



# Keystone Bridge Management Corp.

*Your Bridge Asset Management Specialist*

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March 30, 2023

Terry McCann C.E.T.  
Director of Public Works  
County of Lanark  
99 Christie Lake Road  
Perth, Ontario, K7H 3C6

Re: Andrewsville Bridge

Dear Terry,

This is in response to a request from Lanark County to review the subject bridge prior to the planned re-opening after March 31, 2023. The following will summarize our review of the Andrewsville Bridge on March 28, 2023

Steve Reid and I were met by County staff already at the bridge. The bridge was clear of snow, and the south approach was clear of snow near the bridge but still snow covered further back. The north approach was ploughed. The Rideau River was flowing strongly, typical of spring run-off conditions.

We did a walking inspection of the top surface followed by a traverse with a light pick-up truck and then multiple traverses with an empty tandem axle truck provided by the County.

The following was observed:

- The running boards have some loose ends that need to be secured. Some of the running boards are near end of life and should be considered for replacement.
- The railings on the approaches and on the bridge are less than adequate and ideally these deficiencies should be remedied. The bridge curbs are in excellent condition,
- The dry-stone retaining walls on the approaches remain a concern. There was significant flow penetrating the base of the causeway outside of the dry-stone openings designed to convey flow. As previously reported, there is very significant distortion and bulging to the face of the dry-stone walls and it is impossible to predict how much longer they will last. The risk of failure of these walls must be considered in any decision to re-open the bridge.
- Driving the pick-up truck produced some mechanical noise from the deck, believed to be the running boards flexing under load.
- The tandem axle (12 -13 tonnes GWW) was driven and reversed over the deck at a dead slow speed, and then followed by two traverses going forward at nominal driving speed. On the initial slow pass of the tandem axle truck, the front axle was observed in the forward direction, and then the rear tandem axles were observed in the reverse direction.

- There was no observed distress to the transverse laminated deck boards and no concerning deflection of the steel floor system was observed. There was some mechanical noise from the wood deck, but nothing that suggested timber failure.

Based on these observations I am prepared to endorse re-opening the bridge at the posted 5-tonne load posting at the present speed limit. Although the speed limit is signed as 50 km/h, the nature of the road and bridge is such that normal operating speeds is more like 25 km/h or less. Re-opening the bridge is not an endorsement of the continued viability of the dry stone retaining wall causeway approaches.

Sincerely,

Harold Kleywegt, P.Eng.  
Managing Director

