

Public Information Meeting

State Project 26-120

Replacement of Bridge No. 02937

Main Street

over

Pattaconk Brook

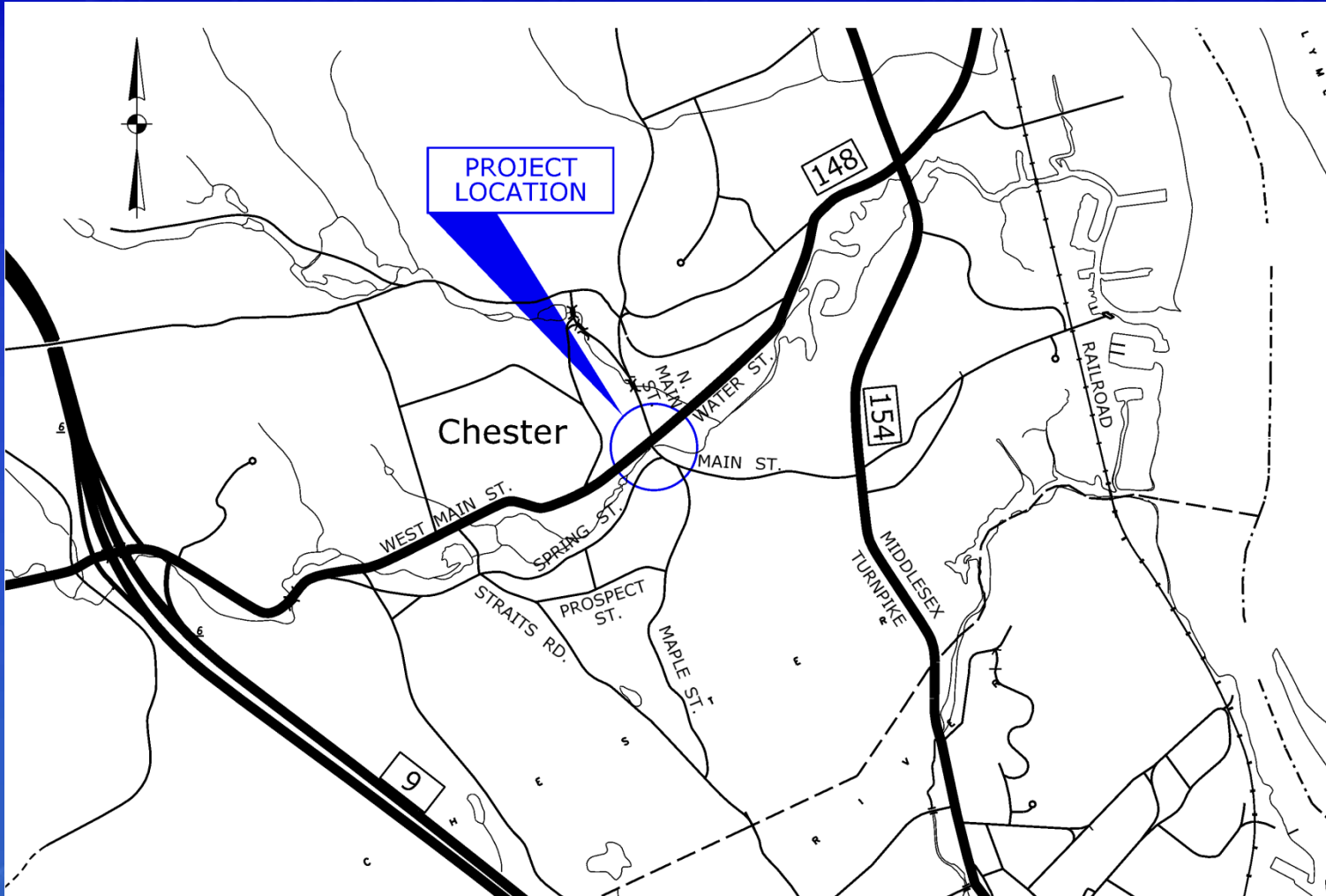
Chester, Connecticut

February 16, 2012

Connecticut Department of Transportation



Project Location



ConnDOT Role and Mission

Bureau of Engineering and Construction

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

Contact: Mr. Andy Fesenmeyer, P.E.



**Fuss & O'Neill, Inc.
& TranSystems Corp.
Consultant Engineers**

ConnDOT has retained the firm of Fuss & O'Neill Incorporated and Fuss & O'Neill has retained TranSystems Corp. to provide the design of this bridge project.

Contact: Mr. Dave Stahnke, P.E. –TranSystems



Reasons for Project

Structure recommended for full bridge replacement in the Rehabilitation Study Report.

Reasons include:

- **Structurally Deficient superstructure**
- **Structurally Deficient substructure**
- **“Poor” Rating**



Project Goals

- **Maintain safety of traveling public**
- **Replace the existing Bridge No. 02937 with new bridge**
- **Minimize impacts of construction on nearby business and traffic**
- **Minimize construction duration**
- **Effectively use funds**



Summary of Meetings

- **October 14, 2008 – Stakeholder Meeting**
- **December 8, 2008 – Merchants Meeting**
- **November 16, 2011 – Main Street Committee Meeting**
- **January 12, 2012 – Meeting with Town Officials**
- **Various – Quarterly Progress Meetings (DOT Staff & Town Officials)**



Summary of Concerns Expressed at the Various Meetings

- **Impact of Project on Town, business and residents**
- **Pedestrian access during construction**
- **Minimize construction duration**
- **Limit road closure to “slower business” time of the year (January – May)**
- **Proximity of buildings to the bridge**
- **Wider sidewalk on new bridge**
- **Tie buildings on RT 148 side of bridge into Main Street “Streetscape”**

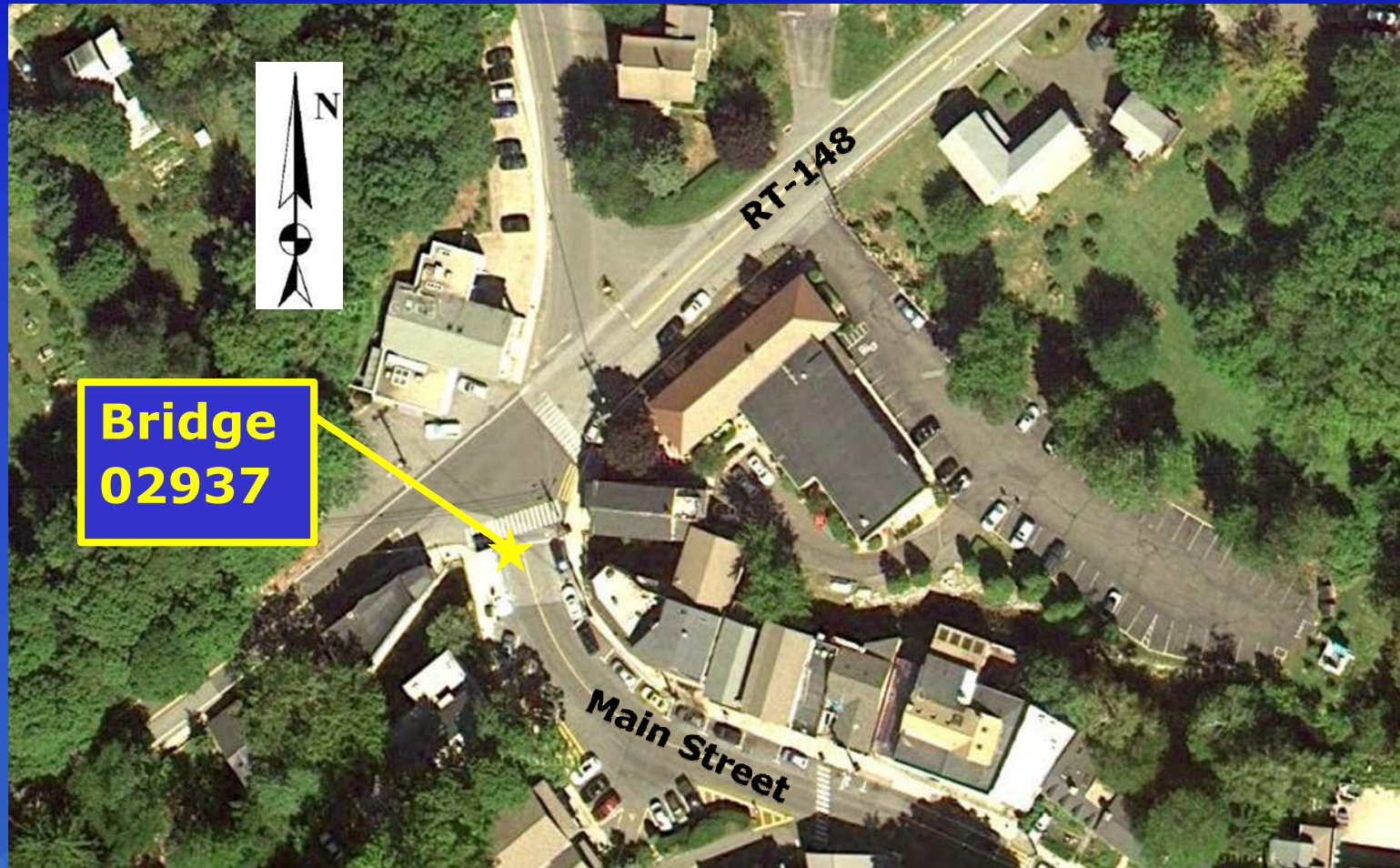


Summary of Concerns Expressed at the Various Meetings

- **Aesthetics**
- **Keep existing stone walls under bridge**
- **Detour route**
- **No night work**
- **Coordinate with Town's proposed Main Street project**



Aerial View of Bridge No. 02937

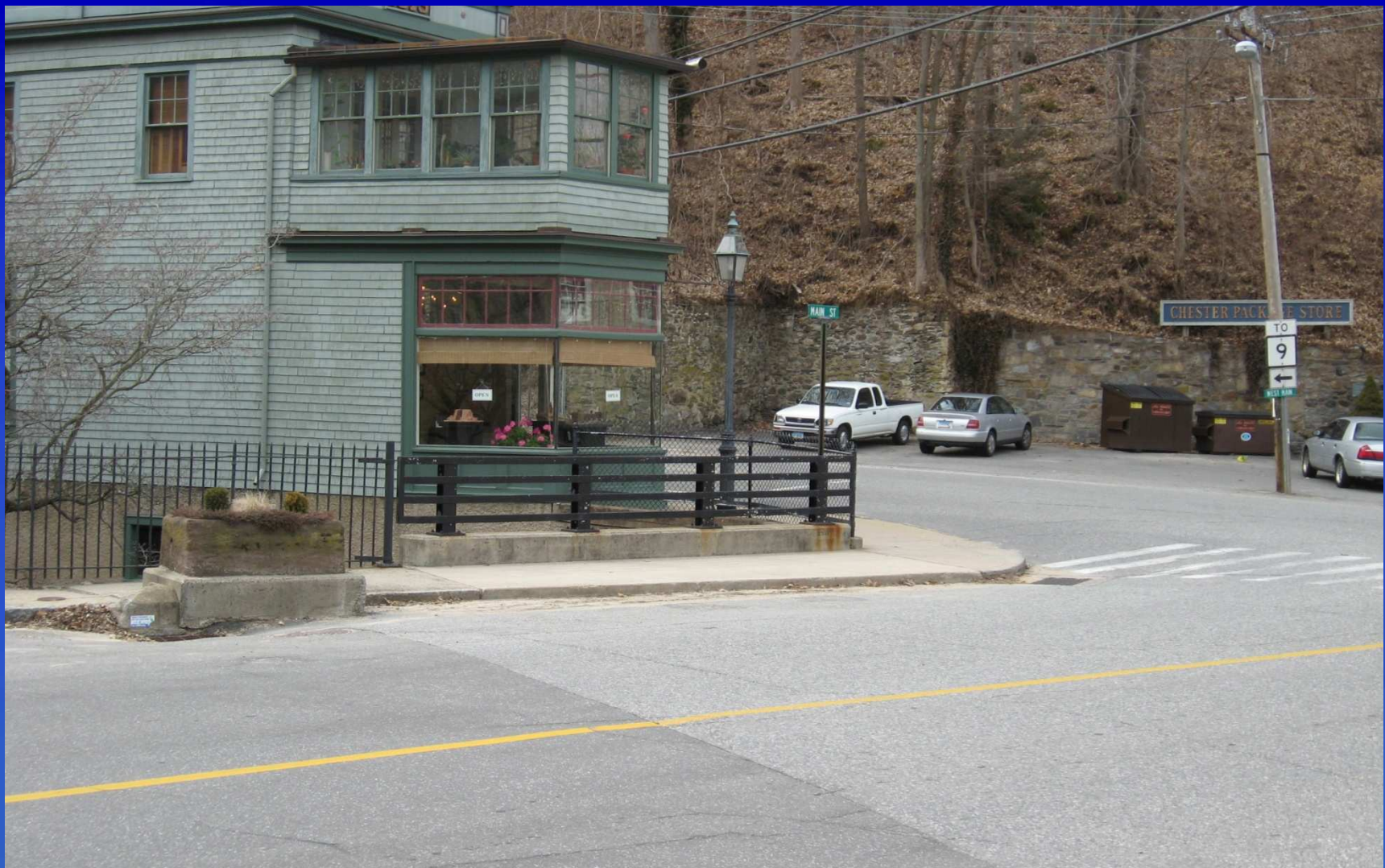




Downstream View of Bridge

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Typical Topside View

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Looking North over Bridge

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Looking South over Bridge

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Existing Bridge Description

- **Single span structure built in 1921**
- **Structure Dimensions**
 - Overall Length = 22 ft
 - Overall Width = 65 ft
 - Roadway Width = 45 ft
- **Straight horizontal alignment**
- **Tangent vertical alignment over Pattaconk Brook**
- **Carries one lane of traffic in each direction**
 - Estimated Average Daily Traffic (ADT) ~ 3,605 vehicles

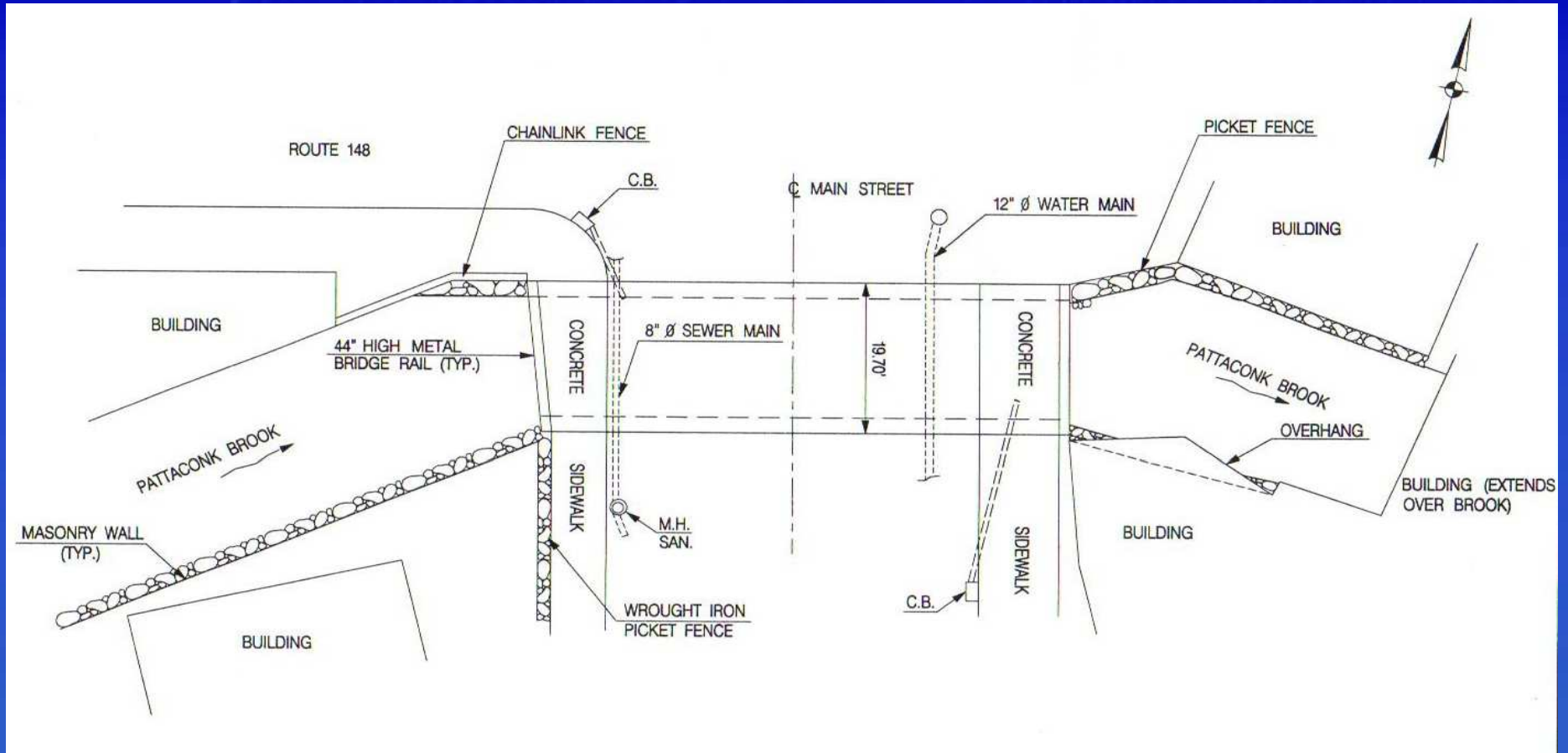


Existing Bridge Description

- **Superstructure consists of:**
 - Reinforced concrete deck supported by steel multi-girders.
- **Substructure consists of:**
 - Dry stacked stone masonry abutments



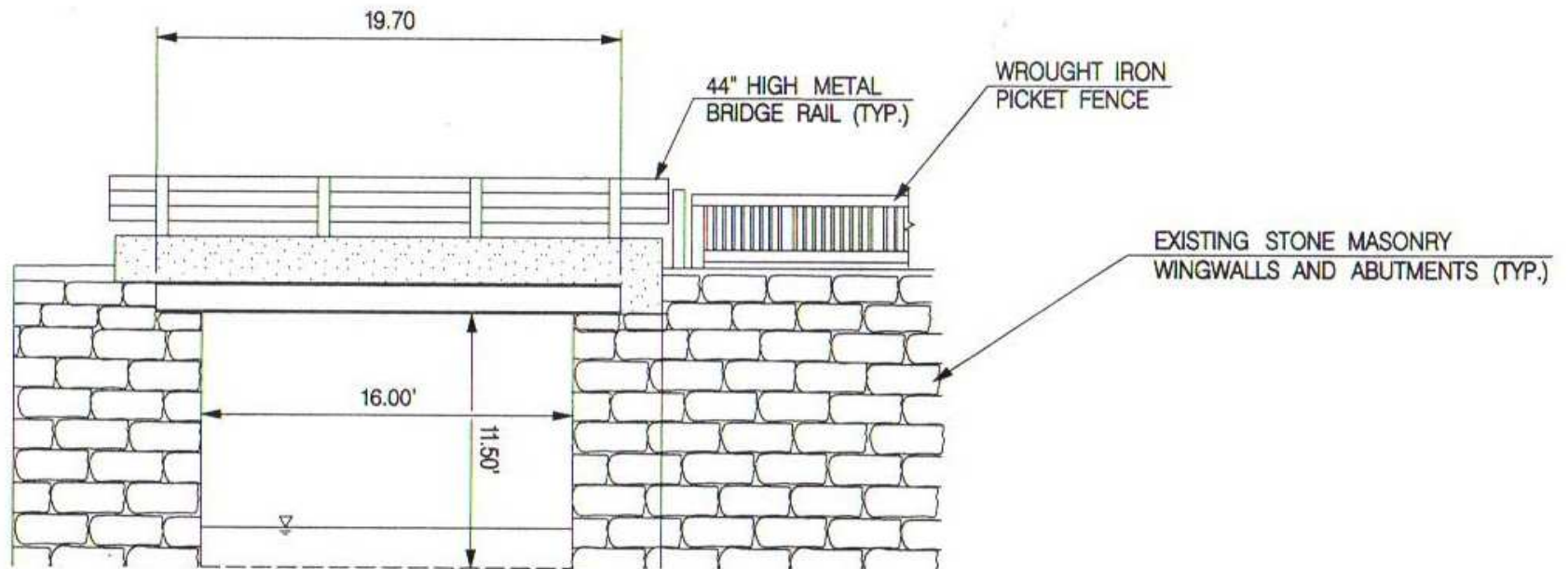
Existing Bridge



Plan

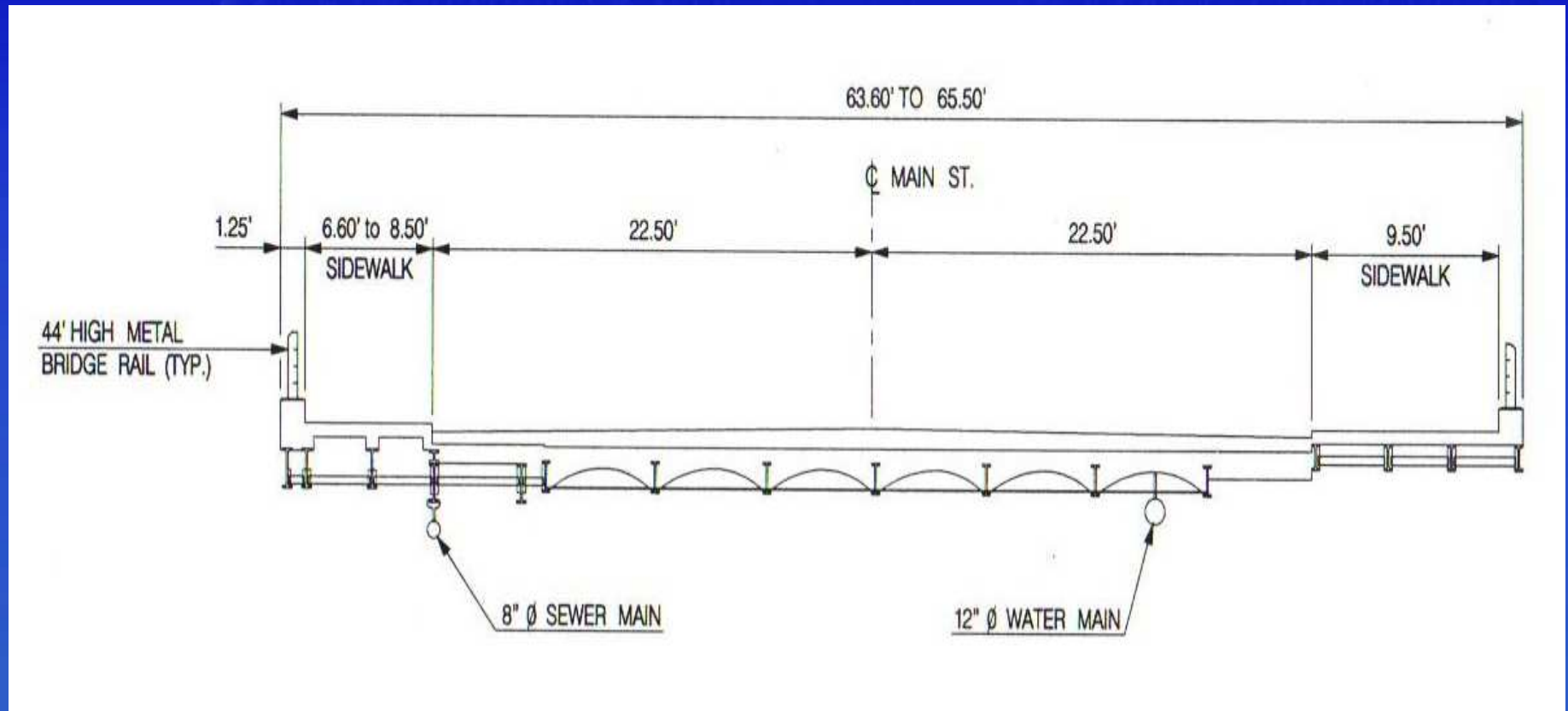


Existing Bridge



Upstream Elevation

Existing Bridge



Superstructure Section

Superstructure Deterioration



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Superstructure Deterioration



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Substructure Deterioration

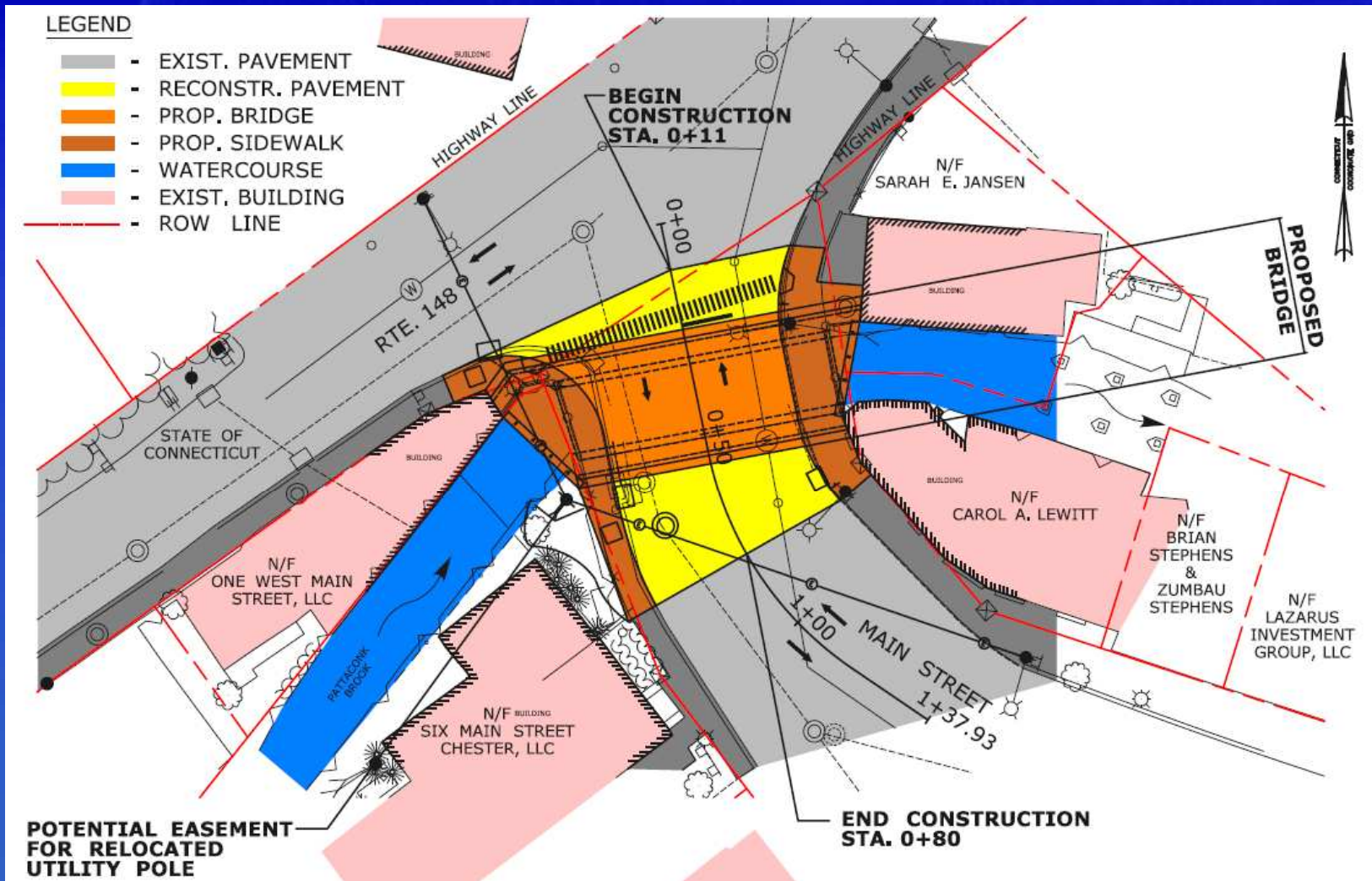


Proposed Construction

- **Replace existing bridge with new bridge**
- **Superstructure will consist of 8.5" thick reinforced concrete deck supported by galvanized steel beams**
- **Substructure will consist of reinforced concrete abutments found on drilled piles**
- **Proposed Structure Dimensions**
 - Overall Length = 32 ft
 - Overall Width Varies from 65 ft to 100 ft
 - Minimum Roadway Width = 45 ft
- **Improve approach roadways and sidewalks**



Proposed Construction

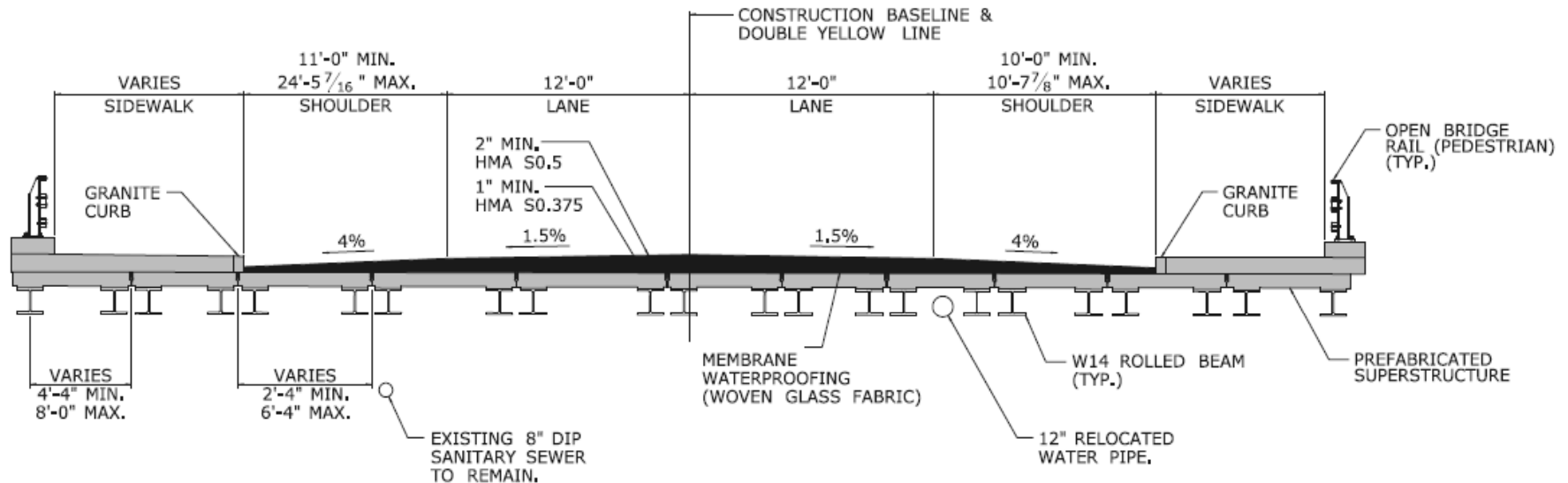


Proposed Plan

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Proposed Construction



Bridge Superstructure Section

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Proposed Bridge



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Proposed Construction

- **The existing bridge geometry will essentially remain the same with the exception of wider sidewalk to better incorporate adjacent buildings**
- **Improve turning radius from Route 148 to Main Street**
- **Single stage construction will minimize construction duration of the project**
- **Replace existing drainage structures**
- **Relocate existing overhead utilities**



Construction

- **Bridge to be closed to traffic during major construction (January – May)**
 - Reasonable detour route is available
 - No night work as requested
 - Single stage construction will minimize the construction time
 - Single stage construction is less complicated
- **Pedestrian access to businesses on Main Street will be maintained by providing temporary pedestrian bridge**
 - Coordination with property owners



Accelerated Bridge Construction

**GUIDELINES FOR ACCELERATED
BRIDGE CONSTRUCTION**
USING PRECAST/PRESTRESSED CONCRETE COMPONENTS
PCI NORTHEAST BRIDGE TECHNICAL COMMITTEE



Precast Substructure Element

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Accelerated Bridge Construction

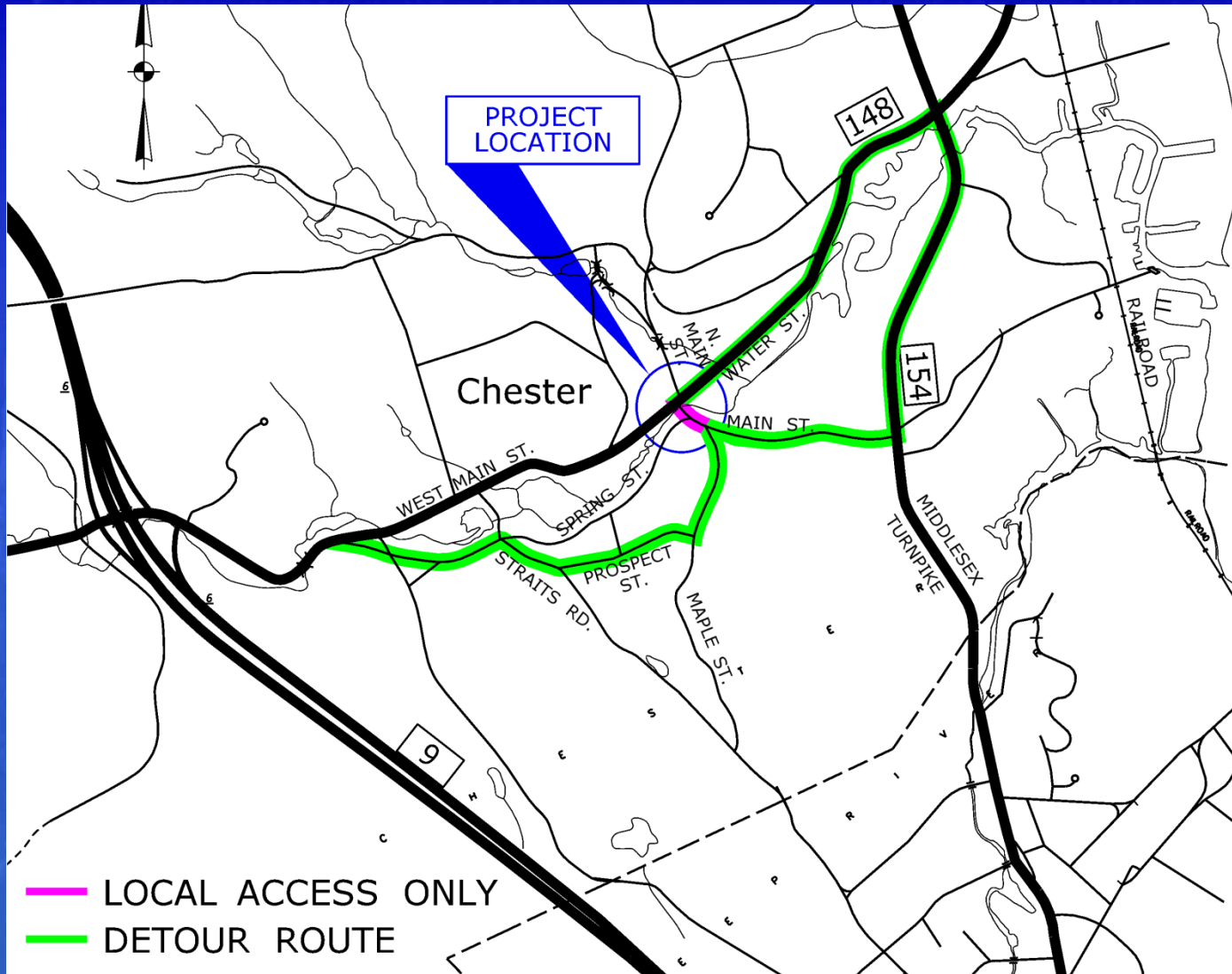


Precast Deck/Beams Superstructure

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Construction Detour



Aesthetic Elements

- **Open bridge rail similar to existing bridge**
- **Widened bridge at north end to blend in with adjacent buildings**
- **Wider sidewalk may be utilized for future benches, planters, etc.**
- **Salvage and reuse granite curbing**



Aesthetic Elements



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Public Utilities

Utilities at the bridge site consist of:

- **Water Main (12" Diameter) passing through abutments and under bridge on east side of the bridge**
- **Sewer Main (8" Diameter) passing through abutments and under bridge on west side of the bridge**
- **Overhead utilities (electrical, cable TV and telephone) on the east side of Main Street**

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.



Water Resources

- **The following permits are anticipated:**
 - **Flood Management Certification**
 - **Coastal Consistency Review Form**
 - **Inland Wetland**
 - **Office of Long Island Sound Program**
 - **Stormwater Discharge**
 - **US Army Corps of Engineers**

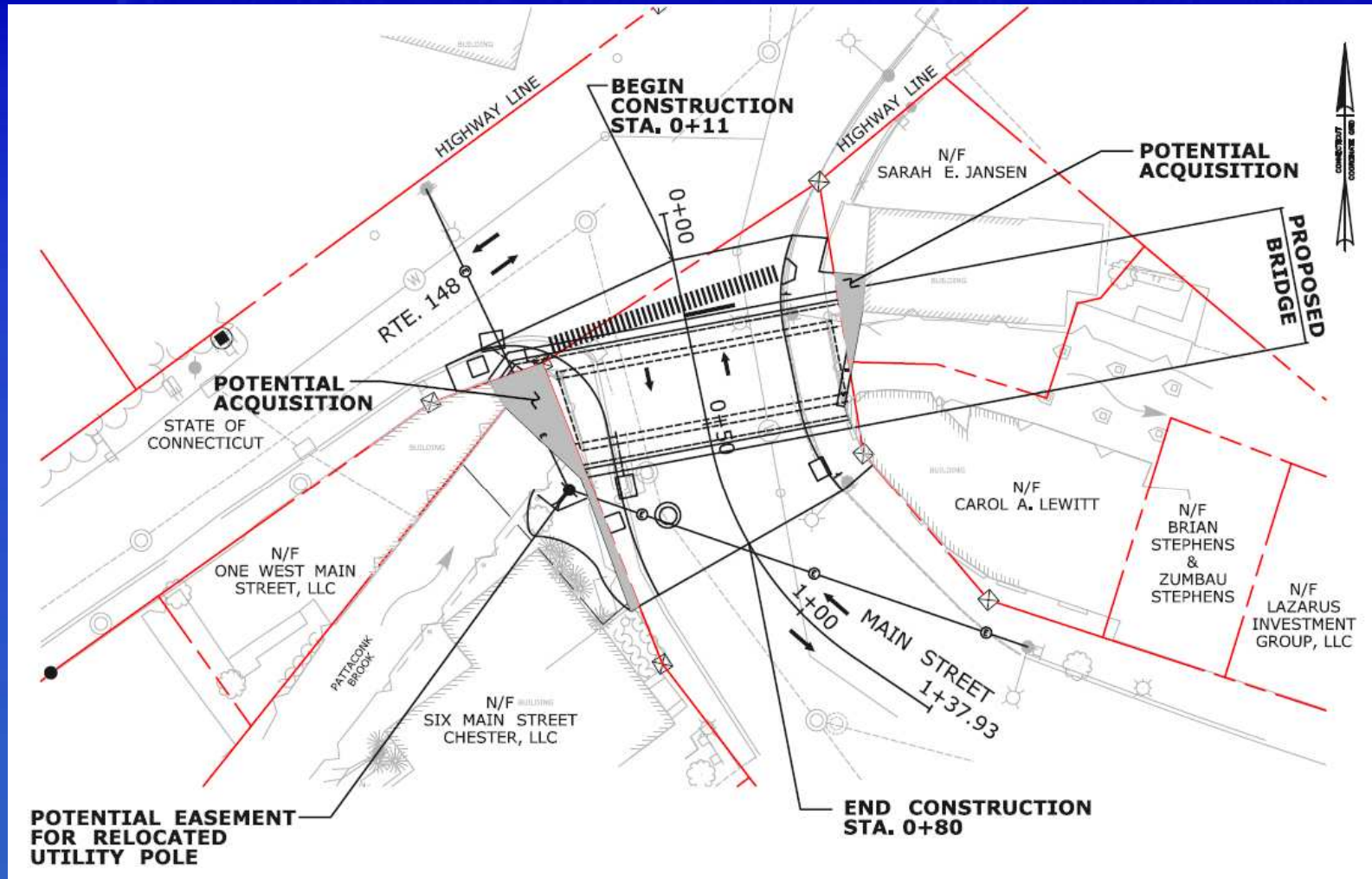


Rights-of-Way

Impacts to private property consisting of permanent or temporary acquisitions and temporary construction easements are anticipated



Rights-of-Way Impact



Project Cost

The estimated construction cost for the entire project is approximately \$2,500,000

This bridge replacement is anticipated to be undertaken using 100% State funds



Project Schedule

The project is anticipated to be constructed starting in Fall 2014

Total project duration estimated to be ~ 8 months

Bridge will be closed to vehicular traffic for maximum of 5 months

The schedule is preliminary and is predicated upon the availability of funding, environmental permits, utility relocations, and the receipt of all required property acquisitions



Contact Information

- **ConnDOT**

Mr. Richard Armstrong, P.E.
2800 Berlin Turnpike, P.O. Box 317546
Newington, Connecticut 06131-7546

- **TranSystems**

Mr. Dave Stahnke, P.E.
76 Westbury Park Road
Watertown, Connecticut 06795



THANK YOU...

Open-up For Questions or Comments

Connecticut Department of Transportation
and
Fuss & O'Neill / TranSystems

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