



Panel Bridge Provides Vital Supporting Role in Montreal Metro Station Upgrade

Acrow bridge is used to suspend a concrete chamber during excavation works

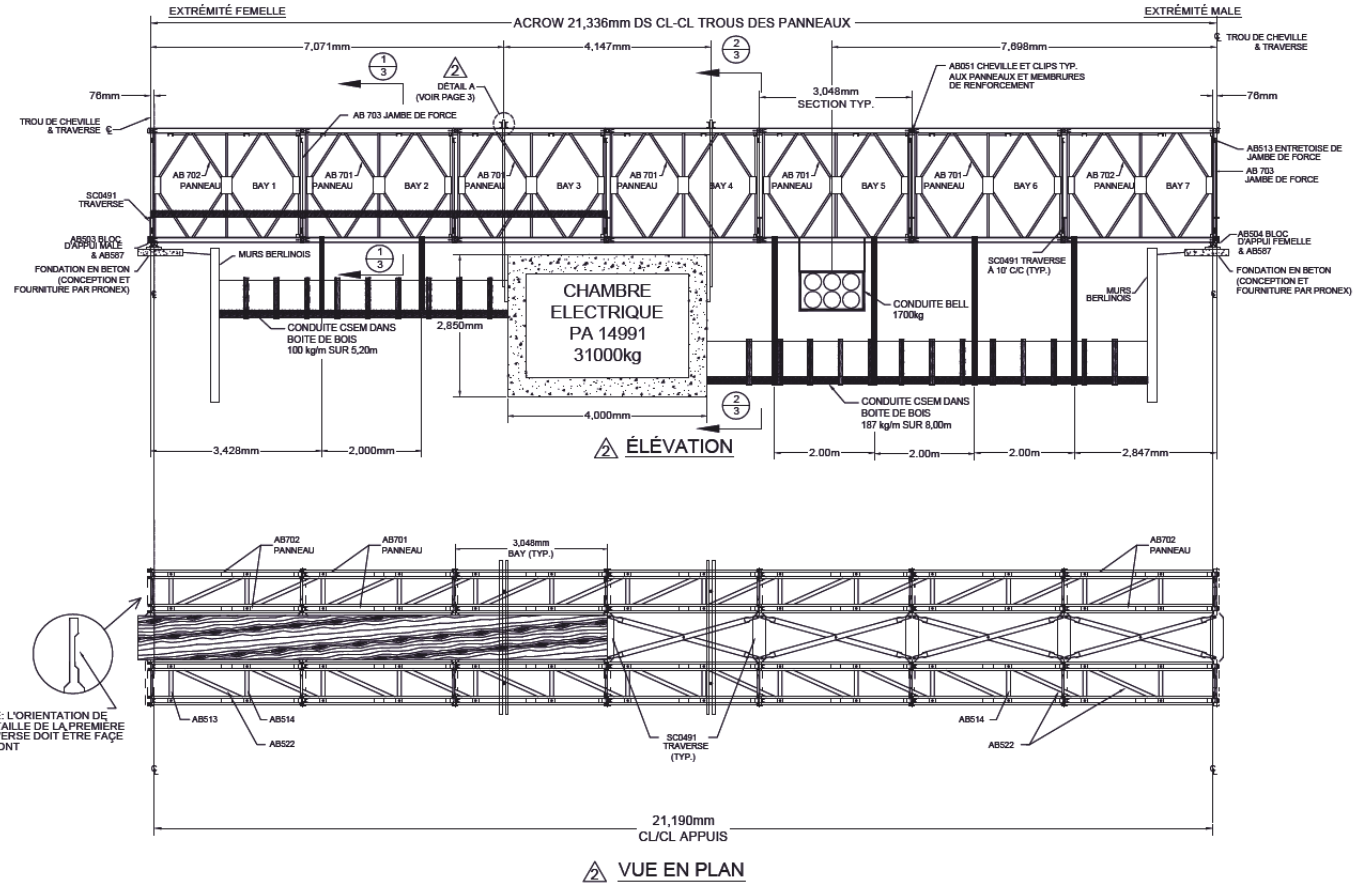
A panel bridge has been successfully deployed by Acrow to temporarily suspend a 'live' power chamber in the Iberville Metro Station in Montreal. Part of a major renovation commissioned by the Société de Transport de Montréal (STM), new elevators are being installed to provide better access and egress for less-abled commuters.

The concrete chamber, belonging to CSEM (Montreal Electrical Services Commission), weighs 31 MT and contains high voltage electricity, internet and telephone cables. The work required deep excavation to accommodate the new elevators and support the immovable chamber sited within the construction area, which had to remain operational and stable throughout the project to continue serving thousands of local Montreal customers.

Based on an innovative idea proposed to STM by the Projects Director at Pronex Excavation Inc., Acrow was approached to determine whether its high-strength modular steel panels had the capacity to provide a temporary support structure so that excavation work could be carried out below the chamber.

Acrow's 700XS® system offered ease of assembly in a limited construction footprint and sufficient load-bearing capacity to suspend the heavy chamber.

The innovative use of a panel bridge to suspend the chamber proved to be the most practical and effective solution for this project, and has enabled the Metro Station upgrade to proceed without disrupting the power and communication supply. The overall renovation project began in April 2021, with an anticipated completion date of July 2023.



Specifications

Bridge length:

70' (21.34m)

Roadway width:

9' (2.74m)

Bridge erection method:

Crane lift-in

Design load:

Electric chamber (31 MT)

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