



GEORGINA

Old Shiloh Road Bridge Municipal Class Environmental Assessment Study Public Information Centre May 17, 2023





WELCOME



This engagement presentation will:

- Establish channels of communication with public & stakeholders
- Detail the study area, study purpose & objectives
- Present the need & justification for the study and issues to be resolved
- Identify alternative solutions & potential environmental impacts
- Seek input & comments for consideration in the selection of the final preferred solution

Public and stakeholders should:

- Review the presentation material
- Ask questions of the Town and/or consultant
- Submit comments & indicate if you would like to be kept informed of the process
- A digital comment form is available through the Town of Georgina website and hard copies are available at the sign in desk





LAND ACKNOWLEDGEMENT



The Town of Georgina recognizes and acknowledges that we are on lands originally used and occupied by the First Peoples of the Williams Treaties First Nations and other Indigenous Peoples, and we would like to thank them for sharing this land. We would also like to acknowledge the Chippewas of Georgina Island First Nation as our close neighbour and friend, one with which we strive to build a cooperative and respectful relationship.

We also recognize the unique relationship the Chippewas have with the lands and waters of this territory. They are the water protectors and environmental stewards of these lands, and we join them in these responsibilities.

STUDY AREA

The Town of Georgina has retained Tatham Engineering Limited to complete a Schedule B Municipal Class Environmental Assessment (Class EA Study) under the Environmental Assessment Act (R.S.O. 1990, c. E.18) to determine the preferred method of improvement to Old Shiloh Road Bridge. The bridge is located on Old Shiloh Road approximately 750 m west of Victoria Road, in the Hamlet of Udora.



STUDY PURPOSE

The **PURPOSE** of study is to:

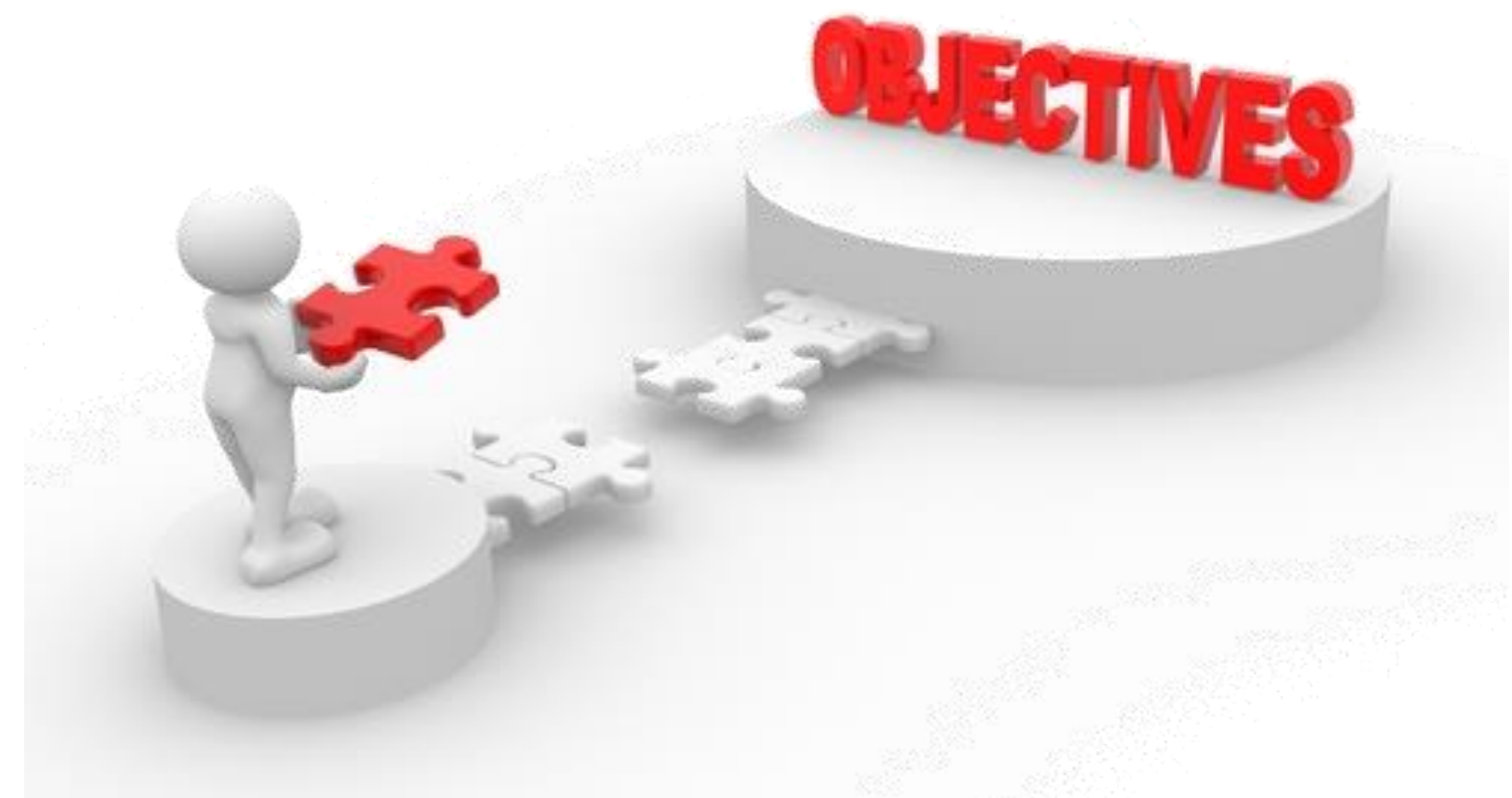
- Develop alternative solutions to improve safety at the bridge
- Identify the location, extent and sensitivity of affected environments
- Assess the alternatives given potential environmental impacts
- Identify the preferred solution
- Establish measures to mitigate impacts
- Satisfy the Municipal Class EA requirements



STUDY OBJECTIVE

The **OBJECTIVE** of the study is to identify the preferred solution to improve the Old Shiloh Road Bridge considering:

- The transportation network
- The long term asset management
- The natural environment and climate change
- The socio-economic environment
- The heritage environment
- The needs of motorists



BACKGROUND



The Old Shiloh Road Bridge is 98 years old, it was rehabilitated in 1988 and again in 2011. It is currently posted with a triple load restriction of 20, 21, 27 tonnes. The 2018 and 2020 visual inspections identified the bridge is in need of replacement and included the following observations:

- Spalling, delamination and scaling, and cracking noted in concrete curbs, concrete arch top, bottom and vertical chords, concrete railing, floor beams and deck
- Existing railing is substandard
- Severe corrosion of the existing deck drains

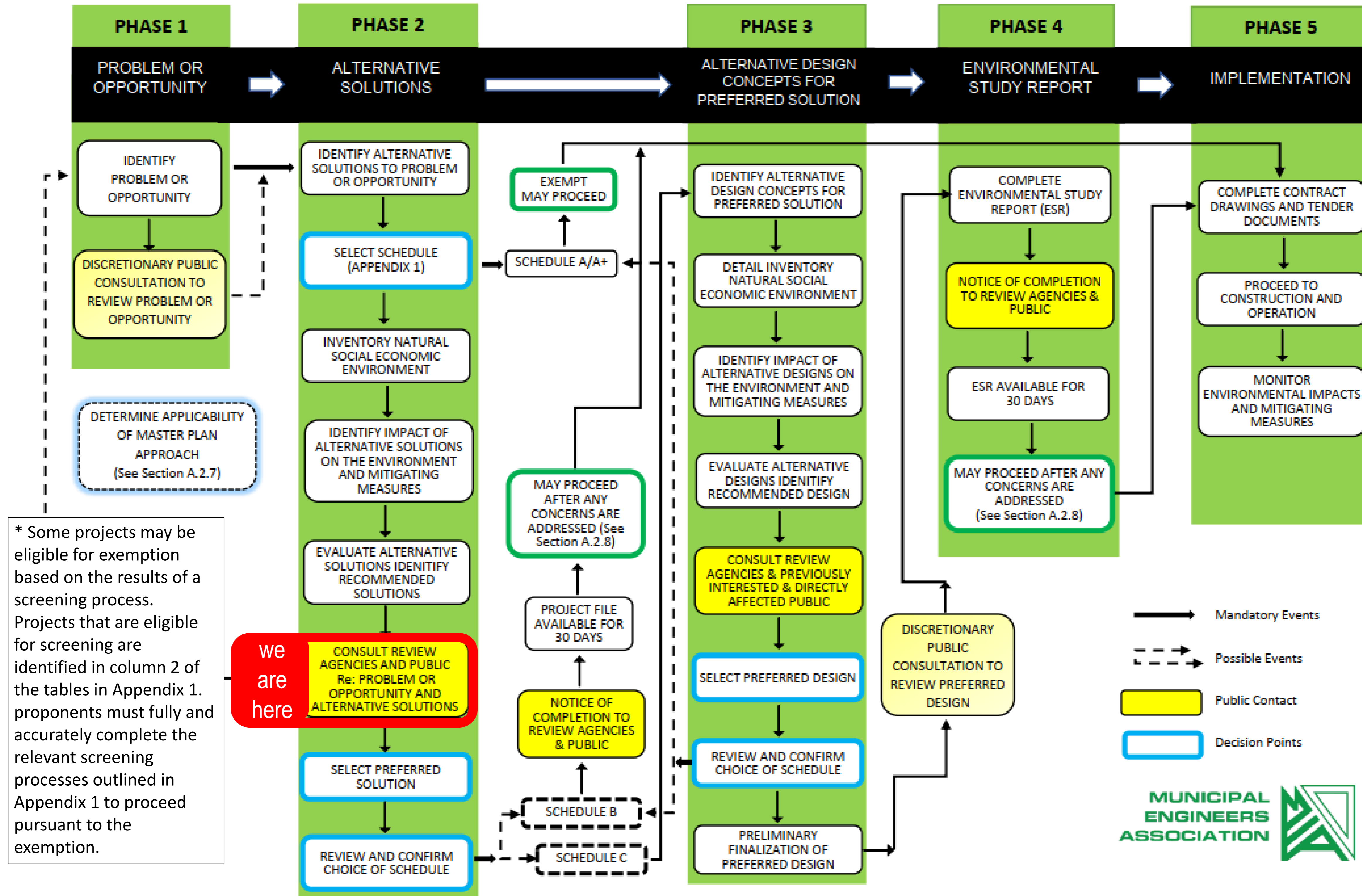


BACKGROUND

- Narrow to wide cracks, scaling and spalling, and efflorescence in abutments, wingwalls, and ballast walls
- There is evidence of older shotcrete repairs as well as more recent concrete patch repairs
- Light to medium concrete erosion is occurring at the base of the abutment walls



MUNICIPAL CLASS EA PROCESS



PROBLEM IDENTIFICATION

Existing conditions:

- Single-lane bridge on a two-lane road
- Ditches on either side of road
- Bridge has a load capacity restriction of 20, 21, & 27 tonnes for single unit vehicles, vehicle combinations with one trailer or semi-trailer, and vehicle trains with more than one trailer respectively
- Constructed circa 1925, the bridge is 98 years old and has exceeded its design service life
- The right-of-way (ROW) is approximately 20 metres wide
- Serves approximately 919 vehicle crossings per day
- Has a posted speed limit of 60 km/hr
- Has the hydraulic capacity to pass the minimum design flows (1:50 year) with less than 1.0 m clearance from water level to underside of bridge
- Substandard bridge barrier
- Deterioration of several bridge elements



PROBLEM STATEMENT: “Old Shiloh Road Bridge has exceeded its design service life, is deteriorating, and has been posted with a 20, 21, 27 tonne triple load posting limit. The Town of Georgina has identified the need to assess alternative solutions at this crossing to address the deteriorating condition and best meet current standards while minimizing impacts to the surrounding residents and environments”

ALTERNATIVE A: DO NOTHING

- maintain existing conditions with no improvements
- bridge will eventually be closed

ALTERNATIVE B: REHABILITATE EXISTING BRIDGE

- reduces safety issues
- extends lifespan of bridge
- load posting remains
- no improvement to geometry and capacity

ALTERNATIVE C: REMOVE & REPLACE BRIDGE

- eliminates load posting
- improves roadside safety
- opportunity to improve geometry and capacity

ALTERNATIVE D: CONSTRUCT NEW BRIDGE ADJACENT TO EXISTING BRIDGE

- eliminates load posting on new bridge
- improves roadside safety
- opportunity to improve geometry and capacity

PRE-SCREEN ALTERNATIVES

Can the alternatives fully address the problem statement?

- × Alt A – no improvements and continued deterioration will lead to eventual closure
- ✓ Alt B – reduces safety issues, extends structure lifespan, no improvement to geometry
- ✓ Alt C – improves safety, extends lifespan, improves geometry, eliminates load posting
- ✓ Alt D – eliminates load posting, improves safety, improves geometry

EXISTING CONDITIONS

- One inactive bird nest was found under the bridge.
- Suitable habitat features present for certain reptile and amphibian species
- Floodplain pools may be present to support amphibian breeding habitat
- Fish habitat assumed to be present
- Area may be amenable to supporting foraging habitat for bats
- Area is potential habitat for generic wildlife species
- No endangered species were recorded during the site review
- Maintenance and repair activities on the existing bridge have normal impacts to greenhouse gas emissions
- Bridge hydraulic capacity meets current capacity requirements with limited clearance available to the underside of bridge during larger storm events.



POTENTIAL IMPACTS

- The most significant risk is related to water quality and downstream fish habitat;
- All minor impacts can be mitigated with reasonable construction practices
- Increase in span or raising the bridge will improve clearance to underside of bridge, however there is risk of negative impacts to road geometry and upstream water levels during regional storm events

- Land use is primarily residential
- Alternate access across the watercourse is available via Regional Road 32 (Ravenshoe Road)
- Detour length of 4.5 km (+/- 5 min)
- Structure does not meet current geometric standards
- Existing right-of-way is approximately 28m at the bridge, and narrows to 26 east of the bridge and 24 m west of the bridge
- Safety is of the utmost importance



POTENTIAL IMPACTS TO SOCIAL ENVIRONMENT

- potential property impacts under Alternative D
- potential impacts to travel during construction
- potential noise impacts during construction

ARCHAEOLOGICAL ENVIRONMENT

- Stage 1 Archaeological Assessment (desktop review) concluded that the study area has been identified as a property that exhibits potential to yield archaeological deposits of cultural heritage value or interest
- Stage 2 Archaeological Assessment (test pits) of the study area is warranted
- To be completed in areas identified as having archaeological potential which will be impacted by the preferred alternative once identified



POTENTIAL IMPACTS TO ARCHAEOLOGICAL ENVIRONMENT

- Stage 2 archaeological assessment is required in areas of archaeological potential



CULTURAL HERITAGE ENVIRONMENT



- The bridge is considered a rare or unique example of a bridge structure, and the bridge type has been identified as a structure of cultural heritage value and significance in the Grand River Watershed Heritage Bridge Inventory in 2013
- The bridge meets the criteria set forth in O.Reg. 9/06: Criteria for Determining Cultural Heritage Value or Interest (under Historical or Associated Value and Contextual Value categories), and a Heritage Impact Assessment (HIA) was deemed appropriate
- A cultural heritage evaluation report has been completed and will be filed with the Town as well as the Ministry of Tourism, Culture and Sport
- Relocating the existing bridge for use in an alternate location may be considered if removal is a preferred alternative, however due to the structure type this is likely to be impractical
- A Heritage Impact Assessment is recommended to identify the impacts to heritage value associated with the preferred alternative and provide recommended mitigation measures.

POTENTIAL IMPACTS TO CULTURAL HERITAGE ENVIRONMENT

- potential impact to cultural heritage depending on alternative chosen
- a Heritage Impact Assessment will be completed to identify impacts and recommended mitigation measures once a preferred solution is identified



PRELIMINARY ASSESSMENT OF ALTERNATIVES



Assessment Criteria		Weight	Alternative A		Alternative B		Alternative C1		Alternative C2		Alternative D	
			Do Nothing		Rehabilitate the Existing Bridge		Remove and Replace with Single Lane Bridge		Remove and Replace with Two Lane Bridge		Construct a New Bridge Adjacent to the Existing Bridge	
			score	weighted score	score	weighted score	score	weighted score	score	weighted score	score	weighted score
Physical Environment	road geometry and alignment	6	0.0	0.0	0.0	0.0	0.0	0.0	2.0	12.0	1.0	6.0
	structural stability and load restrictions	10	0.0	0.0	1.0	10.0	2.0	20.0	2.0	20.0	1.5	15.0
	roadside protection	6	0.0	0.0	1.0	6.0	2.0	12.0	2.0	12.0	1.5	9.0
	traffic operations	7	0.0	0.0	0.0	0.0	0.0	0.0	2.0	14.0	1.5	10.5
	maintenance and snow removal	6	0.0	0.0	0.0	0.0	0.5	3.0	2.0	12.0	0.5	3.0
	Sub-Total	35		0.0		16.0		35.0		70.0		43.5
	Natural Environment	fisheries/aquatic impacts	6	0.0	0.0	-0.5	-3.0	-1.0	-6.0	-1.5	-9.0	-1.0
wildlife/terrestrial impacts		6	0.0	0.0	-0.5	-3.0	-1.0	-6.0	-1.5	-9.0	-1.0	-6.0
hydrology & hydraulics		6	0.0	0.0	0.0	0.0	0.5	3.0	0.5	3.0	0.0	0.0
vegetation impacts		3	0.0	0.0	0.0	0.0	-0.5	-1.5	-1.0	-3.0	-2.0	-6.0
water quality		4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub-Total		25		0.0		-6.0		-10.5		-18.0		-18.0
Social Environment	noise/construction impacts	5	0.0	0.0	-0.5	-2.5	-1.0	-5.0	-1.0	-5.0	-1.0	-5.0
	emergency services	5	0.0	0.0	0.5	2.5	1.0	5.0	2.0	10.0	1.5	7.5
	community impacts	5	0.0	0.0	0.5	2.5	1.0	5.0	1.5	7.5	-1.0	-5.0
	Sub-Total	15		0.0		2.5		5.0		12.5		-2.5

PRELIMINARY ASSESSMENT OF ALTERNATIVES



Assessment Criteria		Weight	Alternative A		Alternative B		Alternative C1		Alternative C2		Alternative D	
			Do Nothing		Rehabilitate the Existing Bridge		Remove and Replace with Single Lane Bridge		Remove and Replace with Two Lane Bridge		Construct a New Bridge Adjacent to the Existing Bridge	
			score	weighted score	score	weighted score	score	weighted score	score	weighted score	score	weighted score
Cultural Heritage Environment	archaeological impacts	4	0.0	0.0	-0.5	-2.0	-1.0	-4.0	-1.5	-6.0	-2.0	-8.0
	heritage impacts	6	0.0	0.0	2.0	12.0	1.0	6.0	0.5	3.0	1.5	9.0
	First Nations impacts	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Sub-Total	15		0.0		10.0		2.0		-3.0		1.0
Economic Environment	construction costs	10	0.0	0.0	-0.5	-5.0	-1.0	-10.0	-1.5	-15.0	-2.0	-20.0
	future maintenance costs	10	0.0	0.0	-1.5	-15.0	-1.5	-15.0	-1.0	-10.0	-2.0	-20.0
	property acquisition costs	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-5.0
	Sub-Total	25		0.0		-20.0		-25.0		-25.0		-45.0
Climate Change	impact on climate change	2	0.0	0.0	-0.5	-1.0	-1.0	-2.0	-1.5	-3.0	-1.0	-2.0
	resiliency to climate change	3	0.0	0.0	0.0	0.0	1.0	3.0	1.0	3.0	0.5	1.5
	Sub-Total	5		0.0		-1.0		1.0		0.0		-0.5
TOTAL		120		0.00		1.50		7.50		36.50		-21.50
OVERALL RANKING				4		3		2		1		5
		Weight: reflects the relative importance of each evaluation criteria within each project environment, and the relative importance of each project environment in relation to one another										
		Score: reflects the effect of each alternative as it relates to the evaluation criteria in comparison to Do Nothing (status quo); -2 denotes a significant negative impact, 0 denotes no impacts and +2 denotes a significant positive impact										
		Weighted Score: product of weight x score										

NEXT STEPS

Bridge Improvements:

- review and address stakeholder comments
- identify the preferred solution
- further develop the preferred solution with details for implementation & mitigation
- address natural environment and water crossing requirements & mitigation
- design 2024
- implementation 2025

Stakeholders:

The following are available on the Town of Georgina Website :

- presentation (PDF of slides)
- comment sheets

<https://www.georgina.ca/municipal-government/building-georgina/old-shiloh-bridge-environmental-assessment>



**SUBMIT YOUR COMMENTS BY
MAY 31, 2023**

**SUBMIT COMMENTS VIA E-MAIL OR
MAIL TO THE PROJECT CONTACTS BELOW**

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