

**DESIGN REPORT  
STATE PROJECT NO. 51-260  
FEDERAL-AID PROJECT NO. 0012(132) [CN]**

**Safety and Traffic Operational Improvements on  
CT Route 4 (Farmington Avenue) from  
Garden Street to Mountain Spring Road  
Town of Farmington**

**Town:** Farmington

**Road:** Route 4 (Farmington Avenue) and Route 10 (Main Street)

**Final Maintenance Responsibly:** State – Route 4 and Route 10  
Town – Backage Road, High Street, Mtn. Spring Road

**Project Location:** This project extends along CT Route 4 (Farmington Avenue) in the town of Farmington from the intersection with Garden Street easterly to Mountain Spring Road, for a total length of approximately 2,600 feet. The section of Route 4 between Route 10 (Main Street/Waterville Road) and High Street runs through Farmington's Historic District known as the Village.

**Purpose:** The purpose of this project is to improve safety (reduce the number and severity of accidents within the project limits, especially within the Village) as well as lane continuity and traffic operations.

**Description:** Route 4 is proposed to be reconstructed to provide two continuous lanes eastbound and one lane westbound. Exclusive left-turn lanes are proposed to be added on Route 4 westbound, Route 10 SB approach at the Route 4 intersection, on Route 4 eastbound at the proposed Backage Road and at Mountain Spring Road. A shared left-through lane and a exclusive right turn lane are proposed on High Street at the Route 4 intersection. All present turn lanes will be re-established.

As part of this project, an access management plan is proposed within the Village to improve traffic flow and reduce the severity/frequency of accidents. On the north side of Route 4, individual driveways will be consolidated into one signalized access to Route 4 by constructing a Backage Road opposite High Street. This road is proposed to become a town road upon completion of the project. A new signal will be installed at the High Street intersection with Route 4. On Route 4, from old Chuck's Restaurant driveway to High Street, a 7' wide textured/stamped/planted raised median will act as a deterrent to left turns to/from Route 4. On the south side, all the driveways between Main Street (Route 10) and High Street are proposed to be limited to right-in/right-out.

The lane designations proposed for the project are two 11' through lanes with 2' shoulders eastbound, and one 12' lane with a 6' shoulder westbound.

## **ROW Involvement**

The rights-of-way involvement consists of 1 total acquisition and 16 partial acquisitions to accommodate the proposed improvements. The remaining parcels are in the process of being acquired. A ROW Waiver will likely be required and will be obtained by the office of ROW.

**Environmental Permits:** The following permits are required for this project:

- General Inland Wetland
- Stormwater Discharge
- Army Corps of Engineers CAT 1A

## **Public Utilities:**

Overhead and underground utilities will be impacted by this project

- Sewer line consolidation to convert the two mains (21-inch and 8-inch) into one (24-inch) from Garden Street to High Street. Replacement of the existing 8-inch line from High Street to Mountain Spring Road. This utility breakout project is ongoing (51-270) and is scheduled to be completed in the spring of 2016.
- Water main upgrade (CT Water) required from Garden Street to High Street. The States Contractor will be installing this segment. Replace the water main from High Street to Mountain Spring Road. CT Water is to install this segment themselves this year.
- Sewer and water main installation required along the Backage Road. The States Contractor will be installing these services.
- 2 – Underground utility duct banks are to be reset by Frontier
- Overhead utility pole reset and/or relocation required for 34 poles.
- 400-feet of gas main to be reset along Route 4 by CNG.

**Salvage:** None

**Reimbursable Agreements:** This project will have illumination installed along the Backage Road. The Town of Farmington requested that the lighting match the luminaires installed under the Farmington River Bridge replacement project (51-267). The Town will be paying the costs for the difference in price between a standard illumination installation and the upgraded standards.

Utilities companies are entitled to 50% reimbursement for their relocations. The States Contractor will be installing the water main along Route 4 as well as within the footprint of the Backage Road. The States Contractor will also be installing the sewer for the Town of Farmington along the Backage Road.

## **Construction Considerations:**

This project will require extensive stage construction operations and full sets of plans for the staging operations have been provided.

## **Site Access:**

All proposed work can be performed from the existing highway or from off the highway along the proposed ROW.

### **Maintenance and Protection of Traffic:**

A majority of the construction operations can be completed during normal working hours or within the staging operations shown in the plans. Some of the drainage installation operations will need temporary lane closures. Drainage, utility and paving operations across the intersections will need to be completed during non-peak hours (night-work).

### **Culvert and Misc. Drainage Construction:**

A new culvert is being proposed to cross Route 4 in the vicinity of Mountain Spring Road. A temporary 42-inch bypass pipe has been designed for this operation. The staging of the culvert installation corresponds to the overall staging set up for this project. The details of the culvert installation are shown in the structure plans.

### **Water Handling Assumptions:**

See the above description for the culvert installation. Provisions have been made for dewatering basins on both the inlet and outlet of the culvert.

Some of the existing drainage system is being replaced by larger pipes. Water handling for the roadway drainage is to temporarily connect the existing drainage system as needed, especially between station 30+00 to station 33+00, where junction chambers are needed to connect to the existing drainage system. Once past station 33+00 the drainage system is within a different footprint than existing.

During Stage 1, a temporary connection with a 15-inch pipe will be needed at station 37+50RT to connect the existing Route 10 Spur drainage to the new drainage proposed along the right side of Route 4.

During Stage 1, a temporary connection with a 12-inch pipe will be required to connect the proposed Backage Road drainage to the proposed drainage along the right side of Route 4 at station 44+50. This pipe is needed because the drainage along the left side of Route 4 cannot be completed until the Frontier underground conduits are relocated in Stage 2.

During Stage 1, a temporary connection with a 15-inch pipe will be required to connect the end of the proposed drainage to the existing pipe at station 47+75 RT.

### **Subsurface Information:**

A full utility test pit program was developed for this project and the test pit information is within the plan sets.

A few soil boring test pits were completed for this project and are also in the plans.

### **Specialized Construction Equipment and Methods:**

Most of the project site has been designated as Areas of Environmental Concern (AOEC) of Low Level Areas of Environmental Concern (LLAOEC). The Environmental Compliance plans are included as part of this project plan set.