

Acrow Bridge Modular Steel Structure Installed During Military Training Exercises in New Brunswick

Structure creates a permanent crossing to be used year-round by recreational vehicles and pedestrians



Each November in the province of New Brunswick, the soldiers of the Canadian Army's Engineer Support Regiment from Base Gagetown hosts Exercise NIHILO SAPPER, a large-scale military construction engineering event to provide hands-on technical training to ensure the Canadian Army is ready to deploy soldiers at short notice.

The unusual name of the event comes from the Latin phrase "Ex Nihilo" meaning to make something out of nothing – which is what typically exists in terms of infrastructure when soldiers are deployed to a new operation. "Sapper" is a term for young military engineers dating back to the 19th century when French military miners would "sap" or undermine enemy defenses.

In addition to personnel from Base Gagetown, other units from across Canada, including reserve and regular force units, participate in the event. In past years, the event had been held within training areas on the base, but in 2015, the decision was made to get out into the "real world" and instead of building structures only to dismantle them after the training, the exercise participants built a home for a non-governmental organization as well as a bridge for use in a local park, among other projects.

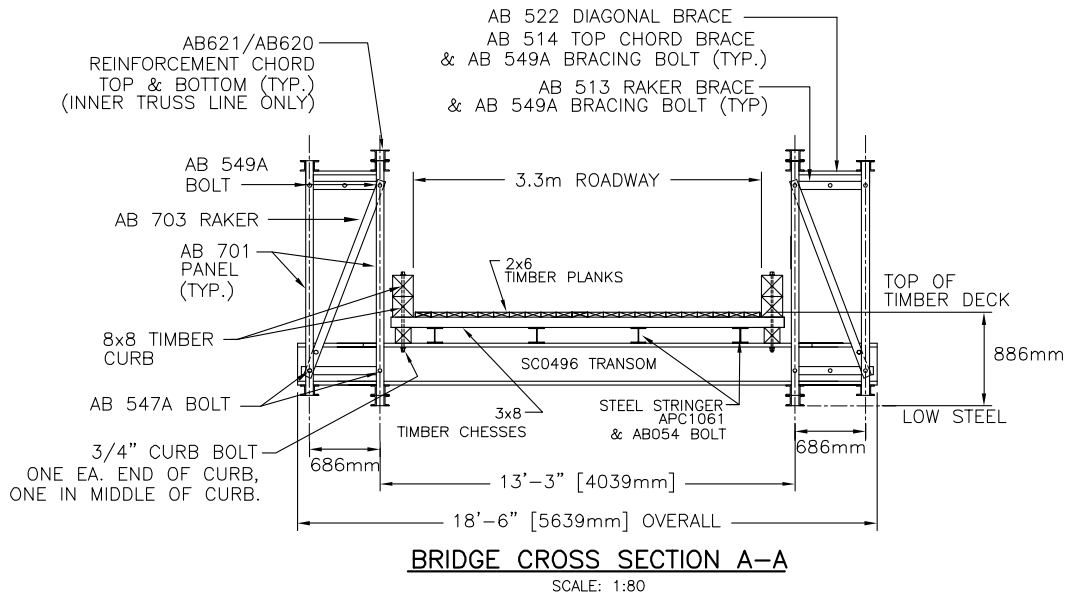
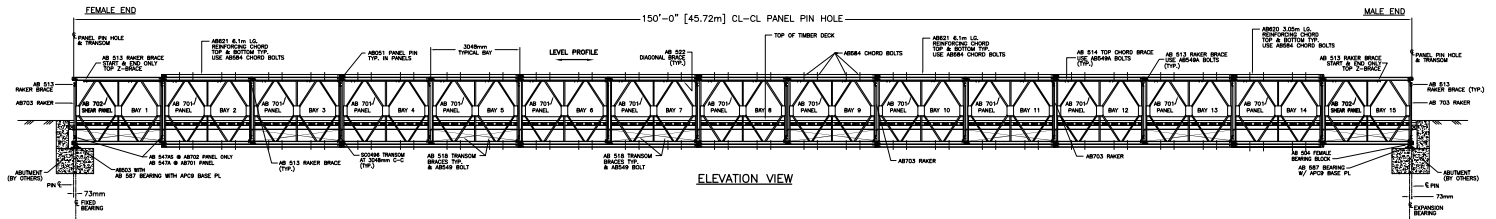
The new tradition continued in 2016, and during the exercises, held November 1-22 in Bathurst, projects included several construction and infrastructure upgrades within the community.

In one of the largest projects, Acrow supplied Club VTT Chaleur with a steel bridge that was installed as part of a partnership between the armed forces, the New Brunswick ATV Federation and the New Brunswick Federation of Snowmobile Clubs. The 45-meter span, built over the Tetagouche River, links north and south snowmobile trails, and

eventually, ATV trails. While initial plans were for a 30-meter span, it was extended to 45 meters to avoid ice blockages in the spring. The structure will provide safer crossings and a longer snowmobiling season.

"The Chaleur Three Trail Group, in the Northeastern part of New Brunswick, is happy to have accomplished what many were unsuccessful in doing for 30 years: having a bridge installed over Tetagouche River for leisure use," said Jacques Ouellette, Project Coordinator and Development Coordinator for the New Brunswick All Terrain Vehicle Federation. "This 45-meter span bridge project came with many issues and concerns that needed to be addressed, but when I was approached by Acrow with their bridge model, I quickly realized that this dream could become reality. The knowledge of Acrow's experts combined with the National Defense's Exercise NIHILO SAPPER program participants were the key to this achievement. Now, Bathurst has a new monument called Atlantic Host Bridge to be used by snowmobilers, ATVers and non-motorized enthusiasts. We are grateful to Acrow Bridge. Your engineering made this happen."

"Because of its unique attributes, the Acrow 700XS bridge system has been selected by military organizations around the world," said Ken Scott, President of Acrow Limited. "Acrow bridges are capable of supporting large armored tanks and other heavy vehicles, designed for fast assembly and disassembly, durable and easy to maintain and the components are easily transported and reused wherever a temporary or permanent bridge is needed."



Specifications

Bridge length:

Acrow supplied 45 meters (150 feet) of bridging to build one clear span.

Bridge width:

3.3 meters (10.8 feet)

Deck surface:

Wood

Live load:

Two lanes of snowmobile or 10 MT groomer

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 – A32