

Ref: 7226

April 4, 2016

Ms. Emily Wentworth  
Senior Planner: Zoning/Special Projects  
Town of Hingham  
210 Central Street  
Hingham, MA 02043

Re: Supplemental Traffic Engineering Peer Review  
Avalon Hingham Shipyard II – 319 Lincoln Street  
Hingham, Massachusetts

Dear Emily:

Vanasse & Associates, Inc. (VAI) has completed a review of the supplemental materials submitted on behalf of Hingham Shipyard Avalon II Inc. (the “Applicant”) in support of the proposed Avalon Hingham Shipyard II residential community to be located at 319 Lincoln Street in Hingham, Massachusetts (hereafter referred to as the “Project”). This information was prepared by Howard Stein Hudson (HSH) in response to the comments that were raised in VAI’s March 10, 2016 review letter and consisted of the following materials which are the subject of this supplemental review:

1. Memorandum titled *Response to Comments* dated March 30, 2016, with accompanying figures and technical appendix;
2. *Technical Memorandum* dated March 30, 2016, with accompanying figures describing the changes to the development program for the Project as they relate to traffic and parking, and defining the elements of the proposed transportation improvement program; and
3. Site Plans titled *Comprehensive Permit Application, Avalon Hingham Shipyard II, 319 Lincoln Street, Hingham, MA*, dated February 12, 2016, last revised March 30, 2016.

Based on our review of the supplemental information, we are satisfied that that Applicant’s engineer has addressed the comments that were raised in our March 10, 2016 review letter. The additional comments that have been provided herein are focused on minor refinements to the Site Plans and concern the addition of traffic calming features and the design of landscape features within sight triangle areas, elements that can be included as a part of any conditions of approval that may be considered for the Project and incorporated into the final Site Plans.

For reference, listed below are the comments that were raised in our March 10, 2016 review letter that required additional information or analysis, followed by a summary of the response submitted on behalf of the Applicant, with additional comments indicated in **bolded** text for identification.

## **PROJECT CHANGES**

The Applicant has submitted revised Site Plans and supporting analyses documenting refinements to the building program, architecture and site layout for the Project, which will now entail the construction of a 190-unit residential apartment community with 298 parking spaces vs. the previously proposed 250-unit apartment community with 390 parking spaces. As a result of the reduction in the number of residential units, the Project is expected to result in 294 fewer vehicle trips on an average weekday and 470 fewer vehicle trips on a Saturday from the conditions that were assessed in the February 2016 TIAS (up to an approximate 28 percent reduction in weekday and Saturday traffic volumes), with fewer than 100 new vehicle trips now expected as a result of the Project during the weekday and Saturday peak hours (up to an approximate 24 percent reduction in peak-hour traffic).

Although the impacts of the Project have been reduced, the Applicant remains committed to the transportation improvement program that was defined for the larger development program that were identified in the February 2016 TIAS, and as modified based on comments received as a part of the Project review process. These modifications are described herein and are further defined in the *Technical Memorandum* that accompanied HSH's March 30, 2016 *Response to Comments* memorandum.

## **FEBRUARY 25, 2016 TRAFFIC IMPACT AND ACCESS STUDY**

### **Traffic Volumes and Data Collection**

**Comment:** *The Applicant's engineer should provide back-up data for the establishment of the composite peak-hour for the study area to include the raw (unadjusted) traffic volume networks and the basis for the peak-hour selected for each time period (weekday morning, weekday evening and Saturday midday).*

**Response:** The Applicant's engineer indicated that raw traffic count data for the overall network peak hours was used for the intersections along Route 3A between the Lincoln Plaza Drive and Bradley Woods Drive. These volumes were then balanced between the intersections. The individual intersection peak hours were used for the remaining study area intersections given the number of intervening driveways and side streets between the intersections. **No further response required.**

### **Sight Distance**

**Comment:** *We recommend that any approvals that may be granted for the Project include a condition that that all signs and landscape features that are to be installed as a part of the Project within the sight triangle areas of the Project site driveways and at the Route 3A/USS Amesbury Drive intersection be designed and located so as not to impede lines of sight. Such features should not exceed 2-feet in height as measured from the surface elevation of the Project site driveways or USS Amesbury Drive. In addition, the Applicant should be required to selectively trim/remove vegetation along the Project site frontage and Route 3A within the public right-of-way where necessary in order to enhance sight lines to and from the Project site driveways and USS Amesbury Drive.*



**Response:** The Applicant's engineer indicated concurrence with the suggested conditions of approval as they related to lines of sight. **No further response required.**

### **Recommendations**

**Comment 1:** *Internal to the Project site, roadways and circulating aisles should be a minimum of 22-feet in width for two-way travel and a minimum of 16-feet in width for one-way travel or where two-way traffic is separated by a raised island (16-foot travel lanes on either side of a raised median or island).*

**Response:** The Applicant's engineer confirmed that all roadways and circulating aisles within the Project site are 24-feet in width. **No further response required.**

**Comment 2:** *Where perpendicular parking is proposed, the travel aisle adjacent to the parking shall be a minimum of 23-feet in width in order to accommodate parking maneuvers.*

**Response:** The Applicant's engineer confirmed that all travel aisles adjacent to perpendicular parking are 24-feet in width. **No further response required.**

**Comment 3:** *Fire lanes and/or emergency vehicle access roads should be a minimum of 20-feet in width.*

**Response:** The Applicant's engineer confirmed that all fire and emergency access roads are 24-feet in width. **No further response required.**

**Comment 4:** *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).<sup>1</sup> This note should be added to the Site Plans.*

**Response:** The requested note has been added to the Site Plans (refer to Sheet C2.00 of the revised (March 30, 2016) Site Plans). **No further response required.**

**Comment 5:** *Snow windrows within the sight triangle areas of the Project site driveways and at the intersection of Route 3A at USS Amesbury Drive shall be promptly removed where such accumulations would exceed 2-feet in height.*

**Response:** The Applicant concurred with this recommendation and will coordinate with abutting property owners and MassDOT to the extent necessary. **No further response required.**

**Comment 6:** *Route 3A/Fottler Road/Bradley Woods Drive – replace crosswalk and stop-line pavement markings.*

**Response:** The Applicant agreed to include the crosswalk and stop-line replacement as a part of the improvements that are to be completed at the *Route 3A/Fottler Road/Bradley Woods Drive* intersection. **In addition, the Applicant will replace the existing traffic signal**

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<sup>1</sup>Manual on Uniform Traffic Control Devices (MUTCD); Federal Highway Administration; Washington, DC; 2009.

**controller if necessary to accommodate the planned intersection improvements. No further response required.**

**Comment 7:** *Route 3A/Downer Avenue/Thaxter Street/Lincoln Street – Facilitate and fund the preparation of a Roadway Safety Audit (RSA) which will likely be required by MassDOT before considering the implementation of safety-related improvements at the intersection. The RSA should be completed prior to implementation of specific improvements at the intersection.*

**Response:** The Applicant has agreed to complete the RSA and to implement the safety enhancements that were defined for the intersection in the February 2016 TIAS as deemed appropriate after the completion of the RSA. **No further response required.**

**Comment 8:** *Route 3A/USS Amesbury Drive – Expand the channelizing island through a combination of increasing the width (area) of the curbed island where not precluded by truck maneuvering and serrated concrete where truck off-tracking will occur. The combination of these features and the associated edgeline pavement markings should reduce the width of the entering and exiting travel lane to no more than 16-feet and provide for improved channelization to reinforce the left-turn restriction. In addition, a “Right Turn Only” sign should be installed on USS Amesbury Drive approaching Route 3A.*

**Response:** The Applicant has committed to implementing the recommended improvements at the Route 3A/USS Amesbury Drive subject to review and approval by MassDOT. **No further response required.**

**Comment 9:** *Beal Street/Fottler Road – Install intersection ahead warning signs (graphic symbol) on Beal Street approaching the intersection and selectively trim trees and vegetation along the north side of Beal Street east of Fottler Road.*

**Response:** The Applicant has agreed to complete the recommended sign installation and vegetation trimming. **No further response required.**

**Comment 10:** *Shipyards Drive East/HMS Essington Drive – Reconstruct/replace/install wheelchair ramps as necessary.*

**Response:** The Applicant has agreed to complete the recommended pedestrian access improvements subject to approval by the Town and the MBTA. **No further response required.**

**Comment 11:** *TDM Program – consider adding the following:*

- *Information regarding public transportation services, maps, schedules and fare information will be posted in a central location*
- *Residents will be encourage to participate in MassRIDES’ NuRide program, which rewards individuals that choose to walk, bicycle, carpool, vanpool or that use public transportation to travel to and from work.*



- *Residents will be made aware of the Emergency Ride Home (ERH) program available through MassRIDES, which reimburses employees of a participating MassRIDES employer partner worksite that is registered for ERH and that carpool, take transit, bicycle, walk or vanpool to work.*

**Response:** The Applicant has agreed to implement the recommended TDM measures as a part of the Project. **No further response required.**

### **SITE PLANS (AS REVISED THROUGH MARCH 30, 2016)**

**Comment 1:** *The Applicant’s engineer provided a truck turning analysis for the Town of Hingham Fire Department design vehicle (tower truck) and an intermediate size tractor semi-trailer combination (WB-50). The turning analysis demonstrated that the subject vehicles can access and circulate within the Project site in an unimpeded manner; however, we note that the fire truck would need to back-up to exit the visitor parking area. The Applicant’s engineer should also provide a turning analysis for an SU-30/40 (small delivery/moving vehicle and trash/recycling vehicle) that demonstrates that the subject vehicle can access and stage in the loading areas without blocking the garage access points. In addition, the analysis should also demonstrate the location and maneuvering required to serve the trash/recycling area.*

**Response:** The Applicant’s engineer provided updated turning analyses for the requisite vehicles for the revised Site Plan. This analysis has demonstrated that the subject vehicles can access and circulate within the Project site in an unimpeded manner. **No further response required.**

**Comment 2:** *“No Parking Any Time” signs with a supplemental “Tow Away Zone” should be added along both sides of the fire lane. “No Parking Loading Zone” signs should be installed within the designated loading areas.*

**Response:** The requested signs have been added to the Site Plans (refer to Sheet C2.00 of the revised (March 30, 2016) Site Plans). **No further response required.**

**Comment 3:** *The proposed sidewalk should be extended along the north side of the building to the stair/lobby area and should include ADA compliant wheelchair ramps at the pedestrian crossings of the driveways to the parking garage.*

**Response:** A sidewalk has been added along the north side of the proposed building between Shipyard Drive East and the walkway to the lobby/elevator area in the parking garage, continuing thereafter along the north side of the fire lane to USS Amesbury Drive. Crosswalks with ADA compliant wheelchair ramps are provided where pedestrian crossings of driveways and the fire lane are proposed. **We recommend that the crosswalk across the fire lane be constructed as a raised crosswalk and that a speed hump be added between the easternmost garage driveway and USS Amesbury Drive; the proposed raised crosswalk at USS Amesbury Drive should be replaced with stamped asphalt crosswalk (not raised). No further response required.**



**Comment 4:** *A school bus waiting area should be provided within the Project site or at an appropriate location defined in consultation with the Town of Hingham School Department.*

**Response:** The Applicant has committed to coordinating with the Town of Hingham School Department to determine the most appropriate location for a bus waiting area. **No further response required.**

**Comment 5:** *An exterior bicycle rack(s) should be provided proximate to the entrance to the fitness center/management office.*

**Response:** The Applicant has committed to installing a bicycle rack(s) outside of the fitness center/management office (refer to Sheet C1.00 of the revised (March 30, 2016) Site Plans). **No further response required.**

**Comment 6:** *A sign and pavement marking plan should be provided as a part of the Site Plans in order to verify that the proposed traffic control devices are appropriately designed and located within the Project site.*

**Response:** A sign and pavement marking plan has been provided as a part of the revised Site Plans (refer to Sheet C2.00 of the revised (March 30, 2016) Site Plans). **No further response required.**

**Comment 7:** *The sight triangle areas for the Project site driveway intersections with USS Amesbury Drive and at the intersection of Route 3A at USS Amesbury Drive should be added to the Site Plans along with a note to indicate: "Signs, landscaping and other features located within the sight triangle areas shall be designed, installed and maintained so as not to exceed 2-feet in height. Snow windrows located within the sight triangle areas that exceed 2-feet in height or that would otherwise inhibit sight lines shall be promptly removed."*

**Response:** The sight triangle areas and the requested note have been added to the revised Site Plans (refer to Sheet C2.00 of the revised (March 30, 2016) Site Plans). **The section of Note 3 on Sheet C2.00 that refers to new trees should be revised as follows: "New trees may be planted within this area so long as tree canopies be maintained at a minimum height of 7-feet from the ground." No further response required.**

**Comment 8:** *A tenant move in/out management plan (narrative) should be provided and reflected in the truck turning analysis for the Project.*

**Response:** The Applicant's engineer provided a narrative detailing the procedures that will be followed for tenant moves, and includes scheduling of moves with the management office so as to avoid conflicts and to provide direction on the location(s) to stage moving vehicles within the Project site. **No further response required.**

**Comment 9:** *A narrative should be provided describing how trash and recycling will be collected within the building and then picked-up by the contracted hauler.*



**Response:** The Applicant's engineer provided a narrative describing how trash and recycling will be collected in a central location within the building and stored in roll-out containers that the building manager will be responsible for moving for pick-up to the loading/service area along the north side of the building. **No further response required.**

**Comment 10:** *The Applicant should consider incorporating electric vehicle charging stations into the Project and coordinating with ZipCar to locate vehicles at the Project site.*

**Response:** The Applicant has committed to providing 14 parking spaces with electric vehicle charging stations within the parking garage. In addition, the Applicant indicated that they are not able to provide ZipCar staging within the Project site due to the liability associated with allowing public access to the private residential community. **We concur with the Applicant's position relative to ZipCar staging within the Project site and would suggest that the staging of such vehicles may be more appropriately accommodated within the MBTA parking lot where users of public transportation could then access such vehicles to complete their trips. No further response required.**

**New Comment:** **It is recommended that the connection between the visitor parking area and the abutting commercial property fronting along Route 3A be constructed as a speed table consisting of colorized stamped asphalt.**

## **PARKING**

**Comment:** *The Applicant's engineer should provide the parking demand observations from the adjacent Avalon Hingham Shipyard residential community. The observations should be provided for both a weekday and a Saturday between 6 AM and 9 PM. We note that the parking ratio that is proposed is within the range of values documented by the Institute of Transportation Engineers (ITE)<sup>2</sup> for an apartment community with a similar level of access to public transportation services.*

**Response:** The Applicant indicated that there are currently 310 outstanding parking permits that have been issued for the 235 units in the Avalon Hingham Shipyard residential community, 95 percent of which are occupied. This corresponds to a parking ratio of approximately 1.29 parking spaces per residential unit, which increases to a parking ratio of 1.44 spaces per residential unit with consideration of visitor parking. The current Project will provide 298 parking spaces to serve 190 residential units, or a parking ratio of approximately 1.57 parking spaces per residential unit.

**We are in agreement that the proposed parking supply (1.57 parking spaces per residential unit) should be sufficient to accommodate the parking demands of residents and visitors of the Project. No further response required.**

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<sup>2</sup>*Parking Generation*, 4<sup>th</sup> Edition; Institute of Transportation Engineers; Washington, D.C.; 2010. Observed parking demand ratios for an apartment community were found to range from 0.59 to 1.94 spaces per dwelling unit, with an average parking demand of 1.23 spaces per dwelling unit and an 85<sup>th</sup> percentile peak parking demand of 1.94 spaces per dwelling unit.

**SUMMARY**

VAI has completed a review of the supplemental materials submitted on behalf of Hingham Shipyard Avalon II Inc. in support of the proposed Avalon Hingham Shipyard II residential community to be located at 319 Lincoln Street in Hingham, Massachusetts. This information was prepared by HSH in response to the comments that were raised in VAI's March 10, 2016 review letter. Based on our review of the supplemental information, we are satisfied that that Applicant's engineer has addressed the comments that were raised in our review letter. The additional comments that have been provided herein are focused on minor refinements to the Site Plans and concern the addition of traffic calming features and the design of landscape features within sight triangle areas, elements that can be included as a part of any conditions of approval that may be considered for the Project and incorporated into the final Site Plans.

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, P.E., PTOE, FITE  
Principal

JSD/jsd

cc: File