VILLAGE OF RYE BROOK

DEPARTMENT of PUBLIC WORKS
And ENGINEERING

Village of Rye Brook Sewer System Maintenance Plan
Capacity, Management, Operations and Maintenance of Sewer Collection System

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1) COLLECTION SYSTEM MANAGEMENT

a. Goals

Rye Brook's Preventive Maintenance Plan (PMP) covers the assets we manage in our wastewater collection system and is one component of our overall Capacity, Management, Operations and Maintenance (CMOM) Plan. The Village implements and enforces all required MS4 requirements. The PMP combines preventive, predictive and corrective maintenance strategies with our best management practices. The CMOM and PMP plan will be annually reviewed and updated accordingly. The CMOM Plan and PMP have been prepared to help Rye Brook effectively manage our wastewater collection system, identify, remove, and eliminate inflow and infiltration, minimize sewer overflows and achieve the following goals:

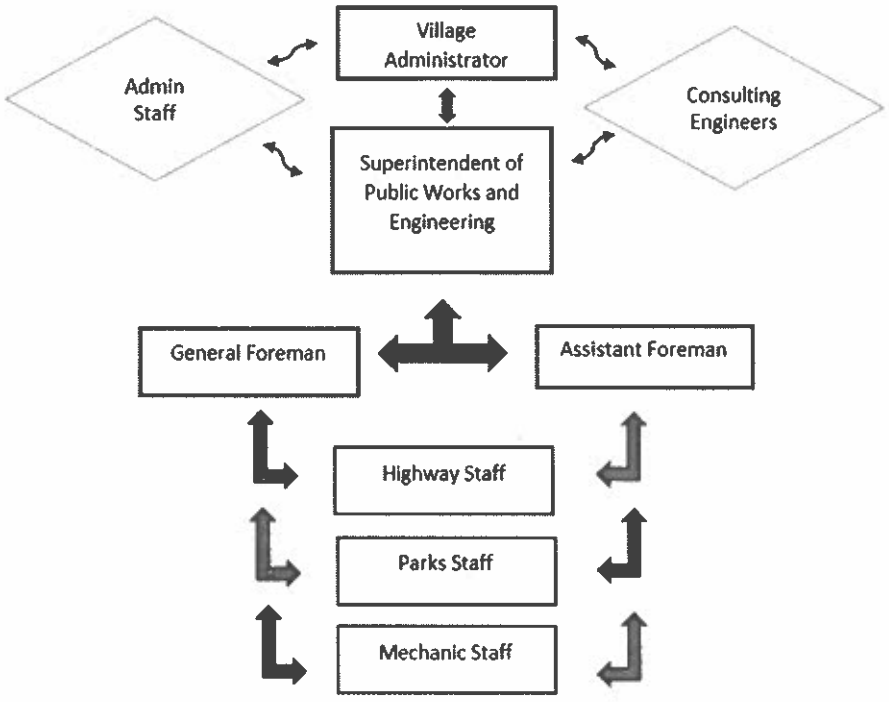
Goals

- Prevent public health hazards
- Protect the environment
- Comply with regulations
- Minimize the frequency of SSOs
- Mitigate the impact of SSOs
- Minimize disruptions in service
- Minimize complaints
- Provide quick response to any disruption in service that occurs
- Protect Rye Brooks' large investment in the sewer collection system by maintaining maximum capacity and extending the useful life of the associated assets
- Prevent unnecessary damage to public/private property
- Efficiently use the funds available for the maintenance of the infrastructure and the operation of services
- Reduce expenditures for emergency maintenance
- Convey wastewater to the Port Chester and Blind Brook wastewater treatment facility with a minimum of infiltration, inflow, and exfiltration
- Provide adequate capacity to convey peak flow
- Provide immediate, responsive, and efficient service to all emergency calls
- Provide a safe work environment for employees, employers, and residents in Rye Brook
- Perform all operations in a safe manner to prevent personal injury
- Utilize evolving technology to increase our effectiveness and efficiency
- Provide reliable service now and into the future

b. Organization

Rye Brooks' Highway Department is responsible for all aspects of our wastewater collection system, except for the Port Chester and Blind Brook Sewage Processing and Treatment Plants which are maintained by Westchester County. The Highway Department has a staff of 13 full time operation and maintenance positions. Contractors are used for some maintenance activities and for emergency support. Figure 1 shows the organizational structure of the Highway Department.

Figure 1- Rye Brook Organizational Chart



Village Administrator – Establishes policy, plans strategy, leads staff and delegates responsibility, allocates financial and staff resources, is the Chief Financial Officer and serves as the Public Information Officer. Christopher Bradbury is our Village Administrator.

Superintendent of Public Works and Engineering – Under the Supervision of the Village Administrator establishes policy, plans strategy, leads staff and delegates responsibility, allocates resources, authorizes outside contractors to perform services. Ensure that new and rehabilitated assets meet Village standards, works with field crews to handle emergencies when contractors are involved, and provides reports to Village Administrator. Coordinates development and implementation of CMOM Plan. Michal Nowak is our Superintendent of Public Works and Engineering. The Superintendent is responsible for quality assurance/quality control oversight of all work related to the operation, maintenance, and rehabilitation of the Village's Sewer Infrastructure. All work as related to maintenance, cleaning, inspection, repairing and etc of the Village Sewer Infrastructure is reviewed by the Superintendent of Public Works. Subordinate staff report directly with findings. Superintendent also performs field inspections and oversight of crews when jetting lines.

Dolph Rotfeld a Division of AI Engineers Consulting – at the direction and supervision of the Village Administrator and/or Superintendent of Public Works, assists in preparing wastewater collection system planning documents, capital improvement project design, documents new and rehabilitated assets. Provide Professional Engineering and Consulting services

Foremen and General Foremen – Under the Supervision of the Superintendent of Public Works and Engineering manage field operations and maintenance activities, provide relevant

information to agency management, implements contingency plans, leads emergency response, investigates and reports SSOs, and supervises field crews. Paul Vinci is our General Foreman and Joe Vasile is our Assistant General Foreman

Highway Department Staff – Under General/ Assistant Foremen supervision conduct staff operations and preventive maintenance activities, mobilize and respond to notification of stoppages and SSOs (e.g., mobilize sewer cleaning equipment, by-pass pumping equipment, and portable generators). Highway Department has 8 full time staff on our field crew.

Parks Department Staff – Under General / Assistant Foremen supervision conduct staff operations and may be utilized to supplement highway department staff levels as situations warrant. Parks Department has 3 full time staff on our field crew

Mechanic Staff – Under General / Assistant Foremen supervision conduct repair and maintenance to Village fleet vehicles. Mechanics assist in fabrication, repairs and maintenance of sewer related items such as pumps, panels, wiring and similar. Mechanics Department has 1 full time lead mechanic and 1 Junior mechanic/laborer

Administrative Staff - Support staff assist with data entry and quality control, handle billing, route calls, payroll, customer response, outreach, education, and other support functions as needed.

Relation to Other Municipal Functions

Rye Brook Highway Department is a standalone department within the Village. It is responsible solely for management, operations, and maintenance of the wastewater collection system, along with maintenance of roads, culverts, storm drains, emergency response, storm damage and other important functions. Many activities of the Villages sewer collection system are supported by the following Public Works department:

- Collection system mapping is supported by Public Works Superintendent and through shared services with Westchester County GIS Department and professional services as provided through Dolph Rotfeld Engineers, A division of AI Engineering. This department also provides support, policy recommendations, and advice concerning Rye Brook's future growth and development, and is responsible for maintaining and updating Rye Brooks' GIS existing sewer infrastructure mapping system.
- Resources and budget are overseen by the Superintendent of Public Works and through the Treasury Department
- Training for safety and operations is provided through FOA and Sons, NY Rural, Cornell Local Roads Local Technical Assistance program.
- Outreach to plumbers and building contractors is done by the Building Department
- Design and Construction Standards for installation, rehabilitation and repair are overseen and reviewed by the Superintendent of Public Works and outside Engineering Consultant Dolph Rotfeld - AI Engineers or other Jurisdictional Authorities
- Standards for inspection and testing are developed by the Superintendent of Public Works and outside Engineering Consultant Dolph Rotfeld - AI Engineers

- Inspection of grease interceptors/separators is performed by the Building Department
- Outreach for Fats, Oils and Grease is performed jointly by Building Department and Public Works personnel and utilize the MIS system for distribution.
- Procurement of non-routine equipment, services or supplies is authorized by the Superintendent of Public works up to $35,000. Sealed bids and Trustee approval required over $35,000.
- Legal Counsel provides legal services and advisory opinions to the Village of Rye Brook on departmental issues, contracts and agreements, and is responsible for handling all claims against the Village of Rye Brook and prosecuting violations of all Sewer Use Ordinances.
- The Highway Department provides paving services on all sewer repairs performed within public streets and works to coordinate street-paving schedules with sewer work unless work is performed through third party contractor at which point paving is included.
- The Village Administrator / Clerk within the Administration Department maintains copies of Resolutions and Rye Brook Ordinances passed by the Board of Trustees related to the operation of all Village Departments.

c. Training

Rye Brook's training program provides a mechanism for educating employees and establishing their technical competence through the various training outlets such as FOA and Sons Risk Management, NY Rural, Westchester County Association of Municipal Public Works Association (WCAMPWA) and American Public Works Association (APWA), Cornell Local Roads Programs Local Technical Assistance Program and the Superintendent of Public Works. Rye Brook utilizes a combination of in-house skill training and specialized training through the above vendor training programs to enhance skills for performing daily work duties and provide continuing education. Skills training for Highway Department employees includes, but is not limited to:

- Routine Line Maintenance
- Heavy Equipment Operation
- Maintenance Equipment Operation
- Pump Station Operation and Maintenance
- Emergency Response
- Public Relations
- Safety
- Confined Space Training
- Hazcomm / SDS
- Personal Protective Equipment
- MS4 Training

Safety training is obtained from training agencies including FOA and Sons Risk Management, NY Rural, Westchester County Association of Municipal Public Works Association (WCAMPWA) and American Public Works Association (APWA), Cornell Local Roads Programs Local Technical Assistance Program. Rye Brook expects employee adherence to the following written safety policies and procedures.

- Confined Space Entry

- Hard Hat Policy
- Vehicle Operation Policy
- Seat Belt Policy
- Excavation Safety Policy and Program
- Injury Reporting Policy
- Post-Accident Drug Testing Policy
- Safety Teams and Committee Policy
- Personal Protective Equipment (provided for the employee)
- First Aid, CPR and AED (First aid supplies are available in office areas and vehicles)
- Flaggers
- Hazard Communication Program
- Defensive Driving Program (employees who are required to maintain a commercial driver's license must complete a four (4) hour defensive driving course)

Training records are maintained for each employee in training logs stored with the Administration Department. The General Foreman maintains appropriate safety equipment including protective clothing, safety glasses, hard hats, gloves, masts, filters, harnesses, tripods, hoists and fire extinguishers. The General Foreman / Assistant Foreman also maintains and calibrates atmospheric testing equipment. Lights, barricades, signage, and exhaust fans are also available at the Highway Department and/or on the truck.

d. Customer Service

1. Complaint Management Program

Complaints and requests are received by various means (e.g., phone calls, e-mail, other Village departments, and occasionally in person). Regardless of the nature or means of receipt, all complaints and requests are routed to the Superintendent of Public Works or General Foreman and tracked via spreadsheet. Entries include the following detailed information about the complaint/request:

- Time and date of request
- Complainant information (Name, address, call back phone number)
- Location of the problem
- Type of complaint (Codes, e.g., home back up, odor, manhole overflow, etc.)
- Specific request
- Personnel assigned to complaint
- Findings type, including cause of problem
- Complaint closeout information
- Date complaint closed

Once a complaint is assigned, our field personnel perform an investigation. If Rye Brook is not responsible for correcting the problem, the Superintendent of Public Works will provide the complainant with guidance on a recommended course of action. Once an investigation has been completed, the staff enters closeout information into the spreadsheet. See **Attachment** which depicts a typical form.

2. Public Information and Education Program

Rye Brook uses a variety of outlets for providing information and education to customers. The outlet(s) used to disseminate information is often based on the type of information and the targeted audience. Rye Brook utilizes the outlets listed below to help provide its citizens with the most up-to-date information possible:

- NY-Alert System / Everbridge
- Rye Brook Cable TV Channel
- Rye Brook Website
- Local Media (TV and Newspaper)
- Neighborhood / Town Hall Meetings
- Trustees Agenda
- Public Hearings
- Personal Visits / Phone Calls
- Door Hangers
- Sign Postings
- Social Media
- Reverse 911/Automated Email Blasts

Rye Brook has had good community relations regarding issues with the operation and maintenance of our collection system. Types of information and education provided to our customers are as follows:

Information and Education Programs

Sewer System Evaluation Survey Work
Major Repairs and Rehabilitation
Customer Emergency Response
Road Closures
Point Repairs
Smoke testing
Illicit Discharge and Elimination
Wetlands and Steep Slopes Permits
Sewer Use Ordinances
Types of Waste Treated
FOG Program
Service Connection Requirements
Complaint Procedures
Private Hauler Instructions
Site Plan Applications
MS4 Regulations

e. Information Management and Geographic Information Systems

Rye Brook uses paper copies, excel files, pdf, limited GIS to manage information on our collection system. This data is connected to Westchester County's Geographic Information System (GIS) through a shared services agreement. Rye Brook receives support from Westchester County GIS and Tax Assessor Parcel Data Viewer. Rye Brook continues to expand on its GIS system and database with assistance from Westchester County and continues to explore Asset Management Packages. Rye Brook through the Sleepy Hollow Mapping Consortium has mapped out Sanitary and Storm Manholes, Sanitary and Storm lines and Catch Basins. Our GIS and Asset Management program is ongoing and evolving. Table 1 shows the information that is included in our GIS of the collection system.

Table 1: Collection System Map Information included in Rye Brook's Paper/Excel/GIS maps

Manholes Basic Map Information - ID number or another unique identifier - Location, with reference to streets and property lines - GPS coordinates as required	**Manholes Additional Map Information** To be supplied later such as: -Inverts -Rim Elevations -Date repairs Made and Type of repairs
Pipes Basic Map Information - Location, with reference to streets, surface waters, property lines and manholes - Size - Direction of flow - Length - Date built	**Pipes Additional Map Information** - Slope - Pipe invert elevations - Plan or as-built ID number - Service laterals
Pump Stations Basic Information - Location - Capacity	**Pump Stations Information** - Additional information on drawings Public Works, and in files

System information managed in our Spreadsheets, Paper, PDF, and or GIS includes:

General

- System specific inventory
- Equipment and tools
- Purchase orders
- Revenue

Collection System

- Continuous Sewer System Assessment
- Collection system mapping
- Collection system inventory
- FOG compliance
- Flow monitoring
- Inflow and Infiltration detection and elimination
- SSO/Emergency response

Personnel

- Department staff
- Safety incidents
- Training
- Job performance

Maintenance program

- Routine and Priority Planned maintenance (cleaning, inspections, etc.)
- Inspection scheduling and tracking
    - Manhole
    - Pipeline (Closed Circuit Television (CCTV), camera)

  - Pump station
- Vehicle maintenance

Customer service program

- Complaints
- Customer service response

Activities performed by department personnel is generated and tracked through the various spreadsheets on file. The excel sheets track the performance of routine maintenance as well as repairs and corrective actions in response to inspection findings or customer complaints. Upon completion of the task(s), data related to the work order is entered into the sheets for tracking performance and historical information on the various types of work performed.

Examples of procedures and forms are provided in the **Appendix**.

f. Legal Authorities and Controls

The Village Building and Public Works Departments are empowered to enforce the Village Code and the Code of the State of New York. In performing day to day duties below is a snapshot of legal controls afforded with regards to maintenance of sewer system:

- Control sources of infiltration and inflow
- Control sources of Fats, Oils and Grease (FOG)
- Require proper design and construction of new and rehabilitated sewers and connections
- Require proper installation, testing and inspection of new and rehabilitated sewers
- Access all components of the collection system
- Identify and eliminate illicit discharges into sanitary sewers, storm drains and water bodies.
- Control the quantity and quality of wastewater from developments and satellite collection systems.

g. Sewer Use Ordinance

Rye Brook has established and implemented regulations regarding the use of the wastewater collection system. Rye Brook has a comprehensive sewer use ordinance, consistent with EPA's model ordinance, in place since 2007. As regulations and requirements have changed, Rye Brook has passed additional ordinances and updates to address unforeseen issues. Ordinances are kept up-to-date and are available electronically at https://ecode360.com/RY1192?needHash=true.

The items addressed through our sewer ordinances include sewer use and standards, access to pipelines and structures, FOG management, pretreatment requirements, service connections, permitting of flows into the system, inflow/infiltration control, enforcement of proper design, installation, and testing standards, and inspection requirements for new and rehabilitated sewers.

2. GENERAL INFORMATION ABOUT THE RYE BROOK SANITARY SEWER SYSTEM

a. Wastewater Treatment and Collection System Description

Rye Brook's first formal wastewater collection system dates to approximately 1950 or earlier. The Village was created in 1982 when annexed from Port Chester. The collection system transports wastewater to the Port Chester Treatment Plant 75 Fox Island Rd, Port Chester, NY 10573 and Blind Brook County Treatment Plants 141 Oakland Beach Ave, Rye, NY 10580, both of which are Westchester County Operated. Approximately 200 residences discharge into the Port Chester Treatment Plant with the remaining majority being treated by the Blind Brook Treatment Plant.

Annual Sewer Service fees are applied by Westchester County directly to individual homeowners. Such fees include but are not limited to wastewater treatment, sewer reserve funds, repairs etc.

The Village maintains approximately 60 miles of gravity sewer, 1/3 of a mile of force main and approximately 950 manholes. Approximately 42 miles of sewer are 0 to 30 years of age, and 18 miles of sewer are approximately 31 to 55 years of age.

Rye Brook does not own or maintain any portion of the sewer laterals that drain each privately owned parcel or property beyond the property line. However, we do work with homeowners to prevent backups into their homes.

Highway staff and contractors perform planned maintenance tasks at scheduled frequencies. Frequencies are established based on experience and collection system information to minimize the risk of blockages or equipment failures that could lead to sewer overflows. Some portions of the wastewater collection system are maintained more frequently than others based upon history and their importance to the effective operation of the wastewater collection system. Staff and/or contractors also perform unplanned maintenance

b. Collection System Details

- Service Area: 3 Square miles
- Population Served in primary community: 10,047 (2020 Census)
- System Inventory owned by Rye Brook, below:

Miles of gravity sewer	Miles of force main	Number of manholes	Number of pump stations		Number of siphons	Number of air relief valves
			Public	Private		
60	0.31	950	2	0	0	0

c. Age Distribution of Collection System

Rye Brook conducts an ongoing program to assess the structural condition and maintenance needs of the collection system as a part of our Cleaning, Inspection and Assessment program and CMOM described in this document and our capital planning described in Resources and Budget

section 10, below.
The ages of the components of our wastewater collection system are as follows:

Age	Gravity Sewer miles	Force Main miles	Number of pump stations
0-30 years	42	0.31	2
31-55 years	18		

d. Sanitary Sewer Overflow History

The Village maintains files in excel format tracking past and current overflow history.

To assure sewer capacity Rye brook has developed a maintenance plan regarding CCTV inspections of sewers, 3D Manhole Inspections, Flow Monitoring, Smoke testing and FOG Ordinances to address capacity, inflow/infiltration, and condition of our collection system. These programs are described later in this document.

e. System Map

A system map is located on the Village website at: https://ryebrook.org/departments/engineering-public-works/. Original system mapping was performed by URS Consultants in 1985. Since that time, various additions have been made to the maps. Updates will continue to be made as the need arises. Through the Sleepy Hollow Mapping Grant Consortium, The Village was able to get matching grants to map out sections of sewer and storm drain lines including sewer manholes, lines, storm drains, manhole covers and storm water outfalls. The Village will continue to seek ways of better mapping and digitizing its infrastructure.

3. CLEANING, INSPECTION AND ASSESSMENT PROGRAM

In 2018 Rye Brook began development of our preventive maintenance plan (PMP) and CMOM. This includes our Cleaning, Inspection, and Assessment program to assess the maintenance needs and structural condition of the entire collection system. The goal of this program is to complete the entire system assessment within a reasonable time. The current schedule from the time of this report is as follows

- Sanitary sewer manholes 3D camera inspected within a 5-year rotation,
- Sanitary sewers cleaned within a 10-year rotation
- Sanitary sewers CCTV Inspected on a 20-year rotation

Rye Brook began the cleaning, inspection and assessment program with a focus on the known problem areas and the older sections of Rye Brook. The results from the cleaning, inspection and assessment program were used to categorize the cleaning frequency and the repair or replacement needs for each component. Critical infrastructure components will also be identified and assessed. Previous knowledge of the condition of the sewer system has also been used to establish more frequent cleaning scheduled for identified problem areas.

The cleaning, inspection and assessment efforts are performed by third party vendors such as Green Mountain Pipeline, National Watermain and Subsurface Utility and reviewed by Dolph Rotfeld/AI Engineers. All data is entered into the vendors camera system program and documented in Village files in various formats.

The cleaning, inspection and assessment program includes sewer cleaning, CCTV inspection of piping, 3D manhole Inspections, visual inspection and classification of the manhole structures and their flow channels, an evaluation of the condition of the pipes and manholes, Results from the assessment program are used to categorize the cleaning and inspection frequencies for both the sub-areas and problem pipe-sections

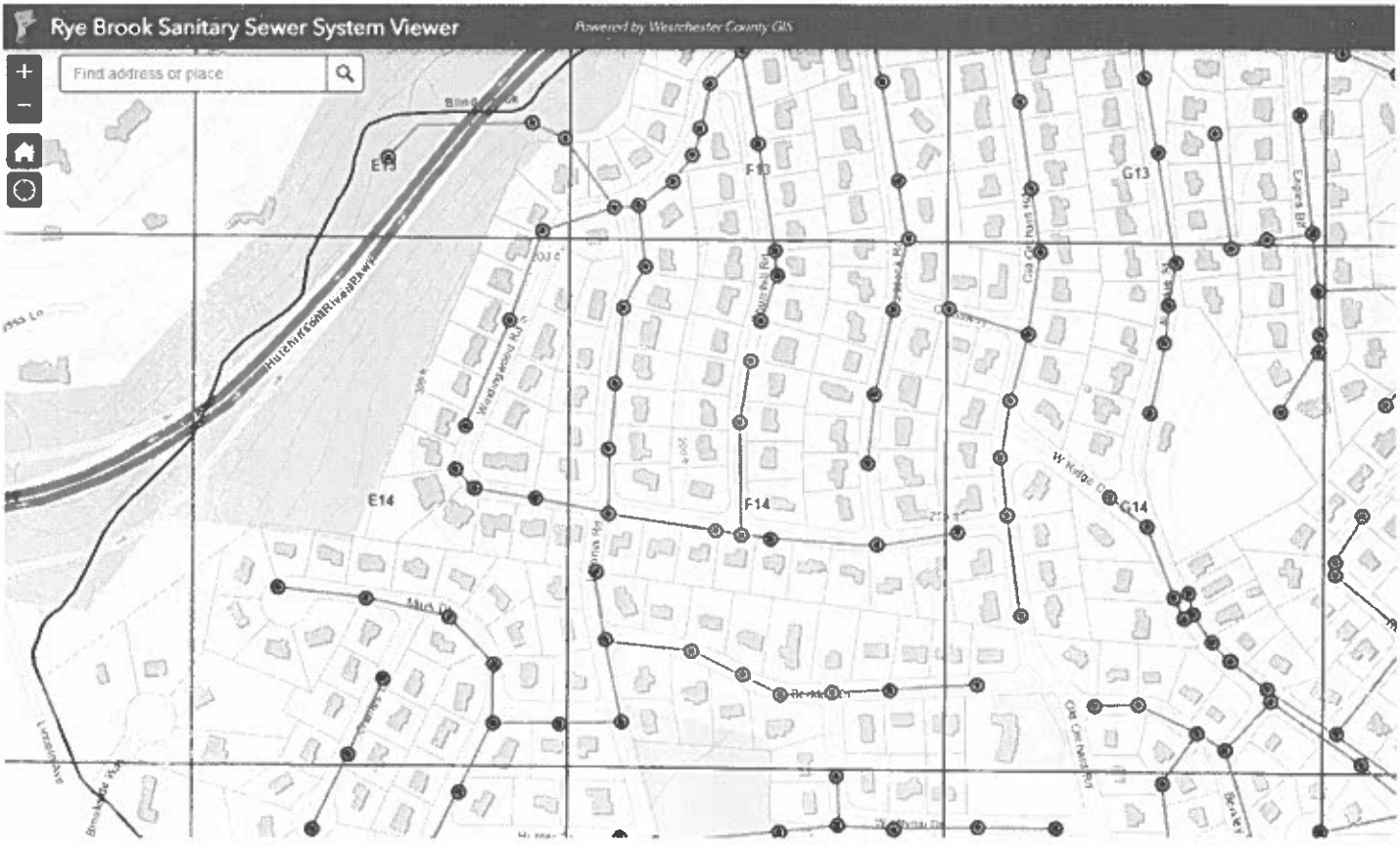
The cleaning and CCTV schedules are closely coordinated with Dolph Rotfeld / AI Engineering, Staff and feedback received from third party Support Crews. As Rye Brooks' goal is to have a complete cleaning, inspection and system assessment every 5 years for Manhole structures, every 10 Years for cleaning and 20 years for CCTV. The approximate miles /percent of the system reviewed by CCTV each year will be documented. Approximate percent / mileage of the system cleaned annually will be documented. The cleaning performed each year includes the priority cleaning plus grid identified areas of the remaining parts of the collection system, factoring in the intermediate and long-term interval cleaning schedules. Most of the system cleaning is for gravity lines, as described in more detail in Section a, below.

Information from cleaning and inspections (see Inspection section, below), including any findings, is entered into Field Logs, Excel sheets, PDF reports, and incorporated into scheduled maintenance and capital improvement. This information is also used to update this long-term Preventive Maintenance Plan (PMP).

a. Cleaning

Our primary sewer maintenance activity is sewer line cleaning. The Rye Brook service area is divided into 5, 10, 20 sewer shed areas as shown on attached maps

Illustration - Multi Year Grid Approach (Courtesy Westchester County GIS)



The cleaning of sewer lines, manholes, and other appurtenances is categorized as:

- Sanitary sewer manholes 3D camera inspected within a 5-year rotation,
- Sanitary sewers cleaned within a 10-year rotation
- Sanitary sewers CCTV Inspected on a 20-year rotation
- Hot Spot Cleaning more than once a year

Cleaning Schedules – Priority Cleaning

Pipe-sections on a priority cleaning frequency are identified based on known HOT Spots and Critical Service Areas lists. The HOT Spots (**see Appendix H**) have a history of blockages, slower flow, flat lines, odor or overflows as noted in chart. These areas get more frequent attention due to the collection of solids, grit, grease, and similar debris which may adversely affect the sewer system.

Cleaning - Gravity Lines Routine Cleaning
This section details schedules for the routine cleaning of each sub-area of the collection system. Figure **(See Appendix)** the collection system is broken into each section and associated cleaning frequency.

During the first cycle of the Cleaning, Inspection and Assessment program, each pipe and manhole will be evaluated to determine cleaning frequency. A crawler camera will be used to evaluate each sewer line to determine the need for cleaning and/or a CCTV structural inspection. If the camera evaluation indicates a need for cleaning, the pipe section will put on the intermediate cleaning frequency. Intermediate Cleaning of pipes shall be determined at a frequency of minimum once every 10 years but not rising to a level of a hot spot cleaning. Hot Spot Cleaning is defined as recurring locations that need additional and rotating maintenance on a schedule to be cleaned once every 6 months.

Cleaning schedule frequency will be determined based on the maintenance condition of said pipes in the respective grid areas inspected. See Cleaning Frequency Matrix for criteria to be considered in placement of segments onto hot spot list.

Sewer shed areas break out the frequency of each respective cleaning and inspection interval on a grid system. Sewer cleaning intervals may be adjusted and tuned as required based on field data. Rye Brook has begun to inspect The Village Sewer System (Pipes and Manholes) on a Grid System, as these grids are inspected, the files are reviewed by Consulting Engineers and corrective action will be recommended and prioritized based on severity and need. If areas of concern are observed that require recurring cleaning, these areas would be placed either onto the hot spot cleaning list for additional attention, and or corrective measures may be pursued. Areas of concern that could trigger placement on a hot spot list are dips / bellies in pipes, excessive scale building, areas where matter may be accumulating such as grit, sludge, grease and others. Areas requiring more attention may be placed on HOT Spot cleaning rotation. These areas may include the older parts of the sewer system, lines within the commercial district, lines subject to grease and similar.

All cleaning records are kept in a Spreadsheet format through excel worksheets that tracks the following:

- date, time, and location of cleaning activity.
- specific lines cleaned.
- equipment used.
- identity of cleaning crew.
- presence of root, grease, or debris; and
- problems identified or other follow up actions necessary.

Each line segment cleaned is identified by an upstream and downstream manhole number. A log is submitted for each day of work completed. Attachment **(See Appendix G)** provides the log form. Support from Fred Cook Jr, Highland Sewer and Drain, National Water Main and Green Mountain Pipeline to name a few are also used for cleaning and repairs, and for emergencies during non-business hours.

Manhole deficiencies are also noted in cleaning logs (see Section b, below). Information about manholes requiring attention is provided to the Superintendent of Public Works and or Dolph Rotfeld / AI Engineers and either a repair work order is issued, or it is added to the capital repair schedule. A standard method for evaluating deficiencies is utilized to rate defects and prioritize repairs.

b. Pipe and Manhole Inspection

Planned manhole and pipe inspections are coordinated with the cleaning program and generally follow the cleaning schedule. However, as Rye Brook implements the PMP, CMOM and Grid Approach and establishes cleaning frequencies and repair schedules, inspection by zoom camera will be used to help establish those cleaning frequencies. The cleaning, inspection and assessment program goal is to inspect the entire collection system within timeline specified in section A above. During the inspection and assessment program, a crawler camera is used to screen a pipe section to determine the cleaning effectiveness and a full CCTV screening is utilized to assess its structural condition or other deficiencies. Rye Brook uses third party services to provide crawler camera support to document:

- the structural condition of the pipe
- root intrusion
- grease
- protruding taps
- evidence of inflow and infiltration (I/I) or surcharging
- manhole pave-overs, and
- other deficiencies that factor into condition assessment

Planned video inspections are generally scheduled to follow the planned cleaning schedule. However, in the event of a blockage, a video inspection assesses the cause of the blockage. After the blockage is removed the line is evaluated with a crawler camera again to determine if an inspection with a CCTV crawler is needed to assess the condition of the pipe.

All newly constructed sewer lines are required to be certified by a Licensed NY State Professional Engineer and pass Westchester County Health Department Testing Standards. Additionally, all new pipes and manholes are required to be Pressure and or Vacuum tested to ensure tightness and prevent release of sewer odors and future infiltration of storm water. This inspection and testing process must be completed prior to backfilling and before Rye Brook will accept the infrastructure from the construction contractor.

Manhole inspections help keep our asset inventory up to date and are used not only to update collection system maps, but to determine structural condition. During manhole inspections, field crews take a complete inventory of each manhole including construction materials, ring size, depth to invert, flow conditions and evidence of problems according to industry standard checklists). Information is recorded in computer software from the Vendor and on excel sheets and used to schedule maintenance and repairs. A 3-Dimensional Digital Robotic Camera is used during the inspection to document defects.

Manhole inspection results are reviewed for condition rating. Those needing repair are placed on a priority schedule, and routine repairs are coordinated accordingly. Village Consulting Engineer

reviews field reports and puts forth a work plan based on criteria set forth in Villages SSES and or other industry standards for evaluation such as Nassco and PACP.

Highway Department along with contracted third-party crews are responsible for completing structural repairs to manholes. Repairs include invert work, frame and cover grade adjustment, and frame and cover replacement. More comprehensive repairs, such as complete relining of the manhole structure, are performed by third party contract vendors. Rye Brook maintains a limited inventory of frames and covers.

c. Assessment

While routine cleaning and visual inspection are used to assess the condition of manholes and surface facilities, CCTV video inspections are the primary method used to assess the condition of the sewer pipes. All records are entered into Excel Spreadsheets and digital files are archived.

The results from routine inspection and monitoring are used to prioritize areas needing CCTV inspections to assess pipe condition such as manholes with evidence of slow flow or surcharging. The assessment is logged into a tracking list using conventional defect criteria. These defects are reviewed by Village Consultants to establish priority.

Pipe condition information is used to determine short- and long-term maintenance strategies including increased cleaning, root treatment, sewer line repair, or replacement. The condition assessment helps establish the cleaning frequency and inform Rye Brook's capital planning. As more condition assessment information becomes available, the priority of capital projects may change.

Condition assessments may document the following details and deficiencies: Characteristics may include pipe diameter, and age and type of material

1) Dips in line
2) Grease build-up
3) Root intrusion
4) Sediment accumulation and encrustation
5) Structural condition, including cracks, corrosion, and erosion
6) Joint alignment and movement
7) Reverse slope
8) Obstructions
9) Deformations in line

Rye Brook's third-party contractors' software may include a defect assessment table where each asset (pipe, manhole, pump, etc.) is rated for specific criteria (e.g., roots, grease, sedimentation, cracks, etc.). Based on the criteria ratings, the program may assign an overall rating for each asset. A ranking of each asset, based on its condition assessment rating (see Table 2), may then use for prioritizing capital repairs and replacement.

Table 2

Condition Rating	Condition Description	Maintenance Required
0	New	Normal
1	Excellent Condition	Normal
2	Minor Defects Only	Minor
3	Backlog Maintenance	Significant
4	Requires Major Renewal	Renew
5	Almost Unserviceable	Replace

Assessment Factor	Consideration	Scale
Criticality	How critical is the service of this asset?	0 (noncritical) – 10 (critical)
Performance	What level of performance is it providing?	New to unserviceable (on a scale of 0 to 5)
Impact of Failure	Is there a process, environmental, or safety issue?	0 (no issue) - 3 (significant) for each impact category
Capacity	Is it capable of meeting system needs?	Undersized – Oversized
Remaining Life	How much of its design life is used up?	Percentage from 0 to 100%
Redundancy	Does the component have a backup?	From 0 (no back up) to 200%

Cleaning Frequency Response Matrix

The below matrix references criteria for review and consideration in evaluating segments of pipe that may need to be added or removed from hot spot cleaning logs. Field Crews when cleaning shall utilize a debris trap and a 5 gallon bucket to determine debris quantity. Matrix will be referenced and appropriate notes will be placed on sewer cleaning logs to indicate any changes to a lines designation as "Hot Spot"

Cleaning Frequency Response Matrix

	Clear	Light	Moderate	Heavy
Debris	¼ Debris Trap Volume/500 Linear Feet (LF) or less 1 pass	½ Debris Trap Volume/500 LF 2 passes	¾ Debris Trap Volume/500 LF 3 passes	1 full Debris Trap or Greater Operator concern for future stoppage 4 or more passes
Grease	¼ Debris Trap Volume/500 LF 1 pass	½ Debris Trap Volume/500 LF 15 minutes or less to clean 2 passes	¾ Debris Trap Volume/500 LF 15-30 minutes to clean 3 passes	1 full Debris Trap or Greater Operator concern for future stoppage 4 or more passes
Roots	¼ Debris Trap Volume/500 LF 1 pass	½ Debris Trap Volume/500 LF 2 passes	¾ Debris Trap Volume/500 LF 3 passes	1 full Debris Trap or Greater Operator concern for future stoppage 4 or more passes
Debris: Structural sewer line fragments, soil, rock, etc.	No observable materials	Minor amount of material (specify type of material if possible)	Moderate amount of material (specify type of material if possible) per sewer line segment	Significant amount of material (specify type of material if possible) per sewer line segment Operator concern for future stoppage
Action	Decrease frequency to next lower frequency after three (3) consecutive results (*e.g.*, 6 months to 12 months)	Continue current maintenance frequency	Increase current maintenance frequency to next higher frequency (*e.g.*, 6 months to 3 months)	Increase current maintenance frequency to next higher frequency (*e.g.*, 6 months to 3 months)

d. Staffing and Equipment

Rye Brook has 10 Highway staff trained for cleaning, inspection and SSO response, and they are deployed in a 3-person crew year-round for cleaning. Staff receive annual training on the CMOM, SOP, and SSORP. Inspection work is coordinated with third party contractors, with oversight from the Superintendent of Public Works and or Dolph Rotfeld Engineering / AI Engineers. Village Staff work with Third Party Contractors and Dolph Rotfeld / AI Engineers on assessing the condition of our collection system, using industry standard techniques.

Third party crews will be assigned a specific area of the collection system with an associated map and are responsible for cleaning all lines and or manholes within the assigned area within the specified time frame. The **Appendix C** contains detailed cleaning procedures that crews must follow. Crews will have received training on use of equipment and how to address problems that might be encountered while cleaning the collection system (roots, fats, oils and grease, and confined space).

Crews report back on progress and problems including any inconsistencies between the map and the actual sewer lines which are noted and submitted with their log to the General Foreman and or Superintendent of Public Works for entry into the database and correction of mapping or location errors. As the crews perform cleaning and evaluation, the long-term cleaning schedule for the entire sub-area is reviewed to determine if any lines designated for long term cleaning need to be cleaned before the crew moves to a new area.

Contracted Crews will perform manhole inspections on a 5-year Grid Rotation utilizing Robotic Inspection technology, approximately 20-25 % of manholes will be inspected in the average year. Such work is contracted out through third party companies as the Village does not have staffing levels nor equipment to accommodate such needs.

Contracted Crews will perform Sewer line cleaning on a 10-year Grid Rotation utilizing High-pressure high-volume sewer jets and or Vactor Trucks, approximately 10-15 % of lines will be cleaned in the average year. Such work is contracted out through third party companies as the Village does not have staffing levels nor equipment to accommodate such needs.

Contracted Crews will perform Sewer line CCTV on a 20-year Grid Rotation utilizing Crawler Camera technology with jet truck support, approximately 5-10 % of lines will be inspected in the average year. Such work is contracted out through third party companies as the Village does not have staffing levels nor equipment to accommodate such needs

The following Village equipment is available for cleaning:

Sewer Jet Truck is used to clean most lines. The standard attachment used is a cleaning nozzle head as manufactured by Nozzteq. Root saws are attached to the jetting equipment and used as needed. Jetting is used to remove blockages from lines. Equipment inventory is covered more fully in Section 8.

4. GRAVITY LINE PREVENTIVE MAINTENANCE

a. Fats, Oils and Grease (FOG)

Grease and grease-like products can significantly increase the likelihood of sewer overflows. Grease can also cause blockages or aggravate blockages due to roots or structural deficiencies. Restaurants, cafeterias, and other food service facilities, as well as industrial facilities, can discharge grease as part of their normal sanitary flows that can lead, in time, to blockages, backups and overflows.

Code Section 122 Fats, Oils and Grease Abatement was added into the Rye Brook Code on September 2021. Code section attached to the **Appendix A.**

The discharge of fats, oils and grease (FOG) is regulated through our Code Section 122; however, backups can sometimes occur. Areas of the collection system with known grease problems are identified and placed on the Hot Spot cleaning list.

The Rye Brook Building Department is tasked with the inspection of all Food Service Establishments (FSE) with grease creating capabilities.

Beginning 2021, all FSEs will be visited to develop a database of contacts and to determine the types of FOG removal technologies employed at each facility. Information regarding the FOG program will be posted on Rye Brook's website.

Keane and Beane Law reviewed the existing sewer use ordinance and found that it grants authority to Rye Brook to regulate discharges to the sewer system, including grease. Rye Brook's sewer use ordinance prohibits discharges to the collection system FOG, or at levels that interfere with the operation of the system. The ordinance also authorizes inspection of facilities during normal business hours.

The Village Board of Trustees enacted a policy and procedures requiring all commercial and similar grease generating facilities to install and maintain a grease interceptor or automatic grease removal device and maintain records of maintenance and operation. The policy also includes annual inspections of FSEs that will be done by our Building Department Staff. The inspection is part of the Annual Place of Public Assembly inspection. If the grease interceptor has not been maintained (with documented removal of accumulated grease and cleaning), has been bypassed, or if significant grease is discovered within the service connection, Rye Brook will issue a letter to the owner giving notice of the ordinance/policy non-compliance and requiring action be taken to prevent further discharge of grease into the system. A follow-up inspection may require a fee as indicated on License and Fee Schedule. If the non-compliance is not remedied within time allotted, the policy states that the enforcement authority of the sewer use ordinance may be invoked.

Rye Brook has a sewer jet truck and third party Vactor Truck on retainer to clean the sewers in problem areas. All emergencies are handled by the Highway Department immediately. Sewer emergencies get immediate priority by Highway Staff and Superintendent of Public Works.

b. Root Control – Mechanical

Rye Brook currently uses mechanical root removal for sewer lines with chronic root problems: Root saw attachments are standard equipment on cleaning trucks. When a crew encounter roots during routine cleaning, a hydraulic saw is attached to the jetter and used to cut and remove the roots. The severity of the problem is recorded on the daily log, and if necessary, the pipe section is placed on the list for priority cleaning.

Cutting a tree's roots is like pruning the tree and stimulates root growth into the system. Consequently, mechanical treatment must be repeated every year or two, which is factored into the cleaning schedules. Rye Brook DOES NOT utilize a chemical root treatment program to control root growth in the collection system. Sections are further camera inspected and determined whether to be placed on repair list such as lining or spot repair.

c. Service Laterals

While Rye Brook maintains Sewer mains only, service laterals from the residence to the sewer main (including portions of the public right-of-way), is the owner's responsibility. Property Owners must repair laterals that are in the public right-of-way when compromised.

d. Flow Monitoring

Rye Brook is evaluating our flow monitoring data to determine the amount of infiltration from various sources and sewer sheds. The Village will continue to perform flow monitoring at intervals to assess effectiveness of its various programs

5. EASEMENTS AND PAVING: MAINTENANCE AND ACCESS

a. Maintenance of Right of Way and Easements

Easements give Rye Brook the right to install and maintain sewer and water facilities on property not owned by the Village. Easements in Rye Brook are usually no more than 20 feet wide typically but run from may run several hundred feet to in length. Rye Brook has numerous sewer access easements. These easements are recorded as deed records that are accessed through Rye Brook's Laserfiche program, Building Files, or Westchester County Land records.

Easements are important for our ability to operate and maintain our collection system. Rye brook's Highway Departments' goal is that all easements remain clear of any fences, buildings, gardens, trees, shrubs and extensive landscaping, to allow equipment access for maintenance of the collection system. The Village typically is not liable to repair or replace any such items that are removed in the process of completing repairs or maintenance on the collection system. Crews are, however, instructed to work with the property owner whenever possible.

Maintenance of easements is accomplished in various ways. Easements on privately-owned parcels are often maintained by the owner. The Building Inspector refers construction questions as they arise, to the Public Works Department. Easements on public land are maintained by the entity responsible for property upkeep, Manholes in easements are inspected as part of our ongoing preventive maintenance program.

b. Street Paving Coordination

Rye Brook's Public Works department is responsible for coordinating street resurfacing and ensuring that all utilities are aware of scheduled resurfacing. A list of streets to be paved on a 20-year schedule is developed each budget year. This list is distributed to Con Edison to facilitate coordination of all underground work.

Rye Brook as much as possible will try to utilize least invasive repair techniques such as lining, grouting, parging and similar. When excavation is required, roads will; be restored to original condition.

6. PUMP STATION/FORCE MAIN MAINTENANCE

Rye Brook owns and operates 2 wastewater pump stations listed in Table 3. The pump stations owned and operated by Rye Brook are routinely checked by Village personnel. The maintenance for the grinder pumps is the responsibility of the Village. The Village has a contract for Semi Annual pump inspections, and system evaluation at which point pump clearances are checked, systems are tested and inspected, and pump grinder parts are rebuilt annually.

The performance of the Rye Brook pump stations is monitored through Monthly inspections and through Remote Dialer for warning messages. During these inspections, Highway Department reviews pump run hours, totalized flow, wet well levels and alarms. Back-up generators are exercised weekly automatically, and load bank tested annually. On a semiannual schedule, Highway Department along with third party service contractor pumps the wet wells, removes grease build up, and calibrates the levels. LBA is administered automatically to aid in digestion of FOGS. Specific pump station inspection protocols are attached in the **Appendix F** for Rye Brooks pump stations.

Inspection, maintenance, and repairs are recorded on Westchester County Annual Pump Station reports and a diary at each station. If a problem or maintenance issue is encountered, personnel must also report it directly to the General Foreman for resolution. Repairs are a higher priority than routine maintenance.

Rye Brook has remote dialers for the Village Hall and Belleair pump stations with online viewing capabilities. The Dialers remotely controls and monitors pump station operations, and sends alarms to the General Foreman, Assistant Foreman, Superintendent of Public Works and Police Department in the event of a malfunction or emergency. Dialer will keep calling such rotation until alarm is acknowledged. The system records all activities at a pump station and provides a running tab for backup documentation. The Sensa phone Dialer can provide continuous status of pump station operations for the following items:

- Number of pumps in operation
- Pump Failure
- Status of pumps (including operational alarms)
- Power status (including power failure alarms)
- Wet well conditions (depth, lead / lag elevations, etc.)
- High- and Low-Level Alarms
- Power Loss

Pump stations with the remote monitoring capabilities of an installed and fully functioning Dialer can be evaluated to determine the need for daily physical inspections.

Table 3. Pump Station Locations

Pump Station Location	Description	Inspection Frequencies*
Village Hall 938 King Street	Dual Barnes Grinders 30GPM Ea.	M
Atria 1200 King Street	Dual ABS Grinders 76GPM Ea.	M

*** D = daily; W = weekly; M = monthly; Q = quarterly; SA = semiannually; A = annually**

Manufacturer's Operation and Maintenance (O&M) manuals for equipment are in Village Hall at the office of the Superintendent of Public Works.

Pump rebuilding, motor rewinds, and other repairs for the pump stations are contracted to Third party ABS Authorized service contractor. Repairs to motor control centers, flow meters, remote monitoring equipment, valves, and macerators are typically repaired by third party maintenance crews. In general, any replacement parts that are difficult to acquire are kept in stock by the Highway Department; other parts are obtained from local vendors or the manufacturer's service center.

Whether repairs are made by local vendors or by Rye Brook personnel, all repairs are recorded and tracked with the Westchester County Annual Sewer Pump Station report.

a. Mechanical and Electrical Maintenance

The size of the pump station and its related equipment determine its specific mechanical and electrical maintenance needs. The Public Works Department coupled with R&R Pump Service is responsible for incorporating the routine maintenance of each pump station. The Superintendent of Public Works and R and R Pump Services uses manufacturers' Operation and Maintenance manuals to establish action items for pump station equipment. Pump stations listed in Table 3 have individual inspection protocols attached in the **Appendix F**. A general description of bi-annual maintenance performed on pump stations by Third Party Service is listed as follows:

Mechanical Maintenance/Inspections	Electrical Maintenance/Inspections
	Check backup generator Exercise stands by power
Bi-Annual	
-Replace hydraulic fluids and oils (as required by manufacturer) -Inspect pumps (oil levels, seals, packing, bearings, etc.) -Replace packing -Inspect pump impellers and clearances -Inspect discharge piping -Check outflow pressure -Calibrate gauges (including pressure gauges used in monitoring) -Check for corrosion problems -Exercise check valves	-Inspect internal Motor Control Center components -Check insulation resistance -Inspect & grease electrical contacts -Inspect electrical pump cables -Inspect electrical breakers -Perform amperage readings on equipment -Check MCC for proper operations Check Generator: -Oil level -Water level *[if a level gauge is installed]* -Fuel level

-Check air release valves -Check floats/bubbler system (clean and/or replace) - -Inspect building and grounds -Check operation of building heat and fans -Inspect HVAC equipment -Check building security	-Inspect hoses and belts -Check piping for leaks -Check battery condition
Annual	
-Pump the wet wells -Remove grease build up (annual or sooner) Service and calibrate all instrumentation: -Flow meters, level sensors, alarms, elapsed time meters and telemetry equipment	-Alternate Power Sources checked and run as part of emergency drill

Capacity and discharge head in the pump stations are reviewed annually, following confirmation that the pumps are in good working order. Changes in capacity and discharge head are evaluated to determine whether cleaning of the force main is warranted.

All mechanical and electrical maintenance activities are recorded on a log sheet at each station and entered and tracked by The Highway crew. Any problems or maintenance issues noted by crews are reported to the General foreman for resolution.

b. Force Main Maintenance

Rye Brook currently has 2 force mains in the collection system with a combined length of 0.31 miles. The Village Hall and Bellefair Pump Stations force mains have NO air release valves located at the high points. The Village Hall and Bellefair Pump Stations force mains is not long enough to warrant air release valves.

7. REACTIVE MAINTENANCE

This chapter outlines the process used by Rye Brook to respond to non-overflow, unplanned maintenance needs in our collection system. It also provides an overview of responsibilities for emergency events. While Chapter 3 outlines Rye Brooks' preventive maintenance and the **Appendix C and E** details Rye Brooks response procedures for emergency sewer overflows, this chapter is written to address those unscheduled maintenance events that don't result in overflows or backups of sewage into basements.

The following programs are typically utilized in a reactive maintenance situation:

- Record Tracking spreadsheets
- Information management system being explored
- Equipment and supplies
- Customer service
- Pump station program

Sewer Overflow Response – (See **Appendix C and E**) – is always a priority situation. Notice requirements, contacts and procedures are further explained on the Sewer Blockage and Overflow Form.

Responsibilities for reactive maintenance are assigned by the Superintendent of Public Works and or general Foreman based on level of priority for response.

a. Corrective Maintenance

Most repair needs are identified while conducting routine maintenance, inspections, and assessments. Because there is such a wide range of potential unexpected events that it is not possible to prescribe the appropriate repair for every possible scenario, Rye Brook has established a prioritization scheme for determining the timing of repairs. This is based on the types of problems that have occurred in the collection system in the past or could occur in the future. While this contingency analysis focuses on system upsets that would not result in immediate sewer overflow, the response timing is based on the potential for a resulting sanitary sewer overflow. Overflow response is covered in the **Appendix**. C and E

Low-risk items, such as light bulbs or lightning arrestors, motor starters, fuses, and impellers, are planned for run-to-failure, and as such, are not part of the PM Program. These items are replaced when they fail. When assets critical to the process fail, they are scheduled for corrective maintenance either on an urgent or routine schedule. Some of these repairs are handled under the operations and maintenance account, and some must be put in as capital improvements as part of our asset management activities depending on asset cost and life expectancy. Assets valued at greater than $20,000 dollars and with a useful life of greater than 10 years are included in the capital budget.

Corrective maintenance repairs include (but are not limited to):

- cleaning to eliminate flow problems that are noted during inspections

- spot repair or replacement of a pipe that shows signs of deterioration
- replacing a rattling or failed manhole cover Using Campbell Foundry 1009 Flow Seal Covers
- repairing or replacing a pump that is becoming clogged or has been damaged by debris
- responding to, investigating and mitigating customer complaints
- repairing system parts subject to vandalism

Corrective maintenance response is outlined in Table 4

b. Scheduling

Scheduling of repairs runs the range from repairing components found to be in substandard condition during inspection, immediate repairs to pump stations that are malfunctioning, to major, capital-intensive, repair projects, such as a manhole-to-manhole pipe replacement or rehabilitation. An emergency, however, always supersedes scheduled maintenance. Timing of other repairs is done by programming into long term capital plans or if severe enough by emergency bid and Trustee authorization. Major replacement or rehab may be capitalized outside of the annual operating budget when they are deemed necessary to maintain the long-term operation such as pump replacement, emergency spot repairs, emergency collapse.

Table 4: Collection System Non-Emergency Response and Repair Priority (not fully comprehensive – but a sampling of response scenarios)

Problem	Response Time	Action	Repair Time Goal
Failure of Bellefair or Village Hall Pump Station.	Respond within 1 hour or less by General Foreman or Assistant Foreman.	Call crew with sewer truck, Clear Alarm codes, assess water level in pit, manually pump down pit. Switch to standby backup system, Call R&R Pump Service if needed. Clear pump as needed or replace parts.	Alarm deactivation within 1 hour, pump down levels within 2 hours. Back to normal within 4 hours.
Potential Pipeline failure / Collapse imminent.	Within 2 hours assess situation and determine stability, corrective course of action.	Obtain emergency RFP or utilize existing contracts if possible. Piggyback contracts if available. Obtain multiple quotes.	Within 48 hours for RFP and start within 24 hours of lowest proposal.

Problem	Response Time	Action	Repair Time Goal
Sewer system Surcharging but no overflows reported.	Direct Highway to respond with sewer jet truck. Within 30 minutes regular workday. Within 1 hour on call out.	Check downstream manholes to find low flow manhole, begin jetting sewer line to break through clog/debris. Assess debris. Jet again and verify line and manholes dropped in flow. Direct Supt. of Public Works as needed and camera line.	Within 1 hour from time of call.
Failure of Backup power at Pump Stations (during power outage event).	Immediate within 30 minutes or less with crew on staff. Within 1 hour otherwise on call out.	Assess Breakers on system, check for fuel, and transfer switch. Notify Supt. of P.W. immediately. Obtain emergency standby Generator immediately. Possibly rewire for portable generator.	Permanent repair depends on problem, Temporary solution within 2 hours.
Homeowner calls in Sewer Spill / Backup inside residence.	Immediate within 30 minutes or less with crew on staff. Within 1 hour otherwise on call out.	Check downstream manholes to find verify flow in manhole and begin jetting sewer line to break through clog/debris if any. If situation remains, direct homeowner to call private plumber to clean lateral.	Within 30 minutes from time of call, 1 hour for call out.

c. Tracking and Recording Repairs

The Village documents corrective maintenance needs on premade spreadsheet and in contract folders at the time of the event. Corrective maintenance tasks are recorded when completed and then Superintendent of Public Works or Administrative Staff inputs them into our database. CCTV or other failure analysis may also be done by staff as a corrective maintenance task after a problem occurs when crews are here surveying the sewer system to diagnose the cause of problems or performing routine ongoing reconnaissance and recommend repairs and schedule changes if needed. Findings may lead to a spot repair of the pipe, pipe lining, root cutting, re-cleaning for grease or debris removal on a periodic preventive basis, and if so, these tasks are included in an update of our schedule as described in Section 3, Cleaning, Inspection and Assessment.

Field crews utilize premade forms depending on activity, these forms are in **Appendix E, F, G, H**. The General Foremen have forms pre printed and available at the highway facility. These forms include the following:

1. Sewer Blockage / Overflow Forms (Completed by Supt. of P.W. or Foremen) _
2. Pump Station Inspection Form (Completed by Pump Service Company)
3. Sanitary Sewer Tracking Form (Field crews complete)
4. Sanitary Sewer Hotspot Log Form (Field crews complete)

Senior crew leaders will complete forms based on field work performed. Such forms will be given to the General Foremen for review and finally to Superintendent of Public Works for filing and or additional action.

Sanitary Sewer Blockage / Overflow forms are completed by Supt. of Public Works and or Foremen only.

All Records are stored digitally on server located at Village Hall. Extension of records is typically: F:\mnowak\DOCS\(Searchby Folder Name). Folder naming convention is typically: Sewer CMOM, Sewer SSES, and so forth

As a CMMS system is developed, records will transition to online database.

d. Complaint Response

The Public Works and Highway Department is responsible for responding to sewer service complaints. Complaints are generally related to sewer stoppages, overflows, or odors. Response is performed by the Highway Department during work hours (Highway 7:30am to 4:00pm) and by General Foreman and Superintendent of Public Works during off work hours (4:00pm to 7:30am). The Superintendent of Public Works provides directions for after-hours service calls that may be received by the Police Department, or through emails.

Complaint response includes both assessing the complaint and resolving the problem. Most of our complaints are related to sewer laterals from homeowners being obstructed, or backups within residences due to lateral line issues. During work hours, a cleaning crew is diverted to assess the situation, jet the sewer lines, and remove stoppages. During non-work hours, Rye Brook uses a call out rotation of Highway Staff to address complaints.

The Village tracks these complaints and response activities on prescribed spreadsheets attached in the **Appendix E**, evaluates response time, trouble spots and uses the information to assess our performance, update this plan and prioritize repairs.

All Records are stored digitally on server located at Village Hall. Extension of records is typically: F:\mnowak\DOCS\(Searchby Folder Name). Folder naming convention is typically: Sewer CMOM, Sewer SSES, and so forth

8. EQUIPMENT AND TOOL INVENTORY

a. Essential Day-to-Day Items

Rye Brook provides operations and maintenance crews with the essential work-related items they use on a day-to-day routine basis. Should new or replacement equipment or tools be needed, the crew leader notifies the General Foreman. The General Foreman will issue the crew leader stocked items. For non-stocked items, the General Foreman advises the crew leader of a local vendor to utilize. The crew leader will then procure the requested items through the local vendor in an "in-stock" format.

b. Spare Equipment and Tools

Rye Brook keeps a limited supply of spare equipment and tools for personnel. In lieu of maintaining a full supply of spare equipment and tools for personnel. Rye brook maintains a Intermunicipal Agreement with various other municipalities and will reach out to obtain parts as needed in an emergency.

c. Sewer Jet Truck and Camera

Rye Brook has ordered a new Sewer Jet truck October 2021 to assist with ongoing maintenance. Due to Global pandemic shortages truck is on order and scheduled for delivery by mid2023.

A Sewer Camera is part of the Village tool package and is available for use when needed. Camera would be utilized when a overflow and or clog occurs to check what was the cause of blockage and or spill. Cameras will also be utilized to check pipe after cleanings to assure any debris is removed. Camera will be also utilized to spot check pipes and see if any corrective action is required.

9. CAPACITY MANAGEMENT

a. Capacity Background

In 1993 Metcalf and Eddy Inc. conducted a Sewer System Evaluation Survey (SSES) for all the sewer collection systems that discharge to the Blind Brook Wastewater Treatment Plant. This included the Village of Rye Brook along with the Town of Harrison and the City of Rye. The investigation was part of a County wide effort to evaluate local sewers that are tributary to the County's trunk sewers and that discharge to County Operated Wastewater Treatment Plants. Significant sources of Inflow and Infiltration include area drains, roof leaders and leaky house connections. Recommendations included lining sewers, repair of sanitary sewers and manholes, and elimination of stormwater connections to sanitary sewers. This included additional CCTV and Engineering inspection of sewers, manholes and ongoing repairs.

The Village of Rye Brook has taken a proactive approach to address sewer capacity concerns and utilizes the following tools:

- Smoke and Dye Testing of Sewers
- Lining of sewer mains
- Implementation of 5,10- and 20-year cleaning program as listed in this report
- CCTV Inspections to locate broken mains and illicit connections
- Plumbing permits require certifications of no known illicit taps. Homeowners responsible for sewer laterals.
- Teardowns require new sewer lateral of lining of existing
- Implementation of Fats, Oils & Grease programs
- Manhole Cover replacements with chimney seal epoxy coatings
- Strict Storm water Management Code requiring full capture/handling of all rainwater from impervious surfaces onsite through recharging.
- Flow monitoring

b. Sewer Capacity Certification/ Connection Policy

Sewer Capacity Certification is a process where any new development requiring the connection of its sanitary sewer service to the Rye Brook sewer system is reviewed to determine whether adequate sewer system capacity exists to convey the new wastewater flow from the proposed development to our wastewater treatment facility. A capacity certification analysis by a professional engineer is required for all new developments larger than a 1 family residence.

Separate from the connection fee, developers of newly constructed homes and businesses are required to pay a sewer capacity charge for removal of infiltration/inflow (I/I) from the system. The fee is based on $100 per unit of proposed development. Such funds then are utilized to execute programs outlined above.

c. Lateral replacement program

Rye Brook does not have a sewer lateral program. Laterals are owned and maintained by the property owner. The Village implemented a certification under Plumbing permits which requires an affidavit attesting to no illicit discharges or connections. Building Department staff then

performs a walk through at closeout of permit to verify statement.

10. RESOURCES AND BUDGET

a. Budget Process

Rye Brook 's budget process requires that the annual budget be completed and adopted by May 31 of each year. The process begins with last year's numbers and projected needs for the following year. Multiple work sessions and Public Hearings are held and ample time for public comment is given at 2 Public Board Meetings.

The Village works diligently to provide necessary funding to ongoing capital projects while providing a lean and balanced budget all while functioning under a restrictive tax cap.

b. Rate Setting, Budgetary Policies and Financial History

Westchester County Department of Environmental Facilities and the Westchester County Finance Department set the rates and bill for usage directly to homeowners

c. Historical Rate Review

Westchester County Department of Environmental Facilities and the County Clerk's office retain such records.

d. Operating and Maintenance Expense

The Village Continues to fund infrastructure repairs and provides sensible fiscally sustainable funding to maintain the sewer infrastructure.

Operating and maintenance expenses include:

- Employee salary and compensation
- Operating supplies
- Utilities
- Repair and maintenance
- Professional services
- Routine capital outlay
- Debt service expenses for repair and replacement

Professional Services includes planning and engineering studies for repair and replacement projects.

Contractor Services includes contractual work for cleaning sewer lines and manholes, CCTV, sewer main lining, manhole rehabilitation, manhole cover replacement and improvements to the collection system map.

Routine Capital Outlay includes items that are considered capital assets and are purchased from annual operating revenue rather than through bonds or the capital reserve fund. Items such as contractual work for cleaning sewer lines and manholes, CCTV, sewer main lining, manhole

rehabilitation, manhole cover replacement and improvements to the collection system map. **Debt service** is the annual principal and interest payments for bonds, loans and other fiduciary instruments owed by Rye Brook. The debt service supports capital improvement projects. Rye Brook's policy is to not accumulate a unsustainable debt greater than manageable. Rye Brook continues to expend money through Debt services as required for long term repairs where it fiscally is appropriate

e. Capital Improvement Program Overview

The Capital Improvement Plan (CIP) is part of the long-term CMOM planning, which uses the Cleaning, Inspection, and Assessment program (see Chapter 3) to evaluate the existing system and to recommend improvements needed to correct existing deficiencies. The CIP also incorporates our Capacity Assessment (Chapter 9) program to assess projected needs for maintaining the integrity of the collection system and expanding sewer capacity to accommodate growth by providing a detailed 5-year capital improvement program.

Capital projects are evaluated based on their severity, impact to service, rate of failure and long-term benefits to name a few.

The capital reserve funds result from the balance of funds remaining after the payment of all operating and maintenance, debt service and other expenses. The capital reserve fund also accounts for the depreciation expense in the O&M budget. The reserve funds are primarily used for:

- Non-bond funded capital projects
- Additional funds for bonded projects
- Emergency repair and maintenance

f. Capital Improvement Plan

The CIP adopted by Rye Brook can be located on the Villages website at https://ryebrook.org/search-site/?term=budget. The CIP shows funded projects.

g. Grants

The Village of Rye Brook in 2022 has retained the services of Millennium Strategies of Nanuet Ny to assist with grant writing. The Village will try to pursue grants as they become available for Sanitary sewer repairs, mapping and Illicit Discharge detection and elimination

UPDATES / CHANGES

Reviewed By	Date	Changes / Comments
Michal Nowak	2022-9-13	Page Numbers added, Page 34 Added Grants, Page 31 added Camera and Jet Truck
Michal Nowak and Kevin Draganchuk P.E.	2023-1-11	Pages 5,16,18,19,21,29,31,32 revised per CEA Engineers Memo dated October 19, 2022. Sewer Overflow and Blockage Notice procedure updated, Appendixes cross referenced, QA/QC clarified

Appendix A-

Chapter 122 Fats, Oils and Grease Abatement And Educational Material

On a motion made by Trustee Epstein and seconded by Trustee Fischer the following resolution was adopted.

RESOLUTION

CONSIDERING ADOPTING A LOCAL LAW TO CREATE CHAPTER 122 OF THE CODE OF THE VILLAGE OF RYE BROOK CONCERNING FATS, OILS AND GREASE ABATEMENT

WHEREAS, a proposed local law was introduced on August 10, 2021 to create Chapter 122 of the Code of the Village of Rye Brook concerning Fats, Oils and Grease Abatement; and

WHEREAS, the Board of Trustees held a duly noticed public hearing on the proposed local law on September 14, 2021, at which time all those interested had an opportunity to be heard and the public hearing was closed on September 14, 2021; and

WHEREAS, the proposed action is an Unlisted Action pursuant to the New York State Environmental Quality Review Act (SEQRA); and

WHEREAS, the Board of Trustees is fully familiar with the proposed local law.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Trustees of the Village of Rye Brook, in accordance with SEQRA and upon review of the Short Environmental Assessment Form and all other materials prepared, hereby adopts the attached Negative Declaration for the proposed local law finding that the adoption of the local law will not result in any significant adverse environmental impacts.

BE IT FURTHER RESOLVED, that the Board of Trustees of the Village of Rye Brook hereby adopts the proposed local creating Chapter 122 of the Code of the Village of Rye Brook concerning Fats, Oils and Grease Abatement.

TRUSTEE EPSTEIN	**AYE**
TRUSTEE FISCHER	**AYE**
TRUSTEE HEISER	**AYE**
TRUSTEE KLEIN	**AYE**
MAYOR ROSENBERG	**AYE**

State of New York
County of Westchester } ss:
Village of Rye Brook

I hereby certify that this is the Resolution adopted by the Board of Trustees of the Village of Rye Brook which was duly passed by said Board on September 14, 2021

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Seal of the Village of Rye Brook, this 15th day of September, 2021

Village Clerk

Date 9/2/2021

LOCAL LAW NO. ____ OF 2021

VILLAGE BOARD OF TRUSTEES
VILLAGE OF RYE BROOK

LOCAL LAW TO CREATE CHAPTER 122 OF THE CODE OF THE VILLAGE OF RYE BROOK

A Local Law to create Chapter 122 of the Code of the Village of Rye Brook concerning Fats, Oils and Grease Abatement.

BE IT ENACTED by the Village Board of Trustees of the Village of Rye Brook as follows:

Section 1. Chapter 122 entitled "Fats, Oils and Grease Abatement" is hereby created as follows:

Chapter 122

Fats, Oils and Grease Abatement

§ 122-1 Purpose.

A. The discharge of fats, oils, grease, sand, grit and other harmful materials into the sanitary sewer system poses a threat to the health, welfare and safety of the residents and the environment of the Village of Rye Brook by reducing system reliability and requires additional maintenance efforts which increase cost.

B. The purpose of this chapter is to aid in the prevention of sanitary sewer blockages, backups and obstructions from contributions and accumulation of fats, oils, and grease into the sanitary sewer system from industrial or commercial establishments, particularly food preparation and serving facilities.

§ 122-2 Applicability.

This chapter shall apply to all existing and new food establishments within the Village of Rye Brook.

Date 9/2/2021

§ 122-3 Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

BUILDING INSPECTOR

The Building Inspector, Assistant Building Inspector, Code Enforcement Officer of the Village of Rye Brook, or Superintendent of Public Works/ Village Engineer or their designee.

FATS, OILS, AND GREASE

Organic polar compounds derived from animal and/or plant sources that contain multiple carbon chain triglyceride molecules. These substances are detectable and measurable using analytical test procedures established in the United States Code of Federal Regulations, 40 CFR 136, as may be amended from time to time.

FOOD ESTABLISHMENT

Any establishment which serves made-to-order food or beverages containing fats, oils and/or grease as defined herein for dine-in, takeout, or delivery. Food establishments shall include, but are not limited to, restaurants, cafes, fast-food establishments and food establishments within grocery stores, except as otherwise determined by the Building Inspector.

GREASE

A material comprised of fatty matter from animal or vegetable sources or hydrocarbons of petroleum origins.

GREASE TRAP/GREASE INTERCEPTOR

A device for separating and retaining waterborne fats, oils and grease and grease complexes prior to the wastewater exiting the trap and entering the sanitary sewer system. These devices also serve to collect settleable solids, generated by and from food preparation activities, prior to the water exiting the trap and entering the sanitary sewer system.

PERSON

Any individual person, firm, partnership, association, corporation, company, organization or legal entity of any kind, including public agencies and municipal corporations.

§ 122-4 Prohibited acts.

A. Introduction of any additives into any establishment's wastewater system for the purpose of emulsifying fats, oils and grease is prohibited.

B. Disposal of waste cooking oils into drainage pipes is prohibited. All waste cooking oils shall be collected and stored properly in receptacles such as barrels or drums for recycling or other acceptable methods of disposal.

C. Discharge of wastewater from dishwashers to any grease trap or grease interceptor is prohibited.

D. The use of biological additives for grease remediation or as a supplement to interceptor maintenance is prohibited, unless written approval from the Building Inspector.

E. Discharge of wastes from toilets, urinals, wash basins and other fixtures containing fecal materials to lines intended for grease interceptor service is prohibited.

F. Discharge of fats, oils and grease to toilets, urinals, wash basins and other fixtures is prohibited.

G. Discharge into the sanitary sewer system of any waste which has fats, oils and grease as well as solid materials removed from the grease control device is prohibited. Grease removed from grease interceptors shall be waste hauled periodically as part of the operation and maintenance requirements for grease interceptors. Licensed waste haulers or an approved recycling facility must be used to dispose of fats, oils and grease, including waste cooking oil.

H. Installation of food grinders are prohibited unless specifically allowed in writing by the Building Inspector.

I. No food waste disposal unit or dishwasher shall be connected to or discharged into any grease trap.

§ 122-5 Installation of grease traps.

A. Grease trap installation generally. The Building Inspector may at any time require the installation and/or relocation of an internal or external grease trap at a food establishment, as he/she may deem necessary to maintain a particular building sewer pipe, any lateral sewer pipe or sewer main pipe free from obstructions caused by fats, oils or grease emanating from the food establishment. Food establishments required to install grease traps shall be given a reasonable amount of time to complete the installation.

B. Grease trap installation in all food establishments.

(1) In every case where a food establishment is preparing or selling food, a suitable internal or external grease trap conforming to the applicable building and plumbing codes must be installed.

(2) The Building Inspector may require that a grease trap in a food establishment be upgraded to the then current-day industry standards.

(3) Food waste, including fats, oils, and grease, cannot be discarded into a slop sink, floor drain, toilet or any other plumbing fixture not connected to a grease trap.

C. Additional requirements for new or remodeled food establishments. New or remodeled food establishments, at the discretion of the Building Inspector, may be required to install an external grease trap. For the purpose of this regulation, a remodeled food establishment is a food establishment that undergoes a renovation requiring the submittal of plans to the Village Building Department.

D. Grease trap requirements. Grease traps must be sized in accordance with the standards set forth in the Uniform Code of the State of New York.

§ 122-6 Grease trap maintenance.

A. All grease traps shall be maintained by the food establishment at the food establishment's expense. Such maintenance shall be performed such that all grease traps shall be maintained to assure proper operation and efficiency . All food establishments shall have all grease traps cleaned before the amount of grease exceeds 25% of the grease capacity of the grease trap or once every month for internal grease traps and once every six months for external grease traps, whichever comes first.

B. Maintenance of grease traps shall include the complete removal of all contents, including floating materials, wastewater, bottom sludge and solids. The decanting or discharging of removed waste back into the trap from which it was removed or any other grease trap, for the purpose of reducing the volume to be disposed, is prohibited.

C. Written logs, as well as all service reports by third party maintenance/service/plumbing professionals, of any repairs, inspections, maintenance, cleaning and pumpings of the grease trap(s) and/or grease trap plumbing shall be maintained on-site by the food establishment. The written logs and service reports shall include the date of service, the type of service, by whom, and the signature of the person performing the service. Said logs and service reports shall be made available on site to the Building Inspector upon demand.

D. Any biological additive(s) placed into the grease trap or building discharge line,

including, but not limited to, enzymes, commercially available bacteria, or other additives designed to absorb, purge, consume, treat, or otherwise eliminate fats, oils, and grease, shall in no way be considered as a substitution to the maintenance procedures required herein.

§ 122-7 **Best management practices required.**

All food establishments shall adhere to best management practices dealing with fats, oils, and grease disposal and shall educate their employees to these practices. Best management practices include, but are not limited to, the following:

A. Training kitchen staff on fats, oils and grease handling practices. The food establishment shall maintain proper written documentation of all training, including the date of training, the training topic, name of attendees, and copies of any distributed training materials. Said documentation shall be made available to the Building Inspector upon demand.

B. Hanging fats, oils and grease handling posters in the kitchen.

C. Instructing employees that food waste shall be disposed of in the trash and not in the sanitary sewer system.

D. Providing ample paper towel dispensers for dry-wiping fats, oils and grease from spills, pots, frying, grilling equipment, and other surfaces saturated with fats, oils, and/or grease residue.

E. Using strainer baskets in sinks to catch food waste.

F. Directing all drains from fats, oils and grease-producing sources to a properly sized grease trap.

G. Collecting and disposing of used fats, oils and grease through a licensed septage handler instead of pouring it down the drain.

H. Capturing fats, oils and grease in ventilation and exhaust hoods.

§ 122-8 Storage and disposal.

A. Storage.

(1) All waste fats, oils and grease and other related wastes requiring storage at the food establishment as a result of removal from grease traps or otherwise shall be collected and stored in a container(s) (i.e., fifty-five-gallon drums or such other suitable storage containers). The container(s) and the location of the

container(s) shall be approved by the Building Inspector.

(2) No more than 110 gallons (two 55-gallon containers) shall be stored on site unless otherwise approved by the Building Inspector.

(3) The container(s) shall be sealed, protected from the elements and provided with secondary containment in case of leakage. The container(s) shall be screened from public view, such screening to be approved by the Building Inspector.

(4) All grease containers and surrounding areas must be kept in a sanitary condition at all times.

B. Disposal.

(1) All waste fats, oils and grease and related wastes shall be removed from the food establishment only by a permitted septage handler.

(2) All material removed from grease traps and hauling and disposal of fats, oils and grease and other related waste, shall be documented in the written log.

(3) The food establishment is responsible for assuring that all waste fats, oils and grease and related wastes are disposed of in accordance with all federal, state and local disposal regulations.

(4) In no way shall any waste fats, oils and grease and related wastes material be disposed of in any private or public portion of the Village's sanitary sewer collection system.

C. The food establishment shall maintain proper written documentation of fats, oils and grease and related wastes removed from the food establishment including copies of bills and other paperwork from any third party septage handler, noting the name, address and phone number of the septage handler, the date and volume in gallons of the waste that was removed from the premises, and the signature of the septage handler in the written log and/or service report. Said documentation shall be made available to the Building Inspector upon demand.

§ 122-9 **Records retention.**

Retention of records. Each food establishment shall retain all training, inspection, maintenance, cleaning, pumpings and disposal records for review by the Building Inspector upon his or her request. Such records shall be retained by the food establishment for no less than three years.

§ 122-10 **Inspections .**

A. The Building Inspector or their designees shall have the authority to enforce the provisions of this chapter. These officials may enter upon any premises at any reasonable time to inspect for compliance.

B. Upon written notification by the Building Inspector, the food establishment shall be required to perform the required maintenance or repair within the time period specified by the Building Inspector.

C. The food establishment may be required to install, at its sole expense, additional controls to prevent discharges of undesirable materials into the wastewater collection system.

D. Refusal to provide reasonable cooperation and access shall constitute a violation of this chapter subject to enforcement as set forth below.

§ 122-11 Enforcement; violations and penalties.

A. Notice of violation. When the Village of Rye Brook determines that a food establishment has violated or is in violation of a requirement or provision of this chapter, it may issue a written notice of violation, to the food establishment. The notice of violation shall contain:

a. The name and address of the landowner;

b. The name and address of the food establishment;

c. A statement specifying the nature of the violation; ~~and~~

d. A description of the remedial measures necessary to bring the food establishment into compliance; and

e. A statement of the penalty or penalties that shall or may be assessed against the person whom the notice of violation is directed.

B. The Building Inspector, or his or her duly authorized designee, may issue a stop-work order in accordance with the provisions of Chapter 214, if, in the judgment of the Building Inspector, the operations on site are not being performed in a safe and sanitary manner, are not in compliance with all approved plans, or are not otherwise in conformance with the requirements of this chapter.

C. Recovery of damages. When the discharge from a food establishment causes an

obstruction, damage, or any other impairment to the sanitary sewer system, or causes any expense, fine, penalty, or damage of whatever character or nature to the Village, the Building Inspector shall invoice the owner for same incurred by the Village. All costs or expenses incurred by the Village in connection with any such obstruction, damage, or any other impairment to the sanitary sewer system shall be assessed against the property on which the work was required to be done and shall be a lien against such property until paid, the same as any tax which the Village is authorized to impose on properties within the Village.

D. Penalties. In addition to or as an alternative to any penalty provided herein or by law, any person committing an offense against the provisions of this chapter shall be guilty of a violation punishable by a fine not exceeding $1,000. Each day's continued violation shall constitute a separate violation.

Section 2. Chapter 214, Section 2 of the Code of the Village of Rye Brook entitled "Illegal work, labor, services or use" is hereby amended as follows:

No owner, landlord, lessee, tenant, occupant, architect, builder or agent, servant or employee of any of them shall use or perform, carry on or conduct any work, labor or services upon or in and about any building or structure installed or erected for the benefit of the building or land in and upon which it is erected, when such work, labor or services are being performed, supplied or furnished in violation of Chapter 91, Building Construction and Fire Prevention; Chapter 107, Demolition of Buildings and Structures; Chapter 118, Erosion and Sediment Control; Chapter 122, Fats, Oils and Grease Abatement; Chapter 130, Flood Damage Prevention; Chapter 213, Steep Slope Protection; Chapter 245, Wetlands and Watercourses; and Chapter 250, Zoning, of the Village of Rye Brook or any other law, ordinance, resolution or regulation of the Village of Rye Brook. Additionally, no use, work, labor or services shall be conducted upon or in any building or structure which is not in conformity with any of the provisions of the application, plans or specifications on the basis of which a permit was issued, or which is being conducted or used in an unlawful, unsafe or dangerous manner.

Section 3. Chapter 214, Section 3 of the Code of the Village of Rye Brook entitled "Power to issue stop-work order; enforcement" is hereby amended as follows:

The Board of Trustees of the Village of Rye Brook hereby delegates to the Building Inspector, Code Enforcement Officer, Superintendent of Public Works/Village Engineer and Director of Public Works of the Village of Rye Brook, or their duly authorized designee, the power and authority to issue a written stop-work order to any owner, landlord, lessee, tenant, occupant, architect, builder or agent, servant or employee of any of them, carrying on or performing any illegal use, work, labor or services in or upon any such building or appurtenance thereto, in violation of Chapter 91, Building Construction and Fire Prevention;

Chapter 107, Demolition of Buildings and Structures; Chapter 118, Erosion and Sediment Control; Chapter 122, Fats, Oils and Grease Abatement; Chapter 130, Flood Damage Prevention; Chapter 213, Steep Slope Protection; Chapter 245, Wetlands and Watercourses; and Chapter 250, Zoning, of the Village of Rye Brook or any other law, ordinance, resolution or regulation of the Village of Rye Brook. Such work shall be stopped immediately upon the issuance of such a stop-work order.

Section 4. Numbering for Codification

It is the intention of the Village of Rye Brook and it is hereby enacted that the provisions of this Local Law shall be included in the Code of the Village of Rye Brook; that the sections and subsections of this Local Law may be re-numbered or re-lettered by the Codifier to accomplish such intention; that the Codifier shall make no substantive changes to this Local Law; that the word "Local Law" shall be changed to " Chapter," "Section" or other appropriate word as required for codification; and that any such rearranging of the numbering and editing shall not affect the validity of this Local Law or the provisions of the Code affected thereby.

Section 5. Severability

The provisions of this Local Law are separable and if any provision, clause, sentence, subsection, word or part thereof is held illegal, invalid or unconstitutional, or inapplicable to any person or circumstance, such illegality, invalidity or unconstitutionality, or inapplicability shall not affect or impair any of the remaining provisions, clauses, sentences, subsections, words or parts of this Local Law or their petition to other persons or circumstances. It is hereby declared to be the legislative intent that this Local law would have been adopted if such illegal, invalid or unconstitutional provision, clause, sentence, subsection, word or part had not been included therein, and if such person or circumstance to which the Local Law or part hereof is held inapplicable had been specifically exempt there from.

Section 6. Effective Date

This local law shall take effect immediately upon filing with the Office of the Secretary of State.

Managing FATS, OILS, and GREASE

DON'T...

1

DO NOT pour cooking residue directly into the drain.

2

DO NOT dispose of food waste into the garbage disposal.

3

DO NOT pour waste oil directly into the drain.

4

DO NOT wash floor mats where water will run off directly into the storm drain.

DO...

1

Wipe pots, pans, and work areas prior to washing.

2

Dispose of food waste directly into the trash.

3

Collect waste oil and store for recycling.

4

Clean mats inside over a utility sink.

Residential Fat, Oil and Grease...

The No. 1 cause of sewer backups in homes!

F.O.G. is Fat, Oil, and Grease.

About 30% of what we eat is **F.O.G.!**

F.O.G. can block your drains and your neighbors drains.

F.O.G. is the cause of most sewer line blockages.

Blocked drains and sewers create health hazards, make life miserable and are expensive to remedy.

Why should you care?

Even a small amount of grease in sink drains can cause sewage backups and overflows that are messy, costly, and a potential threat to your health and the environment.

How can you have fat-free sewers?

- Never pour fat, oil or grease down sink drains or toilets!
- Wipe dishes and pots and pans prior to washing.
- Talk with your friends and neighbors about the grease problem so the community is aware of the risk.

Appendix B-

Chapter 216 Storm Sewers and Sanitary Sewers

Chapter 216

STORM SEWERS AND SANITARY SEWERS

GENERAL REFERENCES

Erosion and sediment control — See Ch. 118.

Excavations and topsoil removal — See Ch. 121.

Flood damage prevention — See Ch. 130.

Garbage, rubbish and refuse — See Ch. 135.

Stormwater management — See Ch. 217.

Subdivision of land — See Ch. 219.

Wetlands and watercourses — See Ch. 245.

Zoning — See Ch. 250.

ARTICLE I
Illicit Discharge Detection and Elimination
[Adopted 10-30-2007 by L.L. No. 15-2007]

§ 216-1. Purpose.

The purpose of this article is to provide for the health, safety, and general welfare of the citizens of the Village of Rye Brook through the regulation of nonstormwater discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. This article establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process. The objectives of this chapter are:

A. To regulate the contribution of pollutants to the municipal separate storm sewer system (MS4) by stormwater discharges by any user.

B. To prohibit illicit connections and discharges to the municipal separate storm sewer system.

C. To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this article.

§ 216-2. Definitions.

For the purposes of this article, the following terms shall have the meanings indicated below:

AUTHORIZED ENFORCEMENT AGENCY — The Building Department and the Superintendent of Public Works/Village Engineer or his or her designee.**[Amended 10-27-2020 by L.L. No. 9-2020]**

BEST MANAGEMENT PRACTICES (BMPs) — Schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

CLEAN WATER ACT — The federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), and any subsequent amendments thereto.

CONSTRUCTION ACTIVITY — Activities subject to NPDES construction permits, land disturbance of one acre or more, or other activities including but not limited to clearing and grubbing, grading, excavating, and demolition.

HAZARDOUS MATERIALS — Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause or significantly contribute to a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

ILLEGAL DISCHARGE — Any direct or indirect nonstormwater discharge to the storm

drain system, except as exempted in § 216-7 of this article.

ILLICIT CONNECTIONS — Either of the following:

A. Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system, including but not limited to any conveyances which allow any nonstormwater discharge including sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency; or

B. Any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records and approved by the authorized enforcement agency.

INDUSTRIAL ACTIVITY — Activities subject to NPDES industrial permits as defined in 40 CFR 122.26(b)(14).

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER DISCHARGE PERMIT — A permit issued by the Environmental Protection Agency (EPA) [or by a state under authority delegated pursuant to 33 USC § 1342(b)] that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

NONSTORMWATER DISCHARGE — Any discharge to the storm drain system that is not composed entirely of stormwater.

PERSON — Any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner or as the owner's agent.

POLLUTANT — Anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; oil and other automotive fluids; nonhazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordinances, and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

PREMISES — Any building, lot, parcel of land, or portion of land, whether improved or unimproved, including adjacent sidewalks and parking strips.

STORM DRAINAGE SYSTEM — Publicly owned facilities by which stormwater is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

STORMWATER — Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

STORMWATER POLLUTION PREVENTION PLAN — A document which describes the best management practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate

or reduce pollutant discharges to stormwater, stormwater conveyance systems, and/or receiving waters to the maximum extent practicable.

WASTEWATER — Any water or other liquid, other than uncontaminated stormwater, discharged from a facility.

§ 216-3. Applicability.

This article shall apply to all water entering the storm drain system generated on any developed and undeveloped lands within the Village of Rye Brook unless explicitly exempted by an authorized enforcement agency.

§ 216-4. Responsibility for administration. [Amended 10-27-2020 by L.L. No. 9-2020]

The Building Department shall administer, implement, and enforce the provisions of this article. Any powers granted or duties imposed upon the authorized enforcement agency may be delegated in writing by the Superintendent of Public Works/Village Engineer of the authorized enforcement agency to persons or entities acting in the beneficial interest of or in the employ of the agency.

§ 216-5. Severability.

The provisions of this article are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this article or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of this chapter.

§ 216-6. Minimum standards; liability.

The standards set forth herein and promulgated pursuant to this article are minimum standards; therefore, this article does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, or unauthorized discharge of pollutants.

§ 216-7. Discharge prohibitions.

A. Illegal discharges prohibited.

(1) No person shall discharge or cause to be discharged into the municipal storm drain system or watercourses any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than stormwater.

(2) The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited except as described as follows:

(a) The following discharges are exempt from discharge prohibitions established by this article: water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising groundwater, groundwater infiltration to storm drains, uncontaminated pumped groundwater, foundation or footing drains (not

including active groundwater dewatering systems), crawl space pumps, air-conditioning condensation, springs, noncommercial washing of vehicles, natural riparian habitat or wetland flows, swimming pools (if dechlorinated, typically less than one PPM chlorine), fire-fighting activities, and any other water source not containing pollutants.

(b) Discharges specified in writing by the authorized enforcement agency as being necessary to protect public health and safety.

(c) Dye testing is an allowable discharge, but requires a verbal notification to the authorized enforcement agency prior to the time of the test.

(d) The prohibition shall not apply to any nonstormwater discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Environmental Protection Agency [or by a state under authority delegated pursuant to 33 USC § 1342(b)], provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

B. Illicit connections prohibited.

(1) The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited.

(2) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

(3) A person is considered to be in violation of this article if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.

§ 216-8. Suspension of MS4 access.

A. Suspension due to illicit discharges in emergency situations. The Superintendent of Public Works/Village Engineer may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the authorized enforcement agency may take such steps as deemed necessary to prevent or minimize damage to the MS4 or waters of the United States, or to minimize danger to persons. **[Amended 10-27-2020 by L.L. No. 9-2020]**

B. Suspension due to the detection of illicit discharge. Any person discharging to the MS4 in violation of this article may have his or her MS4 access terminated if such termination would abate or reduce an illicit discharge. The authorized enforcement agency will notify a violator of the proposed termination of its MS4 access. The violator may petition the authorized enforcement agency for a reconsideration and hearing. A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this section, without the prior approval of the

authorized enforcement agency.

§ 216-9. Industrial or construction activity discharges.

Any person subject to an industrial or construction activity NPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the authorized enforcement agency prior to the allowing of discharges to the MS4.

§ 216-10. Monitoring of discharges.

A. Applicability. This section applies to all facilities that have stormwater discharges associated with industrial activity, including construction activity.

B. Access to facilities.

(1) The authorized enforcement agency shall be permitted to enter and inspect facilities subject to regulation under this article as often as may be necessary to determine compliance with this article. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the authorized enforcement agency.

(2) Facility operators shall allow the authorized enforcement agency ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge stormwater, and the performance of any additional duties as defined by state and federal law.

(3) The authorized enforcement agency shall have the right to set up on any permitted facility such devices as are necessary in the opinion of the authorized enforcement agency to conduct monitoring and/or sampling of the facility's stormwater discharge.

(4) The authorized enforcement agency has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality shall be calibrated to ensure their accuracy.

(5) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the authorized enforcement agency and shall not be replaced. The costs of clearing such access shall be borne by the operator.

(6) Unreasonable delays in allowing the authorized enforcement agency access to a permitted facility is a violation of a stormwater discharge permit and of this article. A person who is the operator of a facility with an NPDES permit to discharge stormwater associated with industrial activity commits an offense if the person denies the authorized enforcement agency reasonable access to the permitted facility for the purpose of conducting any activity authorized or

required by this article.

(7) If the authorized enforcement agency has been refused access to any part of the premises from which stormwater is discharged, and he/she is able to demonstrate probable cause to believe that there may be a violation of this article, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this article or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the authorized enforcement agency may seek issuance of a search warrant from any court of competent jurisdiction.

§ 216-11. Use of best management practices to control pollutants.

Each person owning property shall be required to follow any best management practices identified by the Village or any other involved regulatory agency for any activity, operation, or facility which may cause or contribute to pollution or contamination of stormwater, the storm drain system, or waters of the United States. The owner or operator of a commercial or industrial establishment shall provide, at his or her own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses through the use of these structural and nonstructural BMPs. Further, any person responsible for a property or premises, which is, or may be, the source of an illicit discharge, may be required to implement, at said person's expense, additional structural and nonstructural BMPs to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of stormwater associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section. These BMPs shall be part of a stormwater pollution prevention plan (SWPPP) as necessary for compliance with requirements of the NPDES permit.

§ 216-12. Watercourse protection.

Every person owning property through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

§ 216-13. Notification of spills. [Amended 10-27-2020 by L.L. No. 9-2020]

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation, has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into stormwater, the storm drain system, or water of the United States, said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials, said person shall immediately notify emergency response

agencies of the occurrence via emergency dispatch services. In the event of a release of nonhazardous materials, said person shall notify the authorized enforcement agency in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the Superintendent of Public Works/Village Engineer within three business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained by the authorized enforcement agency for at least three years.

§ 216-14. Enforcement; fees.

A. Notice of violation. Whenever the authorized enforcement agency finds that a person has violated a prohibition or failed to meet a requirement of this article, the authorized enforcement agency may order compliance by written notice of violation to the responsible person. Such notice may require, without limitation:

(1) The performance of monitoring, analyses, and reporting;

(2) The elimination of illicit connections or discharges;

(3) That violating discharges, practices, or operations shall cease and desist;

(4) The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;

(5) Payment of a fee to cover administrative and remediation costs; and

(6) The implementation of source control or treatment BMPs.

B. If abatement of a violation and/or restoration of affected property is required, the notice shall set forth a deadline within which such remediation or restoration must be completed. Said notice shall further advise that, should the violator fail to remediate or restore within the established deadline, the work will be done by the Village and the expense thereof shall be charged to the violator.

C. Cost of abatement of the violation. Upon the failure of the owner to pay the costs, the Superintendent of Public Works/Village Engineer shall certify the costs to the Assessor of the Village, and thereupon such costs shall become and be a lien upon the land involved and shall be added to and become a part of the taxes next to be assessed and levied upon such land and shall bear interest at the same rate as, and be collected and enforced in the same manner as, taxes. **[Amended 10-27-2020 by L.L. No. 9-2020]**

D. Injunctive relief. It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this article. If a person has violated or continues to violate the provisions of this article, the authorized enforcement agency may petition for a preliminary or permanent injunction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.

E. Violations deemed a public nuisance. In addition to the enforcement processes and

penalties provided herein, any condition caused or permitted to exist in violation of any of the provisions of this article is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken.

F. Criminal prosecution.

(1) Any person who has violated or continues to violate this article shall be liable to criminal prosecution to the fullest extent of the law, and shall be subject to a criminal penalty of $250 per violation per day and/or imprisonment for a period of time not to exceed 15 days.

(2) The authorized enforcement agency may recover all attorneys' fees court costs and other expenses associated with enforcement of this article, including sampling and monitoring expenses.

G. Remedies not exclusive. The remedies listed in this article are not exclusive of any other remedies available under any applicable federal, state or local law and it is within the discretion of the authorized enforcement agency to seek cumulative remedies.

ARTICLE II
Sanitary Sewers
[Adopted 2-13-2018 by L.L. No. 3-2018]

§ 216-15. Removal of illegal connections or discharges to sanitary sewer.

A. No person shall discharge or cause to be discharged any nonsanitary substance, including but not limited to, stormwater, surface water, groundwater roof runoff, subsurface drainage, cooling water, air-conditioning and refrigerating wastewaters or unpolluted industrial process water or other similar discharge or entry into the sanitary sewer system. Any existing connection or discharge resulting in a nonsanitary discharge to the sanitary sewer system shall be terminated.

B. Prior to any final decision from the Building Department on any plumbing permit or building permit application for a one- or two-family residential dwelling unit, the property owner shall submit a sworn affidavit to the Building Department stating that to the best of the property owner's knowledge, after the property owner's inspection of its property, there are no roof drains, sump pumps or other prohibited stormwater or groundwater connections or sources of inflow or infiltration on the subject property. This section shall not apply to applications for a building permit for work that is not being performed to the dwelling unit.

C. Prior to the issuance of the certificate of occupancy, the Superintendent of Public Works/Village Engineer or Building Inspector shall be permitted to enter and inspect the premises and all structures to determine compliance with this section. If an applicant has security measures in force which require proper identification and clearance before entry into its premises, the applicant shall make the necessary arrangements to allow access to the Superintendent of Public Works/Village Engineer, Building Inspector or authorized designee. It shall be a violation of this chapter to refuse to grant the Superintendent of Public Works/Village Engineer, Building Inspector or authorized designee access to the premises. No certificate of occupancy shall be issued until such inspection has occurred. **[Amended 10-27-2020 by L.L. No. 9-2020]**

D. Except as provided in Subsection F below, any illegal connection or discharge into the sanitary sewer system shall be remedied by the property owner and reinspected by the Superintendent of Public Works/Village Engineer or Building Inspector within 30 days of the issuance of any inspection report which states that the structures or property contains an illegal connection or discharge into the sanitary sewer system. Any remedial work must be performed by a licensed plumber pursuant to a permit issued by the Village. A certificate of occupancy shall not be issued until any illegal connection or discharge has been remedied to the satisfaction of the Superintendent of Public Works/Village Engineer or Building Inspector. **[Amended 10-27-2020 by L.L. No. 9-2020]**

E. Any building permit application for construction of a new house or teardown (as defined in § 250-2) shall require relining of any existing sewer lateral or replacement of the existing sewer lateral with a new sewer lateral to its connection with the sewer main.

F. It shall be a violation of this chapter for any person to reconnect roof drains. sump

pumps or any other source of prohibited stormwater and/or groundwater discharges to the sanitary sewer system and/or to construct or alter a lateral or other sewer line in such manner as to cause infiltration or inflow to the sanitary sewer system.

Appendix C- Highway Standards of Procedure Forms

1. CCTV Sewer Inspection
2. Dye Testing
3. Smoke Testing
4. Manhole Inspection
5. Vactor Cleaning (Rev 2023-1-11)
6. Sewer Overflow and Blockage Procedure – Jetting (Rev 2023-1-11)
7. Manhole Cleaning
8. Quantifying Sewer Spill Volume

PROCEDURE 1 - CCTV Sewer Inspection

SCHEDULE

Inspection schedule established under Priority ranking system.

ACTIVITY DESCRIPTION

Televised inspection of sewers to assess the physical condition of sewer lines. CCTV is most appropriate for sewer lines 6 inch to 36 inch in diameter and when the water level in the sewer is 25% of diameter or less. Written logs and videotape reports are made during the operation. This procedure includes the inspection of manholes.

ACTIVITY GOALS

- CCTV inspection is used to assess the physical condition of the sewer system. It is used to find the exact location of cross connections, line defects, and infiltration sources.
- To locate house connections, manholes, buried structures, and taps at sewer mains
- To check or inspect the effectiveness of sewer cleaning.

LABOR

Code	Classification
	CCTV Crew

EQUIPMENT

Code	Description
	CCTV truck Video Tapes Camera Ladder

MATERIALS

Code	Description (Illustrative)
	Safety equipment - vest, traffic cones and flags, men-working signs, hardhats, steel toed boots, leather /cloth and impervious gloves, Tyvec coveralls, half mask disposable respirators, eye protection, ear plugs, flashlights, life vests, safety harness and ropes. Disinfectants Eye wash Fire extinguisher First aid kit

SAFETY ANALYSIS

Safety Check List

- Safety Program
- Protective Clothing and Equipment
- Gases and other Hazardous Atmospheres Analysis (Confined Space Entry)
- Overhead Power Lines (Electrical Safety)
- Underground Services Utilities Locations
- Traffic Safety Requirements

Potential Hazards

- Infectious Diseases
- Slip, Trip, and Fall
- Poisonous Snakes, Pests
- Confined Spaces (Confined Space Entry)
- Traffic
- Vehicle Operation
- Mechanical Tools
- Electrical Hazards (Electrical Safety)
- Flooding and Inundation (Confined Space Entry)
- Lifting

PROCEDURE 1 - CCTV Sewer Inspection

ACTIVITY/SUBTASK

1. **Review work order and visit site with crew. (Area Supervisor)**
   - Follow vehicle operation safety procedures.
   - Dispatch maintenance crew to work site.
2. **Secure work site by placing traffic control signs and safety devices at the work site. (Maintenance Crew)**
   - Follow Traffic Safety Procedures
   - Don safety vests, hardhats, safety glasses, ear plugs, gloves, boots.
   - Isolate one or more lanes of traffic with flags, cones, traffic control signs, etc., where work in or immediately adjacent to roads exposes a crew member to traffic injuries.
   - Look for overhead power lines that may hit the truck or equipment. If lines are above the work area, contact Power Company to de-energize or shield the lines. Equipment must be kept at least 10 feet from the overhead lines.
3. **Determine the location of the manholes on the GIS Map (Maintenance Crew)**
   - Locate manhole location on GIS map and identify GIS location number.
   - If manhole access is not visible, use metal detection or other equipment.
   - Check sewer main by removing manhole lids.
   - Lift the manhole cover using the hook. Drag the cover with the hook, avoid bending over and using hand whenever possible.
   - For heavier manholes, use a truck-mounted winch.
   - Follow Confined Space Procedures
   - Follow Personal Protection Equipment
   - DO NOT place your face near the manhole opening. Let the manhole 'breathe" for 10 minutes before looking in.
   - DO NOT SMOKE near manholes regardless of whether the cover is on or off.
   - DO NOT STAND on the removed manhole cover.
   - USE IMPERVIOUS GLOVES when working with an open manhole.
   - USE DISPOSABLE TYVEK COVERALLS to keep sewage off of your uniform as needed.
4. **Sewer line segment cleaning.**
   - It is recommended that cleaning of sewers and service laterals **not** be conducted prior to the CCTV inspection unless necessary to provide an unobstructed view of the pipe. Cleaning may remove defects that should be observed and reported and may damage the pipe.
   - If it is determined that cleaning is required, clean the line using jet rodding equipment
5. **Prepare CCTV equipment for the internal inspection operation.**
   - Thread the camera cable through the sewer line segment using the jet rodding equipment or thread the camera cable through the sewer line segment with a stringer method.
   - Plug upstream manhole with inflatable plug when flow control is required (Typically when depth of flow is greater than 25% of pipe diameter).
   - Set the winch at the downstream manhole and the CCTV truck at the upstream manhole.
   - Lower the camera into the manhole and attach to the winch cable.

PROCEDURE 1 - CCTV Sewer Inspection

ACTIVITY/SUBTASK

6. **Start the televised inspection**

   - Move the camera through the line in either direction at a moderate rate.
   - Note whether the camera is being operated upstream or downstream.

7. **Observe and record the condition of the sewer line as it is televised.**

   - Record distance measurements for the purpose of locating defects.
   - Record observations of root intrusion, grease and debris accumulation, pipe deterioration, pipe misalignment, pipe breaks, pipe defects, separated joints, I/I, cross connections, storm water connections, and lateral defect according to assessment procedures.

8. **Break down work site and report the work completed.**

   - Replace manhole cover by dragging it with the hook if possible.
   - When manhole cover is in place, remove any Tyvek coveralls and place in garbage bag for disposal. Washdown and disinfect outside of boots. Remove gloves and ear plugs.
   - Remove disposable respirator and place in plastic bag for reuse (refer to PPE Program).
   - Complete clean up of work site and any sewage spills of flooding in area. Disinfect and sanitize.
   - Clean camera and associated equipment and place in truck.
   - Complete /fill out Work Order information. Record linear feet of sewer line inspected and document video log.

PROCEDURE 2 - DYE TESTING

SCHEDULE

Testing schedule established under Priority ranking system.

ACTIVITY DESCRIPTION

Dye testing of sewer mains to isolate and quantify defects within the collection system. Written documentation and photographs of dye testing results are taken as required. Results of dye testing conducted in conjunction with CCTV inspection will be recorded on the CCTV inspection logs. Results of the dye testing conducted for verification of smoke testing will be recorded on smoke testing data forms.

ACTIVITY GOALS

To verify apparent direct inflow sources identified through smoke testing or CCTV inspection. To identify interconnections between sanitary and storm sewer systems. To trace sewer pipeline segments as required to verify and update sewer system GIS layer.

LABOR

Code	Classification
	Maintenance Crew

EQUIPMENT

Code	Description
	Work Truck Camera Ladder

MATERIALS

Code	Description(Illustrative)
	Safety equipment – vest, traffic cones and flags, men-working signs, hardhats, steel toed boots, leather/cloth and impervious gloves, face mask,, eye protection, ear plugs, flashlights, safety harness and ropes. • Disinfectants • Eye Wash • Fire Extinguisher • First aid kit • Dye tablets / Liquid

SAFETY ANALYSIS

Safety Check List

- Safety Program
- Protective Clothing and Equipment (Personal Protection Equipment)
- Gases and other Hazardous Atmospheres Analysis (Confined Space Entry)
- Overhead Power Lines (Electrical Safety)
- Underground Services Utilities Locations
- Traffic Safety Requirements (Traffic Safety)

Potential Hazards

- Infectious Diseases
- Slip, Trip, and Fall
- Poisonous Snakes, Pests
- Confined Spaces (Confined Space Entry)
- Traffic
- Vehicle Operation
- Mechanical Tools
- Electrical Hazards (Electrical Safety)
- Flooding and Inundation (Confined Space Entry)
- Lifting

PROCEDURE 2 - DYE TESTING

ACTIVITY/SUBTASK

1. **Notify nearby residents, businesses, and public safety agencies approximately 24 to 48 hours prior to initiation of dye test procedure.**
2. **Review work order and visit site with crew (Area Supervisor)**
    - Ensure all necessary material and equipment have been gathered before leaving the yard.
    - Follow Vehicle Operation Safety Procedures.
3. **Secure work site by placing traffic control signs and safety devices at the work site. (Maintenance Crew)**
    - Follow Traffic Safety Procedures.
    - Don safety vests, hardhats, safety glasses, steel toe boots, etc.
    - Crew Supervisor acts as a safety supervisor during process.
    - Isolate one or more lanes of traffic with flags, cones, traffic control signs, etc. where work in or immediately adjacent to roads exposes a crew member to traffic injuries.
    - Look for overhead power lines that may hit the truck or equipment. Equipment must be keptat least 10 feet from the overhead lines.
4. **Prepare for dye testing.**
    - Locate manhole location on GIS map and identify GIS location number.
5. **Start dye testing.**
    - Determine the location of the manhole. Use metal detection if manhole is not visible.
    - Locate spill point or problem area.
    - Check sewer main by removing manhole lids in the vicinity of the home/business until a free flowing manhole is found.
    - Lift the manhole cover using the hook. Drag the cover with the hook, avoid bending over and using hand whenever possible.
    - For heavier manholes, use a truck-mounted winch or assisted lifting device.
    - Follow Confined Space Procedures.
    - Follow Personal Protection Equipment (PPE) Program.
    - Keep employees away from manhole when opening due to dangerous gases.
    - DO NOT place your face near the manhole opening. Let the manhole "breathe" for 10 minutes before looking in.
    - DO NOT SMOKE near the manholes regardless of whether the cover is on or off.
    - DO NOT STAND on the removed manhole cover.
    - Use IMPERVIOUS GLOVES when working with an open manhole.
    - Keep sewage off of your uniform.
    - Drop dye tablet / liquid upstream of the sewer segment to be inspected.

PROCEDURE 2 - DYE TESTING

ACTIVITY/SUBTASK

6. **Observe and record evidence of dye in the suspected area.**
    - Record the presence or absence of dye in adjacent downstream manholes.
    - Recommend sewer sections for cleaning and internal inspection if necessary.
7. **Break down work site and report the work completed.**
    - Replace manhole cover by dragging it with the hook if possible.
    - When manhole cover is in place. Wash down and disinfect outside of boots. Remove gloves.
    - Remove debris and disposable PPE and place in plastic bag for disposal
    - Complete clean up of work site and any sewage spills of flooding in area. Disinfect and sanitize.
    - Document testing with written reports and photographs or videos as needed.
8. Complete /fill out Work Order information. Record linear feet of sewer line segment dye tested – note information on the Standardized worksheet

PROCEDURE 3 - SMOKE TESTING

SCHEDULE

Testing schedule established under Priority ranking system.

ACTIVITY DESCRIPTION

Smoke testing of sewer mains to identify sources of I/I from defects in the sewers, manholes, and cross connections to storm drainage facilities. Smoke testing is most effective in sewers with diameters equal to or less than 18 inches. Smoke testing should be conducted during dry weather, no wind, and low groundwater level conditions. Written documentation and photographs of smoke testing results / defects are taken as required.

ACTIVITY GOALS

To identify direct connections to the sewer collection system, shallow pipe defects, and manhole defects. To locate lost manholes and diversion points.

LABOR

Code	Classification
	Smoke Testing Crew

EQUIPMENT

Code	Description
	Work Truck Camera and Smoke Blower camera Smoke bombs or canisters (non-toxic, odorless, non-staining, 3-5 minute duration) Liquid Smoke Sandbags, baffles, or manhole plugs Floodlights or Other Lighting Aids Ladder

MATERIALS

Code	Description (Illustrative)
	Safety equipment — vest, traffic cones and flags, men-working signs, hardhats, steel toed boots, leather /cloth and impervious gloves, face mask, eye protection, ear plugs, flashlights, safety harness and ropes. Disinfectants Eye wash Fire extinguisher First aid kit

SAFETY ANALYSIS

Safety Check List	Potential Hazards
• Safety Program • Protective Clothing and Equipment (Personal Protection Equipment) • Gases and other Hazardous Atmospheres Analysis (Confined Space Entry) • Overhead Power Lines (Electrical Safety) • Underground Services Utilities Locations • Traffic Safety Requirements (Traffic Safety)	• Infectious Diseases • Slip, Trip, and Fall • Poisonous Snakes, Pests • Confined Spaces (Confined Space Entry) • Traffic • Vehicle Operation • Mechanical Tools • Electrical Hazards (Electrical Safety) • Flooding and Inundation (Confined Space Entry) • Lifting

PROCEDURE 3 - SMOKE TESTING

ACTIVITY/SUBTASK

1. **Alert neighbors and businesses 24 to 48 hours prior to initiation of smoke testing procedure.**
2. **Review work order and visit site with crew (Area Supervisor)**
    - Ensure all necessary material and equipment have been gathered before leaving the yard.
    - Follow Vehicle Operation Safety Procedures
3. **Secure work site by placing traffic control signs and safety devices at the work site.**
    - Follow Traffic Safety Procedures.
    - Don safety vests, hardhats, safety glasses, steel toe boots.
    - Isolate one or more lanes of traffic with flags, cones, traffic control signs, etc. where work in or immediately adjacent to roads exposes a crew member to traffic injuries.
    - Look for overhead power lines that may hit the truck or equipment. Equipment must be keptat least 10 feet from the overhead lines.
    - Alert closest Fire Department / Police/ 60 Control and EMS to stand by for emergencies and inquiries.
4. **Prepare for Smoke Testing Procedure**
    - Determine the location of the manhole on GIS map. Use metal detection if manhole is not visible.
    - Check sewer main by removing manhole lids in the vicinity of the home/business until a free flowing manhole is found.
    - Lift the manhole cover using the hook. Drag the cover with the hook; avoid bending over and using hand whenever possible.
    - For heavier manholes, use a truck-mounted winch, team work or lifting tool.
    - Follow Confined Space Procedures.
    - Follow Personal Protection Equipment (PPE) Program.
    - DO NOT place your face near the manhole opening. Let the manhole 'breathe" for 10 minutes before looking in.
    - DO NOT SMOKE near manholes regardless of whether the cover is on or off.
    - DO NOT STAND on the removed manhole cover.
    - USE IMPERVIOUS GLOVES when working with an open manhole.
    - Keep sewage off of your uniform.
    - Ensure proper operation of blower.
    - Isolate sections if necessary with sandbags, baffles, or other approved method.
    - Set up blower over an open manhole on the sewer segment to be inspected.

PROCEDURE 3 - SMOKE TESTING

ACTIVITY/SUBTASK

5. **Start the smoke testing procedure.**
    - Start the blower and force air into the line at least 5-10 minutes prior to setting off the smoke.
    - Stand upwind of the smoke to avoid breathing the smoke.
    - Begin gradually adding smoke to system increasing density of smoke gradually.
    - Force smoke through the sewer segment with the blower.
6. **Observe and record evidence of smoke escaping from the sewer through leaks, breaks, and other I/I sources.**
    - Walk the surrounding area to visually detect sources of smoke emissions
    - Record the smoke testing results and document each defect with photographs labeled with date, time, and location and nature of defect.
    - Visually inspect manholes suspected of having direct inflow connections into sanitary sewers.
    - Identify direct inflow connections to sewers and interconnections between sanitary and storm sewer systems.
7. **Break down work site and report the work completed.**
    - Replace manhole cover by dragging it with the hook if possible.
    - When manhole cover is in place, Washdown and disinfect outside of boots. Remove gloves.
    - Complete clean up of work site and any sewage spills of flooding in area. Disinfect and sanitize.
    - Complete /fill out Work Order information. Record linear feet of sewer line inspected and document all photographs and videos.

Procedure 4 - Manhole Inspection

SCHEDULE

Inspection schedule established

ACTIVITY DESCRIPTION

Visual inspection of manholes to assess the physical condition. Written logs and pictures are made during the operation.

ACTIVITY GOALS

- Manhole inspection is used to assess the physical condition of the manholes in the sewer system. It is used to find the exact location manholes, defects, and infiltration sources.
- To locate manholes and connected sewer mains
- To check or inspect the effectiveness of cleaning.

LABOR

Code	Classification
	Manhole Inspection Crew

EQUIPMENT

Code	Description
	Utility truck Camera Ladder Tripod Harness

MATERIALS

Code	Description
	Safety equipment - vest, traffic cones and flags, men-working signs, hardhats, steel toed boots, leather /cloth and impervious gloves, face mask, eye protection,ear plugs, flashlights, safety harness and ropes. Eye wash Fire extinguisher First aid kit Disinfectant - Shockwave or similar

SAFETY ANALYSIS

Safety Check List

- Safety Program
- Protective Clothing and Equipment
- Gases and other Hazardous Atmospheres Analysis (Confined Space Entry)
- Overhead Power Lines (Electrical Safety)
- Underground Services Utilities Locations
- Traffic Safety Requirements

Potential Hazards

- Infectious Diseases
- Slip, Trip, and Fall
- Poisonous Snakes, Pests
- Confined Spaces (Confined Space Entry)
- Traffic
- Vehicle Operation
- Mechanical Tools
- Electrical Hazards (Electrical Safety)
- Flooding and Inundation (Confined Space Entry)
- Lifting

Procedure 4 - Manhole Inspection

ACTIVITY/SUBTASK

1. **Review work order and visit site with crew. (Area Supervisor)**
   - Follow vehicle operation safety procedures.
   - Dispatch maintenance crew to work site.
2. **Secure work site by placing traffic control signs and safety devices at the work site. (Maintenance Crew)**
   - Follow Traffic Safety Procedures
   - Don safety vests, hardhats, safety glasses, ear plugs, gloves, boots.
   - Isolate one or more lanes of traffic with flags, cones, traffic control signs, etc., where work in or immediately adjacent to roads exposes a crew member to traffic injuries.
   - Look for overhead power lines that may hit the truck or equipment. Equipment must be kept at least 10 feet from the overheadlines.
3. **Determine the location of the manholes on the GIS Map (Maintenance Crew)**
   - Locate manhole location on GIS map and identify GIS location number.
   - If manhole access is not visible, use metal detection or other equipment.
   - Check sewer main by removing manhole lids.
   - Lift the manhole cover using the hook. Drag the cover with the hook, avoid bending over and using hand whenever possible.
   - For heavier manholes, use a truck-mounted winch, multiple persons or lifting tool.
   - Follow Confined Space Procedures
   - Follow Personal Protection Equipment **(PPE)** Program
   - DO NOT place your face near the manhole opening. Let the manhole 'breathe" for 10 minutes before looking in.
   - DO NOT SMOKE near manholes regardless of whether the cover is on or off.
   - DO NOT STAND on the removed manhole cover.
   - USE IMPERVIOUS GLOVES when working with an open manhole.
   - Keep sewage off of your uniform.
4. **Ensure that the manhole has been cleaned.**
   - If necessary, clean the manhole using vacuum truck equipment or jet truck.
5. **Prepare for the internal inspection operation.**
   - Determine if manned entry is required to visually inspect manhole.
   - If manned entry is required, use ladder or safety harness to enter manhole for inspection.

Procedure 4 - Manhole Inspection

ACTIVITY/SUBTASK

6. **Observe and record the condition of the manhole.**
    - Record observations on the Manhole Inspection Form.
    - Take pictures where required to document observed conditions and defects.
7. **Break down work site and report the work completed.**
    - Replace manhole cover by dragging it with the hook if possible.
    - When manhole cover is in place, washdown and disinfect outside of boots. Remove gloves and ear plugs.
    - Complete clean up of work site and any sewage spills of flooding in area. Disinfect and sanitize.
    - Clean camera and associated equipment and place in truck.
    - Complete/fill out Manhole Inspection Form. Record linear feet of sewer line inspected and document video log.

PROCEDURE 5 - VACTOR CLEANING

(REV 2023-1-11)

SCHEDULE

Schedule of work orders established under normal schedule and emergency call outs.

ACTIVITY DESCRIPTION

Combination jet and vacuum cleaning for the removal of accumulations of silt, grease, or other debris from the sewer line.

ACTIVITY GOALS

- To remove medium/heavy accumulations of debris to prevent disruption of sewer service.
- To maintain sewer capacity and system integrity.
- To clean sewer prior to rehabilitation.
- To facilitate CCTV inspection of sewer.

LABOR

Code	Classification
	Preventive Maintenance Crew

EQUIPMENT

Code	Description
	Combination (Jet/Vactor) Truck, Floodlights or Other Lighting Aids

MATERIALS

Code	Description (Illustrative)
	Safety equipment - vest, traffic cones and flags, men-working signs, hardhats, steel toed boots. Leather/cloth and impervious gloves, face mask, eye protection,ear plugs, flashlights, safety harness and ropes. Eye wash Fire extinguisher First aid kit Disinfectant - Shockwave or similar

SAFETY ANALYSIS

Safety Check List

- Collection and Transmission Systems Safety Program Plan
- Protective Clothing and Equipment
- Gases and other Hazardous Atmospheres Analysis (Confined Space Entry)
- Overhead Power Lines (Electrical Safety)
- Underground Services Utilities Locations
- Traffic Safety Requirements

Potential Hazards

- Infectious Diseases
- Slip, Trip, and Fall
- Poisonous Snakes, Pests, Insects
- Confined Spaces (Confined Space Entry)
- Traffic
- Vehicle Operation
- Mechanical Tools
- Electrical Hazards (Electrical Safety)
- Flooding and Inundation (Confined Space Entry)
- Lifting

PROCEDURE 5 - VACTOR CLEANING

ACTIVITY/SUBTASK

2. **Coordinate with other Agencies and Departments to confirm accessibility, permits required, etc.**
3. **Review work order and visit site with crew. (Area Supervisor)**
   - Follow vehicle operation safety procedures.
   - Dispatch maintenance crew to work site.
4. **Determine the location of the manholes on the Maps**
   - Locate manhole on GIS map and identify location number.
   - If manhole access is not visible, use metal detection or other equipment.
5. **Secure work site by placing traffic control signs and safety devices at the work site.**
   - Follow Traffic Safety Procedures
   - Don safety vests, hardhats, safety glasses, etc.
   - Isolate one or more lanes of traffic with flags, cones, traffic control signs, etc., where work in or immediately adjacent to roads exposes a crew member to traffic injuries.
   - Look for overhead power lines that may hit the truck or equipment. Equipment must be kept at least 10 feet from the overhead lines.
6. **Conduct activities in a safe manner**
   - Check sewer main by removing manhole lids.
   - Lift the manhole cover using the hook. Drag the cover with the hook; avoid bending over and using hands whenever possible.
   - For heavier manholes, use a truck-mounted winch, multiple persons, or lifting tool.
   - Follow Confined Space Procedures, if necessary.
   - Follow Personal Protection Equipment (PPE) Program
   - DO NOT place your face near the manhole opening. Let the manhole 'breathe" for 10 minutes before looking in.
   - DO NOT SMOKE near manholes regardless of whether the cover is on or off.
   - DO NOT STAND on the removed manhole cover.
   - USE IMPERVIOUS GLOVES when working with an open manhole.
   - Keep sewage off of your uniform.
5. **Prepare the Vactor for the cleaning operation.**
   - Locate the Vactor where the jet and suction hoses are within reach of the manhole.
   - Insert jet hose through tigertail footing.
8. **Attach extension and proper nozzle to end of jet hose.**
   - Select nozzle based on reported problem, indications of grease or roots in the line, and the diameter pipe to

be cleaned.

9. **Insert jetting assembly into manhole.**
    - Two employees are needed to adjust the jetting assembly.
10. **Start the Vactor, cleaning upstream in the sewer with the jetting assembly.**
    - Reverse the jet assembly to pull the debris back to the downstream manhole.
11. **Use the Vactor to pump water and debris from the manhole.**
12. **Repeat steps 6 and 7 until the line is cleaned.**
13. **Thoroughly wash manholes — See Manhole Cleaning Procedure**
    - Keep hands out of the hose assembly while lowering and raising the hose in and out of the manhole.
    - Report any manhole defects noticed during vactoring.
    - Cleanup and disinfect work site if necessary.
14. **Break down work site and report the work completed.**
    - Replace manhole cover by dragging it with the hook if possible.
    - Record linear feet of sewer main/service lateral cleaned on Work Order Form.
    - Complete Service Request, Work Order Form, and log into DATABASE
    - Decant the holding tank when full.
    - Fill the unit with water (as needed) and move to the next site.
15. **Empty the holding tank in the Vactor when it is full.**
    - Transport the removed material to the disposal site.
    - Record volume of disposed material.
16. **Clean and wash the Vactor at the end of the shift.**

Cleaning Frequency Response Matrix

	Clear	Light	Moderate	Heavy
Debris	¼ Debris Trap Volume/500 Linear Feet (LF) or less 1 pass	½ Debris Trap Volume/500 LF 2 passes	¾ Debris Trap Volume/500 LF 3 passes	1 full Debris Trap or Greater Operator concern for future stoppage 4 or more passes
Grease	¼ Debris Trap Volume/500 LF 1 pass	½ Debris Trap Volume/500 LF 15 minutes or less to clean 2 passes	¾ Debris Trap Volume/500 LF 15-30 minutes to clean 3 passes	1 full Debris Trap or Greater Operator concern for future stoppage 4 or more passes
Roots	¼ Debris Trap Volume/500 LF 1 pass	½ Debris Trap Volume/500 LF 2 passes	¾ Debris Trap Volume/500 LF 3 passes	1 full Debris Trap or Greater Operator concern for future stoppage 4 or more passes
Debris: Structural sewer line fragments, soil, rock, etc.	No observable materials	Minor amount of material (specify type of material if possible)	Moderate amount of material (specify type of material if possible) per sewer line segment	Significant amount of material (specify type of material if possible) per sewer line segment Operator concern for future stoppage
Action	Decrease frequency to next lower frequency after three (3) consecutive results (*e.g.*. 6 months to 12 months)	Continue current maintenance frequency	Increase current maintenance frequency to next higher frequency (*e.g.*. 6 months to 3 months)	Increase current maintenance frequency to next higher frequency (*e.g.*. 6 months to 3 months)

SEWER OVERFLOW AND BLOCKAGE PROCEDURE 6 JET RODDING / VACTOR(REV 2023-1-11)

SCHEDULE

Per Occurrence .

ACTIVITY DESCRIPTION

Hydraulic cleaning with a high velocity jet machine to remove grease, roots, or other blockages in sewers up to 18" in diameter. Restore normal operation of system.

ACTIVITY GOALS

- To remove grease, roots, and/or other blockages from sewer mains and service laterals.
- To maintain sewer capacity and system integrity.
- To ensure sewer overflow does not enter storm drains or other bodies of water.
- Notify appropriate regulatory entities..

LABOR

Code	Classification
	Emergency Response Jetting Crew

EQUIPMENT

Code	Description
	Jetting Truck Ladder Floodlights or Other Lighting Aids

MATERIALS

Code	Description
	Safety equipment — vest, traffic cones and flags, men-working signs, hardhats, steel toed boots, leather /cloth and impervious gloves, face mask, eye protection, ear plugs, flashlights, safety harness and ropes. Eye wash Fire extinguisher First aid kit Disinfectant - Shockwave or similar

SAFETY ANALYSIS

Safety Check List

- Safety Program
- Protective Clothing and Equipment (Personal Protection Equipment)
- Gases and other Hazardous Atmospheres Analysis (Confined Space Entry)
- Overhead Power Lines (Electrical Safety)
- Underground Services Utilities Locations
- Traffic Safety Requirements (Traffic Safety)

Potential Hazards

- Infectious Diseases
- Slip, Trip, and Fall
- Poisonous Snakes, Pests, Insects
- Confined Spaces (Confined Space Entry)
- Traffic
- Vehicle Operation
- Mechanical Tools
- Electrical Hazards (Electrical Safety)
- Flooding and Inundation (Confined Space Entry)
- Lifting
- Impacts to natural resources and wildlife

SEWER OVERFLOW AND BLOCKAGE PROCEDURE 6 JET RODDING

ACTIVITY/SUBTASK

1. **Supervisor review work order and visit site with crew (Supt. of Public Works, General and Assistant Foremen)**
   - Follow vehicle operation safety procedures.
   - Dispatch emergency crew to work site.
2. **Secure work site by placing traffic control signs and safety devices at the work site.**
   - Follow Traffic Safety Procedures.
   - Don safety vests, hardhats, safety glasses, etc.
   - Isolate one or more lanes of traffic with flags, cones, traffic control signs, etc. where work in or immediately adjacent to roads exposes a crew member to traffic injuries.
   - Look for overhead power lines that may hit the truck or equipment. Equipment must be kept at least 10 feet fromthe overhead lines.
3. **Identify sewer overflow condition**
   - Senior crew member to complete Sanitary Sewer Blockage / Overflow form
   - Superintendent of Public Works to be notified of exact condition
   - Superintendent of Public Works to obtain DEC Spill number if required and notify DEC/DOH/ NY ALERT
4. **CONTAIN spilling sewage from entering waterways**
   - Capture / Block the sewage where it can be recovered and returned to the sewer system.
   - Contain sewage in advantageous locations (i.e. flood control facilities, construction excavations locations, vacant lots etc.)
   - Containment materials include sand, sand bags, poly sheeting, socks, etc.
5. **CONTROL the spill overflow and bypass area of failure**
   - Bypass the obstructed line by pumping the spillage into another non- restricted line or vacuum with VacCon truck or pumps.
   - Set up barricades to prevent public contact with spill
6. **Prepare for Jet Rodding**
   - Locate manhole on map and identify manhole location number.
   - If manhole is not visible, use metal detection or other equipment to locate it.
   - Lift the manhole cover using the hook. Drag the cover with the hook. Avoid bending over and using hand whenever possible.
   - For heavier manholes. Use a truck-mounted winch, multiple persons or lifting tool.
   - Follow Confined Space Procedures.
   - Follow Personal Protection Equipment (PPE) Program.
   - DO NOT place your face near the manhole opening. Let the manhole 'breathe" for 10 minutes before looking in.

- DO NOT SMOKE near manholes regardless of whether the cover is on or off.
- DO NOT STAND on the removed manhole cover.
- USE IMPERVIOUS GLOVES when working with an open manhole.
- Keep sewage off of your uniform.

7. **Prepare the jetting equipment for the cleaning operation.**
   - Locate the jetting equipment where jet hose is within reach of the manhole/cleanout.
   - Insert jet hose through tigertail footing.
8. **Attach extension and proper nozzle to end of jet hose.**
   - Select nozzle based on reported problem, indications of grease or roots in the line, and the diameter pipe to be cleaned.
9. **Insert jetting assembly into manhole/cleanout.**
   - Two employees are needed to adjust jetting assembly.
10. Tie tigertail footing to manhole lid or work truck for safety measure and to assist in retrieval.
11. **Set the manhole trap into manhole.**
    - Use manhole trap to catch and quantify debris removed during jetting process. See attached Matrix to quantify debris quantity and assess pipe for further action.
12. **Operate the jetting equipment, cleaning upstream in the sewer.**
    - Keep track of the location of the jetting assembly in the line on the Work Order Form.
13. **Move the jetting assembly approximately 50 feet upstream in the sewer.**
14. **Repeat step 7 until the line is cleaned.**
    - Reverse jetting assembly to pull debris back to the downstream manhole.
    - Calculate quantity and type of debris.
    - Identify the specific cause of blockage / overflow
    - Replace manhole cover by dragging it with the hook if possible.
    - When manhole cover is in place, remove Tyvek coveralls and place in garbage bag for disposal.
    - Record linear feet of sewer main/service lateral cleaned on Data Form and Manhole Numbers.
15. **Thoroughly wash manholes**
    - Thoroughly clean area
    - Report any manhole repairs needed.
    - Note evidence of surcharging, broken rims or covers, raised or sunken covers, etc.
16. **Sanitizing Affected Area**
    - Sanitize affected Area as per DEC and WCDOH direction using appropriate solution.
    - Clean up any physical matter, properly bag and dispose of material at 511 West William Street
17. **Resident Interaction**
    - Followup with any affected residents and document damage
    - Do not volunteer or disown Village liability. Instead, neutral comments should be used by Village personnel indicating that the liability issue cannot be addressed until all of the relevant information has been evaluated. Offer Superintendent of Public Works or Village Administrators contact information

18. **Break down work site and report the work completed.**
    - Complete Sewer Blockage / Overflow Form, and enter into database.
    - Fill the unit with water from hydrant (as needed) and park unit
19. **Clean and wash the jetting equipment and the jetting truck at the end of the shift.**

Cleaning Frequency Response Matrix

	Clear	Light	Moderate	Heavy
Debris	¼ Debris Trap Volume/500 Linear Feet (LF) or less 1 pass	½ Debris Trap Volume/500 LF 2 passes	¾ Debris Trap Volume/500 LF 3 passes	1 full Debris Trap or Greater Operator concern for future stoppage 4 or more passes
Grease	¼ Debris Trap Volume/500 LF 1 pass	½ Debris Trap Volume/500 LF 15 minutes or less to clean 2 passes	¾ Debris Trap Volume/500 LF 15-30 minutes to clean 3 passes	1 full Debris Trap or Greater Operator concern for future stoppage 4 or more passes
Roots	¼ Debris Trap Volume/500 LF 1 pass	½ Debris Trap Volume/500 LF 2 passes	¾ Debris Trap Volume/500 LF 3 passes	1 full Debris Trap or Greater Operator concern for future stoppage 4 or more passes
Debris: Structural sewer line fragments, soil, rock, etc.	No observable materials	Minor amount of material (specify type of material if possible)	Moderate amount of material (specify type of material if possible) per sewer line segment	Significant amount of material (specify type of material if possible) per sewer line segment Operator concern for future stoppage
Action	Decrease frequency to next lower frequency after three (3) consecutive results (*e.g.*, 6 months to 12 months)	Continue current maintenance frequency	Increase current maintenance frequency to next higher frequency (*e.g.*, 6 months to 3 months)	Increase current maintenance frequency to next higher frequency (*e.g.*, 6 months to 3 months)

MAINTENANCE PROCEDURE 7
MANHOLE CLEANING

SCHEDULE

Schedule of work orders established under DATABASE.

ACTIVITY DESCRIPTION

Combination jet and vacuum cleaning for the removal of accumulations of silt, grease, or other debris from manholes.

ACTIVITY GOALS

- To remove debris from manholes to prevent or correct disruption of sewer service.
- To maintain sewer capacity and system integrity.
- To facilitate CCTV inspection of sewer.

LABOR

Code	Classification
	Maintenance Crew

EQUIPMENT

Code	Description
	Combination (Jet/Vactor) Truck Ladder Floodlights or Other Lighting Aids Metal Detection Devices

MATERIALS

Code	Description
	Safety equipment - vest, traffic cones and flags, men-working signs, hardhats, steel toed boots, leather /cloth and impervious gloves, face masks, eye protection, ear plugs, flashlights, life vests, safety harness and ropes. Eye wash Fire extinguisher First aid kit Disinfectant - Shockwave or similar

SAFETY ANALYSIS

Safety Check List

- Safety Program
- Protective Clothing and Equipment (Personal Protection Equipment)
- Gases and other Hazardous Atmospheres Analysis (Confined Space Entry)
- Overhead Power Lines (Electrical Safety)
- Underground Services Utilities Locations
- Traffic Safety Requirements (Traffic Safety)

Potential Hazards

- Infectious Diseases
- Slip, Trip, and Fall
- Poisonous Snakes, Insects, Pests
- Confined Spaces (Confined Space Entry)
- Traffic
- Vehicle Operation
- Mechanical Tools
- Electrical Hazards (Electrical Safety)
- Flooding and Inundation
- Weather

MAINTENANCE PROCEDURE 7
MANHOLE CLEANING

1. **Supervisor review work order and visit site with crew**
   - Follow vehicle operation safety procedures.
   - Dispatch maintenance crew to work site.
2. **Secure work site by placing traffic control signs and safety devices at the work site.**
   - Follow Traffic Safety Procedures.
   - Don safety vests, hardhats, safety glasses, etc.
   - Isolate one or more lanes of traffic with flags, cones, traffic control signs, etc. where work in or immediately adjacent to roads exposes a crew member to traffic injuries.
3. **Determine the location of manhole.**
   - If manhole is not visible, use metal detection or other equipment to locate it.
   - Lift the manhole cover using the hook. Drag the cover with the hook; avoid bending over and using hands whenever possible.
   - For heavier manholes, use a truck-mounted winch, multiple persons or lifting tool.
   - Follow Confined Space Procedures.
   - Follow Personal Protection Equipment (PPE) Program in the Collection and Transmission Systems Safety Program Plan.
   - Keep employees away from manhole when opening due to dangerous gases.
   - DO NOT place your face near the manhole opening. Let the manhole 'breathe" for 10 minutes before looking in.
   - DO NOT SMOKE near manholes regardless of whether the cover is on or off.
   - DO NOT STAND on the removed manhole cover.
   - USE IMPERVIOUS GLOVES when working with an open manhole.
   - Keep sewage off of your uniform.
4. **Washing Manhole.**
   - Use pressure washing assembly with correct nozzle pattern
   - Start washing sidewalls from top down
   - Utilize screen in trough to capture debris
5. **Break down work site and report the work completed.**
   - Replace manhole cover by dragging it with the hook if possible.
   - When manhole cover is in place. Remove Tyvek coveralls and place in garbage bag for disposal.
   - Remove disposable respirator and place in plastic bag for reuse (refer to PPE Program).
   - Complete clean up of work site.
   - Complete Service Request, Work Order Form, and log into DATABASE.

Spill Evaluation Checklist

QUANTIFYING SEWER SPILL VOLUME

TABLE 'C'

ESTIMATED SSO FLOW OUT OF M/H PICK HOLE

Height of spout above M/H cover H in inches	SSO FLOW Q in gpm
1/8	1.0
1/4	1.4
3/8	1.7
1/2	1.9
5/8	2.2
3/4	2.4
7/8	2.6
1	2.7
1 1/8	2.9
1 1/4	3.1
1 3/8	3.2
1 1/2	3.4
1 5/8	3.5
1 3/4	3.6
1 7/8	3.7
2	3.9
2 1/8	4.0
2 1/4	4.1
2 3/8	4.2
2 1/2	4.3
2 5/8	4.4
2 3/4	4.5
2 7/8	4.6
3	4.7
3 1/8	4.8
3 1/4	4.9
3 3/8	5.0
3 1/2	5.1
3 5/8	5.2
3 3/4	5.3
3 7/8	5.4
4	5.5
4 1/8	5.6
4 1/4	5.6
4 3/8	5.7
4 1/2	5.8
4 5/8	5.9
4 3/4	6.0
4 7/8	6.0
5	6.1

Height of spout above M/H cover H in inches	SSO FLOW Q in gpm	
5 1/8	6.2	
5 1/4	6.3	
5 3/8	6.3	
5 1/2	6.4	
5 5/8	6.5	
5 3/4	6.6	
5 7/8	6.6	
6	6.7	
6 1/8	6.8	
6 1/4	6.8	
6 3/8	6.9	Unrestrained
6 1/2	7.0	M/H cover will
6 5/8	7.0	start to lift
6 3/4	7.1	
6 7/8	7.2	
7	7.2	
7 1/8	7.3	
7 1/4	7.4	
7 3/8	7.4	
7 1/2	7.5	
7 5/8	7.6	
7 3/4	7.6	
7 7/8	7.7	
8	7.7	
8 1/8	7.8	
8 1/4	7.9	
8 3/8	7.9	
8 1/2	8.0	
8 5/8	8.0	
8 3/4	8.1	
8 7/8	8.1	
9	8.2	
9 1/8	8.3	
9 1/4	8.3	
9 3/8	8.4	
9 1/2	8.4	
9 5/8	8.5	
9 3/4	8.5	
9 7/8	8.6	
10	8.7	

Note: This chart is based on a 7/8 inch diameter pick hole

Disclaimer: This sanitary sewer overflow table was developed by Ed Euyen, Civil Engineer, P.E. No. 33955, California, for County Sanitation District 1. This table is provided as an example. Other Agencies may want to develop their own estimating tables.

Appendix D

Plumbing Permit Affidavit of Compliance – Illicit Discharge

Place of Public Assembly Grease Trap Inspection Form

Building Permit Check List – Zoning Analysis

Food Service Establishment Checklist

BUILDING DEPARTMENT
VILLAGE OF RYE BROOK
938 KING STREET RYE BROOK, NY 10573
(914) 939-1668
www.ryebrook.org

****

AFFIDAVIT OF COMPLIANCE

VILLAGE CODE §216 • STORM SEWERS AND SANITARY SEWERS

THIS AFFIDAVIT MUST BEAR THE NOTARIZED SIGNATURE OF THE LEGAL PROPERTY OWNER AND BE SUBMITTED ALONG WITH ANY BUILDING OR PLUMBING PERMIT APPLICATION. ANY BUILDING OR PLUMBING PERMIT APPLICATION SUBMITTED WITHOUT THIS COMPLETED AND NOTARIZED FORM WILL BE RETURNED TO THE APPLICANT.

STATE OF NEW YORK, COUNTY OF WESTCHESTER) as:

I, _____, residing at, _____
(Print name) (Address where you live)

being duly sworn, deposes and states that (s)he is the applicant above named, and further states that (s)he is the legal owner of the property to which this Affidavit of Compliance pertains at;

_____, Rye Brook, NY.
(Job Address)

Further that all statements contained herein are true, and that to the best of his/her knowledge and belief, that there are no known illegal cross-connections concerning either the storm sewer or sanitary sewer, and further that there are no roof drains, sump pumps, or other prohibited stormwater or groundwater connections or sources of inflow or infiltration of any kind into the sanitary sewer from the subject property in accordance with all State, County and Village Codes.

_____
(Signature of Property Owner(s))

_____
(Print Name of Property Owner(s))

Sworn to before me this _____

day of _____, 20_____

_____
(Notary Public)

		NO	YES	N/A
8. ELEVATORS, DUMBWAITERS & ESCALATORS				
a. [PM] 603.1. Are elevators properly maintained, and is the current certificate of inspection on the premises.	a.	___	___	___
b. 606.3. Are approved standardized, pictorial signs posted adjacent to each elevator call station on all floors reading; IN FIRE EMERGENCY, DO NOT USE ELEVATOR, USE EXIT STAIRS	b.	___	___	___
c. 606.7. Are keys for elevator car doors & fire department service kept in an approved location.	c.	___	___	___
d. 315.3.3. Are elevator machine rooms maintained free from stored combustible material.	d.	___	___	___
e. [B] 3005.1. Are elevator machine room doors maintained unobstructed at all times.	e.	___	___	___
9. COMMERCIAL KITCHENS				
a. 906.1. Are portable Class K fire extinguishers installed within 30 feet of cooking equipment.	a.	___	___	___
b. 904.12.5. Is the fire protection equipment inspected, tested & maintained as per Section 901.6.	b.	___	___	___
c. 904.12.5.2. Are automatic fire extinguishing systems serviced at least every 6 months.	c.	___	___	___
d. 904.12.5.3. Are fusible links & automatic sprinkler heads replaced annually.	d.	___	___	___
e. [RB] 122-5.B. Are grease traps provided and installed as required by Village Code.	e.	___	___	___
f. [PC] 1003.10. [RB] 122-6. Are grease traps properly maintained as per State and Village Code.	f.	___	___	___
g. [RB] 122-6.C., 122-9. Are all service, maintenance, & repair records for grease traps and related plumbing maintained on the premises as required by Village Code.	g.	___	___	___
10. HEATING SYSTEMS				
a. [PM] 603.1. Are all heating appliances properly installed & maintained in a safe working condition.	a.	___	___	___
b. [PM] 603.2. Are all fuel-burning appliances & equipment connected to an approved chimney or vent.	b.	___	___	___
c. [PM] 603.3. Are heating appliances maintained with proper clearances from combustible material.	c.	___	___	___
d. [PM] 603.4. Are safety controls for fuel-burning equipment maintained in effective operation.	d.	___	___	___
e. [PM] 603.5. Is the fuel-burning equipment provided with adequate combustion & ventilation air.	e.	___	___	___
11. MOTOR FUEL-DISPENSING FACILITIES & REPAIR GARAGES				
a. 2303.2. Is an approved, labeled & readily accessible emergency disconnect switch provided in an approved location within 100' of, but not less than 20' from fuel dispensers.	a.	___	___	___
b. 2304.3.4. Are dispenser operating instructions conspicuously posted on every fuel dispenser.	b.	___	___	___
c. 2304.2.4. Are fuel-dispensers unobstructed & in clear view of the attendant at all times.	c.	___	___	___
d. 2305.5. Are approved portable fire extinguishers complying with Section 906 with a minimum rating of 2-A:20-B:C provided & located not more than 75' from pumps, dispensers & fill-pipe openings.	d.	___	___	___
e. 2305.6. Are warning signs provided & posted within sight of each dispenser as per this section.	e.	___	___	___
f. 2305.7. Are weeds and other combustible materials kept at least 10' from fuel-handling equipment.	f.	___	___	___
g. 2306.4. Are above-ground tanks provided with vehicle impact protection.	g.	___	___	___
h. 2306.5. Are above-ground tanks provided with secondary spill containment.	h.	___	___	___
12. HAZARDOUS MATERIALS (HAZ-MATS)				
a.407.2. Are S.D.S. Sheets for all haz-mats readily available on the premises.	a.	___	___	___
b.407.3. Are spaces and individual containers containing haz-mats properly labeled & identified.	b.	___	___	___
c.5004.2. Are stored haz-mats provided with approved secondary spill containment.	c.	___	___	___
d.5003.7.1. Are proper NO SMOKING signs provided as per this section.	d.	___	___	___
13. MISCELLANEOUS				
a. 403.1. Is an approved fire safety & evacuation plan prepared & maintained for the building /occupancy.	a.	___	___	___
b. 405.1. Are emergency evacuation drills conducted at the intervals as specified in Table 405.2.	b.	___	___	___
c. 405.5. Are records of emergency evacuation drills kept & maintained on the premises.	c.	___	___	___
d. 505.1. Are approved address & building numbers properly placed & plainly visible from the street.	d.	___	___	___
e. 506.1. Are approved key boxes (knox boxes) provided, properly located & equipped with the proper keys.	e.	___	___	___
f. 703.1. Is all required fire-resistance rated construction properly maintained as per code.	f.	___	___	___
g. 703.1. Are openings through fire-resistance rated assemblies properly protected & maintained.	g.	___	___	___
h. 5303.5. Are compressed gas cylinders & systems secured & safeguarded against damage & access.	h.	___	___	___
i. 5303.6.1. Are compressed gas cylinder caps or collars in place at all times except when tanks are in use.	i.	___	___	___

14. GENERAL HOUSEKEEPING

a. Good _____
b. Fair _____
c. Inadequate _____
d. Poor _____

INSPECTOR: _____ DATE: _____

Building Permit Check List & Zoning Analysis — OB & C ONLY

Address: _____ SBL: _____

Zone: _____ Use: _____ Const. Type: _____ Other: _____

Submittal Date: _____ Revisions Submittal Dates: _____

Applicant: _____

Nature of Work: _____

_____

_____

Reviews: ZBA: _____ PB: _____ BP: _____ Other: _____

NEED OK

( ) ( ) FEES: Filing: _____ BP: _____ C/O: _____ Legalization: _____
( ) ( ) APP.: Date Stamped: _____ Properly Signed: _____ SBL Verified: _____ Cross Connection: _____ P.O.G.: _____
( ) ( ) Scenic Roads: _____ Steep Slopes: _____ Wetlands: _____ Storm Water Review: _____ Street Opening: _____
( ) ( ) ENVIRO.: Long: _____ Short: _____ Fees: _____ N/A: _____
( ) ( ) SITE PLAN: Topo: _____ Site Protection: _____ S/W Mgmt.: _____ Tree Plan: _____ Other: _____
( ) ( ) SURVEY: Dated: _____ Current: _____ Archival: _____ Sealed: _____ Unacceptable: _____
( ) ( ) PLANS: Date Stamped: _____ Sealed: _____ Copies: _____ Electronic: _____ Other: _____
( ) ( ) License: _____ Workers Comp: _____ Liability: _____ Comp. Waiver: _____ Other: _____
( ) ( ) Code 753#: _____ Dated: _____ N/A: _____
( ) ( ) HIGH-VOLTAGE ELECTRICAL: Plans: _____ Permit: _____ N/A: _____ Other: _____
( ) ( ) LOW-VOLTAGE ELECTRICAL: Plans: _____ Permit: _____ N/A: _____ Other: _____
( ) ( ) FIRE ALARM / SMOKE DETECTORS: Plans: _____ Permit: _____ H.W.I.C.: ___ Battery: ___ Other: _____
( ) ( ) PLUMBING: Plans: _____ Permit: _____ Nat. Gas: _____ LP Gas: _____ Grease Trap: _____ Other: _____
( ) ( ) FIRE SUPPRESSION: Plans: _____ Permit: _____ N/A: _____ Other: _____
( ) ( ) H.V.A.C.: Plans: _____ Permit: _____ N/A: _____ Other: _____
( ) ( ) FUEL TANK: Plans: _____ Permit: _____ FUEL TYPE: _____ Other: _____
( ) ( ) 2020 NY State ECCC: _____ N/A: _____ Other: _____
( ) ( ) Final Survey: _____ Final Topo: _____ RA/PE Sign-off Letter: _____ As-Built Plans: _____ Other: _____
( ) ( ) BP DENIAL LETTER: _____ C/O DENIAL LETTER: _____ Other: _____
( ) ( ) Other: _____
( ) ARB mtg. date: _____ approval: _____ notes: _____
( ) ZBA mtg. date: _____ approval: _____ notes: _____
( ) PB mtg. date: _____ approval: _____ notes: _____

	REQUIRED	EXISTING	PROPOSED	NOTES
Area:				
Circle:				
Frontage:				
Front:				
Front:				
Sides:				
Rear:				
F.A.R.:				
Open Space:				
Height:				
Stories:				

notes: _____

_____

_____

_____

_____

_____

BUILDING DEPARTMENT
VILLAGE OF RYE BROOK
938 KING STREET RYE BROOK, NY 10573
(914) 939-0668 FAX (914) 939-5801
www.ryebrook.org

Name/Location of Establishment _____

New Establishment: ☐ Change of Ownership: ☐ Same Owner Remodel: ☐

Which of the following are present:	Yes	No	Grease Traps Provided Yes	Grease Traps Provided No
Three bay sink with coved corners (size)_____	☐	☐	☐	☐
Hand wash sink #_____size_____	☐	☐	☐	☐
Mop sink #_____size_____	☐	☐	☐	☐
Laundry tray (#_____size_____	☐	☐	☐	☐
Floor Drains in use_____	☐	☐	☐	☐
Kitchen Area use _____				
use_____				
Vegetable sink – Indirect (size)_____	☐	☐	☐	☐
Dishwasher (commercial) GPM & model#_____	☐	☐	☐	☐
Pre Rinse trap size_____	☐	☐	☐	☐
Disposals _____	☐	☐	☐	☐
Dipper well (if applicable) _____	☐	☐	☐	☐
Wok type pot sink & size_____	☐	☐	☐	☐
Other type pot sink & size_____	☐	☐	☐	☐

List any Grease Traps

Make/Model	External Flow Control?	Size	Fixtures Served
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

	Yes	No
Ice Machine:	☐	☐
Indirect?	☐	☐
Top Drain Separate?	☐	☐
Does hand sink have single lever faucet?	☐	☐
Bar area:	☐	☐
Three bay sink with covered corners at bar	☐	☐
Are ice bins indirect and properly separate	☐	☐
Are glass wash sink indirect and properly separate	☐	☐
Hot and cold running water to all fixtures	☐	☐
Seating available (interior/exterior)	☐	☐
No. Interior_____		
No. Exterior_____		
Toilet rooms(s) accessible to the public	☐	☐
# of Toilet Rooms _____		

List any other plumbing deficiencies _____

_____

Inspected by:_____ Date:_____

Received by: _____ Date: _____

Grease Interceptor Application Forms Left on Site	Yes	No
	☐	☐

Appendix E

Sewer Blockage and Overflow Reporting Forms

Revised 2023-1-12

SEWER BLOCKAGE AND/OR OVERFLOW REPORT

INSTRUCTIONS: Fill out **CHECKLIST FOR BLOCKED SEWER LINE** (Page 1-2).
If an overflow has occurred, fill out the **SEWER OVERFLOW REPORT FORM** (Page 3-5).

SEWER ISSUE REPORT

Date: _____

Time Notified: _____

Caller's Name: _____ Caller's Phone #: _____

Caller's Address: _____

Time Crew Dispatched: _____

Names of Crew Members: _____

After Hours Callout: ☐ Y ☐ N Work Day: ☐ Y ☐ N Call In: ☐ Y ☐ N

Problem Location (address & cross-street): _____

Description of Complaint: _____

RESPONSE CHECKLIST

1. **PROBLEM LOCATION OR ADDRESS** (INCLUDING CROSS-STREET):

   _____

   _____

2. **VILLAGE MAIN LINE CHECKED:**
   a. Property Owner's Responsibility: ☐ Y ☐ N
3. **VILLAGE LINE BLOCKED:** ☐ Y ☐ N
   a. Set up at Manhole – Location: _____
   b. Footage to Obstruction: _____
   c. Cause of block: ☐ Grease ☐ Roots ☐ Broken Pipe ☐ Rags
   ☐ Other: _____
4. **CLEARED LINE. REPORTING PARTY ADVISED.** ☐ Y ☐ N
5. **PROPERTY DAMAGE REPORTED BY RESIDENT:** ☐ Y** ☐ N
6. **SANITARY SEWER OVERFLOW OR SPILL:** ☐ Y** ☐ N

** Sanitary Sewer Overflow: ☐ Contact DEC obtain Spill Number

** Property damage reported: ☐ Refer resident to Superintendent of Public Works for information on filing a Claim for Damage or Call 914 939 1121

7.	**VERIFY THAT UPSTREAM MAINTENANCE HOLE IS CLEAR BEFORE LEAVING SITE**	☐ Y	☐ N
8.	**HOSE DOWN UPSTREAM MAINTENANCE HOLES AND/OR AREAS OF OVERFLOW WITH FRESH WATER, CONTAIN AND VACUUM SPILLAGE**	☐ Y	☐ N
9.	**CLEAN AREAS OF SPILLAGE/OVERFLOW WITH WATER WHICH IS CONTAINED AND VACUUMED BEFORE LEAVING SITE**	☐ Y	☐ N

NOTE: If reporting party is not at home, follow-up at later date or leave inspection report.

COMMENTS:

_____

_____

_____

Report completed by: _____

Print Name and Signature

SEWER OVERFLOW REPORT FORM

Form Completed By: _____ Report Date: _____

Maintenance Hole Location: _____

Size of Line: _____ Length of Line: _____

Manhole Numbers _____

Easement: ☐ Y ☐ N

Date Overflow Started _____ Date Overflow Stopped _____

Time Overflow Started _____ Time Overflow Stopped _____

Estimated Village Staff Arrival Date and Time: _____

Duration of SSO: _____ Est. Total Volume (gallons) _____

DESCRIBE HOW OVERFLOW QUANTITY WAS CALCULATED (Appendix G of SSORP):

☐ Eyeball Estimate ☐ Duration/Flow Rate ☐ Measured Volume

☐ Other: _____

DISCHARGE RECOVERED / NOT RECOVERED

Returned to Sewer System (gallons): _____ **Vacuumed** (gallons) _____ **Total Recovered** (gallons) _____

Did SSO reach Receiving Waters? ☐ Y ☐ N

If YES, Volume to Receiving Waters (surface water, drainage channel) or volume **not** able to be recovered from storm drain (gallons): _____

RECEIVING WATER LOCATION:

☐ **Category 1** – Any volume discharge that reaches surface water, drainage channel tributary or storm drain

☐ **Category 2** – Discharge of 1,000 gallons or greater that does not reach surface water, drainage channel tributary or storm drain

☐ **Category 3** – All other discharges

☐ **Private Lateral Sewer Discharge** (PLSD) – Discharges within a privately owned sewer lateral

WEATHER: ☐ Sunny ☐ Cloudy ☐ Dry ☐ Rainy ☐ Rain for several days

Approximate Temperature: _____

PRIMARY CAUSE:

☐ Roots ☐ Grease ☐ Debris ☐ Vandalism ☐ Pipe Failure

☐ Construction Damage ☐ Power Failure ☐ (Heavy Rain)

☐ Other: _____

ADDITIONAL INFORMATION:

SOURCE OF SSO:

☐ Maintenance Manhole ☐ Gravity Main ☐ Force Main ☐ Cleanout

☐ Private Lateral ☐ Other: _____

BLOCKAGE LOCATION (STREET ADDRESS):

Upstream Manhole: _____ Downstream Manhole: _____ Overflow Manhole: _____

SSO APPEARANCE POINT(S):

Number of Point(s): _____ Location of Point(s): _____

Description of Point(s): _____

WATER QUALITY MONITORING: (*Mandatory **ONLY** for SSOs ≥ 50,000 gallons that entered surface waters*)

SAMPLES COLLECTED?

☐ Yes ☐ No By who? _____ Sample Date: _____ Sample Time: _____

Sample Location(s): ☐ _____ ft upstream ☐ _____ ft downstream ☐ at discharge

CONDITIONS THAT MAY INFLUENCE SAMPLE RESULTS:

☐ Storm Drain Discharges ☐ Stream Discharges Other: _____

PARAMETERS FOR ANALYSIS: (*Attach sample results or record in "Additional Notes" page 5*)

☐ Ammonia ☐ Fecal Coliform ☐ Other: _____

FINAL SSO DESTINATION(S):

☐ Storm Drain ☐ Building ☐ Yard/Land ☐ Surface Water: Name: _____

DESCRIBE CLEANUP METHOD:

Spill Response Completion Date: _____

Pictures/Video Taken: Yes ☐ No ☐ Files Saved Location: _____

Affected Area: _____

Describe Property Damage, if applicable:

Signs Posted: Yes ☐ No ☐ Neighbors Notified: Yes ☐ No ☐

Barricaded: Yes ☐ No ☐

REGULATORY AGENCY NOTIFIED (DEC) AND (WCDOH) Yes ☐ No ☐

Date:_____ Time:_____ DEC Spill#:_____

Contacts/Details:

CALLER/CUSTOMER NOTIFIED RE: STATUS: Yes ☐ No ☐

If not, why: _____

Follow-Up Measures:

SKETCH OF AREA: *(include maintenance holes, intersections, stoppage location, etc.)*

ADDITIONAL NOTES:

Foreman or Assistant Foreman Received Date:_____

Situation Closed Out Yes ☐ No ☐

Data Log Verified Yes ☐ No ☐

Contacts and Notification procedures for Sewer Overflows

Michal J. Nowak., Superintendent of Public Works Phone: (914) 939-0753 x 2965 Cell: (914) 490 – 1628 Fax: (914) 939 – 5801 MNowak@Ryebrook.org	Paul Vinci, General Foreman Phone: (914) 939 – 3039 Cell: (914) 447 - 2818 Fax: (914) 939 - 3917 PVinci@Ryebrook.org
Joe Vasile, Assistant Foreman Phone: (914) 939 – 3039 Cell: (914) 755 - 8919 Fax: (914) 939 - 3917 JVasile@Ryebrook.org	Rye Brook Police Dept Phone: (914) 9378 - 1020
Rye Brook Blind Brook Sewer System Publicly Owned Sewer System Number NYS300054	Rye Brook Port Chester Sewer System Publicly Owned Sewer System Number NYS300067 This is Rye brook Sewers going to Port Chester Plant
NYS DEC Spill Hotline Phone: 1 800 457 7362	Westchester County Health Dept. Phone: (914) 813 - 5000
NY Alert Mass Notification System https://authentication.everbridge.net	

Procedures for Notification

The Sewer Overflow Response Plan (SORP) is designed to ensure that every report of a Sanitary Sewer Overflow (SSO) is promptly responded to by the responsible sewer department personnel or their designee for confirmation. Quick response will minimize the effects of the overflow with respect to impacts on public health, welfare, safety, and water quality of surface waters. The SORP further includes provisions to ensure notification of and reporting to NYSDEC and Westchester County Health Department. For purposes of this SORP, "confirmed sewage spill" is also sometimes referred to as "sewer overflow," "overflow," or "SSO" And will be referred to herein as a SSO

The member municipality is responsible for reporting overflow events from their facilities directly to the DEC and to the County Health Department immediately upon determining

the spill is active . Overflows from "District" facilities will be reported directly to New York State Department of Environmental Conservation. NYSDEC and the Westchester County Health Department (WCDOH) at numbers listed above. Generally, this is performed by the Superintendent of Public Works, or General Foremen in his absence.

Notice of NYSDEC/WCDOH/NYAlert is immediately after site and situation is under control (or sooner) and or crews are responding.

Caller speaking to NYSDEC must record the date, time, person spoken to and assigned spill number. Any follow-up return calls or instructions shall be noted as well on form and or notes to be included with form.

Caller speaking to WCDOH must record the date, time, person spoken to and assigned spill number.

The Superintendent of Public Works shall upload/populate/send out on NYAlert a message of active sewer overflow on website listed above. A copy of emails or alerts shall be filed on the F Drive at Village Hall in the respective sanitary sewer spill folder. NYAlert, has a 5 day report component that should be completed after the spill is closed out and alert can be closed out.

Appendix F
Pump Station Inspection Form

INSPECTION REPORT

Job # _____

Customer _____

_____

_____

Equipment _____

SN/SO # _____

Control Panel: MFG _____

Invoice# _____

Date _____ P.O. # _____

Location _____

Contact _____

Phone _____

Service Type _____

Serial # _____

	AMPS			Meg Probe	Meg Motor	Time Meter
#1						
#2						
#3						
#4						

	Voltage		
3ø			
1ø			
Control			

	Junction Box Pass	Fail	N/A
Condition			
Access			

	CB/MCP Pass	Fail	NA
#1			
#2			
#3			
#4			

	Alarm Pass	Fail	NA
Dry Contacts			
Light			
Horn			
Remote			

	Seal Warning Pass	Fail	NA
#1			
#2			
#3			
#4			

	Wet Well Pass	Fail	NA
Access Hatch			
Hatch Lock			
Guide Rails			
Wet Well			
Debris			
Basket			
Piping			
Check Valves			
Gate valves			
Vent Blower			

	Pass	Fail	NA
Condition			
Contactor			
Overload			
HOA			
Relays			
I.S. Relay			
Bulbs			
Alt			
Phase Monitor			
Fuses			

	Floats / Tested		Transducer On	Off
LWA				
OFF				
Lead				
Lag				
2nd Lag				
High Alarm				

Report:

_____

_____

_____

_____

_____

_____

_____

_____

Appendix H
Sanitary Sewer Hot Spot Log Form

HIGHWAY SANITARY SEWER HOTSPOT LOG 2021

Street Name	D.S.M.H	U.S.M.H	ITEM OF CONCERN
32 Garibaldi Senior Center	90744	90742	Senior Center, grease
2ND Base in Garibaldi Park	90752	90750	Grease from Shopping Center
Lincoln Avenue at Westchester (Hilton Hotel)	61718	61741	Grease from Hotel
Intersection Roanoke and Westview (Rye Ridge Plaza)	61653	61655	Plaza Grease
28 Brook Lane	61699	61703	Flat Line
33 Bonwit Road (Billys Bend)	62633	61759	Low Spot
Valley Terrace at Ridge Blvd	62594	62595	Flat Line / Smell

#M.H. Inspected

APPENDIX I

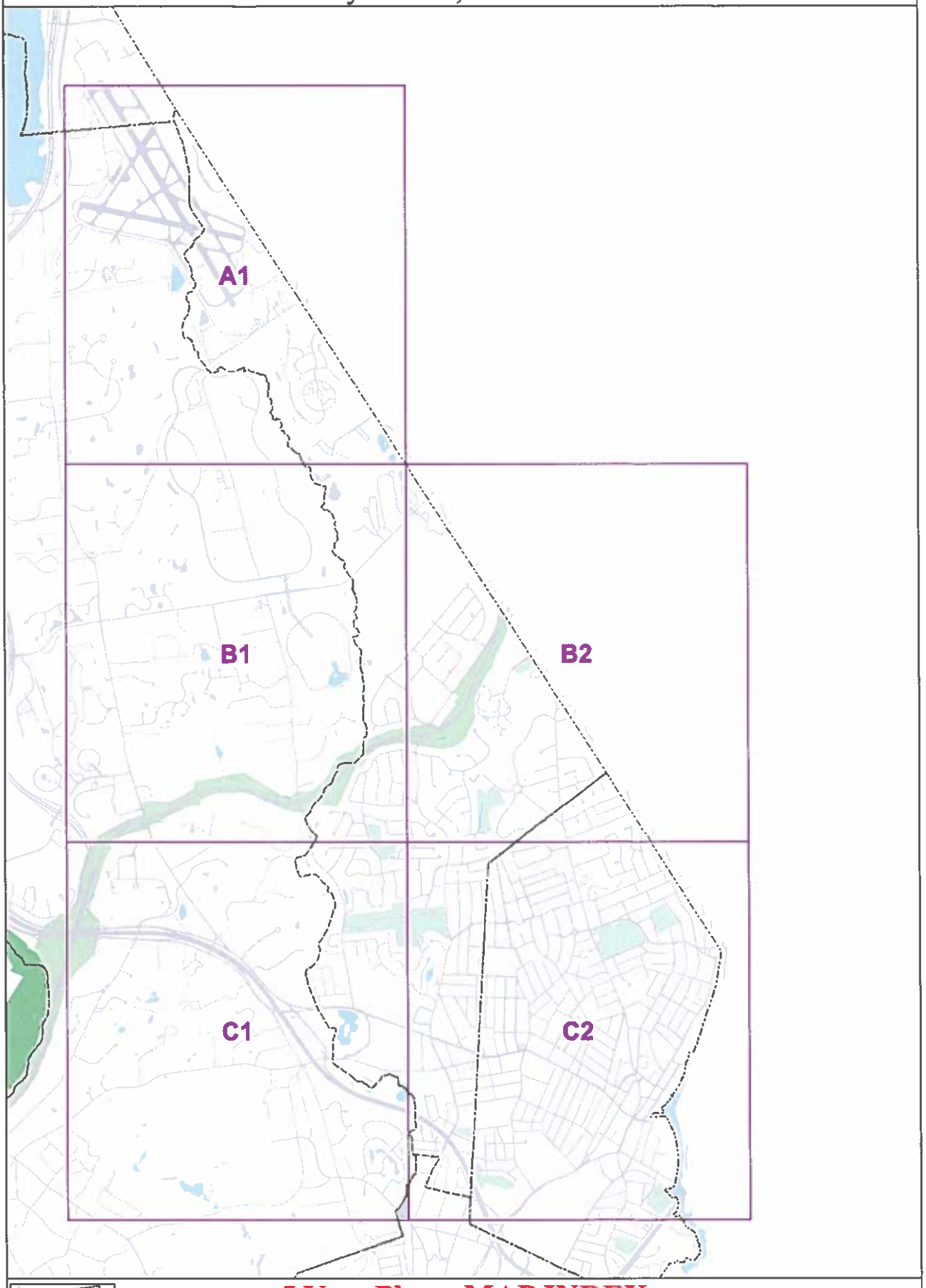
Sewer Maintenance Program – Grid Maps

1. 5 Year Rotation Manhole Inspection Grid Maps A1-C2
2. 10 Year Rotation Gravity Sewer Cleaning Grid Maps A1-F3
3. 20 Year Rotation CCTV Gravity Sewer Grid Maps A1-14

APPENDIX I-1

5 Year Rotation Manhole Inspection Grid Maps A1-C2

Rye Brook, New York



5 Year Plan - MAP INDEX

0 1,000 2,000 3,000 Feet

N W E S

Legend

- Map Page Boundary
- Municipal Boundary
- Roadways
- Lake, Pond, or Reservoir
- County Parks
- State Parks
- Local Parks

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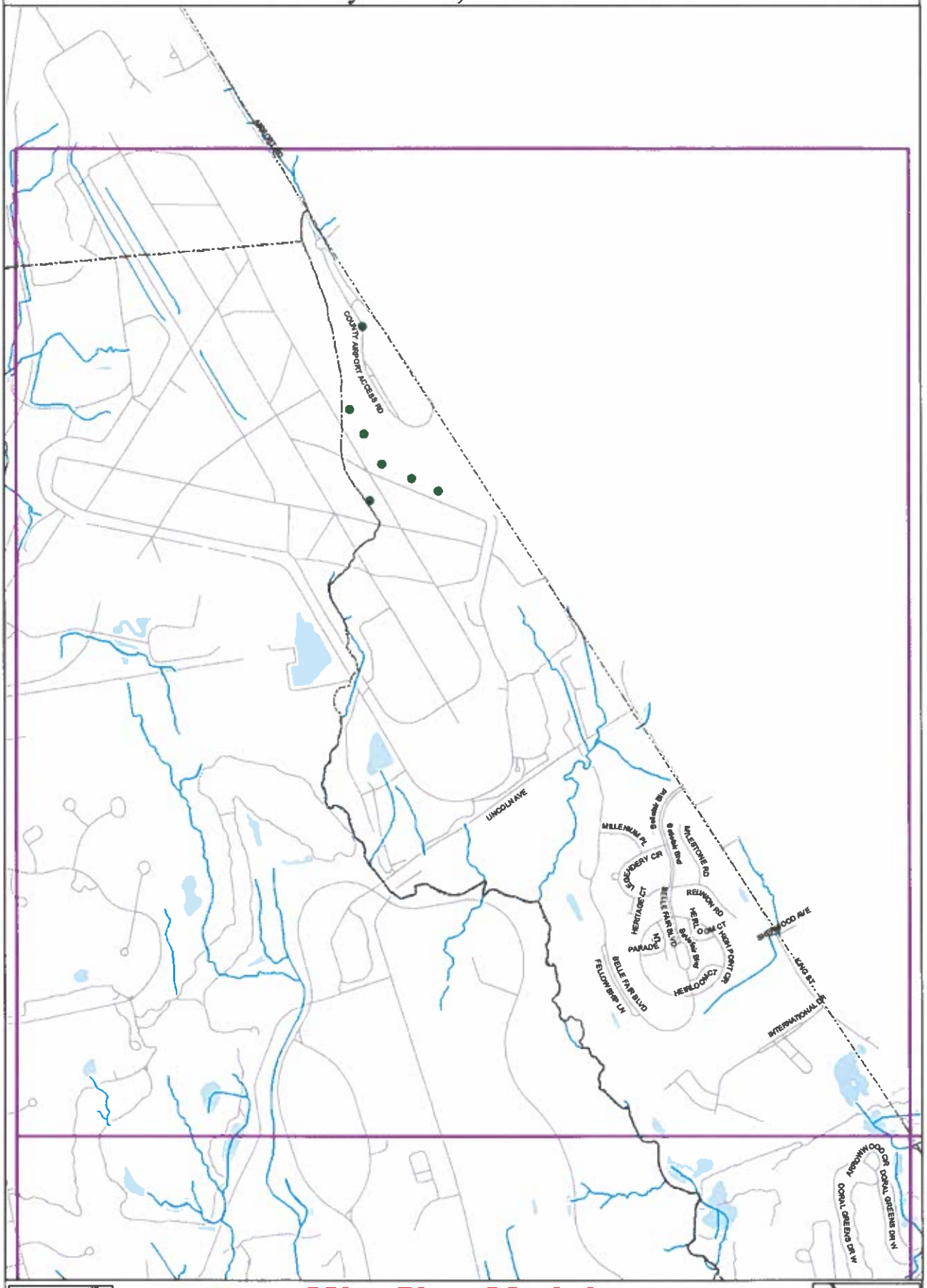
Rye Brook, New York



5 Year Plan - Manholes

A1
Page 1 of 5

1 inch = 900 feet

0 450 900 Feet

Legend

- Sewer Manholes
- Map Page Boundary
- Municipal Boundary
- Roads
- Streams
- Lake, Pond, or Reservoir
- County Parks
- State Parks
- Local Parks

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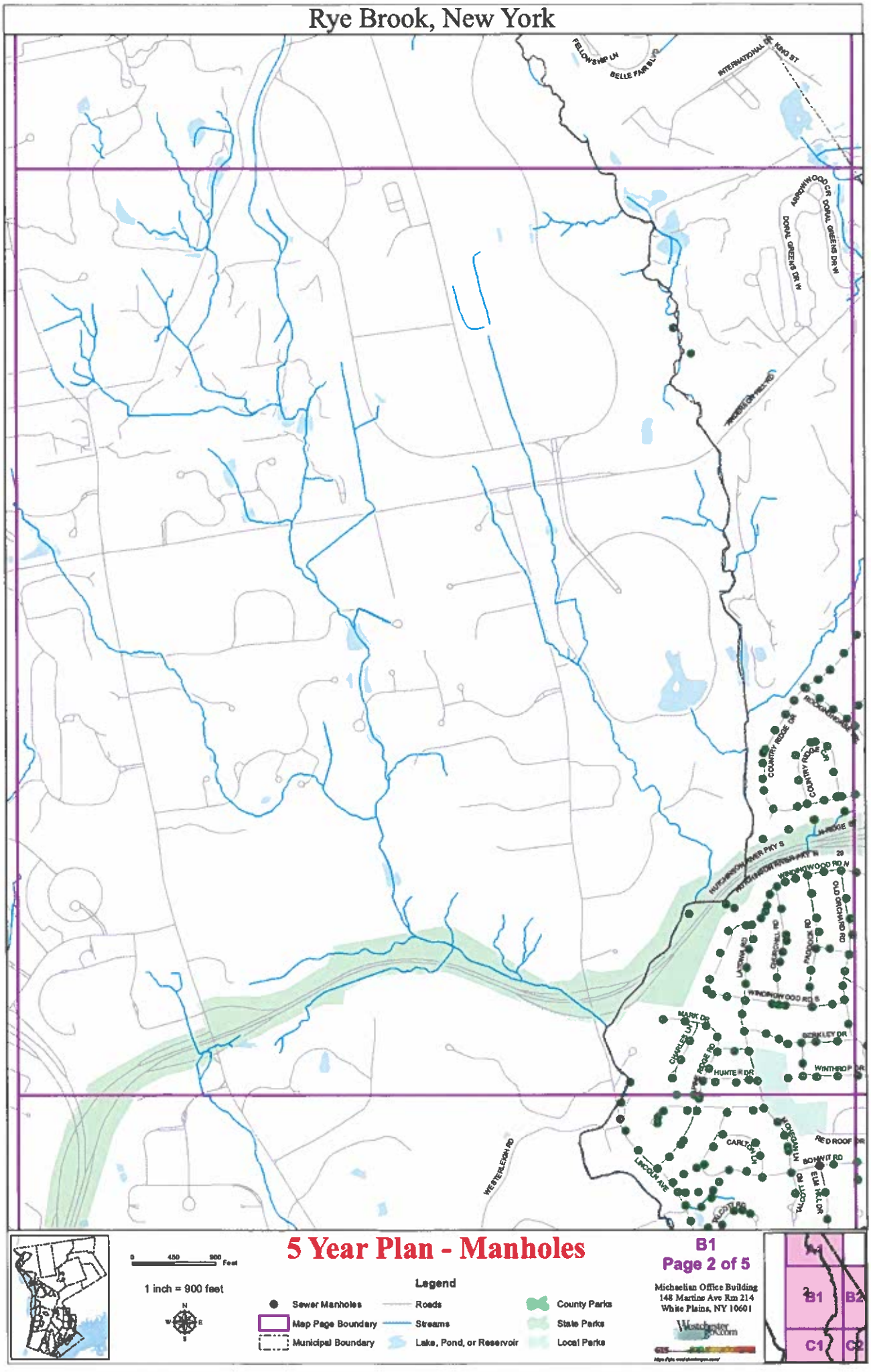
A1
B1 B2

Rye Brook, New York



1 inch = 900 feet

0 450 900 Feet

N W E S

5 Year Plan - Manholes

Legend

- Sewer Manholes
- Map Page Boundary
- Municipal Boundary
- Roads
- Streams
- Lake, Pond, or Reservoir
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- State Parks
- Local Parks

B1
Page 2 of 5

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Westchester County GIS

Rye Brook, New York

5 Year Plan - Manholes

0 450 900 Feet

1 inch = 900 feet

Legend

- Sewer Manholes
- Map Page Boundary
- Municipal Boundary
- Roads
- Streams
- Lake, Pond, or Reservoir
- County Parks
- State Parks
- Local Parks

B2
Page 3 of 5

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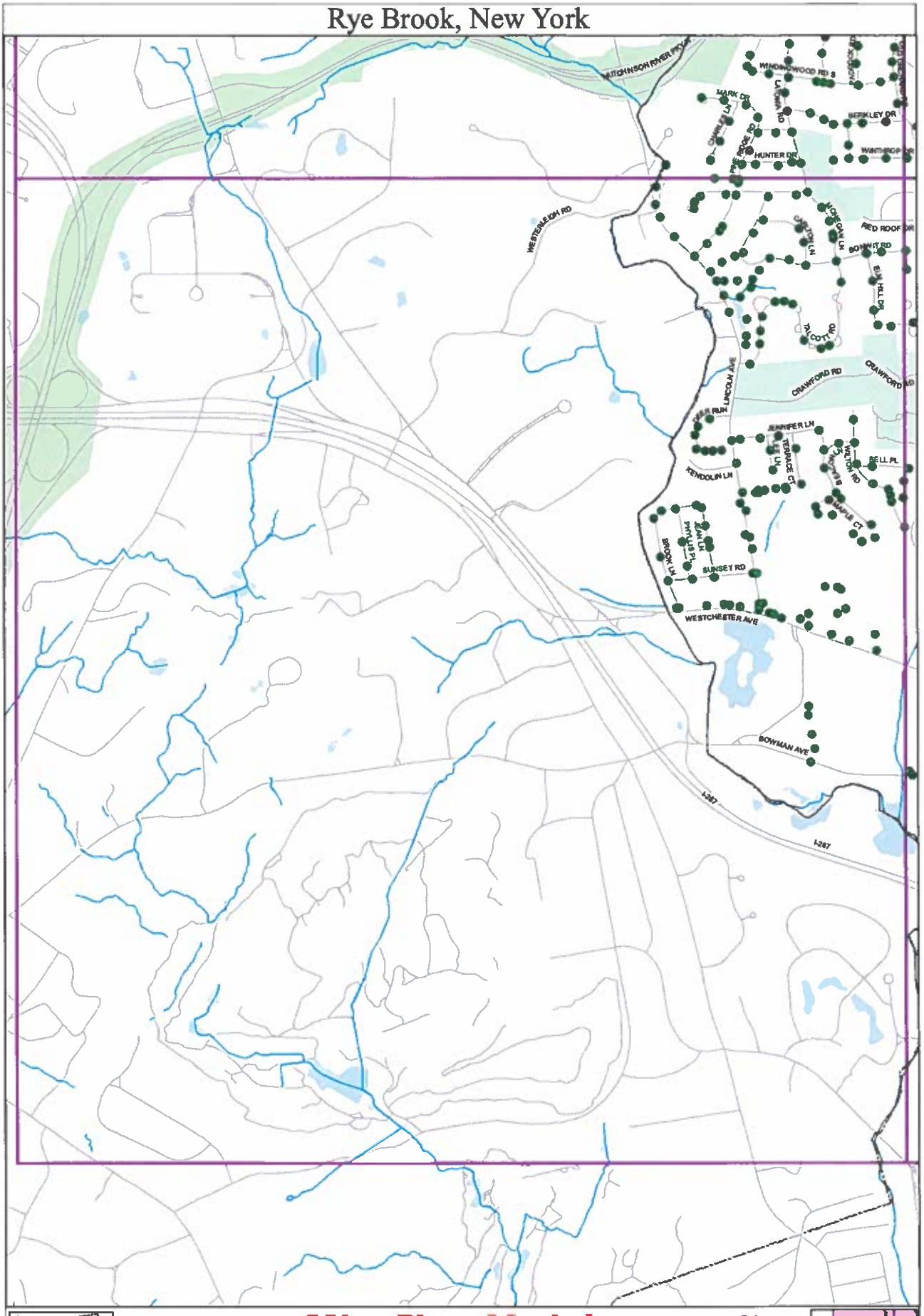
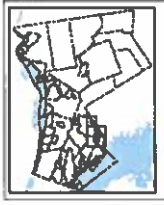
A1 B1 B2 C1 C2

Rye Brook, New York





0 450 900 Feet

1 inch = 900 feet

N W E S

5 Year Plan - Manholes

Legend

- Sewer Manholes
- Map Page Boundary
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- Streams
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- Local Parks

C1
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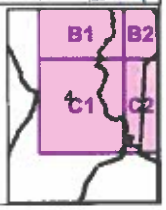
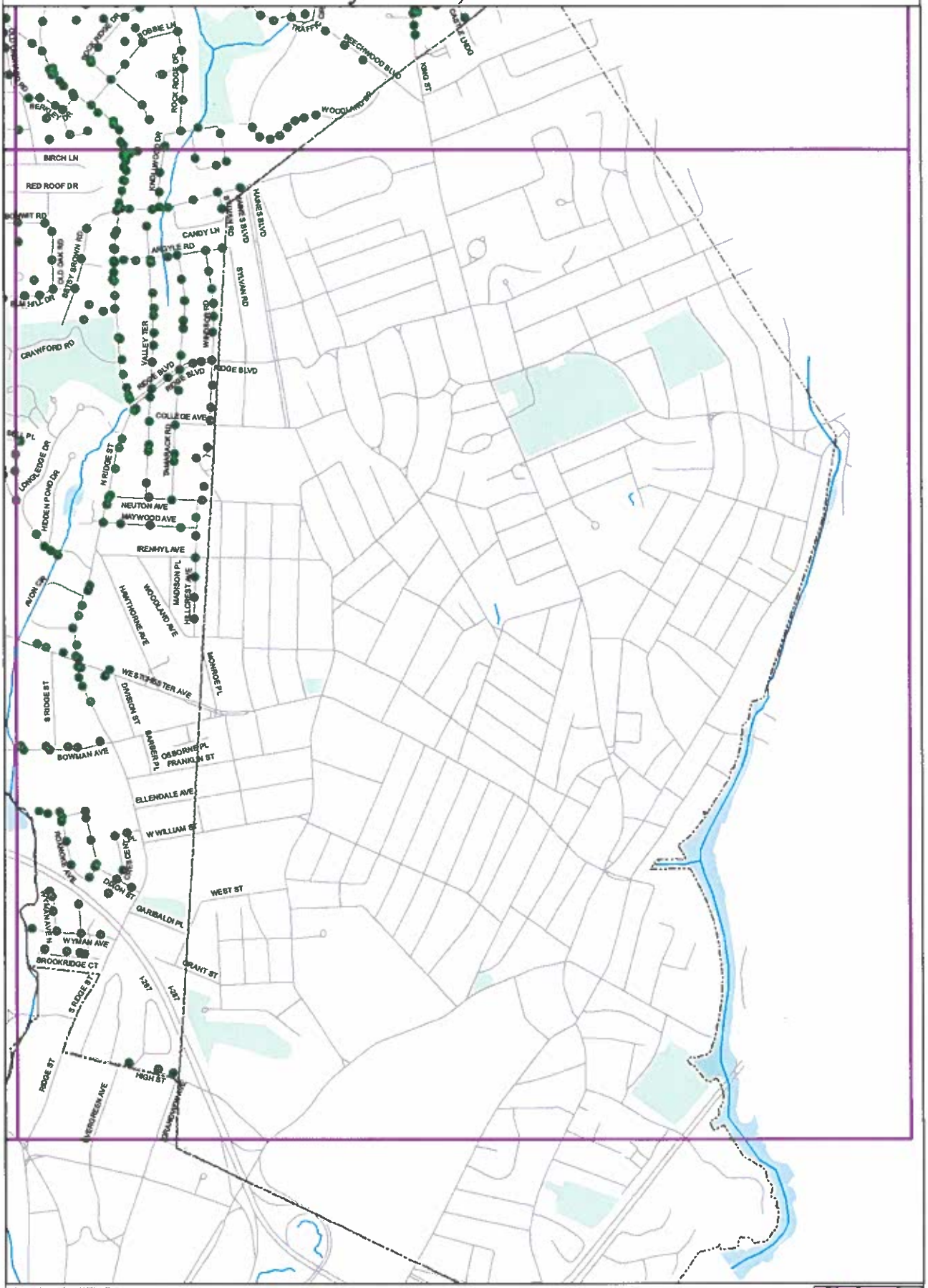


Rye Brook, New York



5 Year Plan - Manholes

0 450 900 Feet

1 inch = 900 feet

Legend

- Sewer Manholes
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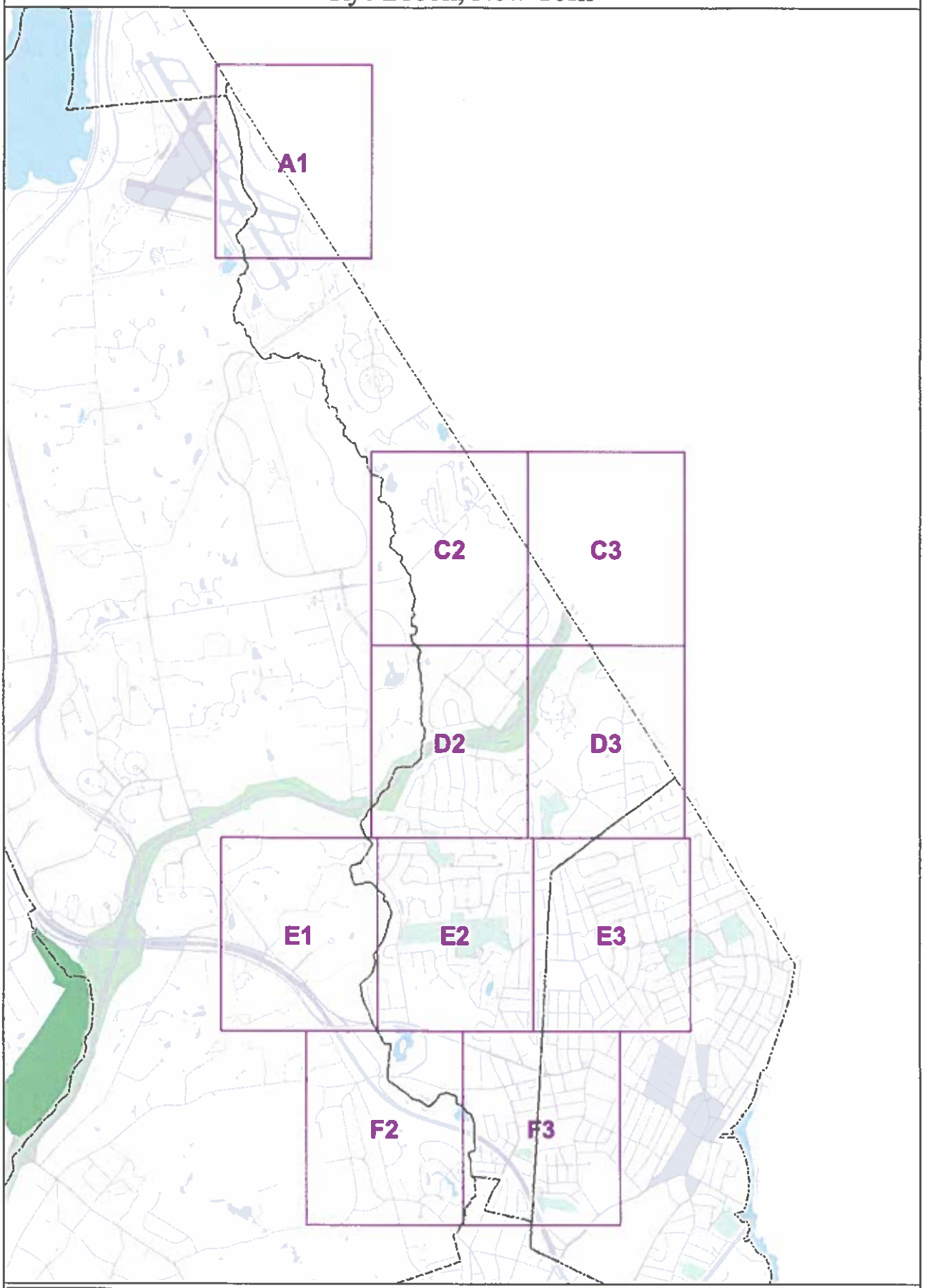
Westchestergis.com

APPENDIX I-2

10 Year Rotation Gravity Sewer Cleaning Grid Maps A1-F3

Rye Brook, New York



10 Year Plan - MAP INDEX

0 970 1,940 2,910 Feet

N W E S

Legend

- Municipal Boundary
- Map Page Boundary
- Roadways
- Lake, Pond, or Reservoir
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- State Parks
- Local Parks

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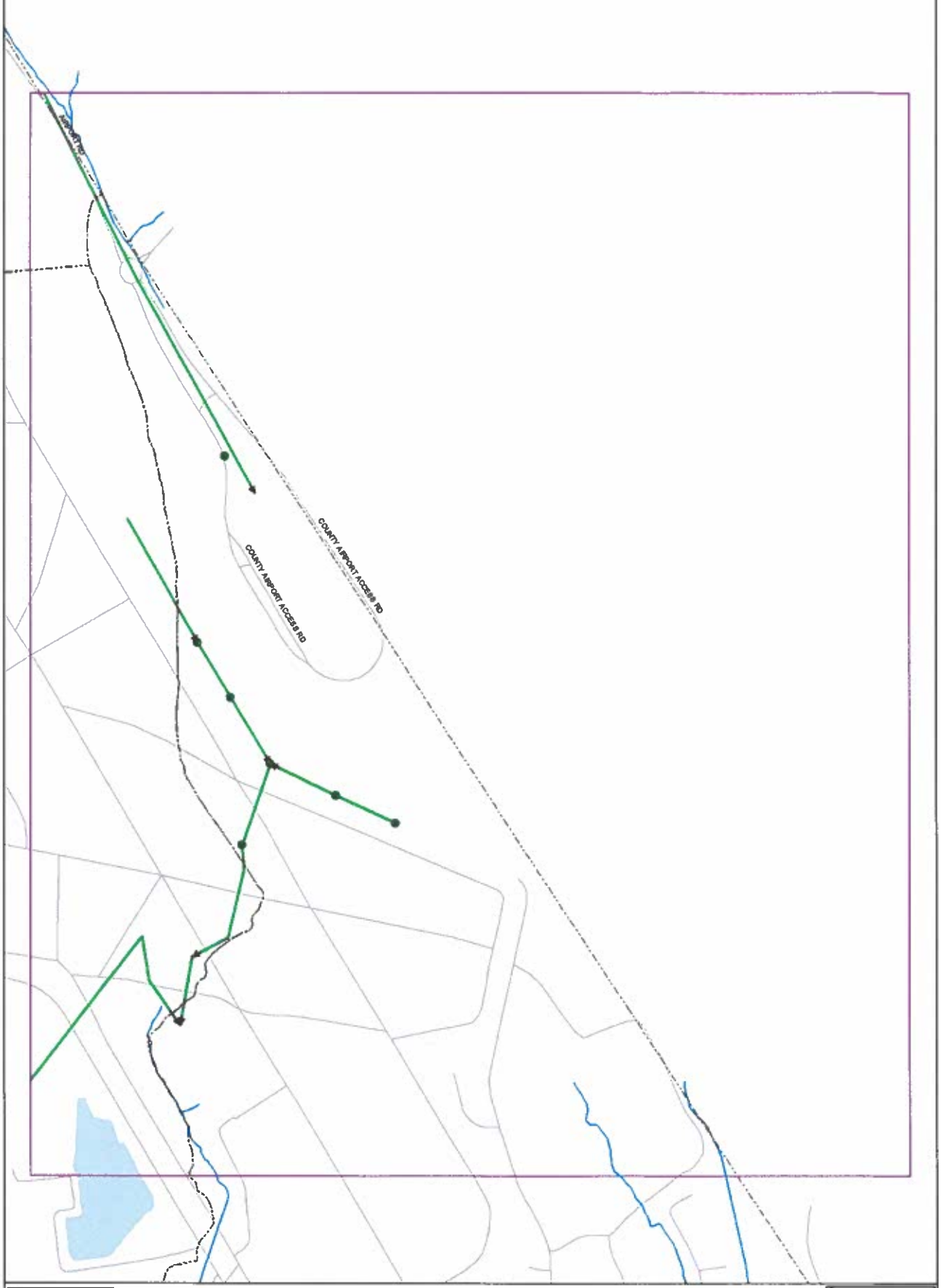
Rye Brook, New York



10 Year Plan - Clean Sewers

A1
Page 1 of 10

1 inch = 6,000 feet

0 3,000 6,000 Feet

Legend

- Sewer Manholes
- Sewer Mains
- Map Page Boundary
- Municipal Boundary
- Streams
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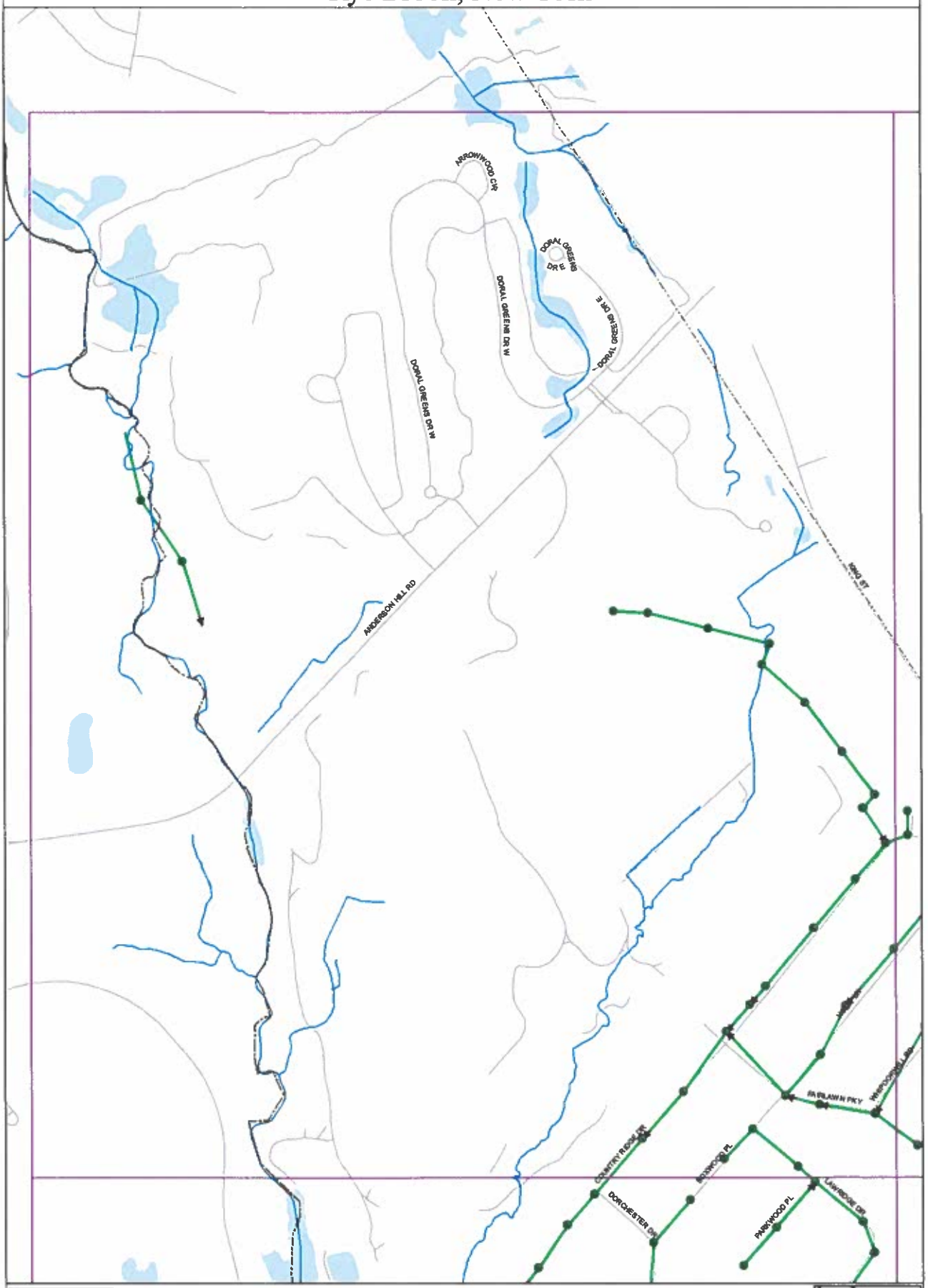
Rye Brook, New York



10 Year Plan - Clean Sewers

0 3,000 6,000 Feet

1 inch = 6,000 feet

Legend

- Sewer Manholes
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C2
Page 2 of 10

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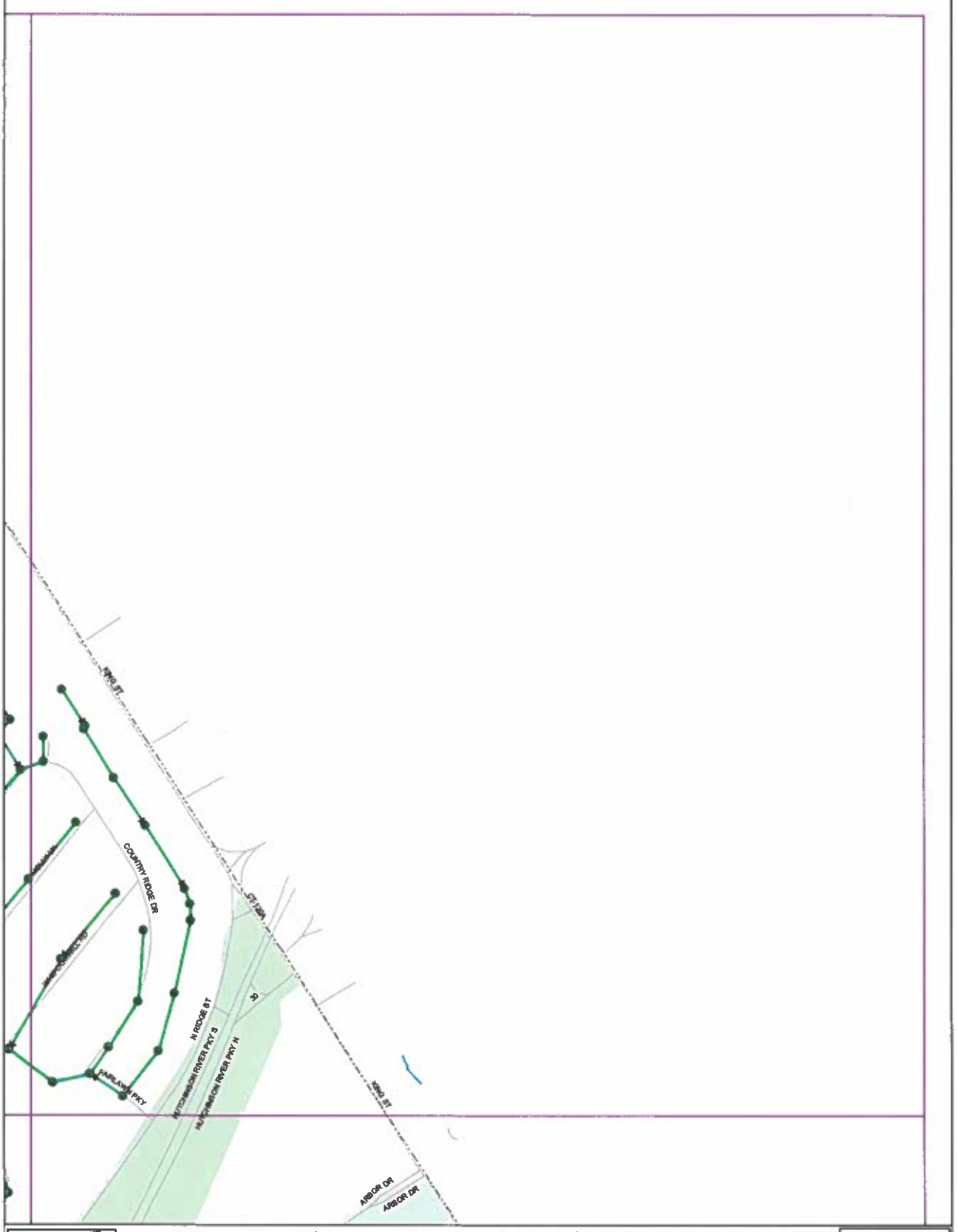
C2 C3 D2 D3

Rye Brook, New York



10 Year Plan - Clean Sewers

0 3,000 6,000 Feet

1 inch = 6,000 feet

Legend

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C3
Page 3 of 10

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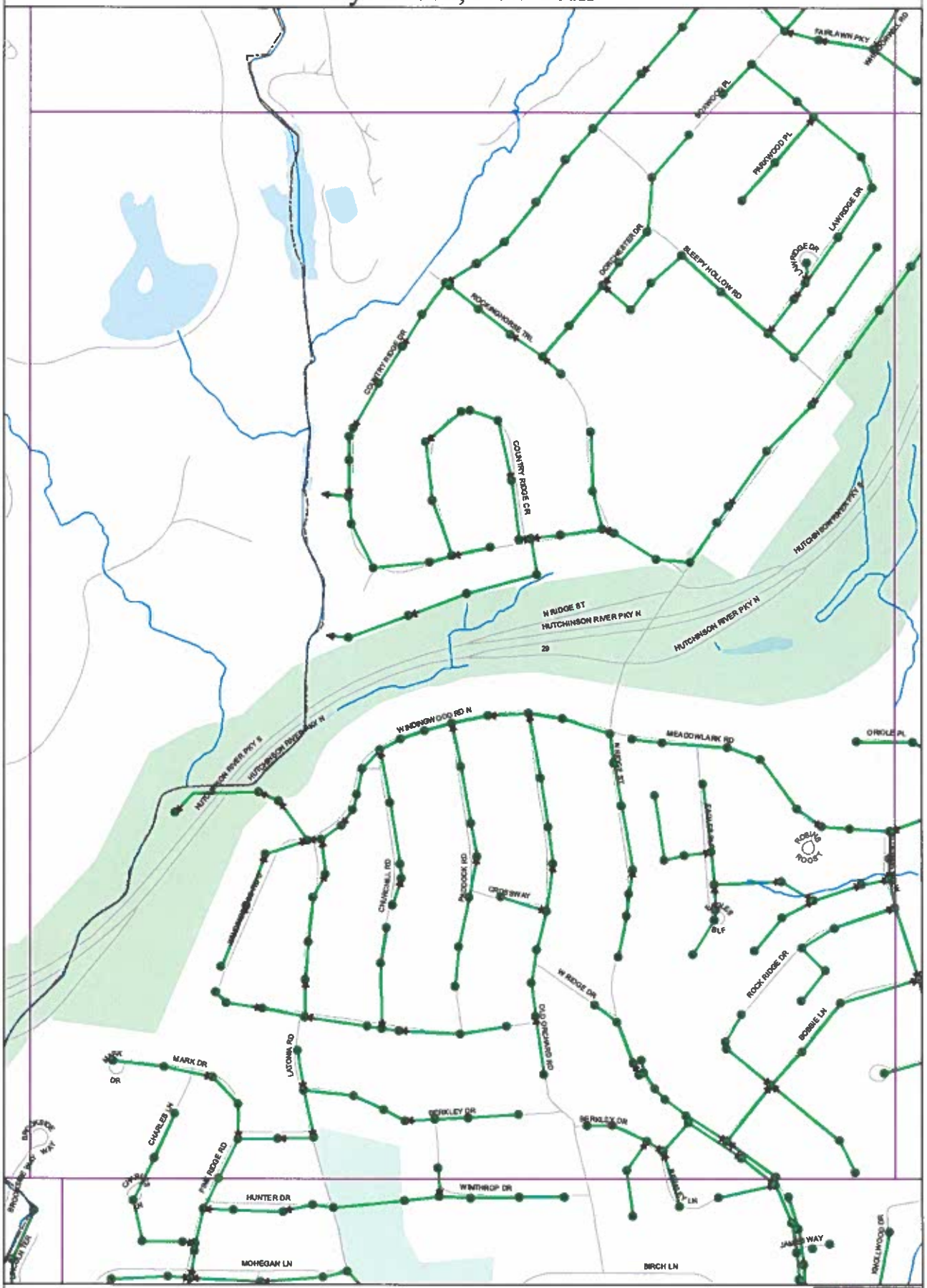
C2 C3 D2 D3

Rye Brook, New York



1 inch = 6,000 feet

0 3,000 6,000 Feet

N W E S

10 Year Plan - Clean Sewers

Legend

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Page 4 of 10

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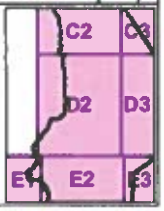
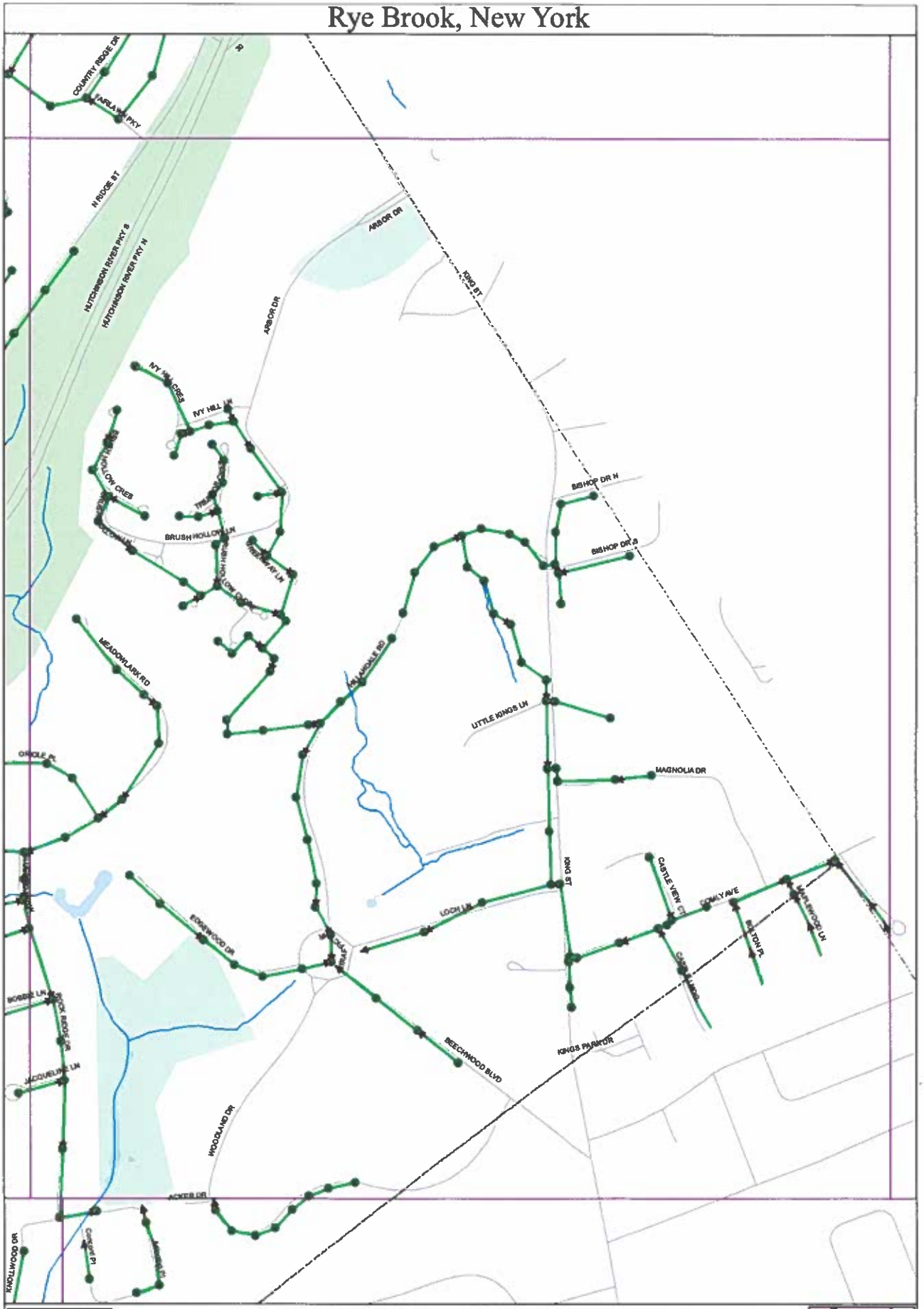


Rye Brook, New York



1 inch = 6,000 feet

0 3,000 6,000 Feet

10 Year Plan - Clean Sewers

Legend

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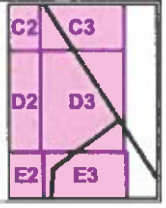
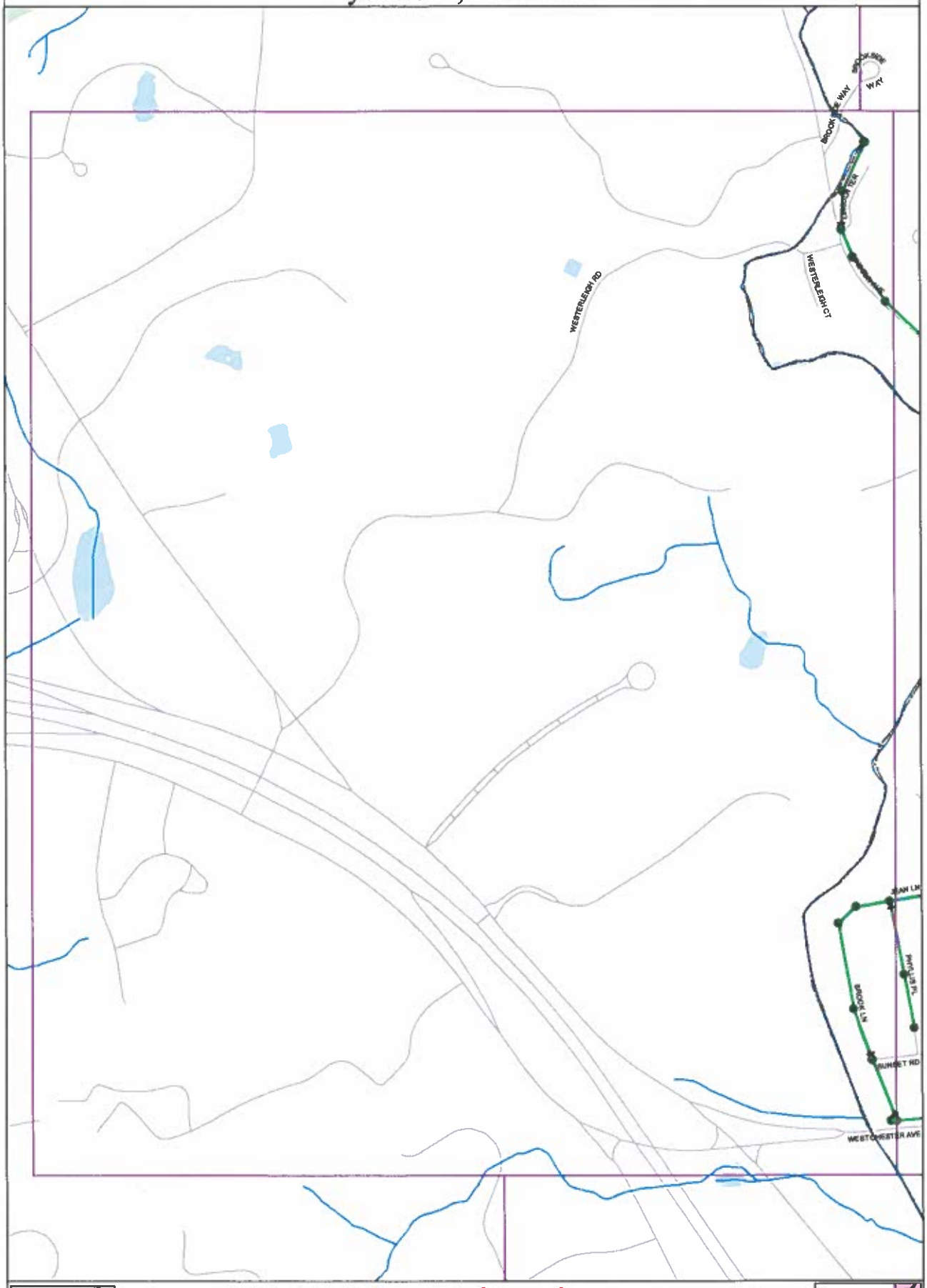


Rye Brook, New York



0 3,000 6,000 Feet

1 inch = 6,000 feet

10 Year Plan - Clean Sewers

Legend

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E1
Page 6 of 10

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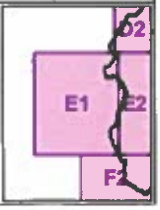
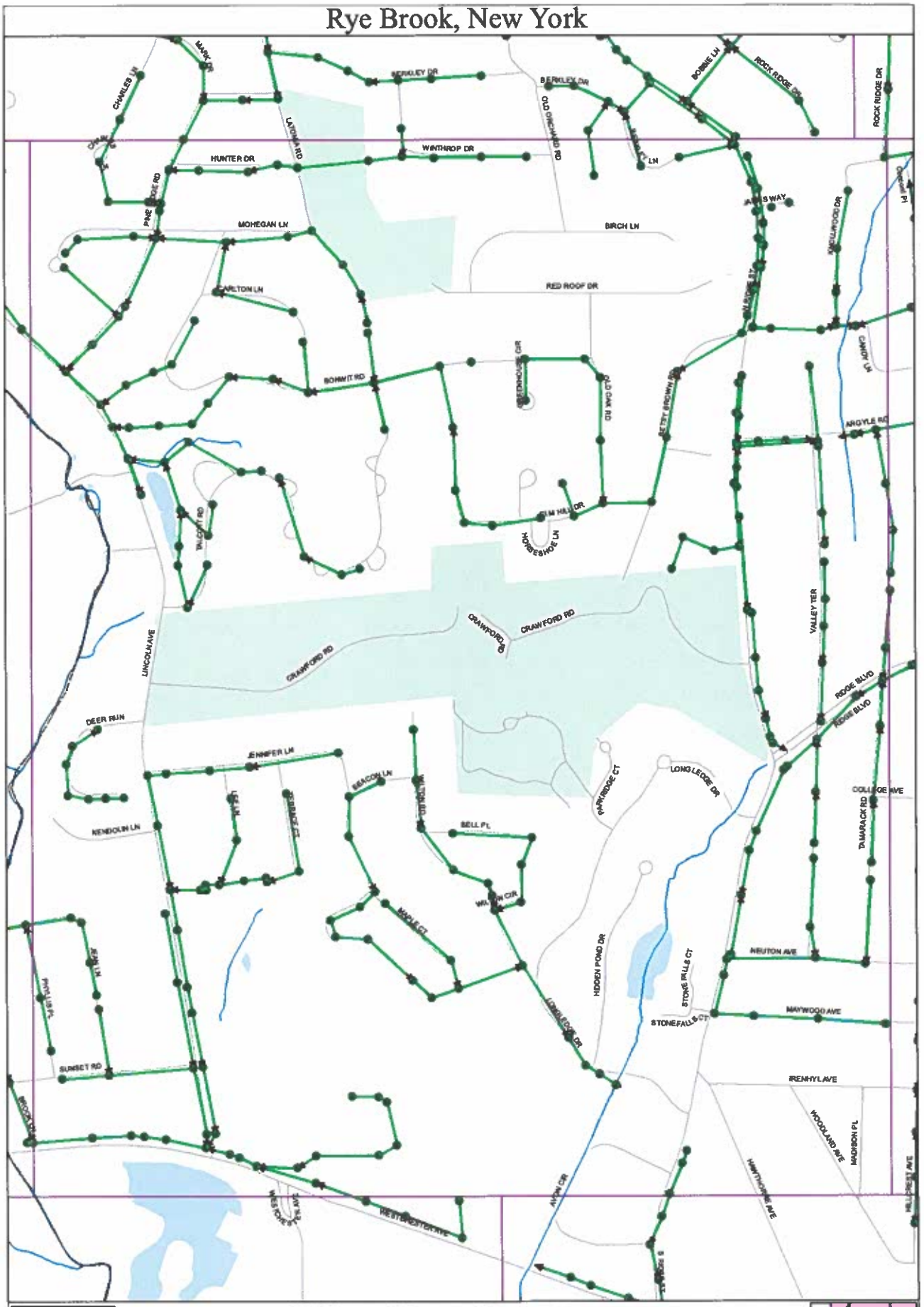


Rye Brook, New York



10 Year Plan - Clean Sewers

1 inch = 6,000 feet

0 3,000 6,000 Feet

Legend

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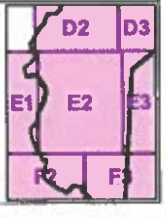

Rye Brook, New York

0 3,000 6,000 Feet

1 inch = 6,000 feet

10 Year Plan - Clean Sewers

Legend

- Sewer Manholes
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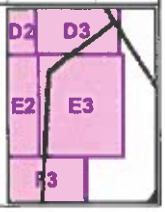

Rye Brook, New York

0 3,000 6,000 Feet

1 Inch = 6,000 feet

10 Year Plan - Clean Sewers

Legend

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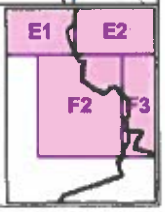
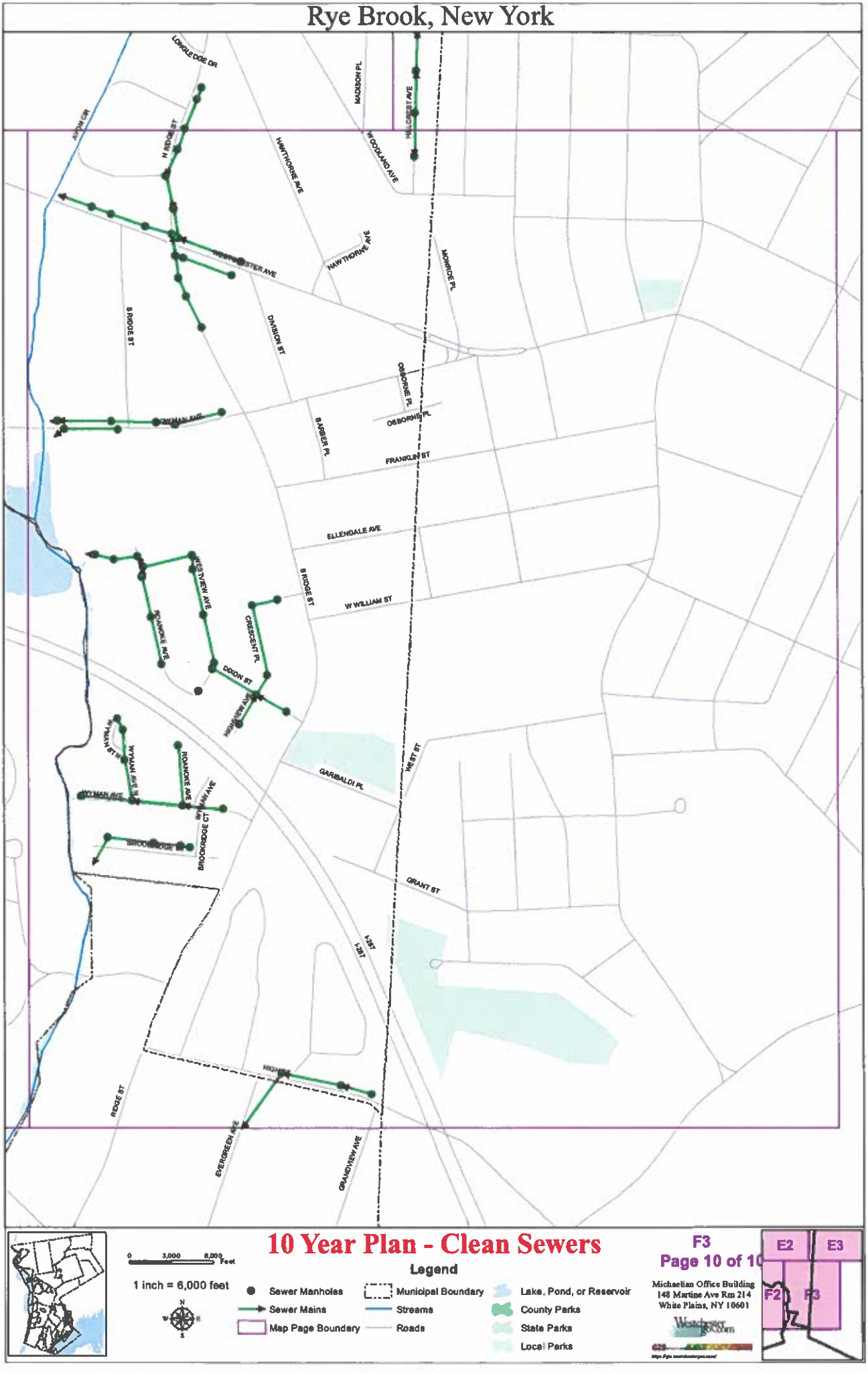


Rye Brook, New York



10 Year Plan - Clean Sewers

0 3,000 6,000 Feet

1 inch = 6,000 feet

Legend

- Sewer Manholes
- Sewer Mains
- Map Page Boundary
- Municipal Boundary
- Streams
- Roads
- Lake, Pond, or Reservoir
- County Parks
- State Parks
- Local Parks

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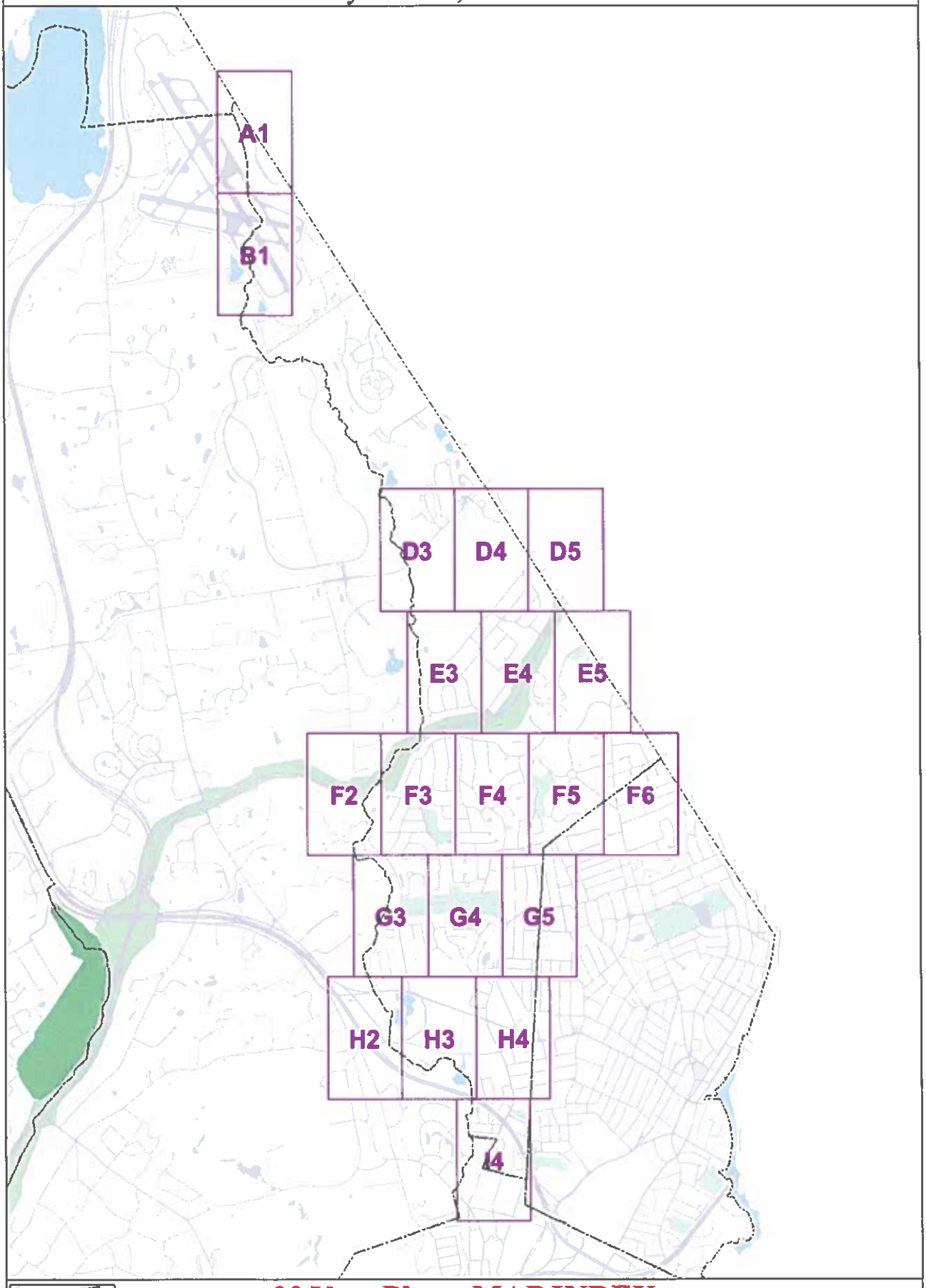
E2 E3 F2 F3

APPENDIX I-3

20 Year Rotation CCTV Gravity Sewer Grid Maps A1-14

Rye Brook, New York



20 Year Plan - MAP INDEX

Legend

- Municipal Boundary
- Map Page Boundary
- Roadways
- Lake, Pond, or Reservoir
- County Parks
- State Parks
- Local Parks

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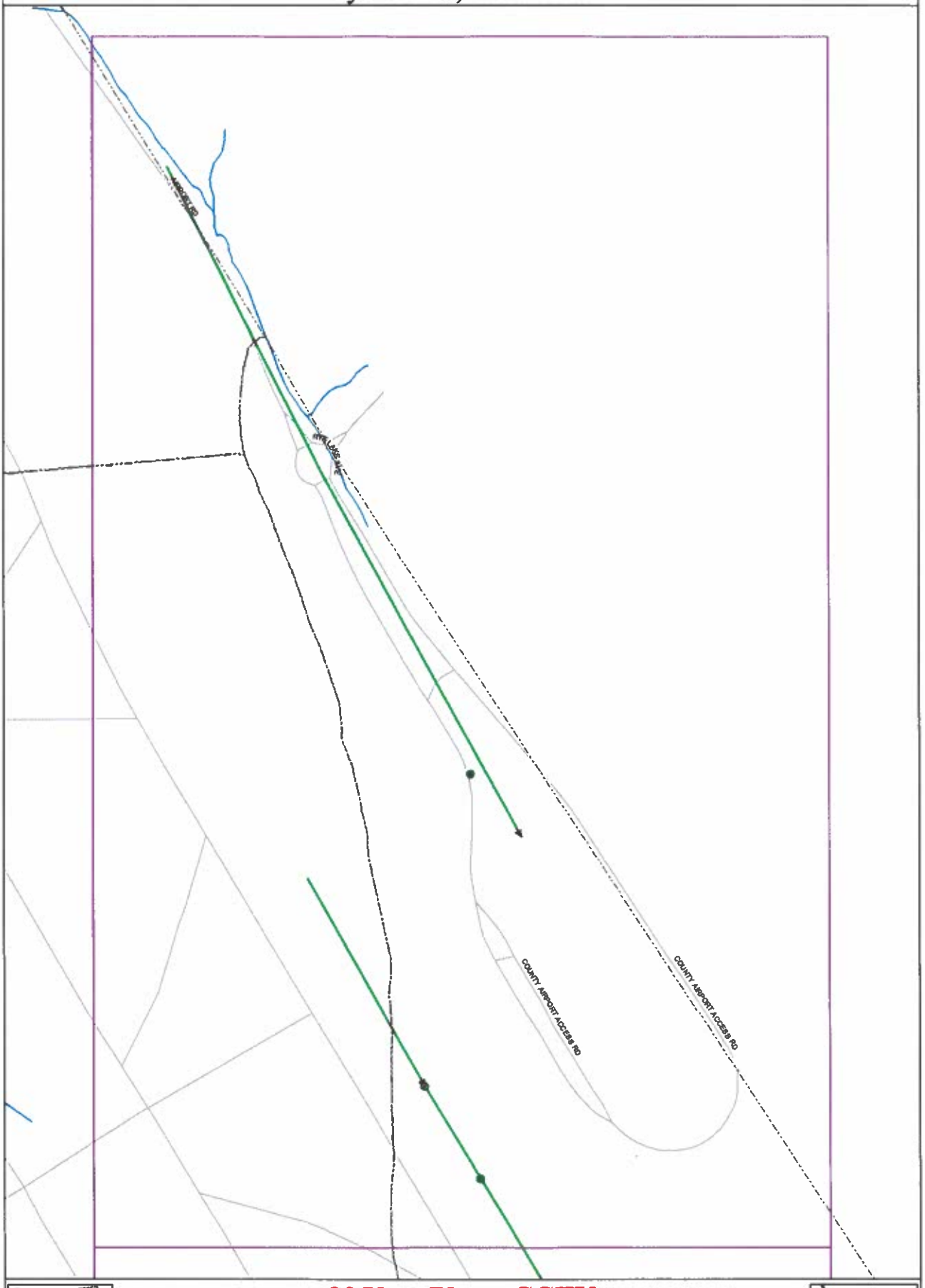
Rye Brook, New York



0 1,750 3,500 Feet

1 inch = 3,598 feet

N W E S

20 Year Plan - CCTV

Legend

- Sewer Manholes
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- Map Page Boundary
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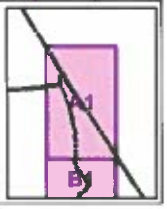
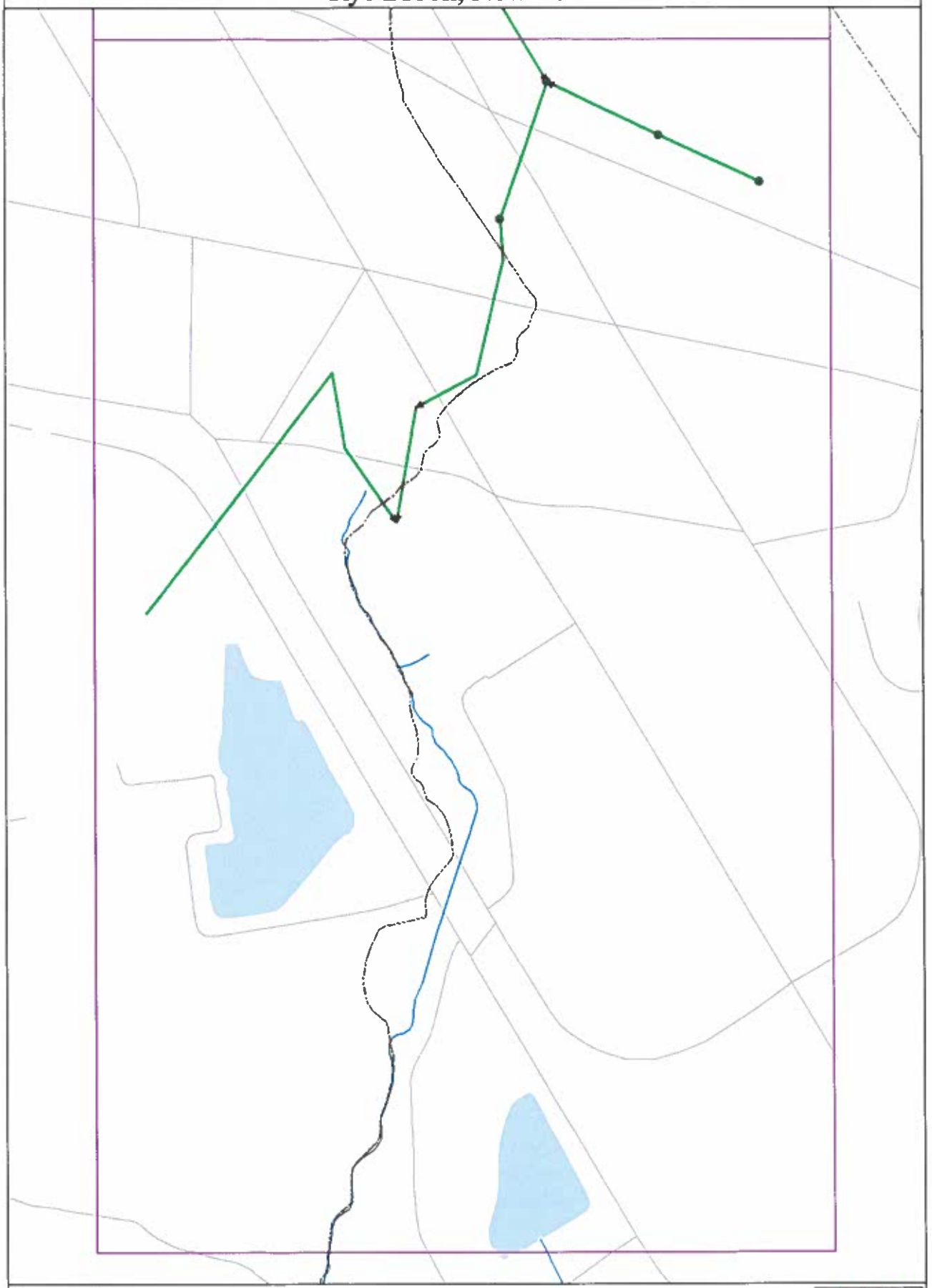


Rye Brook, New York



0 1,750 3,500 Feet

1 Inch = 3,598 feet

20 Year Plan - CCTV

Legend

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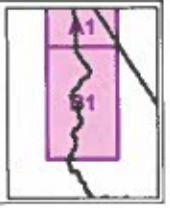
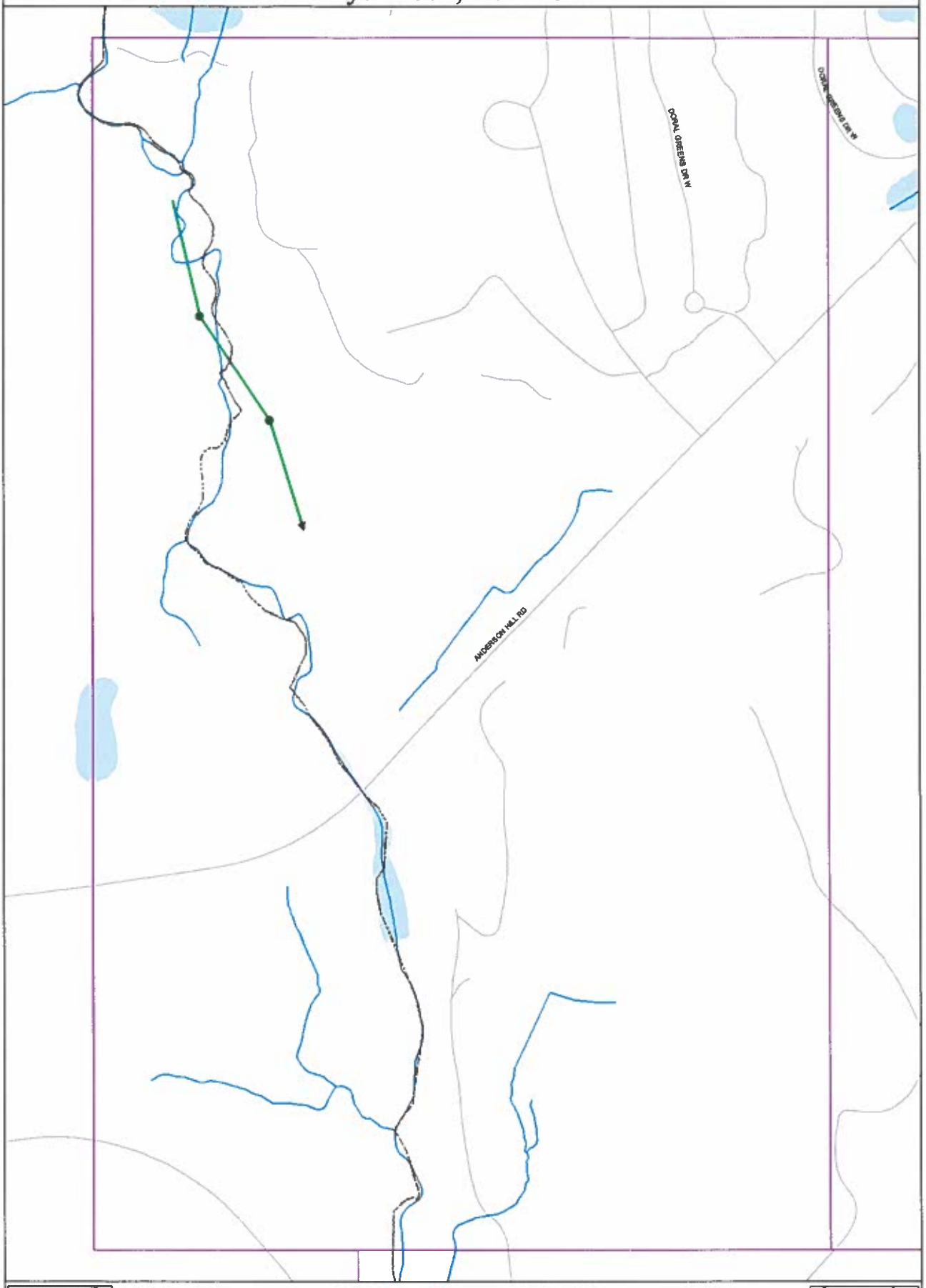


Rye Brook, New York



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20 Year Plan - CCTV

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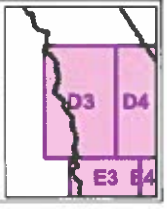
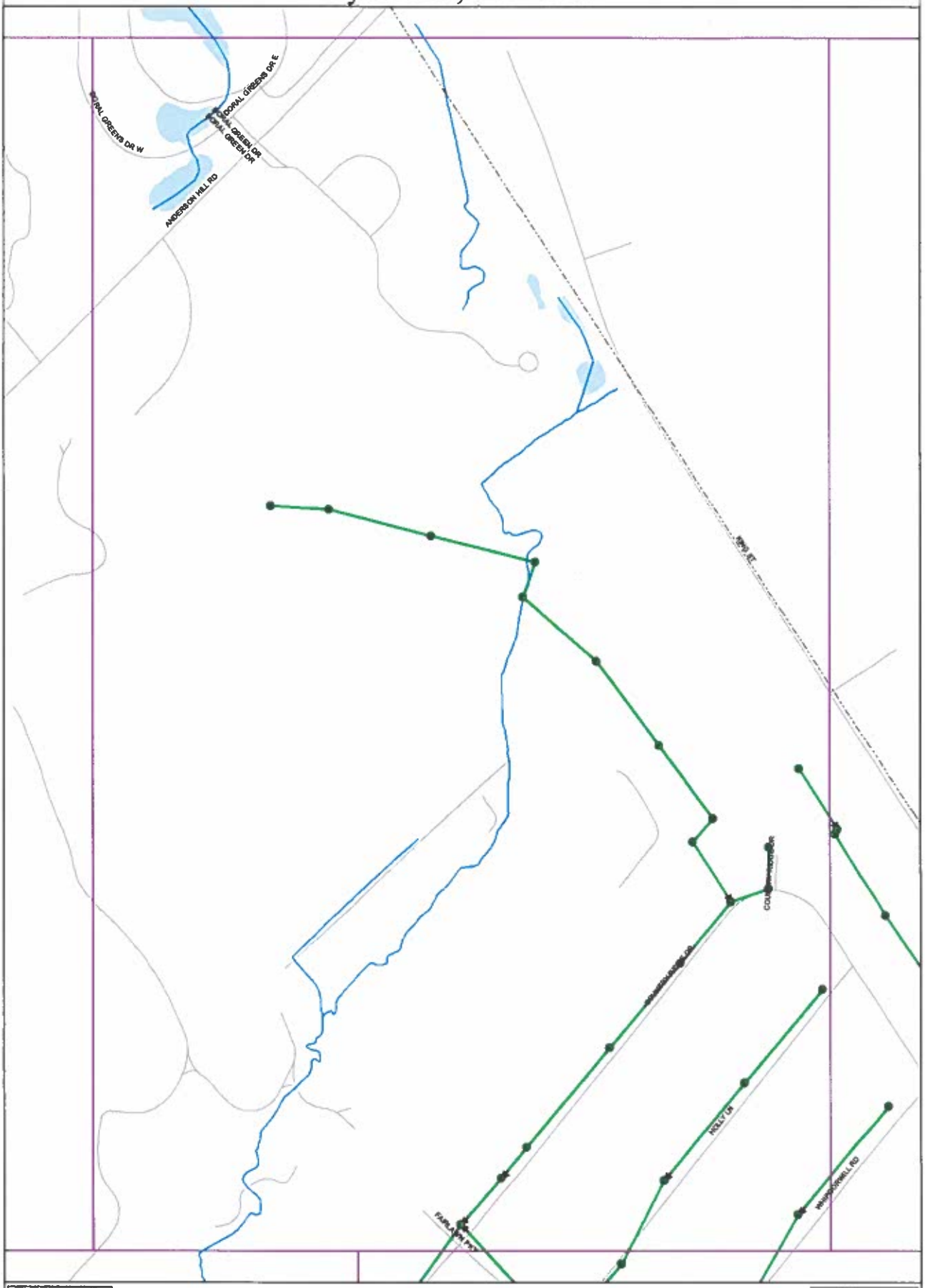


Rye Brook, New York



20 Year Plan - CCTV

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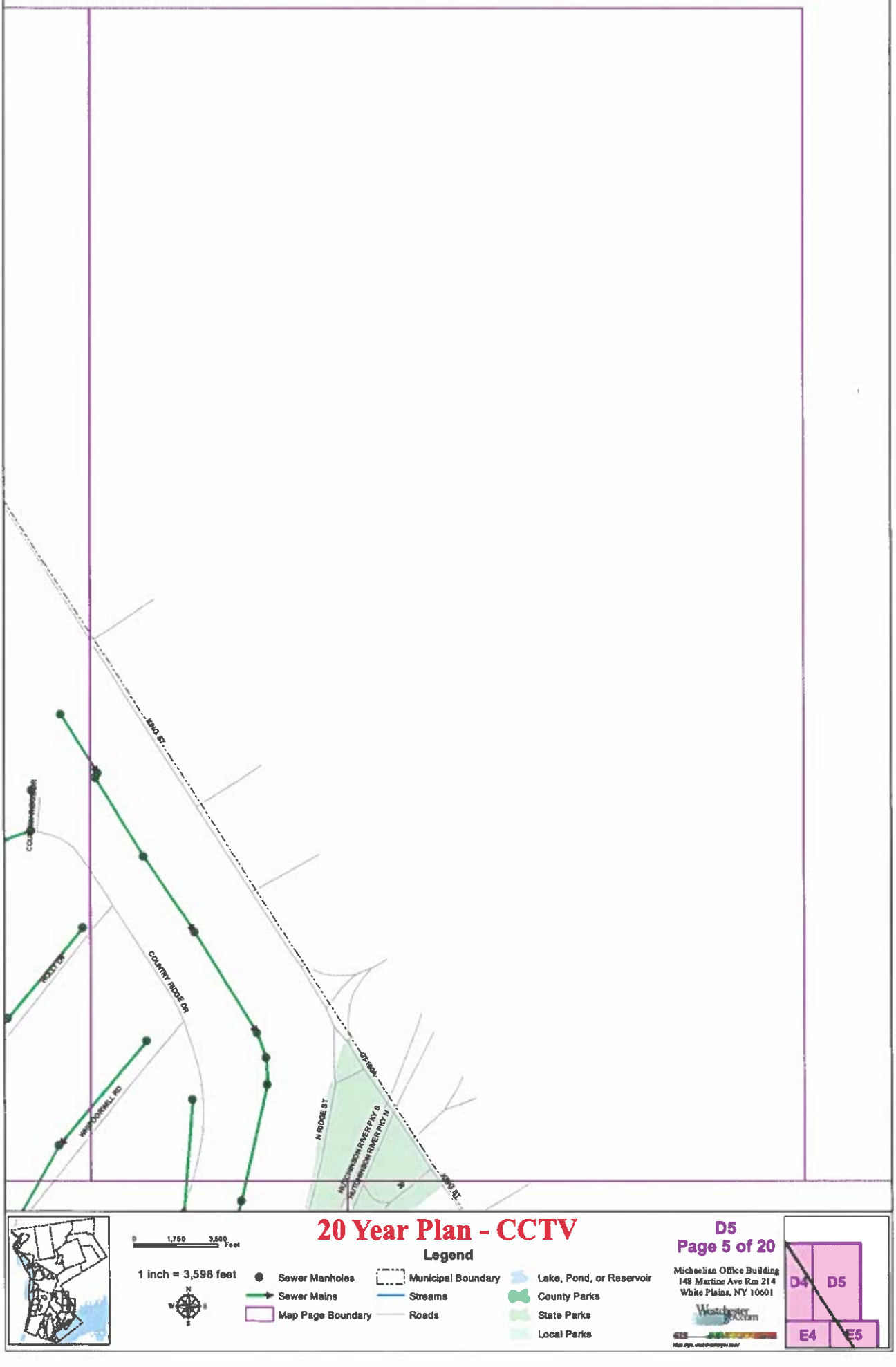
D3 D4 D5
E3 E4 E5

Rye Brook, New York



20 Year Plan - CCTV

Legend

D5
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Michaelian Office Building
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D4 D5 E4 E5

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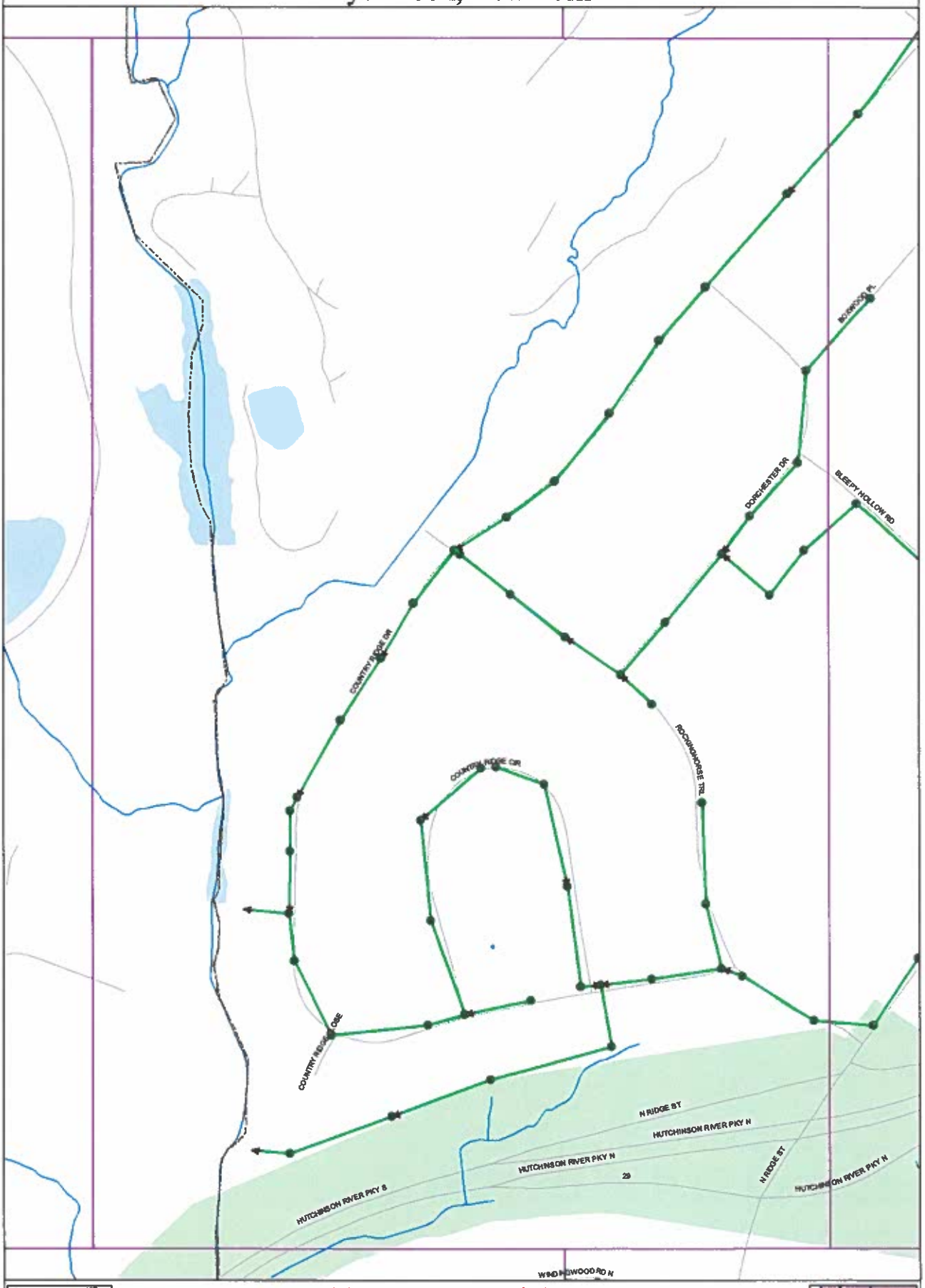

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20 Year Plan - CCTV

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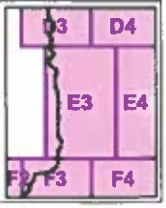
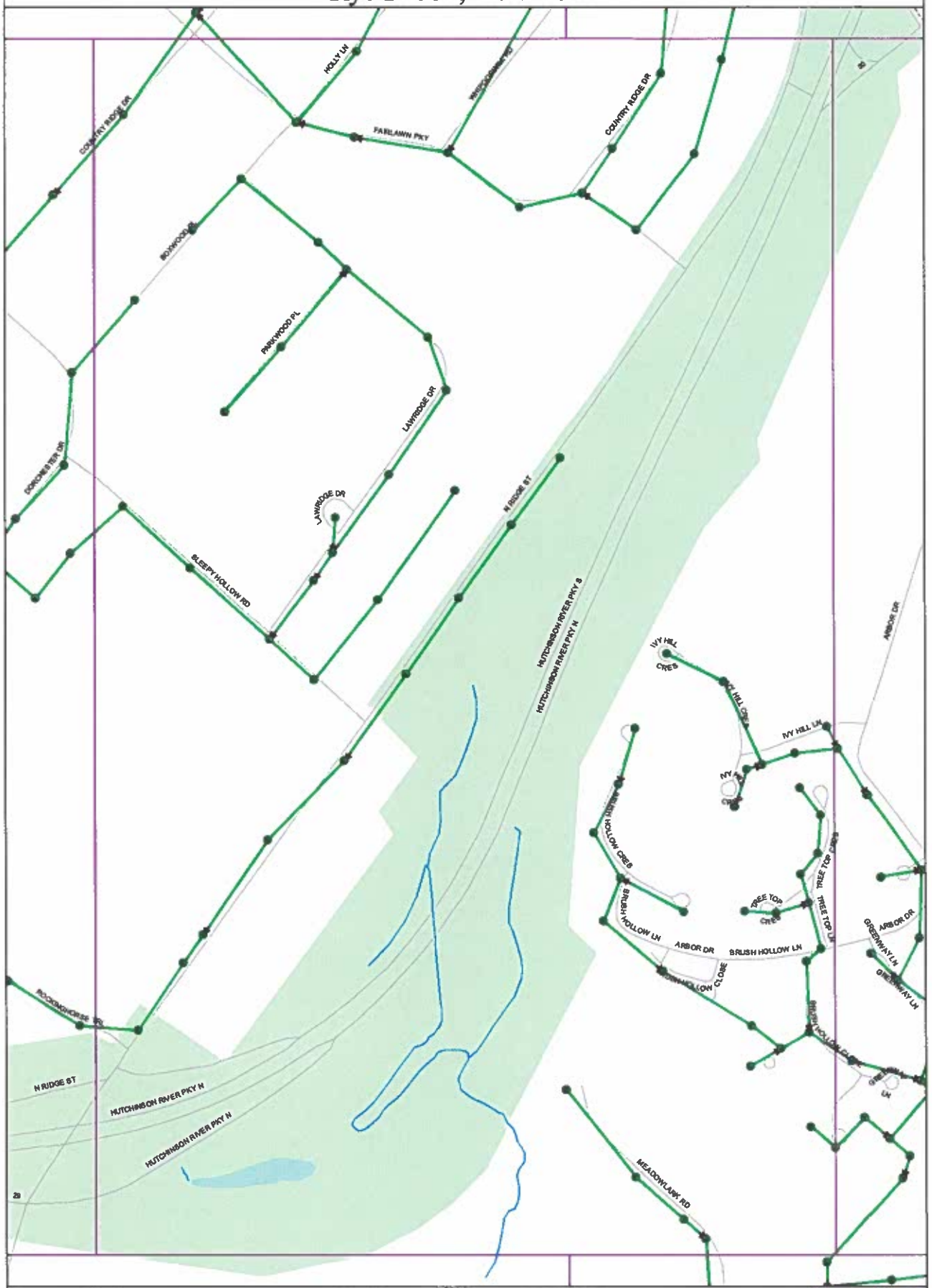


Rye Brook, New York



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20 Year Plan - CCTV

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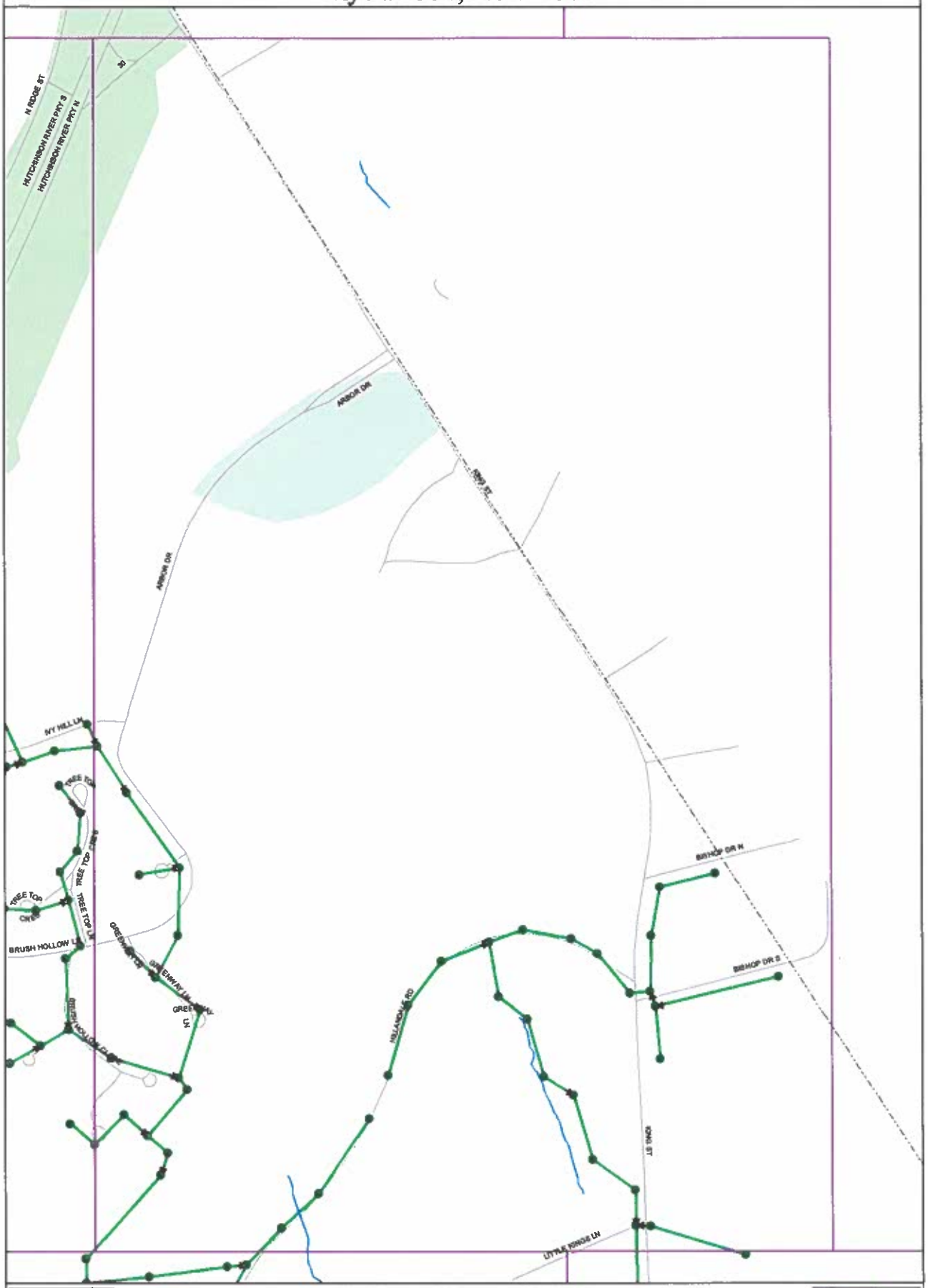
D3	D4	D5
E3	E4	E5
F3	F4	F5

Rye Brook, New York



20 Year Plan - CCTV

Legend

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Michaelian Office Building
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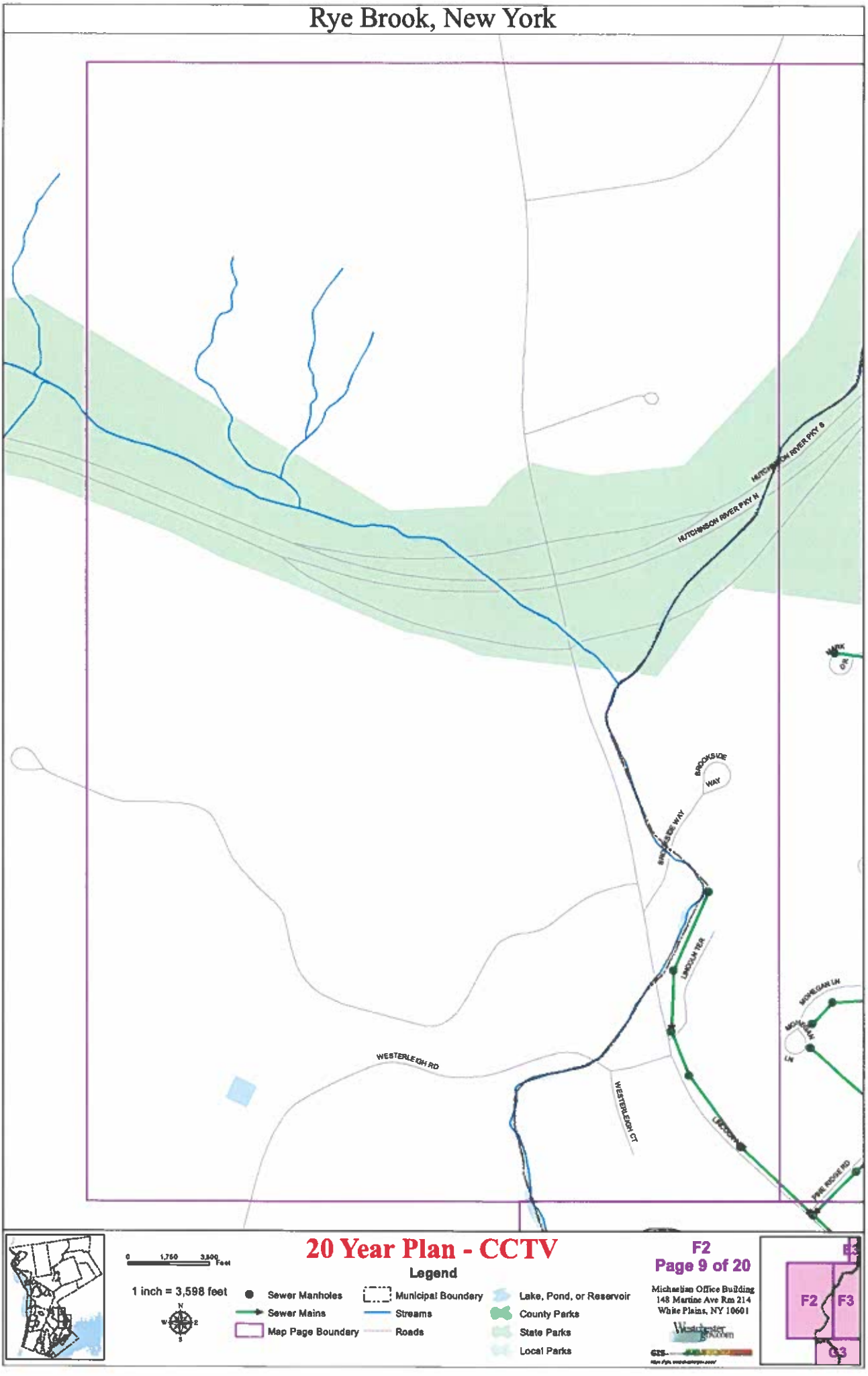
D4 D5 E4 E5 F4 F5 F6

Rye Brook, New York



20 Year Plan - CCTV

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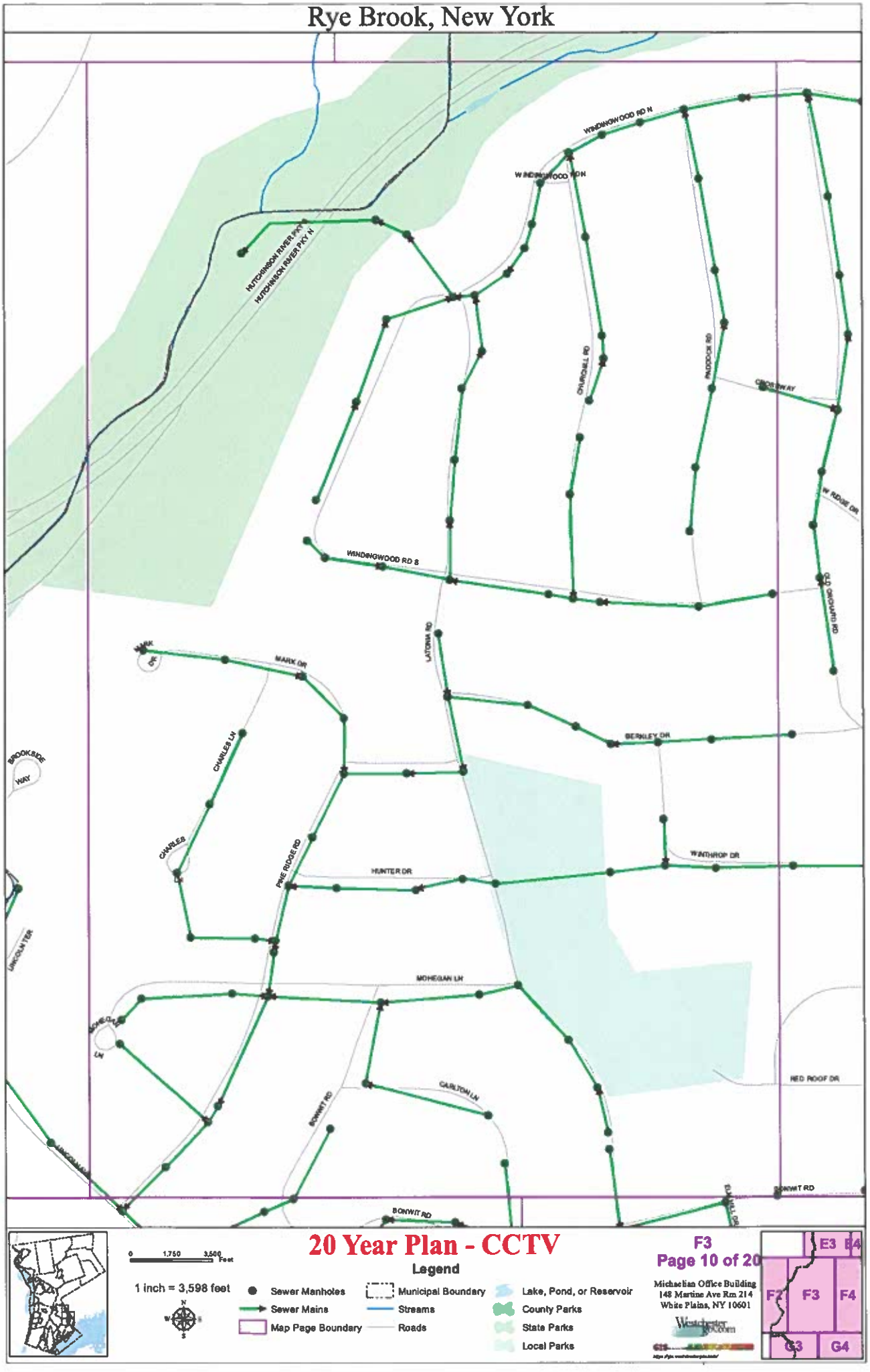
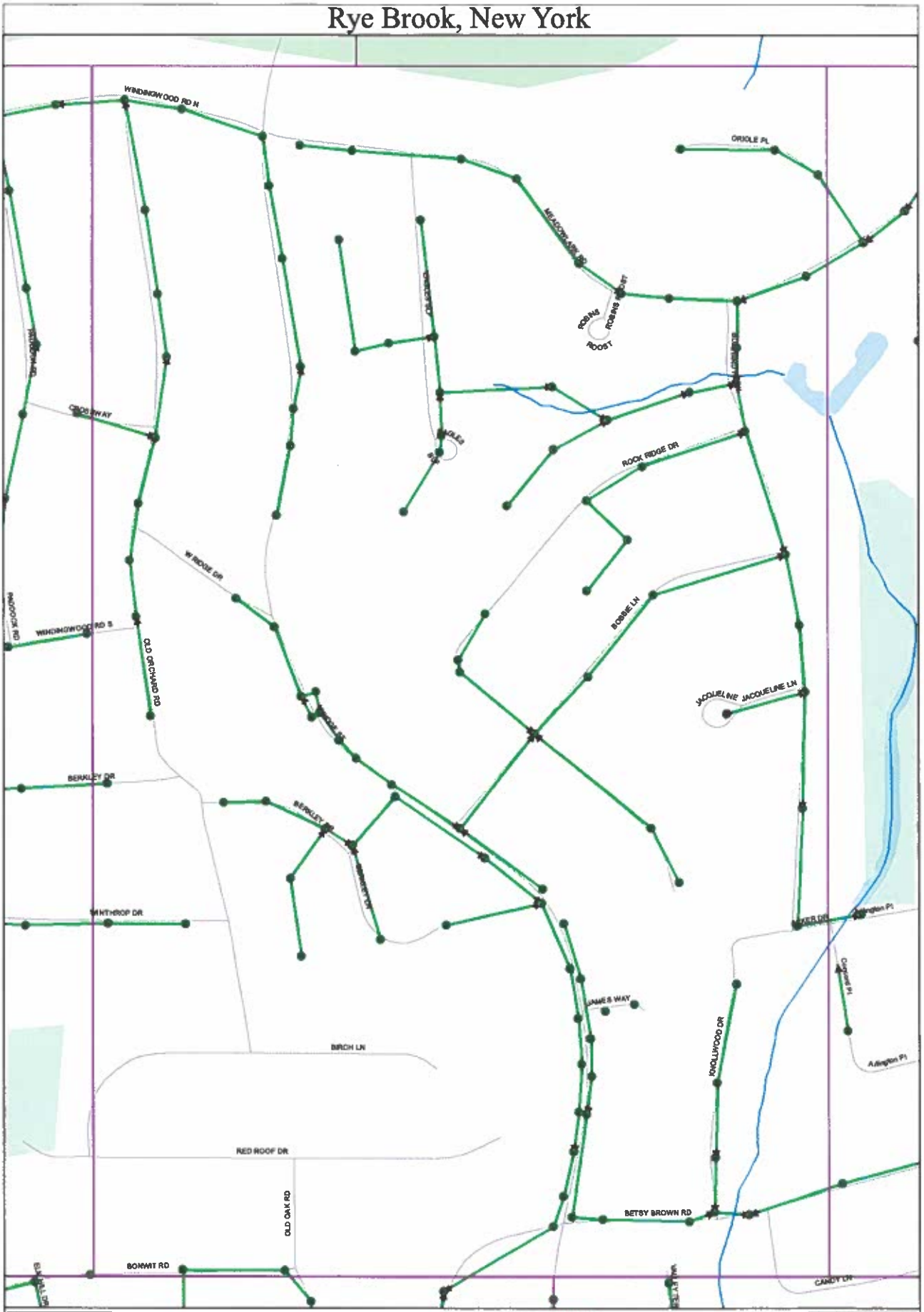
Rye Brook, New York



Rye Brook, New York



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20 Year Plan - CCTV

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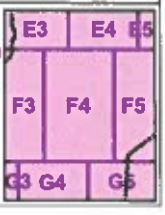
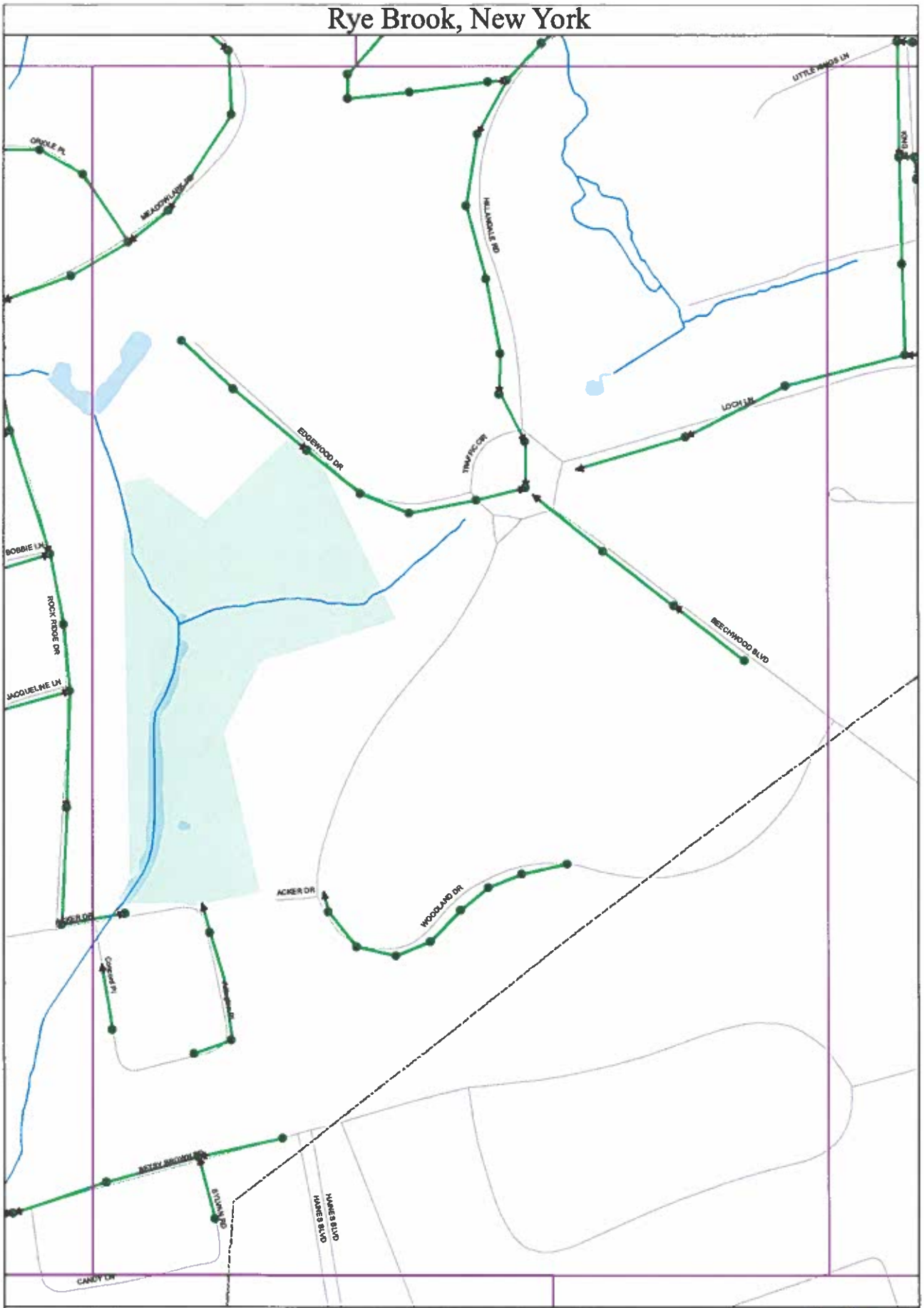


Rye Brook, New York



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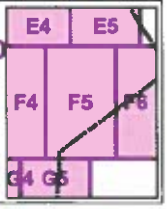
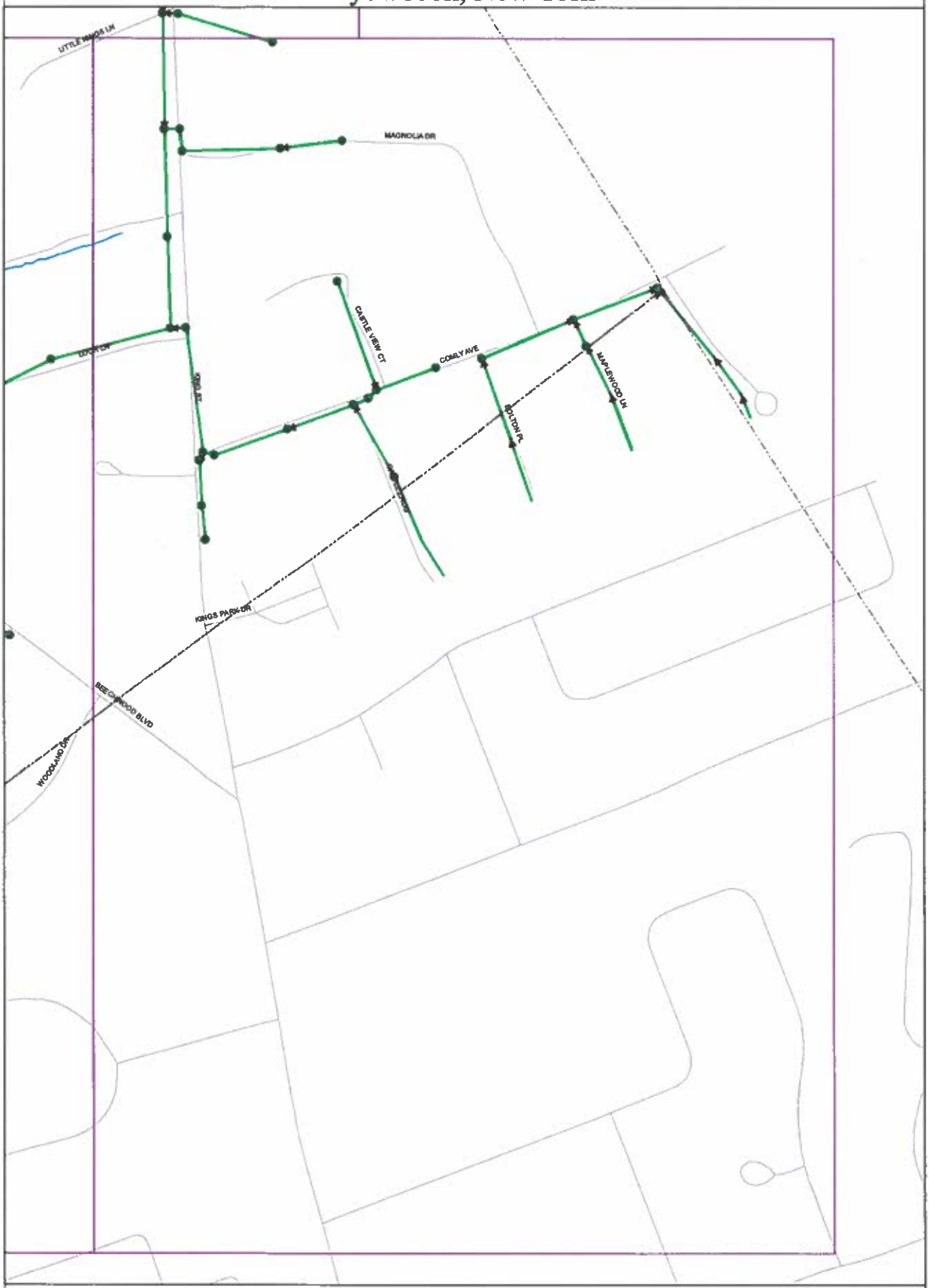


Rye Brook, New York



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20 Year Plan - CCTV

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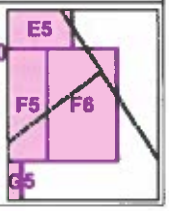
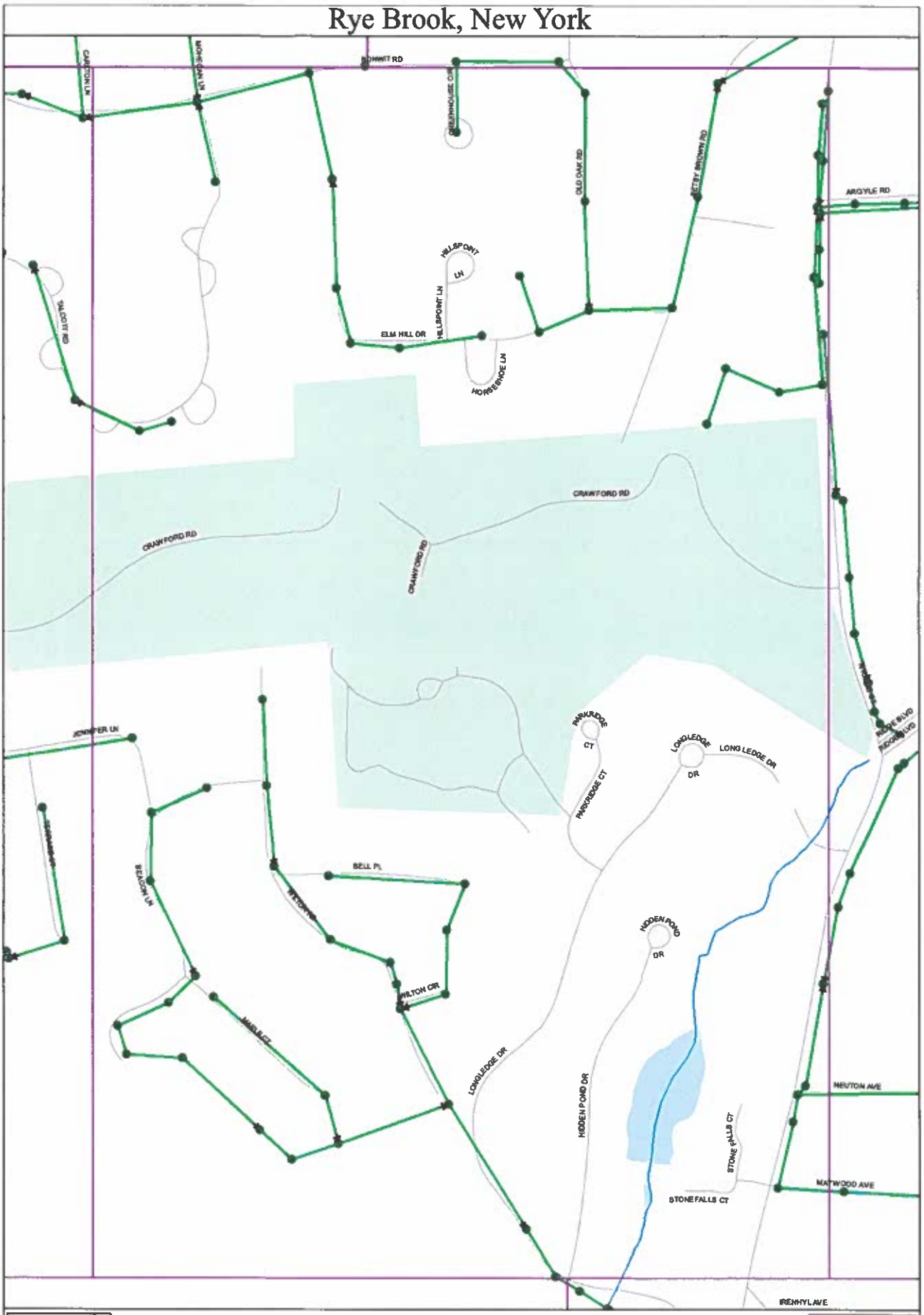


Rye Brook, New York



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20 Year Plan - CCTV

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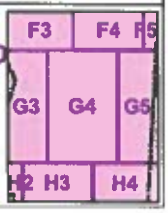

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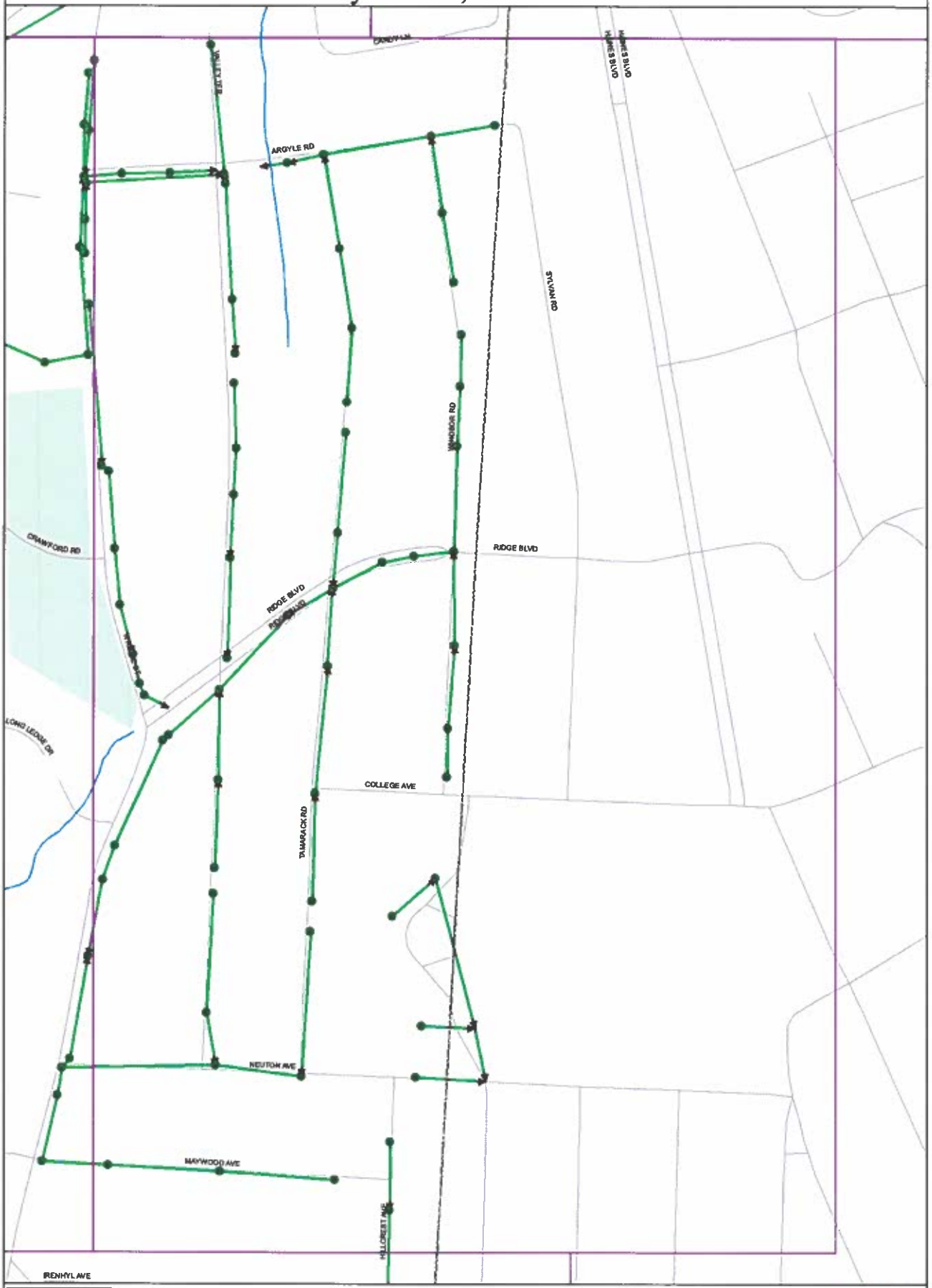

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N W E S

20 Year Plan - CCTV

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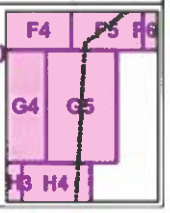

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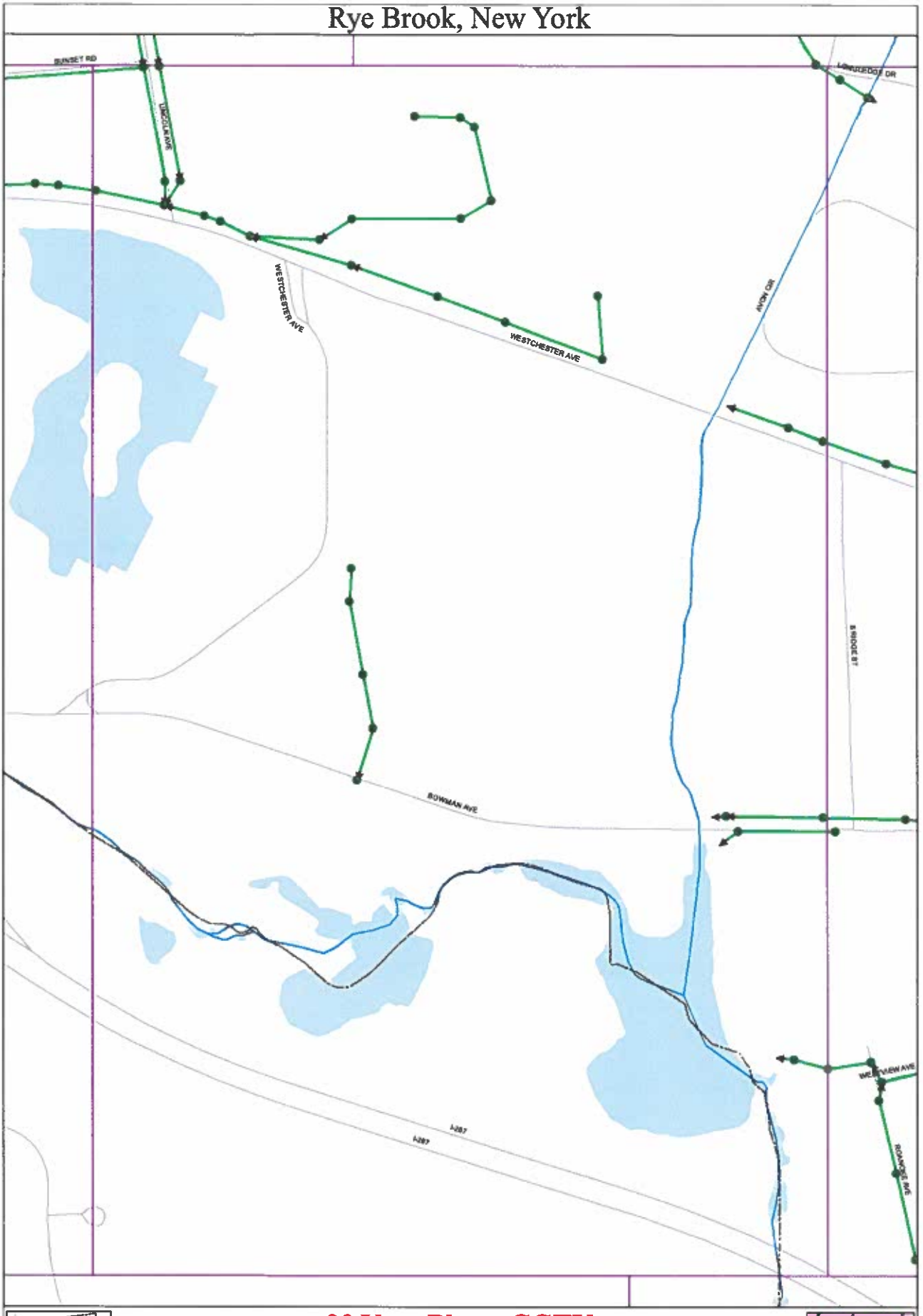

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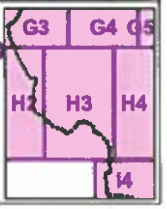
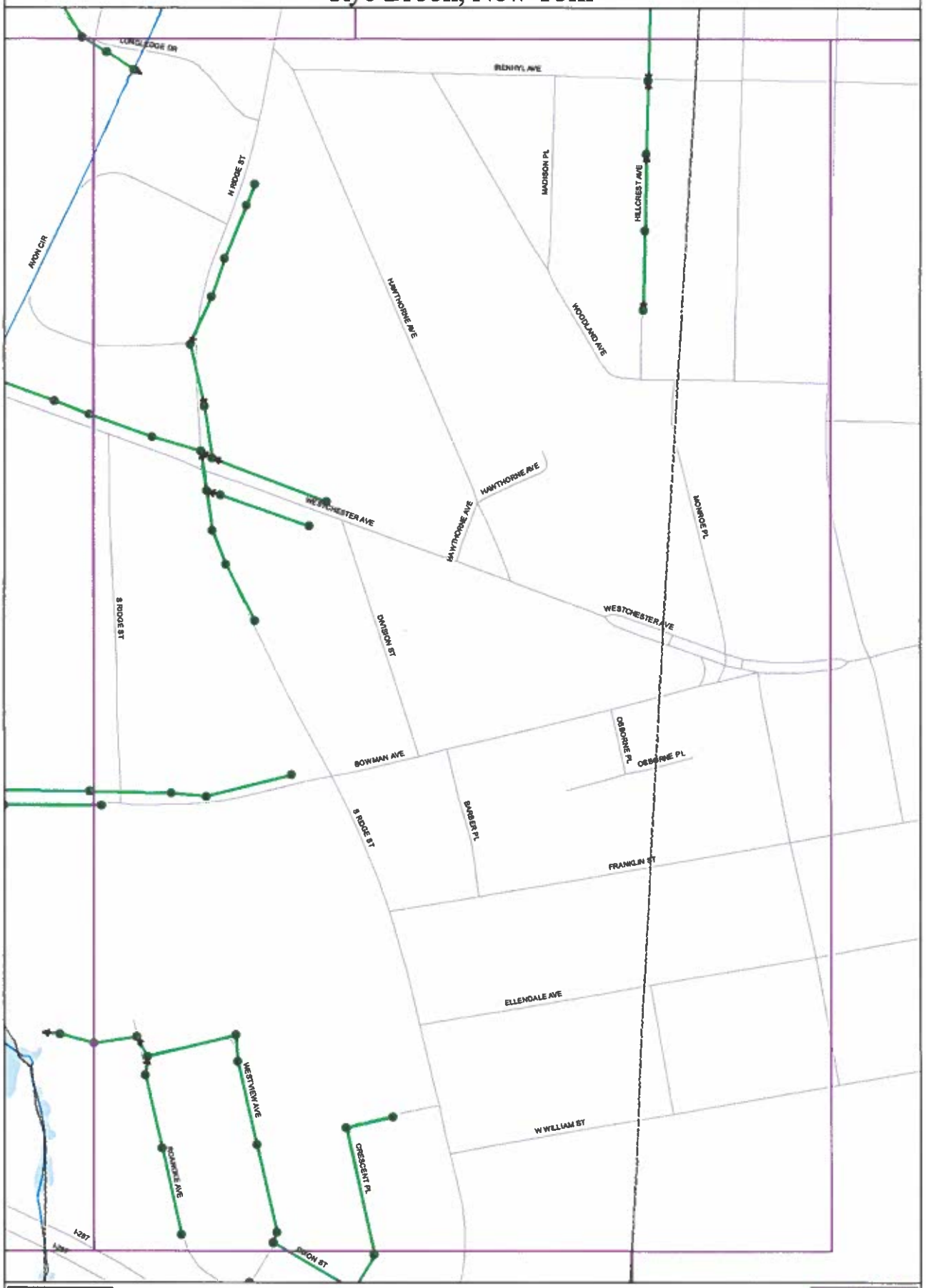


Rye Brook, New York



20 Year Plan - CCTV

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Michaelian Office Building
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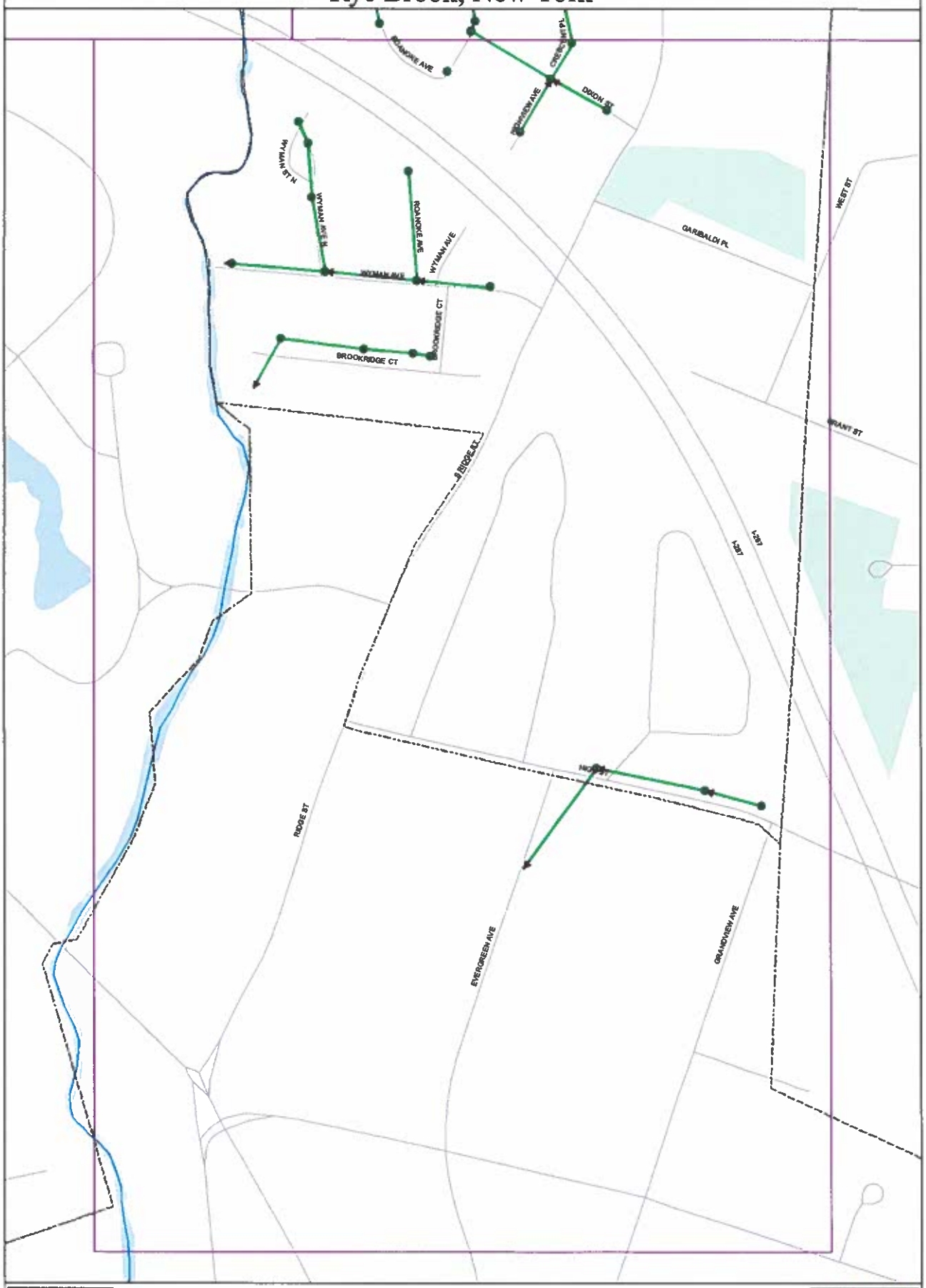
I4

Rye Brook, New York



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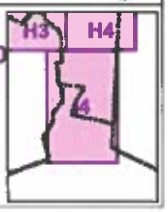

APPENDIX J

Repair Information Sheet (Through January 13, 2023)

Tracking sheet listed in this appendix is a tracking sheet utilized to document various work completed to the sewer system. Work as outlined under Appendix A Page 14 of the Consent Decree are itemized and completed in such table

SSES STUDY/REPORT IN FISCAL YEAR

Village of Rye Brook	2017	2018	2019	2020	2021	2022	2023	2024	2025
Linear miles of pipes identified for CCTV	1.827	7.58	15.56			7.04			
Number of manholes identified to be inspected	300	600				250			
Linear miles of pipe identified to be smoke tested	10.98	19.05				0			
Number of dye tests to be performed				5		0			
Number of pump stations inspected	2	2	2	2	2	2			
Number of public inflow sources identified for removal						In process			
Number of private inflow sources identified for removal	21		43			In process			
Linear miles of pipes identified for rehabilitation		0.45	2	0.95	0.804	in process			
Linear miles of pipe identified for full pipe replacements						in process			
Linear miles of pipe identified for full pipe lining						In process			
Number of pipe spot repairs identified		2		2		In process			
Number of manholes identified for rehabilitation		146	97			In process			
Estimate of I&I removed due to rehabilitation									
Number of manhole covers to be replaced			49			3			
Estimate of total money to be or actually spent to repair the collection system									

REPAIRS IN FISCAL YEAR

Village of Rye Brook	2017	2018	2019	2020	2021	2022	2023	2024	2025
Money spent to repair the system	181,775.00	$106,149.11	$729,582.67	$580,324.18	$409,419.75	$488,000			
Linear miles of pipe rehabilitated		1.3	1.82	0.95	2.21	in process			
Linear miles of pipe lined		1.3	1.82	0.95	2.21	in process			
Linear miles of pipe with full pipe replacement						in process			
Number of spot repairs performed with subsequent linear feet of pipes spot repaired		2		2 / 282		in process			
Number of manholes rehabilitated		117	291	52		in process			
Number of manhole covers replaced				60		3			
Number of public inflow sources removed				5					
Number of private inflow sources removed	21		43						
Estimate of I&I removed due to rehabilitation*	10,528		24,291	64,800					
Flow Monitoring # of locations	4				6				

Updated 2023-1-13

* Estimate listed is for Private inflow reduction and manholes replaced. Current monitoring is in place to evaluate overall system reduction in I/I due to work

2022-1-13 AI Engineers is reviewing all of the Videos and 3D Manhole Inspections and will have a work plan for March.
Current contract uis in place and Funds are availabe and work will proceed as soon as Green Mountain can put it on Schedule

Appendix G
Sanitary Sewer Work Tracking Form

Street Name	Date	D.S.M.H	U.S.M.H	PIPE LENGTH	Pipe Size	Quantity of Debris	Debris Type	Followup Action Needed	CCTV in feet	Crew
Valley Terrace 38 to 52	7/27/2021	62376	62378	250	8	0.5	Grit			MG, JO
Brook Lane 24 to 28	7/27/2021	61699	61700	110	8	1	grease like			MG, JO
Bonwit Road 33 to 36	7/27/2021	62632	61759	150	8	0				MG, JO
Arlington 6 to 7	7/28/2021	61044	62525	230	10	0				MG, JO
Rock Ridge Drive 40 to 47	7/28/2021	62488	62490	300	8	0				MG, JO
Fairlawn and Country Ridge 45	7/28/2021	62274	62248	500	8	1	grit			MG, JO
Garibaldi Grant 94 to 32	7/28/2021	90634	90740	330	8	20	roots and grit			MG, JO
Hawthorne Ave behind 4	7/30/2021	90804	90798	300	8	2	roots and grit			
Roanoke 36 to 44	7/30/2021	61658	61655	300	8	0				
Wyman Street 1A to 4	7/30/2021	61615	61616	300	8	0				
Acker Rock Ridge 58 to 64	7/30/2021	62466	62467	300	8	0				
Churchill Road 14 to 20	7/30/2021	62057	62055	300	8	0				
Churchill Road 12 to 14	7/30/2021	62058	62057	200		0				
Franklin Barber Inter	2/18/2022			300	8	0.5	grit			CL, MA, JO
Westchester to Brook Lane Hilton Hotel	2/18/2022			500	8	0				CL, MA, JO
Brook Lane 24 to 28	2/18/2022	61699	61700	300	8	1	grease and rags			CL, MA, JO
Edgewood 2	2/17/2022	62536	62543	500	8	0				CL, MA, JO
Valley Terrace 38 to 52	2/17/2022	62376	62378	250	8	0.5				CL, MA, JO
Churchill 9 to 17	2/17/2022	62058	62056	300	8	0				CL, MA, JO
Valley Terrace Int	2/17/2022	62376	62378	250	8	0.5				CL, MA, JO
Valley Terrac Inter to 49	2/17/2022	62377	62380	300	8	0				CL, MA, JO
Bonwit 33 to 36	2/22/2022	62633	62632	300	8	0				Cl, JO
Meadowlark 23	2/22/2022	0	62508	150	8	0				Cl, JO
Meadowlark and Bluebird	2/22/2022	62058	62059	300	8	1	grit			Cl, JO
35 Country Ridge Dr	3/3/2022	62280	62281	300	8	0				CL. MA
Country Ridge Dr 44	3/3/2022	62272	62274	380	8	1	grit			CL. MA
Country Ridge and Fairlawn	3/3/2022	62248	62272	450	8	1	grit			CL. MA
Country Ridge Drive Fairlawn	3/3/2022	0	62248	350	8	0.5				CL. MA
Churchill 12 to 14	3/2/2022	62056	62058	100	8	0				CL. MA
Garibaldi amd Grant	3/2/2022	90834	90341	280	8	1	grit			CL. MA
Roanoke Ave	3/2/2022	61658	61655	325	8	0				CL. MA
Acker Drive	3/2/2022	61041	61044	250	8	0				CL. MA
Dorchester and Country Ridge	3/4/2022	0	62242	380	8	0.5	grit			CL, JO
Country Ridge Drive and Rocking Horse	3/4/2022	0	62255	1200	8	0				CL, JO
Country Ridge Drive 33	9/14/2022	62267	62656	50	10	0				CL, TA
Magnolia 2	9/14/2022	61339	62926	250	8	0				CL, TA
Roanoke 44	9/14/2022	61655	61659	380	10	0				CL, TA
Edgewood 2	9/14/2022	62536	62543	508	8	0				CL, TA
Brook Lane 28 24	9/16/2022	61699	61700	300	8	1/2 gallon	grit			CL, TA
Meadowlark 23	9/16/2022	62492	62508	150	8	0				CL, TA
Boxwood 27 / Lawridge	9/28/2022	62225	62229	160	8	0				CL, JO
Dorchester / Lawridge 15 to inter	9/28/2022	62237	62229	750	8	0				CL, JO
Berkley 6 to 18	9/28/2022	61753	61799	700	8	0				CL, JO
Dorchester 5 to Inter to 19	9/30/2022	62215	62337	520	8	0				CL, JO
Dorchester 19 to Intersection Rockinghorse	9/30/2022	62213	62215	125	8	0				CL, JO
Magnolia 2	1/4/2023	61339	62926	250	8	0				CL, TA
Country Ridge Drive 33	1/4/2023	62267	62656	50	10	0				CL, TA

#M.H. Inspected

Total Length: 3570

Gallons Debris removed: 24.5

CCTV in Feet: