

## Project Narrative

### Tanyard Brook Culvert Replacement Project Bristol, RI

The Tanyard Brook Culvert Replacement Project will replace the existing piped and stone-lined channel with a new concrete box culvert from Garfield Street to the outfall at Walker's Cove, in the southern end of Bristol Harbor. Please refer to Figure No. 1. The length of the Project is approximately 1,535 feet. The Brook as it exists today begins at the State Street Reservoir and flows southerly through private property, crossing numerous residential streets. The total length of the Tanyard Brook is approximately 4,500 feet. The depth and width of the channel vary throughout its length. The stone-lined walls and earth bottom were covered with concrete planks in the 1960's. There is a section of 60" corrugated metal pipe between Woodlawn Avenue and Wood Street, and from Hope Street to the outfall.

The stone walls have collapsed in several locations, and there are numerous restrictions within the piped sections that have reduced the capacity of the brook, resulting in frequent flooding of the roadways and properties. The outfall, shown to the right, is submerged during periods of high tide. While the brook conveys runoff from the reservoir and the local street network, when the tide is above the outfall pipe invert elevation, the saltwater flows in to the brook, preventing release of the stormwater runoff.



*Photo 1 – Outfall at Walker Cove*

The new concrete box culvert will be installed generally along the same alignment as the existing brook, and will be constructed deeper

than the current shallow channel, to allow for local drainage to flow into the brook while flows from the northern portion of the watershed are conveyed toward the outfall. The alignment will be revised slightly between Wood Street and Hope Street, relocating the channel south of its present location. This will improve the hydraulic capacity of the culvert, resulting in a smaller section, and therefore reduced impact to the surrounding properties.

A new tide gate is proposed for the outfall, which will allow for release of the stormwater runoff during periods of high tide, and restrict the flow of salt water upstream into the culvert.

Since the new culvert will be constructed along the existing alignment, the construction will take place during the months of July through November.