



September 9, 2019

## Two Algonquin Modular Bolted Truss Bridges fast-swapped to keep MTO highway connected

Highway 652, one of Ontario's most isolated secondary highways, runs east from Cochrane, and eventually northward, as the only connection to the remote Detour Gold Mine in northeastern Ontario. Two bridges along this route were in dire need of replacement and the Ministry of Transportation Ontario (MTO) opted for heavy-duty Algonquin Modular Bolted Truss Bridges.



Chin River and South Floodwood River replacement bridges

### Project at a glance:

**Project Name:** MTO Highway 652  
Delta Bridges

**Location:** Near Cochrane, Ontario

**Owner:** MTO (Northeastern Region)

**Engineer:** McIntosh Perry

**Contractor:** The Miller Group  
(Northern Division)

**Product:** Two Algonquin Modular Bolted  
Truss Bridges

**Application:** Stream Crossings

**Sector:** Transportation

**Dimensions:** Spans 58.5 m (plus 4.5 m deck  
extensions), Widths 7.35 m, TL2 Parapet Rail

**Installation Times:** Ten days for on-site  
assembly, 72 hours for replacement



## Each bridge replaced within a 72-hour road-closure window

The only caveat was that each bridge had to be replaced within a 72-hour road-closure window, or heavy financial penalties would be applied. This project represented a lot of firsts for Algonquin Bridge and our partners.

- They were our first Modular Bolted Truss Bridges sold in Ontario.
- It was the first time the contractor had assembled this type of bridge.
- It was our first experience crane-lifting them into place.

## Overcoming a number of first-time challenges

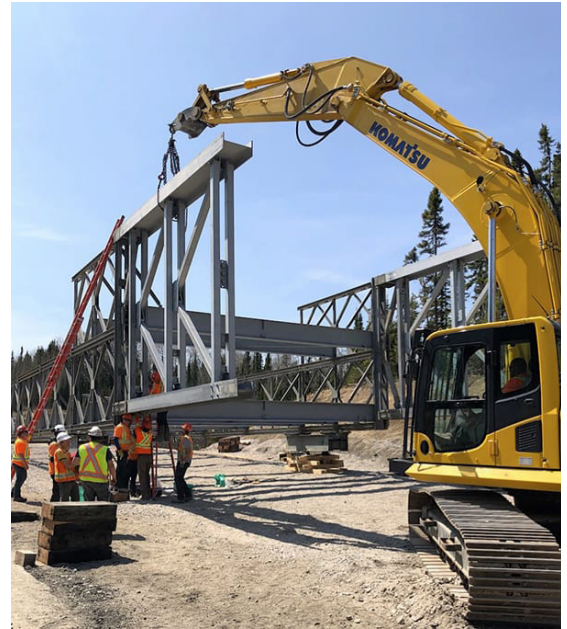
Never daunted by first-time challenges, the Algonquin team put extra energy into each situation to ensure the most positive outcomes.

- We worked closely with MTO representatives on requirements and specifications to demonstrate the viability of Algonquin Modular Bolted Truss Bridges.
- We had a pre-project planning meeting with the contractor, The Miller Group, at our plant and provided extra on-site assistance to help assembly go smoothly.
- Our Engineering team collaborated with Miller on the best pick points for the crane lifts.

Needless to say, careful planning was also required to ensure the old bridges could be removed and the new bridges could be placed on the existing abutments within their respective closure windows.

With relatively small staging areas, we delivered the components in sequence to help Miller build the spans. To facilitate quick replacement of each bridge, they were first cantilever launched across the rivers to sit parallel to the old bridges. Then the crane removed the old and placed the new in short order. A special shout-out to the Miller team for being so well-organized in this.

The overall project was completed two months ahead of schedule and a very positive email from MTO was shared with us.



## About Algonquin Modular Bolted Truss Bridges

Heavier-duty than the Algonquin Modular Panel Bridge Systems, the Algonquin Modular Bolted Truss Systems use innovative 2.25 m long panels that are bolted to top and bottom chord members to form pre-cambered side trusses that carry the applied loads and counter dead load deflection.