



2009 ?? Route 23 Bridge over Otego Creek

Description

Meta Fields

Project Summary :

New York State's second use of ultra-high performance concrete (UHPC) deck closure joints

Project Location :

NYS Route 23 in Otsego County near the village of Oneonta

Impact Category : Tier 5 (within 3 months)

Dimensions : 131.2-ft long and 42.7-ft wide single-span steel plate girder bridge

Average Daily Traffic At Time Of Construction : 6903

Traffic Management :

onsite detour

Existing Bridge Description :

The existing two-lane bridge, consisting of steel through girders on concrete deck, was deteriorated and required replacement.

Replacement Or New Bridge : The two-lane steel stringer integral abutment replacement bridge is New York State's second use of ultra-high-performance concrete (UHPC) deck closure joints. The bridge consists of five 56-inch-deep steel plate girders spaced at 9.18 ft. The 8-inch-thick precast deck panels were installed on the beams, and UHPC was used to connect the panels in a six-inch-wide closure joint between panels.

Construction Method : The 5,436 sq ft of precast deck panels were fabricated with projecting galvanized bars that were spliced with the bars projecting from adjacent panels. After the beams and panels were erected, joint formwork was placed and the joints were filled with UHPC. The closure joints were then covered and cured. After curing, a 2-inch-thick concrete overlay was placed to provide a smooth riding surface.

Stakeholder Feedback : The use of UHPC eliminated the need to post-tension the deck panels, which decreased the duration of construction. Also, NYSDOT anticipates that the cost will be reduced for future projects using UHPC joint fill as contractors become more familiar with the UHPC material and processes.

High Performance Material : UHPC, galvanized bars

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Costs : The engineer's estimate for the project was \$1.78m. The low bid was \$1.46m.

Funding Source : Federal and State

Contract Plans : 1

Year Abc Built : 2009

State : NY

Owner : State

Location : Rural

Spans : One-span

Beam Material : Steel

Max Span Length Ft : 131.2

Total Bridge Length Ft : 131.2

Construction Equipment : Conventional

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