



Dufferin Abbott Triple-Span Bridge-in-a-Box[®]

OWNER

RM of Dufferin Abbott, MB

CONTRACTOR

Samson Engineering

CONSULTANT

Samson Engineering

LOCATION

RM of Dufferin, MB

Spring flooding had taken its toll on the Abbott Bridge, located south of PR245 on Road 26W. Built around 1955, the wooden structure had begun to deteriorate. In 2022, strong currents lifted the bridge from its bridge seat, shifting alignment and making it no longer fit for purpose. The bridge was closed to road users for several years.

The Challenge

The replacement structure would need to span a total of 90 ft. and be suitable for low-volume traffic loading. Aging infrastructure is a constant demand on municipal resources. The RM needed a solution that was both economical and would deliver a long service life. Samson Engineering was brought on board to design and manage the project. They collaborated with Armtec on a solution that would meet the needs of the owner.



PRODUCT DETAILS

Armtec triple span
Bridge-in-a-Box
20 ft. + 50 ft. + 20 ft.
(double lane: width 24 ft.)



The Solution

Armtec's Bridge-In-a-Box, an engineered, pre-fabricated modular steel bridge system, was selected as the best option. A triple-span design was proposed, with a 50 ft. long center flanked by 20 ft. long sections. This would be the first triple-span Bridge-in-a-Box installation in the province. Support for this project was provided by the Disaster Financial Assistance (DFA) and Disaster Financial Assistance Arrangements (DFAA) programs. Samson and Armtec Engineering worked together to design an efficient substructure solution for the multi-span superstructure system. A special solution was

developed to accommodate the bridge splice connection over a very narrow pile cap, which was required to maximize the hydraulic efficiency of the crossing. The open-bottom design of the Bridge-in-a-Box structure also helped to minimize the impact on the aquatic habitat. Despite some weather delays, the installation proceeded smoothly. After a two-year closure, the bridge was open to road users in the fall of 2024.



**Find out how Bridge-In-a-Box[®] can be used on your next project.
Contact us today!**



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