

March 3, 2014

Mr. Kenneth Motta  
Chairman  
New Bedford Conservation Commission  
New Bedford City Hall  
133 William Street  
New Bedford, MA 02744

RE: Nitsch Project #9972  
Bismark Meadows Subdivision  
Review Letter  
New Bedford, MA

Dear Mr. Motta:

This letter is in regard to the Bismark Meadows Subdivision residential subdivision project located off of Bismark Street in New Bedford, Massachusetts. Nitsch Engineering has reviewed the following revised items submitted as part of the proposed project:

- Plan entitled, "Road As-Built Plan of Bismark Meadows Road and Bismark Street, New Bedford, Massachusetts," prepared by Existing Grade, Inc., dated December 23, 2013.

This plan was compared with the documents that were prepared and reviewed when the project was submitted to the Conservation Commission in 2007. These documents include:

- Plans entitled, "Definitive Plan of Land for Bismark Meadows, New Bedford, Massachusetts," prepared by Atlantic Design Engineers, dated December 29, 2006 and revised through April 30, 2007;
- Review letter prepared by BSC Group, Inc., dated March 26, 2007;
- Review letter prepared by BSC Group, Inc., dated May 4, 2007;
- Report entitled, "Stormwater Drainage Analysis, Bismark Meadows, New Bedford, Massachusetts," prepared by Atlantic Design Engineers, dated October 1, 1998;
- Report entitled, "Addendum #1 to the Stormwater Drainage Analysis, Bismark Meadows, New Bedford, Massachusetts," prepared by Atlantic Design Engineers, dated April 20, 2007; and
- Report entitled, "Addendum #2 to the Stormwater Drainage Analysis, Bismark Meadows, New Bedford, Massachusetts," prepared by Atlantic Design Engineers, dated May 1, 2007.

Nitsch Engineering has reviewed the recently submitted As-Built Plan for consistency with the Design Documents that were submitted during the approvals process. We have the following comments:

1. The approved plans showed a bottom of basin elevation of 122.8. This elevation was based on a seasonal high groundwater elevation of 120.84. The bottom of the constructed basin is shown as elevation 122. Therefore, the constructed detention basin has a separation to groundwater of 1.2 feet.
2. The As-Built Plan shows standing water in the detention basin up to approximately the basin outlet elevation of 122.6. Therefore, the effective storage in the detention basin begins at elevation 122.6.
3. The approved plans showed the top of the sediment forebay to be built to elevation 126. This is consistent with the calculations submitted as part of Addendum #2 to the Stormwater Drainage Analysis. The As-Built Plan shows the top of the forebay elevation as less than 126. The highest contour is at elevation 124. Since there are no spot grades on the As-Built Plan, and the plans contain 2-foot contours, it is unclear what the actual top of the sediment forebay is which determines the volume of the forebay. The forebay is required to have a volume of 3,342 cubic feet, per Addendum #2. We have digitized the areas shown on the As-Built Plans. Between elevation 122.6 and 124, there is a volume of approximately 1,128 cubic feet.
4. The approved Design Plans show the top of the detention basin elevation at 128.1. The 128 contour does not connect on itself, implying that the actual storage in the detention basin ends at an elevation less than 128. The emergency spillway is shown on the As-Built Plans at elevation 126.5. Therefore, the effective

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storage in the detention basin ends at elevation 126.5. The design elevation of the emergency spillway is as at 127.10.

5. The approved design calculations show detention basin storage of 12,447 cubic feet. Nitsch Engineering digitized the detention basin areas from the As-Built Plans between elevation 122.6 and 126.5, and calculated storage volumes based on these elevations. We calculated the storage to be 9,366 cubic feet, which is approximately 25% less than the approved plans.
6. We recommend the Applicant supplement the As-Built Survey with both 1-foot contours and spot elevations to understand better the storage volume of the sediment forebay and detention basin. The Applicant should also provide storage volumes based on the As-Built Survey information.

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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