

**Brewster Yards (aka ProSwing)
160 & 132 Pugsley Road
Town of Southeast, Putnam County, NY**

**Review of the Draft Environmental Impact Statement
& Draft Stormwater Pollution Prevention Plan**

**By: Donald W. Lake, Jr. PE, CPESC, CPSWQ
on behalf of the
Office of New York City Watershed Inspector General
August 10, 2022**

These notes are based on my review of the following documents:

- a. Draft Environmental Impact Statement, May 16, 2022, Volume 1, 201 pages prepared by KG+D Architects, Mount Kisco, NY.
- b. Draft Environmental Impact Statement, Compiled May 16, 2022, 923 pages, DEIS Appendices A through M.
- c. Preliminary Stormwater Pollution Prevention Plan (PSWPPP), March 23, 2022, DEIS Appendix E, 282 pages, prepared by Insite Engineering with Appendices A through H.
- d. DEIS Appendix M, Civil Drawings, 14 sheets, various dates.

General

The proposed project is to build an athletic complex for youth baseball, softball, and soccer on two adjoining parcels of land along Pugsley Road in the Town of Southeast. The proposed site is in the Middle Branch Reservoir Watershed, which is within the East of Hudson portion of the NYC Watershed. The overall site is approximately 82 acres of wooded land with some wetlands. The project will disturb 49 acres, including 5.1 acres of wetland buffer. No wetlands will be disturbed. A vegetated buffer of 16.5 acres will be retained between the project area and adjacent residential lots to mitigate noise and visual impacts.

The project will create 10.7 acres of impervious area and approximately 16.3 acres of synthetic turf fields. Although these synthetic turf fields are not considered impervious, they do have reasonably high runoff potential. There are also small discrete areas of the project site, totaling 1.1 acres, proposed for construction on steep slopes (greater than 25%). An onsite septic system is planned to handle all sanitary waste. Approximately 210,000 cubic yards of material, including some rock, will be excavated for the project.

Stormwater management practices on site were designed using updated NRCC rainfall values and correct rainfall distributions. The primary stormwater management practices consist of two separate infiltration basins, capable of infiltrating both the water quality treatment volume and the channel protection volume, generated from the 1-year, 24-hour storm runoff. There is no net increase in phosphorus or need for pollutant loading analyses, since all pollutant loads are infiltrated.

Preliminary Notes

This Draft DEIS is in its very early development stage. Other than the basic overview drawings provided in Appendix M, engineering drawings illustrating or addressing stormwater were not submitted. Missing elements include a construction phasing and sequencing plan, details for an erosion and sediment control plan, and the design and placement of selected stormwater practices. This information is crucial to performing a technical review and evaluating the elevations for the hydrology and hydraulic calculations that appear in DEIS Appendix E of the Preliminary Stormwater Pollution Prevention Plan (SWPPP).

The following comments identify some discrepancies in the data, poses some questions, and provides some recommendations.

1. Drawing OP-1 shows 13.5 acres of synthetic turf at Lot 2 and 0.3 acres at Lot 3, totaling 13.8 acres. In contrast, DEIS Table 16-1 shows a total of 16.3 acres of synthetic turf at Lots 2 and 3. This discrepancy needs to be reconciled.
2. Drawing SP-1 provides no references for the drawings that contain details for the outlet structures, underdrains, inlet

protection, or the outlet at the end of the pipe on the natural slope. Will this be a level spreader? These Detail sheets need to be provided.

3. There are several locations on the drawings that show encroachment into the Town of Southeast wetland buffers. How will the Town of Southeast-owned wetland buffers be regulated?

4. Stormwater detention basins EDB 1.4 and 2.7 are discharging concentrated flow onto natural slopes, that have not previously experienced concentrated flow. These discharged flows need to be quantified and evaluated for erosion potential, so their impact can be mitigated. No predeveloped discharge analyses for these locations are presented in the SWPPP.

5. How is the flow from the synthetic turf fields collected? More information is needed.

6. Drawing OPG-1 shows the limit of disturbance (LOD) at the toes of the slopes and at the tops of the cuts. The LOD total is 49 acres. But more room is needed along these slope boundaries for clearing and grubbing and the installation and maintenance of erosion and sediment control practices. Based on limited information, the LOD value of 49 acres appears to be underestimated and needs to be re-evaluated.

7. Drawing, Figure 4, Testing Plan, DEIS Appendix M, shows the plan view locations and testing results for the stormwater management infiltration basins. The results for holes I-11 and I-12, in infiltration basin 2.6, had rates of 102 inches per hour and 180 inches per hour, respectively. This basin is 15 feet directly above detention basin 2.7. Infiltration rates this high could cause slope stability problems. In addition, rates this high would probably not provide an opportunity for pollutant removal. Previous guidance in the 1992 and 1993 NYS DEC “Reducing the Impacts of Stormwater Runoff from New Development” set 7.5 inches per hour as a maximum infiltration rate to provide pollutant removal and to prevent direct injection into groundwater. The infiltration rates associated with I-11 and I-12 and the guidance value need to be re-

evaluated. In addition, how do these values correlate to the 20 inches per hour used in HydroCAD?

8. The hydrologic and hydraulic analysis shown in the preliminary SWPPP is inadequate. The existing analysis looks at two design lines instead of at design discharge points. The design lines need to be revised to design discharge points to incorporate all the pertinent sub areas. In addition, there will be impacts with the proposed design discharging to areas where there was no previous flow (see comment 4).

9. The HydroCAD Developed analysis cannot be corroborated due to a lack of drawings and details. A Runoff Curve Number (RCN) of 86 was assigned to the 16.3 acres of synthetic turf fields. An RCN of 86 has an initial abstraction value of 0.326 inches. Initial abstraction is defined as the amount of precipitation that is lost before runoff begins. This includes infiltration, adsorption, evaporation, transpiration, and entrapment. The source documentation for this RCN value of 86 needs to be provided.