

US-31 Beulah: Bridge Replacement

Context

The bridge is located on the east side of Beulah, population 421, in Benzie County. The adjacent Crystal Lake attracts boaters and fishing enthusiasts to the area.

Purpose and Description

The project involved removing and replacing the US-31 bridge over the abandoned MIRC Railroad in the village of Beulah. The structure, which was in poor condition, was replaced with three precast concrete arched culverts. The nearly half-mile-long area was filled and paved to create a new roadway surface. In addition, MDOT realigned and reconstructed the local streets underneath the bridge and relocated underground utilities.



Public Engagement

An informal open house was held in May of 2000. Preliminary work began in November of 2000 with construction scheduled to begin in early spring of 2001. During the planning process, MDOT worked closely with the local community to set up the best possible schedule within the scope of work.

Challenges

The project was designed to avoid the busy tourism months between July 4 and Labor Day. Because of quality concerns related to the arched segments, the project was delayed. The first set of arched segments, manufactured off site and delivered to the project, did not meet specifications for tolerance to freeze-thaw cycles and MDOT required that replacements be provided. The closure of US-131 had to be extended until fall of 2001. MDOT worked to keep the community informed of the project delay.

Context Sensitive Solutions Approach

Given the importance of tourism in northwest Michigan, MDOT worked hard to improve the aesthetics of the structure. A simulated stone pattern was used on the concrete wall, piers, and bridge railing. The simulated stone was stained in different colors to resemble a natural fieldstone facade. Because of concerns about steep grades in Beulah and commercial traffic mixing with pedestrians downtown, separate detours were established for cars and commercial trucks. Access to businesses and residents adjacent to the construction area were maintained throughout construction.

Outcome

Although the project schedule was delayed, the end result was an attractive asset to the village of Beulah. The new structure accommodates a non-motorized path. The completion of the project culminated with a special opening celebration and an “Arch March” over the bridge.

Funding

The \$2.2 million bridge replacement project was funded through the Build Michigan II program and TEA-21.

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