Campbellford Bridge: Replacement of Expansion Joints

Frequently asked Questions

What work will be done?

The expansion joints on the east and west ends of the Campbellford Bridge that carries Bridge Street (County Road 8) over the Trent River/Trent Severn Waterway need to be replaced. Recently, it was determined the condition of the joints deteriorated significantly, which has resulted in a rougher transition and increased noise when vehicles cross the joints. The condition of the joints is also complicating snow plowing. Minor repairs to the concrete sidewalks will be completed at the same time.

Why have the expansion joints failed?

Expansion joints experience higher levels of movement, moisture and traffic impact and are often one of the first components of a bridge to show fatigue. It is an expected occurrence over time and part of the regular maintenance requirements of a bridge. Depending on conditions, joint replacement can be expected every 15 – 30 years.

When will the work be done?

The County is currently preparing design details and coordinating with various stakeholders prior to releasing a request for tenders for a contractor to complete the work. It's expected a contractor will be selected this summer with work starting in mid-September until early October of 2022.

What are the impacts to traffic and pedestrians?

The project will involve nightly closures from 7 p.m. to 6 a.m., for a period of three weeks. While traffic closures are undesirable, completing the work during night-time, when traffic flow is lower, will help limit the impact. While this option adds additional duration and costs to the project (compared to a full closure) it provides a less disruptive option for residents and other road users. The detour route will direct traffic northward through Healy Falls and Crowe Bridge and Petherick's Corners using a combination of Northumberland County roads and Trent Hills roads. At night, when the bridge is closed to vehicles, one sidewalk will remain open for pedestrians to cross.

Will there be any impacts when working at night?

The completion of the work at night will create noise during concrete removal and other construction operations associated with installing the new joints. Work will be scheduled to be completed as quickly as possible to limit disruption to area residents. The County will be requesting a noise by-law exemption from Trent Hills Municipal Council to allow for overnight work. Temporary lighting will also be used at night.

What about emergency vehicles? Will they need to detour at night?

No. One-lane access will be in place for emergency vehicles to cross the bridge safely and quickly when ever needed. In consultation with emergency services, other safety measures may be put in place if necessary.

Were other options considered such as keeping one lane open?

Three options were explored, with consideration for duration, cost, and impact to residents. Reducing the bridge to one lane was one option. However, given the length of the bridge; the signal-controlled intersections close to either side; and short downtown blocks; this option would cause considerable traffic disruption during peak hours and extend the duration of the project. Closing the bridge completely for two weeks was another option but forcing all traffic (including emergency services) to detour, particularly at peak hours, would have considerable negative impact on the community.

Is the bridge still safe to use?

Yes. There is no risk to public safety. The day-to-day operational safety of the bridge is not affected by the damaged expansion joints. The joints are not a structural load carrying element of the bridge. They allow for expansion and contraction, to provide a smooth transition for traffic crossing the bridge and to function properly as a protective barrier to prevent water from entering. As required by Provincial regulations the County completes inspections of all bridges every two years. All bridges on County roads will be inspected by a qualified engineering firm in 2022.

What is an expansion joint?

Expansion bridge joints create a gap at either end of the bridge deck to allow the bridge to expand and contract with temperature changes. The Campbellford Bridge has strip seal type joints that include a rubber seal between steel rails on each side of the of the joint. The seal prevents water from passing through the joint and damaging the bridge components below. The steel portions of the expansion joint assemblies also help to protect the ends of the concrete bridge deck from damage caused by vehicle traffic. When properly working and in good condition, the joints remain flush, reducing vehicle vibration and creating a smooth transition from the approach roadway to the bridge deck.

What happens if the joints are not replaced?

If the expansion joints are not replaced, increased vehicle noise will result and the concrete material around the joints will continue to deteriorate, weakening the anchorage of the joints. Water entering through the failed seals in the joints will also lead to increased corrosion of reinforcing steel and damage to the deck-ends and bridge substructure. To prevent further damage and the potential of more costly and extensive construction work in the future, the expansion joints need to be replaced.

What is the status of the new Campbellford Bridge?

In 2017, the Minister of the Environment, Conservation and Parks (MECP) approved the Environmental Assessment for the proposed bridge to be located between Second Street and Alma Street, approximately 450 m downstream of the existing Bridge Street bridge, as well road network improvements.

In 2019, the County retained engineering services of GHD to complete the preliminary and detailed design for the project and an online public consultation was held in the Summer of 2020. An addendum to the Environmental Study Report was completed in March 2021 which updated the preferred solution to include a roundabout at Grand Road and Alma Street on the western side of the new bridge. The project is continuing with detailed design and with a second public consultation event is anticipated in late 2022. For information on the results of the first public consultation event please visit www.campbellfordbridge.ca.

Northumberland County

Campbellford Bridge Repairs
Detour Route Map

Detour Route

Construction Site

N

12th LINE EAST

DETOUR

Healey Falls

Crowe River

DETOUR

Crowe Bridge

11th LINE WEST

50

CROWE RIVER ROAD

IXL ROAD

10th LINE EAST

10th LINE WEST

Trent River

IXL ROAD

38

DETOUR

38

Pethericks Corners

9TH LINE WEST

8TH LINE EAST

Campbellford Bridge [SEE INSET MAP]

DETOUR

THOMSON ROAD

PETHERICKS ROAD

7TH LINE EAST

50

38

BRIDGE STREET WEST

CAMPBELLFORD

8

BURNBREA ROAD EAST

Construction Site

BRIDGE ST

CANROBERT ST

QUEEN ST

50

Trent River

FRONT ST

38

PARK WY

BRIDGE ST

GRAND RD

8

DOXSEE AV

FRANK ST

SASKATOON AV

FRONT ST

RIVER ST

Campbellford Bridge
Nightly Closures from
7:00pm to 6:00am