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June 05, 2021

Ms. Christine Stickney  
Interim Town Planner  
Planning Board  
Town of Hingham  
210 Central Street  
Hingham, MA 02043

Re: 4 Jordan Way (Lot 4A), Site Plan Review

Ms. Stickney and Members of the Planning Board;

In response to the review letter provided to the Planning Board by Chessia Consulting Services, LLC dated May 06, 2021, attached for your review and approval are 6 sets of the revised plans for the above noted site. The plans have been revised not only in response to the comments and comments from the board at the last hearing. In order to assist with the review, we have added our responses to the review engineer comments highlighted in yellow in the order in which he presented them in his review letter.

### **General Plan Review:**

The proposed project would develop a new residential house on a previously approved subdivision lot. At this time the roadway is complete to binder and only the driveway will be necessary to fully access the lot.

Current comments are in *italic type* following my initial comment.

The following issues are considered the most significant for the Board to consider in review of the project:

- Part of the driveway is proposed in the Tree Preservation Area and should be relocated outside of this area.  
*Not addressed.*  
The driveway turnaround is located in an area of blasted ledge and is only 110 square feet of pavement. There were never any trees in this area prior to the development based upon the ledge as shown. However, because we do have the capability, we will be planting additional trees just outside of that location to help re-create what was erroneously listed as a Tree preservation Area.
- The Board should review the proposed landscaping. I note that a landscaping plan has not been provided and is typically required.  
*A landscaping plan has been provided. The Board should review the plan.*

- *Based on our site visit of May 6, 2021, it appears that the tree preservation area has been altered on the east side of the lot. The plans scale approximately 55-60 feet between areas where the driveway is proposed and there is a significantly larger area that has been disturbed to the east of the tree preservation island in front of the proposed house. As explained at the hearing, this area was cleared by the original roadway contractor. It has been in this state since the spring of 2019 and has been in clear view since, as well as at pre-construction meetings for the 2 adjacent Lots. As stated previously, this area was clear of trees based upon the ledge. Subsequently, there was never any orange fencing erected in this location except around the septic system areas at 47 & 49 Canterbury Street (or Lot 4 and Lot 5 as they were referred to at that time). In addition, the site and related orange fencing was inspected prior to the start of any clearing.*

### **Section I-I Site Plan Review:**

1. Purpose:  
No comment required.
2. Procedures:  
It is assumed that the appropriate information has been submitted to initiate the review process. The Board should review the project relative to the specific subsections of this section.  
*No comment required*
3. Pre-Application Submittal.  
Not applicable, the lot is part of the approved subdivision.  
*No comment required*
4. Submittal Requirements:
  - a. The submittal does not include a locus plan. The Owner/Applicant is listed as Canterbury Street LLC on the Plan. The required zoning setbacks and area dimensions should be listed on the Plans. The actual setbacks are indicated. The lot is in the Residence C district and exceeds lot area requirements and complies with setback requirements. The plans indicate existing and proposed contour elevations in the vicinity of the proposed work but are incomplete. Existing grades elevations should be labeled and the source of the data referenced on the grading plans. It is unclear that the proposed contours connect to existing contours in some locations. Structures within 100 feet of the property line are indicated on the plans.  
*Contour data has been added and the notes on Sheet 4 reference the sources. Some of the data is based on more recent surveys and some is from the subdivision plans.*  
*The Grading Sheet (Sheet 4 of 4) has been added has been modified and now shows the existing conditions on site.*
  - b. The plans are drawn to scale (1" = 60' and 1" = 20') and indicate the proposed building footprint. Building elevations and floor plans were not provided but may not be required for a residential dwelling.

*No comment required*

- c. No data on traffic circulation has been provided. As a single-family lot, it is not typically required to perform a traffic analysis.

*No comment required*

- d. The Application does not request any relief from zoning requirements. Since the site includes over 20,000 square feet of land disturbance and would alter 2,500 square feet of land with a slope of over 10% a site plan review is required under Section IV-B 6 b.

*No comment required*

- e. The plans indicate proposed utility connections to existing stubs that have been approved through the Subdivision process, including various modifications. A low pressure sewer pump would discharge to the main in the cul de sac. Other utilities including water, gas and electric/cable services would also connect directly to the roadway. A stormwater system consisting of a roof leaders and an underground chamber system is proposed. The stormwater system design differs from the approved plan. Primarily the location has been changed to the rear of the lot and has few chambers (2) and a smaller outlet (4" PVC pipe proposed versus a 6" PVC pipe approved). Refer to comments on the stormwater systems under h. below. Surface materials for driveways and walkways are not indicated but are proposed to be impervious. There are no details on the plans for these features. It is unclear if the Board will require details for the driveway and walkway. The plans do not indicate the proposed street trees as indicated on the subdivision plans. The only proposed trees on the lot are 8 evergreen trees in the tree preservation area on the east side of the lot. No landscaping plan has been provided at this time. The Approved plans had much more extensive landscape plantings proposed for the lots, refer to Sheet L-202.

*Proposed street trees have been added to the plans. There is a brick walkway now proposed from the front door to the driveway. The drainage system has not changed. The Board should determine if they would like driveway and walkway details. A Landscaping Plan has been provided. The Board should review the Landscape Plan.*

The brick walkway is part of the Landscape Plan which has now been submitted. We have not provided a cross section of other driveways to date. They have all been 2-1/2" of pavement over a 4-6" thick processed gravel base. Based upon the construction traffic that has been using this driveway I have no concerns regarding compaction for the final pavement.

- f. The submittal includes a grading plan. The existing conditions plan does not include any elevation labels. The plans should identify the source of the topography for the existing conditions. The site has been cleared and there are stockpiled soils, trees and stumps dumped along the edge of the altered and filled area. I note that the SWPPP does not indicate that this area was to be used for stockpiling. The Plans should at a minimum indicate the limits of site alteration to compare to the approved plans. The project was previously approved with a slightly larger stormwater system in a different location for roof runoff. No updated stormwater analysis has been provided. The concept is essentially the same. Traffic volume is unlikely to be a concern. Refer to comments under Stormwater Management Regulations below for drainage design.

The grading plan indicates a slightly smaller house (3,557 sf approved plan versus 3,250 sf current plan). It is proposed to move the house a few feet further north and have an angle between the garage and house. The garage would be 0.2 feet higher in elevation. There are fewer retaining walls proposed and a section of rock slope added on the proposed plan. I recommend that the Building Inspector comment on the proposed masonry wall, it is proposed as a maximum height of 4 feet. A detail for this wall has been provided. Grading around the wall is incomplete. The plans include a foundation wall detail with a foundation drain. The outlet for the foundation drain is indicated on this plan. A waiver from Board of Health requirements for the basement will likely be required as ledge is typically considered the elevation of groundwater by the Board of Health.

*More grading has been indicated and notes specify the source of various surveys. At this time the current condition on the lot is not indicated in the disturbed area where ledge has been blasted and graded to level off the lot. There is also a rock pipe and tree/stump pile that is located in the tree preservation area on the east side. It is my understanding that the Contractor will be removing this pile. As noted there has been work performed in the easterly tree preservation area. The Board may require the Applicant to stake out the approved line for review in the field. I recommend that the Building Inspector review proposed retaining walls or determine that they do not require a permit. The Board of Health may require a variance for the foundation.*

The existing conditions in the area of the house have been surveyed and are now shown on sheet 4. As can be seen, the site has been graded to rough grade and is now ready for loam & seed. Based upon the ledge at the easterly side of the lot we are now proposing to move the roof system to the westerly edge of the parcel. This should help to save some additional trees on the eastern side of the lot. Any stockpiles located on this lot is ledge removed from the lot.

- g. This item requires information to assess the impact of the development on soil, water supply, ways and services. There are no test pit logs included in the Application for this lot although other tests indicate shallow depth to ledge with soils reported as sandy loam or loamy sand where tested. Groundwater is generally shallow and estimated either by redox features or assumed at refusal (ledge) which varies in depth across the site.

*There is a label "D 11" on the plans that appears to be a test location but there is no log provided. As noted the site is predominantly ledge, or blasted ledge based on site observations.*

The roof system has been moved and, in my opinion, will be constructed out of blasted ledge. The requirement for test pits is now moot.

- h. The regulations require compliance with DEP Stormwater Management Policy as discussed below:

## **STORMWATER MANAGEMENT REGULATIONS - EROSION AND SEDIMENT CONTROL:**

The DEP Stormwater Management Regulations consist of ten standards. The standards were reviewed using the Massachusetts Stormwater Handbook Documenting Compliance (MSHDC) together with other sections of the Handbook as appropriate. This section of the correspondence lists the standards and identifies whether the submittal complies, does not comply or if additional information is required to demonstrate compliance.

### **Standard 1 – Untreated Stormwater**

This standard requires that no new untreated point source discharges are created and that point source or sheet flow discharges do not result in erosion into or scour of wetlands. This standard is required to be met for redevelopment projects.

The approved design has an outlet to the east and the proposed plan would discharge to the south. The water would ultimately end up in the pond in either case.

*No comment required*

To demonstrate compliance data on the proposed outlet the submittal should include either dimensions and details for the outlet or reference to subdivision details for outlet protection. If different than the approved outlet any associated calculations should be provided.

*Satisfied, this Standard would be met.*

### **Standard 2 – Post Development Peak Discharge Rates**

This standard requires that the peak rate of discharge does not exceed pre-development conditions and that the design would not result in off-site flooding during the 100 year storm. I note that it is not permitted to increase runoff or flooding to abutting properties without appropriate easements, etc.

This lot did not include the subsurface system in the calculations and the impervious area proposed is slightly smaller so there would not be an increase in runoff.

The subsurface system should include design features to prevent flow from weeping through the proposed slope and masonry wall and slope. There is a proposed barrier along the wall side but it should also extend along the reinforced slope side.

Subject to the above modifications this Standard would be met.  
*Satisfied, this Standard would be met.*

### **Standard 3 – Recharge to Groundwater**

This standard requires that designs provide on-site recharge to mimic pre-development conditions. Calculations to demonstrate compliance are based on soil conditions, and certain methodology as outlined in the MSHDC.

No site specific testing has been performed to determine if any suitable soils exist on the site but given other areas tested it is questionable that there would be sufficient soil depth on the site. The Board should determine if testing will be required.

Based on site conditions it is unlikely that suitable soils exist in a location on this lot that would be suitable for infiltration.

The Board should determine if this Standard should be waived due to soil conditions or if additional testing is required.

*The Board should address this issue, as noted most of the site is ledge or blasted ledge. In order to provide soil beneath the system, we would have to locate the system in the area where there are trees growing. Since the approved subdivision had the system in ledge, the system will now be in the area where the ledge has been blasted also. I see no reason to remove any additional trees to make room for this system.*

### **Standard 4 – 80% TSS Removal**

This standard requires runoff be treated to remove suspended solids (TSS) to at least 80% removal.

The runoff from the roof would be considered clean relative to pretreatment. The driveway is designed to flow to the subdivision roadway and that portion of the system has been approved. The design does not include access manholes as indicated on the approved plans for the isolator row in the roof treatment system. These should be added to the plans and a detail provided consistent with the manufacturers specifications.

*Satisfied*

This Standard could be met subject to comments under other Standards and the addition of access manholes to the isolator row.

*This Standard would be met.*

### **Standard 5 – Higher Potential Pollutant Loads**

The project is not considered a source of higher pollutant loads, this standard is not applicable.

*No comment required*

### **Standard 6 – Protection of Critical Areas**

Based on a review of Mass GIS mapping the site is not located in a critical area. According to the submittal the discharge of the municipal stormwater system is outside of the Weir River ACEC and this part of the standards would not apply.

*No comment required*

### **Standard 7 – Redevelopment Projects**

The project would not be considered a redevelopment

*No comment required*

### **Standard 8 – Erosion/Sediment Control**

This standard requires construction phase erosion controls. In this case the project is subject to the approved SWPPP.

This Standard would be met through the existing SWPPP subject to relocation of various components outside of the Tree Preservation Area.

*Refer to other comments regarding the Tree Preservation Area. At this time the tree preservation area fencing and most of the sediment controls have not been installed. It is my understanding based on a discussion on May 6, 2021 with the Contractor that some of the fencing will be installed this week and the mulch sock is in the schedule but has been delayed due to recent rain.*

At this point, the fencing in the front area has been set and the erosion control around the back of the site has been set also. There is no further requirement for any activity beyond the limits of the mulch log. I see no point in setting any additional construction fencing outside of the mulch log.

### **Standard 9 – Operation and Maintenance Plan**

This standard requires long term maintenance of non-structural and structural BMP's and requires a specific inspection schedule, etc.

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The proposed subsurface system is similar in design to other approved systems and a modification to the O&M would not be required. I note that a manhole at the isolator row for access to maintain the systems should be added as noted under Standard 4.  
*Satisfied.*

As the lot is part of the Homeowners Association the approved O&M would apply to this lot.

This Standard could be met, but the design will need to be modified to comply with access requirements for the proposed system.  
*this Standard would be met.*

### **Standard 10 – Illicit Discharge**

A signed Certification Statement has not been provided as required.  
*Comment remains.*

Once again, there are no calculations required. All of the issues associated with the stormwater were addressed in the subdivision. Simply, the certification associated with the calculations submitted with the subdivision remains valid.

- i. It does not appear that any lighting is proposed.  
*No comment required*
  
- j. It is unclear if the Board requires or requests and other materials not identified above regarding the project.  
*No comment required*

Thank you for this opportunity to respond. If you have any further question or comments regarding the submission, please do not hesitate to contact me. I look forward to speaking with the Board to discuss this further.

Very truly yours,



Gary D. James, P.E.