



Modular Steel Bridge Minimizes Construction Impacts on Major Regional Cement Plant

Contractor proposes temporary bridge as Value Engineered solution to expedite bridge replacement

When it was time to replace an aging bridge on County Road 1980 near Croydon, Utah, The Utah Department of Transportation (UDOT) utilized a detour of local roads around the site to maintain traffic during what was expected to be a quick project.

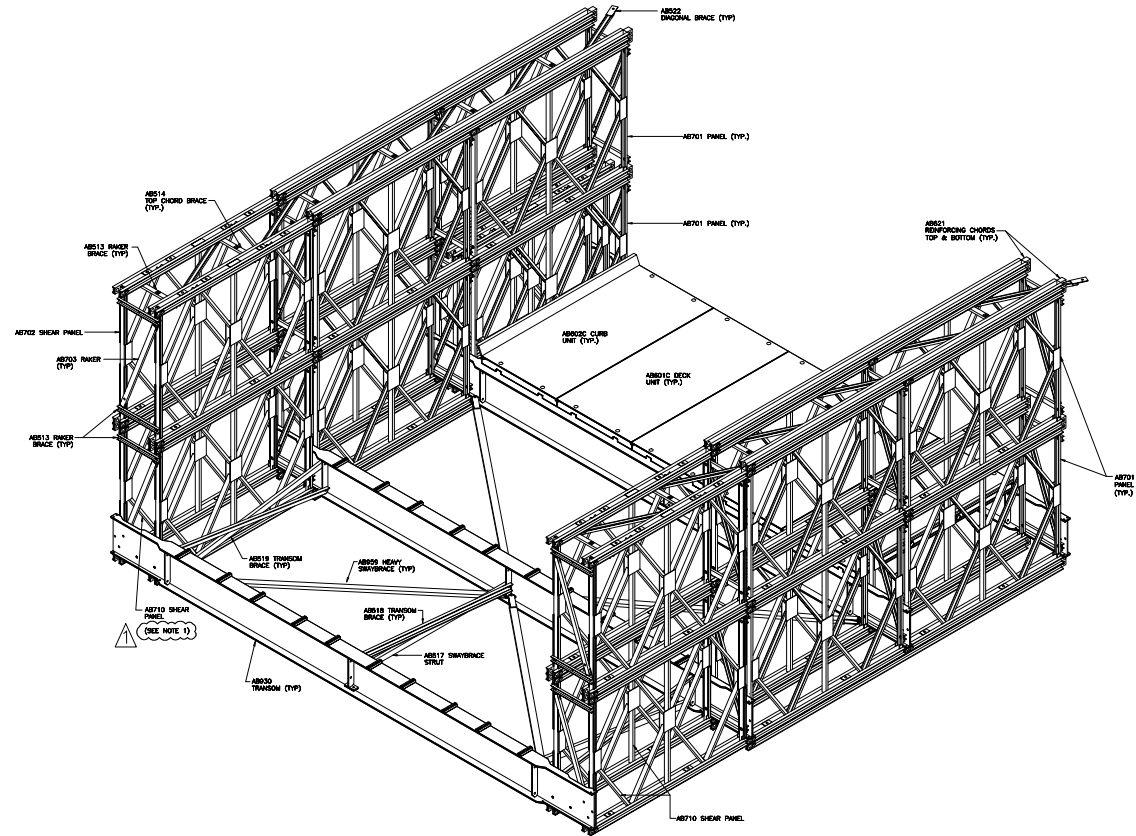
Demolition and reconstruction work began in November 2022 with traffic, which included an off-season volume of cement trucks from an adjacent cement plant, rerouted to the detour. Although the project was planned to finish the following spring, by February 2023, due to unforeseen challenges (including much higher-than-expected water flows in the river), construction was behind schedule.

Delays in the bridge opening posed several problems, including how to best accommodate the increased truck traffic from the cement plant, which would return to full seasonal operations on April 1. Significant damage to the roads over the winter months meant that keeping the route in place for a higher volume of trucks was not feasible.

To get the project back on track and maintain critical

operations at the cement plant, contractor Wadsworth Brothers Construction submitted an innovative value-engineered solution to UDOT, to use a modular steel Acrow bridge during the suspension of works on the permanent structure. The proposal was ultimately approved as UDOT were already familiar with Acrow's panel bridging.

Acrow's single-span solution was 120 feet (36.58m) long with a two-lane width of 30 feet (9.15m). The project posed several challenges including transporting components to the site over damaged, narrow roads. In addition, the constricted site lay between two sets of active railroad tracks, requiring great care and coordination to ensure safe construction. Despite these complications, the bridge was safely installed with a crane-assisted launch and opened to traffic in July 2023. The structure provided a reliable, safe route for traffic until it was de-launched in early November, when crews recommenced work on the permanent structure, which opened in January 2024.



Specifications

Bridge length:

120' (36.58m)

Roadway width:

30' (9.15m)

Guide rails:

TL-4

Deck surface:

Epoxy aggregate

Bridge erection method:

Crane-assisted launch

Design load:

HL-93

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