

Stotts' Bridge, Twyn Rivers Drive over the Rouge River – Demolition of a Designated Heritage Structure, Approval with Conditions

Date: June 30, 2026

To: Toronto Preservation Board

From: Senior Manager, Heritage Planning, Urban Design, City Planning

Wards: Ward 25 – Scarborough-Rouge Park

SUMMARY

This report recommends that City Council approve the demolition of Stotts' Bridge (Structure ID 803), a structure designated under Part IV of the Ontario Heritage Act (OHA), in conjunction with the emergency replacement of the structure.¹

Stotts' Bridge is located on Twyn Rivers Drive between Sheppard Avenue East and the Toronto city limits. Twyn Rivers Drive has a two-lane rural cross-section with no paved shoulder, bike lanes, or sidewalks. The bridge has a 22.1-metre single span and a 4.1-metre-wide deck, limiting traffic to a single lane. Twyn Rivers Drive is identified as an evacuation route in the event of a Pickering nuclear station evacuation.

The bridge and Twyn Rivers Drive are owned and maintained by the City of Toronto but are located within the Rouge River National Urban Park, a federally owned park that spans the boundaries of the cities of Toronto and Pickering.

Stotts' Bridge, constructed in 1915, is a representative example of a Warren pony truss bridge. The bridge's design, construction method, and materiality are typical of the type, including its single-span configuration, five-panel truss design, and riveted connections. The bridge has a direct association with, and reflects the design of, civil engineer Frank Barber, and has contextual value as it supports the rural and scenic character of its surroundings and is considered a landmark structure in Scarborough.

Following safety concerns identified during routine inspections, the City of Toronto closed Stotts' Bridge to all vehicular traffic in July 2024. The concrete abutments and

¹ It should be noted that the bridge name is spelled in various ways in contemporary and historical documentation, including Stotts, Stotts', and Stott's. For ease of reference and consistency with the Heritage Impact Assessment prepared by Archaeological Services Inc. (ASI) dated June 17, 2026, this report will use the name Stotts' Bridge.

wingwalls were found to have wide cracks, delamination and spalling. Moderate to severe corrosion, deformation, twisting and rust jacking were observed on the steel trusses, chords, floor beams and stringers. The bridge remains open to pedestrians and cyclists.

In 2025, a Transportation Master Plan (TMP) was completed for five municipal bridges, including Stotts' Bridge, within the Rouge National Urban Park, to develop long-term strategies to improve transportation infrastructure within the park. The TMP evaluated three project alternatives for Stotts' Bridge, including retention, rehabilitation, and replacement, with replacement preferred from an engineering standpoint.

On June 23, 2026, a Heritage Permit application was submitted to allow for the demolition of the bridge. A Heritage Impact Assessment (HIA), prepared by Archaeological Services Inc. (ASI), dated May 26, 2026, with revisions on June 9 and June 17, 2026, was submitted to support the permit package.

The proposal includes the demolition of the Part IV designated bridge and the installation of a temporary bridge until a final sympathetically designed truss bridge is completed as a form of commemoration. The existing bridge is in poor to defective condition and is not a candidate for any of the three conservation treatments (Preservation, Rehabilitation and Restoration) outlined in the Standards and Guidelines for the Conservation of Historic Places in Canada.

Due to these circumstances, demolition of the bridge and construction of a sympathetically designed replacement bridge have been proposed. The Heritage Impact Assessment, completed by ASI, thoroughly explored all alternatives to demolition and Heritage Planning staff are satisfied that the bridge could not be rehabilitated or retained in situ given its condition. Due to the bridge's condition and limited load capacity, staff are of the opinion that the proposed demolition is a reasonable and supportable course of action.

As part of the conditions of approval, staff recommend that City Council secure a Mitigation and Commemoration Plan for Stotts' Bridge, including an appropriate replacement bridge design to mitigate impact to the cultural heritage value of the crossing and commemorate the designated structure, as well as an interpretation plan and documentation of the bridge prior to demolition.

RECOMMENDATIONS

The Senior Manager, Heritage Planning, Urban Design, City Planning recommends that:

1. City Council approve the application to demolish Stotts' Bridge on Twyn Rivers Drive (Structure ID 803), a Part-IV designated structure with conditions, under Part IV, Section 34(1)2 of the Ontario Heritage Act to allow for the construction of a temporary bridge until a permanent truss bridge is constructed, with such bridge to be substantially in accordance with the Preliminary General Arrangement drawing dated May 2026, prepared by Dillon Consulting (Attachment 5) and the Heritage Impact Assessment

prepared by Archaeological Services Inc. dated June 17, 2026, both on file with the Senior Manager, Heritage Planning.

2. City Council direct that its consent to the application to demolish the designated Stotts' Bridge on Twyn Rivers Drive (Structure ID 803), under Part IV, Section 34(1)2 of the Ontario Heritage Act is subject to the following conditions:

a. prior to the issuance of any permit related to the removal of Stotts' Bridge on Twyn Rivers Drive (Structure ID 803), including a heritage permit or a building permit, the owner shall:

1. provide full documentation of Stotts' Bridge on Twyn Rivers Drive (Structure ID 803), including two (2) printed sets of archival quality 8" x 10" colour photographs with borders in a glossy or semi-gloss finish and one (1) digital set on a flash drive in tiff format and 600 dpi resolution keyed to a location map, elevations and measured drawings, and copies of all elevations as may be available, to the satisfaction of the Senior Manager, Heritage Planning; and

2. provide a memo describing the potential to salvage structural elements during demolition, to the satisfaction of the Senior Manager, Heritage Planning; and

b. prior to the issuance of any permit related to the construction of the permanent replacement structure for Stotts' Bridge on Twyn Rivers Drive, the owner shall:

1. provide detailed plans and drawings for the new Twyn Rivers Drive bridge, with descriptions of materials associated with the replacement bridge design, substantially in accordance with the Preliminary General Arrangement drawing dated May 2026, prepared by Dillon Consulting (Attachment 5) and the Heritage Impact Assessment prepared by Archaeological Services Inc. dated June 17, 2026, to be prepared by the project architect and a qualified heritage consultant to the satisfaction of the Senior Manager, Heritage Planning; and

2. provide a Commemoration Plan that includes concepts for a publicly accessible interpretive installation at the crossing that details the bridge's history and, if feasible, the use of salvaged elements of the original bridge such as portions of the steel truss within the commemoration plan, to the satisfaction of the Senior Manager, Heritage Planning; and

c. upon completion of the new structure, implement the approved Commemoration Plan, to the satisfaction of the Senior Manager, Heritage Planning.

FINANCIAL IMPACT

There are no financial implications resulting from the recommendations included in this report in the current budget year or in future years.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the information as presented in the Financial Impact Section.

DECISION HISTORY

On June 24, 1996, Stotts' Bridge was designated under Part IV of the Ontario Heritage Act through By-law 508-1975. <https://www.heritagetrust.on.ca/oha/details/file?id=5292>

During its meeting on March 20 and 21, 2024, City Council endorsed the preferred solutions for the Rouge Park Bridges Transportation Master Plan. [Agenda Item History - 2024.IE11.5](#)

Following safety concerns identified during regular inspections, the City of Toronto closed the bridge to all vehicular traffic in July 2024. [96f0-Emergency-Bridge-ClosureTwyn-RiversBridge-Closure-Noticenov2024aoda.pdf](#)

BACKGROUND

Area Context

Stotts' Bridge is a single-span Warren pony truss bridge that carries Twyn Rivers Drive over the Rouge River. The bridge is located approximately 500 metres east of Sheppard Avenue East.

Adjacent Heritage Properties

Stotts' Bridge is not located adjacent to any municipally designated properties.

Proposed Demolition

The proposed undertaking involves the demolition of Stotts' Bridge, which has been closed to vehicular traffic since July 2024 due to advanced deterioration and compromised structural conditions. To maintain the crossing, a phased-replacement approach is proposed, consisting of installing a temporary bridge while a new structure is being planned, followed by construction of a permanent steel truss bridge at the existing location.

Heritage Planning Policy Framework

The Planning Act

The Planning Act guides development in the Province of Ontario. It states that municipalities must have regard for matters of provincial interest. Section 2(d) specifically refers to “the conservation of features of significant architectural, cultural, historical, archaeological or scientific interest” and 2(r) “to a built form that is well designed and provides for a sense of place.”

The Provincial Planning Statement (2024)

The Provincial Planning Statement (2024) (the “PPS”) provides policy direction province-wide on land use planning and development to promote strong communities, a strong economy, and a clean and healthy environment. It includes policies on key issues that affect communities, such as:

- The efficient use and management of land and infrastructure.
- Ensuring the sufficient provision of housing to meet changing needs including affordable housing.
- Ensuring opportunities for job creation.
- Ensuring the appropriate transportation, water, sewer, and other infrastructure is available to accommodate current and future needs.
- Protecting people, property, and community resources by directing development away from natural or human-made hazards.
- Conservation of cultural heritage and archaeology.

The provincial policy-led planning system recognizes and addresses the complex inter-relationships among environmental, economic and social factors in land use planning. The PPS supports a comprehensive, integrated and long-term approach to planning, and recognizes linkages among policy areas.

The PPS is issued under Section 3 of the [Planning Act](#) and all decisions of Council in respect of the exercise of any authority that affects a planning matter shall be consistent with the PPS. Comments, submissions or advice affecting a planning matter that are provided by Council shall also be consistent with the PPS.

Policy 4.6.1 of the PPS directs that “Protected heritage property, which may contain built heritage resources or cultural heritage landscapes, shall be conserved.” “Conserved” is defined in the PPS as the identification, protection, management and use of built heritage resources in a manner that ensures their cultural heritage value or interest is retained.

Policy 4.6.2 states that “Planning authorities shall not permit development and site alteration on lands containing archaeological resources or areas of archaeological potential unless the significant archaeological resources have been conserved.”

All decisions of Council in respect of the exercise of any authority that affects a planning matter shall be consistent with the PPS and shall conform with Provincial Plans. All

comments, submissions or advice affecting a planning matter that are provided by Council shall also be consistent with the PPS and conform with Provincial Plans.

Provincial Plans are intended to be read in their entirety and relevant policies are to be applied to each situation.

Toronto Official Plan

This application has been reviewed against the policies of the City of Toronto Official Plan. The Plan provides the policy framework for heritage conservation in the City, and the proposal has been reviewed for consistency with the Heritage Conservation policies in section 3.1.6. The City of Toronto Official Plan can be found here:

<https://www.toronto.ca/city-government/planning-development/official-plan-guidelines/official-plan/>

Standards and Guidelines

The Standards and Guidelines for the Conservation of Historic Places in Canada (the "Standards and Guidelines") is the official document guiding planning, stewardship and the conservation approach for all listed and designated heritage resources within the City of Toronto. The Standards and Guidelines can be accessed here:

<http://www.historicplaces.ca/media/18072/81468-parks-s+g-eng-web2.pdf>

COMMENTS

Demolition of Part IV designated heritage properties is inconsistent with the heritage planning policy framework, which prioritizes conservation. However, in rare circumstances, after thoroughly exploring all possible alternatives, demolition may be the only option.

Heritage Planning staff reviewed the proposal to demolish the Part IV designated heritage bridge for consistency with the Council-adopted Standards and Guidelines for the Conservation of Historic Places in Canada and required that an HIA be submitted. As the application was considered, three options were evaluated: retention in situ, rehabilitation, and replacement with a sympathetically designed structure.

The HIA determined that Stotts' Bridge is not a candidate for retention in situ because the original steel and concrete materials are in poor to defective condition to the point of being irreparable. The extant single-lane bridge does not meet modern bridge code requirements, nor does it meet load capacity requirements for use as an evacuation route in the event of a Pickering nuclear station evacuation.

The rehabilitation of Stotts' Bridge is not considered a viable option from an engineering perspective, as outlined in ASI's Heritage Impact Assessment and associated engineering reports. Although rehabilitation would better align with heritage conservation best practices, the bridge's poor condition makes it infeasible. Similarly, rehabilitation would require the replacement of numerous structural steel elements, including trusses, chords and stringers, and would result in a significant loss of original

historic material. Regardless, rehabilitation of the extant single-lane bridge would not meet modern bridge code requirements, nor would it meet load capacity requirements for use as an evacuation route in the event of a Pickering nuclear station evacuation.

The HIA determined, and staff concur, that the demolition of Stotts' Bridge and its replacement with a sympathetically designed structure is the only viable option to meet modern bridge codes and evacuation route requirements. It was recommended that the impact of demolition be mitigated through the sympathetic design of the replacement bridge, the salvage of steel elements from the 1915 structure for the future interpretation plan, and the full recording and documentation of the heritage bridge.

New Truss Bridge

Preliminary General Arrangement drawings for the proposed permanent bridge are included in Attachment 5 of this report.

Details regarding the temporary bridge are currently unavailable. It is anticipated that the temporary structure will consist of a modular steel truss bridge supported by the existing 1915 cast-in-place concrete abutments and will accommodate a single lane of traffic in the same orientation as the existing bridge.

Based on the Preliminary General Arrangement drawings dated May 2026, the permanent replacement bridge is proposed as a sympathetically designed steel truss structure that reflects the form and type of the existing bridge. As geotechnical investigations were ongoing at the time of report preparation, some design elements may be subject to minor refinement; however, no significant changes to the overall design are anticipated.

Key features of the proposed new permanent bridge include:

- Construction of new cast-in-place concrete abutments and foundations, the final design of which will be informed by geotechnical investigations
- Installation of two five-metre-long wingwalls at each end of the bridge
- Construction of a new single-span, five-panel Warren pony truss bridge, with a span length of approximately 35 metres, supported on bearings at each abutment
- A bridge width of approximately 11 metres, accommodating two vehicular travel lanes, shoulders, and combination traffic and bicycle railings
- Construction of two approach slabs, each approximately six metres in length
- Raising the roadway profile to achieve the required clearance beneath the bridge
- Steel trusses measuring approximately 3.8 metres in depth and 35 metres in length
- A bridge deck supported by five steel stringers
- A truss system to be constructed using a combination of welded and bolted connections

This design is intended to provide a long-term replacement for the existing bridge while maintaining the appearance of the historic Warren pony truss form at the crossing.

Mitigation and Commemoration Plan

Should Council approve the proposed demolition, a Mitigation and Commemoration Plan should be submitted that includes preliminary drawings of the replacement bridge and concepts for on-site interpretation to the satisfaction of the Senior Manager, Heritage Planning.

Bridge Documentation

The design and physical value of the bridge will be commemorated through full documentation of the existing structure, including archival photographs, measured drawings, and original drawings as may be available.

CONCLUSION

Although the demolition of a protected heritage property does not meet the intent of the existing heritage policy framework, staff are of the opinion that conservation of Stotts' Bridge is not an option under the existing circumstances, following the review of condition assessments in accordance with the Standards and Guidelines for the Conservation of Historic Places in Canada.

Therefore, staff recommend that City Council approve the application to demolish Stotts' Bridge, a structure designated under Part IV, Section 34(1)2 of the Ontario Heritage Act, subject to conditions. The final bridge design must be substantially in accordance with the Preliminary General Arrangement drawing dated May 2026, satisfactory to the Senior Manager, Heritage Planning.

CONTACT

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ATTACHMENTS

Attachment 1 - Location Map

Attachment 2 - Aerial Photograph

Attachment 3 - Photographs

Attachment 4 - As-built drawing, Stotts' Bridge

Attachment 5 – Preliminary Design of replacement structure

LOCATION MAP

ATTACHMENT 1

Stotts' Bridge on Twyn Rivers Drive (Structure ID 803)



Location Map showing the location of Stotts' Bridge on Twyn Rivers Drive (Structure ID 803), outlined in red. This location map is for information purposes only; the exact boundaries of the bridge are not shown (City of Toronto Mapping).

AERIAL PHOTOGRAPH

ATTACHMENT 2

Stotts' Bridge on Twyn Rivers Drive (Structure ID 803)



Location Map showing the location of Stotts' Bridge on Twyn Rivers Drive (Structure ID 803), outlined in red. This location map is for information purposes only; the exact boundaries of the bridge are not shown (City of Toronto Mapping).

PHOTOGRAPHS

ATTACHMENT 3

Stotts' Bridge, Twyn Rivers Drive (Structure ID 803)



View of the north elevation of Stotts' Bridge, looking south (ASI, 2025)



View of the south elevation of Stotts' Bridge, looking northeast (ASI, 2025)



View of the west abutment wall, looking west (ASI, 2025)



View of the southwest wingwall, looking north (ASI, 2025)



Stotts' Bridge deck, looking west, with expansion joint in the foreground (ASI, 2025)



Interior soffit looking west, showing abutment, beams and stringers (ASI, 2025)



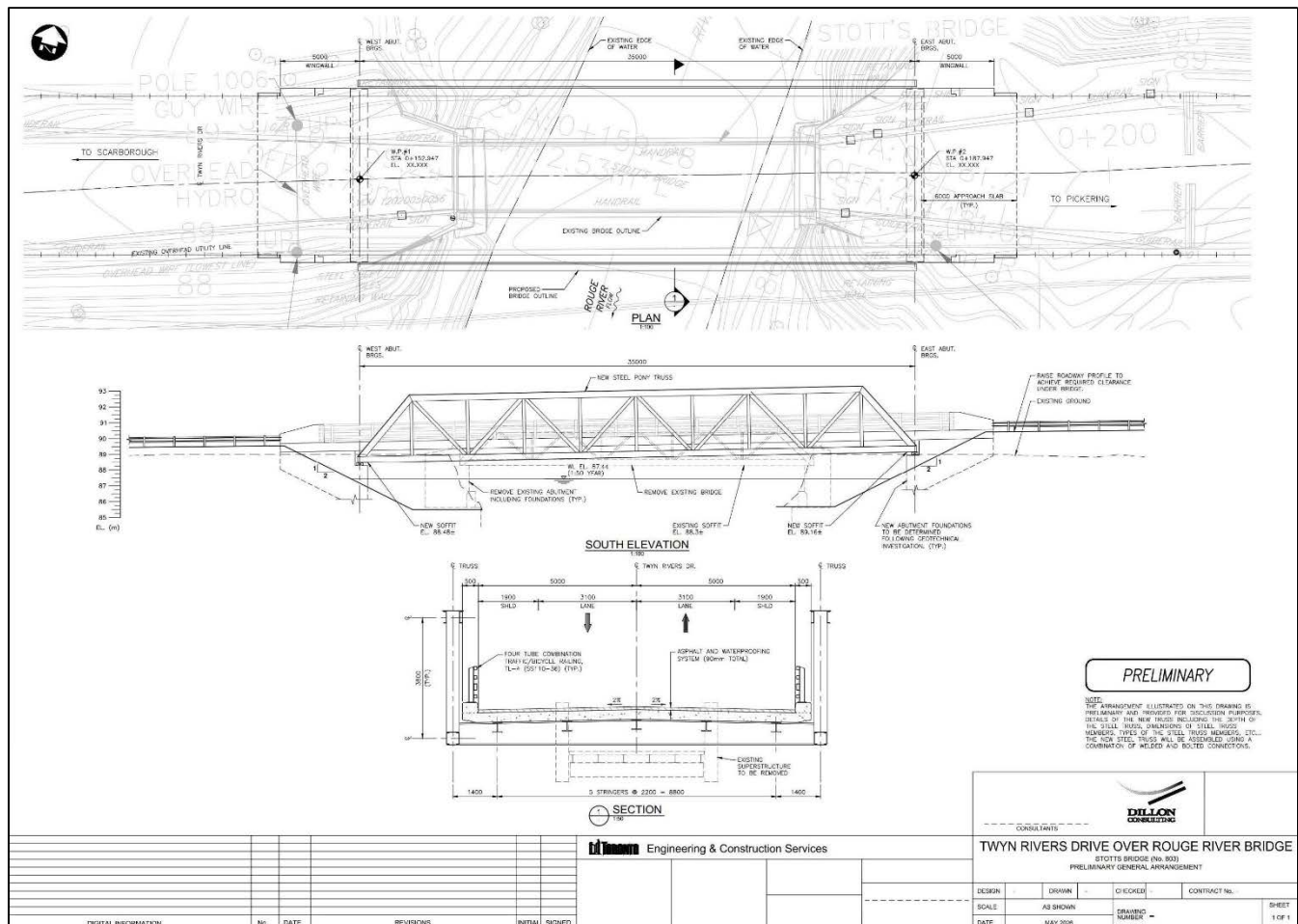
Detailed view of truss connections (ASI, 2025)

Stotts' Bridge, Twyn Rivers Drive (Structure ID 803)



STOTTS' BRIDGE REPLACEMENT STRUCTURE PRELIMINARY DESIGN

ATTACHMENT 5



Preliminary General Arrangement for the replacement of Stotts' Bridge on Twyn Rivers Drive (Structure ID 803) (Associated Engineering, 2026)