

PRELIMINARY HERITAGE VALUE
ASSESSMENT:

**PRINCE OF WALES
BRIDGE**

DRAFT

MOOSE CONSORTIUM INC.

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1 GENERAL OVERVIEW OF HISTORY & HERITAGE — PRINCE OF WALES BRIDGE

The Prince of Wales Bridge is the first railway bridge linking the cities of Ottawa and Hull (now Gatineau) across the Ottawa River. It was constructed in 1879-1880 (the piers were constructed between May 1879 and October 1880. The superstructure was erected by December 1880) and then the steelwork was rebuilt in 1926-27 to accommodate the heavier modern locomotives. The bridge was constructed as an extension of the Québec, Montreal, Ottawa and Occidental Railway (Q.M.O. & O.) and connected to the Canada Central Railway. This became part of the transcontinental Canadian Pacific Railway when purchased by CPR in 1882, connecting its Ellwood Subdivision with its Maniwaki Subdivision. CPR ended its operations in Ottawa in 1997. Under Federal railway law, the Bridge is still considered part of an active rail line, and it was re-certified structurally sound in 2011 (MMM Group Report for the City of Ottawa).

The Prince of Wales Bridge is actually composed of two bridges: one with seven spans across the north channel to Lemieux Island from Gatineau and another with six spans across the south channel to the former Duck Island, which has since become part of the Ontario mainland. The total length is over 730 metres. The contract for the construction of the earthworks and piers was awarded to Horace Jansen Beemer in April 1879. Although this was his first construction work in the Ottawa/Hull area, Beemer was also responsible for much of the construction of the Alexandra Bridge further down the Ottawa River at Nepean Point, of the Pontiac and Pacific Junction and Gatineau Valley Railways. There are numerous recorded stories of the day about the danger of working on building the bridge, especially during Spring's high and fast water, with some barges and scows ending up going over the Chaudière Falls just to the east.

The contract for the superstructure was awarded to Clark, Reeves & Co. of Pennsylvania, who constructed all the bridges for the Q.M.O. & O. and many others across Canada. They are also associated with the Ottawa and New York Bridge in Cornwall and the Québec bridge, both of which collapsed during their construction in 1898 and 1907 respectively.

Materials for the spans on the Ontario side travelled to Ottawa via Brockville while those on the Québec side came to Hull via Montreal. The Prince of Wales Bridge is a Whipple truss or 'double-intersection Pratt', which is a stronger and more rigid version of the Pratt truss. Construction of the superstructure started in mid-August of 1880 and by mid-October of the same year, construction trains were running to Lemieux Island. Providing the reader with a better understanding of the physical make-up of the Bridge, the Ottawa Free Press of August 31, 1880 describes the construction of the superstructure:

“Putting a bridge together”

“First a wooden trestle is erected between the piers, starting from a shore end. This trestle is called false work, as it is only intended to serve a purpose, and that purpose is to aid in the erection of the substantial structure that is to stand the test of traffic, travel and time. Upon this trestle work, which is wider than the intended bridge, a rail track is laid, and the iron to form the superstructure is distributed. The centre panel is first raised, then the others along to first one end of the span and then the other, what is called “a traveller” being used. When the iron forming the span is all connected, the trestle work is knocked out, and that portion of the bridge sustains itself and a great deal more when put to the test. The end columns and top chords are the principal pieces of iron forming an iron truss bridge of recent invention, and after these comes the large floor beams, with four sets of longitudinal

track stringers for the rails. The main iron columns and cords are braced together by diagonal tie bars and transverse bracing. Each span has a set of arched brackets with urns on the top corners. The truss is one of Clark, Reeves & Co.'s own patent pin connection. The bridge material is of wrought iron, with the exception of the compressive strains, (connecting) which are of cast iron."

The Bridge officially opened on January 17, 1881 although freight trains started crossing the bridge December 16, 1880. On June 28th, 1886, the first *Pacific Express* passed over the Prince of Wales Bridge on its way to British Columbia from Montreal.

Alterations to the Bridge over time include strengthening of the stone piers in 1911 which consisted of pouring concrete down to the bedrock. Siding and the main line switch was added to Lemieux Island to coordinate with the construction of the water filtration plant there in 1916. The Bridge was reconstructed in 1926-1927 to accommodate the heavier locomotives that were being brought into service. The old steel was replaced with heavier steel and the tops of the piers were lowered to allow room for the larger spans (the construction work was completed without interrupting the train service).

The last passenger train crossed the Bridge on November 15, 1981 with the final train crossing on the 26th of July 2001. The Prince of Wales Bridge and its approaches (including the approach land in Gatineau) were purchased by the City of Ottawa in 2005 for a potential urban rail link to connect the O-Train/Trillium Line with the Québec side of the river. The feeder tracks south of the Bridge, crossing NCC property, were removed in 2005 during the Lebreton Flats re-vitalization project.

The Bridge has since been abandoned to graffiti artists and urban trawlers. However there has been significant public interest voiced for a transit rail link /pedestrian /cycling route using the Bridge to ease congestion for the numerous commuters who cross the Ottawa River daily.

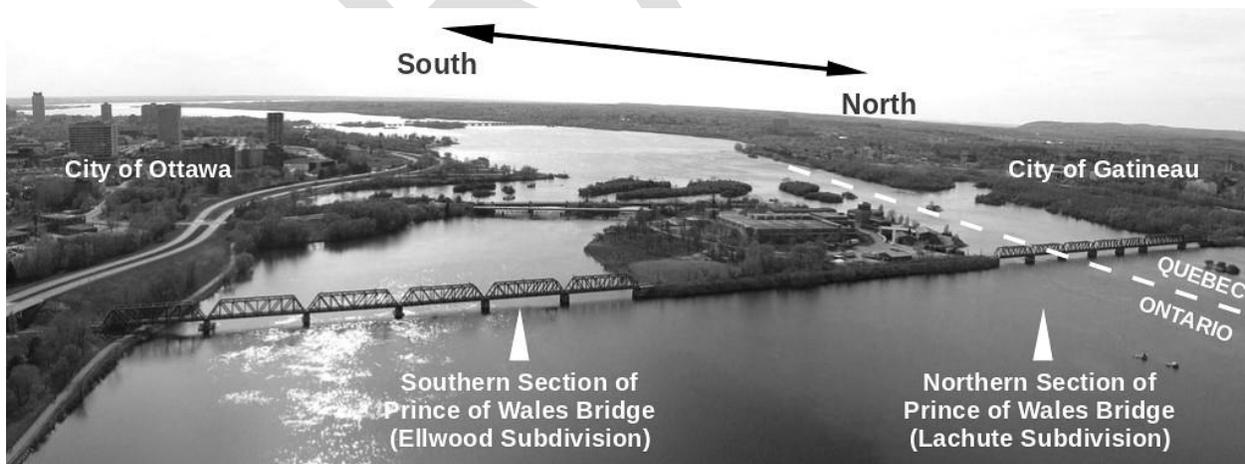


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2 PRELIMINARY REVIEW OF APPLICABLE PLANNING DOCUMENTATION

To better foster an understanding of the nature and value of a place or property, a review of the planning context in which it is subject to, under Heritage and Land Use legislation and regulation, is essential. The Prince of Wales Bridge falls under multiple jurisdictions including Federal, Québec, Ontario, Ville de Gatineau and City of Ottawa. The following is a preliminary review of excerpts of some of the applicable documentation:

2.1. HERITAGE PLANNING

A. STANDARDS AND GUIDELINES FOR THE CONSERVATION OF HISTORIC PLACES IN CANADA, CHAPTER 1: THE CONSERVATION DECISION-MAKING PROCESS

Understanding an historic place is an essential first step to good conservation practice. This is normally achieved through research and investigation. It is important to know where the heritage value of the historic place lies, along with its condition, evolution over time, and past and current importance to its community. The traditional practices associated with the historic place and the interrelationship between the historic place, its environment and its communities should also be considered.....The information collected in this phase will be used throughout the conservation decision-making process..... (page 3)

Although the Prince of Wales Bridge is not designated heritage under any governing authority, because it has potential heritage value, it is prudent to consider that potential value before proposing alterations. Federal guidelines indicate that it is vital to gain a clear understanding of the place or property in order to evaluate what potential values or interest it holds.

B. ONTARIO HERITAGE TOOL KIT: HERITAGE PROPERTY EVALUATION, DESIGNATION UNDER SECTION 29, ONTARIO HERITAGE ACT

Cultural Heritage Landscapes: A cultural heritage landscape can be designated as a unit under section 29 or protected as part of a larger heritage conservation district under Part V. (See Heritage Conservation Districts, A Guide to District Designation under the Ontario Heritage Act). These are geographical areas that involve a grouping of features such as buildings, spaces, archaeological sites and natural elements, which collectively form a significant type of cultural heritage resource. Examples might include villages, parks, gardens, battlefields, main streets, and other streets of special interest, golf courses, farmscapes, neighbourhoods, cemeteries, historic roads and trailways and industrial complexes.

As part of heritage evaluation of a place or property one must consider the broader context within which it physically sits. The Prince of Wales Bridge could be seen to be part of a 19th C. industrial landscape, a significant river landscape (or waterscape) and a broader Capital Core landscape. Therefore consideration should be given to considering it within a cultural heritage landscape.

C. ONTARIO HERITAGE TOOL KIT: HERITAGE PROPERTY EVALUATION, CRITERIA FOR DETERMINING CULTURAL HERITAGE VALUE OR INTEREST UNDER THE ONTARIO HERITAGE ACT

Criteria for Evaluation:

1. (1) The criteria set out in subsection (2) are prescribed for the purposes of clause 29 (1) (a) of the Act.

(2) A property may be designated under section 29 of the Act if it meets one or more of the following criteria for determining whether it is of cultural heritage value or interest:

2. The property has design value or physical value because it,
 - 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, or
 - iii. demonstrates a high degree of technical or scientific achievement.
3. The property has historical value or associative value because it,
 - i. has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community,
 - ii. yields, or has the potential to yield, information that contributes to an understanding of a community or culture, or
 - iii. demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.
4. The property has contextual value because it,
 - i. is important in defining, maintaining or supporting the character of an area,
 - ii. is physically, functionally, visually or historically linked to its surroundings, or
 - iii. is a landmark.

(page 7)

D. ONTARIO PROVINCIAL POLICY STATEMENT 2014 (PPS), UNDER THE PLANNING ACT

Policy Direction: The Provincial Policy Statement provides policy direction on matters of provincial interest related to land use planning, cultural heritage and development. As a key part of Ontario's policy-led planning system, the Provincial Policy Statement sets the policy foundation for regulating the development of use of land. It also supports the provincial goal to enhance the quality of life.... (from Preamble, page 1).

There are numerous clauses in the PPS that relate to the nature, cultural value and use of the Prince of Wales Bridge including the following items:

1.7 Long-Term Economic Prosperity

d) 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;

2.6 Cultural Heritage and Archaeology

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 consider the interests of Aboriginal communities in conserving cultural heritage and archaeological resources.

E. ONTARIO HERITAGE ACT

Note: The Prince of Wales Bridge is NOT currently designated and this section discusses the process of designation and the review of interventions at a high level.

Properties (Part 4) and groups of buildings with their associated landscape (districts - Part 5) can be designated under the Ontario Heritage Act. The desire to designate a property or a district is typically brought forward by citizens to their municipal council with background research supporting its designation and a list of character defining elements or features that contribute to the defined heritage value of that place. Once the necessary community consultation, municipal heritage meetings (where they exist) and council meeting(s) occur and the municipal council approves the potential designation it is then sent to the Province for final review and ascension. Only after it is accepted by the Province does a property or district become designated. While properties are typically designated in this fashion, the Minister does have the ability to designate properties that possess provincially significant cultural heritage value or interest (OHA 34.5 (1)).

Due to the size and potential variety of landscapes and structures within a district the documentation required for a district designation is more extensive in comparison to an individual property designation. Documentation for a District includes two primary elements: the conservation district study and the conservation district plan. A conservation district study typically includes the study boundary, background research and information on the district. Building on the contents of the study, the plan is more of a formal document that specifically includes, among other elements, district boundaries, heritage character statement, list of heritage character elements, management procedures, potential approaches to various changes, property maintenance standards, legal items, and potential by-law modifications.

If property or district is designated, changes within the designated area or associated properties require review. This review typically takes the form of a heritage impact assessment (HIA), which considers the impact of the proposed modifications on the identified heritage character and associated elements. A HIA is typically included in site plan approval submissions along with an Application for permit under the Ontario Heritage Act. A preliminary HIA is included under Section 4 of this Report.

Designation and the associated requirements are intended to manage change in a manner that best respect the identified heritage character, not stop change entirely.

F. QUÉBEC HERITAGE PLANNING LAW

Note: The Prince of Wales Bridge is NOT currently designated and this section discusses the process of designation and the review of interventions at a high level.

In Quebec a site or larger cultural heritage landscape can be identified by both a local municipality or the province as possessing cultural heritage value that is worthy of protection. Quebec's Cultural Heritage Act defines cultural heritage under a series of types including: built heritage, landscape heritage, landscape heritage, immaterial heritage, movable cultural heritage, archaeological heritage, commemorative heritage and documentary heritage. The Prince of Wales Bridge potentially possesses built heritage, landscape heritage, archaeological heritage and movable cultural heritage (objects and goods associated with heritage value).

Identifying heritage properties in Quebec takes a variety of different forms, potentially identified at the provincial or municipal level. At a high level they include the following:

1. Provincial

- a. *Classification*: identification and legal protection for historic sites and monuments (among other heritage elements) along with their surrounding protected area (only where applicable). A classified identification is the highest level of heritage identification and carries with it a range of obligations and advantages. The most noteworthy obligation is that all proposed exterior changes must be approved by the Minister responsible. Advantages include permanent protection, access to provincial technical support along with potential financial assistance to cover partial costs associated with restoration work or archaeological investigations.
- b. *Recognition*: identification and legal protection for historic sites and monuments (among other heritage elements). A classified identification is the highest level of heritage identification and carries with it a range of obligations and advantages. A primary difference between classification and recognition is that recognition requires a 60 day notice of intention to make changes to the Minister and does NOT require permission to undertake the changes. For immovable heritage a copy of the same notice is to be sent to the local municipality.
- c. *District (Historic or Natural)*: A district identification carries similar requirements and protection levels as a classification identification, but applies to a larger area.

2. Municipal

- a. *Designation of historic monuments*: Based on the advice of its local advisory committee municipalities can designate historic monuments by instituting a by-law. There are a range of obligations and advantages for designated historic monuments based on the information and requirements set out in the associated by-law. Advantages may include: financial and technical assistance for the maintenance, restoration or upgrades. Obligations include: owners must keep the historic monument in good condition, owners must provide a 45 day notice prior to make exterior changes to the historic monument, while meeting the conservation conditions set out in the by-law.
- b. *Establishment of historic sites*: A municipality may establish a heritage site for an area "where immovable cultural property is situated and where the architectural landscape has aesthetic or heritage interest." Once established this area is then identified in the municipal planning program as a protected zone. Advantages may include: financial and technical assistance for the maintenance, restoration or upgrades. Obligations include: owners must provide a 45 day notice prior to make exterior changes to the historic monument, while meeting the conservation conditions set out in the by-law.

G. NATIONAL HISTORIC SITE OF CANADA DESIGNATION (NHSC)

According to documentation available on the Parks Canada web site including "National Historic Sites of Canada - Introduction and System" (accessed via Wikipedia), NHSC are organized into five primary themes: peopling the land, governing Canada, developing economies, building social and community life. In order to receive commemoration, a site must meet at least one of the following criteria:

1. illustrate an exceptional creative achievement in concept and design, technology or planning, or a significant stage in the development of Canada;
2. illustrate or symbolize, in whole or in part, a cultural tradition, a way of life or ideas important to the development of Canada;
3. be explicitly and meaningfully associated or identified with persons who are deemed to be of national historic significance; or

4. be explicitly and meaningfully associated or identified with events that are deemed to be of national historic significance.

Based on the Prince of Wales Bridge's association with the development of a national railway across Canada, an argument could be made that criteria 2 and 4 are most directly applicable to the bridge. It should be noted that NHSC is simply a commemoration rather than a designation and as such it carries with it no legal requirements or protection. Nevertheless, it is not uncommon for a NHSC to possess other heritage recognition by different levels of government including Municipal, Provincial and Federal which do carry legal requirements. A preliminary search of Canadian bridges that possess some level of recognition on historicplaces.ca returned 454 entries.

2.2. LAND USE PLANNING

NOTE: REFER TO COMPANION DOCUMENT ON LINKED LOCALITIES

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3 PRELIMINARY EVALUATION OF HERITAGE VALUE

Note: As this is a preliminary evaluation, primary research has not been undertaken. Additional Historical Research may occur for future evaluations.

As the majority of the Prince of Wales Bridge is located in Ontario and it is owned by an Ontario municipality, it could be said to be appropriate to evaluate its heritage value using the Ontario Criteria:

a) The Prince of Wales Bridge has design value or physical value because it:

- i. is a representative and large example of a 19th C. multi-span Whipple truss or 'double-intersection Pratt' truss bridge, which is a stronger and more rigid version of the Pratt truss, and a rare example of one that has been significantly altered to accommodate evolving rail technologies of the 1920's;

b) The Prince of Wales Bridge has historical value or associative value because it:

- i. has direct associations with the themes of the 19th c. industrial development of Canada, the development of a natural resource-based economy & the development of the national railway;
- ii. was built by significant players in bridge-building in 19th C. Canada, Horace Jansen Beemer and the Clark, Reeves & Co. ;

c) The Prince of Wales Bridge has contextual value because it:

- i. is a landmark that is important in helping to define, demark and support the character of the Chaudière Falls industrial basin and the great portage area of the Ottawa River and the west limit of the core area of Canada's Capital, physically, functionally, visually and historically linking it to its surroundings.

It is therefore recommended that, while the Prince of Wales Bridge is not presently designated heritage, it qualifies for designation in several jurisdictions in our opinion and therefore any proposed alterations should reflect minimal intervention to accommodate a revitalized and/or new compatible use and should seek to protect heritage character-defining elements.

The heritage character-defining elements of the Prince of Wales Bridge are:

- Multi-span Whipple Truss steel structure;
- Dressed limestone piers and north & south abutments;
- Dry stack limestone wall abutting the railway track on Lemieux Island;
- Series of spans across north channel from Gatineau to Lemieux Island;
- Series of spans across south channel from Lemieux Island to Ottawa;
- Length of track and associated right-of-way across the built-up east side of Lemieux Island;
- Steel nameplates, signage and feathers at each end reading, "PRINCE OF WALES" and "Built 1879 Superstructure Renewed 1926-27"
- Graffiti (Note: As a temporal act, it is difficult to identify specific graffiti as being character-defining. As such the act of accommodating graffiti on localized areas of the bridge's superstructure where safely accessible, along with periodic updating is considered to sufficiently represent the heritage character associated with the graffiti. Existing graffiti in areas not safely accessible should also be retained to reflect this portion of the bridge's evolution be maintained (Extent to be retained to be determined). Graffiti is defined as public folk art from (usually anonymous) applications (usually with spray paint and other media) or expressions of unlawfully applied to public or private property.

4 PRELIMINARY HERITAGE IMPACT ASSESSMENT (HIA) OF PROPOSED ALTERATIONS TO THE PRINCE OF WALES BRIDGE

The following preliminary HIA is based upon drawings SP-1, SP-2, SP-3, SP-4, SP-5 & SP-6 by Remisz Consulting Engineers, dated Aug. 24, 2015 (see Appendix “J”). It is recommended that these designs be developed into rendered three-dimensional representations showing the bridge in its context, to complete the final HIA.

Note: As this is a preliminary evaluation, primary research has not been undertaken. Additional Historical Research may occur for future evaluations.

4.1. HERITAGE RESOURCE PROPERTY DESCRIPTION

The Prince of Wales Bridge is an interprovincial railway crossing that connects the City of Ottawa to the City of Gatineau with a total crossing length of 989 metres. The bridge is actually two separate bridges (north section 1204 feet over 7 spans; south section 943.5 feet over 6 spans) constructed using a Wipple Truss (double-intersection Pratt Truss) design, along with a land crossing on Lemieux Island within the Province of Ontario. Originally constructed by the Quebec, Montreal, Ottawa and Occidental Railway between 1879 and 1881 (freight service began in 1880) to provide improved connections between Montreal and Hull. Prior to the construction of the bridge, passenger and freight rail would have to travel from Montreal to Prescott and then to Ottawa. In 1882 the bridge was purchased by the Canadian Pacific Railway to add to its burgeoning inventory of track in the area.

Over its 135-year history, the bridge has been subjected to two significant structural upgrades to accommodate changes in train design and respond to challenging environmental conditions:

1. 1911: The limestone piers were strengthened by pouring concrete down to bedrock to better protect the bridge from ice flows in the Ottawa River;
2. 1926-27: The original steel was removed and replaced by heavier steel. A further modification included lowering the tops of the piers to accommodate the new heavier spans. Both of these significant modifications were completed to accommodate heavier locomotives that were being used at the time.

While remaining in use until 2001, bridge use declined steadily after the 1950s with limited freight use. Passenger rail continued to use the bridge until 1981 when the last CP Rail train passed over the bridge on November 5, 1981 travelling to Montreal. In 2005 the bridge was disconnected from the adjacent trackage on the Ontario side as part of work on the Ottawa O-Train system; however, the associated right-of-way remains.

HERITAGE VALUE

The potential heritage value of the bridge is associated with all three main areas of heritage consideration including:

DESIGN/PHYSICAL VALUE: Representative and large example of a 19th C. multi-span Whipple truss or ‘double intersection Pratt’ truss bridge, which is a stronger and more rigid version of the Pratt truss, and a rare example of one that has been significantly altered to accommodate evolving rail technologies of the 1920s;

HISTORICAL AND ASSOCIATIVE VALUE: Direct associations with the themes of the 19th c. industrial development of Canada, the development of a natural resource-based economy & the development of the national railway. Also, it was built by significant players in bridge-building in 19th C. Canada, Horace Jansen Beemer and the Clark, Reeves & Co., along with being renewed by the Dominion Bridge Company.

CONTEXTUAL VALUE: It is a landmark that is important in helping to define, demark and support the character of the Chaudière Falls industrial basin and the great portage area of the Ottawa River and the west limit of the core area of Canada's Capital, physically, functionally, visually and historically linking it to its surroundings.

HERITAGE CHARACTER ELEMENTS

- Multi-span Whipple Truss steel structure;
- Dressed limestone piers and north & south abutments;
- Dry stack limestone wall abutting the railway track on Lemieux Island;
- Series of spans across north channel from Gatineau to Lemieux Island;
- Series of spans across south channel from Lemieux Island to Ottawa;
- Length of track and associated right-of-way across the built-up east side of Lemieux Island;
- Steel nameplates, signage and insignia feathers at each end and reading, "PRINCE OF WALES" and "Built 1879 Superstructure Renewed 1926-27"
- Graffiti (Note: As a temporal act, it is difficult to identify specific graffiti as being character-defining. As such the act of accommodating graffiti on localized areas of the bridge's superstructure where safely accessible, along with periodic updating is considered to sufficiently represent the heritage character associated with the graffiti. Existing graffiti in areas not safely accessible should also be retained to reflect this portion of the bridge's evolution (extent to be retained to be determined). Graffiti is defined as public folk art from (usually anonymous) applications, images or messages (usually with spray paint and other media) or unlawfully applied expressions to public or private property).

4.2. DESCRIPTION OF THE PROPOSED DEVELOPMENT

The proposed development includes the upgrades of the bridge's structural elements to provide the necessary capacity to support new passenger rail service over the crossing, while addressing accumulated deferred maintenance needs. The current understanding of this work, based on a pre-feasibility report level, is that there will be limited impact on heritage fabric and that this work is required to allow for the renewed function of the bridge in a manner that is consistent with its historic use. "Limited" is taken to mean limited new material such as structural supports and very limited removal of existing material.

Additionally, new symmetrically arranged pedestrian and cycling paths are proposed for both bridge sections and adjacent to the rail line over Lemieux Island. Within the bridge sections, the new pathways would be cantilevered from each side of the existing bridge structure with limited modifications to accommodate attachments. All connections to the existing structure would be completed using reversible attachments including bolted, clamped or mechanically fastened means. By employing symmetrical paths cantilevered from the existing bridge, the associated structural systems can be kept to a minimum as the supported width is narrow and balanced.

The pre-feasibility report includes three different options for accommodating the new pedestrian and cycling paths connected to the bridge section, which are as follows:

1. Option 1 All Steel (OWSJ, Fencing, Steel Grating Deck)

- The main cantilever would be large steel or built-up cross beams on hangers under each truss node (using "Simpson Strong Tie" or custom hangers) and built-up shapes would be consistent with the main truss components;
- A couple of stringers made of open web steel truss joists (OWSJ) perpendicular to cross beam (parallel to pedestrian traffic) would support the deck, spaced at 16 inches and butting to or resting on the crossbeams;
- Steel Grating Deck (NCC standard - Max 13 mm apertures in grates) or Non-Slip Fiberglass Grate;
- Exterior railing would consist of steel posts and would otherwise be open;
- The safety fence would be a very light wire netting (similar to what is used on construction sites) on interior truss side and supported on cables with turn buckles attached to main truss system, separating the pedestrians and trains.

2. Option 2 All Wood (Deck, Beam and Railing)

- The main cantilever would consist of large timber built up cross-beams with custom hangers under each truss node (about every 20ft at the large joints and double or triple the size of a railway tie);
- The stringers would be LVL or Glulam (or regular wood joists from housing projects) perpendicular to cross beams and supporting decking planks, spaced at 16 inches and butting to or resting on the cross beams;
- Pathway deck would be made of laminated or pressure treated wood planks (perpendicular to pedestrian/cyclist traffic and max 13mm spacing between planks);
- Consider all wood railing system, with main post at every cross beam and intermediate post with blocking if required (posts would be 1.5 m high for cyclists).

3. Option 3: Composite Wood and Fibreglass

On Lemieux Island new paths connecting with the proposed new trail structures on the bridge sections are proposed. These paths would be outside the track area along the edge of new safety fencing separating the track from the surrounding land. To allow for pedestrians to safely cross the railway tracks 1 or 2 new minimal light-duty structures are proposed on Lemieux Island. The two potential locations are as follows: 55 metres from the north bridge section and 110 metres from the south bridge section.

4.3. IMPACT OF PROPOSED DEVELOPMENT ON IDENTIFIED HERITAGE VALUE: SUMMARY

The evaluation of the impact of proposed development on identified heritage value is based on a pre-feasibility report and would require updating at the project's major milestones as details emerge. As such, this impact assessment is limited to a pre-feasibility analysis.

A. HISTORICAL VALUE

The proposed modifications to the bridge serve to reintroduce the historic use along with the addition of new cantilevered sections to accommodate safe pedestrian and cycling traffic between Ottawa and Gatineau. The proposed development is viewed as a positive development for the bridge, especially in view of its current derelict state, as it is a relatively minimal intervention and a component of a plan for re-using and maintaining the potentially historic structure for the long term. It does not affect the bridge's association with the natural resource-based economy of the area and the development of the national railway. Furthermore it does not

diminish the bridge's association with the various significant players in bridge-building in 19th/early 20th century Canada.

B. ARCHITECTURAL VALUE

The proposed modifications impact both the physical and visual architectural value of the bridge.

PHYSICAL ARCHITECTURAL VALUE

In order to support the new cantilevered pathways, existing timber bridge ties will need to be removed and replaced with steel beams. Where new elements interface with existing bridge components they will be mechanically attached using reversible means allowing for disassembly in the future without negatively impacting the physical integrity of the bridge.

The existing dry stone wall along the east side of the railway tracks should be rehabilitated and retained as a character element. It should remain as a distinct element that continues to function as originally intended.

VISUAL ARCHITECTURAL VALUE

In order to accommodate pedestrian and cyclist traffic two new cantilevered symmetrically-placed sections are proposed for addition to the bridge. While it is challenging to determine the precise final visual impact of the proposed intervention at a pre-feasibility study level, by using two separate paths instead of a single path, the width of the paths can be reduced and the associated structure can be reduced. Furthermore, their symmetrical configuration reduces visual impact as well. With a limited supporting structure, the most visible new elements will be the guards and handrails. The proposed construction of these elements includes steel posts and is otherwise open. On the opposite side a light wire netting along with supporting cables and turnbuckles would be used to separate the existing bridge and its rail traffic from the new pedestrian and cycling paths. Three potential options are put forward for future exploration including all steel, all wood and composite. There is limited detail provided for the composite wood option and as such it will not be evaluated. Both steel and wood could be employed in configurations that are physically and visually compatible with, subordinate to and distinguishable from the existing bridge and as such both options are potentially worthy of consideration from a heritage perspective. However, the historic use of steel as the primary structural material for the bridge does favour the continued use of steel over wood, so long as there was some level of visual differentiation between new and existing. Additionally, steel may also provide smaller member sections, greater spacing and spans (to be confirmed) when compared with wood and if this is confirmed would be a further advantage over wood.

The proposed pedestrian crossing(s) over the railway tracks on Lemieux Island are a significant distance from either bridge section and are anticipated to have limited direct visual impact on the bridge sections. However, the pedestrian crossing could have a significant visual impact on the serialized experience of the full crossing by potentially being visually massive elements that disrupts the generally open sequence. Care should be taken with their design development to ensure their visual lightness, physical and visual compatibility, subordination to the existing structure and their distinguishing character as of their own time, for minimal impact.

C. CONTEXTUAL VALUE

The proposed new additions to the bridge do not appear to affect the character of the bridge as it relates to its role as landmark. This is based on the expectation that the proposed cantilevered sections are "visually light". By separating the path into two symmetrically-placed sections on either side of the bridge, there is a clearly defined intent to achieve a "visually light" intervention.

With the introduction of new modes of transit and the reintroduction of another, a wider cross-section of users will be brought in direct contact with the bridge, thereby enhancing the general public's awareness and potentially increasing the public's appreciation of the bridge. There is also a very strong opportunity to provide new and powerful views of the surrounding built and natural landscape within the area, which would also increase overall public awareness and appreciation of these elements. By introducing new transit modes and reinstating another, the bridge's role as a link would be enhanced.

In order to address safety concerns, the tracks will be enclosed where they pass over Lemieux Island, limiting access to a narrow portion of the island's east side from the remainder of the island; one of the pathways will be located within this area. While this bank is partially accessible, the loss of full connectivity limits the ability for people to access visually powerful views to the east. It is acknowledged safety concerns must be addressed as part of the proposed development and take precedence over slight experiential improvement.

4.4. OPPORTUNITIES FOR MITIGATION

HISTORIC VALUE

- Introduce an interpretive program at points along the proposed new pathways, highlighting the history of the crossing, and the cultural landscape in which it sits, including aboriginal history of this part of the Great River.

ARCHITECTURAL VALUE

- Employ steel construction for the new cantilevered sections to minimize visual impact, assuming greater spans and fewer members when compared with wood, and to continue using the historically relevant structural material;
- Minimize visual disruption associated with cantilevered paths by using guards that are as visually open as possible. One potential option is the light wire netting proposed for the rail bridge, if it meets the associated safety requirements;
- Explore opportunities to employ a wood deck for the new cantilevered sections set on a steel structure. The wood decking is more directly connected to the existing bridge path and may be perceived as a more "temporary" element, as well as the timber connection to the area's history;
- Retain existing graffiti in areas that are not safely accessible and provide locations along the new cantilevered sections (with safe access to the existing bridge superstructure) to maintain this heritage element and associated evolutionary period, while accommodating the temporal aspect of this activity;
- Design and construct Lemieux Island pedestrian overpasses as "visually light" structures with porous materials and assemblies that allow for views through;
- Require a short, medium and long-term maintenance plan be established at the outset to ensure long-term viability, safety and integrity.

CONTEXTUAL VALUE

- Provide uninterrupted connections for all proposed modes of transportation from Ottawa to Gatineau. Link the new connections to existing infrastructure as much as possible;
- Provide opportunities for pathway users to stop along the new cantilevered bridge sections to view the surrounding landscape without affecting trail traffic;

- Provide pedestrian overpasses on Lemieux Island at both Option 1 and Option 2 locations, to limit the impact of enclosing the railway tracks and severing the direct connection between the west side and east side of the tracks as it has historically existed on the east side of the island.

4.5. PRECEDENCE & LIMITATIONS

On a project-by-project basis, heritage conservation planning must consider related planning issues and broader Municipal objectives in order to be relevant and effective. When the design of a proposed development is evaluated, its merits are found by examining a matrix of elements and considerations. This evaluation is non-transferable on a “pick and choose” basis to another future development which may want to utilize some attributes, but not others. Additionally, if this evaluation is based on a pre-feasibility concept study and was prepared to a pre-feasibility level, further evaluation, research and report updates will be required to review heritage impact at project milestones as the proposed interventions are refined.

Planning issues beyond this specific mandate will be dealt with separately as appropriate. Heritage planning is a component part of overall community planning.

4.6. CONCLUSION

A. PROTECTION OF HERITAGE VALUE

The proposed approach, put forward in the pre-feasibility study, contains language and demonstrates an intervention approach that is generally in keeping with good heritage practice including reversibility (using mechanical connections where new elements come in contact with existing) and minimizing visual disruption by employing a configuration that reduces the impact from structural elements.

While both steel and wood assemblies are worthy of exploration for the cantilevered paths, the steel option is currently the heritage preferred option as it is historically associated with the bridge's primary structural material and is likely the most "visually light" option.

The proposed pedestrian overpasses, depending on their final detailing, could potentially be the most visually-significant element and as such their design must be carefully considered. Every effort should be made to provide structures that are "visually light" with materials and assemblies that allow for views through, and finishes that minimize visual impact.

B. ENHANCING HERITAGE VALUE

By returning the historical use to the bridge, while accommodating new modes of transit, an increased cross section of the public will experience the heritage character of the bridge and its surrounding landscape. This is considered a very positive development for the long term viability of the bridge, especially in light of its history of maintenance (or lack thereof) over the recent past.

To further enhance heritage value, an interpretive program including pause zones along the cantilevered paths is proposed as cultural heritage enhancement measures. Both of these potential measures would further enhance the benefits and awareness of the bridge's heritage character and the surrounding landscape. The design of the observation spots must be carefully considered with respect to size, location, rhythm, quantity, etc, with respect to compatibility with the historic place.

C. CONCLUSION

The proposed development of a pair of cantilevered trails is a positive and historically-appropriate evolutionary development for the heritage character of the Prince of Wales Bridge. For a heritage building, place or infrastructure to maintain its value and be retained for the long term it must be continually used in a way that can be accommodated with minimal intervention, be experienced by the public and possess a relevance to current users. Based on the information provided in the pre-feasibility report, along with the proposed mitigation measures that generally build upon the proposed intervention approach, the proposed development is considered to have limited impact to the existing bridge. For any development of the bridge, a Conservation Plan should precede any physical interventions, for approvals. This plan would include details of how the new interventions are as minimal as possible to meet the needs of the new use and how interventions are designed to be physical and visually compatible with, subordinate to and distinguishable from the historic structure/place. A long-term maintenance plan, as part of a comprehensive Conservation Plan, is recommended to meet conservation best practices and to complete the appropriate stewardship of this potentially designate-able historic place.

DRAFT

5 APPENDICES: PRELIMINARY RESEARCH - INTERNET

APPENDIX “A” - 125TH ANNIVERSARY OF THE OPENING OF THE POW BRIDGE

Source: http://www.railways.incanada.net/Articles/Article2006_01.html

The Prince of Wales Bridge, the first railway bridge linking Ottawa and Hull, was opened to regular traffic 125 years ago on 17 January 1881. In this article we will look at its construction and then explore a few of the changes and significant events that have subsequently taken place. [1]

BACKGROUND

The railway between Montreal and Hull was opened by the Québec, Montreal, Ottawa and Occidental Railway (Q.M.O. & O.) on 27 December 1877 and was extended to Aylmer on 6 August 1879. [2] The Q.M.O. & O. provided the most direct route between Ottawa/Hull and Montreal because the only other option at that time was the St. Lawrence and Ottawa Railway to Prescott and a transfer to the Grand Trunk Railway. Many travellers on the Q.M.O. & O. were faced with a difficult journey between Ottawa and Hull over rough roads and were frequently at the mercy of the (horse drawn) cab drivers and others who made the arrival and departure of trains at Hull a raucous event. Passengers were very frequently amused, on the arrival of the train at Hull, by the conductor opening the first class door and calling out “Ottawa”, then going to the second class car and calling out “Hull”. The Q.M.O. & O., which was a department of the Québec government, planned to extend its line across the Ottawa River into the Chaudiere district of Ottawa, now known as Lebreton Flats. Surveys of possible sites for the Chaudiere railway bridge were carried out as early as 1873 when a location using Amelia Island in the Chaudiere was investigated. Later surveys used Lemieux Island, the route finally chosen. The successful bidder for the construction of the earthworks and piers, Horace Jansen Beemer, was announced on 28 April 1879. Mr. Beemer’s bid of \$112,873.10 was the lowest of 39, the highest being \$223,530.50. This was Beemer’s first construction work in the Ottawa/Hull area. [3]

EARTHWORK AND CONSTRUCTION OF THE PIERS.



This plan is dated 27 March 1879 and shows the location of the bridge and the approach from Hull at the top (north) to Ottawa (Chaudiere) at the bottom. The connection to the Canada Central Railway is shown at point B at the bottom as are the existing passenger and freight stations at the Chaudiere. At the north end, the line left the Q.M.O. & O. Aylmer branch at point A just south of the Hull station. The bridge is, in effect, two bridges with seven spans across the north channel to Lemieux Island and a further six spans to Duck Island on the Ontario shore. From Duck Island considerable filling was necessary to bring the line to the Canada Central Railway on the Chaudiere. The water was not very deep, the deepest being about 30 feet, however, at times the water flow was fast and this was to cause some problems. The piers were numbered north to south from 1 to 11. (Adapted from National Archives, NMC 145183)

Mr. Beemer wasted no time and by the third week of May, 1879, some 30 men were working on the Ontario side of the river. However, labour difficulties soon became apparent when the workmen went on strike on 3 June. The reason was wages – the men were paid 85 cents a day and they wanted \$1.10. This did not last very long as on 23 June it was reported that the strikers were sitting around on lumber piles watching other men filling their places. As if this weren't enough, some 35 stone masons went on strike in early July. Wages, again, were the problem, the original rates of pay would only allow the men to make about 60 cents a day. [4]

Work on the piers was assisted by a steam tug which was built in the Hull shipyard of Messrs. J.W. McRae & Co. It was drawn through the city by three spans of horses and launched on the Ottawa River above Ottawa on 4 July, 1879. The boat, with a draught of about 40 inches, was used to haul barges of stone and other materials to the eleven sites for the piers. [5]



This shows a siding being constructed into Bells gravel pit at Britannia on the Canada Central line to Carleton Place. It is constructed to the broad provincial gauge of 5 feet 6 inches and was used to provide fill for the earthworks on the Ontario side of the bridge. A steam shovel was used in the pit.

The new line through Duck Island to the bridge proper passed over some low ground behind the Canada Central three stall round house near the Ottawa River. This required extensive filling and in July, Mr. Beemer leased two locomotives and 30 cars from the Canada Central Railway to haul gravel from Bells Pit at Britannia. [6]

It had been optimistically hoped that the bridge could be finished by the end of 1879. However, trains were still bringing fill in mid October at the rate of 300 cars, each containing 11 yards, daily and much filling was also required on Lemieux Island after the bridge spans had been put in place. It was evident that the project could not be completed in 1879 and work was shut down for the winter, with the exception of a few men in the Hull quarry breaking stone for cement purposes. However, good progress had been made. By the end of 1879 all four

abutments had been completed, with the exception of the coping, and nine of the eleven piers had been finished. [7]

It was in December 1879 that the first problem with the rapid flow of water occurred. The Ottawa Citizen of 10 December 1879 explained:

"A barge loaded with clay and having 35 men on board was towed by the Chaudiere Bridge tug to pier no. 5 yesterday. The usual practice is for the tug to go a little above the pier, cast the barge loose and let it drop down to the pile, when it is snubbed. This was done yesterday, but the line fell short of the pier and the barge drifted towards the falls. The tug immediately backed but was soon aground and the men in the barge felt anything but comfortable, for every moment they were approaching nearer the cataract. A row boat was manned and put off to their relief, the rope being carried to the tug by this means just in time to save the barge and its crew from going into the Big Kettle."

Mr. Beemer resumed work in mid February 1880 with rip-rapping the southern embankment and protecting the piers from water action. The steam tug was launched on 12 April. [8] Almost immediately there were problems with high water.



From The Canadian Illustrated News of 17 April 1880:

"Work on the Chaudiere railway bridge has been recently resumed, and at pier 5 a scow was anchored. On board was a portable steam-engine and a centrifugal pump, the weight of which is about ten tons. Recently a large cake of ice came dashing down the river, and coming into collision with the scow, started her adrift. The scow, with its load of freight, rapidly drifted down the current and went over the falls. The engine was on wheels, and was found canted over, but not injured."

MORE PROBLEMS WERE REPORTED IN THE OTTAWA CITIZEN OF 21 APRIL:

“Yesterday afternoon at three o'clock, another barge used at the Chaudiere bridge works went over the falls. This time four men had a very narrow escape from going over with it. The barge was loaded with clay used for puddling at the cofferdam. The tug boat had cast it loose when near pier No. 6, as was usual, it then having to be pushed up to the pier by men on board with long poles. The current, on account of the high water, was swifter than reckoned upon, and the barge became unmanageable, and was carried down towards the falls. The men on board were Joseph Dupont, Francis Furlough, Geo. Lapierre and J. Tooney. The first three named jumped into the skiff that was by the side of the barge, and made for one of the wooden piers used for holding the booms, in order to fasten a rope to bring the barge to. The man left on the barge threw a rope to them but it curled round the leg of Dupont dragging him into the water. With great difficulty he swam to an island. The man left on board was now in extreme peril. William Connelly, seeing the danger of the man, immediately went to the rescue in a light boat and got up to the barge just as it was entering the rough water of the falls. The man jumped in and it was with extreme difficulty and only by great exertion that they overcame the strength of the current and landed in safety. Connelly saved the man at the risk of his own life. The wonder was that it was possible for him to return after entering the troubled water. The barge went over the falls and was captured at Gilmour's booms, below Messrs. McRae and Co.'s shipyard.”

Because of the high water, work was temporarily suspended on 13 May [9] but three days later disaster struck. The Ottawa Citizen of 17 May 1880 explains:

“The general manager of the works gave the following account of the accident:-

Yesterday, in company with Mr. Beemer, I made a trip across the river and we found the river so high and the current so strong that orders were given to the river foreman to tie up the tug and make no more trips across the river. This morning, he, (the river foreman, Dennis O'Brien) found he required a few sticks of timber and made one trip to bring them over, taking every necessary precaution, intending, as soon as he returned to lay up the tug until the water went down to the proper height for work again. In coming back they fastened the scow to the boom, in order to let the tug drop down below. The scow was on the inside of Eddy's boom. In dropping down, the scow swung end for end in the eddy and passed over the boom, leaving inside the boom and powerless to render any assistance. The two men on the scow had a lifeboat with them, one of them, Joseph Malboeuf, jumped on the boom and the one that was lost, La Berthiaume, got into the lifeboat, which was immediately swamped after being thrown out of the boat. He swam for the boom and when within a few feet of the boom, for some reason unknown to us turned and swam towards the scow, which was floating down the river about twenty five feet from him. He succeeded in catching a short end of rope hanging from the scow but apparently did not have strength to raise himself. The man in company with him said he would have had no difficulty in reaching the boom, where he would have been safe, if he had not turned to the scow. These are the facts as near as I can gather them from eye witnesses. We shall not float any craft until the water falls.”

Work did not resume until mid-July, 1880. It proceeded relatively smoothly, apart from the boom of a derrick snapping while loading stones on to a barge on 22 July. A man who was directly under the boom, heard the cracking of the timber and made a dive into the water. He came up, his hat still on his head, and swam to shore and coolly went about his work again. The last stone was laid at a ceremony on 11 October which was accompanied by toasts and some speeches. Mr. Beemer could then concentrate on filling in on Lemieux Island, the first construction train being run over to the island from the south on 16 October. Beemer's part of the work was finished by the end of November. [11]

GAUGE OF THE ONTARIO CONSTRUCTION TRAINS

The gauge of the construction trains used on the Ontario side is a question which provides many problems for railway historians because, although we have a great deal of information, we don't have a definitive answer.

Mr. Beemer hired two construction locomotives and 30 cars from the Canada Central Railway in July 1879 to bring fill material from Bell's pit on the C.C.R. main line just west of Britannia. At that time the C.C.R. was broad gauge and the work in 1879 was carried out using broad gauge equipment.

After a short break, work was resumed in February 1880 placing rip rap on the southern approach to the bridge. This work had not been completed by the time the C.C.R. changed its gauge to standard in April 1880. [11]

With the change of gauge Mr. Beemer was faced with a number of options:

1. Change the gauge of the construction trackage to standard and either:
 - Convert the broad gauge equipment he was already using to standard gauge. This would likely not have been economic bearing in mind that construction equipment is normally very old and approaching life expiry; or
 - Dispense with the broad gauge equipment and complete the rip rap work with different standard gauge equipment.
2. Stockpile all the material needed to complete the rip rap work at the Chaudiere before the gauge of the C.C.R. main line is changed and complete this work using broad gauge track and equipment. This implies expensive double handling.
3. Lay a third rail between Ottawa, Chaudiere, and Bell's pit and complete the work on the southern approach with the broad gauge equipment already on hand.

A further point to be considered is that the C.C.R. was building its main line west of Mackey's (or Mackie's), beyond Pembroke, using broad gauge equipment even after the rest of its system had been changed to standard gauge. Two broad gauge locomotives were sent up the line to continue the construction:

"Last week a broad gauge engine was taken up to Mackey's station on board the morning train from Pembroke. It is to be used for construction and other purposes above where the track is now laid to, as the track above Mackey's is, for the present, to be constructed to the broad gauge. Five or six broad gauge cars, to be used with the engine, went up on board the train here Saturday morning. (Ottawa Free Press, 17 May 1880)"

On 14 June 1880, the Pembroke Observer, said:

"Tuesday morning last another broad gauge engine and some eight or ten cars of rails went up. (Ottawa Free Press 14 June 1880 (quoting the Pembroke Observer)"

Is it possible that the two broad gauge engines mentioned were those used by Beemer?

Is it possible that the rails had been lifted from a short lived dual gauge section of track between the Chaudiere and Bell's pit?

Canada Central Railway 4-4-0's Nos. 26, 27 and 28 (built by Taunton in 1870) were still broad gauge when the CCR was acquired by Canadian Pacific in June 1881. [12] One of these was isolated at Renfrew when the gauge was changed in April 1880 and was moved up for the construction work above Mackey's. The other two are accounted for above so it is just possible that the two locomotives used by Mr. Beemer were from 26, 27 or 28.

Work on the bridge superstructure began in August 1880. The materials were delivered in standard gauge cars from the United States so there had to be standard gauge access to the bridge by August 1880. The bridge across the southern channel, on the Ontario side, was completed by October 1880 and it was only then that Mr. Beemer could commence the significant amount of fill work on Lemieux Island. Once again, the question of gauge arises. If broad gauge had been used it would have been necessary to lay a third rail over the bridge as far as Lemieux Island.

It is possible that construction work on the southern approach to the Prince of Wales Bridge was completed using broad gauge equipment after the C.C.R. had converted to standard gauge. It is likely that the fill work on Lemieux Island was carried out with standard gauge equipment. However, although we have a lot of information on the subject there is no firm evidence and all we can realistically say is that we don't know.



An aerial view of the bridge looking from the north, Québec, side. Lemieux Island is in the centre of the frame and the newly constructed Ottawa River parkway can be seen in the background,. City of Ottawa Archives

CONSTRUCTION OF THE SUPERSTRUCTURE

The \$200,000 contract for the superstructure was awarded to Clark, Reeves & Co. of Phoenixville, Philadelphia who constructed all of the bridges on the Q.M.O. & O. It was originally intended that the materials should all be supplied from the Québec side via Montreal. The reason for this was that the Canada Central Railway was broad gauge and transshipment would have been required from standard gauge cars to broad gauge at either Morristown or Brockville. However, the Canada Central converted to standard gauge in April 1880 with the result that the materials for the spans on the Ontario side were delivered to Ottawa via Brockville while those on the Québec side came to Hull via Montreal. [13]

PRINCE OF WALES BRIDGE

This is a Whipple truss, developed by Squire Whipple, a stronger version of the Pratt truss. Patented in 1847, it was also known as the "Double-intersection Pratt" because the diagonal tension members cross two panels, while those on the Pratt cross one. The Whipple truss was most commonly used in the trapezoidal form -straight top and bottom chords- although bowstring Whipple trusses were also built. The Whipple truss gained immediate popularity with the railways as it was stronger and more rigid than the Pratt.

The bridge consists of four abutments and thirteen spans.

Bridge No. 119.1 (Lachute subdivision mileage) runs from the Québec shore to Lemieux Island. From north to south the seven spans are:

163' 9"
 258' 7"
 138' 8"
 153' 9"
 153' 7"
 153' 7"
 153' 8"
 1204' Overall

Bridge No. 119.5 runs from Lemieux Island to the Ontario shore.

6 spans of 153' 9" each 943' 6" Overall

Source: Canadian Pacific Condensed Plans and Profiles, 1917

The iron for the spans on the Ontario side started arriving on the Canada Central Railway in mid-August 1880. Work started straight away and on 16 October construction trains started to run to Lemieux Island. This created a new recreation for Ottawa residents who took advantage, during the weekends, to stroll over as far as the island to view progress. This must have been a somewhat perilous stroll because the wooden guard rails were not erected (by William Mason & Sons, who cut the lumber at their mill near the bridge) until December. Work did not start on the Hull side until early October but this proceeded well so that by 18 November, only one more carload of iron was required for completion. The only delay to this part of the work resulted from a storm on 6 November when the traveller used in erecting the superstructure, together with some tools, blew into the water and was lost. This delayed completion by about a week. [14]

Employees of Clark, Reeves & Co. started leaving Ottawa on 8 December, 1880, although a number stayed on until 11 January, 1881 to finish up the work. [15]

Opening to Traffic

A test was made on the Québec side on Saturday 4 December, 1880:

"Superintendent Scott of the QMO&O accompanied by Mr. Peterson and Mr. Keefer, arrived at the Hull station last Saturday afternoon, where a first class carriage was attached to the Aylmer branch engine, in charge of driver Austin and conductor T. Fenell, and the party examined the Chaudiere bridge as far as the fifth span. The party afterwards went to Aylmer. It is expected that the last rail will be laid on Tuesday." [16]

On Thursday 9 December, 1880 the Ottawa Free Press reported:

"It is expected that trains will be run across the Chaudiere Railway bridge on Monday. Mr. Shanly is to act as government inspector at the testing of the bridge. In this connection it is understood that changes will be made in the superstructure of all the bridges on the Occidental Railway, in the adoption of a clamp instead of bolt and nuts as a fastener of supports, an improvement invented by Clarke, Reeves & Co."

The actual test took place on Monday, 13 December, 1880:

“The bridge was tested yesterday afternoon. Messrs. P.A. Peterson, Engineer-in Chief; Mr. C.A. Scott, Assistant Superintendent; Mr. Davis, Mechanical Superintendent; Messrs. Massey and Howard, Assistant Engineers and Mr. Reeves of the firm of Clarke, Reeves and Co., of Philadelphia, the contractors for the iron work being present. The test was more than satisfactory and more than fulfilled the requirements of the specifications. On the deflexion being taken the first 150 feet spans gave a minimum deflexion of 1/4 inch and a maximum of barely 1/2 inch; the maximum deflexion of the 250 foot span was but one tenth of an inch. All the spans, which were in succession covered by the five engines brought together as close as they could be, came up again and did not show any permanent deflexion. The bridge is calculated to stand a pressure six times greater than ordinarily to be put on it.” [17]

Freight trains started running across the bridge on 16 December, 1880 on which date there was an official inspection by a party of gentlemen, consisting of Hon. Mr. Caron, Minister of Militia, Hon. Mr. Chapleau, Mr. Judah of Montreal, Mr. Senecal, Superintendent of the railway, Major. Chapleau, Mr. H.J. Beemer, and several other officials. They crossed the QMO&O Railway bridge in an official car. The trip was a successful one, crossing the structure at an ordinary rate of speed. The Q.M.O. & O. began to run some passenger trains into the Canada Central station on the Chaudiere on 20 December 1880. Regular freight and passenger trains started using the bridge on 17 January, 1881. [18]

Although there was talk in the press of a formal opening by the Governor General and invitation cards were sent out I can find no record of such an occasion. Possibly, this was because the new station facilities in Ottawa were not opened until several months later and also because of the action of the Dominion government in seizing the bridge. [19]

Seizure of the Bridge

Before the bridge was even open to traffic it was seized, in mid-November 1880, by customs authorities on the grounds of under valuation of material in entry. The Québec Government money was garnisheed by the Dominion Government until the matter could be settled. Clark, Reeves & Co. had entered the iron superstructure at \$3.53 per hundred weight, paying \$21,780 in duty, being 25 per cent on \$87,130.40. The Customs Appraiser, who made this seizure on behalf of the Government, held that duty should be paid on the material at a value of \$4.50 per hundred. The firm objected to this and the matter was referred to arbitration, Messrs. Taylor (Montreal), Fleck (Ottawa) and Fraser (western Canada) being appointed. [20]

The report of the arbitrators was placed in the hands of the Minister of Customs on 19 February 1881, and on 7 March it was announced that Clarke, Reeves & Co. would be required to pay a forfeit of \$26,000, in addition to the duty already paid. [21]

Seizure of the bridge did not affect train services across it.

Facilities at Ottawa

Although Q.M.O. & O. trains started running regularly into the Canada Central station in January 1881, this was only a temporary expedient until new passenger and freight facilities could be completed. The Québec government agreed to buy land, construct and ballast the tracks and pay half the cost of a new passenger station at a total cost of \$36,800. [22] In addition, both railways constructed new freight sheds. The new passenger station was a little to the east of the original Canada Central one and had its entrance on Broad Street. The track work and the station were completed by Horace Beemer. The new Canada Central freight shed was opened in early March, 1881 and trains were able to enter the new passenger station for the first time on 9 May 1881. With the changes taking place, there were bound to be minor problems such as derailments caused by unfamiliarity with the trackage and the changes being made. [23]

The Q.M.O. & O. took possession of its freight shed on Monday 23 May, 1881 and the new Union passenger station (Ottawa’s first Union station) was opened the same day. [24]

What's in a Name?

I have been unable to trace when exactly the bridge was named. This appears to have been carried out between 1899 and 1915. [15] It was likely named after the then Prince of Wales, who later became King Edward the Eighth. The Prince of Wales' feathers, which were erected on both ends of the bridge, were re-erected on the rebuilt bridge in 1926.

Subsequent Events

Horace Jansen Beemer, who carried out the earthwork and built the piers, went on to a number of railway contracts in the area. He was responsible for much of the construction of the Pontiac and Pacific Junction and the Gatineau Valley Railways and became president of both. His experience on the Prince of Wales Bridge was put to good use in the construction of the Interprovincial Bridge which was opened in 1901. [26]

Clarke, Reeves & Co. of Phoenixville, Pennsylvania went on to build a number of other bridges in Canada the most notorious of which were the Ottawa and New York bridge across the St. Lawrence at Cornwall which fell in September, 1898 and the Québec bridge across the St. Lawrence which fell in August 1907; both events taking place while the bridge was under construction.

The Canadian Pacific Railway acquired all of the railways then in operation on the Chaudiere. On 28 June, 1886 the first Pacific Express passed over the Prince of Wales Bridge on its way from Montreal to the west coast.

In 1911, Canadian Pacific carried out strengthening work on the stone piers. Concrete was poured down to the bed rock to protect the piers from the heavy current. [27]

Lemieux Island

In 1916, the City of Ottawa constructed a water filtration plant on Lemieux Island and the Canadian Pacific Railway was authorized to lay in a siding by BRC Order 25027 of 30 May 1916. This siding was extended by BRC Order 48335 of 18 March 1932. The siding has not been used for a number of years but, somewhat truncated, is still in place, including the main line switch, a few yards north of the northern abutment of the bridge across the southern channel.

Reconstruction of the Bridge

By the mid 1920's the original spans had become too weak for the heavier locomotives that were being brought into service. On 1 August 1926 the work of removing the old steel and replacing it with heavier steel was begun. [28] The tops of the piers were lowered to allow room for the new, heavier, spans. The work, which was completed in February 1927 and cost \$750,000, was done without interruption to traffic by the Dominion Bridge Company of Lachine, Québec. [29]



A view of the southern, Ontario, end of the bridge taken before the graffiti artists took over.
Canada Science and technology Museum Matt-1573.Acquisition by the City of Ottawa

The last regular passenger train over the bridge was the North Shore Budd car from Montreal on 15 November, 1981 and with subsequent branch line abandonments and changes in ownership the bridge has not seen a train 26 July, 2001. On that day the Québec Gatineau Railway pushed a number of ballast cars to the end of their territory on the north side of the Ottawa River and Ottawa Central Railway work extra 1842 went across to retrieve them. [30] The Québec Gatineau Railway continues to use the northernmost part of the bridge to allow access to the E.B. Eddy plant at Les Terraces de la Chaudière. However, there is hope that the bridge will be used again with its purchase by the City of Ottawa in January 2005 for possible use in an urban rail system.



CP Rail RDC-5 9307 (nee CP RDC-2 9100, and later VIA RDC-1 6147), leased by VIA Rail has just entered the Prince of Wales Bridge with Ottawa to Montreal train 170 on November 5, 1981. In ten days the train was withdrawn as part of the massive VIA Rail cutbacks. The sign at the top of the bridge over the years has been reduced to "INCE OF WALES". Photo by Colin J. Churcher.



CP C-424 4200, RS-18 u 1812 and RS-18 8792 have just exited the Prince of Wales bridge and are curving through Ottawa West with a ballast train in June 1983. Photo by Earl Roberts.

ACKNOWLEDGEMENTS

I would like to thank the members of the Ottawa Railway History Circle for their useful comments in developing this article. I would particularly like to thank Dennis Peters and David Jeanes whose helpful ideas and suggestions were invaluable.

Footnotes

- [1] Although Hull is now part of the City of Gatineau, in this article I shall continue to use the name “Hull” by which it was known for most of the life of the bridge.
- [2] See my article “First Railway to Aylmer” in Branchline, September 2004.
- [3] Ottawa Citizen 30 March 1873, 24 January 1878, 28 April 1879; Ottawa Free Press, 28 April 1879.
- [4] Ottawa Free Press, 20 May, 3 & 4 June, 2 July 1879; Ottawa Citizen, 20 May, 3 & 4 June, 23 June, 3 & 4 July 1879.
- [5] Ottawa Citizen, 3 and 4 July 1879.
- [6] Ottawa Citizen and Ottawa Free Press, 14 July 1879; Ottawa Free Press 25 July 1879.
- [7] Ottawa Free Press, 18 October, 10 December 1879 and 14 January 1880.
- [8] Ottawa Free Press, 12 February and 4 March, 1880; Ottawa Citizen, 13 February and 12 April 1880.
- [9] Ottawa Citizen, 13 May 1880.
- [10] Ottawa Citizen, 1 & 19 June, 12, 19 & 22 July, 12 & 18 October and 4 & 30 November 1880; Ottawa Free Press, 19 June, 12 & 14 October and 2 November, 1880.
- [11] See my article “The Change of Gauge on the Canada Central Railway” in Branchline, April 2005.
- [12] Railway and Locomotive Historical Society bulletin No. 83.
- [13] Ottawa Free Press, 18 and 19 August, 1879.
- [14] Ottawa Citizen, 21 August, 9 October and 18 November 1880; Ottawa Free Press 20 & 24 August, 24 September, 18 October and 15 December, 1880; Renfrew Mercury, 27 August, 1880.
- [15] Ottawa Free Press, 7 December 1880; Ottawa Citizen, 8 January 1881.
- [16] Ottawa Citizen, 7 December, 1880.
- [17] Ottawa Citizen, 14 December, 1880.
- [18] Ottawa Free Press 16 and 20 December, 1880, 12 and 13 January, 1881; Ottawa Citizen, 13 and 17 January 1881.
- [19] Ottawa Citizen, 7 and 10 January, 1881; Ottawa Free Press, January 12, 1881.
- [20] Ottawa Free Press, 11, 12, 17 and 18 December 1880, 6 and 7, January, 21 February and 7 March, 1881; Ottawa Citizen, 19 and 26 January, 1881; Globe and Mail, 22 February, 1881.
- [21] Ottawa Free Press, 7 and 16 March, 1881; Globe and Mail, 8 March, 1881.
- [22] 44 Victoria - Documents de la session (Québec) 1880.
- [23] Ottawa Citizen, 30 November, 1880, 4 March, 1881; Ottawa Free Press 14 December 1880, 9 & 10 May, 1881.
- [24] Ottawa Citizen, 20 May, 1881; Ottawa Free Press 21 May, 1881.
- [25] Commission of Conservation Canada - “Altitudes in Canada” by James White. The bridge is not named in the 1899 edition but is shown as “Prince of Wales Bridge” in the 1915 edition.
- [26] See my article “Centenary of the Interprovincial Bridge” in Branchline, February 2001.
- [27] Ottawa Journal, 1 February, 1911.
- [28] Ottawa Journal, 6 September 1926 and 21 February 1927.
- [29] Transport Canada File ASRE 3568-2-115-119.14 . Because the Ottawa River is technically navigable, an order in council, PC 1926-1817, was passed on 11 November 1926. The Board of Railway Commissioners approved the plans on 29 November 1926 (order 38469) and approved the completed work on 31 March 1927 (order 38877).
- [30] Information from Ray Farand.

APPENDIX "B" - PRINCE OF WALES BRIDGE

Source: https://en.wikipedia.org/wiki/Prince_of_Wales_Bridge

The Prince of Wales Bridge (French: Pont Prince de Galles) is a rail bridge across the Ottawa River joining Ottawa, Ontario to Gatineau, Québec. It connected with the Canadian Pacific Railway line just west of Lebreton Flats, and crosses the south channel of the river to Lemieux Island; it then continues across the northern channel into Québec.

It is a multi-span Pratt truss bridge, consisting of six equal spans over the south channel, and seven spans over the north channel; the second-last span, proceeding northward, is longer by a factor of about 1.7.

HISTORY

The bridge was built by the Québec, Montreal, Ottawa and Occidental Railway[1][2] in 1880, named for Albert Edward, Prince of Wales. At that time, it was one of the few crossings of the Ottawa River, and was one of the most valuable assets of the line, which was owned by the Québec provincial government. The QMO&O continued to lose money, however, and it was purchased by the Canadian Pacific Railway(CPR) in 1882, who connected it with their other recent purchase, the Canada Central Railway. This connection gave the CPR a solid rail route from their westward line being built from North Bay to the ports of the St. Lawrence. The Prince of Wales Bridge was joined by the CPR's Royal Alexandra Interprovincial Bridge in 1901, the second railway bridge to cross the river between Ottawa and Hull.

The Prince of Wales Bridge served well into the 20th century, but as rail transport diminished and more efficient routes became more common, the line was abandoned. The City of Ottawa purchased the CPR line, including the Prince of Wales Bridge, during the early 2000s for the O-Train project, however, the bridge has remained unused and the track east of the Bayview Station to the bridge is overgrown. As the purchase of the bridge included the approaches on both sides, Ottawa now owns property in Québec.[3]

FUTURE

In 2005, the bridge was temporarily disconnected from the tracks just before its approach on the Ottawa side; this was done for a water line project being built along the Sir John A. Macdonald Parkway as part of the Lebreton Flats revitalization.

Despite opposition from City of Gatineau officials, transit advocates hope that the bridge can someday support a transit rail link to the Québec side of the river, and connect Ottawa's O-Train system with the numerous Gatineau commuters who cross the river daily. Modifications would need to be made to allow such, as there is only enough room for a single track on the bridge; it would need to be twinned or a passing loop would need to be installed on Lemieux Island, or other similar upgrade(s) such as a four rail gauntlet track like the one still in use on the Bordeaux Railway Bridge between Montreal and Laval, in addition to the passing loop, would need to be made.

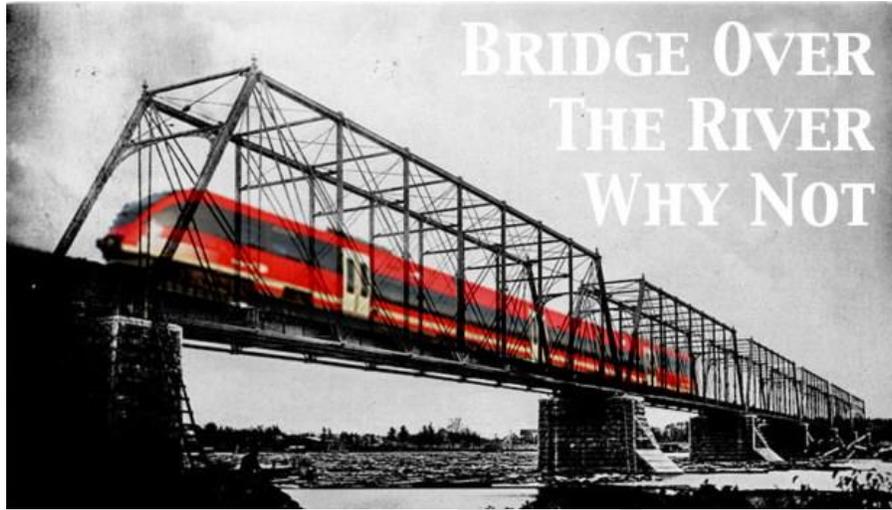
The National Capital Commission (NCC) is seeking public interest in using the bridge as a pedestrian and cycling bridge.[4] It is unclear whether the NCC will add a side-structure to the bridge for this function, as was done with the Alexandra Bridge as well as with the Bordeaux Railway Bridge or whether the tracks would be removed for the pathway. The latter option is opposed by transit and cycling advocates alike.

References

1. "The Railways of Ottawa: Hull - Québec, Montreal, Ottawa and Occidental". Colin Churher's Railway Pages.
2. Jump up^ "The Railways of Ottawa: Findings of the Circle". Colin Churher's Railway Pages.
3. Jump up^ "Property Acquisition - CP Rail Railway Corridor - Ottawa River to Leirtrim Road". City of Ottawa Report to Corporate Services and Economic Development Committee and Council, 7 December 2004.
4. Jump up^ The Ottawa Citizen. (15 November 2005), NCC plans to link Ottawa, Gatineau with new recreation paths.

APPENDIX "C" - SLEEPING PRINCE - A LOOK AT REUSING THE PRINCE OF WALES BRIDGE

Source: ottawow.wordpress.com/2015/02/02/sleeping-prince-a-look-at-re-using-the-prince-of-wales-bridge/



Concept of the O-train crossing the Ottawa River on the dormant Prince of Wales Bridge.

The oldest railway bridge in Ottawa is being considered for a pedestrian/bike path. Finally something is being done to make use of our Prince Of Wales bridge, an Ottawa River landmark built in 1880 that was abandoned in 2001. Since then it has simply been a magnet for daredevils and graffiti. Yet, this solid link to Gatineau could also be re-purposed for something more, making it a vital connection to help alleviate the growing commuter traffic that continues to clog area bridges carrying hundreds of cars at Island Park Drive, Chaudiere, Alexandra Bridge and the Macdonald-Cartier Bridge. A simple gap of a few hundred metres, bureaucracy and money stands between continuing the O-train across the bridge to the Gatineau side using the old existing rail beds and bridge, a purpose for which the Prince Of Wales Bridge was designed for.



1965 aerial image showing the original Canadian Pacific rail line that crossed the Ottawa River on the bridge. –geoOttawa

It was built in 1880 by the Phoenix Bridge Company for the Québec, Montréal, Ottawa and Occidental Railway to cross the Ottawa River near the busy industrial area of Lebreton Flats and Chaudiere Falls. A few years later the bridge and line was purchased by Canadian Pacific Railway who later modified the bridge in 1926 when they replaced the iron work with heavier iron trusses that could carry heavier rail loads between the two sides. The PoW bridge continued to carry rail traffic until 2001 when the last train chugged across.

The bridge was soon purchased for its scrap value by the City Of Ottawa, but the purchase included the approach land on BOTH sides of the river, which means the City Of Ottawa owns property on the Gatineau/Québec side. Curiously, the intact tracks that would have led from the newly operating O-train line were disconnected and removed crossing the NCC property during their Lebreton Flats re-vitalization project in 2005.



The Prince Of Wales bridge could utilize the old connection (removed in 2005) with the existing O-train and continue across the river to Gatineau. –geoOttawa

It seems like an odd and unnecessary action to literally derail future extension of the O-train over to Gatineau using the PoW bridge, that with some forward thinking upgrades, could certainly ease commuter traffic if properly implemented.

In addition to extending the O-train, of which the original rail beds still exist, future modifications could also see the addition of a pedestrian/cycling path built on the side, much like the one on the Alexandra Bridge further down river.



Currently abandoned, the old bridge could be re-purposed as a cycling/pedestrian river crossing and possibly an O-train extension. -photo Wikipedia public domain

With these modifications to a solid, timeless bridge already in place we could certainly help decrease growing commuter traffic building up on our bridges while increasing healthy alternatives to crossing the river with a safe cycling and pedestrian crossing, which is lacking on other bridges.

As I'm sure there are many bureaucratic roadblocks and prohibitive costs involved on both sides of the river that I don't know about, and there are engineering details that could simply make this a dream, maybe with enough public support for such a vision it could become reality. With the City Of Ottawa owning both the bridge AND the land it connects to on both sides of the river, one has to wonder how the NCC and the City of Gatineau would adversely influence a vision that can, and will help all those involved.

DRAFT

APPENDIX "D" - THE CURIOUS CASE OF THE PRINCE OF WALES BRIDGE

Source: <http://beachburg.blogspot.ca/2014/05/the-curious-case-of-prince-of-wales.html>

On my recent trip aboard the O-Train, I noticed that Ottawa's Capital Railway at Bayview no longer connects to the former CP trackage that leads to the Prince of Wales Bridge. Instead, the old CP tracks have been buried by ballast, thus severing their connection to the Capital Railway. These tracks, it should be noted, pass through the old City of Hull along the old Maniwaki Sub. This sub is still technically intact to Wakefield, since it is the home of the Hull-Chelsea-Wakefield Steam Train. This tourist train, it should be noted, is in all likelihood a lost cause since storm damage to the line is too expensive for local governments, who own the line, to fix.

But getting back to Ottawa, I was a little surprised by the disconnection at Bayview, although it sadly makes sense given Ottawa's utter lack of vision when it comes to its railway infrastructure. I wandered over to the end of the Capital Railway the other day to take a few shots. Here's a shot below of the buried connection (almost dead centre) taken from the Somerset Street overpass.





This connection, as you can see on the left, still bears witness to the time when the line was part of CP's Ellwood Subdivision.

The other side of the sign reads "CAP" which obviously stands for the Capital Railway, which is the official name of the O-Train operation in the city as it stands right now.

This severed connection is not, on its own, a big deal, but it takes on more significance given what has happened on the other side of the river in recent years.

As I mentioned in a previous post, the bridge connects to Lemieux Island in the Ottawa River, which marks the official end of the Québec Gatineau Railway, a shortline owned by Genesee and Wyoming. I was doing some research on this railway the other day, trying to figure out where I could go to shoot it, but discovered that it no longer operates in Gatineau, since its main customer on the river, a former pulp mill, has been closed for years.

Even more discouraging, I failed to realize that the railway has severed its connection to the tracks in Gatineau, including the stretch leading to this bridge. The furthest west the railway comes is Thurso, while a local continues to serve the Buckingham spur. Much of the QGR right-of-way in Gatineau has been transformed into a controversial rapid bus transit system, which has garnered mixed reviews from residents of the city.

WHAT DOES THIS MEAN FOR THE PRINCE OF WALES BRIDGE?

Well, it means it is truly on its own for the time being, until such time that the powers that be in Ottawa and Gatineau, not to mention other levels of government, decide to establish a commuter rail link between Ottawa and Gatineau on the remaining trackage. This continues to be a no-go for local politicians, for reasons that escape me.

In the fall, there was a call from city staff to transform the bridge into a recreational pathway for bikes and pedestrians by 2019. This would be a great link, but it also prevents the capital region from realizing the transit opportunity the bridge represents. The report outlined that the city is hoping to do something with the bridge by 2025. In other words, there are no plans. In fact, despite pleas from transportation advocates, the city is not even maintaining the bridge.



This is what the bridge looks like these days, starting with a view from the Ottawa River Pathway.



And a view of the tracks leading to the bridge, just past the end of the Capital Railway. You will notice, compared to shots I took at a similar time last year (see Prince of Wales link above), the foliage is a little late in arriving this year.



And a shot of the Prince of Wales marquis (or is it Ince of Walcs?)



On the plus side, work on the new passing sidings on the Capital Railway has finally been completed, although the new Alstom trainsets have yet to be placed into service. The new sidings have also led to new signalling equipment. Here's a shot of a southbound Bombardier trainset from the Somerset Street overpass. I have not heard any news as to when these trains will give way to the new Alstom trains, although I would suspect that the new trains will be put into service before the coming school year, since Carleton University, at the half-way point of the Capital Railway, represents one of the biggest sources of O-Train ridership. The new O-Trains are no longer parked in Walkley Yard during the day, so I assume they are being tested somewhere. I dropped by Walkley recently and saw no trace of the new trainsets.

APPENDIX “E” - OTTAWA’S FORGOTTEN PRINCE OF WALES BRIDGE

Source: <http://beachburg.blogspot.ca/2013/08/ottawas-forgotten-prince-of-wales-bridge.html>

One of my favourite railway spots in Ottawa is the Prince of Wales bridge across the Ottawa River. The bridge was originally opened in 1881 by a railway known as the Québec, Montreal, Ottawa and Occidental Railway. The following year, the Canadian Pacific bought the QMO&O and took control of the bridge. In 1927, it was rebuilt to accommodate newer, heavier loads. For decades, it was a vital link along the Canadian Pacific Railway's national network, when that network operated through Ottawa. The bridge connected CP's Ellwood Subdivision in the Ottawa area with the railway's Maniwaki Subdivision from the old City of Hull to Maniwaki, Que.

In recent years, the fate of this bridge has taken a few strange turns and its future is uncertain. After the Canadian Pacific ended its operations in Ottawa in 1997, the bridge was in limbo. CP's Ellwood Sub and a portion of its old Prescott Sub were purchased by the City of Ottawa for its eight kilometre O-Train commuter service, which began operation in 2001. In 2005, the city purchased the bridge, which has sat dormant since 2001. The thought at the time of purchase was that the bridge would play a vital role in any commuter rail system in the National Capital Region, which includes Gatineau, Que. Since that time, any talk of extending the O-Train to Québec has been met with deafening silence or outright hostility. I find this reluctance baffling, since Ottawa and Gatineau already co-operate by allowing their commuter buses to cross the river. There has been talk of converting the bridge to a pedestrian crossing as well.

Let's take a short tour of the bridge:



As you walk along the bridge, you will see six spans on the Ottawa side leading to Lemieux Island, in the middle of the river. The island is part of Ottawa and connected to the city via a causeway in addition to the rail bridge. The island is home to a water treatment plant.



What you see is the view from the Ottawa side heading north toward the old City of Hull. The Prince of Wales marquee atop the bridge has been left to the mercy of the elements, like the rest of the bridge.



Once you reach Lemieux Island, the first part of the Prince of Wales bridge ends, giving way to a span of overgrown track and an old switch that once led to the water treatment plant. The switch has been left in place but the spur has been severed.



As you walk across the island, you come up to the second part of the bridge, which is seven spans long on the Québec side. Interesting fact: The Ottawa River goes by the name Rivière des Outaouais in French, which is also the name of the region that includes Gatineau.



Once you step foot in Québec, the old Ellwood Sub gives way to the former Maniwaki Sub. This is where things get a little confusing. Since the City of Ottawa bought the bridge and the approaches, this means the City of Ottawa owns property in the City of Gatineau. This section of track is also considered the end of the Québec-Gatineau Railway, since that railway technically starts at Lemieux Island. At one point, the railway still used trackage near this bridge to access the nearby E.B. Eddy factory, which made paper products, mainly matches. The rails to that facility, now owned by Domtar, were pulled up in recent years. You can also see another old track crossing over the former Maniwaki Sub below. The track has been lifted.



Once you walk under the crossover, the tracks will lead you to the old Hull Station, near the Casino du Lac Leamy. The old Maniwaki Sub is owned by municipal governments in the Outaouais region. The municipality owns a heritage steam train operation that goes to Chelsea and Wakefield, Que. That operation has been dormant for several years since the rail line was damaged by heavy flooding. Local officials hope to have the train operational next summer, since the steam train is a huge tourist draw. Locals do cross the Prince of Wales bridge often, but I should warn you that it is not a pedestrian crossing by any means. I did cross it once for the purposes of this blog, but as a public service, would advise you not to cross it yourself.

APPENDIX “F” - THE PRINCE OF WALES BRIDGE

Source: Rails Across Ontario: Exploring Ontario’s Railway Heritage, by Ron Brown

Older than the Royal Alexandra Interprovincial Bridge, but now unused, the Prince of Wales bridge was constructed over the Ottawa River between 1878 and 1880 by Québec, Montreal, Ottawa and Occidental Railway, a line which later became part of the Canadian Pacific Railway (CPR). The bridge allowed the CPR to link its Québec network to its new transcontinental line at Carleton Place. It consists of two sections, one with six truss spans between Lemieux Island and the south bank of the river, the second, north section with seven such spans completing the crossing to the Québec Side. Eleven spans extended 55 metres (165 feet) each, one at 50 metres (145 feet), with the longest being 75 metres (265 feet). After the last train crossed in 2001, the City of Ottawa purchased the bridge, intending to incorporate it into its O-Train route, although by 2012 that had not yet happened.

APPENDIX “G” - ONTARIO ABANDONED PLACES: PRINCE OF WALES BRIDGE

Source: <http://www.ontarioabandonedplaces.com/upload/wiki.asp?entry=9716>

The Prince of Wales Bridge is a bridge on the edge of Hintonburg/Mechanicsville connecting Ottawa to Hull. It crosses Lemieux Island and is fenced off. However, there are large holes cut into the fence which make it very easy to explore.

The bridge was constructed in 1880 and named after The Prince of Wales, Albert Edward. It was initially owned by Québec's Provincial Government, but soon after it's construction they did not have the money to operate it and it was purchased by the Canadian Pacific Railway in 1882. The bridge operated for much of the 1900's, but as it was replaced by better routes, it became less and less practical for the CPR and it, as well as the rest of the Canadian Pacific Railway's lines in Ottawa were purchased in the early 2000's for the O-Train project. The bridge however, was never incorporated into the O-Train line and, while maintained by the city, remained abandoned. In 2005 the city talked of converting the bridge into a pedestrian and bicycle route, adding to the Parkway's Path System, but this never came to pass.

Today, the bridge has a small wooden "path" covering the large gaps in the bridge previously there, and wires on each side acting as barriers, but it is still fenced off. It has also been completely painted over by graffiti artists. The bottom of the stone supports can also be accessed by a little bit of climbing, but should be accessed with caution as the water currents in the area are very strong and lead directly into the dam at Chaudière Falls.

APPENDIX “H” - IS THIS THE END OF THE LINE FOR THE PRINCE OF WALES RAILWAY BRIDGE?

Source: <http://www.ottawalife.com/2005/08/is-this-the-end-of-the-line-for-the-prince-of-wales-railway-bridge/>

I fear for the future of the Prince of Wales railway bridge that crosses the Ottawa River a mile upstream from Parliament Hill. You’ve probably seen and admired it many times, without knowing its name. Just a short walk from the new Canadian War Museum, the old railway bridge crosses Lemieux Island to Gatineau. Opened in 1878 by its namesake, this is the second oldest of the six bridges that link Ottawa and Gatineau (predated only by the Chaudiere Bridge). Until the startup of the O-Train diesel-powered light rail line in 2001, it was a working railway bridge, carrying passengers and freight as part of the CP Rail system.

However, while O-Train service to Bayview Station comes within 250 meters of the southern edge of the bridge and freight trains regularly use the well maintained Québec and Gatineau railway line to its north, the Prince ofWales Bridge sits unused, except by intrepid folk crossing on foot or bicycle.

Yet looks can be deceiving, as the Prince of Wales Bridge is, under federal railway law, part of an active rail line with no action having been taken to abandon it; the bridge has been certified as structurally sound. And since the start of the O-Train project, the idea of extending the service across the bridge into Gatineau has been strongly advocated by Transport 2000, the City Centre Coalition and Gatineau's Coalition pour l'avancement du transport urbain, which pushed hard to get light rail service across the bridge only to face consistent — and surprising — rejection by government agencies at all levels.

The City of Gatineau's objections are the most straightforward, but hard to accept: the Societe de Transport de l'Outaouais (STO) is bus-based and wants to avoid the hassle of operating a railway. Yes, but the rail line to the north of the bridge runs close by Les Terrasses de la Chaudiere, rue Montcalm, boulevard St-Joseph, the Department of National Defence's Louis St. Laurent Building, Le Casino du Lac Leamy, and Les Promenades de l'Outaouais shopping centre. And, even though STO buses already clog King Edward Avenue, Rideau Street and Wellington Street in downtown Ottawa, Gatineau wants to add more buses instead of relieving bus congestion here by using the rail line that crosses the Prince of Wales Bridge.

The National Capital Commission (NCC) has never explained its total lack of support for light rail transit service across the bridge, even though the National Capital Act mandates the federal agency to coordinate planning in the National Capital Region. In March, the NCC released a draft Strategy for the Capital's Core, which emphasizes heritage enhancement in order to build Canadians' pride in their capital. For an idea of the NCC's real priorities, recall that they own and operate the Champlain and Portage road bridges, and are covering part of the cost of extending boul. St-Laurent through the Hull sector of Gatineau to link up with the Gatineau Parkway.

The City of Ottawa's transportation planners are voicing the strongest opposition to light rail service across the Prince of Wales Bridge. In 2001, they quietly decoupled the O-Train line at Bayview Station from the short stretch of railway extending to the bridge. Since then, the City's transportation planners have objected to all attempts — including appeals to the Ontario Municipal Board and Minister of the Environment — to include the bridge in O-Train planning. After trying to keep the bridge from being bought by the City as part of its purchase of the CP Rail line on which the O-Train runs, they're opposing requests to include the bridge, which the City now owns, as a possible transit corridor in its official plan.

Once again, no reason is given for the City staff's position, other than the mantra that a study of interprovincial transit must first be carried out. There are two major problems with this: the study is two years late and has yet to start — and use of an existing railway bridge is clearly much less costly and more environmentally friendly than any other option.

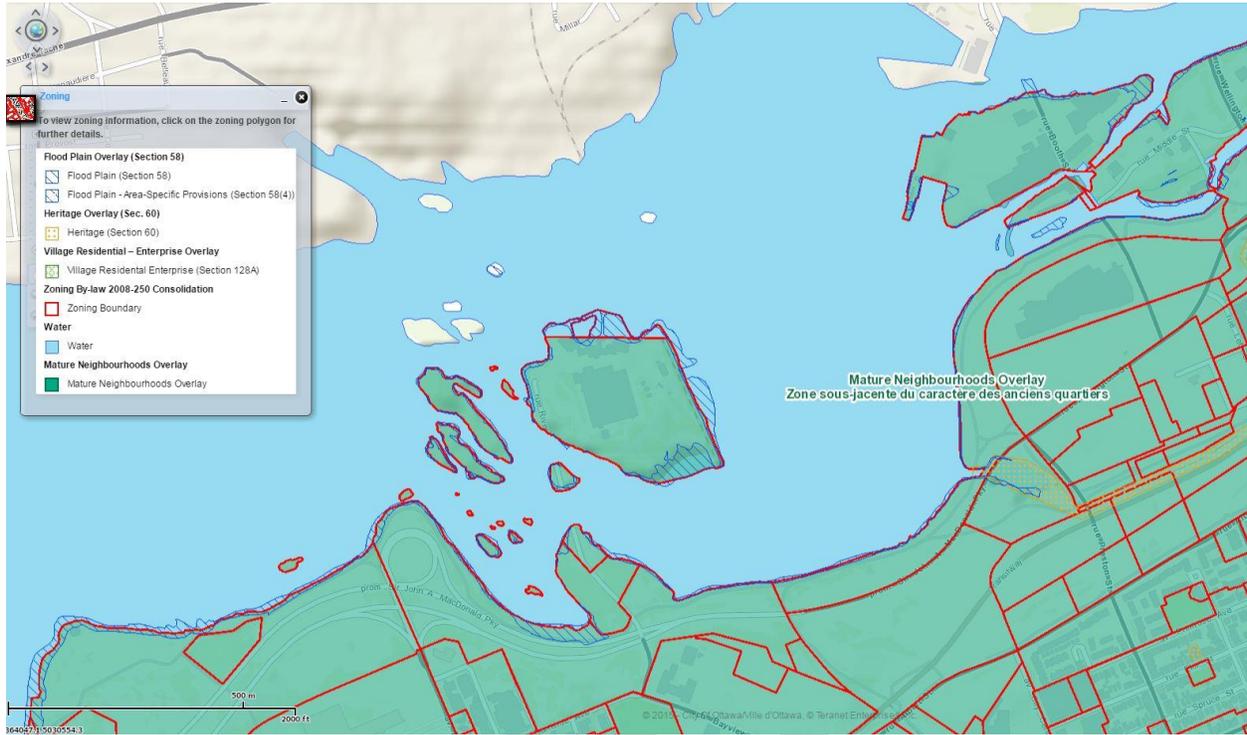
If you are tired of the hassles of taking the bus between Gatineau and Ottawa and seeing the long lines of STO buses on King Edward, Rideau and Wellington, while a heritage railway bridge crossing the Ottawa River remains unused — speak up as part of your response to the One Tonne Challenge. I urge all of you who are reading this column to deluge the NCC and the municipal governments of Ottawa and Gatineau with phone calls and e-mails supporting this argument. Tell all your friends. It might lead transportation planners on both sides of the Ottawa River to reconsider their opposition to interprovincial light rail transit service.

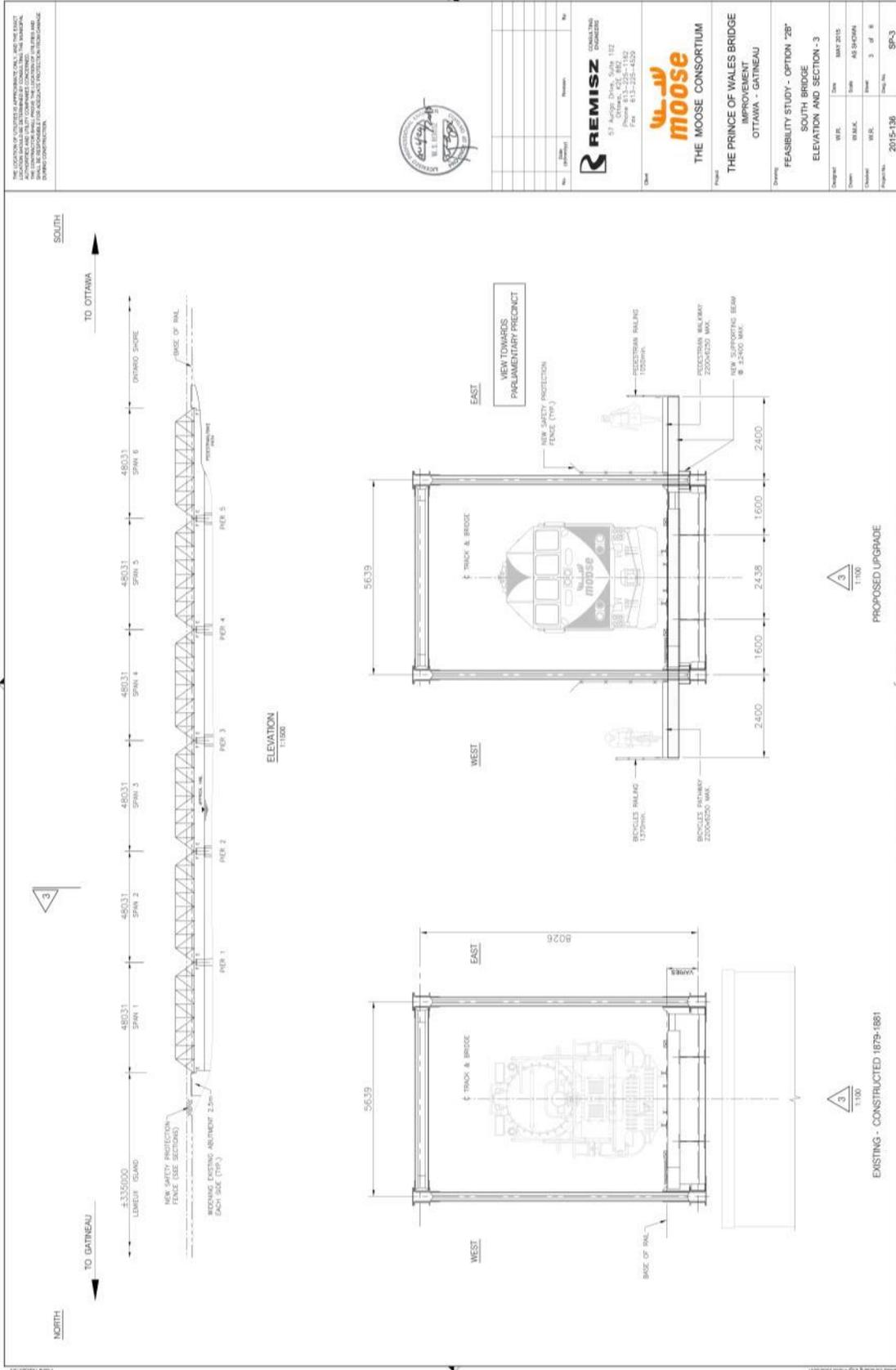
Editor's Note: A very well attended rally to preserve the Prince of Wales Railway Bridge was held on May 5 at both ends of the bridge. On May 3, the National Capital Commission announced a long-awaited \$350,000 interprovincial transit study that should improve the odds for putting the old railway bridge back into service.

By: David Gladstone

Written by: OLM Contributor on August 1, 2005.

APPENDIX "I" - CITY OF OTTAWA E-MAP





THE CONSULTANT HAS REVIEWED THE DRAWINGS AND FOUND THEM TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE BRIDGE ACT AND REGULATIONS AND THE BRIDGE DESIGN AND CONSTRUCTION STANDARDS. THE CONSULTANT HAS NOT CONDUCTED A VISUAL INSPECTION OF THE BRIDGE OR THE SURROUNDING AREA. THE CONSULTANT'S LIABILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE BRIDGE AND THE SURROUNDING AREA.



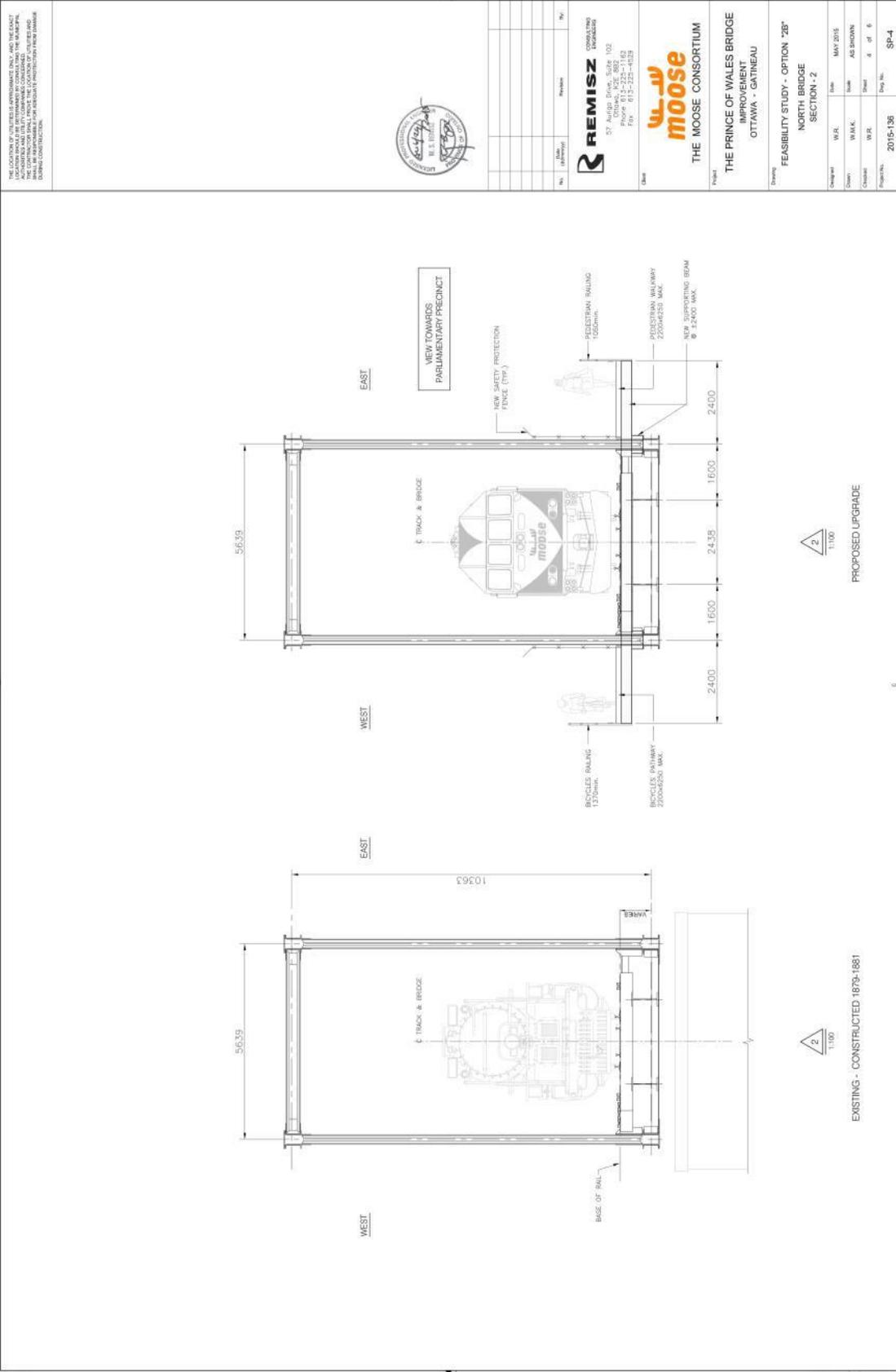
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 57 Avenue C, Ottawa, Ontario
 Phone: 613-225-1152
 Fax: 613-225-1153



THE PRINCE OF WALES BRIDGE IMPROVEMENT OTTAWA - GATINEAU

FEASIBILITY STUDY - OPTION '2B' SOUTH BRIDGE ELEVATION AND SECTION-3

Client	W.F.	Date	MAY 2015
Drawn	W.M.K.	Scale	AS SHOWN
Checked	W.F.	Sheet	3 of 8
Project	2015-136		
Revision	SP-3		



THE LOCATION OF THE RED APPROXIMATE ONLY AND THE EXACT LOCATION OF THE PROPOSED IMPROVEMENTS ARE SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE EXISTING AND PROPOSED IMPROVEMENTS FOR HERETAFY PROTECTION FROM DAMAGE DURING CONSTRUCTION.



No.	Date	Author	Revision	By

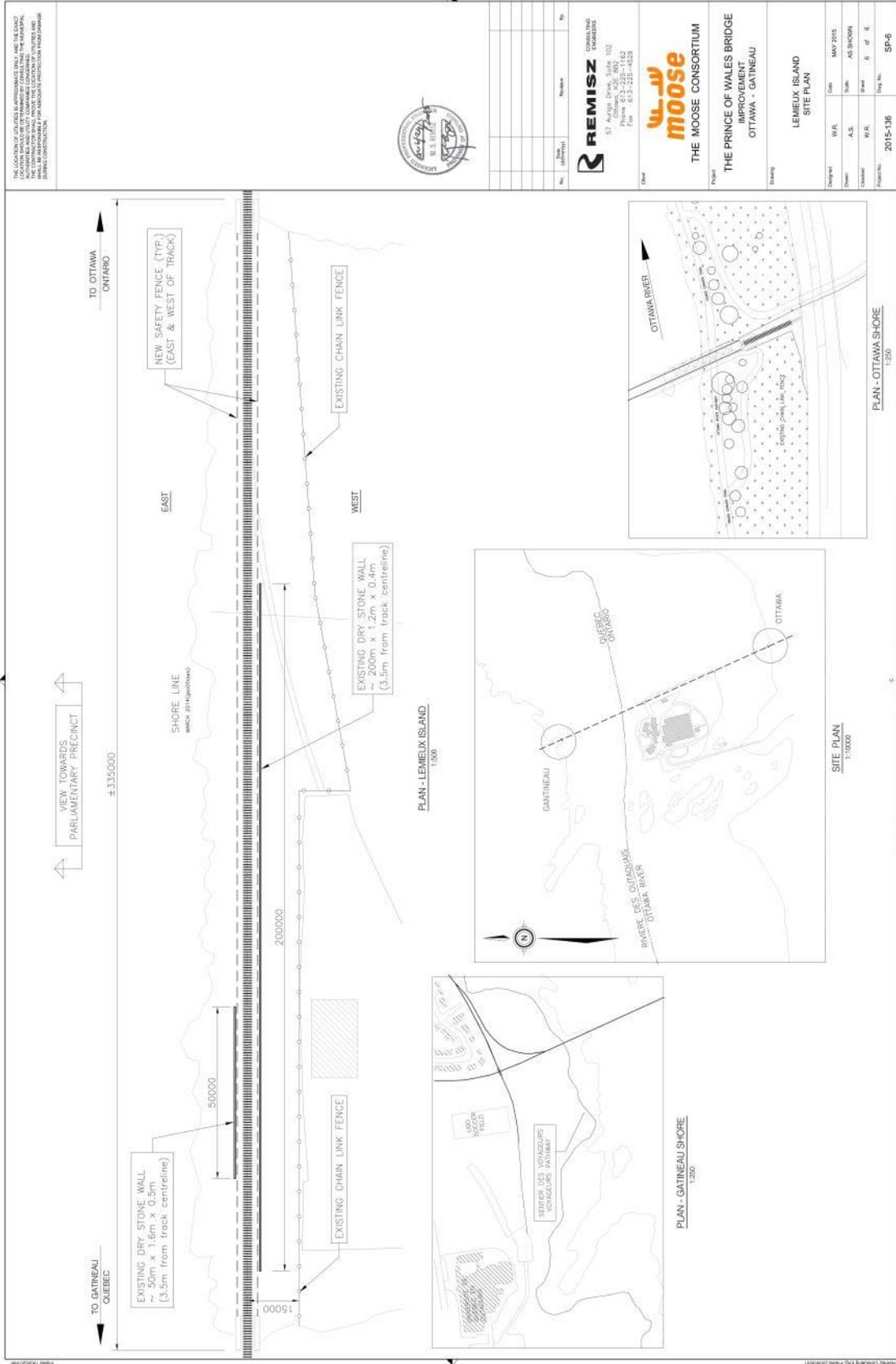
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THE MOOSE CONSORTIUM
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 OTTAWA - GATINEAU

Project: THE PRINCE OF WALES BRIDGE IMPROVEMENT OTTAWA - GATINEAU

Drawings: FEASIBILITY STUDY - OPTION '2B' NORTH BRIDGE SECTION - 2

Checked: W.R.K.	Date: MAY 2015
Drawn: W.R.K.	Date: AS SHOWN
Project No: 2015-136	Sheet: 4 of 6
	Draw No: SP-4



THE LOCATION OF THE BRIDGE IMPROVEMENTS, TRUCK AND THE EXISTING LOCATION OF THE BRIDGE SHALL BE DETERMINED BY CONSULTING THE MUNICIPAL ENGINEER AND THE MUNICIPAL ENGINEER SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF THE BRIDGE AND THE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MUNICIPAL ENGINEER'S DESIGN AND CONSTRUCTION STANDARDS.



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Client	LEMEUX ISLAND SITE PLAN
Project	THE PRINCE OF WALES BRIDGE IMPROVEMENT OTTAWA - GATINEAU
Drawn	
Checked	
Design	
Scale	
Sheet No.	2015-136
Drawn By	SP-6