



**TOWN OF LYME**  
**Virtual Public Meeting**  
**SPN 74-69 Replacement of Bridge No. 04726**  
**Macintosh Road over Eight Mil River**  
**Lyme, Connecticut**  
**Notes from Meeting held on: March 11, 2021, at 6:00 p.m.**

ATTENDEES	REPRESENTING
Steven Mattson	Town of Lyme (Town)
Don Gerber	Town of Lyme
Marc Byrnes, PE	Connecticut Department of Transportation (CTDOT)
Dennis McDonald	CTDOT
Danielle Faucher	Close, Jensen and Miller, PC (CJM)
Michael Brady, PE	CJM
Shelley Plude, MS, PE	SLR International Corporation (SLR)
Eleven Members of the Public	

## PROJECT INTRODUCTION

Shelley Plude of SLR introduced the project to the public. SLR has been retained by the Town to provide design services for the replacement of the existing bridge at Macintosh Road over the Eight Mile River. 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 CTDOT. The remaining 20 percent is paid for with Town funding.

## DESIGN PRESENTATION

### Existing Conditions

The existing bridge was built in 1972 and consists of seven steel girders with a corrugated metal deck pan. The bridge is approximately 50 feet long and supported by concrete abutments. Four of the seven girders have areas of heavy rust, particularly the exterior girders, largely due to the lack of curbing on the bridge, which allows for uncontrolled runoff from the bridge deck to the beams. The consistently damp environment from the Eight Mile River is also a contributing factor. Due to the condition of the beams, the bridge is currently under a 7-ton weight restriction.

The abutments themselves are in fairly good condition. However, during the preliminary design phase, a subsurface investigation was performed, which determined that the existing abutments are shallow, extending roughly to the invert of the channel, and have minimal footings. Due to these factors and subsurface soil conditions, the existing abutments would be sensitive to additional loading.

The bridge is located in an environmentally sensitive area with two of the three abutting properties owned by the Lyme Land Trust or under conservation easement in favor of the Land Trust. The Eight Mile River has a Wild and Scenic designation, which makes it subject to additional scrutiny during permitting. The river and surrounding area are potential habitat for several sensitive or threatened species of wildlife. From a flood hazard standpoint, the bridge is located within a wide floodway and floodplain.

### Proposed Design

During the preliminary design phase, a number of alternatives were considered. The possibility of rehabilitating the existing bridge was examined; however, it was determined to not be cost effective due to the amount of deterioration present. A rehabilitation would not have restored the full capacity, and the bridge would remain under a load restriction. Superstructure replacements were also considered given the good condition of the concrete abutments; however, the existing abutments would not be able to tolerate the increase in load. Ultimately, it was concluded that a full bridge replacement utilizing prestressed concrete beams on integral abutments was the most effective solution.

To minimize impacts to the Eight Mile River, the proposed bridge will have a longer span (64 feet), allowing the new foundations to be built behind the existing abutments. The prestressed concrete box beams provide the shallowest superstructure depth, which allows for a larger bridge opening without needing to raise Macintosh Road. The smooth bottom created by the adjacent box beams allows for more efficient flows through the bridge during a flood event and reduces the potential for debris entrapment, which could worsen flood conditions or damage the bridge. Concrete will also have lower long-term maintenance needs compared with steel.

The beams will be supported by integral abutment foundations, which reduces the amount of concrete and excavation required for installation, allowing the existing abutments to remain in place during construction. The new abutments will be supported by piles.

The new bridge will be slightly wider than the existing structure, which has a curb-to-curb width of 19'-3". Under proposed conditions, the bridge will be widened to 20 feet, accommodating two 10-foot lanes, which is more consistent with the approach roadway width. Minor adjustments to the roadway alignment will be made, but overall, the intent is to preserve the existing character of the roadway.

The new bridge will have concrete curbs and steel bridge rail. Concrete end blocks will be constructed to transition from the bridge rail to metal beam guiderail on the approaches. While the details will be further developed during the next steps in the design, the intent is to provide finishes generally consistent with other bridges in the town of Lyme. This includes galvanized bridge rail and guiderail and smooth concrete finishes.

Macintosh Road will be closed to traffic during construction. Traffic will be detoured south onto Mt. Archer Road and Route 156 (Hamburg Road). With construction likely to coincide with the spring and summer months, access will be maintained to the parking area for Jewett Preserve to the west of the bridge as well as the swimming area to the east.

Construction is currently anticipated for spring 2023. This schedule is dependent on the permit process. A typical construction season extends April through 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 \$1,538,500. Incidentals, which include construction inspection and material testing during construction, have an estimated budget of \$384,600. An additional \$153,900 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 \$2,077,000. 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 Engineers (USACE), CTDOT, and Lyme's local Wetland Agency.

The project will be screened by the State Historic Preservation Office (SHPO) and the Tribal Historic Preservation Office (THPO) to ensure that no historically or archaeologically sensitive resources are being impacted. The Natural Diversity Data Base (NDDDB) will be consulted to determine what protective measures may be necessary during construction for any threatened or endangered species that may be in the area. CTDEEP Fisheries will also review the plans to verify that fish passage is accommodated during construction and by the final design.

Due to the Wild and Scenic designation of the Eight Mile River, the project will be subject to review by the National Parks Service. While no direct impacts to the watercourse are proposed, there may be limited tree clearing necessary, which will be subject to review.

#### **RIGHTS-OF-WAY PRESENTATION**

Minor permanent easements to install and maintain armoring may be required; however, the majority of the easements will be temporary construction easements associated with construction access and crane activity. Further coordination is necessary with the utility companies to determine if their existing overhead lines may be relocated as this will determine the direction of the crane operations. Limited tree

clearing is anticipated to accommodate crane activity. As the design progresses, adjustments will be made, as necessary, to the proposed easements.

Dennis McDonald from CTDOT was present to discuss the rights-of-way process. Once the impacts have been finalized, the impacted property owners will be contacted by CTDOT with a written offer of compensation. In the event that an agreement cannot be reached, the state may acquire the property rights through eminent domain.

## AUDIENCE PARTICIPATION

### ***Would you please speak to the guard rails, length and criteria?***

The guiderail will be installed in accordance with standard details for crashworthy guiderail. The length installed will generally be the minimum allowable under these standards with the exception of the northeastern corner of the bridge where the rail needs to be extended beyond a stone wall in order to properly anchor the rail.

### ***How long will the construction process last once it begins?***

A typical construction season is approximately 8 months (April through November). As design progresses, the schedule will be evaluated and updated accordingly.

### ***Where will staging for the project take place?***

As the road will be closed to traffic, staging will generally take place within the roadway. In conjunction with the Town, alternatives for staging on nearby property are being discussed and will be coordinated with the applicable property owners.

### ***If local residents were interested in a more attractive design, is there a path for them?***

The design of the bridge is being coordinated with the Town Selectmen and is generally in keeping with other bridges in Town. Alternative treatments may have additional costs associated with them and will be vetted with the Town.

### ***It sounds like you do not anticipate the need for environmental remediation or that will be determined after the project is complete?***

While the proposed design is intended to minimize environmental impacts, the project will be reviewed with the appropriate regulators to determine if there are any impacts that may require compensation or remediation. If deemed necessary, it will be included in the design.

***Will anything special be done to accommodate road runoff?***

At this time, there are no proposed alterations to the existing drainage patterns of the roadway. SLR will discuss with the Town to determine if any drainage improvements are desired.

***No thought of using a culvert under the bridge?***

Due to the sensitivity of the watercourse, the intent was to avoid direct impacts to the Eight Mile River. Multiple box culverts would be needed to cross the channel, which would trigger an extensive permitting effort.

***A property owner asked about flags located on their property and what their purpose was.***

The flags are likely from the surveyor marking channel cross sections or our environmental scientist who was on site to flag wetlands.

***Will tree clearing be coordinated with property owners?***

Yes. Once the limits of clearing are determined, the trees to be removed will be identified.

***A property owner brought up foundation and well water issues experienced at their business potentially related to another bridge replacement project. Are similar issues anticipated for Macintosh Road?***

There are no buildings or residences located immediately adjacent to the bridge that would be impacted by pile installation. However, the piles will be installed in accordance with the appropriate industry standards.

***Are the existing abutments being reused?***

No. New abutments will be constructed behind the existing, and the existing abutments will be cut down to be flush with finished grade.

***Will there be further notifications to the public regarding the progress of the project?***

There are no additional public meetings planned. Impacted property owners will be contacted by CTDOT to discuss easements.

***Will the road be raised?***

No. The proposed bridge will generally match existing grade.

## ACRONYMS/ABBREVIATIONS/DEFINITIONS

CJM	Close, Jensen and Miller, PC
CTDEEP	Connecticut Department of Energy & Environmental Protection
CTDOT	Connecticut Department of Transportation
NDDDB	Natural Diversity Data Base
SHPO	State Historic Preservation Office
SLR	SLR International Corporation
THPO	Tribal Historic Preservation Office
Town	Town of Lyme
USACE	United States Army Corps of Engineers

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