

MEMORANDUM

TO: Sarah Porter, City of New Bedford Conservation Agent
FROM: Scott Turner, PE, Nitsch Engineering *ST*
DATE: July 30, 2018
RE: 61 John Vertente Boulevard Site Visit

Nitsch Engineering performed a site visit on July 27, 2018 to observe construction progress and specifically examine the excavation of the bioretention basin. Below is a summary of our observations:

1. The bioretention basin has been excavated to the subgrade. We examined the bottom of the excavation as well as sides of the excavation. Soil mottles were observed along the bottom of the basin as well as along the sides of the excavation. Presence of soil mottles is an indicator of seasonal high groundwater. The mottles extend approximately six inches above the bottom of the excavation. Assuming that the bottom of the excavation is at the bottom of the stone elevation, it appears that seasonal high groundwater is higher than was indicated in the Notice of Intent submittal and could be within the stone layer. If this is the case, during seasonal high groundwater, any water collected by the bioretention basin will simply sit in the basin and not infiltrate. We recommend that a perforated underdrain wrapped in filter fabric be placed in the stone layer. This will dewater the stone when groundwater is within the stone and also insure the basin drains. It appears there is enough elevation change in the swale adjacent to the Samuel Barnet Boulevard to daylight the pipe to that swale.
2. We do not feel that Nitsch Engineering will need to observe the installation of the underdrain. However, we discussed taking pictures of the installation of the underdrain and providing them to the Conservation Commission.
3. The bottom of the basin was generally clean with some large stones, organic materials, and some silt lenses. We recommend that the large stones, organic material, and silt areas be removed. The soils conditions in the bottom of the basin were generally sandy with some silt areas.
4. The ductile iron cross culvert that will sit underneath the new driveway from Samuel Barnet Boulevard had been installed. It appeared to be installed properly. The contractor explained that rip-rap stone, consistent with the approved plans, will be installed soon. The access driveway will also be installed shortly.
5. The aggregate base was being installed for the driveway when we arrived on site.
6. All erosion control measures appeared to be in good condition.

Please call if you have any questions.

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