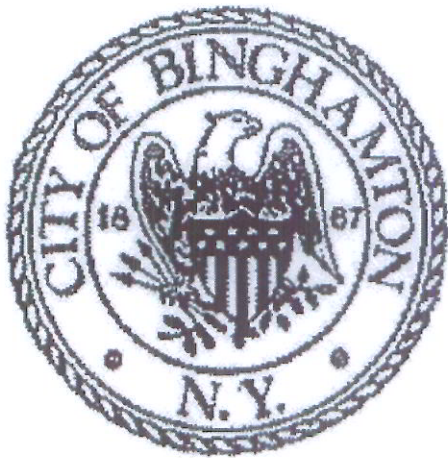


**Binghamton-Johnson City Joint Sewage
Treatment Plant Restoration and
Rehabilitation Project**

2018 Quarter 1 Report

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



March 2018

2018 QUARTER 1 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. 8720110628-59) between the City of Binghamton, Village of Johnson City, the Joint Sewage Board, and the State of New York, the City submits this 2018 Quarter 1 Report. The report summarizes the status and progress of the projects and programs required by the Consent Order from January through March 2018.

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 by a 500 year flood that affected many of the processes in operation. In May of 2011, a concrete structure suffered structural failure, and in September 2011, the BJCJSTP suffered another 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 December 31, 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 June 30, 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	Complete.
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	Complete
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 and the Notice of Final Completion has been executed.

Contract Status: 100% 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. The Fourth Change Order 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. The Fifth Change Order 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 walls continued. Concrete work for the exterior below grade walls for the Headworks completed this quarter. Leak testing of the BAF Backwash Treatment Facility was successfully completed this quarter, and concrete work for the south channel is progressing.

The concrete work and the interior concrete wall coatings are complete for the primary clarifiers 7-10. The contractor began installing the equipment in primary clarifiers 7-10 this quarter. Installation of the chain and flyghts will be completed next quarter. Demolition is complete in the CN Cells 1-8, DN Cells 1-4, and the UV Reactor area. Concrete work in C-N Cells 1-8 is ongoing, and installation of the nozzle decks in C-N Cells 1-8 began. The upper floor of the Administration Building was completed this quarter and STP staff has moved into the upper floor. The lower floor, which will be used for maintenance, will be completed early next quarter. The new green roof for the Administration Building should also be completed next quarter.

The new Chemical Building mechanical and electrical systems are progressing and should be complete next quarter. The chemical tanks and PLC have been installed in the building and the Headhouse has been returned to operation with the existing Binghamton pumps. We are still operating the temporary coarse screen installed in the existing regulator vault. The influent flume for the raw sewage lift pumps for the Binghamton Headhouse and coarse screen area have been cleaned out. The installation and testing of the piping and control systems have been completed. Painting for the pipe in the Headhouse is also complete. Operation of the new control system appears to be smooth and seamless.

The shotcrete subcontractor has completed installing the shotcrete for the walls in the BAF Backwash Tank and for C-N Cells 9-14. The only shotcrete remaining to be completed is 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. The Engineer is evaluating the extent of cracking to give direction on what sections need to be repaired by the Contractor.

Concrete work in C-N Cells continued and is scheduled to be completed in middle to late 2018. The Master Schedule was updated to show the status of the work through the quarter and is reflects PC completing Phase 1 near the end 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 two remaining elements of their submittal that need to be completed are 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 nozzle deck installation began this month with CN Cells 2, 4, 6, & 8.

PC completed the caissons and footing for the new Blower Building this quarter. They should begin installing the south flood wall this quarter. 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. Flow has been diverted to the new 72" outfall through a long term temporary 36" outfall pipe installed by PC.

3 Month Look Ahead: PC Construction will continue work on equipment installation and dry testing of equipment in primary clarifiers 7-10. PC will perform the official leak test after they complete leak repairs in the basins. The Chemical Storage Building and East Scrubber Building will be completed next quarter. The lower level of the Administration Building is nearing completion and will be completed in late April. 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.

Concrete work for the new methanol tank containment tank will continue the next quarter. The new methanol tanks will be 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 they have also modified the Phase I and Phase II Milestones as requested by the City.

Contract Status: 57% Complete through March 2018

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 are installing the new 2MW generators in the new Generator Building. MATCO is providing input for the Project CPM baseline schedule. They completed the electrical work in the Administration Building, and are nearing completion in the Maintenance Building. They are working on the electrical installations for the new Chemical Storage Building and the East Scrubber Building. The East Scrubber Building is required to be completed by the end of April to provide for the higher odor conditions during the warmer weather. 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 and the courtyard gear during the next quarter. MATCO will begin installing electrical systems in the BAF Backwash Treatment Facility, the Headworks, the CN Cells 1-8, the SIPS area, the new Blower Building, the DN Cells, the UV Building, and the Methanol Building.

Contract Status: 54% Complete through March 2018

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 completed start up and testing for the HVAC system in the new Maintenance and Administration Building. They are working on the HVAC systems for both the new Chemical Building, East Odor Control Building, and the Headhouse.

3 Month Look Ahead: J & K Plumbing will complete the startup and testing of the HVAC systems in the East Odor Control and Chemical Storage Buildings this quarter. They will begin installing the HVAC Equipment in the Mechanical Room for SIPS, the Methanol Building, the West Sludge Pump Station, the CN Cells 1-8, and the DN Cells this quarter. They have received a considerable amount of material and equipment and these are in storage and ready to be installed.

Contract Status: 57% Complete through March 2018

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 completed installing the plumbing in the new Maintenance, Administration, and continued installing plumbing in the East Scrubber Building. They continued installing the plumbing in the new Generator Building. They completed the new potable water system installation and testing as well as the new gas service to the STP and new Administration Building.

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: 59% Complete through March 2018

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 punch list for items to repair was prepared for the Contractor and they have completed the punch list work. They completed repairs of the latent defects 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

Contract 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 the concrete work for the slabs in the Sludge Blend Tanks and the new Solids Handling Building. They have completed the walls for the Sludge Blend Tanks and began concrete work for the walls below grade for the Solids Handling Building this quarter. They completed the asbestos containing material on the wall of the existing digester, and it was abated via a change order to the contract. Quandel submitted a preliminary report for the gas conditioning equipment rehabilitation, but their initial inspection did not include the named manufacturer as required by the contract. They had an inspection done by the manufacturer, and we are anticipating the submittal of this report early in April. The condition of the gas conditioning equipment was probably worse than anticipated by the Engineer, and may delay meeting Milestone 1.

3 Month Look Ahead: After Quandel completes concrete work for the new Solids Handling Building walls below grade, they will begin installing the concrete slab at grade for the building. They will also

complete the roof slab on the sludge holding tanks south of the existing digester complex this quarter, and also the slab at grade for the Solids Handling Building this quarter. Quandel will begin installing the new equipment in the Digester Control Building this quarter. Quandel has stated that they do not believe they will complete the Milestone 1 until the end of the 2nd Quarter 2018 due to issues they have encountered with the gas processing equipment. The draft tube for Digester #3 has been delivered, and Quandel has stated that the condition is consistent with the design documents.

Contract Status: 15% Complete through March 2018

Contract No. 11 - Solids Handling Renovation - Electrical

Contract 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.

Contract Status: 5% Complete Through March 2018

Contract No. 12 - Solids Handling Renovation – HVAC

Contract 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. We received the cost estimate for the revised piping and are negotiating the change order with J&K.

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

Contract Status: 24% Complete through March 2018

Contract No. 13 - Solids Handling Renovation – Plumbing

Contract 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 continued work on the under slab piping for the Solids Handling Building and in the existing Digester Control Building this quarter.

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: 31% Complete through March 2018

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.

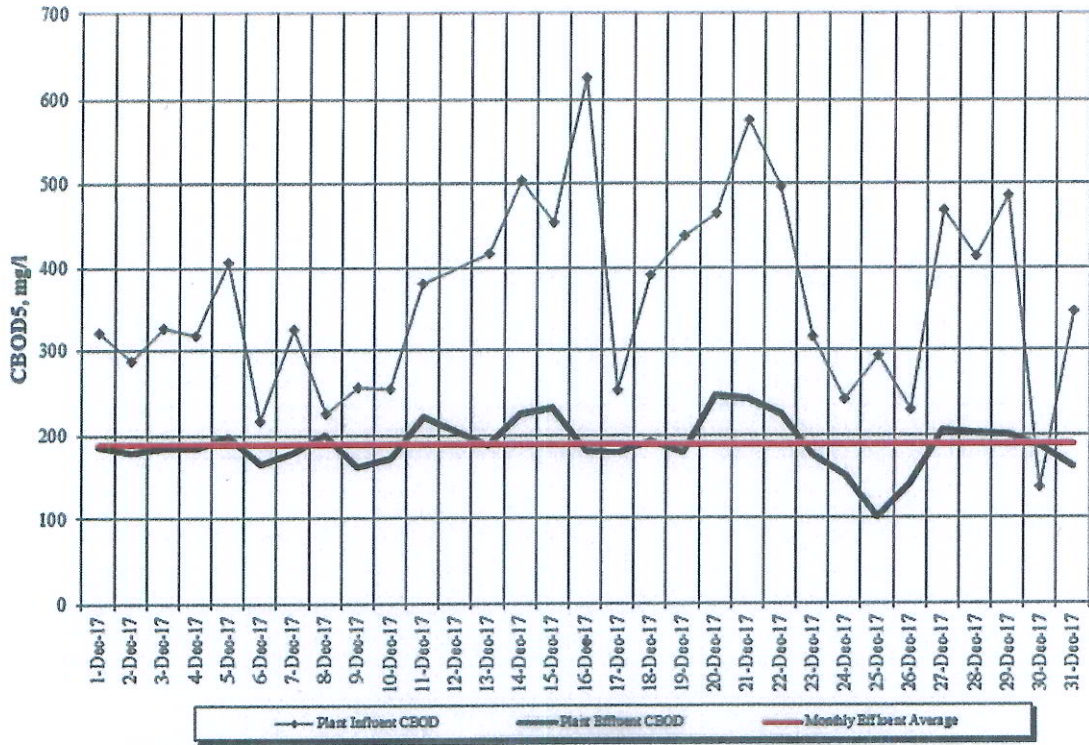
Status: This quarter, Streeter continued installing the precast sections of the structure above the existing 54" Binghamton pipe, and have begun installing the 54" over flow from Manhole #3 to the river. The delivery of the two 54" gates being fabricated by Waterman Industries in California have been delayed. The gates did not begin fabrication until late this quarter. Waterman Industries has not committed to a firm delivery date. Streeter completed concrete work for the floodwall this quarter, and we have confirmed the top of wall to be consistent with the ACI requirements. Streeter continued work on the two storm drain pump stations, the valve access platforms, and the bridge to Manhole #3 this quarter. 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 passed the leak testing this quarter. The work for the selective removal of the existing coatings in Digesters No. 1 and No. 2 is complete. Significantly more coatings came off in Digester #1 and 2, and a replacement coating will be priced by competitive pricing to get the best price for the coating.

3 Month Look Ahead: Streeter will install the 30" Binghamton University line to Manhole #3 this quarter. They will also install the two 54" gates, the platforms for access to the pump station valves, the platform to Manhole #3, and test the storm drain pump stations this quarter.

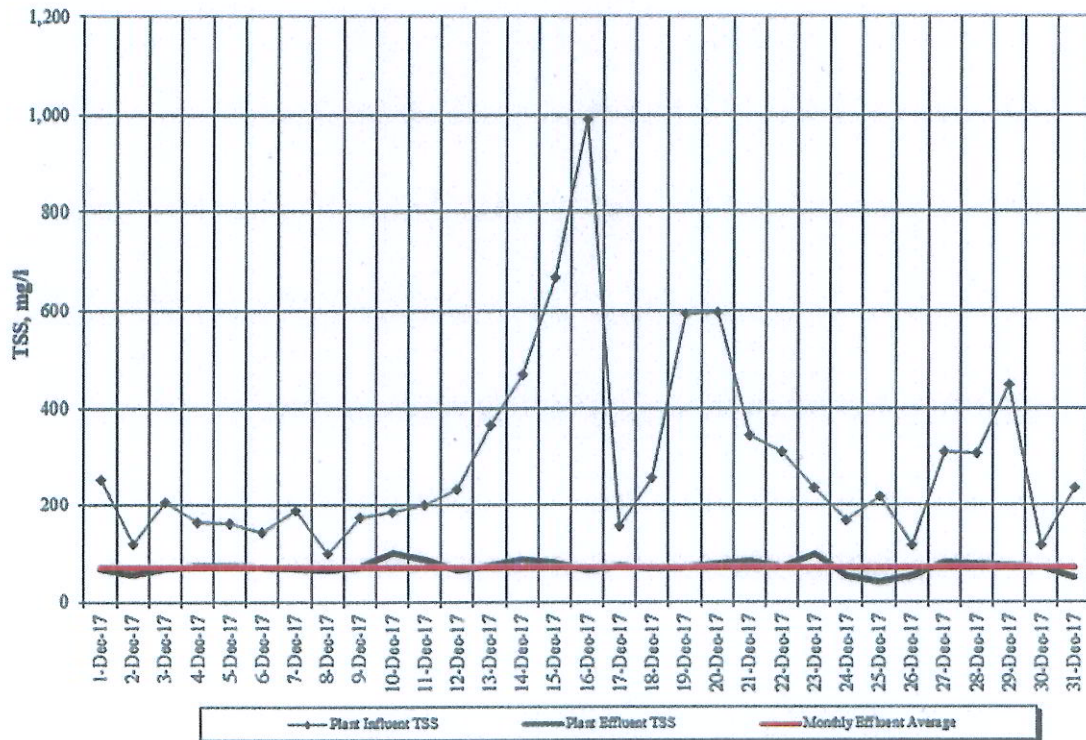
Contract Status: 91% Complete through March 2018

ATTACHMENT A
Facility Operations

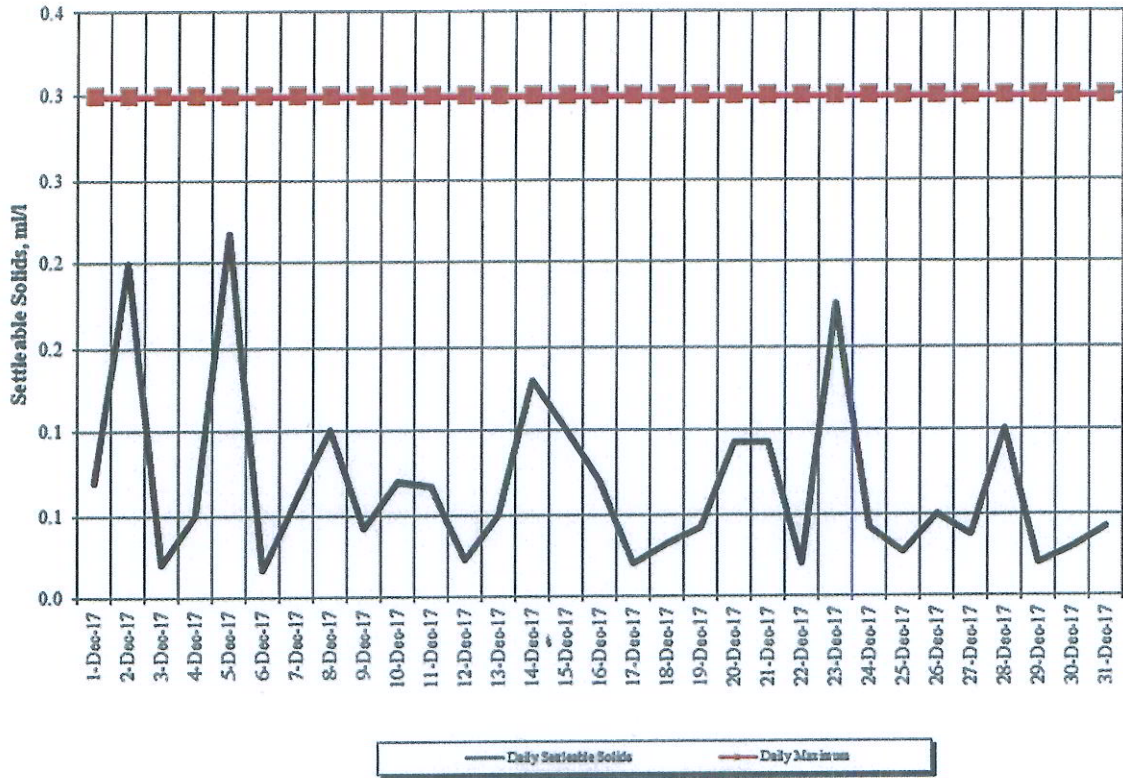
CBOD5 Concentrations
Binghamton - Johnson City JSTP



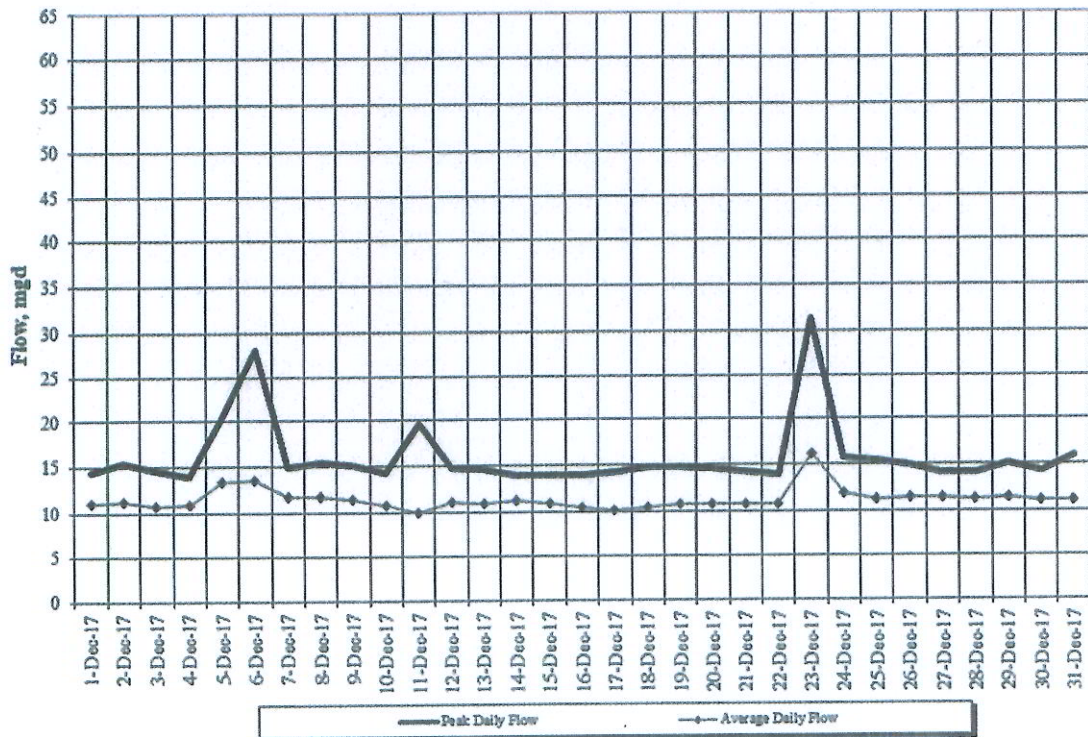
TSS Concentrations
Binghamton - Johnson City JSTP



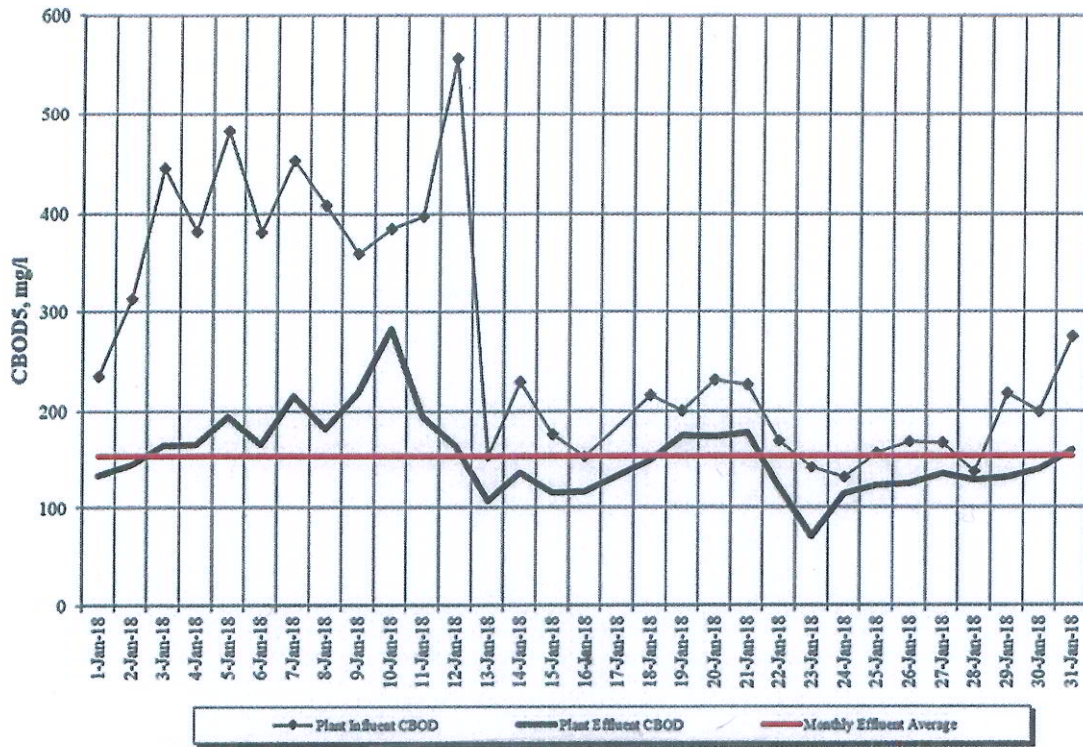
Settleable Solids
Binghamton - Johnson City JSTP



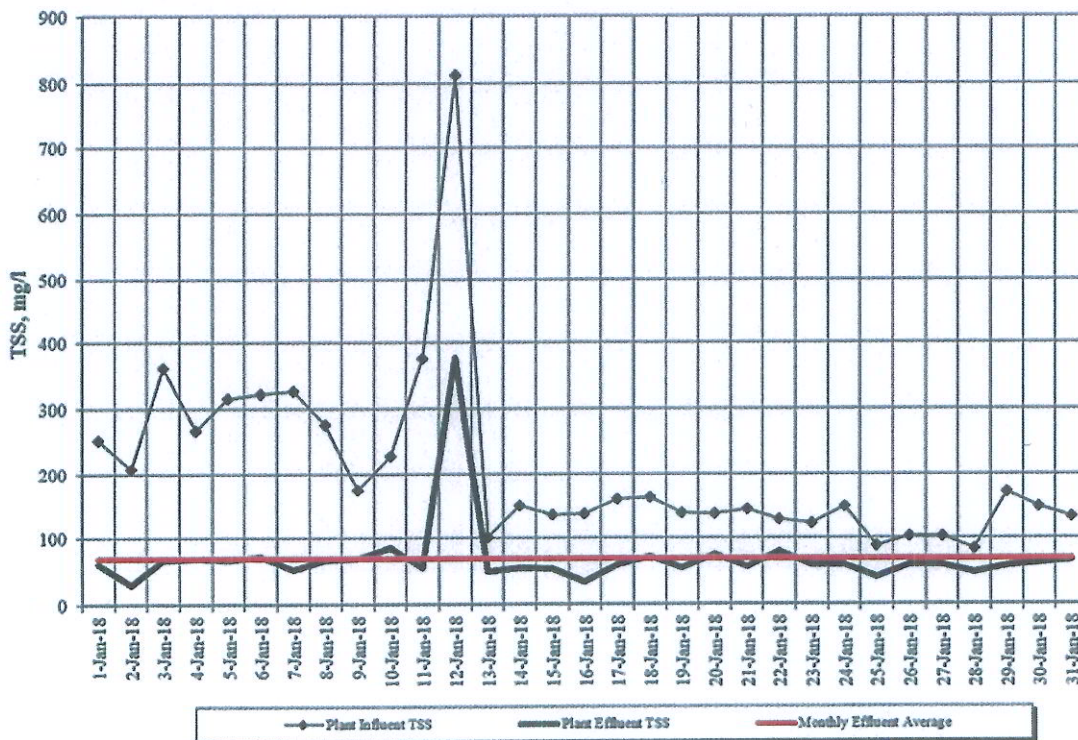
Daily Flows
Binghamton - Johnson City JSTP



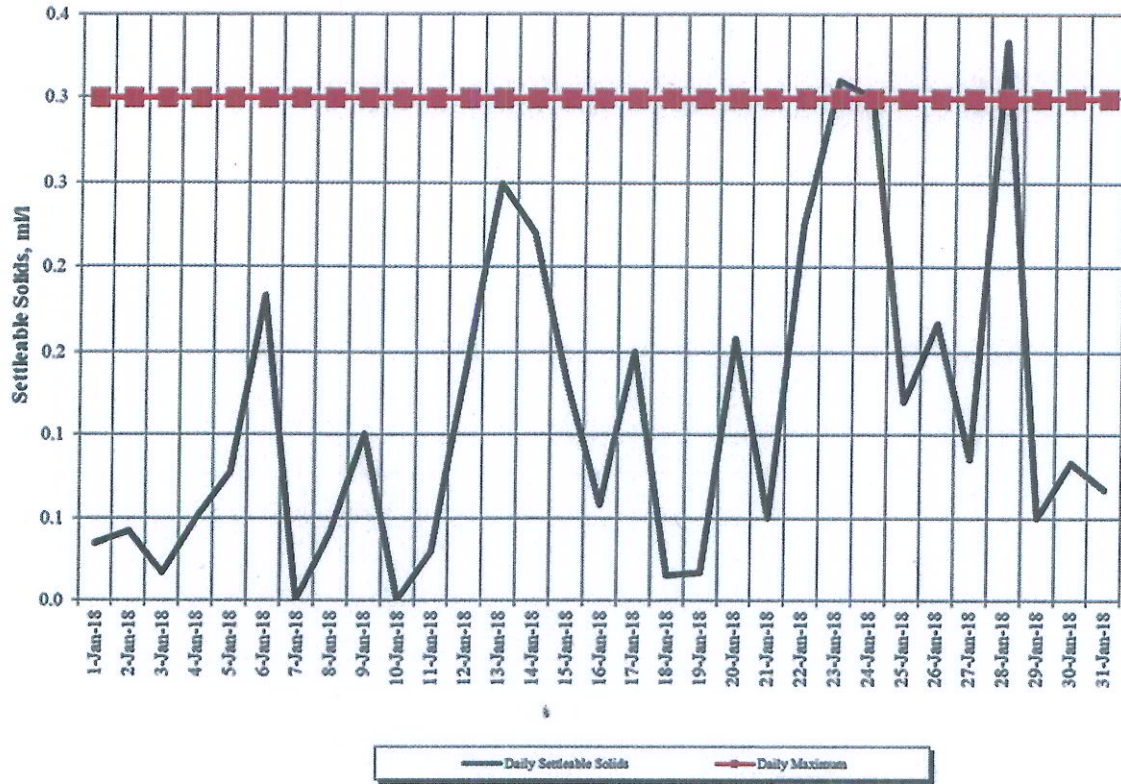
CBOD5 Concentrations
Binghamton - Johnson City JSTP



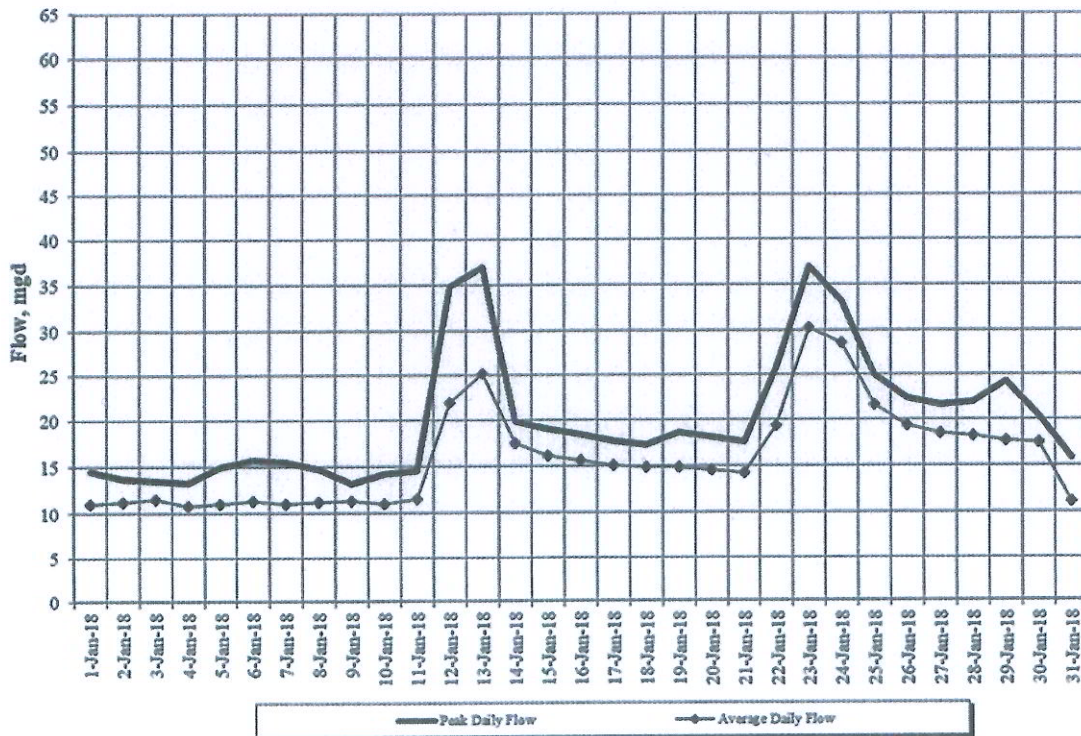
TSS Concentrations
Binghamton - Johnson City JSTP



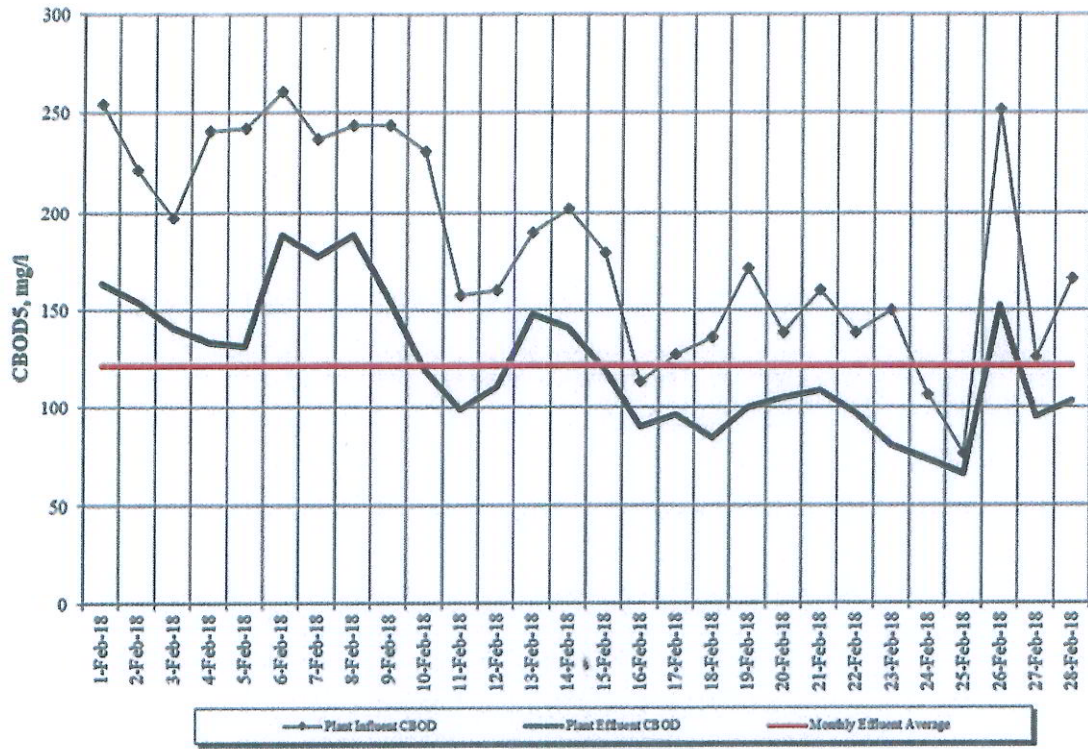
Settleable Solids
Binghamton - Johnson City JSTP



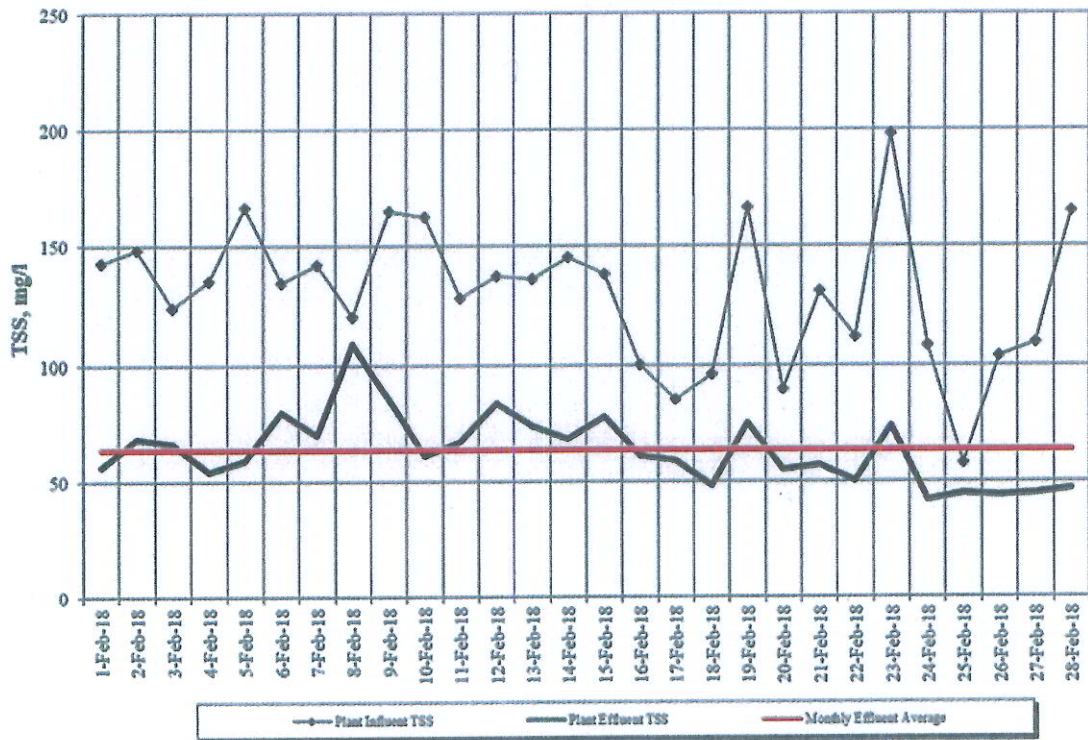
Daily Flows
Binghamton - Johnson City JSTP



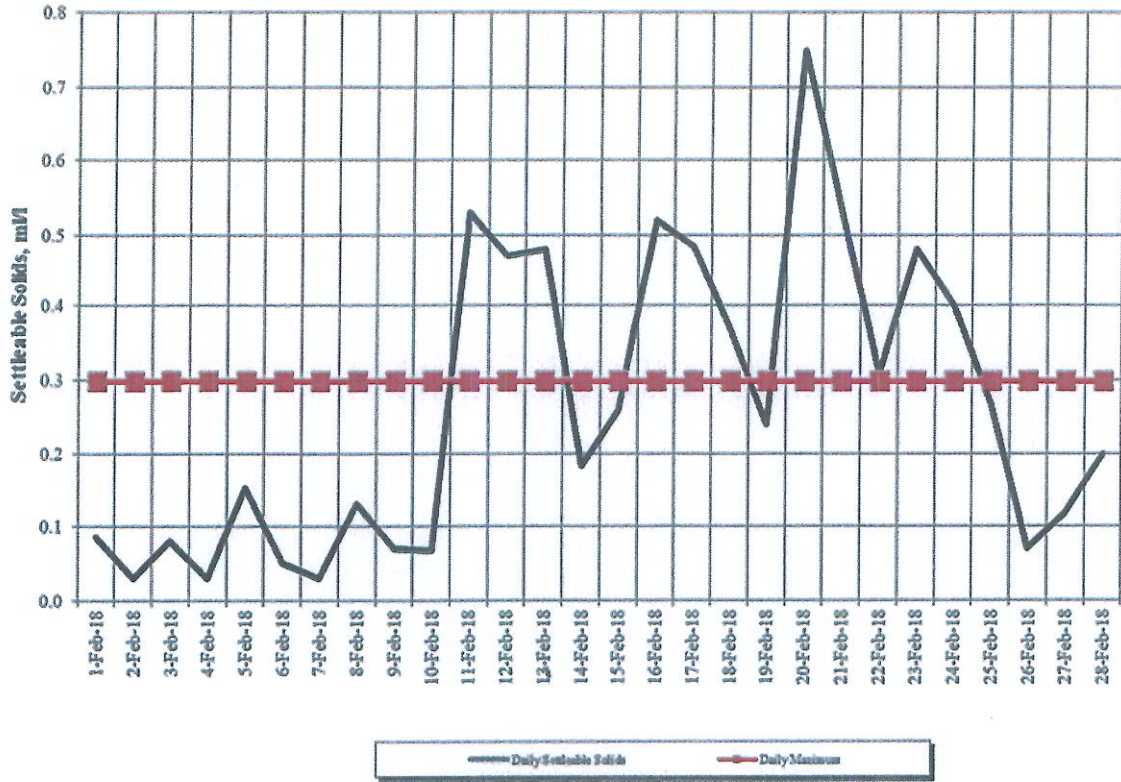
CBOD5 Concentrations
Binghamton - Johnson City JSTP



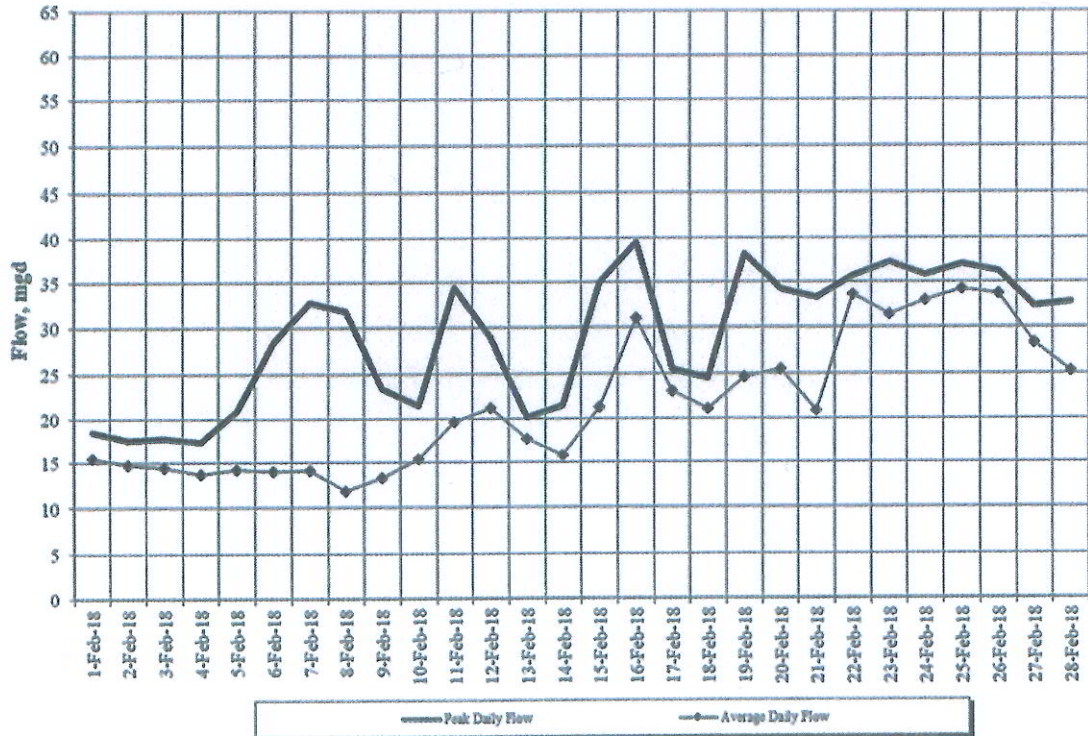
TSS Concentrations
Binghamton - Johnson City JSTP



Settleable Solids
Binghamton - Johnson City JSTP



Daily Flows
Binghamton - Johnson City JSTP

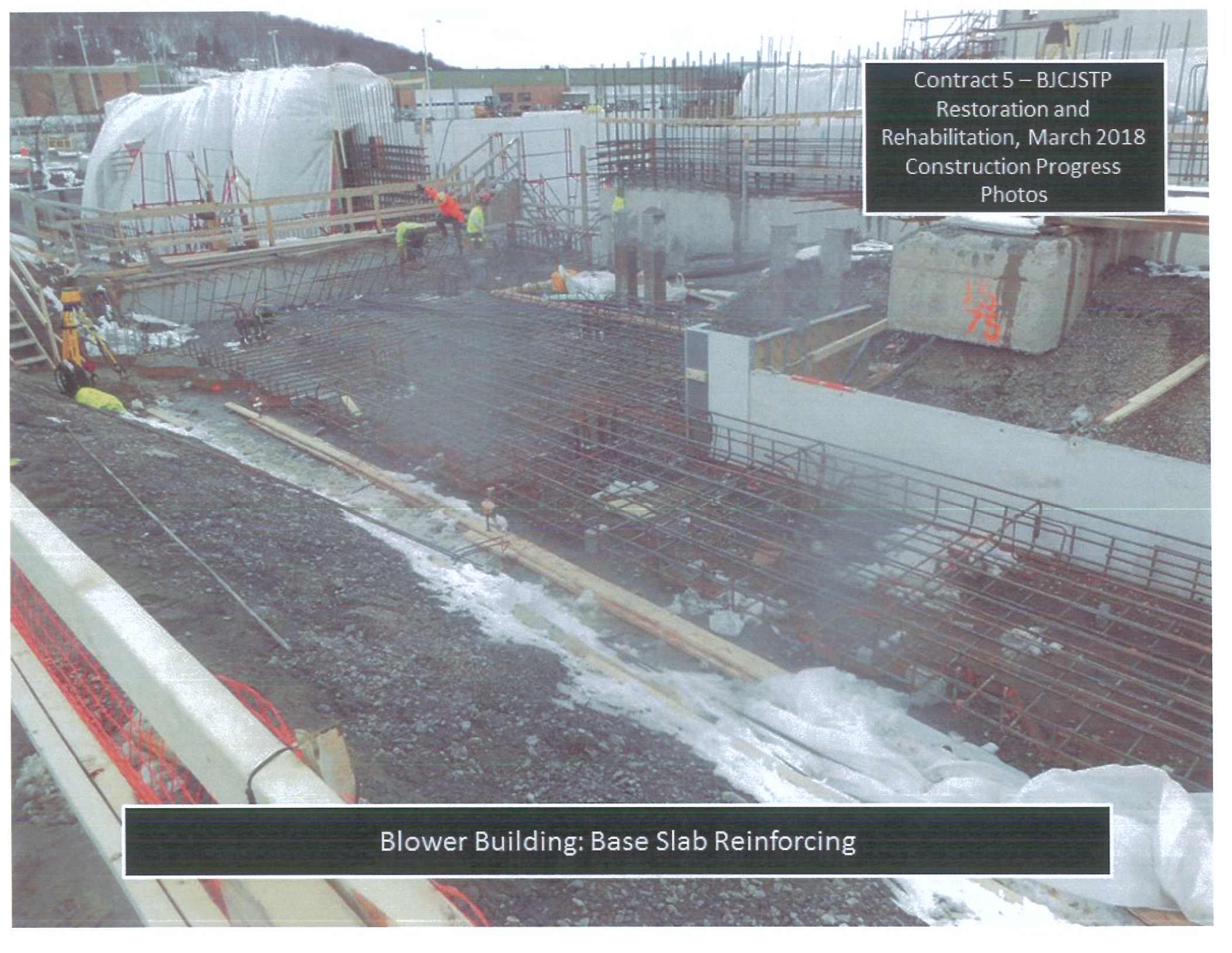


DATE	TOTAL	Final Eff	FW	Final Eff	FW	CL 2	Fecal	Eff.	FW	Eff. Total	Daily	Iron (Fe)
	FLOW	Amm. Avg	Amm. Avg	TKN	TKN	AVG	Coli mg/l	Phos.	Phos. Avg	Iron	Total Q	lbs/day
1-Dec-17	11.16			30.9	29.9	1.31	2					
2-Dec-17	11.25			26.2	28.0	1.03	2					
3-Dec-17	10.75			29.1	30.3	0.77	2					
4-Dec-17	10.96			34.1	31.8	1.31	4					
5-Dec-17	13.50	20.9	19.6	24.9	24.2	1.26	5	3	4.1	3.2	13.50	360
6-Dec-17	13.53			32.6	37.5	1.39	34					
7-Dec-17	11.84			32.3	37.5	1.19	2					
8-Dec-17	11.77			32.2	30.9	1.12	2			3.94	11.77	387
9-Dec-17	11.54			32.7	30.0	1.36	4					
10-Dec-17	10.87			31.6	32.7	0.99	4					
11-Dec-17	10.09			31.8	39.8	1.33	13					
12-Dec-17	11.10	27.5	22.0	35.8	41.2	0.93	83	3.7	4.5	3.94	11.10	365
13-Dec-17	10.97			9.7	10.6	0.93	17					
14-Dec-17	11.27			13.2	12.8	0.96	25			4.59	11.27	431
15-Dec-17	10.97			36.3	13.0	1.14	242					
16-Dec-17	10.49			11	25.2	0.96	2					
17-Dec-17	10.23			11.8	17.0	1.23	2					
18-Dec-17	10.55			10.6	9.6	1.23	2					
19-Dec-17	10.89	22.8	21.4	12	13.2	1.03	40	3.6	5.1	3.57	10.89	324
20-Dec-17	10.89			32.1	25.9	1.18	47					
21-Dec-17	10.82			27	31.3	1.18	4			3.68	10.82	332
22-Dec-17	10.78			29.8	26.4	0.72	4					
23-Dec-17	16.19			19.6	20.3	0.8	2					
24-Dec-17	11.92			21.1	17.5	1.11	2					
25-Dec-17	11.30			22	18.2	1.4	2					
26-Dec-17	11.43	21.5	18.2	6.3	17.3	0.83	21	2.2	2.3	3.39	11.43	323
27-Dec-17	11.47			14	21.4	0.74	105					
28-Dec-17	11.30			7.6	12.6	0.77	58			5.14	11.30	484
29-Dec-17	11.51			9.3	12.0	1.05	118					
30-Dec-17	11.08			18.1	19.1	0.95	2					
31-Dec-17	11.17			21.3	19.6	0.76	2					
	11.41	23.18	20.3	22.81	23.8	1.40	7.80	3.13	3.99	3.93	11.51	377
	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

DATE	TOTAL	Final Eff	FW	Final Eff	FW	CL 2	Fecal Coli mg/l	Eff.	FW	Eff. Total	Daily	Iron (Fe)
	FLOW	Amm. Avg	Amm. Avg	TKN	TKN	AVG		Phos.	Phos. Avg	Iron	Total Q	lbs/day
1-Jan-18	12.24			17.7	17.9	1.21	78					0
2-Jan-18	12.33			17.6	18.7	0.94	14					0
3-Jan-18	16.33	8.8	8.4	14.2	19.3	1.34	5	2.1	3.6	2.94	16.33	400
4-Jan-18	18.26			17	12.5	1.19	15					0
5-Jan-18	15.47			19.3	15.3	1.11	83			5.99	15.47	773
6-Jan-18	14.76			17.6	16.5	1.29	393					0
7-Jan-18	13.92			16.3	16.3	1.39	4					0
8-Jan-18	13.63			17.4	16.1	1.27	9					0
9-Jan-18	12.69			21.1	22.2	1.24	30					0
10-Jan-18	12.58	15.7	14.4	21.8	21.9	1.25	48	3	3.6	5.55	12.58	582
11-Jan-18	14.81			17.6	19.0	1.13	157					0
12-Jan-18	20.89			11.9	11.8	1.35	63			4.54	20.89	791
13-Jan-18	18.54			11.3	12.3	1.18	10					0
14-Jan-18	16.40			12.5	12.9	1.09	51					0
15-Jan-18	15.16			13.1	14.4	1.23	51					0
16-Jan-18	14.23			15.7	15.3	1.33	2					0
17-Jan-18	20.47	9.3	10.7	15.1	17.2	1.34	270	2.1	3.0	3.2	20.47	546
18-Jan-18	19.71			17.5	18.4	0.95	33					0
19-Jan-18	18.16			17.3	19.0	1.39	28			4.93	18.16	747
20-Jan-18	17.60			16.9	20.1	1.1	85					0
21-Jan-18	17.14			17.3	18.8	1.45	12					0
22-Jan-18	16.84			17.7	19.9	1.08	21					0
23-Jan-18	18.60			16.4	19.9	1.28	58					0
24-Jan-18	31.00	5.9	8.3	10.8	17.0	1.04	53	1.5	2.0	3.64	31.00	941
25-Jan-18	24.02			13.7	15.9	1.165	266					0
26-Jan-18	23.84			11.6	12.6	1.38	40			4.41	23.84	877
27-Jan-18	21.22			14.6	15.7	1.38	3					0
28-Jan-18	19.42			14.2	15.8	1.07	58					0
29-Jan-18	18.25			14.6	15.5	1.19	600					0
30-Jan-18	17.74			16.6	17.5	1.51	26					0
31-Jan-18	18.12	13.5	16.1	18.6	18.9	1.26	105	2.9	3.7	7.05	18.12	1065
	17.56	10.64	11.6	15.97	16.9	1.51	36.82	2.32	3.19	4.69	19.65	769
	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

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-Feb-18	15.47			8	9.3	0.96	24			2.22	15.47	286
2-Feb-18	14.80			9.3	12.3	1.08	2					
3-Feb-18	14.48			13.8	7.8	1.13	5					
4-Feb-18	13.69			10.5	14.9	1.12	2					
5-Feb-18	14.29			13.3	13.9	1.27	709					
6-Feb-18	14.04	16.4	17.1	14.8	15.8	1.01	68	3.1	3.2	3.26	14.04	382
7-Feb-18	14.12			16.6	12.2	0.84	5					
8-Feb-18	11.88			13.9	16.0	1.05	12			3.37	11.88	334
9-Feb-18	13.29			5.2	15.9	1.12	713					
10-Feb-18	15.38			20	44.4	1.14	2					
11-Feb-18	19.65			15	15.9	1.41	30					
12-Feb-18	21.22			17.3	15.2	1.47	13					
13-Feb-18	17.66	12.5	13.0	18.9	18.5	1.2	6	2.4	2.8	3.59	17.66	529
14-Feb-18	15.77			18.4	16.9	1.24	235					
15-Feb-18	21.34			13.9	13.5	1.1	11			3.39	21.34	603
16-Feb-18	30.96			11.4	12.5	1.44	152					
17-Feb-18	23.14			12.4	10.7	1.35	30					
18-Feb-18	21.14			14.3	13.8	1.35	45					
19-Feb-18	24.61			12.4	14.1	1.38	33					
20-Feb-18	25.48	7.9	9.3	13.2	13.3	0.99	208	2	2.3	2.88	25.48	612
21-Feb-18	20.96			10	11.1	1.14	5					
22-Feb-18	33.60			8.6	11.7	1.48	132			3.03	33.60	849
23-Feb-18	31.37			10	10.3	1.42	35					
24-Feb-18	32.93			10.2	9.1	1.5	12					
25-Feb-18	34.25			5.5	8.6	1.6	74					
26-Feb-18	33.66			8.6	9.8	1.5	26					
27-Feb-18	28.25	6.8	9.0	12	13.9	1.22	20	1.8	2.2	2.72	28.25	641
28-Feb-18	25.29			11.7	9.8	1.09	46					
	21.53	10.90	12.1	12.47	14.0	1.60	26.65	2.33	2.62	3.06	20.97	535
	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

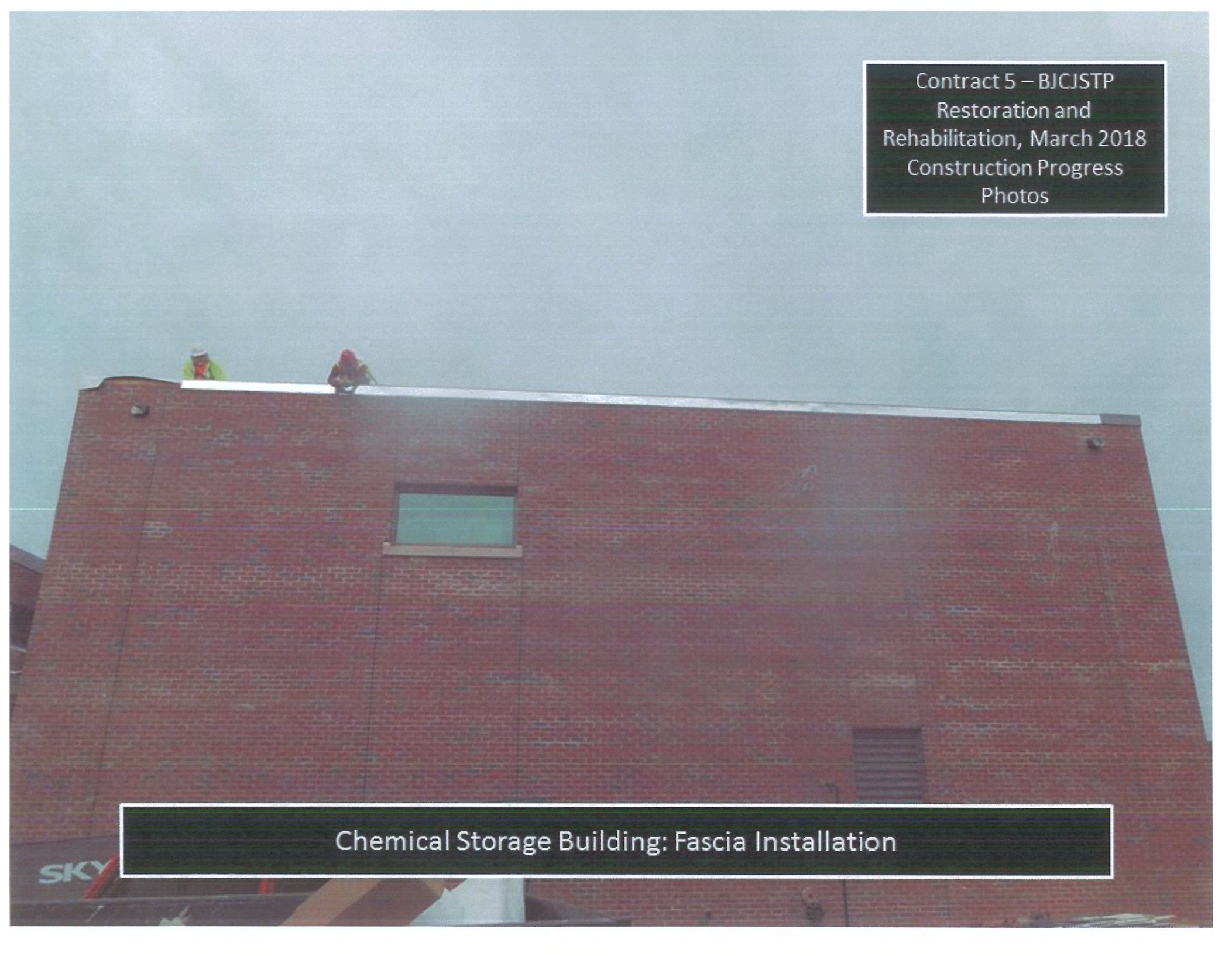
ATTACHMENT B
Photos



Contract 5 – BJCJSTP
Restoration and
Rehabilitation, March 2018
Construction Progress
Photos

Blower Building: Base Slab Reinforcing

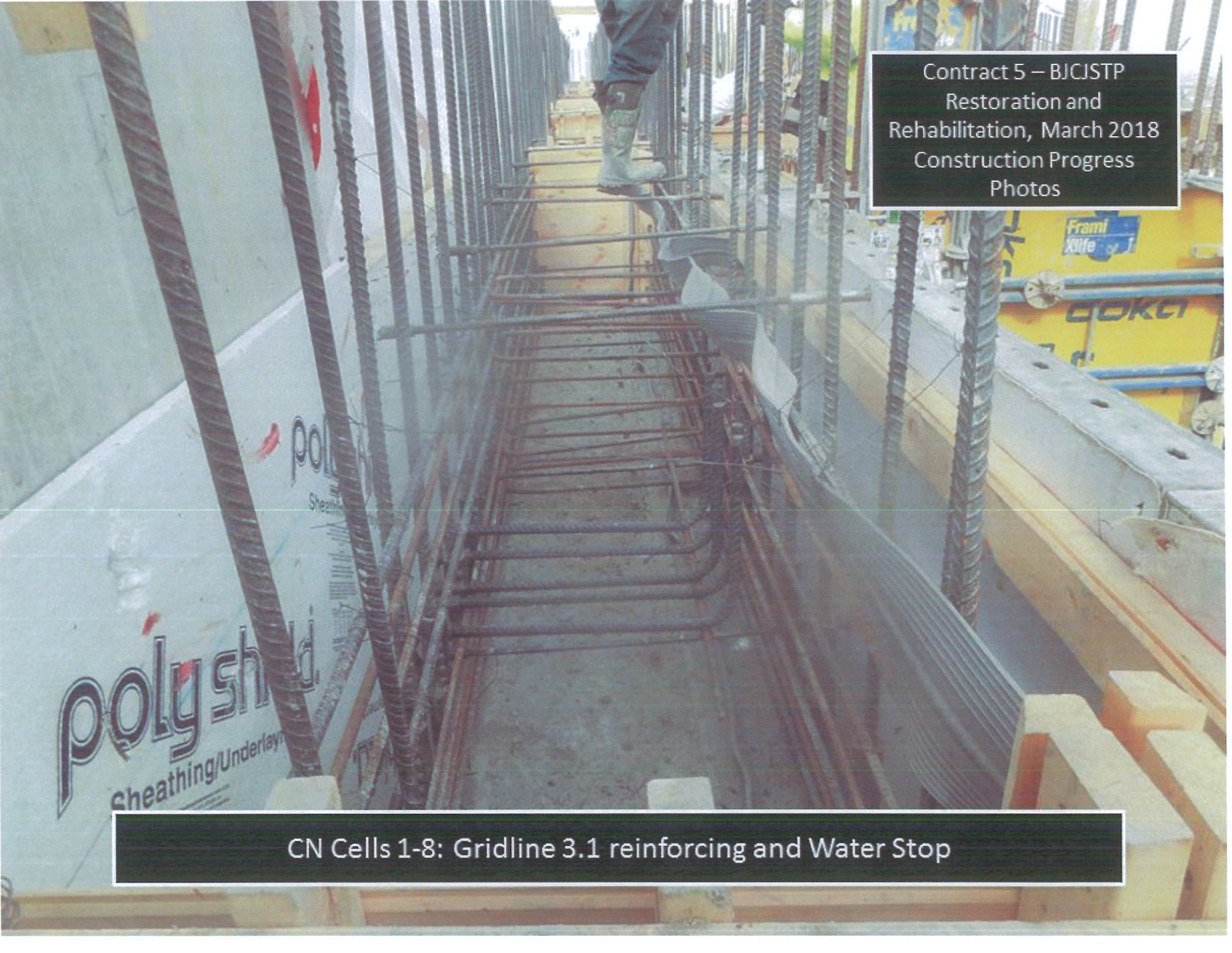
Contract 5 – BJCISTP
Restoration and
Rehabilitation, March 2018
Construction Progress
Photos



Chemical Storage Building: Fascia Installation

SKY

Contract 5 – BICJSTP
Restoration and
Rehabilitation, March 2018
Construction Progress
Photos



CN Cells 1-8: Gridline 3.1 reinforcing and Water Stop

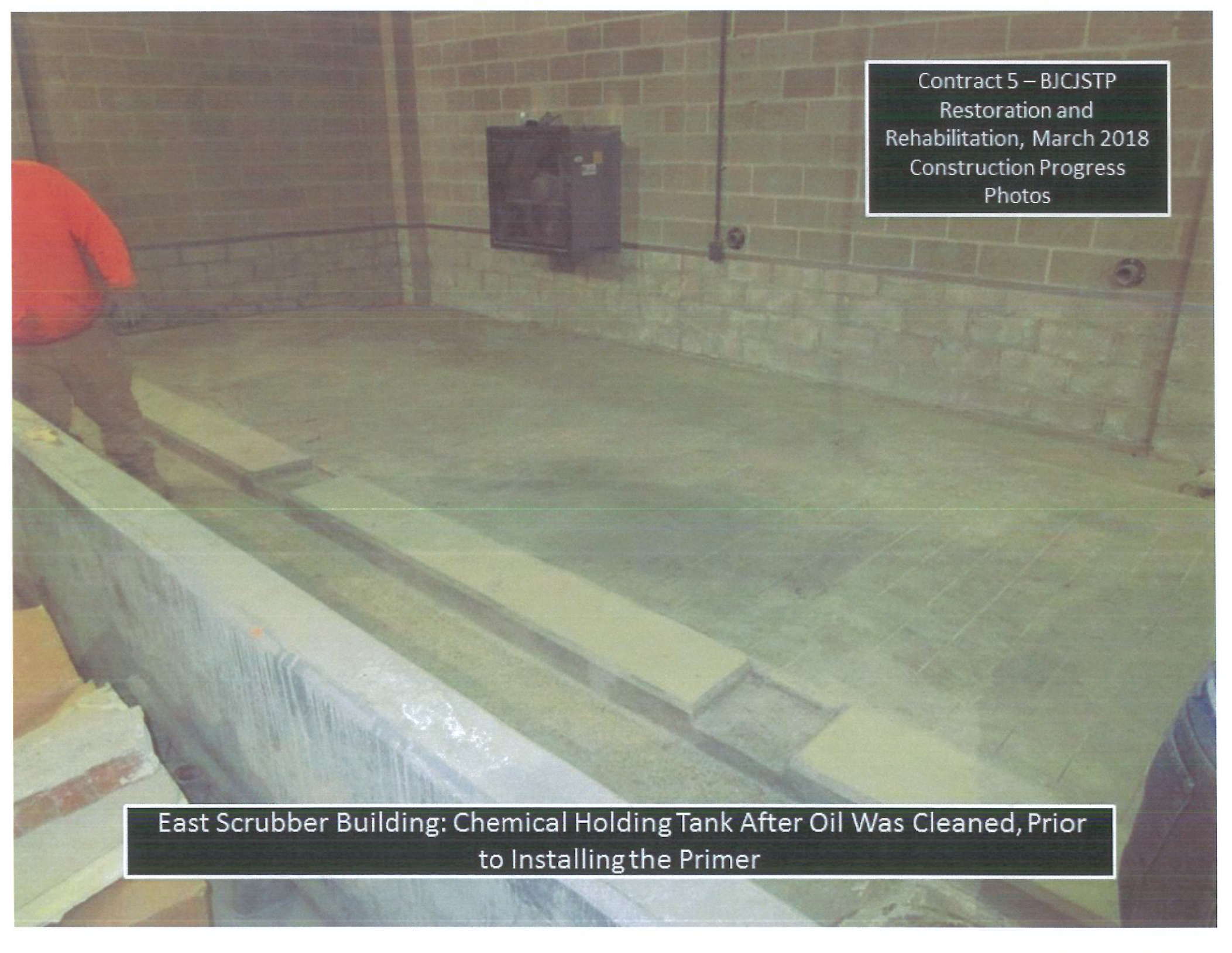
Contract 5 – BICJSTP
Restoration and
Rehabilitation, March 2018
Construction Progress
Photos

A construction site showing the preparation of a concrete wall. A dense grid of steel rebar is visible, supported by wooden forms. In the foreground, there are various pipes and valves, some with red caps. A worker in a high-visibility vest and hard hat is visible on the right side, working on a structure. The ground is covered with snow.

CN Cells 9-14: North Flood Protection Wall East End

Contract 5 – BICJSTP
Restoration and
Rehabilitation, March 2018
Construction Progress
Photos

East Scrubber Building: Chemical Holding Tank After Oil Was Cleaned, Prior to Installing the Primer




Contract 6 – BICJSTP
Restoration and
Rehabilitation, March 2018
Construction Progress
Photos

East Scrubber Building: PLC12B

Contract FW- BJCISTP Flood
Wall, March 2018
Construction Progress
Photos

A photograph of a construction site for a flood wall. In the foreground, there is a dirt and gravel area with a red and white traffic cone. To the left, a yellow concrete pump truck is partially visible, with the number '250' on its side. In the center, a red concrete pump truck is parked, and to its right, a green concrete pump truck is also parked. In the background, a body of water is visible, with several workers in safety gear standing near the water's edge. The sky is clear and blue, and there are trees and houses in the distance.

Flood Wall: Concrete Pump Trucks Pouring Sanitary Bypass Outfall

A photograph showing a large-scale construction project inside a tunnel. The floor is covered with a dense grid of steel reinforcing bars (rebar) laid out on wooden formwork. The rebar is arranged in a rectangular pattern, with some sections being more densely packed than others. The tunnel walls are visible in the background, and a bright light source is visible at the end of the tunnel. The overall scene is one of active construction.

Contract 5 – BJCJSTP
Restoration and
Rehabilitation, March 2018
Construction Progress
Photos

Primary Distribution Box #2: SOG Reinforcing and Water Stop