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January 13, 2016

Mr. John Radcliffe
Chairman
New Bedford Conservation Commission
New Bedford City Hall
133 William Street
New Bedford, MA 02744

RE: Nitsch Project #9972
50 Duchaine Blvd
Review Letter
New Bedford, MA

Dear Mr. Radcliffe:

This letter is in regard to the proposed project located at 50 Duchaine Boulevard in New Bedford, Massachusetts. Nitsch Engineering has received and reviewed the following documents for compliance with the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards:

- Site Plans entitled, "50 Duchaine Boulevard, Assessors Map #134 Lots #456, 457, 458, & 459," prepared by Thompson Farland, revised December 11, 2015.

- Notice of Intent for, "50 Duchaine Blvd, New Bedford, MA," prepared by Thompson Farland, including:

    a. Stormwater Report, calculations dated December 9, 2015.

Nitsch Engineering's comments on the submitted documents, regarding stormwater management only, are provided below.

1. The existing conditions survey and proposed site plans are missing utility and grading information, including structure inverts, pipe sizes, and spot grades. Also, the copy of the Stormwater Report that we received was missing Exhibit H-Drawdown Calculations, Exhibit I-Water Quality Volume Calculations, Exhibit J-TSS Removal Calculations, Exhibit K-Sediment Forebay Sizing Calculations, and Exhibit L-Operation and Maintenance Plan. Therefore, we were not able to review this information for compliance with the MassDEP Stormwater Management Standards. Once these are submitted, we will review them and may issue additional related comments.

2. Based on a site visit and conversation with the Conservation Agent, Sarah Porter, the existing wet area located at the southernmost portion of the site is considered a jurisdictional wetland resource area under the Wetlands Protection Act. Therefore, all proposed stormwater treatment, recharge, and peak flow mitigation must occur prior to discharging into the area. To confirm that the proposed flow directed towards the area is the same or less than the existing flow, the existing and proposed conditions HydroCAD model should be revised to model the wetland area as a Design Point rather than a Pond.

3. The existing site contains a stormwater management system consisting of a closed drainage system and six stormwater basins surrounding the building:

    - At the northeast corner of the existing building;
    - North of the existing building that appears to connect to the depression at the northeast corner;
    - Along the retaining stone wall located near the northwest site entrance;
    - West of the existing building;
    - At the southwest corner of the existing building; and
    - At the southeast corner of the existing building.

The existing conditions HydroCAD model only includes the jurisdictional wetland area discussed in Comment #2. The existing conditions HydroCAD model should be revised to include the detention and infiltration that occurs in all of the existing stormwater basins. This will significantly impact the existing condition calculations and therefore the proposed mitigation strategies. Infiltration rates used for the existing conditions calculations should be consistent with the proposed conditions calculations.

4. The Applicant indicates that portions of the proposed project are considered a redevelopment under the MassDEP Stormwater Management Standards since the building and site access driveway is existing. Under Standard 7, redevelopment projects are defined as, "Development, rehabilitation, expansion and phased projects on previously developed sites, provided the redevelopment results in no net increase in impervious area." Since the project results in a 4.6-acre increase in impervious area and there are substantial changes proposed to the site and stormwater management system, a vast majority of the site is considered a new development and should be designed to meet all of MassDEP Stormwater Management Standards. The existing site driveway that is to remain could be considered a redeveloped area; however, the Applicant should confirm that the same level of treatment is being provided in the proposed condition as the existing condition.

5. As noted in the Stormwater Report, the NRCS Soils map classifies the onsite soils as mostly Hydrologic Soil Group (HSG) "A," with HSG B/D and A/D around the site perimeter. The NRCS Report clarifies that when a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Because the areas within the project limit of work are upland areas, rather than wetland areas, we recommend using HSG A and B rather than D for the hydrologic model and recharge calculations.

6. The detail provided on Sheet 6 for Beehive Catch Basin does not appear to show a beehive-style (domed) grate. Please confirm the design intent.

7. The site plans indicate that stormwater from the trench drains on the north side of the building are to be pumped up to Infiltration Basins 1B and 2A. Details for this system are not provided on the plans, including pump sizing and structure inverts, and the pumps are not modeled in HydroCAD.

8. In the proposed conditions HydroCAD model, the time of concentration for subcatchment PR-1A (proposed parking lot) is listed as 15 minutes. We recommend that this be revised as 6 minutes, consistent with standard engineering practice for paved areas.

9. The infiltration basin labels on the plans are not the same as the proposed conditions HydroCAD model. These should be revised for consistency.

10. The relationship and HydroCAD routing between infiltration basins 1A and 1B should be reviewed. The two basins are joined by two culverts which effectively enables them to act as one basin. The Applicant should review this condition and confirm that the HydroCAD model is consistent with the design intent. This condition is also present at the two basins labelled as "Infiltration Basin-2A" in the northwest corner of the site.

11. Details should be provided for the sediment forebay, overflow berms, curb cuts, flared end sections, and riprap aprons.

12. With the exception of Infiltration Basin 5, the proposed infiltration basins do not appear to provide the 1 foot of freeboard in the 100-year storm that is required by MassDEP.

13. The Applicant indicates that a NPDES Multi-Sector General Permit covers the land use, which means that the project is considered a Land Use with Higher Potential Pollutant Loads (LUHPPL) under Standard 5 of the MassDEP Stormwater Management Standards. Standard 5 requires the following for LUHPPL sites:

    - A detailed source control and pollution prevention plan;
    - Water quality volume for 1-inch times the total impervious area;
    - Pretreatment requirements to address the potential for higher pollutant loads of oil and grease by an oil grit separator, a sand filter, organic filter, filtering bioretention area, or equivalent; and
    - 44% TSS removal prior to discharge to an infiltration device.

    The Applicant should provide documentation that demonstrates compliance with these requirements. A Long Term Pollution Prevention Plan was provided as Attachment M and does appear to meet the requirements of Standards 4 and 8. We suggest adding further direction to the spill management section that clarifies what should be used to cover the catch basins cuts during spills.

14. MassDEP Stormwater Management Standard 8 requires the preparation of a construction period erosion and sediment control plan for project sites greater than 1 acre. Since the project is greater than 1 acre, it also requires a NPDES Construction General Permit and the preparation of a Stormwater Pollution Prevention Plan (SWPPP). MassDEP allows the preparation of a single document that fulfills both of these requirements. Nitsch Engineering recommends that the Commission include a Condition, if the project is approved, that requires the SWPPP be submitted for review prior to the start of construction.

We appreciate the opportunity to review this project for the Conservation Commission. Please contact us with any questions.

Very truly yours,

Nitsch Engineering, Inc.

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Approved by:

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Director of Planning

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