



Primary Treatment Renovation at Bird Island Wastewater Treatment Facility

Pre-Bid Meeting #1: General Information

BUFFALO
SEWER AUTHORITY

 **GREELEY AND HANSEN**
A TYLin Company

February 20, 2024

Agenda

- Opening Remarks
- Overview of Work
- Construction Documents
- Project Components
- Project Constraints and Site Coordination
- General Discussion / Contractor Questions
- Roll Call / Closing Remarks

Opening Remarks



Online
Meeting



You are
Muted



Chat
Box



Live
Q&A



Meeting
Recorded

- **Attendance Record – one representative from each firm to check in via the chat**
 - **Name of attendee and firm**
 - **Roll call at the end**
- **The presentation and attendee list will be shared with all attendees by addendum.**
- **All questions to be provided in writing.**

Presenters



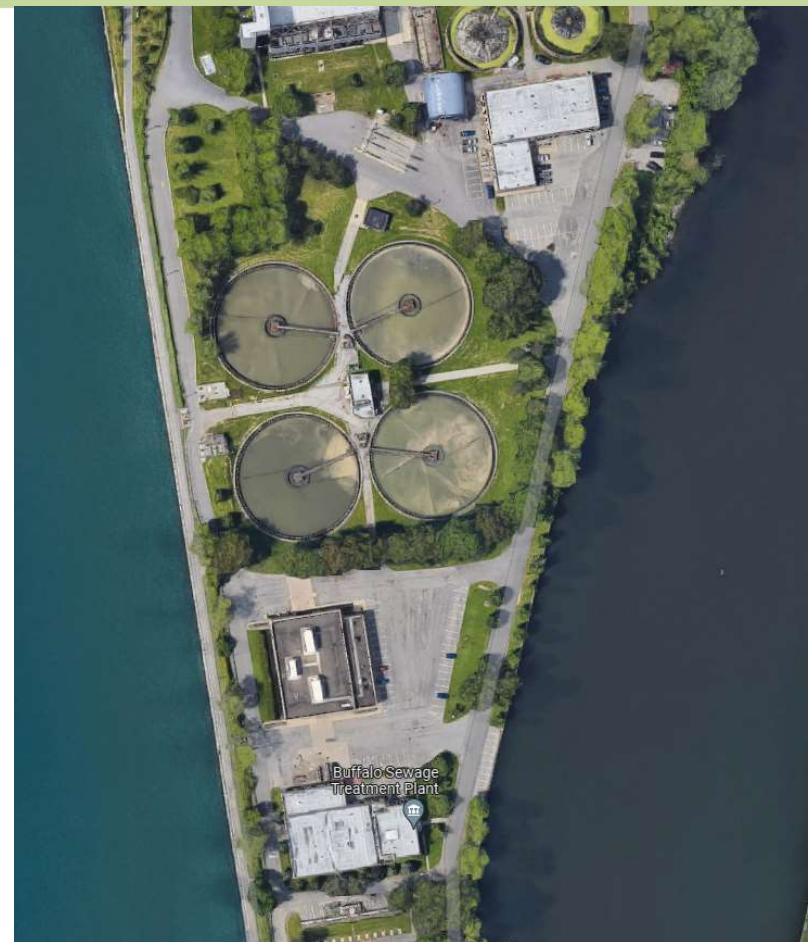
- **Tim Blake**
WWTF Capital Projects Manager
- **Rosaleen Nogle, PE, BCEE**
Principal Sanitary Engineer



- **Walt Walker, PE, ENV SP**
Project Manager
- **Ryan Christopher, PE, ENV SP**
Deputy Project Manager

Bid and Procurement Schedule

- Bid Advertisement: February 12, 2024
- Three (3) Mandatory Pre-Bid Meetings
 - **Meeting #1** – Virtual Informational Meeting: February 20, 2024 @ 11:00am ET
 - **Meeting #2** – Virtual NYSEFC Funding Compliance Meeting: February 21, 2024 @ 2:00pm ET
 - **Meeting #3** – Site walkthrough of the project site: February 22 or 23, 2024
 - Email walt.walker@greeley-hansen.com by 02/21/2024 @ 1:00 pm ET to register
 - PPE required
- Contract Documents are available through Avalon Planroom
 - www.avalonbuff-planroom.com in the “Public Jobs” section.
 - All addenda will posted there



Bid and Procurement Schedule

- Questions
 - Provide all questions in writing by March 18, 2024 to: walt.walker@greeley-hansen.com
 - Questions and Responses will be provided by addenda
 - Final Addendum issued: March 23, 2024
- Bid Packages Due: March 28, 2024 **before 11:00am EST**
 - At the office of *TYLin | Greeley and Hansen*:
77 Broadway, Suite 208, Buffalo, NY 14203
 - Bid Opening via MS Teams **at 11:00am EST**
- Recommendation of Bid Award: May 2024
- Notice to Proceed: Fall 2024
- Substantial Completion: December 2028





Overview of Work

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PRIMARY SYSTEM REHABILITATION AND UPGRADES PROJECT OVERVIEW



1 Primary Sedimentation Tanks

- » New sludge and scum collection equipment
- » Improved efficiency for sludge settling and removal
- » Concrete repair and coating for corrosion protection
- » Safety improvements with new handrail and toeboards

2 Sludge Pumping Station

- » New pumps, piping, and valves
- » New HVAC equipment to meet current ventilation codes and standards
- » New electrical and control equipment for improved automation and operations flexibility
- » Concrete and masonry repair and improvements while maintaining original building design
- » New personnel spaces and lighting

3 Odor Control

- » New effluent trough covers for the Primary Sedimentation Tanks
- » Odor capture at various chambers
- » New FRP piping to convey odorous air to odor control units for treatment prior to being released into the atmosphere

4 High-Rate Disinfection System

- » New Chlorine Contact Tank provides 5 minutes of contact time at 160 MGD
- » High-Rate Disinfection Building includes chemical storage and feed equipment
- » Five new 40 MGD submersible pumps to convey disinfected Primary Effluent through Outfall 001 to the Niagara River

5 Bypass Structure Gates

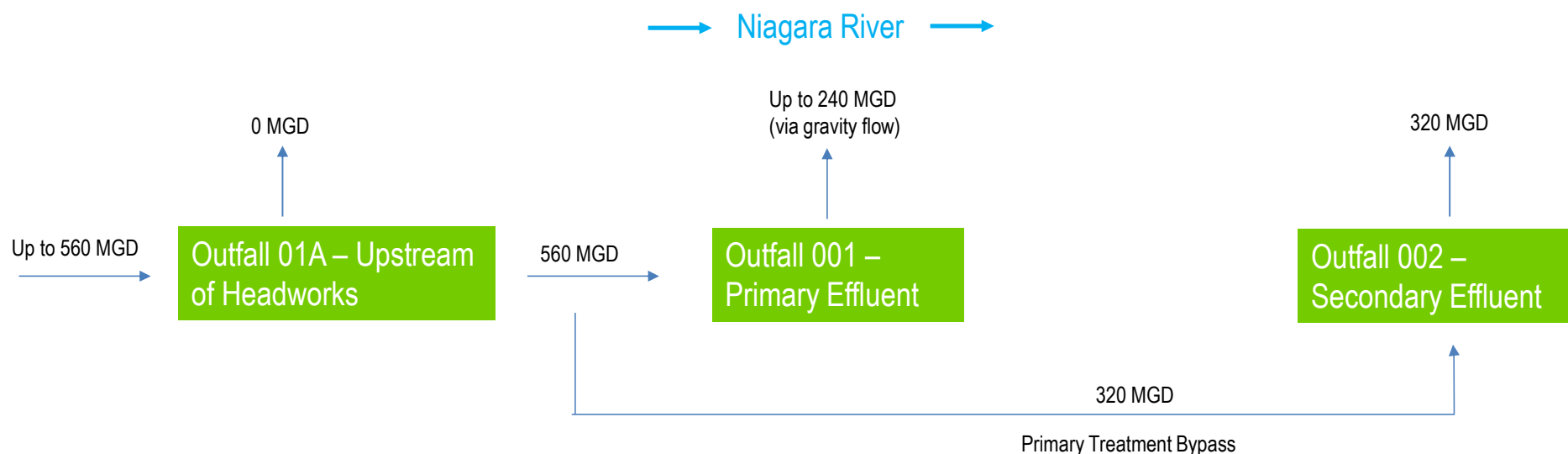
- » Gate 17 installed with new actuator
- » New gates and actuators to automate wet weather sequences and provide operational flexibility for Authority staff

6 Outfall 001 Repair

- » Restoration of multi-use riverwalk/trail
- » Installation of landscaping along public-facing utility bike/pedestrian path along Niagara River
- » Repairs to Outfall 001 overflow structure, and connection of HRD pump station pipe to the outfall structure

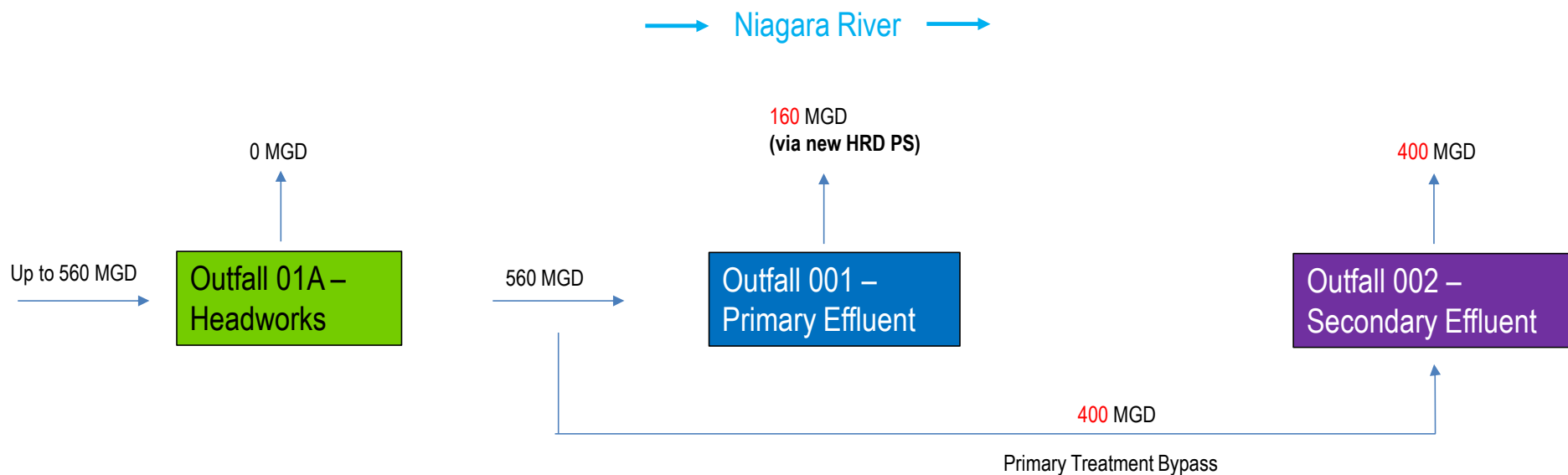
Existing Conditions during Peak Wet Weather (Present)

- During normal operating conditions, Primary Treatment throughput is 160 MGD
- Secondary Treatment capacity currently limited to ~320 MGD
- During peak wet weather conditions (partial treatment mode), excess flows are discharged through partial treatment primary Outfall 001



Ultimate System Buildout – Peak Wet Weather Conditions (2029)

- Primary Treatment Renovation, and Secondary System Rehabilitation and Upgrades completed
- Primary Treatment Capacity maximum throughput of 160 MGD; Secondary Treatment Capacity increased to 400 MGD





Construction Documents

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Instructions to Bidders

- Bidder's Responsibility
- Preparation of Proposals
- Withdrawal of Bid
- Bid Documents
 - Section 01 29 00 - Measurement and Payment
 - Contract Drawings
- Bid Security
 - Certified Check: 5% of Bid Price
 - Bid Bond: 25% of Bid Price
- Addendum No. 1 includes Addendum Acknowledgement Form

Instructions to Bidders

- Project Funding
 - Federal and state funding administered through NYSEFC and NYSDEC
 - BIL, CWSRF, WIIA, WQIP
- Participation Goals of **Disadvantaged Business Enterprises (DBE)**
 - **20% DBE** Utilization Goal across the entire contract
 - Contractor agrees to make documented [Good Faith Efforts](#) to utilize at least 20% of total value of the contract to NYS-certified DBEs
- Contract Packaging
 - Scope organized into Contracts A and B

Contract Packaging

The work is divided into two Contracts, A and B. Bidder may propose on either Contract A or Contract B.

- **Contract A – Primary Settling Tanks and Sludge Pumping Station**
 - Primary Sedimentation Tanks and Sludge Pumping Station Renovation; Installation of New Odor Control System; Demolition of equipment in the existing Bypass SH Facility.
- **Contract B – New Chlorine Contact Tanks and High-Rate Disinfection (HRD) System**
 - New High-Rate Disinfection Chlorine Contact Tank, High-Rate Disinfection Building, a new connection and renovations to the existing Outfall Structure 001, HRD Influent and Effluent Conduits, modifications to the existing Bypass and Control Chamber and Primary Bypass Junction Chamber, replacement of gates at the Bypass and Control Chamber, Primary Bypass Structure No. 1 and 2.
 - Replacement of gates WW-15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, and 26
- **The Bidder may propose the bid alternate identified as Contract C (Combined Bid for Contracts A+B).** If a Bidder proposes on Contract C, they must also provide proposals for Contract A and B.
- The Bidder understands that after a Contract is awarded, the Authority may select the bid alternate. The proposed prices for the bid alternate may or may not be considered in determination of the lowest bid.

DBE Inclusion Plans and Resources

- A DBE Utilization Plan **must** be submitted with your Bid Proposal Package:

<https://efc.ny.gov/system/files/documents/2023/02/dbe-utilization-plan.docx>

- Prime contractor must utilize DBE suppliers/subcontractors that are certified on behalf of the New York State Unified Certification Program:

<https://nysucp.newnycontracts.com/>

- We are looking for Plans that are:
 - Reflecting a good-faith effort
 - Realistic and meaningful

DBE Inclusion (Cont.)

- Create economic opportunity for DBE/MBE/WBE firms, including firms who are new to working with BSA and/or the City of Buffalo
- Promote meaningful teaming arrangements, mentorship, and partnership between established, experienced firms and new and/or smaller firms
- For the Primary Treatment Renovation Construction Services contract:
 - **DBE utilization goal of 20%** of total value of the contract
 - DBE must be certified in New York State as a DBE
 - Utilization of Erie County certified M/WBE and SDVOB firms is encouraged

Contract Documents

- General
 - Equal Employment Opportunity
 - Tax Exemption
 - Non-Collusive Bidding Certification
 - Insurance
- Bonds
 - Performance Bond – 100%
 - Maintenance Bond – 10%
- Liquidated Damages
 - \$500 per day after time specified for Substantial Completion
 - \$1,000 per day beginning 60 days after time specified for Substantial Completion

Contract Administration

- Prevailing Wage Requirements
 - This contract is subject to prevailing wage requirements under Article 8 of the NYS Labor Law.
 - The prevailing wage and supplement rates that are in effect (for each trade) at the time the work is performed must be paid.
- Build America, Buy America (BABA) Act waived for this contract
- Must comply with American Iron & Steel (AIS)

Contract Administration

- Coordination with Emerson for Ovation DCS
- Document Management Software
 - *Procore* will be used for submission of submittals, RFIs/RFCs.
 - Contractor will be provided Procore training and specific instructions for submittal procedures after the bid is awarded.
- Engineer's Field Trailer
 - Part of Contract B



Project Components: Contract A

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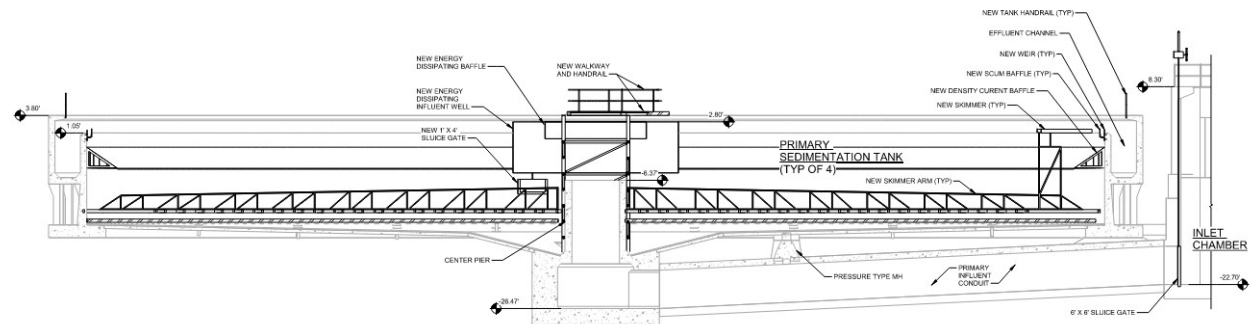
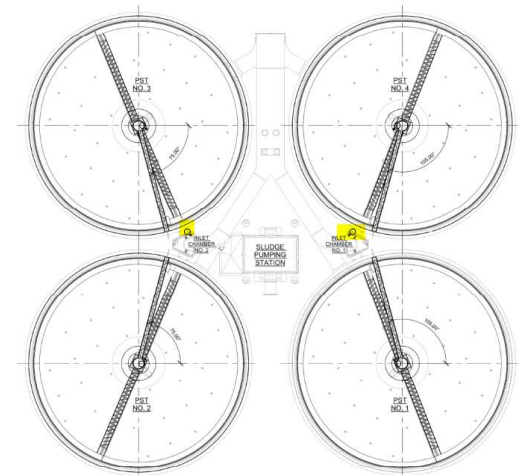


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Primary Sedimentation Tanks Upgrades

- New Clarifying Equipment
 - New Sludge and Scum Collection Equipment
 - Density Current Baffles
 - Energy Dissipating Inlets
 - Replace GW relief valves
 - New Scum Trough, Beach
 - Effluent Weir Covers – Odor Control
- Structural Repairs
 - GW Relief Valve Replacement
 - Concrete Crack / Spall repairs
 - Concrete Coating Inlet Chamber Repairs
 - Inlet Chamber & Scum Well Repairs
- Electrical
 - New Area Lighting
 - Swivel Pole Type at PSTs and PST Walkway
- New Handrails around PSTs
- Davit Mounts
- Inlet Chamber / Scum Well Handrails Left in Place

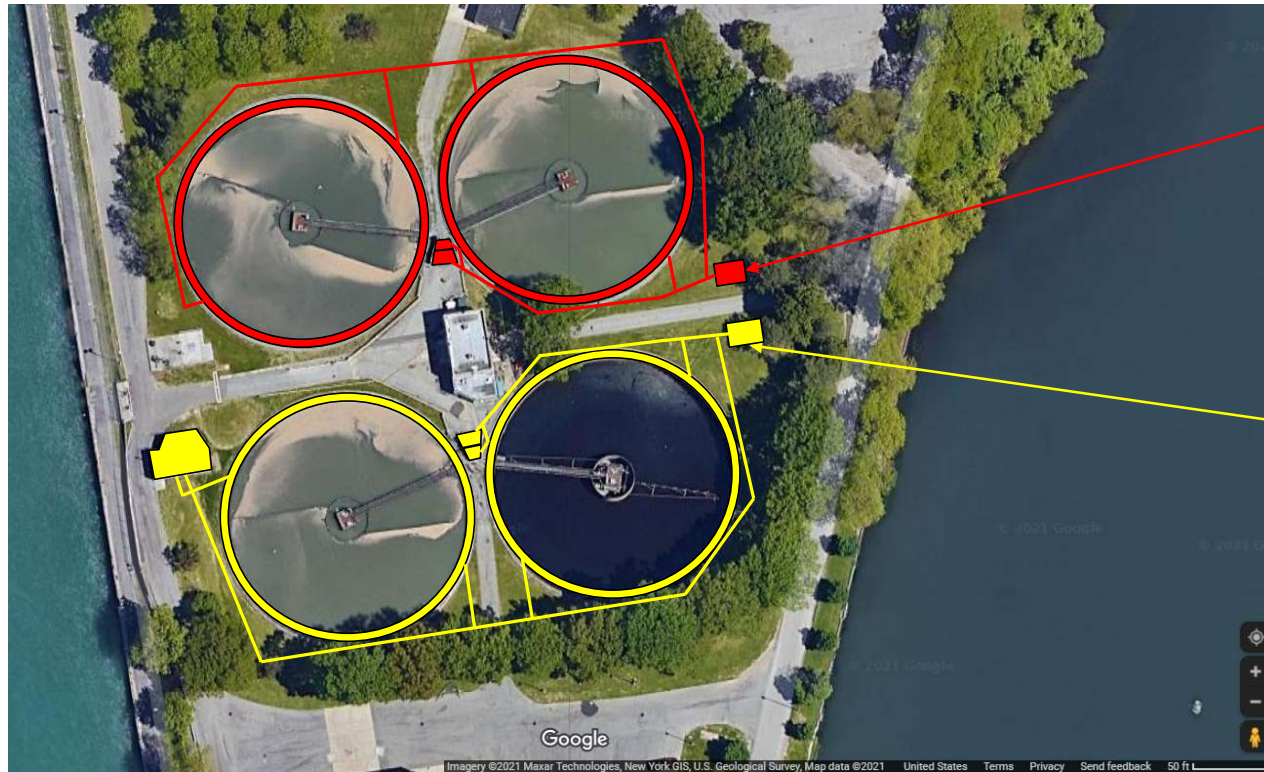


Sludge Pumping Station

- Full Building Renovation – Masonry and Building Repairs
- New Sludge Pumps w/ Grinders
- New Drainage Pumps
- New Piping and Valves
- New Plumbing and HVAC
- New Bridge Crane
- Location of New MCC
- Renovated Electrical Control Room



Odor Control System Layout



Odor Control System to Treat North Inlet Chamber and Effluent Channels of Primary Sedimentation Tanks 1 and 4

Odor Control System to Treat Bypass and Control Chamber, South Inlet Chamber, and Effluent Channels of Primary Sedimentation Tanks 2 and 3

Bypass SH Facility



Scope of Work – Schedule of Quantities

<u>NO.</u>	<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT</u>
1A	Renovations to the Primary Settling Tanks, Sludge Pump Station, Odor Control system, and associated equipment, material, and labor.	1	Lump Sum
2A	Emerson DCS equipment and integration for the equipment associated with the Primary Settling Tanks.	1	Lump Sum
3A	Allowance for the handling, removal, and legal disposal of hazardous and non-hazardous waste.	1	Lump Sum
4A	Allowance for the handling, removal, and legal disposal of unanticipated impacted soil and groundwater.	1	Lump Sum
5A	Allowance for the repair of existing pipes and utilities discovered to be in poor condition or damaged through no fault of the Contractor.	1	Lump Sum
6A	Additional earth excavation	500	Cubic Yards
7A	Additional select fill	500	Cubic Yards
8A	Additional Class B Concrete	250	Cubic Yards
9A	Additional Steel Reinforcing	500	Pounds
10A	Additional Pile Length	300	Linear Feet
11A	Additional re-pointing of existing masonry	50	Square Feet
12A	Removal of damaged brick and installation of matching brick	30	Square Feet
13A	Removal of damaged floor tile and installation of matching floor tile.	40	Square Feet
14A	Removal of damaged limestone coping and installation of matching limestone coping.	7	Each



Project Components: Contract B

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High-Rate Disinfection (HRD) Pump Station and Chlorine Contact Tank

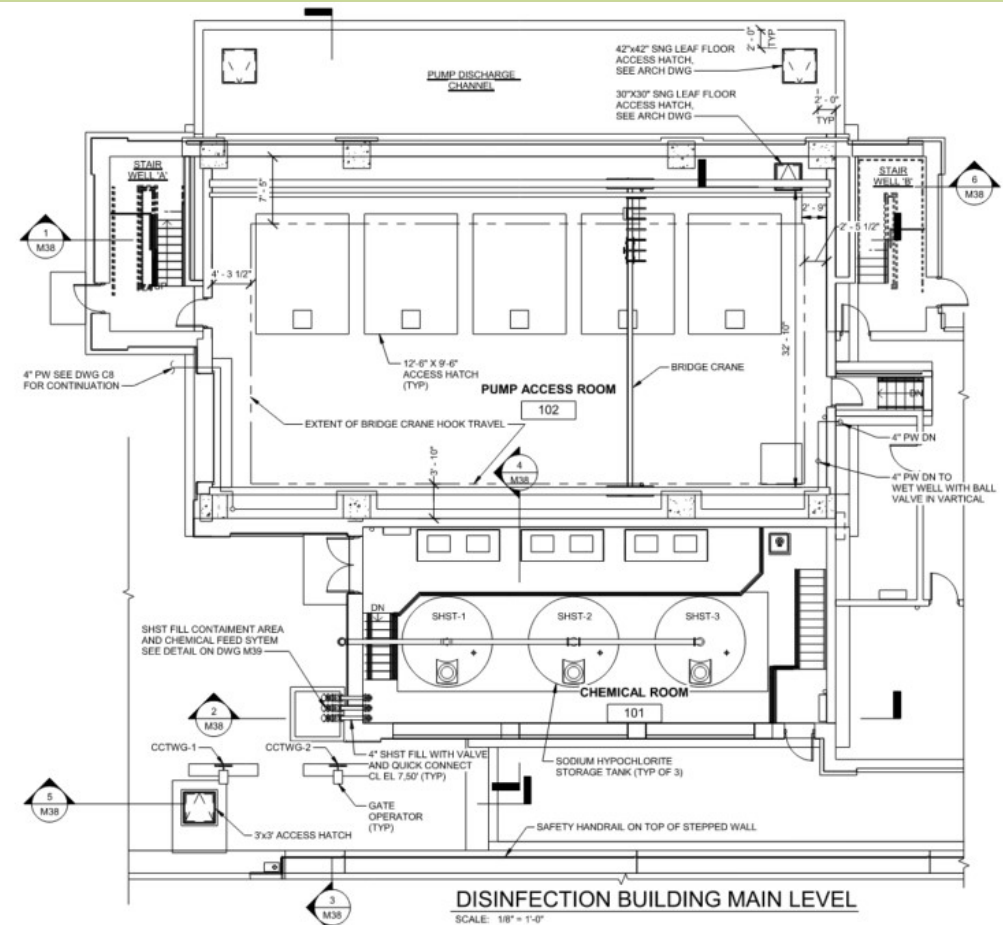
- 160 MGD max throughput
- To be operational only during Partial Treatment mode
- Once connected to Outfall 001, the existing Sodium Hypo Building would be decommissioned



Future Rendering of New HRD Facility

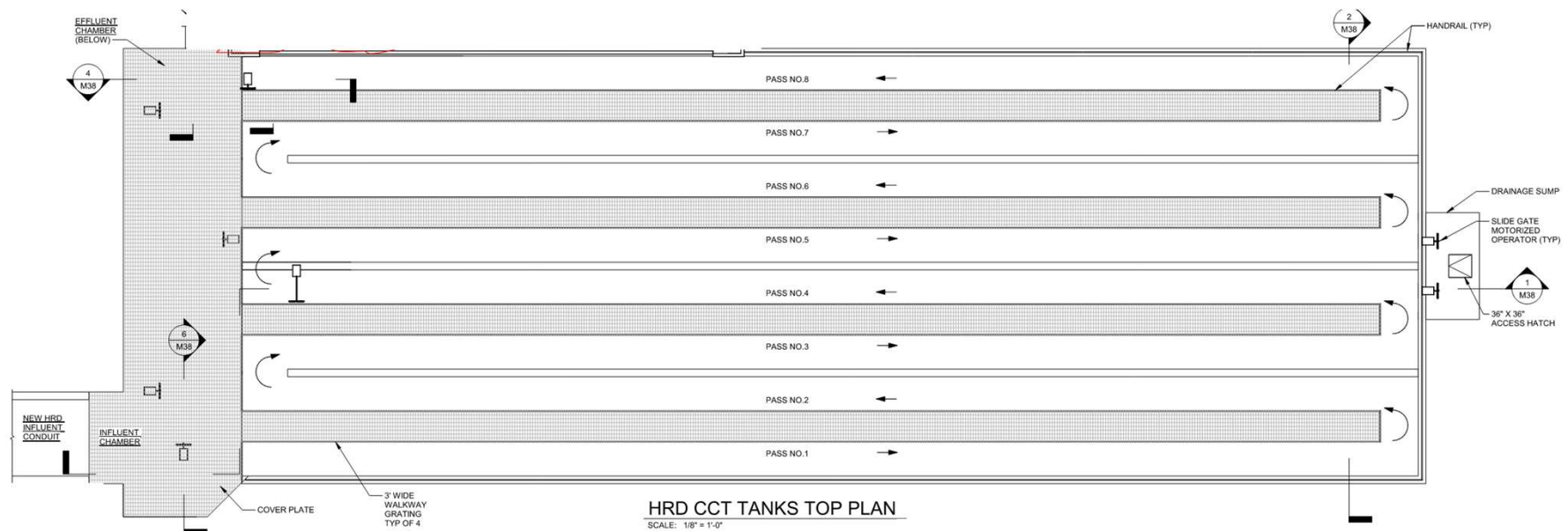
HRD Pump Station

- Pumping Station
 - 160 MGD firm capacity
 - Five 40 MGD Submersible Pumps
 - 3 Pumps on VFD, 2 constant speed
- Chemical Feed and Storage
 - Three 11,200 gallon storage tanks
 - Chemical feed pumps

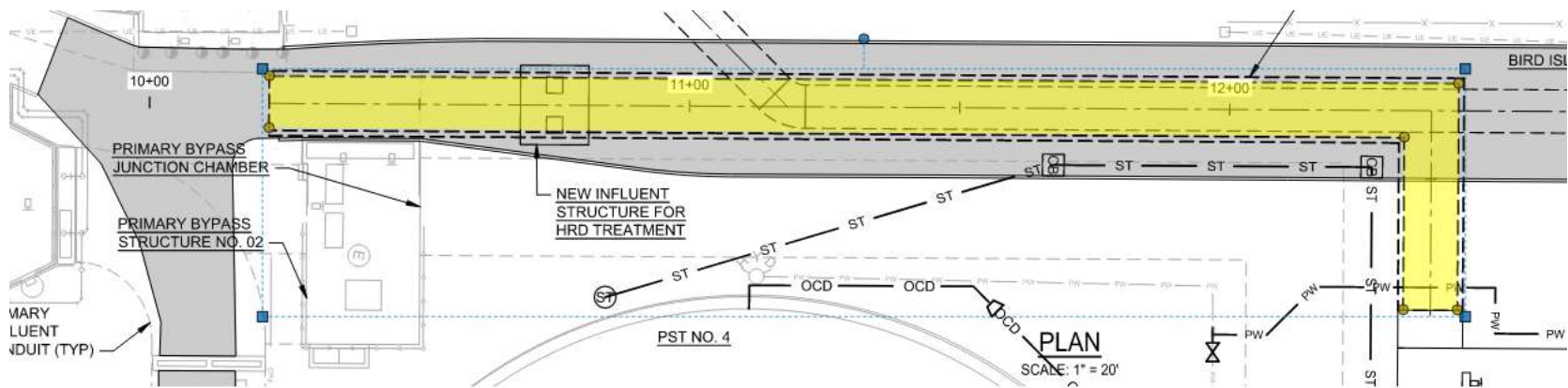


HRD Chlorine Contact Tank

- 5-minute contact time:
 - Channel Width: 6 ft
 - Channels Length: 120 ft
 - Water Depth: ~13 ft



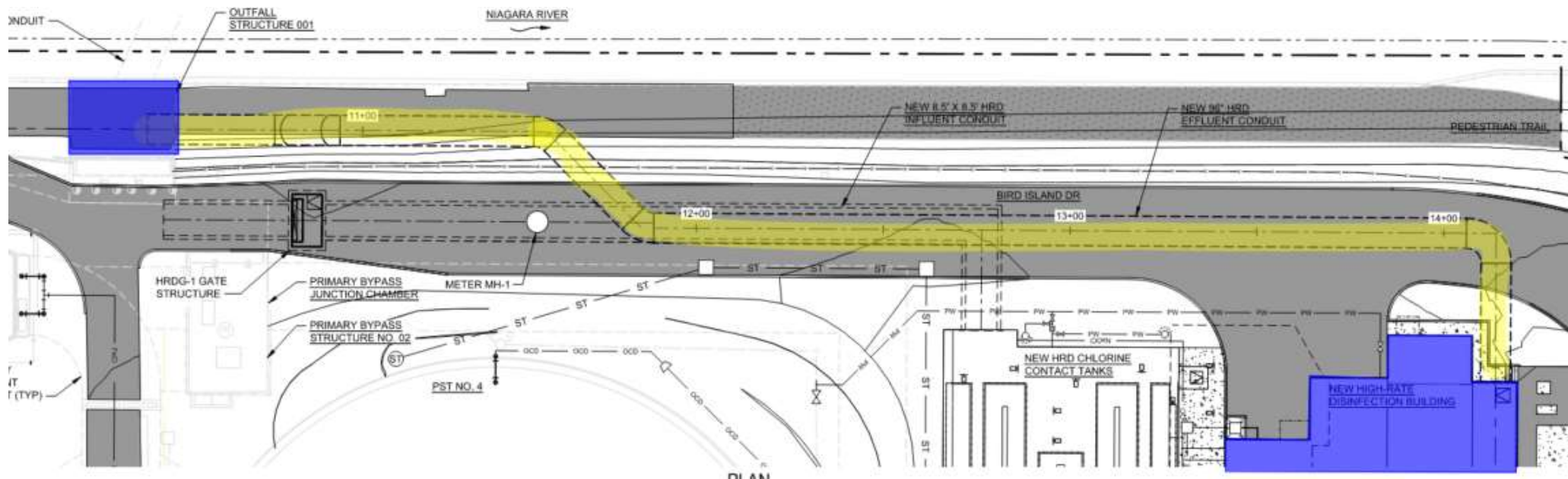
Influent to HRD Conduit



- Flow
 - Gravity
 - Average Flow: 74 MGD
 - Max Flow: 160 MGD
- Size
 - 8.5'x8.5'
- Structural
 - Material: Cast in Place Concrete
 - Steel piles

Outfall 001 Repair and Connection to HRD

- The HRD Pumping Station force main will tie into the existing Outfall 001 structure.
- The existing Outfall 001 overflow structure and conduit was inspected to verify they are structurally competent to facilitate the proposed renovation.



Scope of Work – Schedule of Quantities

<u>NO.</u>	<u>ITEM</u>	<u>QUANTITY</u>	<u>UNIT</u>
1B	Construction of a new Chlorine Contact Tank, High-Rate Disinfection Building, a new connection and renovations to the existing Outfall Structure 001, HRD Influent and Effluent Conduits, modifications to the existing Bypass and Control Chamber and Primary Bypass Junction Chamber, replacement of gates at the Bypass and Control Chamber, Primary Bypass Structure No. 1 and 2, and associated equipment, material and labor.	1	Lump Sum
2B	Negotiated Price: Emerson equipment and integration for the equipment associated with the High-Rate Disinfection System.	1	Lump Sum
3B	Allowance for the handling, removal, and legal disposal of unanticipated hazardous and non-hazardous (regulated) waste.	1	Lump Sum
4B	Allowance for the handling, removal, and legal disposal of unanticipated impacted soil and groundwater.	1	Lump Sum
5B	Allowance for the repair of existing pipelines.	1	Lump Sum
6B	Additional earth excavation	1,000	Cubic Yards
7B	Additional select fill	1,000	Cubic Yards
8B	Additional Class B Concrete	1,000	Cubic Yards
9B	Additional Steel Reinforcing	5,000	Pounds
10B	Additional Pile Length	2,000	Linear Feet

Summary: Major Work and Coordination items

- HRD PS and CCT
 - Deep Excavation and Dewatering for Dewatering
 - Electrical power supply from MegaStructure/Substation
 - The new facility itself – Pump station, CCT, and influent and effluent conduit
 - Connection to Outfall 001
- Replacement of Gate WW-17
- Instrumentation & Controls Coordination with Emerson for the Ovation Control System
- Primary Tank Structural Repair and Mechanical Replacement
- Gut renovation of the Sludge Pump Station – new pumps, relocated process lines and MCC
- Long lead items: Sludge and HRD pumps, MCCs, clarifier mechanisms, odor control equipment, WW gates





Project Constraints and Site Coordination

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Maintenance of Plant Operations

- Limitations in shutdown of the 4 Primary Tanks – typically one at a time
- Understanding Duration of Plant and Tank Shutdowns
- Flexibility of Wet Weather Capacity in either Primary or Secondary Treatment
- Contract B: Replacement of Gate WW-17 must occur first
- Limit Any Potential Discharge Permit Violations/Conflicts
- Riverwalk/Shoreline trail shutdown due to Outfall 001 repair: communication and coordination with City DPW and community
- Large deliveries shall occur at North Gate Entrance (via International Railroad Bridge)
- Coordination with other ongoing Contracts: Secondary Systems Rehab (Phase I), Secondary System Expansion (Phase III), and others





General Discussion / Contractor Questions

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Roll Call / Closing Remarks

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Closing Remarks

- Meeting notes, slides, and attendance list from Pre-Bid General Info Meeting #1 and EFC/Funding Meeting #2 will be provided via addendum
- Roll Call

Project Reminders / Key Dates

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Buffalo Sewer Authority Design Project Team

Walt Walker, PE, ENV SP

Design Project Manager

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Project Point of Contact

Ryan Christopher, PE, ENV SP

Design Deputy Project Manager

Tim Blake

WWTF Capital Projects Manager

Rosaleen Nogle, PE

Principal Sanitary Engineer

Alex Emmerson

Plant Superintendent

Paul Harris, PMP

Superintendent of Mechanical Maintenance





Thank You!

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