

# County of Bruce

## Class EA for the Durham Street Bridge Community of Walkerton



PUBLIC INFORMATION MEETING

May 1, 2024



# Agenda

- Project Background
- Class EA Process
- Review of Alternatives
- Preferred Recommendation
- Anticipated Schedule
- Lane Restrictions during Construction



# Durham Street Bridge

## Bridge Details

- Five span rigid frame T-Beam Girder Bridge with a drop-in centre span with half joints and cantilevered end spans.
- Constructed Circa 1937

## Deficiencies

- Concrete Deterioration
- Safety concerns associated with the drop in centre span



# Durham Street Bridge - Deficiencies

Concrete deterioration



Drop in half joint



# Bridge History

- Bridge Constructed: 1936-1937
- Bridge Repairs 1966
  - Replace Approach Slabs/Repave Deck
- Detailed Deck Condition Survey (Trow) 1993
- Bridge Repairs 1995
  - Deck overlaid, new expansion joints & structural repairs
- Half Joint Span Review 2019
  - Visual Inspection from lift/GPR review
  - Recommended replacement within 1-5 years
- Detailed Deck Condition Survey (HAL Group Inc.) 2023
  - Reinforcement/Rehabilitation determined to be viable

# Project Background

- **February 2021** – Class EA process initiated
- **2021/2022** – Cultural Heritage/Geotechnical/Hydraulic/Aquatic Habitat Studies Completed
- **Fall 2022** – Initial Public Information Meeting
- **June 2023** – Business Owners Meeting
- **Fall 2023** – Third Party Review Initiated by County
- **Winter 2023/24** – Bridge Condition Survey and Third Party Review Completed
- **February 2024** – Load Limit Restrictions Enforced at Crossing
- **April 2024** - Bridge Reinforcement Plan approved by County Council

# CLASS EA STUDY PHASES

**PROBLEM DEFINITION**



**EVALUATION OF ALTERNATIVES**



**EVALUATION OF DESIGN CONCEPTS**

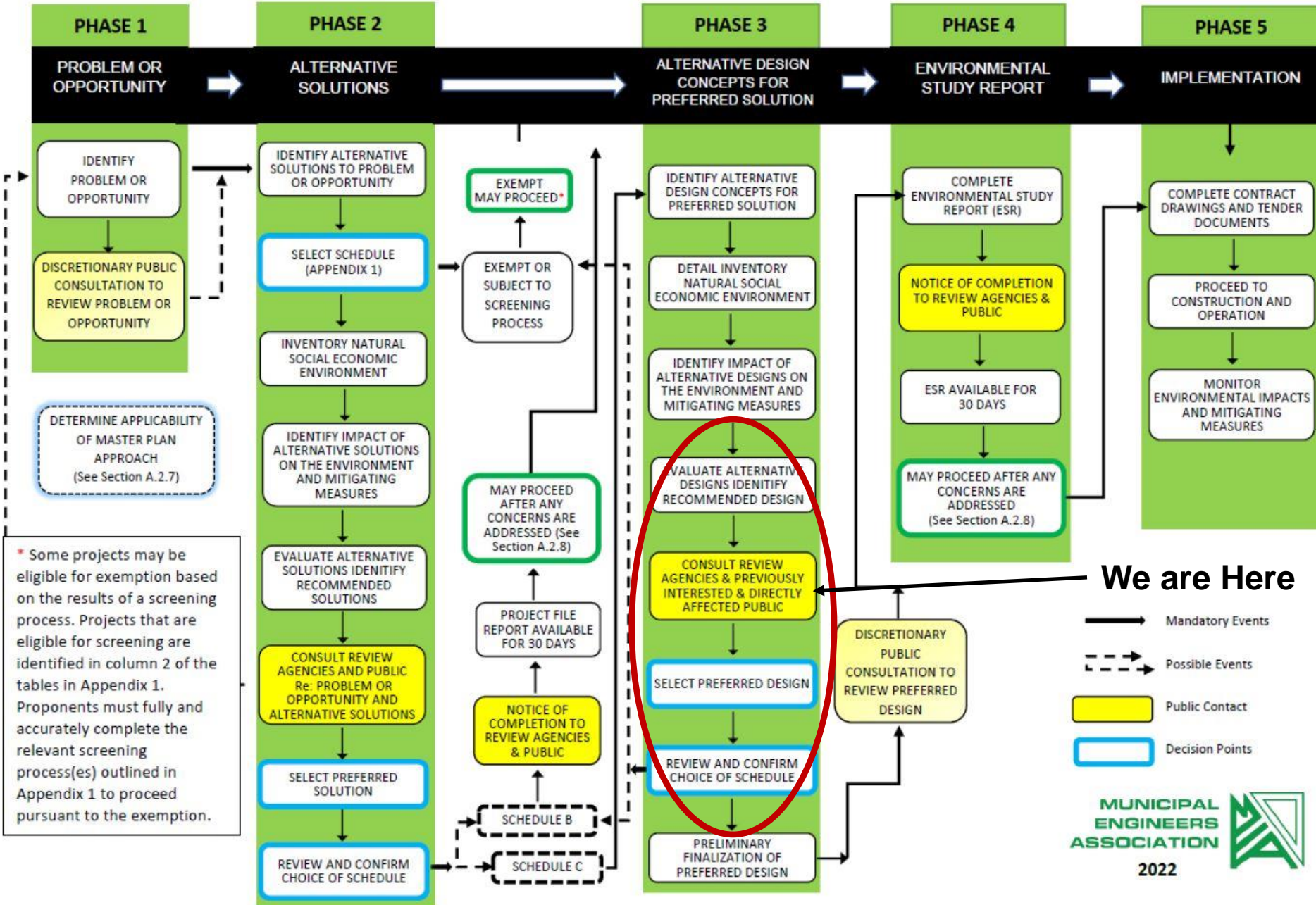


**PREPARE ENVIRONMENTAL STUDY REPORT**



**PROJECT IMPLEMENTATION**

# CLASS EA STUDY PHASES





# Class EA Bridge Alternatives

- **Alternative 1** – Replacement in the Same Location
  - Remove existing bridge and construct a new bridge in the same location
- **Alternative 2** – Rehabilitate the Existing Bridge
  - Complete repairs to the crossing to address existing concrete deterioration at the half-joints, deck and railing repairs, other identified deficiencies
- **Alternative 3** – Do Nothing – No work would occur to address the existing deterioration

# Evaluation of Alternatives

- **Alternative 1 - Bridge Replacement**

- Initially this alternative was preferred due to concerns with the bridge's age and the half-joints
- Concerns expressed by members of the public due to proposed detour and anticipated impacts to residents and local businesses
- Concerns also identified due to length of construction period and costs associated with bridge replacement

# Evaluation of Alternatives

- **Alternative 2 - Bridge Rehabilitation**
  - This alternative was not initially recommended due to concerns with the bridge's age and half joint design
  - Third Party Review and Updated Bridge Condition Survey indicated that bridge could be rehabilitated removing the single load path (half-joints)
  - Condition of other bridge components determined to be better than expected
  - Construction could be completed with lane restrictions rather than complete closure minimizing resident's concerns

# Evaluation of Alternatives

- **Alternative 3 – Do Nothing**
  - Not a viable option given the current condition of the half-joints

# Recommended Bridge Alternative:

- Alternative 2 – Bridge Rehabilitation
  - Addresses identified bridge deficiencies
  - Minimizes impacts to residents and businesses
  - Less expensive than full replacement



# Proposed Schedule

- **May 19/24** – End of comment period following PIC
- **May 2024** – Initiate Emergency Bridge Reinforcement/Repairs
- **June 2024** – Present Preferred Alternative to County Council
- **June 2024** – Finalize ESR/Publish Notice of Study Completion
- **August 2024** – Tender Bridge Rehabilitation Works
- **Fall 2024** – Emergency Reinforcement Completed
- **Winter 2025** – Initiate Rehabilitation Work
- **Summer/Fall 2025** – Rehabilitation Completed

# Next Steps

- Collect input from Public & Stakeholders
- County Council to select Preferred Alternative
- Finalize Environmental Study Report (ESR)
- Publish Report and Notice of Study Completion for 30 day mandatory review period
- Initiate Emergency Bridge Reinforcement Work
- Tender Bridge Rehabilitation Works
- Complete Bridge Rehabilitation following Completion of the Emergency Reinforcement Work

# Questions