

INFRASTRUCTURE REQUIREMENTS

Exhibit VIII.C.17.e

The Sterling Forest Resort site is divided into two major drainage areas. The first is the Resorts World Grand Hotel area and the second is the World Fairgrounds which include the Ski Village. New point sources include parking lots, pedestrian facilities, and rooftops, directing on-site storm water to a management facility/structures, green infrastructure, and on-site surface waters including improvements to existing wetlands and streams. No storm water will flow to adjacent properties.

Drainage Area 1 – Resorts World Grand Hotel

The proposed development will implement green infrastructure for storm water management. These best management practices (BMP) features include rain gardens, bio-retention areas, infiltration basins, underground sand filters, and pervious pavements in surface parking areas.

This project intends to provide at least 10 percent more than the required water quality volume in an effort to clean the storm water runoff beyond what is required by the New York State *Stormwater Management Design Manual*. After the storm water has been cleaned by the above measures, it will be conveyed to the proposed lake with a designed outlet structure. The purpose of this system will be to control the post-development peak flow rates.

The proposed storm water management system will not impound any water for reuse because the project is located in a sole source aquifer region, it will only detain the storm water to release at an allowable release rate.

Once the storm water has been cleaned and slowed to pre-development flow rates, it will be safely discharged into an existing stream and wetlands area for conveyance downstream in the Indian Kill Creek. On-site improvements to Indian Kill Creek will be made so that erosion of the stream channel is avoided.

Geotechnical investigations have determined that high groundwater is present throughout the project site. Storm water measures will be designed to respect the groundwater levels.

The proposed project will excavate some areas of the poor soils identified in the geotechnical report which may lower the groundwater elevation in that immediate area. The excavation areas will be replaced with engineered fill allowing for infiltration to the new groundwater elevation. Infiltration will take place in either bioretention areas or underground infiltration basins. If surface features do not fit into the ultimate design, underground sand filters will provide the water quality treatment in this drainage area.

The proposed lake will be created by excavating the existing soil in the proposed lake area which will allow the ground water to maintain the permanent pool elevation in the lake. The design intent is to clean the storm water runoff prior to discharge into the new lake in order to minimize any mixing of untreated site runoff with natural ground water.

The construction costs for the storm water management improvements described above are estimated to be \$2.5 million. The project is estimated to be complete by November of 2016. The developer will be responsible for initiating the storm water management improvements.

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Drainage Area 2 – World Fairgrounds

The proposed redevelopment will implement green infrastructure for storm water management. These features will include rain gardens, bio-retention areas, and pervious pavements in surface parking areas. Storm water detention and discharge will be treated in small sub sheds with surface treatment facilities such as bio swales, rain gardens, bioretention areas, or underground sand filters.

A portion of this site will be considered redevelopment and will adhere to the New York State guidelines for redevelopment projects as described in Chapter 9 of the New York State *Stormwater Management Design Manual*. It is anticipated that a few areas will be treated as “new development” due to the proposed footprint going beyond the existing New York Renaissance Faire layout.

As the proposed redevelopment will be similar to the existing conditions, the water quantity is not expected to increase significantly. The existing ponds in the project area provide a level of both storm water quantity and quality control for the existing site.

We will enhance these facilities by constructing proper flow control systems to manage the peak flows and significantly improve the water quality by adding the green infrastructure components noted above. After providing the necessary water quality treatment, the controlled runoff will be discharged into an existing stream channel of Indian Kill Creek.

The construction costs for the storm water management improvements described above are estimated to be \$1 million. The project is estimated to be completed by November of 2016. The developer will be responsible for initiating the storm water management improvements.

Storm Water Management Summary

Approvals will be needed from the Town of Tuxedo, Orange County, New York State, the U.S. Army Corps of Engineers (ACOE), and New York State Department of Environmental Conservation (NYSDEC) prior to constructing the storm water management improvements.

The local government will review design plans and calculations produced by the design team in accordance with applicable state and local storm water management regulations. The design team will coordinate with the local government to address any design review comments to obtain approval. No conditions of approval are anticipated to be placed on the development by the local government for this project. The estimated date of local government approval is November 2014.