

Putting Safety First During Major Interstate Construction, Arizona DOT Uses an Acrow Prefabricated Modular Steel Detour Bridge

During construction on I-10 in Tucson, the detour bridge provided a temporary, cost-effective solution for heavy traffic flow while protecting construction workers and motorists



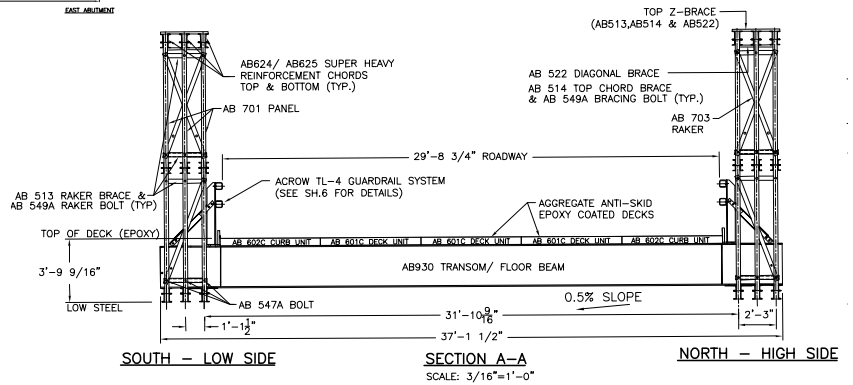
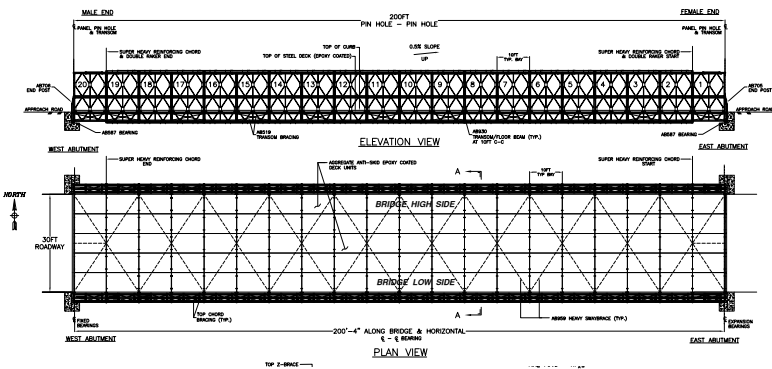
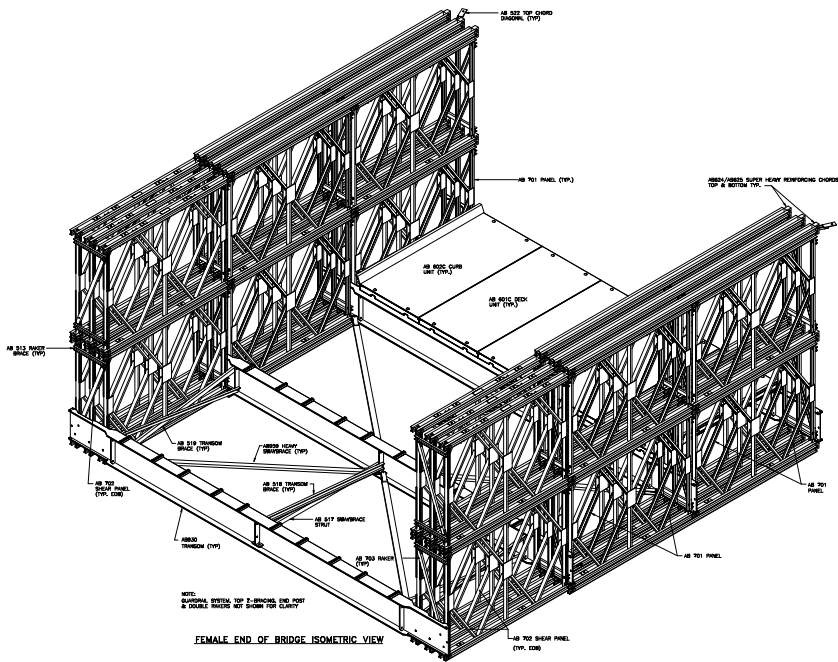
In order to prolong the life of the existing Interstate 10 bridges over Craycroft Road on Tucson's south side, the Arizona Department of Transportation (ADOT) undertook a \$3.3 million project to demolish and replace the decks of the bridges. Built in the 1950s, I-10 is the major east-west interstate highway across Arizona and is heavily traveled by both commercial and private vehicles. According to ADOT data, the Average Annual Daily Traffic at the Craycroft Road exit was 60,768 in 2015.

To move the project ahead with as little traffic interruption as possible and provide a safe environment for motorists and construction workers, a 200-ton, 200-foot-long Acrow modular bridge was ordered and installed in March 2017. The temporary bridge was constructed on-site and assembled in the median space between the existing bridges. It was initially configured to carry eastbound traffic while the deck on the eastbound route was renovated. Upon completion of that phase of the project, westbound traffic was routed over the temporary structure in order to allow for renovation of the westbound deck.

Detour solutions such as this are being increasingly used by state DOTs. Work zone fatalities continue to be an increasing problem and the use of bypass bridging is one method to ensure a safe worksite. Providing a route that separates vehicles from a construction zone is far safer for both motorists and workers in the area. Additionally, in order to minimize traffic delay costs, keeping traffic moving at speed is critical, especially on a busy interstate highway like I-10. Other re-routing options such as a frontage road bypass or a cross-over splitting the road with head-on traffic would slow traffic greatly.

It is expected the Acrow structure will be in place until completion of the project in late fall 2017.

"Acrow modular detour bridges are a logical choice for state DOTs and contractors who need to stay on or ahead of schedule and, at the same time, assure motorist and worker safety," said Bill Killeen, President and CEO of Acrow Bridge. "Acrow modular detour bridges, available for rent or purchase, are cost-effective and provide safe and reliable passage for motorists and enhanced safety in the construction zone."



Specifications

Bridge length:

200 feet

Bridge width:

30 feet

Live load:

HL-93

Deck surface:

Epoxy

Bridge finish:

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

Bridge erection:

Crane assisted

Bridge design:

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

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