

Frequently Asked Questions (FAQs)

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1. When will the study be presented to City Council for a decision?

The Design Alternatives and the evaluation of each is anticipated to be presented to City Council in November 2020 for selection of a Technically Preferred Alternative Design Concept. Once the Technically Preferred Alternative has been selected, a Notice of Study Completion, and associated 30-day Project File Report review period will be advertised.

2. When will construction take place for the chosen Technically Preferred Alternative?

Timing for implementation of the chosen Technically Preferred Alternative for this project will be determined subsequent to the completion of the study and will be subject to available funding and approvals. The South Main Street bridge will remain closed to the public until work is completed.

3. How can we follow the study?

You can ask to be included in the Study Contact List (letter mail or email) and will be contacted at each milestone of the study. Additionally, you can follow along with project updates which are posted to the City of Thorold website.

4. What is the timing of the study?

Phases 1 and 2 of the Municipal Class Environmental Assessment study is anticipated to be completed in 2020, with detail design and construction to be completed subsequently.

5. Are there public safety issues with the existing South Main Street bridge?

As per the Ontario Structural Inspection Manual bi-annual inspection, the existing South Main Street bridge is in poor condition and has been closed for public use at this time.

6. How is public access for pedestrians being maintained ?

Since the South Main Street bridge has been closed for public use at this time, the City of Thorold has constructed a temporary pedestrian pathway along River Street in order to maintain pedestrian linkage within this area.

7. What is the ballpark cost (Class D) estimate for each alternative?

The Class D cost estimates for the various alternatives are:

Alternative Design Concept 1 =	\$900,000
Alternative Design Concept 3 =	\$1,880,000
Alternative Design Concept 4 =	\$2,060,000

8. Can the City preserve the bridge as Heritage monument?

It was determined through a Heritage Impact Assessment of the South Main Street Bridge that it is not feasible to leave the bridge in place as a monument due to safety concerns. Additionally, allowing a bridge to remain and deteriorate would have impacts to the Provincially Significant Wetland (Welland River East Wetland Complex) that the bridge crosses.

9. Will copies of all assessment reports be made available to residents?

All assessment reports completed during this Municipal Class Environmental Assessment Study will be included in a Project File Report (PFR). The PFR will be made available for a 30-day public review period at the conclusion of the study. An advertisement will be published at that time indicating where the Project File can be viewed.

10. What are the findings of the structural investigation? Is the bridge safe for pedestrian and cycling?

As per the Ontario Structural Inspection Manual bi-annual inspection, the existing South Main Street bridge is in poor condition and has been closed for public use at this time. Therefore, the structure is not safe for pedestrian and/or cycling use in its current condition.

11. Is the bridge safe for outdoor recreational and leisure activities?

As per the Ontario Structural Inspection Manual bi-annual inspection, the existing South Main Street bridge is in poor condition and has been closed for public use at this time. Therefore, the structure is not safe for outdoor recreational and/or leisure activities in its current condition.

12. Can the bridge serve as a fishing pier (active recreation)?

As per the Ontario Structural Inspection Manual bi-annual inspection, the existing South Main Street bridge is in poor condition and has been closed for public use at this time. Therefore, the structure is not safe for fishing and/or active recreation in its current condition.

13. Can the bridge serve as observation deck (passive recreation)?

As per the Ontario Structural Inspection Manual bi-annual inspection, the existing South Main Street bridge is in poor condition and has been closed for public use at this time. Therefore, the structure is not safe to be used as an observation deck and/or for passive recreation in its current condition.

14. What is the cost to repair and what is cost of demolition?

Demolition of the bridge is estimated to cost approximately \$375,000.

The cost to repair the bridge varies significantly based on the scope of the rehabilitation. Due to the significant deterioration on many parts of the structure, the cost for a rehabilitation would be considered high. Furthermore, based on the current age and condition of the structure, repairs made to the bridge may not provide a long extension of service life, meaning further repairs could be needed in as few as 10 years.

15. What exactly makes the bridge unsafe?

This bridge is estimated to be around 90 years old – beyond the typical service life of 75 years. There have been no known rehabilitations to the structure in that time. While the structure has not been subjected to vehicle loads for many years, the structure still carries its self-weight and has been exposed to the elements, which has led to deterioration of many of the structural components. The most significant deterioration is found below the deck surface on the concrete girders and piers.

The concrete piers, constructed down to the riverbed, support the girders, which in turn support deck above. A Bridge Condition Survey was undertaken to quantify the deterioration, which indicated that more than 20% of the concrete pier surfaces are deteriorated. These poor areas are mostly on the front of the pier, and the top where the girders sit. As the pier concrete deteriorates and breaks away from the pier, the girder has less surface to be supported on, increasing the stress on the girder end. Deterioration on the girders is concentrated at these ends as well.

While these types of deficiencies are not uncommon on bridges, there are a few factors which must be considered.

- In order to complete the repairs, the bridge superstructure (girders and concrete deck) must be jacked to raise it off the concrete piers. In order to do so, the jacking system must be installed on the front face of the piers prior to lifting the bridge. This requires a design to ensure that the jacking system can lift the bridge and the piers can support the jacking system. Due to the lack of original construction drawings, the steel reinforcement in the piers is unknown and therefore the strength of the piers cannot be properly known.
- The lack of available drawings for the bridge means that the impact of changes to the bridge cannot be properly evaluated.
- The volume of the repairs required at this structure presents issues with possible repairs. This large amount of removals would have to be done in stages to ensure the stability of the bridge while the work was taking place. Again, without accurate existing information on the bridge, there are significant risks involved in this.
- Typically, a bridge would have been repair 2 or more times in its life at this age, each time occurring before reaching this level of condition. In the condition it is in, it is likely cost prohibitive to repair the bridge.
- Repairs made to the bridge would be expected to result in a limited extension of service life. While there would be patches of new concrete, the original structure would continue to deteriorate and would require further attention. This makes rehabilitation the least cost effective option.