



INITIAL STORMWATER REVIEW MEMORANDUM

To: John Aubin, Town Planner
Town of Seekonk

From: Steven M. Cabral, PE
Crossman Engineering

Date: July 17, 2021

Re: Brigham Farm – Section 3
Seekonk, MA

Crossman Engineering was retained to perform an independent review of the stormwater design for the new Brigham Farm – Section 3, 8 Lot Residential Conservation Subdivision. To expedite the review process, a few items immediately came to our attention, therefore we are offering the following observations prior to finalizing a detailed review. The items below may result in significant design changes:

1. Stormwater Management Standard 3 addresses the loss of annual recharge to groundwater due to additional impervious surfaces by requiring infiltration measures. Our initial review finds that none of the roadway surface will be infiltrated and the proposed rooftop drywells will only meet 34% of the required project-wide recharge volume.

The designer states that the seasonal high-water table in relation to the proposed road surface eliminates the feasibility of designing infiltration systems which meet the Stormwater Handbook Design Standards. Our initial review of the topography, site layout and soil data indicates that this conclusion is not valid. Numerous options appear viable that would allow the designer to fully meet the recharge standards. Therefore, we cannot support the proposed “Wet Pond” systems without further justification by the designer or a revised design.

2. If additional data can be provided to justify the “Wet Pond” concept, the designer needs to review the minimum design standards for Wet Ponds as outlined in the Stormwater Handbook and upgrade the design to conform as much as possible. For example, it appears that the top width of the berm (dam) of Wet Pond 1 is only 2 ft wide. A 2 ft width is much less than standard and is not considered stable. Unlike Basin 1, Wet Basin 2 has an 8 ft top of berm width. The designer should also address each design item in the Handbook and identify which

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items are requested to be waived. For example, a safety bench, aquatic bench, bottom valved outlet drain and maintenance accessway were not evident on the Plans.

3. The designer should confirm the available freeboard during the 100 year storm in the grass swales that extend from the sediment forebays to the wet ponds.
4. Typically, the Handbook does not allow peak flow attenuation credit in Sediment Forebays but it appears that the designer takes attenuation credit.
5. The drain lines are called out to be CPEP. A specific specification that is acceptable to the Town DPW should be provided.

Please note that the above does not represent the completion of our Stormwater Review but a response to the above may have a significant impact on the overall design. Therefore, we recommend that the items above be addressed as soon as possible.