



GREEN INTERNATIONAL AFFILIATES, INC.

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August 2, 2022

Ms. Julie Mercier, AICP, LEED AP
Community Development Director
Town of Reading
16 Lowell Street
Reading, MA 01867

Subject: **Transportation Peer Review –
Proposed Mixed-Use Development
459 Main Street
Reading, Massachusetts**

Dear Ms. Mercier:

On behalf of the Town of Reading (the Town), Green International Affiliates, Inc. (Green) is submitting this letter report of the findings from our engineering peer review of the application package for the proposed mixed-use development at 459 Main Street. The Applicant seeks to raze the existing building, which consists of an auto body shop, and construct a four-story building with twelve residential units on the upper three floors and up to 2,000 SF of commercial space on the ground floor. The scope of our review included a review of the traffic study as it relates to trip distribution, queuing, access to the site, and recommendations; and the proposed site plan, as it relates to vehicular access, bicyclist and pedestrian access, and parking at the proposed site and to local traffic circulation at and near the proposed site. The project is before the Community Planning and Development Commission (CPDC) for approval.

This review included an examination of the following documents submitted in support of the proposed project:

- Traffic Impact Assessment (TIA) prepared by The Engineering Corp (TEC), dated November 17, 2021;
- Technical Memorandum, prepared by TEC, dated March 3, 2022;
- Supplemental Traffic Impact Assessment, prepared by TEC, dated June 1, 2022, which outlines turning movements into and out of the site that present concerns for the Community Planning & Development Commission (CPDC);
- Civil Engineered Plan Set, prepared by Fodera Engineering, most recently dated June 1, 2022;
- Architectural Plan Set, prepared by Olinger Architects, most recently dated June 1, 2022;

In addition to the above documents, Green visited the project site and the surrounding roadways on July 27, 2022 to gain a better understanding of the existing conditions and the context of the proposed project. Our review evaluated the documents for consistency with typical industry practice for traffic studies, the Town of Reading's regulations and general bylaws, and Americans with Disabilities Act (ADA) and Massachusetts Architectural Access Board (AAB) design standards.

Green offers the following comments resulting from our initial review of the above documents:

November 2021 (Updated March 2022) Transportation Impact Assessment and March 2022 Supplemental Technical Memorandum

1. Stopping Sight Distance and Intersection Sight Distance were measured for the proposed egress driveway on Washington Street. It was found that the ASSHTO recommended minimum sight distances are available. Green concurs with this but notes that traffic queuing at the intersection of Washington Street and Main Street regularly blocks the sight distance of drivers wishing to turn left out of the driveway. We recommend that left turns out of the Washington Street driveway be restricted to alleviate this safety concern.
2. Trip distribution for the retail land use was based on existing vehicle travel patterns. Green concurs with this methodology and no further information is required.
3. Trip distribution for the residential land use was based on 2009-2013 U.S. Census Journey-to-Work/Home data for the Town. Green recommends that the residential trip distribution be performed using the most recently available Census Bureau On-the-Map data. Based on a cursory review, the distribution for the most recently available year (2019) differs from what is shown in the trip distribution model.
4. Based on capacity analysis results and Green's observations during our site visit, queues on both Main Street and Washington Street regularly extend past the proposed entrance and exit driveways. As mentioned in comment #1, we recommend restricting left turns out of the garage onto Washington Street. We concur that providing an entrance driveway on Main Street and an exit driveway on Washington results in the optimal site circulation pattern.
5. The TIA states that the Applicant will work with the Town to optimize traffic signal timings post-occupancy if necessary. We recommend that traffic signal timings be optimized based on projected traffic volumes prior to the opening of the development and re-examined 6 months after opening for any further necessary adjustments.
6. The TIA states that although 4 parking spaces are provided in the parking garage for the commercial use, the commercial space within the site is exempt from off-street parking requirements since it is within 300 feet of public off-street parking along Woburn Street; however, the site is located over 1,500 feet from Woburn Street. Based on field observations, off-site parking seems to be limited and difficult to locate in the project area. Please clarify which off-street parking lots are expected to be utilized.
7. Fifteen parking spaces are required for the twelve residential units use per Town zoning bylaws. The proposed parking garage does comply with this requirement as it provides fifteen parking spaces for the residential use. One accessible parking space is required; the proposed parking garage provides two accessible spaces. The TIA states that 19 parking spaces are provided (15 for residential and 4 for commercial), but the plans show 20 spaces. Please clarify the total number of proposed parking spaces.

June 2022 Civil Engineering Plan Set and June 2022 Architectural Plan Set

1. Green reviewed the passenger car turning movements shown in the architectural plan set and found them to be acceptable. The Applicant should provide a figure showing emergency vehicle turning movements into and out of the parking garage as well as circulation through the garage for review.

2. Green reviewed the proposed loading zone location and believe that there is sufficient width for delivery vehicles to load/unload while allowing other vehicles to bypass. Please provide turning movements showing that parking spaces 18, 19, and 20 can be accessed while the loading area is occupied.
3. The TIA states that the loading zone will be delineated with pavement markings. Please show these proposed markings on the plan. Additionally, please ensure that adequate lighting will be provided at the loading zone such that it is visible to vehicles turning into the garage.

Recommended Off-Site Mitigation Measures

1. Because most parking for commercial land uses is expected to be off-site and a portion of all trips are expected to be via transit, the Applicant should commit to enhancing pedestrian accommodations at the intersection of Main Street and Washington Street. As the Applicant plans to upgrade the curb ramp at the northeast corner of the intersection, ADA requires that the curb ramps on the other three corners be upgraded as well. Further enhancements could include upgrading pedestrian signal equipment to meet current ADA standards We recommend that existing crosswalks be replaced with textured crosswalks similar to those at the intersections along Main Street north of Washington Street to provide better contrast and a higher level of safety.
2. All vehicular traffic entering and exiting the site is expected to utilize the signalized intersection of Main Street and Washington Street. The Applicant should commit to funding safety improvements at the intersection such as upgrading all signal heads to have backplates and retroreflective borders. We also recommend evaluating the option of revising traffic signal phasing such that the southbound protected left-turn movement and northbound protected left-turn movement are switched. It appears that this would allow vehicles to safely make a left turn into the parking garage after the northbound and southbound through movements if they were not able to find a sufficient gap in traffic.
3. As mentioned previously, traffic signal timings should be optimized before the development opens and re-examined 6 months later.

If either the Town staff or the Applicant's engineer would like to discuss any of these comments further, please feel free to contact me at 978-843-5281.

Sincerely,
Green International Affiliates, Inc.



Amy Allen, P.E., PTOE
Transportation Planning Group

cc: W. Wong, Green