



851 Chemung Street
Horseheads, New York 14845

February 19, 2019

Mr. Jamie Burgess, Code Enforcement Officer
Village of Horseheads
202 South Main Street
Horseheads, New York 14845

**Re: KFC
2138 Grand Central Avenue, Village of Horseheads
Review of Stormwater Pollution Prevention Plan**

Mr. Burgess:

I have completed a review of the above-referenced project regarding the proposed stormwater management system for that project.

- Stormwater Pollution Prevention Plan (SWPPP) for KFC at 2138 Grand Central Avenue - Horseheads, NY, Not Stamped by a NYS Licensed Professional Engineer, Prepared by Davidson Architecture & Engineering, LLC, Prepared for the Delventhal Company, Dated 2019, Received January 29, 2019
- Site Plan Drawings for a New Development for KFC at 2138 Grand Central Avenue (Sheets C1.1, C1.2, C1.3, C1.4, C2.1, C2.2, C3.1, C3.2, C4.1, C4.2, and C4.3), Village of Horseheads, Chemung County, NY, Stamped by a NYS Licensed Professional Engineer, Prepared by Davidson Architecture & Engineering, LLC, Revision dated September 21, 2019, Received January 29, 2019
- Response letter to our January 4, 2019 stormwater management/SWPPP review letter, Prepared by Davidson Architecture & Engineering, LLC, Dated January 18, 2019

My review comments and questions regarding the SWPPP and stormwater management system for the above-referenced project, based upon the submitted information, are as follows.

I. STORMWATER MANAGEMENT

1. As noted previously, given this revision to the site plans, the SWPPP (including the stormwater management system design) should be updated to address the current New York State Stormwater Design Manual (including Runoff Reduction requirements and Soil Restoration requirements), as well as comply with the current SPDES General Permit for Stormwater Discharges.
 - Soil restoration is part of the NYSDEC's green infrastructure requirements. Soil restoration would be completed for existing impervious and gravel areas that shall be converted to grassed areas. Also, soil restoration would be required for soils that are disturbed/compacted during construction, including such areas as the proposed Materials Stockpile Area.

Specific requirements for the proposed soil restoration should be included on the plans and SWPPP to clarify the Contractor's responsibilities and work in regards to this item. It is recommended that NYSDEC's document entitled Deep-Ripping and Decompaction, April 2008, be included as part of the SWPPP.

- Runoff Reduction is part of the NYSDEC's green infrastructure requirements and should be accommodated in the design of the stormwater management system. As per Soils Mapping, the project site is situated upon Howards soils (HoA), which are well-drained and, therefore, often conducive for Runoff Reduction.
2. As noted previously, the construction of the existing stormwater basin deviated from the original plans, including less available storage volume and a lower top of berm elevation. Were the other components of this basin constructed in accordance with the original plan, including the outlet structure and the auxiliary spillway? What are the constructed elevations of the control orifice, the top of the outlet structure and the spillway?

What is the design 100-year water surface elevation in the basin, given the existing outlet structure and the proposed stage versus storage? In the submitted calculations (from 2008), the 25-year peak water surface elevation was estimated to be 889.12 feet (based upon a hydrograph routing). What is the 100-year peak water surface elevation (based upon hydrograph routing)? Does sufficient freeboard exist from the proposed top of berm? What is the proposed width of the top of the embankment of the basin? Is this top width sufficient?
 3. The peak stormwater flows on Sheet No. C3.1 differ from those in the submitted calculations. In regards to the Storm Sewer Calculation Table on Sheet No. C3.2, what time of concentrations (and associated rainfall intensities) were used?
 4. As per the original 2008 SWPPP and the calculations provided on Sheet No. C3.2, the existing and proposed storm sewers would not be able to accommodate the peak 100-year storm. It is unclear how flows (in excess of the capacities of the storm sewers) would be conveyed to the stormwater management basin. For example, in regards to the proposed KFC site, it appears that overflows would reach the proposed dumpster pad area. It is uncertain if these flows could reliably pass through the dumpster area or would jump the adjacent curb, and be directed away from the stormwater basin. It is requested that the ability for overflows from the storm sewers to reliably reach the stormwater basin be closely evaluated and demonstrated.
 5. In regards to the sizing of the storm sewers, consideration should be given to the effects of tailwater (presented by the stormwater basin) on the overall hydraulics of the storm sewer system. Complete hydrologic and hydraulic calculations (including Time of Concentration calculations) should be provided.
 6. As per the response of the Applicant's engineer, roof drains are proposed to be discharged to the pavement of a drive lane along the north side of the proposed building. Discharging directly to the pavement may present icing/slipping issues for motorists and other options for handling roof drainage may exist to avoid this potential.
 7. A detail of the proposed catch basins, including the associated concrete structures, is requested.
 8. Details for the proposed storm sewer including the trench section and the type of pipe (including joint type) should be included on the plans.
 9. It is requested that the nature, location, and extents of the existing 12" CPP storm sewer be determined in the field, prior to the start of construction. Could this existing storm sewer received runoff from Grand Central Avenue?

10. In regards to the rip rap pad detail (aka rip rap outlet protection), specifics such as rock type, rock thickness, and dimensions of the proposed pad should be indicated. The proposed rip rap pad should also be shown on the utility plan. The New York State Standards and Specifications for Erosion and Sediment Control have sizing/design procedures for rip rap pads.
11. In regards to the proposed stormwater inlets for "Storm Sewer 1", are the top elevations for these inlets (noted on Sheet C3.2) the proposed top of grate elevations?
12. On Sheet No. C1.1, a note is provided regarding the General Contractor to complete inspections on a 14-day frequency and also references NPDES requirements. This note is inaccurate. All notes should be aligned with the current SPDES General Permit for Stormwater Discharges from Construction Activity.

II. SWPPP & EROSION/SEDIMENT CONTROL

1. The SWPPP narrative should be aligned with the current SPDES General Permit for Stormwater Discharges from Construction Activity. For example, on Page 7 of the SWPPP, it is indicated that pollution prevention measures "shall be inspected and a report shall be written by a qualified representative of the property once every fourteen (14) calendar days...". This is not accurate.
2. If the runoff reduction requirement is to be accommodated by the existing stormwater management basin, it is recommended that erosion and sediment control measures be implemented that would prevent sediment from reaching this basin.
3. A Sequence of Construction, which includes the installation of the various erosion & sediment control practices, should be included in the SWPPP.
4. The "Temporary Check Dam" at the discharge of the proposed storm sewer is not a typical practice and its use could be problematic.

III. MISCELLANEOUS

1. In regards to the submitted O & M Plan, the following items are noted.
 - In regards to mowing, it is requested that a maximum height of vegetation be noted. When vegetation reaches this height, mowing operation would begin.
 - The sweeping frequency of the parking lot should be generally outlined.
 - Woody debris growth can act to compromise the performance of the stormwater management basin, especially its integrity of the earthen berm. Specifics regarding the removal of woody growth should be included.
 - The use of a sediment marker within the stormwater management basin is recommended that would utilize to gauge when sediment removal is needed.
 - Can the existing storm sewer on the adjacent Rite-Aid site be accessed for maintenance by Plaza Street Fund 48, LLC?

2. As noted previously, in accordance with the SPDES Stormwater General Permit for Construction Activity, documentation must be included in the SWPPP that the proposed construction activities will not adversely affect a property that is listed or is eligible for listing on the State of National Register of Historic Places (including archeological sites).
3. Details regarding the proposed 10-inch diameter orifice plate and the screen for the flow control orifice should be included on the plans.

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,

A handwritten signature in black ink that reads "Jimmie Joe Carl". The signature is written in a cursive, slightly slanted style.

Jimmie Joe Carl, P.E.

Cc: Mark Watts, Chemung County Soil & Water Conservation District
Jessica Verrigni, Chemung County Stormwater Coalition