

Your comments are encouraged and appreciated, as this will provide us an opportunity to address project issues and concerns.





STUDY PURPOSE / PROBLEM DEFINITION



Emma St to Earl St Pedestrian Bridge Class Environmental Assessment

The study is being carried out to determine if a pedestrian bridge is warranted between Emma St. and Earl St. crossing the Speed River. If warranted, this study will determine which style of bridge will be constructed.

PUBLIC INFORMATION CENTRE PURPOSE

To gain community input on:

- Existing conditions information
- Community interests
- •Identification of opportunities and pedestrian bridge design preferences

This Public Information Centre (PIC) is Designed to:

- Present information on existing conditions (Natural, Social, Environment)
- Discuss preliminary bridge alternatives
- Present study process and timelines

STUDY AREA





Emma St to Earl St Pedestrian Bridge Class Environmental Assessment

The proposed location for the pedestrian bridge is shown below, from Emma St to Earl St crossing the Speed River



MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT PROCESS





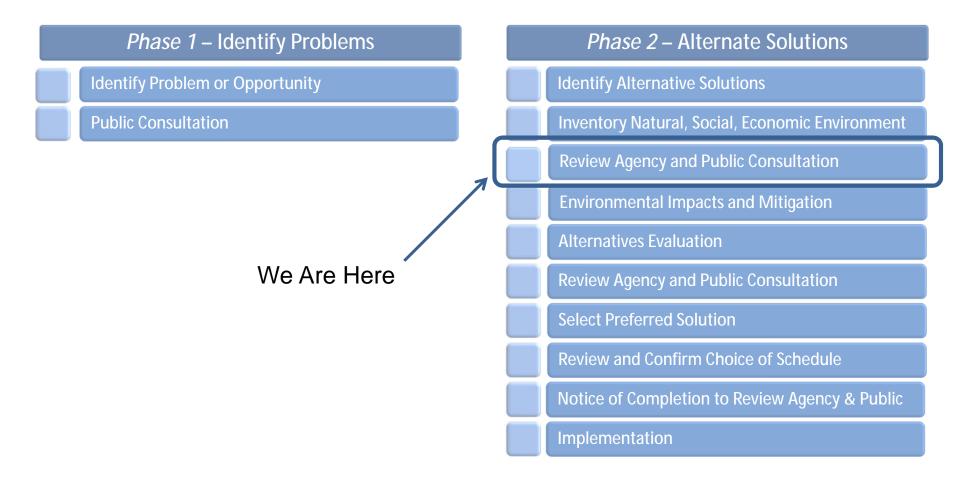
Emma St to Earl St Pedestrian Bridge Class Environmental Assessment

CLASS EA PROCESS - SCHEDULE B

Many projects related to municipal systems are similar in nature, are carried out routinely, and have predictable and mitigatable environmental effects which are investigated according to the Municipal Engineers Association "Municipal Class Environmental Assessment" (October 2000, as amended in 2007, 2011 & 2015).

This study is being undertaken as a Schedule B project under the Municipal Class Environmental Assessment process.

The flow chart illustrates the key steps to be undertaken as part of the EA process.



Study History & Background



Emma St to Earl St Pedestrian Bridge Class Environmental Assessment

Studies have been conducted to identify the possible bridge connection for the study area.

Trail Master Plan - 2005

Identified the Emma to Earl Street connection as a future trail

Local Growth Management Strategy - 2007

- City Council has endorsed a 2031 population of 169,000 and an additional 31,000 jobs over the 25 year planning horizon within the Greenfield area
- Additional bridge connections are in need to accommodate the increase in traffic and population

City Council Resolution – July 20, 2015

 City Staff was directed to conduct an Environmental Assessment for a possible pedestrian bridge connecting Emma Street to Earl Street.

In July 2016, Aquafor was retained by the City of Guelph to conduct a Municipal Class EA for the Emma St to Earl St Pedestrian Bridge.

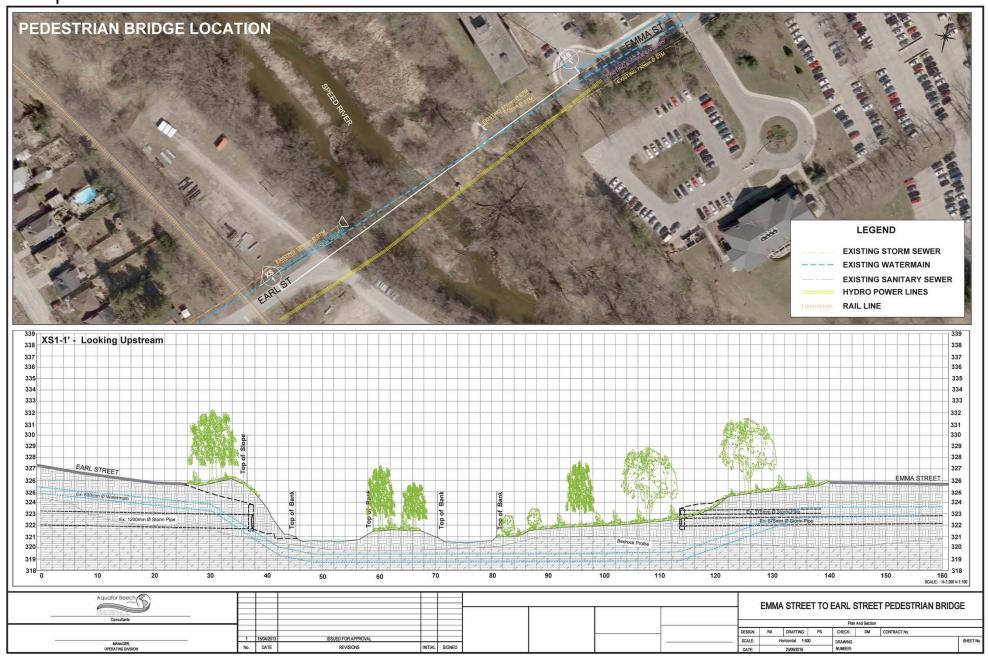
TOPOGRAPHY & UTILITIES





Emma St to Earl St Pedestrian Bridge Class Environmental Assessment

The Speed River corridor is ~90m wide between Emma Street and Earl Street



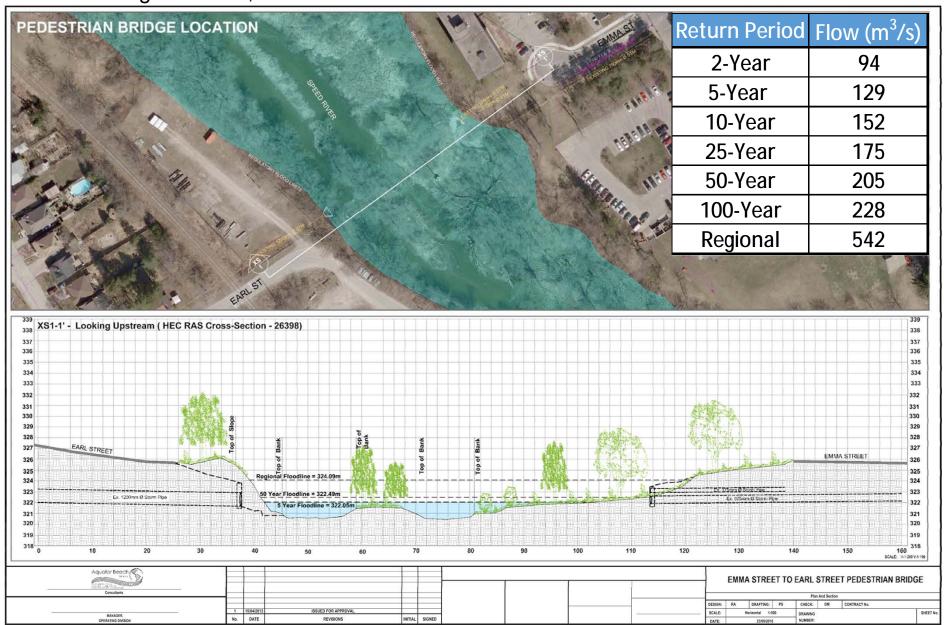
HYDROLOGY AND HYDRAULICS





Emma St to Earl St Pedestrian Bridge Class Environmental Assessment

The study looked into existing Hydrology and Hydraulics of Speed River in order to understand how water flows through the river, the forces it exerts under normal and flood flow conditions.



TREE INVENTORIES





Emma St to Earl St Pedestrian Bridge Class Environmental Assessment

Trees greater than 10cm diameter were inventoried. Removal of trees will be required to accommodate channel and culvert works.



Representative species include:

935 Small leaved Linden	Tag#	Species Common Name	Species Botanical Name	DBH (cm)	Tag#	Species Common Name	Species Botanical Name	DBH (cm)
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FISHERIES & AQUATIC HABITAT





Emma St to Earl St Pedestrian Bridge Class Environmental Assessment

The study looked into the existing fish communities of Speed River to define existing habitat conditions and fish species.

The Ministry of Natural Resources and Forestry has listed the Speed River as coolwater fish habitat. There are no fish collection records within the study area, but sampling at downstream stations has listed the following species present in the Speed River:









In addition, Common Carp was observed during field investigations. These are warm to coolwater species, common in Ontario and fairly tolerant to disturbance within their habitats.

NATURAL HERITAGE ASSESSMENT



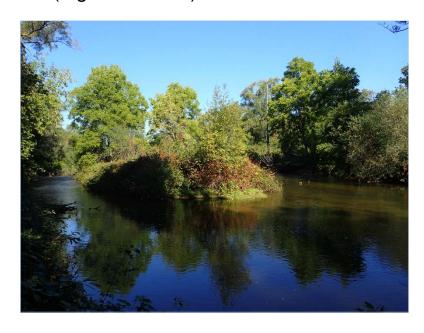


Emma St to Earl St Pedestrian Bridge Class Environmental Assessment

The Speed River corridor consists of a mosaic of woodland, wetland, and aquatic communities. The corridor is part of the City of Guelph's Natural Heritage System, within which the City has identified several natural heritage features, including:

- Significant Woodlands;
- Significant Wildlife Habitat;
- Significant Valleylands;
- Surface Water & Fisheries Resources (cool water); and
- Locally Significant Wetlands.

Using both primary and secondary data sources, Aquafor has confirmed and refined the limits of natural heritage features within the study area. These results will be presented to the City of Guelph and other applicable agencies (e.g. the GRCA) for review and comment.





TERRESTRIAL NATURAL HERITAGE





Emma St to Earl St Pedestrian Bridge Class Environmental Assessment

Aquafor characterized the existing vegetation communities of Speed River according to Ecological Land Classification (ELC) protocols. Vegetation communities within the study area are illustrated in the adjacent map.

Significant Wildlife Habitat:

- Confirmed habitat for Snapping Turtle (a Species-At-Risk) is also shown.
- Potential foraging and mating habitat for Snapping Turtle consists of the Speed River and vegetation units 2-5 & 7-9.
- Suitable nesting habitat was not observed within the study area.

A groundwater seepage area is present in vegetation unit 9.



SOURCE WATER PROTECTION

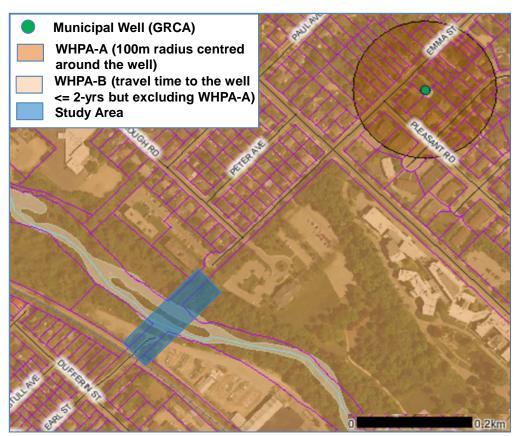




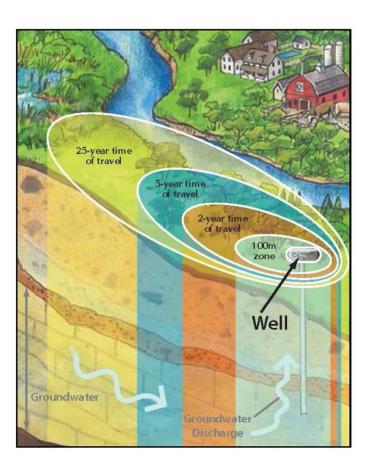
Emma St to Earl St Pedestrian Bridge Class Environmental Assessment

The Provincial Policy Statement (2014) contains policies that protect Ontario's natural heritage and water resources, including designated vulnerable areas mapped in source water protection assessment reports under the *Clean Water Act* (CWA).

The study area is defined as a Vulnerable Area for Groundwater, with a municipal well ~400m from study area.



Wellhead Protection Area (WHPA) (GRCA)



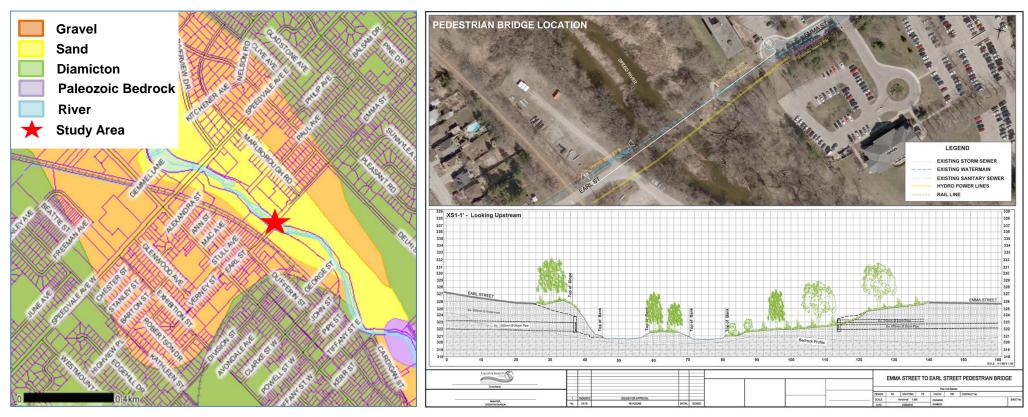
GEOLOGY





Emma St to Earl St Pedestrian Bridge Class Environmental Assessment

The maps below illustrate the soil composition and bedrock elevation at the study area.



Surficial Geology Map (GRCA)

Bedrock Elevation	315 – 326.5 m	Source: MNDM and City of Guelph
Surficial Geology	Mainly Sand	Source: GRCA GRIN mapping tool

ALTERNATIVE EVALUATION CRITERIA



Emma St to Earl St Pedestrian Bridge Class Environmental Assessment

The following criteria will be used to evaluate each alternative. It will help determine which alternative should be selected as the Preliminary Preferred Alternative.

Comment Sheets are provided to gain public input in evaluation criteria.

Social Environment

- Land Use
- Construction Impacts
- Cultural Heritage Resources
- Archaeological Resources
- Quality of Life Health and Safety
- Aesthetics

Technical

- Level of Service
- Regulatory requirements/approvals
- Difficulty of Construction
- Reliability
- Service Life Expectancy
- Utilities
- Operation and Maintenance

Natural Environment

- Areas of Natural and Scientific Interest (ANSIs)
- Woodlands, Wetlands and Wildlife Habitats
- Wildlife (including Species at Risk)
- Fish habitat and surface water features
- Valleylands
- Urban Forest (Hedgerows and trees)
- Ground water features

Cost

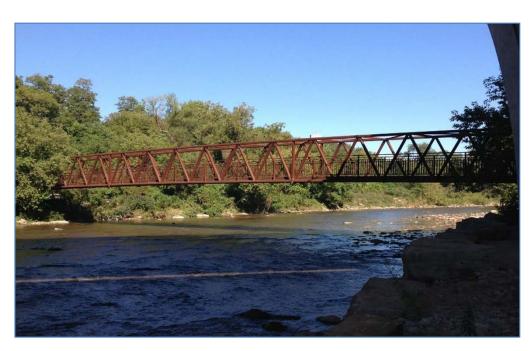
- Capital Costs (engineering, land and construction)
- Annual Operating and Maintenance Costs
- Life Cycle Cost

PRELIMINARY ALTERNATIVES BRIDGE TYPE





Emma St to Earl St Pedestrian Bridge Class Environmental Assessment





Steel Truss Bridge

Steel Arch Bridge



Steel Cable Bridge

PRELIMINARY ALTERNATIVES SPANS & ABUTMENTS

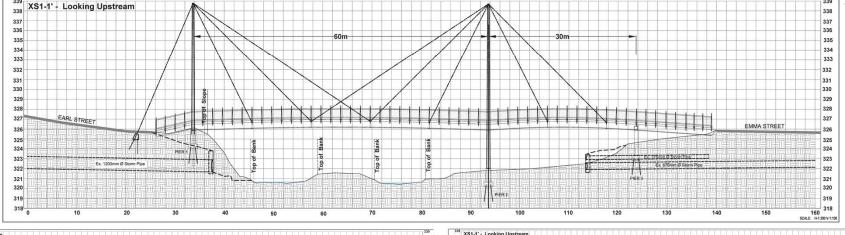


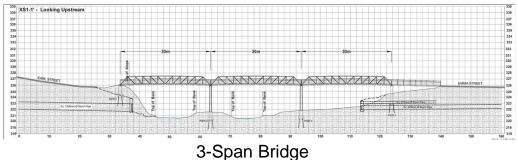


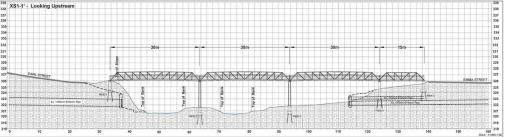
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2-Span Bridge







4-Span Bridge

NEXT STEPS

PUBLIC CONSULTATION, October 2016

- •Comment forms available for input.
- Compile and review feedback. Confirm evaluation criteria and preliminary alternatives.

PRELIMINARY ALTERNATIVES EVALULATION, November 2016

• Develop, analysis and evaluation of preliminary alternatives.

PUBLIC CONSULTATION, December 2016

- •Comment form available for input.
- •Compile and review feedback. Confirm or adapt preferred alternative.

COMPLETE ENVIRONMENTAL ASSESSMENT

•Submit Project File Report to Ministry of Environment & Climate Change for 30 Day Review.

TO PROVIDE COMMENT, OR TO BE ADDED TO THE STUDY STAKEHOLDER LIST, PLEASE CONTACT:

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THANK YOU

FOR PARTICIPATING IN THE
EMMA STREET TO EARL STREET PEDESTRIAN BRIDGE
CLASS ENVIRONMENTAL ASSESSMENT