

Market

DOT

Challenge

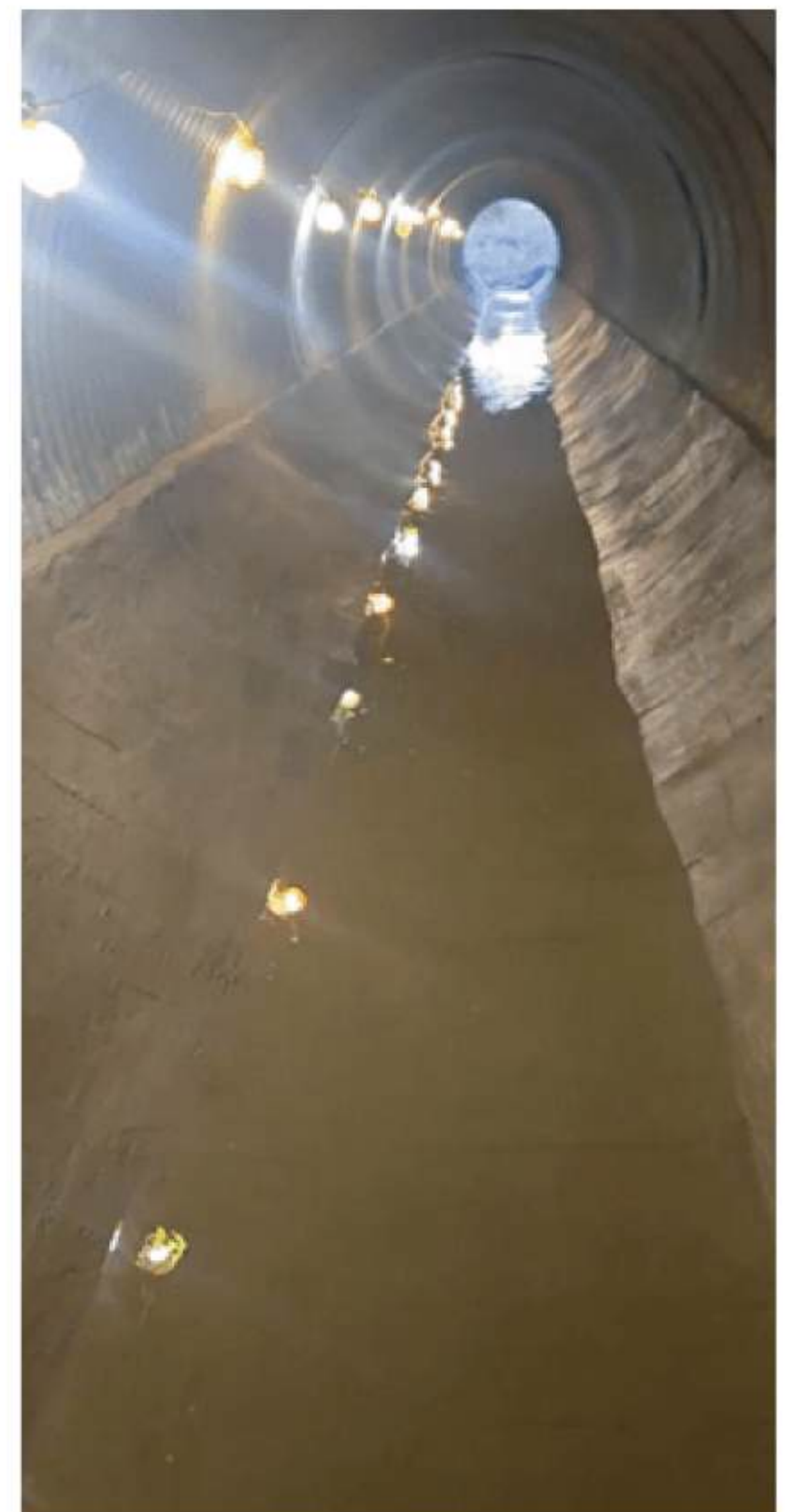
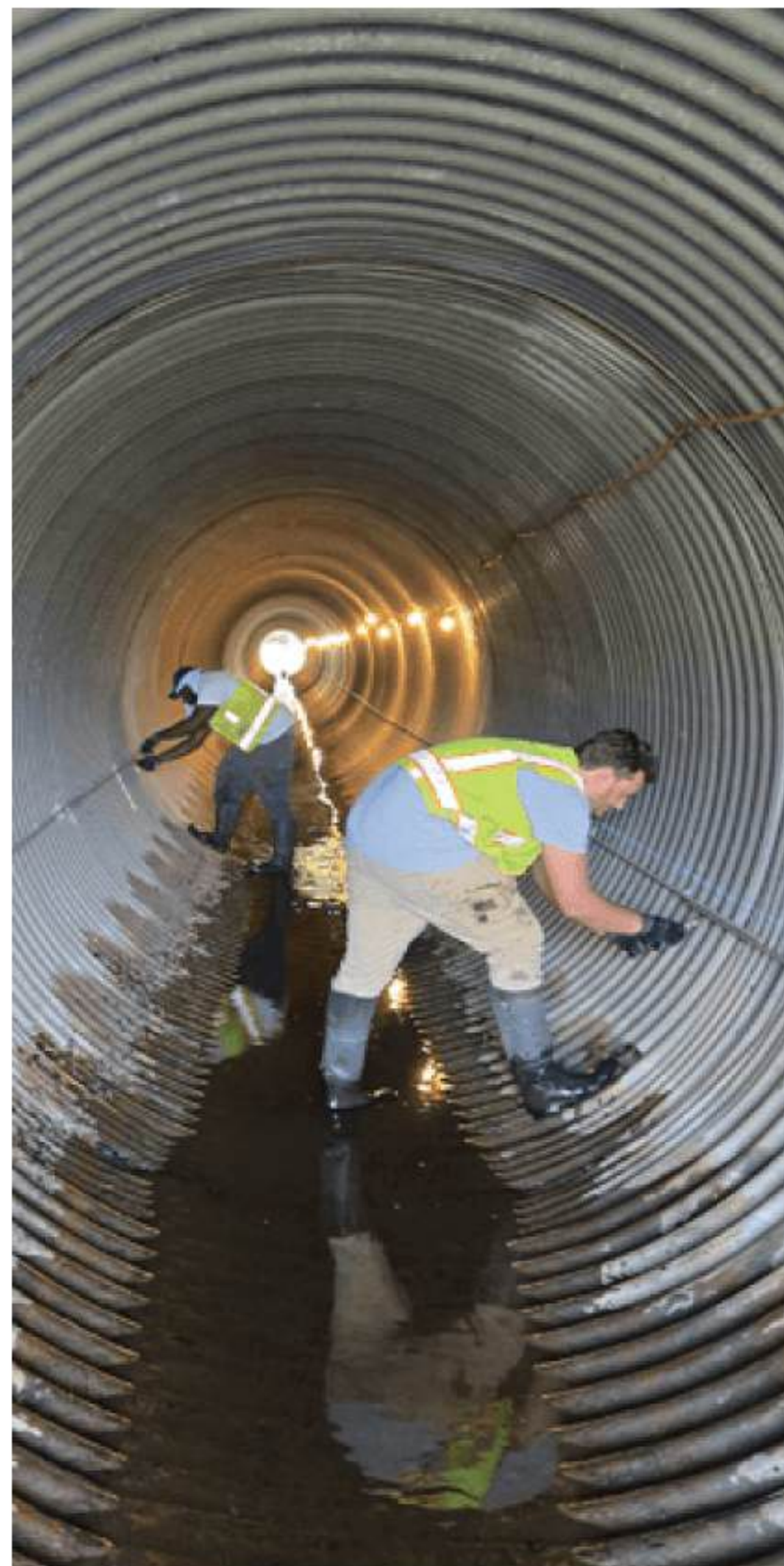
Along County Road 424 in Defiance, Ohio (ODOT District 1), a 102-inch corrugated metal pipe (CMP) culvert — 292 feet long — had developed a corroded invert. Portions of the invert had rusted through, disrupting the flow line. Invert paving was required to rebuild a reinforced concrete flow surface without excavating or replacing the culvert.

Repair Strategy

Field invert paving was the selected solution to rebuild the invert: wire-mesh reinforcement placed over the existing metal, then concrete poured and finished so the high points of the corrugation remained a minimum of three inches below the new concrete surface.

Scope

A HydraTech Field Services crew, typically about four people, ranging from three to five depending on the day, mobilized to northwestern Ohio in early September 2026.



The crew laid out dimensions and materials, then installed steel reinforcement and wire mesh along the invert while maintaining water control with a three-inch trash pump. Access improvements included building an entryway and ramp into the culvert; a neighboring commercial lot was used to stage concrete trucks for placement. High water delayed paving after mesh was complete; levels were rechecked before the pour window.

Concrete was placed in two halves: the first half on September 28 and the second half on September 29. Ready-mix with retarder supported working time in the confined invert. The crew cleaned up and demobilized on September 30. Active work spanned roughly two weeks on site within a September 9–30 calendar window (weather and water interruptions included). ODOT handled maintenance of traffic for the project.

Solution

Field paving restored a reinforced concrete invert through the 102-inch, 292-foot CMP, replacing the rusted flow surface without excavating or replacing the culvert barrel. The finished invert was placed to a minimum three-inch cover over the corrugation high points, re-establishing a workable flow line for the District 1 drainage asset.

