



2020 ?? Clark Fork River Bridge

Description

Meta Fields

Project Summary : This project was MDT’s first use of CM/GC. The deck replacement consisted of full-width, full-depth precast deck panels and specialized conventional concrete closure joints.
Project Location : on Montana Hwy 200 over Clark Fork River at head of Noxon Reservoir near small community of Trout Creek in northwest corner of Montana
Mobility Impact Time :

- ABC: 6 weeks
- Conventional: 12 weeks

Impact Category : Tier 5 (within 3 months)
Dimensions : Main spans: 920-ft-long and 34.33-ft-wide 5-span steel-girder bridge (160 ft – 200 ft – 200 ft – 160 ft); no skew
Average Daily Traffic At Time Of Construction : 1960

Traffic Management : extended use of a 23-mile detour for local traffic and a larger multi-state alternative route for through-traffic
Existing Bridge Description : The existing 2-girder non-redundant 7-span bridge was 1,051-ft long (with approach spans included) and 28-ft wide with two traffic lanes. It was originally constructed over the Noxon Reservoir in 1958 prior to the filling of the reservoir. The deck was in poor condition with significant delamination and high chloride concentration from the frequent use of anti-icing chemicals.
Replacement Or New Bridge : The new 920-ft-long (main spans) deck replacement has a 32-ft-wide roadway with two 11-ft-wide traffic lanes and two 5-ft-wide shoulders. The cross-section consists of 9.5-ft-long, 34.33-ft-wide (full-width), 6.5-inch-thick precast deck panels with specialized conventional concrete joint connections.

Construction Method : The existing bridge’s limited roadway width and two-girder system posed safety concerns that made phased construction impractical. The MDT determined that the bridge will have several more decades of functional life with a new deck and rehabilitated superstructure/substructure. The deck panels were prefabricated locally in Kalispell, Montana, approximately 125 miles from the project site. Ninety-eight (98) full-width deck panels, each 34.33-ft wide and 9.5-ft long, weighing approximately 25,000 lbs, were required for the project. Each panel was fabricated with blockout sections for shear studs, leveling devices, and haunch concrete. A formless joint system was used between adjacent panels to ensure proper transverse connection. The panels were cast with MMFX reinforcement, and with epoxy-coated steel reinforcement protruding at the outside edges for traffic railing connections. The contractor built a mockup at the prefabrication plant to ensure proper fit-up and placement of joint concrete. Concurrent with panel prefabrication and prior to bridge closure, temporary scaffolding was installed beneath the bridge to provide safe access for the rehabilitation work and for containment of construction debris. The bridge was closed in June 2025 for 6 weeks, the maximum closure time allowed in the contract. During this time, the existing deck was carefully removed to avoid damaging the steel girders. Bearings were upgraded, as well as some beam seat improvements to the concrete substructure. The steel superstructure was cleaned and spot painted as deemed appropriate. Two cranes were used to place the deck panels. Each panel was picked up by one crane and placed on a delivery cart that carried the panel to the second crane. The second crane, on a trestle, placed the deck panels in sequence. Blockouts and transverse formless joints were cast with specialized conventional concrete, as the use of Ultra-High Performance Concrete was avoided due to regional shortages in steel fibers and cost considerations. Rehabilitation work was also done on the approach spans at each end of the bridge. Once the deck was in place, the cast-in-place concrete railing was constructed, and a 1.5-inch standard concrete overlay was applied. The project included an incentive/disincentive clause of \$9,000 per day, with a maximum incentive of \$90,000.

Stakeholder Feedback :

