

Public Information Meeting

Replacement of Bridge No. 02190 Route 17 over Long Hill Brook Middletown, Connecticut

Connecticut Department of Transportation



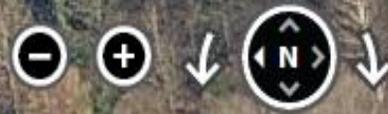


Bridge No. 02190

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41°31'31.57" N 72°39'51.19" W elev 175 ft

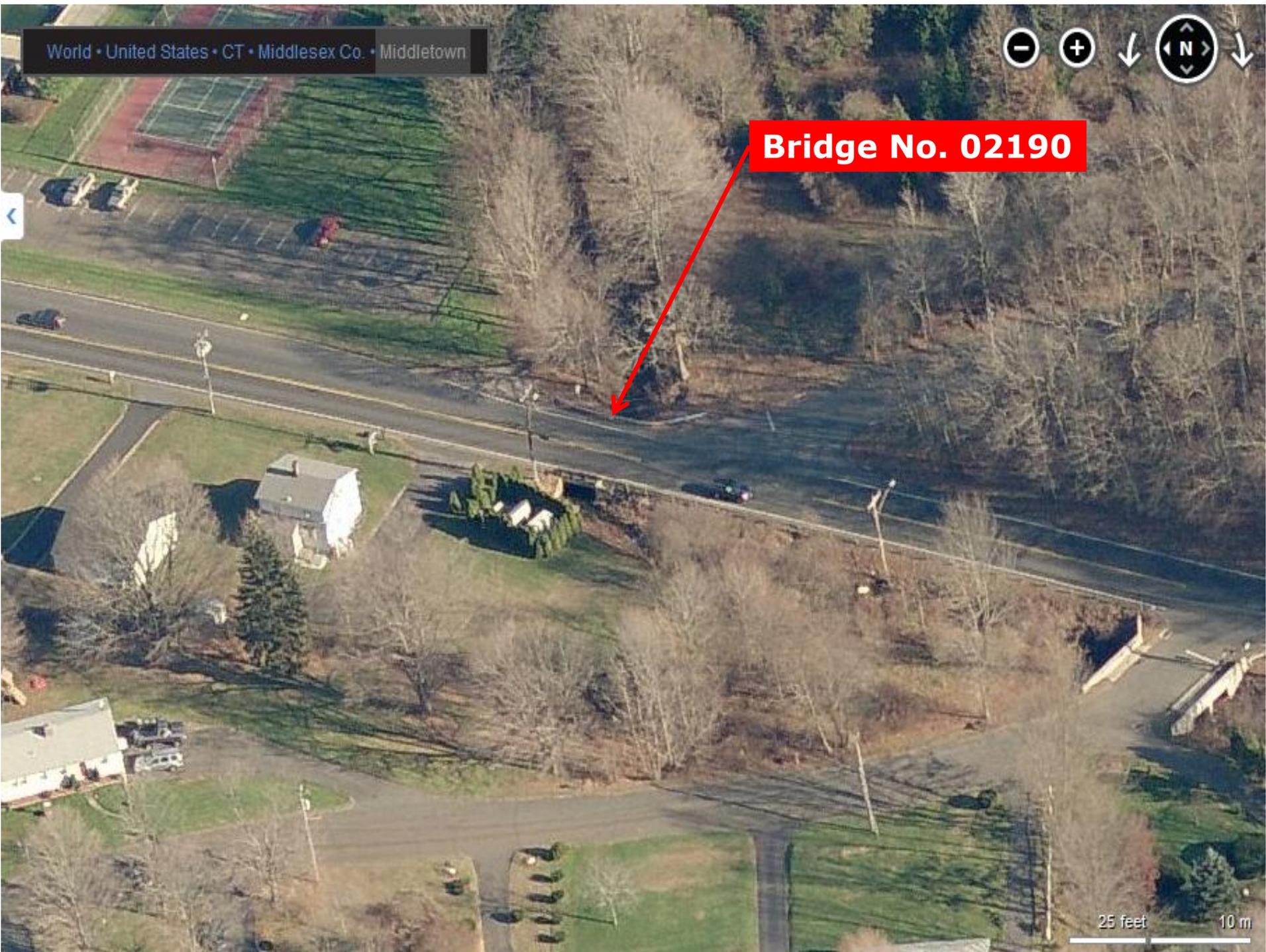
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Bridge No. 02190



25 feet 10 m



CTDOT Role and Mission

Bureau of Engineering and Construction

**Responsible for engineering design,
construction, and inspection of transportation
projects**

Contact: Ms. Mary E. Baker

Connecticut Department of Transportation



Close, Jensen and Miller, P.C. **Consultant Liaison Engineers**

CTDOT has retained the firm of Close, Jensen and Miller to supervise the activities relative to the design of this bridge project.

Contact: Mr. Mark F. Levesque, P.E.



Project Goals

- **Replace Bridge No. 02190**
- **Minimize disturbance to traveling public**
- **Complete construction in a timely manner**
- **Effectively use funds**

Address above with consideration for context sensitive design





Bridge No. 02190 Elevation
Looking Downstream (East)



Bridge No. 02190 Elevation
Looking Upstream (West)

Existing Bridge Description Bridge No. 02190

- **Single Span, Reinforced Concrete Slab Structure built in 1927**
- **Supported by Concrete Abutments and Wingwalls**
- **Structure Dimensions**
 - Total Length = 16.25'
 - Overall Width = 32.5'
 - Roadway Width = 28'
- **Carries one lane of traffic in each direction**
 - Estimated Average Daily Traffic (ADT) over the bridge ~16,200 vehicles (2010)





Bridge No. 02190
Route 17
Looking North



Bridge No. 02190
Route 17
Looking South

Reasons for Project

Structure recommended for replacement under the State Bridge Program.

- **Structurally Deficient:**
 - Overall condition of superstructure is poor with over 50% of deck deteriorated.
 - Extensive cracking of the concrete slab with heavy efflorescence and stalactites.
- **Functionally Obsolete:**
 - Existing bridge width curb-to-curb is 28 feet
 - A minimum curb-to-curb width of 32 feet is required based upon ADT and roadway classification.



Reasons for Project

Deck Cracking with Heavy Efflorescence and Stalactites



Functionally Obsolete Bridge Width (Curb-to-Curb)



Reasons for Project

- **Scour Critical:**
 - Poor angle of attack of flow.
 - Exposed and undermined footings.
 - Existing riprap protection no longer considered effective.
- **Hydraulically Inadequate:**
 - Existing structure is unable to pass 100-year discharge with sufficient underclearance.
- **Substandard Load Rating:**
 - Existing bridge inventory load rating = 34 Tons
 - Standard minimum = 36 Tons



Reasons for Project

North Abutment Footing Exposed



Angle of Attack of Flow and Heavily Eroded Embankment

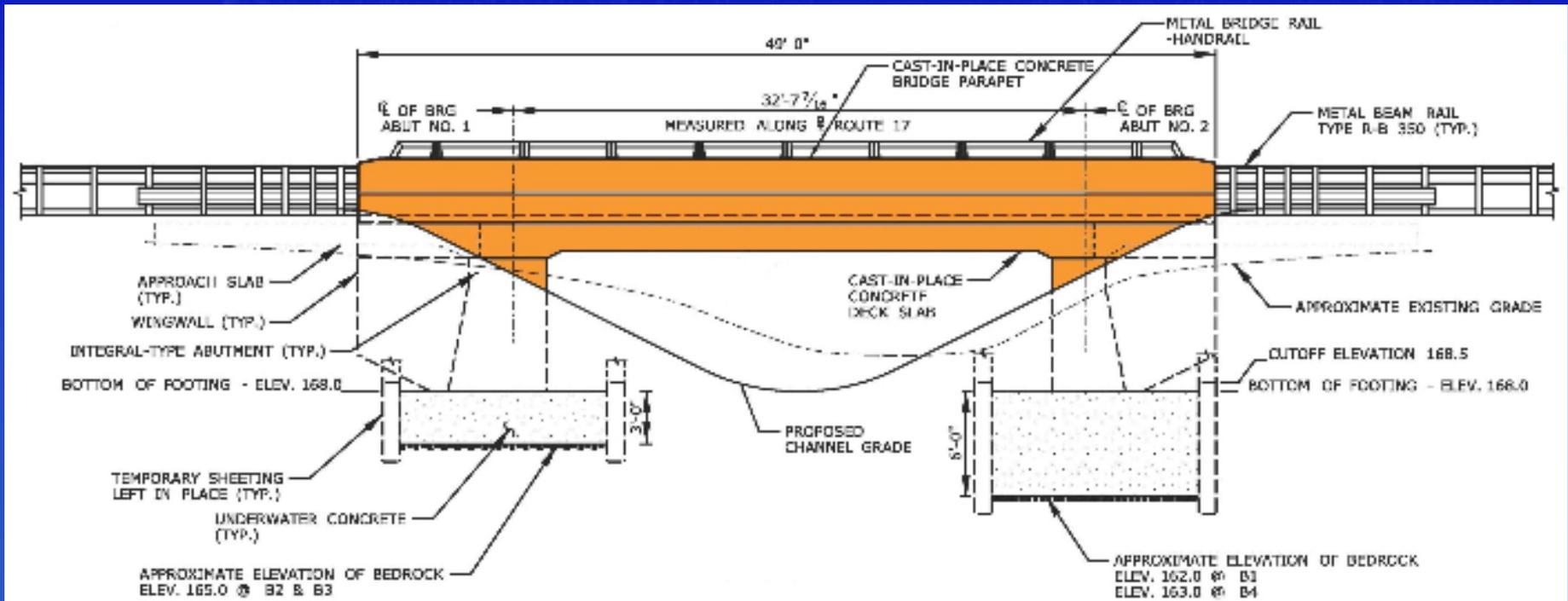


Proposed Construction

- **Bridge No. 02190 will be replaced with a 25-foot clear span bridge constructed of a cast-in-place concrete slab supported by concrete abutments founded on bedrock.**
- **Roadway will contain a 12' wide lane with 4'-8' wide shoulders in each direction.**
- **Sidewalk to be installed along east side of bridge.**
- **The entire structure will be skewed to allow for a better angle of flow for Long Hill Brook under Route 17.**
- **Riprap will be placed along embankments for erosion control.**
- **Proposed Structure will be hydraulically adequate.**



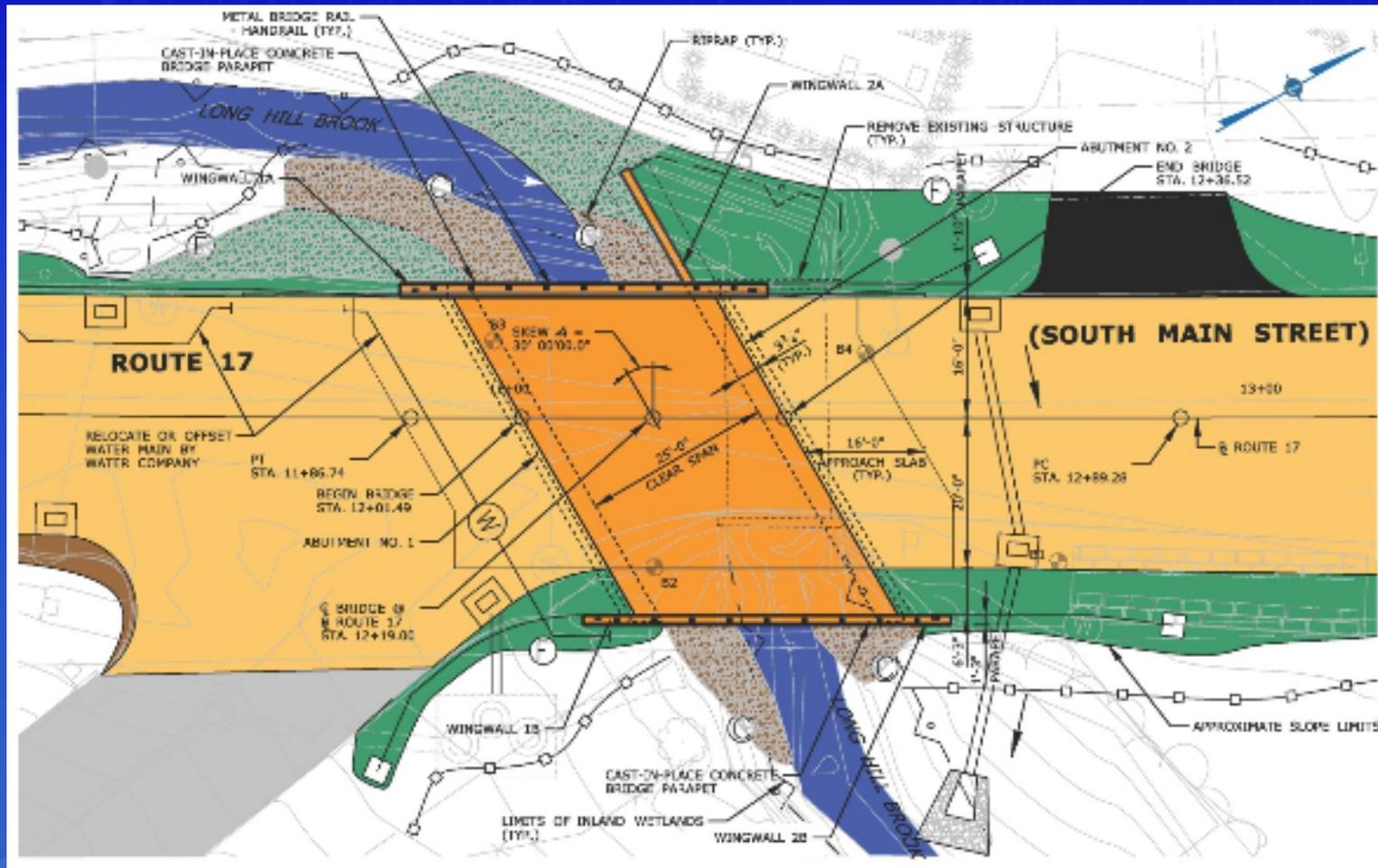
Proposed Construction



Bridge Elevation



Proposed Construction

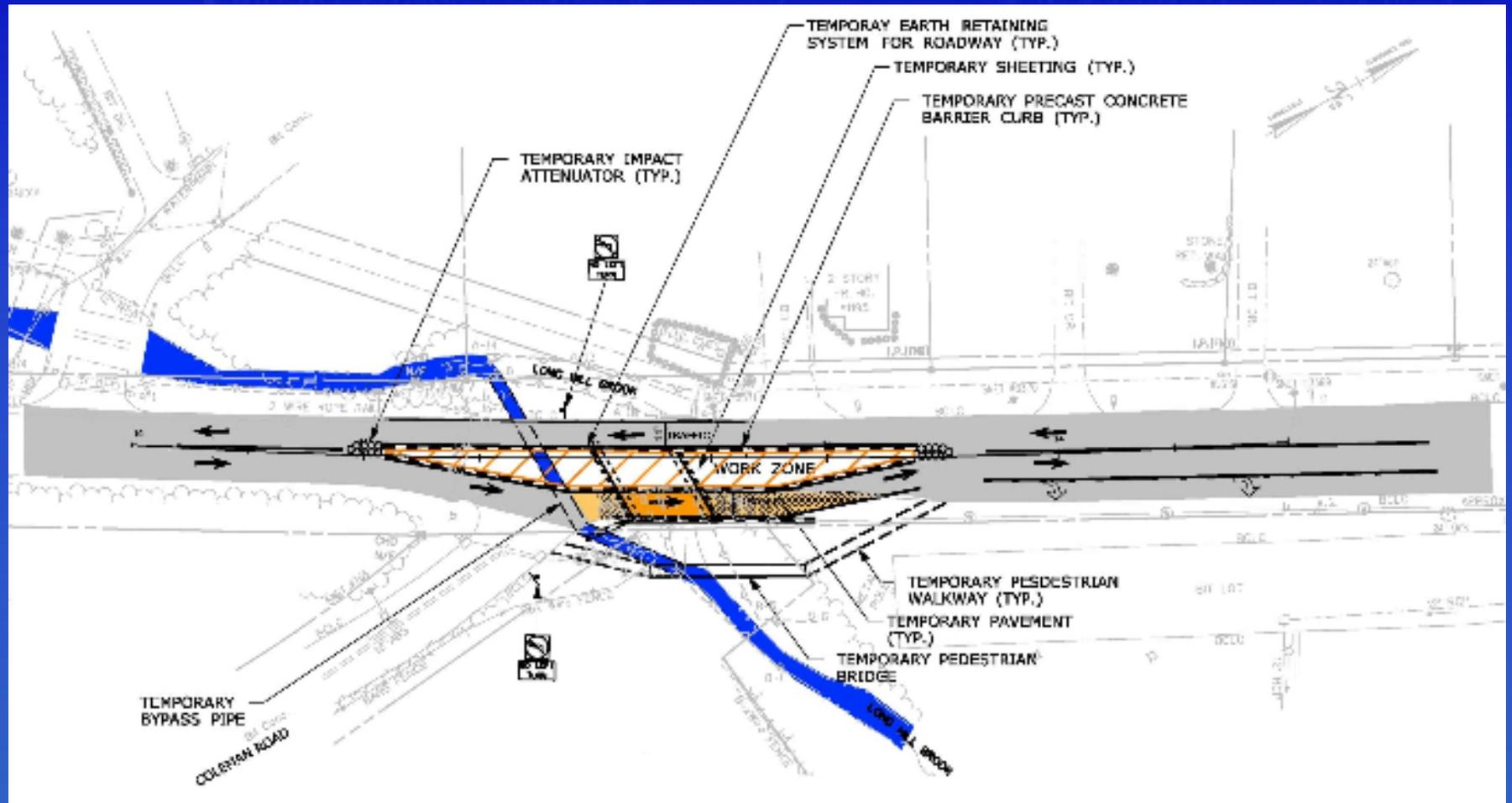


Bridge Plan

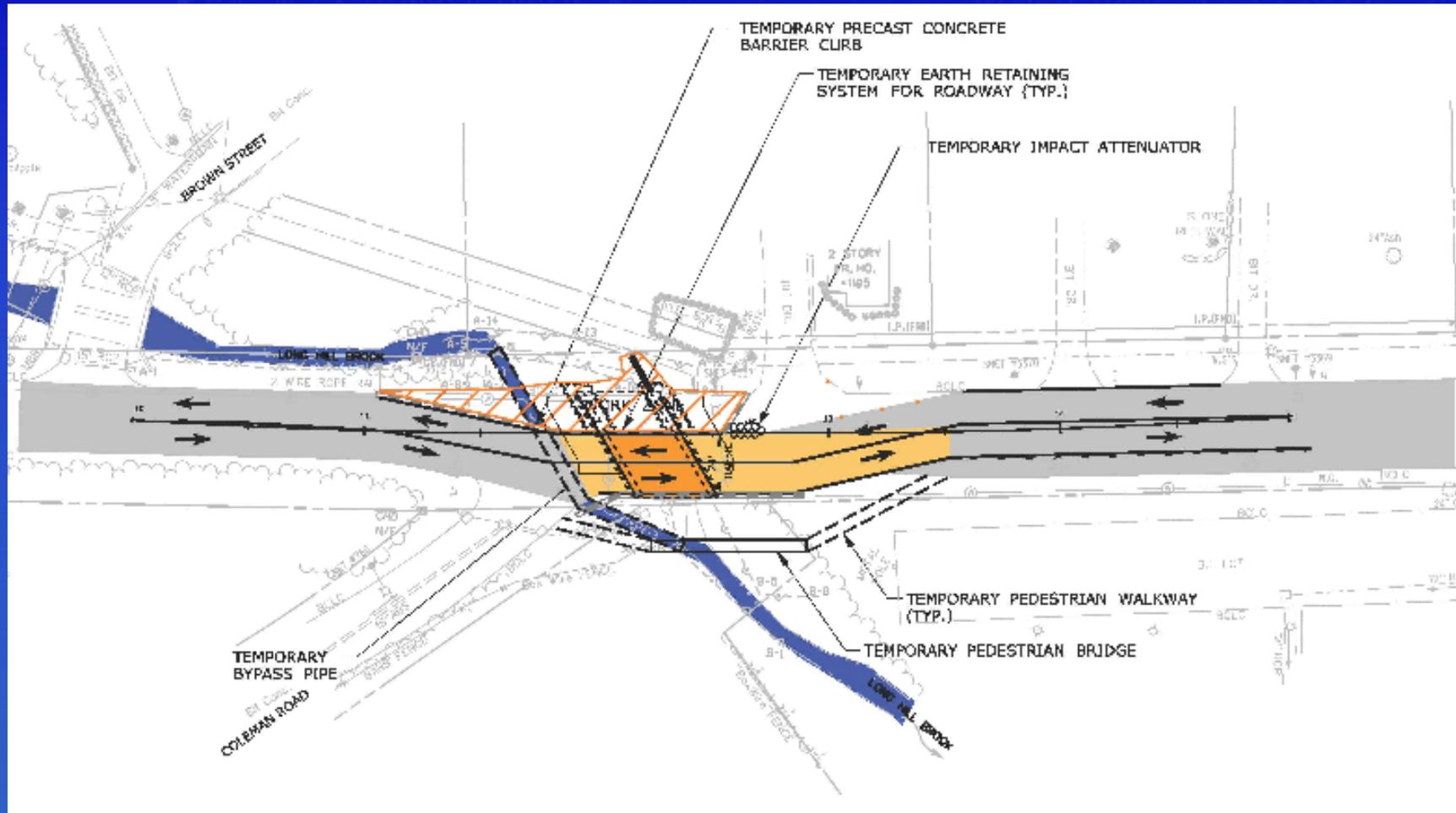
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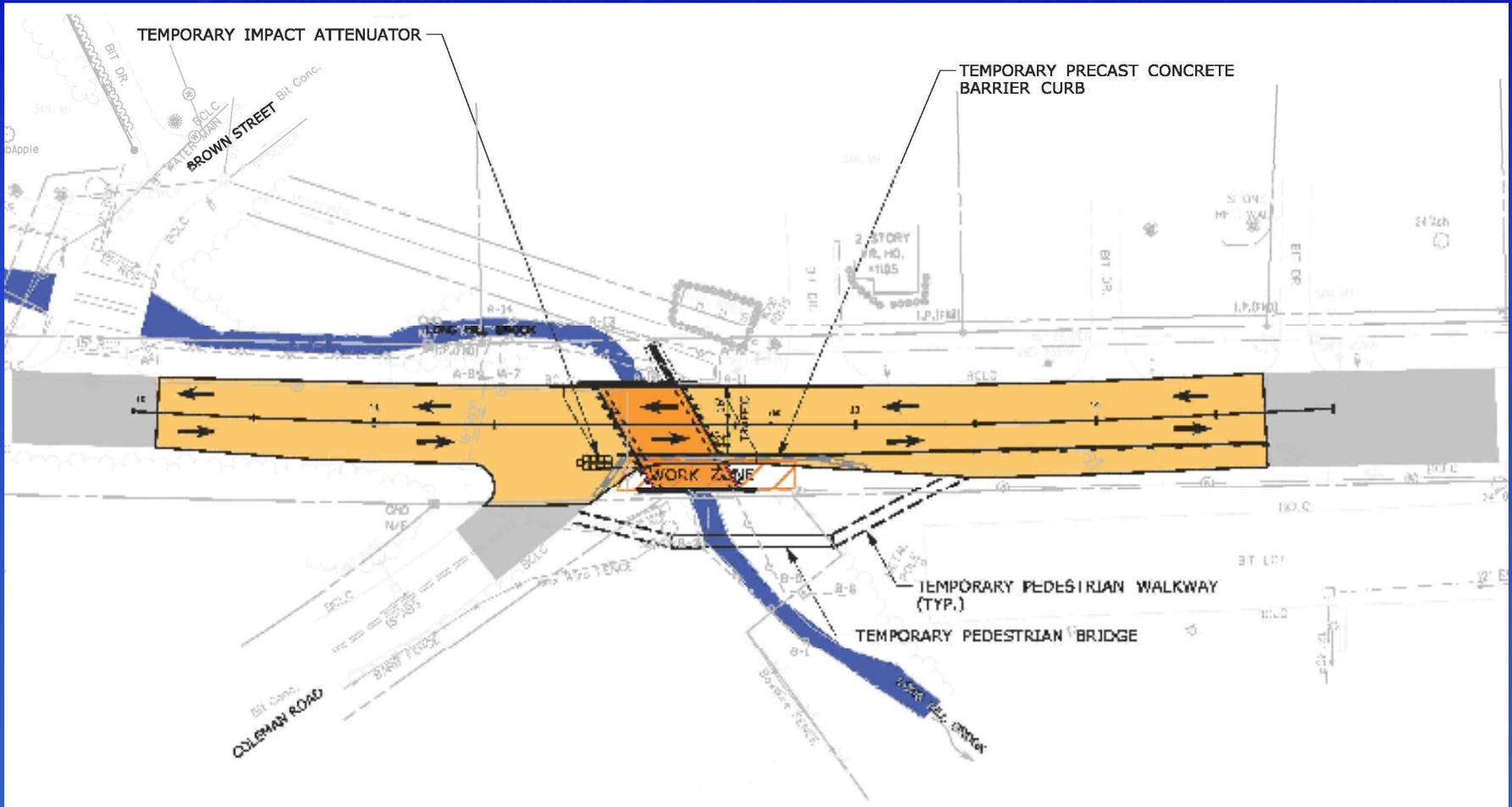
Stage 2 Construction



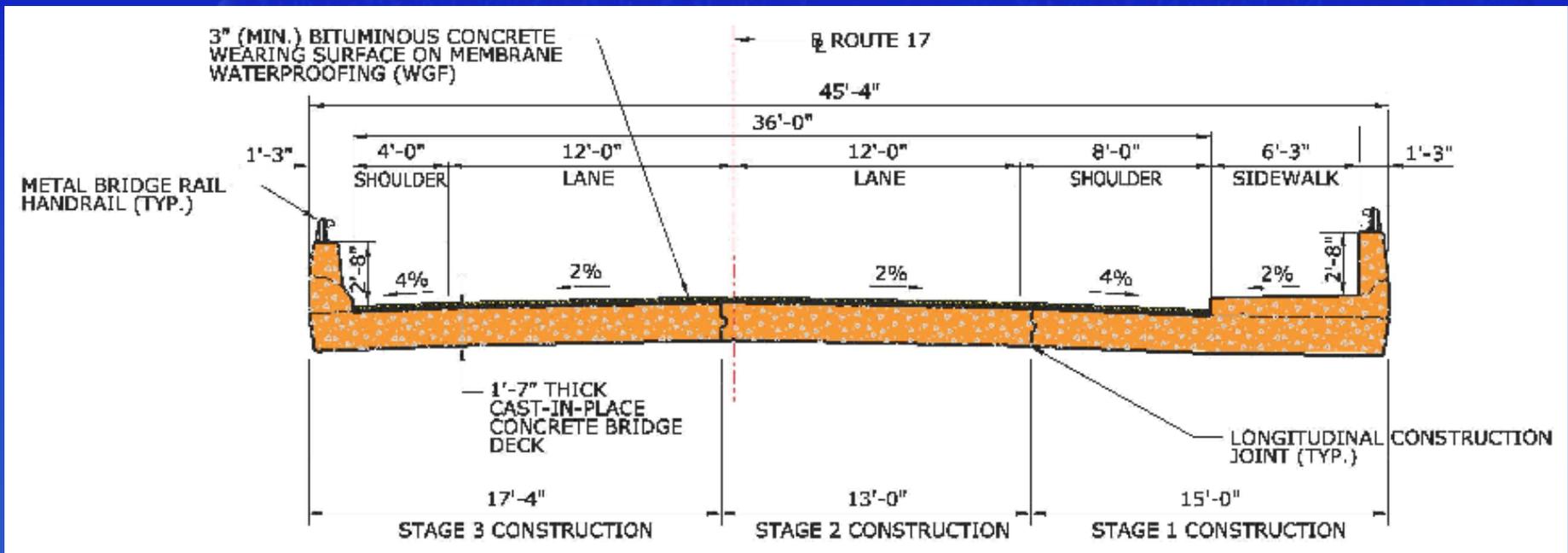
Stage 3A Construction



Stage 3B Construction



Proposed Construction



Bridge Cross Section



Public Utilities

Overhead utilities at the bridge site consist of electric and communication lines.

A 12" diameter water main will require relocation for construction.

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

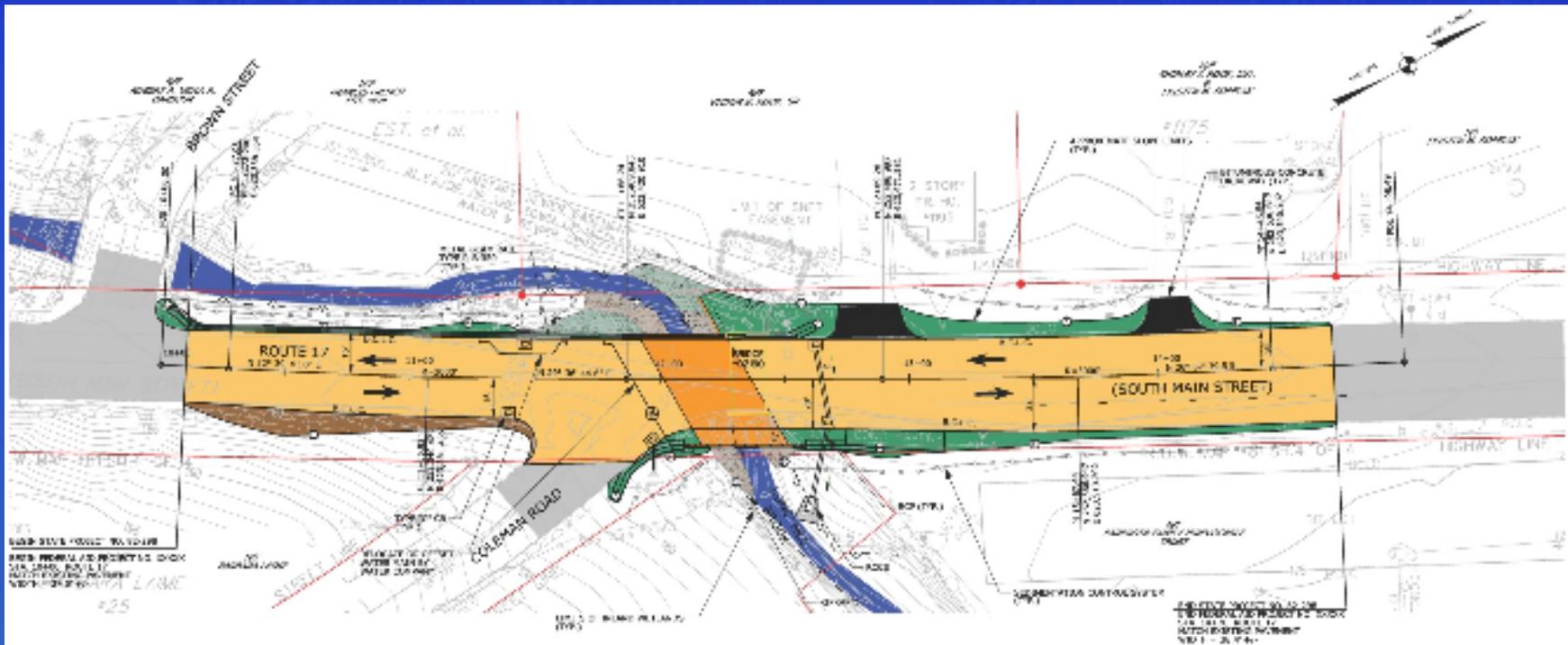


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Rights-of-Way

Based upon the State boundary map, the anticipated ROW impacts to private property include temporary construction and permanent slope easements and a drainage right-of-way.



Project Cost

The estimated construction cost for the project is approximately \$2,000,000.

This bridge replacement is anticipated to be undertaken using Federal and State funds.



Project Schedule

Construction of Bridge No. 02190 is anticipated to begin in the spring of 2014 and be completed in the fall of 2015.

The schedule is preliminary and is predicated upon the receipt of all environmental permits and the availability of funding.



Contact Information

- **CTDOT**

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THANK YOU...

**FOR YOUR TIME AND
ATTENTION**

Connecticut Department of Transportation

