

Ref: 10062

December 23, 2024

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

Re: Traffic Engineering Peer Review
Proposed Multifamily Residential Development – 250 Turnpike Road/0 Parkerville Road
Southborough, Massachusetts

Dear Lara:

Vanasse & Associates, Inc. (VAI) has completed a review of the materials that have been submitted on behalf of FD 250 Turnpike, LLC (the “Applicant”) in support of the proposed multifamily residential development to be located at 250 Turnpike Road (Route 9) in Southborough, Massachusetts (hereafter referred to as the “Project”). The Applicant is requesting the issuance of a Comprehensive Permit for the Project pursuant to M.G.L. c.40B, §§ 20 through 23. Our review focused on the following specific areas as they relate to the Project: i) vehicle and pedestrian access and circulation; ii) Massachusetts Department of Transportation (MassDOT) design standards; iii) Town Zoning requirements as they relate to access, parking and circulation; and iv) accepted Traffic Engineering and Transportation Planning practices. The Applicant has submitted the following materials which are the subject of this review:

1. *Comprehensive Permit Application*, 250 Turnpike Road, Southborough, MA; Ferris Development Group on behalf of FD 250 Turnpike, LLC and dated May 23, 2024;
2. *Site Plan of Land at 250 Turnpike Road in Southborough, Massachusetts*; Expedited Engineering, LLC; May 28, 2023, last revised November 20, 2024 (the “Site Plans”);
3. *List of Requested Waivers From Applicable Town of Southborough Bylaws and Regulations*; 250 Turnpike Road, Southborough, MA (Parcel ID M/B/L: 27-0-46-0);
4. *Traffic Impact Study*, Proposed Self Storage and Multi-Family Residential Development, 250 Turnpike Road, Southborough, Massachusetts; AK Associates; October 2023 (the “October 2023 TIA”); and
5. *Traffic Impact Comparison*, 56 Apartments vs. 32 Townhouses, 250 Turnpike Road, Southborough; AK Associates; December 9, 2024 (the “December 2024 TIC”)

In addition, VAI reviewed the site locus in order to validate the existing conditions context of the Project and to observe factors related to the design and location of the access to the Project site, internal circulation and potential off-site improvements.

Based on a review of the October 2023 TIA and the subsequent December 2024 TIC, the modifications to the existing office building that is located at 250 Turnpike Road that are proposed independent of the Project will result in a net reduction in traffic over that which was associated with the existing office building at full occupancy. This reduction in traffic will off-set the additional traffic that is predicted to be generated by the Project. That being said, the Applicant should review and address the comments below that were identified as a part of our review.

PROJECT DESCRIPTION

The Project will entail the construction of a 32-unit, multifamily residential development to be located at 250 Turnpike Road (Route 9) in Southborough, Massachusetts. The residential units will consist of townhouse style buildings comprised of duplex or triplex buildings dispersed over the development area. The initial Comprehensive Permit Application for the Project and the accompanying October 2023 TIS were based on the development of a 56-unit multifamily residential building, which has since been revised to the current townhouse development. The Project will be developed in the southern portion of a larger 9.83± acre lot that will be subdivided into two lots, with “Lot A” encompassing 4.64± acres of land that will include the existing office building and supporting parking and appurtenances located at 250 Turnpike Road and “Lot B” encompassing 5.19± acres of land that will be used for the Project (the “Project site”).

Separate of and unrelated to the Project, Ferris Development Group, the owner of 250 Turnpike Road, proposes to renovate the existing 55,000± square foot (sf) office building to accommodate a self-storage use and to construct a 14,400± sf building that will be demised for use as contractors storage bays and offices in the northern portion of the surface parking lot that serves the existing office building.

The Project site is currently undeveloped and includes areas of open and wooded space that is bounded by the office building located at 250 Turnpike Road and its supporting infrastructure to the north; residential properties to the south and east; and residential and commercial properties to the west.

Access to the Project will be provided by way of an extension of the driveway that serves 250 Turnpike Road and intersects the south side of Route 9 approximately 250 feet west of Parkerville Road. The driveway is limited to right-turn only operation (i.e., right-in/right-out only) due to the raised median barrier that separates the directions of travel along Route 9 at this location.

On-site parking will be provided for 2.0 parking spaces per unit, with an additional eight (8) surface parking spaces provided in two (2) areas along the driveway, or a total of 72 parking spaces. Section 174-12 of the Zoning Bylaws requires that 2.0 parking spaces be provided for each dwelling unit containing one or two bedrooms, 3.0 parking spaces be provided for each dwelling unit containing three or more bedrooms, plus “one space for each 80 square feet of floor area devoted to a customary home occupation or a professional use”. The Project will provide 28 one and two bedroom units and four (4) three bedroom units, which requires 68 parking spaces. As such, the parking supply for the Project exceeds the requirements of the Zoning Bylaws.



COMMENTS

October 2023 TIS/December 2024 TIC

Comment T1: Using trip-generation statistics published by the Institute of Transportation Engineers (ITE)¹ for Land Use Code 215, *Single-Family Attached Housing*, applied to 32 dwelling units results in the following traffic characteristics for the Project shown in Table 1:

Table 1
Project Trip-Generation Summary

Time Period	Vehicle Trips		
	Entering	Exiting	Total
<i>Average Weekday:</i>	97	97	194
<i>Weekday Morning Peak-Hour:</i>	3	8	11
<i>Weekday Evening Peak-Hour:</i>	9	6	15
<i>Saturday Midday Peak-Hour:</i>	9	9	18

These calculations differ from those presented in the December 2024 TIC and should be reviewed by the Applicant's Traffic Engineer.

Comment T2: Table 2 compares the traffic characteristics of the Project and those of the modifications that are proposed by Ferris Development Group for the existing office building to those of existing office building at full occupancy:

Table 2
Trip-Generation Comparison

Time Period	Vehicle Trips			
	(A) Proposed Residential Development (32 units) ^a	(B) Proposed Modifications to 250 Turnpike Rd. ^b	(C) Existing Office Building ^c	(A+B-C) Difference
<i>Average Weekday:</i>	194	222	690	-274
<i>Weekday Morning Peak-Hour:</i>	11	29	100	-60
<i>Weekday Evening Peak-Hour:</i>	15	36	101	-50
<i>Saturday Midday Peak-Hour:</i>	18	27	29	+16

^aBased on ITE LUC 215, *Single-Family Attached Housing* (32 dwelling units).

^bBased on ITE LUC 151, *Mini-Warehouse* (55,000 sf) and LUC 180, *Specialty Trade Contractor* (14,400 sf).

^cBased on ITE LUC 710, *General Office Building* (55,000 sf).

¹*Trip Generation*, 11th Edition; Institute of Transportation Engineers; Washington, DC; 2021.



These calculations differ from those presented in the December 2024 TIC and should be reviewed by the Applicant's Traffic Engineer. That being said, we agree with the overall conclusion that the proposed modifications to the existing office building and the construction of the Project will result in a significant reduction in traffic on an average weekday and during the weekday peak hours. During the Saturday midday peak-hour, it is expected that there will be a minor increase in traffic that would not be considered significant.

- Comment T3: Based on the net difference in trips that are shown in Table 2, a formal traffic operations analysis (i.e., review of motorist delays and vehicle queuing) is not warranted for the Project.
- Comment T4: A review of the MassDOT Top Crash Locations database indicates that the intersection of Route 9 at Parkerville Road is a high crash location for the 2019-2021 reporting period and Highway Safety Improvement Program (HSIP) eligible. The Applicant's engineer should review the MassDOT crash data for the 2019-2021 reporting period and identify the predominant crash patterns and potential safety enhancements that could be completed as a part of the Project to the extent that the improvements are limited to signs and pavement markings and subject to receipt of all necessary rights, permits and approvals.
- Comment T5: In addition to the recommendations that were provided as a part of the October 2023 TIS, we would suggest that the Applicant 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; and
 - Consult with the MWRTA to discuss options to establish transit service to the Project.

Site Plans

- Comment S1: A vehicle turning analysis should be provided using the AutoTurn© software for a service/delivery vehicle (SU-30 design vehicle) and for the Southborough Fire Department design vehicle. The turning analysis should depict all maneuvers required to enter and exit the Project site from Route 9 and include circulation within the cul-de-sac area.
- Comment S2: Given the depth of the Project site, consideration should be given to establishing a secondary access for emergency vehicles from Parkerville Road. This could take the form of a gated access over the waterline easement.



- Comment S3: The driveways to the residential units should be a minimum of 21 feet long measured between the garage door and the far edge of the sidewalk (edge closest to the residence) where a sidewalk is provided and a minimum of 23 feet measured between the garage door and the edge of the traveled-way in locations without a sidewalk.
- Comment S4: Verify that the centerline of the proposed roadway does not exceed 8 percent and that a leveling area that does not exceed 2 percent is provided approaching the existing parking lot that serves 250 Turnpike Road.
- Comment S5: Circulation within the cul-de-sac area should be in a one-way counterclockwise direction. Signs and pavement markings should be provided to regulate the one-way traffic flow.
- Comment S6: The sight triangle areas for the driveway that serves 250 Turnpike Road and that will be extended to serve the Project 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."
- Comment S7: 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)."²
- Comment S8: Consideration should be given to developing a sidewalk or pedestrian path to connect the proposed sidewalk that is shown along the west side of the proposed driveway to Route 9. This connection should be coordinated with the school bus stop location for the Project defined by the Southborough School Department.

This concludes our review of the materials that have been submitted to date in support of the Project. Written responses to our comments should be provided so that we may continue our review on behalf of the Town. 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
Managing Partner

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

JSD/jsd

²Manual on Uniform Traffic Control Devices (MUTCD), 11th Edition; Federal Highway Administration; Washington, DC; December 2023.

