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MEMORANDUM

Date: November 1, 2011
To: Abe Zambrano
From: Daniel O'Connor 
Subject: Georgia Lane Storm Water Management Pond Evaluation Report

The storm water management pond between Georgia Lane and Park Trail was built to accommodate storm water drainage from the Waldwood Subdivision on Georgia Lane. There have been some operational issues over the years mainly due to the undersized outlet structure and design of the emergency spillway. These issues have resulted in frequent pond overflows in the area of the emergency spillway with subsequent damage to the pond berm and downstream properties. The Village retained Dvirka and Bartilucci Consulting Engineers to model the storm water pond and tributary watershed and make recommendations for improvements to address the above noted issues.

The report titled, "Georgia Lane/Waldwood Subdivision Storm Water Management Basin Engineering Design Report, September 2011" was received on October 6, 2011. This report contains the results of the computer modeling and makes recommendations for various improvements. The tributary area to the pond is about 72 acres and includes Georgia Lane and the associated residential subdivision, upstream woodlands and a portion of the Con Edison transmission corridor lands. The report indicates that the emergency overflow spillway is overtopped at the 5-year and larger storm events. Erosion of the spillway has occurred and it is likely that some overtopping may occur during 2-year storm events due to ongoing erosion. Overtopping of the emergency spillway occurs since the main outlet structure is not designed to handle larger storm events. The report also notes that the culverts under Park Trail do not have the capacity to handle flows from the 5-year storm event.

The storm water basin and tributary area are shown on the maps below. The flows from this basin ultimately reach Batten Road and flow through the recently completed improvements and then to the Croton River near Niles Road.

The report analyzed three possible options to improve the operation of the pond, one included a proposed increase in the size of the pond, the second included the by-passing of the perennial stream around the pond and the third included the complete replacement of the existing outlet structure. All options included repairs to the emergency spillway and damaged sections of the pond berm and installation of a trash rack.

Option #1: enlargement of the basin was deemed not feasible due to the need to obtain additional easements on various properties as such this alternative was not recommended.

Option #2: bypass of the perennial stream was deemed possible but this option increased downstream flows for smaller storm events and had a higher estimated cost (\$143,150.00) than option #3.

Option #3: The recommended option is option 3 which is the complete replacement of the existing outlet structure and discharge pipe. This option has an estimated cost of \$126,350.00.

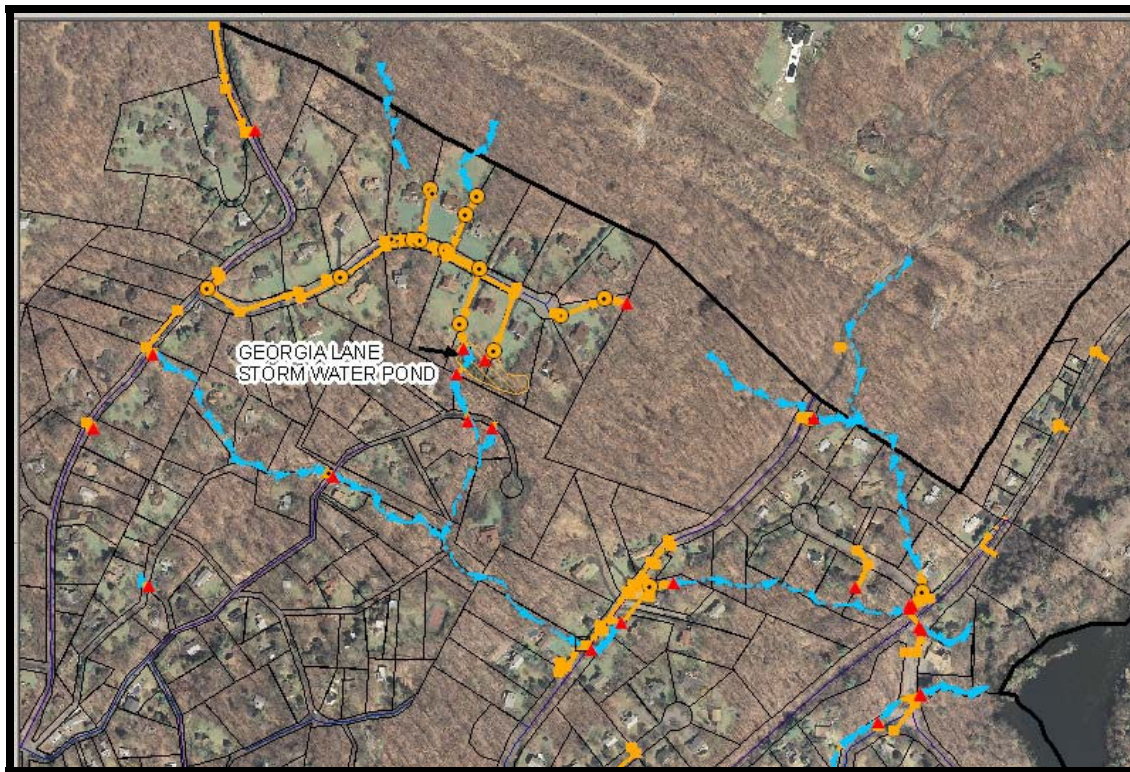
Due to the existing issues with frequent overtopping of the emergency spillway option #3 will be implemented in phases, phase 1 will include the replacement of the outlet structure and discharge pipe and culverts under Park Trail. Phase 2 will include reconstruction of the emergency spillway and section of the berm and removal of some sediment in the basin.

The current access easement to the storm water basin is from Georgia Lane even though access from Park Trail is more efficient. A follow up to the drainage infrastructure improvements will be the possible acquisition of a maintenance access easement from Park Trail to the storm water basin.

A proposal from Dvirka and Bartilucci was received for the phase one design work; the cost of the services is \$8500.00. It is requested that this proposal be placed on the next Village Board agenda for approval by the Village Board. The cost would be charged to the appropriate capital account, which should be H8120-2106-09197.

Please let me know if any additional information is needed.

cc: Paula DiSanto, Village Clerk
Janine King, Assistant Village Manager
File

Georgia Lane storm water management pond and downstream drainage paths.**Georgia Lane storm water management pond (2 ft contours).**