

# Temporary Acrow Bridge Helps to Maintain Traffic Flow During Major Highway Project in Montréal

Reconstruction of heavily traveled Turcot interchange



The Turcot Interchange is a three-level stack freeway interchange, and the largest in the province of Québec. It is heavily traveled, carrying an estimated 300,000 vehicles per day. Because it is located in a high density residential and commercial area and links the Montréal-Pierre Elliott Trudeau International Airport with downtown Montréal, it is critical that traffic flow be maintained throughout the project to rebuild the 40-year-old traffic hub. At the same time, the interchange is situated over three Canadian National Railway tracks used for passenger travel and freight so could not be shut down during installation.

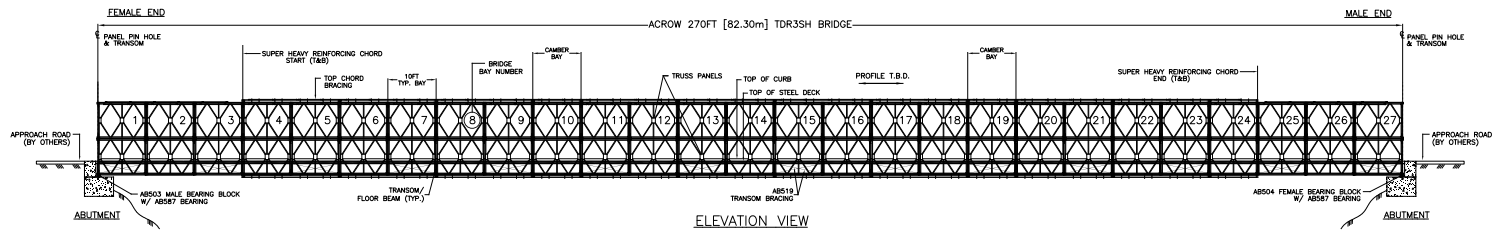
Acrow's long-term temporary modular steel bridge, installed in October 2017, will allow vehicles to travel without interruption from northbound Autoroute 15 to westbound Autoroute 20 and is expected to be in place for two years. It is the longest clear span Acrow bridge in use in Canada and measures 82.31 meters (270 feet) long by 5 meters (16.4 feet) wide with an asphalt-coated orthotropic deck. Due to the site restriction, it was impossible to install the bridge using a crane, so instead a full cantilever launch was employed utilizing a 48.7 meter (160 feet) launching nose. The installer used premanufactured 6 meter (20 feet) sections and launched in sequence.

The rented Acrow components arrived on site in September and the bridge was launched over a single weekend in October. The orthotropic deck and a layer of 75 mm of asphalt were installed in November and the structure opened to traffic at the beginning of December.

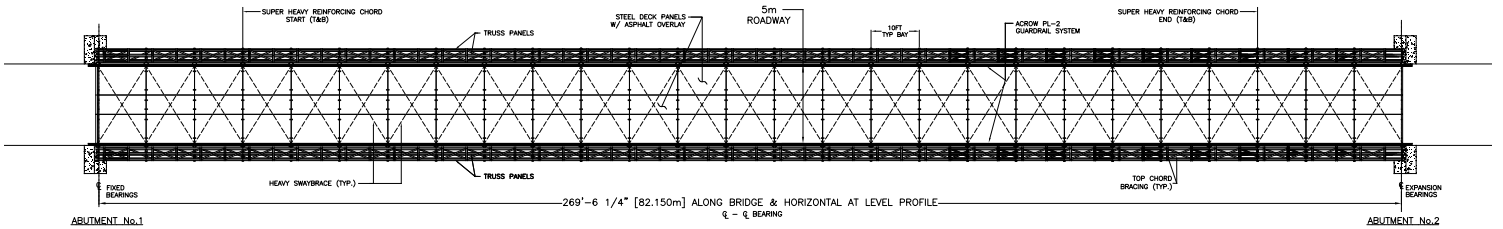
The project was ordered by the Ministère des Transports du Québec and the design-build contractor is KPH Turcot, a partnership of Construction Kiewit Cie and Parsons Canada Ltée as members, as well as WSP Canada Inc. and Holcim (Canada) Inc. as participants.

Benoit Forget, Acrow's regional director for Québec/New Brunswick, commented, "It is gratifying to be a part of this major construction project. Acrow's temporary structure will keep both vehicle and rail traffic moving smoothly during construction."

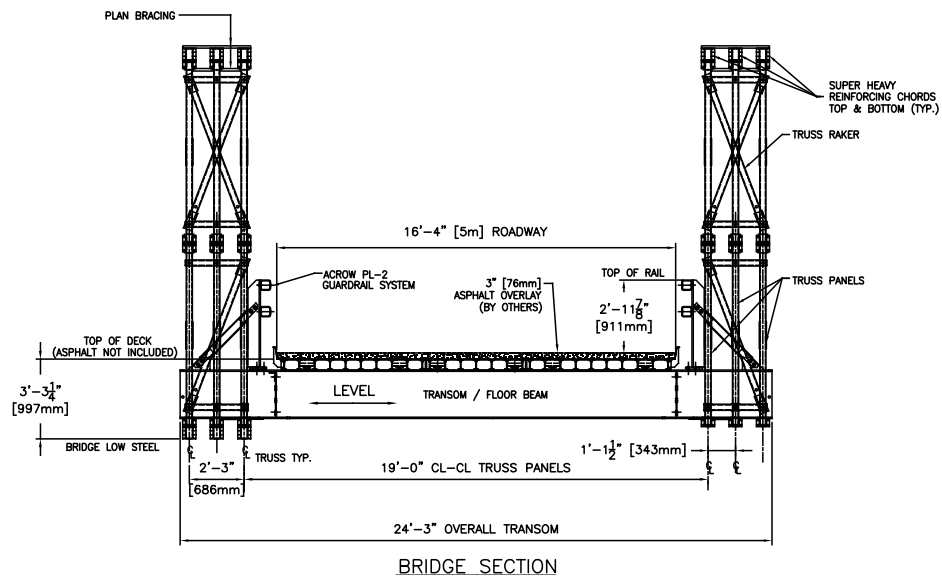
Added Ken Scott, President, Acrow Ltd., "Using a rental structure from Acrow allows for a fixed dollar amount to be allocated to the detour bridge. In addition to the obvious safety benefits, the rental market is growing in the highway construction industry in North America because it can help ensure a project stays on or ahead of schedule, important for both contractors and government agencies."



ELEVATION VIEW



PLAN VIEW



BRIDGE SECTION

## Specifications

### Bridge length:

82.3 meters (270 feet)

### Bridge width:

5 meters (16.4 feet; one lane)

### Live load:

CL-625

### Deck Surface:

Orthotropic Acrow deck with Asphalt

### Bridge finish:

- All major components galvanized to AASHTO M111 – ASTM A 123
- All bolts are hot dipped galvanized
- All pins are electro galvanized

### Bridge Design:

- (A) Panel chords, diagonals, verticals, panel reinforcing chords, rakers to AASHTO M223 GD 65
- (B) Raker brace, transom, top chord brace, swaybrace, transom brace, diagonal chord brace to AASHTO GD 50
- (C) Panel pins to ASTM A 193 GD b7
- (D) Bolts to AASHTO M164M – A325