

PR 313 WINNIPEG RIVER BRIDGE MAJOR REHABILITATION



Purpose and Need

The Winnipeg River Bridge on PR 313 was originally constructed in 1930 as a trolley and vehicle bridge. Since then, it has been modified and repaired several times - in 1958, 1965, and 1994. This bridge is located on a vital transportation link to the east side of the Winnipeg River at Lac Du Bonnet providing access to local residents and businesses, the mining industry, agricultural operations, cottagers and many others.



Severe deterioration of the exterior beam on north side

Due to structural issues with steel members along the north side of the bridge, Manitoba Infrastructure and Transportation closed the north lane of the bridge, and imposed single lane signalized traffic along the south side of the bridge.

MIT engaged an engineering service provider, Stantec Ltd., to undertake a detailed condition survey of the entire bridge and complete a preliminary design of rehabilitation alternatives to extend the service life of the bridge. MIT also engaged Landmark Planning and Design Inc. to undertake a public and stakeholder engagement process, to let people know about the bridge status, and to gain input on viable rehabilitation alternatives.

As part of the option selection process, MIT retained another engineering company, Buckland and Taylor LTD, to undertake an independent review of the assessment and design work. This was an extra measure to help ensure that no important considerations were being overlooked and to mitigate any potential issues during construction.

Stakeholder Feedback

The study team met with many interested stakeholder groups and individuals during the option identification and evaluation stages of the projects. Most participants were concerned about two factors:

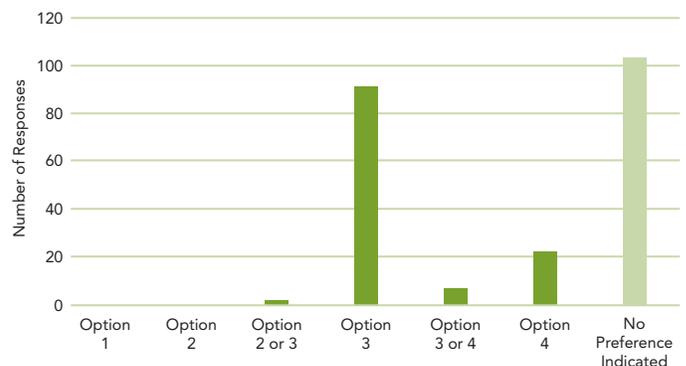
- that a full, modernized bridge crossing would be provided;
- that the bridge would not be closed throughout the construction period.

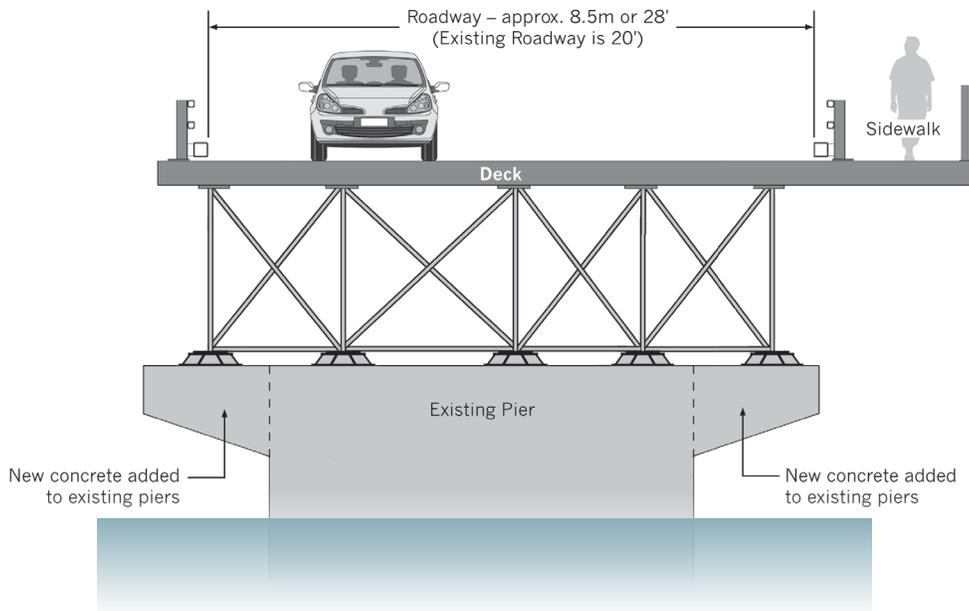
Four options were identified including:

- Option 1** Basic repairs to the bridge: additional life 10 years, cost \$12m, one year project
- Option 2** Rehabilitation of the bridge, additional life not more than 40 years, cost \$17m, one-to-two year project
- Option 3** Build a new bridge on the existing piers: additional life more than 40 years, cost \$30m, two year project
- Option 4** Build a new bridge on new piers on a new alignment: additional life 75 years, cost \$85m, three-to-five year project

The chart below illustrates that Option 3 was clearly favoured by most open house participants in latest public meetings. The main reasons for this support were that this option provided the best 'value for money', with a reasonable lifespan and a shorter construction period. From a user's perspective, the new bridge design for Option 3 was identical to that of Option 4, the only difference between the options was the piers themselves. On this basis, it would be difficult to justify the high cost of Option 4, since Option 3 provides the same bridge experience.

Option Preference Chart





Option 3: Build New Bridge on Existing Piers

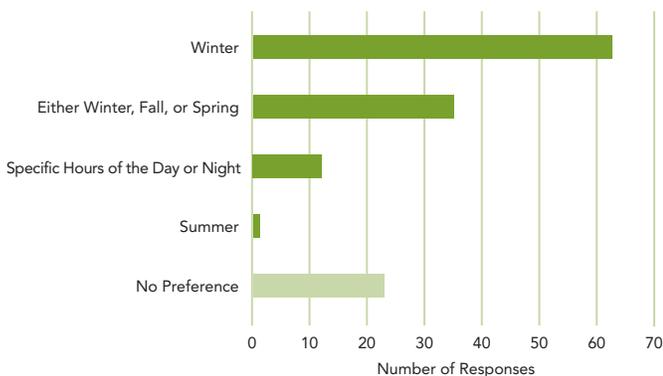
New Bridge Design

The new bridge will feature a wider bridge deck than the existing (increased from 20 feet to 28 feet or 6.2m to 8.5m), a wider pedestrian walkway, and brand new structure supporting the new deck. The roadways at each end of the bridge will also be modified to improve the approach to the bridge.

Bridge Closure

As stated during the consultation process, the bridge will remain open as it is now (one lane controlled with signals) for the entire construction period, with the exception of a brief closure period in the winter time. The chart below illustrates that most stakeholders suggested that if a short closure period was required, that winter would be the best time for this to take place. The exact timing of a short two-to-three week winter closure is yet to be determined.

Bridge Closure Preference Chart



Current Status

- MIT has finalized Option 3 as the selected option and will be starting detailed design of the bridge modifications.
- MIT is continuing to work with specific stakeholder groups, particularly members of the local agricultural community, to see if the detailed design can respond to the needs of this community for crossing the bridge more easily than before.
- In the meantime, as indicated during the consultation process, MIT committed to further testing of the existing piers to be sure that they would provide a long life span for the new bridge as expected. MIT has completed preliminary testing on two of the nine piers and, as expected, the test confirms the piers are in good condition. In the spring, MIT will be inspecting the remaining seven piers to confirm their condition.
- Once this testing is complete and the detailed design is complete, a public tendering process will be initiated in order to select a qualified constructor for the work to be undertaken.
- A construction firm will be selected in late Fall and the construction completion date is still two years, as planned.

More Information

Additional information, including a full consultation report and an updated project status report can be found on the project website at:

www.landmarkplanning.ca/current-projects.php
or
www.gov.mb.ca/mit/wcs/constructionproj.html