

October 20, 2023

To: Mr. Richard S. Novak, Chair
Sherborn Zoning Board of Appeals
19 Washington Street
Sherborn, MA 01770

Re: Engineering Peer Review Response

Dr Mr. Chair and Board Members:

Creative Land & Water Engineering, LLC (CLAWE) has received and reviewed the Engineering Peer Review Letter from Tetra Tech (the "Reviewer") dated October 2, 2023. This letter provides our responses. To facilitate the review, we will quote the Reviewer's comments first and follow-up with our **response** in **red**.

A. SITE DESIGN

The Site Plans provide a good introduction to the Project and its various components and shows the Project is placed in an appropriate location on the site in upland area. The following specific comments are offered to identify areas where additional information is required, or changes are requested to address questions or support further review.

- A.1 The Project notes the Bailey Trail Connector is adjacent to the Project. We recommend the Applicant coordinate with the Town to determine level of access to the trails such as a sidewalk along the frontage of the Project to the Trail access point.
Response: Greenwood Homes favors the walking and trail aspects of this neighborhood. However, a sidewalk solely in front of the four homes would be out of keeping with the overall neighborhood. In addition, this street has very light traffic and low speed limit under normal conditions.
- A.2 It appears the Project is a net fill site which may require earth fill to be imported to complete the proposed grading plan. We recommend the Applicant provide earthwork calculations for the Project and source of the proposed fill as we anticipate excavate material produced from building foundation excavation may not be sufficient to complete the proposed grading scope.
Response: Greenwood Homes will calculate the approximate fill required. The source for any fill is of course not knowable at this time. Furthermore, we are not aware of any local or MA requirement to report on the source location of fill. No outside fill will be used in any wetland buffer areas. The applicant will assure clean fill be used for all means.
- A.3 Greenwood Street is a small local road (approx. 18 feet wide) and we recommend the Applicant provide a construction management plan detailing truck travel routes, project phasing, etc. for review to ensure abutting properties, the right of way and adjacent roadways are properly protected during construction.
Response: At the time of construction, Greenwood Homes will work with the Sherborn Building Inspector to come up with a practical construction management plan to meet best practices and local requirements for site management to ensure proper protection of abutters and other interested parties. The management plan will include proper signage of construction activities and trucking route direction, and project phasing. Limit of work and additional line of sediment and

erosion control line will be installed along the street for most of the sections, which will act like a demarcation and protection for the street.

- A.4 The Applicant should provide the limits of the Greenwood Street roadway and show sight lines at each driveway opening. Greenwood Street is narrow, generally winding and is a scenic roadway and the Applicant should address sight line issues and potential mitigation.

Response: Greenwood Street has a speed limit less than 30 mph (likely 25 mph). The sight distance is 155 ft to 200 ft. Based on our site visit and analysis, each driveway has a sight distance of more than 200 ft.

B. STORMWATER

The Project scope includes four single-family dwellings each on separate lots (the Site) and stormwater generated from the Project does not discharge to a critical area which exempts the Project from the requirements of the Massachusetts Department of Environmental Protection (MA DEP) Stormwater Management Standards (Standards). Stormwater mitigation scope for the Project includes rain gardens and exfiltration trenches. The Project was reviewed for general stormwater design elements and good engineering practice. The following comments are offered specific to the Project Stormwater design.

- B.1 The Project proposes rain gardens and exfiltration trenches to mitigate stormwater resulting from the proposed development. We recommend test pits be performed prior to Final Plan development to determine soil conditions and depth to groundwater at those infiltration locations. It is common practice to maintain a two-foot separation between the bottom of the infiltration best management practice (BMP) and the estimated seasonal high groundwater (ESHGW) elevation.

Response: As the site plan showed, each lot has 5 deep hole soil test pits. In general, the property has very permeable soils (2 mpi to 8 mpi) and adequate groundwater depth (3 ft to 9 ft) to accommodate the proposed stormwater rain gardens and driveway side stone trench apron to meet 2 ft estimated high groundwater separation. The Greenwood Homes will do additional testing in the final rain garden areas to confirm the soil and ground water conditions when the plan is finalized by the review process.

- B.2 Runoff from the developed site will enter the right of way. The Applicant should coordinate with Sherborn DPW to determine if the Project will require formal stormwater analysis as part of the Town's obligations under the United States Environmental Protection Agency (US EPA) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Stormwater Sewer System (MS4) Permit.

Response: Given that Greenwood Street is low impact no-curb street, the added house lots have low impact design of driveway with infiltration stone infiltration shoulder, it is expected that minimal runoff will enter the roadway. Even some entered the roadway, the runoff will end up in the roadway side vegetated area. A formal calculation is not necessary. We will discuss this with Sherborn DPW to seek input. In addition, Greenwood Homes will devise a SWPPP and file a NOI for a US EPA NPDES permit when the plan is getting finalized.

- B.3 One of the proposed rain gardens straddles the property line between Lot 1 and Lot 2. We recommend stormwater mitigation be located on one lot or the other to limit future issues between the homeowners with potential maintenance obligations.

Response: The referenced rain gardens are redesigned so each lot has their own distinctive rain gardens to be taken care of in the future.

C. EROSION AND SEDIMENTATION CONTROL

The Applicant has included provisions for erosion and sediment control as part of the Project scope. The following comments are offered specific to the Project and potential for off-site erosion during construction.

- C.1 The Project appears to meet the requirements for coverage under the US EPA NPDES General Permit for Discharges from Construction Activities (CGP). We recommend a Condition requiring the Applicant provide proof of coverage under the NPDES CGP and provide a copy of the approved Stormwater Pollution Prevention Plan (SWPPP) prior to construction.

Response: We will devise a SWPPP and file an NOI for an EPA NPDES CGP permit prior to construction as recommended.

- C.2 The Applicant should provide additional detail on proposed Project phasing, equipment laydown areas, material stockpiles, construction entrances, etc. These will be items required on the NPDES CGP noted in Comment B.5.

Response: The requested information is added to the updated plan on the sediment and Erosion Control plan sheet. Equipment will be parked outside of the 100-ft buffer in the driveway area.

D. WATER SUPPLY

The Plans indicate the Project will be served by private water supply wells on each of the proposed lots. The following comments are offered specific to Project water supply and related analysis or lack thereof.

- D.1 The Applicant should provide documentation that the proposed dwellings will have sufficient source of water from the proposed wells. This is essential to determine if the Project is viable as proposed. All wells shall be coordinated with Sherborn Board of Health.

Response: Greenwood Homes will provide documentation to Sherborn BOH of sufficient water from an on property well prior to the issuance of a building permit.

- D.2 The proposed well on Lot 3 is located adjacent to the proposed driveway exfiltration trench immediately downgradient of the garage, driveway and main parking area. The proposed well location may be prone to contamination by the impervious surfaces and potential damage during snow clearing. We recommend additional areas be investigated on Lot 3 for the proposed well.

Response: The plan is updated to relocate the well to a safer place. location for this well.

- D.3 The Applicant should confirm method of fire suppression for each dwelling as there are no available hydrants located adjacent to the Site.

Response: Greenwood Homes will coordinate with Sherborn Fire Department on their water source for fire suppression in this area to follow their recommendation.

E. SEPTIC SYSTEMS

The Plans indicate the Project will be served by septic systems on each of the proposed lots. The following comments are offered specific to Project septic design and related analysis or lack thereof.

- E.1 The Applicant has provided test pit logs and percolation testing results (witness by Sherborn BOH) for testing at each soil absorption system (SAS) location. Several of the SAS's are proposed in fill areas and adjacent to 3:1 slopes and groundwater is generally high in the area. However, we anticipate the Project could be permitted given the current development program with careful design and oversight of installation. All septic designs shall be coordinated with Sherborn Board of Health.

Response: Greenwood Homes will submit Title V compliant design for each home.

F. WETLANDS

Wetland resource area is located off-site to the north and west with buffer zone and areas jurisdictional to the Massachusetts Wetlands Protection Act (WPA) extending onto the Site. The following comments are offered specific to the Project's potential impact on wetland resources.

- F.1 The Project includes disturbance within area jurisdictional to the Massachusetts WPA and therefore we anticipate the Project will require permitting through the Sherborn Conservation Commission.

Response: Greenwood Homes anticipates filing with the Conservation Commission for an NOI to perform minor grading and the installation of one well in the outer buffer zone on Lots 2 and 3.

- F.2 Tree clearing and grading is proposed within the 100-foot buffer zone to the wetland resource areas located off-site to the north. The proposed grading scope on site appears to be primarily a net fill for the Project so we do not anticipate impact to groundwater as a result of that process.

Response: No comment.

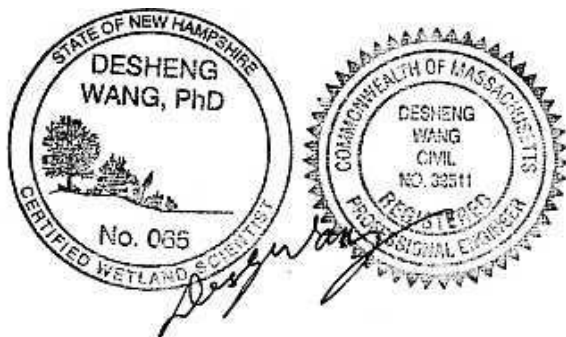
- F.3 We anticipate foundation drains for each dwelling will be required due to potentially high groundwater in the Project area. The Applicant should provide discharge points on the Plans.

Response: The houses are set 2 ft above estimated high groundwater. It is unlikely will be much of discharge from foundation drain. The plan is updated with foundation drain for each house.

Please feel free to contact us if you have any questions.

Sincerely,
Creative Land & Water Engineering, LLC

By



Desheng Wang, Ph.D., P.E.
Civil/Environmental Engineer
Certified Wetland Scientist
Certified Soil Evaluator

A handwritten signature in blue ink that reads 'Francis Alves'.

Francis Alves, E.I.T.
Civil/Environmental Engineer

CC: Robert Murchison, 177 Lake Street, Sherborn, MA 01770
Paul Haverty, Esq.