



Temporary Steel Solution Facilitates Two Aging Bridge Replacements on US-131

Acrow's modular bridge and support towers minimize highway work disruption for Michigan DOT

US-131 is a major route running north-south through Michigan. Near the city of Kalamazoo, it experiences especially high volumes of both commercial and passenger traffic and serves as a critical connection to Interstate 94, which spans several states.

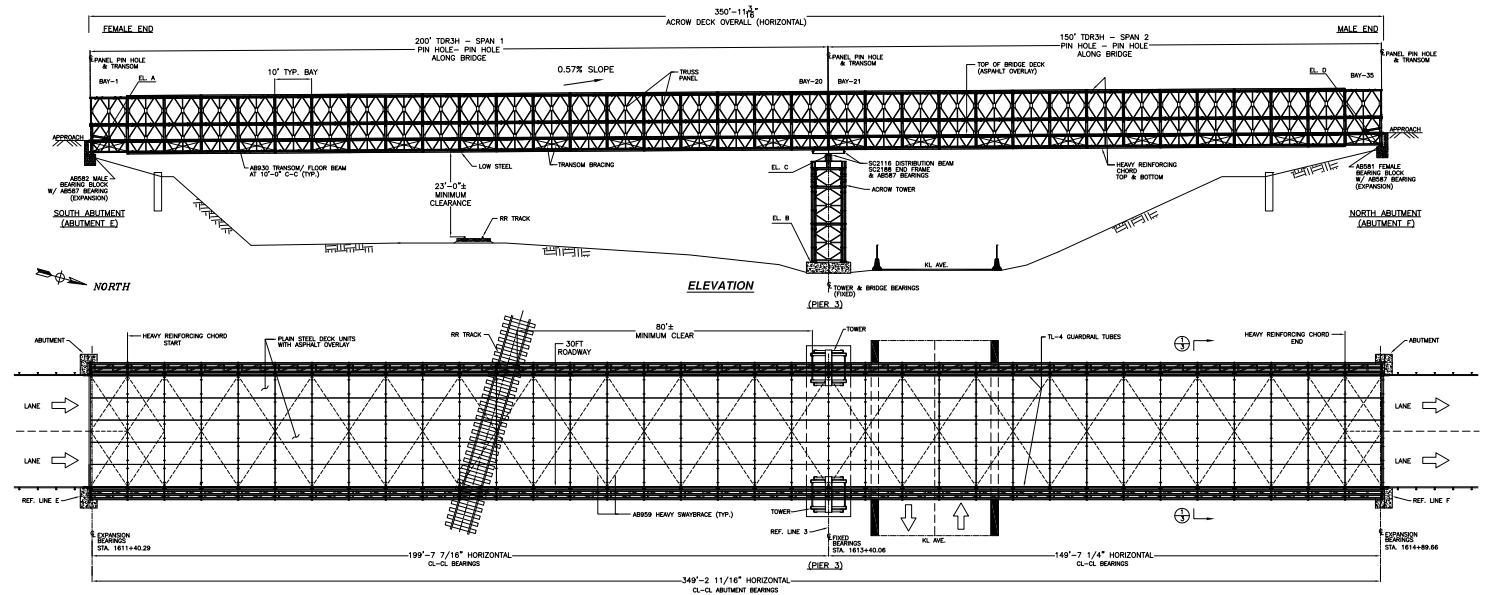
After the two US-131 bridges over KL Avenue and the Amtrak rail lines surpassed their service life and usability, full replacement was deemed more effective than continued repairs. While an alternate route was available for local traffic running beneath the bridges, a solution was still required to maintain the full capacity of US-131 throughout the construction period.

Although using a detour option was considered, limited space for assembly and installation posed a significant challenge. Equally critical was the need to avoid disruptions to the high-speed rail schedule and to protect the underlying rail infrastructure. During the design phase, MDOT selected a proposal from Acrow based on its proven track record, technical expertise,

and quality certifications.

Components for Acrow's two-span 700XS® bridge arrived at the site in August 2024. The final structure measures 350 feet (106.68m) long with a two-lane width of 30 feet (9.15m) and an asphalt overlay deck surface. Two Acrow 700XS® Towers, approximately 30 feet (9.15m) in height, function as intermediate piers to support the spans. The structure was assembled in the median of the highway, which had only 8 to 10 feet (2.44m to 3.05m) between the Acrow bridge and live traffic on each side, and installation was completed with a full cantilever launch.

In mid-March, northbound traffic was detoured to the temporary bridge to allow for reconstruction of the new northbound structure. Northbound traffic was shifted to the newly completed bridge in mid-July, and southbound traffic rerouted to the median bridge. Acrow's solution was in service until completion of both new bridges.



Specifications

Bridge length:

Two spans of 250' (76.2m) and 100' (30.48m) totaling 350' (106.68m), supported by two 30' (9.15m) towers.

Roadway width:

30' (9.15m)

Guide rails:

TL-4

Deck surface:

Asphalt overlay

Bridge erection method:

Full cantilever 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