ConnDOT Role and Mission

Bureau of Engineering and Construction

- Responsible for engineering design, Construction, and inspection of transportation projects

Contact: Mr. David Cutler, PE
(Project Manager)
ConnDOT has retained the firm of WMC Consulting Engineers (WMC) to provide the design of this bridge project.

Contacts: Mr. Dennis Garceau, PE  
(Project Manager)

Mr. Jay Costello, PE  
(Vice President)
Reasons for Project

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

Reasons include:

- Structurally Deficient Superstructure
- Structurally Deficient Substructure
- “Serious” Condition Overall
- Bridge Width Inadequate
- Hydraulically Inadequate
Project Goals

- Reconstruct Bridge No. 02629
- Minimize disturbance to the public
- Complete construction in a timely manner
- Effective use of funds
Existing Bridge

- Single span structure built in 1914

- **Structure Dimensions**
  - Total Length = 12 ft
  - Clear span = 6 ft
  - Curb-to-Curb Width = 23 ft

- Straight horizontal alignment

- Slight downgrade to the south

- Carries one lane of traffic in each direction
  - Estimated Average Daily Traffic (ADT) ~ 15,400 vehicles (2010)
Existing Bridge

- **Superstructure consists of:**
  - Reinforced concrete slab with bituminous overlay

- **Substructure consists of:**
  - Stone masonry abutments and wingwalls
Existing Roadway

Looking North on Monroe Turnpike
Proposed Roadway

• Horizontal & Vertical geometry maintained

• Roadway widened to 34’

• Approximately 240’ of full depth roadway reconstruction

• Minor improvements to drainage

• Upgrades to Guiderail
Proposed Roadway

Roadway Plan

Connecticut Department of Transportation
Proposed Bridge

- New double *precast* concrete box culverts
- New *precast* concrete wingwalls
- Improved hydraulic capacity
- Re-establish / Realign stream channel
Proposed Bridge

Bridge Elevation (Downstream)

WMC CONSULTING ENGINEERS

Connecticut Department of Transportation
Proposed Bridge

Typical Bridge Cross Section

* Recommended state bike route
M & P of Traffic

Alternatives

I. Alternating one-way traffic (signalized)

II. Maintain southbound traffic / detour northbound traffic

III. Full roadway closure – detour northbound and southbound traffic separately
Alt. I - Alternating One-Way

- Queuing lengths / delay
- Blocking driveways / business access
- Constructability – old abutments
- Staged construction
- Longer construction time (6 months)
- Increased construction cost
- Safety – workers vs. traffic

- Less traffic on local roads
Alt. I - Alternating One-Way
Alt. I - Alternating One-Way
Alt. II – Maintain SB / Detour NB

- Constructability – old abutments
- Staged construction
- Longer construction time (6 months)
- Increased construction cost
- Safety – workers vs. traffic
- NB detour = more traffic on local roads than Alt. I
- No signal = no queuing
- Better access to driveways
- Less traffic on local roads than Alt. III
Alt. III – Full Road Closure

- Short construction (4-6 weeks)
- Safety – no workers vs. traffic
- Less Cost
- Maintain access to driveways
- Split detour = less traffic on one route

- All traffic on local roads
Recommended Alternative

Alt. 3 - Reasons Why?

- Short construction (4-6 weeks)
- Safety – no workers vs. traffic
- Less Cost
- Maintain access to driveways
- Split detour = less traffic on one route
Public Utilities

- AT&T conduits along east side
- 8” Gas Main along the west side
- Overhead wires along the west
- Utilities to be relocated prior to bridge construction
- Night time work likely
- Detour may required
Rights-of-Way

- Proposed construction substantially within existing R.O.W.
- Easements anticipated -
  - Easements to slope for support of highway
  - Easements to install and maintain riprap for channel
  - Drainage right-of-way
  - Temporary construction easements
The estimated construction cost for the entire project is approximately $1,800,000.

This project is anticipated to be paid for using State and Federal funds.

No cost to the Town.
The project is anticipated to be constructed starting in Spring 2014.

Project duration estimated to be 4 – 6 weeks.

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

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- **WMC Consulting Engineers**
  
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THANK YOU...

FOR YOUR TIME AND ATTENTION

Connecticut Department of Transportation
And
WMC Consulting Engineers