



VILLAGE of NEW PALTZ
FOUNDED 1678

**VILLAGE OF NEW PALTZ
SANITARY SEWER SYSTEM
C.M.O.M. PROGRAM
ANNUAL UPDATE**

VILLAGE OF NEW PALTZ

Ulster County New York

N.Y.S.D.E.C. ORDER ON CONSENT

CASE NO. R3-201-40430-71

Village of New Paltz Village Board

Timothy Rogers, Mayor

Donald Kerr, Trustee

Thomas Rocco, Trustee

Dennis Young, Trustee

Rebecca Rotzler, Trustee

Gene Bleu Terwilliger, Superintendent of Public Works

December 2016



Dennis M. Larios

Dennis M. Larios, P.E.

BRINNIER AND LARIOS, P.C.

PROFESSIONAL ENGINEERS

67 MAIDEN LANE

KINGSTON, NEW YORK 12401

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INTRODUCTION

The Village of New Paltz has developed a collection system's Capacity, Management, Operation, and Maintenance (CMOM) program designed to help optimize the performance of the sanitary sewer system. In accordance with Environmental Protection Agency (EPA) documents, the major objectives of Village of New Paltz's CMOM program include:

- 1) Manage, operate and maintain at all times, all parts of the collection system so that the Village of New Paltz fully complies with the Clean Water Act.
- 2) Provide sufficient capacity to convey base and peak flows without sanitary sewer overflows for all parts of the collection system.
- 3) Implement feasible steps to stop and mitigate the impact of sanitary sewer overflows from any portion of the collection system.
- 4) Provide timely notification of sanitary sewer overflows from the collection system to persons with reasonable potential for exposure to pollutants from such sanitary sewer overflows.
- 5) Develop a written summary of the CMOM program and make it, and required program audits, available to the public upon request.

The Village's CMOM Report and CMOM Program was approved by the NYSDEC on August 17, 2015. Pursuant to this approval, the Village is required to review, update and provide modifications to the CMOM plan and provide an annual report to the NYSDEC describing the I & I reduction work completed on the sanitary sewer system during the previous calendar year. As required, this report is being presented to summarize all work completed from January 1, 2016 through December 31, 2016.

I & I REDUCTION WORK COMPLETED THE PREVIOUS CALANDER YEAR

The Village of New Paltz successfully completed the following items during 2016 for the reduction of Inflow and infiltration.

Construction Measures

Contract VNP-161 Sanitary Sewer Construction and Rehabilitation. This construction project is summarized as follows:

Bids were opened on August 10th 2016 and construction commenced in August 19th 2016. Construction of sanitary sewer improvements on Elting Avenue, Lincoln Place, Lookout

Avenue, Center Street, Bonticou View Drive, Fairview Avenue, Ridge Road, and Mohonk Avenue included the replacement of 977 LF of deteriorated 10" sanitary sewer with new 10" diameter sewer, 548 LF of deteriorated 8" sanitary sewer with new 8" diameter sewer, 139 LF of 6" sanitary sewer lateral and replacement and installation of 10 sanitary sewer manholes. The contract also included the rehabilitation of 3,305 LF of 8" diameter with the installation of cured in place pipe liner per the approved NYSDEC contract documents. The project substantially completed on October 10, 2016 prior to the NYSDEC approved completion date of October 31, 2016. As built plans of the completed project were submitted to the NYSDEC on December 12, 2016.

Investigations

Since the Village of New Paltz cannot afford to repair and replace all of its aging and deteriorated sanitary sewers in the collection system, it has been making progress toward eliminating the inflow and infiltration causing the sewer overflows by performing investigations of portions of the collection system suspected of receiving inflow and infiltration. Based on the results of these investigations, portions of the sewer system that require repair and or replacement due to the severity of deterioration are selected for capital construction projects by the Superintendent of Public Works and the Village's consulting engineer. It is the Village's intent to identify all remaining deficient sewers and manholes and sources of inflow and infiltration whether surface sources or subsurface sources. When these areas are identified, the Village will prepare a program for rehabilitating the subject areas and investigate funding opportunities.

With these goals in mind, the Village of New Paltz prepared and submitted an application for funding the aforementioned investigations to the New York State DEC/EFC for an Infrastructure Engineering Planning Grant requesting \$99,000.00. The Consolidated Funding Application was submitted in June 2016 and in December 2016, the Village was awarded \$99,888.00 for a "Consent Order Compliance Engineering Planning Grant Project" from a Housing and Community Renewal Community Development Block Grant so the "Village of New Paltz can complete an engineering report to identify all deficient sewers and manholes and sources of inflow and infiltration". The investigation of all remaining sanitary sewers in the Village of New Paltz sewer system will satisfy all of the investigation requirements stipulated in all Consent Order Update Reports previously submitted to the Department.

The proposed investigations for the remaining Village of New Paltz Sewer System will be twofold. The first component of the investigation will consist of conventional cleaning and televising sanitary sewers and manholes to identify deficiencies and abnormalities which are the cause of inflow and infiltration into the sewer system that cause overflow in the sewer system that resulted in the Order on Consent. The results of the investigation will be presented to the Village on DVD as well as a hard copy summary of findings. These findings will be

reviewed by the Superintendent of Public Works and the Village's Consulting Engineer to identify the following features.

- Longitudinal Cracks
- Circumferential Cracks
- Multiple Cracks
- Fractures
- Holes
- Pipe Sags
- Offset Joints
- Broken Joints
- Broken Pipe
- Root Penetrations
- Infiltration Stains
- Infiltration Runners
- Infiltration Gushers

Manholes in these specific sections of sewer will also be evaluated at the same time the cleaning and televising is reviewed for the sewer lines. Generally, the condition of each manhole will be evaluated along with the type of construction and most importantly, if there were any signs of infiltration.

The second component of the investigation will involve the identification of sources of stormwater inflow during rainfall events and remediating these inflows through green infrastructure construction. Identification of problem areas will include a field visual survey by the Department of Public Works and the consulting engineer. Specific items that will be focused on will be diversion of stormwater discharges away from the sanitary sewer collection system or low lying manholes and into accepted properly designed and constructed infiltration systems.

Areas identified as being areas that surcharge with runoff during storm events will be assessed on the areas feasibility of receiving green infrastructure stormwater management in the form of either of the following methods:

- Rain Gardens
- Bioretention Areas
- Vegetated Swales

- Dry Swales
- Porous Pavements

The planning grant will also be utilized to formulate a grassroots effort to implement a public outreach program and alert property owners of green infrastructure alternatives for addressing stormwater issues and the impacts to water quality in the Village. Specifically the Village will outline these measures for the public on methods to reduce stormwater sources on privately owned properties creating inflow into the sanitary sewer system resulting in sewer overflows.

Proposed Construction

In an effort to eliminate the sewer overflows at the subject locations indicated Order on Consent and reduce hydraulic overloading at the sewer plant, portions of sanitary sewer collection system serving the Village and lying within the bounds of private properties will need to be intercepted by new sewers replacing old sewers within the public right of way at specific strategic locations.

Specifically, new gravity sanitary sewer lines and manholes will need to be installed along North Chestnut Street and in the Village owned Rail Trail. The new sewer lines in North Chestnut Street will replace deteriorated sewers in these locations as well as eliminate Village sewer flows through existing sewers on private properties. These sewer lines will run north to Broadhead Avenue and south to North Front Street to existing Village owned and maintained sanitary sewers. Existing users on North Chestnut Street will disconnect from the old sewer and be reconnected to the newly installed sewer within the right of way.

The new sewer on the Rail Trail right of way will receive sanitary sewage from private properties situated between North Chestnut Street and the Rail Trail and will eliminate sewage currently flowing through a private property via a severely deteriorated manhole and sewer on Huguenot Historical Society property. This new sewer will connect to the existing North Front Street sanitary sewer. A map of the proposed sewer project is included in (Exhibit 1).

The proposed project will install new gravity sanitary sewer lines and manholes replacing some of the oldest portions of the Villages sanitary sewer system within the right of way in North Chestnut Street for connection to existing sewers in the right of way. The installation of sewers at strategic locations along North Chestnut Street will intercept Village sewage flowing through private properties and direct it to the Village right of way as well as replace existing sewers that are in excess of 100 years old that exhibit inflow and infiltration contributing to the sewer overflows. Additionally, The installation of a new sanitary sewer in the Rail Trail for connection to an existing sewer in the Village right of way will disconnect users from the old sewer that currently runs over the Huguenot Historical Society property and allow access by the DPW.

In July 2016, the Village of New Paltz submitted an Application to obtain funds for this project to the Office of Housing and Community Renewal for a Community Development Block Grant

requesting \$750,000.00 to complete the aforementioned project scope. The Village was subsequently awarded a grant in the amount of \$750,000.00 to complete this project.

The project will be completed through public bidding utilizing Federal and State prevailing wage rates and will comply with all Federal, State and Local procurement requirements. Since the project involves replacement of existing infrastructure, a relatively short regulatory approval and permitting process is anticipated. Long term operation and maintenance of these improvements will be undertaken by the Village of New Paltz Department of Public Works as part of the Village's overall sewer system operation.

As this project is a replacement of existing sewers it will be classified as a Type II SEQR activity. The permits which will be required and length of time for obtaining them after submission of plans are as follows:

- New York State Department of Environmental Conservation
Plan Approval-60 Days
- New York State Department of Transportation Highway Work Permit
Plan Approval-45 Days

The anticipated schedule for this project is as follows:

Project Approval	December 2016
Engineering RFP	January-February 2017
Design	April-May 2017
Permitting	July -August 2017
Bidding	January –February 2018
Construction	March-June 2018
Project Closeout	July-August 2018

Inspections

Most recently, the Village completed a comprehensive update of its sewer collection map. The update includes a complete manhole alpha numeric identification system for all manholes contained within the collection system. This system will enable the Department of Public Works to physically identify each manhole in its comprehensive manhole inspection program. The map also exhibits the entire system divided into three separate areas. Each area will have all of its manholes physically investigated by Department of Public Works personnel during a four month period each year. The updated sewer system map complete with inspection areas is included in Exhibit 2 of this report of this report.

Manhole inspections of Section 1 in the system commenced on November 15, 2015 and were completed on March 14, 2016. Inspections for section 2 are commenced on March 15, 2016 and was completed on July 14, 2016. Inspections for section 3 commenced on July 15, 2016 and was completed on November 14, 2016. Records of the manhole inspections are on file at the Village of New Paltz Department of Public Works offices, 25 Plattekill Avenue, New Paltz, N.Y. 12561.

Routine Maintenance

The Village of New Paltz Department of Public Works (DPW) has developed a Schedule of Inspection and Maintenance of its sanitary sewer collection system which includes the following tasks:

- The Department of Public Works visually inspects and monitors its four (4) sanitary pump stations on a daily basis. These stations include the Henry W. DuBois pump station, Route 32 North pump station, the Hasbrouck Place pump station and finally the Henry Court pump station.
- The Department of Public Works routinely on a weekly basis introduces a degreasing, root control agent at various suspected locations commonly known for grease buildup and accumulation of routes that has historically plagued the collection and has been a cause of sewer blockages. These areas include:

Plattekill Avenue
Tricor Avenue
Millrock Road
Prospect Street
Mohonk Avenue
Water Street
Huguenot Street
Church Street
South Chestnut Street and Mohonk Avenue
215 Main Street
Grove Street Extension

- The Department of Public Works manually degreases areas in the Village on an annual basis or as required which are known to be problematic with the accumulation of grease and solids. The problem areas are cleaned with a sewer jet rodder that introduces a high pressure emulsification injection to the following areas:

Colonial Drive

Main Street
North Front Street
Route 208

- Pursuant to the Village's Sewer Ordinance, the Department of Public Works semiannually inspects 45 commercial grease traps for compliance with the Villages Sewer Use Ordinance. Inspections are completed in January and again in June of each year. This is an increase of two grease trap inspections from the previous year
- During high rainfall events, the Department of Public Works routinely visually inspects the sanitary manholes which have exhibited problems including overflows in the past. This is undertaken to insure compliance with 6 NYCRR 750-2.7 and Section 17-0826-a of the Sewage Pollution Right to Know and regulations promulgated thereunder.
- Cleaning Blockages-When a sewer blockage is reported or observed by the Village of New Paltz Department of Public Works. The Village owned and operated mobile sewer jet rodder is dispatched and the clog is removed shortly after the report or observance of the blockage. This situation occurred twice over the previous year resulting in minor sewer manhole overflows on 11/30/16 and 12/5/16. In both instances the Department of Public Works removed debris from the manholes and alleviated the overflow condition. As required, the Department of Public Works immediately reported these overflows to the NYSDEC under the Sewage Pollution Right to Know requirements.
- The Village of New Paltz Department of Public Works routinely responds to customer complaints of sewer lateral backups on private property and offers assistance where feasible.

Records of these routine maintenance activities are also maintained in the offices of the Village of New Paltz Department of Public Works.

Miscellaneous Measures

Miscellaneous measures undertaken by the Village of New Paltz for the reduction of inflow and infiltration include the following:

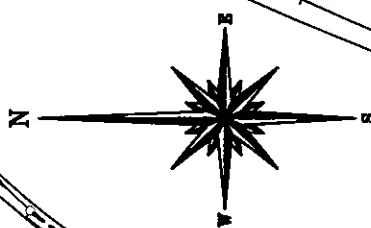
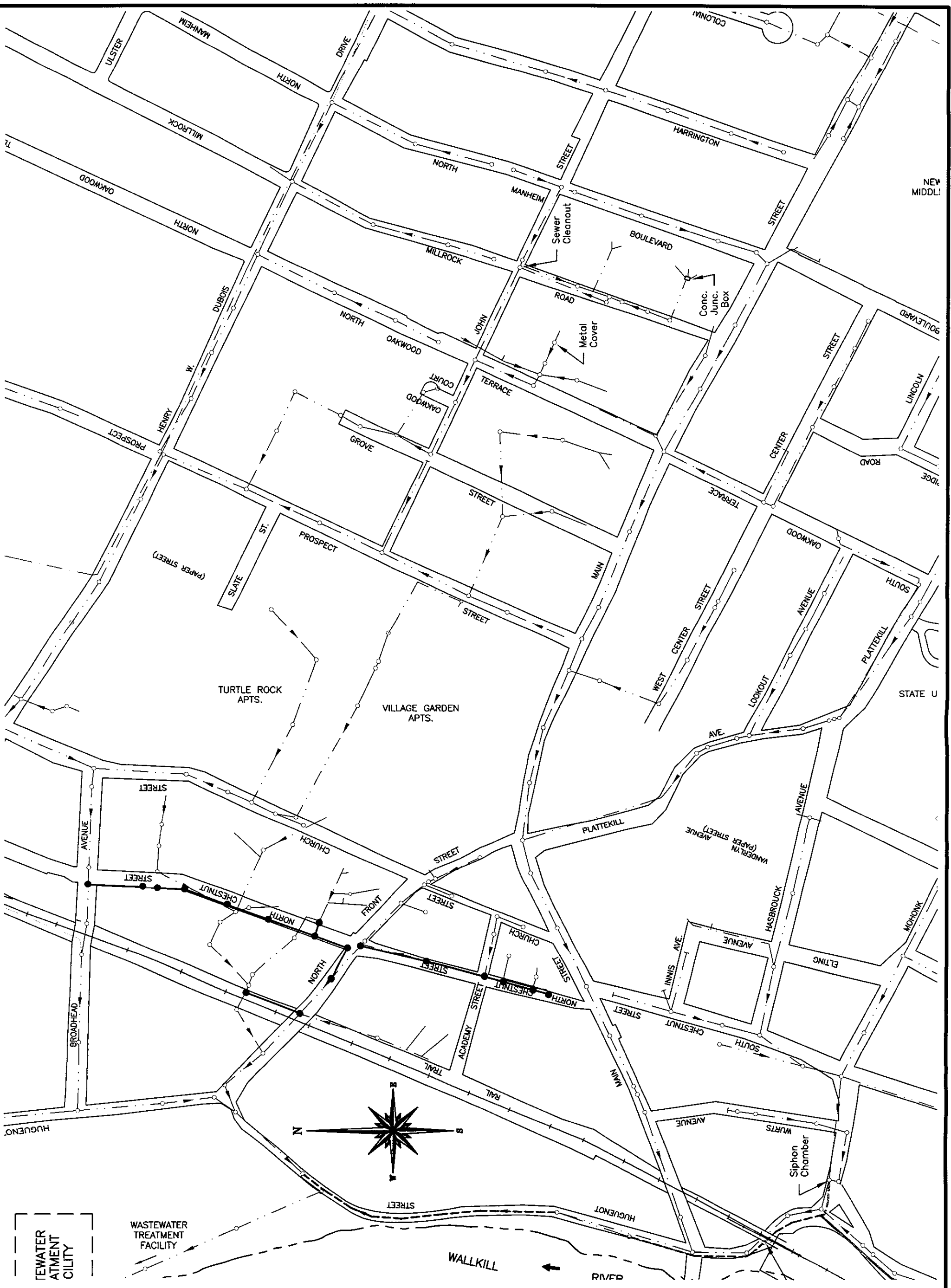
- Replaced 25 LF of 6" clay tile pipe with 6" SDR 35 on Route 208 (1/29/16).
- Replaced 6 LF of 8" clay tile pipe with 8" SDR 35 on Hasbrouck Avenue between Route 208 and Elting Avenue (5/11/16).
- Routine inspections by the Village of New Paltz Building Department revealed two illegal sump pump connections into the sanitary sewer system at the Salvation Army on Route 32 North and on 35 Center Street. Sump Pumps were disconnected in each instance.

SUMMARY

The Village of New Paltz has been aggressively addressing its sanitary sewer collection system to comply with NYSDEC Order on Consent Case No. R3-201-40430-7 through the measures outlined in its recently approved CMOM Program. The combination of construction measures, continued investigations, preparation of engineering plans for additional sewer reconstruction and rehabilitation, routine maintenance measures by the Department of Public Works and miscellaneous operations and maintenance has proven successful in the previous year of sewer collection system operation. As a result of the continued efforts undertaken by the Village of New Paltz, the Village's sanitary sewer collection system has not experienced any sewer overflows from surcharges resulting from inflow or infiltration into the sewer system. The two (2) overflows that have been reported were the result of debris blockage in sewer lines and were immediately remedied by the Village of New Paltz Department of Public Works.

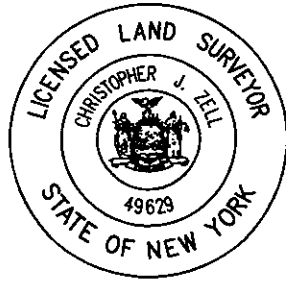
EXHIBIT 1

PROPOSED SEWER PROJECT



● — ● PROPOSED NEW SANITARY SEWERS

Unauthorized alteration or addition to a plan bearing a licensed engineer's seal is a violation of section 7209, subdivision 2, of the New York State Education Law.



2016 SMALL CITIES APPLICATION FOR THE VILLAGE OF NEW PALTZ		NEW YORK	
VILLAGE OF NEW PALTZ		ULSTER COUNTY	
DATE	REVISION RECORD	BRINNIER & LARIOS, P.C. ENGINEERS & LAND SURVEYORS 67 MAIDEN LANE KINGSTON, N.Y.	
		SCALE	DATE
		1" = 200'	MAY 2018
		DWG	CHK
		RPR	DML
			SHEET NO.
			1 OF 1

EXHIBIT 2

**VILLAGE OF NEW PALTZ
SEWER SYSTEM MAP**