



March 28, 2019

Beverly Planning Board  
191 Cabot Street  
Beverly, MA 01915

Beverly Conservation Commission  
191 Cabot Street  
Beverly, MA 01915

Via Hand Delivery

**Subject: Revised Plans and Drainage Report for  
Livingstone Avenue Improvements (7 Porter Terrace)  
Map 9, Lot 370, 371, 372, & 378**

Dear Ladies and Gentlemen:

This letter provides revised plans and stormwater calculations for the subject project. Plan revisions are summarized below:

- 1.) Livingston Avenue roadway improvements were reduced in length by approximately 100-feet, to increase buffer zone vegetation and decrease impervious surfaces (by approximately 1,600 sf). The proposed hammerhead turning area was relocated from Lot 4 to Lot 3. Corresponding changes to driveway and house layouts were made. Zoning Board of Appeals relief for reduced frontage on Lot 4 is required due to the reduced roadway length and will be separately applied for.
- 2.) Two drywells and a rain garden were added to increase stormwater recharge. Roof runoff from Lots 3 & 4 will be directed into the drywells. Stormwater runoff from portions of the driveways on Lots 2 and 3 will be directed into the proposed rain garden.
- 3.) Improvements to portions of the City drain pipe in Porter Terrace and Upland Road are proposed. The drain conveys stormwater from approximately 29 acres of land, including portions of Ashton Street, Livingstone Avenue, Harris Street, Leech Street, Porter Terrace, Upland Road, and Kernwood Avenue, to the Danvers River. Two "bottlenecks" in the drain pipe will be replaced with larger pipe, thereby increasing system capacity. The increased system capacity negates the need for on-site stormwater detention.
- 4.) Improvements to the existing outfall of the City's drain pipe (located behind #87 and #91 Kernwood Ave) are proposed. The outfall area is currently eroded. Additional riprap will be placed at the outfall to minimize the

potential for erosion. The proposed work is located within the jurisdiction of the Conservation Commission; a permit will be separately applied for.

We trust the above is satisfactory. Should you have any questions or comments, or require further information, please do not hesitate to contact us.

Very truly yours,  
**Griffin Engineering Group, LLC**



Robert H. Griffin, P.E.

Enclosures:

Project Plan Set, revised March 28, 2019;  
Stormwater Report, revised March 28, 2019; PDF and 2 copies

Cc: B. Marks, 7 Porter Terrace, LLC w/ 1 copy  
W. Ross, P.E., New England Civil Engineering, Inc. w/ 1 copy