

October 6, 2021

MD 146 Pipe Replacement Project

This project is a Maryland Department of Transportation (MDOT) State Highway Administration (SHA) project located in Baltimore County, adjacent to the Loch Raven Reservoir and is funded for construction with an 80/20 funding split (Federal/State). This project is for the complete replacement of three (3) small structures along MD 146.

The existing small structures, Small Structure Nos. 03189X0, 03190X0, and 03192X0, are reinforced concrete box culverts with concrete headwalls that will be removed and replaced. The existing structures have been repaired numerous times due to the headwalls collapsing, which has led to the roadway failing in localized areas. The structures all received an inspection rating of "poor condition" (previously known as structurally deficient) and MDOT SHA believe the structures have reached the point where a structure/roadway failure is possible if the structures aren't replaced. For these reasons, MDOT SHA has advertised a project to replace the structures. This is a time sensitive construction on a roadway with a high Average Daily Traffic (ADT). Therefore, MDOT SHA has included a construction incentive for the contractor to build all three structures as quickly and safely as possible within a three-week road closure and detour.

The existing deficient structures will be replaced with horizontal elliptical reinforced concrete pipes (H.E.R.C.P) and precast reinforced concrete headwalls. Small Structure Nos. 03189X0 and 03192X0 will be a 60" x 38" H.E.R.C.P, and Small Structure No. 03190X0 will be a 76" x 48" H.E.R.C.P. The proposed structure will be constructed 16' longer to accommodate future bicycle lanes if the MD 146 roadway were to ever be widened. In order to place the new headwalls and invert, the contractor needs to excavate down 6'-8'. OSHA law requires a minimum of a 2:1 slope for safe trench excavation, which pushes the edge of excavation 12'-14' out from the toe face of the headwall footing. The original MDOT SHA design only included 6' of excavation out from the toe face of the headwall footing. After the Concrete General began construction, they alerted MDOT SHA of the issue and we (MDOT) began working on a solution. The solution was to move the proposed Limits of Disturbance (LOD) and extend the area provided for the contractor to safely perform the excavation. The areas around the structures and within the LOD/extended LOD will be restored to their original condition after construction is complete.