



851 Chemung Street
Horseheads, New York 14845

September 18, 2019

Attn: Mr. Thomas Skebey, Code Enforcement
Mr. John McCracken, Code Enforcement

City of Elmira
Inspection Services Department
101 West Second Street
Elmira, New York 14901

**Re: LECOM Off-Site Parking Area
College Avenue, City of Elmira
Review of Stormwater Management System & SWPPP**

Mr. Skebey and Mr. McCracken:

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 Plan Drawings for LECOM Off-Site Parking Area, Elmira, New York, Prepared by Fagan Engineers, Prepared for Kingsview Paving & Excavating, Dated May 13, 2019, Received August 20, 2019, Stamped by a licensed professional engineer
- Stormwater Pollution Prevention Plan (SWPPP) for LECOM Off-Site Parking Area, Prepared by Fagan Engineers, Prepared for Kingsview Paving & Excavating, Dated August 2019, Received August 20, 2019, Stamped by a licensed professional engineer

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. Soils Testing & Groundwater Considerations

1. It is understood that the investigation and testing of on-site soils for stormwater infiltration has not been completed at this time. This investigation would typically include the completion of deep test pits at the locations of the proposed infiltration systems to evaluate the nature of the soils (including the identification of any layers that would limit infiltration) and the depth to groundwater. Also, at those locations, infiltration testing would typically be completed to quantify the infiltration rates of the underlying soils.

Given that a soils evaluation has not been completed, an agreement (in writing) between LECOM and the City of Elmira shall be prepared and executed that outlines the following requirements.

- Soils evaluation and testing shall be completed prior to the start of construction.
- The results of this soil evaluation (including test pits logs, the results of the infiltration testing, and the measured depth to groundwater) shall be provided to the City for their review. In addition, the Applicant's engineer shall provide a narrative discussing how the characteristics of the on-site soils compare with those characteristics that were assumed for the stormwater management system design.
- If poor/marginal on-soils, groundwater at elevations higher than expected, and infiltration results with lower rates than assumed are encountered, the Applicant's Engineer shall revise the stormwater management system design and provide revised plans and SWPPP. Construction would not be allowed to begin, until this revised design is accepted by the City of Elmira.

This agreement shall be reviewed by the City's DPW chief and attorney.

II. Disturbance Area & Permitting Considerations

1. On Plan Sheet C2, the proposed Limit of Disturbance is shown with an orange line. As noted on that plan sheet, the area within the Limit of Disturbance is 42,799 SF (0.9825 acres). On Plan Sheet C1, three existing driveway aprons and four sections of sidewalk are noted as being proposed for demolition as part of this project and are outside of the Limit of Disturbance line shown on Sheet C2. What is the overall area of disturbance for this project, when these additional areas are included? What measures are proposed to be implemented to ensure that the Contractor does not disturb areas outside of the designated Limit of Disturbance?

If the area of disturbance is 1 acre or greater, a SPDES General Permit for Stormwater Discharges from Construction Activity would need to be obtained and design of the stormwater management improvements would need to conform to the New York State Stormwater Management Design Manual.

III. Stormwater Infiltration Systems

1. In regards to the proposed drywells, the "Bottom" elevations of these drywells are noted on the Utility Plan (Sheet C4). The term, "Bottom", may be confusing. Is it the bottom of the excavation, the bottom of the precast concrete base, or the bottom of the inside of the drywell? This should be clarified on the plans.
2. When determining a design infiltration rate, consideration should be given to the potential that particulates could accumulate over time at the interface of the washed stone and native soil that could, in turn, reduce the effective infiltration rate. Given that pretreatment of stormwater is not proposed, the proposed drywells may be more vulnerable to reduced infiltration capacity overtime.

IV. Site Grading

1. It is requested that the grading of the proposed entrance drive be refined to reduce the amount of proposed pavement that shall drain towards West Fourth Street.
2. Will the proposed elevation grades along the east side of the proposed parking area be higher than the existing nearby grades, such that drainage patterns on the adjacent residential lots would be altered and nuisance conditions created?

V. Erosion & Sediment Control

1. A detail for compost filter sock should be included in the plans.
2. Provisions for dust control should be included in the erosion & sediment control plan. An appropriate specification should be included in the SWPPP.
3. The location of the proposed Concrete Washout should be indicated on the Erosion & Sediment Control Plan.
4. Item #11 in the Construction Sequence on Sheet C7 references a Sediment Basin. If a Sediment Basin is not proposed, this note should be revised accordingly.
5. Will soil stockpiles be located on site during construction? If so, what erosion and sediment control measures would be implemented for soil stockpiles?

VI. Operation & Maintenance Plan/Agreement

1. In accordance with the City's Stormwater Management and Erosion and Sediment Ordinance, a formal, signed enforceable operation and maintenance agreement for the stormwater collection and management system shall be provided by the Applicant. Furthermore, this agreement must reference and include an approved Operation & Maintenance Plan. This is especially pertinent to this project as infiltration systems will have specific O & M needs to maintain the on-going performance.

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. Also, the Applicant shall convey to the City easements and/or rights-of-way to assure access for periodic inspections by the City or their representatives (and for maintenance if required). These agreements, as well as the Operation & Maintenance Plan, shall be subject to the review and approval of the City of Elmira, their attorney, and Chemung County Stormwater Coalition.

2. In regards to the proposed stormwater infiltration systems, a detailed O & M Plan should be developed that includes (but not be limited to) the following items.
 - i. Specific operation and maintenance tasks
 - ii. Monitoring requirements (including frequency)
 - iii. Frequency and thresholds of maintenance activities

Like other stormwater infiltration systems, the proposed drywells have an effective life span, after which the repair and/or replacement of these systems would be needed. A number of factors impact the effective life of an infiltration system, including the nature of the existing soils, the nature and amount of solid particulates discharged to the system, and the degree of maintenance. Maintenance of the proposed infiltration systems will be critical to the long-term performance and effective life of these systems.

VII. Miscellaneous Items

1. The design of the entrance drive onto West Fourth Street needs to conform to the City of Elmira's standards, including the extension of the sidewalk across the entrance drive. This should be reviewed by the City DPW, as part of the driveway permit process.

2. Will the proposed fencing around the perimeter of the proposed parking lot result in unsafe visibility for vehicles and pedestrians? Are adequate clear sight triangles accommodated with the layout of the proposed fencing?
3. Although a detail for a Stop Sign Installation is provided on the plans, the location of a proposed stop sign is not indicated on the Site Plan. It is recommended that the location of the proposed Stop Sign be indicated on the Site Plan.

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

Sincerely,



Jimmie Joe Carl, P.E.

Cc: Andy Avery, P.E., City of Elmira
Rick Vary, City of Elmira
Fagan Engineers