



TOWN OF MAYNARD Department of Public Works

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Justin DeMarco
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Administration

*Cemetery & Parks
WWTP*

Facilities

Highway

Water & Sewer

Memorandum

To: Select Board
From: Justin DeMarco, DPW Director
Wayne P. Amico, PE, Town Engineer
cc: Greg Johnson, Town Administrator
Date: January 9, 2024
Subject: 90% Design and Construction Funding Update
Traffic Signal & Intersection Upgrades - Route 27 at Concord Street

Recommended Action:

Motion to approve additional funding of \$447,860 for the Construction and Construction Administration of a new Traffic Signal and related improvements at the intersection of Route 27 at Concord Street in the Town of Maynard, from the Town's Free Cash allocation of Local Funding.

Purpose:

As part of the Department of Public Works capital improvement plans, we review and evaluate capital infrastructure improvements to provide the community with efficient, effective, reliable, and safe methods of transportation. The intersection of Route 27 at Concord Street has been the community's highest priority traffic safety concern and has been pursued for multiple years as an opportunity for increased safety enhancements. Construction of a new Traffic Signal and related improvements at this location will allow the Town of Maynard to post a complete bid for the construction of this vital safety improvement.

Background:

On June 24, 2022, the Town of Maynard was awarded an ARPA Spending Bill Earmark Award of \$500,000 for the Design, Construction Administration and Construction of safety improvements at the intersection of Route 27 and Concord Street.

The preliminary estimated project construction cost at the time of submittal to MassDOT in late 2021-early 2022 was \$510,000.

On April 25, 2023, the Maynard Select Board approved the contract Agreement #1385 with Vanasse Hangen Brustlin, Inc (VHB) for final design development of Route 27 at Concord Street Traffic Signal for the Town of Maynard, in the amount of \$102,100.

This project includes the construction of a new traffic control signal system and associated vehicle and pedestrian safety improvements at the intersection of Concord Street at Haynes and Brown Street (Route 27) in Maynard, Massachusetts. The project also includes construction administration of the proposed improvements, from design through advertising, bidding, contract procurement, construction, and project closeout.

Specifically, the following improvements will be made at this intersection:

- Installation of a new traffic signal cabinet with approved MassDOT controller and ancillary control equipment.
- Installation of a new traffic signal mast arm and post system with signal heads to control vehicular and pedestrian operations at this intersection.
- Installation of traffic signal posts with pedestrian control equipment to guide pedestrians across Haynes Street and Concord Street, as well as specific pedestrian control equipment to meter the Assabet River Rail Trail multi use path crossing of Concord Street.
- Installation of an advanced “SIGNAL AHEAD” illuminated traffic signal beacon on Haynes Street at Walcott Street (south of the intersection). This is included based on limited sight distance in the northerly direction on Haynes Street.
- Installation of MUTCD compliant regulatory and safety traffic and pedestrian signage.
- Sidewalk and pedestrian ramp upgrades throughout the intersection at various locations.
- Sidewalk upgrades on approximately 400' of Haynes Street between Concord Street and Acton Street.
- Sidewalk and pedestrian ramp upgrades at the Acton and Concord Street intersection, directly adjacent to the project intersection.
- Pavement mill and overlay of all four approaches to the intersection as well as the Acton and Concord Street intersection.
- Relocation of a vehicular speed feedback sign solar unit on Haynes Street to a new location north of Concord Street.
- Minor drainage improvements to approaches of the intersection based on the installation of new sections of sidewalk and new handicap ramps.
- Installation of a Rapid Reflective Flashing Beacon (RRFB) across Haynes Street at its intersection with Nason Street and Prospect Street.
- Pedestrian Curb Upgrades at Route 27 and Prospect Street
- The work will also include removal and resetting of existing granite curb, installation of new granite curb, replacement of existing cement concrete or asphalt sidewalk with new asphalt sidewalk as well as new pavement markings throughout the project intersection.

These improvements will provide a safer mix of vehicular traffic at this location and its intersection with the Assabet River Rail Trail to better accommodate pedestrian and vehicular connections from the abutting neighborhoods and the Assabet River trail system.

This project brings this intersection into compliance with current AAB/ADA standards. The location of these upgrades is part of the Town’s effort to ensure pedestrian and vehicular accommodation, accessibility, and safety at this highly used intersection that connects major roadways to Maynard’s downtown area.

Financial Impact

Engineering Design of Route 27 at Concord Street Traffic Signal intersection improvements funding has been previously approved through contract agreement between the State of Massachusetts and Town of Maynard including receipt of wire transfer of appropriated funding of five hundred thousand dollars (\$500,000.00) as an ARPA Spending Bill Earmark on June 24, 2022.

Based on escalating industry costs and expansion in the limits of work for the project, additional funding is hereby requested as detailed below to cover the escalating cost of construction of the above referenced improvements, as well as escalating additional Design and Construction Administration costs during the actual construction of the project improvements.

Project Update

Since the approval of the contract with VHB for the Final Design / Engineering of Route 27 at Concord Street Traffic Signal, the design has been completed and the limits of work expanded south of the intersection to include Pedestrian Curb Upgrades at Route 27 and Prospect Street as well as a Rapid Reflective Flashing Beacon (RRFB) across Route 27 in the vicinity of Prospect Street and Nason Street.

The Final Project Plans, specifications and Engineers Estimate has been completed as well as Photo Simulations of the intersection that represent the final constructed conditions of the Intersection of Route 27 and Concord Street, once the project is completed.

The currently projected construction cost for these improvements has increased based on escalating industry costs and increased project limits and could be as much as \$875,000 as detailed below. Additional local funds are requested in order to construct all improvements as currently planned.

Details of Estimated Cost Allocation for Upgrades at Route 27 and Concord Streets Intersection

- **Estimated Construction Cost**

- Base Bid - Installation of Traffic Signal, repaving of Intersection & New sidewalks = \$735,000
- **Add Alternate #1** – Installation of Solar Powered LED lite Stop Signs at Acton Street = \$5,000
- **Add Alternate #2** – Installation of RRFB (Rapid Reflective Flashing Beacon) on Haynes Street at Prescott Street = \$38,000
- **Add Alternate #3** – Accessible Curb Ramps and curb return work at Prescott Street to allow for Accessible Curb Ramps = \$17,000

Total Estimated Construction Cost = \$795,000

- Estimated Construction Change Order Contingency (10%) = \$80,000

Total Estimated Construction funded needed = \$875,000

- **Summary of Available Funding**
- Commonwealth ARPA Earmark Grant (\$500,000 Grant – estimated \$150,000 Design Contract (VHB original contract for \$102,100+\$47,900 currently anticipated and Construction Administration amendment) = \$350,000
- Local Roads and Sidewalks Funding (\$150,000 allocated - \$72,860 Tiger Drive Repaving 2023) = \$77,140
- Total DPW available funding = \$427,140
- **Local Funds needed to cover cost differential (\$875,000-\$427,140) = \$447,860**

Required local funds to cover differential = \$447,860

Other funding source options available if local funds are not secured to cover cost differential, or partial local funding is granted:

- Chapter 90 Funding – Available as per confirmation from MassDOT on 12/13/23 = \$594,739
- Additional Funds available from Community Fair Share Apportionment as of 12/11/23 = \$134,344

Total Chapter 90 and Community Fair Share funding available = \$729,083.00

Funding Options:

Option 1= SelectBoard approves the required \$447,860 of local funding to cover the cost differential based on estimated construction cost and available DPW funding.

Option 2 = SelectBoard approves part of the required \$447,860 of local funding to cover the cost differential based on estimated construction cost and available DPW funding, and DPW either truncates (“Budget Engineer”) the project limits and improvements or uses funding from the available Chapter 90 and Community Fair Share Funds that are available (please note, this option will limit roadway paving and/or sidewalk work that normally used available Chapter 90 Funding)

Option 3 = SelectBoard approves none of the required \$447,860 of local funding to cover the cost differential based on estimated construction cost and available DPW funding, and DPW either truncates (“Budget Engineer”) the project limits and improvements or uses funding from the available Chapter 90 and Community Fair Share Funds that are available (please note, this option will limit roadway paving and/or sidewalk work that normally used available Chapter 90 Funding)

Summary:

In summary, the Department of Public Works requests that the Select Board move to appropriate \$447,860 of Local Funds to cover the additional estimated construction costs for the construction of the Intersection improvements on Route 27 at Concord Street and negate the need of the Department of Public works form using additional Chapter 90 funding to fund this cost differential. If chapter 90 funds are required to cover this cost differently, this will limit the available funding for roadway paving at other locations within the Town that sorely need roadway repairs.

Once funds are agreed to and appropriated, the project will be publicly advertised by the Department of Public Works for award to the project low bid contractor. This is currently anticipated to occur in the Winter/Spring of 2024, followed by construction to begin later in calendar year 2024, and completion in 2025.