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MEMORANDUM

TO: Mayor David McFadden

FROM: Joseph M. Zongol, PE, NICET III

DATE: March 9, 2022

SUBJECT: Wee Wah Lake, Tuxedo Lake, and Pond 3 Trunk Sewer Investigation

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INTRODUCTION

The Village of Tuxedo Park owns and operates a Wastewater Treatment Plant (WWTP) and collection system that serves the residents within the Village. The collection system includes gravity trunk sewers that run along and within close proximity to the Village's three lakes: Tuxedo Lake, Upper Wee-Wah Lake (Pond 3), and Lower Wee-Wah Lake. Based on available information, the trunk sewers are constructed with different materials throughout the Village. These materials include cast iron, polyvinyl chloride (PVC), and vitrified clay (VCP). Over the years, upgrades to the trunk sewers surrounding the lakes have been implemented which include installation of Cured-in-Place Pipe (CIPP) lining and traditional dig and replacement of sewer pipes. The cast iron and PVC pipes are constructed with gasketed fittings for water tightness and, if installed correctly, CIPP lined pipes should be watertight as well. The VCP, which may be as much as 120 years old, typically has joints every 2 to 3 feet and were often installed as dry laid joints that are not watertight.

The Village periodically uses a consultant to analyze the water within its lakes. It has been reported that the samples recently obtained contained high levels of nutrients, in particular within Pond 3. The dry laid joints of the older VCP pipe have the potential to be a source of nutrients migrating to the lakes and or groundwater entering the sewer. In addition, the Village has excessive Infiltration and Inflow (I&I) into their sewer system and is required to reduce flow as a condition of their New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) permit. As such, the Village has asked that Weston & Sampson provide services for I&I quantification and remote visual inspection of the interior of the gravity trunk sewers constructed with VCP using flow isolation and Closed-Circuit Television (CCTV) inspection techniques. This was done in an effort to assess their condition and potential for inflow and/or infiltration. This approach consisted of a phased study that included the following within the target areas:

- Desktop Groundwater Evaluation
- Manhole Inspections
- Flow Isolation
- CCTV Inspection
- Pipe Cleaning and root cutting within the pipes.
- Summary report of the final results.

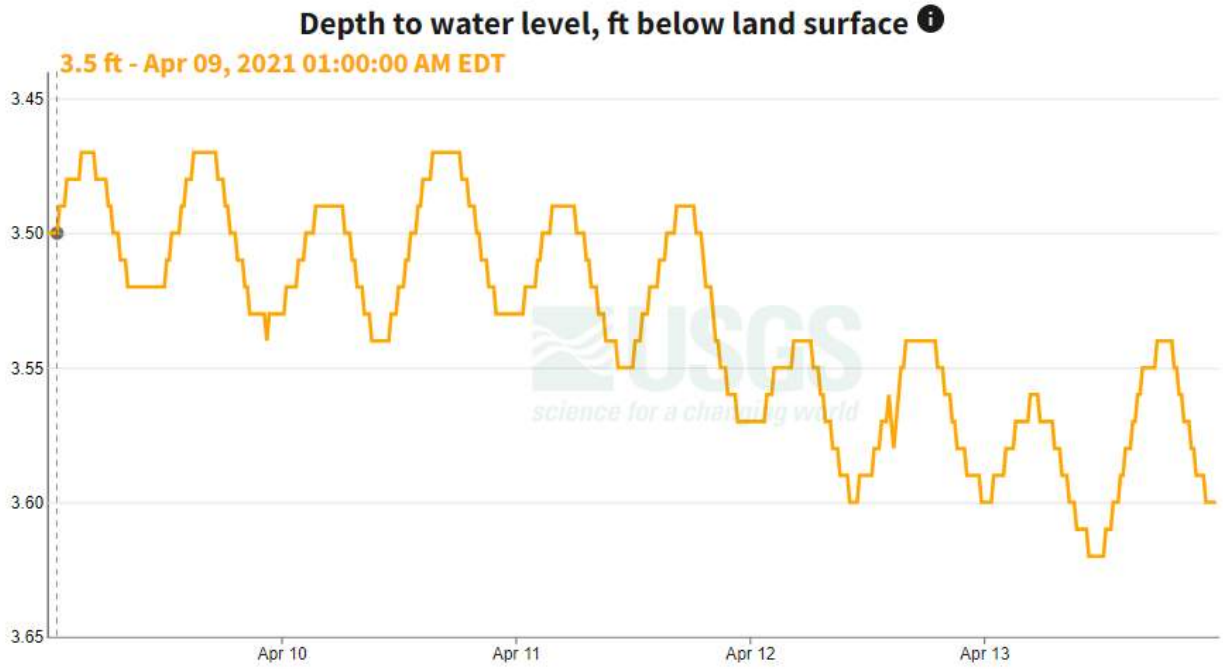
The Village of Tuxedo Park authorized Weston & Sampson on January 13, 2021 to conduct the desktop groundwater evaluation, manhole inspections, flow isolation, and summary report. It was decided that based on the results of the flow isolation, the Village may elect to conduct the CCTV inspection and pipe cleaning and root cutting at a later time.

DESKTOP GROUNDWATER EVALUATION

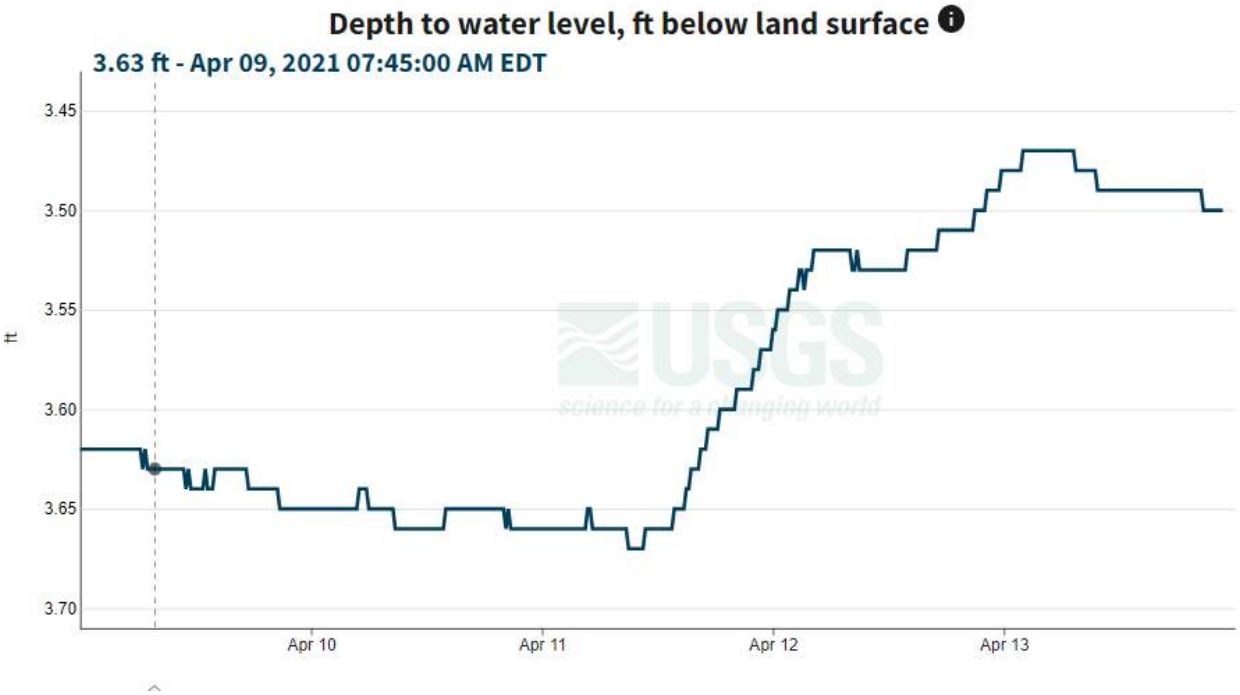
Using USGS seasonal groundwater maps, Weston & Sampson performed an evaluation of the historical seasonal groundwater conditions within the vicinity of the target sewers. This evaluation is intended to help understand, what, if any, seasonal groundwater has on the impact to infiltration into the trunk sewers, resulting in excessive flows to the WWTP. This evaluation also looked at the groundwater conditions during the evaluations to help understand water influent it may have on I/I during the testing. The results are as follows:

Based on USGS data from two monitoring wells in the area of Tuxedo Park ground water was found to be between 3.65 and 3.45 feet below the surface at the time of flow isolation.

Monitoring location 413428074085701 is associated with a WELL in ORANGE COUNTY, NEW YORK



Monitoring location 410207074270001 is associated with a WELL in MORRIS COUNTY, NEW JERSEY



The sanitary sewers are typically below 3.5 feet within the Village so they could likely have been under the influence of groundwater at the time of the flow isolation.

FLOW ISOLATION & MANHOLE INSPECTIONS

Prior to Flow Isolation, a preliminary reconnaissance was conducted to locate the manholes within the collection system target area. We conducted topside visual sanitary sewer manhole inspections on the target manholes that lie within target area during this preliminary reconnaissance. Manhole inspections were be documented using our iDataCollect technology with a custom-made manhole inspection form created specifically for this project. Information was logged on a field iPad and individual inspection reports were be created for each manhole. Our inspector also recorded the location of each manhole with the Village GPS data logger when possible if satellite connectivity could be obtained. Detailed Manhole Inspection reports are included as Appendix A of this memorandum.

Weston & Sampson utilized a sub-contractor to flow isolate the sewer lines to determine the contribution of Infiltration for each segment. This was accomplished by installing a pre-calibrated weir in the downstream manhole of each sewer segment while plugging the upstream manhole to determine the flow in the section. This process was used for 6-inch diameter and larger pipe. If a manhole was inaccessible, the nearest downstream manhole was used, allowing the entire upstream sewer segment to be measured. If the flows are deemed significant, over 4,000 gpd/in-mile, per EPA standards, we recommend that the sewer segment will be closed circuit televised (CCTV) as described in the next section. Flow isolation was be conducted between the hours of 11pm and 6am when domestic sewer use is typically minimal.

One round of Flow Isolation was performed, under the observation of Weston & Sampson staff. The ideal time for this work is in the spring when groundwater is typically at its highest. The during April of 2021, the manhole inspection and flow isolation work was conducted. Our crew, with the assistance of Village DPW staff, was able to

locate a number of manholes within the target sections, however many were not able to be found. The manholes were suspected to have been paved over, buried, or in differing locations than shown on the maps. In addition, many manholes contained metal surge plates to prevent sewer overflows. The Village DPW assisted in removing the rusted bolts and replacing them with new stainless-steel hardware for a number of these manholes so the flow isolation crew to gain access to conduct their work.

Working with the available located and un-plated manholes, flow isolation was conducted between the hours of 11pm and 6am when domestic sewer use is typically minimal.

Wee Wah Lake: Flow isolation for the Wee Wah Lake Trunk sewer which runs along Continental Road was conducted the night of April 9, 2021. The results of the flow isolation showed that the VCP within the Wee-Wah Lake Section on Continental Road had relatively low I&I (below the 4,000 GPD/In-Mi threshold, which is considered excessive). The results are summarized below.

Wee-Wah Lake Trunk Sewer							
Upstream Manhole	Downstream Manhole	Pipe Dia. (In.)	Pipe Material	Length (ft.)	Multi-Segment	Average Weir Reading (gpd)	GDP/IN-MI
East-0070	East-0060	10	VCP	253	NO	690.5	1,441
East-0060	East-0050	10	VCP	290	NO	899.5	1,638
East-0050	East-0040	10	VCP	304	NO	1,261.5	2,191
East-0040	East-0030	10	VCP	217	NO	1,261.5	3,069
East-0030	Esat-0030A	12	PVC	20	NO	86	1,892
East-0030A	East-0010	12	PVC	345	NO	6,387	**8,146**

The only section of pipe that was above the 4,000 gpd/in-mi threshold was the recently replaced PVC pipe within the Wee Wah Dam. We recommend the Village consider addressing this segment of pipe in future sewer rehabilitation projects. The complete flow isolation logs and location maps are included within Appendix B of this memorandum.

Pond 3: Flow isolation for the Pond 3 Trunk sewer which runs along West Lake Stable Road was conducted the night of April 13, 2021. We had limited access to manholes within the Pond 3 section but we able to locate the most upstream and downstream manholes. The results of the flow isolation showed that the VCP within the Pond 3 Section on Continental Road had relatively high I&I (above the 4,000 GPD/In-Mi threshold, which is considered excessive). The results are summarized below.

Pond 3 Trunk Sewer							
Upstream Manhole	Downstream Manhole	Pipe Dia. (In.)	Pipe Material	Length (ft.)	Multi-Segment	Average Weir Reading (gpd)	GDP/IN-MI
West-0260	West-0200	8	VCP	858	YES	52,385	**40,296**
West-0200	West-0190	8	VCP	112	NO	2,736	**16,123**
West-0190	West-0180	8	VCP	206	NO	6,387	**20,463**

The crew was unable to fully plug the upstream most manhole and a tributary manhole which skewed the flow isolation results, however there was significant enough flow measured to warrant further investigation. The complete flow isolation logs and location maps are included within Appendix B of this memorandum.

Tuxedo Lake: Flow isolation for the Tuxedo Lake Trunk sewer which runs along East Lake Road was conducted the night of April 13, 2021. The Tuxedo Lake section had some existing surcharge plates in place during the inspection. Most had bolts loosened but lids were difficult to pry off to gain access. Upon prying up the surcharge plates on two upstream manholes, water began filling the manhole, spraying through the gap in the plate and bench. The crew immediately pressed the plates back down and bolted them to prevent surcharge of the manhole. Crew worked its way downstream finding similar issues and realizing it impossible/improbable to be able to remove remaining surge plates. The crew then went to the most downstream manhole that was found within this section. The crew successfully opened the surcharge plate and pipe was approximately 90% full of flow with almost no capacity remaining at 4:00 am. The crew attempted to take a weir reading at this manhole, but the flow was going over the top of the weir. The results are summarized below.

Tuxedo Lake Trunk Sewer							
Upstream Manhole	Downstream Manhole	Pipe Dia. (In.)	Pipe Material	Length (ft.)	Multi-Segment	Average Weir Reading (gpd)	GDP/IN-MI
EAST-0860	EAST-0330	8	VCP	4410	YES	121,900	**18,244**

The crew was unable to fully plug the upstream and tributary manholes along this entire run of sewer which skewed the flow isolation results, however there was significant enough flow measured to warrant further investigation. The complete flow isolation logs and location maps are included within Appendix B of this memorandum.

While we were not able to isolate each manhole-to-manhole section for all three target areas, based on our inspectors' observations and information provided by the flow isolation subconsultant, Weston & Sampson recommended that Pond 3 and the Tuxedo Lake sections should be further investigated by use of CCTV inspection. Pond 3 was recommended for further investigation as recent occurrence of overflows have been suspected, roots have been seen within the accessible manholes and piping, and the manholes which were not able to be located are recommended to be found in the event future maintenance is necessary. Similarly, we recommended that the Tuxedo Lake section be further investigated to locate the missing manholes and try to identify the cause for the high flows seen within this section of pipe and so it can be further evaluated for blockages or other defects. Based on the flow isolation information and the relatively low I/I readings, it was our opinion that the investment of funds for further investigation at this stage of the process for the Wee-Wah Lake section is not necessary and no CCTV inspection was conducted.

CCTV INVESTIGATION

Weston & Sampson utilized a subcontractor to conduct a video survey investigation of the trunk sewers along the east side of Tuxedo Lake and west side of Pond 3. Investigation of the Tuxedo Lake sections were conducted on October 15th, 2021 and Pond 3 on November 2nd and 3rd, 2021. Target areas were identified during the prior flow isolation. The purpose of this investigation was to confirm/determine the size and type of pipe utilized in the construction of these sewers, identify sources of I/I, locate previously missing manholes, clean the pipes and remove roots and debris, as well as document any defects discovered.

Tuxedo Lake: The investigation along the east side of Tuxedo Lake targeted runs of pipe from MH East-0860 downstream to MH East-0330. CCTV survey of these lines concluded that pipe was 8" Cast Iron Pipe (CIP) and that it was in good structural condition, did not have any visible infiltration, no tree roots, and had minor tuberculation. The condition of this pipe was consistent with other areas of the system containing CIP. We were able to CCTV sections of the Tuxedo Lake trunk sewer. Access was limited due to a limited number of available manholes to access and the piping configuration which had bends within the lines that the camera could not pass. Based on our observations, the trunk sewer within all sections

we were able to access showed the pipe was constructed with cast iron pipe (contrary to the record mapping which showed clay tile pipe) which is typically gasketed and relatively free of I/I. While the bends we found, the tuberculation within the pipe (material buildup on the wall of the pipe), and unlocated manholes (paved or buried) are not desirable, since the purpose of this study was to identify infiltration and inflow, we concluded our investigation.

Pond 3: The target area of the west side of Pond 3 included pipe runs from MH West-0260 downstream to MH West-0180. CCTV survey showed a mix a Vitrified Clay Pipe (VCP) and Cast-Iron Pipe from MH West-0180 to MH West-0240. MH West-0180 to MH West-0190 was 8" vitrified clay pipe. There were roots in this pipe that were thick and were in almost every joint on the run. A few manhole bricks and other debris were found and removed from the sewer. There was no sign of active infiltration at the time of inspection however the presence of roots within the joints typically indicate that infiltration is likely. There is a hole in the pipe 67LF downstream of MH WEST-0190 where the pipe had failed but roots have held back the soils and there was no obstruction of flow other than roots at the time of inspection. Although there wasn't any clear evidence of major contribution of I/I from these separated joints, holes, and cracks, they should still be repaired in order to prevent future potential I/I and for structural support of the pipe. Also, significant flow was observed coming from Sub-Basin 17 via a blind connection within the trunk sewer. The blind connection should be modified, and Sub-Basin 17 should be evaluated. Detailed CCTV inspection reports are included as Appendix C of this memorandum.

SUMMARY AND RECOMMDENDATIONS:

Based on the investigations conducted for this study Weston & Sampson offers the following summary and recommendations:

Wee Wah Lake: The results of the flow isolation showed that the VCP within the Wee Wah Lake Section on Continental Road had relatively low I&I (below the 4,000 GPD/In-Mi threshold, which is considered excessive). The PVC pipe that runs through the Wee Wah Dam should be evaluated during future sewer pipe remediation projects and is proposed to be remediated, if warranted. No further action is recommended for the VCP section at this time, however the sewer should be monitored and inspected on a regular basis in accordance with the EPA compliant Operation & Maintenance plan developed for the Village's sanitary sewer collection system developed in November 2021.

Tuxedo Lake: Based on the sections of sanitary sewer along the trunk line we were able to access, it appears this sewer is constructed with cast iron pipe which is typically gasketed and mostly free of I/I. The sewer contains blind bends and connections (junctions and bends not within manholes). This is not a recommended practice as it may lead to blockages and makes it difficult to maintain. These should be addressed over time. We also recommend that the Village DPW over time jet these lines and locate missing structures as part of regular O&M practices as this would be more cost effective than continuing that work under this contract.

Pond 3: CCTV survey showed a mix a Vitrified Clay Pipe (VCP) and Cast-Iron Pipe from MH West-0180 to MH West-0240. MH West-0180 to MH West-0190 was 8" vitrified clay pipe. There were roots in this pipe that were thick and were in almost every joint on the run. We recommend that all sections of VCP be remediated through Cured-in-Place Pipe lining approaches to prevent future root growth. We also recommend that the manholes be rehabilitated with cementitious mortar and have sealed, gasketed frames and grates installed to prevent sanitary sewer overflows. Finally, the first two sections of Sub-Basin 17 should be CIPP lined, their manholes rehabilitated, and a manhole should be installed at the trunk sewer to eliminate the blind connection to allow for DPW access for maintenance purposes.

Recommended Next Steps:

The remaining funds from the SSES Phase 3, Sub-Basins 2 & 10 Construction contract may be able to be used to remediate the recommended sanitary sewer segments identified within this memorandum. To use these funds, Weston & Sampson will have to update the Engineering Report previously submitted to the New York State Environmental Facilities Corporation (NYSEFC) for the SSES project to gain approval to use funds for this project. We will provide an estimate for this report update effort. Out of the remaining $156,627.00 within the SSES Construction Contract with Arold Construction, using their bid prices and quotes obtained from Arold for work not included within their original bid, we anticipate the proposed remediation work to cost approximately $144,500.

Trunk Sewer Rehabilitation Cost Estimate					
Item No.	Description	Units	Unit Price	Est. Quantity	Total Amount
1	6-Inch CIPP Liner	LF	$65.00	102	$6,630.00
2	8-Inch CIPP Liner	LF	$50.00	922	$46,100.00
3	Cementitious Manhole Lining	EA	$2,500.00	12	$30,000.00
4	Precast Manholes, Frames and Covers	EA	$12,500.00	1	$12,500.00
5	Additional Crushed Stone	CY	$100.00	0	-
6	8" PVC Sewer Pipe	LF	$133.00	0	-
7	Cut, Grout, & Cap Existing Sewer Main	CY	$1,500.00	0	-
8	Grout Lateral Connection	EA	$2,725.00	1	$2,725.00
9	Demolition of Existing Sanitary Sewer Manholes	EA	$3,000.00	0	-
10	Demolition of Existing Sanitary Sewer Pipe	LF	$50.00	0	-
11	Mobilization	LS	$21,502.00	6,114	$6,884.00
12	Replace Manhole Frame & Grate	EA	$3,000.00	0	-
13	Change Order No. 3 - Additional Labor	LS	$7,888.00	0	-
14	Change Order No. 4 – Bypass Pumping	LS	$3,500	1	$3,500.00
15	Change Order No. 4 - 12" CIPP	LF	$105.00	345	$36,225.00
					$144,564.00

Appendix D includes maps of the proposed remediation areas.

APPENDIX A

Manhole Inspection Reports

VOTP Manhole Inspections

Record: 25	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-23*
Inspector	*James Salaway*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*04-0010MMH*
Location	*E Lake Road*
Street or Easement	*Other*
Other Manhole Location	*Yard up from road approx. 75'*
Surface Type	*Grass*
MH Inspection Status	*Inspected*
Number of Inverts	*2*
Signs of Surcharge	*NO*
Surge Plate	*NO*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*None*
MH cleaning Required	*NO*
MH Grease Visible	*NO*
Roots	*NO*
Steps	*NO*
Steps Condition	*Needs Repair*
Chimney Material	*Brick*
Chimney Condition	*Needs Repair*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Needs Repair*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Location Coordinates (click white space below to obtain)	*Latitude:41.200460,* *Longitude:-74.201818,* *Altitude:178.572979,* *Speed:0.025725,* *Horizontal Accuracy:3.736518,* *Vertical Accuracy:7.478966,* *Time:03/23/2021 10:54:07 EDT*

Invert Details	
Clock Position	*12:00*
Rim To Invert	*3' 6"*
Pipe Size	*6"*
Pipe Material	*VCP*

Invert Details	
Clock Position	*6:00*
Rim To Invert	*3' 7"*
Pipe Size	*6"*
Pipe Material	*VCP*

Invert Details	
Clock Position	*10:00*
Rim To Invert	*3' 4"*
Pipe Size	*Other*
Other Pipe Size	*Lateral 4"*
Pipe Material	*VCP*

Photo(s)	
Photo	
Photo Description	*Cover and frame*

Photo(s)	
Photo	
Photo Description	*Inverts, house lateral at 10 oclock*

VOTP Manhole Inspections

Record: 49	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-23*
Inspector	*James Salaway*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*17-0020MMH*
Location	*W Lake Stable Road*
Street or Easement	*Other*
Other Manhole Location	*Off road next to wall*
Surface Type	*Other*
Other Surface Type	*Dirt mound*
MH Inspection Status	*Inspected*
Number of Inverts	*2*
Signs of Surcharge	*NO*
Surge Plate	*NO*
Cover Type	*Other*
Other Cover Type	*Standard small*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
MH Cover Elevation At Grade	*Above Grade*
Cover Inflow	*None*
MH cleaning Required	*NO*
MH Grease Visible	*NO*
Roots	*NO*
Steps	*NO*
Steps Condition	*Needs Repair*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Additional Comments	*Used before for meterimg*
Location Coordinates (click white space below to obtain)	*Latitude:41.211793,* *Longitude:-74.201117,* *Altitude:164.237681,* *Speed:0.022814,* *Horizontal Accuracy:5.229168,* *Vertical Accuracy:12.675818,* *Time:03/23/2021 14:03:46 EDT*

Invert Details	
Clock Position	*12:00*
Rim To Invert	*5'5"*
Pipe Size	*4"*
Pipe Material	*VCP*

Invert Details	
Clock Position	*6:00*
Rim To Invert	*5'6"*
Pipe Size	*6"*
Pipe Material	*VCP*

Photo(s)	
Photo	
Photo Description	*Cover and frame*

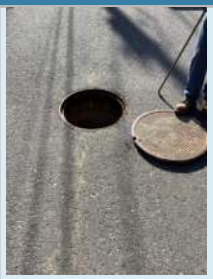
Photo(s)	
Photo	
Photo Description	*Invert*

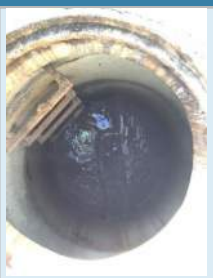
VOTP Manhole Inspections

Record: 19	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-23*
Inspector	*James Salaway*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*East-0010*
Location	*Wee Wah Road*
Street or Easement	*Street*
Surface Type	*Asphalt*
MH Inspection Status	*Inspected*
Number of Inverts	*2*
Signs of Surcharge	*NO*
Surge Plate	*NO*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*None*
MH cleaning Required	*NO*
MH Grease Visible	*NO*
Roots	*NO*
Steps	*YES*
Steps Condition	*Satisfactory*
Chimney Material	*Precast*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*None*
Cone Material	*Precast*
Cone Condition	*Satisfactory*
Cone Infiltration	*None*
Wall Material	*Precast*
Wall Condition	*Satisfactory*
Wall Infiltration	*None*
Bench and Invert Material	*Concrete*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*Minimal*
Additional Comments	*Flow is high in bench, seems to flow over entire base*
Location Coordinates (click white space below to obtain)	*Latitude:41.219662,* *Longitude:-74.191674,* *Altitude:153.580240,* *Speed:0.004530,* *Horizontal Accuracy:3.582748,* *Vertical Accuracy:9.254294,* *Time:03/23/2021 09:49:02 EDT*

Invert Details	
Clock Position	*12:00*
Rim To Invert	*7' 5"*
Pipe Size	*12"*
Pipe Material	*PVC*

Invert Details	
Clock Position	*6:00*
Rim To Invert	*7' 6"*
Pipe Size	*12"*
Pipe Material	*PVC*

Photo(s)	
Photo	
Photo Description	*Cover and frame*

Photo(s)	
Photo	
Photo Description	*Inverts*

VOTP Manhole Inspections

Record: 62	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-17*
Inspector	*Anton Patton*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*EAST-0030*
Location	*Continental Road*
Street or Easement	*Street*
Surface Type	*Asphalt*
MH Inspection Status	*Inspected*
Number of Inverts	*4*
Signs of Surcharge	*NO*
Surge Plate	*NO*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
Riser Rings	*Other*
Other Number of Riser Rings	*0*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*None*
MH cleaning Required	*NO*
MH Grease Visible	*NO*
Steps	*NO*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*Minimal*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*Minimal*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Location Coordinates (click white space below to obtain)	

VOTP Manhole Inspections

Record: 68	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-17*
Inspector	*Anton Patton*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*EAST-0040*
Location	*Continental Road*
Street or Easement	*Street*
Surface Type	*Asphalt*
MH Inspection Status	*Inspected*
Number of Inverts	*3*
Signs of Surcharge	*NO*
Surge Plate	*NO*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
Riser Rings	*Other*
Other Number of Riser Rings	*0*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*None*
MH cleaning Required	*YES*
MH Grease Visible	*NO*
Roots	*NO*
Steps	*NO*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Needs Repair*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Location Coordinates (click white space below to obtain)	

Photo(s)	
Photo	
Photo Description	

Photo(s)	
Photo	
Photo Description	

VOTP Manhole Inspections

Record: 71	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-17*
Inspector	*Anton Patton*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*EAST-0050*
Location	*Continental Road*
Street or Easement	*Street*
Surface Type	*Asphalt*
MH Inspection Status	*Inspected*
Number of Inverts	*3*
Signs of Surcharge	*NO*
Surge Plate	*NO*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
Riser Rings	*Other*
Other Number of Riser Rings	*0*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*None*
MH cleaning Required	*YES*
MH Grease Visible	*NO*
Roots	*NO*
Steps	*NO*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Additional Comments	*Lateral invert blocked with soil. No flow, appears abandoned*
Location Coordinates (click white space below to obtain)	

Photo(s)	
Photo	
Photo Description	

Photo(s)	
Photo	
Photo Description	

VOTP Manhole Inspections

Record: 74	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-17*
Inspector	*Anton Patton*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*EAST-0070*
Location	*Continental Road*
Street or Easement	*Street*
Surface Type	*Asphalt*
MH Inspection Status	*Inspected*
Number of Inverts	*2*
Signs of Surcharge	*NO*
Surge Plate	*NO*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
Riser Rings	*Other*
Other Number of Riser Rings	*0*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*None*
MH cleaning Required	*NO*
MH Grease Visible	*NO*
Roots	*NO*
Steps	*NO*
Chimney Material	*Brick*
Chimney Condition	*Needs Repair*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Needs Repair*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Needs Repair*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Needs Repair*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Additional Comments	*Brick showing signs of aging.*
Location Coordinates (click white space below to obtain)	

Photo(s)	
Photo	
Photo Description	

Photo(s)	
Photo	
Photo Description	

VOTP Manhole Inspections

Record: 16	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-23*
Inspector	*James Salaway*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*East-0100*
Location	*Wee Wah Road*
Street or Easement	*Street*
Surface Type	*Asphalt*
MH Inspection Status	*Inspected*
Number of Inverts	*4*
Signs of Surcharge	*NO*
Surge Plate	*NO*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*None*
MH cleaning Required	*NO*
MH Grease Visible	*NO*
Roots	*NO*
Steps	*NO*
Steps Condition	*Needs Repair*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Location Coordinates (click white space below to obtain)	*Latitude:41.219695,* *Longitude:-74.191704,* *Altitude:152.146018,* *Speed:0.006775,* *Horizontal Accuracy:4.018524,* *Vertical Accuracy:10.102773,* *Time:03/23/2021 09:37:34 EDT*

Invert Details	
Clock Position	*2:00*
Rim To Invert	*7' 6"*
Pipe Size	*4"*
Pipe Material	*VCP*

Invert Details	
Clock Position	*12:00*
Rim To Invert	*7' 10"*
Pipe Size	*8"*
Pipe Material	*VCP*

Invert Details	
Clock Position	*9:00*
Rim To Invert	*8'*
Pipe Size	*10"*
Pipe Material	*VCP*

Invert Details	
Clock Position	*6:00*
Rim To Invert	*8' 2"*
Pipe Size	*10"*
Pipe Material	*VCP*

Photo(s)	
Photo	
Photo Description	*Cover and frame*

Photo(s)	
Photo	
Photo Description	*Inverts*

VOTP Manhole Inspections

Record: 22	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-23*
Inspector	*James Salaway*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*East-0430*
Location	*E Lake Road*
Street or Easement	*Other*
Other Manhole Location	*Inside fence on property 20' from lake*
Surface Type	*Grass*
MH Inspection Status	*Inspected*
Number of Inverts	*2*
Signs of Surcharge	*NO*
Surge Plate	*YES*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*Minimal*
MH cleaning Required	*NO*
MH Grease Visible	*NO*
Roots	*NO*
Steps	*NO*
Steps Condition	*Needs Repair*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Additional Comments	*Surcharge plate, can't see bench or inverts*
Location Coordinates (click white space below to obtain)	*Latitude:41.199782,* *Longitude:-74.202174,* *Altitude:176.038877,* *Speed:0.003404,* *Horizontal Accuracy:4.320988,* *Vertical Accuracy:9.439337,* *Time:03/23/2021 10:44:29 EDT*

Invert Details	
Clock Position	*12:00*
Rim To Invert	*6'*
Pipe Size	*8"*
Pipe Material	*VCP*

Invert Details	
Clock Position	*6:00*
Rim To Invert	*6'*
Pipe Size	*8"*
Pipe Material	*VCP*

Photo(s)	
Photo	
Photo Description	*Cover and frame*

Photo(s)	
Photo	
Photo Description	*Invert and surcharge plate*

VOTP Manhole Inspections

Record: 7	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-17*
Inspector	*Anton Patton*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*East-0440*
Location	*E Lake Road*
Street or Easement	*Easement*
Surface Type	*Other*
Other Surface Type	*Slate Path*
MH Inspection Status	*Inspected*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
Riser Rings	*Other*
Other Number of Riser Rings	*0*
MH Cover Elevation At Grade	*At Grade*
MH cleaning Required	*YES*
Additional Comments	*Manhole filled almost to top with silty mud/muck. Could not see enough for thorough inspection.*
Location Coordinates (click white space below to obtain)	

Photo(s)	
Photo	
Photo Description	

Photo(s)	
Photo	
Photo Description	

VOTP Manhole Inspections

Record: 10	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-17*
Inspector	*Anton Patton*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*East-0450*
Location	*E Lake Road*
Street or Easement	*Easement*
Surface Type	*Grass*
MH Inspection Status	*Inspected*
Signs of Surcharge	*NO*
Surge Plate	*YES*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
Riser Rings	*Other*
Other Number of Riser Rings	*0*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*Minimal*
MH cleaning Required	*YES*
MH Grease Visible	*NO*
Roots	*YES*
Steps	*NO*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*Minimal*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*Minimal*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*Minimal*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Additional Comments	*Filled with 2' of water.*
Location Coordinates (click white space below to obtain)	

Photo(s)	
Photo	
Photo Description	

Photo(s)	
Photo	
Photo Description	

VOTP Manhole Inspections

Record: 28	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-23*
Inspector	*James Salaway*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*East-0460*
Location	*E Lake Road*
Street or Easement	*Other*
Other Manhole Location	*Dequestashia property 15' off lake*
Surface Type	*Grass*
MH Inspection Status	*Inspected*
Number of Inverts	*2*
Signs of Surcharge	*NO*
Surge Plate	*YES*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*Minimal*
MH cleaning Required	*YES*
MH Grease Visible	*NO*
Roots	*YES*
Steps	*NO*
Steps Condition	*Needs Repair*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Additional Comments	*Surcharge plate, can't see bench and invert*
Location Coordinates (click white space below to obtain)	*Latitude:41.198479,* *Longitude:-74.202272,* *Altitude:173.346052,* *Speed:0.055341,* *Horizontal Accuracy:3.873283,* *Vertical Accuracy:8.198738,* *Time:03/23/2021 11:30:38 EDT*

Invert Details	
Clock Position	*12:00*
Rim To Invert	*3' 7"*
Pipe Size	*10"*
Pipe Material	*VCP*

Invert Details	
Clock Position	*6:00*
Rim To Invert	*3' 8"*
Pipe Size	*10"*
Pipe Material	*VCP*

Photo(s)	
Photo	
Photo Description	*Cover and frame*

Photo(s)	
Photo	
Photo Description	*Inverts/surcharge plate*

VOTP Manhole Inspections

Record: 31	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-23*
Inspector	*James Salaway*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*East-0470*
Location	*E Lake Road*
Street or Easement	*Other*
Other Manhole Location	*Burke backyard in brush 30' from lake*
Surface Type	*Grass*
MH Inspection Status	*Inspected*
Number of Inverts	*2*
Signs of Surcharge	*NO*
Surge Plate	*YES*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*None*
MH cleaning Required	*YES*
MH Grease Visible	*NO*
Roots	*YES*
Steps	*NO*
Steps Condition	*Needs Repair*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*Minimal*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Additional Comments	*Surcharge plate can't see inverts*
Location Coordinates (click white space below to obtain)	*Latitude:41.197912,* *Longitude:-74.202650,* *Altitude:175.604614,* *Speed:0.012688,* *Horizontal Accuracy:4.875705,* *Vertical Accuracy:11.101611,* *Time:03/23/2021 11:46:13 EDT*

Invert Details	
Clock Position	*12:00*
Rim To Invert	*3' 8"*
Pipe Size	*10"*
Pipe Material	*VCP*

Invert Details	
Clock Position	*12:00*
Rim To Invert	*3' 9"*
Pipe Size	*10"*
Pipe Material	*VCP*

Photo(s)	
Photo	
Photo Description	*Cover and frame*

Photo(s)	
Photo	
Photo Description	*Surchage plate/inverts*

VOTP Manhole Inspections

Record: 34	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-23*
Inspector	*James Salaway*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*East-0480*
Location	*E Lake Road*
Street or Easement	*Other*
Other Manhole Location	*Burke backyard open yard 25' from lake*
Surface Type	*Grass*
MH Inspection Status	*Inspected*
Number of Inverts	*2*
Signs of Surcharge	*NO*
Surge Plate	*YES*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*Minimal*
MH cleaning Required	*NO*
MH Grease Visible	*NO*
Roots	*NO*
Steps	*NO*
Chimney Material	*Brick*
Chimney Condition	*Needs Repair*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Needs Repair*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Needs Repair*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Additional Comments	*Surcharge plate, can't see inverts*
Location Coordinates (click white space below to obtain)	*Latitude:41.197450, Longitude:-74.203203, Altitude:173.144448, Speed:0.022388, Horizontal Accuracy:3.864647, Vertical Accuracy:9.966428, Time:03/23/2021 11:52:29 EDT*

Invert Details	
Clock Position	*12:00*
Rim To Invert	*4’ 6”*
Pipe Size	*10”*
Pipe Material	*VCP*

Invert Details	
Clock Position	*6:00*
Rim To Invert	*4’ 7”*
Pipe Size	*10”*
Pipe Material	*VCP*

Photo(s)	
Photo	
Photo Description	*Cover and photo*

Photo(s)	
Photo	
Photo Description	*Surcharge plate/inverts*

VOTP Manhole Inspections

Record: 37	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-23*
Inspector	*James Salaway*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*East-500*
Location	*E Lake Road*
Street or Easement	*Other*
Other Manhole Location	*Between burke and brick house, in woods*
Surface Type	*Grass*
MH Inspection Status	*Inspected*
Number of Inverts	*3*
Signs of Surcharge	*NO*
Surge Plate	*YES*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*None*
MH cleaning Required	*YES*
MH Grease Visible	*NO*
Roots	*YES*
Steps	*NO*
Steps Condition	*Needs Repair*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Additional Comments	*Surcharge plate, can't see inverts*
Location Coordinates (click white space below to obtain)	*Latitude:41.196621,* *Longitude:-74.203644,* *Altitude:174.405518,* *Speed:0.006142,* *Horizontal Accuracy:4.738896,* *Vertical Accuracy:11.637528,* *Time:03/23/2021 12:08:51 EDT*

Invert Details	
Clock Position	*11:00*
Rim To Invert	*5'*
Pipe Size	*6"*
Pipe Material	*VCP*

Invert Details	
Clock Position	*2:00*
Rim To Invert	*5'*
Pipe Size	*10"*
Pipe Material	*VCP*

Invert Details	
Clock Position	*6:00*
Rim To Invert	*5' 1"*
Pipe Size	*10"*
Pipe Material	*VCP*

Photo(s)	
Photo	
Photo Description	*Cover and frame*

Photo(s)	
Photo	
Photo Description	*Surcharge plate/inverts*

VOTP Manhole Inspections

Record: 55

Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-23*
Inspector	*James Salaway*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*East-0560*
Location	*E Lake Road*
Street or Easement	*Other*
Other Manhole Location	*Next to driveway bridge*
Surface Type	*Grass*
MH Inspection Status	*Could not open*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
MH Cover Elevation At Grade	*Above Grade*
Cover Inflow	*None*
Location Coordinates (click white space below to obtain)	*Latitude:41.195103,* *Longitude:-74.204000,* *Altitude:172.762012,* *Speed:0.035716,* *Horizontal Accuracy:4.789531,* *Vertical Accuracy:11.096655,* *Time:03/23/2021 15:16:53 EDT*

Photo(s)

Photo	
Photo Description	*Cover*

VOTP Manhole Inspections

Record: 52	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-23*
Inspector	*James Salaway*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*East-1160*
Location	*E Lake Road*
Street or Easement	*Other*
Other Manhole Location	*Cindy booth house*
Surface Type	*Grass*
MH Inspection Status	*Inspected*
Number of Inverts	*4*
Signs of Surcharge	*NO*
Surge Plate	*NO*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*None*
MH cleaning Required	*NO*
MH Grease Visible	*NO*
Roots	*YES*
Steps	*NO*
Steps Condition	*Needs Repair*
Chimney Material	*Brick*
Chimney Condition	*Needs Repair*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Needs Repair*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Needs Repair*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Location Coordinates (click white space below to obtain)	*Latitude:41.203997, Longitude:-74.201384, Altitude:185.169987, Speed:0.009490, Horizontal Accuracy:4.900740, Vertical Accuracy:12.775071, Time:03/23/2021 15:02:21 EDT*

Invert Details	
Clock Position	*10:00*
Rim To Invert	*4'3"*
Pipe Size	*4"*
Pipe Material	*PVC*

Invert Details	
Clock Position	*12:00*
Rim To Invert	*4'3"*
Pipe Size	*4"*
Pipe Material	*VCP*

Invert Details	
Clock Position	*2:00*
Rim To Invert	*4'3"*
Pipe Size	*8"*
Pipe Material	*VCP*

Invert Details	
Clock Position	*6:00*
Rim To Invert	*4'6"*
Pipe Size	*8"*
Pipe Material	*VCP*

Photo(s)	
Photo	
Photo Description	*Cover and frame*

Photo(s)	
Photo	
Photo Description	*Inverts*

VOTP Manhole Inspections

Record: 77	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-17*
Inspector	*Anton Patton*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*EAST-0340*
Location	*E Lake Road*
Street or Easement	*Easement*
Surface Type	*Other*
Other Surface Type	*Loose small stone, parking lot*
MH Inspection Status	*Inspected*
Number of Inverts	*2*
Signs of Surcharge	*NO*
Surge Plate	*YES*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
Riser Rings	*Other*
Other Number of Riser Rings	*0*
MH Cover Elevation At Grade	*Below Grade*
Cover Inflow	*None*
MH cleaning Required	*YES*
Chimney Material	*Brick*
Cone Material	*Brick*
Cone Condition	*Needs Repair*
Cone Infiltration	*Heavy*
Wall Material	*Brick*
Bench and Invert Material	*Brick*
Additional Comments	*Unable to complete survey of manhole due to being full of water. Surge plate working and stopping inflow from reaching sewer main. There is a hole in the cone just below the frame on the east side allowing stone and water freely into the structure.*
Location Coordinates (click white space below to obtain)	

Photo(s)	
Photo	
Photo Description	

Photo(s)	
Photo	
Photo Description	

VOTP Manhole Inspections

Record: 65	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-17*
Inspector	*Anton Patton*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*VIL-0100*
Location	*Wee Wah Road*
Street or Easement	*Street*
Surface Type	*Asphalt*
MH Inspection Status	*Inspected*
Number of Inverts	*4*
Signs of Surcharge	*NO*
Surge Plate	*NO*
Cover Type	*Standard*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
Riser Rings	*Other*
Other Number of Riser Rings	*0*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*None*
MH cleaning Required	*NO*
MH Grease Visible	*NO*
Roots	*NO*
Steps	*NO*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Location Coordinates (click white space below to obtain)	

Photo(s)	
Photo	
Photo Description	

Photo(s)	
Photo	
Photo Description	

VOTP Manhole Inspections

Record: 40	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-23*
Inspector	*James Salaway*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*West-0180*
Location	*W Lake Stable Road*
Street or Easement	*Other*
Other Manhole Location	*Brick house corner near chimney*
Surface Type	*Grass*
MH Inspection Status	*Inspected*
Number of Inverts	*2*
Signs of Surcharge	*NO*
Surge Plate	*NO*
Cover Material	*Cast Iron*
Cover Condition	*Other*
Other Cover Condition	*Small*
Frame Material	*Cast Iron*
Frame Condition	*OK*
MH Cover Elevation At Grade	*Below Grade*
Cover Inflow	*None*
MH cleaning Required	*YES*
MH Grease Visible	*NO*
Roots	*YES*
Steps	*NO*
Steps Condition	*Needs Repair*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Additional Comments	*8' invert*
Location Coordinates (click white space below to obtain)	*Latitude:41.212488,* *Longitude:-74.199158,* *Altitude:160.767673,* *Speed:0.009911,* *Horizontal Accuracy:4.568089,* *Vertical Accuracy:10.028342,* *Time:03/23/2021 08:27:23 EDT*

Invert Details	
Clock Position	*10:00*
Rim To Invert	*6' 10"*
Pipe Size	*8"*
Pipe Material	*VCP*

Invert Details	
Clock Position	*6:00*
Rim To Invert	*7'*
Pipe Size	*8"*
Pipe Material	*VCP*

Photo(s)	
Photo	
Photo Description	*Cover and frame*

Photo(s)	
Photo	
Photo Description	*Invert, outgoing at 6 oclock*

VOTP Manhole Inspections

Record: 13	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-17*
Inspector	*Anton Patton*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*West-0190*
Location	*W Lake Stable Road*
Street or Easement	*Easement*
Surface Type	*Grass*
MH Inspection Status	*Inspected*
Number of Inverts	*2*
Signs of Surcharge	*YES*
Surge Plate	*NO*
Cover Type	*Other*
Other Cover Type	*Small 17”*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
Riser Rings	*1*
MH Cover Elevation At Grade	*Above Grade*
Cover Inflow	*None*
MH cleaning Required	*YES*
MH Grease Visible	*NO*
Roots	*YES*
Steps	*NO*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*Minimal*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*Minimal*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*Minimal*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*Minimal*
Pipe Connection Infiltration	*None*
Location Coordinates (click white space below to obtain)	

Invert Details	
Clock Position	*6:00*
Rim To Invert	*4.35*
Pipe Size	*8”*
Pipe Material	*VCP*

Invert Details	
Clock Position	*11:00*
Rim To Invert	*4.3*
Pipe Size	*8”*
Pipe Material	*VCP*

Photo(s)	
Photo	
Photo Description	

Photo(s)	
Photo	
Photo Description	

VOTP Manhole Inspections

Record: 56	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-17*
Inspector	*Anton Patton*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*West-0200*
Location	*W Lake Stable Road*
Street or Easement	*Easement*
Surface Type	*Grass*
MH Inspection Status	*Inspected*
Number of Inverts	*2*
Signs of Surcharge	*YES*
Surge Plate	*NO*
Cover Type	*Standard*
Other Cover Type	*Small 17"*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
Riser Rings	*Other*
Other Number of Riser Rings	*0*
MH Cover Elevation At Grade	*Above Grade*
Cover Inflow	*None*
MH cleaning Required	*YES*
MH Grease Visible	*NO*
Roots	*YES*
Steps	*NO*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*Minimal*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*Minimal*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*Minimal*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Additional Comments	*Inflow likely dependent on lake water level.*
Location Coordinates (click white space below to obtain)	

VOTP Manhole Inspections

Record: 59	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-17*
Inspector	*Anton Patton*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*West-0220*
Location	*W Lake Stable Road*
Street or Easement	*Easement*
Surface Type	*Grass*
MH Inspection Status	*Inspected*
Number of Inverts	*2*
Signs of Surcharge	*NO*
Surge Plate	*YES*
Cover Type	*Standard*
Other Cover Type	*Small 17"*
Cover Material	*Cast Iron*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
Riser Rings	*Other*
Other Number of Riser Rings	*0*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*None*
MH cleaning Required	*YES*
MH Grease Visible	*NO*
Roots	*NO*
Steps	*NO*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Location Coordinates (click white space below to obtain)	

Photo(s)	
Photo	
Photo Description	

Photo(s)	
Photo	
Photo Description	

VOTP Manhole Inspections

Record: 46	
Client	*Village of Tuxedo Park, New York*
Project Title	*Village of Tuxedo Park Trunk Sewer Inspection*
Inspection Date	*2021-03-23*
Inspector	*James Salaway*
Sewer	*Village of Tuxedo Park Trunk Sewer*
Manhole	*West-0270*
Location	*W Lake Stable Road*
Street or Easement	*Other*
Other Manhole Location	*Behind brown white house, trampolie, access box*
Surface Type	*Grass*
MH Inspection Status	*Inspected*
Signs of Surcharge	*NO*
Surge Plate	*YES*
Cover Type	*Other*
Other Cover Type	*Access box to line*
Cover Material	*Other*
Other Cover Material	*Iron rectangle*
Cover Condition	*OK*
Frame Material	*Cast Iron*
Frame Condition	*OK*
MH Cover Elevation At Grade	*At Grade*
Cover Inflow	*None*
MH cleaning Required	*NO*
MH Grease Visible	*NO*
Roots	*NO*
Steps	*NO*
Steps Condition	*Satisfactory*
Chimney Material	*Brick*
Chimney Condition	*Satisfactory*
Chimney Infiltration	*None*
Cone Material	*Brick*
Cone Condition	*Satisfactory*
Cone Infiltration	*None*
Wall Material	*Brick*
Wall Condition	*Satisfactory*
Wall Infiltration	*None*
Bench and Invert Material	*Brick*
Bench and Invert Condition	*Satisfactory*
Bench and Invert Infiltration	*None*
Pipe Connection Infiltration	*None*
Additional Comments	*Access box, not an actual manhole*
Location Coordinates (click white space below to obtain)	*Latitude:41.209778,* *Longitude:-74.201945,* *Altitude:156.794871,* *Speed:0.006158,* *Horizontal Accuracy:4.233974,* *Vertical Accuracy:12.353905,* *Time:03/23/2021 13:37:12 EDT*

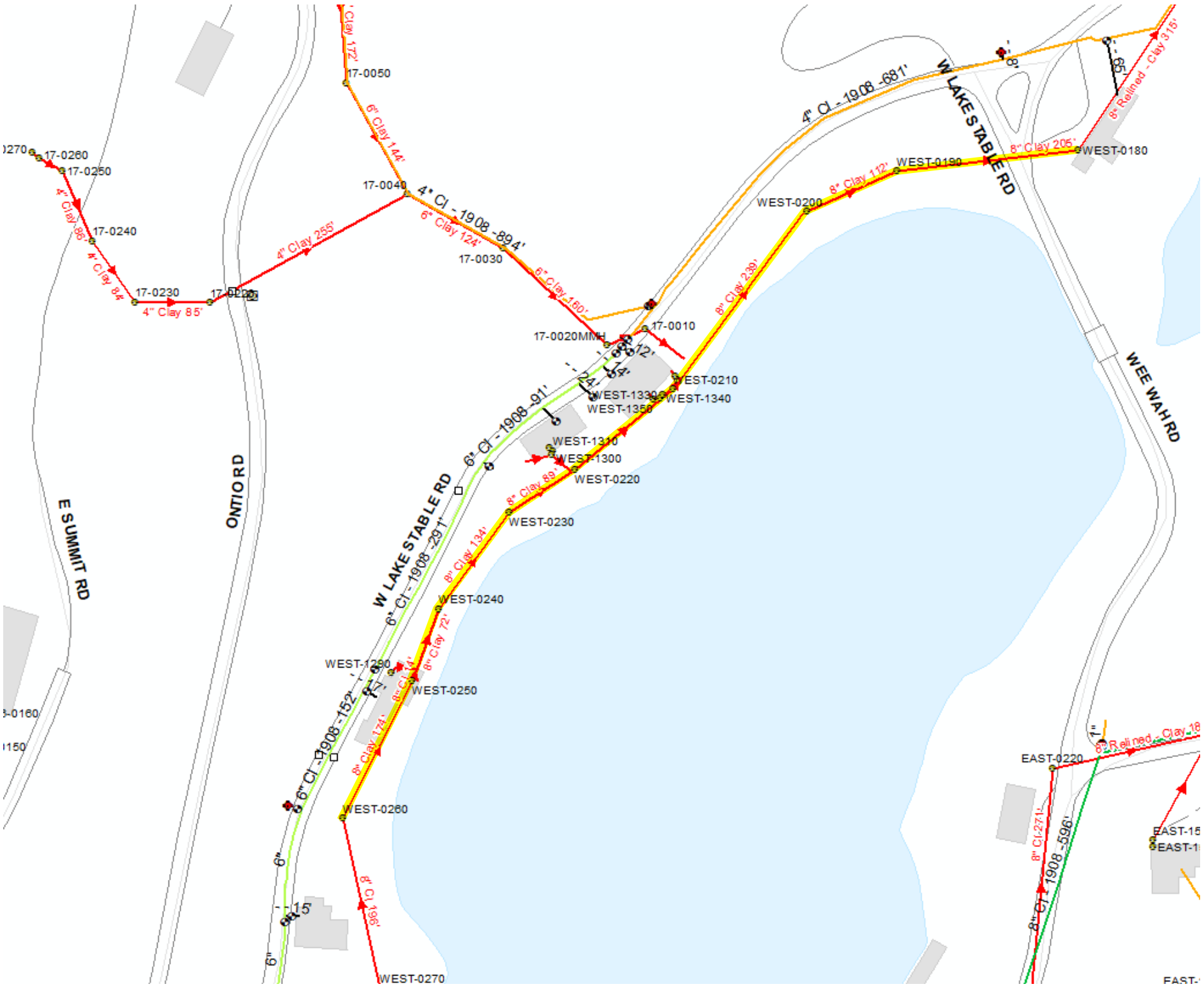
Photo(s)	
Photo	
Photo Description	*Cover and frame*

Photo(s)	
Photo	
Photo Description	*Access box*

APPENDIX B

Flow Isolation Results

Pond 3 Sewer Target Areas

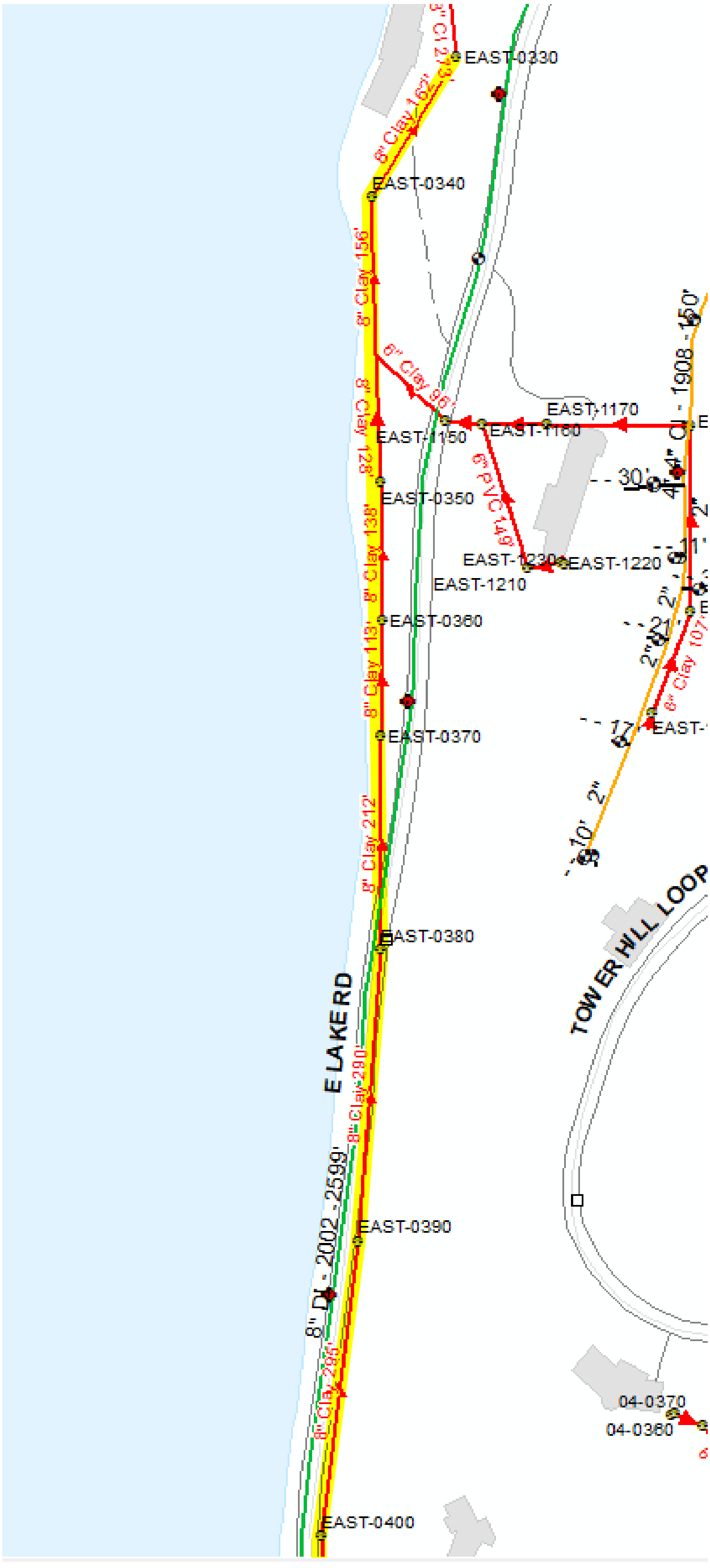


*Investigated Sections Highlighted in Yellow

Wee-Wah Lake Target Areas

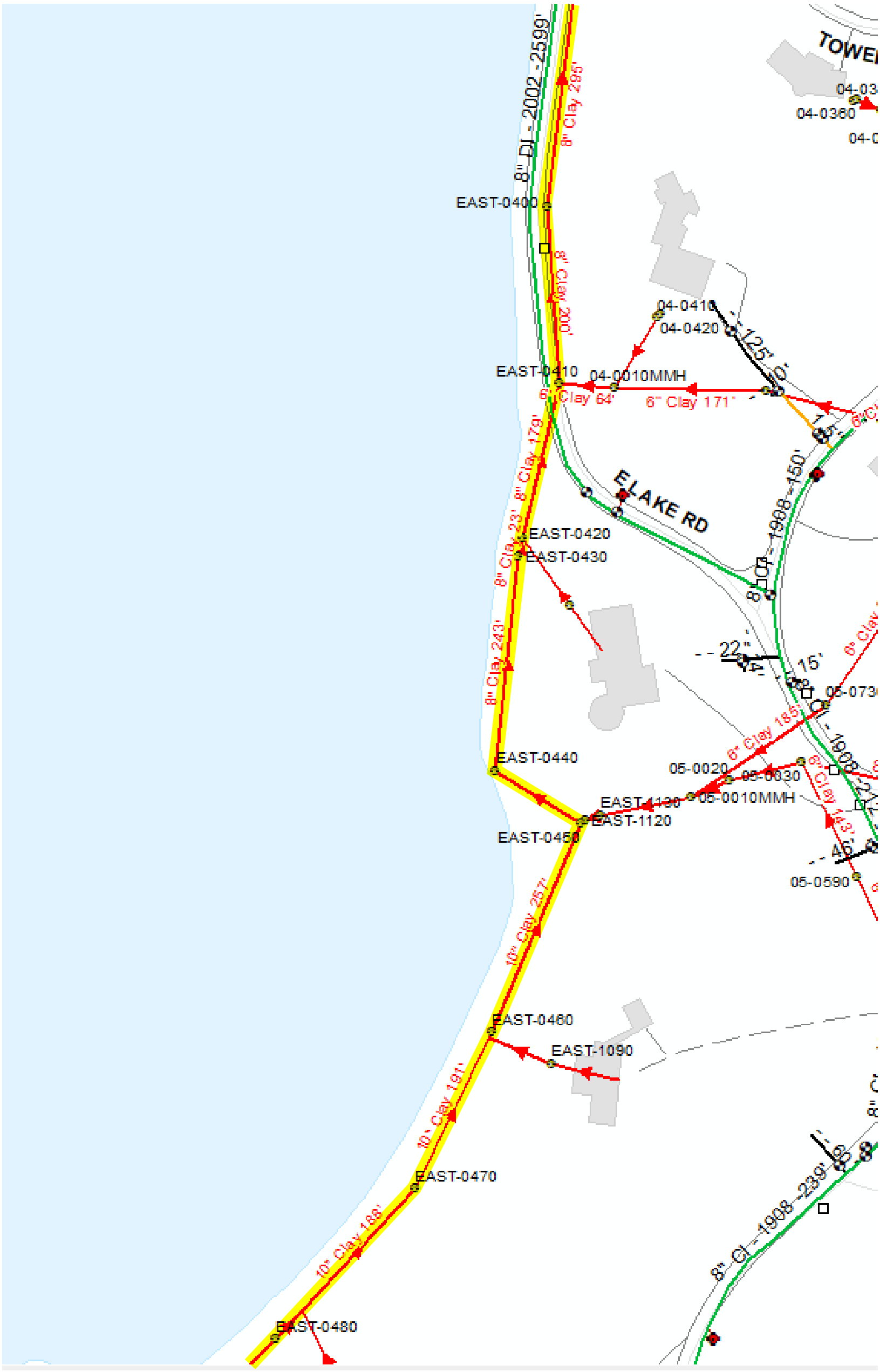
*Investigated Sections Highlighted in Yellow

Tuxedo Lake Target Areas (1 of 3)



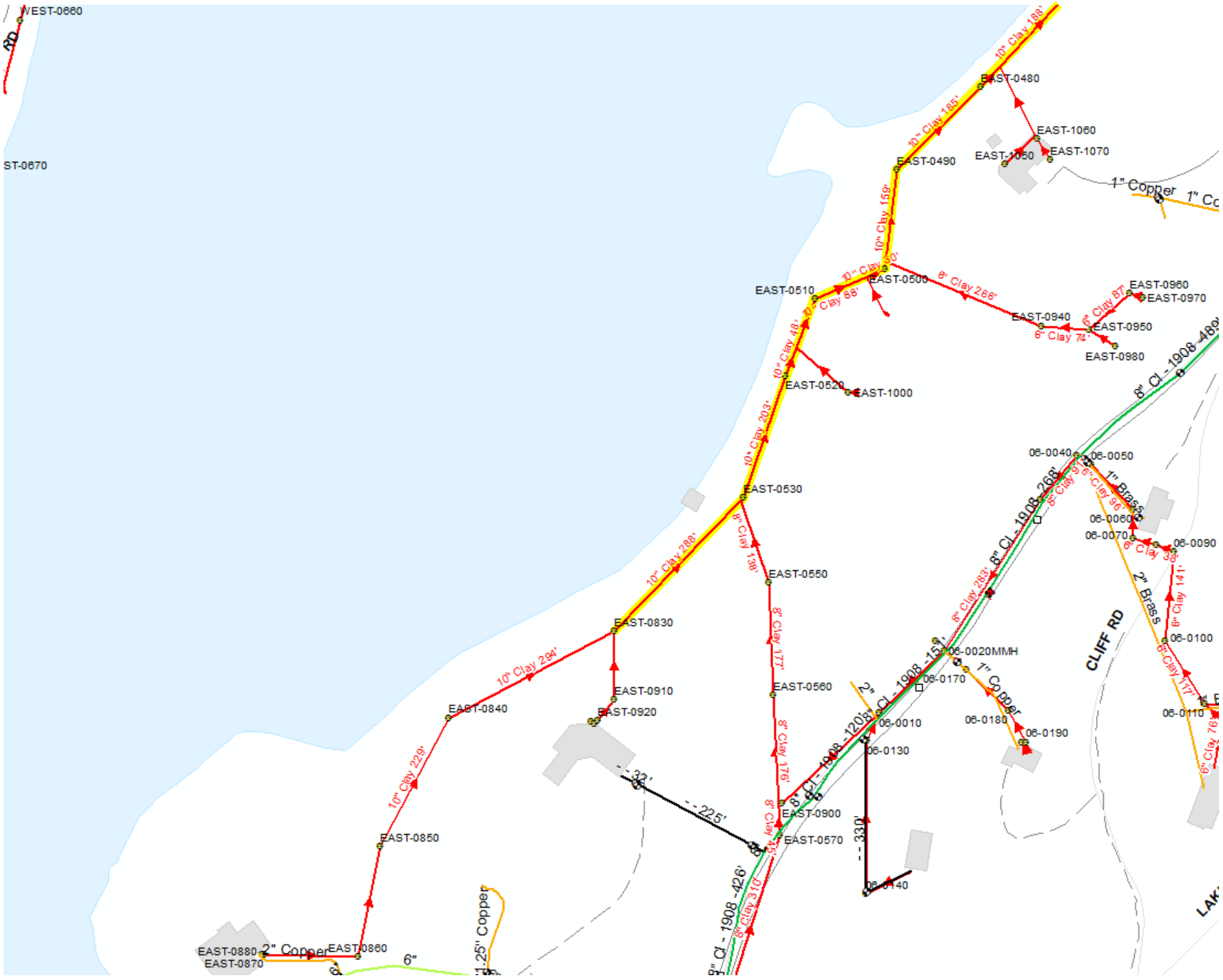
*Investigated Sections Highlighted in Yellow

Tuxedo Lake Target Areas (2 of 3)



*Investigated Sections Highlighted in Yellow

Tuxedo Lake Target Areas (3 of 3)



*Investigated Sections Highlighted in Yellow

New England Pipe Cleaning Company Division Heitkamp, Inc.

Flow Isolation Summary & GPDIM

Engineer	**Weston & Sampson**	**Date:**	4/9/2021
Village	TUXEDO PARK, NY	**Reason:**	Flow Isolation
Inspector	Anton Patton, NICET II	**NEPCCO REP**	Joe Assard

Wee Wah Lake Trunk Sewer

Sub-Area	Location (Street)	Inspection Date	MH	MH	Pipe Dia. (inch)	Pipe Material	Length (l.f.)	Multi-Section	Weir Reading High	Weir Reading Low	Average Reading	GPDIM
Wee-Wah	CONTINENTAL RD	4/9/2021	East-0070	East-0060	10	VCP	253	NO	735	646	690.5	1441
Wee-Wah	CONTINENTAL RD	4/9/2021	East-0060	East-0050	10	VCP	290	NO	1064	735	899.5	1638
Wee-Wah	CONTINENTAL RD	4/9/2021	East-0050	East-0040	10	VCP	304	NO	1459	1064	1261.5	2191
Wee-Wah	CONTINENTAL RD	4/9/2021	East-0040	East-0030	10	VCP	217	NO	1459	1064	1261.5	3069
Wee-Wah	CONTINENTAL RD	4/9/2021	East-0030	Esat-0030A	12	PVC	20	NO	115	57	86	1892
Wee-Wah	CONTINENTAL RD	4/9/2021	East-0030A	East-0010	12	PVC	345	NO	7301	5473	6387	8146

Tuxedo Lake Trunk Sewer

Sub-Area	Location (Street)	Inspection Date	MH	MH	Pipe Dia. (inch)	Pipe Material	Length (l.f.)	Multi-Section	Weir Reading High	Weir Reading Low	Average Reading	GPDIM
TUXEDO LAKE	EAST LAKE ROAD	4/13/2021	EAST-0860	EAST-0330	8	VCP	4410	YES	124190	119610	121900	18244

Pond 3 Trunk Sewer

Sub-Area	Location (Street)	Inspection Date	MH	MH	Pipe Dia. (inch)	Pipe Material	Length (l.f.)	Multi-Section	Weir Reading High	Weir Reading Low	Average Reading	GPDIM
POND 3	WEST LAKE STABLE RD	4/13/2021	West-0260	West-0200	8	VCP	858	YES	54180	50590	52385	40296
POND 3	WEST LAKE STABLE RD	4/13/2021	West-0200	West-0190	8	VCP	112	NO	3032	2440	2736	16123
POND 3	WEST LAKE STABLE RD	4/13/2022	West-0190	West-0180	8	VCP	206	NO	7301	5473	6387	20463

APPENDIX C

CCTV Inspection Reports

Kenyon Pipeline Inspection LLC
68 Park Rd, Queensbury, NY 12804
Tel. 518-832-4070
Tony@kpisewer.com

Section Profile

Project
TUXEDO PARK CCTV INSPECTION MASTER 11-3-21 | **10/12/2021**

Nr.	Upstream MH	Downstream MH	Date	Street	Media Label	Material	Total Length	Length Surveyed
5	04-0010MMH	EAST-0410	10/14/2021	E. LAKE RD. ESMT	DISC 1	Vitrified Clay Pipe	73.48	73.48

1 x Circular 6 = 73.48 Total Length (73.48 Length Surveyed)

Nr.	Upstream MH	Downstream MH	Date	Street	Media Label	Material	Total Length	Length Surveyed
1	EAST-0530	EAST-0520	10/12/2021	EAST LAKE ROAD	DISC 1	Cast Iron	49.22	49.22
2	EAST-0540	EAST-0530	10/12/2021	EAST LAKE ROAD	DISC 1	Cast Iron	7.10	7.10
3	EAST-0510	EAST-0500	10/12/2021	EAST LAKE ROAD ESMT	DISC 1	Cast Iron	105.76	105.76
4	EAST-0500	EAST-0490	10/12/2021	EAST LAKE ROAD ESMT	DISC 1	Cast Iron	6.00	6.00
6	EAST-0440	EAST-0330	11/3/2021	E. LAKE RD. ESMT	DISC 1	Cast Iron	8.04	**8.04**
7	EAST-0440	EAST-0430	11/3/2021	E. LAKE RD. ESMT	DISC 1	Cast Iron	57.93	57.93
8	EAST-0430	EAST-0420	10/14/2021	E. LAKE RD. ESMT	DISC 1	Cast Iron	143.51	143.51
9	EAST-0340	EAST-0330	10/14/2021	E. LAKE RD. ESMT	DISC 1	Cast Iron	81.92	81.92
10	WEST-0250	WEST-0240	11/3/2021	W. LAKE STABLE ROAD ESMT	DISC 1	Cast Iron	18.45	18.45
11	WEST-0240	WEST-0230	11/2/2021	W. LAKE STABLE ROAD ESMT	DISC 1	Cast Iron	127.67	127.67
12	WEST-0230	WEST-0220	11/3/2021	W. LAKE STABLE ROAD ESMT	DISC 1	Cast Iron	90.87	90.87
13	WEST-0220	WEST-0210	11/3/2021	W. LAKE STABLE ROAD ESMT	DISC 1	Cast Iron	145.57	145.57
14	WEST-0210	WEST-0200	11/3/2021	W. LAKE STABLE ROAD ESMT	DISC 1	Vitrified Clay Pipe	257.00	257.00
15	WEST-0200	WEST-0190	11/3/2021	W. LAKE STABLE ROAD ESMT	DISC 1	Vitrified Clay Pipe	113.67	113.67
16	WEST-0190	WEST-0180	11/3/2021	W. LAKE STABLE ROAD ESMT	DISC 1	Vitrified Clay Pipe	203.30	203.30

15 x Circular 8 = 1416.01 Total Length (1416.01 Length Surveyed)

Total: 16 = 1489.49 Total Length (1489.48 Length Surveyed)

Kenyon Pipeline Inspection LLC
68 Park Rd, Queensbury, NY 12804
Tel. 518-832-4070
Tony@kpisewer.com

Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/12/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**1**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Downstream**		**49.2 '**	**49.2 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0530**
Street:	**EAST LAKE ROAD**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:	**Woods**	Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0520**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**TUXEDO PARK**		
Additional Info:					

1:372	Distance	Code	Observation	Counter	Photo	Grade
EAST-0530						
	0.00	AMH	Manhole, EAST-0530 / EAST-0530	00:00:08		
	0.00	MWL	Water Level, 15% of the vertical dimension	00:00:15		
	49.22	MSA	Survey Abandoned, CAN NOT GET PAST / CAN NOT GET PAST	00:05:14		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

Kenyon Pipeline Inspection LLC
68 Park Rd, Queensbury, NY 12804
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Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/12/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**2**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Upstream**		**7.1 '**	**7.1 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0540**
Street:	**EAST LAKE ROAD**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:		Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0530**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**TUXEDO PARK**		

Additional Info:

1:54	Distance	Code	Observation	Counter	Photo	Grade
	0.00	AMH	Manhole, EAST-0530 / EAST-0530	00:00:06		
	0.00	MWL	Water Level, 15% of the vertical dimension	00:00:14		
	7.10	MSA	Survey Abandoned, CAN NOT GET PAST 90 / CAN NOT GET PAST 90	00:02:57		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

Kenyon Pipeline Inspection LLC
68 Park Rd, Queensbury, NY 12804
Tel. 518-832-4070
Tony@kpisewer.com

Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/12/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**3**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Downstream**		**105.8 '**	**105.8 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0510**
Street:	**EAST LAKE ROAD ESMT**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:	**Woods**	Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0500**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**TUXEDO PARK**		

Additional Info:

1:799	Distance	Code	Observation	Counter	Photo	Grade
EAST-0510						
	0.00	AMH	Manhole, EAST-0510 / EAST-0510	00:00:08		
	0.00	MWL	Water Level, 10% of the vertical dimension	00:00:17		
	105.76	AMH	Manhole, EAST-0500 / EAST-0500	00:17:35		
EAST-0500						

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

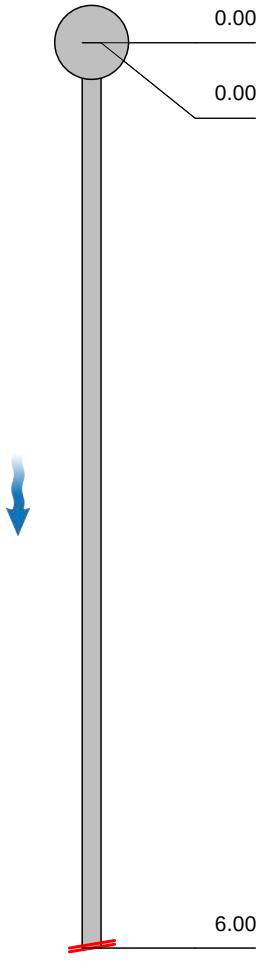
Kenyon Pipeline Inspection LLC
68 Park Rd, Queensbury, NY 12804
Tel. 518-832-4070
Tony@kpisewer.com

Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/12/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**4**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Downstream**		**6.0 '**	**6.0 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0500**
Street:	**EAST LAKE ROAD ESMT**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:	**Woods**	Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0490**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**TUXEDO PARK**		

Additional Info:



1:50	Distance	Code	Observation	Counter	Photo	Grade
	0.00	AMH	Manhole, EAST-0500 / EAST-0500	00:00:06		
	0.00	MWL	Water Level, 10% of the vertical dimension	00:00:16		
	6.00	MSA	Survey Abandoned, CAN NOT GET PAST 90 / CAN NOT GET PAST 90	00:01:44		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

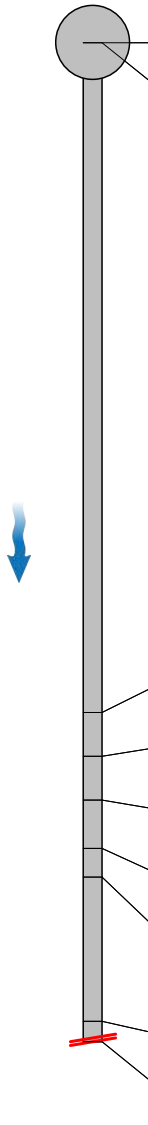
Kenyon Pipeline Inspection LLC
68 Park Rd, Queensbury, NY 12804
Tel. 518-832-4070
Tony@kpisewer.com

Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/14/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**5**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Downstream**		**73.5 '**	**73.5 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**04-0010MMH**
Street:	**E. LAKE RD. ESMT**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:		Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0410**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**6 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Vitrified Clay Pipe**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**TOWN OF TUXEDO PARK**		

Additional Info:



1:555	Distance	Code	Observation	Counter	Photo	Grade
	0.00	AMH	Manhole / 04-0010MMH	00:00:09		
	0.00	MWL	Water Level, 0% of the vertical dimension	00:00:17		
	49.27	HSV	Hole Soil Visible, from 4 o'clock to 8 o'clock	00:02:50		
	52.49	RFJ	Roots Fine Joint, from 9 o'clock to 3 o'clock	00:03:10		
	55.69	H	Hole, from 12 o'clock to 4 o'clock	00:03:31		
	59.26	RMJ	Roots Medium Joint, from 9 o'clock to 3 o'clock, 5% lost	00:03:50		
	61.33	HSV	Hole Soil Visible, at 12 o'clock	00:04:07		
	71.95	MMC	Material Change, Cast iron / CAST IRON PIPE	00:05:09		
	73.48	MSA	Survey Abandoned / CAN NOT GET PAST	00:06:01		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

Kenyon Pipeline Inspection LLC
68 Park Rd, Queensbury, NY 12804
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Tony@kpisewer.com

Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
11/3/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**6**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Upstream**		**8.0 '**	**8.0 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0440**
Street:	**E. LAKE RD. ESMT**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:		Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0330**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**TOWN OF TUXEDO PARK**		
Additional Info:					

1:61	Distance	Code	Observation	Counter	Photo	Grade
EAST-0330						
	0.00	AMH	Manhole / EAST-0330	00:00:00		
	0.00	MWL	Water Level, 95% of the vertical dimension	00:00:15		
	8.04	AMH	Manhole / EAST-0440	00:03:46		
EAST-0440						

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI
0000	0000	0000	0.0	0.0	0.0	0.0	0.0	0.0

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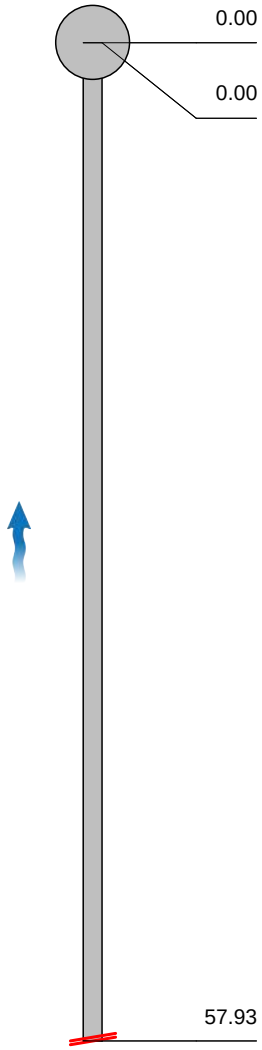
Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
11/3/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**7**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Upstream**		**57.9 '**	**57.9 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0440**
Street:	**E. LAKE RD. ESMT**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:		Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0430**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**TOWN OF TUXEDO PARK**		
Additional Info:					

1:438	Distance	Code	Observation	Counter	Photo	Grade
EAST-0430						
	0.00	AMH	Manhole / EAST-0430	00:00:00		
	0.00	MWL	Water Level, 95% of the vertical dimension	00:00:12		
	57.93	MSA	Survey Abandoned / CAN NOT GET PAST DIRT	00:08:36		



QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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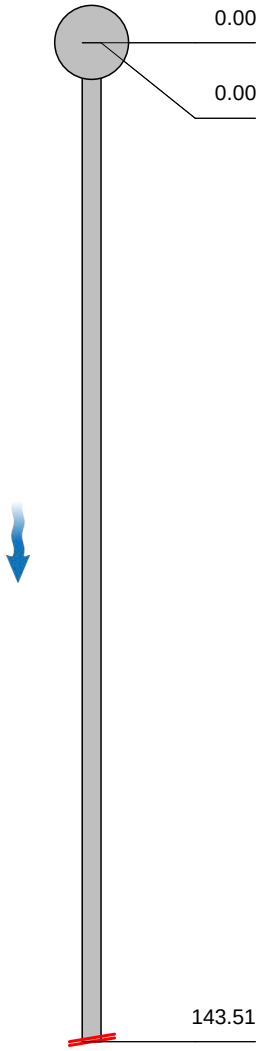
Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/14/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**8**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Downstream**		**143.5 '**	**143.5 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0430**
Street:	**E. LAKE RD. ESMT**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:		Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0420**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**TOWN OF TUXEDO PARK**		

Additional Info:

1:1084	Distance	Code	Observation	Counter	Photo	Grade
EAST-0430						
	0.00	AMH	Manhole / EAST-0430	00:00:00		
	0.00	MWL	Water Level, 85% of the vertical dimension	00:00:16		
	143.51	MSA	Survey Abandoned / CAN NOT GET PAST DIRT	00:20:12		



QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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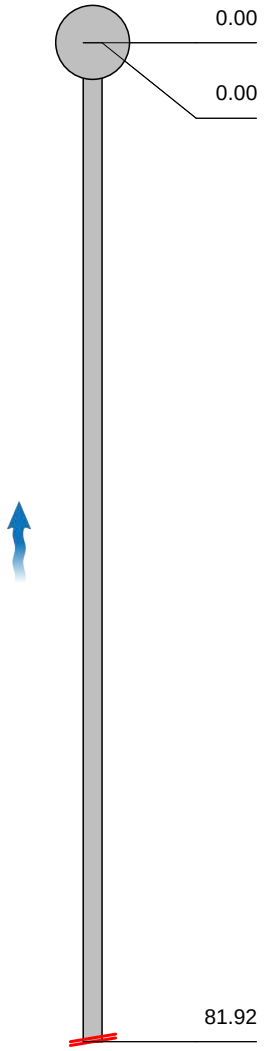
Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/14/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**9**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Upstream**		**81.9 '**	**81.9 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0340**
Street:	**E. LAKE RD. ESMT**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:		Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0330**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**TOWN OF TUXEDO PARK**		

Additional Info:



1:619	Distance	Code	Observation	Counter	Photo	Grade
	0.00	AMH	Manhole / EAST-0340	00:00:00		
	0.00	MWL	Water Level, 50% of the vertical dimension	00:00:27		
	81.92	MSA	Survey Abandoned / CAN NOT GET PAST	00:10:26		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
11/3/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**10**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	Jetting	**Upstream**		**18.5 '**	**18.5 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**WEST-0250**
Street:	**W. LAKE STABLE ROAD ES**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:	**Easement/Right of way**	Flow Control:	**Not Controlled**	Downstream MH:	**WEST-0240**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Routine Assessment**	Joints failed:	**0**
Lining Method:		Owner:	**TUXEDO PARK**		
Additional Info:					

1:140	Distance	Code	Observation	Counter	Photo	Grade
WEST-0240						
	0.00	AMH	Manhole / WEST-0240	00:00:00		
	0.00	MWL	Water Level, 15% of the vertical dimension	00:00:14		
	18.45	MSA	Survey Abandoned / CAN NOT GET PAST DIRT	00:01:54		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
11/2/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**11**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	Jetting	**Upstream**		**127.7 '**	**127.7 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**WEST-0240**
Street:	**W. LAKE STABLE ROAD ES**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:	**Easement/Right of way**	Flow Control:	**Not Controlled**	Downstream MH:	**WEST-0230**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Routine Assessment**	Joints failed:	**0**
Lining Method:		Owner:	**TUXEDO PARK**		
Additional Info:					

1:964	Distance	Code	Observation	Counter	Photo	Grade
WEST-0230						
	0.00	AMH	Manhole / WEST-0230	00:00:07		
	0.00	MWL	Water Level, 15% of the vertical dimension	00:00:15		
	5.06	TFA	Tap Factory Made Active, at 3 o'clock , 4 inch dim	00:00:50		
	127.67	AMH	Manhole / WEST-0240	00:12:44		
WEST-0240						

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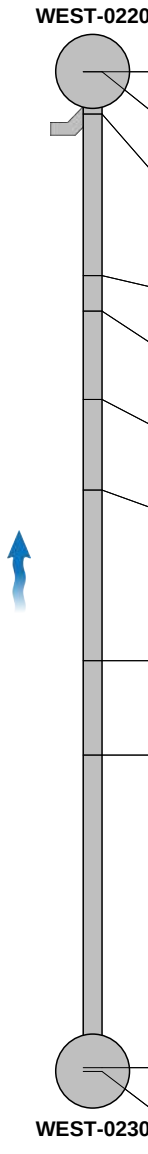
Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
11/3/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**12**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	Heavy Cleaning	**Upstream**		**90.9 '**	**90.9 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**WEST-0230**
Street:	**W. LAKE STABLE ROAD ES**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:	**Easement/Right of way**	Flow Control:	**Not Controlled**	Downstream MH:	**WEST-0220**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Routine Assessment**	Joints failed:	**0**
Lining Method:		Owner:	**TUXEDO PARK**		
Additional Info:					



1:686	Distance	Code	Observation	Counter	Photo	Grade
	0.00	AMH	Manhole / WEST-0220	00:00:00		
	0.00	MWL	Water Level, 20% of the vertical dimension	00:00:22		
	3.87	TFA	Tap Factory Made Active, at 3 o'clock , 4 inch dim	00:00:41		
	18.54	MMC	Material Change, Vitrified clay pipe / VCP	00:02:02		
	21.80	RMJ	Roots Medium Joint, at 12 o'clock , 20% lost	00:02:15		
	29.82	RMJ	Roots Medium Joint, at 12 o'clock , 45% lost	00:02:41		
	38.07	RMJ	Roots Medium Joint, at 12 o'clock , 20% lost	00:03:48		
	53.54	RMJ	Roots Medium Joint, at 12 o'clock , 50% lost	00:04:25		
	62.14	RMJ	Roots Medium Joint, at 12 o'clock , 20% lost	00:04:52		
	90.53	MMC	Material Change, Cast iron / CIP	00:06:17		
	90.87	AMH	Manhole / WEST-0230	00:06:32		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
11/3/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**13**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	Heavy Cleaning	**Upstream**		**145.6 '**	**145.6 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**WEST-0220**
Street:	**W. LAKE STABLE ROAD ES**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:	**Easement/Right of way**	Flow Control:	**Not Controlled**	Downstream MH:	**WEST-0210**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Routine Assessment**	Joints failed:	**0**
Lining Method:		Owner:	**TUXEDO PARK**		
Additional Info:					

1:1099	Distance	Code	Observation	Counter	Photo	Grade
WEST-0210						
	0.00	AMH	Manhole / WEST-0210	00:00:00		
	0.00	MWL	Water Level, 20% of the vertical dimension	00:00:17		
	5.50	TFA	Tap Factory Made Active, at 12 o'clock , 4 inch dim	00:00:33		
	7.43	MMC	Material Change, Vitrified clay pipe / VCP	00:01:04		
	120.52	MMC	Material Change, Cast iron / CIP	00:03:50		
	145.57	AMH	Manhole / WEST-0220	00:04:58		
WEST-0220						

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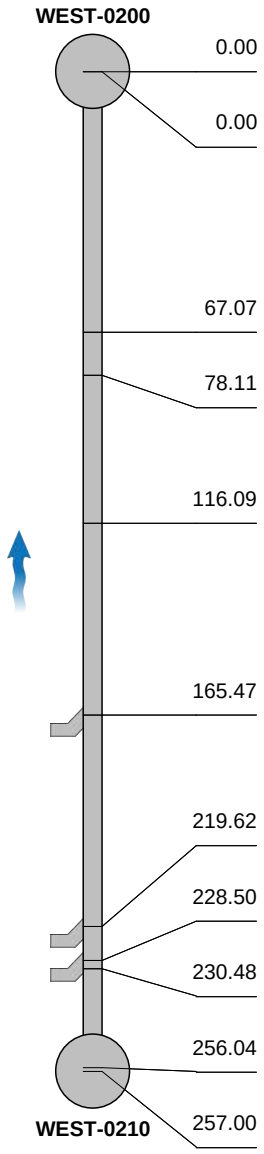
Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
11/3/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**14**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	Heavy Cleaning	**Upstream**		**257.0 '**	**257.0 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**WEST-0210**
Street:	**W. LAKE STABLE ROAD ES**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:	**Easement/Right of way**	Flow Control:	**Not Controlled**	Downstream MH:	**WEST-0200**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Vitrified Clay Pipe**	Purpose:	**Routine Assessment**	Joints failed:	**0**
Lining Method:		Owner:	**TUXEDO PARK**		
Additional Info:					



1:1940	Distance	Code	Observation	Counter	Photo	Grade
	0.00	AMH	Manhole / WEST-0200	00:00:00		
	0.00	MWL	Water Level, 60% of the vertical dimension	00:00:19		
	67.07	RFJ	Roots Fine Joint, at 12 o'clock	00:02:21		
	78.11	RMJ	Roots Medium Joint, at 12 o'clock , 15% lost	00:02:40		
	116.09	MMC	Material Change, Cast iron / CIP	00:03:40		
	165.47	TFC	Tap Factory Made Capped, at 2 o'clock , 3 inch dim	00:06:11		
	219.62	TFA	Tap Factory Made Active, at 2 o'clock , 3 inch dim	00:10:54		
	228.50	TFC	Tap Factory Made Capped, at 2 o'clock , 3 inch dim	00:12:00		
	230.48	MMC	Material Change, Vitrified clay pipe / VCP	00:12:38		
	256.04	MMC	Material Change, Cast iron / CIP	00:13:27		
	257.00	AMH	Manhole / WEST-0210	00:14:33		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
11/3/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**15**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	Jetting	**Downstream**		**113.7 '**	**113.7 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**WEST-0200**
Street:	**W. LAKE STABLE ROAD ES**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:	**Easement/Right of way**	Flow Control:	**Not Controlled**	Downstream MH:	**WEST-0190**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Vitrified Clay Pipe**	Purpose:	**Routine Assessment**	Joints failed:	**0**
Lining Method:		Owner:	**TUXEDO PARK**		
Additional Info:					

1:858	Distance	Code	Observation	Counter	Photo	Grade
WEST-0200						
	0.00	AMH	Manhole / WEST-0200	00:00:00		
	0.00	MWL	Water Level, 20% of the vertical dimension	00:00:24		
	47.99	RMJ	Roots Medium Joint, at 12 o'clock , 20% lost	00:02:50		
	80.97	B	Broken, at 12 o'clock	00:04:03		
	90.29	RFJ	Roots Fine Joint, at 10 o'clock	00:04:28		
	113.67	AMH	Manhole / WEST-0190	00:07:02		
WEST-0190						

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
11/3/2021		**Dry**	**CHRIS OLIVER**	**U-0621-7040-2095**	**16**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	Heavy Cleaning	**Downstream**		**203.3 '**	**203.3 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**WEST-0190**
Street:	**W. LAKE STABLE ROAD ES**	Media Label:	**DISC 1**	Up Rim to Invert:	**0.0**
Location Code:	**Easement/Right of way**	Flow Control:	**Not Controlled**	Downstream MH:	**WEST-0180**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Vitrified Clay Pipe**	Purpose:	**Routine Assessment**	Joints failed:	**0**
Lining Method:		Owner:	**TUXEDO PARK**		
Additional Info:					

1:1535	Distance	Code	Observation	Counter	Photo	Grade
WEST-0190						
	0.00	AMH	Manhole / WEST-0190	00:00:00		
	0.00	MWL	Water Level, 20% of the vertical dimension	00:00:11		
	5.43	MMC	Material Change, Polyvinyl chloride / PVC	00:01:04		
	10.28	MMC	Material Change, Vitrified clay pipe / VCP	00:01:35		
	16.85	RMJ	Roots Medium Joint, at 1 o'clock , 20% lost	00:01:56		
	29.87	RMJ	Roots Medium Joint, at 12 o'clock , 45% lost	00:02:26		
	57.29	RFJ	Roots Fine Joint, at 1 o'clock	00:03:09		
	63.66	B	Broken, from 10 o'clock to 1 o'clock	00:03:23		
	67.15	HSV	Hole Soil Visible, from 9 o'clock to 2 o'clock	00:03:41		
	90.28	BSV	Broken Soil Visible, at 12 o'clock	00:04:22		
	111.18	CC	Crack Circumferential, from 9 o'clock to 2 o'clock	00:04:52		
	167.43	RFJ	Roots Fine Joint, at 1 o'clock	00:06:09		
	203.30	AMH	Manhole / WEST-0180	00:07:59		
WEST-0180						

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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Section Profile

Project
TUXEDO PARK - SANITARY SEWER CCTV INSPECTION | **10/12/2021**

Nr.	Upstream MH	Downstream MH	Date	Street	Media Label	Material	Total Length	Length Surveyed
6	04-0010MMH	EAST-0410	10/14/2021	E. LAKE RD. ESMT		Vitrified Clay Pipe	73.48	73.48

1 x Circular 6 = 73.48 Total Length (73.48 Length Surveyed)

Nr.	Upstream MH	Downstream MH	Date	Street	Media Label	Material	Total Length	Length Surveyed
1	WEST-0210	WEST-0200	10/12/2021	W. LAKE STABLE RD. ESMT		Vitrified Clay Pipe	66.78	66.78
2	WEST-0200	WEST-0190	10/12/2021	W. LAKE STABLE RD. ESMT		Vitrified Clay Pipe	67.25	67.25
2	WEST-0200	WEST-0190	10/12/2021	W. LAKE STABLE RD. ESMT		Vitrified Clay Pipe	67.25	**19.77**
3	EAST-0440	EAST-0430	10/14/2021	E. LAKE RD. ESMT		Cast Iron	57.93	57.93
4	EAST-0440	EAST-0330	10/14/2021	E. LAKE RD. ESMT		Cast Iron	8.04	8.04
5	EAST-0430	EAST-0420	10/14/2021	E. LAKE RD. ESMT		Cast Iron	143.51	143.51
7	EAST-0540	EAST-0530	10/12/2021	EAST LAKE ROAD		Cast Iron	7.10	7.10
8	EAST-0530	EAST-0520	10/12/2021	EAST LAKE ROAD		Cast Iron	49.22	49.22
9	EAST-0510	EAST-0500	10/12/2021	EAST LAKE ROAD ESMT		Cast Iron	4.00	4.00
9	EAST-0510	EAST-0500	10/12/2021	EAST LAKE ROAD ESMT		Cast Iron	4.00	105.76
10	EAST-0500	EAST-0490	10/12/2021	EAST LAKE ROAD ESMT		Cast Iron	6.00	6.00
11	EAST-0340	EAST-0330	10/14/2021	E. LAKE RD. ESMT		Cast Iron	81.92	81.92

12 x Circular 8 = 491.74 Total Length (491.74 Length Surveyed)

Total: 13 = 565.22 Total Length (565.22 Length Surveyed)

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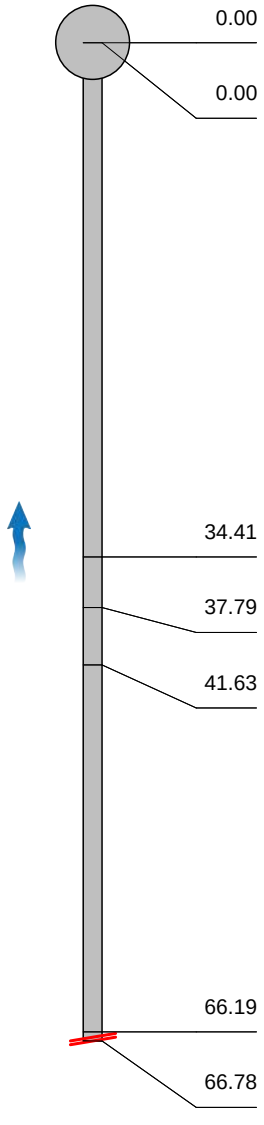
Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/12/2021		**Dry**	**CHRIS OLIVER**	**U-0621-70402095**	**1**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Upstream**		**66.8 '**	**66.8 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**WEST-0210**
Street:	**W. LAKE STABLE RD. ESM**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:	**Woods**	Flow Control:	**Not Controlled**	Downstream MH:	**WEST-0200**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Vitrified Clay Pipe**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**VILLAGE OF TUXEDO PAR**		
Additional Info:					



1:505	Distance	Code	Observation	Counter	Photo	Grade
	0.00	AMH	Manhole, WEST-0200 / WEST-0200	00:00:11		
	0.00	MWL	Water Level, 10% of the vertical dimension	00:00:19		
	34.41	RFJ	Roots Fine Joint, at 9 o'clock	00:01:11		
	37.79	RFJ	Roots Fine Joint, from 9 o'clock to 3 o'clock	00:01:20		
	41.63	RMJ	Roots Medium Joint, at 12 o'clock , 5% lost	00:01:28		
	66.19	RBJ	Roots Ball Joint, from 12 o'clock to 12 o'clock, 95% lost	00:02:05		
	66.78	MSA	Survey Abandoned, CAN NOT GET PAST ROOTS / CAN NOT GET PAST ROOTS	00:02:15		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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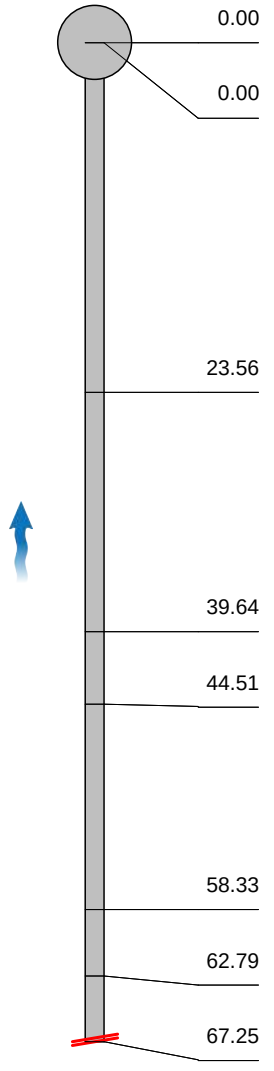
Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/12/2021		**Dry**	**CHRIS OLIVER**	**U-0621-70402095**	**2**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Upstream**		**67.2 '**	**67.2 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**WEST-0200**
Street:	**W. LAKE STABLE RD. ESM**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:	**Woods**	Flow Control:	**Not Controlled**	Downstream MH:	**WEST-0190**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Vitrified Clay Pipe**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**VILLAGE OF TUXEDO PAR**		
Additional Info:					



Distance	Code	Observation	Counter	Photo	Grade
0.00	AMH	Manhole, WEST-0190 / WEST-0190	00:00:11		
0.00	MWL	Water Level, 10% of the vertical dimension	00:00:26		
23.56	RFJ	Roots Fine Joint, at 12 o'clock	00:01:12		
39.64	RBJ	Roots Ball Joint, from 9 o'clock to 3 o'clock, 55% lost	00:02:11		
44.51	RFJ	Roots Fine Joint, from 9 o'clock to 3 o'clock	00:02:25		
58.33	RFJ	Roots Fine Joint, at 12 o'clock	00:02:51		
62.79	RBJ	Roots Ball Joint, from 12 o'clock to 12 o'clock, 95% lost	00:03:03		
67.25	MSA	Survey Abandoned, CAN NOT GET PAST ROOTS / CAN NOT GET PAST ROOTS	00:03:24		

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Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/12/2021		**Dry**	**CHRIS OLIVER**	**U-0621-70402095**	**2**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Downstream**		**67.2 '**	**19.8 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**WEST-0200**
Street:	**W. LAKE STABLE RD. ESM**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:	**Woods**	Flow Control:	**Not Controlled**	Downstream MH:	**WEST-0190**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Vitrified Clay Pipe**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**VILLAGE OF TUXEDO PAR**		
Additional Info:					

1:508	Distance	Code	Observation	Counter	Photo	Grade
WEST-0200						
	0.00	AMH	Manhole, WEST-0200 / WEST-0200	00:00:07		
	0.00	MWL	Water Level, 10% of the vertical dimension	00:00:14		
	19.77	MSA	Survey Abandoned, CAN NOT GET PAST ROCK / CAN NOT GET PAST ROCK	00:04:24		
	67.25		End of pipe			
WEST-0190						

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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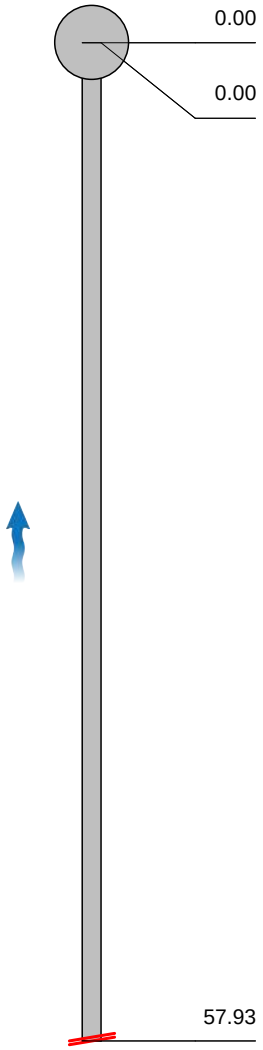
Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/14/2021		**Dry**	**CHRIS OLIVER**	**U-0621-70402095**	**3**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Upstream**		**57.9 '**	**57.9 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0440**
Street:	**E. LAKE RD. ESMT**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:		Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0430**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**VILLAGE OF TUXEDO PAR**		
Additional Info:					



1:438	Distance	Code	Observation	Counter	Photo	Grade
	0.00	AMH	Manhole / EAST-0430	00:00:06		
	0.00	MWL	Water Level, 95% of the vertical dimension	00:00:12		
	57.93	MSA	Survey Abandoned / CAN NOT GET PAST DIRT	00:08:36		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/14/2021		**Dry**	**CHRIS OLIVER**	**U-0621-70402095**	**4**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Upstream**		**8.0 '**	**8.0 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0440**
Street:	**E. LAKE RD. ESMT**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:		Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0330**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**VILLAGE OF TUXEDO PAR**		
Additional Info:					

1:61	Distance	Code	Observation	Counter	Photo	Grade
EAST-0330						
	0.00	AMH	Manhole / EAST-0430	00:00:08		
	0.00	MWL	Water Level, 95% of the vertical dimension	00:00:15		
	8.04	AMH	Manhole / EAST-0430	00:03:46		
EAST-0440						

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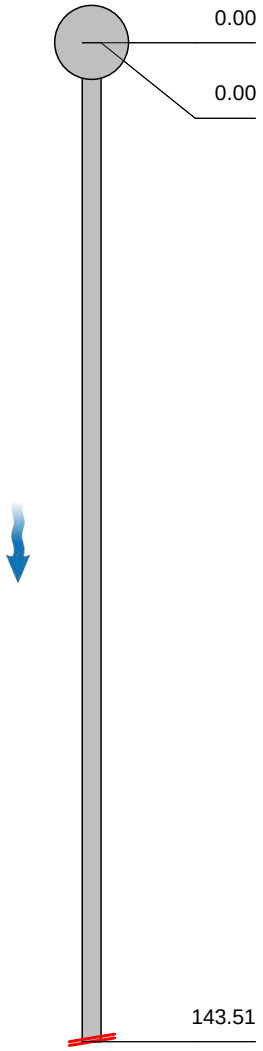
Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/14/2021		**Dry**	**CHRIS OLIVER**	**U-0621-70402095**	**5**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Downstream**		**143.5 '**	**143.5 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0430**
Street:	**E. LAKE RD. ESMT**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:		Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0420**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**VILLAGE OF TUXEDO PAR**		
Additional Info:					



1:1084	Distance	Code	Observation	Counter	Photo	Grade
	0.00	AMH	Manhole / EAST-0430	00:00:08		
	0.00	MWL	Water Level, 85% of the vertical dimension	00:00:16		
	143.51	MSA	Survey Abandoned / CAN NOT GET PAST DIRT	00:20:12		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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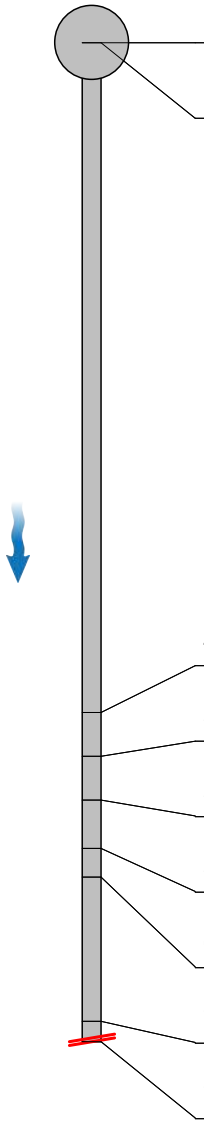
Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/14/2021		**Dry**	**CHRIS OLIVER**	**U-0621-70402095**	**6**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Downstream**		**73.5 '**	**73.5 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**04-0010MMH**
Street:	**E. LAKE RD. ESMT**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:		Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0410**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**6 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Vitrified Clay Pipe**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**VILLAGE OF TUXEDO PAR**		
Additional Info:					



1:555	Distance	Code	Observation	Counter	Photo	Grade
	0.00	AMH	Manhole / 04-0010MMH	00:00:09		
	0.00	MWL	Water Level, 0% of the vertical dimension	00:00:17		
	49.27	HSV	Hole Soil Visible, from 4 o'clock to 8 o'clock	00:02:50		
	52.49	RFJ	Roots Fine Joint, from 9 o'clock to 3 o'clock	00:03:10		
	55.69	H	Hole, from 12 o'clock to 4 o'clock	00:03:31		
	59.26	RMJ	Roots Medium Joint, from 9 o'clock to 3 o'clock, 5% lost	00:03:50		
	61.33	HSV	Hole Soil Visible, at 12 o'clock	00:04:07		
	71.95	MMC	Material Change, Cast iron / CAST IRON PIPE	00:05:09		
	73.48	MSA	Survey Abandoned / CAN NOT GET PAST	00:06:01		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/12/2021		**Dry**	**CHRIS OLIVER**	**U-0621-70402095**	**7**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Upstream**		**7.1 '**	**7.1 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0540**
Street:	**EAST LAKE ROAD**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:		Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0530**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**VILLAGE OF TUXEDO PAR**		
Additional Info:					

1:54	Distance	Code	Observation	Counter	Photo	Grade
EAST-0530						
	0.00	AMH	Manhole, EAST-0530 / EAST-0530	00:00:06		
	0.00	MWL	Water Level, 15% of the vertical dimension	00:00:14		
	7.10	MSA	Survey Abandoned, CAN NOT GET PAST 90 / CAN NOT GET PAST 90	00:02:57		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/12/2021		**Dry**	**CHRIS OLIVER**	**U-0621-70402095**	**8**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Downstream**		**49.2 '**	**49.2 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0530**
Street:	**EAST LAKE ROAD**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:	**Woods**	Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0520**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**VILLAGE OF TUXEDO PAR**		
Additional Info:					

1:372	Distance	Code	Observation	Counter	Photo	Grade
EAST-0530						
	0.00	AMH	Manhole, EAST-0530 / EAST-0530	00:00:08		
	0.00	MWL	Water Level, 15% of the vertical dimension	00:00:15		
	49.22	MSA	Survey Abandoned, CAN NOT GET PAST / CAN NOT GET PAST	00:05:14		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/12/2021		**Dry**	**CHRIS OLIVER**	**U-0621-70402095**	**9**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Upstream**		**4.0 '**	**4.0 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0510**
Street:	**EAST LAKE ROAD ESMT**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:	**Woods**	Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0500**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**VILLAGE OF TUXEDO PAR**		

Additional Info:

1:50	Distance	Code	Observation	Counter	Photo	Grade
EAST-0500						
	0.00	AMH	Manhole, EAST-0500 / EAST-0500	00:00:07		
	0.00	MWL	Water Level, 10% of the vertical dimension	00:00:14		
	4.00	MSA	Survey Abandoned, CAN NOT GET AROUND 90 DEGREE BEND / CAN NOT GET AROUND 90 DEGREE BEND	00:02:47		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

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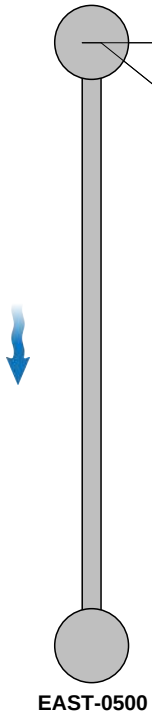
Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/12/2021		**Dry**	**CHRIS OLIVER**	**U-0621-70402095**	**9**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Downstream**		**4.0 '**	**105.8 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0510**
Street:	**EAST LAKE ROAD ESMT**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:	**Woods**	Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0500**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**VILLAGE OF TUXEDO PAR**		

Additional Info:



1:50	Distance	Code	Observation	Counter	Photo	Grade
	0.00	AMH	Manhole, EAST-0510 / EAST-0510	00:00:08		
	0.00	MWL	Water Level, 10% of the vertical dimension	00:00:17		
	105.76	AMH	Manhole, EAST-0500 / EAST-0500	00:17:35		

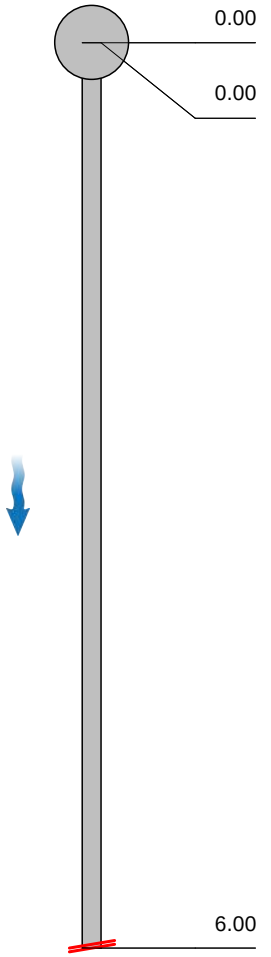
QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

Kenyon Pipeline Inspection LLC
68 Park Rd, Queensbury, NY 12804
Tel. 518-832-4070
Tony@kpisewer.com

Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/12/2021		**Dry**	**CHRIS OLIVER**	**U-0621-70402095**	**10**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Downstream**		**6.0 '**	**6.0 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0500**
Street:	**EAST LAKE ROAD ESMT**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:	**Woods**	Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0490**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**VILLAGE OF TUXEDO PAR**		
Additional Info:					



1:50	Distance	Code	Observation	Counter	Photo	Grade
	0.00	AMH	Manhole, EAST-0500 / EAST-0500	00:00:06		
	0.00	MWL	Water Level, 10% of the vertical dimension	00:00:16		
	6.00	MSA	Survey Abandoned, CAN NOT GET PAST 90 / CAN NOT GET PAST 90	00:01:44		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

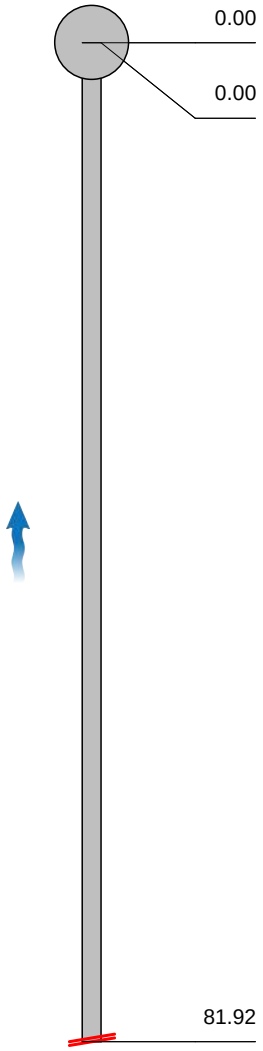
Kenyon Pipeline Inspection LLC
68 Park Rd, Queensbury, NY 12804
Tel. 518-832-4070
Tony@kpisewer.com

Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
10/14/2021		**Dry**	**CHRIS OLIVER**	**U-0621-70402095**	**11**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Upstream**		**81.9 '**	**81.9 '**

City:	**TUXEDO PARK NY**	Drainage Area:		Upstream MH:	**EAST-0340**
Street:	**E. LAKE RD. ESMT**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:		Flow Control:	**Not Controlled**	Downstream MH:	**EAST-0330**
Location Details:		Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Sanitary**	Total gallons used:	**0.0**
Pipe size:	**8 "**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Cast Iron**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**VILLAGE OF TUXEDO PAR**		

Additional Info:



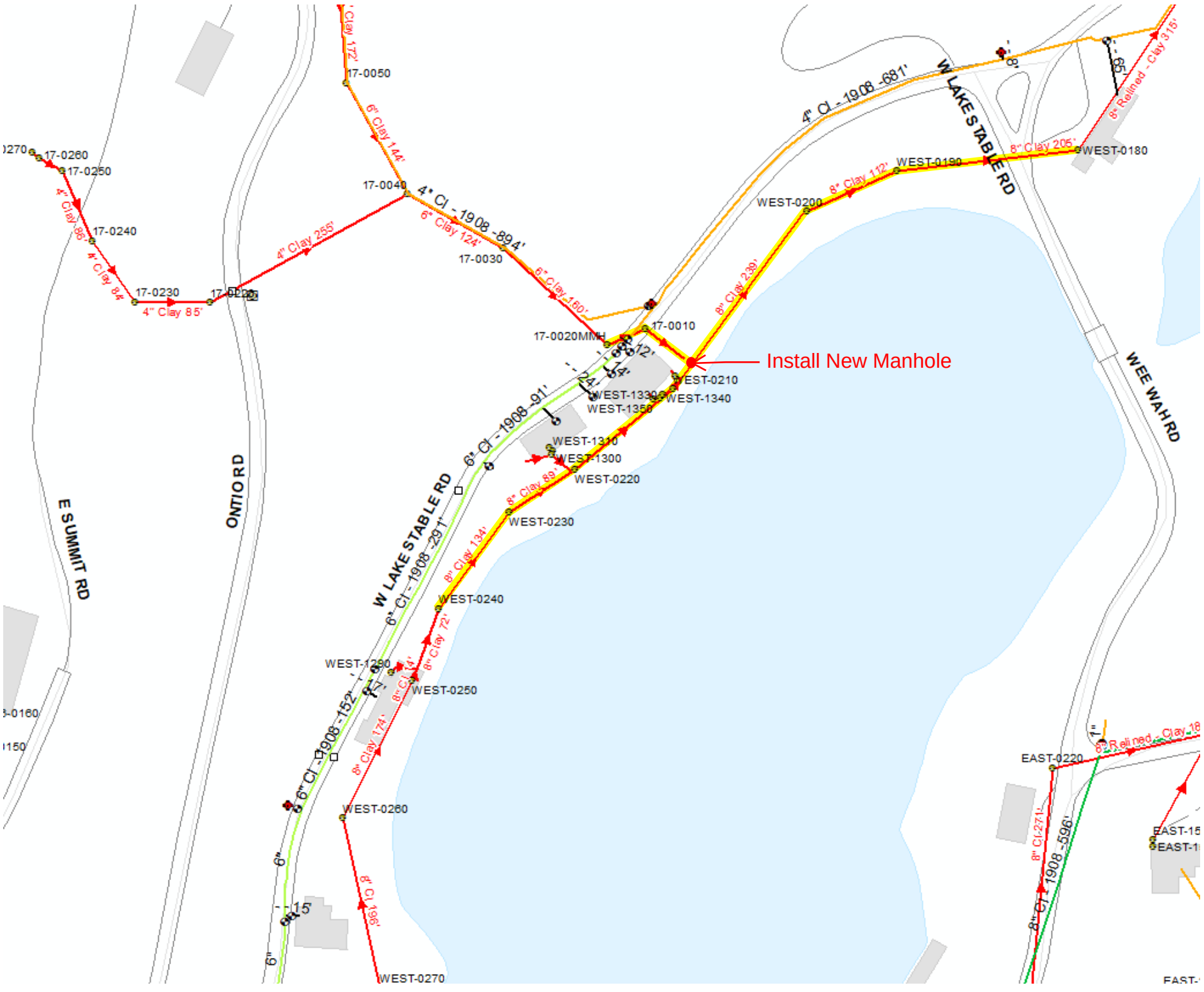
1:619	Distance	Code	Observation	Counter	Photo	Grade
	0.00	AMH	Manhole / EAST-0340	00:00:12		
	0.00	MWL	Water Level, 50% of the vertical dimension	00:00:27		
	81.92	MSA	Survey Abandoned / CAN NOT GET PAST	00:10:26		

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI

APPENDIX D

Proposed Remediation Areas

Pond 3 Sewer Target Areas



* Sections Proposed to be CIPP Lined Highlighted in Yellow

Wee-Wah Lake Target Areas

* Sections Proposed to be CIPP Lined Highlighted in Yellow