



CITY OF CONCORD

REPORT TO THE MAYOR AND CITY COUNCIL

FROM: Karen Hill, P.E., Transportation Engineer

DATE: December 12, 2022

SUBJECT: Lilac Street/Borough Road Intersection Improvement Project

Recommendation

Accept this report and authorize staff to proceed with reconfiguration of the Lilac Street/Borough Road Intersection in accordance with CIP #520/FY2023.

Background

As part of the FY2023 Budget, the City Council approved Capital Improvement Program (CIP) Project #520 “Intersection Improvements” and appropriated the sum of \$25,000 to realign the intersection of Lilac Street and Borough Road from its current “Y” configuration to a “T” shaped alignment. Please see the attached plan depicting existing conditions and proposed improvements for more information.

Accident data shows there have been 3 accidents at the intersection in the last 5 years.

The purpose of this project is to improve pedestrian and vehicular safety. Specifically, removal of the Borough Road right turn – slip lane onto Lilac Street, coupled with widening of the existing Lilac Street approach to better accommodate right turning vehicles, reduces the speed of turning traffic, eliminates a conflict point and the skewed sight line for Borough Road eastbound traffic making a left turn and traveling north on Lilac Street, and substantially reduces the unnecessarily-large size of the paved intersection area which enhances safety for all users (vehicles, pedestrians, and bicyclists) now and in the future.

The Lilac Street and Borough Road intersection is one of several “Y” intersections located throughout the City that have been identified for improvement in the City’s Capital Improvement Program under CIP #520. Said intersections are typically improved concurrently with City’s Annual Highway Program (CIP #78) to achieve economies of scale and reduce costs.

Other recently improved intersections include: Walnut/Canal Street, Mountain/Shaker intersection, Portsmouth/Old Loudon intersection, and Borough/Washington/River intersection.

Construction of the Lilac/Borough intersection is scheduled to be completed in spring/summer 2023.

On August 16, 2022, the design for the proposed improvements was reviewed and endorsed by the City's Traffic Operations Committee.

Discussion

On October 6, 2022, the Engineering Division of the Community Development Department hosted a neighborhood meeting to discuss the proposed improvements. Notices were mailed to approximately 62 property owners. The meeting, which was held at the Penacook Elementary School, was attended by eight (8) members of the public.

During the meeting, members of the public questioned whether removal of the slip lane and creation of the "T" intersection may result in rear-end accidents on Borough Road.

As a result, the Engineering Division completed additional review of the intersection and the proposed improvements.

Borough Road has a posted speed of 30 miles per hour (mph). Traffic data collected by the Engineering Division in August 2020 indicated that the average speed eastbound on Borough Road was 32 mph, and the 85th percentile speed was 37 mph. The average speed traveling westbound was 33 mph, and 85th percentile speed was 38 mph. The 85th percentile speed is defined as the speed at or below which 85 percent of all vehicles are observed to travel.

Using this data, the Engineering Division re-examined sight line analyses for this intersection. As a result of this review, the Engineering Division has updated the proposed design to include additional trimming of vegetation within the Borough Road rights-of-way. Additional trimming will improve sight distance to 445', thus exceeding minimum engineering standards and addressing resident concerns. It is recommended that this trimming be completed regardless of how the intersection improvements move forward. In addition, the design was updated to include granite curbing along Borough Road, as well as expanded signage, to reinforce the new traffic pattern and further address residents' concerns.

On October 18, 2022, the Traffic Operations Committee (TOC) reviewed the Engineering Division's sight distance analyses and updated design plans, and reaffirmed its support for the project.

In addition, during its October 18, 2022 meeting, the Traffic Operations Committee also noted that since the Borough/River/Washington intersection was realigned to a "T" configuration in 2015, no accidents have been reported at that location.

Staff believes that the public safety concerns expressed during the October 6, 2022 neighborhood meeting have been sufficiently addressed. Unless otherwise directed by City Council, the Engineering Division, in conjunction with the General Services Department, will proceed with the proposed improvements during the 2023 construction season.

Attachment

cc: Traffic Operations Committee
Chip Chesley, General Services Director

