



Meadowlily Footbridge Rehabilitation

Municipal Class EA

Civic Works Committee
December 3, 2012



Background

- The existing structure is a 3 span steel truss bridge over the south branch of the Thames River, built in 1910.
- It is one of the few surviving truss bridges in the London area.
- A 2009 Council resolution recognized the bridge as an important cultural heritage resource that should be protected under Part IV of the Ontario Heritage Act and be recognized in perpetuity as a footbridge.
- A 2011 report confirmed the cultural significance and identified rehabilitation as the best possible solution for the bridge (to be confirmed through EA process).
- On July 24, 2012, City Council approved a By-Law to designate the bridge under Part IV of the Ontario Heritage Act.



Issues To Be Addressed

- There is no significant need or benefit in opening the bridge to vehicles.
- The bridge does not need to be designed to carry vehicle traffic or other utilities other than those required for snow plowing and maintenance.
- The design should consider some form of physical access control to ensure usage is limited to pedestrians and bicycles.
- The site is a significant destination for pedestrians and cyclists , therefore lighting and signage should be considered.
- Rehabilitation should include deck replacement, strengthening the existing members and replacing some members, installation of new railings and recoating of the superstructure (trusses).
- Rehabilitation measures should be implemented such that no in-water work is required. All work should be contained in the City's right-of-way limits where possible.
- Improvements to approach roads at both ends of the bridge should be considered.
- Crime Prevention Through Environmental Design (CPTED) principles should be considered where possible to improve safety and reduce vandalism.
- Construction to be completed in 2013.



Alternative Solutions Considered

The following alternative solutions were identified and assessed:

DO NOTHING

- This alternative provides a base to which the other alternatives can be compared.
- No measures to improve the condition of the structure are considered and the bridge remains in its present condition.

REHABILITATE THE EXISTING BRIDGE

- Rehabilitate the bridge using either historic or contemporary materials and techniques.

PARTIAL REHABILITATION & REPLACEMENT

- Partially rehabilitate sections of the bridge & replace pony trusses.

REPLACE THE EXISTING BRIDGE

- Replace existing bridge with a new bridge that complies with acceptable design standards.

Summary of Alternative Solutions Evaluation

Option 2 A: Bridge Rehabilitation (Historic)

- Increased load restriction on the bridge;
- Overall aesthetics preserved;
- Not all elements would be replaced;
- Longer construction time required due to replacement of some items;
- Risk of increased construction costs due to limited specialty labour force (some items);
- In-water works not required; and
- Moderate cost option.

Option 3: Partial Rehabilitation & Replacement

- Selective repairs made to the main span of the bridge;
- Replacement of existing pony trusses required;
- New footings required;
- In-water works required and
- Moderate cost option.

Option 2 B: Bridge Rehabilitation (Contemporary)

- Contemporary materials/techniques;
- Overall aesthetics preserved;
- Reduced dead load on the bridge;
- Not all elements would be replaced;
- In-water works not required; and
- Lowest cost option.

Option 4: Bridge Replacement

- Does not comply with Council resolution;
- Loss of a culturally significant structure;
- Removal and replacement construction could be faster than rehabilitation;
- In-water works would be required; and
- Most expensive option.

Public Comments Received

- Provide a safe bridge to cross;
- Reduce vandalism;
- Reduce light pollution;
- Install a temporary bridge during construction;
- Provide signage;
- Limit removal of trees;
- Install railing similar to King Street Bridge;
- Bridge rehabilitation was supported.



Recommended Solution

Option 2 B: Bridge Rehabilitation (Contemporary)

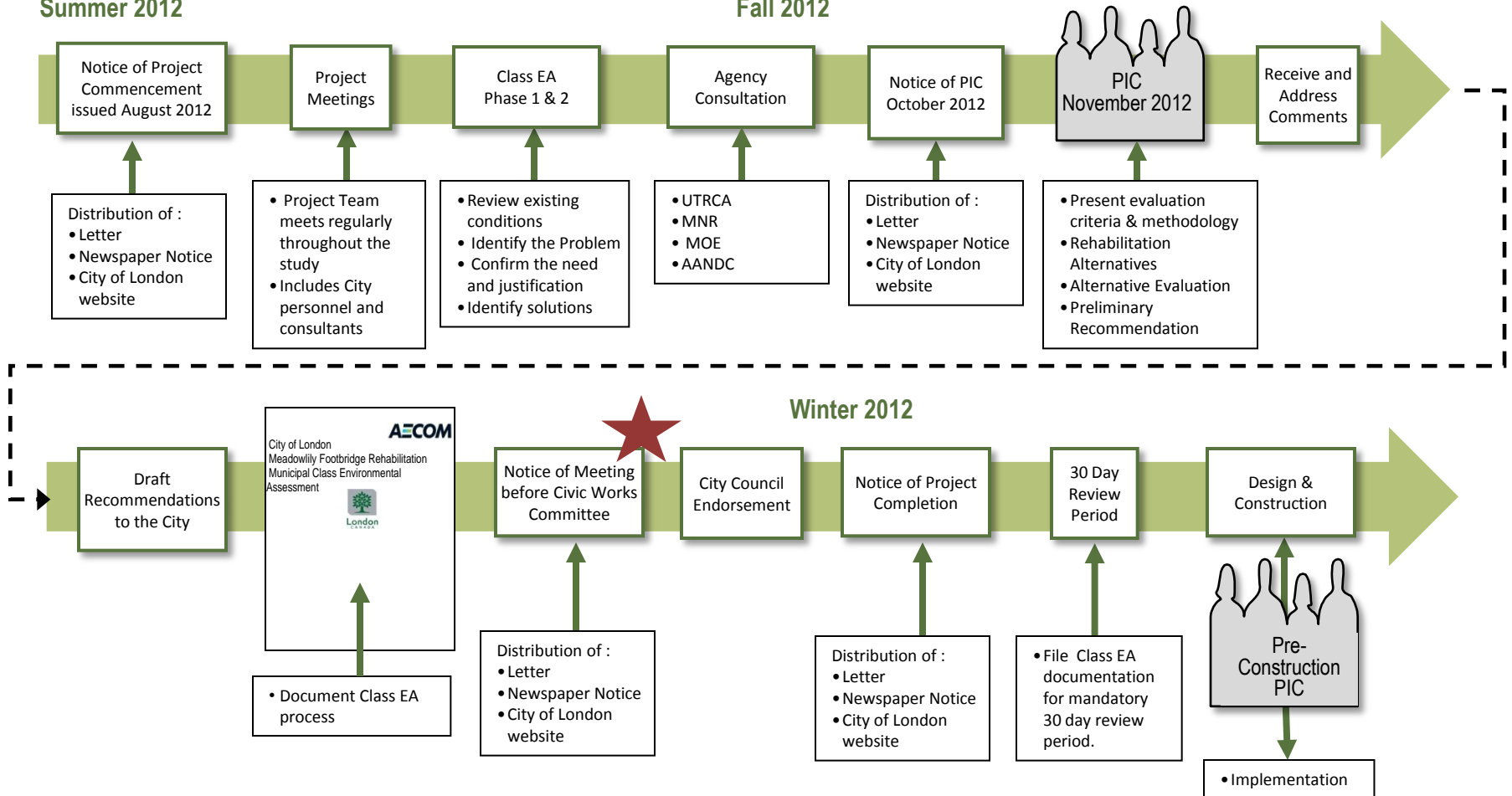
This option represents the preliminary preferred solution for the following reasons:

- Culturally significant structure retained;
 - Dead load reduced;
 - Existing chain link fence removed;
 - Bridge deck restored to full width;
 - Design will incorporate CPTED principles for safety;
 - Anticipated service life of 50 years;
 - High durability restoration/low maintenance materials;
 - No in-water work is required;
 - Contemporary materials will be used but historic appearance retained;
 - Restricts access to area beneath the bridge;
 - Limited, formal parking provided at both ends of bridge;
 - Access maintained to properties during and after construction;
 - Barriers and bollards will be installed at both approaches to discourage vehicular traffic across the bridge; and
 - Minor ditch erosion associated with Meadowlily Road, within the study area, has been addressed.
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- Estimated Project Cost **\$1.9M** (lowest cost alternative).

Project Schedule

Summer 2012

Fall 2012



Meadowlily Footbridge Rehabilitation Municipal Class EA

Project Schedule

Fall 2012

- Present recommendations to Civic Works Committee & Council (opportunity for public participation at Civic Works Committee).

Winter 2012

- Issue a Notice of Completion and File the Screening Report for the mandatory 30 day review period.

- Detailed Design

- Project Tendering & Selection

Spring 2013 –
Fall 2013

- Construction

Preliminary Design / Sample Features

Bridge Details *



Construction Details *



Pre - Construction



Under Construction



Post Construction

* Examples of details and construction methods used on the King Street Bridge (AECOM 2010).