Public Information Meeting

Project 44-147
Replacement of Bridge No. 00368
US Route 1 over Niantic River
East Lyme/Waterford, Connecticut
Project Location

Connecticut Department of Transportation
CTDOT Role and Mission

Bureau of Engineering and Construction

- Introductions
- Responsible for engineering design, construction, and inspection of transportation projects

Contact: Mr. David Cutler, PE
Stantec Consulting Services Inc.
Consultant Engineers

CTDOT has retained the firm of Stantec Consulting Services Inc. to provide the design of this bridge project.

Contact: Mr. John F. Eberle, P.E.
Reasons for Project

Structure recommended for full replacement under the List 19 Bridge Program.

Reasons include:
- Structurally Deficient
- Functionally Obsolete Deck Geometry
- Scour Critical
- “Poor” Rating of Substructure
Project Goals

- Replacement of Bridge No. 00368
- Minimize disturbance and improve safety for the traveling public
- Complete construction in a timely manner
- Effectively use funds
- Address above with consideration for surroundings
Aerial View looking North

Connecticut Department of Transportation
Looking East over Bridge

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Looking West over Bridge

Connecticut Department of Transportation
Existing Bridge Description

- Single span structure built c. 1926
- Structure Dimensions
  - Total Length = 65 ft, 1 span
  - Overall Width = 34 ft
  - Roadway width = 31.7 ft
- Located between two horizontal curves
- Located near low point of sag vertical curve
- Carries one lane of traffic in each direction
  - Estimated Average Daily Traffic (ADT) ~ 10,200 vehicles (2010)
Existing Bridge Description

- Superstructure consists of:
  - Original Structure: Three concrete T-Beams
  - Widened Portion: Steel beam with concrete deck

- Substructure consists of:
  - Masonry abutments with concrete bridge seats

- Bridge is located along CT designated bike route
Existing Bridge Description

EXIST. 100 YR FLOOD EL = 10.2
PROP. 100 YR FLOOD EL = 10.01

MASONRY ABUTMENT

LIMITS OF EXISTING FOUNDATIONS UNKNOWN

EXISTING LOW CHORD EL 5.8 +/-

LIMITS OF EXISTING FOUNDATIONS UNKNOWN
Existing Bridge Description

EXIST. 100 YR FLOOD EL. = 10.2
PROP. 100 YR FLOOD EL. = 10.01

- METAL RAILING
- SHLDR.
- LANE
- CONCRETE TEE BEAM (TYP.)
- CONCRETE PARAPET
- STEEL BEAM
- METAL RAILING
- SHLDR.

CONNECTICUT DEPARTMENT OF TRANSPORTATION
Existing Bridge Description
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Reasons for Project

Structure recommended for full replacement under the List 19 Bridge Program.

Reasons include:

- Structurally Deficient Substructure
- Functionally Obsolete Deck Geometry
- Scour Critical
- "Poor" Rating
Existing Bridge Condition
Existing Bridge Condition
Proposed Construction

- Replace bridge with new: steel stringers with concrete deck supported by concrete abutments and deep foundations
- Widen roadway to include shoulders and bypass for Oil Mill Road
- Improve safety of approach roadways
Proposed Construction

- Proposed structure will have asphaltic overlay on cast-in-place concrete bridge deck
- Full depth pavement reconstruction will occur to the approach roadway approximately 260 feet to the west and approximately 150 ft to the east of the bridge
- Roadway to be raised approximately 2’ in vicinity of bridge to improve hydraulic performance
- Bridge railing will consist of 3-tube curb-mounted railings for the full length of bridge
- The roadway centerline will be shifted 5.5 feet to the south to improve the horizontal curvature and to facilitate staged construction
Proposed Construction

Bridge Cross Section

Connecticut Department of Transportation
Proposed Construction

Bridge Elevation

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Construction Staging

- Bridge to be constructed in three stages
  - Two lanes of traffic to be maintained during construction
  - Significant traffic volumes on Route 1 necessitate staged construction
Construction Staging

Connecticut Department of Transportation
Environmental Considerations

- Project is located within a FEMA Flood Zone (Zone A)
- Niantic River is tidally influenced waterway
- No state threatened species or species of special concern were identified
- No negative impacts to fish habitat, however seasonal construction restrictions may be necessary to accommodate spawning migration of Alewife
- No known contaminated and/or hazardous materials within project limits
- Best management practices will be utilized to handle sedimentation control during construction
Environmental Considerations

Connecticut Department of Transportation
Environmental Considerations
Public Utilities

- Subsurface utilities in the vicinity of the bridge:
  - Water
  - Sewer
  - Gas

- Overhead utilities present along south side of bridge:
  - Telecommunications
  - Power Distribution

- CTDOT has notified the appropriate utility companies of the scheduled project

- Utilities will be maintained in place or relocated as necessary during the proposed construction activities
Rights-of-Way

Impacts to private property consisting of permanent easements as well as temporary construction easements are anticipated.
Project Cost

The estimated construction cost for the entire project is approximately $4,500,000 (2011).

This bridge replacement is anticipated to be undertaken using 80% Federal funds and 20% State funds.
Project Schedule

The project is anticipated to begin construction as early as Spring 2014.

Project duration estimated to be two construction seasons ~ 18 months, but will depend on permitting restrictions.

The schedule is preliminary and is predicated upon the availability of funding, obtaining all necessary permits, and the scheduling and the receipt of all required property acquisitions.
Contact Information

- CTDOT
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- Stantec Consulting Services Inc.
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  Hamden, CT 06518
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Connecticut Department of Transportation
THANK YOU...

FOR YOUR TIME AND ATTENTION

Connecticut Department of Transportation
and
Stantec Consulting Services Inc.

Connecticut Department of Transportation