

## FIELD REPORT

Nitsch Project #:	12808	Date:	August 3, 2021
Client:	Pine Hill Village, LLC	Time:	10:30 am – 11:30 am
Project:	Pine Hill Development	Location:	Harvard, Massachusetts
Weather:	71°F + Fair		
Present:	Liz Allard – Conservation Agent / Town Planner Steven Ventresca, PE – Nitsch Engineering		

The purpose of this site visit was to observe general site conditions for the Pine Hill Village project located off Stow Road in Harvard, MA. Nitsch offers the following observations:

1. The Contractor must continuously maintain the installed bio-retention systems at the project entrance by removing weed and overgrowth from adjacent vegetation. Any plants that are dead in the constructed bio-retention systems must be replaced in kind and the plants must last at least one (1) growing season prior to Homeowner's Association acceptance.



2. The Contractor shall continue to monitor, stabilize, and repair any on site erosion at the roadway shoulders and provide new wattles and bales being used for erosion control in stone swales and along grassed swales.





3. The Contractor shall re-establish the splash pool for the constructed wetland per the approved plans. Currently the splash pad is set level and does not have a slight depression as detailed. Also, the Contractor shall discuss how and when to remove sediment in the constructed wetland prior to final planting with the Conservation Agent. The Contractor shall continue to employ erosion control measures to prevent sedimentation with the constructed wetland.



4. The Contractor shall re-establish any silted bio-retention systems and protect completed bio-retention systems with erosion control measures if the contributing drainage areas to the bio-retention systems are not stable and vegetated. Silt and sediment in the bio-retention systems shall be removed and disposed of properly and not reused in the bio-retention systems.



5. The Contractor shall provide a permanent solution for the low point at the roadway intersection with Stow Road so that water flows toward the wetland. The Conservation Agent agreed that a swale toward the wetland was an appropriate temporary solution. The Contractor shall provide a detail with spot grades that indicate how the permanent condition will be constructed.





6. The Contractor shall indicate to the Commission and Board what and where the concrete posts shown below will be used for on the project.





7. The Contractor shall confirm that the material used on the upper septic field was approved for use by the Board of Health Agent and that the appropriate material submittal was provided to the Health Agent for review. This material must be stabilized as it is eroding at the slope edges.



8. Per the Fire Chief, the Contractor installed the fire cistern six (6) feet too high and the connection points to the cistern are not accessible. The Fire Chief requires that the cistern be lowered so that connection points are accessible to the fire apparatus.



Past Recommended Items to be Completed:

1. The Contractor to install erosion controls prior to the constructed wetland to minimize sedimentation into drainage systems and the constructed wetland.
2. Extending discharge pipe near the first building (that drains to constructed wetland adjacent to road) toward the wetland basin and provide a level slope (2% slope) over the extended pipe, toward the roadway shoulder.
3. The Contractor to provide erosion control measures along the non-stabilized slopes at the top and mid-slope of exposed surfaces to minimize erosion.
4. Remove sediment in swales and re-establish wattle and bale check dams with new wattles.
5. Establish a suitable substrate at stream crossing that minimizes sedimentation during rain events.

New Recommended Items to be Completed:

1. Maintain the installed bio-retention systems at the driveway entrance by removing weeds and replanting any dead shrubs or plantings that were part of the bio-retention system. This will be continuous maintenance task until the development is turned over to the HOA.
2. Contractor to re-establish the outlet rip rap to the constructed wetland per the approved detail which indicates a level spreader type splash pad, where there is a slight depression to pool water prior to discharge toward the wetland.
3. Lower the Fire Cistern by approximately six (6) feet, as directed by the Fire Chief.
4. Contractor to provide a detail for review that indicates how drainage will be conveyed at the roadway entrance to the wetland so that it prevents sediment from entering the wetland and prevents ponding at the subdivision entrance with Stow Road.

Ongoing Recommendations:

1. The Contractor to re-grade, stabilize and maintain roadway shoulders, swales and un-stabilized areas.
2. The Contractor to maintain all perimeter erosion control barriers in good condition for the project duration.
3. The Contractor to sweep the roadway periodically and after rain events at or over 0.25-inches in 24-hours, to remove sediment and debris, which shall be disposed of properly.



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Steven Ventresca, PE  
Senior Project Manager

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Disclaimer: Nitsch Engineering performed this site visit in compliance with the guidelines and requirements of the Commonwealth of Massachusetts COVID-19 Guidelines and Procedures for All Construction Sites and Workers at All Public Work dated March 2020 (COVID-Construction Safety Guidance) and with the COVID-19 guidelines and requirements issued by the CDC and OSHA. However, Nitsch Engineering's services DO NOT include observations for compliance of the general contractor and/or the construction site with the COVID-19 Construction Safety Guidance and with the COVID-19 guidelines and requirements issued by the CDC and OSHA. Jobsite/worker safety duties belong with the general contractor who has control of the jobsite and responsibility for constructing the project, including the implementation and compliance of the COVID-19 Construction Safety Guidance. Neither the professional activities of Nitsch Engineering, nor the presence of Nitsch Engineering or its employees and subconsultants at a construction/project site, imposes any duty on Nitsch Engineering, nor relieve the General Contractor of its obligations, duties and responsibilities including health or safety precautions required by any regulatory agencies.