Vanasse & Associates inc
Transportation Engineers & Planners

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

Ref: 9874

August 7, 2024

Ms. Lara Davis
ZBA Principal Assistant
Southborough Zoning Board of Appeals & Conservation Department
9 Cordaville Road
Southborough, MA 01772

Re: 2nd Traffic Engineering Peer Review
Proposed Multifamily Residential Development – 120 Turnpike Road (Route 9)
Southborough, Massachusetts

Dear Lara:

Vanasse & Associates, Inc. (VAI) has completed a review of the of the supplemental materials that have been submitted on behalf of FD 120 Turnpike, LLC (the "Applicant") in support of the proposed multifamily residential development to be known as The Alexandra and located at 120 Turnpike Road (Route 9) in Southborough, Massachusetts (hereafter referred to as the "Project"). The information that is the subject of this 2nd review was prepared in response to the comments that were raised in our June 3, 2024 Traffic Engineering Peer Review letter and included a letter dated July 26, 2024 prepared by AK Associates with supporting attachments and Site Plans titled *Site Plan of Land at 120 Turnpike Road* prepared by Expedited Engineering, LLC dated October 25, 2023 and revised through July 24, 2024.

Based on our review of the subject materials, the Applicant's team has been responsive to the comments that were raised in our June 3, 2024 letter pertaining to the September 2023 Traffic Impact Study (the "September 2023 TIS) and all comments pertaining thereto have been resolved. The comments that were identified in our letter pertaining to the Site Plans and parking remain outstanding and should be considered in the context of the revised plans that have been submitted, as well as the guidance that we offered the Applicant at the June 12, 2024 public hearing concerning the safety of pedestrians and vehicles accessing the Project through the parking field for the existing office buildings.

For reference, listed below are the comments that were identified in our June 3, 2024 letter pertaining to the September 2023 TIS followed by a summary of the information submitted on behalf of the Applicant, with additional comments indicated in **bolded** text for identification.

September 2023 Traffic Impact Study (TIS)

Comment T1: *The data collection effort was completed following accepted standards; however, the adjustments to the raw traffic count data do not follow current guidelines. First, the September traffic counts should not be adjusted downward. It is customary to retain traffic count data that is above-average without reduction and to adjust the data only in the case where the data was collected during a "below-average" month or when evaluating the warrants for the installation of a traffic control signal. Second, MassDOT has provided updated guidance that no longer requires pandemic-related adjustment of traffic counts performed after March 2022 except in locations*

where the predominant land use consists of offices or similar uses.[1] *Given that the predominant land use that is accessed by way of the study area intersection is office uses, that traffic volumes entering and exiting the driveway that serves 118/120 Turnpike Road should be adjusted (increased) to account for the vacancy of the existing office buildings at the time that the traffic counts were performed.*

Response: The existing office buildings at 118/120 Turnpike Road were identified to have a 35 percent vacancy rate at the time that the traffic counts that formed the basis of the September 2023 TIS were performed (September 7th and 9th, 2023). As such, the unadjusted peak-hour traffic volumes entering and exiting the driveway that serves 118/120 Turnpike Road and that will provide access to the Project site were increased by 35 percent (multiplied by 1.35). A seasonal adjustment was not applied to the raw traffic volume data given that traffic volumes during the month of September are higher than those that occur on an average-month. Tables were provided to summarize the raw (unadjusted) and adjusted (to account for the vacancy of the existing office buildings at 118/120 Turnpike Road) traffic volumes at the intersection of Route 9 at the driveway to 118/120 Turnpike Road.

Table 1 and Table 2 of the July 26, 2024 response letter contain discrepancies that have been corrected in the corresponding tables below which the changes shaded for reference. We note that the traffic volumes that were used in the traffic operations analysis (discussion follows) were developed by applying the 1.35 percent adjustment to the raw traffic volumes that were shown in Table 1 of the July 26, 2024 response letter and that use of the corrected traffic volumes would not materially change the analysis results as they relate to the predicted impact of the Project.

Table 1 – Raw TMC's Corrected

	AM Peak			PM Peak			Sat Peak		
Direction	**EB-T**	**EB-R**	**NB-R**	**EB-T**	**EB-R**	**NB-R**	**EB-T**	**EB-R**	**NB-R**
Volume	**1,848**	**19**	**6**	**1,789**	**3**	**23**	**1,455**	**1**	**4**

Table 2 – Adjusted TMC's Corrected

	AM Peak			PM Peak			Sat Peak		
Direction	**EB-T**	**EB-R**	**NB-R**	**EB-T**	**EB-R**	**NB-R**	**EB-T**	**EB-R**	**NB-R**
Volume	**1,848**	**26**	**8**	**1,789**	**4**	**31**	**1,455**	**1**	**5**

Comment resolved.

Comment T2: *A review of the MassDOT statewide High Crash Location List indicated that the Route 9 intersection with the driveway that serves 118/120 Turnpike Road is not identified as a Highway Safety Improvement Program (HSIP) eligible high crash location. Outside of the immediate intersection, the following intersections that will be impacted by the Project are identified as high crash cluster locations for the 2018-2020 reporting period and HSIP eligible:*

[1] *25% Design Submission Guidelines*; MassDOT Highway Division, Traffic and Safety Engineering; Revised May 31, 2022.

- *Route 9/Breakneck Hill Road/White Bagley Road*
- *Route 9/Woodland Road*
- *Route 9/Oak Hill Road/Central Street*

Given that the Route 9/Breakneck Hill Road/White Bagley Road and Route 9/ Oak Hill Road/Central Street intersections are critical to facilitating access to the Project due to the median barrier along Route 9, a review of the motor vehicle crashes that are occurring at these intersections should be undertaken and potential remedial measures identified that are commensurate with the identified impact of the Project at these intersections.

Response: A review of motor vehicle crash data for the requested intersections as available through MassDOT was undertaken for the most recent complete 12-month period (2023) in order to determine if the location and type of crashes that are occurring at the subject intersections involve maneuvers that would be used by the residents of the Project to reverse direction along Route 9. Based on this review, there were no (0) crashes reported that involved U-turn maneuvers at the Route 9/Breakneck Hill Road/White Bagley Road or Route 9/Oak Hill Road/Central Street intersections. The majority of the reported crashes involved rear-end type collisions that resulted in property damage only, a crash type that is common at signalized intersections that accommodate high traffic volumes.

Comment resolved.

Comment T3: *MassDOT's Transportation Impact Assessment (TIA) Guidelines require that the future conditions analysis horizon be established as a 7-year projection from the date of publication of the assessment. As such, the future condition horizon year should be adjusted to 2030. We agree with the 1.0 percent per year compounded annual background traffic growth rate, but note that Route 9 in Southborough is considered an urban (U) roadway and the urban roadway adjustment factors and growth rates should be used.*

Response: The future conditions analysis horizon year was adjusted to 2030 as requested.

Comment resolved noting the corrected volumes in Table 4 below.

Table 4 – Future No-Build (Year 2030) Traffic Corrected

	AM Peak			PM Peak			Sat Peak		
Direction	**EB-T**	**EB-R**	**NB-R**	**EB-T**	**EB-R**	**NB-R**	**EB-T**	**EB-R**	**NB-R**
Volume	**1,981**	**29**	**9**	**1,918**	**4**	**33**	**1,560**	**1**	**5**

Comment T4: *The Town of Southborough and MassDOT should be consulted concerning potential future development projects by others that may impact future condition traffic volumes and traffic patterns beyond those accounted for by the general background traffic growth rate and to identify planned roadway improvement projects in the area.*

Response: The Town of Southborough and MassDOT were contacted to determine if there were any potential future development projects by others or roadway improvement projects that should be reflected in the future condition traffic volumes or analyses. Based on these discussions, no

projects were identified for inclusion in the future condition traffic volumes or analyses. The Applicant's engineer identified the redevelopment project that is proposed by Ferris Development Group LLC at 250 Turnpike Road and is expected to result in reduction in traffic over the current use of the property. As such, the project (250 Turnpike Road) was not included in the future condition traffic volume projections.

Comment resolved.

Comment T5: The Build condition traffic volumes should be updated to reflect the changes to the No-Build condition traffic volumes and the 2030 horizon year.

Response: The Build condition traffic volumes were updated as requested.

Comment resolved noting the corrected volumes in Table 6 below.

Table 6 – Future Build (Year 2030) Traffic Corrected

	AM Peak			PM Peak			Sat Peak		
Direction	**EB-T**	**EB-R**	**NB-R**	**EB-T**	**EB-R**	**NB-R**	**EB-T**	**EB-R**	**NB-R**
Volume	**1,981**	**35**	**25**	**1,918**	**20**	**43**	**1,560**	**14**	**18**

Comment T6: The traffic operations analysis should be revised to reflect the comments provided as a part of this assessment pertaining to the Existing, No-Build and Build condition traffic volumes.

Response: The traffic operations analysis was revised to reflect the adjusted Existing, No-Build and Build traffic volumes. The revised analysis continues to indicate that sufficient capacity exists along Route 9 and at the driveway that serves 118/120 Turnpike Road to accommodate the additional traffic that will be associated with the Project.

As stated previously, use of the corrected traffic volumes identified as a part of this review would not change the findings relative to the predicted impact of the Project on the transportation infrastructure. Comment resolved.

Comment T7: We would suggest consideration of advancement of the following improvements as a part of the Project, which are commensurate with the predicted impact of the Project on the transportation infrastructure and are focused on safety and encouraging the use of alternative modes of transportation to single-occupancy vehicles:

1. *Define and implement safety-related improvements at the Route 9/Breakneck Hill Road/White Bagley Road and Route 9/Oak Hill Road/Central Street intersections that should be informed by a review of the MassDOT crash data for the intersections and limited to traffic signal timing adjustments and the installation of signs and pavement markings subject to receipt of all necessary rights, permits and approvals; and*

2. *Implement a Transportation Demand Management (TDM) program that is inclusive of the following elements:*

- *Assign a transportation coordinator for the Project who may also have other responsibilities to coordinate the TDM program;*
- *Information regarding public transportation services should be made available to residents and include maps, schedules and fare information;*
- *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;*
- *Work-at-home accommodations should be included within Project, and may take the form of meeting space and a business office in the common area;*
- *Secure bicycle parking should be provided consisting of both weather protected bicycle parking and exterior bicycle racks; and*
- *Consult with the MWRTA to discuss options to establish transit service to the Project.*

Response: The motor vehicle crash analysis that was conducted for the identified intersections along Route 9 did not indicate specific safety deficiencies that are related to the movements at the intersections that are required for Project-related traffic to reverse direction along Route 9 or that are correctible through measures that could reasonably be implemented as a part of the Project and commensurate with the predicted impact of the Project at the intersections.

The TDM measures were noted as being beneficial to the Project.

Comment resolved. We would recommend that consideration be given to requiring that the TDM program as defined above be included as a condition of the approval of the Project at the appropriate time and to the extent that the Zoning Board of Appeals is inclined to act favorably on the Application.

This concludes our review of the materials that have been submitted to date in support of the Project. Written responses to our comments pertaining to the Site Plans and parking should be provided by the Applicant so that we can continue our review. If you should have any questions regarding our review, please feel free to contact me.

Sincerely,

VANASSE & ASSOCIATES, INC.

Jeffrey S. Dirk

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

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

JSD/jsd