Project Narrative

This project will replace an existing deficient stream crossing with a new box culvert, improving both stream function and road conditions. The existing 54-foot-long, 24-inch-diameter multi-sloped CMP culvert will be removed and replaced with a new 40-foot long, 6.0-foot wide, and 3.5-foot tall box culvert. The project will also reposition the culvert south of its original location, recreate 222 linear feet of stream channel (104 feet upstream and 118 feet downstream), and raise the road 2 feet. These changes will accommodate the new culvert's size, the site's steep topography, and the existing, 8-inch-diameter sewer line running along the roadway and under the existing culvert.

The culvert replacement will fix several issues. The existing stream channel is undercutting a steep bank upstream of the existing culvert, on the north side. Moving the culvert south will protect this bank. Along the road, poor drainage and pavement failure has greatly deteriorated the road surface. Raising the road 2 feet will prevent these drainage issues while also allowing the culvert to fit above the existing sewer line and reduce over-roadway flooding during storm events.

Downstream, head cutting of the channel bottom has left a significant drop from the outfall. This headcutting is also leading to erosion along the western shoulder of the roadway, which has begun to slough into the stream. The redesigned crossing will eliminate the headcutting issue. Erosion will be further reduced by lining the streambed with new material (heavy material downstream and light material upstream) to create a roughened channel; planting native vegetation on streambanks and all other disturbed areas along the restored segments of stream; and installing headwalls at culvert ends to stabilize roadway fill. A traffic barrier will also be installed over the crossing to provide safety.