

Maintenance of Traffic

Interstate 75 Reconstruction and Widening

Birch Run, Mich. (Genesee and Saginaw Counties)

Project Overview

Originally placed as two 12-in. thick concrete pavement lanes in 1961, the pavement was widened to three lanes in 1973. In 1990, an asphalt overlay was placed on the existing pavement, followed by microsurfacing every few years. For performance and cost-efficiency, the owner turned to a combination reconstruct and overlay, using 8-in. minimum concrete overlay and 11 in. of new concrete pavement on this 7.2 mile section.

MOT Variables

- Northbound shoulder was widened under traffic to accommodate three full lanes of traffic in each direction during median construction.
- Five lanes of traffic were then moved to the existing northbound lanes and the newly constructed northbound median.
- A temporary, movable wall allowed quick changes from two to three lanes in the direction of the heaviest traffic, while also separating opposing vehicles.
- The movable barrier wall was moved twice per week, allowing three lanes northbound for outgoing Detroit-area traffic on weekends and vice versa on alternate days.
- Average daily traffic of 65,900 vehicles proved to be no match to the innovative traffic management plan.



Fast Facts

Owner

Michigan DOT

Contractor

Interstate Highway Construction, Inc.

Contract Value

\$31.4 million

Concrete Cost

\$8.95 million

Project Completion

October 2005

- The Michigan DOT was sensitive to highway users, not only providing the movable wall to reduce congestion and delays, but also communicated progress of the project and lane restrictions via the media.
- The completed project featured four lanes of 12-in. concrete, with 12 ft. outside shoulders and 6 ft. inside shoulders in each direction.

Construction Factors

- Existing asphalt was milled for uniformity and slope correction.
- An 8-in. minimum concrete overlay was placed on the existing concrete pavement.
- The reconstructed areas included an 11-in. concrete pavement on a 4-in. open-grade base and a 12-in. subbase.
- Concrete was mixed with a central mix plant and delivered with “end dumps.”

Other Factors

- IHC was required to provide a five-year material and workmanship warranty on the concrete pavement.
- In addition to process controls to ensure quality concrete, the contractor checked dowel bar placement and cored concrete routinely throughout the project.



Presented by the

American Concrete Pavement Association

9450 W. Bryn Mawr Ave.
Suite 150
Rosemont, Ill. 60018

www.acpa.org | web
acpa@acpa.org | email



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