

MEMORANDUM

Date January 17, 2024

To Mr. William F. O’Connell, Jr.
Bellingham Planning Board
Municipal Center
10 Mechanic Street
Bellingham, MA 02019

From Jane R. Davis, P.E.
Steve Shekari

CC Scott D. Turner, PE, AICP, LEED AP ND
James D. Fitzgerald, P.E., LEED AP

Subject Transportation Impact Assessment Update Traffic Peer Review
Review of Transportation Impact Assessment Update; Proposed Residential
Development – Blackstone Street

Environmental Partners (EP) has reviewed the Transportation Impact Assessment Update (“the TIA Update”) dated November 2, 2023, and prepared by Vanasse & Associates, Inc. (VAI) for the proposed residential development (“the Project”) located at a portion of property that fronts along North Street and Blackstone Street in Bellingham, Massachusetts (“the Town”).

In general, VAI has prepared this assessment in a professional manner, consistent with standard engineering practices. The following is a summary of EP’s traffic review.

Project Description

The TIA Update outlines the following project description:

“As currently proposed, the Project will entail the construction of a 15-unit multifamily residential development to be located on a portion of a larger development parcel that fronts along North Street and Blackstone Street in Bellingham, Massachusetts. The overall Project site encompasses approximately 20.83± acres of undeveloped land that is bounded by areas of open and wooded space to the north; Blackstone Street and a residential property to the south; areas of open and wooded space and low-lying wetland areas to the east; and North Street and a residential property to the west. The portion of the overall Project site that will contain the Project (the “Development Area”) consists of 5.36± acres of land that fronts along Blackstone Street...

...Access to the Project site will be provided by way of a new driveway that will intersect the north side of Blackstone Street approximately 700 feet northeast of North Street. Off-street parking will be provided in individual garages and driveways that will accommodate a minimum of two (2) vehicles per unit, which is consistent with the requirements of §240-59, Schedule of requirements, of

the Zoning Bylaws of the Town of Bellingham. There will also be an additional 11 off-street parking spaces provided for visitors.”

The Project study area included North Street and Blackstone Street as the study roadways and the following study intersections:

- North Street at Blackstone Street
- Blackstone Street at Project Site Driveway

Comments

The following summarizes EP's traffic review of the Project, which as VAI noted, provides an update to a previous study referenced as the “October 2022 TIA”. EP's review did not include verification of the information in the October 2022 TIA or its comparison with the updated information in the recent TIA Update. Although EP performed a thorough review of the TIA Update, comments on items that are minor in nature and are not anticipated to impact the findings of the TIA Update or EP's recommendations have been omitted for brevity.

Existing Conditions

1. No backups have been provided in the appendix for the crash data summarized in the TIA Update. In our independent research, EP found a total of eight (8) crashes for the five-year period of 2016 through 2020 at or in the immediate vicinity of the intersection of North Street and Blackstone Street. Inclusion of these additional crashes may increase the calculated crash rate at the intersection to exceed the Statewide and/or District 3 averages. EP requests backups/clarifications to address the discrepancy in the number of crashes.

Future Conditions

2. The Project Description section in the TIA Update describes the Project as a 15-unit multifamily residential development, whereas the trip generation is based on single family attached units; we note that the type of housing impacts the number of estimated Project-generated trips based on ITE methodology. Since the single family attached housing land use code used to estimate the trip generation is consistent with the site plans, it appears that the trip generation estimates were based on the most appropriate land use code; EP requests verification.
3. The trip distribution assumes most of Project-generated traffic travels to/from northeast via Blackstone Street. EP takes no exception to the assumed trip distribution; however, no study intersection has been identified along that route to assess the impacts. We typically recommend including major intersections that are anticipated to accommodate the majority of traffic; however, given the relatively low number of generated trips by the Project (two (2) vehicle trips to/from the northeast during the weekday morning peak hour and three (3) vehicle trips during the weekday evening peak hour), we do not anticipate significant impacts to the intersections on the northeast of the site.

Traffic Operations Analysis

4. The traffic analyses were performed using the calculated peak hour factor (PHF) for both existing and future conditions, whereas the Massachusetts Department of Transportation (MassDOT) guidelines require the use of a PHF of 0.92 for urban areas under future conditions analyses.

However, based on the existing PHFs and traffic volumes, it appears revising the PHF will likely have little impact on the results, particularly given the favorable traffic operations (LOS B or better) at the study intersections, and therefore EP does not anticipate the revision would change the overall outcome of the study.

Sight Distance Assessment

5. Without vegetation removal, the desirable Intersection Sight Distance (ISD) will not be achieved at the Project Site Driveway. As per the requirements of §240-61 from Town of Bellingham Zoning Bylaws, both minimum Stopping Sight Distance (SSD) and ISD shall be provided at driveways serving ten (10) or more parking spaces. Based on EP's site visit, it appears the ISD can be achieved with the vegetation removal noted in the TIA Update. EP requests sight triangles be provided for the Project Site Driveway to show the measured sight distances and indicate areas where all obstructions should be removed and/or maintained to provide adequate sight distance.

Summary

6. The Summary section indicates that there are no apparent safety deficiencies; however, based on EP's independent research as discussed in the Existing Conditions section above, the MassDOT crash rates may be exceeded at the intersection of North Street at Blackstone Street, with the potential inclusion of the additional crashes, indicating a possible safety deficiency. If the updated crash data shows a crash rate higher than the MassDOT averages, EP recommends investigating minor improvements to mitigate the safety concerns.

Recommendations

7. The TIA Update states that "a widened sidewalk area should be provided as a school bus waiting area" on Blackstone Street, yet the site plan does not show this widened sidewalk area. EP recommends that the site plan be revised to show the widened sidewalk.

Site Plan

8. EP recommends all crosswalk pavement markings be expanded to a minimum of eight (8) feet in width for better visibility.
9. Continuous protected pedestrian accommodation should be provided throughout the site, including adding a segment of sidewalk along the sides and back of the visitor parking space areas.
10. No accessible parking space has been provided for the site in compliance with the Americans with Disabilities Act (ADA) requirements. We recommend revising the site plan to include the required number of ADA-compliant parking spaces among the visitors' parking spaces.
11. The "Pavement Section" in the "Construction Details" sheet currently shows a thickness of one (1) inch for the intermediate course. The detail should be revised to include a minimum thickness of 1.5 inches for the intermediate course.

We appreciate the opportunity to be able to assist you with this project. We remain available for any questions or additional review.