

April 25, 2024

Groton Planning Board  
c/o Mr. Takashi Tada  
Land Use Director/Town Planner  
Town of Groton  
173 Main Street  
Groton, MA 01450

RE: Nitsch Project #13346.28  
797 Boston Road  
Site Plan and Special  
Permit Review  
Groton, MA

Dear Planning Board Members:

Nitsch Engineering (Nitsch) has received and reviewed the following documents:

1. The transmittal letter entitled "Revisions to Site Plan and Special Permit Submittal", dated April 17, 2024, and prepared by Howard Stein Hudson;
2. The Site Plan (the Plans) entitled "Site Plan for Proposed Age Restricted Housing Development, 797 Boston Road, Groton, MA" (18 sheets), dated February 16, 2024, revised April 17, 2024, and prepared by Howard Stein Hudson;
3. The Architectural Plan Set, dated April 17, 2024, and prepared by The MZO GROUP;
4. The Architectural 3-D renderings, dated February 22, 2024, and prepared by The MZO GROUP;
5. The Supplemental Data Report (Stormwater Report) for the Proposed Age Restrict Housing Development, 797 Boston Road, Groton, Massachusetts (52 sheets), dated February 16, 2024, revised April 17, 2024, and prepared by Howard Stein Hudson;
6. Existing Conditions Survey Plan, dated July 13, 2023, and prepared by WSP USA Inc.; and
7. The Applicant's Peer Review Response Letter dated April 17, 2024, and prepared by Howard Stein Hudson.

Nitsch has reviewed the Plans and supporting documents to determine conformance to the following:

1. "Zoning Bylaw", Chapter 218 from the Code of the Town of Groton, latest version; and
2. "Site Plan Review", Chapter 381, Part 5 from the Code of the Town of Groton, latest version.

This letter includes Nitsch Engineering's original comments in standard text, Howard Stein Hudson's (HSH) responses in *italics*, and our current comments in **bold**.

### ZONING BYLAW

1. Section 218-6.2 states the maximum impervious coverage in the R-A district is 25%.

The Applicant should confirm the proposed impervious coverage of the property. Based on the information provided in the Stormwater Report, it appears the proposed impervious coverage exceeds the maximum allowed.

*HSH Response: In initial discussions with the Town of Groton Department Heads it was confirmed that impervious coverage did not include uses of porous pavement. The proposal calls for the inclusion of porous pavement to balance the impervious on the lot to ensure that the 25% impervious coverage is met.*

*The impervious surfaces within our stormwater calculations have been considered porous pavement to be impervious for conservative measures and offsite impervious surfaces that runoff onto the locus have also been included.*

**This comment has been addressed.**

2. Section 218-9.3.B.(4)(b) states outdoor lighting fixtures shall be the cutoff type, mounted no higher than 15 feet, oriented and shielded to avoid glare on adjoining premises.

The Applicant should confirm all site lighting fixtures are cutoff type and the parking lot and driveway light pole heights are less than 15 feet.

*HSH Response: The proposal calls for full cutoff fixtures and pole height is 12 feet.*

**This comment has been addressed.**

3. Section 218-9.3.B.(4)(c) states to avoid traffic concern, any egress shall have at least 300 feet of visibility in each direction along state-numbered roads and at least 200 feet of visibility along other roads.

The Applicant should provide sight distances at driveways as required by this Section.

*HSH Response: The proposed egress from the site has 390 ft visibility to the east and to the west.*

**This comment has been addressed.**

4. Section 218-9.3.B.(4)(f)[3] states the design of grading shall minimize the volume of earth cut and fill, in general with no cut or fill greater than five feet.

The Applicant should provide a cut and fill analysis to confirm the net amount of cut or fill proposed. The Plans appear to show no cuts or fills greater than five feet.

*HSH Response: Please see attached cut/fill report.*

**This comment has been addressed. The cut/fill report notes a net fill of 1,618 cubic yards.**

## **SITE PLAN REVIEW**

5. Section 381-39.B. states the site plan application shall contain an existing condition plan that indicates all existing site features, including property lines, easements, buildings, parking lots, utilities (above and below ground), conservancy (wetlands), and topography.

The Locus Map, Sheet C.3, includes some but not all this information. The Applicant should provide an existing condition plan meeting the requirements of this Section.

*HSH Response: Please see attached Existing Conditions Survey by WSP dated 7-13-23.*

**This comment has been addressed.**

6. Section 381-39.E. states the site plan application shall contain zoning district boundary lines of the locus and all land within 200 feet of the parcel, including overlay districts.

The Applicant should update the Plans to show all zoning district boundary lines and overlay districts, including the Water Resources Protection District.

*HSH Response: The Locus Map has been updated to show the Zoning Districts and the Water Resources District within 200 feet of the parcel.*

**This comment has been addressed.**

7. Section 381-39.M. states the site plan application shall contain information on the location, size, and type of loading, storage, and service areas.

The Applicant should provide information on how deliveries to the buildings will be made and where delivery and mail trucks will park.

*HSH Response: Delivery vehicles will consist of only those relevant to residential living and are intended to consist of Amazon, UPS, and FedEx style deliveries. Parking spaces, in excess of the zoning requirement has been provided in close proximity to the buildings for parking and unloading such deliveries.*

**This comment has been addressed.**

8. Section 381-39.O. states the Planning Board may require an assessment of traffic impact and safety conditions performed by a professional traffic engineer. All plans shall indicate sight distances at proposed and existing driveway intersections within 200 feet of the site.

The Applicant provided trip generation calculations for the proposed development. Per the Institute of Transportation Engineers Trip Generation Manual, 11<sup>th</sup> Edition, Nitsch concurs with these calculations. Nitsch defers to the Planning Board if a traffic study is required. The Applicant should provide sight distances as required by this Section.

*HSH Response: See response to #3.*

**This comment has been addressed.**

9. Section 381-40.B.(2) states access road/parking shall be 0.5 footcandle minimum (maintained) and 30.0 footcandles maximum.

The Plans indicate some sections of the driveways and parking lot have light levels less than the minimum allowed.

*HSH Response: The lighting design has been adjusted to meet the minimum lighting requirements of 0.5 footcandle for all areas of the parking lot and 1.0 footcandle walkways.*

**This comment has been addressed.**

10. Section 381-40.B.(3) states walkway lighting shall be 1.0 footcandle minimum (maintained) and 30.0 footcandles maximum.

The Plans indicate some sections of the walkways have light levels less than the minimum allowed.

*HSH Response: The lighting design has been adjusted to meet the minimum lighting requirements of 0.5 footcandle for all areas of the parking lot and 1.0 footcandle walkways.*

**This comment has been addressed.**

11. Section 381-40.B.(4) states the plan shall indicate the light hours of operation, especially shut off times.

The Plans should be updated to indicate site lighting hours of operation and shut off times.

*HSH Response: We defer to the Planning Board to establish lighting hours. Hours, once established, will be added to the plans.*

**Nitsch has no further comments on this item and defers to the Planning Board for their preferred lighting hours.**

12. Section 381-40.D.(5) states curbing shall be vertical granite at the access drive radii.

The Plans should be updated to note vertical granite curb at the access drives and along public right-of-ways. The Plans currently call for sloped granite curb.

*HSH Response: The curb radii at the Forge Village Road entry and exit have been updated to be vertical granite curbing.*

**This comment has been addressed.**

13. Section 381-40.D.(7) states curbing shall be placed at the edges of all surfaced areas and shall be vertical granite curb.

The Plans should be updated to note vertical granite curb at the access drives and in the parking lot. The Plans currently call for sloped granite curb.

*HSH Response: All curbing within the parking lot and access drives has been updated to vertical granite curbing.*

**This comment has been addressed.**

14. Section 381-40.D.(9)(b) states parking lot and access drive pavement shall consist of a 2-1/2 inch binder course and 1-1/2 inch top course.

The Plans should be updated to note the required thickness for the parking lot and access drive asphalt binder course. The Plans currently call for 2 inches of asphalt binder course.

*HSH Response: The parking lot pavement section detail has been updated to include 2-1/2" binder course.*

**This comment has been addressed.**

15. Section 381-40.D.(10) states all sidewalks shall be poured Portland cement concrete four inches in depth.

The Plans should be updated to note concrete pavement for all sidewalk materials. The Plans currently call for asphalt pavement at sidewalks.

*HSH Response: Sidewalks throughout the site have been revised to concrete.*

**The concrete sidewalk detail on Sheet C.13 should be provided with a title, the concrete thickness should be noted as 4 inches, and welded wire fabric should be provided at mid-depth.**

16. Section 381-40.E.(1) states service facilities such as dumpsters shall be screened around their perimeters.

The Plans should be updated to include a detail for the dumpster pad and fence enclosure.

*HSH Response: A dumpster pad detail with fence enclosure has been added to the details in the plan set.*

**Nitsch recommends the granular base material thickness for the dumpster pad be increased to 8 inches.**

#### **GENERAL COMMENTS**

17. The Applicant may want to consider installing removable bollards at the ends of the porous pavement driveway, in addition to the already proposed signage, to prevent access to general vehicular traffic.

*HSH Response: The emergency only access has been removed from the plan and therefore this comment is no longer applicable.*

**This comment is no longer applicable and can be considered closed.**

18. If sloped granite curb is used anywhere onsite, the detail should be updated to show finish grade at the top of the curb.

*HSH Response: All reference to sloped granite curbing has been removed from the plan set.*

**This comment is no longer applicable and can be considered closed.**

#### **RECOMMENDATIONS**

Nitsch recommends the outstanding items noted above be addressed by the Applicant prior to the Planning Board granting approval of the Site Plan and Special Permit applications.

Groton Planning Board: Nitsch Project #13346.28  
April 25, 2024  
Page 6 of 6

If the Planning Board has any questions, please let us know.

Very truly yours,

**Nitsch Engineering, Inc.**



Rones Lubin  
Project Designer

RL/jeg

Approved by:



Jared E. Gentilucci, PE, CPESC, LEED AP BD+C  
Deputy Director of Civil Engineering