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December 10, 2018

Ministry of the Environment, Conservation and Parks
Mr. Rod Phillips, Minister
Office of the Minister
77 Wellesley Street West
11th Floor, Ferguson Block
Toronto, ON M7A 2T5

Re: ENV1283MC-2017-1871
Response to Part II Order regarding the Environmental Assessment for the proposed Badley (Metcalfe Street) Bridge Replacement, Victoria Street Pedestrian Bridge and West Mill Street Enhancements

The County of Wellington received a letter from the Minister's office (received on August 25, 2017) which detailed the decision of the MECP on the Part II Order request for the above referenced Projects. The response herein forms the submission from the County in accordance with the initial requirements of the Part II Order decision for the Badley Bridge Replacement. For clarity, the format of this response matches the layout of the MECP decision letter with the Ministry's comments in bold.

Badley Bridge Replacement

MECP Comment No. 1a

Wellington County shall consider dedicated cycle lanes as part of the final design for the proposed Badley (Metcalfe Street Bridge).

- a) **The final design of Badley (Metcalfe Street) Bridge and the rationale for the final design shall be posted on Wellington County's website prior to the start of construction for Badley (Metcalfe Street) Bridge**

County Response No. 1a

The County has included a dedicated 1.5 m lateral space for cyclists, on both sides of the street, across the structure in the preliminary design. This will follow the Complete Streets philosophy of providing space for each mode of travel where possible. These cycling lanes (distinct from the general purpose lanes for vehicles) will be constructed within the limits of this contract. The final

design will be available on the Wellington County's website prior to the start of construction. We expect to post this at the time the final Public Information Centre is advertised.

MECP Comment No. 1b

If dedicated cycle lanes are incorporated into the final design and it results in major change to the Project that would require a Schedule B or C Class Environmental Assessment an addendum would be required.

County Response No. 1b

No addendum is required. Lateral space was identified in the ESR Recommended Plan. See Response No. 1a above.

MECP Comment No. 2a

Wellington County in consultation with the Ministry of Tourism, Culture and Sport shall:

- a) Ensure that a qualified individual (with recent and relevant expertise and experience submits completed or supplementary Heritage Impact Assessment and Cultural Heritage Evaluation Reports for the Badley (Metcalfe Street) Bridge to in accordance with Ministry of Tourism, Culture and Sport guidance and standards prior to detailed design.**

County Response No. 2a

The County of Wellington has retained the services of Wendy Shearer, a prominent Cultural Heritage specialist, and Mark Thompson Brandt, Sr. Conservation Architect & Urbanist with MTBA Associates, a Context Sensitive Design Specialist with bridges in historic settings experience, to provide the independent review and advisory services to respond to this request. These specialists both have over 30 years' experience in conducting such reviews. Curriculum Vitae can be provided upon request. Ms. Shearer has conducted numerous similar heritage reviews across Canada and Wellington County.

All previous reports were reviewed. It was Ms. Shearer's opinion that no further changes were required to the previously prepared CHER and she prepared an independent Heritage Impact Assessment (HIA) report to respond to your request.

The supplementary HIA for the Badley (Metcalfe Street) Bridge was completed in the winter 2018 in accordance with Ministry of Tourism, Culture and Sport (MTCS) guidance and standards prior to detailed design. It was submitted to MTCS in March of 2018.

MECP Comment No. 2b

- b) Ensure that the Heritage Assessment for the Badley (Metcalfe Street) Bridge demonstrates how cultural heritage resources have been incorporated in the evaluation of the alternatives for the overall Badley (Metcalfe Street) Bridge Environmental Assessment.**

County Response No. 2b

Based on the advice and input from the MTCS, both the rehabilitation and replacement alternatives were carried forward and subjected to the technical evaluation of preliminary design alternatives. (See **Appendix M** for a detailed description of the Multi Attribute Trade-off System (MATS) Evaluation Methodology.) The MATS technical evaluation was undertaken to determine whether the project would be a rehabilitation (extending the bridge life for another cycle) or a bridge replacement.

The progression of conservation options is presented in **Table 3**. The conservation options are typically considered in a progression using the initial approaches first where feasible. Options 1 to 7 reflect conservation approaches and Options 8 and 9 reflect mitigation approaches. If the project to be carried forward is a rehabilitation project, then Options 1 to 7 can be considered and if the project is to be a replacement project, then Options 8 and 9 are to be considered. See **Figure 13** for the decision-making process and the steps that included the consideration of cultural heritage conservation based on MTCS advice. The final approach is based on the ranking of alternatives from the MATS evaluation and the direction on whether the project is a bridge rehabilitation or replacement (in the end the recommendation was replacement; the following paragraphs provide a summary of the evaluation steps and where the MTCS provided input).

The initial screening of these conservation approaches, based on the site-specific technical and economic constraints of the Badley (Metcalf Street) Bridge in Elora, is described in **Table 3**. Based on an initial screening of these options/strategies, only Options 1, 3, 8 and 9 were carried forward as part of the preliminary design alternatives.

Based on the results of the MATS technical evaluation and ranking of alternatives for the replacement of the bridge, Alternative 2e was carried forward as the Technically Preferred Alternative (TPA) (see **Section 7.3**). As a component, this alternative would include, where technically and economically feasible, the following:

- Salvage of elements/members of the bridge for incorporation into the new structure or for future conservation work displays.
- Full recording of the structure if it is to be demolished.
- Follow the design principles of the Bridge Design Guidelines developed by Centre Wellington.

The decision making process using the MATS evaluation methodology recommended a replacement structure based on addressing several competing criteria. One criterion that carried significant importance was the cost of restoring the load carrying capacity of the existing truss, due to the extent of structural deterioration of the load carrying members in the truss. The evaluation committee gave a high weight to the life safety consideration, along with the financial cost to extend the bridge one additional rehabilitation cycle.

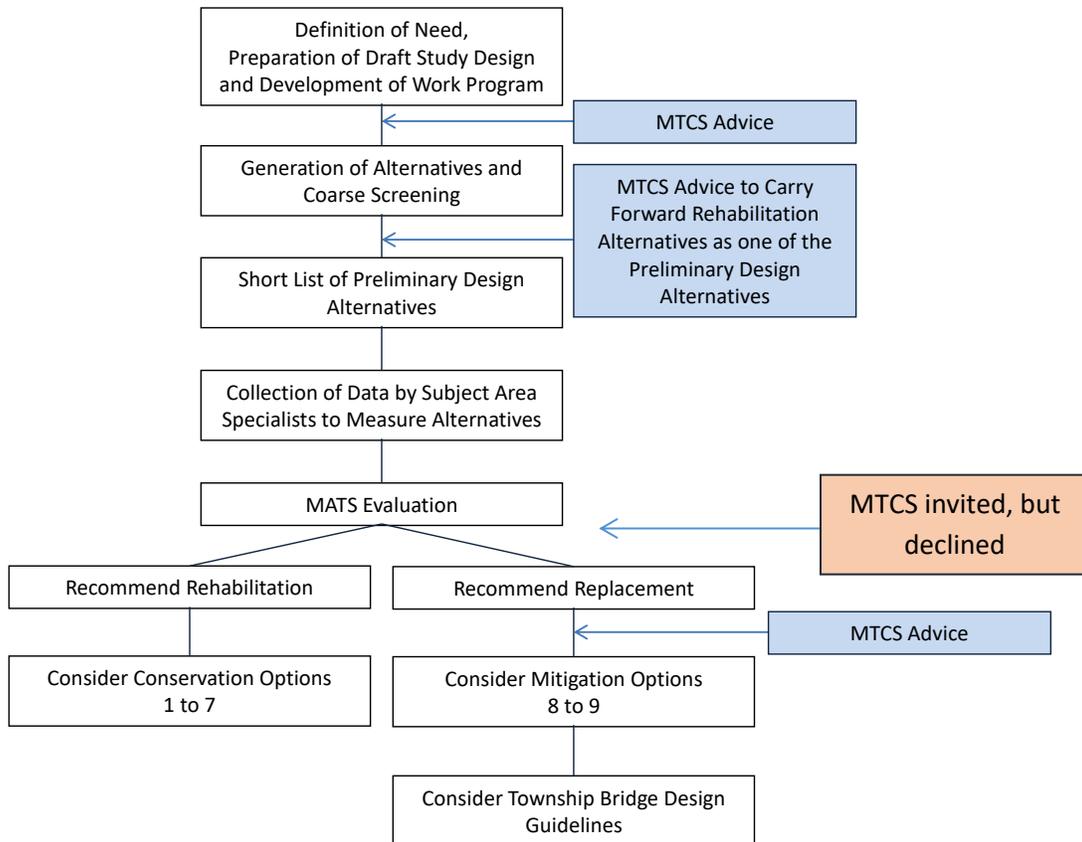


Figure 13: Cultural Heritage Preservation and Mitigation Measures within the Decision Making Process of the Badley (Metcalf Street) Bridge

As illustrated in the figure above, the flow chart shows that the EA had considered the 9 conservation approaches identified by the MTCS in the EA. These conservation approaches are described in **Table 3**.

Conservation Option/Strategy	Feasibility	Carried Forward for Further Consideration
1. Restoration of missing or deteriorated elements where physical or documentary evidence (e.g. photographs or drawings) can be used for their design.	Restoration/replacement of deteriorated elements will extend the bridge’s service life until replacement is required in future years (the next rehabilitation cycle would be in 20-30 years).	Carried forward for evaluation as Alternative 1 - Rehabilitation.

Table 3: Feasibility of Conservation Options/Strategies for the Badley (Metcalfe Street) Bridge		
Conservation Option/Strategy	Feasibility	Carried Forward for Further Consideration
2. Retention of existing bridge with no major modification undertaken.	Elements of the structure are in advanced state of deterioration and nearing the end of their useful service life. Major rehabilitation would be required for the existing bridge to be maintained, resulting in major modifications to the existing structure.	Not considered as an alternative for rehabilitation of the structure based on life safety criteria.
3. Retention of existing bridge with sympathetic modification.	Restoration/replacement of deteriorated elements will extend the bridge's service life until replacement is required in future years.	Retention of the existing structure with sympathetic modifications was carried forward as Alternative 1 – Rehabilitation.
4. Retention of existing bridge with sympathetically designed new structure in proximity.	Due to adjacent land uses and existing infrastructure, a realignment of Metcalfe Street to provide a new vehicular bridge in close proximity while retaining the existing bridge for active modes of transportation is not feasible. Construction of a new bridge at an adjacent location for vehicular traffic would result in considerable impact to existing buildings within the downtown core.	Realignment of Metcalfe Street and construction of a bridge in proximity to the existing structure was not carried forward.
5. Retention of existing bridge no longer in use for vehicular purposes but adapted for pedestrian walkways, cycle paths, scenic viewing, etc.	The existing bridge accommodates approximately 9500 vehicles/day and is the main access for traffic into/out of the downtown core. Adapting the structure for active transportation will restrict access to the community and have significant business impacts.	Adaptation of the existing structure was not considered.
6. Relocation of bridge to appropriate new site for continued use (see 4) or adaptive re-use (see 5).	Due to its size and condition, the existing structural steel truss was not considered economically or technically feasible for relocation.	Relocation of the structure was not carried forward.

Table 3: Feasibility of Conservation Options/Strategies for the Badley (Metcalfe Street) Bridge		
Conservation Option/Strategy	Feasibility	Carried Forward for Further Consideration
7. Retention of bridge as heritage monument for viewing purposes only.	Due to its size and condition, the existing structural steel truss was not considered economically or technically feasible for relocation.	Retention of the structure as a monument was not carried forward. The retention of a portion of the bridge as a monument is considered by Option No. 8.
8. Salvage elements/members of bridge for incorporation into new structure or for future conservation work or displays.	Elements of the existing structure will be salvaged and incorporated into an interpretive plaque, public display/art or comparable feature.	Recommendation to carry forward for mitigation is included for all replacement structure alternatives.
9. Full recording and documentation of structure if it is to be demolished.	Documentation of the existing structure will be completed prior to demolition.	Recommendations for mitigation are included for all replacement structure alternatives.

Based on the sequential decision making for the project, the cultural heritage inputs from the heritage experts on the EA team, and the input from MTCS and the CHER and HIA reports completed during the EA, the following mitigation measures were recommended:

- Salvage of elements/members of the bridge for incorporation into the new structure or for future conservation work displays.
- Full digital recording of structure (photographs from multiple angles, plan, elevations, 2 cross sections including existing abutments and details of typical truss members and connections) if it is to be demolished.
- Follow the design principles of the Bridge Design Guidelines developed by Centre Wellington and the Standards & Guidelines for the Conservation of Historic Places in Canada.

The post-ESR HIA, completed by Ms. Wendy Shearer and Mark Thompson Brandt, has reviewed the sequential decision making for the project and has validated the approach. This original bridge was a functional utilitarian structure and although a character element of the Village of Elora, it held no

heritage designation. Other representative examples of the bridge type continue to exist in the County. The validated Supplementary HIA has been submitted to the MTCS.

MECP Comment No. 2c

- c) Ensure that if the preferred alternative remains (construction of a new bridge), the Heritage Impact Assessment is used to guide the design for the replacement of the bridge by commemorating the existing Badley (Metcalf Street) Bridge and ensuring the replacement bridge is sympathetic to surrounding cultural heritage resources.**

County Response No. 2c

The recommendation continues to be to replace the structure. The primary reason for this recommendation is the life safety of the travelling public based on the continued structural deterioration of the bridge. The bridge replacement is required for safety. In addition, the existing bridge has substandard width for sidewalks which do not meet current requirements.

The Supplementary HIA has included a context sensitive design section that provided input for the design team on “sympathetic design to the surrounding cultural heritage area”. The Supplementary 2018 HIA has described alternative approaches which respect the character of the area. These approaches will be considered by the Detail Design team as the project continues in design development.

MECP Comment No. 2d

- d) Submit the amended Heritage Impact Assessment and Cultural Heritage Evaluation Report for the Badley (Metcalf Street) Bridge to the Ministry of Tourism, Culture and Sport, the municipal heritage planner and the municipal heritage committee(s) for review prior to detailed design.**

County Response No. 2d

Ms. Shearer submitted the follow-up Supplementary Heritage Impact Assessment Report for the Badley (Metcalf Street) Bridge to the Ministry of Tourism, Culture and Sport on April 11, 2018 to Joseph Muller, and received confirmation of receipt on April 24, 2018. We are still awaiting formal comment from the MTCS on these reports. Because of the timing constraints for delivery of the project to meet in-water works restrictions, the design has been ongoing with final detailed design to be completed upon satisfying the imposed conditions. We are following up for permits and approvals from the Grand River Conservation Authority, DFO and Transport Canada.

The follow-up Supplemental Heritage Impact Assessment has also been submitted to the municipal heritage planner and municipal heritage committee for review, along with the County and Ms. Shearer meeting with the municipal heritage committee on November 13, 2018.

The County is concerned with respect to the outstanding comments from MTCS. To date, MTCS has not provided a written response or provided a timeline since the report was provided over six months ago. A response from MTCS is a critical element for the County to satisfy the imposed conditions.

MECP Comment No. 2e

- e) **Post and circulate notice of posting for comment the final amended Heritage Impact Assessment and Cultural Heritage Evaluation Report for the Badley (Metcalf Street) Bridge on Wellington County website.**

County Response No. 2e

The County had been awaiting comment from the MTSC on the amended Heritage Impact Assessment and Cultural Heritage Evaluation Report for the Badley (Metcalf Street) Bridge. However, based on the timing required for the delivery of the project, the Supplementary HIA will be posted in December 2018.

MECP Comment No. 2f

- f) **If changes to the preferred alternative for the Badley (Metcalf Street) Bridge result from the Supplementary Heritage Impact Assessment and Cultural Heritage Evaluation Report, Wellington County shall review the planning and design process and the current environmental setting to ensure the Project and mitigation measures are still valid.**

County Response No. 2f

The County confirms that the planning and design conditions are still valid.

MECP Comment No. 2g

- g) **Wellington County shall complete the addendum process as specified in the appropriate Class Environmental Assessment is required.**

County Response No. 2g

The design as proposed will not require a subsequent addendum as it falls within the scope of works described in the ESR.

MECP Comment No. 2h

- h) **Shall continue to circulate the Ministry of Tourism, Culture and Sport's Culture Division Programs and Services Branch with Updates on the progress of the Project.**

County Response No. 2h

The County agrees with the above comment and will continue to update the Ministry of Tourism, Culture and Sport's Culture Division Programs and Services Branch on the progress of the Project.

For your information we provide the following list of key contacts we have had with the MTCS during the planning and design of the project:

- Notice of Study Commencement in August 2015
- Letter from MTCS regarding Notice of Commencement on October 20, 2015
- Notice of PIC No. 1 on November 11, 2015
- Letter from MTCS regarding PIC exhibits sent to Ministry on November 16, 2015
- Emails inviting MTCS to participate in Evaluation Meeting
- Notice of PIC No. 2 on September 20, 2016
- Letter from MTCS regarding PIC No. 2 notice on October 3, 2016

- TAC Meeting with MTCS on November 15, 2016
- Letter to MTCS (Joe Mueller) on January 4, 2017
- Notice of Study Completion in February 2017
- Letter from MTCS regarding ESR and Appendices on March 3, 2017
- Letter to MTCS (Joe Mueller and Rosi Zirger) on April 10, 2017
- Supplementary HIA and CHER sent April 11, 2017

The original CHER and HIA were prepared and submitted by MHBC in early 2017; a reply letter asking for revisions was sent by MTCS and revised reports addressing the comments were submitted by MHBC on April 11, 2017. There has been no reply from MTCS on those revised reports.

The August 2017 MOECC approval required an independent third party to complete a new or supplementary HIA. That was the scope of work completed by Wendy Shearer and Mark Thompson Brandt. A Supplementary HIA was submitted in April 2018. (This work added new research and an analysis of the cultural landscape setting of the bridge to the earlier revised reports; therefore, it was viewed as a Supplementary Report.) No comments have been received from MTCS on this work.

This chronology is provided to clarify that the 2018 HIA report is described as a Supplementary HIA in this letter (to differentiate it from the earlier works).

Based in the supplemental heritage review confirming the technical advice that the bridge can be replaced. We have discussed an approach to move forward with staff of the Ministry of Tourism Culture and Sport considering both a collaborative approach with staff of the MTCS that would involve a design review workshop or to receive technical comments on the reports we have submitted. Based on a conversation with Karla Barboza MCIP, RPP, CAHP | (A) Team Lead, Heritage Ministry of Tourism, Culture and Sport Culture Division | Programs and Services Branch | Heritage Program Unit on November 30, 2018 we have agree to proceed based on receiving comments on reports previously submitted. Karla has agreed to provide written comments as soon as possible for assistance to guide in the design development based on the upcoming timing of the project for next year. Based on the schedule of the project delivery it will allow accelerated input. This component of the design would then be presented to the public at a planned PIC that is tentatively scheduled for June of 2019.

A preliminary schedule for implementation of the project is:

- Public Information Centre, June 2019
- Access road and cofferdam construction, September 2019
- Install deep foundations, September - October 2019
- Install pier column (beneath existing bridge), October - November 2019
- In water work restriction March to July of any year
- Close road and demolish bridge, January - March 2020
- Remove approach spans
- Remove truss
- Remove existing piers and abutments
- Remove footings to 600 mm below grade
- Construct abutments, July – August 2020
- Construct pier caps, July 2020

- Erect girders, August 2020
- Waterproof and pave deck, October 2020
- Open new bridge, November 2020

MECP Comment No. 3.

Wellington County shall ensure that the Badley (Metcalf Street) Bridge can withstand severe storm events through the necessary mitigation and adaption measures.

County Response No. 3

The Province has completed considerable work relating to changes in the rainfall intensities as a result of climate change. The conclusion is that changes in rainfall intensity could be as high as 24% by 2050 and 35% by 2080. Based on their findings, an infrastructure resilience study was conducted, and found that for bridges, the current design practices appear to provide resilience for the flow increases. The calculated increase in headwater levels for bridges ranged from 0.15 m to 0.4 m, depending on the type of bridge. In the case of the Badley Bridge, the design flood is the 100-year flood and the vertical clearance to the soffit at the span centerlines will be 1.0 m. Based on an increase in flow of 35%, the vertical clearance will accommodate these future storm events.

For extreme events above the 100 year event, the flow may follow the overland flow route along West Mill Street. The Township of Centre Wellington's Official Plan recognizes this as environmental hazard lands, and the planned construction projects maintain this as a potential flow route.

MECP Comment No. 4.

Wellington County shall hold one public meeting to inform the public of its proposed design for the Badley (Metcalf Street) Bridge at least 60 days prior to the start of any construction activities related to the Badley (Metcalf Street) Bridge.

County Response No. 4

The County of Wellington will hold a public meeting to inform the public of its proposed design for the Badley (Metcalf Street) Bridge at least 60 days prior to the start of any construction activities related to the Badley (Metcalf Street) Bridge. The Badley (Metcalf Street) Bridge is currently in the preliminary design stage; therefore, the date has not yet been set for the public meeting. Once the public meeting is held, an additional submission to the MECP will follow for this item.

MECP Comment No. 5.

Wellington County shall submit the final design of the Badley (Metcalf Street) Bridge, the rationale for the final design and documentation from the public meeting to the Director of the Environmental Approvals Branch prior to the start of construction of the Badley (Metcalf Street) Bridge.

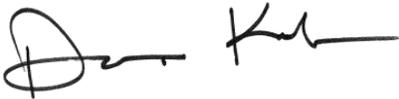
County Response No. 5

The County of Wellington will submit the final design of the Badley (Metcalf Street) Bridge, the rationale for the final design and documentation from the public meeting to the Director of the Environmental Approvals Branch prior to the start of construction of the Badley (Metcalf Street)

Bridge. The Badley (Metcalf Street) Bridge is currently in the preliminary design stage. Once this information is available, an additional submission to the MECP will follow for this item.

As noted in response 2d, receiving comment from Ministry of Tourism Culture and Sport is currently an outstanding matter that is critical for the County to satisfy the imposed conditions. By copy of this letter to MTCS, we hope that this will facilitate the receipt of comments in order for the Ministry of Environment, Conservation and Parks conditions to be satisfied, so that further work with respect to the replacement of this bridge can proceed in accordance with the requirements of MECP.

Sincerely,

A handwritten signature in black ink, appearing to read 'Don Kudo', with a stylized flourish at the end.

Don Kudo, P.Eng.

County Engineer, County of Wellington

c.c.: Steven Taylor, EA Project Manager, BT Engineering Inc.
Wendy Shearer OALA, FCSLA, ASLA, CAHP, Landscape Architect, Cultural Heritage Specialist
Mark Thompson Brandt, MTBA, OAA, MRAIC, LEED AP, CAHP, AIA, APTi, Sr. Conservation Architect & Urbanist
William Van Ruyven, WSP Structural Design Lead
Michael Tibollo, MPP, Minister of Tourism, Culture and Sport
Colin Baker, Managing Director of Infrastructure Services, Township of Centre Wellington