



851 Chemung Street
Horseheads, New York 14845

August 16, 2021

Attn: Mr. Peter Rocchi, Stormwater Management Officer
Town of Southport
1139 Pennsylvania Avenue
Elmira, New York 14904

**Re: Dollar General
Miscellaneous Stormwater Items
Pennsylvania Avenue, Southport, New York**

Mr. Rocchi:

As per the Town of Southport's request, I have completed a review of the following submitted information for the above-referenced project.

- Report of Site Inspection for Dollar General Store, Pennsylvania Avenue, Pine City, New York, Prepared by Whitestone Associates, Inc., Stamped by a NYS Licensed Professional Engineer (Ryan R. Roy, P.E. – NYS P.E. 083380-1), Inspection Date – May 12, 2021, Received May 25, 2021
- DRAFT Stormwater Operation & Maintenance Agreement (with Stormwater General Maintenance Plan)

My review comments and questions regarding this submitted information are as follows.

Stormwater Management Basin Liner

As you are aware, the Contractor choose not to adhere to the approved plans regarding the inspection and testing of the liner for the stormwater management basin. The approved inspection and testing of the proposed 12-inch thick liner included the following elements.

- Construction observation by a geotechnical engineer, licensed in NYS
- The completion of 20 compaction tests per 6-inch lift for the liner
- Geotechnical testing soil prior to placement to confirm that material meets design criteria
- Geotechnical engineer to confirm liner material complies with Section 6.1.2 of the latest NYSDEC Stormwater Design Manual by soil sieve and installation observation throughout the two day installation of the liner
- Permeability testing (based on grain size analysis)

In comparison, no construction observation of the liner installation was completed by a licensed geotechnical engineer; compaction testing was not completed; soil sieve testing was not completed during construction; and permeability testing/analysis was not completed.

As per the submitted "Report of Site Inspection for Dollar General Store, Pennsylvania Avenue, Pine City, New York", on May 12, 2021, a geotechnical engineer for Whitehouse Associates, Inc. completed four hand-excavated test holes through the installed liner at four locations within the basin. At that time, the geotechnical engineer observed that a liner thickness of 9 inches to 12 inches. (The design minimum liner thickness is 12 inches). No compaction testing was completed and no permeability analysis was provided. With that said, the geotechnical engineer considers the clay liner to comply with Section 6.1.2. of the latest NYSDEC Stormwater Design Manual.

It is recommended that additional testing and analysis (including compaction testing) be completed to substantiate that the installed liner does, indeed, comply with the specified requirements.

Operation & Maintenance Plan

1. In regards to the proposed stormwater system (including the Extended Detention Shallow Wetland basin (as well as the liner and outlet structure/pipe for this basin), the Stormwater Planters, storm sewers, and drainage swales, a detailed O & M Plan should be developed that includes (but not be limited to) the following items.
 - i. Specific operation and maintenance tasks for each of the components of the various stormwater system components
 - ii. Monitoring requirements (including frequency)
 - iii. Frequency of and thresholds (triggers) for maintenance activities

Proper maintenance of the stormwater management system will be critical to the long-term performance and effective life of these systems.

2. The Operation & Maintenance Plan should be detailed and address each component of the stormwater management system. For example,
 - A. Extended Detention Shallow Wetland System
 - What specific maintenance actions would be required and when would these be required? What is the frequency of inspection?
 - What maintenance would be completed to control woody growth and other plants that could negatively impact the berm and the liner system
 - What triggers would cause maintenance to be completed (including those regarding the clay liner)? What maintenance triggers would be implemented in regards to the clay liner?
 - How would rodent holes within the basin and within the basin berm be repaired? How would rodent holes in the clay liner be prepared?
 - What are the specific maintenance requirements for the plantings?
 - What are the inspection and maintenance requirements for the outlet structure?

B. Stormwater Planter

- In regards to the Stormwater Planter, what maintenance actions would be required and when would these be required? What is the maximum period of time that water can pond within the planter?
- What triggers would cause maintenance to be completed?
- What are the maintenance requirements for the plantings, mulch, weed management, etc?

C. Stormwater Collection & Conveyance Systems

- What are the specific maintenance requirements for the grassed swale? What is the maximum grass height?

D. Site Litter Control

- How frequently would parking areas be swept?
- What specifics would be applied to litter control?

If you have any questions or comments regarding this letter, please do not hesitate to contact me. Furthermore, I would be happy to meet to discuss this project in greater detail.

Sincerely,



Jimmie Joe Carl, P.E.

Cc: Kathleen Szerszen, Town of Southport Supervisor
Mark Watts, Chemung County Soil & Water District Manager
Bohler Engineering