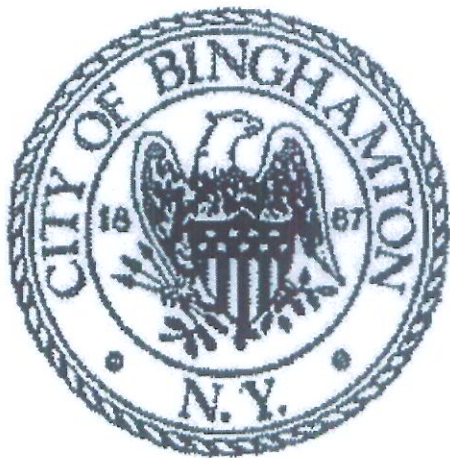


**Binghamton-Johnson City Joint Sewage
Treatment Plant Restoration and
Rehabilitation Project**

2017 Quarter 4 Report

*City of Binghamton
Village of Johnson City
Joint Sewage Board*



December 2017

2017 QUARTER 4 REPORT

BINGHAMTON-JOHNSON CITY JOINT SEWAGE TREATMENT PLANT RESTORATION AND REHABILITATION PROJECT

CASE NO: R7-20110628-59

In accordance with Paragraph A-1c. of the Second Modification Consent Order (Case No. 87-20110628-59) between the City of Binghamton, Village of Johnson City, the Joint Sewage Board, and the State of New York, the City submits this 2017 Quarter 4 Report. The report summarizes the status and progress of the projects and programs required by the Consent Order from October 2017 to December 2017.

SECTION 1— FACILITY OPERATIONS

We continue to operate in CEPT mode. Settling Tanks 7, 8, 9 and 10 have been taken off line in preparation for work to be completed. Flow has been reduced to receive a maximum of 35 MGD. The Binghamton grit system is off-line. CEPT continues to be operational.

See Attachment A for the plant performance during this Quarter.

Background

The Binghamton - Johnson City Joint Sewage Treatment Plant (BJCJSTP) processes 18 million gallons per day with the capability of processing up to 60 million gallons per day (MGD) of wet weather flow. This plant is jointly owned by the City of Binghamton and the Village of Johnson City and managed by the Binghamton-Johnson City Joint Sewage Board (BJCJSB).

The BJCJSTP has suffered several catastrophic events since 2006. In 2006, the BJCJSTP was flooded which affected many of the processes in operation. In May of 2011, a concrete structure suffered structural failure, and in September 2011, the BJCJSTP suffered a 500 year flood that critically damaged equipment and rendered the secondary treatment fundamentally inoperable. The secondary process system is still largely inoperable today. A Consent Order was negotiated between the City of Binghamton, the Village of Johnson City, the BJCJSB and the NYSDEC to develop a plan to restore treatment operations at the BJCJSTP. The Consent Order requires the BJCJSTP to restore secondary treatment functionality and be able to fully treat 35 MGD of wet weather flow by August 1, 2018. To achieve this level of treatment, the reconstruction and testing of the Secondary Treatment Process must be completed as necessary to achieve treatment of 35 MGD. To comply with the Consent Order, the Sewage Treatment Plant must then be fully operable by May, 1, 2019, including the remainder of the secondary treatment process. There are also several interim milestones included in the Consent Order.

The project is being constructed in accordance with Wicks Law, which requires the project be bid as multiple prime contracts. More specifically, Wicks Law requires that the bulk of the construction work, consisting of the secondary treatment biological filtration filters (BAF), be

divided into a General Civil Construction Contract, an Electrical Contract, an HVAC Contract and a Plumbing Contract. The following projects are either nearing completion, in construction, or in the planning stage.

Contract No.	Description	Status
Contract No. 1	Compost Facility Demolition	Complete
Contract No. 2	FEMA Mechanical	Substantial completion to be issued in January 2017. Anticipated final completion date March 2018.
Contract No. 3	BAF Facility Demolition	Complete
Contract No. 4	MCC HH Emergency Replacement	Complete
Contract No. 5	BAF Restoration and Rehabilitation Civil Contract	Notice to Proceed (NTP) issued May 27, 2016.
Contract No. 6	BAF Electrical	NTP issued May 27, 2016
Contract No. 7	BAF HVAC	NTP issued May 27, 2016
Contract No. 8	BAF Plumbing	NTP issued May 27, 2016
Contract No. 9	Secant Pile Contract	Substantial Completion in December 2016. Final Completion October 2017.
Contract No. 10	Solids Handling Renovation Civil	NTP Issued July 20, 2017
Contract No. 11	Solids Handling Renovation Electrical	NTP Issued July 20, 2017
Contract No. 12	Solids Handling Renovation HVAC	NTP Issued July 20, 2017
Contract No. 13	Solids Handling Renovation Plumbing	NTP Issued July 20, 2017
Floodwall	Floodwall and New Diversion Structure	Anticipated completion date July of 2018.

Contract Descriptions

Contract No. 1 - Compost Facility Demolition

Demolition of the upper portion of the compost facility was performed to accommodate the construction of the new Administration Building to house the plant staff as well as provide the new control room to operate the new facilities. Demolition of the lower portion of the Compost Building clears the way for the construction of a new maintenance facility.

Contract Status: 100% Complete

Contract No. 2 - FEMA Mechanical

The FEMA Mechanical Project replaces valves, equipment and other miscellaneous items damaged in the 2011 flood. It includes equipment in both the East and West Primary Sludge

Pumping Stations, valves and equipment located in the Head House, and equipment associated with Sludge Thickener Pumping Station Nos. 1 and 2. Work associated with this contract is being reimbursed by FEMA due to the flood of 2011.

Status: During this quarter, Blue Heron performed very little work. We have negotiated with Blue Heron to delete some of the valve replacements and equipment installations that GHD has determined should no longer be performed under this contract.

Three Month Look Ahead: Contractor has completed all remaining work with the exception of the punch list work. Notice of Substantial Completion has been prepared and is in the process of being executed.

Contract Status: 95% Complete

Contract No. 3 - BAF Facility Demolition

The BAF Demolition Contract removed existing structures and utilities that conflict with the new construction work included in the BAF Restoration Project. Demolition efforts include selective demolition in the existing process tanks (C-Filters, N-Filters, and DN-Filters) and buildings and mechanical equipment and piping to ready the site for new construction.

Status: The scope of work for the contract was increased with five Change Orders. Change Order One modified the contract to demolish and remove the existing Blower Building to improve construction on Contracts 5-8 at the C-N cells 1-8. Change Order Two demolished the known concrete in the C cell area inside the secant pile area below the elevation 825 (the original limit of demolition indicated on the contract documents). Change Order Three removed the additional concrete pile caps and steel H piles not originally included in the contract documents and also backfilled from elevation 825 to 831. Change Order Four compensated the contractor for demolition of approximately 3600 CY of additional concrete within the secant pile area not known to exist. The removal of the additional concrete eliminated a delay in excess of four months on the overall project, and reduced the cost to avoid having a future contractor remove the concrete. Change Order Five compensated LeChase for repairing defective rebar from the original construction while LeChase was repairing the rebar that they overcut at their own expense. The final change was to repair the existing rebar that was cut during the original construction of the C cells.

Contract Status: 100% Complete

Contract No. 4 - MCC - HH Emergency Replacement

Contract 4 replaces the original existing Motor Control Center (MCC) in the Head House. The MCC is 50 years old, and is identified as MCC-HH. The contract was bid as an emergency contract because the electrical system in the Head House is both critical to keeping the BJCJSTP in service, and because the original MCC is extremely unreliable due to the age and condition of the gear. MCC HH Emergency Replacement also replaces the existing raw sewage pump drives of the existing 50 year old equipment including new electrical feeders from the HH to the Johnson City

Grit House No. 1, a new feeder from the HH to the Thickened Sludge Pump Station No. 1, and various other panel boards. The emergency work also includes replacement of the existing raw sewage variable frequency drives that were located in the existing MCC HH. The new drives will be more reliable, more efficient, and will provide better performance of the existing raw sewage pumps.

Status: The new VFD's and MCC HH have been installed in the Head House. All work on the MCC HH project has been completed including the removal of the existing MCC, and project closeout items. We have received the final reports on testing, and the final trip settings on MCC HH from the manufacturer based on actual loadings measured in the field. Paper work is being processed for Final Completion.

Contract Status: 100% Complete

Contract No. 5 - BAF Restoration and Rehabilitation Civil Contract

When combined with the other BAF contracts (Nos. 6, 7 & 8), Contract No. 5, the General Civil contract, is intended to provide a functioning automated plant using a BIOSTYR system that can be modified to fit current plant configurations. It is also intended to provide functioning automated headworks and primary clarification processes upstream of the BIOSTYR system and solid handling processes downstream of the BIOSTYR system.

Major components of the work under Contract No. 5 include new coarse screens and ancillary equipment, new piping and valves for the influent pumps, new metering equipment, new fine screens and grit removal with ancillary equipment, a new primary distribution box, new mechanical equipment for primary clarifiers 1-10, new chemical equipment for primary treatment, modification of the primary clarifier structural components to replace the aged and deteriorated mechanical equipment, new secondary influent pumps and rehabilitation of existing pump stations for the new BAF system, a new BAF backwash tank, new CN-BAF and DN-BAF facilities, a new methanol system that will feed the DN-BAF cells, new Ultra Violet Light disinfection system to replace the existing chlorine disinfection system, new sludge thickening equipment and systems, a new administration building, new odor control equipment, two new 2MW electric generators, and a new plant outfall to the river.

Status: The NTP for Contract No. 5 was issued on May 27, 2016, which complied with milestone requirements in the revised Consent Order. During this quarter, the concrete work for the new Headworks and BAF Backwash Treatment Facility continued. Concrete work for the walls for the BAF Backwash Treatment Facility also continued this quarter. The concrete work is complete for the primary clarifiers 7-10, and the interior coatings on the walls in PST & -10 are nearing completion. Demolition is complete in the CN Cells 1-8 and the UV Reactor area. Concrete work in C-N Cells 1-8 is ongoing and should be advanced enough to install the nozzle decks in C-N Cells 1-8 in the next quarter. Concrete work and brick work was completed this quarter on the Administration Building and the Chemical Storage Building. The new Administration Building, with the exception of the new green roof that is to be installed in the southwest corner of the building is nearing completion. PC is making a concerted effort to complete the interior of the Administration Building with the intention of having it ready to occupy with STP staff in February. Floor tile will be installed after the HVAC system is tested

in January 2018. The new Chemical Building interior coatings are progressing and should be complete in January.

The temporary coarse screen and bypass pumping are installed in the existing regulator vault and are now operational. This has allowed the existing coarse screen building to be demolished. The influent flume for the raw sewage lift pumps for the Binghamton Headhouse and coarse screen area have been cleaned out. The Headhouse piping replacement is nearing completion and should be complete in January. After the piping is and instrumentation is complete, the Binghamton flow will be rediverted to the existing Headhouse.

The shotcrete subcontractor eventually mobilized to do their work last quarter. The shotcrete subcontractor has completed installing the shotcrete for the walls in the BAF Backwash Tank and on the north end of the C-N Cells 9-14. The installation of the shotcrete in the backwash tank has eliminated the structural issues with the out of sequence work proposed by PC. The only shotcrete remaining to be completed is on the south end of C-N Cells 9-14 and also some fillets at the base of the walls in the BAF Backwash Tank. There appears to be some minor cracking in the shotcrete that needs to be repaired. This was to be expected.

Concrete work in C-N Cells continued, and is scheduled to be completed in early to middle of 2018. The Master Schedule was updated to show the status of the work through the quarter and it reflects PC completing Phase 1 in autumn of 2018. The latest draft also shows the Phase 2 Milestone is scheduled to complete in the middle of 2019. The Kruger submittal is nearing completion. The only remaining element of their submittal that needs to be completed is the UV netting that covers the C-N and D-N Cells. Most of the Kruger supplied equipment and concrete elements have been delivered and are in storage locally.

The demolition of the West Scrubber Building is complete, and the construction of the northwest electrical is nearing completion. The asbestos containing material at the west scrubber building and the chlorine contact tank #3 has been completed. Sheeting for the flood wall section on the south side of the plant is complete, and the storm water pumps station number 4 has been installed. As soon as PC completes the foundation for the new Blower Building, they will begin installing the south flood wall. PC failed to achieve the Flood Protection Milestone specified and is being held accountable for all costs incurred by the City due to their failure to meet the November 18, 2017 milestone requirement. Installation of the 72" outfall pipe is complete. PC continued installing the yard piping throughout the site.

3 Month Look Ahead: PC Construction will continue work on interior coatings and equipment for primary clarifiers 7-10. PC will perform the official leak test after they complete leak repairs in the basins. The Chemical Storage Building and the new Administration Building will be completed next quarter. Concrete work will continue on the C-N Cells 9-14, C-N Cells 1-8, D-N Cells, the Headworks, BAF Backwash Treatment Facility, and the UV Facility. Concrete work for the Blower Building and the south floodwall will continue. Work will be completed in the East Scrubber Building, and the equipment will be put back into service by April 2018. The long term temporary outfall will be operational by the end of January, which will allow the flood wall to be completed adjacent to the river.

Concrete work for the new methanol tank containment tank will begin the next quarter. The new methanol tanks get installed within the footprint of the existing chlorine tank #3. We are eliminating

chlorine disinfection for the more environmentally friendly UV disinfection system. Concrete work in the new UV tank will complete this quarter. PC will continue installing yard piping throughout the site. We anticipate the contractor making a major push to complete the bulk of the concrete work in the next quarter. They were unable to complete the concrete work before the cold weather began.

The contractor has stated that they are four months behind schedule for meeting Phase I milestone and about two months behind schedule for meeting Phase II milestone. We continue to work with them to improve their schedule. NYSDEC has revised the several intermediate milestones as requested by the City, and we have discussed the projected late finish of the Phase I Milestone with them. They have indicated that they are willing to work with us on adjusting these dates as soon as we have a better projection on the Phase I Milestone date.

Contract Status: 47% Complete

Contract No. 6 - BAF Electrical

The BAF Electrical contract supports the BAF General Civil Contract and includes all electrical and instrumentation associated with the BAF contracts. The components include installation of the new UV disinfection system, installation of the new generators, installation of the electrical feed throughout the plant, as well as installation of the instrumentation and SCADA System throughout the plant.

Status: Contract No. 6 was bid and awarded in compliance with the May 27, 2016 milestone for issuing the NTP in the Consent Order.

This quarter, the contractor continued installing their concrete ductbanks around the site, and began installing the new 2MW generators in the new Generator Building. MATCO is providing input for the Project CPM baseline schedule. Equipment and material shop drawings are being submitted for review and approval. We continue to maintain a temporary diesel generator at the site that is capable of running the critical loads in the event of another electrical outage from NYSEG.

3 Month Look Ahead: MATCO will continue to install manholes and duct work for the various buildings and structures as they are constructed, for example, The Chemical Feed Building, Generator Building, Headworks and Administration Buildings, and the East Scrubber Building. They have received a considerable amount of materials and equipment which are being stored locally. They anticipate completing installing the majority of the Generator Equipment and new electrical equipment in the new Generator Building during the next quarter.

Contract Status: 46% Complete

Contract No. 7 - BAF HVAC

The BAF HVAC contract supports the BAF General Civil Contract and includes installation of all HVAC Systems in all STP Facilities as well as revisions to the odor control systems throughout the plant. The odor control improvements are intended to alleviate the odors that have

been prevalent in the past in and around the plant.

Status: Contract No. 7 was awarded on May 27, 2016 in compliance with the DEC milestones in the Consent Order. The contractor continued submitting material submittals for the HVAC Equipment for the project this quarter. They continue to provide supporting information for the development of the CPM schedule, and have acknowledged they can meet the required milestones of the Consent Order. They installed the majority of the HVAC system in the new Maintenance and Administration Building.

3 Month Look Ahead: J & K Plumbing will complete the startup and testing of the HVAC systems in the new Maintenance and Administration Building. J&K will complete their work in the East Scrubber Building this quarter and will resume installing the HVAC systems in the new Generator Building and Headhouse this quarter. They have received a considerable amount of material and equipment and these are in storage and ready to be installed.

Contract Status: 51% Complete

Contract No. 8 - BAF Plumbing

The BAF Plumbing contract supports the BAF General Civil Contract and includes installing plumbing systems for the new and existing facilities included in Contract No. 5.

Status: Contract No. 8 Notice to Proceed was issued in compliance with the May 27, 2016 milestone for issuing the NTP in the Consent Order. The contractor has continued providing the supporting information for the overall CPM schedule this quarter, and they have confirmed that they can meet the required milestones of the Consent Order.

This quarter, they continued installing the plumbing in the new Maintenance, Administration, and the East Scrubber Building. They continued installing the plumbing in the new Generator Building. They installed the new potable water backflow preventer that will allow the potable water to be put on the new used water supply to the plant as soon as PC completes the installation.

3 Month Look Ahead: JW Danforth will continue with the installation of the plumbing system as the structures and facilities are built. They also continue to work on the plant water supply system.

Contract Status: 52% Complete

Contract No. 9 - Secant Pile Contract

The Secant Pile contract includes installation of the secant piles that support the excavation for the new BAF Backwash tank as well as supporting the new CN Cells 9-14. Construction also includes excavation to the final grade for the BAF Backwash tank. This project was bid separately from Contracts 5-8. In doing so, a minimum of four months on the critical path schedule was saved.

Status: The project was substantially complete as of December 31, 2016. A punch list for items

to repair was prepared for the Contractor and they are working to complete the punch list work. They completed repairs of the latent defect was discovered in the installation of the rebar couplings that the contractor installed in the wales and struts that support the C-N Cells above the BAF Backwash Tank.

Contract Status: 100% Complete

Contract No. 10 - Solids Handling Renovation Civil

Contracts No. 10 is intended to renovate and improve the solids handling systems including the existing digester control building, existing digesters, solids dewatering systems, and all ancillary equipment.

Bids for all of the Solids handling Contracts were received on March 16, 2017. Additional funding has been secured for these contracts. The Notice to Proceed was issued on July 20, 2017. The Contractor completed their support of excavation for the sludge holding tanks located south of the existing digester complex and also the Solids Handling Building. They cast the slab for the new sludge holding tanks and the gas conditioning building. They encountered asbestos containing material on the wall of the existing digester, and it is being abated via a change order to the contract. Quandel completed installing the rebar for the slab for the new Solids handling Building in December, and should complete the base slab in January. MATCO completed reinstalling the wire for the NYSEG feeder to the new generator building.

3 Month Look Ahead: After Quandel completes concrete work for the new Solids Handling Building slab, they will begin concrete work on the walls below grade. They will also complete the walls on the sludge holding tanks south of the existing digester complex. The contractor will also continue demolition in the Digester Control Building. Quandel will begin installing the new equipment in the Digester Control Building in order to meet the Milestone 1 completion requirement on April 15, 2018. Quandel has stated that they do not believe they will complete the Milestone 1 until the end of the 2nd Quarter 2018, due issues they have encountered with the Gas Processing Equipment. Another issue that could impact the compliance with Milestone 1 is the delivery of the draft tube for Digester #3. Blue Heron, which has a contract with the STP Board, and is refusing to deliver the draft tube until their demands are met by the STP Board in an ongoing dispute for the storage costs for the draft tube.

Contract Status: 12% Complete

Contract No. 11 - Solids Handling Renovation Electrical

Contracts No. 11 is intended to renovate and improve the components of the solids handling systems including the existing digester control building, existing digesters, solids dewatering systems, and all ancillary equipment. The contract is intended to support Contract no. 10 in the construction and renovation of the new Solids Handling System. The contract will follow the schedule of Contract No. 10.

MATCO continued demolition in the Digester Complex and provided temporary power for Quandel at various locations on site this quarter.

3 Month Look Ahead: MATCO will complete their demolition work in the Digester Control Building, and will begin installing the new electrical conduit, wire, and equipment in the building in an effort to support completion of Milestone 1 on April 15, 2018.

Contract Status: 4% Complete

Contract No. 12 - Solids Handling Renovation HVAC

Contracts No. 12 is intended to renovate and improve the HVAC components of the solids handling systems including the existing digester control building, existing digesters, solids dewatering systems, and all ancillary equipment. The contract is intended to support Contract no. 10 in the construction and renovation of the new Solids Handling System. The contract will follow the schedule of Contract No. 10.

J&K began installing the piping for the boiler system in the Digester Control Building. Their work was put on hold temporarily while the Design Engineer determined the changes that needed to be made to the boiler piping system.

3 Month Look Ahead: The redesigned piping information for the boiler system will be provided in the middle of January. J&K will resume fabrication of the boiler pipe in January, and will need to complete the boiler installation in order to support Milestone 1 completion.

Contract Status: 11% Complete

Contract No. 13 - Solids Handling Renovation Plumbing

Contracts No. 13 is intended to renovate and improve the plumbing components solids handling systems including the existing digester control building, existing digesters, solids dewatering systems, and all ancillary equipment. The contract is intended to support Contract no. 10 in the construction and renovation of the new Solids Handling System. The contract will follow the schedule of Contract No. 10.

Danforth began demolition of the plumbing systems and installation of the replacement plumbing systems in the Digester Control Building. They have encountered an issue with the presence of asbestos containing material on the exterior of the digester control building. The new drain lines in the building must penetrate the walls with the asbestos containing material, which will result in the requirement to abate the asbestos. Danforth completed installing the below slab plumbing in the solids handling building last quarter, and installed the gas pressure regulator for the new NYSEG gas service. The new pressure regulator was required to get NYSEG to provide the gas for heating the various buildings on site such as the Headhouse, the new Administration Building, East Odor Control, and Chemical Storage Buildings.

3 Month Look Ahead: Danforth will continue the work in the Digester Control Building to support the effort for compliance with Milestone 1.

Contract Status: 16% Complete

Floodwall

The new floodwall being constructed at the STP is intended to protect the plant to an elevation 1.5 feet above the 2011 flood level. The floodwall includes concrete walls on the east and north side of the STP. The project also includes two new pump stations to pump rainwater out of the plant during the storm events that might overwhelm the existing storm drain system. The new flood wall system works in conjunction with new flood wall features included in Contract No .5 BAF General Civil Construction. The flood wall systems are being funded by a FEMA recovery grant.

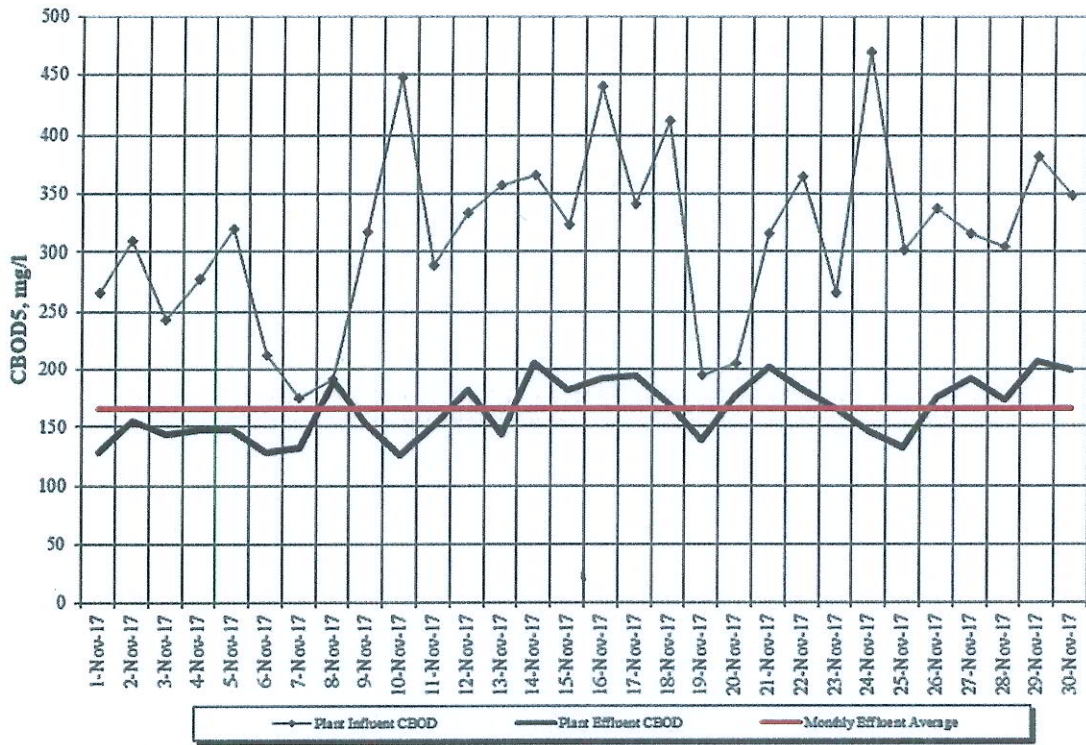
Status: This quarter, work progressed on the structure east of the eastern flood wall. The issue discovered during excavation for the structure has been resolved, and Streeter began installing the precast sections of the structure above the existing 54" Binghamton pipe. The unknown concrete cradle under the 54" pipe was incorporated into the base slab structure for Manhole No. 3. The Contractor removed the original 84" outfall pipe, completed installing the 12" Vestal line, and resumed excavation for the flood wall footings west of the original 84" outfall. They completed concrete work for the floodwall footings up to the location of the short term temporary pipe that they installed. The concrete work is complete on Pump Stations 1 and 2. The piping is mostly installed. MATCO is working for Streeter to install the electrical conduit, wire, and panels for the operation of the two new storm drain pump stations. Digester No. 3 is ready for leak testing. The work in Digester No. 1 and No. 2 had to be modified as more of the coating installed by a previous contract was defective and came off during cleaning. A replacement coating will be priced by competitive pricing to get the best price for the coating.

3 Month Look Ahead: Streeter is waiting on PC to install their long term temporary outfall pipe, which will allow Streeter to remove the short term temporary outfall pipe that prevents the final segment of the floodwall footing from being constructed. The flow will be diverted through the long term temporary outfall pipe by PC, and this allows Streeter to complete the final segment of the concrete floodwall footing. Work on the rehabilitation of digesters 1, 2, and 3 in advance of the Solids Handling Project is ongoing. This work is scheduled to be completed in December 2017.

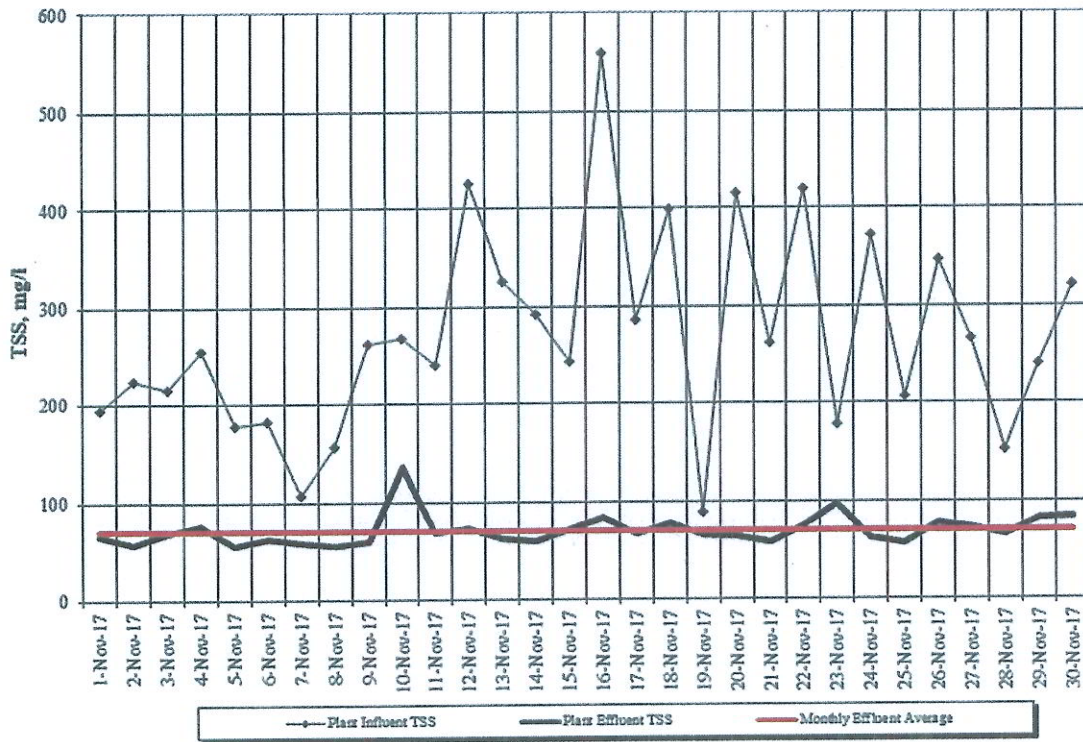
Contract Status: 87% Complete

ATTACHMENT A
Facility Operations

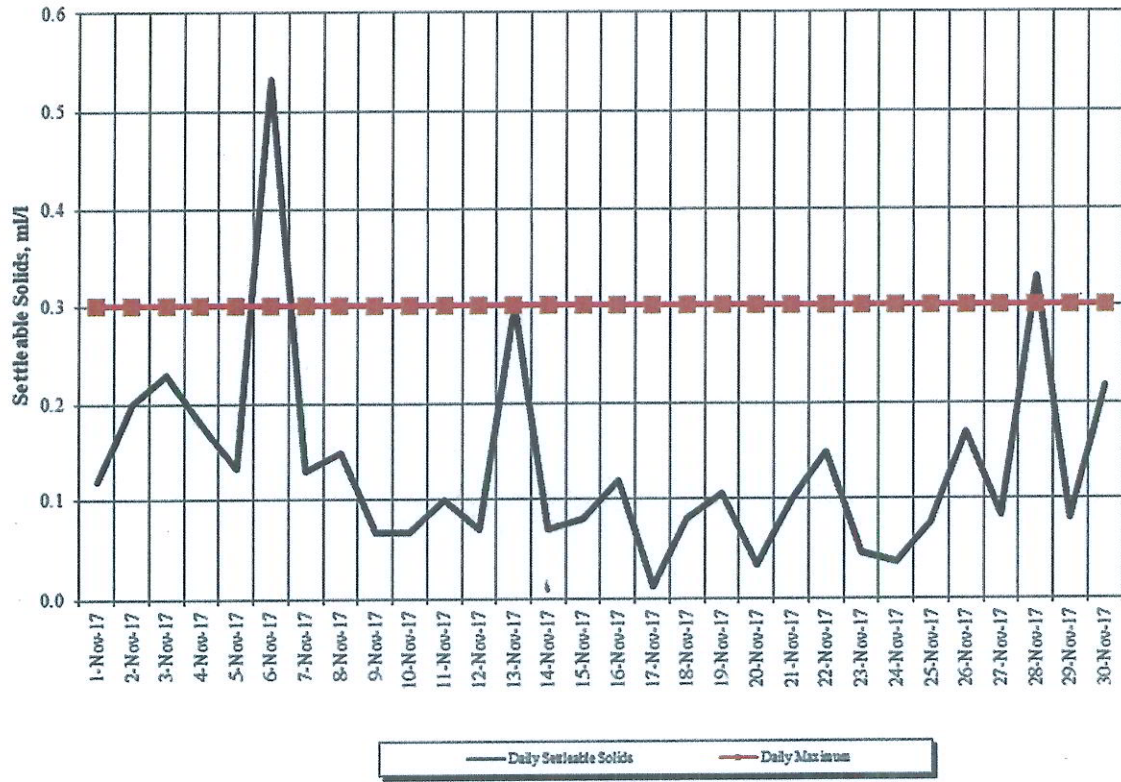
CBOD5 Concentrations Binghamton - Johnson City JSTP



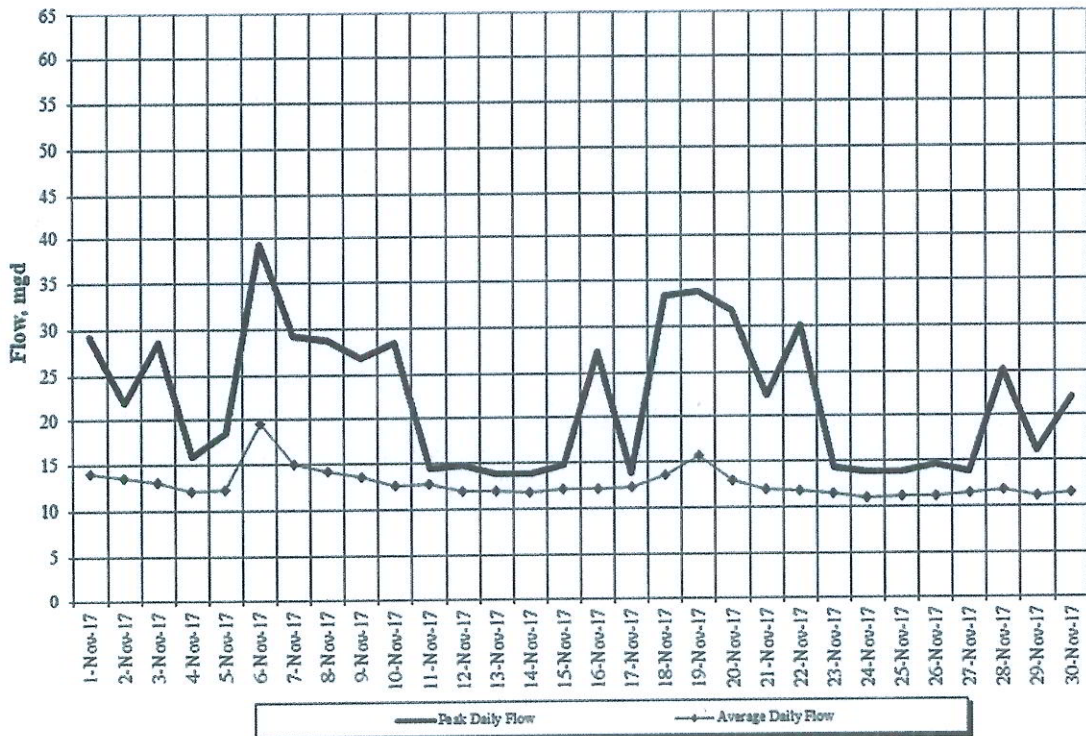
TSS Concentrations Binghamton - Johnson City JSTP



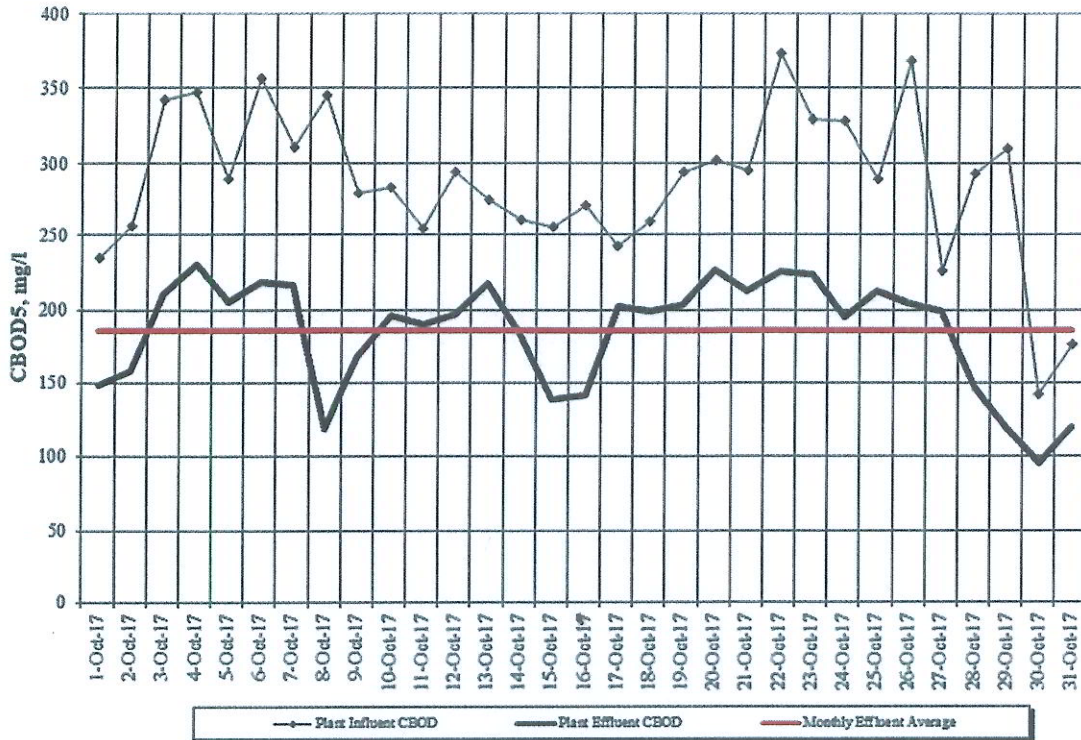
Settleable Solids
Binghamton - Johnson City JSTP



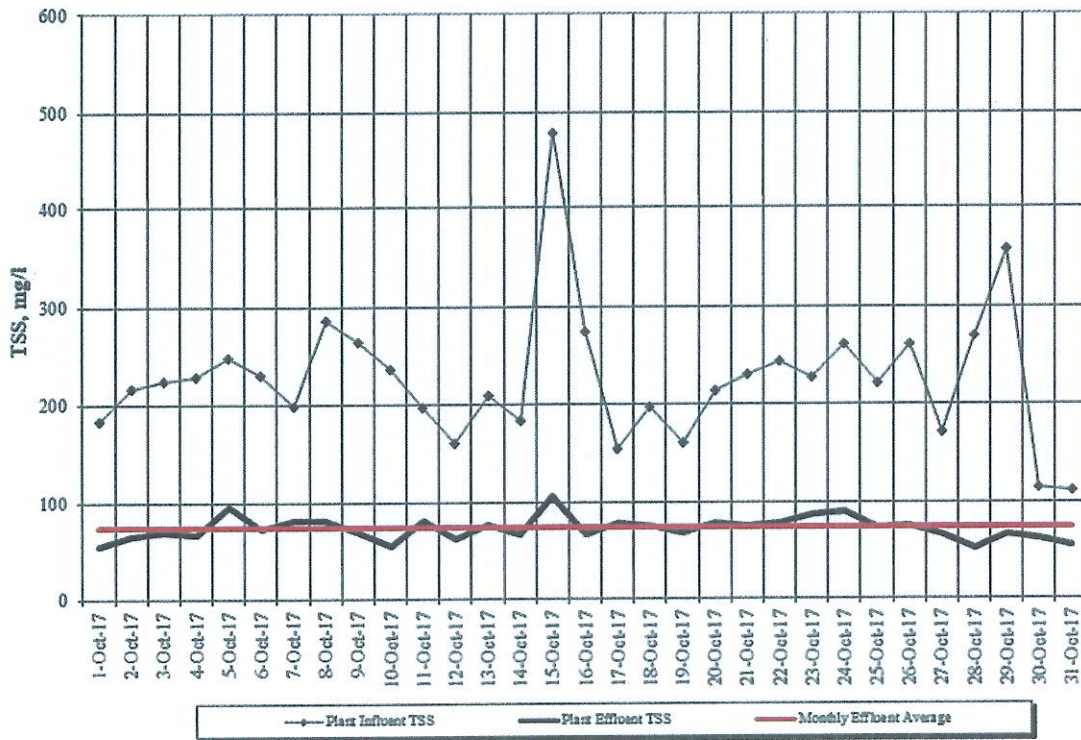
Daily Flows
Binghamton - Johnson City JSTP



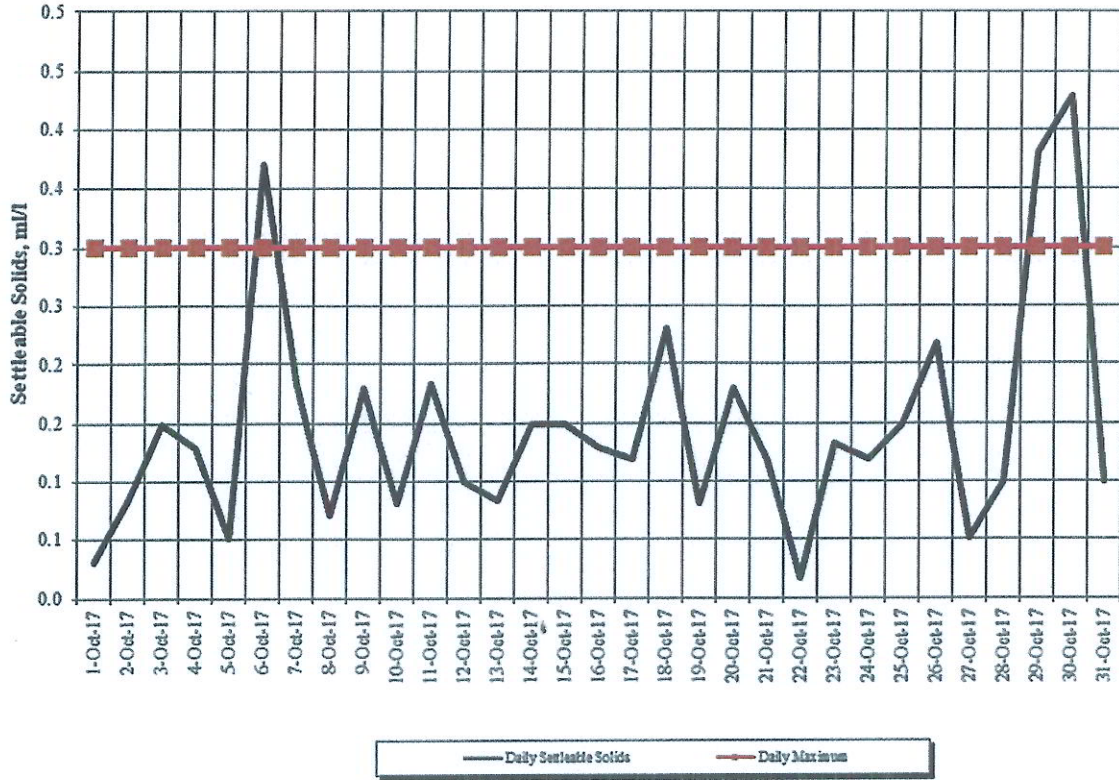
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Binghamton - Johnson City JSTP



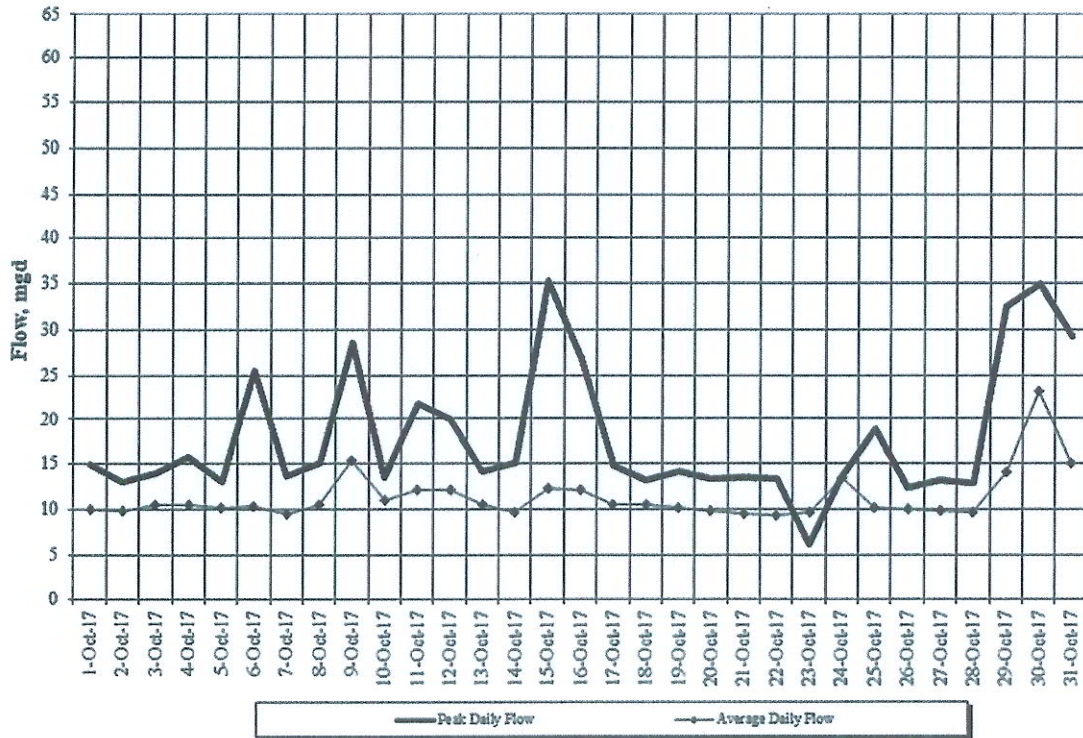
TSS Concentrations
Binghamton - Johnson City JSTP



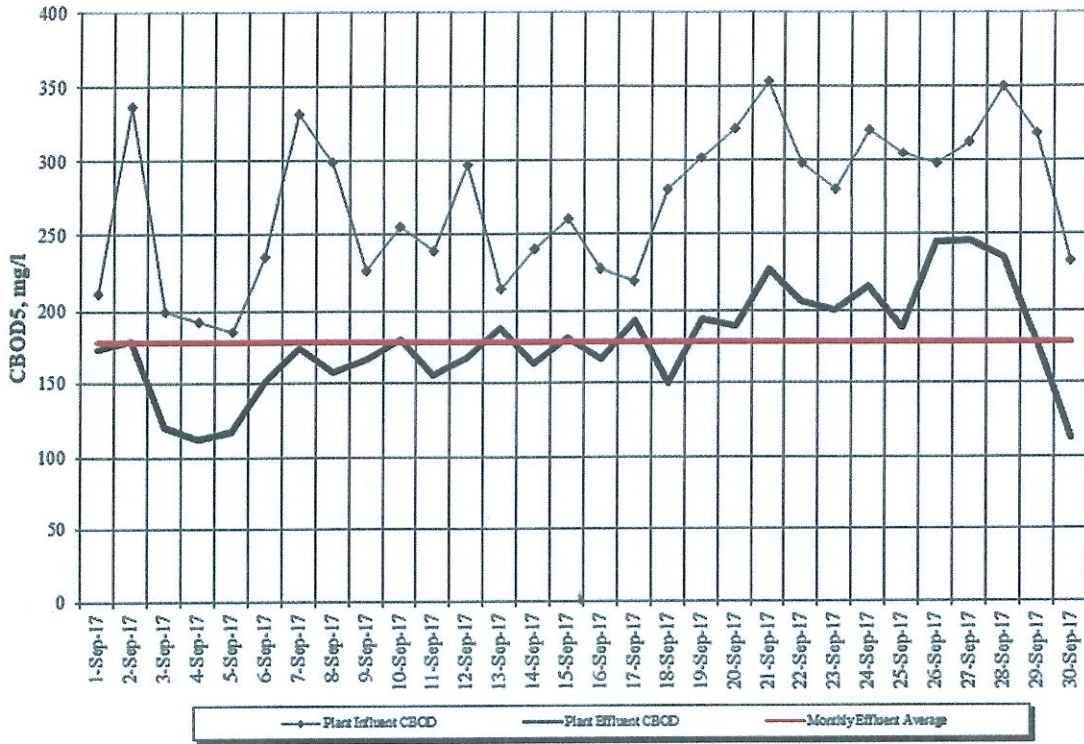
Settleable Solids
Binghamton - Johnson City JSTP



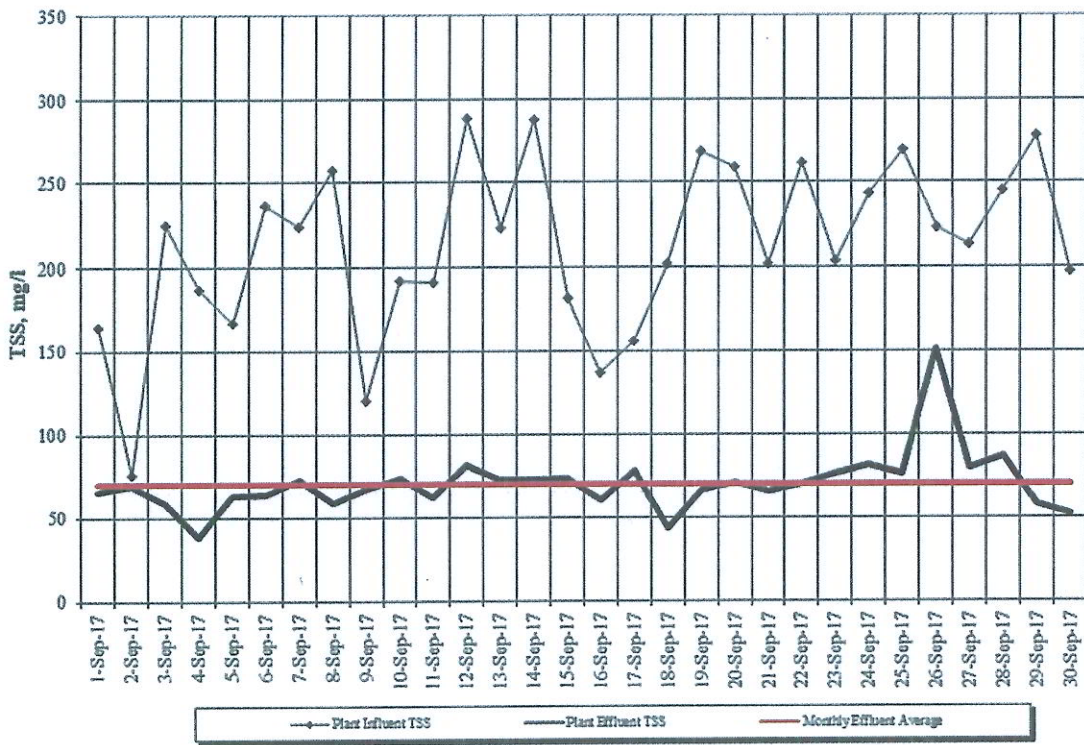
Daily Flows
Binghamton - Johnson City JSTP



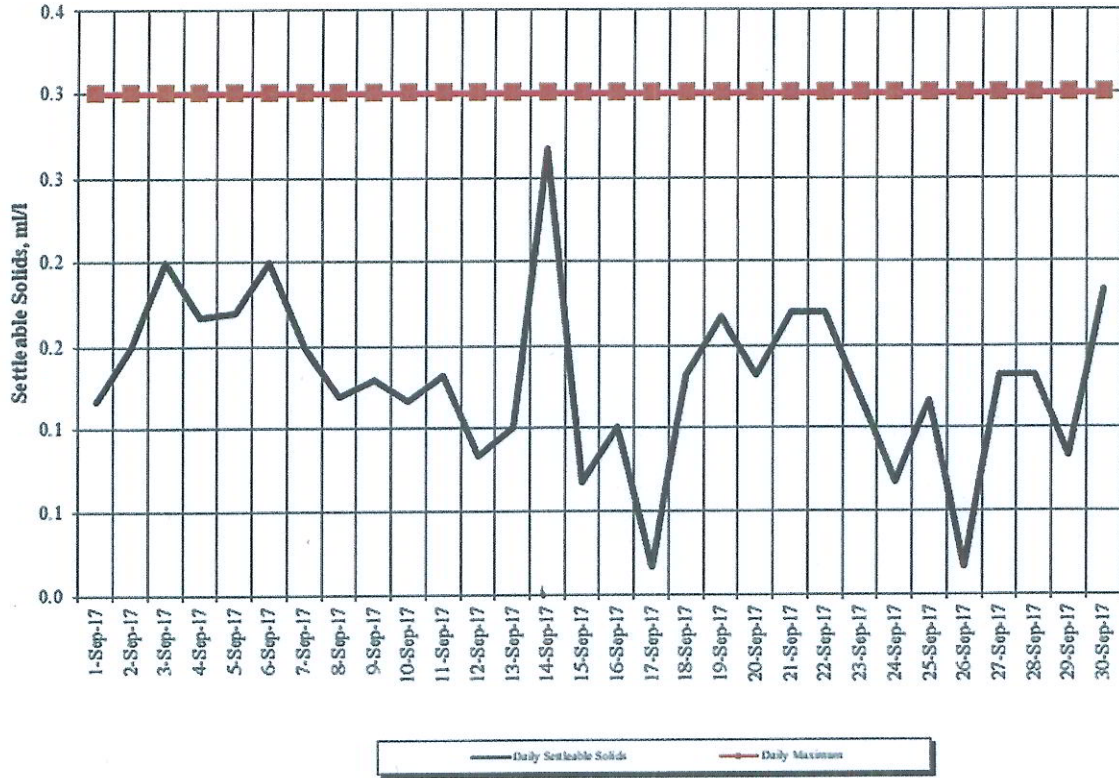
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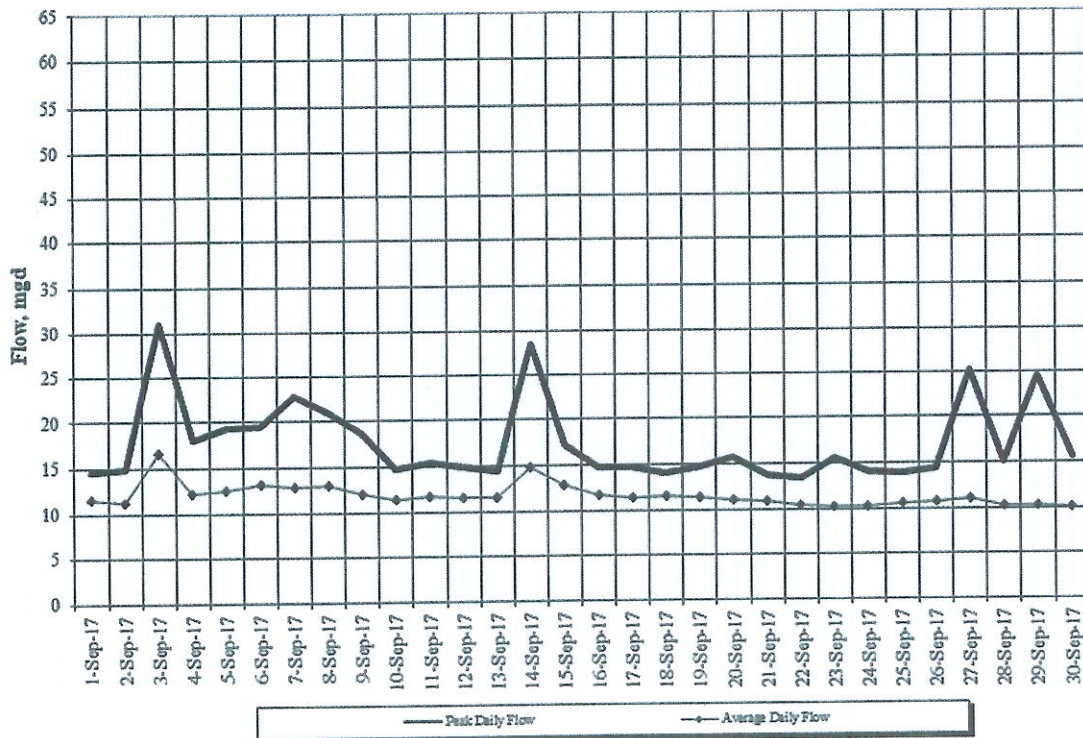
TSS Concentrations
Binghamton - Johnson City JSTP



Settleable Solids
Binghamton - Johnson City JSTP



Daily Flows
Binghamton - Johnson City JSTP

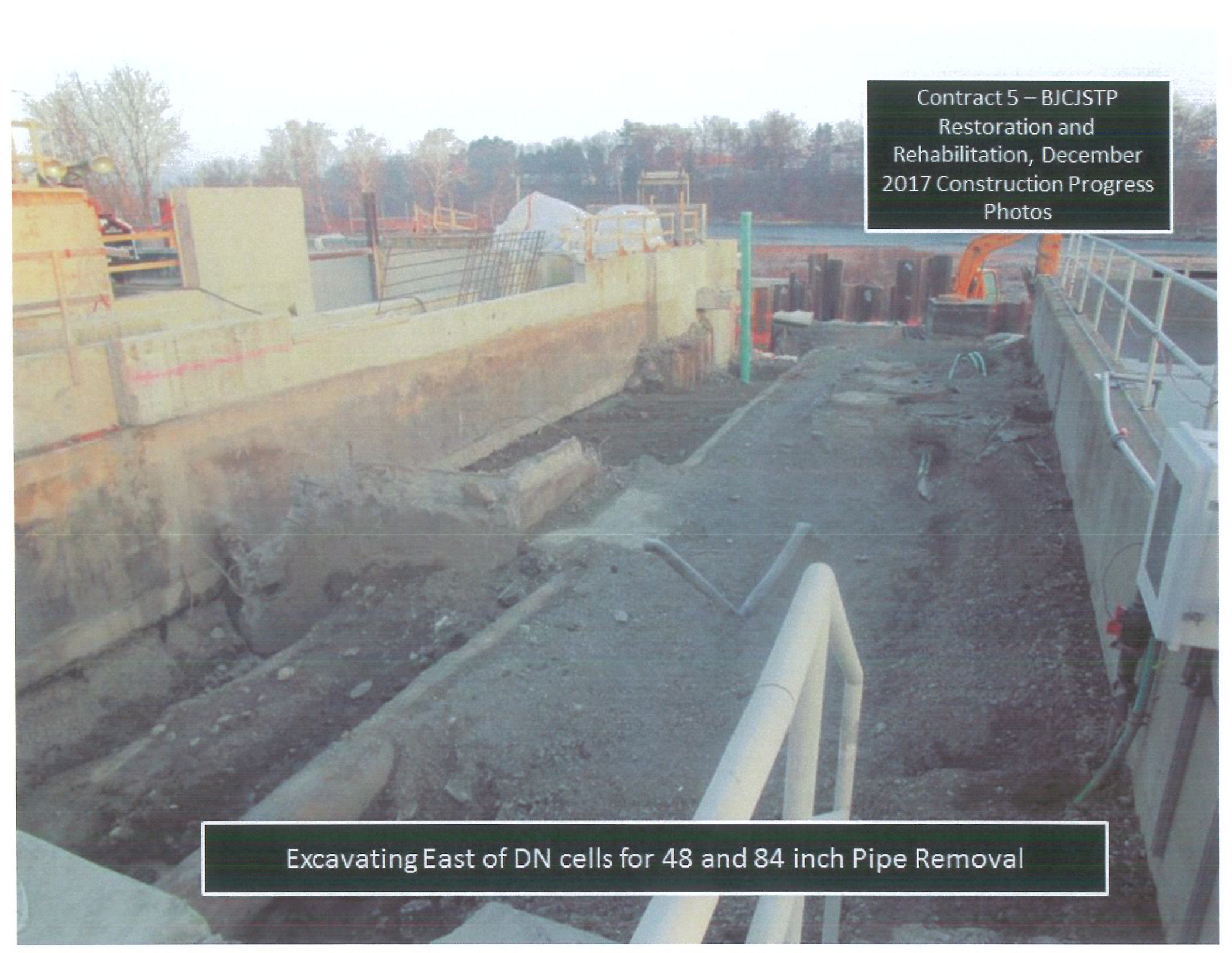


DATE	TOTAL	FW	Final Eff	FW	CL 2	Fecal	Eff.	FW	Eff. Total	Daily	Iron (Fe)
	FLOW	Amm. Avg	TKN	TKN	AVG	Coli mg/l	Phos.	Phos. Avg	Iron	Total Q	lbs/day
1-Sep-17	11.70		20.4	25.4	0.37	2					
2-Sep-17	11.34		20.1	22.6	0.64	2					
3-Sep-17	16.68		16.5	19.2	0.54	2					
4-Sep-17	12.33		17.8	20.5	0.52	4					
5-Sep-17	12.63	17.6	20.3	23.7	0.38	148	2.8	3.9	3.12	12.63	329
6-Sep-17	13.31		22.4	29.0	0.56	276					
7-Sep-17	12.92		24.8	31.6	0.43	12			3.02	12.92	325
8-Sep-17	13.17		20.7	26.7	0.51	29					
9-Sep-17	12.05		19.5	20.5	0.46	8					
10-Sep-17	11.49		23.7	22.1	0.45	2					
11-Sep-17	11.87		27.7	24.4	0.53	61					
12-Sep-17	11.56	25.2	25.5	23.5	0.58	29	3.4	4.8	2.66	11.56	256
13-Sep-17	11.58		31	31.2	0.54	72					
14-Sep-17	14.93		23	36.2	0.68	40			2.48	14.93	309
15-Sep-17	12.86		26.3	34.3	0.56	580					
16-Sep-17	11.73		26	32.2	0.23	2					
17-Sep-17	11.44		28	28.8	0.41	2					
18-Sep-17	11.59		25.7	29.7	0.44	2					
19-Sep-17	11.54	20.8	27	34.0	0.52	23	4.7	6.7	2.58	11.54	248
20-Sep-17	11.14		29.3	35.2	0.57	18					
21-Sep-17	10.92		27	32.7	0.52	2			2.61	10.92	238
22-Sep-17	10.51		28.8	32.7	0.52	14					
23-Sep-17	10.31		24.6	28.5	0.53	3					
24-Sep-17	10.28		28.9	34.2	0.5	2					
25-Sep-17	10.59		26.2	32.0	0.53	11					
26-Sep-17	10.90	19.4	30.2	27.8	0.56	41	4.9	4.8	5.54	10.90	504
27-Sep-17	11.21		26.7	25.2	0.65	4					
28-Sep-17	10.38		31.8	34.0	0.375	2			3.35	10.38	290
29-Sep-17	10.37		31.1	34.6	0.66	5					
30-Sep-17	10.17		26.1	27.4	0.67	2					
	11.78	20.8	25.24	28.7	0.68	#REF!	3.95	5.06	3.17	11.97	317
TOTAL	FW	Final Eff	FW	CL 2	30 Day	EFF.	FW	Eff. Total	Daily	Mthly Avg	
FLOW	Avg as N mg/l	TKN	TKN	Max	MEAN	PHOS.	PHOS.	Iron	Total Q	Iron lbs/day	

DATE	TOTAL	Final Eff	FW	Final Eff	FW	CL 2	Fecal	Eff.	FW	Eff. Total	Daily	Iron (Fe)
	FLOW	Amm. Avg	Amm. Avg	TKN	TKN	AVG	Coli mg/l	Phos.	Phos. Avg	Iron	Total Q	lbs/day
1-Nov-17	14.01			21.2	22.3	1.24	910					
2-Nov-17	13.64			21.1	15.5	1.29	1257			3.01	13.64	342
3-Nov-17	13.02			25	21.3	1.56	264					
4-Nov-17	12.14			22	22.3	1.54	2					
5-Nov-17	12.34			20.4	20.8	1.16	104					
6-Nov-17	19.57			15.2	16.0	1.83	25					
7-Nov-17	15.08	14.3	14.8	14.5	19.9	1.75	2	2.6	2.8	3.25	15.08	409
8-Nov-17	14.20			28.9	16.8	1.52	8					
9-Nov-17	13.65			25.7	18.9	1.49	151			3.34	13.65	380
10-Nov-17	12.57			12.2	20.4	2.03	2					
11-Nov-17	12.70			21.4	22.3	1.76	3					
12-Nov-17	12.02			26.7	18.8	1.56	38					
13-Nov-17	12.01			15.6	19.5	1.43	80					
14-Nov-17	11.79	19.7	19.7	24.5	24.7	1.7	5	3.8	4.6	4.23	11.79	416
15-Nov-17	12.17			24	27.0	1.13	9					
16-Nov-17	12.10			22.6	28.0	1.57	7			4.14	12.10	418
17-Nov-17	12.23			25.8	20.7	1.3	2					
18-Nov-17	13.59			16.8	21.5	1.6	2					
19-Nov-17	15.77			19	16.6	1.51	3					
20-Nov-17	12.88			21.8	19.0	1.64	2					
21-Nov-17	11.89	18.7	16.0	24.4	24.7	1.49	680	3	3.3	3.59	11.89	356
22-Nov-17	11.79			19	14.5	1.63	145					
23-Nov-17	11.41			15.7	15.6	0.95	2			3.4	11.41	324
24-Nov-17	10.91			17.9	18.6	1.02	2					
25-Nov-17	11.20			17.9	21.0	1.64	35					
26-Nov-17	11.17			23.8	22.1	1.37	60					
27-Nov-17	11.41			26.6	22.0	1.51	5083					
28-Nov-17	11.75	21	21.2	27.7	23.7	1.18	2	3.2	3.9	3.38	11.75	331
29-Nov-17	11.12			32.1	27.8	1.26	31					
30-Nov-17	11.54			31	30.6	1.12	20			3.65	11.54	351
	12.72	18.43	17.9	22.02	21.1	2.03	18.71	3.15	3.65	3.55	12.54	372
	TOTAL	Final Eff.	FW	Final Eff	FW	CL 2	30 Day	EFF.	FW	Eff. Total	Daily	Mthly Avg
	FLOW	Avg as N mg/l	Avg as N mg/l	TKN	TKN	Max	MEAN	PHOS.	PHOS.	Iron	Total Q	Iron lbs/day


ATTACHMENT B

Photos

A photograph of a construction site for a water treatment plant. The scene shows a large, rectangular excavation pit with concrete walls. The ground inside the pit is dark and uneven, with some debris and pipes visible. In the background, there are trees and a building. A yellow excavator is partially visible on the right side of the pit. The overall atmosphere is that of an active construction project.


Contract 5 – BICJSTP
Restoration and
Rehabilitation, December
2017 Construction Progress
Photos

Excavating East of DN cells for 48 and 84 inch Pipe Removal




Contract 5 – BICJSTP
Restoration and
Rehabilitation, December
2017 Construction Progress
Photos

UV Tank Interior Wall Reinforcing




Contract 5 – BJCJSTP
Restoration and
Rehabilitation, December
2017 Construction Progress
Photos

Drilling Caisson #1



Contract 5 – BJCISTP
Restoration and
Rehabilitation, December
2017 Construction Progress
Photos

BAF Backwash Facility West Elevated Slab and Beam Reinforcing

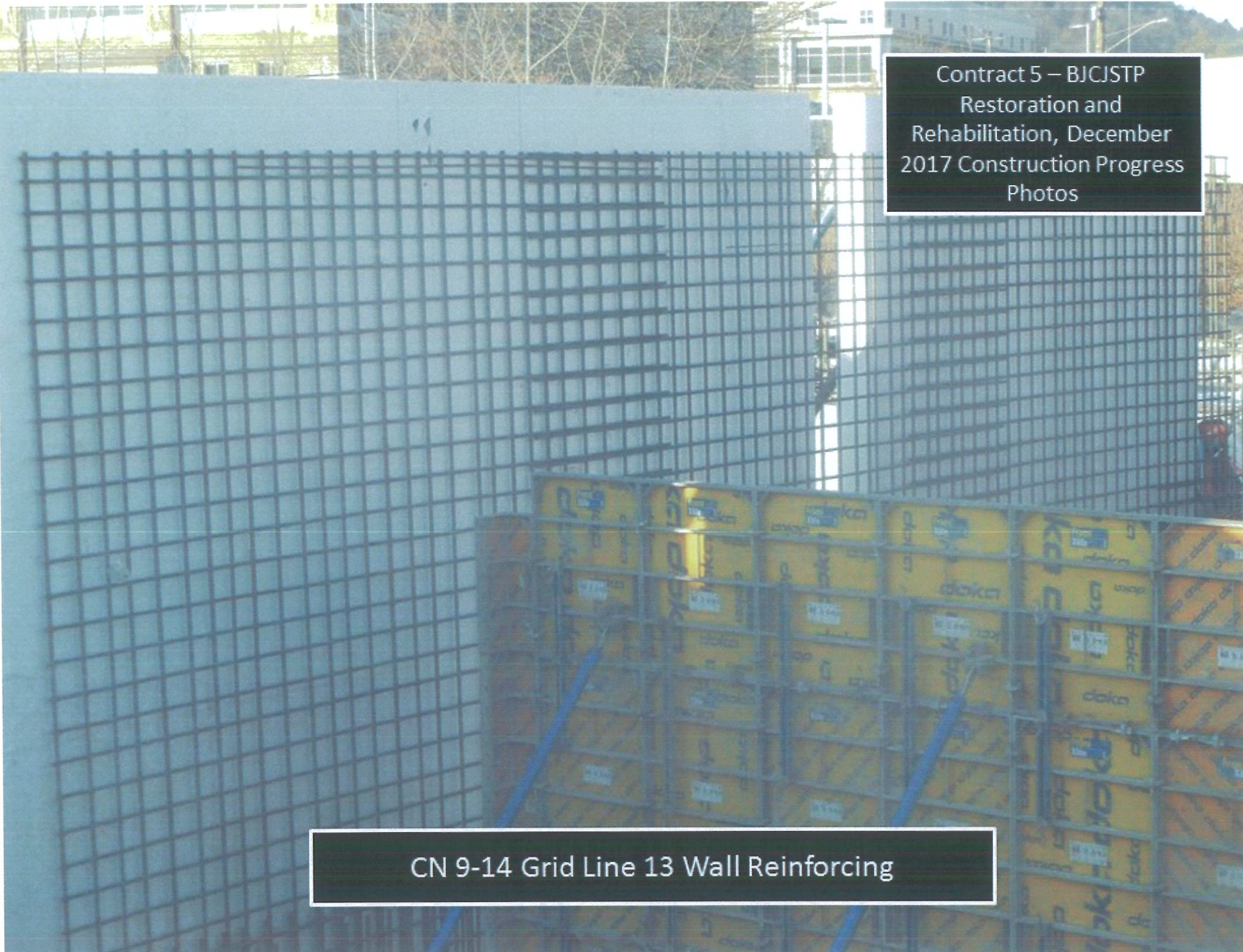
A photograph showing two construction workers in high-visibility vests and hard hats standing on a yellow metal scaffolding. They are working on a large, curved concrete wall in a tunnel. The ceiling of the tunnel is made of parallel concrete beams. The workers are applying a base coating to the wall. A white bucket is visible on the scaffolding. The scene is dimly lit, with a bright light source visible on the left.

Contract 5 – BJCJSTP
Restoration and
Rehabilitation, December
2017 Construction Progress
Photos

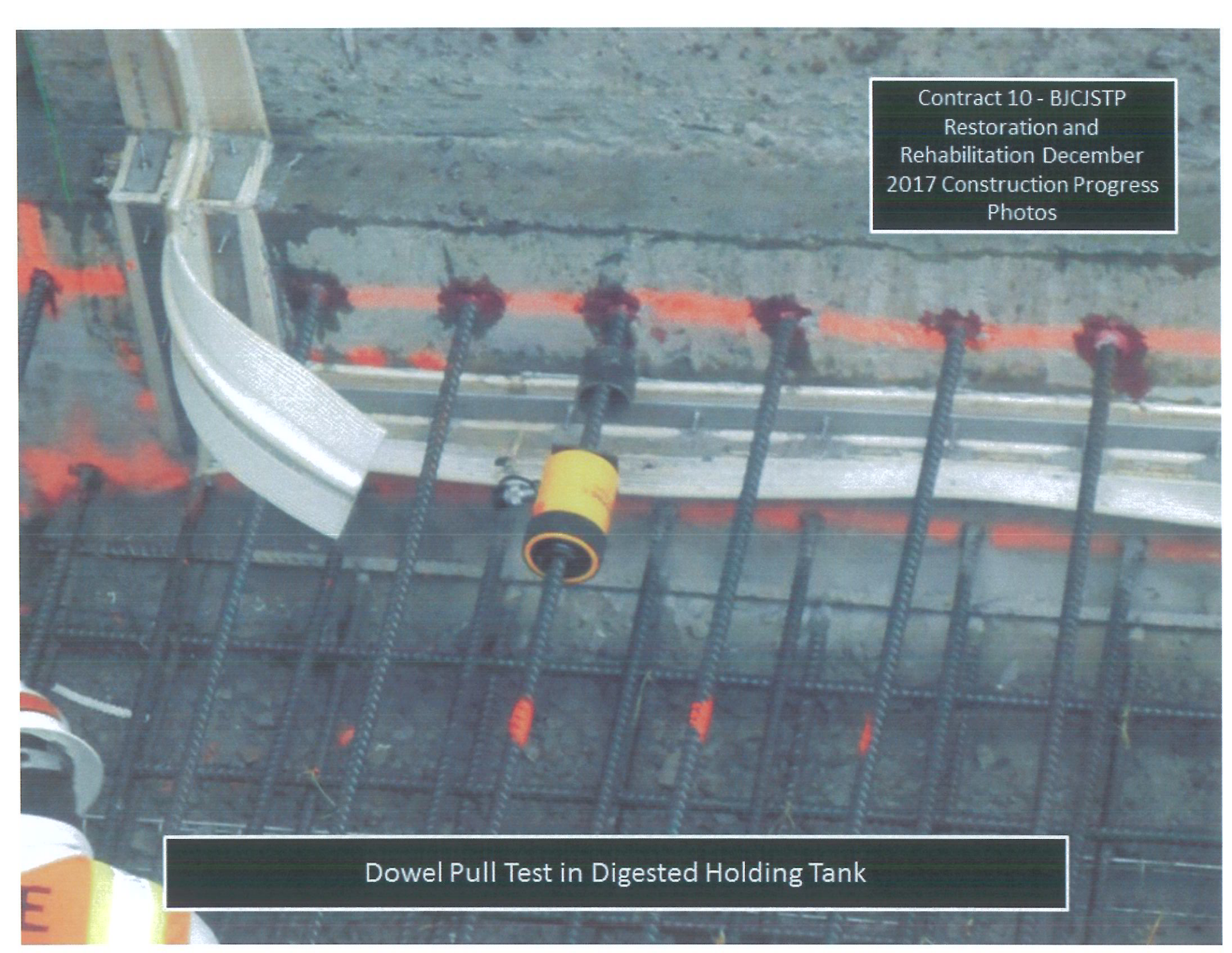
Base Coating in PST10B

Contract 5 – BJCJSTP
Restoration and
Rehabilitation, December
2017 Construction Progress
Photos

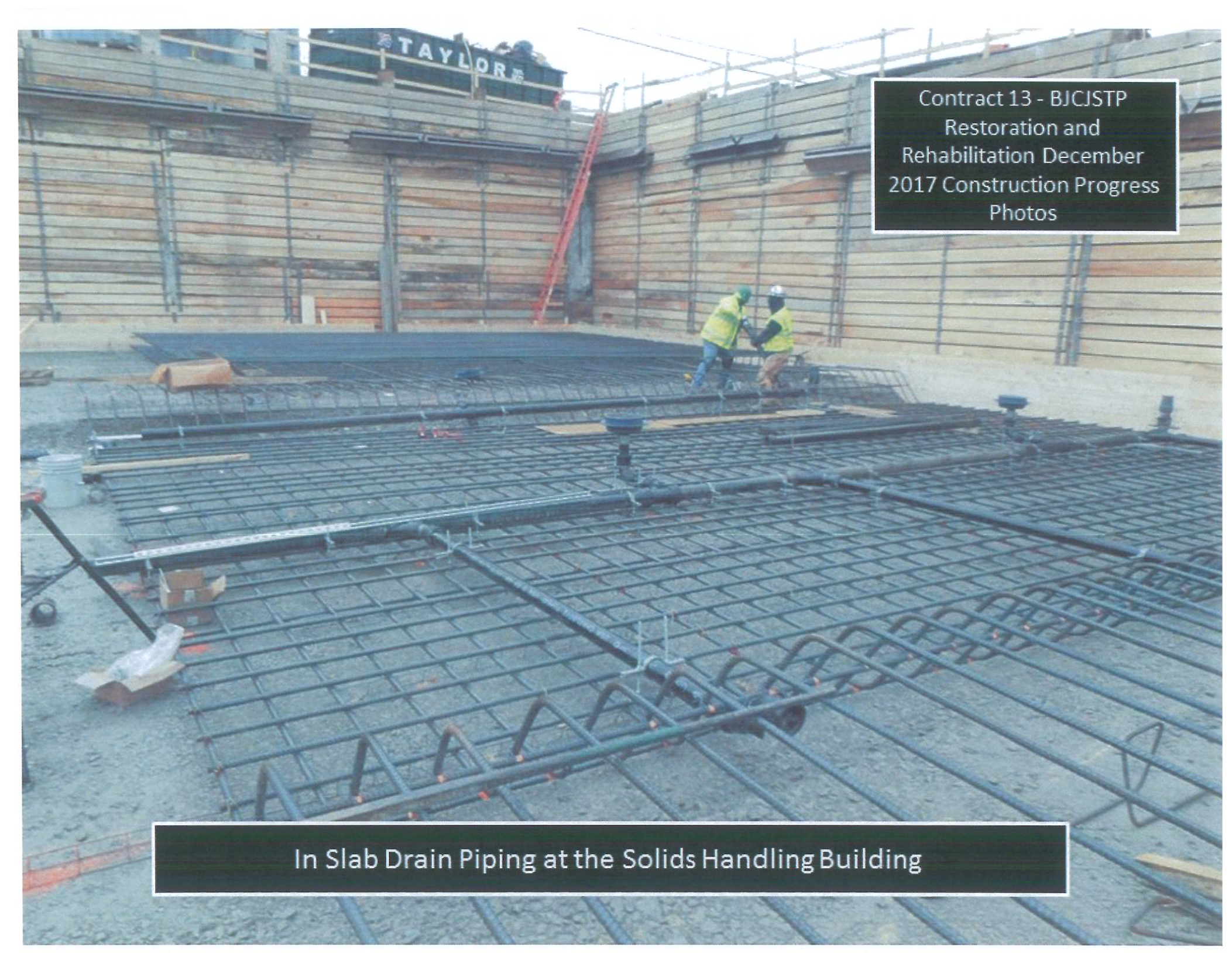
CN 9-14 Grid Line 13 Wall Reinforcing



Contract 10 - BICJSTP
Restoration and
Rehabilitation December
2017 Construction Progress
Photos



Dowel Pull Test in Digested Holding Tank

A wide-angle photograph of a construction site for a large concrete slab. The floor is covered with a dense grid of steel reinforcement bars (rebar) laid out in a grid pattern. Several workers in high-visibility yellow vests and hard hats are visible in the middle ground, working on the rebar. The walls of the building under construction are made of vertical wooden formwork panels. A red crane is visible in the background. The sky is overcast.

Contract 13 - BJCJSTP
Restoration and
Rehabilitation December
2017 Construction Progress
Photos

In Slab Drain Piping at the Solids Handling Building

Contract FW – BJCJSTP Flood
Wall, December 2017
Construction Progress
Photos

Rebar Forms and Waterstop Wall Section 5

