Nitsch Engineering

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May 15, 2017

Mr. Craig Dixon
Chairman
New Bedford Conservation Commission
New Bedford City Hall
133 William Street
New Bedford, MA 02744

RE: Nitsch Project #9972
Northside Farms
New Bedford, MA

Dear Mr. Dixon:

This letter is in regards to the proposed Northside Farms projects in New Bedford, Massachusetts. Nitsch Engineering has reviewed the following documents for compliance with the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards:

- "Application for Notice of Intent, Proposed Subdivision of Land, Northside Farm Modification II, New Bedford, Massachusetts," prepared by Cavanaro Consulting, Inc., dated April 20, 2017;
- Report entitled "Stormwater Drainage Calculations for Definitive Subdivision Modification at Northside Farms, New Bedford, MA," prepared by Cavanaro Consulting, Inc., dated February 10, 2017; and
- Plans entitled "Proposed Modification to Definitive Subdivision Plan, Northside Farm, New Bedford, MA," prepared by Cavanaro Consulting, Inc., dated March 6, 2017.

This project includes revisions to a previously approved Definitive Subdivision Plan. The original plan included the development of 35 single family house lots. The revised plan includes the development of 16 house lots.

Below are our comments on the proposed project regarding stormwater management only:

1. The test holes submitted were performed in 2005 as part of the original subdivision. It is unlikely that seasonal high groundwater has changed substantially, but we recommend that the seasonal high groundwater be confirmed during construction. We also recommend that seasonal high groundwater on the individual house lots be confirmed during construction due to the underground infiltration systems being proposed on each house lot.
2. The Applicant uses an 8.27 in/hour infiltration rate in the calculations, which implies A-soils. The hydrologic calculations show C-soils. The test holes provided indicate A-soils on the project site. Therefore, we recommend that A-soils be used in the hydrologic calculations unless the Applicant can demonstrate otherwise.
3. The underground infiltration systems on each lot have been accounted for in the project's stormwater calculations. Therefore, we recommend that the Commission include the review of the detailed design of each homes infiltration system as a condition of approval.
4. The connection from the subdivision to the existing underground infiltration facility is on private property. The Applicant should confirm that they have permission to connect to this system on abutting properties.
5. The existing underground infiltration system that is shown on Lot A appears to have already been installed. Nitsch Engineering did not observe the installation of the system. Therefore, we cannot confirm that the installed system is consistent with the system that is modeled in the hydrologic calculations.
6. We presume that Lot 16 will not be built upon since the plans do not show any development on that lot. The land area is accounted for in the stormwater calculations.

7. The Applicant states that the required water quality volume is provided in the individual house lots infiltration systems. We disagree with this approach. Treatment of the required water quality volume should be provided to treat impervious surfaces that generate pollutants, such as the subdivisions roads. Stormwater generated by the roofs is clean water and does not need treatment.
8. We recommend that the Operations and Maintenance Plan be revised to prohibit the storage of snow within the 100-year buffer zone.
9. The hydrologic calculations show a significant increase in flows to Acushnet Avenue during the 10-, 25-, and 100-year storm. The Applicant should confirm with the New Bedford Department of Infrastructure that the drainage system in Acushnet Avenue can accommodate this increase in flows. The Applicant should also demonstrate whether there is an overall decrease in peak flows during the 10-, 25-, and 100-year storms consistent with the Stormwater Management Standards.
10. The provides Total Suspended Solids (TSS) removal form shows a 47% removal rate for flows to the proposed detention basin. The Standards require an 80% TSS removal rate.
11. Stormceptor sizing calculations are required to demonstrate the 91% TSS removal rate shown in the TSS removal calculation sheet.
12. The front view of the infiltration pad detail should include the 6-inch orifice that is demonstrated in the calculations and shown in the profile view.

If you have any questions, please call us at 617-338-0063.

Very truly yours,

Nitsch Engineering, Inc.

Scott D. Turner, PE, AICP, LEED AP ND
Director of Planning

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