CHEMUNG COUNTY STORMWATER COALITION

851 Chemung Street
Horseheads, New York 14845

May 9, 2019

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

Re: Dollar General – SWPPP Acceptance
Pennsylvania Avenue, Southport, New York

Mr. Rocchi:

I have completed a review of the following submitted information for the above-referenced project regarding the Stormwater Pollution Prevention Plan (SWPPP) and stormwater management system design for that project.

- Site Development Plans for Franklin Associates, LLC – 9100 Square Foot Retail Store, Stamped by a NYS Licensed Professional Engineer, Prepared by Bohler Engineering, Dated May 1, 2019, Received on May 8, 2019
- Stormwater Pollution Prevention Plan for Proposed Retail Development, Prepared for Franklin Land Associates, LLC, Stamped by a NYS Licensed Professional Engineer, Prepared by Bohler Engineering, Revision dated May 3, 2019, Received on May 8, 2019
- Response letter to our February 6, 2019 SWPPP Review Letter for the Dollar General project, Prepared by Bohler Engineering, Dated April 22, 2019

Upon review of the above submitted information, I believe that the SWPPP and stormwater management system are acceptable. This acceptance is conditioned upon the following items.

1. One set of final approved Stormwater Pollution Prevention Plan (including one set of the approved Site Development Plans), with the executed approval stamp of the Chemung County Stormwater Coalition, must be on-site at all times during construction until complete site stabilization.

2. This acceptance pertains only to stormwater drainage and management facilities. It is incumbent upon the Applicant to obtain all necessary regulatory approvals and permits.

3. Upon completion of the proposed site construction (including the stormwater collection and management systems), a licensed professional engineer shall provide a certification letter to the Town of Southport Code Enforcement Officer (copied to the Chemung County Stormwater Coalition), stating that the project was constructed in conformance with the approved plans and specifications. Deviations from the approved plans should be noted. Also, these associated changes shall be noted on the plans and a copy of these plans provided to the Town.

4. Prior to the start of construction, it is requested that the Applicant arrange a meeting with the Town of Southport Code Enforcement Officer, the Chemung County Stormwater Coalition, and the Applicant's design professionals, to discuss requirements associated with the SWPPP and SPDES permit.

5. To maintain the existing Hydrologic Soil Group rating for disturbed areas proposed to be vegetated, Soil restoration shall be completed in conformance with NYSDEC's document entitled Deep-Ripping and Decompaction, April 2008 and Table 5.3 of the NYS Stormwater Management Design Manual.

6. Silt, sediment, and/or dust shall not be allowed to leave the project site, including tracking onto public roads. Erosion and sediment controls, outlined in the accepted Erosion & Sediment Control Plan, shall be implemented and maintained to ensure this purpose. If silt, sediment, and/or dust are found to be leaving the site or being directed to the stormwater infiltration system, the Owner (or their contractor) shall take immediate actions to correct the situation.

7. Appropriate erosion and sediment control measures shall be implemented for any off-site spoils area, where cut from the project site shall be placed and stockpiled. These measures shall be consistent with the New York State Standards and Specifications for Erosion and Sediment Control. The Erosion & Sediment Control Plan shall be amended, if off-site soil stockpile areas are proposed to be utilized for this project.

9. During the SWPPP review process, the proposed stormwater management basin was identified as a potential source of groundwater contamination to the adjacent existing and proposed wells and, as such, appropriate measures to protect these wells should be provided. As per the Chemung County Soil Survey, the project site is situated upon Tioga silt loam. The Tioga series consists of deep, well-drained soils, medium-textured and moderately coarse textured soils. Given the well-drained nature of these soils, infiltration of stormwater from the proposed stormwater management basin into the aquifer could result.

   Required minimum separation distances from contamination sources to water supply wells are provided in Table 1 of NYCRR Part 5, Subpart 5-1 Standards for Water Wells – Appendix 5B for non-public wells and Appendix 5D for wells that serve a public water system. As per Table 1 of those appendices, "*Surface wastewater recharge absorption system constructed to discharge storm water from parking lots, roadways or driveways*" is noted as being a contaminant source. It appears that these minimum separation distances would not be able to be achieved.

   Given these considerations, measures to address this concern and protect these wells were evaluated by the developer's design engineer. In turn, a 12-inch thick compacted clay liner was recommended by the design engineer that would be installed below the bottom of the proposed stormwater management basin to limit the infiltration of stormwater. The following items are noted regarding this liner system.

   - A geotechnical engineer, licensed in New York State, shall witness the installation of the liner, complete appropriate testing, and certify (via a signed/sealed report to the Town of Southport) that the clay liner was constructed in accordance with Section 6.1.2 of the January 2015 New York State Stormwater Management Design Manual. Refer to the attached pages from the Design Manual.

   - To ensure the long-term intended function of the clay liner, the owner shall routinely complete appropriate operation & maintenance measures, including routine inspection, preventing the growth of plants with roots systems that could damage the liner, and appropriate repairs to the liner. If the permanent pool areas are not holding water, appropriate repairs to the liner system must be completed.

10. A formal, signed enforceable maintenance agreement for the stormwater management system shall be provided by the Applicant/Owner, accepted by the Town, and executed by the Applicant, prior to the issuance of the Certificate of Occupancy for this project. This agreement shall be binding on all subsequent landowners and recorded in the office of the County Clerk as a deed restriction on the property. That agreement must be fully consistent with the Town's Stormwater Management and Erosion and Sediment Control Ordinance and accepted by the Town and their attorney. The maintenance agreement shall include a detailed operation & maintenance plan that has specific provisions for the long-term maintenance of the stormwater management systems.

11. In regards to the Liner Detail on Sheet 13 of the Site Development Plans, that detail shall be replaced with the attached Liner Detail that was provided by Bohler Engineering in the attached May 9, 2019 e-mail.

12. A PDF of the approved plans and SWPPP shall be directed from the applicant to the Town of Southport Code Enforcement Officer and to this office for our digital records.

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

New York State

Stormwater Management Design Manual

January 2015

Originally Prepared by:

Center for Watershed Protection

8391 Main Street

Ellicott City, MD 21043

Updated by:

New York State

Department of Environmental Conservation

625 Broadway

Albany, NY 12233

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Andrew M. Cuomo, Governor **Joseph Martens, Commissioner**

6.1.1 Feasibility

Required Elements

- Stormwater ponds shall not be located within jurisdictional waters, including wetlands.
- Evaluate the site to determine the Hazard Class, and to determine what design elements are required to ensure dam safety (see Guidelines for Design of Dams). For the most recent copy of this document, contact the New York State Department of Environmental Conservation, Dam Safety Division, at: 518-402-8151.
- Avoid direction of hotspot runoff to design P-5.
- Provide a 2' minimum separation between the pond bottom and groundwater in sole source aquifer recharge areas.

Design Guidance

- Designs P-2, P-3, and P-4 should have a minimum contributing drainage area of 25 acres. A 10-acre drainage is suggested for design P-1.
- The use of stormwater ponds (with the exception of design P-1, Micropool Extended Detention Pond) on trout waters is strongly discouraged, as available evidence suggests that these practices can increase stream temperatures.
- Avoid location of pond designs within the stream channel, to prevent habitat degradation caused by these structures.
- A maximum drainage area of five acres is suggested for design P-5.

6.1.2 Conveyance

Inlet Protection

Required Elements

- A forebay shall be provided at each pond inflow point, unless an inflow point provides less than 10% of the total design storm flow to the pond.

Design Guidance

- Inlet areas should be stabilized to ensure that non-erosive conditions exist for at least the 2-year frequency storm event.
- Except in cold regions of the State, the ideal inlet configuration is a partially submerged (i.e., ½ full) pipe.

Adequate Outfall Protection

Required Elements

- The channel immediately below a pond outfall shall be modified to prevent erosion and conform to natural dimensions in the shortest possible distance, typically by use of appropriately-sized riprap placed over filter cloth. Typical examples include submerged earthen berms, concrete weirs, and gabion baskets.
- A stilling basin or outlet protection shall be used to reduce flow velocities from the principal spillway to non-erosive velocities (3.5 to 5.0 fps). (See Appendix L for a table of erosive velocities for grass and soil).

Design Guidance

- Outfalls should be constructed such that they do not increase erosion or have undue influence on the downstream geomorphology of the stream.
- Flared pipe sections that discharge at or near the stream invert or into a step-pool arrangement should be used at the spillway outlet.
- If a pond daylights to a channel with dry weather flow, care should be taken to minimize tree clearing along the downstream channel, and to reestablish a forested riparian zone in the shortest possible distance. Excessive use of riprap should be avoided to reduce stream warming.

Pond Liners

Design Guidance

- When a pond is located in gravelly sands or fractured bedrock, a liner may be needed to sustain a permanent pool of water. If geotechnical tests confirm the need for a liner, acceptable options include: (a) six to 12 inches of clay soil (minimum 50% passing the #200 sieve and a maximum permeability of 1 x 10^{-5} cm/sec), (b) a 30 mm poly-liner (c) bentonite, (d) use of chemical additives (*see NRCS Agricultural Handbook No. 386*, dated 1961, or *Engineering Field Manual*) or (e) a design prepared by a Professional Engineer registered in the State of New York.

6.1.3 Pretreatment

Required Elements

- A sediment forebay is important for maintenance and longevity of a stormwater treatment pond. Each pond shall have a sediment forebay or equivalent upstream pretreatment. The forebay shall consist of a separate cell, formed by an acceptable barrier. Typical examples include earthen berms, concrete weirs, and gabion baskets.
- The forebay shall be sized to contain 10% of the water quality volume (WQ_v), and shall be four to six feet deep. The forebay storage volume counts toward the total WQ_v requirement.
- The forebay shall be designed with non-erosive outlet conditions, given design exit velocities.
- Direct access for appropriate maintenance equipment shall be provided to the forebay.

Jimmie Joe Carl

From: Steve Vukas <svukas@bohlereng.com>
Sent: Thursday, May 9, 2019 4:07 PM
To: Jimmie Joe Carl
Cc: Pete Rocchi
Subject: Clay Liner Detail
Attachments: 2019-05-09 Clay Liner Detail.pdf

Jimmie Joe,

As discussed moments ago, the attached Clay Liner Detail will supersede the one on the plans. This one changes note 2 to reflect 20 compaction tests throughout the liner for each lift.

Thanks,

Steve Vukas

BOHLER
ENGINEERING

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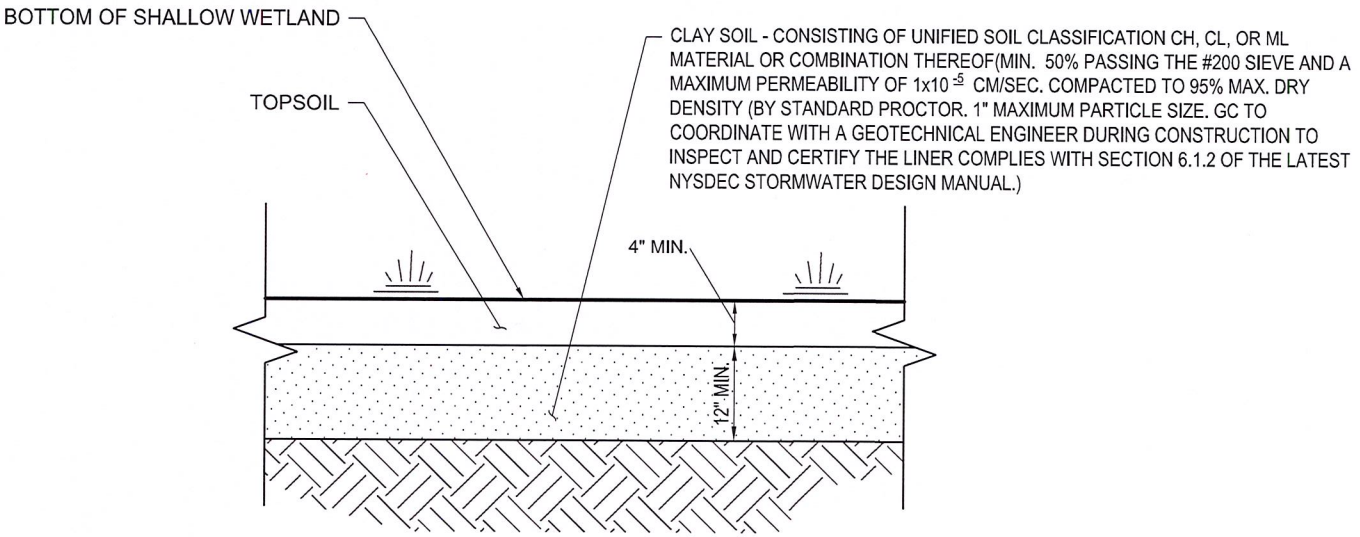

LINER DETAIL

SCALE: NTS

NOTES:

1. THE INTENT/PURPOSE OF THE LINER SYSTEM IS TO AVOID INFILTRATION INTO GROUNDWATER BY MEANS OF COMPACTED CLAY IN ORDER TO PROTECT NEARBY WATER SUPPLY WELLS.
2. INSTALLATION SHALL BE IN 6" LIFTS. TO CONFIRM THAT PROPER COMPACTION IS ACHIEVED, DENSITY TESTS SHOULD BE COMPLETED BY THE GEOTECHNICAL ENGINEER OF RECORD ON EACH LIFT OF FILL PLACED. 20 COMPACTION TESTS TO BE COMPLETED THROUGHOUT AREA OF LINER FOR EACH LIFT.
3. THE INSTALLATION SHALL BE OBSERVED BY A GEOTECHNICAL ENGINEER LICENSED IN NEW YORK STATE.
4. THE GEOTECHNICAL ENGINEER WILL 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 TO BE TESTED BASED ON GRAIN SIZE ANALYSIS.
5. THE GEOTECHNICAL ENGINEER WILL PROVIDE THE TOWN WITH SUMMARY REPORT UPON COMPLETION OF THE LINER. SUMMARY REPORT TO BE SIGNED/SEALED BY GEOTECHNICAL ENGINEER.
6. THE GEOTECHNICAL ENGINEER WILL TEST MATERIAL PRIOR TO PLACEMENT AND CONFIRM THE MATERIAL MEETS CRITERIA OF SECTION 6.1.2 OF THE LATEST NYSDEC STORMWATER DESIGN MANUAL.