



BURNSIDE

**Municipal Class Environmental
Assessment of 5 Bridges in Former
Pilkington Township**

**Township of Centre Wellington
1 MacDonald Square
Elora Ontario N0B 1S0**



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**R.J. Burnside & Associates Limited
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**February 24, 2025
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Record of Revisions

| Revision | Date | Description |
|----------|-------------------|--|
| DRAFT | January 30, 2024 | Initial Draft Submission for Review |
| DRAFTv2 | February 8, 2024 | Revised Submission for Review |
| DRAFTv3 | February 21, 2024 | Draft Submission for Council Review |
| FINAL | March 7, 2024 | Final Submission for Filing |
| REV 1 | February 24, 2025 | Revised to include Archaeological Assessment findings and to address additional comments from MCM and SNGREC |

R.J. Burnside & Associates Limited

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i. Revisions and Supplemental Information

This section outlines revisions and supplemental studies and information that have occurred since the issuance of the Notice of Study Completion on March 7, 2024. The report herein has been updated to include these revisions.

Background

Following the issuance of the Notice of Study Completion on March 7, 2024, a Section 16 Order was requested by Six Nations of the Grand River Elected Council (SNGREC) requesting additional consultation. The study team provided additional information and engagement opportunities to SNGREC through meetings and email correspondence to address the concerns identified by SNGREC in their Section 16 Order Request. On September 19, 2024, SNGREC emailed Ministry of Environment Conservation and Parks (MECP) staff indicating that their concerns have been addressed through further consultation with the Township and that they were withdrawing their Section 16 Order request. The additional correspondence has been included in this revised report, within Appendix H.

Additionally, since the completion of the MCEA, the Stage 1 and 2 Archaeological Assessments have been completed and this report has been updated accordingly.

Additional comments were also received from the MECP, Grand River Conservation Authority and Ministry of Citizenship and Multiculturalism during the review period following the Notice of Completion. The report has been updated to address the comments received.

The following information, as further outlined in the table below, is provided as an update to the Project File Report to document engagement and report revisions:

- Engagement with SNGREC and Mississaugas of the Credit First Nation
- Stage 1 and 2 Archaeological Assessment
- Agency responses and associated updates to the Project File Report from MECP, Grand River Conservation Authority, and Ministry of Citizenship and Multiculturalism

Record of Revisions and Supplemental Information

| Revision | Date | Description |
|-----------------|-------------|--|
| 1 | March 2024 | <p>Comments on the MCEA report were received from the Ministry of Citizenship and Multiculturalism. Comments following the Notice of Study Completion have been added to Appendix H6.</p> <p>The Project File Report is updated by way of the changes made in the responses to comments contained here-in.</p> <p>The heading for Section 4.3 has been updated from “Cultural Heritage” to “Built Heritage Resources and Cultural Heritage Landscapes”.</p> <p>Section 11.1 Detailed Design commitments is updated herein with the following additional commitments:</p> <ul style="list-style-type: none"> • “The recommendations of the Stage 1 and 2 archaeological assessments (AAs) and any further recommended stages should be followed. If revisions to the designs result in ground disturbances beyond the previously disturbed lands, or beyond the approximate grading limits shown in the preliminary replacement structure designs of this study, additional archaeology assessment of the areas should be undertaken. Any further recommended archaeological assessments (e.g., Stage 2, 3 and 4) shall be undertaken by a licensed archaeologist as early as possible during detailed design and prior to any ground disturbing activities. <p>Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore be subject to Section 48(1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the Ontario Heritage Act.</p> |

| Revision | Date | Description |
|----------|----------------|--|
| | | <p>The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with Ontario Regulations 30/11 the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the Ontario Heritage Act.</p> <p>Documentation of each structure should be compiled and deposited in a local publicly accessible repository in accordance with the recommendations of the Cultural Heritage Assessment Report.”</p> |
| 2 | March 2024 | Comments received from the Grand River Conservation Authority have been added to Appendix H6 including the response letter to the Notice of Study Completion. |
| 3 | April 2024 | Appendix H3 is updated to include acknowledgment of the Notice of Study Completion and comments from Mississaugas of the Credit First Nation. |
| 4 | September 2024 | <p>Section 11.1 Detailed Design commitments is updated herein with the following additional commitments:</p> <p>“A tree inventory will be completed to determine and characterize required removals. The Six Nations of the Grand River Elected Council (SNGREC)’s list of plant species of interest and importance shall be reviewed to identify if vegetation proposed for removal is of interest to the SNGREC. Impacts to trees shall be minimized by implementing a tree protection plan in areas adjacent to construction or grading.</p> |

| Revision | Date | Description |
|----------|------|--|
| | | <p>Plant species loss should be minimized where possible, and a re-vegetation plan using native species and seed mix should be created. A re-planting ratio of 10 replanted trees per one removed tree shall be used for quantifying replacements, as per the request of the Six Nations of the Grand River Elected Council (SNGREC). Re-planting should be completed on-site to the extent possible. Where the required re-planting quantities are unable to be achieved within the Township right-of-way, the preference is for the Township to strive to reach an agreement with the immediately adjacent landowners to allow for replanting on-site, beyond the Township right-of-way. If on-site planting is not achievable, off-site plantings to reach the desired ratios are acceptable to the SNGREC.</p> <p>Plant species identified for replanting shall be selected from the SNGREC's list of species of Interest / Importance which are suitable for the proposed planting locations. The Kayanase Greenhouse is available for consultation regarding replanting initiatives during detailed design.</p> <p>Near-bank cover plantings along the watercourse shall be included in the re-planting landscaping plan where possible, while considering the required offset of plantings from structures.</p> <p>Alignment options including radiused or elbow corners within the proposed Bridge 32-P culvert shall be considered in order to optimize the alignment with the existing upstream and downstream watercourse during detailed design.</p> <p>The geometry and alignment of structures should be reviewed during the detailed design stage. Where additional data gathered or analysis completed during the detailed design phase of the project results in a significant change to the proposed structure, the requirement for an addendum to the Project File Report</p> |

| Revision | Date | Description |
|----------|----------------|---|
| | | <p>as part of the MCEA will be reviewed and undertaken if deemed required.</p> <p>All bridge and SWM-related components of the projected shall be designed with consideration for increased precipitation due to Climate Change.</p> <p>Where erosion protection, channel regrading / stabilization or earth retaining structures are determined to be required, the use of “softer” means of protection shall be preferred over the use of hard surfaces unless it is unfeasible to do so. For example, the use of vegetated MSE wall systems at Bridge 32-P shall be preferred over a concrete retaining wall.</p> <p>The recommendations of the Stage 1 & 2 archaeological assessment (AA) and any further recommended stages should be followed. If revisions to the designs result in ground disturbances beyond the previously disturbed lands, or beyond the approximate grading limits shown in the preliminary replacement structure designs of this study, additional archaeology assessment of the areas should be undertaken. Any further recommended archaeological assessments (e.g., Stage 2, 3 and 4) shall be undertaken by a licensed archaeologist as early as possible during detailed design and prior to any ground disturbing activities. Indigenous communities that were included in the EA contact list shall be consulted and given an opportunity to participate in any additional Archeological Assessment reporting and monitoring process that may be determined to be required during the detailed design phase.”</p> |
| 5 | September 2024 | <p>A new appendix, Appendix I, was added with the Stage 1 and 2 Archaeological Assessments (AA). The Stage 1 AA was initiated but not completed prior to filing of the Project File Report in March 2024. Based on results of the Stage 1 AA, a Stage 2 AA was completed.</p> <p>The text in Section 4.4 Archaeology is updated herein:</p> <p>“Stage 1 and 2 Archaeology Assessments (AAs) have been completed for the locations where replacement</p> |

| Revision | Date | Description |
|----------|------|---|
| | | <p>structures are recommended (Bridges 28-P, 32-P, and 33-P), as the anticipated ground disturbance will exceed the limits of previous disturbance. The following is a summary of the findings of these studies:</p> <p>Stage 1 Archaeology Assessment:</p> <ul style="list-style-type: none"> • The study area at Bridge 32-P was determined to have low archaeological potential due to previous disturbance and poorly drained areas. No further studies were recommended for the Bridge 32-P site. • Small swaths of land adjacent to the right-of way were identified to exhibit archaeological potential at Bridges 28-P and 33-P. These areas were recommended to be subjected to a Stage 2 Archaeological Assessment prior to ground disturbance. <p>A Stage 2 Archaeological Assessment was completed at Bridges 28-P and 33-P within the previously identified area of Archeological potential on July 24, 2024. A Field Liaison Representative from the Mississauga of the Credits First Nations was present to oversee the field works. No archaeological materials were found during the investigation. As such, no further archaeological studies are recommended.</p> <p>At the time of submission of the Project File Report, the Stage 1 and 2 Archaeological Assessment report had not been reviewed by the Ministry of Citizenship and Multiculturalism (MCM). Prior to proceeding with proposed ground disturbance, the proponent will ensure that any comments received by the MCM will be addressed and the proponent will not commence with any ground disturbances until the MCM's review letter has been received.</p> <p>At locations where the structures are recommended to be removed and not replaced (Bridge 1-P and 30-P), the limits of disturbances caused by the removals are intended to be constrained to the areas previously</p> |

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| | | <p>disturbed by the original construction of the structures and the approach roadways. Given that the work is to be limited to previously disturbed areas, the scope of this work is not anticipated to disturb areas of archaeological potential and an archaeology assessment has not been completed, accordingly. However, if it is determined that disturbance will occur beyond the existing limits of previous construction during detailed design of the removals, further archaeological investigations shall be conducted on these sites prior to completing any works which will cause ground disturbances.</p> <p>The Stage 1 and 2 Archaeological Assessments are provided in Appendix I for additional information.”</p> |
| 6 | February 2025 | Appendix H3 is updated to include comments received from Six Nations of the Grand River including: minutes of meetings and email correspondence following issuance of the Notice of Study Completion. |

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Appendices

- Appendix A Road / Link Continuity Screening Technical Memorandum
- Appendix B Cultural Heritage Assessment Report
- Appendix C Heritage Documentation Report (Photo Inventory) Bridge 1-P
- Appendix D Geometric & Hydraulic Design Technical Memorandum
- Appendix E Natural Heritage Report
- Appendix F Preliminary Bridge Replacement Cost Estimates (Construction)
- Appendix G Evaluation of Alternatives Matrix
- Appendix H Consultation Records
- Appendix I Consultation Records

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1.0 Introduction and Background

1.1 Introduction

The Township of Centre Wellington (Township) has conducted a study on five bridge structures which are currently closed to traffic and are located within a 20 km² study area, which is located in the northwest quadrant of the Township, in the former Township of Pilkington. These structures have been closed by the Township based on recommendations of structural engineers due to their severely deteriorated physical condition.

The Township has recognized the impact of having numerous closed structures on the overall connectivity of the community and has conducted a Schedule B Municipal Class Environmental Assessment (MCEA) to review opportunities available to address the closures and the overall connectivity within the Study Area.

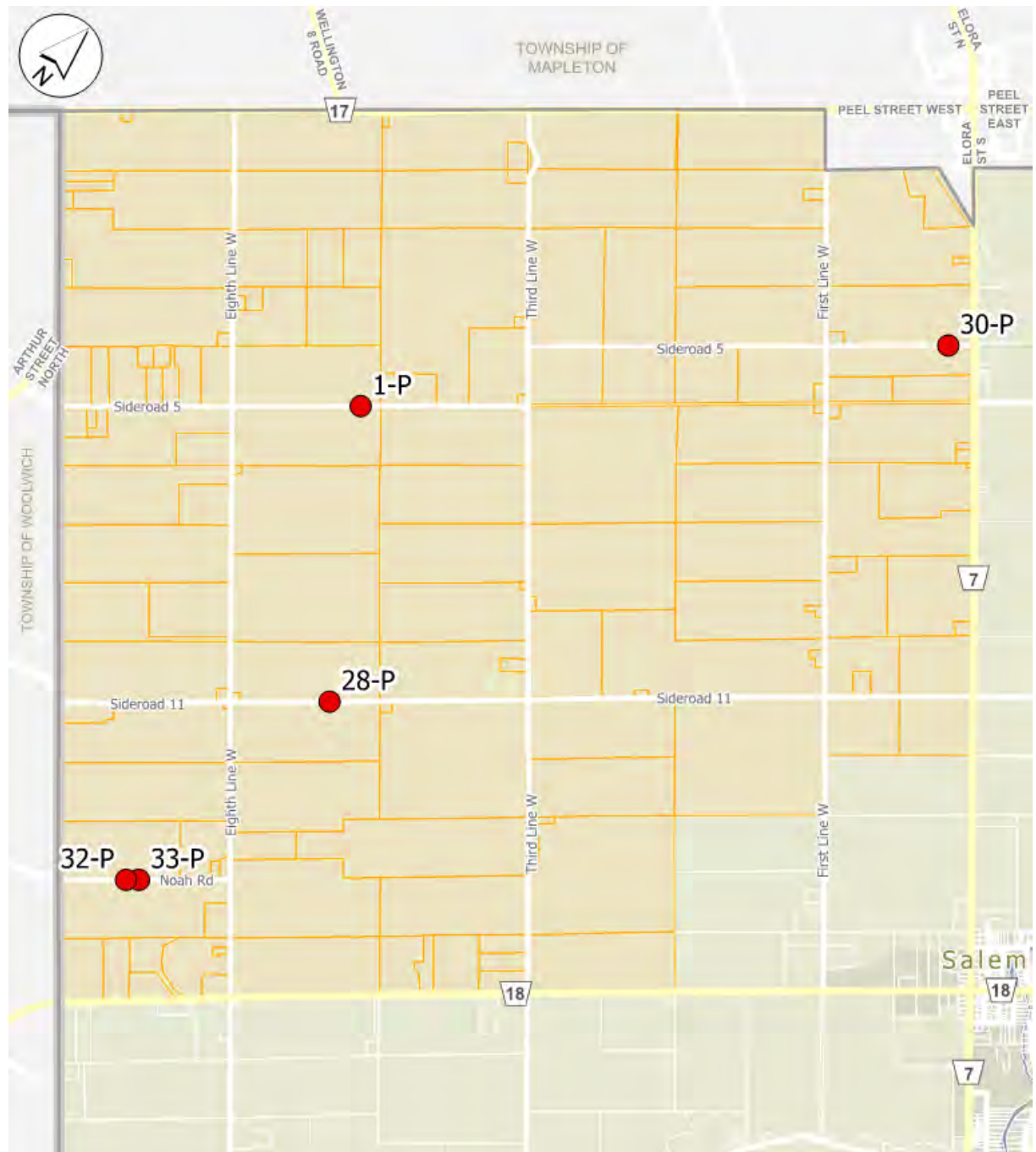
1.2 Study Area

The study area is an approximately 20 km² area in the northwest quadrant of the Township of Centre Wellington, adjacent the boundary lines with Mapleton Township and Woolwich Township. This area was formerly part of Pilkington Township prior to the amalgamation in 1999. The locations of the five bridges being assessed are outlined below and illustrated in Figure 1. Bridges 32-P and 33-P are separated by less than 100 m and, as such, will be considered a single site for the purposes of this study.

- **Bridge 1-P:** Located on Sideroad 5, between 8th Line West and 3rd Line West
- **Bridge 28-P:** Located on Sideroad 11, between 8th Line West and 3rd Line West
- **Bridge 30-P:** Located on Sideroad 5 West, between Wellington Road 7 and 1st Line West
- **Bridges 32-P and 33-P:** Located on Noah Road, west of 8th Line West.

The five bridges service a Rural community which is home to agricultural, residential, and commercial properties. The network of roads within the study area carries motorized and horse drawn vehicles and connects the community to the neighbouring villages of Alma, Salem, Elora, and Fergus.

Figure 1: Study Area



2.0 Municipal Class Environmental Assessment Process

The planning of public sector projects or activities that have the potential for environmental effect are subject to an MCEA as required by Ontario's Environmental Assessment Act, R.S.O. 1990 (EAA).

The MCEA process was developed by the Municipal Engineers Association (MEA), in consultation with the Ministry of the Environment, Conservation and Parks (MECP), as an alternative method to Individual Environmental Assessments for recurring municipal projects that were similar in nature, usually limited in scale and with a predictable range of environmental impacts, which were responsive to mitigating measures.

The MCEA solicits input from regulatory agencies, the municipality, Indigenous Communities, and the public at the local level. This process leads to an evaluation of the alternatives in view of the significance of the environmental effects, including the technical, natural, social / cultural, and economic impact of a project, and the choice of effective mitigation measures.

The Township of Centre Wellington has completed a Schedule B MCEA to consider options for the future of the five bridges.

Based on the description provided in the Municipal Engineering Association (MEA) Guide for Municipal Class EAs (2023) for municipal road and infrastructure project activities, the Alternative Solutions being considered and the estimated cost limit for the project, it was determined that a Schedule B MCEA with a Project File Report was appropriate for the undertaking of this investigation.

As a Schedule B project, the project planning proceeds under the planning and documentation procedures of Phases 1 and 2 of the MCEA process. Through this process, reasonable Alternative Solutions identified are evaluated with input from agencies, Indigenous communities and stakeholders toward a recommendation for a Preferred Solution. As a minimum, public consultation is required at two stages. At the conclusion of Phase 2, the appropriate MCEA planning Schedule is confirmed and, if there are no outstanding concerns, the proponent may proceed to design and implementation.

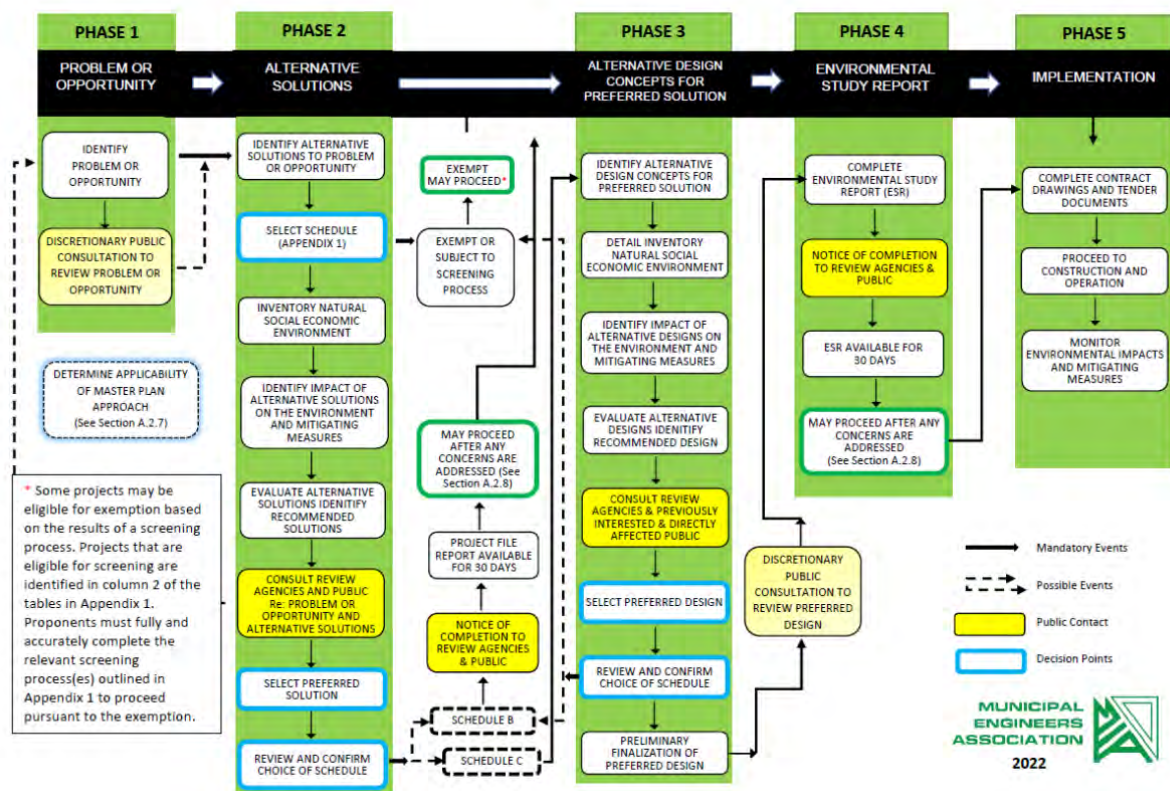
The phases of the Class EA are illustrated in Figure 2 and summarized as follows:

- **Phase 1** - Identify the problem (deficiency) or opportunity.
- **Phase 2** - Identify alternative solutions to address the problem or opportunity by taking into consideration the existing environment and establish the preferred solution taking into account the public and review agency input. At this point, determine the appropriate schedule for the undertaking and document decisions in a

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- project file for Schedule B projects, or proceed through the following phases for Schedule C projects.
- **Phase 3** - Examine alternative methods of implementing the preferred solution, based upon the existing environment, public and review agency input, anticipated environmental effects, and methods of minimizing negative effects and maximizing positive effects.
 - **Phase 4** - Document, in an ESR, a summary of the rationale, and the planning, design and consultation process of the project as established through the above phases and make such documentation available for scrutiny by review agencies and the public.
 - **Phase 5** - Complete contract drawings and documents and proceed to construction and monitor construction for adherence to environmental provisions and commitments. Where special conditions dictate, monitor the operation of the completed facilities.

Figure 2: MCEA Process Flow Chart



3.0 Problem and Opportunity

The five bridges included in this study have all been closed to traffic or removed due to concerns related to their load carrying capacity. The closure of several bridges within a relatively small portion of the road network (20 km²) has led to impacts to connectivity within the study area, which have resulted in additional concerns to the local population and affected stakeholders. The deteriorated state of the closed structures also poses a risk to the public and the environment, resulting in liability concerns to the Township.

Based on review of the study area and consultation throughout the study process, the problems arising due to the closure of these structures can be summarized as follows:

- The Study Area is lacking an east-west connection.
- Traffic (including slow moving vehicles) are having to use busy Wellington County roads, which increases the risk of accidents and reduces the level of service of the arterial route, which is intended to be used for more through traffic.
- Emergency personnel are experiencing delays in reaching destinations.
- Landowners have had to construct private infrastructure to maintain access to their lands on each side of the watercourse and the public is using these privately constructed bridges, causing concern to the Township and Owners of the private bridges regarding liability.
- Closure of structures is causing traffic hazards when larger vehicles are unable to turn-around at the closed structures and have to reverse down the road and into intersections.
- The failing state of the remaining infrastructure presents risks to the public and the surrounding environment should collapse occur.
- The Study Area Population feel 'forgotten' because improvements are occurring in other portions of the Township and not within the Study Area.

In considering the future of these crossing locations, the following opportunities have also been identified:

- Opportunity to provide wider crossings to accommodate farming equipment.
- Potential of diverting watercourse flows to an alternative crossing to eliminate the need for additional infrastructure (Bridge 32-P).
- Potential to use low-level crossings where possible to reduce the capital expenditure requirements for low volume locations.
- Potential for geometry and alignment improvements to reduce the potential for erosion and provide additional aquatic and wildlife habitat and / or passage.
- Opportunity to improve road safety, by improving sight lines and providing roadside safety elements.

The Township has conducted this Schedule B Municipal Class Environmental Assessment to evaluate the role of these structures within the overall transportation

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network and connectivity in the local community to determine the most suitable solution for their future, with a desire to address the problems and opportunities identified above.

4.0 Existing Conditions – Overall Study Area

4.1 Transportation Network

The Study Area encompasses an approximately 20 km² system of roads that are situated in a relatively grid-like manner, as illustrated previously in Figure 1. The road network provides connectivity within the Study Area, and to the neighbouring communities of Alma, Salem, Elora, and Fergus.

A summary of the road characteristics for the Study Area is provided in Table 1 below. Roads in the Study Area generally run in a northeast to southwest orientation, or a northwest to southeast orientation. However, for the purpose of this study, they have been classified as 'East-West' or 'North-South'.

Table 1: Study Area Roadway Characteristics

| Road | Classification | Travel Direction | Surface Type | Regulatory Speed Limit | Average Annual Daily Traffic | |
|---|-------------------------|------------------|--------------|------------------------|--------------------------------|---------------------------------|
| | | | | | Existing (2021) ^[1] | Projected (2041) ^[1] |
| Side Road 5 | Two-Lane Local Rural | East-West | Gravel | 80 km/h (un-posted) | 46 | 85 |
| Side Road 5 West | Two-Lane Local Rural | East-West | Gravel | 80 km/h (un-posted) | 91 | 169 |
| Side Road 11 | Two-Lane Local Rural | East-West | Gravel | 80 km/h (un-posted) | 143 | 256 |
| Wellington Road 18 | Two-Lane Rural Arterial | East-West | Paved | 80 km/h (posted) | N/A | N/A |
| Wellington Road 17 | Two-Lane Rural Arterial | East-West | Paved | 80 km/h (posted) | N/A | N/A |
| Wellington Road 7 | Two-Lane Rural Arterial | North-South | Paved | 80 km/h (posted) | N/A | N/A |
| 1st Line West | Two-Lane Local Rural | North-South | Gravel | 80 km/h (un-posted) | 146 | 271 |
| 3rd Line West | Two-Lane Local Rural | North-South | Paved | 80 km/h (un-posted) | 133 | 246 |
| 8th Line West | Two-Lane Local Rural | North-South | Paved | 60 km/h (posted) | 1,923 | 3,563 |
| ^[1] Traffic counts were taken after the closure of all structures and are therefore a representation of the current and future volumes under the scenario where all bridges remain closed. | | | | | | |

Several of the roads in the Study Area do not have posted speed limits. While these unposted roadways are considered to have regulatory speed limits of 80 km/h in accordance with the Highway Traffic Act (located outside of built-up area), it is apparent by travelling the roads that the road geometry and sightlines would not meet the required criteria for an 80 km/h design speed. This has been confirmed within the local area of the bridge structures by topographic survey of the road profile, which indicates that the design speeds of the roadways are actually in the range of 20 km/h to 60 km/h.

The road networks serve a primarily rural community which is heavily agricultural, with some industrial use lands present as well. The population of the Study Area is also noted to have a significant representation of Mennonite population, and the local Bethel Mennonite Church is located in the Study Area, at the intersection of 8th Line and Sideroad 11.

Traffic on the roadways consists of passenger vehicles (automobiles and horse and carriage), as well as trucking operations for moving products of various farmlands, and some industrial and commercial businesses. The transportation of the farmland products rests on light duty trucks which are the only type of heavy vehicles allowed to use the local roads in the study area. Wellington Road 7 and 17 have been designated as truck by-pass routes for heavy trucks.

At the location of Bridge 1-P, Sideroad 5 is a no-winter maintenance roadway due to the steep grade roads on the approaches.

Although there is no formal active transportation network within the study area, it is understood that these low-volume roads are used by the public for recreational activities such as walks and cycling. During consultations, it was confirmed that the gravel roads of the Study Area are part of a gravel-road cycling route used by a local group of cyclists.

4.1.1 Cross-Community Connectivity

In the current conditions with all bridges closed, the Study Area is lacking a continuous east-west connection, resulting in poor connectivity for the local community within the Study Area and to the surrounding neighbourhoods. The lack of east-west connection between 8th Line West and 3rd Line West is forcing traffic (including slow moving farm equipment and horse and carriage) to the busier arterial roads of Wellington Road 17 and Wellington Road 18.

Figure 3: Cross-Community Connectivity Screening Areas

The Road / Link Continuity Screening technical memorandum included in Appendix A contains a detailed review of the travel times and distances between various areas within the Study Area and surrounding communities. The findings of the existing conditions of that study are provided herein.

To analyse travel within the Study Area, the area was subdivided into four parcels (Areas 1, 2, 3, and 5) separated by points of discontinuity resulting from the bridge closures. Additionally, points of interest in surrounding areas outside the Study Area (Area 4, Alma, Salem, Elora & Fergus) were also investigated for considerations of commuting traffic. These areas are illustrated in Figure 3.

One origin / destination location was picked from each of the screening areas for evaluation. Although the travel time between different locations within the screening areas may vary, the relative change between the areas will be the same regardless of the chosen origin / destination from within each area. The study found that the closure of the bridges has no impact on travel to / from the Area 4 destination. Also, the relative changes to travel times and distances to Elora and Fergus will be the same as those to Salem. Accordingly, Areas 4, Elora and Fergus were not carried forward as origin / destination points. The existing travel times between screening areas are summarized in Table 2 and will form the basis for comparison of the alternative solutions outlined in Section 6.3 of this report.

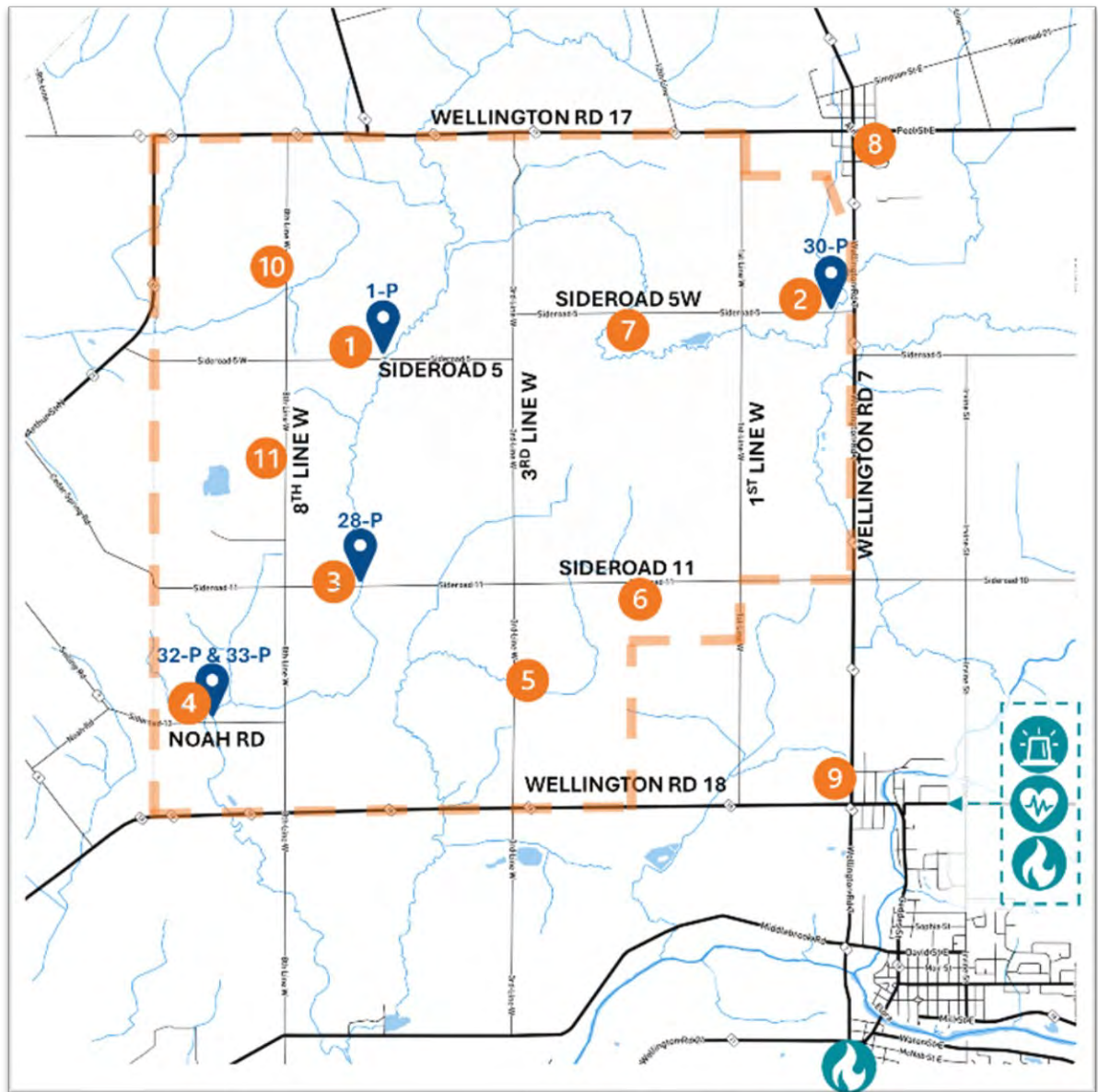
Table 2: Cross-Community Travel Times, Existing Conditions (All Bridges Closed)

| Origin | Destination | Travel Time (mins) | Travel Distance (km) |
|--------|-------------|--------------------|----------------------|
| Area 1 | Area 5 | 4.3 | 5.7 |
| | Alma | 5.2 | 6.2 |
| | Salem | 8.1 | 10.2 |
| Area 2 | Area 5 | 5.8 | 7.7 |
| | Alma | 7.4 | 9.2 |
| | Salem | 5.8 | 7.2 |
| Area 3 | Area 5 | 7.6 | 10.1 |
| | Alma | 11.0 | 13.8 |
| | Salem | 7.6 | 9.6 |

4.1.2 Emergency Response

Similarly, the current bridge closures effect the response times and travel distances for emergency services. An analysis of response times and distances from the local Hospital, Fire Halls, and OPP Station was conducted and is detailed in Appendix A. The evaluated destinations are illustrated in Figure 4 and have been selected on the west side of closed structures, as well as mid-way between crossing roads to represent the worst-case response times in the Study Area. A summary of the travel times under the current condition, with all bridges closed, is provided in Table 3 below. These emergency response travel times will form the basis for comparison of the alternative solutions outlined in Section 6 of this report.

Figure 4: Emergency Response Origins and Destinations



Municipal Class Environmental Assessment of 5 Bridges in Former Pilkington Township
February 24, 2025

Table 3: Emergency Response Times (Minutes), All Bridges Closed

| Origin / Destination | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|-----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|
| Elora Fire Hall | 12.0 | 10.0 | 9.0 | 12.0 | 6.5 | 6.3 | 8.1 | 8.2 | 3.4 | 10.8 | 10.2 |
| Fergus Fire Hall | 17.1 | 16.0 | 16.1 | 19.0 | 13.6 | 12.1 | 13.8 | 14.5 | 10.5 | 17.3 | 16.1 |
| Groves Memorial Hospital | 14.8 | 13.0 | 13.2 | 17.0 | 10.8 | 9.3 | 11.2 | 12.0 | 7.6 | 15.3 | 14.4 |
| OPP Station - Fergus | 15.8 | 9.6 | 12.1 | 15.0 | 10.0 | 8.1 | 10.0 | 10.0 | 6.4 | 15.0 | 13.3 |

4.2 Hydraulics

All structures, with the exception of Structure 32-P, are located over Carroll Creek. Structure 32-P conveys a small tributary, which feeds into the Carroll Creek approximately 250 m downstream of crossing. All structures are within the regulatory areas of the Grand River Conservation Authority (GRCA).

No hydraulic models for Carroll Creek or the small tributary were available from the Grand River Conservation Authority. As such, short-reach hydraulic models were developed for each of the sites using topographic survey information within the right-of-way, supplemented by MNR contour and LiDAR data.

All structures are located on local classification roads and have a span larger than 6.0 m. As such, the preferred design criteria for hydraulics are summarized below, as outlined in the Ministry of Transportation Ontario (MTO) Highway Drainage Design Standards (2008).

Table 4: Hydraulic Design Criteria

| Criteria | Standard Road Classification | Low Volume Road Classification |
|-----------------------------------|-------------------------------------|---------------------------------------|
| Design Storm Return Period | 25 Years | 25 Years |
| Freeboard | 0.3 m | Not Applicable |
| Clearance ⁽¹⁾ | 0.3 m | 0.0 m |
| Change to Flood Elev. | <0.1 m ⁽²⁾ | <0.1 m ⁽²⁾ |

⁽¹⁾ Clearance requirements apply to open-bottom structures with erodible channel beds only

⁽²⁾ Modelling tolerance that is typically accepted by Conservation Authorities associated with the limited accuracy of hydraulic modelling

As visible above, less stringent requirements are identified for Low Volume Road classification within the guidelines. While the subject structures are currently projected to remain within Low Volume traffic volumes through 2041 based on available projections, there is a potential that the 400 vehicles / day threshold may be exceeded within the 75-year design life of the structures.

The hydraulic conditions for the individual sites are outlined further in Section 5.0, as well as in the 'Geometric and Hydraulic Design' Technical Memorandum included in Appendix D.

4.3 Built Heritage Resources and Cultural Heritage Landscapes

As part of this study, a Cultural Heritage Assessment Report (CHAR) was completed by Parslow Heritage Consultancy Inc. for each of the five existing structures. The purpose of the study was to review relevant historical documents, evaluate any potential cultural

heritage value or interest (CHVI) and provide recommendations of each bridge, as appropriate.

As part of the assessment, a site visit was conducted on June 29, 2023, to document the bridges and surrounding landscape. The results of the assessment determined that none of the five structures fulfilled the requirements of the Ontario Heritage Act for Designation, nor did any of the structures meet the 60-point threshold for heritage value based on the MTO bridge assessment standards.

As such, the structures are not candidates for formal heritage protection under the Ontario Heritage Act. However, it was noted that each of the bridges contribute to the rural agricultural landscape of the Study Area.

The summary of the findings and recommendations of the study are as follows:

- No further heritage reports are required for each of the five bridges.
- Any replacement structures should be designed to reflect the existing designs of each bridge where possible. An attempt shall be made to incorporate the unique designs of the original into any replacement structures.
- Bridge 1-P is located within 650 m of structures associated with a Listed property. Given the distance between the bridge and the structures, it is highly unlikely the structures will be impacted, directly or indirectly, by any of the proposed works at Bridge 1-P. Therefore, no further heritage report is recommended specific to the proximity of Bridge 1-P to this Listed property.
- Documentation of each structure be deposited in a local publicly accessible repository. Given the extent of previous assessment on each structure, the existing reports should be accepted as a complete record.

The full Cultural Heritage Assessment Report, completed by Parslow Heritage Consultancy Inc., is provided in Appendix B.

A Photographic Inventory document of Structure 1-P had been previously completed, which documented the steel truss structure prior to its removal in 2019. This document is considered to fulfill the documentation recommendations of the CHAR and is included in Appendix C.

4.4 Archaeology

Stage 1 and 2 Archaeology Assessments (AAs) have been completed for the locations where replacement structures are recommended (Bridges 28-P, 32-P, and 33-P), as the anticipated ground disturbance will exceed the limits of previous disturbance. The following is a summary of the findings of these studies:

Stage 1 Archaeology Assessment:

- The study area at Bridge 32-P was determined to have low archaeological potential due to previous disturbance and poorly drained areas. No further studies were recommended for the Bridge 32-P site.
- Small swaths of land adjacent to the right-of way were identified to exhibit archaeological potential at Bridges 28-P and 33-P. These areas were recommended to be subjected to a Stage 2 Archaeological Assessment prior to ground disturbance.

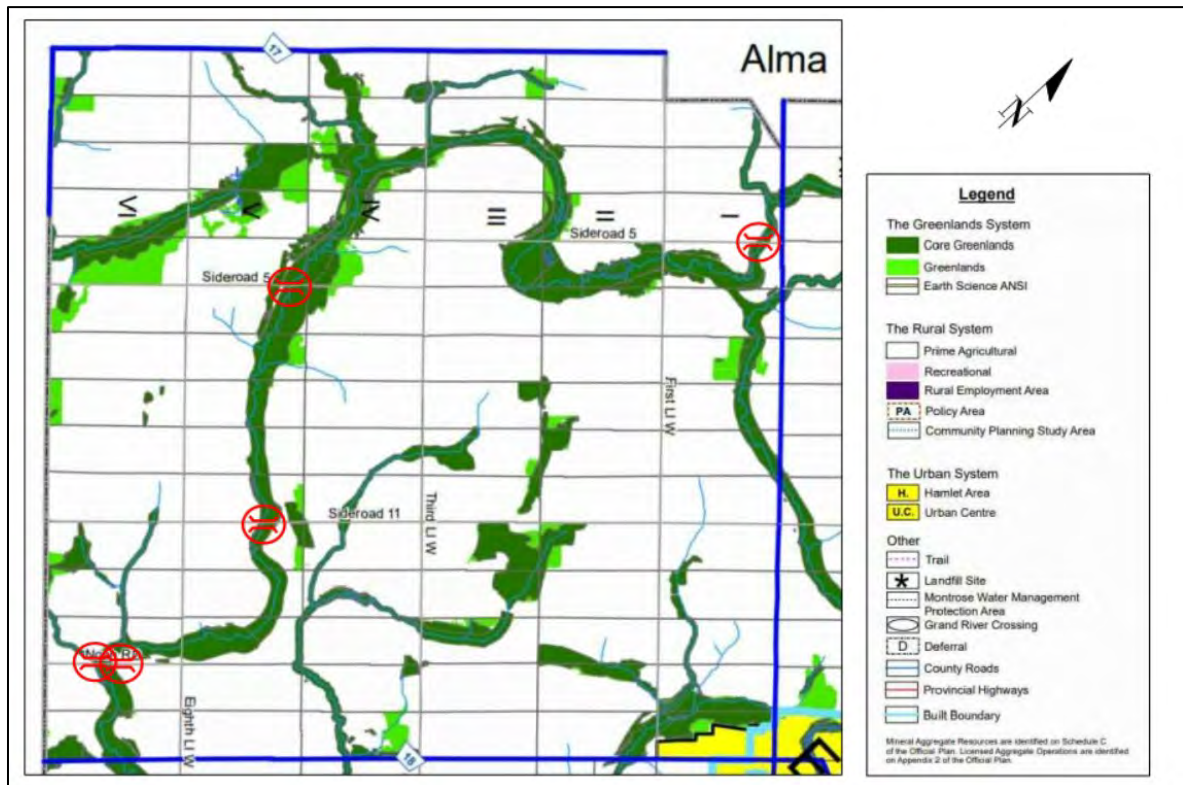
A Stage 2 Archaeological Assessment was completed at Bridges 28-P and 33-P within the previously identified area of Archeological potential on July 24, 2024. A Field Liason Representative from the Mississauga of the Credits First Nations was present to oversee the field works. No archaeological materials were found during the investigation. As such, no further archaeological studies are recommended. The Stage 1 and 2 Archaeological reports are available in Appendix I for additional information.

At the time of submission of the Project File Report, the Stage 1 and 2 Archaeological Assessment report had not been reviewed by the Ministry of Citizenship and Multiculturalism (MCM). Prior to proceeding with proposed ground disturbance, the proponent will ensure that any comments received by the MCM will be addressed and the proponent will not commence with any ground disturbances until the MCM's review letter has been received.

At locations where the structures are recommended to be removed and not replaced (Bridge 1-P and 30-P), the limits of disturbances caused by the removals are intended to be constrained to the areas previously disturbed by the original construction of the structures and the approach roadways. Given that the work is to be limited to previously disturbed areas, the scope of this work is not anticipated to disturb areas of archaeological potential and an archaeology assessment has not been completed, accordingly. However, if it is determined that disturbance will occur beyond the existing limits of previous construction during detailed design of the removals, further archaeological investigations shall be conducted on these sites prior to completing any works which will cause ground disturbances.

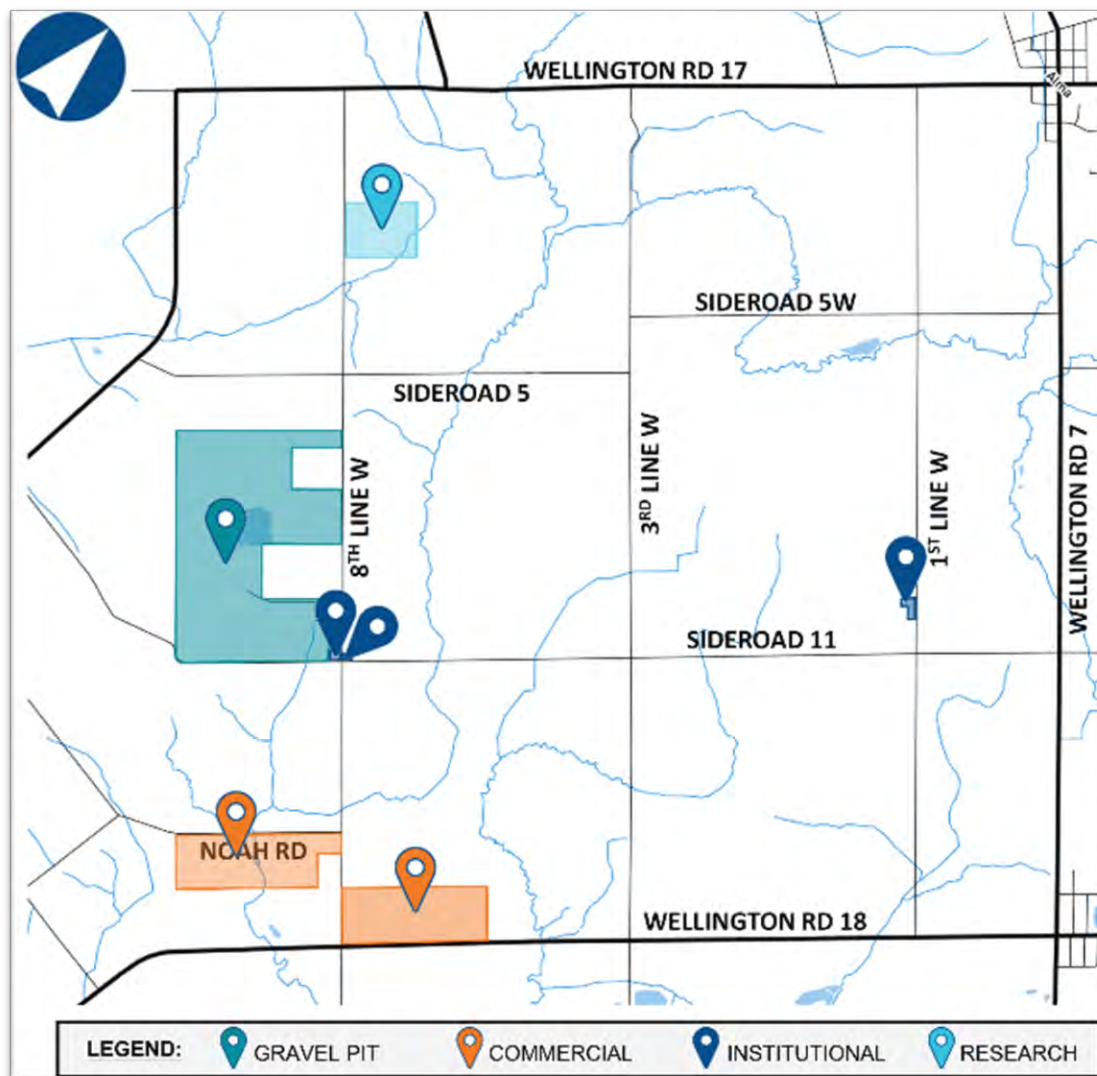
4.5 Socio-Economic Environment

The existing land use designation identified by the Wellington County Official Plan includes mainly prime agricultural, green lands and core green lands, as illustrated in Figure 5.

Figure 5: Study Area Land Use

(Source: Township's Official Plan)

Property uses in the area consist of mainly residential and agricultural; however, a four-parcel gravel pit, two commercial properties, three institutional properties, and one research facility are also located in the study area, as illustrated in Figure 6. Institutional properties consist of the Bethel Mennonite Church, located on the northwest corner of the intersection of 8th Line West and Sideroad 11, a cemetery located across 8th Line West from the church, and a school located on 1st Line West. Commercial properties include Creekbank Welding (a farm equipment manufacturer) at the location of Bridges 32-P and 33-P on Noah Road, as well as the Middlebrook Farm Market and Greenhouse located near the intersection of Wellington Road 18 and 8th Line West. Lastly, the Ontario Aquaculture Research Centre is located on 8th Line West, between Sideroad 5 and Wellington Road 17.

Figure 6: Non-Residential and Non-Agricultural Property Uses

While there are no formal trails or recreational facilities located within the Study Area, consultation with the community identified that residents use these low volume roads for recreational walks and cycling; however, the current road network is not designed to support active transportation.

4.5.1 Clean Water Act -Source Water Protection

As a result of the *Clean Water Act* (Ontario Regulation 287/07), communities in Ontario are required to develop source protection plans in order to protect their municipal sources of drinking water. These plans identify risks to local drinking water sources and develop strategies to reduce or eliminate these risks.

A review of the Ministry of Environment Conservation and Parks (formerly MOECC) Source Water Protection Information Atlas indicates the Study Area is not located within a Wellhead Protection Area or a Highly Vulnerable Aquifer.

The Clean Water Act defines a “prescribed threat” as “an activity or condition that adversely affects, or has the potential to adversely affect, the quality or quantity of any water that is or may be used as a source of drinking water and includes an activity or condition that is prescribed by source protection regulation as a drinking water threat.” The Province has identified 22 activities that could pose a threat if they are present in vulnerable areas, (listed in Section 1.1 of the Clean Water Act). Project activities are not prescribed drinking water threats and are not anticipated to pose a risk to drinking water.

5.0 Existing Conditions – Site Specific

5.1 Bridge 1-P

5.1.1 Existing Geometry and Physical Condition – Bridge 1-P

Bridge 1-P was removed in 2019. Records indicate that the original structure was a 11.8 m long by 4.5 m wide steel truss with timber deck. Presently, only the east abutment remains in place and is noted to be severely disintegrated, with significant material loss and exposure of large stones that were originally encased in concrete. The 2022 OSIM inspection form (H.P. Engineering Inc.) of the remaining portions of the closed bridge is included as an appendix in the 'Geometric and Hydraulic Design' Technical Memo in Appendix D.

Upstream of the culvert, the public has created a crossing directly through the watercourse on a bed of stone to by-pass the closed bridge. There is evidence of vehicular traffic travelling directly through the watercourse at this location.

The approach roadway has a narrow 4.2 m width driving platform and steep gradients, up to 13.5%. There is no posted speed limit, so the assumed regulatory speed is 80 km/h. However, the rate of vertical curvature of the road provides sightlines acceptable for only 20-30 km/h based on headlight criteria. The road is a no-winter maintenance road in the vicinity of the crossing.

5.1.2 Existing Hydraulics – Bridge 1-P

The calculated peak flows and results of the HEC-RAS modelling using the short-reach model developed are shown in Table 5. As evident in the table, the low point of the road is shown to overtop under the two-year design storm, even under the current conditions with no structure in place. As such, the desired freeboard to the roadway is not met. Additionally, this indicates that any structures placed within the crossing location will have negative impacts to flood elevations under all storm events.

Table 5: Existing Hydraulics at Bridge 1-P

| Discharge Names | 2-Year | 5-Year | 10-Year | 25-Year | 50-Year | 100-Year | Regional |
|--|--------|--------|---------|---------|---------|----------|----------|
| Peak Flow Rate (m/s) | 15.93 | 26.97 | 36.33 | 46.41 | 55.25 | 64.44 | 171.25 |
| Existing Headwater Elevation (m) | 395.70 | 395.97 | 396.15 | 396.31 | 396.45 | 396.60 | 397.66 |
| Ex. Freeboard to Edge of Travelled Lane [395.47 m] (m) | -0.23 | -0.50 | -0.68 | -0.84 | -0.98 | -1.13 | -2.19 |

5.1.3 Natural Environment – Bridge 1-P

Terrestrial and aquatic assessments were completed and included a review of various sources of background information as well as site visit components to confirm the background information as well as characterize the existing conditions at the site. The subject lands are in the jurisdiction of the Grand River Conservation Authority (GRCA) and the Guelph MECP District. A review of Natural Heritage Information Centre mapping indicates that Bridge 1-P is situated on the border of an Evaluated, non-Provincially Significant Wetland (Creek Bank Valley Wetland), which is located north and south of the crossing location. The limits of these wetlands were confirmed and staked by GRCA staff in the field. The subject watercourse at the crossing is Carroll Creek and generally flows from south to north through the area.

Surveys for Ecological Land Classification (ELC), botanical inventory, wetland staking, and aquatic assessment were undertaken in August 2023. The ELC indicated the presence of six distinct ecosite communities within 120 m of the site. All communities identified are considered to be relatively common in Ontario, although several of which are considered to be candidate Significant Wildlife Habitat for various species. Although they were not observed, potential Bank Swallow (Provincially Threatened) habitat was identified in the existing embankments at the historic structure. No other terrestrial species at risk that receive protections under the Provincial Endangered Species Act were identified in the reviewed background information as potentially inhabiting the lands in the area of the site.

The watercourse gently meanders through the forested lands upstream, straightening as it approaches the crossing location. Downstream the watercourse is bound by agricultural fields. Abundant vegetation stabilizes both the left and right banks. During the site visit, numerous fish were observed (minnow species) in the upstream and downstream pools, and the watercourse is considered to provide fish habitat to warm water, spring spawning species. No aquatic species at risk were identified in the reviewed background information as potentially inhabiting the watercourse in the area of the site.

Additional information can be found in the Natural Heritage Report which has been included in Appendix E.

5.1.4 Utilities – Bridge 1-P

Utilities visually identified at Bridge 1-P were limited to overhead hydro along the south side of the road within the road right-of-way. No evidence of other utilities was obvious during the site investigations undertaken as part of the EA. Confirmation of whether buried utilities are present should be completed by Subsurface Utility Engineering (SUE) investigation prior to conducting any excavation works.

5.2 Bridge 28-P

5.2.1 Existing Geometry and Physical Condition – Bridge 28-P

Bridge 28-P is a 10.6 m clear span, cast-in-place concrete T-beam bridge which conveys the Carroll Creek watercourse. The structure provided a 5.0 m wide driving platform and has an overall width of 5.7 m.

The structure is estimated to have been constructed circa 1925 but has been closed since 2006 due to its poor physical condition. The existing structure has severe degradation and is in a failed state, with the superstructure disconnected and significantly displaced from the west abutment. The west abutment wall is severely rotated and unstable. The structure is considered to be beyond economical repair. The 2022 OSIM inspection form (H.P. Engineering Inc.) of the closed bridge is included as an appendix in the 'Geometric and Hydraulic Design' Technical Memo in Appendix D.

The approach roadway provides a gravel driving platform that varies in width from 5 m to 7 m. The assumed regulatory speed limit is 80 km/h in accordance with the Highway Traffic Act, given that it is a non-posted rural road. However, the rate of vertical curvature provides sightlines that meet a design speed of only 20 km/h based on the non-illuminated area. As such, the roadway is considered sub-standard in width and design speed.

A privately owned, low-level crossing is located immediately downstream of Bridge 28-P. The privately owned structure consists of a solid slab rigid frame bridge with a span of approximately 6.0 m. Although signed as a private structure, it is apparent that the general public is also using the private structure as a crossing.

5.2.2 Existing Hydraulics – Bridge 28-P

Based on the short-reach hydraulic model developed in HEC-RAS, the existing structure conveys storms up to the 5-year storm event, which is considered substandard to the desired criteria. Under the 25-year design storm event, a freeboard of 0.45 m is provided and is considered to meet the desirable criteria. The calculated peak flow rates and the existing hydraulic results are summarized in Table 6 below.

Table 6: Existing Hydraulics at Bridge 28-P

| Discharge Names | 2-Year | 5-Year | 10-Year | 25-Year | 50-Year | 100-Year | Regional |
|--|---------------|---------------|----------------|----------------|----------------|-----------------|-----------------|
| Peak Flow Rate (m/s) | 16.69 | 28.24 | 38.01 | 48.53 | 57.77 | 67.36 | 174.74 |
| Existing Headwater Elevation (m) | 388.16 | 388.50 | 388.77 | 389.23 | 389.35 | 389.52 | 390.94 |
| Ex. Clearance to Minimum Soffit [388.51] (m) | 0.35 | 0.01 | -0.26 | -0.72 | -0.84 | -1.01 | -2.43 |
| Ex. Freeboard to Edge of Travelled Lane [389.68 m] (m) | 1.52 | 1.18 | 0.91 | 0.45 | 0.33 | 0.16 | -1.26 |

The Regional storm event overtops the road in existing conditions. Therefore, any increases to the road profile will have negative impacts to hydraulics and will have to be offset by an increased hydraulic conveyance through the opening.

It is noted that the existing private structure located downstream of the Township's bridge was included in the modelling, given that the Township does not have jurisdiction over its removal. The private structure is resulting in increases to the tailwater conditions of the Township bridge in comparison to if it were not present.

Additionally, the watercourse immediately upstream of the bridge structure is noted to be wider than the typical width of the watercourse further upstream. This gives indication that the existing structure may be constraining flows and causing increased turbulence resulting in embankment scouring upstream.

5.2.3 Natural Environment – Bridge 28-P

Terrestrial and aquatic assessments were completed and included a review of various sources of background information as well as site visit components to confirm the background information as well as characterize the existing conditions at the site. The subject lands are located downstream of Structure 1-P and are in the jurisdiction of the Grand River Conservation Authority (GRCA) and the Guelph MECP District. The subject watercourse at the crossing is a branch of Carroll Creek and generally flows from northwest to southeast through the area.

Surveys for Ecological Land Classification (ELC), botanical inventory, wetland staking, and aquatic assessment were undertaken in August 2023. The ELC indicated the presence of six distinct ecosite communities within 120 m of the site, two of which are considered to be candidate Significant Wildlife Habitat for various species (Amphibian and Marsh Breeding Bird Habitat, Special Concern and Rare Wildlife Species). All communities identified are considered to be relatively common in Ontario.

Eastern Meadowlark, a Provincially Threatened species was identified in the background review as potentially inhabiting the general vicinity of the site. However, it is not anticipated that the species will be impacted as there is no preferred habitat in the area of the bridge.

The watercourse at the crossing is characterized as flowing from an adjacent landscape dominated by animal pasture with limited tree cover before flowing beneath the structure toward a private bridge that has been constructed downstream. Fish habitat and watercourse morphology was noted to be more diverse downstream and included a pool, riffle, and flat section. The banks were noted to be densely vegetated with herbaceous vegetation, and while not providing significant shade, would protect the banks from some erosive forces.

Numerous fish were observed (minnow and sucker species) in the downstream pool, and the watercourse is considered to provide fish habitat to spring spawning species. No aquatic species at risk were identified in the reviewed background information as potentially inhabiting the watercourse in the area of the site.

Additional information can be found in the Natural Heritage Report in Appendix E.

5.2.4 Utilities – Bridge 28-P

A visual inspection was conducted for indications of utilities on site. Hydro was identified at the site west of the structure; however, it is not anticipated to be impacted by the proposed works. A Subsurface Utility Engineering (SUE) investigation should be undertaken prior to conducting any excavation works to confirm if any buried utilities are present.

5.3 Bridge 30-P

5.3.1 Existing Geometry and Physical Condition – Bridge 30-P

Bridge 30-P is a 7.93 m clear span concrete through-girder bridge, with an overall width of 6.5 m and a driving platform width of 5.5 m. Record drawings for this structure are included in the appendices of the 'Geometric and Hydraulic Design' memo of Appendix D. It appears the structure may have undergone a previous rehabilitation, at an unknown date, which consisted of refacing portions of the abutments. The channel bottom between abutments is also lined with a cast-in-place concrete slab, which is assumed to have been placed at the time of the rehabilitation. The hydraulic opening width has been reduced to 6.8 m due to the refacing.

The structure was constructed in 1929 and closed to traffic in 2016 due to its poor physical condition. The structure is considered to be beyond economical repair, with severe deterioration of the aged concrete throughout. More specifically, there are several large spalls and disintegrating concrete throughout the barriers, which also act

as the main load-carrying structural elements of this bridge type. Further, there are several exposed reinforcing steel bars which show severe corrosion and section loss. The 2015 condition assessment reports (K. Smart Associates Ltd.) recommending closure and the 2022 OSIM inspection form (H.P. Engineering Inc.) of the closed bridge are included as appendices in the 'Geometric and Hydraulic Design' Technical Memo in Appendix D.

The approach roadway provides a gravel driving platform approximately 5.5 m wide. The assumed regulatory speed limit is 80 km/h in accordance with the Highway Traffic Act, given that it is a non-posted rural road. However, the rate of vertical curvature provides sightlines that meet a design speed of only 30 km/h based on the non-illuminated area. As such, the roadway is considered sub-standard in width and design speed.

5.3.2 Existing Hydraulics – Bridge 30-P

The calculated peak flow rates and the hydraulic results from the short-reach HEC-RAS model are shown in Table 7 below. The model indicates that existing structure conveys storms up to the 100-Year storm event. Under the 25-Year design storm event, a clearance of 0.66 m and freeboard of 0.99 m is shown, which are considered to meet the minimum design standards.

Table 7: Existing Hydraulics at Bridge 30-P

| Discharge Names | 2-Year | 5-Year | 10-Year | 25-Year | 50-Year | 100-Year | Regional |
|--|---------------|---------------|----------------|----------------|----------------|-----------------|-----------------|
| Peak Flow Rate (m/s) | 8.13 | 13.69 | 18.36 | 23.37 | 27.75 | 32.29 | 78.46 |
| Existing Headwater Elevation (m) | 422.03 | 422.31 | 422.58 | 422.76 | 422.98 | 423.17 | 424.66 |
| Ex. Clearance to Minimum Soffit [423.42] (m) | 1.39 | 1.11 | 0.84 | 0.66 | 0.44 | 0.25 | -1.24 |
| Ex. Freeboard to Edge of Travelled Lane [423.75] (m) | 1.72 | 1.44 | 1.17 | 0.99 | 0.77 | 0.04 | -0.91 |

The Regional storm event overtops the road in existing conditions. Therefore, any increases to the road profile would have negative impacts to hydraulics and would have to be offset by an increased hydraulic conveyance through the opening.

5.3.3 Natural Environment – Bridge 30-P

Terrestrial and aquatic assessments were completed and included a review of various sources of background information as well as site visit components to confirm the background information as well as characterize the existing conditions at the site. The subject lands are located upstream of Structure 28-P and are in the jurisdiction of the Grand River Conservation Authority (GRCA) and the Guelph MECP District. The subject

watercourse at the crossing is an upper branch of Carroll Creek and generally flows from northwest to southeast through the area.

Similar to the other structures, surveys for Ecological Land Classification (ELC), botanical inventory, wetland staking, and aquatic assessment were undertaken in August 2023. The ELC indicated the presence of five distinct ecosite communities within 120 m of the site, two of which are considered to be candidate Significant Wildlife Habitat for various species (Bat Maternity Colony, Amphibian and Marsh Breeding Bird Habitat, Special Concern and Rare Wildlife Species). All communities identified are considered to be relatively common in Ontario.

Bobolink (Provincially Threatened) and Red Headed Woodpecker (Provincially Endangered), were identified in background records as potentially inhabiting the general region of the site. However, no preferred habitats for the species were identified in the area of the bridge, and as such, no impacts are anticipated to the species.

The watercourse flows through an agriculturally dominated landscape, which is limited in tree cover. Herbaceous vegetation was noted along the banks and shaded the majority of the watercourse both upstream and downstream of the culvert. The channel was noted as being slightly eroded but had limited flow at the time of the site visit. The structure was noted to have a concrete base slab between abutments that was perched above the base of the watercourse which inhibited fish passage, especially during periods of low flow. Several fish were observed (minnow species) in the downstream scour pool at the outlet of the bridge. The watercourse is considered to provide fish habitat to warm water, spring spawning species. No aquatic species at risk were identified in the reviewed background information as potentially inhabiting the watercourse in the area of the site.

Additional information can be found in the Natural Heritage Report in Appendix E.

5.3.4 Utilities – Bridge 30-P

Markers for buried Bell communication and Gas utilities were identified on site, south of the existing bridge. The location and depth of these utilities should be explored further via a Subsurface Utility Engineering (SUE) investigation prior to completing any ground disturbance works.

5.4 Bridges 32-P & 33-P

5.4.1 Existing Geometry and Physical Condition – Bridges 32-P and 33-P

Bridge 32-P provides a water crossing over a small unnamed tributary, which feeds into the main branch of Carroll Creek approximately 250 m downstream of Noah Road. The structure is a 9.14 m span cast-in-place concrete T-beam bridge, constructed circa 1922.

The total width of the bridge is 5.7 m, and a 4.9 m wide driving platform is provided between barriers / curbs.

The nearby Bridge 33-P crosses the main branch of Carroll Creek, approximately 100 m east of Bridge 32-P on Noah Road. This structure was constructed circa 1926 and consists of a 10.4 m clear span Concrete T-Beam with an overall 5.7 m width and a driving platform width of 4.9 m. The record drawings indicated that portions of the west abutment from the pre-1926 structure were re-used for the current bridge. However, it appears that the majority of the pre-1926 abutments have been refaced during a rehabilitation which occurred at an unknown date.

Record drawings of the two structures are included in the appendices of the 'Geometric and Hydraulic Design' memo of Appendix D.

Both structures were closed to traffic in 2015 due to their severely deteriorated state. The concrete elements of these structures are experiencing severe disintegration due to their vintage and prolonged exposure to the elements. Large amounts of the reinforcing steel in the main structural components of the bridges are exposed and no longer engaged due to loss of concrete. Significant section loss was noted in the exposed reinforcing steel, limiting their load carrying capacities. The northwest wingwall of Bridge 33-P has also failed and displaced significantly.

The 2015 condition assessment report (K. Smart Associates Ltd.) recommending closure, and the 2022 OSIM inspection form (H.P. Engineering Inc.) of the closed structures are included as appendices in the 'Geometric and Hydraulic Design' Technical Memo in Appendix D.

The roadway on the approaches and between the two structures has an approximately 4.3 m wide gravel driving width. The assumed regulatory speed limit is 80 km/h in accordance with the Highway Traffic Act, given that it is a non-posted rural road. However, the rate of vertical curvature provides sightlines that meet a design speed of only 40 km/h based on the non-illuminated area. As such, the roadway is considered sub-standard in width and design speed.

5.4.2 Existing Hydraulics – Bridges 32-P & 33-P

Although these two structures technically cross separate channels under normal flow conditions, the hydraulic modelling developed in HEC-RAS shows that for the 2-year storm event and larger, flows overtop the main branch of the Carroll Creek banks and Bridges 32-P and 33-P should be modelled as a single reach model to accurately depict these conditions. As such, the combined flow rates were used and both structures were included in a single reach model. The calculated peak flow rates and the hydraulic results of the modelling are shown in Table 8.

Table 8: Existing Hydraulics at Bridges 32-P & 33-P

| Discharge Names | 2-Year | 5-Year | 10-Year | 25-Year | 50-Year | 100-Year | Regional |
|---|---------------|---------------|----------------|----------------|----------------|-----------------|-----------------|
| Peak Flow Rate (m/s) | 18.2 | 30.76 | 41.4 | 52.84 | 62.89 | 73.33 | 182.92 |
| Existing Headwater Elevation (m) | 374.33 | 374.49 | 374.61 | 374.89 | 374.96 | 375.06 | 375.86 |
| Ex. Clearance to Bridge 32-P Min. Soffit [374.69] (m) | 0.36 | 0.20 | 0.08 | -0.20 | -0.27 | -0.37 | -1.17 |
| Ex. Clearance to Bridge 33-P Min. Soffit [374.48] (m) | 0.15 | 0.01 | -0.13 | -0.41 | -0.48 | -0.58 | -1.38 |
| Ex. Freeboard to Edge of Travelled Lane [375.21] (m) | 0.88 | 0.72 | 0.60 | 0.32 | 0.25 | 0.15 | -0.65 |

The model indicates that Bridge 32-P conveys the 10-year storm and Bridge 33-P conveys up to the 5-year storm. Under the 25-year design storm event, neither of the structures meet the desired clearances; however, the freeboard to edge of travelled lane does meet the desired criteria.

The Regional storm event overtops the road in existing conditions. Therefore, any increases to the road profile will have negative impacts to hydraulics and will have to be offset by an increased hydraulic conveyance through the opening.

5.4.3 Natural Environment – Bridges 32-P & 33-P

Terrestrial and aquatic assessments were completed and included a review of various sources of background information as well as site visit components to confirm the background information as well as characterize the existing conditions at the site. The subject lands are located downstream of Structure 28-P and are in the jurisdiction of the GRCA and the Guelph MECP District. The subject watercourse at the crossing is Carroll Creek at Bridge 33-P and a smaller tributary branch of Carroll Creek at 32-P. Both watercourses generally flow from northwest to southeast beneath the structure.

At Structure 32-P, there are two non-PSW Reed-canary Grass Graminoid Mineral Meadow Marshes (MAMM1-3) that surround Carroll Creek north and south of the structure. At Structure 33-P, there is a non-PSW Joe Pye Weed Forb Mineral Meadow Marsh (MAMM2-6) located just north of the structure.

Similar to the other structures, surveys for Ecological Land Classification (ELC), botanical inventory, wetland staking, and aquatic assessment were undertaken in August 2023. The ELC indicated the presence of eight distinct ecosite communities within 120 m of the site, four of which are considered to be candidate Significant Wildlife

Habitat for various species (Amphibian and Marsh Breeding Bird Habitat, Special Concern and Rare Wildlife Species). All communities identified are considered to be relatively common in Ontario. Although Bobolink and Eastern Meadowlark were identified in the reviewed background information as potentially inhabiting the lands in the area of the site, no preferred habitat was identified in the immediate vicinity of the crossings and no impact is anticipated. It is likely that habitat for these species is located in the nearby agricultural fields.

At Bridge 32-P, the channel was noted to be poorly defined, with no visually flowing water observed. However, water was observed to “seep” from wet soils into a pooled area beneath the existing structure. Downstream, the channel became undefined and the water dispersed within an animal pasture. The watercourse at Bridge 32-P was not considered to provide fish habitat due to water volume and connectivity.

Bridge 33-P is located northeast of Bridge 32-P and is found just upstream of the confluence of the branch tributary of Carroll Creek. Carroll Creek at Bridge 33-P flows from an upstream woodlot within the Central Carroll Creek Wetland Complex. The channel is uniform but appears progressively shallower as it approaches the existing structure. Small grass islands are present in the channel. The banks appeared slightly unstable, with the outside meander showing signs of erosion, such as exposed soil and cut banks. Downstream, a temporary clear span bridge was noted as being constructed. The banks were stable and the channel was largely exposed with limited riparian cover. Fish were observed in the watercourse within a relatively large pool downstream of the crossing. The watercourse at Bridge 33-P is considered to provide direct fish habitat.

No aquatic species at risk were identified in the reviewed background information as potentially inhabiting the watercourse in the area of the site.

Additional information can be found in the Natural Heritage Report in Appendix E.

5.4.4 Utilities – Bridges 32-P & 33-P

Hydro was identified at the site along the north edge of road, running from the west but terminating directly west of Bridge 32-P. Existing Bell Communication pedestals were also visually identified on the north side of the road, west of Bridge 32-P. Further, what appeared to be an exposed conduit was identified traversing the watercourse, just above ground level at Bridge 32-P. The contents of the conduit are unknown at this time, but could represent a utility crossing at Bridge 32-P. It is anticipated that these utilities would be impacted by any widening of the roadway, given their close proximity to the current edge of road. The presence of utilities should be confirmed during the detailed design stage via a Subsurface Utility Engineering (SUE) investigation.

6.0 Identification and Assessment of Alternative Solutions

As part of Phase 2 of the MCEA process, several alternatives were considered to address the problems and opportunities presented as part of this Study. The alternatives were assessed for the impact of the solutions on the general condition of the natural, social / cultural, and economic environment including possible mitigating measures.

6.1 Identification of Alternative Solutions

Eight alternative solutions were identified to address the Project Opportunity Statement, as outlined in Table 9 below.

Table 9: Alternative Solutions

| Alternative Solution | Description |
|--|---|
| Alternative 1: Do Nothing | <ul style="list-style-type: none"> • Leave the existing structures in their current deteriorating state and continue to restrict public use. |
| Alternative 2: Remove All Bridges | <ul style="list-style-type: none"> • Remove structures to eliminate risk to the public and potential future collapse. • Restore / naturalize watercourse at location of removals. |
| Alternative 3: Replace Bridge 28-P | <ul style="list-style-type: none"> • Replace Bridge 28-P. • Remove all other bridges, construct turn-arounds and restore / naturalize watercourse. |
| Alternative 4: Replace Bridges 32-P & 33-P | <ul style="list-style-type: none"> • Replace Bridges 32-P & 33-P. • Remove all other bridges, construct turn-arounds and restore / naturalize watercourse. |
| Alternative 5: Replace Bridges 28-P, 32-P & 33-P | <ul style="list-style-type: none"> • Replace Bridges 28-P, 32-P & 33-P. • Remove Bridges 1-P and 30-P, construct turn-arounds and restore / naturalize watercourse. |
| Alternative 6: Replace Bridges 1-P, 28-P, 32-P & 33-P | <ul style="list-style-type: none"> • Replace Bridges 1-P, 28-P, 32-P & 33-P and remove Bridge 30-P |
| Alternative 7: Replace Bridges 3-P, 28-P, 32-P & 33-P | <ul style="list-style-type: none"> • Replace Bridges 30-P, 28-P, 32-P & 33-P • Remove Bridge 1-P, construct turn-arounds and restore / naturalize watercourse. |
| Alternative 8: Replace All Bridges | <ul style="list-style-type: none"> • Replace all Bridges. |

It is noted that other potential alternatives, including replacement of individual structure or other combinations of structures not included above, were screened out by a high-level, comparative screening process. The series of alternatives carried forward allow the results of each individual structure to be recognized by comparison. For example, by comparing the differences between Alternative 5 (Replace Bridges 30-P, 32-P & 33-P) and Alternative 6 (Replace Bridges 1-P, 30-P, 32-P & 33-P), the impacts of replacing replace Structure 1-P could be recognized.

The 'Do Nothing' option, which involves leaving all structures in their currently deteriorated condition, is a mandatory consideration within the MCEA process and serves as a reference point for comparing other alternative solutions.

6.2 Evaluation Criteria

The overall objective of the evaluation was to identify a Preferred Solution among the eight alternatives using a systematic and transparent approach. The Preferred Solution is the Alternative that best addresses the Problem Statement with as few negative impacts as possible.

To this end, a set of Evaluation Criteria were identified to comparatively evaluate the Alternative solutions. The Evaluation Criteria includes:

Table 10: Summary of Evaluation Criteria

| Transportation | |
|-----------------------------------|--|
| Traffic Population Benefited | Quantitative measure of average vehicular traffic that would be benefited by the proposed alternative, measured based on AADT values. |
| Cross-Community Travel | Quantitative measure of improvements on cross-community travel time / distance, measured using the total and average improvements on a relative scale. |
| Emergency Response | Quantitative measure of improvements on emergency response times to several destinations around the study area. Measured using a relative scale of total and average improvements. Additional bonus provided to rating for elimination of the need to use neighbouring municipality roads. |
| Slow-Moving Vehicle Accommodation | Quantitative measure of reduction in required travel distance on arterial Wellington County roads as a result of providing alternative east-west travel route. |

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| Natural Environment | |
|---|--|
| Environmentally Sensitive Areas | Qualitative ranking of the potential impacts / benefits that the alternatives would have on Environmentally Sensitive Areas, such as wetlands, woodlands, watercourses, etc. |
| Terrestrial Habitat | Qualitative ranking of the potential impacts / benefits to terrestrial habitats such as nesting areas for breeding birds, wildlife habitat, as well as habitat connectivity (ex: wildlife passage through structure openings), etc. |
| Fisheries / Aquatic Habitat | Qualitative ranking of the potential impact / benefits to aquatic habitat features and passage. Examples include impacts related to construction activities, improvements by eliminating barriers to passage, re-naturalization of the watercourse and embankments, etc. |
| Species at Risk (SAR) | Qualitative ranking of potential impacts / benefits to identified SAR such as Barn / Cliff swallows, bats, butternut trees, etc. |
| Economic Environment | |
| Capital Costs | Relative quantitative ranking of estimated capital cost (including engineering and construction costs). |
| Maintenance & Operational Costs | Relative ranking of long-term costs associated with typical maintenance repairs for the applicable structure type, maintenance of barricade systems for structure closures, and operational costs associated with access control for low-level crossings. |
| Social & Cultural Environments | |
| Social Environment | Qualitative ranking of the impacts / benefits to residential property and access, community facilities, recreational facilities, pedestrians, cyclists, noise impacts, and air quality. |
| Archaeological | Qualitative ranking of the potential impacts to archaeological resources, including identified areas of archaeological potential, based on the anticipated limits of disturbance associated with the alternatives. |
| Cultural Heritage | Qualitative ranking of the potential impacts / benefits to built heritage resources and cultural heritage resources, considering value or interest of the structure and the ability to conserve or document heritage features and / or provide sympathetic features in replacement structures. |
| Community Preference | A qualitative ranking of the alignment of the proposed alternative in comparison to the community's input on preferred structures to be replaced based on consultation with, and comments from, the public. |

In addition to the above, the alternatives were also evaluated to determine if they address the problem opportunity statement in general.

6.3 Evaluation of Impacts to Transportation

An in-depth evaluation on the impacts of opening the bridges associated with each alternative was conducted as part of this study to determine the magnitude of impacts and / or improvements associated with each option as it relates to cross-community connectivity and emergency response times. The 'Road / Link Continuity Screening' Technical Memo included in Appendix A provides full details of the transportation assessment undertaken. A summary of its findings is provided in Table 11.

Table 11: Summary of Transportation Improvement Potential

| | | Structures Opened to Vehicular Traffic | | | | | | |
|-----------------------------------|---------|--|-----------------|------------------------|---------------------------------|--------------------------------------|--|----------------|
| | | None (Alt 1 & 2) | 28-P (Alt 3) | 32-P & 33-P (Alt 4) | 28-P, 32-P & 33-P (Alt 5) | 1-P, 28-P, 32-P & 33-P (Alt 6) | 28-P, 30-P, 32-P & 33-P (Alt 7) | All (Alt 8) |
| Cross-Community | | | | | | | | |
| Reduction to Travel Time (mins) | Total | 0 | 3.4 | 6.5 | 11.1 | 11.1 | 11.1 | 11.1 |
| | Max | 0 | 3.1 | 2.2 | 3.4 | 3.4 | 3.4 | 3.4 |
| | Average | 0 | 0.4 | 0.7 | 1.2 | 1.2 | 1.2 | 1.2 |
| Reduction to Travel Distance (km) | Total | 0 | 4.1 | 8.4 | 14.1 | 16.1 | 14.1 | 16.1 |
| | Max | 0 | 4.1 | 2.9 | 4.5 | 4.5 | 4.5 | 4.5 |
| | Average | 0 | 0.5 | 0.9 | 1.6 | 1.8 | 1.6 | 1.8 |
| Emergency Response | | | | | | | | |
| Reduction to Travel Time (mins) | Total | 0 | 15.9 | 14.9 | 30.9 | 32.4 | 37.3 | 38.8 |
| | Max | 0 | 2.1 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| | Average | 0 | 0.7 | 0.6 | 1.3 | 1.4 | 1.6 | 1.6 |
| Reduction to Travel Distance (km) | Total | 0 | 6.1 | 10.9 | 17.0 | 20.2 | 21.2 | 24.4 |
| | Max | 0 | 1.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| | Average | 0 | 0.3 | 0.5 | 0.7 | 0.8 | 0.9 | 1.0 |

Based on the findings outlined in Appendix A, the following conclusions can also be concluded (refer to Figure 3 for identification of Screening Areas):

- The opening of Bridge 28-P has significant benefit to Areas 2 and 5.
- The opening of Bridges 32-P and 33-P has significant benefits to Areas 3 and 5.
- The opening of Bridge 1-P provides benefits only to travel between Areas 1 and 5.
- The opening of Bridge 30-P does not provide any benefit to cross-community travel times between the areas examined.

Similarly, the following key findings for Emergency Response can be concluded from the analysis: (refer to Figure 4 for identification of Destinations):

- The opening of Bridge 28-P benefits emergency response to Destinations 1, 3, 10, and 11.
- The opening of Bridges 32-P and 33-P benefits Destination 4 only, but the benefit is significant.
- The opening of Bridge 1-P makes only a minor difference to Destination 1 only.
- The opening of Bridge 30-P is the only option to improve emergency response to Destination 2, and the benefit is significant.
- The greatest improvements per site are realized by opening bridges 28-P, 32-P, and 33-P.

6.4 Preliminary Designs Used for Evaluations

In order to evaluate the alternatives, a preliminary design was required to be completed at each site to establish the geometry of the replacement structure and road platform, and the associated limits of disturbance, environmental impacts, and costs. A detailed brief of the preliminary design of the roadway and structures is provided in the 'Geometric and Hydraulic Design' technical memorandum of Appendix D.

These preliminary designs were based on eliminating or mitigating negative impacts of the replacement structures to the extent possible, while providing opportunities for improvements, with an attempt to meet desired design criteria within the constraints of the site limitations. The desirable design criteria used during the preliminary design of the structures is summarized in Table 12.

Table 12: Desirable Design Criteria for Replacement Structures

| Roadway Design (Per Township's Development Standards, as amended herein) | |
|---|---|
| Road Classification | Minor Local (Rural) |
| Desirable Design Speed | 40-50 km/h (Minor Local) |
| Associated Rate of Vertical Curvature | Sag: 12 (5 acceptable where illuminated) Crest: 8 |
| Desirable Minimum Grade | 0.5% (0% acceptable where curb and gutter are not present and positive drainage to roadside ditches available.) |
| Desirable Maximum Grade | 8.0% |
| Lane Width | 3.35 m (refer to Section 1.1 of the 'Geometric and Hydraulic Design' Technical Memo in Appendix D.) |
| Shoulder / Side Clearance Width | 1.25 m (refer to Section 1.1 of the 'Geometric and Hydraulic Design' Technical Memo in Appendix D.) |
| Crossfall | 2.0% |
| Hydraulic Design (Per MTO Highway Drainage Design Guidelines) | |
| Design Storm Return Period | 25-Year |
| Freeboard | 0.3 m (0.0 acceptable for Low Volume Roads.) |
| Clearance | 0.3 m (applies to open bottom structures with erodible channel beds only.) |
| Change in Flood Elevations (All Return Periods) | 0 m (0.1 m modelling tolerance typically acceptable.) |

The above is noted to be the desired criteria. However, where the above was unable to be met based on the findings of the geometric and hydraulic investigations, the overall goal was to improve the rideability, sightlines, and safety of the site to the extent possible while ensuring no negative impacts to flood elevations.

As noted in Table 13 below, the desirable sight lines, hydraulic clearance and / or freeboard are not always achievable with reasonable structure sizes, given the constraints of the sites. The proposed structures outlined below are recommended as they are considered to provide the most favourable conditions while working within the project and site constraints. It is noted, for the bridges identified for replacement under the preferred solution, that these geometries may be refined during detailed design to further optimize the improvements.

6.4.1 Geometry

A summary of the preliminary design geometry selected following review of several iterations of structure and roadway geometries for each of the crossings is provided in Table 13 below.

Table 13Table 13 below.

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Table 13: Summary of Preliminary Design Geometry at All Bridges

| | Bridge 1-P | Bridge 28-P | Bridge 30-P | Bridge 32-P | Bridge 33-P |
|---|---|--|--|------------------------------------|--|
| Bridge Geometry | | | | | |
| Structure Type | Four-cell Precast Concrete Box Culvert | Slab on Prestressed Concrete Hollow Core Girder | Cast-in-place Concrete Rigid Frame | Precast Concrete Box Culvert | Slab on Prestressed Concrete Box Girder |
| Size | 4 x 3.0 m span x 1.5 m rise | Span = 14.0 m Girder = S600 | Span = 16.2 m | 2.4 m span x 2.0 m rise | Span = 22.0 m Girder = B800 |
| Overall Width | 16.0 m +/- | 9.8 m | 9.8 m | 16.5 m +/- | 9.8 m |
| Min. Soffit Elevation | 388.51 | 389.21 | 423.38 (Effective) | 374.95 | 374.23 |
| Road Geometry | | | | | |
| Length of Road Reconstruction | 175 m | 110 m | 170 m | 300 m | |
| Vertical Rate of Curvature | 9 (Sag) | 9 (Sag) | 6 (Sag) | 11 (Crest) 18 (Sag) | |
| Applicable Design Speed, Non-illuminated | 40 km/h | 40 km/h | 30 km/h | 60 km/h | |
| Applicable Design Speed, Illuminated | 60 km/h | 60 km/h | 50 km/h | 70 km/h | |
| Lane Width | 3.35 m | 3.35 m | 3.35 m | 3.35 m | |
| Shoulder Width | 1.25 m | 1.25 m | 1.25 m | 1.25 m | |
| Low Point Elev. @ C/L | 395.417 m | 389.72 m | 424.055 m | 375.037 m | |

Preliminary 'Plan and Profile' and 'General Arrangement' drawings illustrating the above geometry, as well as showing the approximate limits of grading are provided for all structures in the appendices of the 'Geometric and Hydraulic Design' memo of Appendix D. However, it should be noted, that not all of these preliminary bridge replacement designs will be carried forward in the preferred solution.

6.4.2 Hydraulics

The hydraulic performances for the preliminary geometry noted above are summarized in Table 14.

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Table 14: Hydraulic Performance of Preliminary Designs at All Bridges

| Bridge | Headwater Elevation (m) [Difference vs. Existing] | | | | | | | Design Storm Return- Period | Clearance (25-Year) | Freeboard (25-Year) | Roadway Overtopping Depth (Regional) |
|---|--|-------------------|-------------------|---------------------------------|-------------------|-------------------|----------------------------------|--------------------------------------|------------------------------|------------------------|---|
| | 2-Year | 5-Year | 10- Year | 25- Year | 50- Year | 100- Year | Regional | | | | |
| 1-P | 395.72 [0.02] | 395.97 [0.00] | 396.14 [-0.01] | 396.31 [0.00] | 396.44 [-0.01] | 396.59 [-0.01] | 397.66 [0.00] | 25-Year | - 1.31 m ^(N/A) | -0.96 m ^(M) | 2.31 m |
| 28-P | 388.15 [-0.01] | 388.47 [-0.03] | 388.72 [-0.05] | 388.96 [-0.27] | 389.16 [-0.19] | 389.35 [-0.17] | 390.93 [-0.01] | 25-Year | 0.25 m ^(PLV) | 0.69 m ^(P) | 1.28 m |
| 30-P | 422.00 [-0.03] | 422.24 [-0.07] | 422.40 [-0.18] | 422.53 [-0.23] | 422.64 [-0.34] | 422.75 [-0.42] | 424.76 [+0.10] ⁽¹⁾ | 25-Year | 0.85 m ^(P) | 1.46 m ^(P) | 0.77 m |
| 32-P | 374.32 [-0.01] | 374.47 [-0.02] | 374.58 [-0.03] | 374.68 [-0.21] | 374.77 [-0.19] | 374.87 [-0.19] | 375.91 [+0.05] ⁽¹⁾ | 25-Year | 0.27 m ^(N/A) | 0.265 m ^(M) | 0.97 m |
| 33-P | 374.32 [-0.01] | 374.47 [-0.02] | 374.58 [-0.03] | 374.68 [-0.21] | 374.77 [-0.19] | 374.87 [-0.19] | 375.91 [+0.05] ⁽¹⁾ | 25-Year | -0.45 m ^(M) | 0.265 m ^(M) | 0.97 m |
| ⁽¹⁾ Considered to be within the typical allowable modelling tolerances of 0.1 m ^(P) Passes: Meets desirable criteria ^(PLV) Passes for Low Volume Road: Meets desirable criteria when considering low volume classification of roadway ^(M) Marginal: Does not meet desirable criteria, but meets minimum requirements of providing improvements compared to existing ^(F) Fails: Does not meet minimum requirements of providing improvements ^(N/A) Not Applicable: Criteria is not applicable to structure type | | | | | | | | | | | |

6.5 Cost Estimations

Using the above geometry, the cost at each site for removal and replacement (including removal) of the structures was estimated based on current industry pricing. Bridges 32-P and 33-P have been combined into one estimate, given that it is anticipated these replacement works would be conducted under a single contract, to recognize efficiencies on overhead costs. A summary of the estimated construction costs are provided in Table 15. Detailed cost estimates for replacements are provided in Appendix F.

Table 15: Estimated Removals and Replacement Costs

| | Structure Removal ^{1,2} | Structure Replacement ^{1,3} |
|--|---|---|
| Bridge 1-P | \$20,000.00 | \$1,065,000.00 |
| Bridge 28-P | \$75,000.00 | \$2,060,000.00 |
| Bridge 30-P | \$70,000.00 | \$2,200,000.00 |
| Bridges 32-P & 33-P | \$120,000.00 | \$3,215,000.00 |
| ¹ Cost estimates are exclusive of engineering costs, property acquisition, utility relocations ² Removal cost estimates do not account for improvements to the approach roadway ³ Replacement cost estimates include for structure removal and improvements to the roadway only within the necessary limits to tie into the proposed replacement structure. Costs associated with upgrading the roadway beyond the limits required for bridge work bridge are excluded. | | |

6.6 Summary of the Evaluation of Alternatives

The evaluation of the alternative solutions was based on an assessment of potential impacts and a review of input received from the public and regulatory agencies during the study process. Table 16 provides a summary of the evaluation of alternative solutions. A detailed evaluation matrix is provided in Appendix G, which provides further explanation of the reasoning behind each of the ratings. The relative ratings of the criteria are represented by graphical 'pies', for which the order of preference is indicated as below:



The 'pies' are visual representations of the actual numerical rating associated with the criteria. Where alternatives may appear to have the same rating based on the visual representation, the ranking is based on the numerical values, which may differ despite showing the same symbol.

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Table 16: Summary of the Evaluation of Alternatives

| Evaluation Criteria | Do Nothing | Remove All | 28-P Open | 32-P & 33-P Open | 28-P, 32-P & 33-P Open | 1-P, 28-P, 32-P & 33-P Open | 28-P, 30-P, 32-P & 33-P Open | All Bridges Open |
|------------------------------------|------------|------------|-----------|------------------|------------------------|-----------------------------|------------------------------|------------------|
| Transportation | | | | | | | | |
| Traffic Population Benefited | | | | | | | | |
| Cross-Community Travel | | | | | | | | |
| Emergency Response | | | | | | | | |
| Slow-Moving Vehicle Accommodation | | | | | | | | |
| Transportation Summary | | | | | | | | |
| Natural Environment | | | | | | | | |
| Environmentally Sensitive Areas | | | | | | | | |
| Terrestrial Habitat | | | | | | | | |
| Fisheries / Aquatic Habitat | | | | | | | | |
| Species at Risk | | | | | | | | |
| Natural Environment Summary | | | | | | | | |

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| Evaluation Criteria | Do Nothing | Remove All | 28-P Open | 32-P & 33-P Open | 28-P, 32-P & 33-P Open | 1-P, 28-P, 32-P & 33-P Open | 28-P, 30-P, 32-P & 33-P Open | All Bridges Open |
|--|------------|------------|-----------|------------------|------------------------|-----------------------------|------------------------------|------------------|
| Economic Environment | | | | | | | | |
| Capital Costs | ● | ● | ◐ | ◐ | ◐ | ◑ | ◑ | ○ |
| Maintenance & Operational Costs | ● | ● | ◐ | ◑ | ◑ | ◑ | ◑ | ○ |
| Economics Summary | ● | ● | ◐ | ◑ | ◑ | ◑ | ◑ | ○ |
| Social & Cultural Environments | | | | | | | | |
| Social Environment | ○ | ○ | ◑ | ◑ | ◑ | ◐ | ◐ | ● |
| Archaeological | ● | ● | ◐ | ◐ | ◐ | ◑ | ◑ | ◑ |
| Cultural Heritage | ● | ◑ | ◐ | ◐ | ◐ | ◑ | ◑ | ◑ |
| Community Preference | ○ | ○ | ◑ | ◑ | ◐ | ◑ | ◑ | ● |
| Social & Cultural Summary | ◑ | ◑ | ◑ | ◑ | ◐ | ◑ | ◑ | ◐ |
| Addresses Problem / Opportunity? | NO | YES | YES | YES | YES | YES | YES | YES |
| Overall Ranking (Equally Weighted) ^[1] | 8 | 6 | 2 | 5 | 1 | 3 | 4 | 7 |
| Overall Ranking (Sensitivity Analysis) ^[2] | 8 | 7 | 3 | 6 | 1 | 2 | 3 | 5 |
| ^[1] Using equal weighting for the main criteria categories (Transportation, Natural Environment, Economic Factors, Social & Cultural Environment) ^[2] Using averaged results of a series of scenarios with different weighting criteria for each of the main criteria categories. | | | | | | | | |

6.7 Preferred Solution

As identified in Table 16 (and Appendix G), the preferred solution is Alternative 5, which consists of the Replacement of Bridges 28-P, 32-P & 33-P and the removal of Bridges 1-P and 30-P, with restoration and naturalization of the watercourse channel. A sensitivity analysis was also completed to confirm the preferred alternative under scenarios, with different weighting applied to each of the main criteria (Transportation, Natural Environment, Economic Factors, Social & Cultural Environments). In all scenarios considered, Alternative 5 was always considered the most preferred.

The preferred solution has many significant benefits and addresses several of the problems and opportunities previously noted in Section 3.0, as summarized below:

- Provides east-west connection alternative to County Roads, providing alternative to 3.9 km of travel on arterial County Road routes (beneficial for slow moving vehicles).
- Serves the two most travelled roadways of the Study Area.
- Opens the two structures with the most individual improvements to cross-community travel and emergency response times.
- Emergency service and other municipal service vehicles (snow removal, road grading) will not be required to use neighbouring municipal roads.
- Opens connectivity for the local Mennonite community to the church and improves ease of access for travel via horse and carriage.
- Provides improved access to commercial, agricultural, and institutional locations throughout the Study Area.
- Opens the top two sites requested by the local community based on consultation throughout the EA.

Disadvantages of the preferred alternative include:

- Disturbance to the natural environment, most of which can use standard mitigation methods or offsetting to minimize the impacts, as outlined in Section 9.0.
- Property impacts for grading requirements beyond property lines on Noah Road, which will require an agreement with the property owner, or property acquisition.

Details of the proposed undertakings, environmental impacts, mitigation measures and monitoring requirements, as well as the future commitments for detailed design and construction associated with the preferred alternative are further outlined in Sections 8.0, 9.0 and 11.0, respectively.

7.0 Consultation

Comprehensive consultation was a key component of this MCEA study. An effective consultation process was followed. The process was highly visible and maximized opportunities for the public, government agencies, and Indigenous communities to participate, in a constructive manner with a process that was open, traceable, rational, and highly defensible.

The key features of the consultation process included:

- The identification of Indigenous communities, agencies, key stakeholders, local residents, and other interested or potentially affected parties that would need to be consulted during the MCEA Study. These contacts comprised the Project Contact List, which was used to maintain contact information for interested parties throughout the process and summarize comments received about the project and responses.
- Indigenous communities, agencies, key landowners / developers, local residents, and other interested or potentially affected parties of the study were notified of results at key points of the MCEA process.
- Engaging Indigenous communities, agencies, key landowners, local residents, and other interested or potentially affected parties at key points of the MCEA process to gather input and help inform key decision making.
- Responding to inquiries or comments in an efficient and timely manner.

7.1 Notices

Notifications were mailed out or emailed to all contacts on the Project Contact List created for this Study. Contacts were notified of the Notice of Study Commencement and Public Information Centre #1, Notice of Public Information Centre #2, and the Notice of Study Completion. The Project Contact List and all project notices are included in Appendix H. All notices were also advertised in the Wellington Advertiser and The Observer and made available to the public on the Township's 'Connect CW' webpage (<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>).

7.2 Indigenous Communities

Notices were sent by email to Indigenous communities. MECP has developed guidance on the steps to rights-based consultation with Indigenous communities. MECP was contacted on July 20, 2023, with the Notice of Study Commencement. A copy of correspondence is provided in Appendix H.

Follow-up calls were made to the identified Indigenous communities following the issuance of the Notice of PIC #2 to confirm receipt of the notice. A summary of communication with identified Indigenous communities was maintained by Burnside on

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the Project Contact List and summarized in Table 17. Copies of all correspondence with Indigenous communities are provided in Appendix H.

Table 17: Summary of Indigenous Community Consultation

| Indigenous Community | Follow-up Call | Comment Received | Study Team Response |
|---|--------------------------------------|---|---|
| Métis Nation of Ontario | July 20, 2023 February 2, 2024 | Phone number updated | |
| Mississaugas of the Credit First Nation | July 21, 2023 February 2, 2024 | No comments at this time, requested copy of EA when complete and to be informed of any proposed archeological studies associated with project prior to start of archeological work | Noted that the report will be made available for review and that they will be informed of any Stage 2 archaeological works are recommended following the Stage 1 study. |
| Six Nations of Grand River | July 21, 2023 February 2, 2024 | Notice does not include enough information – requested additional information on potential effects to natural environment and if bridges cross water courses. Requested copy of Draft report | Additional information provided outlining project background, study process and potential impacts. Six Nations representative responded additional info was helpful and requested to be updated when alternatives were selected. Noted that the report will be provided for review |
| Haudenosaunee Development Institute (HDI) | February 2, 2024 February 6, 2024 | Requested that engagement process be formalized through submitting an application and associated documentation with application fee. | Application was submitted by mail as requested. Township not in a position to pay application fee at this time as the current scope does not include intrusive fieldwork. Noted that further engagement can be made with HDI if scope evolves to include intrusive fieldwork, and that draft reports will be provided for review. Option of meeting to further discuss was offered. |

7.3 Municipal Heritage Committee

The Township provided a presentation to Heritage Centre Wellington on September 12, 2023. The project background information and findings of the Cultural Heritage Assessment Report (CHAR) were presented to the Heritage Committee by Mr. Adam Dickieson (Township of Centre Wellington Project Manager). A copy of the slides presented is included in Appendix H. The Committee acknowledged the findings of the CHAR, which indicated that the structures did not meet the thresholds for being considered to have cultural heritage value or interest. There were no outcomes or project file related questions following the presentation. However, the committee noted that they were in the process of making a bridge-related subcommittee and that information presented would be shared with that subcommittee upon its formation. The presentation slides were provided to the committee for reference and sharing.

Following the second Public Information Centre, the Heritage Centre Wellington Bridge Subcommittee had been formed. Heritage Centre Wellington requested that a memo be provided to the subcommittee for their review and comment. The Township provided a memorandum to the committee on January 5, 2024. The subcommittee provided no comments or concerns with the proposed actions.

The Township will consult with the committee further during detailed design process regarding options to commemorate the former structures.

7.4 Council

A presentation to the Township of Wellington Council was provided on July 17, 2023, to provide background information on the project and the intended study process. Copies of the slides presented to Council are included in Appendix H. Feedback received during the presentation included the following:

- The public should be informed that the study area is located in Ward 1 of the Township.
- Question regarding the reasoning behind not addressing these closures earlier, considering some have been closed since 2004.
- Question regarding whether the Township should be responsible for the structures located downstream on private property.
- Question regarding whether the Township has previous experience with Grand River Conservation Authority regarding the potential to divert a watercourse to eliminate Bridge 32-P.
- Recommendations for timelines of the Public Information Centres to be scheduled considering typical farming harvest timelines and busier summer schedules.
- Identification that there is an opportunity for the project to have a booth at the Township's Key Project Open House in September 2023.

- Requests for confirmation that the study will consider emergency response times.
- Appreciation for taking an approach to looking at several structures and their impact on the community under one holistic study.

It is also noted that Ward 1 Councillor attended both Public Information Centres and that the Mayor was present at the second Public Information Centre.

The Draft Project File Report was provided to Council for review and comment. A presentation summarizing the findings of the study was also provided to Council by Township staff on February 26, 2024. Council endorsed the preferred alternative for replacement of bridges 28-P, 32-P and 33-P and the removal without replacement of Bridges 1-P and 30-P during the Council meeting and gave direction to staff to publish the Notice of Study Completion in accordance with the requirements of the Environmental Assessment Act.

7.5 Agencies

Agencies as listed on the Project Contact List included in Appendix H were sent notices electronically by e-mail. Agencies contacted include:

- Ministry of Environment, Conservation and Parks
- Ministry of Natural Resources and Forestry
- Department of Fisheries and Oceans Canada Centre for Inland Waters
- Ministry of Indigenous Affairs
- Township of Centre Wellington
- Township of Woolwich
- Wellington County
- Ontario Provincial Police
- Township of Centre Wellington Emergency Services
- Grand River Conservation Authority
- Upper Grand District School Board
- Wellington Catholic District School Board
- Wellington-Dufferin Student Transportation Services
- Wellington Federation of Agriculture
- Hydro One – Guelph
- Bell Canada

7.5.1 Grand River Conservation Authority

Pre-consultation emails were exchanged with Grand River Conservation Authority (GRCA) throughout the EA, and a virtual pre-consultation meeting was held on September 19, 2023, with Mr. Trevor Heywood of the GRCA and members of the Study Team. Records of email correspondence and minutes of the meeting are included in Appendix H. A summary is provided below:

- GRCA was provided the Notice of Study Commencement on July 20, 2023, and provided comments on July 24, 2023, indicating their interest in the project and general comments with respect to alternatives for new or reconstructed bridges.
- GRCA was provided the Notice of PIC1 on August 24, 2023, and requested a copy of the slides on September 7, 2023. Burnside provided a PDF of the slides on September 7, 2023.
- GRCA requested a virtual meeting for Burnside to present the PIC materials. Burnside provided a narrated version of the slides to the GRCA on September 7, 2023, as an alternative to the virtual live presentation and met with GRCA on September 19, 2023. GRCA outlined general requirements hydraulic modelling and environmental considerations to be considered in the selection of alternatives. GRCA noted that they do not have policy strictly restricting the options of re-routing the unnamed tributary of Bridge 32-P or the use of a low-level crossing at 1-P, provided that any impacts to the environments or hydrologic / hydraulic functions of the watercourses can be restored or enhanced within the same vicinity.
- GRCA was provided the Notice of PIC2 on November 23, 2023. GRCA responded on December 7, 2023, asking when the PIC2 materials would be available on the webpage. Burnside noted the materials should be posted online later on December 7, 2023, and shared a file of the online narrated presentation, PIC2 boards, and a PDF of the presentation including notes.
- GRCA provided comments on PIC2 materials on December 11, 2023. These comments were related to requests for detailed studies (hydrology / hydraulics, Environmental Impact Study, Geotechnical / Geomorphology). Burnside replied to GRCA indicating that these requests will be addressed during detailed design of the projects, given that a more refined design will be required to properly evaluate the impacts related to the studies requested.

7.6 Public Stakeholders

The opportunity for the public to provide comment to the Study Team was provided over the full duration of the study. Means of contacting the members of the Study Team were provided with each of the issued notices, starting with the Notice of Commencement. In addition to the option to correspond with the Township and / or Consultant Project Manager via email or phone call at any time, two in-person formal Public Information Centres (PICs) were also provided, as well as the option to review the project information and PIC content online and provide comment during an extended comment period via the Township's Connect CW website. A summary of the consultations with the general public are provided below. All correspondence records are provided in Appendix H.

7.6.1 Response to Notice of Commencement

Correspondence was received from several individuals following issuance of the Notice of Commencement, and prior to any formal Public Information Centres. Several requests to be included on the mailing list for all future project updates were received. Comments received by individuals in response to the Notice of Commencement are summarized as follows:

- Opening some, if not all, bridges would be beneficial, as closures cause longer drives with farm equipment and force farmers onto busy county roads where it is more dangerous to be driving a slow-moving vehicle.
- Preference to reconstruct the Noah Road bridges as they consider it important to conducting business and emergency services. The same individual noted that they feel one of either Bridge 1-P or 28-P should be re-opened to keep the community connected, noting that Bridge 28-P would likely be the more viable candidate.
- Gravel trucks were observed travelling on Sideroad 5 and this individual believes that there needs to be an east-west 'shortcut' for gravel trucks moving materials from the gravel pits on the west of the study area to the new developments to the east.
- Strongly supports resurrecting bridges, especially 30-P (which would provide them direct access to Wellington Road 7) and 1-P.
- Prefer that Bridge 30P remain closed as it reduces traffic. They also noted that they would use the other four bridges if they were opened, but support whatever decision is made on those structures. A note regarding the importance of another structure within the Study Area, that is not being evaluated under this study was also given.

7.6.2 Public Information Centre #1

PIC #1 was held on September 6, 2023. PIC #1 was arranged as an open house / drop-in session where residents and other interested persons could review the display boards and discuss comments, questions, and concerns with the Study Team.

A copy of the display boards is provided in Appendix H.

A total of 39 people signed in at PIC #1 excluding the Study Team. A total of 20 comments were received in the comment period following PIC #1. Comments were provided through paper comment sheets supplied at the PIC. Copies of the comment sheets are provided in Appendix H.

The comments received through the formal comment sheets, as well as during the open forum conversations during PIC #1 included the following themes:

- The issues of these closed structures have gone unaddressed for too long.
- Residents notice improvements to infrastructure occurring elsewhere in the Township and feel their area is being neglected.

- Bridge 33-P should be replaced with a bridge for farmers with wide / heavy farm machinery to cross.
- Combine bridges 32P and 33P. Bridge 32-P should be removed, and the brook should be drained into Carroll Creek.
- The closure of 32P and 33P causes a traffic hazard as trucks have to reverse and back out on to 8th Line West to get out.
- Bridge 28-P should be replaced with a new structure so farmers can access their land. This bridge is important for farmers and should be wide enough for farming equipment.
- Bridge closures are creating situations where emergency personnel cannot reach their destination with effective timing, and responders have often taken the wrong route and had to back-track to reach the destination.
- Closures of bridges are resulting in the need to use busier Wellington Roads 17 and 18 for east-west travel and, specifically for one resident who owns land on each side of Sideroad 5, the need to use Wellington Road 7. This concern is amplified for travel with slow moving vehicles (farming equipment or horse and carriage)
- Closures are also resulting in trespassing on private properties. Residents are concerned about liability if someone is trespassing and is injured on their property.
- Residents have had to create a bridge on their private property. Others are trespassing and using this private bridge. GPS is continuing to lead residents through private properties.
- Services such as snow removal, garbage, and grading, are also using private driveways.
- Resident's property taxes go toward these bridges and residents should not have to build private bridges themselves.
- Consideration should be given to providing low-level crossings, which could be used during normal flow conditions, but would overtop in larger storm events.
- Bridge 30-P is low priority for the community, with the exception of one specific local property owner.
- Bridge 1-P is low priority for most of the nearby residents, especially considering it is a no-winter access road. Some of the adjacent landowners even identified a preference for the structure to remain closed.

Based on conversations held with the community during the PIC, and the volume and contents of written comments received, a ranking of preferred rankings of structures to be replaced can be summarized as follows:

1. Bridge 28-P
2. Bridges 32-P & 33-P (with preference to combine into one structure if possible)
3. Bridge 30-P
4. Bridge 1-P

All feedback from the public on the existing conditions and potential alternative solutions was reviewed by the project team and considered in the selection of the preferred alternative.

7.6.3 Public Information Centre #2

PIC #2 was held on December 6, 2023. PIC #2 was arranged as an open house / drop-in session with a presentation at 6:30 pm. After the presentation, residents and other interested persons could review the display boards and discuss comments, questions, and concerns with the Study Team.

A copy of the display boards is provided in Appendix H.

A total of 31 people signed in at PIC #2, excluding the Study Team. A total of two comments were received in the comment period following PIC #2. Comments were provided through paper comment sheets supplied at the PIC. Copies of the comment sheets are provided in Appendix H.

The comments received through the formal comment sheets, as well as through conversation during the open conversation forum during the PIC #2, and email correspondence following the PIC included the following themes:

- Residents hope the project (study, design, construction) can move forward quickly.
- Residents are generally happy with the preferred solution presented at PIC #2.
- Residents questioned whether the use of steel culverts was considered and whether they would be considered suitable for any of the proposed sites.
- Residents questioned why it was decided to replace the structure at Bridge 32-P instead of diverting the watercourse and eliminating the need for a structure.
- A group of cyclists identified that 30-P forms part of a gravel road loop and they would desire to have pedestrian access maintained at the crossing, possibly by means of replacement with a prefabricated pedestrian bridge.
- Previous ward councilor noted that during their term residents, the following information was portrayed to him by residents:
 - Residents were adamant that the bridges be replaced due to farmers requiring access to transport equipment and produce.
 - Employees and old-order Mennonites need secure access to the agribusinesses on Noah and Seiling Roads and Noah Road bridge crossing is more direct than alternative routes.
 - The bridges were originally constructed as a means to traverse waterways with farm equipment and produce and that need has not diminished, with farmers expanding and requiring more significant movement of shared equipment between farm properties.

- Local residents suggested diverting the watercourse at 32-P to reduce costs to Townships but also allow the downstream property owner to reclaim land and relocate watercourse away from feedlots.
- There has been increased migration of old-order Mennonites.

Comments received were considered by the Project Team in confirming the preferred alternative solution. The majority of comments received had already been considered in the selection of the preferred alternative, and no new comments were significant enough to effect the selection of the preferred solution. Responses were provided indicating the justification to still support the preferred solution.

8.0 Description of Proposed Undertaking

As indicated in Section 6.7, the preferred solution is to replace Bridges 28-P, 32-P, and 33-P, and remove Bridges 1-P and 30-P. Table 18 summarizes the proposed undertaking at each location.

Table 18: Summary of Proposed Undertaking

| Structure | Proposed Undertaking |
|------------------|---|
| 1-P | Remove remainder of structure and existing in-stream crossing and naturalize area disturbed during structure removal. |
| 28-P | Replace bridge with 14 m clear span, 9.8 m wide Concrete Slab on Prestressed Hollow Core Slab Girder Bridge. |
| 30-P | Remove bridge and re-naturalize all areas disturbed by structure removal. |
| 32-P | Replace bridge with 2.4 m span x 2.0 m rise Precast Box Culvert. |
| 33-P | Replace bridge with 22 m clear span, 9.8 m wide Concrete Slab on Prestressed Concrete Box Girder. |

8.1 Structure Removals (Bridges 1-P & Bridge 30-P)

The preferred alternative involves removing Bridges 1-P (remains thereof) and 30-P to below the natural channel elevations, restoring the channel to match the upstream / downstream topography and re-naturalizing the watercourse and embankments. It is recommended that during the removals of these structures, the existing concrete base slab of structure 30-P and the built-up stone causeway through the creek at structure 1-P should be removed.

8.2 Structure Replacements & Approach Road Improvements

As outlined in Section 6.4, preliminary designs have been completed for the replacement structures of Bridges 28-P, 32-P, and 33-P. The objective design criteria for each site is summarized in Table 19 below. Preliminary conceptual design drawings of the replacement structures are provided in Figure 7 through Figure 16.

Table 19: Summary of Objective Design Geometry for Preferred Replacements

| | 28-P | 32-P | 33-P |
|---|---|------------------------------|---|
| Structure Geometry | | | |
| Structure Type | Slab on Prestressed Concrete Hollow Core Girder | Precast Concrete Box Culvert | Slab on Prestressed Concrete Box Girder |
| Size | Span = 14.0 m Girder = S600 | 2.4 m span x 2.0 m rise | Span = 22.0 m Girder = B800 |
| Overall Width | 9.8 m | 16.5 m +/- | 9.8 m |
| Skew | 10 degrees | 30 degrees | 30 degrees |
| Min. Soffit Elevation | 389.21 | 374.95 | 374.23 |
| Road Geometry | | | |
| Length of Road Reconstruction & Widening | 110 m | 300 m | |
| Vertical Rate of Curvature | 9 (Sag) | 11 (Crest) 18 (Sag) | |
| Applicable Design Speed, Non-illuminated | 40 km/h | 60 km/h | |
| Applicable Design Speed, Illuminated | 60 km/h | 70 km/h | |
| Lane Width | 3.35 m | 3.35 m | |
| Shoulder Width | 1.25 m | 1.25 m | |
| Roadside Grading | 2H:1V | 2H:1V | |
| Low Point Elev. @ C/L | 389.72 m | 375.037 m | |

Figure 7: Plan View of Conceptual Design, Bridge 28-P

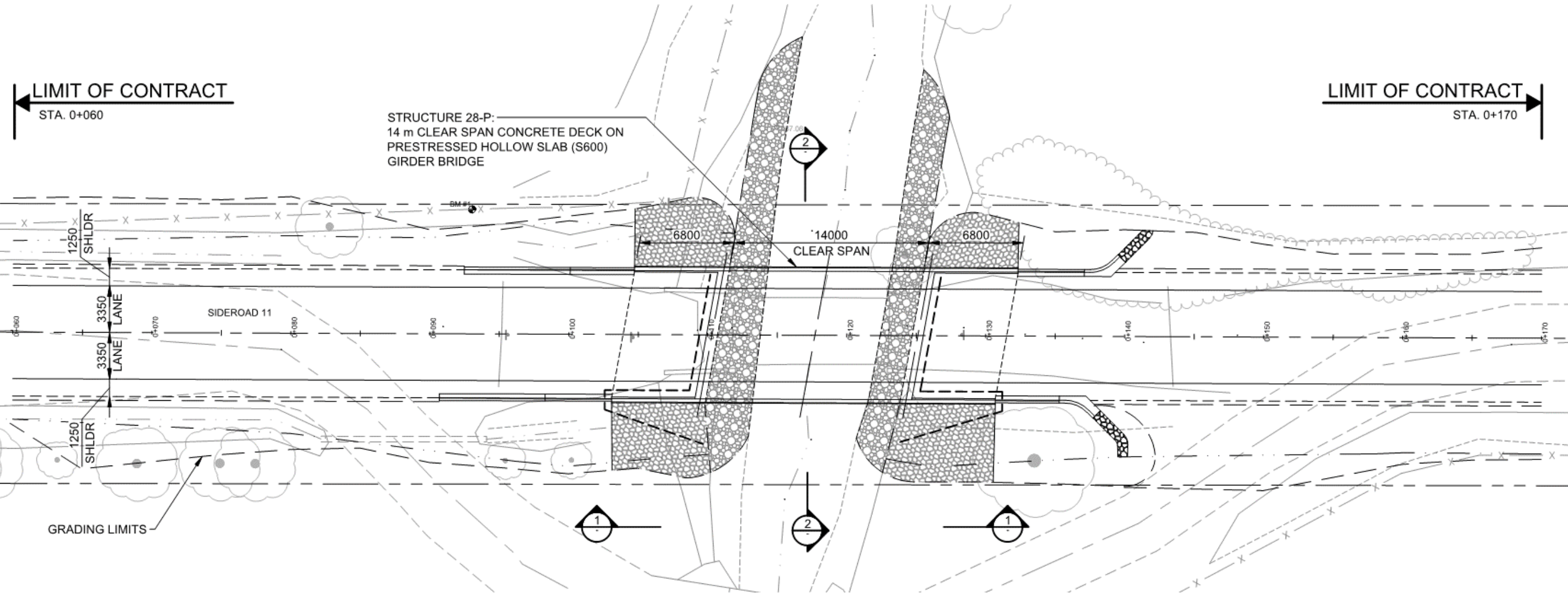


Figure 8: Profile View of Conceptual Design, Bridge 28-P

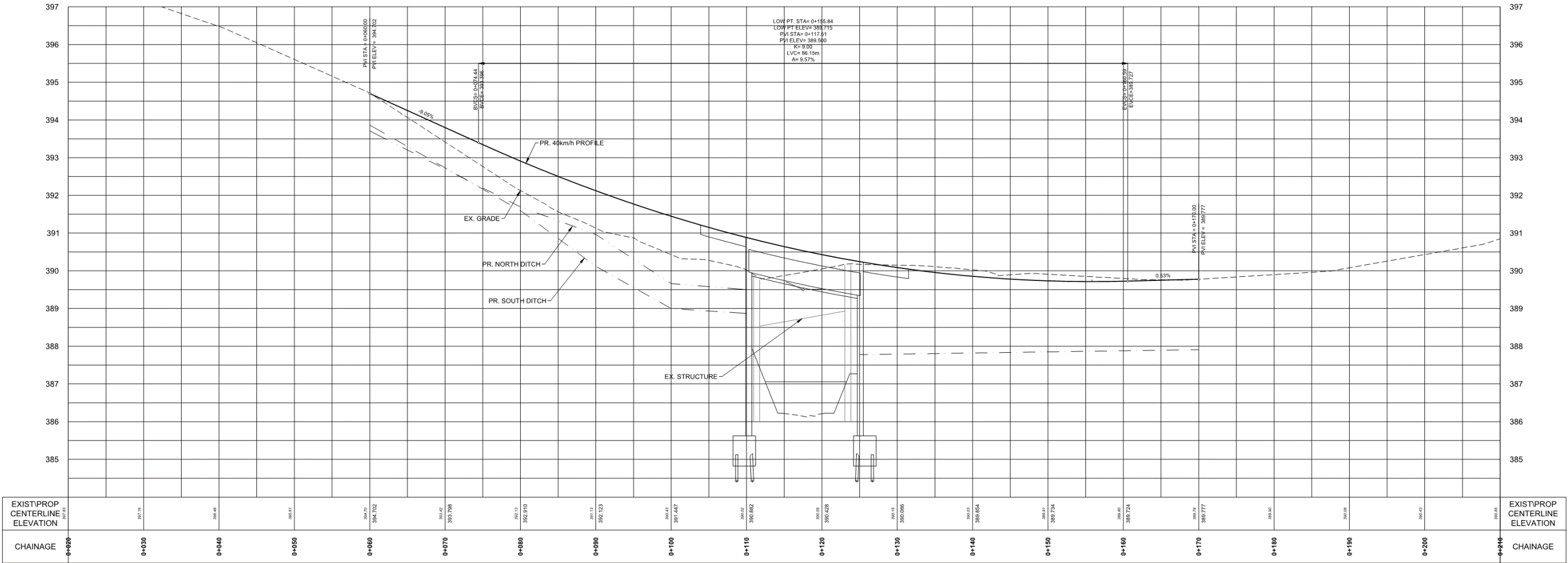


Figure 9: Elevation View of Conceptual Design, Bridge 28-P

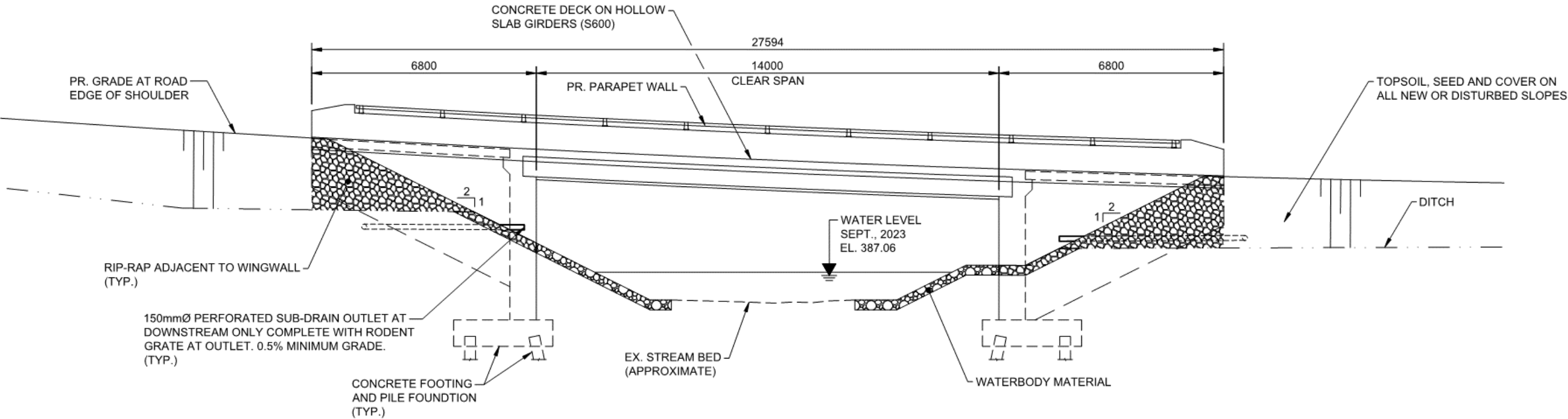


Figure 10: Cross-Section View of Conceptual Design, Bridge 28-P

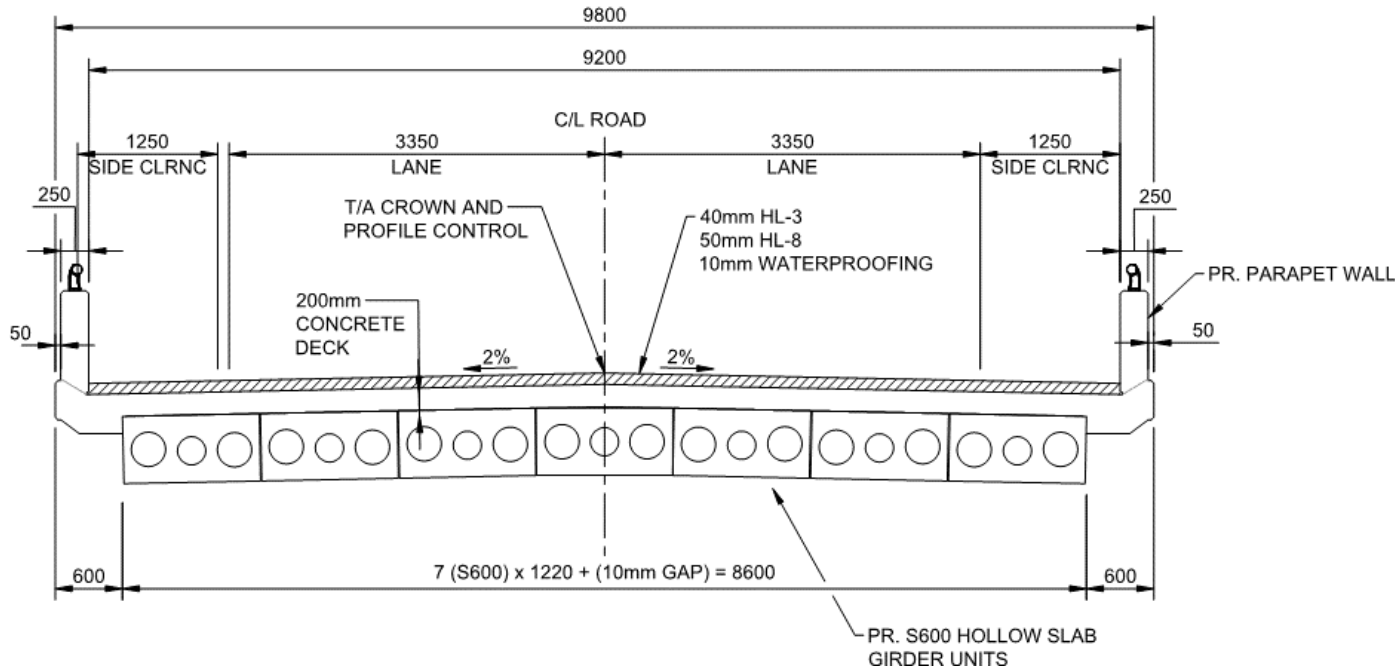


Figure 11: Plan View of Conceptual Design, Bridges 32-P & 33-P

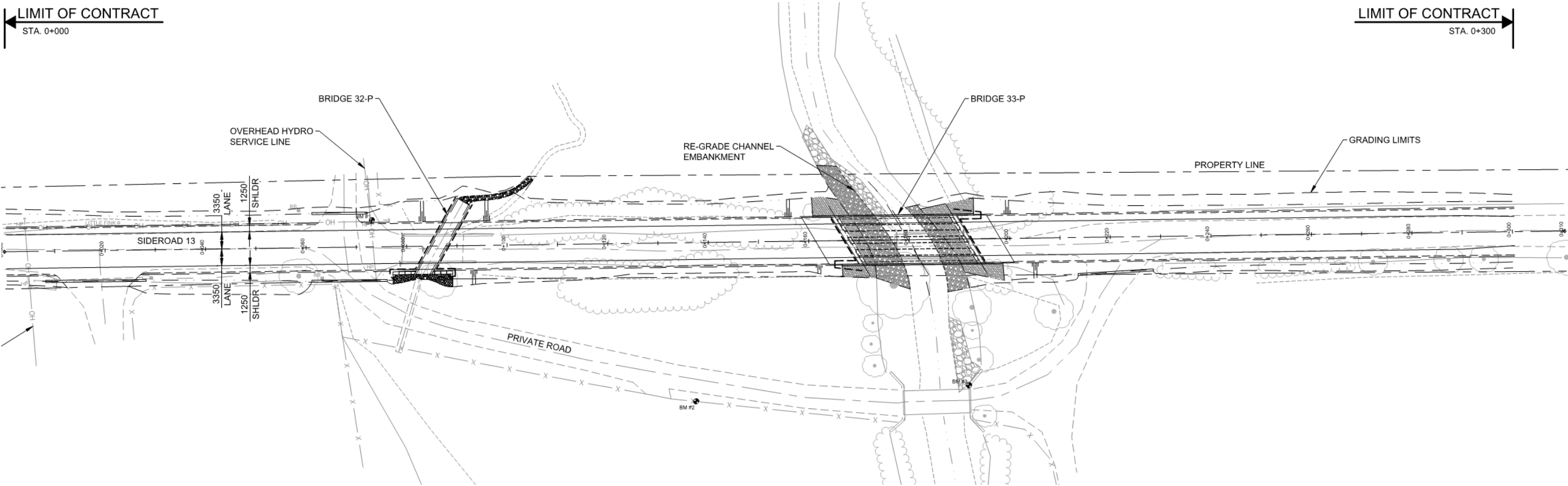


Figure 12: Profile View of Conceptual Design, Bridges 32-P & 33-P

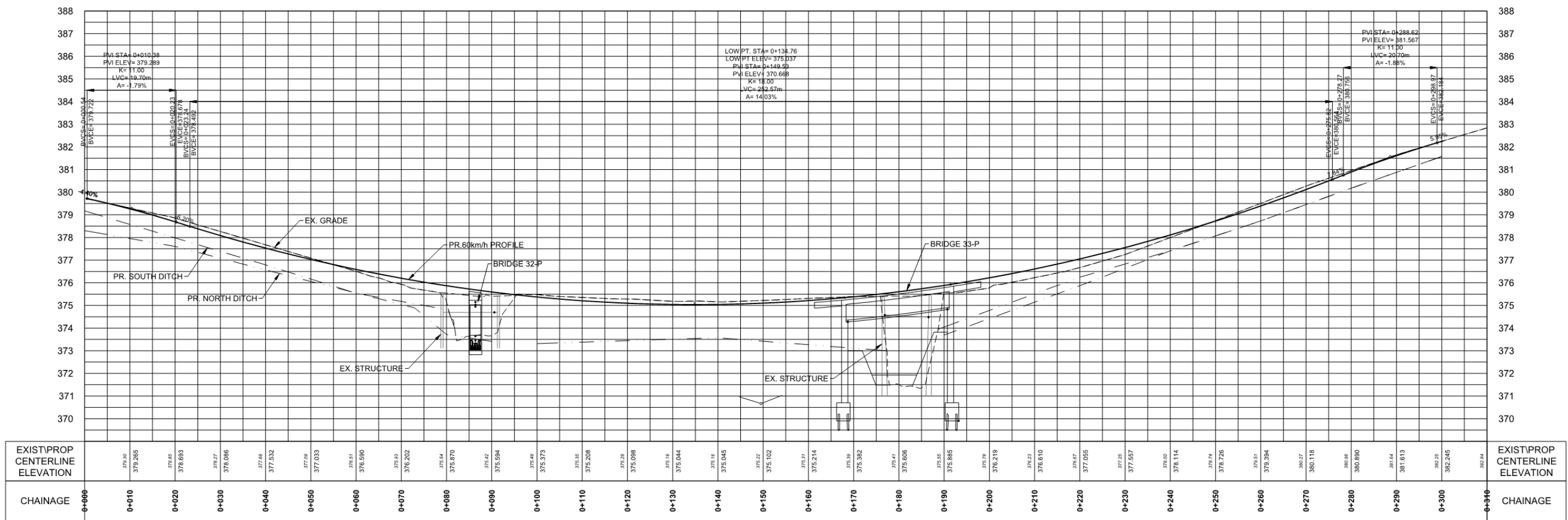


Figure 13: Elevation View of Conceptual Design, Bridge 32-P

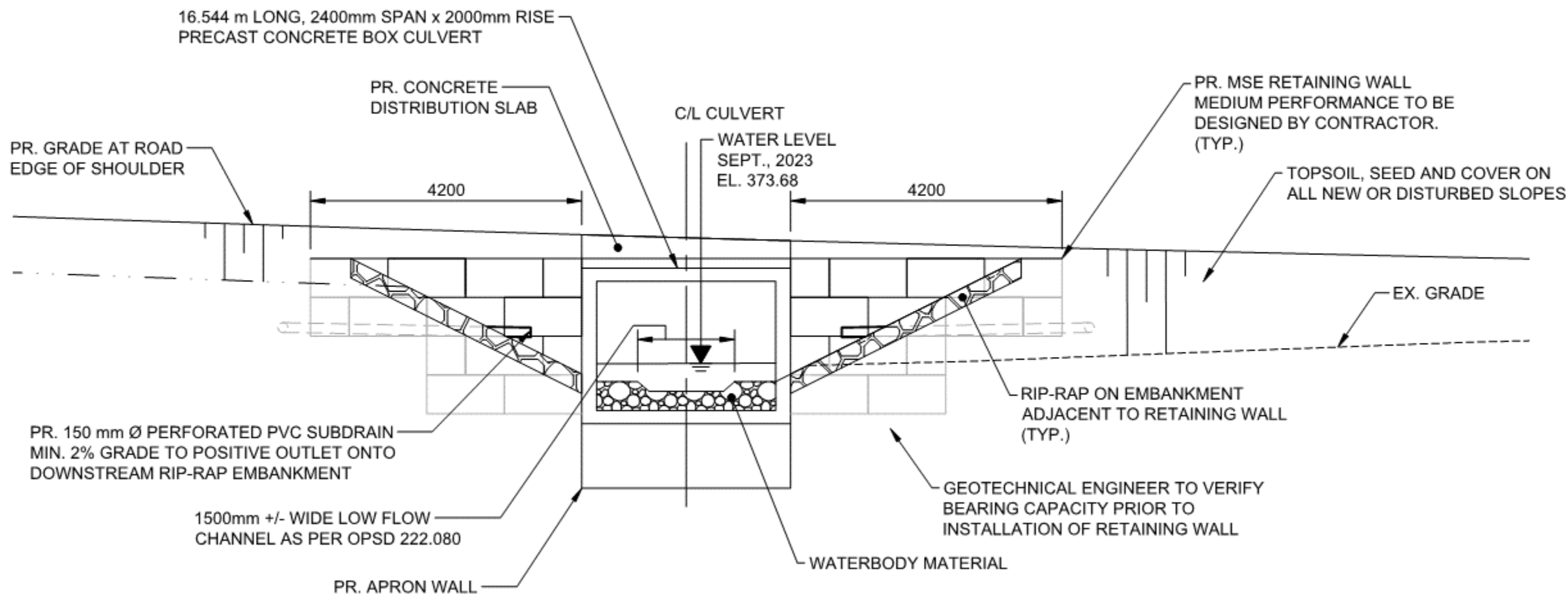


Figure 14: Cross-Section View of Conceptual Design, Bridge 32-P

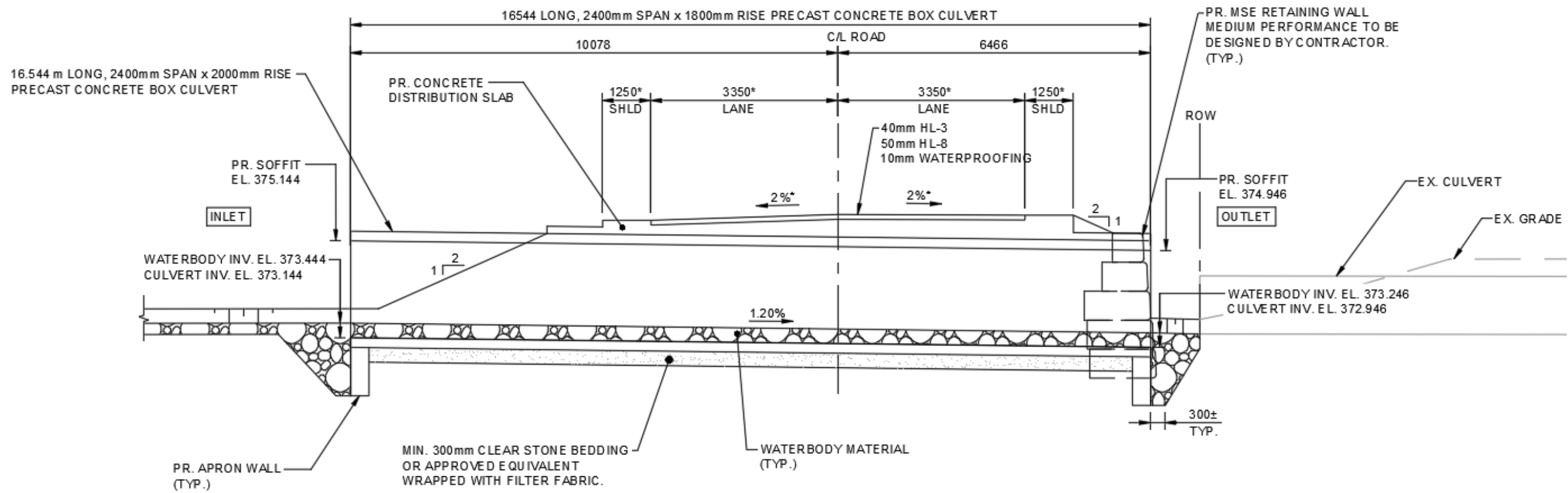


Figure 15: Elevation View of Conceptual Design, Bridge 33-P

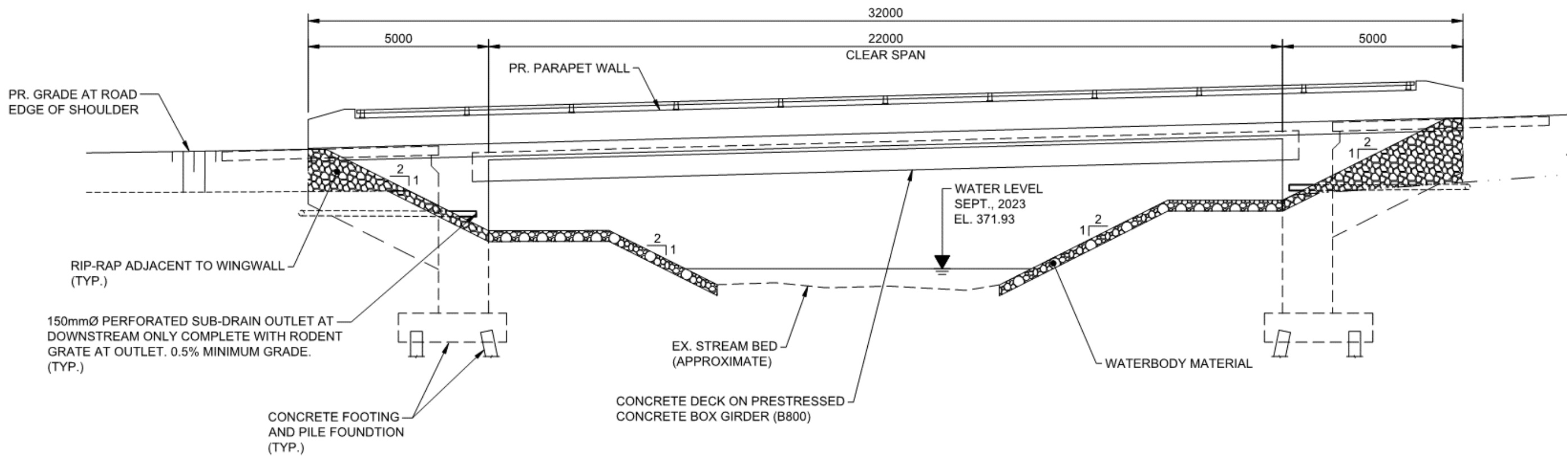
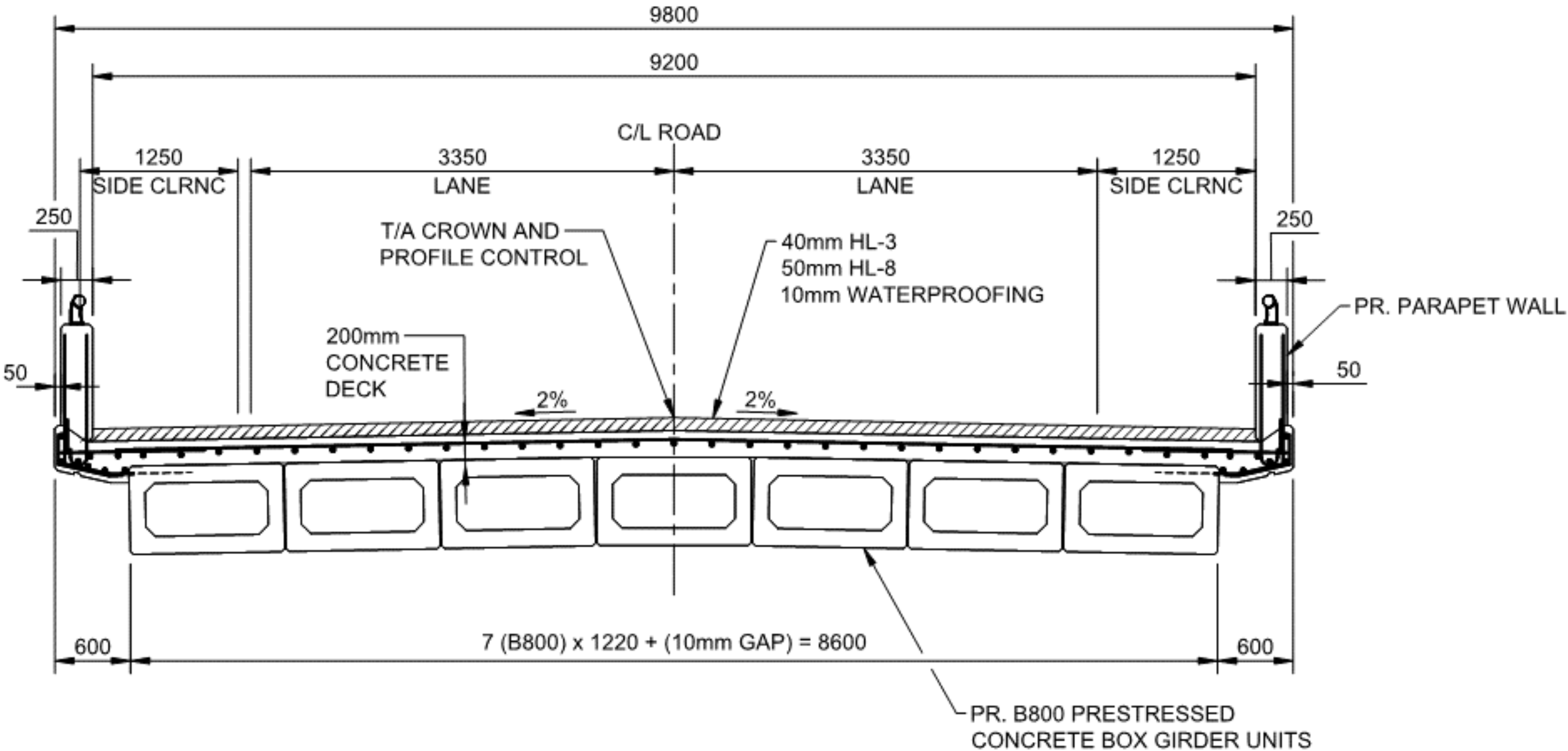


Figure 16: Cross-Section View of Conceptual Design, Bridge 33-P



9.0 Environmental Impacts, Mitigation Measures, and Monitoring

The potential environmental impacts associated with construction, operation, and maintenance of the proposed bridge replacements within the Study Area have been identified and are summarized in Table 20. Proposed measures to mitigate these impacts and monitoring activities to ensure that the mitigation measures are implemented effectively are also provided in the table. All mitigation measures and monitoring activities shall be reviewed during the detailed design phase of the project.

Table 20: Summary of Impacts, Mitigation, and Monitoring Activities

| Feature | Description of Potential Effects | Mitigation Measures | Monitoring Activities |
|--|---|--|--|
| Effects on Ecological Features and Functions | | | |
| Nests of Migratory Birds | Clearing of trees, shrubs and ground vegetation has the potential to disturb or destroy nests of migratory birds. | <ul style="list-style-type: none">Any vegetation clearing will take place outside of the breeding bird timing window; generally, from April 1 to August 31.If clearing must occur within this window a qualified Ecologist / Avian Biologist will first search the affected area. Any active nests will be flagged and all clearing within the associated habitat will be avoided until the Ecologist / Avian Biologist confirms that the birds have fledged, and the nest is no longer active.If a nesting migratory bird (or SAR protected under ESA, 2007) is identified within or adjacent to the construction site, all activities will stop, and the Contractor shall discuss mitigation measures with the proponent. In addition, the proponent will contact the MECP to discuss applicable mitigation options. The Contractor will proceed based on the mitigation measures established through discussions with the MECP. | <ul style="list-style-type: none">The Contractor will conduct monitoring as identified by the NDMNRF and / or MECP, as necessary. |
| Roosting Habitat for Endangered Bats | Removal of trees may disturb or destroy potential bat roosting habitat which may exist in the area. | <ul style="list-style-type: none">Any tree clearing will take place outside of the bat roosting timing window; generally, from April 1 to September 30.If tree clearing must occur within this window, a qualified Ecologist will first assess the trees to determine if potential bat maternity roosting habitat is present, in accordance with provincial guidelines. If trees exhibit characteristics that could provide bat roosting, no clearing will be permitted without further review by MECP and / or a permit under the Endangered Species Act is obtained.All requirements under the <i>Endangered Species Act</i> will be met. | <ul style="list-style-type: none">Any monitoring required under the <i>Endangered Species Act</i> will be carried out. |
| Trees | Removal of trees to accommodate the project will reduce tree cover in the Study Area. | <ul style="list-style-type: none">A Tree Inventory and Preservation Plan will be completed during detailed design. Tree removals will be minimized.Compensation plantings will be undertaken prior to tree removals or at the earliest appropriate season after tree removals.Tree Protection Zones (TPZs) will be established during detailed design.Barriers will be installed around trees to be protected using plywood clad boarding or an equivalent material approved by the affected municipality.No stockpiles, storage, or disturbance to grade will occur within the TPZ to minimize soil compaction and root damage.Where tree roots are encountered during construction, they should be cut cleanly and re-packed with soil as soon as possible. | <ul style="list-style-type: none">The success of compensation vegetation will be monitored for two years. Success of less than 80% of plantings will require further follow-up planting and monitoring for an additional two years until an 80% success rate has been achieved. |
| All Adjacent Natural Features | Sediment and erosion impacts associated with land grading and clearing. | <ul style="list-style-type: none">All work zones should be clearly marked on detailed design drawings and at the work site to indicate that no work should occur outside the work zone.Detailed grading, construction, dewatering, and erosion and sediment control plans will be submitted to the GRCA for review and comment at detailed design.Implementation of the erosion and sediment control (ESC) measures will conform to industry best management practices and recognized standard specifications such as Ontario Provincial Standards Specifications (OPSS).The ESC Plan will be prepared to the satisfaction of the GRCA.Sediment and erosion control measures will be implemented prior to construction and maintained during the construction phase in accordance with the erosion and sediment control plan developed during detailed design. | <ul style="list-style-type: none">Erosion and sediment control measures will be inspected weekly and after heavy rainfall events to ensure they are functioning and are maintained as required.If erosion and sediment control measures are not functioning properly, alternative measures will be implemented and prioritized above other construction activities. |

| Feature | Description of Potential Effects | Mitigation Measures | Monitoring Activities |
|----------|---|--|---|
| | | <ul style="list-style-type: none">All sediment and erosion control measures will be inspected prior to construction and maintained during the construction phase to prevent entry of sediment into natural features.Routine upkeep and maintenance of ESC features are to include regular monitoring for erosion and sedimentation impacts due to site grading during and after trail construction.If the sediment and erosion control measures are not functioning properly, no further work in the affected areas will occur until the sediment and / or erosion problem is addressed.All disturbed areas of the construction site will be stabilized and re-vegetated as soon as conditions allow.Sediment and erosion control measures will be left in place until all areas of the construction site have been stabilized and will then be removed by the Contractor.Wet weather restrictions shall be applied during site preparation and excavation. Work will be avoided near watercourses during periods of excessive precipitation and / or excessive snow melt.The Contractor will be aware of spill prevention best practices and will have contingency plans in place should a spill occur. Personnel will be trained in how to apply the plans. Spills or depositions into watercourses will be immediately contained and cleaned up in accordance with provincial regulatory requirements and the contingency plan. Spills will be reported to the Ontario Spills Action Centre at 1800-268-6060. | |
| Wildlife | Temporary displacement and disturbance to wildlife and habitat during the construction phase. | <ul style="list-style-type: none">The footprint of the proposed disturbed area shall be minimized as much as possible.In the event an animal is encountered during construction and does not move from the construction zone, the Contract Administrator should be notified. If the construction activities are such that continuing construction in the area would result in harm to wildlife, construction activities in that location should temporarily stop and the MECP can be contacted for direction.If temporary perimeter exclusion fencing is used at a location, it should be installed to allow wildlife to leave the fenced area during vegetation clearing. Once the work area has been cleared, it can be securely fenced to prevent wildlife from returning.The excluded area should be searched immediately following fencing installation for any wildlife (including SAR) that may have become trapped. Any wildlife should be safely relocated or permitted to escape to a suitable habitat. All works should stop immediately and MECP should be contacted if SAR is encountered within the area to ensure compliance with the ESA.Avoid vegetation clearing during sensitive times of the year for local wildlife, such as spring and early summer (during breeding and migration seasons).The new structure(s) will allow for wildlife passage below the structure if feasible.Fencing to delineate the work zone will prevent encroachment into adjacent habitat supporting SAR and Species of Special Concern. | <ul style="list-style-type: none">The Contractor will conduct regular monitoring of the erosion and sediment control measures to ensure they are acting as intended and are containing the work area. |
| Wildlife | Mortality of wildlife inadvertently moving through construction zones. | <ul style="list-style-type: none">Silt fencing will be properly installed and maintained in accordance with an approved erosion and sediment control plan to keep wildlife out of work areas.If wildlife inadvertently moves into a construction area, the Environmental Inspector will move the species outside of the work area, if possible, using gloves and a bucket or plastic tub, as appropriate.If any species at risk are encountered that are not identified on relevant permits, all work will cease within the immediate work area and the MECP will be contacted. | <ul style="list-style-type: none">The Contractor will be required to regularly monitor fenced areas to ensure that fencing is properly keyed / toed into the ground to ensure that wildlife cannot gain access under fenced area. |

| Feature | Description of Potential Effects | Mitigation Measures | Monitoring Activities |
|---|---|---|---|
| Wildlife | Dust effects on wildlife habitat | <ul style="list-style-type: none"> As appropriate, dust from the work areas will be controlled through suppressants (e.g., water). | <ul style="list-style-type: none"> Dust emissions will be monitored daily during construction to ensure dust control watering frequency and rates are adequate. |
| Groundwater | Minor dewatering may be required during construction (i.e. installation of bridge footings, etc.) which may affect local hydrology. | <ul style="list-style-type: none"> All requirements under the Ontario Water Resources Act, R.S.O. 1990, c. O.40 with respect to the quality of water discharging into natural receivers will be met, including the following mitigation measures and best practices: <ul style="list-style-type: none"> Any discharge from dewatering should outlet to a vegetated area at least 30 m from a watercourse utilizing a sediment filter bag. In the event of sediment discharge, all operations will stop immediately until the problem can be resolved. If significant changes in water levels are noted, operations will cease until water levels recover. | <ul style="list-style-type: none"> An Environmental Inspector should be on-site during any dewatering. The Monitor should ensure that the filter bag is working appropriately and ensure that no sediment is entering significant natural features or watercourse. |
| Groundwater / Surface Water / Natural Areas | There is potential for spills of fuels or other hazardous materials to occur during fueling of construction equipment or other construction activities. | <ul style="list-style-type: none"> All materials and equipment used for the purpose of site preparation and project construction shall be operated and stored in a manner that prevents any deleterious substances (petroleum products, silt, etc.) from entering natural features. Any stockpiled materials will be stored at least 30 m away from a watercourse. Refueling and maintenance of construction equipment should occur a minimum of 30 m from a natural feature. Hazardous material transportation and application will occur in designated areas according to operational procedures. Proper spill containment equipment will be used and maintained on site. The Contractor will be aware of spill prevention best practices and will have contingency plans in place should a spill occur. Personnel will be trained in how to apply the plans. Spills or depositions into watercourses will be immediately contained and cleaned up in accordance with provincial regulatory requirements and the contingency plan. Spills will be reported to the Ontario Spills Action Centre at 1800-268-6060. | <ul style="list-style-type: none"> Workers will report any instances of spills to their supervisors. |
| Watercourse Banks | Construction along the banks could destabilize the banks. Long-term presence of the structures could lead to bank erosion over time. | <ul style="list-style-type: none"> Geotechnical studies will be carried out early in the detailed design process to confirm soil conditions and bank stability. The design will address findings and include bank stability measures, as required. Natural bank stability measures will be preferred over engineered solutions, where possible. Detailed design plans will be submitted to the GRCA to confirm that all work is in compliance with GRCA regulations. Wet weather restrictions will be applied during site preparation and excavation. Work will be avoided near water during periods of excessive precipitation and / or excessive snow melt. | <ul style="list-style-type: none"> The Construction Inspector will perform regular inspection to ensure that mitigation is implemented. |
| Fish and Fish Habitat | In-water work could disturb / destroy fish and fish habitat. | <ul style="list-style-type: none"> All work will be completed in the dry in isolation of flowing water (i.e., through the use of cofferdams, etc.). Fish will be salvaged under a License to Collect Fish for Scientific Purposes, obtained from the NDMNRF, prior to dewatering. The footprint of disturbed areas will be minimized to the extent possible. Vegetated buffers will be left in place adjacent to watercourses / wetlands to the maximum extent possible. Wet weather restrictions will be applied during site preparation and excavation. Work will be avoided near watercourses during periods of excessive precipitation and / or excessive snow melt. All requirements under the <i>Fisheries Act</i> will be met including Project Review or permitting. Disturbed areas in-channel will be restored to naturalized conditions using a round stone mix and native material where feasible. | <ul style="list-style-type: none"> An Environmental Inspector will perform regular inspection to ensure that mitigation is implemented and that all work is conducted in accordance with any associated permits / approvals. A Qualified Ecologist should be on-site to monitor the in-channel restoration works and stone placement. |

| Feature | Description of Potential Effects | Mitigation Measures | Monitoring Activities |
|---|--|---|--|
| | | <ul style="list-style-type: none">Following construction, all disturbed riparian areas will be restored and / or revegetated as soon as conditions allow using native materials.All in-water work will occur between July 15 and March 15 of any year and the project should be screened to determine the requirement of a submission of a request for review to DFO at the detailed design stage of the project. | |
| All Natural Features | Introduction of invasive species into natural areas. | <ul style="list-style-type: none">Construction equipment should be cleaned prior to bringing it to the site to avoid introducing exotic species from other sites.All disturbed areas of the construction site will be re-vegetated as soon as conditions allow.Where re-vegetation is required seed mixes which do not contain invasive species will be used.If extensive invasion of non-native species is identified as a result of the Project, contingency measures may need to be developed in consultation with TRCA. | <ul style="list-style-type: none">Regular inspections will be conducted by the Contractor to ensure that mitigation is implemented. |
| All Natural Features | Increased salt use at the crossings during the winter can increase salinity of the wetlands and watercourses in the Study Area changing the water chemistry and harming wildlife that inhabit the area. Stockpiling snow also changes habitat conditions for wildlife. | <ul style="list-style-type: none">If the roads are to be salted as part of maintenance during winter months, the use of salt should be minimized to the extent possible. The use of more natural alternatives should be explored. | <ul style="list-style-type: none">No monitoring required. |
| Effects on Cultural Heritage and Archaeological Resources | | | |
| Archaeological Resources | There is potential for archaeological resources to be disturbed during construction. | <ul style="list-style-type: none">The recommendations of the Stage 1 archaeological assessment (AA) and any further recommended stages will be followed.Any further recommended AA (e.g., Stage 2, 3 and 4) will be undertaken by a licensed archaeologist as early as possible during detailed design and prior to any ground disturbing activities.Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the Ontario Heritage Act.The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with Ontario Regulation 30/11 the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (via email to archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the Ontario Heritage Act.First Nations will be contacted by staff prior to any Stage 2 work or additional work beyond Stage 2, if required, and will be offered an opportunity to participate in field studies and / or report review. | <ul style="list-style-type: none">Any monitoring requirements identified through the Stage 2 Archaeological Assessment and any subsequent assessments will be implemented. |

| Feature | Description of Potential Effects | Mitigation Measures | Monitoring Activities |
|---|---|--|--|
| Cultural Resources | There is a potential for cultural resources to be impacted during construction. | <ul style="list-style-type: none">No further heritage reports are required for each of the five bridges.Any replacement structures should be designed to reflect the existing designs of each bridge where possible. An attempt shall be made to incorporate the unique designs of the original into any replacement structures.Bridge 1-P is located within 650 m of structures associated with a Listed property. Given the distance between the bridge and the structures, it is highly unlikely the structures will be impacted, directly or indirectly, by any of the proposed works at Bridge 1-P. Therefore, no further heritage report is recommended specific to the proximity of Bridge 1-P to this Listed property.Documentation of each structure be deposited in a local publicly accessible repository. Given the extent of previous assessment on each structure, the existing reports should be accepted as a complete record. A Photographic Inventory document of Structure 1-P had been previously completed, which documented the steel truss structure prior to its removal in 2019. This document is considered to fulfill the documentation recommendations of the CHAR and is included in Appendix C. | <ul style="list-style-type: none">No monitoring required. |
| Effects on Social Environment, Property and Public Safety | | | |
| Private Property | Removing in-water crossing could lead to increased traffic through the watercourse as well as dumping in the wetland area to re-instate crossing. | <ul style="list-style-type: none">Anti-dumping and watercourse disturbance enforcement should take place if the area continues to be used in these ways after the removal of the crossing. | <ul style="list-style-type: none">No monitoring required. |
| Private Property | Construction may cause damage to private property. | <ul style="list-style-type: none">Construction access routes will be clearly defined in consultation with private landowners prior to construction.Construction areas will be clearly marked and fenced.Any temporary access or staging areas will be restored to their pre-construction condition.Timing of construction on private property will be agreed upon with the property owner. | <ul style="list-style-type: none">A Construction Inspector will ensure that construction limits are well-marked and adhered to throughout construction. |
| Public Safety | Emergency Response could be impacted during construction. | <ul style="list-style-type: none">Bridge construction will be completed in either a phased manor, allowing one of traffic through at all times, or alternatively, bridge closure may be required.Should bridge closure be required, EMS must be notified and detour plans will be completed as required. | <ul style="list-style-type: none">No monitoring required. |
| Public Safety | The configuration of the bridges will impact access and routes for Emergency Response which could affect public safety. | <ul style="list-style-type: none">The greatest improvements per site are realized by opening Bridges 28-P, 32-P, and 33-P.The Township will work with EMS to ensure that opening new routes are documented in EMS's database so access plans are updated in case of emergency. | <ul style="list-style-type: none">No monitoring required. |
| Air Quality | Potential air quality impacts during construction. | <ul style="list-style-type: none">A complaint response protocol for nuisance impacts including dust emissions will be prepared during the detailed design phase of the project and implemented prior to construction.During construction, the following mitigation measures shall be used:<ul style="list-style-type: none">The road shall be graded as required to remove potholes, ruts and ripples in the road surface. Efforts to prevent contamination of the road surface, such as spilling sands, silts and clays, will also help to minimize dust.If appropriate equipment is available, the roadway should be sprayed with water as required to minimize dust generation prior to paving.The construction contractor will be required to develop a Construction Management Plan (CMP) that specifically addresses dust controls, and contingency plans to mitigate dust when it occurs. | <ul style="list-style-type: none">An environmental monitor shall regularly inspect construction work areas to ensure that dust suppression measures are being adequately applied and confirm the requirements outlined in the CMP are being followed. If dust suppression measures are not functioning properly, alternative measures shall be implemented immediately and |

| Feature | Description of Potential Effects | Mitigation Measures | Monitoring Activities |
|---------|---|--|---|
| | | <ul style="list-style-type: none">– Vehicles / machinery and equipment shall be in good repair, equipped with emission controls, as applicable, and operated within regulatory requirements. The contractor shall also be required to implement dust suppression measures to reduce the potential for airborne particulate matter resulting from construction activities. This should be in the form of water applications on exposed soils.– Considerations shall be given to using of chemical suppressants to reduce dust, use of wind barriers and limiting exposed areas which may be a source of dust and equipment washing.– The construction contractor shall develop a Construction Management Plan (CMP) that specifically addresses dust controls, and contingency plans to mitigate dust when it occurs. | prioritized above other construction activities. |
| Noise | Potential for noise through the use of large equipment for construction of the proposed road extension. | <ul style="list-style-type: none">• A complaint response protocol for nuisance impacts including construction noise shall be prepared during the detailed design phase of the project and implemented prior to construction.• Noise control measures shall be implemented where required during the construction phase, such as restricted hours of operation and the use of appropriate machinery and mufflers. The noise produced by the equipment can be limited through proper equipment maintenance.• All construction activities shall conform to the criteria set out in NPC-115 of 83 dB.• The construction contractor will be required to develop a Construction Management Plan (CMP) that specifically addresses noise controls, mitigation to be implemented and frequency of equipment inspection. | <ul style="list-style-type: none">• An environmental monitor should regularly monitor construction noise to ensure that noise control measures are being adequately applied and confirm the requirements outlined in the CMP are being followed. If noise control measures are not functioning properly, alternative measures shall be implemented immediately and prioritized above other construction activities. |

10.0 Climate Change Considerations

10.1 Climate Change

Climate change is defined as any significant change in long-term weather patterns. The term can apply to any major variation in temperature, wind patterns, or precipitation that occurs over time. Global warming describes the recent rise in the average global temperature caused by increased concentrations of greenhouse gas emissions (GHG) trapped in the atmosphere. Scientists have concluded that human activity is largely responsible for recently observed changes to our climate since GHGs are mainly caused by burning fossil fuels to produce energy.

There are two types of climate change effects that can be considered. The first is the effect that a project can have on climate change. In this case, the degree to which the project can provide some climate change mitigation measures is to be assessed. The second is the effect climate change has on the project. Climate change was considered during this Class EA Study and is discussed in this Section.

10.2 Effects of the Project on Climate Change

No new traffic is expected to be generated as a result of this project. However, patterns may change as a result of bridges being reopened. Some travel routes may be shortened and more straightforward, resulting in minor reductions in vehicular emissions. At a minimum, it is expected that there will be no net increase in greenhouse gas emissions.

Existing vegetation will be retained to the extent possible. Removals will be kept to a minimum to limit direct effects to vegetation communities and vascular flora, as well as indirect effects (e.g., soil compaction and changes to topography and drainage). Disturbed areas will be re-stabilized, incorporating revegetation using non-invasive, preferably native plantings and / or seed mix appropriate to the site conditions and adjacent vegetation communities. Seed mixes will be used in conjunction with an appropriate non-invasive cover crop as appropriate.

10.3 Effects on the Project from Climate Change

There is potential for the project to be affected by climate change. Climate change is usually associated with any significant change in long-term weather patterns. Changes in the composition of the atmosphere are resulting in processes that alter global temperature and precipitation, in turn affecting local weather patterns. These processes can ultimately lead to increased occurrence of extreme weather events such as floods, droughts, ice storms, and heat waves.

Precipitation, whether it is rainfall, snowfall, or other forms of frozen / liquid water, is the key climate and weather-related variable of concern with respect to drainage and culvert design. As a result of climate change, storm events are predicted to become more intense, which can result in larger volumes of precipitation at one time. Other climate variables such as temperature are major inputs to evaporation and snowmelt processes. Increases in temperature are likely to impact precipitation and snowmelt runoff volumes discharged to watercourses.

Precipitation, whether it is rainfall, snowfall, or other forms of frozen / liquid water, is the key climate and weather-related variable of concern in stormwater management (SWM). As a result of climate change, storm events are predicted to become more intense, which can result in larger volumes of precipitation at one time.

During the detailed design, all bridge and SWM-related components of the project shall be designed with consideration for increased precipitation.

11.0 Detailed Design and Construction Commitments

Phase 5 of the Municipal Class EA process involves the completion of detailed design drawings, specifications, and tender documents to be provided to a successful contractor for the construction of the proposed project. During the implementation phase, the Township will need to adhere to several mitigation measures and monitoring plans as documented in this Project File Report, some of which will need to be in place prior to and during construction.

The following list provides a preliminary set of commitments to be undertaken during the detailed design phase or construction phase of the Project to ensure that work is being completed in accordance with the Project File Report. These commitments shall be revisited during the detailed design phase of the Project, at which time any additional commitments shall be identified.

11.1 Detailed Design Commitments

- A tree inventory will be completed to determine and characterize required removals. The Six Nations of the Grand River Elected Council (SNGREC)'s list of plant species of interest and importance shall be reviewed to identify if vegetation proposed for removal is of interest to the SNGREC. Impacts to trees shall be minimized by implementing a tree protection plan in areas adjacent to construction or grading.
- If any Provincial SAR are identified during the tree inventory and / or associated detailed design studies, potential impacts will be mitigated to the extent possible and the MECP will be consulted with as needed to determine next steps and permitting requirements.
- Plant species loss should be minimized where possible, and a re-vegetation plan using native species and seed mix should be created. A re-planting ratio of 10 replanted trees per one removed tree shall be used for quantifying replacements, as per the request of the Six Nations of the Grand River Elected Council (SNGREC). Re-planting should be completed on-site to the extent possible. Where the required re-planting quantities are unable to be achieved within the Township right-of-way, the preference is for the Township to strive to reach an agreement with the immediately adjacent landowners to allow for replanting on-site, beyond the Township right of-way. If on-site planting is not achievable, off-site plantings to reach the desired ratios are acceptable to the SNGREC.
- Plant species identified for replanting shall be selected from the SNGREC's list of species of Interest / Importance which are suitable for the proposed planting locations. The Kayanase Greenhouse is available for consultation regarding replanting initiatives during detailed design.
- Near-bank cover plantings along the watercourse shall be included in the re-planting landscaping plan where possible, while considering the required offset of plantings from structures.

- The Township shall comply with the Ontario Water Resources Act, 1990, c. O.40 with respect to the quality of water discharging into natural receivers. The footprint of disturbed areas shall be minimized to the extent possible. For example, vegetated buffers shall be left in place adjacent to natural vegetation features (forested areas) to the maximum extent possible.
- To avoid contravention of the MBCA and / or ESA, the structure(s) shall be completely excluded with tarping / netting prior to the active breeding window for birds (i.e., by the end of March).
- Tree and rock features that are identified as candidate bat maternal roosting habitat shall be taken down outside the active bat window (i.e., active window is March 31 to October 1).
- DFO shall be consulted during the detailed design phase of the project with regard for the potential of works to impact fish and fish habitat, as appropriate.
- GRCA shall be consulted during the detailed design phase of the project and a permit(s) under O. Reg. 150/06 shall be obtained as needed prior to construction.
- A spill management plan shall be created and measures to contain potential spills are to be on-site throughout construction.
- Detailed Hydrologic and hydraulic modelling shall be completed to verify compliance of the proposed works with GRCA policies 8.1.15-8.1.16. The GRCA shall be consulted early in the detailed design stage to determine the scope of work for this exercise.
- The opportunity to divert flows of the tributary upstream of Bridge 32-P shall be further investigated in consultation with the GRCA. The designer should review the environmental mitigation works that would be required to offset any impacts to the diverted channel or the portion of the downstream channel that will be disconnected from the upstream channel and evaluate whether the diversion of flows is more beneficial to the overall project than replacement of the structure as outlined in the conceptual design.
- A scoped environmental impact study shall be completed to verify the extent of the wetlands and verify that the proposed detailed design works are consistent with GRCA policies 8.4.6 – 8.4.7. GRCA shall be circulated on a terms of reference for the EIS on the onset of this work to ensure the scope of the EIS meets its requirements.
- An Erosion and Sediment Control (ESC) Plan shall be developed during the detailed design phase of the project in consultation with the GRCA and will conform to industry best management practices and recognized standard specifications such as Ontario Provincial Standards Specification (OPSS).
- Further investigations should be undertaken to ensure the proposed alternatives will not impact potential erosion hazards that may be present due to riverine slopes and / or the meander belt of the creek. The requirement for engineering assessments such as geotechnical or fluvial geomorphology should be confirmed with the GRCA at the detailed design stage.

- Alignment options including radiused or elbow corners within the proposed Bridge 32-P culvert shall be considered in order to optimize the alignment with the existing upstream and downstream watercourse during detailed design.
- The geometry and alignment of structures should be reviewed during the detailed design stage. Where additional data gathered or analysis completed during the detailed design phase of the project results in a significant change to the proposed structure, the requirement for an addendum to the Project File Report as part of the MCEA will be reviewed and undertaken if deemed required.
- All bridge and SWM-related components of the projected shall be designed with consideration for increased precipitation due to Climate Change.
- Where erosion protection, channel regrading / stabilization or earth retaining structures are determined to be required, the use of “softer” means of protection shall be preferred over the use of hard surfaces unless it is unfeasible to do so. For example, the use of vegetated MSE wall systems at Bridge 32-P shall be preferred over a concrete retaining wall.
- The recommendations of the Stage 1 & 2 archaeological assessment (AA) and any further recommended stages should be followed. If revisions to the designs result in ground disturbances beyond the previously disturbed lands, or beyond the approximate grading limits shown in the preliminary replacement structure designs of this study, additional archaeology assessment of the areas should be undertaken. Any further recommended archaeological assessments (e.g., Stage 2, 3 and 4) shall be undertaken by a licensed archaeologist as early as possible during detailed design and prior to any ground disturbing activities. Indigenous communities that were included in the EA contact list shall be consulted and given an opportunity to participate in any additional Archeological Assessment reporting and monitoring process that may be determined to be required during the detailed design phase
- A Subsurface Utility Engineering (SUE) investigation should be undertaken at any locations where excavation works are anticipated to occur. Utility conflicts should be confirmed in the detailed design stage and relocated prior to construction, if necessary.
- A complaint response protocol for nuisance impacts including dust emissions shall be prepared during the detailed design phase of the project and implemented prior to construction.
- Should future work require an expansion of the study area, then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential heritage resources.
- The recommendations of the Stage 1 and 2 archaeological assessments (AAs) and any further recommended stages should be followed. If revisions to the designs result in ground disturbances beyond the previously disturbed lands, or beyond the approximate grading limits shown in the preliminary replacement structure designs of this study, additional archaeology assessment of the areas should be undertaken. Any further recommended archaeological assessments (e.g., Stage 2, 3 and 4) shall

be undertaken by a licensed archaeologist as early as possible during detailed design and prior to any ground disturbing activities.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore be subject to Section 48(1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the Ontario Heritage Act.

The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with Ontario Regulations 30/11 the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the Ontario Heritage Act.

- All Indigenous communities previously engaged shall be contacted, if there are any substantial changes to the project / process or if the Owner applies for subsequent permits from the Ministry (MECP) that may be of interest or concern to communities.
- Documentation of each structure should be compiled and deposited in a local publicly accessible repository in accordance with the recommendations of the Cultural Heritage Assessment Report.
- Excess soils shall be managed in accordance with O. Reg. 406/19 and the MECP's "Management of Excess Soil – A Guide for Best Management Practices" (2014).
- The required erosion and sediment control measures shall be determined during detailed design to limit sediment migration and protect receiving watercourses. All disturbed areas of the construction site shall be stabilized and re-vegetated as soon as conditions allow.
- Any replacement structures should be designed to reflect the existing designs of each bridge where possible. An attempt shall be made to incorporate the unique designs of the original into any replacement structures.
- Documentation of each structure be deposited in a local publicly accessible repository. Given the extent of previous assessment on each structure, the existing reports should be accepted as a complete record. A Photographic Inventory document of Structure 1-P had been previously completed, which documented the steel truss structure prior to its removal in 2019. This document is considered to fulfill the documentation recommendations of the CHAR and is included in Appendix C.

11.2 Construction Commitments

- The extent of vegetation removal shall be clearly delineated for the vegetation clearing and grubbing contractor. All tree work including branch pruning, root pruning, and removal shall be completed by an ISA Certified Arborist.
- An Environmental Inspector shall be engaged during the construction phase to review protection measures.
- A site inspector shall monitor the success of the seed mix application in re-vegetated areas. Seed mix should be re-applied by the contractor if bare patches are noticed or if it fails to germinate. Ecologists may be required to review site conditions if seed mix persists in not germinating.
- Trees to be retained beyond the limit of clearing should be protected using tree protection fence installed at the dripline or grading limit, whichever provides the greatest setback from the trees.
- Residential properties that are subject to tree removal on the adjacent ROWs may require reinstatement of native woody vegetation to complement existing aesthetics and privacy screening where desired by the property Owner.
- To reduce the risk of contravening the Migratory Bird Convention Act, 1994, and Endangered Species Act, timing constraints shall be applied to avoid any limited vegetation clearing (including grubbing) and / or structure works (construction, maintenance) during the period between April 1 to October 31 to avoid the active period for the following:
 - Breeding birds – Broadly from April 1 to August 31 for most species (regardless of the calendar year).
 - Bat species – Considered to be between April 1 to October 31 of any calendar year.
 - If work must occur during the active breeding bird window, a qualified ecologist shall search the structures for active nests prior to work and every 2-3 days during activity.
- If a nesting migratory bird (or SAR protected under ESA, 2007) is identified within or adjacent to the construction Site (or during operations and maintenance activities) and the activities are such that continuing works in that area would result in a contravention of the *Migratory Birds Convention Act, 1994 or ESA, 2007*, all activities will stop and the Contract Administrator (with assistance from a qualified Avian Biologist) shall discuss mitigation measures with the Town.
- Should SAR be identified, all activities will stop and MECP should be contacted immediately to ensure compliance with the ESA. The Contract Administrator shall instruct the Contractor on how to proceed based on the mitigation measures established through discussions with the County, the MECP and / or Environment Canada.
- Daily sweeps of the construction zone and equipment should be conducted to ensure wildlife, including SAR snakes or turtles, have not entered the work limits. In the

event that an animal is encountered during construction and does not move from the construction zone, the Contract Administrator will be notified. If the construction activities are such that continuing construction in the area would result in harm to wildlife, construction activities in that location will temporarily stop and the MECP shall be contacted for direction.

- Wet weather restrictions shall be applied during Site preparation and excavation. Work will be avoided near watercourses and headwater drainage features during periods of excessive precipitation and / or excessive snow melt.
- Any in-water works shall occur in isolation of flowing waters, with work zone isolation achieved by placing cofferdams constructed of clean, non-erodible materials at the upstream and downstream limits of a given work area. Stream flows must be maintained downstream of in-water work areas through by-passing flows (by-pass culvert, channel, pumping etc.). Any isolated work areas shall be de-watered and dewatering shall be conveyed to a filtering system and flow dissipation device to mitigate sedimentation and erosion of the receiving waterbody.
- Any fish trapped in an isolated work area shall be captured and released outside of it prior to the commencement of in-water works. Any fish rescue shall be performed by a qualified aquatic ecologist / biologist. A License to Collect Fish (LCF) shall be obtained from the NDMNRF prior to any fish rescue occurring.
- In-water works will only be permitted to occur during the appropriate in-water works timing window (generally July 15 to March 15). This window will be confirmed with DFO and NDMNRF during the detailed design.
- Embankments shall be restored with erosion control blankets, topsoil, seeding mixtures approved by the GRCA, and plantings, where appropriate.
- Sediment and erosion control fencing that is suitable to act as reptile exclusion fencing appropriate for Blanding's Turtle species shall be installed in accordance with the ministry guidance document "*BMP for Mitigating the Effects of Roads on Amphibian and Reptile Species at Risk in Ontario*". All fencing shall be installed and maintained during the work phase and until the Site has been stabilized. Sediment control and reptile exclusion measures shall be inspected daily to ensure they are functioning and are maintained as required. If control measures are not functioning properly, no further work shall occur until the problem is resolved. All temporary fencing shall be installed in accordance with recognized provincial standards. Extra silt fence / turbidity curtain shall be stored on-Site, should additional sediment control be required.
- Any stockpiled material shall be stored and stabilized away from the surface water features. All materials and equipment used for the purpose of Site preparation and road construction shall be operated and stored in a manner that prevents any deleterious substance (e.g., petroleum fuel, hydraulic fluids) from entering the environment.

- Refueling and maintenance of construction equipment should occur within designated areas only. Any hazardous materials used for construction will be handled in accordance with appropriate regulations.
- Should previously undocumented archaeological resources be discovered, they may qualify as a new archaeological site and therefore be subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the Ontario Heritage Act.
- The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with Ontario Regulation 30/11 the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (via email to archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.
- A Construction Emergency Response and Communications Plan shall be developed and followed throughout the construction phase (including spill response plans). The Contractor shall develop spill prevention and contingency plans for the construction of new landfill cells and general Site preparation for proposed road extension. Personnel shall be trained in how to apply the plans and the plans shall be reviewed to strengthen their effectiveness and continuous improvement. Spills or depositions into watercourses shall be immediately contained and cleaned up in accordance with provincial regulatory requirements and the contingency plan. A hydrocarbon spill response kit will be on-site at all times during the work. Spills shall be reported to the Ontario Spills Action Centre at 1-800-268-6060.
- The road shall be graded as required to remove potholes, ruts and ripples in the road surface. Efforts to prevent contamination of the road surface, such as spilling sands, silts and clays, will also help to minimize dust.
- If appropriate equipment is available, the roadway should be sprayed with water as required to minimize dust generation prior to paving.
- The construction contractor shall be required to develop a Construction Management Plan (CMP) that specifically addresses dust controls, and contingency plans to mitigate dust when it occurs.
- Vehicles / machinery and equipment shall be in good repair, equipped with emission controls, as applicable, and operated within regulatory requirements. The contractor shall also be required to implement dust suppression measures to reduce the potential for airborne particulate matter resulting from construction activities. This should be in the form of water applications on exposed soils.

- Considerations should be given to the use of chemical suppressants to reduce dust, use of wind barriers and limiting exposed areas which may be a source of dust and equipment washing.
- The construction contractor shall develop a Construction Management Plan (CMP) that specifically addresses dust controls, and contingency plans to mitigate dust when it occurs.
- Noise control measures shall be implemented where required during the construction phase, such as restricted hours of operation and the use of appropriate machinery and mufflers. The noise produced by the equipment can be limited through proper equipment maintenance.
- All construction activities shall conform to the criteria set out in NPC115 of 83 dB.
- The construction contractor shall be required to develop a Construction Management Plan (CMP) that specifically addresses noise controls, mitigation to be implemented and frequency of equipment inspection.
- The contractor shall develop a Health and Safety Plan (HASP) and have it reviewed and approved by the County prior to implementing. The HASP shall follow the Occupational Health and Safety Act, 1990, and regulatory requirements.
- Operation of construction related vehicles shall be done in accordance with all appropriate safety policies and procedures, and based on Canadian Standards (Transport Canada, etc.).
- Contractor will be required to develop and implement a traffic management plan in coordination with Township of Centre Wellington. Adequate signage to give advance notice of disruptions and detours is to be provided by the contractor.

11.3 Permit Requirements

The following list provides a preliminary set of permit requirements that will need to be acquired prior to construction. A final list of permits shall be determined during the detailed design phase of the Project.

- The contractor shall obtain an Occupancy Permit from the Township for working within the Right of Way.
- A Permit to Take Water may be required should dewatering be necessary. Requirements for dewatering shall be determined during the detailed design phase of the Project.
- The Township is required to comply with the *Ontario Water Resources Act* with respect to the quality of water discharging into natural receivers. The footprint of disturbed area shall be minimized as much as possible. For example, minimizing distribution of excavated soil to minimize sedimentation to storm sewers.
- A permit approval shall be required from GRCA in accordance with O.Reg. 150/06 Regulation of Development, Interference with Wetlands and Alteration to Shorelines and Watercourses for construction works in GRCA regulated areas, including culvert extensions, drain relocations and watercourse modifications.

Municipal Class Environmental Assessment of 5 Bridges in Former Pilkington Township
February 24, 2025

- If portions of woodland providing habitat for species at risk bats are to be removed, an Information Gathering Form shall be submitted to MECP, in accordance with the Endangered Species Act.
- A License to Collect Fish will be required for any fish relocations during construction.
- Approval under the Fisheries Act from DFO will be required for any in-water works.
- Archaeological concerns had not been addressed until the Ministry of Citizenship and Multiculturalism has provided a letter indicating all archaeological assessment reports have been entered into the Ontario Public Register of Archaeological Reports and those reports indicate that:
 - the archaeological assessment of the project area is complete
 - and all archaeological sites identified by the assessment are either of no further cultural heritage value or interest (as per Section 48(3) of the Ontario Heritage Act) or that mitigation of impacts has been accomplished through an avoidance and protection strategy
 - MCM's letter indicating the recommended technical cultural heritage studies (e.g., Cultural Heritage Report, CHERs, HIAs) have been completed and are consistent with the requirements guidance and standards of the Municipal Class Environmental Assessment and with best practice guidance prepared by MCM

12.0 Study Completion

12.1 Notice of Study Completion

A Notice of Study Completion of this Municipal Class EA was published in the Wellington Advertiser and Woolwich Observer newspaper on March 7, 2024. The Notice was also mailed / emailed to all agencies, Indigenous communities, utility companies, and stakeholders within the Study Area, on the consultation list, or who had expressed an interest in the project. The notice was also posted on the project specific web page on the 'Connect CW' website.

12.2 Posting of Project File Report

This Project File Report will be made available for review to the public and stakeholders. Stakeholders are encouraged to review the study information and discuss any concerns or issues with the study team. A 30-day comment period will be provided, beginning on the date of issuance of the Notice of Study Completion.

12.3 Section 16 Order

A request may be made to the Ministry of Environment, Conservation and Parks for an order requiring a higher level of study (i.e., requiring an individual / comprehensive EA approval before being able to proceed), or that conditions be imposed (i.e., require further studies), only on the grounds that the requested order may prevent, mitigate, or remedy adverse impacts on constitutionally protected Aboriginal and treaty rights. Requests on other grounds will not be considered. Requests should include the requester contact information and full name for the Ministry.

Requests should specify what kind of order is being requested (request for additional conditions or a request for an individual / comprehensive environmental assessment), how an order may prevent, mitigate, or remedy those potential adverse impacts, and any information in support of the statements in the request. This will ensure that the ministry is able to efficiently begin reviewing the request.

If no order request is received, the project will proceed to design and construction stages as outlined in the planning documentation. Please visit the Ministry's website for more information on requests for orders under Section 16 of the Environmental Assessment Act at: <https://www.ontario.ca/page/class-environmental-assessments-section-16-order>.

13.0 References

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February 24, 2025

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BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix A

Road / Link Continuity Screening Technical Memorandum



Technical Memorandum

Road / Link Continuity Screening

Date: January 26, 2024 **Project No.:** 300056693.0000
Project Name: Municipal Class EA for Bridges 1-P, 28-P, 30-P, 32-P, 33-P
Client Name: The Township of Centre Wellington
Submitted To: File
Submitted By: Sameem Raheemi
Reviewed By: Alvaro Almuina, P.Eng., PMP, & Andrew Dawson, P.Eng.

R.J. Burnside & Associates Limited (Burnside) has been retained by the Township of Centre Wellington (Township) to carry out a Municipal Class EA to assess the need and impact of five existing vehicular bridge crossings (identified as 1-P, 28-P, 30-P, 32-P, and 33-P) located in the northwest quadrant of the Township, which are currently closed to traffic.

Based on background information received from the Township, it is noted that all five of the subject bridge crossings are currently closed to traffic due to their deteriorated state, and that one structure (1-P) has been removed. It is recognized that these structures serve mainly local residents and agricultural operations, as they are located on sections of roadways with low traffic volumes.

Burnside has observed that alternative substandard crossings have been privately constructed immediately adjacent to some of the closed structures (28-P, 32-P & 33-P). These detours are considered to be a potential liability and risk to the Township. The Township is interested in identifying a solution(s) that addresses the need for these structures while maintaining an appropriate transportation network connectivity and minimizing impacts on the social, natural, cultural, heritage and economic environment.

This memo presents the results of a technical review of the road continuity and alignment within the influence areas of the five bridges. The location of the five bridges is illustrated in Figure 1.

Figure 1: Location of Closed Bridges

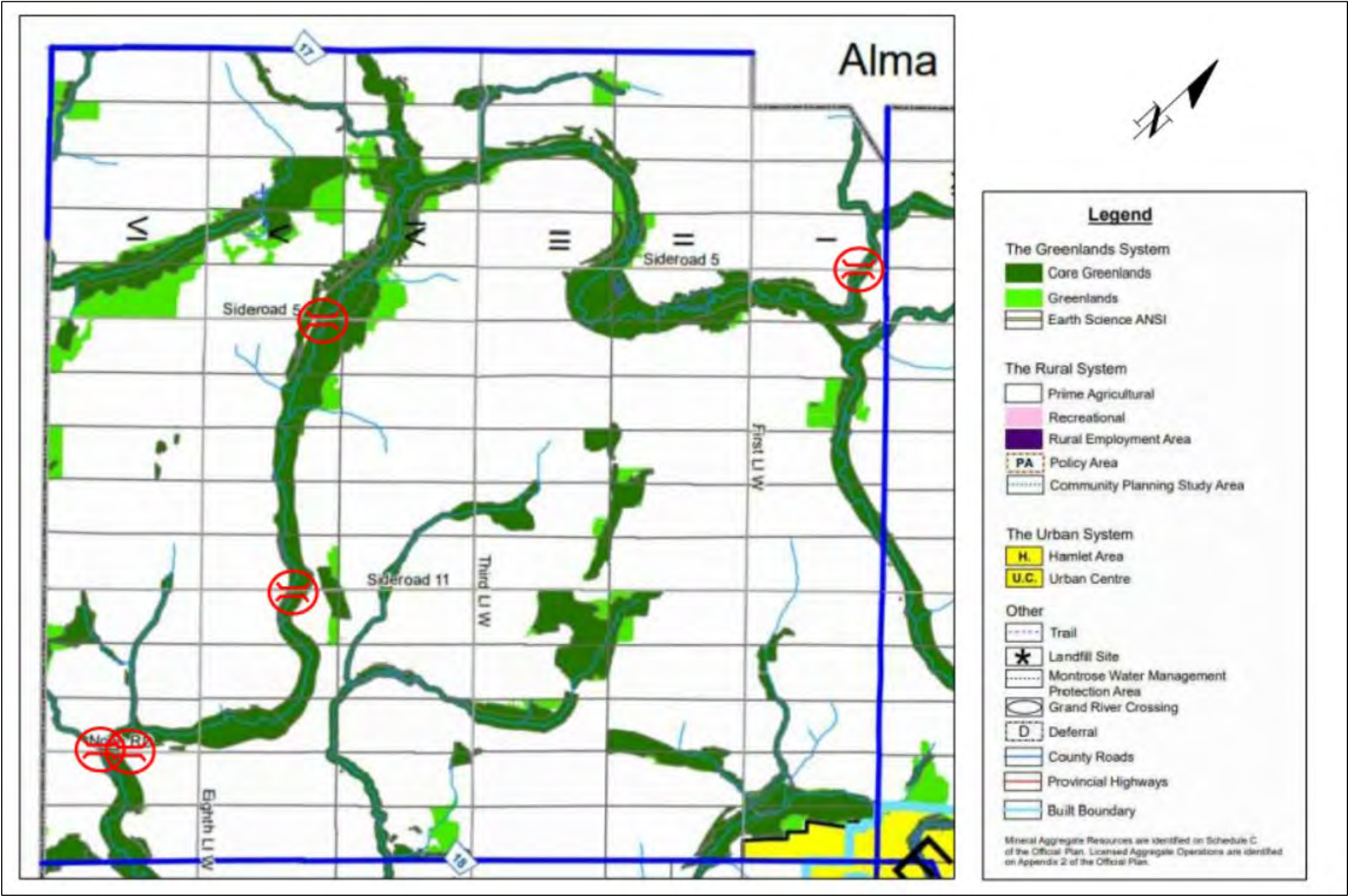


1.0 Existing Conditions

1.1 Land Use

The five bridges are located in the northwestern quadrant of the Township of Centre Wellington. This quadrant of Centre Wellington is primarily a rural community. The existing land use designation identified by the County Official Plan includes mainly agricultural, some green lands and core green lands. The study area is heavily agricultural, with some industrial uses present in the area as well. The network of roads in this quadrant of the Township mainly serves the agricultural farmlands and connects them to the neighbouring Towns of Alma, Salem, Elora, and Fergus. The land use map of the study area is shown in Figure 2.

Figure 2: Land Use Map of Study Area



(Source: Township's Official Plan)

1.2 Road Network and Traffic Volumes

The existing road network is described in Table 1. Annual Average Daily Traffic (AADT) for existing conditions (2021) and forecasted conditions to 2041 are illustrated in Figure 3 and Figure 4, respectively. A 2.5% growth rate compounded annually was applied to the existing condition to project 2041 traffic volumes.

Several of the roads in the Study Area do not have posted speed limits. While these unposted roadways may technically be considered to have statutory speed limits of 80 km/h in accordance with the Highway Traffic Act (located outside of built-up area), these roads have been assumed to have an operating speed of 50 km/h for the purpose of this traffic study. This considers that the roadways are narrow, gravel surface structures, and that the vertical curves provide sight lines which are well below criteria for even a 50 km/h design speed.

Table 1: Study Area Roadways

| Roadway | General Description |
|--------------------------------|---|
| Side Road 5 & Side Road 5 West | Side Road 5 and Side Road 5 West are east-west gravel local roads under the jurisdiction of the Township. Side Road 5 within the study area (from Wellington Road 7 to 3rd Line West) is offset approximately 400 m north of Side Road 5 West (from 3rd Line to Arthur Street) and the portion of Side Road 5 east of Wellington Road 7, and is therefore not a continuous east-west connection through the extent of the study area. The roadway consists of a two-lane rural cross section with no sidewalks. Bridge 30-P is located on Side Road 5, and Bridge 1-P is located on Side Road 5 West. No posted speed limit is present for these roads within the study area, so an assumed operating speed of 50 km/h has been used for this study as outlined previously. |
| Side Road 11 | Side Road 11 is an east-west gravel local road under the jurisdiction of the Township. The roadway consists of a two-lane rural cross section with no sidewalks. Bridge 28-P is located along this road. No posted speed limit is present for these roads within the study area, so an assumed operating speed of 50 km/h has been used for this study as outlined previously. |
| Wellington Road 18 | Wellington Road 18 is an east-west paved arterial road under the jurisdiction of Wellington County with a posted speed limit of 80 km/hr. The roadway consists of a two-lane rural cross section with no sidewalks. |
| Wellington Road 17 | Wellington Road 17 is an east-west paved arterial road under the jurisdiction of Wellington County with a posted speed limit of 80 km/hr. The roadway consists of a two-lane rural cross section with no sidewalks. |
| Wellington Road 7 | Wellington Road 7 is a north-south paved arterial road under the jurisdiction of Wellington County with a posted speed limit of 80 km/hr. The roadway consists of a two-lane rural cross section with no sidewalks. |

| Roadway | General Description |
|---------------|--|
| 1st Line West | 1st Line West is a north-south gravel local road under the jurisdiction of the Township. The roadway consists of a two-lane rural cross section with no sidewalks. No posted speed limit is present for these roads within the study area, so an assumed operating speed of 50 km/h has been used for this study as outlined previously. |
| 3rd Line West | 3rd Line West is a north-south paved local road under the jurisdiction of the Township. The roadway consists of a two-lane rural cross section with no sidewalks. As per the Township's TMP, 3rd Line West is proposed to be promoted to an arterial road by 2031. No posted speed limit is present for these roads within the study area, so an assumed operating speed of 50 km/h has been used for this study as outlined previously. |
| 8th Line West | 8th Line West is a north-south paved local road under the jurisdiction of the Township with a posted speed limit of 60 km/h. The roadway consists of a two-lane rural cross section with no sidewalks. |

Five Bridge Environmental Assessment Centre Wellington

Centre Wellington Roads & Bridges

- Closed Bridges
- + Bridge
- Centre Wellington Roads

Centre Wellington Roads - AADT 2021

| Average Annual Daily Traffic Volume |
|-------------------------------------|
| 46 |
| 74 |
| 91 |
| 133 |
| 143 |
| 146 |
| 1923 |

Natural Features

- Wooded Area
- Waterbody

Municipal Boundaries

- Lower Tier Municipality
- Upper Tier Municipality

0 0.5 1
Kilometres
1:140,000

Datum: North American 1983 CSRS
 Coord. System: NAD 1983 CSRS MTM 10
 Projection: Transverse Mercator
 Central Meridian: 79°30'00"W
 False Easting: 304,800m
 False Northing: 0m
 Scale Factor: 0.99990
 Rotation: 0

Drawn By: JS
 Client: Centre Wellington
 Project: Centre Wellington 5 Bridge EA
 Project Number: 300056693
 Date: 2023/07/12

File Path: C:\Users\jstaylor\OneDrive - RJB\Projects\Centre Wellington 5 Bridge EA\066600\Centre Wellington 5 Bridge EA_066603.aprx. Print Date: 2023/07/12 Time: 04:12 PM

FIG 3

1.3 Transit

Currently, neither the Township nor the County operate their own transit system. However, the Township is served by multiple rideshare services, which are mainly providing door to door services to seniors and people with disabilities. The mentioned services are all privately owned and include the following:

- Community Resource Centre of North and Centre Wellington
- Victorian Order of Nurses (VON)
- Wellington Transportation Service
- Family Home Services

1.4 Active Transportation

There is no active transportation network within the study area to accommodate pedestrians or cyclists. The Centre Wellington Transportation Master Plan did not recommend such infrastructure in the future within the study area.

1.5 Truck and Goods / Agricultural Movement

Highway 6 (east of the study area) serves as the primary route facilitating the transportation of goods, both internally and externally, via trucking operations. Notably, it plays a pivotal role in the efficient movement of commercial vehicles coming into Centre Wellington or bypassing it. Wellington Road 7 and Wellington Road 17 have been designated as truck by-pass routes. These existing County roads in the study area have recently been reconstructed and are in good condition.

The study area road network experiences trucking operations for moving products of various farmlands, and some industrial and commercial businesses. The transportation of the farmland products rests on light-duty trucks which are the only type of heavy vehicles allowed to use the local roads in the study area.

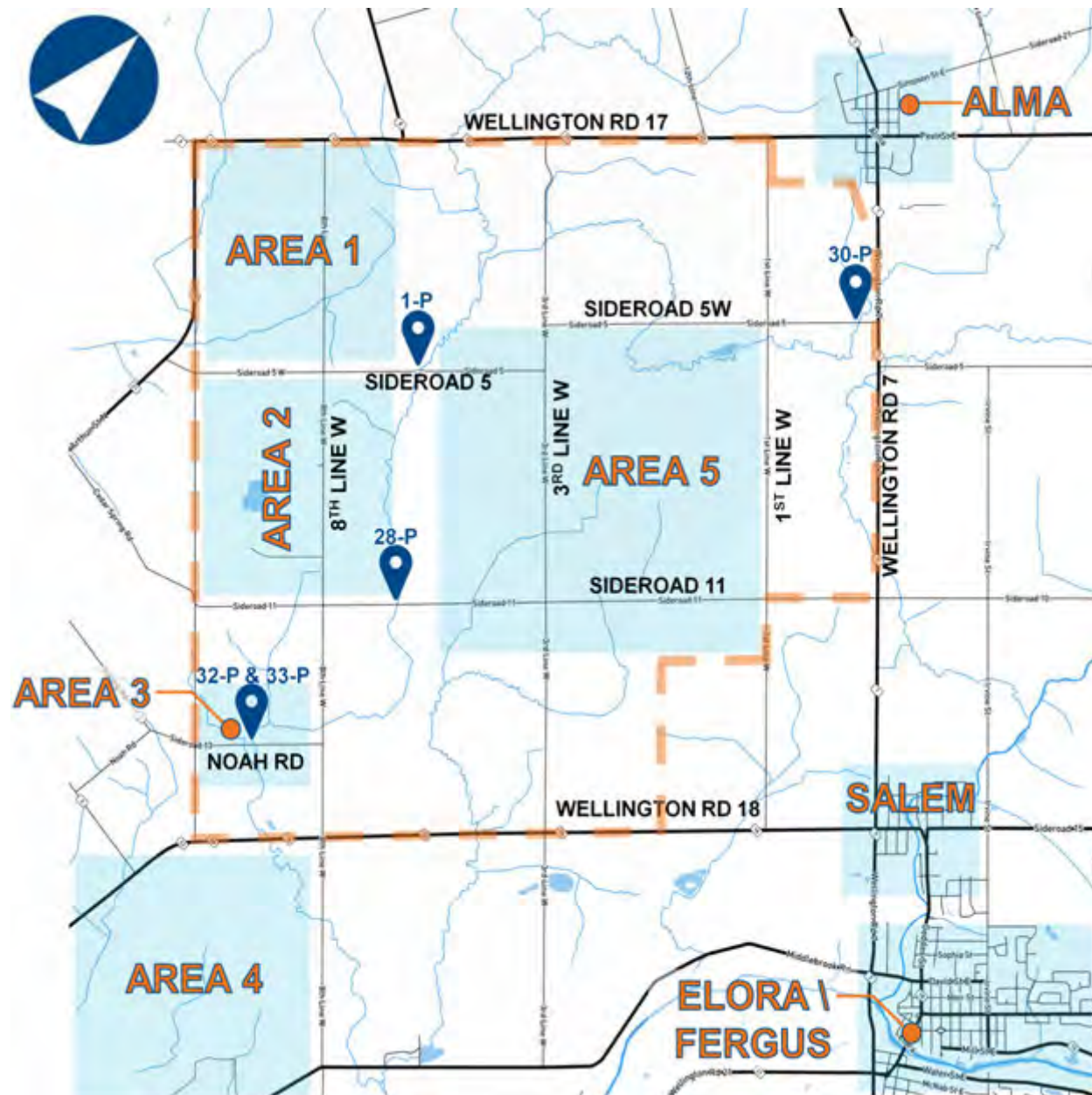
2.0 Bridge Closure Impact

The five structures being assessed are in the range of 100 years old and have been closed for between seven (7) and 19 years. All the bridges are located on roadways with travel in an east-west direction. Bridge closures could have an impact on emergency response, travel time and travel distance along these low-volume roads.

In this section of the technical memorandum, we will assess how the closure / reopening of the subject bridges would impact emergency response, travel time and travel distance.

To assess the impact of the bridge closure the whole northwest quadrant of the township has been divided into five areas as illustrated in Figure 5. The method adopted for dividing the five areas is based on the location and proximity to either east or west of the bridges.

Figure 5: Study Division and Boundaries



area such as Alma, Salem, Fergus, and Elora. An origin destination matrix was created to investigate the impact of bridge closure on various travel patterns. The origin destination matrix is summarized in Table 2.

Table 2: Origin Destination Matrix

| Origin | Destination |
|--|--|
| Area 1 (Alma Research Station) | Area 5 (Sure Choice Produce) |
| | Alma (Napa Autopro - Buehler Automotive) |
| | Salem (Esso) |
| | Elora & Fergus (Elora Lions Park) |
| Area 2 (Bethel Mennonite Church) | Area 5 (Sure Choice Produce) |
| | Alma (Napa Autopro - Buehler Automotive) |
| | Salem (Esso) |
| | Elora & Fergus (Elora Lions Park) |
| Area 3 (Creekbank Welding) | Area 5 (Sure Choice Produce) |
| | Alma (Napa Autopro - Buehler Automotive) |
| | Salem (Esso) |
| | Elora & Fergus (Elora Lions Park) |
| Area 4 (Wellington Road 18 / 8th Line) | Area 5 (Sure Choice Produce) |
| | Alma (Napa Autopro - Buehler Automotive) |
| | Salem (Esso) |
| | Elora & Fergus (Elora Lions Park) |

As summarized in Table 2, The trips originate from areas located in the west of the study area from Area 1, Area 2, Area 3, and Area 4 and travel to the destinations to the east to Area 5, Alma, Salem, Fergus, and Elora.

2.1 Travel Time

Travel time is a fundamental measure of transportation, and it is the time required for a transportation mode (vehicle, trucks, buses, persons) to travel from one point of interest to another on a specific route. Travel time has been used as a measure of efficiency to evaluate transportation facilities and make decisions for future improvements. Travel time is an attribute of travel distance and the speed of the segment of transportation facility.

To assess the impact of the bridge closure / reopening, two scenarios have been considered for the study. The first scenario considers the bridges as closed, and the second one as open. Based on the two mentioned scenarios, alternate travel routes have been considered for studying the difference in travel time under both scenarios. Both the scenarios are discussed below:

Scenario 1 (Bridges Closed):

This scenario analyses the travel time under the existing conditions where all the bridges are closed to public use. The analysis looked into travel patterns from the defined origin destination.

A network of roads was identified for each pair of origin-destination which considers a detour away from the bridge closures. The routes defined to travel from the origin to destination are summarized in Table 3.

Table 3: Alternate Route under Scenario 1 with Bridges Being Closed

| Origin | Destination | Scenario 1 (Bridges Closed) |
|--------|----------------|--|
| Area 1 | Area 5 | <ul style="list-style-type: none"> • 8th Line West • Wellington Road 17 • 3rd Line West |
| | Alma | <ul style="list-style-type: none"> • 8th Line West • Wellington Road 17 |
| | Salem | <ul style="list-style-type: none"> • 8th Line West • Wellington Road 18 |
| | Elora & Fergus | <ul style="list-style-type: none"> • 8th Line West • Wellington Road 18 • Wellington Road 7 |
| Area 2 | Area 5 | <ul style="list-style-type: none"> • 8th Line West • Wellington Road 18 • 3rd Line West |
| | Alma | <ul style="list-style-type: none"> • 8th Line West • Wellington Road 17 |
| | Salem | <ul style="list-style-type: none"> • 8th Line West • Wellington Road 18 |
| | Elora & Fergus | <ul style="list-style-type: none"> • 8th Line West • Wellington Road 18 • Wellington Road 7 |
| Area 3 | Area 5 | <ul style="list-style-type: none"> • Noah Road • 8th Line West • 3rd Line West • Wellington Road 18 • 3rd Line West |
| | Alma | <ul style="list-style-type: none"> • Noah Road • 8th Line West • 3rd Line West • Wellington Road 18 • Wellington Road 7 |
| | Salem | <ul style="list-style-type: none"> • Noah Road • 8th Line West • 3rd Line West • Wellington Road 18 |
| | Elora & Fergus | <ul style="list-style-type: none"> • Noah Road • 8th Line West • 3rd Line West • Wellington Road 18 • Wellington Road 7 |

| Origin | Destination | Scenario 1 (Bridges Closed) |
|--------|----------------|---|
| Area 4 | Area 5 | <ul style="list-style-type: none"> Wellington Road 18 3rd Line West |
| | Alma | <ul style="list-style-type: none"> Wellington Road 18 Wellington Road 7 |
| | Salem | <ul style="list-style-type: none"> Wellington Road 18 |
| | Elora & Fergus | <ul style="list-style-type: none"> Wellington Road 18 Wellington Road 7 |

Scenario 2 (Bridges Open):

This scenario analyses the travel time under the conditions where all the bridges are open to public use. The analysis looked into travel patterns from the defined origin destination. A network of roads was identified for each pair of origin-destination which does not consider a detour away from the bridges. The routes defined to travel from the origin to destination are summarized in Table 4.

Table 4: Alternate Route under Scenario 2 with Bridges Open

| Origin | Destination | Scenario 2 (Bridges Open) |
|--------|----------------|--|
| Area 1 | Area 5 | <ul style="list-style-type: none"> 8th Line West Side Road 5 West 3rd Line West |
| | Alma | <ul style="list-style-type: none"> 8th Line West Wellington Road 7 |
| | Salem | <ul style="list-style-type: none"> 8th Line West Wellington Road 18 |
| | Elora & Fergus | <ul style="list-style-type: none"> 8th Line West Wellington Road 18 Wellington Road 7 |
| Area 2 | Area 5 | <ul style="list-style-type: none"> 8th Line West Side Road 5 West 3rd Line West |
| | Alma | <ul style="list-style-type: none"> 8th Line West Side Road 5 West / 5 Wellington Road 7 |
| | Salem | <ul style="list-style-type: none"> 8th Line West Side Road 5 West / 5 Wellington Road 7 |
| | Elora & Fergus | <ul style="list-style-type: none"> 8th Line West Side Road 5 West / 5 Wellington Road 7 |

| Origin | Destination | Scenario 2 (Bridges Open) |
|--------|----------------|---|
| Area 3 | Area 5 | <ul style="list-style-type: none"> Noah Road 8th Line West Wellington Road 18 3rd Line West |
| | Alma | <ul style="list-style-type: none"> Noah Road 8th Line West Wellington Road 18 Wellington Road 7 |
| | Salem | <ul style="list-style-type: none"> Noah Road 8th Line West Wellington Road 18 |
| | Elora & Fergus | <ul style="list-style-type: none"> Noah Road 8th Line West Wellington Road 18 Wellington Road 7 |
| Area 4 | Area 5 | <ul style="list-style-type: none"> Wellington Road 18 3rd Line West |
| | Alma | <ul style="list-style-type: none"> Wellington Road 18 Wellington Road 7 |
| | Salem | <ul style="list-style-type: none"> Wellington Road 18 |
| | Elora & Fergus | <ul style="list-style-type: none"> Wellington Road 18 Wellington Road 7 |

Impact Analysis:

The bridge closure causes travellers to take a detour to travel between the pair of origin-destinations. The travel times associated with the fastest route of travel between the origins and destinations are shown in Table 5. These times are based on the previously noted speed limits / operating speeds of the road segments. The table also provides a comprehensive analysis of the impact of bridge closures in two alternate scenarios, on travel times between different origin and destination pairs.

It was found that the structures have no impact on travelling to or from Area 4, and that any differences in time or distance for travelling to Salem would be the same as those for travelling to Elora & Fergus. As such, these scenarios have not been included in the summary table below.

Values in the "Travel Time Reduction" column indicate that it takes longer to travel in Scenario 1 (with bridges closed and a detour) compared to Scenario 2 (with bridges open). Where the alternative route travelling over the bridges results in an equal or longer travel time than the current route (with bridges closed), a value of zero is provided to indicate that opening the bridges does not provide any benefit to travel times.

Table 5: Travel Time Difference Between Scenario 1 and Scenario 2

| Origin | Destination | Travel Time Analysis (Mins) | | |
|--------|-------------|-----------------------------|--------------------|-----------------------|
| | | All Bridges Open | All Bridges Closed | Travel Time Reduction |
| Area 1 | Area 5 | 4.3 | 4.3 | 0 |
| | Alma | 5.2 | 5.2 | 0 |
| | Salem | 7.9 | 8.1 | 0.2 |
| Area 2 | Area 5 | 2.7 | 5.8 | 3.1 |
| | Alma | 7.4 | 7.4 | 0 |
| | Salem | 5.7 | 5.8 | 0.1 |
| Area 3 | Area 5 | 4.2 | 7.6 | 3.4 |
| | Alma | 8.9 | 11.0 | 2.1 |
| | Salem | 5.4 | 7.6 | 2.2 |

The impact of bridge closures varies across different origin-destination pairs and routes, as summarized below:

- Travel to / from “Area 4” is not affected by the bridge structures.
- Travel to / from “Area 1” is generally not affected by the bridge closures.
- Travel between “Area 2” and “Area 5” benefits significantly from the opening of Bridge 28-P.
- Travel to / from “Area 3” to areas to the east benefits significantly from the opening of Bridges 32-P & 33-P.
- Travel to / from “Area 5” to “Area 2” and “Area 3” would benefit from the opening of Bridges 28-P, 32-P and 33-P.

2.2 Travel Distance

Similar to Section 2.1, the study also compared the effect of opening the bridges on the travel distance between the same pairs of origin and destinations. The travel distance differences between these scenarios are summarized in Table 6. Similar to travel times, Area 4 was not affected by the bridge closures, and the travel distance reductions between the origins and Salem are the same as those between the origins and Elora and Fergus. As such, these scenarios are not shown in the summary tables below.

Table 6: Travel Distance Difference Between Scenario 1 and Scenario 2

| Origin | Destination | Travel Distance Analysis (km) | | |
|--------|-------------|-------------------------------|--------------------|---------------------------|
| | | All Bridges Open | All Bridges Closed | Travel Distance Reduction |
| Area 1 | Area 5 | 3.7 | 5.7 | 2.0 |
| | Alma | 6.2 | 6.2 | 0 |
| | Salem | 10.2 | 10.2 | 0 |
| Area 2 | Area 5 | 3.6 | 7.7 | 4.1 |
| | Alma | 9.2 | 9.2 | 0 |
| | Salem | 7.2 | 7.2 | 0 |

| Origin | Destination | Travel Distance Analysis (km) | | |
|--------|-------------|-------------------------------|--------------------|---------------------------|
| | | All Bridges Open | All Bridges Closed | Travel Distance Reduction |
| Area 3 | Area 5 | 5.6 | 10.1 | 4.5 |
| | Alma | 11.2 | 13.8 | 2.6 |
| | Salem | 6.7 | 9.6 | 2.9 |

Values in the "Travel Distance Reduction" column indicate that it is a longer distance to travel in Scenario 1 (with bridges closed and a detour) compared to Scenario 2 (with bridges open). Where the alternative route travelling over the bridges results in an equal or longer travel distance compared to the current route (with bridges closed), a value of zero is provided to indicate that opening the bridges does not provide any benefit to travel distances.

The impact of bridge closures on travel distances varies across different origin-destination pairs and routes. The key findings of the travel distance are similar to those indicated by the travel times, as outlined in Section 2.1. However, the comparison of travel distances provides an additional finding for which travel between "Area 1" and "Area 5" benefits from a reduced travel distance if Structure 1-P is opened, despite it not being a shorter time route.

2.3 Emergency Response

Emergency response time is a critical factor in ensuring the safety and well-being of a community. Rapid and effective responses from emergency services, including police, firefighters, and medical care providers, can mean the difference between life and death, injury and recovery, or property loss and preservation. Therefore, understanding how bridge closures can impact emergency response times is crucial.

A robust methodology was employed to evaluate the impact of bridge closures on emergency response times, involving three essential entities: fire stations, hospitals, and police stations. The approach integrates geographic information system (GIS) technology, transportation analysis, and empirical data to conduct a comprehensive assessment of emergency response times.

The analysis focuses on response times from four pivotal service points (Centre Wellington Fire Department – Elora Station, Centre Wellington Fire & Rescue - Fergus Station, Groves Memorial Community Hospital: Emergency Department, and Ontario Provincial Police - Fergus) to eleven strategically chosen locations that represent the broader areas of the Township influenced by bridge closures. As discussed in Section 2.1, the study simulates two distinct scenarios: Scenario 1 (with bridges closed and a detour) and Scenario 2 (with bridges open).

Response times were developed using GIS software that accounted for the route speed limits and travel distances from both scenarios. This enables the determination of the time required for emergency responders to reach each location under varying bridge accessibility conditions. The response time for the emergency services to reach any of the 11 locations is illustrated in

Figure 6, Figure 7, Figure 8, and Figure 9. This study presupposes that all the other bridge structures within the research area (not included within this study) will be maintained in a condition capable of supporting emergency vehicle loads.

Figure 6: Emergency Response Time from Centre Wellington Fire Department – Elora Station

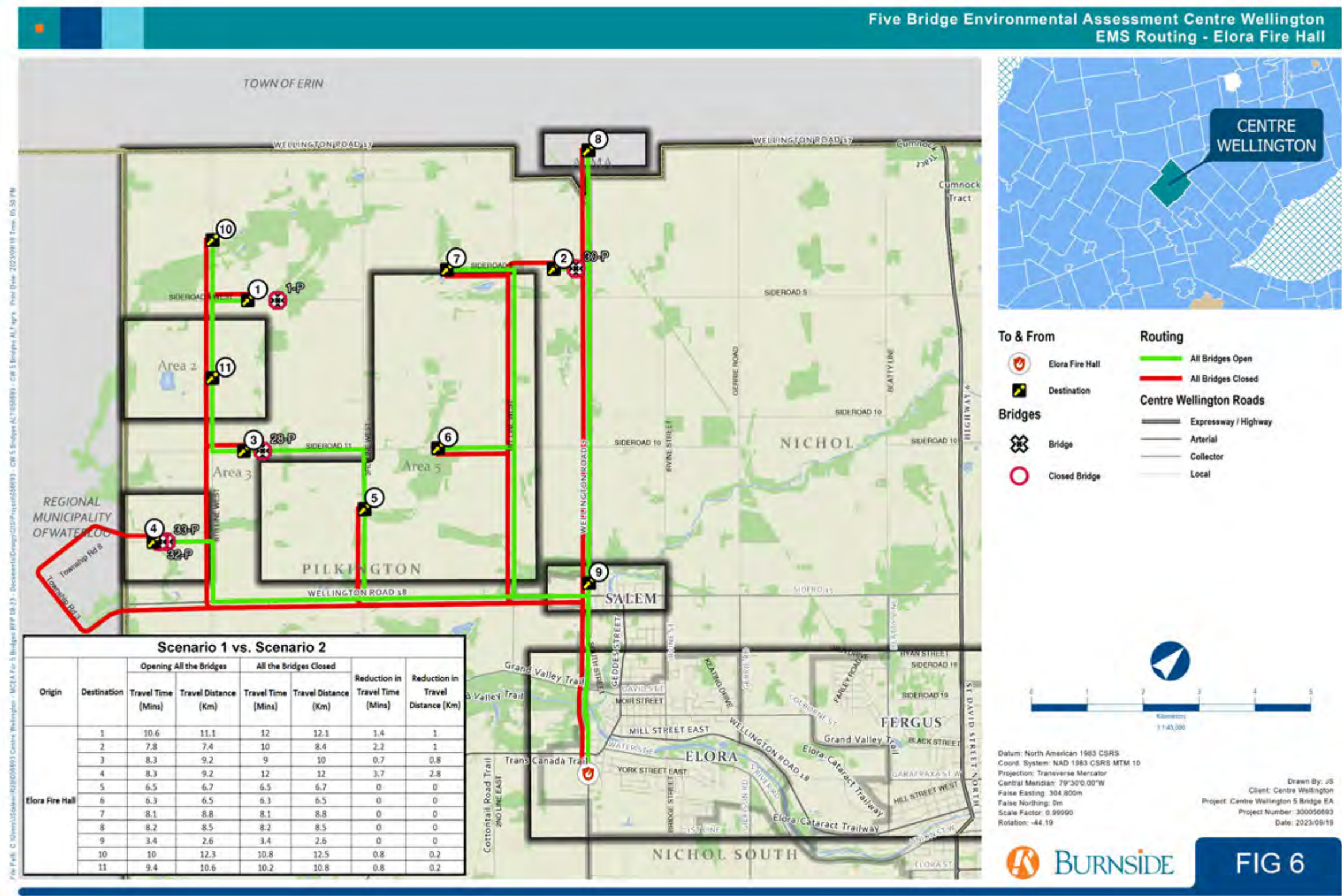


Figure 7: Emergency Response Time from Centre Wellington Fire & Rescue - Fergus Station

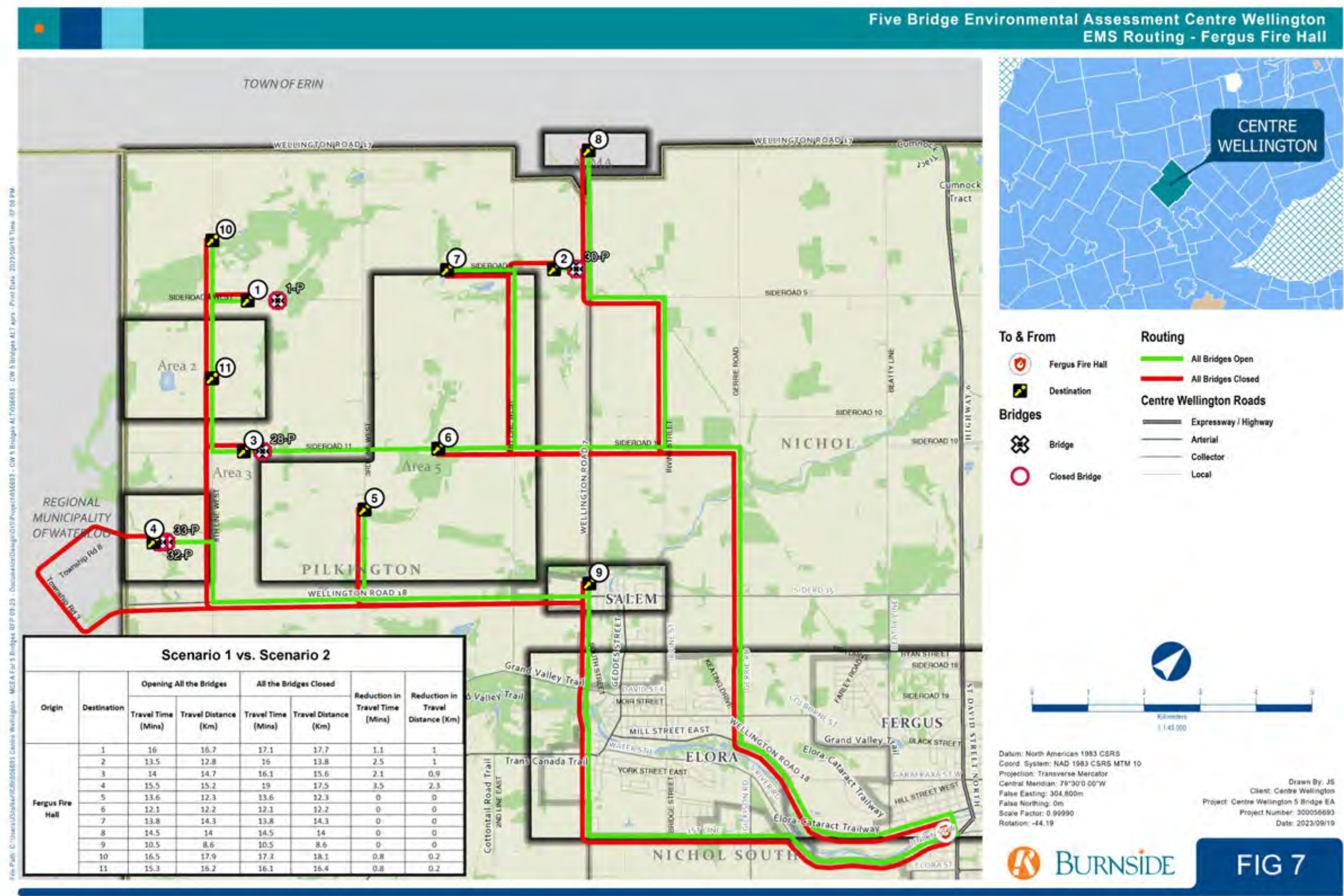


Figure 8: Emergency Response Time from Groves Memorial Community Hospital: Emergency Department

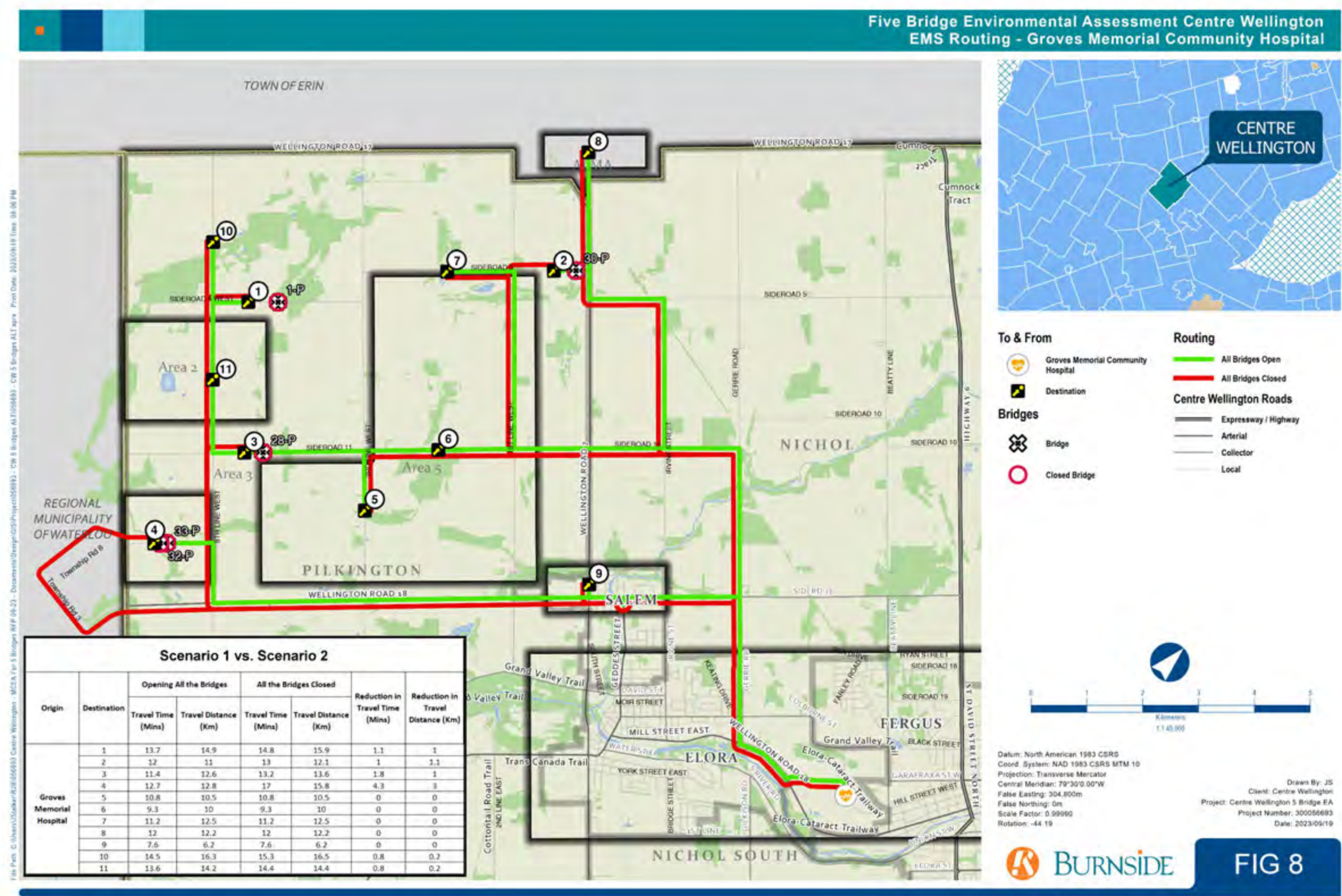
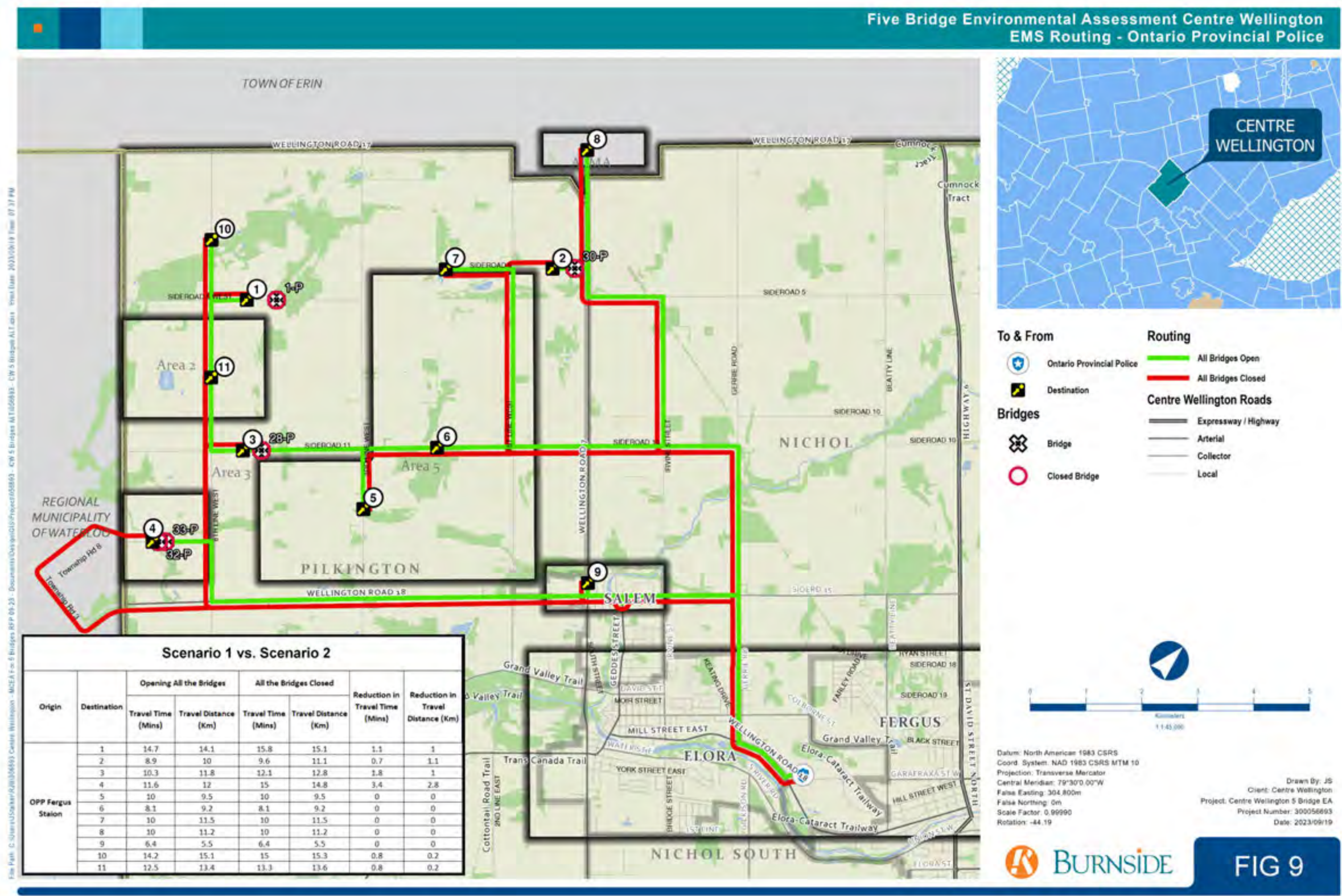


Figure 9: Emergency Response Time from Ontario Provincial Police – Fergus



2.3.1 Centre Wellington Fire Department – Elora Station

As illustrated in Figure 6, bridge closures have a noticeable impact on firefighting response times originating from Centre Wellington Fire Department – Elora Station for specific locations. The emergency response time for Locations 1, 2, 3, 4, 10, and 11 are longer when the bridges are closed compared to when bridges are open. The difference in emergency response time ranges from 0.7 minutes to 3.7 minutes, depending on the location. Additionally, the travel distances for the mentioned locations are longer with the bridges closed as well. The difference in emergency travel distance ranges from 0.2 km to 2.8 km, depending on the location. Locations 1, 2, and 4 are affected more in comparison to other areas.

2.3.2 Centre Wellington Fire & Rescue - Fergus Station

As illustrated in Figure 7, bridge closures have a noticeable impact on firefighting response times originating from Centre Wellington Fire Department – Fergus Station, for specific locations. The emergency response time for Locations 1, 2, 3, 4, 10, and 11 are longer when the bridges are closed compared to when bridges are open. The difference in emergency response time ranges from 0.8 minutes to 3.5 minutes, depending on the location. Additionally, the travel distances for the mentioned locations are longer with the bridges closed as well. The difference in emergency travel distance ranges from 0.2 km to 2.3 km, depending on the location. Locations 2, 3 and 4 are affected more in comparison to other areas.

2.3.3 Centre Wellington Groves Memorial Community Hospital: Emergency Department

As illustrated in Figure 8, bridge closures have a noticeable impact on response times originating from Groves Memorial Community Hospital: Emergency Department, for specific locations. The emergency response times for Locations 1, 2, 3, 4, 10, and 11 are longer when the bridges are closed compared to when bridges are open. The difference in emergency response time ranges from 0.8 minutes to 4.3 minutes, depending on the location. Additionally, the travel distances for the mentioned locations are longer with the bridges closed as well. The difference in emergency travel distance ranges from 0.2 km to 3.0 km, depending on the location. Locations 1, 3 and 4 are affected more in comparison to other areas.

2.3.4 Centre Wellington Ontario Provincial Police – Fergus

As illustrated in Figure 9, bridge closures have a noticeable impact on emergency vehicle response times originating from Centre Wellington Ontario Provincial Police – Fergus, for specific locations. The emergency response times for Locations 1, 2, 3, 4, 10, and 11 are longer when the bridges are closed compared to when bridges are open. The difference in emergency response time ranges from 0.7 minutes to 3.4 minutes, depending on the location. Additionally, the travel distances for the mentioned locations are longer with the bridges closed as well. The

difference in emergency travel distance ranges from 0.2 km to 2.8 km, depending on the location. Locations 1, 3, and 4 are affected more in comparison to other areas.

In conclusion, the analysis of emergency response time reveals that the study area is affected by the bridge closures. The magnitude of effects differs by each location; however, Locations 1, 2, 3, and 4 are most affected by the bridge closures. These are due to the long detour that is required to travel between the pairs of origin and destination.

3.0 Alternative Solutions

After thoroughly reviewing the result of the analysis of the bridge closure impact on travel time, travel distance, and emergency response, a review of each of the alternatives to be considered as part of the Environmental Assessment (EA) Study, as outlined below, have been reviewed:

1. Alternative 1: Do Nothing (Scenario 1)
2. Alternative 2: Removal All Bridges (Scenario 1)
3. Alternative 3: Opening All Bridges. (Scenario 2)
4. Alternative 4: Opening Bridge 28-P and keeping the rest closed.
5. Alternative 5: Opening Bridge 32-P and 33-P and keeping the rest closed.
6. Alternative 6: Opening Bridges 28-P, 32-P and 33-P, and keeping the rest closed.
7. Alternative 7: Opening Bridges 1-P, 28-P, 32-P and 33-P and keeping 30-P closed.
8. Alternative 8: Opening Bridges 28-P, 30-P, 32-P and 33-P and keeping 1-P closed.

3.1 Alternative 1: Do Nothing (Scenario 1)

Alternative 1 of the EA considers the scenario where all the bridges remain closed. This is the base for comparison to the other alternatives, and the travel times and distances associated with this case are outlined in Scenario 1 of Section 2.1 and Section 2.2 above.

3.2 Alternative 2: Remove All Bridges (Scenario 1)

Alternative 2 considers the scenario where all bridges are removed. The results of this option are the same as Scenario 1, as outlined in Scenario 1 of Section 2.1 and Section 2.2 above.

3.3 Alternative 3: Opening Bridge 28-P

Alternative 3 considers a scenario where only Bridge 28-P is replaced and opened. Bridge 28-P is located on Sideroad 11. Sideroad 11 is an east-west gravel local road with an existing 2021 AADT of 143 and future 2031 projected AADT of 256. Alternative 3 evaluates the implications of opening bridge 28-P on cross-community travel time and travel distance and emergency services across the affected communities. Figure 10 illustrates the cross-community routing between pairs of origin and destinations under Alternative 3 with Bridge 28-P open. As illustrated in Table 7, opening bridge 28-P would only impact the travel time between Area 2 and Area 5. It does not have a major impact on travel time between the rest of the pairs of origin and destination. Opening bridge 28-P will reduce the travel time and distance between Area 2 and Area 5 by 3.1 minutes and 4.1 km respectively.

Table 7: Cross-Community Travel Time & Travel Distance Reduction for Alternative 3

| Origin | Destination | Reduction in Travel Time (Min) | Reduction in Travel Distance (km) |
|---------------------------------|-----------------------------|--------------------------------|-----------------------------------|
| Area 1: Alma Research Station | Salem: Esso | 0.2 | 0 |
| Area 2: Bethel Mennonite Church | Area 5: Sure Choice Produce | 3.1 | 4.1 |
| Area 2: Bethel Mennonite Church | Salem: Esso | 0.1 | 0 |

The emergency response time from four pivotal service points (Centre Wellington Fire Department – Elora Station, Centre Wellington Fire & Rescue - Fergus Station, Groves Memorial Community Hospital: Emergency Department, and Ontario Provincial Police - Fergus) to eleven strategically chosen locations that may represent the broader areas of the Township influenced by bridge closures. Out of the 11 chosen locations in the study area, four locations (1, 3, 10, and 11) are affected by this scenario. The response time for the emergency services to reach any of the 11 locations is illustrated in Figure 11,

Figure 12, Figure 13, and Figure 14. Table 8 summarizes the reduction in travel time and travel distance between the four emergency service providers and four locations mentioned above.

Table 8: Emergency Travel Time and Travel Distance Reduction under Alternative 3

| Origin | Destination | Reduction in Travel Time (Min) | Reduction in Travel Distance (km) |
|-----------------|-------------|--------------------------------|-----------------------------------|
| Elora Fire Hall | 1 | 0.68 | 0.2 |
| | 3 | 0.7 | 0.8 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |

| Origin | Destination | Reduction in Travel Time (Min) | Reduction in Travel Distance (km) |
|--------------------------|-------------|--------------------------------|-----------------------------------|
| Fergus Fire Hall | 1 | 0.8 | 0.2 |
| | 3 | 2.1 | 0.9 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |
| Groves Memorial Hospital | 1 | 0.8 | 0.2 |
| | 3 | 1.8 | 1 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |
| OPP Fergus Station | 1 | 0.8 | 0.2 |
| | 3 | 1.8 | 1 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |

As summarized in Table 8, Alternative 3 can reduce the travel time and travel distance between pairs of origin and destination by up to 2.1 minutes and 1.0 km respectively. The range of reductions in travel time varies from a minimum of 0.7 minutes to a maximum of 2.1 minutes, while the range for travel distance reductions spans from 0.2 km to 1.0 km across the different destinations. There is an average 0.7-minute reduction in travel time and 0.3 km reduction in travel distance under this scenario. Additionally, as we can see in Figure 3 and Figure 4, most of the traffic use Sideroad 11 to travel from east to west between pairs of origin and destination.

Figure 10: Alternative 3 Cross-Community Routing

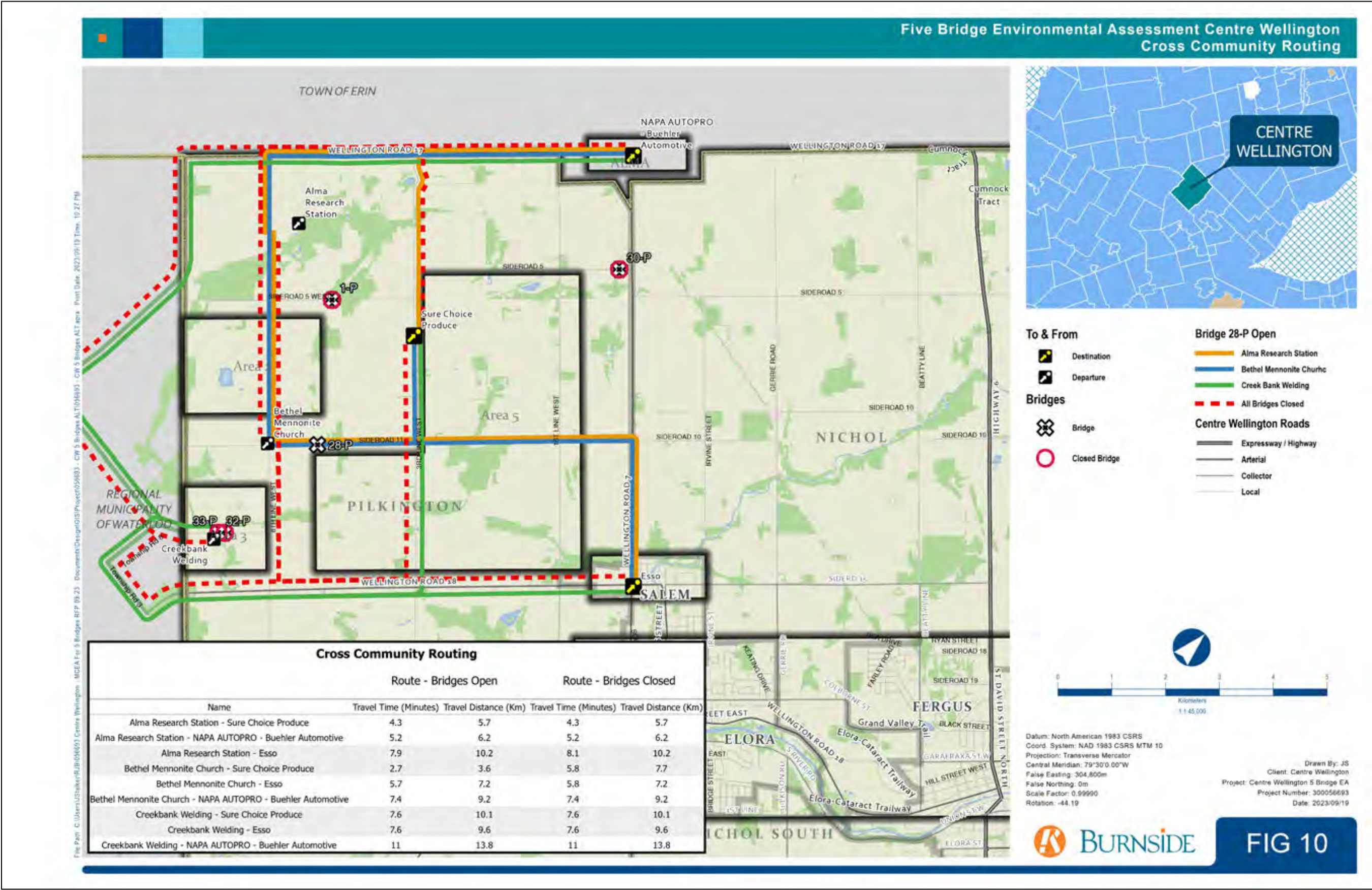


Figure 11: Alternative 3 Emergency Response Time from Centre Wellington Fire Department – Elora Station

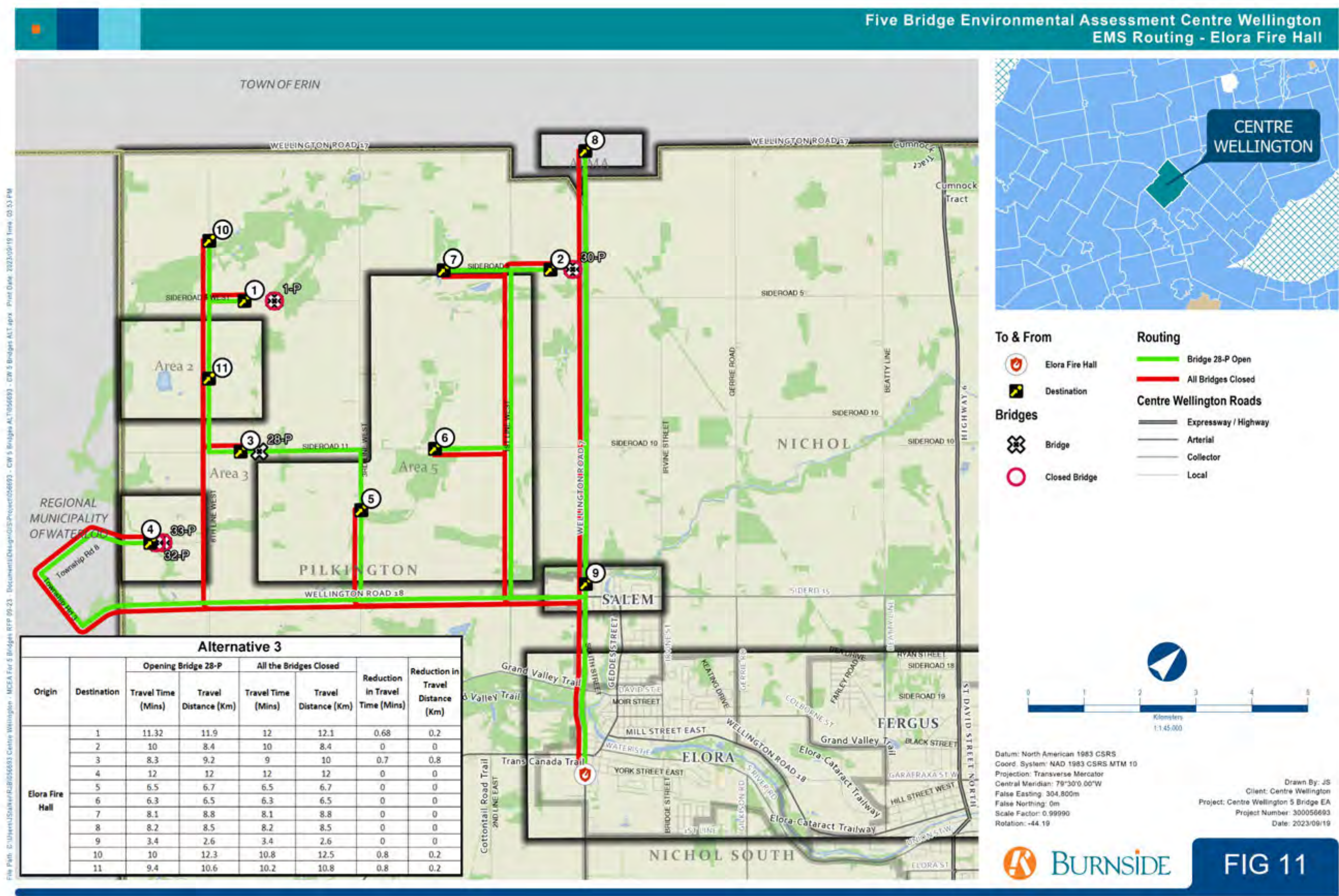


Figure 12: Alternative 3 Emergency Response Time from Centre Wellington Fire & Rescue - Fergus Station

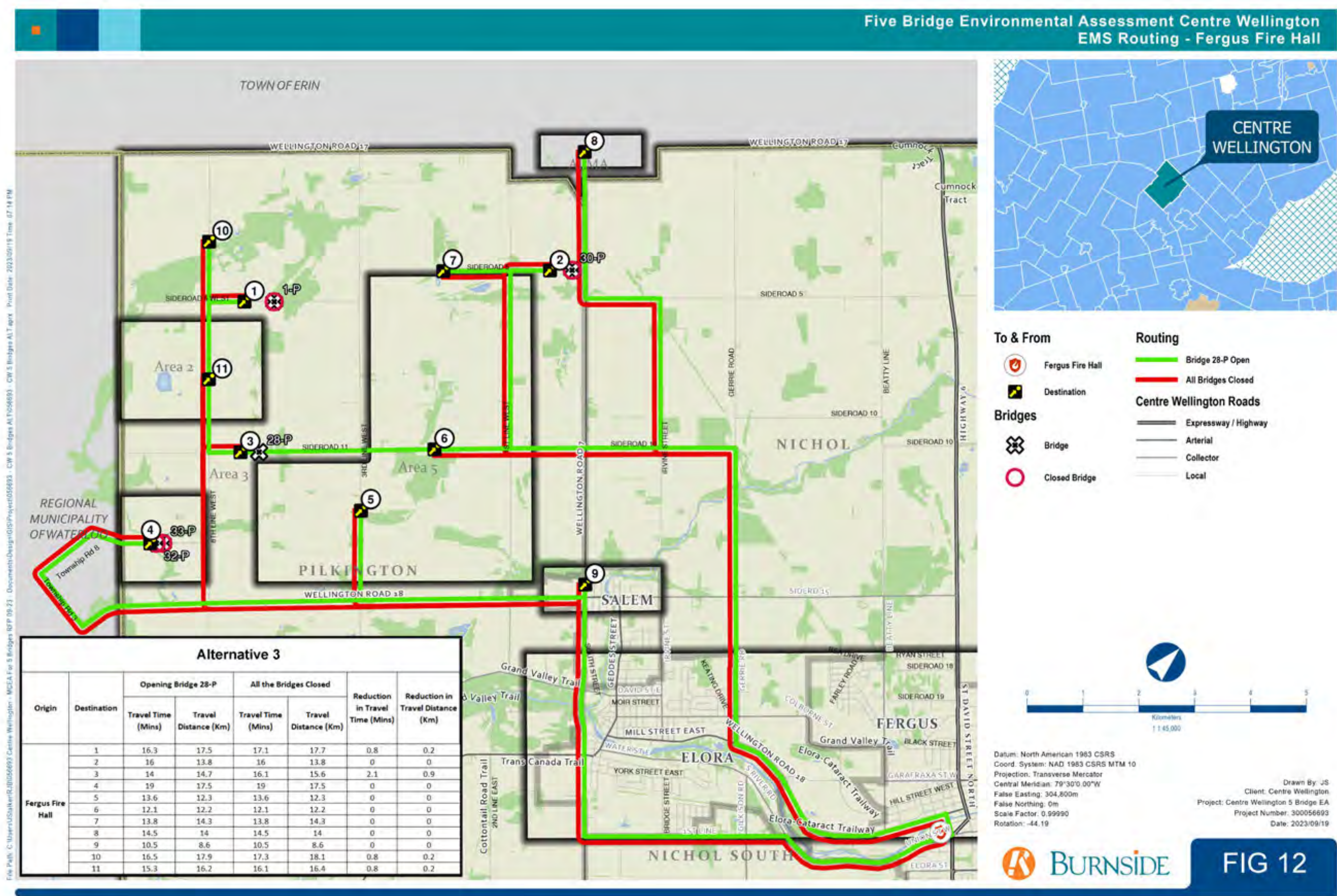
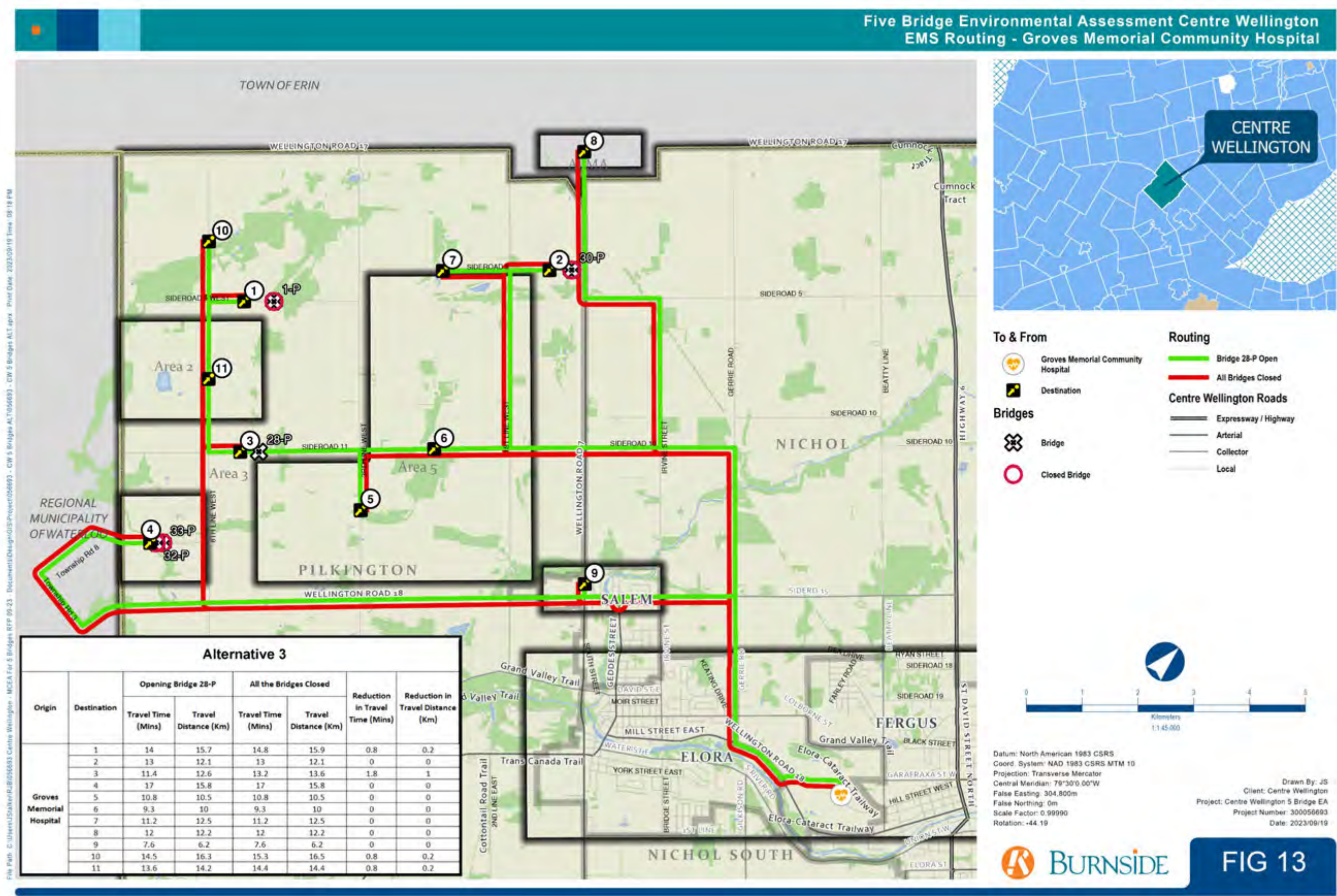


Figure 13: Alternative 3 Emergency Response Time from Groves Memorial Community Hospital: Emergency Department



Five Bridge Environmental Assessment Centre Wellington
EMS Routing - Ontario Provincial Police

Alternative 3

| Origin | Destination | Opening Bridge 28-P | | All the Bridges Closed | | Reduction in Travel Time (Mins) | Reduction in Travel Distance (Km) |
|--------------------|-------------|---------------------|----------------------|------------------------|----------------------|---------------------------------|-----------------------------------|
| | | Travel Time (Mins) | Travel Distance (Km) | Travel Time (Mins) | Travel Distance (Km) | | |
| OPP Fergus Station | 1 | 15 | 14.9 | 15.8 | 15.1 | 0.8 | 0.2 |
| | 2 | 9.6 | 11.1 | 9.6 | 11.1 | 0 | 0 |
| | 3 | 10.3 | 11.8 | 12.1 | 12.8 | 1.8 | 1 |
| | 4 | 15 | 14.8 | 15 | 14.8 | 0 | 0 |
| | 5 | 10 | 9.5 | 10 | 9.5 | 0 | 0 |
| | 6 | 8.1 | 9.2 | 8.1 | 9.2 | 0 | 0 |
| | 7 | 10 | 11.5 | 10 | 11.5 | 0 | 0 |
| | 8 | 10 | 11.2 | 10 | 11.2 | 0 | 0 |
| | 9 | 6.4 | 5.5 | 6.4 | 5.5 | 0 | 0 |
| | 10 | 14.2 | 15.1 | 15 | 15.3 | 0.8 | 0.2 |
| | 11 | 12.5 | 13.4 | 13.3 | 13.6 | 0.8 | 0.2 |

Legend:

- To & From:**
 - Ontario Provincial Police (Star icon)
 - Destination (Yellow arrow icon)
- Bridges:**
 - Bridge (Cross icon)
 - Closed Bridge (Red circle icon)
- Centre Wellington Roads:**
 - Expressway / Highway (Thick black line)
 - Arterial (Thin black line)
 - Collector (Dashed black line)
 - Local (Dotted black line)
- Routing:**
 - Bridge 28-P Open (Green line)
 - All Bridges Closed (Red line)

Scale: 0 to 5 Kilometers, 1:145,000

Datum: North American 1983 CSRS
Coord. System: NAD 1983 CSRS MTM 10
Projection: Transverse Mercator
Central Meridian: 79°30'0.00"W
False Easting: 304,800m
False Northing: 0m
Scale Factor: 0.99990
Rotation: -44.19

Drawn By: JS
Client: Centre Wellington
Project: Centre Wellington 5 Bridge EA
Project Number: 300056693
Date: 2023/09/19

3.4 Alternative 4: Opening Bridge 32-P and 33-P

Alternative 4 considers a scenario where bridges 32-P and 33-P are opened, and all other bridges remain closed. Bridges 32-P and 33-P are located on Noah Road. Noah Road is an east-west gravel local road with an existing 2021 AADT of 74 and future 2041 projected AADT of 138. Alternative 4 evaluates the implications of opening Bridges 32-P and 33-P on cross-community travel time and travel distance and emergency services across the affected communities. Figure 15 illustrates the cross-community routing between pairs of origin and destinations under Alternative 4 with Bridges 32-P and 33-P open. As illustrated in Table 9, opening Bridges 32-P and 33-P would only impact the travel time between Area 3 and Area 5. It does not have a major impact on travel time between the rest of the pairs of origin and destination. Opening Bridges 32-P and 33-P will reduce the travel time and travel distance to / from Area 3 by up to 2.2 minutes and 2.9 km respectively.

Table 9: Cross-Community Travel Time & Travel Distance Reduction for Alternative 4

| Origin | Destination | Reduction in Travel Time (Min) | Reduction in Travel Distance (km) |
|---------------------------|-----------------------------|--------------------------------|-----------------------------------|
| Area 3: Creekbank Welding | Area 5: Sure Choice Produce | 2.2 | 2.9 |
| Area 3: Creekbank Welding | Salem: Esso | 2.2 | 2.9 |
| Area 3: Creekbank Welding | Alma: Napa Autopro | 2.1 | 2.6 |

The emergency response time from the four mentioned pivotal service points (Fire Departments, Hospital, and OPP) to eleven locations are assessed. Out of the 11 chosen locations in the study area, only one location (namely Location 4), is affected by this scenario. The response times for the emergency services to reach any of the 11 locations are illustrated in Figure 16, Figure 17, Figure 18, and Figure 19. Table 10 summarizes the reduction in travel time and travel distance between 4 emergency service providers and Location 4.

Table 10: Emergency Travel Time and Travel Distance Reduction under Alternative 4

| Origin | Destination | Reduction in Travel Time (Min) | Reduction in Travel Distance (km) |
|--------------------------|-------------|--------------------------------|-----------------------------------|
| Elora Fire Hall | 4 | 3.7 | 2.8 |
| Fergus Fire Hall | 4 | 3.5 | 2.3 |
| Groves Memorial Hospital | 4 | 4.3 | 3.0 |
| OPP Fergus Station | 4 | 3.4 | 2.8 |

As summarized in Table 10, Alternative 4 can reduce the travel time and travel distance between Location 4 and rest of the study area by up to 4.3 minutes and 3.0 km respectively. The range of reductions in travel time varies from a minimum of 3.4 minutes to a maximum of

4.3 minutes, while the range for travel distance reductions spans from 2.3 km to 3.0 km across the different destinations. There is an average 0.6-minute reduction in travel time and 0.5 km reduction in travel distance under this scenario. Additionally, as we can see in Figure 3 and Figure 4, these improvements to Noah Road would benefit existing and future AADT values of 74 and 138, respectively.

**Five Bridge Environmental Assessment Centre Wellington
Cross Community Routing**

The map displays the Town of Erin, Region of Waterloo, and parts of Nichol and Fergus. It shows several bridges along Highway 17 and other roads, with specific routes highlighted for travel between key locations. A legend explains the symbols for destinations, departures, bridges, closed bridges, and road types. An inset map shows the location of Centre Wellington within the larger regional context.

Cross Community Routing

| Name | Route - Bridges Open | | Route - Bridges Closed | |
|---|-----------------------|----------------------|------------------------|----------------------|
| | Travel Time (Minutes) | Travel Distance (Km) | Travel Time (Minutes) | Travel Distance (Km) |
| Alma Research Station - Sure Choice Produce | 4.3 | 5.7 | 4.3 | 5.7 |
| Alma Research Station - NAPA AUTOPRO - Buehler Automotive | 5.2 | 6.2 | 5.2 | 6.2 |
| Alma Research Station - Esso | 8.1 | 10.2 | 8.1 | 10.2 |
| Bethel Mennonite Church - Sure Choice Produce | 5.8 | 7.7 | 5.8 | 7.7 |
| Bethel Mennonite Church - Esso | 5.8 | 7.2 | 5.8 | 7.2 |
| Bethel Mennonite Church - NAPA AUTOPRO - Buehler Automotive | 7.4 | 9.2 | 7.4 | 9.2 |
| Creekbank Welding - Sure Choice Produce | 5.4 | 7.2 | 7.6 | 10.1 |
| Creekbank Welding - Esso | 5.4 | 6.7 | 7.6 | 9.6 |
| Creekbank Welding - NAPA AUTOPRO - Buehler Automotive | 8.9 | 11.2 | 11 | 13.8 |

Datum: North American 1983 CSRS
Coord. System: NAD 1983 CSRS MTM 10
Projection: Transverse Mercator
Central Meridian: 79°30'0.00"W
False Easting: 304,800m
False Northing: 0m
Scale Factor: 0.99990
Rotation: -44.19

Drawn By: JS
Client: Centre Wellington
Project: Centre Wellington 5 Bridge EA
Project Number: 300056893
Date: 2023/09/19

BURNSIDE

FIG 15

Figure 16: Alternative 4 Emergency Response Time from Centre Wellington Fire Department – Elora Station

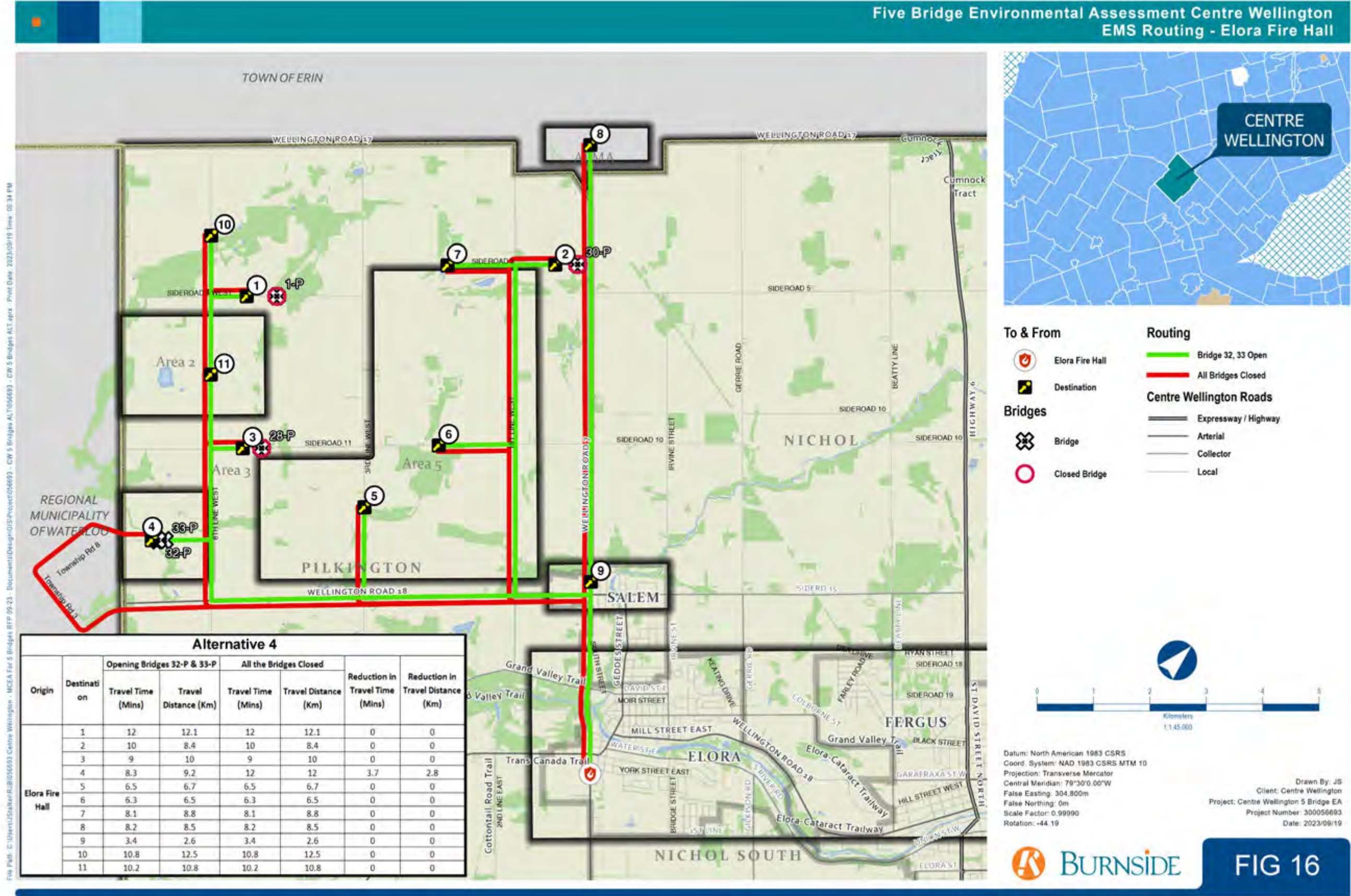
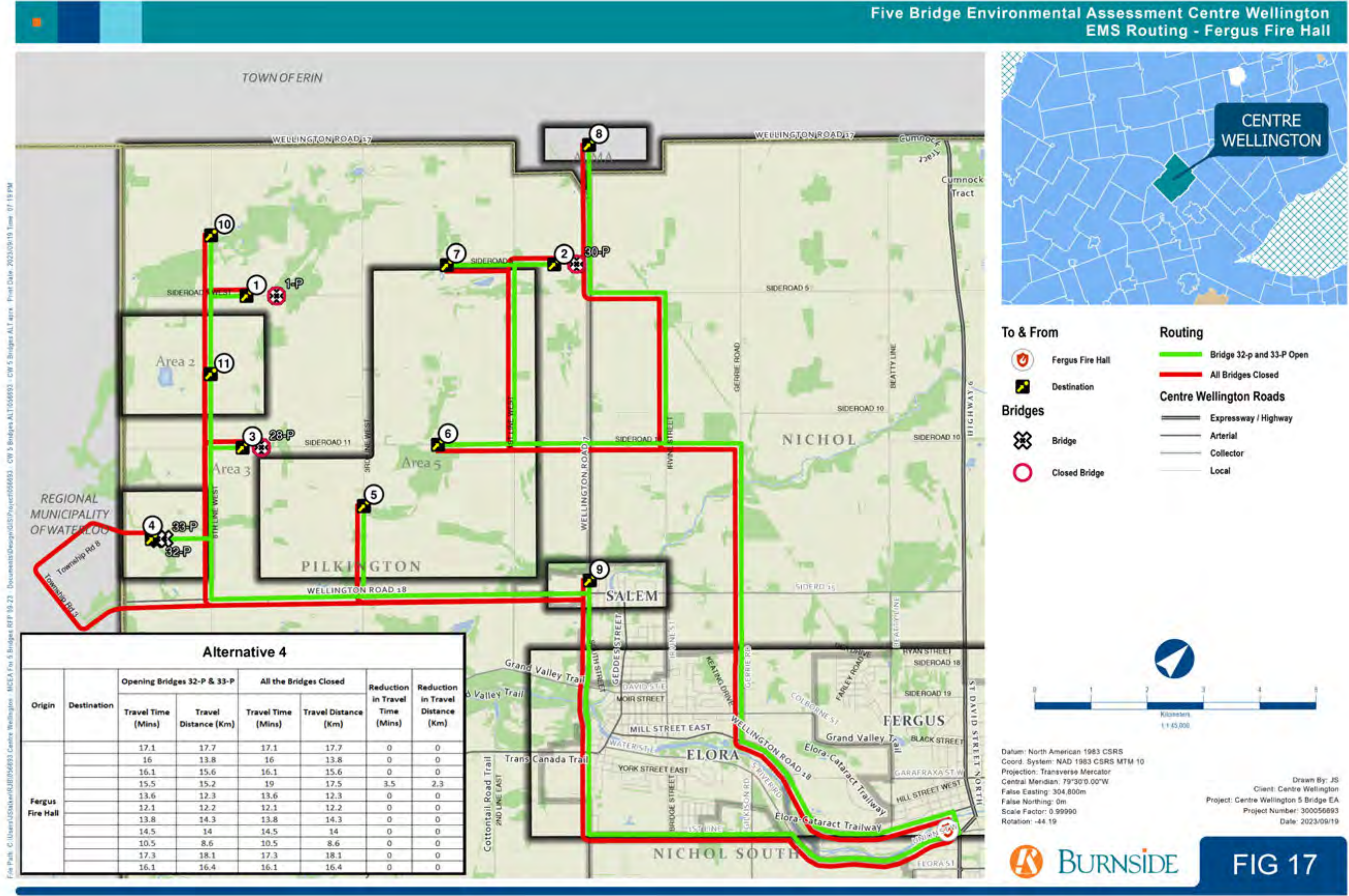


Figure 17: Alternative 4 Emergency Response Time from Centre Wellington Fire Department – Fergus Station



Five Bridge Environmental Assessment Centre Wellington
EMS Routing - Groves Memorial Community Hospital

Alternative 4

| Origin | Destination | Opening Bridges 32-P & 33-P | | All the Bridges Closed | | Reduction in Travel Time (Mins) | Reduction in Travel Distance (Km) |
|--------------------------|-------------|-----------------------------|----------------------|------------------------|----------------------|---------------------------------|-----------------------------------|
| | | Travel Time (Mins) | Travel Distance (Km) | Travel Time (Mins) | Travel Distance (Km) | | |
| Groves Memorial Hospital | 1 | 14.8 | 15.9 | 14.8 | 15.9 | 0 | 0 |
| | 3 | 13.2 | 13.6 | 13.2 | 13.6 | 0 | 0 |
| | 5 | 10.8 | 10.5 | 10.8 | 10.5 | 0 | 0 |
| | 7 | 11.2 | 12.5 | 11.2 | 12.5 | 0 | 0 |
| | 9 | 7.6 | 6.2 | 7.6 | 6.2 | 0 | 0 |
| | 11 | 14.4 | 14.4 | 14.4 | 14.4 | 0 | 0 |
| | 13 | 12.7 | 12.8 | 12.7 | 12.8 | 0 | 0 |
| | 15 | 15.3 | 16.5 | 15.3 | 16.5 | 0 | 0 |

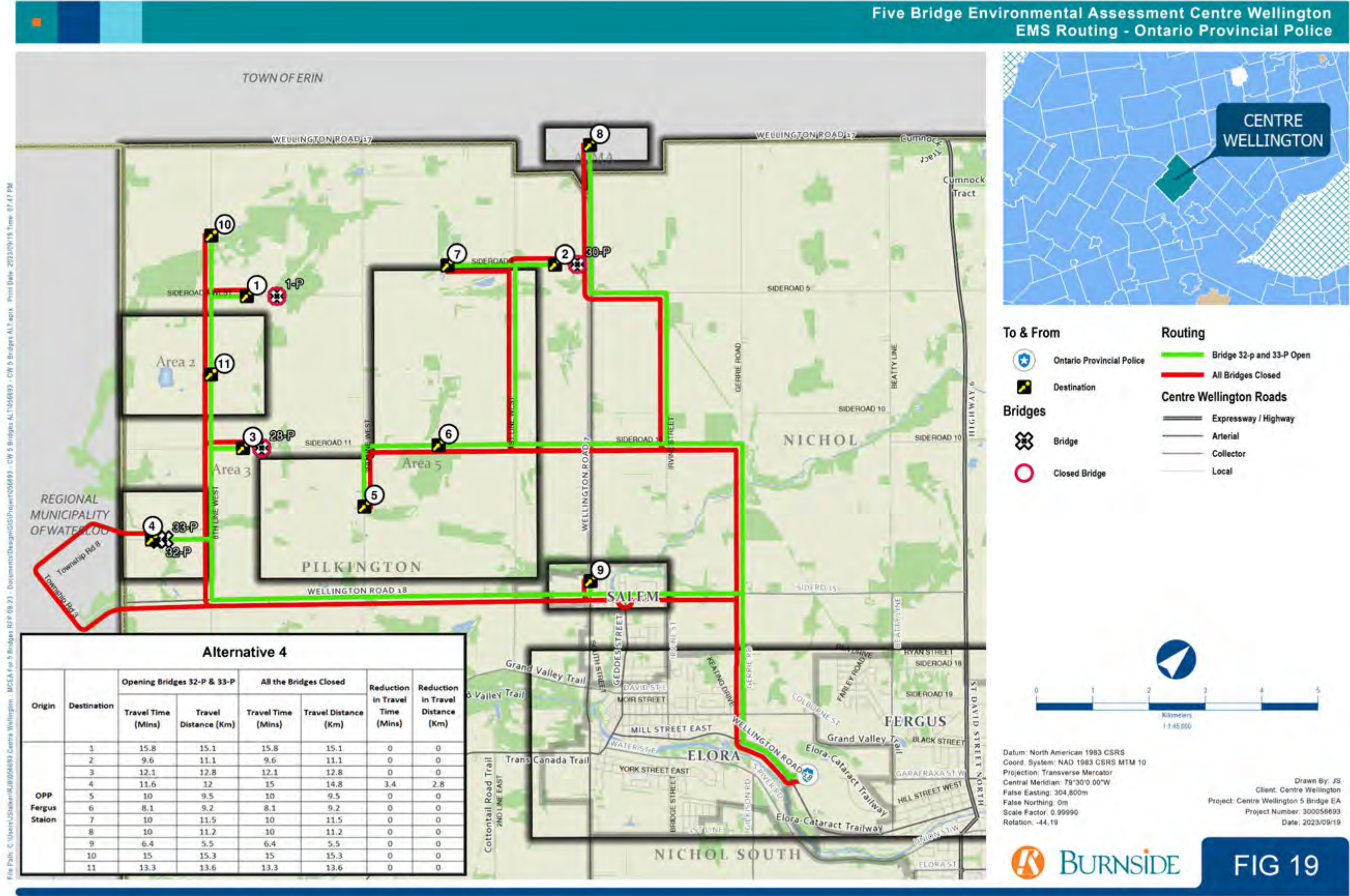
Datum: North American 1983 CSRS
 Coord. System: NAD 1983 CSRS MTM 10
 Projection: Transverse Mercator
 Central Meridian: 79°30'0.00"W
 False Easting: 304,800m
 False Northing: 0m
 Scale Factor: 0.99990
 Rotation: -44.19

Drawn By: JS
 Client: Centre Wellington
 Project: Centre Wellington 5 Bridge EA
 Project Number: 300056693
 Date: 2023/09/19

BURNSIDE

FIG 18

Figure 19: Alternative 4 Emergency Response Time from Ontario Provincial Police – Fergus



3.5 Alternative 5: Opening Bridge 28-P, 32-P, and 33-P

Alternative 5 considers a scenario where all the bridges except for Bridges 28-P, 32-P, and 33-P are closed. Alternative 5 evaluates the implications of opening Bridges 28-P, 32-P, and 33-P on cross-community travel time and travel distance and emergency services across the affected communities. Figure 20 illustrates the cross-community routing between pairs of origin and destinations under Alternative 5 with Bridges 28-P, 32-P, and 33-P open. As illustrated Table 11, opening Bridges 28-P, 32-P, and 33-P will have a potential impact on most of the study area. Opening the three mentioned bridges will reduce the travel time and travel distance between the pairs of origin and destinations by up to 3.4 minutes and 4.5 km respectively.

Table 11: Cross-Community Travel Time & Travel Distance Reduction under Alternative 5

| Origin | Destination | Reduction in Travel Time (Min) | Reduction in Travel Distance (km) |
|---------------------------------|-----------------------------|--------------------------------|-----------------------------------|
| Area 1: Alma Research Station | Salem: Esso | 0.2 | 0 |
| Area 2: Bethel Mennonite Church | Area 5: Sure Choice Produce | 3.1 | 4.1 |
| Area 2: Bethel Mennonite Church | Salem: Esso | 0.1 | 0 |
| Area 3: Creekbank Welding | Area 5: Sure Choice Produce | 3.4 | 4.5 |
| Area 3: Creekbank Welding | Salem: Esso | 2.2 | 2.9 |
| Area 3: Creekbank Welding | Alma: Napa Autopro | 2.1 | 2.6 |

The emergency response time from the four mentioned pivotal service points (Centre Wellington Fire Department – Elora Station, Centre Wellington Fire & Rescue - Fergus Station, Groves Memorial Community Hospital: Emergency Department, and Ontario Provincial Police - Fergus) to 11 strategically chosen locations that may represent the broader areas of the Township influenced by bridge closures are assessed as well. Out of the 11 chosen locations in the study area, Locations 1, 3, 4, 10, and 11 are affected by this scenario. The response times for the emergency services to reach any of the 11 locations are illustrated in Figure 21, Figure 22, Figure 23, and Figure 24. Table 12 summarizes the reduction in travel time and travel distance between four emergency service providers and the affected locations.

Table 12: Emergency Travel Time and Travel Distance Reduction under Alternative 5

| Origin | Destination | Reduction in Travel Time (Min) | Reduction in Travel Distance (km) |
|--------------------------|-------------|--------------------------------|-----------------------------------|
| Elora Fire Hall | 1 | 0.8 | 0.2 |
| | 3 | 0.7 | 0.8 |
| | 4 | 3.7 | 2.8 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |
| Fergus Fire Hall | 1 | 0.8 | 0.2 |
| | 3 | 2.1 | 0.9 |
| | 4 | 3.5 | 2.3 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |
| Groves Memorial Hospital | 1 | 0.8 | 0.2 |
| | 3 | 1.8 | 1 |
| | 4 | 4.3 | 3 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |
| OPP Fergus Station | 1 | 0.8 | 0.2 |
| | 3 | 1.8 | 1 |
| | 4 | 3.4 | 2.8 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |

As summarized in Table 12, Alternative 5 can reduce the emergency response travel time and travel distance between the origin and destination pairs by up to 4.3 minutes and 3 km. The range of reductions in travel time varies from a minimum of 0.7 minutes to a maximum of 4.3 minutes, while the range for travel distance reductions spans from 0.2 km to 3.0 km across the different destinations. Table 12 also indicates that, on average, there is a 1.3-minute reduction in travel time and 0.7 km reduction in travel distance under this scenario. Additionally, as we can see in in Figure 3 and Figure 4 most of the traffic use Sideroad 11 to travel from east to west between pairs of origin and destination.

Figure 20: Alternative 5 Cross-Community Routing

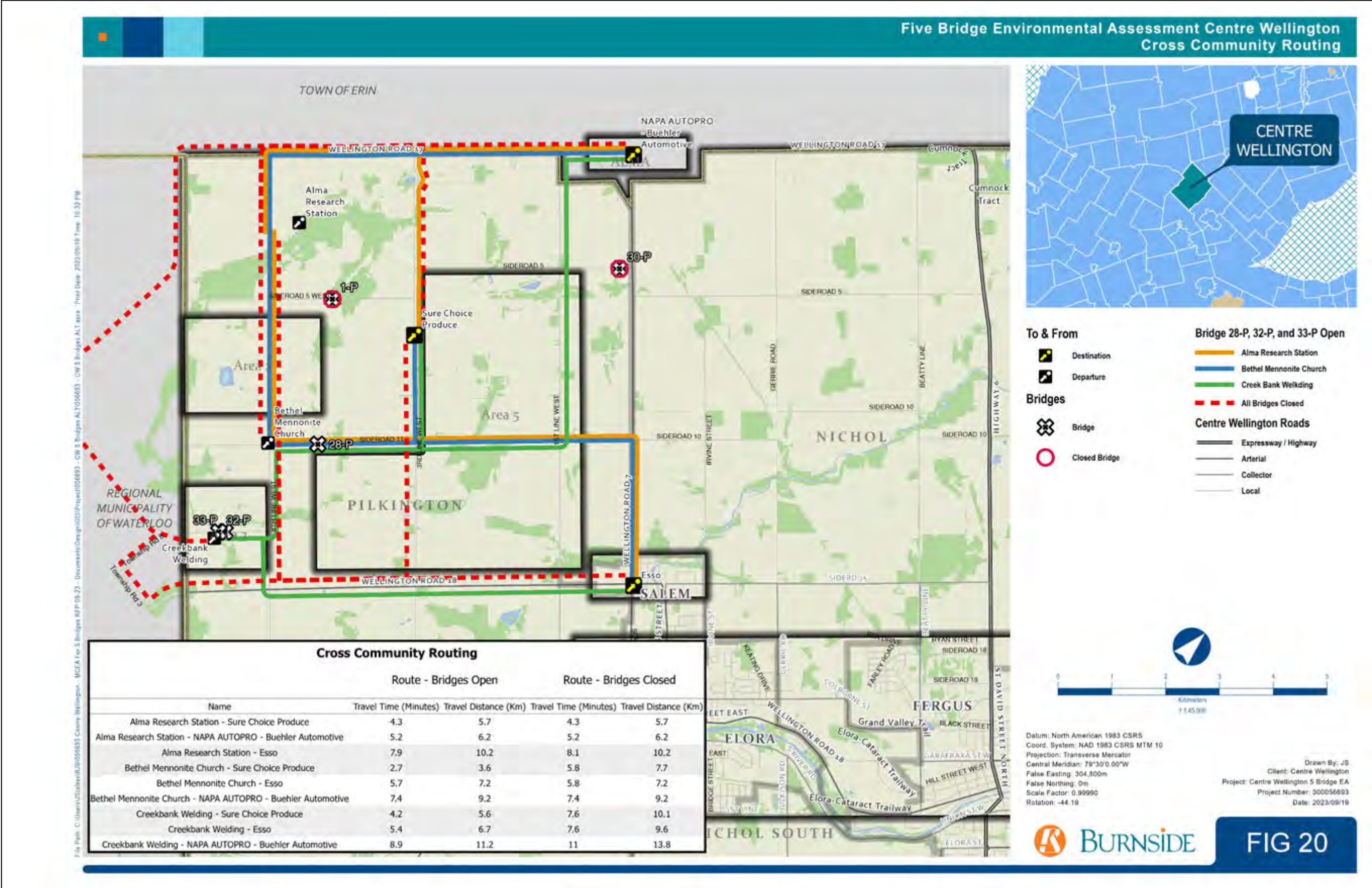
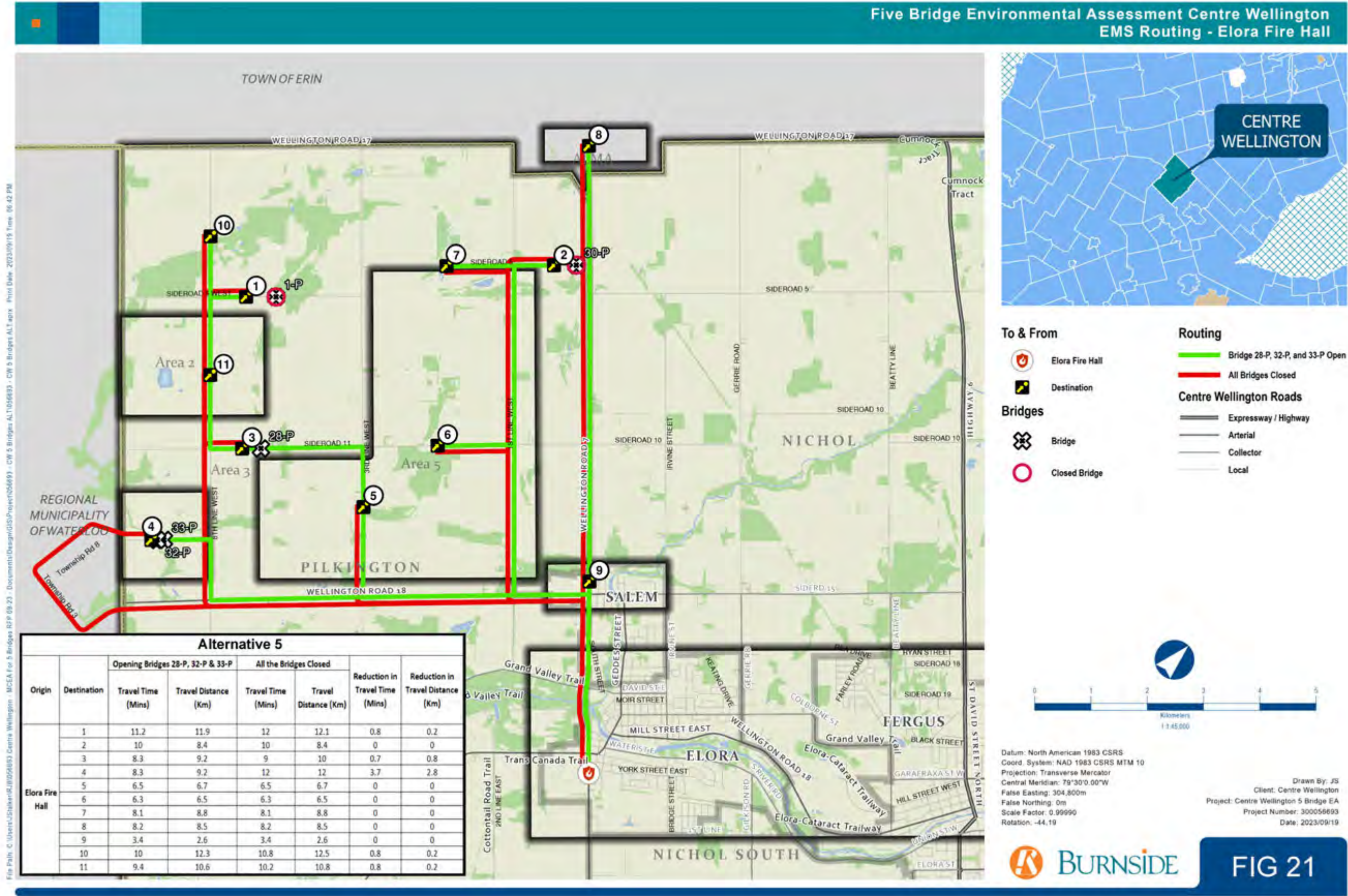


Figure 21: Alternative 5 Emergency Response Time from Centre Wellington Fire Department – Elora Station



Five Bridge Environmental Assessment Centre Wellington
EMS Routing - Fergus Fire Hall

Alternative 5

| Origin | Destination | Opening Bridges 28-P, 32-P & 33-P | | All the Bridges Closed | | Reduction in Travel Time (Mins) | Reduction in Travel Distance (Km) |
|------------------|-------------|-----------------------------------|----------------------|------------------------|----------------------|---------------------------------|-----------------------------------|
| | | Travel Time (Mins) | Travel Distance (Km) | Travel Time (Mins) | Travel Distance (Km) | | |
| Fergus Fire Hall | 1 | 16.3 | 17.5 | 17.1 | 17.7 | 0.8 | 0.2 |
| | 2 | 16 | 13.8 | 16 | 13.8 | 0 | 0 |
| | 3 | 14 | 14.7 | 16.1 | 15.6 | 2.1 | 0.9 |
| | 4 | 15.5 | 15.2 | 19 | 17.5 | 3.5 | 2.3 |
| | 5 | 13.6 | 12.3 | 13.6 | 12.3 | 0 | 0 |
| | 6 | 12.1 | 12.2 | 12.1 | 12.2 | 0 | 0 |
| | 7 | 13.8 | 14.3 | 13.8 | 14.3 | 0 | 0 |
| | 8 | 14.5 | 14 | 14.5 | 14 | 0 | 0 |
| | 9 | 10.5 | 8.6 | 10.5 | 8.6 | 0 | 0 |
| | 10 | 16.5 | 17.9 | 17.3 | 18.1 | 0.8 | 0.2 |
| | 11 | 15.3 | 16.2 | 16.1 | 16.4 | 0.8 | 0.2 |

Alternative 6

| Origin | Destination | Opening Bridges 28-P, 32-P & 33-P | | All the Bridges Closed | | Reduction in Travel Time (Mins) | Reduction in Travel Distance (Km) |
|------------------|-------------|-----------------------------------|----------------------|------------------------|----------------------|---------------------------------|-----------------------------------|
| | | Travel Time (Mins) | Travel Distance (Km) | Travel Time (Mins) | Travel Distance (Km) | | |
| Fergus Fire Hall | 1 | 16.3 | 17.5 | 17.1 | 17.7 | 0.8 | 0.2 |
| | 2 | 16 | 13.8 | 16 | 13.8 | 0 | 0 |
| | 3 | 14 | 14.7 | 16.1 | 15.6 | 2.1 | 0.9 |
| | 4 | 15.5 | 15.2 | 19 | 17.5 | 3.5 | 2.3 |
| | 5 | 13.6 | 12.3 | 13.6 | 12.3 | 0 | 0 |
| | 6 | 12.1 | 12.2 | 12.1 | 12.2 | 0 | 0 |
| | 7 | 13.8 | 14.3 | 13.8 | 14.3 | 0 | 0 |
| | 8 | 14.5 | 14 | 14.5 | 14 | 0 | 0 |
| | 9 | 10.5 | 8.6 | 10.5 | 8.6 | 0 | 0 |
| | 10 | 16.5 | 17.9 | 17.3 | 18.1 | 0.8 | 0.2 |
| | 11 | 15.3 | 16.2 | 16.1 | 16.4 | 0.8 | 0.2 |

Legend:

- To & From:**
 - Fergus Fire Hall
 - Destination
- Bridges:**
 - Bridge
 - Closed Bridge
- Centre Wellington Roads:**
 - Expressway / Highway
 - Arterial
 - Collector
 - Local
- Routing:**
 - Bridge 28-P, 32-P, and 33-P Open
 - All Bridges Closed

Scale: 0 to 5 Kilometers (1:45,000)

Datum: North American 1983 CSRS
Coord. System: NAD 1983 CSRS MTM 10
Projection: Transverse Mercator
Central Meridian: 79°30'00"W
False Easting: 304,800m
False Northing: 0m
Scale Factor: 0.99990
Rotation: -44.19

Drawn By: JS
Client: Centre Wellington
Project: Centre Wellington 5 Bridge EA
Project Number: 300056693
Date: 2023/09/19

Figure 23: Alternative 5 Emergency Response Time from Groves Memorial Community Hospital: Emergency Department

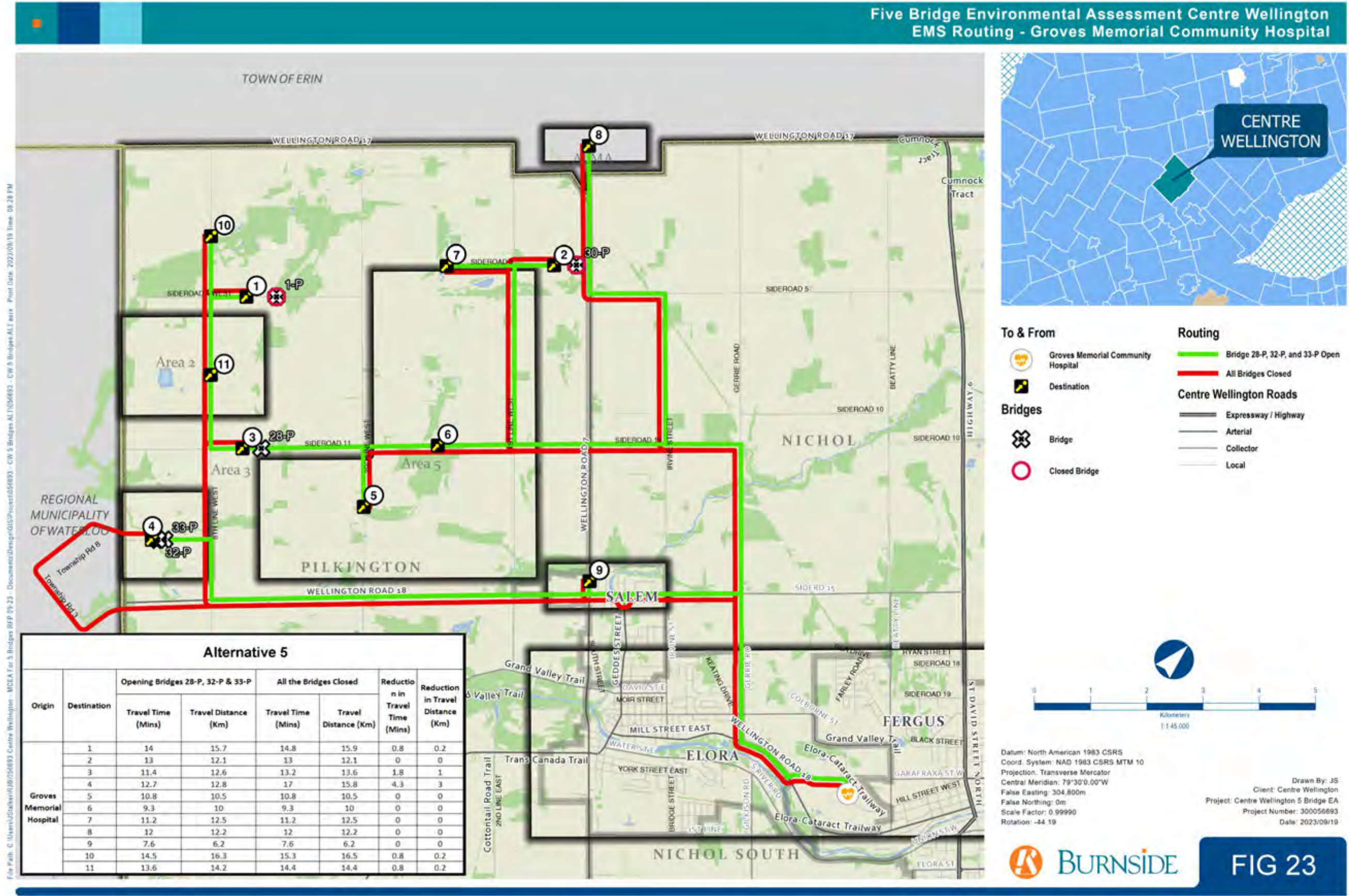
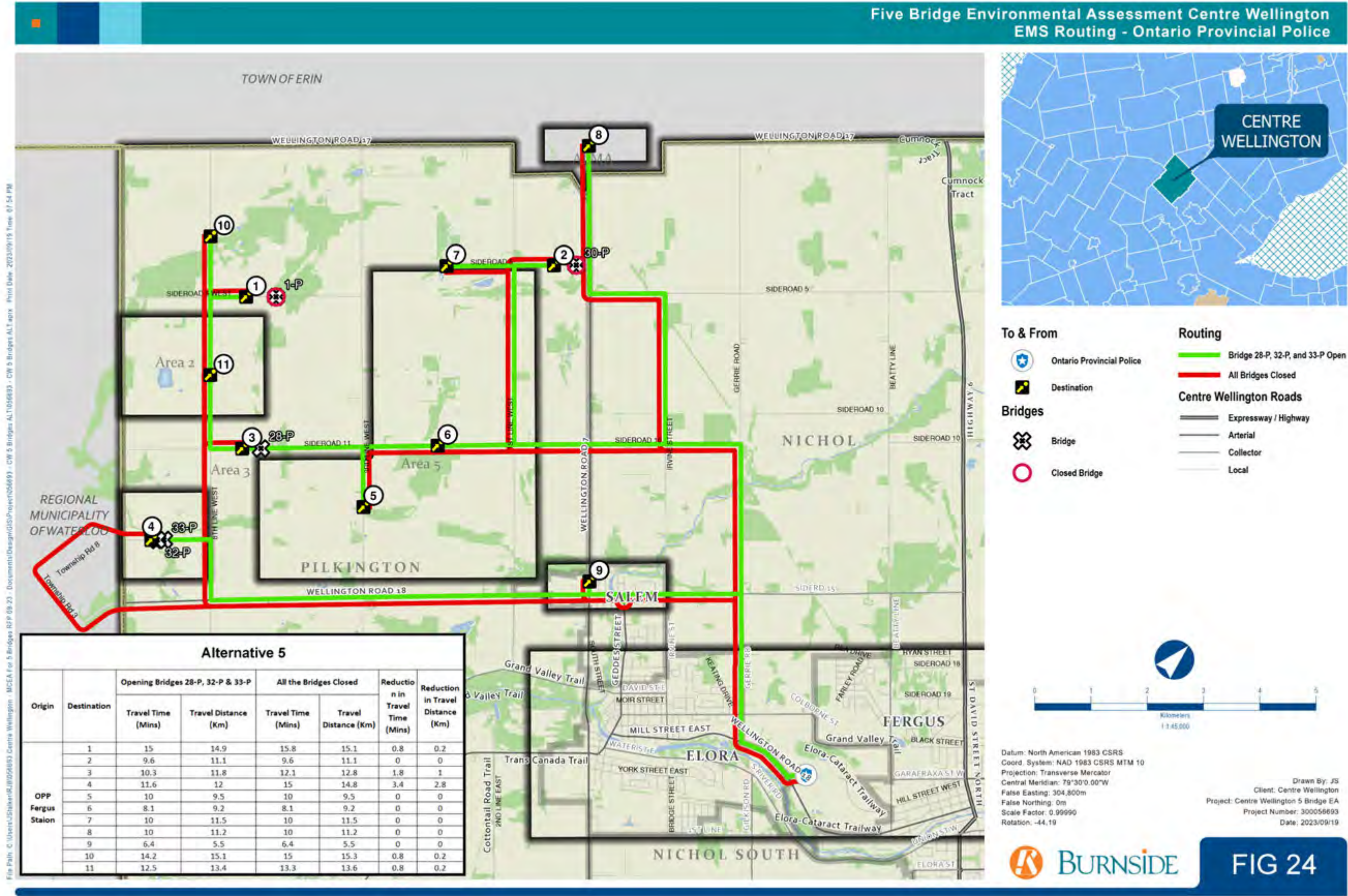


Figure 24: Alternative 5 Emergency Response Time from Ontario Provincial Police – Fergus



3.6 Alternative 6: Opening Bridges 1-P, 28-P, 32-P and 33-P

Alternative 6 considers a scenario where all the bridges except for 30-P are open. Bridge 1-P is located on Sideroad 5, Bridge 28-P is located on Sideroad 11, and Bridges 32-P and 33-P are located on Noah Road. Alternative 6 evaluates the implications of opening Bridges 1-P, 28-P, 32-P, and 33-P on cross-community travel time and travel distance for emergency services across the affected communities. Figure 25, illustrates the cross-community routing between pairs of origin and destinations under Alternative 6 with Bridges 1-P, 28-P, 32-P and 33-P open. As illustrated in Table 13, opening Bridges 1-P, 28-P, 32-P, and 33-P will have a potential impact on all the study area. Opening the four mentioned bridges will reduce the travel time and travel distance between the pairs of origin and destinations by up to 3.4 minutes and 4.5 km respectively.

Table 13: Cross-Community Travel Time & Travel Distance Reduction under Alternative 6

| Origin | Destination | Reduction in Travel Time (Min) | Reduction in Travel Distance (km) |
|---------------------------------|-----------------------------|--------------------------------|-----------------------------------|
| Area 1: Alma Research Station | Area 5: Sure Choice Produce | 0 | 1.98 |
| Area 1: Alma Research Station | Salem: Esso | 0.2 | 0 |
| Area 2: Bethel Mennonite Church | Area 5: Sure Choice Produce | 3.1 | 4.1 |
| Area 2: Bethel Mennonite Church | Salem: Esso | 0.1 | 0 |
| Area 3: Creekbank Welding | Area 5: Sure Choice Produce | 3.4 | 4.5 |
| Area 3: Creekbank Welding | Salem: Esso | 2.2 | 2.9 |
| Area 3: Creekbank Welding | Alma: Napa Autopro | 2.1 | 2.6 |

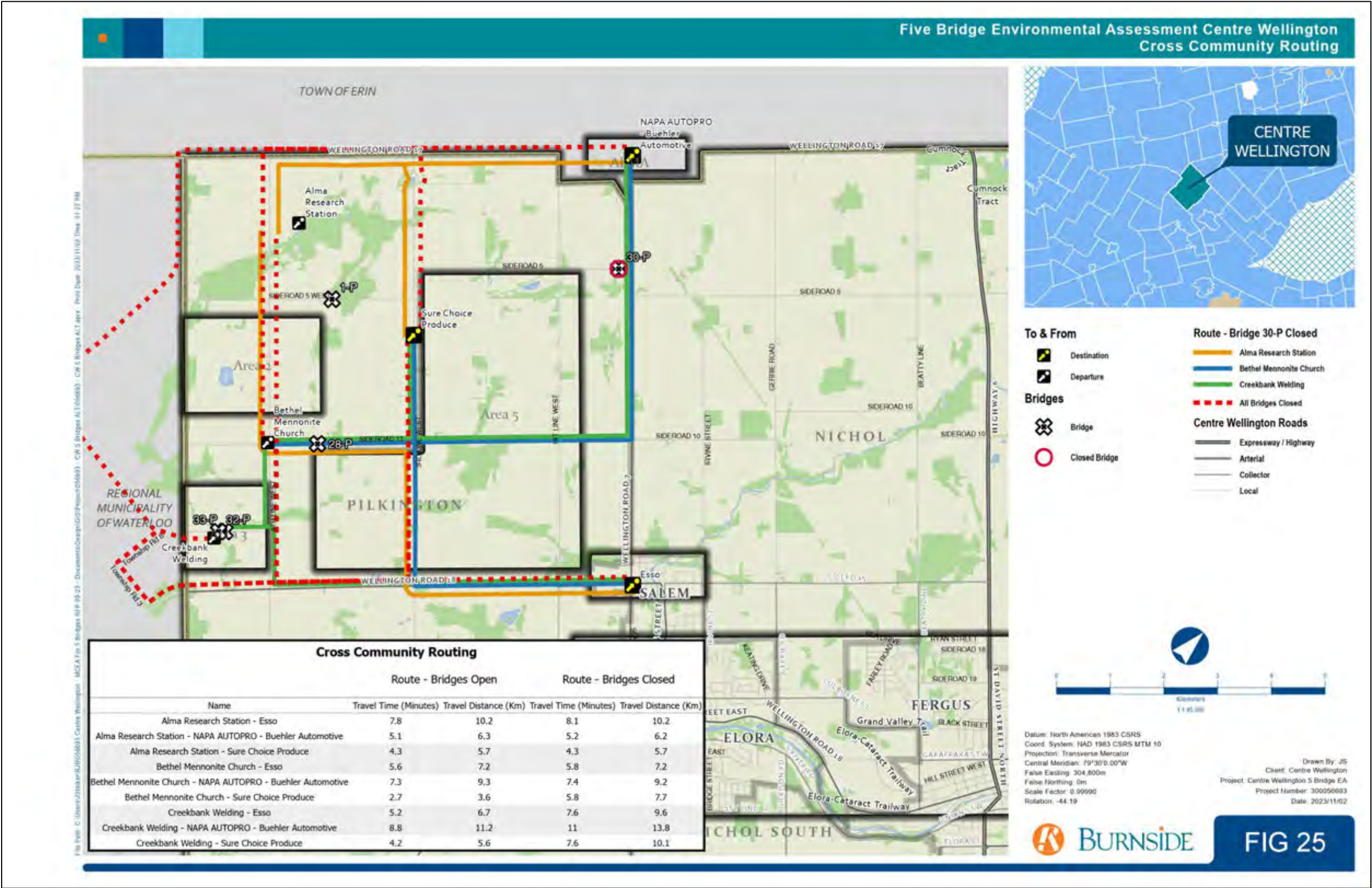
The emergency response time from four mentioned pivotal service points (Centre Wellington Fire Department – Elora Station, Centre Wellington Fire & Rescue - Fergus Station, Groves Memorial Community Hospital: Emergency Department, and Ontario Provincial Police - Fergus) to eleven strategically chosen locations that may represent the broader areas of the Township influenced by bridge closures were assessed as well. Out of the 11 chosen locations in the study area, Location 1, 3, 4, 10, and 11 are affected by this scenario. The response time for the emergency services to reach any of the 11 locations are illustrated in Figure 26, Figure 27, Figure 28, and Figure 29. Table 14 summarizes the reduction in travel time and travel distance between the four emergency service providers and the affected locations.

Table 14: Emergency Travel Time and Travel Distance Reduction under Alternative 6

| Origin | Destination | Reduction in Travel Time (Min) | Reduction in Travel Distance (km) |
|--------------------------|-------------|--------------------------------|-----------------------------------|
| Elora Fire Hall | 1 | 1.4 | 1 |
| | 3 | 0.7 | 0.8 |
| | 4 | 3.7 | 2.8 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |
| Fergus Fire Hall | 1 | 1.1 | 1 |
| | 3 | 2.1 | 0.9 |
| | 4 | 3.5 | 2.3 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |
| Groves Memorial Hospital | 1 | 1.1 | 1 |
| | 3 | 1.8 | 1 |
| | 4 | 4.3 | 3 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |
| OPP Fergus Station | 1 | 1.1 | 1 |
| | 3 | 1.8 | 1 |
| | 4 | 3.4 | 2.8 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |

As summarized in Table 14, Alternative 6 can reduce the emergency response travel time and travel distance between the origin and destination pairs by up to 4.3 minutes and 3 km, respectively. The range of reductions in travel time varies from a minimum of 0.7 minutes to a maximum of 4.3 minutes, while the range for travel distance reductions spans from 0.2 km to 3.0 km across the different destinations. Table 14 also indicates that, on average, there is a 1.4-minute reduction in travel time and 0.8 km reduction in travel distance under this scenario.

Figure 25: Alternative 6 Cross-Community Routing



<

Figure 26: Alternative 6 Emergency Response Time from Centre Wellington Fire Department – Elora Station

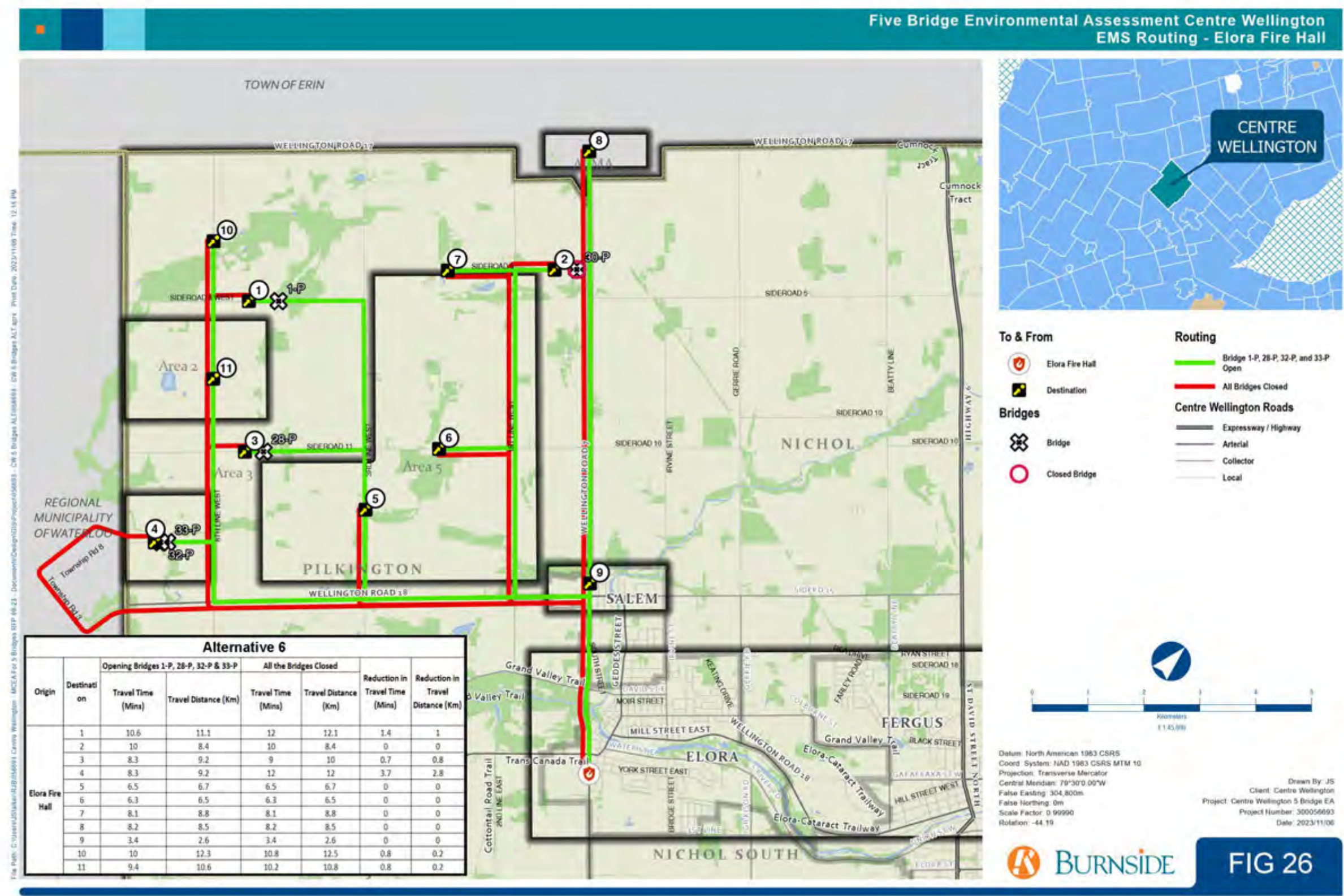


Figure 27: Alternative 6 Emergency Response Time from Centre Wellington Fire Department – Fergus Station

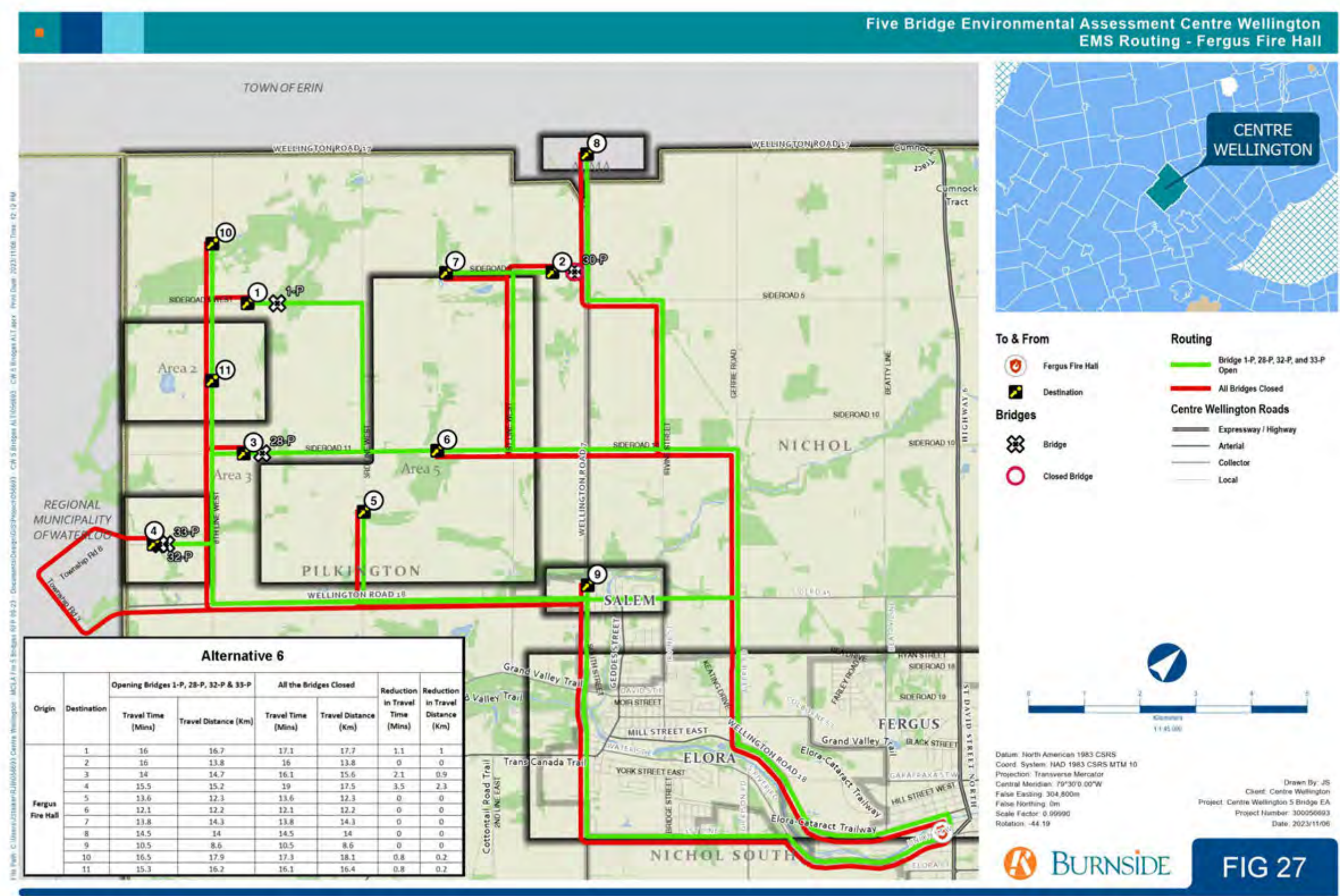


Figure 28: Alternative 6 Emergency Response Time from Groves Memorial Community Hospital: Emergency Department

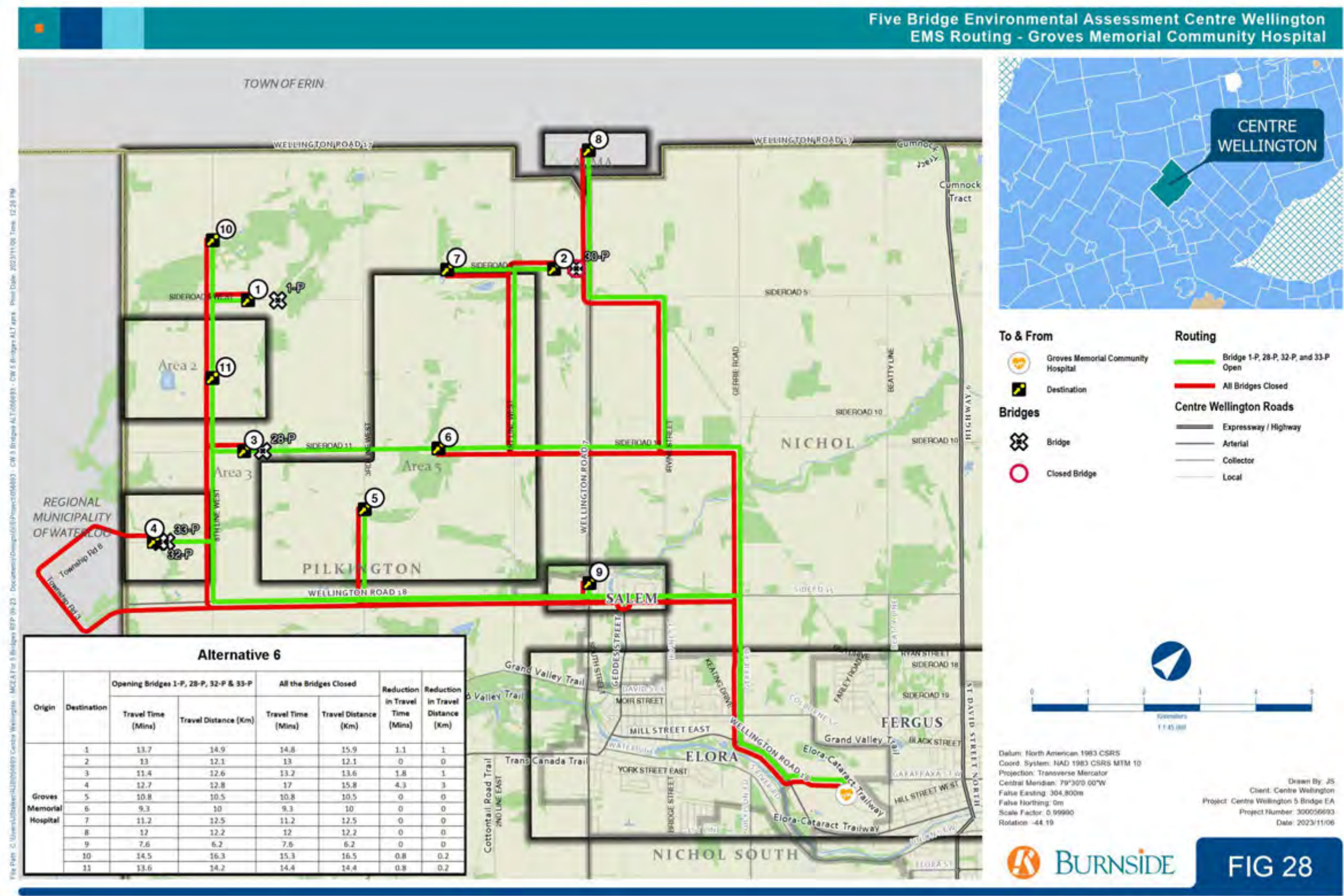
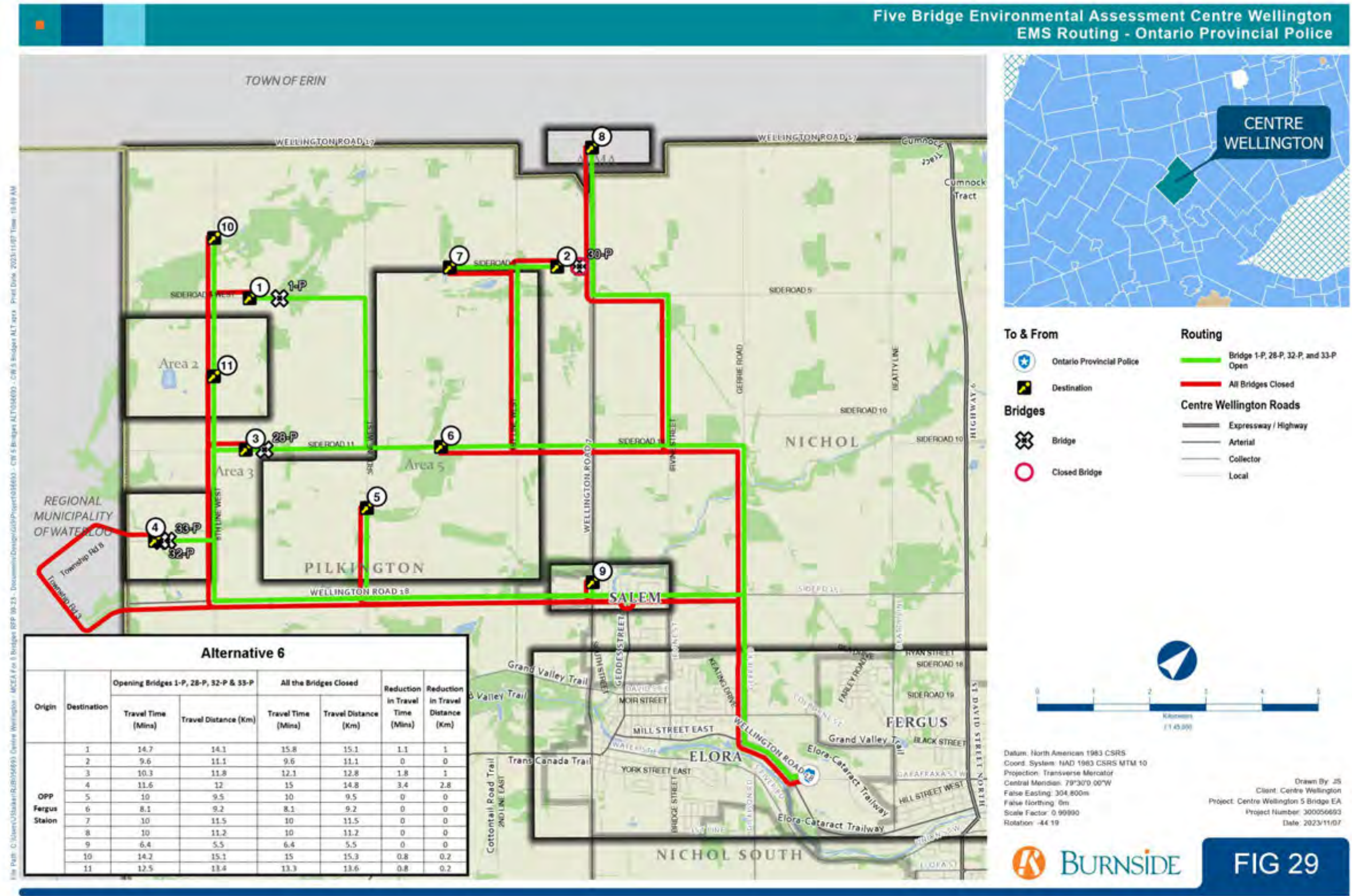


Figure 29: Alternative 6 Emergency Response Time from Ontario Provincial Police – Fergus



3.7 Alternative 7: Opening Bridges 28-P, 30-P, 32-P and 33-P

Alternative 7 considers a scenario where all the bridges except for 1-P are open. Bridge 28-P is located on Sideroad 11, Bridge 30-P is located on Sideroad 5, and Bridges 32-P and 33-P are located on Noah Road. Alternative 7 evaluates the implications of opening Bridges 28-P, 30-P, 32-P, and 33-P on cross-community travel time and travel distance for emergency services across the affected communities. Figure 30 illustrates the cross-community routing between pairs of origin and destinations summarized in Table 2 under Alternative 7 with Bridges 28-P, 30-P, 32-P, and 33-P open. As illustrated in Table 15, opening Bridges 28-P, 30-P, 32-P, and 33-P will have a potential impact on all the study area. Opening the four mentioned bridges will reduce the travel time and travel distance between the pairs of origin and destinations by up to 3.4 minutes and 4.5 km, respectively.

Table 15: Cross-Community Travel Time & Travel Distance Reduction under Alternative 7

| Origin | Destination | Reduction in Travel Time (Min) | Reduction in Travel Distance (km) |
|---------------------------------|-----------------------------|--------------------------------|-----------------------------------|
| Area 1: Alma Research Station | Salem: Esso | 0.2 | 0 |
| Area 2: Bethel Mennonite Church | Area 5: Sure Choice Produce | 3.1 | 4.1 |
| Area 2: Bethel Mennonite Church | Salem: Esso | 0.1 | 0 |
| Area 3: Creekbank Welding | Area 5: Sure Choice Produce | 3.4 | 4.5 |
| Area 3: Creekbank Welding | Salem: Esso | 2.2 | 2.9 |
| Area 3: Creekbank Welding | Alma: Napa Autopro | 2.1 | 2.6 |

The emergency response time from four mentioned pivotal service points (Centre Wellington Fire Department – Elora Station, Centre Wellington Fire & Rescue - Fergus Station, Groves Memorial Community Hospital: Emergency Department, and Ontario Provincial Police - Fergus) to 11 strategically chosen locations that may represent the broader areas of the Township influenced by bridge closures are assessed as well. Out of the 11 chosen locations in the study area, Locations 1, 2, 3, 4, 10, and 11 are affected by this scenario. The response time for the emergency services to reach any of the 11 locations are illustrated in Figure 31, Figure 32, Figure 33, and Figure 34. Table 16 summarizes the reduction in travel time and travel distance between the four emergency service providers and the affected locations.

Table 16: Emergency Travel Time and Travel Distance Reduction under Alternative 7

| Origin | Destination | Reduction in Travel Time (Min) | Reduction in Travel Distance (km) |
|--------------------------|-------------|--------------------------------|-----------------------------------|
| Elora Fire Hall | 1 | 0.8 | 0.2 |
| | 2 | 2.2 | 1 |
| | 3 | 0.7 | 0.8 |
| | 4 | 3.7 | 2.8 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |
| Fergus Fire Hall | 1 | 0.8 | 0.2 |
| | 2 | 2.5 | 1 |
| | 3 | 2.1 | 0.9 |
| | 4 | 3.5 | 2.3 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |
| Groves Memorial Hospital | 1 | 0.8 | 0.2 |
| | 2 | 1 | 1.1 |
| | 3 | 1.8 | 1 |
| | 4 | 4.3 | 3 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |
| OPP Fergus Station | 1 | 0.8 | 0.2 |
| | 2 | 0.7 | 1.1 |
| | 3 | 1.8 | 1 |
| | 4 | 3.4 | 2.8 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |

As summarized in Table 16, Alternative 7 can reduce the emergency response travel time and travel distance between the origin and destination pairs by up to 4.3 minutes and 3 km, respectively. The range of reductions in travel time varies from a minimum of 0.7 minutes to a maximum of 4.3 minutes, while the range for travel distance reductions spans from 0.2 km to 3.0 km across the different destinations. Table 16 also indicates that, on average, there is a 1.6-minute reduction in travel time and 0.9 km reduction in travel distance under this scenario.

**Five Bridge Environmental Assessment Centre Wellington
Cross Community Routing**

File Path: C:\Users\jshaker\Documents\Projects\GIS\Projects\5 Bridges EA\Map\Map - 5 Bridges EA - CW 5 Bridges EA - 20231102 Time: 01:24 PM
 MCEA For 5 Bridges RFP 06-23 - Documents\Design\GIS\Projects\5 Bridges EA - CW 5 Bridges EA - 20231102 Time: 01:24 PM

| Name | Route - Bridges Open | | Route - Bridges Closed | |
|---|-----------------------|----------------------|------------------------|----------------------|
| | Travel Time (Minutes) | Travel Distance (Km) | Travel Time (Minutes) | Travel Distance (Km) |
| Alma Research Station - Esso | 7.8 | 10.2 | 8.1 | 10.2 |
| Alma Research Station - NAPA AUTOPRO - Buehler Automotive | 5 | 6.2 | 5.2 | 6.2 |
| Alma Research Station - Sure Choice Produce | 4.3 | 5.7 | 4.3 | 5.7 |
| Bethel Mennonite Church - Esso | 5.6 | 7.2 | 5.8 | 7.2 |
| Bethel Mennonite Church - NAPA AUTOPRO - Buehler Automotive | 7.3 | 9.2 | 7.4 | 9.2 |
| Bethel Mennonite Church - Sure Choice Produce | 2.7 | 3.6 | 5.8 | 7.7 |
| Creekbank Welding - Esso | 5.2 | 6.7 | 7.6 | 9.6 |
| Creekbank Welding - NAPA AUTOPRO - Buehler Automotive | 8.7 | 11.2 | 11 | 13.8 |
| Creekbank Welding - Sure Choice Produce | 4.1 | 5.5 | 7.6 | 10.1 |

Drawn By: JS
 Client: Centre Wellington
 Project: Centre Wellington 5 Bridge EA
 Project Number: 300056693
 Date: 2023/11/02

Five Bridge Environmental Assessment Centre Wellington

EMS Routing - Elora Fire Hall

Alternative 7

| Origin | Destination | Opening Bridges 28-P, 30-P, 32-P & 33-P | | All the Bridges Closed | | Reduction in Travel Time (Mins) | Reduction in Travel Distance (Km) |
|-----------------|-------------|---|----------------------|------------------------|----------------------|---------------------------------|-----------------------------------|
| | | Travel Time (Mins) | Travel Distance (Km) | Travel Time (Mins) | Travel Distance (Km) | | |
| Elora Fire Hall | 1 | 11.2 | 11.9 | 12 | 12.1 | 0.8 | 0.2 |
| | 2 | 7.8 | 7.4 | 10 | 8.4 | 2.2 | 1 |
| | 3 | 8.3 | 9.2 | 9 | 10 | 0.7 | 0.8 |
| | 4 | 8.3 | 9.2 | 12 | 12 | 3.7 | 2.8 |
| | 5 | 6.5 | 6.7 | 6.5 | 6.7 | 0 | 0 |
| | 6 | 6.3 | 6.5 | 6.3 | 6.5 | 0 | 0 |
| | 7 | 8.1 | 8.8 | 8.1 | 8.8 | 0 | 0 |
| | 8 | 8.2 | 8.5 | 8.2 | 8.5 | 0 | 0 |
| | 9 | 3.4 | 2.6 | 3.4 | 2.6 | 0 | 0 |
| | 10 | 10 | 12.3 | 10.8 | 12.5 | 0.8 | 0.2 |
| | 11 | 9.4 | 10.6 | 10.2 | 10.8 | 0.8 | 0.2 |

Legend:

- To & From:**
 - Elora Fire Hall
 - Destination
- Bridges:**
 - Bridge
 - Closed Bridge
- Centre Wellington Roads:**
 - Expressway / Highway
 - Arterial
 - Collector
 - Local
- Routing:**
 - Bridge 28-P, 30-P, 32-P, and 33-P Open
 - All Bridges Closed

Scale: 1:45,000

Datum: North American 1983 CSRS
Coord. System: NAD 1983 CSRS MTM 10
Projection: Transverse Mercator
Central Meridian: 79°30'0.00"W
False Easting: 304,800m
False Northing: 0m
Scale Factor: 0.99990
Rotation: -44.19

Drawn By: JS
Client: Centre Wellington
Project: Centre Wellington 5 Bridge EA
Project Number: 300056693
Date: 2023/11/06

Figure 32: Alternative 7 Emergency Response Time from Centre Wellington Fire Department – Fergus Station

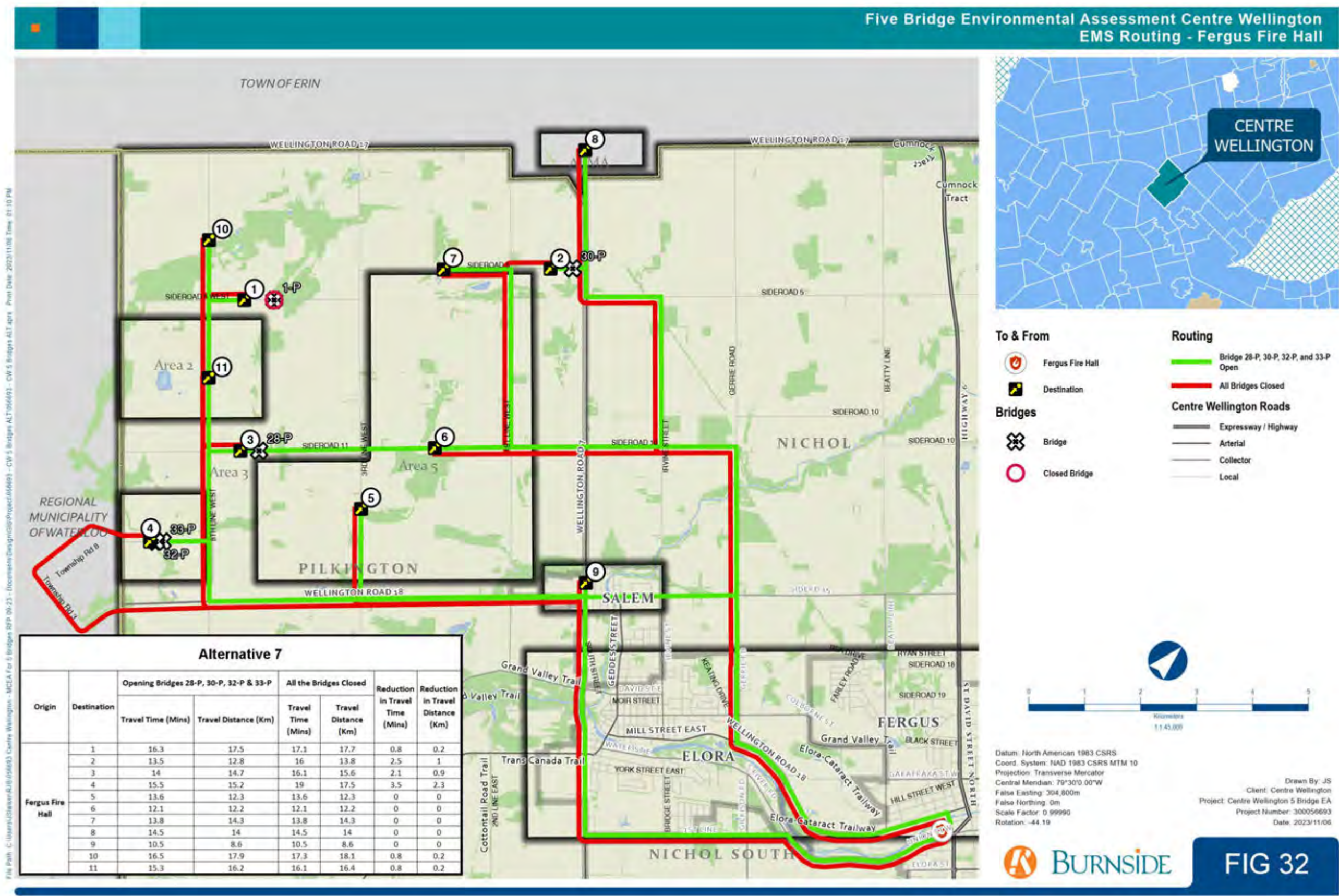


Figure 33: Alternative 7 Emergency Response Time from Groves Memorial Community Hospital: Emergency Department

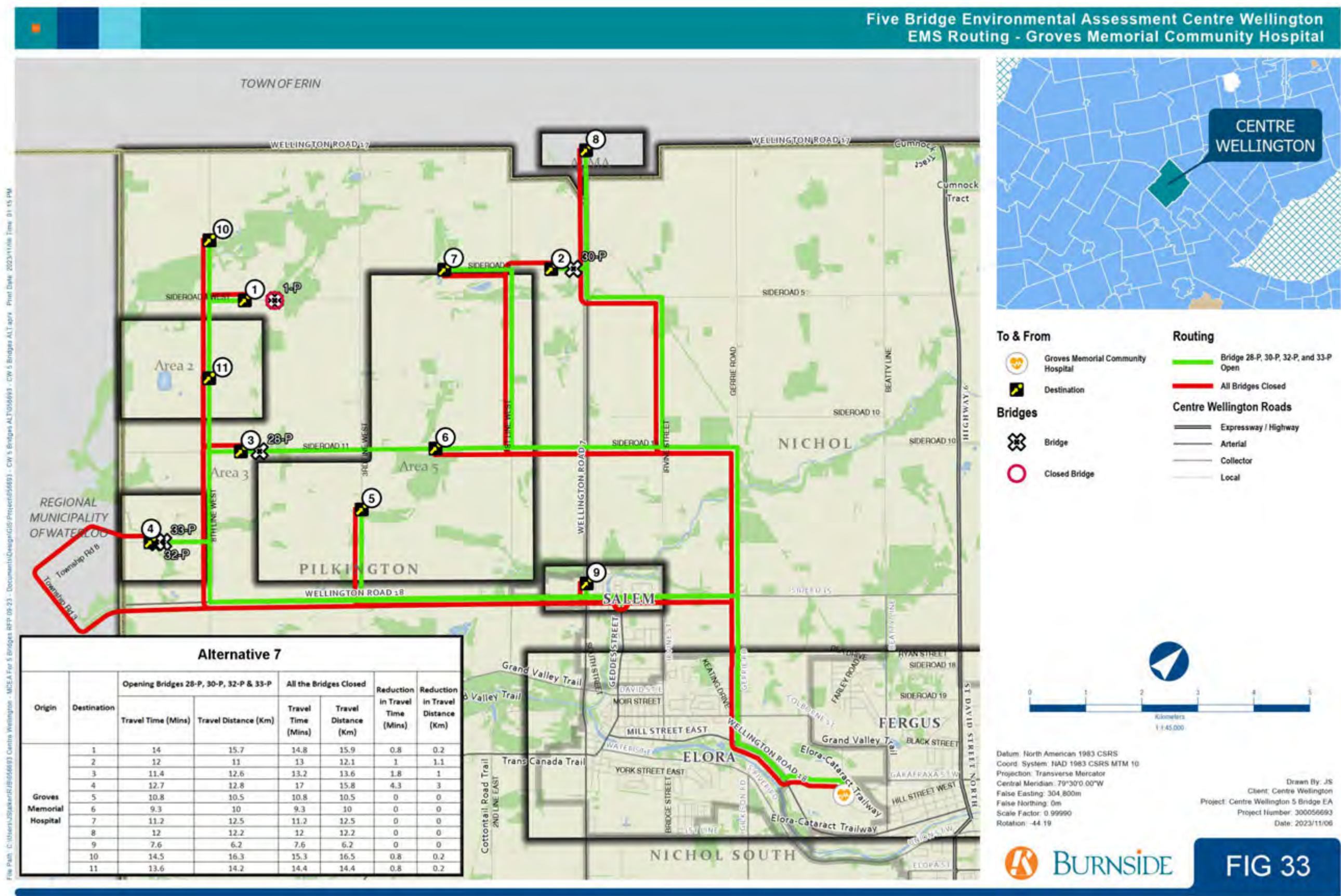
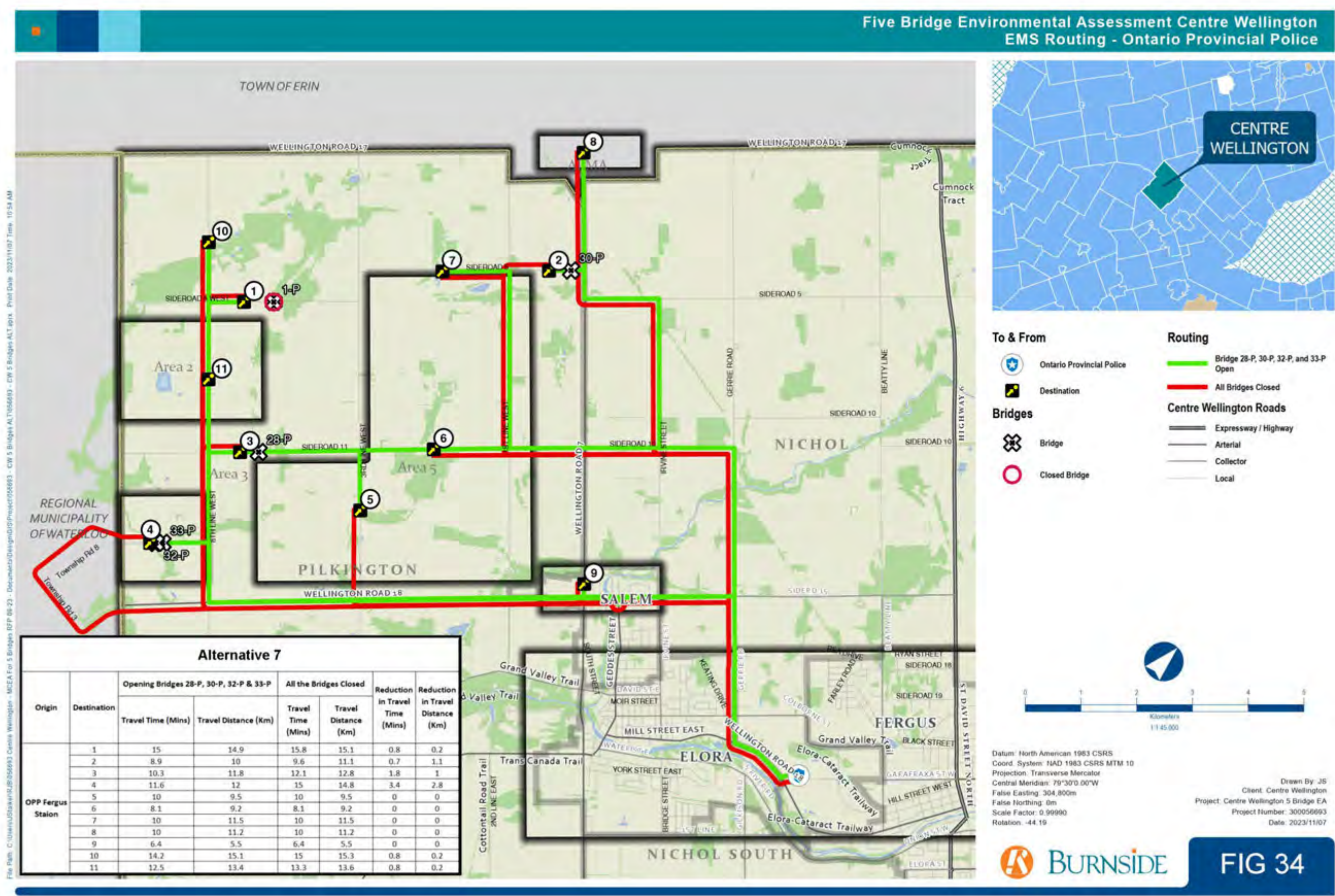


Figure 34: Alternative 7 Emergency Response Time from Ontario Provincial Police – Fergus



3.8 Alternative 8: Opening All the Bridges (Scenario 2)

Alternative 8 considers a scenario where all the bridges are open. As discussed in Section 2.1 and Section 2.2, opening the bridges will result in the removal of detours to travel between the pairs of origin and destinations summarized in Table 2. Opening all the bridges reduces the travel time and distance between cross-community destinations by up to 3.4 minutes and 4.5 km, respectively, as summarized in Table 5 and Table 6.

The emergency response time from four pivotal service points (Centre Wellington Fire Department – Elora Station, Centre Wellington Fire & Rescue - Fergus Station, Groves Memorial Community Hospital: Emergency Department, and Ontario Provincial Police - Fergus) to 11 strategically chosen locations that may represent the broader areas of the Township influenced by bridge closures. Out of the 11 chosen locations in the study area, six locations including 1, 2, 3, 4, 10, and 11 are affected by this scenario. The response time for the emergency services to reach any of the 11 locations are illustrated in Figure 6, Figure 7, Figure 8, Figure 9. Table 17 summarizes the reduction in travel time and travel distance between four emergency service providers and affected in the study area.

Table 17: Travel Time and Travel Distance Reduction under Alternative 8

| Origin | Destination | Reduction in Travel Time (Min) | Reduction in Travel Distance (km) |
|--------------------------|-------------|--------------------------------|-----------------------------------|
| Elora Fire Hall | 1 | 1.4 | 1.0 |
| | 2 | 2.2 | 1.0 |
| | 3 | 0.7 | 0.8 |
| | 4 | 3.7 | 2.8 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |
| Fergus Fire Hall | 1 | 1.1 | 1.0 |
| | 2 | 2.5 | 1.0 |
| | 3 | 2.1 | 0.9 |
| | 4 | 3.5 | 2.3 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |
| Groves Memorial Hospital | 1 | 1.1 | 1.0 |
| | 2 | 1.0 | 1.1 |
| | 3 | 1.8 | 1.0 |
| | 4 | 4.3 | 3.0 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |
| OPP Fergus Station | 1 | 1.1 | 1.0 |
| | 2 | 0.7 | 1.1 |
| | 3 | 1.8 | 1.0 |
| | 4 | 3.4 | 2.8 |
| | 10 | 0.8 | 0.2 |
| | 11 | 0.8 | 0.2 |

As summarized in Table 17, Alternative 8 can reduce the travel time and travel distance between pairs of origin and destination by up to 4.3 minutes and 3 km respectively. The range of reductions in travel time varies from a minimum of 0.7 minutes to a maximum of 3.7 minutes, while the range for travel distance reductions spans from 0.8 km to 3.0 km across the different destinations. Table 17 also indicates that, on average, there is a 1.6-minute reduction in travel time and 1.0 km reduction in travel distance under this scenario.

4.0 Summary

Burnside has undertaken a thorough examination of the closure of five bridges located in the northwest quadrant of the Township of Centre Wellington. The closures were enforced due to the compromised structural condition of the bridges, with certain privately constructed substandard crossings (Bridges 28-P, 32-P, and 33-P) adding an element of potential liability and risk to the Township.

The land use surrounding the bridges primarily consists of agricultural areas, lacking transit, and active transportation facilities. Notably, the highest Average Annual Daily Traffic (AADT) in the study area is observed on Sideroad 11, indicating that the majority of east-west traffic relies on this route to connect with Wellington Road 7.

To comprehensively assess the impact of bridge closures, two scenarios were considered: Scenario 1 with the bridges closed (Alternatives 1 and 2), and Scenario 2 with the bridges open (Alternative 8). The evaluation was based on a set of origin and destination pairs representing the broader study area. Our findings revealed noticeable impacts on travel time and distance for various origin-destination pairs and routes, summarized as follows:

Travel Time Impact:

- Area 1 and Area 3 generally experience faster travel times with all bridges open.
- Area 2 demonstrates a mixed impact, with some routes benefiting from detours and some having no effect. However, it does not indicate that bridge closures result in faster travel times.
- Area 4 shows no impact on travel times due to bridge closures.

Travel Distance Impact:

- Area 1 and Area 3 generally have shorter travel distances with all bridges open.
- Area 2 shows a mixed impact, with some routes having similar travel distances in both scenarios, while others are longer with bridge closures.
- Area 4 exhibits no impact on travel distances with either scenario.

Moreover, we assessed the impact of bridge closures on emergency response time and distance, observing an increase in both due to the closures. Based on these comprehensive findings, five additional alternative solutions were identified, each addressing specific areas and

showcasing potential reductions in travel time and distance, particularly cross-community travel and emergency responses. These alternatives are outlined below.

Alternative 3:

- Impact: Areas 1 and 2 for cross-community trips and Locations 1, 3, 10, and 11 for emergency trips.
- Potential Reductions: Cross-community travel time by up to 3.1 minutes, cross-community travel distance by up to 4.1 km, emergency response time by up to 2.1 minutes, and emergency travel distance by up to 1.0 km.
- Average Reduction: On average, there is a 0.38-minute reduction in cross-community travel time, 0.45 km reduction in cross-community travel distance, 0.7-minute reduction in emergency travel time, and 0.3 km reduction in emergency travel distance under this scenario.

Alternative 4:

- Impact: Area 3 for cross-community trips and Location 4 for emergency trips
- Potential Reductions: Cross-community travel time by up to 2.2 minutes, cross-community travel distance by up to 2.9 km, emergency response time by up to 4.3 minutes, and emergency travel distance by up to 3.0 km.
- Average Reduction: On average, there is a 0.72-minute reduction in cross-community travel time, 0.93 km reduction in cross-community travel distance, 0.6-minute reduction in emergency travel time, and 0.5 km reduction in emergency travel distance under this scenario.

Alternative 5:

- Impact: Areas 1, 2, and 3 for cross-community trips and Locations 1, 3, 4, 10, and 11 for emergency trips.
- Potential Reductions: Cross-community travel time by 3.4 minutes, cross-community travel distance by up to 4.5 km, emergency response time by 4.3 minutes, and emergency travel distance by up to 3.0 km.
- Average Reduction: On average, there is a 1.23-minute reduction in cross-community travel time, 1.57 km reduction in cross-community travel distance, 1.3-minute reduction in emergency travel time, and 0.7 km reduction in emergency travel distance under this scenario.

Alternative 6:

- Impact: Areas 1, 2, and 3 for cross-community trips and Locations 1, 3, 4, 10, and 11 for emergency trips.
- Potential Reductions: Cross-community travel time by up to 3.4 minutes, cross-community travel distance by up to 4.5 km, emergency response time by up to 4.3 minutes, and emergency travel distance by up to 3.0 km.
- Average Reduction: On average, there is a 1.23-minute reduction in cross-community travel time, 1.79 km reduction in cross-community travel distance, 1.4-minute reduction in

emergency travel time, and 0.8 km reduction in emergency travel distance under this scenario.

Alternative 7:

- Impact: Areas 1, 2, and 3 for cross-community trips and Locations 1, 2, 3, 4, 10, and 11 for emergency trips.
- Potential Reductions: Cross-community travel time by up to 3.4 minutes, cross-community travel distance by up to 4.5 km, emergency response time by up to 4.3 minutes, and emergency travel distance by up to 3 km.
- Average Reduction: On average, there is a 1.23-minute reduction in cross-community travel time, 1.57 km reduction in cross-community travel distance, 1.6-minute reduction in emergency travel time, and 0.9 km reduction in emergency travel distance under this scenario.

Alternative 8:

- Impact: All study areas for cross-community trips and Locations 1, 2, 3, 4, 10, and 11 for emergency trips.
- Potential Reductions: Cross-community travel time by up to 3.4 minutes, cross-community travel distance by up to 4.5 km, emergency response time by up to 4.3 minutes, and emergency travel distance by up to 3 km.
- Average Reduction: On average, there is a 1.23-minute reduction in cross-community travel time, 1.79 km reduction in cross-community travel distance there is a 1.6-minute reduction in emergency travel time, and 1.0 km reduction in emergency travel distance under this scenario.

The summary of study findings is illustrated in Figure 35 and Figure 36.

Figure 35: Summary of Maximum Travel Time and Travel Distance Reduction

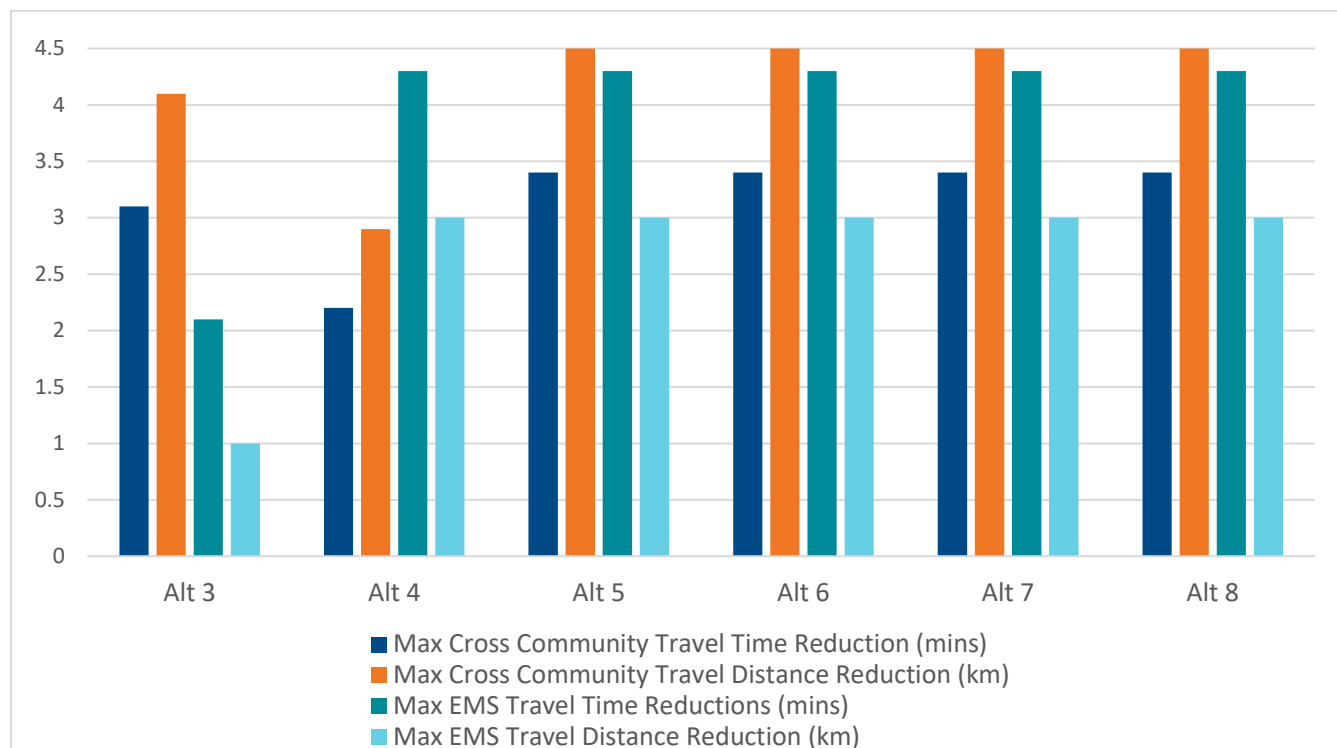
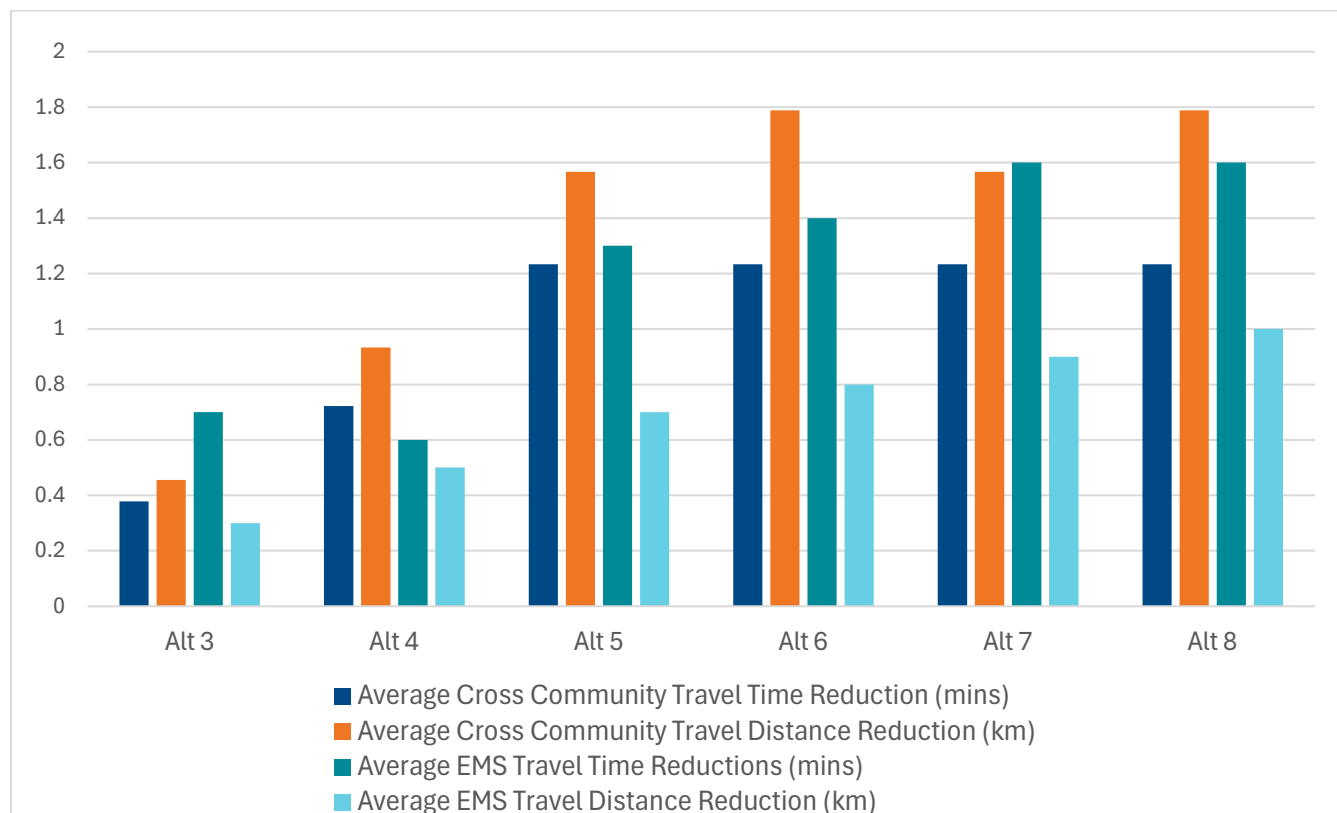


Figure 36: Summary of Average Travel Time and Travel Distance Reduction



The following key findings for cross-community connectivity can also be concluded from analysis of the various alternatives of the traffic analysis:

- The opening of Bridge 28-P has significant benefit to Areas 2 and 5.
- The opening of Bridges 32-P and 33-P has significant benefits to Areas 3 and 5.
- The opening of Bridge 1-P provides benefits to only travel between Areas 1 and 5.
- The opening of Bridge 30-P does not provide any benefit to cross-community travel times between the areas examined.

Similarly, the following key findings for Emergency Response can be concluded from analysis of the various alternatives of the traffic analysis:

- The opening of Bridge 28-P benefits emergency response to Locations 1, 3, 10, and 11.
- The opening of Bridges 32-P and 33-P benefits Location 4 only, but the benefit is significant.
- The opening of Bridge 1-P makes only a minor difference to Location 1 only.
- The opening of Bridge 30-P is the only option to improve emergency response to Location 2, and the benefit is significant.
- The greatest improvements per site are realized by opening bridges 28-P, 32-P, and 33-P.

The findings of this report shall be considered when analyzing the alternatives considered as part of the overall Environmental Assessment.

R.J. Burnside & Associates Limited



Sameem Raheemi

Transportation Planner

SR:mmm

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BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix B

Cultural Heritage Assessment Report



Cultural Heritage Assessment Report, Municipal Class Environmental Assessment, Bridges 1-P, 28- P, 30-P, 32-P, 33-P, Township of Centre Wellington, Ontario

Project Number: 2023-0061

Report Type: Original

Report Date: October 5, 2023

Parslow Heritage Consultancy Inc.

883 St. Clair Ave. West, Toronto, ON,
M6C 1C4

R.J. Burnside & Associates Limited

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Collingwood, ON L9Y 4J6

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Appendix B – Key Plan

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Appendix D – OSIM Inspection Reports

Executive Summary

Parslow Heritage Consultancy, Inc. (PHC) was retained by R.J. Burnside & Associates Limited (the Proponent) to undertake a Cultural Heritage Assessment Report (CHAR) for five bridges in the Township of Centre Wellington, identified as 1-P, 28-P, 30-P, 32-P and 33-P. The five bridges are located in the northwest corner of the municipality and are all located within municipally owned road right-of-ways (ROW). The CHAR was completed as a component of a Municipal Class Environmental Assessment (MCEA).

The purpose of the CHAR is to review relevant historical documents, evaluate the potential cultural heritage value or interest (CHVI) of each bridge, identify cultural heritage resources and provide recommendations for each bridge, as appropriate. In order to evaluate potential CHVI of the bridges and provide appropriate recommendations, provisions in the *Ontario Heritage Act* (OHA) under Ontario Regulation (O.Reg.) 569/22 and the *County of Wellington Official Plan* were applied. A site visit was conducted on 29 June 2023 to document the bridges and surrounding landscape.

Assessment of the heritage value of Bridges 1-P, 28-P, 30-P, 32-P, and 33-P did not result in the identification of any of these structures fulfilling the requirements of the OHA for Designation, nor do any of them meet the 60-point threshold for heritage value based on the MTO bridge assessment standards.

While not candidates for formal heritage protection under the OHA, each of the bridges contributes to the rural agricultural landscape of the Township of Centre Wellington. As such the following recommendations are made:

1. No further heritage reports be required for each of the five bridges.
2. Any replacement structures be designed to reflect the existing designs of each bridge; an attempt be made to incorporate the unique designs of the original into any replacement structures.
3. Bridge 1-P is located approximately 650 m northeast of the structures associated with a Listed property at 7165 Sideroad 5; the Listed property extends northeast from the structures, with agricultural fields associated with the property adjacent to the bridge. Given the distance between the bridge and the structures, it is highly unlikely the structures will be impacted, directly or indirectly, by the replacement of Bridge 1-P; no further heritage report is recommended specific to the proximity of Bridge 1-P to this property.
4. Documentation of each structure be deposited in a local publicly accessible repository. Given the extent of previous assessment on each structure, the existing reports should be compiled and accepted as a complete record.

The *Provincial Policy Statement* (2020) notes that CHVI is identified for cultural heritage resources by communities. Thus, the system by which heritage is administered in Ontario places emphasis on the decision-making of local municipalities in determining CHVI. It is hoped that the information presented in this report will be useful in those determinations.

Project Personnel

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Project Context

Parslow Heritage Consultancy, Inc. (PHC) was retained by R.J. Burnside & Associates Limited (the Proponent) to undertake a Cultural Heritage Assessment Report (CHAR) for five bridges in the Township of Centre Wellington, identified as 1-P, 28-P, 30-P, 32-P and 33-P. The five bridges are located in the northwest corner of the municipality and are all located within municipally owned road right-of-ways (ROW). The CHAR was completed as a component of a Municipal Class Environmental Assessment (MCEA).

The purpose of the CHAR is to review relevant historical documents, evaluate the potential cultural heritage value or interest (CHVI) of each bridge, identify cultural heritage resources and provide recommendations for each bridge, as appropriate. In order to evaluate potential CHVI of the bridges and provide appropriate recommendations, provisions in the *Ontario Heritage Act* (OHA) under Ontario Regulation (O.Reg.) 569/22 and the *County of Wellington Official Plan* were applied. A site visit was conducted on 29 June 2023 to document the bridges and surrounding landscape. Bridges 1-P, 28-P and 30-P are each included in the 2013 publication “Arch, Truss & Beam: The Grand River Watershed Heritage Bridge Inventory” and have been identified as being of increased historical interest based on age, design, construction method or overall scarcity.

A site visit was conducted on 29 June 2023 to document the bridges and surrounding landscape. Documentation took the form of high-resolution photographs using a Nikon D5600 DSLR camera the collection of field notes and the production of measured drawings. The assessment strategy was derived from the National Parks and Sites Branch Canadian Inventory of Historic Buildings (Parks Canada 1980), Well Preserved: The Ontario Heritage Foundation Manual on the Principles and Practice of Architectural Conservation (Fram 2003), the Guide to Field Documentation (HABS 2011), and the Standards and Guidelines for the Conservation of Historic Places in Canada (Parks Canada 2010).

Site Description and Context

The bridges are located in the northwest corner of Centre Wellington, bound by Wellington Road 7 to the east, Wellington Road 18 to the south, Arthur Road North to the west and Wellington Road 17 to the north (Appendix B). The five bridges assessed were constructed between 1923 and 1929. All five of the bridges are currently non-operable, with bridge 1-P having been removed prior to the commencement of this report. The remaining 4 cement bridges are in very poor overall condition.

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Legislative and Policy Framework

The following assessment reviews provincial and municipal legislation and policies designed to protect cultural heritage resources that may be affected by development in the Township of Centre Wellington.

Provincial Legislation and Policy

Ontario Heritage Act (OHA), Revised January 1, 2023

The OHA was enacted in 1990 and since that time has been revised and amended a total of 25 times, most recently on January 1, 2023. When it comes to heritage properties, the OHA prescribes the legal requirements of municipalities and the powers municipalities have to protect and administer heritage within their jurisdiction. The OHA also prescribes the criteria by which heritage value is assessed by way of O.Reg. 569/22. Under Section 27 of the OHA, the municipal clerk is required to keep a current register of properties of cultural heritage value or interest within the municipality, including properties Designated under Part IV, Section 29 of the OHA. Heritage protections within the OHA fall into the following categories:

- ▶ Listed Properties (Part IV, Section 27), minimal protection, usually candidates for Designation
- ▶ Designated Properties (Part IV, Section 29), protection under Municipal By-law
- ▶ Heritage Conservation Districts (Part V), protection under Municipal By-law

Planning Act

The Planning Act (1990) provides the legislative framework for land use planning in Ontario. Part 1, Section 2 (d) and (r) of the Act identifies matters of provincial interest.

Part I, Section 2

The Minister, the council of a municipality, a local board, a planning board and the Tribunal, in carrying out their responsibilities under this Act, shall have regard to, among other matters, matters of provincial interest such as,

- (d) the conservation of features of significant architectural, cultural, historical, archaeological or scientific interest;
- (e) the promotion of built form that,
 - (i) is well-designed,
 - (ii) encourages a sense of place, and
 - (iii) provides for public spaces that are of high quality, safe, accessible, attractive and vibrant.

Provincial Policy Statement

The Provincial Policy Statement (PPS), issued under Section 3 of the Planning Act, came into effect on May 1, 2020. It applies to all planning decisions made on or after that date and replaced the PPS, 2014. The PPS provides direction for the appropriate regulation for land use and development while protecting resources of provincial interest, and the quality of the natural and built environment, which includes cultural heritage and archaeological resources. These policies are specifically addressed in Part V, Sections 1.7 and 2.6.

Section 1.7.1e of the PPS addresses long-term economic prosperity by “encouraging a sense of place, by promoting well-designed built form and cultural planning, and by conserving features that help define character, including built heritage resources and cultural heritage landscapes”.

Section 2.6 of the PPS addresses the protection and conservation cultural heritage and archaeological resources in land use planning and development and requires and requires the following:

2.6.1 Significant built heritage resources and significant cultural heritage landscapes shall be conserved.

2.6.2 Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved.

2.6.3 Planning authorities shall not permit development and site alteration on adjacent lands to protected heritage property except where the proposed development and site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved.

2.6.4 Planning authorities should consider and promote archaeological management plans and cultural plans in conserving cultural heritage and archaeological resources.

2.6.5 Planning authorities shall engage with Indigenous communities and consider their interests when identifying, protecting and managing cultural heritage and archaeological resources.

Municipal Class Environmental Assessment (MCEA) Manual (2015)

The following excerpt is from Section C.1.1 of the MCEA Manual:

Cultural Environment refers to cultural heritage and archaeological resources in the environment. These are defined as follows:

Archaeological resources includes artifacts, archaeological sites and marine archaeological sites. The identification and evaluation of such resources are based upon archaeological fieldwork undertaken in accordance with the Ontario Heritage Act.

Areas of archaeological potential means areas with the likelihood to contain archaeological resources. Criteria for determining archaeological potential are established by the Province, but municipal approaches which achieve the same objective may be applied. Archaeological potential is confirmed through archaeological fieldwork undertaken in accordance with the Ontario Heritage Act.

Built heritage resources means one or more significant buildings, structures, monuments, installations or remains associated with architectural, cultural, social, political, economic or military history and identified as being important to a community. These resources may be identified through designation or heritage conservation easement under the Ontario Heritage Act, or listed by local, provincial or federal jurisdictions.

Cultural heritage landscape means a defined geographical area of heritage significance which has been modified by human activities and is valued by a community. It involves grouping(s) of individual heritage features such as structures, spaces, archaeological sites, and natural elements, which together form a significant type of heritage form, distinctive from that of its constituent elements or parts. Examples may include, but are not limited to, heritage

conservation districts designated under the Ontario Heritage Act; and villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trailways, and industrial complexes of cultural heritage value.

Cultural heritage resources include built heritage, cultural heritage landscapes, and marine and other archaeological sites. The Minister of Culture (MCL) is responsible for the administration of the Ontario Heritage Act and is responsible for determining policies, priorities and programs for the conservation, protection and preservation of Ontario's heritage, which includes cultural heritage landscapes, built heritage and archaeological resources. MCL has released a series of resource guides on the Ontario Heritage Act, entitled the Ontario Heritage Tool Kit.

Significant cultural heritage and archaeological resources features should be avoided where possible. Where they cannot be avoided, then effects should be minimized where possible, and every effort made to mitigate adverse impacts, in accordance with provincial and municipal policies and procedures. Cultural heritage features should be identified early in the process in order to determine significant features and potential impacts.

Ontario Heritage Bridge Guidelines for Provincially Owned Bridges

The *Ontario Heritage Bridge Guidelines for Provincially Owned Bridges* (OHBG) were developed in 1993 by the Ontario Ministry of Transportation (MTO); the current version of the document was revised in 2008 (MTO 2008). While none of the bridges under review are provincially-owned, the established assessment guidelines provide a methodology by which to assess the potential CHVI of municipal bridges. This is accomplished by way of an evaluative scoring system derived from the criteria outlined in O.Reg. 569/22 (formerly O.Reg 9/06) and calibrated by the MTO (MTO 2008). The scoring system requires an overall score of 60 to be achieved before a bridge can be considered to exhibit CHVI. Appendix C provides the scoring of each assessed bridge.

Municipal Policies

Township of Centre Wellington Municipal Official Plan

Section C.2 of the Official Plan (OP) of Centre Wellington (consolidated January 2023) outlines four Goals and Objectives to the management of Cultural Heritage Resources.

- To protect the Township's heritage resources from neglect, deterioration, demolition, alteration, redevelopment or changes in use which threaten their existence or integrity
- To encourage and support the functional and economic use of heritage buildings
- To identify, and protect and enhance natural areas
- To encourage public awareness and appreciation of the heritage resources of the Township and the value of protecting these resources to both residents and visitors

County of Wellington Official Plan

Section 4.1 of the County of Wellington Official Plan deals with cultural heritage and archaeological resources:

Cultural heritage and archaeological resources form an important and in many cases highly visible part of the community fabric. These resources are a source of civic pride for the

residents, a benefit to the local economy through tourism, and are important to our understanding of the settlement of the County. The policies of this Plan, in conjunction with the Ontario Heritage Act, provide a framework for the protection and enhancement of cultural heritage resources in Wellington.

Built Heritage

Wellington has a rich history reflected in many buildings and structures, either individually or in groups, which are considered to be architecturally or historically significant to the community, county, province or country.

Cultural Heritage Landscapes

A cultural heritage landscape is a defined geographical area of heritage significance which has been modified by human activities and is valued by a community. It involves a grouping(s) of individual heritage features such as structures, spaces, archaeological sites and natural elements, which together form a significant type of heritage form, distinctive from that of its constituent elements or parts. Examples may include, but are not limited to, heritage conservation districts designated under the Ontario Heritage Act, and villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, railways and industrial complexes of cultural heritage value.

For cultural heritage landscapes to be significant, they must be valued for the important contribution they make to our understanding of a place, an event, or a people.

Section 4.1.5 provides policy direction related to cultural heritage resources:

- a) significant built heritage resources and significant cultural heritage landscapes shall be conserved. Conserved means the identification, protection, use and/or management of heritage and archeological resources in such a way that their heritage values, attributes and integrity are retained. This may be addressed through a conservation plan or heritage impact assessment in accordance with Section 4.6.7.
- b) The need for a Heritage Impact Assessment and/or Conservation plan will be based on the heritage attributes or reasons for which the resource is identified as significant, and will normally be identified in pre-consultation on development applications.
- c) Wellington County will work with its local municipalities to identify significant cultural heritage landscapes. The identification of significant cultural heritage landscapes shall be implemented through at least one of the following options:
 - i. Added to an Official Plan through an Amendment that shows the resource as an overlay designation on the Schedule, and adds site-specific policies where needed;
 - ii. included in the municipal register of properties that Council considers to be of cultural heritage value or interest but have been designated;
 - iii. Designated under the Ontario Heritage Act.
- d) The need for a Heritage Impact Assessment.
- e) Wellington will encourage the conservation of significant built heritage resources through heritage designations and planning policies which protect these resources.
- f) The re-use of heritage buildings is often a valid means of ensuring their restoration, enhancement or future maintenance. Projects to re-use heritage buildings may be given favourable consideration if the overall results are to ensure the long term protection of a heritage resource and the project is compatible with surrounding land uses and represents an appropriate use of land.
- g) Where a property has been identified as a protected heritage property, development and site alteration may be permitted on adjacent lands where the proposed development and

site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved. Mitigative measures and/or alternative development approaches may be required in order to conserve the heritage attributes of the protected heritage property affected by the adjacent development or site alteration.

- h) The County recognizes the important cultural significance of the Grand River as a Canadian Heritage River, and the need to conserve its inherent values.

Assessment of Existing Conditions

Bridge 1-P

Design and Construction

Bridge 1-P was located on Sideroad 5 between 8th Line West and 3rd Line (Appendix B). Bridge 1-P has been removed and as such no assessment of the design or construction was possible during site visit.

Current Condition

Bridge 1-P no longer exists. The site of the former bridge is identifiable by way of the remains of shoreline infrastructure that would have once supported the necessary bridge abutments.

Bridge 1-P is adjacent to one property Listed on the Township of Centre Wellington's heritage register (7165 Sideroad 5); the Listed property is described as a 2.5 storey brick dwelling built in 1900. While the Listed property is adjacent to the bridge, the structures associated with the property are located approximately 650 m southwest of the bridge. Bridge 1-P is not located within or adjacent to any Cultural Heritage Landscapes (CHLs) (ASI 2021).



FIGURE 1: EAST ABUTMENT OF BRIDGE 1-P



FIGURE 2: WEST ABUTMENT OF BRIDGE 1-P

O.Reg. 569/22 evaluation Bridge 1-P

As Bridge 1-P does not exist O.Reg. 569/22 evaluation was not undertaken. No CHVI is associated with Bridge 1-P. Bridge 1-P was previously identified as exhibiting CHVI in 2013 (GRCA et al 2013), prior to the bridge being removed.

Bridge 28-P

Design and Construction

Bridge 28-P is located on Sideroad 11 between 8th Line West and 3rd Line (Appendix B). Bridge 28-P was designed by the engineering firm of A.W. Connor & Co., Toronto, Ontario. The bridge is constructed of reinforced concrete utilizing a T-Beam design. The bridge was cast in place and constructed between 1925 and 1926. "E.G Martin 1926" was identified cast into the eastern edge of the bridge deck. E.G. Martin is assumed to be the name of the construction company that constructed the bridge.

Current Condition

Bridge 28-P is in poor overall condition exhibiting extensive spalling and failure of the concrete structure resulting in exposure of the underlying steel rebar. Large portions of the bridge railing have fallen away and are located on the shore and within the creek below.

OSIM inspection of Bridge 28-P in May 2022 recommended rehabilitation/replacement within 1-5 years. The inspection noted multiple deficiencies (see Appendix D).

Bridge 28-P is not adjacent to any properties Listed or Designated on the Township of Centre Wellington's heritage register. Bridge 28-P is not located within or adjacent to any CHLs (ASI 2021).



FIGURE 3: SOUTH SIDE OF STRUCTURE



FIGURE 4: CLOSEUP OF REMAINING RAILING SHOWING CAST DETAILS



FIGURE 5: CAST INSCRIPTION IN BRIDGE DECK, CAN MAKE OUT "E.O MARTIN 1926"

O.Reg. 569/22 evaluation: Bridge 28-P

1. **The property has design value or physical value because it is a rare, unique, representative or early example of a style, type, expression, material or construction method. (Criteria Not Met)**

The bridge is typical of early 20th century bridges constructed of reinforced concrete. The overall design is typical of the era.

2. **The property has design value or physical value because it displays a high degree of craftsmanship or artistic merit. (Criteria Not Met)**

Bridge 28-P is typical of reinforced concrete bridges of the era and does not display a high degree of craftsmanship or artistic merit.

3. **The property has design value or physical value because it demonstrates a high degree of technical or scientific achievement. (Criteria Not Met)**

Bridge 28-P is typical of reinforced concrete bridges of the era and does not display a high degree of technical or scientific achievement.

4. **The property has historical value or associative value because it has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community. (Criteria Not Met)**

Bridge 28-P was constructed during a period of rapid transportation growth in the Province of Ontario and is not identified as being of particular significance to the surrounding community.

5. **The property has historical value or associative value because it yields, or has the potential to yield, information that contributes to an understanding of a community or culture. (Criteria Not Met)**

Bridge 28-P does not meet the criteria to have the potential to yield new information that would contribute to the understanding of a community or culture.

6. **The property has historical value or associative value because it demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community. (Criteria Not Met)**

Bridge 28-P was designed by A.W. Connor & Co., a Toronto engineering firm. A.W. Connor was a prominent bridge engineer in Ontario and a proponent of reinforced concrete structures in southern Ontario. A.W. Connor was not identified to be significant to a community.

7. **The property has contextual value because it is important in defining, maintaining, or supporting the character of an area. (Criteria Not Met)**

Bridge 28-P is not key to defining, maintaining or supporting the character of the area; while the scale of the bridge contributes to the rural character of the area, the specific bridge does not meet the intent of the criteria for identifying CHVI.

8. **The property has contextual value because it is physically, functionally, visually or historically linked to its surroundings. (Criteria Met)**

Bridge 28-P is not key to defining maintaining or supporting the character of the area but visually contributes to the overall rural character of the area.

9. The property has contextual value because it is a landmark. O. Reg. 569/22, s. 1. (Criteria Not Met)

Bridge 28-P was not identified to be a landmark.

Evaluation of Bridge 28-P against the nine criteria outlined by O.Reg. 569/22 does not identify the bridge to meet the regulation for consideration for Designation by municipal By-law under Section 29 of the OHA (two or more criteria met under O.Reg. 569/22). The bridge also did not meet the 60-point threshold for heritage value based on the MTO bridge assessment standards.

Bridge 30-P

Design and Construction

Bridge 30-P is located on Sideroad 5, west of Wellington Road 7 (Appendix B). Bridge 30-P was designed by the engineering firm of A.W. Connor & Co., Toronto, Ontario. The bridge is constructed of reinforced concrete utilizing a Through Girder design. The bridge was cast in place and constructed in 1928. The year 1928 was identified cast into the top of the southwest railing.

Current Condition

Bridge 30-P is in poor overall condition exhibiting extensive spalling and failure of the concrete structure resulting in exposure of the underlying steel rebar.

OSIM inspection of Bridge 30-P in May 2022 recommended replacement within 1-5 years. The inspection noted multiple deficiencies (see Appendix D).

Bridge 30-P is not adjacent to any properties Listed or Designated on the Township of Centre Wellington's heritage register. Bridge 30-P is not located within or adjacent to any CHLs (ASI 2021).



FIGURE 6: LOOKING EAST ACROSS BRIDGE



FIGURE 7: SOUTH GUARDRAIL



FIGURE 8: NORTH GUARDRAIL



FIGURE 9: CLOSE UP OF CAST DETAIL



FIGURE 10: 1928 CAST INTO THE TOP OF THE SOUTHWEST RAILING

O.Reg. 569/22 Evaluation: Bridge 30-P

1. **The property has design value or physical value because it is a rare, unique, representative or early example of a style, type, expression, material or construction method. (Criteria Not Met)**

The bridge reflects typical early 20th century bridges constructed of reinforced concrete. The overall design is simple in keeping with bridges of the era.

2. **The property has design value or physical value because it displays a high degree of craftsmanship or artistic merit. (Criteria Not Met)**

Bridge 30-P is typical of reinforced concrete bridges of the era and does not display a high degree of craftsmanship or artistic merit.

3. **The property has design value or physical value because it demonstrates a high degree of technical or scientific achievement. (Criteria Not Met)**

Bridge 30-P is typical of reinforced concrete bridges of the era and does not display a high degree of technical or scientific achievement.

4. **The property has historical value or associative value because it has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community. (Criteria Not Met)**

Bridge 30-P was constructed during a period of rapid transportation growth in the Province of Ontario and is not identified as being of particular significance to the surrounding community.

5. **The property has historical value or associative value because it yields, or has the potential to yield, information that contributes to an understanding of a community or culture. (Criteria Not Met)**

Bridge 30-P does not meet the criteria to have the potential to yield new information that would contribute to the understanding of a community or culture.

6. The property has historical value or associative value because it demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community. (Criteria Not Met)

Bridge 30-P was designed by A.W. Connor & Co., a Toronto engineering firm. A.W. Connor was a prominent bridge engineer in Ontario and a proponent of reinforced concrete structures in southern Ontario. A.W. Connor was not identified to be significant to a community.

7. The property has contextual value because it is important in defining, maintaining, or supporting the character of an area. (Criteria Not Met)

Bridge 30-P is not key to defining, maintaining or supporting the character of the area; while the scale of the bridge contributes to the rural character of the area, the specific bridge does not meet the intent of the criteria for identifying CHVI.

8. The property has contextual value because it is physically, functionally, visually or historically linked to its surroundings. (Criteria Met)

Bridge 30-P is not key to defining maintaining or supporting the character of the area but visually contributes to the overall rural character of the area.

9. The property has contextual value because it is a landmark. O. Reg. 569/22, s. 1. (Criteria Not Met)

Bridge 30-P was not identified to be a landmark.

Evaluation of Bridge 30-P against the nine criteria outlined by O.Reg. 569/22 does not identify the bridge to meet the regulation for consideration for Designation by municipal By-law under Section 29 of the OHA (two or more criteria met under O.Reg. 569/22). The bridge also did not meet the 60-point threshold for heritage value based on the MTO bridge assessment standards.

Bridge 32-P

Design and Construction

Bridge 32-P is located Noah Road, west of 8th Line West (Appendix B). Bridge 32-P was designed by the engineering firm of A.W. Connor & Co., Toronto, Ontario. The bridge is constructed of reinforced concrete utilizing a T-beam design and was constructed c.1926. The bridge was cast in place and constructed by the construction firm E.G. Martin of Elmira, Ontario.

Current Condition

Bridge 32-P is in poor overall condition exhibiting extensive spalling and failure of the concrete structure resulting in exposure of the underlying steel rebar. The original concrete guard rails have all failed and have been replaced with galvanized steel posts. The remains of some guard rail components are located in the water beneath the bridge.

OSIM inspection of Bridge 28-P in May 2022 recommended rehabilitation/replacement within 1-5 years. The inspection noted multiple deficiencies (see Appendix D).

Bridge 32-P is not adjacent to any properties Listed or Designated on the Township of Centre Wellington's heritage register. Bridge 32-P is not located within or adjacent to any CHLs (ASI 2021).



FIGURE 11: WEST VIEW OF BRIDGE



FIGURE 12: LOOKING EAST ACROSS BRIDGE



FIGURE 13: NORTH SIDE OF BRIDGE



FIGURE 14: SOUTH SIDE OF BRIDGE



FIGURE 15: CASTING IN SOUTH EDGE OF BRIDGE DECK

O.Reg. 569/22 evaluation: Bridge 32-P

1. **The property has design value or physical value because it is a rare, unique, representative or early example of a style, type, expression, material or construction method. (Criteria Not Met)**

The bridge is typical of early 20th century bridges constructed of reinforced concrete. The overall design is typical of bridges of the era.

2. **The property has design value or physical value because it displays a high degree of craftsmanship or artistic merit. (Criteria Not Met)**

Bridge 32-P is typical of reinforced concrete bridges of the era and does not display a high degree of craftsmanship or artistic merit.

3. **The property has design value or physical value because it demonstrates a high degree of technical or scientific achievement. (Criteria Not Met)**

Bridge 32-P is typical of reinforced concrete bridges of the era and does not display a high degree of technical or scientific achievement.

4. **The property has historical value or associative value because it has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community. (Criteria Not Met)**

Bridge 32-P was constructed during a period of rapid transportation growth in the Province of Ontario and is not identified as being of particular significance to the surrounding community.

5. The property has historical value or associative value because it yields, or has the potential to yield, information that contributes to an understanding of a community or culture. (Criteria Not Met)

Bridge 32-P does not meet the criteria to have the potential to yield new information that would contribute to the understanding of a community or culture.

6. The property has historical value or associative value because it demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community. (Criteria Not Met)

Bridge 32-P was designed by A.W. Connor & Co., a Toronto engineering firm. A.W. Connor was a bridge engineer in Ontario and a proponent of reinforced concrete structure in southern Ontario. A.W. Connor was not identified to be significant to a community.

7. The property has contextual value because it is important in defining, maintaining, or supporting the character of an area. (Criteria Not Met)

Bridge 32-P is not key to defining, maintaining or supporting the character of the area; while the scale of the bridge contributes to the rural character of the area, the specific bridge does not meet the intent of the criteria for identifying CHVI.

8. The property has contextual value because it is physically, functionally, visually or historically linked to its surroundings. (Criteria Met)

Bridge 32-P is not key to defining maintaining or supporting the character of the area but visually contributes to the overall rural character of the area.

9. The property has contextual value because it is a landmark. O. Reg. 569/22, s. 1. (Criteria Not Met)

Bridge 32-P was not identified to be a landmark.

Evaluation of Bridge 32-P against the nine criteria outlined by O.Reg. 569/22 does not identify the bridge to meet the regulation for consideration for Designation by municipal By-law under Section 29 of the OHA (two or more criteria met under O.Reg. 569/22). The bridge also did not meet the 60-point threshold for heritage value based on the MTO bridge assessment standards.

Bridge 33-P

Design and Construction

Bridge 32-P is located Noah Road, west of 8th Line West (Appendix B). Bridge 33-P was designed by the engineering firm of A.W. Connor & Co., Toronto, Ontario. The bridge is constructed of reinforced concrete utilizing a T-beam design. The bridge was cast in place and constructed c.1926.

Current Condition

Bridge 33-P is in poor overall condition exhibiting extensive spalling and failure of the concrete structure resulting in exposure of the underlying steel rebar. The original concrete guard rails have all failed and have been replaced with galvanized steel posts. The remains of some guard rail components are located in the water beneath the bridge.

OSIM inspection of Bridge 28-P in May 2022 recommended replacement within 1-5 years. The inspection noted multiple deficiencies (see Appendix D).

Bridge 33-P is not adjacent to any properties Listed or Designated on the Township of Centre Wellington's heritage register. Bridge 33-P is not located within or adjacent to any CHLs (ASI 2021).



FIGURE 16: SOUTH EXPOSURE



FIGURE 17: LOOKING WEST ACROSS BRIDGE



FIGURE 18: LOOKING EAST ACROSS BRIDGE



FIGURE 19: REMAINS OF ORIGINAL CAST GUARD RAIL



FIGURE 20: NORTH SIDE OF STRUCTURE

O.Reg. 569/22 evaluation: Bridge 33-P

1. **The property has design value or physical value because it is a rare, unique, representative or early example of a style, type, expression, material or construction method. (Criteria Not Met)**

The bridge is typical of early 20th century bridges constructed of reinforced concrete. The overall design is typical of bridges of the era.

2. **The property has design value or physical value because it displays a high degree of craftsmanship or artistic merit. (Criteria Not Met)**

Bridge 33-P is typical of reinforced concrete bridges of the era and does not display a high degree of craftsmanship or artistic merit.

3. **The property has design value or physical value because it demonstrates a high degree of technical or scientific achievement. (Criteria Not Met)**

Bridge 33-P is typical of reinforced concrete bridges of the era and does not display a high degree of technical or scientific achievement.

4. **The property has historical value or associative value because it has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community. (Criteria Not Met)**

Bridge 33-P was constructed during a period of rapid transportation growth in the Province of Ontario and is not identified as being of particular significance to the surrounding community.

5. **The property has historical value or associative value because it yields, or has the potential to yield, information that contributes to an understanding of a community or culture. (Criteria Not Met)**

Bridge 33-P does not meet the criteria to have the potential to yield new information that would contribute to the understanding of a community or culture.

6. **The property has historical value or associative value because it demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community. (Criteria Not Met)**

Bridge 33-P was designed by A.W. Connor & Co., a Toronto engineering firm. A.W. Connor was a bridge engineer in Ontario and a proponent of reinforced concrete structure in southern Ontario. A.W. Connor was not identified to be significant to a community.

7. **The property has contextual value because it is important in defining, maintaining, or supporting the character of an area. (Criteria Not Met)**

Bridge 33-P is not key to defining, maintaining or supporting the character of the area; while the scale of the bridge contributes to the rural character of the area, the specific bridge does not meet the intent of the criteria for identifying CHVI.

8. **The property has contextual value because it is physically, functionally, visually or historically linked to its surroundings. (Criteria Met)**

Bridge 33-P is not key to defining maintaining or supporting the character of the area but visually contributes to the overall rural character of the area.

9. The property has contextual value because it is a landmark. O. Reg. 569/22, s. 1. (Criteria Not Met)

Bridge 33-P was not identified to be a landmark.

Evaluation of Bridge 33-P against the nine criteria outlined by O.Reg. 569/22 does not identify the bridge to meet the regulation for consideration for Designation by municipal By-law under Section 29 of the OHA (two or more criteria met under O.Reg. 569/22). The bridge also did not meet the 60-point threshold for heritage value based on the MTO bridge assessment standards.

Mitigation Options and Recommendations

None of the five bridges meet the criteria for Designation under the OHA, nor do any of them meet the 60-point threshold for heritage value based on the MTO bridge assessment standards (Appendix C). Each bridge has been subject to prior engineering assessment and found to be a state of structural failure resulting in the permanent closure of each structure (Appendix D).

While not candidates for formal heritage protection under the OHA, each of the bridges contributes to the rural agricultural landscape of the Township of Centre Wellington. As such the following recommendations are made:

1. No further heritage reports be required for each of the five bridges.
2. Any replacement structures be designed to reflect the existing designs of each bridge; an attempt be made to incorporate the unique designs of the original into any replacement structures.
3. Bridge 1-P is located approximately 650 m northeast of the structures associated with a Listed property at 7165 Sideroad 5; the Listed property extends northeast from the structures, with agricultural fields associated with the property adjacent to the bridge. Given the distance between the bridge and the structures, it is highly unlikely the structures will be impacted, directly or indirectly, by the replacement of Bridge 1-P; no further heritage report is recommended specific to the proximity of Bridge 1-P to this property.
4. Documentation of each structure be deposited in a local publicly accessible repository. Given the extent of previous assessment on each structure, the existing reports should be compiled and accepted as a complete record.

The *Provincial Policy Statement* (2020) notes that CHVI is identified for cultural heritage resources by communities. Thus, the system by which heritage is administered in Ontario places emphasis on the decision-making of local municipalities in determining CHVI. It is hoped that the information presented in this report will be useful in those determinations.

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Appendix A



Qualifications



Senior Heritage Specialist – Carla Parslow, PhD, CAHP Member in Good Standing: Dr. Carla Parslow has over 20 years of experience in the cultural heritage resource management (CHRM) industry in Canada. As the President of PHC Inc., Dr. Parslow is responsible for the management of CHRM projects, as well as the technical review and quality assurance of all archaeological and cultural heritage projects completed by PHC. Throughout her career, Carla has managed both large and small offices of CHRM professionals and has mobilized both large (50+) and small (4+) teams of CHRM and Environmental projects offices throughout the province of Ontario. Dr. Parslow has served as either Project Manager or Project Director on hundreds of Archaeological and Cultural Heritage Assessments. Dr. Parslow is a professional member of the Canadian Association of Heritage Professionals (CAHP).

Dr. Parslow is responsible for the overall quality assurance.

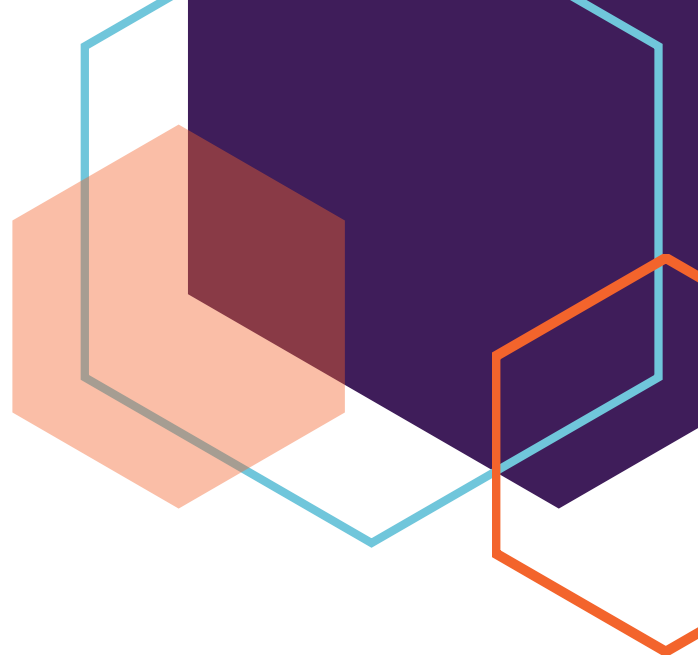
Project Manager – Jamie Lemon, MA: Jamie Lemon is a Senior Archaeologist and Project Manager with PHC and is responsible for managing archaeological and heritage projects across Ontario. She is the primary or secondary author of numerous heritage and archaeological license reports and is proficient at artifact and archaeobotanical analysis. In addition, she is a former field technician and field director with experience on precontact Indigenous and historical Euro-Canadian sites. She has worked on archaeological and heritage projects for mining, land development, transportation, aggregates, and energy sectors. Jamie received a BA in Anthropology from the University of Waterloo in 2007, an MA from Trent University in 2014, and has been active in Cultural Resource Management in Ontario for 15 years. Jamie holds a valid professional license with the Ontario Ministry of Citizenship and Multiculturalism (MCM). Jamie regularly assists clients with navigating the life cycle of archaeological and heritage assessments as it relates to their Project, including interpretation of MCM Standards and Guidelines and engaging with Indigenous communities and other stakeholder groups.

Ms. Lemon is responsible for project management and client relations.

Heritage Specialist – Chris Lemon, B.Sc., Dip. CAHP Member in Good Standing: Chris Lemon is a Cultural Heritage Specialist and Licensed Archaeologist (R289) with 15 years' experience. He received an Honours B.Sc. in Anthropology from the University of Toronto and has completed course work towards an M.A. from the University of Western Ontario. Mr. Lemon has a Diploma in Heritage Carpentry and Joinery and a Certificate in Heritage Planning from Algonquin College. During his career Mr. Lemon has participated in cultural heritage assessments across Ontario as both a Senior Field Director in archaeology and as a Built Heritage Practitioner. Chris's previous experience includes representation on Joint Health and Safety Committees; he is dedicated to maintaining a safety-first focus on all job sites. Chris is a professional member of the Canadian Association of Heritage Professionals (CAHP).

Mr. Lemon is responsible for research, reporting and analysis.

Appendix B



Key Plan



Bridge Number
 Center Municipality Code
 Load Restriction (kN)
 Height Restriction (m)
 Height Limit (meters)

Structure Condition

Open (#8)

Closed (#13)

Load Restricted (#)

Height Restricted (2)

Designated Heritage

Narrow Structure

Narrow Structure With One Lane Only

Neighbouring Municipality Structures Shown:
 0016 Township of East Gwillima
 2050 Township of Wellington North
 170160 Township of Woodwich
 180160 Township of Woodwich

Proposed 2023
 MCEA Site

2023 Centre Wellington Structure Locations & Condition

Updated: January, 2023



© 2023 The Township of Centre Wellington



Appendix C



MTO Bridge Evaluations



Ontario Heritage Bridge Evaluation: 1P

| Criteria | Details | Max. Score | Assigned Score | Comments |
|--|-----------|------------|----------------|------------------------|
| Design/ Physical Value (Total marks 50) | | | | |
| Functional Design (Maximum score 20) | Excellent | 20 | | |
| | Very Good | 16 | | |
| | Fair | 12 | | |
| | Common | 0 | 0 | Bridge removed in 2019 |
| | | | | |
| Visual Appeal (Maximum score 20) | Excellent | 20 | | |
| | Very Good | 12 | | |
| | Fair | 4 | | |
| | Common | 0 | 0 | Bridge removed in 2019 |
| | | | | |
| Materials (Maximum score 10) | Excellent | 10 | | |
| | Very Good | 8 | | |
| | Fair | 5 | | |
| | Common | 0 | 0 | Bridge removed in 2019 |
| | | | | |
| Contextual Value (Total marks 25) | | | | |
| | | | | |
| Landmark (Maximum score 15) | Excellent | 15 | | |
| | Very Good | 9 | | |
| | Fair | 3 | | |
| | Common | 0 | 0 | Bridge removed in 2019 |
| | | | | |
| Character Contribution (Maximum score 10) | Excellent | 10 | | |
| | Very Good | 6 | | |

| | | | | |
|---|-----------|----|-------|---|
| | Common | 0 | 0 | Bridge removed in 2019 |
| | | | | |
| Historical/ Associative Value (Total marks 25) | | | | |
| Designer/ Construction Firm (Maximum score 15) | Excellent | 15 | | |
| | Good | 9 | | |
| | Fair | 3 | | |
| | Unknown | 0 | 0 | Bridge removed in 2019 |
| | | | | |
| Association with a historical theme, person or event (Maximum score 10) | Excellent | 10 | | |
| | Good | 6 | | |
| | Common | 0 | 0 | Bridge removed in 2019 |
| TOTAL | | | 0/100 | Bridge removed in 2019 and therefore not meet heritage value threshold of 60 points |

Ontario Heritage Bridge Evaluation: 28-P

| Criteria | Details | Max. Score | Assigned Score | Comments |
|--|-----------|------------|----------------|--|
| Design/ Physical Value (Total marks 50) | | | | |
| Functional Design (Maximum score 20) | Excellent | 20 | | |
| | Very Good | 16 | | |
| | Fair | 12 | 12 | Historically a common style of bridge construction, few examples of the style left in the area |
| | Common | 0 | | |
| | | | | |
| Visual Appeal (Maximum score 20) | Excellent | 20 | | |
| | Very Good | 12 | 12 | Well-proportioned bridge that is appropriate to the landscape |
| | Fair | 4 | | |
| | Common | 0 | | |
| | | | | |
| Materials (Maximum score 10) | Excellent | 10 | | |
| | Very Good | 8 | | |
| | Fair | 5 | | |
| | Common | 0 | 0 | Common concrete construction |
| | | | | |
| Contextual Value (Total marks 25) | | | | |
| | | | | |
| Landmark (Maximum score 15) | Excellent | 15 | | |
| | Very Good | 9 | | |
| | Fair | 3 | 3 | Stylistically similar to temporally similar structures in the area |
| | Common | 0 | | |
| | | | | |
| Character Contribution (Maximum score 10) | Excellent | 10 | | |

| | | | | |
|---|-----------|----|---------------|---|
| | Very Good | 6 | 6 | Bridge contributes to the overall aesthetic and character of the area |
| | Common | 0 | | |
| | | | | |
| Historical/ Associative Value (Total marks 25) | | | | |
| Designer/ Construction Firm (Maximum score 15) | Excellent | 15 | | |
| | Good | 9 | | |
| | Fair | 3 | 3 | Bridge designed by A.W. Connor & Co. and constructed by E.G. Martin in 1926 |
| | Unknown | 0 | | |
| | | | | |
| Association with a historical theme, person or event (Maximum score 10) | Excellent | 10 | | |
| | Good | 6 | | |
| | Common | 0 | 0 | |
| TOTAL | | | 36/100 | Does not meet heritage value threshold of 60 points |

Ontario Heritage Bridge Evaluation: 30-P

| Criteria | Details | Max. Score | Assigned Score | Comments |
|--|-----------|------------|----------------|---|
| Design/ Physical Value (Total marks 50) | | | | |
| Functional Design (Maximum score 20) | Excellent | 20 | | |
| | Very Good | 16 | | |
| | Fair | 12 | 12 | Historically a common style of bridge construction, relatively few examples of the style left in the area |
| | Common | 0 | | |
| | | | | |
| Visual Appeal (Maximum score 20) | Excellent | 20 | | |
| | Very Good | 12 | | |
| | Fair | 4 | 4 | Bridge that is appropriate to the landscape |
| | Common | 0 | | |
| | | | | |
| Materials (Maximum score 10) | Excellent | 10 | | |
| | Very Good | 8 | | |
| | Fair | 5 | | |
| | Common | 0 | 0 | Common concrete construction |
| | | | | |
| Contextual Value (Total marks 25) | | | | |
| | | | | |
| Landmark (Maximum score 15) | Excellent | 15 | | |
| | Very Good | 9 | | |
| | Fair | 3 | 3 | Stylistically similar to temporally similar structures in the area |
| | Common | 0 | | |
| | | | | |
| Character Contribution (Maximum score 10) | Excellent | 10 | | |

| | | | | |
|---|-----------|----|---------------|---|
| | Very Good | 6 | 6 | Bridge is in keeping with the overall aesthetic and character of the area |
| | Common | 0 | | |
| | | | | |
| Historical/ Associative Value (Total marks 25) | | | | |
| Designer/ Construction Firm (Maximum score 15) | Excellent | 15 | | |
| | Good | 9 | | |
| | Fair | 3 | 3 | Designed by A.W. Connor & Co. Engineers of Toronto |
| | Unknown | 0 | | |
| | | | | |
| Association with a historical theme, person or event (Maximum score 10) | Excellent | 10 | | |
| | Good | 6 | | |
| | Common | 0 | 0 | |
| TOTAL | | | 28/100 | Does not meet heritage value threshold of 60 points |

Ontario Heritage Bridge Evaluation: 32-P

| Criteria | Details | Max. Score | Assigned Score | Comments |
|--|-----------|------------|----------------|---|
| Design/ Physical Value (Total marks 50) | | | | |
| Functional Design (Maximum score 20) | Excellent | 20 | | |
| | Very Good | 16 | | |
| | Fair | 12 | 12 | Historically a common style of bridge construction, relatively few examples of the style left in the area |
| | Common | 0 | | |
| | | | | |
| Visual Appeal (Maximum score 20) | Excellent | 20 | | |
| | Very Good | 12 | | |
| | Fair | 4 | | |
| | Common | 0 | 0 | Bridge heavily damaged, little remains to assess visual appeal |
| | | | | |
| Materials (Maximum score 10) | Excellent | 10 | | |
| | Very Good | 8 | | |
| | Fair | 5 | | |
| | Common | 0 | 0 | Common concrete construction |
| | | | | |
| Contextual Value (Total marks 25) | | | | |
| | | | | |
| Landmark (Maximum score 15) | Excellent | 15 | | |
| | Very Good | 9 | | |
| | Fair | 3 | | |
| | Common | 0 | 0 | Bridge heavily damaged, little remains to assess visual appeal |
| | | | | |
| Character Contribution (Maximum score 10) | Excellent | 10 | | |

| | | | | |
|---|-----------|----|--------|---|
| | Very Good | 6 | 6 | Bridge is in keeping with the overall aesthetic and character of the area |
| | Common | 0 | | |
| | | | | |
| Historical/ Associative Value (Total marks 25) | | | | |
| Designer/ Construction Firm (Maximum score 15) | Excellent | 15 | | |
| | Good | 9 | | |
| | Fair | 3 | 3 | Designed by A.W. Connor & Co. Engineers of Toronto |
| | Unknown | 0 | | |
| | | | | |
| Association with a historical theme, person or event (Maximum score 10) | Excellent | 10 | | |
| | Good | 6 | | |
| | Common | 0 | 0 | |
| TOTAL | | | 21/100 | Does not meet heritage value threshold of 60 points |

Ontario Heritage Bridge Evaluation: 33-P

| Criteria | Details | Max. Score | Assigned Score | Comments |
|--|-----------|------------|----------------|---|
| Design/ Physical Value (Total marks 50) | | | | |
| Functional Design (Maximum score 20) | Excellent | 20 | | |
| | Very Good | 16 | | |
| | Fair | 12 | 12 | Historically a common style of bridge construction, relatively few examples of the style left in the area |
| | Common | 0 | | |
| | | | | |
| Visual Appeal (Maximum score 20) | Excellent | 20 | | |
| | Very Good | 12 | | |
| | Fair | 4 | | |
| | Common | 0 | 0 | Bridge heavily damaged, little remains to assess visual appeal |
| | | | | |
| Materials (Maximum score 10) | Excellent | 10 | | |
| | Very Good | 8 | | |
| | Fair | 5 | | |
| | Common | 0 | 0 | Common concrete construction |
| | | | | |
| Contextual Value (Total marks 25) | | | | |
| | | | | |
| Landmark (Maximum score 15) | Excellent | 15 | | |
| | Very Good | 9 | | |
| | Fair | 3 | | |
| | Common | 0 | 0 | Bridge heavily damaged, little remains to assess visual appeal |
| | | | | |
| Character Contribution (Maximum score 10) | Excellent | 10 | | |

| | | | | |
|---|-----------|----|--------|---|
| | Very Good | 6 | 6 | Bridge is in keeping with the overall aesthetic and character of the area |
| | Common | 0 | | |
| | | | | |
| Historical/ Associative Value (Total marks 25) | | | | |
| Designer/ Construction Firm (Maximum score 15) | Excellent | 15 | | |
| | Good | 9 | | |
| | Fair | 3 | 3 | Designed by A.W. Connor & Co. Engineers of Toronto |
| | Unknown | 0 | | |
| | | | | |
| Association with a historical theme, person or event (Maximum score 10) | Excellent | 10 | | |
| | Good | 6 | | |
| | Common | 0 | 0 | |
| TOTAL | | | 21/100 | Does not meet heritage value threshold of 60 points |

Appendix D



OSIM Inspection Report



Structure Condition Summary Form

Structure Name1-P

Structure NumberTS-BR-00026

Date of InspectionMay 06, 2022

Project No.18015

ConsultantHP Engineering Inc.

| Element Group | Element Name | Unit (Qty.) | Unit Price (MTO) | Total Element Quantity | Element Qty. in Excellent Condition (1.00) | Element Quantity in Good Condition (0.75) | Element Quantity in Fair Condition (0.4) | Element Quantity in Poor Condition (0) | Total Replacement Value (TRV) | Current Element Value (CEV) | Element Condition Index | Performance Deficiency | Maintenance Need |
|------------------------|-----------------|----------------|---------------------|------------------------------|---|---|--|--|-------------------------------------|--------------------------------------|-------------------------------|---------------------------|---------------------|
| Approaches Abutment | Wearing Surface | Sq.m | 6.00 | 100.00 | 0.00 | 30.00 | 70.00 | 0.00 | 600 | 303 | 51 | 00 | 00 |
| | Wingwalls | Sq.m | 350.00 | 100.00 | 0.00 | 0.00 | 10.00 | 90.00 | 35000 | 1400 | 4 | 00 | 00 |
| | Abutment Walls | Sq.m | 900.00 | 100.00 | 0.00 | 0.00 | 30.00 | 70.00 | 90000 | 10800 | 12 | 00 | 00 |
| | | | | | | | | | | 125600 | 12503 | | |

Bridge Condition Index (BCI)

10


Municipal Structure Inspection Form

Structure Name: 1-P

Structure No: TS-BR-00026

MTO Site No:

Inventory Data

| | | | | |
|--------------------|--|--------------------|---|---|
| Structure Name: | 1-P | Hwy No. | | Key Photo  Pilkington <NONE> 5 <NONE> |
| Crossing Over: | Road | Crossing Under: | Road | |
| Road Name: | Sideroad 5 | | | |
| Location: | Sideroad 5 | | | |
| Owner: | TCW, Township of Centre Wellington (100 %) | | | |
| | | Heritage Status: | N | |
| Latitude/Northing: | | Longitude/Easting: | | |
| MTO Region: | | Road Class: | 5 | |
| MTO District: | | Lane Type: | | |
| Old County: | | Posted Speed: | | |
| Geo Twp.: | Pilkington | AADT: | | |
| Structure Type: | T-Beam | Min Vert. Clear.: | m | |
| Material: | C - Cast In Place | No. of Spans: | 1 | |
| Articulation: | | | | |
| Deck Length: | 11.8 m | Special Routes: | <input type="checkbox"/> Transit <input type="checkbox"/> Truck <input type="checkbox"/> School <input type="checkbox"/> Bicycle | |
| Deck Width: | 4.5 m | | | |
| Deck Area: | 53.2 m ² | Detour Length: | 8.00 km | |
| Trav Deck Wdt | 4.0 m | | m | |

Historical Data

| | | |
|----------------------------------|--------------------------|---------------------------|
| Year Built: 1925 | Superstructure Year: | Year of Last Major Rehab: |
| Last OSIM Inspection: 06/16/2020 | Contract No. When Built: | |
| Last Enhanced OSIM: | Last Evaluation: | |
| Last Enhanced Access: | Current Load Limit: | t t t |
| Last Underwater Insp. | Bylaw No.: | |
| Last Condition Survey: | Bylaw Exp. Date: | |

Municipal Structure Inspection Form

Structure Name: 1-P

Structure No: TS-BR-00026

MTO Site No: 00

Inspection Date: May 06, 2022 mm/dd/yyyy
 Next Biennial Inspection: May 2024 mm/dd/yyyy

Condition Index Value (BCI) 10

Performance Deficiencies

| Element Group | Element | Subtype | Performance Deficiency |
|---------------|---------|---------|------------------------|
|---------------|---------|---------|------------------------|

Maintenance Needs

| Element Group | Element | Subtype | Maintenance Need |
|---------------|---------|---------|------------------|
|---------------|---------|---------|------------------|

Repair/Rehabilitation

| Element Group | Element | Repair/Rehabilitation | Priority | Const Cost |
|----------------------------------|-----------------------------|-----------------------|----------|--------------|
| | Rehabilitate Superstructure | | Urgent | \$611,000.00 |
| Total Repair/Rehabilitation Cost | | | | \$611,000.00 |
| Total Associated Work Cost | | | | \$260,000.00 |
| Total Cost | | | | \$871,000.00 |

Overall Comments

- No structure observed at the time of inspection. Structure has been removed since last inspection.
- Large spalls, scaling and concrete disintegration, section loss noted at east abutment wall ($\pm 70\%$ poor)
- Section loss with severe spalls, and concrete disintegration observed at northeast and southeast wingwalls ($\pm 90\%$ poor)
- Approach wearing surfaces are heavily vegetated, with accumulation of debris at east approach.

Municipal Structure Inspection Form

Structure Name: 1-P

Structure No: TS-BR-00026

MTO Site No:

Field Inspection Information

Inspection Date: 05/06/2022 Inspection Type: ☒ OSIM ☐ Enhanced OSIM BCI: 39
 Inspector: Tashi Dwivedi, P.Eng., HP Engineering Eng. Responsible:
 Others in Party: Charlemagne Charles, Sagar Chhayani, EIT
 Access Equip: ☐ Lift ☐ Ladder ☐ Boat ☐ Bridge Master Other:
 Other Equipment: Hammer, tape, Camera, Chest waders
 Weather: Sunny Temperature: 15 °C

Additional Investigations Required

| Investigation | ----- Priority ----- | | | Estimated Cost |
|---|-------------------------------------|--------------------------|--------------------------|----------------|
| | None | Normal | Urgent | |
| Detailed Deck Condition Survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Delamination Survey of Asphalt-Covered Deck | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Concrete Substructure Condition Survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Detailed Coating Condition Survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Detailed Timber Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Post-Tension Strand Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Underwater Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Fatigue Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Seismic Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Structure Evaluation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Monitoring of Deformations, Movements and Settlements | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Monitoring of Crack Widths | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Total Cost: | | | | 0.00 |

Overall Structure Notes

Recommended Work On Structure: rehabilitate/replace structure

Timing of Recommended Work: 1-5 years

Next Inspection Date: 05/06 /2024 Estimated Load Limit: 0 t 0 t 0 t

Overall

It is recommended that a rehabilitation / replacement study be performed (\$20,000.00)

BCI Change**Justification:**

No structure is present at the time of inspection. Abutment walls and wing walls are observed with severe spalls, scaling and concrete disintegration.

Municipal Structure Inspection Form

Structure Name: 1-P

Structure No: TS-BR-00026

MTO Site No:

Element Data**Repair/Rehabilitation Required****Associated Work**

| Comments | | Estimated Cost |
|---------------------|------------------------|----------------|
| Approaches | | 0.00 |
| Detours | | 100,000.00 |
| Traffic Control | | 60,000.00 |
| Utilities | | 0.00 |
| Right-of-Way | | 0.00 |
| Environmental Study | | 100,000.00 |
| Other | 0.00 Contingencies 10% | 0.00 |
| Engineering | | 0.00 |

| | |
|----------------------------------|------------|
| Total Associated Work Cost | 260,000.00 |
| Total Repair/Rehabilitation Cost | 611,000.00 |
| Total Cost | 871,000.00 |

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 1-P



Photo 1 Structure from east approach



Photo 2 Structure from west approach

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 1-P



Photo 3 North elevation



Photo 4 Large spalls, scaling and concrete disintegration noted on west abutment wall



Photo 5 Damaged/ broken steel beam rail at west approach



Photo 6 Large spalls and severe concrete disintegration noted on northeast wingwall

Structure Condition Summary Form

Structure Name
28-P

Structure Number
TS-BR-00040

Date of Inspection
May 05, 2022

Project No.
18015

Consultant
HP Engineering Inc.

| Element Group | Element Name | Unit (Qty.) | Unit Price (MTO) | Total Element Quantity | Element Qty. in Excellent Condition (1.00) | Element Quantity in Good Condition (0.75) | Element Quantity in Fair Condition (0.4) | Element Quantity in Poor Condition (0) | Total Replacement Value (TRV) | Current Element Value (CEV) | Element Condition Index | Performance Deficiency | Maintenance Need |
|---|----------------------|----------------|---------------------|------------------------------|---|---|--|--|-------------------------------------|--------------------------------------|-------------------------------|---------------------------|---------------------|
| Barriers Decks Beams/ Main Longitudinal Abutment | Railing Systems | m | 200.00 | 100.00 | 0.00 | 0.00 | 50.00 | 50.00 | 20000 | 4000 | 20 | 00 | 00 |
| | Deck Top - Thin Slab | Sq.m | 120.00 | 100.00 | 0.00 | 0.00 | 50.00 | 50.00 | 12000 | 2400 | 20 | 00 | 00 |
| | Soffit - Thin Slab | Sq.m | 120.00 | 100.00 | 0.00 | 0.00 | 50.00 | 50.00 | 12000 | 2400 | 20 | 00 | 00 |
| | Girders | Sq.m | 200.00 | 100.00 | 0.00 | 0.00 | 50.00 | 50.00 | 20000 | 4000 | 20 | 00 | 00 |
| | Wingwalls | Sq.m | 350.00 | 100.00 | 0.00 | 0.00 | 50.00 | 50.00 | 35000 | 7000 | 20 | 00 | 00 |
| | Abutment Walls | Sq.m | 900.00 | 100.00 | 0.00 | 0.00 | 50.00 | 50.00 | 90000 | 18000 | 20 | 00 | 00 |
| | | | | | | | | | | 189000 | 37800 | | |

Bridge Condition Index (BCI)

20


Municipal Structure Inspection Form

Structure Name: 28-P

Structure No: TS-BR-00040

MTO Site No:

Inventory Data

| | | | | |
|--------------------|--|--------------------|--|---|
| Structure Name: | 28-P | Hwy No. | | Key Photo  |
| Crossing Over: | Road | Crossing Under: | Road | |
| Road Name: | Sideroad 11 | | | |
| Location: | Sideroad 11 | | | |
| Owner: | TCW, Township of Centre Wellington (100 %) | | | |
| | | Heritage Status: | N | |
| Latitude/Northing: | | Longitude/Easting: | | |
| MTO Region: | | Road Class: | 5 | |
| MTO District: | | Lane Type: | | |
| Old County: | | Posted Speed: | | |
| Geo Twp.: | Pilkington | AADT: | | |
| Structure Type: | T-Beam | Min Vert. Clear.: | m | |
| Material: | C - Cast In Place | No. of Spans: | 1 | |
| Articulation: | | | | |
| Deck Length: | 11.3 m | Special Routes: | <input type="checkbox"/> Transit <input type="checkbox"/> Truck | |
| Deck Width: | 5.7 m | | <input type="checkbox"/> School <input type="checkbox"/> Bicycle | |
| Deck Area: | 64.5 m ² | Detour Length: | 8.00 km | |
| Trav Deck Wdt | 4.9 m | | m | |

Pilkington

<NONE>

5

<NONE>

Skew Angle: degrees

Structure Dir : E-W

Historical Data

| | | |
|---|--------------------|--|
| Year Built: 1925 | Superstruct. Year: | Year of Last Major Rehab: |
| Last OSIM Inspection: 06/16/2020 | | Contract No. When Built: |
| Last Enhanced OSIM: | | Last Evaluation: |
| Last Enhanced Access: | | Current Load Limit: t t t |
| Last Underwater Insp. | | Bylaw No.: |
| Last Condition Survey.: | | Bylaw Exp. Date: |

Municipal Structure Inspection Form

Structure Name: 28-P

Structure No: TS-BR-00040

MTO Site No:

Inspection Date: May 05, 2022 mm/dd/yyyy
 Next Biennial Inspection: May 2020 mm/dd/yyyy

Condition Index Value (BCI)

Performance Deficiencies

| Element Group | Element | Subtype | Performance Deficiency |
|---------------|---------|---------|------------------------|
|---------------|---------|---------|------------------------|

Maintenance Needs

| Element Group | Element | Subtype | Maintenance Need |
|---------------|---------|---------|------------------|
|---------------|---------|---------|------------------|

Repair/Rehabilitation

| Element Group | Element | Repair/Rehabilitation | Priority | ConstCost |
|---------------|---------|----------------------------------|----------|----------------|
| | | Rehabilitate Superstructure | Urgent | \$853,300.00 |
| | | Total Repair/Rehabilitation Cost | | \$853,300.00 |
| | | Total Associated Work Cost | | \$299,000.00 |
| | | Total Cost | | \$1,152,300.00 |

Overall Comments

- The majority of the railing is missing and or fallen into the stream. Severe spalls, delamination, concrete disintegration with exposed corroded reinforcement on the remaining section of the railing.
- West end of the substructure has failed. A large sinkhole has formed as a result.
- Wide crack in the deck at south west end.
- North west wingwall has disconnected from the abutment.
- Large area of disintegration at the east abutment.
- Wide cracks at south east wingwall.
- Severe undermining of west abutment, causing settlement at west.
- West end of the deck is almost disconnected from the abutment.
- Four (4) signs for bridge closure present at the time of the inspection.
- Unstable embankments.
- Moderate volume, low flow from North to South with no obstruction.
- Large spall and undermining at Southeast corner of East abutment.
- Sever concrete disintegration and large spall with exposed concrete reinforcement noted at end section of girders.

Municipal Structure Inspection Form

Structure Name: 28-P

Structure No: TS-BR-00040

MTO Site No:

Field Inspection Information

Inspection Date: 05/05/22

Inspection Typ ☒ OSIM ☐ Enhanced OSIM BCI: 20

Inspector: Tashi Dwivedi, P.Eng., HP Engineering

Eng. Responsible:

Others in Party: Charlemagne Charles and Sagar Chhayani

Access Equip: ☐ Lift ☐ Ladder ☐ Boat ☐ Bridge Master Other:

Other Equipment: Hammer, tape, Camera, Chest waders

Weather: Sunny

Temperature: 14 °C

Additional Investigations Required

| Investigation | Priority | | | Estimated Cost |
|---|-------------------------------------|--------------------------|--------------------------|----------------|
| | None | Normal | Urgent | |
| Detailed Deck Condition Survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Delamination Survey of Asphalt-Covered Deck | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Concrete Substructure Condition Survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Detailed Coating Condition Survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Detailed Timber Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Post-Tension Strand Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Underwater Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Fatigue Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Seismic Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Structure Evaluation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Monitoring of Deformations, Movements and Settlements | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Monitoring of Crack Widths | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Total Cost: | | | | 0.00 |

Overall Structure Notes

Recommended Work On Structure:

rehabilitate/ replace structure

Timing of Recommended Work:

1-5 years

Next Inspection Date:

May 2022

Estimated Load Limit:

0 t 0 t 0 t

Overall

It is recommended that a rehabilitation / replacement study be performed (\$20,000.00)

BCI Change

Justification

Township of Centre Wellington
Municipal Structure Inspection Form

Structure Name: 28-P
Structure No: TS-BR-00040
MTO Site No:

| Element Data |
|--------------------------------|
| Repair/Rehabilitation Required |
| Associated Work |

| | Comments | Estimated Cost |
|----------------------------------|----------|----------------|
| Approaches | | 0.00 |
| Detours | | 100,000.00 |
| Traffic Control | | 60,000.00 |
| Utilities | | 0.00 |
| Right-of-Way | | 0.00 |
| Environmental Study | | 100,000.00 |
| Other | | 0.00 |
| Contingencies | 10% | 0.00 |
| Engineering | | 0.00 |
| Total Associated Work Cost | | \$299,000.00 |
| Total Repair/Rehabilitation Cost | | \$853,300.00 |
| Total Cost | | \$1,152,300.00 |

MUNICIPAL STRUCTURE INSPECTION FORM

Bridge

SITE PHOTOGRAPHS

Site No.: 28-P



Photo 1 Structure from east approach



Photo 2 Structure from west approach



Photo 3 East approach from centre of structure



Photo 4 West approach from centre of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Moderate scaling and large spalls on concrete deck



Photo 8 Bridge barrier broken / detached



Photo 9 Large crack noted on wing wall



Photo 10 East abutment wall



Photo 11 West abutment wall



Photo 12 Exposed Corroded Reinforcement



Photo 12 Exposed Corroded Reinforcement



Photo 14 Large Spall with Exposed Corroded Reinforcement on the Exterior Face

Structure Condition Summary Form

Structure Name
SIDEROAD 5
Structure Number
30-P
Date of Inspection
May 05, 2022
Project No.
18015
Consultant
HP Engineering Inc.

| Element Group | Element Name | Unit (Qty.) | Unit Price (MTO) | Total Element Quantity | Element Qty. in Excellent Condition (1.00) | Element Quantity in Good Condition (0.75) | Element Quantity in Fair Condition (0.4) | Element Quantity in Poor Condition (0) | Total Replacement Value (TRV) | Current Element Value (CEV) | Element Condition Index | Performance Deficiency | Maintenance Need |
|--------------------------------------|------------------------|----------------|---------------------|------------------------------|--|---|--|--|-------------------------------------|--------------------------------------|-------------------------------|---------------------------|---------------------|
| Approaches | Wearing Surface | Sq.m | 6.00 | 54.00 | 0.00 | 54.00 | 0.00 | 0.00 | 324 | 243 | 75 | 00 | 00 |
| Barriers | Railing Systems | m | 200.00 | 35.20 | 0.00 | 10.20 | 12.50 | 12.50 | 7040 | 2530 | 36 | 08 | 00 |
| | Posts (Steel/Concrete) | Each | 200.00 | 4.00 | 0.00 | 0.00 | 2.00 | 2.00 | 800 | 160 | 20 | 08 | 08 |
| Decks | Wearing Surface | Sq.m | 25.00 | 47.85 | 0.00 | 43.85 | 2.00 | 2.00 | 1196 | 842 | 70 | 00 | 12 |
| | Deck Top - Thin Slab | Sq.m | 120.00 | 47.85 | 0.00 | 0.00 | 33.50 | 14.36 | 5742 | 1608 | 28 | 00 | 00 |
| | Soffit - Thin Slab | Sq.m | 120.00 | 57.14 | 0.00 | 0.00 | 28.57 | 28.57 | 6857 | 1371 | 20 | 00 | 00 |
| Beams/ Main Longitudinal Elements | Girders | Sq.m | 200.00 | 68.73 | 0.00 | 12.49 | 41.24 | 15.00 | 13746 | 5173 | 38 | 01 | 00 |
| | Floor Beams - Concrete | Sq.m | 200.00 | 21.60 | 0.00 | 0.00 | 10.80 | 10.80 | 4320 | 864 | 20 | 01 | 00 |
| Abutment | Wingwalls | Sq.m | 350.00 | 21.00 | 0.00 | 10.50 | 5.25 | 5.25 | 7350 | 3491 | 48 | 00 | 00 |
| | Abutment Walls | Sq.m | 900.00 | 27.72 | 0.00 | 6.93 | 13.86 | 6.93 | 24948 | 9667 | 39 | 01 | 00 |
| 72323 | | | | | | | | | | 25950 | | | |

Bridge Condition Index (BCI)

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Municipal Structure Inspection Form
TOWNSHIP OF CENTRE WELLINGTON

Structure Name 30-P

SIDEROAD 5

HP ENGINEERING INC.

Municipal Structure Inspection Form

MTO Site Number:

35-186

BCI:

37

Inventory Data:

| | | | | | | | | | | | |
|--------------------|----------------------------------|--|--------------------------------|----------------------------------|--|------------------------------------|---|--|--|--|--|
| Structure Name: | 30-P | | | | | | | | | | |
| Main Hwy/Road # | | On <input checked="" type="checkbox"/> | Under <input type="checkbox"/> | Crossing Type: | Navig. Water <input checked="" type="checkbox"/> | Rail <input type="checkbox"/> | Road <input type="checkbox"/> | Non-Navig Water <input type="checkbox"/> | Ped. <input type="checkbox"/> | Other <input type="checkbox"/> | |
| Road Name | Sideroad 5 | | | | | | | | | | |
| Structure Location | 0.2 km West of Wellington Road 7 | | | | | | | | | | |
| Latitude | N 43° 43' 6.8" | | | | Longitude | W 80° 29' 21.6" | | | | | |
| Owner(s) | Township of Centre Wellington | | | | Heritage Designation | Not Cons. <input type="checkbox"/> | Cons. /not App <input type="checkbox"/> | List/not Desig. <input type="checkbox"/> | Desig./not List <input type="checkbox"/> | Desig. & List <input type="checkbox"/> | |
| MTO Region * | - | - | Road Class | Freeway <input type="checkbox"/> | Arterial <input type="checkbox"/> | Collector <input type="checkbox"/> | Local <input checked="" type="checkbox"/> | | | | |
| MTO District * | - | - | Posted Speed | 80 | | No. of Lanes: | 2 | | | | |
| Current County* | - | - | AADT | | | % Trucks | | | | | |
| Geographic Twp. * | Pilkington | | Special Routes: | Transit <input type="checkbox"/> | Truck <input type="checkbox"/> | School <input type="checkbox"/> | Bicycle <input type="checkbox"/> | | | | |
| Structure Type* | 5 | Half-through Concrete Girders | | | | | | | | | |
| Total Deck Length | 8.8 | | (m) | Detour Length | 5 | | (km) | Fill on Structure | | | |
| Overall Str. Width | 6.5 | | (m) | Skew Angle | | | (degrees) | Direction of Structure | E-W | | |
| Total Deck Area | 57 | | (sq. m) | No. of Spans | 1 | | | | | | |
| Roadway Width | 5.5 | | (m) | | | | | | | | |
| Span Lengths. | 7.0 (m) | | | | | | | | | | |

Historical Data:

| | | | |
|-------------------------|----------------------|------------------------------|--|
| Year Built | 1929 | Last Biennial Inspection | |
| Current Load Limit | Road Closed (tonnes) | Last BridgeMaster Inspection | |
| Load Limit By-Law # | | Last Evaluation | |
| By-Law Expiry Date | | Last Underwater Inspection | |
| Min. Vertical Clearance | (m) | Last Condition Survey | |

Rehab History : (Date/description)

Field Inspection Information:

| | |
|---------------------|--|
| Date of Inspection: | May 05, 2022 |
| Inspector: | Tashi Dwivedi, P.Eng., HP Engineering |
| Others in Party: | Charlemagne Charles and Sagar Chhayani, HP Engineering |
| Equipment Used: | Hammer, tape, camera, Chest waders |
| Weather | Sunny |
| Temperature | 15 °C |

| Additional Investigations Required | Priority | | | Estimated Cost |
|------------------------------------|----------|------------|--------|----------------|
| | None | Normal | Urgent | |
| Detailed Deck Condition Survey: | | | | |
| DART Survey: | | | | |
| Detailed Coating Condition Survey: | | | | |
| Underwater Investigation | | | | |
| Fatigue Investigation: | | | | |
| Seismic Investigation: | | | | |
| Structure Evaluation: | | | | |
| Load Posting - Estimated Load | 0 | Total Cost | | \$0 |

Special Notes:

No barriers on approach. Deck barrier does not meet current standards. Structure closed at time of inspection. A rehabilitation/replacement study is recommended for this structure (\$20,000.00).

Next Detailed Inspection: May 2024

Municipal Structure Inspection Form

MTO Site Number

35-186

Element Data

| | | | | | | | |
|-------------------|--------------------------------|----------------|------|-------|--------------|------------------------------------|-------|
| Element Group | 900 | Abutments | | | | Length | 6.60 |
| Element Name | 901 | Abutment Walls | | | | Width | |
| Location | East & west sides of structure | | | | | Height | 2.10 |
| Material | Cast-in-place concrete | | | | | Count | 2 |
| Element Type | Conventional closed | | | | Element code | | |
| Environment | Moderate | | | | | Total Qnty. | 27.72 |
| Protection System | None | | | | | Limited Insp. | |
| Condition Data | Units | Ex. | Good | Fair | Poor | Suspected Performance Deficiencies | |
| | Sq. m. | 0 | 6.93 | 13.86 | 6.93 | 1 Load Carrying capacity | |

Comments:

Severe scaling, honeycombing and medium to wide cracks, some with efflorescence observed. Wide shear cracks noted below girders.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|-------------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|------------------------------|-----------|------|------|--------------|------------------------------------|------|
| Element Group | 900 | Abutments | | | | Length | 3.50 |
| Element Name | 903 | Wingwalls | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | Height | 1.50 |
| Material | Cast-in-place concrete | | | | | Count | 4 |
| Element Type | Reinforced concrete | | | | Element code | 6 | |
| Environment | Moderate | | | | | Total Qnty. | 21 |
| Protection System | None | | | | | Limited Insp. | |
| Condition Data | Units | Ex. | Good | Fair | Poor | Suspected Performance Deficiencies | |
| | Sq. m. | 0 | 10.5 | 5.25 | 5.25 | - - | |

Comments:

Some wide cracking, severe concrete disintegration noted on SW wingwall. Medium crack with efflorescence staining noted at southeast wingwall.

| | | | | | | | |
|-------------------|--------|-------------------------------------|---------|-------------------------------------|--------------|--------------------------|--|
| Recommended Work: | Rehab | <input checked="" type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | 08 | Repair of bridge concrete |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input checked="" type="checkbox"/> |

| | | | | | | | |
|-------------------|---------------------------------|-------|------|------|--------------|------------------------------------|---|
| Element Group | 1500 | Signs | | | | Length | |
| Element Name | 1501 | Sign | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | Height | |
| Material | 4 Hazard Signs; 2 Warning Signs | | | | | Count | 6 |
| Element Type | N/A | | | | Element code | N/A | |
| Environment | Severe | | | | | Total Qnty. | 6 |
| Protection System | None | | | | | Limited Insp. | |
| Condition Data | Units | Ex. | Good | Fair | Poor | Suspected Performance Deficiencies | |
| | Each | 0 | 1 | 0 | 1 | - - | |

Comments:

Generally in good condition; NE and SE hazard sign leaning slightly. SW sign is missing.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-186

Element Data

| | | | | | | | |
|-------------------|--------------------------------|-----------------------|------|------|------|------------------------------------|------|
| Element Group | 1600 | Approaches | | | | Length | 6.00 |
| Element Name | 1601 | Wearing surface (app) | | | | Width | 4.50 |
| Location | East & west sides of structure | | | | | | |
| Material | Gravel | | | | | | |
| Element Type | N/A | Element code | N/A | | | | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 54 | 0 | 0 | | |
| | | | | | | Total Qnty. | 54 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Lightly vegetated. No approach barrier present at the time of inspection. A code compliant approach barrier should be installed.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|------------------------|----------------------------|------|------|------|------------------------------------|------------------------|
| Element Group | 500 | Beams/MLE's | | | | Length | 6.00 |
| Element Name | 502 | Floor Beams (Intermediate) | | | | Width | 0.36 |
| Location | Underside of structure | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | Rectangular-solid | Element code | 4 | | | | |
| Environment | Moderate | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 0 | 10.8 | 10.8 | | |
| | | | | | | Total Qnty. | 21.6 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | 1 | Load Carrying capacity |

Comments:

Large areas of spalls with exposed corroded steel on underside and ends of beams. Localized medium to wide cracks noted throughout.

| | | | | | |
|-------------------|---------------------------------|---|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|------------------------|--------------|-------|-------|------|------------------------------------|------------------------|
| Element Group | 500 | Beams/MLE's | | | | Length | 8.70 |
| Element Name | 501 | Girders | | | | Width | 0.35 |
| Location | Underside of structure | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | Rectangular-solid | Element code | 4 | | | | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 12.49 | 41.24 | 15 | | |
| | | | | | | Total Qnty. | 68.73 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | 1 | Load Carrying capacity |

Comments:

Numerous spalls with exposed corroded steel, cracks with efflorescence and moderate scaling.

| | | | | | |
|-------------------|---------------------------------|---|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-186

Element Data

| | | | | | | | | |
|-------------------|---|----------|------|------|--------------|--------|------------------------------------|-------------------------------------|
| Element Group | 100 | Decks | | | | Length | 8.70 | |
| Element Name | 102 | Deck top | | | | Width | 5.50 | |
| Location | Top of deck | | | | | | Height | |
| Material | Cast-in-place concrete | | | | | | Count | 1 |
| Element Type | Cast-in-place conc on supports, composite | | | | Element code | | Total Qty. | 47.85 |
| Environment | Moderate | | | | | | Limited Insp. | <input checked="" type="checkbox"/> |
| Protection System | None | | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | 0 | 0 | 33.5 | 14.36 | | | |

Comments:

Not visible due to gravel fill. Condition rating is based on condition of soffit.

| | | | | | |
|-------------------|---------------------------------|---|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | | |
|-------------------|--------------------------------------|-----------------------------|------|------|--------------|--------|------------------------------------|--|
| Element Group | 100 | Decks | | | | Length | | |
| Element Name | 103 | Soffit Thin Slab (Exterior) | | | | Width | | |
| Location | North & south underside of structure | | | | | | Height | |
| Material | Cast-in-place concrete | | | | | | Count | |
| Element Type | N/A | | | | Element code | N/A | Total Qty. | |
| Environment | Moderate | | | | | | Limited Insp. | |
| Protection System | None | | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | | | | | | | |

Comments:

No exterior thin slab soffit component noted at the time of inspection.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | | |
|-------------------|------------------------|-----------------------------|------|-------|--------------|--------|------------------------------------|-------|
| Element Group | 100 | Decks | | | | Length | 6.50 | |
| Element Name | 103 | Soffit Thin Slab (Interior) | | | | Width | 2.93 | |
| Location | Underside of structure | | | | | | Height | |
| Material | Cast-in-place concrete | | | | | | Count | 3 |
| Element Type | N/A | | | | Element code | N/A | Total Qty. | 57.14 |
| Environment | Benign | | | | | | Limited Insp. | |
| Protection System | None | | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | 0 | 0 | 28.57 | 28.57 | | | |

Comments:

Numerous medium to wide cracks noted with efflorescence. Delaminations and spalls observed with exposed corroded reinforcement.

| | | | | | |
|-------------------|---------------------------------|---|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-186

Element Data

| | | | | | | | | |
|-------------------|-------------|-----------------|-------|--------------|------|------------------------------------|------------|-------|
| Element Group | 100 | Decks | | | | | Length | 8.70 |
| Element Name | 101 | Wearing surface | | | | | Width | 5.50 |
| Location | Top of deck | | | | | Height | | |
| Material | Gravel | | | | | Count | 1 | |
| Element Type | N/A | | | Element code | N/A | | Total Qty. | 47.85 |
| Environment | Severe | | | | | Limited Insp. | | |
| Protection System | None | | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | 0 | 43.85 | 2 | 2 | | | |

Comments:

Gravel accumulation with vegetation noted on wearing surface

| | | | | | |
|-------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|--|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | 12 | Bridge surface repair |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input checked="" type="checkbox"/> |

| | | | | | | | | |
|-------------------|------------------------------|-------------------------|------|--------------|------|------------------------------------|------------|---|
| Element Group | 1400 | Embankments and Streams | | | | | Length | |
| Element Name | 1402 | Embankments | | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | Height | | |
| Material | Native soil | | | | | Count | 4 | |
| Element Type | N/A | | | Element code | N/A | | Total Qty. | 4 |
| Environment | - | | | | | Limited Insp. | | |
| Protection System | None | | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Each | 0 | 4 | 0 | 0 | | | |

Comments:

Steep slope and well vegetated. Embankments appear stable. Some erosion noted at the SE corner.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|--|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | 13 | Erosion Control at Bridges |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input checked="" type="checkbox"/> |

| | | | | | | | | |
|-------------------|------------------------------|-------------------------|------|--------------|------|------------------------------------|------------|--|
| Element Group | 1400 | Embankments and Streams | | | | | Length | |
| Element Name | 1403 | Slope Protections | | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | Height | | |
| Material | Other | | | | | Count | | |
| Element Type | Rock Protection | | | Element code | 9 | | Total Qty. | |
| Environment | - | | | | | Limited Insp. | | |
| Protection System | None | | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Each | 0 | 0 | 0 | 0 | | | |

Comments:

No slope protection noted at the time of inspection.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-186

Element Data

| | | | | | | | |
|-------------------|-----------------|-------------------------|--------------|------|------------------------------------|-------------|---|
| Element Group | 1400 | Embankments and Streams | | | | Length | |
| Element Name | 1401 | Streams and Waterways | | | | Width | |
| Location | Under structure | | | | Height | | |
| Material | Other | | | | Count | 1 | |
| Element Type | N/A | | Element code | N/A | | Total Qnty. | 1 |
| Environment | - | | | | Limited Insp. | | |
| Protection System | None | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | All | 0 | 1 | 0 | 0 | | |

Comments:

Low volume with low flow from north to south. No obstructions noted.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|-----------------|---------------------------------|--------------|------|------------------------------------|-------------|--|
| Element Group | 1300 | Foundations | | | | Length | |
| Element Name | 1301 | Foundation (below ground level) | | | | Width | |
| Location | Below structure | | | | Height | | |
| Material | Unknown | | | | Count | | |
| Element Type | Foundations | | Element code | | | Total Qnty. | |
| Environment | - | | | | Limited Insp. | X | |
| Protection System | None | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | N/A | 0 | 1 | 0 | 0 | | |

Comments:

No visible evidence of instability at time of inspection.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|----------------------------------|----------|--------------|------|------------------------------------|-------------|------|
| Element Group | 400 | Barriers | | | | Length | 0.25 |
| Element Name | 403 | Posts | | | | Width | 0.25 |
| Location | North & south sides of structure | | | | Height | 1.00 | |
| Material | Cast-in-place concrete | | | | Count | 4 | |
| Element Type | N/A | | Element code | N/A | | Total Qnty. | 4 |
| Environment | Severe | | | | Limited Insp. | | |
| Protection System | None | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Each | 0 | 0 | 2 | 2 | | |

Comments:

Areas of large spalls with scaling and cracks noted. Railing is detached from posts at northeast corner.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-186

Element Data

| | | | | | | | | | |
|--|----------------------------------|-------------------------------|--------------------------|---------|-------------------------------------|-------------------------------|--------------------------|---|------|
| Element Group | 400 | Barriers | | | | | Length | 8.80 | |
| Element Name | 402 | Barrier (Exterior & Interior) | | | | | Width | 0.30 | |
| Location | North & south sides of structure | | | | | | | Height | 1.00 |
| Material | Cast-in-place concrete | | | | | | | Count | 2 |
| Element Type | Concrete Barrier | | | | Element code | 6 | Total Qty. | 35.2 | |
| Environment | Severe | | | | | | | Limited Insp. | |
| Protection System | None | | | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | 8 Pedestrian/Vehicular Hazard | | | |
| | m. | 0 | 10.2 | 12.5 | 12.5 | | | | |
| Comments: Medium to wide cracks with staining noted at north and south barriers. Large spalls with severe concrete disintegration and section loss noted | | | | | | | | | |
| Recommended Work: | | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - | |
| | | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | 6-10 yrs | <input type="checkbox"/> | Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> | |

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.:30-P



Photo 1 Structure from east approach



Photo 2 Structure from west approach



Photo 3 East approach from centre of structure



Photo 4 West approach from centre of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Concrete disintegration on north deck barrier



Photo 8 Vegetation growing throughout deck wearing surface



Photo 9 Spalls with exposed corroded reinforcement and efflorescence on north soffit



Photo 10 Spalls with exposed corroded reinforcement on north end of floor beam



Photo 11 Spalls and stained cracks on NE wingwall



Photo 12 Cracks and stains on east abutment wall



Photo 13 Large spall with exposed corroded reinforcement at concrete beams.



Photo 14 Spall with exposed corroded reinforcement at edge of concrete deck.

Structure Condition Summary Form

Structure Name
NOAH ROAD
Structure Number
32-P
Date of Inspection
May 05, 2022
Project No.
18015
Consultant
HP Engineering Inc.

| Element Group | Element Name | Unit (Qty.) | Unit Price (MTO) | Total Element Quantity | Element Qty. in Excellent Condition (1.00) | Element Quantity in Good Condition (0.75) | Element Quantity in Fair Condition (0.4) | Element Quantity in Poor Condition (0) | Total Replacement Value (TRV) | Current Element Value (CEV) | Element Condition Index | Performance Deficiency | Maintenance Need |
|--------------------------|------------------------|----------------|---------------------|------------------------------|---|---|--|--|-------------------------------------|--------------------------------------|-------------------------------|---------------------------|---------------------|
| Approaches | Wearing Surface | Sq.m | 6.00 | 60.00 | 0.00 | 60.00 | 0.00 | 0.00 | 360 | 270 | 75 | 00 | 00 |
| Barriers | Railing Systems | m | 200.00 | 32.50 | 0.00 | 32.50 | 0.00 | 0.00 | 6500 | 4875 | 75 | 00 | 00 |
| Sidewalks/ Curbs | Posts (Steel/Concrete) | Each | 200.00 | 19.00 | 0.00 | 19.00 | 0.00 | 0.00 | 3800 | 2850 | 75 | 00 | 00 |
| | Curbs | Sq.m | 40.00 | 21.13 | 0.00 | 6.13 | 9.00 | 6.00 | 845 | 328 | 39 | 00 | 00 |
| Decks | Deck Top - Thin Slab | Sq.m | 120.00 | 50.00 | 0.00 | 7.50 | 37.50 | 5.00 | 6000 | 2475 | 41 | 00 | 02 |
| | Soffit - Thin Slab | Sq.m | 120.00 | 35.10 | 0.00 | 10.53 | 14.04 | 10.53 | 4212 | 1622 | 39 | 00 | 00 |
| Beams/ Main Longitudinal | Girders | Sq.m | 200.00 | 57.60 | 0.00 | 0.00 | 28.80 | 28.80 | 11520 | 2304 | 20 | 01 | 00 |
| Abutment | Wingwalls | Sq.m | 350.00 | 19.20 | 0.00 | 0.00 | 9.60 | 9.60 | 6720 | 1344 | 20 | 01 | 00 |
| | Ballast Walls | Sq.m | 350.00 | 4.29 | 0.00 | 0.00 | 4.29 | 0.00 | 1502 | 601 | 40 | 00 | 00 |
| | Abutment Walls | Sq.m | 900.00 | 12.76 | 0.00 | 0.00 | 8.76 | 4.00 | 11484 | 3154 | 27 | 01 | 00 |
| | | | | | | | | | | 52943 | 19822 | | |

Bridge Condition Index (BCI)

37

Municipal Structure Inspection Form
TOWNSHIP OF CENTRE WELLINGTON

Structure Name 32-P

NOAH ROAD

Municipal Structure Inspection Form

MTO Site Number:

35-380

BCI:

38.00

Inventory Data:

| | | | |
|--------------------|----------------------------------|---|---|
| Structure Name: | 32-P | | |
| Main Hwy/Road # | | On <input checked="" type="checkbox"/> Under <input type="checkbox"/> | Crossing Type: Navig. Water <input checked="" type="checkbox"/> Non-Navig Water <input type="checkbox"/> Rail <input type="checkbox"/> Ped. <input type="checkbox"/> Road <input type="checkbox"/> Other <input type="checkbox"/> |
| Road Name | Noah Road | | |
| Structure Location | 0.75 km West of Eighth Line West | | |
| Latitude | N 43° 39' 31.3" | Longitude | W 80° 30' 24.4" |
| Owner(s) | Township of Centre Wellington | Heritage Designation | Not Cons. <input type="checkbox"/> Cons. /not App <input type="checkbox"/> List/not Desig. <input type="checkbox"/> Desig./not List <input type="checkbox"/> Desig. & List <input type="checkbox"/> |
| MTO Region * | - - | Road Class | Freeway <input type="checkbox"/> Collector <input type="checkbox"/> Arterial <input type="checkbox"/> Local <input checked="" type="checkbox"/> |
| MTO District * | - - | Posted Speed | 80 No. of Lanes: 2 |
| Current County* | - - | AADT | % Trucks |
| Geographic Twp. * | Pilkington | Special Routes: | Transit <input type="checkbox"/> School <input type="checkbox"/> Truck <input type="checkbox"/> Bicycle <input type="checkbox"/> |
| Structure Type* | 7 T-Beam | Detour Length | 9 (km) |
| Total Deck Length | 10.3 (m) | Fill on Structure | (m) |
| Overall Str. Width | 5.6 (m) | Skew Angle | (degrees) |
| Total Deck Area | 58 (sq. m) | Direction of Structure | E-W |
| Roadway Width | 4.1 (m) | No. of Spans | 1 |
| Span Lengths. | 9.2 (m) | | |

Historical Data:

| | | | |
|-------------------------|----------------------|------------------------------|---------------|
| Year Built | 1926 | Last Biennial Inspection | June 16, 2020 |
| Current Load Limit | Road Closed (tonnes) | Last BridgeMaster Inspection | |
| Load Limit By-Law # | | Last Evaluation | |
| By-Law Expiry Date | | Last Underwater Inspection | |
| Min. Vertical Clearance | (m) | Last Condition Survey | |

Rehab History : (Date/description)

Field Inspection Information:

| | |
|---------------------|--|
| Date of Inspection: | May 05, 2022 |
| Inspector: | Tashi Dwivedi, P.Eng., (H.P. Engineering) |
| Others in Party: | Charlemagne Charles and Sagar Chhayani, (H.P. Engineering) |
| Equipment Used: | Hammer, tape, Camera, Chest waders |
| Weather | Sunny |
| Temperature | °C |

| Additional Investigations Required | Priority | | | Estimated Cost |
|------------------------------------|----------|------------|--------|----------------|
| | None | Normal | Urgent | |
| Detailed Deck Condition Survey: | | | | |
| DART Survey: | | | | |
| Detailed Coating Condition Survey: | | | | |
| Underwater Investigation | | | | |
| Fatigue Investigation: | | | | |
| Seismic Investigation: | | | | |
| Structure Evaluation: | | | | |
| Load Posting - Estimated Load | 0 | Total Cost | | \$0 |

Special Notes:

No approach SBGR. Road closed at time of inspection. It is recommended that a rehabilitation / replacement study should be performed (\$ 20,000.00).

Next Detailed Inspection: May 2022

Municipal Structure Inspection Form

MTO Site Number:

35-380

| Repair and Rehabilitation Required | | Priority | | | | Estimated Construction Cost |
|------------------------------------|------------------------------------|------------|-------------|---------------|--------|-----------------------------|
| Element | Repair and Rehabilitation Required | 6-10 years | 1 - 5 years | Within 1 year | Urgent | |
| | Rehabilitate / replace structure | | X | | | \$663,000.00 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | \$663,000.00 |

| Associated Work: | Comments | Estimated Cost |
|---------------------|------------------|----------------|
| Approaches | Approach SBGR | |
| Detours | Required | \$ 100,000.00 |
| Traffic Control | | \$60,000.00 |
| Utilities | | |
| Right of Way | | |
| Environmental Study | Approvals | \$100,000.00 |
| Other | Engineering Fees | |
| Contingencies | | |
| Total Cost | | \$260,000.00 |

Justification

Estimated costs are based on a structure the same size as the existing.

Element Data

| | | | | | | | |
|------------------------------------|--------------------------------|----------------|-----------|--------------|--------------|----------------------|---------------|
| Element Group | 900 | Abutments | | | | Length | |
| Element Name | 901 | Abutment Walls | | | | Width | 5.80 |
| Location | East & west sides of structure | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | Conventional closed | | | | Element code | | |
| Environment | Moderate | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units Sq. m. | Ex. 0 | Good 0 | Fair 8.76 | Poor 4 | Total Qnty. 12.76 | Limited Insp. |
| Suspected Performance Deficiencies | | | | | | | |
| 1 Load Carrying capacity | | | | | | | |

Comments:

Severe erosion along bottom of west wall and north half of west wall. Moderate scaling. Wide cracks at NE and SW corners. Localized spalls and concrete disintegration with honeycombing observed throughout.

| | | | | |
|-------------------|---|---|--------------|---------------------------------|
| Recommended Work: | Rehab <input checked="" type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | Urgent | 1 year <input type="checkbox"/> |

| | | | | | | | |
|------------------------------------|------------------------------|-----------|-----------|-------------|--------------|---------------------|---------------|
| Element Group | 900 | Abutments | | | | Length | 3.00 |
| Element Name | 903 | Wingwalls | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | Reinforced concrete | | | | Element code | 6 | |
| Environment | Moderate | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units Sq. m. | Ex. 0 | Good 0 | Fair 9.6 | Poor 9.6 | Total Qnty. 19.2 | Limited Insp. |
| Suspected Performance Deficiencies | | | | | | | |
| 1 Load Carrying capacity | | | | | | | |

Comments:

Wide cracks, delaminations. Erosion at base of wingwalls, some exposed steel. A large area of disintegration was noted at northwest and south west corners.

| | | | | |
|-------------------|---|---|--------------|---------------------------------|
| Recommended Work: | Rehab <input checked="" type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | Urgent | 1 year <input type="checkbox"/> |

| | | | | | | | |
|------------------------------------|------------------------------------|---------------|-----------|--------------|--------------|---------------------|---------------|
| Element Group | 900 | Abutments | | | | Length | 3.90 |
| Element Name | 902 | Ballast Walls | | | | Width | |
| Location | East & west underside of structure | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | N/A | | | | Element code | N/A | |
| Environment | Moderate | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units Sq. m. | Ex. 0 | Good 0 | Fair 4.29 | Poor 0 | Total Qnty. 4.29 | Limited Insp. |
| Suspected Performance Deficiencies | | | | | | | |
| - - | | | | | | | |

Comments:

Moderate scaling and honeycombing throughout.

| | | | | |
|-------------------|---------------------------------|----------------------------------|--------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | Urgent | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-380

Element Data

| | | | | | | | |
|-------------------|------------------------------|-------|--------------|------|------|------------------------------------|---|
| Element Group | 1500 | Signs | | | | Length | |
| Element Name | 1501 | Sign | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | | |
| Material | Steel | | | | | | |
| Element Type | N/A | | Element code | N/A | | | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Each | 0 | 5 | 0 | 0 | | |
| | | | | | | Total Qty. | 5 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Minor abrasion damage and small dents noted on hazard signs. Northeast and southwest signs leaning.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|--------------------------------|-----------------------|--------------|------|------|------------------------------------|------|
| Element Group | 1600 | Approaches | | | | Length | 6.00 |
| Element Name | 1601 | Wearing surface (app) | | | | Width | 5.00 |
| Location | East & west sides of structure | | | | | | |
| Material | Gravel | | | | | | |
| Element Type | N/A | | Element code | N/A | | | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 60 | 0 | 0 | | |
| | | | | | | Total Qty. | 60 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Generally in good condition with some vegetation growth and tire rutting.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|------------------------|-------------|--------------|------|------|------------------------------------|------------------------|
| Element Group | 500 | Beams/MLE's | | | | Length | 9.00 |
| Element Name | 501 | Girders | | | | Width | 0.50 |
| Location | Underside of structure | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | Rectangular-solid | | Element code | 4 | | | |
| Environment | Moderate | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 0 | 28.8 | 28.8 | | |
| | | | | | | Total Qty. | 57.6 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | 1 | Load Carrying capacity |

Comments:

Exterior girders are severely spalled and some areas of delamination. Zero confinement of tension steel. Steel is severely corroded on exterior girder.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|-------------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Element Data

| | | | | | | | |
|-------------------|---|--------------------|------|------|--------------|------------------------------------|-------|
| Element Group | 100 | Decks | | | | Length | 10.00 |
| Element Name | 102 | Deck top (exposed) | | | | Width | 5.00 |
| Location | Top of deck | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | Cast-in-place conc on supports, composite | | | | Element code | | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 7.5 | 37.5 | 5 | | |
| | | | | | | Total Qty. | 50 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Moderate to severe scaling, abrasion. At time of the inspection the deck was mostly covered in debris

| | | | | | | | |
|-------------------|--------|--------------------------|---------|-------------------------------------|--------------|--------------------------|--|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | 02 | Bridge Cleaning |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input checked="" type="checkbox"/> |

| | | | | | | | |
|-------------------|------------------------|------------------|-------|-------|--------------|------------------------------------|------|
| Element Group | 100 | Decks | | | | Length | 9.00 |
| Element Name | 103 | Soffit Thin Slab | | | | Width | 1.30 |
| Location | Interior | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | N/A | | | | Element code | N/A | |
| Environment | Benign | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 10.53 | 14.04 | 10.53 | | |
| | | | | | | Total Qty. | 35.1 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Numerous spalls and delaminations with exposed corroded reinforcement noted on soffit.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|-------------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|------------------------|-----------------|------|------|--------------|------------------------------------|---|
| Element Group | 100 | Decks | | | | Length | |
| Element Name | 101 | Wearing surface | | | | Width | |
| Location | | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | N/A | | | | Element code | N/A | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 0 | 0 | 0 | | |
| | | | | | | Total Qty. | |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Element does not exist.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Element Data

| | | | | | | | |
|-------------------|------------------------------|-------------------------|------|------|------|------------------------------------|---|
| Element Group | 1400 | Embankments and Streams | | | | Length | |
| Element Name | 1402 | Embankments | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | | |
| Material | Native soil | | | | | | |
| Element Type | N/A | Element code | N/A | | | | |
| Environment | - | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Each | 0 | 4 | 0 | 0 | | |
| | | | | | | Total Qty. | 4 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Steep slope, well vegetated and stable embankment observed. Erosion and washout at southwest corners.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|------------|-------------------------|------|------|------|------------------------------------|---|
| Element Group | 1400 | Embankments and Streams | | | | Length | |
| Element Name | 1403 | Slope Protections | | | | Width | |
| Location | | | | | | | |
| Material | Other | | | | | | |
| Element Type | Vegetation | Element code | 11 | | | | |
| Environment | - | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Each | 0 | 0 | 0 | 0 | | |
| | | | | | | Total Qty. | |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Element does not exist.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|-----------------|-------------------------|------|------|------|------------------------------------|---------------------------|
| Element Group | 1400 | Embankments and Streams | | | | Length | |
| Element Name | 1401 | Streams and Waterways | | | | Width | |
| Location | Under structure | | | | | | |
| Material | Other | | | | | | |
| Element Type | N/A | Element code | N/A | | | | |
| Environment | - | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | All | 0 | 1 | 0 | 0 | | |
| | | | | | | Total Qty. | 1 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | 13 | Flooding/Channel blockage |

Comments:

Low volume, low flow from north to south with a heavy vegetation accumulation blocking stream.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-380

Element Data

| | | | | | | | |
|-------------------|-----------------|---------------------------------|------|------|--------------|--------|--|
| Element Group | 1300 | Foundations | | | | Length | |
| Element Name | 1301 | Foundation (below ground level) | | | | Width | |
| Location | Below structure | | | | | | |
| Material | Unknown | | | | | | |
| Element Type | Foundations | | | | Element code | | |
| Environment | - | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | N/A | | | | | | |

| | |
|------------------------------------|-------------------------------------|
| Total Qty. | |
| Limited Insp. | <input checked="" type="checkbox"/> |
| Suspected Performance Deficiencies | |
| - | - |

Comments:
No signs of instability noted at the time of inspection.

Recommended Work:

| | | | | | | |
|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|----------------------------------|---------------------|------|------|--------------|--------|-------|
| Element Group | 300 | Sidewalks and curbs | | | | Length | 16.25 |
| Element Name | 302 | Curbs | | | | Width | 0.40 |
| Location | North & south sides of structure | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | N/A | | | | Element code | N/A | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 6.13 | 9 | 6 | | |

| | |
|------------------------------------|--------------------------|
| Total Qty. | 21.13 |
| Limited Insp. | <input type="checkbox"/> |
| Suspected Performance Deficiencies | |
| - | - |

Comments:
Wide cracks along exterior, spalls with exposed reinforcement, severe scaling noted on curbs.

Recommended Work:

| | | | | | | |
|--------|--------------------------|---------|-------------------------------------|--------------|--------------------------|---------------------------------|
| Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|----------------------------------|----------|------|------|--------------|--------|------|
| Element Group | 400 | Barriers | | | | Length | 0.15 |
| Element Name | 403 | Posts | | | | Width | 0.05 |
| Location | North & south sides of structure | | | | | | |
| Material | Steel | | | | | | |
| Element Type | N/A | | | | Element code | N/A | |
| Environment | Severe | | | | | | |
| Protection System | Hot dip galvanizing | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Each | 0 | 19 | 0 | 0 | | |

| | |
|------------------------------------|--------------------------|
| Total Qty. | 19 |
| Limited Insp. | <input type="checkbox"/> |
| Suspected Performance Deficiencies | |
| - | - |

Comments:
Generally in good condition. Localized corrosion observed at the bottom section of steel post at south curb.

Recommended Work:

| | | | | | | |
|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-380

Element Data

| | | | | | | | | | |
|--|----------------------------------|-----------------|--------------------------|--------------|--------------------------|--------------|--------------------------|---|---|
| Element Group | 400 | Barriers | | | | Length | 16.25 | | |
| Element Name | 402 | Railing Systems | | | | Width | | | |
| Location | North & south sides of structure | | | | | | | Height | |
| Material | Steel | | | | | | | Count | 2 |
| Element Type | Steel Flex Beam on steel post | | | Element code | 10 | Total Qty. | 32.5 | | |
| Environment | Severe | | | | | | | Limited Insp. | |
| Protection System | Hot dip galvanizing | | | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | - | - | | |
| | m. | 0 | 32.5 | 0 | 0 | | | | |
| Comments: Code compliency of the barrier should be revised. Condition is generally good.Moderate weathering and abrasion throughout. | | | | | | | | | |
| Recommended Work: | | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - | |
| | | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | 6-10 yrs | <input type="checkbox"/> | Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> | |

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.:32-P



Photo 1 Structure from east approach



Photo 2 Structure from west approach



Photo 3 East approach from center of structure



Photo 4 West approach from centre of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Large spalls with exposed corroded reinforcement noted on curbs



Photo 8 Large spalls with exposed corroded reinforcement on soffit and girder



Photo 9 Large spall with exposed corroded reinforcement on underside of exterior girder



Photo 10 Severe scaling and spalls observed on southwest wingwall

Structure Condition Summary Form

Structure Name
NOAH ROAD
Structure Number
33-P
Date of Inspection
May 05, 2022
Project No.
18015
Consultant
HP Engineering Inc.

| Element Group | Element Name | Unit (Qty.) | Unit Price (MTO) | Total Element Quantity | Element Qty. in Excellent Condition (1.00) | Element Quantity in Good Condition (0.75) | Element Quantity in Fair Condition (0.4) | Element Quantity in Poor Condition (0) | Total Replacement Value (TRV) | Current Element Value (CEV) | Element Condition Index | Performance Deficiency | Maintenance Need |
|--------------------------|------------------------|----------------|---------------------|------------------------------|--|---|--|--|-------------------------------------|--------------------------------------|-------------------------------|---------------------------|---------------------|
| Approaches | Wearing Surface | Sq.m | 6.00 | 28.80 | 0.00 | 0.00 | 28.80 | 0.00 | 173 | 69 | 40 | 00 | 00 |
| Barriers | Railing Systems | m | 200.00 | 30.00 | 0.00 | 30.00 | 0.00 | 0.00 | 6000 | 4500 | 75 | 00 | 00 |
| Sidewalks/ Curbs | Posts (Steel/Concrete) | Each | 200.00 | 14.00 | 0.00 | 14.00 | 0.00 | 0.00 | 2800 | 2100 | 75 | 01 | 00 |
| | Curbs | Sq.m | 40.00 | 19.50 | 0.00 | 0.00 | 9.75 | 9.75 | 780 | 156 | 20 | 08 | 00 |
| Decks | Deck Top - Thin Slab | Sq.m | 120.00 | 62.70 | 0.00 | 0.00 | 31.35 | 31.35 | 7524 | 1505 | 20 | 09 | 00 |
| Beams/ Main Longitudinal | Soffit - Thin Slab | Sq.m | 120.00 | 36.36 | 0.00 | 0.00 | 18.18 | 18.18 | 4363 | 873 | 20 | 01 | 00 |
| | Girders | Sq.m | 200.00 | 20.20 | 0.00 | 12.20 | 4.00 | 4.00 | 4040 | 2150 | 53 | 01 | 00 |
| Abutment | Wingwalls | Sq.m | 350.00 | 27.00 | 0.00 | 0.00 | 13.50 | 13.50 | 9450 | 1890 | 20 | 01 | 00 |
| | Ballast Walls | Sq.m | 350.00 | 5.40 | 0.00 | 3.40 | 1.00 | 1.00 | 1890 | 1033 | 55 | 00 | 08 |
| | Abutment Walls | Sq.m | 900.00 | 28.50 | 0.00 | 20.50 | 5.00 | 3.00 | 25650 | 15638 | 61 | 00 | 08 |
| | | | | | | | | | | 62670 | 29913 | | |

Bridge Condition Index (BCI)

48

Municipal Structure Inspection Form
TOWNSHIP OF CENTRE WELLINGTON

Structure Name 33-P

NOAH ROAD

Field Inspection Information:

| | |
|---------------------|--|
| Date of Inspection: | May 05, 2022 |
| Inspector: | Tashi Dwivedi, P.Eng., HP Engineering |
| Others in Party: | Charlemagne Charles and Sagar Chhayani, HP Engineering |
| Equipment Used: | Hammer, tape, Camera, Chest waders |
| Weather | Sunny |
| Temperature | 15 °C |

| Additional Investigations Required | Priority | | | Estimated Cost |
|------------------------------------|----------|------------|--------|----------------|
| | None | Normal | Urgent | |
| Detailed Deck Condition Survey: | | | | |
| DART Survey: | | | | |
| Detailed Coating Condition Survey: | | | | |
| Underwater Investigation | | | | |
| Fatigue Investigation: | | | | |
| Seismic Investigation: | | | | |
| Structure Evaluation: | | | | |
| Load Posting - Estimated Load | 0 | Total Cost | | \$0 |

Special Notes:

No approach Barrier. Road closed at time of inspection. It is recommended that a rehabilitation / replacement study be performed (\$ 20,000.00).

Next Detailed Inspection: May 2024

35-381

| Justification |
|---|
| Estimated costs are based on a structure the same size as the existing. It is recommended that a rehabilitation study is performed to determine the appropriate rehabilitation/repalcement. |

Municipal Structure Inspection Form

MTO Site Number

35-381

Element Data

| | | | | | | | |
|-------------------|-------------------------------|----------------|------|--------------|------|------------------------------------|------|
| Element Group | 900 | Abutments | | | | Length | |
| Element Name | 901 | Abutment Walls | | | | Width | 5.70 |
| Location | East & west side of structure | | | | | Height | 2.50 |
| Material | Cast-in-place concrete | | | | | Count | 2 |
| Element Type | Conventional closed | | | Element code | 1 | Total Qty. | 28.5 |
| Environment | Moderate | | | | | Limited Insp. | |
| Protection System | None | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | - | - |
| | Sq. m. | 0 | 18.5 | 6 | 4 | | |

Comments:

Wide cracks at abutment walls, delaminations, scaling and spalls noted. Abutment jackets are generally good condition.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|--|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | 08 | Bridge concrete repairs |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input checked="" type="checkbox"/> |

| | | | | | | | |
|-------------------|------------------------------|-----------|------|--------------|------|------------------------------------|------------------------|
| Element Group | 900 | Abutments | | | | Length | 3.40 |
| Element Name | 903 | Wingwalls | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | Height | 2.00 |
| Material | Cast-in-place concrete | | | | | Count | 4 |
| Element Type | Reinforced concrete | | | Element code | 6 | Total Qty. | 27.2 |
| Environment | Moderate | | | | | Limited Insp. | |
| Protection System | None | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | 01 | Load carrying capacity |
| | Sq. m. | 0 | 0 | 13.5 | 13.5 | | |

Comments:

Very wide cracks, concrete disintegration noted on wingwall. Northwest wingwall is not connected to the structure, and is falling into the the river.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|------------------------------------|---------------|------|--------------|------|------------------------------------|------|
| Element Group | 900 | Abutments | | | | Length | 3.60 |
| Element Name | 902 | Ballast Walls | | | | Width | |
| Location | East & west underside of structure | | | | | Height | 0.75 |
| Material | Cast-in-place concrete | | | | | Count | 2 |
| Element Type | N/A | | | Element code | N/A | Total Qty. | 5.4 |
| Environment | Moderate | | | | | Limited Insp. | |
| Protection System | None | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | - | - |
| | Sq. m. | 0 | 3.4 | 1 | 1 | | |

Comments:

Wide cracks, with severe spall and delamination noted at west ballast wall. Localized medium map cracks and horizontal cracks noted at east ballast wall.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|--|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | 08 | Bridge concrete repairs |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input checked="" type="checkbox"/> |

Element Data

| | | | | | | | |
|-------------------|------------------------------|-------|------|--------------|------|------------------------------------|---|
| Element Group | 1500 | Signs | | | | Length | |
| Element Name | 1501 | Sign | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | | |
| Material | STeel | | | | | | |
| Element Type | N/A | | | Element code | N/A | | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Each | 0 | 2 | 3 | 0 | | |
| | | | | | | Total Qty. | 5 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Generally in good condition with some minor abrasions and small dents noted.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|--------------------------------|-----------------------|------|--------------|------|------------------------------------|------|
| Element Group | 1600 | Approaches | | | | Length | 6.00 |
| Element Name | 1601 | Wearing surface (app) | | | | Width | 4.80 |
| Location | East & west sides of structure | | | | | | |
| Material | Gravel | | | | | | |
| Element Type | N/A | | | Element code | N/A | | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 0 | 28.8 | 0 | | |
| | | | | | | Total Qty. | 28.8 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Generally in fair condition. Mostly vegetated.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|------------------------|-------------|------|--------------|------|------------------------------------|------------------------|
| Element Group | 500 | Beams/MLE's | | | | Length | 10.10 |
| Element Name | 501 | Girders | | | | Width | 0.50 |
| Location | Underside of structure | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | Rectangular-solid | | | Element code | 4 | | |
| Environment | Moderate | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 12.2 | 4 | 4 | | |
| | | | | | | Total Qty. | 20.2 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | 1 | Load Carrying capacity |

Comments:

Wide cracks, spalls, and delaminations on underside of girders, particularly exterior girders. Large areas of delamination and spalls with exposed corroded reinforcing on all 4 corners.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|-------------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Element Data

| | | | | | | | |
|-------------------|---|----------|------|--------------|------------------------------------|--------|----------------------|
| Element Group | 100 | Decks | | | | Length | 11.00 |
| Element Name | 102 | Deck top | | | | Width | 5.70 |
| Location | Top of deck | | | | Height | | |
| Material | Cast-in-place concrete | | | | Count | 1 | |
| Element Type | Cast-in-place conc on supports, composite | | | Element code | Total Qty. | 62.7 | |
| Environment | Moderate | | | | Limited Insp. | | |
| Protection System | None | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | 9 | Rough riding surface |
| | Sq. m. | 0 | 0 | 31.35 | 31.35 | | |

Comments:

Mostly covered in gravel and vegetation. Exposed portion is severely scaled and spalled (100mm deep). Northwest section of deck top is detached from bridge deck.

| | | | | | | | |
|-------------------|--------|--------------------------|----------|-------------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |
| | | | 6-10 yrs | <input type="checkbox"/> | | | |

| | | | | | | | |
|-------------------|------------------------|------------------|------|--------------|------------------------------------|------------|------------------------|
| Element Group | 100 | Decks | | | | Length | 10.10 |
| Element Name | 103 | Soffit Thin Slab | | | | Width | 3.60 |
| Location | Interior | | | | Height | | |
| Material | Cast-in-place concrete | | | | Count | 1 | |
| Element Type | N/A | | | Element code | N/A | Total Qty. | 36.36 |
| Environment | Benign | | | | Limited Insp. | | |
| Protection System | None | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | 1 | Load Carrying capacity |
| | Sq. m. | 0 | 0 | 18.18 | 18.18 | | |

Comments:

Nearly entire soffit is spalled, delaminated, or severely scaled with exposed corroded reinforcement. Transverse cracks with scaling noted throughout.

| | | | | | | | |
|-------------------|--------|--------------------------|----------|-------------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |
| | | | 6-10 yrs | <input type="checkbox"/> | | | |

| | | | | | | | |
|-------------------|------------------------|-----------------|------|--------------|------------------------------------|------------|---|
| Element Group | 100 | Decks | | | | Length | |
| Element Name | 101 | Wearing surface | | | | Width | |
| Location | Top of deck | | | | Height | | |
| Material | Cast-in-place concrete | | | | Count | | |
| Element Type | N/A | | | Element code | N/A | Total Qty. | |
| Environment | Severe | | | | Limited Insp. | | |
| Protection System | None | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | - | - |
| | Sq. m. | 0 | 0 | 0 | 0 | | |

Comments:

Element does not exist.

| | | | | | | | |
|-------------------|--------|--------------------------|----------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |
| | | | 6-10 yrs | <input type="checkbox"/> | | | |

Municipal Structure Inspection Form

MTO Site Number

35-381

Element Data

| | | | | | | | |
|-------------------|------------------------------|-------------------------|------|------|--------------|------------------------------------|---|
| Element Group | 1400 | Embankments and Streams | | | | Length | |
| Element Name | 1402 | Embankments | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | | |
| Material | Other | | | | | | |
| Element Type | N/A | | | | Element code | N/A | |
| Environment | - | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Each | 0 | 3 | 0 | 1 | | |
| | | | | | | Count | 4 |
| | | | | | | Total Qty. | 4 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Steep slope, well vegetated and stable. Northwest embankment is falling into the river.

Recommended Work:

Rehab ☐Replace ☐

Maint. Needs -

Urgent ☐1-5 yrs ☐ 6-10 yrs ☐Urgent ☐ 1 year ☐

| | | | | | | | |
|-------------------|------------|-------------------------|------|------|--------------|------------------------------------|---|
| Element Group | 1400 | Embankments and Streams | | | | Length | |
| Element Name | 1403 | Slope Protections | | | | Width | |
| Location | | | | | | | |
| Material | Other | | | | | | |
| Element Type | Vegetation | | | | Element code | 11 | |
| Environment | - | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Each | 0 | 4 | 0 | 0 | | |
| | | | | | | Count | 4 |
| | | | | | | Total Qty. | 4 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Element does not exist.

Recommended Work:

Rehab ☐Replace ☐

Maint. Needs -

Urgent ☐1-5 yrs ☐ 6-10 yrs ☐Urgent ☐ 1 year ☐

| | | | | | | | |
|-------------------|-----------------|-------------------------|------|------|--------------|------------------------------------|---|
| Element Group | 1400 | Embankments and Streams | | | | Length | |
| Element Name | 1401 | Streams and Waterways | | | | Width | |
| Location | Under structure | | | | | | |
| Material | Other | | | | | | |
| Element Type | N/A | | | | Element code | N/A | |
| Environment | - | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | All | 0 | 0 | 0 | 1 | | |
| | | | | | | Count | 1 |
| | | | | | | Total Qty. | 1 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Moderate volume with Low flow from north to south observed. Severe aggradation forcing all flow directly at NE wingwall.

Recommended Work:

Rehab ☐Replace ☐

Maint. Needs -

Urgent ☐1-5 yrs ☐ 6-10 yrs ☐Urgent ☐ 1 year ☐

Municipal Structure Inspection Form

MTO Site Number

35-381

Element Data

| | | | | | | | | |
|-------------------|-----------------|---------------------------------|------|------|--------------|------------------------------------|--------|--|
| Element Group | 1300 | Foundations | | | | | Length | |
| Element Name | 1301 | Foundation (below ground level) | | | | | Width | |
| Location | Below structure | | | | | Height | | |
| Material | Unknown | | | | | Count | | |
| Element Type | Foundations | | | | Element code | Total Qty. | | |
| Environment | - | | | | | Limited Insp. | | |
| Protection System | None | | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | - | - | |
| | N/A | | | | | | | |

Comments:
No signs of instability noted at the time of inspection.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | | |
|-------------------|----------------------------------|---------------------|------|------|--------------|------------------------------------|-----------------------------|-------|
| Element Group | 300 | Sidewalks and curbs | | | | | Length | 15.00 |
| Element Name | 302 | Curbs | | | | | Width | 0.45 |
| Location | North & south sides of structure | | | | | Height | 0.20 | |
| Material | Cast-in-place concrete | | | | | Count | 2 | |
| Element Type | N/A | | | | Element code | N/A | Total Qty. | 19.5 |
| Environment | Severe | | | | | Limited Insp. | | |
| Protection System | None | | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | 8 | Pedestrian/vehicular hazard | |
| | Sq. m. | 0 | 0 | 9.75 | 9.75 | | | |

Comments:
Large portions of curb are missing at Northeast and Southwest corners. Remaining portions are moderately to severely scaled with wide cracks. Exposed corroded reinforcing with some localized severe disintegration noted.

| | | | | | |
|-------------------|---------------------------------|---|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | | |
|-------------------|----------------------------------|----------|------|------|--------------|------------------------------------|------------------------|------|
| Element Group | 400 | Barriers | | | | | Length | 0.15 |
| Element Name | 403 | Posts | | | | | Width | 0.05 |
| Location | North & south sides of structure | | | | | Height | 0.80 | |
| Material | Steel | | | | | Count | 14 | |
| Element Type | N/A | | | | Element code | N/A | Total Qty. | 14 |
| Environment | Severe | | | | | Limited Insp. | | |
| Protection System | Hot dip galvanizing | | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | 1 | Load Carrying capacity | |
| | Each | 0 | 14 | 0 | 0 | | | |

Comments:
±5 posts are not anchored to the deck.

| | | | | | |
|-------------------|---------------------------------|---|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-381

Element Data

| | | | | | | | | |
|--|----------------------------------|-----------------|--------------------------|---------|-------------------------------------|------------------------------------|--|-------|
| Element Group | 400 | Barriers | | | | | Length | 15.00 |
| Element Name | 402 | Railing Systems | | | | | Width | |
| Location | North & south sides of structure | | | | | Height | | |
| Material | Steel | | | | | Count | 2 | |
| Element Type | Steel Flex Beam on steel post | | | | Element code | 10 | Total Qty. | 30 |
| Environment | Severe | | | | | Limited Insp. | | |
| Protection System | Hot dip galvanizing | | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | 1 | Load Carrying capacity | |
| | m. | 0 | 30 | 0 | 0 | | | |
| Comments: Barrier system does not seem adequate for traffic loads. Light collision damage / abrasion noted on steel posts. | | | | | | | | |
| Recommended Work: | | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | |
| | | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | 6-10 yrs | <input type="checkbox"/> | |
| | | | | | | Urgent | <input type="checkbox"/> 1 year <input type="checkbox"/> | |

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.:33-P



Photo 1 Structure from east approach



Photo 2 Structure from west approach



Photo 3 East approach from center of structure



Photo 4 West approach from centre of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Some abrasion and small dents noted on hazard sign



Photo 8 Spalls in concrete around barrier posts



Photo 9 Spalls and delaminations with exposed corroded reinforcement on east deck soffit



Photo 10 Spall with exposed corroded reinforcement on south exterior girder



Photo 11 West underside of structure



Photo 12 Northwest wingwall collapse and disconnected from abutment



Photo 13 Wide cracks, and spalls on SE wingwall



Photo 14 Localized cracks with staining at abutments.

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BURNSIDE

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Appendix C

Heritage Documentation Report (Photo Inventory) Bridge 1-P

Sideroad 5 Bridge (1-P)
of the former Township of Pilkington
Photographic Inventory

June, 2019

Prepared by Adam Dickieson
Township of Centre Wellington, Infrastructure Service Department

Bridge 1-P Documentation Heritage Photos



View of the bridge facing south



View of the westerly abutment facing south



View of deck and easterly abutment facing south-east



View of deck and westerly abutment facing south-west



View of easterly abutment facing south-east



View of underside of deck facing west



View of north-east Bridge bearing facing east



View of beams under deck facing west



View of supporting beams and easterly abutment from underneath bridge facing east



View of easterly abutment facing north



View of easterly abutment facing south



View of bridge facing south-east



View of bridge deck and trusses facing east



View of bridge deck and trusses facing east



View of North-westerly truss facing north



Facing north



View of north-east truss facing north



View of south-west, facing south



Facing south





View of south-westerly corner facing east



View of north-westerly corner facing east



View of west edge of deck facing south



View of westerly abutment facing north



View of south-westerly bridge bearing facing north



View of southern corner of the westerly abutment facing western



View of underside of deck facing east



View of south-westerly bridge bearing and westerly abutment facing north



View of bridge facing north-east



View of bridge facing north



View of bridge deck facing west



View of north-east bridge bearing



View of north-east Bridge bearing facing south



View of bridge facing south-west



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Appendix D

Geometric & Hydraulic Design Technical Memorandum



Technical Memorandum – Geometric and Hydraulic Design – Centre Wellington 5 Bridges EA

Date: January 29, 2024

Project No.: 300056693.0000

Project Name: Centre Wellington 5-Bridges Municipal Class Environmental Assessment

Client Name: Municipality of Meaford

Submitted To: File (MCEA Project File Report)

Submitted By: Andrew Dawson, P.Eng.

Reviewed By: Matthew Brooks, P.Eng.

This memorandum outlines the bridge geometry for the existing structure and the replacement alternative at each of the five structure locations, to be used when evaluating the various alternatives associated with this Environmental Assessment (EA) study. This report will outline the preferred geometric design criteria desired for all site locations (Section 1.0) and the site-specific geometry proposed at each location (Sections 2.0, 3.0, 4.0, and 5.0). For the purpose of this study, structures 32-P and 33-P will be combined into one “site”.

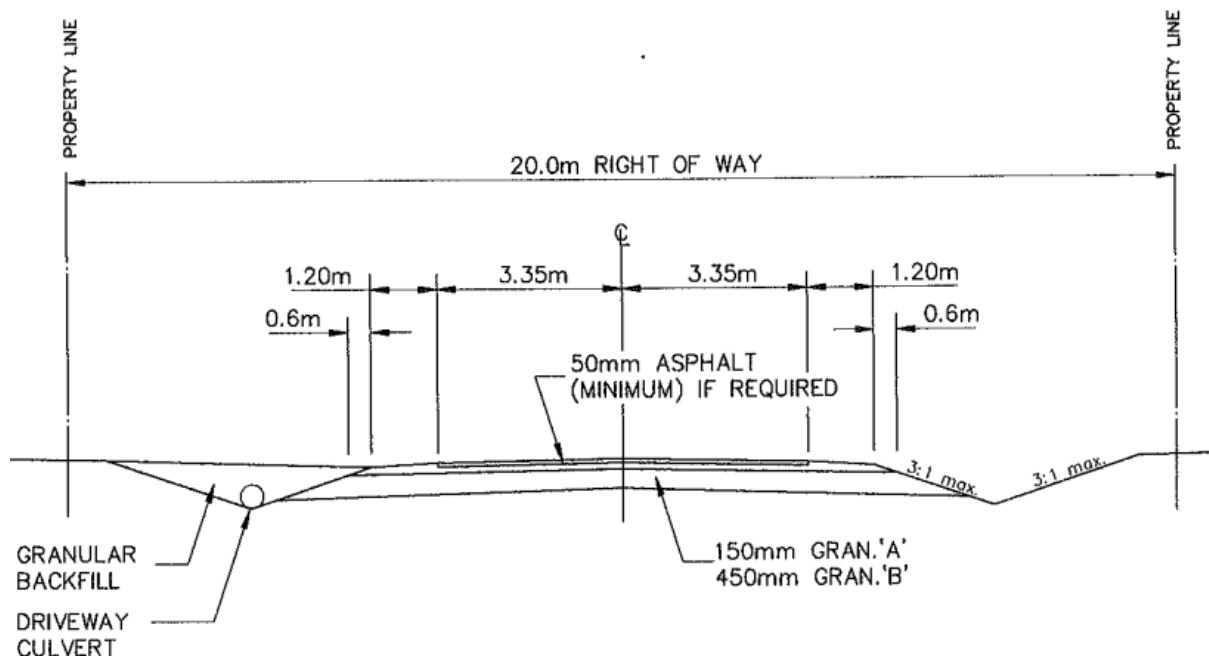
1.0 Preferred Design Criteria

The following outlines the *preferred* design criteria, in accordance with applicable Township of Centre Wellington (Township), County of Wellington (County), and the Ministry of Transportation Ontario (MTO) geometric design standards that will be desired to be met where site conditions permit.

1.1 Preferred Driving Platform Width

R.J. Burnside & Associates Limited (Burnside) has compared the Township Standard Cross Section, Rural Road – 20.0 m R.O.W. (Drawing R4), as illustrated in Figure 1 below, and the minimum requirements outlined in the MTO Design Supplement to the Transportation Association of Canada (“TAC”) Geometric Design Guideline to provide an overall preferred platform width.

Figure 1: Township Standard Cross Section, Rural Road - 20.0 m R.O.W (Drawing R4)



The MTO Design Supplement cross section was based on the following design criteria:

- Road Classification = Local (Minor);
- Traffic Volume = < 400; and
- Design Speed = 80 km/h (un-posted rural road).

A comparison of the overall cross sections has been provided below in Table 1.

Table 1: Proposed Cross Section

| Criteria | Township Standard (New Construction) | MTO Design Supplement to TAC (Min. Requirements) | Preferred Cross Section |
|---------------------------------|---|--|-------------------------------------|
| Lane Width | 3.35 m | 3.25 m ⁽¹⁾ | 3.35 m |
| Shoulder Width on Approaches | 1.2 m | 1.0 m ⁽²⁾ | 1.25 m (to match Side Clearance) |
| Side Clearance on Bridge | Not specified | 1.25 m ⁽³⁾ | 1.25 m |
| TOTAL WIDTH | 9.1 m | 8.5 m (approaches) 9.0 m (on bridge) | 9.2 m |

⁽¹⁾ 3.0 m lanes would likely be considered, given the type, size, and volume of trucks is not significant.
⁽²⁾ Shoulder width of 0.5 m is acceptable on two-lane roads where there is no foreseeable possibility of the road being paved within a 20-year period. Where steel beam guide rail is installed, shoulder width must be 1.0 m.
⁽³⁾ Side clearances of 0.5 m can be considered on Low Volume Roads with AADT less than 400, where single lane or narrow bridges are desired, however considering the potential for Seasonal Average Daily Traffic or future growth within the 75-year service life of structure the Standard Road Classification requirements have been used.

Based on our review of the Townships standard cross section and the MTO Design Supplement to the TAC Geometric Design Guideline, Burnside recommends carrying the approach shoulder widths over the bridge to avoid narrowing the roadway at the bridge crossing and therefore providing a preferred cross section with two 3.35 m lanes and 1.25 m shoulders / side clearances, for a total of a 9.2 m wide driving platform.

1.2 Preferred Roadway Alignment Geometry

All four sites being evaluated are located on non-posted rural roadways with an assumed (unposted) speed limit of 80 km/h. However, the existing vertical profiles of roadways within the vicinity of all structures are significantly sub-standard and do not meet the requirements for sight lines for an 80 km/h design speed.

It is noted that road profile changes negatively impact the hydraulic performance of the site for the Regional Storm event, which currently overtops all of the structures being evaluated. In some instances, increases to the span of the structure do not offset the negative impacts of the road profile increase resulting from the depth of superstructure required to reach such span. In such instances, consideration shall be given to reducing the posted speed limit within the vicinity of the structures by advisory or regulatory signage and associated bylaws, where applicable.

Preliminary profiles have identified that there are several site constraints that would prevent the roadway from being improved to an 80 km/h design speed. These constraints generally include, but are not limited to, the following:

- Limitations on road profile increases within the flood plain, so as to not cause negative impacts to upstream properties during flood events, as outlined above;
- Right of Way limitations for grading associated within Township owned lands;
- Impacts to adjacent natural or hydrologic features such as wetlands.

Further, it is noted that the Township's Development Standards reference that their Minor Local road networks are to be designed using a 40 – 50 km/h Design Speed. Considering this, the *preferred* roadway geometry, in accordance with 'Table 4: Geometric Standards' of the Township's Development Standards, are summarized in Table 2 below:

Table 2: Preferred Roadway Geometric Criteria

| | |
|---|---|
| Desired Design Speed | 40-50 km/h |
| Minimum Grade | 0.5% |
| Maximum Grade | 8.0% |
| Minimum Centreline Horizontal Radius | 60.0 m |
| Rate of Vertical Curvature (K) | Sag: 12 (5 ⁽¹⁾) Crest: 8 |
| Crossfall | 2% |
| ⁽¹⁾ Illuminated condition where headlight-based sight lines do not govern. Based on comfort criteria for drivers. Source: Table 4 of the Township of Centre Wellington's Draft 2022 Development Manual. | |

The above is noted to be the *preferred* criteria. However, where the above is unable to be met based on the findings of the geometric investigations conducted as part of this study, the overall preference will be to improve the rideability, sightlines, and safety of the site to the extent possible within reasonable means given the additional project and site constraints.

1.3 Preferred Hydraulic Criteria

Structure geometry will also need to consider the hydraulic capacity of the structure and its impacts to flood elevations. The structures and the road profile are to be designed to meet the hydraulic requirements as set out in the MTO Highway Drainage Design Guidelines.

These structures are on Local classification roads and therefore, structures with a span larger than 6.0 m are required to be designed using a 25-Year Design Storm event. The applicable preferred design criteria for hydraulics are summarized in Table 3 below.

Table 3: Hydraulic Design Criteria

| Criteria | Standard Road Classification | Low Volume Road Classification |
|---|------------------------------|--------------------------------|
| Return Period | 25 Years | 25 Years |
| Freeboard | 0.3 m | Not Applicable |
| Clearance ⁽¹⁾ | 0.3 m | 0.0 m |
| Change to Flood Elev. | <0.1 m ⁽²⁾ | <0.1 m ⁽²⁾ |
| ⁽¹⁾ Clearance requirements apply to open-bottom structures with erodible channel beds only | | |
| ⁽²⁾ Modelling tolerance that is typically accepted by Conservation Authorities associated with the limited accuracy of hydraulic modelling | | |

As visible above, less stringent requirements are identified for Low Volume Road classification within the guidelines. While the subject structures are currently projected to remain within Low Volume traffic volumes, through 2041 based on available projections, there is a potential that the 400 vehicles / day threshold may be exceeded within the 75-Year design life of the structures. Therefore, the Standard Road Classification requirements are desired to be met where achievable.

Additionally, the proposed structure is not allowed to result in negative impacts to flood elevations. Generally, a modelling tolerance of 0.1 m is considered acceptable, but any increase in flood elevations beyond this threshold would be considered to have a negative impact and would typically not be considered an acceptable solution.

Generally, it is considered a best practice to match or exceed the existing structure’s soffit elevation. Where the proposed structure requires a deeper superstructure compared to the original, increases to the road profile elevations often result in negative impacts to flood elevations. These road profile increases must be offset, which is typically achieved by an increased span.

2.0 Bridge 1-P

2.1 Existing Conditions

Bridge 1-P is located on Sideroad 5 West, approximately 1.15 km west of 3rd Line West. The previous structure was a Steel Truss superstructure on cast-in-place concrete abutments. The structure conveys the Carroll Creek watercourse. It is estimated that the original structure was constructed in 1925. The structure was closed to traffic in 2005, and the superstructure and portions of the abutments were removed in 2019. Currently, only a portion of the west abutment remains.

The 2020 OSIM Inspection Report (H.P. Engineering Inc.) of the remaining bridge is provided in Appendix A.

A by-pass road has been created by the public adjacent to the structure, with evidence of vehicular traffic navigating directly through the watercourse on a raised bed of rounded stone. This by-pass is not maintained or approved by the Township.

2.1.1 Existing Geometry

Records indicate that the existing structure was an 11.8 m long x 4.5 m wide steel truss, timber deck bridge. However, since the structure has been removed, the geometry of the previous structure could not be verified. For the purpose of the hydraulic design, the existing conditions will consider the current state, with the structure removed.

The geometry of the roadway associated with Bridge 1-P is summarized in the table below:

Table 4: Existing Road Geometry - Bridge 1-P

| | |
|---|---|
| Surface Type | Gravel |
| Driving Platform Width on Approaches | 4.2 m |
| Posted / Assumed Speed Limit | 80 km/h (Not Posted) |
| Rate of Vertical Curvature (K) | 4+/- |
| Geometry Based Design Speed | 20-30 km/h (non-illuminated) 40 km/h (illuminated) |
| Road C/L Elevation at Low Point | 395.51 m |
| Edge of Travelled Lane at Low Point | 395.47 m |

The existing approach roadway at Structure 1-P is a no-winter-maintenance roadway. On the west approach of the structure, the existing road profile is very steep with grades up to 13.5%. Overall, the roadways steep grades, low calculated design speed, and narrow platform mean that it does not meet any of the Township's preferred design standards.

2.1.2 Existing Hydraulics

A preliminary hydrological assessment of the applicable drainage area was conducted to determine the peak flow rates for several return-periods for use in the hydraulic analysis.

The parameters used in determining the peak flow rates are as follows:

Table 5: Hydrology Parameters - Bridge 1-P

| Catchment ID | Catchment Area (ha) | Runoff Coefficient | Time of Concentration (hr) | Ia (mm) | CN (II) |
|--------------|---------------------|--------------------|----------------------------|---------|---------|
| 1-P | 2496.41 | 0.34 | 2.66 | 7.1 | 78 |

The peak flows calculated are summarized as follows:

Table 6: Summarized Peak Flows - Bridge 1-P

| Storm Event | 2-Yr (m³/s) | 5-Yr (m³/s) | 10-Yr (m³/s) | 25-Yr (m³/s) | 50-Yr (m³/s) | 100-Yr (m³/s) | Regional (m³/s) |
|-----------------------|-------------|-------------|--------------|--------------|--------------|---------------|-----------------|
| SCS Type II (24 hour) | 15.93 | 26.97 | 36.33 | 46.41 | 55.25 | 64.44 | 171.25 |

A summary of the existing hydraulic conditions using the previously noted geometry and the above flow rates is provided in Table 7 below:

Table 7: Existing Hydraulics at Bridge 1-P

| Discharge Names | 2-Yr | 5-Yr | 10-Yr | 25-Yr | 50-Yr | 100-Yr | Regional |
|--|--------|--------|--------|--------|--------|--------|----------|
| Existing Headwater Elevation (m) | 395.70 | 395.97 | 396.15 | 396.31 | 396.45 | 396.60 | 397.66 |
| Ex. Freeboard to Edge of Travelled Lane [395.47 m] (m) | -0.23 | -0.50 | -0.68 | -0.84 | -0.98 | -1.13 | -2.19 |

The above freeboard is based on the portion of the road within the original travelled roadway, and does not account for the current bypass road through the watercourse. As per the hydraulic modelling, the low point of the road is overtopped, even in current conditions with no bridge in place.

Accordingly, the road profile would have to be raised 1.14 m to prevent the road from overtopping and meet the desired freeboard values for the 25-Year Storm event. However, doing so would result in negative impacts to the upstream flood elevations, unless a dramatically large structure was installed to offset the loss of relief flow.

Under existing conditions, modelling indicates that the 2-Year Design Storm overtops the east portion of the roadway. Under the 25-Year Design Storm, a negative freeboard (overtopping) of 0.84 m occurs at the low point of the road. These conditions do not meet the preferred criteria of the Township. Clearances are not applicable due to the absence of a structure.

2.2 Proposed Conditions

2.2.1 Proposed Geometry

As outlined in the existing hydraulics section, a significant road increase would need to occur to prevent the road from overtopping and to meet desirable freeboard criteria under the 25-Year Design Storm. The size of structure required to offset this increase in road elevations would be extremely large and beyond the intended scope of work at this non-winter-maintenance road. As such, a low-level crossing, which would provide a crossing during normal flow periods, but flood over during larger storm events has been proposed as the recommended replacement structure for this site.

It is desirable to maintain or cut the road within the flood plain in order to minimize the negative impacts to flood elevations and reduce the required size of the low-level crossing to the extent possible. However, it is also desired to improve the rates of curvature of the vertical road profile to improve sight lines. A road profile which limits increases to the road profile to above the 100-Year design flood elevations has been used. The achievable profile allows for a 40 km/h design speed in non-illuminated conditions, and 60 km/h in illuminated conditions.

A summary of the proposed road geometry parameters is provided below:

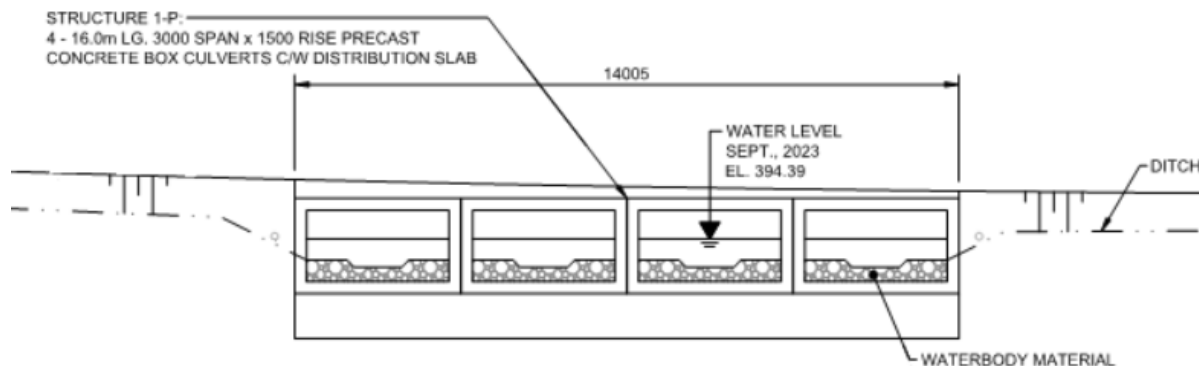
Table 8: Proposed Road Geometry - Bridge 1-P

| | |
|--|--|
| Length of Road Reconstruction | 175 m |
| Vertical Rate of Curvature, K | 9 (Sag) |
| Applicable Design Speed | 40 km/h (non-illuminated) 60 km/h (illuminated) |
| C/L of Road Elevation at Low Point | 395.417 m |
| Lane Width | 3.35 m |
| Shoulder Width | 1.25 m |
| Cross-Fall (%) | 2% |
| Edge of Travelled Lane Elevation at Low Point | 395.35 m |

The proposed road geometry offers limited vertical rise for the proposed structure. As such, it is recommended to use multi-cell, side-by-side precast concrete box culverts. The proposed structure consists of four 3.0 m span x 1.5 m rise precast concrete culverts x 16.0 m long. Smaller size box culverts have been assumed for the purpose of this EA; however, consideration could be given to providing custom geometry precast culverts with larger spans, to reduce the number of side-by-side boxes and decrease the potential for debris blockage. A distribution slab will be required in order to minimize the amount of fill required over the culverts and spread the loads across the individual culvert units.

Figure 2 illustrates the proposed geometry of the culvert arrangement. The proposed soffit / obvert of the culverts is proposed as 395.00 m.

Figure 2: Conceptual Design - Bridge 1-P



Preliminary, conceptual drawings of the plan, profile, and general arrangement of the proposed structures are included in Appendix C.

2.2.2 Proposed Hydraulics

Preliminary hydraulics have been completed for the proposed four-cell box culvert layout and road geometry previously outlined. A summary of the design parameters for the proposed structure modelled is outlined below:

Table 9: Proposed Structure Geometry - Bridge 1-P

| | |
|--------------------------------|---|
| Number of Culvert Cells | 4 |
| Culvert Span (m) | 3.0 m per culvert |
| Culvert Rise | 1.5 m, less 0.3 m bury = 1.2 m opening rise |
| Culvert Length (m) | 16.0 m |
| Obvert Elevation (m) | 395.00 m |

The hydraulic results for the above outlined proposed geometry are as follows:

Table 10: Proposed Hydraulics Bridge 1-P

| Storm Event Return Period | Proposed Headwater Elevation (m) [Difference vs. Exist] | Proposed Clearance to Minimum Soffit [395.00] (m) | Proposed Freeboard to Edge of Travelled Lane [395.35] (m) |
|----------------------------------|--|--|--|
| 2-Year | 395.72 [0.02] | -0.72 | -0.37 |
| 5-Year | 395.97 [0.00] | -0.97 | -0.62 |
| 10-Year | 396.14 [-0.01] | -1.14 | -0.79 |
| 25-Year | 396.31 [0.00] | -1.31 | -0.96 |
| 50-Year | 396.44 [-0.01] | -1.44 | -1.09 |
| 100-Year | 396.59 [-0.01] | -1.59 | -1.24 |
| Regional | 397.66 [0.00] | -1.66 | -2.31 |

As previously discussed, meeting the preferred design criteria for freeboard and clearance is not the approach of this design. The proposed low-level crossing structures and roadway geometry have been designed to improve the overall site, by eliminating the travel of vehicles directly through the watercourse and improving sight lines, while not resulting in any increases to the upstream flood elevations versus current conditions. The above achieves this, but it is noted that the structure would overtop relatively frequently, as the 2-Year Design Storm events are shown to overtop the low-point of the road.

3.0 Bridge 28-P

3.1 Existing Conditions

Bridge 28-P is located on Sideroad 11, approximately 675 m northeast of 8th Line West. The bridge is a cast-in-place concrete T-beam bridge, which conveys the Carroll Creek watercourse. The watercourse immediately upstream of the bridge structure is noted to be wider than the general width of the watercourse further upstream. This gives indication that the existing structure may be constraining flows and causing increased turbulence resulting in embankment scouring upstream.

The structure is estimated to have been constructed circa 1925 but has been closed since 2006, due to its poor physical condition. The existing structure has severe degradation and is in a failed state, with the superstructure disconnected from the west abutment, and the west abutment wall severely rotated and unstable. The structure is considered to be beyond economical repair. The 2020 OSIM Inspection Report (H.P. Engineering Inc.) of the closed bridge is provided in Appendix A.

A privately owned, low-level crossing is located immediately downstream of Bridge 28-P. The privately owned structure consists of a solid slab rigid frame bridge with a span of approximately 6.0 m.

3.1.1 Existing Geometry

The existing bridge has a 10.6 m clear span between abutments and provides a narrow, 5.0 wide driving platform between raised concrete curbs. The overall width of the structure is 5.7 m. This structure does not meet the preferred geometric criteria as outlined in this report above.

The vertical profile of the road has steep grades on the approaches, up to 13%, and rates of curvature in the range of 2-3, which is equivalent to a 20 km/h or lower Design Speed in non-illuminated (nighttime) conditions. The steep grades are steeper than the preferred criteria, and the applicable Design Speed is far below the minimum preferred of 40-50 km/h.

The geometry of the existing structure is summarized in the table below:

Table 11: Existing Structure Geometry - Bridge 28-P

| | |
|---|---|
| Structure Type | Concrete T-Beam |
| Clear Span | 10.6 m |
| Overall Width | 5.7 m |
| Driving Platform Width on Bridge | 5.0 m |
| Soffit Elevations | NW = 388.51, NE = 388.93, SW = 388.65, SE = 389.03 |

The geometry of the roadway on the approaches of 28-P is summarized in the table below:

Table 12: Existing Road Geometry - Bridge 28-P

| | |
|---|--|
| Surface Type | Gravel |
| Driving Platform Width on Approaches | Varies 5.0 m to 7.0 m |
| Posted / Assumed Speed Limit | 80 km/h (Not Posted) |
| Rate of Vertical Curvature (K) | 3+/- |
| Geometry Based Design Speed | 20 km/h (non-illuminated) 35 km/h (illuminated) |
| Road C/L Elevation at Low Point | 389.74 m |
| Edge of Travelled Lane at Low Point | 389.68 m |

As seen above, the calculated design speed based on the vertical curve parameters of the approach roadway to the bridges is 20 km/h, which is significantly lower than the assumed speed limit of 80 km/h for the non-posted rural road. Additionally, the existing road and bridge only provide a narrow, single lane driving platform.

3.1.2 Existing Hydrology and Hydraulics

A preliminary hydrological assessment of the applicable drainage area was conducted to determine the peak flow rates for several return-periods for use in the hydraulic analysis.

The parameters used in determining the peak flow rates are as follows:

Table 13: Hydrology Parameters - Bridge 28-P

| Catchment ID | Catchment Area (ha) | Runoff Coefficient | Time of Concentration (hr) | Ia (mm) | CN (II) |
|---------------------|----------------------------|---------------------------|-----------------------------------|----------------|----------------|
| 28-P | 309.9 | 0.29 | 1.39 | 7.8 | 73 |

The peak flows calculated are summarized as follows:

Table 14: Summarized Peak Flows - Bridge 28-P

| Storm Event | 2-Yr (m³/s) | 5-Yr (m³/s) | 10-Yr (m³/s) | 25-Yr (m³/s) | 50-Yr (m³/s) | 100-Yr (m³/s) | Regional (m³/s) |
|-----------------------|--------------------|--------------------|---------------------|---------------------|---------------------|----------------------|------------------------|
| SCS Type II (24 hour) | 16.69 | 28.24 | 38.01 | 48.53 | 57.77 | 67.36 | 174.74 |

A summary of the existing hydraulic conditions using the previously noted geometry and the above flow rates is provided in Table 15 below:

Table 15: Existing Hydraulics at Bridge 28-P

| Discharge Names | 2-Yr | 5-Yr | 10-Yr | 25-Yr | 50-Yr | 100-Yr | Regional |
|--|-------------|-------------|--------------|--------------|--------------|---------------|-----------------|
| Existing Headwater Elevation (m) | 388.16 | 388.50 | 388.77 | 389.23 | 389.35 | 389.52 | 390.94 |
| Ex. Clearance to Minimum Soffit [388.51] (m) | 0.35 | 0.01 | -0.26 | -0.72 | -0.84 | -1.01 | -2.43 |
| Ex. Freeboard to Edge of Travelled Lane [389.68 m] (m) | 1.52 | 1.18 | 0.91 | 0.45 | 0.33 | 0.16 | -1.26 |

The existing structure and road profile conveys storms up to the 5-Year Design Storm event, with a soffit elevation varying from 388.51 to 389.03. The probable original soffit elevation was likely in the range of 389.03, and the lower values are due to the structures displacement under failure. Under the 25-Year Design Storm event during existing conditions, the headwater elevations reach an elevation of 389.23 and are above the assumed original soffit by 0.20 m, which does not meet the preferred criteria. A freeboard of 0.53 m to the edge of travelled lane at the low point of the road is provided under existing conditions, which does meet the preferred criteria.

Under the existing conditions, the Regional Storm event is shown to overtop the road in the model. Therefore, increases to the road profile will have a negative effect on the headwater elevations for that storm event and will have to be offset by an increase to the hydraulic opening of the structure.

It is noted that the existing downstream, privately owned bridge has been included in the hydraulic modelling. A summary of the applicable geometry used in the modelling is provided in Table 16 below.

Table 16: Geometry of Private Structure Downstream of Bridge 28-P

| Crossing Characteristic | Existing Conditions |
|--------------------------------|----------------------------|
| Structure Information | |
| Material | Concrete Rigid Frame |
| Span (m) | 6.3 |
| Rise (m) | 0.8 |
| Upstream Soffit (m) | 387.76 NW, 387.74 NE |
| Downstream Soffit (m) | 387.83 SW, 387.86 SE |
| Hydraulic Length (m) | 5.7 |

| Crossing Characteristic | Existing Conditions |
|----------------------------|---------------------|
| Roadway Information | |
| Low Point in Road Elev (m) | 388.15 |
| Edge of Lane Elev (m) | 388.14 |
| Road Width (m) | 6.5 |

This downstream structure results in increases to the tailwater conditions of Bridge 28-P and therefore, resulting in increased headwater elevations in comparison to if the downstream structures were not present. However, given that the Township does not have jurisdiction over these structures, they will be carried through for the proposed design.

3.2 Proposed Conditions

3.2.1 Proposed Geometry

The proposed road geometry will consist of a 9.2 m wide platform with 3.35 m lanes and 1.25 m shoulders as outlined in Section 1.0 of the report.

Improvements to the rate of curvature of the approach roadway were examined in combination with hydraulic analysis. Any increase to the road profile will have negative impacts to storm events above the 100-Year return period, as the water overtops the existing road in such scenarios. However, a significant amount of fill is required to be placed on the west approach in order to improve the sightlines of the vertical road profile. The span of the structure is also sensitive to road profile adjustments due to the site topography. Increases to the road profile require additional span to allow for grading to the watercourse. At certain intervals of span increases, the depth of the superstructure is also required to increase.

After several iterations, it was determined that a road profile with a vertical rate of curvature of nine provides the optimal improvement to sightlines and minimizes the impacts to hydraulics. To achieve this profile, a fill of approximately 1.0 m would be required on the west approach. This road profile meets a 40 km/h design speed in non-illuminated conditions (i.e., at nighttime), as sight lines are governed by headlight reach. However, under illuminated conditions, driver comfort criteria governs and this road profile would provide a 60 km/h design speed.

A summary of the proposed road geometry parameters is provided below:

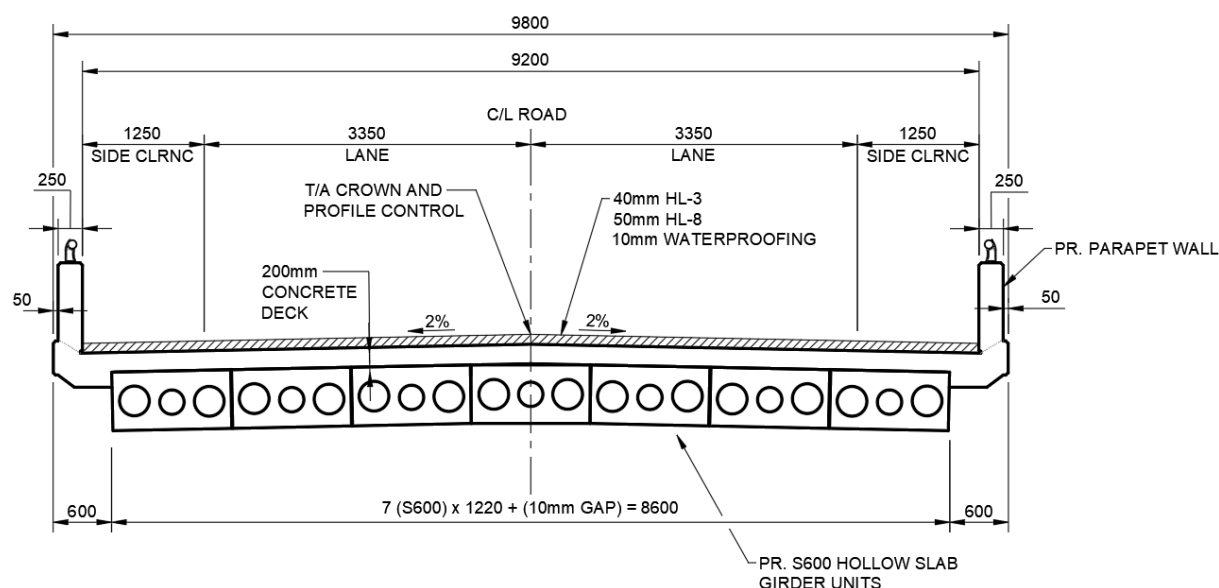
Table 17: Proposed Road Geometry - Bridge 28-P

| | |
|---|--|
| Length of Road Reconstruction | 110 m |
| Vertical Rate of Curvature, K | 9 (Sag) |
| Applicable Design Speed | 40 km/h (non-illuminated) 60 km/h (illuminated) |
| C/L of Road Elevation at Low Point | 389.72 m |

| | |
|--|----------|
| Lane Width | 3.35 m |
| Shoulder Width | 1.25 m |
| Cross-Fall (%) | 2% |
| Edge of Travelled Lane Elevation at Low Point | 389.65 m |

Based on the above road geometry and site topography, a 14.0 m clear span structure is required to convey a channel with an approximately 8.5 m – 9.0 m wide bottom. To achieve this span, it is proposed to use side-by-side 600 mm deep prestressed concrete hollow-core slab girders (S600 girders) with a 200 mm thick deck slab. This superstructure cross-section is illustrated in Figure 3 below. The minimum soffit elevation based on this design is 389.21 m.

Figure 3: Conceptual Design - Bridge 28-P



Preliminary, conceptual drawings of the plan, profile and general arrangement of the proposed structure are included in Appendix C.

3.2.2 Proposed Hydraulics

Preliminary hydraulics have been completed for the proposed 14.0 m clear span bridge on the 40 km/h design speed road profile. A summary of the design parameters for the proposed structure modelled is outlined below:

Table 18: Proposed Structure Geometry - Bridge 28-P

| | |
|-------------------------------------|--------|
| Clear Span (m) | 14.0 |
| Overall Width (m) | 9.8 |
| Minimum Soffit Elevation (m) | 389.21 |

The hydraulic results for the above outlined proposed geometry are as follows:

Table 19: Proposed Hydraulics at Bridge 28-P

| Storm Event Return Period | Proposed Headwater Elevation (m) [Difference vs. Exist] | Proposed Clearance to Minimum Soffit [389.21] (m) | Proposed Freeboard to Edge of Travelled Lane [389.65] (m) |
|------------------------------|---|---|---|
| 2-Year | 388.15 [-0.01] | 1.06 | 1.5 |
| 5-Year | 388.47 [-0.03] | 0.74 | 1.18 |
| 10-Year | 388.72 [-0.05] | 0.49 | 0.93 |
| 25-Year | 388.96 [-0.27] | 0.25 | 0.69 |
| 50-Year | 389.16 [-0.19] | 0.05 | 0.49 |
| 100-Year | 389.35 [-0.17] | -0.14 | 0.3 |
| Regional | 390.93 [-0.01] | -1.72 | -1.28 |

The proposed structure size offsets the effects of the road profile increase and results in the headwater elevations decreasing by between 0.01 m and 0.27 m. For the 25-Year Design Storm event, the proposed condition would provide 0.25 m of clearance to the minimum soffit elevation and 0.69 m of freeboard. Although the provided clearance does not meet the desirable design criteria for volumes of roads with AADT > 400 vehicles per day, it is considered acceptable given the current low-volume road classification of this site.

The freeboard to the edge of travelled lane at the low point of the road exceeds the minimum criteria of 0.3 m for the 25-Year Design Storm.

As previously discussed, the presence of the downstream, privately owned bridges affects the tailwater conditions and overall performance of the Township's proposed structures. Removal of the downstream structures and return of the channel to match original conditions would provide improvements to all flood elevations; however, given that the Township does not have jurisdiction over these privately owned structures, the sizing of the Township's proposed replacement structure is based on the assumption that the privately owned downstream structures will remain in place.

Although the clearance requirements are marginally lower than the preferred design criteria, the proposed structure size results in improvements compared to existing conditions, with decreases to the flood elevations. Further optimization of the structure depth and / or road profile during detailed design could be completed to further improve the clearance to meet the desirable value of 0.3 m.

4.0 Bridge 30-P

4.1 Existing Conditions

Bridge 30-P is located on Sideroad 5, approximately 175 m west of Wellington Road 7. The bridge is a concrete through-girder bridge, which conveys the Carroll Creek watercourse. The structure was constructed in 1929 and closed to traffic in 2016, due to its poor physical condition. It appears the structure may have undergone a previous rehabilitation, at an unknown date, which consisted of refacing portions of the abutments. The channel bottom between abutments is also lined with a cast-in-place concrete slab, which is assumed to have been placed at the time of the rehabilitation.

The structure is considered to be beyond economical repair, with severe deterioration of the aged concrete throughout. More specifically, there are several large spalls and disintegrating concrete throughout the barriers, which also act as the main load-carrying structural elements of this bridge type. Further, there are several exposed reinforcing steel bars that show severe corrosion and section loss. The summer 2015 condition assessment (K. Smart Associates Ltd.), fall 2015 Condition Report recommending closure, (K. Smart Technologies Ltd.) and the 2020 OSIM Inspection Report of the closed structure (H.P. Engineering Inc.) are provided in Appendix A.

4.1.1 Existing Geometry

Record drawings (see Appendix B) indicate that the existing bridge has a 7.93 m clear span between the original abutments; however, the refacing of the abutments has reduced the opening width to approximately 6.8 m based on field measurements.

The geometry of the existing structure is summarized in the table below:

Table 20: Existing Structure Geometry - Bridge 30-P

| | |
|---|-------------------------|
| Structure Type | Concrete Through-Girder |
| Clear Span | 6.8 m |
| Overall Width | 6.5 m |
| Driving Platform Width on Bridge | 5.5 m |
| Soffit Elevations | 423.42 +/- |

The geometry of the roadway on the approaches of 30-P is summarized in the table below:

Table 21: Existing Road Geometry - Bridge 30-P

| | |
|---|--|
| Surface Type | Gravel |
| Driving Platform Width on Approaches | 5.5 m +/- |
| Posted / Assumed Speed Limit | 80 km/h (Not Posted) |
| Rate of Vertical Curvature (K) | 5-6 (sag) |
| Geometry Based Design Speed | 30 km/h (non-illuminated) 50 km/h (illuminated) |
| Road C/L Elevation at Low Point | 423.79 m |
| Edge of Travelled Lane at Low Point | 423.75 m |

As seen above, the calculated design speed based on the vertical curve parameters of the approach roadway to the bridges is 30 km/h, which is significantly lower than the assumed speed limit of 80 km/h for the non-posted rural road. Additionally, the existing road and bridge only provide a narrow, single-lane driving platform which does not meet the desired standards of the Township.

4.1.2 Existing Hydrology and Hydraulics

A preliminary hydrological assessment of the applicable drainage area was conducted to determine the peak flow rates for several return-periods for use in the hydraulic analysis.

The parameters used in determining the peak flow rates are as follows:

Table 22: Hydrology Parameters - Bridge 30-P

| Catchment ID | Catchment Area (ha) | Runoff Coefficient | Time of Concentration (hr) | Ia (mm) | CN (II) |
|--------------|---------------------|--------------------|----------------------------|---------|---------|
| 30-P | 1231.0 | 0.36 | 2.66 | 7.0 | 7.9 |

The peak flows calculated are summarized as follows:

Table 23: Summarized Peak Flows - Bridge 30-P

| Storm Event | 2-Yr (m³/s) | 5-Yr (m³/s) | 10-Yr (m³/s) | 25-Yr (m³/s) | 50-Yr (m³/s) | 100-Yr (m³/s) | Regional (m³/s) |
|-----------------------|-------------|-------------|--------------|--------------|--------------|---------------|-----------------|
| SCS Type II (24 hour) | 8.13 | 13.69 | 18.36 | 23.37 | 27.75 | 32.29 | 78.46 |

A summary of the existing hydraulic conditions using the previously noted geometry and the above flow rates is provided in Table 24 below:

Table 24: Existing Hydraulics at Bridge 30-P

| Discharge Names | 2-Yr | 5-Yr | 10-Yr | 25-Yr | 50-Yr | 100-Yr | Regional |
|--|--------|--------|--------|--------|--------|--------|----------|
| Existing Headwater Elevation (m) | 422.03 | 422.31 | 422.58 | 422.76 | 422.98 | 423.17 | 424.66 |
| Ex. Clearance to Minimum Soffit [423.42] (m) | 1.39 | 1.11 | 0.84 | 0.66 | 0.44 | 0.25 | -1.24 |
| Ex. Freeboard to Edge of Travelled Lane [423.75] (m) | 1.72 | 1.44 | 1.17 | 0.99 | 0.77 | 0.04 | -0.91 |

The existing structure and road profile conveys storms up to the 100-Year Design Storm event and meets the desirable clearance and freeboard for the 25-Year Design Storm event.

Under the existing conditions, the Regional Storm event is shown to overtop the road. Therefore, increases to the road profile will have a negative effect on the headwater elevations for that storm event and will have to be offset by an increase to the hydraulic opening of the structure.

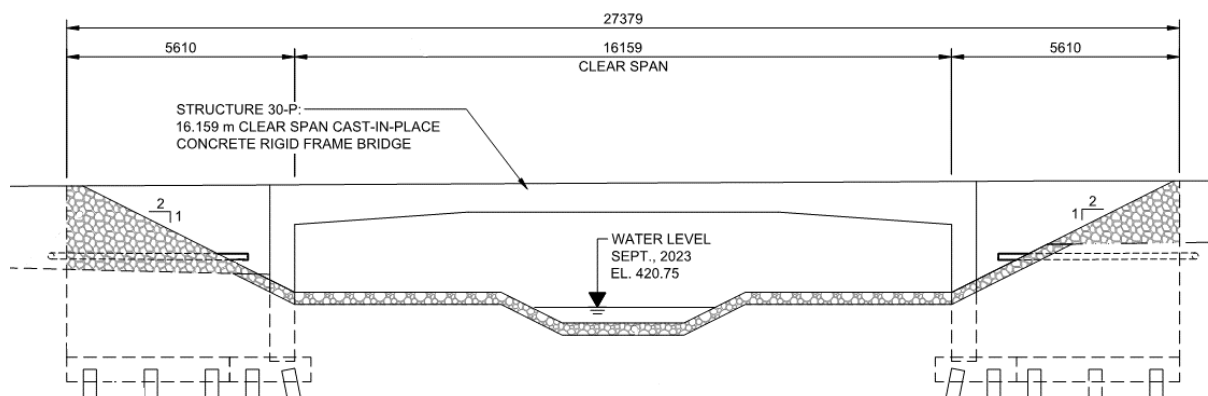
4.2 Proposed Conditions

4.2.1 Proposed Geometry

The proposed road geometry will consist of a 9.2 m wide platform with 3.35 m lanes and 1.25 m shoulders as outlined in Section 1.0 of the report.

Due to the site topography and road geometry, any increase to the road profile has significant impact to the Regional Storm event. In order to match the existing soffit of the existing bridge, while limiting the increase to the road profile, a cast-in-place concrete rigid frame has been recommended. Even when using this structure type (which has a low superstructure depth to span ratio in comparison to other girder-type structures), the roadway is required to be raised by up to 0.33 m. Due to this road increase, the structure span should be increased to 16.16 m to offset the loss of relief-flow over the road (per hydraulics modelling discussed below). The proposed structure geometry is shown in Figure 4 below. Preliminary, conceptual plan and profile and general arrangement drawings are provided in Appendix C.

Figure 4: Conceptual Design - Bridge 30-P



Improvements to the road profile were examined but, due to the sensitivity of this site to profile increases, result in negative impacts to the Regional Storm event flood elevations. Therefore, it is recommended that the existing curvature rates be carried forward to the replacement option to maintain the 30 km/h design speed under non-illuminated conditions (50 km/h comfort criteria).

A summary of the proposed road geometry parameters is provided below:

Table 25: Proposed Road Geometry - Bridge 30-P

| | |
|--|--|
| Length of Road Reconstruction | 170 m |
| Vertical Rate of Curvature, K | 6 (Sag) |
| Applicable Design Speed | 30 km/h (non-illuminated) 50 km/h (illuminated) |
| C/L of Road Elevation at Low Point | 424.055 m |
| Lane Width | 3.35 m |
| Shoulder Width | 1.25 m |
| Cross-Fall (%) | 2% |
| Edge of Travelled Lane Elevation at Low Point | 423.99 m |

4.2.2 Proposed Hydraulics

Preliminary hydraulics have been completed for the proposed 16.16 m clear span bridge and noted profile road profile. A summary of the design parameters for the proposed structure modelled is outlined below:

Table 26: Proposed Structure Geometry - Bridge 30-P

| | |
|-------------------------------------|--|
| Clear Span (m) | 16.16 |
| Overall Width (m) | 11.8 |
| Haunch Length (m) | 4.27 |
| Minimum Soffit Elevation (m) | Varies 423.16 to 423.47 (Effective Soffit Elevation = 423.38) |

The hydraulic results for the above outlined proposed geometry are as follows:

Table 27: Proposed Hydraulics at Bridge 30-P

| Storm Event Return Period | Proposed Headwater Elevation (m) [Difference vs. Exist] | Proposed Clearance to Minimum Soffit [423.38] (m) | Proposed Freeboard to Edge of Travelled Lane [423.99] (m) |
|--------------------------------------|--|--|--|
| 2-Year | 422.00 [-0.03] | 1.38 | 1.99 |
| 5-Year | 422.24 [-0.07] | 1.14 | 1.75 |
| 10-Year | 422.40 [-0.18] | 0.98 | 1.59 |
| 25-Year | 422.53 [-0.23] | 0.85 | 1.46 |
| 50-Year | 422.64 [-0.34] | 0.74 | 1.35 |
| 100-Year | 422.75 [-0.42] | 0.63 | 1.24 |
| Regional | 424.76 [0.10] | -1.38 | -0.77 |

The proposed structure size offsets the effects of the road profile increase and results in the improvements to flood elevations for all storm events up to the 100-Year return period. The Regional Storm event increases by 0.10, which is the maximum allowable when considering modelling tolerances. For the 25-Year Design Storm event, the desirable freeboard and clearance criteria are met with the proposed structure size.

5.0 Bridges 32-P and 33-P

5.1 Existing Conditions

Bridge 32-P is located on Noah Road, approximately 735 m southwest of 8th Line West. The bridge is a cast-in-place concrete T-beam bridge, which conveys a small tributary that feeds into the Carroll Creek approximately 250 m downstream of the crossing location. The structure was constructed in 1922.

Bridge 33-P is a cast-in-place concrete T-beam bridge, which is located approximately 100 m northeast of structure 32-P, over Carroll Creek. The existing structure was constructed circa 1926. The 1926 record drawings indicate that portions of the west abutment from pre-1922 were re-used for the current bridge. It appears that the lower portion of the abutments have been refaced since construction; however, the date of these repairs are unknown.

Record drawings of Bridges 32-P and 33-P are included in Appendix B of this report. The summer 2015 Condition Assessment (K Smart Associates Ltd.), and the 2020 OSIM Inspection Report (H.P. Engineering Inc.) of the closed structure are provided in Appendix A.

Both structures were closed to traffic in 2015 due to their severely deteriorated state. The concrete elements of these structures are experiencing severe disintegration due to their vintage and prolonged exposure to the elements. Large amounts of the reinforcing steel in the main structural components of the bridges are exposed and no longer being engaged due to loss of concrete, and noted to have severe section loss, limiting their load carrying capacities. The northwest wingwall of Bridge 33-P has also failed and displaced significantly.

Privately owned crossings are also located just downstream of the Township's structures. These crossings consist of a 1.2 m diameter round concrete culvert downstream of Bridge 32-P and a 12.9 m span steel pony truss downstream of Structure 32-P.

5.1.1 Existing Geometry

The geometry of the existing structures are summarized in the table below:

Table 28: Existing Structure Geometry - Bridges 32-P & 33-P

| | Bridge 32-P | Bridge 33-P |
|---|--------------------|--|
| Structure Type | Concrete T-Beam | Concrete T-Beam |
| Clear Span | 9.14 m | 10.4 m (original), reduced to 9.4 m minimum due to abutment refacing |
| Overall Width | 5.7 m | 5.7 m |
| Driving Platform Width on Bridge | 4.9 m | 4.9 m |
| Minimum Soffit Elevation | 374.69 | 374.48 |

The geometry of the roadway over Bridges 32-P and 33-P is summarized in the table below:

Table 29: Existing Road Geometry - Bridges 32P & 33-P

| | |
|---|--|
| Surface Type | Gravel |
| Driving Platform Width on Approaches | 4.3 m |
| Posted / Assumed Speed Limit | 80 km/h (Not Posted) |
| Rate of Vertical Curvature (K) | 8.5+/- |
| Geometry Based Design Speed | 40 km/h (non-illuminated) 60 km/h (illuminated) |
| Road C/L Elevation at Low Point | 375.21 m |
| Edge of Travelled Lane at Low Point | 375.21 m |

As seen above, the calculated design speed based on the vertical curve parameters of the approach roadway to the bridges is 40 km/h, which is significantly lower than the assumed speed limit of 80 km/h for the non-posted rural road. Additionally, the existing road and bridge only provide a narrow, single-lane driving platform which does not meet the minimum preferred criteria outlined in Section 1.0.

A summary of the applicable geometry used for the private structure and road downstream is provided below:

Table 30: Downstream Private Structure and Road Geometry

| Crossing Characteristic | Downstream of Bridge 32-P | Downstream of Bridge 33-P |
|---------------------------------------|----------------------------------|----------------------------------|
| Structure Information | | |
| Material | Concrete Culvert | Steel Truss |
| Span (m) | - | 12.92 |
| Rise (m) | - | 2.2 |
| Diameter (m) | 1200 | N/A |
| Inlet Condition (Projecting/Headwall) | Projecting | N/A |
| Number of Barrels | 1 | N/A |
| Upstream Invert (m) | 373.22 | N/A |
| Upstream Obvert / Soffit (m) | 374.42 | 373.89 |
| Downstream Invert (m) | 373.2 | N/A |
| Downstream Obvert / Soffit (m) | 374.4 | 373.89 |
| Depth of Bury (m) | 0 | N/A |
| Hydraulic Length (m) | 15.22 | 4.74 |

| Crossing Characteristic | Downstream of Bridge 32-P | Downstream of Bridge 33-P |
|----------------------------|---------------------------|---------------------------|
| Roadway Information | | |
| Low Point in Road Elev (m) | 373.89 | |
| Edge of Lane Elev (m) | 373.79 | |
| Road Width (m) | 5.2 | |
| Guide Rail (Y/N) | N | |

5.1.2 Existing Hydrology and Hydraulics

A preliminary hydrological assessment of the associated tributaries was conducted to determine the applicable peak flow rates for several return-periods for use in the hydraulic analysis.

The parameters used in determining the peak flow rates are as follows:

Table 31: Hydrology Parameters - Bridge 32-P & 33-P

| Catchment ID | Catchment Area (ha) | Runoff Coefficient | Time of Concentration (hr) | Ia (mm) | CN (II) |
|--------------|---------------------|--------------------|----------------------------|---------|---------|
| 32-P | 84.18 | 0.26 | 1.08 | 7.9 | 68 |
| 33-P | 453.0 | 0.32 | 1.38 | 7.0 | 76 |

Peak flow rates were calculated for both of the applicable watercourses at the location of the structures. However, during preliminary modelling, it was found that the flows in the main branch of Carroll Creek overtop the watercourse banks during the 2-Year Design Storm event. As such, the two structures were modelled under a single reach, with the combined flows applied to the reach. The peak flow rates are summarized as follows:

Table 32: Summarized Peak Flows - Bridges 32-P & 33-P

| | 2-Yr (m³/s) | 5-Yr (m³/s) | 10-Yr (m³/s) | 25-Yr (m³/s) | 50-Yr (m³/s) | 100-yr (m³/s) | Regional (m³/s) |
|-----------------|-------------|-------------|--------------|--------------|--------------|---------------|-----------------|
| 32-P | 0.76 | 1.34 | 1.85 | 2.40 | 2.90 | 3.42 | 7.60 |
| 33-P | 17.44 | 29.42 | 39.55 | 50.44 | 59.99 | 69.91 | 175.32 |
| Combined | 18.2 | 30.76 | 41.4 | 52.84 | 62.89 | 73.33 | 182.92 |

A summary of the existing hydraulic conditions using the previously noted geometry and the above combined flow rates is provided in Table 33.

Table 33: Headwater Comparison at Bridges 32-P & 33-P

| Discharge Names | 2-Yr | 5-Yr | 10-Yr | 25-Yr | 50-Yr | 100-Yr | Regional |
|--|-------------|-------------|--------------|--------------|--------------|---------------|-----------------|
| Existing Headwater Elevation (m) | 374.33 | 374.49 | 374.61 | 374.89 | 374.96 | 375.06 | 375.86 |
| Ex. Clearance to Bridge 32-P Min. Soffit [374.69] (m) | 0.36 | 0.20 | 0.08 | -0.20 | -0.27 | -0.37 | -1.17 |
| Ex. Clearance to Bridge 33-P Min. Soffit [374.48] (m) | 0.15 | 0.01 | -0.13 | -0.41 | -0.48 | -0.58 | -1.38 |
| Ex. Freeboard to Edge of Travelled Lane [375.21] (m) | 0.88 | 0.72 | 0.60 | 0.32 | 0.25 | 0.15 | -0.65 |

Under existing conditions, Bridge 32-P conveys the 10-year storm and Bridge 33-P conveys the 5-Year Design Storm event. The road is only overtopped for storm events greater than the 100-Year return period. For the Design Storm event (25-Year return period), the desired 0.3 m of clearance is not provided for either structure. However, a freeboard of 0.32 m is provided under existing conditions for the Design Storm event, which exceeds the desirable design criteria. During the Regional Storm event, the water elevations reach 0.65 m above the low point of the road.

It is noted that the existing downstream, privately owned bridges and roadway were included in the hydraulic modelling. These downstream structures are causing significant increases to the tailwater conditions of the Bridge 32-P and 33-P crossings and therefore, resulting in increased headwater elevations in comparison to if the downstream structures were not present.

5.2 Proposed Conditions

5.2.1 Proposed Geometry

The proposed road geometry will consist of a 9.2 m wide platform with 3.35 m lanes and 1.25 m shoulders as outlined in Section 1.0 of the report.

Improvements to the rate of curvature of the approach roadway were examined in combination with hydraulic analysis. In order to limit the increase to the road elevations and the associated negative impacts on hydraulics, a design speed of 60 km/h was able to be achieved. To achieve this road profile, a 400 mm increase (fill) to elevations on the east approach, and a cut between structures of up to 200 mm would be required. The cut and fill methodology helps to minimize the amount of excess soil generated by allowing re-use of suitable cut material within fill regions. This profile would exceed the minimum preferred design criteria.

A summary of the proposed road geometry parameters is provided below:

Table 34: Proposed Road Geometry - Bridges 32-P & 33-P

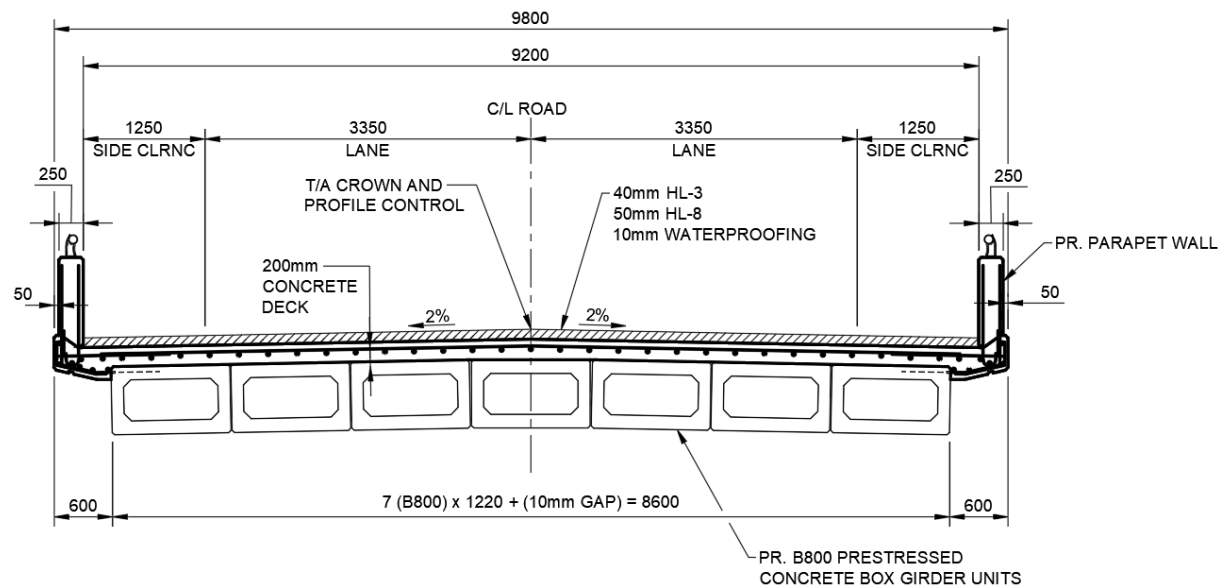
| | |
|--|------------------------|
| Length of Road Reconstruction | 300 m |
| Vertical Rate of Curvature, K | 11 (Crest) 18 (Sag) |
| Applicable Design Speed | 60 km/h |
| C/L of Road Elevation at Low Point | 375.037 m |
| Lane Width | 3.35 m |
| Shoulder Width | 1.25 m |
| Cross-Fall (%) | 2% |
| Edge of Travelled Lane Elevation at Low Point | 374.945 m |

Bridge 33-P:

The existing watercourse at Bridge 33-P was noted to be eroding the northwest embankment. As such, it is recommended to widen the proposed structure to the west and skew the structure to improve its alignment with the watercourse. Preliminary geometric design indicates that the minimum span structure to be considered here to meet the grading requirements of the channel and surrounding topography would be approximately 16 m. However, as outlined in the hydraulics section below, a larger structure with a span of 22 m is required in order to meet the hydraulic requirements at this site.

In order to accommodate the required 22 m span, a slab-on-girder superstructure would be considered the most suitable for this site. The overall width of the structure will be 9.8 m, to carry the proposed 9.2 m driving platform between parapet wall barriers. To achieve this span, the use of 800 mm deep prestressed concrete box girders (B800s) is recommended based on the MTO's Prestressed Concrete Girder Guidelines, in combination with a 200 mm thick concrete deck. This superstructure cross-section is illustrated in Figure 5 and results in a minimum soffit elevation of 374.23 m.

Figure 5: Conceptual Design - Bridge 33-P

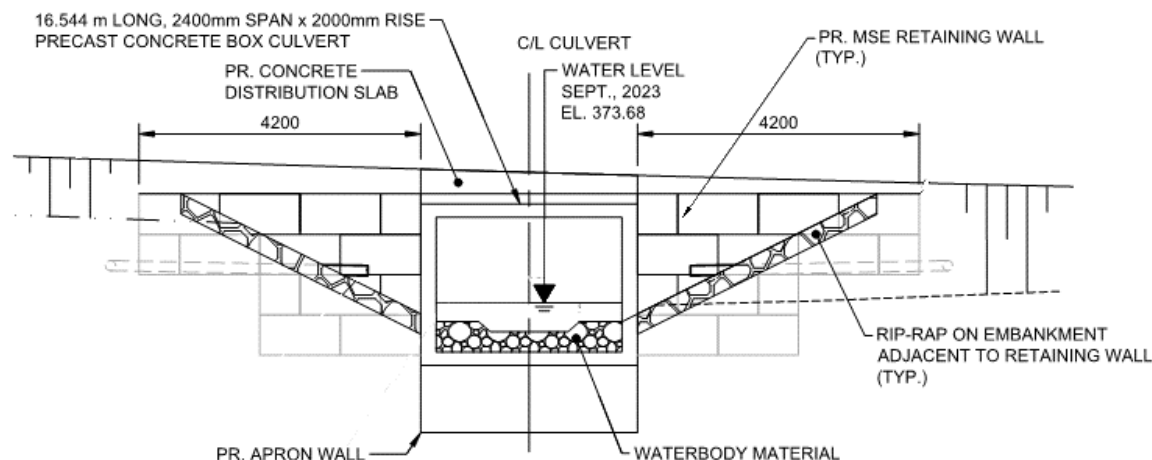


Bridge 32-P:

It was preferred to reduce the structure size at 32-P to a smaller culvert structure in order to minimize the capital investment and maintenance required for this structure. As such, a precast concrete box culvert was sized to provide a cost efficient, low maintenance crossing. Due to the placement of a private driveway culvert immediately downstream of the proposed structure 32-P location, a retaining wall will be required on the south (outlet) end of the culvert. It is recommended that the proposed structure be skewed at an angle of approximately 30 degrees to the roadway due to the relative position of the upstream and downstream watercourse.

The proposed geometry of the structure is based on hydraulics (as described below) and will require a 2.4 m span x 2.0 m rise precast concrete box culvert, approximately 16.5 m long. The culvert invert has been assumed to be embedded 0.3 m below the creek bottom, to allow 0.3 m of rounded stone to be placed through the structure. A concrete distribution slab will be required, as the depth of cover over the proposed culvert is less than 0.6 m. The proposed cross section is illustrated in Figure 6 below. The applicable soffit elevations for the proposed design are 375.144 m upstream and 374.946 m downstream.

Figure 6: Conceptual Design - Bridge 32-P



Preliminary, conceptual drawings of the plan, profile and general arrangement of the proposed structures are included in Appendix C.

5.2.2 Proposed Hydraulics

In order to offset the effects of decreasing the opening of structure 32-P, the size of structure 33-P was required to be increased. Preliminary hydraulics for the combined structure 32-P and 33-P, with the proposed 60 km/h design speed road profile indicate that structure 33-P is required to have a 22 m span to allow structure 32-P to be reduced to a 2.4 m span x 1.8 m rise precast concrete box culvert, as outlined above. A summary of the design parameters for the proposed structures are outlined below.

Table 35: Proposed Structure Geometry - Bridges 32-P & 33-P

| Design Criteria | 32-P | 33-P |
|------------------------------|---------|---------|
| Clear Span (m) | 2.4 | 22.0 |
| Overall Width (m) | 16.544 | 9.8 |
| Minimum Soffit Elevation (m) | 374.946 | 374.230 |

The hydraulic results for the above outlined proposed geometry are shown in Table 36.

Table 36: Proposed Hydraulics at Bridges 32-P & 33-P

| Storm Event Return Period | Proposed Headwater Elevation (m) [Difference vs. Exist] | Proposed Clearance (m) | | Proposed Freeboard (m) [374.945 m] |
|------------------------------|---|------------------------|---------------------|--|
| | | 32-P [374.946 m] | 33-P [374.230 m] | |
| 2-Year | 374.32 [-0.01] | 0.716 | - 0.090 | 0.625 |
| 5-Year | 374.47 [-0.02] | 0.476 | -0.240 | 0.475 |
| 10-Year | 374.58 [-0.03] | 0.366 | -0.350 | 0.365 |
| 25-Year | 374.68 [-0.21] | 0.266 | -0.450 | 0.265 |
| 50-Year | 374.77 [-0.19] | 0.176 | - 0.540 | 0.175 |
| 100-Year | 374.87 [-0.19] | 0.076 | - 0.640 | 0.075 |
| Regional | 375.91 [+0.05] | - 0.964 | - 1.680 | -0.965 |

As per the above results, a clearance of 0.266 m to the minimum soffit at structure 32-P is provided based on the proposed design. Considering that this is a closed bottom structure, there is no requirement for meeting a required clearance. Instead, the structure must ensure that the flood depth at the upstream of the culvert is less than 1.5 times the rise of the culvert. Since the Design Storm elevations do not exceed the soffit, this criteria is met.

For Bridge 33-P, the 25-Year Design Storm would result in the soffit of Bridge 33-P structure being submerged over approximately 80% of its span. However, although the proposed clearance decreases (as a result of the larger span on a steep road grade) and the desired clearance is not met, the proposed condition provides significant improvements for the flood elevations up to 100-year Design Storm events and maintains the Regional Storm flood elevations within modelling tolerances.

The freeboard to the edge of travelled lane at the low point of the road is only marginally below the preferred design criteria.

As previously discussed, the presence of the downstream, privately owned bridges affects the tailwater conditions and overall performance of the Township's proposed structures. Removal of the downstream structures and return of the channel to match original conditions would allow for a decrease in the required size of the proposed structures at 32-P and 33-P. However, given that the Township does not have jurisdiction over these privately owned structures, the sizing of the Township's proposed replacement structures will be based on the assumption that the privately owned downstream structures will remain in place.

Although the preferred design criteria is not met for these structures, the proposed structure sizes result in improvements compared to existing conditions, with decreases to the flood elevations for the 2 through 100-Year Storm events. The Regional Flood elevations increase slightly but are considered to be within modelling tolerances. These results are considered acceptable within the constraints of the site topography.

It is noted that increasing the road elevations to achieve preferred clearances of structure 33-P would result in negative impacts to upstream flood elevations under larger Design Storm events and therefore the proposed geometry offers the most favourable solution without resulting in negative impacts to upstream lands.


6.0 Summary

The recommended replacement structures for use in consideration of the replacement alternatives of this EA vary based on the site specific parameters. All structures have been designed to meet the desirable driving platform widths and ensure no negative impacts to flood elevations. However, the desirable sight lines or hydraulic clearance and freeboard are not always achievable with reasonable structure sizes, given the constraints of the site. The proposed structures outlined below are recommended as they are considered to provide the most improvements while working within the project and site constraints:

- Bridge 1-P: Four-cell 3.0 m span x 1.5 m rise Precast Concrete Box Culvert, Low-level Crossing;
- Bridge 28-P: 14.0 m clear span S600 Prestressed Concrete Hollow Core Slab Girders;
- Bridge 30-P: 16.16 m clear span Cast-in-place Concrete Rigid Frame;
- Bridge 32-P: 2.4 m span x 2.0 m rise Precast Concrete Box Culvert; and
- Bridge 33-P, 22.0 m clear span, B800 Prestressed Concrete Box Girders.

Preliminary conceptual drawings (Plan & Profile and General Arrangement) are included in Appendix C.

R.J. Burnside & Associates Limited



Andrew Dawson, P.Eng.
Project Engineer
AD:tc

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056693_CW 5 Bridges_Geometric Design Memo.docx
1/29/2024 10:51 AM

Enclosure(s) Appendix A – Condition Inspection Reports
 Appendix B – Record Plans
 Appendix C – Preliminary Conceptual Design Drawings



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix A

Condition Inspection Reports



K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS AND PLANNERS

85 McINTYRE DRIVE
KITCHENER, ONTARIO N2R 1H6

TELEPHONE (519) 748-1189
FAX (519) 748-6100
Email: ksmart@ksmart.on.ca

November 30, 2015

File No. 15-182

Mr. Adam Dickieson, Engineering Services Coordinator
and
Mr. Colin Baker, P.Eng., Managing Director of Infrastructure

Township of Centre Wellington
7444 Wellington Road #21
P.O. Box 10
Elora, ON N0B 1S0

**RE: 30-P BRIDGE INSPECTION
SUMMARY OF OBSERVATIONS and RECOMMENDATIONS
FALL 2015 UPDATE REPORT**

Dear Adam and Colin,

K. Smart Associates Limited has been retained to inspect several structures including Structure 30-P in the Township of Centre Wellington that have been previously identified as having specific suspected structural deficiencies. This report is an update to previous reports for Structure 30-P. On October 26, 2015, we attended this site to review the condition of the structure. Our observations and recommendations are as follows:

OBSERVATIONS

- Type: Single span concrete side girder bridge
- Location: Sideroad 5 Between First Line West and Wellington County Road 7
- Existing Load Limit Advisory: 15t

Concern

- Severely deteriorated/cracked floor beams with severely corroded reinforcing steel.
- Deteriorated outer barriers (the barriers are the load carrying components of this style of bridge).

Inspection

- The top of north barrier beam has disintegrated concrete (250mm deep) at both ends with no visible reinforcement. The remainder of the concrete at the top of the beam is in poor condition.
- This particular style utilizes floor beams in conjunction with the above deck girders. The ends of both floor beams are spalled with exposed corroded reinforcement bar. Each beam exhibits spalling and cracking with exposed corroded reinforcement bar. The floor beams are in poor condition.
- Severe corrosion of reinforcement at floor beams resulting in major section loss.
- Efflorescence and disintegrating concrete at outside of outer beams.

- Soffit exhibits spalling with exposed corroded reinforcement. The soffit is generally in poor condition.
- Abutment bottoms previously refaced. Walls above patched areas are poor concrete.
- 3 out of 4 abutment corners have been refaced. The southwest corner was not patched and has poor concrete. The northeast corner patch has a wide crack and is displaced.
- The principal reinforcement in the floor beams is completely detached from the concrete beam itself

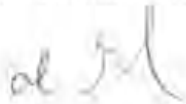
RECOMMENDATION

The bridge has lost much of its original load carrying capacity due to the severe deterioration of many components.

The Township should permanently close this structure and replace as soon as possible.

If you have any questions or concerns, or if we can be of further service, please contact the undersigned anytime.

All of which is respectfully submitted,



Allan Garnham, P.Eng.



Darryl Schwartzentruber, Dipl. T.



1. East Approach



2. West Approach



3. North Elevation



4. South Elevation



5. North Barrier (interior)



6. North Barrier (interior) West End



7. North Barrier (interior) East End



8. North Barrier (interior) East End



9. North Barrier (exterior)



10. North Barrier (exterior)



11. North Barrier Bottom at East



12. North Barrier Bottom at Middle



13. South Barrier (interior)



14. South Barrier (exterior)



15. Beam (east) (north end)



16. Beam (east) (south end)



17. Beam (west) (north end)



18. Beam (west) (south end)



19. Beam (west)



20. East Abutment



21. West Abutment North End



22. West Abutment South End



23. Soffit - East Bay



24. Soffit - Middle Bay



25. Soffit - West Bay



K. SMART ASSOCIATES LIMITED

CONSULTING ENGINEERS AND PLANNERS

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85 McIntyre Drive
Kitchener, ON N2R 1H6

Tel: 519-748-1199
Fax: 519-748-6100

August 21, 2015

File No. 15-182

Mr. Adam Dickieson, Engineering Services Coordinator
and
Mr. Colin Baker, P.Eng., Managing Director of Infrastructure

Township of Centre Wellington
7444 Wellington Road #21
P.O. Box 10
Elora, ON N0B 1S0

**RE: MULTIPLE BRIDGE INSPECTIONS - SUMMARY OF OBSERVATIONS and RECOMMENDATIONS
16-WG, 27-WG, 12-N, 10-P, 7-E, 30-P, 32-P, and 33-P
SPRING 2015 UPDATE REPORT**

Dear Adam and Colin,

K. Smart Associates Limited has been retained to inspect several structures in the Township of Centre Wellington that have been previously identified as having specific suspected structural issues. This report is an update to previous reports for 16-WG, 27-WG, and 12-N, and is a first such report on the other five structures. The structures major structural deficiencies were inspected on June 17, 2015. Please refer to the previous reports (KSAL 13-114) in conjunction with this report.

STRUCTURES INSPECTED

Below is the list of bridges inspected on June 17, 2015.

16-WG

- Type: Single span concrete spandrel arch
- Location: Fifth Line between Wellington Road 19 & Sideroad 15
- Existing Load Limit Advisory: 15t

27-WG

- Type: Single span bowstring arch
- Location: Sideroad 20 between Fifth Line & Sixth Line
- Existing Load Limit Advisory: 6t

12-N

- Type: Single span concrete spandrel arch
- Location: Washington Street between Woolwich Street North & William Street
- Existing Load Limit Advisory: Road Closed to Vehicular Traffic – Pedestrian Access Only

10-P

- Type: Single span concrete T-beam bridge
- Location: Fourth Line East between Sideroad 10 & Sideroad 14
- Existing Load Limit Advisory: 15t



Consulting
Engineers
of Ontario

Email: info@ksmart.on.ca

www.ksmart.on.ca

7-E

- Type: Single span concrete side girder bridge
- Location: Third Line between Sideroad 30 & Wellington County Road 22
- Existing Load Limit Advisory: 15t

30-P

- Type: Single span concrete side girder bridge
- Location: Sideroad 5 Between First Line West and Wellington County Road
- Existing Load Limit Advisory: 15t

32-P

- Type: Single span poured-in-place concrete girders
- Location: Noah Road between Eighth Line West & Seiling Road (westerly structure)
- Existing Load Limit Advisory: 10t

33-P

- Type: Single span poured-in-place concrete girders
- Location: Noah Road between Eighth Line West & Seiling Road (easterly structure)
- Existing Load Limit Advisory: 10t

OBSERVATIONS AND RECOMMENDATIONS**Structure 16-WG****Concern**

- Suspected Wingwall Movement (wingwalls contain the road)

Inspection

- there are a few spalls on the spandrel arch and as a result rebar has been exposed
- the guiderail posts are bolted onto the barrier walls of the bridge; curve in the guiderail posts at the North end indicates that the wingwalls are moving away from each other
- one guiderail post is now twisted as a bolt has separated from concrete
- deterioration of the west fascia is severe, almost exposing the road backfill. No reinforcing steel is evident that would connect the arch to the wingwall. Design of wingwalls is unknown.



- erosion of soil and concrete occurring at corners, particularly northeast

- Measurement between the guiderail posts began on January 15, 2014, to document any movement
- no appreciable movement was measured for first four inspections. See Figure 2 for measurement data.

Recommendation

At this point in time, no appreciable movement of the North wingwalls can be confirmed. There is no evidence of a connection between the arch and the wingwalls. There is severe deterioration of the fascia where the barrier posts are attached; repair is recommended if feasible. The twisted guiderail post should be repaired. Repair erosion at northeast. Continue to monitor the structure.

The MMM 2014 Report recommends lowering the load advisory limit from 15t to 10t or to also consider closing the structure. These are reasonable recommendations. The Township should lower the load limit, continue to monitor and replace this structure as soon as possible. Closure of the structure may need to occur prior to scheduled replacement if movement occurs or further deterioration leads to loss of the roadway embankment

Next scheduled inspection: Fall 2015

Frequency of inspections: Bi-annual

Structure 27-WG

Concern

- Severe Deterioration of Concrete and Reinforcing Steel

Inspection

- deterioration of concrete bottom chord members and their connections with the vertical hangers is severe – There was newly spalled concrete witnessed in streambed during March 2014 inspection which was believed to have come from the south end of the concrete bottom chord at mid span. In a comparison of photos between this inspection (September 23, 2014) and the previous inspection (March 2014) there is much less concrete on the south bottom chord now. This indicates a marked increase in the rate of spalling of deteriorated concrete in the recent months.



-
- exposed reinforcement bars show that rebar connectors were used in original construction; connectors are severely corroded and non-functioning as a tensile member
- one of the deck hangers at the north has been exposed to impact resulting in one of the four reinforcement bars in the hanger being permanently deformed



-
- northeast abutment corner is severely deteriorated

Recommendation

Due to severe deterioration at the connections of the vertical members with the bottom chord as well as the bottom chord in its entirety, structural integrity of the bridge is a concern. It is recommended to close this bridge to vehicular traffic.

Structure 12-N

Concern

- Severe Deterioration of Concrete and Reinforcing Steel
-

Inspection

- arch deterioration is severe; reinforcement bars are visible and deformed at the soffit



-
- the severe erosion of the south abutment and southeast wingwall bases have been recently repaired with mass concrete
- during the inspection on March 31, stone size pieces of concrete were falling away from top corner of southwest wingwall. The September 23, 2014 inspection noted stone size pieces of concrete on top of the new mass concrete, very likely falling from the deteriorated wingwall top overhead.
- The northwest wingwall is undermined and not physically attached to the main structure. New material appeared to have eroded from underneath the wall between the inspections of December 2013 and March 2014.



Recommendation

The bridge shall remain closed to vehicular traffic due to the condition of the spandrel arch. Deterioration of the top corner of the south wingwall does not change the overall stability of the structure. Continue to monitor the structure until major rehabilitation or full replacement.

Although scaling loose concrete from the entire bridge is likely impractical and could potentially further damage the structure, knocking off the very loose concrete that poses a hazard is to be continued as required.

Next scheduled inspection: Fall 2015

Frequency of inspections: Bi-annual

Structure 10-P

Concern

- Severe Deterioration of Two out of Four Concrete Beams
-

Inspection

- Easterly outer beam is severely deteriorated with exposed corroded reinforcing at the bottom



-
- Westerly outer beam is missing much of its original concrete, corroded reinforcing is exposed or missing altogether, and concrete that remains is extremely poor (both in original quality and current deteriorated state)



-
- A temporary repair was performed in 2011 (reinforced concrete slab poured at west side; jersey barrier placed on top)

Recommendation

The outside beams on this structure are in very poor condition. Due to the narrow configuration of this bridge most traffic is likely centred when crossing the bridge, utilizing the two inner girders. However this should not be considered as a long term solution to the structures serious structural issues.

MMM 2014 Report recommends lowering the load advisory limit from 15t to 5t or to also consider closing the structure. These are reasonable recommendations. The Township should lower the load limit, continue to monitor and replace this structure as soon as possible. Closure of the structure may need to occur prior to scheduled replacement.

Next scheduled inspection: Fall 2015

Frequency of inspections: Bi-annual

Structure 7-E

Concern

- Severely deteriorated area at soffit at southeast
- East girder missing much of its concrete and reinforcement
- Southeast bearing contact is minimal

Inspection

- The east concrete girder (the side traffic barriers are actually the load carrying components) has lost at least 10 inches of its top concrete throughout, more at the ends



-
- The west concrete girder is severely scaled
- There is a very large and deep delaminated area at the soffit that is completely separated from the deck



-
- Southeast corner of bridge is bearing only on remains of deteriorated concrete (rocks with no cement remaining)



-
- Few minor spalls at floor beams.
- Bottom two feet of abutments have been refaced several years ago.
- This particular style utilizes floor beams in conjunction with the above deck girders.

Recommendation

The bridge has lost much of its original load carrying capacity due to the severe disintegration of the easterly girder. The southeast corner of the bridge bears on severely deteriorated concrete. The southeast portion of the deck is subject to risk of a punch-through failure.

MMM 2014 Report recommends lowering the load advisory limit from 15t to 10t or to also consider closing the structure. These are reasonable recommendations. The Township should lower the load limit, continue to monitor and replace this structure as soon as possible. Closure of the structure may need to occur prior to scheduled replacement.

Next scheduled inspection: Fall 2015

Frequency of inspections: Bi-annual

Structure 30-PConcern

- Severely deteriorated/cracked floor beams with very corroded reinforcing steel
- Deteriorated outer girders
-

Inspection

- Top of north barrier beam has disintegrated concrete down 10 inches at both ends with no visible reinforcement (the side traffic barriers are actually the load carrying components) and poor concrete at remainder of top



-
- This particular style utilizes floor beams in conjunction with the above deck girders.
- East floor beam cracked through at two locations
- West floor beam cracked through at one location (bottom concrete spalled off and cracks proceed outward as if floor beam overloaded previously)



-
- Concrete at sides and bottoms of floor beams delaminated and spalled
- Severe corrosion of reinforcement at floor beams resulting in major section loss
- Efflorescence and disintegrating concrete at outside of outer beams
- Soffit is fair with some poor areas
- Abutment bottoms previously refaced. Walls above patched areas are poor concrete
- 3 out of 4 abutment corners have been refaced. The southwest corner was not patched and has poor concrete. The northeast corner patch has a wide crack and is displaced.

Recommendation

The bridge has lost much of its original load carrying capacity due to deterioration of many components.

The Township should continue to monitor and replace this structure as soon as possible. Closure of the structure may need to occur prior to scheduled replacement.

Next scheduled inspection: Fall 2015

Frequency of inspections: Bi-annual

Structure 32-P

Concern

- Severe deterioration of concrete at outer beams
- Deteriorated and cracked concrete at abutment corners under outer beams

Inspection

- This is the westerly of two structures (33-P is just to the east)
- The concrete at the bottoms of the outer beams is missing; rebars completely exposed and sagging



-
- West abutment concrete is deteriorated or missing at outer corners
- Northeast abutment corner exhibits vertical crack and disintegrated concrete under an inner beam



-
- Soffit is fair with some delaminated areas
- Northwest curb portion is missing
- Guidrail posts anchored into curbs and outer beams
- Relatively high volume of traffic and most traffic is heavy farm equipment, etc.

Recommendation

The bridge has lost much of its original load carrying capacity due to deterioration of the outer beams.

MMM 2014 Report recommends lowering the load advisory limit from 10t to 5t or to also consider closing the structure. These are reasonable recommendations. The Township should lower the load limit, continue to monitor and replace this structure as soon as possible. Closure of the structure may need to occur prior to scheduled replacement.

Next scheduled inspection: Fall 2015

Frequency of inspections: Bi-annual

Structure 33-P**Concern**

- Thin deck has severe deterioration of concrete at both top and bottom with corroded reinforcement
- Outer two concrete beams in poor condition
-

Inspection

- This is the easterly of two structures (32-P is just to the west)
- Outer two concrete beams in poor condition with missing concrete and exposed reinforcement



-
- Inner two beams in fair condition
- The deck at this structure is approximately 200mm thick (8") and consists of a poor quality concrete. The entire soffit is deeply delaminated (50mm +) exposing corroded reinforcement.



-
- The top of the deck surface is spalled by as much as 75mm. Very little concrete remains at some locations in the deck
- It is noted that traffic slows down to cross this bridge due to the condition of the deck
- Erosion occurring at northeast retaining wall and along east abutment
- Southwest and northwest curbs are missing

- Curbs are not reinforced, not tied into bridge and consist of poor quality concrete. Railing is attached to the curb at the top and the outer beam at the bottom (railing posts not adequately attached) Railing posts not attached at top where curbs are now missing.
- Southwest hazard sign recently fallen into creek
- Large crack at west abutment. Both abutment bottoms have been refaced as well as at northeast corner up to bottom of beam
- Relatively high volume of traffic and most traffic is heavy farm equipment, etc.

Recommendation

The bridge has lost much of its original load carrying capacity due to deterioration of the outer beams. The bridge deck is subject to risk of a punch-through failure.

MMM 2014 Report recommends lowering the load advisory limit from 10t to 5t or to also consider closing the structure. These are reasonable recommendations. The Township should lower the load limit, continue to monitor and replace this structure as soon as possible. Closure of the structure may need to occur prior to scheduled replacement.

Next scheduled inspection: Fall 2015

Frequency of inspections: Bi-annual

All of the preceding structures exhibit serious structural issues due to advanced deterioration. All of these structures should be replaced as soon as possible or be subject to complete closure in the near future.

Our next inspection and report will be in the fall of 2015.

If you have any questions or concerns, or if we can be of further service, please contact the undersigned anytime.

All of which is respectfully submitted,



Allan Garnham, P.Eng.



Trevor Hoard, C.E.T.

Structure Condition Summary Form

Structure Name 1-P
Structure Number TS-BR-00026
Date of Inspection May 06, 2022
Project No. 18015
Consultant HP Engineering Inc.

| Element Group | Element Name | Unit (Qty.) | Unit Price (MTO) | Total Element Quantity | Element Qty. in Excellent Condition (1.00) | Element Quantity in Good Condition (0.75) | Element Quantity in Fair Condition (0.4) | Element Quantity in Poor Condition (0) | Total Replacement Value (TRV) | Current Element Value (CEV) | Element Condition Index | Performance Deficiency | Maintenance Need |
|------------------------------|-----------------|-------------|------------------|------------------------|--|---|--|--|-------------------------------|-----------------------------|-------------------------|------------------------|------------------|
| Approaches | Wearing Surface | Sq.m | 6.00 | 100.00 | 0.00 | 30.00 | 70.00 | 0.00 | 600 | 303 | 51 | 00 | 00 |
| Abutment | Wingwalls | Sq.m | 350.00 | 100.00 | 0.00 | 0.00 | 10.00 | 90.00 | 35000 | 1400 | 4 | 00 | 00 |
| | Abutment Walls | Sq.m | 900.00 | 100.00 | 0.00 | 0.00 | 30.00 | 70.00 | 90000 | 10800 | 12 | 00 | 00 |
| | | | | | | | | | 125600 | 12503 | | | |
| Bridge Condition Index (BCI) | 10 | | | | | | | | | | | | |


Municipal Structure Inspection Form

Structure Name: 1-P

Structure No: TS-BR-00026

MTO Site No:

Inventory Data

| | | | | |
|--------------------|--|--------------------|---|--|
| Structure Name: | 1-P | Hwy No. | | Key Photo  Pilkington <NONE> 5 <NONE> |
| Crossing Over: | Road | Crossing Under: | Road | |
| Road Name: | Sideroad 5 | | | |
| Location: | Sideroad 5 | | | |
| Owner: | TCW, Township of Centre Wellington (100 %) | | | |
| | | Heritage Status: | N | |
| Latitude/Northing: | | Longitude/Easting: | | |
| MTO Region: | | Road Class: | 5 | |
| MTO District: | | Lane Type: | | |
| Old County: | | Posted Speed: | | |
| Geo Twp.: | Pilkington | AADT: | | |
| Structure Type: | T-Beam | Min Vert. Clear.: | m | |
| Material: | C - Cast In Place | No. of Spans: | 1 | |
| Articulation: | | | | |
| Deck Length: | 11.8 m | Special Routes: | <input type="checkbox"/> Transit <input type="checkbox"/> Truck <input type="checkbox"/> School <input type="checkbox"/> Bicycle | |
| Deck Width: | 4.5 m | | | |
| Deck Area: | 53.2 m2 | Detour Length: | 8.00 km | |
| Trav Deck Wdt | 4.0 m | | m | |

Historical Data

| | | |
|----------------------------------|---------------------------|---------------------------|
| Year Built: 1925 | Superstructure Year: | Year of Last Major Rehab: |
| Last OSIM Inspection: 06/16/2020 | Contract No. When Built: | |
| Last Enhanced OSIM: | Last Evaluation: | |
| Last Enhanced Access: | Current Load Limit: t t t | |
| Last Underwater Insp. | Bylaw No.: | |
| Last Condition Survey:. | Bylaw Exp. Date: | |

Municipal Structure Inspection Form

Structure Name: 1-P

Structure No: TS-BR-00026

MTO Site No: 00

Inspection Date: May 06, 2022 mm/dd/yyyy
 Next Biennial Inspection: May 2024 mm/dd/yyyy

Condition Index Value (BCI) 10

Performance Deficiencies

| Element Group | Element | Subtype | Performance Deficiency |
|---------------|---------|---------|------------------------|
|---------------|---------|---------|------------------------|

Maintenance Needs

| Element Group | Element | Subtype | Maintenance Need |
|---------------|---------|---------|------------------|
|---------------|---------|---------|------------------|

Repair/Rehabilitation

| Element Group | Element | Repair/Rehabilitation | Priority | Const Cost |
|---------------|-----------------------------|----------------------------------|----------|--------------|
| | Rehabilitate Superstructure | | Urgent | \$611,000.00 |
| | | Total Repair/Rehabilitation Cost | | \$611,000.00 |
| | | Total Associated Work Cost | | \$260,000.00 |
| | | Total Cost | | \$871,000.00 |

Overall Comments

- No structure observed at the time of inspection. Structure has been removed since last inspection.
 Large spalls, scaling and concrete disintegration, section loss noted at east abutment wall ($\pm 70\%$ poor)
 Section loss with severe spalls, and concrete disintegration observed at northeast and southeast wingwalls ($\pm 90\%$ poor)
 Approach wearing surfaces are heavily vegetated, with accumulation of debris at east approach.

Municipal Structure Inspection Form

Structure Name: 1-P

Structure No: TS-BR-00026

MTO Site No:

Field Inspection Information

Inspection Date: 05/06/2022 Inspection Type: ☒ OSIM ☐ Enhanced OSIM BCI: 39
 Inspector: Tashi Dwivedi, P.Eng., HP Engineering Eng. Responsible:
 Others in Party: Charlemagne Charles, Sagar Chhayani, EIT
 Access Equip: ☐ Lift ☐ Ladder ☐ Boat ☐ Bridge Master Other:
 Other Equipment: Hammer, tape, Camera, Chest waders
 Weather: Sunny Temperature: 15 °C

Additional Investigations Required

| Investigation | ----- Priority ----- | | | Estimated Cost |
|---|-------------------------------------|--------------------------|--------------------------|----------------|
| | None | Normal | Urgent | |
| Detailed Deck Condition Survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Delamination Survey of Asphalt-Covered Deck | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Concrete Substructure Condition Survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Detailed Coating Condition Survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Detailed Timber Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Post-Tension Strand Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Underwater Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Fatigue Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Seismic Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Structure Evaluation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Monitoring of Deformations, Movements and Settlements | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Monitoring of Crack Widths | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Total Cost: | | | | 0.00 |

Overall Structure Notes

Recommended Work On Structure: rehabilitate/replace structure

Timing of Recommended Work: 1-5 years

Next Inspection Date: 05/06 /2024 Estimated Load Limit: 0 t 0 t 0 t

Overall

It is recommended that a rehabilitation / replacement study be performed (\$20,000.00)

BCI Change**Justification:**

No structure is present at the time of inspection. Abutment walls and wing walls are observed with severe spalls, scaling and concrete disintegration.

Municipal Structure Inspection Form

Structure Name: 1-P

Structure No: TS-BR-00026

MTO Site No:

| Element Data |
|--------------------------------|
| Repair/Rehabilitation Required |
| Associated Work |

| Comments | Estimated Cost |
|-----------------------------------|----------------|
| Approaches | 0.00 |
| Detours | 100,000.00 |
| Traffic Control | 60,000.00 |
| Utilities | 0.00 |
| Right-of-Way | 0.00 |
| Environmental Study | 100,000.00 |
| Other 0.00 Contingencies 10% | 0.00 |
| Engineering | 0.00 |

| | |
|----------------------------------|------------|
| Total Associated Work Cost | 260,000.00 |
| Total Repair/Rehabilitation Cost | 611,000.00 |
| Total Cost | 871,000.00 |

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 1-P



Photo 1 Structure from east approach



Photo 2 Structure from west approach

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 1-P



Photo 3 North elevation



Photo 4 Large spalls, scaling and concrete disintegration noted on west abutment wall

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 1-P



Photo 5 Damaged/ broken steel beam rail at west approach



Photo 6 Large spalls and severe concrete disintegration noted on northeast wingwall

Structure Condition Summary Form

Structure Name 28-P
Structure Number TS-BR-00040
Date of Inspection May 05, 2022
Project No. 18015
Consultant HP Engineering Inc.

| Element Group | Element Name | Unit (Qty.) | Unit Price (MTO) | Total Element Quantity | Element Qty. in Excellent Condition (1.00) | Element Quantity in Good Condition (0.75) | Element Quantity in Fair Condition (0.4) | Element Quantity in Poor Condition (0) | Total Replacement Value (TRV) | Current Element Value (CEV) | Element Condition Index | Performance Deficiency | Maintenance Need |
|--------------------------|----------------------|-------------|------------------|------------------------|--|---|--|--|-------------------------------|-----------------------------|-------------------------|------------------------|------------------|
| Barriers | Railing Systems | m | 200.00 | 100.00 | 0.00 | 0.00 | 50.00 | 50.00 | 20000 | 4000 | 20 | 00 | 00 |
| Decks | Deck Top - Thin Slab | Sq.m | 120.00 | 100.00 | 0.00 | 0.00 | 50.00 | 50.00 | 12000 | 2400 | 20 | 00 | 00 |
| | Soffit - Thin Slab | Sq.m | 120.00 | 100.00 | 0.00 | 0.00 | 50.00 | 50.00 | 12000 | 2400 | 20 | 00 | 00 |
| Beams/ Main Longitudinal | Girders | Sq.m | 200.00 | 100.00 | 0.00 | 0.00 | 50.00 | 50.00 | 20000 | 4000 | 20 | 00 | 00 |
| Abutment | Wingwalls | Sq.m | 350.00 | 100.00 | 0.00 | 0.00 | 50.00 | 50.00 | 35000 | 7000 | 20 | 00 | 00 |
| | Abutment Walls | Sq.m | 900.00 | 100.00 | 0.00 | 0.00 | 50.00 | 50.00 | 90000 | 18000 | 20 | 00 | 00 |
| | | | | | | | | | 189000 | 37800 | | | |

Bridge Condition Index (BCI)

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Municipal Structure Inspection Form

Structure Name: 28-P

Structure No: TS-BR-00040

MTO Site No:

Inventory Data

| | | | | |
|--------------------|--|--------------------|--|---|
| Structure Name: | 28-P | Hwy No. | | Key Photo  |
| Crossing Over: | Road | Crossing Under: | Road | |
| Road Name: | Sideroad 11 | | | |
| Location: | Sideroad 11 | | | |
| Owner: | TCW, Township of Centre Wellington (100 %) | | | |
| | | Heritage Status: | N | |
| Latitude/Northing: | | Longitude/Easting: | | |
| MTO Region: | | Road Class: | 5 | |
| MTO District: | | Lane Type: | | |
| Old County: | | Posted Speed: | | |
| Geo Twp.: | Pilkington | AADT: | | |
| Structure Type: | T-Beam | Min Vert. Clear.: | m | |
| Material: | C - Cast In Place | No. of Spans: | 1 | |
| Articulation: | | | | |
| Deck Length: | 11.3 m | Special Routes: | <input type="checkbox"/> Transit <input type="checkbox"/> Truck | |
| Deck Width: | 5.7 m | | <input type="checkbox"/> School <input type="checkbox"/> Bicycle | |
| Deck Area: | 64.5 m ² | Detour Length: | 8.00 km | |
| Trav Deck Wdt | 4.9 m | | m | |

Pilkington

<NONE>

5

<NONE>

Skew Angle: degrees

Structure Dir: E-W

Historical Data

| | | |
|---|--------------------|--|
| Year Built: 1925 | Superstruct. Year: | Year of Last Major Rehab: |
| Last OSIM Inspection: 06/16/2020 | | Contract No. When Built: |
| Last Enhanced OSIM: | | Last Evaluation: |
| Last Enhanced Access: | | Current Load Limit: t t t |
| Last Underwater Insp. | | Bylaw No.: |
| Last Condition Survey:. | | Bylaw Exp. Date: |

Municipal Structure Inspection Form

Structure Name: 28-P

Structure No: TS-BR-00040

MTO Site No:

Inspection Date: May 05, 2022 mm/dd/yyyy
 Next Biennial Inspection: May 2020 mm/dd/yyyy

Condition Index Value (BCI)

Performance Deficiencies

| Element Group | Element | Subtype | Performance Deficiency |
|---------------|---------|---------|------------------------|
|---------------|---------|---------|------------------------|

Maintenance Needs

| Element Group | Element | Subtype | Maintenance Need |
|---------------|---------|---------|------------------|
|---------------|---------|---------|------------------|

Repair/Rehabilitation

| Element Group | Element | Repair/Rehabilitation | Priority | ConstCost |
|---------------|---------|----------------------------------|----------|----------------|
| | | Rehabilitate Superstructure | Urgent | \$853,300.00 |
| | | Total Repair/Rehabilitation Cost | | \$853,300.00 |
| | | Total Associated Work Cost | | \$299,000.00 |
| | | Total Cost | | \$1,152,300.00 |

Overall Comments

- The majority of the railing is missing and or fallen into the stream. Severe spalls, delamination, concrete disintegration with exposed corroded reinforcement on the remaining section of the railing.
- West end of the substructure has failed. A large sinkhole has formed as a result.
- Wide crack in the deck at south west end.
- North west wingwall has disconnected from the abutment.
- Large area of disintegration at the east abutment.
- Wide cracks at south east wingwall.
- Severe undermining of west abutment, causing settlement at west.
- West end of the deck is almost disconnected from the abutment.
- Four (4) signs for bridge closure present at the time of the inspection.
- Unstable embankments.
- Moderate volume, low flow from North to South with no obstruction.
- Large spall and undermining at Southeast corner of East abutment.
- Severe concrete disintegration and large spall with exposed concrete reinforcement noted at end section of girders.

Municipal Structure Inspection Form

Structure Name: 28-P

Structure No: TS-BR-00040

MTO Site No:

Field Inspection Information

Inspection Date: 05/05/22

Inspection Typ ☒ OSIM ☐ Enhanced OSIM BCI: 20

Inspector: Tashi Dwivedi, P.Eng., HP Engineering

Eng. Responsible:

Others in Party: Charlemagne Charles and Sagar Chhayani

Access Equip: ☐ Lift ☐ Ladder ☐ Boat ☐ Bridge Master Other:

Other Equipment: Hammer, tape, Camera, Chest waders

Weather: Sunny

Temperature: 14 °C

Additional Investigations Required

| Investigation | Priority | | | Estimated Cost |
|---|-------------------------------------|--------------------------|--------------------------|----------------|
| | None | Normal | Urgent | |
| Detailed Deck Condition Survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Delamination Survey of Asphalt-Covered Deck | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Concrete Substructure Condition Survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Detailed Coating Condition Survey | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Detailed Timber Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Post-Tension Strand Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Underwater Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Fatigue Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Seismic Investigation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Structure Evaluation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Monitoring of Deformations, Movements and Settlements | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Monitoring of Crack Widths | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0.00 |
| Total Cost: | | | | 0.00 |

Overall Structure Notes

Recommended Work On Structure:

rehabilitate/ replace structure

Timing of Recommended Work:

1-5 years

Next Inspection Date:

May 2022

Estimated Load Limit:

0 t 0 t 0 t

Overall

It is recommended that a rehabilitation / replacement study be performed (\$20,000.00)

BCI Change

Justification

Township of Centre Wellington
Municipal Structure Inspection Form

Structure Name: 28-P
Structure No: TS-BR-00040
MTO Site No:

| Element Data |
|--------------------------------|
| Repair/Rehabilitation Required |
| Associated Work |

| | Comments | Estimated Cost |
|----------------------------------|----------|----------------|
| Approaches | | 0.00 |
| Detours | | 100,000.00 |
| Traffic Control | | 60,000.00 |
| Utilities | | 0.00 |
| Right-of-Way | | 0.00 |
| Environmental Study | | 100,000.00 |
| Other | | 0.00 |
| Contingencies | 10% | 0.00 |
| Engineering | | 0.00 |
| Total Associated Work Cost | | \$299,000.00 |
| Total Repair/Rehabilitation Cost | | \$853,300.00 |
| Total Cost | | \$1,152,300.00 |

MUNICIPAL STRUCTURE INSPECTION FORM

Bridge

SITE PHOTOGRAPHS

Site No.: 28-P



Photo 1 Structure from east approach



Photo 2 Structure from west approach



Photo 3 East approach from centre of structure



Photo 4 West approach from centre of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Moderate scaling and large spalls on concrete deck



Photo 8 Bridge barrier broken / detached



Photo 9 Large crack noted on wing wall



Photo 10 East abutment wall



Photo 11 West abutment wall



Photo 12 Exposed Corroded Reinforcement



Photo 12 Exposed Corroded Reinforcement



Photo 14 Large Spall with Exposed Corroded Reinforcement on the Exterior Face

Structure Condition Summary Form

Structure Name
SIDEROAD 5
Structure Number
30-P
Date of Inspection
May 05, 2022
Project No.
18015
Consultant
HP Engineering Inc.

| Element Group | Element Name | Unit (Qty.) | Unit Price (MTO) | Total Element Quantity | Element Qty. in Excellent Condition (1.00) | Element Quantity in Good Condition (0.75) | Element Quantity in Fair Condition (0.4) | Element Quantity in Poor Condition (0) | Total Replacement Value (TRV) | Current Element Value (CEV) | Element Condition Index | Performance Deficiency | Maintenance Need |
|-----------------------------------|------------------------|-------------|------------------|------------------------|--|---|--|--|-------------------------------|-----------------------------|-------------------------|------------------------|------------------|
| Approaches | Wearing Surface | Sq.m | 6.00 | 54.00 | 0.00 | 54.00 | 0.00 | 0.00 | 324 | 243 | 75 | 00 | 00 |
| Barriers | Railing Systems | m | 200.00 | 35.20 | 0.00 | 10.20 | 12.50 | 12.50 | 7040 | 2530 | 36 | 08 | 00 |
| | Posts (Steel/Concrete) | Each | 200.00 | 4.00 | 0.00 | 0.00 | 2.00 | 2.00 | 800 | 160 | 20 | 08 | 08 |
| Decks | Wearing Surface | Sq.m | 25.00 | 47.85 | 0.00 | 43.85 | 2.00 | 2.00 | 1196 | 842 | 70 | 00 | 12 |
| | Deck Top - Thin Slab | Sq.m | 120.00 | 47.85 | 0.00 | 0.00 | 33.50 | 14.36 | 5742 | 1608 | 28 | 00 | 00 |
| | Soffit - Thin Slab | Sq.m | 120.00 | 57.14 | 0.00 | 0.00 | 28.57 | 28.57 | 6857 | 1371 | 20 | 00 | 00 |
| Beams/ Main Longitudinal Elements | Girders | Sq.m | 200.00 | 68.73 | 0.00 | 12.49 | 41.24 | 15.00 | 13746 | 5173 | 38 | 01 | 00 |
| Abutment | Floor Beams - Concrete | Sq.m | 200.00 | 21.60 | 0.00 | 0.00 | 10.80 | 10.80 | 4320 | 864 | 20 | 01 | 00 |
| | Wingwalls | Sq.m | 350.00 | 21.00 | 0.00 | 10.50 | 5.25 | 5.25 | 7350 | 3491 | 48 | 00 | 00 |
| | Abutment Walls | Sq.m | 900.00 | 27.72 | 0.00 | 6.93 | 13.86 | 6.93 | 24948 | 9667 | 39 | 01 | 00 |
| | | | | | | | | | 72323 | 25950 | | | |

Bridge Condition Index (BCI)

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Municipal Structure Inspection Form
TOWNSHIP OF CENTRE WELLINGTON

Structure Name 30-P

SIDEROAD 5

HP ENGINEERING INC.

Field Inspection Information:

| | |
|---------------------|--|
| Date of Inspection: | May 05, 2022 |
| Inspector: | Tashi Dwivedi, P.Eng., HP Engineering |
| Others in Party: | Charlemagne Charles and Sagar Chhayani, HP Engineering |
| Equipment Used: | Hammer, tape, camera, Chest waders |
| Weather | Sunny |
| Temperature | 15 °C |

| Additional Investigations Required | Priority | | | Estimated Cost |
|------------------------------------|----------|------------|--------|----------------|
| | None | Normal | Urgent | |
| Detailed Deck Condition Survey: | | | | |
| DART Survey: | | | | |
| Detailed Coating Condition Survey: | | | | |
| Underwater Investigation | | | | |
| Fatigue Investigation: | | | | |
| Seismic Investigation: | | | | |
| Structure Evaluation: | | | | |
| Load Posting - Estimated Load | 0 | Total Cost | | \$0 |

Special Notes:

No barriers on approach. Deck barrier does not meet current standards. Structure closed at time of inspection. A rehabilitation/replacement study is recommended for this structure (\$20,000.00).

Next Detailed Inspection: May 2024

| Repair and Rehabilitation Required | | Priority | | | | Estimated Construction Cost |
|------------------------------------|------------------------------------|------------|-------------|---------------|--------|-----------------------------|
| Element | Repair and Rehabilitation Required | 6-10 years | 1 - 5 years | Within 1 year | Urgent | |
| | Replace Structure | | X | | | \$658,000.00 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | \$658,000.00 |

| Associated Work: | Comments | Estimated Cost |
|---------------------|---------------|----------------|
| Approaches | | |
| Detours | | \$ 100,000.00 |
| Traffic Control | | \$60,000.00 |
| Utilities | | |
| Right of Way | | |
| Environmental Study | | \$100,000.0 |
| Other | 0 Engineering | |
| Contingencies | | |
| Total Cost | | \$260,000.00 |

Justification

The cost estimate is based on a replacement structure that is the same size as the existing. The cost may vary based on the results of a rehabilitation/replacement study.

Municipal Structure Inspection Form

MTO Site Number

35-186

Element Data

| | | | | | | | | |
|-------------------|--------------------------------|----------------|------|-------|--------------|--------------------------|------------------------------------|-------|
| Element Group | 900 | Abutments | | | | Length | 6.60 | |
| Element Name | 901 | Abutment Walls | | | | Width | | |
| Location | East & west sides of structure | | | | | | Height | 2.10 |
| Material | Cast-in-place concrete | | | | | | Count | 2 |
| Element Type | Conventional closed | | | | Element code | | Total Qty. | 27.72 |
| Environment | Moderate | | | | | | Limited Insp. | |
| Protection System | None | | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | 1 Load Carrying capacity | | |
| | Sq. m. | 0 | 6.93 | 13.86 | 6.93 | | | |

Comments:

Severe scaling, honeycombing and medium to wide cracks, some with efflorescence observed. Wide shear cracks noted below girders.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|-------------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | | |
|-------------------|------------------------------|-----------|------|------|--------------|--------|------------------------------------|------|
| Element Group | 900 | Abutments | | | | Length | 3.50 | |
| Element Name | 903 | Wingwalls | | | | Width | | |
| Location | NE, NW, SE & SW of structure | | | | | | Height | 1.50 |
| Material | Cast-in-place concrete | | | | | | Count | 4 |
| Element Type | Reinforced concrete | | | | Element code | 6 | Total Qty. | 21 |
| Environment | Moderate | | | | | | Limited Insp. | |
| Protection System | None | | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | - - | | |
| | Sq. m. | 0 | 10.5 | 5.25 | 5.25 | | | |

Comments:

Some wide cracking, severe concrete disintegration noted on SW wingwall. Medium crack with efflorescence staining noted at southeast wingwall.

| | | | | | | | |
|-------------------|--------|-------------------------------------|---------|-------------------------------------|--------------|--------------------------|--|
| Recommended Work: | Rehab | <input checked="" type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | 08 | Repair of bridge concrete |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input checked="" type="checkbox"/> |

| | | | | | | | | |
|-------------------|---------------------------------|-------|------|------|--------------|--------|------------------------------------|---|
| Element Group | 1500 | Signs | | | | Length | | |
| Element Name | 1501 | Sign | | | | Width | | |
| Location | NE, NW, SE & SW of structure | | | | | | Height | |
| Material | 4 Hazard Signs; 2 Warning Signs | | | | | | Count | 6 |
| Element Type | N/A | | | | Element code | N/A | Total Qty. | 6 |
| Environment | Severe | | | | | | Limited Insp. | |
| Protection System | None | | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | - - | | |
| | Each | 0 | 1 | 0 | 1 | | | |

Comments:

Generally in good condition; NE and SE hazard sign leaning slightly. SW sign is missing.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-186

Element Data

| | | | | | | | | |
|-------------------|--------------------------------|-----------------------|--------------|------|------|------------------------------------|--------|------|
| Element Group | 1600 | Approaches | | | | | Length | 6.00 |
| Element Name | 1601 | Wearing surface (app) | | | | | Width | 4.50 |
| Location | East & west sides of structure | | | | | Height | | |
| Material | Gravel | | | | | Count | 2 | |
| Element Type | N/A | | Element code | N/A | | Total Qnty. | 54 | |
| Environment | Severe | | | | | Limited Insp. | | |
| Protection System | None | | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | 0 | 54 | 0 | 0 | | | |

Comments:
Lightly vegetated. No approach barrier present at the time of inspection. A code compliant approach barrier should be installed.

| | | | | |
|-------------------|---------------------------------|----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | | |
|-------------------|------------------------|----------------------------|--------------|------|------|------------------------------------|--------|------|
| Element Group | 500 | Beams/MLE's | | | | | Length | 6.00 |
| Element Name | 502 | Floor Beams (Intermediate) | | | | | Width | 0.36 |
| Location | Underside of structure | | | | | Height | 0.36 | |
| Material | Cast-in-place concrete | | | | | Count | 2 | |
| Element Type | Rectangular-solid | | Element code | 4 | | Total Qnty. | 21.6 | |
| Environment | Moderate | | | | | Limited Insp. | | |
| Protection System | None | | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | 0 | 0 | 10.8 | 10.8 | 1 Load Carrying capacity | | |

Comments:
Large areas of spalls with exposed corroded steel on underside and ends of beams. Localized medium to wide cracks noted throughout.

| | | | | |
|-------------------|---------------------------------|---|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | | |
|-------------------|------------------------|-------------|--------------|-------|------|------------------------------------|--------|------|
| Element Group | 500 | Beams/MLE's | | | | | Length | 8.70 |
| Element Name | 501 | Girders | | | | | Width | 0.35 |
| Location | Underside of structure | | | | | Height | 1.45 | |
| Material | Cast-in-place concrete | | | | | Count | 2 | |
| Element Type | Rectangular-solid | | Element code | 4 | | Total Qnty. | 68.73 | |
| Environment | Severe | | | | | Limited Insp. | | |
| Protection System | None | | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | 0 | 12.49 | 41.24 | 15 | 1 Load Carrying capacity | | |

Comments:
Numerous spalls with exposed corroded steel, cracks with efflorescence and moderate scaling.

| | | | | |
|-------------------|---------------------------------|---|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-186

Element Data

| | | | | | | | | |
|-------------------|---|----------|------|------|--------------|--------|------------------------------------|-------------------------------------|
| Element Group | 100 | Decks | | | | Length | 8.70 | |
| Element Name | 102 | Deck top | | | | Width | 5.50 | |
| Location | Top of deck | | | | | | Height | |
| Material | Cast-in-place concrete | | | | | | Count | 1 |
| Element Type | Cast-in-place conc on supports, composite | | | | Element code | | Total Qty. | 47.85 |
| Environment | Moderate | | | | | | Limited Insp. | <input checked="" type="checkbox"/> |
| Protection System | None | | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | 0 | 0 | 33.5 | 14.36 | | | |

Comments:

Not visible due to gravel fill. Condition rating is based on condition of soffit.

| | | | | | |
|-------------------|---------------------------------|---|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | | |
|-------------------|--------------------------------------|-----------------------------|------|------|--------------|--------|------------------------------------|--|
| Element Group | 100 | Decks | | | | Length | | |
| Element Name | 103 | Soffit Thin Slab (Exterior) | | | | Width | | |
| Location | North & south underside of structure | | | | | | Height | |
| Material | Cast-in-place concrete | | | | | | Count | |
| Element Type | N/A | | | | Element code | N/A | Total Qty. | |
| Environment | Moderate | | | | | | Limited Insp. | |
| Protection System | None | | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | | | | | | | |

Comments:

No exterior thin slab soffit component noted at the time of inspection.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | | |
|-------------------|------------------------|-----------------------------|------|-------|--------------|--------|------------------------------------|-------|
| Element Group | 100 | Decks | | | | Length | 6.50 | |
| Element Name | 103 | Soffit Thin Slab (Interior) | | | | Width | 2.93 | |
| Location | Underside of structure | | | | | | Height | |
| Material | Cast-in-place concrete | | | | | | Count | 3 |
| Element Type | N/A | | | | Element code | N/A | Total Qty. | 57.14 |
| Environment | Benign | | | | | | Limited Insp. | |
| Protection System | None | | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | 0 | 0 | 28.57 | 28.57 | | | |

Comments:

Numerous medium to wide cracks noted with efflorescence. Delaminations and spalls observed with exposed corroded reinforcement.

| | | | | | |
|-------------------|---------------------------------|---|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-186

Element Data

| | | | | | | | | |
|-------------------|-------------|-----------------|-------|------|--------------|------------------------------------|--------|------|
| Element Group | 100 | Decks | | | | | Length | 8.70 |
| Element Name | 101 | Wearing surface | | | | | Width | 5.50 |
| Location | Top of deck | | | | | | | |
| Material | Gravel | | | | | | | |
| Element Type | N/A | | | | Element code | N/A | | |
| Environment | Severe | | | | | | | |
| Protection System | None | | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | 0 | 43.85 | 2 | 2 | | | |
| | | | | | | Total Qnty. | 47.85 | |
| | | | | | | Limited Insp. | | |
| | | | | | | Suspected Performance Deficiencies | | |
| | | | | | | - | - | |

Comments:

Gravel accumulation with vegetation noted on wearing surface

| | | | | | |
|-------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|--|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | 12 | Bridge surface repair |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input checked="" type="checkbox"/> |

| | | | | | | | | |
|-------------------|------------------------------|-------------------------|------|------|--------------|------------------------------------|--------|--|
| Element Group | 1400 | Embankments and Streams | | | | | Length | |
| Element Name | 1402 | Embankments | | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | | | |
| Material | Native soil | | | | | | | |
| Element Type | N/A | | | | Element code | N/A | | |
| Environment | - | | | | | | | |
| Protection System | None | | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Each | 0 | 4 | 0 | 0 | | | |
| | | | | | | Total Qnty. | 4 | |
| | | | | | | Limited Insp. | | |
| | | | | | | Suspected Performance Deficiencies | | |
| | | | | | | - | - | |

Comments:

Steep slope and well vegetated. Embankments appear stable. Some erosion noted at the SE corner.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|--|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | 13 | Erosion Control at Bridges |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input checked="" type="checkbox"/> |

| | | | | | | | | |
|-------------------|------------------------------|-------------------------|------|------|--------------|------------------------------------|--------|--|
| Element Group | 1400 | Embankments and Streams | | | | | Length | |
| Element Name | 1403 | Slope Protections | | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | | | |
| Material | Other | | | | | | | |
| Element Type | Rock Protection | | | | Element code | 9 | | |
| Environment | - | | | | | | | |
| Protection System | None | | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Each | 0 | 0 | 0 | 0 | | | |
| | | | | | | Total Qnty. | | |
| | | | | | | Limited Insp. | | |
| | | | | | | Suspected Performance Deficiencies | | |
| | | | | | | - | - | |

Comments:

No slope protection noted at the time of inspection.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-186

Element Data

| | | | | | | | |
|-------------------|-----------------|-------------------------|------|------|------------------------------------|-------------|---|
| Element Group | 1400 | Embankments and Streams | | | | Length | |
| Element Name | 1401 | Streams and Waterways | | | | Width | |
| Location | Under structure | | | | Height | | |
| Material | Other | | | | Count | 1 | |
| Element Type | N/A | Element code | N/A | | | Total Qnty. | 1 |
| Environment | - | | | | Limited Insp. | | |
| Protection System | None | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | All | 0 | 1 | 0 | 0 | | |

Comments:

Low volume with low flow from north to south. No obstructions noted.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|-----------------|---------------------------------|------|------|------------------------------------|-------------|--|
| Element Group | 1300 | Foundations | | | | Length | |
| Element Name | 1301 | Foundation (below ground level) | | | | Width | |
| Location | Below structure | | | | Height | | |
| Material | Unknown | | | | Count | | |
| Element Type | Foundations | Element code | | | | Total Qnty. | |
| Environment | - | | | | Limited Insp. | X | |
| Protection System | None | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | N/A | 0 | 1 | 0 | 0 | | |

Comments:

No visible evidence of instability at time of inspection.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|----------------------------------|--------------|------|------|------------------------------------|-------------|------|
| Element Group | 400 | Barriers | | | | Length | 0.25 |
| Element Name | 403 | Posts | | | | Width | 0.25 |
| Location | North & south sides of structure | | | | Height | 1.00 | |
| Material | Cast-in-place concrete | | | | Count | 4 | |
| Element Type | N/A | Element code | N/A | | | Total Qnty. | 4 |
| Environment | Severe | | | | Limited Insp. | | |
| Protection System | None | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Each | 0 | 0 | 2 | 2 | | |

Comments:

Areas of large spalls with scaling and cracks noted. Railing is detached from posts at northeast corner.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-186

Element Data

| | | | | | | | | |
|--|----------------------------------|-------------------------------|--------------------------|---------|-------------------------------------|------------------------------------|-----------------------------|---|
| Element Group | 400 | Barriers | | | | | Length | 8.80 |
| Element Name | 402 | Barrier (Exterior & Interior) | | | | | Width | 0.30 |
| Location | North & south sides of structure | | | | | | | |
| Material | Cast-in-place concrete | | | | | | | |
| Element Type | Concrete Barrier | | | | Element code | 6 | Total Qty. | 35.2 |
| Environment | Severe | | | | | | | |
| Protection System | None | | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | Suspected Performance Deficiencies | | |
| | m. | 0 | 10.2 | 12.5 | 12.5 | 8 | Pedestrian/Vehicular Hazard | |
| Comments: Medium to wide cracks with staining noted at north and south barriers. Large spalls with severe concrete disintegration and section loss noted | | | | | | | | |
| Recommended Work: | | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | 6-10 yrs | <input type="checkbox"/> | Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> |

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.:30-P



Photo 1 Structure from east approach



Photo 2 Structure from west approach



Photo 3 East approach from centre of structure



Photo 4 West approach from centre of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Concrete disintegration on north deck barrier



Photo 8 Vegetation growing throughout deck wearing surface



Photo 9 Spalls with exposed corroded reinforcement and efflorescence on north soffit



Photo 10 Spalls with exposed corroded reinforcement on north end of floor beam



Photo 11 Spalls and stained cracks on NE wingwall



Photo 12 Cracks and stains on east abutment wall



Photo 13 Large spall with exposed corroded reinforcement at concrete beams.



Photo 14 Spall with exposed corroded reinforcement at edge of concrete deck.

Structure Condition Summary Form

Structure Name NOAH ROAD
Structure Number 32-P
Date of Inspection May 05, 2022
Project No. 18015
Consultant HP Engineering Inc.

| Element Group | Element Name | Unit (Qty.) | Unit Price (MTO) | Total Element Quantity | Element Qty. in Excellent Condition (1.00) | Element Quantity in Good Condition (0.75) | Element Quantity in Fair Condition (0.4) | Element Quantity in Poor Condition (0) | Total Replacement Value (TRV) | Current Element Value (CEV) | Element Condition Index | Performance Deficiency | Maintenance Need |
|--------------------------|------------------------|-------------|------------------|------------------------|--|---|--|--|-------------------------------|-----------------------------|-------------------------|------------------------|------------------|
| Approaches | Wearing Surface | Sq.m | 6.00 | 60.00 | 0.00 | 60.00 | 0.00 | 0.00 | 360 | 270 | 75 | 00 | 00 |
| Barriers | Railing Systems | m | 200.00 | 32.50 | 0.00 | 32.50 | 0.00 | 0.00 | 6500 | 4875 | 75 | 00 | 00 |
| | Posts (Steel/Concrete) | Each | 200.00 | 19.00 | 0.00 | 19.00 | 0.00 | 0.00 | 3800 | 2850 | 75 | 00 | 00 |
| Sidewalks/ Curbs | Curbs | Sq.m | 40.00 | 21.13 | 0.00 | 6.13 | 9.00 | 6.00 | 845 | 328 | 39 | 00 | 00 |
| Decks | Deck Top - Thin Slab | Sq.m | 120.00 | 50.00 | 0.00 | 7.50 | 37.50 | 5.00 | 6000 | 2475 | 41 | 00 | 02 |
| | Soffit - Thin Slab | Sq.m | 120.00 | 35.10 | 0.00 | 10.53 | 14.04 | 10.53 | 4212 | 1622 | 39 | 00 | 00 |
| Beams/ Main Longitudinal | Girders | Sq.m | 200.00 | 57.60 | 0.00 | 0.00 | 28.80 | 28.80 | 11520 | 2304 | 20 | 01 | 00 |
| | Wingwalls | Sq.m | 350.00 | 19.20 | 0.00 | 0.00 | 9.60 | 9.60 | 6720 | 1344 | 20 | 01 | 00 |
| Abutment | Ballast Walls | Sq.m | 350.00 | 4.29 | 0.00 | 0.00 | 4.29 | 0.00 | 1502 | 601 | 40 | 00 | 00 |
| | Abutment Walls | Sq.m | 900.00 | 12.76 | 0.00 | 0.00 | 8.76 | 4.00 | 11484 | 3154 | 27 | 01 | 00 |
| | | | | | | | | | 52943 | 19822 | | | |

Bridge Condition Index (BCI) 37

Municipal Structure Inspection Form
TOWNSHIP OF CENTRE WELLINGTON

Structure Name 32-P

NOAH ROAD

Municipal Structure Inspection Form

MTO Site Number:

35-380

BCI:

38.00

Inventory Data:

| | | | | | | | | | | | |
|--------------------|----------------------------------|-------------------------|---|--|--|--|---|--------------------------|--|--|--|
| Structure Name: | 32-P | | | | | | | | | | |
| Main Hwy/Road # | | On Under | <input checked="" type="checkbox"/> <input type="checkbox"/> | Crossing Type: | Navig. Water | <input checked="" type="checkbox"/> | Non-Navig Water | <input type="checkbox"/> | | | |
| | | | | | Rail | <input type="checkbox"/> | Ped. | <input type="checkbox"/> | | | |
| | | | | | Road | <input type="checkbox"/> | Other | <input type="checkbox"/> | | | |
| Road Name | Noah Road | | | | | | | | | | |
| Structure Location | 0.75 km West of Eighth Line West | | | | | | | | | | |
| Latitude | N 43° 39' 31.3" | | | | Longitude | W 80° 30' 24.4" | | | | | |
| Owner(s) | Township of Centre Wellington | Heritage Designation | Not Cons. List/not Desig. | <input type="checkbox"/> <input type="checkbox"/> | Cons. /not App Desig./not List Desig.& List | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| MTO Region * | - | - | Road Class | Freeway Arterial | <input type="checkbox"/> <input type="checkbox"/> | Collector Local | <input type="checkbox"/> <input checked="" type="checkbox"/> | | | | |
| | | | | | | | | | | | |
| MTO District * | - | - | Posted Speed | 80 | No. of Lanes: | 2 | | | | | |
| Current County* | - | - | AADT | | % Trucks | | | | | | |
| Geographic Twp. * | | Pilkington | Special Routes: | Transit Truck | <input type="checkbox"/> <input type="checkbox"/> | School Bicycle | <input type="checkbox"/> <input type="checkbox"/> | | | | |
| | | | | | | | | | | | |
| Structure Type* | 7 | T-Beam | Detour Length | | 9 | (km) | | | | | |
| Total Deck Length | | 10.3 | (m) | Fill on Structure | | (m) | | | | | |
| Overall Str. Width | | 5.6 | (m) | Skew Angle | | (degrees) | | | | | |
| Total Deck Area | | 58 | (sq. m) | Direction of Structure | E-W | | | | | | |
| Roadway Width | | 4.1 | (m) | No. of Spans | 1 | | | | | | |
| Span Lengths. | 9.2 (m) | | | | | | | | | | |

Historical Data:

| | | | |
|-------------------------|----------------------|------------------------------|---------------|
| Year Built | 1926 | Last Biennial Inspection | June 16, 2020 |
| Current Load Limit | Road Closed (tonnes) | Last BridgeMaster Inspection | |
| Load Limit By-Law # | | Last Evaluation | |
| By-Law Expiry Date | | Last Underwater Inspection | |
| Min. Vertical Clearance | (m) | Last Condition Survey | |

Rehab History : (Date/description)

Field Inspection Information:

| | |
|---------------------|--|
| Date of Inspection: | May 05, 2022 |
| Inspector: | Tashi Dwivedi, P.Eng., (H.P. Engineering) |
| Others in Party: | Charlemagne Charles and Sagar Chhayani, (H.P. Engineering) |
| Equipment Used: | Hammer, tape, Camera, Chest waders |
| Weather | Sunny |
| Temperature | °C |

| Additional Investigations Required | Priority | | | Estimated Cost |
|------------------------------------|----------|------------|--------|----------------|
| | None | Normal | Urgent | |
| Detailed Deck Condition Survey: | | | | |
| DART Survey: | | | | |
| Detailed Coating Condition Survey: | | | | |
| Underwater Investigation | | | | |
| Fatigue Investigation: | | | | |
| Seismic Investigation: | | | | |
| Structure Evaluation: | | | | |
| Load Posting - Estimated Load | 0 | Total Cost | | \$0 |

Special Notes:

No approach SBGR. Road closed at time of inspection. It is recommended that a rehabilitation / replacement study should be performed (\$ 20,000.00).

Next Detailed Inspection: May 2022

Municipal Structure Inspection Form

MTO Site Number:

35-380

| Repair and Rehabilitation Required | | Priority | | | | Estimated Construction Cost |
|------------------------------------|------------------------------------|------------|-------------|---------------|--------|-----------------------------|
| Element | Repair and Rehabilitation Required | 6-10 years | 1 - 5 years | Within 1 year | Urgent | |
| | Rehabilitate / replace structure | | X | | | \$663,000.00 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | \$663,000.00 |

| Associated Work: | Comments | Estimated Cost |
|---------------------|------------------|----------------|
| Approaches | Approach SBGR | |
| Detours | Required | \$ 100,000.00 |
| Traffic Control | | \$60,000.00 |
| Utilities | | |
| Right of Way | | |
| Environmental Study | Approvals | \$100,000.00 |
| Other | Engineering Fees | |
| Contingencies | | |
| Total Cost | | \$260,000.00 |

Justification

Estimated costs are based on a structure the same size as the existing.

Municipal Structure Inspection Form

MTO Site Number

35-380

Element Data

| | | | | | | | | |
|--------------------------|--------------------------------|----------------|-------------|---------------------|-------------|---|-------|--|
| Element Group | 900 | Abutments | | | | Length | | |
| Element Name | 901 | Abutment Walls | | | | Width | 5.80 | |
| Location | East & west sides of structure | | | | | Height | 1.10 | |
| Material | Cast-in-place concrete | | | | | Count | 2 | |
| Element Type | Conventional closed | | | Element code | | Total Qnty. | 12.76 | |
| Environment | Moderate | | | | | Limited Insp. | | |
| Protection System | None | | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | 0 | 0 | 8.76 | 4 | | | |

Comments:
Severe erosion along bottom of west wall and north half of west wall. Moderate scaling. Wide cracks at NE and SW corners. Localized spalls and concrete disintegration with honeycombing observed throughout.

Recommended Work: Rehab ☒ Replace ☐
Urgent ☐ 1-5 yrs ☒ 6-10 yrs ☐

Maint. Needs - ☐ - ☐
Urgent ☐ 1 year ☐

| | | | | | | | | |
|--------------------------|------------------------------|------------|-------------|---------------------|-------------|---|------|--|
| Element Group | 900 | Abutments | | | | Length | 3.00 | |
| Element Name | 903 | Wingwalls | | | | Width | | |
| Location | NE, NW, SE & SW of structure | | | | | Height | 1.60 | |
| Material | Cast-in-place concrete | | | | | Count | 4 | |
| Element Type | Reinforced concrete | | | Element code | 6 | Total Qnty. | 19.2 | |
| Environment | Moderate | | | | | Limited Insp. | | |
| Protection System | None | | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | 0 | 0 | 9.6 | 9.6 | | | |

Comments:
Wide cracks, delaminations. Erosion at base of wingwalls, some exposed steel. A large area of disintegration was noted at northwest and south west corners.

Recommended Work: Rehab ☒ Replace ☐
Urgent ☐ 1-5 yrs ☒ 6-10 yrs ☐

Maint. Needs - ☐ - ☐
Urgent ☐ 1 year ☐

| | | | | | | | | |
|--------------------------|------------------------------------|---------------|-------------|---------------------|-------------|---|------|--|
| Element Group | 900 | Abutments | | | | Length | 3.90 | |
| Element Name | 902 | Ballast Walls | | | | Width | | |
| Location | East & west underside of structure | | | | | Height | 0.55 | |
| Material | Cast-in-place concrete | | | | | Count | 2 | |
| Element Type | N/A | | | Element code | N/A | Total Qnty. | 4.29 | |
| Environment | Moderate | | | | | Limited Insp. | | |
| Protection System | None | | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | 0 | 0 | 4.29 | 0 | | | |

Comments:
Moderate scaling and honeycombing throughout.

Recommended Work: Rehab ☐ Replace ☐
Urgent ☐ 1-5 yrs ☐ 6-10 yrs ☐

Maint. Needs - ☐ - ☐
Urgent ☐ 1 year ☐

Municipal Structure Inspection Form

MTO Site Number

35-380

Element Data

| | | | | | | | |
|-------------------|------------------------------|--------------|------|------|------|--------|--|
| Element Group | 1500 | Signs | | | | Length | |
| Element Name | 1501 | Sign | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | | |
| Material | Steel | | | | | | |
| Element Type | N/A | Element code | N/A | | | | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Each | 0 | 5 | 0 | 0 | | |

| | |
|------------------------------------|---|
| Limited Insp. | |
| Suspected Performance Deficiencies | |
| - | - |

Comments:

Minor abrasion damage and small dents noted on hazard signs. Northeast and southwest signs leaning.

| | | | | |
|-------------------|---------------------------------|----------------------------------|--------------|--|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | Urgent | <input type="checkbox"/> 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|--------------------------------|-----------------------|------|------|------|--------|------|
| Element Group | 1600 | Approaches | | | | Length | 6.00 |
| Element Name | 1601 | Wearing surface (app) | | | | Width | 5.00 |
| Location | East & west sides of structure | | | | | | |
| Material | Gravel | | | | | | |
| Element Type | N/A | Element code | N/A | | | | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 60 | 0 | 0 | | |

| | |
|------------------------------------|---|
| Limited Insp. | |
| Suspected Performance Deficiencies | |
| - | - |

Comments:

Generally in good condition with some vegetation growth and tire rutting.

| | | | | |
|-------------------|---------------------------------|----------------------------------|--------------|--|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | Urgent | <input type="checkbox"/> 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|------------------------|--------------|------|------|------|--------|------|
| Element Group | 500 | Beams/MLE's | | | | Length | 9.00 |
| Element Name | 501 | Girders | | | | Width | 0.50 |
| Location | Underside of structure | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | Rectangular-solid | Element code | 4 | | | | |
| Environment | Moderate | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 0 | 28.8 | 28.8 | | |

| | |
|------------------------------------|------------------------|
| Limited Insp. | |
| Suspected Performance Deficiencies | |
| 1 | Load Carrying capacity |

Comments:

Exterior girders are severely spalled and some areas of delamination. Zero confinement of tension steel. Steel is severely corroded on exterior girder.

| | | | | |
|-------------------|---------------------------------|---|--------------|--|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> 1 year <input type="checkbox"/> |

Element Data

| | | | | | | | |
|-------------------|---|--------------------|-------------|--------------|--------------|------------------------------------|---------------|
| Element Group | 100 | Decks | | | | Length | 10.00 |
| Element Name | 102 | Deck top (exposed) | | | | Width | 5.00 |
| Location | Top of deck | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | Cast-in-place conc on supports, composite | | | | Element code | | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units Sq. m. | Ex. 0 | Good 7.5 | Fair 37.5 | Poor 5 | Total Qty. 50 | Limited Insp. |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | |

Comments:

Moderate to severe scaling, abrasion. At time of the inspection the deck was mostly covered in debris

| | | | | | |
|-------------------|---------------------------------|---|--------------|---|-----------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | 02 | Bridge Cleaning |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> 6-10 yrs <input type="checkbox"/> | Urgent | <input type="checkbox"/> 1 year <input checked="" type="checkbox"/> | |

| | | | | | | | |
|-------------------|------------------------|------------------|---------------|---------------|---------------|------------------------------------|---------------|
| Element Group | 100 | Decks | | | | Length | 9.00 |
| Element Name | 103 | Soffit Thin Slab | | | | Width | 1.30 |
| Location | Interior | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | N/A | | | | Element code | N/A | |
| Environment | Benign | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units Sq. m. | Ex. 0 | Good 10.53 | Fair 14.04 | Poor 10.53 | Total Qty. 35.1 | Limited Insp. |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | |

Comments:

Numerous spalls and delaminations with exposed corroded reinforcement noted on soffit.

| | | | | | |
|-------------------|---------------------------------|---|--------------|--|---|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> 6-10 yrs <input type="checkbox"/> | Urgent | <input type="checkbox"/> 1 year <input type="checkbox"/> | |

| | | | | | | | |
|-------------------|------------------------|-----------------|-----------|-----------|--------------|------------------------------------|---------------|
| Element Group | 100 | Decks | | | | Length | |
| Element Name | 101 | Wearing surface | | | | Width | |
| Location | | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | N/A | | | | Element code | N/A | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units Sq. m. | Ex. 0 | Good 0 | Fair 0 | Poor 0 | Total Qty. | Limited Insp. |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | |

Comments:

Element does not exist.

| | | | | | |
|-------------------|---------------------------------|--|--------------|--|---|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> 6-10 yrs <input type="checkbox"/> | Urgent | <input type="checkbox"/> 1 year <input type="checkbox"/> | |

Municipal Structure Inspection Form

MTO Site Number

35-380

Element Data

| | | | | | | | |
|-------------------|------------------------------|-------------------------|------|------|------|--------|--|
| Element Group | 1400 | Embankments and Streams | | | | Length | |
| Element Name | 1402 | Embankments | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | | |
| Material | Native soil | | | | | | |
| Element Type | N/A | Element code | N/A | | | | |
| Environment | - | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Each | 0 | 4 | 0 | 0 | | |

| | |
|------------------------------------|---|
| Limited Insp. | |
| Suspected Performance Deficiencies | |
| - | - |

Comments:

Steep slope, well vegetated and stable embankment observed. Erosion and washout at southwest corners.

Recommended Work:

Rehab

☐

Replace

☐

Maint. Needs

☐

-

Urgent

☐

1-5 yrs

☐

6-10 yrs

☐

Urgent

☐

1 year

☐

| | | | | | |
|-------------------|------------|-------------------------|------|------|------|
| Element Group | 1400 | Embankments and Streams | | | |
| Element Name | 1403 | Slope Protections | | | |
| Location | | | | | |
| Material | Other | | | | |
| Element Type | Vegetation | Element code | 11 | | |
| Environment | - | | | | |
| Protection System | None | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor |
| | Each | 0 | 0 | 0 | 0 |

| | |
|------------------------------------|---|
| Length | |
| Width | |
| Height | |
| Count | |
| Total Qnty. | |
| Limited Insp. | |
| Suspected Performance Deficiencies | |
| - | - |

Comments:

Element does not exist.

Recommended Work:

Rehab

☐

Replace

☐

Maint. Needs

☐

-

Urgent

☐

1-5 yrs

☐

6-10 yrs

☐

Urgent

☐

1 year

☐

| | | | | | |
|-------------------|-----------------|-------------------------|------|------|------|
| Element Group | 1400 | Embankments and Streams | | | |
| Element Name | 1401 | Streams and Waterways | | | |
| Location | Under structure | | | | |
| Material | Other | | | | |
| Element Type | N/A | Element code | N/A | | |
| Environment | - | | | | |
| Protection System | None | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor |
| | All | 0 | 1 | 0 | 0 |

| | |
|------------------------------------|---------------------------|
| Length | |
| Width | |
| Height | |
| Count | 1 |
| Total Qnty. | 1 |
| Limited Insp. | |
| Suspected Performance Deficiencies | |
| 13 | Flooding/Channel blockage |

Comments:

Low volume, low flow from north to south with a heavy vegetation accumulation blocking stream.

Recommended Work:

Rehab

☐

Replace

☐

Maint. Needs

☐

-

Urgent

☐

1-5 yrs

☐

6-10 yrs

☐

Urgent

☐

1 year

☐

Municipal Structure Inspection Form

MTO Site Number

35-380

Element Data

| | | | | | | | |
|-------------------|-----------------|---------------------------------|------|------|------|--------|--|
| Element Group | 1300 | Foundations | | | | Length | |
| Element Name | 1301 | Foundation (below ground level) | | | | Width | |
| Location | Below structure | | | | | | |
| Material | Unknown | | | | | | |
| Element Type | Foundatins | Element code | | | | | |
| Environment | - | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | N/A | | | | | | |

Comments:
No signs of instability noted at the time of inspection.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|----------------------------------|---------------------|------|------|------|--------|-------|
| Element Group | 300 | Sidewalks and curbs | | | | Length | 16.25 |
| Element Name | 302 | Curbs | | | | Width | 0.40 |
| Location | North & south sides of structure | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | N/A | Element code | | N/A | | | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 6.13 | 9 | 6 | | |

Comments:
Wide cracks along exterior, spalls with exposed reinforcement, severe scaling noted on curbs.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|-------------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | |
|-------------------|----------------------------------|--------------|------|------|------|--------|------|
| Element Group | 400 | Barriers | | | | Length | 0.15 |
| Element Name | 403 | Posts | | | | Width | 0.05 |
| Location | North & south sides of structure | | | | | | |
| Material | Steel | | | | | | |
| Element Type | N/A | Element code | | N/A | | | |
| Environment | Severe | | | | | | |
| Protection System | Hot dip galvanizing | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Each | 0 | 19 | 0 | 0 | | |

Comments:
Generally in good condition. Localized corrosion observed at the bottom section of steel post at south curb.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-380

Element Data

| | | | | | | | | |
|--|----------------------------------|-----------------|--------------------------|-------------|--------------------------|---|--------------------------|---|
| Element Group | 400 | Barriers | | | | Length | 16.25 | |
| Element Name | 402 | Railing Systems | | | | Width | | |
| Location | North & south sides of structure | | | | | Height | | |
| Material | Steel | | | | | Count | 2 | |
| Element Type | Steel Flex Beam on steel post | | Element code | 10 | | Total Qnty. | 32.5 | |
| Environment | Severe | | | | | Limited Insp. | | |
| Protection System | Hot dip galvanizing | | | | | Suspected Performance Deficiencies | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | m. | 0 | 32.5 | 0 | 0 | | | |
| Comments: | | | | | | | | |
| Code compliency of the barrier should be revised. Condition is generally good.Moderate weathering and abrasion throughout. | | | | | | | | |
| Recommended Work: | | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | 6-10 yrs | <input type="checkbox"/> | Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> |

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.:32-P



Photo 1 Structure from east approach



Photo 2 Structure from west approach



Photo 3 East approach from center of structure



Photo 4 West approach from centre of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Large spalls with exposed corroded reinforcement noted on curbs



Photo 8 Large spalls with exposed corroded reinforcement on soffit and girder



Photo 9 Large spall with exposed corroded reinforcement on underside of exterior girder



Photo 10 Severe scaling and spalls observed on southwest wingwall

Structure Condition Summary Form

Structure Name NOAH ROAD
Structure Number 33-P
Date of Inspection May 05, 2022
Project No. 18015
Consultant HP Engineering Inc.

| Element Group | Element Name | Unit (Qty.) | Unit Price (MTO) | Total Element Quantity | Element Qty. in Excellent Condition (1.00) | Element Quantity in Good Condition (0.75) | Element Quantity in Fair Condition (0.4) | Element Quantity in Poor Condition (0) | Total Replacement Value (TRV) | Current Element Value (CEV) | Element Condition Index | Performance Deficiency | Maintenance Need |
|--------------------------|------------------------|-------------|------------------|------------------------|--|---|--|--|-------------------------------|-----------------------------|-------------------------|------------------------|------------------|
| Approaches | Wearing Surface | Sq.m | 6.00 | 28.80 | 0.00 | 0.00 | 28.80 | 0.00 | 173 | 69 | 40 | 00 | 00 |
| Barriers | Railing Systems | m | 200.00 | 30.00 | 0.00 | 30.00 | 0.00 | 0.00 | 6000 | 4500 | 75 | 00 | 00 |
| | Posts (Steel/Concrete) | Each | 200.00 | 14.00 | 0.00 | 14.00 | 0.00 | 0.00 | 2800 | 2100 | 75 | 01 | 00 |
| Sidewalks/ Curbs | Curbs | Sq.m | 40.00 | 19.50 | 0.00 | 0.00 | 9.75 | 9.75 | 780 | 156 | 20 | 08 | 00 |
| Decks | Deck Top - Thin Slab | Sq.m | 120.00 | 62.70 | 0.00 | 0.00 | 31.35 | 31.35 | 7524 | 1505 | 20 | 09 | 00 |
| | Soffit - Thin Slab | Sq.m | 120.00 | 36.36 | 0.00 | 0.00 | 18.18 | 18.18 | 4363 | 873 | 20 | 01 | 00 |
| Beams/ Main Longitudinal | Girders | Sq.m | 200.00 | 20.20 | 0.00 | 12.20 | 4.00 | 4.00 | 4040 | 2150 | 53 | 01 | 00 |
| | Wingwalls | Sq.m | 350.00 | 27.00 | 0.00 | 0.00 | 13.50 | 13.50 | 9450 | 1890 | 20 | 01 | 00 |
| Abutment | Ballast Walls | Sq.m | 350.00 | 5.40 | 0.00 | 3.40 | 1.00 | 1.00 | 1890 | 1033 | 55 | 00 | 08 |
| | Abutment Walls | Sq.m | 900.00 | 28.50 | 0.00 | 20.50 | 5.00 | 3.00 | 25650 | 15638 | 61 | 00 | 08 |
| | | | | | | | | | 62670 | 29913 | | | |

Bridge Condition Index (BCI)

48

Municipal Structure Inspection Form
TOWNSHIP OF CENTRE WELLINGTON

Structure Name 33-P

NOAH ROAD

Municipal Structure Inspection Form

MTO Site Number:

35-381

BCI:

48.00

Inventory Data:

| | | | | | | | | | | | | |
|--------------------|----------------------------------|--|--------------------------------|----------------------------------|--|------------------------------------|---|--|--|--|--|--|
| Structure Name: | 33-P | | | | | | | | | | | |
| Main Hwy/Road # | | On <input checked="" type="checkbox"/> | Under <input type="checkbox"/> | Crossing Type: | Navig. Water <input checked="" type="checkbox"/> | Rail <input type="checkbox"/> | Road <input type="checkbox"/> | Non-Navig Water <input type="checkbox"/> | Ped. <input type="checkbox"/> | Other <input type="checkbox"/> | | |
| Road Name | Noah Road | | | | | | | | | | | |
| Structure Location | 0.65 km West of Eighth Line West | | | | | | | | | | | |
| Latitude | N 43° 39' 33.5" | | | | Longitude | W 80° 30' 21.3" | | | | | | |
| Owner(s) | Township of Centre Wellington | | | | Heritage Designation | Not Cons. <input type="checkbox"/> | Cons. /not App <input type="checkbox"/> | List/not Desig. <input type="checkbox"/> | Desig./not List <input type="checkbox"/> | Desig. & List <input type="checkbox"/> | | |
| MTO Region * | - | - | Road Class | Freeway <input type="checkbox"/> | Arterial <input type="checkbox"/> | Collector <input type="checkbox"/> | Local <input checked="" type="checkbox"/> | | | | | |
| MTO District * | - | - | Posted Speed | 80 | | No. of Lanes: | 2 | | | | | |
| Current County* | - | - | AADT | | | % Trucks | | | | | | |
| Geographic Twp. * | Pilkington | | Special Routes: | Transit <input type="checkbox"/> | Truck <input type="checkbox"/> | School <input type="checkbox"/> | Bicycle <input type="checkbox"/> | | | | | |
| Structure Type* | 7 | T-Beam | | | | | | | | | | |
| Total Deck Length | 11.1 | | (m) | Detour Length | 9 | | (km) | Fill on Structure | | | | |
| Overall Str. Width | 5.5 | | (m) | Skew Angle | | | (degrees) | Direction of Structure | E-W | | | |
| Total Deck Area | 60.9 | | (sq. m) | No. of Spans | 1 | | | | | | | |
| Roadway Width | 4.3 | | (m) | | | | | | | | | |
| Span Lengths. | 9.4 (m) | | | | | | | | | | | |

Historical Data:

| | | | | | |
|-------------------------|----------------------|--|------------------------------|------------|--|
| Year Built | 1922 | | Last Biennial Inspection | 16/06/2022 | |
| Current Load Limit | Road Closed (tonnes) | | Last BridgeMaster Inspection | | |
| Load Limit By-Law # | | | Last Evaluation | | |
| By-Law Expiry Date | | | Last Underwater Inspection | | |
| Min. Vertical Clearance | | | Last Condition Survey | | |

Rehab History : (Date/description)

Field Inspection Information:

| | |
|---------------------|--|
| Date of Inspection: | May 05, 2022 |
| Inspector: | Tashi Dwivedi, P.Eng., HP Engineering |
| Others in Party: | Charlemagne Charles and Sagar Chhayani, HP Engineering |
| Equipment Used: | Hammer, tape, Camera, Chest waders |
| Weather | Sunny |
| Temperature | 15 °C |

| Additional Investigations Required | Priority | | | Estimated Cost |
|------------------------------------|----------|------------|--------|----------------|
| | None | Normal | Urgent | |
| Detailed Deck Condition Survey: | | | | |
| DART Survey: | | | | |
| Detailed Coating Condition Survey: | | | | |
| Underwater Investigation | | | | |
| Fatigue Investigation: | | | | |
| Seismic Investigation: | | | | |
| Structure Evaluation: | | | | |
| Load Posting - Estimated Load | 0 | Total Cost | | \$0 |

Special Notes:

No approach Barrier. Road closed at time of inspection. It is recommended that a rehabilitation / replacement study be performed (\$ 20,000.00).

Next Detailed Inspection: May 2024

35-381

| Justification |
|---|
| Estimated costs are based on a structure the same size as the existing. It is recommended that a rehabilitation study is performed to determine the appropriate rehabilitation/repalcement. |

Municipal Structure Inspection Form

MTO Site Number

35-381

Element Data

| | | | | | | | |
|-------------------|-------------------------------|----------------|------|------|------|------------------------------------|------|
| Element Group | 900 | Abutments | | | | Length | |
| Element Name | 901 | Abutment Walls | | | | Width | 5.70 |
| Location | East & west side of structure | | | | | Height | 2.50 |
| Material | Cast-in-place concrete | | | | | Count | 2 |
| Element Type | Conventional closed | Element code | 1 | | | Total Qty. | 28.5 |
| Environment | Moderate | | | | | Limited Insp. | |
| Protection System | None | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | - | - |
| | Sq. m. | 0 | 18.5 | 6 | 4 | | |

Comments:

Wide cracks at abutment walls, delaminations, scaling and spalls noted. Abutment jackets are generally good condition.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|---------------------------------|--------|-------------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | 08 | Bridge concrete repairs |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year | <input checked="" type="checkbox"/> |

| | | | | | | | |
|-------------------|------------------------------|--------------|------|------|------|------------------------------------|------------------------|
| Element Group | 900 | Abutments | | | | Length | 3.40 |
| Element Name | 903 | Wingwalls | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | Height | 2.00 |
| Material | Cast-in-place concrete | | | | | Count | 4 |
| Element Type | Reinforced concrete | Element code | 6 | | | Total Qty. | 27.2 |
| Environment | Moderate | | | | | Limited Insp. | |
| Protection System | None | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | 01 | Load carrying capacity |
| | Sq. m. | 0 | 0 | 13.5 | 13.5 | | |

Comments:

Very wide cracks, concrete disintegration noted on wingwall. Northwest wingwall is not connected to the structure, and is falling into the river.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|---------------------------------|--------|--------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year | <input type="checkbox"/> |

| | | | | | | | |
|-------------------|------------------------------------|---------------|------|------|------|------------------------------------|------|
| Element Group | 900 | Abutments | | | | Length | 3.60 |
| Element Name | 902 | Ballast Walls | | | | Width | |
| Location | East & west underside of structure | | | | | Height | 0.75 |
| Material | Cast-in-place concrete | | | | | Count | 2 |
| Element Type | N/A | Element code | N/A | | | Total Qty. | 5.4 |
| Environment | Moderate | | | | | Limited Insp. | |
| Protection System | None | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | - | - |
| | Sq. m. | 0 | 3.4 | 1 | 1 | | |

Comments:

Wide cracks, with severe spall and delamination noted at west ballast wall. Localized medium map cracks and horizontal cracks noted at east ballast wall.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|---------------------------------|--------|-------------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | 08 | Bridge concrete repairs |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year | <input checked="" type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-381

Element Data

| | | | | | | | | |
|-------------------|------------------------------|-------|------|------|--------------|------------------------------------|--------|--|
| Element Group | 1500 | Signs | | | | | Length | |
| Element Name | 1501 | Sign | | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | | | |
| Material | Steel | | | | | | | |
| Element Type | N/A | | | | Element code | N/A | | |
| Environment | Severe | | | | | | | |
| Protection System | None | | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Each | 0 | 2 | 3 | 0 | | | |
| | | | | | | Total Qty. | 5 | |
| | | | | | | Limited Insp. | | |
| | | | | | | Suspected Performance Deficiencies | | |
| | | | | | | - | - | |

Comments:

Generally in good condition with some minor abrasions and small dents noted.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | | |
|-------------------|--------------------------------|-----------------------|------|------|--------------|------------------------------------|--------|------|
| Element Group | 1600 | Approaches | | | | | Length | 6.00 |
| Element Name | 1601 | Wearing surface (app) | | | | | Width | 4.80 |
| Location | East & west sides of structure | | | | | | | |
| Material | Gravel | | | | | | | |
| Element Type | N/A | | | | Element code | N/A | | |
| Environment | Severe | | | | | | | |
| Protection System | None | | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | 0 | 0 | 28.8 | 0 | | | |
| | | | | | | Total Qty. | 28.8 | |
| | | | | | | Limited Insp. | | |
| | | | | | | Suspected Performance Deficiencies | | |
| | | | | | | - | - | |

Comments:

Generally in fair condition. Mostly vegetated.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | | |
|-------------------|------------------------|-------------|------|------|--------------|------------------------------------|------------------------|-------|
| Element Group | 500 | Beams/MLE's | | | | | Length | 10.10 |
| Element Name | 501 | Girders | | | | | Width | 0.50 |
| Location | Underside of structure | | | | | | | |
| Material | Cast-in-place concrete | | | | | | | |
| Element Type | Rectangular-solid | | | | Element code | 4 | | |
| Environment | Moderate | | | | | | | |
| Protection System | None | | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | | |
| | Sq. m. | 0 | 12.2 | 4 | 4 | | | |
| | | | | | | Total Qty. | 20.2 | |
| | | | | | | Limited Insp. | | |
| | | | | | | Suspected Performance Deficiencies | | |
| | | | | | | 1 | Load Carrying capacity | |

Comments:

Wide cracks, spalls, and delaminations on underside of girders, particularly exterior girders. Large areas of delamination and spalls with exposed corroded reinforcing on all 4 corners.

| | | | | | | | |
|-------------------|--------|--------------------------|---------|-------------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Element Data

| | | | | | | | |
|-------------------|---|----------|------|-------|--------------|------------------------------------|----------------------|
| Element Group | 100 | Decks | | | | Length | 11.00 |
| Element Name | 102 | Deck top | | | | Width | 5.70 |
| Location | Top of deck | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | Cast-in-place conc on supports, composite | | | | Element code | | |
| Environment | Moderate | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 0 | 31.35 | 31.35 | | |
| | | | | | | Total Qty. | 62.7 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | 9 | Rough riding surface |

Comments:

Mostly covered in gravel and vegetation. Exposed portion is severely scaled and spalled (100mm deep). Northwest section of deck top is detached from bridge deck.

| | | | | | | | |
|-------------------|--------|--------------------------|----------|-------------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |
| | | | 6-10 yrs | <input type="checkbox"/> | | | |

| | | | | | | | |
|-------------------|------------------------|------------------|------|-------|--------------|------------------------------------|------------------------|
| Element Group | 100 | Decks | | | | Length | 10.10 |
| Element Name | 103 | Soffit Thin Slab | | | | Width | 3.60 |
| Location | Interior | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | N/A | | | | Element code | N/A | |
| Environment | Benign | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 0 | 18.18 | 18.18 | | |
| | | | | | | Total Qty. | 36.36 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | 1 | Load Carrying capacity |

Comments:

Nearly entire soffit is spalled, delaminated, or severely scaled with exposed corroded reinforcement. Transverse cracks with scaling noted throughout.

| | | | | | | | |
|-------------------|--------|--------------------------|----------|-------------------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |
| | | | 6-10 yrs | <input type="checkbox"/> | | | |

| | | | | | | | |
|-------------------|------------------------|-----------------|------|------|--------------|------------------------------------|---|
| Element Group | 100 | Decks | | | | Length | |
| Element Name | 101 | Wearing surface | | | | Width | |
| Location | Top of deck | | | | | | |
| Material | Cast-in-place concrete | | | | | | |
| Element Type | N/A | | | | Element code | N/A | |
| Environment | Severe | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Sq. m. | 0 | 0 | 0 | 0 | | |
| | | | | | | Total Qty. | |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Element does not exist.

| | | | | | | | |
|-------------------|--------|--------------------------|----------|--------------------------|--------------|--------------------------|---------------------------------|
| Recommended Work: | Rehab | <input type="checkbox"/> | Replace | <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent | <input type="checkbox"/> | 1-5 yrs | <input type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> |
| | | | 6-10 yrs | <input type="checkbox"/> | | | |

Municipal Structure Inspection Form

MTO Site Number

35-381

Element Data

| | | | | | | | |
|-------------------|------------------------------|-------------------------|------|------|--------------|------------------------------------|---|
| Element Group | 1400 | Embankments and Streams | | | | Length | |
| Element Name | 1402 | Embankments | | | | Width | |
| Location | NE, NW, SE & SW of structure | | | | | | |
| Material | Other | | | | | | |
| Element Type | N/A | | | | Element code | N/A | |
| Environment | - | | | | | | |
| Protection System | None | | | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | | |
| | Each | 0 | 3 | 0 | 1 | | |
| | | | | | | Count | 4 |
| | | | | | | Total Qty. | 4 |
| | | | | | | Limited Insp. | |
| | | | | | | Suspected Performance Deficiencies | |
| | | | | | | - | - |

Comments:

Steep slope, well vegetated and stable. Northwest embankment is falling into the river.

Recommended Work:

Rehab

☐

Replace

☐

Maint. Needs

☐☐

Urgent

☐

1-5 yrs

☐

6-10 yrs

☐

Urgent

☐

1 year

☐

| | | | | | |
|-------------------|------------|-------------------------|------|------|--------------|
| Element Group | 1400 | Embankments and Streams | | | |
| Element Name | 1403 | Slope Protections | | | |
| Location | | | | | |
| Material | Other | | | | |
| Element Type | Vegetation | | | | Element code |
| | | | | | 11 |
| Environment | - | | | | |
| Protection System | None | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor |
| | Each | 0 | 4 | 0 | 0 |

| | |
|------------------------------------|---|
| Length | |
| Width | |
| Height | |
| Count | 4 |
| Total Qty. | 4 |
| Limited Insp. | |
| Suspected Performance Deficiencies | |
| - | - |

Comments:

Element does not exist.

Recommended Work:

Rehab

☐

Replace

☐

Maint. Needs

☐☐

Urgent

☐

1-5 yrs

☐

6-10 yrs

☐

Urgent

☐

1 year

☐

| | | | | | |
|-------------------|-----------------|-------------------------|------|------|--------------|
| Element Group | 1400 | Embankments and Streams | | | |
| Element Name | 1401 | Streams and Waterways | | | |
| Location | Under structure | | | | |
| Material | Other | | | | |
| Element Type | N/A | | | | Element code |
| | | | | | N/A |
| Environment | - | | | | |
| Protection System | None | | | | |
| Condition Data | Units | Ex. | Good | Fair | Poor |
| | All | 0 | 0 | 0 | 1 |

| | |
|------------------------------------|---|
| Length | |
| Width | |
| Height | |
| Count | 1 |
| Total Qty. | 1 |
| Limited Insp. | |
| Suspected Performance Deficiencies | |
| - | - |

Comments:

Moderate volume with Low flow from north to south observed. Severe aggradation forcing all flow directly at NE wingwall.

Recommended Work:

Rehab

☐

Replace

☐

Maint. Needs

☐☐

Urgent

☐

1-5 yrs

☐

6-10 yrs

☐

Urgent

☐

1 year

☐

Municipal Structure Inspection Form

MTO Site Number

35-381

Element Data

| | | | | | | | | |
|-------------------|-----------------|---------------------------------|------|------|--------------|------------------------------------|--------|--|
| Element Group | 1300 | Foundations | | | | | Length | |
| Element Name | 1301 | Foundation (below ground level) | | | | | Width | |
| Location | Below structure | | | | | Height | | |
| Material | Unknown | | | | | Count | | |
| Element Type | Foundations | | | | Element code | | | |
| Environment | - | | | | | Total Qty. | | |
| Protection System | None | | | | | Limited Insp. | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | Suspected Performance Deficiencies | | |
| | N/A | | | | | - | - | |

Comments:
No signs of instability noted at the time of inspection.

| | | | | | |
|-------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | | |
|-------------------|----------------------------------|---------------------|------|------|--------------|------------------------------------|-----------------------------|-------|
| Element Group | 300 | Sidewalks and curbs | | | | | Length | 15.00 |
| Element Name | 302 | Curbs | | | | | Width | 0.45 |
| Location | North & south sides of structure | | | | | Height | 0.20 | |
| Material | Cast-in-place concrete | | | | | Count | 2 | |
| Element Type | N/A | | | | Element code | N/A | | |
| Environment | Severe | | | | | Total Qty. | 19.5 | |
| Protection System | None | | | | | Limited Insp. | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | Suspected Performance Deficiencies | | |
| | Sq. m. | 0 | 0 | 9.75 | 9.75 | 8 | Pedestrian/vehicular hazard | |

Comments:
Large portions of curb are missing at Northeast and Southwest corners. Remaining portions are moderately to severely scaled with wide cracks. Exposed corroded reinforcing with some localized severe disintegration noted.

| | | | | | |
|-------------------|---------------------------------|---|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

| | | | | | | | | |
|-------------------|----------------------------------|----------|------|------|--------------|------------------------------------|------------------------|------|
| Element Group | 400 | Barriers | | | | | Length | 0.15 |
| Element Name | 403 | Posts | | | | | Width | 0.05 |
| Location | North & south sides of structure | | | | | Height | 0.80 | |
| Material | Steel | | | | | Count | 14 | |
| Element Type | N/A | | | | Element code | N/A | | |
| Environment | Severe | | | | | Total Qty. | 14 | |
| Protection System | Hot dip galvanizing | | | | | Limited Insp. | | |
| Condition Data | Units | Ex. | Good | Fair | Poor | Suspected Performance Deficiencies | | |
| | Each | 0 | 14 | 0 | 0 | 1 | Load Carrying capacity | |

Comments:
±5 posts are not anchored to the deck.

| | | | | | |
|-------------------|---------------------------------|---|-----------------------------------|---------------------------------|---------------------------------|
| Recommended Work: | Rehab <input type="checkbox"/> | Replace <input checked="" type="checkbox"/> | Maint. Needs | - | - |
| | Urgent <input type="checkbox"/> | 1-5 yrs <input checked="" type="checkbox"/> | 6-10 yrs <input type="checkbox"/> | Urgent <input type="checkbox"/> | 1 year <input type="checkbox"/> |

Municipal Structure Inspection Form

MTO Site Number

35-381

Element Data

| | | | | | | | | | |
|--|----------------------------------|-----------------|--------------------------|----------|-------------------------------------|--------------------------|--------------------------|------------------------------------|----|
| Element Group | 400 | Barriers | | | | | Length | 15.00 | |
| Element Name | 402 | Railing Systems | | | | | Width | | |
| Location | North & south sides of structure | | | | | | | Height | |
| Material | Steel | | | | | | | Count | 2 |
| Element Type | Steel Flex Beam on steel post | | | | | Element code | 10 | Total Qty. | 30 |
| Environment | Severe | | | | | | | Limited Insp. | |
| Protection System | Hot dip galvanizing | | | | | | | Suspected Performance Deficiencies | |
| Condition Data | Units | Ex. | Good | Fair | Poor | 1 Load Carrying capacity | | | |
| | m. | 0 | 30 | 0 | 0 | | | | |
| Comments: Barrier system does not seem adequate for traffic loads. Light collision damage / abrasion noted on steel posts. | | | | | | | | | |
| Recommended Work: | | Rehab | <input type="checkbox"/> | Replace | <input checked="" type="checkbox"/> | Maint. Needs | - | - | |
| | | Urgent | <input type="checkbox"/> | 1-5 yrs | <input checked="" type="checkbox"/> | Urgent | <input type="checkbox"/> | 1 year <input type="checkbox"/> | |
| | | | | 6-10 yrs | <input type="checkbox"/> | | | | |

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.:33-P



Photo 1 Structure from east approach



Photo 2 Structure from west approach



Photo 3 East approach from center of structure



Photo 4 West approach from centre of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Some abrasion and small dents noted on hazard sign



Photo 8 Spalls in concrete around barrier posts



Photo 9 Spalls and delaminations with exposed corroded reinforcement on east deck soffit



Photo 10 Spall with exposed corroded reinforcement on south exterior girder



Photo 11 West underside of structure



Photo 12 Northwest wingwall collapse and disconnected from abutment



Photo 13 Wide cracks, and spalls on SE wingwall



Photo 14 Localized cracks with staining at abutments.

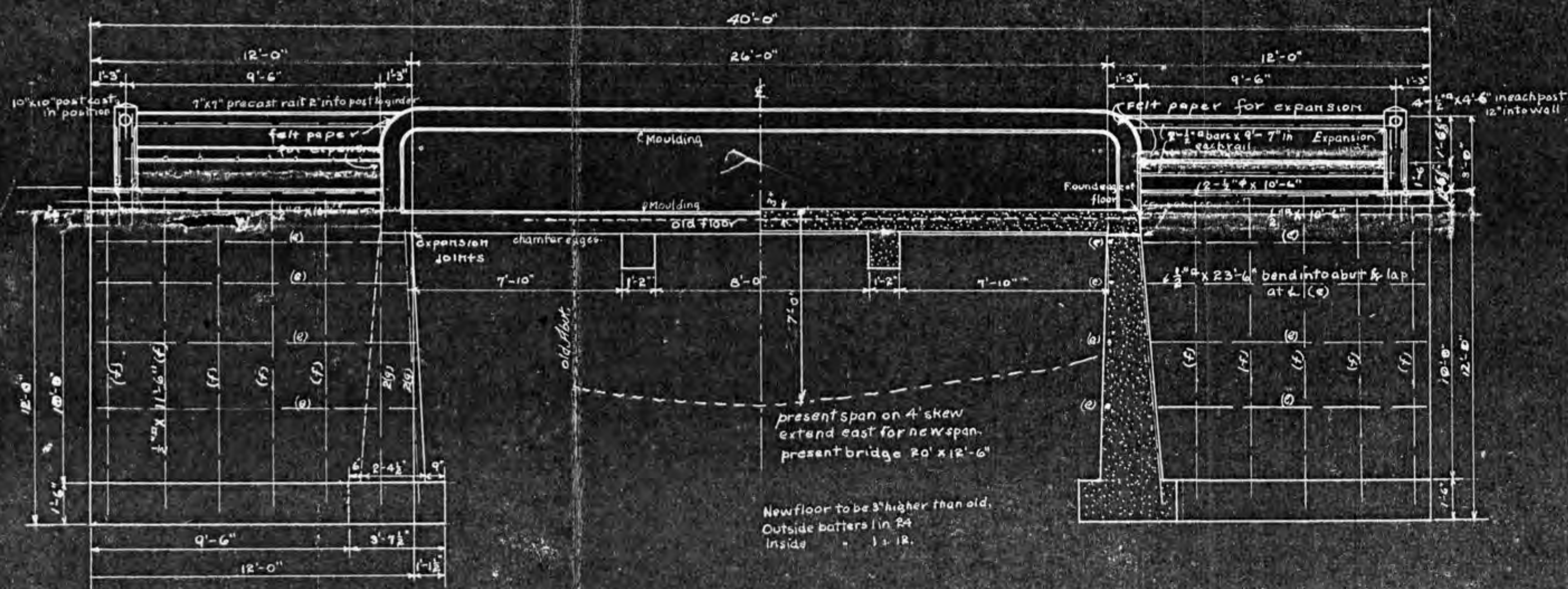


BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

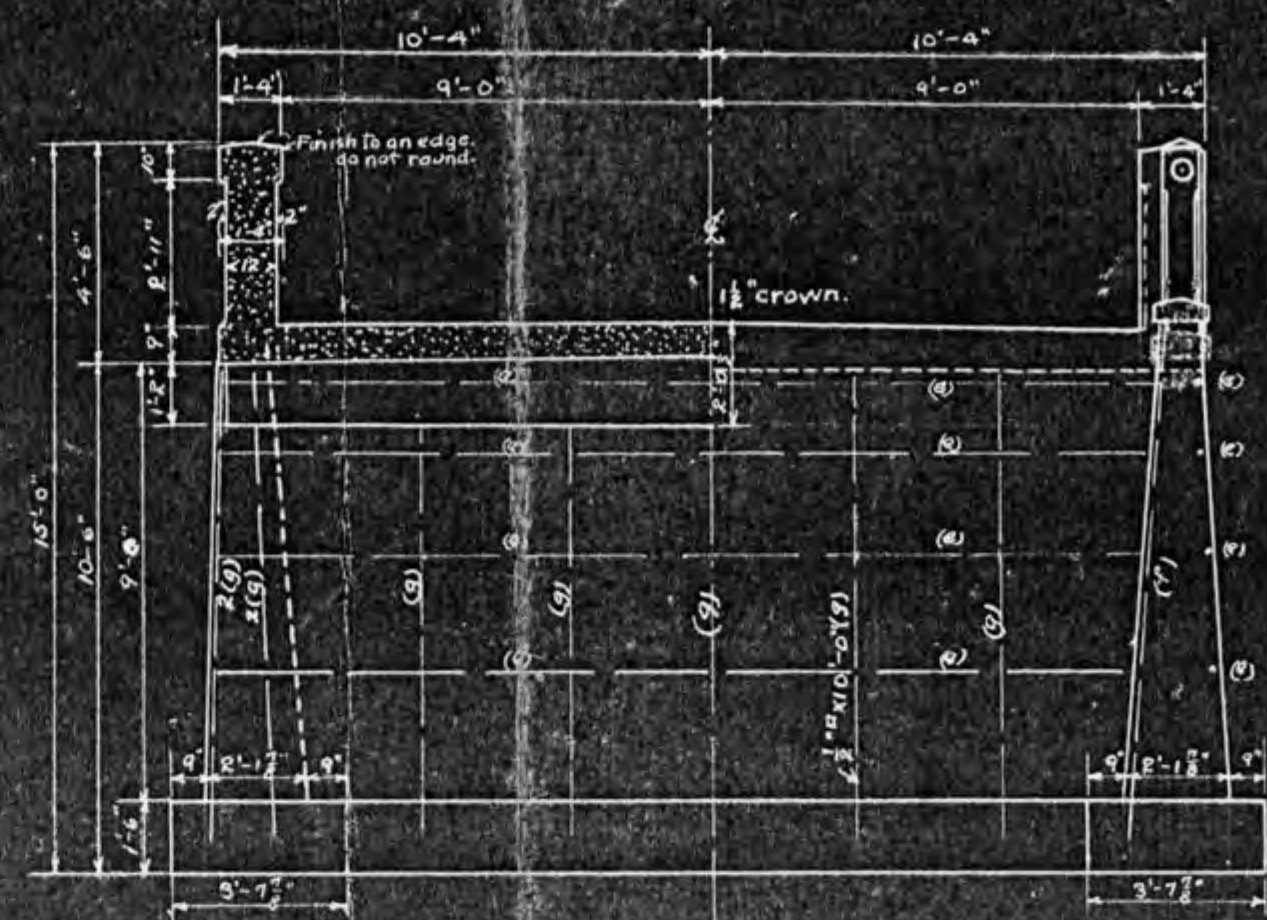
Appendix B

Record Plans



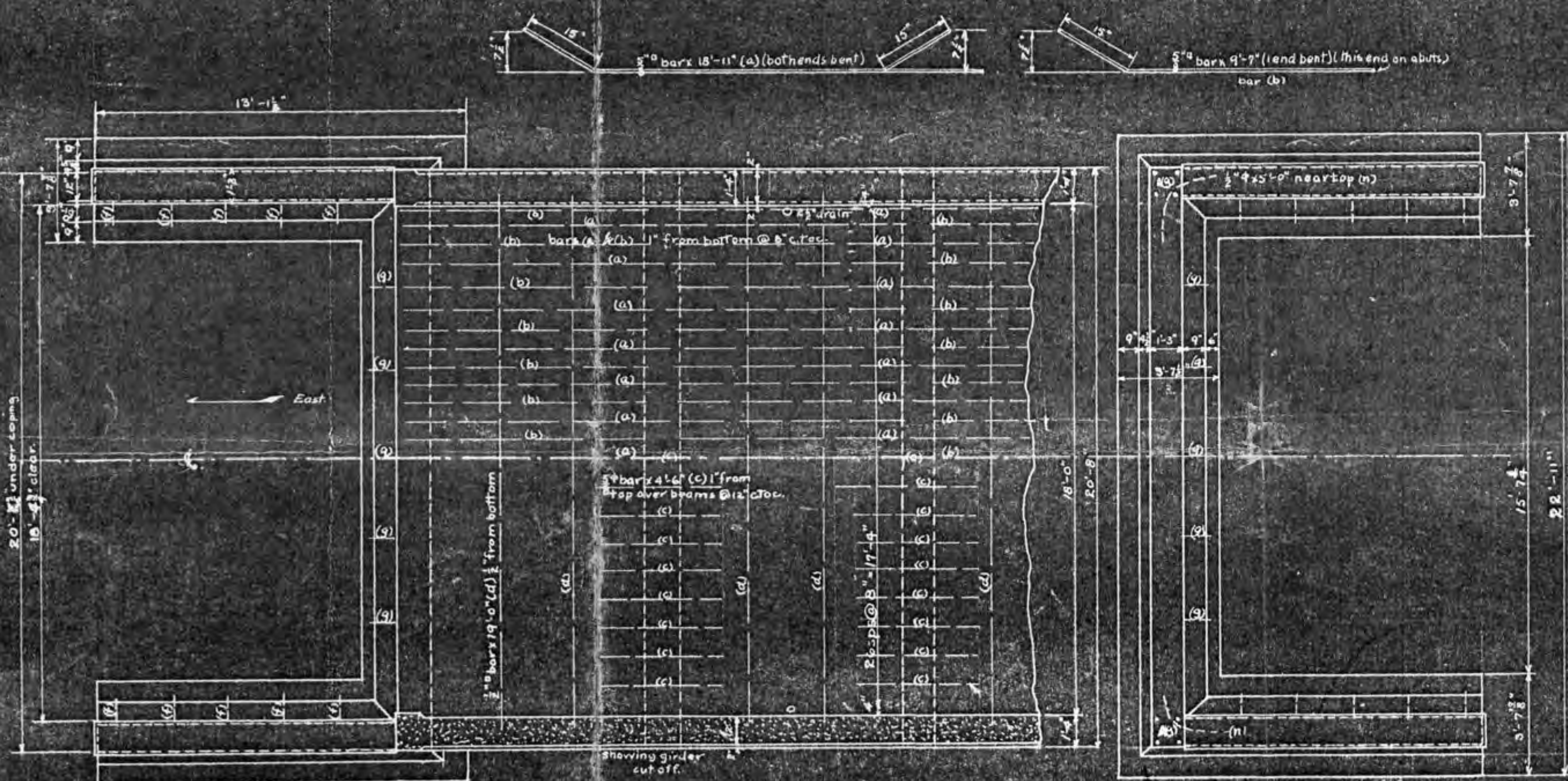
HALF ELEVATION

HALF LONG SECTION



HALF CROSS SECTION

HALF END ELEVATION



FLOOR PLAN

ABUTMENT PLAN

Reinforcing steel shown thus:-
Place bars in girders 2" to 4" from bottom and bend up ends as shown.
slab 1" from top and bottom and bend up
horizontal bars in wings 2" from outside
vertical 2" - inside } 4" if below water.
Bend up stirrups of Kahn bars at 45°
Follow dimensions regardless of scale.
Make expansion joint at both ends of girder. Lay felt paper on abutment seat and around chds of rails entering girder.

Designed and to be built in accordance with specifications of
Dept of Public Highways Ontario. Class A.

ESTIMATE

| | |
|---|------|
| Concrete in slab, beams, coping, posts, rails (1:2:4) | 28.2 |
| Wings & Abutments (1:2:5 or 1:6 if approved) | 64.0 |
| Total Concrete | 92.2 |
| Reinforcing steel | |
| supplied F.O.B. cars at Alma 1 mile away. | |
| Cement supplied F.O.B. cars at Alma. | |
| Gravel about 1 1/2 miles away. | |

26'X13' CONCRETE THROUGH GIRDER

KNOWN AS

MOORE'S BRIDGE

AT LOT 4, CON 1 WEST PILKINGTON 1 MI FROM ALMA

FOR
THE TWP OF PILKINGTON

SCALE: 1" = 1'-0"

A.W. Connor & Co. Engineers.

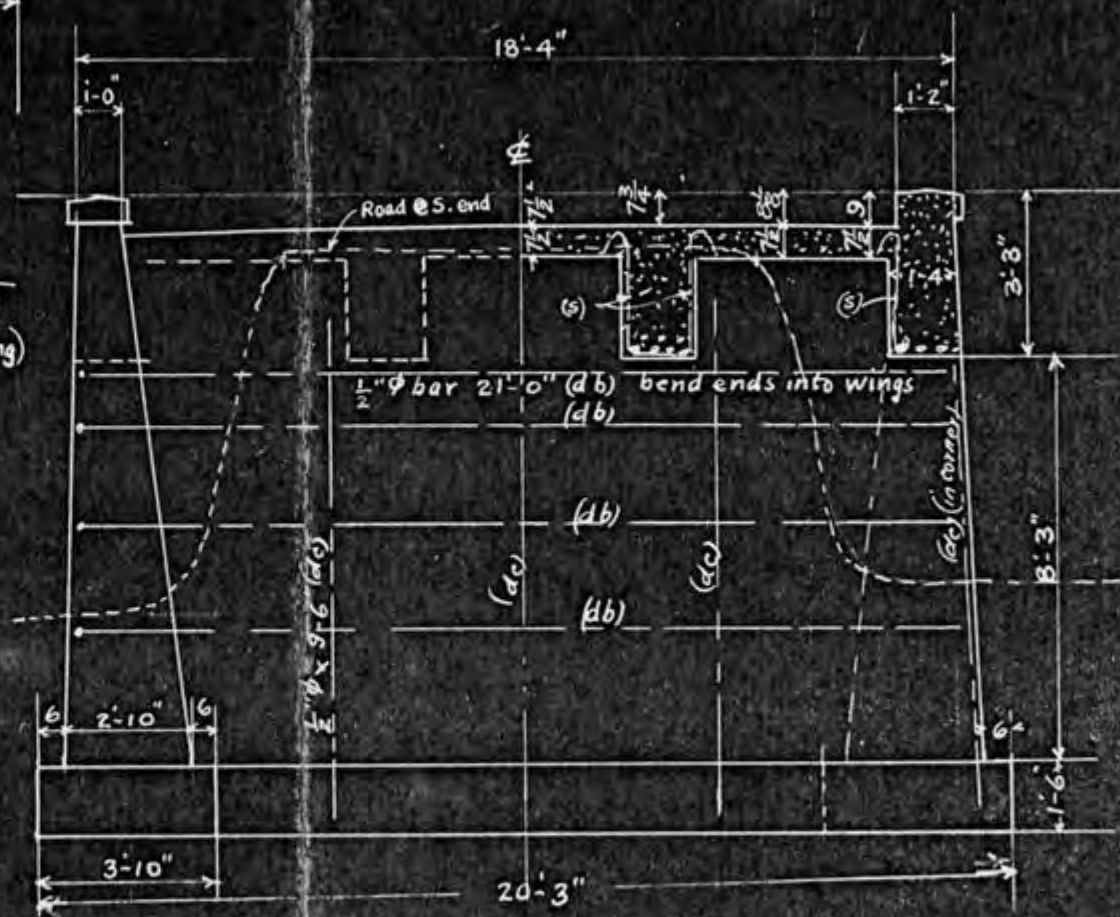
Toronto, May 29, 23.

Dwg No B1-47.

HALF ELEVATION OF GIRDER SHOWING STEEL

HALF CROSS SECTION SHOWING STEEL

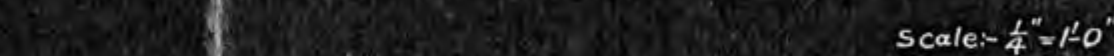
SCALE: 1" = 1'-0"



HALF END ELEVATION HALF CROSS SECTION
& CROSS SECTION OF ROAD AT SOUTH END

Place steel in beams 2" & 4 1/2" from bottom & bend up ends as shown
 " " " slab 1" from bottom & 1" from top over beams
 " horizontal steel in walls 2" from OUTSIDE
 " Vertical " " 2" " INSIDE
 Top 1" of slab to be of 1:1 3/4 mortar, poured with slab. Trowel smooth
 & to proper crown (use template). Finish with dotting roller.
 All as per specifications Dept of Public Highways Class A.

Concrete in slab, beams & coping (1:2:4) & Railing = 35.7 cu yds
 " in abutments (1:2:5 or 1:6 if approved) = 75.5 " "
 Total Concrete = 111.2 " "



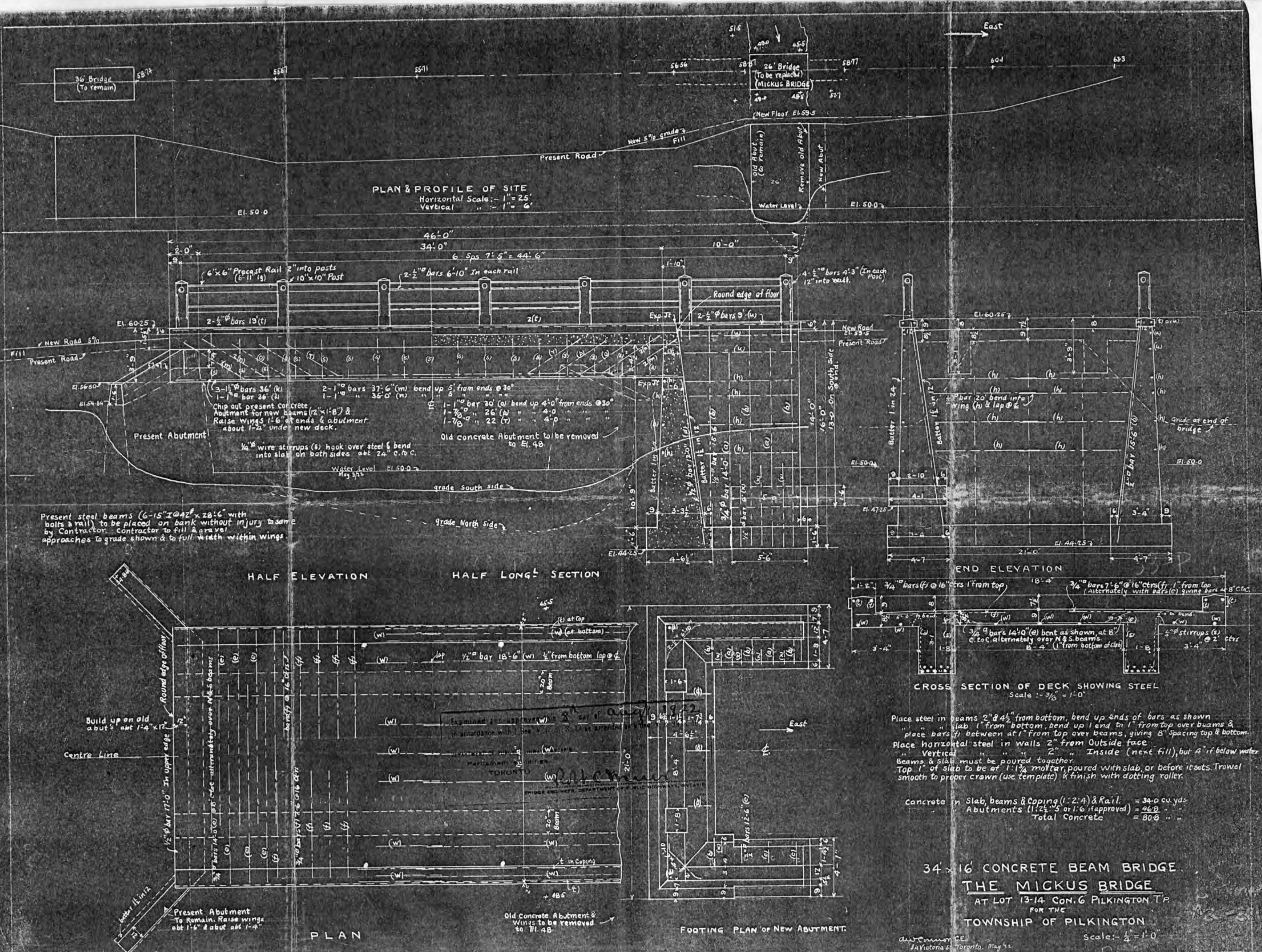
30'x16' CONCRETE BRIDGE
THE MICKUS BRIDGE
AT LOT 14, Con. 6 Pilkington Tp.
FOR THE
TOWNSHIP OF PILKINGTON

PLAN No 2818

A. W. Connor & Co. Engrs
301 Metropolitan Bldg Toronto

JUNE 3/26

Dwg #B-2-46





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Appendix C

Preliminary Conceptual Drawings



STRUCTURE 1-P: _____
4 - 16.0m LG. 3000 SPAN x 1500 RISE PRECAST
CONCRETE BOX CULVERTS C/W DISTRIBUTION SLAB

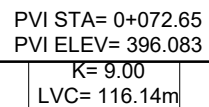
RE-INSTATE SCoured
CHANNEL EMBANKMENT

PROPERTY LINE

GRADING LIMITS

LIMIT OF CONTRACT
STA. 0+190

OVERHEAD HYDRO



LOW PT. STA= 0+143.69
LOW PT ELEV= 395.417
PVI STA= 0+144.91
PVI ELEV= 395.360
K= 9.00
LVC= 20.43m
A= 2.27%

$$\begin{aligned} \text{EVCS} &= 0 + 130.72 \\ \text{EMCE} &= 395.502 \end{aligned}$$

| |
|-----------------|
| EVCS = 0+155.12 |
| EVCF = 395.490 |

+1 STA = 0+190.00

[illegible]

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2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
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[illegible]

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R.J. Burnside & Associates Limited
3 Ronell Crescent,
Collingwood, Ontario, L9Y 4J6
telephone (705) 446-0515
fax (705) 446-2399
web www.rjburnside.com

BRIDGE 1-P REPLACEMENT

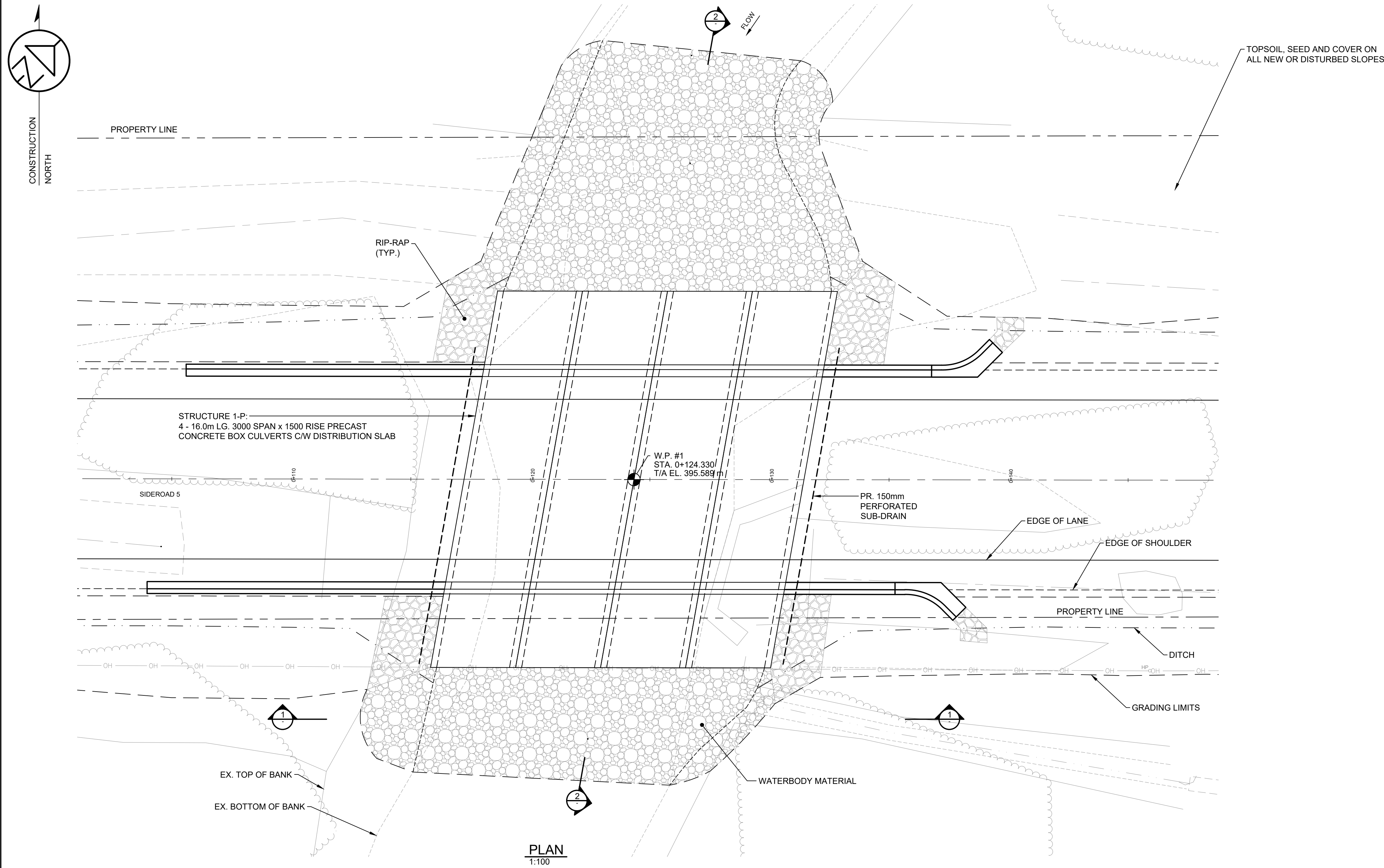
PLAN AND PROFILE

| | | | | |
|--------------------------|-----------------|---------------------------|-----------------|-------------------|
| Drawn A.A. | Checked A.D. | Designed A.D. | Checked M.B. | Date 23/11/06 |
| Project No. 300056693 | | Contract No. 300056693 | | Revision No. 0 |
| Scale H 1:250 V 1:50 | | | | |

Drawing No.

B-001

file: \\OSCAR\\Shared Work Areas\\056693 - Twp. of Centre Wellington - 5 Bridges\\BRIDGE - 1.P\\03 ProductionDwg\\056693 - Bridge 1.P - P&P.dwg Date Plotted: November 29, 2023 - 9:08 PM



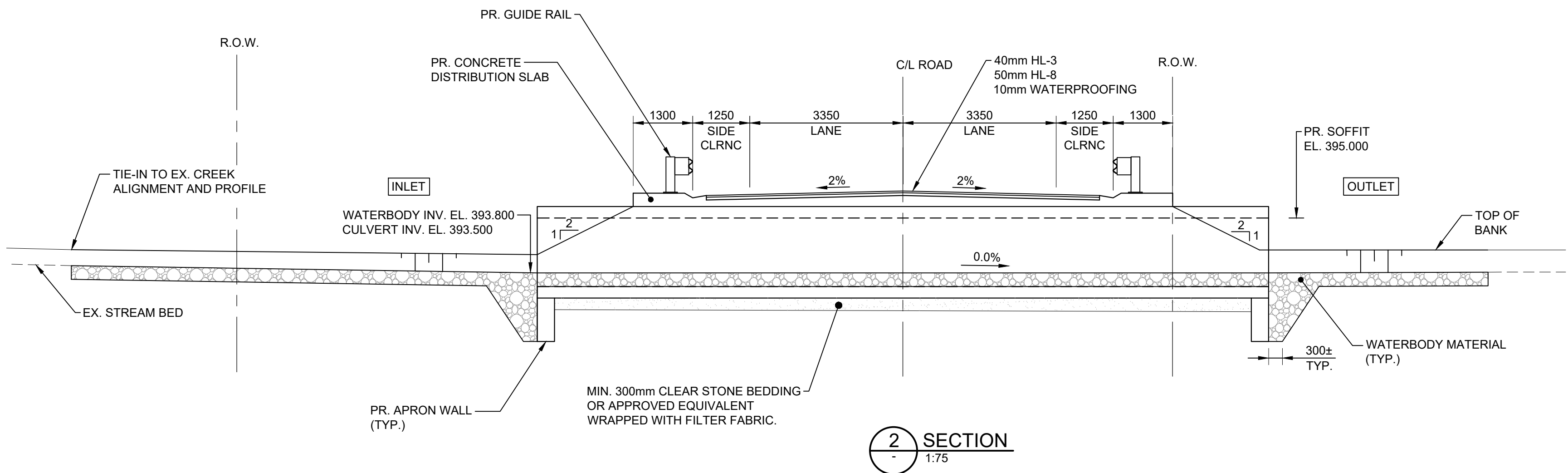
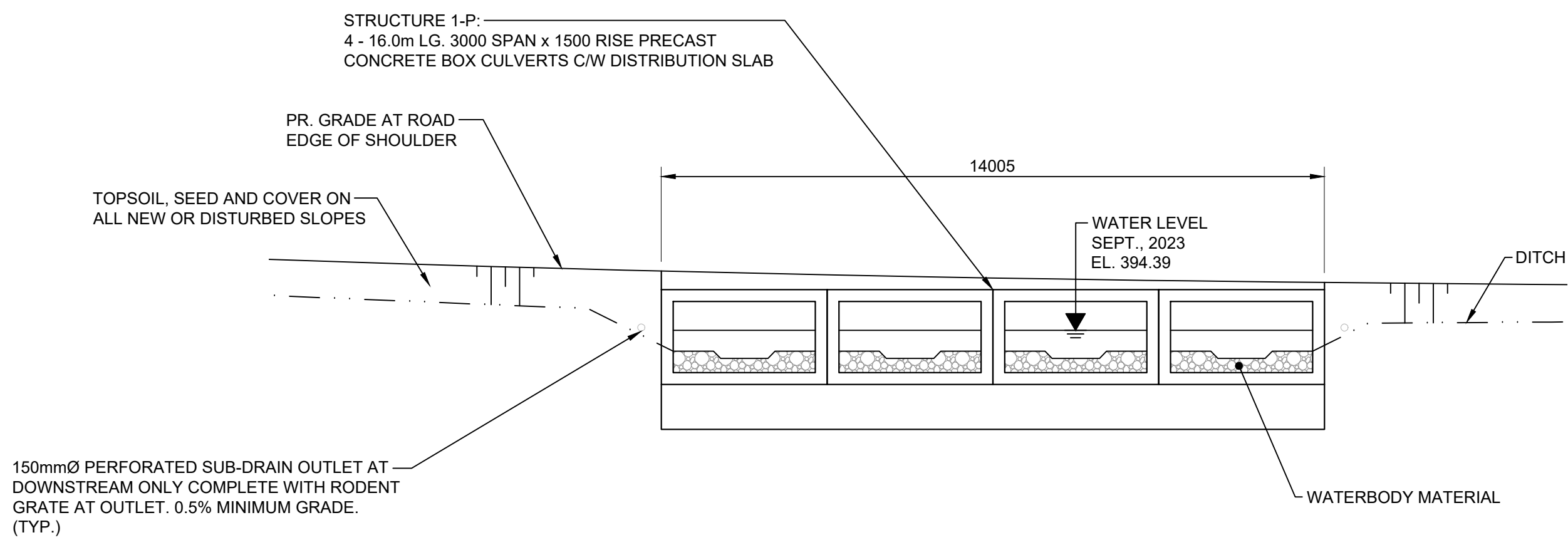
GENERAL NOTES:

- DESIGNED TO CANADIAN HIGHWAY BRIDGE DESIGN CODE (CHBDC) CAN/CSA-S6-19 TO SUPPLEMENT 2, LIVE LOAD TRUCK TO CL-625-ONT.
- CONCRETE SHALL BE EXPOSURE CLASS C-1 WITH A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 35 MPa AT 56 DAYS.
- CLEAR COVER TO REINFORCING STEEL
CAST IN PLACE CONCRETE:

| | | |
|-----------|--------------------------------|----------|
| FOOTINGS | CAST AGAINST SOIL | 100 ± 25 |
| DECK | TOP | 70 ± 20 |
| | BOTTOM | 60 ± 10 |
| REMAINDER | 70 ± 20 UNLESS OTHERWISE NOTED | |

PRECAST CONCRETE:

| | |
|-------------------|---------|
| EXTERIOR SURFACES | 55 ± 10 |
| INTERIOR SURFACES | 50 ± 10 |
- REINFORCING BARS:
STEEL:
 - REINFORCING STEEL (BLACK) SHALL BE GRADE 400W UNLESS OTHERWISE SPECIFIED.
 - STAINLESS REINFORCING STEEL SHALL BE TYPE 316LN OR DUPLEX 2205 AND HAVE MINIMUM YIELD STRENGTH OF 500 MPa, UNLESS OTHERWISE SPECIFIED.
 - BAR MARKS WITH PREFIX 'S' DENOTE STAINLESS STEEL BARS.
 - ALL LAP LENGTHS SHALL BE CONSIDERED TENSION CLASS 'B' UNLESS NOTED OTHERWISE.
 - NOT ALL LAP SPLICES ARE SHOWN ON THE DRAWINGS. WHERE BARS ARE SHOWN AS CONTINUOUS, LAP SPLICES ARE REQUIRED TO SUIT THE ACTUAL AVAILABLE LENGTHS OF THE REBAR. THE CONTRACTOR MAY PROVIDE LAPS NOT REPRESENTED IN THE DRAWINGS, SUBJECT TO THE APPROVAL OF THE ENGINEER.
 - WHERE LAP SPLICES ARE PROPOSED BY THE CONTRACTOR, THE LOCATIONS SHALL BE SUCH THAT THEY LEAST IMPACT THE STRUCTURE.
 - BAR HOOKS SHALL HAVE STANDARD HOOK DIMENSIONS USING MINIMUM BEND DIAMETERS, WHILE STIRRUPS AND TIES SHALL HAVE MINIMUM HOOK DIMENSIONS. ALL HOOKS SHALL BE IN ACCORDANCE WITH THE STRUCTURAL STANDARD DRAWING SS12-1, (AVAILABLE UPON REQUEST) OR THE REINFORCING STEEL INSTITUTE OF ONTARIO OR CANADA (RSIO or RSC), UNLESS INDICATED OTHERWISE.
- CONSTRUCTION NOTES
 - BACKFILL SHALL NOT BE PLACED BEHIND THE ABUTMENTS UNTIL THE DECK SLAB IS IN PLACE AND HAS REACHED 70% OF ITS DESIGN STRENGTH.
 - BACKFILL SHALL BE PLACED SIMULTANEOUSLY BEHIND BOTH ABUTMENTS KEEPING THE HEIGHT OF THE BACKFILL APPROXIMATELY THE SAME. AT NO TIME SHALL THE DIFFERENCE IN ELEVATION BE GREATER THAN 500mm.
 - THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND DETAILS BEFORE STARTING WORK.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION AND PROTECTION OF ALL EXISTING UTILITIES, SERVICES, STRUCTURES, ROADWAYS, ETC. DURING CONSTRUCTION.
 - CHAMFERS MAY OR MAY NOT BE SHOWN ON DRAWINGS. ALL EXPOSED CORNERS TO HAVE 25mm x 25mm CHAMFERS UNLESS NOTED OTHERWISE. CONSTRUCTION JOINTS TO HAVE A 20mm x 20mm CHAMFER.



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| No. | Issue / Revision | Date | Auth. |
|-----|------------------|------|-------|
| | | | |
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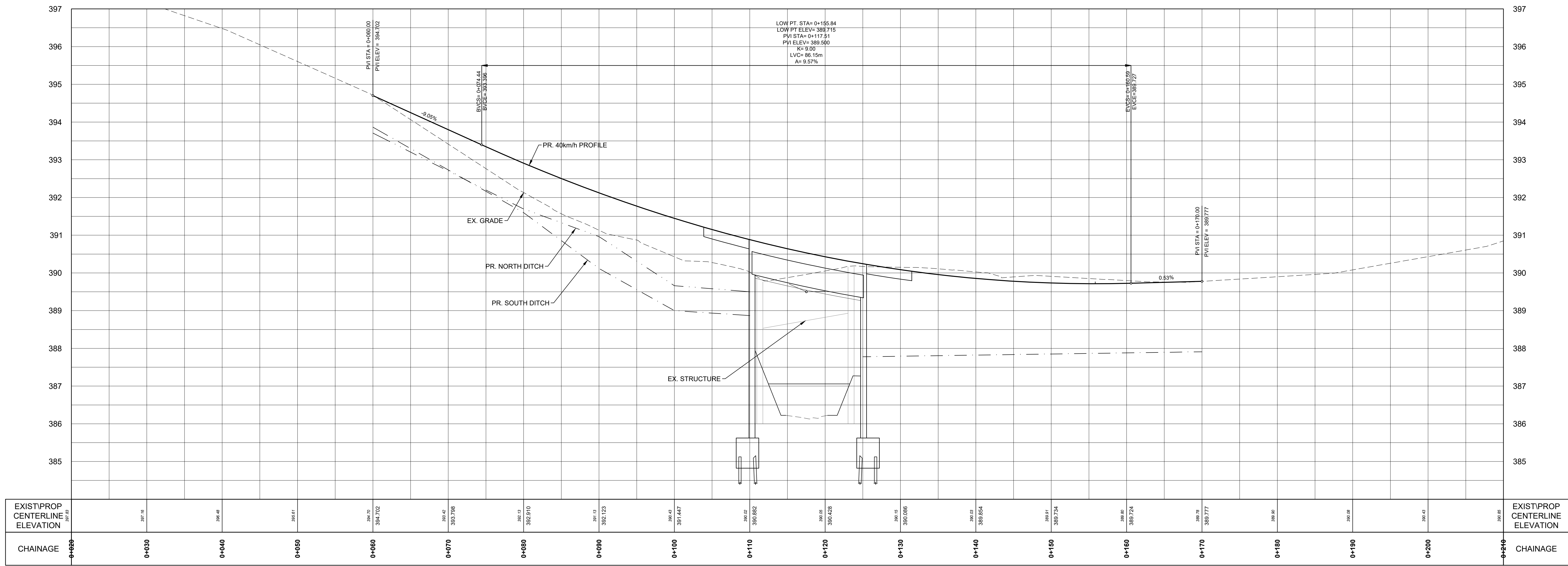
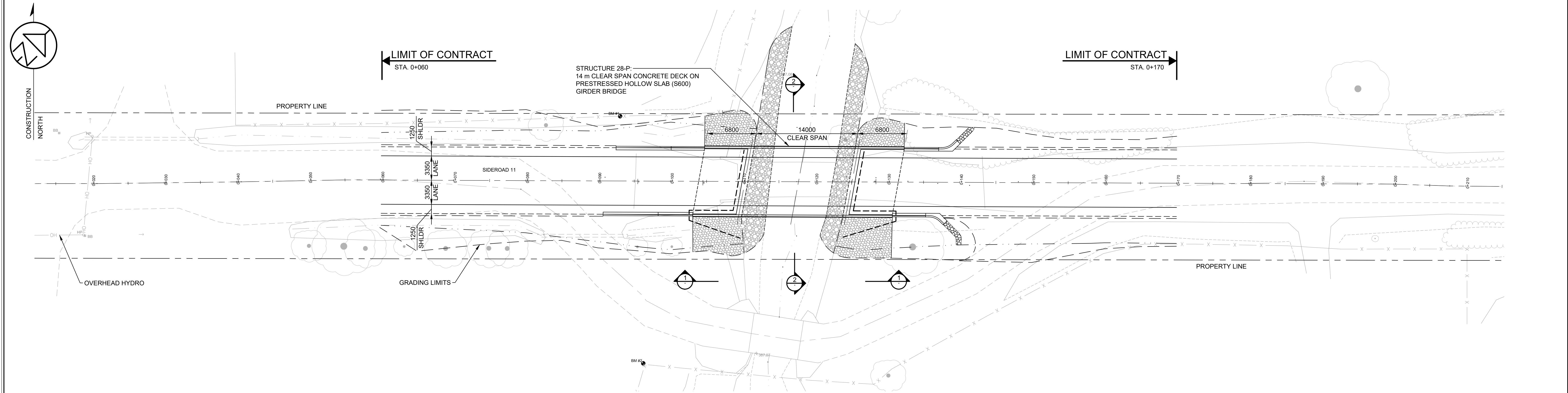
R. J. Burnside & Associates Limited
3 Rhinell Crescent,
Collingwood, Ontario, L9Y 4J6
telephone (705) 446-0515
fax (705) 446-2399
web www.rjburnside.com

Client
TOWNSHIP OF CENTRE WELLINGTON
1 MACDONALD SQUARE
ELORA, ONTARIO
N0B 1S0

Drawing Title
BRIDGE 1-P REPLACEMENT
GENERAL ARRANGEMENT

| Drawn | Checked | Designed | Checked | Date | Drawing No. |
|-------------|--------------|--------------|---------|----------|-------------|
| A.A. | A.D. | A.D. | M.B. | 23/11/06 | |
| Project No. | Contract No. | Revision No. | | | |
| 300056693 | 300056693 | 0 | | | |
| Scale | | | | | |
| AS NOTED | | | | | |

B-002



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| No. | Issue / Revision | Date | Auth. |
|-----|------------------|------|-------|
| | | | |
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BURNSIDE

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3 Ronell Crescent,
Collingwood, Ontario, L9Y 4J6
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web www.rjburnside.com

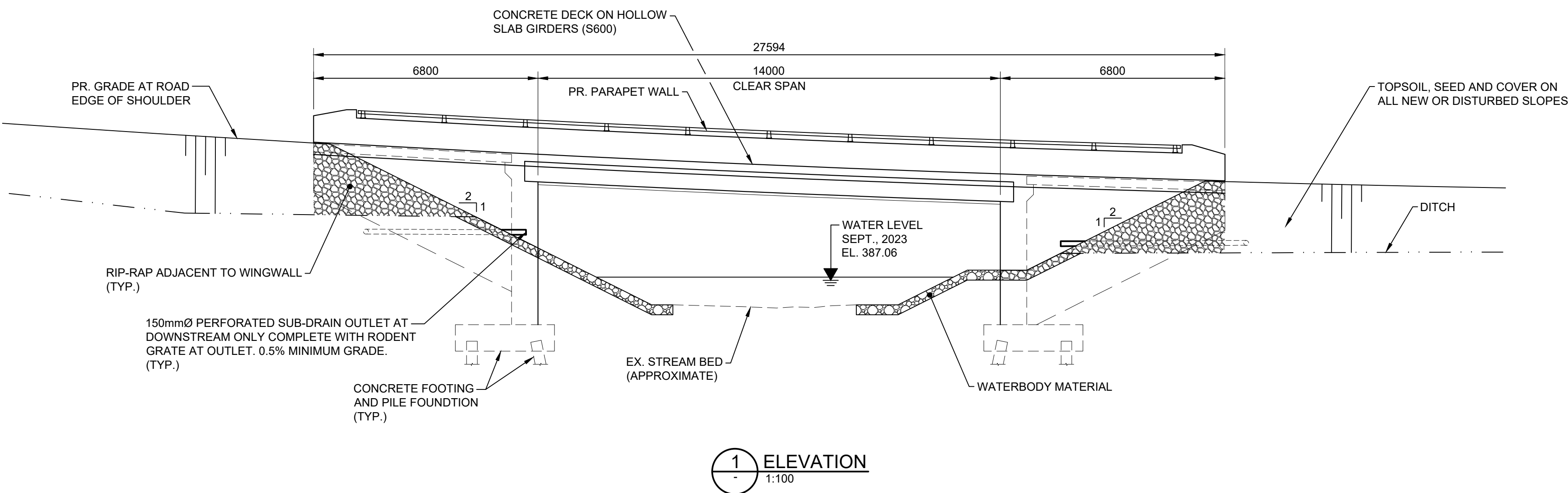
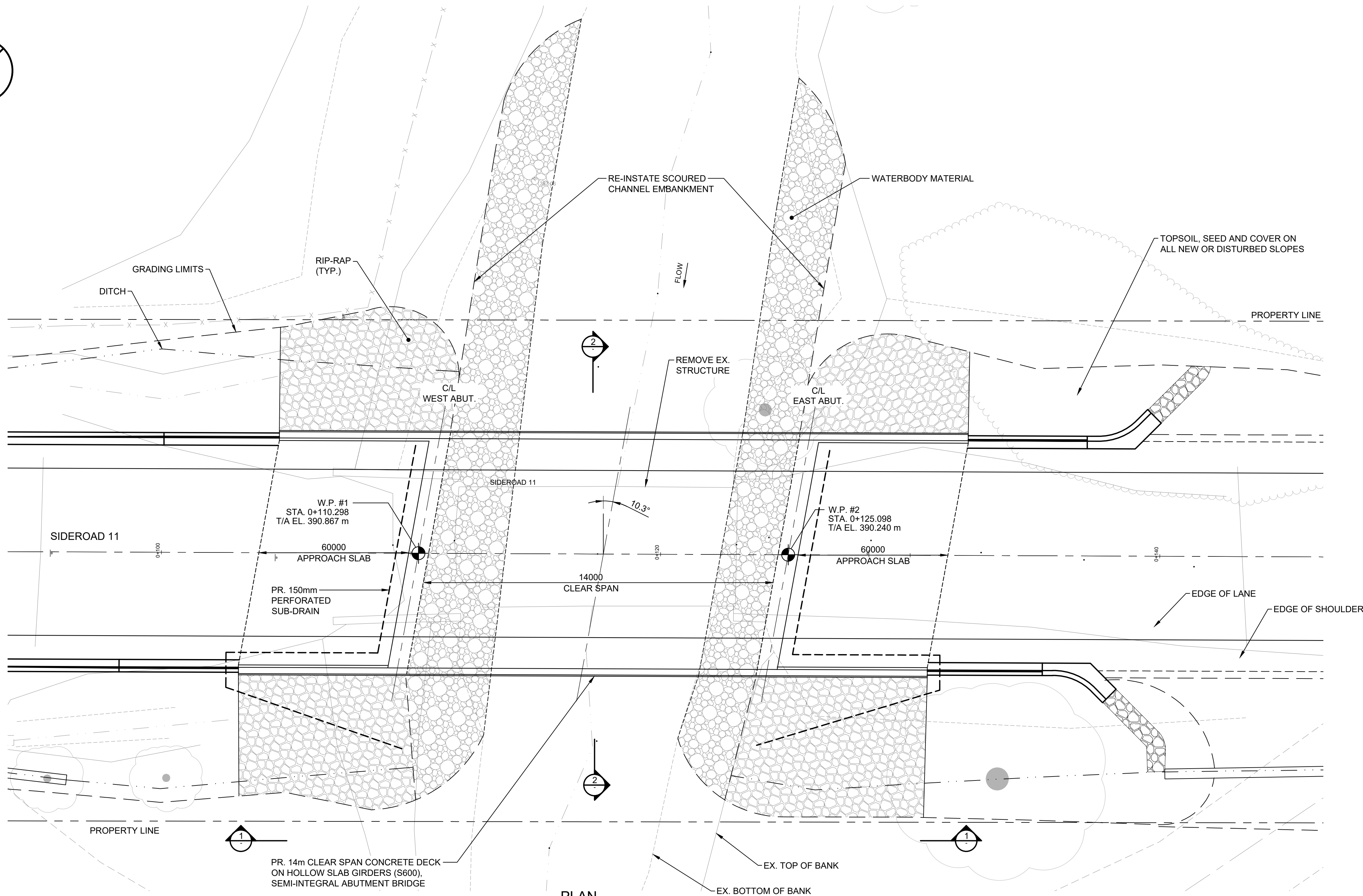
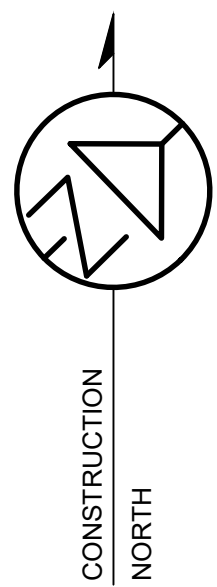
Client
TOWNSHIP OF CENTRE WELLINGTON
1 MACDONALD SQUARE
ELORA, ONTARIO
N0B 1S0

Drawing Title
BRIDGE 28-P REPLACEMENT
PLAN AND PROFILE

| Drawn | Checked | Designed | Checked | Date |
|--------------------------|------------------------------|-------------------|-----------------------------|----------|
| A.A. | A.D. | A.D. | M.B. | 23/11/03 |
| Project No. 300056693 | Contract No. CONTRACT NO. | Revision No. 0 | Drawing No. B-001 | |

Scale
H 1:250 V 1:50

0 5.0 10.0 15.0m



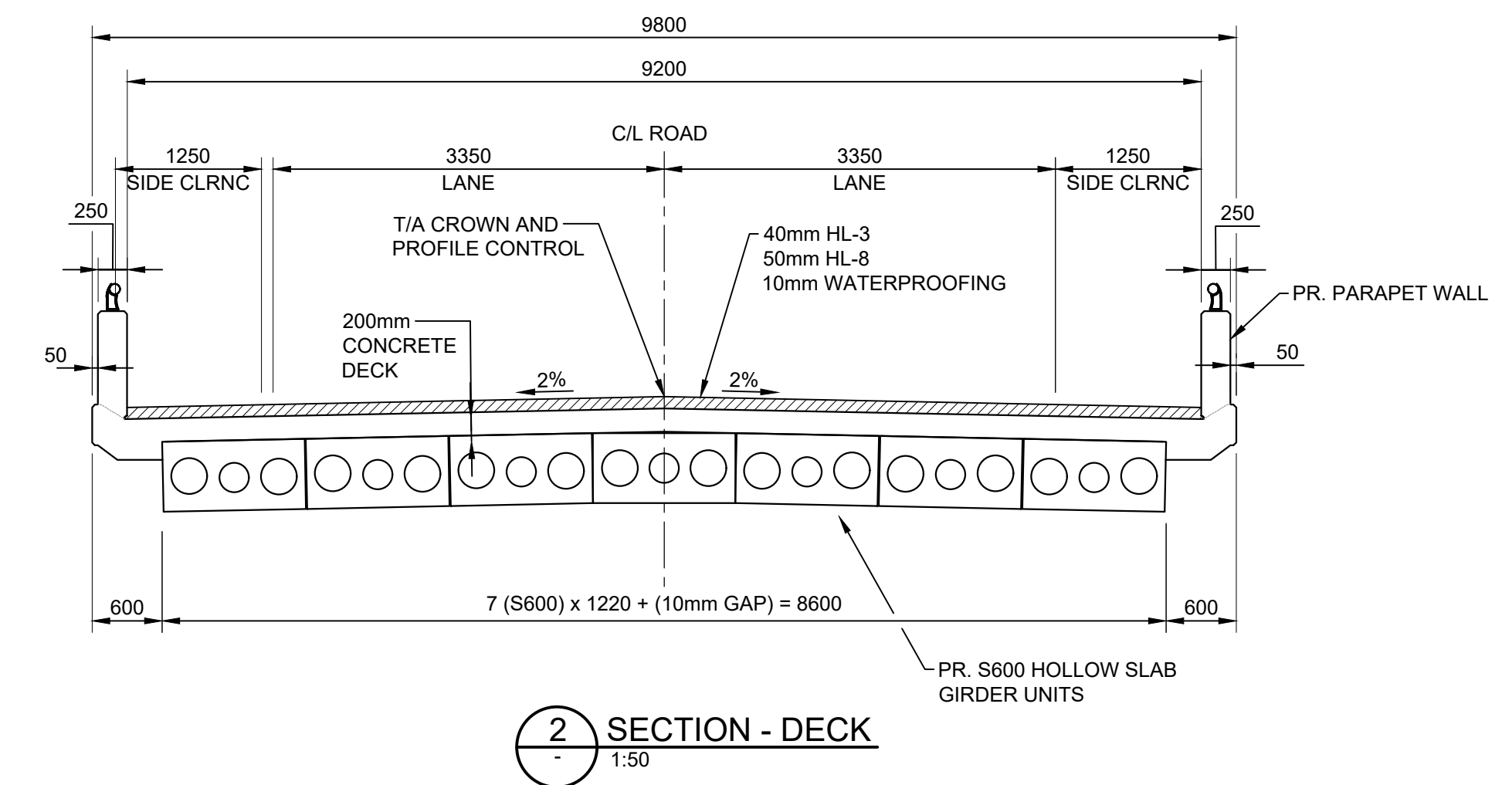
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- CLEAR COVER TO REINFORCING STEEL
CAST IN PLACE CONCRETE:

| | | |
|-----------|-------------------|--------------------------------|
| FOOTINGS | CAST AGAINST SOIL | 100 ± 25 |
| DECK | TOP | 70 ± 20 |
| | BOTTOM | 60 ± 10 |
| REMAINDER | | 70 ± 20 UNLESS OTHERWISE NOTED |

PRECAST CONCRETE:

| | |
|-------------------|---------|
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| INTERIOR SURFACES | 50 ± 10 |
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| No. | Issue / Revision | Date | Auth. |
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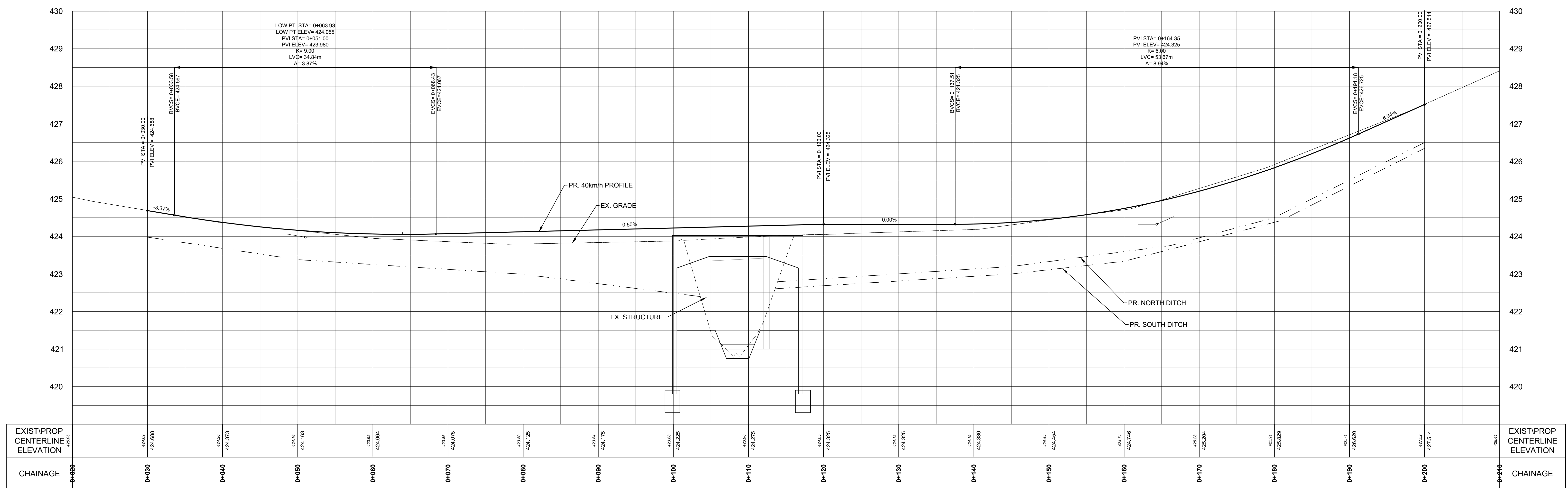
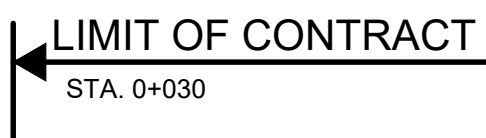


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Collingwood, Ontario, L9Y 4J6
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web www.rjburnside.com

Client
TOWNSHIP OF CENTRE WELLINGTON
1 MACDONALD SQUARE
ELORA, ONTARIO
N0B 1S0

Drawing Title
BRIDGE 28-P REPLACEMENT
GENERAL ARRANGEMENT

| Drawn | Checked | Designed | Checked | Date | Drawing No. |
|--------------------------|--------------|--------------|---------|----------|-------------|
| A.A. | A.D. | A.D. | M.B. | 23/11/03 | B-002 |
| Project No. 300056693 | Contract No. | Revision No. | 0 | | |
| Scale AS NOTED | CONTRACT NO. | | | | |



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BURNSIDE

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web www.rjburnside.com

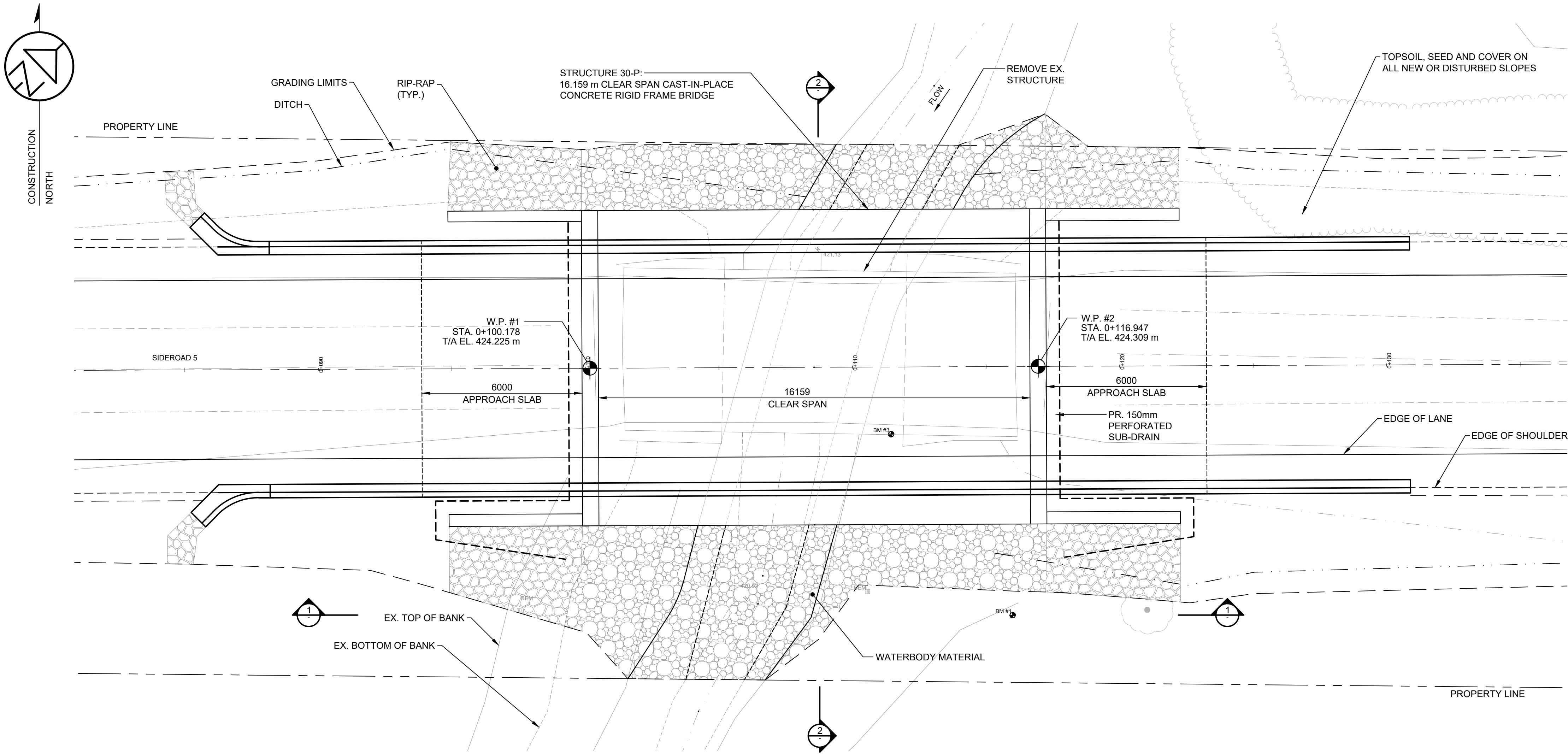
Drawing Title
BRIDGE 30-P REPLACEMENT
PLAN AND PROFILE

| | | | | | |
|--------------------------|-----------------|------------------------------|-----------------|-------------------|---|
| Drawn A.A. | Checked A.D. | Designed A.D. | Checked M.B. | Date 23/11/17 | □ |
| Project No. 300056693 | | Contract No. CONTRACT NO. | | Revision No. 0 | |
| Scale H 1:250 V 1:50 | | | | | |

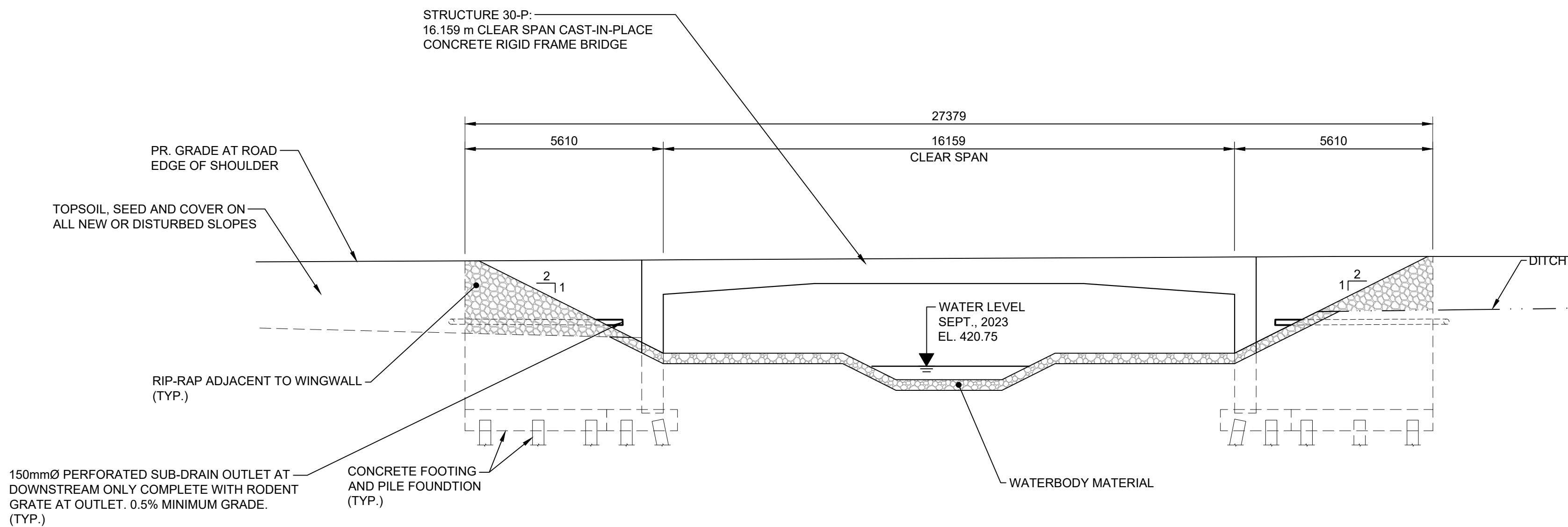
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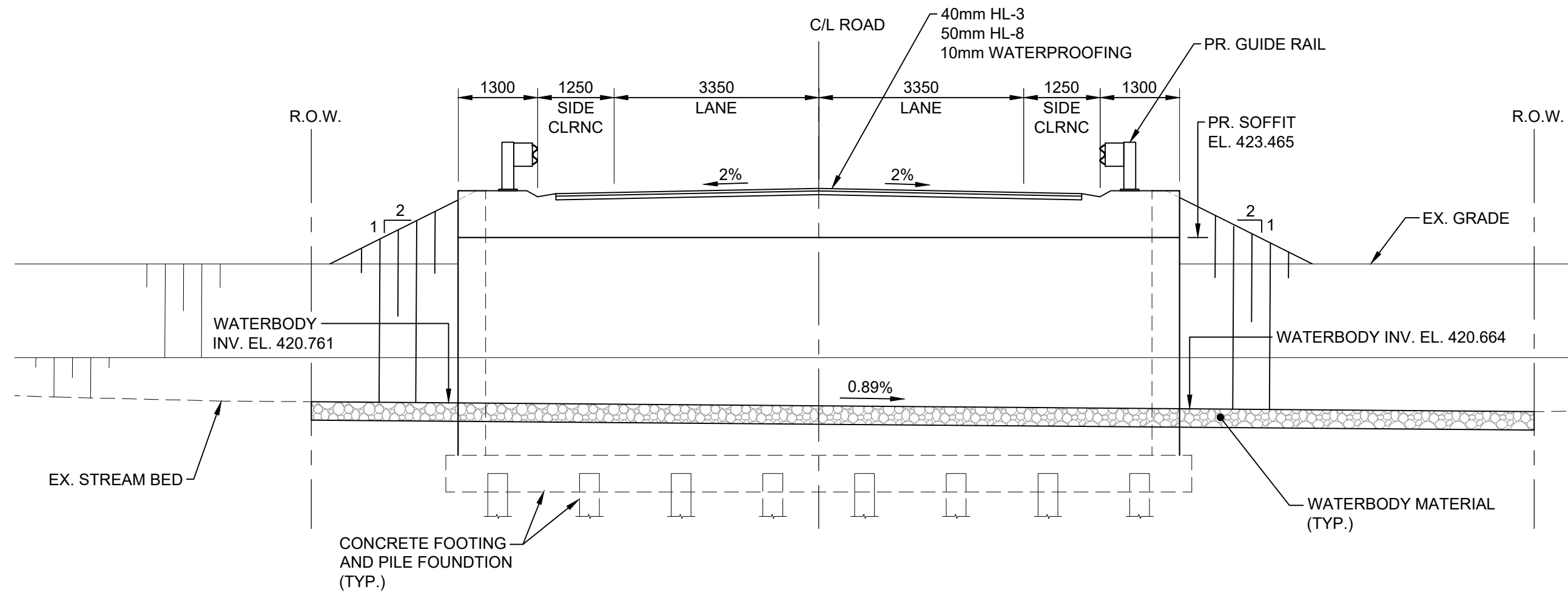
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PLAN
1:100



1 ELEVATION
1:100



2 SECTION
1:75

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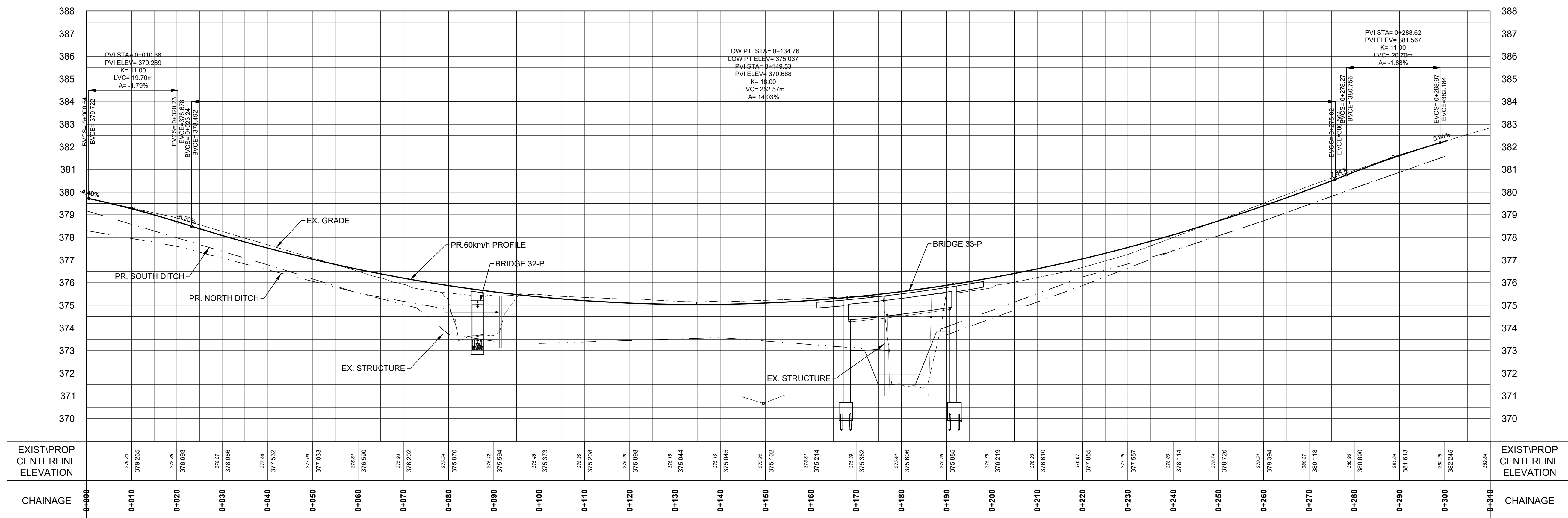
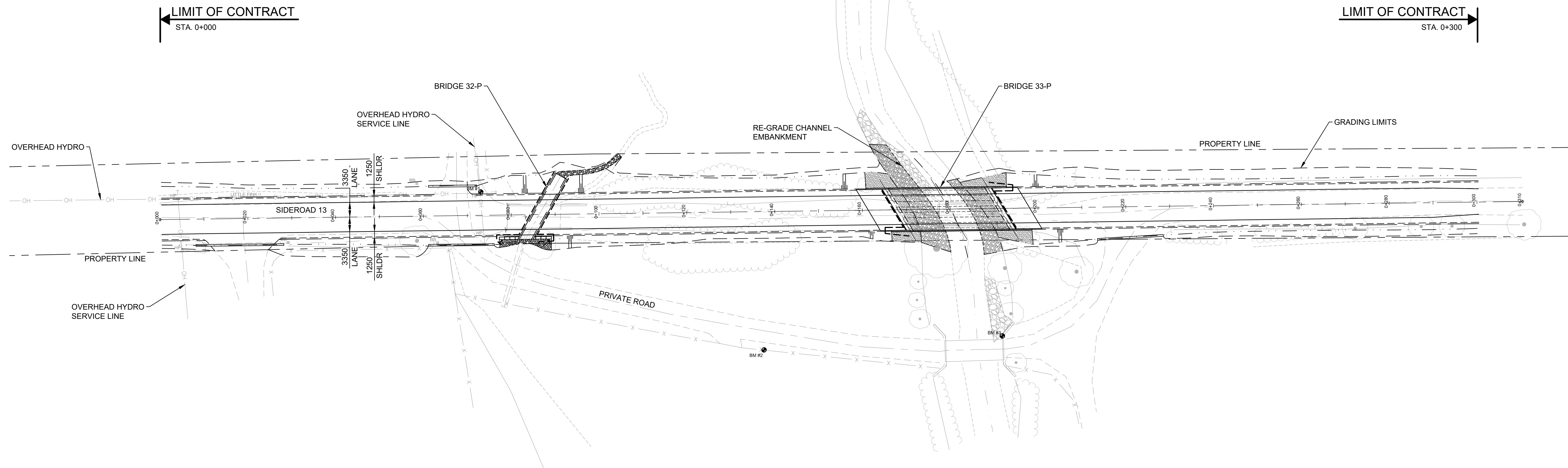
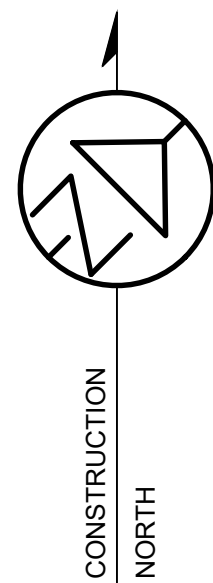


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| EXIST/PROP CENTERLINE ELEVATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | </ |
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- Notes
- This drawing is the exclusive property of R. J. Burnside & Associates Limited. The reproduction of any part without prior written consent of this office is strictly prohibited.
 - The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
 - This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

| No. | Issue / Revision | Date | Auth. |
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| 0 | ISSUED FOR 30% REVIEW | 23/11/21 | A.D. |
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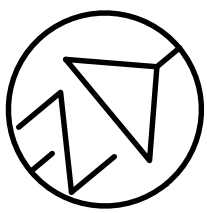
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TOWNSHIP OF CENTRE WELLINGTON
1 MACDONALD SQUARE
ELORA, ONTARIO
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Drawing Title
BRIDGE 32-P & 33-P REPLACEMENT

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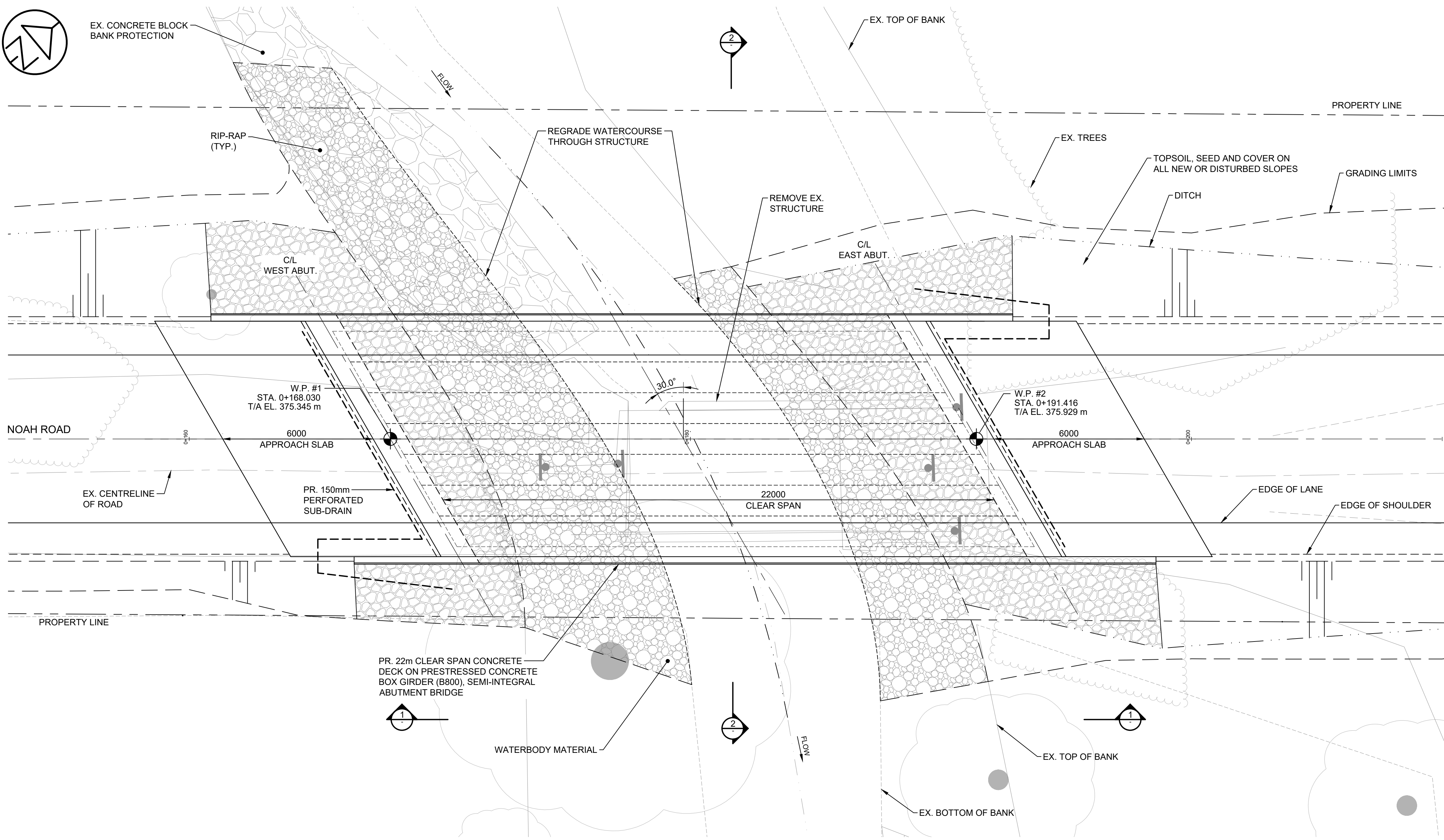
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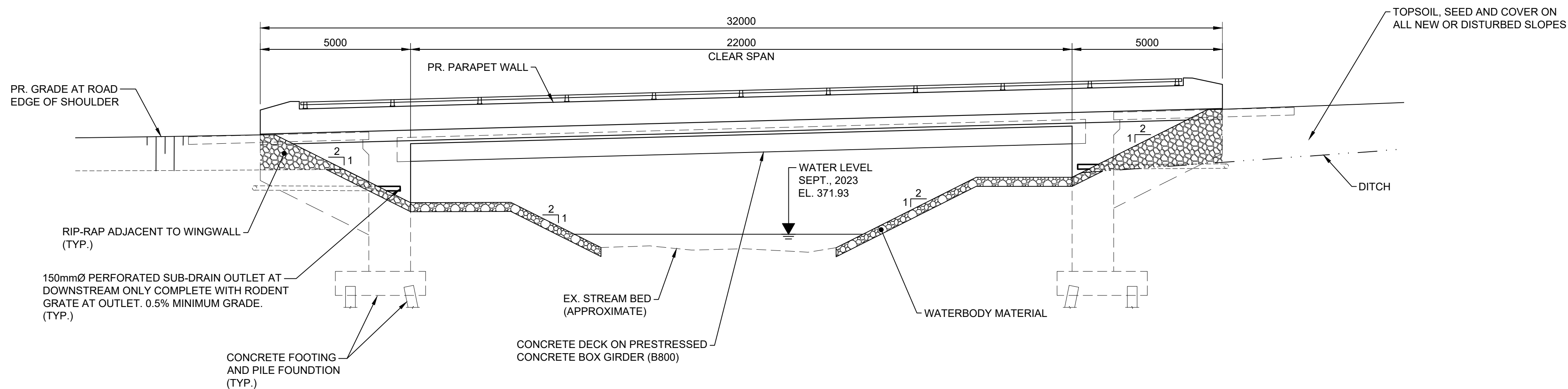


EX. CONCRETE BLOCK
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PLAN
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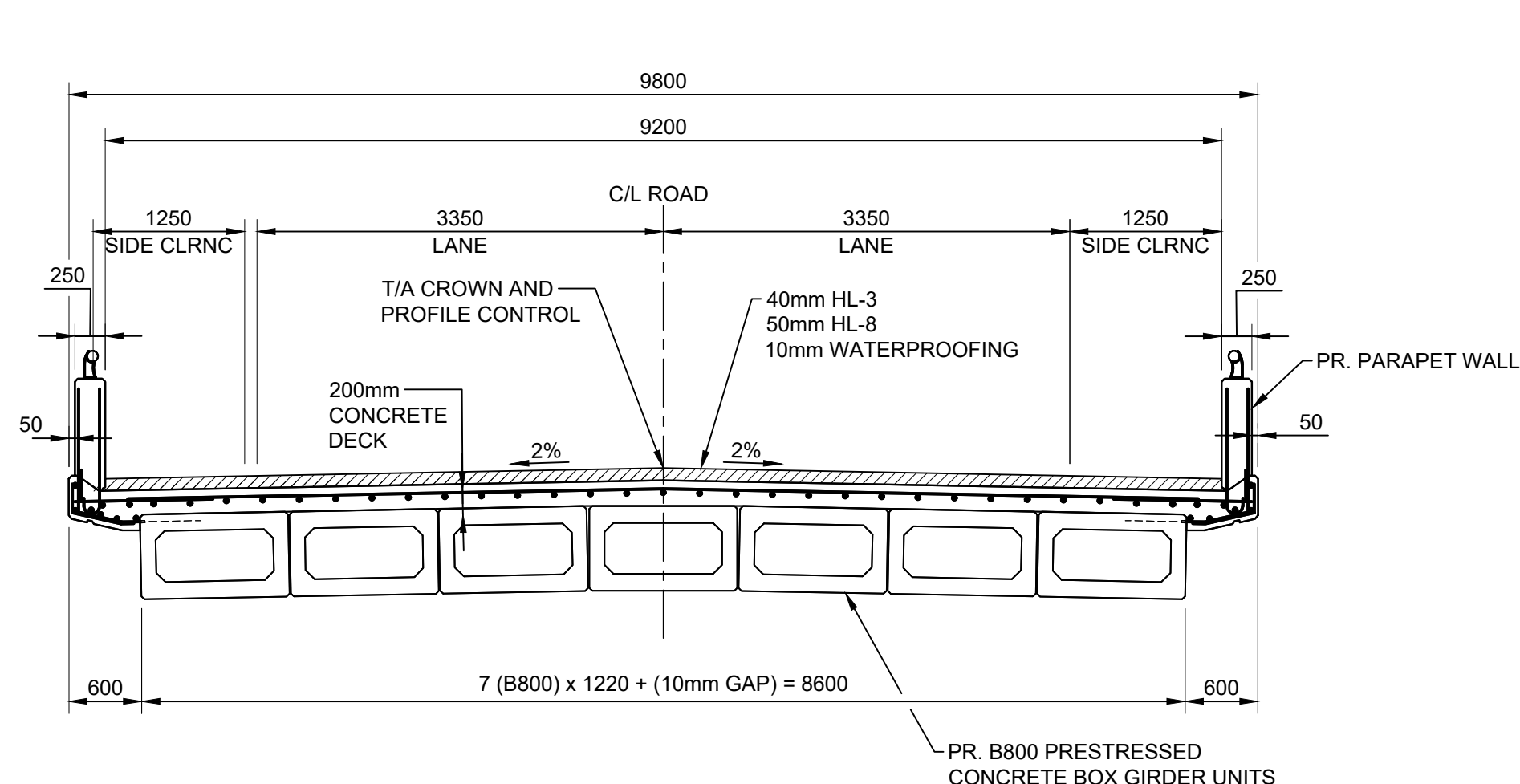
GENERAL NOTES:

- DESIGNED TO CANADIAN HIGHWAY BRIDGE DESIGN CODE (CHBDC) CAN/CSA-S6-19 TO SUPPLEMENT 2, LIVE LOAD TRUCK TO CL-625-ONT.
- CONCRETE SHALL BE EXPOSURE CLASS C-1 WITH A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 35 MPa AT 56 DAYS.
- CLEAR COVER TO REINFORCING STEEL
CAST IN PLACE CONCRETE:

| | | |
|-----------|-------------------|------------------------|
| FOOTINGS | CAST AGAINST SOIL | 100 ± 25 |
| DECK | TOP | 70 ± 20 |
| | BOTTOM | 60 ± 10 |
| REMAINDER | 70 ± 20 | UNLESS OTHERWISE NOTED |

PRECAST CONCRETE:

| | |
|-------------------|---------|
| EXTERIOR SURFACES | 55 ± 10 |
| INTERIOR SURFACES | 50 ± 10 |
- REINFORCING BARS:
STEEL:
 - REINFORCING STEEL (BLACK) SHALL BE GRADE 400W UNLESS OTHERWISE SPECIFIED.
 - STAINLESS REINFORCING STEEL SHALL BE TYPE 316LN OR DUPLEX 2205 AND HAVE MINIMUM YIELD STRENGTH OF 500 MPa, UNLESS OTHERWISE SPECIFIED.
 - BAR MARKS WITH PREFIX 'S' DENOTE STAINLESS STEEL BARS.
 - ALL LAP LENGTHS SHALL BE CONSIDERED TENSION CLASS 'B' UNLESS NOTED OTHERWISE.
 - NOT ALL LAP SPLICES ARE SHOWN ON THE DRAWINGS. WHERE BARS ARE SHOWN AS CONTINUOUS, LAP SPLICES ARE REQUIRED TO SUIT THE ACTUAL AVAILABLE LENGTHS OF THE REBAR. THE CONTRACTOR MAY PROVIDE LAP'S NOT REPRESENTED IN THE DRAWINGS, SUBJECT TO THE APPROVAL OF THE ENGINEER.
 - WHERE LAP SPLICES ARE PROPOSED BY THE CONTRACTOR, THE LOCATIONS SHALL BE SUCH THAT THEY LEAST IMPACT THE STRUCTURE.
 - BAR HOOKS SHALL HAVE STANDARD HOOK DIMENSIONS USING MINIMUM BEND DIAMETERS, WHILE STIRRUPS AND TIES SHALL HAVE MINIMUM HOOK DIMENSIONS. ALL HOOKS SHALL BE IN ACCORDANCE WITH THE STRUCTURAL STANDARD DRAWING SS12-1. (AVAILABLE UPON REQUEST) OR THE REINFORCING STEEL INSTITUTE OF ONTARIO OR CANADA (RSIO or RSIC), UNLESS INDICATED OTHERWISE.
- CONSTRUCTION NOTES
 - BACKFILL SHALL NOT BE PLACED BEHIND THE ABUTMENTS UNTIL THE DECK SLAB IS IN PLACE AND HAS REACHED 70% OF ITS DESIGN STRENGTH.
 - BACKFILL SHALL BE PLACED SIMULTANEOUSLY BEHIND BOTH ABUTMENTS KEEPING THE HEIGHT OF THE BACKFILL APPROXIMATELY THE SAME. AT NO TIME SHALL THE DIFFERENCE IN ELEVATION BE GREATER THAN 500mm.
 - THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND DETAILS BEFORE STARTING WORK.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION AND PROTECTION OF ALL EXISTING UTILITIES, SERVICES, STRUCTURES, ROADWAYS, ETC. DURING CONSTRUCTION.
 - CHAMFERS MAY OR MAY NOT BE SHOWN ON DRAWINGS. ALL EXPOSED CORNERS TO HAVE 25mm x 25mm CHAMFERS UNLESS NOTED OTHERWISE. CONSTRUCTION JOINTS TO HAVE A 20mm x 20mm CHAMFER.



2 SECTION - DECK
1:50

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2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

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BENCHMARK #1 ELEV. 375.94 m (GEODEDIC)
NAIL ON HYDRO POLE ON WEST SIDE OF THE ROAD, APPROX. 12.9 m
SOUTHWEST OF THE EXISTING BRIDGE 32P.

BENCHMARK #2 ELEV. 374.08 m (GEODEDIC)
NAIL ON WOODEN FENCE POST SOUTH OF GRAVEL ROAD ON PRIVATE
LANDS, APPROX. 60.2M NORTHEAST OF THE EXISTING BRIDGE 32P AND
APPROX. 50.2 m SOUTH OF THE EXISTING BRIDGE 33P.

BENCHMARK #3 ELEV. 373.52 m (GEODEDIC)
PERMANENT MARKER CROSS ON CONCRETE ABUTMENT (NORTH FACE
OF NORTHEAST WALL) OF PRIVATE STEEL TRUSS BRIDGE CROSSING,
APPROX. 29.4 m SOUTHEAST OF THE EXISTING BRIDGE 33P.



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Drawing Title
BRIDGE 32-P & 33-P REPLACEMENT
GENERAL ARRANGEMENT - BRIDGE 33P

| Drawn | Checked | Designed | Checked | Date | Drawing No. |
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| A.A. | A.D. | A.D. | M.B. | 23/11/06 | B-202 |
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Appendix E

Natural Heritage Report

**Centre Wellington 5 Bridges Municipal
Class Environmental Assessment,
Natural Heritage Report**

**Township of Centre Wellington
1 MacDonald Square
Elora ON N0B 1S0**



BURNSIDE

**Centre Wellington 5 Bridges Municipal
Class Environmental Assessment,
Natural Heritage Report**

**Township of Centre Wellington
1 MacDonald Square
Elora ON N0B 1S0**

**R.J. Burnside & Associates Limited
292 Speedvale Avenue West Unit 20
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**January 2024
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| Revision | Date | Description |
|----------|------------------|---|
| 0 | January 29, 2024 | Initial Submission to Township of Centre Wellington |

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Appendices

Appendix A Existing Aquatic Habitat Conditions Photo Page

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1.0 Introduction

The Township of Centre Wellington (Township) has implemented a study on five bridge structures which are currently closed to traffic and are located within a 20 km² study area located in the northwest quadrant of the Township, in the former Township of Pilkington. These structures have been closed by the Township based on recommendations of structural engineers, as a result of their severely deteriorated physical condition.

The Township has recognized the impact of having numerous closed structures on the overall connectivity of the community and has conducted a Schedule B Municipal Class Environmental Assessment (MCEA) to review opportunities available to address the closures and the overall connectivity within the study area.

Several alternative solutions have been considered, including doing nothing, removing all the bridges, replacing some of the bridges, or replacing all the bridges.

This report documents the historical and existing natural heritage conditions, proposed design alternatives, the potential impacts that could occur from the Preferred Alternative and the impacts and mitigation measures that will be implemented to the surrounding sensitive ecological features, fish, and wildlife.

1.1 Study Area

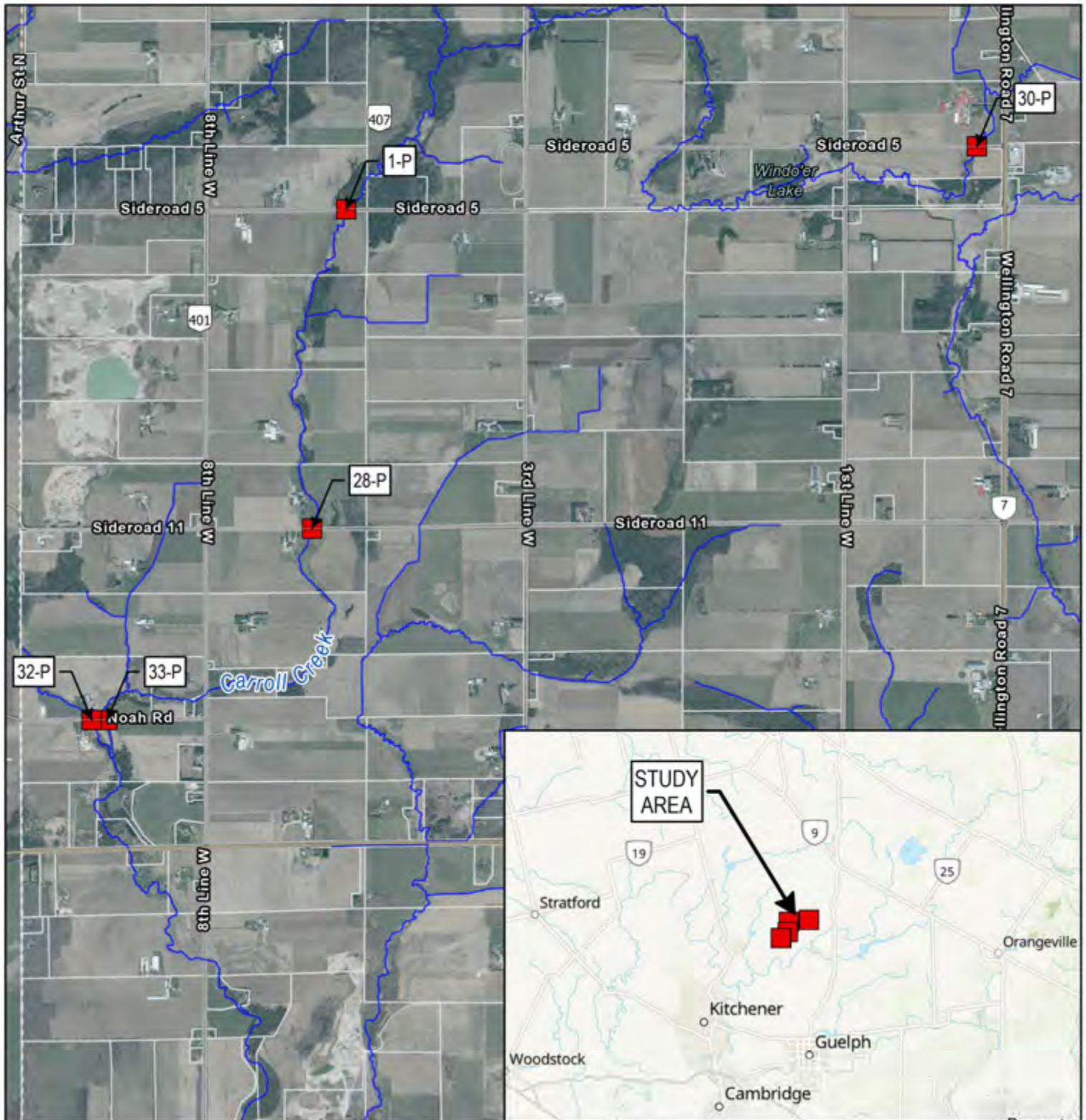
The study area is an approximately 20 km² area in the northwest quadrant of the Township of Centre Wellington, adjacent to the boundary lines of Mapleton Township and Woolwich Township. This area was formerly part of Pilkington Township prior to the amalgamation in 1999. The locations of the five bridges being assessed are outlined below and illustrated in Figure 1. Bridges 32-P and 33-P are located in very close proximity to one another and, as such, will be considered a single site for the purposes of this study.

- **Bridge 1-P:** Located on Sideroad 5, between 8th Line West and 3rd Line West
- **Bridge 28-P:** Located on Sideroad 11, between 8th Line West and 3rd Line West
- **Bridge 30-P:** Located on Sideroad 5 West, between Wellington County Road 7 and First Line West
- **Bridges 32-P and 33-P:** Located on Noah Road, west of 8th Line West

The five bridges service a rural community which is home to agricultural, residential, and commercial properties. The network of roads within the study area carries motorized and horse drawn vehicles and connects the community to the neighbouring villages of Alma, Salem, Elora and Fergus.

The Study Area for this Natural Heritage Report is 120 m around each bridge.

CENTRE WELLINGTON - MCEA FOR 5 BRIDGES



Bridge Location



Project Number: 300056693

2.0 Problem Identification

The Township has initiated a Schedule B Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five bridge structures (Bridges 1-P, 28 P, 30 P, 32 P & 33 P) that are located within a 20 km² area of road networks and are currently closed to vehicular traffic due to their deteriorated state. This study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

3.0 Methodology

Burnside's Ecology staff reviewed the following sources of information to determine the ecological constraints in the vicinity of each structure.

- Aerial photographic imaging and 1:10,000 Ontario Base Mapping (OBM)
- DFO Aquatic SAR mapping (2023)
- Ministry of Natural Resources and Forestry (NDMNRF) Make a Map: Natural Heritage Areas to identify natural heritage features and Natural Heritage Information Centre (NHIC) data of rare wildlife species on, and in the vicinity of, the subject lands: 1x1 km² Squares: 17NJ4041, 17NJ4040, 17NJ4241, 17NJ3837, 17NJ3836, 17NJ3834, 17NJ4034, 17NJ4134, 17NJ3833, 17NJ3933, and 17NJ4033
- NDMNRF Land Information Ontario (LIO) database
- NDMNRF Aquatic Resource Area (ARA) summary data
- Ontario Hydrology Network (OHN) mapping
- The Ontario Breeding Bird Atlas (OBBA) 2001-2005 – 10x10 km² Square 17NJ43
- Ontario Reptile and Amphibian Atlas (ORAA) – 10x10 km² Square 17NJ43
- Ontario Insect Atlas (OIA) 2005 – 2021 – 10x10 km² Square 17NJ43
- iNaturalist records
- eBird records
- GRCA Regulated Areas and Features Mapping
- Township of Centre Wellington Official Plan (2023)
- Wellington County Official Plan (2022)

In addition, field investigations were carried out, as follows:

- August 11, and August 31, 2023:
 - An Ecological Land Classification (ELC) and botanical inventory was undertaken. ELC communities were described according to the updated Second Approximation 2008 codes (Lee, 2008) with reference to Ecological Land Classification for Southern Ontario: First Approximation and Its Application (Lee et al. 1998) for units that could not be adequately described by the 2008 codes
 - Each bridge structure was surveyed by a Burnside ecologist for evidence of breeding birds, primarily Cliff Swallow nests

- August 31, 2023:
 - Wetland boundary staking with Grand River Conservation Authority (GRCA)
- August 14th, 2023:
 - Visual aquatic habitat survey

A summary of conditions during field investigations is presented in Table 1.

Table 1: Natural Environment Field Investigations

| Field Study | Methodology | Staff Involved | Date(s) | Time of Day | Weather Conditions | | |
|---|--|-----------------------------------|----------------------------|----------------------------|-----------------------------------|--------------------------------------|---|
| | | | | | Precipitation/Cloud Cover | Temperature (°C) | Wind (Beaufort Wind Scale) ¹ |
| Ecological Land Classification | Ecological Land Classification for Southern Ontario (Lee et al., 1998) of entire property. | Ariana Burgener & Elly Hind-Smith | August 11, 2023 | 0830 - 1730 | No precipitation Partly cloudy | 20°C on arrival 22°C on departure | 2 - Slight Breeze |
| | | | August 31, 2023 | 0830 – 1430 | No precipitation Sunny | 18°C on arrival 22°C on departure | 1 – Light Air |
| Wetland Boundary Staking | Site visit with GRCA to confirm boundaries using Ontario Wetland Evaluation System (OWES) (NDMNRF, 2014) | Ariana Burgener | August 31, 2023 | 0900 – 1230 | No precipitation Sunny | 18°C on arrival 22°C on departure | 1 – Light Air |
| Aquatic Habitat Assessment | Ontario Ministry of Transportation (MTO) Fisheries Protocol - Environmental Guide for Fish and Fish Habitat (June, 2009) | Matthew Moote, Mark Saunders | August 14, 2023 | 1000-1500 | No precipitation, sunny | 16°C on arrival 22°C on departure | 1 – Light Air |
| Search for potential wildlife habitats | Survey throughout study areas to search for features that could provide habitat for wildlife or SAR habitat such as: Nests, reptile hibernacula, old barns, structures, uncapped chimneys, foundations, mature forest areas with cavities or other features suitable for bat roosting, turtle nesting or overwintering sites. | All staff, all visits | All visits as noted above. | All visits as noted above. | All visits as noted above. | All visits as noted above. | All visits as noted above. |
| Incidental flora and fauna observations | Visual observations of animals, tracks or scat and compilation of a plant inventory during all site visits. | All staff, all visits | All visits as noted above. | All visits as noted above. | All visits as noted above. | All visits as noted above. | All visits as noted above. |
| ¹ Beaufort Wind Scale: 0 = calm, smoke rises vertically (0-2 km/hr); 1 = light air movement, smoke drifts (3-5); 3 = gentle breeze, wind felt on face; leaves rustle (6-11); 4 = moderate breeze, small branches moving, raises dust & loose paper (20-30); 5 = fresh breeze, small trees begin to sway (31-39); 6 = strong breeze, large branches in motion (40-50) | | | | | | | |

3.1 Policy Context

A review of existing planning and policy data was conducted to obtain secondary source information relating to the natural environment within the Study Area and to provide an overview of existing policy framework in the Study Area. The results of this review are provided in the sections below.

3.1.1 Fisheries Act

Section 35(1) of the Fisheries Act states:

“Construction activities that have the potential to impact fish or fish habitat must be built and operated in compliance with the federal Fisheries Act. If the “death of a fish by means other than fishing”, or the “harmful alteration, disruption or destruction of fish habitat” is likely to occur as a result of the project, the proponent responsible for the activities is required to obtain an Authorization from the Minister of Fisheries and Oceans Canada (DFO) as per Paragraph 34.4(2) and 35(2)(b) of the Fisheries Act.”

For the purposes of this Act, any in-water works (i.e., bridge replacement, bridge removal etc.) must not result in harmful alteration, disruption, or destruction (HADD) of fish habitat, or the death of fish. Appropriate mitigation includes working within the appropriate in-water works timing window, completing a fish rescue prior to the commencement of in-water works and using appropriate Erosion and Sediment Control (ESC) measures to ensure sedimentation of the watercourse does not occur. The Department of Fisheries and Oceans (DFO) may authorize work that may result in causing harmful alteration, disruption and / or destruction of fish habitat or the death of fish by means other than fishing.

The design and construction of any bridge replacements or work in a fish-bearing watercourse will need to adhere to the Fisheries Act.

3.1.2 Endangered Species Act

Under the Endangered Species Act, 2007, Section 9(1):

“No person shall, (a) kill, harm, harass, capture or take a living member of a species that is listed on the Species at Risk in Ontario list as an extirpated, endangered or threatened species.”

Furthermore, according to Section 10(1):

“No person shall damage or destroy the habitat of, (a) a species that is listed on the Species at Risk in Ontario List as an endangered or threatened species; or (b) a species that is listed on the Species at Risk in Ontario List as an extirpated species, if the species is prescribed by the regulations for the purpose of this clause.”

There is potential for Endangered or Threatened species to be present within, or around, the study area.

3.1.3 Migratory Bird Convention Act

The “incidental taking” of migratory bird nests or the disturbance, destruction or taking of the nest of a migratory bird are prohibited under Section 6 of the Migratory Bird Regulations under the authority of the Migratory Birds Convention Act, 1994. Nest contents (eggs and young) are protected by virtue of the Migratory Birds Convention Act (MBCA) which has implications on development activities that might occur during the breeding season (Canadian Wildlife Service, July 2012).

3.1.4 Hazard Land Regulations

The Study Area is located within the Approximate Screening Area of the GRCA. Ontario Regulation 150/06 Grand River Conservation Authority: Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses prohibits development or alterations within the jurisdiction of the GRCA in regulated areas without the permission of the Conservation Authority.

3.1.5 Provincial Policy Statement

The Provincial Policy Statement (PPS) provides general policies on land-use patterns, resources, and public health and safety that guide development across Ontario (MMAH, 2014). Section 2.1 of the PPS provides guidance on the protection of natural heritage features. The definition of development under the PPS does not include “activities that create or maintain infrastructure authorized under an environmental assessment process”. As such, solutions for bridge infrastructure evaluated under the Municipal Class Environmental Assessment are not considered to be development activities.

3.1.6 Wellington County Official Plan

According to Schedule B1 – Centre Wellington Land Use of the Wellington County Official Plan (OP) (Wellington County, 2023), the study area is interspersed with *Greenlands* and *Core Greenlands*. The Greenlands System in Wellington County is composed of natural heritage features, flood prone areas, and hazardous lands. The Greenlands System must be maintained or enhanced.

Section 5.3 of the OP states:

“Activities which diminish or degrade the essential functions of the Greenlands System will be prohibited. Activities which maintain, restore or, where possible, enhance the health of the Greenlands System will be encouraged where reasonable.”

Areas immediately adjacent to a watercourse are designated as Core Greenlands. These lands make up the majority of the study areas as all structures are associated with a crossing of Carroll Creek. Section 5.4 of the OP defines Core Greenlands as areas with greater sensitivity or significance such as wetlands, SAR habitat, and hazardous lands. These areas are identified and protected in the policy.

A small area of Greenlands is associated with the outer portion of the study area surrounding Bridge 1-P. Greenlands, as defined in Section 5.5 of the OP, are other natural heritage features that are less sensitive than Core Greenlands but are still intended to be protected from alterations or developments that would have a negative impact.

3.1.7 The Township of Centre Wellington Official Plan

The Township of Centre Wellington Official Plan (2005), provides no identification of land classification within the Study Area.

4.0 Existing Conditions

Under provincial and municipal planning policies, development and site alterations are generally not permitting within the following features, subject to specific exceptions:

- significant wetlands
- significant coastal wetlands
- significant woodlands
- significant valleylands
- significant wildlife habitat
- significant areas of natural and scientific interest
- fish habitat
- habitat of endangered and threatened species

Apart from regulations governing fisheries and Species at Risk (SAR), the provincial policies protecting these features do not apply to *“activities that create or maintain infrastructure authorized under an environmental assessment process”* (Provincial Policy Statement, 2020). However, this MCEA is required to consider impacts to natural features and address potential impacts resulting from any proposed work on, or around the bridge structures.

A review of existing documents and databases was used to identify the presence, or potential presence, of the natural features listed above. The following sections document the presence of natural heritage features across the entire study area, followed by a more detailed review of features at each bridge site.

4.1 Terrestrial Environment

The subject lands are in the jurisdiction of the Grand River Conservation Authority (GRCA) and the Guelph MECP District. The Wellington County OP – Schedule B1 was reviewed and showed that the watercourses at each bridge crossing are surrounded by designated Core Greenlands. A review of NHIC shows that structures 1-P and 30-P are situated on the border of Evaluated Non-Provincially Significant Wetlands (PSW), however, the mapping shows that structures 32-P and 33-P are a part of the Natural Heritage System (NHS). Additionally, GRCA mapping shows that all structures are within GRCA regulated areas. Based on a review of the OBBA, ORAA, and OIA – Square 17NJ43, the following SAR (Endangered or Threatened) and Species of Conservation Concern (SCC) were identified as potentially being present on or adjacent to the subject lands (see Table 2).

Table 2: Candidate SAR and SCC on the Subject Lands or Adjacent Lands Based on Background Review

| Common Name | Scientific Name | Bridge Location | Provincial S-Rank ¹ | Provincial SARO Status ² | Federal COSEWIC Status ³ | Federal SARA Status ⁴ | Federal SARA Schedule ⁴ | Habitat Requirements | Location of Habitat or Potential Habitat in the Study Area |
|--------------------|------------------------------|---------------------|--------------------------------|-------------------------------------|-------------------------------------|----------------------------------|------------------------------------|---|--|
| Bank Swallow | <i>Riparia riparia</i> | All bridges | S4B | THR | THR | THR | 1 | Open habitats including farmland, lake/river shorelines, grasslands, and wetlands. Nests in exposed earthen banks along shorelines. ⁵ | Potential habitat at all structures. |
| Barn Swallow | <i>Hirundo rustica</i> | All bridges | S4B | SC | SC | THR | 1 | Farmland, lake/river shorelines, wooded clearings, urban populated areas, rocky cliffs, wetlands. Nests inside or on buildings, under bridges, and in road culverts; on rock faces, and in caves. ⁶ | Potential habitat at all structures. |
| Blanding’s Turtle | <i>Emydoidea blandingii</i> | 1-P and 30-P | S3 | THR | END | END | 1 | Shallow water, usually in large wetlands and shallow lakes with lots of water plants. Can use linkage corridors hundreds of meters from waterbody while search for a mate or nesting site. ⁷ | Potential habitat at Bridge 1-P and 30-P. |
| Bobolink | <i>Dolichonyx oryzivorus</i> | 30-P, 32-P and 33-P | S4B | THR | SC | THR | 1 | Open grasslands and hay field for nesting. Can use large field of winter wheat and rye. High grass-to-forb ratio preferred. Can tolerate wetter fields. ⁷ | Potential habitat at Bridge 1-P and 33-P. |
| Eastern Meadowlark | <i>Sturnella magna</i> | 28-P, 32-P and 33-P | S4B, S3N | THR | THR | THR | 1 | Grassy pastures, meadows and hay fields. Prefers moderately tall grass with abundant litter cover, a high proportion of grass cover, moderate forb density, low proportions of shrub and woody vegetation cover, and low percent of bare ground. Prefers to nest in drier sites and frequently nests around field margins. ⁸ | Potential habitat at structures 32-P and 33-P. |
| Eastern Wood-pewee | <i>Contopus virens</i> | 28-P, 32-P and 33-P | S4B | SC | SC | SC | 1 | Open space near the nest in the form of forest edges, clearings, roadways, and water. Does not require large areas of woods but occurs less frequently in woodlots surrounded by development than in those without. ⁵ | Potential habitat at structures 1-P, 30-P, 32-P, and 33-P/ |
| Monarch | <i>Danaus plexippus</i> | All bridges | S2N, S4B | SC | END | SC | 1 | In Ontario, larvae feed on milkweed plants and are confined to meadows and open areas where milkweed grows. Adult | Potential habitat at all structures. |

| Common Name | Scientific Name | Bridge Location | Provincial S-Rank ¹ | Provincial SARO Status ² | Federal COSEWIC Status ³ | Federal SARA Status ⁴ | Federal SARA Schedule ⁴ | Habitat Requirements | Location of Habitat or Potential Habitat in the Study Area |
|---|-----------------------------------|-----------------|--------------------------------|-------------------------------------|-------------------------------------|----------------------------------|------------------------------------|--|--|
| | | | | | | | | butterflies can be found in more diverse habitats where they feed on nectar from a variety of wildflowers. ⁸ | |
| Red-headed Woodpecker | <i>Melanerpes erythrocephalus</i> | 30-P | S3 | END | END | END | 1 | Open woodland and woodland edges and often found in parks, golf courses and cemeteries because these areas typically have many dead trees which the woodpecker uses for nesting and perching. ⁷ | Potential habitat at all structures. |
| Snapping Turtle | <i>Chelydra serpentina</i> | 32-P and 33-P | S4 | SC | SC | SC | 1 | Shallow waters where they can hide under the soft mud and leaf litter. Nesting sites usually occur on gravelly or sandy areas along streams. Snapping Turtles often take advantage of man-made structures for nest sites, including roads (especially gravel shoulders), dams and aggregate pits. ⁸ | Potential habitat at structures 1-P and 30-P. |
| Wood Thrush | <i>Hylocichla mustelina</i> | 1-P and 28-P | S4B | SC | THR | THR | 1 | Inhabits and breeds in woodlands ranging from small (3 ha) and isolated to large and contiguous. The presence of tall trees and a thick understory are usually prerequisites for site occupancy. ⁵ | Potential habitat at structures 1-P, 30-P, 32-P, and 33-P. |
| <div><div>1</div><div>S-Rank: S1 to S3 are provincially tracked (S1-critically imperiled; S2-imperiled; S3-vulnerable)</div><div>2</div><div>SARO: Official Species at Risk in Ontario list under the ESA, 2007</div><div>3</div><div>COSEWIC: Committee on the Status of Endangered Wildlife in Canada</div><div>4</div><div>SARA and Schedule: Species at Risk Act; The Act establishes Schedule 1 as the official list of wildlife SAR</div><div>5</div><div>Cadman, M.D., et al. (eds). 2007. Atlas of the Breeding Birds of Ontario, 2001-2005. Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature, Toronto, xxii + 706 pp</div><div>6</div><div>Species at Risk Public Registry https://species-registry.canada.ca/</div><div>7</div><div>McCracken, J.D. et al. 2013. Recovery Strategy for the Bobolink (<i>Dolichonyx oryzivorus</i>) and Eastern Meadowlark (<i>Sturnella magna</i>) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources and Forestry, Peterborough, Ontario, viii + 88 pp.</div><div>8</div><div>SARO List Species Descriptions (Species at risk in Ontario ontario.ca)</div></div> | | | | | | | | | |

The following sections describe natural features at each bridge site.

4.1.1 Terrestrial Natural Features at Each Structure

Bridge 1-P

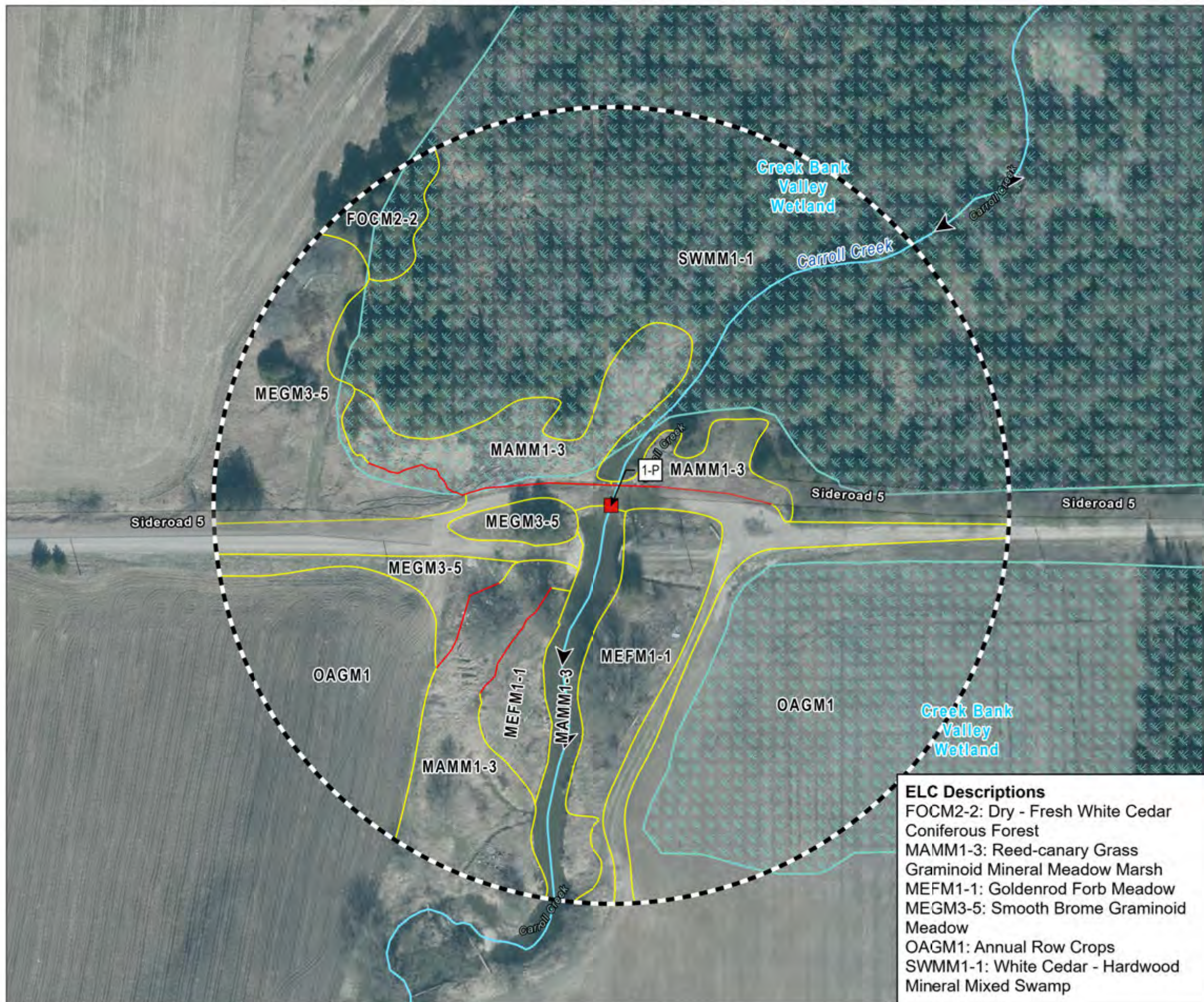
As outlined in Schedule B1 of the Wellington County OP, Bridge 1-P is surrounded by Core Greenlands. Greenlands in Wellington County are determined by their composition of natural features. Any wetland in Wellington County is considered significant. At Bridge 1-P, the Creek Bank Valley Non-Provincially Significant Wetland (PSW) exists north and south of the structure and is associated with several ecological communities. In Wellington County for a woodland to be significant in rural areas, it must be over 4 hectares (ha) of contiguous cover. Over 30 ha of woodland surround Bridge 1-P. Additionally in Wellington County, all streams and valley lands are considered significant, providing protection to the Carroll Creek watercourse at all structures.

At the time of the structure survey, the bridge crossing structure (with the exception of the abutments) were removed / collapsed and therefore there is no potential to support swallow bird nesting colonies. It was determined through a natural heritage background review and summer field visits, that there is habitat potential for Bank Swallow (THR) at the abutments.

A summary is provided in Table 3 and is shown on Figure 2.

Table 3: Bridge 1-P Summary of Natural Heritage Features

| ELC Code | ELC Description | Provincially Significant Wetlands/Other Wetlands | Significant Woodlands | Candidate Significant Wildlife Habitat |
|-----------------|--|---|------------------------------|--|
| FOCM2-2 | Fresh White Cedar Coniferous Forest | Creek Bank Valley Non-PSW | A part of 30 ha woodland. | Raptor wintering area Bald Eagle & Osprey Nesting, Foraging, Perching Special Concern and Rare Wildlife Species |
| MAMM1-3 | Reed-canary Grass Graminoid Mineral Meadow Marsh | Creek Bank Valley Non- PSW | N/A | Amphibian Breeding Habitat (Wetlands) Marsh Breeding Bird Habitat |
| SWMM1-1 | White Cedar – Hardwood Mineral Mixed Swamp | Creek Bank Valley Non-PSW | A part of 30 ha woodland. | Raptor wintering area Bald Eagle & Osprey Nesting, Foraging, Perching Turtle Wintering Areas Woodland Raptor Nesting Habitat Amphibian Breeding Habitat (Woodland) Marsh Breeding Bird Habitat Amphibian Movement Corridor |
| MEFM1-1 | Goldenrod Forb Meadow | N/A | N/A | No Candidate SWH |
| MEGM3-5 | Smooth Brome Graminoid Meadow | N/A | N/A | |
| OAGM1 | Annual Row Crops | Creek Bank Valley Non-PSW | N/A | |



- Bridge Location
- Staked Wetland (GRCA)
- Watercourse
 - Thermal Regime (Warm)
- Provincially Significant Wetland
- Ecological Land Classification
- Study Area (100m)

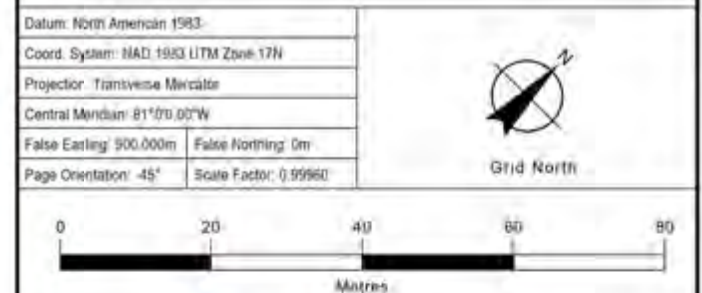
Sources:

- Ministry of Natural Resources and Forestry, King's Printer for Ontario
- Natural Resources Canada, His Majesty the King in Right of Canada

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Client

TOWNSHIP OF CENTRE WELLINGTON

Figure Title

CENTRE WELLINGTON - MCEA FOR 5 BRIDGES

NATURAL HERITAGE FEATURES BRIDGE 1-P

| Drawn | Checked | Date | Figure No. |
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| HN | AB | 2023/09/15 | 1 |
| Scale | | Project No. | |
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Bridge 28-P

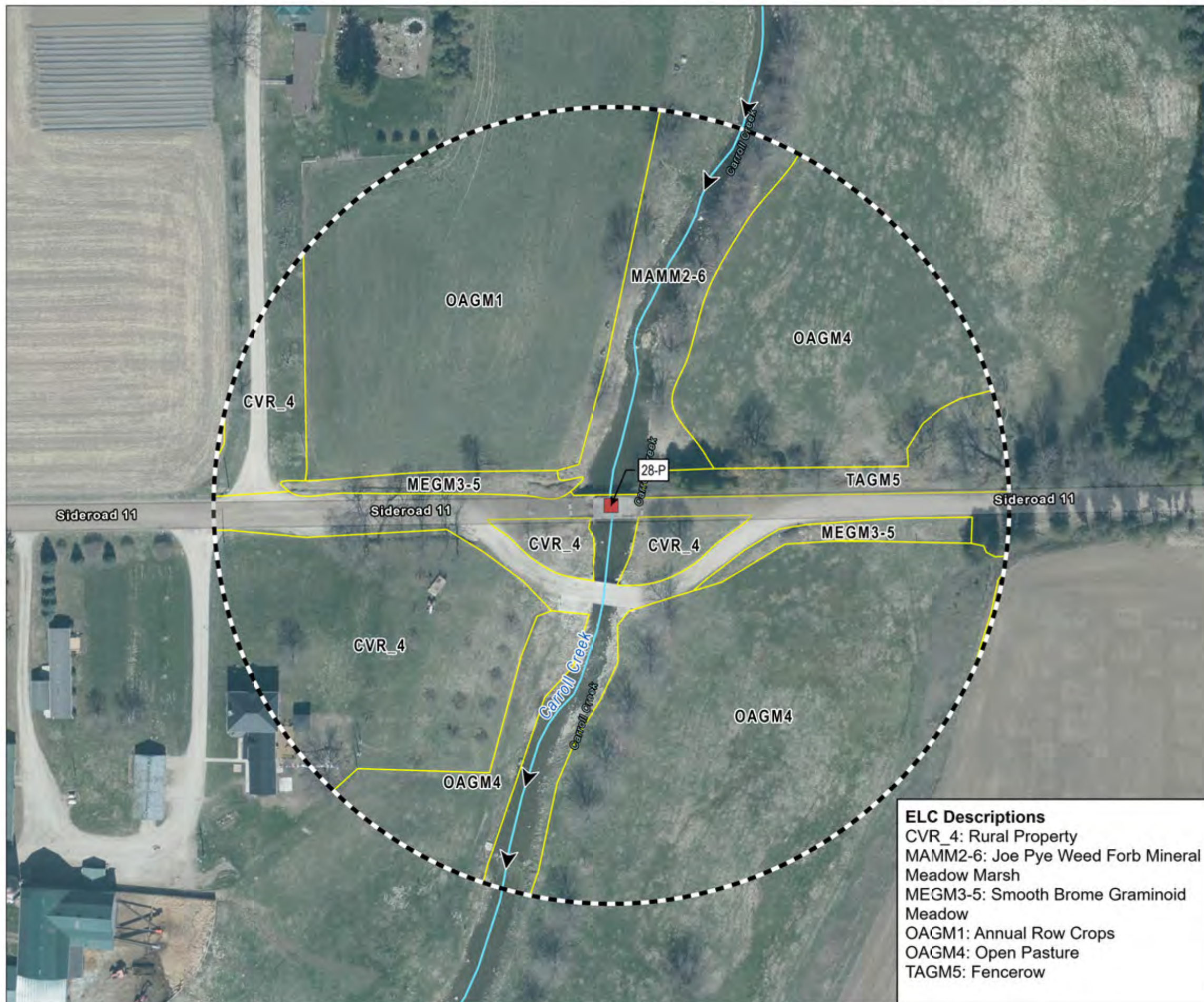
As outlined in Schedule B1 of the Wellington County OP, Bridge 28-P is surrounded by Core Greenlands. Greenlands in Wellington County are determined by their composition of natural features. Any wetland in Wellington County is considered significant. At Bridge 28-P, there is a non-PSW Joe Pye Weed Forb Mineral Meadow Marsh (MAMM2-6) that encompasses the portion of Carroll Creek north of the structure. Additionally, in Wellington County, all streams and valleylands are considered significant, providing protection to the Carroll Creek watercourse at all structures. There are no significant woodlands at Bridge 28-P.

Five inactive cliff swallow nests were found under the structure and no birds were seen in the area. Additionally, a review of natural heritage information as well as data collected during field visits indicates that there is no habitat potential for SAR within the immediate vicinity of the structure.

A summary of these features are outlined in Table 4 and Figure 3 below.

Table 4: Bridge 28-P Summary of Natural Heritage Features

| ELC Code | ELC Description | Provincial Significant Wetlands/Other Wetlands | Significant Woodlands | Candidate Significant Wildlife Habitat |
|-----------------|--|---|------------------------------|---|
| MAMM2-6 | Joe Pye Weed Forb Mineral Meadow Marsh | Non-Provincially Significant Wetland | N/A | Amphibian Breeding Habitat (Wetlands) Marsh Breeding Bird Habitat Special Concern and Rare Wildlife Species |
| OAGM4 | Open Pasture | N/A | N/A | Special Concern and Rare Wildlife Species |
| CVR_4 | Rural Property | N/A | N/A | No Candidate SWH |
| MEGM3-5 | Smooth Brome Graminoid Meadow | N/A | N/A | |
| OAGM1 | Annual Row Crops | N/A | N/A | |
| TAGM5 | Fencerow | N/A | N/A | |



Bridge Location

Watercourse

Thermal Regime (Warm)

Ecological Land Classification

Study Area (100m)

Sources:

1. Ministry of Natural Resources and Forestry, © King's Printer for Ontario

2. Natural Resources Canada © His Majesty the King in Right of Canada

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Datum: North American 1983

Coord. System: NAD 1983 UTM Zone 17N

Projector: Transverse Mercator

Central Meridian: 81°00.00"W

False Easting: 500,000m

False Northing: 0m

Page Orientation: 45°

Scale Factor: 0.99960

Grid North

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40

60

80

Metres

BURNSIDE

Client

TOWNSHIP OF CENTRE WELLINGTON

Figure Title:

CENTRE WELLINGTON - MCEA FOR 5 BRIDGES

NATURAL HERITAGE FEATURES BRIDGE 28-P

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ELC Descriptions

CVR_4: Rural Property
MAMM2-6: Joe Pye Weed Forb Mineral Meadow Marsh
MEGM3-5: Smooth Brome Graminoid Meadow
OAGM1: Annual Row Crops
OAGM4: Open Pasture
TAGM5: Fencerow

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Bridge 30-P

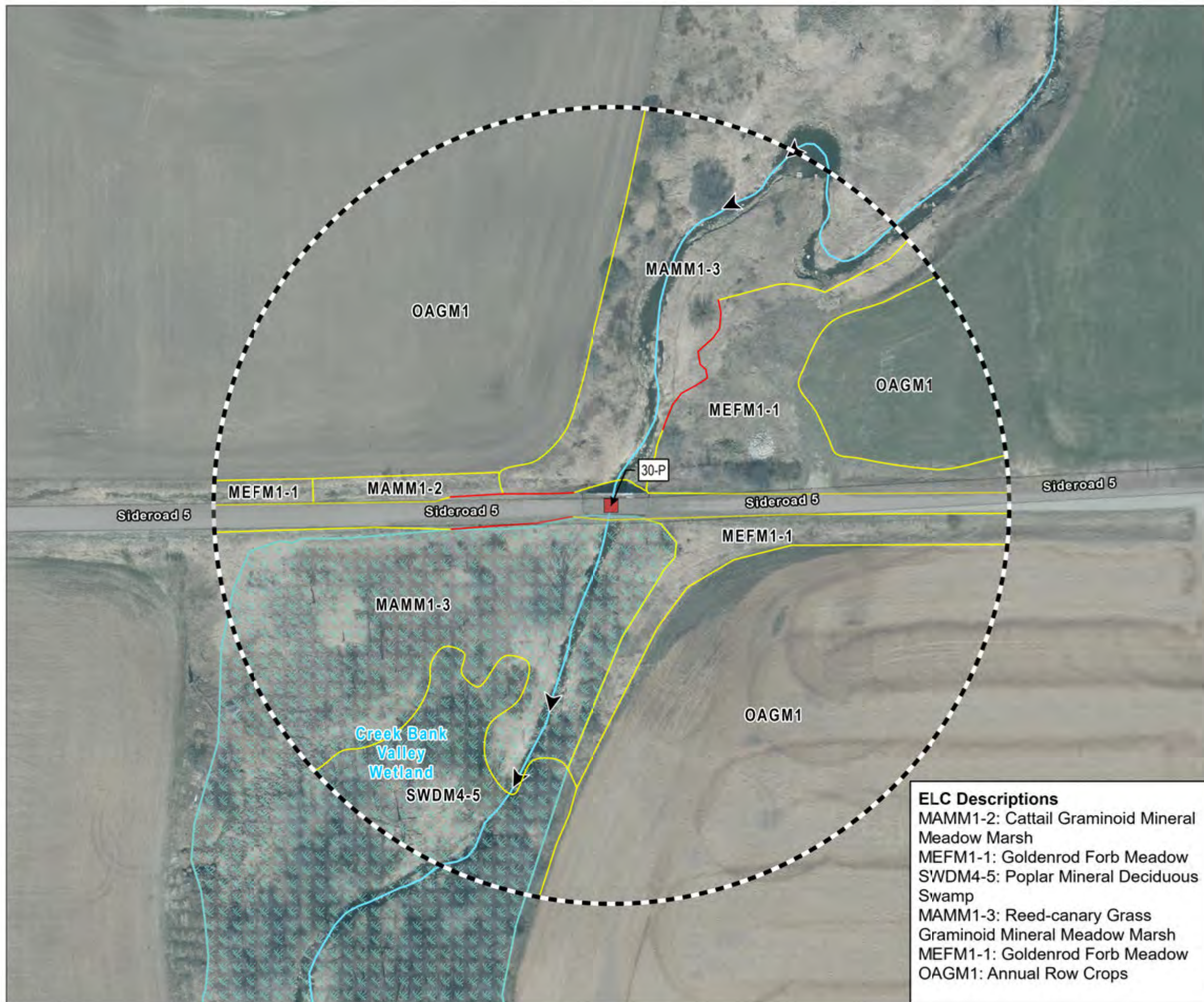
As outlined in Schedule B1 of the Wellington County OP, Bridge 30-P is surrounded by Core Greenlands. Greenlands in Wellington County are determined by their composition of natural features. Any wetland in Wellington County is considered significant. At Bridge 30-P, there are two non-PSW Graminoid Mineral Meadow Marshes (MAMM1-3 & MAMM1-2) that are associated with the portion of Carroll Creek that is north of the structure. Additionally, the Creek Bank Valley non-PSW exists south of the structure and is composed of a Poplar Mineral Deciduous Swamp (SWDM4-5) and a Reed-canary Grass Graminoid Mineral Meadow Marsh (MAMM1-3). In Wellington County for a woodland to be significant in rural areas, it must be over 4 ha of contiguous cover. A contiguous 5 ha tract of woodland exists south of the structure and mainly outside of the study area, however, a small portion (less than 0.5 ha) is in the southwest corner. Additionally in Wellington County, all streams and valleylands are considered significant, providing protection to the Carroll Creek watercourse at all structures.

Sixteen cliff swallow nests were found under the structure. Some nests were still active and in good condition. Approximately 20 individuals were observed flying around the structure. Additionally, habitat potential for Red-headed Woodpecker (END) and Bobolink (THR) were identified using past natural heritage records as well as data gathered from field visits.

A summary of these features is provided in Table 5 and Figure 4.

Table 5: Bridge 30-P Summary of Natural Heritage Features

| ELC Code | ELC Description | Provincially Significant Wetlands/Other Wetlands | Woodlands | Candidate Significant Wildlife Habitat |
|-----------------|--|---|--------------------------|---|
| SWDM4-5 | Poplar Mineral Deciduous Swamp | Creek Bank Valley non-PSW | A part of 5 ha woodland. | Amphibian Breeding Habitat (Wetlands and Woodlands) Amphibian Movement Corridors Marsh Breeding Bird Habitat Special Concern and Rare Wildlife Species |
| MAMM1-3 | Reed-canary Grass Graminoid Mineral Meadow Marsh | Creek Bank Valley non-PSW | N/A | Amphibian Breeding Habitat (Wetlands) Marsh Breeding Bird Habitat Special Concern and Rare Wildlife Species |
| MEFM1-1 | Goldenrod Forb Meadow | N/A | N/A | No Candidate SWH |
| OAGM1 | Annual Row Crops | N/A | N/A | |
| MAMM1-2 | Cattail Graminoid Mineral Meadow Marsh | Non-Provincially Significant Wetland | N/A | |



- Bridge Location
- Staked Wetland (GRCA)
- Watercourse
 - Thermal Regime (Warm)
- Provincially Significant Wetland
- Ecological Land Classification
- Study Area (100m)

Sources:
1. Ministry of Natural Resources and Forestry, © King's Printer for Ontario
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| Coord. System: NAD 1983 UTM Zone 17N | |
| Projector: Transverse Mercator | |
| Central Meridian: 81°00'00"W | |
| False Easting: 500,000m | False Northing: 0m |
| Page Orientation: 45° | Scale Factor: 0.99960 |

Grid North

Metres



Client

TOWNSHIP OF CENTRE WELLINGTON

Figure Title

CENTRE WELLINGTON - MCEA FOR 5 BRIDGES
NATURAL HERITAGE FEATURES
BRIDGE 30-P

| | | | |
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| HN | AB | 2023/09/15 | |
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ELC Descriptions
MAMM1-2: Cattail Graminoid Mineral Meadow Marsh
MEFM1-1: Goldenrod Forb Meadow
SWDM4-5: Poplar Mineral Deciduous Swamp
MAMM1-3: Reed-canary Grass Graminoid Mineral Meadow Marsh
MEFM1-1: Goldenrod Forb Meadow
OAGM1: Annual Row Crops

Bridge 32-P and 33-P

As outlined in Schedule B1 of the Wellington County OP, Bridges 32-P and 33-P are surrounded by Core Greenlands. Greenlands in Wellington County are determined by their composition of natural features. Any wetland in Wellington County is considered significant. At Bridge 32-P, there are two non-PSW Reed-canary Grass Graminoid Mineral Meadow Marshes (MAMM1-3) that surround Carroll Creek north and south of the structure. At structure 33-P, there is a non-PSW Joe Pye Weed Forb Mineral Meadow Marsh (MAMM2-6) just north of the structure. Additionally, in Wellington County, all streams and valleylands are considered significant, providing protection to the Carroll Creek watercourse at all structures. In Wellington County for a woodland to be significant in rural areas, it must be over 4 ha of contiguous cover. A small portion (less than 0.5) of a 60 ha woodland exists within the northwest part of the study area.

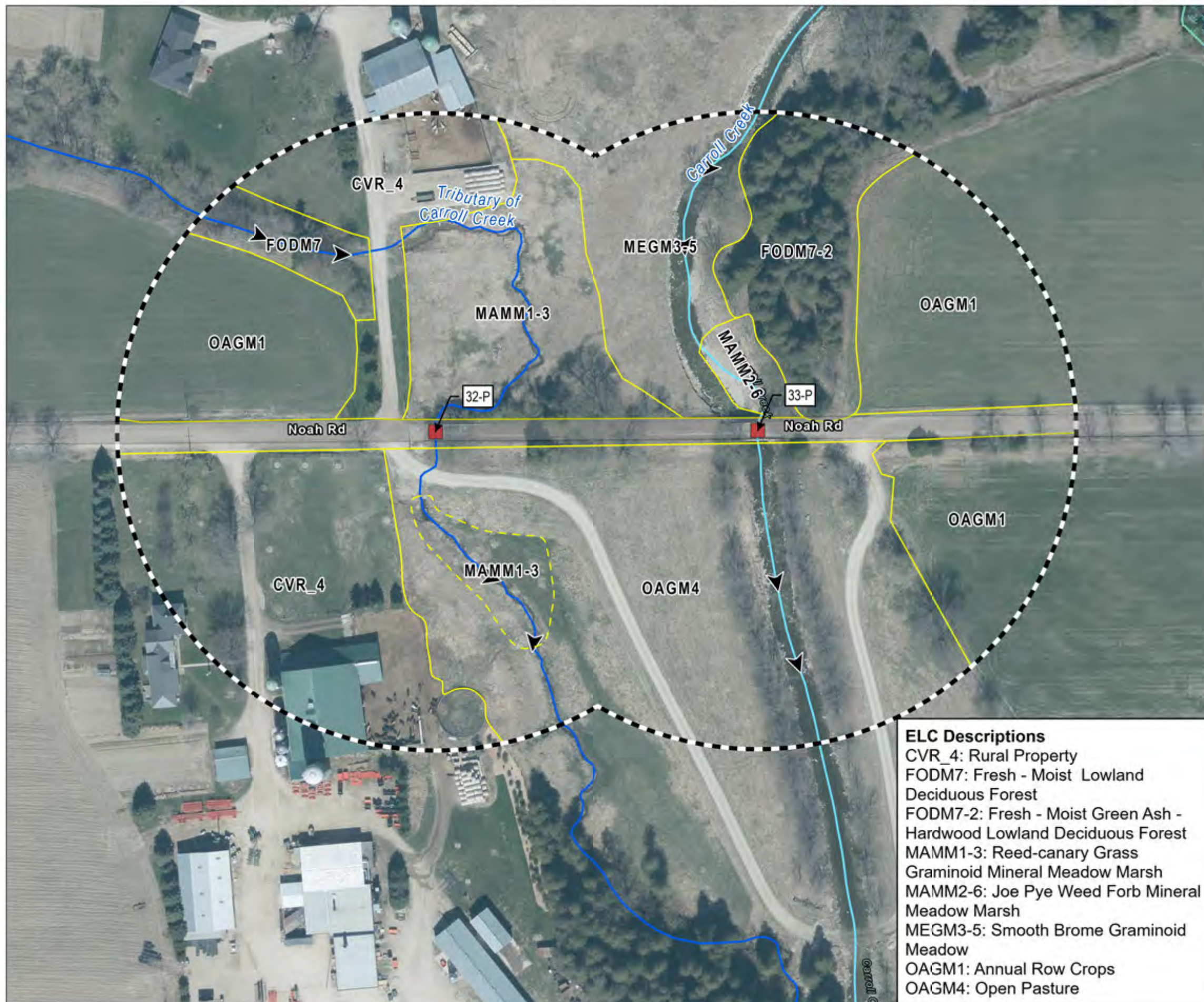
No evidence of past or current cliff swallow nesting was observed, however, a large pile of rock and broken cement slabs was noted beside the bridge. This rock pile received good sun exposure and may be potential reptile hibernacula or roosting habitat for Endangered Eastern Small-footed Myotis. It is candidate Special Concern and Rare Wildlife Species SWH. Additionally, potential habitat for Bobolink (THR) and Eastern Meadowlark (THR) was identified using past natural heritage records as well as data gathered through field visits.

A summary of these features are outlined below in Table 6 and Figure 5.

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Table 6: Bridges 32-P and 33-P Summary of Natural Heritage Features

| ELC Code | ELC Description | Provincially Significant Wetlands/Other Wetlands | Woodlands | Candidate Significant Wildlife Habitat |
|-----------------|---|---|---------------------------|---|
| FODM7-2 | Fresh – Moist Green Ash – Hardwood Lowland Deciduous Forest | N/A | Not significant | Bat Maternity Colony Special Concern and Rare Wildlife Species |
| MAMM1-3 | Reed-canary Grass Graminoid Mineral Meadow Marsh | Non-Provincially Significant Wetland | N/A | Amphibian Breeding Habitat (Wetlands) Marsh Breeding Bird Habitat Special Concern and Rare Wildlife Species |
| MEGM3-5 | Smooth Brome Graminoid Meadow | N/A | N/A | Special Concern and Rare Wildlife Species |
| OAGM4 | Open Pasture | N/A | N/A | |
| OAGM1 | Annual Row Crops | N/A | N/A | |
| FODM7 | Fresh – Moist Lowland Deciduous Forest | N/A | A part of 60 ha woodland. | |
| MAMM2-6 | Joe Pye Weed Forb Mineral Meadow Marsh | Non-Provincially Significant Wetland | | |
| CVR_4 | Rural Property | N/A | | No Candidate SWH |



- Bridge Location
- Ecological Land Classification
- Ecological Land Classification Inclusion
- Thermal Regime (Cold)
- Thermal Regime (Warm)
- Provincially Significant Wetland
- Study Area (100m)

Sources:

- Ministry of Natural Resources and Forestry, King's Printer for Ontario
- Natural Resources Canada, His Majesty the King in Right of Canada

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| Central Meridian: 81°00'00"W | | |
| False Easting: 500,000m | False Northing: 0m | |
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TOWNSHIP OF CENTRE WELLINGTON

Figure Title:

CENTRE WELLINGTON - MCEA FOR 5 BRIDGES
NATURAL HERITAGE FEATURES
BRIDGE P32 & P33

| | | | |
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| HN | AB | 2023/09/15 | |
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| H 1:1,250 | | 300056693 | |

ELC Descriptions

CVR_4: Rural Property

FODM7: Fresh - Moist Lowland Deciduous Forest

FODM7-2: Fresh - Moist Green Ash - Hardwood Lowland Deciduous Forest

MAMM1-3: Reed-canary Grass Graminoid Mineral Meadow Marsh

MAMM2-6: Joe Pye Weed Forb Mineral Meadow Marsh

MEGM3-5: Smooth Brome Graminoid Meadow

OAGM1: Annual Row Crops

OAGM4: Open Pasture

4.2 Aquatic Habitat Conditions

A review of ARA data shows that Carroll Creek is the main watercourse that crosses all bridge sites, aside from Bridge 32-P which is a tributary of Carroll Creek. Based on this review, Table 7 is a list of documented fish species observed in the watercourse and could potentially be present on the subject lands. The NDMNRF ARA mapping states that Carroll Creek is a warm-water watercourse. The tributary of it which flows through Bridge 32-P is identified as cold-water.

Table 7: Summary of Fish Species Historically Found in Carroll Creek

| Species Name | Scientific Name | Thermal Regime |
|------------------------|--------------------------------|----------------|
| American Brook Lamprey | <i>Lethenteron appendix</i> | Cold |
| Blacknose Dace | <i>Rhinichthys atratulus</i> | Cool |
| Blackside Darter | <i>Percina maculata</i> | Cool |
| Bluntnose Minnow | <i>Pimephales notatus</i> | Warm |
| Brassy Minnow | <i>Hybognathus hankinsoni</i> | Cool |
| Brook Stickleback | <i>Culaea inconstans</i> | Cool |
| Brook Trout | <i>Salvelinus fontinalis</i> | Cold |
| Brown Trout | <i>Salmo trutta</i> | Cold |
| Central Stoneroller | <i>Campostoma anomalum</i> | Cool |
| Common Shiner | <i>Luxilus cornutus</i> | Cool |
| Creek Chub | <i>Semotilus atromaculatus</i> | Cool |
| Fantail Darter | <i>Etheostoma flabellare</i> | Cool |
| Fathead Minnow | <i>Pimephales promelas</i> | Warm |
| Greenside Darter | <i>Etheostoma</i> | Warm |
| Largemouth Bass | <i>Micropterus nigricans</i> | Warm |
| Longnose Dace | <i>Rhinichthys cataractae</i> | Cool |
| Mottled Sculpin | <i>Cottus bairdii</i> | Cool |
| Northern Hog Sucker | <i>Hypentelium nigricans</i> | Warm |
| Northern Redbelly Dace | <i>Chrosomus eos</i> | Cool |
| Rainbow Darter | <i>Etheostoma caeruleum</i> | Cool |
| River Chub | <i>Nocomis micropogon</i> | Cool |
| Rock Bass | <i>Ambloplites rupestris</i> | Cool |
| Stonecat | <i>Noturus flavus</i> | Warm |
| White Sucker | <i>Catostomus commersonii</i> | Cool |

Table 8 below summarizes channel dimensions (i.e., information pertaining to morphology, wetted width/depth, substrate etc.) and conditions observed by Burnside's aquatic ecologist on August 14, 2023. Weather conditions were sunny with air temperatures ranging between 16°C and 22 °C. A photo page that references the observations described in Section 4.2.1 is provided in Appendix A.

Table 8: Existing Aquatic Habitat Conditions

| Structure | Watercourse Name | Morphology | Percentage of Area (upstream/downstream) | Wetted Width/Depth Upstream (m) | Wetted Width/Depth Downstream (m) | Substrate Upstream | Substrate Downstream | Fish Observed |
|-----------|-------------------------------|-------------------------------|---|---------------------------------------|--------------------------------------|----------------------------------|-------------------------------------|---------------|
| 1-P | Carroll Creek | Flat | 70/70 | 9.3/0.35 | 6.0/0.3 | Cobble/ Gravel | Cobble/ Gravel | Yes |
| | | Pool | 30/30 | 6.7/0.5 | 9.0/0.7 | Cobble/ Gravel | Cobble/ Gravel/ Silt/ Muck | Yes |
| 28-P | Carroll Creek | Pool | 80/40 | 8.0/NA | 7.0/1.0 | Cobble/ Gravel/ Silt | Cobble/ Gravel/ Silt | Yes |
| | | Riffle | 20/30 | NA | 5.0/0.35 | Cobble/ Gravel | Cobble/ Gravel | Yes |
| | | Flat | 0/30 | - | 5.0/NA | - | Cobble/ Gravel | NA |
| 30-P | Carroll Creek | Riffle | 100/5 | 1.0/0.12 | 1.4/0.2 | Cobble, Gravel, Sand | Cobble, Gravel, Sand | Yes |
| | | Flat | 0/95 | - | 2.5/0.3 | Cobble, Gravel, Sand | Cobble, Gravel, Sand | Yes |
| 32-P | Tributary of Carroll Creek | Watercourse poorly defined | NA | NA | NA | NA | NA | No |
| 33-P | Carroll Creek | Run | 100/0 | 5.0/0.4 | - | Boulder, Cobble, Gravel, Sand | - | - |
| | | Flat | 0/100 | - | 6.0/0.4 | - | Boulder, Cobble, Gravel, Sand | Yes |

4.2.1 Aquatic Natural Features at Each Structure

Bridge 1-P

Upstream

The reach upstream of the Bridge 1-P flows from north to south through a forested corridor in the Creek Bank Valley non-PSW in an otherwise agriculturally dominated landscape. A full bridge is not present at this location. The deck has been removed and only the abutments remain. Potential sources of pollution were identified as run-off from surrounding agricultural fields and debris and disturbance of the watercourse from vehicles driving through the river (Photo 1).

The watercourse gently meanders through the forested lands, straightening as it approaches the bridge (Photo 2). Abundant vegetation stabilizes both the left and right banks. Upstream of the bridge abundant in-stream woody debris is not present, although instream aquatic plants and boulders are present close to the crossing. The watercourse is largely exposed, with less than 30% shaded by vegetation. However, the flat section furthest upstream appeared more shaded than the pool near the crossing. Numerous minnow species were observed in the pool.

Downstream

Armor rocks from the old bridge were also present within the pool. The banks of the downstream reach are steep with minor undercutting observed, suggesting the downstream banks were slightly less stable than upstream but still vegetated. Downstream, the watercourse flowed through open agricultural fields, as opposed to forested lands upstream, that do not provide a canopy to shade the aquatic habitat (Photo 4).

In-stream fish habitat was more varied downstream than upstream. In-stream vegetation was common, with ~15% submerged, 5% floating, and 10% emergent covering the water's surface, mainly concentrated in the pool (Photo 3). Arrowhead (*Sagittaria spp.*) and grasses were the most common. Islands of vegetation were present at the transition from pool to flat. Some woody debris (~5% cover) was also present. Large fish were seen jumping, and abundant minnow species were observed within the pool.

Habitat Improvement

A temporary road crossing cuts through the river that creates a shallow area that likely acts as a barrier to fish passage during seasonal periods of low flow by separating the upstream and downstream sections (Photo 1). It is recommended that if a bridge replacement occurs at this location, then the channel be re-graded to match the original stream profile once the preferred solution is selected and implemented.

Bridge 28-P

Upstream

The upstream reach flows northwest to southeast through a landscape dominated by animal pasture and is largely exposed to sunlight (Photo 5). However, some trees surrounding the pool provide moderate shading (<30% cover). A large log jam is present near the old bridge, creating a visible eddy in the pool (Photo 6). Large amounts of foam built up behind the log jam limited observation of the in-stream habitat characteristics within the watercourse. Signs of erosion, such as exposed soils, were observed on the left and right banks, which are otherwise vegetated. The depth of the pool could not be determined due to access issues. Potential sources of pollution would derive from run-off from surrounding animal pasture and the road.

Downstream

A temporary bridge was constructed downstream of the old structure (Photo 7). The bridge is low level, and the unpaved gravel road may be a source of sediment pollution to the watercourse. Watercourse features are more varied downstream than upstream, including a pool, a riffle, and a flat (Photo 7). The watercourse is completely exposed through the downstream section as riparian trees do not provide a canopy to shade the downstream reach. However, the heavily vegetated banks did not display signs of erosion. In-stream vegetation was limited to Watercress (*Nasturtium officinale*), which was observed in the pool, indicating the potential for groundwater upwelling (Photo 8). Fish, including minnow and sucker species, were abundant in the pool.

Habitat Improvement

The large log jam upstream may create the eddy, resulting in erosion of the left and right banks. Removing the log jam and installing shoreline erosion protection is recommended for upstream improvements. Downstream, it is recommended to continue excluding the watercourse from animal pasture. Once the clear span bridge, which will not impede flow, is constructed, the temporary crossing will be removed.

Bridge 30-P

Upstream

The watercourse flows northwest to southeast through an agriculturally dominated landscape that provides limited forest cover (Photo 9). The upstream reach slightly meanders through a tall, herbaceous field, which shaded 70% of the watercourse. Slight undercutting is observed on both banks despite the abundant vegetation. The upstream habitat is largely homogenous, with limited in-stream structure, such as a diversity of

morphology. Potential sources of pollution were identified as run-off from surrounding agricultural fields.

The inlet of the culvert is not embedded in the channel, rising 0.5 m from the streambed (Photo 10). This created a shallow, fast-flowing section within the culvert, providing no fish habitat and a barrier to fish passage, especially during periods of low flow.

Downstream

Similar to the upstream reach, the downstream section is 70% covered by overhanging grasses, and the banks show signs of erosion like minor undercuts (Photo 11). However, the riparian area downstream of Bridge 30-P contains more woody vegetation than upstream. The outlet of the structure is perched by 0.2 m, creating a barrier to fish passage (Photo 12). Minnow species were observed at the base of the culvert. As the watercourse flows downstream, it enters the Creek Bank Valley Wetland.

Habitat Improvement

It is recommended to embed the new structure to remove the current barrier to fish passage caused by the current culvert. Invasive Purple Loosestrife (*Lythrum salicaria*) and Himalayan Balsam (*Impatiens glandulifera*) are present, especially in the upstream section. Invasive species management should be considered if the preferred alternative includes replacement of Bridge 30-P.

Bridge 32-P

Upstream

Upstream, the watercourse's channel was poorly defined and flowing water was not observed (Photo 13). Instead, water was observed to be seeping out of the surrounding waterlogged soils into a pooled area under the existing structure (Photo 14). The upstream area was open pasture with no trees, except for some Willows and White Cedars (*Thuja occidentalis*) surrounding the structure.

Downstream

Downstream of the structure, the water from the pool flowed into a culvert (Photo 15). Downstream of the culvert, surface water was not confined to a channel, instead it dispersed through an animal pasture (Photo 16).

Habitat Improvements

There is limited aquatic habitat in the immediate vicinity of this structure. There is the potential to connect the upstream reach with the mainstem of Carroll Creek, upstream of

Bridge 33-P, instead of downstream where the confluence of the two channels currently occurs.

Bridge 33-P

Upstream

The watercourse flows north to south before turning and continuing northwest to southeast ~100 m north of the structure through an exposed agriculturally dominated landscape (Photo 17). However, approximately 400 m upstream of the old structure, the watercourse flowed through a largely wooded corridor within the Central Carroll Creek Wetland Complex. The channel is uniform but appears progressively shallower as it approaches the existing structure. Small grass islands are present in the channel. The banks appeared slightly unstable, with the outside meander showing signs of erosion, such as exposed soil and cut banks. However, large amounts of concrete armoring were near the old structure's base, potentially placed there for erosion protection. Watercress is present along channel banks, indicating the potential for groundwater upwelling. Large riparian trees, including willows, are present adjacent to the abutments of the existing structure (Photo 18). Potential sources of pollution include run-off from surrounding agricultural fields and from the road.

Downstream

A temporary clear span bridge, with metal supports and a wooden floor, was constructed to redirect traffic while the existing bridge is out of operation.

The banks are stable, and large amounts of concrete armoring are present around the old structure and the temporary bridge (Photo 19). The channel is largely exposed, with some riparian tree cover (<5% of the channel). The watercourse primarily flows in a straight channel that does not meander and is uniform with respect to morphology and substrate. The homogenous habitat lacks structures like woody debris and in-stream vegetation (Photo 20). However, large boulders present in the pool provide in-stream aquatic cover and habitat structure. The water was clear, and abundant minnow and sucker species were observed.

Habitat Improvements

It is recommended the area disturbed for construction is vegetated and stabilized post-construction with native species and materials (i.e., not concrete).

5.0 Identification of Alternative Solutions

A total of eight alternative solutions are to be considered, and they range from doing nothing (i.e., leaving the structures in place as they currently exist), removing all bridges, and combinations of replacing 1 bridge, 2 bridges, 3 bridges, 4 bridges and 5 bridges.

Burnside ecology, engineering and planning staff reviewed the options in tandem and considered the potential impacts from undertaking various alternatives. Ultimately it was determined through an evaluation of various engineering, transportation, socio-economic, and cultural factors that the preferred solution is to replace Bridges 28-P, 32-P and 33-P, and remove Bridges 1-P and 30-P.

6.0 Preferred Solution

Based on the evaluation of the alternatives, the comments received from stakeholders, agencies and interested parties, the preferred solution identified is to replace Bridges 28-P, 32-P, and 33-P, and remove structures 1-P and 30-P. Table 9 below outlines the preferred alternative.

Table 9: Summary of Preferred Solutions

| Bridge | Existing Condition | Preferred Alternative |
|--------|---|---|
| 1-P | No bridge present. Existing stone causeway in-stream crossing. | Remove remainder of structure and existing in-stream crossing and naturalize area disturbed during structure removal. |
| 28-P | 10.6 m span x 5.7 m wide Concrete T-Beam Bridge | Replace bridge with 14 m clear span, 9.8m wide Concrete Slab on Prestressed Hollow Core Slab Girder Bridge. |
| 30-P | 7.9 m span x 6.5 m wide Concrete Through-Girder Bridge | Remove bridge and re-naturalize all areas disturbed by structure removal, including channel. |
| 32-P | 9.14 m span x 5.7 m wide Concrete T-Beam Bridge | Replace bridge with 2.4 m span x 2.0 m rise Precast Box Culvert. |
| 33-P | 10.4 m span x 5.7 m wide Concrete T-Beam Bridge | Replace bridge with 22 m clear span, 9.8 m wide Concrete Slab on Prestressed Concrete Box Girder. |

The preferred alternative involves removing the structures (or remains thereof) to below the natural channel elevations at Bridges 1-P and 30-P and re-naturalizing the existing watercourse channel. The base slab of Bridge 30-P would be removed, and the channel naturalized through the existing crossing. The existing built-up stone roadway through the creek at Bridge 1-P would be removed and the channel restored. The replacement structures at Bridges 28-P, 32-P and 33-P will be designed to improve the hydraulic conditions, sight lines and roadside safety at each site.

7.0 Impacts and Mitigation

Project activities associated with the preferred solution are anticipated to include grading and asphalt application, with tree and vegetation removal occurring within the immediate vicinity of each structure to facilitate grading and construction (i.e., located within the existing ROW and on lands immediately adjacent), as well as the removal of the existing bridges and abutments and construction of new bridges. The removal of the existing abutments may require isolation with cofferdams near the abutments and temporary dewatering of the area. During this isolation, the watercourse baseflows will be maintained downstream via by-pass pumping, temporary culvert, etc.

From a technical perspective, the preferred solution ensures bridges that are safe, efficient, and provide a high level of service for the local community.

The watercourses within the study area have been categorized by the NDMNRF ARA mapping as having a warmwater thermal regime. As such, any proposed in-water works would require compliance with the appropriate in-water work construction timing windows, which are based on fish species and thermal regime, and are set by the NDMNRF and must be approved by DFO.

The construction of the preferred solution will occur within the regulated area of the GRCA. Development or alterations within the jurisdiction of the GRCA in Regulated Areas will require a Permit from GRCA under Ontario Regulation 150/06 (Grand River Conservation Authority: Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses).

The replacement of the existing structures with a wider span and increased vertical profile would allow for water to pass more easily beneath the bridge during periods of high flow, providing resilience under changing climatic conditions. The increased span of the structures are anticipated to benefit the fish habitat, watercourse morphology and the condition of the structures. Aquatic habitat through the structures will be maintained, with bank protection present through the structures in the form of stone placement.

The following mitigation measures and design approach should be implemented to mitigate negative impacts of the proposed Project on the environment of the study area. It is also recommended that the following mitigation and monitoring measures be included within the detailed design process and reporting, and within the special provisions section of the tender documents, as applicable. All design and construction reports and plans are to be based on a best management approach that centers on the prevention of impacts, protection of the existing environment, and opportunities for rehabilitation and enhancement of the impacted areas.

Table 10: Summary of Impacts, Mitigation and Monitoring for Natural Features

| Feature | Description of Potential Effects | Mitigation Measures | Monitoring Activities |
|--|--|--|---|
| Effects on Ecological Features and Functions | | | |
| Wildlife (General) | <p>Temporary displacement and disturbance to wildlife and habitat during the construction phase.</p> <p>This could include SAR and Species of Special Concern.</p> <p>Possible positive impact as wildlife crossing potential could be improved at structures 28-P and 33-P.</p> | <p>The footprint of the proposed disturbed area shall be minimized as much as possible. In the event an animal is encountered during construction and does not move from the construction zone, the Contract Administrator should be notified. If the construction activities are such that continuing construction in the area would result in harm to wildlife, construction activities in that location should temporarily stop and the MECP can be contacted for direction.</p> <p>If temporary perimeter exclusion fencing is used at a location, it should be installed to allow wildlife to leave the fenced area during vegetation clearing. Once the work area has been cleared, it can be securely fenced to prevent wildlife from returning. The excluded area should be searched immediately following fencing installation for any wildlife (including SAR) that may have become trapped. Any wildlife should be safely relocated or permitted to escape, to a suitable habitat. All works should stop immediately and MECP should be contacted if SAR is encountered within the area to ensure compliance with the ESA.</p> <p>Avoid vegetation clearing during sensitive times of the year for local wildlife, such as spring and early summer (during breeding and migration seasons).</p> <p>The new structure will allow for wildlife passage below the structure if feasible.</p> <p>Fencing to delineate the work zone will prevent encroachment into adjacent habitat supporting SAR and Species of Special Concern.</p> | <p>The Contractor will conduct regular monitoring of the erosion and sediment control measures to ensure they are acting as intended and are containing the work area.</p> |
| Migratory Breeding Birds | <p>Disturbance or destruction of migratory breeding bird nests / habitat may occur during construction phase (vegetation clearing).</p> | <p>To reduce the risk of contravening the federal Migratory Bird Convention Act, 1994 (MBCA), timing constraints shall be applied to avoid any limited vegetation clearing (including grubbing) and/or structure works (construction) during the active window for breeding birds, broadly from April 1 to August 31 for most species.</p> <p>Active nests (nests with eggs or young birds) of protected migratory birds, including SAR protected under the ESA, cannot be destroyed at any time of the year.</p> <p>If a nesting migratory bird (or SAR protected under ESA) is identified within or adjacent to the construction site (or during operations and maintenance activities) and the activities are such that continuing works in that area would result in a contravention of the MBCA or ESA, all activities should stop and the Contract Administrator (with assistance from an Avian Biologist) should discuss mitigation measures with the Town. If SAR are identified, all activities should stop and MECP should be contacted to ensure compliance with the ESA. The Contract Administrator can instruct the Contractor on how to proceed based on the mitigation measures established through discussions with the Township, the MECP and/or Environment Canada.</p> <p>To avoid contravention of the MBCA and/or ESA, the bridge structure should be completely excluded with tarping or netting material prior to the next active window for breeding birds (i.e., by end of March) if construction works are to occur during the active window for breeding birds (as noted above). Tarping or netting of the bridge ensures</p> | <p>If construction works occur during the active window for breeding birds, an Environmental Inspector should monitor the tarped or netted structure every 2 to 3 days to ensure that no bird nests are established on the bridge (some species such as Barn Swallow or Eastern Phoebe (<i>Sayornis phoebe</i>) have been reported to attempt nesting on the exterior of the tarp material used for exclusion).</p> |

| Feature | Description of Potential Effects | Mitigation Measures | Monitoring Activities |
|--------------------------------------|--|---|---|
| | | that breeding birds are excluded from nesting on or under the structure while the bridge is being replaced. | |
| SAR bat maternity-roosting habitat | Tree removals could impact wildlife. Removal of rock piles along the bank of the river at structure 33-P has the potential to affect Eastern Small-footed Myotis habitat. | Trees and rock features that are identified as candidate bat maternal roosting habitat must be taken down outside the active bat window (active window is March 31 to October 1). | Further studies are required to confirm the extent of impacts and whether surveys are required to determine absence or presence of SAR. |
| Cliff Swallow and Barn Swallow Nests | Removal of Bridge 30-P could impact cliff swallow nesting as the structure was still being actively used by a colony. | Removing Bridge 30-P outside of the active breeding bird window (active window is April 1 to August 31) will mitigate the direct effects on cliff swallows. The restored structures may offer alternative nesting habitat. | No monitoring required. |
| Trees | Loss of woody vegetation from minimal tree removals required at Bridge 28-P and moderate tree removals required at structures 32-P and 33-P. Creation of new edge in forest communities at 32-P and 33-P, exposing remaining vegetation to new growing conditions such as sun exposure, weed invasion. | A tree inventory will be completed during the detailed design to characterize and confirm required removals. Minimize impacts to remaining trees by implementing measures such as tree protection or ESC fencing where it is proposed to protect trees from grading impacts near adjacent construction. This can occur at all structures. ESC measures and other specified protection measures should be installed prior to commencement of any grading or vegetation disturbance. No access, storage or stockpile of materials or equipment should occur within the area protected by the ESC and other protection measures. | An Environmental Inspector should be engaged during the construction phase to review ESC and other protection measures for deficiencies. |
| Vegetation | Temporary disturbance to meadow marsh communities at structures 32-P and 33-P during construction as well as temporary disturbance to the adjacent wetlands at structures 1-P and 30-P. This could include alterations to herbaceous vegetation and ground disturbance. Removing Bridge 1-P could lead to increased traffic through the watercourse as well as dumping in the wetland area due to its abandoned atmosphere. | Impacts to meadow marsh communities, wetlands, and other disturbed herbaceous ground vegetation can be mitigated through the use of native seed mix in areas of grading. Disturbed areas should be stabilized and re-vegetated using a seed mix comprised of native grasses and wildflowers upon project completion and restored to a pre-disturbed state where practical. A nurse crop of oats (<i>Avena sativa</i>) must be applied with the seed mix to establish quickly and reduce impacts from erosion. Anti-dumping and watercourse disturbance enforcement should take place if the area continues to be used in these ways after the removal of the structure. | Site inspectors should monitor the success of the seed mix application. If bare patches are noticed, or the seed mix does not appear to have germinated, the contractor should be contacted to re-apply the seed mix during ideal weather conditions (i.e., spring or fall). Ecologists may be required to review site conditions and seed application practices if seed mix persists in not germinating. |
| All Adjacent Natural Features | Sediment and erosion impacts associated with land grading and clearing. | All work zones should be clearly marked on detailed design drawings and at the work site to indicate that no work should occur outside the work zone. | ESC measures will be inspected weekly and after heavy rainfall events to ensure they are functioning and are maintained as required. |

| Feature | Description of Potential Effects | Mitigation Measures | Monitoring Activities |
|-----------------------|---|---|---|
| | | <p>Detailed grading, construction, dewatering and ESC plans will be submitted to the GRCA for review and comment at detailed design.</p> <p>Implementation of the ESC measures will conform to industry best management practices and recognized standard specifications such as Ontario Provincial Standards Specifications (OPSS).</p> <p>The ESC Plan will be prepared to the satisfaction of the GRCA.</p> <p>The ESC Plan will also consider the GRCA Erosion and Sediment Control Guidelines for Urban Construction (2006).</p> <p>Sediment and erosion control measures will be implemented prior to construction and maintained during the construction phase in accordance with the erosion and sediment control plan developed during detailed design.</p> <p>All sediment and erosion control measures will be inspected prior to construction and maintained during the construction phase to prevent entry of sediment into natural features.</p> <p>Routine upkeep and maintenance of ESC features are to include regular monitoring for erosion and sedimentation impacts due to site grading during and after trail construction.</p> <p>If the sediment and erosion control measures are not functioning properly, no further work in the affected areas will occur until the sediment and/or erosion problem is addressed.</p> <p>All disturbed areas of the construction site will be stabilized and re-vegetated as soon as conditions allow.</p> <p>Sediment and erosion control measures will be left in place until all areas of the construction site have been stabilized and will then be removed by the Contractor.</p> <p>Wet weather restrictions shall be applied during site preparation and excavation. Work will be avoided near watercourses during periods of excessive precipitation and/or excessive snow melt.</p> <p>The Contractor will be aware of spill prevention best practices and will have contingency plans in place, should a spill occur. Personnel will be trained in how to apply the plans.</p> <p>Spills or depositions into watercourses will be immediately contained and cleaned up in accordance with provincial regulatory requirements and the contingency plan. Spills will be reported to the Ontario Spills Action Centre at 1 800-268-6060.</p> | <p>If ESC measures are not functioning properly, alternative measures will be implemented and prioritized above other construction activities.</p> |
| Fish and Fish Habitat | <p>In-water works may be required, and the proposed works could potentially result in HADD to fish habitat and the death of fish by means other than fishing.</p> | <p>A qualified professional aquatic ecologist will submit a Request for Review to DFO for any bridge replacements or removals requiring in-water works. It is anticipated that a Letter of Advice will be obtained for the project based on the footprints of the structures and fish community present. During Detailed Design, correspondence shall be maintained with a qualified professional aquatic ecologist to determine appropriate mitigation measures and whether the proposal has potential to pose HADD to fish habitat and/or if the proposal has the potential to kill fish. Preferred mitigation measures include work zone isolation while maintaining flow downstream and fish salvage from the isolated</p> | <p>Erosion and sediment control (ESC) monitoring during construction</p> <p>Fish salvage prior to the commencement of any in-water works.</p> <p>Spill management plan to be created and measures to contain potential spills are to be on-site throughout construction .</p> |

| Feature | Description of Potential Effects | Mitigation Measures | Monitoring Activities |
|--|--|--|--|
| | | work area. Efforts will be made in consultation with the DFO to mitigate should HADD to fish habitat occur. A fish salvage must occur under a License to Collect Fish for a Scientific Purpose obtained from the NDMNRF. Near-water work and work below the annual high-water mark will adhere to the appropriate in-water work timing window to avoid potential impacts to resident and migratory fish species. | |
| Groundwater | Potential for localized groundwater quality impacts as a result of spills. Temporary dewatering in the work area. | Refueling of equipment and fuel storage shall be conducted in designated areas, at least 30 m away from the watercourses and any existing wells, with spill protection provided. The work area shall be dewatered as per recognized provincial standards and pumped into acceptable dewatering traps. These dewatering traps will be placed away from the watercourse to allow for infiltration prior to discharging to the watercourse. | ESC monitoring throughout construction. Spill management plan to be created and measures to contain potential spills are to be on-site throughout construction . |
| Surface Water / Hydrology / Stormwater | Potential for sediments to enter the water course due to stockpiling, excavation, and construction. Potential for localized water quality impacts in the case of spills. Potential for invasive species to enter the environment | The footprint of the disturbed area shall be minimized as much as possible, for example, vegetated buffers/setbacks will remain untouched adjacent to the watercourse, wherever possible. An ESC Plan shall be developed during the detailed design phase of the project, prior to construction. Implementation of the erosion and sediment control measures shall conform to recognized standard specifications, such as Ontario Provincial Standards Specification (OPSS), and the requirements of the GRCA. A permit from the GRCA under the Development, Interference, with Wetlands and Alterations to Shorelines and Watercourses Regulation (Ontario Regulation 150/06) will be required prior to conducting the proposed works as work is proposed within a flood Regulated Area. In water operation of heavy equipment shall be prevented, as well as minimizing the operation of any equipment on the banks of the watercourse. Stockpiled material will be stored and stabilized a minimum of 30 m from the watercourse. All materials and equipment used for the purpose of site preparation and project completion will be operated and stored in a manner that prevents any deleterious substance (e.g., petroleum products, silt, etc.) from entering the water. ESC measures (silt curtains, silt fence, rock check dams, etc.) shall be installed and maintained during the work phase, until the site has been stabilized. ESC measures will be inspected daily to ensure they are functioning and maintained as required. If ESC measures are not functioning properly, no further work will occur until the problem is resolved. Temporary mitigation measures shall be installed prior to the commencement of any clearing, grubbing, excavation, filling, or grading works and must be maintained on a regular basis, prior to, and after precipitation events. Water quality impacts related to surface water run off shall be mitigated to avoid downstream impacts by controlling surface water run off within the boundaries of the site. All disturbed areas of the work site shall be stabilized immediately, and re-vegetated as soon as conditions allow. | Monitoring of surface water quality will be completed along with regular ESC monitoring as outlined above. Spill management plan to be created and measures to contain potential spills are to be on-site throughout construction . |

| Feature | Description of Potential Effects | Mitigation Measures | Monitoring Activities |
|---------|----------------------------------|---|-----------------------|
| | | <p>All equipment fueling and maintenance shall be done at least 30 m from the watercourse to ensure that no deleterious substances enter the waterway.</p> <p>The Contractor shall be required to develop Spill Prevention and Contingency Plans for construction and operational phases of the project. Personnel will be trained in how to apply the Plans, and the Plans will be reviewed to strengthen their effectiveness and ensure continuous improvement. Spills will be immediately contained and cleaned up in accordance with provincial regulatory requirements and the contingency plan. A hydrocarbon spill response kit will be on site at all times during the work. Spills will be reported to the Ontario Spills Action Center at 1 800 268 6060.</p> <p>All equipment and personal protective equipment must arrive on-site clean to prevent the potential transfer of invasive species (i.e., phragmites) to the local environment.</p> | |

8.0 Conclusions

The natural environment was assessed during field studies in the summer of 2023 within the vicinity of the five bridges. The preferred alternative is to replace bridges 28-P, 32-P and 33-P, and remove structures 1-P and 30-P and naturalize the area of the existing structures. During Detailed Design and Construction of the Project, the following commitments are required:

- Mitigation measures as detailed in Section 7.0
- Further studies to determine the presence of SAR at structures 28-P, 32-P, and 33-P are needed
- The Township will be required to secure all necessary permits and/or authorizations required for the project, including
 - Consultation with the GRCA with respect to working within a regulated area
 - Letter of Advice from the DFO
 - License to Collect Fish for a Scientific Purpose from the NDMNRF
 - Permit from Wellington County to remove trees under By-Law 5515-09

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BURNSIDE

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Appendix A

Existing Aquatic Habitat Conditions Photo Page

Structure 1-P



Photo 1: Temporary road crossing. Facing southeast.



Photo 2: Upstream pool. Facing north.



Photo 3: Vegetation in downstream pool. Facing south.



Photo 4: Downstream flat. Facing northeast.

Structure 28-P



Photo 5: Upstream pool. Facing northwest.



Photo 6: Log jam upstream of old structure. Facing northwest.



Photo 7: Downstream pool, rifle, flat, and the temporary bridge. Facing southeast.



Photo 8: Downstream pool and old structure. Facing northwest.

Structure 30-P



Photo 9: Upstream section. Facing northwest.



Photo 10: Unembedded inlet of culvert. Facing southeast.



Photo 11: Downstream section. Facing southeast.



Photo: 12 Culvert outlet is perched at outlet. Facing east.

Structure 32-P



Photo 13: Upstream section, a defined channel is not present. Facing northwest.



Photo 14: Upstream, water from soil draining into pool under structure. Facing northwest.



Photo 15: Pool at outlet. Facing northwest.



Photo 16: Downstream section, a defined channel is not present in the field. Facing southeast.

Structure 33-P



Photo 17: Upstream section. Facing northwest.



Photo 18: Riparian trees growing alongside old bridge. Facing southeast.



Photo 19: Downstream pool and old bridge. Facing northwest.



Photo 20: Downstream section, south of temporary bridge. Facing southeast.





BURNSIDE

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Appendix F

Preliminary Bridge Replacement Cost Estimates (Construction)

| | |
|------------------------------------|-----|
| Bridge 1-P Cost Estimate | F.1 |
| Bridge 28-P Cost Estimate | F.2 |
| Bridge 30-P Cost Estimate | F.3 |
| Bridge 32-P and 33-P Cost Estimate | F.4 |



| | |
|-------------|-------------------------------|
| Client | Township of Centre Wellington |
| Project | Five Bridges EA |
| Project No. | 300056693.0000 |
| Date | 1/26/2024 |

Bridge 1-P: Low-Level Crossing (Four-Cell, 3.0m span x 1.8m rise Side-by-Side Box Culverts)

EA Construction Cost Estimate

| | | | | Engineering Estimate | |
|--|--|-------------------|------|----------------------|-----------------|
| Item No. | Description | Contract Quantity | Unit | UNIT PRICE | ESTIMATED PRICE |
| Part A - General Work | | | | | |
| 1 | Mobilization and Demobilization | 1.0 | LS | \$20,000.00 | \$20,000.00 |
| 2 | Contract Bonds & Insurance | 1.0 | LS | \$10,000.00 | \$10,000.00 |
| 3 | Construction Layout | 1.0 | LS | \$10,000.00 | \$10,000.00 |
| 4 | Excess Soil Management | 1.0 | LS | \$12,500.00 | \$12,500.00 |
| 5 | As-built Drawings | 1.0 | LS | \$2,500.00 | \$2,500.00 |
| Part B - Temporary Works | | | | | |
| 6 | Traffic Control Signing | 1.0 | LS | \$7,500.00 | \$7,500.00 |
| 7 | Heavy-Duty Silt Fence Barriers | 400.0 | m | \$26.50 | \$10,600.00 |
| 8 | Fibre Roll Flow Check Dams | 4.0 | ea | \$500.00 | \$2,000.00 |
| 9 | Rock Flow Check Dams | 4.0 | ea | \$1,000.00 | \$4,000.00 |
| 10 | Temporary Flow Passage System | 1.0 | LS | \$30,000.00 | \$30,000.00 |
| 11 | Unwatering Structure Excavations | 1.0 | LS | \$20,000.00 | \$20,000.00 |
| Part C - Removal Works | | | | | |
| 12 | Removal of Existing Bridge Abutment | 1.0 | LS | \$7,500.00 | \$7,500.00 |
| 13 | Clearing and Grubbing | 285.0 | sq.m | \$50.00 | \$14,250.00 |
| Part D - Bridge Works | | | | | |
| 14 | Precast Concrete Culverts, 3.0m span x 1.5m | 64.0 | m | \$6,000.00 | \$384,000.00 |
| 15 | Concrete in Distribution Slab | 1.0 | LS | \$65,000.00 | \$65,000.00 |
| 16 | Earth Excavation for Structure | 1.0 | LS | \$20,000.00 | \$20,000.00 |
| 17 | Granular Backfill to Structure | 1200.0 | t | \$40.00 | \$48,000.00 |
| 18 | Concrete in Apron Walls | 1.0 | LS | \$15,000.00 | \$15,000.00 |
| 19 | Culvert Waterproofing | 1.0 | LS | \$15,000.00 | \$15,000.00 |
| 20 | Pipe Subdrain | 40.0 | m | \$50.00 | \$2,000.00 |
| Part E - Road Works | | | | | |
| 21 | Earth Excavation, Grading & Disposal | | | | |
| | a) Earth Excavation, Grading | 1.0 | LS | \$30,000.00 | \$30,000.00 |
| | b) Management and Disposal of Excess Soil for Re-use | 1600.0 | m3 | \$40.00 | \$64,000.00 |
| 22 | Granular A (Roadway) | 720.0 | t | \$40.00 | \$28,800.00 |
| 23 | Granular B (Roadway) | 1320.0 | t | \$35.00 | \$46,200.00 |
| 24 | Hot Mix HL-4 | 60.0 | t | \$350.00 | \$21,000.00 |
| Part F - Restoration Works | | | | | |
| 25 | Rip Rap | 50.0 | t | \$120.00 | \$6,000.00 |
| 26 | Site Restoration | 1.0 | LS | \$30,000.00 | \$30,000.00 |
| Subtotal Estimated Construction Price | | | | | \$925,850.00 |
| 15% Contingency | | | | | \$138,877.50 |
| Project Subtotal | | | | | \$1,064,727.50 |
| 13% .H.S.T | | | | | \$138,414.58 |
| TOTAL ESTIMATED CONSTRUCTION PRICE | | | | | \$1,203,142.08 |

Note - Total estimated construction price does not include any cost for property or engineering



| | |
|-------------|-------------------------------|
| Client | Township of Centre Wellington |
| Project | Five Bridges EA |
| Project No. | 300056693.0000 |
| Date | 1/26/2024 |

Bridge 28-P: 14m Prestressed Concrete Hollow Core Slab Girder

EA Construction Cost Estimate

| | | | | Engineering Estimate | |
|---|--|-------------------|------|----------------------|-----------------------|
| Item No. | Description | Contract Quantity | Unit | UNIT PRICE | ESTIMATED PRICE |
| Part A - General Work | | | | | |
| 1 | Mobilization and Demobilization | 1.0 | LS | \$80,000.00 | \$80,000.00 |
| 2 | Contract Bonds & Insurance | 1.0 | LS | \$35,000.00 | \$35,000.00 |
| 3 | Construction Layout | 1.0 | LS | \$20,000.00 | \$20,000.00 |
| 4 | Excess Soil Management | 1.0 | LS | \$12,500.00 | \$12,500.00 |
| 5 | As-built Drawings | 1.0 | LS | \$2,500.00 | \$2,500.00 |
| Part B - Temporary Works | | | | | |
| 6 | Traffic Control Signing | 1.0 | LS | \$7,500.00 | \$7,500.00 |
| 7 | Heavy-Duty Silt Fence Barriers | 400.0 | m | \$26.50 | \$10,600.00 |
| 8 | Fibre Roll Flow Check Dams | 4.0 | ea | \$500.00 | \$2,000.00 |
| 9 | Rock Flow Check Dams | 4.0 | ea | \$1,000.00 | \$4,000.00 |
| 10 | Temporary Flow Passage System | 1.0 | LS | \$75,000.00 | \$75,000.00 |
| 11 | Unwatering Structure Excavations | 1.0 | LS | \$50,000.00 | \$50,000.00 |
| Part C - Removal Works | | | | | |
| 12 | Removal of Existing Bridge | 1.0 | LS | \$60,000.00 | \$60,000.00 |
| Part D - Bridge Works | | | | | |
| 13 | Pipe Subdrain | 50.0 | m | \$80.00 | \$4,000.00 |
| 14 | Steel Beam Guide Rail, Structure Connection | 4.0 | ea | \$5,000.00 | \$20,000.00 |
| 15 | Earth Excavation for Structure | 1.0 | LS | \$35,000.00 | \$35,000.00 |
| 16 | Granular Backfill to Structure | 1500.0 | t | \$50.00 | \$75,000.00 |
| 17 | Concrete in Footings | 35.0 | m3 | \$1,250.00 | \$43,750.00 |
| 18 | Concrete in Substructure | 1.0 | LS | \$200,000.00 | \$200,000.00 |
| 19 | Concrete in Deck | 1.0 | LS | \$120,000.00 | \$120,000.00 |
| 20 | Concrete in Parapet Walls | 1.0 | LS | \$50,000.00 | \$50,000.00 |
| 21 | Concrete in Approach Slabs | 1.0 | LS | \$35,000.00 | \$35,000.00 |
| 22 | Reinforcing Steel Bar | 1.0 | LS | \$100,000.00 | \$100,000.00 |
| 23 | Stainless Steel Reinforcing Bar | 1.0 | LS | \$80,000.00 | \$80,000.00 |
| 24 | Prestressed Concrete, S600 Hollowcore Girders - Fabrication | 103.6 | m | \$2,250.00 | \$233,100.00 |
| 25 | Prestressed Concrete, S600 Hollowcore Girders - Delivery | 1.0 | LS | \$20,000.00 | \$20,000.00 |
| 26 | Prestressed Concrete, S600 Hollowcore Girders - Installation | 1.0 | LS | \$40,000.00 | \$40,000.00 |
| 27 | Bridge Deck Waterproofing | 147.2 | m2 | \$80.00 | \$11,776.00 |
| 28 | Bearings | 14.0 | ea | \$600.00 | \$8,400.00 |
| 28 | Joint Fillers, Seals and Compounds | 1.0 | LS | \$6,500.00 | \$6,500.00 |
| Part E - Road Works | | | | | |
| 29 | Earth Excavation, Grading & Disposal | | | | |
| | a) Earth Excavation, Grading | 1.0 | LS | \$45,000.00 | \$45,000.00 |
| | b) Management and Disposal of Excess Soil for Re-use | 1000.0 | m3 | \$40.00 | \$40,000.00 |
| 30 | Hot Mix HL-3 | 80.0 | t | \$200.00 | \$16,000.00 |
| 31 | Hot Mix HL-8 | 100.0 | t | \$175.00 | \$17,500.00 |
| 29 | Granular A (Roadway) | 500.0 | t | \$40.00 | \$20,000.00 |
| 32 | Granular B (Roadway) | 850.0 | t | \$35.00 | \$29,750.00 |
| 33 | Concrete Curb & Gutter | 50.0 | m | \$175.00 | \$8,750.00 |
| 30 | Single Rail Steel Beam Guide Rail | 76.2 | m | \$400.00 | \$30,480.00 |
| 34 | Steel Beam Energy Attenuating Terminal System | 4.0 | ea | \$8,500.00 | \$34,000.00 |
| Part F - Restoration Works | | | | | |
| 35 | Rip Rap | 50.0 | t | \$120.00 | \$6,000.00 |
| 36 | Site Restoration | 1.0 | LS | \$100,000.00 | \$100,000.00 |
| Subtotal Estimated Construction Price | | | | | \$1,789,106.00 |
| 15% Contingency | | | | | \$268,365.90 |
| Project Subtotal | | | | | \$2,057,471.90 |
| 13% .H.S.T | | | | | \$267,471.35 |
| TOTAL ESTIMATED CONSTRUCTION PRICE | | | | | \$2,324,943.25 |

Note - Total estimated construction price does not include any cost for property or engineering



| | |
|-------------|-------------------------------|
| Client | Township of Centre Wellington |
| Project | Five Bridges EA |
| Project No. | 300056693.0000 |
| Date | 1/26/2024 |

Bridge 30-P: 16.2m Concrete Rigid Frame

EA Construction Cost Estimate

| | | | | Engineering Estimate | |
|--|--|-------------------|------|----------------------|-----------------|
| Item No. | Description | Contract Quantity | Unit | UNIT PRICE | ESTIMATED PRICE |
| Part A - General Work | | | | | |
| 1 | Mobilization and Demobilization | 1.0 | LS | \$80,000.00 | \$80,000.00 |
| 2 | Contract Bonds & Insurance | 1.0 | LS | \$35,000.00 | \$35,000.00 |
| 3 | Construction Layout | 1.0 | LS | \$20,000.00 | \$20,000.00 |
| 4 | Excess Soil Management | 1.0 | LS | \$12,500.00 | \$12,500.00 |
| 5 | As-built Drawings | 1.0 | LS | \$2,500.00 | \$2,500.00 |
| Part B - Temporary Works | | | | | |
| 6 | Traffic Control Signing | 1.0 | LS | \$7,500.00 | \$7,500.00 |
| 7 | Heavy-Duty Silt Fence Barriers | 400.0 | m | \$26.50 | \$10,600.00 |
| 8 | Fibre Roll Flow Check Dams | 4.0 | ea | \$500.00 | \$2,000.00 |
| 9 | Rock Flow Check Dams | 4.0 | ea | \$1,000.00 | \$4,000.00 |
| 10 | Temporary Flow Passage System | 1.0 | LS | \$50,000.00 | \$50,000.00 |
| 11 | Unwatering Structure Excavations | 1.0 | LS | \$30,000.00 | \$30,000.00 |
| Part C - Removal Works | | | | | |
| 12 | Removal of Existing Bridge | 1.0 | LS | \$60,000.00 | \$60,000.00 |
| Part D - Bridge Works | | | | | |
| 13 | Pipe Subdrain | 50.0 | m | \$80.00 | \$4,000.00 |
| 14 | Steel Beam Guide Rail, Structure Connection | 4.0 | ea | \$5,000.00 | \$20,000.00 |
| 15 | Earth Excavation for Structure | 1.0 | LS | \$35,000.00 | \$35,000.00 |
| 16 | Granular Backfill to Structure | 1500.0 | t | \$50.00 | \$75,000.00 |
| 17 | Concrete in Footings | 40.0 | m3 | \$1,250.00 | \$50,000.00 |
| 18 | Concrete in Substructure | 1.0 | LS | \$200,000.00 | \$200,000.00 |
| 19 | Concrete in Deck | 1.0 | LS | \$500,000.00 | \$500,000.00 |
| 20 | Concrete in Parapet Walls | 1.0 | LS | \$55,000.00 | \$55,000.00 |
| 21 | Concrete in Approach Slabs | 1.0 | LS | \$35,000.00 | \$35,000.00 |
| 22 | Reinforcing Steel Bar | 1.0 | LS | \$125,000.00 | \$125,000.00 |
| 23 | Stainless Steel Reinforcing Bar | 1.0 | LS | \$90,000.00 | \$90,000.00 |
| 24 | Bridge Deck Waterproofing | 167.4 | m2 | \$80.00 | \$13,395.20 |
| 25 | Joint Fillers, Seals and Compounds | 1.0 | LS | \$6,500.00 | \$6,500.00 |
| Part E - Road Works | | | | | |
| 26 | Earth Excavation, Grading & Disposal | | | | |
| | a) Earth Excavation, Grading | 1.0 | LS | \$45,000.00 | \$45,000.00 |
| | b) Management and Disposal of Excess Soil for Re-use | 1300.0 | m3 | \$40.00 | \$52,000.00 |
| 27 | Hot Mix HL-3 | 110.0 | t | \$200.00 | \$22,000.00 |
| 28 | Hot Mix HL-8 | 125.0 | t | \$175.00 | \$21,875.00 |
| 26 | Granular A (Roadway) | 750.0 | t | \$40.00 | \$30,000.00 |
| 29 | Granular B (Roadway) | 1250.0 | t | \$35.00 | \$43,750.00 |
| 30 | Concrete Curb & Gutter | 50.0 | m | \$175.00 | \$8,750.00 |
| 27 | Single Rail Steel Beam Guide Rail | 76.2 | m | \$400.00 | \$30,480.00 |
| 31 | Steel Beam Energy Attenuating Terminal System | 4.0 | ea | \$8,500.00 | \$34,000.00 |
| 32 | | | | | \$0.00 |
| Part F - Restoration Works | | | | | |
| 33 | Rip Rap | 50.0 | t | \$120.00 | \$6,000.00 |
| 34 | Site Restoration | 1.0 | LS | \$100,000.00 | \$100,000.00 |
| Subtotal Estimated Construction Price | | | | | \$1,916,850.20 |
| 15% Contingency | | | | | \$287,527.53 |
| Project Subtotal | | | | | \$2,204,377.73 |
| 13% .H.S.T | | | | | \$286,569.10 |
| TOTAL ESTIMATED CONSTRUCTION PRICE | | | | | \$2,490,946.83 |

Note - Total estimated construction price does not include any cost for property or engineering



| | |
|-------------|-------------------------------|
| Client | Township of Centre Wellington |
| Project | Five Bridges EA |
| Project No. | 300056693.0000 |
| Date | 1/26/2024 |

Bridges 32-P and 33-P: 2.4m x 2.0m Box Culvert & 22.0m Span Prestressed Concrete Box Girder

EA Construction Cost Estimate

| | | | | Engineering Estimate | |
|--|--|-------------------|------|----------------------|-----------------|
| Item No. | Description | Contract Quantity | Unit | UNIT PRICE | ESTIMATED PRICE |
| Part A - General Work | | | | | |
| 1 | Mobilization and Demobilization | 1.0 | LS | \$100,000.00 | \$100,000.00 |
| 2 | Contract Bonds & Insurance | 1.0 | LS | \$50,000.00 | \$50,000.00 |
| 3 | Construction Layout | 1.0 | LS | \$30,000.00 | \$30,000.00 |
| 4 | Excess Soil Management | 1.0 | LS | \$15,000.00 | \$15,000.00 |
| 5 | As-built Drawings | 1.0 | LS | \$4,000.00 | \$4,000.00 |
| Part B - Temporary Works | | | | | |
| 6 | Traffic Control Signing | 1.0 | LS | \$7,500.00 | \$7,500.00 |
| 7 | Heavy-Duty Silt Fence Barriers | 700.0 | m | \$26.50 | \$18,550.00 |
| 8 | Fibre Roll Flow Check Dams | 8.0 | ea | \$500.00 | \$4,000.00 |
| 9 | Rock Flow Check Dams | 8.0 | ea | \$1,000.00 | \$8,000.00 |
| 10 | Temporary Flow Passage System, Structure 32-P | 1.0 | LS | \$30,000.00 | \$30,000.00 |
| 11 | Unwatering Structure Excavations, Structure 32-P | 1.0 | LS | \$20,000.00 | \$20,000.00 |
| 12 | Temporary Flow Passage System, Structure 33-P | 1.0 | LS | \$120,000.00 | \$120,000.00 |
| 13 | Unwatering Structure Excavations, Structure 33-P | 1.0 | LS | \$70,000.00 | \$70,000.00 |
| Part C - Removal Works | | | | | |
| 14 | Removal of Existing Bridge, Structure 32-P | 1.0 | LS | \$50,000.00 | \$50,000.00 |
| 15 | Removal of Existing Bridge, Structure 33-P | 1.0 | LS | \$50,000.00 | \$50,000.00 |
| Part D - Bridge Works, 32-P | | | | | |
| 16 | Precast Concrete Culverts, 2.4m span x 2.0m rise | 16.5 | m | \$6,000.00 | \$99,000.00 |
| 17 | Concrete in Distribution Slab | 1.0 | LS | \$17,500.00 | \$17,500.00 |
| 18 | Earth Excavation for Structure | 1.0 | LS | \$10,000.00 | \$10,000.00 |
| 19 | Granular Backfill to Structure | 1200.0 | t | \$40.00 | \$48,000.00 |
| 20 | Concrete in Apron Walls | 1.0 | LS | \$3,000.00 | \$3,000.00 |
| 21 | Culvert Waterproofing | 1.0 | LS | \$10,000.00 | \$10,000.00 |
| 22 | Armour Stone Retaining Walls | 16.0 | m2 | \$2,250.00 | \$36,000.00 |
| 23 | Pipe Subdrain | 40.0 | m | \$50.00 | \$2,000.00 |
| Part E - Bridge Works, 33-P | | | | | |
| 24 | Pipe Subdrain | 50.0 | m | \$80.00 | \$4,000.00 |
| 25 | Steel Beam Guide Rail, Structure Connection | 4.0 | ea | \$5,000.00 | \$20,000.00 |
| 26 | Earth Excavation for Structure | 1.0 | LS | \$35,000.00 | \$35,000.00 |
| 27 | Granular Backfill to Structure | 1500.0 | t | \$50.00 | \$75,000.00 |
| 28 | Concrete in Footings | 45.0 | m3 | \$1,250.00 | \$56,250.00 |
| 29 | Concrete in Substructure | 1.0 | LS | \$200,000.00 | \$200,000.00 |
| 30 | Concrete in Deck | 1.0 | LS | \$150,000.00 | \$150,000.00 |
| 31 | Concrete in Parapet Walls | 1.0 | LS | \$65,000.00 | \$65,000.00 |
| 32 | Concrete in Approach Slabs | 1.0 | LS | \$35,000.00 | \$35,000.00 |
| 33 | Reinforcing Steel Bar | 1.0 | LS | \$140,000.00 | \$140,000.00 |
| 34 | Stainless Steel Reinforcing Bar | 1.0 | LS | \$100,000.00 | \$100,000.00 |
| 35 | Prestressed Concrete Members (B800 Box Girders) - Fabrication | 159.6 | m | \$2,500.00 | \$399,000.00 |
| 36 | Prestressed Concrete Members (B800 Box Girders) - Delivery | 1.0 | LS | \$30,000.00 | \$30,000.00 |
| 37 | Prestressed Concrete Members (B800 Box Girders) - Installation | 1.0 | LS | \$55,000.00 | \$55,000.00 |
| 38 | Bridge Deck Waterproofing | 228.2 | m2 | \$80.00 | \$18,252.80 |
| 39 | Bearings | 14.0 | ea | \$600.00 | \$8,400.00 |
| 40 | Joint Fillers, Seals and Compounds | 1.0 | LS | \$6,500.00 | \$6,500.00 |
| Part F - Road Works | | | | | |
| 41 | Earth Excavation, Grading & Disposal | | | | |
| | a) Earth Excavation, Grading | 1.0 | LS | \$45,000.00 | \$45,000.00 |
| | b) Management and Disposal of Excess Soil for Re-use | 2500.0 | m3 | \$40.00 | \$100,000.00 |
| 42 | Hot Mix HL-3 | 200.0 | t | \$200.00 | \$40,000.00 |
| 43 | Hot Mix HL-8 | 240.0 | t | \$175.00 | \$42,000.00 |
| 41 | Granular A (Roadway) | 1350.0 | t | \$40.00 | \$54,000.00 |
| 44 | Granular B (Roadway) | 2350.0 | t | \$35.00 | \$82,250.00 |
| 45 | Concrete Curb & Gutter | 50.0 | m | \$175.00 | \$8,750.00 |
| 42 | Single Rail Steel Beam Guide Rail | 121.9 | m | \$400.00 | \$48,768.00 |
| 46 | Steel Beam Energy Attenuating Terminal System | 8.0 | ea | \$8,500.00 | \$68,000.00 |
| Part F - Restoration Works | | | | | |
| 47 | Rip Rap | 50.0 | t | \$120.00 | \$6,000.00 |
| 48 | Site Restoration | 1.0 | LS | \$100,000.00 | \$100,000.00 |
| Subtotal Estimated Construction Price | | | | | \$2,794,720.80 |
| 15% Contingency | | | | | \$419,208.12 |
| Project Subtotal | | | | | \$3,213,928.92 |
| 13% .H.S.T | | | | | \$417,810.76 |
| TOTAL ESTIMATED CONSTRUCTION PRICE | | | | | \$3,631,739.68 |

Note - Total estimated construction price does not include any cost for property or engineering



BURNSIDE









































[THE DIFFERENCE IS OUR PEOPLE]

Appendix G

Evaluation of Alternatives Matrix

5 Bridges EA - Evaluation of Alternative Solutions

[illegible]

| | Criteria for Evaluating Alternatives | Alternative 1: Do Nothing | Alternative 2: Remove all bridges | Alternative 3: Replace Bridge 28-P | Alternative 4: Replace Bridges 32-P and 33-P | Alternative 5: Replace Bridges 28-P, 32-P, and 33-P | Alternative 6: Replace Bridges 28-P, 32-P, 33-P, & 1-P | Alternative 7: Replace Bridges 28-P, 32-P, 33-P, & 30-P | Alternative 8: Replace All Bridges |
|---|---|---|--|---|--|---|---|--|--|
| B | Natural Environment | | | | | | | | |
| 1 | Environmentally Sensitive Areas | Watercourse at 1-P would continue to be driven through. Continued dumping in wetland and forests at 1-P due to lack of traffic and abandoned atmosphere. No construction disturbance now, but more possible future impacts that are not mitigated if structures collapse. | Adjacent wetland at 1-P, 30-P, 32-P and 33-P could be temporarily impacted during removals. Watercourse at 1-P would continue to be driven through. Continued dumping in wetland and forests at 1-P due to lack of traffic and abandoned atmosphere. | No impacts around bridge 28-P. Continued dumping in wetland and forests at 1-P. | Temporary impact to meadow marsh communities near 32-P and 33-P. Impacts can be mitigated through use of native seed mix in areas of grading. Continued dumping in wetland and forests at 1-P. | Temporary impact to meadow marsh communities near 32-P and 33-P only. Impacts can be mitigated through use of native seed mix in areas of grading. Continued dumping in wetland and forests at 1-P. | Temporary impact to meadow marsh communities and wetlands near 1-P, 32-P and 33-P. Impacts can be mitigated through use of native seed mix in areas of grading. Vehicles would no longer travel directly through watercourse at 1-P and rates of dumping may decrease. | Temporary impact to meadow marsh and wetland communities near 30-P, 32-P and 33-P. Impacts can be mitigated through use of native seed mix in areas of grading. Watercourse at 1-P would continue to be driven through. Continued dumping in wetland and forests at 1-P. | Temporary impact to meadow marsh and wetland communities near 1-P, 30-P, 32-P and 33-P. Impacts can be mitigated through use of native seed mix in areas of grading. Vehicles would no longer travel directly through watercourse at 1-P and dumping may decrease. |
| | Rating |  |  |  |  |  |  |  |  |
| 2 | Terrestrial Habitat (potential to impact breeding birds, general wildlife habitat, habitat connectivity) | No impact. | No impact. | Minimal tree removals. Wildlife crossing under structure improved. | Clearing of several trees along roadway. Wildlife crossing potential improved under 33-P but reduced at 32-P. | Minimal tree removals at 28-P; several tree removals at 32-P & 33-P. Wildlife crossing potential improved under 28-P and 33-P but reduced at 32-P. | Minimal tree removals at 28-P; several tree removals at 1-P, 32-P & 33-P. Wildlife crossing potential improved under 28-P and 33-P, reduced at 32-P, and remains same at 1-P. | Minimal tree removals at 28-P and 30-P; several tree removals at 32-P & 33-P. Wildlife crossing potential improved under 28-P and 33-P and 30-P but reduced at 32-P. | Minimal tree removals at 28-P and 30-P; several tree removals at 1-P, 32-P & 33-P. Wildlife crossing potential improved under 28-P and 33-P and 30-P but reduced at 32-P and unchanged at 1-P. |
| | Rating |  |  |  |  |  |  |  |  |
| 3 | Fisheries / Aquatic Habitat (potential to impact aquatic habitat features) | Future collapse of structures will result in significant negative impacts to watercourse and associated habitat. | Minimal impacts associated with structure removal (could cut-off abutments above grade to eliminate). | Moderate potential to cause temporary impact during construction. Does not address fish migration barrier at bridge 30-P, or vehicle passage through watercourse at bridge 1-P. | Moderate potential to cause temporary impact during construction of 33-P. Bridge 32-P is not considered aquatic habitat. Does not address fish migration barrier at bridge 30-P, or vehicle passage through watercourse at bridge 1-P. | Moderate potential to cause temporary impact during construction at bridges 28-P and 33-P. Bridge 32-P is not considered aquatic habitat. Does not address fish migration barrier at bridge 30-P, or vehicle passage through watercourse at bridge 1-P. | Moderate potential to cause temporary impact during construction at bridges 1-P, 28-P and 33-P. Bridge 32-P is not considered aquatic habitat. Benefit at 1-P by eliminating vehicular passage through watercourse. Does not address fish migration barrier at bridge 30-P. | Moderate potential to cause temporary impact during construction at bridges 1-P, 28-P, 30-P and 33-P. Bridge 32-P is not considered aquatic habitat. Benefit at 30-P by eliminating concrete base slab. Does not address vehicle passage through watercourse at bridge 1-P. | Moderate potential to cause temporary impact during construction at bridges 1-P, 28-P, 30-P and 33-P. Bridge 32-P is not considered aquatic habitat. Benefit at 1-P by eliminating vehicular passage through watercourse. Benefit at 30-P for eliminating base slab. |
| | Rating |  |  |  |  |  |  |  |  |
| 4 | Species at Risk (SAR) (potential to impact habitat of Species at Risk e.g. Barn Swallow, bats, Butternut) | Possible future collapse of bridge 30-P may harm Cliff Swallow during breeding season. | Removal of cliff swallow nesting habitat at 30-P. Impacts mitigated through timing window, no direct harm to individuals. | No impact to SAR at Bridge 28-P anticipated. Possible future collapse of bridge 30-P may harm Cliff Swallow during breeding season. | Removal of potential reptile / bat habitat at 32-P/33-P. Further studies required to confirm absence or presence of SAR species. | Removal of potential reptile / bat habitat at 32-P/33-P. Further studies required to confirm absence or presence of SAR species. | Removal of potential reptile / bat habitat at 32-P/33-P. Further studies required to confirm absence or presence of SAR species. | Temporary removal of cliff swallow nesting habitat at 30-P during construction will require mitigation, however new structure provides similar habitat; Removal of potential reptile / bat habitat at 32-P/33-P. Further studies required to confirm absence or presence of SAR species. | Temporary removal of cliff swallow nesting habitat at 30-P during construction will require mitigation, however new structure provides similar habitat; Removal of potential reptile / bat habitat at 32-P/33-P. Further studies required to confirm absence or presence of SAR species. |
| | Rating |  |  |  |  |  |  |  |  |
| | Summary Natural Environment |  |  |  |  |  |  |  |  |

5 Bridges EA - Evaluation of Alternative Solutions



| | Criteria for Evaluating Alternatives | Alternative 1: Do Nothing | Alternative 2: Remove all bridges | Alternative 3: Replace Bridge 28-P | Alternative 4: Replace Bridges 32-P and 33-P | Alternative 5: Replace Bridges 28-P, 32-P, and 33-P | Alternative 6: Replace Bridges 28-P, 32-P, 33-P, & 1-P | Alternative 7: Replace Bridges 28-P, 32-P, 33-P, & 30-P | Alternative 8: Replace All Bridges |
|---|---|--|--|--|---|--|---|---|---|
| c | Economic Factors | | | | | | | | |
| 1 | Estimated Capital Costs (includes Engineering and Construction Costs) | No immediate costs, but costs of future structure removal upon failure (\$0.6M) would be higher than removing now. | Costs estimated at \$0.3M for structure removals. Least Capital Cost | \$2.3M estimated for replacement of 28-P and removal of all other structures | \$3.4M estimated for replacement of 32-P & 33-P and removal of all other structures | \$5.4M estimated for replacement of 28-P, 32-P and 33-P, and removal of 1-P and 30-P | \$6.5M estimated for replacement of 1-P, 28-P, 32-P and 33-P, and removal of 30-P | \$7.5M estimated for replacement of 28-P, 30-P, 32-P and 33-P, and removal of 1-P | \$8.6M estimated for replacement of all five structures |
| | Rating | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |
| 2 | Maintenance and Operational Costs | Ongoing maintenance of barricades for preventing public use of structure | Maintenance for bridge assets eliminated. Ongoing maintenance of barricades to prevent vehicles from entering the watercourse. | Typical maintenance costs associated with one bridge | Typical maintenance costs associated with one bridge and one culvert | Typical maintenance costs associated with two bridges and one culvert | Typical maintenance costs associated with two bridges and two culverts. Ongoing operational costs associated with access control during flooding of low-level crossing. | Typical maintenance costs associated with three bridges and one culvert | Typical maintenance costs associated with three bridges and two culverts. Ongoing operational costs associated with access control during flooding of low-level crossing. |
| | Rating | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |
| | Summary Economic Factors | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |

| | | | | | | | | | |
|---|---|--|--|--|---|---|--|--|---|
| d | Social & Cultural Environment | | | | | | | | |
| 1 | Social Environment (Way of life, connection to facilities, political, etc.) | Community continues to feel forgotten by Township. | Community continues to feel forgotten by Township. | Improved connectivity to local mennonite church; Moderate improvements to connectivity for agricultural community and ease of travel within community by horse and carriage. | 32-P & 33-P serve Creekbank Welding, a provider of farm equipment to the agricultural community; Improvements to connectivity for the agricultural community and ease of travel within community are localized; | 32-P & 33-P serve Creekbank Welding, a provider of farm equipment to the agricultural community of the Study Area; Improved connectivity to local mennonite church; Moderate improvements to connectivity for agricultural community and ease of travel within community by horse and carriage. | 32-P & 33-P serve Creekbank Welding, a provider of farm equipment to the agricultural community of the Study Area. Improved connectivity to local mennonite church; Significant improvements to connectivity for agricultural community and ease of travel within community by horse and carriage. | 32-P & 33-P serve Creekbank Welding, a provider of farm equipment to the agricultural community of the Study Area. Improved connectivity to local mennonite church; Significant improvements to connectivity for agricultural community and ease of travel within community by horse and carriage. | 32-P & 33-P serve Creekbank Welding, a provider of farm equipment to the agricultural community of the Study Area. Removes all barriers of connectivity for agricultural community and ease of travel within community by horse and carriage. |
| | Rating | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |
| 2 | Archaeological (potential to impact resources) | No disturbance to ground | All work would occur in previously disturbed areas | Excavation for structure foundations and widening of road platform | Excavation for structure foundations and widening of road platform | Excavation for structure foundations and widening of road platform | Excavation for structure foundations and widening of road platform | Excavation for structure foundations and widening of road platform | Excavation for structure foundations and widening of road platform |
| | Rating | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |
| 3 | Cultural Heritage | Visual contribution to rural character of area and historical context of bridge crossing location is maintained. | On-site context of there historically being bridge crossings at the locations are lost for all structures. | Newer structure doesn't blend as well with rural character of area. On-site context of there historically being bridge crossings at the locations are lost for 4 structures. | Newer structures don't blend as well with rural character of area. On-site context of there historically being bridge crossings at the locations are lost for 3 structures. | Newer structures don't blend as well with rural character of area. On-site context of there historically being bridge crossings at the locations are lost for 2 structures. | Newer structures don't blend as well with rural character of area. On-site context of there historically being bridge crossings at the locations are lost for 1 structure. | Newer structures don't blend as well with rural character of area. On-site context of there historically being bridge crossings at the locations are lost for 1 structure. | Newer structures don't blend as well with rural character of area. |
| | Rating | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |
| 4 | Community Preference (Based on comments received) | Does not meet any requests for community's structure replacement inputs | Does not meet any requests for community's structure replacement inputs | Replaces structure at the top requested site only | Replaces structure at the second most requested site only | Replaces structures at the two most requested sites for replacement | 28-P was most requested replacement. 32-P & 33-P were second most requested replacement. 1-P was least requested replacement | 28-P was most requested replacement. 32-P & 33-P were second most requested replacement. 30-P was requested for replacement by immediate neighbouring properties only | Satisfies most of public input, with exception of those who noted 1-P should remain closed |
| | Rating | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |
| | Summary Social & Cultural Environment | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |

| | | | | | | | | | |
|---|-----------------------------|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| e | Problem Statement | | | | | | | | |
| 1 | Addresses Problem Statement | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | Summary Problem Statement | Does not meet POS | Meets POS | Meets POS | Meets POS | Meets POS | Meets POS | Meets POS | Meets POS |

| | Alternative 1: Do Nothing | Alternative 2: Remove all bridges | Alternative 3: Replace Bridge 28-P | Alternative 4: Replace Bridges 32-P and 33-P | Alternative 5: Replace Bridges 28-P, 32-P, and 33-P | Alternative 6: Replace Bridges 28-P, 32-P, 33-P, & 1-P | Alternative 7: Replace Bridges 28-P, 32-P, 33-P, & 30-P | Alternative 8: Replace All Bridges |
|--|---------------------------|-----------------------------------|------------------------------------|--|---|--|---|------------------------------------|
| Overall Ranking (Equal Weighted Criteria) ^[1] | 8 | 6 | 2 | 5 | 1 | 3 | 4 | 7 |
| Overall Ranking (Sensitivity Analysis) ^[2] | 8 | 7 | 3 | 6 | 1 | 2 | 3 | 5 |

^[1]The ‘Overall Ranking (Equal Weighted Criteria)’ is based on the main criteria categories (Transportation, Natural Environment, Economic Factors, Social & Cultural Environment) being equally weighted.

^[2]The ‘Overall Ranking (Sensitivity Analysis)’ is based on the averaged results of a series of scenarios ran with different weighting criteria for each of the main criteria categories (Transportation, Natural Environment, Economic Factors, Social & Cultural Environment).



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix H

Consultation Records

| | |
|--|-----|
| Project Contact Lists | H.1 |
| Record of Notices | H.2 |
| Indigenous Communities Consultation Records | H.3 |
| Heritage Centre Wellington Consultation Records | H.4 |
| Township of Centre Wellington Council Consultation Records | H.5 |
| Agency Consultation Records | H.6 |
| Public Information Centre No. 1 Consultation Records | H.7 |
| Public Information Centre No. 2 Consultation Records | H.8 |
| Public Stakeholders Consultation Records | H.9 |

AGENCY CONTACT LIST

| Title | First Name | Last Name | Position | Organization | Email |
|-----------------------------|------------|-------------------|---|---|--|
| Provincial & Federal Agency | | | | | |
| Sir/Madam | | | Class EA Form | Ministry of Environment, Conservation and Parks | eanotification.wcregion@ontario.ca |
| | | | | Ministry of the Environment, Conservation and Parks - Environmental Assessment and Permissions Branch | MEA.NOTICES.EAAB@ontario.ca |
| | Joan | Del Villar Cuicas | Environmental Resource Planner & EA Coordinator (Acting) | Ministry of the Environment, Conservation and Parks, West Central Region | joan.delvillarcuicas@ontario.ca ; |
| Ms. | Tammy | Verhaeghe | District Planner, Guelph District | Ministry of Natural Resources and Forestry | tammy.verhaeghe@ontario.ca |
| Ms. | Jody | Marks | Regional Planner, Land Use Planning and Strategic Issues Section, Southern Region | Ministry of Natural Resources and Forestry | jody.marks@ontario.ca |
| Mr. | Dan | Minkin | Heritage Planner, -MCM | Ministry of Citizenship and Multiculturalism (MCM) | dan.minkin@ontario.ca |
| Ms. | Jessica | Hill | Senior Advisor - Indigenous Relations Unit | Ministry of Indigenous Affairs | jessica.hill2@ontario.ca |
| Sir/Madam | | | | Fisheries and Oceans Canada Centre for Inland Waters | info@dfo-mpo.gc.ca |
| | | | | | |
| Municipal Agency | | | | | |
| Mr. | Shawn | Watters | Mayor | Township of Centre Wellington | mayor@centrewellington.ca |
| Ms. | Kerri | O'Kane | Manager of Legislative Services & Municipal Clerk | Township of Centre Wellington | kokane@centrewellington.ca |
| Mr. | Dan | Wilson | Chief Administrative Officer | Township of Centre Wellington | dwilson@centrewellington.ca |
| Ms. | Kendra | Martin | Communications Officer | Township of Centre Wellington | kmartin@centrewellington.ca |
| Mr. | John | Gaddye | Superintendent of Public Works | Township of Centre Wellington | jgaddye@centrewellington.ca |
| Ms. | Mariana | Iglesias | Manager of Planning | Township of Centre Wellington | miglesias@centrewellington.ca |
| Mr. | Brett | Salmon | Managing Director of Planning & Development | Township of Centre Wellington | bsalmon@centrewellington.ca |
| Mr. | Adam | McNabb | Managing Director of Coporate Services & Treasurer | Township of Centre Wellington | amcnabb@centrewellington.ca |
| Ms. | Pat | Newson | Managing Director of Community Services | Township of Centre Wellington | pnewson@centrewellington.ca |
| Mr. | Lisa | MacDonald | Township Councillor - Ward 1 | Township of Centre Wellington | lisamacdonald@outlook.com |
| Mr. | Phil | Brown | Chair, Centre Wellington Heritage Committee | Township of Centre Wellington | |
| Ms. | Kimberley | Jefferson | Township Councillor - Ward 2 | Township of Centre Wellington | ward2@centrewellington.ca |
| Ms. | Barbara | Lustgarten-Evoy | Township Councillor - Ward 3 | Township of Centre Wellington | ward3@centrewellington.ca |
| Ms. | Jennifer | Adams | Township Councillor - Ward 4 | Township of Centre Wellington | ward4@centrewellington.ca |
| Ms. | Bronwynne | Wilton | Township Councillor - Ward 5 | Township of Centre Wellington | ward5@centrewellington.ca |
| Mr. | Denis | Craddock | Township Councillor - Ward 6 | Township of Centre Wellington | ward6@centrewellington.ca |
| Mr. | Phil | Brown | Chair, Centre Wellington Heritage Committee | Township of Centre Wellington | |
| Mr. | Don | Kudo | County Engineer | Wellington County | donk@wellington.ca |
| Mr. | Joe | de Koning | County Engineer | Wellington County | joedk@wellington.ca |
| Ms. | Rae | Bauman | Executive Officer/Corporate Communication/Media Relations | Township of Woolwich | rbauman@woolwich.ca |
| Mr. | Jared | Puppe | Director of Infrastructure Services | Township of Woolwich | JPuppe@woolwich.ca |
| Mr. | Ryan | Tucker | Engineering Project Supervisor | Township of Woolwich | rtucker@woolwich.ca |
| Mr. | Darryl | Schwartzentruber | Engineering Technologist | Township of Woolwich | dschwartzentruber@woolwich.ca |
| Emergency Services | | | | | |
| Mr. | Tom | Mulvey | Deputy Fire Chief | Township of Centre Wellington | tmulvey@centrewellington.ca |
| Mr. | Jonathan | Karn | Deputy Fire Chief | Township of Centre Wellington | jkarn@centrewellington.ca |
| Ms. | Chantalle | Pellizzari | Community Emergency Management Coordinator | Township of Centre Wellington | cpellizzari@centrewellington.ca |
| Ms. | Shannon | Koestner | Community Emergency Management Coordinator | Township of Centre Wellington | skoestner@centrewellington.ca |
| | Hurania | Melgar | Emergency Manager/CEMC | County of Wellington | huraniam@wellington.ca |
| Ms. | Marylin | Koch | Centre Wellington Operations Centre (Fergus) Detachment - Admin Assistant | Ontario Provincial Police | marilynkoeh@opp.ca |
| Ms. | Sherry | Hoysa | Guelph Wellington Paramedic Services | | sherry.hoysa@guelph.ca |

AGENCY CONTACT LIST

| Title | First Name | Last Name | Position | Organization | Email |
|--|------------|-----------|--------------------------------|---|--|
| Conservation Authority | | | | | |
| Ms. | Laura | Warner | Resource Planner | Grand River Conservation Authority | lwerner@grandriver.ca |
| Mr. | Trevor | Heywood | Resource Planner | Grand River Conservation Authority | theywood@grandriver.ca |
| Mr. | Dwight | Boyd | Director of Engineering | Grand River Conservation Authority | dboyd@grandriver.ca |
| School Boards & Student Transportation | | | | | |
| Ms. | Martha C. | Rogers | Director of Education | Upper Grand District School Board | amy.villeneuve@ugdsb.on.ca |
| Mr. | Michael | Glazier | Director of Education | Wellington Catholic District School Board | michael.glazier@wellingtoncdsb.ca |
| Sir/Madam | | | | Wellington-Dufferin Student Transportation Services | |
| Businesses | | | | | |
| Ms. | Janet | Harrop | President | Wellington Federation of Agriculture | |
| Mr. | Dave | Tiessen | Paster | Bethel Mennonite Church | mdavetiessen@gmail.com |
| Utilities | | | | | |
| Mr. | Ahmad | Nouman | Supervising Distribution Tech. | Hydro One -Guelph | ahmad.nouman@hydroone.com |
| Mr. | Neil | Ackerman | Bell Implementation Manager | Bell Canada | neil.ackerman1@bell.ca |

INDIGENOUS COMMUNITY CONTACT LIST

| Title | First Name | Last Name | Position | Indigenous Community | Phone | Email |
|---------|--------------------|--------------|---|---|-------------------|--|
| Chief | Mark B. | Hill | Chief | Six Nations of the Grand River | 519-445-2201 | markhill@sixnations.ca |
| | Lonny | Bomberry | Lands and Resources Director | Six Nations of the Grand River | | lonnybomberry@sixnations.ca |
| | Peter | Graham | Consultation Supervisor | Six Nations of the Grand River | 519-753-0665 x 54 | LRCS@sixnations.ca ; dlaforme@sixnations.ca ; |
| Ms. | Dawn | LaForme | | Six Nations of the Grand River | 519-445-2201 | dlaforme@sixnations.ca |
| Chief | R. Stacey | Laforme | Chief | Mississaugas of the Credit First Nation | 905-768-1133 | Stacey.Laforme@mncfn.ca |
| Mr. | Mark | Laforme | Director of Consultation | Mississaugas of the Credit First Nation | | Mark.Laforme@mncfn.ca |
| | Abby | LaForme | Consultation Manager | Mississaugas of the Credit First Nation | 905-768-4260 | abby.laforme@mncfn.ca |
| | Adam | Laforme | Archaeology/FLR Participation contact | Mississaugas of the Credit First Nation | | adam.laforme@mncfn.ca |
| | Jesse | Fieldwebster | Manager of Lands, Resources and Consultations | Métis Nation of Ontario | (705)-529-6000 | consultations@metisnation.org jessef@metisnation.org |
| | | | | Haudenosaunee Development Institute | (519) 755-2769 | info@hdi.land |
| Hohahes | Leroy | Hill | Secretary to the Haudensaunee Confederacy | Haudenosaunee Confederacy | 519-445-4222 | communications@hdi.land ; jocko@sixnationsns.com ; info@hdi.land ; 1749resource@gmail.com |
| | Raechelle (Janice) | Williams | Environmental Supervisor | Haudenosaunee Confederacy | 519-445-4222 | janicewilliams@hdi.land |

PROPERTY OWNERS MAILING LIST

| PROPERTY LIST FOR NOTICE MAILOUTS | Notice of Commencement Sent | Notice of PIC 1 Sent | Notice of PIC 2 Sent |
|---|-----------------------------|----------------------|----------------------|
| 6978 THIRD LINE W, RR1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6978 THIRD LINE W, RR1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7253 WELLINGTON RD 17, RR2 ALMA, ON N0B 1A0 | Y | Y | Y |
| 7253 WELLINGTON RD 17, RR2 ALMA, ON N0B 1A0 | Y | Y | Y |
| 7371 WELLINGTON RD 17, RR2 ALMA, ON N0B 1A0 | Y | Y | Y |
| 6412 WELLINGTON RD 7, RR2 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6950 FIRST LINE W, RR 2 ALMA, ON N0B 1A0 | Y | Y | Y |
| 7098 SIDEROAD 5, RR 1 STN MAIN ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 6985 WELLINGTON RD 17, RR 1 STN MAIN ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 6979 WELLINGTON RD 17, RR 1 STN MAIN ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 7097 SIDEROAD 5, RR 1 STN MAIN ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 7090 WELLINGTON RD 18, RR 1 STN MAIN ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 7124 WELLINGTON RD 18, RR 1 STN MAIN ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 7108 WELLINGTON RD 18, RR 1 STN MAIN ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 7137 WELLINGTON RD 17, RR 1 STN MAIN ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 6888 FIRST LINE W, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6780 FIRST LINE W, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6976 EIGHTH LINE W, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6820 EIGHTH LINE W, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6728 FIRST LINE W, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6734 THIRD LINE W, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6734 THIRD LINE W, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 7242 WELLINGTON RD 18, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6644 THIRD LINE W, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6802 THIRD LINE W, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6650 EIGHTH LINE W, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6711 EIGHTH LINE W, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6707 EIGHTH LINE, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6987 EIGHTH LINE W, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 7233 SIDEROAD 11, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6935 EIGHTH LINE W, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 7233 SIDEROAD 11, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6802 THIRD LINE W, RR 1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| 6887 FIRST LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7317 SIDEROAD 5, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6867 EIGHTH LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6924 EIGHTH LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7140 SIDEROAD 5, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7122 SIDEROAD 5, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7021 SIDEROAD 5, RR 1 ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 7108 SIDEROAD 5, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7105 SIDEROAD 5, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6862 EIGHTH LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6862 EIGHTH LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7102 SIDEROAD 5, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7000 THIRD LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6681 THIRD LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6857 EIGHTH LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6965 WELLINGTON RD 7, RR 1 ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 6965 WELLINGTON RD 7, RR 1 ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 7021 SIDEROAD 5, RR 1 ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 7021 SIDEROAD 5, RR 1 ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 7021 SIDEROAD 5, RR 1 ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 7270 SIDEROAD 14, RR 1 ARISS, ON N0B 1B0 | Y | Y | Y |
| 7270 SIDEROAD 14, RR 1 ARISS, ON N0B 1B0 | Y | Y | Y |
| 7270 SIDEROAD 14, RR 1 ARISS, ON N0B 1B0 | Y | Y | Y |
| 7270 SIDEROAD 14, RR 1 ARISS, ON N0B 1B0 | Y | Y | Y |
| 6699 THIRD LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6730 EIGHTH LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6719 THIRD LINE, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |

| PROPERTY LIST FOR NOTICE MAILOUTS | Notice of Commencement Sent | Notice of PIC 1 Sent | Notice of PIC 2 Sent |
|--|-----------------------------|----------------------|----------------------|
| 6893 FIRST LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7397 SIDEROAD 5, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7187 SIDEROAD 11, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7187 SIDEROAD 11, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7256 WELLINGTON RD 18, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6882 FIRST LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6860 FIRST LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7284 SIDEROAD 5, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6865 THIRD LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6365 EIGHTH LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6878 WELLINGTON RD 7, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6830 FIRST LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6830 FIRST LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6830 FIRST LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6830 FIRST LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6930 FIRST LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6708 EIGHTH LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7146 NOAH RD, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6680 EIGHTH LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6731 EIGHTH LINE, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6689 EIGHTH LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6892 THIRD LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6882 THIRD LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6862 THIRD LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6980 MIDDLEBROOK RD, RR 1 WEST MONTROSE, ON N0B 1V0 | Y | Y | Y |
| 6808 THIRD LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6937 EIGHTH LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7178 SIDEROAD 5, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6424 EIGHTH LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6922 THIRD LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6802 EIGHTH LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7109 SIDEROAD 11, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7109 SIDEROAD 11, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6819 FIRST LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6980 MIDDLEBROOK RD, RR 1 WEST MONTROSE, ON N0B 1V0 | Y | Y | Y |
| 7434 SIDEROAD 11, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6726 WELLINGTON RD 7, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6970 WELLINGTON RD 7, RR 1 ALMA, ON N0B 1A0 | Y | Y | Y |
| 6926 THIRD LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7188 SIDEROAD 11, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6782 THIRD LINE W, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7422 SIDEROAD 5, RR 1 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7111 NOAH RD, RR 1 ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 7284 WELLINGTON RD 21, RR #2 ARISS, ON N0B 1B0 | Y | Y | Y |
| 83 MUIR ST, PO BOX 40 MOOREFIELD, ON N0G 2K0 | Y | Y | Y |
| 7351 WELLINGTON RD 17, PO BOX 102 ALMA, ON N0B 1A0 | Y | Y | Y |
| 7351 WELLINGTON RD 17, PO BOX 102 ALMA, ON N0B 1A0 | Y | Y | Y |
| C/O HENK & DEBBIE DIRKSEN, P O BOX 99 ALMA, ON N0B 1A0 | Y | Y | Y |
| C/O D SHOEMAKER, MAPLE DRIVE SCHOOL, RR1 RPO ELORA, ON N0B 1S0 | Y | Y | Y |
| C/O MURRAY LEONARD SCHNARR, 7312 SIDEROAD 5, RR1 ELORA, ON N0B 1S0 | Y | Y | Y |
| C/O MURRAY LEONARD SCHNARR, 7312 SIDEROAD 5, RR1 ELORA, ON N0B 1S0 | Y | Y | Y |
| PO BOX 3001, 6950 THIRD LINE W ELORA, ON N0B 1S0 | Y | Y | Y |
| C/O HENK DIRKSEN, 6936 WELLINGTON RD 7 RR 1 ALMA, ON N0B 1A0 | Y | Y | Y |
| C/O HENK DIRKSEN, 6936 WELLINGTON RD 7 RR 1 ALMA, ON N0B 1A0 | Y | Y | Y |
| C/O JOYCE BAUMAN, 43 ROBERTA ST ELMIRA, ON N3B 3N8 | Y | Y | Y |
| C/O JOYCE BAUMAN, 43 ROBERTA ST ELMIRA, ON N3B 3N8 | Y | Y | Y |
| C/O JOYCE BAUMAN, 43 ROBERTA ST ELMIRA, ON N3B 3N8 | Y | Y | Y |
| ATTN: DIRECTOR RESEARCH ARIO, 1 STONE RD W, 2ND FLOOR GUELPH, ON N1G 4Y2 | Y | Y | Y |
| 7365 SIDEROAD 5 ELORA, ON N0B 1S0 | Y | Y | Y |
| RR 1 ELMIRA, ON N3B 2Z1 | Y | Y | Y |

| PROPERTY LIST FOR NOTICE MAILOUTS | Notice of Commencement Sent | Notice of PIC 1 Sent | Notice of PIC 2 Sent |
|---|-----------------------------|----------------------|----------------------|
| 6803 EIGHT LINE W ELORA, ON N0B 1S0 | Y | Y | Y |
| 7188 SIDEROAD 11 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7130 SIDEROAD 5 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7118 SIDEROAD 5 ELORA, ON N0B 1S0 | Y | Y | Y |
| 1095 GATENSBURY RD PORT MOODY, BC V3H 4C9 | Y | Y | Y |
| 795 LAKE ROAD YOUNGSTOWN, NY 14174, USA | Y | Y | Y |
| 6781 WELLINGTON RD 7 ELORA, ON N0B 1S0 | Y | Y | Y |
| 5710 ARTHUR ST N ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 5710 ARTHUR ST N ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 8435 WELLINGTON RD 22 ROCKWOOD, ON N0B 2K0 | Y | Y | Y |
| 8435 WELLINGTON RD 22 ROCKWOOD, ON N0B 2K0 | Y | Y | Y |
| 7302 WELLINGTON RD 18 ELORA, ON N0B 1S0 | Y | Y | Y |
| 7682 WELLINGTON RD 7 ALMA, ON N0B 1A0 | Y | Y | Y |
| 7112 NOAH RD ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 7111 NOAH RD ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| P O BOX 123 ALMA, ON N0B 1A0 | Y | Y | Y |
| 7192 WELLINGTON RD 18 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6680 THIRD LINE ELORA, ON N0B 1S0 | Y | Y | Y |
| 7236 WELLINGTON RD 18 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6634 THIRD LINE W ELORA, ON N0B 1S0 | Y | Y | Y |
| 6892 FIRST LINE ELORA, ON N0B 1S0 | Y | Y | Y |
| 7305 WELLINGTON RD 17 ALMA, ON N0B 1A0 | Y | Y | Y |
| 6890 WELLINGTON RD 7 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6874 WELLINGTON RD 7 ELORA, ON N0B 1S0 | Y | Y | Y |
| P.O. BOX 2942 ELORA, ON N0B 1S0 | Y | Y | Y |
| BOX 3003 ELORA, ON N0B 1S0 | Y | Y | Y |
| PO BOX 52 ALMA, ON N0B 1A0 | Y | Y | Y |
| 638 BLACK FOREST PL WATERLOO, ON N2V 1R4 | Y | Y | Y |
| 6780 WELLINGTON RD 7 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6780 WELLINGTON RD 7 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6803 THIRD LINE W ELORA, ON N0B 1S0 | Y | Y | Y |
| 6652 THIRD LINE W ELORA, ON N0B 1S0 | Y | Y | Y |
| 7148 NOAH RD ELORA, ON N0B 1S0 | Y | Y | Y |
| PO BOX 2985 ELORA, ON N0B 1S0 | Y | Y | Y |
| PO BOX 263 ELMIRA, ON N3B 2Z6 | Y | Y | Y |
| 2 WILLIAM ST ELMIRA, ON N3B 1N9 | Y | Y | Y |
| 7 ROSEWOOD PL ST CLEMENTS, ON N0B 2M0 | Y | Y | Y |
| 6927 EIGHTH LINE W ELORA, ON N0B 1S0 | Y | Y | Y |
| PO BOX 712 ST JACOBS, ON N0B 2N0 | Y | Y | Y |
| 7129 SIDEROAD 11 ELORA, ON N0B 1S0 | Y | Y | Y |
| GD WATERDOWN, ON L0R 2H0 | Y | Y | Y |
| 7573 SIDEROAD 5 ELORA, ON N0B 1S0 | Y | Y | Y |
| 6798 FIRST LINE W ELORA, ON N0B 1S0 | Y | Y | Y |
| 6780 FIRST LINE W ELORA, ON N0B 1S0 | Y | Y | Y |
| 7146 WELLINGTON RD 18 ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 7125 WELLINGTON RD ELMIRA, ON N3B 2Z1 | Y | Y | Y |
| 6986 FIRST LINE W ALMA, ON N0B 1A0 | Y | Y | Y |
| 66 ARROW RD, GUELPH, ON N1K 1T4 | Y | Y | Y |
| RR#1, 7764 Nichol Sdrrd 5, Fergus, ON N1M 2W3 | Y | Y | Y |
| 1 Macdonald Square, Elora, ON N0B 1S0 | Y | Y | Y |
| 470 Wellington Road 18, Fergus ON N1M 2W3 | Y | Y | Y |



Notice of Commencement
Municipal Class Environmental Assessment Study for Five Bridges
in Centre Wellington (Former Pilkington Township)
July 20, 2023

Dear Property Owner(s):

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network, and their value in connecting points across the community when determining the preferred alternative.

The Township of Centre Wellington has retained R.J. Burnside & Associates Limited to undertake the study. The benefits and impacts of various options for the bridges bridge will be assessed using social, cultural, economic, and ecological criteria. The Study Area is shown in the attached Notice of Commencement.

This MCEA is being carried out in accordance with the planning and design process for Schedule B projects as outlined in the Municipal Engineers Association Municipal Class Environmental Assessment, which is approved under the Ontario Environmental Assessment Act.

The Notice of Commencement for the study has been attached to this letter for your information.

Consultation is an important part of this study. If you have any questions or comments regarding the study, or would like to be included on the mailing list to receive future notices and study updates, please contact one of the Project Team members below:

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Limited
292 Speedvale Avenue West, #20
Guelph ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington

Notice of Study Commencement

Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P

This notice was first issued on July 20, 2023

The Project

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28-P, 30-P, 32-P & 33-P) that are located within a twenty square kilometre (20km²) area of road networks located within the former Township of Pilkington. The structures are currently closed to vehicular traffic due to their deteriorated state. This study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

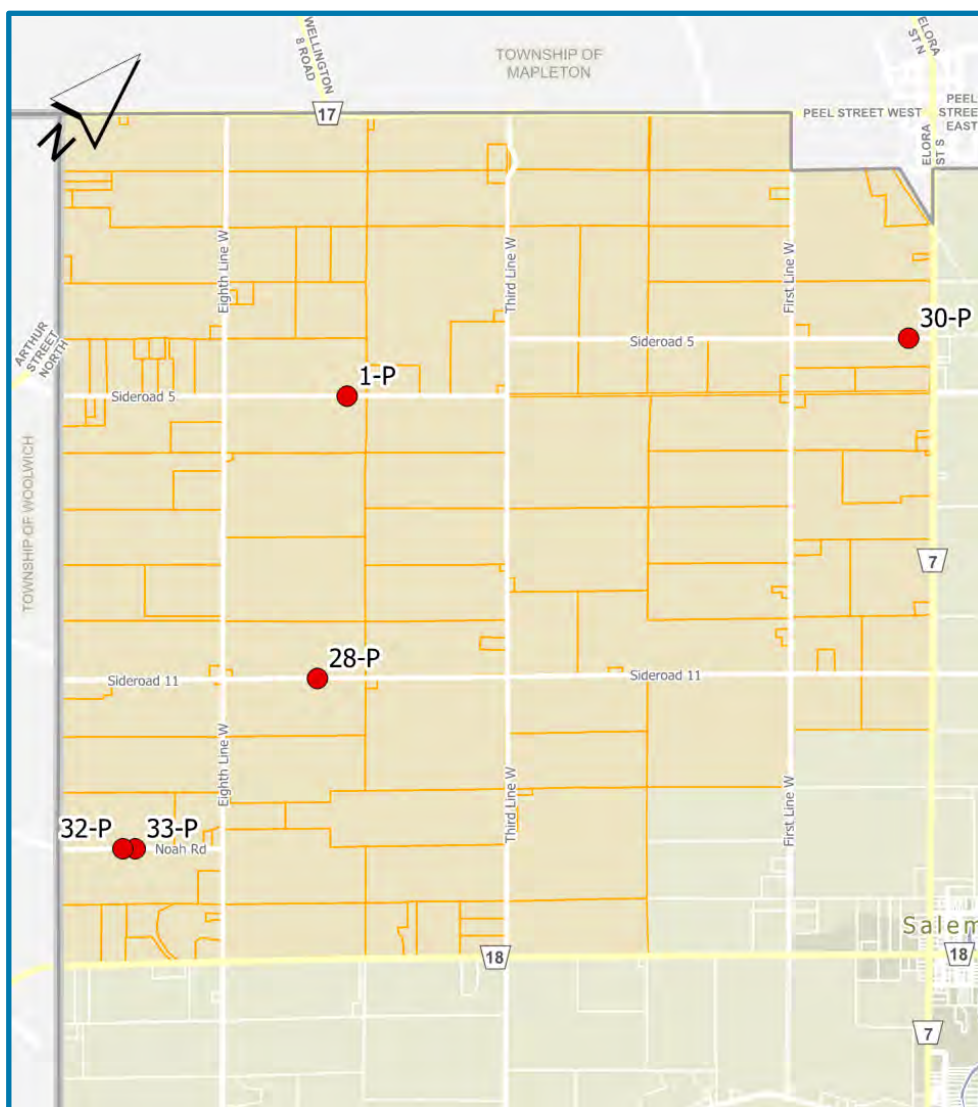
The location of the structures are shown in the key plan herein.

The Study Process

The Study is being conducted in accordance with Schedule B of the Municipal Class Environmental Assessment (October 2000, as amended) process. This notice signals the commencement of the Municipal Class Environmental Assessment (MCEA) Study. The MCEA Study will confirm and document the existing structural deficiencies and identify alternative solutions, including removal and permanent closure, rehabilitation, or replacement of the structure. The environmental impacts of each alternative will be evaluated and a technically preferred alternative will be selected in consultation with the public, agencies, and Indigenous Communities.

How to Participate

A key component to this study is public and agency consultation. The public is encouraged to provide input



and comments for consideration in developing the preferred alternative. Two in-person Public Open House meetings are planned to occur within the local community as part of this study. The first is planned for mid to late summer of 2023 and will be held to present project information to stakeholders and collect information related to the role of these structures within the local community. Details of the Open House meetings will be provided by mail to affected stakeholders, as well as advertised in the **Wellington Advertiser**, **Woolwich Observer** and on **centrewellington.ca** closer to the date under a separate notice.

We want to Hear from You!

If you have any questions or comments regarding the study, or would like to be included on the mailing list to receive future notices and study updates, please contact one of the Project Team members below:

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
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Andrew Dawson, P. Eng.

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Break point - Although smaller in numbers for the last day, the “try tennis program” in Erin typically had around 30 participants each week. Submitted photo

NOTICES



NOTICE OF STUDY COMMENCEMENT Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P *This notice was first issued on July 20, 2023*

The Project

The Township of Centre Wellington has initiated a Schedule ‘B’ Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28-P, 30-P, 32-P & 33-P) that are located within a twenty square kilometre (20km²) area of road networks located within the former Township of Pilkington. The structures are currently closed to vehicular traffic due to their deteriorated state. This study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

The location of the structures are shown in the key plan herein.



The Study Process

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We want to Hear from You!

If you have any questions or comments regarding the study, or would like to be included on the mailing list to receive future notices and study updates, please contact one of the Project Team members below:

| | |
|---|--|
| Adam Dickleson Engineering Services Coordinator Township of Centre Wellington 1 MacDonald Square, Elora, ON N0B 1S0 519-846-9691 x 355 adickleson@centrewellington.ca | Andrew Dawson, P. Eng. Consultant Project Manager R.J. Burnside & Associates Ltd. 292 Speedvale Ave W, #20, Guelph, ON N1H 1C4 705-797-4310 andrew.dawson@rjburnside.com |
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Erin Tennis Club holds final ‘try tennis program’ until fall

By Nicole Beswitherick

ERIN — On June 30, the Erin Tennis Club held its last junior youth tennis club event for the summer, which included a “last-day barbecue”.

The club ran the “try tennis program” for six weeks, and it will pick back up again for four weeks in September once school resumes.

“We were able to introduce children as young as four years of age to the sport,” explained Betty McEachern, the main coordinator of the program.

“The children learned some basic and fundamental aspects of the sport, but most importantly they had a fun activity to participate in for an hour each week with friends and new acquaintances.”

McEachern says a parent contacted her with a note about the program starting.

“my daughter really liked it! And on a personal note, I think it was such an amazing thing to offer the kids.”

“We had less numbers [the last week], but we were reaching upwards of 30 participants in the weeks prior to that last week,” stated Grant Groves, vice president of the tennis club.

Junior youth tennis is a free public community program, welcoming all youth who are interested in participating and in trying out the sport. It is coordinated by club members, and has on-court help from parents and volunteers.

On Fridays from 5 to 6pm, children aged five to 10 had the court, while youth aged 10 to 16 had it from 6 to 7pm.

“We’re not training them, it’s not lessons. It’s kind of a drop-in so that the kids can get acclimatized to enjoying the fun of tennis, getting some fitness and meet-

ing some new friends,” said Groves.

The children played tag games, dead ball and target games amongst others. Many parents of the children were in attendance each week as volunteers, which McEachern says made it a fun family affair.

With a high number of participants who were new to the sport and did not have the proper equipment, the Erin Optimists helped by donating \$300 to help cover the costs of lender racquets so participants without their own could still join in.

“It’s a wonderful way for the club to engage and give back to the community,” stated Jason Skinner, another program organizers.

Officials said they can always use volunteers, and any volunteers are welcome. Contact the Erin Tennis Club or visit erintenniscub.com for information.

NOTICES



TOWNSHIP OF WELLINGTON NORTH SCHEDULE ‘B’ MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT ARTHUR WATER SYSTEM SUPPLY REDUNDANCY AND STORAGE NOTICE OF COMMENCEMENT

The Project:

The community of Arthur is a growing urban community located within the Township of Wellington North (Township) that is serviced by municipal water, sanitary and stormwater systems. A Technical Study of the existing conditions of Arthur’s water and sanitary systems was completed in November 2020 to review the adequacy of these systems to meet the needs of the existing community and to service future development. As a result of the Technical Study and subsequent updates, it has been determined that **the existing Arthur water system requires water supply redundancy and additional water storage to support expected population growth** and has therefore initiated a Municipal Class Environmental Assessment (Class EA) for the Arthur Water System. The existing water supply wells and towers in Arthur’s water system are shown on the map below.



The Process:

The project is being planned following the Schedule ‘B’ process in the Municipal Class Environmental Assessment (Municipal Engineers Association, March 2023) to identify and evaluate alternatives to address the water supply and storage requirements and select a preferred alternative. Consultation with affected or interested stakeholders and Indigenous Communities is a key element in the planning process.

Public Involvement:

For further information on the project, or on the planning process being followed, to be added to the study mailing list or to share information for consideration and influence in the decision-making process, please consult <https://www.wellington-north.com/government/capital-projects> or contact one of the Project Team members listed below. Initial comments are welcomed and will be received until September 14, 2023.

Project Team:

| | |
|--|--|
| Lindsay Scott, P.Eng. Consultant Project Manager Triton Engineering Services Limited 105 Queen Street West, Unit 14 Fergus, ON N1M 1S6 (519) 843-3920 Ext. 251 lscott@tritoneng.on.ca | Corey Schmidt Manager, Environmental & Development Services Township of Wellington North 7490 Sideroad 7 W, P.O. Box 125 Kenilworth, ON N0G 2E0 (519) 848-3620 Ext. 4627 cschmidt@wellington-north.com |
|--|--|

Comments submitted to the Project Team for the purpose of providing feedback regarding this Municipal Class Environmental Assessment are collected under the authority of the Environmental Assessment Act. Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record. Questions relating to the collection, use and disclosure of this information may be addressed to Corey Schmidt, Manager, Environmental and Development Services, Township of Wellington North at (519) 848-3620 Ext. 4627 or cschmidt@wellington-north.com

This Notice first issued July 13, 2023.



NOTICE OF STUDY COMMENCEMENT

Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P

This notice was first issued on July 20, 2023

The Project

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28-P, 30-P, 32-P & 33-P) that are located within a twenty square kilometre (20km²) area of road networks located within the former Township of Pilkington. The structures are currently closed to vehicular traffic due to their deteriorated state. This study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

The location of the structures are shown in the key plan herein.



The Study Process

The Study is being conducted in accordance with Schedule B of the Municipal Class Environmental Assessment (October 2000, as amended) process. This notice signals the commencement of the Municipal Class Environmental Assessment (MCEA) Study. The MCEA Study will confirm and document the existing structural deficiencies and identify alternative solutions, including removal and permanent closure, rehabilitation, or replacement of the structure. The environmental impacts of each alternative will be evaluated and a technically preferred alternative will be selected in consultation with the public, agencies, and Indigenous Communities.

How to Participate

A key component to this study is public and agency consultation. The public is encouraged to provide input and comments for consideration in developing the preferred alternative. Two In-person Public Open House meetings are planned to occur within the local community as part of this study. The first is planned for mid to late summer of 2023 and will be held to present project information to stakeholders and collect information related to the role of these structures within the local community. Details of the Open House meetings will be provided by mail to affected stakeholders, as well as advertised in the Wellington Advertiser, Woolwich Observer and on centrewellington.ca closer to the date under a separate notice.

We want to Hear from You!

If you have any questions or comments regarding the study, or would like to be included on the mailing list to receive future notices and study updates, please contact one of the Project Team members below:

| | |
|---|--|
| Adam Dickleson Engineering Services Coordinator Township of Centre Wellington 1 MacDonald Square, Elora, ON N0B 1S0 519-846-9691 x 355 adickleson@centrewellington.ca | Andrew Dawson, P. Eng. Consultant Project Manager R.J. Burnside & Associates Ltd. 292 Speedvale Ave W, #20, Guelph, ON N1H 1C4 705-797-4310 andrew.dawson@rjburnside.com |
|---|--|

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Fraser Allen got to celebrate a hole-in-one July 15 at the Grey Silo Golf Course.

Young Elmira golfer notches hole-in-one at MJT tournament

Bill Atwood

Observer Staff

AT 14, ELMIRAS

FRASER ALLEN is just getting started in golf, but he has already accomplished one of the rarest things that can happen in the sport: a hole-in-one during an important tournament.

Allen completed the feat on Saturday on the 165-yard par-3 8th hole at the Grey Silo Golf Course in Waterloo while taking part in the Maple Leaf Junior Golf Tour's Maui Jim Series.

"I hit a high draw and it was tracking right at the pin. And then we saw it take a bounce right at the hole," said Allen.

However with how the hole is set up – it has a bunker in front of the green blocking the pin – Allen was unable to see his first-ever hole-in-one and had to rely on the reactions of others for confirmation.

"All the spectators just

screamed 'go in.' And then they all went crazy. I just screamed like crazy and I was just so happy."

With two-day scores of 80 and 78, Allen finished in three-way tie for fourth in the bantam boys group. The Maple Leaf Junior Tour is run by the Professional Golfers Association of Canada and hosts 100 events across the country. Allen is currently ranked 60th for boys in his age group on the tour.

The son of Cam Allen, who played the sport at a high level, he has played golf almost his entire life, but started competitively at the age of 10. Last year he joined the Galt Country Club, where a combination of coaching and being more serious about the game has caused his level.

"I'm just scoring better [this year]. And I've been putting [better], and I'm not getting as nervous as I used to. So I can still play and kind of relax

a bit, getting better at controlling those nerves."

Looking ahead to the rest of the season, Allen will be playing in the Golf Ontario U15 qualifier July 21 in Barrie and the Tee It Up Tour, a local junior tour on courses in Brant, Wellington and Waterloo counties.

"I'm going to get more practice in and really focus on controlling my nerves and making sure I can keep doubles off the scorecard – really try and grind it out if I'm not having the best ball stroking day," Allen said of preparing to play against the best golfers in his category.

Beyond that, Allen has already set his sights on college and a scholarship to play the sport.

"Any scholarship for golf would be good. And then see where that takes me, whether it's the PGA Tour, just local pro or coaching or something like that, that'd be really cool," he said.

RINGETTE: She's proud to wear the maple leaf

→ FROM 9

a strict training program to follow, set out by the Team Canada trainer. She trains five days each week and must undergo fitness testing for strength and endurance at the beginning of each training camp.

Besides meeting her commitments for Team Canada, Jacobi is also working full-time as a landscaper from 7:30 a.m. to 6 p.m., Monday to

Friday. She'll also be starting up with her National Ringette League team the Waterloo Wildfire when it starts up again in September. "I plan to play with the Waterloo Wildfire until I retire," she said.

She'll also be entering her third year of her kinesiology degree at Wilfrid Laurier University. Her next goal is to play for the Team Canada senior ringette team.

"It is an extreme honour and privilege to have the opportunity to wear the maple leaf on my chest and to represent my country in a sport that I have played and loved for the majority of my life," she said. "I am looking forward to being a mentor and an example to younger girls in sports. "It is a good feeling that all of my hard work and dedication to ringette has paid off."



Centre Wellington

Notice of Public Information Centre #1

Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P

This notice was first issued on August 24, 2023

You Are Invited!

Further to the Notice of Commencement letter that was sent on July 20, 2023 regarding the Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P, we would like to welcome your attendance at the first of two in-person Public Open House meetings for the project. This Open House Public Information Centre (PIC) will present project information to the community and stakeholders and will be an avenue for you to provide your comments relating to the role of these structures within the local community.

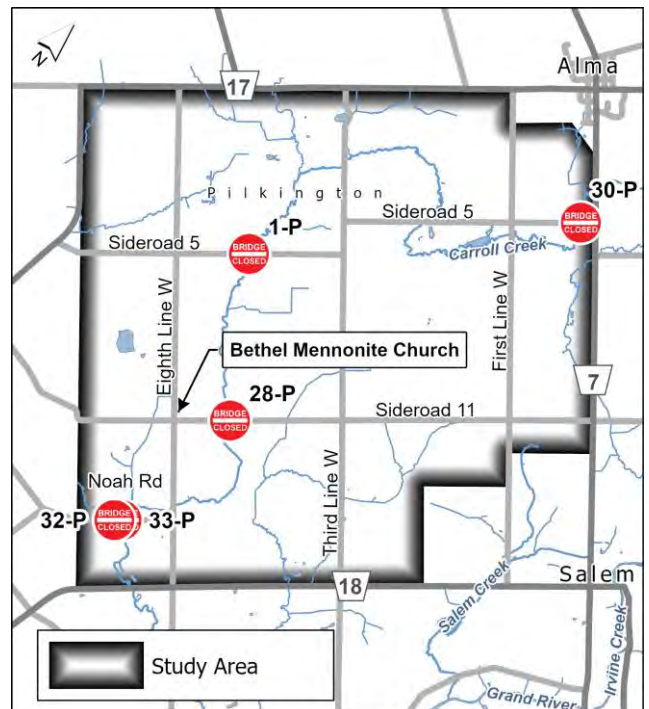
Date & Time: September 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

The Project

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28-P, 30-P, 32-P & 33-P) that are located within a twenty square kilometre (20km²) area of road networks located within the former Township of Pilkington. The structures are currently closed to vehicular traffic due to their deteriorated state. This study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

The existing structures are all narrow, single lane structures that have exceeded their service life at an age of nearly 100 years old. The structures have been closed to the public for several years due to their poor condition state and decreased load carrying capacity. The locations of the structures are shown in the key plan herein.



The Study Process

The project is being conducted in accordance with the planning and design processes for Schedule 'B' projects, as outlined in the Municipal Class Environmental Assessment (2023), which is approved under the Environmental Assessment Act. The MCEA process includes consultation with agencies, stakeholders, Indigenous communities and public; an evaluation of alternative solutions to address the problem; development of a design concept for the preferred solution; an assessment of potential environmental impacts; and identification of reasonable measures to mitigate any potential adverse impacts. At the conclusion of the Study, a Project File Report will be prepared for public review.

Consultation and Input

At the PIC, background information of the project and the MCEA process will be provided, and attendees will have the opportunity to direct any comments or questions related to the project directly to the Project Team.

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available at this webpage from **September 6th to 15th, 2023** to allow stakeholders to share, collaborate, exchange ideas and learn more about this project. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

If you have questions or comments regarding the study, or would like to be included on the mailing list to receive future notices and study updates, please contact one of the Project Team members below:

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
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Life in the fast lane — On Aug. 19, Chris Stoddart held a book signing at Sussmans Men's Wear in Arthur from 11 to 3pm. He was signing his new book called *Life in the Fast Lane*, which is an autobiography about living with spina bifida and from his beginnings as a wheelchair basketball player to his evolution into a three-time Paralympian and fifty-mile marathon racer. Stoddart shares his life journey as it parallels Canada's rise in wheelchair sports.

Photo by Nicole Beswithrick

NOTICES



NOTICE OF PUBLIC INFORMATION CENTRE #1 Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P

This notice was first issued on August 24, 2023

You Are Invited!

The Township of Centre Wellington welcomes your attendance at the first of two in-person Public Information Centre (PIC) meetings for the Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P. This PIC will present project information to the community and stakeholders and will be an avenue for you to provide your comments relating to the role of these structures within the local community.

Date & Time: September 6, 2023, 6:00 pm – 8:00 pm
Location: Bethel Mennonite Church, 6772 8th Line W., Elnora, ON N0B 1S0

The Project

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The locations of the structures are shown in the key plan herein.

The Study Process

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andrew.dawson@rjburnside.com

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SALE OF LAND BY PUBLIC TENDER THE CORPORATION OF THE TOWNSHIP OF CENTRE WELLINGTON

Take Notice that tenders are invited for the purchase of the land described below and will be received until 3:00 p.m. local time on September 7, 2023, at the Centre Wellington Municipal Office, 1 MacDonald Square, Elnora Ontario.

Description of Land: Roll No. 23 26 000 008 17200 0000; FERGUS; PIN 71401-0050 (LT); File No. 22-08; **Minimum Tender Amount: \$47,456.06**

Except as follows, the municipality makes no representation regarding the title to, any contamination concerns, or any other matters relating to the land to be sold. Responsibility for ascertaining these matters rests with the potential purchasers.

This sale is governed by the Municipal Act, 2001 and the Municipal Tax Sales Rules made under that Act. A full copy of the tax sale advertisement and further information about this matter is available on line at www.OntarioTaxSales.ca or www.centrewellington.ca

or you may contact:
Tammy Martin, Tax Administrator,
The Corporation of the Township of Centre Wellington,
1 MacDonald Square, Elnora ON N0B 1S0,
Phone: 519-846-9691 Ext 244,
Email: tmartin@centrewellington.ca

Notice of Public Information Centre #2 Municipal Class Environmental Assessment Fergus Golf Club Redevelopment

The Study

Fergus Development Inc. is undertaking a Municipal Class Environmental Assessment (MCEA) Study to evaluate alternatives for water and wastewater servicing required for the redevelopment of part of the Fergus Golf Club lands. The site location and approximate extent of the Study Area are shown on the map.



The Process

The project is being conducted in accordance with the planning and design processes for 'Schedule C' projects, as outlined in the Municipal Class Environmental Assessment (2023), which is approved under the Environmental Assessment Act. The MCEA process includes consultation with agencies, stakeholders, Indigenous communities and public; an evaluation of alternative solutions to address the problem; alternative design concepts for the preferred solution; an assessment of potential environmental impacts; and identification of reasonable measures to mitigate any potential adverse impacts. At the conclusion of the Study, an Environmental Study Report (ESR) will be prepared for public review.

Opportunity to Participate

Public consultation is important to this Study. Fergus Development Inc. would like to ensure that anyone interested in this Study can provide input. Fergus Development Inc. is inviting the public to attend the second Public Information Centre (PIC).

PIC #2 will present the results of environmental and technical studies completed to date, the alternative solutions considered and the preferred solution, and the alternative design concepts considered for the preferred solution. PIC #2 will be held as an "Open House" with materials pertaining to the study on display and members of the study team on hand to answer questions related to the project. A short presentation will be provided (see timing below).

Public Information Centre #2

Date: Monday September 11, 2023

Time: 6:00 - 8:00 p.m.

Presentation: 6:30 p.m.

Location: Belwood Hall, 36 Queen Street, Belwood, ON N0B 1J0

For More Information

To provide comment, request additional information about this Study or to be added to the Project Contact List to receive future notices, please email or contact either of the following Project Team members:

Theonas Manoharan, P.Eng.
Project Manager
Fergus Development Inc.
3190 Steeles Avenue East, Suite 300
Markham, ON L3R 1G9
Tel: 905-477-1177 x 257

Email: FergusGolfEA@rjburnside.com

Jennifer Vandermeer, P.Eng.
Consultant Project Manager
R.J. Burnside & Associates Limited
292 Speedvale Avenue West, Unit 20
Guelph, ON N1H 1C4
Tel: 226-486-1559

For more information, including study documentation, please visit the study webpage at: www.rjburnside.com/fergusgea/

Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

This Notice first issued on August 24, 2023.

TWO TRUTHS + A LIE

How is your BS detector?

↓ LAST WEEK:

Truth: Tourism Vancouver cites over 1 million nude visitors per year and is famous for its scenic views and relaxed, judgment-free atmosphere.

Truth: Tourism PEI explains on their website that the sand does make squeaking noises due to the high silica content of the sands rubbing together.

Lie: Glass Beach in Tofino is a real place, but the Coke bottle factory is made up. According to Tourism Tofino the beach was a dump site for objects like glass bottles, dishes, lightbulbs in the 1900s and those items eroded and were polished by the waves giving the beach a glittery appearance.

You can play online by reading any online post at www.observextra.com. Vote for the lie and be notified if you are correct immediately.

1 The number one summer recreational activity for Canadians is camping.

2 National and Provincial parks saw a major increase in visitors during the summer of 2021 compared to 2020.

3 The Canadian Fitness and Lifestyle Research Institute listed the second most popular pastime for Canadians is golf. More than 2 million Canadian hit the links each year.



NOTICE OF PUBLIC INFORMATION CENTRE #1 Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P

This notice was first issued on August 24, 2023

You Are Invited!

The Township of Centre Wellington welcomes your attendance at the first of two in-person Public Information Centre (PIC) meetings for the Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P. This PIC will present project information to the community and stakeholders and will be an avenue for you to provide your comments relating to the role of these structures within the local community.

Date & Time: September 6, 2023, 6:00 pm – 8:00 pm
Location: Bethel Mennonite Church, 6772 8th Line W., Elnora, ON N0B 1S0

The Project

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28-P, 30-P, 32-P & 33-P) within the former Township of Pilkington. The structures are currently closed to vehicular traffic due to their deteriorated state. This study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

The locations of the structures are shown in the key plan herein.

The Study Process

The project is being conducted in accordance with the planning and design processes for Schedule 'B' projects, as outlined in the Municipal Class Environmental Assessment (2023), which is approved under the Environmental Assessment Act. The MCEA process includes consultation with agencies, stakeholders, indigenous communities and public; an evaluation of alternative solutions to address the problem; development of a design concept for the preferred solution; an assessment of potential environmental impacts; and identification of reasonable measures to mitigate any potential adverse impacts. At the conclusion of the Study, a Project File Report will be prepared for public review.

Consultation and Input

At the PIC, background information of the project and the MCEA process will be provided, and attendees will have the opportunity to direct any comments or questions related to the project directly to the Project Team. If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available at this webpage from September 6th to 15th, 2023 to allow stakeholders to share, collaborate, exchange ideas and learn more about this project. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

If you have questions or comments regarding the study, or would like to be included on the mailing list to receive future notices and study updates, please contact one of the Project Team members below:

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elnora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.
Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20,
Guelph, ON N1H 1C4
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DYER: Corruption means change will come to Zimbabwe

→ FROM 8

Yet they will win eventually, because everybody in Zimbabwe – literally everybody – knows that the regime is corrupt and the system is rigged. Indeed, everybody except its direct beneficiaries hates it.

Robert Mugabe, the hero of the independence war, ruled the country with an iron hand for 37 years until he tried to fire his vice-president, Emmerson Mnangagwa, at the behest of his wife, Grace Mugabe.

Mnangagwa, another liberation war hero (known as 'The Crocodile'), overthrew Mugabe instead, but rules in exactly the same intransparent and ruthless style. However, he is now 80, and there are no more liberation war heroes coming up behind him.

make some sort of coalition government. In fact, it already has its feelers out.

ZANU has already been in power for longer than that (43 years), and its time is also almost up. The transition there may be rougher than that in South Africa, where the ANC never directly controlled the military and the courts always remained independent, but ZANU's role as Zimbabwe's eternal 'ruling party' is unlikely to survive.

KANNON: Changes just the appearance of doing something

→ FROM 9

In that regard, provided they're sturdy enough to bear repeated washings. But cloth presents other issues.

A recent Danish study that looked at environmental impacts beyond just greenhouse gas emissions – the likes of water use and air pollution – estimated you'd have to

use an organic cotton bag 20,000 times more than a plastic grocery bag to make using it better for the environment.

None of this is to say we shouldn't tackle our overuse of plastics. Only that we as consumers are being forced to make compromises due to government decisions that are often not well thought

out. We're too often stuck with decisions designed to make politicians look like they're doing something

– the virtue-signalling school – rather than to improve the situation. Poorly considered and implemented changes are increasingly prevalent, with the plastic bag situation just one example of many.



Schools are expected to be open as usual in September as unions poll their members. *File photo*

STRIKE VOTES: It's all about the students, say unions

→ FROM 1

in some form of action including work-to-rule, rotating strikes, and walkouts leading up to the start of the province-wide pandemic shutdowns in March 2020.

The Ontario Secondary School Teachers' Federation leadership expressed frustration with the way current bargaining is going in an internal memo to members, but have so far not announced a strike vote.

"We definitely appreciate the stress that a strike vote can take on people but I think our message at this point is, we hope to cause the least amount of disruption possible," said Pelich.

"We hope that there is no disruption because if the government returns to the table and actually engages in some of the conversation about these priority issues that are priorities for both teachers and for parents, then there won't be a strike, there won't be

any disruption."

Ontario Minister of Education Stephen Lecce released a statement this week noting the government has been bargaining in good faith and has met some 170 times with all the education unions.

"After years of difficulty, nothing should matter more than ensuring students have a full year of uninterrupted learning, with a focus on boosting reading, writing and math. The threat of another strike by some of the teacher unions just weeks ahead of the start of school is unfair to parents and moves the focus away from getting a deal that keeps kids in class.

"After private mediation was rejected, we have been available to meet every day to negotiate a deal that keeps students in class and improves the outcomes of students. I believe by staying at the table, we can and will reach a deal that keeps kids learning in classrooms

where they belong," said Lecce.

Pelich says he understands parents could be frustrated by another disruption to the school year, noting the union has been trying to bargain for a year.

"There have been reports that we're going on strike in September. That's simply not the case. We're taking a strike vote. It's part of the bargaining process, and there are many different types of collective action that members can take before we walk on the streets and schools are shut down. I know that many parents are frustrated and many parents get tired of having to deal with these things, but I think when you take a look at the bargaining goals that elementary educators have, you'll see that they're very much focused on students and improving the experience for them in our classrooms."



Notice of Public Information Centre #2

Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P

This notice was first issued on November 23, 2023

You Are Invited!

The Township of Centre Wellington welcomes your attendance at the second Public Information Centre (PIC) meeting for the Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P. This PIC will present project information to the community and stakeholders and will be an avenue for you to provide your comments relating to the role of these structures within the local community.

Date & Time: December 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

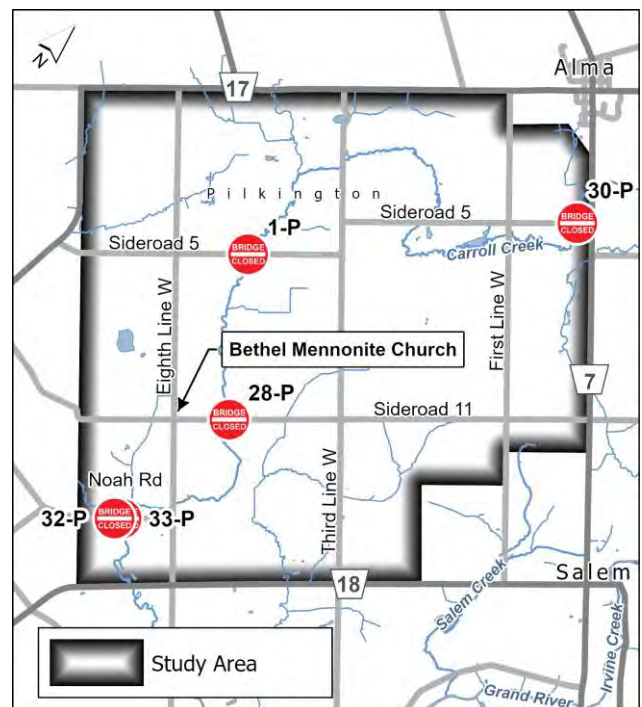
The Project

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28-P, 30-P, 32-P & 33-P) within the former Township of Pilkington. The structures are currently closed to vehicular traffic due to their deteriorated state. This study is evaluating the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

The locations of the structures are shown in the key plan herein.

The Study Process

An evaluation to review which bridges, if any, should be reopened is underway. The evaluation is being conducted in accordance with the planning and design processes for Schedule 'B' projects, as outlined in the Municipal Class Environmental Assessment (2023), which is approved under the Environmental Assessment Act. The preferred alternatives resulting from the preliminary findings of the study will be presented at this Public Information Centre. The preliminary findings to be presented are subject to final analysis and input from the public, agencies and Indigenous communities. At the conclusion of the Study, a Project File Report will be prepared for public review.



Consultation and Input

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Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
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519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
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NOTICES

Advertise here to make sure your information reaches everyone.
Email your notice to : advertising@wellingtonadvertiser.com.



Wyndham House hosts holiday fundraiser for homeless youth

GUELPH – Wyndham House is hosting an unforgettable community fundraiser, The Gift of Home, on Dec. 2 from 8pm to 12am.

The holiday party, hosted at the artBar, invites community to enjoy a lively and fun-filled evening while raising money to support homeless and vulnerable youth in Guelph.

Guests will enjoy live music from Guelph's own Uncle Harry & The Kickstands at 8:30pm and Hamilton performer Mattie Leon at 10pm.

Other entertainment for the evening includes a silent auction with items donated from local businesses, hot cocoa, appetizers, and cocktails for purchase.

Tickets can be purchased for The Gift of Home on Eventbrite for \$25 or at the door.

"We hope this event is an

opportunity for the Guelph community to come together and celebrate the holidays while also reflecting on the importance of home and the comfort it provides to the youth in our community.

"Having a place to call home creates a solid foundation from which our young people can move away from a difficult path and seek a stable future," said Wyndham House executive director Kristen Cairney.

For 50 years, Wyndham House has worked to prevent, reduce, and end youth homelessness through the provision of high quality case management, housing, and clinical support for youth with a variety of needs and complexities.

Through its permanent supportive housing model, Wyndham House provides innovative supports that focus on wellness, stability,

and healthy development for youth.

In May, Wyndham House opened the newly renovated Bellevue Project, a state of the art youth-focused supportive housing facility that creates a safe, inclusive home for eight young people.

Service expansion

This summer, the Concurrent Specialized Youth Hub was also able to expand its services and care for over 300 unique youth.

The Gift of Home event is made possible through support from Guelph businesses, including Guelph Toyota, Skyline Group of Companies, Fusion Homes, Spring Mill Distillery, Sleeman Breweries and Freightzy.

Tickets can be purchased on Eventbrite for \$25 or at the door.

For more information about Wyndham House visit wyndhamhouse.org



THE CORPORATION OF THE TOWN OF ERIN NOTICE OF APPLICATION AND PUBLIC MEETING FOR AN AMENDMENT TO THE TOWN OF ERIN ZONING BY-LAW

File: Z23-05

TAKE NOTICE that the Council of the Corporation of the Town of Erin will hold a Public Meeting to consider a proposed amendment to the Town of Erin Comprehensive Zoning By-law 07-67, pursuant to Section 34 of the Planning Act, R.S.O. 1990, as amended.

A Public Meeting will be held by the Town of Erin Council to consider this on:

December 14, 2023

Erin Municipal Office

Council Chambers

5684 Trafalgar Road

3:00 p.m. (Public participation will occur at this date/time in-person.

Please see details below)

Location of Subject Land

The property subject to the proposed amendment is legally described as Part Lot 13, Concession 3, Town of Erin, with a civic address of 5397 Wellington Road 125. The property is approximately 3.5 ha (8.65 ac) in size and location is shown on the map below.

The Purpose and Effect of the Application

The purpose and effect of the proposed zoning by-law amendment is to permit the existing riding arena on the subject property to be used as a warehouse for storage of boats, travel trailers, RV's, trucks, automobiles and tractors; and to also permit outdoor storage of the above in the area located to the rear of the existing building.

Requirements for Owners of Multi-tenanted Buildings

Upon receiving this Notice, owners of multi-tenant buildings with seven (7) or more residential units are required under the Planning Act to post this in a location that is clearly visible to all tenants.

Oral or Written Submissions

Any person or public body is entitled to attend the public meeting and make written or oral submissions in support of or in opposition to the proposed zoning by-law amendment. Written comments should be submitted to the Town Clerk at the address shown below.

Please be advised that all Council and Statutory Public Meetings offer virtual and in-person participation. While written submissions are encouraged, if you would like to make oral submissions at the public meeting, you must pre-register with the Clerk's Office by contacting clerks@erin.ca with your phone number.

TAKE NOTICE that if a person or public body would otherwise have an ability to appeal the decision of the Council of the Town of Erin to the Ontario Land Tribunal (OLT) but the person or public body does not make oral submissions at a public meeting or make written submissions to the Town of Erin before the by-law is passed, the person or public body is not entitled to appeal the decision.

AND TAKE NOTICE that if a person or public body does not make oral submissions at a public meeting, or make written submissions to the Town of Erin before the by-law is passed, the person or public body may not be added as a party to the hearing of an appeal before the Ontario Land Tribunal (OLT) unless, in the opinion of the Tribunal, there are reasonable grounds to do so.

Request for Notice of Decision

If you wish to be notified of the decision in respect of the proposed Town of Erin Zoning By-law Amendment, you must make a written request to the Clerk at the address below.

Additional Information regarding the proposed amendment, including information about appeal rights, is available between 8:30 a.m. and 4:30 p.m. at the Town of Erin Municipal Office. Please contact planning@erin.ca about obtaining information electronically.

Dated at the Town of Erin
This 20 of November, 2023

Lisa Campion, Clerk
Town of Erin
5684 Trafalgar Road
Hillsburgh, ON N0B 1Z0
T 519.855.4407
F 519.855.4821



NOTICES



NOTICE OF PUBLIC INFORMATION CENTRE #2

Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P

This notice was first issued on November 23, 2023

You Are Invited!

The Township of Centre Wellington welcomes your attendance at the second Public Information Centre (PIC) meeting for the Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P. This PIC will present project information to the community and stakeholders and will be an avenue for you to provide your comments relating to the role of these structures within the local community.

Date & Time: December 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

The Project

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28-P, 30-P, 32-P & 33-P) within the former Township of Pilkington. The structures are currently closed to vehicular traffic due to their deteriorated state. This study is evaluating the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

The locations of the structures are shown in the key plan herein.

The Study Process

An evaluation to review which bridges, if any, should be reopened is underway. The evaluation is being conducted in accordance with the planning and design processes for Schedule 'B' projects, as outlined in the Municipal Class Environmental Assessment (2023), which is approved under the Environmental Assessment Act. The preferred alternatives resulting from the preliminary findings of the study will be presented at this Public Information Centre. The preliminary findings to be presented are subject to final analysis and input from the public, agencies and Indigenous communities. At the conclusion of the Study, a Project File Report will be prepared for public review.

Consultation and Input

At the PIC, the preliminary evaluation and preferred alternatives will be provided, and attendees will have the opportunity to direct any comments or questions related to the project directly to the Project Team.

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available at this webpage from **December 6th to 21st, 2023** to allow stakeholders to share, collaborate, exchange ideas and learn more about this project. To access the online forum and review ongoing project updates, visit the webpage at:

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If you have questions or comments regarding the study, or would like to be included on the mailing list to receive future notices and study updates, please contact one of the Project Team members below:

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
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Andrew Dawson, P. Eng.
Consultant Project Manager
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292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
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TWO TRUTHS + A LIE

How is your BS detector?

↓ LAST WEEK:

Truth: According to realsimple.com, this friends-first holiday tradition is all about your friends and no strict guidelines, as long as you and your friends have a good time together.

Truth: The "Friendsgiving with Bailey's" ad campaign was launched in 2011 with the help of social media influencers featuring their product with friends shining a national spotlight on the "holiday".

Lie: The TV show is not officially part of the festivities, but it could be if you wanted. The show has been referenced alongside this holiday, but there was no mention within the series. The first mention was found on Twitter in 2007.

You can play online at www.observerextra.com/two-truths-and-a-lie/. Vote for the lie and be notified if you are correct immediately.

- 1 **Growing mustaches in the month of November raises awareness for mens health issues.**
- 2 **US Air Force members participate in Mustache March and Decembeard promote awareness for bowel cancer.**
- 3 **Clean-shaven men have less bacteria on their faces than bearded ones.**

■ Something doesn't add up at Wellesley rec. complex

To the Editor,
The new Township of Wellesley Recreation Centre has created some controversy already due to its \$27-million construction cost and the 14 per cent tax hike the township experienced due to the cost of everything rising so dramatically and quickly. However, after reading last week's Observer and the brief article about the Waterloo Regional Police Services (WRPS) looking for office space in the newly constructed recreation centre, I learned that not all costs have skyrocketed. Notwithstanding

the ongoing housing crisis with both housing and commercial rental prices being propelled to record amounts, rent in Wellesley seems downright affordable.

Apparently, exclusive use office space in the new rec. complex is priced at a shockingly low \$600 a month for the WRPS. Not only that, for \$600 month the WRPS will also receive 24-hour access to the gym facilities – for on or off duty officers I'm not certain. Now I'm not a municipal facilities operator, but I'm willing to bet you that providing access to a facility that isn't 24 hours, to only one user group, is going to cost a significant amount (lighting, security access, heating, etc). Not only that, but considering the costs of everything

nowadays, I'm not sure how \$600 in monthly rent can also cover heating, AC, lighting, electrical let alone maintenance costs for just about any sized office space.

Perhaps the worst is the CAO telling township council that "the main bonus to the township of having this is... hopefully it'll increase the police presence and potentially reduce some response times." I'm curious how many other decisions are made in the township based upon "hopeful" thinking instead of critically analyzed, third-party verified and properly budgeted decisions.

Seems like the controversy of the Wellesley recreation complex may not be over yet.

Bob Smith
ELMIRA



NOTICE OF PUBLIC INFORMATION CENTRE #2

Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P

This notice was first issued on November 23, 2023

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Date & Time: December 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

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DYER: Musk's value lies in helping the space program

→ FROM 8

all-weather sunlight in space and beam it down to Earth for energy.

You can start mining minerals that are rare on Earth but may be plentiful on the Moon and various asteroids. You can build orbital factories that exploit zero gravity for various chemical and pharmaceutical processes. And there's no pollution involved, because the fuel used is just methane, which burns

cleanly with oxygen leaving only water behind.

You can do all sorts of things we hadn't even taken seriously before, because at \$10-\$100 per kilo to orbit it all becomes affordable, including refueling in orbit for more distant destinations.

What makes Musk so important for that?

We could have had all this technology by the mid-1980s, but the two countries then financing

space flight, the US and the Soviet Union, lost interest after the US won the race to the Moon and détente de-escalated the Cold War.

Until and unless space flight becomes a widespread and commercially viable business, a shift in the political winds could stall it again. That is what makes Musk the indispensable man for the moment. Without him the momentum could easily be lost again.

KANNON: It boils down to who benefits at what cost?

→ FROM 9

While many people may appreciate the history and the aesthetics, most of us wouldn't be happy to see large tax increases to pay for privilege. Everyone is well aware – or should be – that there's an infrastructure deficit in Woolwich, along with every other

municipality, province and, indeed, the country itself. There's nowhere near enough money to meet today's requirements, let alone tomorrow's, as the existing infrastructure continues to age and deteriorate.

Still, the heritage considerations can't be

dismissed out of hand. The region has a very poor track record of protecting historical structures, many of which were left to crumble while others were torn down in favour of ugly, badly designed and poorly built replacements. That's to be avoided at (almost) all costs.

LIONS: Wellesley set to light it up for Christmas

→ FROM 3

On December 8 will be the 20th annual Christmas Tyme event, with the parade leaving the new recreation complex at 6:45. A live nativity will be held by the pond at 6:30 and 7:20 p.m. Caroling and the tree lighting will then

take place at 7:30 p.m. at the pond. A craft show will be held at the community centre on Friday from 4-8 p.m. and Saturday from 9 a.m. to 3 p.m.

The Lions Club is also hosting a clothing drive for the Wellesley Food Cupboard at the rec

complex on December 17.

Any support is welcome, Purdie said.

"We really respect and cherish the fact that people donate what they can, when they can, so we do have a few of our tried-and-true sponsors who are repeat donors or sponsors."

WCS: Dealing with growing demand for support

→ FROM 3

Tire. On those stars are gift cards that people can buy to donate.

Teenagers of the families will also receive a gift card to either Conestoga Mall, Walmart or The Bargain Shop.

"Most people donate within different age ranges. I have found over the years

that the age range that's a little bit harder would be the 11- to 12-year-old range – it's sometimes a bit harder to fill those wish lists. However, we seem to get a wide range of everything, but that would be the one that would be a little bit more difficult to fill," Reed said.

Those interested in

providing support can also sponsor a specific family. Information to match their giving budget will be provided to the sponsor including the number of people in the family, what their needs/wants are, clothing sizes and ages. Based on this information the sponsor then shops for that family.

Crystal Ferguson

From: Andrew Dawson
Sent: Wednesday, April 03, 2024 9:49 AM
To: Mark LaForme; Abby LaForme; Adam LaForme
Cc: ADickieson@centrewellington.ca; Tricia Radburn; Matt Brooks; Crystal Ferguson; Jamie Lemon
Subject: RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Attachments: Bridges 28-P, 32-P and 33-P_Stage 1 AA 21Mar2024_DRAFT.pdf

Mr. LaForme,

During previous phone discussions with our team on February 2, 2024, you had requested we provide you with the Stage 1 Archaeological Assessment if it recommended Stage 2 studies. The report has recently been provided to us in Draft format and recommends that Stage 2 studies be undertaken in a couple small areas with archaeological potential at structures 28-P and 33-P. Please see attached for a copy of the DRAFT Stage 1 report.

The Township will be proceeding with the recommended Stage 2 studies and combining the findings of that study with this Draft report prior to finalizing a combined final Archaeological Assessment report. Our team and/or our archaeological sub-consultants will be sending further correspondence to you once the schedule of the Stage 2 works is confirmed. I have cc'd our sub-consultant (Parslow Heritage Consultancy Inc) contact, Jamie Lemon on this email.

If you have any specific interests or requests at this time as we begin to coordinate the undertaken of the Stage 2 studies, please let us know as soon as possible.

Feel free to call me to discuss the Stage 1 findings or proposed Stage 2 study if you desire.

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: Mark LaForme <Mark.LaForme@mncfn.ca>
Sent: Friday, July 21, 2023 12:31 PM
To: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>; Abby LaForme <Abby.LaForme@mncfn.ca>; Adam LaForme <Adam.LaForme@mncfn.ca>
Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; ADickieson@centrewellington.ca
Subject: RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Hello Ms. Ferguson and Mr. Dickieson,

Thank you for providing us with the Notice of Commencement of the MCEA for Five Bridges in Centre Wellington. We have no comments or questions at this time, however, we do ask that you provide us with the EA report when it is complete.

We also ask that you inform us of any proposed archaeological studies associated with this project prior to the start of any archaeological work.

Thank you.

Kind regards,

Mark LaForme (he/him)
Director
MCFN-DOCA
4065 Hwy. 6
Hagersville, ON N0A 1H0
Phone: 905-768-4260

<http://mncfn.ca/doca>

Google Maps: <https://www.google.ca/maps/place/MNCFN-DOCA/@42.9718566,-80.0429177,15z/data=!4m5!3m4!1s0x0:0xd52b4642633e9aa2!8m2!3d42.9718566!4d-80.0429177>

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From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Sent: Friday, July 21, 2023 9:38 AM

To: Chief, R Stacey Laforme <Stacey.Laforme@mncfn.ca>; Mark LaForme <Mark.LaForme@mncfn.ca>; Abby LaForme <Abby.LaForme@mncfn.ca>; Adam LaForme <Adam.LaForme@mncfn.ca>

Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; ADickieson@centrewellington.ca

Subject: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Dear Mississaugas of the Credit First Nation:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

A summary of the project is as follows:

- | | |
|--------------------------|--|
| Project Lead: | • Township of Centre Wellington |
| Project consultant: | • R.J. Burnside & Associates Limited |
| Approval Process: | • Schedule B Municipal Class EA |
| Project Location: | • Five bridges in the former Township of Pilkington (refer to attached Notice of Commencement for a map) |
| Duty to Consult: | • The province has delegated the responsibility for consultation to the Township of Centre Wellington |
| Project Purpose: | • To assess whether one or more of the five bridges should be reopened or remain closed. |
| Studies to be completed: | <ul style="list-style-type: none">• Traffic study to review traffic patterns, volumes and flow.• Archaeological screening and additional archaeological studies, if required.• Cultural Heritage Screening and additional heritage studies, if required.• Ecological study using existing records and field observations. |

- Geotechnical study to assess soil conditions and stability, if required.
- To be determined, based on information received from your community.

Potential impacts to Treaty/Aboriginal Rights:

We are notifying you of the project (see attached notice) in hopes that you can assist our project team in determining if your community may hold interest in this project. Your comments are welcome and will be taken into consideration throughout this Municipal Class EA Study.

If you have an interest in this project, please contact one of the Project Team members below. The team is happy to provide additional information, provide opportunities for your community to participate in studies or review project reports, or meet with team members to answer questions and resolve concerns.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington

1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355

adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.

292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310

andrew.dawson@rjburnside.com

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington



Environmental Coordinator
R.J. Burnside & Associates

128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6

Office: 800-265-9662 Direct Line: +1 705-797-4352

www.rjburnside.com



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If you have received this communication in error please notify the sender at the above email address and delete this email immediately.

Thank you.

Crystal Ferguson

From: Peter Graham <LRCS@sixnations.ca>
Sent: Thursday, June 13, 2024 1:39 PM
To: Adam Dickieson; Lauren Jones
Cc: Andrew Dawson
Subject: RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Adam,

Thank you again for meeting with us. I was able to download the document without any problems. I've forwarded the below to our Archaeology Supervisor.

At the end of the day, we'd like to know what enhancements Centre Wellington are willing to implement per our discussion this morning.

Best, Peter

From: Adam Dickieson <ADickieson@centrewellington.ca>
Sent: Thursday, June 13, 2024 12:20 PM
To: Peter Graham <LRCS@sixnations.ca>; Lauren Jones <laurenjones@sixnations.ca>
Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Subject: [External] Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up

Peter, Lauren,

Thank you for taking the time to meet with both Andrew and I this morning. As discussed, the 5 Bridge Environmental Report is quite large and could not be managed on the Township web page due to the overall file size. You will find a link to this file through the Township's file sharing application 2big4email in the next few minutes. There is no password to access the report required, leave the password field blank. Let me know if you have any issue in receiving this report.

This is a link to the Township's project web page that contains additional presentation and project information.
[Centre Wellington 5 Bridge EAs in Former Pilkington Township | Connect CW](#)

Attached is a copy of today's meeting presentation.

Please coordinate with me if there is any interest in getting the stage two archaeological study that we have planned for the two structures.

We look forward in keeping communications open with Six Nations of the Grand River and provide any additional information and answer questions that you may have regarding the Centre Wellington 5 Bridge Environmental Assessment.

Regards,

Adam.



Adam Dickieson | Engineering Services Coordinator

Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

-----Original Appointment-----

From: Adam Dickieson

Sent: Wednesday, May 29, 2024 12:41 PM

To: Adam Dickieson; Dawn Russell; Adam Gilmore; Matt Brooks

Cc: Tricia Radburn; Peter Graham; Andrew Dawson

Subject: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting

When: June 13, 2024 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).

Where: Microsoft Teams Meeting

Microsoft Teams [Need help?](#)

[Join the meeting now](#)

Meeting ID: 244 147 517 595

Passcode: rpptUc

Dial in by phone

[+1 647-794-5569](tel:+16477945569), [111560467#](tel:+111560467) Canada, Toronto

[Find a local number](#)

Phone conference ID: 111 560 467#

For organizers: [Meeting options](#) | [Reset dial-in PIN](#)
[Org help](#)

Crystal Ferguson

From: Adam Dickieson <ADickieson@centrewellington.ca>
Sent: Thursday, June 13, 2024 12:20 PM
To: Peter Graham; laurenjones@sixnations.ca
Cc: Andrew Dawson
Subject: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up
Attachments: TCW_5 Bridge Study_June 13_2024_Presentation_PDF.pdf
Follow Up Flag: Follow up
Flag Status: Flagged

Peter, Lauren,

Thank you for taking the time to meet with both Andrew and I this morning. As discussed, the 5 Bridge Environmental Report is quite large and could not be managed on the Township web page due to the overall file size. You will find a link to this file through the Township's file sharing application 2big4email in the next few minutes. There is no password to access the report required, leave the password field blank. Let me know if you have any issue in receiving this report.

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Attached is a copy of today's meeting presentation.

Please coordinate with me if there is any interest in getting the stage two archaeological study that we have planned for the two structures.

We look forward in keeping communications open with Six Nations of the Grand River and provide any additional information and answer questions that you may have regarding the Centre Wellington 5 Bridge Environmental Assessment.

Regards,
Adam.



Adam Dickieson | Engineering Services Coordinator

Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

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Sent: Wednesday, May 29, 2024 12:41 PM

To: Adam Dickieson; Dawn Russell; Adam Gilmore; Matt Brooks

Cc: Tricia Radburn; Peter Graham; Andrew Dawson

Subject: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting

When: June 13, 2024 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).

Where: Microsoft Teams Meeting

Microsoft Teams [Need help?](#)

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Meeting ID: 244 147 517 595

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Township of Centre Wellington 5 Bridges in Former Pilkington Township Environmental Assessment Study

Project Overview Presentation

**Six Nations of the Grand River
June 13, 2024**



Centre
Wellington

Project Study Location



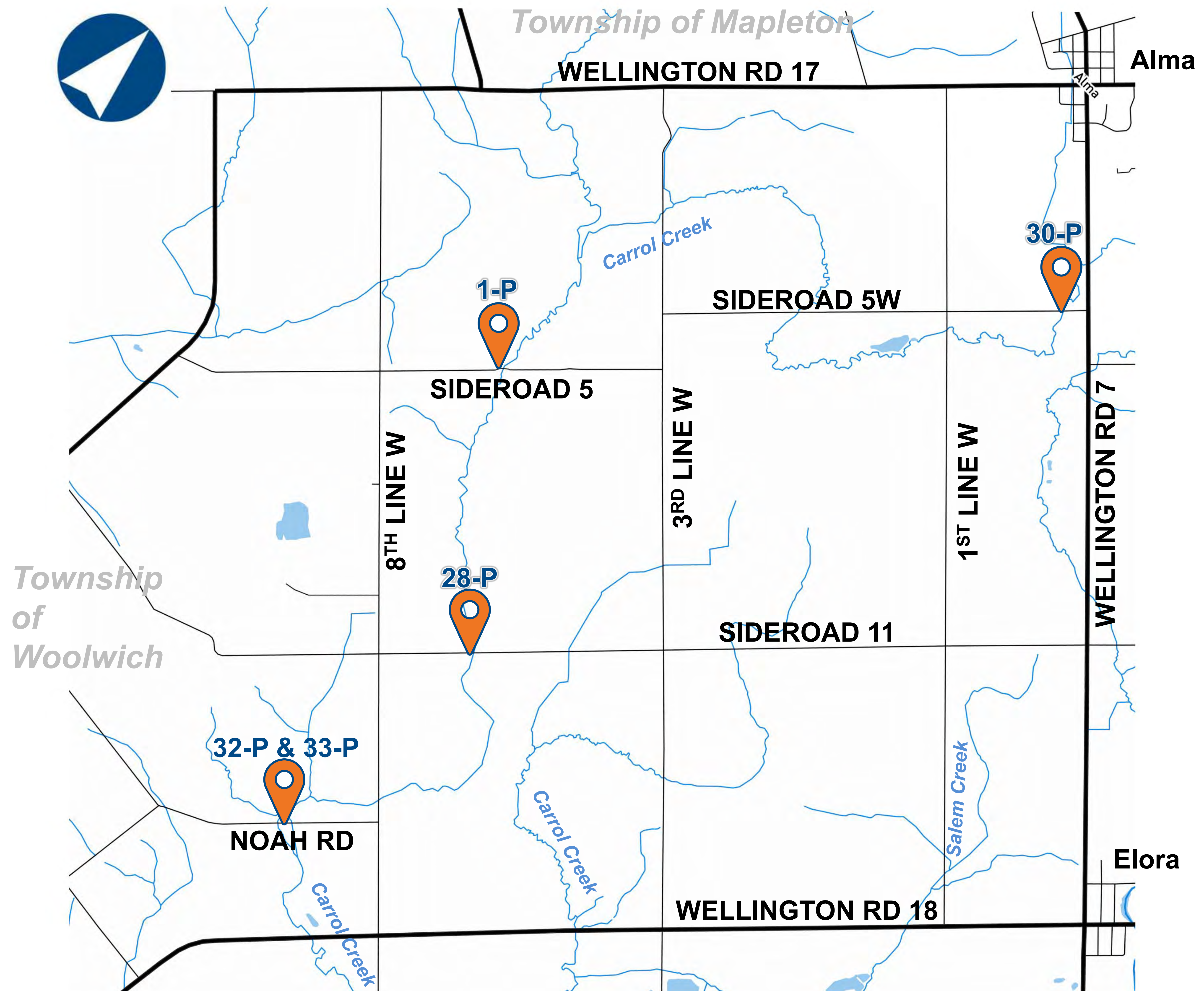
BURNSIDE

The Township of Centre Wellington



Project Study Area:

- 20 km² area in northwest quadrant of Centre Wellington
- Crossings located along Carroll Creek
- Located within the Haldimand Tract



Study Purpose:

- Address the several closed structures located within the Study Area
- Planning exercise to determine if all structures are required from transportation perspective
- Identify impacts and benefits related to proposed alternatives at each site
- Bring replacement structures up to current standards for intended use
- Follows the Schedule B Municipal Class EA process

Project Initiation :

- July 20, 2023 - Notice of Commencement

Alternatives:

- Bridge Rehabilitation, Replacement, and Removal options were explored at each of the five bridge sites.
- Removal and Replacement options at each site (Rehabilitation not feasible)
- Alternatives selected were combinations that covered the impacts of all structure replacements / removals
- Some combinations filtered out during broad-level review



Transportation



Economic



Structural / Technical



Natural Environment



Social & Cultural Environment

Cultural Heritage Assessment:

- None of the structures fulfilled the requirements for formal heritage protection under the Ontario Heritage Act
- None of the structures met the 60-point threshold for heritage value under the MTO bridge assessment standards
- Structures not considered to have Cultural Heritage Value or Interest

Natural Heritage Assessment:

- Ecological Land Classification and Botanical Inventories by Burnside staff
- Wildlife and Aquatic Habitat Assessments
- Provincially Significant wetlands present at structures 1-P and 30-P
- Candidate Species at Risk and Species of Conservation Concern identified
 - Various species of concern (birds, turtles and monarchs) have been observed at all bridge sites.
- Mitigation measures can offset the potential impacts to the Natural Heritage

Transportation Study:

- 28-P provides most beneficial East-West connection through study area
- Most benefits to emergency response and cross-community travel times occurred with opening 28-P, 32-P & 33-P.
- Additional benefits of opening 1-P and 30-P were localized and not significant

Stage 1 Archaeological Assessment:

- Conducted at Structures 28-P, 32-P, 33-P
 - 28-P has small area of archaeological potential beyond edge of road grading
 - 32-P had low archaeological potential within study area
 - 33-P has small area of archaeological potential beyond edge of road grading
- Structures 1-P and 30-P removal disturbance limits is not anticipated to extend beyond previous limits of disturbance from when original structure was constructed.

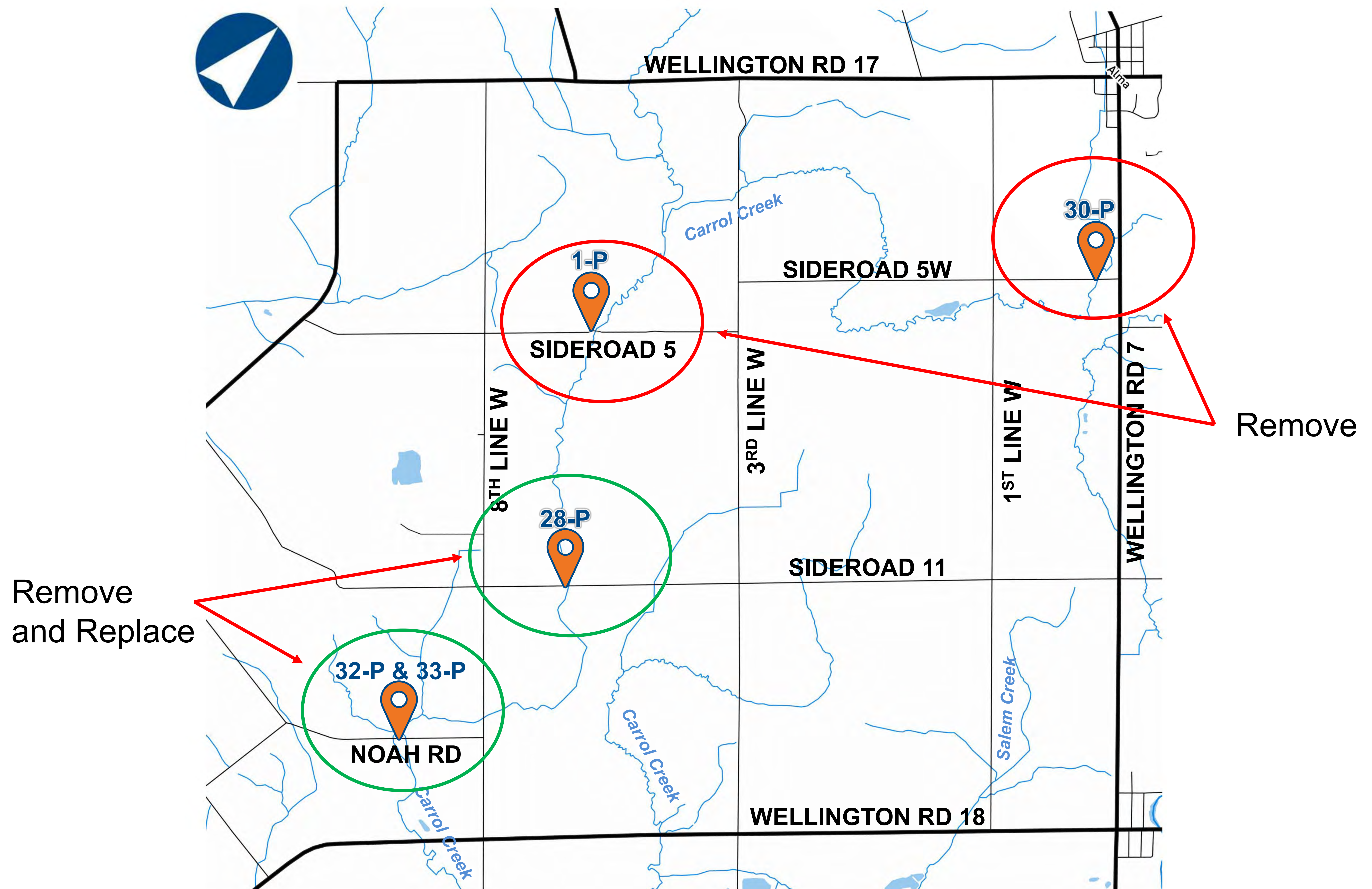
Stage 1 Archaeological Assessment:



- Stage 2 Archaeological Assessment recommended at 28-P and 33-P (in green areas of map above) prior to construction or any ground disturbance

REPLACEMENT OF BRIDGES 28-P, 32-P & 33-P & REMOVAL OF BRIDGES 1-P & 30-P

- Serve the two most travelled roadways of the Study Area
- Results in the most improvements per opened structure for cross-community travel and emergency response times.
- Emergency service and other municipal service vehicles (snow removal, road grading) not required to use neighbouring municipality roads
- Provides east-west connection alternative to County Roads (beneficial for slow moving vehicles such as farm equipment and horse and buggy)
- Best Cost-Benefit
- Opens the top two sites requested by the local community



Next Step:

Provide all project file information and reports to Six Nations of the Grand River for review to determine next steps.

QUESTIONS / COMMENTS?

If you would like to submit questions / comments following the meeting, please send them to the following Project Team members:

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora, ON N0B 1S0
Tel: 519-846-9691 ext. 355
adickieson@centrewellington.ca

Andrew Dawson, P.Eng
Consultant Project Manager
R. J. Burnside and Associates Limited
292 Speedvale Avenue West, Unit 20
Guelph, ON N1H 1C4
Tel: 705-797-4310
andrew.dawson@rjburnside.com

All previous study reports and presentations are available for review at:
www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township

If you would like to request access to the files by another means other than through the website, please contact one of the Project Team Members above



Minutes of Meeting

Meeting Date: June 13, 2024 **Project No.:** 300056693.0000

Project Name : Centre Wellington 5 Bridges EA

Meeting Subject: Six Nations of the Grand River – EA Review

Meeting Location: Virtual (Microsoft Teams)

Date Prepared: June 18, 2024

Those in attendance were:

| | | |
|----------------|---|--------------------------------|
| Adam Dickieson | Township of Centre Wellington (Township) | adickieson@centrewellington.ca |
| Peter Graham | Six Nations of the Grand River (SNGR) | petergraham@sixnations.ca |
| Lauren Jones | SNGR | laurenjones@sixnations.ca |
| Andrew Dawson | R.J. Burnside & Associates Ltd. (Burnside) | Andrew.dawson@rjburnside.com |

The following items were discussed

Action by

1. Introductions

- 1.1 Peter Graham: SNGR – Consultation Supervisor
- 1.2 Lauren Jones: SNGR – Wildlife and Stewardship Manager
- 1.3 Adam Dickieson: Township – Project Manager
- 1.4 Andrew Dawson: Burnside (Consultant) – Project Manager

2. EA Background Presentation

- 2.1 Township presented a PowerPoint outlining the project area, a background of structure condition and closures, an overview of alternatives considered and studies undertaken, findings of studies, the preferred alternative, and next steps.

| The following items were discussed | | Action by |
|------------------------------------|---|-----------|
| 2.2 | Township noted that the preferred alternative is replacement of Bridges 32-P, 33-P, and 28-P, and removal of Bridges 1-P and 30-P. | |
| 2.3 | Township to share the PowerPoint presentation with SNGR. <i>[The Township emailed SNGR the presentation on June 13, 2024, following the conclusion of the meeting.]</i> | Township |
| 3. | Project File Report | |
| 3.1 | Township to provide SNGR with a link to download the full Project File Report, which contains the Natural Heritage Report and outlines many of the identified interests related to the natural environment and the mitigation strategies to be considered during detailed design. <i>[Township provided SNGR with a link to download the Project File Report on June 13, 2024 via email, following the meeting.]</i> | Township |
| 3.2 | SNGR to review the Project File Report and provide further comments specific to the projects. | |
| 3.3 | Township to provide SNGR with the link to the ConnectCW project-specific website which contains additional information (PICs, notices, etc.) regarding the EA. <i>[Township provided SNGR with a link to the ConnectCW page on June 13, 2024 via email, following the meeting.]</i> | Township |
| 3.4 | SNGR to complete a review of the Project File Report and provide formal comments. | SNGR |
| 4. | General Requirements | |
| 4.1 | SNGR outlined their general overview of their preferred approach to EA Reviews. | |
| 4.2 | In general, the SNGR would like the Township to demonstrate that they are going above and beyond minimum legislative requirements, as often the minimum requirements are not enough to truly protect the interests of the natural environment and wildlife. | |

| The following items were discussed | | Action by |
|------------------------------------|---|-----------|
| 4.3 | SNGR desires that the project improve the environment and not just replace areas that are impacted. They would like to see an overall net improvement to the system. | |
| 4.4 | SNGR identified that they have “species of importance”, which includes species beyond those specified as Species At Risk. They would like to see these species be considered prior to them being at risk, such that they do not reach the point of formally becoming a Species at Risk. | |
| 5. | Suggested Considerations | |
| 5.1 | SNGR identified that they desire all wetlands to be protected, regardless of whether they are identified as Provisionally Significant Wetlands (PSW) or not. SNGR noted that there were changes to the classification of PSWs and some wetlands that were previously identified as PSW may no longer be; however, they are still seen to be important to the environment. | |
| 5.2 | SNGR provided a plant list which identifies whether the plants are considered significant to their community. It was noted that there are many species that have cultural significance or can be used for traditional medicine but would not appear on a typical list related to species at risk. | |
| 5.3 | SNGR identified that they have a re-planting program with Kayanase Greenhouse that the Township could work with for restoration planting. | |
| 5.4 | SNGR recommended considering “softer”, more natural bank erosion protection measures than typical rip-rap or stone armouring. Burnside noted that the existing concrete cobble armouring placed on the embankment at Bridge 33-P has been identified. | |
| 5.5 | SNGR recommended that the design of the bridge consider the alignment of the watercourse and be aligned with the watercourse to minimize erosion potential. | |
| 5.6 | SNGR recommended that the structures be designed for spans larger than bank-full flows to allow for wildlife passage. | |

| The following items were discussed | Action by |
|---|-----------------|
| <p>5.7 SNGR identified that the re-alignment of the watercourse upstream of Bridge 32-P appeared to have potential erosion concerns. Burnside noted that although a 'channel' was drawn on the conceptual drawings, the flow in this area is not within a defined channel and the velocities of flows are not anticipated to cause erosion.</p> | |
| <p>5.8 SNGR recommended that the potential spawning habitats be considered within the watercourse.</p> | |
| <p>5.9 SNGR identified that the opportunity of removing the private by-pass road could be an area where enhancements to the current conditions could be considered. The Township noted that they can discuss this with the landowner, but the private landowner would have to be willing to allow the removal of the private road, as it is within their property limits.</p> | |
| <p>5.10 SNGR recommended exploring the option of improving the natural environment by removing invasive species if they are found to be present. An example of phragmites was noted as an option.</p> | |
| <p>6. Archaeological Assessments</p> | |
| <p>6.1 Township noted that Stage 1 Archaeological Assessments (AAs) have been completed for the bridges slated for replacement and that the extent of disturbances related to the removal of Bridges 1-P and 30-P are not anticipated to disturb any previously undisturbed land and, therefore, did not have studies completed.</p> | |
| <p>6.2 Township outlined that Bridges 28-P and 33-P each had a small swath along the property line where archaeological potential was identified and a Stage 2 AA is scheduled to be undertaken.</p> | |
| <p>6.3 Township to send information regarding proposed Stage 2 AA to Peter Graham, who will forward it along to Tanya Hill-Montour for further review and determination of their preferred level of engagement for those studies.</p> | <p>Township</p> |

The preceding are the minutes of the meeting as observed by the undersigned. Should there be a need for revision, please advise Burnside within seven days of issuance. In the absence of notification to the contrary, these minutes will be deemed to be an accurate record of the meeting.

Minutes prepared by:

R.J. Burnside & Associates Limited



Andrew Dawson, P.Eng.
Project Manager
AD:mmm

Distribution:

All Attendees

| | | |
|----------------|----------|---|
| Tricia Radburn | Burnside | Via: tricia.radburn@rjburnside.com |
| Adam Gilmore | Township | Via: agilmore@centrewellington.ca |
| Matthew Brooks | Burnside | Via: matt.brooks@rjburnside.com |

Other than by the addressee, copying or distribution of this document, in whole or in part, is not permitted without the express written consent of R.J. Burnside & Associates Limited.

240613_Six Nations Mtg Minutes (056693).docx
6/18/2024 10:50 AM

Crystal Ferguson

From: Jamie Lemon <jlemon@phcgroup.ca>
Sent: Friday, June 28, 2024 12:21 PM
To: Tanya Hill-Montour; LRCS@sixnations.ca; Adam LaForme; archaeology@hdi.land; Owen Greene; Todd Williams
Cc: Andrew Dawson; Matt Brooks; Adam Dickieson
Subject: Centre Wellington Bridges EA (RFP #09-23) - Stage 2 AA
Attachments: Appendix B - Key Plan (2).pdf

Good afternoon,

PHC has been retained by RJ Burnside & Associates Ltd. to complete Stage 2 test pit survey for two bridges in the Township of Centre Wellington. The end client is the Township. These bridges, identified as 28-P and 33-P, are illustrated on the attached map. Note – of the bridges circled on the attached map, only 28-P and 33-P are part of the Stage 2 scope.

At the direction of the Township, we would like to notify you of the upcoming Stage 2 fieldwork, to give you an opportunity to provide an archaeological monitor for the duration of the work (1 day). In order to allow time for agreements with the Township to be finalized, we anticipate the fieldwork being undertaken in mid to late July.

Should you elect to provide an archaeological monitor for the fieldwork, and/or be provided with the draft archaeological assessment report for review, please provide your monitoring agreement to Adam Dickieson from the Township of Centre Wellington (cc'd).

Please do not hesitate to reach out if there are any questions. @Owen Greene and @Todd Williams, I have not included Sharann, per her notice of role change on her signature line, but please let me know if I am to continue including her on correspondence.

Thank you,

Jamie

Jamie Lemon, MA
Senior Archaeologist/Project Manager
jlemon@phcgroup.ca
226-230-0607

PHC is pleased to support a 4-day work week. Our core hours are Monday to Thursday, 8am – 5pm.

Parslow Heritage Consultancy Inc.
www.phcgroup.ca



Bridge Number
 Former Municipality Code
 Bridge ID: 21-WG (10, 4m)
 Height Limit (metres)

- Structure Condition
- Open (98)
 - Closed (13)
 - Load Restricted (6)
 - Height Restricted (3)
 - Designated Heritage
 - Narrow Structure
 - Narrow Structure With One Lane Only

Neighbouring Municipality Structures Shown:

- 0016 Township of East Garafraxa
- 2050 Township of Wellington North
- 170160 Township of Woolwich
- 180160 Township of Woolwich

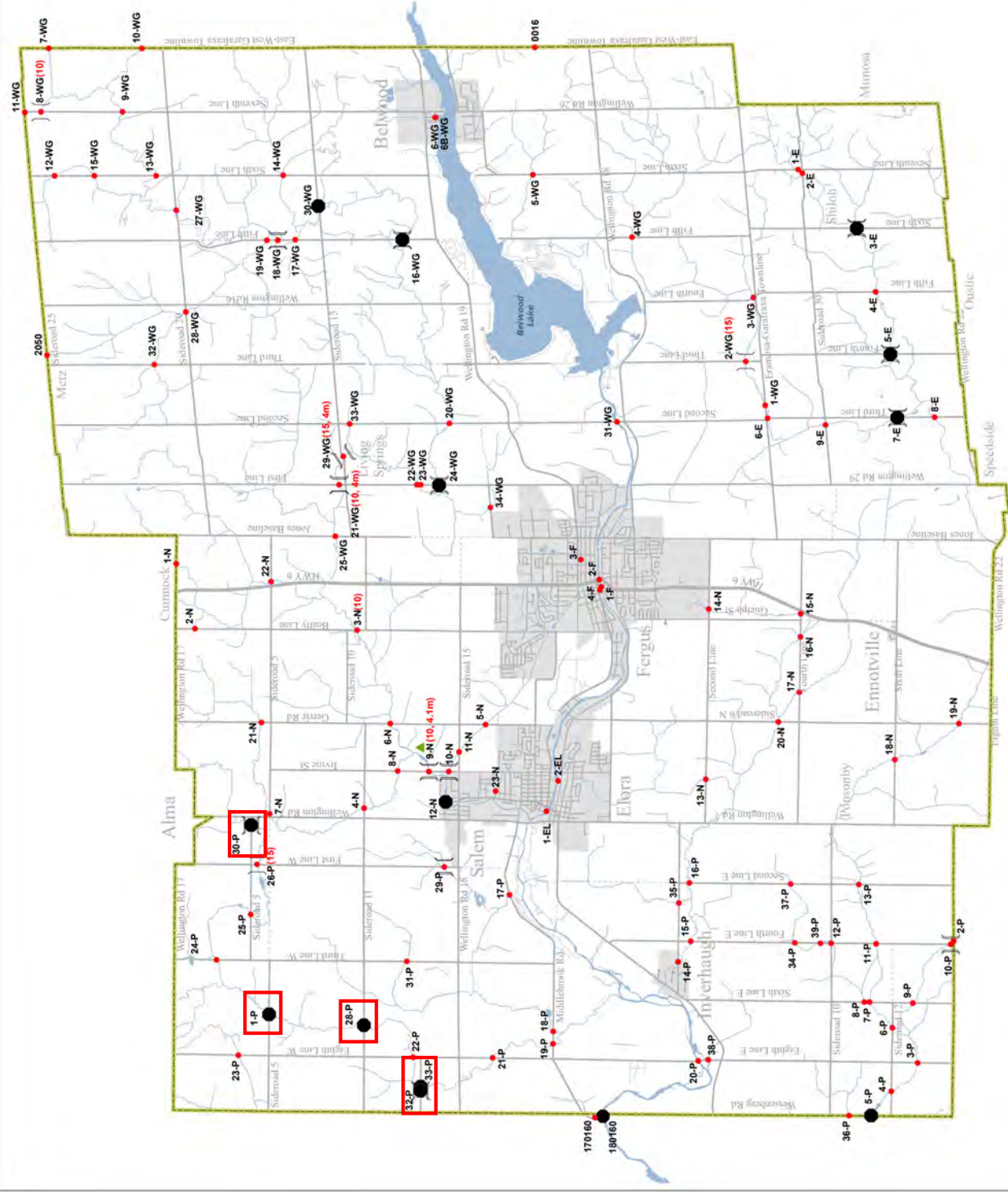
Proposed 2023
 MCEA Site

2023 Centre Wellington Structure Locations & Condition

Updated: January, 2023



© 2023 The Township of Centre Wellington
 1:85,000



Crystal Ferguson

From: Tanya Hill-Montour <tanyahill-montour@sixnations.ca>
Sent: Monday, July 01, 2024 8:28 PM
To: Andrew Dawson; Jamie Lemon
Cc: Matt Brooks; Adam Dickieson; Crystal Ferguson; Mishaal Rizwan
Subject: Re: Centre Wellington Bridges EA (RFP #09-23) - Stage 2 AA

Thanks Andrew that's great

Tanya Hill-Montour
SNGR Archaeological Supervisor
226.388.0665

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Sent: Monday, July 1, 2024 7:20:10 PM
To: Tanya Hill-Montour <tanyahill-montour@sixnations.ca>; Jamie Lemon <jlemon@phcgroup.ca>
Cc: Matt Brooks <Matt.Brooks@rjburnside.com>; Adam Dickieson <ADickieson@centrewellington.ca>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>; Mishaal Rizwan <Mishaal.Rizwan@rjburnside.com>
Subject: [External] Re: Centre Wellington Bridges EA (RFP #09-23) - Stage 2 AA

Tanya,
Apologies if there was any confusion on who received this message, but it was sent to Peter based on his direct request during our June 13, 2024 meeting with him. If you could please confirm which contacts from Six Nations should be included on all future correspondence regarding archaeological studies for this project and others in Centre Wellington, that would be much appreciated.

Regards,
Andrew Dawson

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: Tanya Hill-Montour <tanyahill-montour@sixnations.ca>
Sent: Monday, July 1, 2024 5:39:06 PM
To: Jamie Lemon <jlemon@phcgroup.ca>; Adam LaForme <Adam.LaForme@mncfn.ca>; archaeology@hdi.land <archaeology@hdi.land>; Owen Greene <owengreene@hdi.land>; Todd Williams <toddwilliams@hdi.land>
Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; Matt Brooks <Matt.Brooks@rjburnside.com>; Adam Dickieson <ADickieson@centrewellington.ca>
Subject: RE: Centre Wellington Bridges EA (RFP #09-23) - Stage 2 AA

Dawn or Tierra will reach out regarding this project notice, not sure how Peter was notified he is environmental not archaeology

Nia':wen ko:wa (thankyou)

Tanya Hill-Montour

Six Nations of the Grand River Archaeological Supervisor
226.388.0665

From: Jamie Lemon <jlemon@phcgroup.ca>

Sent: Friday, June 28, 2024 12:21 PM

To: Tanya Hill-Montour <tanyahill-montour@sixnations.ca>; Peter Graham <LRCS@sixnations.ca>; Adam LaForme <Adam.LaForme@mncfn.ca>; archaeology@hdi.land; Owen Greene <owengreene@hdi.land>; Todd Williams <toddwilliams@hdi.land>

Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; Matt Brooks <Matt.Brooks@rjburnside.com>; Adam Dickieson <ADickieson@centrewellington.ca>

Subject: [External] Centre Wellington Bridges EA (RFP #09-23) - Stage 2 AA

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At the direction of the Township, we would like to notify you of the upcoming Stage 2 fieldwork, to give you an opportunity to provide an archaeological monitor for the duration of the work (1 day). In order to allow time for agreements with the Township to be finalized, we anticipate the fieldwork being undertaken in mid to late July.

Should you elect to provide an archaeological monitor for the fieldwork, and/or be provided with the draft archaeological assessment report for review, please provide your monitoring agreement to Adam Dickieson from the Township of Centre Wellington (cc'd).

Please do not hesitate to reach out if there are any questions. @Owen Greene and @Todd Williams, I have not included Sharann, per her notice of role change on her signature line, but please let me know if I am to continue including her on correspondence.

Thank you,

Jamie

Jamie Lemon, MA
Senior Archaeologist/Project Manager
jlemon@phcgroup.ca
226-230-0607

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Parslow Heritage Consultancy Inc.
www.phcgroup.ca



Crystal Ferguson

From: Andrew Dawson
Sent: Monday, July 01, 2024 7:20 PM
To: Tanya Hill-Montour; Jamie Lemon
Cc: Matt Brooks; Adam Dickieson; Crystal Ferguson; Mishaal Rizwan
Subject: Re: Centre Wellington Bridges EA (RFP #09-23) - Stage 2 AA

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226.388.0665

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226-230-0607

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www.phcgroup.ca



Crystal Ferguson

From: Dawn LaForme <dlaforme@sixnations.ca>
Sent: Tuesday, July 02, 2024 8:51 AM
To: Adam Dickieson
Cc: Tanya Hill-Montour; Tierra Henhawk; Jamie Lemon; Andrew Dawson; Matt Brooks
Subject: RE: Centre Wellington Bridges EA (RFP #09-23) - Stage 2 AA
Attachments: 2024 Arch Monitor Agreement for One Monitor.docx

*Good morning Adam,
Attached please find the 2024 Archaeology Monitor Agreement to be filled in, signed and send back at your earliest convenience for processing.*

*Thank you kindly,
Dawn LaForme, Secretary/Receptionist, Six Nations Lands & Resources, (519) 753-0665*

From: Tanya Hill-Montour <tanyahill-montour@sixnations.ca>
Sent: Monday, July 1, 2024 5:38 PM
To: Dawn LaForme <dlaforme@sixnations.ca>
Cc: Tierra Henhawk <acmaa@sixnations.ca>
Subject: FW: Centre Wellington Bridges EA (RFP #09-23) - Stage 2 AA

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Six Nations of the Grand River Archaeological Supervisor
226.388.0665

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www.phcgroup.ca





Six Nations of the Grand River Elected Council Archaeological Monitoring Agreement

The purpose of this agreement is to ensure that Six Nations of the Grand River Elected Council (“**SNGREC**”) will be remunerated for the reasonable costs for **ONE Archaeological Monitor (“Monitor”)** in connection with archaeological work required at the location of _____ scheduled for _____, 2024 (weather dependent). The developer/proponent is _____.

The Monitor mandate will be to monitor and work directly with the archaeological firm _____ to ensure that SNGREC’s perspectives and priorities are considered, and to provide any applicable feedback to SNGREC to enable SNGREC to provide timely and meaningful comment on the Project as part of its due diligence as outlined in the Ministry of Citizenship and Multiculturalism (MCM) standards and guidelines, and the Aboriginal Engagement Process.

_____ and SNGREC (together, the “Parties”) agree that _____ will provide funding for one Monitor, on the following terms and conditions:

1. The Monitor will be selected by SNGREC and will have appropriate qualifications for the required work, for example, training in archaeology and a working knowledge of field work techniques.
2. The Monitor will be responsible for his/her own personal safety equipment, such as safety boots, safety glasses, safety vest, hard hat, etc. The Monitor will attend all applicable on-site orientation/tailgate safety meetings presented by the field director/supervisor, presenting safety issues on archaeological site/s, in conjunction with _____.
3. _____’s field director will coordinate site meeting locations and times directly with SNGREC’s point of contact person, Tanya Hill-Montour, Archaeology Supervisor. She may be contacted at cell number 226-388-0665 or her work email address tanyahill-montour@sixnations.ca.
4. _____ will reimburse SNGREC for the Monitor reasonable expenses incurred in connection with the monitoring work in the **amount of \$125.00 per hour** for one monitor. This amount will cover all costs associated with this project such as: wage, mileage, 3-hour show up time and all applicable employment fees i.e. CPP etc., and hotel/meal (if applicable), the administrative fee, and a fee for reviewing and commenting on the Archaeological Assessments being sent to the Ministry of Citizenship and Multiculturalism.
5. _____ will provide payment to SNGREC by cheque or bank transfer within 60 days of receipt of invoice. The invoice will be addressed to the following mailing address: _____ and the Project will be noted in the text of the invoice. The purchase order, etc. will be provided for the text of the invoice and then will be submitted electronically to one email address: _____

The foregoing accurately reflects the terms of the agreement that the Parties hereby agree to enter into and the undersigned agree to be legally bound hereby.

Formally offered by SNGREC on _____
(Date)

By: Lonny Bomberry _____
(Signature)

Title: Director, Lands and Resources
Six Nations of the Grand River Elected Council

Accepted by _____ on _____
(Date)

By: _____
(Print Name) (Signature)

Title: _____

This agreement will expire on December 31, 2024

Crystal Ferguson

From: Andrew Dawson
Sent: Thursday, August 15, 2024 5:09 PM
To: Peter Graham
Cc: Adam Dickieson (Centre Wellington)
Subject: RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up (RJB # 056693)

Peter,

Hope you have been keeping well!

I am wondering on the status and timeline for your Wildlife team's comments on the PFR?

Our discussions regarding the enhancements recommended by Six Nations was fairly general at the time, as it is my understanding your team had not yet familiarized yourselves with the project. I do believe that the EA had considered a number of the items you had identified during discussions as part of our Natural Heritage study and mitigation recommendations. Our preference would be to have your project-specific comments and recommended enhancements provided so that we can provide a response that addresses your specific concerns.

If you could please provide an anticipated date that we can expect to receive the comments, that would be appreciated.

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: Peter Graham <L RCS@sixnations.ca>
Sent: Thursday, July 04, 2024 1:30 PM
To: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Subject: RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up

Hi Andrew,

Just letting you know I'm not expecting a timely response from Wildlife on the PFR. If I had a higher level of concern after our meeting, I would insist on waiting until they had time to review and comment. But I think the next step here is for us to see what enhancements Centre Wellington is willing to implement based on our virtual discussion.

Thank you, Peter

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Sent: Tuesday, June 18, 2024 11:42 AM
To: Peter Graham <L RCS@sixnations.ca>; Lauren Jones <laurenjones@sixnations.ca>; Adam Dickieson <ADickieson@centrewellington.ca>
Cc: Matt Brooks <Matt.Brooks@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; Mishaal Rizwan <Mishaal.Rizwan@rjburnside.com>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>; Adam Gilmore (Centre Wellington) <agilmore@centrewellington.ca>

Subject: [External] RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up

All,

Please find the attached minutes of the meeting held on June 13th. Kindly review these meeting minutes and let me know if you feel there are any errors or omissions within the minutes as soon as possible.

We look forward to hearing further comments from Six Nations once you have completed your review of the Project File Report!

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Peter Graham <L RCS@sixnations.ca>

Sent: Thursday, June 13, 2024 1:39 PM

To: Adam Dickieson <ADickieson@centrewellington.ca>; Lauren Jones <laurenjones@sixnations.ca>

Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>

Subject: RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up

Hi Adam,

Thank you again for meeting with us. I was able to download the document without any problems. I've forwarded the below to our Archaeology Supervisor.

At the end of the day, we'd like to know what enhancements Centre Wellington are willing to implement per our discussion this morning.

Best, Peter

From: Adam Dickieson <ADickieson@centrewellington.ca>

Sent: Thursday, June 13, 2024 12:20 PM

To: Peter Graham <L RCS@sixnations.ca>; Lauren Jones <laurenjones@sixnations.ca>

Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>

Subject: [External] Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up

Peter, Lauren,

Thank you for taking the time to meet with both Andrew and I this morning. As discussed, the 5 Bridge Environmental Report is quite large and could not be managed on the Township web page due to the overall file size. You will find a link to this file through the Township's file sharing application 2big4email in the next few minutes. There is no password to access the report required, leave the password field blank. Let me know if you have any issue in receiving this report.

This is a link to the Township's project web page that contains additional presentation and project information.
[Centre Wellington 5 Bridge EAs in Former Pilkington Township | Connect CW](#)

Attached is a copy of today's meeting presentation.

Please coordinate with me if there is any interest in getting the stage two archaeological study that we have planned for the two structures.

We look forward in keeping communications open with Six Nations of the Grand River and provide any additional information and answer questions that you may have regarding the Centre Wellington 5 Bridge Environmental Assessment.

Regards,
Adam.



Adam Dickieson | Engineering Services Coordinator

Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

-----Original Appointment-----

From: Adam Dickieson

Sent: Wednesday, May 29, 2024 12:41 PM

To: Adam Dickieson; Dawn Russell; Adam Gilmore; Matt Brooks

Cc: Tricia Radburn; Peter Graham; Andrew Dawson

Subject: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting

When: June 13, 2024 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).

Where: Microsoft Teams Meeting

Microsoft Teams [Need help?](#)

[Join the meeting now](#)

Meeting ID: 244 147 517 595

Passcode: rpptUc

Dial in by phone

[+1 647-794-5569](tel:+16477945569), [111560467#](tel:+16477945569) Canada, Toronto

[Find a local number](#)

Phone conference ID: 111 560 467#

For organizers: [Meeting options](#) | [Reset dial-in PIN](#)
[Org help](#)



Minutes of Meeting

Meeting Date: September 16, 2024 **Project No.:** 300056693.0000

Project Name : Centre Wellington 5 Bridges EA

Meeting Subject: Six Nations of the Grand River – EA Review & Section 16 Order

Meeting Location: Virtual (Microsoft Teams)

Date Prepared: September 16, 2024

Those in attendance were:

| | | |
|----------------|--|--------------------------------|
| Adam Dickieson | Township of Centre Wellington (Township) | adickieson@centrewellington.ca |
| Peter Graham | Six Nations of the Grand River Elected Council (SNGREC) | petergraham@sixnations.ca |
| Lauren Jones | SNGREC | laurenjones@sixnations.ca |
| Andrew Dawson | R.J. Burnside & Associates Ltd. (Burnside) | Andrew.dawson@rjburnside.com |
| Tricia Radburn | Burnside | Tricia.radburn@rjburnside.com |

The following items were discussed

Action by

1. **Introductions**
- 1.1 Peter Graham: SNGREC – Consultation Supervisor
- 1.2 Lauren Jones: SNGREC – Wildlife and Stewardship Manager
- 1.3 Adam Dickieson: Township – Project Manager
- 1.4 Andrew Dawson: Burnside (Consultant) – Project Manager
- 1.5 Tricia Radburn: Burnside (Consultant) – EA Lead

| The following items were discussed | | Action by |
|------------------------------------|---|-----------|
| 2. | Project Environmental Enhancements Presentation | |
| 2.1 | Burnside presented a PowerPoint outlining the preliminary preferred alternatives at each site and what measures will be taken at each site to enhance the environment. A copy of the presentation slides has been enclosed. | |
| 2.2 | <p>The following was noted during the presentation, as it relates to previous requests made by the SNGREC:</p> <ul style="list-style-type: none">• Wetland areas were staked with the GRCA and impacts to wetland areas will be minimized to the extent feasible by employing means such as shored excavations to limit the footprint of the works in the vicinity of wetlands.• Requirements for replanting will be established during detailed design when the number and species of plantings is determined.• Option of using softer erosion protection measures will be strived for during detailed design where feasible; this includes removing the existing concrete cobble armouring within the right of way and replacing it with softer methods of erosion control, minimizing the use of rip-rap to the extent possible, and considering the use of vegetated retaining wall systems if viable at 32-P.• Alignment of bridges will be skewed to match the natural alignment of the watercourse to minimize erosion potential.• Areas within watercourse will be re-instated with smooth-run riverstone and topped with natural substrate.• The existing base slab at structure 30-P will be removed and the channel re-naturalized during the structure removal.• Township will approach property owners regarding removal of the private watercourse crossings located on private property, but may not have the jurisdiction to force the removal of the structures.• Bridge 33-P span is greater than the bank-full width and will provide the opportunity for wildlife passage. | |
| 3. | Structure Geometry | |
| 3.1 | Burnside confirmed that there is the opportunity for adjustments to the proposed bridges in the case that additional information gathered during the detailed design phase requires adjustments to the overall | |

| The following items were discussed | Action by |
|--|-----------------|
| <p>geometry. Significant changes to the project are not anticipated but, if required, would require an amendment to the EA.</p> | |
| <p>4. SNGREC Comments</p> | |
| <p>4.1 SNGREC noted that they do not have any further concerns related to structures 1-P and 30-P, which are not slated for replacement.</p> | |
| <p>4.2 SNGREC would like the following items to be identified as commitments during detailed design related to the replacements of bridges 28-P, 32-P and 33-P.</p> <ul style="list-style-type: none"> • Structure Geometry to be reviewed and confirmed to be sized in consideration of potential future flood events. • Preference to use softer methods of erosion protection, channel stabilization and earth retaining structures, except where may be unfeasible • Installation of near-bank cover plantings adjacent to watercourse • Replanting ratios of 10:1 (10 trees planted for every 1 tree removed), with a preference of plantings to be included on-site, within the Township right-of way. Off-site plantings will also be considered acceptable; however, if possible, the first preference is to have plantings placed within the immediate adjacent private properties if agreed upon by the property owner(s). • Species to be planted are to be selected from the SNGREC's plant list which identify species of interest or importance to SNGREC. Species selected during detailed design should consider suitability of planting site. Kayanse Greenhouse is available for consultation regarding replanting initiatives during detailed design. • Review of the alignment options for Bridge 32-P, including the use of radius or 'elbows' sections to optimize alignment from the upstream watercourse to the downstream private watercourse crossing. | |
| <p>4.2.1 Burnside to provide draft verbiage outlining the above noted requests for SNGREC review and approval, prior to the detailed design commitments being added to the project file report.</p> | <p>Burnside</p> |

| The following items were discussed | | Action by |
|------------------------------------|--|-----------|
| 5. | Project File Report | |
| 5.1 | Burnside to revise the Project File Report to include the additional detailed design commitments, once the verbiage has been reviewed and approved by the SNGREC. | Burnside |
| 6. | Section 16 Order | |
| 6.1 | Upon acceptance of the additional verbiage in the Project File Report, SNGREC noted that they will contact the MECP and all previously included contacts on the Section 16 Order request to identify that all matters related to the previous order request have been resolved and ask that their Section 16 Order request be revoked. | SNGREC |

The preceding are the minutes of the meeting as observed by the undersigned. Should there be a need for revision, please advise Burnside within seven days of issuance. In the absence of notification to the contrary, these minutes will be deemed to be an accurate record of the meeting.

Minutes prepared by:

R.J. Burnside & Associates Limited

Andrew Dawson, P.Eng.
Project Manager
AD:mmm

Enclosure(s): September 16, 2024 Six Nations Meeting – Presentation Slides

Distribution:

All Attendees

Adam Gilmore Township
Matthew Brooks Burnside

Via: agilmore@centrewellington.ca
Via: matt.brooks@rjburnside.com

Other than by the addressee, copying or distribution of this document, in whole or in part, is not permitted without the express written consent of R.J. Burnside & Associates Limited.

Township of Centre Wellington

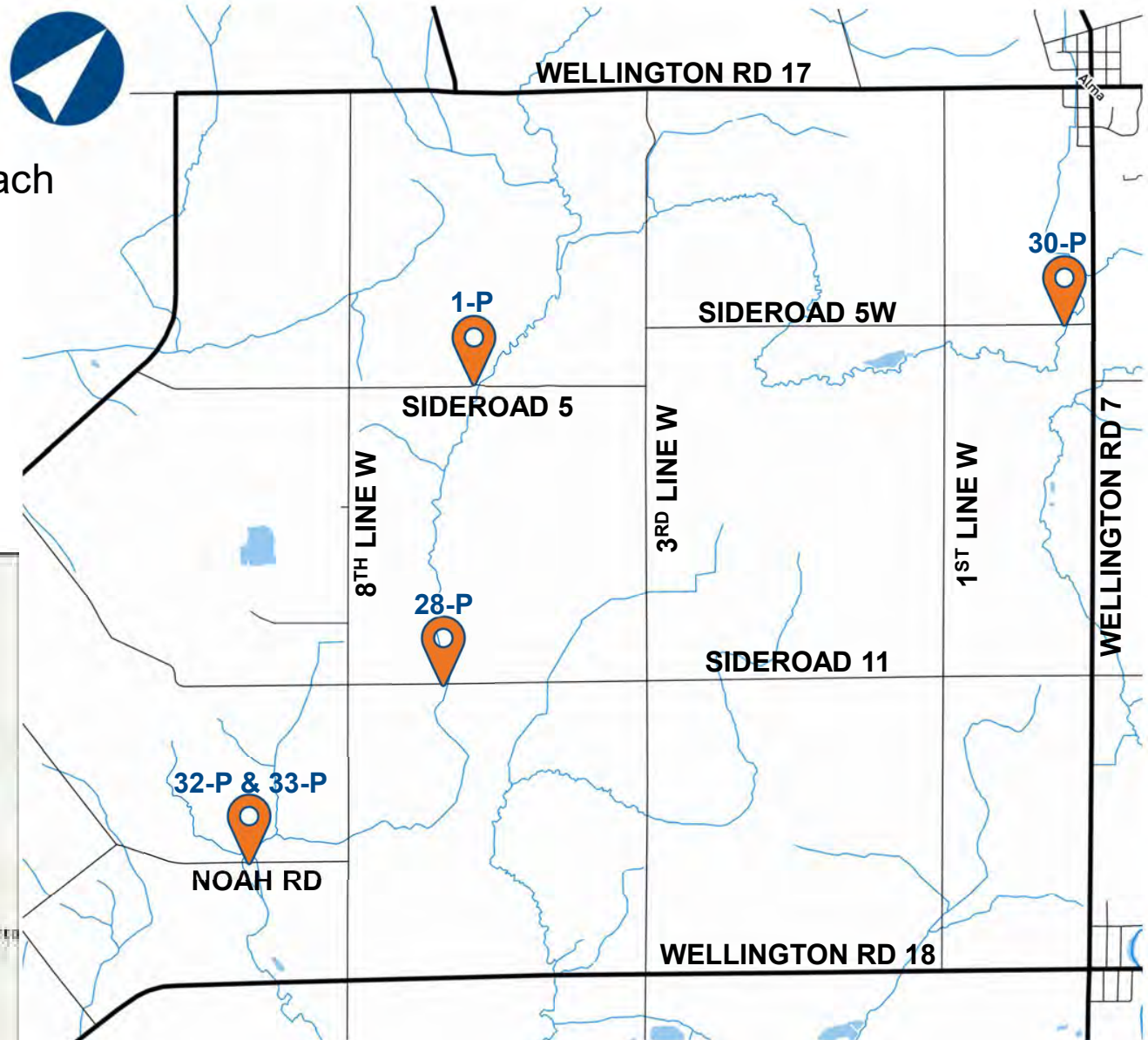
5 Bridges in Former Pilkington Township

Environmental Assessment Study

Meeting with Six Nations of the Grand River
September 16, 2024

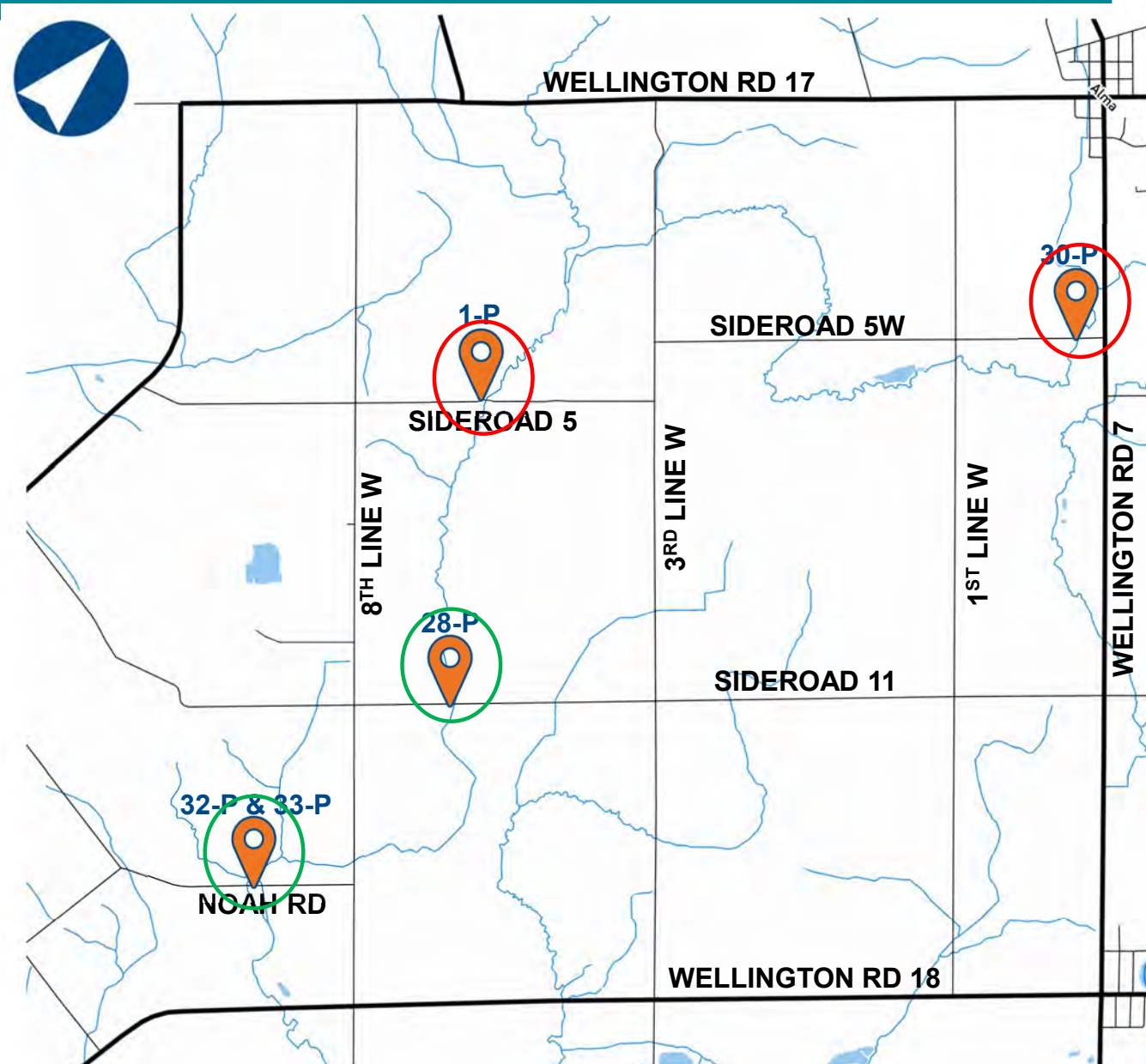
Project Study Area:

The study area for the natural heritage report is 120m around each bridge



Preferred Alternative:

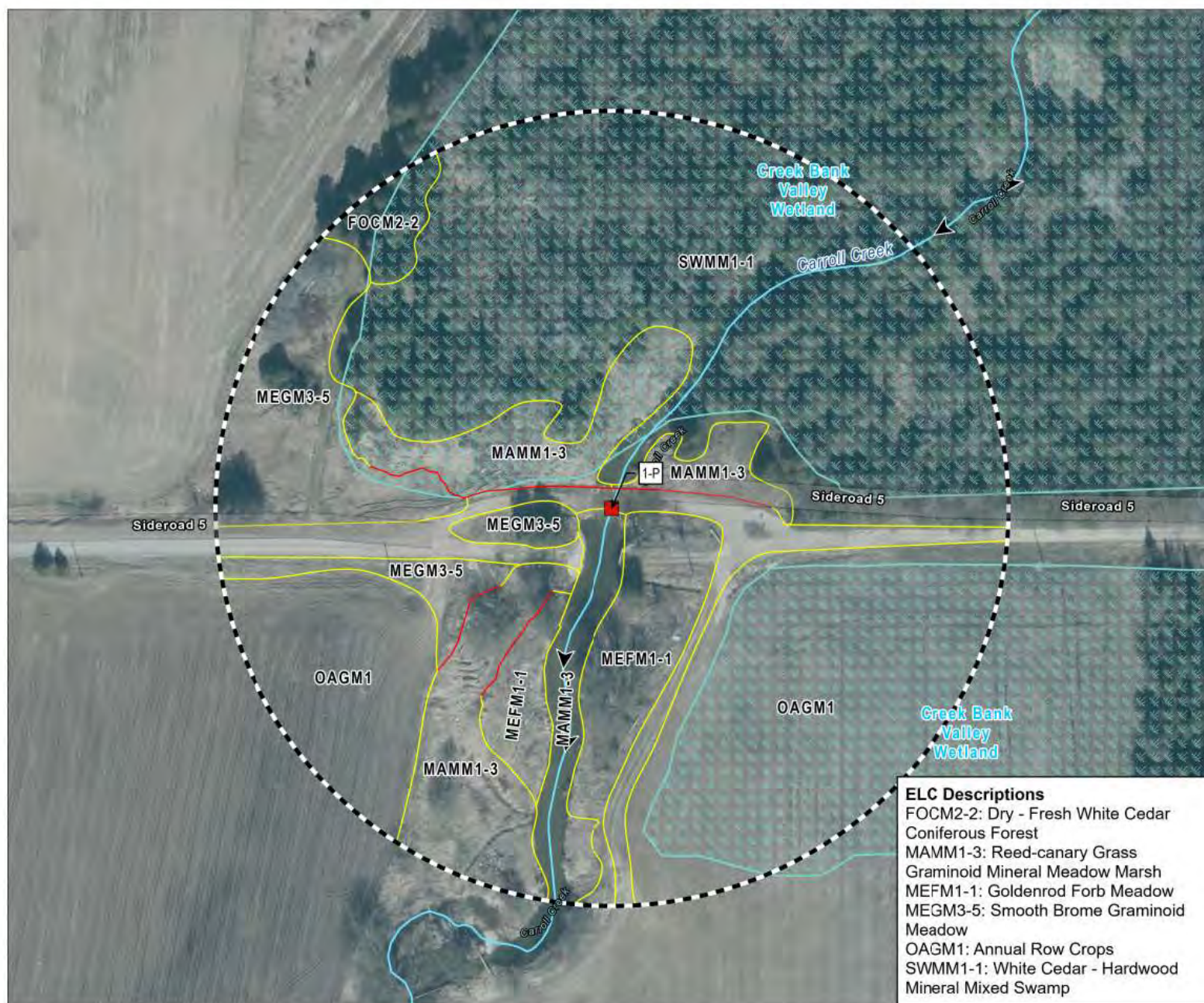
- Close bridges 1-P and 30-P and add a turn around.
- Replace bridges 28-P, 32-P and 33-P



- 📍 Sideroad 5, Between 8th Line W & 3rd Line W
- 🔧 Constructed circa 1925
- 🚫 Closed to Traffic: 2004
- 🏗️ Steel Truss Superstructure (Removed in 2019)

STRUCTURE NOT BEING
REPLACED





- Bridge Location
- Staked Wetland (GRCA)
- Watercourse**
 - Thermal Regime (Warm)
 - Provincially Significant Wetland
 - Ecological Land Classification
 - Study Area (100m)

Sources:

1. Ministry of Natural Resources and Forestry © King's Printer for Ontario.
2. Natural Resources Canada © His Majesty the King in Right of Canada.

Disclaimer:

R.J. Burnside & Associates Limited and the above mentioned sources and agencies are not responsible for the accuracy of the spatial, temporal, or other aspects of the data represented on this map. It is recommended that users confirm the accuracy of the information represented.

This map is the product of a Geographic Information System (GIS). As such, the data represented on this map may be subject to updates and future reproductions may not be identical.

Datum: North American 1983

Coord. System: NAD 1983 UTM Zone 17N

Projector: Transverse Mercator

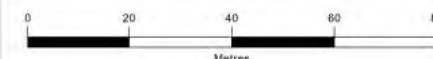
Central Meridian: 81°09.00"W

False Easting: 500,000m False Northing: 0m

Page Orientation: -45° Scale Factor: 0.99960



Grid North



Client

**TOWNSHIP OF CENTRE
WELLINGTON**

Figure Title

**CENTRE WELLINGTON - MCEA FOR
5 BRIDGES
NATURAL HERITAGE FEATURES
BRIDGE 1-P**

| Drawn | Checked | Date | Figure No. |
|-----------|---------|-------------|------------|
| HN | AB | 2023/09/15 | 1 |
| Scale | | Project No. | |
| H 1:1,000 | | 300056693 | |

ELC Descriptions

FOCM2-2: Dry - Fresh White Cedar
Coniferous Forest

MAMM1-3: Reed-canary Grass

Graminoid Mineral Meadow Marsh

MEFM1-1: Goldenrod Forb Meadow

MEGM3-5: Smooth Brome Graminoid
Meadow

OAGM1: Annual Row Crops

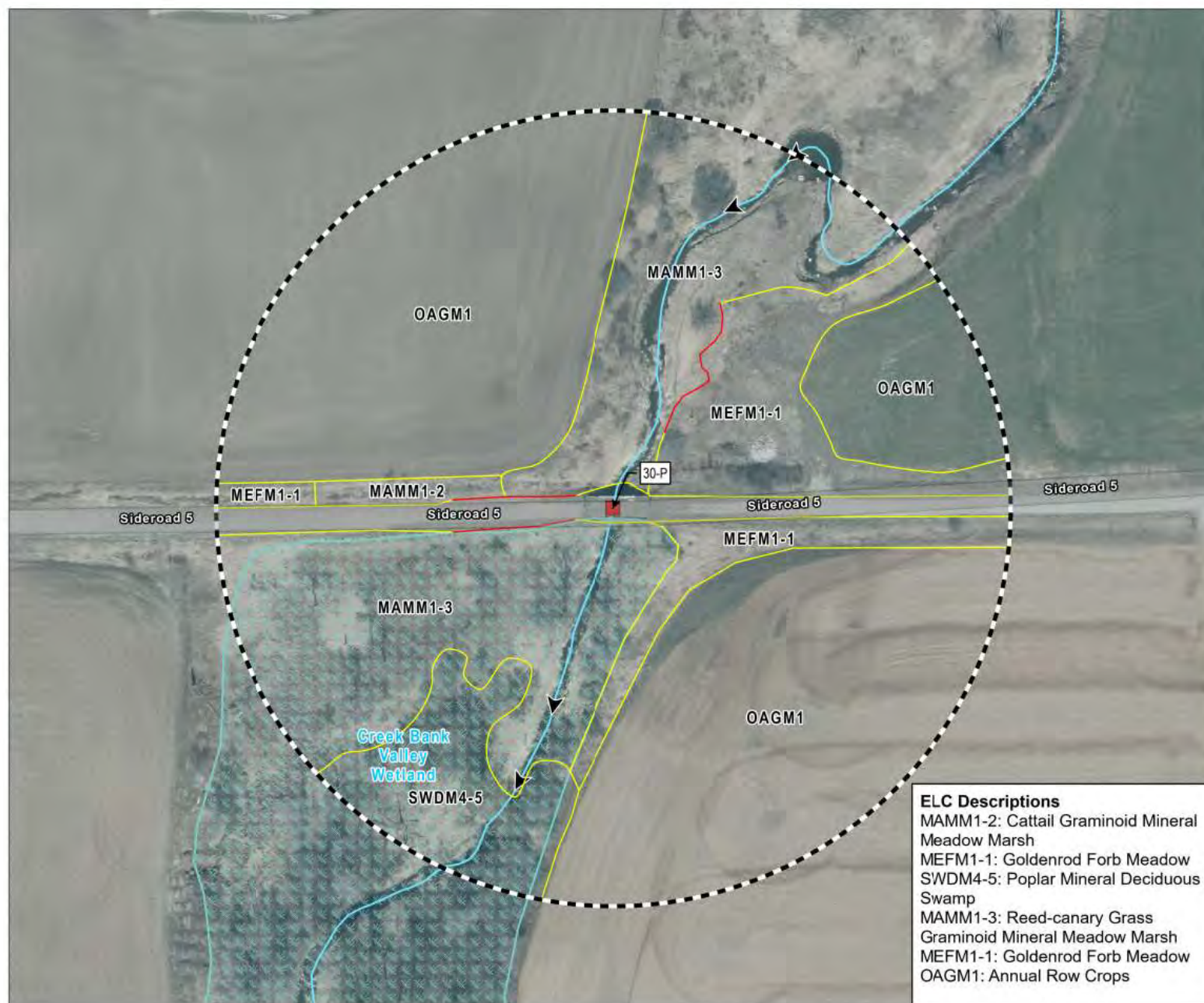
SWMM1-1: White Cedar - Hardwood
Mineral Mixed Swamp

- 📍 Sideroad 5, West of Wellington Road 7
- 🔧 Constructed circa 1929
- 🚫 Closed to Traffic: 2016
- 🏠 Concrete Through Girders

**STRUCTURE NOT BEING
REPLACED**

Remove bridge and re-naturalize all areas disturbed by structure removal, including channel.





- Bridge Location
- Staked Wetland (GRCA)
- Watercourse**
 - Thermal Regime (Warm)
- Provincially Significant Wetland
- Ecological Land Classification
- Study Area (100m)

Sources:

1. Ministry of Natural Resources and Forestry © King's Printer for Ontario.
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Coord. System: NAD 1983 UTM Zone 17N

Projector: Transverse Mercator

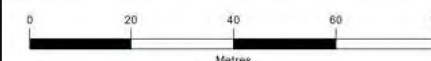
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False Easting: 500,000m False Northing: 0m

Page Orientation: 45° Scale Factor: 0.99960



Grid North



Client

**TOWNSHIP OF CENTRE
WELLINGTON**

Figure Title

**CENTRE WELLINGTON - MCEA FOR
5 BRIDGES
NATURAL HERITAGE FEATURES
BRIDGE 30-P**

| Drawn | Checked | Date | Figure No. |
|-----------|-------------|------------|------------|
| HN | AB | 2023/09/15 | 3 |
| Scale | Project No. | | |
| H 1:1,000 | 300056693 | | |

ELC Descriptions

MAMM1-2: Cattail Graminoid Mineral Meadow Marsh
MEFM1-1: Goldenrod Forb Meadow
SWDM4-5: Poplar Mineral Deciduous Swamp
MAMM1-3: Reed-canary Grass Graminoid Mineral Meadow Marsh
MEFM1-1: Goldenrod Forb Meadow
OAGM1: Annual Row Crops

Bridge 30-P



Remove existing concrete base slab and re-naturalize watercourse

📍 Sideroad 11, Between 8th Line W & 3rd Line W

🔧 Constructed circa 1925

🚫 Closed to Traffic: 2006

🏗️ Concrete T-Beam

STRUCTURE BEING
REPLACED

Span increasing from 10.7m to 14m for
better watercourse alignment



Existing bridge span narrower
than natural watercourse



- Bridge Location
- Watercourse
 - Thermal Regime (Warm)
- Ecological Land Classification
- Study Area (100m)

Sources:

1. Ministry of Natural Resources and Forestry; © King's Printer for Ontario.
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Datum: North American 1983

Coord. System: NAD 1983 UTM Zone 17N

Projector: Transverse Mercator

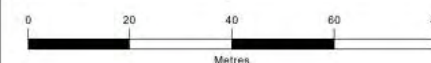
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False Easting: 500,000m False Northing: 0m

Page Orientation: -45° Scale Factor: 0.99960



Grid North



Client

**TOWNSHIP OF CENTRE
WELLINGTON**

Figure Title

**CENTRE WELLINGTON - MCEA FOR
5 BRIDGES
NATURAL HERITAGE FEATURES
BRIDGE 28-P**

| Drawn | Checked | Date | Figure No. |
|-----------|---------|-------------|------------|
| HN | AB | 2023/09/15 | 2 |
| Scale | | Project No. | |
| H 1:1,000 | | 300056693 | |

ELC Descriptions

CVR_4: Rural Property
MAMM2-6: Joe Pye Weed Forb Mineral Meadow Marsh
MEGM3-5: Smooth Brome Graminoid Meadow
OAGM1: Annual Row Crops
OAGM4: Open Pasture
TAGM5: Fencerow

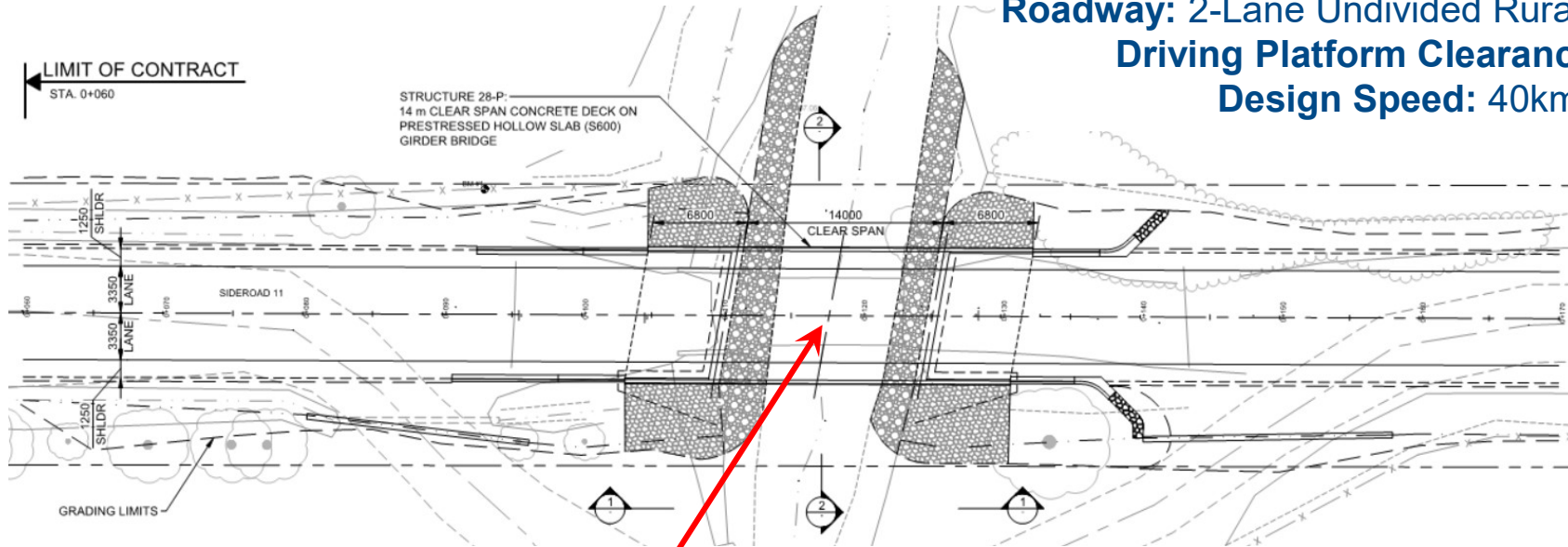
Bridge 28-P



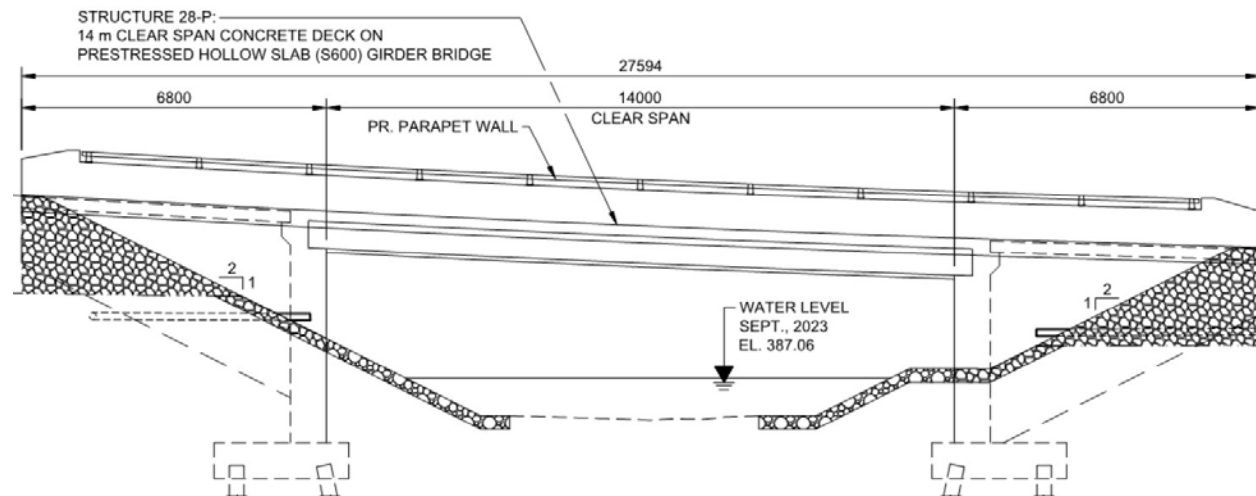
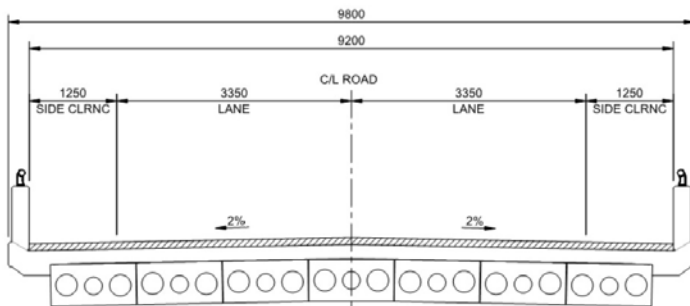
Design Concept

28-P

Roadway: 2-Lane Undivided Rural Cross-Section
Driving Platform Clearance: 9.2 m
Design Speed: 40km/h



Bridge has minor skew for
watercourse alignment



📍 Noah Road, 0.75km West of 8th Line W

🔧 Constructed circa 1922

🚫 Closed to Traffic: 2015

🏗️ Concrete T-Beam

STRUCTURE BEING REPLACED

Replace bridge with 2.4 m span x 2.0 m rise Precast Box Culvert. Existing bridge is oversized for small tributary

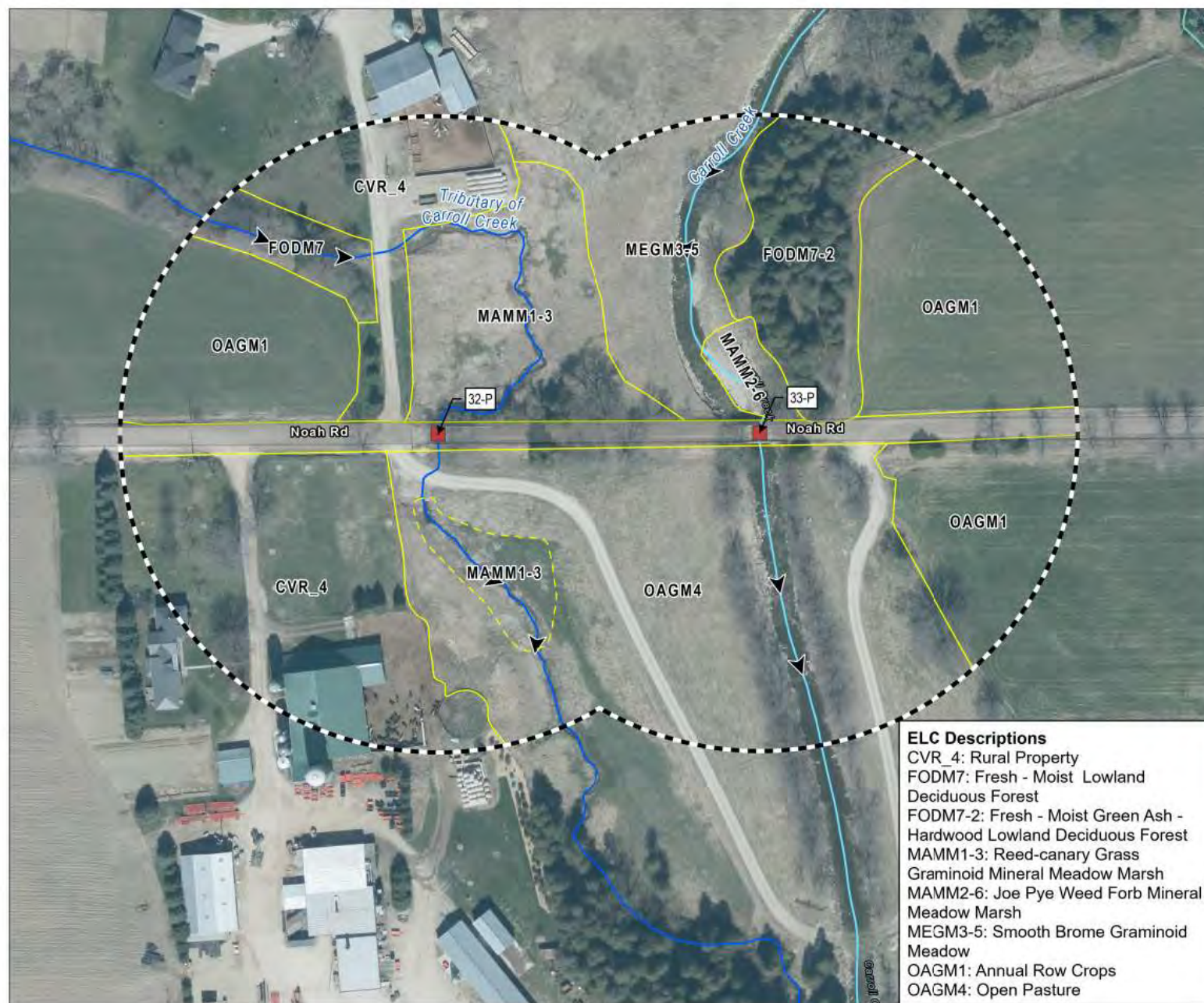


- 📍 Noah Road, 0.65km West of 8th Line W
- 🔧 Constructed circa 1926
- 🚫 Closed to Traffic: 2015
- 🏗️ Concrete T-Beam

STRUCTURE BEING REPLACED

Span increasing from 9.8m to 22m for
better watercourse alignment and
opportunity for wildlife passage





- Bridge Location
- Ecological Land Classification
- Ecological Land Classification Inclusion
- Thermal Regime (Cold)
- Thermal Regime (Warm)
- Provincially Significant Wetland
- Study Area (100m)

Sources:

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Datum: North American 1983

Coord. System: NAD 1983 UTM Zone 17N

Projector: Transverse Mercator

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False Easting: 500,000m

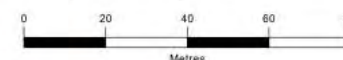
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Grid North



Client

**TOWNSHIP OF CENTRE
WELLINGTON**

Figure Title

**CENTRE WELLINGTON - MCEA FOR
5 BRIDGES
NATURAL HERITAGE FEATURES
BRIDGE P32 & P33**

| Drawn | Checked | Date | Figure No. |
|-----------|-------------|------------|------------|
| HN | AB | 2023/09/15 | 4 |
| Scale | Project No. | | |
| H 1:1,250 | 300056693 | | |

ELC Descriptions

CVR_4: Rural Property
FODM7: Fresh - Moist Lowland
Deciduous Forest
FODM7-2: Fresh - Moist Green Ash -
Hardwood Lowland Deciduous Forest
MAMM1-3: Reed-cannary Grass
Graminoid Mineral Meadow Marsh
MAMM2-6: Joe Pye Weed Forb Mineral
Meadow Marsh
MEGM3-5: Smooth Brome Graminoid
Meadow
OAGM1: Annual Row Crops
OAGM4: Open Pasture



Centre
Wellington

Bridges to be Replaced



BURNSIDE

Bridge 32-P



Private driveway
/ laneway
structure
immediately
downstream



Centre
Wellington

Bridges to be Replaced



BURNSIDE

Bridge 32-P





Centre
Wellington

Bridges to be Replaced



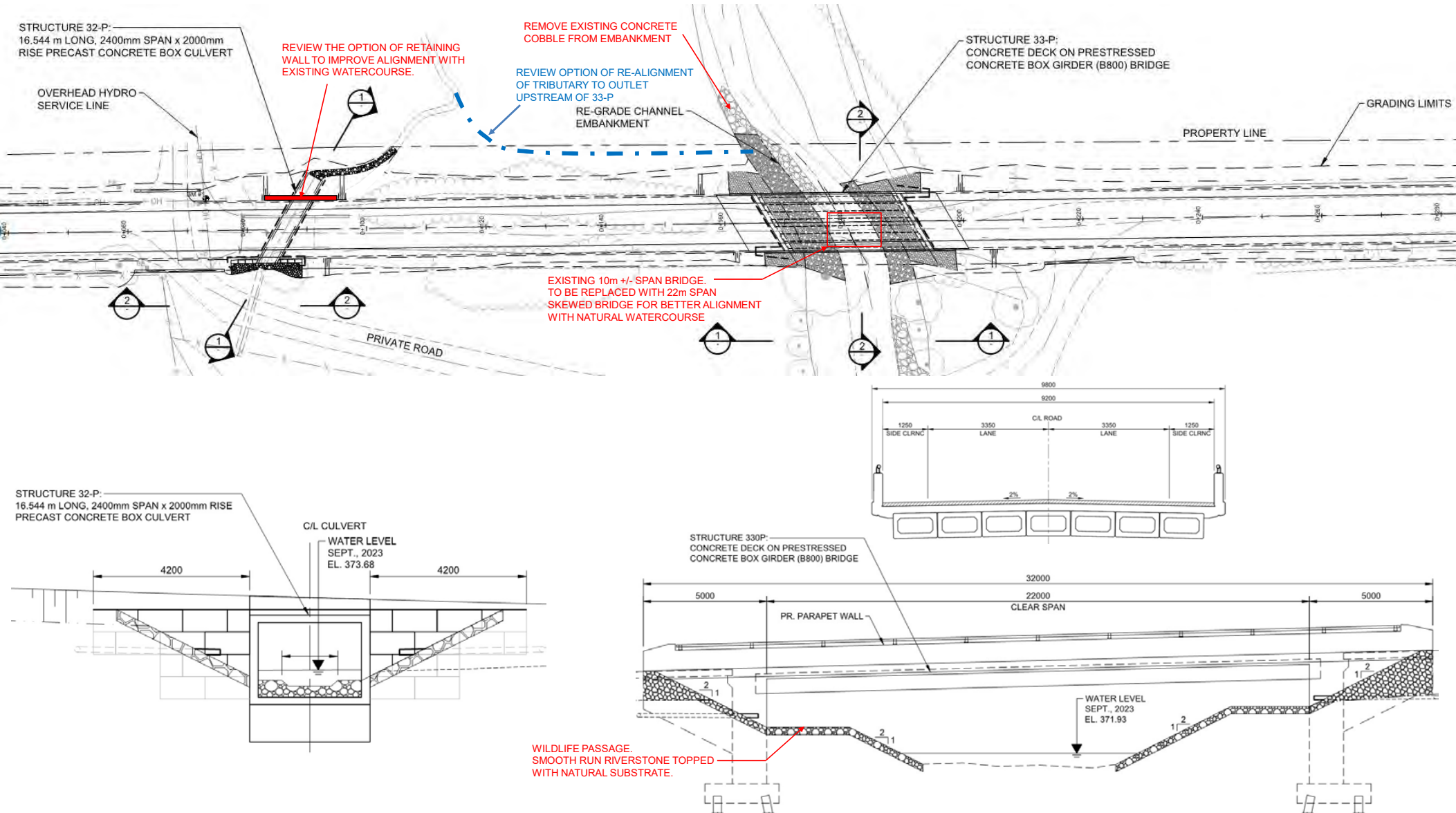
BURNSIDE

Bridge 33-P



Remove
concrete cobble
from upstream
embankment

Design Concept 32-P & 33-P



Q: Wetland protection (all wetlands, not just PSW)

A:

- Minimize construction footprint within wetlands by providing shoring for excavation.
- Impacts and requirements to be established during detailed design

Q: Re-planting Program

A:

- Requirements for replanting will be established during detailed design when the number and species of plantings is determined
- Can provide commitment within EA document to provide certain species if requested

Q: “Softer” erosion protection measures

A:

- Remove concrete cobble armouring at Bridge 33-P
- Minimize use of rip-rap and use vegetated slopes where practical
- Consider bio-engineering for erosion control during detailed design.
- Include live staking within any stone revetment areas
- Exact details to be established during the detailed design phase

Q: Align bridges with watercourse

A:

- Proposed solutions are skewed to match the natural alignment of the watercourse

Q: Provide spawning habitats

A:

- Areas requiring disturbance will be reinstated with smooth run riverstone topped with natural substrate
- Remove existing base slab at structure 30-P and re-naturalize channel

Q: Remove private by-pass roads and structures

A:

- Township will approach property owners but may not have the ability to enforce these removals

Q: Remove invasive species if found

A:

- None were identified during previous reviews of the sites

Q: Add wildlife passage below the bridges

A:

- Proposed preliminary geometry for Bridge 33-P spans beyond bankfull width
- In this case there is little benefit because the roads have minimal traffic and low speed.
- Amphibians and turtles can use the watercourse to pass under the bridges.
- Small mammals and deer will cross the road and wouldn't be drawn to pass below the bridges.

Detailed Design Commitments

- Tree inventory to determine and characterize required removals, minimize to the extent possible and create re-planting plan for plant species loss.
- Review opportunity to divert flows of the Bridge 32-P tributary to upstream of Bridge 33-P.
- Develop Erosion and Sediment Control Plans
- All indigenous communities previously engaged shall be contacted if there are any substantial changes to the project / process or if the Owner applies for subsequent permits from the MECP that may be of interest to the communities.

Questions?

Crystal Ferguson

From: Andrew Dawson
Sent: Tuesday, September 17, 2024 4:32 PM
To: Peter Graham; laurenjones@sixnations.ca
Cc: Adam Dickieson (Centre Wellington); Matt Brooks; Tricia Radburn
Subject: RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up (RJB # 056693)
Attachments: 240916_Six Nations Mtg Minutes (056693).pdf

Peter / Lauren,

Thank you very much for your time to meet yesterday! I believe the conversations were very helpful in us gaining a better understanding of your comments and requests.

I have attached a set of meeting minutes from yesterday's meeting for your review. Please review the meeting minutes and confirm whether or not you have any additions or requested revisions.

In addition, we had discussed that we would provide an email summarizing the proposed verbiage that is to be added to the revised Project File Report considering yesterday's discussions.

Below is a summary of existing verbiage within the report (in blue), as well as additional verbiage (in red) to be added to the report based on the requests made by the SNGREC.

Please note that the text included in this email is not a full list of all the commitments outlined within the Project File Report, as I have only included the commitments relative to the discussions had with SNGREC.

10.3 Effects on the Project from Climate Change

There is potential for the project to be affected by climate change. Climate change is usually associated with any significant change in long-term weather patterns. Changes in the composition of the atmosphere are resulting in processes that alter global temperature and precipitation, in turn affecting local weather patterns. These processes can ultimately lead to increased occurrence of extreme weather events such as floods, droughts, ice storms, and heat waves.

Precipitation, whether it is rainfall, snowfall, or other forms of frozen / liquid water, is the key climate and weather-related variable of concern with respect to drainage and culvert design. As a result of climate change, storm events are predicted to become more intense, which can result in larger volumes of precipitation at one time. Other climate variables such as temperature are major inputs to evaporation and snowmelt processes. Increases in temperature are likely to impact precipitation and snowmelt runoff volumes discharged to watercourses.

Precipitation, whether it is rainfall, snowfall, or other forms of frozen / liquid water, is the key climate and weather-related variable of concern in stormwater management (SWM). As a result of climate change, storm events are predicted to become more intense, which can result in larger volumes of precipitation at one time.

During the detailed design, all bridge and SWM-related components of the project shall be designed with consideration for increased precipitation.

11.0 Detailed Design and Construction Commitments

Phase 5 of the Municipal Class EA process involves the completion of detailed design drawings, specifications, and tender documents to be provided to a successful contractor for the construction of the proposed project. During the implementation phase, the Township will need to adhere to several mitigation measures and monitoring plans as documented in this Project File Report, some of which will need to be in place prior to and during construction.

The following list provides a preliminary set of commitments to be undertaken during the detailed design phase or construction phase of the Project to ensure that work is being completed in accordance with the Project File Report. These commitments shall be revisited during the detailed design phase of the Project, at which time any additional commitments shall be identified.

11.1 Detailed Design Commitments

- A tree inventory will be completed to determine and characterize required removals. The Six Nations of the Grand River Elected Council (SNGREC)'s list of plant species of interest and importance shall be reviewed to identify if vegetation proposed for removal is of interest to the SNGREC. Impacts to trees shall be minimized by implementing a tree protection plan in areas adjacent to construction or grading.
- If any Provincial SAR are identified during the tree inventory and / or associated detailed design studies, potential impacts will be mitigated to the extent possible and the MECP will be consulted with as needed to determine next steps and permitting requirements.
- Plant species loss should be minimized where possible, and a re-vegetation plan using native species and seed mix should be created. A re-planting ratio of 10 replanted trees per 1 removed tree shall be used for quantifying replacements, as per the request of the Six Nations of the Grand River Elected Council (SNGREC). Re-planting should be completed on-site to the extent possible. Where the required re-planting quantities are unable to be achieved within the Township right-of-way, the preference is for the Township to strive to reach an agreement with the immediately adjacent land owners to allow for replanting on-site, beyond the Township right-of-way. If on-site planting is not achievable, off-site plantings to reach the desired ratios are acceptable to the SNGREC.
- Plant species identified for replanting shall be selected from the SNGREC's list of species of Interest / Importance which are suitable for the proposed planting locations. The Kayanase Greenhouse is available for consultation regarding replanting initiatives during detailed design.
- Near-bank cover plantings along the watercourse shall be included in the re-planting landscaping plan where possible, while considering the required offset of plantings from structures.
- Detailed Hydrologic and hydraulic modelling shall be completed to verify compliance of the proposed works with GRCA policies 8.1.15-8.1.16. The GRCA shall be consulted early in the detailed design stage to determine the scope of work for this exercise.
- The opportunity to divert flows of the tributary upstream of Bridge 32-P shall be further investigated in consultation with the GRCA. The designer shall review the environmental mitigation works that would be required to offset any impacts to the diverted channel or the portion of the downstream channel that will be disconnected from the upstream channel, and evaluate whether the diversion of flows is more beneficial to the overall project than replacement of the structure as outlined in the conceptual design.
- An Erosion and Sediment Control (ESC) Plan shall be developed during the detailed design phase of the project in consultation with the GRCA and will conform to industry best management practices and recognized standard specifications such as Ontario Provincial Standards Specification (OPSS).
- Further investigations shall be undertaken to ensure the proposed alternatives will not impact potential erosion hazards that may be present due to riverine slopes and / or the meander belt of the creek. The requirement for engineering assessments such as geotechnical or fluvial geomorphology should be confirmed with the GRCA at the detailed design stage.
- Alignment options including radiused or elbow corners within the proposed Bridge 32-P culvert shall be considered in order to optimize the alignment with the existing upstream and downstream watercourse during detailed design.
- The geometry and alignment of structures should be reviewed during the detailed design stage. Where additional data gathered or analysis completed during the detailed design phase of the project results in a

significant change to the proposed structure, the requirement for an addendum to the Project File Report as part of the MCEA will be reviewed and undertaken if deemed required.

- All bridge and SWM-related components of the projected shall be designed with consideration for increased precipitation due to Climate Change.
- Where erosion protection, channel regrading / stabilization or earth retaining structures are determined to be required, the use of “softer” means of protection shall be preferred over the use of hard surfaces unless it is unfeasible to do so. For example, the use of vegetated MSE wall systems at Bridge 32-P shall be preferred over a concrete retaining wall.
- Should future work require an expansion of the study area, then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential heritage resources.
- The recommendations of the Stage 1 & 2 archaeological assessment (AA) and any further recommended stages should be followed. If revisions to the designs result in ground disturbances beyond the previously disturbed lands, or beyond the approximate grading limits shown in the preliminary replacement structure designs of this study, additional archaeology assessment of the areas should be undertaken. Any further recommended archaeological assessments (e.g., Stage 2, 3 and 4) shall be undertaken by a licensed archaeologist as early as possible during detailed design and prior to any ground disturbing activities. Indigenous communities that were included in the EA contact list shall be consulted and given an opportunity to participate in any additional Archeological Assessment reporting and monitoring process that may be determined to be required during the detailed design phase.
- All Indigenous communities previously engaged shall be contacted, if there are any substantial changes to the project / process or if the Owner applies for subsequent permits from the Ministry (MECP) that may be of interest or concern to communities.
- The required erosion and sediment control measures shall be determined during detailed design to limit sediment migration and protect receiving watercourses. All disturbed areas of the construction site shall be stabilized and re-vegetated as soon as conditions allow.

Please let me know if the above verbiage is considered approved by the SNGREC to capture the agreed upon commitments discussed during yesterday’s meeting. Once we get your approval on this draft wording, we will include it into the revised Project File Report and provide you with the formally revised copy for your records. After such approval, it is my understanding from yesterday’s meeting that the SNGREC would be satisfied with the consultation efforts employed by the Town, and will be in contact with the MECP to revoke the previously issued request for a Section 16 Order on the file.

If you have any questions or comments, please let us know as soon as possible!

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: Peter Graham <L RCS@sixnations.ca>

Sent: Friday, August 16, 2024 2:03 PM

To: Andrew Dawson <Andrew.Dawson@rjburnside.com>

Cc: Adam Dickieson (Centre Wellington) <ADickieson@centrewellington.ca>

Subject: RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up (RJB # 056693)

Hi Andrew,

As noted last month, I really wouldn't expect to hear back from wildlife anytime soon. They'd ideally like to read the documents of everything they comment on, but simply don't have time. Our initial hope was to resolve everything via our virtual meetings to speed things up. I can formally put the work in wildlife's cue, guaranteeing a fulsome written response, but you'd have to wait until December to receive it.

Let me know how you'd like to proceed.

Thank you, Peter

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Sent: August 15, 2024 5:09 PM
To: Peter Graham <LRCS@sixnations.ca>
Cc: Adam Dickieson (Centre Wellington) <ADickieson@centrewellington.ca>
Subject: [External] RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up (RJB # 056693)

Peter,

Hope you have been keeping well!

I am wondering on the status and timeline for your Wildlife team's comments on the PFR?

Our discussions regarding the enhancements recommended by Six Nations was fairly general at the time, as it is my understanding your team had not yet familiarized yourselves with the project. I do believe that the EA had considered a number of the items you had identified during discussions as part of our Natural Heritage study and mitigation recommendations. Our preference would be to have your project-specific comments and recommended enhancements provided so that we can provide a response that addresses your specific concerns.

If you could please provide an anticipated date that we can expect to receive the comments, that would be appreciated.

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Peter Graham <LRCS@sixnations.ca>
Sent: Thursday, July 04, 2024 1:30 PM
To: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Subject: RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up

Hi Andrew,

Just letting you know I'm not expecting a timely response from Wildlife on the PFR. If I had a higher level of concern after our meeting, I would insist on waiting until they had time to review and comment. But I think the next step here is for us to see what enhancements Centre Wellington is willing to implement based on our virtual discussion.

Thank you, Peter

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Sent: Tuesday, June 18, 2024 11:42 AM

To: Peter Graham <L RCS@sixnations.ca>; Lauren Jones <laurenjones@sixnations.ca>; Adam Dickieson <ADickieson@centrewellington.ca>

Cc: Matt Brooks <Matt.Brooks@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; Mishaal Rizwan <Mishaal.Rizwan@rjburnside.com>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>; Adam Gilmore (Centre Wellington) <agilmore@centrewellington.ca>

Subject: [External] RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up

All,

Please find the attached minutes of the meeting held on June 13th. Kindly review these meeting minutes and let me know if you feel there are any errors or omissions within the minutes as soon as possible.

We look forward to hearing further comments from Six Nations once you have completed your review of the Project File Report!

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Peter Graham <L RCS@sixnations.ca>

Sent: Thursday, June 13, 2024 1:39 PM

To: Adam Dickieson <ADickieson@centrewellington.ca>; Lauren Jones <laurenjones@sixnations.ca>

Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>

Subject: RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up

Hi Adam,

Thank you again for meeting with us. I was able to download the document without any problems. I've forwarded the below to our Archaeology Supervisor.

At the end of the day, we'd like to know what enhancements Centre Wellington are willing to implement per our discussion this morning.

Best, Peter

From: Adam Dickieson <ADickieson@centrewellington.ca>

Sent: Thursday, June 13, 2024 12:20 PM

To: Peter Graham <L RCS@sixnations.ca>; Lauren Jones <laurenjones@sixnations.ca>

Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>

Subject: [External] Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up

Peter, Lauren,

Thank you for taking the time to meet with both Andrew and I this morning. As discussed, the 5 Bridge Environmental Report is quite large and could not be managed on the Township web page due to the overall file size. You will find a link to this file through the Township's file sharing application 2big4email in the next few minutes. There is no password to access the report required, leave the password field blank. Let me know if you have any issue in receiving this report.

This is a link to the Township's project web page that contains additional presentation and project information.
[Centre Wellington 5 Bridge EAs in Former Pilkington Township | Connect CW](#)

Attached is a copy of today's meeting presentation.

Please coordinate with me if there is any interest in getting the stage two archaeological study that we have planned for the two structures.

We look forward in keeping communications open with Six Nations of the Grand River and provide any additional information and answer questions that you may have regarding the Centre Wellington 5 Bridge Environmental Assessment.

Regards,
Adam.



Adam Dickieson | Engineering Services Coordinator

Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

-----Original Appointment-----

From: Adam Dickieson

Sent: Wednesday, May 29, 2024 12:41 PM

To: Adam Dickieson; Dawn Russell; Adam Gilmore; Matt Brooks

Cc: Tricia Radburn; Peter Graham; Andrew Dawson

Subject: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting

When: June 13, 2024 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).

Where: Microsoft Teams Meeting

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Phone conference ID: 111 560 467#

For organizers: [Meeting options](#) | [Reset dial-in PIN](#)
[Org help](#)

Crystal Ferguson

From: Peter Graham <LRCS@sixnations.ca>
Sent: Thursday, September 19, 2024 10:41 AM
To: jake.noordhof@ontario.ca
Cc: O'Neill, Kathleen (MECP); Mazzuca, Marco (MECP); Zhao, Simon (MECP); Mazzaferro, Alys (MECP); adickieson@centrewellington.ca; Andrew Dawson; Nick.Colella@ontario.ca
Subject: RE: MECP Letter to SNGR - s16 order request - Centre Wellington MCEA Bridges

Good morning Jake,

After productive conversations with the township, our concerns have been satisfied. On behalf of SNGR, I am withdrawing my section 16 request.

Thank you, Peter

From: Colella, Nick (MECP) <Nick.Colella@ontario.ca>
Sent: June 14, 2024 10:52 AM
To: Peter Graham <LRCS@sixnations.ca>
Cc: O'Neill, Kathleen (MECP) <Kathleen.Oneill@ontario.ca>; Mazzuca, Marco (MECP) <Marco.Mazzuca@ontario.ca>; Zhao, Simon (MECP) <Simon.Zhao@ontario.ca>; Mazzaferro, Alys (MECP) <Alys.Mazzaferro@ontario.ca>; adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>
Subject: [External] MECP Letter to SNGR - s16 order request - Centre Wellington MCEA Bridges

Dear Peter Graham,

Please see the attached letter from the Ministry of the Environment, Conservation and Parks.

Thank you,
Nick

Nick Colella (he/him)
A/Manager, Environmental Assessment Services
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks

Crystal Ferguson

From: Peter Graham <LRCS@sixnations.ca>
Sent: Thursday, September 19, 2024 10:37 AM
To: Andrew Dawson; Lauren Jones
Cc: Adam Dickieson (Centre Wellington); Matt Brooks; Tricia Radburn
Subject: RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up (RJB # 056693)

Good morning Andrew,

Yes, the added language addresses what we discussed at the meeting. Thank you. I'll copy you and Adam on my email to MECEP.

Best, Peter

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Sent: September 17, 2024 4:32 PM
To: Peter Graham <LRCS@sixnations.ca>; Lauren Jones <laurenjones@sixnations.ca>
Cc: Adam Dickieson (Centre Wellington) <ADickieson@centrewellington.ca>; Matt Brooks <Matt.Brooks@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>
Subject: [External] RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up (RJB # 056693)

Peter / Lauren,

Thank you very much for your time to meet yesterday! I believe the conversations were very helpful in us gaining a better understanding of your comments and requests.

I have attached a set of meeting minutes from yesterday's meeting for your review. Please review the meeting minutes and confirm whether or not you have any additions or requested revisions.

In addition, we had discussed that we would provide an email summarizing the proposed verbiage that is to be added to the revised Project File Report considering yesterday's discussions.

Below is a summary of existing verbiage within the report (in blue), as well as additional verbiage (in red) to be added to the report based on the requests made by the SNGREC.

Please note that the text included in this email is not a full list of all the commitments outlined within the Project File Report, as I have only included the commitments relative to the discussions had with SNGREC.

10.3 Effects on the Project from Climate Change

There is potential for the project to be affected by climate change. Climate change is usually associated with any significant change in long-term weather patterns. Changes in the composition of the atmosphere are resulting in processes that alter global temperature and precipitation, in turn affecting local weather patterns. These processes can ultimately lead to increased occurrence of extreme weather events such as floods, droughts, ice storms, and heat waves.

Precipitation, whether it is rainfall, snowfall, or other forms of frozen / liquid water, is the key climate and weather-related variable of concern with respect to drainage and culvert design. As a result of climate

change, storm events are predicted to become more intense, which can result in larger volumes of precipitation at one time. Other climate variables such as temperature are major inputs to evaporation and snowmelt processes. Increases in temperature are likely to impact precipitation and snowmelt runoff volumes discharged to watercourses.

Precipitation, whether it is rainfall, snowfall, or other forms of frozen / liquid water, is the key climate and weather-related variable of concern in stormwater management (SWM). As a result of climate change, storm events are predicted to become more intense, which can result in larger volumes of precipitation at one time.

During the detailed design, all bridge and SWM-related components of the project shall be designed with consideration for increased precipitation.

11.0 Detailed Design and Construction Commitments

Phase 5 of the Municipal Class EA process involves the completion of detailed design drawings, specifications, and tender documents to be provided to a successful contractor for the construction of the proposed project. During the implementation phase, the Township will need to adhere to several mitigation measures and monitoring plans as documented in this Project File Report, some of which will need to be in place prior to and during construction.

The following list provides a preliminary set of commitments to be undertaken during the detailed design phase or construction phase of the Project to ensure that work is being completed in accordance with the Project File Report. These commitments shall be revisited during the detailed design phase of the Project, at which time any additional commitments shall be identified.

11.1 Detailed Design Commitments

- A tree inventory will be completed to determine and characterize required removals. **The Six Nations of the Grand River Elected Council (SNGREC)'s list of plant species of interest and importance shall be reviewed to identify if vegetation proposed for removal is of interest to the SNGREC.** Impacts to trees shall be minimized by implementing a tree protection plan in areas adjacent to construction or grading.
- If any Provincial SAR are identified during the tree inventory and / or associated detailed design studies, potential impacts will be mitigated to the extent possible and the MECP will be consulted with as needed to determine next steps and permitting requirements.
- Plant species loss should be minimized where possible, and a re-vegetation plan using native **species and seed mix** should be created. **A re-planting ratio of 10 replanted trees per 1 removed tree shall be used for quantifying replacements, as per the request of the Six Nations of the Grand River Elected Council (SNGREC). Re-planting should be completed on-site to the extent possible. Where the required re-planting quantities are unable to be achieved within the Township right-of-way, the preference is for the Township to strive to reach an agreement with the immediately adjacent land owners to allow for replanting on-site, beyond the Township right-of-way. If on-site planting is not achievable, off-site plantings to reach the desired ratios are acceptable to the SNGREC.**
- Plant species identified for replanting shall be selected from the SNGREC's list of species of Interest / Importance which are suitable for the proposed planting locations. **The Kayanase Greenhouse is available for consultation regarding replanting initiatives during detailed design.**
- **Near-bank cover plantings along the watercourse shall be included in the re-planting landscaping plan where possible, while considering the required offset of plantings from structures.**
- Detailed Hydrologic and hydraulic modelling shall be completed to verify compliance of the proposed works with GRCA policies 8.1.15-8.1.16. The GRCA shall be consulted early in the detailed design stage to determine the scope of work for this exercise.
- The opportunity to divert flows of the tributary upstream of Bridge 32-P shall be further investigated in consultation with the GRCA. The designer shall review the environmental mitigation works that would be required to offset any impacts to the diverted channel or the portion of the downstream channel that will

be disconnected from the upstream channel, and evaluate whether the diversion of flows is more beneficial to the overall project than replacement of the structure as outlined in the conceptual design.

- An Erosion and Sediment Control (ESC) Plan shall be developed during the detailed design phase of the project in consultation with the GRCA and will conform to industry best management practices and recognized standard specifications such as Ontario Provincial Standards Specification (OPSS).
- Further investigations shall be undertaken to ensure the proposed alternatives will not impact potential erosion hazards that may be present due to riverine slopes and / or the meander belt of the creek. The requirement for engineering assessments such as geotechnical or fluvial geomorphology should be confirmed with the GRCA at the detailed design stage.
- Alignment options including radiused or elbow corners within the proposed Bridge 32-P culvert shall be considered in order to optimize the alignment with the existing upstream and downstream watercourse during detailed design.
- The geometry and alignment of structures should be reviewed during the detailed design stage. Where additional data gathered or analysis completed during the detailed design phase of the project results in a significant change to the proposed structure, the requirement for an addendum to the Project File Report as part of the MCEA will be reviewed and undertaken if deemed required.
- All bridge and SWM-related components of the projected shall be designed with consideration for increased precipitation due to Climate Change.
- Where erosion protection, channel regrading / stabilization or earth retaining structures are determined to be required, the use of “softer” means of protection shall be preferred over the use of hard surfaces unless it is unfeasible to do so. For example, the use of vegetated MSE wall systems at Bridge 32-P shall be preferred over a concrete retaining wall.
- Should future work require an expansion of the study area, then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential heritage resources.
- The recommendations of the Stage 1 & 2 archaeological assessment (AA) and any further recommended stages should be followed. If revisions to the designs result in ground disturbances beyond the previously disturbed lands, or beyond the approximate grading limits shown in the preliminary replacement structure designs of this study, additional archaeology assessment of the areas should be undertaken. Any further recommended archaeological assessments (e.g., Stage 2, 3 and 4) shall be undertaken by a licensed archaeologist as early as possible during detailed design and prior to any ground disturbing activities. Indigenous communities that were included in the EA contact list shall be consulted and given an opportunity to participate in any additional Archeological Assessment reporting and monitoring process that may be determined to be required during the detailed design phase.
- All Indigenous communities previously engaged shall be contacted, if there are any substantial changes to the project / process or if the Owner applies for subsequent permits from the Ministry (MECP) that may be of interest or concern to communities.
- The required erosion and sediment control measures shall be determined during detailed design to limit sediment migration and protect receiving watercourses. All disturbed areas of the construction site shall be stabilized and re-vegetated as soon as conditions allow.

Please let me know if the above verbiage is considered approved by the SNGREC to capture the agreed upon commitments discussed during yesterday’s meeting. Once we get your approval on this draft wording, we will include it into the revised Project File Report and provide you with the formally revised copy for your records. After such approval, it is my understanding from yesterday’s meeting that the SNGREC would be satisfied with the consultation efforts employed by the Town, and will be in contact with the MECP to revoke the previously issued request for a Section 16 Order on the file.

If you have any questions or comments, please let us know as soon as possible!

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Peter Graham <LRCS@sixnations.ca>

Sent: Friday, August 16, 2024 2:03 PM

To: Andrew Dawson <Andrew.Dawson@rjburnside.com>

Cc: Adam Dickieson (Centre Wellington) <ADickieson@centrewellington.ca>

Subject: RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up (RJB # 056693)

Hi Andrew,

As noted last month, I really wouldn't expect to hear back from wildlife anytime soon. They'd ideally like to read the documents of everything they comment on, but simply don't have time. Our initial hope was to resolve everything via our virtual meetings to speed things up. I can formally put the work in wildlife's cue, guaranteeing a fulsome written response, but you'd have to wait until December to receive it.

Let me know how you'd like to proceed.

Thank you, Peter

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>

Sent: August 15, 2024 5:09 PM

To: Peter Graham <LRCS@sixnations.ca>

Cc: Adam Dickieson (Centre Wellington) <ADickieson@centrewellington.ca>

Subject: [External] RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up (RJB # 056693)

Peter,

Hope you have been keeping well!

I am wondering on the status and timeline for your Wildlife team's comments on the PFR?

Our discussions regarding the enhancements recommended by Six Nations was fairly general at the time, as it is my understanding your team had not yet familiarized yourselves with the project. I do believe that the EA had considered a number of the items you had identified during discussions as part of our Natural Heritage study and mitigation recommendations. Our preference would be to have your project-specific comments and recommended enhancements provided so that we can provide a response that addresses your specific concerns.

If you could please provide an anticipated date that we can expect to receive the comments, that would be appreciated.

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Peter Graham <LRCS@sixnations.ca>

Sent: Thursday, July 04, 2024 1:30 PM

To: Andrew Dawson <Andrew.Dawson@rjburnside.com>

Subject: RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up

Hi Andrew,

Just letting you know I'm not expecting a timely response from Wildlife on the PFR. If I had a higher level of concern after our meeting, I would insist on waiting until they had time to review and comment. But I think the next step here is for us to see what enhancements Centre Wellington is willing to implement based on our virtual discussion.

Thank you, Peter

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Sent: Tuesday, June 18, 2024 11:42 AM
To: Peter Graham <LRCs@sixnations.ca>; Lauren Jones <laurenjones@sixnations.ca>; Adam Dickieson <ADickieson@centrewellington.ca>
Cc: Matt Brooks <Matt.Brooks@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; Mishaal Rizwan <Mishaal.Rizwan@rjburnside.com>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>; Adam Gilmore (Centre Wellington) <agilmore@centrewellington.ca>
Subject: [External] RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up

All,

Please find the attached minutes of the meeting held on June 13th. Kindly review these meeting minutes and let me know if you feel there are any errors or omissions within the minutes as soon as possible.

We look forward to hearing further comments from Six Nations once you have completed your review of the Project File Report!

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Peter Graham <LRCs@sixnations.ca>
Sent: Thursday, June 13, 2024 1:39 PM
To: Adam Dickieson <ADickieson@centrewellington.ca>; Lauren Jones <laurenjones@sixnations.ca>
Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Subject: RE: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up

Hi Adam,

Thank you again for meeting with us. I was able to download the document without any problems. I've forwarded the below to our Archaeology Supervisor.

At the end of the day, we'd like to know what enhancements Centre Wellington are willing to implement per our discussion this morning.

Best, Peter

From: Adam Dickieson <ADickieson@centrewellington.ca>
Sent: Thursday, June 13, 2024 12:20 PM

To: Peter Graham <L RCS@sixnations.ca>; Lauren Jones <laurenjones@sixnations.ca>

Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>

Subject: [External] Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting - Follow-up

Peter, Lauren,

Thank you for taking the time to meet with both Andrew and I this morning. As discussed, the 5 Bridge Environmental Report is quite large and could not be managed on the Township web page due to the overall file size. You will find a link to this file through the Township's file sharing application 2big4email in the next few minutes. There is no password to access the report required, leave the password field blank. Let me know if you have any issue in receiving this report.

This is a link to the Township's project web page that contains additional presentation and project information.
[Centre Wellington 5 Bridge EAs in Former Pilkington Township | Connect CW](#)

Attached is a copy of today's meeting presentation.

Please coordinate with me if there is any interest in getting the stage two archaeological study that we have planned for the two structures.

We look forward in keeping communications open with Six Nations of the Grand River and provide any additional information and answer questions that you may have regarding the Centre Wellington 5 Bridge Environmental Assessment.

Regards,
Adam.



Adam Dickieson | Engineering Services Coordinator

Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

-----Original Appointment-----

From: Adam Dickieson

Sent: Wednesday, May 29, 2024 12:41 PM

To: Adam Dickieson; Dawn Russell; Adam Gilmore; Matt Brooks

Cc: Tricia Radburn; Peter Graham; Andrew Dawson

Subject: Six Nations of the Grand River - Township Centre Wellington, 5 Bridge Environmental Assessment Consultation Meeting

When: June 13, 2024 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).

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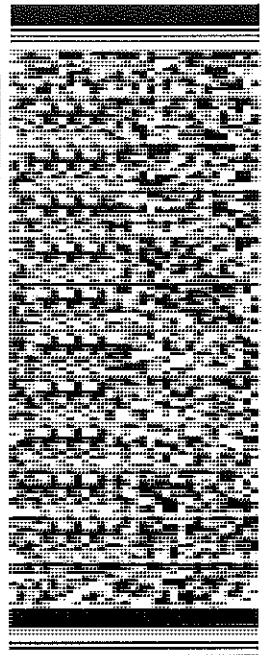
FROM/DE

Township of Centre Wellington
7444 WELLINGTON RD 21
ELORA, ON
N0B 1S0
519-846-9691 x 358

TO/À

Raechele Williams
Haudenosaunee Confederacy
16 SUNRISE CRT
SUITE 402B
OHSWEKEN, ON
N0A 1M0

519-445-4222



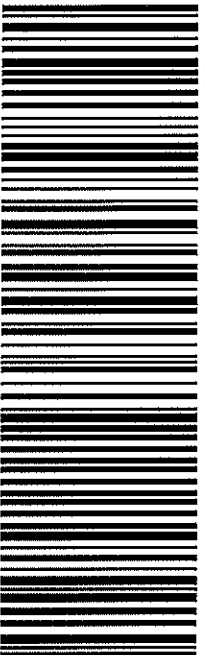
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Cassie McDougall

From: Olivia Beirnes
Sent: July 28, 2023 10:52 AM
To: Cassie McDougall
Subject: FW: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334215841365

From: NotificationService@purolator.com <NotificationService@purolator.com>
Sent: Friday, July 28, 2023 10:51 AM
To: Olivia Beirnes <OBeirnes@centrewellington.ca>
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334215841365

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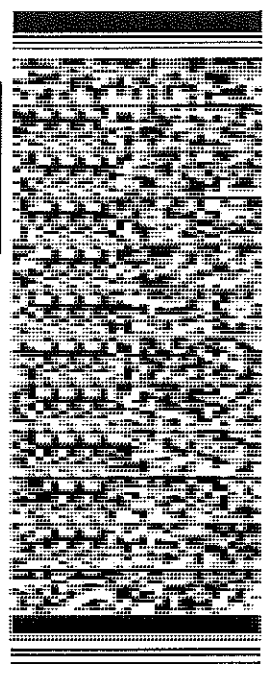
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Township of Centre Wellington
7444 WELLINGTON RD Z1
ELORA, ON
N0B 1S0
519-846-9691 x 358

TO/À

Haudenosaunee Development Inst
16 SUNRISE CRT
SUITE 600
OHSWEKEN, ON
N0A 1M0

519-755-2769



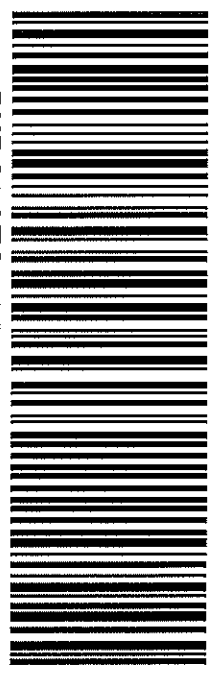
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Cassie McDougall

From: Olivia Beirnes
Sent: July 28, 2023 10:52 AM
To: Cassie McDougall
Subject: FW: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334215843734

From: NotificationService@purolator.com <NotificationService@purolator.com>
Sent: Friday, July 28, 2023 10:51 AM
To: Olivia Beirnes <OBeirnes@centrewellington.ca>
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334215843734

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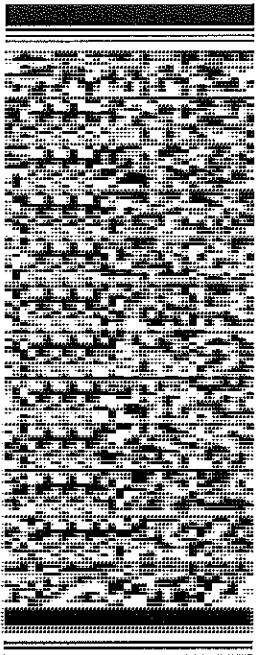
FROM/DE

Township of Centre Wellington
7444 WELLINGTON RD 21
ELORA, ON
N0B 1S0
519-846-9691 x 358

TO/À

Hohahes Leroy Hill
Haudenosaunee Confederacy
16 Sunrise CRT
SUITE 600
OHSWEKEN, ON
N0A 1M0

519-445-4222



DATE:

24 JUL 2023

PIECES:

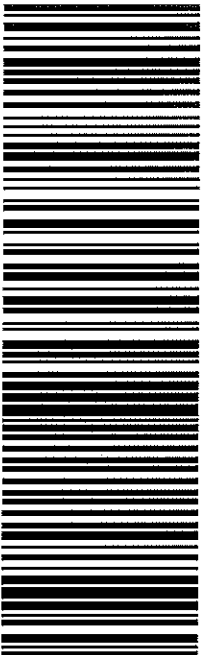
1 of/de 1

WEIGHT/POIDS

1 LB

64

EXP



PURULATOR PIN: 334215847446

ESO - PDF

Purulator's published terms and conditions of service apply - see www.purulator.com.
Les Modalités et conditions de service publiées de Purulator s'appliquent - voir www.purulator.com.

Fold the Bill of Lading on the dotted line and insert into the adhesive pouch. Attachez un connaissement à chaque colis.
Veuillez offrir ce connaissement sur la ligne pointillée et l'insérer dans la pochette adhésive. Veuillez joindre un connaissement à chaque colis.

Description: Documents

Declared Value Entered By Sender / Valeur déclarée entrée par l'expéditeur

CONDITIONS OF CARRIAGE

IMPORTANT - PLEASE READ: The consignor agrees that the act of tendering the shipment to the carrier for transportation shall be sufficient to constitute signature of this bill of lading by the consignor and shall bind the consignor to the conditions of carriage stated below.

RECEIPT Carrier acknowledges receiving from the shipper, at the point of origin and on the date specified, the shipment described in this bill of lading in apparent good order, except as noted (contents and conditions of contents of shipment unknown), and agrees to carry and deliver the shipment to the receiver at the destination set out in this bill of lading, subject to payment of all lawful charges. "Carrier" refers to Purulator Inc. and any connecting and/or successive carriers involved in the transportation of the shipment herein described, including any of their respective subsidiaries, controlled entities, and their respective employees, agents and independent contractors.

LIMITATION ON LIABILITY Carrier's liability in respect of the shipment described in this bill of lading (including for any loss, damage, delay, misdelivery, non-delivery or failure to deliver) is limited to \$2.00 per pound (\$4.41 per kilogram) computed on the total weight of the shipment, unless a higher value is declared in the specially marked Purulator Online Shipping user entry field. "Declared Value for Insurance (\$?)" Notwithstanding any disclosure of the nature or value of the goods carried or any special agreement to the contrary, carrier is not liable under any circumstances for the consequences of delay, or for any indirect or consequential damages (including lost profits) howsoever caused.

NOTICE OF CLAIM Carrier is not liable for any loss, damage or delay to any goods carried under this bill of lading unless notice of the claim setting out particulars of the origin, destination and date of shipment of the goods and the estimated amount claimed in respect of such loss, damage or delay is given in writing to the carrier within sixty (60) days after the delivery of the goods, or, in the case of failure to make delivery, within nine (9) months from the date of shipment. Subject to any overriding statutory provisions, the final statement of the claim must be filed within nine (9) months from the date of shipment together with a copy of the paid freight bill. If the Convention applies, other notice periods may govern. No claim will be entertained until all transportation charges due in connection with this bill of lading have been paid in full. All claims are subject to proof of amount of loss.

TERMS INCORPORATED BY REFERENCE Every service to be performed under this bill of lading is subject to the conditions of carriage contained in this bill of lading, including the terms and conditions contained in Purulator Inc.'s published terms and conditions of carriage and the terms and conditions prescribed by the law of the jurisdiction where the goods originate (including the uniform conditions of carriage thereunder, if any). If the carriage involves an ultimate destination or a stop in a country other than the country of departure, the Convention (as defined below) may apply and limit the liability of the carrier in respect of loss of, damage to or delay of cargo. "Convention" means the Convention for the Unification of Certain Rules relating to International Carriage by Air, signed at Warsaw, Poland, 12 October, 1929, or the Convention for the Unification of Certain Rules for International Carriage by Air, signed at Montreal, Canada, 28 May, 1999, or those Conventions as amended or supplemented as may be applicable to the carriage hereunder.

MISCELLANEOUS Unless otherwise indicated, the consignor's name and address is the sender's name and address indicated on this bill of lading, and the latter is the place of execution and the place of departure; the consignee's name and address is the receiver's name and address indicated on this bill of lading, and the latter is the place of destination; and the date indicated on this bill of lading is the date of execution. There are no specific stopping places which are agreed to, and the carrier reserves the right to select the route and the mode of transportation that the carrier deems appropriate. The consignor warrants that the shipment is properly marked, addressed and packed to ensure safe transportation in accordance with the carrier's ordinary care in handling. Unless otherwise indicated on this bill of lading, the consignor waives its right to determine the volume or dimensions of the shipment, and to indicate same on this bill of lading. The consignor appoints the carrier as its agent for the performance of customs clearance and selecting a customs broker.

ENTIRE AGREEMENT The terms and conditions contained in this bill of lading, including those incorporated herein by reference, constitute the entire agreement relating to the carriage of the shipment described in this bill of lading, and no agent, servant or representative of the carrier or consignor has the authority to alter, waive or otherwise modify any provision of this agreement. In tendering the shipment described herein for carriage, the consignor agrees to these terms and conditions on his own behalf and on behalf of the consignee and any other party claiming an interest in this shipment.

Cassie McDougall

From: Olivia Beirnes
Sent: July 28, 2023 10:52 AM
To: Cassie McDougall
Subject: FW: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334215847446

From: NotificationService@purolator.com <NotificationService@purolator.com>
Sent: Friday, July 28, 2023 10:51 AM
To: Olivia Beirnes <OBeirnes@centrewellington.ca>
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334215847446

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



Veuillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes, obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334215847446
Status: Delivered to TOWNSHIP OF CENTRE WELLINGTON
Delivery Date/Time: July 28, 2023 at 10:46
To: TOWNSHIP OF CENTRE WELLINGTON
City:
Province:
Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334215847446>

Returned

This email was sent from our automated inbox. Please do not reply.

Purolator

Purolator Express Envelope

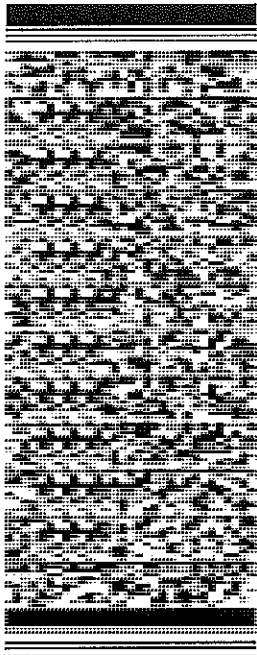
FROM/DE

Township of Centre Wellington
7444 WELLINGTON RD 27
ELORA, ON
N0B 1S0
519-846-9691 x 358

TO/À

Jesse Fieldwebster
Meits Nation of Ontario
255 Cranston CRES
PO Box 4
MIDLAND, ON
L4R 4K6

613-798-1488



DATE:
20 JUL 2023

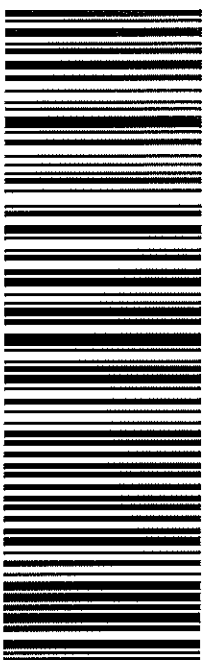
PIECES:
1 of/de 1

WEIGHT/POIDS

1 LB

48

EXP



PUROLATOR PIN: 334214598511

ESO - PDF

Purolator's published terms and conditions of service apply - see www.purolator.com.
Les Modalités et conditions de service publiées de Purolator s'appliquent - voir www.purolator.com.

Veuillez ôter ce connaissement sur la ligne pointillée et l'insérer dans la pochette adhésive. Veuillez joindre un connaissement à chaque colis.
Fold the Bill of Lading on the dotted line and insert into the adhesive pouch. Attach a Bill of Lading to each package.

Description: Documents

Declared Value Entered By Sender / Valeur déclarée entrée par l'expéditeur

CONDITIONS OF CARRIAGE

IMPORTANT - PLEASE READ: The consignor agrees that the act of tendering the shipment to the carrier for transportation shall be sufficient to constitute signature of this bill of lading by the consignor and shall bind the consignor to the conditions of carriage stated below.

RECEIPT Carrier acknowledges receiving from the shipper, at the point of origin and on the date specified, the shipment described in this bill of lading in apparent good order, except as noted (contents and conditions of contents of shipment unknown), and agrees to carry and deliver the shipment to the receiver at the destination set out in this bill of lading, subject to payment of all lawful charges. "Carrier" refers to Purolator Inc. and any connecting and/or successive carriers involved in the transportation of the shipment herein described, including any of their respective subsidiaries, controlled entities, and their respective employees, agents and independent contractors.

LIMITATION ON LIABILITY Carrier's liability in respect of the shipment described in this bill of lading (including for any loss, damage, delay, misdelivery, non-delivery or failure to deliver) is limited to \$2.00 per pound (\$4.41 per kilogram) computed on the total weight of the shipment, unless a higher value is declared in the specially marked Purolator Online Shipping user entry field, "Declared Value for Insurance (\$)". Notwithstanding any disclosure of the nature or value of the goods carried or any special agreement to the contrary, carrier is not liable under any circumstances for the consequences of delay, or for any indirect or consequential damages (including lost profits) howsoever caused.

NOTICE OF CLAIM Carrier is not liable for any loss, damage or delay to any goods carried under this bill of lading unless notice of the claim setting out particulars of the origin, destination and date of shipment of the goods and the estimated amount claimed in respect of such loss, damage or delay is given in writing to the carrier within sixty (60) days after the delivery of the goods, or, in the case of failure to make delivery, within nine (9) months from the date of shipment. Subject to any overriding statutory provisions, the final statement of the claim must be filed within nine (9) months from the date of shipment, together with a copy of the paid freight bill. If the Convention applies, other notice periods may govern. No claim will be entertained until all transportation charges due in connection with this bill of lading have been paid in full. All claims are subject to proof of amount of loss.

TERMS INCORPORATED BY REFERENCE Every service to be performed under this bill of lading is subject to the conditions of carriage contained in this bill of lading, including the terms and conditions contained in Purolator Inc.'s published terms and conditions of carriage and the terms and conditions prescribed by the law of the jurisdiction where the goods originate (including the uniform conditions of carriage thereunder, if any). If the carriage involves an ultimate destination or a stop in a country other than the country of departure, the Convention (as defined below) may apply and limit the liability of the carrier in respect of loss of, damage to or delay of cargo. "Convention" means the Convention for the Unification of Certain Rules relating to International Carriage by Air, signed at Warsaw, Poland, 12 October, 1929, or the Convention for the Unification of Certain Rules for International Carriage by Air, signed at Montreal, Canada 28 May, 1999, or those Conventions as amended or supplemented as may be applicable to the carriage hereunder.

MISCELLANEOUS Unless otherwise indicated, the consignor's name and address is the sender's name and address indicated on this bill of lading, and the latter is the place of execution and the place of departure, the consignee's name and address is the receiver's name and address indicated on this bill of lading, and the latter is the place of destination; and the date indicated on this bill of lading is the date of execution. There are no specific stopping places which are agreed to, and the carrier reserves the right to select the route and the mode of transportation that the carrier deems appropriate. The consignor warrants that the shipment is properly described on this bill of lading and on any accompanying documentation, and that the shipment is properly marked, addressed and packed to ensure safe transportation in accordance with the carrier's ordinary care in handling. Unless otherwise indicated on this bill of lading, the consignor waives its right to determine the volume or dimensions of the shipment, and to indicate same on this bill of lading. The consignor appoints the carrier as its agent for the performance of customs clearance and selecting a customs broker.

ENTIRE AGREEMENT The terms and conditions contained in this bill of lading, including those incorporated herein by reference, constitute the entire agreement relating to the carriage of the shipment described in this bill of lading, and no agent, servant or representative of the carrier or consignor has the authority to alter, waive or otherwise modify any provision of this agreement. In tendering the shipment described herein for carriage, the consignor agrees to these terms and conditions on his own behalf and on behalf of the consignee and any other party claiming an interest in this shipment.

Olivia Beirnes

From: NotificationService@purolator.com
Sent: July 21, 2023 11:45 AM
To: Olivia Beirnes
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334214598511

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



Veuillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes , obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334214598511

Status: Delivered to METIS NATION OF ONTARIO,JESSE

Delivery Date/Time: July 21, 2023 at 11:40

To: METIS NATION OF ONTARIO,JESSE

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334214598511>

This email was sent from our automated inbox. Please do not reply.

Tracking Status:



Purolator

Purolator Express Envelope

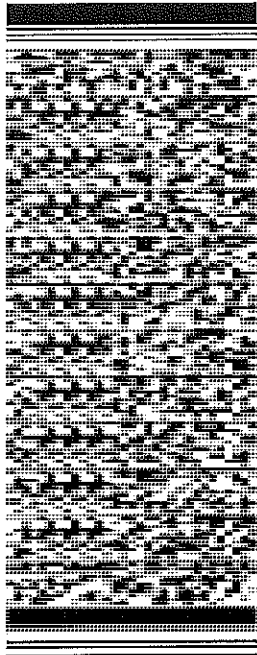
FROM / DE

Township of Centre Wellington
7444 WELLINGTON RD 21
ELORA, ON
N0B 1S0
519-846-9891 x 358

TO / A

Ms. Dawn LaForme
Six Nations of the Grand River
1695 CHIEFSWOOD RD
OHSWEKEN, ON
N0A 1M0

519-445-2201



DATE:

20 JUL 2023

PIECES:

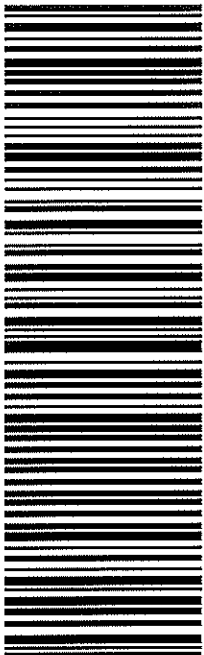
1 of/de 1

WEIGHT/POIDS

1 LB

64

EXP



PUROLATOR PIN: 334214392162

ES0 - PDF

Purolator's published terms and conditions of service apply - see www.purolator.com.
Les Modalités et conditions de service publiées de Purolator s'appliquent - voir www.purolator.com.

Veuillez plier ce connaissement sur la ligne pointillée et l'insérer dans la pochette adhésive. Veuillez joindre un connaissement à chaque colis.
Fold the Bill of Lading on the dotted line and insert into the adhesive pouch. Attach a Bill of Lading to each package.

Description: Documents

Declared Value Entered By Sender / Valeur déclarée entrée par l'expéditeur

CONDITIONS OF CARRIAGE

IMPORTANT - PLEASE READ: The consignor agrees that the act of tendering the shipment to the carrier for transportation shall be sufficient to constitute signature of this bill of lading by the consignor and shall bind the consignor to the conditions of carriage stated below.

RECEIPT: Carrier acknowledges receiving from the shipper, at the point of origin and on the date specified, the shipment described in this bill of lading in apparent good order, except as noted (contents and conditions of contents of shipment unknown), and agrees to carry and deliver the shipment to the receiver at the destination set out in this bill of lading, subject to payment of all lawful charges. "Carrier" refers to Purolator Inc. and any connecting and/or successive carriers involved in the transportation of the shipment herein described, including any of their respective subsidiaries, controlled entities, and their respective employees, agents and independent contractors.

LIMITATION ON LIABILITY: Carrier's liability in respect of the shipment described in this bill of lading (including for any loss, damage, delay, misdelivery, non-delivery or failure to deliver) is limited to \$2.00 per pound (\$4.41 per kilogram) computed on the total weight of the shipment, unless a higher value is declared in the specially marked Purolator Online Shipping user entry field, "Declared Value for Insurance (\$)". Notwithstanding any disclosure of the nature or value of the goods carried or any special agreement to the contrary, carrier is not liable under any circumstances for the consequences of delay, or for any indirect or consequential damages (including lost profits) howsoever caused.

NOTICE OF CLAIM: Carrier is not liable for any loss, damage or delay to any goods carried under this bill of lading unless notice of the claim setting out particulars of the origin, destination and date of shipment of the goods and the estimated amount claimed in respect of such loss, damage or delay is given in writing to the carrier within sixty (60) days after the delivery of the goods, or, in the case of failure to make delivery, within nine (9) months from the date of shipment. Subject to any overriding statutory provisions, the final statement of the claim must be filed within nine (9) months from the date of shipment, together with a copy of the paid freight bill. If the Convention applies, other notice periods may govern. No claim will be entertained until all transportation charges due in connection with this bill of lading have been paid in full. All claims are subject to proof of amount of loss.

TERMS INCORPORATED BY REFERENCE: Every service to be performed under this bill of lading is subject to the conditions of carriage contained in this bill of lading, including the terms and conditions contained in Purolator Inc.'s published terms and conditions of carriage and the terms and conditions prescribed by the law of the jurisdiction where the goods originate (including the uniform conditions of carriage thereunder, if any). If the carriage involves an ultimate destination or a stop in a country other than the country of departure, the Convention (as defined below) may apply and limit the liability of the carrier in respect of loss of, damage to or delay of cargo. "Convention" means the Convention for the Unification of Certain Rules relating to International Carriage by Air, signed at Warsaw, Poland, 12 October, 1929, or the Convention for the Unification of Certain Rules for International Carriage by Air, signed at Montreal, Canada, 28 May, 1999, or those Conventions as amended or supplemented as may be applicable to the carriage hereunder.

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Olivia Beirnes

From: NotificationService@purolator.com
Sent: July 21, 2023 1:45 PM
To: Olivia Beirnes
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334214392162

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Veuillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes , obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334214392162

Status: Delivered to SIX NATIONS OF THE GRAND RIVER

Delivery Date/Time: July 21, 2023 at 13:38

To: SIX NATIONS OF THE GRAND RIVER

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334214392162>

This email was sent from our automated inbox. Please do not reply.

Tracking Status:



Purulator

Purulator Express Envelope

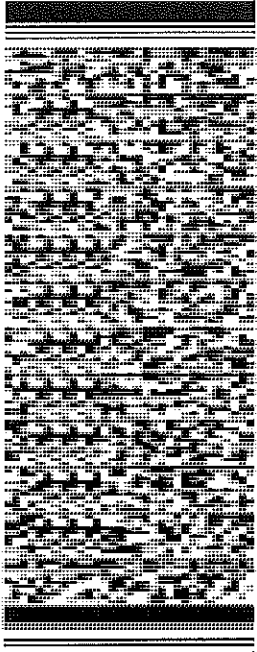
FROM/DE

Township of Centre Wellington
7444 WELLINGTON RD 21
ELORA, ON
N0B 1S0
519-846-9691 x 358

TO/À

Mr. Peter Graham
Six Nations of the Grand River
1695 CHIEFSWOOD RD
PO Box 5000
OHSWEKEN, ON
N0A 1M0

519-445-2201



DATE:
20 JUL 2023

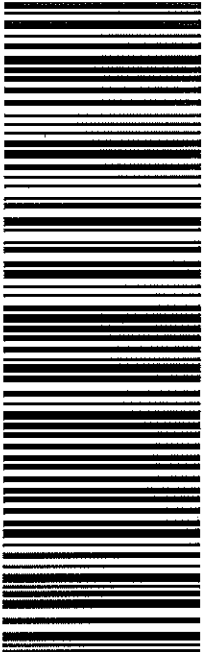
PIECES:
1 of/de 1

WEIGHT/POIDS

1 LB

64

EXP



PURULATOR PIN: 334214400452

ESD - PDF

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Fold the Bill of Lading on the dotted line and insert into the adhesive pouch. Veuillez plier ce connaissement à chaque cois.

Description: Documents
Declared Value Entered By Sender / Valeur déclarée entrée par l'expéditeur

CONDITIONS OF CARRIAGE

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Olivia Beirnes

From: NotificationService@purolator.com
Sent: July 21, 2023 1:45 PM
To: Olivia Beirnes
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334214400452

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



Veuillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes , obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334214400452

Status: Delivered to SIX NATIONS OF THE GRAND RIVER

Delivery Date/Time: July 21, 2023 at 13:38

To: SIX NATIONS OF THE GRAND RIVER

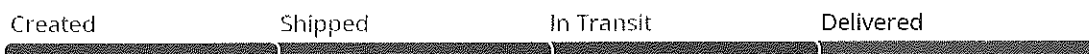
City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334214400452>

This email was sent from our automated inbox. Please do not reply.

Tracking Status:



Purolator

Purolator Express Envelope

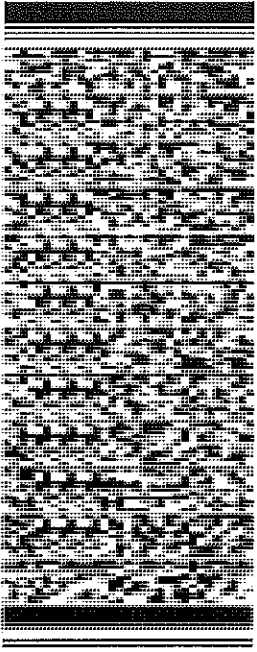
FROM / DE

Township of Centre Wellington
7444 WELLINGTON RD Z1
ELORA, ON
N0B 1S0
519-846-6691 x 358

TO / A

Chief Mark B. Hill
Six Nations of the Grand River
1695 Cheifswood RD
PO Box 5000
OHSWEKEN, ON
N0A 1M0

519-445-2201



DATE:
20 JUL 2023

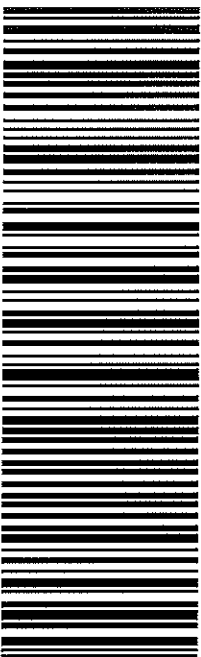
PIECES:
1 of/de 1

WEIGHT/POIDS

1 LB

64

EXP



PURULATOR PIN: 334214407952

ESO - PDF

Purolator's published terms and conditions of service apply - see www.purolator.com.
Les Modalités et conditions de service publiées de Purolator s'appliquent - voir www.purolator.com.

Veuillez offrir ce connaissement sur la ligne pointillée et l'insérer dans la pochette adhésive. Veuillez joindre un connaissement à chaque colis.
Fold the Bill of Lading on the dotted line and insert into the adhesive pouch. Attach a Bill of Lading to each package.

Description: Documents

Declared Value Entered By Sender / Valeur déclarée entrée par l'expéditeur

CONDITIONS OF CARRIAGE

IMPORTANT - PLEASE READ: The consignor agrees that the act of tendering the shipment to the carrier for transportation shall be sufficient to constitute signature of this bill of lading by the consignor and shall bind the consignor to the conditions of carriage stated below.

RECEIPT Carrier acknowledges receipt from the shipper, at the point of origin and on the date specified, the shipment described in this bill of lading in apparent good order, except as noted (contents and conditions of contents of shipment unknown), and agrees to carry and deliver the shipment to the receiver at the destination set out in this bill of lading, subject to payment of all lawful charges. "Carrier" refers to Purolator Inc. and any connecting and/or successive carriers involved in the transportation of the shipment herein described, including any of their respective subsidiaries, controlled entities, and their respective employees, agents and independent contractors.

LIMITATION ON LIABILITY Carrier's liability in respect of the shipment described in this bill of lading (including for any loss, damage, delay, misdelivery, non-delivery or failure to deliver) is limited to \$2.00 per pound (\$4.41 per kilogram) computed on the total weight of the shipment, unless a higher value is declared in the specially marked Purolator Online Shipping User Entry Field, "Declared Value for Insurance (\$)". Notwithstanding any disclosure of the nature or value of the goods carried or any special agreement to the contrary, carrier is not liable under any circumstances for the consequences of delay, or for any indirect or consequential damages (including lost profits), howsoever caused.

NOTICE OF CLAIM Carrier is not liable for any loss, damage or delay to any goods carried under this bill of lading unless notice of the claim setting out particulars of the origin, destination and date of shipment of the goods and the estimated amount claimed in respect of such loss, damage or delay is given in writing to the carrier within sixty (60) days after the delivery of the goods, or, in the case of failure to make delivery, within nine (9) months from the date of shipment. Subject to any overriding statutory provisions, the final statement of the claim must be filed within nine (9) months from the date of shipment, together with a copy of the paid freight bill. If the Convention applies, other notice periods may govern. No claim will be entertained until all transportation charges due in connection with this bill of lading have been paid in full. All claims are subject to proof of amount of loss.

TERMS INCORPORATED BY REFERENCE Every service to be performed under this bill of lading is subject to the conditions of carriage contained in this bill of lading, including the terms and conditions contained in Purolator Inc.'s published terms and conditions of carriage and the terms and conditions prescribed by the law of the jurisdiction where the goods originate (including the uniform conditions of carriage thereunder, if any). If the carriage involves an ultimate destination or a stop in a country other than the country of departure, the Convention (as defined below) may apply and limit the liability of the carrier in respect of loss of, damage to or delay of cargo. "Convention" means the Convention for the Unification of Certain Rules relating to International Carriage by Air, signed at Warsaw, Poland, 12 October, 1929, or the Convention for the Unification of Certain Rules for International Carriage by Air, signed at Montreal, Canada, 28 May, 1999, or those Conventions as amended or supplemented as may be applicable to the carriage hereunder.

MISCELLANEOUS Unless otherwise indicated, the consignor's name and address is the sender's name and address indicated on this bill of lading, and the latter is the place of execution and the place of departure; the consignee's name and address is the receiver's name and address indicated on this bill of lading, and the latter is the place of destination; and the date indicated on this bill of lading is the date of execution. There are no specific stopping places which are agreed to, and the carrier reserves the right to select the route and the mode of transportation that the carrier deems appropriate. The consignor warrants that the shipment is properly described on this bill of lading and on any accompanying documentation, and that the shipment is properly marked, addressed and packed to ensure safe transportation in accordance with the carrier's ordinary care in handling. Unless otherwise indicated on this bill of lading, the consignor waives its right to determine the volume or dimensions of the shipment, and to indicate same on this bill of lading. The consignor appoints the carrier as its agent for the performance of customs clearance and selecting a customs broker.

ENTIRE AGREEMENT The terms and conditions contained in this bill of lading, including those incorporated herein by reference, constitute the entire agreement relating to the carriage of the shipment described in this bill of lading, and no agent, servant or representative of the carrier or consignor has the authority to alter, waive or otherwise modify any provision of this agreement. In tendering the shipment described herein for carriage, the consignor agrees to these terms and conditions on his own behalf and on behalf of the consignee and any other party claiming an interest in this shipment.

Olivia Beirnes

From: NotificationService@purolator.com
Sent: July 21, 2023 1:45 PM
To: Olivia Beirnes
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334214407952

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



Veuillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes , obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334214407952

Status: Delivered to SIX NATIONS OF THE GRAND RIVER

Delivery Date/Time: July 21, 2023 at 13:38

To: SIX NATIONS OF THE GRAND RIVER

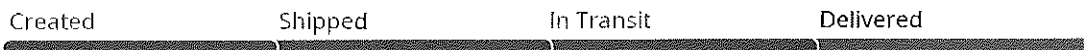
City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334214407952>

This email was sent from our automated inbox. Please do not reply.

Tracking Status:



Purolator

Purolator Express Envelope

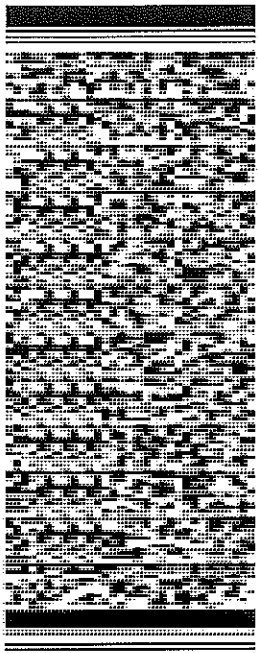
FROM / DE

Township of Centre Wellington
7444 WELLINGTON RD 21
ELORA, ON
N0B 1S0
519-846-9691 x 358

TO / A

Mr. Lonny Bomberly
Six Nations of the Grand River
1695 CHIEFSWOOD RD
PO Box 5000
OHSWEKEN, ON
N0A 1M0

519-445-2201



DATE:

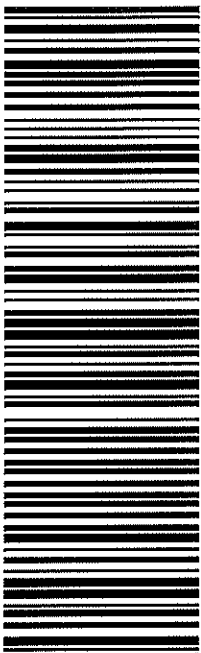
20 JUL 2023
PIECES:
1 of/cde 1

WEIGHT/POIDS

1 LB

64

EXP



PUROLATOR PIN: 334214425137

ESQ - PDF

Purolator's published terms and conditions of service apply - see www.purolator.com.
Les Modalités et conditions de service publiées de Purolator s'appliquent - voir www.purolator.com.

Fold the Bill of Lading on the dotted line and insert into the adhesive pouch. Attachez le bordereau de transport sur la ligne pointillée et insérez dans la pochette adhésive. Veuillez plier ce connaissement à chaque colis.

Description: Documents
Declared Value Entered By Sender / Valeur déclarée entrée par l'expéditeur

CONDITIONS OF CARRIAGE

IMPORTANT - PLEASE READ: The consignor agrees that the act of tendering the shipment to the carrier for transportation shall be sufficient to constitute signature of this bill of lading by the consignor and shall bind the consignor to the conditions of carriage stated below.

RECEIPT: Carrier acknowledges receipt from the shipper, at the point of origin and on the date specified, the shipment described in this bill of lading in apparent good order, except as noted (contents and conditions of contents of shipment unknown), and agrees to carry and deliver the shipment to the receiver at the destination set out in this bill of lading, subject to payment of all lawful charges. "Carrier" refers to Purolator Inc. and any contracting and/or successive carriers involved in the transportation of the shipment herein described, including any of their respective subsidiaries, controlled entities, and their respective employees, agents and independent contractors.

LIMITATION ON LIABILITY: Carrier's liability in respect of the shipment described in this bill of lading (including for any loss, damage, delay, misdelivery, non-delivery or failure to deliver) is limited to \$2.00 per pound (\$4.41 per kilogram) computed on the total weight of the shipment, unless a higher value is declared in the specially marked Purolator Online Shipping user entry field, "Declared Value for Insurance (\$)". Notwithstanding any disclosure of the nature or value of the goods carried or any special agreement to the contrary, carrier is not liable under any circumstances for the consequences of delay, or for any indirect or consequential damages (including lost profits) howsoever caused.

NOTICE OF CLAIM: Carrier is not liable for any loss, damage or delay to any goods carried under this bill of lading unless notice of the claim setting out particulars of the origin, destination and date of shipment of the goods and the estimated amount claimed in respect of such loss, damage or delay is given in writing to the carrier within sixty (60) days after the delivery of the goods, or, in the case of failure to make delivery, within nine (9) months from the date of shipment. Subject to any overriding statutory provisions, the final settlement of the claim must be filed within nine (9) months from the date of shipment, together with a copy of the paid freight bill. If the Convention applies, other notice periods may govern. No claim will be entertained until all transportation charges due in connection with this bill of lading have been paid in full. All claims are subject to proof of amount of loss.

TERMS INCORPORATED BY REFERENCE: Every service to be performed under this bill of lading is subject to the conditions of carriage contained in this bill of lading, including the terms and conditions contained in Purolator Inc.'s published terms and conditions of carriage and the terms and conditions prescribed by the law of the jurisdiction where the goods originate (including the uniform conditions of carriage therewith, if any). If the carriage involves an ultimate destination or a stop in a country other than the country of departure, the Convention (as defined below) may apply and limit the liability of the carrier in respect of loss of, damage to or delay of cargo. "Convention" means the Convention for the Unification of Certain Rules relating to International Carriage by Air, signed at Warsaw, Poland, 12 October, 1929, or the Convention for the Unification of Certain Rules for International Carriage by Air, signed at Montreal, Canada, 28 May, 1999, or those Conventions as amended or supplemented as may be applicable to the carriage hereunder.

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ENTIRE AGREEMENT: The terms and conditions contained in this bill of lading, including those incorporated herein by reference, constitute the entire agreement relating to the carriage of the shipment described in this bill of lading, and no agent, servant or representative of the carrier or consignor has the authority to alter, waive or otherwise modify any provision of this agreement. In tendering the shipment described herein for carriage, the consignor agrees to these terms and conditions on his own behalf and on behalf of the consignee and any other party claiming an interest in this shipment.

Olivia Beirnes

From: NotificationService@purolator.com
Sent: July 21, 2023 1:45 PM
To: Olivia Beirnes
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334214425137

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



Veuillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes , obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334214425137

Status: Delivered to SIX NATIONS OF THE GRAND RIVER

Delivery Date/Time: July 21, 2023 at 13:38

To: SIX NATIONS OF THE GRAND RIVER

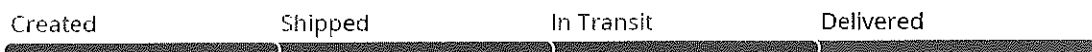
City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334214425137>

This email was sent from our automated inbox. Please do not reply.

Tracking Status:



Purolator

Purolator Express Envelope

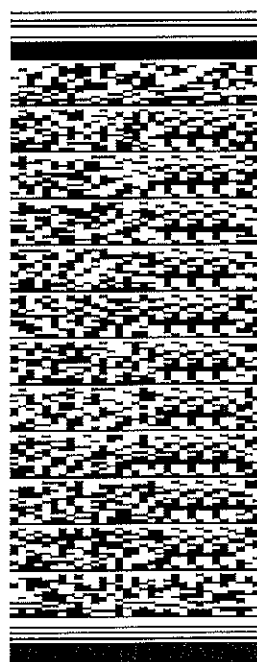
FROM / DE

Township of Centre Wellington
7444 WELLINGTON RD 21
ELORA, ON
N0B 1S0
519-846-9691 x 358

To/A

Adam Laforme
Mississauga of the Credit
First Nation
4065 Hwy 6 HWY
HAGERSVILLE, ON
N0A 1H0

905-768-4260



DATE: 24 JUL 2023
PIECES: 1 of/de 1

DATE: 24 JUL 2023
PIECES: 1 of/de 1

DATE: _____

WEIGHT/POIDS _____

DATE: 24 JUL 2023
PIECES: 1 of/de 1

EXP



PUROLATOR PIN: 334215823009

303 - 055

Purulator's published terms and conditions of service apply - see www.purulator.com.

Les Modalités et conditions de service publiées de Purolator s'appliquent - voir www.purolator.com.
Purolator's published terms and conditions of service apply - see www.purolator.com.

Description: Documents

Declared Value Entered By Sender / Valeur déclarée entrée par l'expéditeur

CONDITIONS OF CARRIAGE

IMPORTANT - PLEASE READ: The consignor agrees that the act of tendering the shipment to the carrier for transportation shall be sufficient to constitute signature of this bill of lading by the consignor and shall bind the consignor to the conditions of carriage stated below.

RECEIPT Carrier acknowledges receiving from the shipper, at the point of origin and on the date specified, the shipment described in this bill of lading in apparent good order, except as noted (contents and conditions of contents of shipment unknown), and agrees to carry and deliver the shipment to the receiver at the destination set out in this bill of lading, subject to payment of all lawful charges. "Carrier" refers to Purolozor Inc. and any connecting and/or successive carriers involved in the transportation of the shipment herein described, including any of their respective subsidiaries, controlled entities, and their respective employees, agents and independent contractors.

LIMITATION ON LIABILITY Carrier's liability in respect of the shipment described in this bill of lading (including for any loss, damage, delay, misdelivery or failure to deliver) is limited to \$2.00 per pound (\$4.41 per kilogram) computed on the total weight of the shipment, unless a higher value is declared in the specially marked PuroLator field. Notwithstanding any disclosure of the nature or value of the goods carried or any special agreement to the contrary, carrier is not liable under any circumstances for the consequences of delay, or for any indirect or consequential damages (including lost profits) whatsoever caused.

NOTICE OF CLAIM. Carrier is not liable for any loss, damage or delay to any goods carried under this bill of lading if the carrier receives written notice of such loss, damage or delay from the shipper within sixty (60) days after the date of shipment of the goods, or, in the case of failure to make delivery, within ninety (90) days after the date of delivery of the goods. Subject to any overriding statutory provisions, the final statement of the claim must be filed within nine (9) months from the date of shipment, together with a copy of the paid freight bill. If the Convention applies, other notice periods may govern. No claim will be entertained until all transportation charges due in connection with this bill of lading have been paid in full. All claims are subject to proof of amount of loss.

TERMS INCORPORATED BY REFERENCE Every service to be performed under this bill of lading is subject to the conditions of carriage contained in this bill of lading, including the terms and conditions contained in Purulot Inc.'s published terms and conditions of carriage and the terms and conditions prescribed by the law of the jurisdiction where the goods originate (including the uniform conditions of carriage hereunder, if any), if the carriage involves an ultimate destination or a stop in a country other than the country of departure, the Convention (as defined below) may apply and shall limit the liability of the carrier in respect of loss of, damage to or delay of cargo. "Convention" means the Convention for the Unification of Certain Rules relating to International Carriage by Air, signed at Warsaw, Poland, 12 October, 1929, or the Convention for the Unification of Certain Rules for International Carriage by Air, signed at Montreal, Canada, 28 May, 1956, or those Conventions as amended or supplemented as may be applicable to the carriage hereunder.

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ENTIRE AGREEMENT The terms and conditions contained in this bill of lading, including those incorporated herein by reference, constitute the entire agreement relating to the carriage of the shipment described in this bill of lading, and no agent, servant or representative of the carrier or consignor has the authority to alter, waive or otherwise modify any provision of this agreement. In tendering the shipment described herein for carriage, the consignor agrees to these terms and conditions on his own behalf and on behalf of the consignee and any other party claiming an interest in this shipment.

Fold the Bill of Lading on the dotted line and insert into the adhesive pouch. Attach a Bill of Lading to each package.

Veillez piler ce connaissance sur la ligne pointillée et l'insérer dans la pochette adhésive. Veuillez joindre un connaissance à chaque colis.

Olivia Beirnes

From: NotificationService@purolator.com
Sent: July 25, 2023 9:14 AM
To: Olivia Beirnes
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334215823009

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



Veuillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes , obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334215823009

Status: Delivered to MISSISSAUGAS OF THE CREDIT,ABB

Delivery Date/Time: July 25, 2023 at 09:08

To: MISSISSAUGAS OF THE CREDIT,ABB

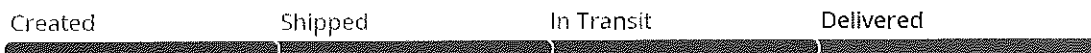
City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334215823009>

This email was sent from our automated inbox. Please do not reply.

Tracking Status:



Purolator Express Envelope

FROM / DE

Township of Centre Wellington
7444 WELLINGTON RD 21
ELORA, ON
N0B 1S0
519-846-9691 x 358

Total

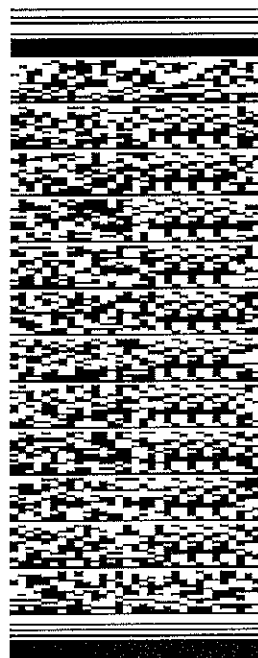
Chief R. Stacey Laforme
Mississaugas of the Credit
First Nation
4065 HWY 6 HWY

HAGERSVILLE, ON

NOA 1HO

Purolator Express Envelope

905-768-1133



DATE: _____

24 JUL 2023

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1 of/de

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EXP



PUROLATOR PIN: 334215775571

ISO - PDF

Purolator's published terms and conditions of service apply - see www.purolator.com.

Les Modalités et conditions de service publiées de Purlator s'appliquent - voir www.purlator.com.

Fold the Bill of Lading on the dotted line and insert into the adhesive pouch. Attach a Bill of Lading to each package.

Veuillez plier ce connaissance sur la ligne pointillée et l'insérer dans la pochette adhésive. Veuillez joindre un connaissance à chaque colis.

CONDITIONS OF CARRIAGE

IMPORTANT - PLEASE READ: The consignor agrees that the act of tendering the shipment to the carrier for transportation shall be sufficient to constitute signature of this bill of lading by the consignor and shall bind the consignor to the conditions of carriage stated below.

RECEIPT Carrier acknowledges receiving from the shipper, at the point of origin and on the date specified, the shipment described in this bill of lading in apparent good order, except as noted (contents and conditions of contents of the shipment unknown), and agrees to carry and deliver the shipment to the receiver at the destination set out in this bill of lading, subject to payment of all lawful charges. "Carrier" refers to Puroator Inc. and any connecting and/or successive carriers involved in the transportation of the shipment herein described, including any of their respective subsidiaries, controlled entities, and their respective employees, agents and independent contractors.

LIMITATION ON LIABILITY Carrier's liability in respect of the shipment described in this bill of lading (including for any loss, damage, delay, misdelivery, non-delivery or failure to deliver) is limited to \$2.00 per pound (\$4.41 per kilogram) computed on the total weight of the shipment, unless a higher value is declared in the specially marked PuroLator Online Shipping user entry field, "Declared Value for Insurance (\$)". Notwithstanding any disclosure of the nature or value of the goods carried or any special agreement to the contrary, carrier is not liable under any circumstances for the consequences of delay, or for any indirect or consequential damages (including lost profits) however caused.

NOTICE OF CLAIM. Carrier is not liable for any loss, damage or delay to any goods carried under this bill of lading unless notice of the claim setting out particulars of the origin, destination and date of shipment of the goods and the estimated amount claimed in respect of such loss, damage or delay is given in writing to the carrier within sixty (60) days after the delivery of the goods or, in the case of failure to make delivery, within nine (9) months from the date of shipment. Subject to any overriding statutory provisions, the final statement of the claim must be filed within nine (9) months from the date of shipment, together with a copy of the paid freight bill. If the Convention applies, other notice periods may govern. No claim will be entertained until all transportation charges due in connection with this bill of lading have been paid in full. All claims are subject to proof of amount of loss.

TERMS INCORPORATED BY REFERENCE Every service to be performed under this bill of lading is subject to the conditions of carriage contained in this bill of lading, including the terms and conditions contained in Purlator Inc.'s published terms and conditions of carriage and the terms and conditions prescribed by the law of the jurisdiction where the goods originate (including the uniform conditions of carriage hereunder, if any). If the carriage involves an ultimate destination or a stop in a country other than the country of departure, the Convention (as defined below) may apply and limit the liability of the carrier in respect of loss of, damage to or delay of cargo. "Convention" means the Convention for the Unification of Certain Rules relating to International Carriage by Air, signed at Warsaw, Poland, 12 October, 1929, or the Convention for the Unification of Certain Rules for International Carriage by Air, signed at Montreal, Canada, 28 May, 1999, or those Conventions as amended or supplemented as may be applicable to the carriage hereunder.

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Olivia Beirnes

From: NotificationService@purolator.com
Sent: July 25, 2023 9:14 AM
To: Olivia Beirnes
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334215775571

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



Veuillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes , obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334215775571

Status: Delivered to MISSISSAUGAS OF THE CREDIT,ABB

Delivery Date/Time: July 25, 2023 at 09:08

To: MISSISSAUGAS OF THE CREDIT,ABB

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334215775571>

This email was sent from our automated inbox. Please do not reply.

Tracking Status:



Purolator Express Envelope

FROM / DE

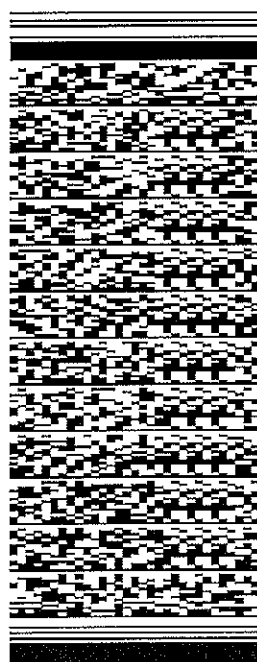
Township of Centre Wellington
7444 WELLINGTON RD 21
ELORA, ON
N0B 1S0
519-846-9691 x 358

TO / A

Abby Laforme
Mississaugas of the Credit
First Nations
1065 Hwy 6 HWY

HAGERSVILLE, ON
N0A 1H0

905-768-4260

DATE: _____
WEIGHT/POIDS _____

24 JUL 2023

pieces:

1 of/de 1

WEIGHT/POIDS

ப

60

EXP



PUROLATOR PIN: 334215829121

304 - 0511

Purdinator's published terms and conditions of service apply - see www.purdinator.com.

Les Modalités et conditions de service publiées de Puroiator s'appliquent - voir www.puroiator.com.
Puroiator s publishes terms and conditions of service apply - see www.puroiator.com.

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Veillez plier ce connaissance sur la ligne pointillée et l'insérer dans la cochette adhésive. Veuillez joindre un connaissance à chaque colis.

CONDITIONS OF CARRIAGE

IMPORTANT - PLEASE READ: The consignor agrees that the act of tendering the shipment to the carrier for transportation shall be sufficient to constitute signature of this bill of lading by the consignor and shall bind the consignor to the conditions of carriage stated below.

RECEIPT Carrier acknowledges receiving from the shipper, at the point of origin and on the date specified, the shipment described in this bill of lading in apparent good order, except as noted (contents and conditions of contents of the shipment unknown), and agrees to carry and deliver the shipment to the receiver at the destination set out in this bill of lading, subject to payment of all lawful charges. "Carrier" refers to Purolicor Inc. and any connecting and/or successive carriers involved in the transportation of the shipment herein described, including any of their respective subsidiaries, controlled entities, and their respective employees, agents and independent contractors.

LIMITATION ON LIABILITY: Carrier's liability in respect of the shipment described in this bill of lading (including for any loss, damage, delay, misdelivery, non-delivery or failure to deliver) is limited to \$2.00 per pound (\$4.41 per kilogram) computed on the total weight of the shipment, unless a higher value is declared in the specially marked Pundlator Online Shipping user entry field, "Declared Value for Insurance (\$)". Notwithstanding any disclosure of the nature or value of the goods carried or any special agreement to the contrary, carrier is not liable under any circumstances for the consequences of delay, or for any indirect or consequential damages (including lost profits) howsoever caused.

NOTICE OF CLAIM. Carrier is not liable for any loss, damage or delay to any goods carried under this bill of lading unless the carrier is notified in writing of such loss, damage or delay within the time specified in this bill of lading. The latest time for giving notice of claim is the date of shipment of the goods and the latest amount claimed in respect of such loss, damage or delay is given in writing to the carrier within sixty (60) days after the delivery of the goods or, in the case of failure to make delivery, within nine (9) months from the date of shipment. Subject to any overriding statutory provisions, the final statement of the claim must be filed within nine (9) months from the date of shipment, together with a copy of the paid freight bill. If the Convention applies, other notice periods may govern. No claim will be entertained until all transportation charges due in connection with this bill of lading have been paid in full. All claims are subject to proof of amount of loss.

TERMS INCORPORATED BY REFERENCE Every service to be performed under this bill of lading is subject to the conditions of carriage contained in this bill of lading, including the terms and conditions contained in Purologist Inc.'s published terms and conditions of carriage and the terms and conditions prescribed by the law of the jurisdiction where the goods originate (including the uniform conditions of carriage thereunder, if any), if the carriage involves an ultimate destination or a stop in a country other than the country of departure, the Convention (as defined below) may apply and shall limit the liability of the carrier in respect of loss of, damage to or delay of cargo. "Convention" means the Convention for the Unification of Certain Rules relating to International Carriage by Air, signed at Warsaw, Poland, 12 October, 1929, or the Convention for the Unification of Certain Rules for International Carriage by Air, signed at Montreal, Canada, 28 May, 1999, or those Conventions as amended or supplemented as may be applicable to the carriage thereunder.

MISCELLANEOUS Unless otherwise indicated, the consignor's name and address is the sender's name and address indicated on this bill of lading, and the latter is the place of execution and the place of departure; the consignee's name and address is the receiver's name and address indicated on this bill of lading, and the latter is the place of destination; and the date indicated on this bill of lading is the date of execution. There are no specific stopping places which are agreed to, and the carrier reserves the right to select the route and the mode of transportation that the carrier deems appropriate. The consignor warrants that the shipment is properly described on this bill of lading and on any accompanying documentation, and that the shipment is properly marked, addressed and packed to ensure safe transportation in accordance with the carrier's ordinary care in handling. Unless otherwise indicated on this bill of lading, the consignor waives its right to determine the volume or dimensions of the shipment, and to indicate same on this bill of lading. The consignor appoints the carrier as its agent for the performance of customs clearance and selecting a customs broker.

ENTIRE AGREEMENT The terms and conditions contained in this bill of lading, including those incorporated herein by reference, constitute the entire agreement relating to the carriage of the shipment described in this bill of lading, and no agent, servant or representative of the carrier or consignor has the authority to alter, waive or otherwise modify any provision of this agreement. In tendering the shipment described herein for carriage, the consignor agrees to these terms and conditions on his own behalf and on behalf of the consignee and any other party claiming an interest in this shipment.

Olivia Beirnes

From: NotificationService@purolator.com
Sent: July 25, 2023 9:14 AM
To: Olivia Beirnes
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334215829121

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



Veuillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes , obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334215829121

Status: Delivered to MISSISSAUGAS OF THE CREDIT,ABB

Delivery Date/Time: July 25, 2023 at 09:08

To: MISSISSAUGAS OF THE CREDIT,ABB

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334215829121>

This email was sent from our automated inbox. Please do not reply.

Tracking Status:



FROM/DE

Township of Centre Wellington
7444 WELLINGTON RD 21
ELORA, ON
N0B 1S0
519-846-9691 x 356

TO/À

Mark Laforme
Mississauga of the Credit
First Nation
4065 HWY 6 HWY
HAGERSVILLE, ON
N0A 1H0

905-768-1133

EXP

DATE:
24 JUL 2023
PIECES:
1 of/de 1

WEIGHT/POIDS
1 LB

61

EXP

PUROLATOR PIN: 334215791081

ESQ - PDF

ESQ - PDF

PUROLATOR's published terms and conditions of service apply - see www.purolator.com.

Les Modalités et conditions de service publiées de Purolator s'appliquent - voir www.purolator.com.

Purolator Express Envelope

Fold the Bill of Lading on the dotted line and insert into the adhesive pouch. Attach a Bill of Lading to each package.
Veuillez plier ce connaissement sur la ligne pointillée et l'insérer dans la pochette adhésive. Veuillez joindre un connaissement à chaque colis.

Description: Documents
Declared Value Entered By Sender / Valeur déclarée entrée par l'expéditeur

CONDITIONS OF CARRIAGE

IMPORTANT - PLEASE READ: The consignor agrees that the act of tendering the shipment to the carrier for transportation shall be sufficient to constitute signature of this bill of lading by the consignor and shall bind the consignor to the conditions of carriage stated below.

RECEIPT Carrier acknowledges receiving from the shipper, at the point of origin and on the date specified, the shipment described in this bill of lading in apparent good order, except as noted (contents and conditions of contents of shipment unknown), and agrees to carry and deliver the shipment to the receiver at the destination set out in this bill of lading, subject to payment of all lawful charges. "Carrier" refers to Purolator Inc. and any connecting and/or successive carriers involved in the transportation of the shipment herein described, including any of their respective subsidiaries, controlled entities, and their respective employees, agents and independent contractors.

LIMITATION ON LIABILITY Carrier's liability in respect of the shipment described in this bill of lading (including for any loss, damage, delay, misdelivery, non-delivery or failure to deliver) is limited to \$2.00 per pound (\$4.41 per kilogram) computed on the total weight of the shipment, unless a higher value is declared in the specially marked Purolator Online Shipping user entry field. "Declared Value for Insurance (\$)": Notwithstanding any disclosure of the nature or value of the goods carried or any special agreement to the contrary, carrier is not liable under any circumstances for the consequences of delay, or for any indirect or consequential damages (including lost profits) howsoever caused.

NOTICE OF CLAIM Carrier is not liable for any loss, damage or delay to any goods carried under this bill of lading unless notice of the claim setting out particulars of the origin, destination and date of shipment of the goods and the estimated amount claimed in respect of such loss, damage or delay is given in writing to the carrier within sixty (60) days after the delivery of the goods, or, in the case of failure to make delivery, within nine (9) months from the date of shipment. Subject to any overriding statutory provisions, the final statement of the claim must be filed within nine (9) months from the date of shipment, together with a copy of the paid freight bill. If the Convention applies, other notice periods may govern. No claim will be entertained until all transportation charges due in connection with this bill of lading have been paid in full. All claims are subject to proof of amount of loss.

TERMS INCORPORATED BY REFERENCE Every service to be performed under this bill of lading is subject to the conditions of carriage contained in this bill of lading, including the terms and conditions contained in Purolator Inc.'s published terms and conditions of carriage and the terms and conditions prescribed by the law of the jurisdiction where the goods originate (including the uniform conditions of carriage thereunder, if any). If the carriage involves an ultimate destination or a stop in a country other than the country of departure, the Convention (as defined below) may apply and limit the liability of the carrier in respect of loss of, damage to or delay of cargo. "Convention" means the Convention for the Unification of Certain Rules relating to International Carriage by Air, signed at Warsaw, Poland, 12 October, 1929, or the Convention for the Unification of Certain Rules for International Carriage by Air, signed at Montreal, Canada, 28 May, 1999, or those Conventions as amended or supplemented as may be applicable to the carriage hereunder.

MISCELLANEOUS Unless otherwise indicated, the consignor's name and address is the sender's name and address indicated on this bill of lading, and the latter is the place of execution and the place of departure; the consignee's name and address is the receiver's name and address indicated on this bill of lading, and the latter is the place of destination; and the date indicated on this bill of lading is the date of execution. There are no specific stopping places which are agreed to, and the carrier reserves the right to select the route and the mode of transportation that the carrier deems appropriate. The consignor warrants that the shipment is properly described on this bill of lading and on any accompanying documentation, and that the shipment is properly marked, addressed and packed to ensure safe transportation in accordance with the carrier's ordinary care in handling. Unless otherwise indicated on this bill of lading, the consignor waives its right to determine the volume or dimensions of the shipment, end to indicate same on this bill of lading. The consignor appoints the carrier as its agent for the performance of customs clearance and selecting a customs broker.

ENTIRE AGREEMENT The terms and conditions contained in this bill of lading, including those incorporated herein by reference, constitute the entire agreement relating to the carriage of the shipment described in this bill of lading, and no agent, servant or representative of the carrier or consignor has the authority to alter, waive or otherwise modify any provision of this agreement. In tendering the shipment described herein for carriage, the consignor agrees to these terms and conditions on his own behalf and on behalf of the consignee and any other party claiming an interest in this shipment.

Olivia Beirnes

From: NotificationService@purolator.com
Sent: July 25, 2023 9:14 AM
To: Olivia Beirnes
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334215791081

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



Veillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes , obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334215791081

Status: Delivered to MISSISSAUGAS OF THE CREDIT,ABB

Delivery Date/Time: July 25, 2023 at 09:08

To: MISSISSAUGAS OF THE CREDIT,ABB

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334215791081>

This email was sent from our automated inbox. Please do not reply.

Tracking Status:



Purulator

Purulator Express Envelope

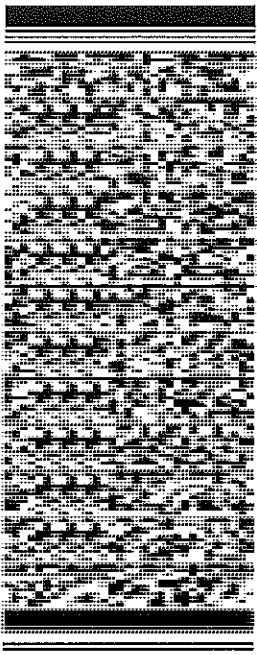
FROM / DE

Township of Centre Wellington
7444 WELLINGTON RD 21
ELORA, ON
N0B 1S0
519-846-9691 x 356

TO / A

Jesse Fieldwebster
Melis Nation of Ontario
845 KING ST
Unit 10 & 11
MIDLAND, ON
L4R 0B7

705-529-6000



DATE:

24 JUL 2023

PIECES:

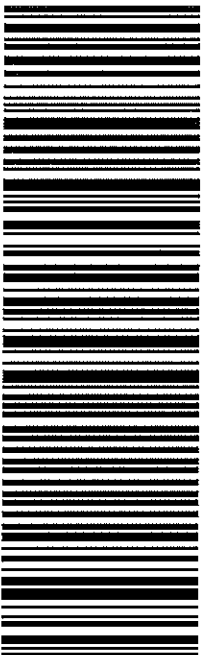
1 of/de 1

WEIGHT/POIDS

1 LB

48

EXP



PURULATOR PIN: 334215795843

ESQ - PDF

Purulator's published terms and conditions of service apply - see www.purulator.com.
Les Modalités et conditions de service publiées de Purulator s'appliquent - voir www.purulator.com.

Yeuillez plier ce connaissement sur la ligne pointillée et insérer dans la pochette adhésive. Veuillez joindre un connaissement à chaque colis.
Fold the Bill of Lading on the dotted line and insert into the adhesive pouch. Attach a Bill of Lading to each package.

Description: Documents

Declared Value Entered By Sender / Valeur déclarée entrée par l'expéditeur

CONDITIONS OF CARRIAGE

IMPORTANT - PLEASE READ: The consignor agrees that the act of tendering the shipment to the carrier for transportation shall be sufficient to constitute signature of this bill of lading by the consignor and shall bind the consignor to the conditions of carriage stated below.

RECEIPT Carrier acknowledges receiving from the shipper, at the point of origin and on the date specified, the shipment described in this bill of lading in apparent good order, except as noted (contents and conditions of contents of shipment unknown), and agrees to carry and deliver the shipment to the receiver at the destination set out in this bill of lading, subject to payment of all lawful charges. "Carrier" refers to Purulator Inc. and any connecting and/or successive carriers involved in the transportation of the shipment herein described, including any of their respective subsidiaries, controlled entities, and their respective employees, agents and independent contractors.

LIMITATION ON LIABILITY Carrier's liability in respect of the shipment described in this bill of lading (including for any loss, damage, delay, misdelivery, non-delivery or failure to deliver) is limited to \$2.00 per pound (\$4.41 per kilogram) computed on the total weight of the shipment, unless a higher value is declared in the specially marked Purulator Online Shipping user entry field. "Declared Value for Insurance (\$)". Notwithstanding any disclosure of the nature or value of the goods carried or any special agreement to the contrary, carrier is not liable under any circumstances for the consequences of delay or for any indirect or consequential damages (including lost profits) howsoever caused.

NOTICE OF CLAIM Carrier is not liable for any loss, damage or delay to any goods carried under this bill of lading unless notice of the claim setting out particulars of the origin, destination and date of shipment of the goods and the estimated amount claimed in respect of such loss, damage or delay is given in writing to the carrier within sixty (60) days after the delivery of the goods, or, in the case of failure to make delivery, within nine (9) months from the date of shipment. Subject to any overriding statutory provisions, the final settlement of the claim must be filed within nine (9) months from the date of shipment together with a copy of the paid freight bill. If the Convention applies, other notice periods may govern. No claim will be entertained until all transportation charges due in connection with this bill of lading have been paid in full. All claims are subject to proof of amount of loss.

TERMS INCORPORATED BY REFERENCE Every service to be performed under this bill of lading is subject to the conditions of carriage contained in this bill of lading, including the terms and conditions contained in Purulator Inc.'s published terms and conditions of carriage and the terms and conditions prescribed by the law of the jurisdiction where the goods originate (including the uniform conditions of carriage thereunder, if any). If the carriage involves an ultimate destination or a stop in a country other than the country of departure, the Convention (as defined below) may apply and limit the liability of the carrier in respect of loss of, damage to or delay of cargo. "Convention" means the Convention for the Unification of Certain Rules relating to International Carriage by Air, signed at Warsaw, Poland, 12 October, 1929, or the Convention for the Unification of Certain Rules for International Carriage by Air, signed at Montreal, Canada, 28 May, 1999, or those Conventions as amended or supplemented as may be applicable to the carriage hereunder.

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ENTIRE AGREEMENT The terms and conditions contained in this bill of lading, including those incorporated herein by reference, constitute the entire agreement relating to the carriage of the shipment described in this bill of lading, and no agent, servant or representative of the carrier or consignor has the authority to alter, waive or otherwise modify any provision of this agreement. In tendering the shipment described herein for carriage, the consignor agrees to these terms and conditions on his own behalf and on behalf of the consignee and any other party claiming an interest in this shipment.

Olivia Beirnes

From: NotificationService@purolator.com
Sent: July 25, 2023 11:41 AM
To: Olivia Beirnes
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334215795843

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Veuillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes , obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334215795843

Status: Delivered to METIS NATION OF ONTARIO,JESSE

Delivery Date/Time: July 25, 2023 at 11:36

To: METIS NATION OF ONTARIO,JESSE

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334215795843>

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Tracking Status:



Adam Dickieson

From: Olivia Beirnes
Sent: August 24, 2023 1:16 PM
To: Adam Dickieson
Subject: FW: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261354248

From: NotificationService@purolator.com <NotificationService@purolator.com>
Sent: Thursday, August 24, 2023 11:54 AM
To: Olivia Beirnes <OBeirnes@centrewellington.ca>
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261354248

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Veuillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes, obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334261354248

Status: Delivered to METIS NATIONS OF ONTARIO,JESSE

Delivery Date/Time: August 24, 2023 at 11:50

To: METIS NATIONS OF ONTARIO,JESSE

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334261354248>

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Policy: <http://www.purolator.com/en/legal/privacy.page>

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nt(s) above, please click here:

shiponline.purolator.com/ShipOnline/Public/ProactiveNotification/Unsubscribe.aspx?lang=E&token=mpJnCLExA59nrEknKFqMHX2zBgVDPH10yymIBVfDS6hO1FSPpLISQb%2BPZ

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nmediately.

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Votre envoi a été livré!

Bonjour Olivia Beirnes,

À la demande de Olivia Beirnes , obeirnes@centrewellington.ca, le présent message
confirme que l'envoi ou les envois ont été livrés. Nous sommes impatients d'effectuer
d'autres livraisons pour vous dans un proche avenir!

Adam Dickieson

From: Olivia Beirnes
Sent: August 23, 2023 12:11 PM
To: Adam Dickieson
Subject: FW: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261382066

From: NotificationService@purolator.com <NotificationService@purolator.com>
Sent: Wednesday, August 23, 2023 12:10 PM
To: Olivia Beirnes <OBeirnes@centrewellington.ca>
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261382066

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Veuillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes, obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334261382066

Status: Delivered to SIX NATIONS OF THE GRAND RIVER

Delivery Date/Time: August 23, 2023 at 12:03

To: SIX NATIONS OF THE GRAND RIVER

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334261382066>

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Email has been submitted to receive notifications of any changes that impact the delivery of the specific shipment(s) above. If you wish to unsubscribe for notifications regarding the shipment(s) above, please click here:

<http://www.purolator.com/ShipOnline/Public/ProactiveNotification/Unsubscribe.aspx?lang=E&token=hPynBRZ3b4cd6DM32fcYwqGV%2FyQp0Lk8EFazicAvdzgdXxTzmP3HGT0EH>

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Votre envoi a été livré!

Bonjour Olivia Beirnes,

À la demande de Olivia Beirnes , obeirnes@centrewellington.ca, le présent message confirme que l'envoi ou les envois ont été livrés. Nous sommes impatients d'effectuer d'autres livraisons pour vous dans un proche avenir!

Adam Dickieson

From: Olivia Beirnes
Sent: August 23, 2023 12:12 PM
To: Adam Dickieson
Subject: FW: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261389590

From: NotificationService@purolator.com <NotificationService@purolator.com>
Sent: Wednesday, August 23, 2023 12:10 PM
To: Olivia Beirnes <OBeirnes@centrewellington.ca>
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261389590

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



Veuillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes, obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334261389590

Status: Delivered to SIX NATIONS OF THE GRAND RIVER

Delivery Date/Time: August 23, 2023 at 12:03

To: SIX NATIONS OF THE GRAND RIVER

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334261389590>

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Tracking Status:



It's not a package.
It's a promise.

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Visit
www.purolator.com

Call
[1 888 SHIP-123](tel:1888SHIP123)



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An email has been submitted to receive notifications of any changes that impact the delivery of the specific shipment(s) above. If you wish to unsubscribe for notifications regarding the shipment(s) above, please click here:

<http://www.purolator.com/ShipOnline/Public/ProactiveNotification/Unsubscribe.aspx?lang=E&token=hPynBRZ3b4c9KIXKTarcBGYuNdFvHuGgDdGMaQg8RuqTG6A9Ghp18luHpPF>

A tracking notification has been sent to you by Purolator on the behalf of the shipper noted above. Purolator does not validate the authenticity of the e-mail addresses provided by the shipper. Purolator assumes no responsibility for the content of the e-mail message added by the shipper. This e-mail contains proprietary information and may be confidential. If you are not the intended recipient of this e-mail, you are hereby notified that any dissemination, distribution or copying of this message is strictly prohibited. If you received this message in error, please delete it immediately.

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Votre envoi a été livré!

Bonjour Olivia Beirnes,

À la demande de Olivia Beirnes , obeirnes@centrewellington.ca, le présent message confirme que l'envoi ou les envois ont été livrés. Nous sommes impatients d'effectuer d'autres livraisons pour vous dans un proche avenir!

Adam Dickieson

From: Olivia Beirnes
Sent: August 23, 2023 12:11 PM
To: Adam Dickieson
Subject: FW: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261394905

From: NotificationService@purolator.com <NotificationService@purolator.com>
Sent: Wednesday, August 23, 2023 12:10 PM
To: Olivia Beirnes <OBeirnes@centrewellington.ca>
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261394905

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



Veuillez faire défiler l'écran vers le bas pour afficher la version française.

Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes, obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334261394905

Status: Delivered to SIX NATIONS OF THE GRAND RIVER

Delivery Date/Time: August 23, 2023 at 12:03

To: SIX NATIONS OF THE GRAND RIVER

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334261394905>

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Votre envoi a été livré!

Bonjour Olivia Beirnes,

À la demande de Olivia Beirnes , obeirnes@centrewellington.ca, le présent message confirme que l'envoi ou les envois ont été livrés. Nous sommes impatients d'effectuer d'autres livraisons pour vous dans un proche avenir!

Adam Dickieson

From: Olivia Beirnes
Sent: August 23, 2023 12:12 PM
To: Adam Dickieson
Subject: FW: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261399292

From: NotificationService@purolator.com <NotificationService@purolator.com>
Sent: Wednesday, August 23, 2023 12:10 PM
To: Olivia Beirnes <OBeirnes@centrewellington.ca>
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261399292

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Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes , obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334261399292

Status: Delivered to SIX NATIONS OF THE GRAND RIVER

Delivery Date/Time: August 23, 2023 at 12:03

To: SIX NATIONS OF THE GRAND RIVER

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334261399292>

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Votre envoi a été livré!

Bonjour Olivia Beirnes,

À la demande de Olivia Beirnes , obeirnes@centrewellington.ca, le présent message confirme que l'envoi ou les envois ont été livrés. Nous sommes impatients d'effectuer d'autres livraisons pour vous dans un proche avenir!

Adam Dickieson

From: Olivia Beirnes
Sent: August 23, 2023 10:38 AM
To: Adam Dickieson
Subject: FW: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261405875

From: NotificationService@purolator.com <NotificationService@purolator.com>
Sent: Wednesday, August 23, 2023 9:43 AM
To: Olivia Beirnes <OBeirnes@centrewellington.ca>
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261405875

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Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes, obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334261405875

Status: Delivered to MISSISSAUGAS OF THE CREDIT,MAR

Delivery Date/Time: August 23, 2023 at 09:39

To: MISSISSAUGAS OF THE CREDIT,MAR

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334261405875>

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Votre envoi a été livré!

Bonjour Olivia Beirnes,

À la demande de Olivia Beirnes , obeirnes@centrewellington.ca, le présent message confirme que l'envoi ou les envois ont été livrés. Nous sommes impatients d'effectuer d'autres livraisons pour vous dans un proche avenir!

Adam Dickieson

From: Olivia Beirnes
Sent: August 24, 2023 8:05 AM
To: Adam Dickieson
Subject: FW: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261411725

From: NotificationService@purolator.com <NotificationService@purolator.com>
Sent: Wednesday, August 23, 2023 5:00 PM
To: Olivia Beirnes <OBeirnes@centrewellington.ca>
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261411725

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Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes , obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334261411725

Status: Delivered to MISSISSAUGAS OF THE CREDIT,CHI

Delivery Date/Time: August 23, 2023 at 16:55

To: MISSISSAUGAS OF THE CREDIT,CHI

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334261411725>

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Votre envoi a été livré!

Bonjour Olivia Beirnes,

À la demande de Olivia Beirnes , obeirnes@centrewellington.ca, le présent message confirme que l'envoi ou les envois ont été livrés. Nous sommes impatients d'effectuer d'autres livraisons pour vous dans un proche avenir!

Adam Dickieson

From: Olivia Beirnes
Sent: August 23, 2023 10:38 AM
To: Adam Dickieson
Subject: FW: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261415361

From: NotificationService@purolator.com <NotificationService@purolator.com>
Sent: Wednesday, August 23, 2023 9:43 AM
To: Olivia Beirnes <OBeirnes@centrewellington.ca>
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261415361

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Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes, obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334261415361

Status: Delivered to MISSISSAUGAS OF THE CREDIT,MAR

Delivery Date/Time: August 23, 2023 at 09:39

To: MISSISSAUGAS OF THE CREDIT,MAR

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334261415361>

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Votre envoi a été livré!

Bonjour Olivia Beirnes,

À la demande de Olivia Beirnes , obeirnes@centrewellington.ca, le présent message confirme que l'envoi ou les envois ont été livrés. Nous sommes impatients d'effectuer d'autres livraisons pour vous dans un proche avenir!

Adam Dickieson

From: Olivia Beirnes
Sent: August 23, 2023 10:38 AM
To: Adam Dickieson
Subject: FW: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261419876

From: NotificationService@purolator.com <NotificationService@purolator.com>
Sent: Wednesday, August 23, 2023 9:43 AM
To: Olivia Beirnes <OBeirnes@centrewellington.ca>
Subject: Purolator - Your shipment is delivered / Votre envoi a été livré - PIN/NIC:334261419876

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Your shipment is delivered!

Hi Olivia Beirnes,

As requested by Olivia Beirnes , obeirnes@centrewellington.ca, this message confirms that the shipment(s) have been successfully delivered. We look forward to delivering for you again in the near future!

PIN: 334261419876

Status: Delivered to MISSISSAUGAS OF THE CREDIT,MAR

Delivery Date/Time: August 23, 2023 at 09:39

To: MISSISSAUGAS OF THE CREDIT,MAR

City:

Province:

Tracking Details: <https://www.purolator.com/en/ship-track/tracking-details.page?pin=334261419876>

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Votre envoi a été livré!

Bonjour Olivia Beirnes,

À la demande de Olivia Beirnes , obeirnes@centrewellington.ca, le présent message confirme que l'envoi ou les envois ont été livrés. Nous sommes impatients d'effectuer d'autres livraisons pour vous dans un proche avenir!

Crystal Ferguson

From: Adam Dickieson <ADickieson@centrewellington.ca>
Sent: Thursday, November 30, 2023 10:34 AM
To: Tricia Radburn; Crystal Ferguson
Cc: Andrew Dawson
Subject: Purolator Letters - Notice of Public Information Centre#2
Attachments: Notice of PIC2_First Nations.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Tricia, Crystal,

Find attached documentation of notices sent via Purolator for the project file regarding the Public Information Centre #2 for the project file:

1. METIS NATIONS OF ONTARIO
2. SIX NATIONS OF THE GRAND RIVER
3. MISSISSAUGAS OF THE CREDIT

Regards,
Adam.

Adam Dickieson | Engineering Services Coordinator
Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

From: Tricia Radburn <Tricia.Radburn@rjburnside.com>
Sent: Wednesday, October 4, 2023 3:41 PM
To: Adam Dickieson <ADickieson@centrewellington.ca>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Subject: Re: Purolator Letters - Notice of Public Information Centre

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Thanks Adam. We'll file these with our consultation documentation.

Tricia

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From: Adam Dickieson <ADickieson@centrewellington.ca>
Sent: Wednesday, October 4, 2023 3:33:07 PM
To: Tricia Radburn <Tricia.Radburn@rjburnside.com>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; Olivia Forster <oforster@centrewellington.ca>; Cassie

McDougall <cmcdougall@centrewellington.ca>

Subject: Purolator Letters - Notice of Public Information Centre

Tricia, Crystal,

I have realized that the attached notification documentation was not turned over for the project file regarding the Public Information Centre #1:

Please find Purolator conformation of delivery attached for the project file for the following (9) groups:

1. METIS NATIONS OF ONTARIO, JESSE, 334261354248, METIS NATIONS OF ON, 845 KING ST, MIDLAND ON, L4R 0B (Attn: Jesse Fieldwebster)
2. SIX NATIONS OF THE GRAND RIVER, 334261382066, SIX NATIONS OF THE, 1695 CHIEFSWOOD R, OHSWEKEN ON, N0A 1M0 (Attn: Dawn LaForme)
3. SIX NATIONS OF THE GRAND RIVER, 334261389590, SIX NATIONS OF THE, 1695 CHIEFSWOOD R, OHSWEKEN ON, N0A 1M0 (Attn: Peter Graham)
4. SIX NATIONS OF THE GRAND RIVER, 334261394905, SIX NATIONS OF THE, 1695 CHIEFSWOOD R, OHSWEKEN ON, N0A 1M0 (Attn: Chief Mark B. Hill)
5. SIX NATIONS OF THE GRAND RIVER, 334261399292, SIX NATIONS OF THE, 1695 CHIEFSWOOD R, OHSWEKEN ON, N0A 1M0 (Attn: Lonny Bomberry)
6. MISSISSAUGAS OF THE CREDIT, MAR, 334261405875, MISSISSAUGAS OF THE 4065 HIGHWAY 6, HAGERSVILLE ON, N0A 1H0 (Attn: Adam LaForme)
7. MISSISSAUGAS OF THE CREDIT, CHI, 334261411725, MISSISSAUGAS OF THE 4065 HIGHWAY 6, HAGERSVILLE ON, N0A 1H0 (Attn: Chief R. Stacey LaForme)
8. MISSISSAUGAS OF THE CREDIT, MAR, 334261415361, MISSISSAUGAS OF THE 4065 HIGHWAY 6, HAGERSVILLE ON, N0A 1H0 (Attn: Abby LaForme)
9. MISSISSAUGAS OF THE CREDIT, MAR, 334261419876, MISSISSAUGAS OF THE 4065 HIGHWAY 6, HAGERSVILLE ON, N0A 1H0 (Attn: Mark LaForme)

Regards,
Adam.

Adam Dickieson | Engineering Services Coordinator
Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

-----Original Message-----

From: Adam Dickieson

Sent: Monday, August 21, 2023 1:11 PM

To: Cassie McDougall <cmcdougall@centrewellington.ca>; Olivia Beirnes <OBeirnes@centrewellington.ca>

Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Subject: Purolator Letters - Notice of Public Information Centre

Cassie, Olivia,

As discussed today - please see that the Notice of Public Information Centre #1 is sent by Purolator in the same way as the Notice of Commencement was earlier. Note that there is no cover letter for this Notice of Public Information Centre #1. It could be sent out as a single page double sided (colour).

Also attached is the Purolator circulation list of those that has been confirmed that address is accurate. Please sent this notice to all those that have confirmed receipt.

Regards,
Adam.

Adam Dickieson | Engineering Services Coordinator Township of Centre Wellington | 1 MacDonald Square, Elora,
ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

-----Original Message-----

From: Cassie McDougall <cmcdougall@centrewellington.ca>
Sent: Monday, July 31, 2023 9:47 AM
To: Adam Dickieson <ADickieson@centrewellington.ca>
Subject: Purolator Confirmations

Hi Adam,

Here are the Purolator tracking numbers and confirmation of deliveries for your shipments.

Cassie McDougall | Administrative, Payroll and Accounts Clerk-Infrastructure

Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x361 centrewellington.ca

Office located at: 7444 Wellington Road 21, Elora ON

-----Original Message-----

From: Cassie McDougall <cmcdougall@centrewellington.ca>
Sent: Monday, July 31, 2023 10:29 AM
To: Cassie McDougall <cmcdougall@centrewellington.ca>
Subject: Message from "RNP002673B92535"

This E-mail was sent from "RNP002673B92535" (MP C4503).

Scan Date: 07.31.2023 10:28:49 (-0400)



*Notice of Commencement
Municipal Class Environmental Assessment Study for Five Bridges
in Centre Wellington (Former Pilkington Township)
July 20, 2023*

Haudenosaunee Development Institute
16 Sunrise Court, Suite 6000
Ohsweken, ON N0A 1M0

To Whom it May Concern:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

A summary of the project is as follows:

- | | |
|---------------------|--|
| Project Lead: | • Township of Centre Wellington |
| Project consultant: | • R.J. Burnside & Associates Limited |
| Approval Process: | • Schedule B Municipal Class EA |
| Project Location: | • Five bridges in the former Township of Pilkington (refer to attached Notice of Commencement for a map) |
| Duty to Consult: | • The province has delegated the responsibility for consultation to the Township of Centre Wellington |
| Project Purpose: | • To assess whether one or more of the five bridges should be reopened or remain closed. |

Studies to be completed:

- Traffic study to review traffic patterns, volumes and flow.
- Archaeological screening and additional archaeological studies, if required.
- Cultural Heritage Screening and additional heritage studies, if required.
- Ecological study using existing records and field observations.
- Geotechnical study to assess soil conditions and stability, if required.

Potential impacts to Treaty/Aboriginal Rights:

- To be determined, based on information received from your community.

We are notifying you of the project (see attached notice) in hopes that you can assist our project team in determining if your community may hold interest in this project. Your comments are welcome and will be taken into consideration throughout this Municipal Class EA Study.

If you have an interest in this project, please contact one of the Project Team members below. The team is happy to provide additional information, provide opportunities for your community to participate in studies or review project reports, or meet with team members to answer questions and resolve concerns.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington



*Notice of Commencement
Municipal Class Environmental Assessment Study for Five Bridges
in Centre Wellington (Former Pilkington Township)
July 20, 2023*

Hohahe Leroy Hill
Secretary to the Haudensaunee Confederacy
16 Sunrise Court, Suite 6000
Ohsweken, ON N0A 1M0

Dear Hohahe Leroy Hill:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

A summary of the project is as follows:

- | | |
|---------------------|--|
| Project Lead: | <ul style="list-style-type: none">• Township of Centre Wellington |
| Project consultant: | <ul style="list-style-type: none">• R.J. Burnside & Associates Limited |
| Approval Process: | <ul style="list-style-type: none">• Schedule B Municipal Class EA |
| Project Location: | <ul style="list-style-type: none">• Five bridges in the former Township of Pilkington (refer to attached Notice of Commencement for a map) |
| Duty to Consult: | <ul style="list-style-type: none">• The province has delegated the responsibility for consultation to the Township of Centre Wellington |
| Project Purpose: | <ul style="list-style-type: none">• To assess whether one or more of the five bridges should be reopened or remain closed. |

Studies to be completed:

- Traffic study to review traffic patterns, volumes and flow.
- Archaeological screening and additional archaeological studies, if required.
- Cultural Heritage Screening and additional heritage studies, if required.
- Ecological study using existing records and field observations.
- Geotechnical study to assess soil conditions and stability, if required.

Potential impacts to Treaty/Aboriginal Rights:

- To be determined, based on information received from your community.

We are notifying you of the project (see attached notice) in hopes that you can assist our project team in determining if your community may hold interest in this project. Your comments are welcome and will be taken into consideration throughout this Municipal Class EA Study.

If you have an interest in this project, please contact one of the Project Team members below. The team is happy to provide additional information, provide opportunities for your community to participate in studies or review project reports, or meet with team members to answer questions and resolve concerns.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington



*Notice of Commencement
Municipal Class Environmental Assessment Study for Five Bridges
in Centre Wellington (Former Pilkington Township)
July 20, 2023*

Ms. Raechelle Williams
Environmental Supervisor
Haudenosaunee Confederacy
16 Sunrise Court, Suite 402B
Ohsweken, ON N0A 1M0

Dear Raechelle Williams:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

A summary of the project is as follows:

- | | |
|---------------------|--|
| Project Lead: | <ul style="list-style-type: none">• Township of Centre Wellington |
| Project consultant: | <ul style="list-style-type: none">• R.J. Burnside & Associates Limited |
| Approval Process: | <ul style="list-style-type: none">• Schedule B Municipal Class EA |
| Project Location: | <ul style="list-style-type: none">• Five bridges in the former Township of Pilkington (refer to attached Notice of Commencement for a map) |
| Duty to Consult: | <ul style="list-style-type: none">• The province has delegated the responsibility for consultation to the Township of Centre Wellington |
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Studies to be completed:

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- Ecological study using existing records and field observations.
- Geotechnical study to assess soil conditions and stability, if required.

Potential impacts to Treaty/Aboriginal Rights:

- To be determined, based on information received from your community.

We are notifying you of the project (see attached notice) in hopes that you can assist our project team in determining if your community may hold interest in this project. Your comments are welcome and will be taken into consideration throughout this Municipal Class EA Study.

If you have an interest in this project, please contact one of the Project Team members below. The team is happy to provide additional information, provide opportunities for your community to participate in studies or review project reports, or meet with team members to answer questions and resolve concerns.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
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Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington

Crystal Ferguson

From: Crystal Ferguson
Sent: Friday, July 21, 2023 9:46 AM
To: communications@hdi.land; jocko@sixnationsns.com; info@hdi.land; 1749resource@gmail.com; janicewilliams@hdi.land
Cc: Andrew Dawson; ADickieson@centrewellington.ca
Subject: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Attachments: Notice of Commencement_Final.pdf

Dear Haudenosaunee Confederacy and Development Institute:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

A summary of the project is as follows:

| | |
|--|---|
| Project Lead: | • Township of Centre Wellington |
| Project consultant: | • R.J. Burnside & Associates Limited |
| Approval Process: | • Schedule B Municipal Class EA |
| Project Location: | • Five bridges in the former Township of Pilkington (refer to attached Notice of Commencement for a map) |
| Duty to Consult: | • The province has delegated the responsibility for consultation to the Township of Centre Wellington |
| Project Purpose: | • To assess whether one or more of the five bridges should be reopened or remain closed. |
| Studies to be completed: | <ul style="list-style-type: none">• Traffic study to review traffic patterns, volumes and flow.• Archaeological screening and additional archaeological studies, if required.• Cultural Heritage Screening and additional heritage studies, if required.• Ecological study using existing records and field observations.• Geotechnical study to assess soil conditions and stability, if required. |
| Potential impacts to Treaty/Aboriginal Rights: | • To be determined, based on information received from your community. |

We are notifying you of the project (see attached notice) in hopes that you can assist our project team in determining if your community may hold interest in this project. Your comments are welcome and will be taken into consideration throughout this Municipal Class EA Study.

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Adam Dickieson

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Sincerely,

Adam Dickieson

Engineering Services Coordinator

Township of Centre Wellington

Fw: HDI mailing address - Notice of Commencement Municipal Class EA

From: Raechelle Williams <raechellewilliams@hdi.land>
Sent: Wednesday, July 26, 2023 11:48 AM
To: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Cc: HDI Administration <administration@hdi.land>; Brian Doolittle <ganowa@me.com>; Todd Williams <toddwilliams@hdi.land>; Aaron Detlor <aarondetlor@gmail.com>; Jake Linklater <jake@detlorlaw.com>
Subject: Re: HDI mailing address - Notice of Commencement Municipal Class EA

Sge:no/Hello Crystal,

I want to acknowledge and say nya:weh/thank-you for the notification sent to HDI regarding the proposed project, however this is not considered engagement. The HDI engagement process is completed by submitting an application, along with providing the necessary documentation, and application fee. It is necessary that the Centre Wellington Township and RJ Burnside and Associates provides a completed application so we can participate meaningfully on this project which is going to impair and interfere with our established treaty rights. Please see below the provided instructions on HDI application process:

HDI Application Process:

- **Application is accessible at** [Development - Haudenosaunee Confederacy](#).
- **Click on the PDF file download and fill in the application form.**
- **Once completed, please mail the application along with the necessary documentations for the proposed project to:**

**Haudenosaunee Development
44 Sixth Line
Caledonia, Ontario
N3W 1Y9**

Fee can be provided as a cheque or electronically with reference number 0300

Once the appropriate measures have been followed through, we will discuss how and when we can participate meaningfully by scheduling a time to meet.

Nya:weh,

Raechelle Williams
HDI Environmental Supervisor
Haudenosaunee Development Institute
16 Sunrise Court, Suite 600 Ohsweken, ON
P.O. Box 714
Ph: 519-445-4222
(Direct): 519-802-9402



The content of this email is confidential and intended for the recipient specified in message only. It is strictly forbidden to share any part of this message with any third party, without a written consent of the sender. If you received this message by mistake, please reply to this message and follow with its deletion, so that we can ensure such a mistake does not occur in the future.

On Wed, Jul 26, 2023 at 9:50 AM Crystal Ferguson <Crystal.Ferguson@rjburnside.com> wrote:

Good Morning Raechelle,

R.J Burnside and Associates Limited has been retained by Centre Wellington Township to initiate a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network, and their value in connecting points across the community when determining the preferred alternative.

A Notice of Commencement has been made public and we would like to mail a hard copy of the Notice directly to the Haudenosaunee Development Institute.

I am reaching out to ask if the HDI can provide a registered mailing address where we may be able to mail a hard copy of the notice of commencement?

Kind Regards,



Crystal Ferguson
Environmental Coordinator

R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: 800-265-9662 Direct Line: +1 705-797-4352
www.rjburnside.com



**** CONFIDENTIALITY NOTICE ****

This electronic transmission and any accompanying attachments may contain privileged or confidential information intended only for the use of the individual or organization named above. Any distribution, copying or action taken in reliance on the contents of this communication by anyone other than the intended recipient(s) is STRICTLY PROHIBITED.

If you have received this communication in error please notify the sender at the above email address and delete this email immediately.

Thank you.

Re: HDI mailing address - Notice of Commencement Municipal Class EA

Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Fri 7/28/2023 11:44 AM

To: Raechelle Williams <raechellewilliams@hdi.land>

Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; Matt Brooks <Matt.Brooks@rjburnside.com>; Chris Knechtel <Chris.Knechtel@rjburnside.com>; cmcdougall@centrewellington.ca <cmcdougall@centrewellington.ca>; adickieson@centrewellington.ca <ADickieson@centrewellington.ca>

 1 attachments (435 KB)

Notice of Commencement_Final.pdf;

Good Morning Raechelle,

Thank you for letting us know of your interest in this project. Centre Wellington will complete the requested application form shortly and send it by mail to the address listed on the website. However, the Township is not in a position to cover the application fee at this time.

The current scope of the EA does not include any intrusive field work as part of the studies. If the scope of the work changes to involve intrusive fieldwork (such as Stage 2 archaeology), the Environmental Study team can provide a greater level of engagement with HDI, which could include inviting HDI representatives to be present during intrusive field investigations, if desired, and may consider compensation for direct costs actually incurred at that time.

We are happy to meet with you to provide you with more information about the project and hear about your specific concerns. Draft reports can be sent to you for review, including any archaeological assessments, ecological studies and other studies that are of interest. We can share the details of these studies during a meeting, if desired. If you would like to meet to further discuss, please let us know of your availability to meet to discuss the project further.

Kind Regards,

From: Raechelle Williams <raechellewilliams@hdi.land>

Sent: Wednesday, July 26, 2023 11:48 AM

To: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Cc: HDI Administration <administration@hdi.land>; Brian Doolittle <ganowa@me.com>; Todd Williams <toddwilliams@hdi.land>; Aaron Detlor <aarondetlor@gmail.com>; Jake Linklater <jake@detlorlaw.com>

Subject: Re: HDI mailing address - Notice of Commencement Municipal Class EA

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**Haudenosaunee Development
44 Sixth Line
Caledonia, Ontario
N3W 1Y9**

Fee can be provided as a cheque or electronically with reference number 0300

Once the appropriate measures have been followed through, we will discuss how and when we can participate meaningfully by scheduling a time to meet.

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HDI Environmental Supervisor
Haudenosaunee Development Institute
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P.O. Box 714
Ph: 519-445-4222
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On Wed, Jul 26, 2023 at 9:50 AM Crystal Ferguson <Crystal.Ferguson@rjburnside.com> wrote:

Good Morning Raechelle,

R.J Burnside and Associates Limited has been retained by Centre Wellington Township to initiate a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network, and their value in connecting points across the community when determining the preferred alternative.

A Notice of Commencement has been made public and we would like to mail a hard copy of the Notice directly to the Haudenosaunee Development Institute.

I am reaching out to ask if the HDI can provide a registered mailing address where we may be able to mail a hard copy of the notice of commencement?

Kind Regards,



Crystal Ferguson
Environmental Coordinator

R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: 800-265-9662 Direct Line: +1 705-797-4352
www.rjburnside.com



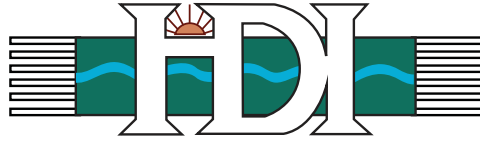
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is STRICTLY PROHIBITED.

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Thank you.



Haudenosaunee Development Institute

Our Land, Our Law, Our People, Our Future

APPLICATION FOR CONSIDERATION AND ENGAGEMENT FOR DEVELOPMENT

NOTE: *This application to be completed in quadruplicate.*

SECTION 1: APPLICANT INFORMATION

1.1 Name of applicant and full mailing address:

Adam Dickieson Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0

Tel: 519-846-9691 x 355

Fax No.: 519-846-2074

1.2 Name of Registered owner(s) of subject land(s) and mailing address:

Adam Dickieson Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0

1.3 Party who is to be contacted about the application (check one):

☒ Applicant ☐ Agent, Planning Consultant ☐ Owner ☐ Surveyor

Name and address:

Adam Dickieson Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0

Tel: 519-846-9691 x 355

Fax No.: 519-846-2074

Email: adickieson@centrewellington.ca

SECTION 2: LOCATION OF LANDS PROPOSED TO BE DEVELOPED

2.1 Municipal address:

Bridges 1-P, 28-P, 30-P, 32-P, and 33-P, located within a twenty square kilometre (20km²) area of road networks former Township of Pilkington northwest of Elora, Ontario within the Township of Centre Wellington (see attached map).

2.2 Legal description (please attach survey):

2.3 Maps (please attach):

SECTION 3: PROPOSED AND CURRENT LAND USE

3.1 Current land use: (i.e. Agricultural, residential, commercial, industrial, other):

The purpose of the project is to review whether one or more of the five bridges, which are now closed, should be reopened. The land use includes the road network and the five bridges that have exceeded their life cycle and are now closed. Surrounding lands are primarily agricultural. Four of the bridges were used to convey vehicular traffic over Carroll Creek and one conveys traffic over a tributary of Carroll Creek.

3.2 Proposed use of subject land:

The purpose of the study is to determine if the bridges should be reconstructed, rehabilitated or remain closed and be removed. If the bridges are reopened, the subject lands will be used as part of the Township of Centre Wellington's road network. If they will remain closed, the land will continue to be owned by the Township as an unopened road allowance.

3.3 Are there any buildings or structures on the lands proposed to be developed?

If yes, are these buildings to be retained, demolished or otherwise removed?

Five bridge structures will be assessed for potential rehabilitation, reconstruction, or continued closure.

SECTION 4: ADDITIONAL INFORMATION FOR THE SITE

4.1 Current zoning: N/A

SECTION 5: ARCHAEOLOGY

5.1 Have any archaeology studies been completed? If yes please attach.

5.2 If no archaeology studies have been undertaken to date are any archaeology studies planned? Please include any relevant details.

The need for archaeological studies will be assessed based on whether the preferred alternative at each site will result in disturbance to the existing ground. These studies, if required, will be completed at a later date.

SECTION 6: LAND TITLE

6.1 Please provide details and a history of the title including any information on the initial Crown patent and how the Crown obtained such patent.

SECTION 7: TIME FRAME

7.1 Please set out the scheduling proposed for the project and any significant dates.

This study is anticipated to be completed in Spring, 2024. At the completion of the study, the preferred alternative at each site, and a conceptual design will be identified, and any required additional studies (archaeological, Heritage impact study, etc.) will be completed as deemed necessary based on the preferred solution. There is a Public Information Centre (PIC), open-house scheduled September 6, 2023 at the Bethel Mennonite Church, 6772 8th Line W., Elora (6:00pm - 9:00pm). This PIC is intended to provide comments relating to the role of these structures.

SECTION 8: OTHER PERMITS, LICENCES AND/OR APPROVALS

8.1 Please provide details with respect to any other permits, licences and/or approvals which the Applicant is seeking for the project from any municipal, provincial and/or federal authority.

Grand River Conservation Authority, MECP, NDMNRF and DFO will be consulted with throughout the EA process; however, no permitting will be required for these studies. Permits will be acquired in the future, ahead of any proposed construction works which may occur based on the recommendations of this study.

SECTION 9: APPLICATION FEE

9.1 An application fee is enclosed in the amount of \$ N/A on the basis that the cost of the proposed project is:

- Less than \$300,000 (fee of \$3,000)
- Greater than \$300,000 but less than \$500,000 (fee of \$5,000)
- Greater than or equal to \$500,000 (fee of \$7,000)

The Township is not in a position to cover the application fee at this time. The current scope of the EA does not include any intrusive field work as part of the studies. If the scope of the work changes to involve intrusive fieldwork (such as Stage 2 archeology), the Environmental Study team can provide a greater level of engagement with HDI, which could include inviting HDI representatives to be present during intrusive field investigations, if desired, and may consider compensation for direct costs actually incurred at that time.

SECTION 10: OTHER INFORMATION

10.1 The HDI reserves the right to request such other information as it deems necessary in its sole discretion to process this application.

We are happy to meet with you to provide you with more information about the project and hear about your specific concerns. Draft reports can be sent to you for review, including any archaeological assessments, ecological studies and other studies that are of interest. We can share the details of these studies during a meeting, if desired. If you would like to meet to further discuss, please let us know of your availability to meet to discuss the project further.

SECTION 11: FORM OF APPLICATION

11.1 This form is provided for information purposes and requests the minimal information required to process an application. An applicant is free to amend the form as necessary and include such other information as necessary.

11.2 Application is to be provided to:

Haudenosaunee Development Institute
16 Sunrise Court, Suite 417
P.O. Box 714
Ohsweken, Ontario
N0A 1M0

SECTION 12: SIGNATURE OF APPLICANT

Name of Applicant: Adam Dickieson

Signature of Applicant:

Dated this 9 day of August, 2023.

Crystal Ferguson

From: Crystal Ferguson
Sent: Thursday, August 24, 2023 11:31 AM
To: info@hdi.land; communications@hdi.land; jocko@sixnationsns.com; info@hdi.land; 1749resource@gmail.com; janicewilliams@hdi.land
Cc: Andrew Dawson; adickieson@centrewellington.ca
Subject: Notice of Public Information Centre #1, Five Bridges in Centre Wellington MCEA
Attachments: 056693_Notice of PIC_230815_Final.pdf

Hello Haudenosaunee Confederacy and Development Institute,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #1 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance at the first of two in-person Public Open House meetings for the project. A Study Area map is provided on the attached notice.

Date & Time: September 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

At this time, the Township will present project information to the community and stakeholders and will provide opportunity for you to provide your comments relating to the role of these structures within the local community.

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **September 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record. If you have accessibility requirements in order to participate in this project, please contact one of the project team members listed above.

On behalf of the study team,

Crystal Ferguson

From: Crystal Ferguson
Sent: Thursday, November 23, 2023 2:52 PM
To: info@hdi.land; communications@hdi.land; jocko@sixnationsns.com; info@hdi.land; 1749resource@gmail.com; janicewilliams@hdi.land
Cc: Tricia Radburn; Andrew Dawson; adickieson@centrewellington.ca; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Subject: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA
Attachments: 056693_Notice of PIC#2.pdf

Hello, Secretary, Hohahes Leroy Hill,
Environmental Supervisor, Raechelle Williams, of the Haudenosaunee Confederacy,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #2 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance to the second Public Information Centre meeting for the project. A Study Area map is provided on the attached notice.

Date & Time: December 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **December 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
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Andrew Dawson, P. Eng.

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292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
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On behalf of the study team,



*Notice of Commencement
Municipal Class Environmental Assessment Study for Five Bridges
in Centre Wellington (Former Pilkington Township)
July 20, 2023*

Ms. Abby Laforme
Consultation Manager
Mississaugas of the Credit First Nation
4065 Highway 6
Hagersville, ON N0A 1H0

Dear Abby Laforme:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

A summary of the project is as follows:

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|---------------------|--|
| Project Lead: | <ul style="list-style-type: none">• Township of Centre Wellington |
| Project consultant: | <ul style="list-style-type: none">• R.J. Burnside & Associates Limited |
| Approval Process: | <ul style="list-style-type: none">• Schedule B Municipal Class EA |
| Project Location: | <ul style="list-style-type: none">• Five bridges in the former Township of Pilkington (refer to attached Notice of Commencement for a map) |
| Duty to Consult: | <ul style="list-style-type: none">• The province has delegated the responsibility for consultation to the Township of Centre Wellington |
| Project Purpose: | <ul style="list-style-type: none">• To assess whether one or more of the five bridges should be reopened or remain closed. |

Studies to be completed:

- Traffic study to review traffic patterns, volumes and flow.
- Archaeological screening and additional archaeological studies, if required.
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- Ecological study using existing records and field observations.
- Geotechnical study to assess soil conditions and stability, if required.

Potential impacts to Treaty/Aboriginal Rights:

- To be determined, based on information received from your community.

We are notifying you of the project (see attached notice) in hopes that you can assist our project team in determining if your community may hold interest in this project. Your comments are welcome and will be taken into consideration throughout this Municipal Class EA Study.

If you have an interest in this project, please contact one of the Project Team members below. The team is happy to provide additional information, provide opportunities for your community to participate in studies or review project reports, or meet with team members to answer questions and resolve concerns.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington



*Notice of Commencement
Municipal Class Environmental Assessment Study for Five Bridges
in Centre Wellington (Former Pilkington Township)
July 20, 2023*

Mr. Adam Laforme
Archaeology / FLR Participation Contact
Mississaugas of the Credit First Nation
4065 Highway 6
Hagersville, ON N0A 1H0

Dear Adam Laforme:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

A summary of the project is as follows:

- | | |
|---------------------|--|
| Project Lead: | <ul style="list-style-type: none">• Township of Centre Wellington |
| Project consultant: | <ul style="list-style-type: none">• R.J. Burnside & Associates Limited |
| Approval Process: | <ul style="list-style-type: none">• Schedule B Municipal Class EA |
| Project Location: | <ul style="list-style-type: none">• Five bridges in the former Township of Pilkington (refer to attached Notice of Commencement for a map) |
| Duty to Consult: | <ul style="list-style-type: none">• The province has delegated the responsibility for consultation to the Township of Centre Wellington |
| Project Purpose: | <ul style="list-style-type: none">• To assess whether one or more of the five bridges should be reopened or remain closed. |

Studies to be completed:

- Traffic study to review traffic patterns, volumes and flow.
- Archaeological screening and additional archaeological studies, if required.
- Cultural Heritage Screening and additional heritage studies, if required.
- Ecological study using existing records and field observations.
- Geotechnical study to assess soil conditions and stability, if required.

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Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington



*Notice of Commencement
Municipal Class Environmental Assessment Study for Five Bridges
in Centre Wellington (Former Pilkington Township)
July 20, 2023*

Chief R. Stacey Laforme
Mississaugas of the Credit First Nation
4065 Highway 6
Hagersville, ON N0A 1H0

Dear Chief R. Stacey Laforme:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

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Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington



*Notice of Commencement
Municipal Class Environmental Assessment Study for Five Bridges
in Centre Wellington (Former Pilkington Township)
July 20, 2023*

Mr. Mark Laforme
Director of Consultation
Mississaugas of the Credit First Nation
4065 Highway 6
Hagersville, ON N0A 1H0

Dear Mark Laforme:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

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Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington

Crystal Ferguson

From: Mark LaForme <Mark.LaForme@mncfn.ca>
Sent: Friday, July 21, 2023 12:31 PM
To: Crystal Ferguson; Abby LaForme; Adam LaForme
Cc: Andrew Dawson; ADickieson@centrewellington.ca
Subject: RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Hello Ms. Ferguson and Mr. Dickieson,

Thank you for providing us with the Notice of Commencement of the MCEA for Five Bridges in Centre Wellington. We have no comments or questions at this time, however, we do ask that you provide us with the EA report when it is complete.

We also ask that you inform us of any proposed archaeological studies associated with this project prior to the start of any archaeological work.

Thank you.

Kind regards,

Mark LaForme (he/him)
Director
MCFN-DOCA
4065 Hwy. 6
Hagersville, ON N0A 1H0
Phone: 905-768-4260

<http://mncfn.ca/doca>

Google Maps: <https://www.google.ca/maps/place/MNCFN-DOCA/@42.9718566,-80.0429177,15z/data=!4m5!3m4!1s0x0:0xd52b4642633e9aa2!8m2!3d42.9718566!4d-80.0429177>

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From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: Friday, July 21, 2023 9:38 AM
To: Chief, R Stacey Laforme <Stacey.Laforme@mncfn.ca>; Mark LaForme <Mark.LaForme@mncfn.ca>; Abby LaForme <Abby.LaForme@mncfn.ca>; Adam LaForme <Adam.LaForme@mncfn.ca>
Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; ADickieson@centrewellington.ca
Subject: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Dear Mississaugas of the Credit First Nation:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

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| Project consultant: | • R.J. Burnside & Associates Limited |
| Approval Process: | • Schedule B Municipal Class EA |
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Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington

1 MacDonald Square, Elora, ON N0B 1S0

519-846-9691 x 355

adickieson@centrewellington.ca

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Consultant Project Manager
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705-797-4310

andrew.dawson@rjburnside.com

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Sincerely,

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington



Crystal Ferguson

Environmental Coordinator

R.J. Burnside & Associates

128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6

Office: 800-265-9662 Direct Line: +1 705-797-4352

www.rjburnside.com



**** CONFIDENTIALITY NOTICE ****

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Any distribution, copying or action taken in reliance on the contents of this communication by anyone other than the intended recipient(s) is STRICTLY PROHIBITED.

If you have received this communication in error please notify the sender at the above email address and delete this email immediately.

Thank you.

Crystal Ferguson

From: Crystal Ferguson
Sent: Friday, July 21, 2023 9:38 AM
To: Stacey.Laforme@mncfn.ca; Mark.Laforme@mncfn.ca; abby.laforme@mncfn.ca; adam.laforme@mncfn.ca
Cc: Andrew Dawson; ADickieson@centrewellington.ca
Subject: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Attachments: Notice of Commencement_Final.pdf

Dear Mississaugas of the Credit First Nation:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

A summary of the project is as follows:

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| Project consultant: | • R.J. Burnside & Associates Limited |
| Approval Process: | • Schedule B Municipal Class EA |
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| Project Purpose: | • To assess whether one or more of the five bridges should be reopened or remain closed. |
| Studies to be completed: | <ul style="list-style-type: none">• Traffic study to review traffic patterns, volumes and flow.• Archaeological screening and additional archaeological studies, if required.• Cultural Heritage Screening and additional heritage studies, if required.• Ecological study using existing records and field observations.• Geotechnical study to assess soil conditions and stability, if required. |
| Potential impacts to Treaty/Aboriginal Rights: | • To be determined, based on information received from your community. |

We are notifying you of the project (see attached notice) in hopes that you can assist our project team in determining if your community may hold interest in this project. Your comments are welcome and will be taken into consideration throughout this Municipal Class EA Study.

If you have an interest in this project, please contact one of the Project Team members below. The team is happy to provide additional information, provide opportunities for your community to participate in studies or review project reports, or meet with team members to answer questions and resolve concerns.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington

1 MacDonald Square, Elora, ON N0B 1S0

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Consultant Project Manager

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andrew.dawson@rjburnside.com

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Sincerely,

Adam Dickieson

Engineering Services Coordinator

Township of Centre Wellington

Crystal Ferguson

From: Crystal Ferguson
Sent: Thursday, August 24, 2023 11:31 AM
To: Stacey.Laforme@mncfn.ca; Mark.Laforme@mncfn.ca; abby.laforme@mncfn.ca; adam.laforme@mncfn.ca
Cc: Andrew Dawson; adickieson@centrewellington.ca
Subject: Notice of Public Information Centre #1, Five Bridges in Centre Wellington MCEA
Attachments: 056693_Notice of PIC_230815_Final.pdf

Hello Mississaugas of the Credit First Nation,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #1 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance at the first of two in-person Public Open House meetings for the project. A Study Area map is provided on the attached notice.

Date & Time: September 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

At this time, the Township will present project information to the community and stakeholders and will provide opportunity for you to provide your comments relating to the role of these structures within the local community.

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **September 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

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On behalf of the study team,

Crystal Ferguson

From: Crystal Ferguson
Sent: Thursday, November 23, 2023 2:52 PM
To: Stacey.Laforme@mncfn.ca; Mark.Laforme@mncfn.ca; abby.laforme@mncfn.ca; adam.laforme@mncfn.ca
Cc: Tricia Radburn; Andrew Dawson; adickieson@centrewellington.ca; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Subject: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA
Attachments: 056693_Notice of PIC#2.pdf

Hello, Chief R. Stacey LaForme,
Director of Consultation, Mark LaForme
Consultation Manager, Abby LaForme
Archeology FLR participation contact, Adam LaForme, of the Mississaugas of the Credit First Nation,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #2 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance to the second Public Information Centre meeting for the project. A Study Area map is provided on the attached notice.

Date & Time: December 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **December 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

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On behalf of the study team,



*Notice of Commencement
Municipal Class Environmental Assessment Study for Five Bridges
in Centre Wellington (Former Pilkington Township)
July 20, 2023*

Mr. Jesse Fieldwebster
Manager of Lands, Resources and Consultations
Metis Nation of Ontario
Unit 10 & 11, 845 King Street
Midland, ON L4R 0B7

Dear Jesse Fieldwebster:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

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Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington

Crystal Ferguson

From: Crystal Ferguson
Sent: Friday, July 21, 2023 9:41 AM
To: consultations@metisnation.org; jessef@metisnation.org
Cc: Andrew Dawson; ADickieson@centrewellington.ca
Subject: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Attachments: Notice of Commencement_Final.pdf

Dear Métis Nation of Ontario:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

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Attachments: 056693_Notice of PIC_230815_Final.pdf

Hello Métis Nation of Ontario,

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Date & Time: September 6, 2023, 6:00 pm – 8:00 pm
Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

At this time, the Township will present project information to the community and stakeholders and will provide opportunity for you to provide your comments relating to the role of these structures within the local community.

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **September 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.
Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

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On behalf of the study team,

Crystal Ferguson

From: Crystal Ferguson
Sent: Thursday, November 23, 2023 2:52 PM
To: consultations@metisnation.org; jessef@metisnation.org
Cc: Tricia Radburn; Andrew Dawson; adickieson@centrewellington.ca; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Subject: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA
Attachments: 056693_Notice of PIC#2.pdf

Hello, Manager of Lands, Resources and Consultations, Jesse Fieldwebster, of Métis Nation of Ontario,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #2 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance to the second Public Information Centre meeting for the project. A Study Area map is provided on the attached notice.

Date & Time: December 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **December 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

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On behalf of the study team,



*Notice of Commencement
Municipal Class Environmental Assessment Study for Five Bridges
in Centre Wellington (Former Pilkington Township)
July 20, 2023*

Ms. Dawn LaForme
Six Nations of the Grand River
1695 Chiefswood Rd., P.O Box 5000
Ohsweken, ON
N0A 1M0

Dear Ms. Dawn LaForme:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

A summary of the project is as follows:

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| Project Lead: | • Township of Centre Wellington |
| Project consultant: | • R.J. Burnside & Associates Limited |
| Approval Process: | • Schedule B Municipal Class EA |
| Project Location: | • Five bridges in the former Township of Pilkington (refer to attached Notice of Commencement for a map) |
| Duty to Consult: | • The province has delegated the responsibility for consultation to the Township of Centre Wellington |
| Project Purpose: | • To assess whether one or more of the five bridges should be reopened or remain closed. |

Studies to be completed:

- Traffic study to review traffic patterns, volumes and flow.
- Archaeological screening and additional archaeological studies, if required.
- Cultural Heritage Screening and additional heritage studies, if required.
- Ecological study using existing records and field observations.
- Geotechnical study to assess soil conditions and stability, if required.

Potential impacts to Treaty/Aboriginal Rights:

- To be determined, based on information received from your community.

We are notifying you of the project (see attached notice) in hopes that you can assist our project team in determining if your community may hold interest in this project. Your comments are welcome and will be taken into consideration throughout this Municipal Class EA Study.

If you have an interest in this project, please contact one of the Project Team members below. The team is happy to provide additional information, provide opportunities for your community to participate in studies or review project reports, or meet with team members to answer questions and resolve concerns.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
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Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington



*Notice of Commencement
Municipal Class Environmental Assessment Study for Five Bridges
in Centre Wellington (Former Pilkington Township)
July 20, 2023*

Mr. Lonny Bomberly
Lands and Resource Director
Six Nations of the Grand River
1695 Chiefswood Rd., P.O Box 5000
Ohsweken, ON
N0A 1M0

Dear Mr. Lonny Bomberly:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

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Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
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Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington



*Notice of Commencement
Municipal Class Environmental Assessment Study for Five Bridges
in Centre Wellington (Former Pilkington Township)
July 20, 2023*

Chief Mark B. Hill
Six Nations of the Grand River
1695 Chiefswood Rd., P.O Box 5000
Ohsweken, ON
N0A 1M0

Dear Chief Mark B. Hill:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

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Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
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Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington



*Notice of Commencement
Municipal Class Environmental Assessment Study for Five Bridges
in Centre Wellington (Former Pilkington Township)
July 20, 2023*

Mr. Peter Graham
Consultation Supervisor
Six Nations of the Grand River
1695 Chiefswood Rd., P.O Box 5000
Ohsweken, ON
N0A 1M0

Dear Mr. Peter Graham:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

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Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington

Crystal Ferguson

From: Crystal Ferguson
Sent: Friday, July 21, 2023 9:55 AM
To: 'markhill@sixnations.ca'
Cc: Andrew Dawson; ADickieson@centrewellington.ca
Subject: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Attachments: Notice of Commencement_Final.pdf

Dear Chief Mark B. Hill,

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

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Township of Centre Wellington

1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355

adickieson@centrewellington.ca

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Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington

Crystal Ferguson

From: Crystal Ferguson
Sent: Friday, July 21, 2023 9:33 AM
To: markhill@sixnation.ca; lonnybomberry@sixnations.ca; LRCS@sixnations.ca; dlaforme@sixnations.ca
Cc: Andrew Dawson; ADickieson@centrewellington.ca
Subject: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Attachments: Notice of Commencement_Final.pdf

Dear Six Nations of the Grand River:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

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Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington

Crystal Ferguson

From: Crystal Ferguson
Sent: Friday, July 21, 2023 1:21 PM
To: Peter Graham
Subject: RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Good Afternoon Peter,

Thank you for your response. Please forward any questions or concerns to the Engineering Services Coordinator: Adam Dickieson and/or the Consultant Project Manager: Andrew Dawson (see contact information below). They will be able to respond and address any of your questions or concerns.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

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R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Thank you kindly,

From: Peter Graham <LRCS@sixnations.ca>
Sent: Friday, July 21, 2023 1:14 PM
To: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Subject: RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Hi Crystal,

The notice does not include enough information to determine our interest or potential impacts to treaty rights. The more you can tell me about potential effects on the natural environment the better. Do these bridges go over watercourses?

Thank you, Peter

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: Friday, July 21, 2023 9:33 AM
To: markhill@sixnation.ca; Lonny Bomberly <lonnybomberly@sixnations.ca>; Peter Graham <LRCS@sixnations.ca>; Dawn LaForme <dlaforme@sixnations.ca>
Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; ADickieson@centrewellington.ca
Subject: [External] 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Dear Six Nations of the Grand River:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

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Township of Centre Wellington

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andrew.dawson@rjburnside.com

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Sincerely,

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington



Crystal Ferguson
Environmental Coordinator

R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: 800-265-9662 Direct Line: +1 705-797-4352
www.rjburnside.com



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Any distribution, copying or action taken in reliance on the contents of this communication by anyone other than the intended recipient(s) is STRICTLY PROHIBITED.
If you have received this communication in error please notify the sender at the above email address and delete this email immediately.
Thank you.

Crystal Ferguson

From: Andrew Dawson
Sent: Friday, July 21, 2023 2:31 PM
To: Peter Graham
Cc: markhill@sixnation.ca; lonnybomberry@sixnations.ca; LRCS@sixnations.ca; dlaforme@sixnations.ca; Tricia Radburn; Crystal Ferguson; adickieson@centrewellington.ca; Matt Brooks; Chris Knechtel
Subject: RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Peter,

Thank you for reaching out for further information. We have just commenced this EA project but are happy to provide you with an overview of the current plans and process!

The five bridge structures are watercourse crossings of Carroll Creek and its tributaries. The existing structures are narrow, single lane structures that are all approximately 100 years old and have been closed to traffic due to their deteriorated state and concerns regarding load carrying capacity. Additionally, the superstructure of structure 1-P has been previously removed.

We are in the process of undergoing desktop and field studies of the natural, heritage, built and economic environments to determine areas of interest and possible impacts. In regards to the natural environment, we will complete consider ecological land classification, review natural heritage databases, complete terrestrial and aquatic habitat field assessments, species at risk screening, tree inventories. Cultural Heritage evaluations, hydrology/hydraulic assessments and traffic studies will also be completed. A Stage 1 & 2 archaeological assessment will be conducted where necessary if the preferred alternative results in disturbance to the project study area.

The potential impacts to the natural environment will be dependent on the selective alternative at each site. From a preliminary perspective, we are looking at considering several options at each site, including:

- Do Nothing (deteriorated structures remain in place and closed to traffic)
- Removal of Structure and construction of formal turn-around
- Rehabilitation of Structure (likely unfeasible due to the state of the structures)
- Replacement of Structure (including two-lane and single-lane options)

Based on these alternatives we can foresee that potential impacts to the natural environment could possibly include

- Disturbance (excavation / re-grading) of the study area, including areas beyond previously disturbed limits of original construction
- In-water works, including temporary isolation of the structure and localized unwatering of the watercourse to allow works to be completed in the dry.
- Vegetation removals (if required) for widening of structure or roadway, regrading, construction access, etc.

These potential impacts will be analyzed for each alternative through the EA process and mitigative measures will be considered and recommended when selecting the preferred alternative.

If you have any further questions, or if there was more specific information you were looking for, please do not hesitate to contact myself.

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Peter Graham <L RCS@sixnations.ca>
Sent: Friday, July 21, 2023 1:33 PM
To: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>
Subject: RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Hi Adam and Andrew,

Can you comment on possible impacts to the natural environment this EA will contemplate?

Thank you, Peter

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: Friday, July 21, 2023 1:21 PM
To: Peter Graham <L RCS@sixnations.ca>
Subject: [External] RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Good Afternoon Peter,

Thank you for your response. Please forward any questions or concerns to the Engineering Services Coordinator: Adam Dickieson and/or the Consultant Project Manager: Andrew Dawson (see contact information below). They will be able to respond and address any of your questions or concerns.

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519-846-9691 x 355
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Andrew Dawson, P. Eng.
Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Thank you kindly,

Crystal Ferguson
Environmental Coordinator

R.J. Burnside & Associates | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4352

From: Peter Graham <L RCS@sixnations.ca>
Sent: Friday, July 21, 2023 1:14 PM
To: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Subject: RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Hi Crystal,

The notice does not include enough information to determine our interest or potential impacts to treaty rights. The more you can tell me about potential effects on the natural environment the better. Do these bridges go over watercourses?

Thank you, Peter

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: Friday, July 21, 2023 9:33 AM

To: markhill@sixnation.ca; Lonny Bomberry <lonnybomberry@sixnations.ca>; Peter Graham <LRCS@sixnations.ca>; Dawn LaForme <dlaforme@sixnations.ca>
Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; ADickieson@centrewellington.ca
Subject: [External] 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Dear Six Nations of the Grand River:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

A summary of the project is as follows:

| | |
|--|---|
| Project Lead: | • Township of Centre Wellington |
| Project consultant: | • R.J. Burnside & Associates Limited |
| Approval Process: | • Schedule B Municipal Class EA |
| Project Location: | • Five bridges in the former Township of Pilkington (refer to attached Notice of Commencement for a map) |
| Duty to Consult: | • The province has delegated the responsibility for consultation to the Township of Centre Wellington |
| Project Purpose: | • To assess whether one or more of the five bridges should be reopened or remain closed. |
| Studies to be completed: | • Traffic study to review traffic patterns, volumes and flow. • Archaeological screening and additional archaeological studies, if required. • Cultural Heritage Screening and additional heritage studies, if required. • Ecological study using existing records and field observations. • Geotechnical study to assess soil conditions and stability, if required. |
| Potential impacts to Treaty/Aboriginal Rights: | • To be determined, based on information received from your community. |

We are notifying you of the project (see attached notice) in hopes that you can assist our project team in determining if your community may hold interest in this project. Your comments are welcome and will be taken into consideration throughout this Municipal Class EA Study.

If you have an interest in this project, please contact one of the Project Team members below. The team is happy to provide additional information, provide opportunities for your community to participate in studies or review project reports, or meet with team members to answer questions and resolve concerns.

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.
Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

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Sincerely,

Adam Dickieson

Engineering Services Coordinator

Township of Centre Wellington



Crystal Ferguson

Environmental Coordinator

R.J. Burnside & Associates

128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6

Office: 800-265-9662 Direct Line: +1 705-797-4352

www.rjburnside.com



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Thank you.

Andrew Dawson

From: Peter Graham <LRCS@sixnations.ca>
Sent: Monday, July 24, 2023 10:45 AM
To: Andrew Dawson
Subject: RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Hi Andrew,

Thank you. This gives me a much better idea. Please get in touch again when you have your alternatives.

Best, Peter

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Sent: Friday, July 21, 2023 2:31 PM
To: Peter Graham <LRCS@sixnations.ca>
Cc: markhill@sixnation.ca; Lonny Bomberry <lonnybomberry@sixnations.ca>; Peter Graham <LRCS@sixnations.ca>; Dawn LaForme <dlaforme@sixnations.ca>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>; adickieson@centrewellington.ca; Matt Brooks <Matt.Brooks@rjburnside.com>; Chris Knechtel <Chris.Knechtel@rjburnside.com>
Subject: [External] RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Peter,

Thank you for reaching out for further information. We have just commenced this EA project but are happy to provide you with an overview of the current plans and process!

The five bridge structures are watercourse crossings of Carroll Creek and its tributaries. The existing structures are narrow, single lane structures that are all approximately 100 years old and have been closed to traffic due to their deteriorated state and concerns regarding load carrying capacity. Additionally, the superstructure of structure 1-P has been previously removed.

We are in the process of undergoing desktop and field studies of the natural, heritage, built and economic environments to determine areas of interest and possible impacts. In regards to the natural environment, we will complete consider ecological land classification, review natural heritage databases, complete terrestrial and aquatic habitat field assessments, species at risk screening, tree inventories. Cultural Heritage evaluations, hydrology/hydraulic assessments and traffic studies will also be completed. A Stage 1 & 2 archaeological assessment will be conducted where necessary if the preferred alternative results in disturbance to the project study area.

The potential impacts to the natural environment will be dependent on the selective alternative at each site. From a preliminary perspective, we are looking at considering several options at each site, including:

- Do Nothing (deteriorated structures remain in place and closed to traffic)
- Removal of Structure and construction of formal turn-around
- Rehabilitation of Structure (likely unfeasible due to the state of the structures)
- Replacement of Structure (including two-lane and single-lane options)

Based on these alternatives we can foresee that potential impacts to the natural environment could possibly include

- Disturbance (excavation / re-grading) of the study area, including areas beyond previously disturbed limits of original construction

- In-water works, including temporary isolation of the structure and localized unwatering of the watercourse to allow works to be completed in the dry.
- Vegetation removals (if required) for widening of structure or roadway, regrading, construction access, etc.

These potential impacts will be analyzed for each alternative through the EA process and mitigative measures will be considered and recommended when selecting the preferred alternative.

If you have any further questions, or if there was more specific information you were looking for, please do not hesitate to contact myself.

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Peter Graham <L RCS@sixnations.ca>

Sent: Friday, July 21, 2023 1:33 PM

To: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>

Subject: RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Hi Adam and Andrew,

Can you comment on possible impacts to the natural environment this EA will contemplate?

Thank you, Peter

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Sent: Friday, July 21, 2023 1:21 PM

To: Peter Graham <L RCS@sixnations.ca>

Subject: [External] RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Good Afternoon Peter,

Thank you for your response. Please forward any questions or concerns to the Engineering Services Coordinator: Adam Dickieson and/or the Consultant Project Manager: Andrew Dawson (see contact information below). They will be able to respond and address any of your questions or concerns.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington

1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355

adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.

292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
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Thank you kindly,

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From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: Friday, July 21, 2023 9:33 AM
To: markhill@sixnation.ca; Lonny Bomberry <lonnybomberry@sixnations.ca>; Peter Graham <LRCS@sixnations.ca>; Dawn LaForme <dlaforme@sixnations.ca>
Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; ADickieson@centrewellington.ca
Subject: [External] 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Dear Six Nations of the Grand River:

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network and their value in connecting points across the community when determining the preferred alternative.

A summary of the project is as follows:

| | |
|--|--|
| Project Lead: | • Township of Centre Wellington |
| Project consultant: | • R.J. Burnside & Associates Limited |
| Approval Process: | • Schedule B Municipal Class EA |
| Project Location: | • Five bridges in the former Township of Pilkington (refer to attached Notice of Commencement for a map) |
| Duty to Consult: | • The province has delegated the responsibility for consultation to the Township of Centre Wellington |
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| Studies to be completed: | • Traffic study to review traffic patterns, volumes and flow. |
| | • Archaeological screening and additional archaeological studies, if required. |
| | • Cultural Heritage Screening and additional heritage studies, if required. |
| | • Ecological study using existing records and field observations. |
| Potential impacts to Treaty/Aboriginal Rights: | • Geotechnical study to assess soil conditions and stability, if required. |
| | • To be determined, based on information received from your community. |

We are notifying you of the project (see attached notice) in hopes that you can assist our project team in determining if your community may hold interest in this project. Your comments are welcome and will be taken into consideration throughout this Municipal Class EA Study.

If you have an interest in this project, please contact one of the Project Team members below. The team is happy to provide additional information, provide opportunities for your community to participate in studies or review project reports, or meet with team members to answer questions and resolve concerns.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington

1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355

adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
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andrew.dawson@rjburnside.com

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Sincerely,

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington



Crystal Ferguson

Environmental Coordinator
R.J. Burnside & Associates

128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6

Office: 800-265-9662 Direct Line: +1 705-797-4352

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Thank you.

Crystal Ferguson

From: Crystal Ferguson
Sent: Thursday, August 24, 2023 11:30 AM
To: markhill@sixnations.ca; lonnybomberry@sixnations.ca; Peter Graham; dlaforme@sixnations.ca
Cc: Andrew Dawson; adickieson@centrewellington.ca
Subject: Notice of Public Information Centre #1, Five Bridges in Centre Wellington MCEA
Attachments: 056693_Notice of PIC_230815_Final.pdf

Hello Six Nations of The Grand River,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #1 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. A Study Area map is provided on the attached notice.

At this time, the Township will present project information to the community and stakeholders and will provide opportunity for you to provide your comments relating to the role of these structures within the local community. If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available at this webpage from **September 6th to 15th, 2023** to allow stakeholders to share, collaborate, exchange ideas and learn more about this project. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
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705-797-4310
andrew.dawson@rjburnside.com

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On behalf of the study team,

Crystal Ferguson

From: Crystal Ferguson
Sent: Thursday, November 23, 2023 2:52 PM
To: 'markhill@sixnations.ca'; 'lonnybomberry@sixnations.ca'; 'LRCS@sixnations.ca'; 'dlaforme@sixnations.ca'
Cc: Tricia Radburn; Andrew Dawson; adickieson@centrewellington.ca; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Subject: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA
Attachments: 056693_Notice of PIC#2.pdf

Hello Chief Mark B. Hill,
Lands and Resources Director, Lonny Bomberry
Consultation Supervisor, Peter Graham
Receptionist, Dawn LaForme, of Six Nations of the Grand River

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #2 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance to the second Public Information Centre meeting for the project. A Study Area map is provided on the attached notice.

Date & Time: December 6, 2023, 6:00 pm – 8:00 pm
Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **December 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

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Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
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On behalf of the study team,

Township of Centre Wellington 5 Bridges in Former Pilkington Township Environmental Assessment Study

Heritage Committee Meeting #1

September 12, 2023

- Project Study Area Overview
- Municipal Class EA Process
 - Problem / Opportunity Statement
 - Alternative Solutions
 - Evaluation Criteria
- Cultural Heritage Assessment Process
- Overview of Bridges and Cultural Heritage Assessment Findings
- Next Steps

Problem / Opportunity Statement:

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28 P, 30 P, 32 P & 33 P) that are located within a twenty square kilometre (20 km²) area of road networks and are currently closed to vehicular traffic due to their deteriorated state. This study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

- The MCEA process is built on a framework of Environmental Protection, Effective Consultation & Traceable Decision Making.
- This Project is considered a Schedule 'B' Project and requires Phase 1 & Phase 2 of the MCEA process be conducted, as outlined below:

Phase 1:

Project Opportunity

- Notice of Study Commencement
- Identify Problem / Opportunity
- Preliminary consultation with Council, Public & Heritage

WE ARE HERE



Phase 2:

Alternative Solutions

- Identify alternative solutions to problem/opportunity
- Inventory technical, natural, cultural & economic environment
- Identify impact of alternative solutions on the environment
- Evaluate alternative solutions
- PIC #2
- Confirm Preferred Solution
- Confirm MCEA Schedule.

Community Input (PIC No.1):

A Public Information Centre was held on September 6th, 2023. Common comments received are summarized below:

- East-West connection required to keep slow moving vehicles and farm equipment from using County Roads. 28-P was noted to be the most favourable for achieving this.
- Any bridges to be replaced shall have a width and load capacity capable of supporting farm equipment.
- Vehicles (including EMS, delivery, farm equipment) reaching a dead-end bridge and backing down roadway is safety concern.
- Consider eliminating Bridge 32-P by diverting watercourse to 33-P crossing, or replace with smaller culvert structure
- Not a significant amount of interest in replacement of Bridge 1-P, given it is on a no-winter maintenance road and closed during the winter

Alternative Solutions:

To address the Problem/Opportunity Statement, the following preliminary Alternative Solutions will be considered and evaluated after appropriate studies and consultations have been completed:

Alternative 1: Do Nothing

Leave the existing structures in their current deteriorating state and continue to restrict public use.

Alternative 2: Remove Structure and Create Formal Turn-Around

Removal of existing bridge and construction of new turn-around areas on each side of the structures.

Alternative 3: Rehabilitate Existing Structure

Complete repairs to the existing structure to meet engineering and public safety standards and re-open the structure, if achievable.

****Due to severely deteriorated state of structures, this alternative is not achievable****

Alternative 4: Replacement of Structure

Full removal of the existing bridge and replacement with a new bridge in the current location.

- a) Two-Lane Full Capacity Bridge
- b) Single-Lane Bridge
- c) Low-Level Crossing

Evaluation Criteria:



Structural / Technical

- Safety / Traffic Operations
- Construction Staging / Duration
- Extension of Service Life



Natural Environment

- Environmentally Sensitive Areas
- Wildlife Habitats
- Fisheries/Aquatic Habitat
- Species at Risk



Social & Cultural Environment

- Socio-Economic Conditions
- Archaeological, Built Heritage & Cultural Heritage Features
- Construction Impacts
- Community Input



Economic

- Capital Costs
- Operational and Maintenance Costs

Each of the 5 structures were evaluated by sub-consultant Parslow Heritage Consultancy (PHC) using two assessment guidelines to determine if Cultural Heritage Value or Interest (CHVI) exists:

O. Reg. 569/22 (Ontario Heritage Act)

A set of criteria of which one or more must be met to be considered to have CHVI.
Property that has one of the following characteristics may be considered to have CHVI:

- Rare, unique, representative or early example of a construction method / style
- High degree of craftsmanship or artistic merit
- High degree of technical or scientific achievement
- Directly associated with significant theme, event, belief, person, activity, organization or institution of the community
- Yields information that contributes to understanding of a community or culture
- Reflects work or ideas of an architect, artist, builder, designer or theorist who is significant to the community
- Important in defining, maintaining or supporting the character of an area
- Physically, functionally or historically linked to its surroundings

Criteria is Evaluated on a MEETS or DOES NOT MEET criteria, with no in-between.

■ Ontario Heritage Bridge Guidelines for Provincially Owned Bridges

Scoring system approach to O.Reg. 569/22, as derived by the Ontario Ministry of Transportation (MTO) which considers that aspects of CHVI may fall between being fully met or not met.

- Design / Physical Value (50 Points)
 - Functional Design (Max 20 Points)
 - Visual Appeal (20 Points)
 - Materials (10 Points)
- Contextual Value (25 Points)
 - Landmark (15 Points)
 - Character Contribution (10 Points)
- Historical / Associative Value (25 Points)
 - Designer / Construction Firm (15 Points)
 - Association with historical theme, person or event (10 Points)

An Overall score over 60 is required before a bridge can be considered to exhibit CHVI

Bridge 1-P

- 📍 Sideroad 5, Between 8th Line W & 3rd Line W
- 🔧 Constructed circa 1925
- 🚫 Closed to Traffic: 2004
- 🏗️ Steel Truss Superstructure (Removed in 2019)



Evidence of vehicles currently driving
through watercourse upstream of original bridge:



Cultural Heritage Assessment Report (CHAR) Findings:

- Previously identified as exhibiting CHVI in the 2013 “Arch, Truss & Beam, The Grand River Watershed Heritage Bridge Inventory”, prior to its removal
- “Heritage Centre Wellington agreed by consensus no objection to the removal of Bridge 1-P based on the information provided in the report dated May 7, 2019 and due to the risk to public safety.” – Heritage Centre Wellington Minutes (May 14, 2019)
- Existing structure was photographically documented in June 2019, prior to removal.
- Documentation is considered acceptable for purposes of record keeping in local repository.
- Structure located 650m from to a Listed property on Township’s heritage registrar (2.5 story brick dwelling at 7165 Sideroad 5), but any work on the bridge is not anticipated to impact the adjacent Listed property
- The structure no longer exists, and therefore has no CHVI

Does Not Meet threshold for consideration for CHVI

Bridge 28-P

- 📍 Sideroad 11, Between 8th Line W & 3rd Line W
- 🔧 Constructed circa 1925
- 🚫 Closed to Traffic: 2006
- 🏠 Concrete T-Beam



CHAR Findings:

- Typical of early 20th Century reinforced concrete construction and the design is typical of the era. Common Style of bridge construction with a few examples of style in the area.
- No high degree of craftsmanship, artistic merit, technical or scientific achievement
- Constructed during period of rapid transportation growth and not identified as significance to the surrounding community
- Does not have potential to yield information that would contribute to the understanding of the community or culture
- Designed by A.W. Connor & Co. (Toronto Engineering Firm) and constructed by E.G. Martin of Elmira. Both were not identified to be significant to the community.
- The scale of the bridge *contributes* to the rural character of the area, but the specific bridge does not meet the intent of defining, maintaining or supporting the areas character.
- Not identified as a landmark

TOTAL SCORE = 36/100

Does not meet threshold for consideration for CHVI

Bridge 30-P

- 📍 Sideroad 5, West of Wellington Road 7
- 🔧 Constructed circa 1928
- 🚫 Closed to Traffic: 2016
- 🏗️ Concrete Through Girders



CHAR Findings:

- Historically common style of 20th Century reinforced concrete construction with relatively few examples of style left in the area.
- No high degree of craftsmanship, artistic merit, technical or scientific achievement
- Constructed during period of rapid transportation growth and not identified as significance to the surrounding community
- Does not have potential to yield information that would contribute to the understanding of the community or culture
- Designed by A.W. Connor & Co. (Toronto Engineering Firm) which is not identified to be significant to the community.
- The scale of the bridge *contributes* to the rural character of the area, but the specific bridge does not meet the intent of defining, maintaining or supporting the areas character.
- Not identified as a landmark

TOTAL SCORE = 28/100

Does not meet threshold for consideration for CHVI

Bridge 32-P

- 📍 Noah Road, 0.75km West of 8th Line W
- 🔧 Constructed circa 1922
- 🚫 Closed to Traffic: 2015
- 🏠 Concrete T-Beam



Bridge 33-P

📍 Noah Road, 0.65km West of 8th Line W

🔧 Constructed circa 1926

🚫 Closed to Traffic: 2015

🏗️ Concrete T-Beam



CHAR Findings:

- Historically common style of 20th Century reinforced concrete construction with relatively few examples of style left in the area.
- No high degree of craftsmanship, artistic merit, technical or scientific achievement
- Constructed during period of rapid transportation growth and not identified as significance to the surrounding community
- Does not have potential to yield information that would contribute to the understanding of the community or culture
- Designed by A.W. Connor & Co. (Toronto Engineering Firm) and constructed by E.G. Martin of Elmira. Both were not identified to be significant to the community.
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- Not identified as a landmark

TOTAL SCORES: Bridge 32-P = 21/100
Bridge 33-P = 21/100

Does not meet threshold for consideration for CHVI

A Summary of the Cultural Heritage Assessment Report is as follows:

Study Findings:

- None of the bridges were identified to fulfill the requirements of the Ontario Heritage Act for Designation
- None of the bridges meet the 60-point threshold for heritage value using MTO bridge assessment standards
- Bridges contribute to the rural agricultural landscape of the Township

Study Recommendations:

- No further heritage reports are required for any of the five bridges
- Design replacement structures to reflect the existing bridge style and attempt to incorporate unique designs of the original bridge into the replacement
- Documentation of each structure be deposited in a local publicly accessible repository prior to any removals

Next Steps

Fall 2023

- PIC #1 Comment Period to October 4th, 2023
- Inventory natural, cultural and economic environment
- Select Preliminary Preferred Solution
- PIC #2 (Late Fall 2023 – Date TBD)

Winter 2024

- Heritage Committee Meeting #2
- Design Concept for Preferred Alternative
- Draft Environmental Study Report
- Council Meeting #2

Spring 2024

- File Final EA Project File Report
- Notice of Study Completion
- Public Review Period

Comments / Questions?

Please feel free to provide comments to the Project Team by emailing one of the contacts listed below.

A website containing updates on the project is also available at the following link:

www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora, ON N0B 1S0
Tel: 519-846-9691 ext. 355
adickieson@centrewellington.ca

Andrew Dawson, P.Eng
Consultant Project Manager
R. J. Burnside and Associates Limited
292 Speedvale Avenue West, Unit 20
Guelph, ON N1H 1C4
Tel: 705-797-4310
andrew.dawson@rjburnside.com



To: Heritage Centre Wellington – Bridge Subcommittee

CC: Mariana Iglesias – Senior Planner

From: Adam Dickieson - Engineering Services Coordinator, TCW

Date: January 5, ~~2023~~
2024

Re: Municipal Class Environmental Assessment Study - Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

Summary

On July 17, 2023 The Township of Centre Wellington initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) Study to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28 P, 30 P, 32 P & 33 P) that are located within a twenty square kilometre area of road networks and are currently closed to vehicular traffic due to their deteriorated state in former Pilkington Township (refer to the study location map below). This study evaluated the role of these structures within the overall transportation network and connectivity in the local community and determined the most suitable alternative at each location.

Since early July, an inventory of transportation, economic, structural/technical, natural environment, and social/cultural/heritage impacts have been evaluated. During this period, the Township has invited comment from the community and other project stakeholders.

The following meetings were organized and facilitated by the MCEA Study team:

- September 6th, 2023 - Public Information Centre #1 (Study Overview);
- September 12, 2023 Heritage Centre Wellington meeting (Study Overview); and,
- December 6th, 2023 - Public Information Centre #2 (Preferred Alternatives Presented).

Summaries of the Heritage Centre Wellington meeting and Public Information Centre #2 are provided in the sections below.

Heritage Centre Wellington – Presentation

At the September 12, 2023 Heritage Centre Wellington meeting an overview presentation was delivered by the project team. At the meeting, the team discussed findings of a Cultural Heritage Assessment Report prepared by Parslow Heritage Consultancy (PHC) summarizing heritage findings at each of the bridges included in the study. Highlights of the Cultural Heritage Assessment Report are summarized below.

Per O. Reg. 569/22 (Ontario Heritage Act), a set of criteria must be met for a bridge to have Cultural Heritage Value or Interest. Property that has one of the following characteristics may be considered to have Cultural Heritage Value or Interest:

- Rare, unique, representative or early example of a construction method / style;
- High degree of craftsmanship or artistic merit;
- High degree of technical or scientific achievement;
- Directly associated with significant theme, event, belief, person, activity, organization or institution of the community;
- Yields information that contributes to understanding of a community or culture;
- Reflects work or ideas of an architect, artist, builder, designer or theorist who is significant to the community;
- Important in defining, maintaining or supporting the character of an area; or,
- Physically, functionally or historically linked to its surroundings.

Additionally, the Ontario Ministry of Transportation (MTO) has developed heritage bridge guidelines to determine if a bridge has Cultural Heritage Value or Interest. This is accomplished by way of an evaluative scoring system derived from the criteria outlined in the Ontario Heritage Act, O.Reg. 569/22. The scoring system requires an overall score of 60 to be achieved before a bridge can be considered to exhibit Cultural Heritage Value or Interest. This methodology was used as an evaluation tool for the five bridges in this MCEA Study. All of five of the bridges did not meet heritage value threshold of 60 points.

Study Findings:

- None of the bridges were identified to fulfill the requirements of the Ontario Heritage Act for Designation;
- None of the bridges meet the 60-point threshold for heritage value using MTO bridge assessment standards; and,
- Bridges contribute to the rural agricultural landscape of the Township.

Study Recommendations:

- No further heritage reports are required for any of the five bridges;
- Design replacement structures to reflect the existing bridge style and attempt to incorporate unique designs of the original bridge into the replacement; and,
- Documentation of each structure be deposited in a local publicly accessible repository prior to any removals.

Outcomes from the Public Information Centre #2 (December 6th, 2023)

On December 6, 2023, the preferred alternatives were presented at the Bethel Mennonite Church, 6772 Eighth Line W. The preferred alternative presented at the meeting was to **replace Bridges 28-P, 32-P & 33-P and remove bridges 1-P and 30-P with turn-around area areas constructed at either end.**

Summary of key study preferred alternative findings:

- ❖ Bridges 28-P, 32-P, and 33-P serve the two most travelled roadways of the Study Area (Sideroad 11 and Noah Road);
- ❖ Results in the most improvements per opened structure for cross-community travel and emergency response times;
- ❖ Emergency service and other municipal service vehicles (snow removal, road grading) would no longer be required to use neighbouring municipality roads;
- ❖ Provides east-west connection alternative to County Roads (beneficial for slow moving vehicles);
- ❖ Opens connectivity for the local Mennonite community to the local church and improves ease of access for travel via horse and carriage; and,
- ❖ Opens the top two sites requested by the local community.

There were no mentions of heritage related concerns or discussions raised by meeting attendees.

Heritage Centre Wellington – Bridge Subcommittee Consideration

As replacement designs are developed for any of these five structures consultation with Heritage Centre Wellington will be coordinated to see that proposed design elements may reflect the existing designs components. As with other +80 year old bridge replacements an attempt is made to incorporate reflection of unique design elements of the original into replacement structures.

Additional project information can be found online:

www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township

The final Cultural Heritage Assessment Report will become part of the MCEA Project File Report. A copy of the *Cultural Heritage Assessment Report, Municipal Class Environmental Assessment, Bridges 1-P, 28-P, 30-P, 32-P, 33-P, Township of Centre Wellington, Ontario, October 5, 2023* report by Parslow Heritage Consultancy Inc. has been included as an attachment to this memorandum.

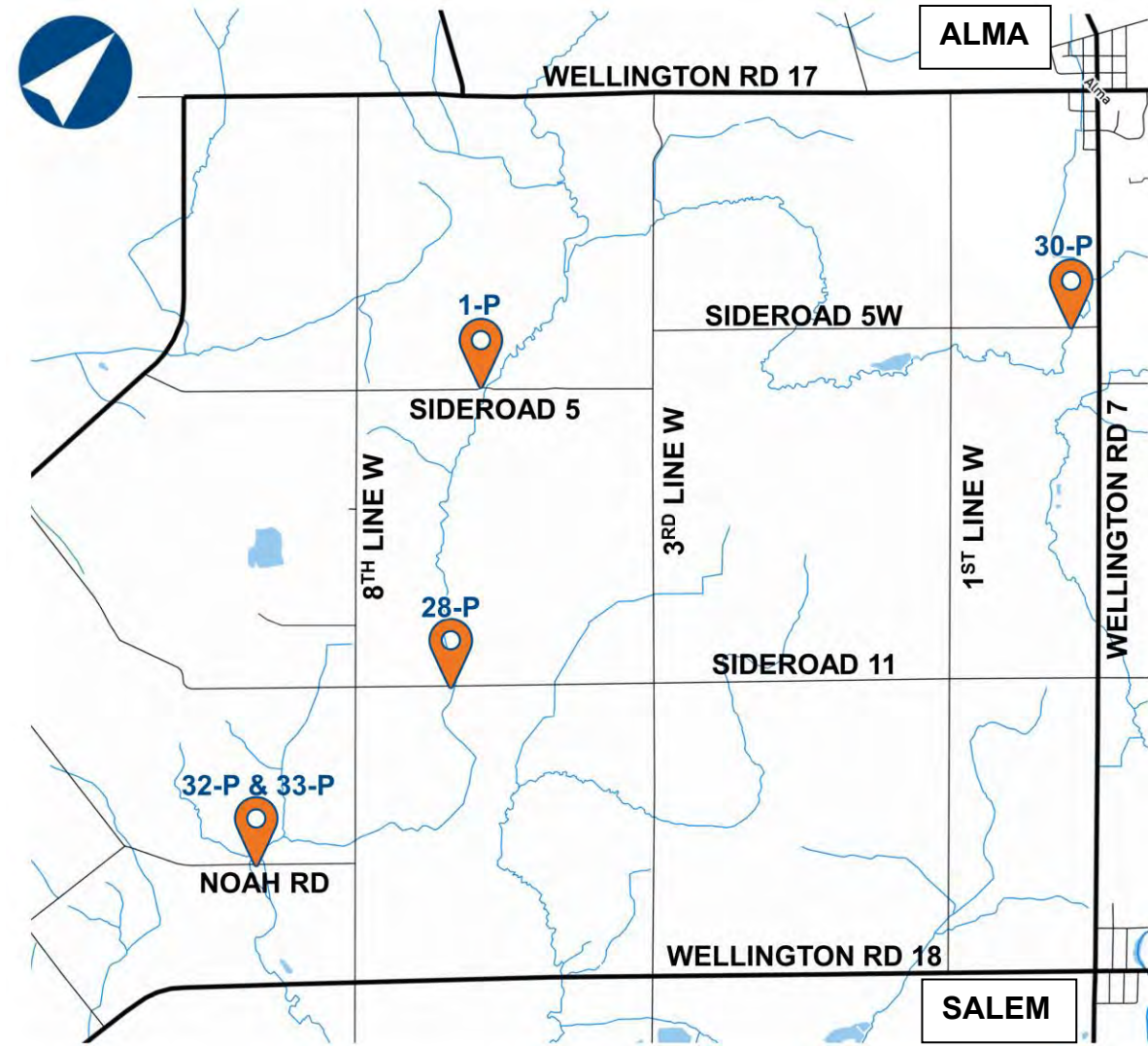
Please submit any comments and questions that the Heritage Centre Wellington, Bridge Subcommittee has by **January 22, 2024.**

Next Steps in MCEA Study Process

- All comments from the public will be reviewed as it pertains to the preferred alternatives (including comments from Heritage Centre Wellington);
- Project team will confirm preferred solution;
- The Project File Report documenting the MCEA Study findings will be completed as draft;
- The MCEA Study findings will be presented to Township Council for their consideration;
- Pending Township Council endorsement, the Project File Report will be finalized and filed on the public record for a 30-day review period;
- A Notice of Study Completion will be circulated to stakeholder groups and published online and in the local newspaper;
- The Project File Report will be available for comment from all stakeholder groups during the 30-day review period.

It is anticipated that the study will be completed in the spring of 2024.

Study Locations



Andrew Dawson

From: Adam Dickieson <ADickieson@centrewellington.ca>
Sent: Thursday, February 01, 2024 1:40 PM
To: Mariana Iglesias
Cc: Devlin Schellenberger
Subject: RE: 5 Bridges in Former Pilkington Township - Heritage Meeting

Mariana,

Thanks for looking onto this. It will be noted in the Municipal Class Environmental Assessment (MCEA), Environment Study Report File that and that there are no further comments from the Heritage Centre Wellington Committee . I wanted to close the loop on The Heritage Committee communications for the MCEA process.

I will note at the time that replacement bridges are in the design stage to review design options to commemorate the former structures that the Heritage Committee Bridge Sub-Committee.

Regards,
Adam.

Adam Dickieson | Engineering Services Coordinator
Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

From: Mariana Iglesias <MIglesias@centrewellington.ca>
Sent: Thursday, February 1, 2024 12:02 PM
To: Adam Dickieson <ADickieson@centrewellington.ca>
Cc: Devlin Schellenberger <DSchellenberger@centrewellington.ca>
Subject: RE: 5 Bridges in Former Pilkington Township - Heritage Meeting

Hi Adam,

I've resent the memo and we haven't heard anything back by the deadline date, so I think it's safe to assume the committee has no concerns with the proposed action to move forward and be consulted on the 3 replacement bridges in terms of design options to commemorate the former structures.

Thanks,
Mariana

From: Adam Dickieson <ADickieson@centrewellington.ca>
Sent: Wednesday, January 31, 2024 8:11 AM
To: Mariana Iglesias <MIglesias@centrewellington.ca>
Cc: Devlin Schellenberger <DSchellenberger@centrewellington.ca>
Subject: RE: 5 Bridges in Former Pilkington Township - Heritage Meeting

Mariana, Devlin,

Was there any comments or correspondence that came from the Heritage Committee – Bridge Sub-Committee regarding the project update memo attached?

Regards,
Adam.

Adam Dickieson | Engineering Services Coordinator
Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

From: Adam Dickieson
Sent: Tuesday, January 9, 2024 2:17 PM
To: Mariana Iglesias <MIglesias@centrewellington.ca>
Cc: Devlin Schellenberger <DSchellenberger@centrewellington.ca>
Subject: RE: 5 Bridges in Former Pilkington Township - Heritage Meeting

Ok – Thank you both for your assistance.

Regards,
Adam.

Adam Dickieson | Engineering Services Coordinator
Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

From: Mariana Iglesias <MIglesias@centrewellington.ca>
Sent: Tuesday, January 9, 2024 1:07 PM
To: Adam Dickieson <ADickieson@centrewellington.ca>
Cc: Devlin Schellenberger <DSchellenberger@centrewellington.ca>
Subject: RE: 5 Bridges in Former Pilkington Township - Heritage Meeting

Hi Adam,

Thanks for this. I will ask Devlin to share with the Bridge Sub-committee with a note of the deadline date so they can arrange a sub-committee meeting soon.

Thanks,
Mariana

From: Adam Dickieson <ADickieson@centrewellington.ca>
Sent: Friday, January 5, 2024 8:37 AM
To: Mariana Iglesias <MIglesias@centrewellington.ca>
Cc: Devlin Schellenberger <DSchellenberger@centrewellington.ca>
Subject: RE: 5 Bridges in Former Pilkington Township - Heritage Meeting

Mariana,

As discussed in the email chain below, please find attached an informational memo for the Heritage Committee – Bridge Sub-Committee’s review and comment. As mentioned in the memo the Municipal Class EA team is interested in receiving any comments the Heritage Group may have by **January 22, 2024**. These comments will become part of the study file.

The CHAR report is to be shared with the Sub-Committee as well. The CHAR report is a larger file size at 29Mb. It can be accessed here:

<F:\Common\T - Transportation Services\T11 - Bridges\1-P, 28-P, 30-P, 32-P, 33-P MCEA\CHAR>

Regards,
Adam.

Adam Dickieson | Engineering Services Coordinator
Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

From: Mariana Iglesias <MIglesias@centrewellington.ca>
Sent: Friday, December 1, 2023 12:13 PM
To: Adam Dickieson <ADickieson@centrewellington.ca>
Cc: Devlin Schellenberger <DSchellenberger@centrewellington.ca>
Subject: RE: 5 Bridges in Former Pilkington Township - Heritage Meeting

Hi Adam,

I think an email or memo from you would suffice. We would just pass it along.

Thanks,
Mariana

From: Adam Dickieson <ADickieson@centrewellington.ca>
Sent: Friday, December 1, 2023 11:38 AM
To: Mariana Iglesias <MIglesias@centrewellington.ca>
Cc: Devlin Schellenberger <DSchellenberger@centrewellington.ca>
Subject: RE: 5 Bridges in Former Pilkington Township - Heritage Meeting

Mariana,

Thanks for getting back so quickly. It would be no more than a project update outlining the preferred solutions and detailing when the formal review period, and Notice of Completion is to occur. Is there a reporting format that the bridge subcommittee would want a written report provided?

Regards,
Adam.

Adam Dickieson | Engineering Services Coordinator
Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

From: Mariana Iglesias <MIglesias@centrewellington.ca>
Sent: Friday, December 1, 2023 11:27 AM
To: Adam Dickieson <ADickieson@centrewellington.ca>
Cc: Devlin Schellenberger <DSchellenberger@centrewellington.ca>
Subject: RE: 5 Bridges in Former Pilkington Township - Heritage Meeting

Hi Adam,

We already have a bridge sub-committee, probably at the time we were just confirming the membership, but I think this item can just be referred to them. So you can provide an update in writing whenever you have a chance and we can forward it on to the Bridge Sub-committee for review. They can do whatever is needed and report back through to the full committee.

If that doesn't make sense just let me know. If you're looking for some committee endorsement then we can bring it to the full committee. Just trying to understand what you might be looking for from them, if anything other than providing an update.

Thanks,
Mariana

From: Adam Dickieson <ADickieson@centrewellington.ca>
Sent: Friday, December 1, 2023 11:02 AM
To: Mariana Iglesias <MIglesias@centrewellington.ca>
Cc: Devlin Schellenberger <DSchellenberger@centrewellington.ca>
Subject: 5 Bridges in Former Pilkington Township - Heritage Meeting

Marianna,

As the Municipal Class Environment Assessment of 5 Bridges in Former Pilkington Township continues, I am interested in knowing if the Heritage Committee or Bridge Subcommittee are interested reviewing the Preferred alternatives of this study. If so, I could provide an update. I have noted the following from the September 12 Heritage Committee Meeting:

Outcome Summary from the Sept. 12 Heritage Meeting

During the time for questions at the end of the presentation the only question presented was:

- *Can a copy of the Heritage meeting slides be made available to the committee?*
- *Answer – Yes.*

Comments were made at the end of the presentation that Heritage Centre Wellington is in the process of making a "Bridge" subcommittee and that the information presented would be shared regarding the CW 5 Bridges EA will be shared with them. There was no time provided as to when the sub-committee will be developed.

I see that there is a December 12 Heritage Meeting approaching, is item something that should be revisited at that time with either a report of presentation?

Regards,
Adam.

Adam Dickieson | Engineering Services Coordinator
Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca



BURNSIDE



Centre
Wellington

Schedule “B” Municipal Class Environmental Assessment for Five Bridges (1-P, 28-P, 30-P, 32-P & 33-P)

Township of Centre Wellington

Council Presentation

July 17, 2023

Project Team

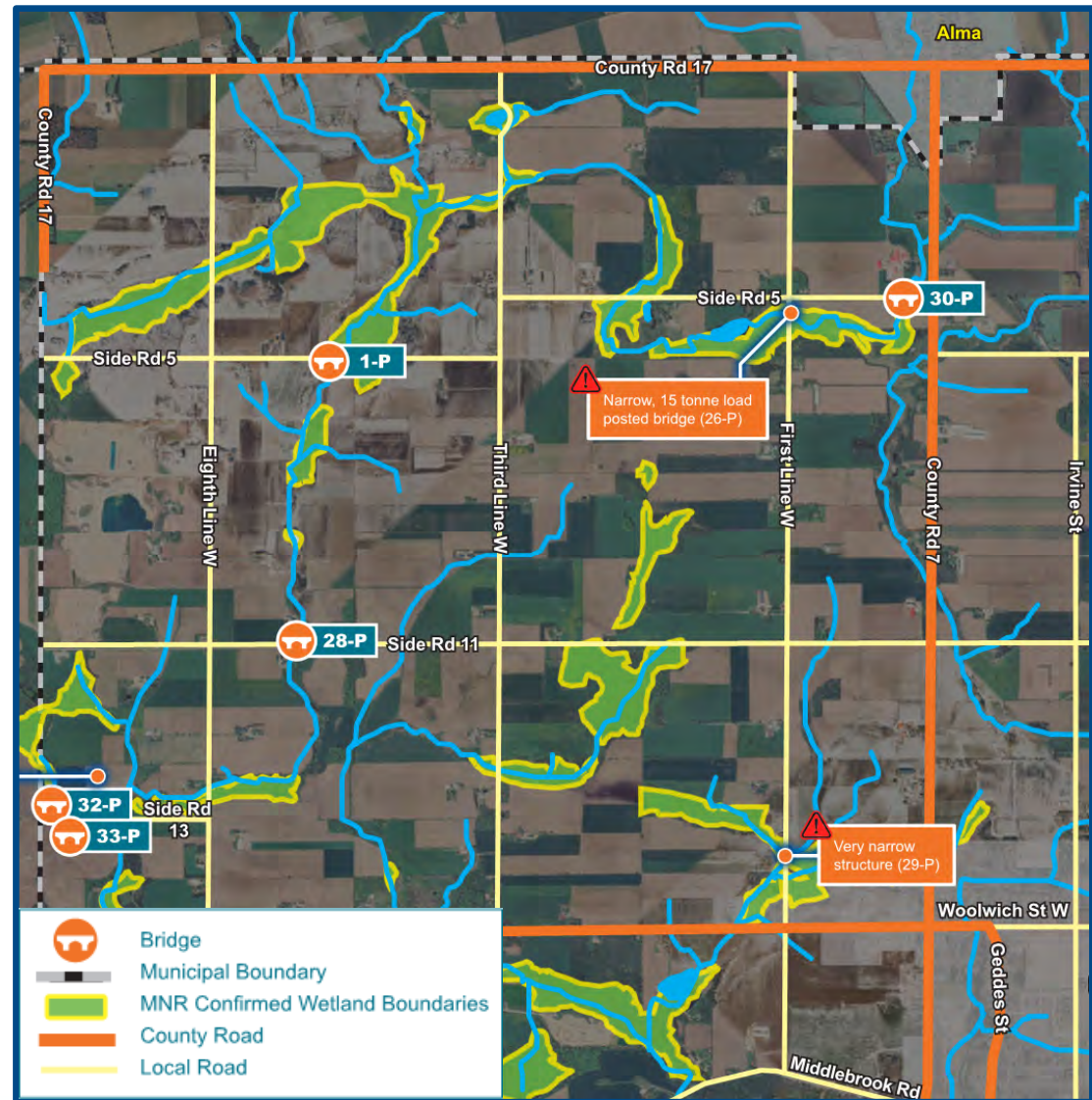


Project Study Area







Centre
Wellington

- 5 Bridges within 20km² area of former Pilkington Township
- Rural Community
 - Agricultural
 - Aggregates
 - Mennonite
- Low Volume Roads
- Load limited structures on alternative routes



Bridge 1-P







-  Sideroad 5, Between 8th Line W & 3rd Line W
-  Constructed circa 1925
-  Closed to Traffic: 2004
-  Steel Truss Superstructure (Removed in 2019)



Bridge 28-P







-  Sideroad 11, Between 8th Line W & 3rd Line W
-  Constructed circa 1925
-  Closed to Traffic: 2006
-  Concrete T-Beam







Bridge 30-P



-  Sideroad 5, West of Wellington Road 7
-  Constructed circa 1929
-  Closed to Traffic: 2016
-  Concrete Through Girders







Bridge 32-P

-  Noah Road, 0.75km West of 8th Line W
-  Constructed circa 1922
-  Closed to Traffic: 2015
-  Concrete T-Beam

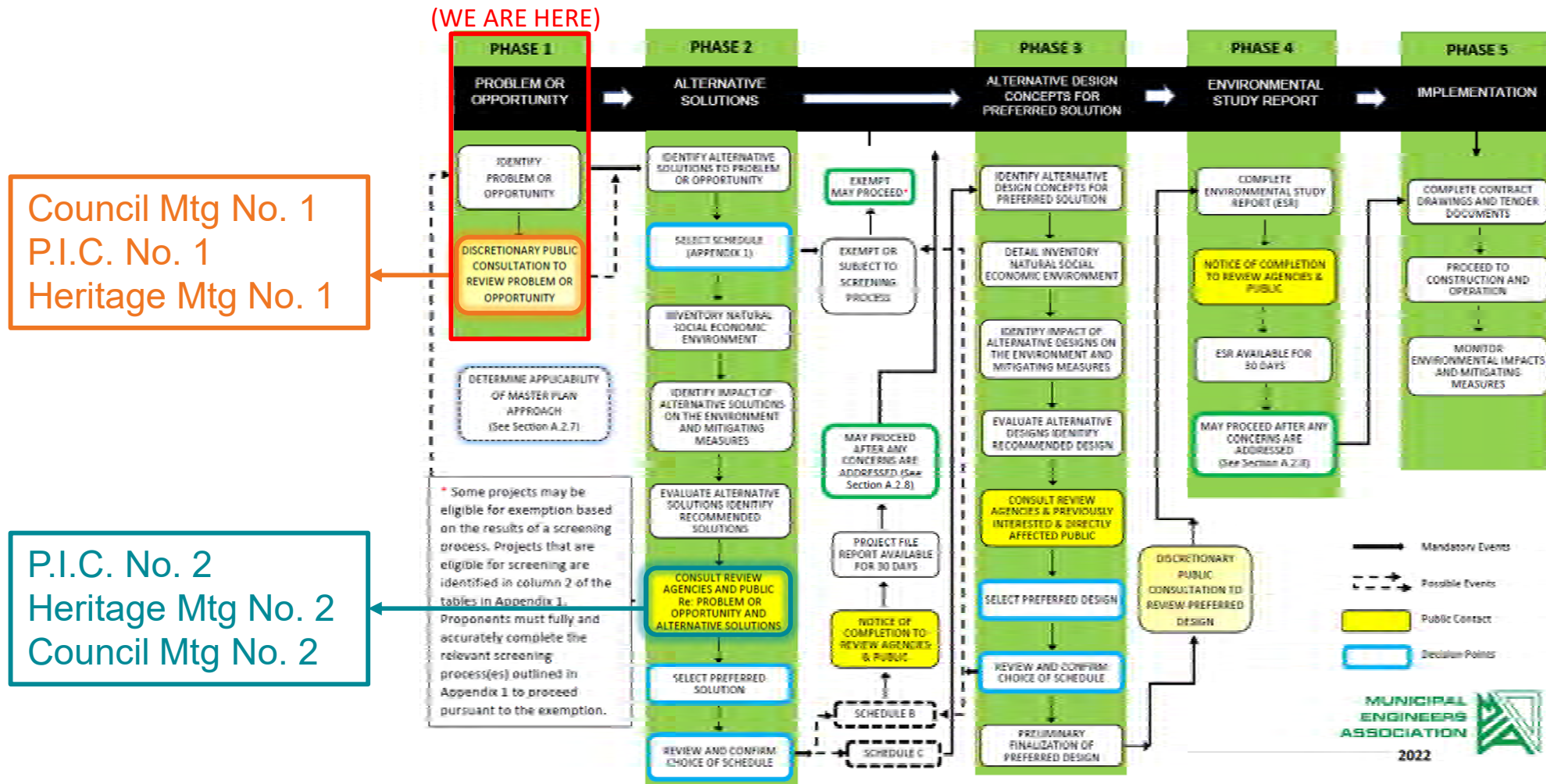


Bridge 33-P

-  Noah Road, 0.65km West of 8th Line W
-  Constructed circa 1926
-  Closed to Traffic: 2015
-  Concrete T-Beam



Municipal Class Environmental Assessment Process



Problem / Opportunity Statement

“ The Township of Centre Wellington has initiated a Schedule ‘B’ Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28-P, 30-P, 32-P & 33-P) that are located within a twenty square kilometre (20km²) area of road networks and are currently closed to vehicular traffic due to their deteriorated state. This study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location. ”

Alternatives To Be Considered

To address the Problem/Opportunity Statement, the following preliminary Alternative Solutions will be considered and evaluated after appropriate studies and consultations have been completed:

Alternative 1: Do Nothing

Leave the existing structures in their current deteriorating state and continue to restrict public use.

Alternative 2: Remove Structure and Create Formal Turn-Around

Removal of existing bridge and construction of new turn-around areas on each side of the structures.

Alternative 3: Rehabilitate Existing Structure

Complete repairs to the existing structure to meet engineering and public safety standards and re-open the structure, if achievable.

Alternative 4: Replacement of Structure

Full removal of the existing bridge and replacement with a new bridge in the current location. Consideration will be given to full capacity two-lane bridge replacements, as well as low-volume bridges with limited load or traffic capacities

Evaluation Criteria



Structural / Technical

- Safety / Traffic Operations
- Construction Staging / Duration
- Extension of Service Life



Natural Environment

- Environmentally Sensitive Areas
- Wildlife Habitats
- Fisheries/Aquatic Habitat
- Species at Risk



Social & Cultural Environment

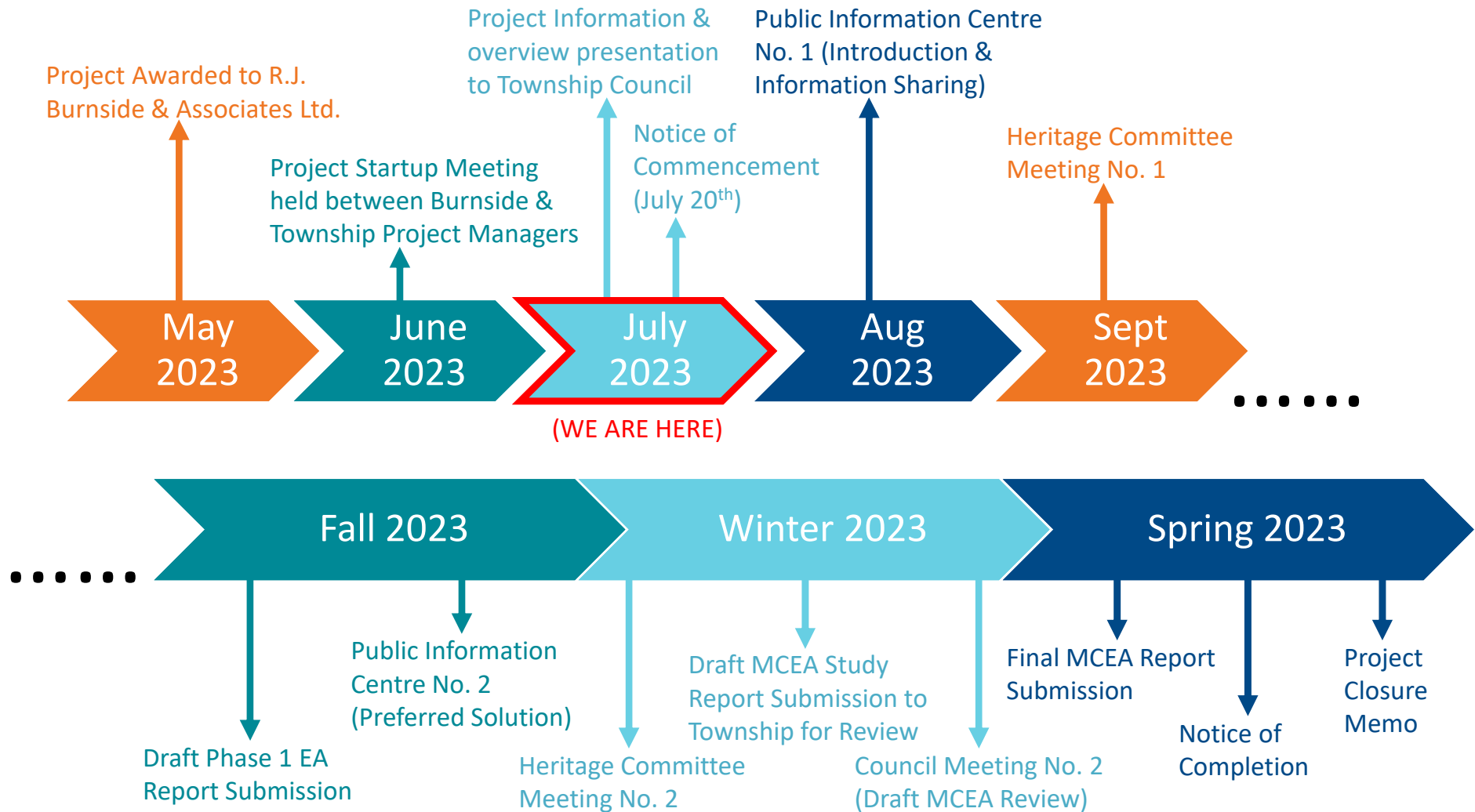
- Socio-Economic Conditions
- Archaeological, Built Heritage & Cultural Heritage Features
- Construction Impacts
- Community Input during Consultation



Financial

- Capital Costs
- Operational and Maintenance Costs

Project Timelines



[Note: Timelines may be subject to change as a result of study findings]

Comments / Questions?

We welcome your comments and questions!

Adam Dickieson
adickieson@centrewellington.ca

Andrew Dawson, P.Eng.
andrew.dawson@rjburnside.com

To: Mayor Watters and Members of Council**Report:** IS2023-16**Prepared By:** Adam Dickieson, Engineering Services
Coordinator**Date:** 17 Jul 2023**RE:** Five Bridges in former Pilkington Township Municipal Class Environmental Assessment Study - Notice of Study Commencement

Recommendation:

THAT the Council of the Township of Centre Wellington receives for information Report No. IS2023-16: FiveBridges in former Pilkington Township Municipal Class Environmental Assessment Study - Notice of Study Commencement.

Report:Introduction

There are five bridge crossings located in the former Township of Pilkington located on Sideroad 5, Sideroad 11, and Noah Road: Bridge 32-P, 33-P, 28-P, 1-P, and 30-P. The five bridges were constructed between 1922 and 1929, and all of them are currently closed due to structural deterioration and as a measure to ensure public safety.

The Township is currently undertaking a Municipal Class Environmental Assessment (MCEA) Study, in accordance with the Municipal Engineers Association's Municipal Class Environmental Assessment process (October 2000, as amended), in order to identify and evaluate alternative solutions to address the closed bridges. This Study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

Municipal Class Environmental Assessment (MCEA) Study Process

Through Report No. COR2023-52, R.J. Burnside & Associates Ltd., were retained by the Township through a Request for Proposal process to assist with completing the Schedule B MCEA Study.

The Study will confirm and document the existing structural deficiencies of these five bridges and identify alternative solutions, including permanent closure, rehabilitation or replacement for each of the five structures. The environmental impacts of each alternative will be evaluated and in consultation with the public, external agencies, and Indigenous Communities, a technically preferred alternative will be selected.

To establish a preferred alternative, each alternative is subjected to a rigorous evaluation to identify potential impacts and benefits. The evaluation and selection of a preferred bridge solution through the MCEA process is a complex undertaking that requires consideration of technical, natural environment, social, cultural, and financial criteria. As such the MCEA Study must be completed by a project team with diverse technical experience in: structural engineering, bridge hydraulics, aquatic and terrestrial biology, cultural heritage, and stakeholder consultation and communication.

Consultation Plan

A key component of the MCEA process is consultation with members of the public, external agencies, Indigenous Communities, and Township Council and Committees. The following consultation activities are being carried out as part of this Study:

- Mailouts of notices to members of the public, external agencies, and Indigenous Communities;
- Advertisement of notices in the Wellington Advertiser, and Woolwich Observer ;
- Creation of a webpage on connectCW.ca providing project details, notices, technical resources, and updates;
- An Public Open House is planned for August 2023 and will be held to present the study findings and obtain public input. Details of the Open House will be advertised in the Wellington Advertiser, Woolwich Observer and on connectCW.ca closer to the date under a separate notice; and,
- Presentation at Township Heritage Committee and Committee of the Whole at key project stages to present updates and obtain input.

Note that as part of the consultation plan, the Notice of Study Commencement (included as Attachment 1) will be issued on July 20th, 2023.

Alternative Solutions to be Evaluated

The project team has identified the following alternative solutions that will be evaluated as part of the Study for each of the five bridges:

1. Do nothing (used as a baseline option for comparative purposes);
2. Remove the existing bridge and provide new turn around areas at the watercourse crossing;
3. Remove the existing bridge and provide a new bridge in its place; and,
4. Rehabilitate the existing bridge to meet engineering and public safety standards.

Next Steps

The project team will proceed with the detailed evaluation and consultation phase of the Study, with the goal of establishing a preliminary preferred alternative solution. Staff will prepare and present a report to Township Council in Winter 2024 to provide a summary of the detailed evaluation, consultation, and preliminary preferred alternative solution, with the goal of seeking Township Council endorsement of the preferred alternative solution.

Corporate Strategic Plan:

1. Provide innovative & sustainable governance

Financial Implications:

There are no forecasted impacts to existing budgets as a result of this report.

Consultation:

This report was prepared in consultation with the Manager of Engineering, Adam Gilmore, and the Managing Director of Infrastructure Services, Colin Baker

Attachments:

- [ATT 1 Notice of Commencement](#)
- [ATT 2 Presentation](#)

Approved By:

Colin Baker, Managing Director of Infrastructure Services
Dan Wilson, Chief Administrative Officer

Notice of Study Commencement

Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P & 33-P

This notice was first issued on July 20, 2023

The Project

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28-P, 30-P, 32-P & 33-P) that are located within a twenty square kilometre (20km²) area of road networks located within the former Township of Pilkington. The structures are currently closed to vehicular traffic due to their deteriorated state. This study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

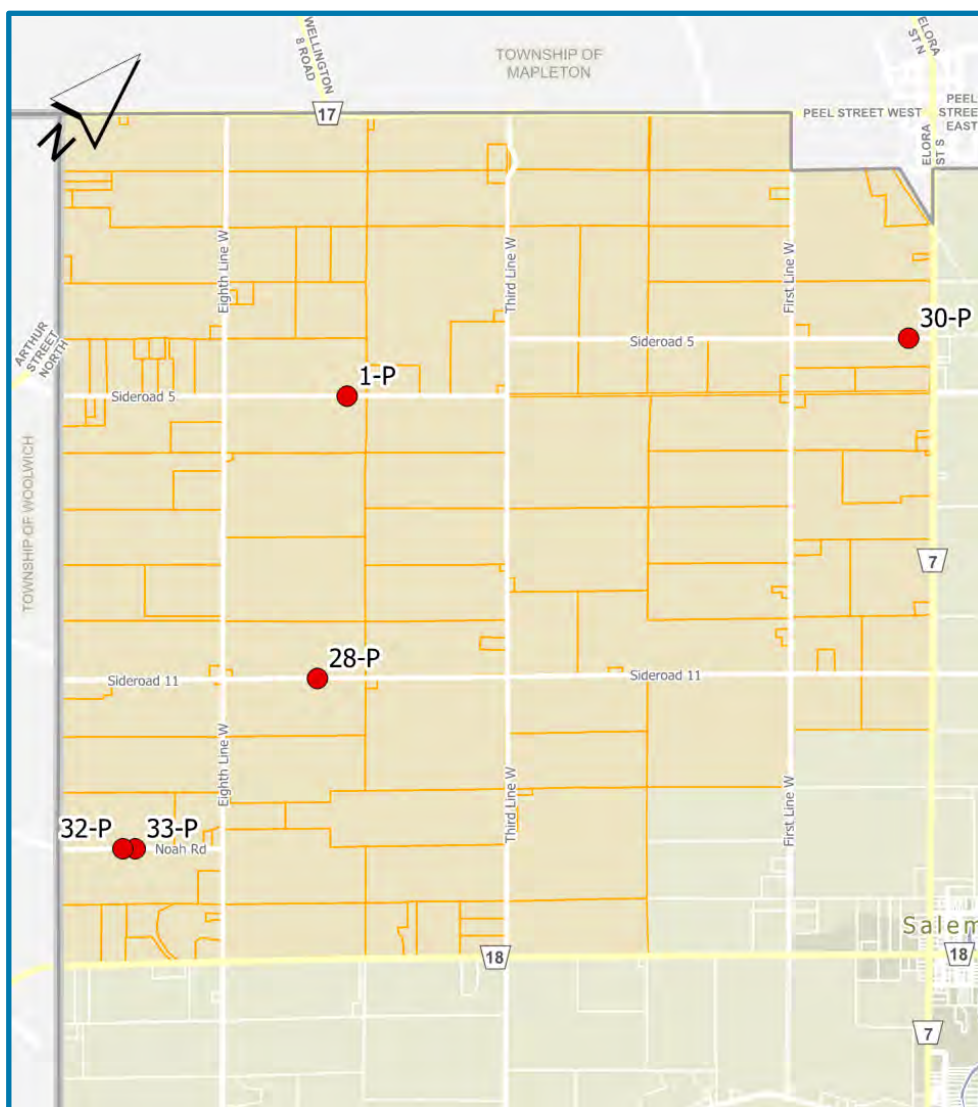
The location of the structures are shown in the key plan herein.

The Study Process

The Study is being conducted in accordance with Schedule B of the Municipal Class Environmental Assessment (October 2000, as amended) process. This notice signals the commencement of the Municipal Class Environmental Assessment (MCEA) Study. The MCEA Study will confirm and document the existing structural deficiencies and identify alternative solutions, including removal and permanent closure, rehabilitation, or replacement of the structure. The environmental impacts of each alternative will be evaluated and a technically preferred alternative will be selected in consultation with the public, agencies, and Indigenous Communities.

How to Participate

A key component to this study is public and agency consultation. The public is encouraged to provide input



and comments for consideration in developing the preferred alternative. Two in-person Public Open House meetings are planned to occur within the local community as part of this study. The first is planned for mid to late summer of 2023 and will be held to present project information to stakeholders and collect information related to the role of these structures within the local community. Details of the Open House meetings will be provided by mail to affected stakeholders, as well as advertised in the **Wellington Advertiser** and on **centrewellington.ca** closer to the date under a separate notice.

We want to Hear from You!

If you have any questions or comments regarding the study, or would like to be included on the mailing list to receive future notices and study updates, please contact one of the Project Team members below:

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.
Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record. If you have accessibility requirements in order to participate in this project, please contact one of the project team members listed above.

Crystal Ferguson

From: Barboza, Karla (She/Her) (MCM) <Karla.Barboza@ontario.ca>
Sent: Thursday, March 07, 2024 3:41 PM
To: Crystal Ferguson
Cc: Smythe, Liam (He/Him) (MCM); EA Notices to WRegion (MECP); Del Villar Cuicas, Joan (MECP); adickieson@centrewellington.ca; Andrew Dawson; Tricia Radburn
Subject: FW: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P
Attachments: Notice of Completion_Centre Wellington 5 Bridges.pdf

Hi Crystal,

Thanks for sending the notice of completion for the above referenced project to the Ministry of Citizenship and Multiculturalism (MCM).

We understand that a Stage 1 archaeological assessment is underway but could you please inform the Project Information Form number of that assessment? This will assist us linking our files internally. We will provide comments on the Project File Report by April 6.

Looking forward to hearing from you.

Thanks in advance,
Karla

Karla Barboza, (She/Her) RPP, MCIP, CAHP
Team Lead, Heritage | Heritage Planning Unit | **Ministry of Citizenship and Multiculturalism** | 416-660-1027 | karla.barboza@ontario.ca

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: March 7, 2024 9:52 AM
To: EA Notices to WRegion (MECP) <eanotification.wcregion@ontario.ca>; MEA Notices to Director EAAB (MECP) <MEANOTICESEAAB@ontario.ca>; Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>; Verhaeghe, Tammy (She/Her) (MNRF) <Tammy.Verhaeghe@ontario.ca>; Marks, Jody (MNRF) <Jody.Marks@ontario.ca>; Minkin, Dan (MCM) <Dan.Minkin@ontario.ca>; Hill, Jessica (IAO) <Jessica.Hill2@ontario.ca>; info@dfm-mpo.gc.ca; mayer@centrewellington.ca; kokane@centrewellington.ca; dwilson@centrewellington.ca; kmartin@centrewellington.ca; jgaddy@centrewellington.ca; miglesias@centrewellington.ca; bsalmon@centrewellington.ca; amcnabb@centrewellington.ca; pnewson@centrewellington.ca; lisa.macdonald@outlook.com; ward2@centrewellington.ca; ward3@centrewellington.ca; ward4@centrewellington.ca; ward5@centrewellington.ca; ward6@centrewellington.ca; donk@wellington.ca; joedk@wellington.ca; rbauman@woolwich.ca; JPuppe@woolwich.ca; rtucker@woolwich.ca; dschwartzentruber@woolwich.ca; tmulvey@centrewellington.ca; jkarn@centrewellington.ca; cpellizzari@centrewellington.ca; skoestner@centrewellington.ca; huraniam@wellington.ca; sherry.hoysa@guelph.ca; lwarner@grandriver.ca; theywood@grandriver.ca; dboyd@grandriver.ca; amy.villeneuve@ugdsb.on.ca; Michael Glazier <Michael.glazier@wellingtoncdsb.ca>; mdavetiessen@gmail.com; ahmad.nouman@hydroone.com; neil.ackerman1@bell.ca
Cc: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23 <056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>
Subject: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good Morning,

On behalf of the Township of Centre Wellington, please see attached the Notice of Completion for the Municipal Class Environmental Assessment for Bridges 1-P, 28-P, 30-P, 32-P, and 33-P. This notice signals the completion of the review of Bridges 1-P, 28-P, 30-P, 32-P, and 33-P. The Project File Report (PFR) is available for public review and comment for a period of 30 days starting March 7, 2024 and ending April 6, 2024 in accordance with the requirements of the MCEA process.

An electronic copy of the PFR is available for viewing on the Township of Centre Wellington website at <https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>.

To provide comments on the project or if you require alternative accommodations to view the PFR, please contact the Project Manager by 4:30 p.m. April 6, 2024.

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.
Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

On Behalf of the Study Team,

 **BURN**
Crystal Ferguson
Environmental Coordinator

R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: +1 800-265-9662 Direct: +1 705-797-4352
www.rjburnside.com

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Thank you.

Crystal Ferguson

From: Andrew Dawson
Sent: Friday, March 15, 2024 12:12 PM
To: Barboza, Karla (She/Her) (MCM); Crystal Ferguson
Cc: Smythe, Liam (He/Him) (MCM); EA Notices to WCRRegion (MECP); Del Villar Cuicas, Joan (MECP); adickieson@centrewellington.ca; Tricia Radburn
Subject: RE: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

Karla,
Sorry for the delay in getting back to you. I have received confirmation of the PIF number from our sub-consultant for this project. It is **P1056-0245-2024**.
Would you like us to pass along the Stage 1 report once received (estimated to be received by late March), or will you just access it via the PIF?

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: Barboza, Karla (She/Her) (MCM) <Karla.Barboza@ontario.ca>
Sent: Thursday, March 07, 2024 3:41 PM
To: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Cc: Smythe, Liam (He/Him) (MCM) <Liam.Smythe@ontario.ca>; EA Notices to WCRRegion (MECP) <eanotification.wcregion@ontario.ca>; Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>; adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>
Subject: FW: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

Hi Crystal,

Thanks for sending the notice of completion for the above referenced project to the Ministry of Citizenship and Multiculturalism (MCM).

We understand that a Stage 1 archaeological assessment is underway but could you please inform the Project Information Form number of that assessment? This will assist us linking our files internally. We will provide comments on the Project File Report by April 6.

Looking forward to hearing from you.

Thanks in advance,
Karla

Karla Barboza, (She/Her) RPP, MCIP, CAHP
Team Lead, Heritage | Heritage Planning Unit | Ministry of Citizenship and Multiculturalism | 416-660-1027 | karla.barboza@ontario.ca

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: March 7, 2024 9:52 AM

To: EA Notices to WRegion (MECP) <eanotification.wregion@ontario.ca>; MEA Notices to Director EAAB (MECP) <MEANOTICEEAAB@ontario.ca>; Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>; Verhaeghe, Tammy (She/Her) (MNRF) <Tammy.Verhaeghe@ontario.ca>; Marks, Jody (MNRF) <Jody.Marks@ontario.ca>; Minkin, Dan (MCM) <Dan.Minkin@ontario.ca>; Hill, Jessica (IAO) <Jessica.Hill2@ontario.ca>; info@dfo-mpo.gc.ca; mayor@centrewellington.ca; kokane@centrewellington.ca; dwilson@centrewellington.ca; kmartin@centrewellington.ca; jgaddy@centrewellington.ca; miglesias@centrewellington.ca; bsalmon@centrewellington.ca; amcnabb@centrewellington.ca; pnewson@centrewellington.ca; lisamacdonald@outlook.com; ward2@centrewellington.ca; ward3@centrewellington.ca; ward4@centrewellington.ca; ward5@centrewellington.ca; ward6@centrewellington.ca; donk@wellington.ca; joedk@wellington.ca; rbauman@woolwich.ca; JPuppe@woolwich.ca; rtucker@woolwich.ca; dschwartzentruber@woolwich.ca; tmulvey@centrewellington.ca; jkarn@centrewellington.ca; cpellizzari@centrewellington.ca; skoestner@centrewellington.ca; huraniam@wellington.ca; sherry.hoysa@guelph.ca; lwerner@grandriver.ca; theywood@grandriver.ca; dboyd@grandriver.ca; amy.villeneuve@ugdsb.on.ca; Michael Glazier <Michael.glazier@wellingtoncdsb.ca>; mdavetiessen@gmail.com; ahmad.nouman@hydroone.com; neil.ackerman1@bell.ca
Cc: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23 <056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>
Subject: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

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Good Morning,

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To provide comments on the project or if you require alternative accommodations to view the PFR, please contact the Project Manager by 4:30 p.m. April 6, 2024.

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.
Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

On Behalf of the Study Team,

 **BURN**
Crystal Ferguson
Environmental Coordinator

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128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
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Thank you.

Crystal Ferguson

From: Trevor Heywood <theywood@grandriver.ca>
Sent: Wednesday, March 20, 2024 1:29 PM
To: Andrew Dawson; adickieson@centrewellington.ca
Cc: Crystal Ferguson; Jessica Conroy
Subject: RE: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P
Attachments: 2024-03-20 Carroll Creek Bridges GRCA comments 3.pdf

Thanks Andrew.

Please see our comments attached for the final EA. As noted in the letter, please direct future inquiries to Jessica Conroy (cc'ed).

Regards,

Trevor Heywood
Resource Planner
Grand River Conservation Authority

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Sent: Wednesday, March 20, 2024 10:00 AM
To: Trevor Heywood <theywood@grandriver.ca>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Cc: adickieson@centrewellington.ca
Subject: RE: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

Trevor,
Please see the link below for access to the Project File Report for download.
Please note that the link is accessible by your email only. When clicking on the link, you will be asked to confirm your email. Following email confirmation you should receive an email with a verification to access the document. Once you can access the file, there is an option for you to download the file and save it locally to your computer. The link can expire within 1 month so please ensure you download the file upon receipt as it may not be accessible at a later date.
If you have any issues with the accessing the file, please let me know.

 [056693 FINAL CW 5 Bridges EA PFR.pdf](#)

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Trevor Heywood <theywood@grandriver.ca>
Sent: Wednesday, March 20, 2024 9:40 AM
To: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Cc: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>
Subject: RE: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

Hi Crystal,

Can the GRCA receive a copy of the Project File for download to our files? The link takes you to one that's only viewable online.

Thanks,

Trevor Heywood B.Sc.(Env.)
Resource Planner
Grand River Conservation Authority

400 Clyde Road, PO Box 729
Cambridge, ON N1R 5W6
Phone: 519-621-2761 ext. 2292
Email: theywood@grandriver.ca
www.grandriver.ca | [Connect with us on social media](#)

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Sent: Thursday, March 7, 2024 9:52 AM

To: eanotification.wregion@ontario.ca; MEA.NOTICES.EAAB@ontario.ca; joan.delvillarcuicas@ontario.ca; tammy.verhaeghe@ontario.ca; jody.marks@ontario.ca; dan.minkin@ontario.ca; jessica.hill2@ontario.ca; info@dfo-mpo.gc.ca; mayor@centrewellington.ca; kokane@centrewellington.ca; dwilson@centrewellington.ca; kmartin@centrewellington.ca; jgaddye@centrewellington.ca; miglesias@centrewellington.ca; bsalmon@centrewellington.ca; amcnabb@centrewellington.ca; pnewson@centrewellington.ca; lisamacdonald@outlook.com; ward2@centrewellington.ca; ward3@centrewellington.ca; ward4@centrewellington.ca; ward5@centrewellington.ca; ward6@centrewellington.ca; donk@wellington.ca; joedk@wellington.ca; Rae Ann Bauman <rbauman@woolwich.ca>; jpuppe@woolwich.ca; rtucker@woolwich.ca; dschwartzentruber@woolwich.ca; tmulvey@centrewellington.ca; jkarn@centrewellington.ca; cpellizzari@centrewellington.ca; skoestner@centrewellington.ca; huraniam@wellington.ca; sherry.hoysa@guelph.ca; Laura Warner <lwerner@grandriver.ca>; Trevor Heywood <theywood@grandriver.ca>; Dwight Boyd <dboyd@grandriver.ca>; amy.villeneuve@ugdsb.on.ca; michael.glazier@wellingtoncdsb.ca; mdavetiessen@gmail.com; ahmad.nouman@hydroone.com; neil.ackerman1@bell.ca

Cc: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23 <056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>

Subject: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

Good Morning,

On behalf of the Township of Centre Wellington, please see attached the Notice of Completion for the Municipal Class Environmental Assessment for Bridges 1-P, 28-P, 30-P, 32-P, and 33-P. This notice signals the completion of the review of Bridges 1-P, 28-P, 30-P, 32-P, and 33-P. The Project File Report (PFR) is available for public review and comment for a period of 30 days starting March 7, 2024 and ending April 6, 2024 in accordance with the requirements of the MCEA process.

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To provide comments on the project or if you require alternative accommodations to view the PFR, please contact the Project Manager by 4:30 p.m. April 6, 2024.

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.
Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

On Behalf of the Study Team,



R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: +1 800-265-9662 Direct: +1 705-797-4352
www.rjburnside.com

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Thank you.



Administration Centre: 400 Clyde Road, P.O. Box 729 Cambridge, ON N1R 5W6

Phone: 519-621-2761 Toll free: 1-866-900-4722 Fax: 519-621-4844 www.grandriver.ca

March 20, 2024

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora ON N0B 1S0
adickieson@centrewellington.ca

Andrew Dawson
Project Manager
R.J. Burnside & Associates
20-292 Speedvale Avenue West
Guelph ON N1H 1C4
andrew.dawson@rjburnside.com

**Re: Bridges 1-P, 28-P, 30-P, 32-P & 33-P Class Environmental Assessment
Sideroads 5, 5 West, 11 and 13 at Carroll Creek**

Dear Mr. Dickieson and Mr. Dawson,

We have received the Notice of Completion and Project File Report for the above-noted Class EA.

The GRCA has reviewed the Class EA under Ontario Regulation 686/21, acting on behalf of the Province regarding natural hazards identified in Section 3.1 of the Provincial Policy Statement (PPS, 2020), as well as in accordance with Ontario Regulation 150/06 (to be replaced by Ontario Regulation 41/24 effective April 1, 2024) and GRCA's Board approved policies.

Please note that Ontario Regulation 150/06 will be replaced by Ontario Regulation 41/24 effective April 1, 2024. This does not change the policy guidance and requirements provided for the Class EA, as our comments already have accounted or will be able to account for the changes.

We understand that the Class EA proposes to replace bridges 28-P (on Sideroad 11) as well as bridges 32-P and 33-P (on Sideroad 13). This will also remove bridges 1-P and 30-P (on Sideroad 5 / 5 West). Following our December 11, 2023 comments from Public Information Centre 1, we wish to provide the following comments:

1. We appreciate the commitment to detailed hydrologic / hydraulic modelling to verify compliance with GRCA policies 8.1.15-8.1.16. This is particularly important as significant vertical grading above the existing roadbeds is proposed. We request that the Township and their engineering consultant engages with the GRCA as early as possible to prepare a terms of reference for this work. We will note that:
 - a. The work must be done by a Ontario-licensed water resource engineer.
 - b. The work will need to be consistent with the Ministry of Natural Resources and Forestry's Technical Guide for the Flooding Hazard Limit, and in accordance with Technical Guidelines for Flood Hazard Mapping (Environmental Water Resources Group, March 2017) for data, analysis, modelling and mapping requirements.
 - c. The terms of reference should include, but is not limited to:
 - i. The hydrology modelling and methods;
 - ii. If calibration / validation is required;
 - iii. Whether 1D or 2D modelling will be used, with justification; and,
 - iv. General parameters such as roughness coefficients, cross-section spacing, and boundary conditions.
2. We appreciate the commitment to completing a scoped environmental impact study (EIS), and circulating the GRCA on a terms of reference. We will note that:
 - a. The EIS must be completed by someone qualified in the Ontario Wetland Evaluation System (OWES).
 - b. GRCA staff will need to verify wetland boundaries in the field with consulting staff during the growing season (roughly May-September).
3. We appreciate the commitment to engineering assessments to mitigate erosion impacts and accommodate creek movement, as well as consulting with the GRCA on a scope of work during detailed design. For additional guidance, please refer to GRCA policy 8.2.21, as well as the Ministry of Natural Resources and Forestry's Technical Guide for the Erosion Hazard Limit.
4. Decommissioning bridges 1-P and 30-P will involve the removal of remaining structures, and restoring disturbed areas. Please prepare grading and restoration plans during detailed design, as these will still require a GRCA permit (interference with a watercourse, grading in a floodplain).

We trust this information is of assistance. As work progresses into detailed design, if you have any questions or require additional information, please contact Jessica Conroy at 519-621-2763 ext. 2230 or jconroy@grandriver.ca.

Sincerely,

A handwritten signature in black ink, appearing to read 'T. Heywood', written over a horizontal line.

Trevor Heywood
Resource Planner
Grand River Conservation Authority

cc: Jessica Conroy, GRCA

Crystal Ferguson

From: Adam Dickieson <ADickieson@centrewellington.ca>
Sent: Tuesday, April 02, 2024 8:53 AM
To: Smythe, Liam (He/Him) (MCM)
Cc: Andrew Dawson; Crystal Ferguson; Tricia Radburn; EA Notices to WCRegion (MECP); Barboza, Karla (She/Her) (MCM)
Subject: RE: MCM Response - Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P [MCM File # 0021146]

Liam,

Thank you for providing detailed comments regarding the Project File Report. Our team will see that the Report is updated to include MCM's recommended revisions.

Regards,
Adam.



Adam Dickieson | Engineering Services Coordinator

Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

From: Smythe, Liam (He/Him) (MCM) <Liam.Smythe@ontario.ca>
Sent: Thursday, March 28, 2024 2:48 PM
To: Adam Dickieson <ADickieson@centrewellington.ca>
Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; EA Notices to WCRegion (MECP) <eanotification.wcregion@ontario.ca>; Barboza, Karla (She/Her) (MCM) <Karla.Barboza@ontario.ca>
Subject: MCM Response - Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P [MCM File # 0021146]

You don't often get email from liam.smythe@ontario.ca. [Learn why this is important](#)

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Good afternoon Adam,

Thank you for providing the Ministry of Citizenship and Multiculturalism with the Notice of Study Completion for the above-referenced project, and for making the Project File Report available for review and comment.

Please find MCM's comments on the Project File Report in the attached letter. Do not hesitate to contact us if you have any questions.

Best regards,

Liam Smythe

Heritage Planner | Citizenship, Inclusion and Heritage Division
Ministry of Citizenship and Multiculturalism | Ontario Public Service
416-301-4797 | Liam.Smythe@ontario.ca



Taking pride in strengthening Ontario, its places and its people

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Sent: March 7, 2024 9:52 AM

To: EA Notices to WCRegion (MECP) <eanotification.wcregion@ontario.ca>; MEA Notices to Director EAAB (MECP) <MEANOTICESEAAB@ontario.ca>; Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>; Verhaeghe, Tammy (She/Her) (MNRF) <Tammy.Verhaeghe@ontario.ca>; Marks, Jody (MNRF) <Jody.Marks@ontario.ca>; Minkin, Dan (MCM) <Dan.Minkin@ontario.ca>; Hill, Jessica (IAO) <Jessica.Hill2@ontario.ca>; info@dfo-mpo.gc.ca; mayor@centrewellington.ca; kokane@centrewellington.ca; dwilson@centrewellington.ca; kmartin@centrewellington.ca; jgaddye@centrewellington.ca; miglesias@centrewellington.ca; bsalmon@centrewellington.ca; amcnabb@centrewellington.ca; pnewson@centrewellington.ca; lisamacdonald@outlook.com; ward2@centrewellington.ca; ward3@centrewellington.ca; ward4@centrewellington.ca; ward5@centrewellington.ca; ward6@centrewellington.ca; donk@wellington.ca; joedk@wellington.ca; rbauman@woolwich.ca; JPuppe@woolwich.ca; rtucker@woolwich.ca; dschwartzentruber@woolwich.ca; tmulvey@centrewellington.ca; jkarn@centrewellington.ca; cpellizzari@centrewellington.ca; skoestner@centrewellington.ca; huraniam@wellington.ca; sherry.hoysa@guelph.ca; lwarner@grandriver.ca; theywood@grandriver.ca; dboyd@grandriver.ca; amy.villeneuve@ugdsb.on.ca; Michael Glazier <Michael.glazier@wellingtoncdsb.ca>; mdavetiessen@gmail.com; ahmad.nouman@hydroone.com; neil.ackerman1@bell.ca

Cc: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23 <056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>

Subject: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

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Good Morning,

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To provide comments on the project or if you require alternative accommodations to view the PFR, please contact the Project Manager by 4:30 p.m. April 6, 2024.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

On Behalf of the Study Team,

 **BURNSIDE**
Crystal Ferguson
Environmental Coordinator

R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: +1 800-265-9662 Direct: +1 705-797-4352
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Thank you.

Crystal Ferguson

From: Barboza, Karla (She/Her) (MCM) <Karla.Barboza@ontario.ca>
Sent: Friday, March 22, 2024 9:16 AM
To: Andrew Dawson; Crystal Ferguson
Cc: Smythe, Liam (He/Him) (MCM); EA Notices to WCRegion (MECP); Del Villar Cuicas, Joan (MECP); adickieson@centrewellington.ca; Tricia Radburn
Subject: RE: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

Hi Andrew,

Thanks for sharing the PIF number.

We have linked our internal files accordingly. You don't need to send the archaeological assessment to us. The licensed archaeologist is the one to submit to our ministry as per the terms and conditions of their licence. I noticed that the archaeologist has yet to submit the report to MCM.

Please note that archaeological concerns have not been fully addressed until reports have been entered into the Ontario Public Register of Archaeological Reports where those reports recommend that:

1. the archaeological assessment of the project area is complete and
2. all archaeological sites identified by the assessment are either of no further cultural heritage value or interest (as per Section 48(3) of the Ontario Heritage Act) or that mitigation of impacts has been accomplished through excavation or an avoidance and protection strategy.

Proponents should wait to receive the MCM's review letter indicating that the report(s) has been entered into the Register before issuing a decision or proceeding with any ground disturbing activities.

It seems that the above report is just for 28-P, 32-P and 33-P bridges. Could you please advise whether an archaeological assessment was undertaken for study areas for 1-P and 30 P bridges?

Thanks again,
Karla

Karla Barboza, MCIP, RPP, CAHP (she/her)

Team Lead, Heritage | Heritage Branch | Citizenship, Inclusion and Heritage Division
Ministry of Citizenship and Multiculturalism | Ontario Public Service
416-660-1027 | karla.barboza@ontario.ca

Ontario |

Taking pride in strengthening Ontario, its places and its people

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Sent: March 15, 2024 12:12 PM
To: Barboza, Karla (She/Her) (MCM) <Karla.Barboza@ontario.ca>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Cc: Smythe, Liam (He/Him) (MCM) <Liam.Smythe@ontario.ca>; EA Notices to WRegion (MECP) <eanotification.wregion@ontario.ca>; Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>; adickieson@centrewellington.ca; Tricia Radburn <Tricia.Radburn@rjburnside.com>
Subject: RE: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

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Karla,

Sorry for the delay in getting back to you. I have received confirmation of the PIF number from our sub-consultant for this project. It is **P1056-0245-2024**.

Would you like us to pass along the Stage 1 report once received (estimated to be received by late March), or will you just access it via the PIF?

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Barboza, Karla (She/Her) (MCM) <Karla.Barboza@ontario.ca>
Sent: Thursday, March 07, 2024 3:41 PM
To: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Cc: Smythe, Liam (He/Him) (MCM) <Liam.Smythe@ontario.ca>; EA Notices to WRegion (MECP) <eanotification.wregion@ontario.ca>; Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>; adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>
Subject: FW: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

Hi Crystal,

Thanks for sending the notice of completion for the above referenced project to the Ministry of Citizenship and Multiculturalism (MCM).

We understand that a Stage 1 archaeological assessment is underway but could you please inform the Project Information Form number of that assessment? This will assist us linking our files internally. We will provide comments on the Project File Report by April 6.

Looking forward to hearing from you.

Thanks in advance,
Karla

Karla Barboza, (She/Her) RPP, MCIP, CAHP
Team Lead, Heritage | Heritage Planning Unit | Ministry of Citizenship and Multiculturalism | 416-660-1027 | karla.barboza@ontario.ca

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: March 7, 2024 9:52 AM
To: EA Notices to WRegion (MECP) <eanotification.wregion@ontario.ca>; MEA Notices to Director EAAB (MECP) <MEANOTICEEAAB@ontario.ca>; Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>; Verhaeghe, Tammy (She/Her) (MNRF) <Tammy.Verhaeghe@ontario.ca>; Marks, Jody (MNRF) <Jody.Marks@ontario.ca>; Minkin, Dan (MCM) <Dan.Minkin@ontario.ca>; Hill, Jessica (IAO) <Jessica.Hill2@ontario.ca>; info@dfo-mpo.gc.ca; mayor@centrewellington.ca; kokane@centrewellington.ca; dwilson@centrewellington.ca; kmartin@centrewellington.ca; jgaddy@centrewellington.ca; miglesias@centrewellington.ca;

bsalmon@centrewellington.ca; amcnabb@centrewellington.ca; pnewson@centrewellington.ca;
lisamacdonald@outlook.com; ward2@centrewellington.ca; ward3@centrewellington.ca; ward4@centrewellington.ca;
ward5@centrewellington.ca; ward6@centrewellington.ca; donk@wellington.ca; joedk@wellington.ca;
rbauman@woolwich.ca; JPuppe@woolwich.ca; rtucker@woolwich.ca; dschwartzentruber@woolwich.ca;
tmulvey@centrewellington.ca; jkarn@centrewellington.ca; cpellizzari@centrewellington.ca;
skoestner@centrewellington.ca; huraniam@wellington.ca; sherry.hoysa@guelph.ca; lwarner@grandriver.ca;
theywood@grandriver.ca; dboyd@grandriver.ca; amy.villeneuve@ugdsb.on.ca; Michael Glazier
<Michael.glazier@wellingtoncdsb.ca>; mdavetiessen@gmail.com; ahmad.nouman@hydroone.com;
neil.ackerman1@bell.ca

Cc: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>; Tricia Radburn
<Tricia.Radburn@rjburnside.com>; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
<056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>

Subject: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good Morning,

On behalf of the Township of Centre Wellington, please see attached the Notice of Completion for the Municipal Class Environmental Assessment for Bridges 1-P, 28-P, 30-P, 32-P, and 33-P. This notice signals the completion of the review of Bridges 1-P, 28-P, 30-P, 32-P, and 33-P. The Project File Report (PFR) is available for public review and comment for a period of 30 days starting March 7, 2024 and ending April 6, 2024 in accordance with the requirements of the MCEA process.

An electronic copy of the PFR is available for viewing on the Township of Centre Wellington website at <https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>.

To provide comments on the project or if you require alternative accommodations to view the PFR, please contact the Project Manager by 4:30 p.m. April 6, 2024.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

On Behalf of the Study Team,



R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: +1 800-265-9662 Direct: +1 705-797-4352
www.rjburnside.com

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If you have received this communication in error please notify the sender at the above email address and delete this email immediately.

Thank you.

Crystal Ferguson

From: Andrew Dawson
Sent: Tuesday, March 26, 2024 4:04 PM
To: Barboza, Karla (She/Her) (MCM)
Cc: Smythe, Liam (He/Him) (MCM); EA Notices to WCRegion (MECP); Del Villar Cuicas, Joan (MECP); adickieson@centrewellington.ca; Tricia Radburn; Crystal Ferguson
Subject: RE: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P
Attachments: Stage 1 AA Arch Potential Map_CW 5 Bridges.pdf

Karla,

Thank you for confirming that your files have been linked. Our subconsultant has not yet submitted the report to MCM because we only just received the Stage 1 AA report at the end of last week and are in the process of reviewing the findings and discussing next steps with the client. The Stage 1 AA report is for bridges 28-P, 32-P and 33-P only. No Archaeological Assessment has been completed for bridges 1-P and 30-P, given that the works for removing the structure at 30-P and the remainder of the structure at 1-P are anticipated to be maintained within areas that were previously disturbed during the original construction of these structures.

For your information prior to receiving the report for Bridges 28-P, 32-P and 33-P, the Stage 1 AA assessment identified that site 32-P has low archaeological potential with no further need for stage 2 AA, and that there is one small swath at each of 28-P and 33-P with archaeological potential for which a stage 2 AA has been recommended. See attached map for reference of areas.

It is the Township's intent to complete these additional Stage 2 AA surveys prior to any ground disturbance and we are working with them to confirm what timelines these studies will be completed in. If the Township wishes to complete the Stage 2 AA works as part of the EA, our subconsultant will complete the works and update their report with Stage 2 findings prior to submitting the report. If the Township elects to proceed with the Stage 2 AA works outside of this EA, during the future detailed design works for the bridge (once disturbance limits are finalized in greater detail and encroachment within the areas of archaeological potential is confirmed, if applicable), the Stage 1 AA report will be finalized and submitted to the MCM, with the Town commitment to complete the Stage 2 AA works prior to any ground disturbance. We can provide you an update on the timing of the Stage 2 AA studies once confirmed.

We will provide indigenous communities with the Stage 1 report for review and the Township will consult further with the communities as required ahead of the Stage 2 AA.

Please confirm whether the MCM has any concerns with the above noted approach.
Feel free to contact me at 705-797-4310 to discuss further if you prefer.

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: Barboza, Karla (She/Her) (MCM) <Karla.Barboza@ontario.ca>

Sent: Friday, March 22, 2024 9:16 AM

To: Andrew Dawson <Andrew.Dawson@rjburnside.com>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Cc: Smythe, Liam (He/Him) (MCM) <Liam.Smythe@ontario.ca>; EA Notices to WCRegion (MECP) <eanotification.wcregion@ontario.ca>; Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>; adickieson@centrewellington.ca; Tricia Radburn <Tricia.Radburn@rjburnside.com>
Subject: RE: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

Hi Andrew,

Thanks for sharing the PIF number.

We have linked our internal files accordingly. You don't need to send the archaeological assessment to us. The licensed archaeologist is the one to submit to our ministry as per the terms and conditions of their licence. I noticed that the archaeologist has yet to submit the report to MCM.

Please note that archaeological concerns have not been fully addressed until reports have been entered into the Ontario Public Register of Archaeological Reports where those reports recommend that:

1. the archaeological assessment of the project area is complete and
2. all archaeological sites identified by the assessment are either of no further cultural heritage value or interest (as per Section 48(3) of the Ontario Heritage Act) or that mitigation of impacts has been accomplished through excavation or an avoidance and protection strategy.

Proponents should wait to receive the MCM's review letter indicating that the report(s) has been entered into the Register before issuing a decision or proceeding with any ground disturbing activities.

It seems that the above report is just for 28-P, 32-P and 33-P bridges. Could you please advise whether an archaeological assessment was undertaken for study areas for 1-P and 30 P bridges?

Thanks again,
Karla

Karla Barboza, MCIP, RPP, CAHP (she/her)

Team Lead, Heritage | Heritage Branch | Citizenship, Inclusion and Heritage Division
Ministry of Citizenship and Multiculturalism | Ontario Public Service
416-660-1027 | karla.barboza@ontario.ca

Ontario |

Taking pride in strengthening Ontario, its places and its people

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>

Sent: March 15, 2024 12:12 PM

To: Barboza, Karla (She/Her) (MCM) <Karla.Barboza@ontario.ca>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Cc: Smythe, Liam (He/Him) (MCM) <Liam.Smythe@ontario.ca>; EA Notices to WCRegion (MECP) <eanotification.wcregion@ontario.ca>; Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>; adickieson@centrewellington.ca; Tricia Radburn <Tricia.Radburn@rjburnside.com>

Subject: RE: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

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Karla,

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Would you like us to pass along the Stage 1 report once received (estimated to be received by late March), or will you just access it via the PIF?

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Barboza, Karla (She/Her) (MCM) <Karla.Barboza@ontario.ca>

Sent: Thursday, March 07, 2024 3:41 PM

To: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Cc: Smythe, Liam (He/Him) (MCM) <Liam.Smythe@ontario.ca>; EA Notices to WCRegion (MECP) <eanotification.wcregion@ontario.ca>; Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>; adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>

Subject: FW: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

Hi Crystal,

Thanks for sending the notice of completion for the above referenced project to the Ministry of Citizenship and Multiculturalism (MCM).

We understand that a Stage 1 archaeological assessment is underway but could you please inform the Project Information Form number of that assessment? This will assist us linking our files internally. We will provide comments on the Project File Report by April 6.

Looking forward to hearing from you.

Thanks in advance,
Karla

Karla Barboza, (She/Her) RPP, MCIP, CAHP

Team Lead, Heritage | Heritage Planning Unit | Ministry of Citizenship and Multiculturalism | 416-660-1027 | karla.barboza@ontario.ca

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Sent: March 7, 2024 9:52 AM

To: EA Notices to WCRegion (MECP) <eanotification.wcregion@ontario.ca>; MEA Notices to Director EAAB (MECP) <MEANOTICEEAAB@ontario.ca>; Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>; Verhaeghe, Tammy (She/Her) (MNRF) <Tammy.Verhaeghe@ontario.ca>; Marks, Jody (MNRF) <Jody.Marks@ontario.ca>; Minkin, Dan (MCM) <Dan.Minkin@ontario.ca>; Hill, Jessica (IAO) <Jessica.Hill2@ontario.ca>; info@dfo-mpo.gc.ca; mayor@centrewellington.ca; kokane@centrewellington.ca; dwilson@centrewellington.ca; kmartin@centrewellington.ca; jgaddy@centrewellington.ca; miglesias@centrewellington.ca; bsalmon@centrewellington.ca; amcnabb@centrewellington.ca; pnewson@centrewellington.ca; lisamacdonald@outlook.com; ward2@centrewellington.ca; ward3@centrewellington.ca; ward4@centrewellington.ca; ward5@centrewellington.ca; ward6@centrewellington.ca; donk@wellington.ca; joedk@wellington.ca; rbauman@woolwich.ca; JPuppe@woolwich.ca; rtucker@woolwich.ca; dschwartzentruber@woolwich.ca; tmulvey@centrewellington.ca; jkarn@centrewellington.ca; cpellizzari@centrewellington.ca; skoestner@centrewellington.ca; huraniam@wellington.ca; sherry.hoysa@guelph.ca; lwarner@grandriver.ca; theywood@grandriver.ca; dboyd@grandriver.ca; amy.villeneuve@ugdsb.on.ca; Michael Glazier

<Michael.glazier@wellingtoncdsb.ca>; mdavetiessen@gmail.com; ahmad.nouman@hydroone.com; neil.ackerman1@bell.ca

Cc: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23 <056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>

Subject: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

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Good Morning,

On behalf of the Township of Centre Wellington, please see attached the Notice of Completion for the Municipal Class Environmental Assessment for Bridges 1-P, 28-P, 30-P, 32-P, and 33-P. This notice signals the completion of the review of Bridges 1-P, 28-P, 30-P, 32-P, and 33-P. The Project File Report (PFR) is available for public review and comment for a period of 30 days starting March 7, 2024 and ending April 6, 2024 in accordance with the requirements of the MCEA process.

An electronic copy of the PFR is available for viewing on the Township of Centre Wellington website at <https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>.

To provide comments on the project or if you require alternative accommodations to view the PFR, please contact the Project Manager by 4:30 p.m. April 6, 2024.

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.
Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

On Behalf of the Study Team,

 **BURN**
Crystal Ferguson
Environmental Coordinator

R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: +1 800-265-9662 Direct: +1 705-797-4352
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Thank you.

Crystal Ferguson

From: Smythe, Liam (He/Him) (MCM) <Liam.Smythe@ontario.ca>
Sent: Thursday, March 28, 2024 2:48 PM
To: adickieson@centrewellington.ca
Cc: Andrew Dawson; Crystal Ferguson; Tricia Radburn; EA Notices to WCRegion (MECP); Barboza, Karla (She/Her) (MCM)
Subject: MCM Response - Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P [MCM File # 0021146]
Attachments: 2024-03-28_CtrWellingtonBridges_MCMComments.pdf

Good afternoon Adam,

Thank you for providing the Ministry of Citizenship and Multiculturalism with the Notice of Study Completion for the above-referenced project, and for making the Project File Report available for review and comment.

Please find MCM's comments on the Project File Report in the attached letter. Do not hesitate to contact us if you have any questions.

Best regards,

Liam Smythe

Heritage Planner | Citizenship, Inclusion and Heritage Division
Ministry of Citizenship and Multiculturalism | Ontario Public Service
416-301-4797 | Liam.Smythe@ontario.ca

Ontario |

Taking pride in strengthening Ontario, its places and its people

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: March 7, 2024 9:52 AM
To: EA Notices to WCRegion (MECP) <eanotification.wcregion@ontario.ca>; MEA Notices to Director EAAB (MECP) <MEANOTICESEAAB@ontario.ca>; Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>; Verhaeghe, Tammy (She/Her) (MNRF) <Tammy.Verhaeghe@ontario.ca>; Marks, Jody (MNRF) <Jody.Marks@ontario.ca>; Minkin, Dan (MCM) <Dan.Minkin@ontario.ca>; Hill, Jessica (IAO) <Jessica.Hill2@ontario.ca>; info@dfo-mpo.gc.ca; mayor@centrewellington.ca; kokane@centrewellington.ca; dwilson@centrewellington.ca; kmartin@centrewellington.ca; jgaddye@centrewellington.ca; miglesias@centrewellington.ca; bsalmon@centrewellington.ca; amcnabb@centrewellington.ca; pnewson@centrewellington.ca; lisamacdonald@outlook.com; ward2@centrewellington.ca; ward3@centrewellington.ca; ward4@centrewellington.ca; ward5@centrewellington.ca; ward6@centrewellington.ca; donk@wellington.ca; joedk@wellington.ca; rbauman@woolwich.ca; JPuppe@woolwich.ca; rtucker@woolwich.ca; dschwartzentruber@woolwich.ca; tmulvey@centrewellington.ca; jkarn@centrewellington.ca; cpellizzari@centrewellington.ca; skoestner@centrewellington.ca; huraniam@wellington.ca; sherry.hoysa@guelph.ca; lwerner@grandriver.ca; theywood@grandriver.ca; dboyd@grandriver.ca; amy.villeneuve@ugdsb.on.ca; Michael Glazier <Michael.glazier@wellingtoncdsb.ca>; mdavetiessen@gmail.com; ahmad.nouman@hydroone.com; neil.ackerman1@bell.ca
Cc: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>; Tricia Radburn

<Tricia.Radburn@rjburnside.com>; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

<056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>

Subject: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

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Good Morning,

On behalf of the Township of Centre Wellington, please see attached the Notice of Completion for the Municipal Class Environmental Assessment for Bridges 1-P, 28-P, 30-P, 32-P, and 33-P. This notice signals the completion of the review of Bridges 1-P, 28-P, 30-P, 32-P, and 33-P. The Project File Report (PFR) is available for public review and comment for a period of 30 days starting March 7, 2024 and ending April 6, 2024 in accordance with the requirements of the MCEA process.

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To provide comments on the project or if you require alternative accommodations to view the PFR, please contact the Project Manager by 4:30 p.m. April 6, 2024.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

On Behalf of the Study Team,



R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: +1 800-265-9662 Direct: +1 705-797-4352
www.rjburnside.com

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Thank you.

**Ministry of Citizenship
and Multiculturalism**

Heritage Planning Unit
Heritage Branch
Citizenship, Inclusion and
Heritage Division
5th Flr, 400 University Ave
Tel.: 416-301-4797

**Ministère des Affaires civiques
et du Multiculturalisme**

Unité de la planification relative au
patrimoine
Direction du patrimoine
Division des affaires civiques, de
l'inclusion et du patrimoine
Tél.: 416-301-4797



March 28, 2024

EMAIL ONLY

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora, ON N0B 1S0
adickieson@centrewellington.ca

MCM File : 0021146
Proponent : Township of Centre Wellington
Subject : Municipal Class Environmental Assessment – Schedule B - Notice of Study Completion
Project : Centre Wellington Bridges 1-P, 28-P, 30-P, 32-P, and 33-P
Location : Township of Centre Wellington, Wellington County

Dear Adam Dickieson:

Thank you for providing the Ministry of Citizenship and Multiculturalism (MCM) with the Notice of Completion for the above-referenced project, and for making the final Project File Report (PFR) available for review.

MCM's interest in this Environmental Assessment (EA) project relates to its mandate of conserving Ontario's cultural heritage.

Project Summary

The Township of Centre Wellington conducted a review of five municipally owned bridges. These bridges are located within a 20km² area in the former Pilkington Township in the northwest quadrant of the current Township of Centre Wellington. All five bridges have been closed to vehicular traffic due to their severely deteriorated condition.

The five bridge sites are identified as:

- Bridge 1-P: Located on Sideroad 5 between 8th Line West and 3rd Line West
- Bridge 28-P: Located on Sideroad 11, between 8th Line West and 3rd Line West
- Bridge 30-P: Located on Sideroad 5 West between Wellington Road 7 and 1st Line
- Bridges 32-P and 33-P; Located on Noah Road, west of 8th Line West

The study was conducted in accordance with Schedule 'B' of the Municipal Class Environmental Assessment study process. The Township is conducting this EA Study to evaluate the role of these structures within the overall transportation network and determine the most suitable solution for their future.

Comments

We have reviewed the *Final Project File Report – Municipal Class Environmental Assessment of 5 Bridges in Former Pilkington Township* prepared by R.J. Burnside & Associates Limited, dated March 2024. MCM has the following comments and observations:

Archaeological Resources

A Stage 1 Archaeological Assessment (under Project Information Form (PIF) #P1056-0245-2024 has been initiated for bridge sites 28-P, 32-P, and 33-P. We strongly recommend that the licensed archaeologist submit the report to MCM for review as soon as possible.

Please note that archaeological concerns have not been fully addressed until reports have been entered into the Ontario Public Register of Archaeological Reports where those reports recommend that:

1. the archaeological assessment of the project area is complete and
2. all archaeological sites identified by the assessment are either of no further cultural heritage value or interest (as per Section 48(3) of the Ontario Heritage Act) or that mitigation of impacts has been accomplished through excavation or an avoidance and protection strategy.

Proponents should wait to receive the MCM's review letter indicating that the report(s) has been entered into the Register before issuing a decision or proceeding with any ground disturbing activities.

Proponents must follow the recommendations of the archaeological assessment report(s). MCM recommends that further stages of archaeological assessment (if recommended) be undertaken as early as possible during detailed design and prior to any ground disturbing activities.

Section 4.4 of the PFR notes that a Stage 1 AA has been initiated for the three bridge sites (as described above) but at the time of publication of the PFR, the results of the Stage 1 report have yet to be received. Once the Stage 1 report has been reviewed by MCM and the proponent has received MCM's review letter, this section of the PFR should be revised to describe the results of the Stage 1 report and the requirements for any future archaeological assessments. We note that Section 11.1 – *Detailed Design Considerations* also includes a commitment that the recommendations of the Stage 1 report, and any further archaeological assessments will be followed and undertaken as early as possible during detailed design.

Built Heritage Resources and Cultural Heritage Landscapes

A Cultural Heritage Assessment Report (CHAR) was completed for the five bridges as part of this project (prepared by Parslow Heritage Consultancy Inc., dated October 5, 2023). The CHAR was undertaken to evaluate the potential cultural heritage value of each bridge and provide mitigation recommendations as appropriate. The results of the CHAR are described in Section 4.2 of the PFR, and the full report is included as Appendix B. The CHAR determined that no further technical cultural heritage studies are recommended for any of the five bridges, however it suggested that any replacement structures be designed to reflect the designs of the existing bridges.

The CHAR also recommended that documentation of each structure be deposited in a local publicly accessible repository. The CHAR indicates that previous assessments have already been completed for each structure, and this information should be compiled into a single document. A Heritage Documentation Report (Photo Inventory) was previously completed for bridge 1-P in June of 2019 prior to the removal of its steel truss structure. Section 4.3 of the PFR indicates that this report fulfills the documentation requirements for this bridge as outlined in the CHAR. The full report is included in Appendix C of the PFR.

We have reviewed the above referenced CHAR and find that the report is overall consistent with the requirements, guidance and standards of the MCEA and with best practice guidance prepared by MCM.

To support due diligence documentation, we have provided some additional comments on the PFR in the attached table.

Thank you for the opportunity to review the PFR for this project. If you have any questions or require clarification, please do not hesitate to contact me.

Sincerely,

Liam Smythe
Heritage Planner
Liam.Smythe@Ontario.ca

Copied to: Crystal Ferguson, R.J. Burnside & Associates Ltd.
Andrew Dawson, R.J. Burnside & Associates Ltd.
Tricia Radburn, R.J. Burnside & Associates Ltd.
EA Notices to West Central Region, MECP
Karla Barboza, MCM

It is the sole responsibility of proponents to ensure that any information and documentation submitted as part of their EA report or file is accurate. The Ministry of Citizenship and Multiculturalism (MCM) makes no representation or warranty as to the completeness, accuracy or quality of the any checklists, reports or supporting documentation submitted as part of the EA process, and in no way shall MCM be liable for any harm, damages, costs, expenses, losses, claims or actions that may result if any checklists, reports or supporting documents are discovered to be inaccurate, incomplete, misleading or fraudulent.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with *Ontario Regulation 30/11* the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

| Comment # | Reference to ESR | Comment | Proposed Action/Solution |
|-----------|---|---|---|
| 1. | 4.3 – <i>Cultural Heritage</i> p. 14-15 | As built heritage resources, cultural heritage landscapes, and archaeological resources are all considered to be cultural heritage resources, we recommended revising the title of this section to 'Built Heritage Resources and Cultural Heritage Landscapes' to clarify, as archaeological resources are discussed in the section below. | Revise subheading to: 4.3 - <u>Built Heritage Resources and Cultural Heritage Landscapes</u> |
| 2. | 4.4 – <i>Archaeology</i> p. 15-16 | As noted in the cover letter, this section should be updated once the results of the Stage 1 report have been made available. The section should summarize the results of the Stage 1 report, and recommendations for future archaeological assessment (as appropriate). This section could also be revised to specifically identify the two bridge locations (1-P and 30-P) where archaeological assessment was not recommended due to demolition work remaining within the footprint of the original bridge. | Include template language |
| 3. | 11.1 – <i>Detailed Design Commitments</i> p. 74-76 | We recommend that this section be updated to align with current legislation regarding undocumented archaeological resources. The commitment to compile existing documentation of each bridge and deposit it in a publicly accessible repository (as stipulated in the CHAR) should be noted in this section as well. | Include a bullet with a recommendation to compile existing documentation of each bridge and deposit it in a publicly accessible repository. Following the bullet describing the recommendations of the Stage 1 report, please include the following paragraphs: Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and |

| Comment # | Reference to ESR | Comment | Proposed Action/Solution |
|-----------|------------------|---------|--|
| | | | <p>engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the Ontario Heritage Act.</p> <p>The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with Ontario Regulation 30/11 the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the Ontario Heritage Act.</p> |

Crystal Ferguson

From: Smythe, Liam (He/Him) (MCM) <Liam.Smythe@ontario.ca>
Sent: Thursday, March 28, 2024 2:48 PM
To: adickieson@centrewellington.ca
Cc: Andrew Dawson; Crystal Ferguson; Tricia Radburn; EA Notices to WCRegion (MECP); Barboza, Karla (She/Her) (MCM)
Subject: MCM Response - Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P [MCM File # 0021146]
Attachments: 2024-03-28_CtrWellingtonBridges_MCMComments.pdf

Good afternoon Adam,

Thank you for providing the Ministry of Citizenship and Multiculturalism with the Notice of Study Completion for the above-referenced project, and for making the Project File Report available for review and comment.

Please find MCM's comments on the Project File Report in the attached letter. Do not hesitate to contact us if you have any questions.

Best regards,

Liam Smythe

Heritage Planner | Citizenship, Inclusion and Heritage Division
Ministry of Citizenship and Multiculturalism | Ontario Public Service
416-301-4797 | Liam.Smythe@ontario.ca

Ontario |

Taking pride in strengthening Ontario, its places and its people

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: March 7, 2024 9:52 AM
To: EA Notices to WCRegion (MECP) <eanotification.wcregion@ontario.ca>; MEA Notices to Director EAAB (MECP) <MEANOTICESEAAB@ontario.ca>; Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>; Verhaeghe, Tammy (She/Her) (MNRF) <Tammy.Verhaeghe@ontario.ca>; Marks, Jody (MNRF) <Jody.Marks@ontario.ca>; Minkin, Dan (MCM) <Dan.Minkin@ontario.ca>; Hill, Jessica (IAO) <Jessica.Hill2@ontario.ca>; info@dfo-mpo.gc.ca; mayor@centrewellington.ca; kokane@centrewellington.ca; dwilson@centrewellington.ca; kmartin@centrewellington.ca; jgaddye@centrewellington.ca; miglesias@centrewellington.ca; bsalmon@centrewellington.ca; amcnabb@centrewellington.ca; pnewson@centrewellington.ca; lisamacdonald@outlook.com; ward2@centrewellington.ca; ward3@centrewellington.ca; ward4@centrewellington.ca; ward5@centrewellington.ca; ward6@centrewellington.ca; donk@wellington.ca; joedk@wellington.ca; rbauman@woolwich.ca; JPuppe@woolwich.ca; rtucker@woolwich.ca; dschwartzentruuber@woolwich.ca; tmulvey@centrewellington.ca; jkarn@centrewellington.ca; cpellizzari@centrewellington.ca; skoestner@centrewellington.ca; huraniam@wellington.ca; sherry.hoysa@guelph.ca; lwerner@grandriver.ca; theywood@grandriver.ca; dboyd@grandriver.ca; amy.villeneuve@ugdsb.on.ca; Michael Glazier <Michael.glazier@wellingtoncdsb.ca>; mdavetiessen@gmail.com; ahmad.nouman@hydroone.com; neil.ackerman1@bell.ca
Cc: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>; Tricia Radburn

<Tricia.Radburn@rjburnside.com>; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

<056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>

Subject: Notice of Study Completion - Centre Wellington MCEA Bridges 1-P, 28-P, 30-P, 32-P, and 33-P

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good Morning,

On behalf of the Township of Centre Wellington, please see attached the Notice of Completion for the Municipal Class Environmental Assessment for Bridges 1-P, 28-P, 30-P, 32-P, and 33-P. This notice signals the completion of the review of Bridges 1-P, 28-P, 30-P, 32-P, and 33-P. The Project File Report (PFR) is available for public review and comment for a period of 30 days starting March 7, 2024 and ending April 6, 2024 in accordance with the requirements of the MCEA process.

An electronic copy of the PFR is available for viewing on the Township of Centre Wellington website at <https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>.

To provide comments on the project or if you require alternative accommodations to view the PFR, please contact the Project Manager by 4:30 p.m. April 6, 2024.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

On Behalf of the Study Team,



R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: +1 800-265-9662 Direct: +1 705-797-4352
www.rjburnside.com

**** CONFIDENTIALITY NOTICE ****

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Thank you.

**Ministry of Citizenship
and Multiculturalism**

Heritage Planning Unit
Heritage Branch
Citizenship, Inclusion and
Heritage Division
5th Flr, 400 University Ave
Tel.: 416-301-4797

**Ministère des Affaires civiques
et du Multiculturalisme**

Unité de la planification relative au
patrimoine
Direction du patrimoine
Division des affaires civiques, de
l'inclusion et du patrimoine
Tél.: 416-301-4797



March 28, 2024

EMAIL ONLY

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora, ON N0B 1S0
adickieson@centrewellington.ca

MCM File : 0021146
Proponent : Township of Centre Wellington
Subject : Municipal Class Environmental Assessment – Schedule B - Notice of Study Completion
Project : Centre Wellington Bridges 1-P, 28-P, 30-P, 32-P, and 33-P
Location : Township of Centre Wellington, Wellington County

Dear Adam Dickieson:

Thank you for providing the Ministry of Citizenship and Multiculturalism (MCM) with the Notice of Completion for the above-referenced project, and for making the final Project File Report (PFR) available for review.

MCM's interest in this Environmental Assessment (EA) project relates to its mandate of conserving Ontario's cultural heritage.

Project Summary

The Township of Centre Wellington conducted a review of five municipally owned bridges. These bridges are located within a 20km² area in the former Pilkington Township in the northwest quadrant of the current Township of Centre Wellington. All five bridges have been closed to vehicular traffic due to their severely deteriorated condition.

The five bridge sites are identified as:

- Bridge 1-P: Located on Sideroad 5 between 8th Line West and 3rd Line West
- Bridge 28-P: Located on Sideroad 11, between 8th Line West and 3rd Line West
- Bridge 30-P: Located on Sideroad 5 West between Wellington Road 7 and 1st Line
- Bridges 32-P and 33-P; Located on Noah Road, west of 8th Line West

The study was conducted in accordance with Schedule 'B' of the Municipal Class Environmental Assessment study process. The Township is conducting this EA Study to evaluate the role of these structures within the overall transportation network and determine the most suitable solution for their future.

Comments

We have reviewed the *Final Project File Report – Municipal Class Environmental Assessment of 5 Bridges in Former Pilkington Township* prepared by R.J. Burnside & Associates Limited, dated March 2024. MCM has the following comments and observations:

Archaeological Resources

A Stage 1 Archaeological Assessment (under Project Information Form (PIF) #P1056-0245-2024 has been initiated for bridge sites 28-P, 32-P, and 33-P. We strongly recommend that the licensed archaeologist submit the report to MCM for review as soon as possible.

Please note that archaeological concerns have not been fully addressed until reports have been entered into the Ontario Public Register of Archaeological Reports where those reports recommend that:

1. the archaeological assessment of the project area is complete and
2. all archaeological sites identified by the assessment are either of no further cultural heritage value or interest (as per Section 48(3) of the Ontario Heritage Act) or that mitigation of impacts has been accomplished through excavation or an avoidance and protection strategy.

Proponents should wait to receive the MCM's review letter indicating that the report(s) has been entered into the Register before issuing a decision or proceeding with any ground disturbing activities.

Proponents must follow the recommendations of the archaeological assessment report(s). MCM recommends that further stages of archaeological assessment (if recommended) be undertaken as early as possible during detailed design and prior to any ground disturbing activities.

Section 4.4 of the PFR notes that a Stage 1 AA has been initiated for the three bridge sites (as described above) but at the time of publication of the PFR, the results of the Stage 1 report have yet to be received. Once the Stage 1 report has been reviewed by MCM and the proponent has received MCM's review letter, this section of the PFR should be revised to describe the results of the Stage 1 report and the requirements for any future archaeological assessments. We note that Section 11.1 – *Detailed Design Considerations* also includes a commitment that the recommendations of the Stage 1 report, and any further archaeological assessments will be followed and undertaken as early as possible during detailed design.

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The CHAR also recommended that documentation of each structure be deposited in a local publicly accessible repository. The CHAR indicates that previous assessments have already been completed for each structure, and this information should be compiled into a single document. A Heritage Documentation Report (Photo Inventory) was previously completed for bridge 1-P in June of 2019 prior to the removal of its steel truss structure. Section 4.3 of the PFR indicates that this report fulfills the documentation requirements for this bridge as outlined in the CHAR. The full report is included in Appendix C of the PFR.

We have reviewed the above referenced CHAR and find that the report is overall consistent with the requirements, guidance and standards of the MCEA and with best practice guidance prepared by MCM.

To support due diligence documentation, we have provided some additional comments on the PFR in the attached table.

Thank you for the opportunity to review the PFR for this project. If you have any questions or require clarification, please do not hesitate to contact me.

Sincerely,

Liam Smythe
Heritage Planner
Liam.Smythe@Ontario.ca

Copied to: Crystal Ferguson, R.J. Burnside & Associates Ltd.
Andrew Dawson, R.J. Burnside & Associates Ltd.
Tricia Radburn, R.J. Burnside & Associates Ltd.
EA Notices to West Central Region, MECP
Karla Barboza, MCM

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| | | | <p>engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the Ontario Heritage Act.</p> <p>The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with Ontario Regulation 30/11 the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the Ontario Heritage Act.</p> |

Crystal Ferguson

From: Colella, Nick (MECP) <Nick.Colella@ontario.ca>
Sent: Friday, June 14, 2024 10:52 AM
To: LRCS@sixnations.ca
Cc: O'Neill, Kathleen (MECP); Mazzuca, Marco (MECP); Zhao, Simon (MECP); Mazzaferro, Alys (MECP); adickieson@centrewellington.ca; Andrew Dawson
Subject: MECP Letter to SNGR - s16 order request - Centre Wellington MCEA Bridges
Attachments: MECP Letter to SNGR - s16 order request - Centre Wellington MCEA Bridges.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Peter Graham,

Please see the attached letter from the Ministry of the Environment, Conservation and Parks.

Thank you,
Nick

Nick Colella (he/him)
A/Manager, Environmental Assessment Services
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks

From: Zhao, Simon (MECP) <Simon.Zhao@ontario.ca>
Sent: Wednesday, September 11, 2024 2:57 PM
To: Adam Dickieson <ADickieson@centrewellington.ca>
Cc: Mazzuca, Marco (MECP) <Marco.Mazzuca@ontario.ca>
Subject: FW: MECP Letter to Township of Centre Wellington - s16 order request - Centre Wellington MCEA Bridges

You don't often get email from simon.zhao@ontario.ca. [Learn why this is important](#)

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

Hi Adam,

I'm following up on our call yesterday on the Township of Centre Wellington section 16 order request from Six Nations of the Grand River (SNGR). As we discussed, I would appreciate an update on the

consultations with SNGR since the completion of Table A/B in June 2024. Specifically, could you provide the following details:

- **Meeting Schedule with SNGR:** Dates and times of any meetings held.
- **Discussion Points:** Key topics covered during these meetings. Were any commitments made by the Township, or have any of the concerns raised in their request been addressed?
- **Additional Updates:** Any new developments or additions since the submission of Table A/B.

Additionally, could you confirm the following:

- **Records of Notice of Completion:** Verification that notices were sent to Indigenous communities.
- **Receipts for Public Information Centre 2:** Confirmation of receipt by Indigenous communities.

Let me know if you have any questions.

Thanks,

Simon Zhao | Project Officer

Project Coordination Team 2 | Environmental Assessment Branch | Ministry of the Environment, Conservation and Parks

135 St. Clair Avenue West | Toronto ON M4V 1P5 | 437-225-5790

Simon.zhao@ontario.ca

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>

Sent: Friday, June 28, 2024 12:42 PM

To: Colella, Nick (MECP) <Nick.Colella@ontario.ca>

Cc: Mazzuca, Marco (MECP) <Marco.Mazzuca@ontario.ca>; Zhao, Simon (MECP) <Simon.Zhao@ontario.ca>;

Mazzaferro, Alysa (MECP) <Alysa.Mazzaferro@ontario.ca>; O'Neill, Kathleen (MECP) <Kathleen.Oneill@ontario.ca>;

Tricia Radburn <Tricia.Radburn@rjburnside.com>; Mishaal Rizwan <Mishaal.Rizwan@rjburnside.com>; Matt Brooks

<Matt.Brooks@rjburnside.com>; adickieson@centrewellington.ca

Subject: RE: MECP Letter to Township of Centre Wellington - s16 order request - Centre Wellington MCEA Bridges

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Nick et al,

On behalf of Adam Dickieson, Township of Centre Wellington and R.J. Burnside & Associates Ltd., please see the proponent's response to your previous letter received on June 14, 2024 requesting project documents and Table A and B in response to the Six Nations of the Grand River's request for Section 16 Order.

Table A and B have been attached to this email directly; however, due to the size of the Project File Report and the correspondence files, the rest of the package is shared via the OneDrive file-share link below:

[Centre Wellington 5 Bridges Project Documents and Correspondance References](#)

Note: The above link will be available for you to download files until August 28, 2024. Please ensure that you download these files prior to the noted expiration.

In the linked correspondence files, we have tried to group files in folder structures to help you navigate the correspondence more easily. We have also placed any comments received after the Notice of Completion into

separate subfolders (“NOCP Comments....”) within each stakeholder folder so you can better delineate which correspondence has occurred since the notice of completion.

We hope that everything you need to further review the request is included; however, if you do need any additional information, please do not hesitate to contact the Adam Dickieson or myself.

We will continue our further consultations with the SNGR as your review process progresses. We hope that we can ensure all parties are satisfied with the level of consultation conducted with this project by doing so.

Regards,
Andrew Dawson

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Colella, Nick (MECP) <Nick.Colella@ontario.ca>

Sent: Friday, June 14, 2024 10:49 AM

To: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>

Cc: Mazzuca, Marco (MECP) <Marco.Mazzuca@ontario.ca>; Zhao, Simon (MECP) <Simon.Zhao@ontario.ca>;

Mazzaferro, Alysa (MECP) <Alysa.Mazzaferro@ontario.ca>; O'Neill, Kathleen (MECP) <Kathleen.Oneill@ontario.ca>

Subject: MECP Letter to Township of Centre Wellington - s16 order request - Centre Wellington MCEA Bridges

Dear Andrew Dawson and Adam Dickieson,

Please see the attached letter from the Ministry of the Environment, Conservation and Parks.

Thanks,
Nick

Nick Colella (he/him)
A/Manager, Environmental Assessment Services
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks

Crystal Ferguson

From: Andrew Dawson
Sent: Tuesday, September 24, 2024 10:55 AM
To: Zhao, Simon (MECP)
Cc: Mazzuca, Marco (MECP); Tricia Radburn; Crystal Ferguson; Mishaal Rizwan; Matt Brooks; Adam Dickieson (Centre Wellington)
Subject: RE: MECP Letter to Township of Centre Wellington - s16 order request - Centre Wellington MCEA Bridges

Hello Simon,


My name is Andrew Dawson, I work for R.J. Burnside & Associates Ltd., who are the consulting engineers working with the Township of Centre Wellington on this file. I have prepared the following response to your September 11th email, on behalf of the Township:

As an update to the current status of the Township's consultations with Six Nations of the Grand River Elected Council (SNGREC), please see below:

- June 13, 2024 Meeting
 - Township and R.J. Burnside met with Peter Graham (Consultation Supervisor) and Lauren Jones (Wildlife and Stewardship Manager)
 - Presentation provided outlining the EA and preferred solutions
 - SNGREC had not reviewed the EA document at the time, so discussions had were general regarding what the SNGREC generally are looking for through their consultations.
 - Request was made that SNGREC review the EA documents and provide comments
 - Minutes of meeting are included in the link below.
- Stage 2 Archaeological Assessment
 - Township entered into an agreement with SNGREC to have their representative present for the field work for the Stage 2 Archaeological work.
 - The agreement is attached in the file share link below.
 - Stage 2 AA work was completed on July 24, 2024 with SNGREC field representation on site. No archaeological materials were discovered and no further studies were recommended.
- Email Correspondence (July – September)
 - July 4th – Peter Graham indicated he was not expecting timely response for comments on the Project File Report. Noted he did not have a high level of concern on the project and recommended the next steps were to see what enhancements Centre Wellington was willing to implement.
 - August 15th – R.J. Burnside followed up regarding SNGREC's timelines for review of the documents, indicating the preference would be to receive formal comments.
 - August 16th – SNGREC responded that their capacity is limited to complete a review and it would take until December to receive formal comments.
 - September 5th – Township requested meeting to further consult with SNGREC on the projects. A meeting was scheduled for September 16th following exchange of availability.
- September 16th, 2024 Meeting
 - An additional meeting was held with the Township, R.J. Burnside and Peter Graham (Consultation Supervisor) and Lauren Jones (Wildlife and Stewardship Manager) of SNGREC
 - A presentation outlining the commitments on the proposed works that are to be incorporated into detailed design was provided to SNGREC staff.
 - Further consultation regarding the SNGREC requests were made. The Township committed to addressing specifics within the detailed design stage of the project. SNGREC requested these commitments be documented in the Project File Report.
 - Meeting minutes are attached in the link below.

- Detailed Design Commitments for the Project File Report
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 - The revised Project File Report will be circulated to SNGREC, MCM and MECP and the report on file at the Township and available to the public will be updated accordingly.

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 [056693 - Additional SNGREC Consultation](#)

Note: This link will expire on November 22, 2024. Please save copies of this file prior to the expiration date, as they will become unavailable following expiration.

Now that the Section 16 Order request has been revoked, can the MECP please confirm the procedures that would be required to close-out this EA? Given that the 30-day comment period has been elapsed and the order request has now been revoked, can the proponent proceed to implement the project based on the preferred alternative? Will we be receiving a letter or anything from the MECP to confirm that the order request has been withdrawn and that that the proponent can proceed with implementation?

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: Adam Dickieson <ADickieson@centrewellington.ca>

Sent: Wednesday, September 11, 2024 3:36 PM

To: Andrew Dawson <Andrew.Dawson@rjburnside.com>

Cc: Tricia Radburn <Tricia.Radburn@rjburnside.com>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Subject: FW: MECP Letter to Township of Centre Wellington - s16 order request - Centre Wellington MCEA Bridges

Andrew,

Please note that Simon from the MECP phoned me yesterday and sent the follow-up email (below) today regarding the Section 16 Order. I suggest that we complete a response to this email after our Sept. 16 meeting with SNGR.

Regards,
Adam.



Adam Dickieson | Engineering Services Coordinator

Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

From: Zhao, Simon (MECP) <Simon.Zhao@ontario.ca>

Sent: Wednesday, September 11, 2024 2:57 PM

To: Adam Dickieson <ADickieson@centrewellington.ca>

Cc: Mazzuca, Marco (MECP) <Marco.Mazzuca@ontario.ca>

Subject: FW: MECP Letter to Township of Centre Wellington - s16 order request - Centre Wellington MCEA Bridges

You don't often get email from simon.zhao@ontario.ca. [Learn why this is important](#)

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

Hi Adam,

I'm following up on our call yesterday on the Township of Centre Wellington section 16 order request from Six Nations of the Grand River (SNGR). As we discussed, I would appreciate an update on the consultations with SNGR since the completion of Table A/B in June 2024. Specifically, could you provide the following details:

- **Meeting Schedule with SNGR:** Dates and times of any meetings held.
- **Discussion Points:** Key topics covered during these meetings. Were any commitments made by the Township, or have any of the concerns raised in their request been addressed?
- **Additional Updates:** Any new developments or additions since the submission of Table A/B.

Additionally, could you confirm the following:

- **Records of Notice of Completion:** Verification that notices were sent to Indigenous communities.
- **Receipts for Public Information Centre 2:** Confirmation of receipt by Indigenous communities.

Let me know if you have any questions.

Thanks,

Simon Zhao | Project Officer

Project Coordination Team 2 | Environmental Assessment Branch | Ministry of the Environment, Conservation and Parks

135 St. Clair Avenue West | Toronto ON M4V 1P5 | 437-225-5790

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Sent: Friday, June 28, 2024 12:42 PM
To: Colella, Nick (MECP) <Nick.Colella@ontario.ca>
Cc: Mazzuca, Marco (MECP) <Marco.Mazzuca@ontario.ca>; Zhao, Simon (MECP) <Simon.Zhao@ontario.ca>; Mazzaferro, Alysa (MECP) <Alysa.Mazzaferro@ontario.ca>; O'Neill, Kathleen (MECP) <Kathleen.Oneill@ontario.ca>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; Mishaal Rizwan <Mishaal.Rizwan@rjburnside.com>; Matt Brooks <Matt.Brooks@rjburnside.com>; adickieson@centrewellington.ca
Subject: RE: MECP Letter to Township of Centre Wellington - s16 order request - Centre Wellington MCEA Bridges

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Nick et all,

On behalf of Adam Dickieson, Township of Centre Wellington and R.J. Burnside & Associates Ltd., please see the proponent's response to your previous letter received on June 14, 2024 requesting project documents and Table A and B in response to the Six Nations of the Grand River's request for Section 16 Order.

Table A and B have been attached to this email directly; however, due to the size of the Project File Report and the correspondence files, the rest of the package is shared via the OneDrive file-share link below:

[Centre Wellington 5 Bridges Project Documents and Correspondance References](#)

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We hope that everything you need to further review the request is included; however, if you do need any additional information, please do not hesitate to contact the Adam Dickieson or myself.

We will continue our further consultations with the SNGR as your review process progresses. We hope that we can ensure all parties are satisfied with the level of consultation conducted with this project by doing so.

Regards,
Andrew Dawson

Andrew Dawson
Project Engineer

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From: Colella, Nick (MECP) <Nick.Colella@ontario.ca>
Sent: Friday, June 14, 2024 10:49 AM
To: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>
Cc: Mazzuca, Marco (MECP) <Marco.Mazzuca@ontario.ca>; Zhao, Simon (MECP) <Simon.Zhao@ontario.ca>; Mazzaferro, Alysa (MECP) <Alysa.Mazzaferro@ontario.ca>; O'Neill, Kathleen (MECP) <Kathleen.Oneill@ontario.ca>
Subject: MECP Letter to Township of Centre Wellington - s16 order request - Centre Wellington MCEA Bridges

Dear Andrew Dawson and Adam Dickieson,

Please see the attached letter from the Ministry of the Environment, Conservation and Parks.

Thanks,
Nick

Nick Colella (he/him)
A/Manager, Environmental Assessment Services
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks

Crystal Ferguson

From: Andrew Dawson
Sent: Wednesday, October 16, 2024 10:12 AM
To: Zhao, Simon (MECP)
Cc: Mazzuca, Marco (MECP); Tricia Radburn; Crystal Ferguson; Mishaal Rizwan; Matt Brooks; Adam Dickieson (Centre Wellington)
Subject: RE: MECP Letter to Township of Centre Wellington - s16 order request - Centre Wellington MCEA Bridges

Simon,

I am just following up on the email below to confirm the procedures that would be required to close-out this EA? Given that the 30-day comment period has been elapsed and the order request has now been revoked, can the proponent proceed to implement the project based on the preferred alternative? Will we be receiving a letter or anything from the MECP to confirm that the order request has been withdrawn and that that the proponent can proceed with implementation?

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: Andrew Dawson
Sent: Tuesday, September 24, 2024 10:55 AM
To: Zhao, Simon (MECP) <Simon.Zhao@ontario.ca>
Cc: Mazzuca, Marco (MECP) <Marco.Mazzuca@ontario.ca>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>; Mishaal Rizwan <Mishaal.Rizwan@rjburnside.com>; Matt Brooks <Matt.Brooks@rjburnside.com>; Adam Dickieson (Centre Wellington) <ADickieson@centrewellington.ca>
Subject: RE: MECP Letter to Township of Centre Wellington - s16 order request - Centre Wellington MCEA Bridges

Hello Simon,


My name is Andrew Dawson, I work for R.J. Burnside & Associates Ltd., who are the consulting engineers working with the Township of Centre Wellington on this file. I have prepared the following response to your September 11th email, on behalf of the Township:

As an update to the current status of the Township's consultations with Six Nations of the Grand River Elected Council (SNGREC), please see below:

- June 13, 2024 Meeting
 - Township and R.J. Burnside met with Peter Graham (Consultation Supervisor) and Lauren Jones (Wildlife and Stewardship Manager)
 - Presentation provided outlining the EA and preferred solutions
 - SNGREC had not reviewed the EA document at the time, so discussions had were general regarding what the SNGREC generally are looking for through their consultations.
 - Request was made that SNGREC review the EA documents and provide comments
 - Minutes of meeting are included in the link below.
- Stage 2 Archaeological Assessment
 - Township entered into an agreement with SNGREC to have their representative present for the field work for the Stage 2 Archaeological work.
 - The agreement is attached in the file share link below.

- Stage 2 AA work was completed on July 24, 2024 with SNGREC field representation on site. No archaeological materials were discovered and no further studies were recommended.
- Email Correspondence (July – September)
 - July 4th – Peter Graham indicated he was not expecting timely response for comments on the Project File Report. Noted he did not have a high level of concern on the project and recommended the next steps were to see what enhancements Centre Wellington was willing to implement.
 - August 15th – R.J. Burnside followed up regarding SNGREC’s timelines for review of the documents, indicating the preference would be to receive formal comments.
 - August 16th – SNGREC responded that their capacity is limited to complete a review and it would take until December to receive formal comments.
 - September 5th – Township requested meeting to further consult with SNGREC on the projects. A meeting was scheduled for September 16th following exchange of availability.
- September 16th, 2024 Meeting
 - An additional meeting was held with the Township, R.J. Burnside and Peter Graham (Consultation Supervisor) and Lauren Jones (Wildlife and Stewardship Manager) of SNGREC
 - A presentation outlining the commitments on the proposed works that are to be incorporated into detailed design was provided to SNGREC staff.
 - Further consultation regarding the SNGREC requests were made. The Township committed to addressing specifics within the detailed design stage of the project. SNGREC requested these commitments be documented in the Project File Report.
 - Meeting minutes are attached in the link below.
- Detailed Design Commitments for the Project File Report
 - On September 17th, R.J. Burnside present draft verbiage to the SNGREC outlining commitments that were within the previous Project File Report, along with additional commitments to be made as part of the consultations with the SNGREC. Burnside noted that if the SNGREC was in acceptance, they will revise the Project File Report accordingly.
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Subject: FW: MECP Letter to Township of Centre Wellington - s16 order request - Centre Wellington MCEA Bridges

Andrew,

Please note that Simon from the MECP phoned me yesterday and sent the follow-up email (below) today regarding the Section 16 Order. I suggest that we complete a response to this email after our Sept. 16 meeting with SNGR.

Regards,
Adam.



Adam Dickieson | Engineering Services Coordinator

Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

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- **Receipts for Public Information Centre 2:** Confirmation of receipt by Indigenous communities.

Let me know if you have any questions.

Thanks,

Simon Zhao | Project Officer

Project Coordination Team 2 | Environmental Assessment Branch | Ministry of the Environment, Conservation and Parks

135 St. Clair Avenue West | Toronto ON M4V 1P5 | 437-225-5790

Simon.zhao@ontario.ca

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Subject: RE: MECP Letter to Township of Centre Wellington - s16 order request - Centre Wellington MCEA Bridges

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Nick et al,

On behalf of Adam Dickieson, Township of Centre Wellington and R.J. Burnside & Associates Ltd., please see the proponent's response to your previous letter received on June 14, 2024 requesting project documents and Table A and B in response to the Six Nations of the Grand River's request for Section 16 Order.

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Regards,
Andrew Dawson

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

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Sent: Friday, June 14, 2024 10:49 AM

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Subject: MECP Letter to Township of Centre Wellington - s16 order request - Centre Wellington MCEA Bridges

Dear Andrew Dawson and Adam Dickieson,

Please see the attached letter from the Ministry of the Environment, Conservation and Parks.

Thanks,
Nick

Nick Colella (he/him)
A/Manager, Environmental Assessment Services
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks

From: Mazzuca, Marco (MECP) <Marco.Mazzuca@ontario.ca>
Sent: Monday, October 21, 2024 4:04 PM
To: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>
Cc: Noordhof, Jake (MECP) <jake.noordhof@ontario.ca>; Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>
Subject: Acknowledgement of Section 16 Withdrawal - Centre Wellington

Dear Adam Dickieson and Andrew Dawson,

Please see the attached letter from the Ministry of the Environment, Conservation and Parks.

Thank you,

Marco

MARCO J. MAZZUCA

Supervisor, Project Review
Environmental Assessment Services
Environmental Assessment Branch
Environmental Assessment and Permissions Division
Ministry of the Environment, Conservation and Parks
T: 647.641.1743 | E: marco.mazzuca@ontario.ca

Our work hours differ. Please do not feel obliged to respond beyond yours.

**Ministry of the Environment,
Conservation and Parks**

**Ministère de l'Environnement, de la
Protection de la nature et des Parcs**



Environmental Assessment
Branch

Direction des évaluations
environnementales

7th Floor
135 St. Clair Avenue W
Toronto ON M4V 1P5
Tel.: 416 314-8001
Fax.: 416 314-8452

7ème étage
135, avenue St. Clair Ouest
Toronto ON M4V 1P5
Tél. : 416 314-8001
Téléc. : 416 314-8452

October 21, 2024

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1, MacDonald Square
Elora, ON N0B 1S0
Email: adickieson@centrewellington.ca

Andrew Dawson, P.Eng.
Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Avenue West
Guelph, ON N1H 1C4
Email: andrew.dawson@rjburnside.com

Dear Adam Dickieson and Andrew Dawson:

On April 5, 2024, the Ministry of the Environment, Conservation and Parks (MECP) and the Director of the Environmental Assessment Branch received a Section 16 Order Request seeking that a comprehensive environmental assessment be undertaken regarding the proposed Bridges 1-P, 28-P, 30-P, 32-P and 33-P (the Project) to be carried out by the Township of Centre Wellington.

On September 19, 2024, the MECP received correspondence from the requester indicating that they wished to withdraw the Section 16 Order Request.

With no outstanding Section 16 Order Requests before the MECP, the Township of Centre Wellington can now proceed with the Project, subject to any additional permits or approvals that may be required. The Township of Centre Wellington must ensure the Project is implemented in the manner it was developed and designed, as set out in the Project documentation, and inclusive of all mitigating measures, environmental and other provisions therein.

Lastly, I would like to ensure that Township of Centre Wellington understands that failure to comply with the Environmental Assessment Act (the Act), the provisions of the Municipal Class Environmental Assessment (Class EA), and failure to implement the Project in the manner described in the planning documents, are contraventions of the Act and may result in prosecution under section 38 of the Act.

I am confident that Township of Centre Wellington recognizes the importance and value of the Act and will ensure that its requirements and those of Class EA are satisfied.

Sincerely,

A handwritten signature in cursive script that reads "Jake Noordhof".

Jake Noordhof
Manager

Environmental Assessment Section, Environmental Assessment Branch

- c: Marco Mazzuca, Supervisor, Ministry of the Environment, Conservation and Parks
Simon Zhao, Project Officer, Ministry of the Environment, Conservation and Parks
Sadhvika Chandrasekar, Project Evaluator, Ministry of the Environment, Conservation and Parks

TABLE A – PROPONENT RESPONSE TO SECTION 16 ORDER REQUEST

| | |
|--------------------------------|--|
| PROPONENT: | Township of Centre Wellington |
| PROJECT TITLE: | Municipal Class Environmental Assessment of 5 Bridges in Former Pilkington Township |
| PROJECT LOCATION: | Township of Centre Wellington: Bridge 1-P: Located on Sideroad 5, between 8th Line West and 3rd Line West Bridge 28-P: Located on Sideroad 11, between 8th Line West and 3rd Line West Bridge 30-P: Located on Sideroad 5 West, between Wellington Road 7 and 1st Line West Bridges 32-P and 33-P: Located on Noah Road, west of 8th Line West. |
| PREPARED BY: | Andrew Dawson (R.J. Burnside & Associates Ltd.) Adam Dickieson (Township of Centre Wellington) |
| DATE SUBMITTED TO MECP: | Friday, June 28, 2024 |
| PHONE # and E-MAIL: | Andrew Dawson (R.J. Burnside & Associates Ltd.): 705-797-4310 Andrew.dawson@rjburnside.com Adam Dickieson (Township of Centre Wellington): 519-846-9691 x355 adickieson@centrewellington.ca |

Abbreviations:

SNGR = Six Nations of the Grand River

Township = Township of Centre Wellington

Burnside = R.J. Burnside & Associates Ltd.

PFR = Project File Report

PIC = Public Information Centre

| Issues and Concerns | Proponent Response | Status |
|--|--|--|
| <p>SNGR submitted that “Consultation has not taken place, or at the very least, that consultation was inadequate”</p> | <p>The Township provided all required notices to SNGR, including the Notice of Commencement (July 20, 2023), Notice of PIC#1 (August 24, 2023), Notice of PIC#2 (November 23, 2023) and Notice of Completion (March 7, 2024). All notices were sent via Purolator and/or email. Records of their delivery are provided within Appendix H.3 of the Project File Report (Pages 529-629). Follow-up phone calls were made to ensure the SNGR had received the documents. Additional correspondence was also had with Mr. Peter Graham of SNGR and is documented in Appendix H.3 (Pages 624-627) of the PFR.</p> <p>It was the proponent’s understanding that all requested consultation with the SNGR was met after providing the Notice of PIC#2. On July 24, 2023, Peter Graham had sent an email which stated, “Please get in touch again when you have your alternatives”. Notice of PIC#2 included a link to access the project portal, which contained information on the preferred alternatives. A follow up phone call was made on February 2, 2024, at which time SNGR confirmed they had received the notice. No indication of further consultation requirements were identified during the follow-up phone call.</p> <p>Since the notice of completion was issued, the Township has since further engaged with the SNGR. An agreement regarding financial compensation was made with SNGR on April 26, 2024. On June 13, 2024, a meeting with the Township, Burnside and SNGR was held to allow the Township to provide an overview of the project and provided SNGR an opportunity for further consultation regarding any concerns or mitigation recommendations. At the time of the meeting, the SNGR representatives (Peter Graham and Lauren Jones) had not completed a review of the project documents and therefore their comments and mitigation recommendations were general in nature and did not include specific concerns related to the project. At present, SNGR has been given time to review the PFR and provide formal comments. Following SNGR’s review and comments, all parties will further consult to address and respond to any SNGR comments as needed.</p> | <p>Ongoing consultations and meetings with SNGR have occurred since the Section 16 Order Request. Proponent entered into agreement for financial compensation to SNGR on April 26, 2024 and a meeting was held on June 13, 2024. Additional meetings will be held on an as-needed basis following SNGR’s review and comment of the PFR.</p> |

SNGR noted that they were unable to quantify the impacts because of the “actions of the proponent” and that without fulsome knowledge of the impacts, SNGR are unable to provide proper mitigation measures to Centre Wellington.

The proponent is unclear which direct actions of theirs prevented the SNGR from quantifying the impacts of the works. At no time was any indication given to the SNGR that they were not allowed to assess the sites to quantify impacts.

Following receipt of the Notice of Commencement, On July 21, 2023, Peter Graham of the SNGR requested additional information on potential effects to the natural environment and if the bridges cover water courses. On July 21, 2023, Andrew Dawson of Burnside responded to Peter identifying the alternatives at each site, which included rehab (likely unfeasible), replacement or removal and abandonment. The email from Burnside confirmed the structures were watercourse crossings and also outlined the following potential impacts to the natural environment:

- Disturbance (excavation / re-grading) of the study area, including areas beyond previously disturbed limits of original construction
- In-water works, including temporary isolation of the structure and localized unwatering of the watercourse to allow works to be completed in the dry.
- Vegetation removals (if required) for widening of structure or roadway, regrading, construction access, etc.

Subsequently, the SNGR were provided notices which contained a link to the Township’s online project portal (<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>), where further detailed information of the project was available, including a virtual version of the Project Information Centre presentations. These presentations outlined information regarding the existing project sites, the findings of natural environment studies and the proposed mitigation strategies being recommended. Conceptual designs and drawings were also presented in the PIC #2 presentation which would have aided the SNGR in determining the level of impact associated with the proposed replacements.

With the above information provided to SNGR, we believe that they had the information required to at the very least conduct a general assessment of impacts and identify potential mitigation measures or communicate to the proponent their concerns related to impacts. Had the SNGR reviewed the information and provided concerns related to their ability to quantify impacts, the Township and Burnside had resources such as conceptual drawing files and field studies that could have been shared with the SNGR.

As stated previously, the proponent has since provided the SNGR the opportunity (including compensation) to complete a review of the documents to provide them an opportunity to quantify the impacts of the project and recommend mitigation measures. During the June 13, 2024 meeting with the Township, Burnside and SNGR, a description of the proposed alternatives was provided to help aid the SNGR identify the level of impacts anticipated with the projects. At the time of this meeting SNGR had not reviewed the PFR so was not able to provide project specific comments related to mitigation measures; however, general considerations for mitigation measures were discussed and the Township has requested that the SNGR provide formal comments regarding concerns related to impacts and proposed mitigation measures as part of their review of the PFR.

Ongoing. SNGR currently reviewing the PFR and is to provide comments on the documents, concerns related to quantifying impacts and recommend project specific mitigation measures.

| | | |
|--|---|---|
| <p>SNGR requests an opportunity to properly review and comment on project documents and engage in meaningful consultation with the proponent.</p> <p>SNGR noted that their wildlife unit requires at least two months lead time to schedule the review of the project.</p> | <p>See above response. SNGR was provided with all notices, which contained links to access information throughout the study. The SNGR did not communicate concerns related to timelines for commenting until after the Notice of Completion was issued. Following the Notice of Completion, Peter Graham sent email correspondence on March 11, 2024 which indicated that SNGR had “a long work cue, and it is impossible to comment prior to the April 6th deadline”. A request was made from the SNGR to withdraw the notice of completion with the alternative that they would request a Section 16 order if not withdrawn. Given that the proponent had provided the SNGR with previous notices and was not notified earlier of any additional timeline requirements for document review, the Township desired to maintain the proposed comment period schedule by sticking to the required 30-day comment period, so as to not impact their overall project implementation timelines. As such, the Township and Burnside offered to provide support to the SNGR by arranging a meeting to review the project with the SNGR to aid with their review timelines. In response to the meeting request, SNGR indicated that they typically require two months lead time for review. This lead time was not identified in any previous correspondence. SNGR also requested that they be financially compensated for the meeting and document review. When the proponent did not agree to the financial compensation request, the SNGR requested via email on April 2, 2024 that the meeting be cancelled, and issued an order request to the MECP.</p> <p>Since the Section 16 Order request, the Township has reached an agreement with the SNGR and is providing SNGR the time and financial compensation to properly review and comment on the project documents and engage in meaningful consultation.</p> | <p>Ongoing. SNGR currently reviewing the PFR and is to provide comments on the documents. Further consultation with SNGR will occur as needed based on their comments.</p> |
| <p>SNGR noted that the proponent “refused to provide any capacity funding whatsoever [...] as directed by the MECP”.</p> | <p>Following the Township / Burnside’s request to host a meeting to aid with the SNGR’s concerns related to document review, the SNGR requested that a fixed fee per meeting and an hourly fee for document review be provided by the proponent. At the time, the Township was not in a position to provide financial compensation. The Township / Burnside met with the MECP (Joan Del Villar Cuicas and Gavin Battarino) on April 5th, 2024 to discuss the SNGR’s request for financial compensation and how financial compensation is addressed in the MCEA guidance document and other MECP consultation guidelines. It was the proponent’s understanding, following conversations with the MECP, that the support provided to the indigenous communities to aid them in their review is not required to be monetary support for document review and that the communities are expected to engage in consultation in good faith. It was also noted by the MECP staff during that meeting that a community should not strictly object to a meeting based on the lack of financial compensation. Following these discussions, the Township was prepared to offer the SNGR further non-financial support to engage in consultation by providing additional timing for review as well as meetings to provide a summary of project documents and findings. However, the SNGR issued their Section 16 order request to the MECP shortly thereafter the meeting between the proponent and the MECP concluded, prior to the proponent notifying the SNGR of the intent to extend timelines.</p> | <p>Resolved – the proponent has entered into an agreement with SNGR for financial compensation for the meeting and document review.</p> |

Table B – Proponent Information Requirements

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|--------------------------|--|
| PROPONENT: | Township of Centre Wellington |
| PROJECT TITLE: | Municipal Class Environmental Assessment of 5 Bridges in Former Pilkington Township |
| PROJECT LOCATION: | Township of Centre Wellington: Bridge 1-P: Located on Sideroad 5, between 8th Line West and 3rd Line West Bridge 28-P: Located on Sideroad 11, between 8th Line West and 3rd Line West Bridge 30-P: Located on Sideroad 5 West, between Wellington Road 7 and 1st Line West Bridges 32-P and 33-P: Located on Noah Road, west of 8th Line West. |

| Required Information | Response or Attachments |
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| <p><u>Consultation Record</u> Please provide a brief summary of each type of consultation (e.g. PIC, stakeholder meetings, and notices) and the date it occurred for the following groups.</p> <ul style="list-style-type: none">• Public;• Agency; and• Indigenous (Please indicate what communities were contacted and how you identified who to contact). <p>If provided in the EA documentation, summarize here and provide exact reference location in the EA documentation.</p> | <p>Summary of consultations are provided in Section 7.0 of the Project File Report (PFR). Consultation records are provided in Appendix H of the PFR.</p> <p>Indigenous Consultation Each Indigenous community was circulated on all EA Notices by email.</p> <ul style="list-style-type: none">• Notice of Study Commencement was sent to Indigenous communities by email and delivered by Purolator courier mail on July 21, 2023.• Notice of PIC1 was sent to Indigenous communities by email and delivered by Purolator courier mail August 24, 2023• Notice of PIC2 was sent to Indigenous communities by email and delivered by Purolator courier mail November 23, 2023.• Notice of Study Completion was sent to Indigenous communities March 7, 2024. <p>All Study Notices are provided in PFR Appendix H3.</p> <p>HDI</p> <ul style="list-style-type: none">• HDI responded to a follow up phone call regarding the Notice of Study Commencement requesting that their specific HDI Application for Consideration and Engagement for Development forms be filled out and mailed to HDI.• An HDI Application was completed and mailed to HDI on August 15, 2023 |

| Required Information | Response or Attachments |
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| | <p>MCFN</p> <ul style="list-style-type: none"> • M. LaForme of MCFN responded to the NOCm on July 21, 2023, requesting the PFR be shared once completed and to be notified in advance of archaeological studies/fieldwork <p>SNGR</p> <ul style="list-style-type: none"> • July 21, 2023 Six Nations of Grand River (SNGR) reached out to the study team to inquire about possible impacts to the environment. • July 21, 2023 the study team responded to SNGR with an overview of the project summarizing preliminary alternatives and potential environment impacts associated. • July 24, 2023 SNGR thanked the study team for background information and asked for alternatives to be provided once determined. • SNGR followed up requesting the alternatives on March 11, 2024 • The Study Team responded to SNGR on March 13, 2024 with a summary of the alternatives considered and a summary of the preferred alternative solution. • P. Graham of SNGR responded to the Study Team on March 14, 2024 noting they prefer EA's considering natural environment impacts to be reviewed by wildlife staff who require 2 months lead time and recommending the project be paused to provide review time and requesting funding for review and meetings. • The Study Team and SNGR attended a virtual meeting June 13, 2024 to discuss the project. A slideshow presentation with an overview of the project and preferred alternative was presented to SNGR. Areas of typical (not project specific) interest and potential mitigation measures were provided by the SNGR, as they had not reviewed the project specific information. A copy of the meeting minutes is provided. SNGR noted they would like the Township to demonstrate they are exceeding minimum requirements for the protection of the natural environment and wildlife. Following the meeting, the study team sent an email to SNGR to provide them with a link to the PFR for their formal review and comment and asked that SNGR contact the study team if they have interest in participating in the Stage 2 Archaeological Assessment, • SNGR thanked the study team on June 13, 2024 noting they have forwarded this email to their Archaeological Supervisor and noting they would like to know what environmental enhancements Centre |

| Required Information | Response or Attachments |
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| | <p>Wellington is willing to implement and provided examples such as addition of spawning areas and removal of invasive phragmites..</p> <ul style="list-style-type: none"> • SNGR's review of the PFR is currently on-going and further consultation will occur based on SNGR's comments <p><u>Public Consultation</u></p> <p>The following notices were issued to the public:</p> <ul style="list-style-type: none"> • Notice of Study Commencement was issued July 21, 2023. • Notice of PIC1 was issued August 24, 2023 • Notice of PIC2 was issued November 23, 2023. • Notice of Study Completion was issued March 7, 2024. • All study Notices are provided in PFR Appendix H. <p>Two PICs were held as follows:</p> <ul style="list-style-type: none"> • PIC #1 was held on September 6, 2023 from 6 - 8 pm. • PIC #2 was held December 6, 2023 from 6 - 8 pm. <p>Both PICs were held at Bethel Mennonite Church to be in close proximity to the bridges subject to the study. Materials from both PICs (display boards, presentation slides) were posted to the project webpage (https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township) the following day along with a comment sheet for additional comments. The webpage was updated with the notices.</p> <ul style="list-style-type: none"> • PIC#1 was attended by 39 residents; 20 sets of comments were received during and after the PIC. PIC #1 comment sheets are in Appendix H. • PIC#2 was attended by 31 residents; two sets of comments were received during the PIC. PIC #2 comment sheets are in Appendix H. |
| <p><u>Source Protection</u></p> <p>Information to support how proponent has considered source water protection including:</p> <ul style="list-style-type: none"> • Source Protection Area; • Potential drinking water threats, • If the project is located in an Intake Protection Zone (IPZs) or Well Head Protection Areas (WHPA); | <p>Source Water Protection Information Atlas indicates the Study Area is not located within a Wellhead Protection Area or a Highly Vulnerable Aquifer.</p> <ul style="list-style-type: none"> • GRCA responded on July 24, 2023 to the Notice of Study Commencement noting resource features and GRCA regulated area. GRCA also advised that bridges should adhere to GRCA policy 9.1.2, 8.1.15, 8.1.16, 8.2.21, 8.4.6, and 8.4.7. • GRCA responded on December 7, 2023 to the Notice of PIC#2 circulated to them on November 23, 2023 requesting slides |

| Required Information | Response or Attachments |
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| <ul style="list-style-type: none"> • Comment from the conservation authorities (Please attach a copy of these comments or provide the exact location reference within the EA documentation) and; • A brief summary of mitigation measures for salt, if applicable (e.g., road projects). | <ul style="list-style-type: none"> • The study team provided the slides on December 7, 2023 and GRCA provided comments on December 11, 2023. The study team responded January 27, 2024 acknowledging comments and noting they pertain to the detailed design and responses to these items can be carried forward as commitments/ GRCA confirmed this was acceptable on January 30, 2024. • GRCA emailed the Study Team March 20, 2024 in response to the Notice of Study Completion acknowledging the commitment hydrologic/hydraulic modelling and noting requirements for the work and requesting the GRCA be contacted as early as possible to prepare a Terms of Reference. GRCA acknowledged the commitment to preparation of an EIS and submission of a Terms of Reference and noted their requirements. GRCA acknowledged the commitment to mitigate erosion impacts and accommodate creek movements as well as consulting with GRCA during detailed design. Additionally, GRCA noted that decommissioning of Bridge 1-P and Bridge 30P will require a GRCA permit. |
| <p><u>Climate Change</u> Information summarizing how mitigation or resiliency measures for the effects of climate change (example: frequent or severe weather events (e.g., IDF curves), greenhouse gases (modeling for greenhouse gases), air quality components) on or from the Project was considered during the environmental assessment process (https://www.ontario.ca/page/considering-climate-change-environmental-assessment-process). If assessed in the EA documentation, summarize here and provide exact location reference in the EA documentation.</p> | <p>No new traffic is expected to be generated as a result of this project. However, patterns may change as a result of bridges being reopened. Some travel routes may be shortened and more straightforward, resulting in minor reductions in vehicular emissions. At a minimum, it is expected that there will be no net increase in greenhouse gas emissions.</p> <p>Existing vegetation will be retained to the extent possible. Removals will be kept to a minimum to limit direct effects to vegetation communities and vascular flora, as well as indirect effects (e.g., soil compaction and changes to topography and drainage). Disturbed areas will be re-stabilized, incorporating revegetation using non-invasive, preferably native plantings and / or seed mix appropriate to the site conditions and adjacent vegetation communities. Seed mixes will be used in conjunction with an appropriate non-invasive cover crop as appropriate.</p> <p>There is potential for the project to be affected by climate change. Climate change is usually associated with any significant change in long-term weather patterns. Changes in the composition of the atmosphere are</p> |

| Required Information | Response or Attachments |
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| | <p>resulting in processes that alter global temperature and precipitation, in turn affecting local weather patterns. These processes can ultimately lead to increased occurrence of extreme weather events such as floods, droughts, ice storms, and heat waves.</p> <p>Precipitation, whether it is rainfall, snowfall, or other forms of frozen / liquid water, is the key climate and weather-related variable of concern with respect to drainage and culvert design. As a result of climate change, storm events are predicted to become more intense, which can result in larger volumes of precipitation at one time. Other climate variables such as temperature are major inputs to evaporation and snowmelt processes. Increases in temperature are likely to impact precipitation and snowmelt runoff volumes discharged to watercourses.</p> <p>Precipitation, whether it is rainfall, snowfall, or other forms of frozen / liquid water, is the key climate and weather-related variable of concern in stormwater management (SWM). As a result of climate change, storm events are predicted to become more intense, which can result in larger volumes of precipitation at one time.</p> <p>During the detailed design, all bridge and hydraulic-related components of the project shall be designed with consideration for increased precipitation.</p> |
| <p><u>Species at Risk</u> Species in a project area subject to <i>Endangered Species Act</i>, O. Reg. 242/08 and any applicable permits required. Any proposed mitigation measures or compensation should be described along with consultation (if any) with the Ministry of the Environment, Conservation and Parks, Species at Risk Branch</p> <ul style="list-style-type: none"> Please provide all relevant correspondence between MECP (If this is found within the EA documentation please specify the reference location). | <p>No aquatic species at risk were identified in the reviewed background information as potentially inhabiting the watercourse in the area of the site.</p> <p>Surveys for Ecological Land Classification (ELC), botanical inventory, wetland staking, and aquatic assessment were undertaken in August 2023.</p> <p>Bridge 1-P</p> <p>The ELC indicated the presence of six distinct ecosite communities within 120 m of Bridge 1-P. All communities identified are considered to be</p> |

| Required Information | Response or Attachments |
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| | <p>relatively common in Ontario, although several of which are considered to be candidate Significant Wildlife Habitat for various species. Although they were not observed, potential Bank Swallow (Provincially Threatened) habitat was identified in the existing embankments at the historic structure. No other terrestrial species at risk that receive protections under the Provincial Endangered Species Act were identified in the reviewed background information as potentially inhabiting the lands in the area of Bridge 1-P.</p> <p>Bridge 28-P</p> <p>The ELC indicated the presence of six distinct ecosite communities within 120 m of 28-P, two of which are considered to be candidate Significant Wildlife Habitat for various species (Amphibian and Marsh Breeding Bird Habitat, Special Concern and Rare Wildlife Species). All communities identified are considered to be relatively common in Ontario.</p> <p>Eastern Meadowlark, a Provincially Threatened species was identified in the background review as potentially inhabiting the general vicinity of the site. However, it is not anticipated that the species will be impacted as there is no preferred habitat in the area of the 28-P bridge.</p> <p>Bridge 30-P</p> <p>The ELC indicated the presence of five distinct ecosite communities within 120 m of 30-P, two of which are considered to be candidate Significant Wildlife Habitat for various species (Bat Maternity Colony, Amphibian and Marsh Breeding Bird Habitat, Special Concern and Rare Wildlife Species). All communities identified are considered to be relatively common in Ontario.</p> <p>Bobolink (Provincially Threatened) and Red Headed Woodpecker (Provincially Endangered), were identified in background records as potentially inhabiting the general region of the site. However, no preferred habitats for the species were identified in the area of bridge 30-P, and as such, no impacts are anticipated to the species.</p> |

| Required Information | Response or Attachments |
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| | <p>Bridges 32-P and 33-P</p> <p>The ELC indicated the presence of eight distinct ecosite communities within 120 m of the site, four of which are considered to be candidate Significant Wildlife Habitat for various species (Amphibian and Marsh Breeding Bird Habitat, Special Concern and Rare Wildlife Species). All communities identified are considered to be relatively common in Ontario. Although Bobolink and Eastern Meadowlark were identified in the reviewed background information as potentially inhabiting the lands in the area of the site, no preferred habitat was identified in the immediate vicinity of the crossings and no impact is anticipated. It is likely that habitat for these species is located in the nearby agricultural fields.</p> <p>Mitigation:</p> <p>Mitigation will include avoidance of breeding bird timing window; generally, from April 1 to August 31 and the bat roosting timing window; generally, from April 1 to September 30. If clearing must occur within this window a qualified Ecologist / Avian Biologist will first search the affected area. Any active nests will be flagged and all clearing within the associated habitat will be avoided until the Ecologist / Avian Biologist confirms that the birds have fledged, and the nest is no longer active. If trees exhibit characteristics that could provide bat roosting, no clearing will be permitted without further review by MECP and / or a permit under the Endangered Species Act is obtained.</p> <p>If a nesting migratory bird (or SAR protected under ESA, 2007) is identified within or adjacent to the construction site, all activities will stop, and the Contractor shall discuss mitigation measures with the proponent.</p> <p>A Tree Inventory and Preservation Plan will be completed during detailed design. Tree removals will be minimized and compensation plantings will be undertaken prior to tree removals or at the earliest appropriate season after tree removals. Tree Protection Zones (TPZs) will be established during detailed design.</p> |

| Required Information | Response or Attachments |
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| | <p>Barriers will be installed around trees. No stockpiles, storage, or disturbance to grade will occur within the TPZ to minimize soil compaction and root damage. Where tree roots are encountered during construction, they should be cut cleanly and re-packed with soil as soon as possible.</p> <p>All work zones should be clearly marked on detailed design drawings and at the work site to indicate that no work should occur outside the work zone. Detailed grading, construction, dewatering, and erosion and sediment control plans will be submitted to the GRCA for review and comment at detailed design.</p> <p>Implementation of the erosion and sediment control (ESC) measures will conform to industry best management practices and recognized standard specifications such as Ontario Provincial Standards Specifications (OPSS). The ESC Plan will be prepared to the satisfaction of the GRCA. Sediment and erosion control measures will be implemented prior to construction and maintained during the construction phase in accordance with the erosion and sediment control plan developed during detailed design.</p> <p>Routine upkeep and maintenance of ESC features are to include regular monitoring for erosion and sedimentation impacts due to site grading during and after trail construction. If the sediment and erosion control measures are not functioning properly, no further work in the affected areas will occur until the sediment and / or erosion problem is addressed. All disturbed areas of the construction site will be stabilized and re-vegetated as soon as conditions allow. Sediment and erosion control measures will be left in place until all areas of the construction site have been stabilized, and will then be removed by the Contractor.</p> <p>Wet weather restrictions shall be applied during site preparation and excavation. Work will be avoided near watercourses during periods of excessive precipitation and / or excessive snow melt.</p> <p>The Contractor will be aware of spill prevention best practices and will have contingency plans in place should a spill occur.</p> <p>Silt fencing will be properly installed and maintained in accordance with an approved erosion and sediment control plan to keep wildlife out of work areas. If wildlife inadvertently moves into a construction area, the</p> |

| Required Information | Response or Attachments |
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| | <p>Environmental Inspector will move the species outside of the work area, if possible, using gloves and a bucket or plastic tub, as appropriate. If any species at risk are encountered that are not identified on relevant permits, all work will cease within the immediate work area and the MECP will be contacted.</p> <p>Please see Section 12.0 Environmental Impacts, Mitigation Measures, and Monitoring for more information.</p> <p>Relevant permits:</p> <ul style="list-style-type: none"> • A Permit to Take Water may be required should dewatering be necessary. Requirements for dewatering shall be determined during the detailed design phase of the Project. • The Township is required to comply with the Ontario Water Resources Act with respect to the quality of water discharging into natural receivers. The footprint of disturbed area shall be minimized as much as possible. For example, minimizing distribution of excavated soil to minimize sedimentation to storm sewers. • A permit approval shall be required from GRCA in accordance with O.Reg. 150/06 Regulation of Development, Interference with Wetlands and Alteration to Shorelines and Watercourses for construction works in GRCA regulated areas, including culvert extensions, drain relocations and watercourse modifications. • If portions of woodland providing habitat for species at risk bats are to be removed, an Information Gathering Form shall be submitted to MECP, in accordance with the Endangered Species Act. • A License to Collect Fish will be required for any fish relocations during construction. • Approval under the Fisheries Act from DFO will be required for any in-water works. |
| <p><u>Cumulative Effects</u> Information summarizing how the project considered cumulative effects. Description of how current and future</p> | <p>The study considered the current and future land use and transportation routes identified in the Township of Centre Wellington's Transportation</p> |

| Required Information | Response or Attachments |
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| <p>policy/planning/environmental assessment works in the area were considered by the proponent as part of the assessment of the proposed project. If assessed in the EA documentation, summarize here and provide exact location in the EA documentation.</p> | <p>Master Plan and Official Plan. Project future traffic volumes were also considered in the transportation assessment.</p> <p>During the Detailed Design, the project team will continue to investigate mitigation of impacts that are identified through on-going studies.</p> |
| <p><u>Archaeological Assessment</u> Archaeological Assessment work required to demonstrate no impacts on archaeological resources and/or cultural heritage resources, built heritage resources and other related issues that may be identified in the requests.</p> <ul style="list-style-type: none"> • Was the Ministry of Citizenship and Multiculturalism contacted? • Please provide any relevant correspondence. | <p>The removal of Bridges 1P and 30P were determined to not require Archaeological Assessment (AA) study through the screening checklist of “Part C – Screening for Archaeological Resources” of the MEA’s Municipal Bridges Criteria for Evaluating Potential for Cultural Heritage Resources. The removal of the structures will not result in activities of ground disturbance deeper than or outside of the previously disturbed areas.</p> <p>The remaining three sites (28P, 32P, 33P) required AA as bridge replacement was recommended and would result in ground disturbance beyond previously disturbed areas. At the time the PFR was filed, the Stage 1 AA had been initiated. Stage 1 AA has since been completed but remains in draft form, as it will be updated upon completion of the Stage 2 study in order to have all information compiled into one complete AA report. The Stage 1 AA identified areas of archaeological potential at Bridges 28P and 33P but not at 32P. Stage 2 AA’s will be proceeding for the two sites identified. Stage 2 Archaeological Assessment fieldwork will be proceeding. Six Nations of Grand River, Mississaugas of the Credit First Nation, and Haudenosaunee Development Institute will all be extended an opportunity to be engaged in the process. The finalized Stage 1-2 Archaeological Assessment will be filed with MCM upon completion. The PIF number associated with these studies is P1056-0245-2024.</p> <p>A Cultural Heritage assessment was completed at all sites by sub-consultant Parslow Heritage Consultancy Inc. (PHC). The Cultural Heritage Assessment Report (CHAR) is included as Appendix B of the PFR (Pages 158-279 of the PDF file of the PFR). A summary of the CHAR findings is provided in Section 4.3 of the PFR.</p> <p>MCM provided comments on the Project File Report on March 28, 2024 including some recommended language revisions. The applicable MCM File number is 0021146.</p> |

| Required Information | Response or Attachments |
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| <p><u>Class EA Process</u> Please provide the following information:</p> <ul style="list-style-type: none"> • Was the MECP regional EA coordinator contacted? • What points/stages during the Class EA process were they contacted (please provide dates)? • Please provide any correspondence or comments received. | <ul style="list-style-type: none"> • Notice of Study Commencement was issued to the West Central email and to the Regional Environmental Coordinator on July 20, 2023. • Regional Environmental Coordinator Joan Del Villar Cuicas responded to the Notice of Commencement on October 13, 2023 with the MECP Letter of Acknowledgement. • Notice of PIC1 was issued to the Regional Environmental Coordinator on August 24, 2023 • Notice of PIC2 was issued to the West Central email and to the Regional Environmental Coordinator on November 23, 2023. • Notice of Study Completion was issued to the West Central email and to the Regional Environmental Coordinator on March 7, 2024. |
| <p><u>Timing Considerations</u> Please provide the following information:</p> <ul style="list-style-type: none"> • The total cost of the proposed Project? • Budget allocation? • Construction timing widow? • Will construction be a phased approach? • When is construction anticipated to be completed? • External funding? Any deadlines that need to be met for this funding? | <p><u>Project Cost Estimates:</u> \$50,000 (Bridge Removal 1-P) \$2,250,000 (Bridge Replacement 28-P) \$70,000 (Bridge Removal 30-P) <u>\$3,400,000 (Bridge Replacements 32-P and 33-P)</u> Total \$5,770,000</p> <p><u>Budget Allocation:</u> \$5,770,000</p> <p><u>Construction Timing Windows (Phased construction):</u></p> <ul style="list-style-type: none"> • Bridge 32-P and 33-P: 2027 • Bridge 30-P = 2030 • Bridge 28-P = 2033 • Bridge 1-P = 2034 <p>Note construction timing is subject change based on funding limits and council budget approval.</p> <p><u>External Funding:</u> Ontario Community Infrastructure Funded (OCIF) with no deadlines.</p> |

**Ministry of the Environment,
Conservation and Parks**

**Ministère de l'Environnement, de la
Protection de la nature et des Parcs**



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357-2024-670

June 14, 2024

Peter Graham
Consultation Supervisor
Lands & Resources Department
Six Nations of the Grand River Elected Council
Email: LRCS@sixnations.ca

Dear Peter Graham:

Thank you for your April 5, 2024, letter to the Ministry of the Environment, Conservation and Parks (the ministry) requesting that the Minister issue a Section 16 Order imposing conditions on the Township of Centre Wellington's (Township) Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P, and 33-P (Project), and specifically, a condition requiring that consultation with Six Nations of the Grand River (SNGR) be completed to the satisfaction of all parties, or alternatively, to the satisfaction of the Crown.

The ministry understands that since submission of your Section 16 Order request, SNGR has been participating in discussions with the Township regarding the Project and the concerns raised in your April 5th letter. We encourage such discussions to continue and look forward to any updates you may have in respect of them. The ministry will be requesting a response from the Township with respect to the concerns raised in your letter and subsequent discussions.

The Minister will decide whether to order a comprehensive EA or impose conditions. You will be notified in writing of the Minister's decision once made. In the interim, if your concerns regarding the Project are resolved through your discussions with the Township, we would ask that you notify the ministry and withdraw your request.

If you have any questions about the ministry's review of your request, please contact Simon Zhao, Project Officer, directly at Simon.zhao@ontario.ca. Thank you again for writing.

Sincerely,

Nick Colella

Nick Colella
A/Manager, Environmental Assessment Services
Environmental Assessment Branch

c: Adam Dickieson, Engineering Services Coordinator, Township of Centre Wellington
Andrew Dawson, Consultant project Manager, R.J. Burnside & Associates Ltd.
Simon Zhao, Project Officer, Ministry of Environment, Conservation and Parks

**Ministry of the Environment,
Conservation and Parks**

**Ministère de l'Environnement, de la
Protection de la nature et des Parcs**



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357-2024-670

June 14, 2024

Andrew Dawson
Consultant project Manager
R.J. Burnside & Associates Ltd.
Email: andrew.dawson@rjburnside.com

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
Email: adickieson@centrewellington.ca

Dear Andrew Dawson and Adam Dickieson,

The Ministry of the Environment, Conservation and Parks (MECP) has received a Section 16 Order request from Six Nations of the Grand River (SNGR) asking that the Minister impose conditions on the Township of Centre Wellington's Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P, 32-P, and 33-P (Project).

As the Project is being planned by the Township of Centre Wellington in accordance with the Municipal Class EA (Class EA) the Project cannot proceed until a decision is made by the Minister or the request is withdrawn.

MECP understands that since submission of SNGR's Section 16 Order request, the Township has had discussions with SNGR regarding the Project and the concerns raised in its request. We encourage such discussions to continue and look forward to any updates you may have in respect of them.

To assist MECP in reviewing SNGR's request for an order, MECP is requesting the following information from the Township:

- An electronic copy of the documentation developed for the Project as part of the Class EA process (project documentation).
- Responses to the issues and concerns raised in the request, listed in Table A (attached):

- A description of additional actions undertaken by the Township of Centre Wellington following the Class EA for the Project to address the requester's issues and concerns (including a written record of consultation carried out following the issuance of the Notice of Completion); and,
- A detailed description, with any supporting documentation, of how the issues and concerns:
 - have been addressed through the Class EA process;
 - will be addressed through the implementation of the Project;
 - will be addressed through additional commitments; and/or,
 - will be addressed through other legislation or approvals required for the Project.
- Other information requested by the MECP in Table B (attached);
- Description of any relevant information that is not captured by the project documentation.
 - A record of Indigenous consultation that was undertaken during the planning process for this Project, and not included in the project documentation.
 - Please provide this record in a table format with date comment/email/correspondence received and response sent by the Township of Centre Wellington and summary of the correspondence.
 - Provide any email attachments, summary of any meeting held with communities, and phone calls.

The Township is requested to submit the completed Tables A and B by June 28, 2024. The MECP would also ask that you keep us apprised of how discussions with the SNGR are going.

Please note that the information you provide to MECP will form a part of the public record on this matter required to be maintained pursuant to section 30 of the EAA. This information will be made available to any person upon request.

Thank you for your assistance in the ministry's review of the Section 16 Order request. If you have any further questions, please contact me directly at Nick.Colella@ontario.ca.

Sincerely,

Nick Colella

Nick Colella
A/Manager, Environmental Assessment Services
Environmental Assessment Branch

Enclosures

c: Simon Zhao, Project Officer, MECP



April 5, 2024

Minister
Ministry of the Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto ON M7A 2J3

Director
Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto ON M4V 1P5

Re: Section 16 request for Centre Wellington MCEA Bridges

Dear Minister and Director,

I am the Consultation Supervisor for Six Nations of the Grand River Elected Council (SNGREC) and am writing on behalf of SNGREC. Six Nations of the Grand River has Aboriginal and treaty rights which may be adversely impacted by the proposed project.

I am requesting a Section 16 Order on behalf of SNGREC.

The proponent is the Township of Centre Wellington. All communication has been with representatives from R.J. Burnside & Associates Ltd., consultants who are acting on the township's behalf.

In short, we submit that consultation has not taken place, or at the very least, that consultation was inadequate, per the circumstances outlined further below.

The aquatic and terrestrial work proposed by this project may impact hunting, fishing, harvesting, and other Aboriginal and treaty rights, but we are unable to quantify those impacts because of the actions of the proponent. And without fulsome knowledge of those impacts, we are unable to propose mitigation measures to Centre Wellington.

We believe an order will mitigate adverse impacts to Six Nations of the Grand River's Aboriginal and treaty rights by providing an opportunity for us to properly review and comment on project documents and engage in meaningful consultation with the proponent. We are requesting additional conditions, specifically that consultation with Six Nations of the Grand River be completed to the satisfaction of all parties, or alternatively to the satisfaction of the Crown, prior to the Environmental Assessment (EA) being deemed complete.

On July 24, 2023, I asked Burnside to get in touch with me once the project's alternatives were available. I made this request to ensure my office would have sufficient time to review EA material prior to the 30-days notice. Any project involving watercourses is a priority for us, and our wildlife unit, who have credentialed experts, require at least two months lead time to fit such work into their schedule.

On March 7, 2024, I received a Notice of Completion. On March 11, 2024, I sent the following to Burnside: "Last summer, we requested that alternatives be forwarded when available, but I have no record of receiving them. We have a long work cue, and it's impossible to comment prior to the April 6th deadline. Can the notice of completion to be withdrawn, or is a request to the minister my only option?" On March 13, 2024, Burnside replied in part "My sincere apologies for not providing you with a direct email specifically outlining the alternatives when our team decided upon them." Burnside did not respond to my query about whether a withdrawal was possible. On March 14, 2024, I replied: "Thank you for this additional information. We always prefer EAs contemplating natural environmental impacts near watercourses be reviewed by our wildlife staff who have appropriate credentials, but they require at least two months lead time for their document reviews. My preference is to pause things and advance this file through our normal process. But I'll ask my colleague Dawn Russell to try scheduling a meeting with you prior to April 6th, and my team will assess next steps afterwards. Per MECP guidance, we charge for EA work: \$1250 for meetings and \$125/hr for document review."

That triggered a second problem: the proponent's refusal to provide any capacity funding whatsoever. Burnside referred to the upcoming meeting as strictly "voluntary" which was unusual, but I didn't think too much of it. Then, on March 27, 2024, Burnside defined "voluntary" as meaning "the Township is not in a position to provide financial support to Six Nations for the meeting or document review as previously requested by Peter Graham." On April 2, 2024, I replied in part: "We already had an issue with the insufficient time to make informed comments, and now the township is refusing to provide capacity funding to First Nations as directed by MECP. We will cancel this meeting and make a request to the Minister."

On April 2, 2024, Burnside responded to my April 2, 2024 email as follows: Apologies for any confusion surrounding the meaning of my previous emails. I will cancel the meeting as you have requested. If you have any questions or comments that you would like us to address or consider, please pass them along and we can provide responses accordingly. I will follow up with another email regarding some information we wished to share during the meeting."

While the Ministry may or may not find the requested amount to be reasonable, that issue is irrelevant here, as the proponent did not object to the rate, but was instead insisting it would not pay any amount, which is clearly unreasonable and goes against the guideline.

Prior to this experience, only one municipality had ever turned down a request from my office for EA capacity funding, and in that sole case a work around was offered to ultimately provide that funding. In contrast, this proponent has not provided any leeway despite the flexibility we demonstrated after the proponent's actions prevented us from reviewing EA materials.

Sincerely,



Peter Graham
Consultation Supervisor
Lands & Resources Department
Six Nations of the Grand River Elected Council
P.O. Box 5000
2498 Chiefswood Rd.
Ohsweken, ON N0A 1M0
LRCS@sixnations.ca

Cc'd: Andrew Dawson
Project Engineer
R.J. Burnside & Associates Ltd.
Andrew.Dawson@rjburnside.com

INSTRUCTIONS FOR COMPLETING TABLES A & B – PROPONENT RESPONSE TO SECTION 16 ORDER REQUESTS

Table A

Title:

- Please fill in the required information in the title of this table – proponent name, project title, project location, and name of the individual(s) that completed this table.

Issue:

- Each issue and concern raised by the requester(s) must be described in the first column of the table. Be brief, but ensure that the issues and concerns are accurately reflected.
- Each issue and concern need only be stated in the table once. That is, if five requesters raise the same issue, it is only included once in the table (because presumably it will be addressed in the same fashion for each requester).
- Where there is more than one Section 16 Order request, indicate, for each issue and concern, the requesters that raised them. This will enable Ministry of the Environment, Conservation and Parks (MECP) staff to cross-reference between the table and the original Section 16 Order request submissions.
- It should be noted that the Project Evaluator at MECP will also review the requests to be satisfied that the table is inclusive of all issues and concerns.

Proponent Response:

- For each issue, begin by providing any necessary background information to support the response. This will help set the context for the specific response to the issue. For example, if the issue surrounds a project's conformance with official plan policies, provide background information about the official plan and the relevant policies to put the matter into context for MECP staff. If decisions were made during the planning and development of the project because of legislative requirements, describe these requirements.
- In as much detail as necessary, describe how the issues and concerns:
 - Have been addressed during the Class Environmental Assessment (Class EA) process:
 - What was done during the Class EA process (for example, in the comparison of alternatives, proposed project design)
 - What impact management measures have been developed as part of the project (the specific measures to prevent or mitigate environmental effects);
 - Will be addressed through other permits or approvals required after the class environmental assessment process
 - Identify the permit or approval, describe the requirements and specify how the issues and concerns will be addressed;
 - Will be addressed during the implementation of the project or the operation of the facility
 - What measures have been developed during the Class EA process that will be implemented at later stages of the project
 - What later stages of project development will address the issues and concerns (for example, detail design addressing the extent of property expropriation required)

- What elements of the project's operation once constructed will address the issues and concerns
- Will be addressed through new commitments made in addition to those set out in the project documentation prepared under the Class EA
 - Indicate whether any commitments have been made after the issuance of the Notice of Completion and the project documentation for final public review to address the issues and concerns, at any stage of the project.
 - Describe the commitments in detail and indicate how they will address the issues and concerns.
- You have been asked to provide a complete copy of the project documentation. In the response for each issue, be sure to reference the appropriate sections/pages/excerpts from the project documentation for easy cross-reference by ministry staff.
- In the response section of the table, also include any relevant input from government review agencies that supports or otherwise addresses your response to the issues and concerns.
- If any additional information/documentation is provided in your submission to the ministry that did not form part of the project documentation (for example, excerpts from an official plan, the Ministry of Natural Resources and Forestry wetland evaluations or documentation of additional commitments made to requesters), please reference these appropriately in the response section of the table.

Status:

- Indicate for confirmation whether the issues and concerns have been addressed or will be addressed in later stages of the project.

Other Approvals:

- The project documentation should provide a complete outline of other permits and approvals required. If this was not included in the project documentation prepared under the Class EA, please provide a brief list below the table.

Table B

Title:

- Please fill in the required information in the title of this table – proponent name, project title, project location, and name of the individual(s) that completed this table.

Response or Attachments:

- Provide a brief information summary of the information requested, and where information can be found within the Project documentation.
- Detail any relevant information that is not captured by the Project documentation. For example, any meetings, discussions and/or commitments that were made after the Project documentation was finalized.

Crystal Ferguson

From: Crystal Ferguson
Sent: Thursday, July 20, 2023 1:14 PM
To: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Cc: Andrew Dawson; ADickieson@centrewellington.ca
Subject: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Attachments: Notice of Commencement_Final.pdf

Dear Property Owner(s):

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network, and their value in connecting points across the community when determining the preferred alternative.

The Township of Centre Wellington has retained R.J. Burnside & Associates Limited to undertake the study. The benefits and impacts of various options for the bridges bridge will be assessed using social, cultural, economic, and ecological criteria. The Study Area is shown in the attached Notice of Commencement.

This MCEA is being carried out in accordance with the planning and design process for Schedule B projects as outlined in the Municipal Engineers Association Municipal Class Environmental Assessment, which is approved under the Ontario Environmental Assessment Act.

The Notice of Commencement for the study has been attached to this letter for your information.

Consultation is an important part of this study. If you have any questions or comments regarding the study, or would like to be included on the mailing list to receive future notices and study updates, please contact one of the Project Team members below:

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.
Consultant Project Manager
R.J. Burnside & Associates Limited
292 Speedvale Avenue West, #20
Guelph ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

Crystal Ferguson

From: Jennifer Sweetman
Sent: Thursday, July 20, 2023 2:08 PM
To: Crystal Ferguson
Subject: RE: mail out contacts - 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Thanks Crystal! I'll pop these in the mail today!

Jenn

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: Thursday, July 20, 2023 1:59 PM
To: Jennifer Sweetman <Jennifer.Sweetman@rjburnside.com>
Subject: mail out contacts - 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Hi Jen,

The contacts to be mailed are listed below (there were 4 in total) and the notice is attached to the email.

| Title | First Name | Last Name | Position | |
|-----------|------------|-----------|---|--------|
| Mr. | Phil | Brown | Chair, Centre Wellington Heritage Committee | Town |
| Sir/Madam | | | | Wellin |
| Ms. | Janet | Harrop | President | Wellin |
| Ms. | Marylin | Koch | Centre Wellington Operations Centre (Fergus) Detachment - Admin Assistant | Ontar |

Thank you,
Crystal

Crystal Ferguson

From: Crystal Ferguson
Sent: Thursday, August 24, 2023 11:30 AM
To: joan.delvillarcuicas@ontario.ca; tammy.verhaeghe@ontario.ca; jody.marks@ontario.ca; dan.minkin@ontario.ca; jessica.hill2@ontario.ca; info@dfo-mpo.gc.ca; mayor@centrewellington.ca; kokane@centrewellington.ca; dwilson@centrewellington.ca; kmartin@centrewellington.ca; jgaddye@centrewellington.ca; miglesias@centrewellington.ca; bsalmon@centrewellington.ca; amcnabb@centrewellington.ca; pnewson@centrewellington.ca; lisamacdonald@outlook.com; ward1@centrewellington.ca; ward2@centrewellington.ca; ward3@centrewellington.ca; ward4@centrewellington.ca; ward5@centrewellington.ca; ward6@centrewellington.ca; donk@wellington.ca; joedk@wellington.ca; rbauman@woolwich.ca; JPuppe@woolwich.ca; rtucker@woolwich.ca; dschwartzentruber@woolwich.ca; tmulvey@centrewellington.ca; jkarn@centrewellington.ca; cpellizzari@centrewellington.ca; skoestner@centrewellington.ca; huraniam@wellington.ca; sherry.hoysa@guelph.ca; lwarner@grandriver.ca; theywood@grandriver.ca; dboyd@grandriver.ca; amy.villeneuve@ugdsb.on.ca; michael.glazier@wellingtoncdsb.ca; mdavetiessen@gmail.com; ahmad.nouman@hydroone.com; neil.ackerman1@bell.ca
Cc: Andrew Dawson; adickieson@centrewellington.ca
Subject: Notice of Public Information Centre #1, Five Bridges in Centre Wellington MCEA
Attachments: 056693_Notice of PIC_230815_Final.pdf

Hello,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #1 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance at the first of two in-person Public Open House meetings for the project. A Study Area map is provided on the attached notice.

Date & Time: September 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

At this time, the Township will present project information to the community and stakeholders and will provide opportunity for you to provide your comments relating to the role of these structures within the local community.

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **September 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.
Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record. If you have accessibility requirements in order to participate in this project, please contact one of the project team members listed above.

On behalf of the study team,

Crystal Ferguson

From: Crystal Ferguson
Sent: Thursday, November 23, 2023 2:52 PM
To: eanotification.wregion@ontario.ca; joan.delvillarcuicas@ontario.ca; tammy.verhaeghe@ontario.ca; dan.minkin@ontario.ca; jessica.hill2@ontario.ca; info@dfo-mpo.gc.ca; mayor@centrewellington.ca; kokane@centrewellington.ca; dwilson@centrewellington.ca; kmartin@centrewellington.ca; jgaddye@centrewellington.ca; miglesias@centrewellington.ca; bsalmon@centrewellington.ca; amcnabb@centrewellington.ca; pnwson@centrewellington.ca; lisamacdonald@outlook.com; donk@wellington.ca; joedk@wellington.ca; rbauman@woolwich.ca; JPuppe@woolwich.ca; rtucker@woolwich.ca; dschwartzentruber@woolwich.ca; tmulvey@centrewellington.ca; jkarn@centrewellington.ca; cpellizzari@centrewellington.ca; skoestner@centrewellington.ca; huraniam@wellington.ca; sherry.hoysa@guelph.ca; lwarner@grandriver.ca; theywood@grandriver.ca; dboyd@grandriver.ca; amy.villeneuve@ugdsb.on.ca; michael.glazier@wellingtoncdsb.ca; mdavetiessen@gmail.com; ahmad.nouman@hydroone.com; neil.ackerman1@bell.ca
Cc: Tricia Radburn; Andrew Dawson; adickieson@centrewellington.ca; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Subject: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA
Attachments: 056693_Notice of PIC#2.pdf

Hello,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #2 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance to the second Public Information Centre meeting for the project. A Study Area map is provided on the attached notice.

Date & Time: December 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **December 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record. If you have accessibility requirements in order to participate in this project, please contact one of the project team members listed above.

On behalf of the study team,

Crystal Ferguson

From: Hill, Jessica (IAO) <Jessica.Hill2@ontario.ca>
Sent: Thursday, November 23, 2023 2:52 PM
To: Crystal Ferguson
Subject: Automatic reply: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA

Follow Up Flag: Follow up
Flag Status: Flagged

Thank you for your email. I am out of the office and do not have access to email. Please contact Kezia Picard, Team Lead at Kezia.Picard@ontario.ca in my absence.

Jessica Hill

Crystal Ferguson

From: Crystal Ferguson
Sent: Sunday, December 03, 2023 10:42 PM
To: 'Kezia.Picard@ontario.ca'
Cc: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Subject: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA
Attachments: 056693_Notice of PIC#2.pdf

Hello,

This email has been forwarded as per the autoreply from Jessica Hill.

Hello,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #2 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance to the second Public Information Centre meeting for the project. A Study Area map is provided on the attached notice.

Date & Time: December 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

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Adam Dickieson

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Township of Centre Wellington
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519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
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Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record. If you have accessibility requirements in order to participate in this project, please contact one of the project team members listed above.

On behalf of the study team,



Minutes of Meeting

Meeting Date: September 19, 2023 **Project No.:** 300056693.0000
Project Name: Centre Wellington 5 Bridges EA
Meeting Subject: GRCA Pre-Consultation Meeting
Meeting Location: Virtual (Microsoft Teams)
Date Prepared: October 5, 2023

Those in attendance were:

| | | |
|----------------|--|--------------------------------|
| Adam Dickieson | Township of Centre Wellington (Township) | adickieson@centrewellington.ca |
| Trevor Heywood | Grand River Conservation Authority (GRCA) | theywood@grandriver.ca |
| Matthew Brooks | R.J. Burnside & Associates Limited (Burnside) | matt.brooks@rjburnside.com |
| Andrew Dawson | Burnside | andrew.dawson@rjburnside.com |

The following items were discussed

Action by

1. Project Introduction

- 1.1 Burnside provided a background of the general scope of the Environmental Assessment (EA) study, which involves the review of development of reconstruction alternatives at structures 1-P, 28-P, 30-P, 32-P, 33-P.

2. General Requirements

- 2.1 GRCA noted that studies will have to show that proposed development at watercourse crossings meet the GRCA policies and guidelines for alterations to watercourses and interference with wetlands.
- 2.2 Wetland limits staked by Burnside in consultation with GRCA staff shall be used as the limits of the wetlands over any map based information.
- 2.3 GRCA does not have a policy specifying requirements for open-bottom / clear span structures. However, Burnside shall consult with other Ministries related to these requirements.

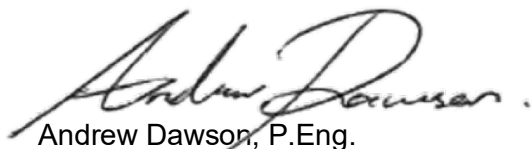
| The following items were discussed | | Action by |
|------------------------------------|--|-----------|
| 3. | Modelling and Mapping | |
| 3.1 | GRCA confirmed that they do not have an existing HEC-RAS model for this reach of the watercourse (Carroll Creek) and Burnside will have to develop models for the crossings. | Burnside |
| 3.2 | Where private structures have been installed adjacent to the subject bridges, Burnside shall model scenarios with and without the adjacent private structures to determine the overall worst case impacts. | Burnside |
| 3.3 | GRCA confirmed that their floodplain mapping is approximate only and is based on watercourse buffers and historical field mapping and not defined by hydraulic modelling. | |
| 4. | Structures 32-P and 33-P | |
| 4.1 | Burnside noted to GRCA that there was interest communicated through consultation for the re-routing of the tributary of Carroll Creek, upstream of 32-P to connect to the main reach of Carroll Creek and eliminate the crossing structure at 32-P. | |
| 4.2 | GRCA confirmed the option of eliminating 32-P could be considered for approval by the GRCA provided that the hydrologic functions of any downstream features are not being impacted, or that it is demonstrated, through an Environmental Impact Statement report that any impacts are restored and enhanced within the same vicinity. | |
| 4.3 | GRCA confirmed they would also consider downsizing of the original bridge crossing to a smaller culvert structure (similar to the current private culvert downstream) acceptable provided that it was confirmed this would have no negative impacts to surrounding lands during storm events. | |
| 5. | Structure 1-P | |
| 5.1 | Burnside identified to GRCA that there is evidence of vehicles travelling directly through the watercourse, adjacent to the existing crossing. It was noted that the Township's previous efforts to barricade the existing crossing had been removed on several occasions previously. | |
| 5.2 | Burnside noted that, based on consultation with the community, they would like to evaluate the option of providing a low-level crossing (crossing with minimal height above creek bottom, which would flood over during larger storm events) at this location to eliminate vehicles travelling directly through the watercourse. | |

| The following items were discussed | | Action by |
|------------------------------------|--|-----------|
| 5.3 | GRCA noted that a low-level crossing could be considered acceptable subject to hydraulic analysis indicating that it would not cause negative impacts to the upstream flood levels, or impact to the hydrologic functions of the upstream wetland. | |
| 5.4 | GRCA indicated that they would require a monitoring and advisory plan to be developed with the Township to ensure the crossing would be adequately closed and inaccessible to the public during flood events. | |
| 6. | Next Steps | |
| 6.1 | Burnside will complete hydrology and hydraulic modelling and further consult with GRCA staff as required pending results of their findings. | Burnside |

The preceding are the minutes of the meeting as observed by the undersigned. Should there be a need for revision, please advise Burnside within seven days of issuance. In the absence of notification to the contrary, these minutes will be deemed to be an accurate record of the meeting.

Minutes prepared by:

R.J. Burnside & Associates Limited



Andrew Dawson, P.Eng.
Project Engineer
ASD:tc

Enclosure(s) N/A

Distribution:

All Attendees

| | | |
|----------------|----------|-------------------------------|
| Chris Knechtel | Burnside | chris.knechtel@rjburnside.com |
| Tricia Radburn | Burnside | tricia.radburn@rjburnside.com |
| Mishaal Rizwan | Burnside | mishaal.rizwan@rjburnside.com |

Other than by the addressee, copying or distribution of this document, in whole or in part, is not permitted without the express written consent of R.J. Burnside & Associates Limited.

Crystal Ferguson

From: Trevor Heywood <theywood@grandriver.ca>
Sent: Monday, July 24, 2023 12:05 PM
To: Andrew Dawson; ADickieson@centrewellington.ca
Subject: RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Attachments: 2023-07-24 Carroll Creek Bridges GRCA comments combined.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Adam, Andrew,

Please see the GRCA's comments attached.

Regards,

Trevor Heywood B.Sc.(Env.)
Resource Planner
Grand River Conservation Authority

400 Clyde Road, PO Box 729
Cambridge, ON N1R 5W6
Phone: 519-621-2761 ext. 2292
Email: theywood@grandriver.ca
www.grandriver.ca | [Connect with us on social media](#)

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: Thursday, July 20, 2023 1:14 PM
To: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23 <056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>
Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; ADickieson@centrewellington.ca
Subject: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Dear Property Owner(s):

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

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Consultation is an important part of this study. If you have any questions or comments regarding the study, or would like to be included on the mailing list to receive future notices and study updates, please contact one of the Project Team members below:

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
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Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Limited
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705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.



Crystal Ferguson

Environmental Coordinator
R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: 800-265-9662 Direct Line: +1 705-797-4352
www.rjburnside.com



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Thank you.



July 24, 2023

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora ON N0B 1S0
adickieson@centrewellington.ca

Andrew Dawson
Project Manager
R.J. Burnside & Associates
20-292 Speedvale Avenue West
Guelph ON N1H 1C4
andrew.dawson@rjburnside.com

**Re: Bridges 1-P, 28-P, 30-P, 32-P & 33-P Class Environmental Assessment
Sideroads 5, 5 West, 11 and 13 at Carroll Creek**

Dear Mr. Dickieson and Mr. Dawson,

The Grand River Conservation Authority (GRCA) is in receipt of the Notice of Commencement for the above-noted Municipal Class Environmental Assessment (Class EA).

Information currently available at our office indicates that all the bridges cross Carroll Creek and an unnamed tributary. The area around these bridges contain associated floodplains, riverine slopes and wetlands. As such, the GRCA has an interest in the Class EA under Ontario Regulation 686/21, acting on behalf of the Province regarding natural hazards identified in Section 3.1 of the Provincial Policy Statement (PPS, 2020), as well as in accordance with Ontario Regulation 150/06 and GRCA's Board approved policies.

Attached are a series of maps of the bridges showing the resource features and the GRCA's regulated area. Bridge crossings are permitted in accordance with GRCA's public infrastructure policies. As the Township moves forward in the Class EA process, we'd like to provide the following comments with respect to alternatives for new or reconstructed bridges:

1. Bridges should adhere to GRCA policy 9.1.2. Assuming any bridges would be taking advantage of the existing right of way and road alignment, the key

requirement would be to avoid any physical realignments or alterations to Carroll Creek.

2. The GRCA's floodplain for Carroll Creek is estimated. Hydrologic and hydraulic modelling may be required to verify compliance with GRCA policies 8.1.15-8.1.16. We'd encourage further consultation with the GRCA early in the process to determine the need and scope of work for this exercise.
3. Erosion hazards may be present due to riverine slopes, and/or the meander belt of the creek. An engineering assessment (e.g. geotechnical / fluvial geomorphology) may be required to establish more precise erosion hazard limits, and ensure the proposed alternatives will not impact the erosion hazards. Please refer to GRCA policy 8.2.21, as well as provincial guidelines for erosion hazards.
4. Some of the bridges are adjacent to wetlands. A scoped environmental impact study is required to verify the extent of wetlands, and verify that any works adjacent to them are consistent with GRCA policies 8.4.6-8.4.7.

Advisory Comment

- A. Bridges 28-P, 1-P and 30-P are listed (as CW15, CW12 and CW16, respectively) in Arch, Truss & Beam: The Grand River Watershed Heritage Bridge Inventory (March 2013). The relevant pages have been attached to this letter.

We trust this information is of assistance. If you have any questions or require additional information, please contact me at 519-621-2763 ext. 2292 or theywood@grandriver.ca.

Sincerely,



Trevor Heywood
Resource Planner
Grand River Conservation Authority

Encl. Resource Mapping
Arch, Truss & Beam, p. 268-269, 274-277

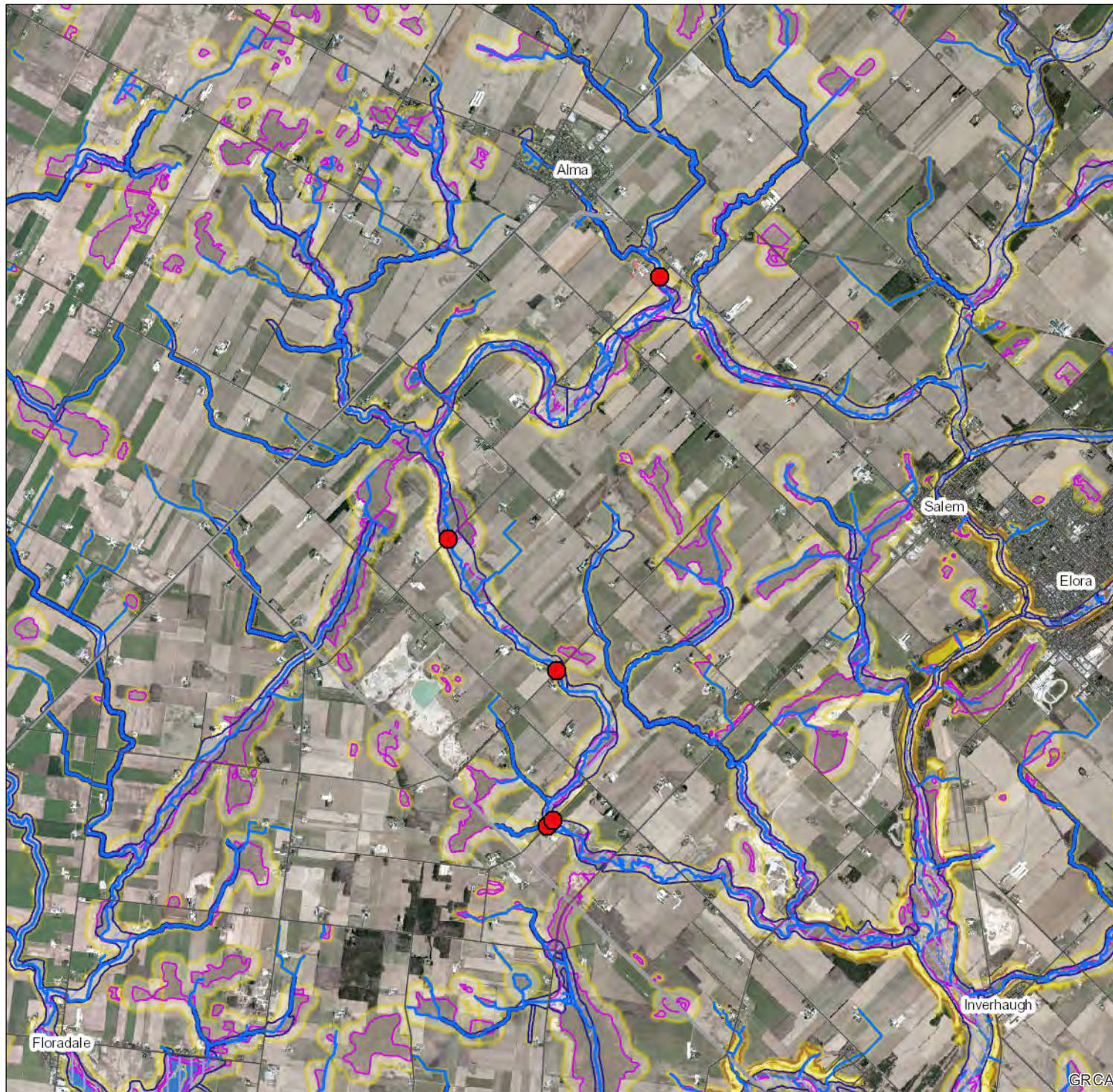


Grand River Conservation Authority

Date: Jul 20, 2023

Author: TH

Bridges 1-P, 28-P, 30-P, 32-P & 33-P, Centre-Wellington



Legend

- Regulation Limit (GRCA)
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- Parcel - Assessment (MPAC/MNRF)

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0 412.5 825 1,650 2,475 Metres
NAD 1983 UTM Zone 17N Scale: 68,108



Grand River Conservation Authority

Date: Jul 20, 2023

Author: TH

Bridges 1-P, 28-P, 30-P, 32-P & 33-P, Centre-Wellington

Legend

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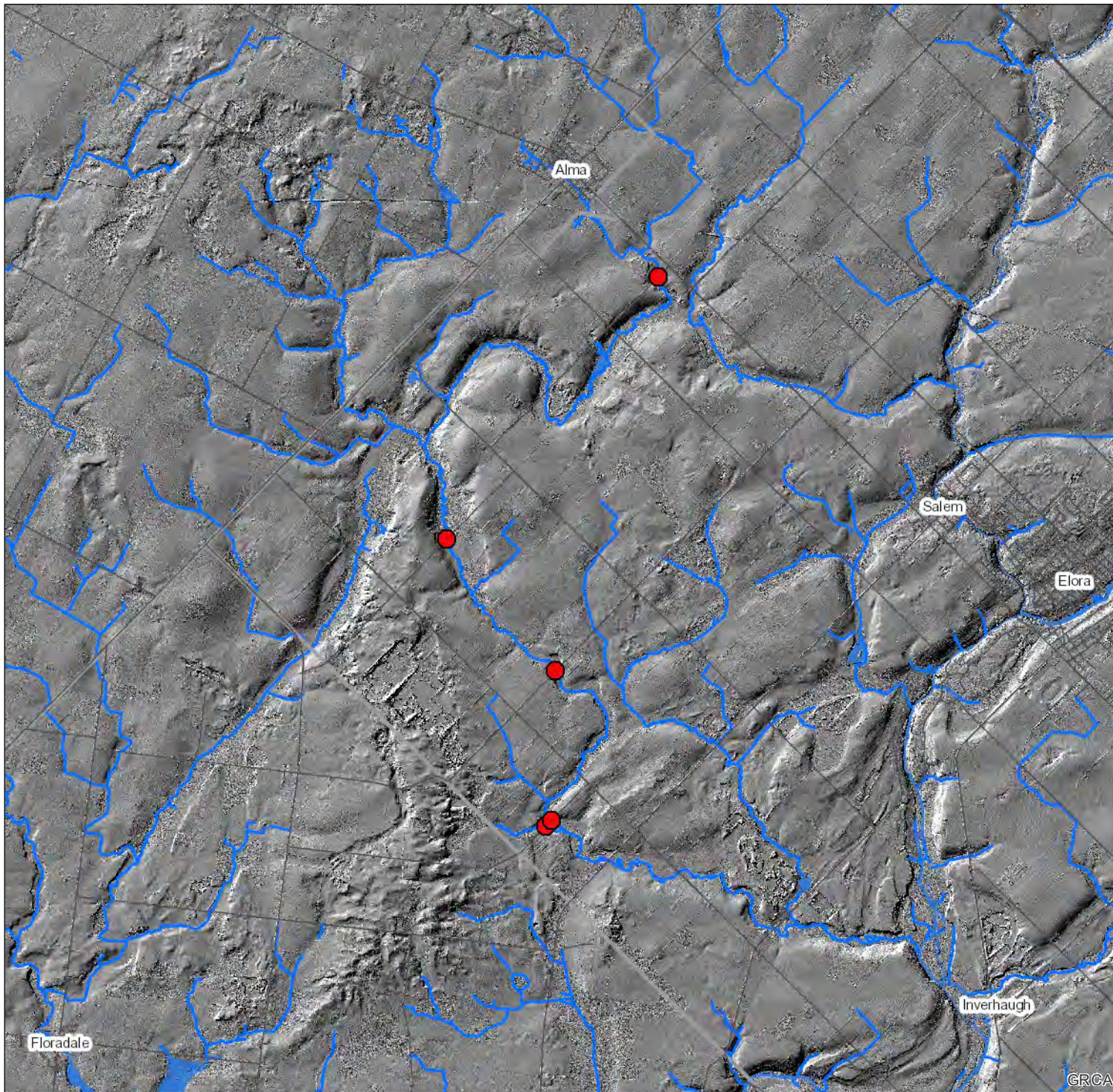
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NAD 1983 UTM Zone 17N

Scale: 68,108



Map Centre (UTM NAD83 z17): 539,996.01 4,837,431.72

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Grand River Conservation Authority

Date: Jul 24, 2023

Author: TH

Sideroad 13 at Carroll Creek, Centre Wellington

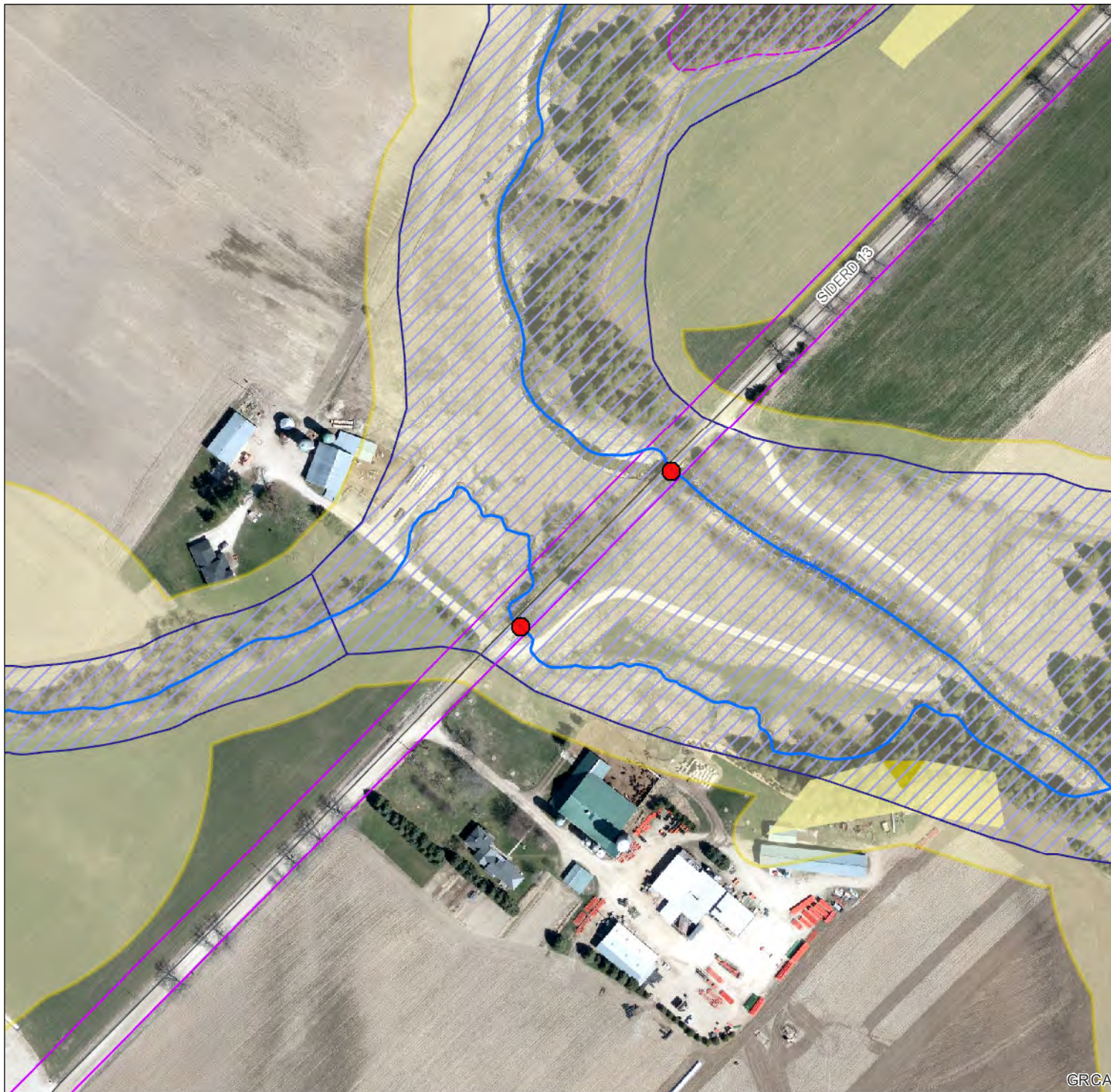
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0 15 30 60 90 Metres
NAD 1983 UTM Zone 17N Scale: 2,604



Map Centre (UTM NAD83 z17): 539,791.16 4,834,114.79

This map is not to be used for navigation | 2020 Ortho (ON)

GRCA



Grand River Conservation Authority

Date: Jul 24, 2023

Author: TH

Sideroad 13 at Carroll Creek, Centre Wellington

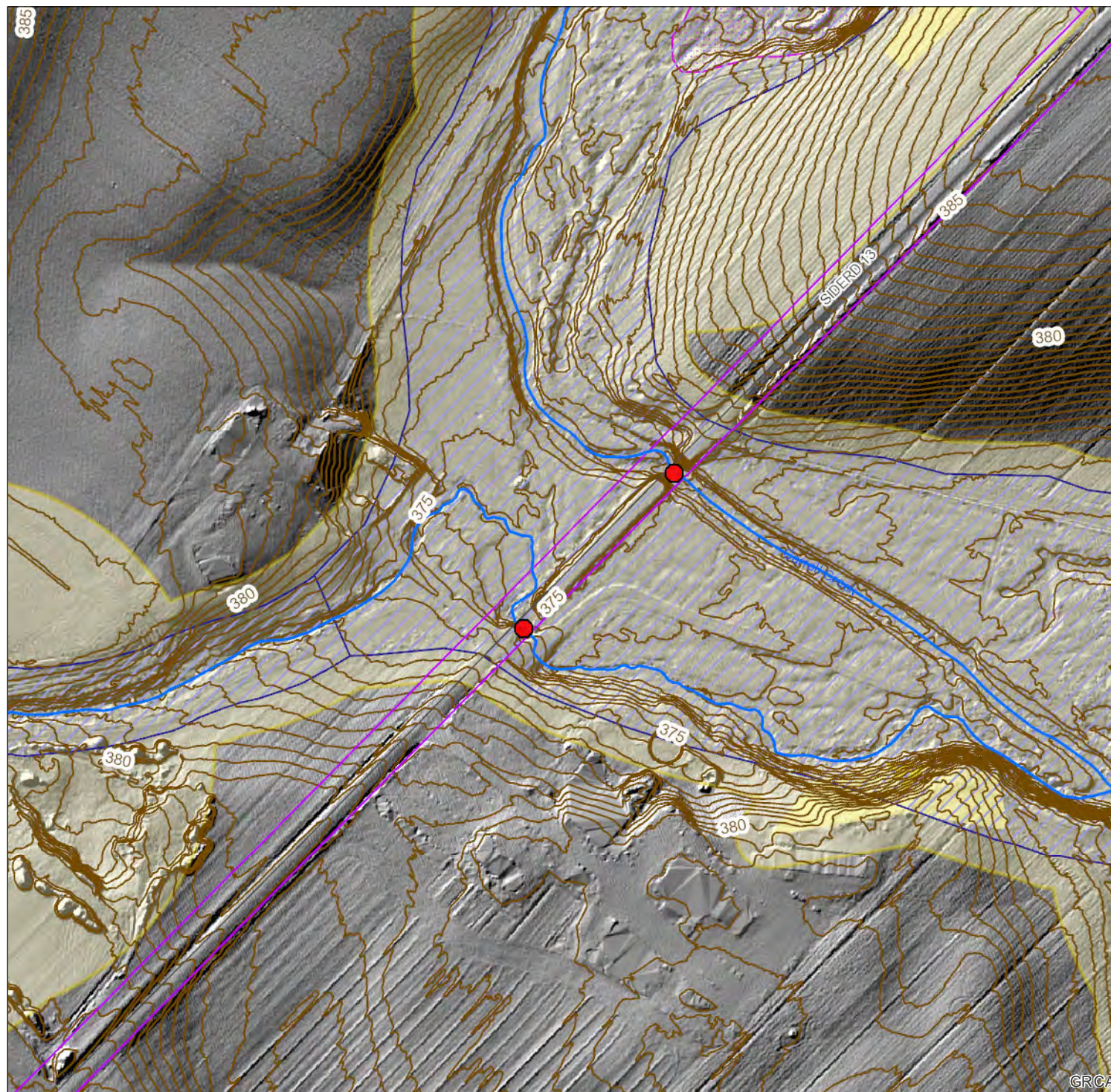
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GRCA



Grand River Conservation Authority

Date: Jul 24, 2023

Author: TH

Sideroad 11 at Carroll Creek, Centre Wellington

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0 12.5 25 50 75 Metres
NAD 1983 UTM Zone 17N Scale: 2,288



Map Centre (UTM NAD83 z17): 539,889.00 4,835,960.03

This map is not to be used for navigation | 2020 Ortho (ON)



Grand River Conservation Authority

Date: Jul 24, 2023

Author: TH

Sideroad 11 at Carroll Creek, Centre Wellington

Legend

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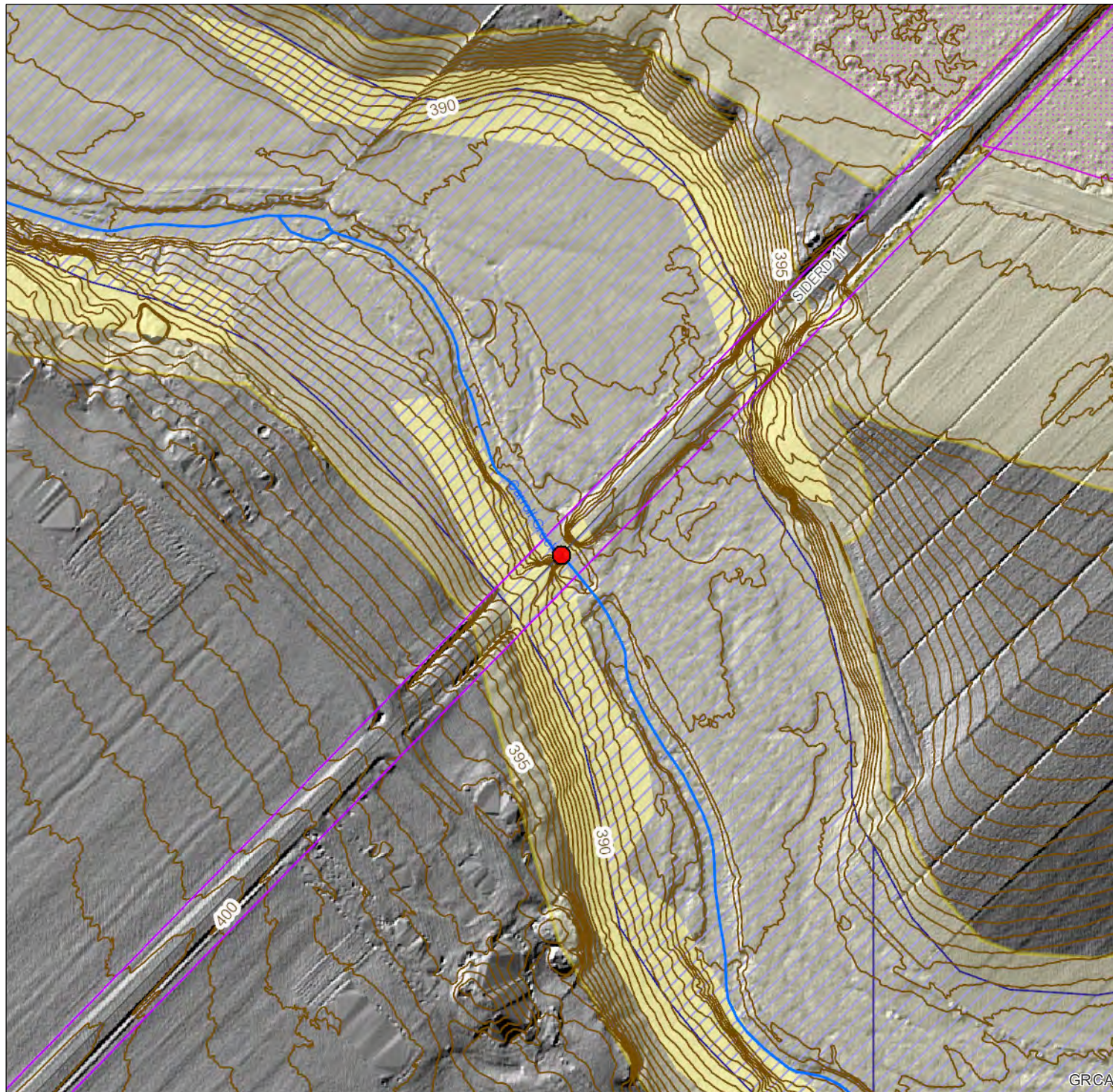
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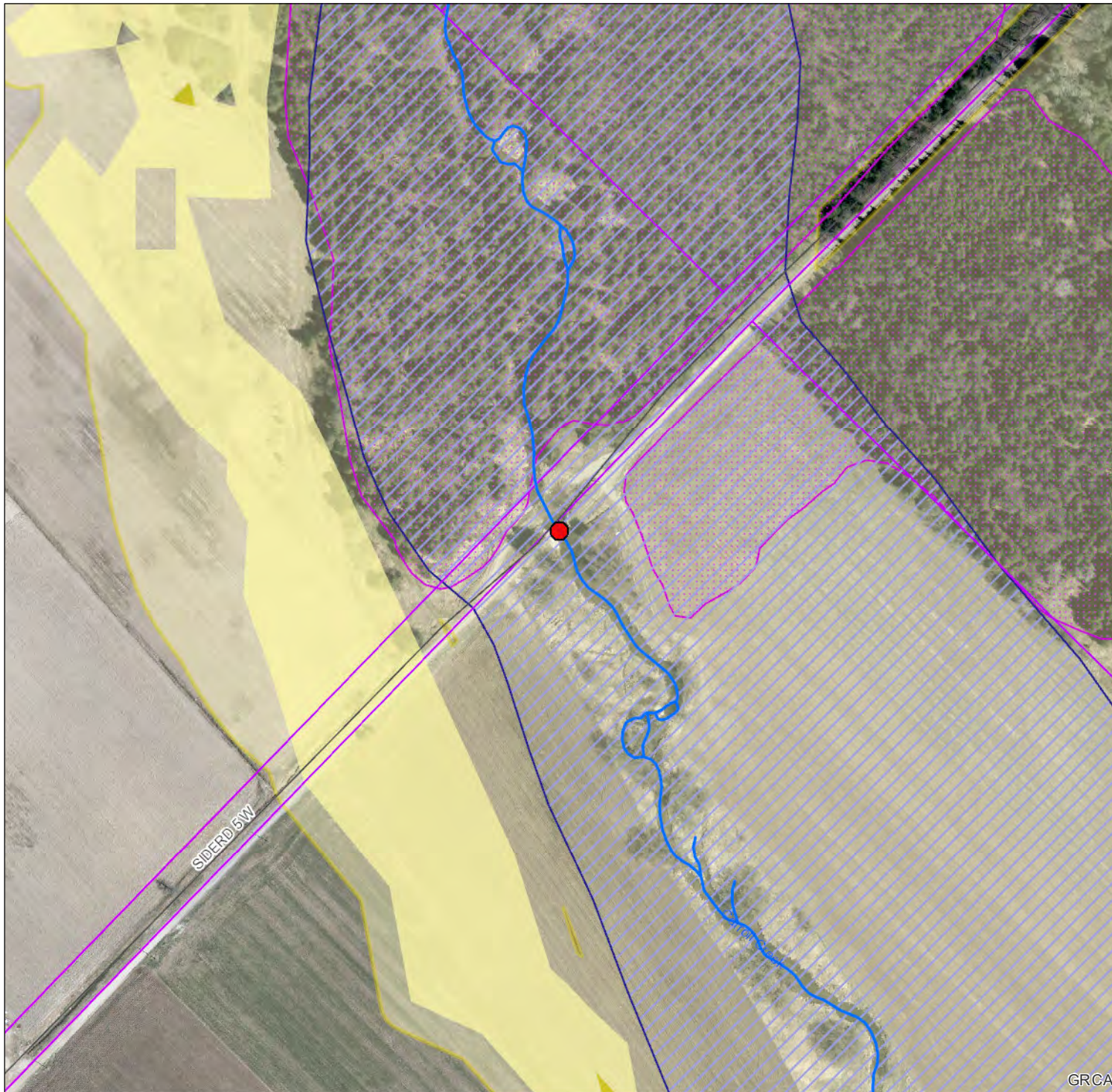
Sideroad 5 W at Carroll Creek, Centre Wellington

Legend

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Map Centre (UTM NAD83 z17): 538,580.05 4,837,538.93

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GRCA



Grand River Conservation Authority

Date: Jul 24, 2023

Author: TH

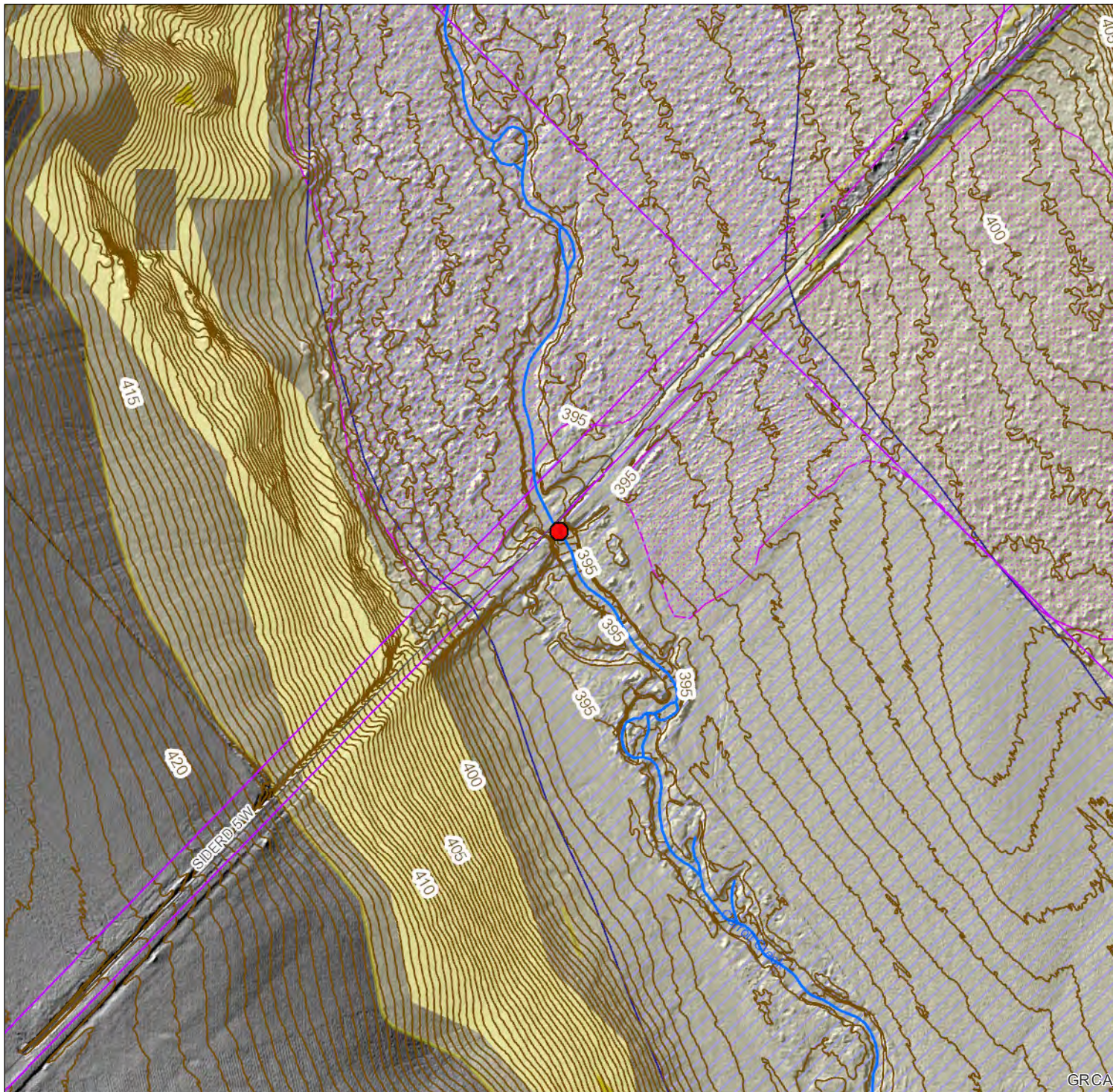
Sideroad 5 W at Carroll Creek, Centre Wellington

Legend

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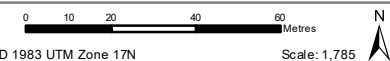
Sideroad 5 at Carroll Creek, Centre Wellington

Legend

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Map Centre (UTM NAD83 z17): 541,130.76 4,840,747.35

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GRCA



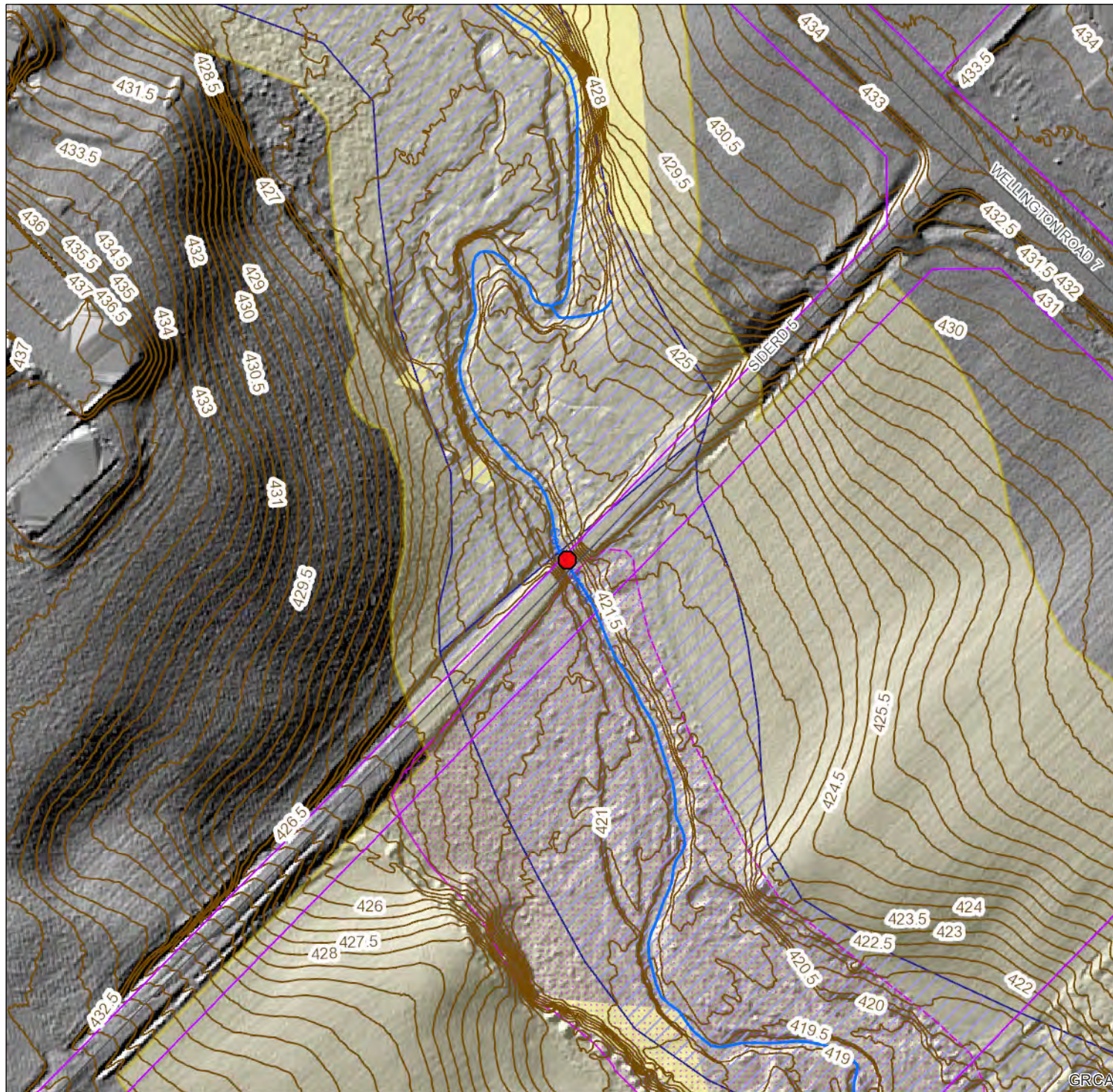
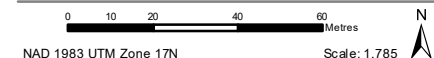
Sideroad 5 at Carroll Creek,
Centre Wellington

Legend

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Centre Wellington Bridge 1-P



| General Information | Physical Details |
|--|--------------------------------|
| Bridge No. CW12 | Type: Pony Truss (Pin Jointed) |
| Ownership: Township of Centre Wellington | Span: Single |
| Construction Date: 1890 | Dimensions: 11.8m x 4.5m (LxW) |
| Water Crossing: Carroll Creek | Materials: Steel, Timber |



| Evaluation Form | | Check |
|--|--|-------|
| Design/Physical Value | | |
| I. Is a rare, unique, representative or early example of a style, type, expression, material or construction method | | ✓ |
| II. Displays a high degree of craftsmanship or artistic merit | | |
| III. Demonstrates a high degree of technical or scientific achievement | | |
| Historic/Associative Value | | |
| I. Has direct association with a theme, event, belief, person, activity, organization, or institution that is significant to the community | | |
| II. Yields, or has the potential to yield, information that contributes to an understanding of the community or culture | | |
| III. Demonstrates or reflects the work or ideas of an architect, artist, engineer, builder, designer or theorist who is significant to a community | | |
| Contextual Value | | |
| I. Is important in defining, maintaining or supporting the character of an area | | ✓ |
| II. Is physically, functionally, visually or historically linked to its surroundings | | ✓ |
| III. Is a landmark | | |

General Description

Centre Wellington Bridge 1-P is located on Sideroad 5, 0.9 km east of Eighth Line West. It was constructed in 1890; making it the oldest steel truss bridge remaining in the Township of Centre Wellington. There are five remaining steel truss bridges in Centre Wellington, and together with the Salem Bridge, Centre Wellington Bridge 1-P is one of only two remaining pony truss bridges.

Aside from its early date of construction and pin jointing, now a rare feature, this bridge is unique due to its uncharacteristically short span. The bridge is constructed of steel with a timber deck. It is in poor condition and has been closed to the public.

Sources: Township of Centre Wellington 2008 Structure Inventory Data
GRCA Heritage Bridge Inventory
Ministry of Culture Bridge Inspection Report, 1983



Centre Wellington Bridge 28-P



| General Information | Physical Details |
|--|--------------------------------|
| Bridge No. CW15 | Type: T-beam |
| Ownership: Township of Centre Wellington | Span: Single |
| Construction Date: 1926 | Dimensions: 11.3m x 5.7m (LxW) |
| Water Crossing: Carroll Creek | Materials: Reinforced Concrete |



| Evaluation Form | | Check |
|--|--|-------|
| Design/Physical Value | | |
| I. Is a rare, unique, representative or early example of a style, type, expression, material or construction method | | ✓ |
| II. Displays a high degree of craftsmanship or artistic merit | | |
| III. Demonstrates a high degree of technical or scientific achievement | | |
| Historic/Associative Value | | |
| I. Has direct association with a theme, event, belief, person, activity, organization, or institution that is significant to the community | | ✓ |
| II. Yields, or has the potential to yield, information that contributes to an understanding of the community or culture | | ✓ |
| III. Demonstrates or reflects the work or ideas of an architect, artist, engineer, builder, designer or theorist who is significant to a community | | |
| Contextual Value | | |
| I. Is important in defining, maintaining or supporting the character of an area | | ✓ |
| II. Is physically, functionally, visually or historically linked to its surroundings | | |
| III. Is a landmark | | |

General Description

Centre Wellington Bridge 28-P is located on Sideroad 11, 0.7 km west of Eighth Line West. It was constructed in 1926 and belongs to a grouping of early T-beam bridges built in the Township of Centre Wellington during the 1920s and 1940s. This group includes Centre Wellington bridges 26-P, 32-P, 3-N, 1-E, 6-E and 33-P. Like this bridge, they each display an early experimentation with concrete. This bridge has concrete chamfered balustrades with decorative embossed circles. The thin boards used to set the concrete on site during construction left imprints that are still visible. Engravings are found on the bottom railings that read, "Martin, Oct 26, 1926; Inspector ALMA On; ELMIRA". Bridge 32-P has similar engravings to this bridge.

Bridge 28-P is in poor condition and has been closed to the public. A replacement bridge has been constructed directly to the east, which allows predominantly agricultural traffic to cross Carroll Creek.

Source: Township of Centre Wellington 2008 Structure Inventory Data



Centre Wellington Bridge 30-P



Photograph by Melissa Davies, 2012

| General Information | Physical Details |
|--|--------------------------------|
| Bridge No. CW16 | Type: Half-through Girders |
| Ownership: Township of Centre Wellington | Span: Single |
| Construction Date: 1929 | Dimensions: 8.8m x 6.5m (LxW) |
| Water Crossing: Unknown | Materials: Reinforced Concrete |



| Evaluation Form | Check |
|--|-------|
| Design/Physical Value | |
| I. Is a rare, unique, representative or early example of a style, type, expression, material or construction method | ✓ |
| II. Displays a high degree of craftsmanship or artistic merit | |
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| Contextual Value | |
| I. Is important in defining, maintaining or supporting the character of an area | ✓ |
| II. Is physically, functionally, visually or historically linked to its surroundings | |
| III. Is a landmark | |

General Description

Centre Wellington Bridge 30-P is located on Sideroad 5, 0.2 km west of Wellington Road 7. It was constructed in 1929 and is the last in a grouping of early half-through girder bridges built in the Township of Centre Wellington during the 1920s. This group includes Centre Wellington bridges 2-WG, 8-WG, 5-P and 5-E. Like this bridge, they each display an early experimentation with concrete, which has resulted in decorative concrete railings with a solid centre portion and balustrades on each side. The thin boards used to set the concrete on site during construction left imprints that are still visible. This bridge is unique to the group as it has the shortest span. Portions of the bridge are in poor condition but it is better preserved than others in its group.

Source: Township of Centre Wellington 2008 Structure Inventory Data



Crystal Ferguson

From: Andrew Dawson
Sent: Tuesday, July 25, 2023 10:07 AM
To: Trevor Heywood
Cc: Deanna De Forest; Crystal Ferguson; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23; ADickieson@centrewellington.ca
Subject: RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Trevor,

Thank you for passing along GRCA comments. These comments will be filed as part of the MCEA process and we will consider your comments in review of the alternative as we progress through the MCEA process. We will consult with the GRCA further, as required, as the EA progresses.

We also appreciate you passing along the various maps for our reference. We are aware of the noted bridges being listed on the Grand River watershed heritage bridge inventory, and will be having our subconsultant Parslow Heritage Consultancy Inc. conducting a Cultural Heritage Evaluation of the bridges.

Regards,
Andrew

Andrew Dawson
Project Engineer



R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: Trevor Heywood <theywood@grandriver.ca>
Sent: Monday, July 24, 2023 12:05 PM
To: Andrew Dawson <Andrew.Dawson@rjburnside.com>; ADickieson@centrewellington.ca
Subject: RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Hi Adam, Andrew,

Please see the GRCA's comments attached.

Regards,

Trevor Heywood B.Sc.(Env.)
Resource Planner
Grand River Conservation Authority

400 Clyde Road, PO Box 729
Cambridge, ON N1R 5W6
Phone: 519-621-2761 ext. 2292
Email: theywood@grandriver.ca
www.grandriver.ca | [Connect with us on social media](#)

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: Thursday, July 20, 2023 1:14 PM
To: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23 <056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>
Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; ADickieson@centrewellington.ca
Subject: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Dear Property Owner(s):

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network, and their value in connecting points across the community when determining the preferred alternative.

The Township of Centre Wellington has retained R.J. Burnside & Associates Limited to undertake the study. The benefits and impacts of various options for the bridges bridge will be assessed using social, cultural, economic, and ecological criteria. The Study Area is shown in the attached Notice of Commencement.

This MCEA is being carried out in accordance with the planning and design process for Schedule B projects as outlined in the Municipal Engineers Association Municipal Class Environmental Assessment, which is approved under the Ontario Environmental Assessment Act.

The Notice of Commencement for the study has been attached to this letter for your information.

Consultation is an important part of this study. If you have any questions or comments regarding the study, or would like to be included on the mailing list to receive future notices and study updates, please contact one of the Project Team members below:

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.
Consultant Project Manager
R.J. Burnside & Associates Limited
292 Speedvale Avenue West, #20
Guelph ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.



Crystal Ferguson
Environmental Coordinator
R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: 800-265-9662 Direct Line: +1 705-797-4352
www.rjburnside.com



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If you have received this communication in error please notify the sender at the above email address and delete this email immediately.
Thank you.

Crystal Ferguson

From: Andrew Dawson
Sent: Thursday, September 07, 2023 7:41 PM
To: Trevor Heywood; Adam Dickieson
Cc: Mishaal Rizwan; Crystal Ferguson; Tricia Radburn; Devin Soeting
Subject: RE: Notice of Public Information Centre #1, Five Bridges in Centre Wellington MCEA
Attachments: 056693_PIC1_PDF.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Trevor,

Please see attached for the PDF of the slides.

Also, you may visit the link below to review a narrated virtual presentation of the slides:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township/widgets/161889/videos/11159>

Let us know if you need any additional information.

We would also like to set up a meeting with the GRCA to discuss the project sites and the alternatives solutions to be considered to get the GRCA's input as to viability. During the PIC, several members of the community questioned whether a low volume crossing could be considered at some of the sites. Based on this interest, it will be added as an alternative solution to be considered for a couple of the sites. We'd like to discuss this further with the GRCA.

If you could please let me know your availability to meet over the next couple of weeks that would be greatly appreciated. It would likely most valuable to have these meetings / discussions on site.

Thanks,
Andrew

Andrew Dawson
Project Engineer

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Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: Trevor Heywood <theywood@grandriver.ca>
Sent: Thursday, September 07, 2023 4:35 PM
To: Adam Dickieson <adickieson@centrewellington.ca>; Andrew Dawson <Andrew.Dawson@rjburnside.com>
Subject: RE: Notice of Public Information Centre #1, Five Bridges in Centre Wellington MCEA

Hi gentlemen,

Can I get a PDF copy of the slides from this?

Thanks,

Trevor Heywood B.Sc.(Env.)
Resource Planner
Grand River Conservation Authority

400 Clyde Road, PO Box 729
Cambridge, ON N1R 5W6

Phone: 519-621-2761 ext. 2292

Email: theywood@grandriver.ca

www.grandriver.ca | [Connect with us on social media](#)

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Sent: Thursday, August 24, 2023 11:30 AM

To: joan.delvillarcuicas@ontario.ca; tammy.verhaeghe@ontario.ca; jody.marks@ontario.ca; dan.minkin@ontario.ca; jessica.hill2@ontario.ca; info@dfo-mpo.gc.ca; mayor@centrewellington.ca; kokane@centrewellington.ca; dwilson@centrewellington.ca; kmartin@centrewellington.ca; jgaddye@centrewellington.ca; miglesias@centrewellington.ca; bsalmon@centrewellington.ca; amcnabb@centrewellington.ca; pnewson@centrewellington.ca; lisamacdonald@outlook.com; ward1@centrewellington.ca; ward2@centrewellington.ca; ward3@centrewellington.ca; ward4@centrewellington.ca; ward5@centrewellington.ca; ward6@centrewellington.ca; donk@wellington.ca; joedk@wellington.ca; Rae Ann Bauman <rbauman@woolwich.ca>; jpuppe@woolwich.ca; rtucker@woolwich.ca; dschwartzentruber@woolwich.ca; tmulvey@centrewellington.ca; jkarn@centrewellington.ca; cpellizzari@centrewellington.ca; skoestner@centrewellington.ca; huraniam@wellington.ca; sherry.hoysa@guelph.ca; Laura Warner <lwerner@grandriver.ca>; Trevor Heywood <theywood@grandriver.ca>; Dwight Boyd <dboyd@grandriver.ca>; amy.villeneuve@ugdsb.on.ca; michael.glazier@wellingtoncdsb.ca; mdavetiessen@gmail.com; ahmad.nouman@hydroone.com; neil.ackerman1@bell.ca

Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; adickieson@centrewellington.ca

Subject: Notice of Public Information Centre #1, Five Bridges in Centre Wellington MCEA

Hello,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #1 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance at the first of two in-person Public Open House meetings for the project. A Study Area map is provided on the attached notice.

Date & Time: September 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

At this time, the Township will present project information to the community and stakeholders and will provide opportunity for you to provide your comments relating to the role of these structures within the local community.

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **September 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

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On behalf of the study team,



Crystal Ferguson

Environmental Coordinator

R.J. Burnside & Associates

128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6

Office: 800-265-9662 Direct Line: +1 705-797-4352

www.rjburnside.com



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Thank you.

Crystal Ferguson

From: Trevor Heywood <theywood@grandriver.ca>
Sent: Friday, September 08, 2023 11:54 AM
To: Andrew Dawson; Adam Dickieson
Cc: Mishaal Rizwan; Crystal Ferguson; Tricia Radburn; Devin Soeting
Subject: RE: Notice of Public Information Centre #1, Five Bridges in Centre Wellington MCEA

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Andrew,

Thanks for the PDF, I prefer to have them in that format for filing.

I would prefer to have an MS Teams meeting, and if you can provide a map that shows the wetland boundaries Richard verified with the team last week, I think it'll be just as productive as being on site. We can have an on-site down the road if a preferred alternative is showing potential with conflicting with our policies, or there's need for discussion on final EA / permit submission requirements.

I'm generally available for a video call:

- Wed 13th AM
- Thurs 14th AM
- Fri 15th after 10:00
- 18th, 19th, 21st, 22nd Anytime

Regards,

Trevor Heywood

Resource Planner

Grand River Conservation Authority

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Sent: Thursday, September 7, 2023 7:41 PM
To: Trevor Heywood <theywood@grandriver.ca>; Adam Dickieson <adickieson@centrewellington.ca>
Cc: Mishaal Rizwan <Mishaal.Rizwan@rjburnside.com>; Crystal Ferguson <Crystal.Ferguson@rjburnside.com>; Tricia Radburn <Tricia.Radburn@rjburnside.com>; Devin Soeting <Devin.Soeting@rjburnside.com>
Subject: RE: Notice of Public Information Centre #1, Five Bridges in Centre Wellington MCEA

Trevor,

Please see attached for the PDF of the slides.

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Let us know if you need any additional information.

We would also like to set up a meeting with the GRCA to discuss the project sites and the alternatives solutions to be considered to get the GRCA's input as to viability. During the PIC, several members of the community questioned

whether a low volume crossing could be considered at some of the sites. Based on this interest, it will be added as an alternative solution to be considered for a couple of the sites. We'd like to discuss this further with the GRCA.

If you could please let me know your availability to meet over the next couple of weeks that would be greatly appreciated. It would likely most valuable to have these meetings / discussions on site.

Thanks,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Trevor Heywood <theywood@grandriver.ca>

Sent: Thursday, September 07, 2023 4:35 PM

To: Adam Dickieson <adickieson@centrewellington.ca>; Andrew Dawson <Andrew.Dawson@rjburnside.com>

Subject: RE: Notice of Public Information Centre #1, Five Bridges in Centre Wellington MCEA

Hi gentlemen,

Can I get a PDF copy of the slides from this?

Thanks,

Trevor Heywood B.Sc.(Env.)
Resource Planner
Grand River Conservation Authority

400 Clyde Road, PO Box 729

Cambridge, ON N1R 5W6

Phone: 519-621-2761 ext. 2292

Email: theywood@grandriver.ca

www.grandriver.ca | [Connect with us on social media](#)

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>

Sent: Thursday, August 24, 2023 11:30 AM

To: joan.delvillarcuicas@ontario.ca; tammy.verhaeghe@ontario.ca; jody.marks@ontario.ca; dan.minkin@ontario.ca; jessica.hill2@ontario.ca; info@dfo-mpo.gc.ca; mayor@centrewellington.ca; kokane@centrewellington.ca; dwilson@centrewellington.ca; kmartin@centrewellington.ca; jgaddye@centrewellington.ca; miglesias@centrewellington.ca; bsalmon@centrewellington.ca; amcnabb@centrewellington.ca; pnewson@centrewellington.ca; lisamacdonald@outlook.com; ward1@centrewellington.ca; ward2@centrewellington.ca; ward3@centrewellington.ca; ward4@centrewellington.ca; ward5@centrewellington.ca; ward6@centrewellington.ca; donk@wellington.ca; joedk@wellington.ca; Rae Ann Bauman <rbauman@woolwich.ca>; jpuppe@woolwich.ca; rtucker@woolwich.ca; dschwartzentruber@woolwich.ca; tmulvey@centrewellington.ca; jkarn@centrewellington.ca; cpellizzari@centrewellington.ca; skoestner@centrewellington.ca; huraniam@wellington.ca; sherry.hoysa@guelph.ca; Laura Warner <lwarner@grandriver.ca>; Trevor Heywood <theywood@grandriver.ca>; Dwight Boyd <dboyd@grandriver.ca>; amy.villeneuve@ugdsb.on.ca; michael.glazier@wellingtoncdsb.ca; mdavetiessen@gmail.com; ahmad.nouman@hydroone.com; neil.ackerman1@bell.ca

Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; adickieson@centrewellington.ca

Subject: Notice of Public Information Centre #1, Five Bridges in Centre Wellington MCEA

Hello,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #1 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance at the first of two in-person Public Open House meetings for the project. A Study Area map is provided on the attached notice.

Date & Time: September 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

At this time, the Township will present project information to the community and stakeholders and will provide opportunity for you to provide your comments relating to the role of these structures within the local community.

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **September 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

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On behalf of the study team,



Crystal Ferguson

Environmental Coordinator
R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: 800-265-9662 Direct Line: +1 705-797-4352
www.rjburnside.com



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Thank you.

Crystal Ferguson

From: Trevor Heywood <theywood@grandriver.ca>
Sent: Monday, December 11, 2023 1:43 PM
To: Andrew Dawson; adickieson@centrewellington.ca
Cc: Crystal Ferguson
Subject: RE: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA
Attachments: 2023-12-11 Carroll Creek Bridges GRCA comments 2.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hey Andrew, Adam,

Thank you for providing the slides. Please see our comments attached.

Regards,

Trevor Heywood B.Sc.(Env.)
Resource Planner
Grand River Conservation Authority

400 Clyde Road, PO Box 729
Cambridge, ON N1R 5W6
Phone: 519-621-2761 ext. 2292
Email: theywood@grandriver.ca
www.grandriver.ca | [Connect with us on social media](#)

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Sent: Thursday, December 7, 2023 11:02 AM
To: Trevor Heywood <theywood@grandriver.ca>; adickieson@centrewellington.ca
Cc: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Subject: RE: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA

Trevor,

The Township is just trying to work through the aspects of getting it up and posted. It is intended to be online today. There is a file share link provided below which has the presentation boards from yesterday's open house, a recorded version of the online presentation, and a hard copy of the presentation (with presentation script included). If you have any questions, please reach out.

 [056693 - PIC 2 Information for GRCA 231207](#)

The link above will expire on February 7, 2024. Please ensure you have saved a copy of these files prior to expiration.

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Trevor Heywood <theywood@grandriver.ca>
Sent: Thursday, December 07, 2023 10:32 AM

To: Andrew Dawson <Andrew.Dawson@rjburnside.com>; adickieson@centrewellington.ca
Cc: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Subject: RE: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA

Hi Adam, Andrew,

I did not see the PIC 2 materials on the website. Could the slides be sent to me directly?

Thank you,

Trevor Heywood B.Sc.(Env.)
Resource Planner
Grand River Conservation Authority

400 Clyde Road, PO Box 729
Cambridge, ON N1R 5W6
Phone: 519-621-2761 ext. 2292
Email: theywood@grandriver.ca
www.grandriver.ca | [Connect with us on social media](#)

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: Thursday, November 23, 2023 2:52 PM
To: eanotification.wregion@ontario.ca; joan.delvillarcuicas@ontario.ca; tammy.verhaeghe@ontario.ca; dan.minkin@ontario.ca; jessica.hill2@ontario.ca; info@dfo-mpo.gc.ca; mayor@centrewellington.ca; kokane@centrewellington.ca; dwilson@centrewellington.ca; kmartin@centrewellington.ca; jgaddye@centrewellington.ca; miglesias@centrewellington.ca; bsalmon@centrewellington.ca; amcnabb@centrewellington.ca; pnewson@centrewellington.ca; lisamacdonald@outlook.com; donk@wellington.ca; joedk@wellington.ca; Rae Ann Bauman <rbauman@woolwich.ca>; jpuppe@woolwich.ca; rtucker@woolwich.ca; dschwartzentruber@woolwich.ca; tmulvey@centrewellington.ca; jkarn@centrewellington.ca; cpellizzari@centrewellington.ca; skoestner@centrewellington.ca; huraniam@wellington.ca; sherry.hoysa@guelph.ca; Laura Warner <lwerner@grandriver.ca>; Trevor Heywood <theywood@grandriver.ca>; Dwight Boyd <dboyd@grandriver.ca>; amy.villeneuve@ugdsb.on.ca; michael.glazier@wellingtoncdsb.ca; mdavetiessen@gmail.com; ahmad.nouman@hydroone.com; neil.ackerman1@bell.ca
Cc: Tricia Radburn <Tricia.Radburn@rjburnside.com>; Andrew Dawson <Andrew.Dawson@rjburnside.com>; adickieson@centrewellington.ca; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23 <056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>
Subject: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA

Hello,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #2 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance to the second Public Information Centre meeting for the project. A Study Area map is provided on the attached notice.

Date & Time: December 6, 2023, 6:00 pm – 8:00 pm
Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **December 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

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Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
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On behalf of the study team,



Environmental Coordinator
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Thank you.



Administration Centre: 400 Clyde Road, P.O. Box 729 Cambridge, ON N1R 5W6

Phone: 519-621-2761 Toll free: 1-866-900-4722 Fax: 519-621-4844 www.grandriver.ca

December 11, 2023

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora ON N0B 1S0
adickieson@centrewellington.ca

Andrew Dawson
Project Manager
R.J. Burnside & Associates
20-292 Speedvale Avenue West
Guelph ON N1H 1C4
andrew.dawson@rjburnside.com

**Re: Bridges 1-P, 28-P, 30-P, 32-P & 33-P Class Environmental Assessment
Sideroads 5, 5 West, 11 and 13 at Carroll Creek**

Dear Mr. Dickieson and Mr. Dawson,

Thank you for meeting with Grand River Conservation Authority (GRCA) staff on September 19, 2023 following Public Information Centre 1 for the above-noted Municipal Class Environmental Assessment (Class EA). We also appreciate the opportunity to verify wetland boundaries with the project team on August 31, 2023.

We have now received the Public Information Centre 2 materials for the Class EA, and understand that the preferred alternative is to replace bridges 28-P (on Sideroad 11) as well as bridges 32-P and 33-P (on Sideroad 13). This will also remove bridges 1-P and 30-P (on Sideroad 5 / 5 West). We wish to provide the following comments:

1. We request a hydrologic / hydraulic assessment for bridges 28-P and 32-P / 33-P to verify compliance with GRCA policies 8.1.15-8.1.16. This is particularly important as adjustments to the road approaches (horizontally and/or vertically) and hydraulic capacities of the structures are contemplated. We understand some hydraulic analysis has been completed to date, but GRCA has not reviewed this work. Prior to reviewing any hydrologic / hydraulic assessments,

we request that the Township engages with the GRCA early to define the scope, and ensure it will meet requirements for a GRCA permit.

2. The environmental impact study (EIS) should be scoped appropriately given that it will primarily be centred on using the GRCA-verified wetland boundaries and ensuring there's no impacts from removing bridges 1-P and 30-P. Please circulate the GRCA on a terms of reference for the EIS.
3. A scoped engineering assessment (e.g. geotechnical / fluvial geomorphology) is requested to verify that proposed changes to the structures will not result in increased erosion upstream or downstream, and the structures themselves will accommodate flows and creek movement. Please refer to GRCA policy 8.2.21, as well as provincial guidelines for erosion hazards, and consult with the GRCA on a scope of work.

We trust this information is of assistance. If you have any questions or require additional information, please contact me at 519-621-2763 ext. 2292 or theywood@grandriver.ca.

Sincerely,



Trevor Heywood
Resource Planner
Grand River Conservation Authority

Andrew Dawson

From: Andrew Dawson
Sent: Saturday, January 27, 2024 11:01 AM
To: Trevor Heywood
Cc: Crystal Ferguson; Mishaal Rizwan; adickieson@centrewellington.ca
Subject: RE: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA

Trevor,

Thank you for providing your comments on the EA and PIC2 information.

We have reviewed your comments and will consider them as part of the EA process, ensuring they are included in the Project File Report.

The comments / requests received are related to detailed design aspects of the preferred alternative solutions. While conceptual designs have been included as part of this EA, they are considered to be preliminary designs only to allow for the potential impacts/benefits and costs to be considered at a high level. These preliminary conceptual designs shall be further reviewed and refined during the detailed design stages for the structure replacements or removals. As such, we are recommending that these requests for more in depth studies be deferred to the detailed design stage of the project(s) and be carried forward in this EA under the 'Detailed Design and Construction Commitments' that will be outlined in the Project File Report.

If you have any questions or concerns, please feel free to give me a call to further discuss.

Regards,
Andrew

From: Trevor Heywood <theywood@grandriver.ca>
Sent: Monday, December 11, 2023 1:43 PM
To: Andrew Dawson <Andrew.Dawson@rjburnside.com>; adickieson@centrewellington.ca
Cc: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Subject: RE: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA

Hey Andrew, Adam,

Thank you for providing the slides. Please see our comments attached.

Regards,

Trevor Heywood B.Sc.(Env.)
Resource Planner
Grand River Conservation Authority

400 Clyde Road, PO Box 729
Cambridge, ON N1R 5W6
Phone: 519-621-2761 ext. 2292
Email: theywood@grandriver.ca
www.grandriver.ca | [Connect with us on social media](#)

From: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Sent: Thursday, December 7, 2023 11:02 AM

To: Trevor Heywood <theywood@grandriver.ca>; adickieson@centrewellington.ca
Cc: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Subject: RE: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA

Trevor,
The Township is just trying to work through the aspects of getting it up and posted. It is intended to be online today. There is a file share link provided below which has the presentation boards from yesterday's open house, a recorded version of the online presentation, and a hard copy of the presentation (with presentation script included).
If you have any questions, please reach out.

 [056693 - PIC 2 Information for GRCA 231207](#)

The link above will expire on February 7, 2024. Please ensure you have saved a copy of these files prior to expiration.

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

From: Trevor Heywood <theywood@grandriver.ca>
Sent: Thursday, December 07, 2023 10:32 AM
To: Andrew Dawson <Andrew.Dawson@rjburnside.com>; adickieson@centrewellington.ca
Cc: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Subject: RE: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA

Hi Adam, Andrew,

I did not see the PIC 2 materials on the website. Could the slides be sent to me directly?

Thank you,

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From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: Thursday, November 23, 2023 2:52 PM
To: eanotification.wcregion@ontario.ca; joan.delvillarcuicas@ontario.ca; tammy.verhaeghe@ontario.ca; dan.minkin@ontario.ca; jessica.hill2@ontario.ca; info@dfo-mpo.gc.ca; mayor@centrewellington.ca; kokane@centrewellington.ca; dwilson@centrewellington.ca; kmartin@centrewellington.ca; jgaddye@centrewellington.ca; miglesias@centrewellington.ca; bsalmon@centrewellington.ca; amcnabb@centrewellington.ca; pnewson@centrewellington.ca; lisamacdonald@outlook.com; donk@wellington.ca; joedk@wellington.ca; Rae Ann Bauman <rbauman@woolwich.ca>; jpuppe@woolwich.ca; rtucker@woolwich.ca; dschwartzentruber@woolwich.ca; tmulvey@centrewellington.ca; jkarn@centrewellington.ca; cpellizzari@centrewellington.ca; skoestner@centrewellington.ca; huraniam@wellington.ca; sherry.hoysa@guelph.ca; Laura Warner <lwerner@grandriver.ca>; Trevor Heywood <theywood@grandriver.ca>; Dwight Boyd <dboyd@grandriver.ca>; amy.villeneuve@ugdsb.on.ca; michael.glazier@wellingtoncdsb.ca; mdavetiessen@gmail.com;

ahmad.nouman@hydroone.com; neil.ackerman1@bell.ca

Cc: Tricia Radburn <Tricia.Radburn@rjburnside.com>; Andrew Dawson <Andrew.Dawson@rjburnside.com>; adickieson@centrewellington.ca; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23 <056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>

Subject: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA

Hello,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #2 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance to the second Public Information Centre meeting for the project. A Study Area map is provided on the attached notice.

Date & Time: December 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **December 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record. If you have accessibility requirements in order to participate in this project, please contact one of the project team members listed above.

On behalf of the study team,



Crystal Ferguson

Environmental Coordinator
R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: 800-265-9662 Direct Line: +1 705-797-4352
www.rjburnside.com



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If you have received this communication in error please notify the sender at the above email address and delete this email immediately.

Thank you.



Administration Centre: 400 Clyde Road, P.O. Box 729 Cambridge, ON N1R 5W6

Phone: 519-621-2761 Toll free: 1-866-900-4722 Fax: 519-621-4844 www.grandriver.ca

December 11, 2023

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora ON N0B 1S0
adickieson@centrewellington.ca

Andrew Dawson
Project Manager
R.J. Burnside & Associates
20-292 Speedvale Avenue West
Guelph ON N1H 1C4
andrew.dawson@rjburnside.com

**Re: Bridges 1-P, 28-P, 30-P, 32-P & 33-P Class Environmental Assessment
Sideroads 5, 5 West, 11 and 13 at Carroll Creek**

Dear Mr. Dickieson and Mr. Dawson,

Thank you for meeting with Grand River Conservation Authority (GRCA) staff on September 19, 2023 following Public Information Centre 1 for the above-noted Municipal Class Environmental Assessment (Class EA). We also appreciate the opportunity to verify wetland boundaries with the project team on August 31, 2023.

We have now received the Public Information Centre 2 materials for the Class EA, and understand that the preferred alternative is to replace bridges 28-P (on Sideroad 11) as well as bridges 32-P and 33-P (on Sideroad 13). This will also remove bridges 1-P and 30-P (on Sideroad 5 / 5 West). We wish to provide the following comments:

1. We request a hydrologic / hydraulic assessment for bridges 28-P and 32-P / 33-P to verify compliance with GRCA policies 8.1.15-8.1.16. This is particularly important as adjustments to the road approaches (horizontally and/or vertically) and hydraulic capacities of the structures are contemplated. We understand some hydraulic analysis has been completed to date, but GRCA has not reviewed this work. Prior to reviewing any hydrologic / hydraulic assessments,

we request that the Township engages with the GRCA early to define the scope, and ensure it will meet requirements for a GRCA permit.

2. The environmental impact study (EIS) should be scoped appropriately given that it will primarily be centred on using the GRCA-verified wetland boundaries and ensuring there's no impacts from removing bridges 1-P and 30-P. Please circulate the GRCA on a terms of reference for the EIS.
3. A scoped engineering assessment (e.g. geotechnical / fluvial geomorphology) is requested to verify that proposed changes to the structures will not result in increased erosion upstream or downstream, and the structures themselves will accommodate flows and creek movement. Please refer to GRCA policy 8.2.21, as well as provincial guidelines for erosion hazards, and consult with the GRCA on a scope of work.

We trust this information is of assistance. If you have any questions or require additional information, please contact me at 519-621-2763 ext. 2292 or theywood@grandriver.ca.

Sincerely,



Trevor Heywood
Resource Planner
Grand River Conservation Authority

Crystal Ferguson

From: Andrew Dawson
Sent: Saturday, January 27, 2024 11:01 AM
To: Trevor Heywood
Cc: Crystal Ferguson; Mishaal Rizwan; adickieson@centrewellington.ca
Subject: RE: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA

Trevor,

Thank you for providing your comments on the EA and PIC2 information.

We have reviewed your comments and will consider them as part of the EA process, ensuring they are included in the Project File Report.

The comments / requests received are related to detailed design aspects of the preferred alternative solutions. While conceptual designs have been included as part of this EA, they are considered to be preliminary designs only to allow for the potential impacts/benefits and costs to be considered at a high level. These preliminary conceptual designs shall be further reviewed and refined during the detailed design stages for the structure replacements or removals. As such, we are recommending that these requests for more in depth studies be deferred to the detailed design stage of the project(s) and be carried forward in this EA under the 'Detailed Design and Construction Commitments' that will be outlined in the Project File Report.

If you have any questions or concerns, please feel free to give me a call to further discuss.

Regards,
Andrew

Andrew Dawson
Project Engineer

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Office: +1 800-265-9662 **Direct:** +1 705-797-4310

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Resource Planner
Grand River Conservation Authority

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 [056693 - PIC 2 Information for GRCA 231207](#)

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Regards,
Andrew

Andrew Dawson
Project Engineer

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Laura Warner <lwerner@grandriver.ca>; Trevor Heywood <theywood@grandriver.ca>; Dwight Boyd <dboyd@grandriver.ca>; amy.villeneuve@ugdsb.on.ca; michael.glazier@wellingtoncdsb.ca; mdavetiessen@gmail.com; ahmad.nouman@hydroone.com; neil.ackerman1@bell.ca
Cc: Tricia Radburn <Tricia.Radburn@rjburnside.com>; Andrew Dawson <Andrew.Dawson@rjburnside.com>; adickieson@centrewellington.ca; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23 <056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>

Subject: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA

Hello,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #2 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance to the second Public Information Centre meeting for the project. A Study Area map is provided on the attached notice.

Date & Time: December 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **December 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

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Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
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Crystal Ferguson

Environmental Coordinator
R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
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Thank you.

Crystal Ferguson

From: Crystal Ferguson
Sent: Thursday, July 20, 2023 12:11 PM
To: eanotification.wcregion@ontario.ca
Cc: Andrew Dawson; IADickieson@centrewellington.ca; 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Subject: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Attachments: EA ProjectInfoForm.pdf; Notice of Commencement_Final.pdf

Please find attached the EA Project Information Form and Notice of Commencement for the Township of Centre Wellington MCEA for 5 Bridges.

Andrew Dawson

From: Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>
Sent: Friday, October 13, 2023 11:58 AM
To: adickieson@centrewellington.ca; Andrew Dawson
Cc: Todd, Aaron (MECP)
Subject: RE: Notice of Commencement , Five Bridges in Centre Wellington MCEA
Attachments: Client Guide to Preliminary Screening-May 2019.pdf; MECP Acknowledgement-Township of Centre Wellington- 5 Bridges.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Good afternoon,

Sincere apologies for the delay.

Please find attached MECP's Letter of Acknowledgement and attachment in response to the Notice of Commencement for the Township of Centre Wellington, Five Bridges MCEA.

Please do not hesitate to contact me if you have any questions.

Regards,

Joan Del Villar Cuicas (she/her)

Regional Environmental Planner

Project Review Unit | Environmental Assessment Branch

Ontario Ministry of the Environment, Conservation and Parks

Joan.delvillarcuicas@ontario.ca | Phone: 365-889-1180

**Ministry of the Environment,
Conservation and Parks**

**Ministère de l'Environnement,
de la Protection de la nature
et des Parcs**

Environmental Assessment
Branch

Direction des évaluations
environnementales

1st Floor
135 St. Clair Avenue W
Toronto ON M4V 1P5
Tel.: 416 314-8001
Fax.: 416 314-8452

Rez-de-chaussée
135, avenue St. Clair Ouest
Toronto ON M4V 1P5
Tél. : 416 314-8001
Télec. : 416 314-8452

October 13, 2023

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
adickieson@centrewellington.ca

Andrew Dawson
Consultant Project Manager
R.J. Burnside & Associates Ltd.
andrew.dawson@rjburnside.com

BY EMAIL ONLY

**Re: Municipal Class Environmental Assessment Study for Bridges 1-P, 28-P, 30-P,32-P &
33-P
Township of Centre Wellington
Municipal Class Environmental Assessment, Schedule B
Acknowledgement of Notice of Commencement**

Dear Project Team,

This letter is in response to the Notice of Commencement for the above noted project. The Ministry of the Environment, Conservation and Parks (MECP) acknowledges that the Township of Centre Wellington (proponent) has indicated that the study is following the approved environmental planning process for a Schedule B project under the Municipal Class Environmental Assessment (Class EA).

The **updated (August 2022)** attached “Areas of Interest” document provides guidance regarding the ministry’s interests with respect to the Class EA process. Please address all areas of interest in the EA documentation at an appropriate level for the EA study. Proponents who address all the applicable areas of interest can minimize potential delays to the project schedule. **Further information is provided at the end of the Areas of Interest document relating to recent changes to the Environmental Assessment Act through Bill 197, Covid-19 Economic Recovery Act 2020.**

The Crown has a legal duty to consult Aboriginal communities when it has knowledge, real or constructive, of the existence or potential existence of an Aboriginal or treaty right and contemplates conduct that may adversely impact that right. Before authorizing this project, the Crown must ensure that its duty to consult has been fulfilled, where such a duty is triggered. Although the duty to consult with Aboriginal peoples is a duty of the Crown, the Crown may delegate procedural aspects of this duty to project proponents while retaining oversight of the consultation process.

The proposed project may have the potential to affect Aboriginal or treaty rights protected under Section 35 of Canada’s *Constitution Act* 1982. Where the Crown’s duty to consult is triggered in relation to the proposed project, **the MECP is delegating the procedural aspects of rights-based consultation to the proponent through this letter.** The Crown intends to rely on the delegated consultation process in discharging its duty to consult and maintains the right to participate in the consultation process as it sees fit.

Based on information provided to date and the Crown’s preliminary assessment the proponent is required to consult with the following communities who have been identified as potentially affected by the proposed project:

- Mississaugas of the Credit
- Six Nations of the Grand River (Elected Council, and Traditional Council Haudenosaunee Confederacy Chiefs Council (HCCC) / Haudenosaunee Development Institute (HDI)).

Steps that the proponent may need to take in relation to Aboriginal consultation for the proposed project are outlined in the [“Code of Practice for Consultation in Ontario’s Environmental Assessment Process”](#). Additional information related to Ontario’s Environmental Assessment Act is available online at: www.ontario.ca/environmentalassessments.

Please also refer to the attached document “A Proponent’s Introduction to the Delegation of Procedural Aspects of consultation with Aboriginal Communities” for further information, including the MECP’s expectations for EA report documentation related to consultation with communities.

The proponent must contact the Director of Environmental Assessment Branch (EABDirector@ontario.ca) under the following circumstances after initial discussions with the communities identified by the MECP:

- Aboriginal or treaty rights impacts are identified to you by the communities;
- You have reason to believe that your proposed project may adversely affect an Aboriginal or treaty right;
- Consultation with Indigenous communities or other stakeholders has reached an impasse; or
- A Section 16 Order request is expected based on impacts to Aboriginal or treaty rights

The MECP will then assess the extent of any Crown duty to consult for the circumstances and will consider whether additional steps should be taken, including what role you will be asked to play should additional steps and activities be required.

A draft copy of the report should be sent directly to me prior to the filing of the final report, allowing a minimum of 30 days for the ministry's technical reviewers to provide comments.

Please also ensure a copy of the final notice is sent to the ministry's West Central Region EA notification email account (eanotification.wcregion@ontario.ca) after the draft report is reviewed and finalized.

Should you or any members of your project team have any questions regarding the material above, please contact me at Joan.DelVillarCuicas@ontario.ca.

Sincerely,



Joan Del Villar Cuicas
Regional Environmental Planner – West Central Region
Project Review Unit, Environmental Assessment Branch

Cc: Aaron Todd, Manager, Guelph District Office, MECP

Enclosed: Areas of Interest

Attached: Client's Guide to Preliminary Screening for Species at Risk

A Proponent's Introduction to the Delegation of Procedural Aspects of Consultation
with Aboriginal Communities

AREAS OF INTEREST (v. August 2022)

It is suggested that you check off each section after you have considered / addressed it.

☐ Planning and Policy

- Applicable plans and policies should be identified in the report, and the proponent should describe how the proposed project adheres to the relevant policies in these plans.
 - Projects located in MECP Central, Eastern or West Central Region may be subject to [A Place to Grow: Growth Plan for the Greater Golden Horseshoe \(2020\)](#).
 - Projects located in MECP Central or Eastern Region may be subject to the [Oak Ridges Moraine Conservation Plan \(2017\)](#) or the [Lake Simcoe Protection Plan \(2014\)](#).
 - Projects located in MECP Central, Southwest or West Central Region may be subject to the [Niagara Escarpment Plan \(2017\)](#).
 - Projects located in MECP Central, Eastern, Southwest or West Central Region may be subject to the [Greenbelt Plan \(2017\)](#).
 - Projects located in MECP Northern Region may be subject to the [Growth Plan for Northern Ontario \(2011\)](#).
- The [Provincial Policy Statement \(2020\)](#) contains policies that protect Ontario's natural heritage and water resources. Applicable policies should be referenced in the report, and the proponent should describe how the proposed project is consistent with these policies.
- In addition to the provincial planning and policy level, the report should also discuss the planning context at the municipal and federal levels, as appropriate.

☐ Source Water Protection

The *Clean Water Act*, 2006 (CWA) aims to protect existing and future sources of drinking water. To achieve this, several types of vulnerable areas have been delineated around surface water intakes and wellheads for every municipal residential drinking water system that is located in a source protection area. These vulnerable areas are known as a Wellhead Protection Areas (WHPAs) and surface water Intake Protection Zones (IPZs). Other vulnerable areas that have been delineated under the CWA include Highly Vulnerable Aquifers (HVAs), Significant Groundwater Recharge Areas (SGRAs), Event-based modelling areas (EBAs), and Issues Contributing Areas (ICAs). Source protection plans have been developed that include policies to address existing and future risks to sources of municipal drinking water within these vulnerable areas.

Projects that are subject to the Environmental Assessment Act that fall under a Class EA, or one of the Regulations, have the potential to impact sources of drinking water if they occur in designated vulnerable areas or in the vicinity of other at-risk drinking water systems (i.e.

systems that are not municipal residential systems). MEA Class EA projects may include activities that, if located in a vulnerable area, could be a threat to sources of drinking water (i.e. have the potential to adversely affect the quality or quantity of drinking water sources) and the activity could therefore be subject to policies in a source protection plan. Where an activity poses a risk to drinking water, policies in the local source protection plan may impact how or where that activity is undertaken. Policies may prohibit certain activities, or they may require risk management measures for these activities. Municipal Official Plans, planning decisions, Class EA projects (where the project includes an activity that is a threat to drinking water) and prescribed instruments must conform with policies that address significant risks to drinking water and must have regard for policies that address moderate or low risks.

- In October 2015, the MEA Parent Class EA document was amended to include reference to the Clean Water Act (Section A.2.10.6) and indicates that proponents undertaking a Municipal Class EA project must identify early in their process whether a project is or could potentially be occurring with a vulnerable area. **Given this requirement, please include a section in the report on source water protection.**
 - The proponent should identify the source protection area and should clearly document how the proximity of the project to sources of drinking water (municipal or other) and any delineated vulnerable areas was considered and assessed. Specifically, the report should discuss whether or not the project is located in a vulnerable area and provide applicable details about the area.
 - If located in a vulnerable area, proponents should document whether any project activities are prescribed drinking water threats and thus pose a risk to drinking water (this should be consulted on with the appropriate Source Protection Authority). Where an activity poses a risk to drinking water, the proponent must document and discuss in the report how the project adheres to or has regard to applicable policies in the local source protection plan. This section should then be used to inform and be reflected in other sections of the report, such as the identification of net positive/negative effects of alternatives, mitigation measures, evaluation of alternatives etc.
- While most source protection plans focused on including policies for significant drinking water threats in the WHPAs and IPZs it should be noted that even though source protection plan policies may not apply in HVAs, these are areas where aquifers are sensitive and at risk to impacts and within these areas, activities may impact the quality of sources of drinking water for systems other than municipal residential systems.
- In order to determine if this project is occurring within a vulnerable area, proponents can use [Source Protection Information Atlas](#), which is an online mapping tool available to the public. Note that various layers (including WHPAs, WHPA-Q1 and WHPA-Q2, IPZs, HVAs, SGRAs, EBAs, ICAs) can be turned on through the “Map Legend” bar on the left. The

mapping tool will also provide a link to the appropriate source protection plan in order to identify what policies may be applicable in the vulnerable area.

- For further information on the maps or source protection plan policies which may relate to their project, proponents must contact the appropriate source protection authority. **Please consult with the local source protection authority to discuss potential impacts on drinking water. Please document the results of that consultation within the report and include all communication documents/correspondence.**

More Information

For more information on the *Clean Water Act*, source protection areas and plans, including specific information on the vulnerable areas and drinking water threats, please refer to [Conservation Ontario's website](#) where you will also find links to the local source protection plan/assessment report.

A list of the prescribed drinking water threats can be found in [section 1.1 of Ontario Regulation 287/07](#) made under the *Clean Water Act*. In addition to prescribed drinking water threats, some source protection plans may include policies to address additional "local" threat activities, as approved by the MECP.

☐ **Climate Change**

The document "[Considering Climate Change in the Environmental Assessment Process](#)" (Guide) is now a part of the Environmental Assessment program's Guides and Codes of Practice. The Guide sets out the MECP's expectation for considering climate change in the preparation, execution and documentation of environmental assessment studies and processes. The guide provides examples, approaches, resources, and references to assist proponents with consideration of climate change in EA. Proponents should review this Guide in detail.

- **The MECP expects proponents of Class EA projects to:**
 1. Consider during the assessment of alternative solutions and alternative designs, the following:
 - a. the project's expected production of greenhouse gas emissions and impacts on carbon sinks (climate change mitigation); and
 - b. resilience or vulnerability of the undertaking to changing climatic conditions (climate change adaptation).
 2. Include a discrete section in the report detailing how climate change was considered in the EA.

How climate change is considered can be qualitative or quantitative in nature and should be scaled to the project's level of environmental effect. In all instances, both a project's impacts on climate change (mitigation) and impacts of climate change on a project (adaptation) should be considered.

- The MECP has also prepared another guide to support provincial land use planning direction related to the completion of energy and emission plans. The "[Community Emissions Reduction Planning: A Guide for Municipalities](#)" document is designed to educate stakeholders on the municipal opportunities to reduce energy and greenhouse gas emissions, and to provide guidance on methods and techniques to incorporate consideration of energy and greenhouse gas emissions into municipal activities of all types. We encourage you to review the Guide for information.

□ **Air Quality, Dust and Noise**

- If there are sensitive receptors in the surrounding area of this project, a quantitative air quality/odour impact assessment will be useful to evaluate alternatives, determine impacts and identify appropriate mitigation measures. The scope of the assessment can be determined based on the potential effects of the proposed alternatives, and typically includes source and receptor characterization and a quantification of local air quality impacts on the sensitive receptors and the environment in the study area. The assessment will compare to all applicable standards or guidelines for all contaminants of concern.
Please contact this office for further consultation on the level of Air Quality Impact Assessment required for this project if not already advised.
- If a quantitative Air Quality Impact Assessment is not required for the project, the MECP expects that the report contain a qualitative assessment which includes:
 - A discussion of local air quality including existing activities/sources that significantly impact local air quality and how the project may impact existing conditions;
 - A discussion of the nearby sensitive receptors and the project's potential air quality impacts on present and future sensitive receptors;
 - A discussion of local air quality impacts that could arise from this project during both construction and operation; and
 - A discussion of potential mitigation measures.
- As a common practice, "air quality" should be used as an evaluation criterion for all road projects.
- Dust and noise control measures should be addressed and included in the construction plans to ensure that nearby residential and other sensitive land uses within the study area are not adversely affected during construction activities.
- The MECP recommends that non-chloride dust-suppressants be applied. For a comprehensive list of fugitive dust prevention and control measures that could be applied, refer to [Cheminfo Services Inc. Best Practices for the Reduction of Air Emissions from](#)

[Construction and Demolition Activities](#) report prepared for Environment Canada. March 2005.

- The report should consider the potential impacts of increased noise levels during the operation of the completed project. The proponent should explore all potential measures to mitigate significant noise impacts during the assessment of alternatives.

☐ **Ecosystem Protection and Restoration**

- Any impacts to ecosystem form and function must be avoided where possible. The report should describe any proposed mitigation measures and how project planning will protect and enhance the local ecosystem.
- Natural heritage and hydrologic features should be identified and described in detail to assess potential impacts and to develop appropriate mitigation measures. The following sensitive environmental features may be located within or adjacent to the study area:
 - Key Natural Heritage Features: Habitat of endangered species and threatened species, fish habitat, wetlands, areas of natural and scientific interest (ANSIs), significant valleylands, significant woodlands; significant wildlife habitat (including habitat of special concern species); sand barrens, savannahs, and tallgrass prairies; and alvars.
 - Key Hydrologic Features: Permanent streams, intermittent streams, inland lakes and their littoral zones, seepage areas and springs, and wetlands.
 - Other natural heritage features and areas such as: vegetation communities, rare species of flora or fauna, Environmentally Sensitive Areas, Environmentally Sensitive Policy Areas, federal and provincial parks and conservation reserves, Greenland systems etc.

We recommend consulting with the Ministry of Natural Resources and Forestry (MNRF), Fisheries and Oceans Canada (DFO) and your local conservation authority to determine if special measures or additional studies will be necessary to preserve and protect these sensitive features. In addition, for projects located in Central Region you may consider the provisions of the Rouge Park Management Plan if applicable.

☐ **Species at Risk**

- The Ministry of the Environment, Conservation and Parks has now assumed responsibility of Ontario's Species at Risk program. Information, standards, guidelines, reference materials and technical resources to assist you are found at <https://www.ontario.ca/page/species-risk>.
- The Client's Guide to Preliminary Screening for Species at Risk (Draft May 2019) has been attached to the covering email for your reference and use. Please review this document for next steps.

- For any questions related to subsequent permit requirements, please contact SAROntario@ontario.ca.

□ **Surface Water**

- The report must include enough information to demonstrate that there will be no negative impacts on the natural features or ecological functions of any watercourses within the study area. Measures should be included in the planning and design process to ensure that any impacts to watercourses from construction or operational activities (e.g. spills, erosion, pollution) are mitigated as part of the proposed undertaking.
- Additional stormwater runoff from new pavement can impact receiving watercourses and flood conditions. Quality and quantity control measures to treat stormwater runoff should be considered for all new impervious areas and, where possible, existing surfaces. The ministry's [Stormwater Management Planning and Design Manual \(2003\)](#) should be referenced in the report and utilized when designing stormwater control methods. **A Stormwater Management Plan should be prepared as part of the Class EA process** that includes:
 - Strategies to address potential water quantity and erosion impacts related to stormwater draining into streams or other sensitive environmental features, and to ensure that adequate (enhanced) water quality is maintained
 - Watershed information, drainage conditions, and other relevant background information
 - Future drainage conditions, stormwater management options, information on erosion and sediment control during construction, and other details of the proposed works
 - Information on maintenance and monitoring commitments.
- Ontario Regulation 60/08 under the *Ontario Water Resources Act* (OWRA) applies to the Lake Simcoe Basin, which encompasses Lake Simcoe and the lands from which surface water drains into Lake Simcoe. If a proposed sewage treatment plant is listed in Table 1 of the regulation, the report should describe how the proposed project and its mitigation measures are consistent with the requirements of this regulation and the OWRA.
- Any potential approval requirements for surface water taking or discharge should be identified in the report. A Permit to Take Water (PTTW) under the OWRA will be required for any water takings that exceed 50,000 L/day, except for certain water taking activities that have been prescribed by the Water Taking EASR Regulation – *O. Reg. 63/16*. These prescribed water-taking activities require registration in the EASR instead of a PTTW. Please

review the [Water Taking User Guide for EASR](#) for more information. Additionally, an Environmental Compliance Approval under the OWRA is required for municipal stormwater management works.

☐ **Groundwater**

- The status of, and potential impacts to any well water supplies should be addressed. If the project involves groundwater takings or changes to drainage patterns, the quantity and quality of groundwater may be affected due to drawdown effects or the redirection of existing contamination flows. In addition, project activities may infringe on existing wells such that they must be reconstructed or sealed and abandoned. Appropriate information to define existing groundwater conditions should be included in the report.
- If the potential construction or decommissioning of water wells is identified as an issue, the report should refer to Ontario Regulation 903, Wells, under the OWRA.
- Potential impacts to groundwater-dependent natural features should be addressed. Any changes to groundwater flow or quality from groundwater taking may interfere with the ecological processes of streams, wetlands or other surficial features. In addition, discharging contaminated or high volumes of groundwater to these features may have direct impacts on their function. Any potential effects should be identified, and appropriate mitigation measures should be recommended. The level of detail required will be dependent on the significance of the potential impacts.
- Any potential approval requirements for groundwater taking or discharge should be identified in the report. A Permit to Take Water (PTTW) under the OWRA will be required for any water takings that exceed 50,000 L/day, with the exception of certain water taking activities that have been prescribed by the Water Taking EASR Regulation – *O. Reg. 63/16*. These prescribed water-taking activities require registration in the EASR instead of a PTTW. Please review the [Water Taking User Guide for EASR](#) for more information.
- Consultation with the railroad authorities is necessary wherever there is a plan to use construction dewatering in the vicinity of railroad lines or where the zone of influence of the construction dewatering potentially intercepts railroad lines.

☐ **Excess Materials Management**

- In December 2019, MECP released a new regulation under the Environmental Protection Act, titled “[On-Site and Excess Soil Management](#)” (O. Reg. 406/19) to support improved management of excess construction soil. This regulation is a key step to support proper management of excess soils, ensuring valuable resources don’t go to waste and to provide

clear rules on managing and reusing excess soil. New risk-based standards referenced by this regulation help to facilitate local beneficial reuse which in turn will reduce greenhouse gas emissions from soil transportation, while ensuring strong protection of human health and the environment. The new regulation is being phased in over time, with the first phase in effect on January 1, 2021. For more information, please visit <https://www.ontario.ca/page/handling-excess-soil>.

- The report should reference that activities involving the management of excess soil should be completed in accordance with O. Reg. 406/19 and the MECP's current guidance document titled "[Management of Excess Soil – A Guide for Best Management Practices](#)" (2014).
- All waste generated during construction must be disposed of in accordance with ministry requirements

☐ **Contaminated Sites**

- Any current or historical waste disposal sites should be identified in the report. The status of these sites should be determined to confirm whether approval pursuant to Section 46 of the EPA may be required for land uses on former disposal sites. We recommend referring to the [MECP's D-4 guideline](#) for land use considerations near landfills and dumps.
 - Resources available may include regional/local municipal official plans and data; provincial data on [large landfill sites](#) and [small landfill sites](#); Environmental Compliance Approval information for waste disposal sites on [Access Environment](#).
- Other known contaminated sites (local, provincial, federal) in the study area should also be identified in the report (Note – information on federal contaminated sites is found on the Government of Canada's [website](#)).
- The location of any underground storage tanks should be investigated in the report. Measures should be identified to ensure the integrity of these tanks and to ensure an appropriate response in the event of a spill. The ministry's Spills Action Centre must be contacted in such an event.
- Since the removal or movement of soils may be required, appropriate tests to determine contaminant levels from previous land uses or dumping should be undertaken. If the soils are contaminated, you must determine how and where they are to be disposed of, consistent with *Part XV.1 of the Environmental Protection Act* (EPA) and Ontario Regulation 153/04, Records of Site Condition, which details the new requirements related to site assessment and clean up. Please contact the appropriate MECP District Office for further consultation if contaminated sites are present.

☐ **Servicing, Utilities and Facilities**

- The report should identify any above or underground utilities in the study area such as transmission lines, telephone/internet, oil/gas etc. The owners should be consulted to discuss impacts to this infrastructure, including potential spills.
- The report should identify any servicing infrastructure in the study area such as wastewater, water, stormwater that may potentially be impacted by the project.
- Any facility that releases emissions to the atmosphere, discharges contaminants to ground or surface water, provides potable water supplies, or stores, transports or disposes of waste must have an Environmental Compliance Approval (ECA) before it can operate lawfully. Please consult with MECP's Environmental Permissions Branch to determine whether a new or amended ECA will be required for any proposed infrastructure.
- We recommend referring to the ministry's [environmental land use planning guides](#) to ensure that any potential land use conflicts are considered when planning for any infrastructure or facilities related to wastewater, pipelines, landfills or industrial uses.

☐ **Mitigation and Monitoring**

- Contractors must be made aware of all environmental considerations so that all environmental standards and commitments for both construction and operation are met. Mitigation measures should be clearly referenced in the report and regularly monitored during the construction stage of the project. In addition, we encourage proponents to conduct post-construction monitoring to ensure all mitigation measures have been effective and are functioning properly.
- Design and construction reports and plans should be based on a best management approach that centres on the prevention of impacts, protection of the existing environment, and opportunities for rehabilitation and enhancement of any impacted areas.
- The proponent's construction and post-construction monitoring plans must be documented in the report, as outlined in Section A.2.5 and A.4.1 of the MEA Class EA parent document.

☐ **Consultation**

- The report must demonstrate how the consultation provisions of the Class EA have been fulfilled, including documentation of all stakeholder consultation efforts undertaken during the planning process. This includes a discussion in the report that identifies concerns that were raised and **describes how they have been addressed by the proponent** throughout

the planning process. The report should also include copies of comments submitted on the project by interested stakeholders, and the proponent's responses to these comments (as directed by the Class EA to include full documentation).

- Please include the full stakeholder distribution/consultation list in the documentation.

☐ **Class EA Process**

- If this project is a Master Plan: there are several different approaches that can be used to conduct a Master Plan, examples of which are outlined in Appendix 4 of the Class EA. **The Master Plan should clearly indicate the selected approach for conducting the plan**, by identifying whether the levels of assessment, consultation and documentation are sufficient to fulfill the requirements for Schedule B or C projects. Please note that any Schedule B or C projects identified in the plan would be subject to Part II Order Requests under the Environmental Assessment Act, although the plan itself would not be. **Please include a description of the approach being undertaken (use Appendix 4 as a reference).**
- If this project is a Master Plan: Any identified projects should also include information on the MCEA schedule associated with the project.
- The report should provide clear and complete documentation of the planning process in order to allow for transparency in decision-making.
- The Class EA requires the consideration of the effects of each alternative on all aspects of the environment (including planning, natural, social, cultural, economic, technical). The report should include a level of detail (e.g. hydrogeological investigations, terrestrial and aquatic assessments, cultural heritage assessments) such that all potential impacts can be identified, and appropriate mitigation measures can be developed. Any supporting studies conducted during the Class EA process should be referenced and included as part of the report.
- Please include in the report a list of all subsequent permits or approvals that may be required for the implementation of the preferred alternative, including but not limited to, MECP's PTTW, EASR Registrations and ECAs, conservation authority permits, species at risk permits, MTO permits and approvals under the *Impact Assessment Act*, 2019.
- Ministry guidelines and other information related to the issues above are available at <http://www.ontario.ca/environment-and-energy/environment-and-energy>. We encourage you to review all the available guides and to reference any relevant information in the report.

Amendments to the EAA through the Covid-19 Economic Recovery Act, 2020

Once the EA Report is finalized, the proponent must issue a Notice of Completion providing a minimum 30-day period during which documentation may be reviewed and comment and input can be submitted to the proponent. The Notice of Completion must be sent to the appropriate MECP Regional Office email address.

The public can request a higher level of assessment on a project if they are concerned about potential adverse impacts to constitutionally protected Aboriginal and treaty rights. In addition, the Minister may issue an order on his or her own initiative within a specified time period. The Director (of the Environmental Assessment Branch) will issue a Notice of Proposed Order to the proponent if the Minister is considering an order for the project within 30 days after the conclusion of the comment period on the Notice of Completion. At this time, the Director may request additional information from the proponent. Once the requested information has been received, the Minister will have 30 days within which to make a decision or impose conditions on your project.

Therefore, the proponent cannot proceed with the project until at least 30 days after the end of the comment period provided for in the Notice of Completion. Further, the proponent may not proceed after this time if:

- a Section 16 Order request has been submitted to the ministry regarding potential adverse impacts to constitutionally protected Aboriginal and treaty rights, or
- the Director has issued a Notice of Proposed order regarding the project.

Please ensure that the Notice of Completion advises that outstanding concerns are to be directed to the proponent for a response, and that in the event there are outstanding concerns regarding potential adverse impacts to constitutionally protected Aboriginal and treaty rights, Section 16 Order requests on those matters should be addressed in writing to:

Minister David Piccini
Ministry of Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto ON M7A 2J3
minister.mecp@ontario.ca

and

Director, Environmental Assessment Branch
Ministry of Environment, Conservation and Parks
135 St. Clair Ave. W, 1st Floor
Toronto ON, M4V 1P5
EABDirector@ontario.ca

Client's Guide to Preliminary Screening for Species at Risk

***Ministry of the Environment, Conservation and Parks
Species at Risk Branch, Permissions and Compliance
DRAFT - May 2019***

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1.0 Purpose, Scope, Background and Context

1.1 Purpose of this Guide

This guide has been created to:

- help clients better understand their obligation to gather information and complete a preliminary screening for species at risk before contacting the ministry,
- outline guidance and advice clients can expect to receive from the ministry at the preliminary screening stage,
- help clients understand how they can gather information about species at risk by accessing publicly available information housed by the Government of Ontario, and
- provide a list of other potential sources of species at risk information that exist outside the Government of Ontario.

It remains the client's responsibility to:

- carry out a preliminary screening for their projects,
- obtain best available information from all applicable information sources,
- conduct any necessary field studies or inventories to identify and confirm the presence or absence of species at risk or their habitat,
- consider any potential impacts to species at risk that a proposed activity might cause, and
- comply with the *Endangered Species Act* (ESA).

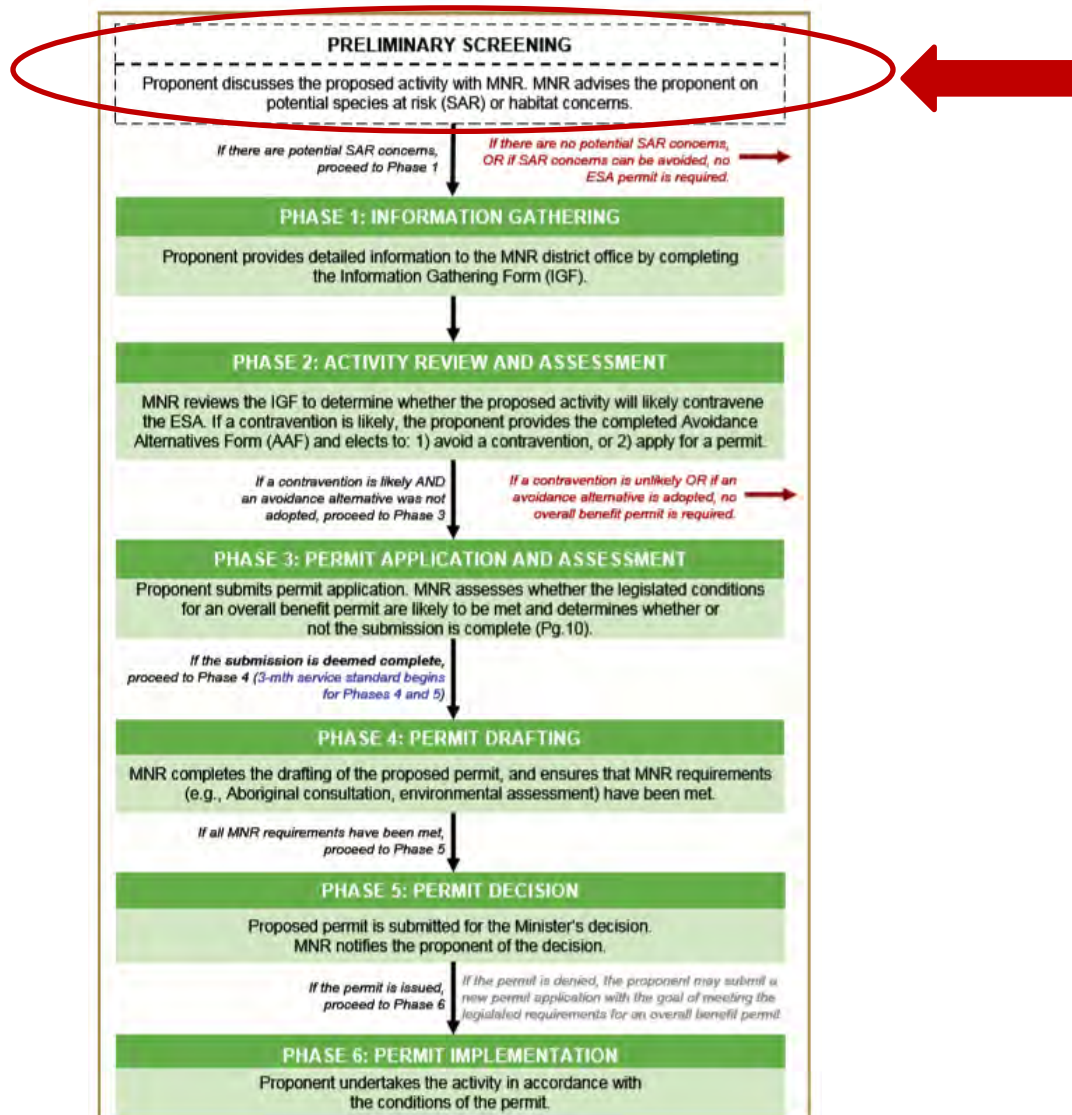
To provide the most efficient service, clients should initiate species at risk screenings and seek information from all applicable information sources identified in this guide, at a minimum, prior to contacting Government of Ontario ministry offices for further information or advice.

1.2 Scope

This guide is a resource for clients seeking to understand if their activity is likely to impact species at risk or if they are likely to trigger the need for an authorization under the ESA. It is not intended to circumvent any detailed site surveys that may be necessary to document species at risk or their habitat nor to circumvent the need to assess the impacts of a proposed activity on species at risk or their habitat. This guide is not an exhaustive list of available information sources for any given area as the availability of information on species at risk and their habitat varies across the province. This guide is intended to support projects and activities carried out on Crown and private land, by private landowners, businesses, other provincial ministries and agencies, or municipal government.

1.3 Background and Context

To receive advice on their proposed activity, clients must first determine whether any species at risk or their habitat exist or are likely to exist at or near their proposed activity, and whether their proposed activity is likely to contravene the ESA. Once this step is complete, clients may contact the ministry at SAROntario@ontario.ca to discuss the main purpose, general methods, timing and location of their proposed activity as well as information obtained about species at risk and their habitat at, or near, the site. At this stage, the ministry can provide advice and guidance to the client about potential species at risk or habitat concerns, measures that the client is considering to avoid adverse effects on species at risk or their habitat and whether additional field surveys are advisable. This is referred to as the “Preliminary Screening” stage. For more information on additional phases in the diagram below, please refer to the *Endangered Species Act Submission Standards for Activity Review and 17(2)(c) Overall Benefit Permits* policy available online at <https://www.ontario.ca/page/species-risk-overall-benefit-permits>. Please note: any reference to MNR in the diagram is replaced by MECP.



2.0 Roles and Responsibilities

To provide the most efficient service, clients should initiate species at risk screenings and seek information from all applicable information sources identified in this guide prior to contacting Government of Ontario ministry offices for further information or advice.

Step 1: Client seeks information regarding species at risk or their habitat that exist, or are likely to exist, at or near their proposed activity by referring to all applicable information sources identified in this guide.

Step 2: Client reviews and consider guidance on whether their proposed activity is likely to contravene the ESA (see section 3.4 of this guide for guidance on what to consider).

Step 3: Client gathers information identified in the checklist in section 4 of this guide.

Step 4: Client contacts the ministry at SAROntario@ontario.ca to discuss their preliminary screening. Ministry staff will ask the client questions about the main purpose, general methods, timing and location of their proposed activity as well as information obtained about species at risk and their habitat at, or near, the site. Ministry staff will also ask the client for their interpretation of the impacts of their activity on species at risk or their habitat as well as measures the client has considered to avoid any adverse impacts.

Step 5: Ministry staff will provide advice on next steps.

Option A: Ministry staff may advise the client they can proceed with their activity without an authorization under the ESA where the ministry is confident that:

- no protected species at risk or habitats are likely to be present at or near the proposed location of the activity; or
- protected species at risk or habitats are known to be present but the activity is not likely to contravene the ESA; or
- through the adoption of avoidance measures, the modified activity is not likely to contravene the ESA.

Option B: Ministry staff may advise the client to proceed to Phase 1 of the overall benefit permitting process (i.e. Information Gathering in the previous diagram), where:

- there is uncertainty as to whether any protected species at risk or habitats are present at or near the proposed location of the activity; or
- the potential impacts of the proposed activity are uncertain; or
- ministry staff anticipate the proposed activity is likely to contravene the ESA.

3.0 Information Sources

Land Information Ontario (LIO) and the Natural Heritage Information Centre (NHIC) maintain and provide information about species at risk, as well as related information about fisheries, wildlife, crown lands, protected lands and more. This information is made available to organizations, private individuals, consultants, and developers through online sources and is often considered under various pieces of legislation or as part of regulatory approvals and planning processes.

The information available from LIO or NHIC and the sources listed in this guide should not be considered as a substitute for site visits and appropriate field surveys. Generally, this information can be regarded as a starting point from which to conduct further field surveys, if needed. While this data represents best available current information, it is important to note that a lack of information for a site does not mean that species at risk or their habitat are not present. There are many areas where the Government of Ontario does not currently have information, especially in more remote parts of the province. The absence of species at risk location data at or near your site does not necessarily mean no species at risk are present at that location. On-site assessments can better verify site conditions, identify and confirm presence of species at risk and/or their habitats.

Information on the location (i.e. observations and occurrences) of species at risk is considered sensitive and therefore publicly available only on a 1km square grid as opposed to as a detailed point on a map. This generalized information can help you understand which species at risk are in the general vicinity of your proposed activity and can help inform field level studies you may want to undertake to confirm the presence, or absence of species at risk at or near your site.

Should you require specific and detailed information pertaining to species at risk observations and occurrences at or near your site on a finer geographic scale; you will be required to demonstrate your need to access this information, to complete data sensitivity training and to obtain a Sensitive Data Use License from the NHIC. Information on how to obtain a license can be found online at <https://www.ontario.ca/page/get-natural-heritage-information>.

Many organizations (e.g. other Ontario ministries, municipalities, conservation authorities) have ongoing licensing to access this data so be sure to check if your organization has this access and consult this data as part of your preliminary screening if your organization already has a license.

3.1 Make a Map: Natural Heritage Areas

The Make a Natural Heritage Area Map (available online at <https://www.ontario.ca/page/make-natural-heritage-area-map>) provides public access to natural heritage information, including species at risk, without the user needing to have Geographic Information System (GIS) capability. It allows users to view and identify generalized species at risk information, mark areas of interest, and create and print a custom map directly from the web application. The tool also shows topographic information such as roads, rivers, contours and municipal boundaries.

Users are advised that sensitive information has been removed from the natural areas dataset and the occurrences of species at risk has been generalized to a 1-kilometre grid to mitigate the risks to the species (e.g. illegal harvest, habitat disturbance, poaching).

The web-based mapping tool displays natural heritage data, including:

- Generalized Species at risk occurrence data (based on a 1-km square grid),
- Natural Heritage Information Centre data.

Data cannot be downloaded directly from this web map; however, information included in this application is available digitally through Land Information Ontario (LIO) at <https://www.ontario.ca/page/land-information-ontario>.

3.2 Land Information Ontario (LIO)

Most natural heritage data is publicly available. This data is managed in a large provincial corporate database called the LIO Warehouse and can be accessed online through the LIO Metadata Management Tool at <https://www.javacoeapp.lrc.gov.on.ca/geonetwork/srv/en/main.home>. This tool provides descriptive information about the characteristics, quality and context of the data. Publicly available geospatial data can be downloaded directly from this site.

While most data are publicly available, some data may be considered highly sensitive (i.e. nursery areas for fish, species at risk observations) and as such, access to some data maybe restricted.

3.3 Additional Species at Risk Information Sources

- The Breeding Bird Atlas can be accessed online at <http://www.birdsontario.org/atlas/index.jsp?lang=en>
- eBird can be accessed online at <https://ebird.org/home>
- iNaturalist can be accessed online at <https://www.inaturalist.org/>
- The Ontario Reptile and Amphibian Atlas can be accessed online at <https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas>
- Your local Conservation Authority. Information to help you find your local Conservation Authority can be accessed online at <https://conservationontario.ca/conservation-authorities/find-a-conservation-authority/>

Local naturalist groups or other similar community-based organizations

- Local Indigenous communities
- Local land trusts or other similar Environmental Non-Government Organizations
- Field level studies to identify if species at risk, or their habitat, are likely present or absent at or near the site.
- When an activity is proposed within one of the continuous caribou ranges, please be sure to consider the caribou Range Management Policy. This policy includes figures and maps of the continuous caribou range, can be found online at <https://www.ontario.ca/page/range-management-policy-support-woodland-caribou-conservation-and-recovery>

3.4 Information Sources to Support Impact Assessments

- Guidance to help you understand if your activity is likely to adversely impact species at risk or their habitat can be found online at <https://www.ontario.ca/page/policy-guidance-harm-and-harass-under-endangered-species-act> and <https://www.ontario.ca/page/categorizing-and-protecting-habitat-under-endangered-species-act>
- A list of species at risk in Ontario is available online at <https://www.ontario.ca/page/species-risk-ontario>. On this webpage, you can find out more about each species, including where it lives, what threatens it and any specific habitat protections that apply to it by clicking on the photo of the species.

4.0 Check-List

Please feel free to use the check list below to help you confirm you have explored all applicable information sources and to support your discussion with Ministry staff at the preliminary screening stage.

- ✓ Land Information Ontario (LIO)
- ✓ Natural Heritage Information Centre (NHIC)
- ✓ The Breeding Bird Atlas
- ✓ eBird
- ✓ iNaturalist
- ✓ Ontario Reptile and Amphibian Atlas
- ✓ List Conservation Authorities you contacted: _____

- ✓ List local naturalist groups you contacted: _____

- ✓ List local Indigenous communities you contacted: _____

- ✓ List any other local land trusts or Environmental Non-Government Organizations you contacted: _____

- ✓ List and field studies that were conducted to identify species at risk, or their habitat, likely to be present or absent at or near the site: _____

- ✓ List what you think the likely impacts of your activity are on species at risk and their habitat (e.g. damage or destruction of habitat, killing, harming or harassing species at risk): _____

Crystal Ferguson

From: Marks, Jody (MNRF) <Jody.Marks@ontario.ca>
Sent: Wednesday, August 09, 2023 1:53 PM
To: Crystal Ferguson
Cc: ADickieson@centrewellington.ca
Subject: RE: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23
Attachments: 2023_08_09_CentreWellingot_5BridgesMCEA_MNRFResponse.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hello,

Thank you for circulating the Notice of Commencement for the Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington to the Ministry of Natural Resources and Forestry. Please find attached the Ministry's response.

If you have any questions or concerns, please feel free to contact me.

Thank you.

Jody Marks *(her/she)*
Regional Planner
Land Use Planning and Strategic Issues Section | Southern Region |
Ministry of Natural Resources and Forestry (MNRF)
| (249) 733-1376 | jody.marks@ontario.ca



As part of providing accessible customer service, please let me know if you have any accommodation needs or require communication supports or alternate formats.

From: Crystal Ferguson <Crystal.Ferguson@rjburnside.com>
Sent: July 20, 2023 1:14 PM
To: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23 <056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>
Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>; ADickieson@centrewellington.ca
Subject: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Dear Property Owner(s):

Re: Notice of Commencement – Municipal Class Environmental Assessment Study for Five Bridges in Centre Wellington (Former Pilkington Township)

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options for five (5) bridges which are currently closed to vehicular traffic due to their poor condition. The MCEA will consider the role of these bridges in the Township's road network, and their value in connecting points across the community when determining the preferred alternative.

The Township of Centre Wellington has retained R.J. Burnside & Associates Limited to undertake the study. The benefits and impacts of various options for the bridges bridge will be assessed using social, cultural, economic, and ecological criteria. The Study Area is shown in the attached Notice of Commencement.

This MCEA is being carried out in accordance with the planning and design process for Schedule B projects as outlined in the Municipal Engineers Association Municipal Class Environmental Assessment, which is approved under the Ontario Environmental Assessment Act.

The Notice of Commencement for the study has been attached to this letter for your information.

Consultation is an important part of this study. If you have any questions or comments regarding the study, or would like to be included on the mailing list to receive future notices and study updates, please contact one of the Project Team members below:

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.
Consultant Project Manager
R.J. Burnside & Associates Limited
292 Speedvale Avenue West, #20
Guelph ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.



Crystal Ferguson
Environmental Coordinator
R.J. Burnside & Associates
128 Wellington Street West, Suite 301, Barrie, Ontario L4N 8J6
Office: 800-265-9662 Direct Line: +1 705-797-4352
www.rjburnside.com



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Thank you.

Ministry of Natural Resources and Forestry

Land Use Planning and Strategic Issues
Section
Southern Region

Regional Operations Division
300 Water Street
Peterborough, ON K9J 3C7

Ministère des Richesses naturelles et des Forêts

Section de l'aménagement du territoire et des
questions stratégiques
Région du Sud

Division des opérations régionales
300, rue Water
Peterborough (ON) K9J 3C7



August 9, 2023

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora ON N0B 1S0
adickieson@centrewellington.ca

**SUBJECT: Notice of Commencement – Municipal Class Environmental Assessment
Study for Five Bridges in Centre Wellington (Former Pilkington Township)**

The Ministry of Natural Resources and Forestry (MNRF) received the Notice of Commencement on July 20, 2023. Thank you for circulating this to our office. Please note that we have not completed a screening of natural heritage or other resource values for the project at this time. This response, however, does provide information to guide you in identifying and assessing natural features and resources as required by applicable policies and legislation, as well as engaging with the Ministry for advice as needed.

Please also note that it is the proponent's responsibility to be aware of, and comply with, all relevant federal or provincial legislation, municipal by-laws or other agency approvals.

Natural Heritage

MNRF's natural heritage and natural resources GIS data layers can be obtained through the Ministry's [Land Information Ontario \(LIO\)](#) website. You may also view natural heritage information online (e.g., Provincially Significant Wetlands, ANSI's, woodlands, etc.) using the [Make a Map: Natural Heritage Areas](#) tool.

We recommend that you use the above-noted sources of information during the review of your project proposal.

Natural Hazards

A series of natural hazard technical guides developed by MNRF are available to support municipalities and conservation authorities implement the natural hazard policies in the Provincial Policy Statement (PPS). For example, standards to address flood risks and the potential impacts and costs from riverine flooding are addressed in the *Technical Guide River and Stream Systems: Flooding Hazard Limit (2002)*. We recommend that you consider these technical guides as you assess specific improvement projects that can be undertaken to reduce the risk of flooding.

Petroleum Wells & Oil, Gas and Salt Resources Act

There may be petroleum wells within the proposed project area. Please consult the Ontario

Oil, Gas and Salt Resources Library website (www.ogsrlibrary.com) for the best-known data on any wells recorded by MNRF. Please reference the 'Definitions and Terminology Guide' listed in the publications on the library website to better understand the well information available. Any oil and gas wells in your project area are regulated by the *Oil, Gas and Salt Resource Act*, and the supporting regulations and operating standards. If any unanticipated wells are encountered during development of the project, or if the proponent has questions regarding petroleum operations, the proponent should contact the Petroleum Operations Section at POSRecords@ontario.ca or 519-873-4634.

Fish and Wildlife Conservation Act

Please note, that should the project require:

- The relocation of fish outside of the work area, a Licence to Collect Fish for Scientific Purposes under the *Fish and Wildlife Conservation Act* will be required.
- The relocation of wildlife outside of the work area (including amphibians, reptiles, and small mammals), a Wildlife Collector's Authorization under the *Fish and Wildlife Conservation Act* will be required.

Public Lands Act & Lakes and Rivers Improvement Act

Some Project may be subject to the provisions of the *Public Lands Act* or *Lakes and River Improvement Act*. Please review the information on MNRF's web pages provided below regarding when an approval is, or is not, required. Please note that many of the authorizations under the *Lakes and Rivers Improvement Act* are administered by the local Conservation Authority.

- For more information about the *Public Lands Act*: <https://www.ontario.ca/page/crown-land-work-permits>
- For more information about the *Lakes and Rivers Improvement Act*: <https://www.ontario.ca/page/lakes-and-rivers-improvement-act-administrative-guide>

After reviewing the information provided, if you have not identified any of MNRF's interests stated above, there is no need to circulate any subsequent notices to our office. If you have identified any of MNRF's interests and/or may require permit(s) or further technical advice, please direct your specific questions to the undersigned.

If you have any questions or concerns, please feel free to contact me.

Best Regards,



Jody Marks
Regional Planner
Land Use Planning and Strategic Issues Section – Southern Region
Ministry of Natural Resources and Forestry

Township of Centre Wellington 5 Bridges in Former Pilkington Township Environmental Assessment Study

Public Information Centre #1

**Narrated Presentation posted Online
September 6, 2023**



Hello, and Welcome to the first public information centre for the Township of Centre Wellington's Environmental Assessment Study for the 5 Bridges in former Pilkington Township.

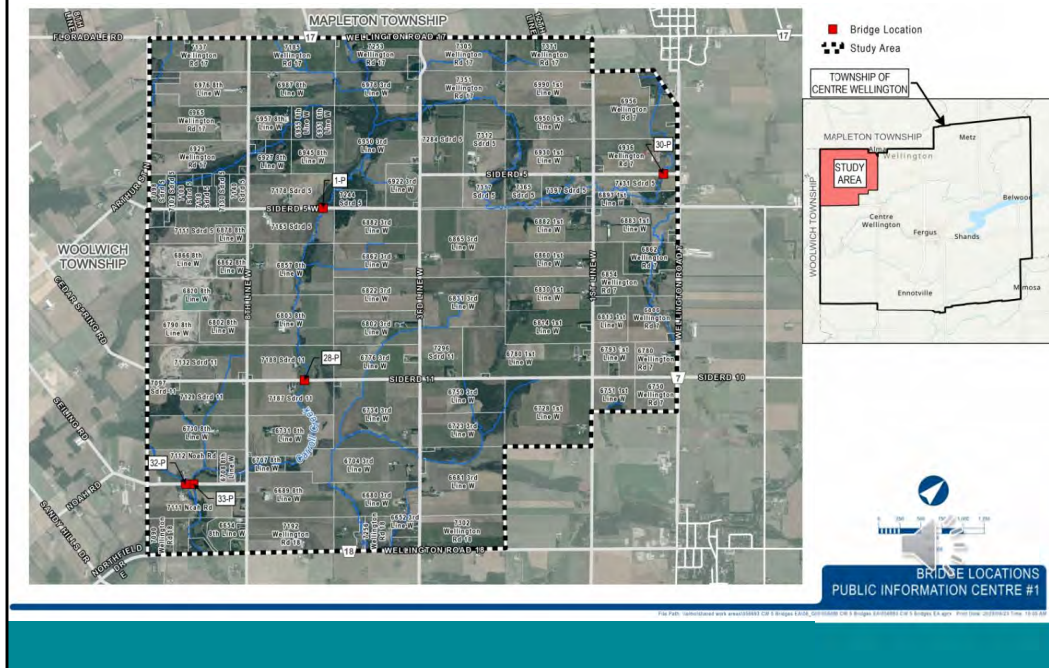
My name is Andrew Dawson, I am a professional Engineer with R.J. Burnside & Associates Limited, also known as "Burnside". Burnside is the consulting engineering company that has been selected by the Township of Centre Wellington to work with the Township and the community on this bridge study. Burnside will be presenting this PIC on behalf of the Township of Centre Wellington.

Thank you in advance for your time to review this PIC. We appreciate your interest in the project, as consultation with the community is a very important aspect of the Environmental Assessment study process.

- Project Study Area Overview
- Municipal Class EA Process
- Problem / Opportunity Statement
- Review of Current Structures
- Cultural Heritage Assessment Findings
- Alternative Solutions
- Evaluation Criteria
- Next Steps



During this PIC, we will be presenting background information of the proposed study area, information regarding the Municipal Class Environmental Assessment process, details regarding the current state of the existing bridges, some preliminary study findings, a preliminary list of solutions to be considered, how they options will be evaluated, and what steps follow after this PIC.



Lets start with defining the WHERE for this study:

We will review each structure in more detail shortly. For now, lets discuss the study area as a whole.

The overview map shown here outlines the limits of the study area, and highlights the location of the bridge locations in red.

The study area is located in the northwest quadrant of the Township of Centre Wellington, adjacent the boundary lines with Mapleton Township and Woolwich Township. This area is in Ward 1 of the Township of Centre Wellington, and was formerly part of Pilkington Township, prior to the Amalgamation in 1999.

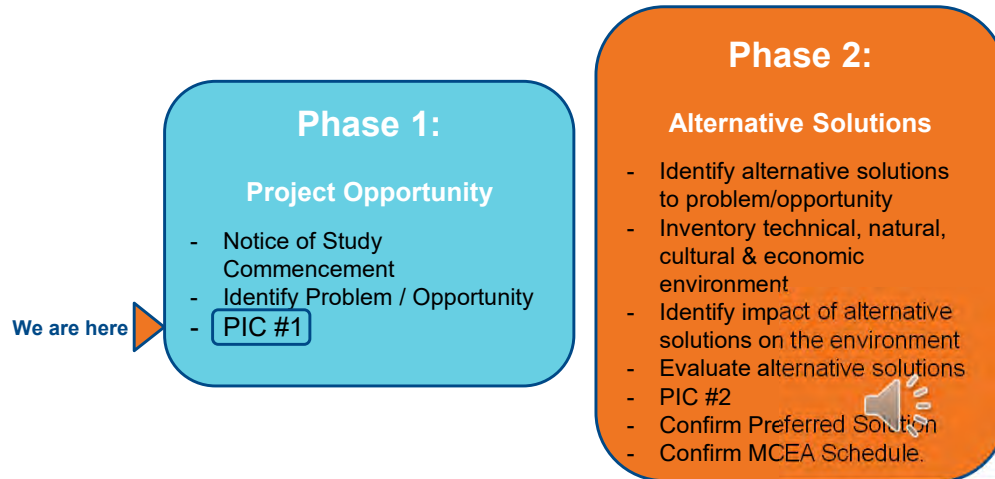
The 5 bridges being assessed under this EA are located on Sideroads 5, 5 West, 11 and Noah Road. Bridges 32-P and 33-P are located in very close vicinity to one another and, as such, will be considered a single “site” for this study.

These 5 bridges service a Rural community which is home to agricultural, residential, and commercial properties. The network of roads within the study area carry motorized and horse drawn vehicles and connects the community to the neighbouring Towns of Alma, Salem, Elora and Fergus.

Sideroad 5, 5 West , 11 and Noah Road are all considered to be low volume roads, with an average of less than 200 vehicles per day travelling on these roads based on the most recent 2021 study.

The study area is also noted to be outside of the future residential growth nodes of the Township’s Transportation Master Plan

- The MCEA process is built on a framework of Environmental Protection, Effective Consultation & Traceable Decision Making.
- This Project is considered a Schedule 'B' Project and requires Phase 1 & Phase 2 of the MCEA process be conducted, as outlined below:



Now, let's discuss WHAT this study is:

This study is a Municipal Class Environmental Assessment. But what exactly does that mean?

Firstly, you will often hear the Municipal Class Environmental Assessment referred to as the MCEA - or even more simply - the EA

The EA process is built on a framework of Environmental Protection, Effective Consultation and Traceable Decision Making.

It is used to engage with the community and other stakeholders, such as ministries, first nations, conservation authorities, etc. to consider and review a number of potential alternatives, with due consideration of the impacts that they could have on the natural, social, cultural and economic environments.

There are several different scales of EA's, based on what the project entails. This project is considered to be what is called a "Schedule B" project. What that means is this study will consist of 2 phases, as outlined in this slide. Phase 1 will identify the Project Opportunity and phase 2 will identify a number of alternatives that could solve that problem - and then evaluate them to determine a preferred alternative.

As previously mentioned, public consultation is a very important aspect of the EA process. Throughout the EA, the public will be provided with several opportunities to provide comment on this study. This first PIC is one of those opportunities. This PIC is part of the first phase, in helping define and understand the project opportunity. This Public Information Centre will provide you with background information regarding the project, so that you can provide comments and recommendations on how you may

be impacted by decisions made regarding the future plans for these structures. Your opinions are important will help identify potential solutions and decision making in phase 2 of the study.

Phase 2 of this study will begin following this PIC and will involve a series of studies to be conducted within the project area. These include traffic studies, studies of the environment, cultural and heritage studies, and so on. We will then confirm the list of potential solutions to be considered that will help address the problem statement for this study, and then evaluate these potential solutions, using the information gathered to determine what will be considered the “preliminary preferred solution”. Once a “preliminary preferred solution” is selected, we will hold another Public Information Centre to share our findings and explain how we arrived at the preliminary preferred solution. During this second PIC, you will once again be provided the opportunity to consult with the Project Team and provide comments on the preferred solution and any other components of the decision making process for our further consideration.

Following PIC No. 2, the consultations with all stakeholders will once again be reviewed, and the final preferred solution will be selected.

All consultation and decision making will be formalized through an official report. A notice regarding the completion of the study will be provided and a final, formal, 30-day public review period will be provided for final comments.

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28 P, 30 P, 32 P & 33 P) that are located within a twenty square kilometre (20 km²) area of road networks and are currently closed to vehicular traffic due to their deteriorated state. This study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.



So WHY is this study being complete?

As previously mentioned, the first step of Phase 1 of the EA Process is to define the problem or opportunity. The problem/opportunity statement for this study is as follows:

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28 P, 30 P, 32 P & 33 P) that are located within a twenty square kilometre (20 km²) area of road networks and are currently closed to vehicular traffic due to their deteriorated state. This study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

We will now review each of the bridge locations to further understand this problem / opportunity statement

- 📍 Sideroad 5, Between 8th Line W & 3rd Line W
- ✂️ Constructed circa 1925
- 🚫 Closed to Traffic: 2004
- 🏗️ Steel Truss Superstructure (Removed in 2019)



Bridge 1-P is located on Sideroad 5, between 8th Line West and 3rd Line West. The original structure was a steel truss, with an estimated construction date of around 1925.

The structure was closed in 2004, based on the recommendation of structural engineer, due to its severe deterioration and limited load carrying capacity. In 2019, the bridge was removed. As shown in the photo on this slide, only portions of the existing concrete abutments still remain.

- 📍 Sideroad 11, Between 8th Line W & 3rd Line W
- ✂️ Constructed circa 1925
- 🚫 Closed to Traffic: 2006
- 🏗️ Concrete T-Beam







Bridge 28-P is located on Sideroad 11, Between 8th Line West & 3rd Line West. The structure is a Concrete T-Beam structure, which is estimated to have been constructed around 1925 as well.

The driving platform width of the structure is narrow and considered a single lane bridge.

As visible in this photo, the existing concrete is severely deteriorated. This deteriorated concrete has a significantly reduced capacity, as is evident by the several large cracks, missing barriers and exposed reinforcing steel. The top of the wingwalls have failed, causing loss of fill on the approaches to the bridge as well.

As a result of the poor state of the concrete and reduced capacity, the structure is considered to be beyond a repairable state, and the structure was closed in 2006,

-  Sideroad 5, West of Wellington Road 7
-  Constructed circa 1929
-  Closed to Traffic: 2016
-  Concrete Through Girders



Structure 30-P is located on Sideroad 5, just west of Wellington Road 7 and was constructed in 1929.

This structure is a Concrete Through Girder bridge, which means that the large solid 'railing' over the bridge actually acts as the main load carrying element.

Severe deterioration with loss of concrete and exposed embedded reinforcing steel in a severely corroded state provided reasoning for closure of the structure in 2016, as per the recommendation of a structural engineer. Based on the severity of the deterioration, repair of this structure is not considered a feasible option.

This bridge also has a narrow, single lane driving platform width.

- 📍 Noah Road, 0.75km West of 8th Line W
- ✂️ Constructed circa 1922
- 🚫 Closed to Traffic: 2015
- 🏗️ Concrete T-Beam



Bridge 32-P is located on Noah Road, West of 8th Line West. This bridge is approximately 100 m west of Bridge 33-P, and the two structures will be considered as one site for the purpose of this EA.

This is another Concrete T-Beam structure, with a narrow, single lane driving platform width. The structure was constructed in 1922 and closed to traffic in 2015 due to the severely deteriorated concrete on the T-beam elements, which significantly reduces the load carrying capacity of these main load carrying elements. Due to the significant amount of deteriorated concrete on the bridge, this structure would also not be considered a valuable candidate for rehabilitation.

- 📍 Noah Road, 0.65km West of 8th Line W
- ✂️ Constructed circa 1926
- 🚫 Closed to Traffic: 2015
- 🏗️ Concrete T-Beam



Bridge 33-P is located just east Bridge 32-P on Noah Road.

Similar to 32-P, it is also a Concrete T-Beam structure, with a narrow, single lane driving platform width. The structure was constructed in 1926 and closed to traffic in 2015 – again, due to the severe deterioration and failing concrete elements, such as the wingwall shown in the left photo. This structure would also not be considered a valuable candidate for rehabilitation.

It is noted that the preferred solutions for Bridge 32-P and 33-P will be the same due to their close proximity.

Cultural Heritage Assessments have been completed by sub-consultant Parslow Heritage Consultancy Inc. (PHC) on the 5 bridges as part of the MCEA studies.

Study Findings:

- None of the bridges were identified to fulfill the requirements of the Ontario Heritage Act for Designation
- None of the bridges meet the 60-point threshold for heritage value using MTO bridge assessment standards
- Bridges contribute to the rural agricultural landscape of the Township

Study Recommendations:

- No further heritage reports are required for any of the five bridges
- Any replacement structures be designed to reflect the existing design of the bridge with an attempt to incorporate unique designs into the replacement
- Documentation of each structure be deposited in a local publicly accessible repository prior to any removals

As part of the background review of the existing structures, a Cultural Heritage Assessment was completed on all 5 bridges. The purpose of this study is to review relevant historical documents, evaluate the potential for cultural heritage value or interest, identify any cultural heritage resources and provide recommendations for each bridge.

This evaluation uses provisions of the Ontario Heritage Act and the County of Wellington's Official Plan to determine if the structures are of cultural heritage significance.

The study found that none of the 5 bridges were identified to fulfill the requirements of the Ontario Heritage Act for Designation – nor did any of them meet the 60-point threshold for heritage value under MTO's assessment standards. As such, none of the 5 bridges are candidates for formal heritage protection under the Act. However, it was recognized that these structures contribute to the rural agricultural landscape of the Township.

Accordingly, the study recommends that no further heritage reports are required for the bridges and that, if the structures are to be removed, documentation of the bridges should be deposited in a local, publicly accessible repository. It is noted that structure 1-P was documented prior to its removal and these records are considered to fulfill the record keeping recommendations.

For bridges that are to be replaced, the study recommends that the design of the replacement structure reflect the original bridge, with an attempt to incorporate any unique features of the original design.



Centre
Wellington

Alternative Solutions



BURNSIDE

To address the Problem/Opportunity Statement, the following preliminary Alternative Solutions will be considered and evaluated after appropriate studies and consultations have been completed:

Alternative 1: Do Nothing

Leave the existing structures in their current deteriorating state and continue to restrict public use.

Alternative 2: Remove Structure and Create Formal Turn-Around

Removal of existing bridge and construction of new turn-around areas on each side of the structures.

Alternative 3: Rehabilitate Existing Structure

Complete repairs to the existing structure to meet engineering and public safety standards and re-open the structure, if achievable.

Alternative 4: Replacement of Structure

Full removal of the existing bridge and replacement with a new bridge in the current location. Consideration will be given to full capacity two-lane bridge replacements, as well as low-volume bridges with limited load or traffic capacities



For the purpose of discussions and promoting comments as part of this PIC, this slide presents the preliminary list of alternative solutions to be considered for each of the bridge sites as part of the EA process.

The alternatives are as follows:

Do Nothing – which would involve taking no action and leaving the existing structures in their current state.

Removal of the structure and construction of a formal turn-around area on each side of the structure

Rehabilitation of the Existing Structure – which would involve repairing the existing bridges to bring them up to current engineering and public safety standards.

However, as discussed during the review of the structures, this option would not be considered feasible for any of these structures due to their advanced state of deterioration, narrow widths and limited load capacities.

Replacement of the structure – which would involve the full removal of the existing bridge and replacement with a new structure. As part of this alternative, considerations will be given to the required level of service for each structure, to determine if full-capacity two-lane bridges would be required, or if bridges with limited capacities could be considered.

It is important to note that the undertaking of this study DOES NOT mean that replacement of ANY or ALL of these structures will be the preferred solution.

Similarly, it DOES NOT mean that the preferred solution for ANY or ALL of these structures will be removal. The purpose of this EA is to evaluate all potential solutions

and select based on a qualitative and quantitative analysis.



To determine the preferred solutions for these bridges, Burnside will evaluate the alternatives against several criteria related to technical aspects, the natural environment, social and cultural environment, and economic impacts. In order to conduct these evaluations, Burnside will first conduct desktop studies and field investigations during Phase 2 of the study to prepare an inventory of the natural, social, built and economical environment within the study area. The studies will include, but are not limited to:

- Cultural Heritage Evaluation to determine any potential significance of the structures – as previously reviewed
- traffic studies regarding the impacts with bridges open versus closed
- ecological studies to identify aquatic and terrestrial habitats or any species at risk that could be impacted by the works
- tree inventories to evaluate the potential impact of alternatives on existing vegetation
- Community Consultations such as these PIC's and ongoing information sharing through online platforms or ongoing communications
- Cost evaluations

The magnitude of positive or negative impacts of each alternative will be weighed, and the ability to mitigate these impacts will be considered in determining the preliminary recommended solution. These findings will be presented to the Public during the next PIC.



Burnside and the Township will continue to consult with agencies and stakeholders as we work to evaluate and recommend a preferred solution for the bridges. This slide outlines the steps and approximate timelines following this PIC. The information gathered from this PIC and the upcoming field studies will formulate the path forward and through phase 2 of the EA process.

As previously mentioned, an additional PIC will be held upon the selection of the preliminary preferred alternative to allow the public to comment further on the preferred alternative selection.

A final Project File Report will be filed in the Spring of 2024, at which point the Notice of Study Completion will be circulated and the 30 Day Public Review period will be provided.

We want to hear from you!

Invitation for Participation

You are invited to provide comments by submission via the Township's Connect CW website (from Sept 6th to 15th, 2023) or by emailing one of the Project Team members below by October 4th, 2023:

www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora, ON N0B 1S0
Tel: 519-846-9691 ext. 355
adickieson@centrewellington.ca

Andrew Dawson, P.Eng
Consultant Project Manager
R. J. Burnside and Associates Limited
292 Speedvale Avenue West, Unit 20
Guelph, ON N1H 1C4
Tel: 705-797-4310
andrew.dawson@rjburnside.com



That brings us to the end of the PIC.

As we have noted several times, public consultation is an important aspect of this study. As such, we welcome any comments regarding this study to be submitted to the Project Team contacts. There will be a forum open on the Connect CW website from September 6th to 15th to submit comments related to this PIC. Alternatively, please feel free to send comments to the contacts listed in this slide before October 4th.

We appreciate your time and interest in this project and we look forward to receiving your comments!

Township of Centre Wellington

5 Bridges in Former Pilkington Township

Environmental Assessment Study

Public Information Centre #1

Presentation Boards

September 6, 2023

Bethel Mennonite Church, Township of Centre Wellington

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28 P, 30 P, 32 P & 33 P) that are located within a twenty square kilometre (20 km²) area of road networks and are currently closed to vehicular traffic due to their deteriorated state. This study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

- The MCEA process is built on a framework of Environmental Protection, Effective Consultation & Traceable Decision Making.
- This Project is considered a Schedule 'B' Project and requires Phase 1 & Phase 2 of the MCEA process be conducted, as outlined below:

Phase 1:

Project Opportunity

- Notice of Study Commencement
- Identify Problem / Opportunity
- **PIC #1**

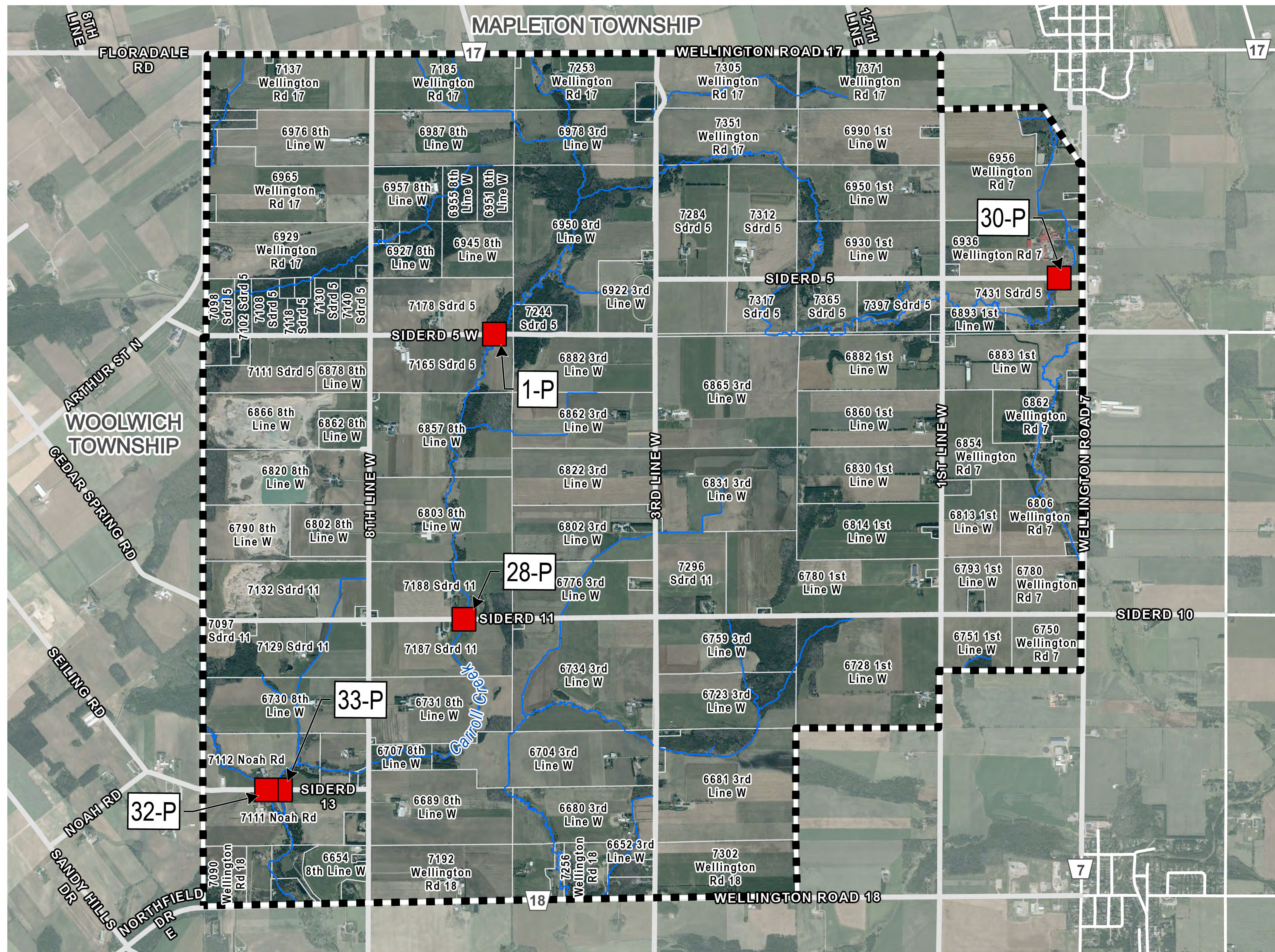
We are here


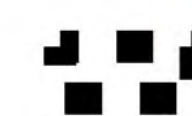


Phase 2:

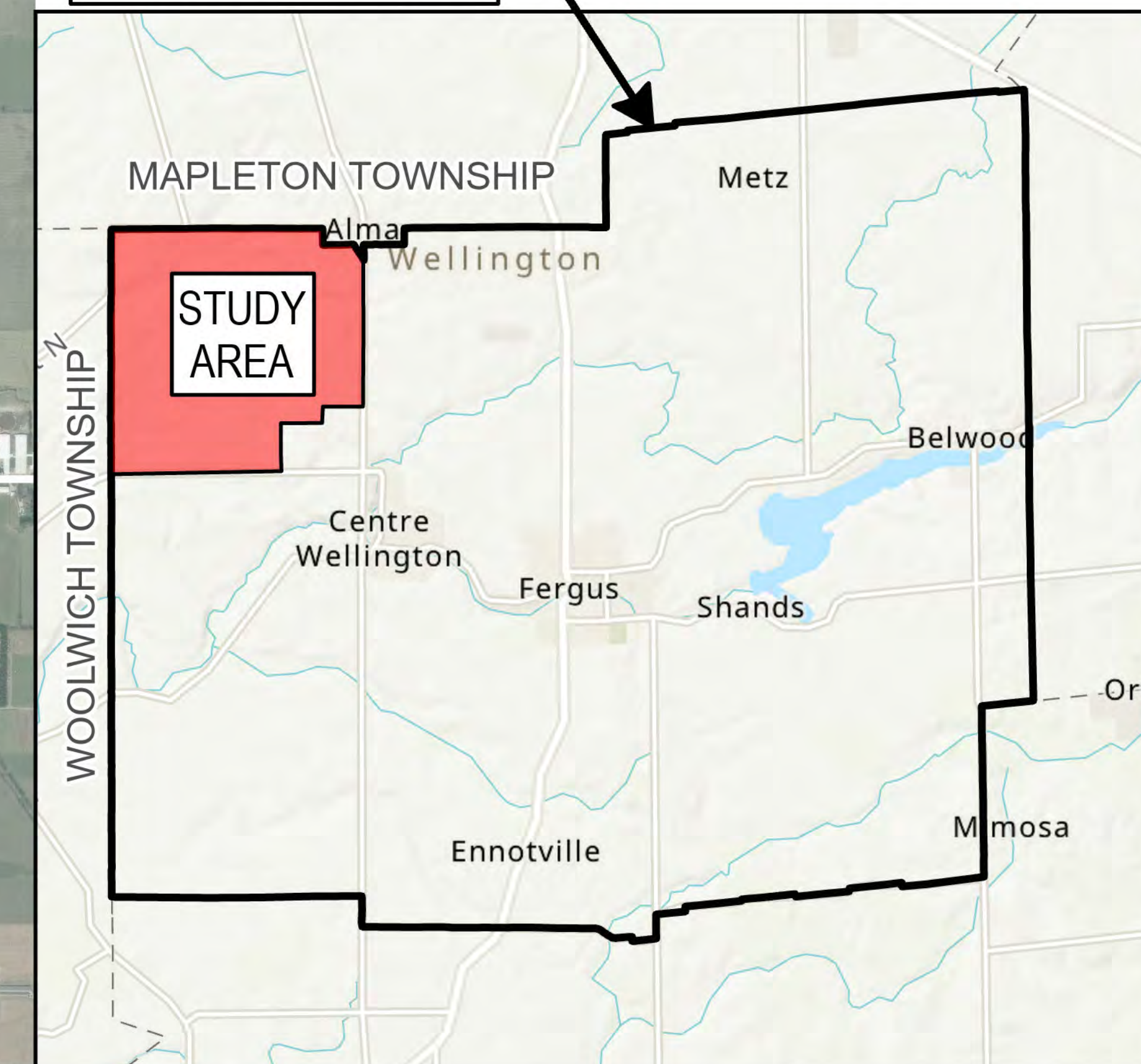
Alternative Solutions

- Identify alternative solutions to problem/opportunity
- Inventory technical, natural, cultural & economic environment
- Identify impact of alternative solutions on the environment
- Evaluate alternative solutions
- **PIC #2**
- Confirm Preferred Solution
- Confirm MCEA Schedule.



 Bridge Location
 Study Area

TOWNSHIP OF
CENTRE WELLINGTON



0 250 500 750 1,000 1,250
Metres
1:30,000





BRIDGE LOCATIONS
PUBLIC INFORMATION CENTRE #1

- 📍 Sideroad 5, Between 8th Line W & 3rd Line W
- 🔧 Constructed circa 1925
- 🚫 Closed to Traffic: 2004
- 🏗️ Steel Truss Superstructure (Removed in 2019)



- 📍 Sideroad 11, Between 8th Line W & 3rd Line W
- 🔧 Constructed circa 1925
- 🚫 Closed to Traffic: 2006
- 🏠 Concrete T-Beam



-  Sideroad 5, West of Wellington Road 7
-  Constructed circa 1929
-  Closed to Traffic: 2016
-  Concrete Through Girders



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- 🔧 Constructed circa 1922
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- 🏠 Concrete T-Beam



- 📍 Noah Road, 0.65km West of 8th Line W
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To address the Problem/Opportunity Statement, the following preliminary Alternative Solutions will be considered and evaluated after appropriate studies and consultations have been completed:

Alternative 1: Do Nothing

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Full removal of the existing bridge and replacement with a new bridge in the current location. Consideration will be given to full capacity two-lane bridge replacements, as well as low-volume bridges with limited load or traffic capacities.



Structural / Technical

- Safety / Traffic Operations
- Construction Staging / Duration
- Extension of Service Life



Natural Environment

- Environmentally Sensitive Areas
- Wildlife Habitats
- Fisheries/Aquatic Habitat
- Species at Risk



Social & Cultural Environment

- Socio-Economic Conditions
- Archaeological, Built Heritage & Cultural Heritage Features
- Construction Impacts
- Community Input



Economic

- Capital Costs
- Operational and Maintenance Costs

Cultural Heritage Assessments have been completed by sub-consultant Parslow Heritage Consultancy Inc. (PHC) on the 5 bridges as part of the MCEA studies.

■ Study Findings:

- None of the bridges were identified to fulfill the requirements of the Ontario Heritage Act for Designation
- None of the bridges meet the 60-point threshold for heritage value using MTO bridge assessment standards
- Bridges contribute to the rural agricultural landscape of the Township

■ Study Recommendations:

- No further heritage reports are required for any of the five bridges
- Any replacement structures be designed to reflect the existing design of the bridge with an attempt to incorporate unique designs into the replacement
- Documentation of each structure be deposited in a local publicly accessible repository prior to any removals



We want to hear from you!

Invitation for Participation

You are invited to provide comments by completing a comment sheet and submitting it to the comment box today or emailing one of the Project Team members below by October 4th, 2023:

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora, ON N0B 1S0
Tel: 519-846-9691 ext. 355
adickieson@centrewellington.ca

Andrew Dawson, P.Eng
Consultant Project Manager
R. J. Burnside and Associates Limited
292 Speedvale Avenue West, Unit 20
Guelph, ON N1H 1C4
Tel: 705-797-4310
andrew.dawson@rjburnside.com

The display boards will be available on the project webpage after the PIC.




Centre Wellington

Public Information Centre #1 for Municipal Class Environmental Assessment
for Bridges 1-P, 28-P, 30-P, 32-P & 33-P

Sign-in Sheet (Please Print)

Public Information Centre – September 6, 2023, 6:00 p.m. – 8:00 p.m.
Bethel Mennonite Church, 6772 8th Line W., Elora ON N0B 1S0



| Name Please Print | Organization | Mailing Address (incl. Postal Code) Please Print | Phone Number/ E-mail | Do you wish to be on the  mailing list? Y/N |
|----------------------|--------------|--|-------------------------|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. Except for personal information (e.g., name, address, phone number), all comments will become part of the public record that is available to the general public.

Project information will be made available in an alternative format upon request in accordance with the *Accessibility Standard for Information and Communication under the Accessibility for Ontarians with Disabilities Act, 2005*.



Sign-in Sheet (Please Print)

Public Information Centre – September 6, 2023, 6:00 p.m. – 8:00 p.m.
Bethel Mennonite Church, 6772 8th Line W., Elora ON N0B 1S0



| Name Please Print | Organization | Mailing Address (incl. Postal Code) Please Print | Phone Number/ E-mail | Do you wish to be on the mail mailing list? Y/N |
|----------------------|--------------|--|-------------------------|---|
| | | | | |

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. Except for personal information (e.g., name, address, phone number), all comments will become part of the public record that is available to the general public.

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Centre Wellington

Public Information Centre #1 for Municipal Class Environmental Assessment
for Bridges 1-P, 28-P, 30-P, 32-P & 33-P

Sign-in Sheet (Please Print)

Public Information Centre – September 6, 2023, 6:00 p.m. – 8:00 p.m.
Bethel Mennonite Church, 6772 8th Line W., Elora ON N0B 1S0



| Name Please Print | Organization | Mailing Address (incl. Postal Code) Please Print | Phone Number/ E-mail | Do you wish to be on the TMP mailing list? Y/N |
|----------------------|--------------|--|-------------------------|--|
| | | | | |

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Public Information Centre #1
Municipal Class Environmental
Assessment
Bridges 1-P, 28-P, 30-P, 32-P & 33-P



Comment Sheet

Name

Public Information Centre

Address

Time: 6:00pm – 8:00pm

Postal Code

Location: Bethel Mennonite
Church, 6772 8th Line W., Elora
ON N0B 1S0

Phone

Email

Comments/Questions/Suggestions (additional space on second page).

Bridge 33P replace with ^{new} 2 lane bridge ^{strong enough for 90 000 lbs trucks}
wide enough for farmers to cross with
wide farm machinery (current one is too narrow)
Bridge 32P eliminate!! spend an
afternoon with a backhoe in the pasture
and drain the brook into Carroll Creek
700 ft upstream approx cost \$1000
(savings \$3000000)
Bridge 28P replace with new structure
farmers need to access their land

All bridges are creating situations ~~where~~ ^{where}
emergency personnel can't reach destinations
I have personally seen an ambulance (lights flashing) ^{over} →

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ON N0B 1S0**

Phone:

Email:

Comments/Questions/Suggestions (additional space on second page):

Noah Rd has been a main route for our family almost all my life
for farm equipment moving to and from my brothers and myself with
farms both sides of the bridges

The road was always the access route.

Our experience has been that many GPS direct
vehicles in from Eighth Line to the closed bridges A truck trying
to get back on Eighth Line in reverse is a traffic hazard. Comments
about "not paying our prop tax do happen". The route to get to our
property now is through Woolwich township but who gets our prop tax?
A new bridge should be min. 24 ft wide & 40 ton. The smaller
stream could easily be routed to Carrull creek before crossing the
road. 1 bridge & a million dollars eliminated! Alternatively a large
culvert could handle that stream. 90-100 yrs ago they built many
similar bridges in 10 yrs time. Look at all the equipment we have now but can't replace
these bridges in a similar time frame.

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Bridge 28 P should also be replaced. That would
be a good farm equipment route crossways through the
township by passing bigger county roads

Please complete this Comment Sheet and submit to one of the Study Team member
below on or before **October 4, 2023**.

Your input and comments are appreciated.

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
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519-846-9691 x 355
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Comments/Questions/Suggestions (additional space on second page)

First of all thank you for the invitation.

Please replace bridge 32 & 33 p and bridge 30 p

*Bridge 28 p has a private bridge a 1 P is pointed to
as the road only has 3 residences.*



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- the bridges that affect us are ^{32 P} 33 P, and we would like to see the replacement of the structures. We farm in both Woodwich and Wellington and equipment is taken between properties; + with the bridges out it is a huge inconvenience.
- Also, of concern is emergency services being hindered by being inaccessible.
- Other services - snow removal, garbage, grading etc do double duty + use private drives to turn around.
- Private citizens shouldn't have to build alternative to something a municipality should be responsible for, awaiting something being built - WE PAY TAXES too
- focus on the rural - don't spend all money in ELORA

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Centre Wellington

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Bridges 1-P, 28-P, 30-P, 32-P & 33-P**



BURNSIDE

Comment Sheet

Public Information Centre

Add

Time: 6:00pm – 8:00pm

Postal

**Location: Bethel Mennonite
Church, 6772 8th Line W., Elora
ON N0B 1S0**

P

Comments/Questions/Suggestions (additional space on second page):

My family and I live on sideroad 5 and have been in the area for almost 2 decades. We would love to see bridge 1-P be re-investigated into putting something new in to allow passage over the river again. We personally love to use that stretch of road for walks, runs, biking, and outdoor excursions with family & friends, and But, the removal of the previous truss bridge made it more difficult to cross. Instead, we have utilized a baver dam about 100 ft down stream, yet it is not safe, especially when there is high rainfall. My brother and father particularly love this road since it is off the "higher traffic" of the 8th line, making hikes and running safer as there are very few cars using this section of the road. We would be interested in adding maybe a foot bridge, as it is lower cost, and allows safer passage. However, a full bridge is also very useful as farming equipment is already just driving through the river

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despite the downward bridge. ~~The~~ A new bridge here could help reduce pollution in the water, and provide a crossing for these farming vehicles. Yes, the road from the bridge up to the 8th line is in rough shape, so maybe the full bridge would be impractical, in which case, we would appreciate you considering a smaller foot/1 lane bridge instead. Also, living in the area for so long, the bus routes used to be faster for the local kids (including me) getting home. However, the closure of each bridge has made bus routes increasingly lengthy (personally my rides lasted 45-60 min one way). For this reason, we would still love to see one of the side road bridges like 28-P be re-opened. It helps local traffic navigate between the numerous families without driving all the way up or down to Wellington Road 18/17.

Please complete this Comment Sheet and submit to one of the Study Team member below on or before **October 4, 2023**.

Your input and comments are appreciated.

Adam Dickieson
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Township of Centre Wellington
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BURNSIDE

BRIDGE 1-P

Side Road 5 West between third line and
Eight line

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ON N0B 1S0**

Phone

Email

Comments/Questions/Suggestions (additional space on second page)

- I welcome this initiative. It should have been done the year the bridge was closed. But better late than never
- The closing of this bridge is causing me hardship as I need to go to ELMIRA 2 or 3 times a week. It cost me a lot of money in extra gas!! Compensation???
- As far as I am concerned closing a bridge is not a solution. I live in this village and am entitled to the same services as my neighbours!
- It would only be fair to replace the bridges in the order they were closed!
- If you consider Alternative 1 or Alternative 2, I need to be compensated in form of lower Property Taxes.

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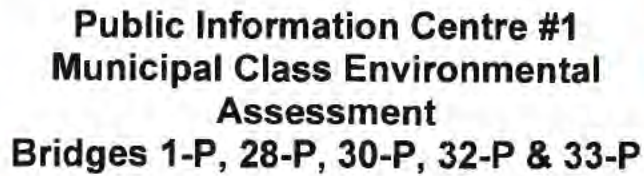
Email

Comments/Questions/Suggestions (additional space on second page):

compline 32-P + 33P 32P is small creek
it could be rerout with 33P or a colvert
trucks come in from 8th Line and have
to back out. traffic hazard

28 P is Farmer's bridge should be
replaced, ~~no~~ needs 15 ft wide for
farm equipment same as 33P,

trucks come in on side road 11
from third Line and have to back out
traffic hazard


BURNSIDE

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Name

Address

Postal Code

Phone

Email

Comments/Questions/Suggestions (add)

I live on Property [redacted] beside 28P and also
have Land Property [redacted] My livestock is all on
home Farm and therefore all my crop has to
come across creek. Also I see alot of ~~car~~ car
or truck traffic from public. My neighbor and
I build a low level bridge beside the
road ~~and~~ a lot of people are using it.
It is a liability for myself and neighbor Brian Sdoernick.
Farmer outside our area use our private bridge
Please build us a public bridge for everyone,



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Comments/Questions/Suggestions (additional)

Bridges on Noah Rd need to
be replaced
Emergency service to clean Horst
is a ~~real~~ huge issue if this
keeps getting pushed off.

We pay taxes we expect to
see a service in return

Whats the ~~same~~ reason for
not getting it done

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Comments/Questions/Suggestions (additional)

About 32P - 33P
As a farmer I cross these bridges 4 times
a day to do chores. We build a bridge beside
for a bandage. Who is responsible if someone
has an accident. We have private signs.
With the welding shop a lot of trucks
turn in North Rd. They can't see the sign
till they already turned so only thing to do
is back out which is high risk. In
case of accident the township should be held
responsible. 32P could be put through a culvert
because we do or take it over into Carrol Creek
on [redacted] making only one bridge to change.
If changed make it two lane. We need 26 feet for
equipment

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Otherwise we have to go on Wellington Rd 18 which is not safe. Traffic is crazy there. Please consider it. It is not right the way country bridge are not fixed. On the flip side. We thank you for repaving 8th line. Would it be nice to have snow removal till the closed bridges. The grader operator did it last year sometimes because we asked him which was nice. The hill is slippery making it dangerous. All bridges but 1-P should be fixed

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Comments/Questions/Suggestions (additional space provided below)

Bridge 1-P would need a lot of work on the side road for me this Bridge is low priority.

Bridge P28 for me is the highest priority. I think we should try hard to get this one into the Budget as soon as possible. I realize we might need a tax increase but when you take this neighborhood's frustration into consideration I think it would make sense.

Bridge 30-P for me is also low priority.

Bridge 32-P, ~~30-P~~, could be rerouted on the west side of side road then we could just put 1 new Bridge in Bridge 33-P.

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Bridge P 32 & Bridge

Bridge P 33 & Bridge 28P were replaced there
would be quite a few happy farmers to get the
crop & local traffic flowing again! Very sad the
farmers had to go out of pocket in the first place
being they had no choice, having land on both sides
of the bridge. Such a shame but I guess better
late than never on replacing a couple of bridges!!



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BURNSIDE

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Comments/Questions/Suggestions (add)

32-P could be eliminated
could be moved to 33-P

33-P install a new bridge

28-P install a new bridge to have
a thru road between Hwy 18 and Hwy 17
to move ag traffic off main roads.

1-P - remove

30-P remove

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Comments/Questions/Suggestions (additional)

In Regards to Bridge 30P.

We Own the

This bridge has been "part of the farm"
until the bridge was ~~deff~~ closed in 2016. Since the bridge
was closed we have not been able to safely access our
land on the corner of without driving our
farm equipment on the hwy. Without the ability to get
up to speed we cause a great safety risk impeding traffic.
- Since the bridge has been closed we have been forced
to enter the farm with our equipment on the hwy vs. turning
down the sideroad and entering our back lane safely.
The geographic landscape of our CR7 access is in a hill,
making it very dangerous and difficult to enter, especially
during rush hours and long weekends.

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- With Sideroad 5 being closed our property has become an easy route for trespassing vehicles, especially Amazon drivers who use our property as their personal thru-way. This is incredibly dangerous for not only us, but anyone that might be walking on our property at the time. We installed gates at the end of our back lane. Only to have Amazon drivers open, drive thru and carry on their way, at speeds over 60km/hr.
- Theft, with the sideroad closed since 2016 this has increased the amount of theft on our property. With this sideroad closed being quiet and unmonitored we became an easy target for: a stolen truck, 2 ATVs, 1000s of litres of fuel and a second truck in 2020.
- The amount of taxes our farm alone has paid in the last 7 years, a great contribution could have gone towards getting our bridge back.

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BRIDGE 32-P IS SUCH A SMALL AMOUNT OF
WATER, IS DIVERTING THE WATER BACK TO
CARROLL CREEK AN OPTION? THEN IT IS
ONLY 1 BRIDGE FOR 33-P

THERE IS 5 FAMILIES THAT SHARE FARMING
THAT HAS TO USE THAT BRIDGE. THEY
BUILT A PRIVATE BRIDGE

WEST OF 32-P + 33-P IS A METAL SHOP
CALLED CREEKBANK WELDING. OFTEN
EMPLOYEES HAVE TO CROSS TO + FROM WORK
PLUS DELIVERY TRUCKS

THERE ARE AT LEAST 2 FAMILIES THAT
NEED TO CROSS FOR SCHOOLING

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28 P

33-P



BURNSIDE

Comment Sheet

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Name:

Address:

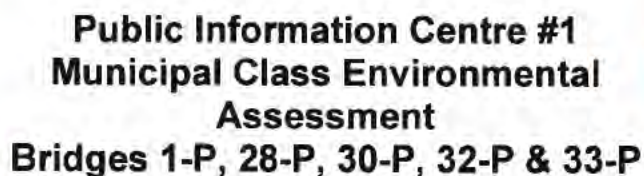
Postal Code:

Phone:

Email:

Comments/Questions/Suggestions (additional space on second page):

regarding ~~28~~ 33 P bridge. It would be fairly easy to
combine the 2 bridges into one. There is a big shop
down by - only across to come in from Marlwich-
does that look right? Bridge 28, if it would be fixed
the farmers would use it alot instead of
going out to County Rd 17 + 18. It is sad
to see all the bridges fall apart. It seems
the farmers are not important anymore.
Thank You for letting us voice our
opinion



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Comments/Questions/Suggestions (additional space on second page).

For public safety, access ... especially during construction and/or detours on major road ways --- and probability that only one bridge will be completed/replaced in the near future --- Bridge #28-P on sideroad 11 should be replaced first.

Bridge # 1-P - access & egress is too steep to maintain --- never had winter maintenance.
-this bridge is very low or no priority

Bridges # 32-P & 33-P on North Road should receive # 2 priority

Bridge # 30-P on sideroad 5 ~~should~~ 3rd priority





**Public Information Centre #1
Municipal Class Environmental
Assessment
Bridges 1-P, 28-P, 30-P, 32-P & 33-P**



- Bridge 28-P - needs to be wide & accommodate
large farming equipment - access & egress should be
less of a grade as feasible.

Please complete this Comment Sheet and submit to one of the Study Team member
below on or before **October 4, 2023**.

Your input and comments are appreciated.

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON, N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.
Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave. W. Unit #20, Guelph
ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. Except for
personal information (e.g., name, address, phone number), all comments will become part of the public record that is available to the
general public.

Project information will be made available in an alternative format upon request in accordance with the *Accessibility Standard for
Information and Communication under the Accessibility for Ontarians with Disabilities Act, 2005*.



Public Information Centre #1
Municipal Class Environmental
Assessment
Bridges 1-P, 28-P, 30-P, 32-P & 33-P



Comment Sheet

Public Information Centre

Time: 6:00pm – 8:00pm

Location: Bethel Mennonite
Church, 6772 8th Line W., Elora
ON N0B 1S0

Name

Address

Postal Code

Phone

Email

Comments/Questions/Suggestions (additional space on second page)

- We live on farm on [redacted] with low bridge crossing
- Was built when road structure was closed to connect with farm land across river
- Have more farmland on other side which makes this useful year round.
- Had railings on low structure but ~~was~~ where sometimes removed for wide equipment by neighbours.
- Was built for farm equipment & local traffic but are seeing more traffic as ~~people~~ ^{time} goes on including some larger trucks also loaded gravel/Salem trucks. This is only road connecting between ~~Elora~~ Rd & Alma Rd. Should be considered for emergency purposes.
- Low structure was built for short term ^{work} last on the long run with traffic use we are seeing now



**Public Information Centre #1
Municipal Class Environmental
Assessment
Bridges 1-P, 28-P, 30-P, 32-P & 33-P**



Comment Sheet

Name

Public Information Centre

Address

Time: 6:00pm – 8:00pm

Postal Code

**Location: Bethel Mennonite
Church, 6772 8th Line W., Elora
ON N0B 1S0**

Phone

Email

Comments/Questions/Suggestions (additional space on second page)

GPS bring truck drivers in from 8th Line W when
delivering to Creekbank Welding. (Fire # 7111 Noah Rd.)
Ignore Road Closed signs and get stuck in winter.
Can't drive farm crops over closed bridges when
helping neighbours.

Put in a culvert for small creek and replace bridge
over Carroll Creek.



**Public Information Centre #1
Municipal Class Environmental
Assessment
Bridges 1-P, 28-P, 30-P, 32-P & 33-P**



Comment Sheet

Name

Public Information Centre

Address

Time: 6:00pm – 8:00pm

Postal Code

**Location: Bethel Mennonite
Church, 6772 8th Line W., Elora
ON N0B 1S0**

Phone

Email

Comments/Questions/Suggestions (additional)

would it be possible to cement creek
Bottom on side road 5
if side road 5 bridge not build big
enough no good to us
we go through creek with combine 30' head

the bridge on road road would benefit us
most

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Township of Centre Wellington 5 Bridges in Former Pilkington Township Environmental Assessment Study

Public Information Centre #2

**Live Presentation
December 6, 2023**

Phase 1: Project Opportunity (Complete)

Notice of Study
Commencement
(July 17, 2023)

Identify
Problem /
Opportunity

Public
Information
Centre #1
(Sept. 6, 2023)

Phase 2: Evaluation of Alternatives

Identify
Alternative
Solutions

Inventory
Environment &
Impacts

Evaluate
Alternatives

Select
Preliminary
Preferred
Alternative



WE ARE HERE

PIC # 2

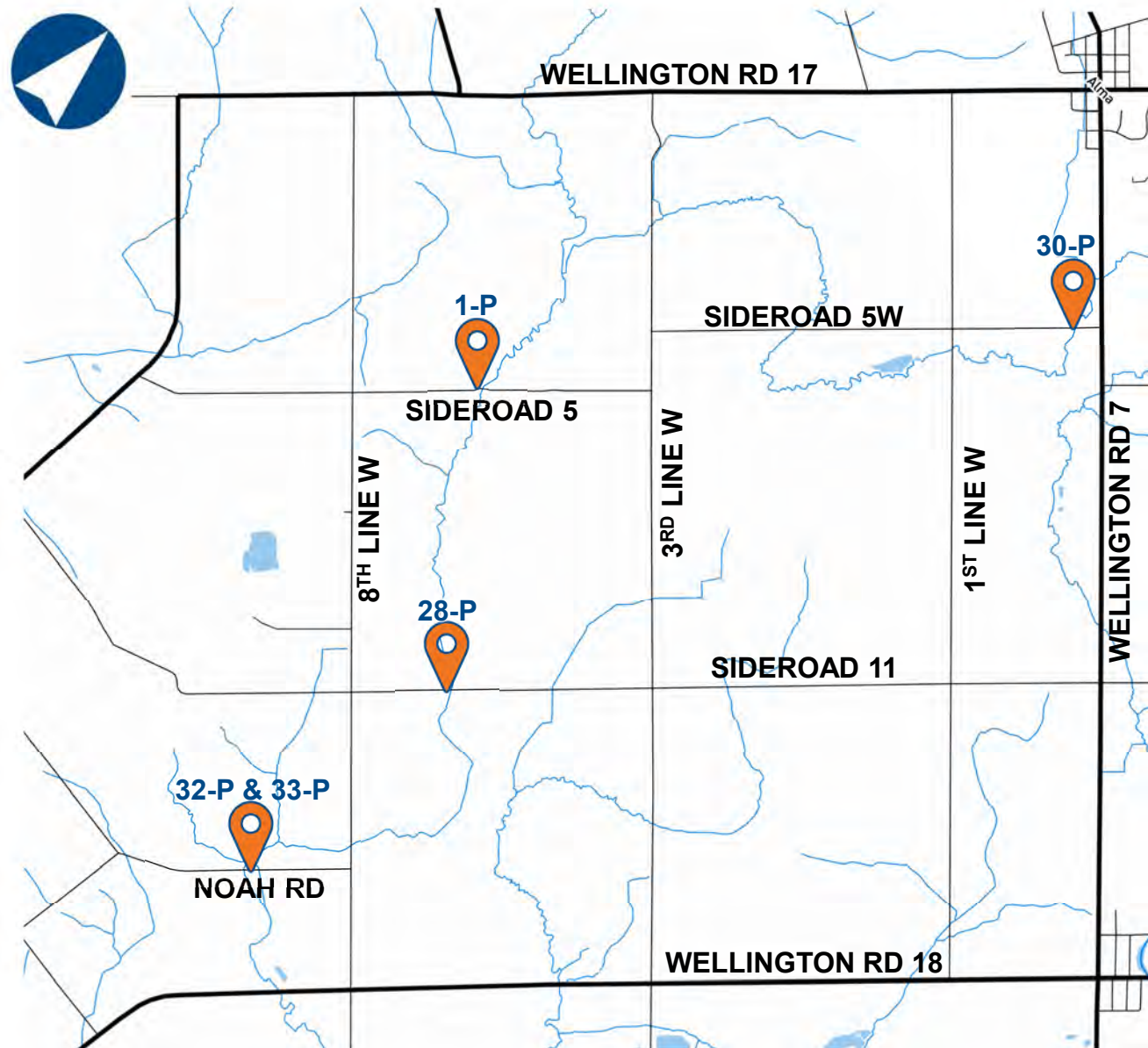
Confirm
Preferred
Alternative

Project File
Report

Notice of
Completion

Public
Review
Period

Project Study Area:



Problems:

- Study Area Population feels 'forgotten' about
- Study Area is lacking an east-west connection
- Slow moving vehicles required to use busy Wellington County roads
- Emergency personnel are experiencing delays in reaching destinations
- Privately constructed infrastructure is being used by the public
- Closures are causing traffic hazards with trucks having to reverse down roads

Opportunities:

- Widen bridges to accommodate farm equipment
- Consider eliminating Bridge 32-P & draining brook into Carroll Creek upstream of bridge 33-P.
- Consider using 'low-level crossings' where possible

Alternatives:

1

DO NOTHING

- Leave the existing structures in their current deteriorating state and continue to restrict public use.

2

REMOVE ALL BRIDGES

- Remove structures to eliminate risk to the public and potential future collapse.

3

REPLACE BRIDGE 28-P

- Remove all other bridges and construct turn-arounds at removed structure locations

4

REPLACE BRIDGES 32-P & 33-P

- Remove all other bridges and construct turn-arounds at removed structure locations

5

REPLACE BRIDGES 28-P, 32-P & 33-P

- Remove Bridges 1-P and 30-P and construct turn-arounds at the removed structure locations

6

REPLACE BRIDGES 1-P, 28-P, 32-P & 33-P

- Remove Bridge 30-P and construct turn-around

7

REPLACE BRIDGES 30-P, 28-P, 32-P & 33-P

- Remove Bridge 1-P and construct turn-around

8

REPLACE ALL BRIDGES



Transportation



Economic



Structural / Technical



Natural Environment



Social & Cultural Environment

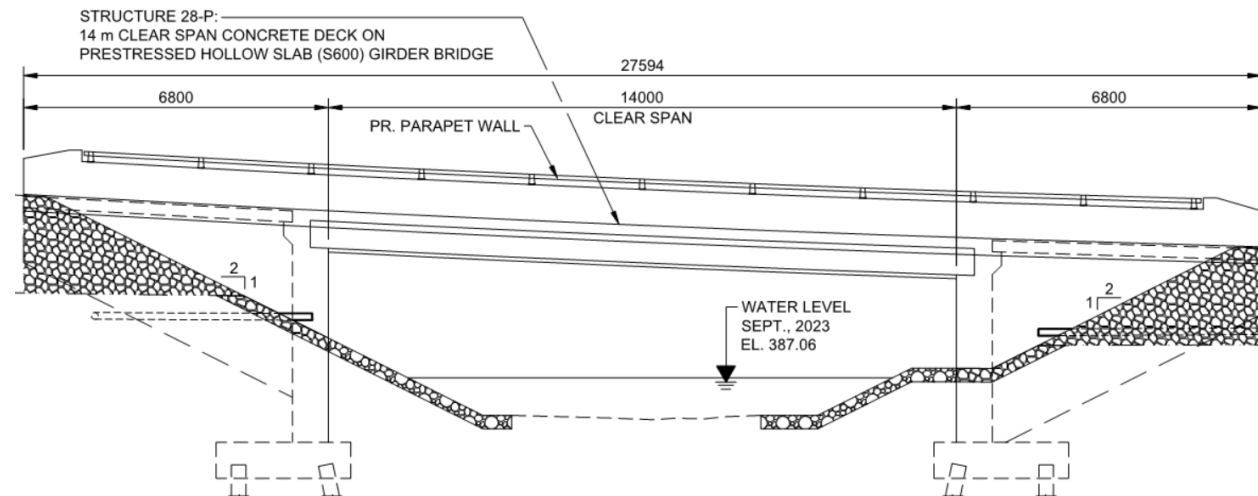
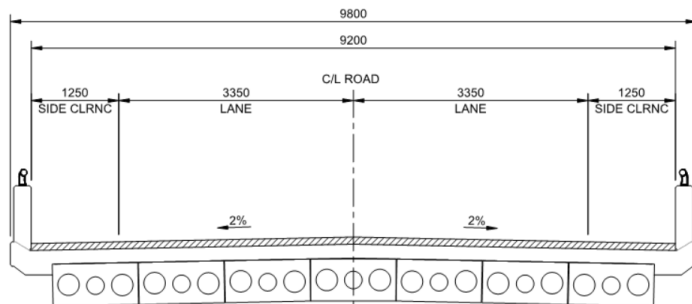
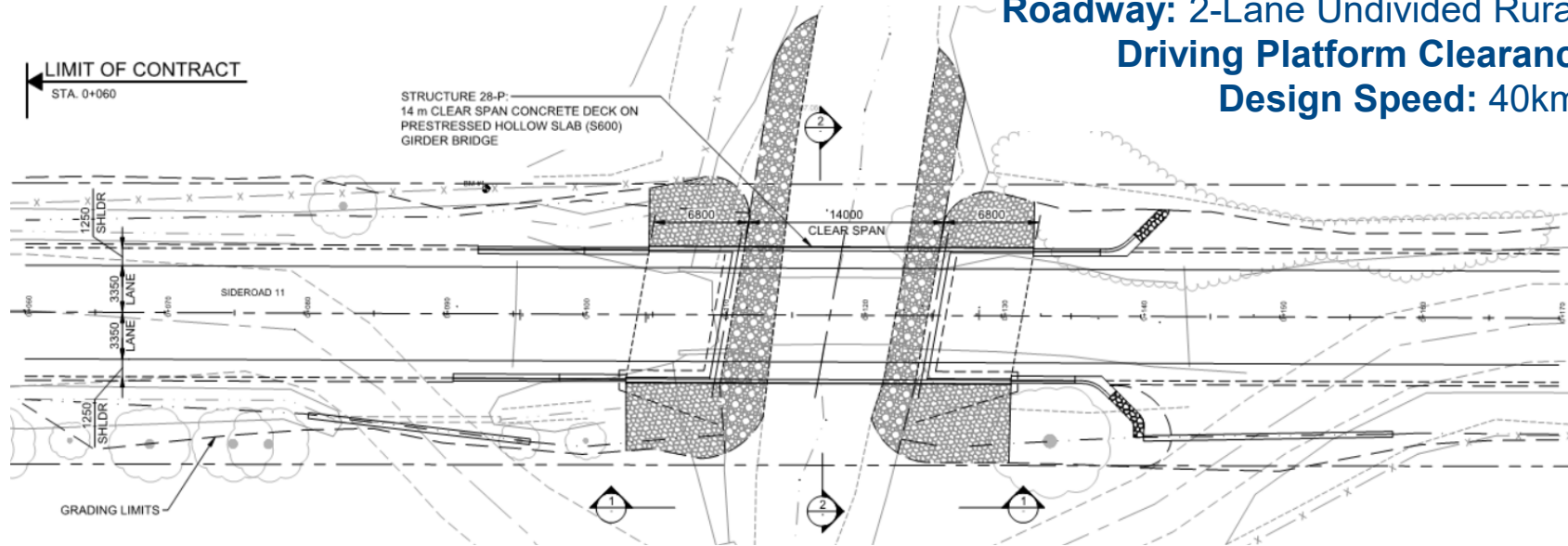
REPLACEMENT OF BRIDGES 28-P, 32-P & 33-P & REMOVAL OF BRIDGES 1-P & 30-P WITH TURN-AROUND

- Serve the two most travelled roadways of the Study Area
- Results in the most improvements per opened structure for cross-community travel and emergency response times.
- Emergency service and other municipal service vehicles (snow removal, road grading) not required to use neighbouring municipality roads
- Provides east-west connection alternative to County Roads (beneficial for slow moving vehicles)
- Best Cost-Benefit
- Opens connectivity for the local Mennonite community to the local church and improves ease of access for travel via horse and carriage
- Opens the top two sites requested by the local community

Design Concept

28-P

Roadway: 2-Lane Undivided Rural Cross-Section
Driving Platform Clearance: 9.2 m
Design Speed: 40km/h



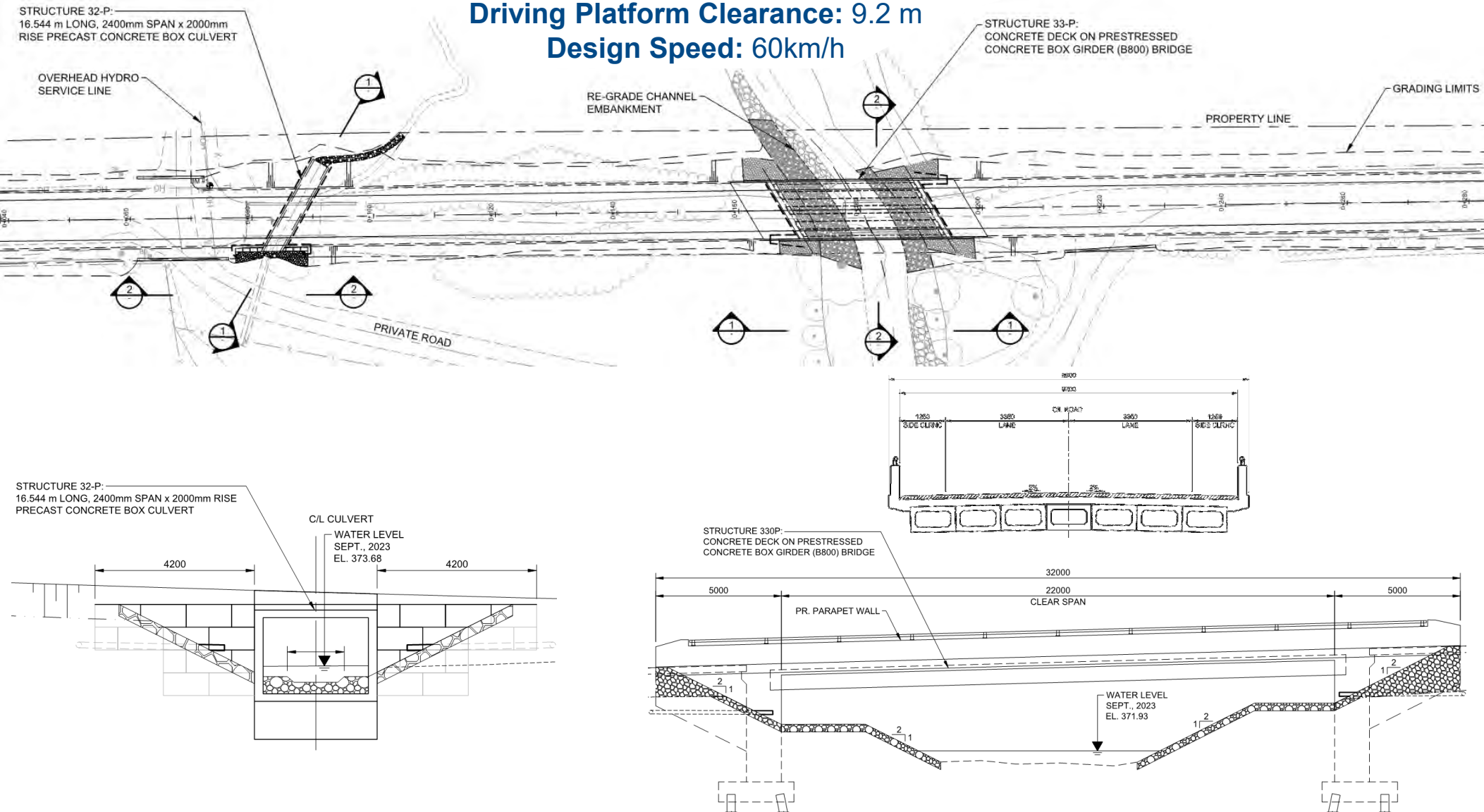
Design Concept

32-P & 33-P

Roadway: 2-Lane Undivided Rural Cross-Section

Driving Platform Clearance: 9.2 m

Design Speed: 60km/h



- The Township has a “Bridge & Major Culverts 10-Year Plan”
- \$2.8 million per year is dedicated for bridge & major culvert work.
- Centre Wellington has 111 bridges & major culverts
- The Township’s asset management plan and formal bridge / culvert inspections provide prioritization direction.
- The replacement plan is revised annually to incorporate priority and funding limits
- The 2024 bridge budget includes:
 - ❖ Detailed design work for the Noah Road bridges (32-P & 33-P)
 - ❖ Sideroad 11 bridge (28-P). In the 2025 budget it will move based on these study outcomes
- The 10 year Capital bridge plan will be influenced by decisions made from outcomes from this study.



Invitation to Participation

We want to hear from you!

You are invited to provide comments by completing a comment sheet and submitting it to the comment box today or by mailing or emailing one of the Project Team members below before January 19th, 2024:

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora, ON N0B 1S0
Tel: 519-846-9691 ext. 355
adickieson@centrewellington.ca

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Guelph, ON N1H 1C4
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andrew.dawson@rjburnside.com

The display boards and a more in-depth recorded presentation will be available on the project webpage after the PIC.

www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township

If you would like to request access to the files by another means other than through the website, please contact one of the Project Team Members above



Township of Centre Wellington

5 Bridges in Former Pilkington Township

Environmental Assessment Study

Public Information Centre #2

Presentation Boards for In-Person Meeting
December 6, 2023

Phase 1: Project Opportunity (Complete)



Problem / Opportunity Statement

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28 P, 30 P, 32 P & 33 P) that are located within a twenty square kilometre (20 km²) area of road networks and are currently closed to vehicular traffic due to their deteriorated state. This study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

Problems

- Population feels 'forgotten' about due to lack of improvements in this part of Centre Wellington
- The Study Area is lacking an east-west connection.
- Slow moving vehicles are required to use busy Wellington County roads, increasing risk of accidents.
- Emergency personnel are experiencing delays in reaching destinations.
- Privately constructed infrastructure is being used by the public. Owners of public structures are concerned about liability.
- Closures are causing traffic hazards with trucks having to reverse down road.

Opportunities

- Widen bridges to accommodate farm equipment
- Consider eliminating Bridge 32-P & draining brook into Carroll Creek upstream of bridge 33-P.
- Consider using 'low-level crossings' where possible

Community Preference Ranking:

1. Bridge 28-P
2. Bridges 32-P & 33-P
3. Bridge 30-P
4. Bridge 1-P

Phase 2 (Alternative Solutions):



WE ARE HERE

Project Study Area:



ALTERNATIVE SOLUTIONS:

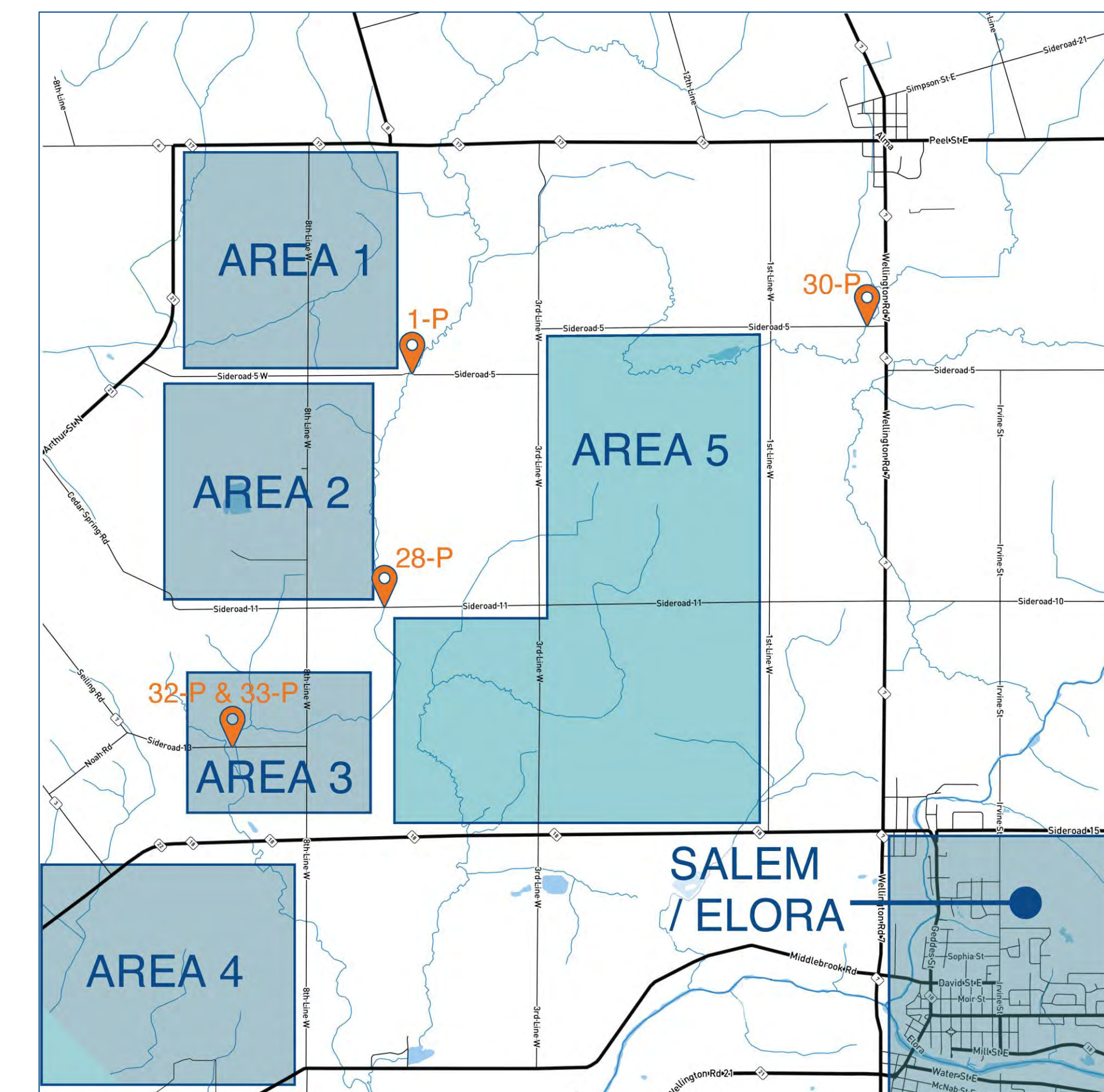
- 1 **DO NOTHING**
 - Leave the existing structures in their current deteriorating state and continue to restrict public use.
- 2 **REMOVE ALL BRIDGES**
 - Remove structures to eliminate risk to the public and potential future collapse.
- 3 **REPLACE BRIDGE 28-P**
 - Remove all other bridges and construct turn-arounds at removed structure locations
- 4 **REPLACE BRIDGES 32-P & 33-P**
 - Remove all other bridges and construct turn-arounds at removed structure locations
- 5 **REPLACE BRIDGES 28-P, 32-P & 33-P**
 - Remove Bridges 1-P and 30-P and construct turn-arounds at the removed structure locations
- 6 **REPLACE BRIDGES 1-P, 28-P, 32-P & 33-P**
 - Remove Bridge 30-P and construct turn-around
- 7 **REPLACE BRIDGES 30-P, 28-P, 32-P & 33-P**
 - Remove Bridge 1-P and construct turn-around
- 8 **REPLACE ALL BRIDGES**

Important Transportation Considerations:

- No East-West Connections currently exist within the Study Area.
- Slow moving vehicles are forced to busy arterial roads
- Sideroad 5 West at Bridge 1-P is a no-winter-maintenance road
- Transportation Master Plans includes upgrading 3rd Line W to arterial road by 2031
- Current and Projected Annual Average Daily Travel (AADT) Values for Roads:

| Rank | Road Name | From | To | 2021 AADT | 2041 AADT |
|------|-------------|------------------------|------------------------|-----------|-----------|
| 1 | Sideroad 11 | Arthur St. N | Wellington Rd 7 | 143 | 256 |
| 2 | Sideroad 5W | Arthur St. N | 3 rd Line W | 91 | 169 |
| 3 | Noah Rd | Arthur St. N | 8 th Line W | 74 | 138 |
| 4 | Sideroad 5 | 3 rd Line W | Wellington Rd 7 | 46 | 85 |

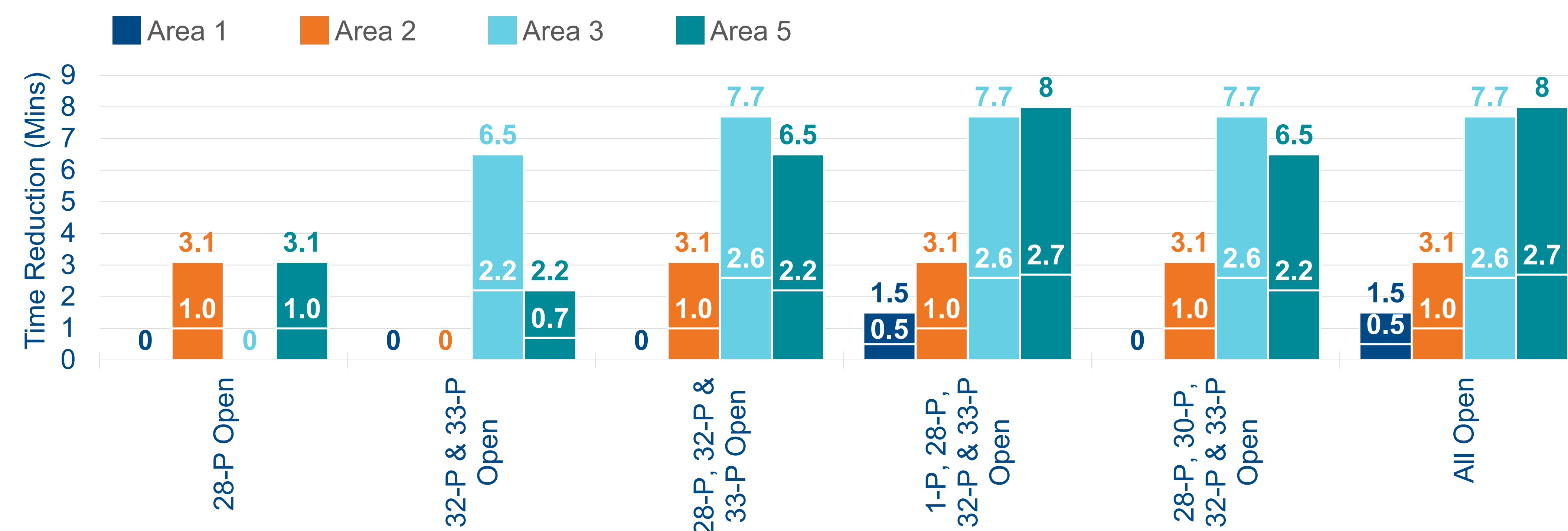
Cross-Community Travel Screening Areas:



Some travel routes can be screened out as not being affected:

- Travel between Areas 1 and 2 are not affected by structures
- All travel to / from Area 4 is not affected by structures
- Impacts of travel to Salem are same as travel to Elora and Fergus

Cross-Community Travel Improvements:



White line and values in white are **average** time improvements.
Values shown in colour are **total** time improvements

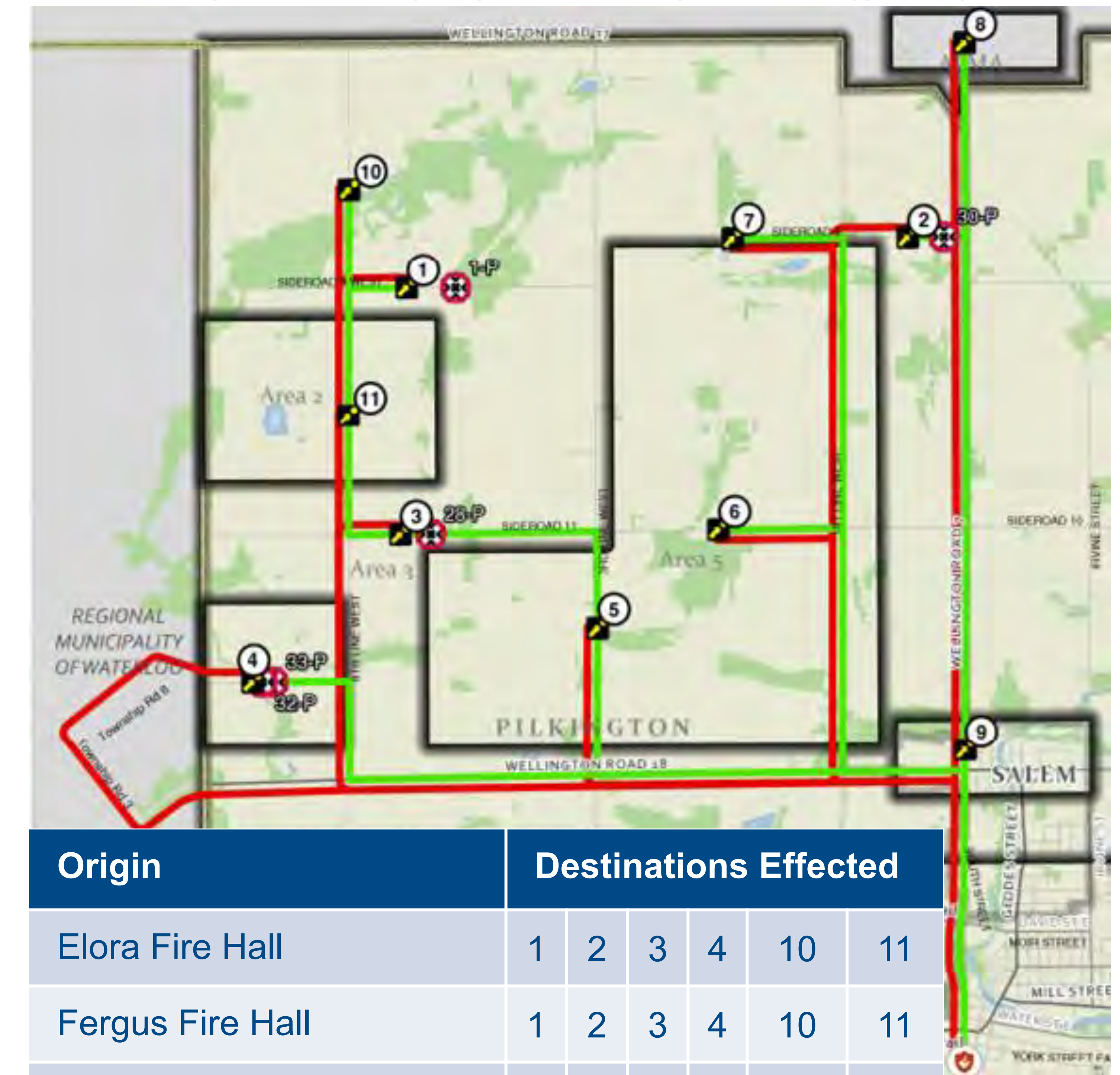
Key Findings:

- Opening of 28-P has significant benefit on Areas 2 and 5
- Opening of 32-P and 33-P have significant benefit on Areas 3 & 5
- Opening 1-P only provides benefit to Area 1
- Opening 30-P does not provide any benefit to cross community travel times

Emergency Response Time Improvements:

Example of Emergency Response Evaluation Scenario

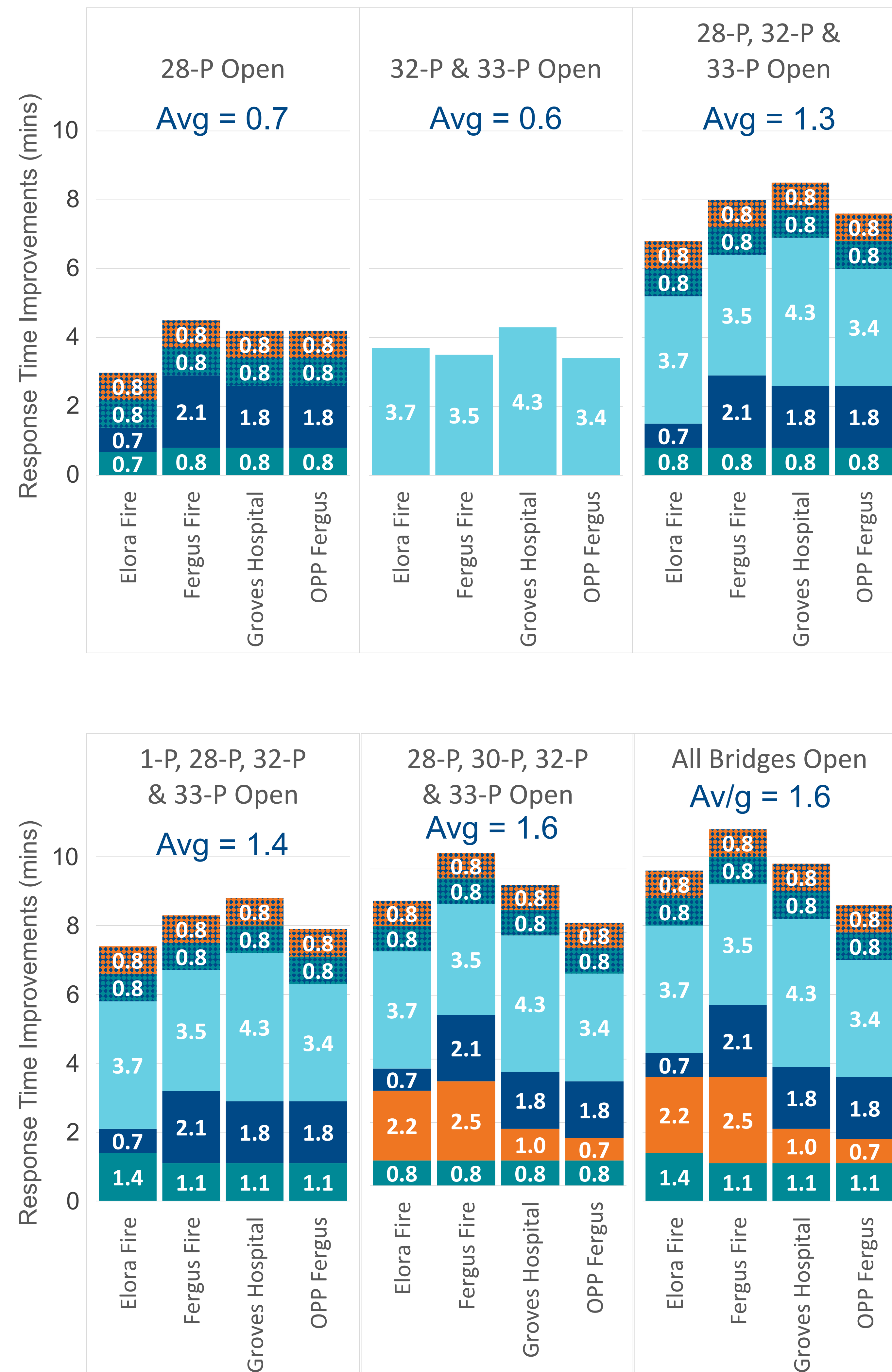
- All bridges closed (red) vs All bridges open (green)



| Origin | Destinations Effected | | | | | |
|--------------------------|-----------------------|---|---|---|----|----|
| Elora Fire Hall | 1 | 2 | 3 | 4 | 10 | 11 |
| Fergus Fire Hall | 1 | 2 | 3 | 4 | 10 | 11 |
| Groves Memorial Hospital | 1 | 2 | 3 | 4 | 10 | 11 |
| OPP Fergus Station | 1 | 2 | 3 | 4 | 10 | 11 |

Key Findings:

- Destinations 5 through 9 are not affected by structures
- Opening of 28-P results in benefits to destinations 1, 3, 10 & 11
- Opening of 32-P and 33-P benefits destination 4 only, but benefit is significant
- Opening 1-P makes only a minor difference, and to destination 1 only
- Opening 30-P is the only option to improve destination 2, and the benefit is significant
- The greatest improvements per site are realized by opening bridges 28-P, 32-P & 33-P



Preliminary Geometry:

- Preliminary Geometry required to evaluate impacts considers:
- Widening of the road platforms to meet Township geometric design standards
 - Hydraulic Conveyance requirements for no increase to floods
 - Adjustment of road profiles to improve sight lines and safety
 - Fit with the natural channel and site topography

EXAMPLE VISUALS OF
STRUCTURE TYPES:



Precast Concrete Box Culverts



Concrete Rigid Frame



Prestressed Concrete Box Girders

| Site | Road Width | | Design Speed | | Structure Type | | Structure Size | | Road Works Length |
|------|------------|----------|--------------|----------|-------------------------|---|------------------------|-----------------------------|-------------------|
| | Existing | Proposed | Existing | Proposed | Existing | Proposed | Existing | Proposed | |
| 1-P | 3 - 5 m | 9.2 m | 20 km/h | 40 km/h | Steel Truss | Concrete Box Culverts, Low-Level Crossing | 11.8m span x 4.5m wide | 4 x [3.0m span x 1.5m rise] | 180 m |
| 28-P | 5 - 7 m | 9.2 m | 20 km/h | 40 km/h | Concrete T-Beam | Prestressed Concrete Box Girders | 10.6m span x 5.7m wide | 14 m span x 9.8 m wide | 110 m |
| 30-P | 4 m | 9.2 m | 30 km/h | 30 km/h | Concrete Through Girder | Concrete Rigid Frame | 7.9m span x 6.4m wide | 16.2 m span x 9.8 m wide | 170 m |
| 32-P | 6 - 7 m | 9.2 m | 40 km/h | 60 km/h | Concrete T-Beam | Precast Concrete Box Culvert | 9.1m span x 5.7m wide | 2.4m span x 1.8m rise | 300 m |
| 33-P | | | | | Concrete T-Beam | Prestressed Concrete Box Girders | 10.4m span x 5.7m wide | 22 m span x 9.8m wide | |

Cost Estimates:

Estimated Capital Costs:

| Site | Estimated Removal Cost | Estimated Replacement Cost |
|-------------|------------------------|----------------------------|
| 1-P | \$20,000 (Abutment) | \$1,250,000 |
| 28-P | \$75,000 | \$2,400,000 |
| 30-P | \$75,000 | \$2,550,000 |
| 32-P & 33-P | \$120,000 | \$4,550,000 |

Maintenance & Operational Costs:

- Low-Level Crossing at 1-P will require an operational budget to maintain signage and road closures during flood events.
- Structures that are not replaced will require ongoing barrier maintenance
- Low maintenance bridge replacement types are proposed.
- Structures will require rehabilitation over their lifespan to reach design service life.

Natural Environment:

| Findings | Mitigations |
|--|---|
| Treed areas are candidates for significant wildlife habitat | Minimize tree removals and limit removals to outside migratory bird breeding window |
| Wetlands and marshes at all structures provide potential for amphibian breeding habitat, as well as offer hydrological function | Minimize disturbance and provide compensation to offset any impacts |
| Cliff swallow nesting at bridge 30-P (active and in good condition) | Install compensative bird nesting structures adjacent bridge and install bird nesting preventative measures on structure prior before start of nesting period |
| Potential reptile habitat or Endangered bat species habitat in the channel embankment protection (rocks and concrete) adjacent bridge 33-P. | Conduct SAR survey of potential habitat, minimize disturbance to area and compensate for any habitat removed |
| All watercourses except 32-P were considered habitable by fish. The concrete slab through the watercourse at 30-P is considered partial barrier to fish passage. | Remove any barriers to fish passage, limit in-water works to applicable fisheries timing window, provide low-flow channels through any streambed regrading areas and restore any disturbed areas in watercourse with smooth rounded stone |
| Watercourse embankments at structures 28-P and 33-P have eroded due to flow constrictions caused by debris or narrow structure opening | Reinstate embankments and stabilize using bio-engineered solutions. Enforce erosion and sediment control plans during construction. |
| Wetted width during normal flow conditions extends from abutment to abutment, providing minimal potential for wildlife passage below structure | Increase structure span to be greater than the natural channel width and provide platforms above normal water level to provide wildlife passage |

Social & Cultural Environment:

Social Environment:

- Way-of-life considerations including how the community live, work and interact with one another on a day-to-day basis
- Political impacts
- Residents' sense of belonging within the Township
- Accessibility to social facilities such as halls, churches, gathering areas etc.
- Improvements to services received by the Township
- Improvements to the agricultural and commercial industries

Archeological:

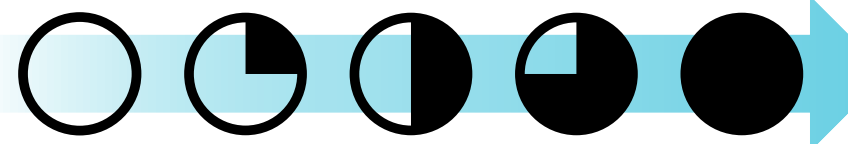
- Areas that were previously disturbed by construction of the original road and bridges are generally not considered a potential risk
- Archaeological investigations have not been completed to date. Investigations will only occur where the proposed work at the site involves disturbance beyond previous limits
- In general, excavations for new foundations and widening of road platforms will result in disturbance beyond existing limits

Cultural Heritage Assessment:

- Structures visually contribute to the overall rural character of the area
- None of the bridges were identified to fulfill the requirements for Designation as Heritage structures

| Potential Impacts to Cultural Heritage | Mitigations |
|--|--|
| The context of a bridge historically being present at that crossing is no longer prevalent | Document each structure prior to removal and deposit in a publicly accessible repository. Incorporate any unique features of existing bridges into the design of the replacement |
| New structures do not visually represent the rural and historic nature of the area. | Design replacement structure to aesthetically blend with the character of the area |

Evaluation Matrix:

Highest Impact /
Least Preferred  Least Impact /
Most Preferred

| Criteria | Do Nothing | Remove All | 28-P Open | 32-P & 33-P Open | 28-P, 32-P & 33-P Open | 1-P, 28-P, 32-P & 33-P Open | 28-P, 30-P, 32-P & 33-P Open | All Bridges Open |
|---|------------|------------|-----------|------------------|------------------------|-----------------------------|------------------------------|------------------|
| TRANSPORTATION | | | | | | | | |
| Traffic Population Benefited | | | | | | | | |
| Cross-Community Travel | | | | | | | | |
| Emergency Response | | | | | | | | |
| Slow-Moving Vehicle Accommodation | | | | | | | | |
| TRANSPORTATION SUMMARY | | | | | | | | |
| NATURAL ENVIRONMENT | | | | | | | | |
| Environmentally Sensitive Areas | | | | | | | | |
| Terrestrial Habitat | | | | | | | | |
| Fisheries / Aquatic Habitat | | | | | | | | |
| Species at Risk | | | | | | | | |
| NATURAL ENVIRONMENT SUMMARY | | | | | | | | |
| SOCIAL & CULTURAL ENVIRONMENTS | | | | | | | | |
| Social Environment | | | | | | | | |
| Archaeological | | | | | | | | |
| Cultural Heritage | | | | | | | | |
| Community Preference | | | | | | | | |
| SOCIAL & CULTURAL SUMMARY | | | | | | | | |
| ECONOMIC ENVIRONMENT | | | | | | | | |
| Capital Costs | | | | | | | | |
| Maintenance & Operational Costs | | | | | | | | |
| ECONOMICS SUMMARY | | | | | | | | |
| OVERALL RANKING (EQUAL WEIGHTING) | 8 | 6 | 2 | 5 | 1 | 3 | 4 | 7 |
| OVERALL RANKING (SENSITIVITY ANALYSIS) | 8 | 7 | 4 | 6 | 1 | 2 | 5 | 3 |

Criteria Weighting & Sensitivity Analysis

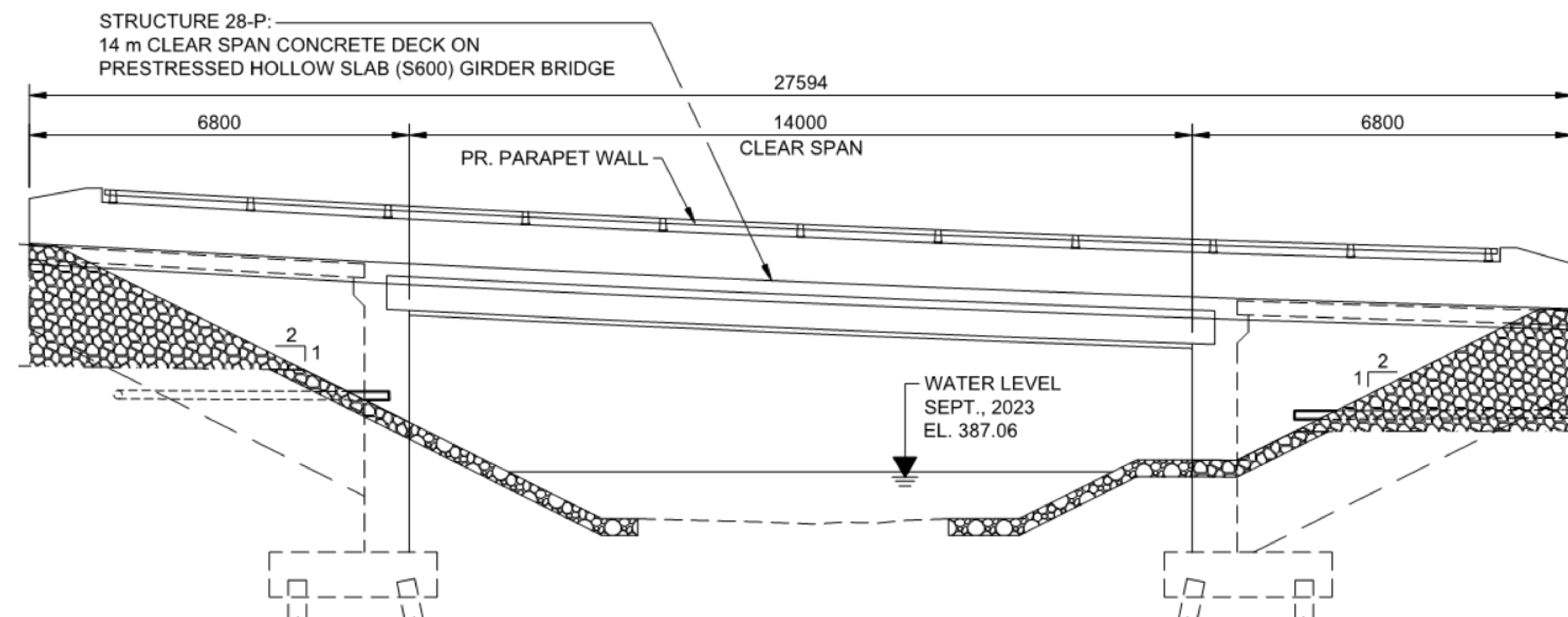
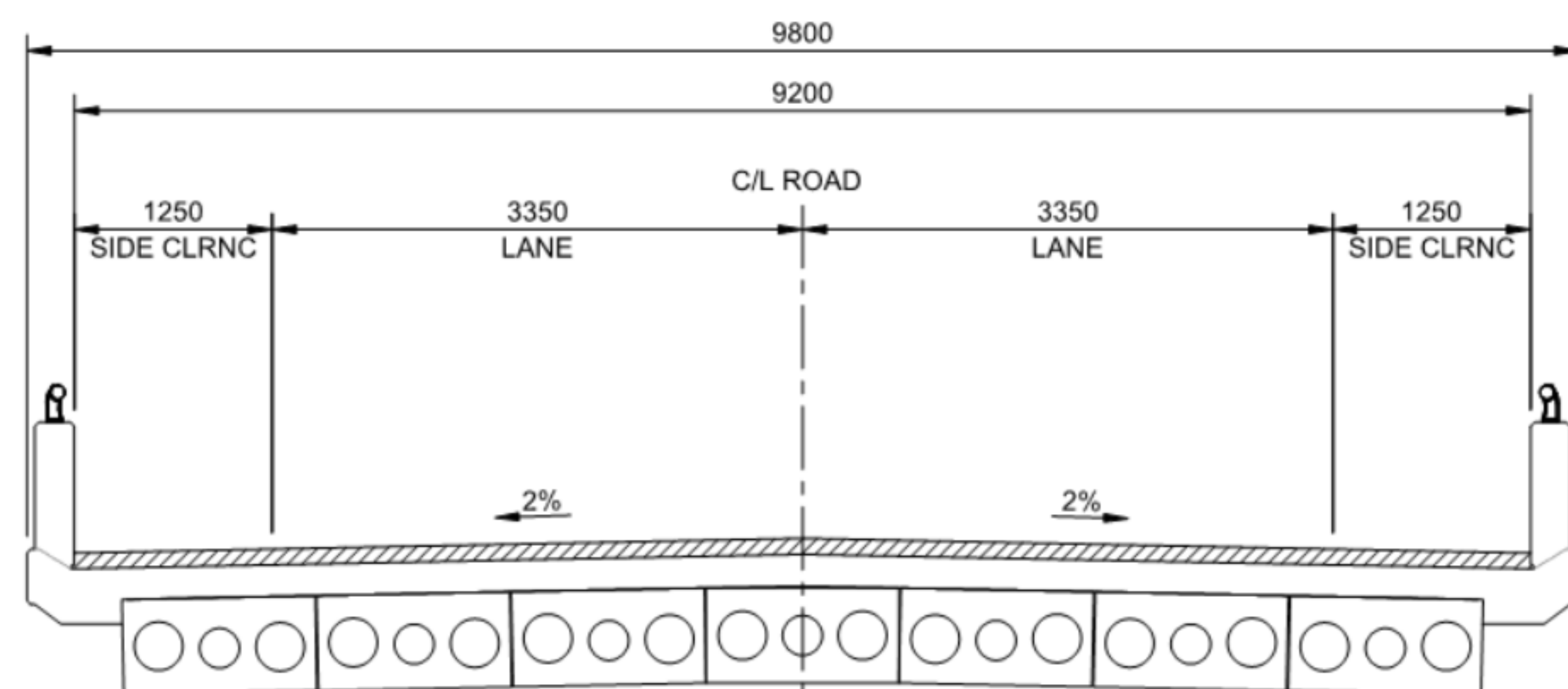
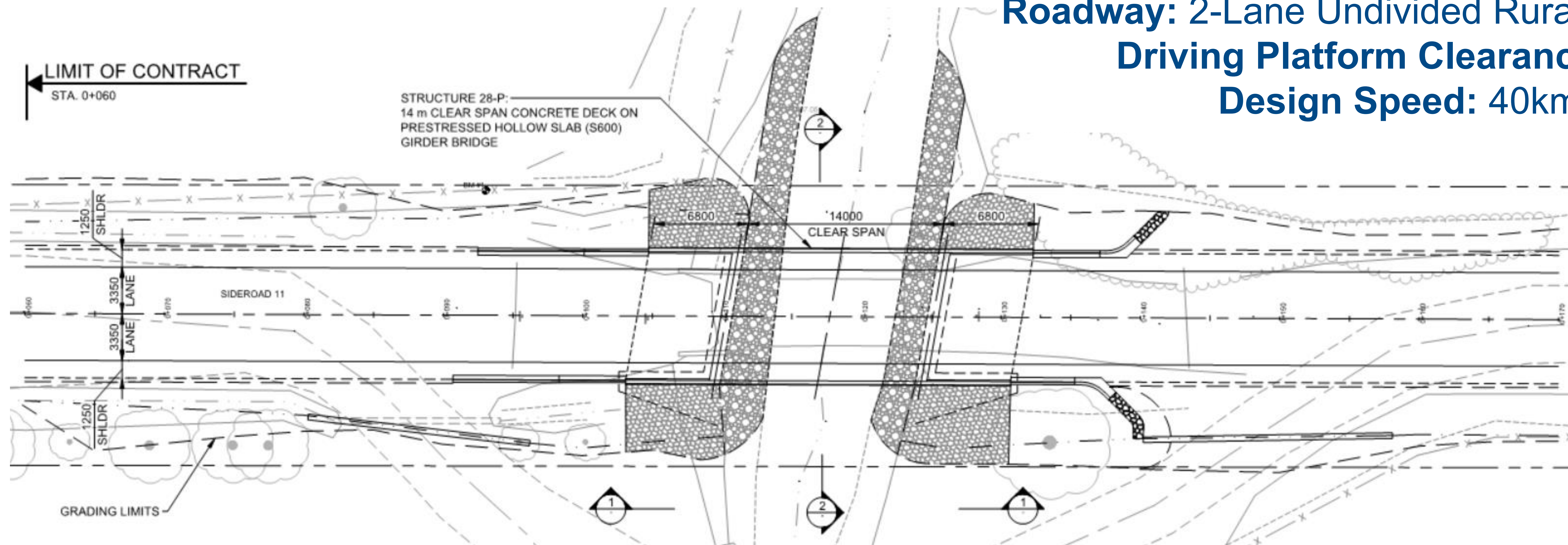
- The 'pies' shown are a simplified visualization of the numerical rating system used. Options with the same 'pie' graphic do not necessarily have the exact same numerical rating.
- The 'Overall Ranking (Equal Weighting)' is provided based on equal weighting for each criteria (25% Transportation, 25% Natural Environment, 25% Social & Cultural Environments and 25% Economic Environment)
- The 'Overall Ranking (Sensitivity Analysis)' is based on the combined results of a series of scenarios ran with different weighting criteria for each of the categories.
- The preferred alternative was consistent across the equally weighted and sensitivity analysis rankings.

Preferred Alternative:

REPLACEMENT OF BRIDGES 28-P, 32-P & 33-P & REMOVAL OF BRIDGES 1-P & 30-P WITH TURN-AROUND

- Serve the two most travelled roadways of the Study Area
- Results in the most improvements per opened structure for cross-community travel and emergency response times.
- Emergency service and other municipal service vehicles (snow removal, road grading) not required to use neighbouring municipality roads
- Provides east-west connection alternative to County Roads (beneficial for slow moving vehicles)
- Best Cost-Benefit
- Opens connectivity for the local Mennonite community to the local church and improves ease of access for travel via horse and carriage
- Opens the top two sites requested by the local community

Roadway: 2-Lane Undivided Rural Cross-Section
Driving Platform Clearance: 9.2 m
Design Speed: 40km/h



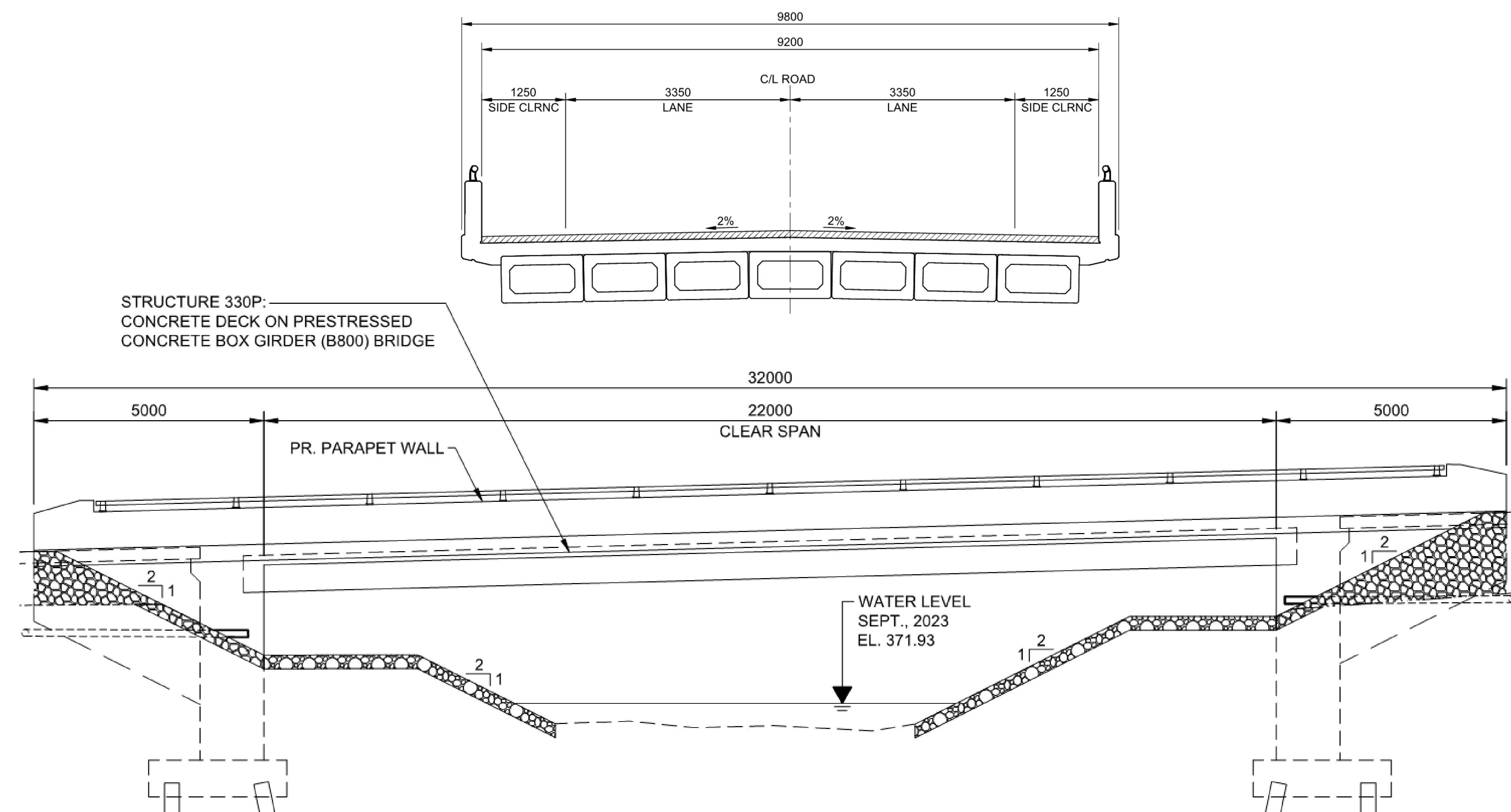
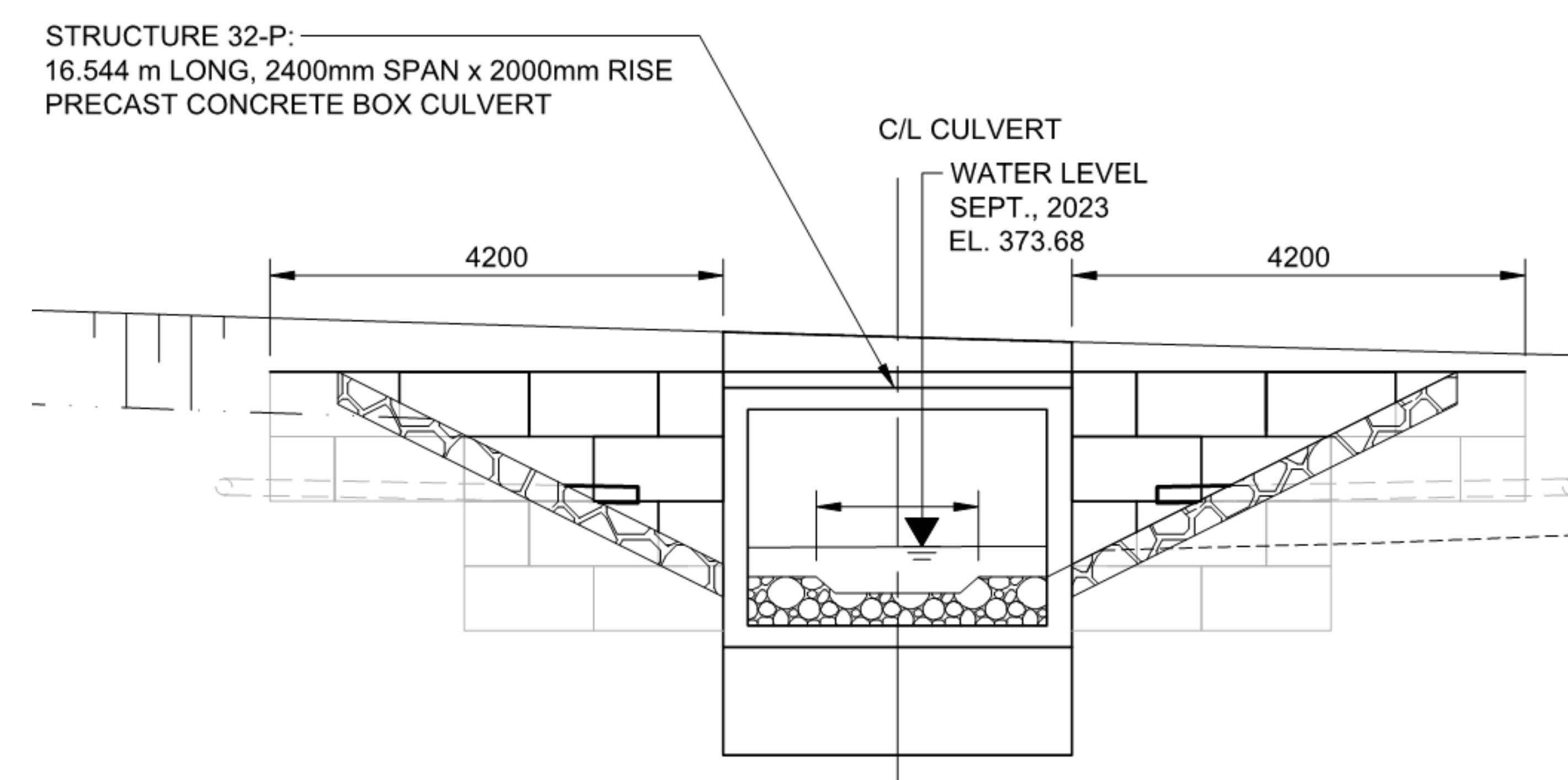
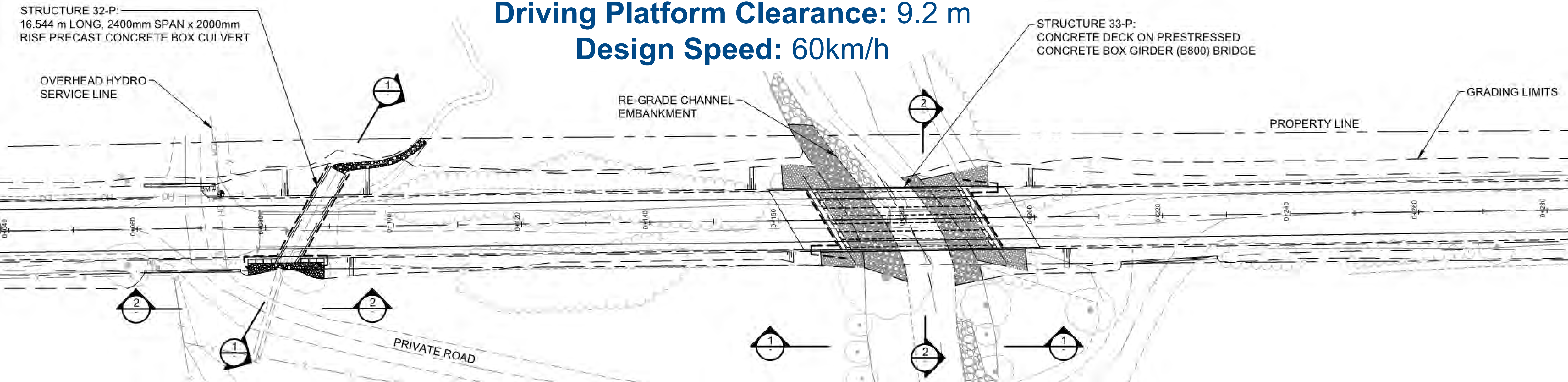
Design Concept

32-P & 33-P

Roadway: 2-Lane Undivided Rural Cross-Section

Driving Platform Clearance: 9.2 m

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www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township

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Township of Centre Wellington 5 Bridges in Former Pilkington Township Environmental Assessment Study

Public Information Centre #2

**Narrated Presentation posted online
December 6, 2023**

Hello, and Welcome to the second public information centre for the Township of Centre Wellington's Environmental Assessment Study for the 5 Bridges in former Pilkington Township.

My name is Andrew Dawson, I am a professional Engineer with R.J. Burnside & Associates Limited, also known as "Burnside". Burnside is the consulting engineering company that has been engaged by Centre Wellington to work with the Township and the community on this bridge study. Burnside will be presenting this PIC on behalf of the Township of Centre Wellington.

Thank you in advance for your time to review this PIC. We appreciate your interest in the project, as consultation with the community is a very important aspect of the Environmental Assessment study process.

- Project Study Area Overview
- Municipal Class EA Process
- Problem / Opportunity Statement
- Alternative Solutions
- Evaluation Criteria & Study Findings
- Evaluation of Alternatives
- Preferred Alternative
- Conceptual Preliminary Design of Preferred Alternative
- Mitigation and Future Design Considerations
- Next Steps

The agenda for this presentation is shown here.

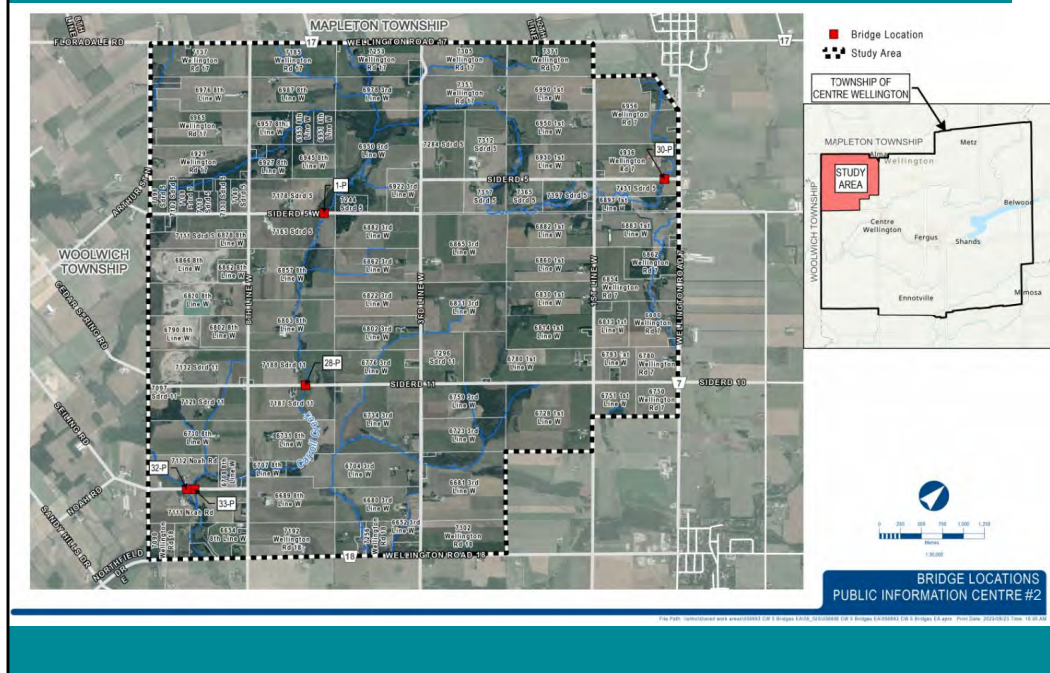
We will start with a brief overview of the project background and the Municipal Class Environmental Assessment Process.

We will then present the problems and opportunities that this study is working to address.

The 8 alternatives that were evaluated will be presented and we will provide a summary of the findings of all studies conducted and use these findings to evaluate the 8 alternatives.

The preliminary preferred alternative will be presented, along with how we arrived at the decision.

Conceptual designs of the preferred alternative and identification of mitigations and future design considerations will then be provided, before wrapping up and outlining the remaining steps associated with the EA Process



The highlighted area shown on this map represents the Project Study Area, with the locations of the 5 bridges shown with red markers.

The study area is located in the northwest quadrant of the Township of Centre Wellington, adjacent the boundary lines with Mapleton Township and Woolwich Township. This area is in Ward 1 of the Township of Centre Wellington, and was formerly part of Pilkington Township, prior to the Amalgamation in 1999.

The 5 bridges being assessed under this EA are:

Bridge 1-P, which is located on Sideroad 5 West, between 8th line west and 3rd Line west.

Bridge 28-P, which is located on Sideroad 11 between 8th line and 3rd line west.

Bridge 30-P which is located on Sideroad 5, between 1st Line West and Wellington Road 7.

Bridges 32-P and 33-P, which are located on Noah Road, between 8th Line west and sandy hills drive. These two structures will be considered as a single site for this study.

These 5 bridges service a Rural community which is home to agricultural, residential, and commercial properties. The network of roads within the study area carry motorized and horse drawn vehicles and connects the community to the neighbouring Towns of Alma, Salem, Elora and Fergus.

Sideroad 5, 5 West , 11 and Noah Road are all considered to be low volume roads, with an average daily traffic of less than 200 vehicles per day travelling on these roads based on the most recent 2021 study.

The study area is also noted to be outside of the future residential growth nodes of the Township's Transportation Master Plan

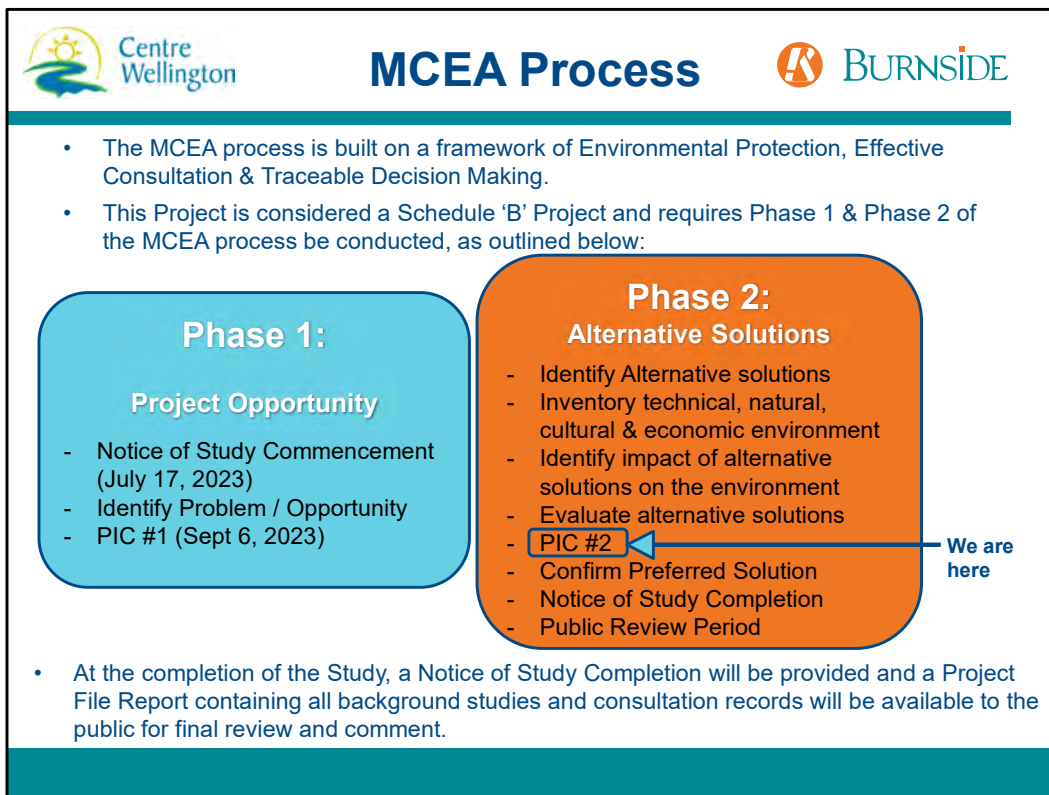
- All five bridges were closed due to the severe state of deterioration of the bridges, in accordance with recommendations made by Professional Engineers
- The structures are considered to have surpassed the threshold of being economically repairable, therefore rehabilitation alternatives screened out as potential alternatives



The existing bridges are shown here.

- Bridge 1-P was constructed in 1925 and closed in 2004. The old steel truss structure was removed in 2019.
- Bridge 28-P was constructed in 1925 and was closed in 2006. The structure and is currently in a state of failure, with the deck separating from the supports and significantly displaced
- Bridge 30-P was constructed in 1929 and closed in 2016. The bridge is experiencing severe deterioration with loss of concrete and reinforcing steel in a severely corroded state.
- Bridges 32-P and 33-P were constructed in 1926 and 1922, respectively. Both structures were closed in 2015 due to the disintegrating concrete in the main load carrying beam elements of the structure.
- All closures were made by the Township based on recommendations for closure made by Professional Engineers. The structures all have severe deficiencies that effect the load carrying capacities of the structure, deeming them unsafe for traffic. The bridges are also narrow structures that do not meet current Township standards.

Field investigations of the structural condition of all five structures were completed as party of this study, and it was determined that all five structures are beyond the threshold of being economically repairable. This means the options to be considered for each site will be limited to removal or replacement.



Before we get into the specifics of the study, we would like to review the Municipal Class Environmental Assessment process

The Municipal Class Environmental Assessment – or the “EA” as we will refer to it from here on - is a process built on a framework of Environmental Protection, Effective Consultation and Traceable Decision Making.

It is used to engage with the community and other stakeholders, such as ministries, first nations, conservation authorities, etc. to consider and review a number of potential alternatives, with due consideration of the effects that they could have on the natural, social, cultural and economic environments.

There are several different levels of EA's, based on what the project entails. This project is considered to be what is called a “Schedule B” project. What that means is this study will consist of 2 phases, as outlined in this slide. Phase 1 identified the Project Opportunity and phase 2, which we are in now, identifies and evaluates several alternatives that could solve that problem, and selects a preferred alternative. Throughout the EA, the public has and will be provided with several opportunities to provide comment on this study. An online forum, and the first PIC, which was held in September were used to gather background information and comments from the community to better define the problem and opportunity for the study.

This PIC will present findings of the phase 2 studies, our evaluation of the several alternatives considered, and the preliminary preferred solution. Any comments that you provide today will be considered as we confirm the preferred solution and the mitigations and future studies and design considerations for the preferred alternative

Your opinions are very important and will help confirm the preferred alternative and decision making in phase 2 of the study.

Following this PIC, an official report outlining all background information, field investigation findings, in-depth evaluation of each of the alternatives, summary of consultations and selection of the preferred alternative will be compiled. A notice regarding the completion of the study and the availability of the report will be provided to all stakeholders and the public will be provided with a 30-day review period to submit final comments.

The Township of Centre Wellington has initiated a Schedule 'B' Municipal Class Environmental Assessment (MCEA) to evaluate options and select a preferred alternative for five (5) bridge structures (Structures 1-P, 28 P, 30 P, 32 P & 33 P) that are located within a twenty square kilometre (20 km²) area of road networks and are currently closed to vehicular traffic due to their deteriorated state. This study will evaluate the role of these structures within the overall transportation network and connectivity in the local community and determine the most suitable alternative at each location.

The problem and opportunity statement that was derived as part of Phase 1 of the EA is shown here.

Put simply, the problem is that there are five bridge structures that are located within a 20 square kilometer area of road networks that are currently closed to traffic. These closures effect the transportation and connectivity within the local communities. This study will examine the opportunities at each of the sites to make improvements to the transportation and connectivity of this community.

A summary of the common community inputs received from the public during the September 6th, 2023 Public Information Centre are as follows:

- Population of the Study Area feel 'forgotten' because improvements are occurring in other portions of the Township and not within the Study Area.
- The Study Area is lacking an east-west connection.
- Slow moving vehicles are having to use busy Wellington County roads, increasing risk of accidents.
- Emergency personnel are experiencing delays in reaching destinations.
- Privately constructed infrastructure is being used by the public. Owners of public structures are concerned about liability.
- Closure of structures is causing traffic hazards with trucks having to reverse down road.
- Bridge replacements should be wide enough to accommodate farming equipment
- Consideration should be given to eliminating the bridge 32-P crossing and draining the brook into Carroll Creek upstream of bridge 33-P.
- Consideration should be given to use of 'low-level crossings' where possible

28-P was the most requested bridge for replacement, followed by 32-P & 33-P, then 30-P.
Several of the community noted opening of 1-P was not a high priority.

The overall problem being addressed with this study can be further broken down. A summary of the common problems or opportunities that were gathered from the community during the September 6th Public Information Centre are shown here. Problems identified include:

- - that the population is feeling 'forgotten' due to the lack of improvements to the study area while improvements are occurring in the other portions of the Township
- that the study area is lacking an east-west connection
- that slow moving vehicles are having to use busy Wellington County roads, increasing risk of accidents
- that emergency personnel are experiencing delays in reaching destinations
- that residents have had to construct privately owned infrastructure, and that the public is using these private structures for which the owners are liable for
- and that trucks are reaching closed structures and having to reverse down the road, increasing risk for accidents

The community also provided input in regards to opportunities that should be considered during the study, including:

- that new structures should be wide enough to accommodate farming equipment
- that eliminating bridge 32-P, by draining the brook into Carroll Creek upstream of bridge 33-P, should be considered.
- and that low-level crossings, which would flood over during larger storm events,

but be a cheaper alternative, should be considered where possible as a cost saving measure.

These themes form part of the problem and opportunity that this EA is working to address.

It is also worth noting that - based on the comments received - the bridge most requested to be replaced was bridge 28-P, followed by 32-P & 33-P, then 30-P. Several of the community noted that opening of bridge 1-P wasn't considered a high priority for them.



To address the Problem/Opportunity Statement, the following preliminary Alternative Solutions have been considered:

- Alternative 1: Do Nothing**
 Leave the existing structures in their current deteriorating state and continue to restrict public use.
- Alternative 2: Remove All Bridges**
 Remove structures to eliminate risk to the public and potential future collapse
- Alternative 3: Replace Bridge 28-P**
- Alternative 4: Replace Bridges 32-P & 33-P**
- Alternative 5: Replace Bridge 28-P, 32-P & 33-P**
- Alternative 6: Replace Bridges 28-P, 32-P, 33-P & 1-P**
- Alternative 7: Replace Bridges 28-P, 32-P, 33-P & 30-P**
- Alternative 8: Replace All Bridges**

*For alternatives 3 through 7, structures that are not replaced are recommended to be removed

In order to address the problem opportunity statement, the following list of alternatives was compiled.

Some individual or combinations of bridge replacements did not make the list of alternatives, as they were screened out by a high level, comparative screening process.

That original screening resulted in 8 alternatives to be carried forward for more in-depth evaluation.

The alternatives include:

- Alternative 1, the 'Do Nothing', which is mandatory consideration as part of the EA process, and involves leaving the structures in place and closed to public and allowing them to continually deteriorate
- Alternative 2, which is the removal of all bridges to eliminate the risk to the public and protect against future collapse, but not reinstating any of the structures
- Alternative 3, which includes the replacement of structure 28-P only
- Alternative 4, which is for the replacement of Bridges 32-P and 33-P only
- Alternative 5, which involves the combination of replacement of 28-P, 32-P and 33-P
- Alternative 6, which is replacement of all structures except for 30-P
- Alternative 7, which includes replacement of all structures except for bridge 1-P
- And Alternative 8, which is the replacement of all structures.

For alternatives 3 through 7, structures that are not slated to be replaced are recommended to be removed



To determine the preferred solutions for these bridges, Burnside has evaluated the alternatives against several criteria related to transportation, the natural environment, social and cultural environment, and economic impacts. In order to conduct these evaluations, Burnside has completed desktop studies and field investigations during Phase 2 of the study to prepare an inventory of the natural, social, built and economical environment within the study area. The studies included, but are not limited to:

- Transportation studies to evaluate the effects of open the bridges on connectivity within the community, commuting times and emergency response times
- Cultural Heritage Evaluation to determine any potential significance of the structures
- Ecological studies to identify aquatic and terrestrial habitats or any species at risk that could be impacted by the alternatives
- Consultations with the public to collect comments and input from the local population regarding their use of the structures and how they may be effected.
- and Cost evaluations of alternatives to identify the capital costs and operational costs

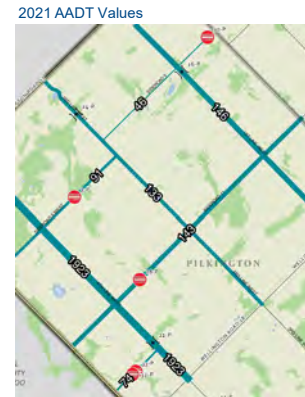
We will discuss the findings of these studies in more detail, and then review the overall evaluation of these criteria to outline how we have arrived at our preliminary preferred alternative.

■ Important Connectivity Considerations:

- No East-West Connections currently exist within the Study Area.
- Slow moving vehicles are forced to busy arterial roads
- Sideroad 5 West at Bridge 1-P is a no-winter-maintenance road.
- Current and Projected Annual Average Daily Travel (AADT) Values for Roads:

| Rank | Road Name | From | To | 2021 AADT | 2041 AADT |
|------|-------------|------------------------|------------------------|-----------|-----------|
| 1 | Sideroad 11 | Arthur St. N | Wellington Rd 7 | 143 | 256 |
| 2 | Sideroad 5W | Arthur St. N | 3 rd Line W | 91 | 169 |
| 3 | Noah Rd | Arthur St. N | 8 th Line W | 74 | 138 |
| 4 | Sideroad 5 | 3 rd Line W | Wellington Rd 7 | 46 | 85 |

- Centre Wellington Transportation Master Plan includes upgrading 3rd Line West to an arterial road by 2031



We will start by outlining the findings of the transportation study.

While we explain the evaluation of traffic findings and weigh the benefits of each alternative, there are a few important considerations that should be kept in mind, as outlined in this slide.

Firstly, due to the location of the closed structures, there is not a continuous east-west connection through the study area. Particularly, any traffic wishing to travel east-west between 8th Line and 3rd Line is forced to the busier County roads of Wellington Roads 17 or 18. In a community where there is a significant amount of slow moving vehicles, such as farm equipment or horse and carriage, this imposes increased congestion on the County Roads, and also increases the risk of accidents occurring.

It is also noted that Sideroad 5 West is not maintained during winter months in the vicinity of Bridge 1-P. As such, any benefits associated with replacing the bridge at this site would only be realized for approximately 2/3rd of the year.

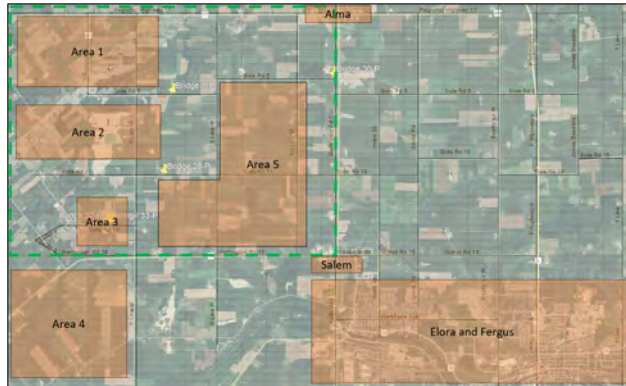
The volume of users of each of the sites must be considered as well. The average daily traffic experienced at each of the sites is shown in the table and figure on this slide for reference. As you can see, the number of users that would benefit from the opening of the structures varies with each site. For example, Sideroad 11 currently experiences the most traffic, and would therefore benefit the most users if opened. While sideroad 5 west has the second most users, it is also a seasonal road as previously mentioned.

Lastly, it is worth noting that the Township of Centre Wellington's most recent

Transportation Master Plan recommended that 3rd Line West be upgraded to an arterial route in the medium term, with a target of 2031.

Connectivity:

Burnside conducted a study to analyze connectivity between various areas within the Study Area and surrounding areas shown in the illustration below:



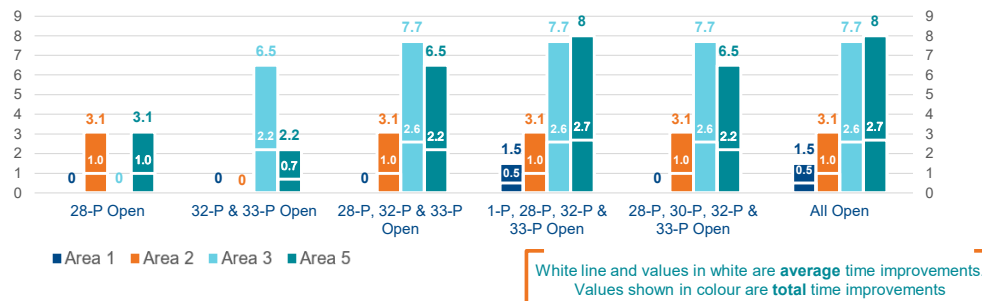
| Origin | Destinations |
|--------|------------------------|
| Area 1 | Area 5 |
| | Alma |
| | Salem / Elora / Fergus |
| Area 2 | Area 5 |
| | Alma |
| | Salem / Elora / Fergus |
| Area 3 | Area 5 |
| | Alma |
| | Salem / Elora / Fergus |

Some travel routes can be screened out as not being affected by observation:

- Travel between Areas 1 and 2 are not affected by structures
- All travel to / from Area 4 is not affected by structures
- Impacts of travel to Salem will be the same as impact of travel to Elora and Fergus

To quantify the connectivity rating for the various alternatives, Burnside has evaluated the travel times and distances for a series of origins and destinations around the study area. The study area was divided into four regions which are separated by the bridge closure locations. These are Areas 1, 2, 3 and 5 on the map. Area 4, outside the study area, and Salem, Alma, Elora and Fergus were also considered as origins and destinations. Commute times and distances between these origins and destinations were evaluated for each of the alternatives with the different combinations of bridges being opened. It is noted that a number of origin and destination combinations were eliminated from the scenarios ran, as they were determined to not be affected by any of the five structures, or are otherwise covered by other combinations. The condensed list of affected origin and destination combinations evaluated is summarized in the table shown on this slide.

Cross Community Travel Time Improvements (Minutes)



Connectivity Key Take-aways:

- Opening of 28-P has significant benefit on Areas 2 and 5
- Opening of 32-P and 33-P have significant benefit on Areas 3 and 5
- Opening 1-P only provides benefit to Area 1
- Opening 30-P does not provide any benefit to cross community travel times

This chart shows a summary of findings of the cross-community travel study. Each cluster of 4 bars represents one alternative, and each bar within the cluster represents the travel time improvements for the applicable area under that scenario. The height of each bar and the coloured number represents the TOTAL time improvements, as a cumulative total of all the origin / destination combinations associated with that Area. The white lines and text contained within the bar shows the AVERAGE time savings for travel.

If we used the Area 5 bar for the Scenario of 28-P, 32-P & 33-P being open as an example, the total time savings associated with opening the bridge would be 6.5 minutes. This does not mean you will save 6.5 minutes on any one trip – this savings is made up of a 2.2 minute time savings for travelling to Alma, 2.2 minute time savings if travelling to Salem and 2.1 minute time saving if travelling to Area 5. The average time savings for these trips is 2.2 minutes, as shown in white.

The key take-aways from this data can be summarized as follows:

- Opening of Structure 28-P has moderate improvements to Areas 2 and 4
- Opening of Structures 32-P and 33-P have significant to moderate improvements to Areas 3 and 5
- By comparing these two highlighted alternatives, where the only difference is the opening of bridge 1-P, we can note that opening structure 1-P has a significant improvement to travel associated with Area 1 only. It is noted that this this would be a seasonal improvement only due to the road being no-winter-maintenance
- Lastly, by comparing these two alternatives, where the only difference is the

opening of 30-P, we can see that opening of structure 30-P does not offer improvement

It should also be noted that the reductions in distances result in the same conclusions as those for time improvements

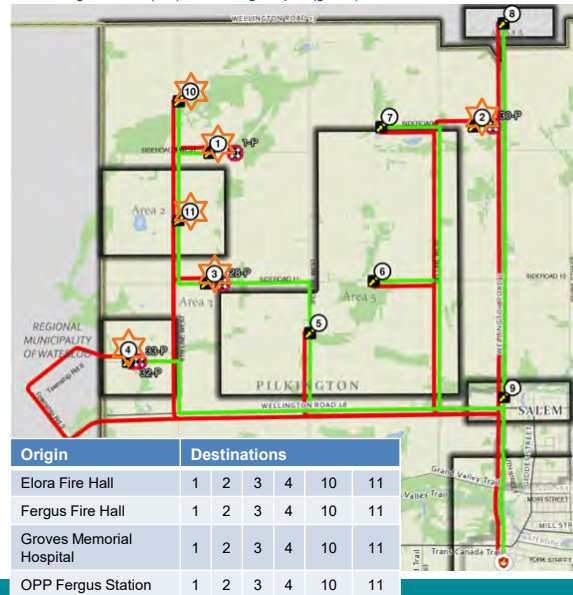
Emergency Response:

An analysis to determine the change in emergency response times from the local fire, ambulance and police stations were evaluated.

- Properties located west of closures are most affected and used for comparison measures
- Routes to numerous destination locations (5 through 9) are not affected by closures.
- List of origins and effected destinations used for analysis is shown in the table

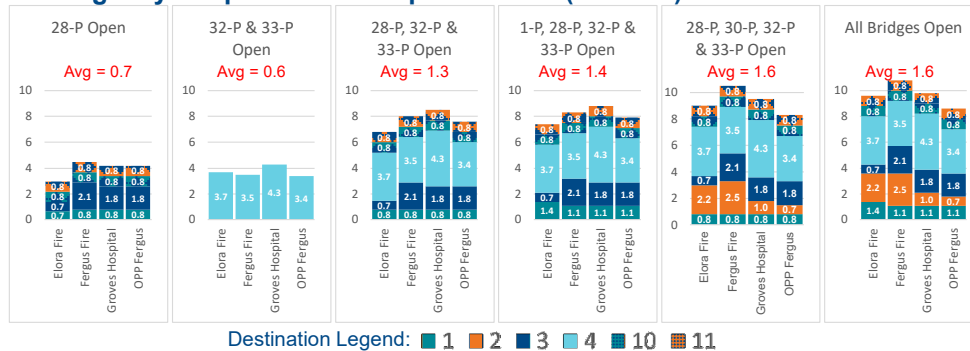
Example of Emergency Response Evaluation Scenario

- All bridges closed (red) vs All bridges open (green)



A similar analysis was conducted for emergency response times from the Elora and Fergus Fire Halls, the Groves Memorial Hospital and the OPP Fergus Station. The model analyzed travel times from these emergency service origins, to 11 locations strategically selected within the Study Area. Given that emergency services approach from the east, the destinations analyzed were selected to be west of the bridge closures. An example of the comparative routes maps is shown on this slide. Through the analysis, it was determined that locations 5 through 9 are not affected by closures, as the routes with the bridges open and closed would be the same. For the other destinations listed in the table and shown as starred in this figure, models were run to determine the time and distance savings of each alternative.

Emergency Response Time Improvements (Minutes):



Destination Legend: 1 2 3 4 10 11

Emergency Response Key Take-aways:

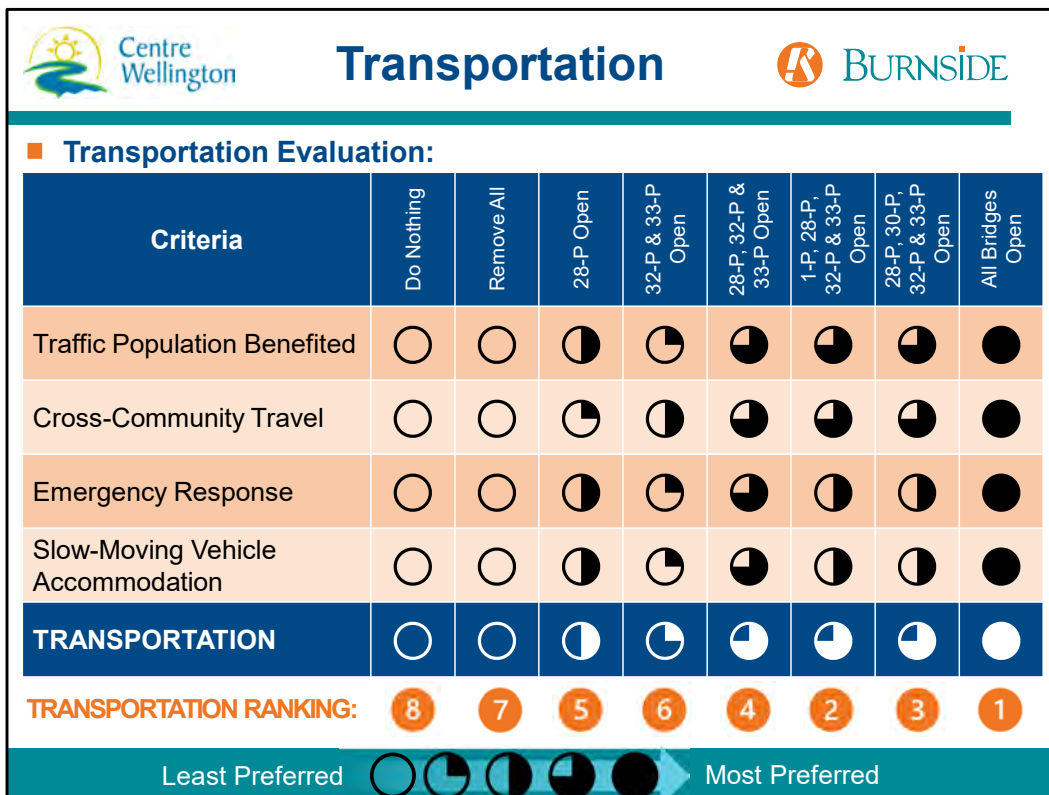
- Opening of 28-P results in benefits to destinations 1, 3, 10 & 11
- Opening of 32-P and 33-P benefits destination 4 only, but benefit is significant
- Opening 1-P makes only a minor difference, and to destination 1 only
- Opening 30-P is the only option to improve destination 2, and the benefit is significant
- The greatest improvements per site are realized by opening bridges 28-P, 32-P & 33-P

The findings of the Emergency Response study are shown in the figures above, with individual figures for each alternative, broken down to show the benefits to each emergency response origin, for each destination.

These figures provide a similar finding to that of the cross-community study.

The Key Take-aways from the emergency response study are as follows:

- As seen in the first figure, opening of 28-P offers improvements to several destinations, however some are relatively small in nature.
- The second figure shows that opening of bridges 32-P and 33-P would provide a significant improvement to response times, but these improvements apply to one destination only.
- By comparing the third and fourth figures, we can see that opening bridge 1-P only makes very minor improvements, and to one destination site only
- The fifth figure shows that opening bridge 30-P is the only option to provide improvements to destination 2, and the improvements are significant
- By comparing the averages of each alternative, the greatest improvements, on a per site basis, are recognized under the alternative 5, which opens bridges 28-P, 32-P and 33-P.



This table shows a summary of the evaluation of each of the alternatives for four sub-criteria of Transportation.

The pies indicate the relative rating of each alternative. Please note that the more filled in the circle is with either black or white, the more preferred the alternative is.

As you can see in the table, it is always most preferred from a transportation perspective to open all bridges, and always least preferred to not open any.

The first criteria shown is the Traffic Population benefited. This criteria is a quantitative criteria whose ranking is based on the average daily traffic benefited by each option.

For example, Bridge 28-P is on the road with the highest traffic volumes, so opening it would result in most benefit. Opening additional structures adds additional benefit, but sometimes that benefit is not as significant, when considered relatively. This is the case with bridges 30-P which has relatively low volumes, as well as 1-P which has a factor applied to it due to it being a seasonable road.

The cross-community travel and emergency response criteria summarizes the previously discussed findings. The average and total time savings were used to provide quantitative ratings on a scale relative to each other. For the emergency response criteria, it is noted that the alternatives which diverted response vehicles from using neighbouring township roads was given a bonus.

The slow-moving vehicle accommodation criteria is also a quantitative criteria. The ratings are based on the length of County Roads that slow moving vehicles have been diverted from. For example, opening bridge 28-P would allow slow moving vehicles

the alternative of using Sideroad 11, between 8th Line West and 3rd Line West, with a length of 1.8 km, instead of using Wellington Road 18. If combining 28-P and 32-P and 33-P, that distance would increase to 3.9 km. Similar applies to bridges 1-P and 30-P as a diversion from Wellington Road 17. For bridge 1-P, a seasonal factor has been applied to the distance saved, to account for it being a no-winter-maintenance road at the structure.

When considering ranking of the alternatives from solely a transportation perspective, the rankings are as shown in the slide:

- Alternative 8 of opening all bridges is most preferred, as would be expected
- The second through 4th place rankings scored very closely to one another, separated by only 0.2 points (on a scale of 4 points) between 2nd and 4th.
- Alternative 2 comes in as the second least preferred, with the edge over Alternative 8 since turn-arounds could be constructed during removals

Preliminary Geometry was determined in order to evaluate the environmental, economic, social & cultural impacts of the alternatives.

The geometry considers:

- Widening of the road platforms to meet Township geometric design standards
- Hydraulic Conveyance requirements for no negative impacts for flooding
- Adjustment of road profiles to improve sight lines and safety
- Fit with the natural channel and site topography

A summary of the proposed road geometry on the approaches of the structures is as follows:

| Site | Road Width | | Design Speed | | Reconstruction Length |
|-------------|---------------|----------|--------------|----------|-----------------------|
| | Existing | Proposed | Existing | Proposed | |
| 1-P | 3 – 5 m (+/-) | 9.2 m | 20 km/h | 40 km/h | 180 m |
| 28-P | 5 – 7 m (+/-) | 9.2 m | 20 km/h | 40 km/h | 110 m |
| 30-P | 4 m (+/-) | 9.2 m | 30 km/h | 30 km/h | 170 m |
| 32-P & 33-P | 6 – 7 m (+/-) | 9.2 m | 40 km/h | 60 km/h | 300 m |

Road improvements are proposed; however, the ability to increase the design speed was limited by the hydraulics of the site, since increasing the road elevation contributes to flooding.

In order to evaluate the impacts of replacement structures at each of the sites, a preliminary design structure sizing and road geometry was completed.

These geometries will be used when outlining the environmental, economic, social and cultural impacts.

The geometry at the sites are based on meeting the Township general geometric standards, adjusting the sizing the structure to meet hydraulic requirements, such that flood elevations are not increased upstream, while also adjusting the road profile to improve sight lines and increasing traffic safety. The structures are also skewed and aligned to better fit with the natural channel and site topography.

Given that the service life of replacement structures is 75 years, geometry must also consider potential changes in the future. Although these sites may be low volume roads with less than 200 cars per day currently, there is potential for that to change within the 75 year life of the structure. As such, we have based the design of these structures on the Township's standard cross-section for local rural roads, which consists of 3.35m lanes and 1.25 metre shoulders, for a total road width of 9.2 m.

The existing sites have poor sight lines, specifically at night in non-illuminated conditions. Design speeds for these sites are governed by the sharpness of the curves of peaks and valleys. In existing conditions, the design speed varies between 20 and 40 km/h, as outlined in the table. Options for improving these conditions include illumination or changes to the road profile. Given the rural nature of these sites, street light illumination was not considered, and adjustments of the road profiles were considered. However, improvements could only occur to a limited degree due to

the negative effects that raising the road has on flood elevations. The proposed design speed is considered to be the optimized balance between structure size and design speed for the road.

The length of road reconstruction required to complete these improvements is shown in the table for reference.

A Summary of the preliminary structure types and sizes is provided below.

| Site | Structure Type | | Structure Size | |
|------|-------------------------|--|------------------------|-----------------------------|
| | Existing | Proposed | Existing | Proposed |
| 1-P | Steel Truss | 4-Cell Precast Concrete Box Culverts, Low-Level Crossing | 11.8m span x 4.5m wide | 4 x [3.0m span x 1.5m rise] |
| 28-P | Concrete T-Beam | Prestressed Concrete Hollow Slab Girders | 10.6m span x 5.7m wide | 14 m span x 9.8 m wide |
| 30-P | Concrete Through Girder | Concrete Rigid Frame | 7.9m span x 6.4m wide | 16.2 m span x 9.8 m wide |
| 32-P | Concrete T-Beam | Precast Concrete Box Culvert | 9.1m span x 5.7m wide | 2.4m span x 1.8m rise |
| 33-P | Concrete T-Beam | Prestressed Concrete Box Girders | 10.4m span x 5.7m wide | 22 m span x 9.8m wide |



Preliminary structure types and sizes have been selected, as outlined in the table shown on this slide.

Given the seasonality of Sideroad 5 West, structure 1-P has been designed as a low-level crossing. This means that there is not a large clearance between the watercourse and the top of the structure. The structure would provide a crossing for the watercourse during normal flow conditions; however, would flood over during larger storm events. This type of structure requires monitoring and access control by the Township to note the closure of the bridge during increased flow periods of the watercourse. The structure would consist of four 3m wide concrete box culverts, similar to those shown in the left picture, but with 4 openings instead of two. The replacement structure for 28-P would require a larger structure than the existing, with a span of 14 m. A Prestressed concrete box girder bridge, on conventional cast-in-place concrete substructure has been used for the purpose of this study. The general aesthetics of this type of structure would be similar to the picture shown in the middle of this slide.

Structure 30-P would require a significantly larger structure if replaced, in order to meet hydraulic requirements. The original 7.9m span would have to be increased to approximately 16.2m. In order to limit the depth of the deck at this site, a cast-in-place concrete rigid frame structure is proposed, which would look similar to the structure shown in the picture on the bottom right of this slide.

At the site containing 32-P and 33-P, an investigation into eliminating or reducing structure 32-P was conducted. Options of eliminating the crossing at 32-P, by

diverting the watercourse to intersect Carroll Creek upstream of structure 33-P were evaluated; however, due to the potential impacts to habitats and the hydrologic function of taking the downstream portion of the watercourse offline, the preferred solution at this site was to maintain a crossing at this location, but minimize the size of structure 32-P. In order to do so, the structure at 33-P has to be increased, since the two structures act together to pass flows during more significant flood events. A hydraulic analysis of the site concluded that the preferred solution at this site would include replacing structure 32-P with a single 2.4m span precast concrete box culvert and increasing the size of structure 33-P to a 22m span prestressed concrete box girder. These structure types would look similar to the pictures on the bottom left and middle of the page, respectively.



Field investigations of all sites and the surrounding environments were completed to determine potential impacts of each alternative from an environmental perspective.

■ Study Findings:

- Treed areas are candidates for significant wildlife habitat
- Wetlands and marshes at all structures provide potential for amphibian breeding habitat, as well as offer hydrological function
- Cliff swallow nesting at bridge 30-P (active and in good condition)
- Potential reptile habitat or Endangered bat species habitat in the channel embankment protection (rocks and concrete) adjacent bridge 33-P.
- Tributary of Carroll Creek related to Structure 32-P is not considered fish habitat
- Perched concrete slab in channel below 30-P is partial barrier to fish passage
- Watercourse embankments at structures 28-P and 33-P have eroded due to flow constrictions caused by debris or narrow structure opening.

■ Study Recommendations:

- Environmental impacts can be mitigated through by working within applicable bird and fish timing windows and through proper compensation by plantings, appropriate seed mixes, etc.
- Increasing structure spans can improve fish habitat, provide terrestrial crossing corridors and reduce erosion

With these proposed replacement structures in mind, we have to also consider the potential impacts that would be caused to the natural environment at each site for each alternative.

Field investigations to determine significant wildlife habitat, including fish, bird, reptiles, etc. was conducted. The findings of the study concluded the following:

















































- Treed areas at all sites are generally candidates for significant wildlife habitat
- The wetlands and marshes at all structure provide potential for amphibian breeding habitat, as well as offer hydrological function. Disturbances to these areas should be minimized and compensated for if disturbance occurs
- Bridge 30-P had several active cliff swallow nests. The Cliff swallow is a migratory bird which is protected under the migratory bird convention act
- The rocks and concrete debris along the embankments of 33-P were identified as potential reptile or endangered bat species habitat and mitigative efforts will be required if disturbing this area
- The tributary of Carroll Creek was considered to not be fish habitat
- The perched concrete slab under Bridge 30-P creates a partial barrier to fish passage. The preference would be to remove this aspect to improve fish passage if undertaking any work at this site.
- And lastly, the watercourse embankments at structures 28-P and 33-P have eroded, likely due to flow constrictions caused by the current structure being narrower than the upstream channel, or due to debris build-up between the structure walls. This indicates that increasing the span of these structures should

be considered.

In general, there are opportunities to improve fish habitat, terrestrial crossings and provide erosion control by increasing the span of the structures to better align with the site topography.

Environmental findings identified as needing mitigation can generally be achieved by working within applicable timing windows or providing proper compensation.

■ Natural Environment Evaluation:

| Criteria | Do Nothing | Remove All | 28-P Open | 32-P & 33-P Open | 28-P, 32-P & 33-P Open | 1-P, 28-P, 32-P & 33-P Open | 28-P, 30-P, 32-P & 33-P Open | All Bridges Open |
|-------------------------------------|---|---|---|---|---|---|---|---|
| Environmentally Sensitive Areas |  |  |  |  |  |  |  |  |
| Terrestrial Habitat |  |  |  |  |  |  |  |  |
| Fisheries / Aquatic Habitat |  |  |  |  |  |  |  |  |
| Species at Risk |  |  |  |  |  |  |  |  |
| ENVIRONMENTAL |  |  |  |  |  |  |  |  |
| NATURAL ENVIRONMENT RANKING: | 2 | 1 | 1 | 3 | 4 | 5 | 5 | 6 |
| Highest Level of Impact |  |  |  |  |  |  |  |  |
| Lowest Level of Impact | | | | | | | | |

To determine the preferences of alternatives from a natural environment perspective, the level of impact to four environmental sub-criteria were evaluated, and are summarized in this table. Here, the more filled in the pie is, the less impact to the environment, and the more preferred that item is.

The first sub-criteria, environmentally sensitive areas, rates impacts to wetlands or protected forest areas.

The terrestrial habitat sub-criteria considers items such as impacts to migratory birds by removal of trees or cliff swallow habitat and potential for wildlife passage on river banks below structures.

The fisheries and aquatic habitat sub-criteria considers potential impacts such as in-water disturbances caused by collapse of structure or excavation for replacement structures, as well as possible improvements such as eliminating vehicle crossings through watercourse, or removing fish passage barriers.

The species at risk criteria evaluates potential impacts to wildlife that is specifically noted to be at risk and are generally protected by law.

Based on the level of potential impact to each of the alternatives, the rankings from a natural environment perspective are as shown in the slide. Alternatives 2 and 3 are tied as the most preferred

■ Capital Costs

The upfront capital costs associated with the design and construction of the proposed works, are estimated as follows:

| Site | Estimated Removal Cost | Estimated Replacement Cost |
|-------------|------------------------|----------------------------|
| 1-P | \$20,000 (Abutment) | \$1,250,000 |
| 28-P | \$75,000 | \$2,400,000 |
| 30-P | \$75,000 | \$2,550,000 |
| 32-P & 33-P | \$120,000 | \$4,550,000 |

■ Maintenance and Operational Costs

- Structure 1-P will require an operational budget to maintain signage and road closures during flood events
- Structures that are not replaced will require ongoing maintenance of barricades to prevent the public from using the structure or driving into the watercourse
- Low maintenance structure types are proposed. Bridges (28-P, 30-P and 33-P) would require more maintenance than Culverts (1-P & 32-P)
- Structures will require rehabilitation over their lifespan to reach design service life. The relative cost of rehabilitations can be assumed proportionate to the capital cost.


Financial considerations must also be considered in the evaluation of the alternatives. The cost to remove or replace structures requires substantial up-front capital investment from the Township. While some may feel it may be most desirable to just replace all structures, that option would come with a hefty price tag, which in turn could require increases to taxes to fund the projects that could also affect the community.

To evaluate the cost-benefit of each of the alternatives, Burnside has completed high-level cost estimations for the removal and replacement costs for each structure. These costs are shown in the table on this slide, and vary from \$1.25M to over \$4.5M.

In addition to the up-front capital costs, the life-time costs associated with maintenance and operations must also be considered. For example, for the option of the low-level structure replacement at structure 1-P, an operational budget would be required for a monitoring program of water levels and execution of closures of the road during flood events. Where structures aren't replaced, the Township has to maintain barriers to protect the public from hazards of the site.

The recommended replacement structures generally have fairly low maintenance costs based on the selected design features; however, all structures deteriorate over time, and rehabilitation programs will need to be provided over the structure's lifespan to ensure they do not reach a state of disrepair like the current structures. In general, these rehabilitation costs can be considered proportional to the construction costs for the purpose of evaluation.

■ Economic Evaluation:

| Criteria | Do Nothing | Remove All | 28-P Open | 32-P & 33-P Open | 28-P, 32-P & 33-P Open | 1-P, 28-P, 32-P & 33-P Open | 28-P, 30-P, 32-P & 33-P Open | All Bridges Open |
|--|------------|------------|-----------|------------------|------------------------|-----------------------------|------------------------------|------------------|
| Capital Costs | ● | ● | ◐ | ◑ | ◒ | ◓ | ◔ | ○ |
| Maintenance & Operational Costs | ● | ● | ◐ | ◑ | ◒ | ◓ | ◔ | ○ |
| ECONOMICS | ● | ● | ◐ | ◑ | ◒ | ◓ | ◔ | ○ |
| ECONOMIC RANKING: | 2 | 1 | 3 | 4 | 5 | 6 | 7 | 8 |
| <div> <div>Least Preferred</div> <div>  </div> <div>Most Preferred</div> </div> | | | | | | | | |

This table shows a summary of the evaluation of each of the alternatives based on Economic Factors.

In general, the more structures replaced, the higher the costs, and the less preferred the alternative is in terms of economic impact.

For the Do Nothing option, the upfront capital costs may be nothing, however, the eventual cost for structure removal and remedial efforts following their collapse would be higher than the cost of removing the structures now, prior to full failure of the structures.

As such, the Alternative of Removing all structures now is the top ranked alternative from a financial perspective.

This is followed by the do nothing alternative, and then alternatives 3 through 8, in that order.

■ Social

- Way-of-life considerations including how the community live, work and interact with one another on a day-to-day basis
- Political impacts
- Residents' sense of belonging within the Township
- Accessibility to social facilities such as halls, churches, gathering areas etc.
- Improvements to services received by the Township
- Improvements to the agricultural and commercial industries

■ Archaeological

- Areas that were previously disturbed by construction of the original road and bridges are generally not considered a potential risk
- Archaeological investigations have not been completed to date. Investigations will only occur where the proposed work at the site involves disturbance beyond previous limits
- In general, excavations for new foundations and widening of road platforms will result in disturbance beyond existing limits

Lastly, we need to consider the social and cultural environment and how it is effected by the alternatives.

The social impacts will evaluate way-of-life considerations, including how the community live, work and interact with another on a day-to-day basis, political impacts, residents' sense of belonging within the Township, and accessibility to social facilities such as halls and churches. Improvements to services received by the Township and efficiencies of the agricultural and commercial industries that the residents work in also form part of the considerations for the Social environment.

For example, the Mennonite community within the study area may find improvements to their way-of-life since the ability to travel by horse and carriage or to access the local Mennonite church is improved. Or - those who make a living from agricultural activities may find some of the alternatives provide efficiencies to their business by reduction of hauling routes.

From a cultural perspective, we must also consider the potential to impact archaeological features that may be of significance, whether it be to first-nations or other stakeholders. The more area to be disturbed by the works, the higher the potential risk to buried artifacts. Generally, areas that have been previously disturbed by the original bridge or road construction would be considered low-risk, but the widening of roadways and bridges could impact areas that were not previously impacted. Archaeological investigations have not occurred to date, but will be required prior to completing construction to help clear or mitigate impacts.

Cultural Heritage Assessments have been completed by sub-consultant Parslow Heritage Consultancy Inc. (PHC) on the 5 bridges as part of the MCEA studies.

■ Study Findings:

- Structures visually contribute to the overall rural character of the area
- None of the bridges were identified to fulfill the requirements of the Ontario Heritage Act for Designation
- None of the bridges meet the 60-point threshold for heritage value using MTO bridge assessment standards

■ Potential Impacts:

- If structures are removed and not replaced, the context of a bridge historically being present at that crossing is no longer prevalent
- New structures do not visually represent the rural and historic nature of the area.

■ Mitigations:

- Design replacement structure to aesthetically blend with the character of the area.
- Document each structure prior to removal and deposit in a publicly accessible repository.
- Incorporate any unique features of existing bridges into the design of the replacement.

A Cultural Heritage Assessment was also completed on all 5 bridges to review relevant historical documents, evaluate the potential for cultural heritage value or interest, identify any cultural heritage resources and provide recommendations for each bridge.

The study found that none of the 5 bridges were identified to fulfill the requirements of the Ontario Heritage Act for Designation – nor did any of them meet the 60-point threshold for heritage value under MTO’s assessment standards. As such, none of the 5 bridges are candidates for formal heritage protection under the Act. However, it was recognized that these structures contribute to the rural agricultural landscape of the Township.

Accordingly, if the structures are to be removed, documentation of the bridges should be deposited in a local, publicly accessible repository.

For bridges that are to be replaced, it is recommended that the design of the replacement structure blend with the rural character of the area and reflect any unique features of the original design - however, the original structures do not include any significantly unique features.

■ Social & Cultural Evaluation:

| Criteria | Do Nothing | Remove All | 28-P Open | 32-P & 33-P Open | 28-P, 32-P & 33-P Open | 1-P, 28-P, 32-P & 33-P Open | 28-P, 30-P, 32-P & 33-P Open | All Bridges Open |
|--|------------|------------|-----------|------------------|------------------------|-----------------------------|------------------------------|------------------|
| Social Environment | | | | | | | | |
| Archaeological | | | | | | | | |
| Cultural Heritage | | | | | | | | |
| Community Preference | | | | | | | | |
| SOCIAL & CULTURAL | | | | | | | | |
| SOCIAL & CULTURAL RANKING: | | | | | | | | |
| <div> <div>Least Preferred</div> <div> </div> <div>Most Preferred</div> </div> | | | | | | | | |

The evaluation of the social and cultural environments is summarized here. The first three rows indicate the impact to the social, archaeological and cultural heritage criteria previously discussed. In addition to these criteria, a section has been included for evaluating how the alternatives relate to the preferences of the community. The community preferences are based on the input received from the those who attended the first public information centre, or submitted comments by the other means of consultation.

The ranking of the alternatives from a social and cultural environment perspective are as shown in the slide.

Opening all bridges is the most preferred, followed by the option of opening bridges 28-P, 32-P and 33-P. Removal of all structures and the do nothing option are the least preferred

SUMMARY OF OVERALL EVALUATION:

| Criteria | Do Nothing | Remove All | 28-P Open | 32-P & 33-P Open | 28-P, 32-P & 33-P Open | 1-P, 28-P, 32-P & 33-P Open | 28-P, 30-P, 32-P & 33-P Open | All Bridges Open |
|---|------------|------------|-----------|------------------|------------------------|-----------------------------|------------------------------|------------------|
| Transportation | | | | | | | | |
| Natural Environment | | | | | | | | |
| Economic | | | | | | | | |
| Social & Cultural | | | | | | | | |
| RANKING (EQUAL WEIGHT) | 8 | 6 | 2 | 5 | 1 | 3 | 4 | 7 |
| RANKING (SENSITIVITY ANALYSIS) | 8 | 7 | 4 | 6 | 1 | 2 | 5 | 3 |

We will now use the information previously presented for the individual criteria to determine the overall preferred solution for this study.

As we have seen, and as is illustrated here, the most preferred option differs for each of the criteria examined. However, we need to consider what alternative best suits the combination of these criteria.

For the first scenario, we have considered each of the criteria to be equally weighted, meaning, for example that transportation criteria is just as important as economic or any of the other criteria. Under these assumed criteria weights, the ranking of the alternatives results in the preferred solution being [CLICK] Alternative 5 – the replacement of bridges 28-P, 32-P and 33-P. The ranking of the remaining options under equal weighting is as follows [CLICK x 7]

However, the importance of each of these criteria is somewhat subjective, and different people may value different criteria more than others. To address this consideration, we also conducted a sensitivity analysis with a series of alternative weightings for each criteria, and provided a ranking based on combination of rankings of each weighting scenario. These rankings based on sensitivity analysis are shown here on the bottom row. As you will see, the ranking of several of the alternatives changed with the different weightings, however the most preferred alternative remained as Alternative 5.



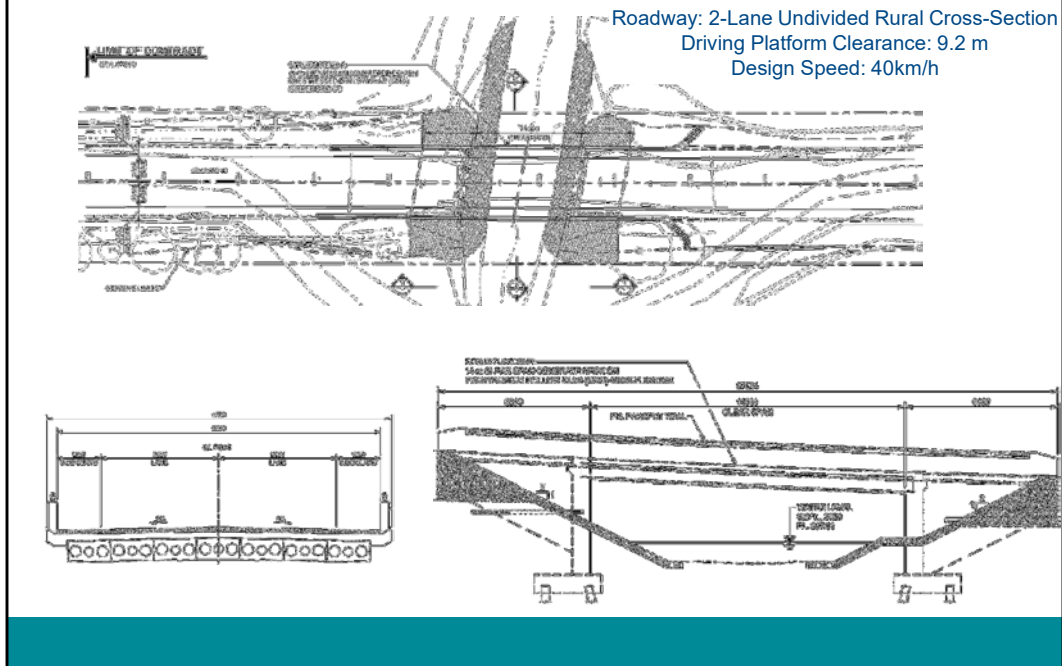
■ REPLACEMENT OF BRIDGES 28-P, 32-P & 33-P

- Serve the two most travelled roadways of the Study Area
- Results in the most improvements per opened structure for cross-community travel and emergency response times.
- Emergency service and other municipal service vehicles (snow removal, road grading) not required to use neighbouring municipality roads
- Provides east-west connection alternative to County Roads (beneficial for slow moving vehicles)
- Best Cost-Benefit
- Opens connectivity for the local Mennonite community to the local church and improves ease of access for travel via horse and carriage
- Opens the top two sites requested by the local community

This slide summarizes the findings of the studies related to the preferred alternative of replacing structures 28-P, 32-P and 33-P, which formed the basis of its selection.

By replacing these structures, the Township will

- provide a solution to the two most travelled roadways of the study area
- be opening the structures that provided the most improvements to the cross-community and emergency response travel times
- divert emergency services and other municipal service vehicles from neighbouring municipal roads
- provide a continuous east-west connection route through the study area and beyond, which also has the added benefit of offering slow moving vehicles such as farm equipment or horse and carriages an alternative to using the busy county roads
- provides the most cost-benefit in terms of financial impact to overall benefits to community
- improves connectivity for the local Mennonite community to the local church, and provides easier access to the community by horse and carriage travel, and
- is in general agreement with the communities desires regarding preferences for which structures should be opened

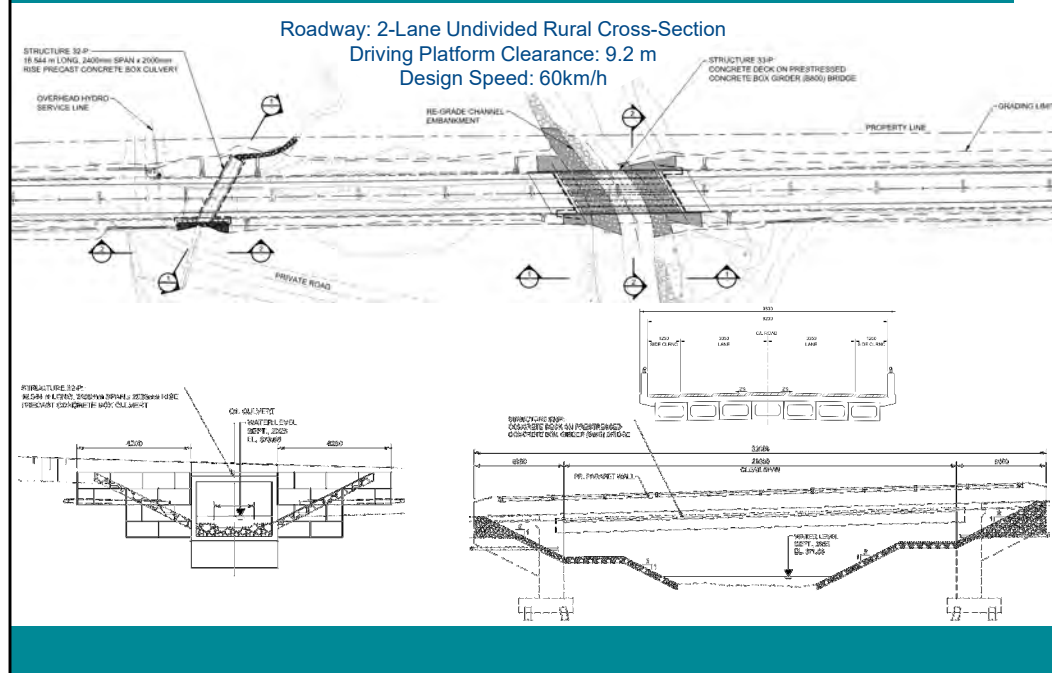


Preliminary design concepts for the preferred solutions have been developed. The preliminary design concept for bridge 28-P is shown here.

The roadway is proposed to be widened to 9.2m (30'), which will carry one lane of traffic in each direction and also provide clearance for wide farming equipment.

Adjustments to the road profile will raise the west approach in order to improve the design speed to 40 km/h, which will require speed limit advisory signs within the vicinity of the bridge. The span of the structure will increase to 14 m, improving the hydraulic performance and wildlife passage potential. The structure will be skewed to realign with the watercourse, and the eroded channel embankments will be restored and stabilized.

A cross section of the structure is shown in the lower left quadrant of the slide. The elevation view is shown in the lower right quadrant of the slide.



The preliminary design concept for bridges 32-P and 33-P are shown here. The design includes widening of the roadway to provide a 9.2m (30') clearance to accommodate one lane of traffic in each direction, as well as wider vehicles such as farming equipment. The profile of the road will be adjusted to smooth the vertical curves of the roadway and increase the design speed to 60 km/h. Structure 32-P will be down-sized from a 9.2 m span bridge to a 2.4m span concrete box culvert structure, with small retaining walls. A drawing of the view looking at structure 32-P from the outlet of the structure is shown on the bottom left of this slide. Structure 33-P will be upsized to a 22 m long span to offset the downsizing of 32-P and will skewed to better align with the watercourse. The structure is recommended to be a concrete slab on prestressed concrete box girder bridge. A cross-section and elevation view of structure 33-P is shown on the bottom right of the slide. The watercourse will require regrading to tie into the new structures.

■ Mitigations:

- Archaeological Study should be conducted to identify any areas of potential concern
- Construction should occur within applicable in-water working windows for fisheries
- Erosion and Sediment Control plans shall be implemented into design
- Minimize vegetation removals to extent possible and provide compensation planting
- Species at Risk (SAR) Bat surveys at rock pile on embankments of 33-P
- Use of native seed mixes and plantings during restorations
- Bird nesting preventative measures prior to nesting season before structure removals
- Documentation of existing structures prior to removal

■ Future Design Considerations:

- Legal Survey to confirm property limits and easement or acquisition requirements
- Permits from Grand River Conservation Authority, DFO, MECP, MNRF, as applicable are required prior to construction
- Geotechnical investigation required for confirmation of foundation type and size
- Assess options to further improve design speeds and sight lines
- Identify utility conflicts and relocate prior to construction works

Finally, if the preferred solution is carried forward to the design and eventual construction phases, several mitigative measures and design consideration should be included as part of the design phase. A non-exhaustive list of mitigations includes:

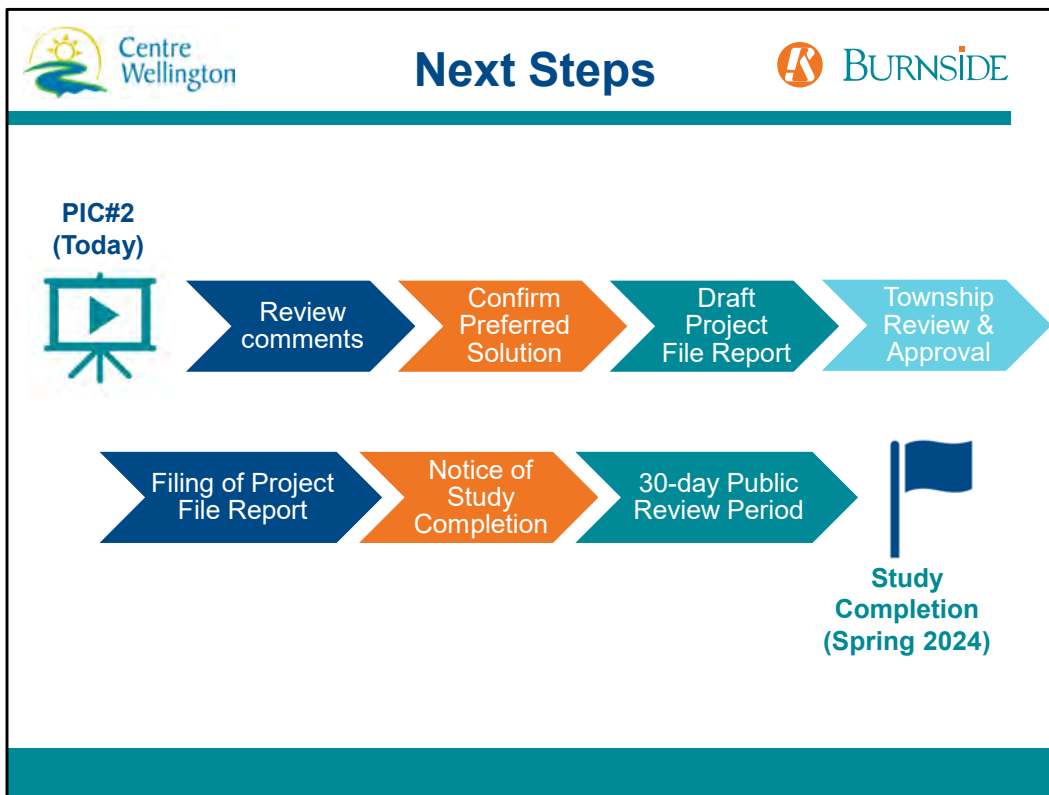
- An archaeological study should be conducted to identify any areas of potential concern
- In-water construction works should occur within the applicable working windows for the protection of fisheries
- Erosion and sediment control plans shall be included in the design and implemented during construction
- The removal of vegetation should be limited to the extent possible, or compensation planting should be carried out where removals are required
- A species at risk bat survey should be conducted at the rock pile on embankments of 33-P
- Native seed mixes and plantings should be used during site restorations
- Bird nesting preventative measures should be installed on structures prior to the beginning of migratory bird nesting periods so that there are no active nests during structure removals
- the existing structure should be photo documented prior to their removal

Also, the designer of the replacement structures should

- complete a legal survey to confirm property limits and whether easements or acquisitions are required
- obtain permits and approvals from the required regulator authorities including the

GRCA, DFO, MECP and MNRF

- Complete a subsurface geotechnical investigation to confirm the foundation type, size and depth
- Assess options to further improve design speeds at the sites, and
- Identify utility conflicts and relocate utilities as required



Following this PIC, comments from the public and other stakeholders will be collected and reviewed. These comments will be taken into consideration and the preferred alternative will be confirmed or revisited in light of any pertinent factors that may be brought forward during consultation with stakeholders. Once the preferred solution is confirmed, a project file report will be drafted and provided to Township staff and council for review. Once the report has been reviewed and finalized, it will be placed on file and a Notice of Completion will be issued to Indigenous Communities, review agencies and the public. A minimum 30-day period will be provided from the date of issue of the notice of completion to allow for comment and input. Following the 30-day period, if no requests for section 16 order has been received by the Ministry, the Township may proceed to implement the project based on the preferred solution.

- The Township has a “Bridge & Major Culverts 10-Year Plan”
- \$2.8 million per year is dedicated for bridge & major culvert work.
- Centre Wellington has 111 bridges & major culverts
- The Township’s asset management plan and formal bridge / culvert inspections provide prioritization direction.
- The replacement plan is revised annually to incorporate priority and funding limits
- The 2024 bridge budget includes:
 - ❖ Detailed design work for the Noah Road bridges (32-P & 33-P)
 - ❖ Sideroad 11 bridge (28-P). Timeline will be adjusted in the 2025 budget based on these study outcomes
- The 10 year Capital bridge plan will be influenced by decisions made from outcomes from this study.



The preferred alternative outlined in this study will become part of the Township’s 10-Year plan for their Bridges and Major Culverts. The Township has 111 bridges and major culverts, and currently allocates \$2.8 Million dollars per year to the budget for the maintenance, repair and replacement of their bridge and culvert inventory. The Township uses their asset management plan and formal bridge and culvert inspection program to help provide direction on the prioritization of structures to be addressed. This 10-year plan is revised annually to incorporate any changes or newly identified priorities and funding limits.

The 2024 version of the 10-year capital plan has already been determined, and was completed prior to the selection of the preferred alternative of this study.

The current 10-year capital plan includes work for the detailed design of Bridges 32-P and 33-P on Noah Road. The replacement of Bridge 28-P on Sideroad 11 is also included within the 10-year capital plan; however, based on the decisions made from outcomes of this study, the priority of bridge works will be revisited in the 2025 version of the capital plan and the Township anticipates that the timeline for structure 28-P will be adjusted to an earlier timeline based on the preliminary preferred solution presented today.

In general, it is typically a 3-year process from the completion of the EA study in order to design and construct the replacement bridge. However, it should be recognized that multiple bridge projects with high capital costs may not be able to be constructed in the same year due to budgeting restraints, so the implementation of this 3-year process typically has to be staggered for each structure

We want to hear from you!

Invitation for Participation

You are invited to provide comments by submission via the Township's Connect CW website (from December 6th to 21st, 2023) or by emailing one of the Project Team members below by January 19th, 2024:

www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township

Adam Dickieson
Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square
Elora, ON N0B 1S0
Tel: 519-846-9691 ext. 355
adickieson@centrewellington.ca

Andrew Dawson, P.Eng
Consultant Project Manager
R. J. Burnside and Associates Limited
292 Speedvale Avenue West, Unit 20
Guelph, ON N1H 1C4
Tel: 705-797-4310
andrew.dawson@rjburnside.com

That brings us to the end of the PIC.

We welcome any comments regarding this study to be submitted to the Project Team contacts. We ask that they be submitted prior to January 19th, 2024. This presentation will be posted on the Township's Connect CW website and a forum will be open on the website from December 6th to 21st to submit comments related to this PIC, should you wish to submit comments through that avenue.

We appreciate your time and interest in this project and we look forward to receiving your comments!



Public Information Centre #1 for Municipal Class Environmental Assessment
for Bridges 1-P, 28-P, 30-P, 32-P & 33-P



Sign-in Sheet (Please Print)

Public Information Centre #2 – December 6, 2023, 6:00 p.m. – 8:00 p.m.
Bethel Mennonite Church, 6772 8th Line W., Elora ON N0B 1S0

| Name Please Print | Organization | Mailing Address (incl. Postal Code) Please Print | Phone Number/ E-mail | Do you wish to be on the mailing list? Y/N |
|----------------------|--------------|--|-------------------------|---|
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Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. Except for personal information (e.g., name, address, phone number), all comments will become part of the public record that is available to the general public.

Project information will be made available in an alternative format upon request in accordance with the *Accessibility Standard for Information and Communication under the Accessibility for Ontarians with Disabilities Act, 2005*.



Centre Wellington

Public Information Centre #1 for Municipal Class Environmental Assessment
for Bridges 1-P, 28-P, 30-P, 32-P & 33-P

Sign-in Sheet (Please Print)

Public Information Centre #2 – December 6, 2023, 6:00 p.m. – 8:00 p.m.
Bethel Mennonite Church, 6772 8th Line W., Elora ON N0B 1S0



| Name Please Print | Organization | Mailing Address (incl. Postal Code) Please Print | Phone Number/ E-mail | Do you wish to be on the mailing list? Y/N |
|----------------------|--------------|--|-------------------------|---|
| | | | | |

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. Except for personal information (e.g., name, address, phone number), all comments will become part of the public record that is available to the general public.

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Centre Wellington

**Public Information Centre #1
Municipal Class Environmental
Assessment
Bridges 1-P, 28-P, 30-P, 32-P & 33-P**



BURNSIDE

Comment Sheet

Name

Public Information Centre #2

Address

December 6, 2023, 6:00pm –
8:00pm

Postal Code

Location: Bethel Mennonite
Church, 6772 8th Line W., Elora
ON N0B 1S0

Phone

Email

Comments/Questions/Suggestions (additional space on second page)

- with 111 +/- bridge structures to maintain/replace/inspect, etc.
a budget of \$2.8 million annually sounds a little inadequate...
considering the age and condition of many of the structures.
- in effort to keep progress moving forward maybe \$\$
from the Casino/Racetrack can be diverted for a few years
specifically for bridge reconstruction.

- hoping the study, design, tender/construction for Bridges
32-P/33-P & 28-P can move quickly ... for all the reasons
presented during the presentation.

- It was an informative presentation - Thank you

[Signature]

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. Except for personal information (e.g., name, address, phone number), all comments will become part of the public record that is available to the general public.

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**Public Information Centre #1
Municipal Class Environmental
Assessment
Bridges 1-P, 28-P, 30-P, 32-P & 33-P**



Comment Sheet

Name

Public Information Centre #2

Address

December 6, 2023, 6:00pm –
8:00pm

Postal Code

Location: Bethel Mennonite
Church, 6772 8th Line W., Elora
ON N0B 1S0

Phone

Email

Comments/Questions/Suggestions (additional space on second page)

- Really liked your proposal.
- Most important to me is that 26 P stays open. we live on corner of Sideroad 5 & 1st line & school is down at Sideroad 11 on 1st line
- we will be taking school children there for the next 18 years, this would be much appreciated.

Meeting was well done!

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. Except for personal information (e.g., name, address, phone number), all comments will become part of the public record that is available to the general public.

Project information will be made available in an alternative format upon request in accordance with the *Accessibility Standard for Information and Communication under the Accessibility for Ontarians with Disabilities Act, 2005*.

Crystal Ferguson

From: Andrew Dawson
Sent: Tuesday, July 25, 2023 9:25 AM
To: [REDACTED]
Cc: Deanna De Forest; Crystal Ferguson
Subject: RE: Bridge 30p

[REDACTED]

Thank you very much for your response to the mail out notice. Your correspondence will be filed with this project as part of the Municipal Class Environmental Assessment process and be considered in the evaluation of alternatives for the project.

Also, please note that there will be a Public Information Centre held within the community later this summer related to this project where additional information will be available regarding the process and alternatives. The venue and date are still being finalized; but you will receive a further notice regarding the meeting in the near future.

Regards,
Andrew Dawson

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

-----Original Message-----

From: [REDACTED]
Sent: Tuesday, July 25, 2023 6:54 AM
To: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>
Subject: Bridge 30p

Hello,

I received a notice in the mail about the bridge studies I live on Sideroad 5 near bridge 30p. We have really liked having the bridge closed We are [REDACTED] in that section of Sideroad 5 and this has become very private for us with much less traffic.

On the other hand the bridge on 1st line just down the hill from Sideroad 5 is very important to us. We cross this 4 times a day to go back and forth to our school close to Sideroad 10(this bridge is not on the study just mentioning how important it is to us).

We are ok with whatever decision is made on 30p but thought I would mention we like it the way it is.

We would use almost all the other bridges at times if they were open but again are ok with whatever decision is made

[REDACTED]

Sent from my iPhone

Andrew Dawson

From: [REDACTED]
Sent: Tuesday, July 25, 2023 6:54 AM
To: adickieson@centrewellington.ca; Andrew Dawson
Subject: Bridge 30p

Hello,

I received a notice in the mail about the bridge studies I live on Sideroad 5 near bridge 30p. We have really liked having the bridge closed We are [REDACTED] in that section of Sideroad 5 and this has become very private for us with much less traffic.

On the other hand the bridge on 1st line just down the hill from Sideroad 5 is very important to us. We cross this 4 times a day to go back and forth to our school close to Sideroad 10(this bridge is not on the study just mentioning how important it is to us).

We are ok with whatever decision is made on 30p but thought I would mention we like it the way it is.

We would use almost all the other bridges at times if they were open but again are ok with whatever decision is made

[REDACTED]

Sent from my iPhone

Crystal Ferguson

From: [REDACTED]
Sent: Saturday, July 29, 2023 10:52 AM
To: adickieson@centrewellington.ca
Cc: Andrew Dawson
Subject: Bridge Assessments

Good Morning,

I would like to be included on updates of the assessments for the bridges in my area of Centre Wellington.

I feel it would be beneficial to have some, if not all, bridges brought back into usable condition. By permanently closing bridges on sideroad 5 and 11 we have created a large block that is not quickly accessible between Third line and Eighth Line. For farmers like myself it causes longer drives with farm equipment and forces us onto busy county roads where it is more dangerous to be driving slow moving vehicles. And when other bridges in the area need to be closed for work/repairs it makes a difficult maze to navigate.

Thanks for looking into this issue!

Regards,

[REDACTED]

Crystal Ferguson

From: [REDACTED]
Sent: Monday, July 31, 2023 10:16 AM
To: Andrew Dawson
Subject: Voice Mail (28 seconds)
Attachments: audio.mp3

Yes, [REDACTED] calling from Pilkington Township concerning the study on the five bridges. I would like to be put on the mailing list and it's [REDACTED] Thank you.

You received a voice mail from [REDACTED]

Thank you for using Transcription! If you don't see a transcript above, it's because the audio quality was not clear enough to transcribe.

[Set Up Voice Mail](#)

Crystal Ferguson

From: Andrew Dawson
Sent: Tuesday, August 01, 2023 9:02 AM
To: [REDACTED]
Cc: adickieson@centrewellington.ca; Tricia Radburn; Crystal Ferguson
Subject: RE: Bridge Assessments

Good Morning [REDACTED]

Thank you for reaching out to identify your interest in this Municipal Class Environmental Assessment! We appreciate your comments and will take these into consideration in our evaluation of alternatives as part of the MCEA process. We will also be holding a public information centre later this summer (tentatively scheduled for the evening of September 6th, 2023 at the Bethel Mennonite Church), where we welcome further input from the community on this project. You will be receiving further notification regarding this PIC in the near future, once all details have been finalized.

Should you have any questions, please do not hesitate to contact us in the meantime.

Regards,
Andrew Dawson

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: [REDACTED]
Sent: Saturday, July 29, 2023 10:51 AM
To: adickieson@centrewellington.ca
Cc: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Subject: Bridge Assessments

Good Morning,

I would like to be included on updates of the assessments for the bridges in my area of Centre Wellington.

I feel it would be beneficial to have some, if not all, bridges brought back into usable condition. By permanently closing bridges on sideroad 5 and 11 we have created a large block that is not quickly accessible between Third line and Eighth Line. For farmers like myself it causes longer drives with farm equipment and forces us onto busy county roads where it is more dangerous to be driving slow moving vehicles. And when other bridges in the area need to be closed for work/repairs it makes a difficult maze to navigate.

Thanks for looking into this issue!

Regards,
[REDACTED]

Crystal Ferguson

From: Andrew Dawson
Sent: Friday, August 04, 2023 9:23 AM
To: [REDACTED]
Cc: Tricia Radburn; Crystal Ferguson; adickieson@centrewellington.ca
Subject: RE: Centre Wellington Bridges

Good Morning [REDACTED]

Thank you for your email indicating your interest in this project! We will ensure to include you on future notices and updates.

Also, so you are aware, there will be a Public Information Centre held at the beginning of September (tentatively scheduled for the evening of September 6 at the Bethel Mennonite Church) where we welcome yourself and the community to come learn more about the Municipal Class Environmental Assessment process and share your opinions on how each of these bridge structures impact you and your connection in the community. A notice will be circulated confirming the details of this Public Information Centre meeting in the near future.

If you have any questions or additional comments in the meantime, please do not hesitate to reach out to myself or Adam Dickieson.

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: [REDACTED]
Sent: Thursday, August 03, 2023 10:18 PM
To: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>
Subject: Centre Wellington Bridges

Dear Mr. Dickieson and Mr. Dawson,

I would like to be put on your mailing list to receive future notices and study updates for the bridges study in Centre Wellington.

Thanks!

[REDACTED]

Crystal Ferguson

From: Andrew Dawson
Sent: Tuesday, August 08, 2023 10:25 AM
To: [REDACTED]
Cc: Adam Dickieson; Tricia Radburn; Crystal Ferguson
Subject: RE: Bridge assessment

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Good Morning [REDACTED]

Your email was passed along to me by Adam Dickieson at the Township. I am with the Consulting Engineer firm R.J. Burnside & Associates Ltd., who are working with the Township on this Environmental Assessment project. I am emailing you to let you know that we have received your comments and interest in the project and future updates, and we will include you on the contact list for future updates!

Also, so you are aware, there will be a Public Information Centre held at the beginning of September (tentatively scheduled for the evening of September 6 at the Bethel Mennonite Church) where we welcome yourself and the community to come learn more about the Municipal Class Environmental Assessment process and further share your opinions on how each of these bridge structures impact you and your connection in the community. A notice will be circulated confirming the details of this Public Information Centre meeting in the near future.

If you have any questions or additional comments in the meantime, please do not hesitate to reach out to myself or Adam Dickieson.

Regards,
Andrew Dawson

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: [REDACTED]
Sent: Thursday, August 03, 2023 10:55 AM
To: Adam Dickieson <ADickieson@centrewellington.ca>
Subject: Bridge assessment

You don't often get email from [REDACTED] [Learn why this is important](#)

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

Dear Adam,
Thank you for the notice about the beginning of an environmental assessment of five bridges in Centre Wellington. As property owners who have used these bridges, we would like to receive any updates you have on this project.

Thank you for your consideration.

[REDACTED]

Crystal Ferguson

From: [REDACTED]
Sent: Thursday, August 03, 2023 10:18 PM
To: adickieson@centrewellington.ca; Andrew Dawson
Subject: Centre Wellington Bridges

Dear Mr. Dickieson and Mr. Dawson,

I would like to be put on your mailing list to receive future notices and study updates for the bridges study in Centre Wellington.

Thanks!



Crystal Ferguson

From: Andrew Dawson
Sent: Tuesday, August 08, 2023 8:28 AM
To: [REDACTED]
Cc: adickieson@centrewellington.ca; Tricia Radburn; Crystal Ferguson
Subject: RE: Bridges Study

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Good Morning [REDACTED]

Thank you for your email indicating your interest in this project! We appreciate your comments in support of resurrecting the structures and this will be considered in the evaluation of alternatives of the structures, as part of the Municipal Class Environmental Assessment process. We will also ensure to include you on future notices and updates.

Also, so you are aware, there will be a Public Information Centre held at the beginning of September (tentatively scheduled for the evening of September 6 at the Bethel Mennonite Church) where we welcome yourself and the community to come learn more about the Municipal Class Environmental Assessment process and further share your opinions on how each of these bridge structures impact you and your connection in the community. A notice will be circulated confirming the details of this Public Information Centre meeting in the near future.

If you have any questions or additional comments in the meantime, please do not hesitate to reach out to myself or Adam Dickieson.

Regards,
Andrew Dawson

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: [REDACTED]
Sent: Friday, August 04, 2023 4:49 PM
To: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>
Subject: Bridges Study

Dear Sirs,

I live at [REDACTED] Elora Ontario

I just want to express my strong support for the resurrecting these bridges - and especially 30P on sideroad 5 which used to allow us direct access onto the 7

Other than that, the one that would make a difference would be 1p

Please add me to your mailing list
Best wishes
[REDACTED]

Crystal Ferguson

From: [REDACTED]
Sent: Friday, August 04, 2023 10:57 AM
To: Andrew Dawson
Cc: Tricia Radburn; Crystal Ferguson; adickieson@centrewellington.ca
Subject: Re: Centre Wellington Bridges

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Thanks Andrew and team. Much appreciated. Will look forward to the public meeting on September 6.

Have a great weekend!

[REDACTED]

On 2023-08-04 09:23 AM, Andrew Dawson wrote:

Good Morning [REDACTED]

Thank you for your email indicating your interest in this project! We will ensure to include you on future notices and updates.

Also, so you are aware, there will be a Public Information Centre held at the beginning of September (tentatively scheduled for the evening of September 6 at the Bethel Mennonite Church) where we welcome yourself and the community to come learn more about the Municipal Class Environmental Assessment process and share your opinions on how each of these bridge structures impact you and your connection in the community. A notice will be circulated confirming the details of this Public Information Centre meeting in the near future.

If you have any questions or additional comments in the meantime, please do not hesitate to reach out to myself or Adam Dickieson.

Regards,

Andrew

From: [REDACTED]
Sent: Thursday, August 03, 2023 10:18 PM
To: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>
Subject: Centre Wellington Bridges

Dear Mr. Dickieson and Mr. Dawson,

I would like to be put on your mailing list to receive future notices and study updates for the bridges study in Centre Wellington.

Thanks!

[REDACTED]

Crystal Ferguson

From: [REDACTED]
Sent: Thursday, August 03, 2023 10:55 AM
To: Adam Dickieson
Subject: Bridge assessment

You don't often get email from [REDACTED] [Learn why this is important](#)

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

Dear Adam,

Thank you for the notice about the beginning of an environmental assessment of five bridges in Centre Wellington. As property owners who have used these bridges, we would like to receive any updates you have on this project.

Thank you for your consideration.

[REDACTED]



Record of Correspondence

Date: August 15, 2023 **Project No.:** 300056693.0000
Project Name: Centre Wellington 5 Bridges Municipal Class Environmental Assessment
Client Name: Township Centre Wellington
To: Project File
Author: Crystal Ferguson M.E.S., B.A.Sc.

This memo is a record of correspondence received via telephone, for the purpose of paper documentation to be included on file.

On August 15, 2023 a voicemail was received by Mr. Adam Dickieson of Centre Wellington Township from [REDACTED].

The following is a transcript of the voicemail:

Hello, this is [REDACTED]. We were living out here and side Route 11 where the bridges are being. Being assessed to be replaced or whatever you want to do with them. If you don't mind, you could add our name to the update list to keep us informed what's happening. [REDACTED]
[REDACTED] phone number [REDACTED] Thank you.

Crystal Ferguson

From: Adam Dickieson <ADickieson@centrewellington.ca>
Sent: Tuesday, August 15, 2023 10:37 AM
To: Andrew Dawson
Cc: Tricia Radburn; Crystal Ferguson; Chris Knechtel; Matt Brooks
Subject: 056693 Centre Wellington - MCEA_Communication – Resident Phone Call Record
Attachments: audio.mp3

Follow Up Flag: Follow up
Flag Status: Flagged

Andrew,

056693 Centre Wellington - MCEA_Communication – Resident Phone Call Record

- On August 15, 2023 at 8:46, I received a phone message (attached) from [REDACTED]

I called back and spoke with [REDACTED]. I stated that we look forward to hearing information regarding these bridges from area residents. I had explained that the upcoming Public Meeting – open house would be held September 6, 2023 at the Bethel church and that details regarding the meeting would be circulated via Canada Post.

Regards,
Adam.

Adam Dickieson | Engineering Services Coordinator

Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x355 centrewellington.ca

Office located at: 7444 Wellington Road #21, Elora, ON N0B 1S0

Crystal Ferguson

From: [REDACTED]
Sent: Tuesday, August 22, 2023 9:09 AM
To: Adam Dickieson
Subject: Study of the Five bridges in Centre Wellington

[You don't often get email from [REDACTED] Learn why this is important at [CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.](https://urldefense.proofpoint.com/v2/url?u=https-3A__aka.ms_LearnAboutSenderIdentification&d=DwIFAg&c=euGZstcaTDIlvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=9amd3skiVPQFk0w_DKpyhdKAyXNIHeBDjlo8c5U2NOI&m=zJLGA-I0qWrUR4J_ZfunDREMxU_wqQEUbGcw_q_lw-kRVLB6GdSc0h6GbPEtVAbO&s=qotek15RovjtXj5JKOpUMfol62gpZIGyEU3IHuBuRv4&e=]</p></div><div data-bbox=)

Good morning Adam

In regard to the study of the bridges in Centre Wellington I would like to be notified of further discussions if possible



Thanks !

[REDACTED]

Notice of Public Information Centre #1, Five Bridges in Centre Wellington MCEA



Crystal Ferguson

To: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23

Cc: Andrew Dawson, adickieson@centrewellington.ca

Bc:



056693_Notice of PIC_230815_Final.pdf
309 KB

Reply Reply All Forward

Thu 8/24/2023 11:30 AM

Hello,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #1 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance at the first of two in-person Public Open House meetings for the project. A Study Area map is provided on the attached notice.

Date & Time: September 6, 2023, 6:00 pm ~ 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

At this time, the Township will present project information to the community and stakeholders and will provide opportunity for you to provide your comments relating to the role of these structures within the local community.

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **September 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

Adam Dickleson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record. If you have accessibility requirements in order to participate in this project, please contact one of the project team members listed above.

On behalf of the study team,

Crystal Ferguson

From: [REDACTED]
Sent: Sunday, September 03, 2023 7:00 PM
To: Adam Dickieson
Subject: Bridge study

[You don't often get email from [REDACTED] Learn why this is important at [CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.](https://urldefense.proofpoint.com/v2/url?u=https-3A__aka.ms_LearnAboutSenderIdentification&d=DwIF-g&c=euGZstcaTDIlvimEN8b7jXrwqOf-v5A_Cdp gnVfiiMM&r=9amd3skiVPQFk0w_DKpyhdKAyXNIHeBDjlo8c5U2NOI&m=4YFyPfHmltDsPaTZpUANftrSN6X_NAhP7oabP5WqpMyJkuR-kGjjygKJoMFFLV5w&s=WY-tvWryCR2jM-97L5fLIID4Dy3556MGtryIJinhn1A&e=]</p></div><div data-bbox=)

On August 17 or 24th, on Gerrie rd while I was biking up and down the paved portion, but mostly back and forth through the Irvine valley I observed a gravel trucks coming from the Sorbara subdivision on Colborne Street travelling up Gerrie Road empty and either turning left on Side Road 10 or side Road 5. Fully loaded trucks were coming back Gerrie off of either side rd 5 or 10. loaded with 5/8" gravel.

These trucks were going by at about 3 minute intervals and maybe more frequently. I of course did not see them as to what they did at County Road 7. I suspect they went to Alma or Salem and then out to the gravel pits in Pilkington. To me this shows a need to fix the bridges or culverts.

I can't remember the bridge on sideroad 5 being open , but assuming it was and the road rebuilt the gravel trucks would have used it for some of the loads.

If future subdivisions are built up as far as the Irvine river as proposed, then for sure there would be a need for east west short cuts for gravel trucks moving material to these new subdivisions.

[REDACTED]
Elora

Crystal Ferguson

From: Andrew Dawson
Sent: Tuesday, September 05, 2023 9:09 AM
To: [REDACTED]
Cc: Mishaal Rizwan; Tricia Radburn; Crystal Ferguson
Subject: RE: Bridge study

Good Morning [REDACTED]

Adam Dickieson passed along your email to me. I am with R.J. Burnside & Associates Limited Consulting Engineers, who are working with the Township as part of this study.

We appreciate your insight regarding these structures, and the effect they may have on the transportation of materials for development or other construction requirements. Our team will be conducting a traffic study to analyze the impacts / benefits of each of the structures being open / closed on the travel time and paths for vehicular traffic as part of the study.

Also, I want to let you know that there will be a Public Information Centre held tomorrow (September 6th) from 6:00 - 8:00 pm at the Bethel Mennonite Church, located at 8th Line W and Sideroad 11.

Please feel free to stop into this open-house format information centre to get some more background on the study and the process and speak to our Project Team directly.

Should you have any more comments or recommendations, please feel free to contact myself or Adam Dickieson further.

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

-----Original Message-----

From: [REDACTED]
Sent: Sunday, September 03, 2023 7:00 PM
To: Adam Dickieson <ADickieson@centrewellington.ca>
Subject: Bridge study

[You don't often get email from [REDACTED] Learn why this is important at [CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.](https://urldefense.proofpoint.com/v2/url?u=https-3A_aka.ms_LearnAboutSenderIdentification&d=DwIF-g&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_Cdp gnVfiiMM&r=9amd3skiVPQFk0w_DKpyhdKAyXNIHeBDjlo8c5U2NOI&m=4YFyPfHmltDsPaTZpUANfrSN6X_NA hP7oabP5WqpMyJkuR-kGijygKJoMFFLV5w&s=WY-tvWryCR2jM-97L5fLIID4Dy3556MGtryJjnhn1A&e=]</p></div><div data-bbox=)

On August 17 or 24th, on Gerrie rd while I was biking up and down the paved portion, but mostly back and forth through the Irvine valley I observed a gravel trucks coming from the Sorbara subdivision on Colborne Street travelling up Gerrie Road empty and either turning left on Side Road 10 or side Road 5. Fully loaded trucks were coming back Gerrie off of either side rd 5 or 10. loaded with 5/8" gravel.

These trucks were going by at about 3 minute intervals and maybe more frequently. I of course did not see them as to what they did at County Road 7. I suspect they went to Alma or Salem and then out to the gravel pits in Pilkington. To me this shows a need to fix the bridges or culverts.

I can't remember the bridge on sideroad 5 being open , but assuming it was and the road rebuilt the gravel trucks would have used it for some of the loads.

If future subdivisions are built up as far as the Irvine river as proposed, then for sure there would be a need for east west short cuts for gravel trucks moving material to these new subdivisions.

Crystal Ferguson

From: Andrew Dawson
Sent: Wednesday, September 06, 2023 10:21 AM
To: [REDACTED]
Cc: Tricia Radburn; Mishaal Rizwan; Crystal Ferguson
Subject: RE: Bridge study

Follow Up Flag: Follow up
Flag Status: Flagged

Thank you for letting us know!

If you would like to review the information to be presented at today's PIC, we have also made a recorded presentation for those who can not attend.

You can also provide comments on the project and the PIC presentation between Sept 6th and 15th on the overall project page. To do so, scroll down to the bottom of the project page and fill out and submit the "Questions?" form.

Overall EA Project Page: <https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

PIC Video Link: <https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township/widgets/161889/videos/11159>

Enjoy your travels!

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: [REDACTED]
Sent: Tuesday, September 05, 2023 5:54 PM
To: Andrew Dawson <Andrew.Dawson@rjburnside.com>
Subject: Re: Bridge study

Thanks
Unable to CC attend meeting. Travelling to Cape Breton

On Sep 5, 2023, at 10:09 AM, Andrew Dawson <Andrew.Dawson@rjburnside.com> wrote:

Good Morning [REDACTED]

Adam Dickieson passed along your email to me. I am with R.J. Burnside & Associates Limited Consulting Engineers, who are working with the Township as part of this study.

We appreciate your insight regarding these structures, and the effect they may have on the transportation of materials for development or other construction requirements. Our team will be conducting a traffic study to analyze the impacts / benefits of each of the structures being open / closed on the travel time and paths for vehicular traffic as part of the study.

Also, I want to let you know that there will be a Public Information Centre held tomorrow (September 6th) from 6:00 - 8:00 pm at the Bethel Mennonite Church, located at 8th Line W and Sideroad 11.

Please feel free to stop into this open-house format information centre to get some more background on the study and the process and speak to our Project Team directly.

Should you have any more comments or recommendations, please feel free to contact myself or Adam Dickieson further.

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 Direct: +1 705-797-4310

-----Original Message-----

From: [REDACTED]
Sent: Sunday, September 03, 2023 7:00 PM
To: Adam Dickieson <ADickieson@centrewellington.ca>
Subject: Bridge study

[You don't often get email from [REDACTED] Learn why this is important at https://urldefense.proofpoint.com/v2/url?u=https-3A_aka.ms_LearnAboutSenderIdentification&d=DwIF-g&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpqnVfiiMM&r=9amd3skiVPQFk0w_DKpyhdKAYXNIHeBDjlo8c5U2NOI&m=4YFyPfHmltDsPaTZpUANfrSN6X_NAhP7oabP5WqpMyJkuR-kGjjygKJoMFFLV5w&s=WY-tvWryCR2jM-97L5fLIID4Dy3556MGtryIJinhn1A&e=]

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

On August 17 or 24th, on Gerrie rd while I was biking up and down the paved portion, but mostly back and forth through the Irvine valley I observed a gravel trucks coming from the Sorbara subdivision on Colborne Street travelling up Gerrie Road empty and either turning left on Side Road 10 or side Road 5. Fully loaded trucks were coming back Gerrie off of either side rd 5 or 10. loaded with 5/8" gravel. These trucks were going by at about 3 minute intervals and maybe more frequently. I of course did not see them as to what they did at County Road 7. I suspect they went to Alma or Salem and then out to the gravel pits in Pilkington. To me this shows a need to fix the bridges or culverts. I can't remember the bridge on sideroad 5 being open , but assuming it was and the road rebuilt the gravel trucks would have used it for some of the loads. If future subdivisions are built up as far as the Irvine river as proposed, then for sure there would be a need for east west short cuts for gravel trucks moving material to these new subdivisions.

[REDACTED]

From: Crystal Ferguson

Sent: Thursday, November 23, 2023 2:52 PM

To: 056693 Centre Wellington - MCEA For 5 Bridges RFP 09-23 <056693CentreWellington-MCEAFor5BridgesRFP09-23@rjburnside.com>

Bcc: [REDACTED]
[REDACTED]
[REDACTED]

Cc: Tricia Radburn <Tricia.Radburn@rjburnside.com>; Andrew Dawson <Andrew.Dawson@rjburnside.com>; adickieson@centrewellington.ca

Subject: Notice of Public Information Centre #2, Five Bridges in Centre Wellington MCEA

Hello,

On behalf of The Township of Centre Wellington, please see attached Notice of Public Information Centre #2 (PIC), for the Five Bridges in Centre Wellington (Former Pilkington Township), Municipal Class Environmental Assessment. We would like to welcome your attendance to the second Public Information Centre meeting for the project. A Study Area map is provided on the attached notice.

Date & Time: December 6, 2023, 6:00 pm – 8:00 pm

Location: Bethel Mennonite Church, 6772 8th Line W., Elora, ON N0B 1S0

If you are unable to attend the PIC, a webpage containing study information is available. An online forum will be made available from **December 6th to 15th, 2023**. To access the online forum and review ongoing project updates, visit the webpage at:

<https://www.connectcw.ca/centre-wellington-5-bridge-eas-in-former-pilkington-township>

Please contact either of the Project Team members below if you are unable to access the online information or to request additional information about the project.

Adam Dickieson

Engineering Services Coordinator
Township of Centre Wellington
1 MacDonald Square, Elora, ON N0B 1S0
519-846-9691 x 355
adickieson@centrewellington.ca

Andrew Dawson, P. Eng.

Consultant Project Manager
R.J. Burnside & Associates Ltd.
292 Speedvale Ave W. #20, Guelph, ON N1H 1C4
705-797-4310
andrew.dawson@rjburnside.com

Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record. If you have

accessibility requirements in order to participate in this project, please contact one of the project team members listed above.

On behalf of the study team,

From: [REDACTED]
Sent: Thursday, December 07, 2023 10:21 AM
To: Andrew Dawson; adickieson@centrewellington.ca
Cc: [REDACTED]
Subject: Centre Wellington 5 Bridge EAs in Former Pilkington Township

Follow Up Flag: Follow up
Flag Status: Flagged

Thank you for the public information session at Bethel church last night.

[REDACTED] and I are members of a community group currently working hard with Centre Wellington and Woolwich Townships to save the Middlebrook Bridge over the Grand River. We attended your session last night and found it to be very informative as an overview of the situation and explanation of the possible solutions.

We were the ones that mentioned that we use all of these bridges frequently for recreational cycling.

My question to you is about structure 30-P, which provides an ideal crossing point from the east side to the west side of the busy County Road 7. Although it ranks quite low in your priorities for emergency vehicle and farm traffic flow, I am wondering if a cycling/pedestrian crossing can be maintained at this location.

There are many low cost prefabricated pedestrian bridge solutions available that I'm sure could be utilized for this location. We have had much interaction with the Guelph-to-Goderich Trail organization and they have directed us to some very low cost solutions with Eagle Bridge and Algonquin Bridge Companies.

As well as the prefabricated aspect which keeps costs low, they have successfully re-used existing abutments that are strong and stable enough for pedestrian bridges (a possibility here?) and have also used much cheaper "block" outboard abutments where necessary.

I understand the very real challenges for the Township with a limited capital budget, but we cannot continue losing safe connectors across the Township that then limit active and recreational transportation possibilities and results in more unsafe conditions for the public.

Please consider this idea as the plans are being finalized and reach out to us if you wish to discuss.

Regards,
[REDACTED]

From: [REDACTED]
Sent: Friday, December 08, 2023 2:31 PM
To: adickieson@centrewellington.ca; Andrew Dawson
Cc: [REDACTED]
Subject: Centre Wellington 5 Bridge EAs in Former Pilkington Township

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Adam and Andrew,

I am writing once again to provide some further input to the subject of the 5 Bridge EAs in Former Pilkington Township.

As you recall, it was questioned during the public meeting on Wednesday evening if structure 32-P truly needs to be replaced.

After thinking about it some more, and knowing the area well, I want to point out how the downstream area from 32-P that you said is protected habitat from a GRCA perspective, has already been mostly taken over by the local farm for agriculture and turned into a cultivated field as well as being used for a bridge bypass road. In fact I don't think structure 32-P even passes surface water at all any more given the existing elevations and land use.

I cannot see how this area can still be considered functioning as environmentally significant. I would suggest the drainage area upstream of 32-P can easily be redirected to the east to flow into Carroll Creek with the inclusion of a well thought out wetland-type habitat, thereby eliminating the need for 32-P with absolutely no environmental impact, in fact it could be an improvement to the environment compared to today's layout.

I recognize that the GRCA will have input to this aspect of the plan, but wanted my concern and ideas to be documented.

The reason I believe this to be a significant detail in your plans is that the capital cost savings of eliminating 32-P could be well spent elsewhere in this project, such as the replacement of structure 30-P with a pedestrian crossing as I suggested in my email from yesterday Thursday December 7, 2023.

Please consider this input in your decision-making, and reach out to discuss if required.

Than you, [REDACTED]

Crystal Ferguson

From: [REDACTED]
Sent: Friday, December 08, 2023 4:37 PM
To: [REDACTED]
Cc: adickieson@centrewellington.ca; Andrew Dawson; Stephanie Lines-Toohill
Subject: Re: Centre Wellington 5 Bridge EAs in Former Pilkington Township

Follow Up Flag: Follow up
Flag Status: Flagged

Hello,

I agree with [REDACTED] assessment. While it's been a couple of decades since I was a practicing hydrogeologist, I have performed my share of EAs, and don't think it's a stretch to remediate the 32-P structure without incurring significant spend, while retaining the existing environmental footprint. I wouldn't consider it worth the extra cost to fully remediate, given the impact of the farmer's bypass road. If anything, [REDACTED] plan would remediate any flooding on the farmer's property caused by the existing structure.

Thanks for your consideration,
[REDACTED]

On Fri, 8 Dec 2023 at 14:31, [REDACTED] wrote:
Hi Adam and Andrew,

I am writing once again to provide some further input to the subject of the 5 Bridge EAs in Former Pilkington Township.

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Please consider this input in your decision-making, and reach out to discuss if required.

Than you,



From: [REDACTED]

Sent: Sunday, December 10, 2023 10:18 AM

To: Adam Dickieson <adickieson@centrewellington.ca>; Andrew Dawson <Andrew.Dawson@rjburnside.com>

Subject: RE: Municipal Class Environmental Assessment Bridges 32-P and 33-P

Hi Adam, Andrew,

Due to a [REDACTED], I could not attend the recent Bethel Church open house.

I'd like to share my thoughts on the bridges project from conversations with people who lived near the bridges [REDACTED].

Residents in the area were adamant that the Township replace the bridges. Farmers on both sides of the bridges require a safe water crossing to transport their equipment and produce. Employees, many of whom are old-order Mennonites, need secure access to the agribusinesses on Noah and Seiling Roads. The Noah Bridge crossing is a more direct route than travelling via Eighth Line to Northfield Drive E to Sandy Hills Drive to Noah Road with the bridges closed.

The current unofficial water crossing, which can be challenging to navigate with full wagons, demonstrates the critical need for a proper bridge crossing. It is inoperable during spring floods and following heavy rains.

Area residents suggested diverting the smaller of the two creeks upstream of the two bridges, reducing the number of bridges from two to one. Aside from potentially lowering overall Township costs, the two farms on the west side of the bridges would be able to reclaim some land and relocate the watercourse away from the feedlots.

Regarding Bridges 1-P, 30-P and 28-P, these were initially constructed to support local agribusinesses as a means to traverse the waterways with farm equipment and produce. That need has not diminished. Farms have expanded, requiring more significant movement of shared equipment between farm properties. We also witness increased migration of old-order Mennonites into Centre Wellington, buying up the farm properties. Their preferred method of travel requires more direct access than those of us with vehicles less inconvenienced by the detours.

Thank you for listening.

[REDACTED]

Crystal Ferguson

From: Andrew Dawson
Sent: Monday, December 11, 2023 9:45 AM
To: [REDACTED]
Cc: Adam Dickieson
Subject: RE: Municipal Class Environmental Assessment Bridges 32-P and 33-P

Follow Up Flag: Follow up
Flag Status: Flagged

[REDACTED]

Thank you for providing your input based on your previous consultations with the local community!

We too had talked with several of the landowners in the study area during the two public information centres and heard these same comments. During the first meeting, the points regarding the need for a more direct travel route to allow agricultural and other slow moving vehicles (horse and carriage) more accessibility without the need for using country roads was a common theme. This was considered an important aspect of the project. The majority of feedback from the community was related to the Noah Road structures (32-P and 33-P) and the Sideroad 11 structure (28-P). The community seemed less concerned about re-opening of structures 1-P on Sideroad 5 and 30-P on Sideroad 5W. A couple of the local residents adjacent 1-P even indicated an understanding or preference of it remaining closed.

We had also heard the recommendation for eliminating the structure crossing (33-P) for the smaller tributary on Noah Road. We met with the land-owner upstream of 33-P and a GRCA Resource Planner to review the possibility of eliminating that structure in its entirety. There are ecological and hydrological functions of the downstream section of the watercourse that would require compensation to allow for the structures removal; but the removal of the structure is not out of question. For the sake of the EA study, it was assumed that this structure would be replaced with a much smaller concrete culvert; however, detailed design and future work can further evaluate the opportunity for full removal and diversion of the watercourse to Carroll Creek upstream of the larger structure, provided that agreements can be reached with the property owner(s) and a solution for compensation of the ecological and hydrological impacts could be reached with the GRCA.

If you have any further comments or would like to discuss anything further, please feel free to get in touch with Adam or myself.

Regards,
Andrew

Andrew Dawson
Project Engineer

R.J. Burnside & Associates Limited | www.rjburnside.com
Office: +1 800-265-9662 **Direct:** +1 705-797-4310

From: [REDACTED]
Sent: Sunday, December 10, 2023 10:18 AM
To: Adam Dickieson <adickieson@centrewellington.ca>; Andrew Dawson <Andrew.Dawson@rjburnside.com>
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Thank you for listening.

[REDACTED]

December 10, 2023

Crystal Ferguson

From: [REDACTED]
Sent: Monday, December 11, 2023 10:05 AM
To: Andrew Dawson
Cc: Adam Dickieson
Subject: Re: Municipal Class Environmental Assessment Bridges 32-P and 33-P

Hi Andrew,

Thank you for providing an update on the review process. I appreciate the update.

I am surprised about the lack of interest in opening 1-P. I thought of all the closed bridges, 30-P would be the one to remain closed. However, the locals would know best.

The challenge with building new bridges will be allowing sufficient width for the new farm equipment. It can be challenging travelling between farms and having to plot a route that accommodates the equipment's width. I'm surprised at the increasing width of farm equipment that is better suited to the prairies than here.

Regards,

[REDACTED]

On Dec 11, 2023, at 9:45 AM, Andrew Dawson <Andrew.Dawson@rjburnside.com> wrote:

[REDACTED]

Thank you for providing your input based on your previous consultations with the local community!

We too had talked with several of the landowners in the study area during the two public information centres and heard these same comments. During the first meeting, the points regarding the need for a more direct travel route to allow agricultural and other slow moving vehicles (horse and carriage) more accessibility without the need for using country roads was a common theme. This was considered an important aspect of the project. The majority of feedback from the community was related to the Noah Road structures (32-P and 33-P) and the Sideroad 11 structure (28-P). The community seemed less concerned about re-opening of structures 1-P on Sideroad 5 and 30-P on Sideroad 5W. A couple of the local residents adjacent 1-P even indicated an understanding or preference of it remaining closed.

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Andrew

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Thank you for listening.

[REDACTED]

Crystal Ferguson

From: Andrew Dawson
Sent: Monday, January 08, 2024 1:11 PM
To: [REDACTED]
Cc: [REDACTED] adickieson@centrewellington.ca; Crystal Ferguson; Mishaal Rizwan; Tricia Radburn; Matt Brooks; Chris Knechtel
Subject: RE: Centre Wellington 5 Bridge EAs in Former Pilkington Township
Attachments: Centre Wellington 5 Bridge EAs in Former Pilkington Township; Centre Wellington 5 Bridge EAs in Former Pilkington Township; Re: Centre Wellington 5 Bridge EAs in Former Pilkington Township

[REDACTED]

Please see our response to the two emails received from [REDACTED] (Dec 7, 2023 and Dec 8, 2023) and the additional email received from [REDACTED] (Dec 8, 2023). Your original emails are attached for the sake of completeness in our correspondence tracking as part of the Environmental Assessment process.

We appreciate your interest and input in the environmental assessment process. We understand that 30-P provides a crossing point of County Road 7 for the recreational cycling community, and is of specific interest to your gravel road cycling group. The ongoing study area environmental assessment evaluation criteria consists of weightings from the transportation, economic, structural/technical, natural environment, and social & cultural environments, to find preferred alternatives that derived from all five of these assessment spheres. Transportation is a key part of this evaluation. The role of structure 30-P on the east-west connection across County Road 7 has been considered. It is noted that Sideroad 5 is not a continuous alignment on the east and west side of County Road 7 and therefore requires traffic (vehicular, pedestrian, cyclist, etc.) to travel along County Road 7 for a short distance. Accelerating and decelerating traffic and additional turning traffic (of any kind – vehicular or bicycle) on County Road 7 results in slowed traffic on an arterial route which should be optimized for continuous through travel. These conditions result in increased potential of accidents, especially given the limited sight lines related to the vertical curves of the roads at these intersections. This actually results in a scenario for which the Sideroad 5 intersection (and bridge 30-P) are not considered an ideal crossing of County Road 7 from a safety or travel perspective, in comparison to an aligned intersection such as that of Sideroad 10/11.

Centre Wellington is familiar with a variety of bridge systems and technologies. There is currently one Eagle Bridge and one Algonquin Bridge in the 111 bridge inventory of Centre Wellington structures. Burnside, our consulting engineer for this EA, is also very familiar with these structures, having provided pedestrian, bicycle, snowmobile, etc bridge solutions using these type of pre-fabricated structures in many scenarios, for many municipalities. When bridge replacements are required, the Township seeks to find the most appropriate solution for each crossing.

In 2024 the Township will be initiating an active transportation and mobility master plan. The process will encompass the current and future needs of Centre Wellington's active and recreational transportation network needs in order to develop a plan/direction from the findings. The study will be advertised on the Township's website (ConnectCW.ca), on social media, and in the local newspaper. We encourage your group to watch out for study updates and to participate in the study as a stakeholder.

In regards to the comments related to Structure 32-P:

We appreciate your input and it will be documented as part of this Study. We are aware of the downstream conditions of the site, as Burnside has conducted field investigations of the watercourse and the surrounding area to identify and

document the terrestrial environment and the aquatic habitat conditions. Based on these field investigations, we can confirm that the structure does indeed still have a hydraulic function (i.e. passes surface water).

As discussed during P.I.C. # 2, the option of eliminating 32-P is not off the table. This option can be further examined during the detailed design phase of the project and may be able to be implemented, provided that the requirements outlined by the GRCA can be addressed to their satisfaction at the time of detailed design. The option of including a smaller structure at this location was carried forward for the purpose of the study to evaluate the alternative in the scope of this multi-site EA study, as the detailed aspects of design are not part of the scope of the study, and in consideration that, if the mitigative measures can be achieved to offset any negative environmental impacts, the solution would only become more preferred by reducing the capital and life-span costs associated with the structure. A recommendation for further examining the option of eliminating 32-P by diverting the tributary and providing environmental and hydrological mitigative measures during detailed design will be included in the Project File Report. However, it should be noted that any cost savings made through the detailed design phase of these projects, will not necessarily be utilized for other structures within this study area, as it will be subject to the usual Township wide budgetary planning process.

Your recommendations and input will become part of the Centre Wellington 5 Bridge EA study.

Thanks for your interest and participation.

Regards,
Andrew

Andrew Dawson
Project Engineer

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Office: +1 800-265-9662 Direct: +1 705-797-4310

From: [REDACTED]
Sent: Friday, December 08, 2023 2:31 PM
To: adickieson@centrewellington.ca; Andrew Dawson <Andrew.Dawson@rjburnside.com>
Cc: [REDACTED]
Subject: Centre Wellington 5 Bridge EAs in Former Pilkington Township

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Please consider this input in your decision-making, and reach out to discuss if required.

Than you,



From: [REDACTED]
Sent: Tuesday, January 09, 2024 6:20 AM
To: Andrew Dawson
Cc: [REDACTED] Crystal Ferguson;
Mishaal Rizwan; Tricia Radburn; Matt Brooks; Chris Knechtel
Subject: Re: Centre Wellington 5 Bridge EAs in Former Pilkington Township

Hi Andrew,

Thank you for the reply and insight into the considerations made in the EA for these particular bridges. Although our interest lies in recreational and active transportation, and therefore bridge 30-P is significant to us, we also recognize the safety aspect of that crossing point of County Road 7 and the limited east-west extent of Township Sideroad 5, so can understand the likely end result. We look forward to the Township's final position on all of these bridges and will definitely watch for the initiation of the active transportation and mobility master plan update and will participate in that process for sure.

Regards,

On Mon, Jan 8, 2024 at 1:10 PM Andrew Dawson <Andrew.Dawson@rjburnside.com> wrote:

[REDACTED]

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Please consider this input in your decision-making, and reach out to discuss if required.

Than you,





BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix I

Stage 1 and 2 AA



Stage 1 and 2 Archaeological Assessment:
Municipal Class Environmental Assessment for
Three Bridges (28-P, 32-P, 33-P), Between Lots 10
and 11, 13 and 14, Concession 5 and 6 West of
Grand River, former Township of Pilkington, now
Township of Centre Wellington, Ontario

Project Number: 2023-0061

PIF: P1153-0158-2024 & P1153-0163-2024

Report Type: Original

Report Date: December 17, 2024

Licensee: Adam Long, MSc (P1153)

Parslow Heritage Consultancy Inc.

883 St. Clair Ave. West, Toronto, ON,
M6C 1C4

R.J Burnside & Associates Ltd

177345 Leslie Steet, Suite 303, Newmarket,
ON, L3Y 0A4

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Executive Summary

Parslow Heritage Consultancy Inc. (PHC) was retained by R.J. Burnside & Associates Limited (the Proponent) to conduct a Stage 1 and 2 archaeological assessment for three bridges in the Township of Centre Wellington, identified as 28-P, 32-P, and 33-P, located between Lots 10 and 11, 13 and 14, and on Part of Lot 14, Concession 5 and 6 West of the Grand River, former Township of Pilkington, now Township of Centre Wellington, County of Wellington, Ontario. The three bridges are located within municipally owned road right-of-way (ROW) of Sideroad 11 (28-P) and Noah Road (32-P, 33-P) (Map 1, Map 2).

The objectives of the Stage 1 archaeological assessment are defined in the Ministry of Citizenship and Multiculturalism's (MCM) *Standards and Guidelines for Consultant Archaeologists* (2011). A Stage 1 archaeological assessment provides compiled information about the study area's geography, history, current land conditions as well as any previous archaeological research and listed archaeological sites on or within the vicinity, as well as specific direction for the protection, management and/or recovery of these resources.

The study areas consist of municipal ROWs, which include gravel roads with manicured lawn on either side, steep ditches, and overgrown shorelines. A negative indicator of archaeological potential is extensive, below-grade land disturbance. Disturbance associated with soil manipulation, grading, and stockpiling of soils were encountered in association with the construction of the bridges and gravel roads within the study areas. Areas of low archaeological potential were also encountered in the form of low-lying wet environments and steep ditches.

The Stage 1 property inspection was conducted on 15 March 2024 and determined that the study area around 32 P was extensively disturbed and did not require Stage 2 assessment, while there was marginal potential remaining at the 28-P and 33-P study areas; as such they were recommended to undergo Stage 2 property assessment, which was performed on 24 July 2024 via test pit survey at 5 m intervals, per Section 2.1.2 of the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011). The property survey at both study areas resulted in confirmation of disturbance, with no intact soil profiles found.

Based on the results of the Stage 1 and 2 archaeological assessment, the following recommendations are provided:

- ▶ The Stage 2 archaeological assessment did not result in the identification of archaeological materials and no further archaeological assessment is recommended for the study area.

It is requested that this report be entered into the Ontario Public Register of Archaeological Reports, as provided for in Section 65.1 of the Ontario Heritage Act.

Project Personnel

| | |
|--------------------------|--|
| Project Manager/Licensee | Adam Long, M.Sc. (P1153) |
| Field Directors | Chris Lemon, B.Sc., Dip. Heritage, CAHP (R289) |
| | Jamie Lemon, MA. (P1056) |
| Report Preparation | Sarah News, B.A (R485) |
| Graphics | Gabriel Dunk-Gifford |
| Review | Jamie Lemon |
| | Carla Parslow, Ph.D, RPA, CAHP (P243) |

Acknowledgements

| | |
|---------------|-----------------------------------|
| Andrew Dawson | R.J. Burnside and Associates Ltd. |
|---------------|-----------------------------------|

Project Context

This section of the report provides the context for the archaeological assessment and covers three areas: development context, historical context, and archaeological context.

Development Context

Parslow Heritage Consultancy Inc. (PHC) was retained by R.J. Burnside & Associates Limited (the Proponent) to conduct a Stage 1 and 2 archaeological assessment for three bridges in the Township of Centre Wellington, identified as 28-P, 32-P, and 33-P, located between Lots 10 and 11, 13 and 14, and on Part of Lot 14, Concession 5 and 6 West of the Grand River, former Township of Pilkington, now Township of Centre Wellington, County of Wellington, Ontario. The three bridges are located within municipally owned road right-of-way (ROW) of Sideroad 11 (28-P) and Noah Road (32-P, 33-P) (Map 1, Map 2). The study areas included the existing road ROW of each bridge, for a distance of 20 m from the end of each bridge.

The objectives of the Stage 1 archaeological assessment are to gather information about the study area's geography, history, current land conditions, as well as any previous archaeological research and listed archaeological sites on or within the vicinity. Methods to achieve these objectives include:

- ▶ Review of relevant historic and environmental literature pertaining to the study area
- ▶ Review of an updated listing of archaeological sites within 1 km from the Ontario Archaeological Sites Database (OASD)
- ▶ Review of all archaeological assessments within 50 m of the study area
- ▶ Consultation with individuals knowledgeable about the study area
- ▶ Review of historic maps and aerial imagery of the study area

The objectives of the Stage 2 assessment are to determine if there are archaeological resources present on the property and to assess whether the identified resources have cultural heritage value or interest.

Permission to access the study area was provided by the Proponent and no limits were placed on this access. All archaeological work documented in this report was completed under the Ministry of Citizenship and Multiculturalism's (MCM) *Standards and Guidelines for Consultant Archaeologists* (2011).

Historical Context

This section describes the past and present land use and settlement history of the property, and any other relevant historical information gathered through the background research.

Indigenous History

Most of the archaeological record found in Ontario – the tools, animals, plants, structures, soils, and contexts recovered from the landscape – are the direct heritage of the Indigenous communities that currently live in south-central Ontario and adjacent provinces and states. Archaeology is the sole non-verbal means of reconstructing this ancient past; thus, understanding the lives and histories of these early peoples is both a challenge and a responsibility. Every new site identified and documented provides a unique opportunity to learn more about the 13,000-year history in Ontario. Table 1 provides an archaeological timeline for the presence of Indigenous people in Ontario, drawn from Ellis and Ferris (1990).

TABLE 1: OVERVIEW OF THE CULTURAL CHRONOLOGY OF SOUTHERN ONTARIO

| Period | Characteristics | Time | Comments |
|---------------------------|---|------------------|---|
| Early Paleo | Fluted Points | 9,000 – 8,400 BC | Caribou hunters |
| Late Paleo | Hi-Lo Points | 8,400 – 8,000 BC | Smaller but more numerous sites |
| Early Archaic | Kirk, Nettling, and Bifurcate Base Points | 8,000 – 6,000 BC | Slow population growth |
| Middle Archaic I | Stanley/Neville, Stemmed Points | 6,000 – 4,000 BC | Environment similar to present |
| Middle Archaic II | Thebes, Otter Creek Points | 4,000 – 3,000 BC | |
| Middle Archaic III | Brewerton Side and Corner Notched Points | 3,000 – 2,000 BC | |
| Late Archaic I | Narrow Point (Lamoka, Normanskill) | 2,000 – 1,800 BC | Increasing site size |
| | Broad Point (Genesee, Adder Orchard) | 1,800 – 1,500 BC | Large chipped lithic tools Introduction of bow hunting |

| | | | |
|-------------------------|--|------------------|------------------------------------|
| | Small Point (Crawford Knoll, Innes, Ace-of-Spades) | 1,500 – 1,100 BC | |
| Terminal Archaic | Hind Points | 1,100 – 950 BC | Emergence of true cemeteries |
| Early Woodland | Meadowood Points | 950 – 400 BC | Introduction of pottery |
| Middle Woodland | Dentate/Pseudo-Scallop Pottery | 400 BC – AD 500 | Increased sedentism |
| | Princess Point | AD 550 – 900 | Introduction of corn |
| Late Woodland | Early Ontario | AD 900 – 1,300 | Emergence of agricultural villages |
| | Middle Ontario | AD 1,300 – 1,400 | Large longhouses (100m+) |
| | Late Ontario (Neutral) | AD 1,400 – 1,650 | Tribal warfare and displacement |
| Contact | Various Algonkian and Iroquoian Groups | AD 1,700 – 1,875 | Early written records and treaties |

Paleo and Archaic Time Periods

The first human settlement in south-central Ontario can be traced back 11,000 years, just after the end of the Wisconsin Glacial Period, when this area was settled by Indigenous groups that had been living south of the Great Lakes. The period of these first inhabitants is known as the Paleo (Ellis and Deller 1990), a time in which bands of small hunter gatherer, consisting of probably no more than 25-35 individuals, followed a pattern of seasonal mobility extending across wide-ranging territories shaped extensively by the ebb and flow of glaciers.

The Paleo period was a time of rapid environmental change. As the glaciers retreated sparse tundra and evergreen forests gave way to extensive deciduous forests and water levels in the Great Lakes rose dramatically (Ellis et al 1990). By the end of this period (8000 BC), many of the large game species that Paleo hunters had relied upon either moved further north, or as in the case of the mastodons and mammoths, become

extinct. Thus, the end of the Late Paleo Period was heralded by numerous technological and cultural innovations, likely as responses to the dynamic nature of the post-glacial environment and region-wide population increases. These innovations continue to be found in sites belonging to the direct descendants of the Paleo, groups of people known by archaeologists as “Archaic.”

The term “Archaic” designates preagricultural sites lacking in pottery and other specific artefact forms (Ellis et al 1990) and are primarily distinguished from Paleo sites by a significantly greater degree of artefact diversity and regional variety. Archaic people began to make stone tools out of coarser raw material by laboriously grinding the rock into the desired shape. The introduction of ground stone tools such as celts and axes, suggests the beginnings of a simple woodworking industry and an increased use of localized stone sources indicates that Archaic populations may have been less nomadic than their Paleo ancestors (Munson and Jamieson 2013). It is likely that gradual infilling of the landscape resulting from rising water levels and population growth necessitated the development of strategies to support more people from smaller areas of liveable land.

During the Late Archaic Period (2,500-950 BC) the trends towards decreased territory size, a broadening subsistence base, population growth and increasing sedentism continued and it is during this period that the first true cemeteries appeared. During the Late Archaic Period, if an individual died while his or her group happened to be at some distance from their group cemetery, the bones would be kept until they could be placed in the cemetery, suggesting that people returned with greater frequency to the same areas. These first cemeteries may have served as visible reminders of a group’s cultural history and demarcated their rights to an area. Living in a time before farming or pottery, early hunter gatherers hunted, fished, and travelled in a land that was dynamic, ever-changing, and far removed from modern or historic ways of life.

Woodland Time Period

The Early Woodland Period (950 to 400 BC) is distinguished from the Late Archaic Period primarily by the gradual adoption of ceramic technology. However, in many ways the life ways of people in this period show a high degree of continuity with the preceding Late Archaic and it is not until the Middle Woodland (300 BC to AD 500) that there is an evident shift in settlement and subsistence patterns towards a sedentary way of life.

Middle Woodland peoples relied much more extensively on ceramic technology and vessels were often heavily decorated with hastily impressed designs covering the entire exterior surface and upper portion of the vessel interior. The Middle Woodland provides a major point of departure from the Archaic and Early Woodland; fish was becoming an increasingly important part of diets and sites along the margins of major lakes and rivers appear to have functioned as base camps instead of seasonally utilized locations, indicating a greater degree of sedentism and reliance on fishing technology.

The Late Woodland Period is widely accepted as the beginning of a truly agricultural way of life in south-central Ontario. Researchers have suggested that a warming trend during this period may have encouraged the spread of maize into southern Ontario by

providing a greater number of frost-free days (Stothers and Yarnell 1977). The presence of carbonized corn kernels and cob fragments recovered from sub-floor storage pits indicates that agriculture was becoming a vital part of the Early Iroquoian economy.

The Middle Ontario Iroquoian Period (AD 1300-1400) witnessed several interesting developments in terms of settlement patterns and artefact assemblages. The size of villages and houses increased dramatically, with house lengths almost doubling to an average of 30m. Possible explanations for these shifts involve changes in economic and socio-political organization (Dodd et al. 1990); small villages may have amalgamated to form larger communities for mutual defence (Dodd et al. 1990). These large villages were often heavily defended with numerous rows of wooden palisades, suggesting that defence may have been one of the rationales for smaller groups banding together.

By the late 1400s major villages covered as many as 4-5 hectares and would have contained over 2,000 individuals each. A change in the orientation of longhouses at this time may indicate the initial development of the tribes and nations which were a characteristic of the historically known Iroquoian peoples (Dodd et al. 1990).

After AD 1450, house lengths begin to decrease, with houses dating between AD 1500-1580 averaging a mere 30 m in length. The even shorter houses witnessed on Historical Period sites can be at least partially attributed to the population reductions associated with the introduction of European diseases such as smallpox (Lennox and Fitzgerald 1990) which, in the span of a few years, had reduced the population to a mere 30,000 people. With the deaths of many bearers of oral history in the 1630's much of the ancient oral history in Ontario was lost. Archaeology provides an alternative means of understanding pre-European history by providing unique information on the movement of people throughout the landscape, their interactions with one another and with the environment, over the course of 13,000 years.

Historic Indigenous Period

At the time of first contact with the French, in 1615 AD, the traditional territory of the Huron-Wendat, known as Wendake, roughly stretched between the Canadian Shield, Lake Ontario and the Niagara Escarpment; it has been suggested the Huron-Wendat population at this time was approximately 30,000 individuals (Warrick 2008; Heidenreich 1978).

In the 1640s the Haudenosaunee, whose territory was located south of the lower Great Lakes, invaded Huron-Wendat territory, largely due to the decrease of available beaver pelts. The majority of the Huron-Wendat population sought sanctuary within the communities of the Petun, Neutral and other neighbouring groups, after numerous Huron-Wendat village were destroyed (Stone and Chaput 1978). Commencing in the 1660s, the Haudenosaunee controlled most of southern Ontario (Schmalz 1991; Williamson 2013). Four hundred years ago Ontario was home to an estimated 75,000 Indigenous people, divided into two major cultural groups – Algonquians (Anishinaabeg or Anishinaabe) and Iroquoians (Haudenosaunee).

During the mid-17th century, several Algonquin-speaking linguistic and cultural groups within the Anishinaabeg (or Anishinaabe) began to challenge the Haudenosaunee

dominance in the region (Johnston 2004; Gibson 2006). Prior to this, the Anishinaabeg were located primarily inland from the north shore of Lake Huron (MCFN nd). From 1653 to 1662, following a series of attacks against the Haudenosaunee by groups within the Anishinaabeg, Haudenosaunee dominance in the region began to fail (Warrick 2008; Schmalz 1991). By the 1690s, Haudenosaunee settlements along the northern shores of Lake Ontario were abandoned (Williamson 2013). Following several battles throughout southern Ontario, the Anishinaabeg replaced the Haudenosaunee in area at the start of the 18th century (Gibson 2006; Schmalz 1991).

European Treaties and Deeds

A portion of the study area is located on lands that were part of the Between the Lakes Treaty (Treaty No. 3, 1792); as detailed in MCFN (n.d-b:6):

The arrival of Loyalists during and after the American Revolutionary War placed pressure on the British Crown to find lands on which to settle the newcomers. Among the Loyalists were approximately 2000 members of the Six Nations who had lost their homes fighting on behalf of the Crown.

Seeking to reward his First Nation allies for their loyalty during the war, Governor Haldimand offered homes to the Six Nations refugees in the remaining British colonies. One group of the

Six Nations Loyalists settled at the eastern end of Lake Ontario, while another group, under the leadership of Mohawk Chief Joseph Brant, selected the Grand River Valley as an area for settlement.

Recognizing that under the terms of the Royal Proclamation of 1763 the land needed to be purchased from its owners before the resettlement of the Grand River Valley could begin, Col. John Butler was sent to negotiate with the Mississaugas at the western end of Lake Ontario. On May 22, 1784, for the sum of £1180 worth of trade goods, the Mississaugas of the Credit ceded to the Crown approximately 3 000 000 acres of land located between Lakes Huron, Ontario, and Erie. Of those lands, some 550 000 acres were granted to the Six Nations in the Haldimand Proclamation of October 25, 1784, with the remainder to be utilized for the settlement of other Loyalists. The land grant to the Six Nations was to extend six miles on both sides of the Grand River from its mouth to its source. When it was later discovered that the upper limits of the Between the Lakes Treaty were in error due to faulty geographical assumptions, actual boundaries were defined and a confirming document signed by the Mississaugas and the Crown in 1792.

The remaining portions of the study area are located within Treaty 4, 1793, known as the Simcoe Patent. The British issued the Haldimand Proclamation in 1784. The Proclamation granted a tract of land, often referred to as the Haldimand Tract, to the Six Nations in recognition of their support of the Crown during the American Revolution (Filice 2016). This tract of land extended for 10 km on either side of the Grand River. In May of 1784, Haldimand signed an accord with the Mississauga chiefs to cede, with the largest portion of this going to the Haudenosaunee (Filice 2016).

In 1791, the Crown appointed surveyor Augustus Jones to refine the boundaries of the tract. During this process, Jones established straight-lined boundaries, rather than following the curves of the river; thus, reducing the boundaries of the Haldimand Tract. (Filice 2016). With the reduction in territory, the Thayendanegea petitioned John Graves Simcoe to gain control over the Haldimand Tract. Simcoe made the decision to remedy the situation by creating a compromise between the Crown and Six Nations (Filice 2016).

The Simcoe Patent, which was issued in 1793, confirmed the newly established boundaries as marked by Augustus Jones. The patent imposed a limit of 111,000 hectares on the Haldimand Tract, which was to be used exclusively by the Six Nations. After the Haudenosaunee had ceded some of their land to the Crown, the remaining land was available to be leased, surrendered or sold. According to the patent, any land transactions of the Six Nations had to be approved by the Crown. Nevertheless, the document allowed the Six Nations to sell parts of the territory to the government when needed (Filice 2016).

The Simcoe Patent, however, did not address the issue of land title to the territories by the headwaters of the Grand River resulting in a continuing dispute between the Haudenosaunee and the Ontario government. Still, the Thayendanegea of the Six Nations view this patent as a reinforcement of the Crown's trusteeship interpretation of the title; rejecting the Simcoe Patent claiming it was not binding on them (Filice 2016).

Euro-Canadian Settler History

Following the Toronto Purchase of 1787, southern Ontario was divided into four political districts, Lunenburg, Mechlenburg, Nassau, and Hesse, within the Province of Quebec. In 1791, the Province of Upper Canada was formed, and the four political districts were renamed Eastern, Midland, Home, and Western, respectively (Hall 2023). The study area fell within the former Hesse District and later the Western District.

The Western District initially included all lands between an arbitrary "north and south line intersecting the extreme projection of Long Point into the Lake Erie, on the northerly side of the said Lake Erie" (Lloyd 1906). In 1793, John Graves Simcoe, the first Lieutenant Governor of Upper Canada, further subdivided each district into counties and townships, and European settlement began shortly after (Hunter 1909). The study area is located in the County of Wellington, in the former Geographic Township of Pilkington, now the Township of Centre Wellington.

Wellington County and the Township of Centre Wellington

Initially set apart from the Western District in 1838, the District of Wellington was formed to contain the present counties of Wellington, Waterloo, and Grey, as well as a portion of the County of Dufferin (Lloyd 1906). By 1852, Wellington separated from Waterloo, and a year later Wellington County was established consisting of several townships and towns, including, Amaranth, Arthur, Eramosa, Erin, Guelph, Garafraxa, Maryborough, Nichol, Peel, Pilkington, and Puslinch (Wellington County 2023). By 1879, the City of Guelph was incorporated and withdrawn from the county. The amalgamation of the county in 1999 resulted in the formation of seven new municipalities, including the

Township of Centre Wellington which included the former Townships of Nichol, Pilkington and West Garafraxa (Wellington County 2023).

Past and Current Land Uses of Study Areas

The study areas are situated within the right-of-way (ROW) between Lots 10 and 11, Concession 5 West of the Grand River, and between Lots 13 and 14, Concession 6 West of the Grand River, former Township of Pilkington, now Township of Centre Wellington, Wellington County, Ontario. Table 2 provides an overview of the owners of each lot and concession as well as notable archaeological features associated with the 1861 *County Map of Wellington County* and the 1877 *Illustrated Historical Atlas of Wellington County* maps. No archaeological features are depicted within the study areas on either map; this does not mean the properties were vacant, only that the landowners did not subscribe to the map publisher.

TABLE 2: OVERVIEW OF LOT AND CONCESSION OWNERSHIP

| Bridge Identifier | Lot | Con. | 1861 Map Occupants | 1877 Map Occupants |
|-------------------|-----|------|---|---|
| 28-P | 10 | 5 | Joshua Stickney shown as owning the entire lot; a Methodist Church is depicted on the eastern border of the lot, outside of the study area. | Joshua Stickney shown as owning the entire lot; no historical features are depicted. |
| | 11 | 5 | John Stickney shown as owning the entire lot; no historical features are depicted. | F. Eddler shown as owning the entire lot; no historical features are depicted. |
| 32-P and 33-P | 13 | 6 | Henry Snyder shown as owning the entire lot; a saw mill is depicted along the river on the east side of the lot, outside of the study area. | J. Oppershizer shown as owning the entire lot; no historical features are depicted. |
| | 14 | 6 | Henry Snyder shown as owning the entire lot; no historical features are depicted. | V. Shafer shown as owning the west 50 acres of the lot; no historical features are depicted. W. Checkly shown as owning the east 50 acres of the lot; no historical features are depicted. |

A review of the 1954 aerial photograph depicts the study area as unmodified during this time, no structures are illustrated.

Archaeological Context

Archaeological Sites and Previous Assessments

The registered archaeological site records kept by the MCM were consulted so that an inventory of archaeological resources could be compiled. In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database maintained by the MCM. This database contains archaeological sites registered according to the Borden system. Under the Borden system, Canada is divided into grid blocks based on latitude and longitude. A Borden block is approximately 13km east to west and approximately 18.5km north to south. Each Borden block is referenced by a four-letter designator, and sites within a block are numbered sequentially as they are found. The study area is located within Borden block *AjHd* and *AkHd*.

According to the *Standards and Guidelines for Consultant Archaeologists*, all registered or known archaeological sites within a minimum 1 km distance from the study areas must be listed. No archaeological sites were found within 1 km of the study areas.

A search on archaeological fieldwork carried out within the limits of, or immediately adjacent (within 50 metres) to, the study areas was conducted. No archaeological reports have been registered adjacent to, or within the study areas.

The Natural and Physical Environment

The study areas are situated within the Waterloo Hills physiographic region, which is described as:

The Waterloo hills region occupies about 300 square miles or 192,000 acres, lying chiefly in the Regional Municipality of Waterloo...The surface is composed of sandy hills, some of them being ridges of sandy till while others are kames or kame moraines, with outwash sands occupying the intervening hollows....Adjoining the hilly region is an extensive area of alluvial terraces of the Grand River spillway system which, although more nearly horizontal, contains similar but more uniform sandy and gravelly materials....The original forest consisted of splendid pines and hardwoods such as sugar maple, beech, wild cherry, and red oak.

Chapman and Putnam 1984:136

The soil of the study area consists primarily of Guelph Loam and London Loam (Hoffman and Matthews 1963). The Guelph Loam soil series is a well-draining soil forming gently rolling hills and steeply rolling drumlins throughout the region. Generally, these soils are ideal for agriculture (Hoffman and Matthews 1963). The London Loam series occur throughout the area in association with the Guelph series. However, the London soil series are imperfectly draining soils, on gently undulating upland areas. The

London soil series are suitable for producing arable crops (Hoffman and Matthews 1963).

The study areas are located within the Grand River watershed and are located on tributaries of the Grand River. The study areas are located approximately 4.5 km east of the Grand River. The study areas are approximately 393 m above sea level.

Field Methods

The Stage 1 archaeological assessment was conducted under archaeological consulting license P1153 issued to Adam Long by the MCM (P1153-0158-2024). Field director duties were delegated to Chris Lemon (R289). The Stage 2 archaeological assessment was conducted under archaeological consulting license P1153 issued to Adam Long by the MCM (P1153-0163-2024). Field director duties were delegated to Brianne Graves (R1324) per Section 12 of the MCM 2013 *Terms and Conditions for Archaeological Licenses*, issued in accordance with clause 48(4)(d) of the *Ontario Heritage Act*.

The Stage 1 property assessment was conducted on 15 March 2024. Assessment conditions were good and at no time were the field, weather, or lighting conditions detrimental to the recovery of archaeological material. The weather was partly cloudy, with a temperature 10°C.

The study areas consist of municipal ROWs, which include gravel roads with steep ditches, overgrown shorelines, and in some cases manicured lawn. A negative indicator of archaeological potential is extensive, below-grade land disturbance. Disturbance associated with soil manipulation, grading, and stockpiling of soils were encountered in association with the construction of the bridges and gravel roads within the study areas. Areas of low archaeological potential were also encountered in the form of low-lying wet environments and steep ditches.

The property inspection was carried out systematically, reviewing the extent of the existing road ROW to identify the presence or absence of archaeological potential, for a distance of 20 m from the end of each bridge. Photographic images of the study areas are presented within Images 1 to 17. Location and orientation information associated with all photographs taken in the field is provided on Map 7. During the property inspection, it was observed that a significant portion of the current road's ROW and the surrounding areas have undergone extensive disturbance due to infrastructure development, however, portions of the study areas retain archaeological potential.

The Stage 2 archaeological assessment was conducted on 24 July 2024. The weather was overcast with a temperature of 26°C. Assessment conditions were good and at no time were the field, weather, or lighting conditions detrimental to the identification of archaeological resources.

The areas of archaeological potential, identified in the Stage 1 archaeological assessment, were subject to Stage 2 test pit survey at 5 m intervals. Photographic images of the Stage 2 archaeological assessment are presented within Images 18 to 21. Location and orientation information associated with the Stage 2 photographs taken in the field is provided on Map 8.

Test pits were excavated at least 5 cm into the subsoil unless cultural features were encountered. Test pits were excavated within 1 m of built structures, or until test pits showed evidence of recent ground disturbance. Soil from all test pits was screened through a 6 mm hardware mesh to facilitate the identification and recovery of

archaeological resources. All test pits were examined for stratigraphy, cultural features, and evidence of fill.

Stratigraphy at 28-P and 33-P exhibited extensive disturbance, with several layers of redeposited topsoil, characterised as a dark grey sandy loam (L1) over a yellow brown, sandy loam (L2), over a mottled layer of L1 and L2. Test pits ranged from 10 cm to 40 cm in depth. Test pits were determined to be associated with the fill event from the construction of the bridge.

All test pits were backfilled once completed. No cultural material was found in any of the test pits across the study area.

Record of Documentation

TABLE 4 - RECORD OF DOCUMENTATION

| Document Type | Location of Document | Additional Comments | Quantity |
|--------------------------------|-----------------------------|--------------------------------------|-----------------|
| Field Notes | PHC Office | 1 lined sheet stored in project file | 1 page |
| Maps Provided by Client | PHC Office | In project file (Site Map) | 1 map |
| Digital Photographs | PHC Office | Stored digitally in project file | 63 photographs |

Analysis and Conclusion

Archaeological Potential

Archaeological Potential for the Study Area

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. In accordance with the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* the following are features or characteristics that indicate archaeological potential:

- ▶ Previously identified archaeological sites;
- ▶ Water sources:
 1. Primary water sources (lakes, rivers, streams, creeks);
 2. Secondary water sources (intermittent streams and creeks; springs; marshes; swamps);
 3. Features indicating past water sources (e.g. glacial lake shorelines indicated by the presence of raised gravel, sand, or beach ridges; relic river or stream channels indicated by clear dip or swale in the topography; shorelines of drained lakes or marshes; and cobble beaches);
 4. Accessible or inaccessible shoreline (e.g. high bluffs, swamps or marsh fields by the edge of a lake; sandbars stretching into marsh);
 - ▶ Elevated topography (eskers, drumlins, large knolls, plateaux);
 - ▶ Pockets of well drained sandy soil, especially near areas of heavy soil or rocky ground; Distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases (there may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings);
 - ▶ Resource areas including:
 1. Food or medicinal plants;
 2. Scarce raw minerals (e.g. quartz, copper, ochre or outcrops of chert);
 3. Early Euro-Canadian industry (fur trade, mining, logging);
 4. Areas of Euro-Canadian settlement; and,
 5. Early historical transportation routes.

In recommending a Stage 2 property survey based on determining archaeological potential for a study area, MCM stipulates the following:

- ▶ No areas within 300 metres of a previously identified site; water sources; areas of early Euro-Canadian Settlement; or locations identified through local knowledge, or informants can be recommended for exemption from further assessment;

- ▶ No areas within 100 metres of early transportation routes can be recommended for exemption from further assessment; and,
- ▶ No areas within the property containing an elevated topography; pockets of well-drained sandy soil; distinctive land formations; or resource areas can be recommended for exemption from further assessment.

Archaeological Integrity

A negative indicator of archaeological potential is extensive land disturbance. This includes widespread earth movement activities that would have eradicated or relocated any cultural material to such a degree that the information potential and cultural heritage value or interest has been lost.

Section 1.3.2 of the MCM 2011 Standards and Guidelines for Consultant Archaeologists states that:

Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources (MCM 2011:18)

The types of disturbance referred to above include, but are not restricted to, quarrying, sewage and infrastructure development, building footprints, and major landscaping involving grading below topsoil.

Potential Archaeological Resources

Following the criteria outlined above to determine archaeological potential, background research identified the study area to exhibit archaeological potential for the following reasons:

- ▶ Tributaries of the Grand River flow through the study areas 28-P, 32-P, and 33-P.
- ▶ The soils of the study areas would have been suitable for Indigenous and Euro-Canadian agricultural practices.
- ▶ The study areas are located along historical transportation routes.

Conclusion

The study areas consist of municipal ROWs, which include gravel roads with steep ditches, overgrown shorelines, and in some cases manicured lawn. A negative indicator of archaeological potential is extensive, below-grade land disturbance. Disturbance associated with soil manipulation, grading, and stockpiling of soils were encountered in association with the construction of the bridges and gravel roads within the study areas. Areas of low archaeological potential were also encountered in the form of low-lying wet environments and steep ditches.

Recommendations

Based on the results of the Stage 1 and 2 archaeological assessment, the following recommendations are provided:

- ▶ The Stage 2 archaeological assessment did not result in the identification of archaeological materials and no further archaeological assessment is recommended for the study area.

It is requested that this report be entered into the Ontario Public Register of Archaeological Reports, as provided for in Section 65.1 of the Ontario Heritage Act.

Advice on Compliance with Legislation

Advice on the compliance with legislation is not part of the archaeological record. However, for the benefit of the proponent and approval authority in the land use planning and development process, the report must include the following standard statements:

- ▶ This report is submitted to the Minister of Heritage, Sport, Tourism and Cultural Industries as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c O.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection, and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regards to alterations to archaeological sites by the proposed development.
- ▶ It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- ▶ Should previously undocumented archaeological resources be discovered, they may be representative of a new archaeological site or sites and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act*.
- ▶ The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.

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Stage 1 and 2 Archaeological Assessment: Municipal Class Environmental Assessment for Three Bridges (28-P, 32-P, 33-P), Between Lots 10 and 11, 13 and 14, Concession 5 and 6 West of Grand River, former Township of Pilkington, now Township of Centre Wellington, Ontario

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Images



IMAGE 1: VIEW OF 28-P WITH STEEP DITCHES, FACING SOUTHWEST



IMAGE 2: VIEW OF 28-P WITH STEEP DITCHES TO POORLY DRAINED AREA, FACING SOUTHWEST



IMAGE 3: VIEW OF 28-P WITH MANICURED LAWNS AND GRAVEL ROAD, FACING SOUTHWEST



IMAGE 4: VIEW OF 28-P WITH STEEP DITCH SHORELINE, FACING NORTHEAST



IMAGE 5: VIEW OF 28-P WITH MANICURED LAWN AND STEEP DITCH SHORELINE, FACING SOUTH



IMAGE 6: VIEW OF 28-P, FACING NORTHEAST



IMAGE 7: VIEW OF 28-P, FACING NORTH-NORTHEAST



IMAGE 8: VIEW OF 32 -P WITH OVERGROWN, STEEP DITCH, FACING SOUTHWEST



IMAGE 9: VIEW OF 32-P, WITH OVERGROWN AND STEEP DITCHES, FACING SOUTHWEST



IMAGE 10: VIEW OF 32-P WITH STEEP DITCHES TO POORLY DRAINED AREA, FACING NORTHEAST



IMAGE 11: VIEW OF 32-P FACING NORTHEAST



IMAGE 12: VIEW OF 32-P WITH STEEP, OVERGROWN DITCHES TO POORLY DRAINED AREA, FACING NORTH



IMAGE 13: VIEW OF 32-P WITH POORLY DRAINED AREA, FACING SOUTHWEST



IMAGE 14: VIEW OF 33-P WITH OVERGROWN SHORELINE, FACING NORTHEAST



IMAGE 15: VIEW OF 33-P WITH OVERGROWN, STEEP DITCHES, FACING NORTHEAST



IMAGE 16: VIEW OF 33-P WITH STEEP, ROCKY SHORELINE, FACING SOUTHWEST



IMAGE 17: VIEW OF 33-P WITH STEEP, OVERGROWN DITCHES AND SHORELINE, FACING SOUTHWEST



IMAGE 18: STAGE 2 TEST PIT SURVEY AT 5 M INTERVALS AT LOCATION 28- P, FACING NORTHEAST



IMAGE 19: STAGE 2 TEST PIT EXHIBITING DISTURBED STRATIGRAPHY AT LOCATION 28- P, FACING NORTH



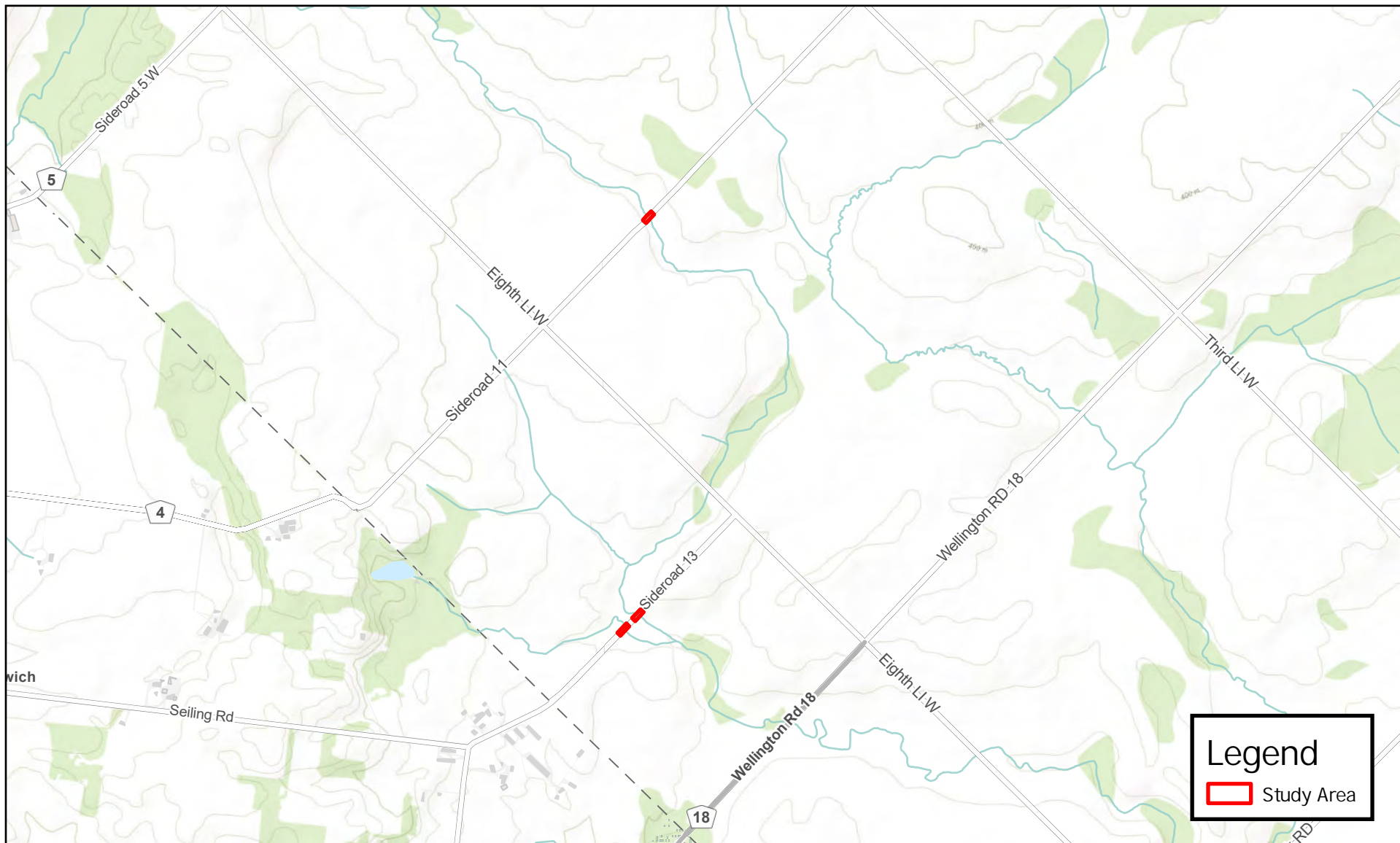
IMAGE 20: STAGE 2 TEST PIT EXHIBITING DISTURBED STRATIGRAPHY AT LOCATION 33-P, FACING NORTH



IMAGE 21: VIEW OF SLOPE ALONG SOUTH SIDE OF LOCATION 33-P, FACING NORTH

Maps

All maps on subsequent pages.



Legend

Study Area



Stage 1 Archaeological Assessment - RJ Burnside MCEA for 5 Bridges Centre Wellington

Map 1: Study Area on Topographic Map

Coordinate System: NAD 1983 UTM Zone 17N

Esri, NASA, NGA, USGS, FEMA, Province of Ontario,
Esri Canada, Esri, TomTom, Garmin, SafeGraph,
GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS,
US Census Bureau, USDA, NRCAN, Parks Canada

N

Scale 1: 25,000

0 340 680 Meters

0 0.47 0.95 Km



Legend

Study Area



Stage 1 Archaeological Assessment - RJ Burnside MCEA for 5 Bridges Centre Wellington

Map 2: Study Area on Modern Aerial Image

Coordinate System: NAD 1983 UTM Zone 17N

Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada, Maxar

N



Scale 1: 20,000

0 275 550 Meters

0 0.38 0.75 Km



Legend

-  Treaty No. 4, 1793
-  Study Area




Stage 1 Archaeological Assessment - RJ Burnside MCEA for 5 Bridges Centre Wellington

Map 3: Study Area on Treaties Map


Maxar

Coordinate System: NAD 1983 UTM Zone 17N

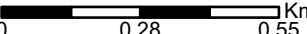


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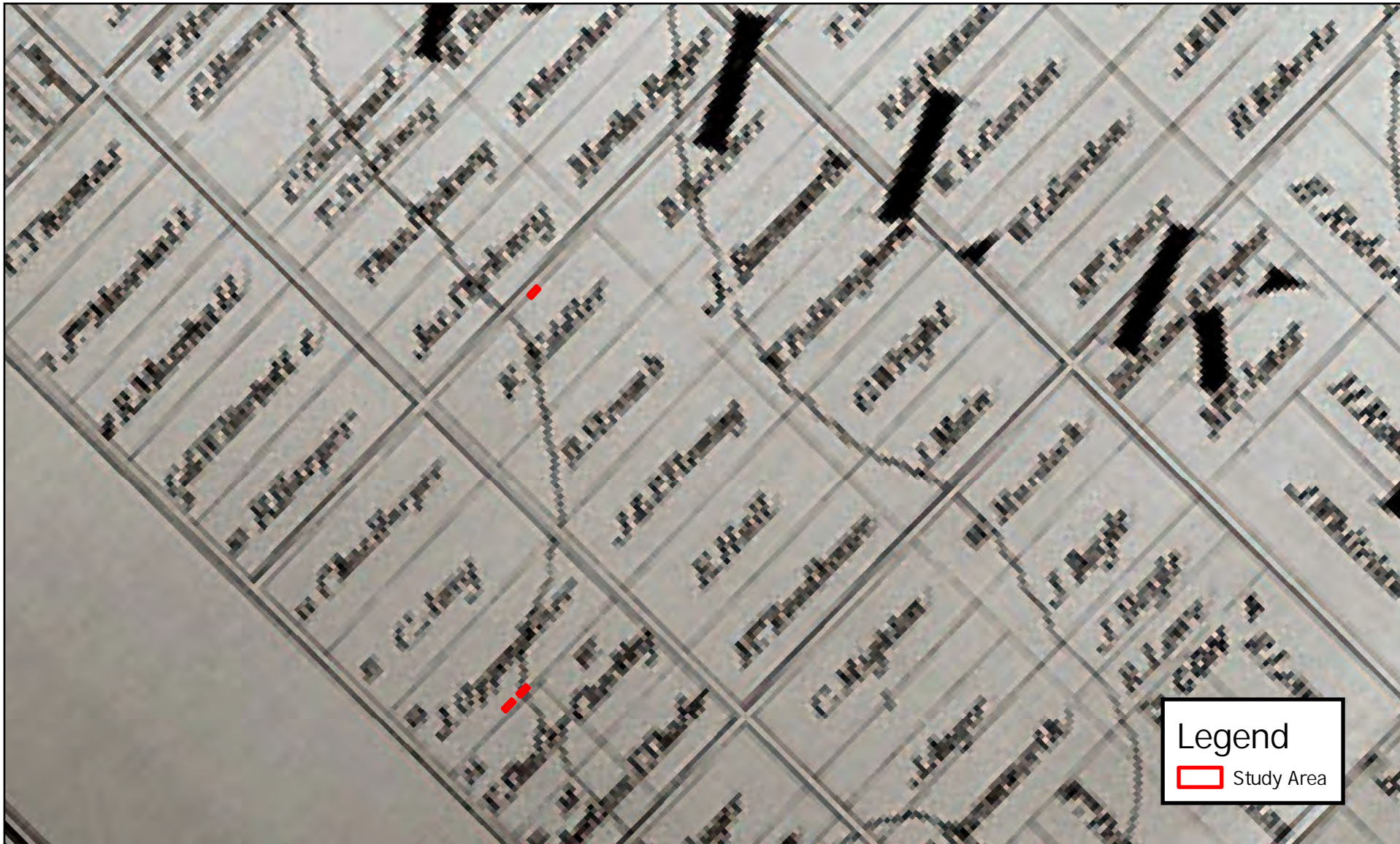
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0 205 410 Meters



0 0.28 0.55 Km

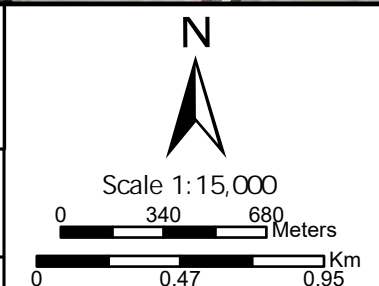


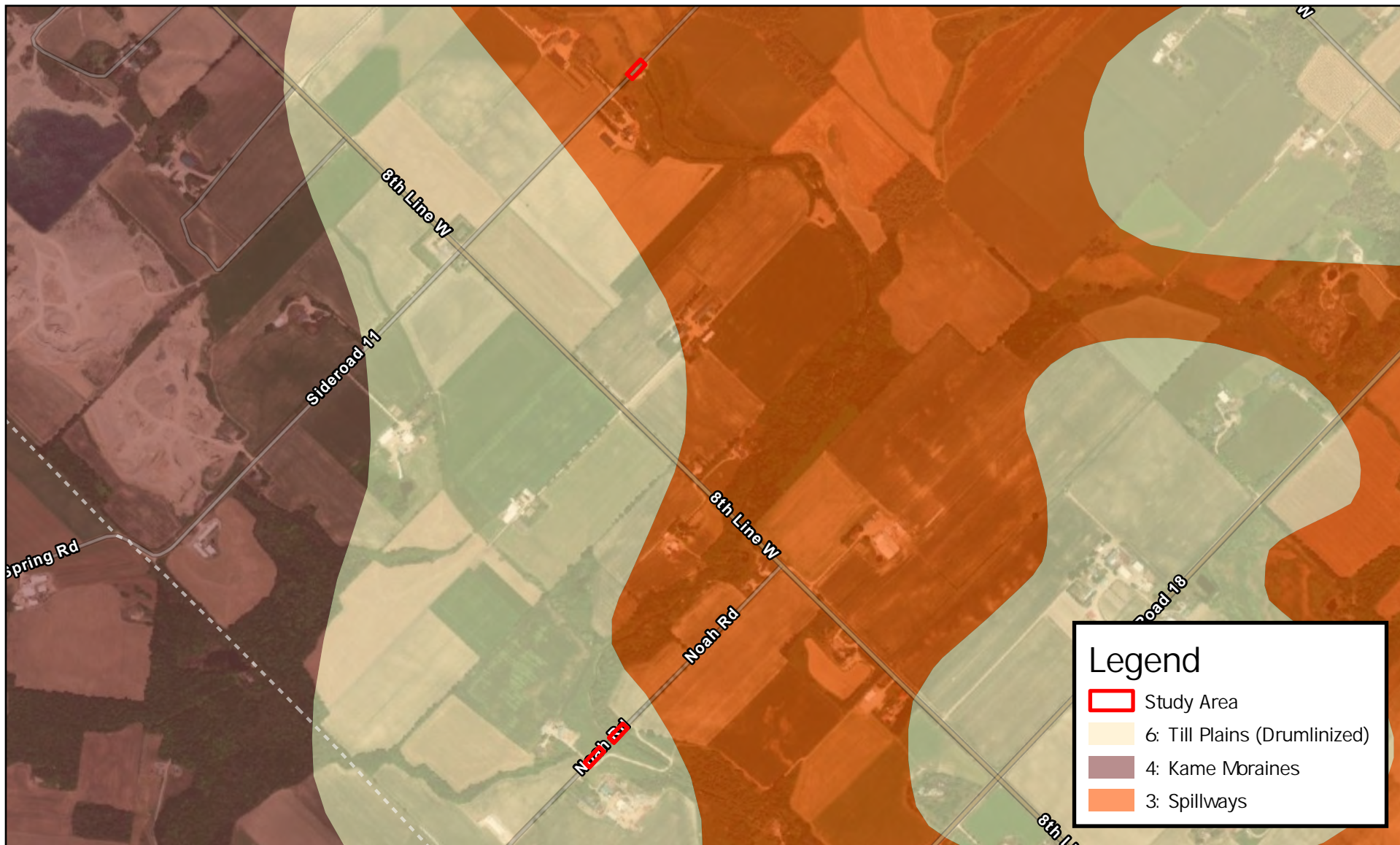
Stage 1 Archaeological Assessment - RJ Burnside MCEA for 5 Bridges Centre Wellington

Map 5: Study Area on 1877 Illustrated Historical Atlas

Esri, NASA, NGA, USGS, FEMA, Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

Coordinate System: NAD 1983 UTM Zone 17N





Stage 1 Archaeological Assessment - RJ Burnside MCEA for 5 Bridges Centre Wellington

Map 6: Study Area on Physiographic Map

Coordinate System: NAD 1983 UTM Zone 17N

Esri Community Maps Contributors, Province of Ontario,
Esri Canada, Esri, TomTom, Garmin, SafeGraph,
GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS,
US Census Bureau, USDA, NRCan, Parks Canada,
Maxar

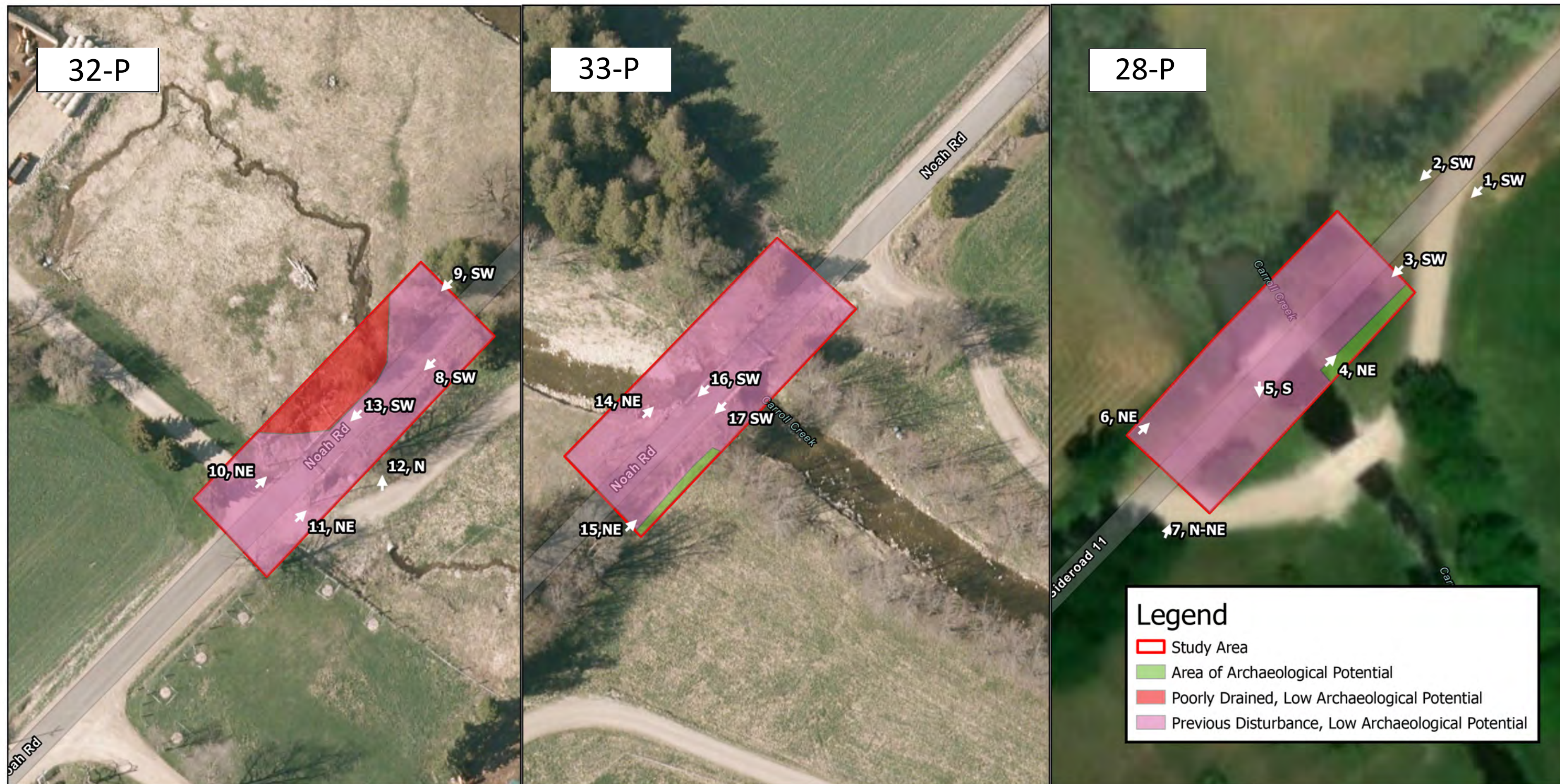
Legend

- Study Area
- 6: Till Plains (Drumlinized)
- 4: Kame Moraines
- 3: Spillways

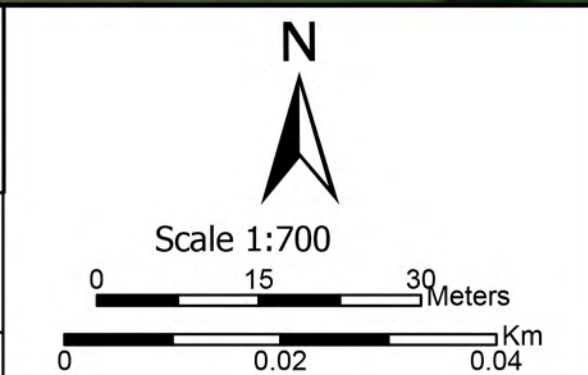


Scale 1:15,000






| | |
|---|--|
| <h2>Stage 1 Archaeological Assessment - RJ Burnside MCEA for 5 Bridges Centre Wellington</h2> | |
| <p>Map 7: Stage 1 Assessment Results, Photo Locations and Directions</p> | <p>Region of Waterloo, Maxar, Microsoft, Esri Community Maps Contributors, Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada</p> |
| <p>Coordinate System: NAD 1983 UTM Zone 17N</p> | |





Legend

- Study Area
- Stage 2 Test Pit Survey at 5m Intervals
- Poorly Drained, Low Archaeological Potential
- Previous Disturbance, Low Archaeological Potential

| | | |
|---|---|---|
|  | Stage 2 Archaeological Assessment - RJ Burnside MCEA for 5 Bridges Centre Wellington | |
| | Map 8: Stage 2 Assessment Results, Photo Locations and Directions | Region of Waterloo, Maxar, Microsoft, Esri Community Maps Contributors, Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada |
| | | |

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