



# Kensington Bridge Municipal Class Environmental Assessment



Ecological Community Advisory Committee Meeting

February 16, 2022



## PIC #2

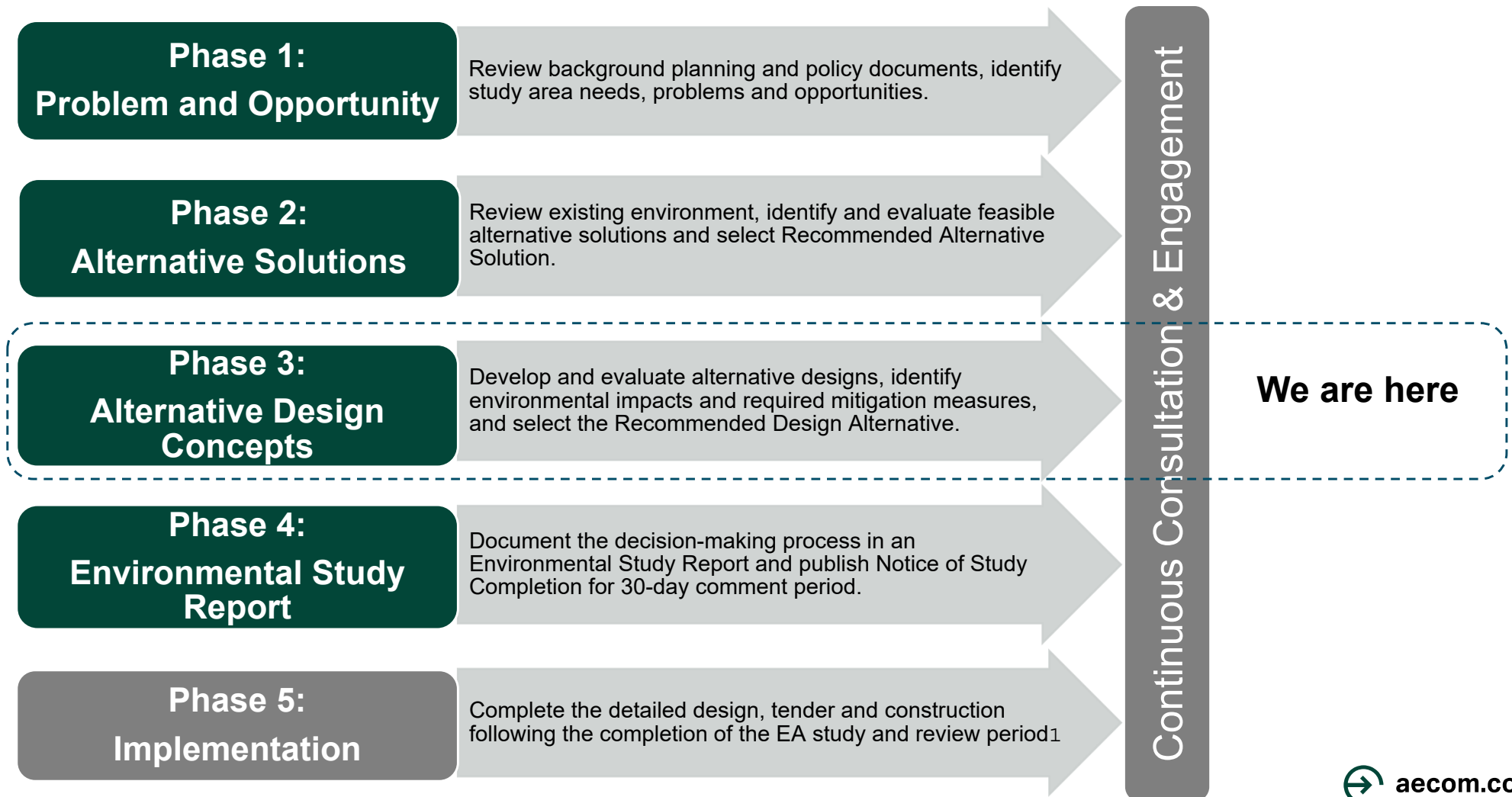
The Purpose of PIC#2 will be to:

- Present the alternative design concepts.
- Present the recommended design concepts.
- Solicit feedback.



# Municipal Class EA Study Process

The Class EA study will be completed in accordance with the **Ontario Environmental Assessment Act** and will fulfill the requirements of the Municipal Class EA process for **Schedule C** projects. At the end of the EA process, an **Environmental Study Report** will be prepared for public review and comment to document the planning process followed.



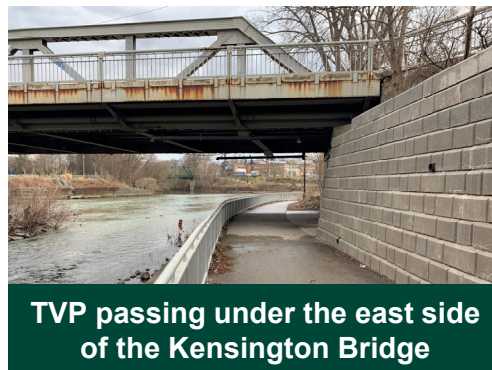
# Study Area Features / Existing Conditions

## Bridge Description

- Kensington Bridge was constructed in 1930 and is 3-span steel modified Warren pony-truss structure.
- The bridge deck currently has two 3.0 m wide eastbound travel lanes.
- The Annual Average Daily Traffic count at the bridge is 9,500 vehicles per day.
- Active transportation accommodations include sidewalks on both sides of the bridge and bidirectional cycle track on the south side of the bridge (2020).
- The Thames Valley Parkway (TVP) passes below the east and west spans adjacent to the Thames River. The daily users on the TVP averages about 1200 users per day with over 2500 users per day during summer periods.



Thames Valley Parkway (TVP)



TVP passing under the east side of the Kensington Bridge



Existing two way cycle track on Kensington Bridge



Existing pedestrian walkway on Kensington Bridge

# Study Area Features / Existing Conditions

## Bridge Condition

- Previous major rehabilitation includes deck replacement (1960), construction of an exposed concrete overlay (1985), and structural steel recoating (1996). Kensington Bridge is 92 years old and has ongoing maintenance issues. Maintenance of the bridge since 2004 has included abutment refacing, sidewalk and deck repairs, bearing seat repairs, and replacement of the expansion joints.
- Exposed concrete deck is in fair to poor condition with narrow to wide cracking, concrete delaminations and previous patching. Concrete repairs and lane closures are required annually to address issues.
- Structural steel is in fair condition with localized poor conditions below the deck at the abutments and piers.
- Bridge bearings are in fair to poor condition with light to severe corrosion, flaking and pack rust.



Kensington Bridge – South Elevation



Localized corrosion on bridge truss



Kensington Bridge Soffit



# Natural Heritage Studies

## **Work completed as part of this study include:**

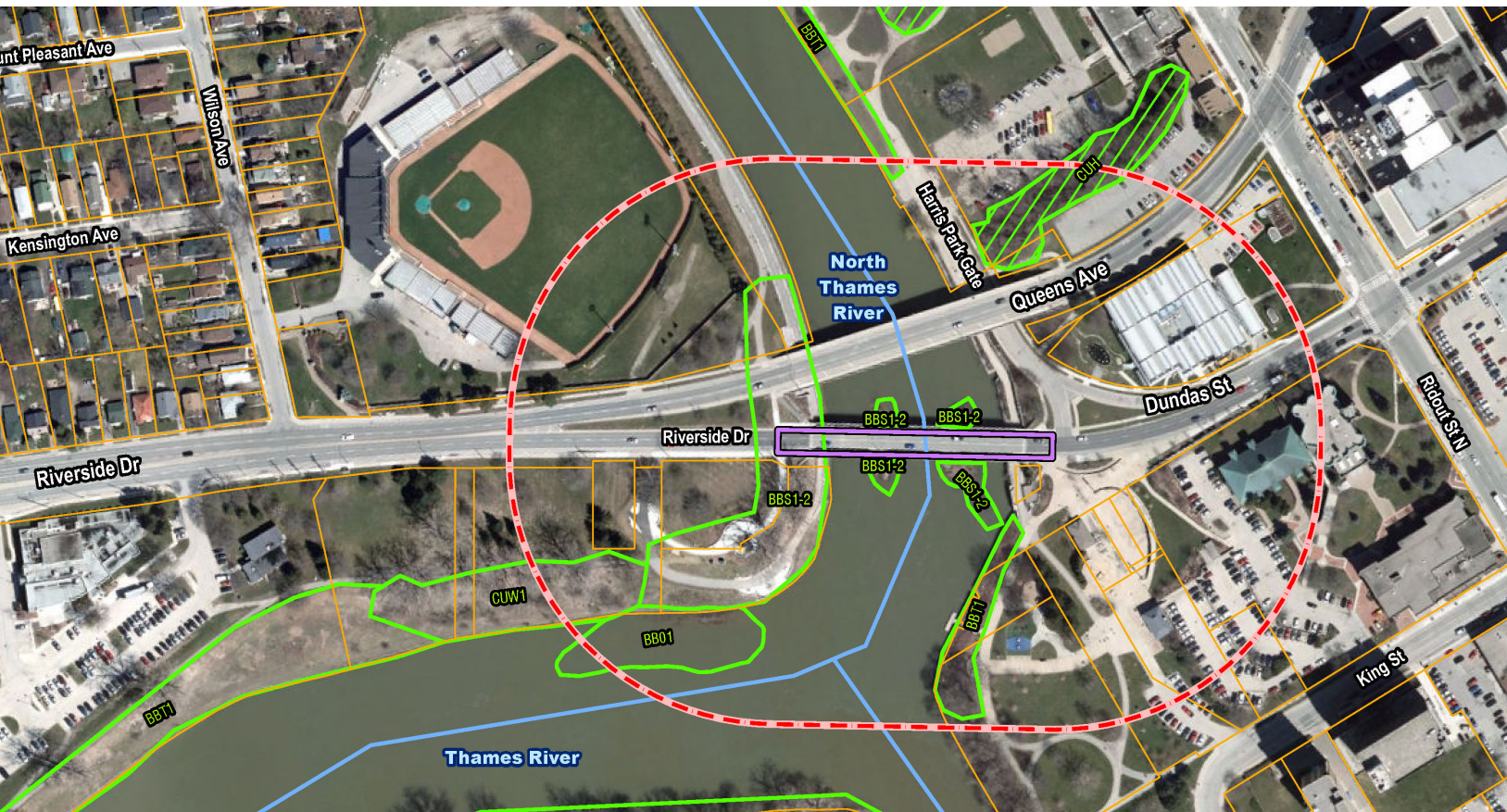
- Species at Risk (SAR) Screening and Habitat Assessment.
- Significant Wildlife Habitat (SWH) Screening.
- Aquatic Habitat Assessment.
- Environmental Land Classification (ELC) community confirmation.
- Incidental Wildlife Observations.

## **Previously Completed Studies reviewed for existing natural heritage information:**














- One River Master Plan Forks of the Thames – Environmental Impact Study (Matrix Solutions Inc., 2019).
- London Rapid Transit Project - Environmental Impact Study (WSP, 2018).

# Natural Heritage Study Area

## Study Area and Ecological Land Classification (ELC)



### Legend

-  Subject Lands
-  Study Area
- ELC Vegetation Code**
-  BB01: Mineral Open Beach/Bar
-  BBS1-2: Willow Gravel Shrub Beach Bar
-  BBT1: Mineral Treed Beach/Bar
-  CUH: Cultural Hedgerow
  
-  FOD7: Fresh-Moist Lowland Deciduous Forest
-  CUW1: Mineral Cultural Woodland
-  Delineated by Photo Interpretation
- General Features**
-  Parcel Limit
-  Railway
-  District, County, or Regional Road
-  Watercourse

# Existing Conditions

## Species at Risk:

A total of 31 SAR (END, THR and SC) were identified as potentially occurring in the vicinity of the Study Area. Of these, 3 terrestrial and 4 aquatic species were confirmed or had high probability of occurring within the study area:

### Aquatic



Black Redhorse - THR & THR\*\*



Silver Shiner – THR & THR\*\*



Round Pigtoe – END & END\*\*

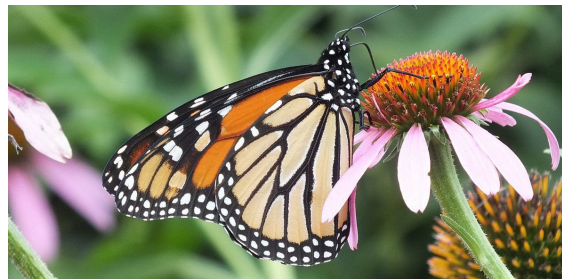


Wavy-rayed Lampmussel – THR & SC\*\*

### Terrestrial



Barn Swallow\* - SC



Monarch – SC



Spiny Softshell Turtle - END

\*Barn swallow was recently down listed to Special Concern in January 2023.

\*\*Provincial & Federal designation

**END** – Endangered, **THR** – Threatened, **SC** – Special Concern.



# Problem and Opportunity Statement

The Problem and Opportunity Statement is the principal starting point of a MCEA and becomes the central theme and integrating element of the project. It also assists in setting the scope of the project.

## **The Problem:**

- To address ongoing maintenance issues with the bridge and achieve an additional service life objective of 50 years, complete concrete deck replacement, steel recoating and other major repairs are required.
- The Thames Valley Parkway (TVP) passes below the east and west spans of the bridge, with height clearances of 2.5 to 4.0m.
- The Bridge meets the criteria to merit heritage designation under the Ontario Heritage Act (OHA) and is currently designated under Part V of the OHA as part of Blackfriars/Petersville Heritage Conservation District.

# Problem and Opportunity Statement

## The Opportunity:

- To identify the preferred solution for a new or rehabilitated Kensington Bridge through supporting background studies, field investigations and a systematic qualitative evaluation process.
- Gather feedback from public, area stakeholders, agencies and Indigenous Communities allowing the sharing of ideas.
- Coordinate any bridge work with planned improvements to the TVP.



Kensington Bridge



Thames Valley Parkway (TVP) – West Side, North of Kensington Bridge and The Queens Bridge

# Alternative Planning Solutions Presented at PIC #1 (June 2022)

Planning solutions are alternatives that can implement the previously identified opportunities. The Planning Solutions for this project were identified below:

1. **Do Nothing** – This alternative provides a basis to which other alternative planning solutions can be compared. This alternative does not address the Problem and Opportunity Statement and therefore will not be evaluated as a viable option.
2. **Rehabilitate the Existing Structure** - This alternative would involve completing the recommended works to achieve a minimum 50-year service life objective. **Recommended and Carried Forward for further evaluation.**
3. **Replace Structure**
  - a) New Bridge on the existing alignment (remove existing bridge). **Not Recommended for further evaluation.**
  - b) New Bridge on a new alignment to the south. **Not Recommended for further evaluation.**

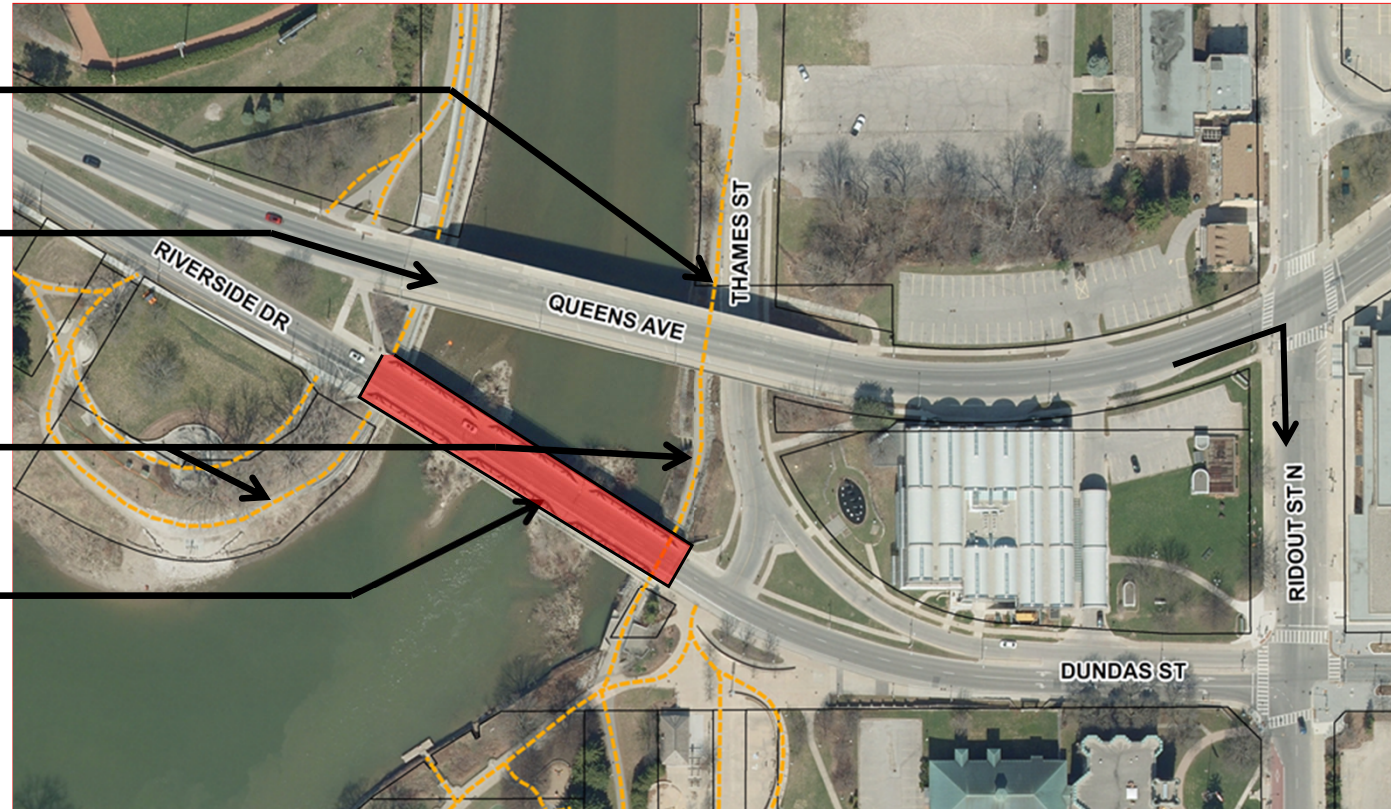
# PIC #1 Recommendation: Rehabilitate the Existing Structure

Coordination with planned replacement of retaining wall.

Traffic detour using The Queens Bridge during Construction. (coordination with Rapid Transit required).

TVP Closed during construction  
TVP Detours necessary.

Rehabilitate existing bridge with **necessary repairs to increase service life.**



## Rationale for Recommendation (Natural Heritage):

- 1) No in water works required for rehabilitation. Replacement would require significant in water works.
- 2) Least amount of impact to natural heritage features.

# Design Alternatives - Summary

## General Bridge Rehabilitation Base Scope – **Required Works**

- Deck replacement.
- Patch repairs.
- Joint elimination.
- Structural steel strengthening and recoating.
- Substructure repairs.
- Replacement of street lighting.
- Coordinate TVP improvements in detailed design.

## Pedestrian Railing System Alternatives

1. Rehabilitate and reuse the existing railing system.
2. Replacement with replicated/sympathetic design approach – **Recommended.**

## Bridge Barrier System Alternatives

1. Do Nothing – Structure and traffic are not protected from impact.
2. Concrete parapet wall.
3. Metal tube rail system – **Recommended.**

## Pillar Alternatives

1. Do Nothing – Maintain status quo (original pillars were removed and not part of arrangement).
2. Construct sympathetic Pillars at west end in the general area of the bridge in alignment with the truss (approaches/park).
3. Construct sympathetic Pillars at west end close to the bridge and outside of the sidewalk – **Recommended.**

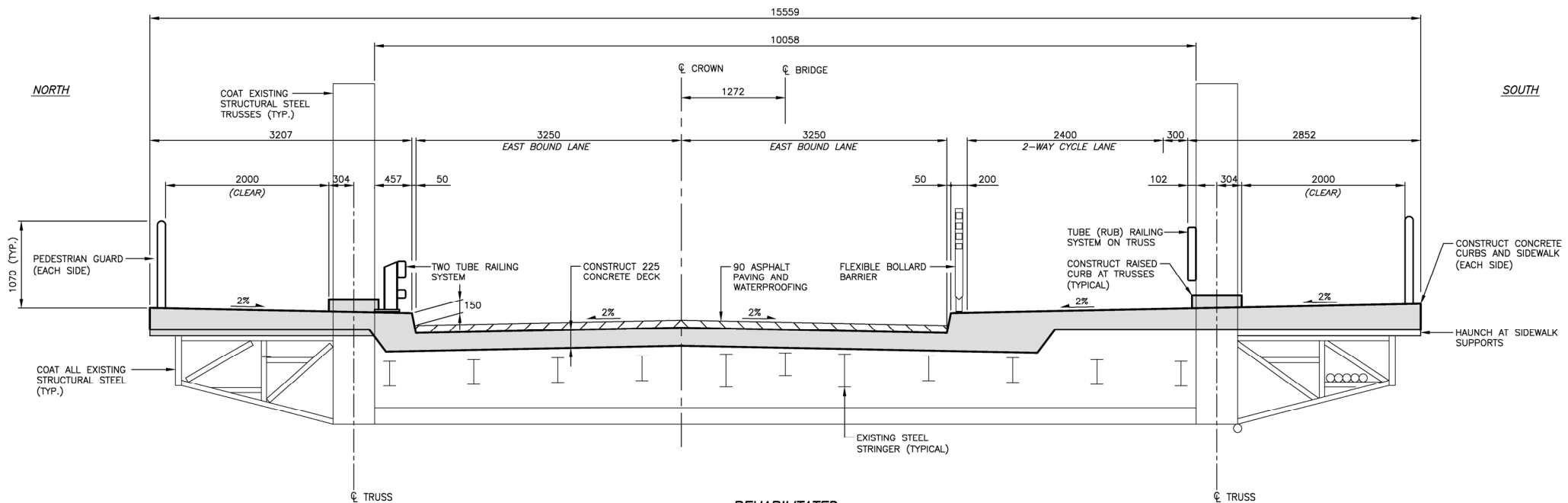
# Bridge Cross Section and Barrier System Design Summary

## Rationale for Tube System

- Less aesthetic impact, preserves views from the bridge.
- Protects cyclists from impacts with the bridge trusses.
- Provides some vehicle collision protection for the bridge trusses.

## Design Summary for Tubes System Barrier

- Barrier will be adjacent to the curb on the north side of the bridge.
- Barrier will be adjacent to the trusses on the south side of the bridge.



REHABILITATED  
 Preliminary Design Only – Lane widths and tube railing system to be confirmed during detailed design  
 Type of Barrier System being used will not impact Natural Heritage

# Other Considerations

## Lighting

- Two of four original poles are still in place, but original decorative lighting arms were replaced.
- Existing light poles are in poor condition and require replacement.
- Existing light poles have decorative sleeve that will be mimicked.
- Lighting levels to be upgraded to current standards.



Kensington Bridge Truss



Kensington Bridge Existing Light Standard  
Base



Kensington Bridge Existing Light Standard

# Permitting and Approvals

## Anticipated Permitting and Approvals:

- **Endangered Species Act (ESA), 2007, MECP**
  - Project currently meets criteria under "Threats to Health and Safety, non-imminent" and will require registration in advance of construction. Requirements under ESA are to be confirmed at detailed design.
- **Species at Risk Act (SARA), 2002 Fisheries and Oceans Canada (DFO)**
  - Potentially required. Should proposed activities be needed within the high-water mark of the Thames River, or vegetated riparian communities, including vegetation removal or disturbance in riparian areas, DFO submission for Project Review is required.
  - A SARA permit application may be required as determined by DFO following project review.
- **Migratory Birds Convention Act, 1994, CWS**
  - Not anticipated if vegetation removal and the installation of any required exclusionary measures occurs outside of the breeding bird season.
- **Fisheries Act , 1985, DFO**
  - A DFO Request for Review to the DFO Fish and Fish Habitat Protection Program (FFHPP) may require submission in advance of commencement of the works.



## Anticipated Permitting and Approvals Continued:

- **O.Reg. 157/06 Upper Thames River Conservation Authority (UTRCA) Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses, UTRCA**
  - A Section 28 Permit should be obtained in advance of the proposed rehabilitation activities.
  - Consultation with the UTRCA at detailed design will be required to determine applicable permitting requirements.



# Construction Impacts

- Rehabilitation is not anticipated to result in any permanent change to the footprint of the existing bridge.
- Access to the bridge deck and abutments from existing ROW will minimize or avoid vegetation removal,
- Access to centre pier from the bridge deck, scaffolding, or other means to work outside of the water will avoid temporary footprint.



# Construction Impacts Mitigations

- **Timing Restrictions** – Should minimal tree pruning, or removal be required to allow machinery access, all works should be kept to a minimum and should occur outside of the bird nesting season: **April 1 to August 31** and bat roosting season: **April 1 to September 30**
- **Environmental Monitoring** - Regular environmental monitoring during construction should be initiated at the commencements of construction activities and should include environmental compliance monitoring and adjacent natural heritage feature monitoring
- **Equipment Cleaning and Inspection** - To control the potential for invasive species introduction or spread within the construction site and adjacent lands, it is important to ensure that equipment entering the project site is clean.
- **Species at Risk and Wildlife Handling Protocol** - Due to the presence of several SAR and local wildlife within the Thames and associated riparian habitats, it is recommended that a Species at Risk and Wildlife Handling Protocol be developed and kept readily available on the construction site

# Next Steps

## Winter 2023 Collect input from PIC #2

Receive and consider input from the public, agencies and stakeholders to confirm the preferred planning alternatives.

## Winter/Spring 2023 Environmental Study Report

Prepare Environmental Study Report (ESR)

ECAC Review of ESR

Report will be available for Public Review for 30-Days.

If no issues are raised within the 30-day review period and subject to MECP acceptance, the City can proceed to detailed design.