

## **Project Description**

Bridge No. 07102 supports Route 216 over an unnamed brook in the town of North Stonington. The structure is located approximately 50 feet south of Route 184/Secondary State Route 626 (SSR 626), approximately 250 feet north of Interstate 95 (I-95) Southbound (SB) mainline, immediately north of the I-95 Southbound Exit 93 ramps, and approximately 0.3 miles from the Rhode Island Border (see Location Map).

The existing bridge was constructed in 1964; it consists of a 72-inch by 55-inch asphalt-coated corrugated metal pipe, approximately 56 feet long. The culvert is under approximately 3 feet of ballast and is supported by headwall, endwall, and wingwalls at the inlet and outlet. Bridge No. 07102 is in fair condition (Rating = 5). The asphalt coating is missing on the side plates the full length of the culvert, where visible. Light to moderate rust was seen on the side plates at the silt line for the full length of the pipe. Vertical and diagonal hairline cracks were seen with and without efflorescence in the reinforced concrete headwall. Roughly 20 inches of silt build up was visible the full length of the pipe. Heavy vegetation growth is present in the channel and along the embankments and no water flow was present at the time of the inspection.

The Route 216 lane configuration over Bridge No. 07102 is composed of two 25-foot lanes with no shoulders). A metal beam rail is present along both sides of the roadway and the bridge. The Average Daily Traffic (ADT) over the bridge is approximately 4,800 vehicles per day (2023 CTDOT Traffic Log).

There are overhead lines present near the Route 216 highway line at mile marker 2.47 and illumination is visible in the vicinity. No underground utilities are present at Bridge No. 07102. The nearest underground utilities are along Route 216, approximately 120 feet south of the I-95 SB Exit 93 On Ramp.

The project site lies within the Pawcatuck River drainage basin (1003-10-1) and is not located within an aquifer protection area. According to the FEMA Map Service Center, the Project Area is not within a floodway area. Review of CT DEEP's Natural Diversity Data Base (NDDb) for North Stonington indicates that the project site is not located within an area identified as a known habitat for state and federally listed species and significant natural communities.

The purpose and need of this project is to address the deteriorating condition of the bridge and restore the structure to good condition. The proposed work consists of replacing the existing culvert with an 11 foot by 6 foot-6-inch precast concrete box culvert. The replacement also includes the installation of new cutoff and return walls, wingwalls, and parapets. Traffic on Route 216 would be maintained during construction via a temporary road constructed approximately 250 feet southwest of the bridge.

A Wrong Way Driving Detection System (WWDDS) will be installed on the I-95 SB Exit 93 off ramp as part of this project. The WWDDS will consist of new equipment including pedestals, thermal and CCTV cameras, solar panels, cellular modems, internally illuminated signs, and signs with flashers. This equipment will be the primary detection for wrong-way vehicles. The system will be installed prior to the start of the construction of the culvert replacement.

Construction is anticipated to begin in Summer 2029.