

Project Description
State Project No. 0134-0148
F.A.P. No. (PE) 1134(105)
Rotary Upgrade to a Modern Roundabout
Route 190 at Route 32
Town of Stafford

PROJECT LOCATION

The project is located in the Town of Stafford at the intersection of Main Street, East Main Street, and River Street (Routes 32 and 190). The existing intersection is a three-legged rotary with a decorative fountain operating in its center. The intersection is located at mile marker 19.28 along Route 190 and mile marker 48.85 along Route 32. The project limits extend westerly along Main Street (approximately 0.25 miles) and southerly along River Street (approximately 0.1 miles) to include pedestrian improvements through the corridor.

EXISTING CONDITIONS

Currently, there are many geometric and operational deficiencies present at the intersection. From the south, River Street (Route 32) approaches with minimal deflection, creating a clear sightline through the intersection. This, along with limited signing, contributes to high speeds and confusion when motorists enter the rotary and creates a high potential for crashes. From the west, Main Street (Routes 32/190) provides little channelization for vehicles turning right onto River Street (Route 32). Despite adequate room to make this maneuver, large vehicles have repeatedly struck the roof of the adjacent police station as well as the utility pole immediately behind it. From the north, East Main Street (Route 190) approaches the intersection only one-hundred feet south of the its intersection with Furnace Avenue. The lack of signing, expanse of pavement, and multiple closely-spaced conflict points add to the confusion and safety concerns of this approach.

Crash data (2018 - 2021) obtained from the UConn Crash Data Repository revealed 30 total crashes. Of those 30 crashes, fourteen were rear end crashes, ten were sideswipe crashes, five were angle crashes, and one crash involved a pedestrian. Of the 30 crashes, there have been two injuries. One injury resulted from an angle crash and the second injury resulted in the crash involving a pedestrian.

PURPOSE AND NEED

The purpose of the project is to increase the safety and efficiency at the intersection of Route 190 at Route 32 by upgrading the existing rotary to a modern roundabout. The features of a modern roundabout will improve safety and efficiency by decreasing entering speeds, separating conflict points, and reducing driver confusion. Additionally, the revised configuration will channelize large trucks through the intersection, eliminating their ability to strike the roof of the Police Station and adjacent utility pole, as has been done numerous times. Pedestrian improvements, including crosswalk bump-outs on Main Street and a new sidewalk along River Street, will also increase safety in the project area.

PROPOSED IMPROVEMENTS

It is proposed to upgrade the existing intersection by installing a modern roundabout. The roundabout will create greater deflection for the approaching roadways by installing splitter islands and a concrete truck apron. Additionally, the splitter islands and truck apron will aid in channelizing a vehicle's approach and path through the intersection. The splitter islands reduce vehicle speeds as they enter while the concrete apron channelizes vehicles as they proceed around the central island. Furthermore, the roundabout will physically separate conflict points that currently exist within the rotary, allowing more decision-making time and reducing the frequency of near-miss crashes. The new splitter islands will provide locations for proper signage to be placed. Pavement markings will be installed to help decrease driver confusion as well.

In the vicinity of the Police Station, proper deflection and entry into the intersection will be aided by the installation of a raised island. A police parking area will be provided to preserve the existing parking capacity in front of the station, but the island will help ensure large trucks will enter the intersection correctly and avoid striking the building's roof when turning onto River Street (Route 32). The decorative fountain will be slightly offset from the middle of the center island to allow it to remain in its existing location. No impact to the fountain is anticipated.

Given its proximity to the intersection, revisions to the Town Hall parking lot will be incorporated as well. The separate ingress and egress driveway access points will be combined into a larger bi-directional driveway providing the same access that exists today while moving the access points as far from the intersection as possible to reduce conflicts. An island will be installed at the drive to reinforce internal traffic flow patterns. A minor loss of parking spaces may result from these changes, but no impacts to the existing solar canopy are anticipated.

Pedestrian improvements will be incorporated throughout the project as well. New crosswalk locations associated with the roundabout and splitter islands will shorten the crossing distances. A new sidewalk will be installed on the eastern side of River Street, connecting the sidewalks along Main Street, East Main Street, and Furnace Avenue to the existing gas station parking lot approximately 0.1 miles south of the intersection. Curb extensions (bump-outs) are proposed at the existing crossing locations on Main Street approximately 0.25 miles west through to Park Street (Route 140). The bump-outs increase visibility to pedestrians waiting to cross while decreasing the length of their crossing.

Just south of the roundabout, Bridge No. 00940 will be impacted as part of this project to include sidewalk on the east side of the bridge.

RIGHTS OF WAY

The proposed modern roundabout will be constructed within the existing roadway footprint of the circular intersection. Pedestrian improvements, including the proposed sidewalk along River Street, will be constructed primarily within the existing State ROW. However, small sliver acquisitions are required for sidewalks. A Drainage Right of Way may be needed to ensure adequate drainage throughout this location. Additionally, construction easements on Town owned property may be required to facilitate construction.

REQUIRED PERMITS

Environmental permits will be required. The specific permits will be determined as the design progresses.

PROJECT SCHEDULE

FDP: June 1, 2022

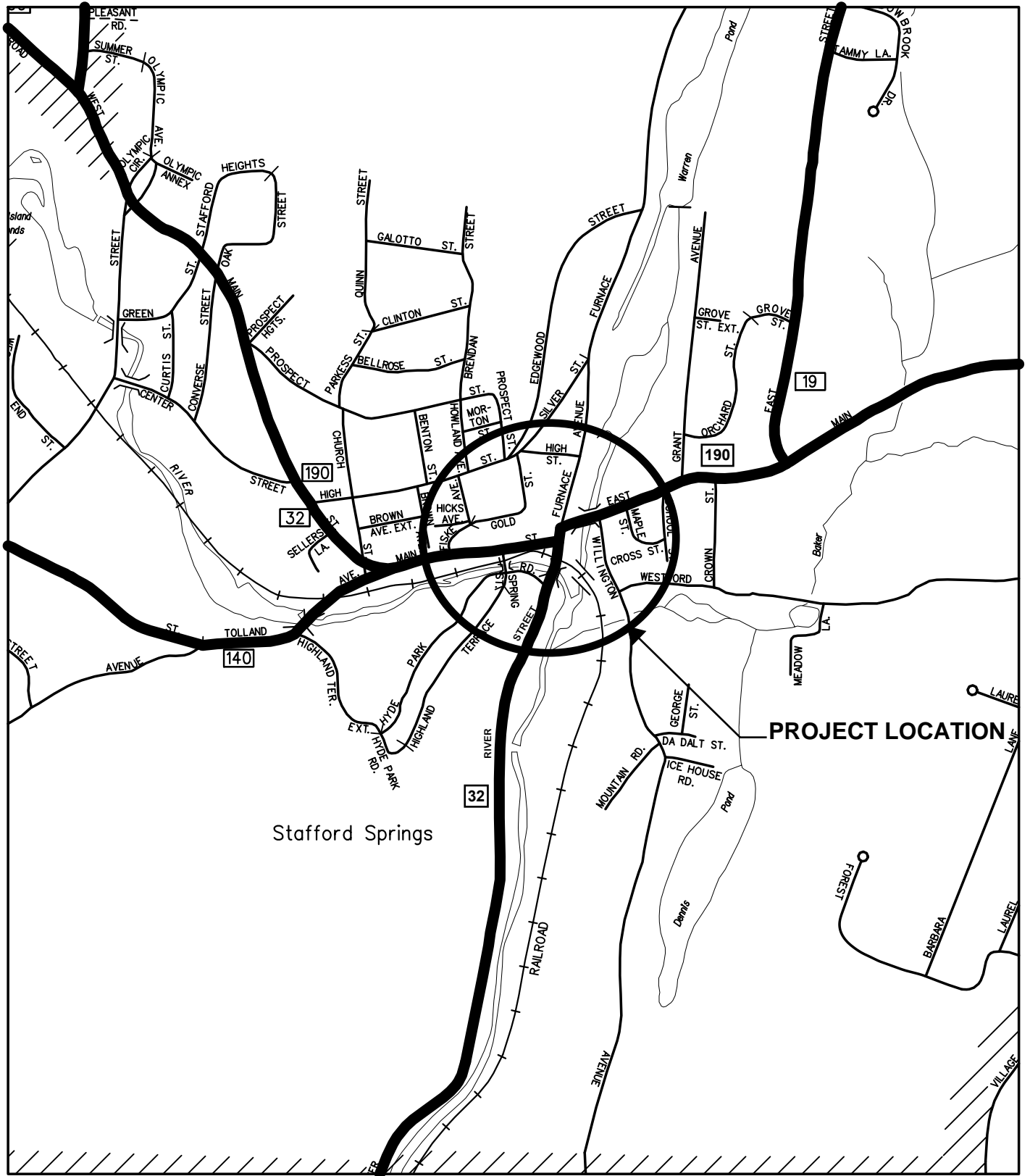
DCD: July 13, 2022

ADV: August 10, 2022

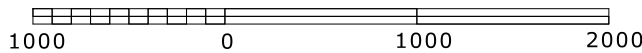
Anticipated start of construction: Spring 2023

PROJECT COST (CONSTRUCTION)

The estimated construction cost is approximately \$1,925,000.



SCALE IN FEET



STATE PROJECT NO.:

0134-0148

CITY/TOWN:

Stafford

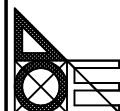


STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Location Plan
Route 190 at Route 32
Rotary Upgrade to a Modern Roundabout



OFFICE OF
ENGINEERING



DATE:

September 2016