



City of Methuen, Massachusetts

Department of Public Works

Engineering Division

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Neil Perry
Mayor

March 21, 2024

To: Community Development
City of Methuen

From: Stephen J. Gagnon, CPWP-M *SG*
Engineering Department Administrator

Subject: Brookview Heights
Definitive Subdivision Review

As requested, I have reviewed the plan set and Stormwater Management Report, dated March 6, 2024, submitted by Greenman-Pedersen, Inc., on behalf of DHB Homes, LLC. Based on my review of the above, I have the following comments to offer:

GENERAL

1. The documentation provided for review did not indicate the intended final disposition of the subdivision, i.e. public or private.
2. Sheet two of the plan set provides a list of requested waivers, however the list is incomplete. Additional waivers include:
 - Section 4.2.2.8 - Dead Ends
 - Section 4.2.4.1 - Centerline Grades
3. The plan set depicts retaining walls, as high as 14', on several lots. Who will be responsible for the care and maintenance of these walls?
4. A complete design of the retaining walls should be provided.
5. The intersection of Washington Street, Currier Street and Old Ferry Drive has been an area of concern for the neighborhood, due to poor drainage, icing and pavement deterioration. Perhaps the Developer could provide off-site improvements in this area.

ROADWAY

1. The proposed roadway layout will provide a 2,800-foot-long dead end, exceeding the 500' maximum dead-end length by 2,300'.
2. The plan proposes a 24' pavement width for Washington Street and 22' pavement width for Edgewater Drive. In my opinion, 22' pavement width is not sufficient to service the 23 homes proposed on Edgewater Drive.
3. The roadway cross-section throughout the development should be constructed to provide an appropriately graded shoulder area to allow the future construction of sidewalks without the need for any earthwork or relocating features.
4. The profile drawings provided depict the existing grades for only the centerline. Existing elevation profiles should be provided for left and right also.

WATER

1. The plan depicts the water main on Edgewater Drive running around each catch basin. The plan should be revised to depict the water main in an appropriate location.
2. The hydrant spacing on Edgewater Drive should be adjusted slightly to not exceed the 500' maximum spacing.
3. A second gate valve should be provided at the intersection of Washington Street and Old Ferry Drive.
4. Three-way gating should be provided where the cross-country water main connects to Old Ferry Drive.
5. The location of the water main and/or sewer force main, in Washington Street, should be adjusted to provide a minimum separation of 10'.

SEWER

1. The sewer pump station, as currently proposed, does not conform to the City's Sewer Pump Station Design Standards, which require a wet well/dry pit configuration. The design should be revised to conform to the design standards. A complete design package, including but not limited to system curves, pump curves buoyance calculations and component submittals should be provided.
2. The sewer pump station should be located within a fenced parcel or easement of sufficient size to contain all the associated components. Paved off street parking for two vehicles and site lighting is required.

3. The Sewer Pump Station will be subject to Municipal Code Chapter 14 Article XI Sewer Pump Station Maintenance Fee.
4. On page 31 of the plan set the pump station wet well is depicted as 6' diameter, the adjacent notes specify 8' diameter.
5. The Engineer should confirm the actual velocity of each sewer main segment falls within minimum velocity of 2½ FPS and maximum 15 FPS.

DRAINAGE

1. The Stormwater Manage Report provides a full report for the pre and post development 25-year storms and summaries for the 2, 10 and 100-year storms. Full reports should be provided for the 2, 10 and 100-year storms.
2. The Stormwater Manual requires 1' of freeboard over the peak water surface elevation. As designed, the infiltration basins will discharge out the emergency spillways in a 100-year storm, 0 freeboard provided.
3. The Stormwater regulations require underdrains to be provided in infiltration basins to allow for future maintenance.
4. The Stormwater Manual requires a 15' wide access to be provided around the pond.
5. The proposed access route for maintenance equipment should be identified on the plan.
6. While it is understood that the houses and driveways depicted on the plan set are generic, the final site plans should not depict any catch basins falling within driveways.
7. Corrugated polyethylene pipe is proposed for the drainage system. As of this date corrugated polyethylene has not been approved for use in public roadways in the city.

CONSTRUCTION DETAILS

1. A ladder should be depicted in manhole structures.
2. The manhole and catch basin details should be revised to depict a minimum of 2 courses, maximum of 4 courses of brick under the casting frames.

The Project Engineer should address these comments in writing.