# Sauquoit Creek Pumping Station - Sanitary Screening Facility Upgrades - June 2024 Engineering Report Addendum

Prepared for Oneida County Water Quality and Water Pollution Control, Oneida County, NY | Engineering Report Addendum |

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# Executive Summary

This report serves as an addendum to the original engineering report titled "Sauquoit Creek Pumping Station Sanitary Screening Facility Upgrades Engineering Report", prepared by Brown and Caldwell dated July 2022 ("2022 Engineering Report"). The 2022 Engineering Report provides background details, existing site information, definition of the problem, and more regarding the issue this report is working to address. The original report also provides four alternatives which were analyzed as potential solutions.

This addendum report provides information on a fifth alternative, not previously analyzed in the 2022 Engineering Report, which has been reviewed and selected as the preferred alternative by the Oneida County Department of Water Quality and Water Pollution Control (County). This addendum report references the information from the original Engineering Report where relevant to Alternative 5, written in italics. However, for full details and descriptions of previous alternatives, the original Engineering Report can be referenced. This full report is attached as Appendix H.

As stated in the 2022 Engineering Report:

*The Oneida County Department of Water Quality and Water Pollution Control (County) is responsible for the operation and management of the Oneida County Sewer District's (District) facilities and personnel. District facilities include 45 miles of interceptor sewers, the Sauquoit Creek and the Barnes Avenue Pumping Stations and the Water Pollution Control Plant (WPCP).*

*The WPCP is a regional facility that treats wastewater from the City of Utica, 14 municipalities, and the Oneida County Business Park. Wastewater from the City of Utica is combined sewage (sanitary and storm water). The sewer systems outside the City of Utica are separate sanitary sewers. The WPCP is designed and operated to accept sanitary sewage (municipal and industrial wastewater), infiltration and inflow, and some combined sewer overflow (CSO) flows. It is standard practice to use available WPCP hydraulic capacity to treat and store infiltration and inflow into the sanitary system as well as the combined sewage. The WPCP staff currently adjusts operations to treat as much combined sewage from the City of Utica as possible. When the combined sewage from the City of Utica exceeds the available hydraulic capacity of the WPCP, some storage is provided in the interceptor before this excess flow is diverted to a permitted CSO outfall.*

*The New York State Department of Environmental Conservation (NYSDEC) and Oneida County entered into Consent Order No. R620060823-67 due to sanitary sewer overflow (SSO) at the Sauquoit Creek Pumping Station (SCPS). The Consent Order has an effective date of December 12, 2011, and originally required mitigation of the SSO at the SCPS by December 31, 2021. This date was subsequently updated to December 31, 2022. Recommended improvements were initially established in the Sauquoit Creek Pumping Station Evaluation Report, dated August 2012 and Basis of Design report, dated May 2014, updated in April 2016. Construction of the recommended upgrades were substantially completed in February 2019.*

*The Sanitary Screen Facility (SSF) at the SCPS, which has been in operation for over two years, is designed for a 38-mgd flow and includes two (2) new 38-mgd rated mechanical bar screens, each paired with a dedicated washer compactor and discharge conveyors for compacted screenings.*

*Despite reductions in inflow/infiltration from the sewer rehabilitation projects undertaken in the Sauquoit Creek Basin service area, actual peak flows at the SCPS have exceeded the original design flow most likely due to more severe weather and more intense storm events occurring more often than in the past. Handling the extreme peak flows at the SSF during intense storm events is operationally challenging especially if one screen falls out of service. Inoperability of the sanitary screening equipment could result in upstream collection system backups or passing unscreened flow to the pumping station causing increased maintenance for the pumps or force main. In addition, failure of the screening equipment creates potential safety concerns for SSF maintenance staff who need to address the equipment failures as high flows often coincide with local flooding near the SSF.*

The five alternatives presented to address these SSO events were:

- *Alternative 1 – No Action*
- *Alternative 2 – Screening Building Expansion to the North*
- *Alternative 3 – New Screening Building to the North*
- *Alternative 4 – New Channel within Existing Screening Building*
- Alternative 5 – Addition of a Wet Weather Holding Tank

Alternatives 1 through 4 were developed in the 2022 engineering report prepared by Brown and Caldwell.

Alternative 1 was largely not considered because it does not address SSO events from either screen malfunctions or extreme wet weather events.

Alternatives 2 – 4 are relatively similar, which focus on the construction of a third screening channel with alternative construction methods varying in scope and cost. The addition of a third channel would help prevent upstream flooding and unscreened material passing in the event of a screen malfunction but may not prevent SSO in the event of extreme wet weather.

Alternative 5, the newly proposed alternative and reason for this addendum report, addresses both extreme wet weather events and screen malfunctions. It is largely this reason that makes Alternative 5 the recommended alternative. Alternative 5 also offers a much more constructable solution, eliminating deep excavation within the floodplain and associated dewatering and stabilization.

Alternative 5 includes the construction of a 7,000,000-gallon holding tank south of the SCPS (away from the Sauquoit Creek and Mohawk River) that will be utilized to reduce the effects of peak flow rates on the overall collection system. If levels within the interceptor or pumping station rise to levels that can have adverse effects on upstream sewers and/or if the WPCP cannot handle additional flow, this system can be used to hold the excess flow in lieu of diverting untreated sewage to the Mohawk River. The stored flow can then be slowly introduced back into the system when levels subside and will be screened and pumped to the WPCP for further treatment.

The holding tank will be equipped with an automated wash water system for the purpose of cleaning out the holding tank after an event to prevent grit build-up and associated odors. This alternative, similar to other alternatives, will need to add automation to existing valves to divert flows around the SSF to eliminate the need for manual access to these valves during flooding conditions.

The Class 5 opinion of total construction cost for Alternative 5 (Addition of a Wet Weather Holding Tank) of $6,605,000, with a lower range of $3,302,500 (-50%) and an upper range of $13,210,000 (+100%). This cost estimate of total project costs includes administrative costs such as engineering, construction administration, and permitting.

For securing of funding for total project costs, it is believed that a sufficient high end maximum amount of funding would be $11,200,000, which is approximately 70% more than the mid-point Class 5 cost estimate.

# Abbreviations

| | |
|---|---|
| BIL | Bipartisan Infrastructure Law |
| CSO | Combined Sewer Overflow |
| DAC | Disadvantaged Community |
| DI | Ductile Iron |
| EAF | Environmental Assessment Form |
| ECHO | Enforcement and Compliance History Online |
| FEMA | Federal Emergency Management Agency |
| GIS | Geospatial Information System |
| GPM | Gallons per Minute |
| I/I | Infiltration and Inflow |
| MGD | Million Gallons per Day |
| MHI | Median Household Income |
| NRCS | National Resources Conservation Services |
| NYS | New York State |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSEFC | New York State Environmental Facilities Corporation |
| NYSERDA | New York State Energy Research and Development Authority |
| OCSD | Oneida County Sewer District |
| PEJA | Potential Environmental Justic Area |
| PLLC | Professional Limited Liability Company |
| POSS | Publicly Owned Sewer System |
| PS | Pumping Station |
| RPA | Regional Permit Administrator |

| | |
|---|---|
| SCI | Sauquoit Creek Interceptor |
| SCPS | Sauquoit Creek Pumping Station |
| SEQR | State Environmental Quality Review |
| SEQRA | State Environmental Quality Review Act |
| SPDES | State Pollution Discharge Elimination System |
| SSF | Sanitary Screening Facility |
| SSO | Sanitary Sewer Overflow |
| USDA | United States Department of Agriculture |
| USEPA | United States Environmental Protection Agency |
| WPCP | Water Pollution Control Plant |

# 1.0 Project Background and History

## 1.1 Site Information

### 1.1.1 Location

This report serves as an addendum to the original engineering report titled "Sauquoit Creek Pumping Station Sanitary Screening Facility Upgrades Engineering Report", prepared by Brown and Caldwell dated July 2022 ("2022 Engineering Report"). Site location information was previously provided in the 2022 Engineering Report. This report stated the following information regarding the site location.

*The SCPS is located on a 200-foot by 215-foot site at the end of an access road off of Whitesboro Street in the Village of Yorkville, NY. The SCPS site is bounded on the north and west side by the Sauquoit Creek and on the north side by CSX railroad tracks. The land area north of the CSX railroad tracks and west of the Sauquoit Creek is undeveloped privately held property. The site is also bounded by undeveloped private property on its south and east sides. The undeveloped areas are generally flat and wooded and the closest developed spaces are ball fields that are owned by the Whitestown Veterans Club that are approximately 400-feet away from the SCPS property's south side and an electric substation owned by National Grid (also south of the SCPS). The general location and orientation of screenings building with respect to the pumping station is presented in Figure 1-1.1*


***Figure 1-1.1 –Sanitary Screening Facility (Looking Southwest)***

*The site is substantially flat and clear. The SCPS site is bounded on the north and west by the Sauquoit Creek. Consequently, the SCPS is prone to flood events. The County has stated that they have observed high water during flood events at the SCPS at approximately the same elevation as the top edge of the loading dock slab on the west elevation of the SCPS (Elev. 413.5.00 ft.).*

*The 100-year storm elevation has been identified as elevation 417.15 feet and the 500-year storm elevation has been identified as elevation 418.1 feet. Additionally, Ten State Standards requires that wastewater pumping station structures and electrical and mechanical equipment be protected from physical damage by the 100-year flood by 18 inches and that the wastewater pumping station should remain fully operational and accessible during the 25-year flood.*

*The access road from Whitesboro Street to the SCPS and the area between the pumping station and the junction structure are paved. The SCPS site also includes site utilities for natural gas, potable water, storm drainage and electrical power. Additional descriptions of the site are provided as follows.*

*Paving. The access road from Whitesboro Street to the pumping station and the area between the structures was paved during recent construction including a parking area and truck access/turn area to screenings area, SCPS unloading dock and the generator refueling area.*

*Power. The existing service was rerouted during the 2020 construction to make room for the new generator and associated access. Power from the new lines enters the SCPS where it is distributed accordingly from a new motor control center (MCC).*

*Natural Gas. Natural gas is currently supplied to the SCPS to fuel the boilers. A new buried, 1.5" natural gas service was supplied to the SCPS and generator as part of the recent construction.*

*Potable Water. Potable water is supplied to the SCPS site from a 6-inch diameter buried water main that enters the SCPS site along the access road. The water service supplies a new fire hydrant adjacent to the SCPS site entry and a new 2-inch potable water service to SCPS and a new 2-inch diameter water service to the Screenings Room (through backflow Prevention in Mechanical Room) Water is required in new Screenings Room to supply water for the washer compactor and wash down water for housekeeping.*

*Drainage. The SCPS includes new buried, site drainage piping connection to existing 12" outfall to Sauquoit Creek that was installed as part of new construction including roof leaders and catch basins in paved areas.*

*Fencing. The 2020 construction demolished existing fencing. This was not replaced as part of the new project.*

*Landscaping. The SCPS site has had some restoration since the recent construction, including reseeding of grass areas and gravel placed outside of the paved areas towards Sauquoit Creek.*

### 1.1.2 Geologic Conditions

Geologic conditions were previously provided in the 2022 Engineering Report which stated:

*The United States Department of Agriculture (USDA) National Resources Conservation Services (NRCS) Web Soil Survey shows the pumping station site to be approximately 79% Wakeville silt loam and 21% Udorthents. The topography of the area is mainly flat.*

*A geotechnical report for the project area was completed by an outside contractor in November 2014. The borings taken at the site indicated the following:*

- *Very loose fill consisting of soil mixed with demolition debris encountered at the ground surface. Wet, medium dense silty sand with gravel below fill to a depth of 20'*
- *At and adjacent boring location, the fill was 5' deep, underlain with by loose to dense wet silt, sand and gravel approximately 18' deep. Below, very stiff laminated clay and silt was encountered.*
- *At the time of the subsurface investigation, groundwater was encountered at a depth of approximately 10'.*

*An additional geotechnical report for the project area was completed by an outside contractor in January 2017. The borings taken at the site indicated the following:*

- *Fine sand, silt and gravel to a depth of 22'. Soil was wet beginning at a depth of 5'.*
- *Soft silt from 22' to 34' (wet)*
- *Medium stiff silt and clay from 34' to 48.5' (wet)*
- *Very dense glacial till, consisting of clayey sand with gravel, from 48.5' to 57.7'*

### 1.1.3 Environmental Resources

Environmental resources were previously provided in the 2022 Engineering Report which stated:

*The SCPS is located adjacent to Sauquoit Creek (a Class C waterbody) and Mohawk River (also a Class C waterbody). Based on a review of the NYSDEC Environmental Resource Mapper (included in Appendix D), a portion of the SCPS site is considered to be in the vicinity of a regulated freshwater wetland (New York State); the wetland area itself is located north of the CSX railroad tracks. Based on previous construction activities at this site, being in the vicinity of the regulated freshwater wetland would likely not impact the proposed project in this report.*

*It should be noted that prior to the recent upgrades at the SCPS, the project was reviewed through the State Environmental Quality Review Act process (SEQRA). A Full Environmental Assessment Form was completed, which included an assessment of potential environmental and socio-economic impacts, as well as mitigation to reduce or eliminate those impacts. The project was determined to have no significant adverse impacts on the environment, and a "Negative Declaration" was issued. The Full Environmental Assessment Form and Negative Declaration resolution can be found in Appendix C.*

### 1.1.4 Floodplain Considerations

Floodplain considerations were previously provided in the 2022 Engineering Report which stated:

*As noted in Section 1.1.1, the SCPS is prone to flood events. The SCPS is located in a Federal Emergency Management Agency (FEMA) designated floodplain, see Appendix D for the National Flood Hazard Layer FIRMette. Provisions have been made under the previous construction contract to provide building access points above the flood level and protect electrical and mechanical equipment from flood damage. Similar provisions would be made with any new construction at the facility.*

The base flood elevation was not previously identified in the 2022 Engineering Report but is as shown on the FIRMette in Appendix D, to be approximately 417-418 feet in the area of the proposed construction corresponding to the 100-year flood elevations already being considered for design. It should be noted that the new construction is anticipated within Zone AE of the identified flood zone mapping. However, in comparison to the other alternatives identified in the previous report, the proposed construction will not be within a regulatory floodway.

### 1.1.5 Impacts to Potential Environmental Justice Area(s) and/or Disadvantaged Communities

Impacts to potential environmental justice area(s) (PEJAs) and/or disadvantaged communities were previously provided in the 2022 Engineering Report which stated:

*The NYSDEC's Geospatial Information System (GIS) tools were used to identify the Potential Environmental Justice Areas (PEJA) at the SCPS site, and the resulting map is included in Appendix D. The SCPS site is located directly in a PEJA. The PEJA recognizes populations that meet or exceed certain statistical criteria related to percentage minority population and percentage of households with incomes below the federal poverty level. The proposed project would have a direct beneficial impact to the PEJAs within Oneida County by improving the water quality in the Mohawk River.*

*According to the US Census Bureau, the Oneida County has a median household income (MHI) of $59,113 (2020 dollars based on the American Community Survey 5-Year Estimates, 2016-2020), compared to the New York State average MHI of $71,117 (2020) and the United States MHI of $64,994 (2020 dollars). The US Census Bureau lists that 12.4 percent of Oneida County lives in poverty compared to the national average of 11.4 percent.*

*The NYSEFC has issued guidelines on hardship financing eligibility based on municipal, project and environmental justice criteria. The NYSEFC established criteria that the municipal population must be less than 300,000, and the MHI of a municipality must be less than 80 percent of the regionally adjusted MHI of $68,486 for the upstate region ($54,789) or the MHI be between 80 to 100 percent of the regionally adjusted MHI with a poverty level that is greater than the 2019 state-wide poverty of 10.4 percent, to be*

*eligible for hardship financing. While the MHI for Oneida County ($59,113) is greater than 80 percent of the regionally adjusted MHI ($54,789), it does satisfy the alternate criteria of MHI being between 80 to 100 percent of the regionally adjusted MHI and the poverty of 12.4 percent is greater than the state-wide poverty of 10.4 percent. Oneida County's population of 230,274 (2021 estimate) is also below the 300,000-person threshold. Therefore, Oneida County may qualify for hardship financing for this project.*

As a result of Oneida County's prior project listing on NYSEFC Intended Use Plan, this project was scored and is above both the hardship funding line as well as the Bipartisan Infrastructure Law (BIL) funding line (NYSEFC project number C6-6070-14-00). This makes this project eligible to receive a 50% grant and a partial 0% interest 30-year loan. The grant is $5.6M capped at a maximum 50% of the Net project cost.

## 1.2 Ownership and Service Area

### 1.2.1 Facility Ownership

Facility ownership was previously provided in the 2022 Engineering Report which stated:

*The Oneida County Sewer District (District) was formed in 1965 through an act by the former Oneida County Board of Supervisors. It is administered by Oneida County through the Oneida County Department of Water Quality and Water Pollution Control (WQ&WPC) which is responsible for operation and management of the District's facilities and personnel. District facilities include 45 miles of interceptor sewers, the Sauquoit Creek and the Barnes Avenue Pumping Station, and the Water Pollution Control Plant (WPCP). The District services the City of Utica, 14 municipalities and a business park. The municipalities of the District are listed below:*

- *Village of Clayville*
- *Village of New Hartford*
- *Village of New York Mills*
- *Village of Oriskany*
- *Village of Holland Patent*
- *Village of Whitesboro*
- *Village of Yorkville*
- *Town of New Hartford*
- *Town of Paris*
- *Town of Marcy*
- *Town of Deerfield*
- *Town of Schulyer*
- *Town of Frankfort*
- *Town of Whitestown*
- *City of Utica*
- *Oneida County Business Park*

### 1.2.2 Industrial Discharges or Hauled Waste

There are no major effects from industrial discharges or hauled waste on the SCPS site. Hauled waste is only accepted at the WPCP.

### 1.2.3 Population Trends and Growth

The District currently covers an area of approximately 170 square miles and services a population of approximately 146,000 people within this area. The population data received from the Census and American Community Survey is shown in Table 1.2.4 below. The available data from the Census and American Community Survey was only representative of 2010 and 2020 and did not provide any data before 2010. As shown below, the population of this service area has gone up slightly from 145,633 in 2010 to 146,116 in 2020.

TABLE 1.2.4. DISTRICT POPULATION DATA

| Community | 2010 Population | 2020 Population |
|---|---|---|
| Village of Clayville | 350 | 339 |
| Village of New Hartford | 1,847 | 1,859 |
| Village of New York Mills | 3,327 | 3,244 |
| Village of Oriskany | 1,400 | 1,315 |
| Village of Holland Patent | 458 | 416 |
| Village of Whitesboro | 3,772 | 3,612 |
| Village of Yorkville | 2,689 | 2,657 |
| Town of New Hartford | 22,166 | 21,874 |
| Town of Paris | 4,411 | 4,332 |
| Town of Marcy | 8,982 | 8,777 |
| Town of Deerfield | 4,273 | 3,983 |
| Town of Schulyer | 3,420 | 3,296 |
| Town of Frankfort | 7,636 | 7,011 |
| Town of Whitestown | 18,667 | 18,118 |
| City of Utica | 62,235 | 65,283 |

## 1.3 Existing Facilities and Present Condition

### 1.3.1 Major System Components

Major system components information was previously provided in the 2022 Engineering Report which stated:

***Junction Structure.*** *A concrete junction structure (refer to Figure 1-3.1) to the west of the SCPS and the SSF receives flow from two (2) intercepting sewers, a 48-inch from Whitesboro Street from the south and a 42 inch from the north side of the CSX railroad tracks. Flow from the junction structure to the SSF is conveyed through two (2) 36-inch diameter ductile iron (DI) pipes, with sluice gates within the SSF that isolate each of the 36-inch pipes entering screenings channel.*

The 36-inch pipes from the junction structure to the SSF are each connected to a separate bypass pipe around the SSF, originally installed for construction. This piping needs to be opened during extreme wet weather conditions if the water level in the junction structure gets too high for the upstream interceptor or if there is an issue with one of the mechanical screens.

***Sanitary Screening Facility (SSF).*** *In 2020, construction of the SSF was completed. The facility consists of a building with a screenings room, electrical room and mechanical room and attached covered but not enclosed screenings receiving area where dumpsters or trucks are located to receive the compacted screenings. The SSF screenings room includes a loading dock with an overhead doorway on the southwest corner to facilitate access for large equipment in and out of the screenings room and has two large overhead hatches directly over the two screens for access to remove and/or install screens.*

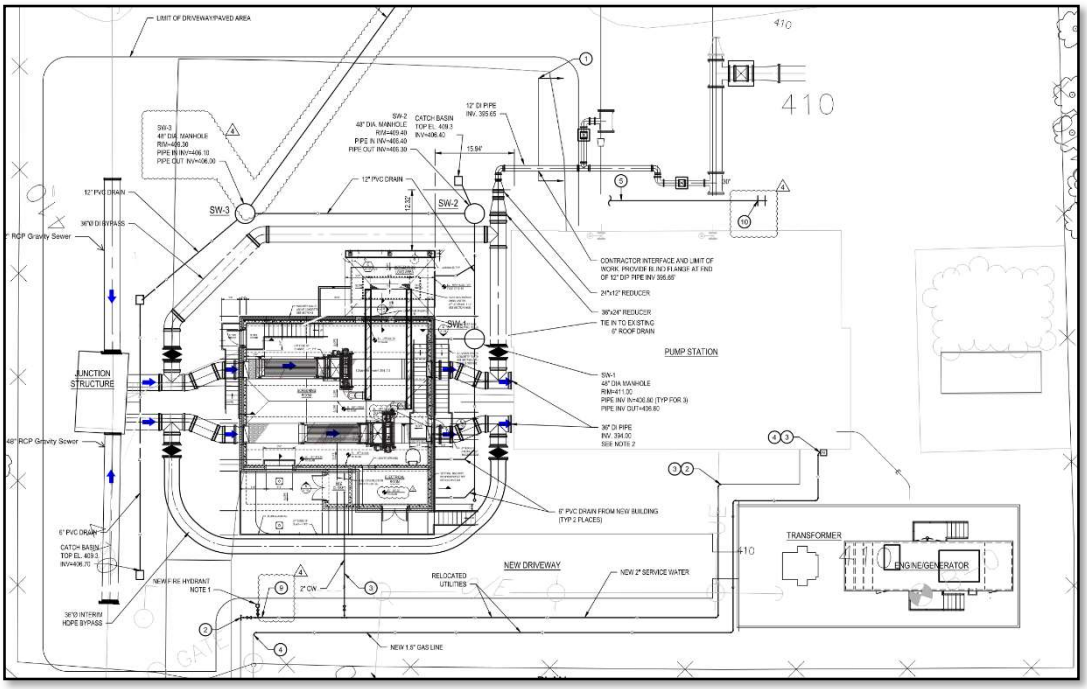



***Figure 1-3.1 –Sanitary Screening Facility – Existing Screening Building and Site***

***SCPS.*** *The SCPS contains two influent channels (each receives flow from one of the two new channels/screens) that distribute flow to one of two respective wet wells through two 30 x 36 manually operated gates. These wet wells contain the suction piping each for four (4), 250-horsepower sewage pumps. The pumps are 16-inch diameter, operate with a variable frequency drive, and are currently rated (three duty pumps, one standby) to pump 38 MGD to WPCP with a 16-inch bypass for SSO conditions. The two wet wells are connected by a manually operated slide gate.*

A process flow diagram, showing the relationship between these three major system components is shown in Section 5.0.

Currently, there are no active projects at the SCPS site. However, a planned future project involves replacement of the existing four 16" sewage pumps within the SCPS, the four 16" ball valves that directly follow each pump, and two 24" ball valves within the pump room. Two of the four pumps are aging and require replacement, 1 pump is new and one rebuilt (will need to be replaced for additional capacity) and six valves have aged over time and are in need of replacement, in kind. These replacements are not currently scheduled but are planned as future maintenance work at the SCPS site.

### 1.3.2 SPDES Permit Conditions

Oneida County currently operates its facilities under SPDES permit NY0025780. A copy of the current SPDES permit can be found in Appendix E.

### 1.3.3 Documented Compliance Issues

Documented SSO discharge events at the SCPS were identified over the last three years, between 2021 and 2024. Each of these discharge events was either due to extreme wet weather conditions in excess of design capacity and/or a combination of mechanical screening issues associated with excess flow. Extreme wet weather conditions can overwhelm the SSF and SCPS, which are only rated for 38 MGD. These extreme wet weather events have required the operators to initiate emergency SSO discharges in order to prevent equipment damage, flooding of the interceptor, and potential release of SSO through the openings upstream in the collection system. A list of these non-compliance events is shown below.

- 2/17/2022 9:25pm – 2/18/2022 8:05am
- 4/7/2022 7:30pm – 4/8/2022 12:45pm
- 4/20/2022 2:25pm – 4/20/2022 11:05pm
- 4/6/2023 1:40am – 4/6/2023 10:55am
- 12/18/2023 6:15am – 12/18/2023 8:22pm
- 1/26/2024 7:25am – 1/26/2024 3:20pm

### 1.3.4 Design Flows, Existing Flows, and Waste Loads

The original design for the SCPS was for peak flows of 38 MGD. However, this flow value has been exceeded over the last three years. Table 1.4.1 provides the minimum daily, average daily, maximum daily, and peak flow values during 2022, 2023, and 2024. The 2024 data is a partial data set, for the year to date.

As noted in Table 1.4.1, the minimum to peak flow ratio for 2022 – 2024 is 8.8:1 and the average to peak flow ratio for 2022 – 2024 is 4.5:1.

TABLE 1.4.1. FLOW SUMMARY TO SANITARY SCREENING FACILITY: 2022 – 2024

| Date/Time | 2022 | 2023 | 2024 |
|---|---|---|---|
| Minimum Daily Flow (MG) | 3.9 | 4.4 | 7.2 |
| Average Daily Flow (MG) | 8.2 | 9.1 | 12.0 |
| Maximum Daily Flow (MG) | 30.0 | 35.4 | 30.5 |
| Peak Flow (MGD) | 39.0 | 46.5 | 43.0 |

Table 1.4.2 shows a summary of the peak flow events to the SSF from 5/1/2022 to 5/1/2024. The longest duration of a peak flow event exceeding the design conditions was 13 hours on 12/18/2023.

TABLE 1.4.2. PEAK FLOW EVENTS TO SANITARY SCREENING FACILITY: 5/1/22 – 5/1/24

| Date/Time | Flow (MGD) | Date/Time | Flow (MGD) |
|---|---|---|---|
| 4/6/2023 1:00 | 39.9 | 12/18/2023 13:00 | 46.3 |
| 4/6/2023 2:00 | 44.2 | 12/18/2023 14:00 | 46.5 |
| 4/6/2023 3:00 | 42.8 | 12/18/2023 15:00 | 46.5 |
| 4/6/2023 4:00 | 39.3 | 12/18/2023 16:00 | 43.8 |
| 4/6/2023 5:00 | 38.9 | 12/18/2023 17:00 | 43.8 |
| 4/6/2023 6:00 | 40.4 | 12/18/2023 18:00 | 40.6 |
| 4/6/2023 7:00 | 38.5 | 12/18/2023 19:00 | 38.0 |
| 12/18/2023 6:00 | 40.4 | 1/26/2024 7:00 | 39.1 |
| 12/18/2023 7:00 | 44.7 | 1/26/2024 8:00 | 43.0 |
| 12/18/2023 8:00 | 44.3 | 1/26/2024 9:00 | 42.5 |
| 12/18/2023 9:00 | 44.3 | 1/26/2024 10:00 | 41.3 |
| 12/18/2023 10:00 | 41.7 | 1/26/2024 11:00 | 39.7 |
| 12/18/2023 11:00 | 44.5 | 1/26/2024 12:00 | 38.3 |
| 12/18/2023 12:00 | 45.8 | | |

### 1.3.5 Photographs

For photographs related to the SCPS and the SSF in their present condition, see Appendix F.

### 1.3.6 History of Damage

The intensity of storms and corresponding peak flow conditions are higher than the established peak design conditions. These peak flows in excess of design capacity increase the likelihood of flooding and damage upstream, observed as surging of sewers through manholes and laterals into basements. To protect upstream users, the County has had to initiate emergency SSO discharges to the Mohawk River.

The original bar screens within SCPS were replaced with Huber Multi-Rake Bar Screen High Flow RakeMax L-shaped screens during the 2019 construction. Since then, the new L-shaped screens have malfunctioned during extreme wet weather events. The screens are climber screens with rake mechanisms that continually clean the screens. However, operators have had to manually chip out rocks that have been lodged between the screen slots after extreme wet weather events. In this scenario the operators have to manually access the screen channels and manually remove the rocks and stones from the screen faces. If one screen fails during a storm event, operators have been unable to pass the full flow greater than 30 MGD through one 30% blinded screen during storm conditions, resulting in the opening of the SSF bypass valves and unscreened flow being sent directly to the SCPS, circumventing the SSF. The downstream pumps can only pump 38 MGD to the WPCP and therefore to prevent rising levels in SCPS, the plant protection

valve is opened when there is no other feasible option to prevent damage to the SCPS for flows in excess of 38 MGD. Sending unscreened flow through the force mains can result in solids build up and leads to increased frequency of cleaning of the force mains, which is expensive and labor intensive.

### 1.3.7 Unit Process Assessment

Regardless of system flows, the two 38 MGD rated mechanical bar screens have not performed as intended during extreme wet weather events due to issues with the screens blinding and limited system hydraulics for headloss build-up upstream of the screens. The maximum flow that each screen can pass is estimated to be around 30-32 MGD, as shown with supporting hydraulic calculations and operating data. As shown in Table 1.4.1, the peak flows over the past three years have reached 46.5 MGD. In this event, each screen can run about 23 MGD. However, if one screen is to malfunction and is therefore unable to be used, the other screen cannot handle the peak flow of 38 MGD (or extreme wet weather flow of 46.5 MGD).

When these peak flows occur and a screen is malfunctioning, water levels increase in the junction structure and will continue to rise within the service area if not bypassed around the SSF Building. Without bypassing the excess flow, upstream interceptor can become flooded releasing SSO from manholes and through laterals into basements.

Once the unscreened flow has been bypassed around the SSF Building, to the SCPS, the unscreened material continues to travel through the pumping station towards the force mains. Unscreened grit and debris can settle out and impact the capacity of the force mains. Therefore, sending this unscreened material to a holding location to be screened later when the system has returned to normal operation could help reduce some of this material from entering the force main.

It is also recommended to add manual coarse screens in channels upstream of the pumps to protect large debris from entering the pumping station during bypass conditions. These channels need to be modified regardless to help with the current hydraulic restriction between wet wells in the pumping station and coarse screens with an overflow bypass can be installed during this work effort to protect the pumps from large debris.

Additionally, the pumps within the SCPS have not been able to achieve flows much higher than the design value of 38 MGD, which has been exceeded in the past 3 years. At flows above this level, the operators have no choice but to alleviate the system hydraulics with an SSO event. Even if the pumps were upgraded above 38 MGD, it is not guaranteed that the excess flow can be sent to the WPCP under extreme wet weather conditions.

Therefore, the addition of a holding tank will allow for the additional flows to be redirected to a holding location to later be redirected back to the SSF and SCPS once the extreme wet weather event has ended.

## 1.4 Definition of the Problem

### 1.4.1 Health, Sanitation, Security, and/or Cybersecurity

SSO events can affect public health. When the SCPS has an extreme wet weather event in excess of 38 MGD, the excess water currently must be alleviated via SSO to protect rising water levels in the adjacent interceptors resulting in upstream release of SSO material to streets and into basements.

The release of SSO into the river poses a threat to both humans and the environment however the only other alternative is to allow the levels in the Junction Structure to rise which can cause upstream flooding and release of SSO through manholes and through laterals into basements. This is not an option as it would be even more of a direct health risk to the local population in comparison to an SSO release to the river.

The holding tank will allow capture of extreme wet weather event flows in a controlled manner to prevent release of sewage to the environment protecting human and aquatic life.

### 1.4.2 Aging Infrastructure

SSO events at the SCPS have historically been caused by extreme wet weather events, which can be compounded by operational issues with the screens in the SSF building. Extreme wet weather events would include an influx of infiltration and inflow (I/I) to the SCPS. This in part relates to aging infrastructure. Issues with I/I can be attributed to aging collection system infrastructure and damage from tree roots and settling of structures.

An ongoing effort of the County is to address this aging collection system and reduce I/I to the SCPS. However, this is anticipated to take 5-7 years to complete. Alternative 5, presented in this addendum report, works to address these aging infrastructure issues with a solution that can be utilized in the meantime to prevent SSO.

The pumps and valves in the SCPS have also been identified as in need of replacement due to aging infrastructure. The County is planning on replacing the pumps and valves, ideally with additional capacity in the pumping station to provide true redundancy of pumps and be able to handle flow in excess of 38 MGD, in case the additional I/I cannot be addressed and/or storm intensity continues to increase.

### 1.4.3 Need for Redundancy

The current SCPS process equipment was designed to be redundant, however it has been recognized that when one screen fails the other cannot handle greater than 30-32 MGD.

Previous alternatives identified in the 2022 Engineering Report identified adding an additional screen to provide redundancy for 38 MGD and extreme wet weather flows in excess up to 46 MGD.

The addition of the holding tank will provide system relief if one screen is out and/or the system cannot convey flows in excess of 38 MGD up to the main WPCP.

### 1.4.4 Infiltration and Inflow

One of the goals that the County is currently working on is to reduce I/I to the SCPS. This goal is still being pursued but is estimated to take another 5-7 years to complete. Because of the threat of these I/I issues to public health, a more immediate solution for extreme wet weather events is required.

### 1.4.5 Reasonable Growth

There are no projected large population increases within the Sauquoit Creek Sewer Shed, which feeds into the SCPS.

### 1.4.6 Water, Energy, and/or Waste Considerations

There are no additional energy and/or waste considerations required when considering the problem of handling SSO events at SCPS.

Some additional water will be needed to wash the holding tank out after an event. The wash water system is anticipated to be comprised of four automated spray bars working in tandem. This system is estimated to operate at 100 gallons per minute for 50 minutes, per spray bar, for a total of 20,000 gallons 3-4 times per year.

### 1.4.7 Suitability for Continued Use

Continued use of the SSF and SCPS as they currently operate is not acceptable. Based on current system peak flows and SSF operation, SSOs may continue to occur going forward under extreme wet weather events which seem to be occurring more frequently due to climate change. Improvements to the SCPS site must be made to counteract these overflow situations and provide the County with a more suitable solution to this type of event.

### 1.4.8 Physical Risk Due to Climate Change

The risks due to climate change are in relation to increased frequency of extreme wet weather events. The extreme storms that this type of event can bring overloads the SSF screens, upstream interceptors, and SCPS wet wells. In this type of event, SSO must currently be released directly to the Mohawk River to protect from SSO events in upstream sewers. With continued climate change becoming an important factor to address, these types of events will most likely continue to get worse over time. The SCPS facility is in need of an alternative path for the SSO during this type of extreme wet

weather event to prevent raw sewage from entering the Mohawk River until further measures can be made to reduce I/I and/or be able to transfer the additional flow to the main WPCP.

### 1.4.9 Compliance with Current Standards

Per 10 State Standards Section 61.124, where mechanical screens are used, a redundant mechanical screen that can handle peak instantaneous flows must be provided. As previously discussed in this report, each of the two screens in the SSF cannot handle the peak flows alone, especially if 38 MGD design capacity is exceeded. Therefore, when one screen is malfunctioning, there is a lack of redundancy, and this standard is not met.

Alternative 5 in this addendum report addresses this issue by providing a manually screened bypass and holding tank for the additional flows.

## 1.5 Financial Status

### 1.5.1 Sources of Income

Oneida County generates the revenue necessary to fund the operation of its facilities through sewer billing charges based on metered or unmetered water consumption. In addition to funding the operation of the wastewater system, these sewer billing charges in 2024 include $7.03 per 1,000 gallons of water usage. Additionally, customers in the Sauquoit Creek tributary basin, except the Village of Whitesboro are assessed an additional surcharge rate of $1.05 per 1,000 gallons of water usage to pay for capital expenditures and system repairs associated with the Consent Order. Customers residing in the Village of Whitesboro are assessed an additional surcharge rate of $2.30 per 1,000 gallons of water usage for the same expenditures and repairs.

### 1.5.2 Other Capital Improvement Programs

Recent capital projects include several construction contracts for upgrades at the WPCP, Sauquoit Creek Pumping Station/force main, and sanitary sewer collection system improvements that are either completed or near completion, which were part of the Consent Order compliance program. These projects were funded through the CWSRF program.

### 1.5.3 Status of Existing Debts

The County has a number of capital projects funded with long term debt. The annual debt service for the 2024 budget is $13,620,936.

# 2.0 Alternatives Analysis

Alternatives 1, 2, 3, and 4 were previously analyzed in the 2022 Engineering Report which is attached as Appendix H. Of these alternatives, Alternative 2 was selected as the recommended alternative. For the purposes of this addendum report, Alternative 5 presented herein, will only be compared to previously recommended Alternative 2.

## 2.1 Alternative 2 – Screening Building Expansion to the North

This section provides a description, cost estimate, and summary of non-monetary factors with regards to Alternative 2. Additional details and discussion on this alternative can be found in the previously submitted 2022 Engineering Report. A figure representation of this alternative can be found in Section 5.0.

### 2.1.1 Description

*Figure 2-1.1 provides an overview of Alternative 2. Alternative 2 consists of the following major elements:*

- *Moves the screenings receiving area to the north.*
- *Extends the two conveyors which currently feed the screenings area so that they can reach the new screenings receiving area.*
- *Constructs a new building adjacent to the existing building with a new third 4-foot-wide channel, screen, and a screenings compactor which would discharge north to the new screenings receiving area.*
- *New building would include a main process room with two points of personnel access and a skylight for screen/equipment extraction and a mechanical and electrical room with separate outside access.*
- *The screenings receiving area would be enclosed as a separate "room" with roll-up door for truck access and a separate personnel access door.*
- *A new junction structure north of the existing junction structure built in a "dog-house" construction style over the existing sewer.*
- *A dedicated 4-foot-wide feed channel from the new junction structure with an isolation gate located at the junction box.*
- *The feed channel would include a 36-inch emergency/special conditions bypass pipe and valve directionally traveling north from the channel and then east toward the existing emergency/special conditions bypass piping.*
- *Downstream connection of the third channel would be via a 48-inch pipe.*
- *Two new channels would be constructed to feed the two existing screenings channels with isolation gates at the feed side. As the existing junction structure will be live during the construction, the construction to the new junction structure will be built in a "dog-house" construction style around the two discharge pipes.*
- *New constructed openings of approximately 4-foot width would be constructed into the existing channels.*

- *A new common discharge structure will be constructed, again built in a "dog-house" construction style to allow discharge of screened sewage from any of the channels to feed either side of the pumping station wet well.*
- *Additional generator capacity to cover power to the new equipment.*
- *Maintain system resiliency for the new equipment and electrical components above the 100-year flood plain elevation.*

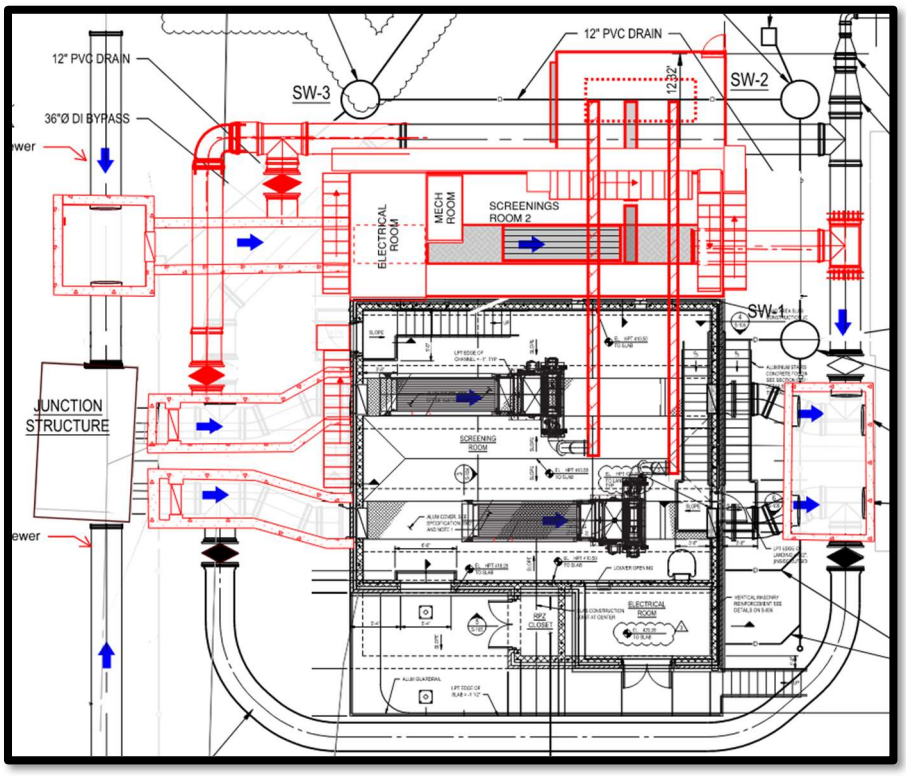



***Figure 2-1.1 – Alternative 2 - Screening Building Expansion to the North***

### 2.1.2 Cost Estimate

*The estimated Class 5 opinion of probable construction cost for Alternative 1 (Screening Building Expansion to the North) is $5,452,000, with a lower range of $2,726,000 (-50%) and an upper range of $10,904,000 (+100$).*

*This does not include engineering, legal, or construction administration costs, which are estimated to add an additional 20%.*

### 2.1.3 Non-Monetary Factors

*This alternative expands the existing screening building to the north, creating a new screening room. The two areas would share a common wall and could be connected via a new doorway to simplify operations and maintenance access to equipment. The new room would be sized for sufficient working space around the equipment but would*

*create additional heating and ventilation demands. The location of screening dumpster is pushed further north but still has sufficient truck turning area.*

It should be noted that this alternative, in comparison to Alternative 5, requires extending the conveyance system for the screen solids. Conveyance of solids in extended screw conveyors can present operational risk and maintenance difficulties.

Alternative 2 also requires deep excavation in regulatory floodway near the Sauquoit Creek and Mohawk River, requiring stabilization and dewatering. While this was done for previous construction; this excavation would be even closer to the Sauquoit Creek and Mohawk River than previous work.

Alternative 2 eliminates crucial accessibility for removal of screenings and maintenance activities. There has been concern from operators that this alternative will impede the ability to move materials in and out of the site.

In addition, Alternative 2 increases the amount of rotating equipment that needs to be maintained, increasing the overall operating costs of the SCPS facilities.

## 2.2 Alternative 5 – Addition of a Wet Weather Holding Tank

This section provides a description, cost estimate, and summary of non-monetary factors with regards to Alternative 5. A figure representation of this alternative can be found in Section 5.0.

### 2.2.1 Description

The process flow diagram in Section 5.0 provides an overview of Alternative 5, which consists of the following major elements to address extreme wet weather events:

- Construct a 7,000,000-gallon tank to hold excess flows during extreme wet weather events.
- Install level sensing devices within the holding tank.
- Include an automatic spray wash cleaning system with the holding tank.
- Install an automated valve on the existing 24” force main from the SCPS to the main WPCP to direct flow to the holding tank during extreme wet weather events.
- Install elevated piping to carry flow from the existing 24” force main to the holding tank. Piping will be free draining after an event and therefore will not need insulation and freeze protection.
- Install a flow meter on the piping to the holding tank to measure flow being diverted to the holding tank.
- Install piping to carry flow, via gravity, from the holding tank back to the closest nearby manhole on the 48” Sauquoit Creek Interceptor (SCI), upstream of the junction structure.
- Install a control valve on the piping line from the holding tank to the SCI to control the flow back to the Junction Structure and avoid surged level conditions in the Junction Structure as the holding tank is drained.

- Install an overflow pipe from the top of the holding tank to the drainage pipe leading to the SCI in the event of a holding tank overflow.
- Retrofit existing SCPS inlet channels to provide manual screening and wet well equalization during extreme wet weather events.
- Install actuators and controls on existing bypass valves to divert flow around the SSF to the SCPS.
- Install controls for level based automated operation of bypass valves and automated diversion valves to and from the holding tank.

As shown in the figure provided in Section 5.0, the main feature in Alternative 5 is the addition of a 7,000,000-gallon holding tank. This holding tank becomes utilized if pumping station flows exceed 38MGD.

When there is a storm event in excess of 38 MGD and the SCPS pumps cannot pump the excess flow up to the WPCP, the water level in the wet wells will rise indicating excess flow to the SCPS. Currently the system hydraulics are relieved by opening the plant protection valve, as opening this valve lowers the system curve to where the existing pumps can pump more flow volume. However, with the addition of the holding tank, this additional flow can now be sent to the holding tank to alleviate the system and be held until the wet well levels within the SCPS have lowered back to normal values. Once the extreme wet weather event is over and water levels are lower in both the junction structure and the SCPS wet wells, the holding tank will drain slowly by gravity back into the junction structure via the upstream SCI.

The preliminary design for the addition of this holding tank can be found in the figures in Section 5.0. The design begins with elevated piping to the holding tank from the existing 24” force main. This line enters the holding tank and fills this tank during an extreme wet weather event. From here, buried pipe will be installed to drain the holding tank contents back to the junction structure. Once the holding tank is at a low enough level, the automated water flush system will activate automatically to clean and flush the tank of debris and associated odors.

### Holding Tank Retention Calculations

A 7,000,000-gallon tank was selected as the size of the new holding tank. The flow from the existing 24” force main to the holding tank will travel via a new 24” pipeline. The flow from the holding tank back to the SCI will travel via a new 36” pipeline. Preliminarily these lines have been sized to retain the proper velocities and to ensure the maximum diversion flow rate of 5900 gpm can be maintained in an overflow event.

To size the 7,000,000-gallon tank, peak storm flows were analyzed. As shown in Table 1.4.1, the peak flow the plant has received over the past three years is 46.5 MGD. Understanding that the WPCP can receive up to 38 MGD with the existing pumps and force main, there will be a remaining 8.5 MGD going to the holding tank in this extreme scenario. The following calculation was completed to support the size of 7,000,000-gallons for the holding tank.

$$\left(\frac{8{,}500{,}000\ gallons}{1\ day}\right)\left(\frac{1\ day}{24\ hours}\right) = 354{,}167\,\frac{gallons}{hour}$$

$$\frac{7{,}000{,}000\ gallons}{354{,}167\ \frac{gallons}{hour}} = 19.8\ hours$$

As shown above, the 7,000,000-gallon tank provides about 19.8 hours of fill time at the peak rate of 46.5 MGD. 19.8 hours was deemed enough time for the extreme wet weather event to subside and flow to begin to be drained back into the junction structure or held in the holding tank. Table 1.4.2 outlines the peak flow events over the last three years to support this claim. As shown in this table, the longest observed peak flow event over the last three years was 13 hours. Even over the course of these 13 hours, the peak flow event did not remain at the highest recorded peak flow value consistently. With about 19.8 hours of maximum flow capacity, a 7,000,000-gallon tank was recommended to be large enough for this holding tank.

The addition of the holding tank allows existing flows to the WPCP to remain below the 38 MGD threshold. With flow to the WPCP remaining at or below 38 MGD there is no need for The County to have an emergency SSO discharge into the Mohawk River. This emergency discharge would instead be routed to the holding tank for eventual draining back through the SCPS and to the WPCP. The addition of the holding tank allows peak flows to have the same effect on the SCPS as the design flows of 38 MGD.

In order to build the holding tank, the land that this tank will be built on must be acquired from the private landowner, the Whitestown Veterans Association. The County has existing easements in place with this property owner. The Whitestown Veterans Association has ceased operations and has expressed interest in selling the property.

As previously stated in section 1.1.5, the SCPS site is located within a PEJA. However, the construction and operation of this holding tank will only positively affect the PEJA. The addition of this new tank will help prevent the County from having to discharge sewage to the Mohawk River during extreme wet weather events. This will keep the County from introducing a health risk to the local PEJA community. Additionally, the holding tank is designed to have a cover and include a wash water system to be activated upon tank draining. Each of these measures is in place to clean the tanks after an event and minimize odors associated with a sewage holding tank. Therefore, there will be no additional impact on the PEJA regarding air quality.

### 2.2.2 Cost Estimate

The Class 5 opinion of total construction cost for Alternative 5 (Addition of a Wet Weather Holding Tank) of $6,605,000, with a lower range of $3,302,500 (-50%) and an upper range of $13,210,000 (+100%). This cost estimate of total project costs includes administrative costs such as engineering, construction administration, and permitting.

### 2.2.3 Non-Monetary Factors

This alternative, when compared to the previously selected Alternative 2, is preferred by the operations staff. The previously selected alternative reduced the already limited accessibility to the site for maintenance activities and required deep excavations near the Sauquoit Creek and Mohawk River floodplain area. Alternative 2 also does not provide the detention for flows in excess of 38 MGD and therefore could still result in SSO events during extreme wet weather conditions.

Alternative 5 does require the clearing of trees, brush, and wildlife space at the SCPS site to provide a location for the holding tank. The piping from the holding tank to the existing manhole upstream of the junction structure will be buried and may require additional clearing to the tie-in point. Piping from the tank will need to cross an existing water line and access road and will require tie-in to an existing manhole structure.

The piping from the force main to the holding tank will be above ground, requiring anchoring to the existing SCPS building until the piping reaches the holding tank.

This alternative also requires tie-in to the 6” water line for the flushing system. This pipe will need to be properly protected from freezing and rupture during cold weather.

# 3.0 Summary and Comparison of Alternatives

## 3.1 Alternatives Comparison

The results of the original comparison matrix and analysis for Alternatives 1 – 4 are discussed in the 2022 Engineering Report, attached as Appendix H. The reasons for initially selecting Alternative 2 are stated below once more for reference.

*Based on the analysis of the alternatives for adding the third screen channel, Alternative 2 – Screening Building Expansion to the North is recommended. The primary reasons for the recommendation of Alternative 2 are the following:*

- *Always maintains two (2) channels on-line through construction*
- *Limited work inside existing structure – change of two conveyor systems for the existing two bar screens*
- *Provides for a relatively quick new third channel during the construction progress*
- *Provides good approach channels and inlet channel connections with the new and existing channels in the building*

Taking into consideration the new Alternative 5, below is a summary of why this alternative is recommended over the previously selected Alternative 2. The primary reasons for the recommendation of Alternative 5 are the following:

- Addresses increased flows from extreme wet weather events in excess of 38 MGD.
- Provides a more constructable and cost effective approach, compared to the previously selected Alternative 2.
- Requires lower continual maintenance once startup is complete and the system is online.
- Utilizes less equipment that will require maintenance and/or replacement during the full project life cycle.

## 3.2 Comparison Method

The alternatives were evaluated using the same two-step weight scoring approach utilized in the 2022 Engineering Report. Applicable parameters were identified (costs, schedule, operations impacts, maintenance impacts, safety, etc.) and were given a comparison weighting (1, 3, or 5, with 5 being highest importance parameter) relative to each other. Then for each parameter, the alternatives were scored (1, 2, or 3, with 3 being the highest) on a comparative basis to each other. Finally, the summed weighted scores were compared.

Table 3.4.1 provides a comparison between Alternative 2 and Alternative 5.

## 3.3 Parameter Weight

- 1 = Owner lower consideration / driver
- 3 = Owner consideration / driver
- 5 = Significant owner driver

### 3.4 Parameter Score

- 1 = Lower – Less favorable
- 2 = Neutral
- 3 = High – more favorable

TABLE 3.4.1. ALTERNATIVES 2 AND 5 COMPARISON MATRIX

| Evaluation Parameter | Parameter Weight | Alternative 2 | Alternative 5 |
|---|---|---|---|
| Cost | 3 | 2 | 2 |
| Schedule | 3 | 1 | 2 |
| Permitting | 1 | 2 | 2 |
| Risk – Overruns | 3 | 1 | 3 |
| Dewatering and Excavation Requirements | 3 | 2 | 3 |
| Site Limit Impacts | 3 | 2 | 3 |
| Screenings/Dumpster Area Access | 3 | 2 | 3 |
| Existing PS Loading Dock Access | 3 | 2 | 3 |
| Utilities Impacts / Additional Utilities | 1 | 2 | 3 |
| Existing Equipment Impacts | 3 | 2 | 3 |
| New Equipment (Access and Removal) | 3 | 2 | 3 |
| Electrical Impacts | 3 | 2 | 3 |
| Operations / Operability | 5 | 2 | 3 |
| Constructability | 3 | 2 | 2 |
| Maintenance – Quantity | 3 | 2 | 3 |
| Ease of Maintenance | 5 | 2 | 3 |
| Flow Distribution and Hydraulics (Influent) | 5 | 3 | 1 |
| Flow Distribution and Hydraulics (Effluent) | 5 | 3 | 1 |
| Solids Conveyance | 3 | 2 | 3 |
| Safety Impacts | 5 | 2 | 3 |
| **Totals** | | **146** | **168** |

# 4.0 Recommended Alternative

Alternative 5 – Addition of a Wet Weather Holding Tank is the highest recommended alternative, over Alternative 2 which was previously selected.

## 4.1 Basis of Selection

Alternative 5 was selected over Alternative 2 because Alternative 5 addresses both types of events, screen malfunctions and extreme wet weather. Alternative 2 addresses screen malfunctions but does not provide the SCPS and associated force main relief during an extreme wet weather event in excess of 38 MGD and therefore still may result in SSO to protect upstream and downstream infrastructure.

Alternative 5 also involves low continual maintenance. Adding a third screen, as outlined in Alternative 2, would require maintenance of rotating equipment with a confined space channel access and elevated screw conveyors. In addition, the expansion of the building requires maintenance of additional building facilities

County operations staff prefer Alternative 5 over Alternative 2, as stated in Section 2.2.3. Alternative 5 does not limit vehicular accessibility at the SCPS site nor does this require the deep excavations and working area within the regulatory floodplain. Both of these concerns were expressed by plant staff during further project development, which eventually led to the development of Alternative 5.

Alternative 5 is also preferred by County operations staff as this alternative does not require any additional screening equipment or facility maintenance. Alternative 5 would only require staff to monitor flows and levels, as they currently do, and acknowledge initiation to open the valves needed to bypass the SSF and/or divert flow to the holding tank when needed. The tank wash system is also fully automated and designed to run on its own without any additional staff operation needed.

Alternative 5 requires the installation of less short-lived assets. Alternative 2 requires the addition of a mechanical screen, new compactor and conveyors system as well as building HVAC systems, all complex short-lived asset. The only additional equipment needed for Alternative 5 is the tank wash system on the tank itself which is a relatively simple piping and nozzle arrangement. These tank wash systems are easier and more cost effective to maintain and/or replace than a new mechanical screen.

## 4.2 Cost Estimate

The estimated construction cost for Alternative 5 is $5,520,000, with a lower range of $2,760,000 (-50%) and an upper range of $11,040,000 (+100%). An outline of this cost breakdown is shown below in Table 4.2.1.

TABLE 4.2.1. ALTERNATIVE 5 CONSTRUCTION COST

| Description | Estimated Cost |
|---|---|
| Demolition/Spoils Disposal | $ 25,000 |
| Dewater Equipment | $ 0 |
| Piping | $ 325,000 |
| Equipment | $ 693,750 |
| Structures/Tanks | $ 4,170,000 |
| Dumpster Enclosure | $ 0 |
| Electrical, Instrumentation, and Controls Allowance | $ 306,250 |
| **Subtotal** | **$ 5,520,000** |

This cost breakdown does not include engineering, legal, or construction administration costs, which will add approximately 20% of the total cost. These additional costs bring the total construction costs to $6,605,824, with a lower range of $3,302,912 (-50%) and an upper range of $13,211,648 (+100%). This full breakdown is shown below in Table 4.2.2.

TABLE 4.2.2. ALTERNATIVE 5 TOTAL COST

| Description | Estimated Cost |
|---|---|
| Base Construction Costs | $ 2,484,000 |
| **Subtotal** | **$ 2,484,000** |
| Contractor Overhead and Profit (11%) | $ 263,546 |
| **Subtotal** | **$ 2,747,546** |
| Materials Shipping and Handling (1%) | $ 21,205 |
| **Subtotal** | **$ 2,768,751** |
| Contractor General Conditions (15%) | $ 415,010 |
| **Subtotal** | **$ 3,183,761** |
| Startup and Training (2%) | $ 63,615 |
| **Subtotal** | **$ 3,247,376** |
| Under Design/Develop Contingency (50%) | $ 1,623,688 |
| **Subtotal** | **$ 4,871,063** |
| Building Risk, Liability Auto Insurance (2%) | $ 96,937 |
| **Subtotal** | **$ 4,968,000** |
| Payment and Performance Bonds (2%) | $ 74,722 |
| **Subtotal** | **$ 5,042,722** |
| Escalation to Midpoint (9%) | $ 462,468 |
| **Subtotal** | **$ 5,505,190** |
| Engineering (20%) | $ 1,100,634 |
| **Subtotal** | **$ 6,605,824** |

## 4.3 Project Schedule

The estimated project schedule is shown in Appendix A.

## 4.4 Next Steps

### 4.4.1 Community Engagement

Community engagement information was previously provided in the 2022 Engineering Report which stated:

*Since 2013, the County has made a significant effort toward community outreach initiatives. The goal of the outreach has been public education on the importance of the SSO mitigation program and the benefit of the capital upgrades in the collection system, at the SCPS, and at the WPCP. Community Engagement has included:*

- *Development of the "Operation Ripple Effect" initiative to educate the community on the overall program, and benefits of disconnecting stormwater sources from the collection system. http://rippleeffectocsd.org*
- *Radio and television advertisements*
- *Interviews of key personnel (County Executive, Commissioner, etc.) by local print and radio media*
- *Rain barrel construction community events*
- *Educational events in local elementary schools*
- *Regular Steering Committee meetings with DPW supervisors, highway superintendents, etc. in the communities that operate collection systems tributary to the OCSD interceptor network.*

*The community engagement program will continue through the construction of the upgrades described in this Engineering Report.*

### 4.4.2 SEQR Review

SEQR review information was previously provided in the 2022 Engineering Report which stated:

*Prior to commencing the construction phase of the improvements to the WPCP and SCPS, the County performed a coordinated review under the State Environmental Quality Review Act (SEQRA). The NYSEFC requested completion of a Full Environmental Assessment Form (EAF) in conjunction with the SEQRA process. In 2015, the County prepared Part 1 of the Full EAF and coordinated review with other involved agencies, who concurred with the County acting as Lead Agency. Parts 2 and 3 of the Full EAF were completed to review potential environmental and socio-economic impacts. The SEQRA review confirmed the upgrades at the WPCP and SCPS will have no significant adverse impacts on the environment, and the County issued a Negative Declaration with regard to proposed improvements and modifications to County owned and operated wastewater management facilities.*

*As the proposed upgrades described in this Engineering Report are of similar nature and scope as the original upgrades, the 2015 Negative Declaration would still apply. The Negative Declaration resolution, passed by the Oneida County Board of Legislators in July 2015, is provided in Appendix C.*

### 4.4.3 Procurement Methods and Plan of Contracts

Procurement methods and plan of contracts information was previously provided in the 2022 Engineering Report which stated:

*These upgrades will be procured by a traditional design-bid-build process. Once the final design is completed, and plans approved by the NYSEFC and NYSDEC, the Contract Documents will be issues for public bidding. The Contractor(s) will be chosen on the basis of the lowest responsible base bid.*

### 4.4.4 Engineering Report Certification

The Engineering Report Certification is shown in Appendix B.

### 4.4.5 NYS Senate and Assembly Support

Letters of support for this application for WIIA funding for Alternative 5 from Senator Joseph Griffo and Assemblywoman Marianne Buttenschon are included in Appendix I.

# 5.0 Maps & Figures

### Overall Service Area

### Existing Site Conditions

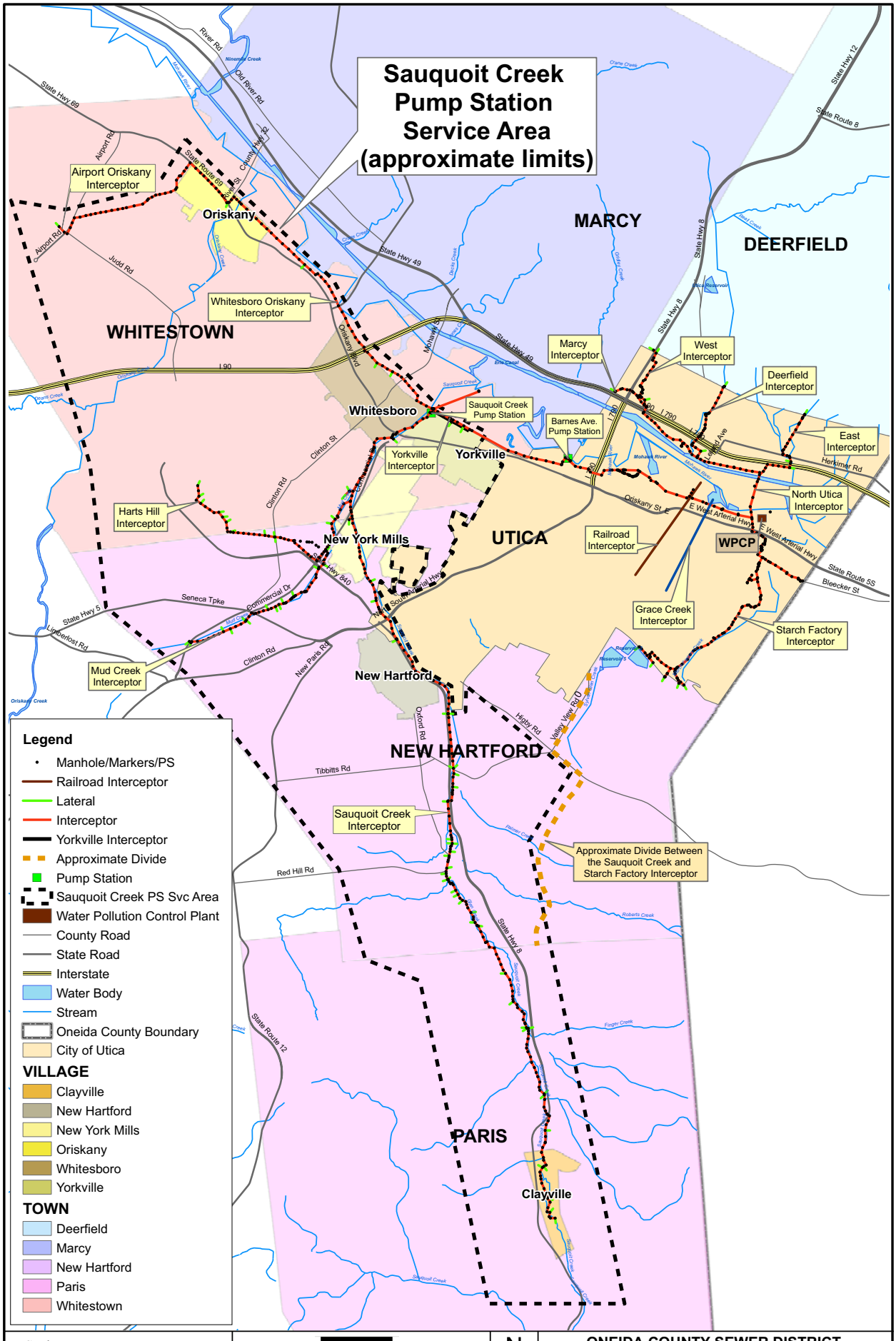
Supplied from the previously provided in the 2022 Engineering Report.

### Proposed Improvements – Alternative 2

Supplied from the previously provided in the 2022 Engineering Report.

### Proposed Improvements – Alternative 5

Included are site plans, a process flow diagram, a hydraulic profile, and a hydraulic sketch.

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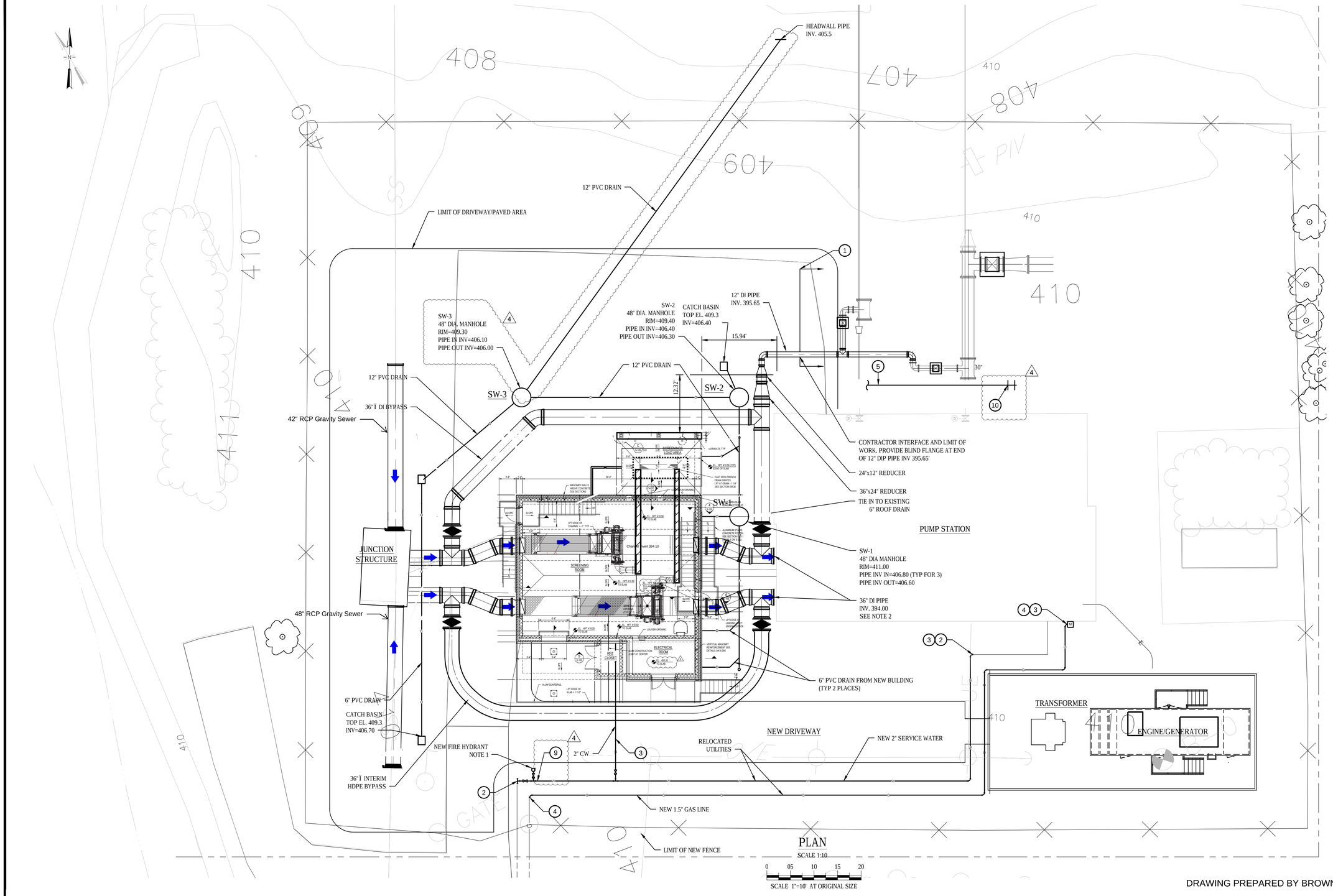



PLAN

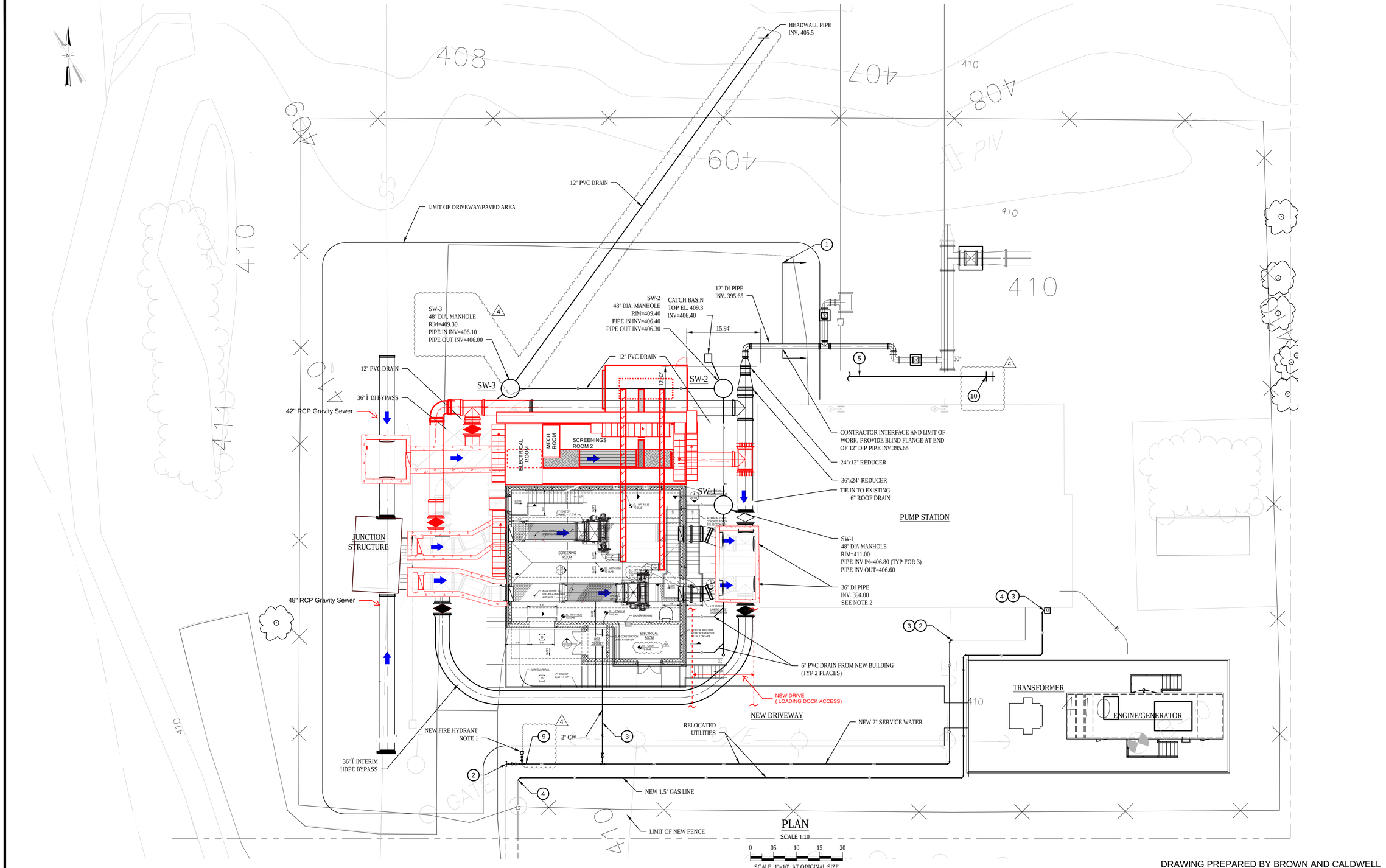
SCALE 1:10

0 05 10 15 20

SCALE 1"=10' AT ORIGINAL SIZE

DRAWING PREPARED BY BROWN AND CALDWELL

# FIGURE 5.2.1
# CIVIL LAYOUT - EXISTING SITE CONDITIONS




PLAN

SCALE 1:10

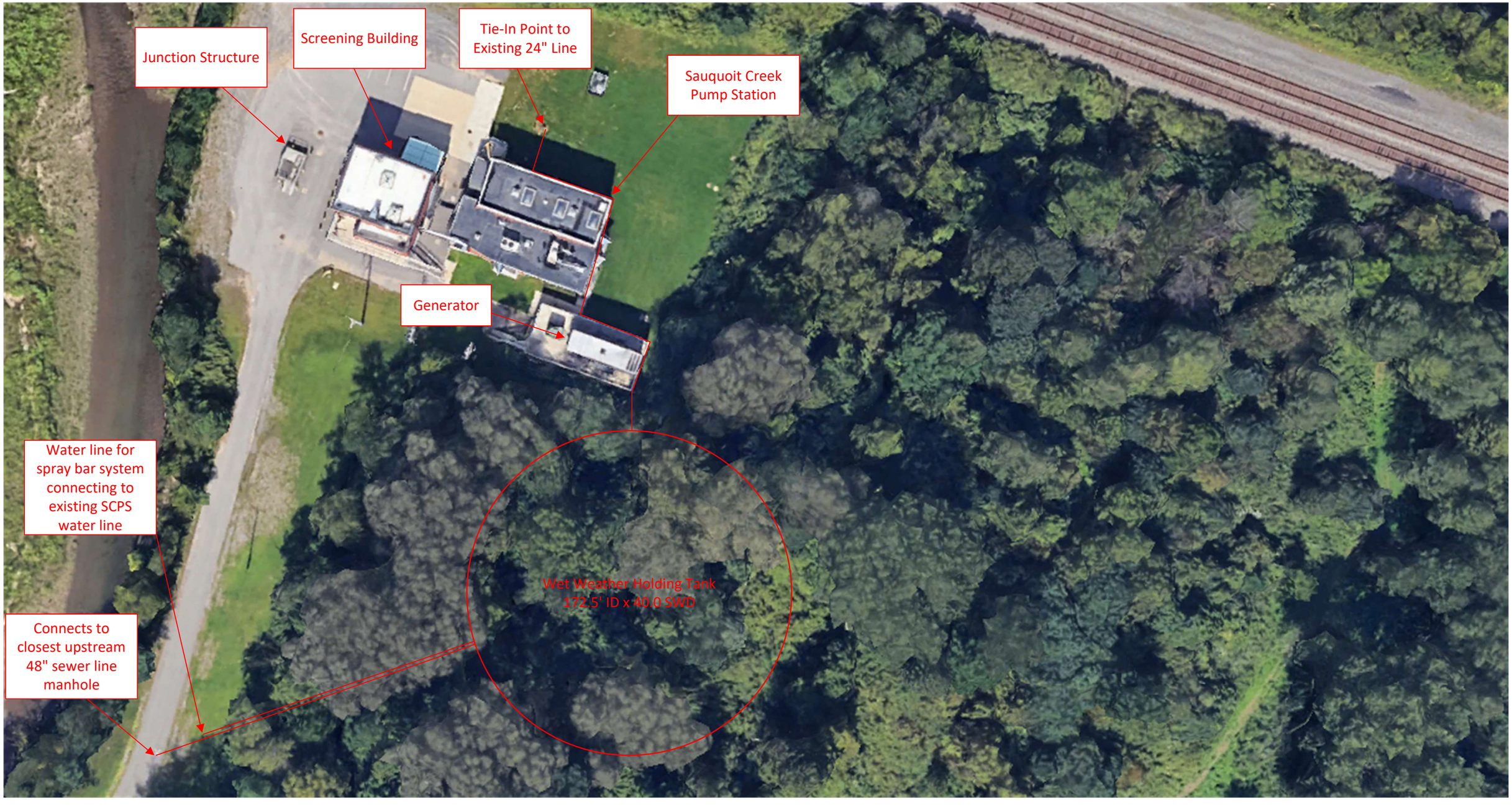
0 05 10 15 20

SCALE 1"=10' AT ORIGINAL SIZE

DRAWING PREPARED BY BROWN AND CALDWELL

# FIGURE 5.2.3
# ALTERNATIVE 2 - FINAL SITE PLAN

Plot Date: 28 February 2017 - 5:08 PM Plotted by: Jacob Rush Cad File No: C:\pwwork\pwv8i86oc\ext_bc_jrush\dms02596\WO26C104.dwg




Critical Path ENGINEERING SOLUTIONS

7030 E. Genesee St., Fayetteville, NY 13066

WIIA Grant Submission

**Site Plan**

| SIZE | DATE | DWG NO | REV |
|---|---|---|---|
| 11x17 | JUNE 13, 2024 | **SP-1** | **A** |

| SCALE | NTS | DRAWN BY | RSP | SHEET | 1 OF 2 |
|---|---|---|---|---|---|

Tie-In Point to Existing 24" Line

Sauquoit Creek Pump Station

Screening Building

Junction Structure

48" Diameter Sewer Line

Generator

Limit of Fence

LIMIT OF DRIVEWAY/PAVED AREA

SW-3
48" DIA. MANHOLE
RIM=409.30
PIPE IN INV=406.10
PIPE OUT INV=406.00

SW-2
48" DIA. MANHOLE
RIM=409.40
PIPE IN INV=406.40
PIPE OUT INV=406.30

CATCH BASIN
TOP EL. 409.3
INV=406.40

12" DI PIPE
INV. 395.65

15.94'

12" PVC DRAIN

12.32'

SW-2

36"Ø DI BYPASS

INV=406.30

CATCH BASIN
TOP EL. 409
INV=406.40

4" SAN FURNISHED AND INSTALLED BY PLUMBING CONTRACT

SCREEN LOADING AREA

SW-1

CONTRACTOR INTERFACE AND LIMIT OF WORK. PROVIDE BLIND FLANGE AT END OF 12" DIP PIPE INV 395.65'

24"x12" REDUCER

36"x24" REDUCER

TIE IN TO EXISTING 6" ROOF DRAIN

PUMP STATION

SW-1
48" DIA MANHOLE
RIM=411.00
PIPE INV IN=406.80 (TYP FOR 3)
PIPE INV OUT=406.60

36" DI PIPE
INV. 394.00
SEE NOTE 2

JUNCTION STRUCTURE

SANITARY SCREEN FACILITY
NOTE: STAIRS, HANDRAILS AND GRATING NOT SHOWN FOR CLARITY

ELECTRICAL ROOM

36" DI PIPE
INV. 394.25
SEE NOTE 2

6" PVC DRAIN

CATCH BASIN
TOP EL. 409.3
INV=406.70

6" PVC DRAIN FROM NEW BUILDING (TYP 2 PLACES)

NEW FIRE HYDRANT
NOTE 1

2" CW

36"Ø INTERIM HDPE BYPASS

NEW DRIVEWAY

RELOCATED UTILITIES

NEW 2" SERVICE WATER

NEW 1.5" GAS LINE

TRANSFORMER

ENGINE/GENERATOR

Critical Path ENGINEERING SOLUTIONS

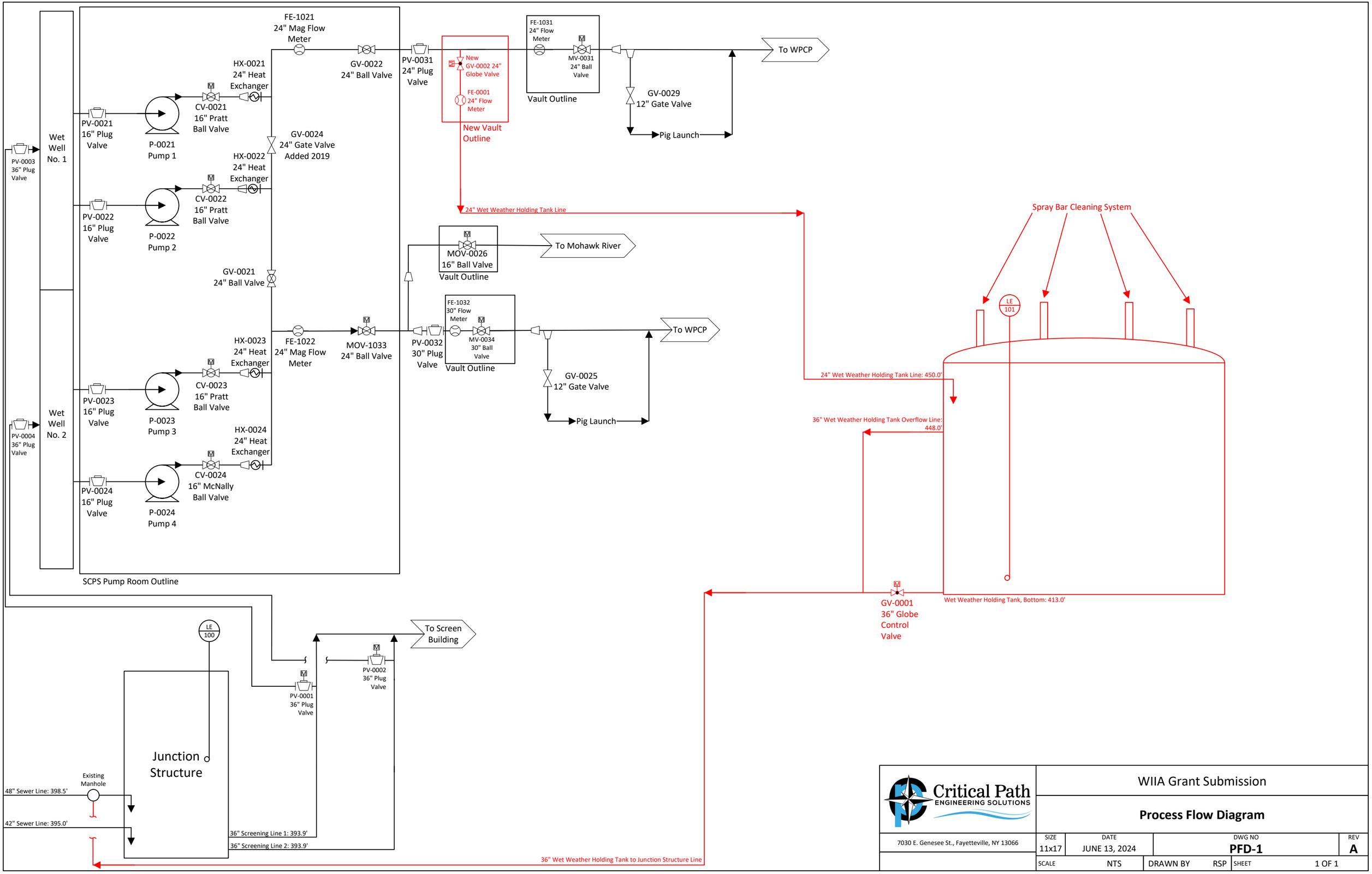
7030 E. Genesee St., Fayetteville, NY 13066

WIIA Grant Submission

**Site Plan**

| SIZE | DATE | DWG NO | REV |
|---|---|---|---|
| 11x17 | JUNE 13, 2024 | **SP-2** | **A** |

| SCALE | NTS | DRAWN BY | RSP | SHEET | 2 OF 2 |
|---|---|---|---|---|---|




Critical Path ENGINEERING SOLUTIONS

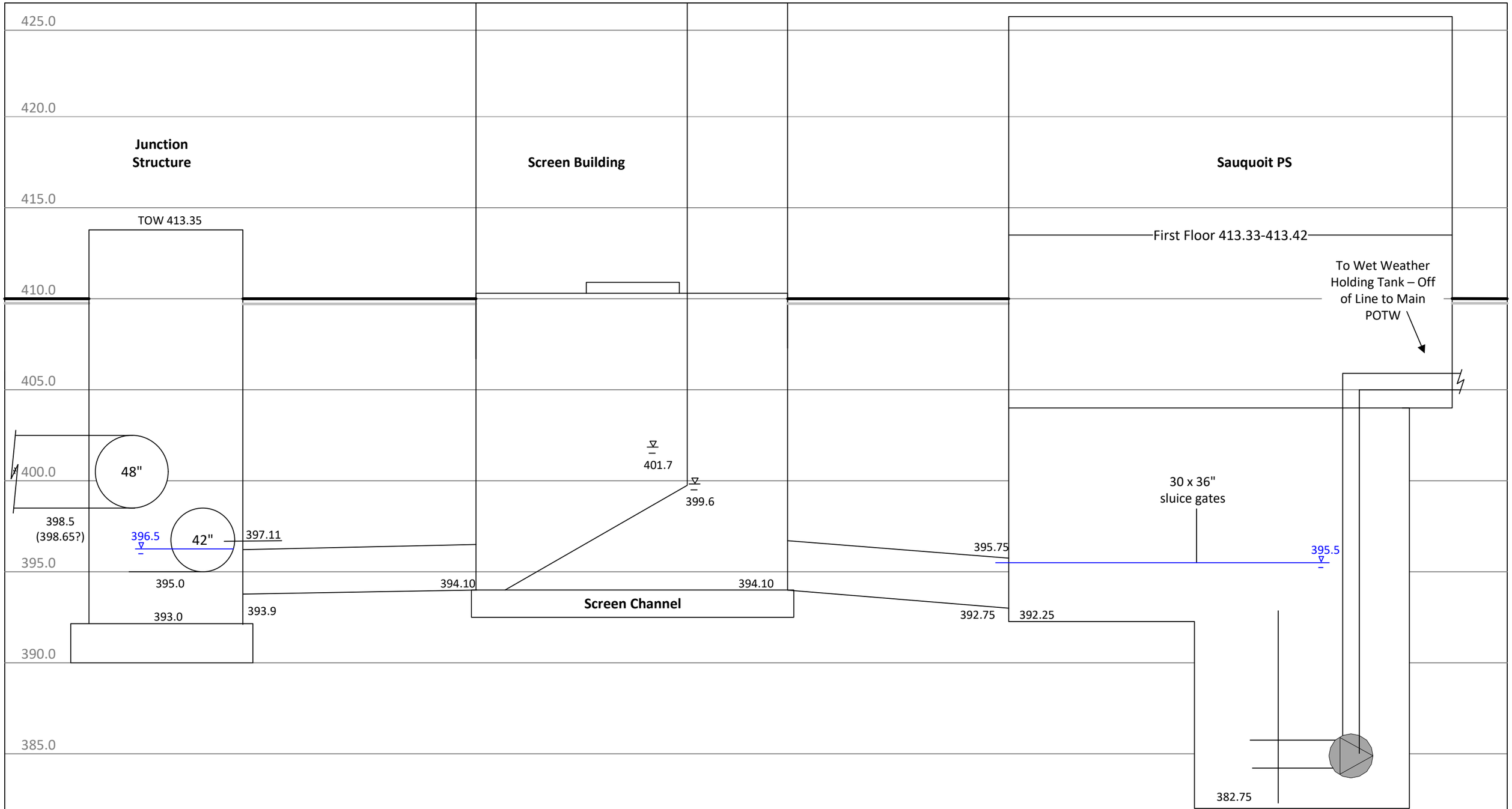
7030 E. Genesee St., Fayetteville, NY 13066

WIIA Grant Submission

**Process Flow Diagram**

| SIZE | DATE | DWG NO | REV |
|---|---|---|---|
| 11x17 | JUNE 13, 2024 | **PFD-1** | **A** |

| SCALE | NTS | DRAWN BY | RSP | SHEET | 1 OF 1 |
|---|---|---|---|---|---|




Key:
TOP – Top of Pipe
TOF – Top of Flange
TOW – Top of Wall

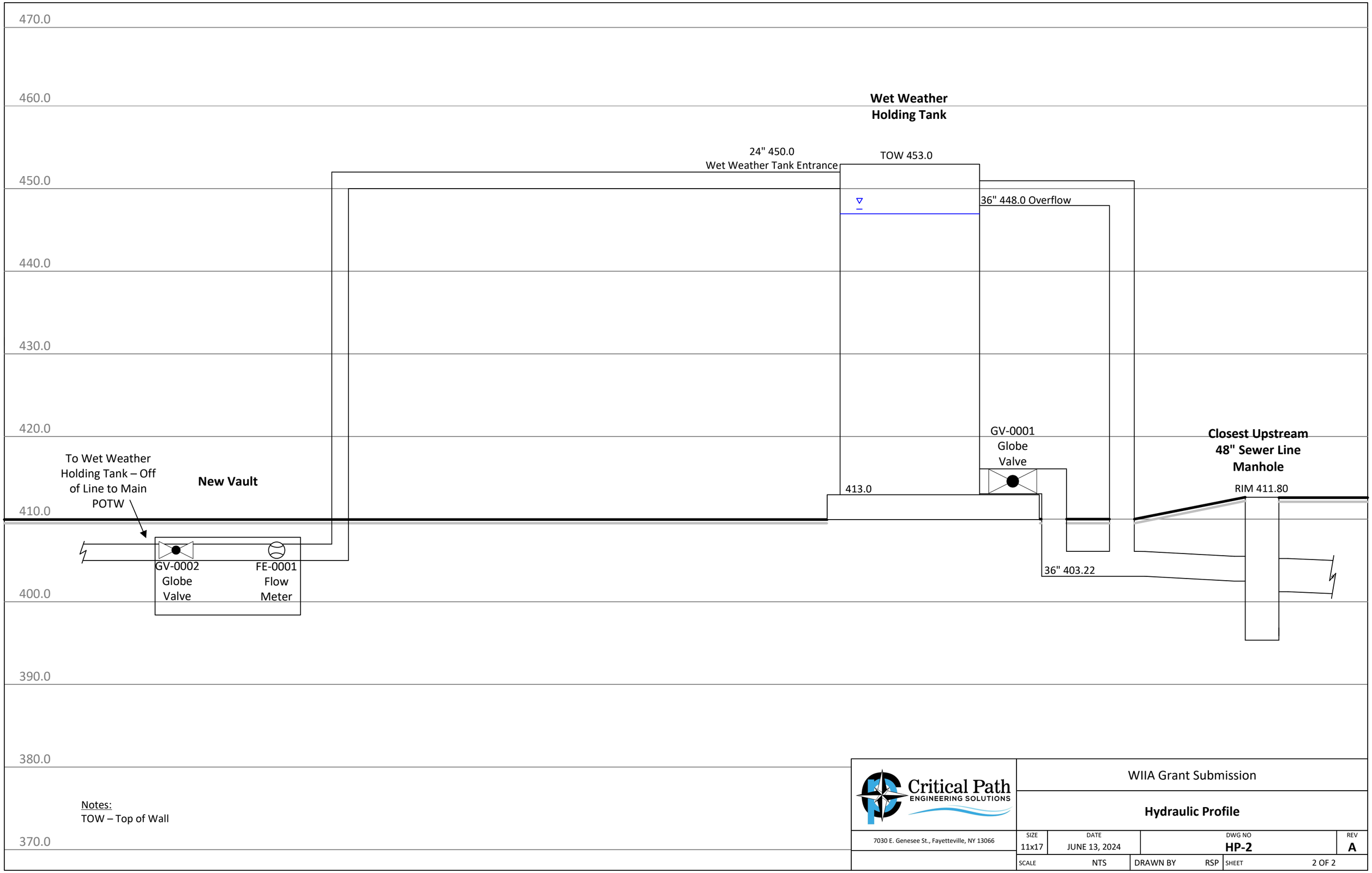
Critical Path ENGINEERING SOLUTIONS
7030 E. Genesee St., Fayetteville, NY 13066

WIIA Grant Submission

**Hydraulic Profile**

| SIZE | DATE | DWG NO | REV |
|---|---|---|---|
| 11x17 | JUNE 13, 2024 | **HP-1** | **A** |

| SCALE | NTS | DRAWN BY | RSP | SHEET | 1 OF 2 |
|---|---|---|---|---|---|




Notes:
TOW – Top of Wall

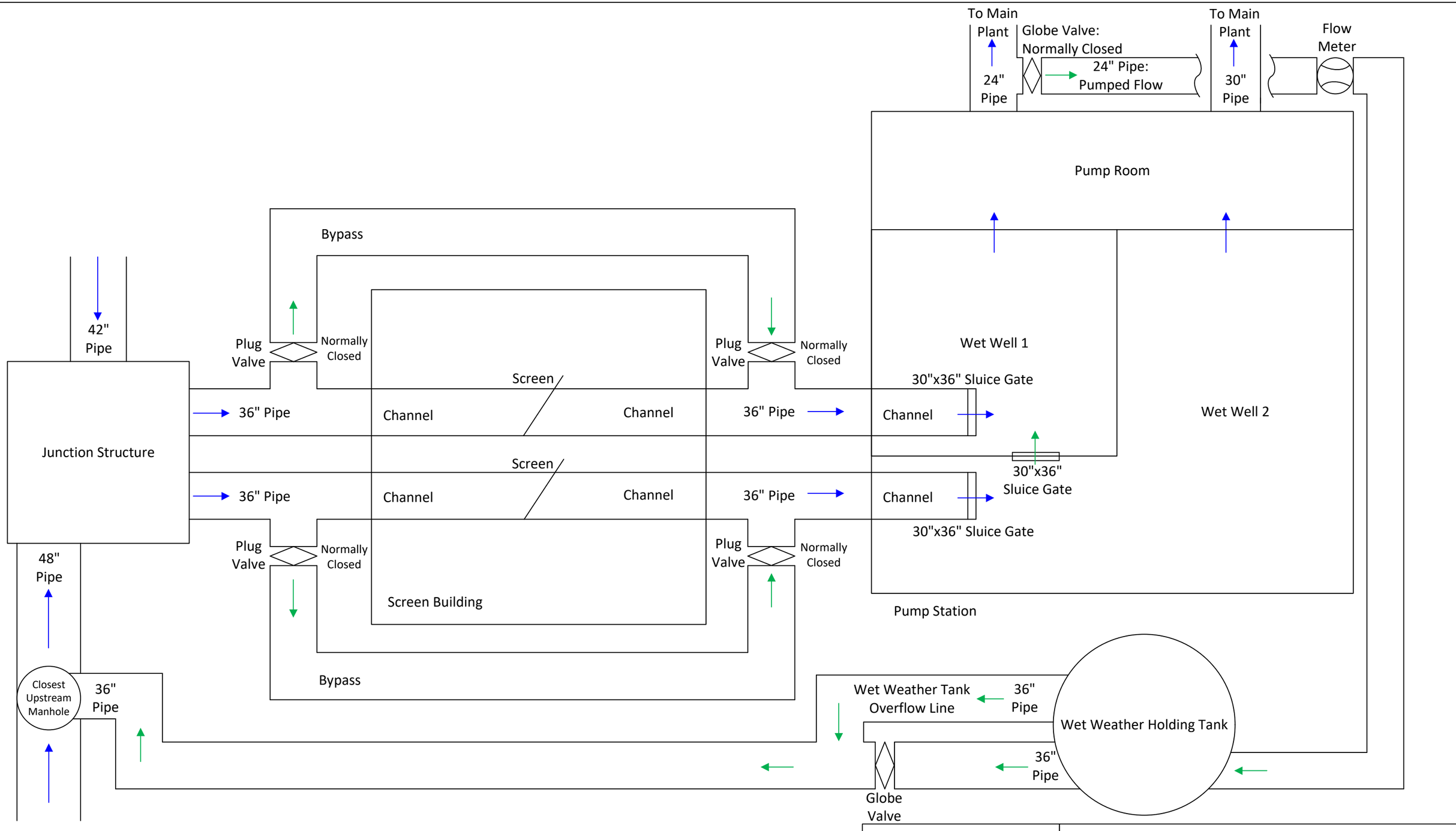
Critical Path
ENGINEERING SOLUTIONS
7030 E. Genesee St., Fayetteville, NY 13066

WIIA Grant Submission

**Hydraulic Profile**

| SIZE | DATE | DWG NO | REV |
|---|---|---|---|
| 11x17 | JUNE 13, 2024 | **HP-2** | **A** |

| SCALE | NTS | DRAWN BY | RSP | SHEET | 2 OF 2 |
|---|---|---|---|---|---|




Notes:
- Normal Flow
- Alternative Flow

Critical Path ENGINEERING SOLUTIONS
7030 E. Genesee St., Fayetteville, NY 13066

WIIA Grant Submission

**Hydraulic Sketch**

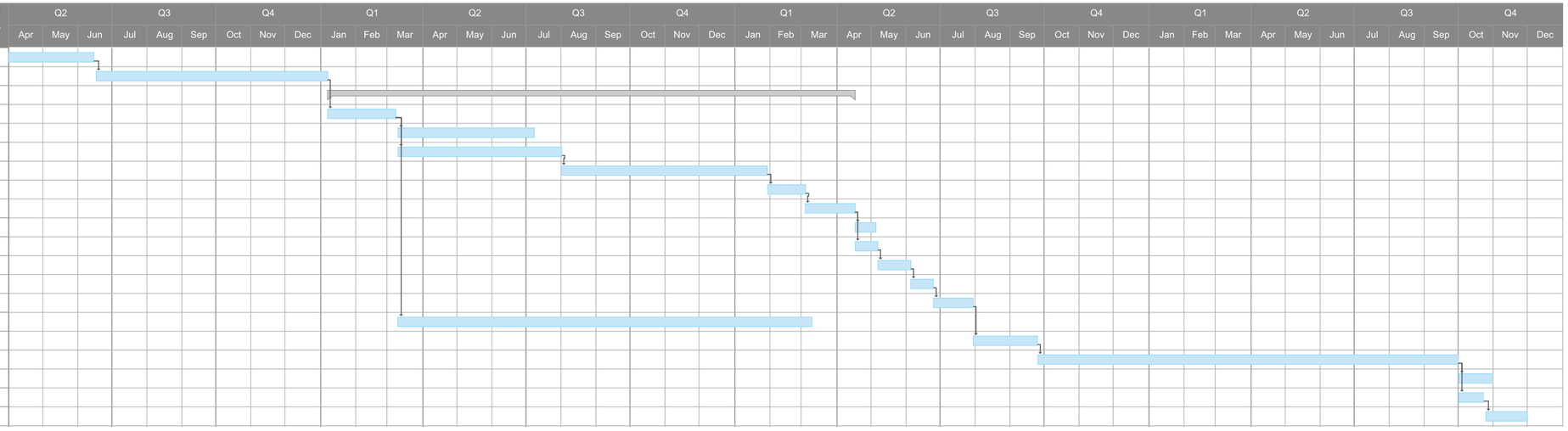
| SIZE | DATE | DWG NO | REV |
|---|---|---|---|
| 11x17 | JUNE 13, 2024 | **HS-1** | **A** |

| SCALE | NTS | DRAWN BY | RSP | SHEET | 1 OF 1 |
|---|---|---|---|---|---|

# Appendix A: Proposed Schedule

# Attachment A - Project Schedule

| | Task Name | Duration | Start | Finish | Predecessors |
|---|---|---|---|---|---|
| 1 | Conceptual Design Report | 55d | 04/01/24 | 06/14/24 | |
| 2 | Basis of Design Report | 146d | 06/17/24 | 01/06/25 | 1 |
| 3 | Detailed Design | 333d | 01/07/25 | 04/16/26 | |
| 4 | 30% Design Submittal | 44d | 01/07/25 | 03/07/25 | 2 |
| 5 | NYSDEC Review | 86d | 03/10/25 | 07/07/25 | 4 |
| 6 | 60% Design Submittal | 104d | 03/10/25 | 07/31/25 | 4 |
| 7 | 90% Design Submittal | 130d | 08/01/25 | 01/29/26 | 6 |
| 8 | Plans and Spec Submitted to EFC | 23d | 01/30/26 | 03/03/26 | 7 |
| 9 | IFC | 32d | 03/04/26 | 04/16/26 | 8 |
| 10 | Bid Documents Finalized | 12d | 04/17/26 | 05/04/26 | 9 |
| 11 | Advertisement | 14d | 04/17/26 | 05/06/26 | 9 |
| 12 | Project Bidding | 21d | 05/07/26 | 06/04/26 | 11 |
| 13 | Review Bids- Select Contractor | 14d | 06/05/26 | 06/24/26 | 12 |
| 14 | Award/Negotiate Contractor | 25d | 06/25/26 | 07/29/26 | 13 |
| 15 | Permitting | 261d | 03/10/25 | 03/09/26 | 4 |
| 16 | Equipment Procurement | 41d | 07/30/26 | 09/24/26 | 14 |
| 17 | Construction | 265d | 09/25/26 | 09/30/27 | 16 |
| 18 | Start-Up and Commissioning | 21d | 10/01/27 | 10/29/27 | 17 |
| 19 | Training | 16d | 10/01/27 | 10/22/27 | 17 |
| 20 | Project Turnover | 27d | 10/25/27 | 11/30/27 | 19 |



# Appendix B: Engineering Report Certification

**Engineering Report Certification**

To Be Provided by the Professional Engineer Preparing the Report

During the preparation of this Engineering Report, I have studied and evaluated the cost and effectiveness of the processes, materials, techniques, and technologies for carrying out the proposed project or activity for which assistance is being sought from the New York State Clean Water State Revolving Fund. In my professional opinion, I have recommended for selection, to the maximum extent practicable, a project or activity that maximizes the potential for efficient water use, reuse, recapture, and conservation, and energy conservation, taking into account the cost of constructing the project or activity, the cost of operating and maintaining the project or activity over the life of the project or activity, and the cost of replacing the project and activity.

**Title of Engineering Report:** Sauquoit Creek Pumping Station - Sanitary Screen Facility Upgrades - June 2024 Egineering Report Addendum

**Date of Report:** 06/13/2024

**Professional Engineer's Name:** Sara Elizabeth Martin, P.E.

**Signature:** Sara Martin

**Date:** 06/13/2024

# Appendix C: Full Environmental Assessment Form and the 2015 Negative Declaration Resolution

*INTRODUCTORY NO. 233*

*F.N. 2015-257*

# ONEIDA COUNTY BOARD OF LEGISLATORS

*RESOLUTION NO.*

*INTRODUCED BY: Messrs. Miller, Porter*
*2ND BY: Mr. Joseph*

**RE: APPROVAL OF THE CLEAN WATER STATE REVOLVING FUND, PROJECT NO. C6-6070-08-04, STATE ENVIRONMENTAL QUALITY REVIEW DETERMINATION OF SIGNIFICANCE, JULY 8, 2015**

**WHEREAS**, Oneida County is implementing requirements stipulated in a NYSDEC-issued Consent Order (R620060823-67); and;

**WHEREAS**, the Consent Order requires improvements and modifications to County owned and operated wastewater management facilities including the Oneida County Water Pollution Control Plant (WPCP) located in the City of Utica, NY, the Sauquoit Creek Pump Station located in the Village of Yorkville; the Sauquoit Creek Pumping Station Force Main located in the Village of Yorkville, Town of Whitestown, and City of Utica, and;

**WHEREAS**, these required improvements and modifications are to be funded, in part, through the State Revolving Fund, which is administered by the Environmental Facilities Corporation (EFC); and;

**WHEREAS**, discretionary actions approved or undertaken by local and State agencies require review under the State Environmental Quality Review Act (SEQRA); and;

**WHEREAS**, SEQRA implementing regulations (6 NYCRR § 617.5(c)(29)) exempt from further review actions, which consist of "civil or criminal enforcement proceedings, whether administrative or judicial, including a particular course of action specifically required to be undertaken pursuant to a judgment or order, or the exercise of prosecutorial discretion;" and;

**WHEREAS**, EFC requested completion of a Full Environmental Assessment Form (EAF) in conjunction with a coordinated SEQRA process; and;

**WHEREAS**, the County prepared and disseminated Part 1 of a Full EAF with the objective of initiating a coordinated review with other Involved Agencies; and;

**WHEREAS**, other Involved Agencies concurred with the County acting as SEQRA Lead Agency; and;

**WHEREAS**, the County, as SEQRA Lead Agency, prepared Parts 2 and 3 of a Full EAF; and;

**WHEREAS**, the County, as SEQRA Lead Agency, has considered the information contained in the Full EAF, which included an assessment of potential environmental and socio-economic impacts, as well as mitigation to reduce or eliminate those impacts, now therefore;

**BE IT RESOLVED THAT**, Oneida County, in its capacity as SEQRA Lead Agency, as determined in a Coordinated Review process, has concluded that the project will result in no significant adverse impacts on the environment and, therefore, an environmental impact statement need not be prepared. Accordingly, the County

of Oneida hereby issues a Negative Declaration with regard to proposed improvements and modifications to County owned and operated waste water management facilities.

| | | |
|---|---|---|
| APPROVED: | Public Works | (July 6, 2015) |
| | Ways & Means Committee | (July 8, 2015) |
| DATED: | July 8, 2015 | |

Adopted by the following vote:
AYES 23 NAYS 0 ABSENT 0

**OFFICE, CLERK BOARD OF COUNTY LEGISLATORS)**
**COUNTY OF ONEIDA ) SS:**

I, hereby certify that I have compared the foregoing extract from the minutes of meeting of the Board of County Legislators of Oneida County held on the 8th day of July, 2015 with the original record thereof on File in this office and that the same is a true and correct transcript therefrom, and of the whole of such original.

**IN TESTIMONY WHEREOF,** I have hereunto affixed the seal of said Board this 8th day of July, 2015

ONEIDA COUNTY • NEW YORK 1798 BOARD OF LEGISLATORS

Clerk
**MIKALE BILLARD**

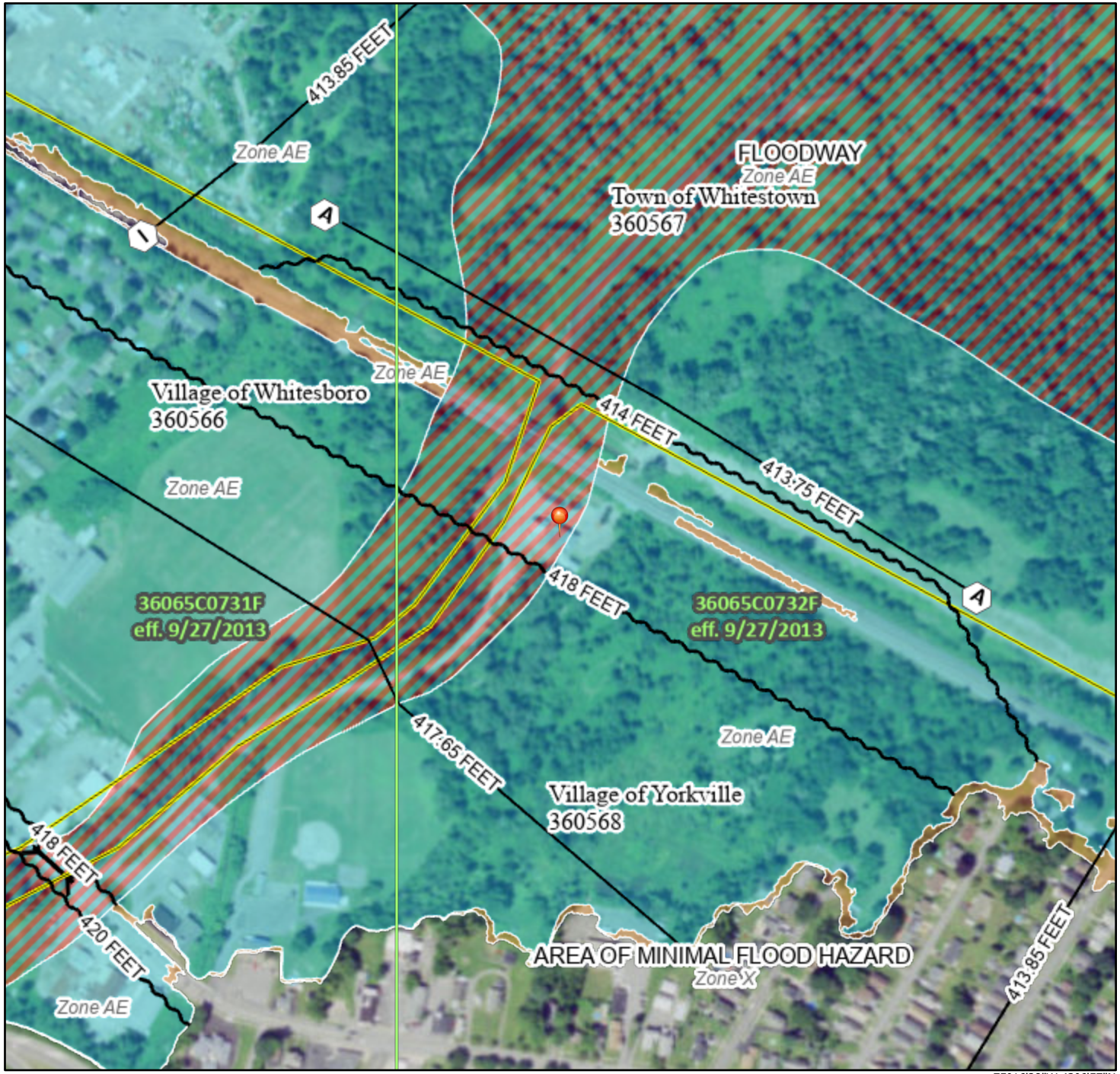
# Appendix D: Other Maps, Figures, and Permits


**FIGURE**
**NYSDEC ENVIRONMENTAL MAPPER**
**SCPS SITE**

# National Flood Hazard Layer FIRMette

FEMA

75°17'6"W 43°7'23"N




75°16'28"W 43°6'57"N

Feet 1:6,000

0 250 500 1,000 1,500 2,000

*Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020*

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

**OTHER AREAS**
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

**GENERAL STRUCTURES**
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**
- Digital Data Available
- No Digital Data Available
- Unmapped

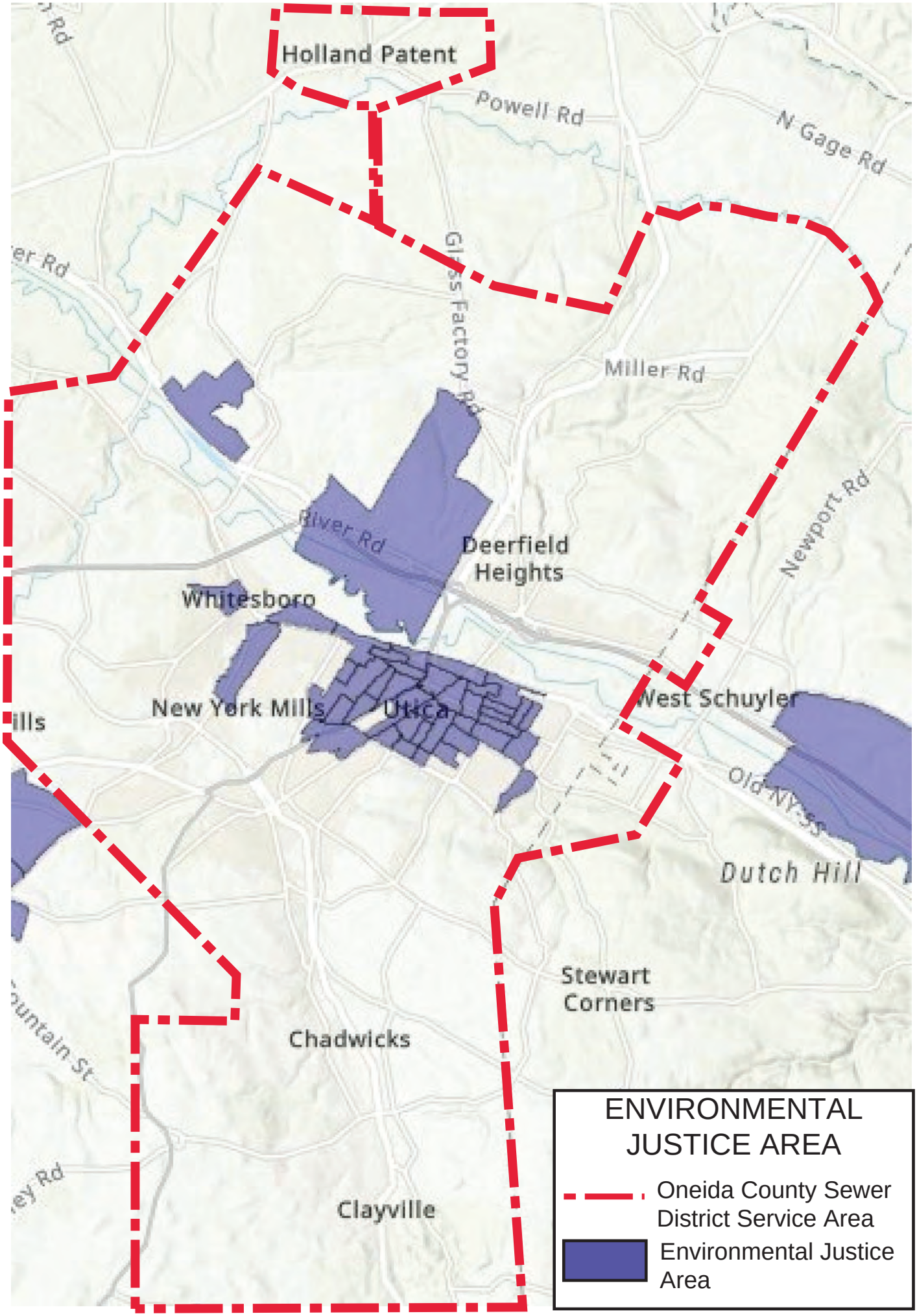
N

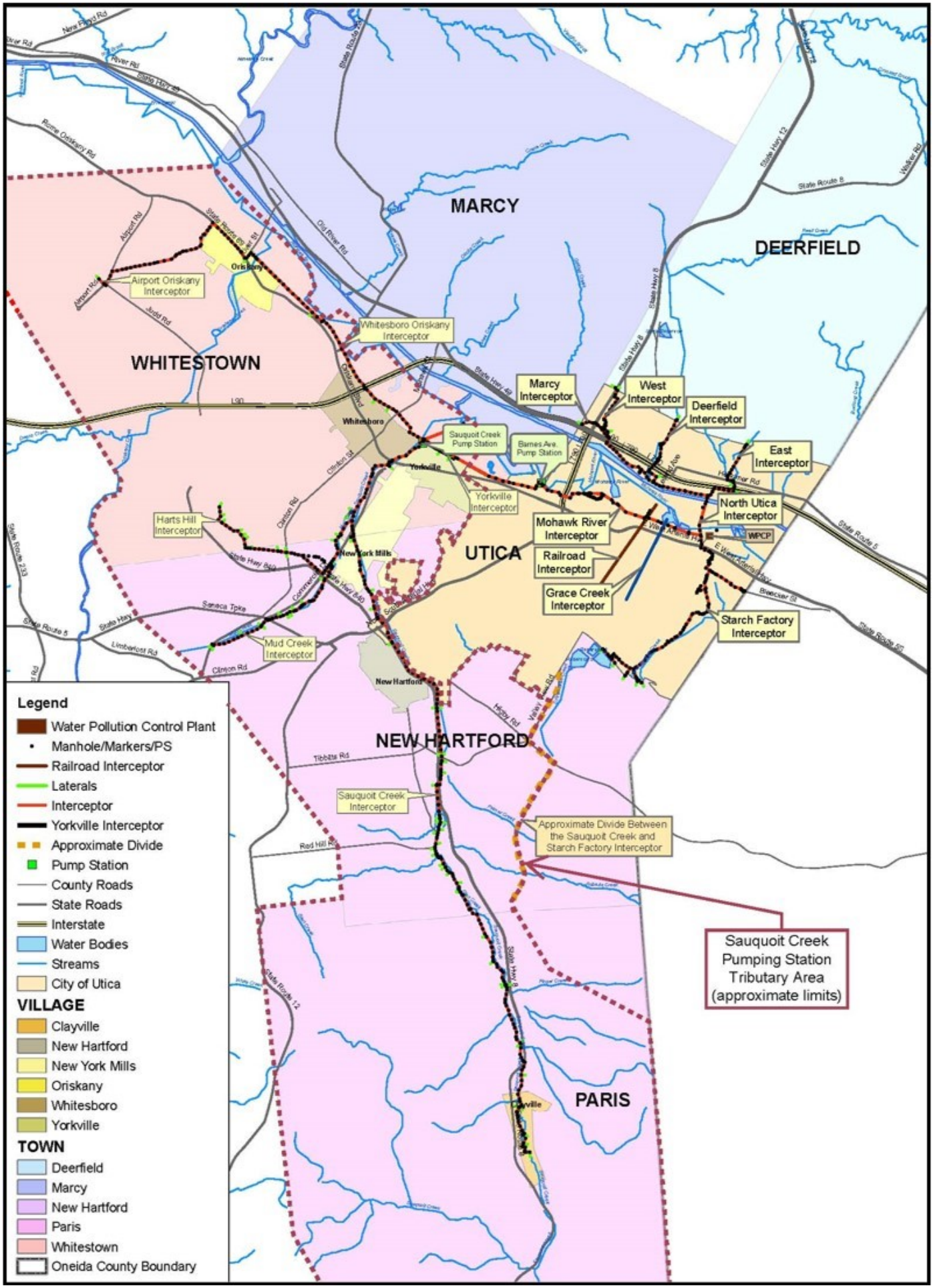
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

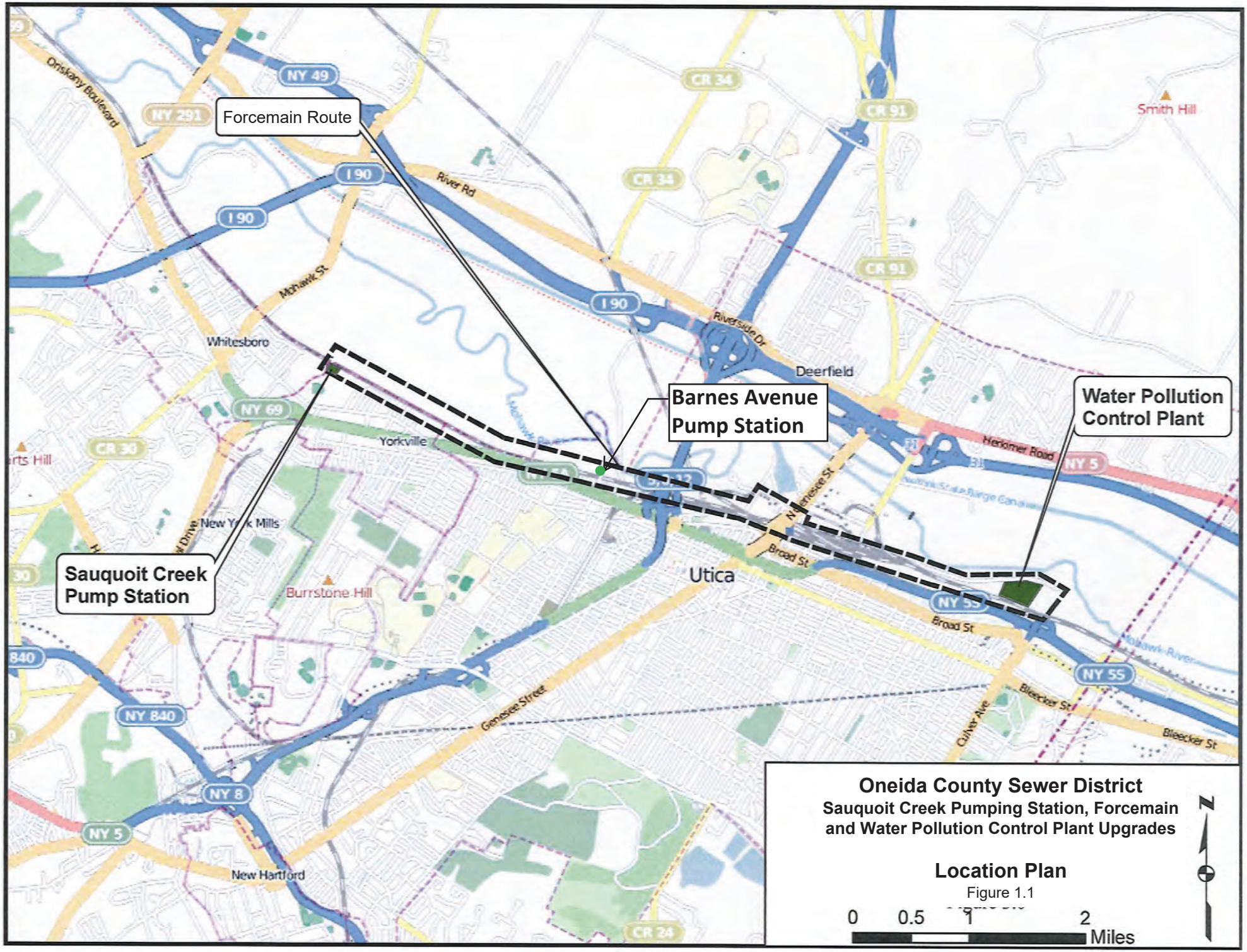
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/14/2022 at 7:36 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.


Holland Patent
Powell Rd
N Gage Rd
Glass Factory Rd
Miller Rd
Newport Rd
River Rd
Deerfield Heights
Whitesboro
New York Mills
Utica
West Schuyler
Dutch Hill
Stewart Corners
Chadwicks
Clayville
ENVIRONMENTAL JUSTICE AREA
Oneida County Sewer District Service Area
Environmental Justice Area


MARCY
DEERFIELD
WHITESTOWN
UTICA
NEW HARTFORD
PARIS
Airport Oriskany Interceptor
Whitesboro Oriskany Interceptor
Marcy Interceptor
West Interceptor
Deerfield Interceptor
East Interceptor
Sauquoit Creek Pump Station
Barnes Ave. Pump Station
Yorkville Interceptor
North Utica Interceptor
Harts Hill Interceptor
Mohawk River Interceptor
WPCP
Railroad Interceptor
Grace Creek Interceptor
Starch Factory Interceptor
Mud Creek Interceptor
Sauquoit Creek Interceptor
Approximate Divide Between the Sauquoit Creek and Starch Factory Interceptor
Sauquoit Creek Pumping Station Tributary Area (approximate limits)
Legend
Water Pollution Control Plant
Manhole/Markers/PS
Railroad Interceptor
Laterals
Interceptor
Yorkville Interceptor
Approximate Divide
Pump Station
County Roads
State Roads
Interstate
Water Bodies
Streams
City of Utica
VILLAGE
Clayville
New Hartford
New York Mills
Oriskany
Whitesboro
Yorkville
TOWN
Deerfield
Marcy
New Hartford
Paris
Whitestown
Oneida County Boundary


Forcemain Route
Barnes Avenue Pump Station
Water Pollution Control Plant
Sauquoit Creek Pump Station
Oneida County Sewer District
Sauquoit Creek Pumping Station, Forcemain and Water Pollution Control Plant Upgrades
Location Plan
Figure 1.1
0 0.5 1 2
Miles
N
Utica
Deerfield
Whitesboro
Yorkville
New York Mills
Burrstone Hill
New Hartford
Smith Hill
River Rd
Broad St
Genesee Street
Bleecker St
Herkimer Road
Riverside Dr
Mohawk St
Oriskany Boulevard
NY 49
NY 291
I 90
CR 34
CR 91
NY 69
CR 30
NY 840
NY 8
NY 5
NY 55
CR 24

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**Office of General Counsel, Region 6**
Dulles State Office Building, 317 Washington Street, Watertown, NY 13601-3787
P: (315) 785-2238 | F: (315) 785-2242
www.dec.ny.gov

November 30, 2021

VIA EMAIL: ce@ocgov.net

Anthony J. Picente, Jr.
Oneida County Executive
Oneida County Office Building, 10th Floor
800 Park Avenue
Utica, NY 13501

Re: Consent Order No.: R6-20060823-67-M2

Dear Anthony Picente:

Enclosed is a conformed copy of Oneida County's Second Modification Consent Order.

Thank you for your cooperation.

Sincerely,

April L. Sears

April L. Sears
Program Aide
Region 6

Enclosure

ec: Karl Schrantz, Commissioner - WPCP (w/enc.)
Matthew Duffany (w/enc.)
Jennifer Dougherty (w/enc.)
Barbara McGinn (w/enc.)
Melissa Evans (w/enc.)

**STATE OF NEW YORK**
**DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

In the Matter of Violations of Article 17 of the Environmental Conservation Law and of Part 750 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York occurring in the Town of Whitestown by:

**Oneida County**,

Respondent.

---

**ORDER ON CONSENT**
**SECOND MODIFICATION**

**Case Number:**
**R6-20060823-67-M2**

**WHEREAS:**

1. On July 11, 2007, the New York State Department of Environmental Conservation ("Department") and the County of Oneida ("Respondent") entered into an administrative Order on Consent (R6-20060823-67) ("2007 Order") to address violations of their State Pollutant Discharge Elimination System ("SPDES") Permit Number NY-0025780 ("Permit"), Environmental Conservation Law ("ECL") Section 17-0803 and Section 17-0509, and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York ("6 NYCRR") Section 750-2.1 and Section 750-2.9 at the Oneida County Water Pollution Control Plant ("WPCP" or "Facility'). Specifically, the 2007 Order required Respondent to upgrade the Sauquoit Creek Pump Station and the WPCP to eliminate sewage overflows into the Mohawk River. The 2007 Order required Respondent to complete the upgrades by October 31, 2014.

2. On December 12, 2011, the parties entered into a Consent Order (R6-20060823-67) ("2011 Order") which superseded and replaced, in its entirety, the 2007 Order except for the following documents, reports and their respective applicable correspondence which were developed pursuant to the 2007 Order:

    a. Flow Management Plan and Wet Weather Operating Plan - Received December 10, 2007;

    b. Oneida County Sewer District ("OCSD") Sewer Overflow Response Plan – Received October 30, 2007, implemented April1, 2008 - The measures set forth

in this Plan will continue to be implemented until the discharges from the Sauquoit Creek Pump Station are brought into compliance;

c. OCSD Inflow/Infiltration Offset Plan dated January 4, 2008, as revised September 23, 2008;

d. Supplemental Report – Re-evaluation of Temporary Treatment Alternatives for the Sauquoit Creek Pumping Station Bypass – Received December 24, 2010;

e. OCSD Sauquoit Creek Pumping Station Sanitary Sewer Overflow Mitigation Plan – Received July 7, 2010; and

f. OCSD December 23, 2010 response to the Department's October 27, 2010 comments on the Sauquoit Creek Pumping Station Sewer Overflow Mitigation Plan.

3. The practices, schedules, and other requirements set forth in these reports and submittals listed in Paragraph 2, above, as may be amended from time to time with the approval of the Department shall remain in full force and effect, unless they are inconsistent with the requirements of Schedule A attached hereto, and in such case, Schedule A shall control.

4. Should any future reports or facility repairs and upgrades necessitate changes to the documents listed in Paragraph 2, above, any modifications to said documents may be initiated by the Department or Respondent. Any modification approved by both parties will become an enforceable component of this Order.

5. The 2011 Order extended the completion date of the required upgrades to December 31, 2021, based on an engineering study claiming the upgrades could not be completed earlier.

6. On June 28, 2018, the parties entered into a Consent Order (R6-20060823-67-M1) ("2018 Consent Order First Modification") which, *inter alia*, approved Respondent's request for interim effluent limits for Influent Flow, Biological Oxygen Demand ("$BOD_5$"), Total Suspended Solids ("TSS") and Nitrogen during Respondent's construction of the Facility's upgrades which was to be completed by December 31, 2021.

7. On April 1, 2019, the Department issued the most recent SPDES Permit for the Facility with an Effective Date of April 1, 2019 and an Expiration Date of March 31, 2024.

8. By letter dated June 16, 2021, Respondent requested an extension of the compliance date for completion of the Facility's upgrades to December 31, 2022 citing four (4) flooding events resulting from project delays in conjunction with logistical difficulties and material delays associated with the COVID-19 pandemic.

Based upon Respondent's correspondence, the Department, after due consideration having been had thereon, believes that this Consent Order Second Modification will be advantageous to the State.

**NOW, THEREFORE**, having considered this matter, and being duly advised, **IT IS ORDERED THAT:**

## I. MODIFICATIONS TO THE 2018 CONSENT ORDER FIRST MODIFICATION

Pursuant to Paragraphs XII and XIV of the 2011 Order, Respondent is bound by and agrees to follow and comply with the terms, provisions, and requirements set forth in this 2021 Consent Order Second Modification. Upon the effective date of this 2021 Consent Order Second Modification, it is hereby incorporated into and made an enforceable part of the 2011 Order and 2018 Consent Order First Modification. Except as stated herein, all terms and conditions of the 2011 Order and the 2018 Consent Order First Modification remain in effect.

## II. COMPLIANCE

Respondent shall comply with the provisions, terms, and conditions set forth in this 2021 Consent Order Second Modification as modified by the attached Appendix A, the Schedule for Compliance, which is incorporated into and made a part of this 2021 Consent Order Second Modification. Respondent's failure to comply with any provision of the 2021 Consent Order Second Modification or the 2018 Consent Order First Modification or the

2011 Order shall constitute a default and a violation of said order(s), and upon such default and violation, the Department's right to pursue all claims and remedies administratively, at law, or in equity shall not be affected by anything contained in said order(s).

## GENERAL PROVISIONS

### III. FORCE MAJEURE

If Respondent cannot comply with a deadline or requirement of this Order because of natural disaster, Federal or State declared national or state emergency based on an epidemic or pandemic, act of God, war, terrorist attack, strike, riot, judicial injunction, or other, similar unforeseeable event which was not caused by the negligence or willful misconduct of Respondent and which could not have been avoided by Respondent through the exercise of due care, Respondent shall apply in writing to the Department within a reasonable time after obtaining knowledge of such fact and request an extension or modification of the deadline or requirement. Respondent shall include in such application the measures taken by Respondent to prevent and/or minimize any delays. Failure to give such notice constitutes a waiver of any claim that a delay is not subject to penalties.

### IV. MODIFICATION

No change in this Order shall be made or become effective except as specifically set forth by written order of the Commissioner, being made either upon written application of Respondent, or upon the Commissioner's own findings after notice and opportunity to be heard have been given to Respondent. Respondent shall have the burden of proving entitlement to any modification requested pursuant to this Standard Provision or the "Force

Majeure" provision, supra. Respondent's request for modification shall not be unreasonably denied by the Department, which may impose such additional conditions upon Respondent as the Department deems appropriate.

## V. EFFECTIVE DATE

The Effective Date of this 2021 Consent Order Second Modification is the date it is signed and "so ordered" by the Commissioner of the Department or his designee. The parties hereto consent to entry of the second modification without further notice.

Dated: Watertown, New York

November 24, 2021

BASIL SEGGOS, COMMISSIONER
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

By: Randall Young
Randall C. Young
Regional Director
Region 6

## CONSENT BY RESPONDENT

Respondent hereby consents to the issuing and entering of this Order, waives Respondent's right to a hearing herein as provided by law, and agrees to be bound by the provisions, terms, and conditions contained in this Order.

By: _____
Anthony J. Picente, Jr.
Oneida County Executive

Date: 10-19-21

STATE OF NEW YORK )
) ss.:
COUNTY OF ONEIDA )

On the 19 day of October, in the year 2021, before me, the undersigned, personally appeared Anthony J. Picente, Jr., personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public
Notary Public, State of New York
No. 01MA4792150
Qualified in New York County
Commission Expires September 06, 2022

## APPENDIX A – SCHEDULE FOR COMPLIANCE

## NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**Respondent: Oneida County WPCP- SPDES No. NY0025780**

**Case No. R6-20060823-67-M2**

1. Respondent must complete the upgrades to the Facility in substantial conformance with the approved engineering report and the approved plans and specifications by December 31, 2022.

2. Respondent shall comply with the following Interim Limits from the Effective Date of this 2021 Consent Order Second Modification until the completion date of December 31, 2022.

| OUTFALL | LIMITATIONS APPLY: | RECEIVING WATER | EXPIRATION DATE |
|---|---|---|---|
| 001 | Year Round (unless specified) | Mohawk River | 12/31/2022 |

### INTERIM EFFLUENT LIMITS

| PARAMETER | Effluent Limit | | | | | Monitoring Requirements | | | | FN |
|---|---|---|---|---|---|---|---|---|---|---|
| | Type | Limit | Units | Limit | Units | Sample Frequency | Sample Type | Location | | |
| | | | | | | | | Inf. | Eff. | |
| FLOW | Daily Max. | Monitor | MGD | | | Continuous | Meter | X | | 3 |
| $BOD_5$ | 30-Day Avg. | 40 | mg/L | | | Daily | 24-hr. Comp. | X | X | 1, 2a |
| $BOD_5$ | 7-Day Avg. | 60 | mg/L | | | Daily | 24-hr. Comp. | X | X | 2a |
| Solids, suspended (TSS) | 30-Day Avg. | 40 | mg/L | | | Daily | 24-hr. Comp. | X | X | 1, 2a |
| Solids, suspended (TSS) | 7-Day Avg. | 60 | mg/L | | | Daily | 24-hr. Comp. | X | X | 2a |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, total Kjeldahl (as N) June 1- October 31 | Daily Max. | Monitor | mg/L | Monitor | lbs/d | Daily | 24-hr. Comp. | X | X | 2a |

**FOOTNOTES:**

1. **Removal Rates** – Effluent shall not exceed 35% and 35% of influent concentration values for $BOD_5$ and TSS, respectively.

2. **Composite Sampling:**

   a. Composite samples shall be composed of a minimum of 6 grab samples collected over the specified collection period, either at a constant sample volume for a constant flow interval or at a flow-proportional sample volume for a constant time interval.

3. **Wet Weather Flows** – During the effective period of these interim limits, the minimum flow through the secondary treatment works during wet weather shall be 48 MGD.

4. **Interim Limits** – The limits set forth herein supersede ONLY the following limits in SPDES Permit No. NY0025780. All other effluent limitations remain in full effect.

   a. Minimum wet weather flow through secondary treatment of 53 MGD;

   b. 30-Day Average $BOD_5$ and TSS of 30 mg/L;

   c. 7-Day Average $BOD_5$ and TSS of 45 mg/L;

   d. Daily Maximum TKN (June 1 – October 31) of 1120 lbs/d.

# Appendix E: SPDES Permit NY0025780

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

# State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

| | | | | | |
|---|---|---|---|---|---|
| SIC Code: | **4952** | NAICS Code: | **221320** | SPDES Number: | **NY0025780** |
| Discharge Class (CL): | **05** | | | DEC Number: | **6-3016-00048/00001** |
| Toxic Class (TX): | **T** | | | Effective Date (EDP): | **04/01/2019** |
| Major-Sub Drainage Basin: | **12 - 01** | | | Expiration Date (ExDP): | **03/31/2024** |
| Water Index Number: | **H-240** | Item No.: | **876 - 015** | Modification Dates (EDPM): | **04/01/2019**<br>**06/01/2022** |
| Compact Area: | **-** | | | | |

This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental Conservation Law of New York State and in compliance with the Clean Water Act, as amended, (33 U.S.C. '1251 et.seq.)

| PERMITTEE NAME AND ADDRESS | | | | | |
|---|---|---|---|---|---|
| Name: | **Oneida County** | Attention: | **County Executive** | | |
| Street: | **P.O. Box 442** | | | | |
| City: | **Utica** | State: | **NY** | Zip Code: | **13503-0442** |
| Email: | **wpc@ocgov.net** | Phone: | **315-798-5656** | | |

is authorized to discharge from the facility described below:

| FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name: | **Oneida County Water Pollution Control Plant** | | | | | | | | | | | | | | | |
| Address / Location: | **51 Leland Avenue** | | | | | | | | | | | County: | **Oneida** | | | |
| City: | **Utica** | | | | | | State: | **NY** | | | | Zip Code: | **13503** | | | |
| Facility Location: | | Latitude: | **43** | ° | **05** | ’ | **54** | ” N | & Longitude: | **75** | ° | **10** | ’ | **2.9** | ” W | |
| Primary Outfall No.: | **001** | Latitude: | **43** | ° | **06** | ’ | **03** | ” N | & Longitude: | **75** | ° | **11** | ’ | **22** | ” W | |
| Outfall Description: | **Treated Sanitary** | Receiving Water: | **Mohawk River** | | | | | | Class: | **C** | | Standard: | **C** | | | |

and the additional outfalls listed in this permit, in accordance with: effluent limitations; monitoring and reporting requirements; other provisions and conditions set forth in this permit; and 6 NYCRR Part 750-1 and 750-2.

This permit and the authorization to discharge shall expire on midnight of the expiration date shown above and the permittee shall not discharge after the expiration date unless this permit has been renewed or extended pursuant to law. To be authorized to discharge beyond the expiration date, the permittee shall apply for permit renewal not less than 180 days prior to the expiration date shown above.

DISTRIBUTION:
CO BWP - Permit Coordinator
BWP – Permit Writer
CO BWC - SCIS
RWE
RPA
EPA Region II
NYSEFC

| | | | |
|---|---|---|---|
| Permit Administrator: | Terry Tyoe | | |
| Address: | USOB Rm 1404 207 Genesee St Utica NY 13501 | | |
| Signature: |  | Date: | 05 /27 /2022 |

# Contents

# SUMMARY OF ADDITIONAL OUTFALLS

| Outfall | Wastewater Description | Outfall Latitude | Outfall Longitude |
|---|---|---|---|
| **01S** | **Separate Sewer System Primary Treatment Train** | - ° - ' - " N | - ° - ' - " W |
| Receiving Water: | **Mohawk River (Internal to Outfall 001)** | Class: | **C** |

| Outfall | Wastewater Description | Outfall Latitude | Outfall Longitude |
|---|---|---|---|
| **01C** | **Combined Sewer Primary Treatment Train** | - ° - ' - " N | - ° - ' - " W |
| Receiving Water: | **Mohawk River (Internal to Outfall 001)** | Class: | **C** |

| Outfall | Wastewater Description | Outfall Latitude | Outfall Longitude |
|---|---|---|---|
| **003** | **During High Rate Disinfection (HRD) Discharges** | **43** ° **06** ' **03** " N | **75** ° **11** ' **22** " W |
| Receiving Water: | **Mohawk River** | Class: | **C** |

# DEFINITIONS

| TERM | DEFINITION |
|---|---|
| **7-Day Geo Mean** | The highest allowable geometric mean of daily discharges over a calendar week. |
| **7-Day Average** | The average of all daily discharges for each 7-days in the monitoring period. The sample measurement is the highest of the 7-day averages calculated for the monitoring period. |
| **12-Month Rolling Average (12 MRA)** | The current monthly value of a parameter, plus the sum of the monthly values over the previous 11 months for that parameter, divided by the number of months for which samples were collected in the 12-month period. |
| **30-Day Geometric Mean** | The highest allowable geometric mean of daily discharges over a calendar month, calculated as the antilog of: the sum of the log of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. |
| **Action Level** | Action level means a monitoring requirement characterized by a numerical value that, when exceeded, triggers additional permittee actions and department review to determine if numerical effluent limitations should be imposed. |
| **Compliance Level / Minimum Level** | A compliance level is an effluent limitation. A compliance level is given when the water quality evaluation specifies a Water Quality Based Effluent Limit (WQBEL) below the Minimum Level. The compliance level shall be set at the Minimum Level (ML) for the most sensitive analytical method as given in 40 CFR Part 136, or otherwise accepted by the Department. |
| **Daily Discharge** | The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants expressed in units of mass, the 'daily discharge' is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the 'daily discharge' is calculated as the average measurement of the pollutant over the day. |
| **Daily Maximum** | The highest allowable Daily Discharge. |
| **Daily Minimum** | The lowest allowable Daily Discharge. |
| **Effective Date of Permit (EDP or EDPM)** | The date this permit is in effect. |
| **Effluent Limitations** | Effluent limitation means any restriction on quantities, quality, rates and concentrations of chemical, physical, biological, and other constituents of effluents that are discharged into waters of the state. |
| **Expiration Date of Permit (ExDP)** | The date this permit is no longer in effect. |
| **Instantaneous Maximum** | The maximum level that may not be exceeded at any instant in time. |
| **Instantaneous Minimum** | The minimum level that must be maintained at all instants in time. |
| **Monthly Average** | The highest allowable average of daily discharges over a calendar month, calculated as the sum of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. |
| **Outfall** | The terminus of a sewer system, or the point of emergence of any waterborne sewage, industrial waste or other wastes or the effluent therefrom, into the waters of the State. |
| **Range** | The minimum and maximum instantaneous measurements for the reporting period must remain between the two values shown. |
| **Receiving Water** | The classified waters of the state to which the listed outfall discharges. |
| **Sample Frequency / Sample Type / Units** | See NYSDEC's "DMR Manual for Completing the Discharge Monitoring Report for the SPDES" for information on sample frequency, type and units. |

# PERMIT LIMITS, LEVELS AND MONITORING – Outfall 001

| OUTFALL | LIMITATIONS APPLY | RECEIVING WATER | EFFECTIVE | EXPIRING |
|---|---|---|---|---|
| 001 | All Year (unless otherwise specified) | Mohawk River | 04/01/2019 | 03/31/2024 |

| PARAMETER | EFFLUENT LIMIT | | | | | MONITORING REQUIREMENTS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Location | | |
| | Type | Limit | Units | Limit | Units | Sample Frequency | Sample Type | Inf. | Eff. | FN |
| Flow | 12-Month Rolling Average | 54 | MGD | | | Continuous | Meter | X | | 3d |
| Flow | Daily Maximum | Monitor | MGD | | | Continuous | Meter | X | | 3d, 7 |
| pH | Range | 6.0 – 9.0 | SU | | | 6/day | Grab | | X | |
| Temperature | Daily Maximum | Monitor | ° C | | | 6/day | Grab | | X | |
| Dissolved Oxygen (June 1 – October 31) | Daily Minimum | 4.0 | mg/L | | | Daily | Grab | | X | |
| Dissolved Oxygen (November 1 – May 31) | Daily Minimum | Monitor | mg/L | | | Daily | Grab | | X | |
| Solids, Settleable | Daily Maximum | 0.1 | mL/L | | | 6/day | Grab | X | X | 4 |
| $CBOD_5$ | 30-day Average | 25 | mg/L | 11,000 | lbs/d | Daily | 24-hour Comp. | X | X | 1, 4, 7 |
| $CBOD_5$ | 7-Day Average | 40 | mg/L | 18,000 | lbs/d | Daily | 24-hour Comp. | X | X | 4, 7 |
| UOD (June 1 – October 31) | Daily Maximum | 26 | mg/L | 12,000 | lbs/d | Weekly | Calculated | | X | 2, 8 |
| UOD (November 1 – May 31) | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Weekly | Calculated | | X | 2, 8 |
| Solids, Suspended | 30-day Average | 30 | mg/L | 14,000 | lbs/d | Daily | 24-hour Comp. | X | X | 1, 4, 7 |
| Solids, Suspended | 7-Day Average | 45 | mg/L | 20,000 | lbs/d | Daily | 24-hour Comp. | X | X | 4, 7 |
| Total Kjeldahl Nitrogen (TKN) | 30-day Average | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | X | X | 4 |
| TKN | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | X | X | 4 |
| Ammonia (as N) | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | X | X | 4 |
| Nitrate | 30-day Average | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | | X | |
| Nitrate | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | | X | |
| Nitrite | 30-day Average | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | | X | |
| Nitrite | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | | X | |
| Total Nitrogen | 30-day Average | Monitor | mg/L | Monitor | lbs/d | Weekly | Calculated | | X | 12 |
| Total Nitrogen | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Weekly | Calculated | | X | 12 |
| Phosphorus (as P) | 30-day Average | Monitor | mg/L | Monitor | lbs/d | Weekly | Grab | | X | |
| Phosphorus (as P) | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Weekly | Grab | | X | |
| Soluble Reactive Phosphorus (as P) | 30-day Average | Monitor | mg/L | Monitor | lbs/d | Weekly | Grab | | X | |
| Soluble Reactive Phosphorus (as P) | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Weekly | Grab | | X | |

**Footnotes listed on Pages 10 and 11 of this permit**

# PERMIT LIMITS, LEVELS AND MONITORING – Outfall 001 (continued)

| OUTFALL | LIMITATIONS APPLY: | RECEIVING WATER | EFFECTIVE | EXPIRING |
|---|---|---|---|---|
| 001 (continued) | All Year (unless otherwise specified) | Mohawk River | 04/01/2019 | 03/31/2024 |

| PARAMETER | EFFLUENT LIMIT | | | | | MONITORING REQUIREMENTS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Location | | |
| | Type | Limit | Units | Limit | Units | Sample Frequency | Sample Type | Inf. | Eff. | FN |
| Mercury, Total | 12-Month Rolling Average | 12 | ng/L | | | Quarterly | Grab | | X | |
| Mercury, Total | Daily Maximum | 50 | ng/L | | | Quarterly | Grab | | X | |
| **Effluent Disinfection required: [ ] All Year [ X ] Seasonal from May 1 to October 31** | | | | | | | | | | |
| Coliform, Fecal | 30-Day Geometric Mean | 200 | No./ 100 ml | | | Daily | Grab | | X | |
| Coliform, Fecal | 7 Day Geometric Mean | 400 | No./ 100 ml | | | Daily | Grab | | X | |
| Coliform, Fecal | Daily Maximum | Monitor | No./ 100 ml | | | Daily | Grab | | X | |
| Chlorine, Total Residual | 30-day Average | Monitor | mg/L | | | 6/day | Grab | | X | |
| Chlorine, Total Residual | Daily Maximum | 0.030 | mg/L | | | 6/day | Grab | | X | 8, 11 |
| ACTION LEVEL PARAMETERS | Type | Action Level | Units | Action Level | Units | Sample Frequency | Sample Type | Inf. | Eff. | FN |
| Ammonia (as N) | 30-Day Average | 6.0 | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | X | X | 4 |
| Chloroform | Daily Maximum | Monitor | mg/L | 5.5 | lbs/d | Quarterly | 24-hour Comp. | | X | 5 |
| Chromium, Total | Daily Maximum | Monitor | mg/L | 2.8 | lbs/d | Monthly | 24-hour Comp. | | X | 5 |
| Copper, Total | Daily Maximum | Monitor | mg/L | 6.3 | lbs/d | Monthly | 24-hour Comp. | | X | 5 |
| Lead, Total | Daily Maximum | Monitor | mg/L | 3.2 | lbs/d | Monthly | 24-hour Comp. | | X | 5 |
| Zinc, Total | Daily Maximum | Monitor | mg/L | 14 | lbs/d | Monthly | 24-hour Comp. | | X | 5 |
| WHOLE EFFLUENT TOXICITY (WET) TESTING | | Limit | Units | Action Level | Units | Sample Frequency | Sample Type | Inf. | Eff. | FN |
| WET - Acute Invertebrate | See footnote | 0.3 | TUa | | | Quarterly | See footnote | | X | 6 |
| WET - Acute Vertebrate | See footnote | 0.3 | TUa | | | Quarterly | See footnote | | X | 6 |
| WET - Chronic Invertebrate | See footnote | | | 3.9 | TUc | Quarterly | See footnote | | X | 6 |
| WET - Chronic Vertebrate | See footnote | | | 3.9 | TUc | Quarterly | See footnote | | X | 6 |

**Footnotes listed on Pages 10 and 11 of this permit**

# PERMIT LIMITS, LEVELS AND MONITORING – Outfall 01S

| OUTFALL | LIMITATIONS APPLY: | RECEIVING WATER | EFFECTIVE | EXPIRING |
|---|---|---|---|---|
| 01S | All Year | Mohawk River (Internal to Outfall 001)<br>Separate Sewer System Primary Treatment Train | 04/01/2019 | 03/31/2024 |

| PARAMETER | EFFLUENT LIMIT | | | | | MONITORING REQUIREMENTS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Location | | |
| | Type | Limit | Units | Limit | Units | Sample Frequency | Sample Type | Inf. | Eff. | FN |
| Flow | 12-Month Rolling Average | Monitor | MGD | | | Continuous | Meter | X | | 3a |
| Flow | Daily Maximum | Monitor | MGD | | | Continuous | Meter | X | | 3a |
| Temperature | Daily Maximum | Monitor | ° C | | | 6/day | Grab | X | | |
| Solids, Settleable | Daily Maximum | Monitor | mL/L | | | 6/day | Grab | X | | |
| $CBOD_5$ | 30-day Average | Monitor | mg/L | Monitor | lbs/d | Daily | 24-hour Comp. | X | | |
| $CBOD_5$ | 7-Day Average | Monitor | mg/L | Monitor | lbs/d | Daily | 24-hour Comp. | X | | |
| Solids, Suspended | 30-day Average | Monitor | mg/L | Monitor | lbs/d | Daily | 24-hour Comp. | X | | |
| Solids, Suspended | 7-Day Average | Monitor | mg/L | Monitor | lbs/d | Daily | 24-hour Comp. | X | | |
| TKN | 30-day Average | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | X | | |
| TKN | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | X | | |
| Ammonia (as N) | 30-day Average | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | X | | |
| Ammonia (as N) | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | X | | |

**Footnotes listed on Pages 10 and 11 of this permit**

# PERMIT LIMITS, LEVELS AND MONITORING – Outfall 01C

| OUTFALL | LIMITATIONS APPLY: | RECEIVING WATER | EFFECTIVE | EXPIRING |
|---|---|---|---|---|
| 01C | All Year | Mohawk River (Internal to Outfall 001)<br>Combined Sewer Primary Treatment Train | 04/01/2019 | 03/31/2024 |

| PARAMETER | EFFLUENT LIMIT | | | | | MONITORING REQUIREMENTS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Location | | |
| | Type | Limit | Units | Limit | Units | Sample Frequency | Sample Type | Inf. | Eff. | FN |
| Flow | 12-Month Rolling Average | Monitor | MGD | | | Continuous | Calculated | X | X | 3b, 3c |
| Flow | Daily Maximum | Monitor | MGD | | | Continuous | Calculated | X | X | 3b, 3c |
| Solids, Settleable | Daily Maximum | Monitor | mL/L | | | 6/day | Grab | X | | |
| $CBOD_5$ | 30-day Average | Monitor | mg/L | Monitor | lbs/d | Daily | 24-hour Comp. | X | | |
| $CBOD_5$ | 7-Day Average | Monitor | mg/L | Monitor | lbs/d | Daily | 24-hour Comp. | X | | |
| Solids, Suspended | 30-day Average | Monitor | mg/L | Monitor | lbs/d | Daily | 24-hour Comp. | X | | |
| Solids, Suspended | 7-Day Average | Monitor | mg/L | Monitor | lbs/d | Daily | 24-hour Comp. | X | | |
| TKN | 30-day Average | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | X | | |
| TKN | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | X | | |
| Ammonia (as N) | 30-day Average | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | X | | |
| Ammonia (as N) | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Weekly | 24-hour Comp. | X | | |

**Footnotes listed on Pages 10 and 11 of this permit**

# PERMIT LIMITS, LEVELS AND MONITORING – Outfall 003

| OUTFALL | LIMITATIONS APPLY: | RECEIVING WATER | EFFECTIVE | EXPIRING |
|---|---|---|---|---|
| 003 | During HRD Discharges | Mohawk River | January 1, 2022 | 03/31/2024 |

| PARAMETER | EFFLUENT LIMIT | | | | | MONITORING REQUIREMENTS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Location | | |
| | Type | Limit | Units | Limit | Units | Sample Frequency | Sample Type | Inf. | Eff. | FN |
| Flow (volume) | Monthly Total | Monitor | MG | | | Continuous | Totalizer | | X | 3e |
| Flow | Daily Maximum | Monitor | MGD | | | Continuous | Meter | | X | 3e |
| Number of Discharge Events | Monthly Total | Monitor | | | | Continuous | Calculated | | X | |
| pH | Range | 6.0 – 9.0 | SU | | | 1/event | Grab | | X | 9d |
| Temperature | Daily Maximum | Monitor | ° C | | | 1/event | Grab | | X | 9a, 9d |
| Solids, Settleable | Daily Maximum | 0.8 | mL/L | | | 1/event | Grab | | X | 9a, 9d |
| Floatable Materials | Daily Maximum | None | | | | 1/event | Visual Observation | | X | 9a, 9d |
| $CBOD_5$ | Monthly Total | | | Monitor | lbs/d | 1/event | Composite | | X | 9c |
| $CBOD_5$ | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | 1/event | Composite | | X | 9a, 9c |
| Solids, Suspended | Monthly Total | | | Monitor | lbs/d | 1/event | Composite | | X | 9c |
| Solids, Suspended | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | 1/event | Composite | | X | 9a, 9c |
| TKN | Monthly Total | | | Monitor | lbs/d | 1/event | Composite | | X | 9c |
| TKN | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | 1/event | Composite | | X | 9a, 9c |
| Ammonia (as N) | Monthly Total | | | Monitor | lbs/d | 1/event | Composite | | X | 9c |
| Ammonia (as N) | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | 1/event | Composite | | X | 9a, 9c |
| Total Nitrogen | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Monthly | Calculated | | X | 9a, 9c,12 |
| Phosphorus (as P) | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Monthly | Grab | | X | |
| Chloroform | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Quarterly | Grab | | X | |
| Chromium, Total | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Monthly | Grab | | X | |
| Copper, Total | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Monthly | Grab | | X | |
| Lead, Total | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Monthly | Grab | | X | |
| Zinc, Total | Daily Maximum | Monitor | mg/L | Monitor | lbs/d | Monthly | Grab | | X | |
| **Effluent Disinfection required: [ ] All Year [ X ] Seasonal from May 1 to October 31** | | | | | | | | | | |
| Coliform, Fecal | 90-day Geometric Mean | 200 | No./ 100 ml | | | 1/event | Grab | | X | 9b, 9d, 10 |
| Coliform, Fecal | Daily Maximum | Monitor | No./ 100 ml | | | 1/event | Grab | | X | 9a, 9b, 9d |
| Chlorine, Total Residual | Daily Maximum | 0.10 | mg/L | | | 1/event | Grab | | X | 9a, 9d |

**Footnotes listed on Pages 10 and 11 of this permit**

# FOOTNOTES

1. **Removal Rates** – Effluent shall not exceed 15 % of influent concentration values for $CBOD_5$ & TSS.

2. **Ultimate Oxygen Demand** – UOD shall be computed as follows: UOD = 1.5 x CBOD5 (7DA) + 4.5 x TKN.

3. **Flow** –
   a. Outfall 01S influent flow shall consist of separate sanitary sewage and shall be monitored prior to primary treatment. [Location 2 on Flow Schematic]
   b. Outfall 01C influent shall consist of combined sewage prior to the primary treatment [Location 1 on Flow Schematic]
   c. Outfall 01C effluent flow shall consist of the portion of combined sewage, following primary settling, that is directed to secondary treatment. The flow shall be calculated by subtracting the sanitary influent flow from the aeration tank flow. [Location 01C on Flow Schematic]
   d. Outfall 001 influent flow is the calculated sum of flows from Outfall 01S and Outfall 01C effluent.
   e. Outfall 003 effluent flow is all flow discharged from the HRD tank. [Location 6 on Flow Schematic]

4. **Concentration Computation** – Following completion of the new separate sewer headworks, concentrations shall be calculated using the formula below for reporting of Outfall 001 influent requirements:

$$Flow\ Weighted\ Average\ Influent\ Conc. = \frac{(C_{01S} \times F_{01S}) + (C_{01C} \times F_{01C})}{F_{01S} + F_{01C}}$$

   Where (see also Page 25 "Monitoring Locations"):
   $C_{01S}$ is the influent concentration for Outfall 01S (the separate sewer system train) [mg/L or mL/L]
   $C_{01C}$ is the influent concentration for Outfall 01C (the combined sewer system train) [mg/L or mL/L]
   $F_{01S}$ is the influent flow for Outfall 01S (the separate sewer system train) [MGD]
   $F_{01C}$ is the effluent flow for Outfall 01C (Primary Effluent Distribution Structure to Secondary Treatment) [MGD]

   For the interim period, from 4/1/19 until construction of the new separate sewer headworks is complete:
   Outfalls 01S and 01C shall be reported as "NODI9" on the DMR; and
   Outfall 001 influent sampling shall be performed after screening and prior to grit removal.

5. **Sample Timing** – Samples shall be collected when plant flows represent typical industrial loadings.

6. **Whole Effluent Toxicity (WET) Testing:**
   Testing Requirements - WET testing shall consist of **Chronic and report Acute results**. WET testing shall be performed in accordance with 40 CFR Part 136 and TOGS 1.3.2 unless prior written approval has been obtained from the Department. The test species shall be Ceriodaphnia dubia (water flea - invertebrate) and Pimephales promelas (fathead minnow - vertebrate). Receiving water collected upstream from the discharge should be used for dilution. All tests conducted should be static-renewal (two 24 hr composite samples with one renewal for Acute tests and three 24 hr composite samples with two renewals for Chronic tests). The appropriate dilution series bracketing the IWC and including one exposure group of 100% effluent should be used to generate a definitive test endpoint, otherwise an immediate rerun of the test is required. WET testing shall be coordinated with the monitoring of chemical and physical parameters limited by this permit so that the resulting analyses are also representative of the sample used for WET testing. The ratio of critical receiving water flow to discharge flow (i.e. dilution ratio) is 2.4:1 for acute, and 3.9:1 for chronic. Discharges which are disinfected using chlorine should be dechlorinated prior to WET testing or samples shall be taken immediately prior to the chlorination system.

   Monitoring Period - WET testing shall be performed at the specified sample frequency for the duration of the permit. Quarters shall be calendar quarters of January – March, April – June, July – September, October – December.

   Reporting - Toxicity Units shall be calculated and reported on the DMR as follows: TUa = (100)/(48 hr LC50) or (100)/(48 hr EC50) (note that Acute data is generated by both Acute and Chronic testing) and TUc = (100)/(NOEC) when Chronic testing has been performed or TUc = (TUa) x (10) when only Acute testing has been performed and is used to predict Chronic test results, where the 48 hr LC50 or 48 hr EC50 and NOEC are expressed in % effluent. This must be done for both species and using the Most Sensitive Endpoint (MSE) or the lowest NOEC and corresponding highest TUc. Report a TUa of 0.3 if there is no statistically significant toxicity in 100% effluent as compared to control.

# FOOTNOTES (continued)

**Footnote 6 – WET Testing (continued)**
The complete test report including all corresponding results, statistical analyses, reference toxicity data, daily average flow at the time of sampling and other appropriate supporting documentation, shall be submitted within 60 days following the end of each test period to the Toxicity Testing Unit, Bureau of Watershed Assessment and Management, 625 Broadway, Fourth Floor, Albany, NY 12233-3502. A summary page of the test results for the invertebrate and vertebrate species indicating TUa, 48 hr LC50 or 48 hr EC50 for Acute tests and/or TUc, NOEC, IC25, and most sensitive endpoints for Chronic tests, should also be included at the beginning of the test report.

WET Testing Action Level Exceedances - If an action level is exceeded then the Department may require the permittee to conduct additional WET testing including Acute and/or Chronic tests. Additionally, the permittee may be required to perform a Toxicity Reduction Evaluation (TRE) in accordance with Department guidance. If such additional testing or performance of a TRE is necessary, the permittee shall be notified in writing by the Regional Water Engineer. The written notification shall include the reason(s) why such testing or a TRE is required.

7. **Final Effluent Limits** – These are final effluent limitations effective January 1, 2023, following completion of WPCP upgrades and expansion. Interim limits are specified in Order on Consent #R6-20060823-67-M2.

8. **Final Effluent Limits** – These are final effluent limitations, effective January 1, 2024, following completion of WPCP upgrades and expansion. Interim limits are in accordance with the Schedule of Compliance on Page 22 of this permit.

9. **Outfall 003 Monitoring Frequency Requirements:**
   a. Daily min/max shall be calculated based on the arithmetic mean of samples taken during each event.
   b. No./100 ml calculated as the geometric mean of the grab samples taken during each event.
   c. Representative composite samples shall be a composite of grab samples, one taken every FOUR hours for the duration of an event. Sampling shall begin within 2 hours of the start of discharge from the HRD system.
   d. Grab samples shall be collected a minimum of once every FOUR hours during each event, except Bacteria which shall be collected/tested at a rate of one per 24-hour period. Sampling shall begin within 2 hours of the start of the discharge from the HRD System.

10. This limit shall be a 90-day geometric mean, applied over the periods of: May 1 – July 31 and August 1 – October 31. The 90 Day GM is defined as the highest allowable geometric mean of daily discharges over the reporting period, calculated as the antilog of the sum of the log of each of the daily discharges measured during the reporting period, divided by the number of daily discharges measured during that period. Compliance with the effluent limitation shall only occur as a 90-day GM, as defined above. A summary table of each month's individual sample results shall be attached to each monthly DMR.

11. The WQBEL is 0.020 mg/L. Since the WQBEL is below the ML of the most sensitive analysis method, compliance with the ML shall be considered as compliant with the WQBEL.

12. Total Nitrogen (as N) = [Total Kjeldahl Nitrogen (TKN), as N] + [Nitrite (NO2), as N] + [Nitrate (NO3), as N].

## ADDITIONAL REQUIREMENTS

1. If the HRD System Fecal Coliform quarterly geometric mean is not met, the permittee shall submit to the Department, a revised plant-wide Wet Weather Operating Plan, which includes the HRD system and recommended procedures for evaluating and modifying the HRD system.

# BEST MANAGEMENT PRACTICES FOR POTW SERVICING PUBLICALLY OWNED SEWER SYSTEM(S) WITH COMBINED SEWAGE

The permittee shall implement the following Best Management Practices (BMPs). These BMPs are designed to implement operation & maintenance procedures, utilize the existing treatment facility and collection system to the maximum extent practicable, and implement sewer design, replacement and drainage planning, to maximize pollutant capture and minimize water quality impacts from combined sewer overflows. The BMPs are equivalent to the "Nine Minimum Control Measures" required under the USEPA National Combined Sewer Overflow policy. The EPA's policy is available at https://www.epa.gov/npdes/combined-sewer-overflows-csos

1. CSO Maintenance/Inspection - Not Applicable.

2. Maximum Use of Collection System for Storage - The permittee shall optimize the collection system by operating and maintaining it to minimize the discharge of pollutants from CSOs. It is intended that the maximum amount of in-system storage capacity be used (without causing service backups) to minimize CSOs and convey the maximum amount of combined sewage to the treatment plant in accordance with Item 4 below. This shall be accomplished by an evaluation of the hydraulic capacity of the system but should also include a continuous program of flushing or cleaning to prevent deposition of solids and the adjustment of regulators and weirs to maximize storage.

3. Industrial Pretreatment - The approved Industrial Pretreatment Program shall consider CSOs in the calculation of local limits for indirect discharges. Discharge of persistent toxics upstream of CSOs will be in accordance with guidance under **(NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.3.8 New Discharges to POTWs**. (http://www.dec.ny.gov/docs/water_pdf/togs138.pdf). For industrial operations characterized by use of batch discharge, consideration shall be given to the feasibility of a schedule of discharge during conditions of no CSO. For industrial discharges characterized by continuous discharge, consideration must be given to the collection system capacity to maximize delivery of waste to the treatment plant. Non-contact cooling water should be excluded from the combined system to the maximum extent practicable. Direct discharges of cooling water must apply for a SPDES permit.

   To the maximum extent practicable, consideration shall be given to maximize the capture of nondomestic waste containing toxic pollutants and this wastewater should be given priority over residential/commercial service areas for capture and treatment by the POTW.

4. Maximize Flow to POTW - Factors cited in Item 2. above shall also be considered in maximizing flow to the POTW. Maximum delivery to the POTW is particularly critical in treatment of "first-flush" flows. Effective January 1, 2024 the treatment plant shall be capable of receiving and treating the peak design hydraulic loading rates, or a minimum of 65 MGD through secondary treatment works during wet weather. The headworks must be capable of delivering these flows during wet weather. Up to January 1, 2024 the minimum flow through secondary treatment during wet weather is 48 MGD.

5. Wet Weather Operating Plan (WWOP) - The permittee shall maximize treatment during wet weather events. This shall be accomplished by having a WWOP containing procedures so as to operate unit processes to treat maximum flows while not appreciably diminishing effluent quality or destabilizing treatment upon return to dry weather operation. The WWOP shall be developed in accordance with the DEC guidance, Wet Weather Operating Practices for POTWs With Combined Sewers, (http://www.dec.ny.gov/docs/water_pdf/wwtechtran.pdf) .

   **The submission of a WWOP is a one-time requirement that shall be done to the Department's satisfaction once. However, a revised wet weather operating plan must be submitted whenever the POTW and/or sewer collection system is replaced or modified. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT", the permittee is not required to repeat the submission. The above due dates are independent from the effective date of the permit stated in the letter of "SPDES NOTICE/RENEWAL APPLICATION/PERMIT".**

# BEST MANAGEMENT PRACTICES FOR POTW SERVICING PUBLICALLY OWNED SEWER SYSTEM(S) WITH COMBINED SEWAGE (continued)

6. Prohibition of Dry Weather Overflow – Discharge from Outfall 003 shall only be during wet weather events. At no time shall discharge from Outfall 003 occur unless the total facility peak influent flow (sum of 01S and 01C influent flows) is greater than the flow specified in CSO BMP #4. The occurrence of any dry weather overflow shall be promptly abated and reported to the NYSDEC Region 6 Office in accordance with 6 NYCRR Part 750-2.7.

7. Control of Floatable and Settleable Solids - The discharge of floating solids, oil and grease, or solids of sewage origin which cause deposition in the receiving waters, is a violation of the NYS Narrative Water Quality Standards contained in Part 703. As such, the permittee shall implement best management practices in order to eliminate or minimize the discharge of these substances. All of the measures cited in Items 1, 2, 4 & 5 above shall constitute approvable "BMPs" for mitigation of this problem.

8. Combined Sewer System Replacement – Not Applicable.

9. Combined Sewer/Extension - Not Applicable.

10. Sewage Backups – Not Applicable.

11. Septage and Hauled Waste – All releases of septage of hauled waste into the treatment plant shall be directed to the separate sewer treatment train. Any discharge of untreated or partially treated septage or hauled waste from Outfall 003 is prohibited.

12. Control of Runoff – Not Applicable.

13. Public Notification – Not Applicable.

14. Characterization and Monitoring – Not Applicable.

15. Annual Report - The permittee shall submit an annual BMP checklist summarizing implementation of the above BMPs. The report shall list existing documentation of implementation of the BMPs and shall be submitted by January 31st of each year to the Region Water Engineer at the address listed on the Recording, Reporting, and Additional Monitoring page of this permit and to the Bureau of Water Permits, 625 Broadway, Albany, NY 12233-3505. Examples of recommended documentation of the BMPs are found in Combined Sewer Overflows, Guidance for Nine Minimum Controls (NMC), EPA, 1995. The permittee may obtain an electronic copy of the NMC guidance at http://www.epa.gov/npdes/pubs/owm0030.pdf. The BMP checklist is available from DEC at http://www.dec.ny.gov/docs/water_pdf/csobmp.pdf. The permittee must, as a minimum, submit a completed copy of this BMP checklist as the annual report. The actual documentation shall be stored at a central location and be made available to DEC upon request.

## CSO LONG TERM CONTROL PLAN PARTICIPATION

The permittee shall complete upgrades as required by Order on Consent R6-20060823-67-M2 and operate in accordance with the requirements contained within this permit. The LTCP implementation schedule and post-construction compliance monitoring is regulated under the City of Utica CSO SPDES Permit (NY0031429).

# MERCURY MINIMIZATION PROGRAM (MMP) - Type I

1. General - The permittee must develop, implement, and maintain a mercury minimization program (MMP), containing the elements set forth below, to reduce mercury effluent levels with the goal of achieving the WQBEL of 0.7 ng/L.

2. MMP Elements - The MMP must be a written document and must include any necessary drawings or maps of the facility and/or collection system. Other related documents already prepared for the facility may be used as part of the MMP and may be incorporated by reference. At a minimum, the MMP must include the following elements as described in detail below:

   a. Monitoring - Monitoring at Outfall influent and other locations tributary to compliance points shall be performed using either USEPA Method 1631 or another sufficiently sensitive method, as approved under 40 CFR Part 136[1]. Monitoring of raw materials, equipment, treatment residuals, and other non-wastewater/non-stormwater substances may be performed using other methods as appropriate. Monitoring must be coordinated so that the results can be effectively compared between locations.

      Minimum required monitoring is as follows:

      i. Sewage Treatment Plant Influent and/or Effluent – The permittee must collect samples at the location(s) and frequency as specified in the SPDES permit limitations table.

      ii. *Key Locations* and *Potential Mercury Sources* – The permit includes reduced monitoring requirements and does not require key location sampling. See section 2.a.iv below.

      iii. Hauled Wastes – The permittee must establish procedures for the acceptance of hauled waste to ensure the hauled waste is not a potential mercury source. Loads which may exceed 500 ng/L,[2] must receive approval from the Department prior to acceptance.

      iv. Decreased Monitoring Requirements – The permittee has an EEQ at or below 12 ng/L and the permit includes the following requirements:

         1) Reduced requirements
            a) Conduct influent monitoring, sampling quarterly, in lieu of monitoring within the collection system, such as at *key locations*; and
            b) Conduct effluent compliance sampling quarterly.
         2) If a facility with reduced requirements reports discharges above 12 ng/L for two of four consecutive effluent samples, the Department may undertake a Department-initiated modification to remove the allowance of reduced requirements.
         3) Under the decreased permit requirements, the facility must continue to conduct a status report, as applicable in accordance with 2.c of this MMP, to determine if any waste streams have changed.

      v. Additional monitoring must be completed as required elsewhere in this permit (e.g., locations tributary to compliance points).

   b. Control Strategy - The control strategy must contain the following minimum elements:

      i. Pretreatment/Sewer Use Law - The permittee must review pretreatment program requirements and the Sewer Use Law (SUL) to ensure it is up-to-date and enforceable with applicable permit requirements and will support efforts to achieve a dissolved mercury concentration of 0.70 ng/L in the effluent.

[1] Outfall monitoring must be conducted using the methods specified in Table 8 of *DOW 1.3.10.*
[2] A level of 0.2 mg/L (200,000 ng/L) or more is considered hazardous per 40 CFR Part 261.11. 500 ng/L is used here to alert the permittee that there is an unusual concentration of mercury and that it will need to be managed appropriately.

# MERCURY MINIMIZATION PROGRAM (MMP) - Type I (Continued)

ii. Monitoring and Inventory/Inspections
   1) Monitoring shall be performed as described in 2.a above. As mercury sources are found, the permittee must enforce its sewer use law to track down and minimize these sources.
   2) The permittee must inventory and/or inspect users of its system as necessary to support the MMP.
      a) Dental Facilities
         1. The permittee must maintain an inventory of each dental facility.
         2. The permittee must inspect each dental facility at least once every five years to verify compliance with the wastewater treatment operation, maintenance, and notification elements of 6 NYCRR 374.4. Alternatively, the permittee may develop and implement an outreach program,[3] which informs users of their responsibilities, and collect the "Amalgam Waste Compliance Report for Dental Dischargers"[4] form, as needed, to satisfy the inspection requirements. The permittee must conduct the outreach program at least once every five years and ensure the "Amalgam Waste Compliance Report for Dental Dischargers" are submitted by new users, as necessary. The outreach program could be supported by a subset of site inspections.
         3. A file shall be maintained containing documentation demonstrating compliance with 2.b.ii.2)a) above. This file shall be available for review by the Department representatives and copies shall be provided upon request.
      b) Other *potential mercury sources*
         1. The permittee must maintain an inventory of other *potential mercury sources.*
         2. The permittee must inspect other *potential mercury sources* once every five years. Alternatively, the permittee may develop and implement an outreach program which informs users of their responsibilities as *potential mercury sources.* The permittee must conduct the outreach program at least once every five years. The outreach program should be supported by a subset of site inspections.
         3. A file shall be maintained containing documentation demonstrating compliance with 2.b.ii.2)b) above. This file shall be available for review by the Department representatives and copies shall be provided upon request.

iii. Systems with CSO & Type II SSO Outfalls – Permittees must prioritize *potential mercury sources* upstream of CSOs and Type II SSOs for mercury reduction activities and/or controlled-release discharge.

iv. Equipment and Materials – Equipment and materials (e.g., thermometers, thermostats) used by the permittee, which may contain mercury, must be evaluated by the permittee. As equipment and materials containing mercury are updated/replaced, the permittee must use mercury-free alternatives, if possible.

v. Bulk Chemical Evaluation – For chemicals, used at a rate which exceeds 1,000 gallons/year or 10,000 pounds/year, the permittee must obtain a manufacturer's certificate of analysis, a chemical analysis performed by a certified laboratory, and/or a notarized affidavit which describes the substances' mercury concentration and the detection limit achieved. If possible, the permittee must only use bulk chemicals utilized in the wastewater treatment process which contain <10 ppb mercury.

c. **Status Report - An annual** status report must be developed and maintained on site, in accordance with the Schedule of Additional Submittals, summarizing:
   i. All MMP monitoring results for the previous reporting period;
   ii. A list of known and *potential mercury sources*
      1) If the permittee meets the criteria for MMP Type IV, the permittee must notify the Department for a permittee-initiated modification;
   iii. All actions undertaken, pursuant to the control strategy, during the previous reporting period;
   iv. Actions planned, pursuant to the control strategy, for the upcoming reporting period; and

[3] For example, the outreach program could include education about sources of mercury and what to do if a mercury source is found.
[4] The form, "Amalgam Waste Compliance Report for Dental Dischargers," can be found here: https://www.dec.ny.gov/docs/water_pdf/dentalform.pdf

# MERCURY MINIMIZATION PROGRAM (MMP) - Type I (Continued)

v. Progress towards achieving a dissolved mercury concentration of 0.70 ng/L in the effluent (e.g., summarizing reductions in effluent concentrations as a result of the control strategy implementation and/or installation/modification of a treatment system).

The permittee must maintain a file with all MMP documentation. The file must be available for review by Department representatives and copies must be provided upon request in accordance with 6 NYCRR 750-2.1(i) and 750-2.5(c)(4).

3. MMP Modification - The MMP must be modified whenever:
   a. Changes at the facility, or within the collection system, increase the potential for mercury discharges;
   b. Effluent discharges exceed the current permit limitation(s); or
   c. A letter from the Department identifies inadequacies in the MMP.

   The Department may use information in the status reports, as applicable in accordance with 2.c of this MMP, to determine if the permit limitations and MMP Type is appropriate for the facility.

DEFINITIONS:

Key location – a location within the collection/wastewater system (e.g. including but not limited to a specific manhole/access point, tributary sewer/wastewater connection, or user discharge point) identified by the permittee as a potential mercury source. The permittee may adjust key locations based upon sampling and/or best professional judgement.

Potential mercury source – a source identified by the permittee that may reasonably be expected to have total mercury contained in the discharge. Some potential mercury sources include switches, fluorescent lightbulbs, cleaners, degreasers, thermometers, batteries, hauled wastes, universities, hospitals, laboratories, landfills, Brownfield sites, or raw material storage.

# DISCHARGE NOTIFICATION REQUIREMENTS

(a) The permittee shall install and maintain identification signs at all outfalls to surface waters listed in this permit unless the Permittee has obtained a waiver in accordance with the Discharge Notification Act (DNA). Such signs shall be installed before initiation of any discharge.

(b) Subsequent modifications to or renewal of this permit does not reset or revise the deadline set forth in (a) above unless a new deadline is set explicitly by such permit modification or renewal.

(c) The Discharge Notification Requirements described herein do not apply to outfalls from which the discharge is composed exclusively of storm water, or discharges to ground water.

(d) The sign(s) shall be conspicuous, legible and in as close proximity to the point of discharge as is reasonably possible while ensuring the maximum visibility from the surface water and shore. The signs shall be installed in such a manner to pose minimal hazard to navigation, bathing or other water related activities. If the public has access to the water from the land in the vicinity of the outfall, an identical sign shall be posted to be visible from the direction approaching the surface water.

The signs shall have **minimum** dimensions of eighteen inches by twenty-four inches (18" x 24") and shall have white letters on a green background and contain the following information:

**N.Y.S. PERMITTED DISCHARGE POINT**

**SPDES PERMIT No.: NY_____**

**OUTFALL No. :____**

For information about this permitted discharge contact:

Permittee Name: _____

Permittee Contact: _____

Permittee Phone: ( ) - ### - ####

OR:

NYSDEC Division of Water Regional Office Address:

NYSDEC Division of Water Regional Phone: ( ) - ### - ####

(e) Upon request, the permittee shall make available electronic or hard copies of the sampling data to the public. In accordance with the RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS page of your permit, each DMR shall be maintained (either electronically or as a hard copy) on record for a period of five years.

(f) The permittee shall periodically inspect the outfall identification sign(s) in order to ensure they are maintained, are still visible, and contain information that is current and factually correct. Signs that are damaged or incorrect shall be replaced within 3 months of inspection.

# INDUSTRIAL PRETREATMENT PROGRAM IMPLEMENTATION REQUIREMENTS

A. DEFINITIONS: Generally, terms used in this Section shall be defined as in the General Pretreatment Regulations (40 CFR Part 403). Specifically, the following definitions apply to terms used in this Section:

1. Categorical Industrial User (CIU): an industrial user of the POTW that is subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N;

2. Local Limits: General Prohibitions, specific prohibitions and specific limits as set forth in 40 CFR 403.5.

3. The Publicly Owned Treatment Works (POTW): as defined by 40 CFR 403.3(q) and that discharges in accordance with this permit.

4. Program Submission(s): requests for approval or modification of the POTW Pretreatment Program submitted in accordance with 40 CFR 403.11 or 403.18 and approved by letter dated September 27, 1985.

5. Significant Industrial User (SIU):
   a) CIUs;
   b) Except as provided in 40 CFR 403.3(v)(3), any other industrial user that discharges an average of 25,000 gallons per day or more of process wastewater (excluding sanitary, non-contact cooling and boiler blowdown wastewater) to the POTW;
   c) Except as provided in 40 CFR 403.3(v)(3), any other industrial user that contributes a process waste stream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant;
   d) Any other industrial user that the permittee designates as having a reasonable potential for adversely affecting the POTW's operation or for violating a pretreatment standard or requirement.

6. Substances of Concern: Substances identified by the New York State Department of Environmental Conservation Industrial Chemical Survey as substances of concern.

B. IMPLEMENTATION: The permittee shall implement a POTW Pretreatment Program in accordance 40 CFR Part 403 and as set forth in the permittee's approved Program Submission(s). Modifications to this program shall be made in accordance with 40 CFR 403.18. Specific program requirements are as follows:

1. Industrial Survey: To maintain an updated inventory of industrial dischargers to the POTW the permittee shall:
   a) Identify, locate, and list all industrial users who might be subject to the industrial pretreatment program from the pretreatment program submission and any other necessary, appropriate, and available sources. This identification and location list will be updated, at a minimum, every five years. As part of this update the permittee shall collect a current and complete New York State Industrial Chemical Survey form (or equivalent) from each SIU.
   b) Identify the character and volume of pollutants contributed to the POTW by each industrial user identified in B.1.a above that is classified as a SIU.
   c) Identify, locate, and list, from the pretreatment program submission and any other necessary, appropriate, and available sources, all SIUs of the POTW.

2. Control Mechanisms: To provide adequate notice to and control of industrial users of the POTW the permittee shall:
   a) Inform by certified letter, hand delivery courier, overnight mail, or other means which will provide written acknowledgment of delivery, all industrial users identified in B.1.a. above of applicable pretreatment standards and requirements including the requirement to comply with the local sewer use law, regulation or ordinance and any applicable requirements under section 204(b) and 405 of the Federal Clean Water Act and Subtitles C and D of the Resource Conservation and Recovery Act.

# INDUSTRIAL PRETREATMENT PROGRAM IMPLEMENTATION REQUIREMENTS (continued)

b) Control through permit or similar means the contribution to the POTW by each SIU to ensure compliance with applicable pretreatment standards and requirements. Permits shall contain limitations, sampling frequency and type, reporting and self-monitoring requirements as described below, requirements that limitations and conditions be complied with by established deadlines, an expiration date not later than five years from the date of permit issuance, a statement of applicable civil and criminal penalties and the requirement to comply with Local Limits and any other requirements in accordance with 40 CFR 403.8(f)(1).

3. Monitoring and Inspection: To provide adequate, ongoing characterization of non-domestic users of the POTW, the permittee shall:
   a) Receive and analyze self-monitoring reports and other notices. The permittee shall require all SIUs to submit self-monitoring reports at least every six months unless the permittee collects all such information required for the report, including flow data.
   b) The permittee shall adequately inspect each SIU at a minimum frequency of once per year.
   c) The permittee shall collect and analyze samples from each SIU for all priority pollutants that can reasonably be expected to be detectable at levels greater than the levels found in domestic sewage at a minimum frequency of once per year.
   d) Require, through permits, each SIU to collect at least one 24-hour, flow proportioned composite (where feasible) effluent sample every six months and analyze each of those samples for all priority pollutants that can reasonably be expected to be detectable in that discharge at levels greater than the levels found in domestic sewage. The permittee may perform the aforementioned monitoring in lieu of the SIU except that the permittee must also perform the compliance monitoring described in 3.c.

4. Enforcement: To assure adequate, equitable enforcement of the industrial pretreatment program the permittee shall:
   a) Investigate instances of noncompliance with pretreatment standards and requirements, as indicated in self-monitoring reports and notices or indicated by analysis, inspection and surveillance activities. Sample taking and analysis and the collection of other information shall be performed with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions. Enforcement activities shall be conducted in accordance with the permittee's Enforcement Response Plan developed and approved in accordance with 40 CFR Part 403.
   b) Enforce compliance with all national pretreatment standards and requirements in 40 CFR Parts 406 - 471.
   c) Provide public notification of significant non-compliance as required by 40 CFR 403.8(f)(2)(viii).
   d) Pursuant to 40 CFR 403.5(e), when either the Department or the USEPA determines any source contributes pollutants to the POTW in violation of Pretreatment Standards or Requirements the Department or the USEPA shall notify the permittee. Failure by the permittee to commence an appropriate investigation and subsequent enforcement action within 30 days of this notification may result in appropriate enforcement action against the source and permittee.

5. Recordkeeping: The permittee shall maintain and update, as necessary, records identifying the nature, character, and volume of pollutants contributed by SIUs. Records shall be maintained in accordance with 6 NYCRR 750-2.5(c).

6. Staffing: The permittee shall maintain minimum staffing positions committed to implementation of the Industrial Pretreatment Program in accordance with the approved pretreatment program.

C. SLUDGE DISPOSAL PLAN. The permittee shall notify NYSDEC, and USEPA as long as USEPA remains the approval authority, 60 days prior to any major proposed change in the sludge disposal plan. NYSDEC may require additional pretreatment measures or controls to prevent or abate an interference incident relating to sludge use or disposal.

# INDUSTRIAL PRETREATMENT PROGRAM IMPLEMENTATION REQUIREMENTS (continued)

D. REPORTING: The permittee shall provide to the offices listed on the Monitoring, Reporting and Recording page of this permit and to the Chief-Water Compliance Branch, USEPA Region II, 290 Broadway, New York, NY 10007, a periodic report that briefly describes the permittee's program activities over the previous year. This report shall be submitted in accordance with the Schedule of Submittals to the above noted offices within 60 days of the end of the reporting period. The periodic report shall include:

1. Industrial Survey: Updated industrial survey information in accordance with 40 CFR 403.12(i)(1) (including any NYS Industrial Chemical Survey forms updated during the reporting period).

2. Implementation Status: Status of Program Implementation, to include:
   a) Any interference, upset or permit violations experienced at the POTW directly attributable to industrial users.
   b) Listing of SIUs issued permits.
   c) Listing of SIUs inspected and/or monitored during the previous reporting period and summary of results.
   d) Listing of SIUs notified of promulgated pretreatment standards or applicable local standards who are on compliance schedules. The listing should include for each facility the final date of compliance.
   e) Summary of POTW monitoring results not already submitted on Discharge Monitoring Reports and toxic loadings from SIU's organized by parameter.
   f) A summary of additions or deletions to the list of SIUs, with a brief explanation for each deletion.

3. Enforcement Status: Status of enforcement activities to include:
   a) Listing of SIUs in significant non-compliance (as defined by 40 CFR 403.8(f)(2)(viii) with federal or local pretreatment standards at end of the reporting period.
   b) Summary of enforcement activities taken against non-complying SIUs. The permittee shall provide a copy of the public notice of significant violators as specified in 40 CFR 403.8(f)(2)(viii).

E. ADDITIONAL PRETREATMENT CONDITIONS: The following pretreatment monitoring program shall be performed by the permittee. This monitoring may be performed in conjunction with monitoring for those parameters specified as Action Levels on Page 6 of this permit, where applicable.

1. *Influent and Effluent Monitoring* – The permittee shall start influent sampling prior to effluent sampling by a period of approximately equal to the treatment plant's hydraulic retention time during the sampling event. ***When possible, samples shall be collected during dry weather periods.***

   a. **Metals**

| Parameter | Frequency/Type |
|---|---|
| Cadmium, Total | Monthly/24-hr Composite |
| Chromium, Total | Monthly/24-hr Composite |
| Copper, Total | Monthly/24-hr Composite |
| Lead, Total | Monthly/24-hr Composite |
| Nickel, Total | Monthly/24-hr Composite |
| Zinc, Total | Monthly/24-hr Composite |

   b. **Volatile Organic Compounds**

| Parameter | Frequency/Type |
|---|---|
| Methylene Chloride | Quarterly/Composite – 3 Grab Samples, 1 every 8 hours |
| Chloroform | Quarterly/Composite – 3 Grab Samples, 1 every 8 hours |
| Ethylbenzene | Quarterly/Composite – 3 Grab Samples, 1 every 8 hours |
| Tetrachloroethene | Quarterly/Composite – 3 Grab Samples, 1 every 8 hours |
| Toluene | Quarterly/Composite – 3 Grab Samples, 1 every 8 hours |
| Trichloroethene | Quarterly/Composite – 3 Grab Samples, 1 every 8 hours |
| Xylene | Quarterly/Composite – 3 Grab Samples, 1 every 8 hours |

# INDUSTRIAL PRETREATMENT PROGRAM IMPLEMENTATION REQUIREMENTS (continued)

c. **Base – Neutrals**

| Parameter | Frequency/Type |
|---|---|
| Bis (2-ethylhexyl) pthalate | Quarterly/Composite – 3 Grab Samples, 1 every 8 hours |

d. **Other (Effluent Only)**

| Parameter | Frequency/Type |
|---|---|
| Phenols, Total | Quarterly/Composite – 3 Grab Samples, 1 every 8 hours |

2. *Sludge Ash Monitoring* – Samples shall be collected of incinerated sludge ash as follows:

| Parameter | Frequency/Type |
|---|---|
| TCLP | Annually/Grab |

3. *Background Monitoring* – A sample shall be collected from a manhole serving only residential areas. The sample shall be collected during a dry weather period. Sampling shall be performed for the following parameters:

| Parameter | Frequency/Type |
|---|---|
| Cadmium, Total | Quarterly/Grab |
| Chromium, Total | Quarterly/Grab |
| Copper, Total | Quarterly/Grab |
| Lead, Total | Quarterly/Grab |
| Nickel, Total | Quarterly/Grab |
| Zinc, Total | Quarterly/Grab |

The results of this sampling program shall be submitted with the *Annual Pretreatment Report*.

# SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

| Outfall(s) | Parameter(s) Affected | Interim Effluent Limit(s) | Compliance Action | Due Date |
|---|---|---|---|---|
| 001 | Ultimate Oxygen Demand (UOD) | Monitor (DM) | The permittee shall meet final effluent limitations for the listed parameters. | January 1, 2024 |
| | Total Residual Chlorine (TRC) | 0.1 mg/L (DM) | | |
| **The above compliance actions are one-time requirements. The permittee shall comply with the above compliance actions to the Department's satisfaction once. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT," the permittee is not required to repeat the submission(s) noted above. The above due dates are independent from the effective date of the permit stated in the "SPDES NOTICE/RENEWAL APPLICATION/PERMIT" letter.** | | | | |

b) For any action where the compliance date is greater than 9 months past the previous compliance due date, the permittee shall submit interim progress reports to the Department every nine (9) months until the due date for these compliance items are met.

c) The permittee shall submit a written notice of compliance or non-compliance with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All such compliance or non-compliance notification shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:

1. A short description of the non-compliance;
2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirements without further delay and to limit environmental impact associated with the non-compliance;
3. Any details which tend to explain or mitigate an instance of non-compliance; and
4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.

d) The permittee shall submit copies of any document required by the above schedule of compliance to the NYSDEC Regional Water Engineer and to the Bureau of Water Permits.

# SCHEDULE OF SUBMITTALS

a) The permittee shall submit the following information to the Regional Water Engineer at Department of Environmental Conservation, State Office Building, Watertown, NY 13601-3787 and to the Bureau of Water Permits, 625 Broadway, Albany NY 12233-3505.

| Outfall(s) | Parameter(s) Affected or Type of Submittal | Required Action | Due Date |
|---|---|---|---|
| N/A | Total Mercury | The permittee shall submit the previous year's annual Mercury Minimization Program Status Report. | July 15th Annually |
| N/A | Wet Weather Operating Plan | The permittee shall submit to the Department an approvable Wet Weather Operating Plan for the expanded facility, in accordance with the "Best Management Practices for Combined Sewer Overflows" on Page 12 of this permit. | Submitted June 1, 2021 |
| N/A | WET Testing | The permittee shall submit the complete test report, including all corresponding results, statistical analyses, reference toxicity data, daily average flow at the time of sampling and other appropriate supporting documentation to the Department. A summary page of the test results for the invertebrate and vertebrate species indicating TUa, 48 hr LC50 or 48 hr EC50 for Acute tests and/or TUc, NOEC, IC25, and most sensitive endpoints for Chronic tests, should also be included at the beginning of the test report.<br><br>Results shall be submitted to the Toxicity Testing Unit, Bureau of Watershed Assessment and Management, 625 Broadway, Fourth Floor, Albany, NY 12233-3502. | End of Test Period + 60 Days |
| N/A | BMP Checklist | In accordance with the requirements on Pages 12 & 13 of this permit, the permittee shall submit to the Department, an annual BMP checklist summarizing implementation of the listed BMPs to maximize pollutant capture and minimize water quality impacts from combined sewer overflows | January 31st Annually |
| N/A | Pretreatment report | Pretreatment Report: The permittee shall provide to the Chief-Water Compliance Branch, USEPA Region II, 290 Broadway, New York, NY 10007, an *Annual Pretreatment Report* that briefly describes the permittee's program activities over the previous year. The reporting period shall be annual, with reporting period(s) ending on December 31 of each year. This annual report does not need to be submitted to NYSDEC. | March 1st of each year |
| 001, 01S, 01C | Certification of Construction Completion | The permittee shall notify the Department, in writing, the date of construction completion for the new separate sewer headworks. This notification shall also identify the date that both the new and existing headworks will begin operating simultaneously. The date of operation will discontinue the allowance of "NODI9" reporting for Outfalls 01S and 01C. | Date of New Headworks Construction Complete + 7 Days |

**Schedule of Submittals Continued on Next Page**

# SCHEDULE OF SUBMITTALS (continued)

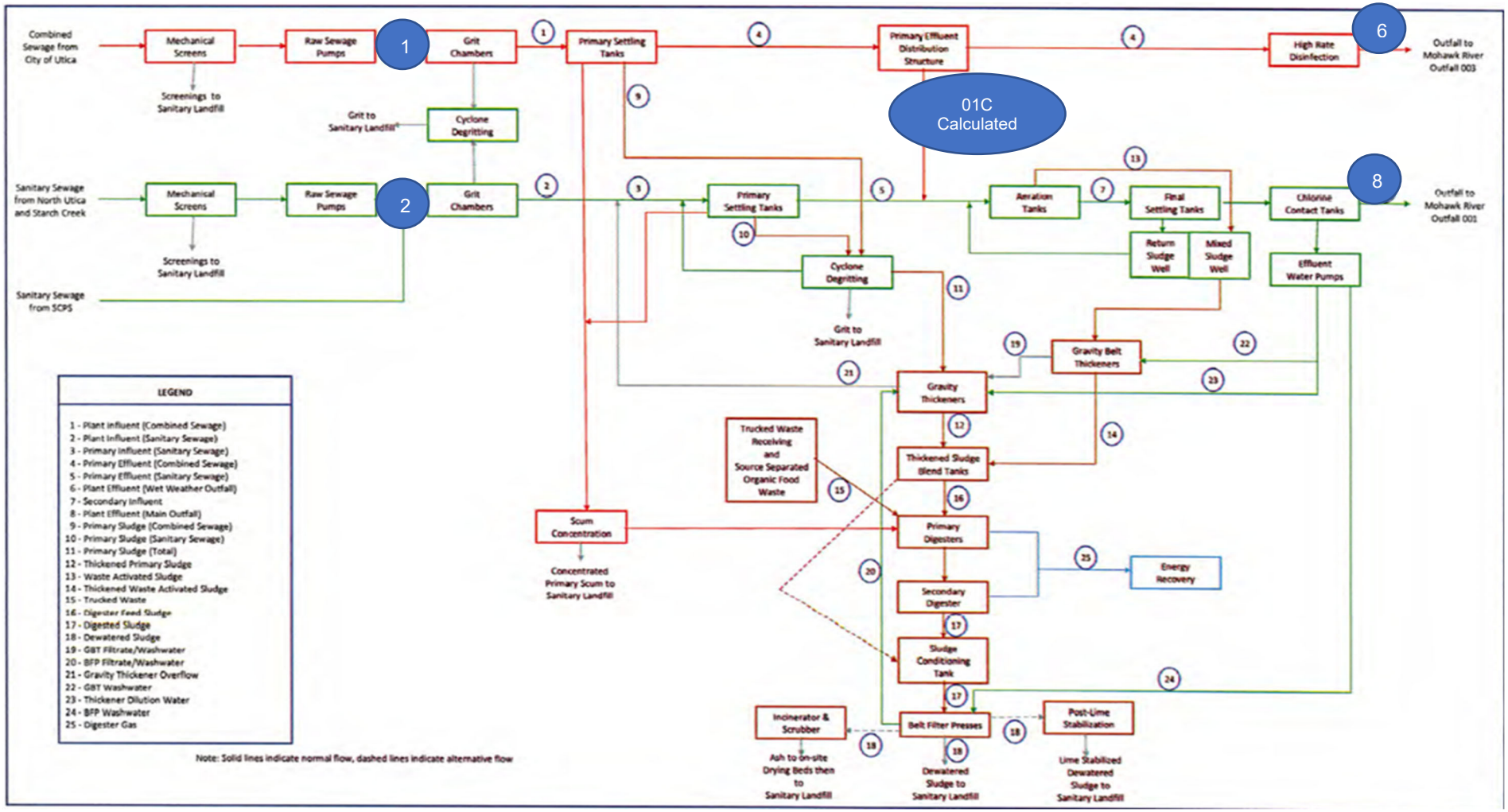
| Outfall(s) | Parameter(s) Affected or Type of Submittal | Required Action | Due Date |
|---|---|---|---|
| 003 | HRD Study | The permittee shall develop a workplan for a high-rate disinfection performance study to identify effective disinfection (achieves the 200/100mL 90-day geometric mean and TRC limit of 0.1 mg/L at Outfall 003) through surrogate wet-weather indicators for real-time control throughout wet-weather events, including TRC dosing rate.<br><br>The study should include sampling of HRD influent and effluent fecal coliform at a frequency of 1 sample per 8-hours during lab staffed hours for the first 12 events. The TRC dosing rate, TRC concentration prior to dichlorination, and effluent TRC concentration should be monitored at the same frequency.<br><br>A summary of the study, number of events, duration of events, samples collected, log-reduction calculation during each event, sampling results and analysis of data results should be provided to the Department. The study will provide performance recommendations to meet TRC and fecal coliform limits for variable rates, durations, and variations in flow. All data used in the analysis should be provided in a spreadsheet format. | 04/01/2020<br><br>10/01/2023 |

b) Unless noted otherwise, the above actions are one-time requirements. The permittee shall submit the results of the above actions to the satisfaction of the Department. When this permit is administratively renewed by NYSDEC letter entitled “SPDES NOTICE/RENEWAL APPLICATION/PERMIT”, the permittee is not required to repeat the above submittal(s), unless noted otherwise. The above due dates are independent from the effective date of the permit stated in the letter of “SPDES NOTICE/RENEWAL APPLICATION/PERMIT.”

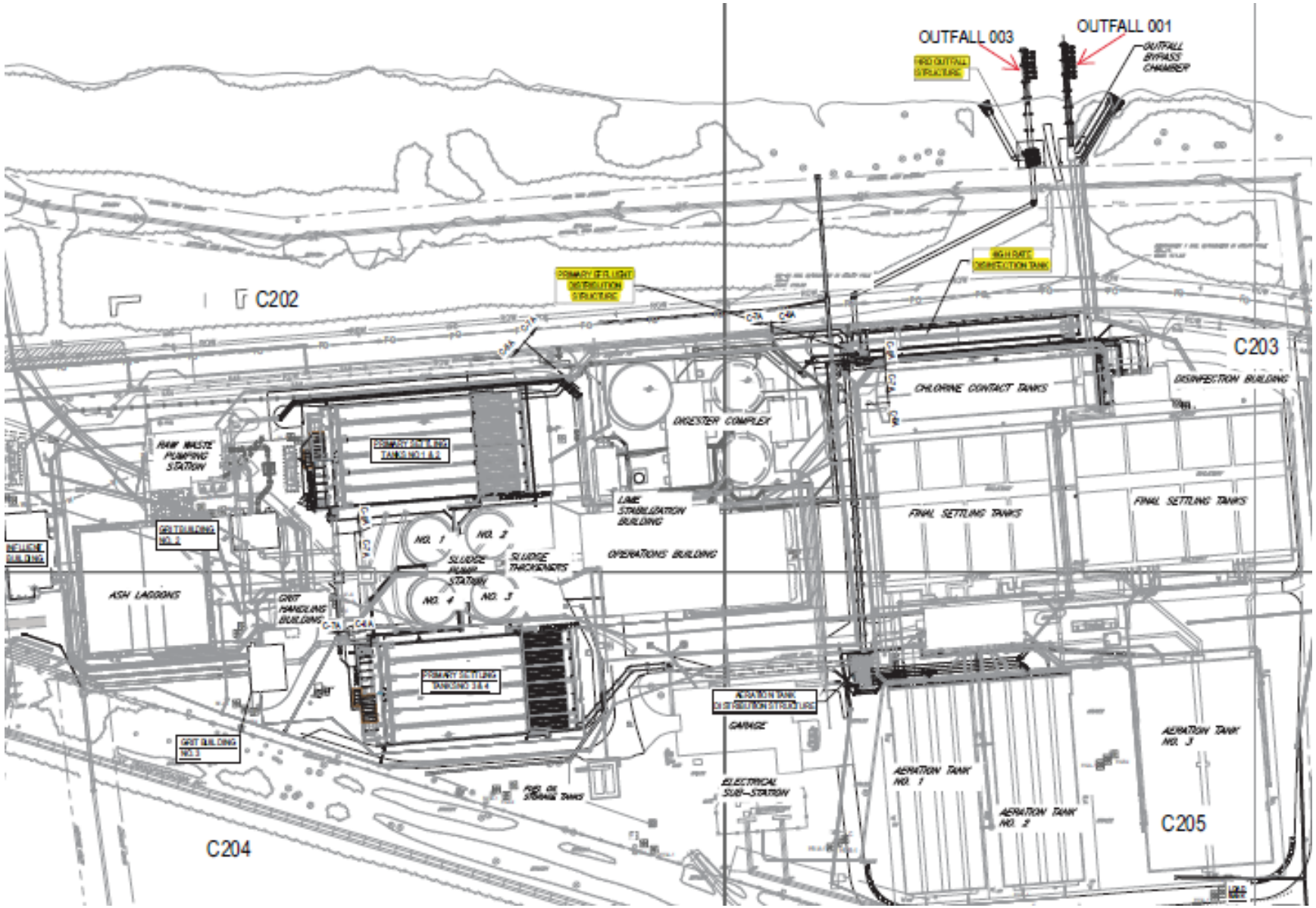
# MONITORING LOCATIONS

The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the locations(s) specified below:

| Outfall Name – Description | Influent Monitoring Location | Effluent Monitoring Location |
|---|---|---|
| Outfall 01C – Combined Sewer System to Secondary | Location 1 | Location 01C |
| Outfall 01S – Separate Sewer System to Secondary | Location 2 | N/A |
| Outfall 001 – WPCP Secondary Treatment System | Calculated | Location 8 |
| Outfall 003 – HRD System | N/A | Location 6 |



# FACILITY LAYOUT SCHEMATIC



# GENERAL REQUIREMENTS

A. The regulations in 6 NYCRR Part 750 are hereby incorporated by reference and the conditions are enforceable requirements under this permit. The permittee shall comply with all requirements set forth in this permit and with all the applicable requirements of 6 NYCRR Part 750 incorporated into this permit by reference, including but not limited to the regulations in paragraphs B through I as follows:

B. General Conditions

| | | |
|---|---|---|
| 1. | Duty to comply | 6 NYCRR 750-2.1(e) & 2.4 |
| 2. | Duty to reapply | 6 NYCRR 750-1.16(a) |
| 3. | Need to halt or reduce activity not a defense | 6 NYCRR 750-2.1(g) |
| 4. | Duty to mitigate | 6 NYCRR 750-2.7(f) |
| 5. | Permit actions | 6 NYCRR 750-1.1(c), 1.18, 1.20 & 2.1(h) |
| 6. | Property rights | 6 NYCRR 750-2.2(b) |
| 7. | Duty to provide information | 6 NYCRR 750-2.1(i) |
| 8. | Inspection and entry | 6 NYCRR 750-2.1(a) & 2.3 |

C. Operation and Maintenance

| | | |
|---|---|---|
| 1. | Proper Operation & Maintenance | 6 NYCRR 750-2.8 |
| 2. | Bypass | 6 NYCRR 750-1.2(a)(17), 2.8(b) & 2.7 |
| 3. | Upset | 6 NYCRR 750-1.2(a)(94) & 2.8(c) |

D. Monitoring and Records

| | | |
|---|---|---|
| 1. | Monitoring and records | 6 NYCRR 750-2.5(a)(2), 2.5(a)(6), 2.5(c)(1), 2.5(c)(2), & 2.5(d) |
| 2. | Signatory requirements | 6 NYCRR 750-1.8 & 2.5(b) |

E. Reporting Requirements

| | | |
|---|---|---|
| 1. | Reporting requirements | 6 NYCRR 750-2.5, 2.7 & 1.17 |
| 2. | Anticipated noncompliance | 6 NYCRR 750-2.7(a) |
| 3. | Transfers | 6 NYCRR 750-1.17 |
| 4. | Monitoring reports | 6 NYCRR 750-2.5(e) |
| 5. | Compliance schedules | 6 NYCRR 750-1.14(d) |
| 6. | 24-hour reporting | 6 NYCRR 750-2.7(c) & (d) |
| 7. | Other noncompliance | 6 NYCRR 750-2.7(e) |
| 8. | Other information | 6 NYCRR 750-2.1(f) |
| 9. | Additional conditions applicable to a POTW | 6 NYCRR 750-2.9 |

F. Planned Changes

1. The permittee shall give notice to the Department as soon as possible of planned physical alterations or additions to the permitted facility when:

    a. The alteration or addition to the permitted facility may meet any of the criteria for determining whether facility is a new source in 40 CFR §122.29(b); or
    b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject either to effluent limitations in the permit, or to notification requirements under 40 CFR §122.42(a)(1); or
    c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

In addition to the Department, the permittee shall submit a copy of this notice to the United States Environmental Protection Agency at the following address: U.S. EPA Region 2, Clean Water Regulatory Branch, 290 Broadway, 24th Floor, New York, NY 10007-1866.

# GENERAL REQUIREMENTS (continued)

2. Notification Requirement for POTWs
   All POTWs shall provide adequate notice to the Department and the USEPA of the following:

   a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; or
   b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
   c. For the purposes of this paragraph, adequate notice shall include information on:
      i. the quality and quantity of effluent introduced into the POTW, and
      ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

   POTWs shall submit a copy of this notice to the United States Environmental Protection Agency, at the following address:
   U.S. EPA Region 2, Clean Water Regulatory Branch, 290 Broadway, 24th Floor, New York, NY 10007-1866

G. Sludge Management
   The permittee shall comply with all applicable requirements of 6 NYCRR Part 360.

H. SPDES Permit Program Fee
   The permittee shall pay to the Department an annual SPDES permit program fee within 30 days of the date of the first invoice, unless otherwise directed by the Department, and shall comply with all applicable requirements of ECL 72-0602 and 6 NYCRR Parts 480, 481 and 485. Note that if there is inconsistency between the fees specified in ECL 72-0602 and 6 NYCRR Part 485, the ECL 72-0602 fees govern.

I. Water Treatment Chemicals (WTCs)
   New or increased use and discharge of a WTC requires prior Department review and authorization. At a minimum, the permittee must notify the Department in writing of its intent to change WTC use by submitting a completed *WTC Notification Form* for each proposed WTC. The Department will review that submittal and determine if a SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. The majority of WTC authorizations do not require SPDES permit modification. In any event, use and discharge of a WTC shall not proceed without prior authorization from the Department. Examples of WTCs include biocides, coagulants, conditioners, corrosion inhibitors, defoamers, deposit control agents, flocculants, scale inhibitors, sequestrants, and settling aids.
   1. WTC use shall not exceed the rate explicitly authorized by this permit or otherwise authorized in writing by the Department.
   2. The permittee shall maintain a logbook of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure that excessive levels of WTCs are not used.
   3. The permittee shall submit a completed WTC Annual Report Form each year that they use and discharge WTCs. This form shall be submitted in electronic format and attached to either the December DMR or the annual monitoring report required below. The *WTC Notification Form and WTC Annual Report Form* are available from the Department's website at: http://www.dec.ny.gov/permits/93245.html

# RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

A. The monitoring information required by this permit shall be retained for a period of at least five years from the date of the sampling for subsequent inspection by the Department or its designated agent.

B. Discharge Monitoring Reports (DMRs): Completed DMR forms shall be submitted for each 1 month reporting period in accordance with the DMR Manual available on Department's website.

DMRs must be submitted electronically using the electronic reporting tool (NetDMR) specified by NYSDEC. Instructions on the use of NetDMR can be found at https://www.dec.ny.gov/chemical/103774.html. **Hardcopy paper DMRs will only be received at the address listed below, directed to the Bureau of Water Compliance, if a waiver from the electronic submittal requirements has been granted by DEC to the facility.**

Attach the monthly "Wastewater Facility Operation Report" (form 92-15-7) and any required DMR attachments electronically to the DMR or with the hardcopy submittal.

The first monitoring period begins on the effective date of this permit, and, unless otherwise required, the reports are due no later than the 28th day of the month following the end of each monitoring period.

C. Additional information required to be submitted by this permit shall be summarized and reported to the RWE and Bureau of Water Permits at the following addresses:

Department of Environmental Conservation
Division of Water, Bureau of Water Permits
625 Broadway, Albany, New York 12233-3505 Phone: (518) 402-8111

Department of Environmental Conservation
Regional Water Engineer, Region 6
State Office Building, Watertown, New York, 13601-3787 Phone: (315) 785-2513

D. Bypass and Sewage Pollutant Right to Know Reporting: In accordance with the Sewage Pollutant Right to Know Act (ECL § 17-0826-a), Publicly Owned Treatment Works (POTWs) are required to notify DEC and Department of Health within two hours of discovery of an untreated or partially treated sewage discharge and to notify the public and adjoining municipalities within four hours of discovery. Information regarding reporting and other requirements of this program may be found on the Department's website. In addition, POTWs are required to provide a five-day incident report and supplemental information to the DEC in accordance with Part 750-2.7(d) by utilizing the Division of Water Report of Noncompliance Event form unless waived by DEC on a case-by-case basis.

E. Monitoring and analysis shall be conducted using sufficiently sensitive test procedures approved under 40 CFR Part 136 unless other test procedures have been specified in this permit.

F. More frequent monitoring of the discharge(s), monitoring point(s), or waters of the State than required by the permit, where analysis is performed by a certified laboratory or where such analysis is not required to be performed by a certified laboratory, shall be included in the calculations and recording of the data on the corresponding DMRs.

G. Calculations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

H. Unless otherwise specified, all information recorded on the DMRs shall be based upon measurements and sampling carried out during the most recently completed reporting period.

I. Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section 502 of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be directed to the New York State Department of Health, Environmental Laboratory Accreditation Program.

# Appendix F: SCPS and SSF Present Condition Photographs

Photo 1 – SCPS Building: Photograph taken from the north

Photo 2 – Generator next to SCPS Building

Photo 3 – SSF Building: Photograph taken from the south

Photo 4 – SSF Building: Photograph taken from the north

Photo 5 – Junction Structure: Photograph taken from the east

Photo 6 – Screens inside the SSF Building


Photo 7 – Valve MOV-1033: 24" Ball valve to be replaced in future project

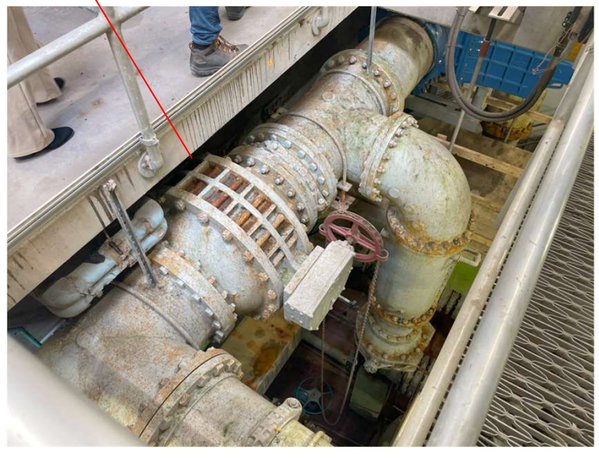



Photo 8 – Valve GV-0021: 24" Ball valve to be replaced in future project

| REV. | DESCRIPTION | DATE | BY |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Critical Path ENGINEERING SOLUTIONS

7030 E. Genesse St., Fayetteville, NY 13066

Detail Design Phase Draft for Client Review

**SCPS, SSF, and Junction Structure Photo Log**

| SIZE | DATE | DWG NO | REV |
|---|---|---|---|
| 11X17 | JUNE 12, 2024 | **P-101** | **A** |

| SCALE | NTS | DRAWN BY | RSP | SHEET | 1 OF 2 |
|---|---|---|---|---|---|


Photo 9 – Valve CV-0021: 16" Ball valve. Representative of valves CV-0022, CV-0023, and CV-0024. All four to be replaced in future project


Photo 10 – Pump P-0021. Representative of pumps P-0022, P-0023, and P-0024. All four to be replaced in future project


Photo 11 – Additional photo of pump P-0021 to be replaced in future project


Photo 12 – SCPS Main Floor

Photo 13 – Brush area to be cleared for wet weather holding tank

| REV. | DESCRIPTION | DATE | BY |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Critical Path ENGINEERING SOLUTIONS
7030 E. Genesse St., Fayetteville, NY 13066

Detail Design Phase Draft for Client Review

**SCPS, SSF, and Junction Structure Photo Log**

| SIZE | DATE | DWG NO | REV |
|---|---|---|---|
| 11X17 | JUNE 12, 2024 | **P-102** | **A** |

| SCALE | DRAWN BY | SHEET |
|---|---|---|
| NTS | RSP | 2 OF 2 |

# Appendix G: Smart Growth Assessment Form

NEW YORK STATE OF OPPORTUNITY. | Department of Health | Environmental Facilities Corporation

# Smart Growth Assessment Form

This form should be completed by an authorized representative of the applicant, preferably the project engineer or other design professional.[1]

## Section 1 – General Applicant and Project Information

Applicant: Oneida County

Project No.: C6-6070-14-00

Project Name: Sauquoit Creek Pump Station Sanitary Screening Facility Upgrades - June 2024 Addendum

Is project construction complete? ☐ Yes, date: ☑ No

Please provide a brief project summary in plain language including the location of the area the project serves:

This project intends to provide the Oneida County Sauquoit Creek Pump Station (SCPS) with a new wet weather holding tank to be used during extreme wet weather and screen malfunction events. This new 7,000,000-gallon tank is intended to receive additional flow during each of these events and upon completion of the event, it will drain back into the existing SCPS treatment system for discharge to the main plant. This project serves the Sauquoit Creek Sewer Shed.

## Section 2 – Screening Questions

### A. Prior Approvals

1. Has the project been previously approved for Environmental Facilities Corporation (EFC) financial assistance? ☑ Yes ☐ No
2. If yes to A(1), what is the project number(s) for the prior approval(s)? Project No.: C6-6070-14-00
3. If yes to A(1), is the scope of the previously-approved project substantially the same as the current project? ☑ Yes ☐ No

**If your responses to A(1) and A(3) are both yes, please proceed to Section 5, Signature.**

### B. New or Expanded Infrastructure

1. Does the project involve the construction or reconstruction of new or expanded infrastructure? ☐ Yes ☐ No

Examples of new or expanded infrastructure include, but are not limited to:

(i) The addition of new wastewater collection/new water mains or a new wastewater treatment system/water treatment plant where none existed previously;

(ii) An increase of the State Pollutant Discharge Elimination System (SPDES) permitted flow capacity for an existing wastewater treatment system; and OR

[1] If project construction is complete and the project was not previously financed through EFC, an authorized municipal representative may complete and sign this assessment.

(iii) An increase of the permitted water withdrawal or the permitted flow capacity for the water treatment system such that a Department of Environmental Conservation (DEC) water withdrawal permit will need to be obtained or modified, or result in the Department of Health (DOH) approving an increase in the capacity of the water treatment plant.

**If your response to B(1) is no, please proceed to Section 5, Signature.**

## Section 3 –Smart Growth Criteria

Your project must be consistent will all relevant Smart Growth criteria. For each question below please provide a response and explanation.

1. Does the project use, maintain, or improve existing infrastructure?
   ☐ Yes ☐ No

   Explain your response:

2. Is the project located in a (1) municipal center, (2) area adjacent to a municipal center, or (3) area designated as a future municipal center, as such terms are defined herein (please select one response)?

   ☐ Yes, my project is located in a municipal center, which is an area of concentrated and mixed land uses that serves as a center for various activities, including but not limited to: central business districts, main streets, downtown areas, brownfield opportunity areas (see *www.dos.ny.gov* for more information), downtown areas of local waterfront revitalization program areas (see *www.dos.ny.gov* for more information), areas of transit-oriented development, environmental justice areas (see *www.dec.ny.gov/public/899.html* for more information), and hardship areas (projects that primarily serve census tracts or block numbering areas with a poverty rate of at least twenty percent according to the latest census data).

   ☐ Yes, my project is located in an area adjacent to a municipal center which has clearly defined borders, is designated for concentrated development in the future in a municipal or regional comprehensive plan, and exhibits strong land use, transportation, infrastructure, and economic connections to an existing municipal center.

   ☐ Yes, my project is located in an area designated as a future municipal center in a municipal or comprehensive plan and is appropriately zoned in a municipal zoning ordinance

   ☐ No, my project is not located in a (1) municipal center, (2) area adjacent to a municipal center, or (3) area designated as a future municipal center.

   Explain your response and reference any applicable plans:

3. Is the project located in a developed area or an area designated for concentrated infill development in a municipally-approved comprehensive land use plan, local waterfront revitalization plan, and/or brownfield opportunity area plan?

   ☐Yes ☐No

   Explain your response and reference any applicable plans:

4. Does the project protect, preserve, and enhance the State's resources, including surface and groundwater, agricultural land, forests, air quality, recreation and open space, scenic areas, and significant historic and archaeological resources?

   ☐Yes ☐No

   Explain your response:

5. Does the project foster mixed land uses and compact development, downtown revitalization, brownfield redevelopment, the enhancement of beauty in public spaces, the diversity and affordability of housing in proximity to places of employment, recreation and commercial development, and the integration of all income and age groups?

   ☐Yes ☐No

   Explain your response:

6. Does the project provide mobility through transportation choices including improved public transportation and reduced automobile dependency?

   ☐Yes ☐No ☐N/A

   Explain your response:

7. Does the project involve coordination between State and local government, intermunicipal planning, or regional planning?

   ☐Yes ☐No

   Explain your response and reference any applicable plans:

8. Does the project involve community-based planning and collaboration?

   ☐Yes ☐No

   Explain your response and reference any applicable plans:

9. Does the project support predictability in building and land use codes?

   ☐Yes ☐No ☐N/A

   Explain your response:

10. Does the project promote sustainability by adopting measures such as green infrastructure techniques, decentralized infrastructure techniques, or energy efficiency measures?

    ☐Yes ☐No

    Explain your response and reference any applicable plans:

11. Does the project mitigate future physical climate risk due to sea-level rise, storm surges, and/or flooding, based on available data predicting the likelihood of future extreme weather events, including hazard risk analysis data, if applicable?

    ☐Yes ☐No

    Explain your response and reference any applicable plans:

## Section 4 – Miscellaneous

1. Is the project expressly required by a court or administrative consent order? ☐ Yes ☐ No

   If yes, and you have not previously provided the applicable order to EFC/DOH, please submit it with this form.

## Section 5 – Signature

By signing below, you agree that you are authorized to act on behalf of the applicant and that the information contained in this Smart Growth Assessment is true, correct and complete to the best of your knowledge and belief.

| | |
|---|---|
| Applicant: Oneida County | Phone Number: 315-798-5656 |
| Name and Title of Signatory: Karl E. Schrantz P.E., Commissioner | |
| Signature: Karl E. Schrantz | Date: 06/12/2024 |

# Appendix H: Sauquoit Creek Pumping Station Sanitary Screening Facility Upgrades Engineering Report

# Sauquoit Creek Pump Station
# Sanitary Screening Facility Upgrades Engineering Report
# July 2022 Update

Prepared for
Oneida County Sewer District
Oneida County, NY
July 27, 2022


Brown AND Caldwell
One Tech Drive, Suite 310
Andover, MA 01810

# Table of Contents

# List of Figures



# List of Tables

# List of Abbreviations

| | |
|---|---|
| ADF | average daily flow |
| BODR | Basis of Design Report |
| cf | cubic feet |
| County | Oneida County Department of Water Quality and Water Pollution Control |
| CSO | combined sewer overflow |
| DI | Ductile Iron |
| District | Oneida County Sewer District |
| El. | elevation |
| EUH | electric unit heaters |
| fps | feet per second |
| FEMA | Federal Emergency Management Agency |
| GIS | Geospatial Information System |
| gpd | gallons per day |
| HP | Horsepower |
| Hr | hour |
| HVAC | heating ventilation and cooling |
| lf | linear feet |
| MCC | motor control center |
| MG | million gallons |
| MGD | million gallons per day |
| MHI | Median Household Income |
| NAVD88 | North American Vertical Datum-1988 |
| NGVD29 | National Geodetic Vertical Datum-1929 |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSEFC | New York State Environmental Facilities Corporation |
| NYSERDA | New York State Energy Research Development Authority |
| PHF | peak hour flow |
| SEQRA | State Environmental Quality Review Act |
| SCPS | Sauquoit Creek Pump Station |
| SSF | Sanitary Screening Facility |
| SSO | sanitary sewer overflow |
| WPCP | Water Pollution Control Plant |
| WQ & WPC | Water Quality and Water Pollution Control |
| W/S | water surface (level) |

# Executive Summary

Update: The following is an update of the June 15, 2022 – Sauquoit Creek Pump Station – Sanitary Screening Facility Upgrades Report with the primary modifications and additions being:

a) Alternative 2 was selected, whereas the June 15, 2022, Report stated that the most recommended alternative was Alternative 4 and Alternative 2 was the next highest recommended alternative. Below is a summary of design effort advancements that led to the recommendation of Alternative 2 instead of Alternative 4.
    - In the initial findings of the Report, Alternative 4 showed as most favorable in the initial scoring matrix mostly because this option has the lowest capital and simpler construction implementation compared to other alternatives that require a new building or building addition. However, during advancement of the design conducted after the initial recommendation, hydraulic analysis identified concern for proper flow distribution with Alternative 4 as well as sequencing difficulties during construction which would require the existing screens to be down for extended periods of time.
    - This warranted further review with operations staff as well as visual inspection of the area with the new screen footprint. Upon lining out the new equipment on the floor, it was observed that it is unlikely that the new screen could be installed between the two existing channels without significant rework to the existing screens and conveyors, and portions of the new compactor for the new screen would likely hang over the existing south channel interfering with the ability to access this screen.
    - In the likelihood that this equipment could fit within this space, there is concern over safety of the operators and their ability to perform routine maintenance activities in a congested area.
b) Additional information regarding the flows and loads for the upgraded facility are provided.

The Oneida County Department of Water Quality and Water Pollution Control (County) is responsible for the operation and management of the Oneida County Sewer District's (District) facilities and personnel. District facilities include 45 miles of interceptor sewers, the Sauquoit Creek and the Barnes Avenue Pumping Stations and the Water Pollution Control Plant (WPCP).

The WPCP is a regional facility that treats wastewater from the City of Utica, 14 municipalities, and the Oneida County Business Park. Wastewater from the City of Utica is combined sewage (sanitary and storm water). The sewer systems outside the City of Utica are separate sanitary sewers. The WPCP is designed and operated to accept sanitary sewage (municipal and industrial wastewater), infiltration and inflow, and some combined sewer overflow (CSO) flows. It is standard practice to use available WPCP hydraulic capacity to treat and store infiltration and inflow into the sanitary system as well as the combined sewage. The WPCP staff currently adjusts operations to treat as much combined sewage from the City of Utica as possible. When the combined sewage from the City of Utica exceeds the available hydraulic capacity of the WPCP, some storage is provided in the interceptor before this excess flow is diverted to a permitted CSO outfall.

The New York State Department of Environmental Conservation (NYSDEC) and Oneida County entered into Consent Order No. R620060823-67 due to sanitary sewer overflow (SSO) at the Sauquoit Creek Pumping Station (SCPS). The Consent Order has an effective date of December 12, 2011, and originally required mitigation of the SSO at the SCPS by December 31, 2021. This date was subsequently updated to December 31, 2022. Recommended improvements were initially established in the Sauquoit Creek Pumping Station Evaluation Report, dated August 2012 and Basis

of Design report, dated May 2014, updated in April 2016. Construction of the recommended upgrades were substantially completed in February 2019.

The Sanitary Screen Facility (SSF) at the SCPS, which has been in operation for over two years, is designed for a 38-mgd flow and includes two (2) new 38-mgd rated mechanical bar screens, each paired with a dedicated washer compactor and discharge conveyors for compacted screenings. Despite reductions in inflow/infiltration from the sewer rehabilitation projects undertaken in the Sauquoit Creek Basin service area, actual peak flows at the SCPS have exceeded the original design flow most likely due to more severe weather and more intense storm events occurring more often than in the past. Handling the extreme peak flows at the SSF during intense storm events is operationally challenging especially if one screen falls out of service. Inoperability of the sanitary screening equipment could result in upstream collection system backups or passing unscreened flow to the pump station causing increased maintenance for the pumps or force main. In addition, failure of the screening equipment creates potential safety concerns for SSF maintenance staff who need to address the equipment failures as high flows often coincide with local flooding near the SSF.

Four alternatives were analyzed as follows.

- Alternative 1 - Do Nothing
- Alternative 2 - Screening Building Expansion to the North
- Alternative 3 - New Screening Building to the North
- Alternative 4 - New Channel within Existing Screening Building

All three improvement alternatives, Alternatives 2, 3 and 4, contemplate the same conceptual type of improvement, the construction of a third channel.

Based on analysis of the alternatives for adding the third screening channel, Alternative 2 - New Screening Building Expansion to the North, is recommended. The primary reasons for the recommendation of Alternative 2 are the following:

- Always maintains two (2) channels on-line through construction
- Limited work and operational impacts inside existing structure – change of two conveyor systems for the existing two bar screens
- Provides for a relatively quick construction of new third channel during the construction progress
- Provides good approach channels and inlet channel connections with the new and existing channels in the screening building

The Alternative 1 - Do Nothing was not included in the evaluation comparison as it does not address resiliency needs and higher duration of peak flows currently facing the Sauquoit Creek Pump Station. Alternative 3 – New Screening Building to the North, scored well behind Alternative 2 and Alternative 4 in capital cost and accessibility to existing structures and was not highly considered after initial review. After additional review, Alternative 4, was found to have both constructability and operational challenges as described above and was subsequently scored lower than Alternative 2.

The proposed enhancements would increase facility resiliency by including the addition of a third channel and screen with associated compactor to improve the systems performance during peak flow and screenings loading conditions. This will provide the sanitary screening facility with increased redundancy to improve resilience and performance during high flow conditions. The construction of a new channel with optimized flow distribution and similar screening facilities to the existing two channels will serve to reduce the operations and maintenance burdens, reduce safety concerns, and reduce the risk of regulatory violations.

The primary elements of the upgrade project include:

- Move and then enclose the screenings receiving area to the north. The screenings receiving area would be enclosed as a separate work area with roll-up door for truck access, a separate personnel access door and provided with exhaust ventilation and temperature control for winter weather.
- Extension of the two conveyors that currently feed the screenings area so that they can reach the new screenings receiving area.
- Construction of a new (expansion) screening building adjacent to the existing building with a new third 4-foot-wide channel, screen, and a screenings compactor which would discharge north to the new screenings receiving area.
- New building expansion would include a main process room with two points of personnel access and a skylight for screen/equipment extraction and a mechanical and electrical room with separate outside access.
- A new junction structure north of the existing junction structure built in a "dog-house" construction style over the existing sewer. Replacement of piping between structures to improve flow between structure.
- A dedicated feed channel from the new junction structure to the existing junction structure with an isolation gate located at the junction box.
- Similar to the existing channels, the feed channel for the third new channel would include a 36-inch emergency and special conditions bypass pipe and valve directionally traveling north from the channel and then east toward the existing emergency bypass piping.
- Downstream connection of the third channel would be via a 48-inch pipe.
- A new common discharge structure will be constructed, again built in a "dog-house" construction style to allow discharge of screened sewage from any of the channels to feed either side of the pump station wet well.
- New influent and effluent distribution channels from the existing Junction Structures to the existing Sanitary Screening Facility and from the Sanitary Screening Facility to the SCPS, respectively.
    - Two new channels would be constructed to feed the two existing screenings channels with isolation gates at the feed side. As the existing junction structure will be live during the construction, the construction to the existing junction box will be built in a "dog-house" construction style around the two discharge pipes.
    - New 4-foot width constructed openings would be constructed into the existing channels.
    - New influent and effluent actuated gates and controls to control flow between screens.
- Additional generator capacity for new equipment and spare pump in the existing pump station which does not currently have generator backup power.
- Maintain flood resiliency for the new equipment and associated electrical components above the 100-year flood plain elevation
- Provide automatic gates and valves (with manual override) to minimize operation's needs to access during flood conditions.

The Class 5 opinion of total construction cost for Alternative 2 (Building Expansion to the North) of $6,542,000, with a lower range of $3,271,000 (-50%) and an upper range of $13,084,000. This cost estimate of total project costs includes administrative costs such as engineering, construction administration, and permitting.

For securing of funding for total project costs, it is believed that a sufficient high end maximum amount of funding would be $11,000,000, which is approximately 70% more than the mid-point Class 5 cost estimate.

## Section 1

# Project Background and History

The Oneida County Department of Water Quality and Water Pollution Control (County) is responsible for the operation and management of the Oneida County Sewer District's (District) facilities and personnel. District facilities include 45 miles of interceptor sewers, the Sauquoit Creek and the Barnes Avenue Pumping Stations and the Water Pollution Control Plant (WPCP).

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The Sanitary Screen Facility (SSF) at the SCPS, which has been in operation for over two years, is designed for a 38-mgd flow and includes two (2) new 38-mgd rated mechanical bar screens, each paired with a dedicated washer compactor and discharge conveyors for compacted screenings. Despite reductions in inflow/infiltration from the sewer rehabilitation projects undertaken in the Sauquoit Creek Basin service area, actual peak flows at the SCPS have exceeded the original design flow most likely due to more severe weather and more intense storm events occurring more often than in the past. Handling the extreme peak flows at the SSF during intense storm events is operationally challenging especially if one screen falls out of service. Inoperability of the sanitary screening equipment could result in upstream collection system backups or passing unscreened flow to the pump station causing increased maintenance for the pumps or force main. In addition, failure of the screening equipment creates potential safety concerns for SSF maintenance staff who need to address the equipment failures as high flows often coincide with local flooding near the SSF.

The proposed enhancements would increase facility resiliency by including the addition of a third channel and screen with associated compactor to improve the systems performance at peak flow and screenings loading. This will provide the sanitary screening facility with increased redundancy to improve resilience and performance during high flow conditions. The construction of a third channel with optimized flow distribution and similar screening equipment to the existing two channels will

serve to reduce the operations and maintenance burdens and reduce the risk of regulatory violations.

## 1.1 Site Information

The SCPS is located on a 200-foot by 215-foot site at the end of an access road off of Whitesboro Street in the Village of Yorkville, NY. The SCPS site is bounded on the north and west side by the Sauquoit Creek and on the north side by CSX railroad tracks. The land area north of the CSX railroad tracks and west of the Sauquoit Creek is undeveloped privately held property. The site is also bounded by undeveloped private property on its south and east sides. The undeveloped areas are generally flat and wooded and the closest developed spaces are ball fields that are owned by the Whitestown Veterans Club that are approximately 400-feet away from the SCPS property's south side and an electric substation owned by National Grid (also south of the SCPS). The general location and orientation of screenings building with respect to the pump station is presented in Figure 1-1.1


**Figure 1-1.1 –Sanitary Screening Facility (Looking Southwest)**

The site is substantially flat and clear. The SCPS site is bounded on the north and west by the Sauquoit Creek. Consequently, the SCPS is prone to flood events. The County has stated that they have observed high water during flood events at the SCPS at approximately the same elevation as the top edge of the loading dock slab on the west elevation of the SCPS (Elev. 413.5.00 ft.).

The 100-year storm elevation has been identified as elevation 417.15 feet and the 500-year storm elevation has been identified as elevation 418.1 feet. Additionally, Ten State Standards requires that wastewater pumping station structures and electrical and mechanical equipment be protected from physical damage by the 100-year flood by 18 inches and that the wastewater pumping station should remain fully operational and accessible during the 25-year flood.

The access road from Whitesboro Street to the SCPS and the area between the pumping station and the junction structure are paved. The SCPS site also includes site utilities for natural gas, potable

water, storm drainage and electrical power. Additional descriptions of the site are provided as follows.

Paving. The access road from Whitesboro Street to the pumping station and the area between the structures was paved during recent construction including a parking area and truck access/turn area to screenings area, SCPS unloading dock and the generator refueling area.

Power. The existing service was rerouted during the 2020 construction to make room for the new generator and associated access. Power from the new lines enters the SCPS where it is distributed accordingly from a new motor control center (MCC).

Natural Gas. Natural gas is currently supplied to the SCPS to fuel the boilers. A new buried, 1.5" natural gas service was supplied to the SCPS and generator as part of the recent construction.

Potable Water. Potable water is supplied to the SCPS site from a 6-inch diameter buried water main that enters the SCPS site along the access road. The water service supplies a new fire hydrant adjacent to the SCPS site entry and a new 2-inch potable water service to SCPS and a new 2-inch diameter water service to the Screenings Room (through backflow Prevention in Mechanical Room) Water is required in new Screenings Room to supply water for the washer compactor and wash down water for housekeeping.

Drainage. The SCPS includes new buried, site drainage piping connection to existing 12" outfall to Sauquoit Creek that was installed as part of new construction including roof leaders and catch basins in paved areas.

Fencing. The 2020 construction demolished existing fencing. This was not replaced as part of the new project.

Landscaping. The SCPS site has had some restoration since the recent construction, including reseeding of grass areas and gravel placed outside of the paved areas towards Sauquoit Creek.

### 1.1.1 Geologic Conditions

The United States Department of Agriculture (USDA) National Resources Conservation Services (NRCS) Web Soil Survey shows the pump station site to be approximately 79% Wakeville silt loam and 21% Udorthents. The topography of the area is mainly flat.

A geotechnical report for the project area was completed by an outside contractor in November 2014. The borings taken at the site indicated the following:

- Very loose fill consisting of soil mixed with demolition debris encountered at the ground surface. Wet, medium dense silty sand with gravel below fill to a depth of 20'
- At and adjacent boring location, the fill was 5' deep, underlain with by loose to dense wet silt, sand and gravel approximately 18' deep. Below, very stiff laminated clay and silt was encountered.
- At the time of the subsurface investigation, groundwater was encountered at a depth of approximately 10'.

An additional geotechnical report for the project area was completed by an outside contractor in January 2017. The borings taken at the site indicated the following:

- Fine sand, silt and gravel to a depth of 22'. Soil was wet beginning at a depth of 5'.
- Soft silt from 22' to 34' (wet)
- Medium stiff silt and clay from 34' to 48.5' (wet)
- Very dense glacial till, consisting of clayey sand with gravel, from 48.5' to 57.7'

### 1.1.2 Environmental Resources and Floodplain Considerations

The SCPS is located adjacent to Sauquoit Creek (a Class C waterbody) and Mohawk River (also a Class C waterbody). Based on a review of the NYSDEC Environmental Resource Mapper (included in Appendix F), a portion of the SCPS site is considered to be in the vicinity of a regulated freshwater wetland (New York State); the wetland area itself is located north of the CSX railroad tracks. Based on previous construction activities at this site, being in the vicinity of the regulated freshwater wetland would likely not impact the proposed project in this report.

As noted in Section 1.1, the SCPS is prone to flood events. The SCPS is located in a Federal Emergency Management Agency (FEMA) designated floodplain, see Appendix F for the National Flood Hazard Layer FIRMette. Provisions have been made under the previous construction contract to provide building access points above the flood level and protect electrical and mechanical equipment from flood damage. Similar provisions would be made with any new construction at the facility.

It should be noted that prior to the recent upgrades at the SCPS, the project was reviewed through the State Environmental Quality Review Act process (SEQRA). A Full Environmental Assessment Form was completed, which included an assessment of potential environmental and socio-economic impacts, as well as mitigation to reduce or eliminate those impacts. The project was determined to have no significant adverse impacts on the environment, and a "Negative Declaration" was issued. The Full Environmental Assessment Form and Negative Declaration resolution can be found in Appendix E.

### 1.1.3 Potential Environmental Justice Areas

The NYSDEC's Geospatial Information System (GIS) tools were used to identify the Potential Environmental Justice Areas (PEJA) at the SCPS site, and the resulting map is included in Appendix F. The SCPS site is located directly in a PEJA. The PEJA recognizes populations that meet or exceed certain statistical criteria related to percentage minority population and percentage of households with incomes below the federal poverty level. The proposed project would have a direct beneficial impact to the PEJAs within Oneida County by improving the water quality in the Mohawk River.

According to the US Census Bureau, the Oneida County has a median household income (MHI) of $59,113 (2020 dollars based on the American Community Survey 5-Year Estimates, 2016-2020), compared to the New York State average MHI of $71,117 (2020) and the United States MHI of $64,994 (2020 dollars). The US Census Bureau lists that 12.4 percent of Oneida County lives in poverty compared to the national average of 11.4 percent.

The NYSEFC has issued guidelines on hardship financing eligibility based on municipal, project and environmental justice criteria. The NYSEFC established criteria that the municipal population must be less than 300,000, and the MHI of a municipality must be less than 80 percent of the regionally adjusted MHI of $68,486 for the upstate region ($54,789) or the MHI be between 80 to 100 percent of the regionally adjusted MHI with a poverty level that is greater than the 2019 state-wide poverty of 10.4 percent, to be eligible for hardship financing. While the MHI for Oneida County ($59,113) is greater than 80 percent of the regionally adjusted MHI ($54,789), it does satisfy the alternate criteria of MHI being between 80 to 100 percent of the regionally adjusted MHI and the poverty of 12.4 percent is greater than the state-wide poverty of 10.4 percent. Oneida County's population of 230,274 (2021 estimate) is also below the 300,000-person threshold. Therefore, Oneida County may qualify for hardship financing for this project.

## 1.2 Ownership and Service Area

The Oneida County Sewer District (District) was formed in 1965 through an act by the former Oneida County Board of Supervisors. It is administered by Oneida County through the Oneida County Department of Water Quality and Water Pollution Control (WQ&WPC) which is responsible for the operation and management of the District's facilities and personnel. District facilities include 45 miles of interceptor sewers, the Sauquoit Creek and the Barnes Avenue Pumping Station, and the Water Pollution Control Plant (WPCP). The District services the City of Utica, 14 municipalities and a business park. The municipalities own and operate their own collection systems. The member municipalities of the District are listed below:

- Village of Clayville
- Village of New Hartford
- Village of New York Mills
- Village of Oriskany
- Village of Holland Patent
- Village of Whitesboro
- Village of Yorkville
- Town of New Hartford
- Town of Paris
- Town of Marcy
- Town of Deerfield
- Town of Schulyer
- Town of Frankfort
- Town of Whitestown
- City of Utica
- Oneida County Business Park

The District currently services a population of approximately 106,000 people and covers an area of approximately 170 square miles.

## 1.3 Existing Facilities and Present Condition

**Junction Structure.** A concrete junction structure (refer to Figure 1-3.1) to the west of the SCPS and the SSF receives flow from two (2) intercepting sewers, a 48-inch from Whitesboro Street from the south and a 42 inch from the north side of the CSX railroad tracks. Flow from the junction structure to the SSF is conveyed through two (2) 36-inch diameter ductile iron (DI) pipes, with sluice gates within the SSF that isolate each of the 36-inch pipes entering each screenings channel.

**Sanitary Screening Facility (SSF).** In 2020, construction of the SSF was completed. The facility consists of a building with a screenings room, electrical room and mechanical room and attached covered but not enclosed screenings receiving area where dumpsters or trucks are located to receive the compacted screenings. The SSF screenings room includes a loading dock with an overhead doorway on the southwest corner to facilitate access for large equipment in and out of the

screenings room and has two large overhead hatches directly over the two screens for access to remove and/or install screens.

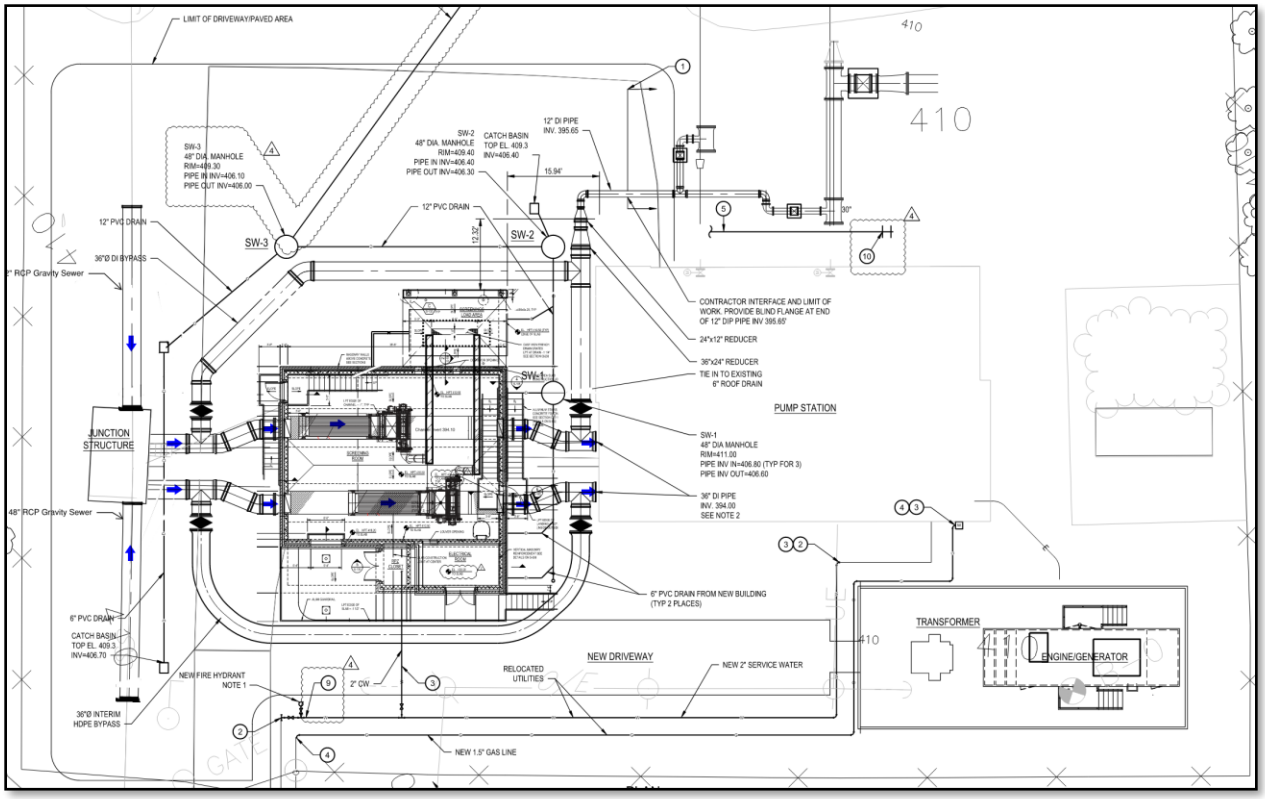



**Figure 1-3.1 –Sanitary Screening Facility – Existing Screening Building and Site**

**SCPS**. The SCPS contains two influent channels (each receives flow from one of the two new channels/screens) that distribute flow to one of two respective wet wells through two 30 x 36 manually operated gates. These wet wells contain the suction piping each for four (4), 250-horsepower sewage pumps. The pumps are 16-inch diameter, operate with a variable frequency drive, and are currently rated (three duty pumps, one standby) to pump 38 MGD to WPCP with a 16-inch bypass for SSO conditions. The two wet wells are connected by a manually operated slide gate.

## 1.4 Definition of the Problem and Objectives of the Project

Since start-up of the SSF in 2020, the facility has experienced operational and reliability challenges at high flow storm events, and even more-so if one screen is out of service. Original design conditions for peak flows of 38 MGD have been exceeded for extended periods of time. Table 1.4.1 provides the minimum, average, median, and peak flows to the SSF from 5/4/2021 through to 5/24/2022. Handling the extreme peak flows at the SSF during intense storm events is operationally challenging especially if one screen is out of service.

As noted in Table 1.4.1, the minimum to peak flow ratio is 14:1 and the average to peak flow ratio is 4.5:1. This extreme variability which leads to slug loading onto the machinery that also presents operational challenges for the SSF systems.

| Table 1.4.1. Flow Summary to Sanitary Screening Facility 5/4/21 – 5/24/22 | |
|---|---|
| Date/Time | Flow (MGD) |
| Minimum Flow | 3.2 |
| 5th Percentile Flow | 5.1 |
| Median Flow | 8.8 |
| Average Flow | 10.0 |
| 95th Percentile Flow | 18.3 |
| Peak Flow | 44.9 |

Table 1.4.2 provides a summary of the peak flow events to the SSF from 5/4/2021 to 5/24/2022. The longest duration in excess of design conditions was 11 hours through 8/19/2021.

| Table 1.4.2 Peak Flow Events to Sanitary Screening Facility 5/4/21 – 5/24/22 | | | |
|---|---|---|---|
| Date/Time | Flow (MGD) | Date/Time | Flow (MGD) |
| 7/8/21 11:00 PM | 44.6 | 8/19/21 10:00 AM | 44.7 |
| 7/9/21 12:00 AM | 42.7 | 8/19/21 11:00 AM | 42.0 |
| 7/9/21 1:00 AM | 41.5 | 8/19/21 12:00 PM | 44.6 |
| 7/9/21 2:00 AM | 42.2 | 8/19/21 1:00 PM | 41.4 |
| 7/9/21 4:00 AM | 39.1 | 8/19/21 2:00 PM | 43.1 |
| 7/9/21 5:00 AM | 39.5 | 8/19/21 3:00 PM | 39.3 |
| 7/9/21 7:00 AM | 38.8 | 8/19/21 4:00 PM | 38.1 |
| 7/12/21 4:00 AM | 42.3 | 10/26/21 2:00 PM | 39.7 |
| 7/12/21 9:00 PM | 38.4 | 10/26/21 3:00 PM | 42.1 |
| 7/12/21 10:00 PM | 38.3 | 10/26/21 4:00 PM | 41.4 |
| 7/18/21 11:00 AM | 40.7 | 10/26/21 5:00 PM | 44.0 |
| 7/18/21 12:00 PM | 42.0 | 10/26/21 6:00 PM | 38.3 |
| 7/18/21 1:00 PM | 43.4 | 4/7/22 12:00 AM | 38.6 |
| 7/18/21 2:00 PM | 43.4 | 4/7/22 1:00 AM | 39.0 |
| 7/18/21 3:00 PM | 42.6 | 4/7/22 2:00 AM | 39.0 |
| 7/18/21 4:00 PM | 38.1 | 4/7/22 3:00 AM | 38.9 |
| 8/19/21 6:00 AM | 42.1 | 4/7/22 11:00 PM | 38.2 |
| 8/19/21 7:00 AM | 44.6 | | |
| 8/19/21 8:00 AM | 44.9 | | |
| 8/19/21 9:00 AM | 43.9 | | |

Additional items which cause challenges for the SSF and the SCPS include difficulty balancing flows to the two wet wells of the SCPS at the peak flow events as currently each screening channel within the SSF is dedicated to one side of the wet well, lack of automation on the screen maintenance isolation valves which require operators to access these in flooded conditions during peak flow conditions. In addition, the screenings receiving area is not enclosed leading to operational challenges with vector attraction and freezing, and the screenings room is challenged with maintaining temperature above freezing during the coldest periods of the year.

This project objectives of this project are as follows:

- Add machine redundancy to the SSF to aid in the screening of the sewage in the events when a screen falls out of service during peak flow events.
- Provide increased screenings washing/compaction capacity to better handle the potential for slug loading of solids associated with the sewer washout during storm events as noted in the extreme peaking ratios, which exacerbate the potential for screen failure.
- Improve flow distribution to the SCPS on the influent and discharge side of the SSF.
- Provide automation to eliminate the need for manual opening of the gates and valves during extreme peak flows.
- Enclose the screening receiving area to reduce vector attraction and freezing.
- Provide additional heating to the screenings room.
- Increase generator capacity to support new equipment.

## 1.5 Financial Status

Annual revenues for the OCSD are derived from sewer billing charges based on metered or unmetered water consumption. In addition to funding the operation of the wastewater system, these charges also go toward the construction of Consent Order related system upgrades. The 2022 OCSD sewer billing charges include $6.77 per 1,000 gallons of water usage. Additionally, customers in the Sauquoit Creek tributary basin, except the Village of Whitesboro are assessed an additional surcharge rate of $1.05 per 1,000 gallons of water usage to pay for capital expenditures and system repairs associated with the Consent Order. Customers residing in the Village of Whitesboro are assessed an additional surcharge rate of $2.30 per 1,000 gallons of water usage for the same expenditures and repairs. In addition to the OCSD sewer charges, each tributary community establishes their own sewer rates since the communities own and operated their own sewer collection systems.

According to the 2022 adopted budget for the Oneida County Department of Water Quality and Water Pollution Control (WQ&WPC), the total budget is $12,889,512, which includes administrative, sanitary sewers, sewage treatment and industrial program appropriations. The County has a number of bonds to fund capital projects, and the annual debt service for the 2022 budget is $11,299,496. Recent capital projects include several construction contracts for upgrades at the WPCP, Sauquoit Creek Pump Station/force main, and sanitary sewer collection system improvements that are either completed or near completion, which were part of the Consent Order compliance program.

## 1.6 Report Update

This report represents an update of the June 15, 2022 – Sauquoit Creek Pump Station – Sanitary Screening Facility Upgrades Report. The primary modifications and additions in this update include:

a) Selection of Alternative 2 whereas the June 15, 2022, Report stated of the most recommended alterative as Alternative 4 and the second highest recommended alternative

was Alternative 4. Below is a summary of further design efforts that led to the recommendation of Alternative 2 instead of Alternative 4.

- In the initial findings of the report, Alternative 4 showed as most favorable in the initial scoring matrix mostly because this option has the lowest capital and simpler implementation compared to other alternatives that require a new building/building addition. However, during advancement of the design after the initial recommendation, hydraulic analyses identified concern for proper flow distribution with Alternative 4 as well as sequencing during construction requiring existing screens to be down for extended periods of time.
- This warranted further review with operations staff as well as visual inspection of the area with the new screen footprint. Upon lining out the new equipment on the floor, it was observed that it is unlikely that the new screen could be installed between the two existing channels without significant rework to the existing screens and conveyors, and portions of the new compactor for the new screen would likely hang over the existing south channel interfering with the ability to access this screen.
- In the likelihood that this equipment could fit within this space, there is another concern over safety of the operators and their ability to perform routine maintenance activities safely in a congested area.

b) Additional information regarding the flows and loads for the upgraded facility are provided.

Section 2

# Alternatives Analysis

This section provides a discussion of the alternatives analysis performed. A description of each alternative, discussion of construction sequencing, a cost estimate, a review of non-monetary factors, and a table of advantages and disadvantages is provided. Four alternatives were analyzed as follows.

- Alternative 1 - Do Nothing
- Alternative 2 - Screening Building Expansion to the North
- Alternative 3 - New Screening Building to the North
- Alternative 4 - New Channel within Existing Screening Building

All three improvement alternatives, Alternatives 2, 3 and 4, contemplate the same conceptual type of improvement, the construction of a third channel.

## 2.1 Alternative 1 – Do Nothing

This alternative would include not adding a third screen channel. No changes would be made to the existing equipment.

### 2.1.1 Description and Discussion

No improvements would be made under this alternative and the existing systems and their related challenges would stay the same. Reference Section 1 for a discussion of the existing systems.

### 2.1.2 Cost Estimate

There would be no capital cost associated with this option. Maintenance and operational costs would be unchanged.

### 2.1.3 Non-Monetary Factors

The existing systems would continue to be operationally challenged and especially so during peak storm events and when one screen falls out of service. Unscreened flow would be bypassed around the SSF and would enter the wet well of the SCPS and be pumped through the force main to the treatment plant. The high level of unscreened flows puts the pumps and force main at higher risk of failure.

## 2.2 Alternative 2 – Screening Building Expansion to the North

This section provides a description and discussion of Alternative 2, with a discussion of the impacts on each major discipline, a cost estimate, a discussion of non-monetary factors and then a summary of advantages and disadvantages.

### 2.2.1 Description and Discussion

Figure 2-2.1 provides an overview of Alternative 2 with a larger representation presented in Section 5. A series of sequencing sketches for this Alternative is also provided in Section 5.

Alternative 2 consists of the following major elements:

- Moves the screenings receiving area to the north.
- Extends the two conveyors which currently feed the screenings area so that they can reach the new screenings receiving area.
- Constructs a new building adjacent to the existing building with a new third 4-foot-wide channel, screen, and a screenings compactor which would discharge north to the new screenings receiving area.
- New building would include a main process room with two points of personnel access and a skylight for screen/equipment extraction and a mechanical and electrical room with separate outside access.
- The screenings receiving area would be enclosed as a separate "room" with roll-up door for truck access and a separate personnel access door.
- A new junction structure north of the existing junction structure built in a "dog-house" construction style over the existing sewer.
- A dedicated 4-foot-wide feed channel from the new junction structure with an isolation gate located at the junction box.
- The feed channel would include a 36-inch emergency/special conditions bypass pipe and valve directionally traveling north from the channel and then east toward the existing emergency/special conditions bypass piping.
- Downstream connection of the third channel would be via a 48-inch pipe.
- Two new channels would be constructed to feed the two existing screenings channels with isolation gates at the feed side. As the existing junction structure will be live during the construction, the construction to the new junction structure will be built in a "dog-house" construction style around the two discharge pipes.
- New constructed openings of approximately 4-foot width would be constructed into the existing channels.
- A new common discharge structure will be constructed, again built in a "dog-house" construction style to allow discharge of screened sewage from any of the channels to feed either side of the pump station wet well.
- Additional generator capacity to cover power to the new equipment.
- Maintain system resiliency for the new equipment and electrical components above the 100-year flood plain elevation.

#### 2.2.1.1 Civil

New civil work will include the following:

- Asphalt repairs and repaving of disturbed asphalt.
- Site drainage (slopes), catch basins, and storm water pipe repairs or realignment to maintain site storm water capture and conveyance.
- New bollards as needs to protect new above grade structures.
- New or relocated valve boxes at grade for relocated valves.

- Relocation of site utilities as required for implementation of new influent and effluent structures.
- New concrete landings for new or relocated stairs.
- Extension of storm water system to capture new roof leaders.
- Extension of access road and driveway to access SCPS loading dock

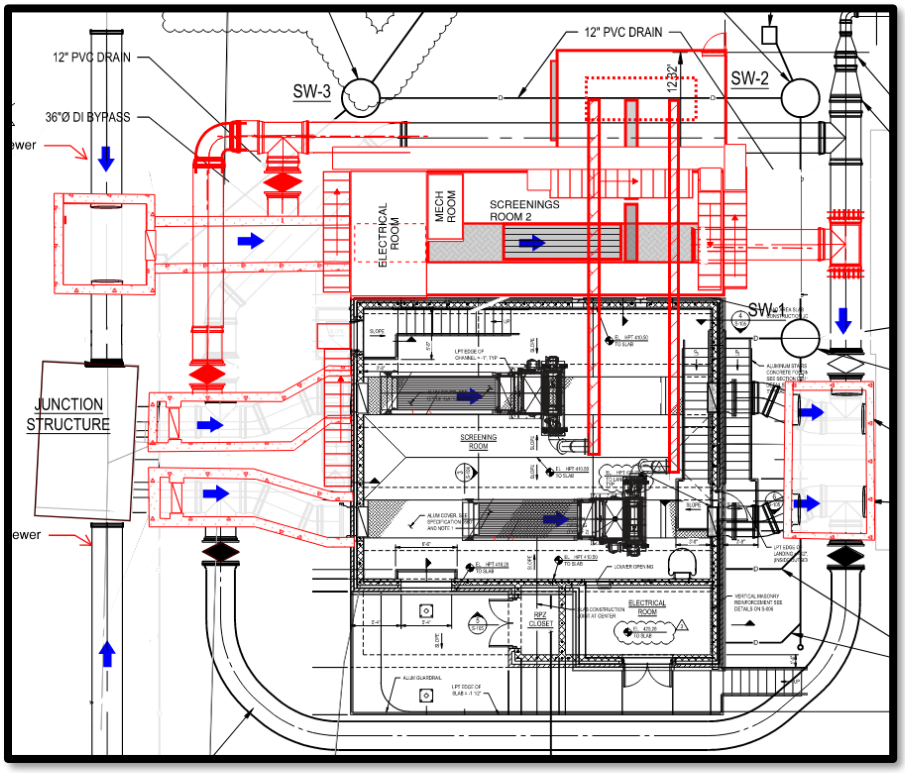



**Figure 2-2.1 – Alternative 2 - Screening Building Expansion to the North**

### 2.2.1.2 Process-Mechanical

New process equipment will consist of the following:

- One (1) 6-foot screen with dedicated compactor.
- Two (2) conveyors to span the increased distance to the new receiving area.
- One (1) 36” plug valve, and one (1) relocation of an existing 36” plug valve for isolation to the new channel bypass tie-in.
- Three (3) automatic slide gates for the new feed channels and one (1) automatic slide gate for the screen channel in the new structure.

### 2.2.1.3 Structural

Structural work includes:

- Concrete junction box on 42" gravity interceptor and concrete channel between new junction box and the new attached screening building.
- Concrete influent channels between junction structure and existing screening structure.
- Concrete substructure for new screenings channel with new building over the new screenings channel, with a screen room, electrical room and mechanical room.
- Fall protection such as removeable handrail and tie-off points around new and existing screen channels.
- Concrete flow collection chamber located downstream of screening structure.
- Enclosure of covered but not enclosed screening receiving area.

#### 2.2.1.4 HVAC/Plumbing

A new mechanical room would be located in the building expansion with separated outside access.

Major new HVAC/Plumbing items for the project would include the following:

- New heaters for the new screenings room.
- Supply and exhaust fans, with unit heaters for the supply air for the enclosure of the screenings receiving area.
- New heaters for the existing building would be added to supplement the existing space heaters.

#### 2.2.1.5 Electrical

A new electrical room would be located in the building expansion with separated outside access.

The existing utility feed is 400 amps. The electrical loads for the new equipment would be the following:

- One (1) 7.5 HP Screen
- One (1) 5 HP Wash Press
- 100-kW unit heater
- Four (4) 3 HP fans (supply and exhaust for ventilation)
- Lights, receptacles, minor panels, etc.

The updated connected load would be approximately 285 amps which is below the 320-amp limit (based on the 400-amp feed).

With the existing generator already loaded at 100% capacity, a small new generator will be required. The generator will need to be located so it is accessible for fueling and resilient from the 100-year flood.

### 2.2.2 Construction Steps

The following describe construction steps, and these are detailed in Figure 5.2.2 in Section 5.

**Phase 1**

1. Construct new, enclosed screenings receiving area with dumpster. Remove one screenings compactor out of service and remove existing screw conveyor.

2. Install new, longer conveyors. If required, modify wash press discharge on the existing screens to coordinate with new conveyor. Repeat for second screen.
3. Excavate and construct new common discharge box in a "dog-house" construction style over the existing discharge piping. Demolish existing discharge piping. Return existing screenings compactors into service.

**Phase 2**

1. Construct new, enclosed screenings room with electrical and mechanical rooms. Install new, 6' screenings compactor, wash press, and conveyor.
2. Isolate bypass piping from the system and install new screenings channel discharge piping and tee into existing bypass line.
3. Excavate and demolish existing bypass piping. Construct new influent box in a "dog-house" construction style. Construct new 6' wide screenings feed channel. Install new slide gate between the influent box and feed channel.
4. Install new bypass piping and plug valve for new feed channel. Partially install bypass connection for the north existing channel. Lay pipe down to the area of the new channel and install a temporary blind flange.
5. Commission new screening equipment. Demolish existing pipe section of 42" RCP Gravity Sewer within the influent box. Bring new screenings compactor online for service.

**Phase 3a**

1. Plug north outlet of existing junction structure. Dewater screen channel. Using the existing slide gates within the facility, isolate screen from system.
2. Excavate and demolish existing channel feed piping.

**Phase 3b**

1. Construct new 4' wide screenings feed channel. Install new slide gate between channel entrance and junction structure. Enlarge opening at existing screen channel entrance if required.
2. Dewater bypass line and uninstall blind flange. Cut penetration in new feed channel and install new bypass connection and isolation plug valve.
3. Bring screenings channel back online.

**Phase 4a**

1. Plug south outlet of existing junction structure. Dewater screen channel. Using the existing slide gates within the facility, isolate screen from system.
2. Excavate and demolish existing channel feed piping.

**Phase 4b**

1. Construct new 4' wide screenings feed channel. Install new slide gate between channel entrance and junction structure. Enlarge opening at existing screen channel entrance if required.
2. Cut penetration in new feed channel and reinstall bypass connection and isolation plug valve.
3. Remove temporary plug and bring screenings channel back online.

### 2.2.3 Cost Estimate

The estimated Class 5 opinion of probable construction cost for Alternative 2 (Screening Building Expansion to the North) is $5,452,000, with a lower range of $2,726,000 (-50%) and an upper range of $10,904,000 (+100%).

This does not include engineering, legal, or construction administration costs, which are estimated to add an additional 20%. See Appendix A for additional breakdown of the construction cost estimate and Section 4 for further breakdown of the total project costs for the recommended alternative.

### 2.2.4 Non-Monetary Factors

This alternative expands the existing screening building to the north, creating a new screening room. The two areas would share a common wall and could be connected via a new doorway to simplify operations and maintenance access to equipment. The new room would be sized for sufficient working space around the equipment but would create additional heating and ventilation demands. The location of screening dumpster is pushed further north but still has sufficient truck turning area.

### 2.2.5 Energy Efficiency Best Practices

Energy efficiency practices for this alternative are consistent with New York State Energy Research and Development Authority (NYSERDA) guidelines for wastewater plants and include the following:

- Variable frequency drives and low speed operation for new screening equipment
- Intermittent operation will be reviewed during detailed design
- High efficient motors
- Low temperatures setpoints and automatic temperature control for heating

### 2.2.6 Short Lived Assets

This alternative adds redundant equipment and thus is not expected to significantly increase overall maintenance requirements. Changes in maintenance was not considered in the selection process.

### 2.2.7 Summary of Advantages and Disadvantages

Table 2.2.1 provides a summary of the advantages and disadvantages of Alternative 2.

**Table 2.2.1. Summary of Advantages and Disadvantages for Alternative 2 - Screening Building Expansion to the North**

| | |
|---|---|
| **Advantages** | |
| 1. | Always maintains two (2) channels on-line through construction |
| 2. | Limited work inside existing structure – change of two conveyor systems for the existing two bar screens |
| 3. | Maintains similar truck access to the dumpster area |
| 4. | Provides for a relatively quick new third channel during the construction progress |
| 5. | Provides good approach channels and inlet channel connections with the new and existing channels in the building |
| 6. | Provides full independent bypassing for each approach channel |
| 7. | The third channel is close enough to the screenings receiving area that a third conveyor would not be needed - conveyance of screenings can be performed by the compactor itself |
| **Disadvantages** | |
| 1. | Replacement of existing conveyors |
| 2. | Expands structure to the north but only by 12-feet. |
| 3. | Creates a second screen room with separate access. |
| 4. | Creates a second electrical room and mechanical room |

| Table 2.2.1. Summary of Advantages and Disadvantages for Alternative 2 - Screening Building Expansion to the North | |
|---|---|
| 5. | Flow distribution may favor the new channel due to the new upstream junction box |
| 6. | Dewatering is challenging at this site and this new structure would require dewatering for the subsurface construction efforts. |

# 2.3 Alternative 3 – New Screening Building to the North

This section provides a description and discussion of Alternative 3, with a discussion of the impacts on each major discipline, a cost estimate, a discussion of non-monetary factors and then a summary of advantages and disadvantages.

## 2.3.1 Description and Discussion

Figure 2-3.1 provides an overview of Alternative 3 with a larger representation presented in Section 5. A series of sequencing sketches for this Alternative is also provided in Section 5.

Alternative 3 consists of the following major elements:

- Constructs a new building to the north of the existing building and screenings receiving area with a new third 4-foot-wide channel, screen, and a screenings compactor which would discharge screenings directly south to the existing screenings receiving area
- New building would include a main process room with two points of personnel access and a skylight for screen/equipment extraction and a mechanical and electrical room with separate outside access
- The screenings receiving area would be enclosed as a separate “room” with roll-up door for truck access and a separate personnel access door
- A new junction structure north of the existing junction box built in a “dog-house” construction style over the existing sewer
- A dedicated 4-foot-wide feed channel from the junction structure with an isolation gate located at the junction structure
- The feed channel would include a 36-inch emergency/special conditions bypass pipe and valve directionally traveling north from the channel and then east toward the existing emergency/special conditions bypass piping.
- Downstream connection of the third channel would be via a 48-inch pipe.
- Two new channels would be constructed to feed the two existing screenings channels with isolation gates at the feed side. As the existing junction structure will be live during the construction, the construction to the new junction structure will be built in a “dog-house” construction style around the two discharge pipes
- New constructed openings of approximately 4-foot width would be constructed into the existing channels
- A new common discharge structure will be constructed, again built in a “dog-house” construction style to allow discharge of screened sewage from any of the channels to feed either side of the pump station wet well
- Additional generator capacity to cover power to the new equipment

- Maintain system resiliency for the new equipment and electrical components above the 100-year flood plain elevation

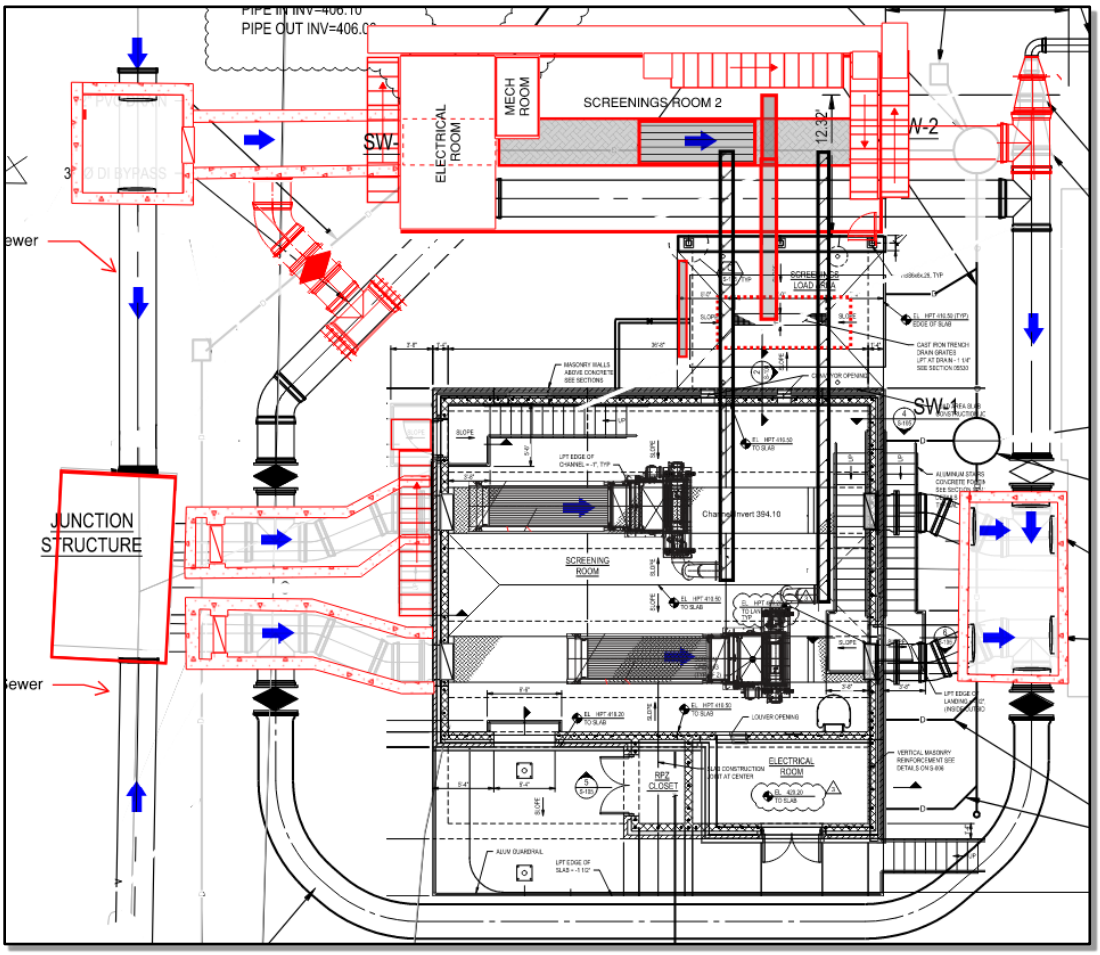



**Figure 2.3.1 – Alternative 3 - New Screening Building to the North**

### 2.3.1.1 Civil

New civil work will include the following:

- Asphalt repairs and repaving of disturbed asphalt.
- Site drainage (slopes), catch basins, and storm water pipe repairs or realignment to maintain site storm water capture and conveyance
- New bollards as needs to protect new above grade structures
- New or relocated valve boxes at grade for relocated valves
- Relocation of site utilities as required for implementation of new influent and effluent structures.
- New concrete landings for new or relocated stairs
- Extension of storm water system to capture new roof leaders

- Extension of access road and driveway to access SCPS loading dock

#### 2.3.1.2 Process-Mechanical

New process equipment will consist of the following:

- One (1) 6-foot screen with dedicated compactor.
- One (1) 36" plug valve for isolation to the new channel bypass tie-in.
- Three (3) automated slide gates for the new feed channels and one (1) automated slide gate for the screen channel in the new structure.

#### 2.3.1.3 Structural

Structural work includes:

- Concrete junction box on 42" gravity interceptor and concrete channel between new junction box and the new detached screening building
- Concrete influent channels between junction structure and existing screening structure.
- Concrete substructure for new screenings channel with new building over the new screenings channel, with a screen room, electrical room and mechanical room.
- Fall protection such as removeable handrail and tie-off points around new and existing screen channels.
- Concrete flow collection chamber located downstream of screening structure.
- Enclosure of covered but not enclosed screening receiving area.

#### 2.3.1.4 HVAC/Plumbing

A new mechanical room would be located in the building expansion with separated outside access.

Major new HVAC/Plumbing items for the project would include the following:

- New heaters for the new screenings room.
- Supply and exhaust fans, with unit heaters for the supply air for the enclosure of the screenings receiving area.
- New heaters for the existing building would be added to supplement the existing space heaters.

#### 2.3.1.5 Electrical

A new electrical room would be located in the building expansion with separated outside access.

The existing utility feed is 400 amps. The electrical loads for the new equipment would be the following:

- One (1) 7.5 HP Screen
- One (1) 5 HP Wash Press
- 100-kW of unit heaters
- Four (4) 3 HP fans (supply and exhaust for ventilation)
- Lights, receptacles, minor panels, etc.

The updated connected load would be approximately 285 amps which is below the 320-amp limit (based on the 400-amp feed).

With the existing generator already loaded at 100% capacity, a small new generator will be required. The generator will need to be located so it is accessible for fueling and resilient from the 100-year flood.

### 2.3.2 Construction Steps

The following describe construction steps, and these are detailed in Figure 5.2.3 in Section 5.

**Phase 1**

1. Construct new building to the north of the existing building and screenings receiving area with a new third 6-foot-wide channel, screen, and a screenings compactor. Install isolation slide gates on the channel inlet and outlet.
2. Enclose existing screenings receiving area. Install new personnel and roll-up door in structure.
3. Excavate and install new screenings channel discharge pipe and tee connection. Relocate existing reducers as required.
4. Excavate and construct new influent box in a “dog-house” construction style. Construct new 6’ wide screenings feed channel. Install new slide gate between the influent box and feed channel.
5. Cut penetration in new channel for bypass connection. Install piping and plug valve up to tie-in point with existing bypass line.
6. Cut existing bypass line and install tee for bypass connection of new screenings feed channel.
7. Demolish existing pipe section of 42” RCP Gravity Sewer within the influent box. Bring new screen online for service.
8. Excavate and construct new common discharge box in a “dog-house” construction style over the existing discharge piping. Demolish existing discharge piping.

**Phase 2a**

1. Plug north outlet of existing junction structure. Dewater screen channel. Using the existing slide gates within the facility, isolate screen from system.
2. Excavate and demolish existing channel feed piping.

**Phase 2b**

1. Construct new 4’ wide screenings feed channel. Install new slide gate between channel entrance and junction structure. Enlarge opening at existing screen channel entrance if required.
2. Bring screenings channel back online.

**Phase 3a**

1. Plug south outlet of existing junction structure. Dewater screen channel. Using the existing slide gates within the facility, isolate screen from system.
2. Excavate and demolish existing channel feed piping.

**Phase 3b**

1. Construct new 4’ wide screenings feed channel. Install new slide gate between channel entrance and junction structure. Enlarge opening at existing screen channel entrance if required.

2. Cut penetration in new feed channel and reinstall bypass connection and isolation plug valve.
3. Remove temporary plug and bring screenings channel back online.
4. Bring screenings channel back online.

### 2.3.3 Cost Estimate

The estimated Class 5 opinion of probable construction cost for Alternative 3 (New Screening Building to the North) is $4,800,000, with a lower range of $2,400,000 (-50%) and an upper range of $9,600,000 (+100%). This does not include engineering, legal, or construction administration costs, which are estimated to add an additional 20%. See Appendix A for additional breakdown of the construction cost estimate and Section 4 for further breakdown of the total project costs for the recommended alternative.

### 2.3.4 Non-Monetary Factors

This alternative creates a new detached screening building to the north. The two screenings rooms would not share a common wall and thus complicate operations and maintenance access to equipment. The new room would be sized for sufficient working space around the equipment but would create additional heating and ventilation demands similar to the previous alternative. The location of screening dumpster stays the same but is now between the two building. Truck turning and screenings removal becomes more complicated.

### 2.3.5 Energy Efficiency Best Practices

Energy efficiency practices for this alternative are consistent with New York State Energy Research and Development Authority (NYSERDA) guidelines for wastewater plants and include the following:

- Variable frequency drives and low speed operation for new screening equipment
- Intermittent operation will be reviewed during detailed design
- High efficient motors
- Low temperatures setpoints and automatic temperature control for heating

### 2.3.6 Short Lived Assets

This alternative adds redundant equipment and thus is not expected to significantly increase overall maintenance requirements. Changes in maintenance was not considered in the selection process.

### 2.3.7 Summary Advantages and Disadvantages

Table 2.3.1 provides a summary of the advantages and disadvantages of Alternative 3.

**Table 2.3.1. Summary of Advantages and Disadvantages for Alternative 3 - New Screening Building to the North**

| | |
|---|---|
| **Advantages** | |
| 1. | Always maintains 2 channels on-line through construction |
| 2. | No work inside existing structure |
| 3. | Provides for the quickest new third channel during the construction progress |
| 4. | Provides good approach channels and inlet channel connections with the existing channels in the building |
| 5. | Provides full independent bypassing for each approach channel |

| Table 2.3.1. Summary of Advantages and Disadvantages for Alternative 3 - New Screening Building to the North | |
|---|---|
| 6. | The third channel is close enough to the screenings receiving area that a third conveyor would not be needed - conveyance of screenings can be performed by the compactor itself |
| **Disadvantages** | |
| 1. | Introduces challenging truck access to the dumpster area |
| 2. | Expands structure to the north by 20-feet (the most of the three alternatives) |
| 3. | Creates a second screen room with separate access. |
| 4. | Creates a second electrical and mechanical room |
| 5. | Dewatering is challenging at this site and this new structure would require dewatering for the subsurface construction efforts. |

# 2.4 Alternative 4 – New Channel within Existing Screening Building

This section provides a description and discussion of Alternative 4, with a discussion of the impacts on each major discipline, a cost estimate, a discussion of non-monetary factors and then a summary of advantages and disadvantages.

## 2.4.1 Description and Discussion

Figure 2-4.1 provides an overview of Alternative 4 with a larger representation presented in Section 5. A series of sequencing sketches for this Alternative is also provided in Section 5.

Alternative 4 consists of the following major elements:

- Constructs a new third 6-foot-wide channel, screen, a screenings compactor and conveyor which would discharge north to the existing screenings receiving area
- Constructs a new electrical room in the existing mechanical room and builds a separate new mechanical room at the same deck level to the west of the existing
- The screenings receiving area would be enclosed as a separate “room” with roll-up door for truck access and a separate personnel access door
- A new junction box/screenings approach channel structure located between the existing junction box and screenings building to feed the existing two channels and the new constructed center channel
- The feed channel would include a 36-inch emergency/special conditions bypass pipe and valve directionally traveling north from the channel and then east toward the existing emergency/special conditions bypass piping.
- Downstream connection of the third channel would be via a 48-inch pipe.
- A new large common discharge structure will be constructed, built in a “dog-house” construction style to allow discharge of screened sewage from any of the three channels to feed either side of the pump station wet well
- Additional generator capacity to cover power to the new equipment
- Maintain system resiliency for the new equipment and electrical components above the 100-year flood plain elevation

### 2.4.1.1 Civil

New civil work will include the following”

- Asphalt repairs and repaving of disturbed asphalt.
- Site drainage (slopes), catch basins, and storm water pipe repairs or realignment to maintain site storm water capture and conveyance
- New or relocated valve boxes at grade for relocated valves
- Relocation of site utilities as required for implementation of new influent and effluent structures.

### 2.4.1.2 Process-Mechanical

New process equipment will consist of the following:

- One (1) 6-foot screen with dedicated compactor.
- Three (3) automated slide gates for the new feed channels and one (1) automated slide gate for the new central channel.

Dog-house fabrication around ductile iron piping is an unknown factor. The new approach box may need to be slightly modified if the structure cannot be placed over the bypass pipe.

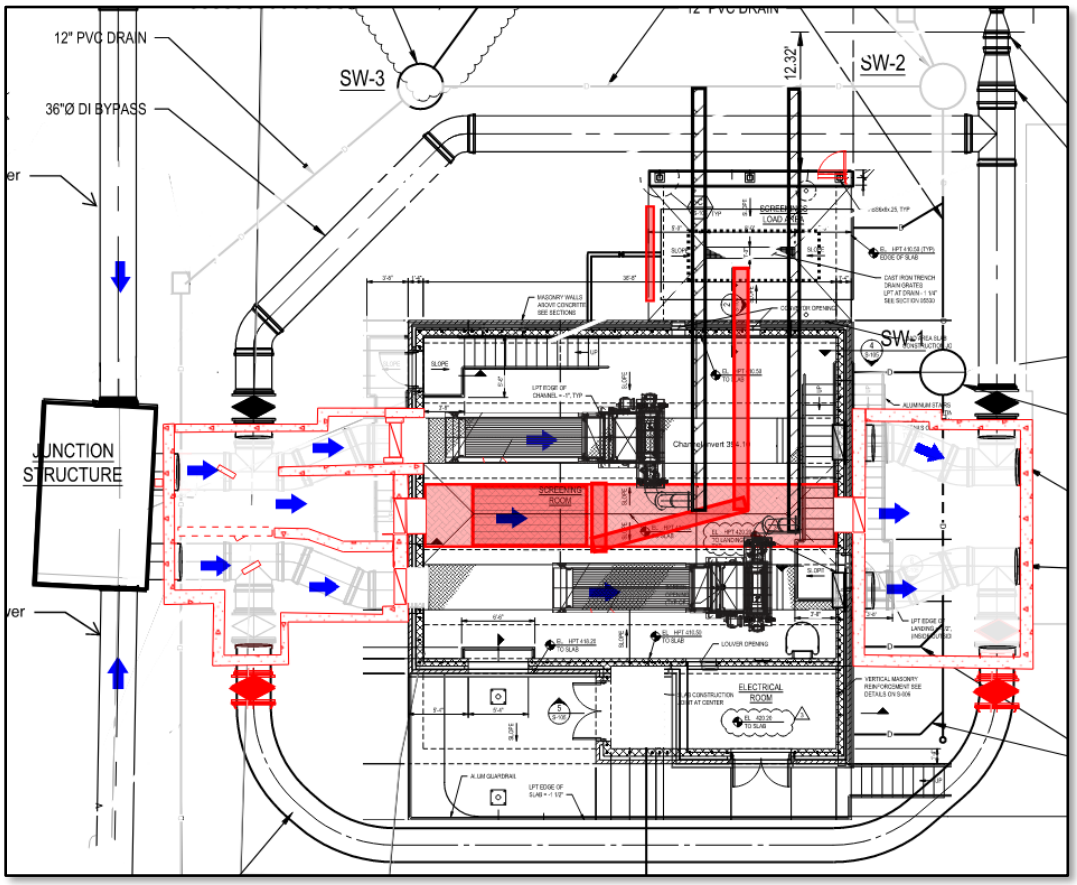



**Figure 2.4.1 – Alternative 4 - New Channel within Existing Screening Building**

#### 2.4.1.3 Structural

Structural work includes:

- Concrete influent structure between junction structure and screening structure.
- Concrete modifications inside existing screenings room to develop new 6-ft wide screen channel. Fall protection such as removeable handrail and tie-off points around new channel.
- Concrete flow collection chamber located downstream of screening structure.
- Enclosure of existing covered but not enclosed screening receiving area.

#### 2.4.1.4 HVAC/Plumbing

The existing mechanical room will be relocated in this alternative to provide additional space to the expanding electrical room. Relocation of the mechanical room would be determined during detailed design as multiple options have been discussed based on existing boiler locations and hot water loops.

Major new HVAC/Plumbing items for the project would include the following:

- Supply and exhaust fans, with unit heaters for the supply air for the enclosure of the screenings receiving area.
- New heaters for the existing building would be added to supplement the existing space heaters.

#### 2.4.1.5 Electrical

The existing mechanical and electrical rooms share a wall. For this alternative, this wall would be demolished, and the mechanical room equipment would be relocated to allow for required expansion of the electrical room.

The existing utility feed is 400 amps. The electrical loads for the new equipment would be the following:

- One (1) 7.5 HP Screen
- One (1) 5 HP Wash Press
- 50-kW heaters
- Two (2) 3 HP fans (supply and exhaust for ventilation)
- Lights, receptacles, minor panels, etc.

The updated connected load would 260 amps which is below the 320-amp limit (based on the 400-amp feed).

With the existing generator already loaded at 100% capacity, a small new generator will be required. The generator will need to be located so it is accessible for fueling and resilient from the 100-year flood.

### 2.4.2 Construction Steps

**Phase 1a:**

1. Enclose existing screenings receiving area. Install new personnel and roll-up door in structure.

2. Saw cut slab in existing screenings building. Construct new 6' channel between the existing washer compactors. Install new screen, wash press and discharge chute.
3. Demolish west wall of electrical room for expansion into the mechanical room. Relocate mechanical room.
4. Excavate and construct new screenings approach structure in a "dog-house" construction style. Install south divider wall for center channel and cut opening in existing building for the new channel. Install the new channel feed slide gate. Install stop logs left of the divider wall.
5. Excavate and construct new common discharge box in a "dog-house" construction style over the existing discharge piping. Cut opening in existing building for the new channel discharge. Install the new channel discharge slide gate.

**Phase 1b:**

1. Plug north outlet of existing junction structure. Dewater screen channel. Using the existing slide gates within the facility, isolate screen from system.
2. Demolish existing channel feed piping.
3. Install northern channel baffle, divider wall, and channel feed slide gate.
4. Demolish existing discharge piping within the new common discharge box.

**Phase 1c:**

1. With stop logs installed adjacent to the southern divider wall, remove plug from northern junction box outlet.
2. Bring new screen channel and northern screen channel online.

**Phase 2a:**

1. Plug south outlet of existing junction structure. Dewater screen channel. Using the existing slide gates within the facility, isolate screen from system.
2. Demolish existing channel feed piping.
3. Install southern channel baffle and channel feed slide gate.

**Phase 2b:**

1. Remove stop logs from approach structure.
2. Remove plug from south outlet of existing junction structure.
3. Bring southern screen channel online.

### 2.4.3 Cost Estimate

The estimated Class 5 opinion of probable construction cost for Alternative 4 (New Channel within Existing Building) is $3,300,000, with a lower range of $1,700,000 (-50%) and an upper range of $6,700,000 (+100%). This does not include engineering, legal, or construction administration costs, which are estimated to add an additional 20%. See Appendix A for additional breakdown of the construction cost estimate and Section 4 for further breakdown of the total project costs for the recommended alternative.

### 2.4.4 Non-Monetary Factors

This alternative creates a new screening channel inside the existing structure. No addition room space is created. The new channel and layout of new equipment would be designed for sufficient working space around the equipment. However, working space around the existing equipment would be decreased. This layout does not create additional heating and ventilation demands. The location of screening dumpster is not changed and truck turning area is not impacted.

### 2.4.5 Energy Efficiency Best Practices

Energy efficiency practices for this alternative are consistent with New York State Energy Research and Development Authority (NYSERDA) guidelines for wastewater plants and include the following:

- Variable frequency drives and low speed operation for new screening equipment
- Intermittent operation will be reviewed during detailed design
- High efficient motors

### 2.4.6 Short Lived Assets

This alternative adds redundant equipment and thus is not expected to significant increase overall maintenance requirements. Changes in maintenance was not considered in the selection process.

### 2.4.7 Summary of Advantages and Disadvantages

Table 2.4.1 provides a summary of the advantages and disadvantages of Alternative 4.

**Table 2.4.1. Summary of Advantages and Disadvantages for Alternative 4 - New Channel within Existing Screening Building**

| | |
|---|---|
| **Advantages** | |
| 1. | Does not expand to the north |
| 2. | Maintains existing truck access |
| 3. | Does not include dewatering efforts for a new building |
| 4. | Lowest cost and fast schedule |
| **Disadvantages** | |
| 1. | Creates a large influent flow distribution box which may be difficult to keep free of sediment and rocks during average and low flow conditions |
| 2. | Creates flow distribution challenges |
| 3. | Creates challenging construction efforts inside the building. Minimal spacing between the existing screenings equipment and the new screen, creating a more congested area to work in/navigate for equipment maintenance. |
| 4. | Creates a construction period when only one channel will be available. |
| 5. | Roof would not include a skylight above for complete screen extraction – center screen would need to be installed and removed in pieces using the roll-up door in the southeast corner of the building |

## Section 3

# Summary and Comparison of Alternatives

Based on analysis of the alternatives for adding the third screening channel, Alternative 2 – Screening Building Expansion to the North is recommended. The primary reasons for the recommendation of Alternative 2 are the following:

- Always maintains two (2) channels on-line through construction
- Limited work inside existing structure – change of two conveyor systems for the existing two bar screens
- Provides for a relatively quick new third channel during the construction progress
- Provides good approach channels and inlet channel connections with the new and existing channels in the building

The Alternative 1 - Do Nothing was not included in the evaluation comparison as it does not address the higher peak flows currently facing the Sauquoit Creek Pump Station.

Alternative 3 – New Screening Building to the North, scored lowerthan Alternative 2 and Alternative 4 and was not highly considered after initial review.

Alternative 4 – New Channel within Existing Screening Building, was the second highest recommended alternative, but was found to have operational and construction challenges which led to it being scored lower.

**Comparison Method**

The alternatives were evaluated using a two-step weight scoring approach. Applicable parameters were identified (costs, schedule, operations impacts, maintenance impacts, safety, etc.) and were given a comparison weighting (1, 3, or 5, with 5 being highest importance parameter) relative to each other. Then for each parameter, the alternatives were scored (1, 2, or 3, with 3 being the highest) on a comparative basis to each other. Finally, the summed weighted scores were compared. Table 3.1.1 provides a comparison of the alternatives which were considered for the additional third screening channel. The basis of the weights and scores is shown below.

**Parameter Weight**

- 1 = Owner lower consideration / driver
- 3 = Owner consideration / driver
- 5 = Significant owner driver

**Parameter Score**

- 1 = Lower - less favorable
- 2= Neutral
- 3= High - more favorable

| Table 3.1.1. Alternatives Comparison Matrix | | | | |
|---|---|---|---|---|
| Evaluation Parameter | Parameter Weight | Alternative 2 Screening Building Expansion to the North | Alternative 3 New Screening Building to the North | Alternative 4 New Channel within Existing Screening Building |
| Cost | 3 | 2 | 2 | 3 |
| Schedule | 3 | 1 | 1 | 3 |
| Permitting | 1 | 2 | 1 | 3 |
| Risk – SSO During Construction | 3 | 3 | 3 | 2 |
| Dewatering and Excavation requirements | 3 | 2 | 1 | 3 |
| Site Limit impacts | 3 | 2 | 1 | 3 |
| Screenings/ Dumpster area access | 3 | 2 | 1 | 3 |
| Existing PS Loading Dock access | 3 | 2 | 1 | 3 |
| Utilities Impacts / Additional Utilities | 1 | 2 | 2 | 3 |
| Existing equipment impacts | 3 | 3 | 3 | 2 |
| New equipment (access and removal) | 3 | 3 | 3 | 1 |
| Electrical Impacts | 3 | 2 | 2 | 2 |
| Operations / Operability | 5 | 3 | 3 | 1 |
| Constructability | 3 | 2 | 2 | 2 |
| Maintenance - Quantity | 3 | 2 | 2 | 3 |
| Ease of Maintenance | 5 | 3 | 2 | 1 |
| Flow Distribution and Hydraulics (Influent) | 5 | 3 | 2 | 1 |
| Flow Distribution and Hydraulics (Effluent) | 5 | 2 | 2 | 3 |
| Solids Conveyance | 3 | 2 | 3 | 2 |
| Safety Impacts | 5 | 2 | 1 | 1 |
| Totals | | **153** | **128** | **137** |

Section 4

# Recommended Alternative

Alternative 2 – Screening Building Expansion to the North is the most recommended alternative.

## 4.1 Basis of Selection

Alternative 2 was compared to the other viable alternatives and the primary reasons for this recommendation are the following:

- Always maintains two (2) channels on-line through construction
- Limited work inside existing structure – change of two conveyor systems for the existing two bar screens
- Provides for a relatively quick construction of channel during the construction progress
- Provides good approach channels and inlet channel connections with the new and existing channels in the building

## 4.2 Discussion of System Flows, Preliminary Hydraulic Grade Considerations Results and Screenings Loading

This section provides a brief review of the following:

- System flows into the SCPS Screening Facility
- Preliminary hydraulic grade considerations and results, and
- Preliminary screenings loading of debris and floatables to the screens

### 4.2.1 System Flows

The incoming flows to the SCPS are presented in Table 4.2.1 and represent recent flows from 5/4/21 through 5/24/22. Reliable data before this were not available and not reviewed. Note that flows beyond 38.0 MGD are being addressed by I/I reduction efforts in the collection system; however, for the near term, flows exceeding 38 mgd are anticipated to reach the SCPS screening facility.

**Table 4.2.1. Flow Summary to Sanitary Screening Facility 5/4/21 – 5/24/22**

| Date/Time | Flow (MGD) |
|---|---|
| Minimum Flow | 3.2 |
| 5th Percentile Flow | 5.1 |
| Median Flow | 8.8 |
| Average Flow | 10.0 |
| 95th Percentile Flow | 18.3 |
| Peak Flow | 44.9 |

Figure 4.2.1 shows the inlet structure to the SCPC screening facility, which consists of a 42-inch gravity sewer from the north and a 48-inch gravity sewer from the south. Currently the two sewers join in an existing junction structure, and a new junction structure just north of this structure is contemplated in this project which will provide flow to a third feed channel and a third screening channel. Reference Figure 2.2.1 for an overall figure of the recommended new facilities.

A preliminary estimate of flows from each sewer based on a review of the incoming flow was found to be approximately 70% flow from the 48-inch sewer and 30% flow from the 42-inch sewer. This was applied across all flow ranges. This will be further analyzed and refined during follow-on design efforts.

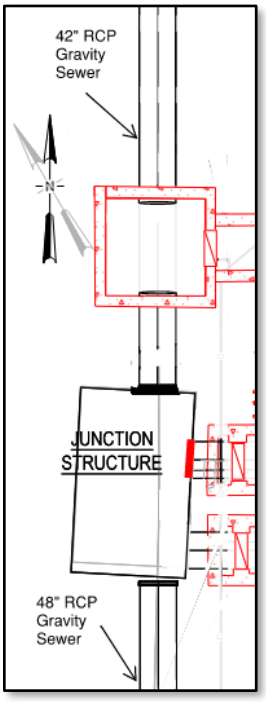



**Figure 4.2.1 – Gravity Sewer Feed to SCPS**

## 4.2.2 Channel Flows / Hydraulic Grade Line

The system flows and the hydraulic grade for the proposed new system, which will include three equally sized channels (4-feet wide), with an n+1 redundancy program, where n=2 (two channels) are as follows.

- One screen channel will be utilized from the low flow, 3.2 MGD, through to the 95th percentile flow, 18.3 MGD.
- Once the 95th percentile flow has been reached, a second channel will be opened.
- The third channel will be left in reserve and serve as a fully redundant channel.
- It is anticipated that the new northern channel will serve as the primary duty channel, however, channels will be rotated through the three on a schedule to maintain system viability.

Two primary items regarding the channel flows and the hydraulic grade line are as follows:

- The new screen will have the same slot opening as the existing screens, ½-inch, and will have an angle of approximately 75-degrees which is different than the two existing screens which are at 30-degrees. While the 30-degree angle provides for additional flow, less headloss and less slot velocity over the flow regime, the overall design of the 30-degree screen is unique in nature to the manufacturer and has operational characteristics which are not preferred by OCSD.
- The pump station wet well operation set points are recommended to be operated at two distinct set points, regular mode and storm mode (see Figure 4.2.2), as follows.
    - Regular Mode: Target wet well set point will be elevation 395.0 (NAVD88) which is 6-inches below the crown of the entrance sluice into the wet well. This set point will minimize day in and day out accumulation of floatables in the old comminutor approach channels of the pump station forebay. Regular mode wet well level will be set at all flows less than 18.3 MGD which is the 95th percentile flow. This flow measurement will be taken from the pump stations flow meters on the two discharge flow meters.
    - Storm Mode: Target wet well set point will move to a higher elevation of 398.0 (NAVD88) which is 1.5-feet below the lower operating deck in the old comminutor

approach channels of the pump station forebay. This is done to maximize the water surface level downstream of the screens to allow for as much screen-field contact with incoming wastewater as possible. This will minimize the slot velocity through the screens. This will also serve to aid the pump station in its pumping duties. The submergence of the crown of the entrance sluice gate for short durations (flows above the 95th percentile flow, i.e.., 5% of the time) is not deemed to be a source of operational difficulty with debris accumulation, especially with well operating screens capturing the bulk of the debris. Storm mode wet well level will be set at all flows greater than 18.3 MGD, again, an operator adjustable period of time, originally set to 15 minutes of flow.

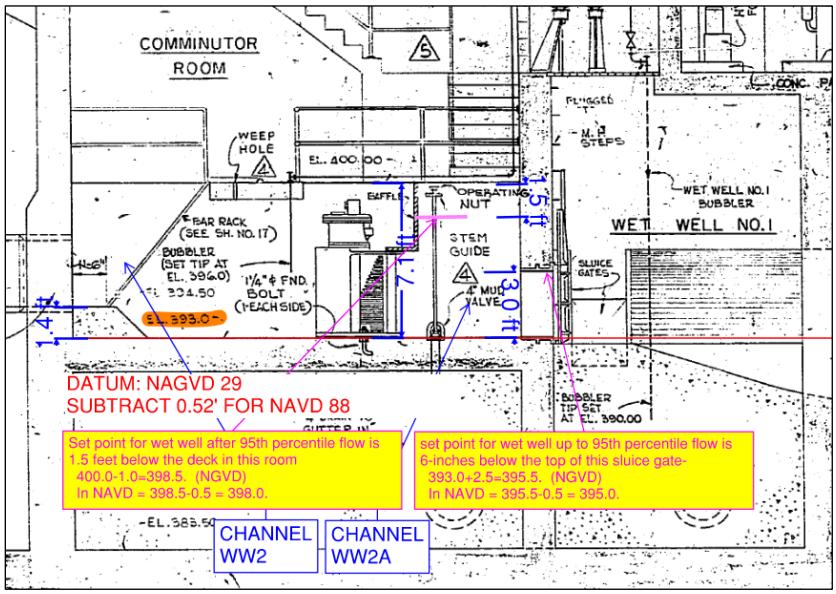



**Figure 4.2.2 – Forebay to Pump Station**

With the above noted considerations, Table 4.2.2 provides a preliminary hydraulic summary of the screen channels and other key hydraulic features within the immediate boundaries of the system.

**Table 4.2.2. Preliminary Hydraulic Summary**

| Flow Scenario | Flow (MGD) | PS Wet Well Set Point | North Channel Flow (MGD) | North Channel Upstream W/S EL | North Channel Slot Velocity (fps) | South or Mid Channel Flow (MGD) | South or Mid Channel Upstream W/S EL | South or Mid Channel Slot Velocity (fps) | Junction Structure W/S EL |
|---|---|---|---|---|---|---|---|---|---|
| **Average Flow** | **10.0** | 395.0 | 10.0 | 396.3 | 5.9 | -- | -- | -- | 396.5 |
| **95th Perc. Flow** | **18.3** | 395.0 | 18.3 | 397.8 | 6.5 | -- | -- | -- | 398.6 |
| **Design Peak Flow** | **38.0** | 398.0 | 18.1 | 400.9 | 3.4 | 19.9 | 400.7 | 2.0 | 401.9 |
| **Hi-Peak Flow** | **45.0** | 398.0 | 21.5 | 402.0 | 3.5 | 23.5 | 401.7 | 2.1 | 403.1 |

Notes 1. The flow split between the north and south (or mid) channel (the two existing channels, at peak flows is close to 50/50 however, slightly more flow will flow to the south or mid-channels as shown.

2. All slot velocities and water surface elevations are provided at a 40% blinding percentage on the screens and use a ½-inch slot opening.

It should be noted that the slot velocities shown in Table 4.2.2 are at a 40% blinding rate. At a 0% blinding rate, the slot velocities for the north screen are 5.1 fps and 4.9 fps, for the ADF and 95th Percentile Flow condition. While this is above the 10-state standard recommended 4.0 fps slot velocity, the detail design intent will be to lower this from 5.1fps and 4.9fps to 4.0fps utilizing one or a combination of four strategies: a) bring the second channel on at a lower flow rate, for example the 90th percentile flow rate, b) raise the wet well and thus the screen face available at a lower flow rate, for example again the 90th percentile flow rate, c) lower the angle of the new north screen, for example to 65 degrees, or d) widen the north channel slightly, for example to 4.5-feet. During follow-on design efforts a review of these four strategies will be made to optimize the best solution to make up this difference. Additional conversations with the manufacturing community will also be held to review their individual recommendations.

### 4.2.3 Screenings Loading

The preliminary estimate of screen loading is discussed here. Table 4.2.3 presents the preliminary loading estimate for the major flow parameters. Note that the new screen and its associated compactor will be sized based on the Hi-Peak Flow scenario. These values will continue to be refined during the follow-on design efforts.

**Table 4.2.3. Preliminary Loading Summary**

| Flow Scenario | Flow (MGD) | North Channel Flow (MGD) | Base Screening Load Rate (cf/MG) (3) | Base Screening Load Rate (cf/hr) | Peaking Factor (3) | Design Screening Load (cf/hr) |
|---|---|---|---|---|---|---|
| Average Flow | 10.0 | 10.0 | 6.5 | 2.7 | 1 | 3 |
| 95th Perc. Flow | 18.3 | 18.3 | 11.0 | 8.4 | 6 | 50 |
| Design Peak Flow (1) (2) | 38.0 | 18.1 | 11.0 | 8.3 | 15 | 125 |
| Hi-Peak Flow (1) (2) | 45.0 | 21.5 | 11.0 | 9.9 | 15 | 148 |

Notes 1. Flows above the 95th percentile will be divided by two screen channels. Assumed here, that the north and the middle screens will be in service at design peak and hi-peak flows.

2. The flow split between the north and south (or mid) channel (the two existing channels), at peak flows is close to 50/50 however, slightly more flow will flow to the south or mid-channels as shown, with a flow split at Design Peak Flow of 18.1MGD/19.9MGD to the north and south Channel, respectively, and at Hi-Peak Flow of 21.5MGD/23.5MGD to the north and south channel, respectively.

3. Reference: WEF Manual of Practice 8 – 6th Edition, Chapter 9.

## 4.3 Cost Estimate

The estimated Class 5 opinion of probable construction cost for Alternative 2 (Screening Building Expansion to the North) is $5,452,000, with a lower range of $2,726,000 (-50%) and an upper range of $10,904,000 (+100%) and is presented in Table 4.2.4.

This does not include engineering, legal, or construction administration costs, which are estimated to add an additional 20%. This yields a Class 5 opinion of total construction cost for Alternative 2 (Screening Building Expansion to the North) of $6,542,000, with a lower range of $3,271,000 (-50%) and an upper range of $13,084,000. The total project costs including total construction and soft costs such as engineering, construction, administration, and permitting is presented in Table 4.2.5.

For securing of funding for total project costs, it is believed that a sufficient high end maximum amount of funding would be $11,000,000, which is approximately 70% more than the mid-point Class 5 cost estimate.

The estimated Class 5 opinions of probable construction costs for all alternatives are presented in Appendix A.

**Table 4.2.4. Alternative 2 Class 5 Opinion of Probable Construction Cost**

| Description | Probable Cost |
|---|---|
| Demolition | $ 25,000 |
| Dewatering Equipment | $ 771,000 |
| Piping | $ 869,000 |
| Equipment | $ 1,070,000 |
| Structures | $ 974,000 |
| Dumpster Enclosure | $ 62,000 |
| Electrical, Instrumentation, and Controls Allowance | $ 1,681,000 |
| **Subtotal** | $ 5,452,000 |

**Table 4.2.5. Alternative 2 Class 5 Opinion of Total Project Cost**

| Description | Probable Cost |
|---|---|
| Base Construction Costs | $ 2,460,000 |
| **Subtotal** | $ 2,460,000 |
| Contractor Overhead and Profit (1) | $ 261,000 |
| **Subtotal** | $ 2,721,000 |
| Materials Shipping + Handling (2%) (2) | $ 21,000 |
| **Subtotal** | $ 2,742,000 |
| Contractor General Conditions (15%) | $ 411,000 |
| **Subtotal** | $ 3,153,000 |
| Startup Training O&M (2%) | $ 63,000 |
| **Subtotal** | $ 3,216,000 |
| Under design/ develop Contingency (50%) | $ 1,608,000 |
| **Subtotal** | $ 4,824,000 |
| Bldg. Rick, Liability Auto Insurance (2%) | $ 96,000 |
| **Subtotal** | $ 4,920,000 |
| Payment and Performance Bonds (1.5%) | $ 74,000 |
| **Subtotal** | $ 4,994,000 |

| Table 4.2.5. Alternative 2 Class 5 Opinion of Total Project Cost | |
|---|---|
| Description | Probable Cost |
| Escalation to Midpoint (9.16%) | $ 458,000 |
| **Construction Subtotal** | $ 5,452,000 |
| Engineering, Legal, and Administration (20%) | $ 1,090,000 |
| **Project Cost Total** | $ 6,542,000 |

*Notes: 1. Includes the following: Labor Markup 15%, Material Markup 10%, Sub Markup 15%, Construction Equipment Markup 15%, and Process Equipment 8%*

*2. Percent is applied to materials costs only.*

## 4.4 Project Schedule

The estimated schedule is presented in Appendix B.

## 4.5 Next Steps

A basis of design report (BODR) and detailed design will be developed for the recommended alternative.

### 4.5.1 Descriptions of Community Engagement

Since 2013, the County has made a significant effort toward community outreach initiatives. The goal of the outreach has been public education on the importance of the SSO mitigation program and the benefit of the capital upgrades in the collection system, at the SCPS, and at the WPCP. Community Engagement has included:

- Development of the "Operation Ripple Effect" initiative to educate the community on the overall program, and benefits of disconnecting stormwater sources from the collection system. http://rippleeffectocsd.org
- Radio and television advertisements
- Interviews of key personnel (County Executive, Commissioner, etc.) by local print and radio media
- Rain barrel construction community events
- Educational events in local elementary schools
- Regular Steering Committee meetings with DPW supervisors, highway superintendents, etc. in the communities that operate collection systems tributary to the OCSD interceptor network.

The community engagement program will continue through the construction of the upgrades described in this Engineering Report.

### 4.5.2 SEQR Review

Prior to commencing the construction phase of the improvements to the WPCP and SCPS, the County performed a coordinated review under the State Environmental Quality Review Act

(SEQRA). The NYSEFC requested completion of a Full Environmental Assessment Form (EAF) in conjunction with the SEQRA process. In 2015, the County prepared Part 1 of the Full EAF and coordinated review with other involved agencies, who concurred with the County acting as Lead Agency. Parts 2 and 3 of the Full EAF were completed to review potential environmental and socio-economic impacts. The SEQRA review confirmed the upgrades at the WPCP and SCPS will have no significant adverse impacts on the environment, and the County issued a Negative Declaration with regard to proposed improvements and modifications to County owned and operated wastewater management facilities.

As the proposed upgrades described in this Engineering Report are of similar nature and scope as the original upgrades, the 2015 Negative Declaration would still apply. The Negative Declaration resolution, passed by the Oneida County Board of Legislators in July 2015, is provided in Appendix E.

### 4.5.3 Procurement Method

These upgrades will be procured by a traditional design-bid-build process. Once the final design is completed, and plans approved by the NYSEFC and NYSDEC, the Contract Documents will be issued for public bidding. The Contractor(s) will be chosen on the basis of the lowest responsible base bid.

### 4.5.4 Smart Growth Assessment

As required by the NYSEFC, the County has prepared the Smart Growth Assessment Form for this project. The completed form can be found in Appendix D.

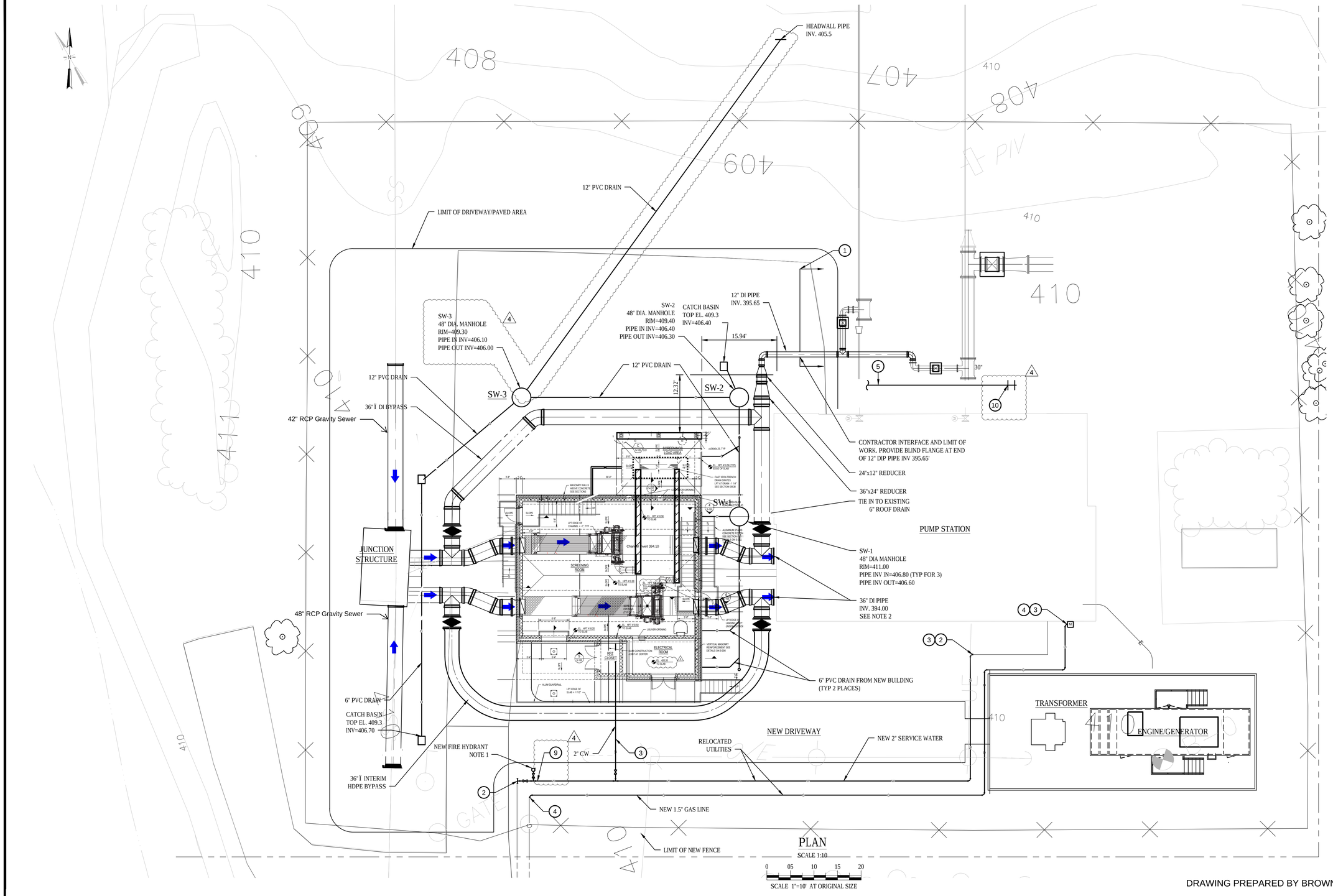
## Section 5

# Maps and Figures

This section provides a series of maps and figures which are referenced throughout the previous sections.

**Table 5.1.1. List of Maps and Figures**

| Dwg/Fig No. | Title |
|---|---|
| 5.2.1 | Civil Layout - Existing Site Conditions |
| 5.2.2 | Alternative 2 – Construction Phasing |
| 5.2.3 | Alternative 2 – Final Site Plan |
| 5.3.1 | Alternative 3 – Construction Phasing |
| 5.3.2 | Alternative 3 – Final Site Plan |
| 5.4.1 | Alternative 4 – Construction Phasing |
| 5.4.2 | Alternative 4 – Final Site Plan |




PLAN

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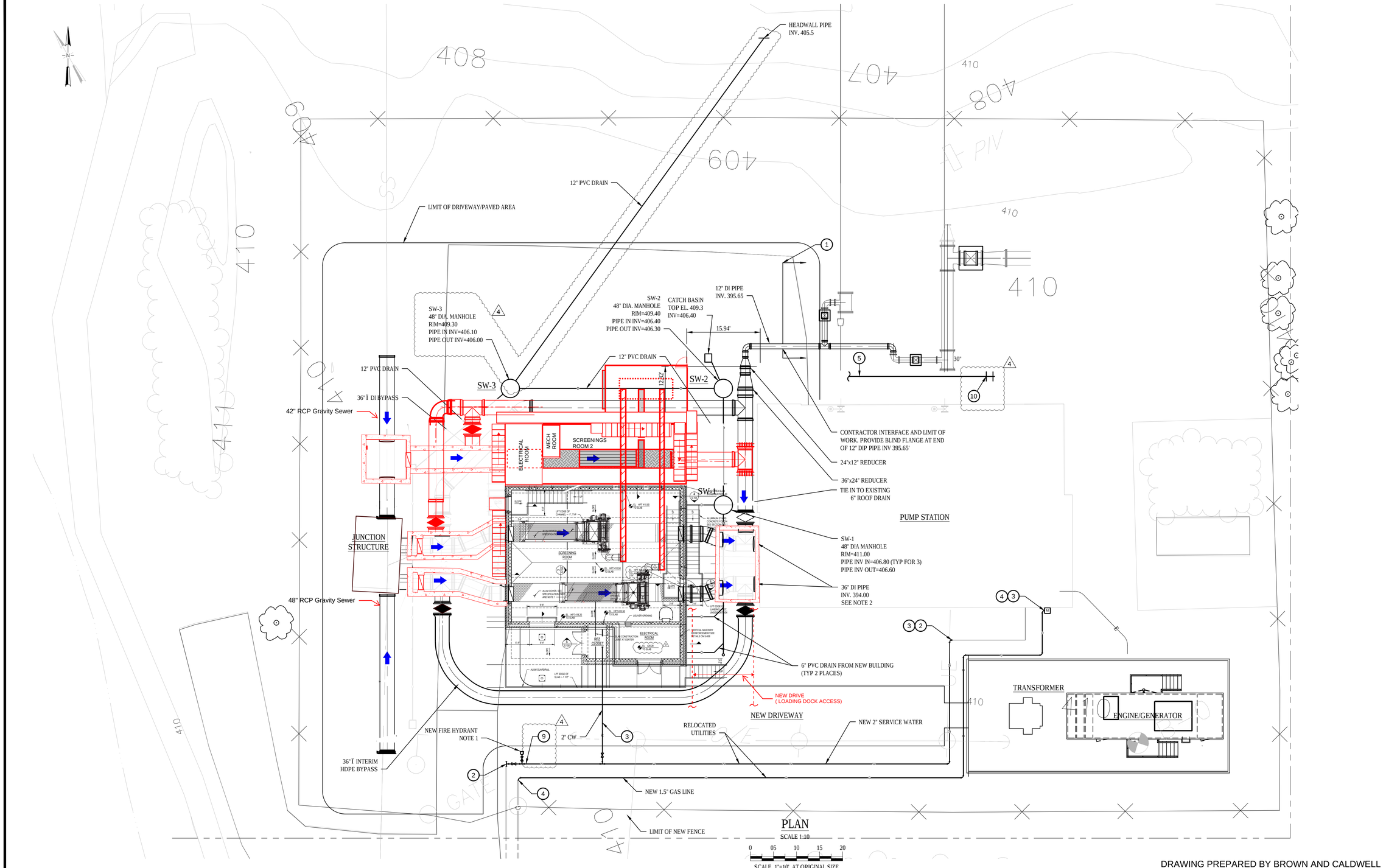
DRAWING PREPARED BY BROWN AND CALDWELL

# FIGURE 5.2.1
# CIVIL LAYOUT - EXISTING SITE CONDITIONS

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DRAWING PREPARED BY BROWN AND CALDWELL

# FIGURE 5.2.3
# ALTERNATIVE 2 - FINAL SITE PLAN

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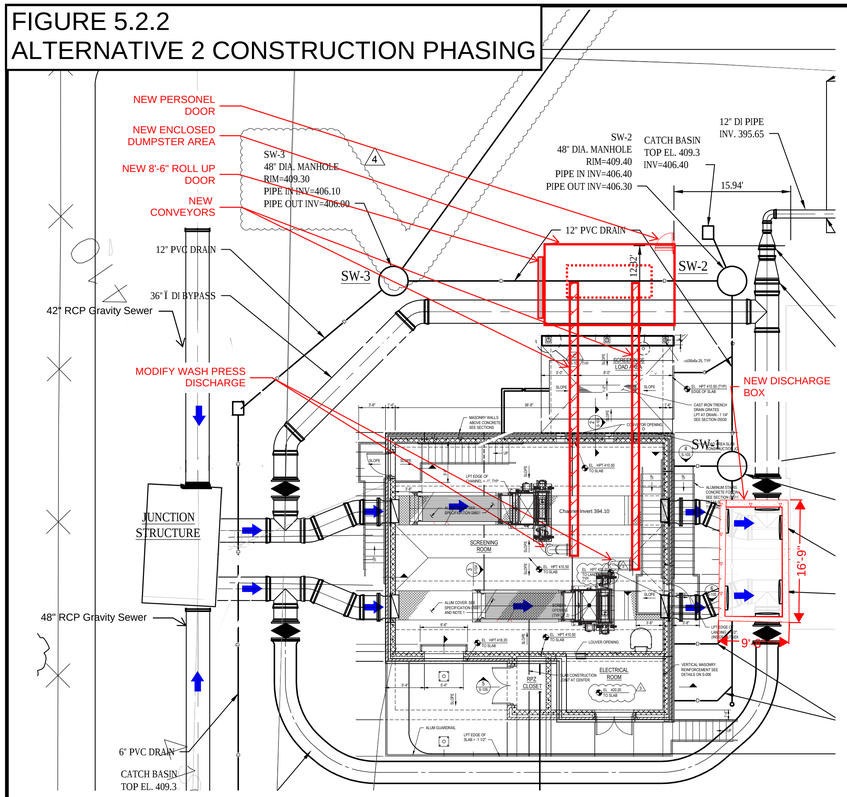
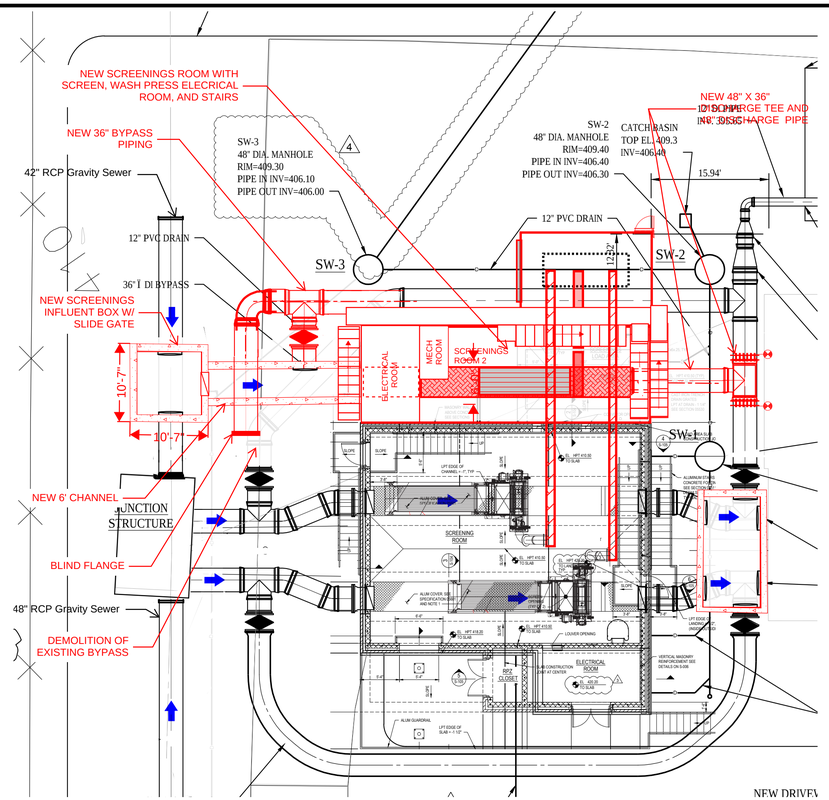
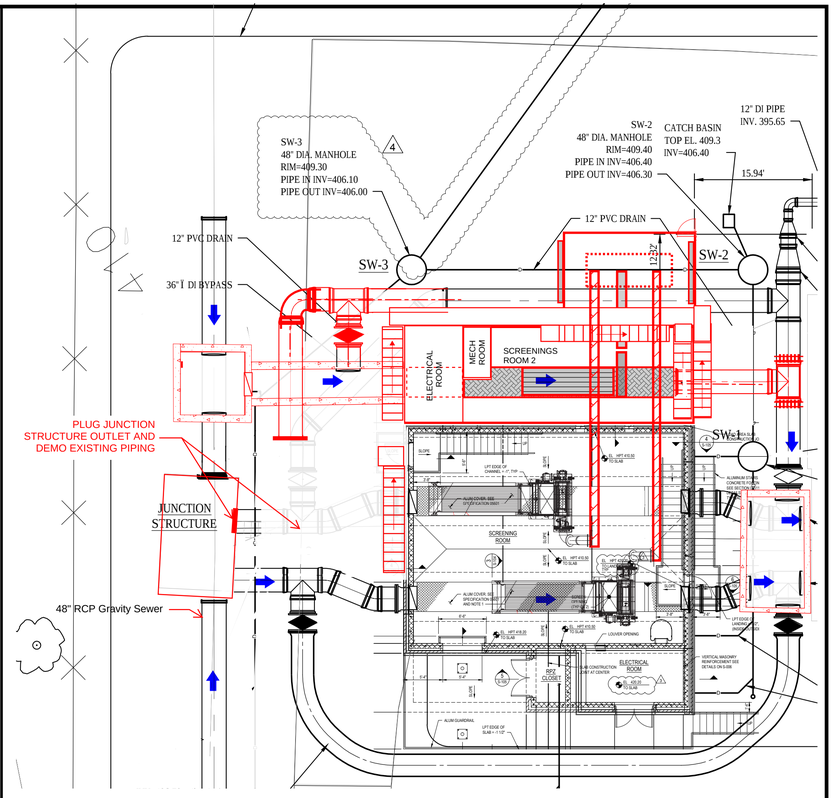
FIGURE 5.2.2
ALTERNATIVE 2 CONSTRUCTION PHASING




PHASE 1




PHASE 2

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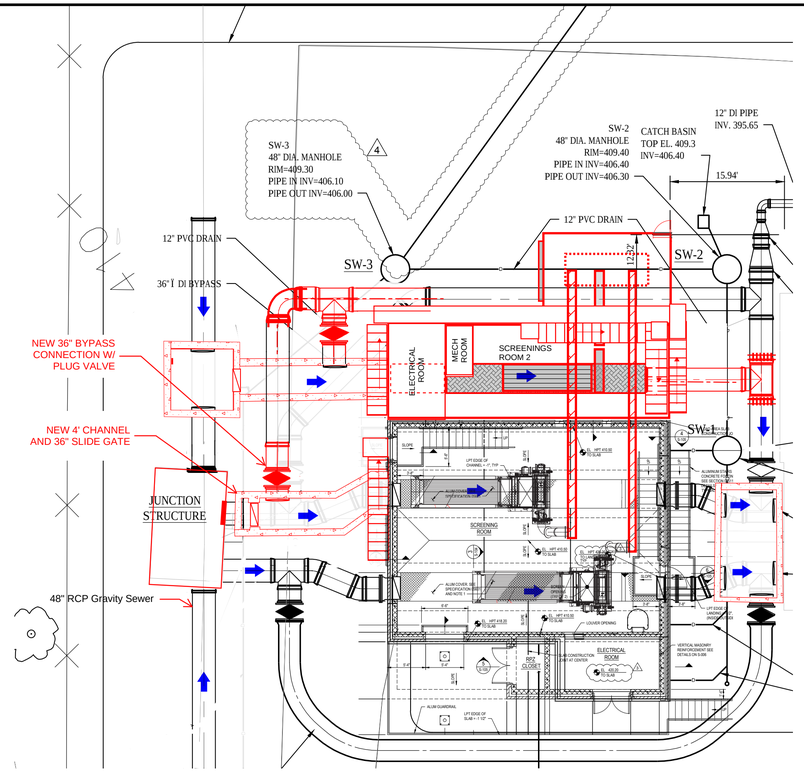
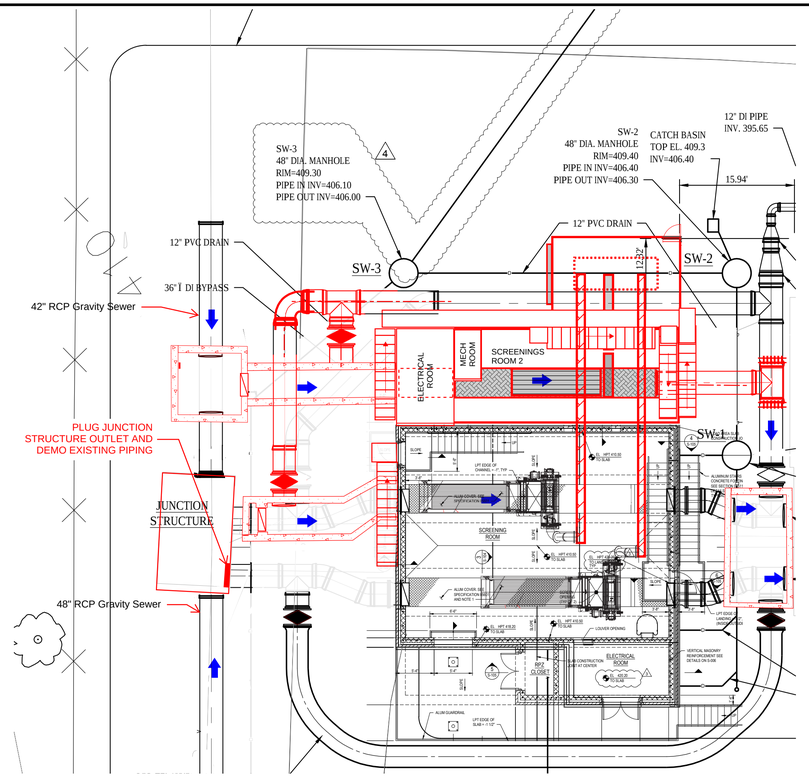



PHASE 3b

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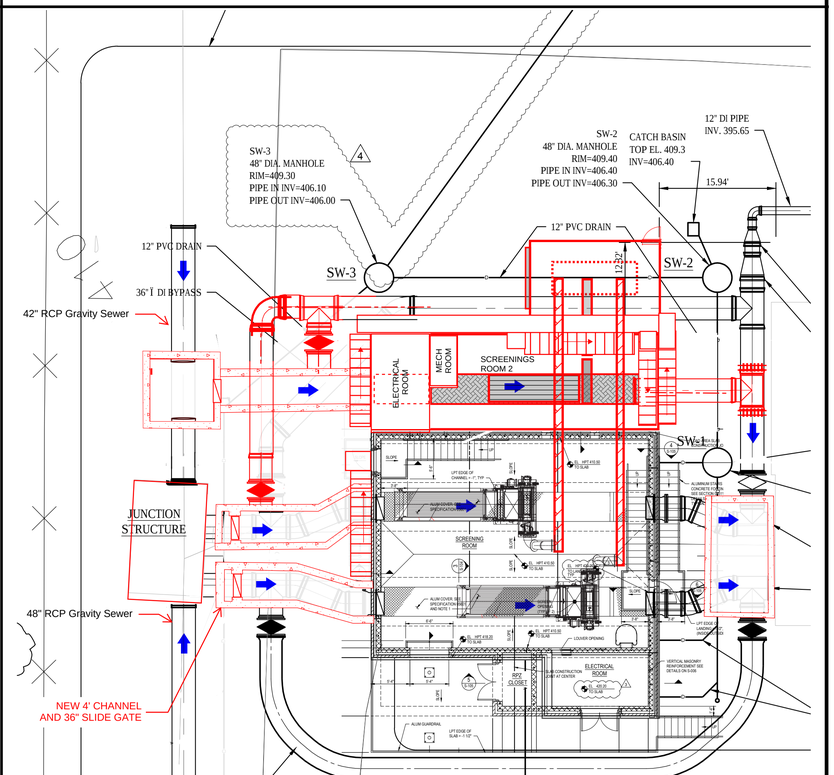
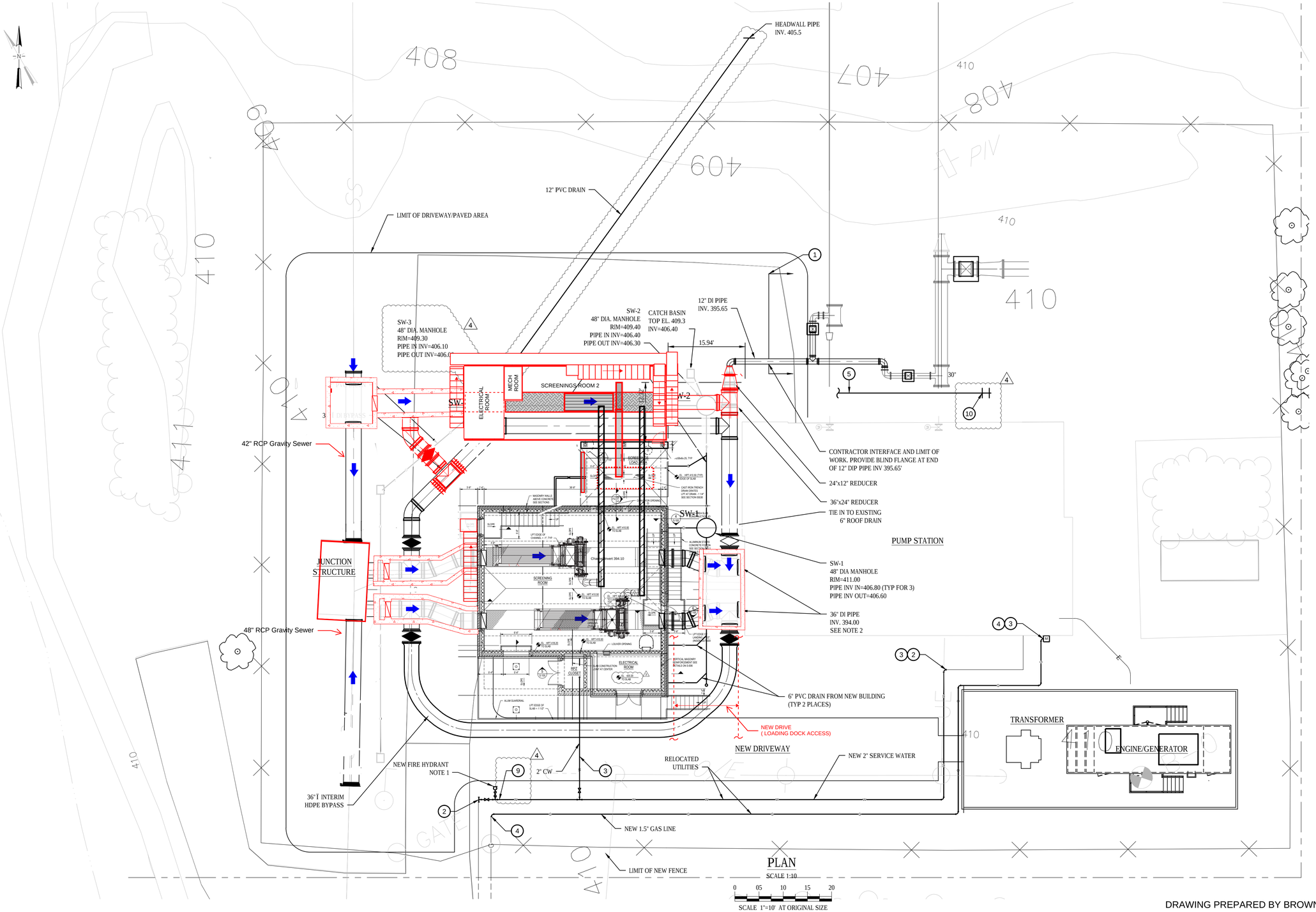



PHASE 4b




PLAN

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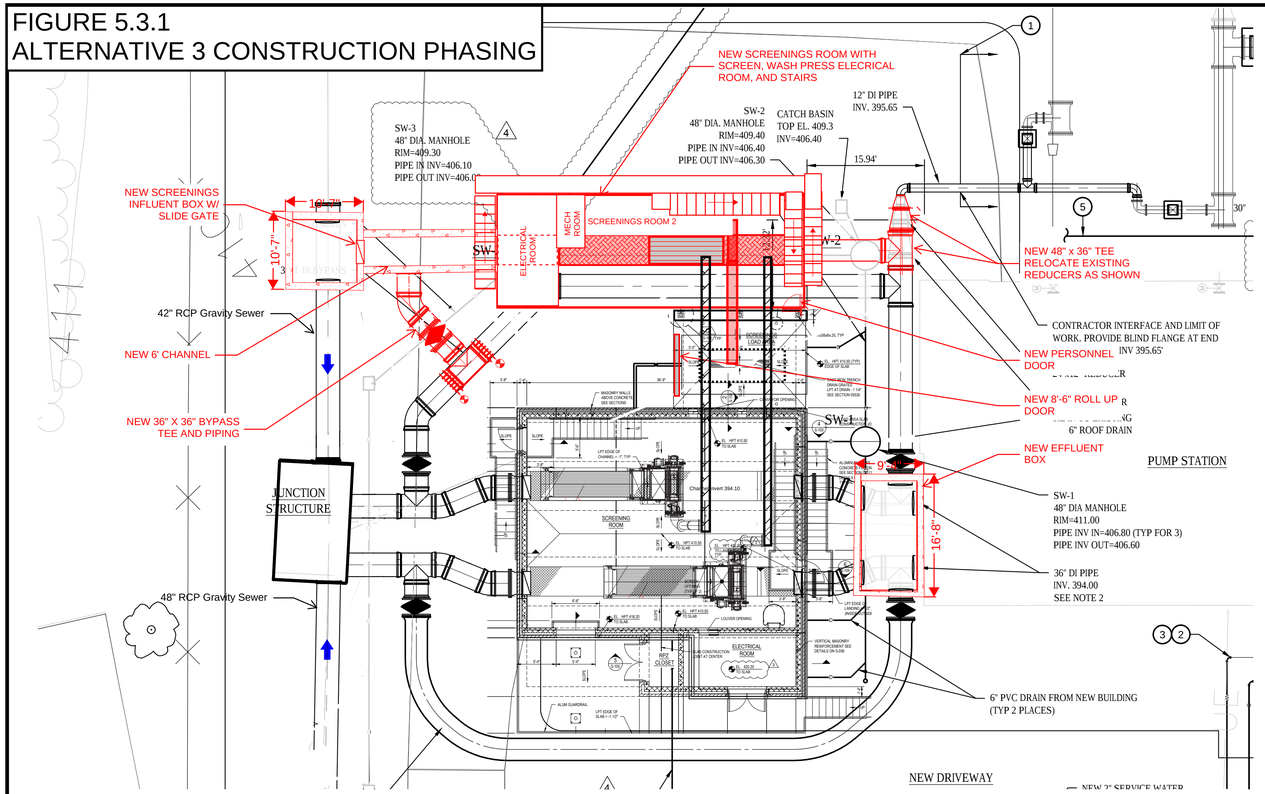
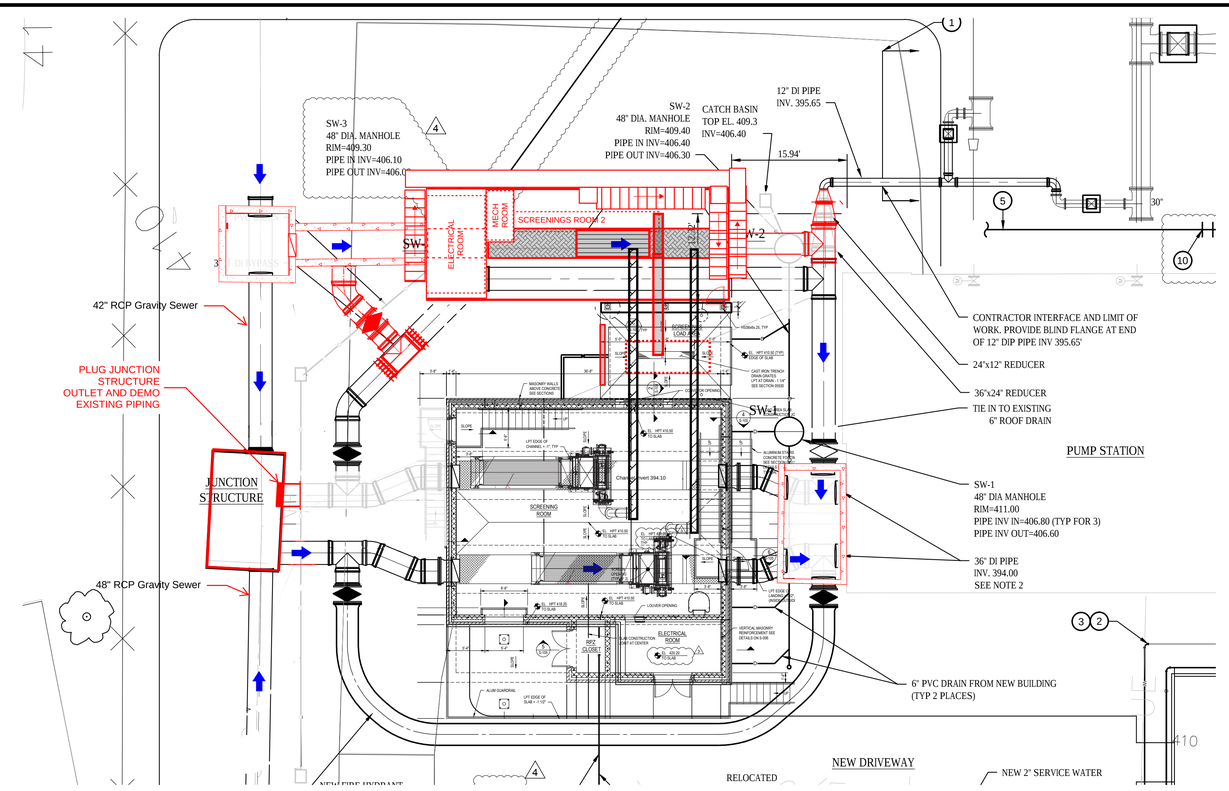
DRAWING PREPARED BY BROWN AND CALDWELL

# FIGURE 5.3.2
# ALTERNATIVE 3 - FINAL SITE PLAN

# FIGURE 5.3.1
# ALTERNATIVE 3 CONSTRUCTION PHASING




PHASE 1

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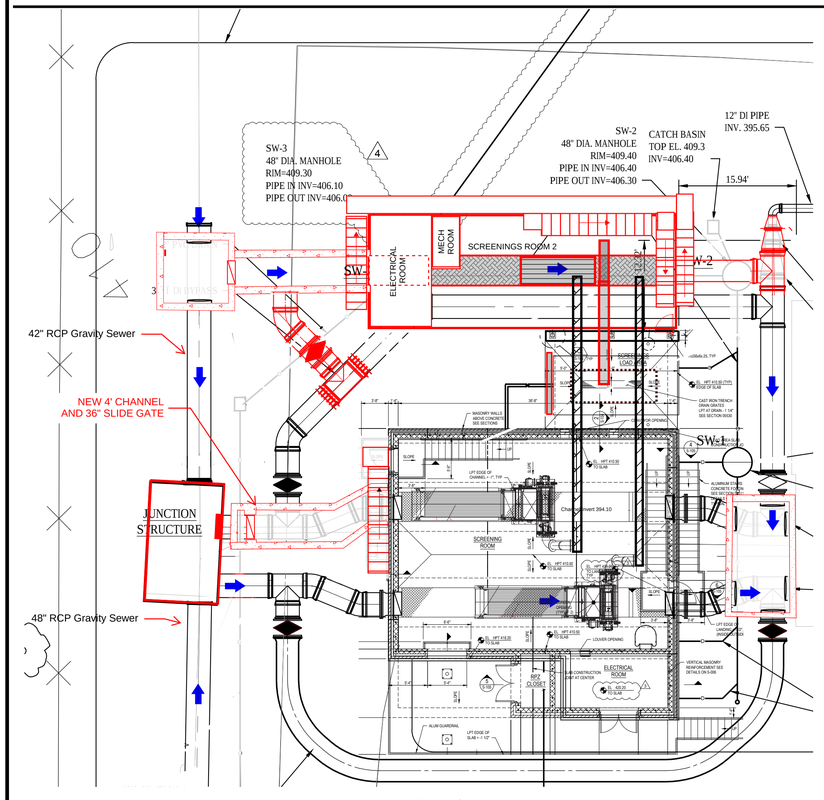


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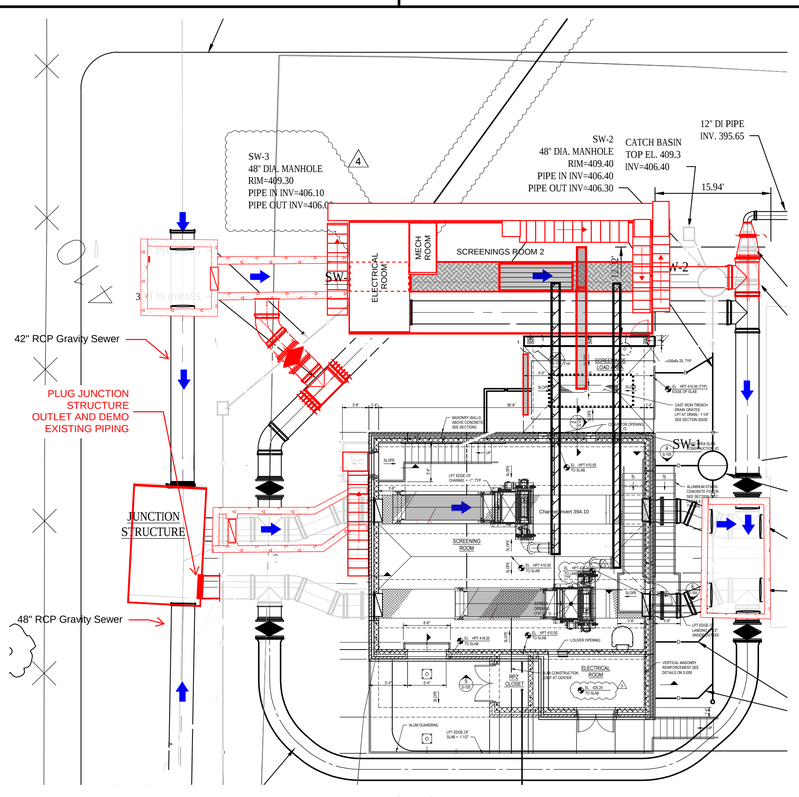


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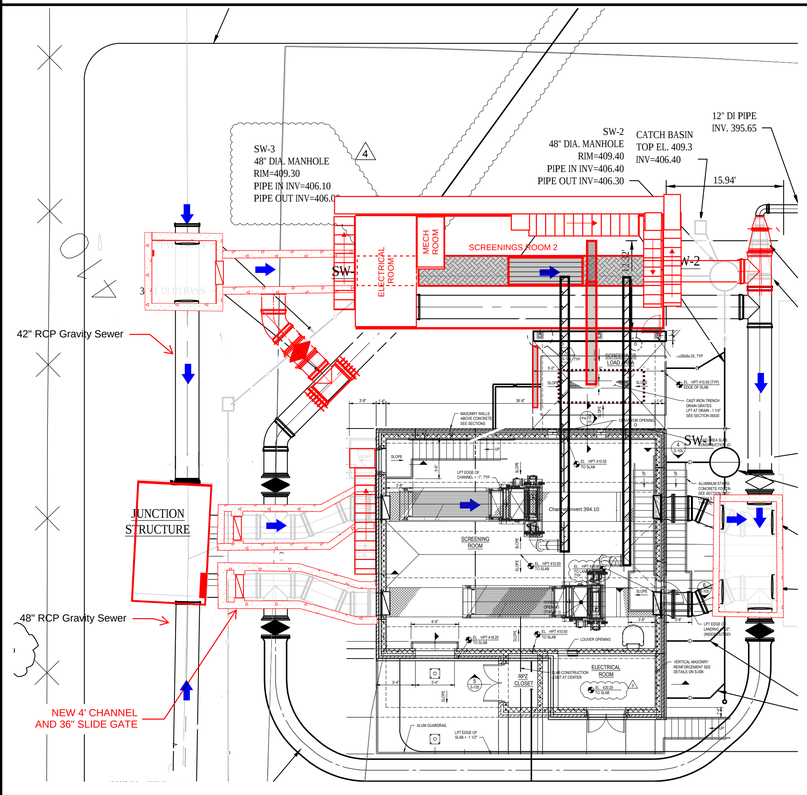
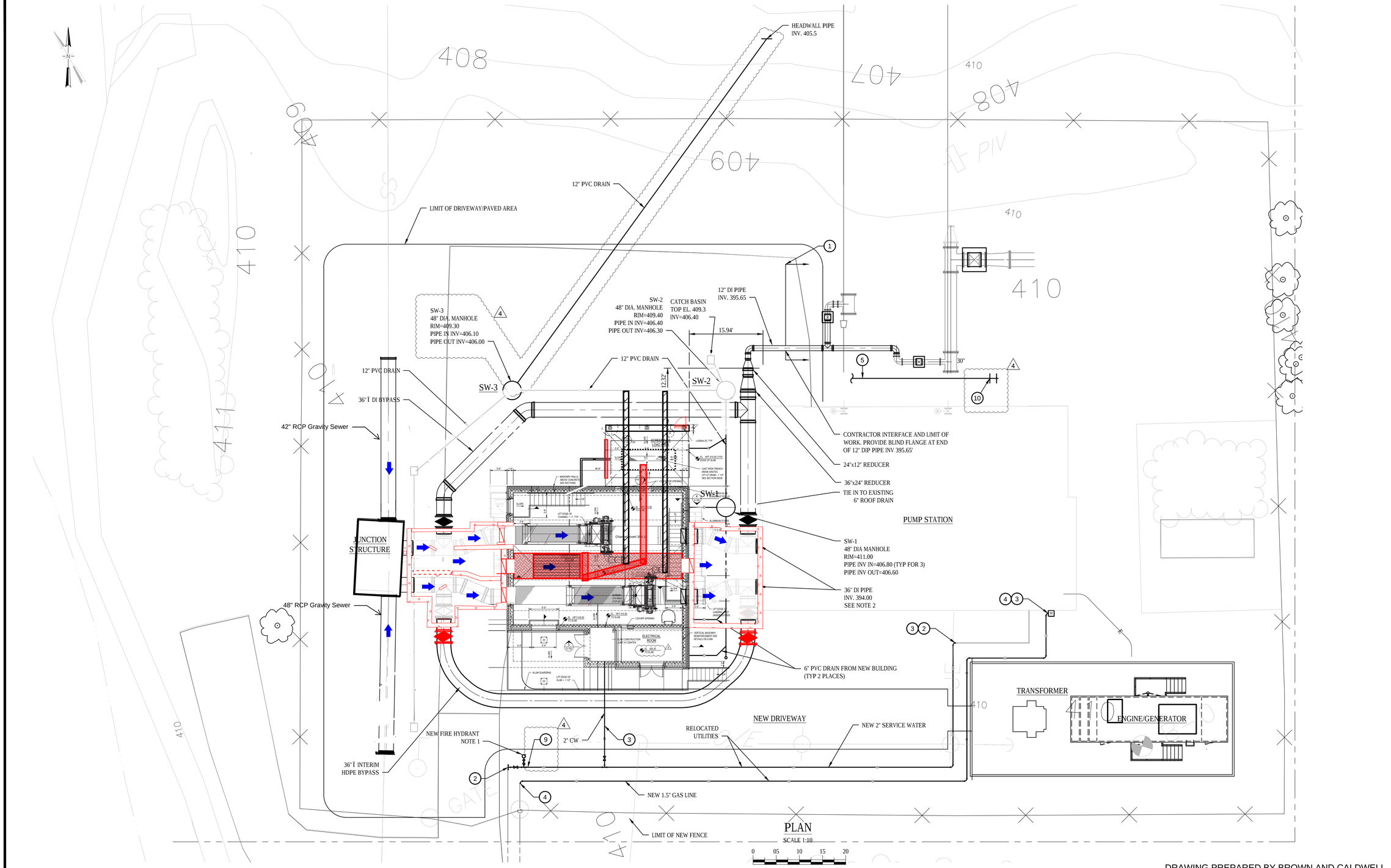



PHASE 3b




PLAN

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SCALE 1"=10' AT ORIGINAL SIZE

DRAWING PREPARED BY BROWN AND CALDWELL

# FIGURE 5.4.2
# ALTERNATIVE 4 - FINAL SITE PLAN

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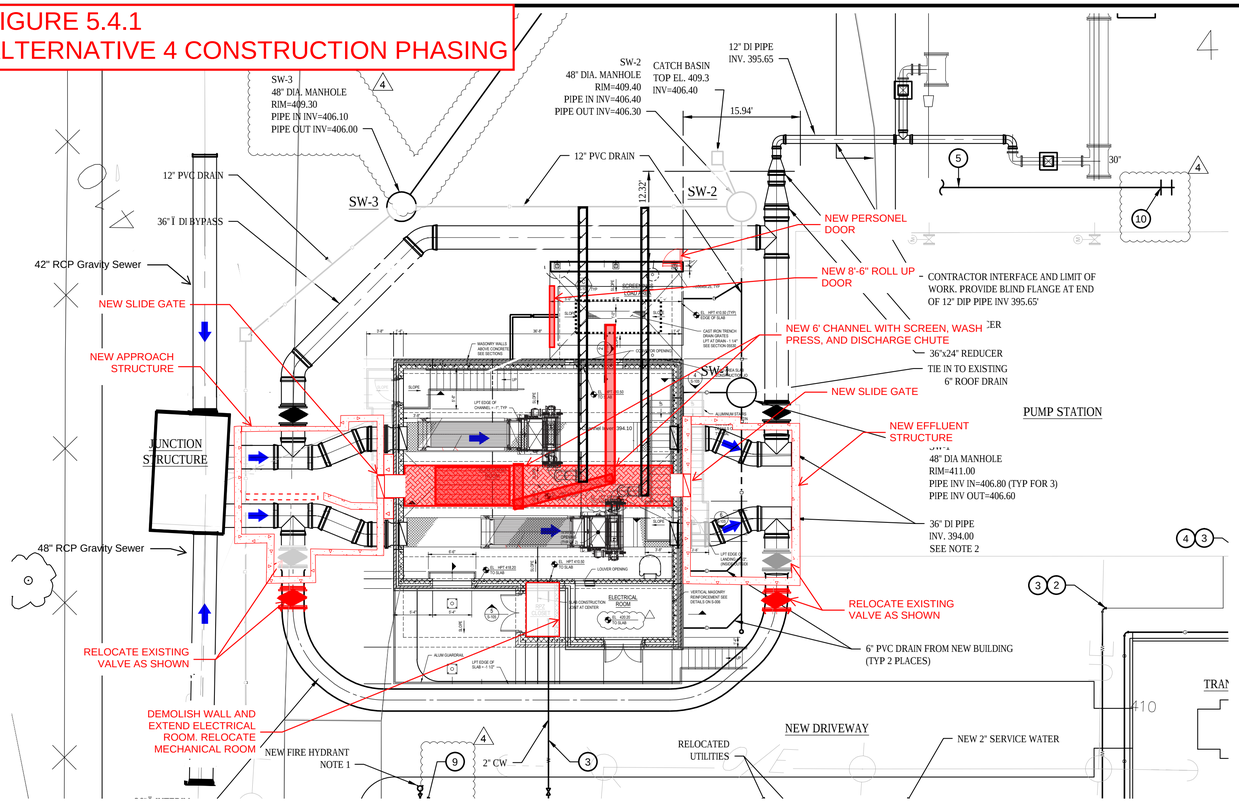
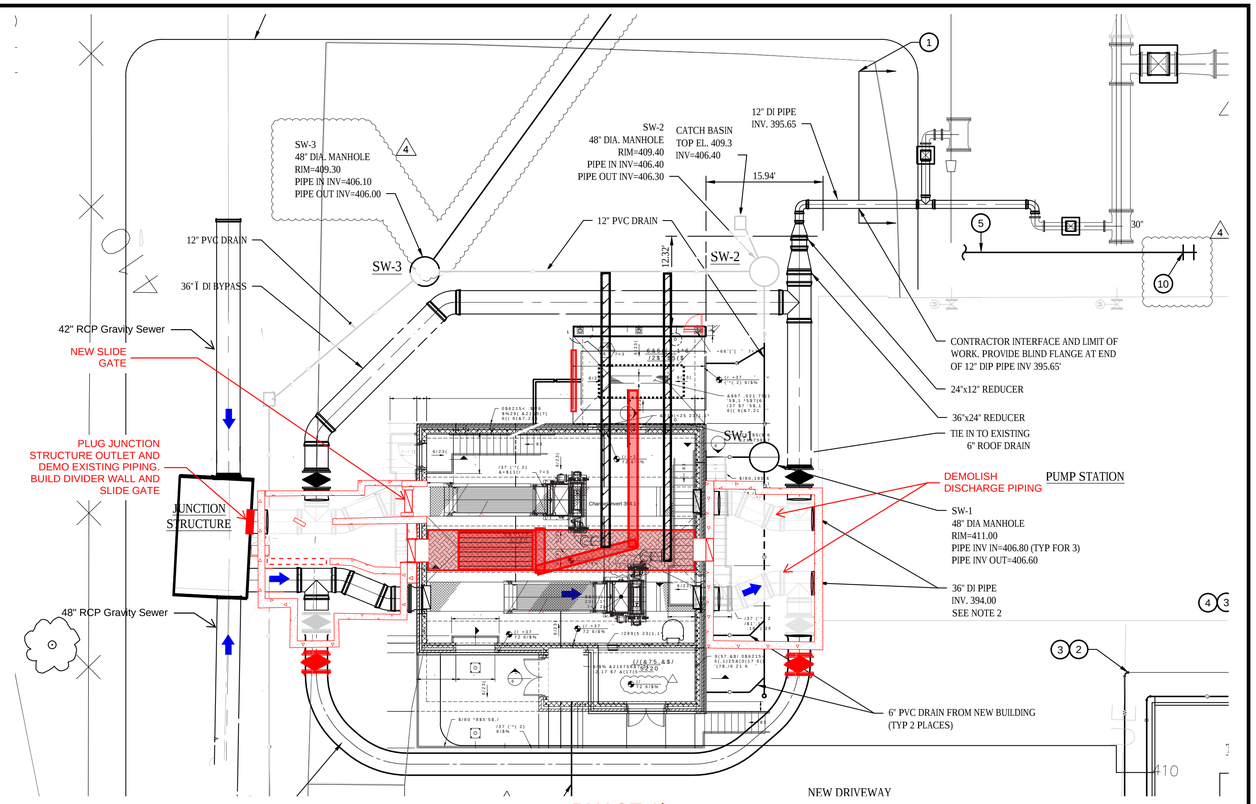
# FIGURE 5.4.1
# ALTERNATIVE 4 CONSTRUCTION PHASING




PHASE 1a

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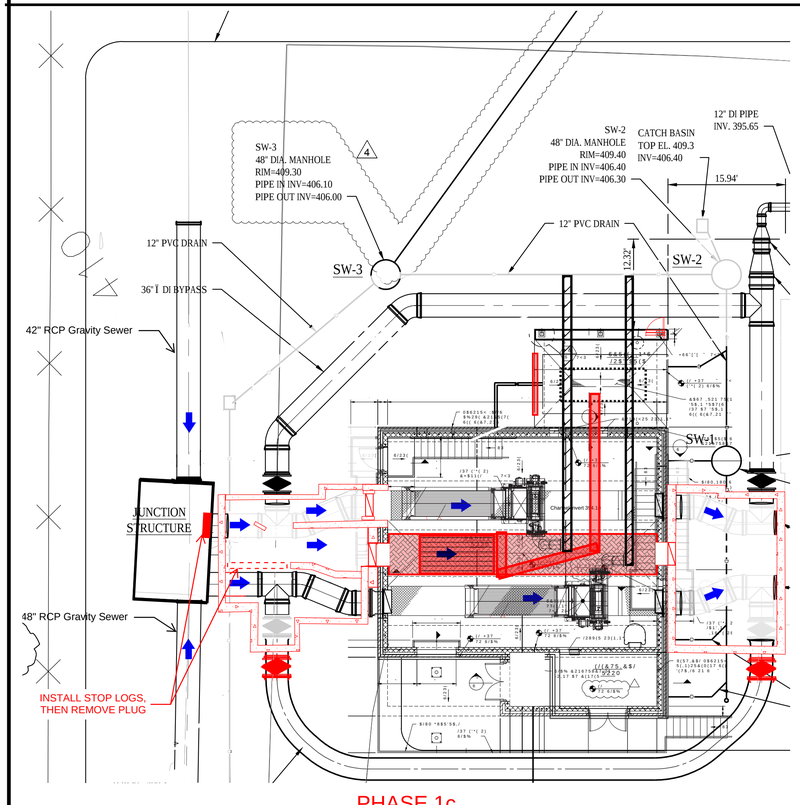


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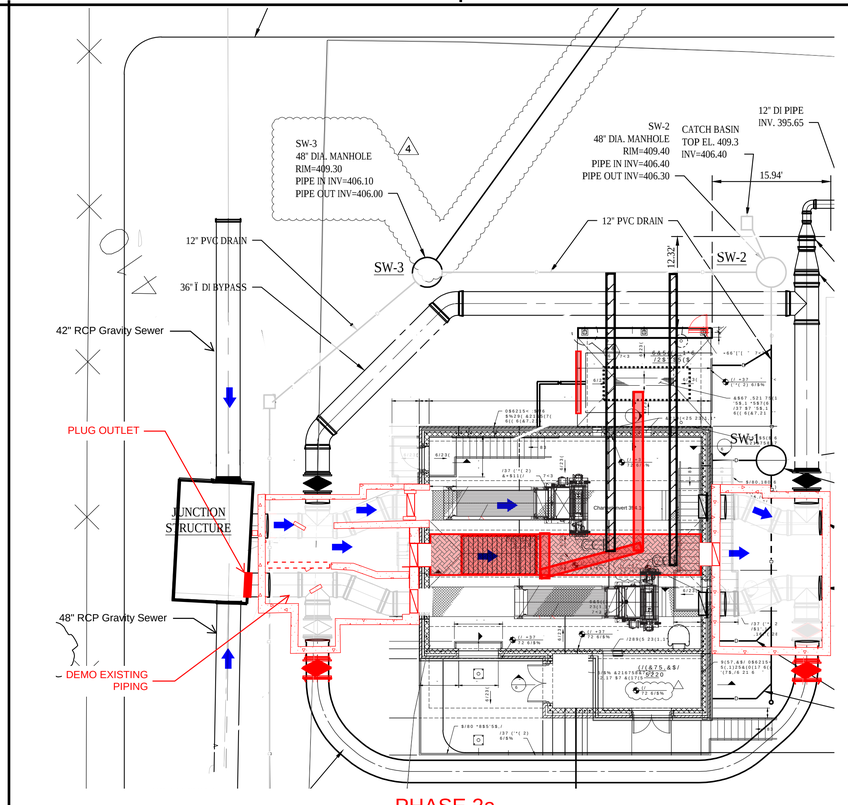


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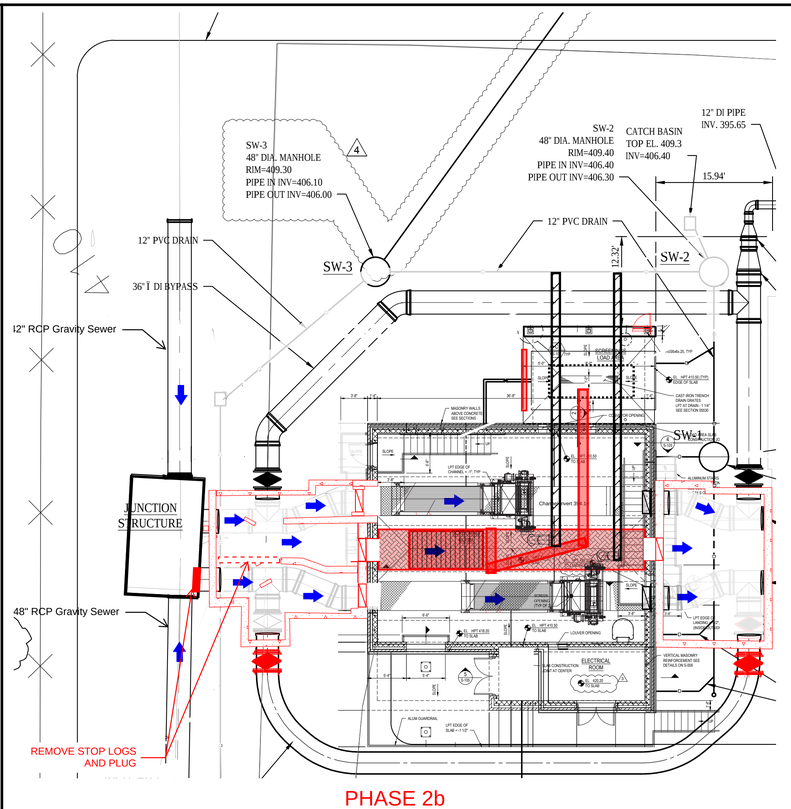


PHASE 2b

## Section 6

# Limitations

This document was prepared solely for Oneida County Sewer District in accordance with professional standards at the time the services were performed and in accordance with the contract between GHD Consulting Services Inc and Brown and Caldwell dated April 1, 2013. This document is governed by the specific scope of work authorized by Oneida County Sewer District and GHD; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by Oneida County Sewer District and GHD and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

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# Appendix A: Cost Estimates

# Memorandum

Date: June 10, 2022

To: Mark Richards, Boston

From: Doug Gabbard, Cincinnati

Reviewed by: Bill Agster, Denver

Copy to: Christopher Mini

Project No.: 150788.300.****

Subject: Sauquoit Creek Pump Station New Screenings Building
2-Percent Design Completion
Basis of Estimate of Probable Construction Cost

The Basis of Estimate Report and supporting estimate reports for the subject project are attached. Please call me if you have questions or need additional information.

Enclosures (3):

1. Basis of Estimate Report
2. Summary Estimate
3. Detailed Estimate

## Basis of Estimate Report

# Sauquoit Creek Pump Station New Screenings Building

## Introduction

Brown and Caldwell (BC) is pleased to present this opinion of probable construction cost (estimate) prepared for Oneida County, NY, Sauquoit Creek Pump Station New Screenings Building, Utica, NY.

## Estimated Project Costs

Based on the typical accuracy of a Class 5 estimate, the expected ranges of costs are:

| | Upper Range | Estimated Cost | Lower Range |
|---|---|---|---|
| | + 100 % | | - 50 % |
| Alt 2 – New Adjacent to existing Building | $ 10,904,354 | $ 5,452,177 | $ 2,726,089 |
| Alt 3 – New North of existing Building | $ 9,630,148 | $ 4,815,074 | $ 2,407,537 |
| Alt 4 - New In Existing Building | $ 6,666,020 | $ 3,333,010 | $ 1,666,505 |

## Summary

This Basis of Estimate contains the following information:

- Scope of work
- Background of this estimate
- Class of estimate
- Estimating methodology
- Direct cost development
- Indirect cost development
- Bidding assumptions
- Estimating assumptions
- Estimating exclusions
- Allowances for known but undefined work
- Contractor and other estimate markups

## Scope of Work

Work involves three different alternates for and additional screening channel. Alternates one and two Include construction a separate metal building for the channel. Alternate three includes excavating a new 6-foot-wide channel inside the existing building. All three alternates include constructing new influent and effluent concrete structures and different modifications of piping.

# Background of this Estimate

There have been no previous estimates prepared by the Brown & Caldwell Estimating and Scheduling Group for this project.

The attached estimate of probable construction cost is based on documents dated 5/25/2022, received by the Estimating and Scheduling Group (ESG). These documents are described as 2 percent complete based on the current project progression, additional or updated scope and/or quantities, and ongoing discussions with the project team. Further information can be found in the detailed estimate reports.

# Class of Estimate

## Class 5: 0 to 2 Percent Conceptual Design Completion

In accordance with the Association for the Advancement of Cost Engineering International (AACE) criteria, this is a Class 5 estimate. A Class 5 estimate is defined as a Conceptual Level or Project Viability Estimate. Typically, engineering is from 0 to 2 percent complete. Class 5 estimates are used to prepare planning level cost scopes or evaluation of alternative schemes, long range capital outlay planning and can also form the base work for the Class 4 Planning Level or Design Technical Feasibility Estimate.

Expected accuracy for Class 5 estimates typically ranges from -50 to +100 percent, depending on the technological complexity of the project, appropriate reference information and the inclusion of an appropriate contingency determination. In unusual circumstances, ranges could exceed those shown.

# Estimating Methodology

This estimate was prepared using quantity take-offs, vendor quotes and equipment pricing furnished either by the project team or by the estimator. The estimate includes direct labor costs and anticipated productivity adjustments to labor and equipment. Where possible, estimates for work anticipated to be performed by specialty subcontractors have been identified.

Construction labor crew and equipment hours were calculated from production rates contained in documents and electronic databases published by R.S. Means, Mechanical Contractors Association (MCA), National Electrical Contractors Association (NECA), and Rental Rate Blue Book for Construction Equipment (Blue Book).

This estimate was prepared using BC's estimating system, which consists of Sage Construction and Real Estate 300 estimating software engine (formerly Timberline) using RS Means database, historical project data, the latest vendor and material cost information, and other costs specific to the project location.

# Direct Cost Development

Costs associated with the General Provisions and the Special Provisions of the construction documents, which are collectively referred to as Contractor General Conditions (CGC), were based on the estimator's interpretation of the contract documents. The estimates for CGCs are divided into two groups: a time-related group (e.g., field personnel) and non-time-related group (e.g., bonds and insurance). Labor burdens such as health and welfare, vacation, union benefits, payroll taxes, and worker's compensation insurance are included in the labor rates. No trade discounts were considered.

## Indirect Cost Development

Local sales tax has been applied to material and equipment rentals. A percentage allowance for contractor's home office expense has been included in the overall rate markups. The rate is standard for this type of heavy construction and is based on typical percentages outlined in Means Heavy Construction Cost Data.

The contractor's cost for builder's risk, general liability and vehicle insurance has been included in this estimate. Based on historical data, this is typically two to four percent of the overall construction contract amount. These indirect costs have been included in this estimate as a percentage of the gross cost and are added after the net markups have been applied to the appropriate items.

## Bidding Assumptions

The following bidding assumptions were considered in the development of this estimate.

1. Bidders must hold a valid, current Contractor's credentials, applicable to the type of project.
2. Bidders will develop estimates with a competitive approach to material pricing and labor productivity, and will not include allowances for changes, extra work, unforeseen conditions, or any other unplanned costs.
3. Estimated costs are based on a minimum of four bidders. Actual bid prices may increase for fewer bidders or decrease for a greater number of bidders.
4. Bidders will account for General Provisions and Special Provisions of the contract documents and will perform all work except that which will be performed by traditional specialty subcontractors as identified here:
   - Electrical
   - HVAC systems

## Estimating Assumptions

As the design progresses through different completion stages, it is customary for the estimator to make assumptions to account for details that may not be evident from the documents. The following assumptions were used in the development of this estimate.

1. Concrete structures, channels and pipes are assumed to have a depth of 16-feet.
2. Contractor performs the work during normal daylight hours, nominally 7 a.m. to 5 p.m., Monday through Friday, in an 8-hour shift. No allowance has been made for additional shift work or weekend work.
3. Contractor has complete access for lay-down areas and mobile equipment.
4. Equipment rental rates are based on verifiable pricing from the local project area rental yards, Blue Book rates, and/or rates contained in the estimating database.
5. Contractor markup is based on conventionally accepted values that have been adjusted for project-area economic factors.
6. Major equipment costs are based on vendor supplied price quotes obtained by the project design team and/or estimators and on historical pricing of like equipment.
7. Process equipment vendor training using vendors' standard Operations and Maintenance (O&M) material is included in the purchase price of major equipment items where so stated in that quotation.
8. Bulk material quantities are based on manual quantity take-offs.
9. There is enough electrical power to feed the specified equipment. The local power company will supply power and transformers suitable for this facility.

10. Soils are of adequate nature to support the structures. No piles have been included in this estimate.

## Estimating Exclusions

The following estimating exclusions were assumed in the development of this estimate.

1. Hazardous materials remediation and/or disposal.
2. O&M costs for the project except for the vendor supplied O&M manuals.
3. Utility agency costs for incoming power modifications.
4. Permits beyond those normally needed for the type of project and project conditions.
5. Impacts from COVID-19 including additional labor and management hours required to meet social distancing, personal protection, and cleaning routines, additional costs of protective equipment, supply chain impacts, and material shortages.

## Allowances for Known but Undefined Work

The following allowances were made in the development of this estimate.

1. Electrical

## Contractor and Other Estimate Markups

Contractor markup is based on conventionally accepted values which have been adjusted for project-area economic factors. Estimate markups are shown in Table 1.

**Table 1. Estimate Markups**

| Item | Rate (%) |
|---|---|
| Net Cost Markups | |
| Labor markup | 15 |
| Materials and process equipment | 10 |
| Equipment (construction-related) | 10 |
| Subcontractor | 10 |
| Other – Process Equipment | 8 |
| Sales Tax (State and local for materials, process equipment and construction equipment rentals, etc.) | |
| Material Shipping and Handling | 2 |
| Gross Cost Markups | |
| Contractor General Conditions | 15 |
| Start-up, Training and O&M | 2 |
| Construction Contingency | 50 |
| Builders Risk, Liability and Auto Insurance | 2 |
| Performance and Payment Bonds | 1.5 |
| Escalation to Midpoint of Construction | 9.16 |

## Labor Markup

The labor rates used in the estimate were derived from RS Means latest national average wage rate tables and city cost indexes. These include base rate paid to the laborer plus fringes. A labor burden factor is applied to these such that the final rates include all employer paid taxes. These taxes are FICA (which covers social security plus Medicare), Workers Comp (which varies based on state, employer experience and history) and unemployment insurance. The result is fully loaded labor rates. In addition to the fully loaded labor rate, an overhead and profit markup is applied at the back end of the estimate. This covers payroll and accounting, estimator's wages, home office rent, advertising, and owner profit.

## Materials and Process Equipment Markup

This markup consists of the additional cost to the contractor beyond the raw dollar amount for material and process equipment. This includes shop drawing preparation, submittal and/or re-submittal cost, purchasing and scheduling materials and equipment, accounting charges including invoicing and payment, inspection of received goods, receiving, storage, overhead and profit.

## Equipment (Construction) Markup

This markup consists of the costs associated with operating the construction equipment used in the project. Most GCs will rent rather than own the equipment and then charge each project for its equipment cost. The equipment rental cost does not include fuel, delivery and pick-up charges, additional insurance requirements on rental equipment, accounting costs related to home office receiving invoices and payment. However, the crew rates used in the estimate do account for the equipment rental cost. Occasionally, larger contractors will have some or all the equipment needed for the job, but to recoup their initial purchasing cost they will charge the project an internal rate for equipment use which is like the rental cost of equipment. The GC will apply an overhead and profit percentage to each individual piece of equipment whether rented or owned.

## Subcontractor Markup

This markup consists of the GC's costs for subcontractors who perform work on the site. This includes costs associated with shop drawings, review of subcontractor's submittals, scheduling of subcontractor work, inspections, processing of payment requests, home office accounting, and overhead and profit on subcontracts.

## Sales Tax (Materials, Process Equipment and Construction Equipment)

This is the tax that the contractor must pay according to state and local tax laws. The percentage is applied to both the material and equipment the GC purchases as well as the cost for rental equipment. However, tis client is tax exempt and no sales tax has been added.

## Contractor Startup, Training, and O&M Manuals

This cost markup is often confused with either vendor startup or owner startup. It is the cost the GC incurs on the project beyond the vendor startup and owner startup costs. The GC generally will have project personnel assigned to facilitate the installation, testing, startup, and O&M manual preparation for equipment that is put into operation by either the vendor or owner. These project personnel often include an electrician, pipe fitter or millwright, and/or I&E technician. These personnel are not included in the basic crew makeup to install the equipment but are there to assist and troubleshoot the startup and proper running of the equipment. The GC also incurs a cost for startup for such things as consumables (oil, fuel,

filters, etc.), startup drawings and schedules, startup meetings and coordination with the plant personnel in other areas of the plant operation.

## Builders Risk, Liability, and Vehicle Insurance

This percentage comprises all three items. There are many factors which make up this percentage, including the contractor's track record for claims in each of the categories. Another factor affecting insurance rates has been a dramatic price increase across the country over the past several years due to domestic and foreign influences. Consequently, in the construction industry we have observed a range of 0.5 to 1 percent for Builders Risk Insurance, 1 to 1.25 percent for General Liability Insurance, and 0.85 to 1 percent for Vehicle Insurance. Many factors affect each area of insurance, including project complexity and contractor's requirements and history. Instead of using numbers from a select few contractors, we believe it is more prudent to use a combined 2 percent to better reflect the general costs across the country. Consequently, the actual cost could be higher or lower based on the bidder, region, insurance climate, and the contractor's insurability at the time the project is bid.

## Material Shipping and Handling

This can range from 2 to 6 percent, and is based on the type of project, material makeup of the project, and the region and location of the project. Material shipping and handling covers delivery costs from vendors, unloading costs (and in some instances loading and shipment back to vendors for rebuilt equipment), site paperwork, and inspection of materials prior to unloading at the project site. BC typically adjusts this percentage by the amount of materials and whether vendors have included shipping costs in the quotes that were used to prepare the estimate. This cost also includes the GC's cost to obtain local supplies, e.g., oil, gaskets and bolts that may be missing from the equipment or materials shipped.

## Escalation to Midpoint for Labor, Materials and Subcontractors

In addition to contingency, it is customary for projects that will be built over several years to include an escalation to midpoint of anticipated construction to account for the future escalation of labor, material, and equipment costs beyond values at the time the estimate is prepared. For this project, the anticipated rate of escalation is 8 percent per annum.

The estimated construction time for this project is 12 months, exclusive of unusual weather or site conditions delays. Construction is anticipated to start 4/1/2024 and be completed by 14/1/2025. The escalation factors used in this estimate are calculated from the date of this estimate to the anticipated midpoint of construction which is approximately 27 months from the date of this estimate.

## Undesigned/Undeveloped Contingency

The contingency factor covers unforeseen conditions, area economic factors, and general project complexity. This contingency is used to account for those factors that cannot be addressed in each of the labor and/or material installation costs. Based on industry standards, completeness of the project documents, project complexity, the current design stage and area factors, construction contingency can range from 10 to 50 percent.

## Performance and Payment Bonds

Based on historical and industry data, this can range from 0.75 to 3 percent of the project total. There are several contributing factors including such items as size of the project, regional costs, contractor's historical record on similar projects, complexity, and current bonding limits. BC uses 1.5 percent for bonds, which we have determined to be reasonable for most heavy construction projects.

# Estimate Summary Report

6/14/2022 1:29 PM

BC Project Number: 150788
Estimate Version Number: 1
Estimate Date: 6/2/2022
Lead Estimator: Doug Gabbard

## Sauquoit Creek Pump Station New Screening Building

# Oneida County, NY
# Sauquoit Creek Pump Station New Screening Building
# Class 5 Estimate

| | |
|---|---|
| **Estimator** | Doug Gabbard |
| **BC Project Manager** | Mark Richards |
| **BC Office** | Boston |
| **Est Version Number** | 1 |
| **QA/QC Reviewer** | Bill Agster |
| **QA/QC Review Date** | 6/1/2022 |
| **BC Project Number** | 150788 |
| **Alternates** | Alternate 2 New - Adjaent to Existing Builing |

Brown AND Caldwell

# Estimate Summary Report

6/14/2022 1:29 PM

BC Project Number: 150788
Estimate Version Number: 1
Estimate Date: 6/2/2022
Lead Estimator: Doug Gabbard

## Sauquoit Creek Pump Station New Screening Building

| Phase | Description | Takeoff Quantity | Grand Total Price | Gross Total Cost with Markups |
|---|---|---|---|---|
| 01 Total | | | | |
| 100 Demollition | | | | |
| 02221 | Demo Concrete Wall at Dumpster | 144.00 sf | 55.92 /sf | 8,052 |
| 02221 | Demo Asphalt | 2,158.00 sf | 5.71 /sf | 12,319 |
| 02999 | Demo Dumpster Canopy | 1.00 LS | 3,562.01 /LS | 3,562 |
| 02999 | Demo 42" Concrete Pipe | 8.00 LF | 154.97 /LF | 1,240 |
| | 100 Demollition | | /ls | 25,173 |
| 150 Dewatering Systems | | | | |
| 31240 | Dewatering Systems | 5.00 mo | 154,139.02 /mo | 770,695 |
| | 150 Dewatering Systems | | /LS | 770,695 |
| 200 Piping | | | | |
| 03330 | 6' Wide Concrete Ditch Slab (140sf x 12") | 140.00 cy | 40.35 /cy | 5,649 |
| 03330 | 4' Wide Ditch Slab (126 SF x 12") | 4.67 cy | 1,148.20 /cy | 5,359 |
| 03345 | 6' Wide Concrete Ditch WallsConcrete Walls (2 ea x 20' x 16' x 12") | 640.00 cy | 111.72 /cy | 71,503 |
| 03345 | 4' Wide Ditch Concrete Walls (2 ea x 21' x 16' x 12") | 24.89 cy | 3,016.46 /cy | 75,077 |
| 33490 | Trench for 36" DI Pipe (Shored) | 49.00 lf | 488.73 /lf | 23,948 |
| 33490 | Trench for 6' Concrete Ditch (Shored) | 20.00 lf | 671.04 /lf | 13,421 |
| 33490 | Trench for 4' Wide Concrete Ditch (Shored) | 21.00 lf | 510.93 /lf | 10,730 |
| 40120 | 36" Piping DI Flanged Shop Fab Piping, Flg Valves | 49.00 lf | 13,543.37 /lf | 663,625 |
| | 200 Piping | | /LS | 869,311 |
| 500 New Screening Building | | | | |
| 03330 | Slab for Screenings Building | 50.37 cy | 1,765.20 /cy | 88,913 |
| 05999 | Metal Building for Screenings Building | 1.00 LS | 28,974.24 /LS | 28,974 |
| 23001 | HVAC for Dumpster Enclosure | 520.00 sf | 36.77 /sf | 19,122 |
| | 500 New Screening Building | | /LS | 137,009 |
| 600 Equipment | | | | |
| 13999 | Belt Conveyors | 2.00 EA | 34,757.69 /EA | 69,515 |
| 46999 | Rack Screen | 1.00 EA | 1,000,393.63 /EA | 1,000,394 |
| | 600 Equipment | | /LS | 1,069,909 |

## Sauquoit Creek Pump Station New Screening Building

| Phase | Description | Takeoff Quantity | Grand Total Price | Gross Total Cost with Markups |
|---|---|---|---|---|
| 700 Structures | | | | |
| 03330 | Effluent Box Slab (1762sf x 2') | 530.52 cy | 932.40 /cy | 494,653 |
| 03330 | Influent Box Slab (112sf x 1') | 4.15 cy | 1,131.46 /cy | 4,693 |
| 03345 | Effluent Box Concrete Walls (52.84 x 16' x 12") | 30.27 cy | 1,380.89 /cy | 41,794 |
| 03345 | Influent Box Concrete Walls (42.32 x 16' x 12") | 28.51 cy | 1,059.67 /cy | 30,214 |
| 31250 | Shoring Systems for Influent Box | 380.24 SF | 45.22 /SF | 17,193 |
| 31250 | Shoring Systems for Effluent Box | 903.00 SF | 45.81 /SF | 41,366 |
| 31290 | Influent Structure Excavation and Backfill | 157.81 cy | 192.83 /cy | 30,431 |
| 31290 | Effuent Structure Excavation and Backfill | 202.43 cy | 205.37 /cy | 41,573 |
| 33999 | Slide Gates | 1.00 LS | 135,398.97 /LS | 135,399 |
| | 700 Structures | | /LS | 837,317 |
| 800 Dumpster Encosure | | | | |
| 03305 | Footing for Dumpster Concrete Wall | 2.00 cy | 1,332.44 /cy | 2,665 |
| 03345 | Dumpster Enclosure Concrete Wall | 180.00 cy | 106.20 /cy | 19,116 |
| 05999 | Metal Building for Dumpster Enclosure | 1.00 LS | 13,054.38 /LS | 13,054 |
| 08999 | Doors | 1.00 LS | 15,739.94 /LS | 15,740 |
| 23001 | HVAC for Dumpster Enclosure | 234.00 sf | 47.74 /sf | 11,171 |
| | 800 Dumpster Encosure | | /LS | 61,746 |
| 900 Electrical, Instrumentation, and Controls Subcontract (Allowance) | | | | |
| 26002 | Electrical, Instrumentation, and Controls Subcontract (Allowance) | 1.00 ls | 1,681,017.58 /ls | 1,681,018 |
| | 900 Electrical, Instrumentation, and Controls Subcontract (Allowance) | | /LS | 1,681,018 |
| | 01 Total | 1.00 LS | 5,452,177.30 /LS | 5,452,177 |

## Estimate Totals

| Description | Rate | Hours | Amount | Totals |
|---|---|---|---|---|
| Labor | | 3,577 hrs | 315,428 | |
| Material | | | 1,021,004 | |
| Subcontract | | | 773,061 | |
| Equipment | | 24,862 hrs | 319,348 | |
| Other | | | 31,462 | |
| | | | **2,460,303** | **2,460,303** |
| Labor Mark-up | 15.00 % | | 47,314 | |
| Material Mark-up | 10.00 % | | 102,100 | |
| Subcontractor Mark-up | 10.00 % | | 77,306 | |
| Construction Equipment Mark-up | 10.00 % | | 31,935 | |
| Other - Process Equip Mark-up | 8.00 % | | 2,517 | |
| | | | **261,172** | **2,721,475** |
| Material Shipping & Handling | 2.00 % | | 20,420 | |
| Material Sales Tax | | | | |
| Other - Process Eqp Sales Tax | | | | |
| **Net Markups** | | | **20,420** | **2,741,895** |
| Contractor General Conditions | 15.00 % | | 411,284 | |
| | | | **411,284** | **3,153,179** |
| Start-Up, Training, O&M | 2.00 % | | 63,064 | |
| | | | **63,064** | **3,216,243** |
| Undesign/Undevelop Contingency | 50.00 % | | 1,608,122 | |
| | | | **1,608,122** | **4,824,365** |
| Bldg Risk, Liability Auto Ins | 2.00 % | | 96,487 | |
| | | | **96,487** | **4,920,852** |
| Payment and Performance Bonds | 1.50 % | | 73,813 | |
| | | | **73,813** | **4,994,665** |
| Escalation to Midpoint (ALL) | 9.16 % | | 457,511 | |
| **Gross Markups** | | | **457,511** | **5,452,176** |
| **Total** | | | | **5,452,176** |

# Estimate Summary Report

6/14/2022 1:42 PM

BC Project Number: 150788
Estimate Version Number: 1
Estimate Date: 6/2/2022
Lead Estimator: Doug Gabbard

## Sauquoit Creek Pump Station New Screening Building

# Oneida County, NY
# Sauquoit Creek Pump Station New Screening Building
# Class 5 Estimate

| | |
|---|---|
| **Estimator** | Doug Gabbard |
| **BC Project Manager** | Mark Richards |
| **BC Office** | Boston |
| **Est Version Number** | 1 |
| **QA/QC Reviewer** | Bill Agster |
| **QA/QC Review Date** | 6/1/2022 |
| **BC Project Number** | 150788 |
| **Alternates** | Alternate 3 - New North of Existing Building |

## Sauquoit Creek Pump Station New Screening Building

| Phase | Description | Takeoff Quantity | Grand Total Price | Gross Total Cost with Markups |
|---|---|---|---|---|
| 01 Total | | | | |
| 100 Demollition | | | | |
| 02221 | Demo Asphalt | 2,158.00 sf | 5.70 /sf | 12,308 |
| 02301 | Pipe Demolition | 24.00 ft | 126.09 /ft | 3,026 |
| 02999 | Demo Canopy | 1.00 LS | 3,558.96 /LS | 3,559 |
| | 100 Demollition | | /ls | 18,893 |
| 150 Dewatering Systems | | | | |
| 31240 | Dewatering Systems | 5.00 mo | 154,005.23 /mo | 770,026 |
| | 150 Dewatering Systems | | /LS | 770,026 |
| 200 Piping | | | | |
| 03330 | 4' Wide Ditch Slab (62' x 6' x 12") | 14.47 cy | 1,079.98 /cy | 15,627 |
| 03345 | 4' Wide Ditch Concrete Walls (124' x 14' x 12") | 135.02 cy | 2,870.53 /cy | 387,580 |
| 33490 | Trench for 36" DI Pipe (Shored) | 15.00 lf | 498.24 /lf | 7,474 |
| 33490 | Trench for 4' Wide Concrete Ditch (Shored) | 21.00 lf | 510.48 /lf | 10,720 |
| 33999 | 36" Plug | 1.00 LS | 5,040.92 /LS | 5,041 |
| 40120 | 36" Piping DI Flanged Shop Fab Piping, Flg Valves | 15.00 lf | 23,003.26 /lf | 345,049 |
| | 200 Piping | | /LS | 771,491 |
| 500 New Screening Building | | | | |
| 03330 | Slabs for Screenings Building | 50.37 cy | 1,763.69 /cy | 88,837 |
| 05999 | Metal Building for Screenings Building | 1.00 LS | 28,949.27 /LS | 28,949 |
| 23001 | HVAC for Dumpster Enclosure | 520.00 sf | 36.74 /sf | 19,105 |
| | 500 New Screening Building | | /LS | 136,891 |
| 600 Equipment | | | | |
| 13999 | Belt Conveyors | 1.00 EA | 11,293.56 /EA | 11,294 |
| 46999 | Rack Screen | 1.00 EA | 999,529.75 /EA | 999,530 |
| | 600 Equipment | | /LS | 1,010,823 |
| 700 Structures | | | | |
| 03330 | Effluent Box Slab (10.58 x 10.58 x 2') | 8.96 cy | 1,089.21 /cy | 9,763 |

## Sauquoit Creek Pump Station New Screening Building

| Phase | Description | Takeoff Quantity | Grand Total Price | Gross Total Cost with Markups |
|---|---|---|---|---|
| 03330 | Influent Box Slab ( 16' x 9.5' x 1') | 5.63 cy | 1,077.43 /cy | 6,066 |
| 03345 | Effluent Box Concrete Walls (52.84' x 16" x 12") | 30.27 cy | 1,379.70 /cy | 41,758 |
| 03345 | Influent Box Concrete Walls (51' x 16' x 12") | 35.15 cy | 986.10 /cy | 34,659 |
| 31250 | Shoring Systems for Influent Box | 380.24 SF | 45.18 /SF | 17,179 |
| 31250 | Shoring Systems for Effluent Box | 903.00 unit | 45.77 /unit | 41,330 |
| 31290 | Influent Structure Excavation and Backfill | 157.81 cy | 192.66 /cy | 30,404 |
| 31290 | Effuent Structure Excavation and Backfill | 202.43 cy | 205.19 /cy | 41,537 |
| 35201 | 36" Slide Gates | 0.00 | /EA | 37,575 |
| | 700 Structures | | /LS | 260,271 |
| 800 Dumpster Encosure | | | | |
| 03305 | Footing for Dumpster Concrete Wall | 2.00 cy | 1,331.29 /cy | 2,663 |
| 03345 | Dumpster Enclosure Concrete Wall | 180.00 cy | 106.11 /cy | 19,099 |
| 05999 | Metal Building for Dumpster Enclosure | 1.00 LS | 13,043.14 /LS | 13,043 |
| 08999 | Doors | 1.00 LS | 15,726.43 /LS | 15,726 |
| 23001 | HVAC for Dumpster Enclosure | 234.00 sf | 47.70 /sf | 11,162 |
| | 800 Dumpster Encosure | | /LS | 61,693 |
| 900 Electrical, Instrumentation, and Controls Subcontract (Allowance) | | | | |
| 26002 | Electrical, Instrumentation, and Controls Subcontract (Allowance) | 1.00 ls | 1,784,985.46 /ls | 1,784,985 |
| | 900 Electrical, Instrumentation, and Controls Subcontract (Allowance) | | /LS | 1,784,985 |
| | 01 Total | 1.00 LS | 4,815,073.93 /LS | 4,815,074 |

## Estimate Totals

| Description | Rate | Hours | Amount | Totals |
|---|---|---|---|---|
| Labor | | 2,942 hrs | 242,366 | |
| Material | | | 780,655 | |
| Subcontract | | | 820,992 | |
| Equipment | | 24,717 hrs | 307,809 | |
| Other | | | 24,778 | |
| | | | **2,176,600** | **2,176,600** |
| Labor Mark-up | 15.00 % | | 36,355 | |
| Material Mark-up | 10.00 % | | 78,066 | |
| Subcontractor Mark-up | 10.00 % | | 82,099 | |
| Construction Equipment Mark-up | 10.00 % | | 30,781 | |
| Other - Process Equip Mark-up | 8.00 % | | 1,982 | |
| | | | **229,283** | **2,405,883** |
| Material Shipping & Handling | 2.00 % | | 15,613 | |
| Material Sales Tax | | | | |
| Other - Process Eqp Sales Tax | | | | |
| **Net Markups** | | | **15,613** | **2,421,496** |
| Contractor General Conditions | 15.00 % | | 363,225 | |
| | | | **363,225** | **2,784,721** |
| Start-Up, Training, O&M | 2.00 % | | 55,694 | |
| | | | **55,694** | **2,840,415** |
| Undesign/Undevelop Contingency | 50.00 % | | 1,420,208 | |
| | | | **1,420,208** | **4,260,623** |
| Bldg Risk, Liability Auto Ins | 2.00 % | | 85,212 | |
| | | | **85,212** | **4,345,835** |
| Payment and Performance Bonds | 1.50 % | | 65,188 | |
| | | | **65,188** | **4,411,023** |
| Escalation to Midpoint (ALL) | 9.16 % | | 404,050 | |
| **Gross Markups** | | | **404,050** | **4,815,073** |
| **Total** | | | | **4,815,073** |

# Estimate Summary Report

6/14/2022 1:50 PM

BC Project Number: 150788
Estimate Version Number: 1
Estimate Date: 6/2/2022
Lead Estimator: Doug Gabbard

## Sauquoit Creek Pump Station New Screening Building

# Oneida County, NY
# Sauquoit Creek Pump Station New Screening Building
# Class 5 Estimate

| | |
|---|---|
| **Estimator** | Doug Gabbard |
| **BC Project Manager** | Mark Richards |
| **BC Office** | Boston |
| **Est Version Number** | 1 |
| **QA/QC Reviewer** | Bill Agster |
| **QA/QC Review Date** | 6/1/2022 |
| **BC Project Number** | 150788 |
| **Alternates** | Alternate 4 - New In Existing Building |

## Sauquoit Creek Pump Station New Screening Building

| Phase | Description | Takeoff Quantity | Grand Total Price | Gross Total Cost with Markups |
|---|---|---|---|---|
| 01 Total | | | | |
| 100 Demollition | | | | |
| 02221 | Demo Asphalt | 1,000.00 sf | 7.54 /sf | 7,540 |
| 02221 | Demo Concrete Inside Building | 60.00 sf | 52.67 /sf | 3,160 |
| 02301 | Pipe Demolition | 90.00 ft | 115.46 /ft | 10,392 |
| 02999 | Demo canopy | 1.00 LS | 3,561.62 /LS | 3,562 |
| | 100 Demollition | | /ls | 24,654 |
| 150 Dewatering Systems | | | | |
| 31240 | Dewatering Systems | 5.00 mo | 154,122.07 /mo | 770,610 |
| | 150 Dewatering Systems | | /LS | 770,610 |
| 200 Piping | | | | |
| 02999 | Relocate Existing Gate Valves | 2.00 EA | 7,427.77 /EA | 14,856 |
| 03330 | 6" Wide Concrete Ditch Slab | 10.89 cy | 1,060.41 /cy | 11,548 |
| 03345 | 6" Wide Concrete Dicth WallsConcrete Walls | 178.11 cy | 702.48 /cy | 125,119 |
| 31999 | Premium for Trench Excavation With Small Equipment | 1.00 LS | 72,921.73 /LS | 72,922 |
| 33490 | Trench for 6' Concrete Ditch (Shored) | 35.00 lf | 2,083.05 /lf | 72,907 |
| | 200 Piping | | /LS | 297,351 |
| 600 Equipment | | | | |
| 13999 | Belt Conveyors (Modify) | 1.00 EA | 11,302.02 /EA | 11,302 |
| 46999 | Rack Screen | 1.00 EA | 1,000,284.19 /EA | 1,000,284 |
| | 600 Equipment | | /LS | 1,011,586 |
| 700 Structures | | | | |
| 03330 | Effluent Box Slab (408 sf x 2') | 31.73 cy | 978.28 /cy | 31,041 |
| 03330 | Influent Box Slab ( 356 sf x 1') | 13.84 cy | 897.97 /cy | 12,428 |
| 03345 | Effluent Box Concrete Walls (74' x 14' x 12") | 39.19 cy | 1,208.30 /cy | 47,353 |
| 03345 | Influent Box Concrete Walls (70' x 14' x 12") | 41.72 cy | 957.81 /cy | 39,960 |
| 03345 | Effluent Box Divider Concrete Walls (28' x 14' x 12") | 15.24 cy | 1,860.12 /cy | 28,348 |
| 31250 | Shoring Systems for Influent Box | 1,190.00 SF | 46.34 /SF | 55,139 |
| 31250 | Shoring Systems for Effluent Box | 1,120.00 sf | 46.34 /sf | 51,896 |

## Sauquoit Creek Pump Station New Screening Building

| Phase | Description | Takeoff Quantity | Grand Total Price | Gross Total Cost with Markups |
|---|---|---|---|---|
| 31290 Influent Structure Excavation and Backfill | | 317.03 cy | 234.72 /cy | 74,415 |
| 31290 Effuent Structure Excavation and Backfill | | 297.12 cy | 231.18 /cy | 68,688 |
| 35201 36" Slide Gates | | 2.00 EA | 18,801.85 /EA | 37,604 |
| 700 Structures | | | /LS | 446,871 |
| 800 Dumpster Encosure | | | | |
| 03305 Footing for Dumpster Concrete Wall | | 2.00 cy | 1,332.30 /cy | 2,665 |
| 03345 Dumpster Enclosure Concrete Wall | | 180.00 cy | 106.19 /cy | 19,114 |
| 05999 Metal Building for Dumpster Enclosure | | 1.00 LS | 13,052.96 /LS | 13,053 |
| 08999 Doors | | 1.00 LS | 15,738.23 /LS | 15,738 |
| 23001 HVAC for Dumpster Enclosure | | 234.00 sf | 47.74 /sf | 11,170 |
| 800 Dumpster Encosure | | | /LS | 61,740 |
| 900 Electrical, Instrumentation, and Controls Subcontract (Allowance) | | | | |
| 26002 Electrical, Instrumentation, and Controls Subcontract (Allowance) | | 1.00 ls | 720,197.43 /ls | 720,197 |
| 900 Electrical, Instrumentation, and Controls Subcontract (Allowance) | | | /LS | 720,197 |
| 01 Total | | 1.00 LS | 3,333,009.54 /LS | 3,333,010 |

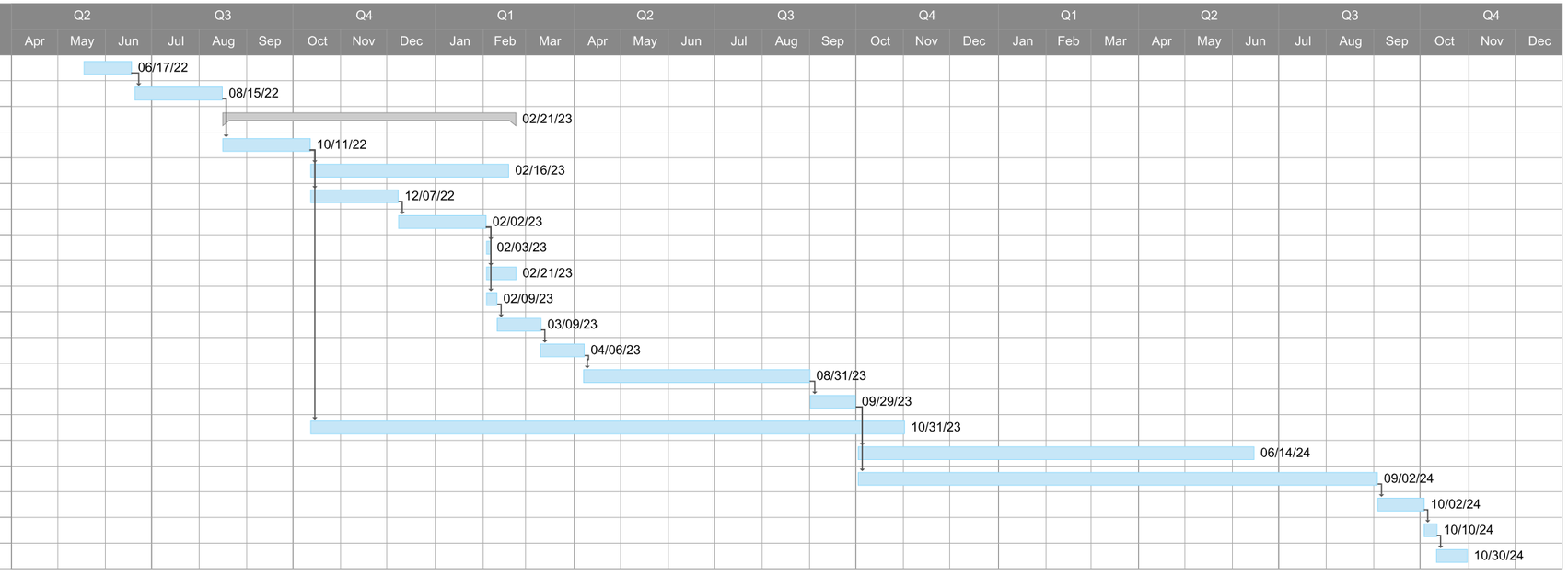
## Estimate Totals

| Description | Rate | Hours | Amount | Totals |
|---|---|---|---|---|
| Labor | | 2,833 hrs | 226,027 | |
| Material | | | 564,532 | |
| Subcontract | | | 330,114 | |
| Equipment | | 24,829 hrs | 322,814 | |
| Other | | | 60,870 | |
| | | | **1,504,357** | **1,504,357** |
| Labor Mark-up | 15.00 % | | 33,904 | |
| Material Mark-up | 10.00 % | | 56,453 | |
| Subcontractor Mark-up | 10.00 % | | 33,011 | |
| Construction Equipment Mark-up | 10.00 % | | 32,281 | |
| Other - Process Equip Mark-up | 8.00 % | | 4,870 | |
| | | | **160,519** | **1,664,876** |
| Material Shipping & Handling | 2.00 % | | 11,291 | |
| Material Sales Tax | | | | |
| Other - Process Eqp Sales Tax | | | | |
| **Net Markups** | | | **11,291** | **1,676,167** |
| Contractor General Conditions | 15.00 % | | 251,425 | |
| | | | **251,425** | **1,927,592** |
| Start-Up, Training, O&M | 2.00 % | | 38,552 | |
| | | | **38,552** | **1,966,144** |
| Undesign/Undevelop Contingency | 50.00 % | | 983,073 | |
| | | | **983,073** | **2,949,217** |
| Bldg Risk, Liability Auto Ins | 2.00 % | | 58,984 | |
| | | | **58,984** | **3,008,201** |
| Payment and Performance Bonds | 1.50 % | | 45,123 | |
| | | | **45,123** | **3,053,324** |
| Escalation to Midpoint (ALL) | 9.16 % | | 279,685 | |
| **Gross Markups** | | | **279,685** | **3,333,009** |
| **Total** | | | | **3,333,009** |

# Appendix B: Proposed Schedule

# SCPS - High Level Schedule

| | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 1 | Conceptual Design Report | 23d | 05/18/22 | 06/17/22 |
| 2 | Basis of Design Report | 41d | 06/20/22 | 08/15/22 |
| 3 | Detailed Design | 136d | 08/16/22 | 02/21/23 |
| 4 | 30% Design Submittal | 41d | 08/16/22 | 10/11/22 |
| 5 | NYSDEC Review | 92d | 10/12/22 | 02/16/23 |
| 6 | 60% Design Submittal | 41d | 10/12/22 | 12/07/22 |
| 7 | 90% Design Submittal | 41d | 12/08/22 | 02/02/23 |
| 8 | Plans and Spec Submitted to EFC | 1d | 02/03/23 | 02/03/23 |
| 9 | IFC | 13d | 02/03/23 | 02/21/23 |
| 10 | Bid Documents Finalized | 5d | 02/03/23 | 02/09/23 |
| 11 | Advertisement | 20d | 02/10/23 | 03/09/23 |
| 12 | Project Bidding | 20d | 03/10/23 | 04/06/23 |
| 13 | Review Bids - Select Contractor | 105d | 04/07/23 | 08/31/23 |
| 14 | Award/Negotiate Contract | 21d | 09/01/23 | 09/29/23 |
| 15 | Permitting | 275d | 10/12/22 | 10/31/23 |
| 16 | Equipment Procurement | 185d | 10/02/23 | 06/14/24 |
| 17 | Construction | 241d | 10/02/23 | 09/02/24 |
| 18 | Start-Up and Commissioning | 22d | 09/03/24 | 10/02/24 |
| 19 | Training | 6d | 10/03/24 | 10/10/24 |
| 20 | Project Turnover | 14d | 10/11/24 | 10/30/24 |

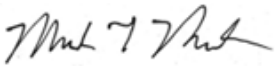


# Appendix C: Engineering Report Certification

**Engineering Report Certification**

To Be Provided by the Professional Engineer Preparing the Report

During the preparation of this Engineering Report, I have studied and evaluated the cost and effectiveness of the processes, materials, techniques, and technologies for carrying out the proposed project or activity for which assistance is being sought from the New York State Clean Water State Revolving Fund. In my professional opinion, I have recommended for selection, to the maximum extent practicable, a project or activity that maximizes the potential for efficient water use, reuse, recapture, and conservation, and energy conservation, taking into account the cost of constructing the project or activity, the cost of operating and maintaining the project or activity over the life of the project or activity, and the cost of replacing the project and activity.

| | |
|---|---|
| **Title of Engineering Report:** | Sauquoit Creek Pump Station - Sanitary Screening Facility Upgrades Engineering Report |
| **Date of Report:** | June 15, 2022 |
| **Professional Engineer's Name:** | Mark T. Richards |
| **Signature:** |  |
| **Date:** | June 15, 2022 |

# Appendix D: Smart Growth Assessment Form

NEW YORK STATE OF OPPORTUNITY. | Department of Health | Environmental Facilities Corporation

# Smart Growth Assessment Form

This form should be completed by an authorized representative of the applicant, preferably the project engineer or other design professional.[1]

## Section 1 – General Applicant and Project Information

Applicant: Oneida County

Project No.: C6-6070-14-00

Project Name: Sauquoit Creek Pump Station Sanitary Screening Facility Upgrades - June 2024 Addendum

Is project construction complete? ☐ Yes, date: ☐ No

Please provide a brief project summary in plain language including the location of the area the project serves:

This project intends to provide the Oneida County Sauquoit Creek Pump Station (SCPS) with a new wet weather holding tank to be used during extreme wet weather and screen malfunction events. This new 7,000,000-gallon tank is intended to receive additional flow during each of these events and upon completion of the event, it will drain back into the existing SCPS treatment system for discharge to the main plant. This project serves the Sauquoit Creek Sewer Shed.

## Section 2 – Screening Questions

### A. Prior Approvals

1. Has the project been previously approved for Environmental Facilities Corporation (EFC) financial assistance? ☐ Yes ☐ No
2. If yes to A(1), what is the project number(s) for the prior approval(s)? Project No.: C6-6070-14-00
3. If yes to A(1), is the scope of the previously-approved project substantially the same as the current project? ☐ Yes ☐ No

**If your responses to A(1) and A(3) are both yes, please proceed to Section 5, Signature.**

### B. New or Expanded Infrastructure

1. Does the project involve the construction or reconstruction of new or expanded infrastructure? ☐ Yes ☐ No

Examples of new or expanded infrastructure include, but are not limited to:

(i) The addition of new wastewater collection/new water mains or a new wastewater treatment system/water treatment plant where none existed previously;

(ii) An increase of the State Pollutant Discharge Elimination System (SPDES) permitted flow capacity for an existing wastewater treatment system; and OR

[1] If project construction is complete and the project was not previously financed through EFC, an authorized municipal representative may complete and sign this assessment.

(iii) An increase of the permitted water withdrawal or the permitted flow capacity for the water treatment system such that a Department of Environmental Conservation (DEC) water withdrawal permit will need to be obtained or modified, or result in the Department of Health (DOH) approving an increase in the capacity of the water treatment plant.

**If your response to B(1) is no, please proceed to Section 5, Signature.**

## Section 3 –Smart Growth Criteria

Your project must be consistent will all relevant Smart Growth criteria. For each question below please provide a response and explanation.

1. Does the project use, maintain, or improve existing infrastructure?
   ☐ Yes ☐ No

   Explain your response:

2. Is the project located in a (1) municipal center, (2) area adjacent to a municipal center, or (3) area designated as a future municipal center, as such terms are defined herein (please select one response)?

   ☐ Yes, my project is located in a municipal center, which is an area of concentrated and mixed land uses that serves as a center for various activities, including but not limited to: central business districts, main streets, downtown areas, brownfield opportunity areas (see *www.dos.ny.gov* for more information), downtown areas of local waterfront revitalization program areas (see *www.dos.ny.gov* for more information), areas of transit-oriented development, environmental justice areas (see *www.dec.ny.gov/public/899.html* for more information), and hardship areas (projects that primarily serve census tracts or block numbering areas with a poverty rate of at least twenty percent according to the latest census data).

   ☐ Yes, my project is located in an area adjacent to a municipal center which has clearly defined borders, is designated for concentrated development in the future in a municipal or regional comprehensive plan, and exhibits strong land use, transportation, infrastructure, and economic connections to an existing municipal center.

   ☐ Yes, my project is located in an area designated as a future municipal center in a municipal or comprehensive plan and is appropriately zoned in a municipal zoning ordinance

   ☐ No, my project is not located in a (1) municipal center, (2) area adjacent to a municipal center, or (3) area designated as a future municipal center.

   Explain your response and reference any applicable plans:

3. Is the project located in a developed area or an area designated for concentrated infill development in a municipally-approved comprehensive land use plan, local waterfront revitalization plan, and/or brownfield opportunity area plan?

   ☐Yes ☐No

   Explain your response and reference any applicable plans:

4. Does the project protect, preserve, and enhance the State's resources, including surface and groundwater, agricultural land, forests, air quality, recreation and open space, scenic areas, and significant historic and archaeological resources?

   ☐Yes ☐No

   Explain your response:

5. Does the project foster mixed land uses and compact development, downtown revitalization, brownfield redevelopment, the enhancement of beauty in public spaces, the diversity and affordability of housing in proximity to places of employment, recreation and commercial development, and the integration of all income and age groups?

   ☐Yes ☐No

   Explain your response:

6. Does the project provide mobility through transportation choices including improved public transportation and reduced automobile dependency?

   ☐Yes ☐No ☐N/A

   Explain your response:

7. Does the project involve coordination between State and local government, intermunicipal planning, or regional planning?

   ☐Yes ☐No

   Explain your response and reference any applicable plans:

8. Does the project involve community-based planning and collaboration?

   ☐Yes ☐No

   Explain your response and reference any applicable plans:

9. Does the project support predictability in building and land use codes?

   ☐Yes ☐No ☐N/A

   Explain your response:

10. Does the project promote sustainability by adopting measures such as green infrastructure techniques, decentralized infrastructure techniques, or energy efficiency measures?

    ☐Yes ☐No

    Explain your response and reference any applicable plans:

11. Does the project mitigate future physical climate risk due to sea-level rise, storm surges, and/or flooding, based on available data predicting the likelihood of future extreme weather events, including hazard risk analysis data, if applicable?

    ☐Yes ☐No

    Explain your response and reference any applicable plans:

## Section 4 – Miscellaneous

1. Is the project expressly required by a court or administrative consent order? ☐ Yes ☐ No

   If yes, and you have not previously provided the applicable order to EFC/DOH, please submit it with this form.

## Section 5 – Signature

By signing below, you agree that you are authorized to act on behalf of the applicant and that the information contained in this Smart Growth Assessment is true, correct and complete to the best of your knowledge and belief.

| | |
|---|---|
| Applicant: Oneida County | Phone Number: 315-798-5656 |
| Name and Title of Signatory: Karl E. Schrantz P.E., Commissioner | |
| Signature: | Date: 06/12/2024 |

# Appendix E: Full Environmental Assessment Form and the 2015 Negative Declaration Resolution

*INTRODUCTORY NO. 233*

*F.N. 2015-257*

# ONEIDA COUNTY BOARD OF LEGISLATORS

*RESOLUTION NO.*

*INTRODUCED BY: Messrs. Miller, Porter*
*2ND BY: Mr. Joseph*

**RE: APPROVAL OF THE CLEAN WATER STATE REVOLVING FUND, PROJECT NO. C6-6070-08-04, STATE ENVIRONMENTAL QUALITY REVIEW DETERMINATION OF SIGNIFICANCE, JULY 8, 2015**

**WHEREAS**, Oneida County is implementing requirements stipulated in a NYSDEC-issued Consent Order (R620060823-67); and;

**WHEREAS**, the Consent Order requires improvements and modifications to County owned and operated wastewater management facilities including the Oneida County Water Pollution Control Plant (WPCP) located in the City of Utica, NY, the Sauquoit Creek Pump Station located in the Village of Yorkville; the Sauquoit Creek Pumping Station Force Main located in the Village of Yorkville, Town of Whitestown, and City of Utica, and;

**WHEREAS**, these required improvements and modifications are to be funded, in part, through the State Revolving Fund, which is administered by the Environmental Facilities Corporation (EFC); and;

**WHEREAS**, discretionary actions approved or undertaken by local and State agencies require review under the State Environmental Quality Review Act (SEQRA); and;

**WHEREAS**, SEQRA implementing regulations (6 NYCRR § 617.5(c)(29)) exempt from further review actions, which consist of "civil or criminal enforcement proceedings, whether administrative or judicial, including a particular course of action specifically required to be undertaken pursuant to a judgment or order, or the exercise of prosecutorial discretion;" and;

**WHEREAS**, EFC requested completion of a Full Environmental Assessment Form (EAF) in conjunction with a coordinated SEQRA process; and;

**WHEREAS**, the County prepared and disseminated Part 1 of a Full EAF with the objective of initiating a coordinated review with other Involved Agencies; and;

**WHEREAS**, other Involved Agencies concurred with the County acting as SEQRA Lead Agency; and;

**WHEREAS**, the County, as SEQRA Lead Agency, prepared Parts 2 and 3 of a Full EAF; and;

**WHEREAS**, the County, as SEQRA Lead Agency, has considered the information contained in the Full EAF, which included an assessment of potential environmental and socio-economic impacts, as well as mitigation to reduce or eliminate those impacts, now therefore;

**BE IT RESOLVED THAT**, Oneida County, in its capacity as SEQRA Lead Agency, as determined in a Coordinated Review process, has concluded that the project will result in no significant adverse impacts on the environment and, therefore, an environmental impact statement need not be prepared. Accordingly, the County

of Oneida hereby issues a Negative Declaration with regard to proposed improvements and modifications to County owned and operated waste water management facilities.

| | | |
|---|---|---|
| APPROVED: | Public Works | (July 6, 2015) |
| | Ways & Means Committee | (July 8, 2015) |
| DATED: | July 8, 2015 | |

Adopted by the following vote:
AYES 23 NAYS 0 ABSENT 0

**OFFICE, CLERK BOARD OF COUNTY LEGISLATORS)**
**COUNTY OF ONEIDA ) SS:**

I, hereby certify that I have compared the foregoing extract from the minutes of meeting of the Board of County Legislators of Oneida County held on the 8th day of July, 2015 with the original record thereof on File in this office and that the same is a true and correct transcript therefrom, and of the whole of such original.

**IN TESTIMONY WHEREOF,** I have hereunto affixed the seal of said Board this 8th day of July, 2015

ONEIDA COUNTY • NEW YORK 1798 BOARD OF LEGISLATORS

Clerk
**MIKALE BILLARD**

# Appendix F: Other Maps Figures, and Permits

SCPS Environmental Mapper

SCPS FEMA Map (Firmette)

EJ Area Maps Oneida County Sewer District

Oneida County Sewer District Map

Location Map

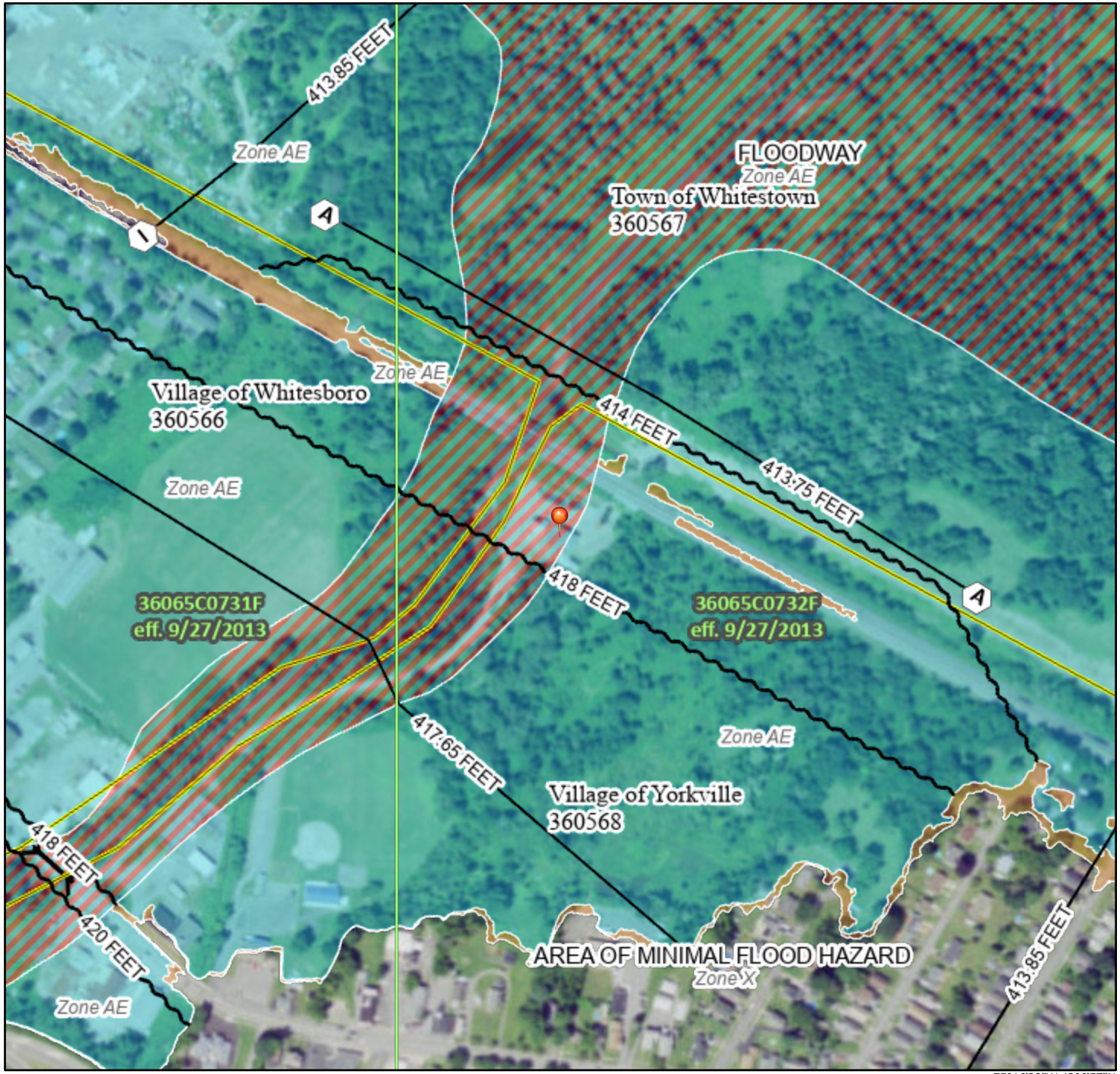
Consent Order R6-20060823-67-M2 – 11-30-2021


**FIGURE**
**NYSDEC ENVIRONMENTAL MAPPER**
**SCPS SITE**

# National Flood Hazard Layer FIRMette

FEMA

75°17'6"W 43°7'23"N




75°16'28"W 43°6'57"N

Feet 1:6,000

0 250 500 1,000 1,500 2,000

*Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020*

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

**OTHER AREAS**
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

**GENERAL STRUCTURES**
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**
- Digital Data Available
- No Digital Data Available
- Unmapped

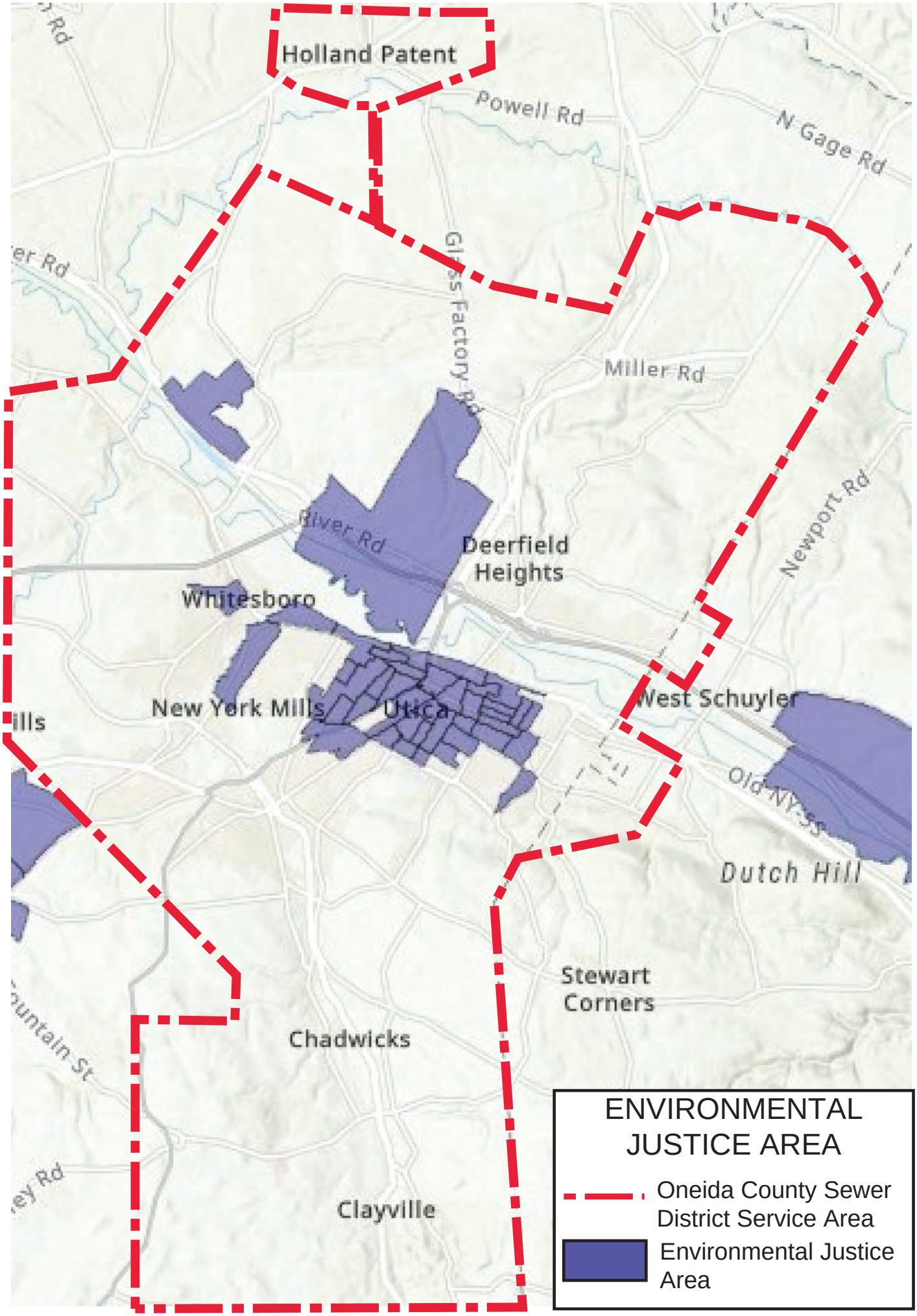
N

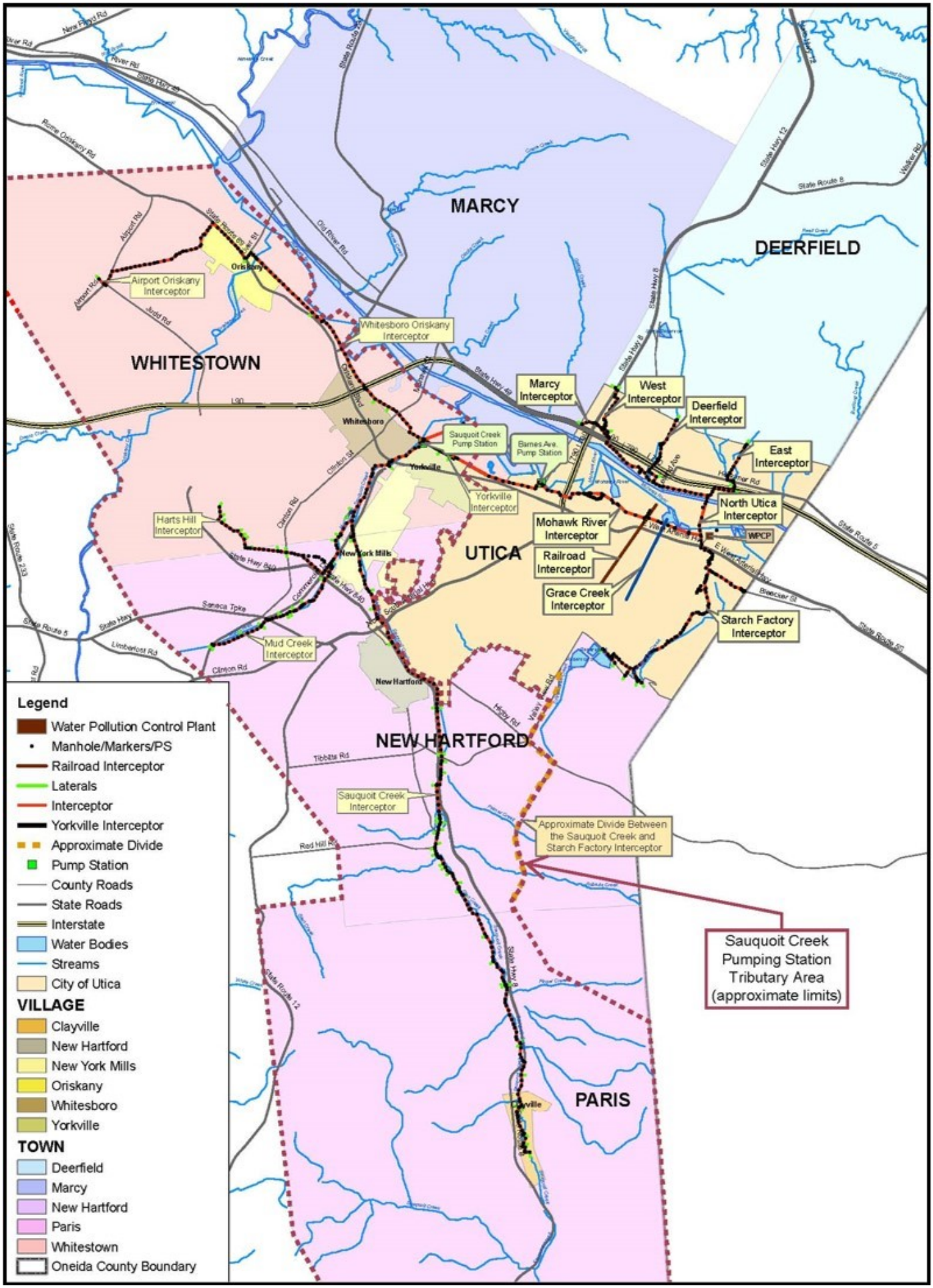
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

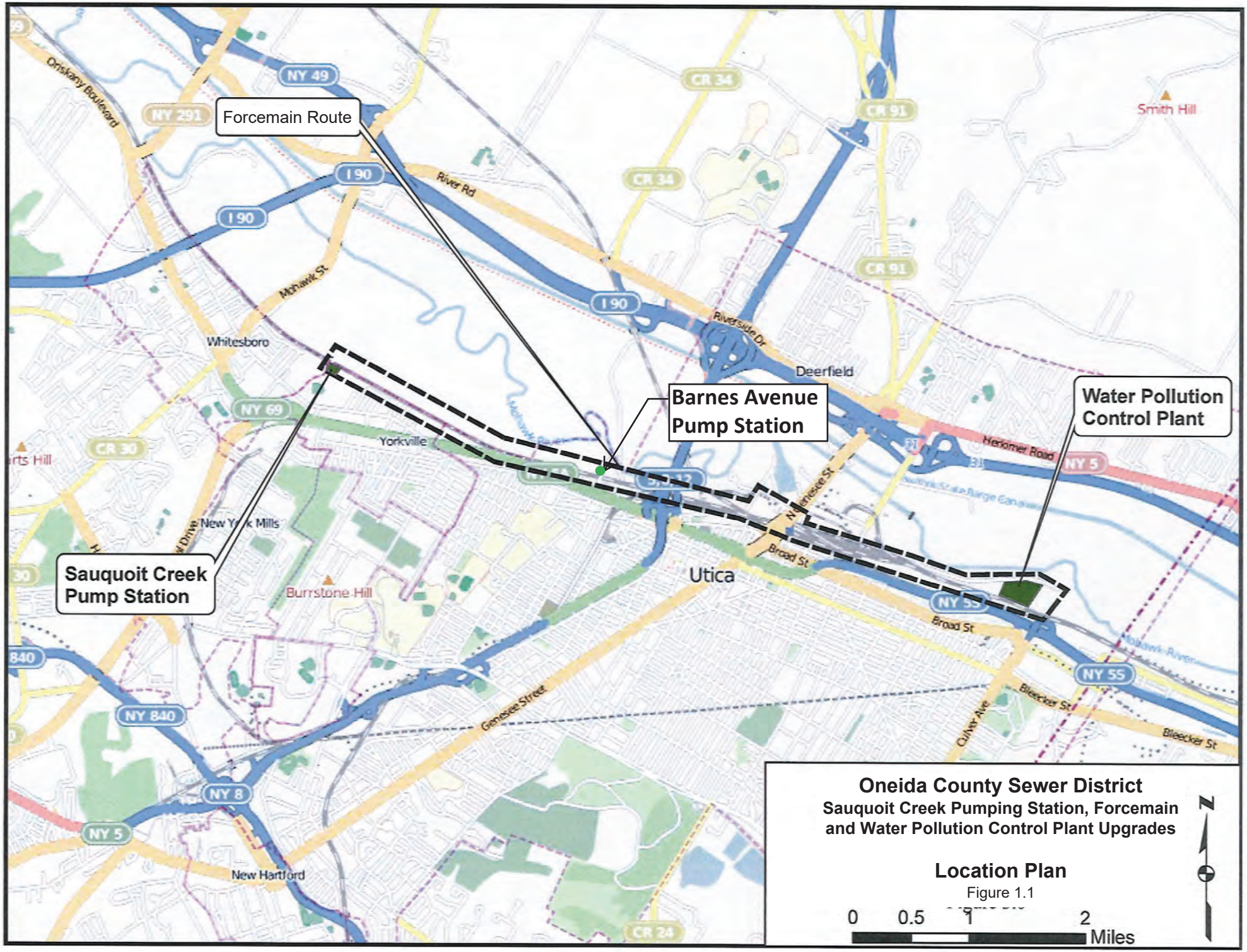
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/14/2022 at 7:36 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.


Holland Patent
Powell Rd
N Gage Rd
Glass Factory Rd
Miller Rd
Newport Rd
River Rd
Deerfield Heights
Whitesboro
New York Mills
Utica
West Schuyler
Dutch Hill
Stewart Corners
Chadwicks
Clayville
ENVIRONMENTAL JUSTICE AREA
Oneida County Sewer District Service Area
Environmental Justice Area


MARCY
DEERFIELD
WHITESTOWN
UTICA
NEW HARTFORD
PARIS
Airport Oriskany Interceptor
Whitesboro Oriskany Interceptor
Marcy Interceptor
West Interceptor
Deerfield Interceptor
East Interceptor
Sauquoit Creek Pump Station
Barnes Ave. Pump Station
Yorkville Interceptor
North Utica Interceptor
Harts Hill Interceptor
Mohawk River Interceptor
WPCP
Railroad Interceptor
Grace Creek Interceptor
Starch Factory Interceptor
Mud Creek Interceptor
Sauquoit Creek Interceptor
Approximate Divide Between the Sauquoit Creek and Starch Factory Interceptor
Sauquoit Creek Pumping Station Tributary Area (approximate limits)
Legend
Water Pollution Control Plant
Manhole/Markers/PS
Railroad Interceptor
Laterals
Interceptor
Yorkville Interceptor
Approximate Divide
Pump Station
County Roads
State Roads
Interstate
Water Bodies
Streams
City of Utica
VILLAGE
Clayville
New Hartford
New York Mills
Oriskany
Whitesboro
Yorkville
TOWN
Deerfield
Marcy
New Hartford
Paris
Whitestown
Oneida County Boundary


Forcemain Route
Barnes Avenue Pump Station
Water Pollution Control Plant
Sauquoit Creek Pump Station
Oneida County Sewer District
Sauquoit Creek Pumping Station, Forcemain and Water Pollution Control Plant Upgrades
Location Plan
Figure 1.1
0 0.5 1 2
Miles
N
Utica
Deerfield
Whitesboro
Yorkville
New York Mills
Burrstone Hill
New Hartford
Smith Hill
River Rd
Broad St
Genesee Street
Bleecker St
Herkimer Road
Riverside Dr
Mohawk St
Oriskany Boulevard
NY 49
NY 291
I 90
CR 34
CR 91
NY 69
CR 30
NY 840
NY 8
NY 5
NY 55
CR 24

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**Office of General Counsel, Region 6**
Dulles State Office Building, 317 Washington Street, Watertown, NY 13601-3787
P: (315) 785-2238 | F: (315) 785-2242
www.dec.ny.gov

November 30, 2021

VIA EMAIL: ce@ocgov.net

Anthony J. Picente, Jr.
Oneida County Executive
Oneida County Office Building, 10th Floor
800 Park Avenue
Utica, NY 13501

Re: Consent Order No.: R6-20060823-67-M2

Dear Anthony Picente:

Enclosed is a conformed copy of Oneida County's Second Modification Consent Order.

Thank you for your cooperation.

Sincerely,

April L. Sears

April L. Sears
Program Aide
Region 6

Enclosure

ec: Karl Schrantz, Commissioner - WPCP (w/enc.)
Matthew Duffany (w/enc.)
Jennifer Dougherty (w/enc.)
Barbara McGinn (w/enc.)
Melissa Evans (w/enc.)

**STATE OF NEW YORK**
**DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

In the Matter of Violations of Article 17 of the Environmental Conservation Law and of Part 750 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York occurring in the Town of Whitestown by:

**Oneida County**,

Respondent.

---

**ORDER ON CONSENT**
**SECOND MODIFICATION**

**Case Number:**
**R6-20060823-67-M2**

**WHEREAS:**

1. On July 11, 2007, the New York State Department of Environmental Conservation ("Department") and the County of Oneida ("Respondent") entered into an administrative Order on Consent (R6-20060823-67) ("2007 Order") to address violations of their State Pollutant Discharge Elimination System ("SPDES") Permit Number NY-0025780 ("Permit"), Environmental Conservation Law ("ECL") Section 17-0803 and Section 17-0509, and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York ("6 NYCRR") Section 750-2.1 and Section 750-2.9 at the Oneida County Water Pollution Control Plant ("WPCP" or "Facility'). Specifically, the 2007 Order required Respondent to upgrade the Sauquoit Creek Pump Station and the WPCP to eliminate sewage overflows into the Mohawk River. The 2007 Order required Respondent to complete the upgrades by October 31, 2014.

2. On December 12, 2011, the parties entered into a Consent Order (R6-20060823-67) ("2011 Order") which superseded and replaced, in its entirety, the 2007 Order except for the following documents, reports and their respective applicable correspondence which were developed pursuant to the 2007 Order:

    a. Flow Management Plan and Wet Weather Operating Plan - Received December 10, 2007;

    b. Oneida County Sewer District ("OCSD") Sewer Overflow Response Plan – Received October 30, 2007, implemented April1, 2008 - The measures set forth

in this Plan will continue to be implemented until the discharges from the Sauquoit Creek Pump Station are brought into compliance;

c. OCSD Inflow/Infiltration Offset Plan dated January 4, 2008, as revised September 23, 2008;

d. Supplemental Report – Re-evaluation of Temporary Treatment Alternatives for the Sauquoit Creek Pumping Station Bypass – Received December 24, 2010;

e. OCSD Sauquoit Creek Pumping Station Sanitary Sewer Overflow Mitigation Plan – Received July 7, 2010; and

f. OCSD December 23, 2010 response to the Department's October 27, 2010 comments on the Sauquoit Creek Pumping Station Sewer Overflow Mitigation Plan.

3. The practices, schedules, and other requirements set forth in these reports and submittals listed in Paragraph 2, above, as may be amended from time to time with the approval of the Department shall remain in full force and effect, unless they are inconsistent with the requirements of Schedule A attached hereto, and in such case, Schedule A shall control.

4. Should any future reports or facility repairs and upgrades necessitate changes to the documents listed in Paragraph 2, above, any modifications to said documents may be initiated by the Department or Respondent. Any modification approved by both parties will become an enforceable component of this Order.

5. The 2011 Order extended the completion date of the required upgrades to December 31, 2021, based on an engineering study claiming the upgrades could not be completed earlier.

6. On June 28, 2018, the parties entered into a Consent Order (R6-20060823-67-M1) ("2018 Consent Order First Modification") which, *inter alia*, approved Respondent's request for interim effluent limits for Influent Flow, Biological Oxygen Demand ("$BOD_5$"), Total Suspended Solids ("TSS") and Nitrogen during Respondent's construction of the Facility's upgrades which was to be completed by December 31, 2021.

7. On April 1, 2019, the Department issued the most recent SPDES Permit for the Facility with an Effective Date of April 1, 2019 and an Expiration Date of March 31, 2024.

8. By letter dated June 16, 2021, Respondent requested an extension of the compliance date for completion of the Facility's upgrades to December 31, 2022 citing four (4) flooding events resulting from project delays in conjunction with logistical difficulties and material delays associated with the COVID-19 pandemic.

Based upon Respondent's correspondence, the Department, after due consideration having been had thereon, believes that this Consent Order Second Modification will be advantageous to the State.

**NOW, THEREFORE**, having considered this matter, and being duly advised, **IT IS ORDERED THAT:**

## I. MODIFICATIONS TO THE 2018 CONSENT ORDER FIRST MODIFICATION

Pursuant to Paragraphs XII and XIV of the 2011 Order, Respondent is bound by and agrees to follow and comply with the terms, provisions, and requirements set forth in this 2021 Consent Order Second Modification. Upon the effective date of this 2021 Consent Order Second Modification, it is hereby incorporated into and made an enforceable part of the 2011 Order and 2018 Consent Order First Modification. Except as stated herein, all terms and conditions of the 2011 Order and the 2018 Consent Order First Modification remain in effect.

## II. COMPLIANCE

Respondent shall comply with the provisions, terms, and conditions set forth in this 2021 Consent Order Second Modification as modified by the attached Appendix A, the Schedule for Compliance, which is incorporated into and made a part of this 2021 Consent Order Second Modification. Respondent's failure to comply with any provision of the 2021 Consent Order Second Modification or the 2018 Consent Order First Modification or the

2011 Order shall constitute a default and a violation of said order(s), and upon such default and violation, the Department's right to pursue all claims and remedies administratively, at law, or in equity shall not be affected by anything contained in said order(s).

## GENERAL PROVISIONS

### III. FORCE MAJEURE

If Respondent cannot comply with a deadline or requirement of this Order because of natural disaster, Federal or State declared national or state emergency based on an epidemic or pandemic, act of God, war, terrorist attack, strike, riot, judicial injunction, or other, similar unforeseeable event which was not caused by the negligence or willful misconduct of Respondent and which could not have been avoided by Respondent through the exercise of due care, Respondent shall apply in writing to the Department within a reasonable time after obtaining knowledge of such fact and request an extension or modification of the deadline or requirement. Respondent shall include in such application the measures taken by Respondent to prevent and/or minimize any delays. Failure to give such notice constitutes a waiver of any claim that a delay is not subject to penalties.

### IV. MODIFICATION

No change in this Order shall be made or become effective except as specifically set forth by written order of the Commissioner, being made either upon written application of Respondent, or upon the Commissioner's own findings after notice and opportunity to be heard have been given to Respondent. Respondent shall have the burden of proving entitlement to any modification requested pursuant to this Standard Provision or the "Force

Majeure" provision, supra. Respondent's request for modification shall not be unreasonably denied by the Department, which may impose such additional conditions upon Respondent as the Department deems appropriate.

## V. EFFECTIVE DATE

The Effective Date of this 2021 Consent Order Second Modification is the date it is signed and "so ordered" by the Commissioner of the Department or his designee. The parties hereto consent to entry of the second modification without further notice.

Dated: Watertown, New York

November 24, 2021

BASIL SEGGOS, COMMISSIONER
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

By: Randall Young
Randall C. Young
Regional Director
Region 6

## CONSENT BY RESPONDENT

Respondent hereby consents to the issuing and entering of this Order, waives Respondent's right to a hearing herein as provided by law, and agrees to be bound by the provisions, terms, and conditions contained in this Order.

By: _____
Anthony J. Picente, Jr.
Oneida County Executive

Date: 10-19-21

STATE OF NEW YORK )
) ss.:
COUNTY OF ONEIDA )

On the 19 day of October, in the year 2021, before me, the undersigned, personally appeared Anthony J. Picente, Jr., personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public
Notary Public, State of New York
No. 01MA4792150
Qualified in New York County
Commission Expires September 06, 2022

## APPENDIX A – SCHEDULE FOR COMPLIANCE

## NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**Respondent: Oneida County WPCP- SPDES No. NY0025780**

**Case No. R6-20060823-67-M2**

1. Respondent must complete the upgrades to the Facility in substantial conformance with the approved engineering report and the approved plans and specifications by December 31, 2022.

2. Respondent shall comply with the following Interim Limits from the Effective Date of this 2021 Consent Order Second Modification until the completion date of December 31, 2022.

| OUTFALL | LIMITATIONS APPLY: | RECEIVING WATER | EXPIRATION DATE |
|---|---|---|---|
| 001 | Year Round (unless specified) | Mohawk River | 12/31/2022 |

### INTERIM EFFLUENT LIMITS

| PARAMETER | Effluent Limit | | | | | Monitoring Requirements | | | | FN |
|---|---|---|---|---|---|---|---|---|---|---|
| | Type | Limit | Units | Limit | Units | Sample Frequency | Sample Type | Location | | |
| | | | | | | | | Inf. | Eff. | |
| FLOW | Daily Max. | Monitor | MGD | | | Continuous | Meter | X | | 3 |
| $BOD_5$ | 30-Day Avg. | 40 | mg/L | | | Daily | 24-hr. Comp. | X | X | 1, 2a |
| $BOD_5$ | 7-Day Avg. | 60 | mg/L | | | Daily | 24-hr. Comp. | X | X | 2a |
| Solids, suspended (TSS) | 30-Day Avg. | 40 | mg/L | | | Daily | 24-hr. Comp. | X | X | 1, 2a |
| Solids, suspended (TSS) | 7-Day Avg. | 60 | mg/L | | | Daily | 24-hr. Comp. | X | X | 2a |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Nitrogen, total Kjeldahl (as N) June 1- October 31 | Daily Max. | Monitor | mg/L | Monitor | lbs/d | Daily | 24-hr. Comp. | X | X | 2a |

**FOOTNOTES:**

1. **Removal Rates** – Effluent shall not exceed 35% and 35% of influent concentration values for $BOD_5$ and TSS, respectively.

2. **Composite Sampling:**

   a. Composite samples shall be composed of a minimum of 6 grab samples collected over the specified collection period, either at a constant sample volume for a constant flow interval or at a flow-proportional sample volume for a constant time interval.

3. **Wet Weather Flows** – During the effective period of these interim limits, the minimum flow through the secondary treatment works during wet weather shall be 48 MGD.

4. **Interim Limits** – The limits set forth herein supersede ONLY the following limits in SPDES Permit No. NY0025780. All other effluent limitations remain in full effect.

   a. Minimum wet weather flow through secondary treatment of 53 MGD;

   b. 30-Day Average $BOD_5$ and TSS of 30 mg/L;

   c. 7-Day Average $BOD_5$ and TSS of 45 mg/L;

   d. Daily Maximum TKN (June 1 – October 31) of 1120 lbs/d.

# Appendix I: NYS Senate and Assembly Letters of Support

**JOSEPH A. GRIFFO**
SENATOR, 53RD DISTRICT

ASSISTANT MINORITY LEADER

THE SENATE
STATE OF NEW YORK

**ALBANY OFFICE:**
ROOM 414
STATE CAPITOL
ALBANY, NEW YORK 12247
(518) 455-3334
FAX: (518) 426-6921

**UTICA OFFICE:**
207 GENESEE STREET, ROOM 408
UTICA, NEW YORK 13501
(315) 793-9072
FAX: (315) 793-0298

**EMAIL ADDRESS:**
griffo@nysenate.gov

June 5, 2024

Honorable Maureen A. Coleman
President and Chief Executive Officer
New York State Environmental Facilities Corporation
625 Broadway
Albany, NY 13207

Dear President Coleman:

I write in support of Oneida County in its application for Water Infrastructure Improvement Act (WIIA) funding. The County, through its Department of Water Quality and Water Pollution Control, administers the Oneida County Sewer District (OCSD) which encompasses 15 municipalities located within the Greater Utica area. The County, in coordination with Oneida County Sewer District municipalities, intends use the WIIA funds toward upgrades at the Sauquoit Creek Pumping Station.

Specifically, the WIIA funds will be used toward the design and construction of resiliency enhancements at the Sauquoit Creek Pumping Station to further mitigate the negative impacts to the facility during extreme wet weather events. These upgrades/enhancements will further protect the public health as well as the water quality of the Mohawk River.

This project will be another milestone in the County's comprehensive and state-of-the-art water quality improvement initiatives. For the region this means increased system capacity for future economic and residential development while also serving Environmental Justice areas.

I hope you will give this proposal consideration.

Sincerely,

Joseph A Griffo

Joseph A. Griffo
Senator

MARIANNE BUTTENSCHON
Assemblywoman 119th District

THE ASSEMBLY
STATE OF NEW YORK
ALBANY

COMMITTEES
Agriculture
Banks
Economic Development, Job Creation, Commerce and Industry
Education
Higher Education
Veterans' Affairs

June 12, 2024

Honorable Maureen A. Coleman
President and Chief Executive Officer
New York State Environmental Facilities Corporation
625 Broadway
Albany, NY 13207

Dear President Coleman:

I am pleased to support Oneida County in its application for Water Infrastructure Improvement Act (WIIA) funding. The County, through its Department of Water Quality and Water Pollution Control, administers the Oneida County Sewer District (OCSD) which encompasses 15 municipalities located within the Greater Utica area. The County, in coordination with Oneida County Sewer District municipalities, intends to use the WIA funds toward upgrades at the Sauquoit Creek Pumping Station.

Specifically, the WIIA funds will be used toward the design and construction of resiliency enhancements at the Sauquoit Creek Pumping Station to further mitigate the negative impacts to the facility during extreme wet weather events. These upgrades/enhancements will further protect the public health as well as the water quality of the Mohawk River.

This project will be another milestone in the County's comprehensive and state-of-the-art water quality improvement initiatives. For the region this means increased system capacity for future economic and residential development while also serving Environmental Justice areas.

Please give this application every positive consideration as we strongly endorse this project and the awarding of WIIA funds to Oneida County.

Sincerely,

Marianne Buttenschon

Assemblywoman Marianne Buttenschon
119th Assembly District
State Office Building
207 Genesee St
Utica, NY 13501