

Ref: 9361

February 17, 2023

Mr. Robert Moriarty, Chair  
Topsfield Zoning Board of Appeals  
Town of Topsfield  
8 West Common Street  
Topsfield, MA 01983

Re: Response to Independent Peer Review for Emerson Homes  
Proposed Age-Qualified Multifamily Residential Development – 10 High Street (Route 97)  
Topsfield, Massachusetts

Dear Chair Moriarty and Members of the Zoning Board of Appeals:

Vanasse & Associates, Inc. (VAI) is providing responses to the comments that were raised in the February 3, 2023 *Independent Peer Review for Emerson Homes* letter prepared by Beals and Thomas, Inc. (B+T) in reference to their review of the Chapter 40B Comprehensive Permit Application Filing submitted by Emerson Homes, LP (the “Applicant”) in support of the proposed age-qualified multifamily residential development to be located at 10 High Street (Route 97) in Topsfield, Massachusetts (hereafter referred to as the “Project”). Included with B+T’s letter as an attachment was a letter dated January 30, 2023 prepared by Chappell Engineering Associates, LLC (CEA) that included comments pertaining to CEA’s review of the September 15, 2022 *Transportation Impact Assessment* (the “September 2022 TIA”) prepared by VAI in support of the Project. Listed below are the comments that were identified by B+T and CEA in their respective subject letters followed by our response on behalf of the Project Applicant.

## **B+T FEBRUARY 3, 2023 INDEPENDENT PEER REVIEW OF EMERSON HOMES**

### **Traffic Comments**

**Comment 18:** *Please see the “Traffic Peer Review” attached hereto provided by Chappell Engineering Associates dated January 30, 2023.*

**Response:** Responses to CEA comments follow.

**Comment 19:** *Relative to the request from Chappell Engineering Associates for defined sight line triangles, with only 100-ft of frontage, we request that the Applicant document if easements will be required from abutting properties to keep the sight triangles maintained and clear of vegetation.*

**Response:** As can be seen on Figure 1, the sight triangle areas are contained within the Project site or the public right-of-way. As such, sight line easements are not required for the Project.

**CEA JANUARY 30, 2023 TRAFFIC PEER REVIEW**

**Traffic Study Review**

**Comment 1:** *The correct number of parking spaces should be clarified.*

**Response:** On-site parking will be provided for 48 vehicles.

**Comment 2:** *The traffic study area is appropriate for the proposed project and its expected traffic impacts.*

**Response:** No response required.

**Comment 3:** *CEA concurs with the selected time periods used for analysis.*

**Response:** No response required.

**Comment 4:** *Based on available MassDOT permanent count station data on Interstate 95 (I-95) in Boxford (No. 5085), traffic during the month of May is approximately 3.2 percent higher than annual average-month conditions. Therefore, the existing volumes were not downwardly adjusted to provide a conservative analysis. CEA concurs with these findings.*

**Response:** No response required.

**Comment 5:** *Given the current traffic conditions associated with the coronavirus pandemic, the study adjusted the May 2022 traffic volumes to represent normal, pre-COVID traffic conditions. Traffic data from MassDOT were reviewed to determine what adjustments to the traffic volume data would be required. MassDOT permanent count station data on Yankee Division Highway in Beverly were reviewed. Based on the data, it was found that traffic in May 2022 was approximately 5.5 percent less than in May 2019. Therefore, since the volumes were already noted to be seasonally above average by approximately 3.2 percent the volumes were further adjusted upward by 2.3 percent to represent pre-COVID conditions.*

*It should be noted that per the new MassDOT Traffic and Safety Engineering 25% Design Submission Guidelines, traffic volume data collected after March 1, 2022, are no longer subject to any adjustments to represent pre-pandemic traffic volume conditions, except in areas where land use is predominantly office. Since the traffic volume data were collected in May 2022 and land use near the site is a mix of commercial and residential, the traffic volume data obtained were not subject to any adjustments. Therefore, since the counts were upwardly adjusted, the volumes likely represent an above average condition.*

**Response:** No response required.



**Comment 6:** *The applicant has committed to facilitating a Road Safety Audit (RSA) prior to the issuance of a Certificate of Occupancy. It is recommended that the Town of Topsfield include this as a condition of any approval of the project.*

**Response:** No response required.

**Comment 7:** *A 7-year design horizon was used for the No-Build and Build condition analyses consistent with MassDOT's Transportation Impact Assessment Guidelines. Traffic volume data was compiled from MassDOT permanent count stations in Topsfield and Boxford. Based on the data, traffic volumes have fluctuated over the past several years, with the average growth rate found to be approximately 1.44 percent per year. Therefore, an annual growth rate of 1.5 percent per year was used to project the future No-Build volumes. CEA concurs with this growth rate.*

**Response:** No response required.

**Comment 8:** *The Traffic study noted the following developments near the site....Due to the low traffic generation of the two residential developments, the study assumed them included in the 1.5 percent annual growth rate. Since the potential commercial and mixed-use developments have not filed any formal applications to the town, traffic from these developments were not included in the projections. CEA concurs with these assumptions.*

**Response:** No response required.

**Comment 9:** *The Town of Topsfield and MassDOT were also contacted to determine if there are any planned roadway improvements in the study area that should be included in the study. Based on these discussions, there are no roadway improvement projects planned in the area.*

**Response:** No response required.

**Comment 10:** *The anticipated trip generation of the development was estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual for Senior Adult Housing – Multifamily (Land Use Code 252). As such, 144 new weekday trips can be expected with 9 trips (3 in and 6 out) occurring during the weekday AM peak hour and 11 trips (6 in and 5 out) occurring during the weekday PM peak hour. CEA concurs with these trip estimates.*

**Response:** No response required.

**Comment 11:** *The traffic study describes that the trip distribution methodology for the residential development was based on Journey-to-Work data obtained from the U.S. Census for persons residing in the Town of Topsfield. Based on these data, 11 percent of the residential traffic will be to/from the northwest on High Street Extension, 16 percent will be to/from the north on Main Street, 2 percent will be to/from the northeast on East Common Street, 60 percent will be to/from the southeast on High Street and 11 percent will be to/from the south on Main Street. CEA concurs with this methodology and distribution assumptions.*



**Response:** No response required.

**Comment 12:** *Capacity analyses were performed at the study area intersections under Existing, No-Build and Build conditions...The development is expected to result in negligible increases in delay and queue lengths. As noted in Comment 6, the applicant has committed to facilitating a Road Safety Audit (RSA) for this intersection [Main Street and High Street/High Street Extension] as mitigation for the project. The RSA will be useful to the Town in identifying both low-cost and high-cost improvements to safety and capacity. It is recommended that the RSA consider all-way stop control at the intersection as the volumes appear to meet the criteria for such control. Based on our preliminary analyses, significant improvements in operations could be achieved with such control.*

**Response:** An all-way stop control configuration will be considered as a part of the RSA.

**Comment 13:** *The signalized intersection analyses were performed using the Highway Capacity Manual (HCM) 2010 methodology as opposed to the newest HCM 6th methodology. Since the difference in the results of the two methodologies is not significant, no further action is required.*

**Response:** No response required.

**Comment 14:** *It is recommended that a sight line plan be developed to specifically identify the areas of vegetation removal necessary to ensure that adequate sight distance will exist. It is further recommended that the sight triangle areas be kept clear of any obstructions such as landscaping, signs, or fences and be regularly maintained to assure adequate sight distance.*

**Response:** Figure 1 depicts the sight triangle areas for the Route 97/Project Site driveway intersection and includes a note stating: "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 windrows located within sight triangle areas that exceed 3.5-feet in height or that would otherwise inhibit sight lines shall be promptly removed." The Applicant will accept a condition requiring that the sight triangle area be kept clear of obstructions pursuant to the note on Figure 1.

**Comment 15:** *The following recommendations are made in the traffic study. These should be included as conditions of any approval of the project:*

- *A sidewalk is proposed along the north side of the site driveway which extends to High Street. Since there is only sidewalk along the west side of High Street and the site driveway intersects from the east, the traffic study recommends that a marked crosswalk with ADA compliant wheelchair ramps and a pedestrian actuated rectangular rapid flashing beacon (RRFB) and pedestrian crossing warning signs be installed for the crossing of High Street. CEA concurs with this recommendation.*
- *The study recommends that ADA compliant wheelchair ramps be provided at pedestrian crossings within the project area. CEA concurs with this recommendation.*





- *The study recommends that signs and landscaping proposed as a part of the project within the intersection sight triangle areas be designed and maintained so as not to restrict lines of sight. CEA concurs with this recommendation.*
- *The study recommends that snow accumulations (windrows) within the sight triangle areas be promptly removed where snow accumulations would impede sight lines. CEA concurs with this recommendation.*
- *Secure bicycle parking should be provided near the residential building. CEA concurs with this recommendation.*

**Response:** No response required.

### **Site Plan Review**

**Comment 16:** *It is recommended that a STOP sign (R1-1) be added to the plan and located adjacent to the stop line.*

**Response:** Figure 2 reflects the addition of a STOP-sign (R1-1) adjacent to the Stop-Line on the Project site driveway approach to High Street, and will also be added to the Site Plans.

**Comment 17:** *A sidewalk is proposed along the north side of the site driveway. There is no existing sidewalk along the east side of High Street. As noted in Comment 15, it is recommended that a marked crosswalk with ADA compliant wheelchair ramps and a pedestrian actuated rectangular rapid flashing beacon and pedestrian crossing warning signs be installed for the crossing of High Street. The site plans do not reflect this. It is recommended that the site plans be updated to show these improvements.*

**Response:** Figure 2 illustrates the recommended pedestrian access improvements, including: i) the addition of a sidewalk segment along the east side of High Street; ii) the installation of a marked crosswalk and ADA compliant wheelchair ramps for crossing High Street; and iii) the installation of a pedestrian actuated Rectangular Rapid Flashing Beacon (RRFB) and associated pedestrian crossing warning signs. These improvements will be added to the Site Plans.

**Comment 18:** *The fire department's largest vehicle should be able to traverse the site. It is recommended that AutoTurn (or a similar program) be used to show a swept-path analysis of the largest fire truck to be used around the site. It is also recommended that the proponent coordinate with the Topsfield Fire Department regarding accessibility to all sides of the building.*

**Response:** The requested vehicle turning analysis will be provided by others under separate cover.

**Comment 19:** *The correct number of parking spaces should be clarified.*

**Response:** On-site parking will be provided for 48 vehicles.



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**Comment 20:** *The Institute of Transportation Engineers Parking Generation Manual, 5th Edition was reviewed to determine if adequate parking is proposed. Based on Land Use Code 252 (Senior Adult Housing – Attached), 44 units would require, on average, 27 parking spaces and an 85th percentile peak parking demand of 30 spaces. Accordingly, the proposed supply of parking should be sufficient to accommodate the expected demand.*

**Response:** No response required.

We trust that this information is responsive to the comments that were raised in the subject letters from B+T and CEA. If you should have any questions or would like to discuss our responses in more detail, please feel free to contact me.

Sincerely,

VANASSE & ASSOCIATES, INC.



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

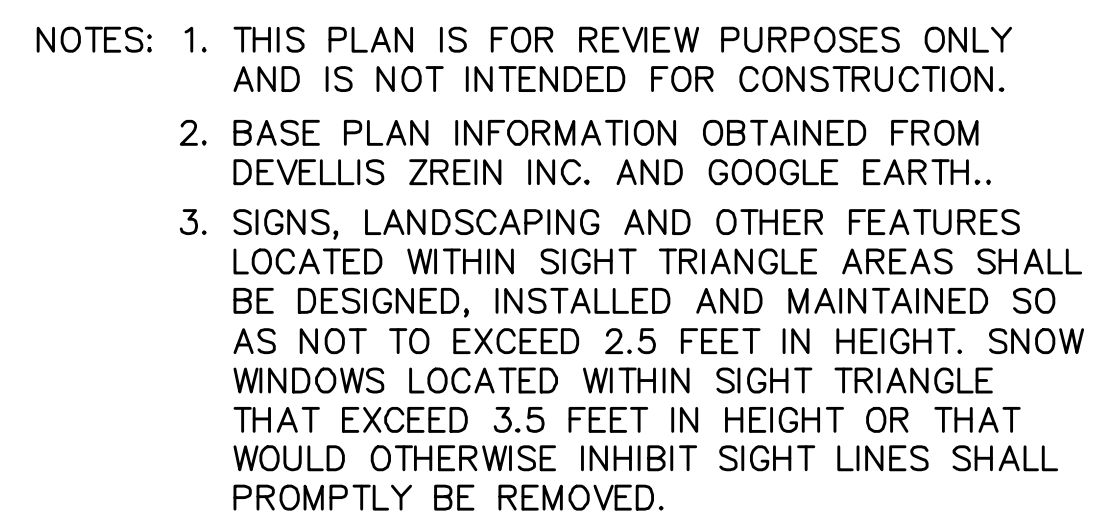
*Professional Engineer in CT, MA, ME, NH, RI, and VA*

JSD/dcl

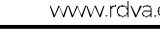
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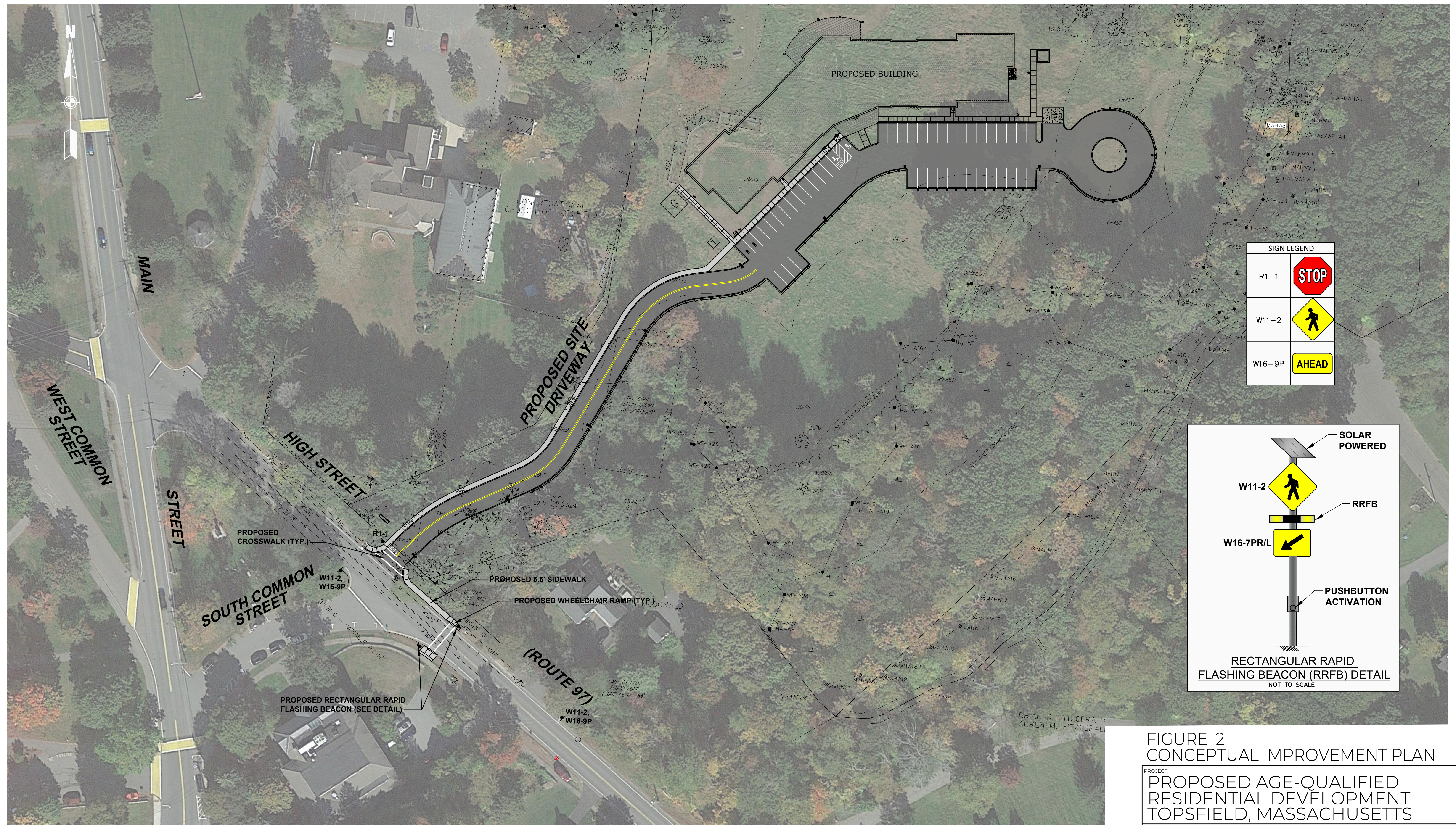




PROJECT: PROPOSED AGE-QUALIFIED  
RESIDENTIAL DEVELOPMENT  
TOPSFIELD, MASSACHUSETTS

NO.	REVISIONS	DATE	 <b>Vanasse &amp; Associates inc</b> <b>Transportation Engineers &amp; Planners</b> 35 New England Business Center Drive - Suite 140 - Andover, MA 01810 www.rdvva.com 978-474-8800		
		DESIGNED BY:	DCL	DATE:	02/17/2023
		DRAWN BY:	JTG	SCALE:	1" = 40'
		CHECKED BY:	JSB	SHEET	1 OF 1






NOTES: 1. THIS PLAN IS FOR REVIEW PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION.

2. BASE PLAN INFORMATION OBTAINED FROM DEVELLIS ZREIN INC. AND GOOGLE EARTH..

3. 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 WINDOWS LOCATED WITHIN SIGHT TRIANGLE THAT EXCEED 3.5 FEET IN HEIGHT OR THAT WOULD OTHERWISE INHIBIT SIGHT LINES SHALL PROMPTLY BE REMOVED.

PROJECT:			
<h1 style="margin: 0;">PROPOSED AGE-QUALIFIED RESIDENTIAL DEVELOPMENT TOPSFIELD, MASSACHUSETTS</h1>			
PROPOSITOR:			
<h1 style="margin: 0;">THE CALEB GROUP SWAMPSCOTT, MASSACHUSETTS</h1>			

NO.	REVISIONS	DATE	
			 <div style="margin-top: 10px;"> <b>Vanasse &amp; Associates inc</b>  <i>Transportation Engineers &amp; Planners</i>  <small>35 New England Business Center Drive - Suite 140 - Andover, MA 01810  <a href="http://www.rtdva.com">www.rtdva.com</a>      978-474-8800</small> </div>
DESIGNED BY: <b>DCL</b>			DATE: <b>02/17/2023</b>
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CHECKED BY: <b>JSD</b>			SHEET <b>1</b> OF <b>1</b>