
MEETING DATE:	September 3, 2020	ATTENDEES:	John Iennaco, PE, CFM – Town of Madison (Madison)
PROJECT:	SPN 75-136 Replacement of Bridge No. 04857 Heatherwood Drive over Camp Laurelwood Brook		Robert Russo, PE – Madison Marc Byrnes, PE – CTDOT
MMI #:	1566-29-04		Daniel Carnein – Close, Jensen & Miller (CJM)
SUBJECT:	Public Information Meeting		Michael Brady – CJM
LOCATION:	WebEx – Virtual Meeting		Shelley Plude, MS, PE – MMI Kishor Patel, PE – MMI Four Members of the Public (Estimate)

I. Project Introduction

Shelley Plude of Milone & MacBroom, Inc. (MMI) introduced the project to the public. MMI has been retained by the town to provide design services for the replacement of the existing culvert at Heatherwood Drive over Camp Laurelwood Brook. The project is being funded under the Federal Local Bridge Program, which covers 80 percent of the cost of design and construction. The federal funds are managed by the Connecticut Department of Transportation (CTDOT). The remaining 20 percent is paid for with town funding.

II. Design Presentation

Existing Conditions

The existing culvert at Heatherwood Drive consists of three corrugated metal pipes (6 feet wide by 3.5 feet high). The pipes are in poor condition with missing asphaltic liner, heavy rust, and some perforations along the bottom of all three pipes. There is also deformation of the top of the pipes due to large riprap placed above them for slope stabilization. A number of joints along the length of the pipe are also separating. Both the inlet and outlet ends of the pipes are undermined by scour. There is debris buildup on the inlet side that is restricting flow through the culvert.

There is a significant amount of scour downstream of the bridge caused by restricted flows through the culvert during storm events. This has caused a large scour hole to develop as well as a significant widening of the channel immediately downstream.

In addition to the culvert, there are two existing stormwater outfalls in need of repair. One outfall located west of the bridge near Concord Drive is buried and has no outlet armoring. This has resulted in a significant amount of erosion between the outlet and the channel. A second outfall is located on the east bank of the channel immediately downstream of the culvert. The concrete headwall is completely undermined. Both outfalls will be replaced as a part of the project with appropriate armoring to prevent erosion.

Proposed Design

The proposed culvert replacement will consist of a three-sided precast concrete culvert supported by cast-in-place concrete footings. Our geotechnical investigation showed that bedrock is present at the site but is highly variable. The western abutment will be a strip footing cast directly on bedrock while the eastern footing will be pile supported to protect against scour.

The existing culvert pipes are approximately 53 feet long and extend the full width of the existing right-of-way. The existing roadway width of Heatherwood Drive will be maintained, and the bridge will be reduced in width from 53 feet to 28 feet to more closely align with the width of the roadway. The existing pipes will be removed, and a natural channel bottom restored through the new structure. The banks will be restored with native rounded stone.

The new bridge will have a solid concrete parapet with a simulated stone masonry formliner to give the appearance of a stone wall. The concrete will be hand stained in the field to resemble native stone. There will be new guiderail installed on the approaches similar to the type of guiderail that is present today. The new guiderail will be galvanized and painted to resemble weathering steel, which is the town standard. Weathering steel guiderail is no longer permitted for use by CTDOT due to the reduced longevity of weathering steel versus galvanized.

Heatherwood Drive will be closed to traffic during construction. Traffic will be detoured onto Concord Drive. It is anticipated that this detour will be in place throughout construction, with construction slated to begin in April 2022 with a typical construction season extending to November. As design progresses, the construction schedule will be refined, and the proposed schedule may be reduced.

The current construction cost estimate for the project is \$1,072,500. Incidentals, which include construction inspection and material testing during construction, have an estimated budget of \$268,100. An additional \$107,300 of contingency is included in the overall project cost to account for unforeseen circumstances, changes in site conditions, or other changes during construction. This brings the total project estimate to \$1,447,900. Eighty percent of the cost will be paid for by federal funds and 20 percent by the town.

Permit Process

As a part of the design process, a series of permits will be obtained from the Connecticut Department of Energy & Environmental Protection (CTDEEP), the United States Army Corps of Civil Engineers (USACE), CTDOT, Madison's Inland Wetlands Agency, and Planning and Zoning Commission.

The project will be screened by the State Historic Preservation Office (SHPO) and the Tribal Historic Preservation Office (THPO) to ensure that no historically sensitive resources are being impacted. The Natural Diversity Database (NDDDB) will be consulted to determine if any threatened or endangered species are known to be in the area that may require special consideration during construction. CTDEEP Fisheries will also review the plans to verify that fish passage is accommodated during construction and by the final design.

The project will be presented to the state and federal regulators to make a final permit determination. A typical permit application process takes 6 to 8 months to complete. Currently, the following permits are anticipated:

- CTDOT Flood Management Certification
- USACE Self Verification General Permit No. 19
- Local Wetlands Agency Permit
- Local Planning and Zoning Commission Permit

III. Rights-of-Way Presentation

In order to construct the new bridge, construction easements are anticipated from four of the abutting properties. These easements are necessary for contractor access during construction and will be dissolved once the project is complete. Drainage easements will also be needed from the two properties downstream. While the existing drainage outfalls are currently on private property, drainage easements will be obtained to formalize these arrangements. The size and type of easements needed will be further detailed as the design progresses.

CTDOT will be handling the acquisition of the easements for this project. The impacted property owners will be contacted by CTDOT with a written offer of compensation. In the event an agreement cannot be reached, the state may acquire the property rights through eminent domain.

IV. Audience Participation

- An abutting property owner inquired about the impacts to their property and what would be impacted. The property owner also asked for clarification with regard to the detour.

Construction on this particular property will be generally confined to the northwest corner of the parcel near the existing culvert and along the channel. Impacts will include removal of the existing pipes, excavation for the construction of the wingwall (to be located within the right-of-way), modifications to the drainage outfall, and placement of riprap for the channel restoration.

For the driveways on Heatherwood Drive east of the culvert, they will be required to travel east on Heatherwood Drive to Concord Drive following Concord Drive around to the western side of the project site. They will then be able to exit via Heatherwood Drive to Summer Hill Road.