



Four Permanent Acrow Bridges Accommodate Heavier Equipment at Canadian Forces Base Wainwright

Alberta training facility benefits from structures with updated design codes

Canadian Forces Base/Area Support Unit Wainwright is one of the busiest Army bases in Canada. Used primarily for training exercises, it also houses a residential community of military members. Because the Battle River cuts off one-third of Wainwright's training area, ensuring safe and reliable crossings is critical.

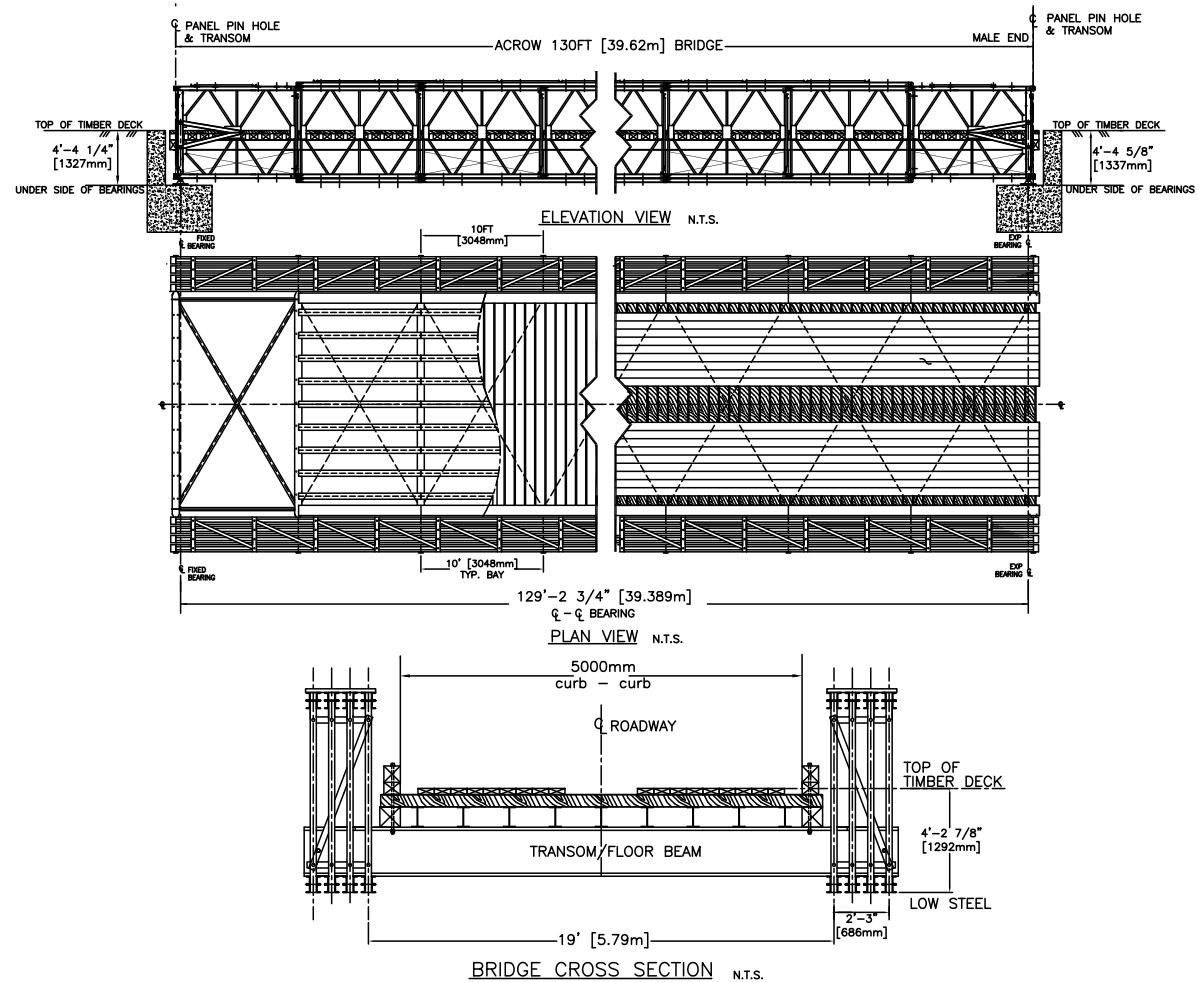
When four bridges on the base were deemed obsolete, plans were made for their replacement. Acrow won the mandate after a competitive bid process based on price, experience and technical expertise.

The new structures were necessary to accommodate the heavier loads of reintroduced tanks and associated vehicles as well as new training and towing vehicles. The permanent installations were required to meet design conformance with Military Load Classification (MLC) 150 in accordance with NATO STANAG 2012/CAN/CSA-S6

Canadian Highway Bridge Design Code. The old bridges bore an MLC of 60.

A requirement for the contract was that the first bridge be opened within five months for the annual Exercise MAPLE RESOLVE, the largest and most comprehensive Canadian Army training event of the year. This meant a particularly difficult build under harsh winter conditions.

It was originally expected that the project would be completed in four years, but all four structures were installed and opened in just over two years from the delivery of the first bridge in December 2015, with a successful completion date of December 2017. The bridges range from 80 feet (24.38m) to 130 feet (39.62m) in length. All are 16.4 feet (5m) wide curb-to-curb and have timber decks.



Specifications

Bridge length:

80' (24.38m) to 130' (39.62m)

Roadway width:

16.4' (5m)

Deck surface:

Timber deck

Design load:

Military Load Classification (MLC) 150

Standard Acrow bridge finish:

- All major components galvanized to AASHTO M111-ASTM A123
- All bolts are hot-dip galvanized
- All pins are electrogalvanized

Standard Acrow bridge specification:

- (A) Panel chords, diagonals, verticals, reinforcing chords, rakers to AASHTO M223 GD 65
- (B) Raker braces, transoms, top chord braces, swaybraces, transom braces, diagonal chord braces, decking to AASHTO M223 GD 50
- (C) Panel pins to ASTM A 193 GD B7
- (D) Bolts to AASHTO M164M - A325