Town of East Lyme

P.O. Drawer 519
Town Engineer
Alexander T. Klose, P.E.

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To: William Mulholland, Zoning Official

From: Alex Klose P.E., Town Engineer

Date: June 15, 2022

Re: "138 Post" Elderly Housing
138 Boston Post Road
Special Permit Review

Information submitted by the Applicant which was considered in this review:

-Application for a Special Permit
-Site Landscape Plan, Lighting Plan and Cut Sheets
-Architectural Plan Set, dated May 26, 2022, prepared by Peter J. Springsteel Architect, LLC
-Site Development Plan Set, dated May 26, 2022, prepared by Indigo Land Design, LLC
-Drainage Narrative, dated May 25, 2022, prepared by Indigo Land Design, LLC

This office has reviewed the above referenced information and provides the following comments:

1. The applicant should provide an existing conditions survey.

2. Note, the applicant is to obtain an CTDOT encroachment permit as the proposed entrance is from Route 1 not a town ROW.

3. It should be clarified if the sidewalk will be at grade with the entry drive or ramped, and if detectable warning should be used prior to crossing the site drive.

4. It should be noted in the approval explicitly that the Town will not be responsible for curb-side refuse collection at this site.

5. Fire Marshall should comment on emergency vehicle circulation on the site.

6. I recommend a garbage vehicle turning be demonstrated on the site.

7. I note that it is very flat in the vicinity of the existing dwelling and garage with no catch basins proposed in that area.

8. Roof leaders or down spouts should be identified as well as foundation drains if proposed.

9. What design storm has the stormwater hydraulic network been designed for? I recommend the applicant demonstrate that the hydraulic capacity of the system at least meet the 10-year storm (as required by the Town of East Lyme Subdivision Regulations); and as an effort to promote climate change resistance and flood resiliency, I would recommend the 25-year storm capacity be considered by the commission. I note that tailwater conditions of the infiltration system should be considered in this modeling.

10. What happens if the stormwater network does not have enough hydraulic capacity? The hydrology model assumes full capture of the 100-year storm into the proposed infiltration chambers, however, if restricted (by the 15" HDPE pipe entering the system) is there enough on-site ponding to ensure flooding off property will not be exacerbated? This should be made clear at the lowest catch basin prior to leaving the site.

11. The applicant has provided infiltration rates for the sub-surface infiltration stormwater system. I note that the maximum suggested infiltration rate from the CT Stormwater Quality Manual is 5 in/hour and the applicant is proposing 14 in/hour for every storm event, including the 100-year storm. The samples tested by the applicant ranged between 10.18 in/hour and 15.84 in/hour, with an average of 14 in/hour. Additionally, the Manual suggests that "The recommended design infiltration rate is equal to one-half the field-measured infiltration rate (i.e., safety factor of 2)." In the 100-year storm the peak elevation is actually above the chambers into the stone network as currently designed. Considering these factors, I would recommend limiting the infiltration rate for design to 5 in/hour at a maximum.

12. I recommend the commission ask the design professional engineer to certify that they acknowledge the risk in using such a significant infiltration rate (even at 5 in/hour) for an infiltration system design with no emergency overflow outlet control. They should further certify that the drainage system, once installed, has been installed per their design.