



REQUEST FOR PROPOSAL

ENGINEERING DESIGN  
FIVE ACTIVE TRANSPORTATION BRIDGES

RFP #P13-010

Closing: Tuesday, February 12, 2013 at 2:00 pm local time.

Halifax Regional Municipality  
Procurement Section  
Suite 103, 1<sup>st</sup> Floor,  
40 Alderney Dr. (Alderney Gate),  
Dartmouth Nova Scotia  
B2Y 2N5

supervisor).

- b) The Proponent's head office will be contacted about the problem, orally and followed up in writing.
- c) The Contract may, at the discretion of HRM, be suspended or terminated and/or payment withheld by HRM.
- d) If required to do so by legislation, HRM will immediately report the problem to the appropriate regulatory authority

1. that depending upon the nature and/or seriousness of the deficiency HRM reserves the right to bypass any or all of the steps described in subsection 2.23.3(1)

2.23.4 The Proponent shall acknowledge they have read the HRM Contractor Safety Management Policy as found on HRM's web site at [www.halifax.ca/procurement](http://www.halifax.ca/procurement) and that the proponent understands and shall undertake to adhere to the terms of this Policy and to co-operate with HRM in its efforts to ensure compliance thereunder.

### **3.0 PROJECT BACKGROUND AND FRAMEWORK**

#### **3.1 Project Background**

##### 3.1.1. Need

Achieving the objectives of the HRM Active Transportation Plan in promoting greater participation in active transportation is critical in meeting the HRM Regional Plan goal of achieving greater sustainability in managing transportation demand.

##### 3.1.2 Goal

The goal of this project is to have engineering design drawings and tender packages completed for five active transportation bridges using sound engineering principles and applicable codes and standards. Those bridges are as follows, with generalized locations identified in Attachment A:

- CN main line – Pinehill Drive to Saint Mary's University (SMU) campus
- CN main line – Chisholm Avenue to Scot Street
- Highway 111 – Lancaster Ridge to Dartmouth Crossing
- Sackville River – Balsam Circle to Old Sackville Road
- Bayers Lake Business Park – small watercourse crossing

##### 3.1.3 Objectives/Critical Path

Our objective is to have the five active transportation bridges tendered in late 2014 with construction completed during 2015. To the degree practical, these bridges should make

use of panels salvaged from the Macdonald Bridge redecking project.

The consultant will be required to complete objectives including but not limited to the following:

- Complete the project on time and on budget using sound project management principles.
- Study and investigate the project area, review available HRM records; and collect data from other sources as required.
- Complete a geotechnical investigation and report of the bridge areas.
- Complete a topographical survey for the bridge areas.
- Complete the required engineering/hydrological tasks to properly size the bridges (as necessary) to ensure the new structures can handle the design flows (1:100 year).
- Produce preliminary designs and report.
- Prepare preliminary and detail cost estimates for each structure.
- Identify land and easement acquisition requirements. If required, HRM will prepare legal surveys and supporting documentation.
- Produce design drawings for the replacement bridge (including, but not limited to: footings; wing walls; de-watering; abutments; deck; railing; roadway geometry (plan and profile of approaches; etc.)
- Meet, liaise with regulatory bodies, utilities, stakeholder groups and affected property owners.
- Complete public consultation with the preliminary design.
- Respond to design related inquiries during the tender phase as required.
- If so decided by HRM, provide part time specialized inspection services during construction. HRM will provide contract administration and general on site inspection services during construction.
- Identify the need for the acquisition of property or easements that are necessary to complete the project.
- Separate cost estimates shall be required for each survey and/or investigation required.
- Apply for and obtain ALL applicable approvals and permits, as required on behalf of HRM (i.e. NSDEL, DFO, Transport Canada, etc.). The consultant shall be responsible for all costs associated with obtaining permits.
- Prepare the tender documents including engineering final design drawings ready

for tender, schedule of quantities, supplementary specifications, technical specifications and detailed final cost estimate.

- HRM will advertise and tender the bridge construction utilizing its own staff. The consultant services would include: review, evaluate and make a recommendation on the tender bids, as received by HRM and attend the pre-construction meeting(s). All tender documents must be returned to HRM within one week of the tender closing in order to meet the tender award report deadline.
- Respond to inquiries from bidders during the tendering process as well as prepare any necessary addenda and submit them to the HRM project manager for distribution to bidders.
- Attend the preconstruction meeting and be prepared to meet on-site to discuss both design intent and ramifications of any proposed change relative to the design with both the construction inspector and contractor. A minimum of three meetings should be assumed, including the preconstruction meeting.
- If so decided, the Consultant shall be prepared to provide part time specialized inspection services to address miscellaneous items that develop during construction. HRM requests that the consultant include a separate item in the cost proposal based on 30 hrs. engineering time comprised of 25 hrs. intermediate engineer and 5 hrs. senior engineering. This item would be included in the overall cost proposal evaluation.
- HRM will provide contract administration and on site inspection services during construction.

#### 3.1.4 Requirements

The proponent is required to undertake site reconnaissance, environmental scoping, preliminary and detail engineering design, and public engagement as steps to ensure that bridges are located and designed to optimize safety and functionality while meeting the needs of adjacent communities.

The type of footings and wing walls best suited to the location and structure type shall be determined. Approaches to and exits from the bridge shall have railings suitable to both pedestrian and cyclist traffic.

Proposed replacement bridges over watercourses shall be designed to accommodate the 1:100 year hydraulic criteria

The bridges spanning CN Rail lines shall be designed to CN requirements for horizontal and vertical clearances from the tracks.

The bridge across highway 111 shall be designed to Nova Scotia Transportation and

Infrastructure Renewal (NSTIR) requirements for horizontal and vertical clearances.

The final design shall meet the minimum standards and documentation requirements of HRM. These standards are presented in HRM's Municipal Service Systems guideline manual. Specifications shall be prepared for use with the Standard Specification for Municipal Services as published by the Nova Scotia Road Builders Association - The Nova Scotia Consulting Engineers Association Joint Committee on contract documents. HRM has adopted as its model these specifications and has developed standards for various sections. The consultant is not to modify any items standardized by HRM unless agreed to in writing by HRM. HRM will assemble and produce the complete specification document, make copies, advertise and tender the project.

In addition to meeting HRM standards, the final designs shall meet (as applicable over watercourses), the minimum requirements of the Nova Scotia Department of Environment (NSE) and conform to the standards and codes of other regulatory agencies, from which approval may be necessary (i.e. DFO, Transport Canada, etc.).

The structures shall be designed in accordance with CSA Standard CAN/CSA-S6-00 Canadian Highway Bridge Design Code. The consultant shall design structures coordinated with the geometric alignment of existing and/or proposed trails.

The superstructure design of the bridges shall be reviewed to determine if the salvaged deck panels from the MacDonald Bridge rehabilitation can be used. A previous study by Hatch Mott MacDonald indicated that structures of spans less than 24m would be appropriate candidates for reuse of the material. That study is included as Attachment B

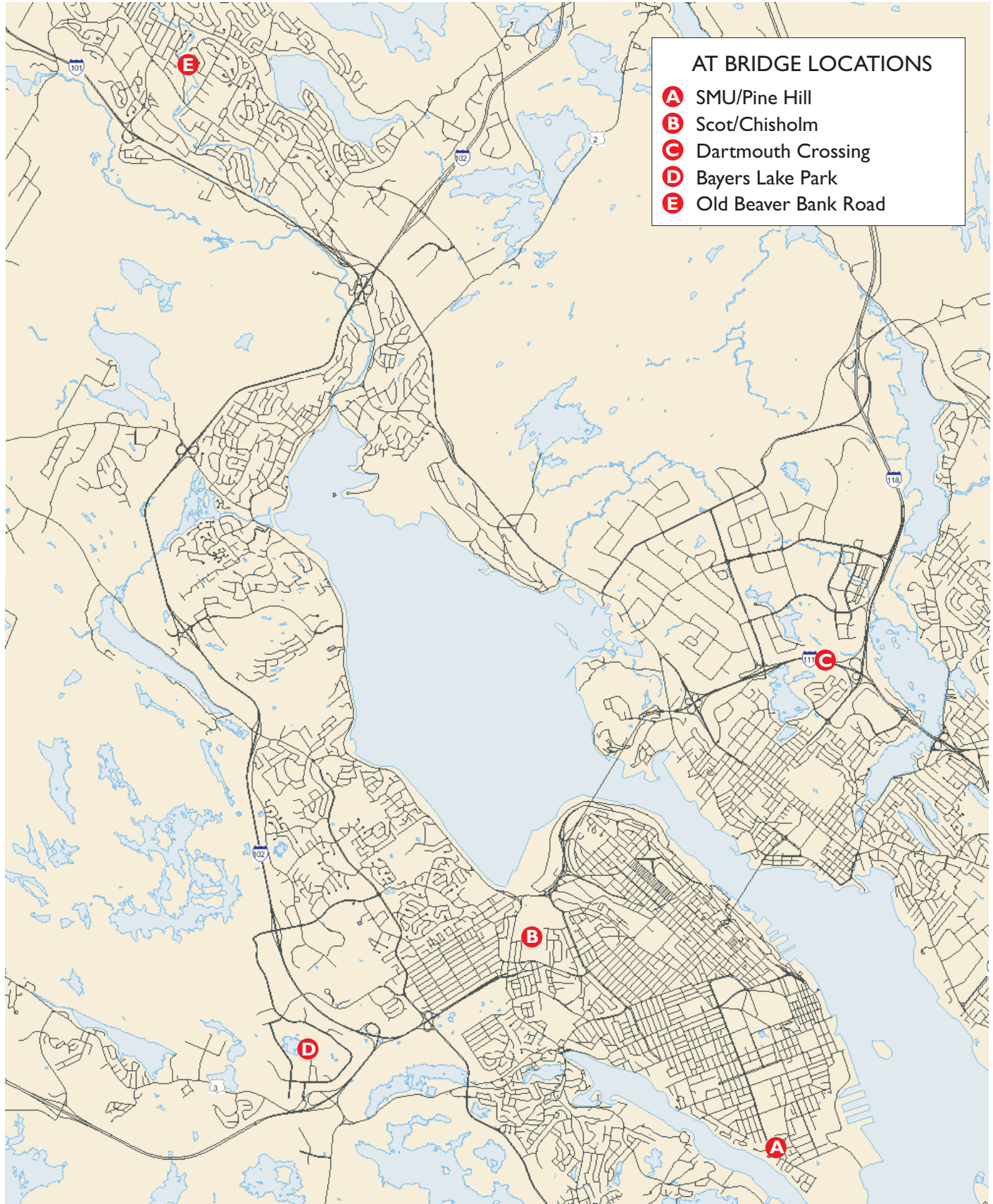
### 3.1.5 Constraints

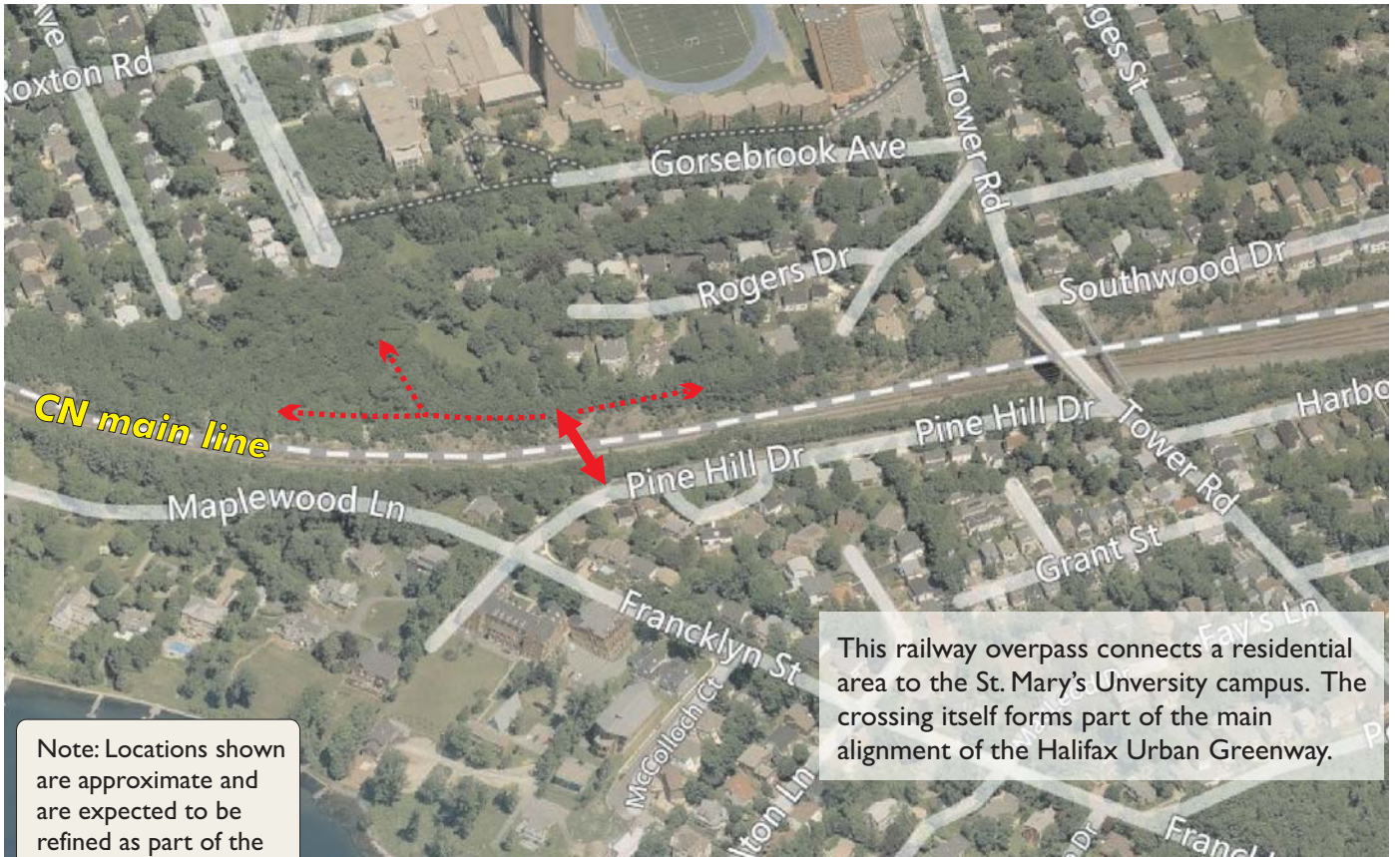
Some of these bridges will be located on land not currently owned by HRM and will cross transportation corridors operated by CN or Nova Scotia Transportation & Infrastructure Renewal. HRM will facilitate access to lands and interaction with other transportation agencies. The proponent shall coordinate the undertaking of project tasks and provide detail design to meet the requirements of those agencies.

## 3.2 Project Framework

HRM will appoint a project manager to this project and create an internal committee to steer it. The proponent is expected to design a work plan that provides opportunity for the steering committee, active transportation stakeholders, and residents/businesses in the vicinity of the proposed bridges to have input on the project outcomes.

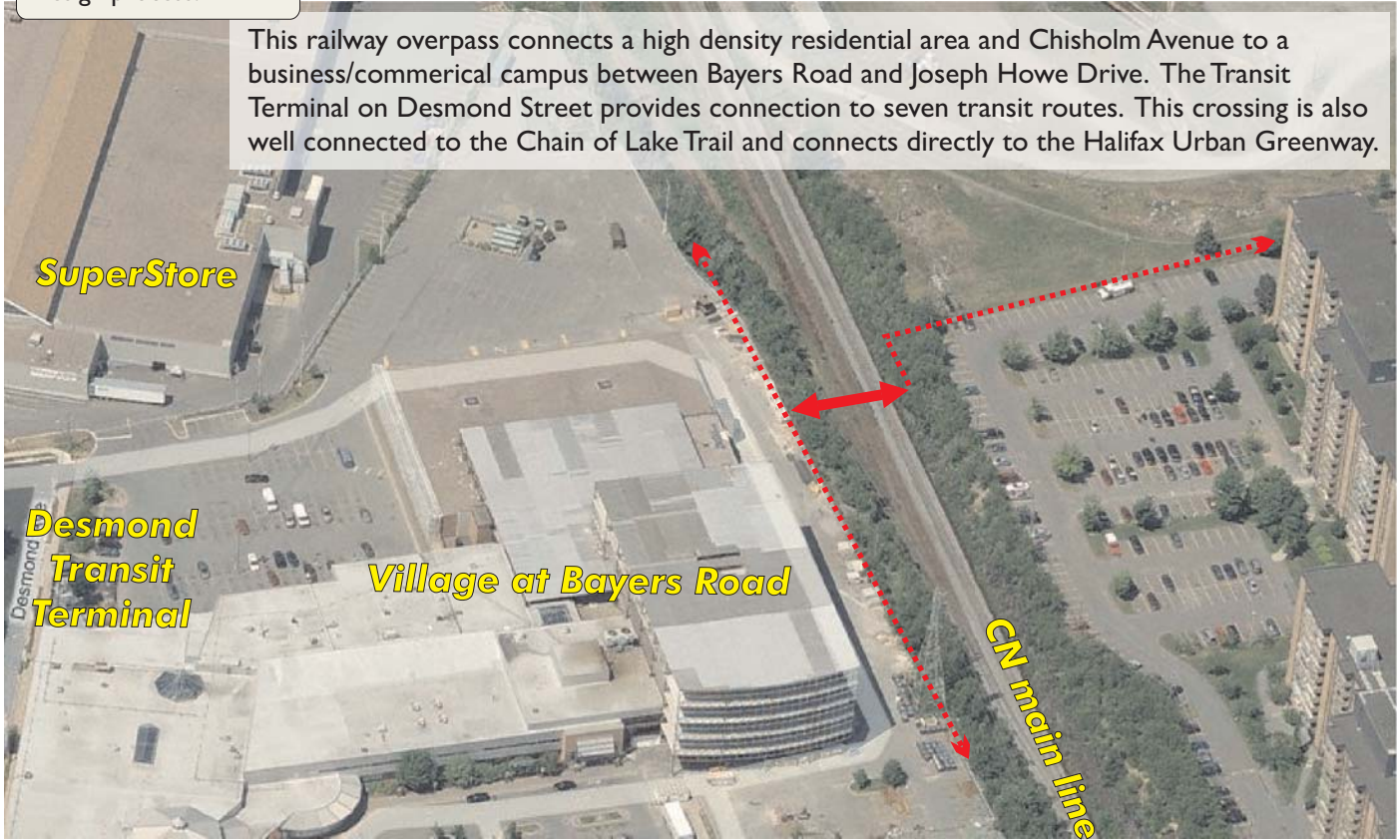
## 4.0 PROJECT OBJECTIVE





Note: Locations shown are approximate and are expected to be refined as part of the design process.

This railway overpass connects a residential area to the St. Mary's University campus. The crossing itself forms part of the main alignment of the Halifax Urban Greenway.



This railway overpass connects a high density residential area and Chisholm Avenue to a business/commercial campus between Bayers Road and Joseph Howe Drive. The Transit Terminal on Desmond Street provides connection to seven transit routes. This crossing is also well connected to the Chain of Lake Trail and connects directly to the Halifax Urban Greenway.

