

Exhibit VIII.C.17.e – Storm Water Management

Submit as Exhibit VIII.C.17.e. a description of plans for management, detention and discharge of storm water on and from the Project Site to include (i) the estimated cost of the improvements; (ii) the estimated date of completion; (iii) the names of the parties, whether public or private, initiating the improvements; (iv) the names of the parties responsible for the costs of the improvements; and (v) if more than one party is responsible for the costs, the proportionate distribution of the costs among the parties.

Methodology

The project will be designed in accordance with the criteria presented in the New York State Stormwater Management Design Manual (August 2010) and the State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities (GP-0-10-001).

In order to evaluate the potential impacts associated with the development of the site, existing and proposed condition hydrographs will be generated. The conditions will be modeled using the SCS unit hydrograph method using a type II rainfall distribution. Runoff curve numbers and times of concentration will be computed using standard NRCS TR-55 methodology. Additionally, peak stormwater flows and hydrographs for the existing and post-development conditions will be computed using the Bentley Pondpack Hydrology Program (Version V8i).

The project will be designed to meet the following New York Stormwater Sizing Criteria:

- Water Quality Volume
- Run-off Reduction Volume (Through the use of Green Infrastructure Techniques)
- Channel Protection Volume (24 Hour Extended Detention of post developed 1 year storm)
- Overbank Flood (Peak Flow mitigation of the 10 year storm)
- Extreme Storm (Peak Flow mitigation of the 100 year storm)

Stormwater Practices

The Stormwater Management Practice Selection Matrices will be utilized to determine the appropriate combination of practices for the site. The factors used to determine the proposed methods include:

- Land Use
- Physical Feasibility Factors
- Watershed Factors
- Stormwater Management Capability
- Community and Environmental Factors

The use of Green Infrastructure Techniques to meet the required Run-Off Reduction Volume (RRV) will be utilized. Practices to be evaluated include bioretention, vegetated swales, green roof, rain garden, planters and porous pavement. The geotechnical investigation indicates shallow rock in areas of the site with underlying soils having limited suitability for infiltration.

Mitigation of the 1, 10 and 100 year storm events will be through standard practices such as micro-pool extended detention ponds. The remaining water quality volume that is not treated through Green Infrastructure Techniques will be treated within the permanent pool and extended detention of the ponds.

The location of proposed stormwater management features are depicted on the Attachment to this Exhibit VIII.C.17.e.



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Drainage Areas

Run-off from the existing site encompasses several drainage areas and discharge points. The eastern portion of the site is generally sloped from the west to east with a discharge point along Route 4. The remaining portion of the site is undulating with discharge points to three distinct wetland complexes. The post developed condition will maintain similar drainage areas and discharge points from the site.

Local Approval

The Town of East Greenbush is a regulated MS4 Local and as such will review and provide a MS4 sign-off for the NYSDEC Notice of Intent for coverage under the General Permit for Construction Activities. The MS4 review will include the Stormwater Pollution Prevention Plan and Stormwater Management Report. The MS4 sign-off will be obtained concurrently as part of the SEQR and PDD review processes being conducted by the Town. Since the project will be designed to meet the NYSDEC requirements conditions placed on the project as part of the MS4 review will not be required. The MS4 sign-off will be obtained concurrently with the PDD review process being conducted by the Town.



