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Subject: **Transportation Engineering Peer Review  
Additional Comments on VHB Response to Comments February 22, 2019  
The Northland Newton Development  
Newton, Massachusetts**

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The Northland Newton Development is proposing a mixed-use development to be located along Needham Street and Oak Street in Newton, Massachusetts. This review focuses on the *Response to BETA Group, Alta Planning + Design comments, Northland Newtown Development Transportation Peer Review*, VHB, February 22, 2019. The original BETA comments (January 2019) and VHB responses (February 22, 2019) are provided (in full or part). To provide a concise response, we have only identified issues/responses below that require additional information.

## 2.1 STUDY AREA

**BETA Comment 2.1:** A quantitative assessment of shuttle bus operations should be conducted at the Newton Highland MBTA Station.

*VHB Response:* We are aware of accessibility improvements to be undertaken at the Newton Highlands T, and we know that Councilor Rice has been involved in preventing engine idling in the neighborhood. Shuttle routes are subject to Council approval.

*Additional BETA Comment:* *The response does not address the comment and appears to be incomplete. The Applicant should coordinate with the City to identify areas where shuttle buses can temporarily park so as not to conflict with pedestrians, bicyclists, other buses, and automobiles.*

## 2.2 EXISTING CONDITIONS

**BETA Comment 2.6:** The Chestnut Street unsignalized intersection with the Route 9 eastbound service road was evaluated as an AWSC intersection. Therefore, a different software program should be used to properly model operations at this intersection (e.g., SIDRA).

*VHB Response:* The Proponent has acknowledged the congestion along this corridor (see Comment 2.24), therefore further review and modeling of the congestion is not considered a productive exercise at this time. Additionally, the operating conditions have changed at that intersection with the 2018 closing of the access to Wellesley Office Park from Route 9 which has made the eastbound service road the sole access to the Wellesley Office Park. Northland would be willing to contribute to further study of this area.

Additional BETA Comment: *Refer to Comment 2.27 for Mitigation.*

**BETA Comment 2.15:** Of these 12 high crash rate locations, no improvements are planned for the Chestnut Street and Oak Street intersection.

*VHB Response:* See response to comment 2.6. The Applicant is proposing programmatic rather than physical mitigation as a more effective strategy in mitigating the effect of the Applicant's project.

Additional BETA Comment: *The Applicant should provide safety improvements at this intersection in addition to programmatic strategies. Refer to Comment 2.27 for Mitigation.*

## 2.3 FUTURE CONDITIONS

**BETA Comment 2.18:** The Applicant should confirm how long the existing space on the site has been vacant.

*VHB Response:* The office space on-site is currently vacant and was vacant in 2017 during the time of the traffic counts. However, the lease for C&J Clarks America, Inc. (Clarks Shoes) ran through the end of December 2016. The lease on the office space was occupied within 2 years of when the traffic counts were conducted and when the TIA was submitted to the City of Newton, as well as within two years of the submission of the Environmental Notification Form (ENF) to MEPA and MassDOT (August 2017).

Additional BETA Comment: *The Applicant should confirm that the only vacant office space at the time of the traffic counts was associated with Clarks Shoes and that this tenant occupied the entire office space on the existing site.*

## 2.5 MITIGATION

**BETA Comment 2.27:** Since these intersections satisfy MassDOT's criteria for locations with significant impact as a result of a proposed development, the Applicant should develop improvement measures for these study area intersections (also see Comment 10.2).

*VHB Response:* MassDOT's criteria for project impacts may indeed be met, but the guidelines say that "the Proponent must assess options to mitigate impacts." The MassDOT mitigation requirements provide emphasis on mitigation initiatives that provide alternatives to reducing traffic and reliance single occupancy vehicle travel. The Northland Newton development is proposing active mitigation by creating a privately owned, publicly available transit system looking forward in the 21<sup>st</sup> Century rather than exclusively accommodating more vehicles. This approach is recognized in several key areas of the MassDOT TIA Guidelines referenced below as examples:

From the TIA Guidelines Purpose & Policy Context (statement)

As outlined in the document, "MassDOT seeks to ensure that the transportation impact review process reflects and advances the Commonwealth of Massachusetts's policy goals, in particular those that promote MassDOT's Project Development and Design Guide standards on Complete Streets, the Global Warming Solutions Act, the Massachusetts GreenDOT Policy Initiative, the Mode Shift Initiative, the Healthy Transportation Compact, the Healthy Transportation Policy Directive, and the Massachusetts

Ridesharing Regulation. These goals work together to mutually reinforce one another and strengthen the Commonwealth's efforts to reduce its dependence on driving.

Additional BETA Comment: *The shuttle system that has been proposed as part of the project is an appropriate mitigation to reduce single-occupant autos for the project's residents, employees and visitors. However, even with a successful shuttle system, the project will increase vehicle volumes on study roadways and intersections and impact delay and operations. Therefore, additional measures are needed to better manage traffic flow along the Needham and Winchester Street corridors; and improve mobility and safety at other study locations. The following traffic-related mitigation measures are recommended:*

- 1. Provide a cloud-based computer system and traffic signal management software capable of remote access between the signalized intersections (Needham and Winchester Street corridors) and the Newton Department of Public Works (DPW).*
- 2. Provide full signal coordination and communication between the Route 9/Winchester Street intersections (planned to be signalized by MassDOT) and the Centre Street/ Walnut Street signal. Benefit:*
- 3. Provide full Transit Signal Priority (TSP) capability to be interfaced with the proposed Adaptive Signal system by MassDOT along the Needham Street and Winchester Street corridors. Modify signal timing and phasing to accommodate the transit signal priority feature. Coordinate with the MBTA as necessary. Provide shuttle buses with transponders/ emitters to interface with the adaptive signal system.*
- 4. Upgrade traffic and pedestrian signal equipment at the Chestnut Street intersections with Oak Street and with Elliot Street.*
- 5. Provide new traffic and pedestrian signals at the Chestnut Street intersections with Route 9 Westbound Service Road and with Route 9 Eastbound Service Road.*
- 6. The Applicant has proposed to fund a Road Safety Audit (RSA) for the intersection of Centre Street/Walnut Street. The Applicant should provide safety and operation improvements based on the outcome of the RSA Report.*
- 7. An assessment of the traffic operations at the Newton Highlands Massachusetts Bay Transportation Authority (MBTA) Station should be provided that describes the proposed shuttle bus operations and potential conflicts with traffic, pedestrians, and bicyclists.*
- 8. Review the extension of the two-lane eastbound approach lanes on Oak Street at Needham Street to accommodate the left-turn vehicle queue.*
- 9. Evaluate and provide traffic calming improvements along the Chestnut Street corridor.*
- 10. Conduct a vehicle speed study on Upper Falls Neighborhood roadways and provide traffic calming devices as needed.*

11. *The Applicant should evaluate the potential to provide emergency vehicle access to the project site via Mechanic Street.*

12. *Extend the Upper Falls Greenway to the Newton Highland MBTA Station.*

**BETA Comment 2.28:** Provide additional improvement measures to offset the project's traffic impacts at Chestnut Street/Elliott Street and Centre Street/Walnut Street.

*VHB Response:* None.

Additional BETA Comment: *Please provide response. It is noted that Comment 2.28 was incorrectly listed in the VHB Response to Comments Memo.*

**BETA Comment 2.29:** Consideration could be provided to lengthening the Oak Street eastbound two-lane approach to the signalized intersection with Needham Street and Christina Street.

*VHB Response:* None.

Additional BETA Comment: *Please provide response.*

**BETA Comment 2.30:** The Applicant should coordinate with the City to provide traffic calming devices for the Chestnut Street corridor.

*VHB Response:* None.

Additional BETA Comment: *Please provide response.*

### **3.3 COMMUTER SURVEY**

**BETA Comment 3.3:** For future surveys, it may be useful to include a stated preference set of questions to assess willingness to pay; this would help inform the development of the fare structure.

*VHB Response:* This comment has been noted.

Additional BETA Comment: *The comment simply acknowledges comment; no agreement to conduct stated preference survey.*

### **4.0 PEDESTRIAN AND BICYCLE ACCOMMODATION**

**BETA Comment 4.5:** No crosswalks are shown at the two raised intersections on Main Street and the Village Green Loop. Crosswalks should be included to encourage pedestrian crossing at designated locations.

*VHB Response:* Comment has been noted.

Additional BETA Comment: *The Applicant should commit to this recommendation.*

**BETA Comment 4.8:** The drawings seem to indicate that the only entry to the retail space in Building 2 is from Main Street. Enlivening Needham Street with an entry to the east would help to make a more pedestrian friendly environment.

*VHB Response:* Comment will be considered.

Additional BETA Comment: *The Applicant should commit to this recommendation.*

**BETA Comment 4.16:** The Applicant should investigate if it is feasible to extend the Upper Falls Greenway along the former rail right of way to the northeast to intersect with Winchester Street via Curtis Street.

*VHB Response:* Other stakeholders, including planning staff and bike advocate groups have already looked at different ways to connect or extend the north end of the greenway beyond its termination behind National Lumber. Northland is willing to engage with efforts to enhance/extend the Greenway but does not have rights in the land of others.

Additional BETA Comment: *The Applicant should coordinate with the City to identify feasible alternatives to extend the Greenway. It acknowledged that there may be land ownership constraints.*

**BETA Comment 4.17:** The intersection of Chestnut Street/Elliott Street has old pedestrian and traffic equipment and signal heads. The Applicant should consider upgrading both the traffic and pedestrian signal equipment including countdown signal heads.

*VHB Response:* The comment has been noted.

Additional BETA Comment: *The Applicant should commit to this recommendation.*

## 5.1 SITE ACCESS PLAN

**BETA Comment 5.2:** Due to the heavy traffic demands along the Needham Street corridor and the long delays for vehicles attempting to exit the site destined for Needham Street to the north, the south site driveway (Main Street) was recommended to be modified to restrict left-turns onto Needham Street.

*VHB Response:* There is no need to modify this driveway to restrict maneuvers because vehicles destined for Needham Street north are more likely to use the Charlemont Street driveway or the Tower Road exit during heavy traffic demand periods.

Additional BETA Comment: *The Applicant should monitor operations at this intersection in the future and prohibit left turns from the south site driveway (Main Street) if needed to reduce delay and conflicts.*

## 5.2 PARKING

**BETA Comments 5.10 and 5.11:** Based on a review of the October 12, 2018 Right-Size Parking calculations provided for The Northland Newton Development, discrepancies were found with the base parking ratios that were used versus the Urban Land Institute (ULI) recommended ratios. In addition, the shared parking demand for the retail, office, restaurant, medical office, and health club components

may exceed the parking ratios provided in the MBTA and MassDOT TOD guidelines. Therefore, more detailed information was requested to be provided on the proposed parking supply ratios for each of the project land use components and to determine if the proposed parking spaces would meet the parking demand based on standard traffic engineering practice.

*VHB Response:* The proposed development is not using ULI parking ratios, which do not apply to mixed-use developments with a shuttle service. The Applicant is intending to reduce the number of parking spaces to the minimum necessary to encourage shared uses and alternative modes of transportation, as well as to be responsive to City Council requests.

*Additional BETA Comment:* As presented on page 4 in Appendix B of the traffic study (October 12, 2018 Right-Size Parking memorandum), the ULI methodologies were stated to have been used in developing the proposed shared parking demand estimates. Therefore, the Applicant should provide more detailed information on the proposed parking supply ratios for each of the project land use components.

## **6.0 LOADING AND CURBSIDE ACTIVITY**

**BETA Comment 6.1:** To confirm that the City of Newton's Zoning Ordinances are being met (Article 5.1.12), truck turning plans should be provided for each of the delivery areas and within the site to ensure that all necessary maneuvering space can be accommodated on-site and would not require traveling onto parking spaces or into vertical obstructions.

*VHB Response:* Truck loading areas are noted on the plans. No new loading areas require truck maneuvering off site.

*Additional BETA Comment:* The Applicant should prepare and submit truck turning plans to demonstrate that delivery trucks can be accommodated on-site without crossing into parking spaces or vertical objects (curbs, buildings, etc.) and without requiring multi-point turns. In addition, the truck turning plans should demonstrate how delivery vehicles would access the loading area off Oak Street as the necessary maneuvering space needed must be located entirely within the lot (Zoning Ordinance Article 5.1.12).

**BETA Comment 6.4:** The study states that on-street spaces would be provided along Unnamed Road to load and unload for Building 2. In accordance with the City's Zoning Ordinances (Article 5.1.12), delivery trucks must have direct ingress to the intended building. It appears, however, that direct ingress to Building 2 may not be available. This issue should be clarified and a designated loading space should be identified.

*VHB Response:* Delivery trucks will utilize on-street parking lanes as loading zones during retailer non-business hours, typically before 9 AM.

*Additional BETA Comment:* The Applicant should provide on-site signage at the anticipated loading zone to restrict parking between certain hours to accommodate delivery trucks.

**BETA Comments 6.5 through 6.11:** For Buildings 3 through 13, a description and details should be provided as to how delivery trucks would access the designated loading areas. The proposed parking spaces in front of the loading area curb cut at the loading dock for Building 6 were recommended to be

removed to ensure no conflicts. The loading and shuttle service area along Unnamed Road at Building 7 was recommended to be signed to indicate separate areas and that the bump-out area between the loading area and the drop off/pick up area be removed to provide more storage.

*VHB Response:* Deliveries and loading for all buildings will be further evaluated by the design team as the Response Plan advances through design.

Additional BETA Comment: *As the design progresses, the Applicant should provide a description and details as to how delivery trucks would access the designated loading areas. In addition, the recommendations for the loading areas at Buildings 6 and 7 should be addressed.*

## 7.2 SHUTTLE SYSTEM

**BETA Comment 7.2:** “Fare structure: to assess the long-term feasibility of the service and its ability to attract and sustain ridership, starting assumptions need to be made regarding the fare and costs.”

*VHB Response:* Presents 128 Business Council funding model; submits that a funding structure is not necessary to determine service feasibility and suggests that fare structure is not critical at this point, but expresses a willingness to work with the City to determine a tentative fare structure.

Additional BETA Comment: *More information and details required to understand potential effectiveness of the shuttle system.*

**BETA Comment 7.3:** Addresses phasing of service, monitoring and surveying riders.

*VHB Response:* Presents the outline of a monitoring program; suggests benchmarks to be used to evaluate service and define success. For example: achieving “75% capacity for on-peak runs and 30% capacity for off-peak runs after 6-12 months for Route 1.....”

Additional BETA Comment: It would be more informative and consistent with best practice to express this in terms of riders carried rather than “capacity.”

**BETA Comment 7.7:** Newton Circulator Shuttle should be at more frequent headways than 45 minutes.

*VHB Response:* Schedule is conservative; asking shuttle vendor partners to verify route travel times to determine whether a higher frequency can be promised.

Additional BETA Comment: *The response does not acknowledge that more frequent service is necessary.*

**BETA Comment 7.9:** Cambridge Shuttle should operate at more frequent headways than 60 minutes; consider reducing weekend service; cover bus should be provided.

*VHB Response:* Comment noted; cover bus included; does not recommend curtailing weekend service; shuttle vendor partners to verify route travel times to determine whether a higher frequency can be promised.

Additional BETA Comment: *The response does not acknowledge that more frequent service is necessary on weekdays.*

**BETA Comment 7.12:** There needs to be a thorough assessment of TNC impacts on the shuttle bus system.

*VHB Response:* Comment noted. References “lack of industry standards” in managing TNCs.

Additional BETA Comment: There needs a more substantive response with respect to impacts on shuttle bus ridership.

**BETA Comment 7.13:** More information needed n fare structure.

*VHB Response:* “128 Business Council is unaware of any similar mixed-use developments with shuttle systems of this scale.”

Additional BETA Comment: *This strikes at the heart of the City’s concern regarding the potential effectiveness of the so-called “robust” shuttle system: there is no benchmark available to help evaluate the ridership estimates.*

**BETA Comment 7.15:** Evaluate service in the 128 corridor; document feasibility of achieving 30% mode share goal; analyze TNC impacts.

*VHB Response:* 128 Business Council is surveying Waltham-Lexington area and will share data with the City; references Massport’s TNC management.

Additional BETA Comment: *No documentation is provided on how to achieve 30% transit mode share. The airport example is not at all applicable to an off-airport location and is misleading.*

**BETA Comment 7.18:** If the targets are not met, then identify additional mitigation.

*VHB Response:* Page 56 of the Implementation Plan shows ridership goals, not projected ridership. Northland intends that both ridership of the shuttles and traffic generation of the project be monitored.

Additional BETA Comment: *Standard practice is to develop ridership estimates when contemplating a new service.*

## **7.5 ADDITIONAL TDM MEASURES**

**BETA Comment 7.21:** The Applicant should provide an addendum that analyzes TNC operations.

*VHB Response:* Specifying a designated pick-up/drop-off address has been shown to be effective at Massport, as well as similar locations in other municipalities.

Additional BETA Comment: *Airport examples are not transferable to off-airport situations. Applicant should provide examples used in municipalities not at airports.*

**BETA Comment 7.25:** Explain how paid parking charged directly to employers will work.

*VHB Response:* Employers will be allocated a certain number of spaces based on the amount of space they are leasing. The cost of the spaces will be included in their lease rate.

Additional BETA Comment: *This information should be included in the parking management plan that the Applicant has agreed to develop. See Comment 7.26.*

**BETA Comment 7.26:** Will visitors have to pay for parking on-site in garage and surface spaces?

*VHB Response:* We will prepare a comprehensive and flexible parking management plan that encompasses the many types of parkers (office, retail, residential, visitors, short/long-term) at the project. The plan will determine, when, if necessary, a charge will need to be applied to parkers.

Additional BETA Comment: *The parking management plan should be developed in enough detail to provide the City with information on how parking fees may discourage or encourage parking on-site.*

## **8.0 CONSISTENCY WITH NEWTON STREET DESIGN GUIDES**

**BETA Comment 8.6:** Per the Newton Street Design Guide, indicate if the recommended 26-28 foot curb-to-curb width (for a two-way yield street and parking on both sides of the roadway) is not appropriate for the on-site roadways given the lack of driveway spacing and on-street parking utilization (expected to be above 50 percent during most periods).

*VHB Response:* Please clarify comment.

Additional BETA Comment: *Revised site plans were submitted by the Applicant on February 14, 2019. No response needed.*

**BETA Comment 8.10:** The shared use bike path meets the minimum required width of 8 feet. The Applicant should consider widening the path to at least 11 feet as recommended in the Newton Street Design Guide, June 2018, to better accommodate two-direction travel for pedestrians and bicyclists.

*VHB Response:* Comment will be considered.

Additional BETA Comment: *The Applicant should commit to this recommendation.*

## **9.0 CONSISTENCY WITH NEEDHAM STREET VISION PLAN**

**BETA Comment 9.2:** The Planting Plan does not show any street trees at Building 1 on both Needham Street and Oak Street. The Applicant should consider providing street trees in this area to enhance the pedestrian walking environment.

*VHB Response:* There is no feasible location for street trees adjacent to Building 1 along Oak Street. There are existing trees in the State ROW at the top of a very steep slope along Needham Street at the east end of Building 1.

Additional BETA Comment: *The Applicant should consider planting small caliper columnar trees along the Oak Street project frontage 1) in tree grates; 2) in the grass area near the corner with Needham Street; and 3) in the gravel area west of the delivery area for 156 Oak Street. Explore if additional trees can be planted in the sloped area behind the fence along Needham Street between where the existing trees end and Oak Street.*

**BETA Comment 9.3:** In addition to providing new connections on the site to the Greenway, the Applicant should consider providing walking/biking amenities as listed above.

*VHB Response:* None provided.

Additional BETA Comment: *Please provide response.*

**BETA Comment 9.7:** A long-term action in the Vision Plan is to institute transit signal priority (TSP) between the Newton Highlands Station and the Needham border to improve reliability of buses and shuttles. Will the applicant provide or contribute to providing TSP to improve travel time and reliability for project shuttle buses, MBTA buses, and others?

*VHB Response:* The MassDOT Needham Street project is thought to include TSP adaptive signal controls. The Proponent will evaluate the cost/benefit of employing optical readers on its shuttles in coordination with the City and MassDOT.

Additional BETA Comment: BETA is checking with *MassDOT on the status of TSP as part of the Needham Street corridor project.*