

January 24, 2022

Ms. Elizabeth Hughes, Town Planner
Town of Concord
133 Keyes Road
Concord, MA 01742

RE: Nitsch Project #13517.2
Middlesex Faculty Housing
Concord, MA
Utilities Design Review

Dear Ms. Elizabeth Hughes,

Nitsch Engineering is writing to respond to the comments prepared by the Concord Public Works Engineering Division as part of the project site plan application review.

Please find a summary of the original comments from January 14th in regular font and Nitsch Engineering responses in **bold**.

1. On sheet C300, the roof drains only appear to capture roof runoff from downspouts in the front of the unit. The architectural plan indicates that the structure has a center-peaked roof, how will the back half of the roof be captured into the drainage system?

Nitsch Response: Roof runoff capture has since been coordinated with the architect. The back half of the roof will be captured by a drip strip which will direct the runoff to the stone infiltration system at the front of the houses. An updated utility plan has been provided to display this update.

2. There are not enough proposed grading and spot grades to indicate where stormwater runoff will be directed. This is especially important to ensure that the stormwater runoff from the gravel driveway and grassed areas are directed into the sediment forebays and that the existing parking lot does not discharge stormwater runoff into the subsurface infiltration basins.

Nitsch Response: Site grading has since been refined. Please see the updated utility and layout sheets which provide additional grading.

3. Sheet C300 call out the subsurface infiltration systems as #1-4, but the details on sheet C401 the basins are called north and south. Please synchronize the basins naming so that there is no confusion.

Nitsch Response: The infiltration system details on sheet C401 have been updated to reflect the system numbering.

4. In the Long-Term Pollution Prevention Plan and Stormwater Operation and Maintenance Plan, Section 3.2 there is no maintenance of the Sediment forebays. Please add this maintenance. Additionally, the maintenance schedule should be more stringent than standard practices due to the gravel driveway generation more sediment load than a standard roadway.

Nitsch Response: The Long-Term Pollution Prevention Plan and Stormwater Operation and Maintenance Plan was updated to include the maintenance of Sediment forebays and a maintenance schedule that is mindful of the sediment load generated by a gravel driveway as opposed to a standard roadway.

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5. In the Long-Term Pollution Prevention Plan and Stormwater Operation and Maintenance Plan, Section 3.3 Street Sweeping is called for. How will this occur on gravel roadways or is this only for the parking areas?

Nitsch Response: Street sweeping will be removed from the Operation and Maintenance Plan.

6. In the Checklist for Stormwater Report, Standard 3 Recharge, why was item number 11 relating to groundwater mounding not checked? It appears that this mounding analysis is required.

Nitsch Response: We will perform a groundwater mounding analysis and provide the results.

7. In the stormwater design report, please rename DA-PR to something that indicates it is the proposed condition.

Nitsch Response: The only DA-PR in the report is a portion of the Figure title "Figure DA-PR Proposed Drainage Area". DA-PR is short for Drainage Area – Proposed. Please clarify if changes need to be made elsewhere, and if so, where.

8. In the stormwater design report, the hydroCAD report shows that proposed Link 17L has less than the Inflow area than existing Link 16L. These numbers should be equal for the proper analysis. Please update the calculations and update Table 1 in the narrative of the report. It appears on sheet DA-PR that a portion of Subsurface Infiltration System 1 is outside of the drainage area. It is unclear if this is the cause for the discrepancy, but this area should be included in the analysis. Please revise the calculations.

Nitsch Response: Existing and proposed areas were revisited and adjusted to reflect the current project extents. Calculations, the HydroCAD model and the stormwater report were updated to reflect these changes.

9. In the final submitted version of the stormwater report please stamp and sign the Illicit Discharge statement.

Nitsch Response: The Illicit Discharge statement will be signed and stamped in the submission of the stormwater report.

Please let me know if you have any questions.

Very truly yours,

Nitsch Engineering, Inc.

Approved by:

Sarah Kwatinetz
Project Designer

Steven Ventresca, PE, LEED AP
Senior Project Manager