Vanasse & Associates inc
Transportation Engineers & Planners

35 New England Business Center Drive
Suite 140
Andover, MA 01810

Ref: 9448

November 4, 2022

Ms. Darlene Wynne, AICP
City of Beverly
Director of Planning & Community Development
191 Cabot Street
Beverly, MA 01915

Re: 2nd Traffic Engineering Peer Review
Proposed Mixed-Use Development - 218-224 Cabot Street and 18 Federal Street
Beverly, Massachusetts

Dear Ms. Wynne:

Vanasse & Associates, Inc. (VAI) has completed a review of the supplemental materials that have been submitted on behalf of Leggat McCall Properties, LLC (the "Applicant") in support of the proposed redevelopment of the existing commercial property located at 218-224 Cabot Street and 18 Federal Street in Beverly, Massachusetts, to accommodate a new mixed-use building (hereafter referred to as the "Project"). This information was prepared in response to comments from the Parking & Traffic Commission and the Planning Board, and those that were raised in our September 27, 2022 Traffic Engineering Peer Review letter, and consisted of a letter with accompanying attachments prepared by Greenman-Pedersen, Inc. (GPI) and dated October 26, 2022. GPI indicated that responses to VAI's comments regarding the Site Plans would be provided by others under separate cover. As such, this supplemental review focuses on our comments pertaining to the July 12, 2022 *Traffic Impact and Access Study* (the "July 2022 TIAS") and the subsequent September 6, 2022 *Response to Comments from Parking & Traffic Commission* letter (the "September 2022 RTC").

Based on our review of this information, we are satisfied that the Applicant's team has been responsive to our comments pending receipt of the revised Site Plans. We continue to recommend that the Applicant review the parking layout within the parking garage as there are several parking spaces that are not functional as currently designed.

For reference, listed below are the comments that were raised in our September 27, 2022 Traffic Engineering Peer Review letter, followed by a summary of the information submitted on behalf of the Applicant, with additional comments indicated in **bolded** text for identification.

July 2022 TIAS

Comment T1. *A review of the MassDOT High Crash Location (HSIP) database should be undertaken in order to determine if there are designated located within the study area. Our review indicates that the following intersections have been designated as high crash cluster locations for the 2017-2019 reporting period:*

- *Cabot Street/West Dane Street/Dane Street*
- *Cabot Street/Pond Street/Winter Street/Knowlton Street*

Just outside of the study area, the Federal Street/Park Street intersection is also listed as a high crash cluster location. Specific recommendations should be provided to advance safety-related improvements at locations where the calculated crash rate exceeds the MassDOT average crash rate and/or the intersection is listed as a high crash location.

Response: A review of the MassDOT High Crash Location (HSIP) database was undertaken and confirmed that the Cabot Street/West Dane Street/Dane Street and Dane Street/Knowlton Street intersections have been identified by MassDOT as high crash locations. The Cabot Street/Pond Street/ Winter Street/Knowlton Street has not been identified by MassDOT as a high crash location; however, this intersection was found to have experienced a motor vehicle crash rate that was higher than the MassDOT average crash rates for similar intersections. Outside of the study area that is the subject of the July 2022 TIAS, the Federal Street/Park Street intersection was also confirmed as being identified by MassDOT as a high crash location. The Project is not expected to result in a material increase in traffic at this intersection.

The Applicant has committed to performing a Road Safety Audit (RSA) at the high crash locations within the study area (Cabot Street/West Dane Street/Dane Street, Dane Street/ Knowlton Street and Cabot Street/Pond Street/Winter Street/Knowlton Street intersections) and to implement the low-cost, short-term improvements that are an outcome of the RSA at a cost of up to $15,000. It was also noted that completion of the RSA will afford an opportunity for the City to apply for state grant monies to implement the improvements that are defined as a result of the RSA.

This commitment should be a condition of any approvals that are granted for the Project. Comment closed.

Comment T2. *A sight triangle plan should be prepared for the Project site driveway intersections that illustrates the sight distance for: i) a driver exiting the garage to a pedestrian in the sidewalk; and then ii) for a driver exiting the driveway assuming that the vehicle occupies the sidewalk area. The sight triangle plan should consider the building wall location for the sight lines to a pedestrian and the presence of on-street parking along Chapman Street for the final exit maneuver.*

Response: Updated sight triangle plans were prepared for the Project site driveway intersections that reflect the widening of the garage doors to 20-feet and provide sight lines for each of the three maneuvers that are required to exit the garage (look for pedestrians in the sidewalk, occupy the sidewalk area when clear, and proceed to exit to Chapman Street). These illustrations included the location of on-street parking along Chapman Street.

The sight distance illustrations reinforce the need for both active (LED lights or illuminated sign and sound) and passive (signs) pedestrian warning devices at the driveways to inform a pedestrian of an exiting vehicle and drivers of the potential for pedestrians to be crossing the driveways. The Applicant has committing to installing these devices, which should be shown on the Site Plans and included as a condition of the approval of the Project.

Comment closed.

Comment T3. *The Applicant should commit to implementing the pedestrian mobility improvements at the Cabot Street/Wallis Street intersection, the sidewalk improvements that were identified along Bow Street and the fire truck maneuverability improvements at the Chapman Street/Bow Street intersection.*

In addition, consideration should be given to advancing pedestrian safety improvements at the following intersections to include the installation of pedestrian crossing warning signs, reconstruction of wheelchair ramps where necessary to meet ADA requirements and reapplication of crosswalk pavement markings where faded:

- *Cabot Street/Bow Street/Abbott Street*
- *Federal Street/Chapman Street*
- *Chapman Street/Bow Street*

Response: The City has secured funding for the reconstruction of sidewalks and wheelchair ramps along Cabot Street between Bow Street and School Street as a part of Phase 3 of the Cabot Street corridor improvements, which is expected to commence in the spring of 2023. As such and given the difficulty of coordinating contractors working on multiple projects within the same area, the Applicant has committed to focusing on the implementation of improvements at the Cabot Street intersections with Dane Street/West Dane Street and Pond Street/Winter Street/Knowlton Street, where improvements are not currently programmed to occur.

In addition to constructing the low-cost, short-term improvements defined as an outcome of the RSA described previously (Comment 1), the Applicant has committed to the following improvements:

1. Reconstruct the sidewalk in the following areas:
    - Along the north side of Bow Street between Bow Street and Cabot Street, meeting the existing newly constructed sidewalk on the northwest corner of Cabot Street / Bow Street;
    - Along the east side of Chapman Street between Bow Street and Federal Street; and
    - Along the south side of Federal Street between Chapman Street and the driveway to the Lux Realty parking lot.
2. Reconstruct curb ramps with ADA-compliant ramps and tactile warning devices at the following locations:
    - Both sides of Chapman Street at intersection with Bow Street
    - Southeast corner of Federal Street/Chapman Street
    - Southwest corner of Federal Street/Chapman Street
3. Increase the curb radii on the northeast corner of Bow Street/Chapman Street to allow for fire truck movements;
4. Relocate the STOP (R1-1) sign on the northwest corner of Bow Street/Chapman Street to the back of the sidewalk to allow fire trucks to overhang the sidewalk while turning right from Bow Street to Chapman Street;

5. Resurface (overlay) pavement along Federal Street and Chapman Street within limits of work;

6. Restriping pavement markings including STOP lines, crosswalks, lane lines, and parking lines along Federal Street, Chapman Street, and Bow Street within the limits of overlay; and

7. Install new STOP signs and parking designation signs along Federal Street and Chapman Street as necessary to accommodate the improvements described above.

We are in agreement with the approach to the improvements that have been suggested by the Applicant, and the measures that have been suggested.

These improvements should be a condition of any approvals that are granted for the Project. Comment closed.

Site Plans

Comment S1: *The garage doors should be recessed within the building so that a queued vehicle entering the garage does not extend into the traveled-way along Chapman Street. The design of the garage entrance and door location should be informed by the sight distance analysis requested in Comment T2.*

Response: It was clarified that the garage doors will be set-back within the building to afford a minimum distance of 10-feet from the edge of the traveled-way along Chapman Street. In addition, the garage doors will be high-speed operating in order to reduce vehicle dwell times in the sidewalk area. The sight distance plans have been provided as described in response to Comment T2.

Comment closed.

Comment S2: *The garage doors appear to be 18 feet in width and would do not allow for two-way traffic. The garage doors and the driveway openings leading to the doors should be increased to 20-feet in width.*

Response: The driveways and garage doors have been widened to 20-feet.

Comment remains open pending receipt of the revised Site Plans.

S3: *The Applicant should verify if on-street parking along Chapman Street will be removed or modified to accommodate access to the Project site. These modifications should be reflected on the Site Plans along with the requisite regulatory signs.*

Response: No changes to the quantity of on-street parking are proposed; however, the allocation of parking along the curb will be modified to accommodate the closure of existing driveways and the construction of new driveways.

The sight distance plans indicate that parking will be prohibited within 10-feet of the proposed driveways. This should be reflected on the revised Site Plans.

Comment S4: *The sight triangle areas for the Project site driveways should be shown on the Site Plans along with a note to indicate: "Signs, landscaping and other features located within sight triangle areas shall be designed, installed and maintained so as not to exceed 2.5-feet in height. Snow accumulation (windrows) located within sight triangle areas that exceed 3.5-feet in height or that would otherwise inhibit sight lines shall be promptly removed."*

Response: The Site Plans will be updated accordingly.

Comment remains open pending receipt of the revised Site Plans.

Comment S5: *A note should be added stating: "All Signs and pavement markings to be installed within the Project site shall conform to the applicable specifications of the Manual on Uniform Traffic Control Devices (MUTCD)."*

Response: The Site Plans will be updated accordingly.

Comment remains open pending receipt of the revised Site Plans.

Comment S6: *A narrative should be provided that describes how tenant moves and loading and delivery activities for the commercial tenants will be managed. The narrative should include the locations where vehicles associated with these activities will be accommodated.*

Response: The Site Plans have been revised to include a 30-foot loading zone along Federal Street at the location of the existing driveway that will be closed in conjunction with the Project. This loading zone will accommodate deliveries for the commercial tenants and is proximate to the door that provides access to the elevator within the residential building.

Comment remains open pending receipt of the revised Site Plans.

Comment S7: *A vehicle turning analysis should be provided using the AutoTurn© software for a service/delivery/moving vehicle (SU-30 or SU-40 design vehicle). The turning analysis should depict all maneuvers required to access the required areas defined as a part of the narrative requested in Comment S4, including the pick-up of trash/recycling.*

Response: As requested, a vehicle turning analysis was provided for the requested design vehicles, as well as for an ambulance and a fire truck. It was noted that trach/recycling will be collected in the loading zone identified in response to Comment S6 and will consist of roll-out containers that will be placed curbside for pick-up and then returned to the enclosed area within the parking garage. The turning analysis indicated that with the planned curbline improvements at the Bow Street/Chapman Street intersection, the subject vehicles are able to access and circulate in an unimpeded manner.

Comment Closed.

Comment S8: *The parking spaces at the end of each row of parking are only accessible by backing into the spaces. A vehicle turning analysis should be performed for each end parking space to demonstrate that sufficient maneuvering area is available. This analysis should be performed using the AutoTurn© software for a passenger car design vehicle (P design vehicle, 19-feet in length).*

Response: As requested, a vehicle turning analysis was provided for the parking spaces at the end of each row of parking within the parking garage. This analysis indicates that the parking spaces at the west end (Chapman Street side) of the rows of parking adjacent the exit driveway and for the center parking aisle (both sides), and the parking space at the east end of the southernmost row of parking, require multiple point turns to enter and/or exit the spaces.

Given the identified parking maneuver constraints that are illustrated by the turning analysis, we would suggest that the Applicant review the subject spaces and consider the following: a) relocating the compact parking spaces to constrained maneuvering areas; b) eliminating the parking space at the east end of the southernmost row of parking; and/or c) removing one or more of the subject parking spaces to increase maneuvering areas.

Parking

Comment P1: The number of tandem parking spaces that are provided within the residential parking garage should be clarified. Ground Floor Plan A1.01 appears to indicate that 32 tandem parking spaces are provided.

Response: There are 32 tandem parking spaces within the parking garage.

Comment closed.

Comment P2: The parking space assignment within the residential parking garage should be defined. The tandem parking spaces will need to be assigned to the two bedroom units.

Response: The 32 tandem parking spaces will be assigned to the 16 two-bedroom units.

Comment Closed.

Comment P3: A narrative describing the access controls or restrictions that will be used for the Chapman Street/Federal Street surface parking lot should be provided.

Response: Parking stickers will be issued to residents and the surface parking lot will be monitored by property management staff. Non-resident vehicles that are found to be parked in the parking lot will be towed.

Comment closed.

Updated Parking Study

An updated study of the availability of public on-street parking located within 500 feet of the Project site was completed on Saturday, October 15, 2022, when two "nearly sold-out" events were scheduled at the Cabot and Larcom Theaters. The updated study was performed to validate the conclusion of the prior study that was performed in July and August 2022, months when it was identified that the Larcom Theater is closed due to a lack of air conditioning. The updated parking demand observations concluded that there are 764 public parking spaces located within 500 feet of the Project site, of which 98 are located within the Project site. The updated parking demand observations indicate a peak demand of 565 parking spaces when two nearly sold-out events were scheduled at the Cabot and Larcom Theaters, leaving 199 public parking spaces available.

With the construction of the Project, the available parking supply will be reduced by 98 parking spaces, from 764 parking spaces to 666 parking spaces. As such, during the identified peak parking demand period (565 parking spaces occupied), the number of available public parking spaces will decrease from 199 parking spaces to 101 parking spaces. The remaining public parking supply within 500 feet of the Project site continues to be sufficient to meet the parking demands for the proposed retail and restaurant uses without consideration of the parking demands that are associated with the existing uses that occupy the Project site and that will be removed.

This concludes our review of the materials that have been submitted to date in support of the Project. If you should have any questions regarding our review, please feel free to contact me.

Sincerely,

VANASSE & ASSOCIATES, INC.

Jeffrey S. Dirk

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