



851 Chemung Street
Horseheads, New York 14845

May 8, 2014

Mr. Tim Gilbert, Code Enforcement Officer
Town of Big Flats Code Enforcement Department
476 Maple Street, P.O. Box 449
Big Flats, New York 14814

**Re: Hickory View Apartments
Big Flats, New York
Review of Contingency Stormwater Management Plan**

Mr. Gilbert:

I have completed a cursory review of the above-referenced project regarding the Stormwater Pollution Prevention Plan and stormwater management system design for that project.

- Hickory Grove Apartments Contingency Design Plan for Arnot Realty Corporation, Stamped by a NYS Licensed Professional Engineer, Prepared by Larson Design Group, Project No. 6632-00-6A, Dated April 2014, Received April 21, 2014
- Contingency Stormwater Design Plan, Stamped by a NYS Licensed Professional Engineer, Prepared by Larson Design Group, Project No. 6632-006, Dated April 17, 2014, Received on April 21, 2014

As you are aware, as a condition of the original approval of the Hickory Grove Apartments projects, a contingency stormwater management plan had to be implemented, if standing water (lasting for 48 hours or more) and/or stormwater discharges leaving the site were occurring. Soon after the construction of the Hickory Grove Project, standing water (lasting for extended durations) and stormwater flows from the project site being discharged to off-site areas were occurring. These shortcomings were witnessed and documented by the Town and, in turn, the Applicant was directed to pursue an associated contingency plan.

The current submission from the Applicant's engineer outlines details associated with their proposed stormwater contingency plan. My review comments and questions regarding the above-referenced submitted information for the Hickory View Apartments project are as follows.

STORMWATER CONVEYANCE

1. Is a rip rap pad proposed at the discharge of the proposed 18-inch diameter storm sewer? Associated sizing calculations and details for this pad should be provided.
2. In regards to the proposed drainage swale from the discharge of the proposed 18-inch diameter storm sewer to the existing wetland;
 - What is the proposed cross-section of this swale? Appropriate sizing calculations should be provided.
 - Will this proposed swale be erosive? If so, what design measures will be utilized to prevent erosion of this swale?

2. In regards to the existing Swale BCD, the design plans note "**Fill to prevent runoff from existing onto adjacent properties**". It is unclear from this note what improvement is proposed for this swale. It is my understanding that it is intended that the grade along the adjacent property line be raised. The design intention of the proposed improvement should be clearly indicated on the plans.

STORMWATER MANAGEMENT ITEMS

1. In regards to the proposed Outlet Structure, the following questions/comments pertain.
 - o Could the outlet structure be prone to flotation?
 - o In a ponding situation, how would this structure (including the slide gate) be accessed?
 - o How was the top of grate elevation of this structure determined? It was my understanding that the intent is to allow stormwater from the Hickory View site to be stored on-site, in the advent of issues related with the existing wetland.
2. Details regarding the design of the proposed berms should be provided. The details should include fill requirements, site preparation requirements, compaction requirements, elevations, and proposed slopes. If overflows from the wetland occur, how would erosion of these berms be prevented?
3. On Sheet 1 of 2 of the plans, it appears that fill is proposed to be placed immediately to the east of the existing wetland. What is the purpose of this fill?

EROSION & SEDIMENT CONTROL

1. Provisions for erosion and sediment control, associated with the proposed improvements, should be noted on the plans (including stabilization measures for the proposed berms and swale).

MISCELLANEOUS

1. In accordance with the Town's Stormwater Management and Erosion and Sediment Ordinance, an operation and maintenance agreement for the stormwater collection and management system exists for the original Hickory View Project is in place. This operation and maintenance agreement (and associated O & M Plan) should be expanded/modified to include the proposed improvements associated with the contingency stormwater management plan.

This expanded/modified agreement (including the expanded/modified O & M Plan) 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 Town easements and/or rights-of-way to assure access for periodic inspections by the Town or their representatives (and for maintenance if required).

As a point of understanding, the proposed stormwater system would be considered to be operating ineffectively if;

- i. The wetland area is full and stormwater is being discharged from the wetland area.
- ii. Stormwater from the Hickory View Apartment site is otherwise reaching off-site areas.

The expanded/modified O & M Plan should include actions to be undertaken if the stormwater management system is operating ineffectively. Furthermore, the expanded/modified O & M Plan should outline operational provisions for the slide gate in the proposed outlet structure.

2. A second area, south of the existing wetland, is proposed to act as an emergency overflow area. Given the performance issues with the constructed infiltration system for the original Hickory View Apartments project (as well as the historic lack of performance of stormwater infiltration facilities in Collamer soils), the creation of this emergency overflow area seems prudent. Both the wetland area and the emergency overflow area are situated within Collamer soils.

In the narrative of the Stormwater Management Contingency Plan, it is noted that "*Once the system has been fully operational for a period of one (1) year, if it can be demonstrated that this area (the emergency overflow area) is not being utilized, it is the applicant's intent that this area will be available for future development*".

A 1-year period of operation would most likely not provide sufficient track history for the applicant's engineer to make a sound judgment on the continued need/benefit of the emergency overflow area. For example, if precipitation is low and dry-weather conditions exist, the performance of the wetland area may not be adequately tested. This subject should be discussed and the accepted conditions incorporated into the operations and maintenance agreement.

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: Jessica Verrigni, Chemung County Stormwater ✓
Mike O'Connell, P.E., Larson Design Group