



HUDSON
ENGINEERING
&
CONSULTING, P.C.

January 14, 2019

Alvaro Alfonzo-Larrain, P.E.
Consulting Village Engineer
Village of Mamaroneck

Re: Site Plan Review
416 Waverly Avenue (560 Fenimore Avenue)
Village of Mamaroneck

Dear Mr. Alfonzo-Larrain,

We have received your comment letter dated May 25, 2018 and offer the following responses:

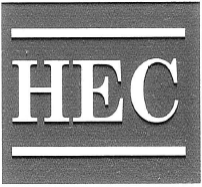
1.
 - a. The specification for the existing Aqua-swirl unit is included in Section 9 of the SWPPP.
 - b. The existing Aquaswirl unit is functioning as designed.
 - c. The existing Aquaswirl unit was **installed** in 2016 in accordance with the plans that were of the prior approval where the location was **reviewed, approved, and granted a certificate of occupancy** by the Village of Mamaroneck's Engineering Department & Building Department as well as it's Consultants.
2. The proposed site improvements result in a reduction of 715 square feet of impervious area. Coverage breakdowns are included on Sheet C-4. The "*Watershed Map – Proposed*" and report were revised accordingly.
3. A pre- and post-developed analysis was completed for the site. The proposed development results in a reduction of flow rate from the site for storms up to and including the 25-year event.
4. An existing conditions watershed map was included in Section 5 of the SWPPP.
5. Pre and post developed analysis has been completed at both points of connection to the village drainage system (DP-1 & DP-2) the results are summarized as follows:



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| Pre- and Post-Developed Conditions | | | | | | |
|---|---------------|--------------|----------------|--------------|----------------|--------------|
| Design Point | 1-Year | | 10-Year | | 25-Year | |
| | Pre- | Post- | Pre- | Post- | Pre- | Post- |
| DP-1 | 0.89 | 0.89 | 3.02 | 2.98 | 3.81 | 3.75 |
| DP-2 | 1.58 | 1.48 | 2.89 | 2.85 | 3.64 | 3.62 |

6. An assessment of the existing infrastructure will be coordinated with the village engineer. Upon completion, the results will be submitted to the village.
7. The anticipated sewer demand generated from the proposed development is estimated to be less than 300 gallons per day.
8.
 - a. The stormwater planter was revised to have a maximum ponding depth of 9-inches.
 - b. No longer applicable. The stormwater planter has been revised to utilize a FocalPoint biofilter system. All materials for the system shall be provided by the manufacturer. The remainder of the planter can remain existing soils with 6" of topsoil at the surface.
 - c. The proposed HydroCAD model of the stormwater planter was modified to include the FocalPoint biofilter system. As per the manufacturers specifications, a 20% void storage was provided within the limits of the system. The entire planter was modeled as storage above the planted surface (el. 21.58 to el. 22.33) as 100% voids.
9. Watershed 3 was divided into two watersheds, Watershed 3 and Watershed 3B. Watershed 3B contains the parking area tributary to the stormwater planter while Watershed 3 contains all runoff that flows overland off the site. Impervious & pervious areas for all watersheds were verified.



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10. Water quality was provided for the parking area and portion of the building previously located within Watershed 3. In the current design, Watershed 3 contains the areas around the perimeter of the site that could not be captured in the proposed drainage system. Runoff that remains untreated for water quality consists of 1,655 square feet of pervious area and 416 square feet of impervious area. Additional treatment capacity has been provided in each water quality treatment device to compensate for the areas that could not be collected/treated.
11. The requested revision was made to the Erosion Control Measures note on Sheet C-3.
12. The following comments were added to Sheet C-2:
 - a. Existing sanitary sewer services to all buildings to be demolished shall be abandoned and capped at the main. A watertight joint shall be used to cap the main per Village of Mamaroneck standards.
 - b. Existing water services to all buildings to be demolished shall be removed, cut and capped per Westchester Joint Water Works requirements and regulations.
13. No new utilities are proposed for the addition. All utilities will be interconnected with the existing structure.
14. The proposed addition will be four stories. The SWPPP was revised accordingly.
15. The contractor certification statement was revised accordingly.
16. A cut-fill report was added to Sheet C-2.
17. A detail for the construction of the proposed curb cut was included on Sheet C-6.
18. A proposed concrete washout area was added to Sheet C-3 and the corresponding detail was added to Sheet C-5.



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19. An equipment and material storage area was added to Sheet C-3.
20. References to tree protection have been removed from the SWPPP. There are no trees within the project area.
21. The requested note was added to Sheet C-2.
22. The requested note was added to Sheet C-2.
23. A draft stormwater maintenance agreement has been provided for the Village's review.
24. A note was included on sheet C-2 stating the following:

“The applicant shall provide an as-built plan of the stormwater management system (for all storm features including, but not limited to, locations of stormwater infrastructure, invert/rim elevations, pipe locations and sizes, final grading, etc.) Certified by the engineer on record, prior to the issuance of the certificate of occupancy. The as-built plan shall also include the final maintenance schedule for the stormwater management features.”
25. A Full Environmental Assessment Form has been included with this submission.

Additionally, revisions were made based upon our meeting on November 29th, 2018 and subsequent communications:

1. Sheet C-4 includes a detailed break down of impervious and pervious areas located on the site both before and after the proposed development.
 - a. Note, the proposed impervious & pervious areas have been confirmed. Therefore, the reduction in impervious area calculation remained unchanged.
 - b. All impervious/pervious area calculations remained unchanged. Impervious areas on plans, within the SWPPP and all calculations remain consistent.



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2. Watershed 3 contains the small strip of land on the southern side of the existing building and proposed addition, landscaped areas and portions of sidewalk along the western side of the property that flow into the Right-of Way. Additional callouts have been provided on WS-P to clarify the areas contained in Watershed 3. As proposed, Watershed 3 does not receive any water quality treatment as the areas flow away from the collection system. While water quality treatment is not provided for Watershed 3, the water quality devices were sized to provide additional runoff to compensate for the areas that could not be captured.
 - a. As previously stated, our impervious/pervious coverage calculation have been reviewed and confirmed. 786 square feet (a portion of the existing building) was removed from Watershed 3 as it is directly tributary to DP-1.
3. See Comment 2 Above. This portion of land is part of Watershed 3.
4. Sizing calculations for the focal point bed area have been provided in Section 10 of the SWPPP. Sizing of the stormwater planter can be found in Sections 7 & 8. Section 7 includes the sizing of the planter to bypass storms up to the 25-year event without exceeding capacity. Section 8 demonstrates the planters ability to pass the entire water quality volume without the use of any overflow device.
5. As discussed, a note was added to the plan stating that an as-built of the stormwater system shall be submitted and certified by the engineer of record prior to obtaining a Certificate of Occupancy.
6. The sanitary sewer abandonment note was revised to specify a water-tight joint be utilized on the main at the former service connection.



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If you should have any additional questions or comments, please do not hesitate to contact our office at (914) 909-0420, or via email at thomas@hudsonec.com.

Sincerely,

Thomas Kohany
Project Engineer