

Connecticut Department of Transportation

**Public Information Meeting
State Project No. 0162-0159
Replacement of Bridge No. 01571
Carrying Route 263 over East Branch Naugatuck River**

**October 17, 2024 7:00 PM
Winchester Town Hall
338 Main Street
Winsted, CT 06098**

Report of Meeting

Present:

~5 Attendees including Mr. Jim Rollins Director of Public Works for Winchester

Team Presenting from the Connecticut Department of Transportation:

Andrew J. Cardinali, Principal Engineer, State Bridge Design
Jonathan J. Kempf, Project Manager, State Bridge Design
Raymond I. Basar, Project Engineer, State Bridge Design
Yiannis A. Bagtzoglou, Project Designer, State Bridge Design
Kathleen E. Ericson, R.O.W. Coordinator, Office of Rights of Way

Presentation:

Jonathan J. Kempf opened the meeting at 7:20 pm with a brief welcome, introduced the project design team, and reviewed Title VI policies. Mr. Kempf explained that the information related these policies, and the design team contact information will be publicly available on the project website.

Yiannis A. Bagtzoglou began the formal presentation of the project with a brief project description and location. Mr. Bagtzoglou continued presenting the following key points about the existing bridge condition:

- The bridge was originally constructed in 1935 and is nearly 90 years old.
- The existing bridge structure consists of four reinforced concrete tee-beams supported on concrete abutments and wingwalls.
- The overall length of the existing structure is 29 feet, the maximum span length is 27 feet, and the clear span under the structure is 23 feet.
- The roadway supported by the bridge is narrow with a curb-to-curb width of 18 feet 3 inches and an overall width of 20 feet 8 inches.
- The existing bridge structure provides service to Route 263 along Ashley Road over East Branch Naugatuck River.
- The estimated average daily traffic (ADT) for the bridge is 400 vehicles, and two percent of this traffic are trucks.

Yiannis A. Bagtzoglou explained the condition of the existing bridge. Images and photographs of the existing structure were shared, including the roadway approaches, inlet and outlet elevations, upstream and downstream conditions, and existing substructure. An image summarizing the extent of deterioration from the most recent inspection report was presented by highlighting key points. Photographs of the deficiencies present on the existing structure were also shared:

- Recent inspections show that there is significant deterioration to the underside of the structure supporting the roadway. The beam and deck concrete is deteriorating, spalling, and cracking.
- Steel reinforcement on the underside of the bridge is partially exposed and corroding.
- The most recent bridge inspection assigned a poor condition rating for the existing structure. This lets the Department know that a project needs to be initiated to address these deficiencies. The bridge can still currently support traffic safely, but the deterioration needs to be addressed.
- Images of the concrete tee-beam deterioration, exposed steel reinforcement corrosion, and cracks with deterioration of the concrete deck supporting the roadway were shared.

Yiannis A. Bagtzoglou explained the reasoning behind replacing the existing structure. Mr. Bagtzoglou also introduced the initial scope of the proposed structure:

- The superstructure supporting the roadway is in poor condition, with a condition rating of four.
- The concrete beams and deck supporting the roadway have experienced deterioration, and the reinforcement is exposed and corroded.
- The existing roadway is substandard and must be widened to accommodate the minimum roadway width required by the current State standards.
- The proposed bridge structure will replace the existing bridge with a 25'-0" span x 6'-3" rise x 30'-6" long precast three-sided rigid frame structure supported on a deep foundation.
- The roadway width will be increased to 28 feet curb-to-curb to meet current State standards.

Yiannis A. Bagtzoglou continued the presentation by explaining the following details of the Department's proposal:

- The proposed structure layout was presented with delineations given for the proposed bridge, approach roadway reconstruction, proposed cut and fill, rights of way limits, property lines, watercourse limits, and wetland limits.
- A section view of the roadway was presented and discussed. The roadway geometry with superelevation and two ten-foot lanes and four-foot shoulders in each direction was presented. The proposed concrete pile cap, pedestal wall, precast frame sections, headwalls, and parapets were also noted.

Yiannis A. Bagtzoglou explained the anticipated construction scheme that corresponds with the Department's proposal for the replacement of the existing bridge structure:

- The water handling scheme was explained with corresponding figures to demonstrate how an area to work would be achieved in the watercourse during construction. Water handling cofferdams will divert the water from the inlet and the outlet. A temporary water handling pipe will maintain the flow of East Branch Naugatuck River.
- Fully enclosed cofferdams will allow for excavation and support of the approach roadways as well as groundwater handling. Within these fully enclosed cofferdams piles will be installed, and the pile cap footings and pedestal walls will be constructed to support the three-sided frame.
- The precast three-sided frame sections will be placed carefully on the pedestals, and the frame sections will be connected using concrete closure pours to provide unity to the structure.
- Concrete wingwalls, headwalls, and parapets will be constructed after the three-sided frame sections are placed and connected.
- The approach roadways to the proposed bridge structure will be raised. The roadway will be paved and painted with striping, and the water handling scheme will be removed.

Yiannis A. Bagtzoglou showed some photographs that exhibited the construction process of a similar three-sided frame construction project in East Haddam, CT for comparison:

- The precast sections are cast offsite to shorten the construction duration and reduce the impact of road closure and detours to the traveling public.
- The large size of the precast three-sided frame sections was noted and emphasized as to why a detour would be needed for the construction within the narrow existing roadway.
- The large frame sections need to be transported to the site of the proposed structure replacement, and a large crane will be utilized to carefully place the three-sided frame sections into place on top of pedestal walls. Concrete closure pours connect the reinforced closure joints of the structure so the sections can act together as a unit.

Yiannis A. Bagtzoglou continued the presentation by discussing the traffic, environmental and rights-of-way impacts of the Department's proposal:

- A full detour with roadway closure will be utilized during the construction of the project. The road will be closed between West Road and Blue Street on Route 263. The proposed detour route was presented, is approximately 16 miles in length, and adds roughly 20 minutes of travel time.
- The utilities running overhead on the southern side of the bridge will need to be relocated temporarily further south to enable construction and provide space for crane access. An existing utility pole and additional poles will need to be relocated, and this relocation will minimize interruptions to service.
- The environmental impacts of the project were reviewed. The proposed structure is hydraulically adequate, maintains unrestricted fish passage, and is not located within a FEMA flood zone. A riparian shelf will be fortified under the roadway to enable wildlife passage. Work within the stream will be done behind water handling cofferdams, and "in-kind" placement of natural streambed material will be utilized. Coordination is ongoing with a pending survey for the Area of Potential Effect (APE) on the project, and moderate to high archaeological sensitivity is anticipated. The potential presence of the Northern Long-eared and Tri-colored Bat was noted.
- Environmental resource project authorization for East Branch Naugatuck River will be given under permits. A Self-Verification permit is anticipated through the U.S. Army Corps of Engineers. An Inland Wetland and Watercourse Permit through CT DEEP is also necessary.
- Rights of way impacts needed for the bridge involve the acquisition of a construction easement for temporary utility relocation as well as permanent take areas to accommodate roadway improvements, slope easements, driveway reconstruction, and access for future inspections.

Kathleen E. Ericson then discussed the State's rights of way process:

- The proposed project design will require the acquisition of easements for temporary utility relocation as well as permanent take areas to accommodate improvements. These acquisitions may still change as the project planning and design is still ongoing.
- The Acquisition process: The ROW office will send out a letter of intent to acquire the property needed. The agent will then evaluate the current property cost and make an offer of Just compensation to the owner. The owner of the property can then negotiate the offer to come to an agreement. If no agreement is made, then the State may try to obtain the property through eminent domain where the property owner has 6 months to appeal or accept the State's offer.

Following the presentation of the Rights of Way, the project schedule, estimated cost, and funding were presented by Yiannis A. Bagtzoglou:

- Estimated Construction Cost: \$4,900,000 (80% Federal, 20% State)
- Project Schedule:

- Start of Construction: Spring 2027
- One Construction Season
- Full road closure and detour of 11 consecutive weeks outside of school season

The presentation ended with Yiannis A. Bagtzoglou informing attendees on how to contact the design team with questions and comments. The following means of contact were provided:

Project email: DOTProject0162-0159@ct.gov

Project Q&A phone: (860)-594-2020

The attendees were informed that the period to provide comments and questions to the project team extends through October 31, 2024.

The meeting was then opened for a session of questions and comments that allowed the public's participation.

Public Comments and Questions During the O&A Session that followed the presentation:

- **Question:** How does the schedule of this project compare to the schedule of work being proposed to be done under the municipality project on Wahnee Road and Newfield Road?

Response: Jim Rollins, Public Works Director of Winchester, responded that the work on Wahnee Road and Newfield Road should be completed before the State's project begins.

- **Question:** For the municipality project, are rocks present by roadways going to be addressed or left in place?

Response: Jim Rollins, Public Works Director of Winchester, responded that within the proposed project site boulders encountered near the roadway will be placed appropriately such that safe travel can be achieved.

- **Question:** What are the geotechnical conditions of the site, and will a high bedrock cause issues with driving sheeting?

Response: Bedrock is present underneath the proposed structure at this site. It is known that the substrata is boney. A comparative scour analysis was conducted in the 1990's, and this analysis suggested the bedrock would be found at a shallow depth. However, more recent borings that were done by the Department have indicated that the bedrock is present at a depth further below the ground surface than initially anticipated. It may be difficult to drive sheeting at this location for the cofferdam system. Designing the cofferdams will be the Contractor's responsibility. The Contractor will come up with the design of such a system that is more convenient for the site. For the piles, the Department is proposing the use of micropiles socketed into bedrock that will be designed and installed by the Contractor. The soil is very boney with large rocks therefore the use of driven piles will be difficult at the proposed project location so that it will be avoided.

- **Question:** What is the range of depth for the bedrock?

Response: The depth of the bedrock is approximately 20 feet below the ground surface based upon the borings, but this depth varies. Initially the Department anticipated a shallow foundation from the scour analysis findings, however the boring results showed a deeper foundation would be more suitable.

- **Question:** Are the rights of way impacts temporary easements or permanent takes?

Response: It is anticipated that there will be a mix of permanent take areas and temporary construction easements. The existing State right of way limits is currently close to the existing narrow roadway. The permanent take will be needed to accommodate a 28-foot roadway width that is needed for the proposed structure to meet State standards and the increase of roadway vertical geometry. Slope embankments to the north and south will also need to be enlarged to support the roadway. Furthermore, access to the bridge will be needed for inspections and maintenance.

- **Question:** If the bridge is currently rated four "poor condition", can a fire truck or other trucks safely cross?

Response: When a bridge structure has a condition rating of four, the bridge will be maintained and is still safe for travel. Should the condition of the structure drop further, then the Department

would take more frequent and urgent action.

- **Question:** Is pre-tensioning used to fabricate the three-sided rigid frames?

Response: Pre-tensioned cables will not be used with the proposed three-sided frames. In some cases, the frame legs may kick in or out, and sometimes pre-tensioned cables are used to prevent this behavior. Since the proposed span is short, only mild reinforcement will be needed.

- **Question:** What is the purpose of the gaps between the frames to be connected?

Response: The gaps in the frame sections allow the large precast elements to be connected with concrete closure pours after the sections are transported to the site and placed. The Department has recently adopted this kind of connection detail in lieu of traditionally used shiplap joints because this type of connection enables the frame to achieve a more rigid, durable, and leak-proof connection. The frame sections are intended to act as one singular unit. The use of precast elements also accelerates the construction timeframe which decreases the impacts of traffic disruptions to the traveling public.

- **Question:** Will there be overlap between the rebars at the frame connections?

Response: There will not be overlapping of the hooked bars. The hook-bar reinforcement between adjacent frame sections will be offset from one another, and cast-in-place concrete will be poured at these connections to provide closure.

- **Question:** What kind of concrete will be used for the frame connections?

Response: The concrete used in the closure pours for the three-sided frame connections will have a 5000-psi compressive strength. It was also noted that the type of concrete used in connections tends to be related to how quickly a road needs to be opened. It was mentioned that a conventional concrete mix will be used in this particular project, but moving forward the use of Ultra-High-Performance Concrete will also be considered where applicable.

- **Question:** Will there be enough room for construction with cranes and other construction vehicles?

Response: The project will utilize a road closure and detour to provide the space necessary to construct the proposed three-sided frame structure. The overhead utilities will be temporarily relocated further to the south to provide a safe construction site while following OSHA guidelines. Tree-trimming will also provide more space to relocate these utilities. It was also mentioned that de-energizing the utilities was considered but not deemed feasible in this location by the utility company due to the current configuration of power lines allowing only one-way feed to the street.

- **Question:** Can the contact information shown in the presentation be emailed to the Town?

Response: Yes, and the contact information is in the notice provided. This information can also be found on the project website. Furthermore, there will be a 2-week comment period posted on the project portal.

- **Question:** What happens with leftover concrete?

Response: Typically, contractors do not end up with large amounts of leftover concrete materials on construction projects. However, there may still be some leftover concrete to clear. The

Contractor will be responsible for removing leftover concrete from the project site.

- **Question:** Will there be a waterproofing membrane applied to the frame?

Response: A waterproofing membrane will be applied to the roof slab of the frame, which will be buried underneath the roadway. The membranes have been performing well with regards to durability. Partial mills have been used for the maintenance of existing structures, and there are a variety of different membrane materials that have been utilized by the Department. Furthermore, the Department also uses a low permeable concrete mix design in addition to coating of the reinforcement with galvanization as a degradation countermeasure to enhance the overall service life of the structure.

Adjournment:

The meeting was adjourned at approximately 8:05 PM.