



May 3, 2019

Ref: 08363.53

Mr. John E. Corey, Jr. PE
City Engineer
City of Woburn
100 Common Street
Woburn, MA 01801

Re: Peer Review of the Traffic and Site Plans,
Proposed Woburn Mall Mixed-Use Development, Woburn, MA

Dear Jay,

Vanasse Hangen Brustlin, Inc. (VHB) has completed a review of the additional materials submitted on behalf of Edens (the "Applicant") in support of the proposed Woburn Mall Mixed-Use Development to be located at the intersection of Mishawum Road and Commerce Way in the City of Woburn, Massachusetts (hereafter referred to as the "Project"). The Project has been previously submitted to the City for consideration of the issuance of a site plan review and special permit. On April 8, 2019, VHB issued a letter to your office which provided preliminary comments on the Traffic Study and the site plans.

On April 24, 2019, the Applicant provided a detailed response to those comments which included additional evaluations, updated site plans, and general narrative responses to the comments raised. For the most part, the information provided in the Applicant's response provides VHB with clarity on those questions that were raised in our April 8, 2019 letter and provides adequate detail from which VHB can assess the proposed Project's impacts on traffic and parking.

This letter provides details on additional informational needs and/or questions that are unresolved and provides a summary of suggested language for the City to consider as part of any project advancement.

TRAFFIC STUDY INFORMATION

The following summarizes our continuing review of the traffic study information and the Applicant's response letter and documentation.

PARKING

VHB has reviewed the Applicants detailed responses to the question on parking availability and adequacy. At this point in time, VHB and MDM (the Applicant's traffic consultant/engineer) are continuing to work through the details on the parking needs of the site. More information will be provided shortly on this

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topic. At this point in time, VHB has requested that the Applicant's traffic consultant review the Institute of Transportation Engineer's/Urban Land Institute procedures for Shared Parking assessments and demonstrate that adequate parking is provided for all the intended uses on the site.

BACKGROUND DEVELOPMENTS

The Applicant's engineer contacted the City's planning department and provided information for three additional background projects identified within the vicinity of the study area. The engineer has provided estimated peak hour trip generation throughout the study area for each of the three projects. They include the following:

- Woburn Woods, 200 Presidential Way (200-unit residential complex)
- Mixed-Use Development, 120 Commerce Way (289 apartment units and 9,400 sf of commercial space)
- Medical Marijuana, 130 Commerce Way (4,500 sf Registered Marijuana Dispensary)

VHB is comfortable that the known future development projects have been captured in their assessment. No further information is needed on this topic.

TRAFFIC GENERATION

The Applicant's engineer provided additional and updated information for each of the various land uses and how it might influence traffic generation at the site. The Applicant's engineer stands by their methodology for calculating the trip generation for the proposed development which shows no growth in traffic resulting from the proposed Project; however, the engineer has also provided two alternative methods of assessing future traffic impacts which were suggested by VHB and which support the claim that there is limited additional impacts from the Project. While VHB still has some reservations on how the traffic numbers were presented in the original methodology, VHB does agree that the various alternative assessments provide a good basis from which to estimate traffic generation at the Project site.

TRAFFIC ANALYSIS

VHB has reviewed the various traffic analysis inputs and results. The information was prepared in a professional manner and provides for a reasonable assessment of the existing and future conditions on the study area roadways and intersections. VHB visited the study area on two occasions to observe traffic volumes and compare them to the calculated information provided in the Applicant's traffic study. There were only a few discrepancies from our observations and they are noted below:

Commerce Way at Mishawum Road/I-95 Ramps

The analysis results in the evening peak hour generally understate the traffic queuing that was observed in the field. Specifically, the queue of traffic in the eastbound direction tended to extend, at times, back to and through the adjacent signal at the site driveway along Mishawum Road. Moreover, the left-turn movement from this signal routinely exceeded the storage capacity of the lane.



Mishawum Road at the Project's Signalized Driveway

The engineer has corrected the inputs to the model raised in our prior letter and provided a queue table and queue diagrams for the 2025 Build Condition to demonstrate the expected queues at the Mishawum Road at Site Driveway intersection. Additionally, the site plan has been modified to eliminate one of the STOP signs at the internal four-way intersection so that traffic exiting the mall does not have to stop (although vehicles on the side entrances to the intersection will need to stop to allow for traffic to exit the site). Essentially, the Applicant is noting that the queuing of vehicles will spill back during busy times of the day between the buildings noted on the plans as Retail (D) and Retail (E).

VHB has two comments on this layout, but recognizes that vehicle queuing will be limited to on-site roadways and will ultimately need to be managed by the property owner during those times when volumes are peaking.

Comment 1: The graphics provided for this intersection do not take into account the potential spillback of traffic from the nearby signal at the Commerce Way/ I-95 ramp intersection. As noted previously, during VHB's observations, it was not uncommon for traffic queues to block this location.

Comment 2: As the model predicts that traffic will, at times, back up into the Project site and block the first internal intersection, traffic on the side streets will be delayed. Whereas this isn't necessarily problematic in and of itself, the surges of traffic that are associated with movies ending at the same time may result in times when the eastbound approach to this intersection back up into the site and interfere with on-site circulation. This should be monitored and the Applicant should be prepared to make adjustments to the traffic control at the internal intersection during busier times of the season.

PROJECT COMMITMENTS

VHB had made a series of recommendations and clarifications to the applicants' recommended commitments to address the Project's impacts. The Applicant's consultant responded and committed to the following:

- The applicant has stated that they will seek to enhance connections between the project site and the Anderson RTC and will work with the City to see if regular service at the Mishawum Station can be reactivated through the MBTA.
- The Applicant has committed to conducting a Road Safety Audit (RSA) within 6 months of receiving site plan approval at the intersection of Mishawum Road and the Site Driveway (East) through MassDOT. The Applicant will provide the final report to the City within 2 months of the completion of the RSA. The implementation of short-term improvements outlined in the RSA would be completed prior to issuance of a Certificate of Occupancy for either the Cinema or the Residential building.
- The Applicant has committed to the traffic monitoring protocol laid out in our initial comment letter subject to the Woburn Village activity being measured against the projections made in their study. Should the projections exceed those outlined in the traffic study, the Applicant will work with the City to implement recommended improvements.



The commitment to traffic monitoring at the study area intersections is defined as follows:

- › Within 4-months of achieving 80 percent occupancy of the Project, the Applicant will conduct a post-occupancy traffic operations assessment at the study area intersections consisting of the following elements:
 - Performing manual turning movement and vehicle classification counts during the weekday morning (7:00 to 9:00 AM), evening (4:00 to 6:00 PM), and Saturday (11:00 AM to 2:00 PM) peak periods; and
 - Evaluate traffic operations (levels of service, motorist delays and vehicle queuing) for both the weekday morning, evening, and Saturday peak hours.
 - The results of the monitoring program should be summarized in a report to be provided to the City of Woburn's Engineering Department within 2-months after the completion of the data collection effort. The report will include specific recommendations to improve traffic operations at the various site driveway intersection to the extent that it is determined that one or more movements are operating below a level-of-service (LOS) of "D". If so directed by the Engineering Department, the Applicant shall implement the recommended improvements at the intersection subject to receipt of all necessary rights, permits and approvals.

VHB agrees with these commitments and recommends to the City that they be adopted, along with those other actions noted in the prior comment letter, should the City agree to approve the Project.

ADDITIONAL RECOMMENDATIONS

Given the comments made about the traffic analysis and the ways in which the Project's site driveways interact with the local street network, VHB recommends the following additional considerations be made:

The Existing traffic conditions along Mishawum Road and Commerce Way are clearly congested and are the subject of additional study. While the Applicant has stated that there is little to no impact associated with their development, it is clear that the development program will continue to influence and change the transportation conditions in and around the Project site.

Through discussions with the City's Planning and Engineering Departments, there are several City-sponsored studies taking place which will focus on integrating the adaptive traffic signal system that has been installed in the area, upgrading the pedestrian network, considering vehicular and pedestrian safety upgrades (unrelated to those presented earlier), studying traffic flow and queuing, and address long-standing operational challenges that have existed in the area for decades. The resulting study will make recommendations (both short- and long-term) that will improve safety and operations within the study area.

At the public hearing, the applicant's traffic engineer correctly noted that these studies continue to advance and that the timing of their completion and their resulting recommendations will likely be after the conclusion of the site plan discussions for this Project. Moreover, any efforts on their part to predict



what recommendations might be at this time are premature and won't likely reflect the holistic considerations of the studies being conducted.

Assuming that the City is inclined to approve the Application, one recommendation might be that the City seek a meaningful financial contribution targeted at implementing the recommendations which would allow the planning and engineering efforts to be finalized. This would provide the City with funds that could then be used to implement those items that directly or indirectly affect traffic flow in and around the Woburn Mall site. The resulting study recommendations could then be reviewed with the City Engineering & Planning department, along with the Applicant and their engineers, and the Council to prioritize and implement the actions.

SITE PLAN COMMENTS

The Applicant's engineer (Bohler) provided additional information for each of the Site Plan bullet items requested. VHB's review is noted below on a point by point basis:

- The snow storage plan has been provided and the applicant has noted at the last public hearing that it is their intent to clear the parking lot as quickly as possible of snow piles using ice melting machines and transporting snow off site. VHB notes that the temporary snow storage requires the use of 132 parking spaces on Site, although it is unlikely that there will be a heavy demand for these spaces either during or immediately after a significant snow event. The applicant should provide a specific time frame and commitment to reducing the piles following a snow event.
- Cart coral locations have been provided. No further comments required.
- The engineer has provided truck turning exhibits for the proposed design vehicles. VHB provides the following additional comments on loading and large vehicle circulation throughout the site:
 - › An SU-30 seems small for the site and number of units provided. SU-30 trucks would be equivalent to renting a single-unit U-Haul-style truck. It is likely that any professional moving company would use at least a SU-40 for local moving. Most interstate/long distance moving would use a WB-50 or WB-62.
 - › The Applicant should offer commentary on their ability to control the size of the vehicles making deliveries to the residential facility. In the case of larger design vehicles accessing the site, the Applicant should acknowledge and have a plan in place for the loading/unloading activities doing so from the drive aisles or demonstrate how a larger vehicle can access the loading areas.
 - › It does not appear a WB-50 or WB-62 can circulate around the north side of the residential building.
 - › Will the "trash staging area" use bins for a front-loading garbage truck? If so can the Applicant demonstrate how the front loader will access that staging area?
 - › If not already provided, please demonstrate that the City of Woburn has reviewed the fire truck access around the remaining buildings (retail & bank) and residential building, especially as it relates to the dead ends are involved.



- › How does the retailer (R1) load?
- › Are there restricted hours for the Cinema Loading as this occurs in the main drive aisle?
- › How do the gates work to access the residential parking? There do not appear to be card reader/intercom pedestals and the loading/trash occurs on the interior of the gates.

SUMMARY

VHB has completed its follow up review of the materials submitted on behalf of Edens in support of the proposed Woburn Mall Mixed Use Development to be located at the site of the Woburn Mall in Woburn, Massachusetts. Our initial review focused on the following areas as they relate to the Project: i) vehicle and pedestrian access and circulation; ii) MassDOT design standards; iii) City Zoning requirements as they relate to access, parking and circulation; and iv) accepted Traffic Engineering and Transportation Planning practices.

Based on our review of the Applicant's responses, the original TIAS and the accompanying Site Plans, we have determined that the materials were prepared in a professional manner and following the applicable standards of care. Written responses to our comments in the applicant's April 24, 2019 memorandum were clear and addressed many of our outstanding questions. We believe that the majority of these outstanding comments can be addressed but will continue to work with the Applicant's consultants in reviewing the adequacy of the parking supply being proposed and traffic flow in and around the site.

This concludes our review of the materials that have been submitted to date in support of the Project, I will be available and in attendance at the next City Council hearing (Tuesday May 7, 2019) to present and answer any questions you or the Council may have. If you should have any questions regarding our review, please feel free to contact me directly.

Sincerely,

Vanasse Hangen Brustlin, Inc.

Robert L Nagi, PE

Principal, Transportation Planning & Operations