TETRA TECH

September 6, 2023

Mr. John Lee, Chairman
135 School Street
Walpole, MA 02081
United States

Re: Comment Letter 1
1015 East Street – "Gilmore"
Comprehensive Permit (40B) Peer Review
Walpole, Massachusetts

Dear Mr. Chairman:

Tetra Tech (TT) has reviewed specific submittal materials for the above-referenced Project to assist the Town of Walpole Zoning Board of Appeals (Board) in its Comprehensive Permit review of the proposed Multi-Family Residential Development at 981, 989 and 1015 East Street hereafter referred to as the "Gilmore 40B Project". The following letter provides comments generated during our review of Applicant submittals and generally focuses on substantive concerns that speak to issues whose eventual resolution may substantially impact Project design or could otherwise result in potentially unsafe conditions or unanticipated impacts.

The comments below are intended to guide discussion as well as inform development of the revised plans and we expect to provide more detailed comments as the design and discussion advances. We understand revised submittals have been provided to the ZBA. The comments below are based on the prior submittals and do not reflect any changes or supplemental information that may be included in the revised submission. Our review is based on the following materials available on the ZBA's website as of August 30, 2023:

- A plan set titled "Preliminary Civil Engineering Plan Set" for Proposed Multi-Family Development, 981, 989, & 1015 East Street, Town of Walpole, Norfolk County, Massachusetts (Site Plans), dated May 31, 2023 prepared by Bohler Engineering (Bohler).
- A series of figures including a Landscape Plan (Sheet C-701) dated May 31, 2023 and an undated "Proposed Site Lighting" figure prepared by Bohler.
- A "Fire Truck Turn Exhibit" Sheet 01, dated May 31, 2023, prepared by Bohler.
- Two (2) untitled figures both noted as Sheet 01 and dated May 31, 2023, prepared by Bohler. A 20 scale drawing showing a proposed crosswalk and flashing beacon and green arrow depicting pedestrian route and a 40 scale drawing showing only the pedestrian route.
- A letter to Patrick Deschenes, Department Director "RE: Engineering Memorandum - Proposed Multi-Family Development - 981, 989 & 1015 East Street - Walpole, MA" dated May 31, 2023, prepared by Bohler (Engineering Report).
- A "Transportation Impact Assessment" for a Proposed Residential Development - 1015 East Street (Route 27) - Walpole, Massachusetts (Traffic Report) dated October 2022, prepared by Vanasse & Associates Inc (VAI).
- A memorandum from VAI dated April 27, 2023 with subject line title "Transportation Impact Assessment Update" (Traffic Report Update).
- Related Exhibits
- Comment letters from Town Boards, Commissions and Departments.

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The Plans and accompanying materials were reviewed for good engineering practice, overall site plan efficiency, stormwater, utilities, traffic and public safety. In general, the plans and supporting materials were thoughtfully prepared and we appreciate the clarity and completeness of documents provided. However, some critical drainage design information is missing that in our opinion should be provided to confirm the program described is capable of meeting applicable stormwater design standards. Our initial comments are provided below and are generally organized by submittal.

Site Plans

Demolition Plan (Sheet C-201)

1. The limits of abandonment vs. removal are unclear. We recommend any utilities discontinued by the Project within the public way be removed to avoid potential future settlement, utility congestion or confusion that would otherwise become the Town's responsibility to address.
2. No invert information is provided for existing sewer or drain structures. Given the Project proposes relocation of sewers serving off locus properties and modification of an existing off locus drainage outfall improvement we recommend the Board request the applicant provide as-found invert and pipe size information.
3. The Demolition Plan is the only plan showing existing conditions information, yet it lacks critical information such as existing contours or location of critical railway infrastructure adjacent to the property. Recommend the applicant provide an Existing Conditions Plan prepared by a Massachusetts Professional Land Surveyor including a verified property boundary including metes and bounds and showing, at a minimum, all topographic features, wetland resource areas and/or buffer zones and recoverable utility information such as pipe sizes and invert elevations. Given the relatively tight site layout, small adjustments in the Project boundary may result in substantive changes.

Site Layout Plan (Sheet C-301)

4. It's unclear how the loading area is intended to operate given the location of the proposed garage entrance. We recommend the applicant be required to provide a plan showing expected loading operations including clear indication of vehicle staging.
5. The sidewalk awkwardly terminates at the garage/loading area precluding the ability for a resident to walk around the building on a sidewalk.
6. Vehicles exiting the garage will have a difficulty seeing vehicles approaching from the east due to the exiting approach angle and the garage wall. Recommend applicant consider providing a mirror or similar device to providing exiting vehicles a means of considering approaching traffic.
7. There appears to be no substantive space to store snow. Recommend the applicant provide a summary of how snow will be managed on site given the apparent lack of space available.
8. A small portion of the patio area near the southwest corner of the building extends into the public way. Typically, private patio space would not encumber the public way.
9. There is almost no landscape relief or vertical interest in the parking area. Recommend the applicant consider forgoing 2-3 parking spaces to allow for interior landscape islands with street trees to break up the long run of parking along the building's north side.

Grading and Drainage Plan (Sheets C–401)

10. Building finish floor elevation appears to be mislabeled as 442.0 instead of 412.0. Please address in future submittals.

11. A wall is shown along the northwest property boundary that retains approximately 5 feet of grade on the abutting property yet does not provide any offset from the property line in which to accommodate the construction without impacting the abutting property. Recommend the applicant provide a description of how they intend to construct the wall in the location shown without impacting the abutting property or otherwise modify the layout.

12. The design includes several underground infiltration systems but does not appear to provide any test pit information verifying assumed soil conditions or estimated seasonal high groundwater. Recommend the applicant provide test pit results verifying assumed soil and groundwater conditions to demonstrate viability of the proposed stormwater design.

13. Infiltration System 1 shows no outlet despite the model indicating a 12" discharge and the system is not sized adequately to empty by infiltration nor is any overflow provided. As shown, the system will overflow to East Street via CB-101. Recommend the design be modified so that no discharge is directed to the public way.

14. Off locus drainage work is proposed at the northeast corner of the site which is critical to the design and functionality of the proposed stormwater improvements and the outlet elevation which is also critical is noted as "approximate" and appears to conflict with contour and wetland information shown in the same area. Recommend the plans be modified to address the issues noted and show how the proposed system will discharge and all improvements required. Documentation provided does not demonstrate a viable stormwater design.

15. The plan indicates a Bordering Vegetated Wetland (BVW) is located at the northeast corner of the site and that drainage work is proposed within it and a substantial portion of the parking lot (including Stormwater Management Area 3) is within the 100-foot buffer zone subject to jurisdiction of the Massachusetts Wetlands Protection Act.

Utility Plan (Sheet C-501)

16. The proposed sewer relocation results in sewers with very shallow slopes including at least one section whose slope is substantially lower than recommended by NEWPC TR-16 which is the recognized standard for public sewer design. The Project proposes an 8-inch public sewer at 0.26% slope when TR-16 recommends a minimum 0.4% slope for 8-inch sewers. Recommend the applicant provide documentation demonstrating the proposed sewer relocations comply with minimum standards described in Chapter 2 of TR-16.

Soil Erosion & Sediment Control Plan (Sheet C-601)

17. The alignment of the stone construction entrances creates an awkward entry onto East Street. Recommend the entrances be oriented at right angles to East Street as shown on the construction detail.

18. The plan does not show any perimeter controls (ie. compost sock) along the eastern site boundary despite proposed grade being directed towards the abutting parcel. Recommend the plan be modified to incorporate perimeter controls wherever grade slopes away from the subject parcel.

Soil Erosion & Sediment Control Notes and Details (Sheet C-602)

19. The "Compost Sock" detail shows hay bales rather than compost filter sock.

Landscape Plan (Sheet C-701)

20. The plan shows a single canopy tree in the southeast planting area which is inconsistent with that shown on the Cover, Sheet A010 and Sheet A401 of the Architectural Package suggesting otherwise. Recommend the Landscape Plan and the Architectural Plans be coordinated to present a single expectation.
21. The plan shows landscape improvements within the public way. Recommend any decision approving the Comprehensive Permit include a condition requiring the Project to maintain any landscaping proposed within the public way.
22. The submittals include conflicting Landscape Plans with identical dates and titles. Please clarify which plan applies, Exhibit H or Landscape Plan included in the Civil Plan Set and include applicable plan in future Civil Plan sets.

Lighting Plan (Sheet C-703)

23. The plan indicates light from the project will spill onto abutting parcels along the entire project boundary and at significant intensity (> 2 fc) at several locations.
24. The plan does not appear to be consistent with proposed fixture layout. For example, light levels near the light fixture in the northeast parking area are shown to increase as you move away from the fixture. Recommend the plans be modified to reflect the fixture layout shown and that light spill onto abutting property be eliminated or at least reduced to no greater than 0.2 fc unless otherwise approved by the abutting landowner.

Detail Sheet (C-902)

25. The retaining wall detail provided suggests significant excavation and the installation of geotextile fabric anchors will be required on the abutting railroad property. Recommend the applicant confirm intent or otherwise modify the design.

Detail Sheet (C-903)

26. The details for the stormwater storage systems lack critical information required to confirm system dimensions and required separation from groundwater. Recommend the applicant be required to provide basic design information needed to reasonably conclude the systems are capable of meeting design criteria of the Massachusetts Stormwater Handbook. At a minimum, the information should include (1) separation from ESHGW, (2) system bottom elevation, and (3) isolator row elevation.

Bohler Engineering Memorandum

27. The memorandum does not include figures depicting existing or proposed watershed boundaries used in the analysis. Recommend applicant provide figures showing the boundaries to assist in our

review of the analysis. Please note, the analysis identifies a single discharge point (DP1) when the proposed plans indicate runoff will discharge from the site directly to East Street and to the abutting property to the east. The analysis should compare pre- and post-development conditions at each point where runoff leaves the subject property to insure no increase in discharge to any abutter.

28. The memorandum indicates soil conditions were assumed and groundwater was estimated based on "boring data prepared by McPhail Associates" neither of which complies with methods prescribed in the Massachusetts Stormwater Handbook. We recognize the memorandum notes that "Test pits will be completed to confirm onsite soil classifications and depth to seasonal high groundwater and will be provided in a drainage report prepared and submitting during subsequent permitting efforts." However, that information is foundational to determining if the project as currently described can be constructed in compliance with applicable standards. We recommend the applicant conduct at least two (2) test pits to provide a more conclusive assessment of soil conditions given (1) draw down times approach the maximum 72-hour limit, (2) presence of nearby wetlands suggest water surface may be higher than indicated in borings, (3) analysis indicates almost no "wiggle room" in the pre- vs. post peak runoff comparison and (4) options for expanding or relocating systems is limited. If test pits show inconsistent results additional pits may be needed.

29. Pond #1 does not match conditions shown on plans. Please address inconsistency.

30. Drawdown calculations are based on an assumed infiltration rate for the higher of two potential type "C" soils without any supporting field investigation. If actual field testing indicates soils are slower infiltrating soils, then drawdown times would exceed maximum allowed by a significant amount. Recommend applicant be required to provide at least some basic on-site testing to support critical design assumptions.

Traffic

31. The building program, including number of residential units, parking supply and parking layout (surface versus garage parking spaces) presented in the traffic study update, updated architectural plans and updated site plans are inconsistent. Tetra Tech recommends that the Applicant confirm the currently proposed building program.

32. The Applicant is seeking approval for a reduction in approximately 40 percent in the parking supply required by local zoning bylaws. The Applicant has submitted a parking narrative (dated September 6, 2023) describing the anticipated parking operations at the site and a comparison of the proposed parking supply to other area residential developments. Tetra Tech recommends that the Applicant also provide an estimate of peak parking demand based on empirical data from other similar residential developments or using industry standard parking rates published by the Institute of Transportation Engineers to ensure that adequate parking will be provided.

33. The traffic study included a crash analysis of the study intersections which indicated that the unsignalized Elm Street/East Street and Elm Street/West Street intersections experience above-average crash rates. Per the TIA, the Applicant commits to conducting a Road Safety Audit (RSA) at these locations to identify potential short-term and long-term improvements to enhance safety. The TIA also states that the Applicant will design and construct short-term improvements identified in the RSAs. Any improvements proposed for these locations will require review and approval by the Town. We recommend any decision approving the Project include a condition requiring the Project to

perform the RSA and construct any short-term improvements approved by the Town prior to occupancy.

34. The TIA states that the Applicant commits to designing and implementing traffic signal timing, phasing and coordination improvements at the coordinated signal system along Main Street at its intersections with East Street, Stone Street/Glenwood Avenue/West Street and Common Street/Elm Street. Any improvements proposed for these locations will require review and approval by the Town. We recommend any decision approving the Project include a condition requiring the Project to perform the work described prior to occupancy.
35. Tetra Tech recommends that the Applicant provide the supporting MassDOT crash data used in the TIA crash analysis for the Town to review.
36. The TIA states that secure bicycle parking will be provided in a bike room within the parking garage, yet no such space is shown of the proposed garage floor plan. Tetra Tech recommends that the bike room be shown on the garage floor plan noting the anticipated bike path between the bike room and the surface lot. Please note any adjustments to parking count that result.
37. The fire truck turning exhibit shows the fire truck accessing the site to/from the east via East Street. Tetra Tech recommends that the Applicant also evaluate emergency vehicle access at the site to/from the west. Additionally, Tetra Tech recommends that the Applicant describe emergency vehicle access to the proposed underground parking garage and the south side of the proposed building through the 12-space parking lot. The Applicant should review the updated site plan with the Walpole Fire Department to ensure that safe and efficient access to the site will be provided.
38. Tetra Tech recommends that the Applicant describe anticipated delivery and moving truck operations and conduct an AutoTurn analysis to confirm that these services/vehicles can be adequately accommodated on-site without impeding on-site access, circulation, and/or parking as well as operations on East Street.
39. Exhibit G suggests a package delivery pull off area will be provided which is inconsistent with the Site Plans and the Lighting Plan. Please clarify.
40. Tetra Tech recommends that the Applicant describe the anticipated trash pick-up operations and conduct an AutoTurn analysis to confirm that trash pick-up can be adequately accommodated without impeding on-site access, circulation, and/or parking as well as operations on East Street.
41. Tetra Tech agrees with the proposed site access improvements to provide a Stop bar at the site driveway approaches to East Street. Tetra Tech recommends that a Stop sign be installed for vehicles exiting the garage and that all proposed traffic signage and pavement markings for the project be MUTCD-compliant.
42. The TIA states that the Applicant commits to implementing a Transportation Demand Management (TDM) program for the Project. Tetra Tech recommends that the Applicant coordinate the specific elements of the TDM program with the Town as a condition of approval.
43. Tetra Tech recommends that the site plans be updated to include stopping sight distance (SSD) and intersection sight distance (ISD) plans and profiles at all proposed site driveways on East Street to confirm that minimum American Association of State Highway and Transportation Officials (AAHTO) SSD and ISD criteria is met based on the observed 85th percentile travel speeds. The Applicant should ensure that any proposed landscaping, signage, and walls do not obstruct sight lines for

vehicles and for pedestrians. Additionally, there is an existing horizontal curve on East Street adjacent to the westerly side of the site. The Applicant should confirm that sight line easements from nearby properties will not be required to meet minimum SSD and ISD criteria.

44. The October 2022 TIA included an evaluation of SSD and ISD at one site driveway location. The site plan shows four site driveways proposed along East Street. Tetra Tech recommends that the Applicant conduct a sight distance evaluation of all proposed site driveway intersections with East Street. The evaluation should be based on the observed 85th percentile travel speeds and the calculations should be provided to the Town for review.
45. The Applicant has provided a sidewalk exhibit which presents a conceptual sidewalk extension from the proposed westerly site driveway on the north side of East Street to the existing crosswalk at Glenwood Avenue. Per the Applicant's September 6, 2023 response to DPW comments, the Applicant indicates that the conceptual sidewalk improvements shown in the Exhibit would be engineered and installed by the Town. Tetra Tech recommends that this assumption be confirmed with the Walpole DPW and that the Project construct the portion of the sidewalk along the site frontage.
46. Given that the trip generation estimates summarized in the TIA and TIA update take credit for available public transportation and that the Applicant is seeking approval of a parking supply approximately 40 percent less than required by zoning, Tetra Tech recommends that the Applicant inventory the existing pedestrian connections between the site and the Massachusetts Bay Transportation Authority (MBTA) Walpole commuter rail station. This should include the connection between the MBTA station and Elm Street. As part of this inventory, Tetra Tech recommends that the Applicant identify potential improvements to any existing deficiencies, including but not limited to the installation of rectangular rapid flashing beacons at crosswalks and safety enhancements at any rail crossings.

If you have any questions or comments, please feel free to contact us at (508) 786-2200.

Very truly yours,

Sean P. Reardon, P.E.
Vice President

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