Project File Report
McCraney Creek Bridge Replacement
Municipal Class Environmental
Assessment

# Appendix G: Public Information Centre Materials and Public Comments

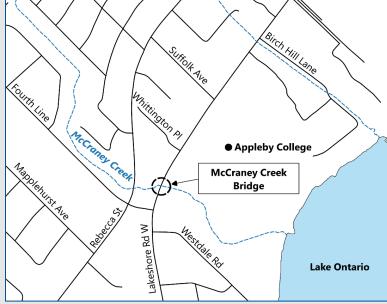
Project File Report McCraney Creek Bridge Replacement Municipal Class Environmental Assessment

# **Public Information Centre Materials**

# Welcome! McCraney Creek Bridge Replacement Schedule 'B' Municipal Class Environmental Assessment

Public Information Centre (16 June 2022 – 30 June 2022) Online Presentation (21 June 2022 at 6:00 PM)









## **Presentation Outline**

### **Background and Current Study**

- Background
- Current Study
- Study Process
- Work Completed for the McCraney Creek Bridge Replacement

#### **Existing Conditions and Problem Statement**

- McCraney Creek Bridge
- Existing Conditions (Fluvial Geomorphology, Natural Environment, Stormwater Management, Flooding, Cultural Environment)
- Problem Statement

#### **Alternative Solutions**

- Identification and Evaluation of Alternative Solutions
- Proposed Design for Bridge Structure, Bridge Deck and McCraney Creek
- Climate Change Considerations for the Project

#### **Next Steps**





# **Background**

### **Council Direction in July 2021**

At a Special Council Meeting held Tuesday, July 6, 2021, the Town Council directed staff to terminate the Class EA for Lakeshore Road West improvements and directed the town staff to proceed with a separate Class EA for the McCraney Creek Bridge Replacement using information, analysis and design from the Lakeshore Road West study.

Special Council Minutes July 6, 2021 - 6:30 p.m.

10. That staff be directed to prepare a separate EA for McCraney Bridge Improvements and file on the public record for a 30 day review period.



# **Current Study**



The town is undertaking an environmental assessment study for the replacement of this bridge.



This Study will satisfy the requirements of a Schedule 'B' project as outlined in the Municipal Class Environmental Assessment (Class EA) document (October 2000, as amended in 2015).



This Class EA Study will build on and utilize information from previously completed reports that were developed as part of the Lakeshore Road West Improvements project.



# **Study Process**

This study will address the requirements of the following phases of the Municipal Class EA process:

#### **Class EA Phase 1: Problem and/or Opportunity**

Develop Problem and Opportunity Statement

#### **Class EA Phase 2: Alternative Solutions**

- •Inventory of natural, socio-economic and cultural environments
- Identification and evaluation of alternative solutions to identify preliminary preferred solution
- ■Consultation with the public, Indigenous Nations, government review agencies and key stakeholders/interest groups
- Selection of preferred solution
- Preparation of Project File Report and Issuance of Notice of Study Completion

Following completion of the two phases, the project will proceed to detailed design phase.

Additional technical work will be completed during detailed design phase to support development of detailed design.





# Work Completed for the McCraney Creek Bridge Replacement

#### **Technical Investigations from Lakeshore Rd Class EA**



**Natural Environment Assessments** 



Fluvial Geomorphology and Channel Design



Stage 1 Archaeological Assessment



Cultural Heritage Report



Stormwater Management Report

#### **Consultation from Lakeshore Rd Class EA**



**Public consultation:** Three Public Information Centres, stakeholder meetings, and on-site resident meetings



**Agency consultation:** Meetings with Conservation Halton in 2017 and 2018 (including review of the evaluation of alternatives for the McCraney Creek Bridge)



**Indigenous Nations consultation:** Circulation of project notifications, meetings with Mississaugas of the Credit First Nation

#### **Additional Technical Investigations:**

Following additional technical investigations contribute to this study:

- Flood Mitigation Opportunities Study for Fourteen Mile and McCraney Creek Systems (ongoing)
- Town of Oakville's Creek Inventory and Assessment Studies from <u>2010</u>, 2015 and <u>2021</u>
- Structure Inspection Report Lakeshore Road West over McCraney Creek (2021)





# **McCraney Creek Bridge**



McCraney Creek Bridge is located on Lakeshore Road West immediately east of Fourth Line.



It carries McCraney Creek, which flows into Lake Ontario, south of Lakeshore Road West.



It accommodates two vehicular lanes (one eastbound and one westbound).



A sidewalk is located on the south side of the bridge. A sidewalk is also located on the north side, west of the bridge.



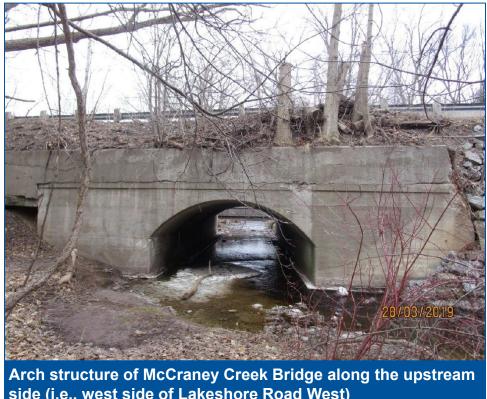






# **McCraney Creek Bridge – Structure**

- McCraney Creek Bridge is a concrete arch structure built over 80 years ago (in 1940).
- It was subsequently extended with a box culvert section.
- The width of the structure is 5.4 metres.



side (i.e., west side of Lakeshore Road West)



Box culvert extension of McCraney Creek Bridge along the downstream side (i.e., east side of Lakeshore Road West)





# McCraney Creek Bridge – 2017 Emergency Repair Works

- In 2017, the north-west supporting wall of the bridge collapsed as a result of severe erosion.
- Emergency repair works were completed to temporarily stabilize the slope.
- The collapsed wingwall along with armour stone (large pieces) were used as temporary support for the slope.









Collapse of the McCraney Creek Bridge's north-west wingwall in 2017 and subsequent emergency works to temporarily stabilize the slope









Photographs showing deterioration in various parts of McCraney Creek Bridge

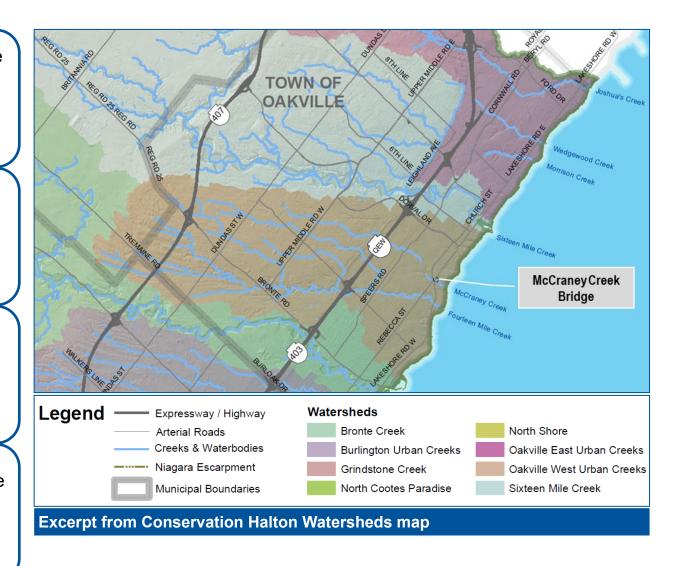
# **McCraney Creek Watershed**

**About McCraney Creek Watershed:** McCraney Creek is one of the fourteen Urban Creek watersheds within the jurisdiction of Conservation Halton. The subject tributary of the creek originates in the northern part of the town (southeast of 407 ETR and Bronte Road) and discharges into Lake Ontario.

**Creek Flow Duration:** The upstream branches of the creek flow through natural channels and swales. As the creek flows downstream, it becomes frequently enclosed and altered in urban areas. The storm sewers in urban areas discharge storm water into this creek.

Fish Community: A total of nine (9) species of fish have been observed through past sampling studies conducted throughout the McCraney Creek watershed in riverine, nearshore and marsh habitats. Aquatic Species at Risk mapping from Fisheries and Oceans Canada did not identify aquatic Species at Risk in McCraney Creek.

Watershed Health: Conservation Halton's <u>Urban Creeks and Supplemental Monitoring (2009)</u> identified this creek to be one of the least healthy watercourses within Conservation Halton's jurisdiction. The majority of benthic invertebrates observed in the creek were aquatic worms, which are typically found in areas that contain organic pollution.





# McCraney Creek – Fluvial Geomorphology\*

The McCraney Creek flows through a woodlot downstream of Rebecca Street. Upon approaching the bridge crossing at Lakeshore Road West, the channel takes a sharp 90 degree turn into the structure.

This directs the erosion potential of creek flows directly against the bridge abutments/wing walls, putting them at continued risk.

Town of Oakville's Creek Inventory and Assessment Studies from 2010, 2015 and 2021 recommended channel realignment for this reach of McCraney Creek.

A channel realignment upstream of the bridge would help to orient flows such that they pass through the crossing at an optimal angle, thus reducing stress on the structure itself.

\* Fluvial Geomorphology is the study of the form and function of streams and the interaction between streams and the landscape around them.



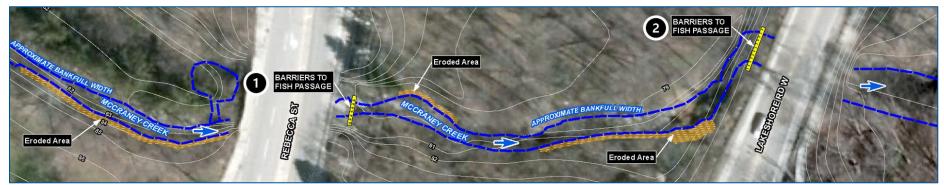






# **McCraney Creek – Aquatic Ecosystem**

There are two locations where barriers to fish passage exist. These are the bridge crossings at Rebecca Street and Lakeshore Road West.



### **Key Enhancement Opportunities to Improve Aquatic Habitat:**

- Naturalize the substrate within the crossing to improve fish passage.
- Incorporate natural channel design for the channel realignment to improve bank stability, and create flow morphology diversity
- Vegetate channel edges under the structure where light penetration is sufficient for growth.
- Enhance riparian vegetation to increase shading to the watercourse; maintain cooler water temperatures and increase bank stability / provide scour protection.



Vertical drop – barrier to fish passage

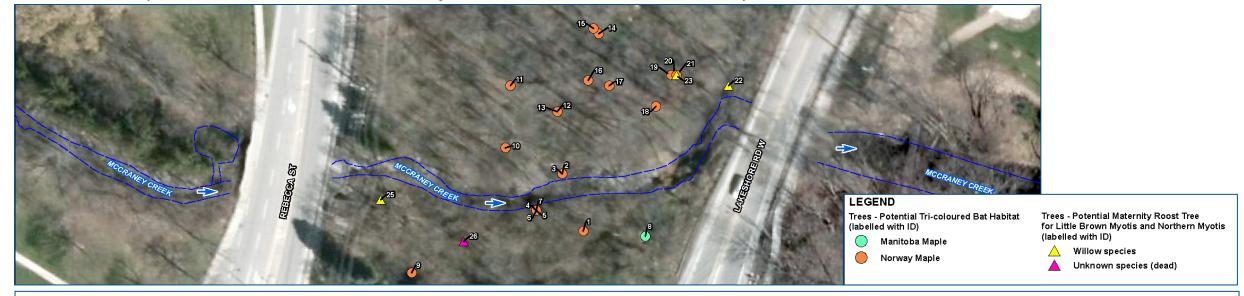


Exposed limestone – barrier to fish passage



# **Terrestrial Ecosystem**

As noted earlier, McCraney Creek flows through a woodlot downstream of Rebecca Street. This forest is dominated by Norway Maple (an invasive plant species) with some Black Walnut and willow. There are very few native species in this community, and it is highly disturbed with signs of flooding and erosion. The forest contains some trees potentially suitable as maternity roost sites for Species at Risk bats (Little Brown, Northern Myotis and Tri-coloured Bat).



#### **Key Enhancement Opportunities to Improve Terrestrial Habitat:**

 Plant native species for vegetation restoration including selection of native trees, which are able to outcompete invasive trees and shrubs present.

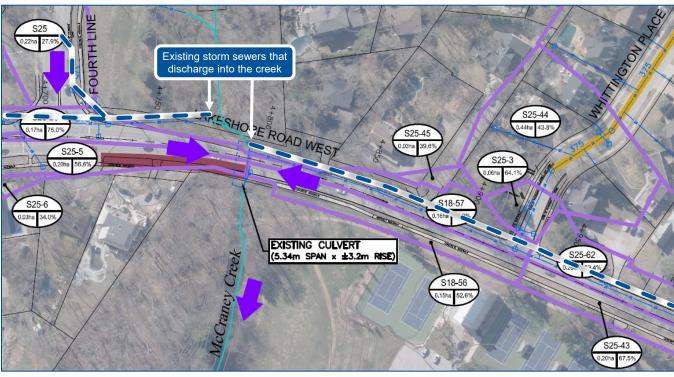


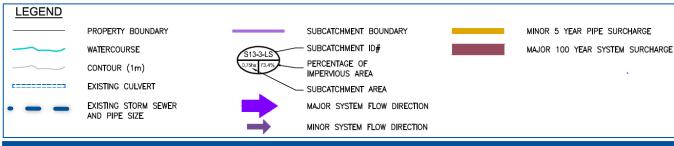
# **Drainage / Stormwater Management**

There are two storm sewers that convey stormwater runoff to McCraney Creek:

- A 600 mm storm sewer on the east side.
- A 375 mm to 525 mm storm sewer on the west side.







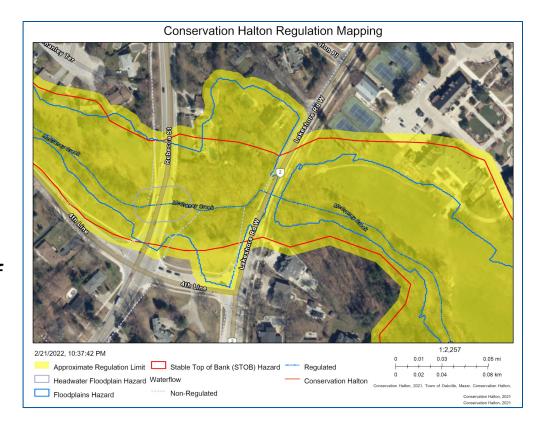
Map Excerpt showing Storm Drainage Boundaries (Existing Conditions)





# **Flooding Hazards**

- The McCraney Creek Bridge is located within the Floodplain Hazard and Approximate Regulatory Limit regulated by Conservation Halton.
- The structure has capacity to convey flood flows associated with a 100-year storm event, however, the modelling indicates that the current structure will be overtopped by the Regional Storm (Hurricane Hazel) by approximately 1.40 metres. This will impact the ability of emergency vehicles to safely use Lakeshore Road.
- Another ongoing study by the Town recommends replacement of McCraney Creek Bridge structure with a larger structure to address flooding risk to protect public safety, municipal infrastructure, and private property (<u>Flood Mitigation Opportunities Study for Fourteen Mile</u> and McCraney Creek Systems).



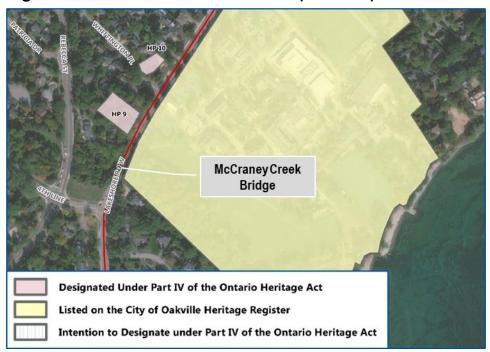




# **Cultural Environment**

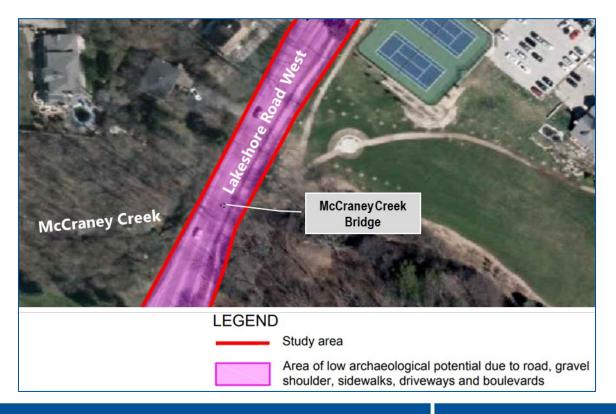
# **Built Heritage Resources and Cultural Heritage Landscapes**

Town of Oakville's Heritage Register (Section F) identifies several bridges of Cultural Heritage Value or Interest (not designated). The McCraney Creek Bridge is not listed in Town's Heritage Register. Nearby properties with cultural heritage value are shown in the map excerpt below.



#### **Archaeological Resources**

The Stage 1 Archaeological Assessment for Lakeshore Road West improvements (2017) identified the location of McCraney Creek Bridge as an area of low archaeological potential, due to the past disturbance in the Creek area.







# **Problem Statement**

**Problem Area 1 – Structural Deficiency:** The northwest wingwall of McCraney Creek Bridge was collapsed in 2017. Emergency repair works were completed to reinforce the bridge slope; however, those works only temporarily fixed the slope failure and a long-term solution is required.

**Problem Area 2 – Erosion Hazard:** The flows from McCraney Creek continue to direct the erosion potential, putting them at continued risk of failure. Town of Oakville's Creek Inventory and Assessment Studies from <u>2010</u>, 2015 and <u>2021</u> recommended channel realignment for this reach of McCraney Creek.

**Problem Area 3 – Flooding Hazard:** Modelling indicates that the existing McCraney Creek Bridge will be overtopped by the Regional Storm (Hurricane Hazel) by approximately 1.40 metres. This will impact the ability of emergency vehicles to safely use Lakeshore Road. <u>Flood Mitigation Opportunities Study for Fourteen Mile and McCraney Creek Systems</u> recommends McCraney Creek Bridge structure for replacement to increase its conveyance capacity and to address the risk of flooding.

The Town of Oakville is undertaking this environmental assessment to identify a solution to address structural deficiency, ongoing erosion and flooding risk at McCraney Creek Bridge.



# **Alternative Solutions**

The following alternatives were identified to address structural deficiency, continued erosion and flooding risk at McCraney Creek Bridge.

Alternative	Description			
Alternative 1	Do nothing (maintain existing structure)			
Alternative 2	Replacement of existing bridge with a new structure without re-alignment of McCraney Creek			
Alternative 3	Replacement of existing bridge with a new structure with re-alignment of McCraney Creek			
Alternative 4	Replacement of existing bridge with a new structure (with slightly adjusted ends) with re-alignment of McCraney Creek			



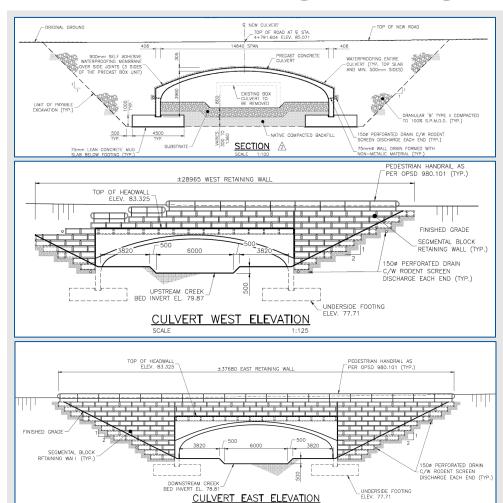
# **Summary of Evaluation of Alternative Solutions**

Evaluation Criteria	Alternative 1: Do Nothing	Alternative 2: Bridge Replacement (No Creek Re-alignment)	Alternative 3: Bridge Replacement with Creek Re-alignment	Alternative 4: Bridge Replacement with Slightly Adjusted Ends and Creek Re-alignment
Natural Environment	Existing flooding and erosion problems will remain unaddressed.	This alternative will not address the existing erosion problem.	Channel realignment will reduce the erosion problem and risk of failure of bridge abutments to a greater extent. However, due to the orientation of the bridge structure relative to McCraney Creek, there will still be continued erosion and risk of failure of infrastructure	The longer structure would be able to span the low flow channel and provide adequate erosion setbacks with channel modifications. Opportunity for improvements to the watercourse. Risk of further erosion of Lakeshore Road West embankment could be minimized.
Social Environment	No reduction in flood risk to private property.	Reduction in flood risk to private property.	Reduction in flood risk to private property.	Reduction in flood risk to private property.
Cultural Environment	No impact to archaeology and cultural heritage resources.	Potential for impact to archaeological resources which can be mitigated through further archaeological investigations. No impacts to cultural heritage resources.	Potential for impact to archaeological resources which can be mitigated through further archaeological investigations. No impacts to cultural heritage resources.	Potential for impact to archaeological resources which can be mitigated through further archaeological investigations. No impacts to cultural heritage resources.
Transportation	No new cycling or pedestrian infrastructure across structure. Sidewalk only on south side of existing structure.	The new bridge will provide space to potentially accommodate a future sidewalk on the north side.	The new bridge will provide space to potentially accommodate a future sidewalk on the north side.	The new bridge will provide space to potentially accommodate a future sidewalk on the north side.
Economic Environment	No incremental cost for this option. However, there may higher costs in long term due to need for emergency repair or replacement	Capital cost for structural replacement would be lower than the cost of Alternative 3 or Alternative 4. However, erosion issue will continue to exist and may result in additional cost related to repairs due to impacts on the bridge	Capital cost for structural replacement including creek realignment would be higher than the cost of Alternative 1 but lower than Alternative 4. However, erosion issue will continue to exist and may result in additional maintenance costs.	Cost for this alternative would be highest, however, it will address the structural deficiency issues and will minimize long term maintenance costs.
Structural	Structural condition not be improved.	New structure will address structural deficiency issues.	New structure will address structural deficiency issues.	New structure will address structural deficiency issues.
Recommendation	Not Recommended	Not Recommended	Not Recommended	Recommended Solution



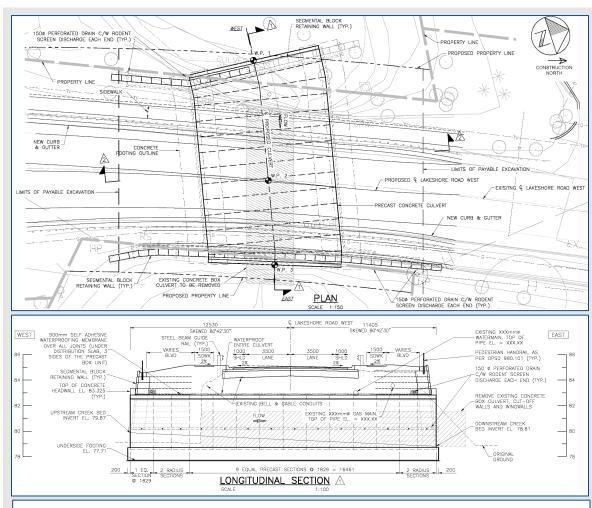


# **Proposed Bridge Design**



- Proposed bridge span will be 14.65m
- Proposed bridge will convey flows associated with the Regional Storm (Hurricane Hazel)
- Proposed bridge orientation will eliminate contact of creek flows with the slope and bridge embankments and help address continued erosion.

# **Proposed Bridge Deck**

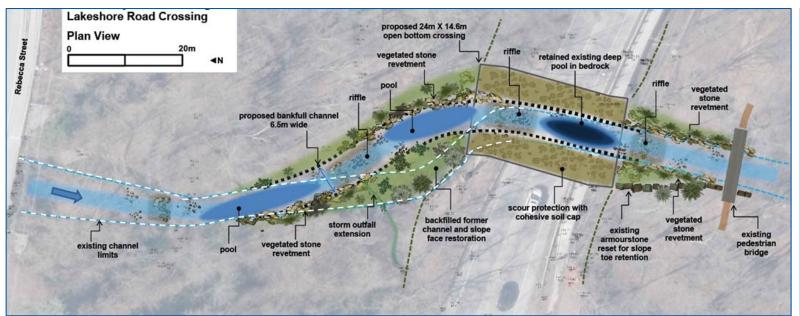


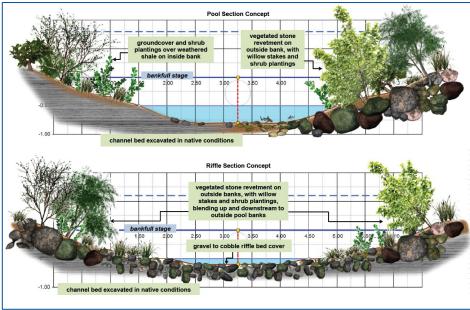
- Proposed bridge deck will maintain existing vehicular traffic lanes.
- Proposed bridge deck will provide space for a new 1.5 m wide sidewalk along the north side.

# McCraney Creek - Proposed Channel Design

The channel realignment has been designed based on geomorphic principles. Key features and benefits of proposed channel design include:

- Optimal channel orientation to align with proposed bridge structure to eliminate contact with slope and to address continued erosion.
- Pool to riffle pattern to provide consistent bedform sequence in the creek.
- Vegetated stone revetments along outside pool banks to protect vegetation roots from the potential impact of high creek flows.
- Removal of the bedrock barrier in the crossing to improve fish passage. Stone treatments to promote small wildlife movement.



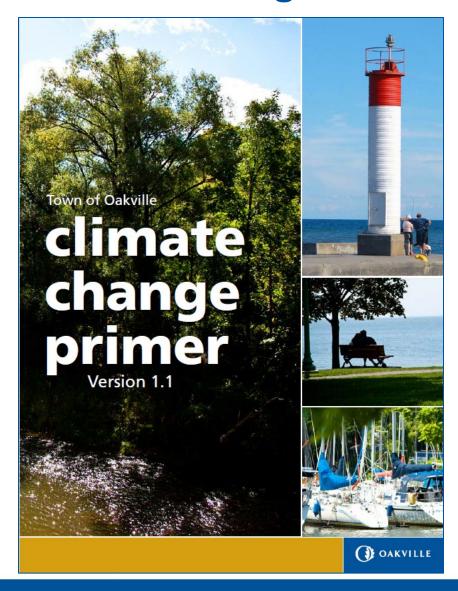


**Riffles** are the short segments of streams with shallow depths where water flows fast, and where oxygen is mixed into the water. Riffles are a food source and a shelter from predators. **Pools** are the areas of streams with deep depths and slow flowing water. Pools provide refuge to aquatic life during dry conditions and protection from predators or shelter.





# **Climate Change Considerations**



Oakville's <u>Climate Change Primer</u> provides local information to residents on climate change and how to help protect human health, the natural environment, residential homes and properties against the impacts of a changing climate. For building town's resiliency, the document refers to Town's <u>Climate Change Strategy</u>.

This project will advance Town's adaptation actions related to the following impacts of climate change identified in the strategy document:

Creeks and channels may meet or exceed capacity during extreme precipitation events.

Extreme weather will result in increased natural debris (fallen trees, sediment and branches) entering creeks and channels.

Warmer, shallower water will threaten sensitive aquatic species and habitats.

Transportation infrastructure is subject to flooding due to extreme and longer duration extreme precipitation events.

Flooding could result from an increase in the frequency, intensity and duration of extreme weather events.





# **Next Steps**

#### Class EA Phase (This Phase – to be finalized by end of 2022)

The Study Team will complete the following next steps:

- Review comments received as a result of this PIC
- Prepare Project File Report
- Issue Notice of Study Completion

#### **Detailed Design Phase (Next Phase – timeline not known at this time)**

- Detailed design for bridge replacement and creek realignment will be completed.
- Additional technical investigations will be completed (including, terrestrial and aquatic investigations, geotechnical investigation, detailed geomorphological design, Stage 1 Archaeological Assessment).
- A Tree Preservation and Replacement Plan and Landscaping Plan will be developed to protect trees during construction and to recommend trees and vegetation.
- Additional consultation with regulatory agencies will be completed and all required permits will be obtained prior to construction. Regulatory agencies include Fisheries and Oceans Canada; Ministry of the Environment, Conservation and Parks; Ministry of Northern Development, Mines, Natural Resources and Forestry; and Conservation Halton.





# Thank you!

The Study Team would like to thank you for taking the time participate in this Online Public Information Centre. We invite you to submit any questions or comments by **30 June 2022** using the **online comment form available on project webpage**.

You can also submit your questions or comments via email to one of the following Study Team Members:

#### Please contact the following staff for any questions or comments:

Syed Rizvi, M.Sc., P. Eng.
Transportation Engineer
Town of Oakville
<a href="mailto:syed.rizvi@oakville.ca">syed.rizvi@oakville.ca</a>

David Sinke, B.Eng. Mgt., P.Eng.
Principal, Transportation Engineering
Wood Environment & Infrastructure Solutions
<a href="mailto:david.sinke@woodplc.com">david.sinke@woodplc.com</a>



Project File Report McCraney Creek Bridge Replacement Municipal Class Environmental Assessment

**Comments: Residents** 

From: Syed Rizvi

To: Cc: RE: McCraney Bridge Replacement

Date: Tuesday, June 28, 2022 11:10:24 AM

CAUTION: External email. Please do not click on links/attachments unless you know the content is genuine and safe.

Dear Mr. and Ms.

I want to thank you for taking time to attend the McCraney Creek Bridge PIC Zoom meeting on June 21, 2022, and sending your comment on the Bridge Replacement study material. For ease of reference, your comment is included below with gray highlighting and our response is provided following your comment.

Looks like our street needs your attention again.

The attached has been circulated on our street and the residents are concerned about where traffic is going to be re-routed. We quickly need your expertise as how to prevent from becoming even more heavily used by traffic than it is now.

Any advice will be appreciated.

In order to accommodate the construction of the new bridge, it will be necessary to reduce traffic to a single lane at the construction site, alternating between eastbound and westbound, can controlled by temporary traffic signals. However, no detour route (including along Suffolk Avenue) is planned at this time. A traffic management plan will be developed during the next phase of this project (i.e., detailed design phase). The traffic management plan will be developed taking into consideration the traffic concerns of area residents. The duration of disruption to traffic on Lakeshore Road West will be minimized to the degree possible by expediting construction.

Comments related to traffic concerns along Suffolk Avenue ( will be noted in the environmental assessment report to ensure that these comments are incorporated into traffic management plan during detailed design phase.

We trust that our responses provide clarification to your questions. Please do not hesitate to contact me if you have further questions.

Thank you again,

Syed

Syed Rizvi, M.Sc., P. Eng

# Transportation Engineer Transportation and Engineering

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Vision: To be the most livable town in Canada

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From:

**Sent:** Monday, June 20, 2022 11:09 AM **To:** Syed Rizvi <syed.rizvi@oakville.ca> **Subject:** McCraney Bridge replacement

SECURITY CAUTION: This email originated from outside of The Town of Oakville. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Please sign me in for the Tuesday, June 21 presentation at 6pm:

Project File Report McCraney Creek Bridge Replacement Municipal Class Environmental Assessment

# **Comments: Coronation Park Residents Association**



June 22, 2022

Mr. Syed Rizvi, M.Sc., P. Eng Transportation and Engineering Town of Oakville 1225 Trafalgar Road Oakville, ON L6H 0H3

Re: McCraney Creek Bridge

Dear Mr. Rizvi

As our questions for the recent PIM were lengthy, we are providing them in written form below.

#### **McCraney Creek Bridge Memo**

The memo notes: Immediately downstream of Rebecca Street, there is a vertical drop where the poured concrete slab foundation of the crossing meets the natural stream substrate ... The vertical drop from the poured cement slab to the natural stream substrate is approximately 0.5 m high on the west and 0.8 m high on the east.

Question: Will the works undertaken for the bridge correct this problem or is this to be addressed in stream work later? When might that be?

#### **Various Documents**

Looking at the drawings provided, our assumption is the present 5m culvert will be replaced with a 14m culvert. Various documents note that increasing the size of the bridge's culvert will increase flow and help prevent flooding upstream.

Question: There seems to be no information anywhere regarding the effect of the increased flow on lands downstream of the bridge. What are the effects and how/where will they be handled?

#### **General Arrangement Drawing**

Unfortunately nothing in the EA presentation materials show where the new bridge will be in comparison to the present bridge and its location.

An overlay of this type would very helpful to provide residents with a better understanding of the project.

How far into the woodlot area will the bridge project? How far into the present stream area?

Is there an incline to the new road surface?

Documents refer to the bridge being 'marginally larger' but there are no dimensions given. Would these please be provided?

#### **Longitudinal Cross Section Illustration**

The cross section denotes sidewalks, lanes and a marked SHLD (shoulder?) as well as two areas that show the boulevard size will vary.

Is the shoulder area planned to accommodate bike lanes?

What affects the varying size of the boulevard?

Doesn't it make sense to have the sidewalk, not the boulevard, be the farthest away from road? In general, all sidewalks along Lakeshore Road West are set back from the road's edge, thus it would be preferable here as well.

#### **Culvert West Elevation**

Both the Longitudinal Cross Section and the Culvert West Elevation appear to show one of pedestrian sidewalks as being a stepped approach.

Is this correct? Once again, a better illustration of the bridge would be quite helpful.

#### **Design Aesethetics**

While we realize the pedestrian railing shown in the illustrations are the same sort used further along the south side of Lakeshore Road toward Appleby College, we urge consideration be given to taking the opportunity with this bridge to give it a more traditional feeling by using black railings. These would be more suitable to the rural nature of the road and its surroundings and blend with the black railing fences currently in use at Appleby College.

#### **Conservation Halton**

We do understand further studies will be undertaken on the project to update and add to information already gathered. We also note no documents from Conservation Halton are included in materials presented and would like to ensure these updated pieces are provided with materials in future.

Thank you for the opportunity to provide these comments and questions. We will look forward to receiving your replies and information.

Sincerely,

Pamela Knight
President
Coronation Park Residents Association

CC:

Councillor Duddeck Councillor Chisholm M. Rose, VP CPRA

#### Talpur, Mir

From: Syed Rizvi <syed.rizvi@oakville.ca>
Sent: Monday, July 25, 2022 11:08 PM

**To:** Talpur, Mir

**Subject:** FW: Comments/Questions PIM McCraney Bridge

**Attachments:** McCraney Creek Bridge EA\_Comments Response.pdf; McCraneyCreek Bridge General Arrangement

Drawing.pdf

**CAUTION:** External email. Please do not click on links/attachments unless you know the content is genuine and safe.

Fyi, Thanks, Syed

Syed Rizvi, M.Sc., P. Eng Transportation Engineer Transportation and Engineering

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From: Syed Rizvi

**Sent:** Tuesday, July 19, 2022 5:42 PM **To:** 'Pamela Knight' <pknight@cogeco.ca>

**Cc:** Cathy Duddeck <cathy.duddeck@oakville.ca>; Ray Chisholm <ray.chisholm@oakville.ca>; MelanieL Rose <melsharp80@gmail.com>; Jane Clohecy <jane.clohecy@oakville.ca>; Phoebe Fu <phoebe.fu@oakville.ca>; Jill Stephen <jill.stephen@oakville.ca>; Eric Chan <eric.chan@oakville.ca>

Subject: RE: Comments/Questions PIM McCraney Bridge

Hi Pamela,

Reference to your email below, please find attached a formal response letter to your comments and questions on the Public Information Centre for the McCraney Creek Bridge Replacement Class Environmental Assessment study project.

For ease of reference, your comments are included in the attached letter with gray highlight and our responses are provided immediately following each comment. An updated bridge general arrangement drawing is also attached for cross reference in response to some of the comments related to the bridge design.

Please feel free to contact if you have any questions.

Thanks, Syed

From: Pamela Knight < <a href="mailto:pknight@cogeco.ca">pknight@cogeco.ca</a> Sent: Wednesday, June 22, 2022 10:22 AM

To: Syed Rizvi < syed.rizvi@oakville.ca>

**Cc:** Cathy Duddeck <<u>cathy.duddeck@oakville.ca</u>>; Ray Chisholm <<u>ray.chisholm@oakville.ca</u>>; MelanieL Rose

<melsharp80@gmail.com>

Subject: Comments/Questions PIM McCraney Bridge

SECURITY CAUTION: This email originated from outside of The Town of Oakville. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello Syed,

As noted last evening, our questions and comments are attached. Please don't hesitate to contact me if you require clarification on any point.

Regards,

Pamela Knight

**President** 

**Coronation Park Residents Association** 



Pamela Knight
President
Coronation Park Residents Association

Dear Ms. Knight,

This is a formal response to your letter dated June 22, 2022, in response to the Public Information Centre for the Class Environmental Assessment for McCraney Creek Bridge Replacement. For ease of reference, your comments are included below with gray highlight and our responses are provided immediately following each comment.

#### McCraney Creek Bridge Memo

The memo notes: Immediately downstream of Rebecca Street, there is a vertical drop where the poured concrete slab foundation of the crossing meets the natural stream substrate ... The vertical drop from the poured cement slab to the natural stream substrate is approximately 0.5 m high on the west and 0.8 m high on the east.

Question: Will the works undertaken for the bridge correct this problem or is this to be addressed in stream work later? When might that be?

Response: The barrier to fish just downstream of Rebecca Street is formed as a result of the fixed grade of the Rebecca Street crossing's slab foundation. There are currently no plans to remedy this condition as part of the McCraney Creek bridge replacement at Lakeshore Road as channel works are not expected to extend as far upstream as Rebecca Street. The removal of this fish barrier would be considered in the future at the time of infrastructure renewal of the Rebecca Street crossing.

#### **Various Documents**

Looking at the drawings provided, our assumption is the present 5m culvert will be replaced with a 14m culvert. Various documents note that increasing the size of the bridge's culvert will increase flow and help prevent flooding upstream.

Question: There seems to be no information anywhere regarding the effect of the increased flow on lands downstream of the bridge. What are the effects and how/where will they be handled?

Response: The proposed bridge structure would not result to increase the floodplain limits downstream of the bridge to Lake Ontario.

#### **General Arrangement Drawing**

Unfortunately, nothing in the EA presentation materials show where the new bridge will be in comparison to the present bridge and its location.

An overlay of this type would be very helpful to provide residents with a better understanding of the project.

Response: The existing structure is shown on the general arrangement drawing in gray, and the proposed structure is shown in black. The gray color was used for the existing structure to differentiate it from the proposed structure. The drawing is included in the PIC slides as well. We have updated the drawing so that the existing structure is clearer to the public.

How far into the woodlot area will the bridge project? How far into the present stream area?

Response: The proposed structure extends to the north by 7.87 metres from the face of the existing structure. We have updated the drawing to show these dimensions.

Is there an incline to the new road surface?

Response: There is no change in profile of the roadway/bridge deck proposed at this location.

Documents refer to the bridge being 'marginally larger' but there are no dimensions given. Would these please be provided?

Response: The existing structure is 5.4 metres wide and 20.4 metres long. The proposed structure is 14.64 metres wide and 25.99 metres long on the east side and 21.95 metres long on the west side. We have updated the drawing to show these dimensions.

#### **Longitudinal Cross Section Illustration**

The cross section denotes sidewalks, lanes and a marked SHLD (shoulder?) as well as two areas that show the boulevard size will vary.

Is the shoulder area planned to accommodate bike lanes?

Response: The shoulder and boulevard area will replace what already exists on south side. It will not include bike lanes.

What affects the varying size of the boulevard?

Response: Due to the skew of the culvert and slight curvature of the roadway there is slight variability in the boulevard width.

Doesn't it make sense to have the sidewalk, not the boulevard, be the farthest away from road? In general, all sidewalks along Lakeshore Road West are set back from the road's edge, thus it would be preferable here as well.

Response: Providing a sidewalk closer to the bridge edge will require higher retaining walls. This could be reviewed during the detailed design phase.

#### **Culvert West Elevation**

Both the Longitudinal Cross Section and the Culvert West Elevation appear to show one of pedestrian sidewalks as being a stepped approach.

Is this correct? Once again, a better illustration of the bridge would be quite helpful.

Response: We would like to clarify that the sidewalks will not be stepped. They will follow parallel to the roadway surface. The step shown on the left side of the west elevation is for the wall only.

### **Design Aesthetics**

While we realize the pedestrian railing shown in the illustrations are the same sort used further along the south side of Lakeshore Road toward Appleby College, we urge consideration be given to taking the opportunity with this bridge to give it a more traditional feeling by using black railings. These would be more suitable to the rural nature of the road and its surroundings and blend with the black railing fences currently in use at Appleby College.

Response: We appreciate this idea. We will note this suggestion in the EA report for the Town to finalize the railing design during detailed design phase.

#### **Conservation Halton**

We do understand further studies will be undertaken on the project to update and add to information already gathered. We also note no documents from Conservation Halton are included in materials presented and would like to ensure these updated pieces are provided with materials in future.

Response: We have recently submitted requests for natural heritage information to Conservation Halton and Ministry of Natural Resources and Forestry. Any information received from agencies will be included in the Project File Report, which is planned to be made available for public review in summer-fall of this year. A Notice of Study Completion will be issued to inform the public where and when they can access the Project File Report for review.

We trust that our responses provide clarification to your questions. Please do not hesitate to contact me if you have further questions.
Thank you,
Syed Rizvi

Project File Report McCraney Creek Bridge Replacement Municipal Class Environmental Assessment

**Comments: Oakville Green** 

### Talpur, Mir

From: Syed Rizvi <syed.rizvi@oakville.ca>
Sent: Friday, July 29, 2022 4:49 PM

To: 'Karen Brock'

Cathy Duddeck; Ray Chisholm; Jane Clohecy; Phoebe Fu; Jill Stephen; Eric Chan; Talpur, Mir

**Subject:** RE: McCraney Creek Bridge Replacement

Attachments: McCraneyCreekBridgeReplacement\_OakvilleGreen-CommentResponses\_2022-07-29.pdf; McCraney

Creek Bridge EA\_June 2022.pdf

**CAUTION:** External email. Please do not click on links/attachments unless you know the content is genuine and safe.

Hi Karen,

Thank you for taking the time to review the Public Information Centre (PIC) materials for the McCraney Creek Bridge Replacement Class EA. The Study Team is pleased to receive your support for the proposed creek habitat enhancement measures as identified in the technical studies for this project and as being advanced as part of the recommended solution.

Reference to your email below, please find attached a response letter to your comments on PIC materials for the Bridge Replacement Class EA study project.

Please feel free to contact if you have any questions.

Thanks again, Syed

Syed Rizvi, M.Sc., P. Eng Transportation Engineer Transportation and Engineering

Town of Oakville | 905-845-6601, ext.3981 | www.oakville.ca

### Vision: To be the most livable town in Canada

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From: Karen Brock president@oakvillegreen.org>

Sent: Thursday, June 30, 2022 12:18 PM

To: Talpur, Mir <mir.talpur@woodplc.com>; Syed Rizvi <syed.rizvi@oakville.ca>

Cc: Sinke, David <david.sinke@woodplc.com>; Felker, Bob <bob.felker@woodplc.com>; Cathy Duddeck

<cathy.duddeck@oakville.ca>; Ray Chisholm <ray.chisholm@oakville.ca>; \_Members of Council

<MembersofCouncil@oakville.ca>

Subject: McCraney Creek Bridge Replacement

SECURITY CAUTION: This email originated from outside of The Town of Oakville. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon,

Please accept the attached comments from Oakvillegreen, regarding the Lakeshore Road bridge replacement over McCraney Creek.

Thank you, Karen

Karen Brock (she/her) | President president@oakvillegreen.org



**Donate today!** 



June 30, 2022

Good afternoon,

Thank you for the opportunity to report on the Environmental Assessment (EA) study for the replacement of the bridge spanning McCraney Creek at Lakeshore Road near Fourth Line.

Oakvillegreen would like to comment in particular, on the Aquatic Studies and Terrestrial studies that were provided for this EA.

Bridge construction will be extensive and potentially very environmentally damaging. Emphasis must be on minimizing and avoiding adverse effects on fish and wildlife habitat. Mitigation measures must be taken very seriously and adhered to during the construction.

## **Enhancement Opportunities**

Most importantly, Oakvillegreen strongly supports the detailed creek and creekside habitat enhancement measures proposed in the above-mentioned studies. In our opinion, resources should unquestionably be utilized "to improve aquatic and terrestrial habitat as a component of the crossing replacement/extension works and stream rehabilitation."

#### **Fish Habitat**

Regulated fish habitat will be impacted.

"The watercourses on site range from areas providing no discernable fish habitat (i.e. ephemeral drainage features) to areas of high sensitivity habitat that supports the above mentioned species at risk." Aquatic Habitat & Existing Conditions

"McCraney Creek was assessed for opportunities for fish habitat enhancement (i.e. fish passage barriers, areas exhibiting bank instability). The watercourse was assessed from approximately 50m upstream of Rebecca Street to Lakeshore Road West." (2.1 Aquatic Field Surveys -terrestrial study) Map included below.

Reports revealed that there were no SAR fish species observed in McCraney Creek (p.28 of Aquatic Study) but specialists noted several correctable reasons, mainly blockage of fish passage and water quality, restricting their access and viability in what could be ideal stream habitat. Now is the time to remedy this fundamental issue. This is supported in this excerpt:

3.2.4.4 p.29 of Aquatic Habitat & Existing Conditions (October 2017) Fisheries Limitations

Within the ROW, laminar flow is evident at the upstream end of the bridge where an area of exposed limestone is evident. This presents a potential enhancement opportunity to increase fish passage beneath the structure.

McCraney Creek was found to be one of the least healthy watercourses within CH's jurisdiction based on invertebrate communities, with the majority of benthic invertebrates observed being aquatic worms, typically found in areas that contain organic pollution and anoxic conditions (CH, 2009b). The poor water quality present within the watercourse likely limits the fish species present; as species less tolerant of contaminants would not be able to inhabit this watercourse.

The proposed works at this site will include the replacement of the existing crossing structure with a larger spanning structure. Additionally, the channel upstream of the crossing may be realigned to better accommodate flows directly through the ROW and crossing structure. This would reduce bank erosion and bank instability caused by the current watercourse alignment, which enters the crossing at a sharp angle approaching from the west. Instream works would be required to complete the bridge replacement and potential realignment of the watercourse. Alternatively, the option to skew the replacement spanning structure to better align with the flows of the existing watercourse is also being considered. This alternative would avoid the need for channel realignments. As areas below the high water mark will be impacted through these proposed activities, a DFO 'Request for Review' should be completed and sent to DFO for consideration of the project detail and to determine approval requirements for the proposed works. Potential impacts of the proposed works and recommended mitigation measures are included in Sections 4.0 and 5.0 below. Emergency works were recently performed at the southwest bank of the crossing to repair the wing-wall and bank slope which were exhibiting signs of failure. Active erosion had caused the wing-wall to lean significantly and become a safety concern.

### Flow Issues and Barrier to Fish Movement

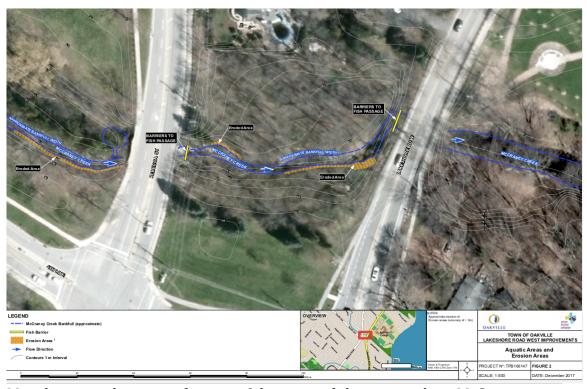
Flow issues and barriers to fish movement in McCraney Creek must be remedied as reported in the following excerpt:

### 3.1 Aquatic Habitat

A depiction of the key features and habitat mapping for the site are provided in (Attachment 1; Figure 2). Upstream of Lakeshore Road West, McCraney Creek maintains a relatively uniform wetted width of approximately 6 m as it meanders through the woodlot. Flows are slow and is mainly comprised of flats with a few small sets of riffles where rocky substrate is present in shallower areas. Immediately downstream of Rebecca Street, there is a vertical drop where the poured concrete slab foundation of the crossing meets the natural stream substrate. Flows at the outlet of the crossing structure are concentrated on the easternmost side of the crossing where they flow over this structure, as a large accumulation of woody debris and leaves blocks the majority of the channel at the westernmost side of the crossing outlet. The vertical drop from the poured cement slab to the natural stream substrate is approximately 0.5 m high on the west and 0.8 m high on the east. This area of concentrated flow exhibits a higher velocity then the surrounding watercourse and laminar flow is present. As such, this feature is a barrier to the

upstream movement of small-bodied fish. The effects of this barrier would be exacerbated during periods of high flow.

At the inlet of the Lakeshore Road crossing, an area of exposed limestone is evident. At the downstream end of the limestone, a poured concrete pad is evident. This was potentially installed for the protection of a conduit or other underground infrastructure. A step/face of concrete is present at the edge of the concrete pad, where the pad stops and meets with the natural channel bed downstream. Laminar flow was evident flowing over the limestone bedrock and concrete pad during surveys previously conducted in June, 2017. During a revisit of the site in September 2017 as well as the December 18th, 2017 surveys, flows were significantly reduced, exposing much of the limestone and resulting in shallow laminar flow. As such, it is believed that this area may pose a barrier to fish movement. Removal of this feature represents a potential enhancement opportunity.



Map depicting the areas of erosion & barrier to fish passage along McCraney Creek at Lakeshore Road.

### **Recommendation: Downstream improvements of McCraney Creek**

Though not mentioned, it would be strongly advised to study and consider stream rehabilitation along McCraney Creek south of Lakeshore Road right to Lake Ontario

The health of the creek in its entirety should be considered rather than piecemeal fixes. It appears that McCraney Creek crosses through or is at the most westerly edge of Appleby College's property.

Efforts should be made by the Town to work with landowners to make necessary enhancements to this portion of the creek and floodplain which connect the study area to Lake Ontario.

### **Enhancement Opportunities Support**

Finally, Oakvillegreen strongly supports the proposed enhancement opportunities by experts (quoted below) in order to improve both the aquatic and terrestrial habitat in McCraney Creek.

This is critical for a biodiverse urban forest, creek health, ecosystem connectivity and the health of wildlife & fish species.

#### **Bird Habitat**

It cannot be emphasized enough, the value of natural Carolinian habitat for the migratory bird populations that pass through Oakville during spring and fall. Exhausting trips for small birds across Lake Ontario, require restorative habitat and food resources along Oakville's lakeshore. Though some species are not present year-round, this habitat remains critical to the health and survival of migratory bird populations, whether they are deemed species at risk or not.

#### 4.0 ENHANCEMENT OPPORTUNITIES

### 4.1 Aquatic Habitat

Enhancement measures which could be utilized to improve aquatic habitat as a component of the crossing replacement/extension works and stream realignment include:

Select a new replacement structure that will improve fish passage:

o Consider flow velocities and select the structure, grading, etc. that will ensure the crossing structure is passable by fish species known to inhabit the watercourse which include smaller-bodied species which may move through the watercourse seasonally based on stream temperatures and are capable of low/moderate swim speeds (i.e. Longnose Dace 0.65 meters per second (m/sec) and White Sucker 0.45-0.60 m/sec). Rainbow Trout, a sensitive cool/coldwater species has also been found within the watercourse and is likely migrating through the study area to reach upstream breeding grounds. This species can move up to 5.70 m/sec (Peake, S.J, 2008).

o Naturalize the substrate within the ROW. Consider modifying the limestone bedrock and poured concrete slab substrate at the upstream end of the ROW to improve fish passage within the ROW by creating a low flow channel. Incorporate natural channel design for the channel realignment to improve bank stability, and create flow morphology diversity;

Following the completion of the construction activities, vegetate margins under the structure where light penetration is sufficient for growth;

Enhance riparian vegetation in areas adjacent to and upstream of the crossing through restoration and revegetation following the completion of the construction activities to increase: shading to the watercourse; maintain cooler water temperatures and increase bank stability / provide scour protection; Enhance stormwater drains at Lakeshore Road which outlet to McCraney Creek to ensure the flows are thermally regulated and of good quality; and

Protect natural channel areas and habitats which provide refuge and potential spawning habitat.

### 4.2 Terrestrial Habitat

Enhancement measures which could be utilized to improve bat habitat as a component of the stream realignment include:

Selection of native species for vegetation restoration including selection of native trees able to outcompete invasive trees and shrubs present such as Norway Maple. Recommended trees may include Black Maple (*Acer nigrum*) and Red Maple (*Acer rubrum*);

Provide forest management to monitor the site to encourage the growth of native tree species and maintain existing large trees, as well as potentially controlling invasive species such as Norway Maple and Multiflora Rose; Install bat roosting boxes to provide additional roosting habitat for SAR bats.

Thank you for the opportunity to comment.

Karen Brock President, Oakvillegreen

c/o 2089 Nipigon Drive Oakville, ON L6H 4G3 Karen Brock
President
Oakvillegreen Conservation Association
<a href="mailto:president@oakvillegreen.org">president@oakvillegreen.org</a>

Hello Ms. Brock,

Thank you for taking the time to review the Public Information Centre materials for the McCraney Creek Bridge Replacement Class EA. The Study Team is pleased to receive your support for the proposed creek habitat enhancement measures as identified in the technical studies for this project and as being advanced as part of the recommended solution.

As noted in the Public Information Centre materials and supporting technical investigations, the recommended solution for bridge replacement and creek realignment will offer several benefits, including:

- The proposed bridge will address the risk of overtopping of Lakeshore Road West during Regional Storms (i.e., Hurricane Hazel). The new bridge will convey flows associated with the Regional Storms.
- The proposed bridge orientation will minimize contact of creek flows with the slope and bridge embankments, and it will help address continued erosion.
- The proposed channel design has an optimal orientation to align with the proposed bridge structure to minimize contact with the slope and to address continued erosion.
- The proposed channel design includes a pool to riffle pattern to provide consistent bedform sequence in the creek.
- The proposed channel design includes vegetated stone revetments along outside pool banks to protect vegetation roots from the potential impact of high creek flows.
- The proposed channel design will remove the bedrock barrier in the crossing at Lakeshore Road West to improve fish passage. Stone treatments in the crossing bed will promote small wildlife movement.

These are just some of the key features/benefits of the proposed design.

The Study Team is in the process of preparing this Class EA's Project File Report, which will identify the project's environmental effects and will propose mitigation measures. These measures, which include protection of terrestrial and aquatic habitats, wildlife and aquatic species, will be incorporated into tender documents during the detailed design phase, to ensure that environmental protection is the key priority during construction, and damage to the environment can be avoided/minimized to the extent possible.

Necessary reviews and approvals from regulatory agencies, for example, Conservation Halton, Fisheries and Oceans Canada will be obtained during detailed design phase.

Construction will be conducted in accordance with and subject to the conditions of permits and approvals from regulatory agencies.

Lastly, we appreciate your suggestion to consider creek rehabilitation south to Lake Ontario. At this time, the town does not have plans to extend creek rehabilitation works as far downstream as Lake Ontario, as the lands located south of the Lakeshore Road West crossing are owned by Appleby College. It is our understanding that the works have been carried out in the past by Appleby College on their property to improve conditions along the shoreline and creek.

Again, we appreciate your time and feedback on this Study. We invite you to review the Project File Report when it becomes available. A Notice of Study Completion will be issued later this year to inform the public where and when they can access the Project File Report for review. We will be sharing this notice with you, when available.

Sincerely,

Syed Rizvi

Project File Report McCraney Creek Bridge Replacement Municipal Class Environmental Assessment

**Comments: Halton District School Board** 

From: <u>Talpur, Mir</u>
To: <u>Syed Rizvi</u>

Cc: Sinke, David; Felker, Bob

Subject: FW: [hdsbplanningdepartment] RE: McCraney Creek Bridge Replacement - Notice of Study Commencement and

Online Public Information Centre

**Date:** Wednesday, June 29, 2022 10:05:00 AM

Attachments: <u>image001.png</u>

FYI

Sincerely,

Mir

### Mir Ahsan Talpur, M.Env.Sc., EP

Environmental Planner Mobile: +1 (647) 545 8974

www.woodplc.com



From: Laureen Choi [Staff] <choil@hdsb.ca>
Sent: Wednesday, June 29, 2022 9:59 AM
To: Talpur, Mir <mir.talpur@woodplc.com>
Cc: Colley, David <ColleyD@haltonbus.ca>

**Subject:** Re: [hdsbplanningdepartment] RE: McCraney Creek Bridge Replacement - Notice of Study Commencement and Online Public Information Centre

**CAUTION:** External email. Please do not click on links/attachments unless you know the content is genuine and safe.

Hi Mir. Thank you for your email. I have reviewed the <u>slide deck</u> as presented at the public meeting on June 21, 2022. At this point the Board has no comment on this project. It is understood at this time that the Class EA will be completed by the end of 2022 and that the next phase of detailed design is TBD. The Board is most interested in the construction phase and with timing of future road closures, if any.

The Board has three school within 1km of Fourth Line and Lakeshore:

Pine Grove PS - 529 Fourth Line W.H. Morden PS - 180 Morden Road T.A. Blakelock HS - 1160 Rebecca Street

Once construction schedule is determined, we would like the Board and the schools to be notified so students and parents can adjust walking routes. <u>Halton Student Transportation Services (HSTS)</u> should also be notified so that any impacted bussing routes can be adjusted if required.

Continue to circulate us on future notices and updates. Please contact me if you have any questions.

### **Laureen Choi**

Senior Analyst - Planning Halton District School Board

J.W. Singleton Education Centre

2050 Guelph Line

Burlington, Ontario L7P 5A8 email: <a href="mailto:choil@hdsb.ca">choil@hdsb.ca</a> cell: 905-749-2184 office: 905-335-3665 x2201

On Fri, Jun 24, 2022 at 10:11 AM Talpur, Mir < mir.talpur@woodplc.com > wrote:

Good Morning,

This is a gentle reminder regarding the ongoing Public Information Centre for McCraney Creek Bridge Replacement Municipal Class Environmental Assessment (Schedule 'B'). Comments are being requested by **June 30, 2022**. Please refer to the <u>project webpage</u> for more information.

Sincerely,

Mir

Mir Ahsan Talpur, M.Env.Sc., EP

Environmental Planner Mobile: +1 (647) 545 8974





From: Talpur, Mir

**Sent:** Monday, June 6, 2022 1:50 PM **To:** Talpur, Mir <mir.talpur@woodplc.com>

**Cc:** Syed Rizvi < <u>syed.rizvi@oakville.ca</u>>; Jill MacInnes < <u>jill.macinnes@oakville.ca</u>>; Sinke, David

<<u>david.sinke@woodplc.com</u>>; Felker, Bob <<u>bob.felker@woodplc.com</u>>

Subject: McCraney Creek Bridge Replacement - Notice of Study Commencement and Online

Public Information Centre

6 June 2022

# McCraney Creek Bridge Replacement Notice of Study Commencement and Online Public Information Centre

## **Municipal Class Environmental Assessment**

The Town of Oakville has initiated an environmental assessment for the replacement of the McCraney Creek Bridge that is located over McCraney Creek, on Lakeshore Road West immediately to the east of Fourth Line. The bridge was built in 1940. Due to its deteriorating condition, ongoing erosion and risk of flooding, the bridge requires replacement. The purpose of this email is to share the attached notice with you and invite you to participate in the upcoming Public Information Centre (PIC).

The Town is hosting a Public Information Centre to share the recommended solution for bridge replacement. Information materials will be available on the <u>project webpage</u>, from **June 16 to June 30, 2022**. We encourage you to participate in the PIC by reviewing the information materials and providing any comments on the online comment form by **June 30, 2022**. You are also invited to attend the **Online Presentation** on **Tuesday, June 21, 2022, at 6 p.m.** where there will be an opportunity to ask any questions of the study team and provide comments. Please refer to the attached notice and visit project webpage for further details.

Sincerely,

Mir

Mir Ahsan Talpur, M.Env.Sc., EP

Environmental Planner Mobile: +1 (647) 545 8974

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