

ACPA » Project Profile

11 Mile Rd over Novi-Lyon Drain

This project was a local agency job funded by the RCOC Road Commission of Oakland County and Lyon Township with matching federal funds. MDOT's role was mainly bid letting, oversight and compliance.

The project location was on 11 Mile Road at the Novi-Lyon Drain in Lyon Township, Oakland County, Michigan. The project consisted of directional boring of a new sanitary line and the replacement of two "failing" 6'-7" x 9'-9" metal culverts with a 19' x 9' precast concrete box culvert. The new precast box culvert included headwalls, wing walls, apron, and a scour curtain wall.

Project Schedule

The project start date was July 2024 with a substantial completion date of October 2024.

Impact on Traffic

11 Mile Road was scheduled to be closed to through traffic during construction. Access to homes and businesses was allowed from either end only.

Contractor Details

Toebe Construction LLC of Wixom, Michigan was the prime contractor. Founded by Walter A. Toebe back in 1922.

Experience and innovative ideas led the contractor to offer a VECP (value engineering change proposal) to the construction sequence, namely the placement of the precast box culvert.

Flow in the Novi-Lyon Drain had to be maintained during the entire project. A steel sheeting "coffer dam design" was used to completely remove the two "failing" metal culverts and install the "complete" precast box culvert in just 2 days while maintaining flow in the drain.

The project was completed 3 weeks early and savings from the VECP "installation sequence" (approximately 4.5% of the original bid) were passed on to the owner.

When the contractor was asked what the motivation was behind the VECP "installation sequence" savings: "We valued our relationship with our pre-caster and worked hand in hand with their willing dispatch for a timely delivery so our crews could install the whole box culvert in just two days." He then added, "It was really the box culvert itself and the ease of installation. Opening the road up for traffic 3 weeks early was icing on the cake!"

Project Profile

Location

Oakland County, MI

Installation Completed

October 2024

Project Owner

RCOC Road Commission of Oakland County and Lyon Township

Concrete Contractor

Toebe Construction LLC

ACPA Producer

Northern Concrete Pipe, Inc.

Engineer/Designer

Northern Concrete Pipe, Inc.

» Box Culvert, Value Engineering, Precast Concrete