

# Project Description/Purpose and Need Statement

Project No. 0140-0180

Replacement of Bridge No. 01846

Town of Thomaston

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Bridge No. 01846 is a single-span structure carrying Route 222 (Hill Road) over Naugatuck Railroad located approximately 0.30 miles east of Route 8, in Thomaston. The existing structure, constructed in 1960, consists of a single-span bridge with rolled steel girders and cast-in-place concrete deck, with a span length of 36'-0" and an out-to-out width of 32'-0". Route 222 at this crossing has a posted Speed Limit of 35 MPH and an AADT of approximately 900 vehicles. The roadway is oriented in an east/west direction and carries two (2) lanes of vehicular traffic (one (1) lane each direction). Steel mesh fences with three-pipe railing and reinforced concrete bases are present on both the north and south sides of the bridge. A two-cable guiderail with timber posts is present at all four corners of the bridge. There are no overhead utilities or underground utilities within the project limits.

Bridge No. 01846 is in fair condition due to its Superstructure rating of '5' and has been assigned an Underclearances – Vertical & Horizontal rating of '3' due to the existing substandard vertical clearance to the railroad tracks of 19.5'. For structures crossing non-electrified railroads, the minimum vertical clearance needs to be 20.5'. All existing traffic safety features for the bridge currently do not meet the acceptable FHWA standards. All bearings have been past cleaned and painted but have up to heavy rusting. Girders have up to 42.2% web bearing loss and up to 27.6% shear loss. Abutment stems have random spalls up to 2.5' x 2' x 1.5" deep with random exposed rebar. The superstructure has less than 50% of painted surfaces that are rusted. The reinforced concrete rail base has scaled areas up to 10' x 17" x 3" deep.

The purpose of this project is to replace Bridge No. 01846 due to its structural deficiencies in order to provide a structure that is in a state of good repair, is capable of meeting current load rating and highway design standards, and improves the vertical and horizontal clearance to the railway tracks. The proposed replacement structure will consist of precast prestressed reinforced concrete deck units founded upon reinforced concrete abutments and wingwalls. The roadway will be widened at the bridge to match current design standards and raised at the bridge to provide additional vertical clearance to the railroad tracks below. Protective fencing, appropriate guiderail attachments to the bridge and end anchorages will be installed. Approaches will be milled and overlaid to provide a smooth transition with the raised roadway profile. Drainage structures within the project limits will be modified accordingly.

Replacement will take place under two (2) stages of alternating one-way traffic with temporary signalization. One (1) 11' lane with 1' shoulders on both sides will be provided during each of these stages. There are no Rights-of-Way impacts anticipated with this project; however, temporary access within the Naugatuck Railroad Right-of-Way will be required to complete construction. There are no environmental permits anticipated for this project as there are no wetlands or watercourses within the proposed project excavation/fill limits. Construction is anticipated to begin in the Fall of 2028 and cost approximately \$11.2 million dollars.