



## Committee Report

**To:** Warden Mitch Twolan  
Members of the Transportation & Environmental Services  
Committee

**From:** Miguel, Pelletier  
Director of Transportation & Environmental Services

**Date:** October 17, 2019

**Re:** Winter Closure - Arran Township Shed Bridge (Invermay)

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### Staff Recommendation:

That a by-law be introduced to temporarily close the Arran Township Shed Bridge (Invermay), Bridge ID 270050, for the 2019-2020 winter season (approximately November 15, 2019 - April 15, 2020).

### Background:

The Arran Township Shed Bridge (Invermay) is located on Concession Road 6 (formerly Bruce Road 27) 0.5 km west of Bruce Road 10. A map of the location is attached.

The transfer of Bruce Road 27 to the Municipality of Arran-Elderslie was approved based on a recommendation from the September 2004 Road Designation Study. At that time, both parties agreed that if the road was transferred to the local municipality, the bridge would remain a County responsibility until such time as the bridge is permanently closed. The posted speed is currently 80 km/h with an estimated Average Annual Daily Traffic (AADT) count of 1400. This section of road is a shortcut that connects Bruce Road 10 and Bruce Road 17 that could be accommodated by Union Street (Bruce Road 17) for a distance increase of 1.5km. There are 7 households on the section of Concession Road 6 between Bruce Road 10 and 17.

The 33m single lane single span steel truss bridge was built in 1913 and had a maximum load rating of 18 tonnes. It consists of a wood deck and the original design would have been meant to accommodate horse and carriage traffic.

The bridge has several elements in poor condition and a 5 tonnes load restriction has been imposed in January 2019. At that time an exemption was granted for winter maintenance vehicles for the Municipality of Arran-Elderslie who carries out winter maintenance on the road and bridge. However, deterioration of the bridge continues to the point where an exemption for winter maintenance is no longer recommended. Neither the Municipality of Arran-Elderslie or the County of Bruce have winter maintenance equipment that is light

enough to work under the load restriction. And, there is no interest from local winter maintenance contractors to take on this work. Under the 2001 Ontario Municipal Act, Ontario Regulation 239/02, Minimum Maintenance Standards Municipal Highways, winter maintenance must be carried out for a highway to be deemed in a state of repair. Under the current conditions, this could not be achieved. It is therefore recommended that the bridge be closed for the 2019-2020 winter season. This recommendation has been discussed with the Works Manager for the Municipality of Arran-Elderslie and supported in principle. Municipal Council was advised of the situation on October 15, 2019.

This bridge has been subject to load restrictions on and off since 1984. Significant repairs were carried out in 1988, 2004, 2013, and 2015. The single lane of traffic will impede traffic flow of motorists and larger vehicles. The County is at a decision point as to how to proceed with the future of this bridge. The Transportation and Environmental Services Department will develop an option analysis to present to this committee with a view to decide in 2020 if the bridge is to be closed permanently. The options analysis will look at a minimum of four options:

- Close and remove bridge. There is a need to further assess the impact to the public, determine historical significance, and define environmental assessment needs.
- Keep the bridge open, which has three options:
  - o Repair bridge. Minimal repairs to the deck, cross beams and chords are estimated at \$339,200 and would keep the bridge open. This work would not guarantee to increase the load from 5 tonnes to 18 tonnes. Another estimated \$50,000 would be required every 5-10 years for additional repairs to prevent deck or structural member failure.
  - o Rehabilitate bridge. Replace and upgrade the deck system, cross beams and bottom chords. This work is estimated at \$950,000 and would extend the life of the bridge by 20 years with a maximum load of 18 tonnes with a single lane.
  - o Replace bridge. A replacement with a two-lane bridge is estimated at \$2,500,000. This would include adjusting the road grades. The designed life of the bridge would be 75 years.

#### **Financial/Staffing/Legal/IT Considerations:**

A line item (\$50,000) will be included in the 2020 Bridge Capital Budget to prepare the options analysis. If the bridge is to stay open in the winter, the County must be able to meet the Minimum Maintenance Standards for winter maintenance.

There are no staffing, legal, or IT considerations.

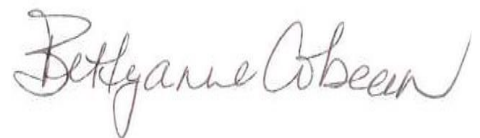
#### **Interdepartmental Consultation:**

Not applicable

#### **Link to Strategic Goals and Elements:**

None identified

**Approved by:**

A handwritten signature in cursive script, reading "Bettyanne Cobean". The ink is dark and the signature is fluid, with a large initial 'B' and a trailing flourish.

Bettyanne Cobean  
Acting Chief Administrative Officer