



FUSS & O'NEILL

July 12, 2019

Mr. Richard Harris, AICP
Town Planner
Town of South Hadley
116 Main Street
South Hadley, MA 01705

RE: Final Peer Review of the Stormwater Management
South Hadley Dog Park, Mulligan Drive Site Plan Review
Fuss & O'Neill Reference No. 20150214.P31

Dear Mr. Harris:

Fuss & O'Neill has conducted a review of the revised documents submitted by Berkshire Design Group related to the development of a dog park on Mulligan Drive. The overall concept of the project appears to be feasible; however, there are several technical items which need to be addressed in order to verify the proposed design meets the South Hadley Stormwater Bylaws. We have conducted a review of the following materials as they relate to the stormwater management and standard engineering practice.

Materials Reviewed

1. Letter addressed to Mr. Harris, regarding response to comments, dated June 18, 2019.
2. Site Plan Titled, Site Details, revised through June 18, 2019.
3. Site Plan Titled, Grading & Utilities Plan, dated May 20, 2019.
4. Figure Titled, Proposed Hydrology, dated May 19, 2019.
5. Stormwater Standard 4 - Water Quality Volume calculations, revised through June 17, 2019.
6. Stormwater Standard 3 – Recharge Calculations, revised through June 17, 2019.
7. HydroCAD calculations revised through June 20, 2019.
8. Contractor & Recharger Stormwater Chambers, Operation and Maintenance Guidelines and manufacture details.
9. Letter addressed to Mr. Harris, Final Comment Responses, dated July 9, 2019.
10. Report titled, Stormwater Management System Operation & Maintenance Plan, dated July 9, 2019, including Operation and Maintenance Log.

Fuss & O'Neill believes at this time the Applicant has addressed the comments presented in our previous review letter dated June 18, 2019. Comments were discussed and reviewed during a conference call with Berkshire Design Group Town Planner, Mr. Harris, and Fuss & O'Neill on July 8, 2019. Comments that have been addressed have been removed. Based on our meeting, several comments require the applicant to submit materials prior to construction. These comments are included in this letter for tracking purposes. No further review by Fuss & O'Neill is required at this time. For tracking and clarification purposes, the numbering for comments requiring further

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action form the Applicant has remained the same as the initial review letter. Responses made by Berkshire Design Group have been italicized and acknowledgment of those comments by Fuss & O'Neill are in bold lettering.

Stormwater Management

3. Per Section 200-16 N of the Stormwater Management Bylaw, information showing seasonal high groundwater elevation in areas of infiltration must be provided.

June 13, 2019 response:

- *Rain garden 1 is located at or 1' above grade in one of the higher areas of the site. It is assumed that groundwater will not be present within 3' of the surface.*
- *Rain garden 2 is located 2'-5' above grade. It is assumed that groundwater will not be located within 1' of the surface.*
- *The underground system has been redesigned as a shallower system (see L-401). The stone base of the revised system is located 1.5 to 3' above existing grade. It is assumed that groundwater will not be present within 1.5' of the surface at the upper end of the system.*

July 9, 2019 response: Estimated high groundwater elevation will be established at the time of construction. If groundwater is found to be higher than anticipated, the facility will be re-designed to achieve the separation requirement.

Results from the test pits performed at time of construction must be provided to the Planning Board and reviewed by Fuss & O'Neill. If results require a re-design of the facility, it will be at the discretion of the Board to have Fuss & O'Neill review the re-design. Additional review not required at this time.

5. Per Section 200-16 T of the Stormwater Management Bylaw, soil information from test pit at the location of proposed stormwater management facilities must be provided.

June 13, 2019 response: Soil mapping indicates that the soils are loamy sand with depth to the water table of more than 6'.

July 9, 2019 response: On site soil parameters at the location of the stormwater facilities will be confirmed at the time of construction.

Results from the test pits performed at time of construction must be provided to the Planning Board and reviewed by Fuss & O'Neill. If results require a re-design of the facility, it will be at the discretion of the Board to have Fuss & O'Neill review the re-design. Additional review not required at this time.

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6. Per Section 200-16 X and Section 200-21 of the Stormwater Management Bylaw, an Erosion and Sediment Control Plan shall be provided. The provided Sediment & Erosion Control Plan does not provide sufficient information to meet the requirements outlined within these sections.

June 13, 2019 response: Silt Fencing is part of erosion control barriers on sheet L-201. Refer to detail 12 on sheet L-601.

July 9, 2019 response: This project requires a NPDES general permit. The contractor will be responsible for completing a SWPPP and filing for the permit prior to the start of construction. The SWPPP will include all the parameters required by the Town's code.

The completed SWPPP must be provided to the Planning Board prior to the start of construction. It is at the discretion of the Board to have Fuss & O'Neill review the SWPPP. Additional review not required at this time.

7. Per Section 200-20 A(6) of the Stormwater Bylaws, infiltration basins shall be constructed with a minimum 3 feet of separation from the bottom of the structure to seasonal high groundwater elevations. MassDEP Stormwater Standards require a minimum 2 feet of separation from the bottom of an infiltration structure to seasonal high groundwater elevations. The Applicant proposes a rain garden, a stormwater basin, and an underground infiltration system; they do not provide documentation on separation distances from high groundwater.

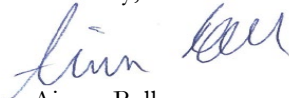
June 13, 2019 response: See response to comment 3.

July 9, 2019 response: See response to comment 3.

Results from the test pits performed at time of construction must be provided to the Planning Board and reviewed by Fuss & O'Neill. If results require a re-design of the facility, it will be at the discretion of the Board to have Fuss & O'Neill review the re-design. Additional review not required at this time.

The above comments are based on plans and documentation received at the time of review. Any revisions to the plans and documentation will require further review. Please feel free to contact us with any questions.

Sincerely,



Aimee Bell
Project Engineer

Reviewed by:



Daniel F. DeLany, P.E.
Associate – Department Manager