

December 20, 2021

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Town of Belmont Planning Board
Attn. Mr. Robert Hummel, Senior Planner
Homer Municipal Building
19 Moore Street, 2nd Floor
Belmont, Massachusetts 02478

www.bscgroup.com

**RE: Olmsted Road – McLean Hospital Zone 3
Peer Review, Proposed Stormwater Revisions to Uphams Bowl Area**

Dear Planning Board Members:

Per the request of Mr. Hummel, BSC Group, Inc. (BSC) has reviewed supplemental design information pertaining to the Uphams Bowl area provided by the Developer of the proposed residential development to be located within McLean Hospital Zone 3 at a site located on Olmsted Road in Belmont, Massachusetts. This letter report summarizes our findings and presents comments and questions that we have formed as a result of the review. The proposed revisions to the previously reviewed stormwater design were provided to BSC via email from Mr. Curtis Quitzau of VHB and subsequently discussed via an online meeting between Mr. Quitzau and myself. The proposed revisions can generally be broken into two main components – (1) relocation of an existing drain outfall near the Chapel and (2) revisions to the edge of the Uphams Bowl. Descriptions and discussions of the two proposed revisions are presented below.

Existing Drain Outfall Near the Eliot Chapel

A previously unknown 12-inch drain outfall pipe was discovered in the wooded area northwest of the Eliot Chapel. This outfall has since been documented and added to the project's existing conditions survey. Based on the existing site contours, stormwater discharged from this pipe flows overland towards the west, across the paved parking and driveway northwest of Olmstead Drive, and discharges to the Uphams Bowl. Per my discussions with Mr. Quitzau, there is no evidence suggesting that stormwater from this pipe makes its way to Olmstead Drive or to any place other than the Uphams Bowl. Under the proposed design however, this flow path would be cut off by Buildings #1 and #2. As such, the project proposes to install a stormwater manhole on the existing pipe upstream of the outfall and reroute the stormwater within a 12-inch HDPE pipe north of Buildings #1 and #2 and discharge into the Uphams Bowl. The project proposes to install a small drywell at the outlet pipe to provide some minor level of infiltration to groundwater beyond that which currently occurs. In larger storm events, the drywell will overflow via a grate at the surface and stormwater will flow into the Uphams Bowl. The area around this drywell is proposed to be reinforced with rip-rap to prevent erosion.

As this revision ultimately results in stormwater following to the same location to which it flows under existing conditions, we have no significant concerns with the proposal. While the proposed dry well with an overflow outfall is acceptable, use of a flared end section outfall would also be acceptable and may result in a simpler configuration for maintenance purposes.

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However, a flared end outlet may result in a more frequent saturated condition within the Uphams Bowl downstream of the outlet. Overall, BSC has no objections to or issues with this proposed revision to the previously reviewed stormwater design.

Revisions to the Uphams Bowl Edge

The project includes the elimination of some paved driveway and parking northwest of Olmstead Drive and the construction of a walkway from Olmstead Drive to the northeast in this general area. This walkway is adjacent to the Uphams Bowl. A portion of this area currently includes some armoring of the grass slope from the pavement to the Uphams Bowl below consisting of granite curb pieces and rip-rap. To help prevent future erosion in this area adjacent to the proposed walkway, the project is proposing construction of a shallow rip-rap swale along the walkway with a bowled rip-rap outlet. This bowled outlet would also contain the drywell outlet for the relocated drain pipe detailed above.

Based on our review of this proposed revision, the net decrease of impervious surface in this area, the reduction of peak-flow rates to the Uphams Bowl, and the proposed rip-rap swale should help prevent future erosion issues along this edge of the Bowl. We recommend that maintenance requirements for this swale be added to the Stormwater Operation and Maintenance (O&M) Plan for the project. Once this is added to the O&M Plan, we have no other objections to or issues with the proposed revisions.

I look forward to discussing these proposed revisions with the Board at the upcoming public hearing on the project. Please feel free to contact me at (617) 896-4386 or drinaldi@bscgroup.com should you have any questions on the information in this review.

Sincerely,
BSC Group, Inc.

Dominic Rinaldi, P.E., LEED AP BD+C
Senior Associate