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Executive Summary for the HMSD Extension Project- Phase 1
October 2019

Project Background

There are approximately 5,200 parcels in the Hallocks Mill Sewer District (HMSD), of which 1,400 are currently unsewered as the Town sewer mains do not extend to the property line.

In 2010 the Town worked with an engineering consultant to study the feasibility of installing new sewers within the HMSD, then in 2017-18 the consultant prepared a schematic design report to identify high priority parcels. The Study Area was originally for 660 parcels, however, due to the cost and complexity of such a large project, the Town elected to proceed with a Phase 1 project that will allow 315 parcels the ability to connect to Town sewers.

Parcels that are currently unsewered rely on individual septic systems; many of these disposal systems are in excess of 40 years old, are located on small lots with steep slopes and are within wetland buffers or have other environmental constraints. Since the Town of Yorktown and the HMSD are part of the NYC watershed, septic system failures have the potential to create environmental and public health hazards.

The Town has a been working with the Northern Westchester Watershed Corp, Westchester County and the NYCDEP on funding for the proposed project that will provide sewer service to parcels currently serviced by septic systems. It is the intent of the Town to apply any grant funding to the Phase 1 construction project and then pursue other funding opportunities to undertake a second phase of construction in future years.

Capital Cost for Extending Town Sewer Main

As per the engineering report entitled "Hallocks Mill Sewer Extension Report & Crystal Lake Pump Station Improvements", dated July 2018, the total capital cost to install sewers to 315 parcels in Birch Street Sub-Area (220 parcels), Sparkle Lake Sub-Area (69 parcels) and Sunrise Street Sub-Area (26 parcels) is estimated to be $14,300,000.

It is anticipated that the Town will receive $10,000,000 from East of Hudson (EOH) Water Quality Improvement Program (WQIP) Funds to complete the Project. NYCDEP and Westchester County as administrator of the funds have previously approved the concept plan and gave a preliminary funding commitment, which will be formalized in an inter-municipal agreement (IMA) between the Town and Westchester County.

Based on the total estimated project cost and the funding commitment noted above, the Town will need to fund the estimated balance of $4,300,000 through issuance of sewer bonds.

All debt service for this borrowing shall be paid for by the benefitted property owners within the HMSD. For every $1 million that the Town needs to borrow to fund a portion of the capital costs,

the annual debt service on this amount (assuming an annual interest rate of 4.0% and an amortization period of 30 years) would be $57,290. [Note: Bond @ 4.5% would be $60,802]

- **Projected annual payback for 30-years: $782 /parcel/year**

According to the preliminary engineering study, the total Phase 1 project will cover the construction of approximately 5.5 miles of new Town-owned sanitary sewer via a combination of gravity lines and low pressure force mains.

The Phase 1 project construction consists of installing sewer mains to the property line of each parcel in the benefitted area, i.e. to 315 parcels. Individual property owners who wish to connect to Town sewer would then be responsible for hook-up fees and running a sewer lateral from the home to connect at the property line.

Hook-Up Fees & Cost for Individual Property Connections

As per the engineering report and as summarized in the preceding section, the Project will consist of the construction and installation of approximately 5.5 miles of new Town sanitary sewer via a combination of gravity lines and low pressure force mains. The scope of work includes installing sewer mains to the property line of each parcel in the benefitted area, i.e. to 315 parcels.

Individual property owners who wish to connect to Town sewer would then be financially responsible for running a sewer lateral from the home to connect at the property line.

In accordance with Town Code, connection of an individual parcel to Town sewer can only be done by a Westchester County-licensed plumber. A Sewer Connection Permit must also be obtained from the Engineering Department.

Individual homeowner costs for connecting to Town sewer will vary based on a multitude of factors, including whether a gravity line or low pressure system is required, site topography, underlying soil conditions, distance from the house to the property line, site constraints, etc. The following information is provided in an attempt to assist homeowners in their evaluation.

1. Application for Sewer Connection Permit: $350 (based on current master fee schedule)

2. Gravity Sewer Lateral (project cost in the range of $4,500 to $6,500, as itemized below)
    a. 4-inch PVC Pipe cost, no rock excavation no dewatering: $55 - $65 per linear foot
    b. Note: costs can vary significantly due to individual site constraints; therefore it is recommended that homeowners obtain multiple contractor price proposals before making a selection.

3. Low Pressure Pump System (project costs in the range of $12,500 to $17,000, as itemized below)
    a. Cost to furnish Pump System from vendor (E/One or equal): $5,000 to $6,000

b. 2-inch PVC Pipe cost, no rock excavation no dewatering: $45 - $50 per linear foot
c. Electrical panel installation, outdoor hookup (requires dedicated circuit from homeowner panel, 120/240 volt, 60 Hz, single phase): $2,500
d. Note: costs can vary significantly due to individual site constraints; therefore it is recommended that homeowners obtain multiple contractor price proposals before making a selection.

Based on the preliminary engineering assessment, the Town evaluated all 315 parcels to determine which ones would be gravity laterals versus low-pressure pump systems. This data is available in Attachment #3 and summarized below:

- Birch Street Sub-Area (220 parcels): Gravity 160 parcels; Low-Pressure 60 parcels
- Sparkle Lake Sub-Area (69 parcels): Gravity 0 parcels; Low-Pressure 69 parcels
- Sunrise Street Sub-Area (26 parcels): Gravity 15 parcels; Low-Pressure 11 parcels

➢ **Overall (315 parcels): Gravity 175 parcels; Low-Pressure 140 parcels**

The following tables are provided to provide cost estimates for a typical homeowner who will connect via a gravity lateral connection or a pumped system.

Table 1 Summary of Cost for a Typical Property Connecting to Town Sewer via a Gravity Lateral

First Year Capital Cost for a Parcel Connecting to Town Sewer (Gravity)					
	Description	**Quantity**	**Unit**	**Unit Cost**	**Total Cost/Year**
1	Sewer Bond Repayment, Yearly Cost for 30-year payback term	1	Ea	$782.00	$782.00
2	Hook-Up Fee for Sewer Connection Permit	1	LS	$350.00	$350.00
3	Average cost for Gravity Lateral Sewer Connection	1	LS	$5,500.00	$5,500.00
	Total First Year Cost				$6,632.00

Whenever possible, a typical homeowner would utilize a gravity lateral to connect to the Town sewer as the overall cost would be lower and there would be no need for electrical power or energy use to run the system.

In certain instances, a gravity lateral will not be feasible, i.e. where the site topography dictates that a pump-up system be utilized, where the homeowner sanitary waste piping is lower than the Town trunk sewer and/or other condition exist to make a gravity line not workable.

The engineering study performed by GHD Consulting Engineers identified preliminary elevations of Town trunk sewers to maximize the number of homeowners who may connect via a gravity lateral.

The parcel-by-parcel data is preliminary based on an initial engineering study performed for the Town and subject to change based on the topographic surveys and soil borings still to be performed as part of the final engineering design.

When gravity laterals cannot be utilized, the homeowner will be required to install a pump-up system that consists of the following components: (1) waste pipe from the house to the pump station; (2) package pump station to include a vessel, pump, piping, valves and level control; (3) electric panel to provide power; and (4) pressure-rated piping 2-inch diameter installed from the pump station to the property line.

Table 2 Summary of Cost for a Typical Property Connecting to Town Sewer via a Pumped System

First Year Capital Cost for a Parcel Connecting to Town Sewer (Pumped System)					
	Description	**Quantity**	**Unit**	**Unit Cost**	**Total Cost/Year**
1	Sewer Bond Repayment, Yearly Cost for 30-year payback term	1	Ea	$782.00	$782.00
2	Hook-Up fee for Sewer Connection Permit	1	LS	$350.00	$350.00
3	Average cost for Low Pressure Pump System	1	LS	$14,750.00	$14,750.00
	Total First Year Cost				$15,882.00

Operation and Maintenance Cost

Next Steps & Project Timeline

Each year, the New York State Comptroller publishes an average estimated cost threshold for use in determining whether approval of the State Controller is necessary for special district actions in that year (see Appendix H). The 2019 threshold amount for a town special district establishment of a sewer district is $995. The Comptroller's approval is required for the establishment of a town district if two factors are present:

- debt is to be issued or assumed by the town for the improvement, and
- the cost of the district to the "typical property" is above the average annual estimated cost threshold.

Since the yearly debt estimated in this analysis ($782) does not exceed the allowable threshold of $995, approval from the New York State Comptroller will not be required prior to the project moving forward (to be confirmed with NYS Comptroller's office).

The following schedule is provided to describe the important milestone dates and are subject to change:

Task 1 Start date in Fall 2019: Begin Town Sewer Petition process (Month #1)
Task 2 Public Information sessions and homeowner decision, estimated duration 2 months
Task 3 Town Board review of petitions and interest: duration 2 months
Task 4 New York State Comptroller Approval (if required)
Task 5 Town hires an engineering consultant for project design: duration 12 months
Task 6 Engineering plans submitted permits & approval: duration 2 months
Task 7 Town obtains bids & issues Award: duration 2 months
Task 8 Contractor mobilizes & completes work, duration 15 months