

GLENERIE STORM WATER IMPROVEMENTS

**PRELIMINARY ENGINEERING REPORT
AND
SUMMARY OF COSTS**

TOWN OF ULSTER, ULSTER COUNTY, NEW YORK

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Prepared for:

TOWN OF ULSTER

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BACKGROUND

The Glenerie area of the Town of Ulster is located at the northerly end of the township, bordered generally by NYS Route 9W on the east, the Esopus Creek on the north and south, and Lake Katrine on the south. The Glenerie "neighborhood" consists of an area of approximately 350 acres, encompassing 272 single-family homes and trailers and eight commercial parcels. The topography is hilly, varying in elevation between 270 to 130 feet. Glenerie Boulevard, a major north-south artery, traverses the area for a distance of approximately three miles.

Many houses in the area were initially built as summer camps and bungalows. Consequently, many lots are small and have limited area for proper installation of utility systems. In addition, these homes have been located at elevations below the adjacent roadway, causing ponding and similar poor drainage characteristics. Two dominant soil types, Bath and Stockbridge, are characterized by slow percolation and steep slopes and are generally not conducive to septic systems. All these factors have combined to be the major cause of failing septic systems in the area.

A municipal water system was installed in 2004 to address the well contamination issues and studies have indicated that a sanitary sewer system is cost-prohibitive. This storm water project provides a consistent and complimentary engineering solution directed toward improvement of public health conditions in the Glenerie neighborhood.

STORM WATER RUNOFF

Storm water runoff is carried by roadside and backyard ditches and some short sections of pipe to the nearby Esopus Creek. Many residents have excavated channels and installed lengths of makeshift piping on their property in an effort to divert storm water away from their homes and septic fields. High runoff volumes are reported due to the steep terrain, shallow depth to bedrock and poor soil conditions.

During moderate rainfall events, residents have reported sanitary waste flowing in these streambeds and ditches due to failing septic systems in the area. Health Department records indicate numerous sanitary violations attributable to contaminated water lying in ditches and low areas throughout the area.

In 2002, the Town of Ulster installed a major drainage trunk line along Wildwood Lane and a small portion of North Drive (most northerly area of North Drive). This project addressed a small but vital portion of the drainage concerns in the Glenerie area, and created a discharge point to the Esopus Creek.

There are four additional chronic problem areas in Glenerie, including:

- I. Glenerie Boulevard-area north of Upper Crossing Rd., between Esopus Creek and Railroad -approximately 600 feet of piping is required to connect area to outfall sewer

II. Open ditch-line running in a northwesterly direction along the southern most portion of North Drive, with discharge to Glenerie Blvd., approximately 1600 feet

III. Portions of Cedarwood Lane and Belvedere Lane tributary to new storm system on Wildwood Lane-approximately 850 feet of piping and basins required

IV. Open ditchline parallel to South Drive, tributary to new storm system on Wildwood Lane- approximately 800 feet of piping and basins required

**PRELIMINARY OPINION OF PROJECT COST
BASED ON TOWN HIGHWAY DEPARTMENT FORCE ACCOUNT LABOR**

ITEM	DESCRIPTION	PAY UNIT	EST. QTY	UNIT PRICE	TOTAL
1	12 inch Storm Pipe	lin ft	1450	\$55.00	\$79,750.00
2	15 inch Storm Pipe	lin ft	800	\$65.00	\$52,000.00
3	24 inch Storm Pipe	lin ft	1600	\$110.00	\$176,000.00
4	Storm Manholes	each	3	\$3,500.00	\$10,500.00
5	Drop Inlets	each	16	\$3,000.00	\$48,000.00
6	Trench Rock Excavation	cu. yds.	300	\$110.00	\$33,000.00
7	Rip- Rap	cu. yds.	60	\$50.00	\$3,000.00
8	Sediment and Erosion Controls	lump sum	allowance		\$8,000.00
9	Flared End Sections	each	6	\$600.00	\$3,600.00
10	Restoration- seed/mulch	sq. yds.	4000	\$8.00	\$32,000.00
11	Pavement Restoration	sq. yds.	800	\$30.00	\$24,000.00
12	Sub-Total Construction				\$469,850.00
13	Construction Contingencies		5%		\$23,492.50
14	Total Construction				\$493,342.50
15	Surveying-easements & conditions	allowance			\$24,000.00
16	Design Services		8%		\$39,467.40
17	Easement Acquisition	allowance			\$24,000.00
18	Inspection Services	allowance			\$16,000.00
19	Administration		4%		\$19,733.70
	TOTAL PROJECT COST				\$616,543.60

PROJECT BENEFITS SUMMARY

The proposed project consists of installation of approximately 3,850 feet of storm sewers within two drainage areas found to have the most serious concentration of contamination issues. Area 1, generally bounded by South Drive, North Drive, Wildwood Lane, Belvedere Lane and Cedarwood Lane, is contained within a 54-acre drainage area tributary to the Esopus Creek (see map exhibit). Area 2, generally bounded by Glenerie Parkway and the railroad tracks, is contained within a 19-acre drainage area also tributary to the Esopus Creek (see map exhibit). Residents of these areas have indicated that repairing or replacing their septic systems is not possible due to ponding water and uncontrolled runoff from springs and upland sources.

The project will significantly reduce property damage, alleviate ponding, improve the effectiveness of private septic systems and reduce the incidence of public contact with contamination sources. The project consists of installation of a system of catch basins, drainage manholes and culverts designed to capture and direct storm water runoff to its natural point of discharge. The system would be designed to contain the 25-year storm event and include measures for erosion control and storm water pollution prevention.

