


## MEMORANDUM

**DATE:** February 13, 2025

**TO:** Elizabeth Hughes, AICP, Town Planner  
Town of Concord Planning Division  
141 Keyes Road  
Concord, MA 01742

**FROM:** Robert J. Michaud, P.E. – Managing Principal  
Daniel A. Dumais, P.E. – Senior Project Manager

**RE:** **Response to Secondary Comments – GPI**  
275 Forest Ridge Road, Concord, Massachusetts



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MDM Transportation Consultants, Inc. (MDM) has prepared the following responses to transportation-related comments as issued in a follow-up letter by Greenman-Pedersen, Inc. (GPI) dated January 23, 2025, and ZBA hearing discussions regarding said supplemental comments on January 23, 2025. To facilitate review, specific comments are paraphrased with corresponding responses.

*Comment 2: “The Applicant has agreed to modify the design of the entry boulevard to provide an 18-foot entering lane and a 14-foot exiting lane separated by a 6-foot median island to allow adequate bypass for emergency vehicles on the inbound lane. In addition, the Applicant will provide breaks in the median every 150 feet to allow an emergency apparatus to bypass a disabled vehicle by crossing over to the other side of the boulevard. In order to maintain adequate sight lines, GPI recommends that the median island be kept free from snow storage and that snow be cleared promptly from the median immediately following snow events over 6-inches in height. In addition, no vegetation higher than 3 feet above the paved roadway surface should be planted within the median. Trees may be planted within the median so long as the tree canopy does not fall below 6.5 feet in height. The Applicant has agreed to review the proposed design with the Fire Department and should provide a letter of acceptance from the Fire Department prior to the start of construction.”*

**Response:** The Site Layout Plan will include a note citing that “landscaping and other features located within the island areas along the boulevard shall be designed, installed, and maintained so as not to exceed 2.0-feet in height or with tree canopies maintained to not fall below 6.5 feet in height. Snow windrows located within boulevard median areas that exceed 3.5-feet in height or that would otherwise inhibit sight lines shall be promptly removed.” The Applicant continues to coordinate with the Fire Department regarding the desired design width of the boulevard lanes and the desire/ viability of a secondary emergency path/road through the Thoreau Club. The Applicant will continue to keep the ZBA updated on any feedback will request a letter of acceptance from the Fire Department well in advance of the start of construction.

Comment 3: *“GPI previously requested that the Applicant provide a vehicle turning path analysis for the trash removal vehicle to ensure the site provides sufficient circulation for trash removal vehicles. The Applicant has stated that trash will be stored inside the buildings and the Applicant will use roll out totes for curbside trash pick-up. The Applicant should explain how and where the trash pick-up will occur when the entirety of both buildings is surrounded by parking.”*

**Response:** The trash will be collected via trash chutes within the individual buildings and stored inside the buildings and will utilize roll out totes for trash pickup curbside. Each building has a dedicated trash pick-up area located on the eastern side to accommodate the trash tote staging and pick-up activity which does not impact any of the parking spaces.

Comment 4: *“The Applicant previously designated snow storage areas within the islands at the internal intersections on the site, which may create sight line obstructions for vehicles attempting to exit the parking area between Buildings A and B. GPI recommended eliminating the snow storage areas on the inside of the parking loop around the buildings. The Applicant has agreed to revise the snow storage areas to eliminate snow storage areas that would restrict internal sight lines; however, revised site plans have not yet been provided. GPI will review the final site plans for compliance with this comment upon receipt.”*

**Response:** Snow storage areas that would restrict internal sight lines were eliminated from the site plan.

Comment 5: *“The Applicant has agreed to implement a pavement overlay at the intersection of Forest Ridge Road and the site driveway, as well as install a new crosswalk with ADA-accessible curb ramps on both sides of the roadway, and MUTCD-compliant pavement markings and warning signage on Forest Ridge Road at the site driveway. No plans have been provided depicting the proposed improvements. GPI recommends that the Town require the reconstruction of this crosswalk and the pavement overlay as a condition of approval of the proposed development. The proposed improvements should be demonstrated on the final site plan set.”*

**Response:** Acknowledged; while these items are warranted independent of the project, the Applicant has committed to providing these mitigation actions. No further response required.

Comment 8: *“GPI recommends the Applicant install a STOP sign (R1-1) on the Sweet Birch Lane approach to the traffic circle at Forest Ridge Road / Sweet Birch Lane / Black Birch Lane as a condition of approval.”*

**Response:** Acknowledged; while these items are warranted independent of the project, the Applicant has committed to providing these mitigation actions. No further response required.

Comment 10: *“The Applicant has performed a sensitivity analysis of the traffic operations under 2031 No-Build and Build conditions using an annual growth rate of 1.0 percent per year at GPI’s request. However, this analysis was performed utilizing the existing Peak Hour Factors (PHF) for the 2031 conditions. As described in Comment #17, MassDOT guidelines for traffic analysis require that all future year conditions utilize a default PHF of 0.92. GPI performed a sensitivity analysis of the Main Street (Route 62) / Forest Ridge Road intersection under 2031 Build conditions using MassDOT’s recommended PHF of 0.92, and the detailed analysis worksheets are attached. The results of the analysis indicate that traffic exiting Forest Ridge Road is expected to operate at LOS F during the weekday AM and PM peak hours under 2031 Build conditions. However, the volume-to-capacity ratio (V/C) ratio will be below 1.00, indicating there will be adequate capacity to accommodate the anticipated traffic volumes, and the queue is not expected to exceed four vehicles. As Forest Ridge Road already contains separate left- and right- turn lanes and warranting conditions for installation of a traffic signal will not be met at this intersection, the Applicant should consider implementation of safety enhancements at this location to mitigate the project’s impacts in lieu of capacity enhancements. The proposed development will be generating pedestrian traffic crossing Main Street at Forest Ridge Road to travel between the site and Powder Mill Plaza, as well as other surrounding destinations. Given the high volume of approximately 1,200 vehicles per hour traveling along Main Street during the peak periods, CPW Engineering requests that the crosswalk safety be enhanced by installing pedestrian-activated rectangular rapid flashing beacons (RRFBs) in both directions at the crosswalk.”*

**Response:** MDM concurs that a traffic signal will not be warranted at the Main Street at Forest Ridge Road intersection with the full buildout of the project in place. The Applicant will design and install pedestrian activated rectangular rapid flashing beacons (RRFBs) at the crosswalk located just to the west of the Main Street intersection with Forest Ridge Road; the design will be subject to review and approval by CPW.

Comment 12: *“Based on the updated sight line analysis performed by the Applicant, it appears that the available sight lines at the site driveway intersection with Forest Ridge Road will meet AASHTO recommendations for minimum sight distance. The Applicant has agreed to provide sight line diagrams as part of the final plan set. GPI recommends the Applicant prepare a sight line plan that depicts the available sight lines and required clear zones to meet AASHTO recommendations for minimum stopping sight distance (SSD) and desirable intersection sight distance (ISD) at the proposed site driveway intersection with Forest Ridge Road based on a posted speed of 25 MPH and a decision point 14.5 feet from the edge of travelway, and ensure that no signage, vegetation, structures, or snow storage that would impede sight lines are located within the required clear zones.”*

**Response:** The sight line triangles for the site driveway will be provided on the final Site Layout Plan set to be prepared by Allen & Major Associates. The Site Layout Plan will include a note citing that “Signs, landscaping and other features located within sight triangle areas shall be designed, installed, and maintained so as not to exceed 2.0-feet in height. Snow 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 17: *“The Applicant has prepared a sensitivity analysis of the traffic operations under 2031 No-Build and Build conditions using MassDOT’s recommended PHF of 0.92; however, the sensitivity analysis was performed using a 0.5 percent per year annual growth rate rather than the 1.0 percent growth rate recommended in Comment #10. As described in Comment #10, GPI has performed a sensitivity analysis that incorporates both the recommended 1.0 percent annual growth rate and the 0.92 PHF under 2031 Build conditions at the Main Street / Forest Ridge Road intersection. The results of the analysis indicate that traffic exiting Forest Ridge Road is expected to operate at LOS F during the weekday AM and PM peak hours under 2031 Build conditions. However, the volume-to-capacity ratio (V/C) ratio will be below 1.00, indicating there will be adequate capacity to accommodate the anticipated traffic volumes, and the queue is not expected to exceed four vehicles.”*

**Response:** No further response required.

Comment 20: *“The Applicant has agreed to implement the following additional Transportation Demand Management (TDM) measures to reduce single-occupant vehicle trips, which should be included in the conditions of approval for the proposed development:*

- a. An on-site Transportation Coordinator (TC) will be established to distribute information to residents on available transportation options in the area and provide incentives for utilizing alternatives means of travel;*
- b. The TC will provide all new residents with information on registering with NuRIDE upon move-in. Nu-RIDE offers incentives for making green trips (walking, biking, using public transit, carpooling, or ridesharing) and provides assistance to commuters in identifying appropriate ride-share matches in their area. In addition, Nu-RIDE offers a guaranteed ride home for any commuters making green trips that need to leave work in an emergency or inclement weather.*
- c. Provide at least one ride-share parking space near the entrances to each building.”*

**Response:** Acknowledged; no further response required.

Comment 23: *“The Applicant has agreed “to work with the neighborhood to” install ADA compliant ramps and MUTCD- compliant pavement markings at crosswalks along Forest Ridge Road. The Applicant should clarify what is meant by “work with the neighborhood”. GPI recommends that the Applicant construct the recommended curb ramps and crosswalk pavement markings as a condition of approval of the proposed development to ensure walkability of the major roadways that residents of the development may travel to access Main Street.”*

**Response:** Acknowledged, “work with the neighborhood” means that the Applicant is in discussions with the HOA to provide a fair share portion of roadway elements along Forest Ridge Road which would normally be paid for through monthly roadway maintenance fees associated with the HOA(s). While these items are warranted independent of the project, the Applicant will continue to work with the neighborhood homeowner’s association(s) and will independently pay for ADA compliant ramps, refreshed crosswalk markings, and detectable warning panels if required at the remaining two side-street crossing locations along Forest Ridge Road between the traffic circle and Main Street. MDM notes that the ramps and detectable warning panels are in place at the other locations along the relevant sidewalk section

between the Site and Main Street.

Comment 24: *“Similarly, the Applicant has agreed to “work with the neighborhood” to implement the following improvements at the intersection of Main Street (Route 62) / Forest Ridge Road:*

- a. Install a new STOP sign and STOP line on the Forest Ridge Road approach to Main Street (Route 62), compliant with Manual on Uniform Traffic Control Devices (MUTCD) standards.*
- b. Install STOP AHEAD warning signage in advance of the intersection to further alert drivers to the approaching stop condition.*
- c. Install new lane markings, including lane lines, turn arrows, and a centerline within 100 feet of the STOP line on Forest Ridge Road approaching Main Street (Route 62).*

*The Applicant should clarify what is meant by “work with the neighborhood”. In addition, GPI recommends that the Applicant complete the improvements described above prior to the issuance of a Certificate of Occupancy as a condition of approval for the proposed development.*

*GPI previously noted that Forest Ridge Road northbound approaches Main Street (Route 62) on a downhill grade. When Main Street (Route 62) was last resurfaced, the first 50 feet of Forest Ridge Road were also resurfaced. However, the roadway was regraded at that time so that the last 50 feet of Forest Ridge Road slopes upward toward Main Street (Route 62) to match the finished elevation of Main Street (Route 62). As a result, a low point has been created on Forest Ridge Road just south of the intersection where water ponds and freezes during the winter months, causing vehicles to slide into the intersection. GPI recommended the Applicant consider regrading Forest Ridge Road as it approaches Main Street to eliminate the low point and/or properly direct water toward the existing catch basins on Forest Ridge Road. The Applicant has not committed to such regrading of the roadway; however, the Applicant has noted that they are in discussions with the Home Owners Association (HOA) to provide a mill and overlay of Forest Ridge Road. **If a mill and overlay is completed, the roadway surface should be graded to eliminate the low point and ensure proper drainage on Forest Ridge Road. Independent of discussions with the HOA, CPW Engineering recommends that the Forest Ridge Road approach to Main Street be regraded as part of the project to remove the low point, eliminate the ponding and icing hazard, and improve the safety of the approach given that the project’s traffic will result in the approach operating at Level-of-Service (LOS) F with queues of four vehicles.”***

**Response:** Applicant expressly acknowledges that traffic increases for the Project do not independently create a failing (LOS F) condition at this intersection, further acknowledging that maintenance of the existing roadways and signage along Forest Ridge Road and other private neighborhood streets are the responsibility of the Homeowners Association(s). “Work with the neighborhood” means that the Applicant is in discussions with the HOA to provide a fair share portion of the signs, markings, and a roadway mill and overlay along Forest Ridge Road which are currently paid for through monthly roadway maintenance fees associated with the HOA(s). When the next mill and overlay is scheduled, the HOA and/or CPW Engineering can inform the paving contractor of the “low point” drainage concern so that the new pavement leveling course can be adjusted for drainage if required. While the Applicant has not committed to any formal mitigative actions relative to roadway grading or drainage, the Applicant has continued discussion with the various HOA’s in an effort to be a meaningful contributor to the ongoing maintenance of Forest Ridge Road now and in the future.

*Comment 25: “Sheet C-106A of the site plan package depicts snow storage areas along both sides and within the median on the proposed site driveway. This snow has the potential to obstruct sight lines for vehicles entering and exiting the site driveway. In addition, the fire truck turning path diagram on Sheet C-107A indicates that the truck chassis will extend over the snow storage area when making a left turn into the site driveway. GPI recommended that all snow storage areas within 25 feet of an intersection be eliminated to avoid sight line obstructions, avoid icing of intersections due to snow melt, and ensure adequate turning movements for fire apparatus. The Applicant has agreed to revise the snow storage areas as part of the final site plan set. GPI will review the site plan set for compliance with this comment upon receipt of the plans.”*

**Response:** Acknowledged, no further response required.

*Comment 26: “Although the Applicant has proposed sidewalks along the perimeter of Buildings A and B, the Applicant has not provided any connections between these two sidewalk systems. GPI recommended the Applicant extend the sidewalk at either end of Buildings A and B out to the internal roadway and provide curb ramps and a crosswalk across both ends of the parking aisle separating Buildings A and B. The Applicant has agreed to extend the sidewalks accordingly as part of the final plan set. GPI will review the site plan set for compliance with this comment upon receipt of the plans.”*

**Response:** A centralized pedestrian connection has been provided between the building with a raised pedestrian crossing for enhanced safety of the crossing. A bus stop was also added to this location.

*Comment 29: “The Applicant has agreed to appropriately located the speed table proposed along the site driveway on the final plan set. GPI will review the site plan set for the appropriateness of the speed table’s location upon receipt of the plans.”*

**Response:** The speed table along the site driveway has been revised. Likewise, a raised pedestrian crossing has been provide between the buildings in a centralized location along the desired pathway.

Comment 30: *“While a STOP sign and STOP line are provided on the northbound approach to the parking aisle that separates Buildings A and B, there is not STOP line or STOP sign proposed on the opposing approach exiting the northerly parking aisle. The Applicant has agreed to install a STOP line and STOP sign on this approach and will incorporate in the final plan set. GPI will review the site plan set for compliance with this comment upon receipt of the plans.”*

**Response:** A STOP sign and STOP line was added on this approach as recommended.

Comment 31: *“GPI previously recommended that the Applicant consider a pedestrian connection between the pool area and the perimeter sidewalk around Building A to provide a direct pedestrian connection between the parking along the north side of Building A and the pool area. The Applicant has noted that the sidewalk system will be revised on the final plan set. GPI will review the site plan set for adequacy of the proposed sidewalk network upon receipt of the plans.”*

**Response:** There is a secure enclosed pathway provided through the building at the first floor for access to the northerly parking area between the buildings for residents. There are also three (3) pedestrian connections to the perimeter sidewalk from the courtyard.

Comment 33: *“The Applicant has provided a signal warrant analysis for the intersection of Main Street / Forest Ridge Road that addresses the comments contained in GPI’s December 19, 2024 review letter. GPI has reviewed the additional traffic count data, traffic volume projections, and signal warrant analysis performed by the Applicant. Many of the 2024 existing conditions volumes utilized in the signal warrant analysis were lower than the raw count data from the October 10, 2024 traffic counts. Otherwise, GPI concurred with the methodology used to perform the signal warrant analysis. GPI performed an updated signal warrant analysis with the corrected traffic volumes, which is included as an Attachment to this letter. The results of the updated analysis indicate that none of the volume-related warrants (Warrants 1, 2, and 3) for installation of a traffic signal are anticipated to be met at the Main Street / Forest Ridge Road intersection upon opening condition.”*

**Response:** Acknowledged, no further response required.