Vanasse & Associates inc
Transportation Engineers & Planners

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

Ref: 9929

April 16, 2024

Mr. Brian Keating, Director
Community Development & Planning
Town of Lancaster
Prescott Building
701 Main Street
Lancaster, MA 01523

Re: 3rd Traffic Engineering Peer Review
Neck Farm Estates – 13 Neck Road
Lancaster, Massachusetts

Dear Brian:

Vanasse & Associates, Inc. (VAI) has completed a review of the supplemental materials that have been submitted on behalf of Neck Farm, LLC (the "Applicant") in support of the proposed multifamily residential development to be known as Neck Farm Estates and located at 13 Neck Road in Lancaster, Massachusetts (hereafter referred to as the "Project"). The materials that are the subject of this 3rd review were submitted on April 16, 2024 and consisted of a revised (through April 11, 2024) *Permit Site Plan* prepared by Hancock Associates (the "Site Plans") with supporting materials that included a *Sight Triangle Exhibit Plan* dated April 11, 2024 and AutoTurn™ analyses for various design vehicles prepared by MDM Transportation Consultants, Inc. (MDM) dated April 2024.

The submitted materials are responsive to the comments that were raised in our March 8, 2024 Traffic Engineering Peer Review letter and in our subsequent March 30, 2024 2nd Traffic Engineering Peer Review letter and have addressed the remaining open items that have been raised as a part of our review. We have indicated where notes should be added to the final Site Plans, none of which would result in changes to the layout of the Project as presented on the revised Site Plans that form the basis of this review.

For reference, listed below are the comments that were identified in both our March 8, 2024 and March 30, 2024 letters for completeness followed by a summary of the information submitted on behalf of the Applicant, with our comments shaded and **bolded** for identification.

FEBRUARY 2024 TRANSPORTATION IMPACT STATEMENT (TIS)

Comment T1: *We agree with the recommended improvements, which should be included as a part of any conditions of approval that may be granted for the Project and should be completed prior to the issuance of the first Certificate of Occupancy for the Project subject to receipt of all necessary rights, permits and approvals. The bicycle racks and the location of the weather-protected bicycle parking should be shown on the final Site Plans. In addition, the suggested TDM measures, should also be required as a part of the Project and should be expanded to include the following:*

- *A transportation coordinator should be assigned for the Project, who may also have other responsibilities, to coordinate the TDM program; and*
- *A "welcome packet" should be provided to new residents providing the name and contact information for the transportation coordinator and detailing available public transportation services, bicycle and walking alternatives, and other commuting options.*

MDM Response: *The Applicant has agreed to incorporate the suggested additional TDM measures.*

VAI Follow-Up: **The TDM program defined in the February 2024 TIS inclusive of the expanded measures and the other recommendations outlined therein should be a condition of any approvals that may be grated for the Project.**

SITE PLANS

Comment S1: *The Project site driveways and the internal drive should be widened to a minimum of 23-feet (24 feet is suggested) in order to accommodate parking maneuvers or a vehicle turning analysis should be provided using the AutoTurn© software that demonstrates that vehicles can enter and exit the proposed parking spaces without maneuvering into the adjacent parking space. Alternatively, consideration could be given to establishing a one-way circulation pattern and reconfiguring the parking to be angled.*

MDM Response: *A vehicle turning analysis was complete using the AutoTurn© software for a composite passenger vehicle, which was defined as being 17.3 feet in length,[1] and for a smaller passenger car that was defined as 15.42 feet in length. This analysis indicated that the composite passenger vehicle required multiple maneuvers to enter or exit a parking space when vehicles were parked in the adjacent parking spaces.*

VAI Follow-Up: *Based on the vehicle turning analysis, it is apparent that vehicles larger than a compact car will have difficulty maneuvering to enter or exit the proposed parking spaces within the Project site. As such, we continue to recommend that the Applicant widen the drive aisle to 23-feet or consider establishing a one-way circulation pattern with angled parking.*

Hancock Response: The Site Plans have been revised to reflect a one-way circulation with vehicles entering from Center Bridge Road and exiting to Neck Road and the parking has been changed to angled parking to reflect the one-way circulation pattern while maintaining a 20-foot drive aisle width. As a result of these changes the number of parking spaces has been reduced from 21 to 18, or a parking ratio of 1.63 parking spaces per unit.

[1]We note that a standard passenger car design vehicle is defined as being 19-feet in length.

We support the changes to the Site Plans to facilitate one-way circulation and it is our opinion that the parking supply will continue to be sufficient to accommodate the parking demands of the Project. For context we offer that the Institute of Transportation Engineers (ITE)[2] has documented that the average observed peak parking demand for multifamily residential communities in a similar setting is 1.27 parking spaces per unit with an 85th percentile peak parking demand (typical design value) of 1.59 parking spaces per unit.[3] Comment Resolved

Comment S2: *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."*

MDM Response: *The sight triangle areas and requested note will be added to the final Site Plans.*

VAI Follow-Up: *Comment resolved pending receipt of the final Site Plans.*

Hancock Response: A sight triangle exhibit has been added.

The final Site Plans should include the Sight Triangle Exhibit with the requested note provided on the exhibit.

Comment S3: *A narrative should be provided describing how tenant moves will be accommodated and trash/recycling managed, including the scheduling of such activities and where they will occur for each building.*

MDM Response: *The Transportation Coordinator will advise tenants of the procedures for tenant moves. Trash and recycling will be placed in containers situated in a dumpster area in the southeast corner of the Project site and will be collected by a private vendor. A vehicle turning analysis was provided for trash/recycling vehicle whish demonstrated that the subject vehicle is able to access the dumpster area and maneuver within the Project site in an unimpeded manner.*

VAI Follow-Up: *The staging location for moving vans and trucks needs to be defined and should be sufficient to accommodate a 15-foot box truck. The staging location may involve the temporary use of 1-2 parking spaces and should be coordinated with the Transportation Coordinator so that the spaces can be blocked off when a move is scheduled. In no instance should the internal drive be used for temporary parking or moving vehicle staging as the drive must remain unencumbered for emergency vehicle travel at all times.*

[2] *Parking Generation Manual*, 6th Edition; Institute of Transportation Engineers; Washington D.C.; October 2023.
[3] The 85th percentile peak parking demand is the parking demand within which 85 percent of the observed data points were captured and 15 percent were above.

Hancock Response: A managed staging area has been provided for moving vans and trucks situated adjacent to the northeast corner of the building and incorporates a short-term parking space for delivery service providers.

Comment resolved.

Comment S4: *Consideration should be given to providing short-term parking (up to 10 minutes) for rideshare vehicles and delivery service providers.*

MDM Response: *Short-term parking will be provided for visitors and delivery service providers.*

VAI Follow-Up: *Comment resolved. The location of the short-term parking should be shown on the final Site Plans.*

Hancock Response: A short-term parking space has been added that is included as a part of the managed staging area for moving vans and trucks, and is situated adjacent to the northeast corner of the building.

Comment resolved.

Comment S5: *The location of the bicycle racks and weather protected bicycle parking should be shown along with the number of bicycles that can be accommodated.*

MDM Response: *The location of the bicycle racks and weather protected bicycle parking will be shown on the final Site Plans.*

VAI Follow-Up: *Comment resolved pending receipt of the final Site Plans.*

Hancock Response: Bicycle racks have been added to the Site Plans.

Consideration should also be given to providing weather protected bicycle parking.

Comment S6: *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).[4]"*

MDM Response: *The requested note will be added to the final Site Plans.*

VAI Follow-Up: *Comment resolved pending receipt of the final Site Plans.*

The requested note should be added to the final Site Plans.

[4] *Manual on Uniform Traffic Control Devices* (MUTCD), 10th Edition; Federal Highway Administration; Washington, DC; 2009.

Comment S7: *STOP-signs and marked STOP-lines should be added for motorists exiting the Project site driveways.*

MDM Response: *The STOP-signs and marked STOP-lines will be added to the final Site Plans.*

VAI Follow-Up: *Comment resolved pending receipt of the final Site Plans.*

Hancock Response: The requested signs and pavement markings have been added to the Site Plans.

Comment resolved.

Comment S8: *Americans with Disabilities Act (ADA) compliant wheelchair ramps should be provided for crossing the Center Bridge Road Project site driveway.*

MDM Response: *ADA compliant wheelchair ramps for crossing the Center Bridge Road Project site driveway will be shown on the final Site Plans.*

VAI Follow-Up: *Comment resolved pending receipt of the final Site Plans.*

Hancock Response: An ADA compliant ramp has been added for crossing the Center Bridge Road Project site driveway.

Comment resolved.

This concludes our review of the supplemental materials that have been submitted 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 Dirk

Jeffrey S. Dirk, P.E., PTOE, FITE
Managing Partner

Professional Engineer in CT, MA, ME, NH, RI and VA

JSD/jsd