

Iron Mountain/Kingsford Joint Sewage Authority

Wastewater Treatment Facility
Equipment Repair and Replacement Project

August, 2016 through October, 2020

Treatment Facility History

- Pre-1958: Sewer Creek to Menominee River
- Early 1950's: State of Michigan vs. Iron Mountain and Kingsford. Joint Sewage Board Formed.
- 1958: Construction of Primary Treatment Facility

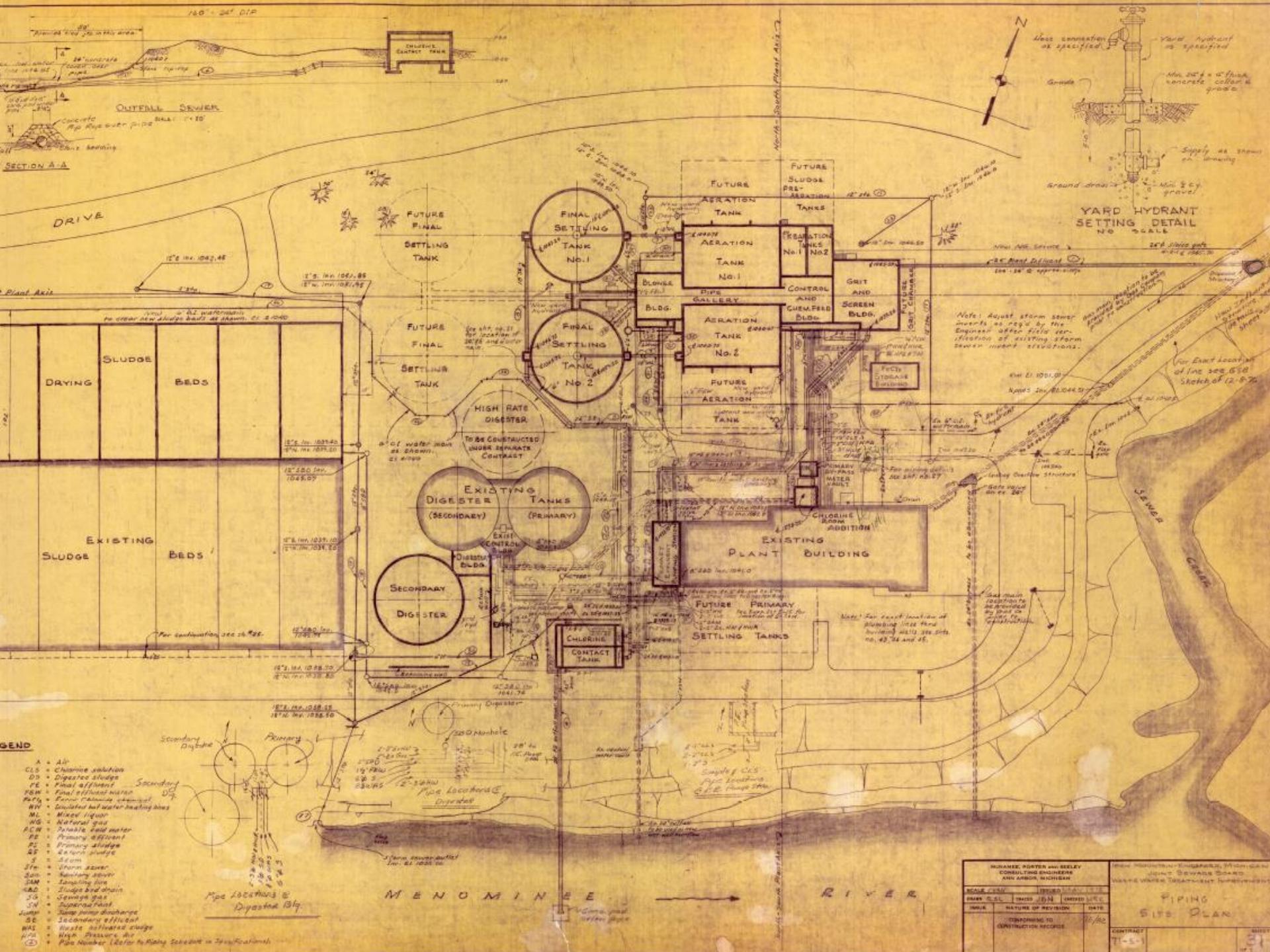




Treatment Facility History

- 1972: Clean Water Act (USEPA Formed)
- 1975 – 1978: Secondary Treatment Facility Construction

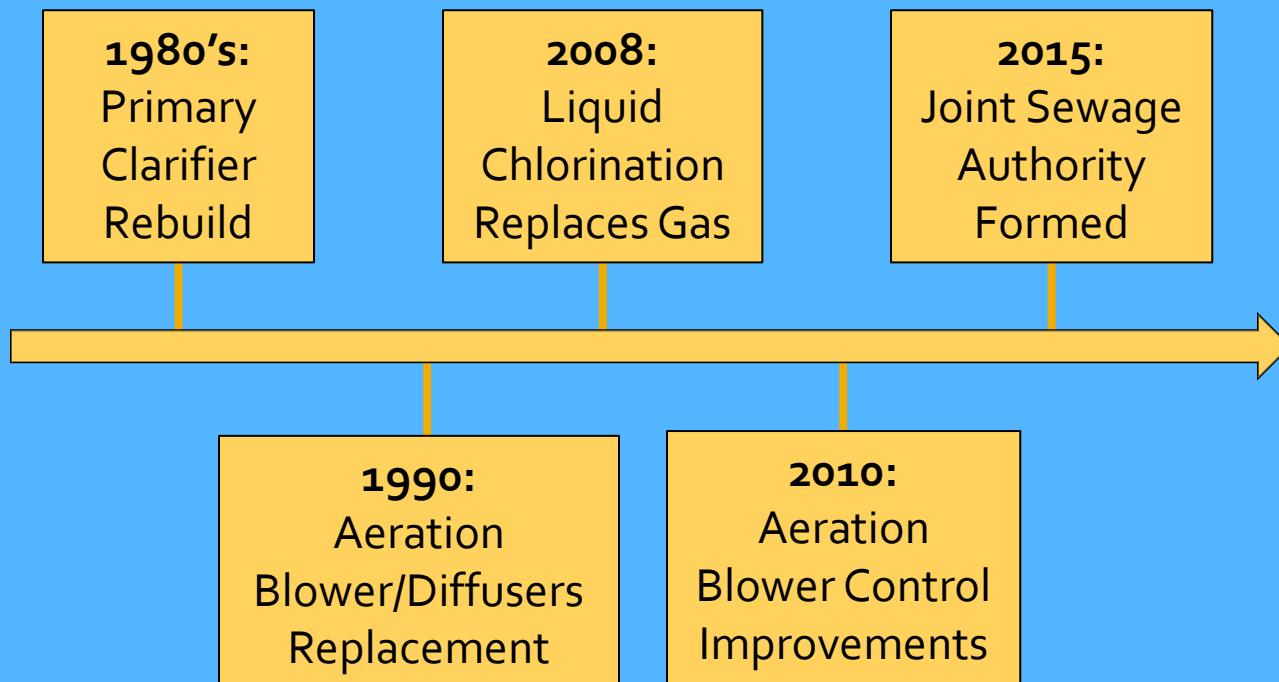




Treatment Facility History

- 1978 – 1979:
 - Combined Sewer Overflow Basin
 - New Primary Digester

Treatment Facility History



Improvements: Past 20 Years

In House

CSO Basin Bar Screens – partial rebuild
CSO Basin Grit Collector – partial rebuild
CSO Basin Grit Auger – rebuild
#1 Dewatering Pump – new
#3 Dewatering Pump – new
CSO Basin Stairway – safer access – new
CSO Basin Gate Valve – easier cleaning – new
Main Plant Bar Screen – rebuild (twice)
Secondary Building Sump Pump – new
RAS/WAS Flow Meters – new
(3) RAS Pumps with VFD's – new
Aeration Tank Dissolved Oxygen Meters – new
#1 #2 Final Clarifier Gear Box – partial new
#2 Digester Sealing Tubes – new
Two Digester Gas Lifters – new
Digester Building Sump Pump – new
Digester Gas System Water Traps – new
3 Primary Effluent Pumps – new
Primary Clarifier/Cross collector Drives – new
Laboratory Renovation/Lab Equipment
Pick Up – new
John Deere Lawn Mower – new
Disinfection Upgrade from Gas to Liquid Bleach – new
Sodium Bisulfite Feed System - new

Contracted

Dry Weather Flow Meter - new
Dry Weather Control Valve Actuator – new
CSO Basin Chlorine Pipe Relocated
Duct Work for Exhaust Fan - new
CSO Basin Building Boilers - new
CSO Basin Building Air Handlers - new
Grit Room Air Handlers - new
Secondary Building Boilers - new
Aeration Blower VFD's - new
Final Clarifier Sandblast and Paint
Main Plant Boilers – new (duel fuel)
Main Plant SCADA System - new
Plant Building Roofs- new
Miscellaneous Windows - new
Air Handlers/Heating System Primary Tanks
Asbestos Removal – plant wide
Parking Lot

**Previous repairs and
replacements were
funded without debt!**

Reasons for Project

- Equipment Beyond Life Expectancy
- Increased O&M Costs
- Emergency Repairs are Expensive
- Reliability
- Risk of Treatment Failure
- NPDES Permit Compliance

Modest Needs

- Electrical Service Switch Gear/Transformer (1978)
- CSO Basin Bar Screens and Handling (1979)
- CSO Basin Grit Collection and Handling (1979)
- Main Plant Screen and Handling (1978)
- Main Plant Grit Collection and Handling (1978)
- Primary Clarifier Rebuild (1958/1980's)
- Aeration Blowers and Diffusers (1978/1990)
- Final Clarifier Domes (1978)
- Ferrous Chloride Building (1978)
- Primary Digester Mixing and Heating Systems (1958/1978)
- Secondary Digester Covers and Mixing System (1958/1978)
- Roofing (2000+/-)
- Exterior Doors (1958/1978/1979)

Electric Switch Gear/Transformer



CSO Basin Bar Screen



CSO Basin Grit Collector



Main Plant Bar Screen



Main Plant Grit Collector



Primary Clarifier



Aeration Blowers



Final Clarifier Domes



Ferrous Chloride Building



Primary Digesters

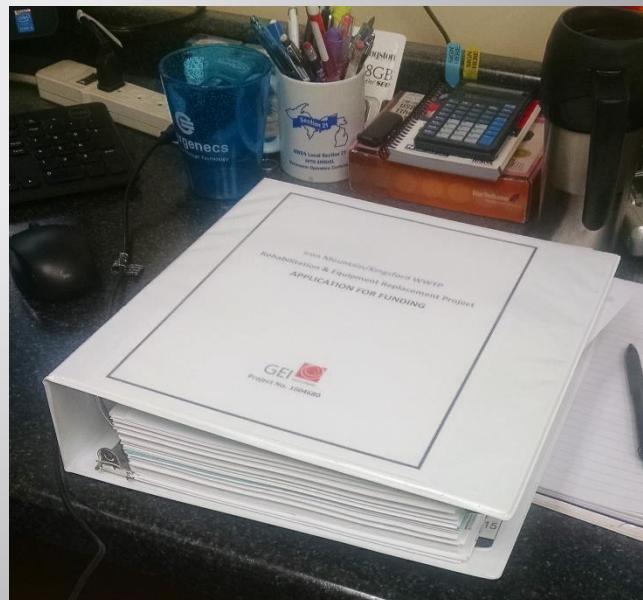


Secondary Digesters



Events Following Presentation to Councils on August 26, 2016

- September, 2016: Support of City Councils
- October, 2016: Authority proceeds with USDA funding application.



Events Following Presentation to Councils

- December 23, 2016: Funding Application Submitted to USDA
- February, 2017: USDA Letter of Obligation: Project Approved
- Loan terms:
 - Interest rate 2%
 - 40 years term



Items to Complete before closing the loan

- April, 2017: Letter of Conditions and Checklist

A - Authority
 E - Enclosed
 Atty - Attorney

MI Guide 5

WEP DOCKET CHECKLIST

| DOCUMENT OR ACTION | POS | FORM NO. | PROVIDED BY: | Date Received |
|--|-----|-----------------------------------|----------------------|----------------|
| 1 Certify to the Number of Users | 5-2 | MI Guide 4, Attach 3 | Applicant | |
| 2 Commitment to Enforce Mandatory Hook-up <i>Ordinance (Sewer only)</i> | 5-2 | MI Guide 4, Attach 3 | Applicant | |
| 3 Certify to Zoning | 5-2 | MI Guide 4, Attach 3 | Applicant | |
| 4 Water Users Agreement (Revenue Issues) | 5-2 | RUS Bulletin 1780-9 | Attorney | |
| 5 Preliminary Title Opinion or Title Insurance Commitment | 5-3 | MI 1927-9 (see Guide 4, Attach 1) | Attorney | |
| 6 Copies of Deeds | 5-3 | | Attorney | |
| 7 Right-of-Way Easement (copy of a typical one) <i>N/A</i> | 5-3 | Reference RD442-20 | Attorney | |
| 8 Color-coded Right-of-Way Map | 5-3 | N/O Guide 24 | Applicant | |
| 9 Right-of-Way Certificate | 5-3 | 442-21 | Applicant | |
| 10 Opinion of Counsel Relative to the Rights-of-Way | 5-3 | 442-22 | Attorney | |
| 11 Audit Engagement Letter (RUS S.I. 1780-4) | 5-5 | SI 1780-4 | Applicant | |
| 12 Copy of Commitment of other funds or cash | 5-6 | | Applicant | |
| 13 Copy of Water Purchase or Sewage Treatment Contract (must be reviewed/approved by RD & OGC) | 5-7 | Reference 442-30 | Applicant Auditor | |
| 14 Third Party Management or Operating Agreements (Approved by RD) | 5-7 | RUS Bulletin 1780-8 | Applicant | |
| 15 Budget and Income Analysis | 3-4 | 442-7 optional | Applicant | |
| 16 Copy of Rate Resolution/Ordinance | 3-4 | | Applicant | |
| 17 User Verification | 5-2 | | A/O | |
| 18 Adequate Accounting System Verification | 5-5 | Memo | A/O | |
| 19 Affirmative steps must be taken to utilize & procure services from small, minority & women's businesses | | Letter of Conditions | Applicant | |
| 20 Submit Plans & Specifications to RD | 6-3 | MI Guide 3 | Applicant | |
| 21 Bond Counsel Application filed with Treasury (or qualified status) | | | Applicant | |
| 22 Plans and Specs reviewed by RD Engineer | 6-2 | Guide 6 | RD Engineer | |
| 23 Docket to S/O requesting closing instr from OGC | 5-1 | | A/O & S/O | |
| 24 Permit to Construct from MDEQ | 6-5 | | Consulting Engineer | |
| 25 Permit to Construct from Railroad <i>N/A</i> | 6-5 | | Consulting Engineer | |
| 26 Permit to Construct from County or State Highway Dept. | 6-5 | | Consulting Engineer | |
| 27 NPDES-Discharge permit or Application for Permit | 6-5 | | Consulting Engineer | |
| 28 Authorization to bid issued by RD <i>A/O The above</i> | 6-4 | | Consulting Engineer | |
| 29 Affidavit of Publication of Bid Advertisement | 6-4 | | Consulting Engineer | |
| 30 Bid Tabulation - Complete set with Consulting Engineers recommendation for award | 6-4 | | Consulting Engineer | |
| 31 Copy of minutes Authorizing acceptance of bids and awarding of contracts | 6-4 | | Applicant | |
| 32 State RD Engineer concurrence in award | 6-4 | | RD Engineer | |
| Revision Date 12/13/2011 | 6-1 | | Engineer | April 13, 2017 |
| E 32a Engineering Agreement | 5-3 | | Attorney | |
| E 32b Legal Service Agreement | 5-3 | | | |

MI Guide 5

| A | 33 | Loan Resolution (public body) | 5-4 | RUS Bulletin 1780-27 | Applicant |
|---|----|---|-----------|----------------------|---------------------|
| E | 34 | Water and Waste System Grant Agreement | 2-3 | RUS Bulletin 1780-13 | A/O Applicant |
| A | 35 | Insurance certificate on fire & extended coverage PL, PD, vehicular coverage, workers compensation | 7-2 | | Applicant |
| A | 36 | Flood Insurance (if applicable) <i>check box if flood found</i> | 7-2 | | Applicant |
| A | 37 | Fidelity Bond (Bond must remain in effect for the length of the loan) | 7-1 | 440-24 (optional) | Applicant |
| B | 38 | Final Determination of RUS loan/grant funds and deobligate if necessary | 2-2 | 1940-10 | A/O |
| B | 39 | Environmental Mitigation Items | 3-4 | Letter of Conditions | Applicant |
| B | 40 | Loan Closing Processing(S/D, PIC, Bond Counsel, Applicant) | 6-4 | | Closing Date: |
| E | 41 | Process Electronic Funds Transfer (EFT) | 2-2 | | A/O |
| E | 42 | Resume of Project Inspector (Approved by RD) | 6-4 | | Consulting Engineer |
| E | 43 | Approval of Construction Contracts by RD Engineer | | EJCD-C MI Guide 6A | RD Engineer |
| E | 44 | Preconstruction Conference | 1-4 | 1924-16 | Engineer |
| A | 45 | Check CAIVRS system & document results | 3-2 | Construction File | A/O |
| A | 46 | Final Title Opinion or Insurance Policy | 5-3 | 1940-M, Exhibit A | A/O |
| A | 47 | Compliance Review | 5-2 | 1927-10 | Attorney |
| A | 48 | Emergency Response Plan | | 400-8 | A/O |
| A | 49 | Vulnerability Assessment | | Certification Letter | Applicant |
| A | 50 | Check Debarment List | 3-2 | 1940-M, Exhibit A | Applicant |
| A | 51 | Review of Bond Documents and Ordinance (certify there is no defeasance on loan) | 3-1 | | A/O |
| A | 52 | Statement of Deposits or Withdrawals | 2-1 | 402-2 | Construction File |
| A | 53 | Send Position 5 of General File; Copy of Bond with Final Approving Opinion & Grant Agreement to S/O for Final Closing Opinion | 5-1 | Memo | A/O |
| A | 54 | Final Approving Opinion from Bond Counsel | | | Bond Counsel |
| A | 55 | Forward loan closing documents to Finance Office | 5-1 | Memo | A/O |
| A | 56 | Final approving opinion from Bond Counsel | 5-1 & BTF | | RDM |
| A | 57 | Authorization Agreement for Preauthorized Payments | Svc file | SF 5510 | RDM/Applicant |

Revision Date 12/13/2011

List Items

- May, 2017: Authority Resolution for the Project (prepared by Bond Counsel)
- June, 2017: Resolution and Contract Approval.
- Public Notice Period: 45 Day Referendum.
- September 1, 2017, \$0.94/1000 rate increase approved. Total Rate = \$3.68/1000 gallons
- April 26, 2018 Project Bid
- June 26, 2018 CLOSE LOAN WITH USDA-RD

IRON MOUNTAIN KINGSFORD JOINT SEWAGE AUTHORITY
 IMKWWTP
 OPINION OF PROBABLE COST (2-21-18)
 GEI CONSULTANTS PROJECT #1604680



General

| <i>Item Description</i> | <i>Qty</i> | <i>Unit</i> | | |
|--------------------------------|-------------------|--------------------|--------------|---------------------|
| Mobilization | 1 | LS | \$100,000.00 | \$100,000.00 |
| Permits | 1 | LS | \$10,000.00 | \$10,000.00 |
| Dumpsters | 1 | LS | \$10,000.00 | \$10,000.00 |
| General Conditions | 1 | LS | \$180,000.00 | \$180,000.00 |
| SUBTOTAL | | | | \$300,000.00 |

Electrical Service

| <i>Item Description</i> | | <i>Unit</i> | | |
|--|-----|--------------------|--------------|---------------------|
| Topsoil (4 inch), Fertilizer, Seed and Mulch | 200 | SYD | \$9.00 | \$1,800.00 |
| Concrete Sidewalk & Pads | 1 | LS | \$15,000.00 | \$15,000.00 |
| Conduit & Conductors, Yard, Poles (2) to Transformer | 400 | FT | \$60.00 | \$24,000.00 |
| Transformer (13.8kV to 480V) | 1 | EA | \$9,000.00 | \$9,000.00 |
| Transocket Meter | 1 | EA | \$9,000.00 | \$9,000.00 |
| Transfer Switch, Exterior Main Disconnect, Main CBs, Generator CBs | 1 | EA | \$126,000.00 | \$126,000.00 |
| Generator, 400 kW | 1 | EA | \$242,000.00 | \$242,000.00 |
| Conduit & Conductors, Transformer to MCC | 100 | FT | \$140.00 | \$14,000.00 |
| Existing Transformer Removal & Disposal | 1 | LS | \$8,000.00 | \$8,000.00 |
| Power Switchover Coordination and Labor | 1 | LS | \$40,000.00 | \$40,000.00 |
| SUBTOTAL | | | | \$488,800.00 |

CSO Basin Bar Screens**Item Description****Unit**

| | | | | |
|--|----|----|-------------|---------------------|
| Drive Chain and Shafts, Bearings, Sprockets (Head, Idler & Boot) | 3 | Ea | \$39,100.00 | \$117,300.00 |
| Drive Assembly w/ Reducer & Ex Prf Motor | 3 | Ea | \$30,000.00 | \$90,000.00 |
| Foot Shaft & 9T Sprocket Assembly | 6 | Ea | \$3,000.00 | \$18,000.00 |
| Bucket Cleaning Rakes | 12 | Ea | \$2,000.00 | \$24,000.00 |
| Wiper Assembly (Screen 3 Only) | 1 | Ea | \$11,000.00 | \$11,000.00 |
| Automation / SCADA | 1 | Ea | \$69,000.00 | \$69,000.00 |
| SUBTOTAL | | | | \$329,300.00 |

CSO Basin Grit Collector (in kind carbon steel)**Item Description****Unit**

| | | | | |
|--|---|----|--------------|---------------------|
| Sets of Carbon Steel Buckets, Wear Shoes, Hardware | 3 | Ea | \$29,000.00 | \$87,000.00 |
| Drive Assembly w/ Reducer, Baseplate, Sprocket & Guard | 3 | Ea | \$21,000.00 | \$63,000.00 |
| Drive Chain, Shafts, Bearings, Sprockets, T-rails, Return Tracks | 3 | Ea | \$140,970.00 | \$422,910.00 |
| SUBTOTAL | | | | \$572,910.00 |

CSO Basin Grit Augers, 9", Collection & Transfer

| Item Description | | | | Unit |
|---|---|----|-------------|---------------------|
| Removals & Prep Work | 1 | LS | \$12,000.00 | \$12,000.00 |
| Inclined Shaftless Screw Conveyor (collection) | 1 | Ea | \$85,000.00 | \$85,000.00 |
| Inclined Shaftless Screw Conveyor (transfer to truck) | 1 | Ea | \$77,000.00 | \$77,000.00 |
| Motor Controls | 2 | Ea | \$6,000.00 | \$12,000.00 |
| Disconnect, XP | 2 | Ea | \$1,000.00 | \$2,000.00 |
| Local Operator Station, XP | 2 | Ea | \$4,000.00 | \$8,000.00 |
| Conduit and Conductors | 1 | LS | \$6,000.00 | \$6,000.00 |
| Electrician Labor | 1 | LS | \$24,000.00 | \$24,000.00 |
| SUBTOTAL | | | | \$226,000.00 |

CSO Basin Screenings Conveyors to Truck

| Item Description | | | | Unit |
|---|---|----|-------------|---------------------|
| Retrofit Existing Conveyor Belt (Shorten) | 1 | Ea | \$31,000.00 | \$31,000.00 |
| Belt Conveyor, Discharge to Truck | 1 | Ea | \$77,000.00 | \$77,000.00 |
| Motor Controls | 1 | Ea | \$15,000.00 | \$15,000.00 |
| Local Operator Station | 1 | Ea | \$4,000.00 | \$4,000.00 |
| Conduit and Conductors | 1 | LS | \$5,000.00 | \$5,000.00 |
| Electrician Labor | 1 | LS | \$12,000.00 | \$12,000.00 |
| SUBTOTAL | | | | \$144,000.00 |

Primary Clarifier Rebuild

| Item Description | | | | Unit | |
|--|---|----|-------------|-------------|---------------------|
| Mechanical Removals | 1 | LS | \$17,000.00 | | \$17,000.00 |
| Longitudinal Chain & Flight Collectors (20'W x 85' L), Side rails, wear bars, sprockets, shafts | 2 | Ea | \$67,000.00 | | \$134,000.00 |
| Cross Collector Chain & Flight Collectors (20'W x 85' L), Side rails, wear bars, sprockets, shafts | 2 | Ea | \$32,000.00 | | \$64,000.00 |
| Pipe Skimmers (12" diameter x 20' L) | 2 | Ea | \$21,000.00 | | \$42,000.00 |
| SUBTOTAL | | | | | \$257,000.00 |

Digester #3 Cover Replacement

| Item Description | | | | Unit | |
|--|---|----|--------------|-------------|---------------------|
| Replace 50 ft dia. Steel Floating Cover In-kind | 1 | LS | \$400,000.00 | | \$400,000.00 |
| Sandblast & recoat internal piping, pipe supports and ferrous surfaces (beyond covers) | 1 | Ea | \$15,000.00 | | \$15,000.00 |
| SUBTOTAL | | | | | \$415,000.00 |

Digester #4 Sandblast and Paint

| Item Description | | | | Unit | |
|--|---|----|-------------|-------------|---------------------|
| Sandblast & recoat internal piping, pipe supports and ferrous surfaces (beyond covers) | 1 | Ea | \$15,000.00 | | \$15,000.00 |
| Restore in place 60 ft dia Floating Cover, Sandblast & Recoat | 1 | LS | \$90,000.00 | | \$90,000.00 |
| SUBTOTAL | | | | | \$105,000.00 |

Main Plant Bar Screen**Item Description**

| | | | Unit | |
|-------------------------------------|---|----|--------------|---------------------|
| Front Cleaned Bar Screen & Controls | 1 | EA | \$231,000.00 | \$231,000.00 |
| Local Operator Station, XP | 1 | Ea | \$4,000.00 | \$4,000.00 |
| Disconnect, XP | 1 | Ea | \$1,000.00 | \$1,000.00 |
| Conduit & Conductors | 1 | LS | \$2,000.00 | \$2,000.00 |
| MCC Retrofit / Main Disconenct | 1 | Ea | \$3,000.00 | \$3,000.00 |
| Electrician Labor | 1 | LS | \$12,000.00 | \$12,000.00 |
| SUBTOTAL | | | | \$253,000.00 |

Main Plant Grit Collector**Item Description**

| | | | Unit | |
|--|---|----|--------------|---------------------|
| Bucket & Chain Grit Collector & Controls | 1 | EA | \$315,000.00 | \$315,000.00 |
| Grit Screw Conveyor (9-inch) | 1 | EA | \$43,000.00 | \$43,000.00 |
| Disconnect, XP | 3 | Ea | \$1,000.00 | \$3,000.00 |
| Local Operator Stations, XP | 3 | Ea | \$4,000.00 | \$12,000.00 |
| Conduit & Conductors | 1 | LS | \$2,000.00 | \$2,000.00 |
| MCC Retrofit / Main Disconnect | 3 | Ea | \$3,000.00 | \$9,000.00 |
| Electrician Labor | 1 | LS | \$24,000.00 | \$24,000.00 |
| SUBTOTAL | | | | \$408,000.00 |

Aeration Blowers**Item Description**

| | | | Unit | |
|---------------------------------|---|----|-------------|---------------------|
| Blower Removal | 2 | EA | \$4,000.00 | \$8,000.00 |
| Direct Drive Blower Replacement | 2 | EA | \$85,000.00 | \$170,000.00 |
| Equipment Pads | 2 | EA | \$2,000.00 | \$4,000.00 |
| MCC Retrofit / Main Disconnect | 2 | Ea | \$7,000.00 | \$14,000.00 |
| Conduit & Conductors | 1 | LS | \$6,000.00 | \$6,000.00 |
| VFDs | 2 | EA | \$15,000.00 | \$30,000.00 |
| Electrician Labor | 1 | LS | \$29,000.00 | \$29,000.00 |
| SUBTOTAL | | | | \$261,000.00 |

Ferrous Chloride Bldg Repairs

| Item Description | | Unit | | |
|--|----|-------------|------------|--------------------|
| Bracing Structure | 1 | LS | \$6,000.00 | \$6,000.00 |
| Removal, Steel Siding & Studs | 1 | LS | \$2,400.00 | \$2,400.00 |
| Drilling & Epoxy Reinforcing Bar | 42 | Ea | \$43.33 | \$1,800.00 |
| Concrete, Reinforced (40 ft x 4 ft x 8-inch)) | 4 | CYD | \$4,000.00 | \$16,000.00 |
| Base Plate, Anchors & Steel Stud Connection Plates | 1 | LS | \$4,600.00 | \$4,600.00 |
| Flashing & Z-strip | 50 | FT | \$90.00 | \$4,500.00 |
| SUBTOTAL | | | | \$35,300.00 |

Final Clarifier Dome Covers (Clarifier No. 1 & 2)

| Item Description | | Unit | | |
|---|---|-------------|-------------|---------------------|
| Dome Skylight Removal | 8 | EA | \$500.00 | \$4,000.00 |
| Dome Skylight Replacement, 5 ft dia. | 8 | EA | \$3,000.00 | \$24,000.00 |
| Dome Equipment Hatch Removal (4 ft x 6 ft) | 2 | EA | \$500.00 | \$1,000.00 |
| Dome Equipment Hatch Replacement (4 ft x 6 ft) | 2 | EA | \$3,000.00 | \$6,000.00 |
| Dome Repairs - Remove Loose Material, Apply Mesh, Surface Prep, Recoat, & Seal | 2 | Sft | \$74,000.00 | \$148,000.00 |
| SUBTOTAL | | | | \$183,000.00 |

Primary Digesters Coatings Rehabilitation

| Item Description | | Unit | | |
|--|---|-------------|-------------|--------------------|
| Sandblast & recoat internal piping, pipe supports and ferrous surfaces (beyond covers) | 2 | EA | \$15,000.00 | \$30,000.00 |
| SUBTOTAL | | | | \$30,000.00 |

Alternate Add I: Primary Digesters Mixing & Heating System

| Item Description | Unit | | |
|---|-------------|----|---------------------|
| Digester & Building Removals | 1 | LS | \$21,000.00 |
| Digester No.1 Gaslifter Mixing Equipment (Eductor Tube and Heating Jacket) compressorwater jacket | 1 | EA | \$254,000.00 |
| Digester No.2 Gaslifter Mixing Equipment (Eductor Tube and Heating Jacket) compressorwater jacket | 1 | EA | \$243,000.00 |
| SUBTOTAL | | | \$518,000.00 |

Alternate Add II: Door Removal and Replacement

| Item Description | Unit | | |
|---|-------------|----|---------------------|
| Exterior Steel Doors & Hardware - Single | 24 | EA | \$4,000.00 |
| Exterior Steel Doors & Hardware - Single w/ Panic Bar | 2 | EA | \$4,500.00 |
| Exterior Steel Doors & Hardware - Double | 2 | EA | \$5,000.00 |
| SUBTOTAL | | | \$115,000.00 |

Alternate Add III: Roof Removal and Replacement

| Item Description | Unit | | |
|--|-------------|-----|---------------------|
| CSO Basin Roof | 6100 | Sft | \$4.00 |
| CSO Basin Built Up Roof Removal & Prep | 6100 | Sft | \$5.00 |
| Grit Building Roof | 3100 | Sft | \$4.00 |
| Grit Building Built Up Roof Removal & Prep | 3100 | Sft | \$5.00 |
| Blower Building Roof | 1100 | Sft | \$4.00 |
| Blower Building Built Up Roof Removal & Prep | 1100 | Sft | \$5.00 |
| Main Plant Roof | 9400 | Sft | \$4.00 |
| Main Plant Roof EPDM Removal & Prep | 9400 | Sft | \$3.00 |
| Digester Building Roof | 800 | Sft | \$4.00 |
| Digester Building EPDM Removal & Prep | 800 | Sft | \$3.00 |
| SUBTOTAL | | | \$164,100.00 |

| | |
|--|---------------------|
| Subtotal Construction (Inclusive of Alternate Add I, II, & III) | \$ 4,805,410 |
| Construction Contingency (10%) | \$ 480,541 |
| Total Construction | \$ 5,285,951 |
| Engineering: Basic Services | \$ 163,000 |
| Engineering: Resident Project Observation | \$ 99,865 |
| Legal / Attorney | \$ 8,000 |
| Bond Counsel | \$ 33,700 |
| Admin / Advertising | \$ 1,000 |
| Other Project Planning / Investigation Expenses | \$ 2,053 |
| Miscellaneous (Aeration Tank Diffuser Purchase for Installation by Staff) | \$ 43,000 |
| Equipment (Tractor) | \$ 45,000 |
| Total Project Cost Opinion | \$ 5,681,569 |
| Total Project Budget | \$ 5,470,000 |

IRON MOUNTAIN / KINGSFORD JOINT SEWAGE AUTHORITY
 VARIOUS REHABILITATION AND EQUIPMENT REPLACEMENT PROJECT
 BID SUMMARY

Engineer's Cost Opinion

Bidder: Staab Construction

Bidder: Gundlach Champion, Inc.

| BASE BID | BASE BID | BASE BID |
|--|--|--|
| BASE BID \$4,008,310.00 | BASE BID \$4,130,000.00 | BASE BID \$4,713,784.00 |
| TOTAL \$4,008,310.00 | TOTAL \$4,130,000.00 | TOTAL \$4,713,784.00 |
| | | |
| BASE BID + ALT ADD 1 | BASE BID + ALT ADD 1 | BASE BID + ALT ADD 1 |
| BASE BID \$4,008,310.00 | BASE BID \$4,130,000.00 | BASE BID \$4,713,784.00 |
| ALT ADD I \$518,000.00 | ALT ADD I \$395,000.00 | ALT ADD I \$425,635.00 |
| TOTAL \$4,526,310.00 | TOTAL \$4,525,000.00 | TOTAL \$5,139,419.00 |
| | | |
| BASE BID + ALT ADD 1 + ALT ADD 2 | BASE BID + ALT ADD 1 + ALT ADD 2 | BASE BID + ALT ADD 1 + ALT ADD 2 |
| BASE BID \$4,008,310.00 | BASE BID \$4,130,000.00 | BASE BID \$4,713,784.00 |
| ALT ADD I \$518,000.00 | ALT ADD I \$395,000.00 | ALT ADD I \$425,635.00 |
| ALT ADD II \$115,000.00 | ALT ADD II \$145,000.00 | ALT ADD II \$95,106.00 |
| TOTAL \$4,641,310.00 | TOTAL \$4,670,000.00 | TOTAL \$5,234,525.00 |
| | | |
| BASE BID + ALT ADD 1 + ALT ADD 2 + ALT ADD 3 | BASE BID + ALT ADD 1 + ALT ADD 2 + ALT ADD 3 | BASE BID + ALT ADD 1 + ALT ADD 2 + ALT ADD 3 |
| BASE BID \$4,008,310.00 | BASE BID \$4,130,000.00 | BASE BID \$4,713,784.00 |
| ALT ADD I \$518,000.00 | ALT ADD I \$395,000.00 | ALT ADD I \$425,635.00 |
| ALT ADD II \$115,000.00 | ALT ADD II \$145,000.00 | ALT ADD II \$95,106.00 |
| ALT ADD III \$164,100.00 | ALT ADD III \$215,000.00 | ALT ADD III \$178,823.00 |
| TOTAL \$4,805,410.00 | TOTAL \$4,885,000.00 | TOTAL \$5,413,348.00 |

May 2018 – Contract Awarded to Staab Construction

Replacement/Rehabilitation Project to include

- Electrical Service upgrade with Generator

- CSO Basin Bar Screens Refurbished and New Handling System

- CSO Basin Grit Collection Refurbished and New Handling System

 - Main Plant Bar Screen (New)

 - Main Plant Grit Collection (New)

 - Primary Clarifier Rebuild

 - Aeration Blower (New) and Diffuser Replacement

 - Final Clarifier Domes

 - Ferrous Chloride Building Repair

 - Primary Digester Mixing and Heating System

 - #3 Secondary Digester Cover (New)

 - #4 Secondary Digester Sandblast and Paint

 - Door replacement added – Summer 2019

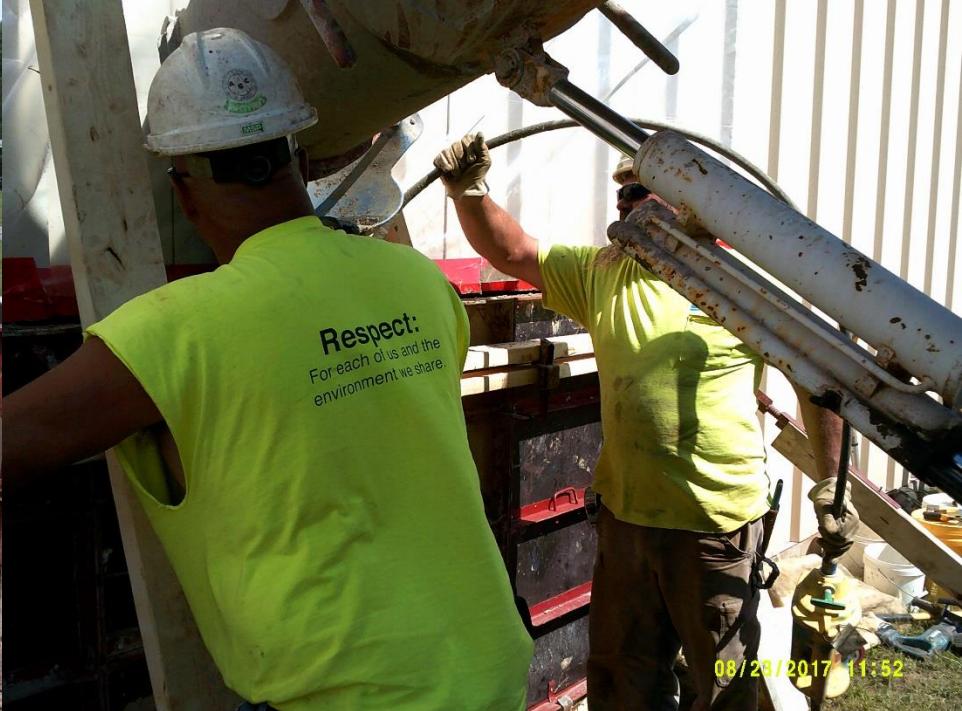
 - Partial Roof Replacement added – Fall 2019

Ferrous Chloride Building August - Sept. 2018

Repair rusted section on Southwest corner
Replace Access door









#4 Digester Sandblast and Paint

August – December 2018

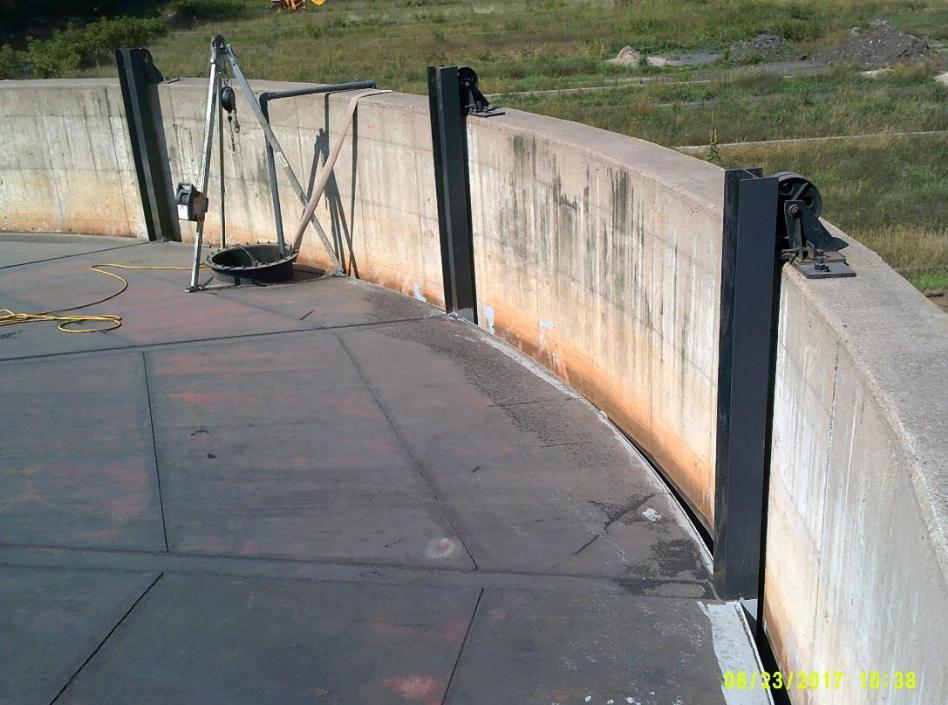
Sandblast 6o' diameter gas holder digester cover

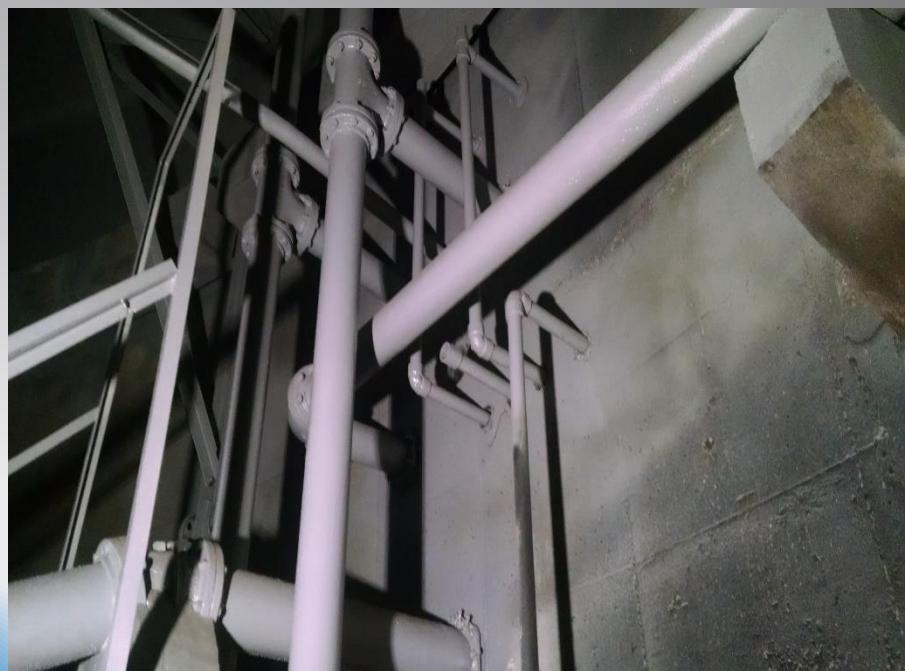
Recoat 6o' digester cover

Inspect and provide report on internal tank component

Repair internal components as needed, plant personnel or contractor







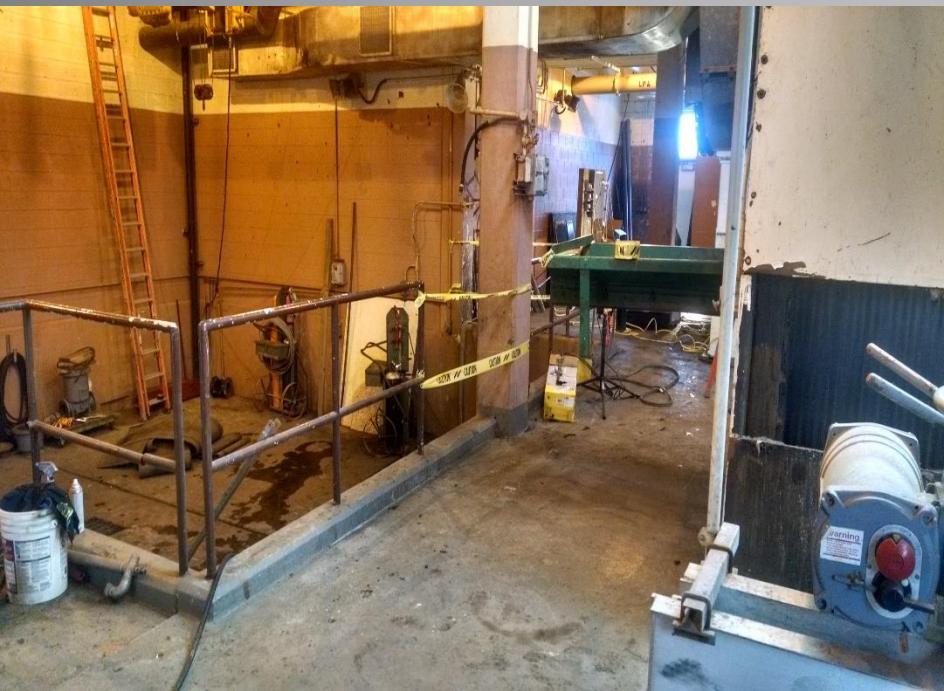


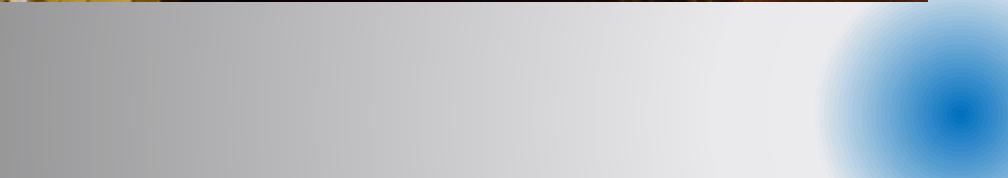
CSO Basin Bar Screens Rehabilitation

December 2018 – March 2019

Replace moving components on (3) 75 MGD Bar Screens
Install new conveyor to Truck to eliminate the use of hoppers









CSO Basin Grit Collector Rehabilitation

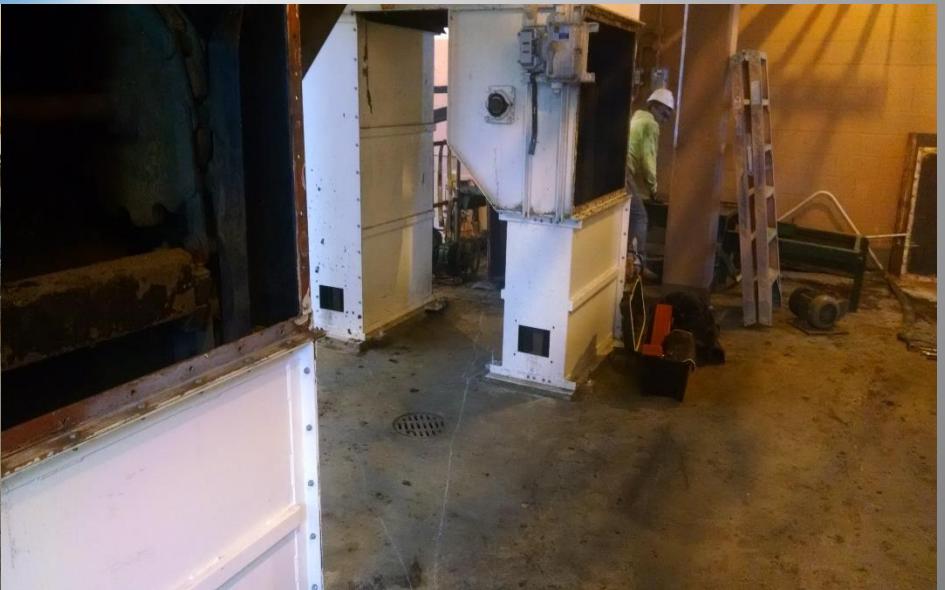
December – March 2019



Replace moving parts in (3) 75MGD Grit Collectors

Replace #1 Grit Auger

Install new Grit Auger to Truck to eliminate the use of hoppers







Main Plant Bar Screen Replacement

March - May 2019









Main Plant Grit Collector Replacement

March - May 2019











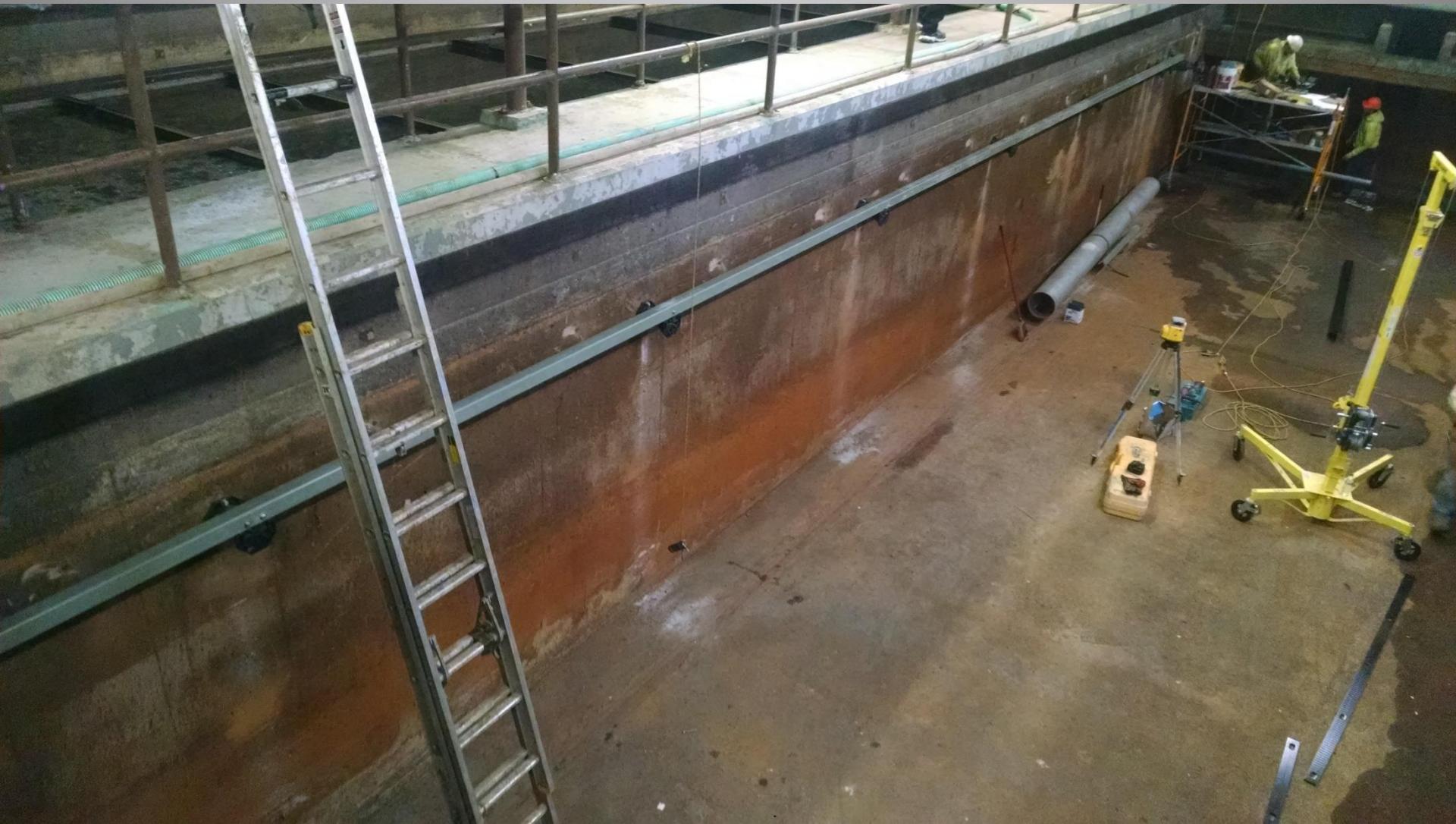


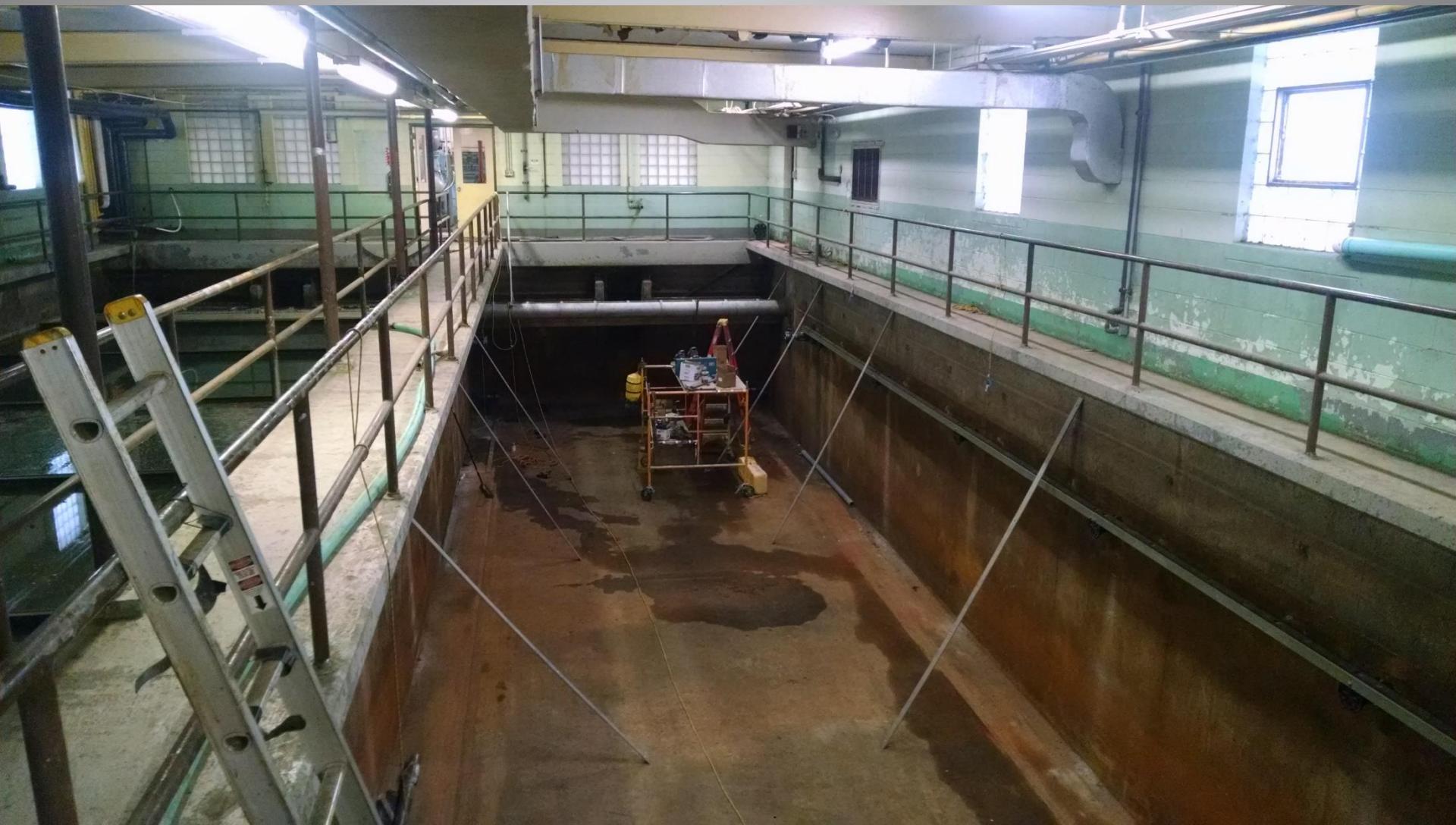
Primary Clarifier Flight and Cross Collector Replacement

April - August 2019

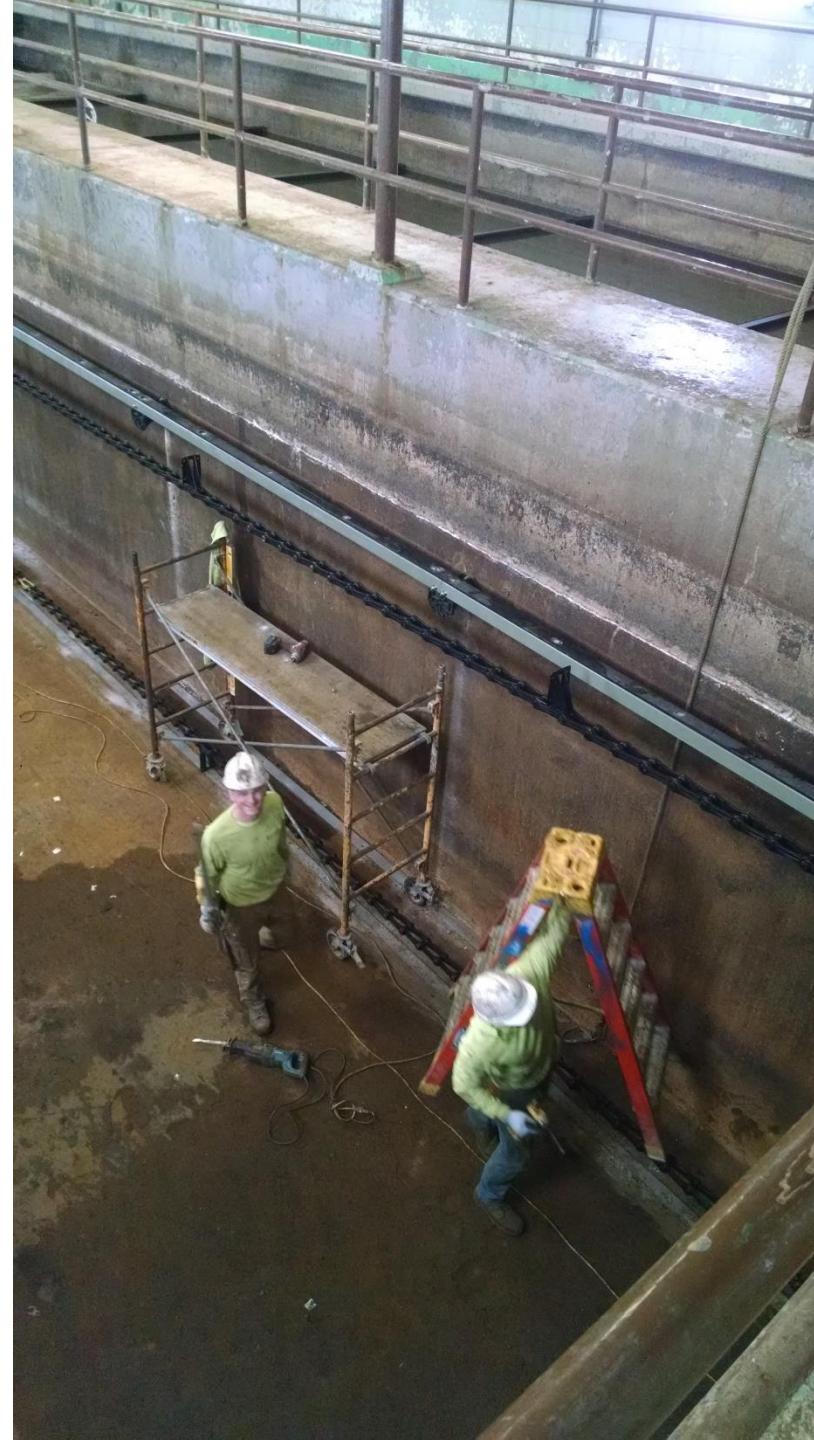
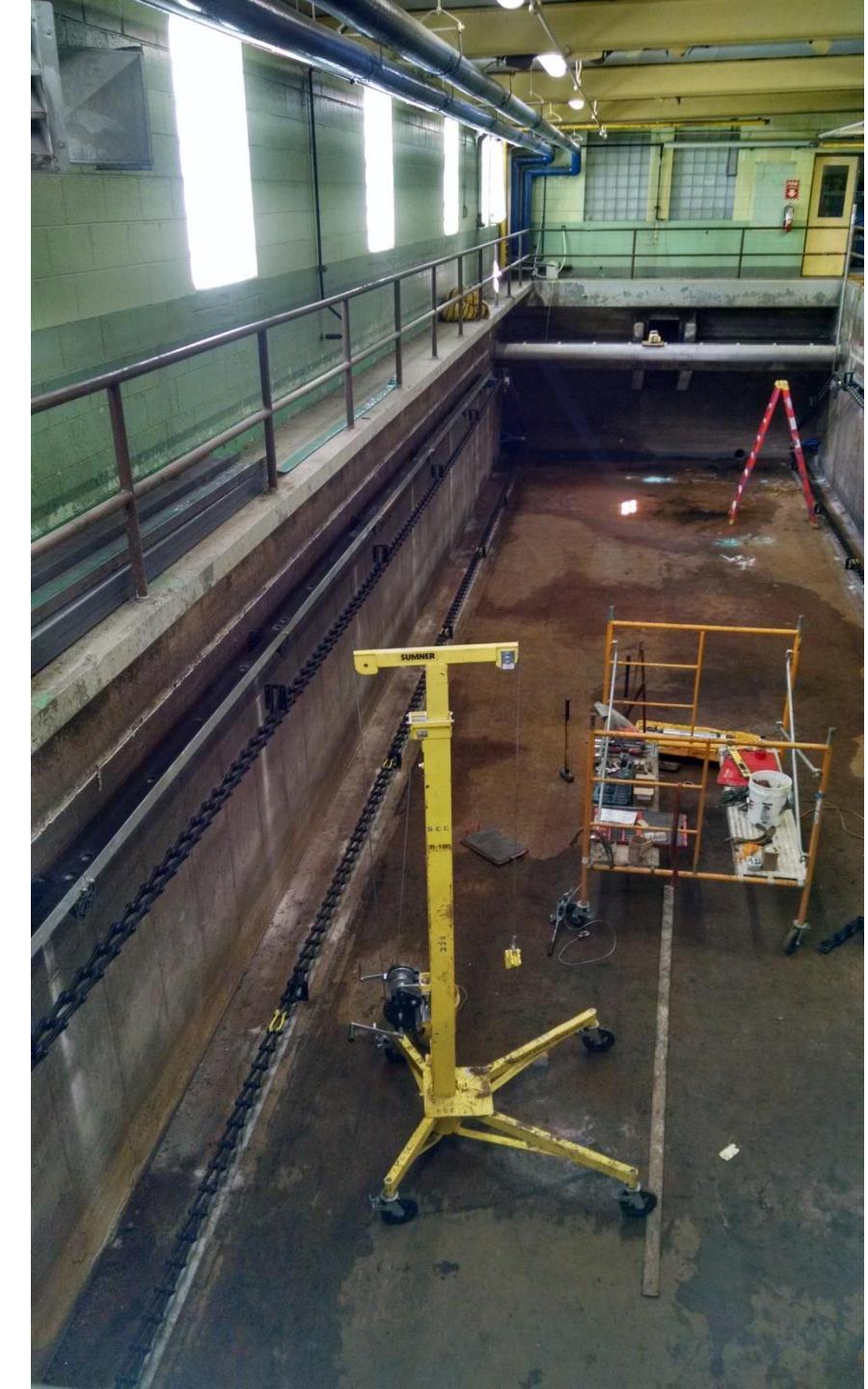


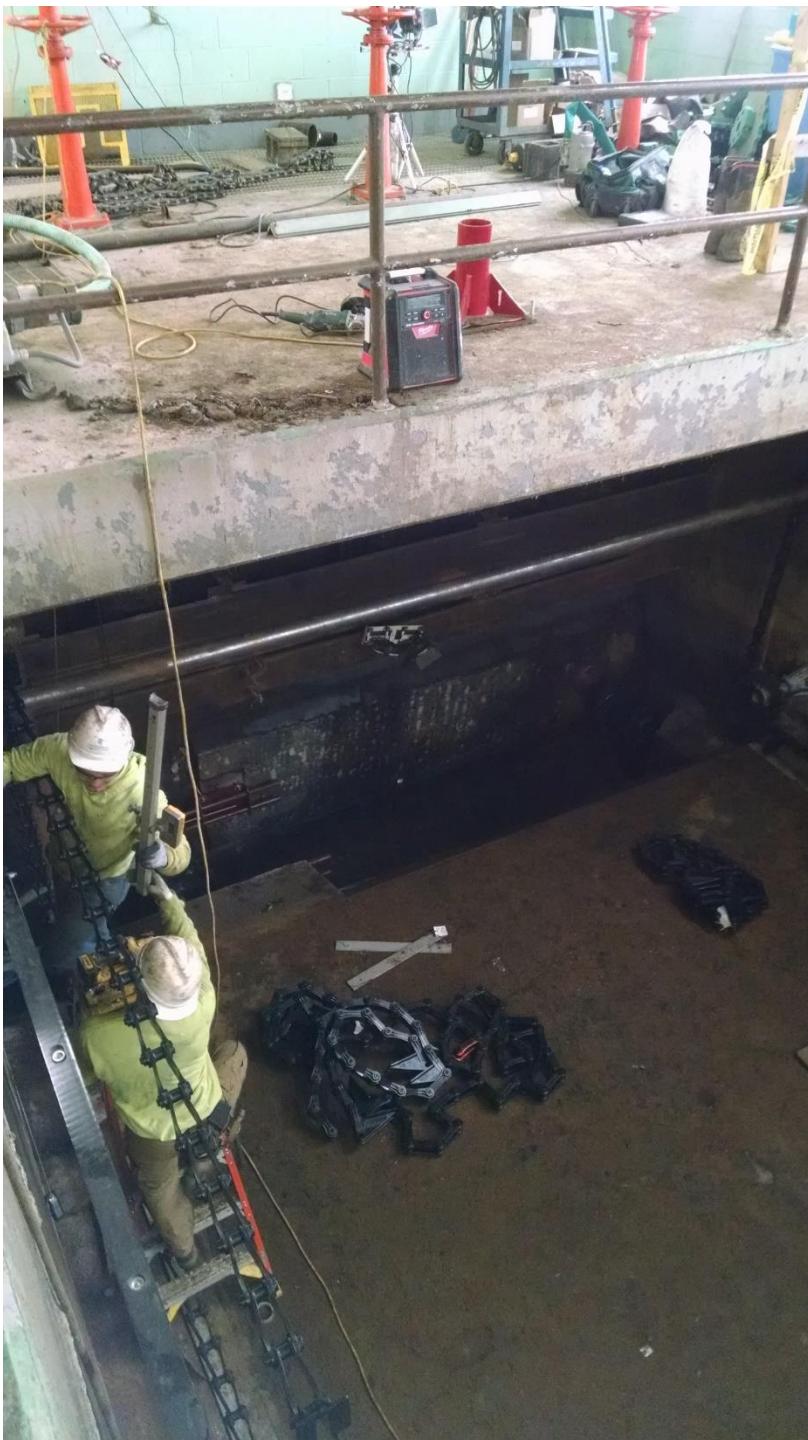








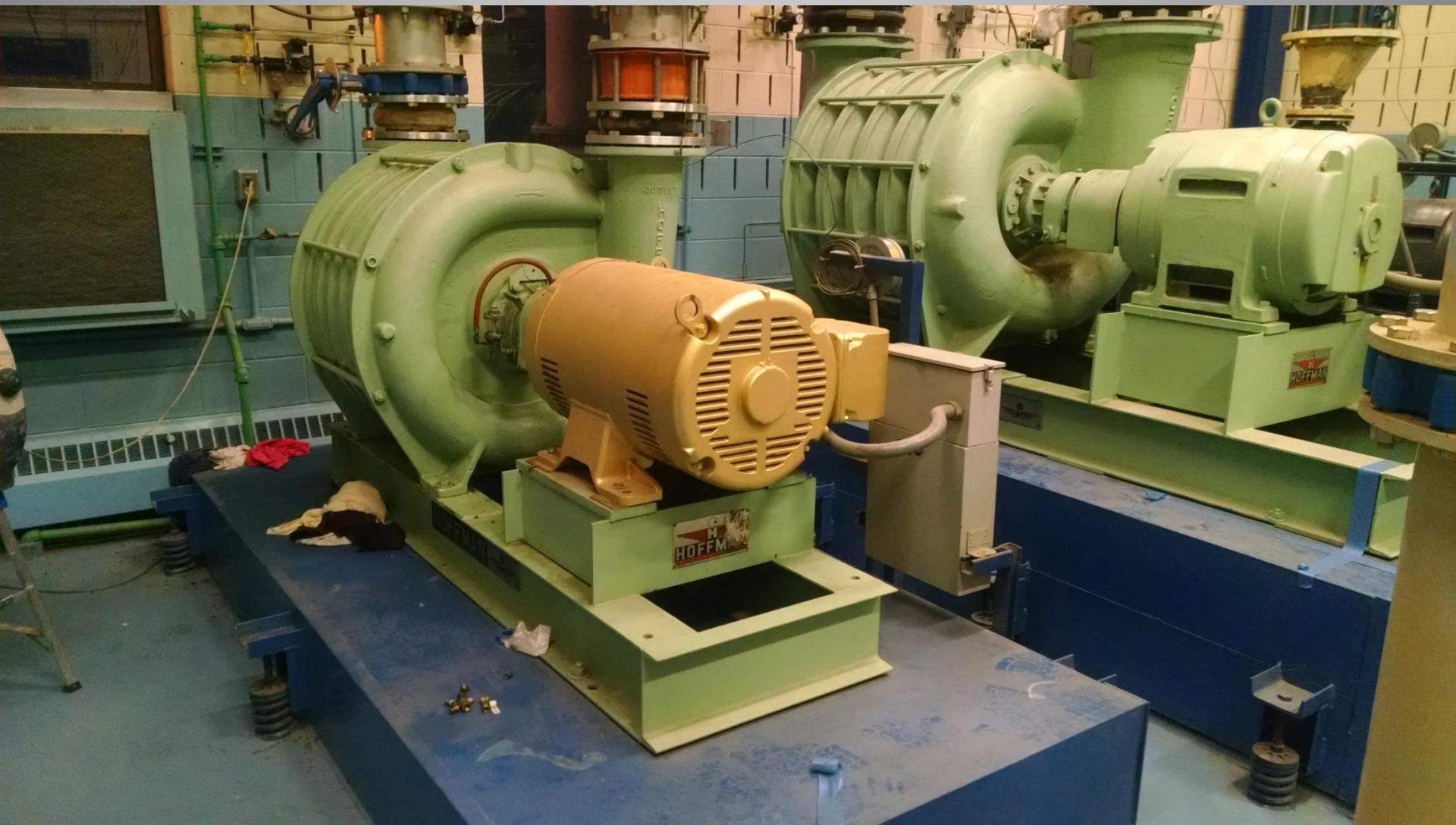




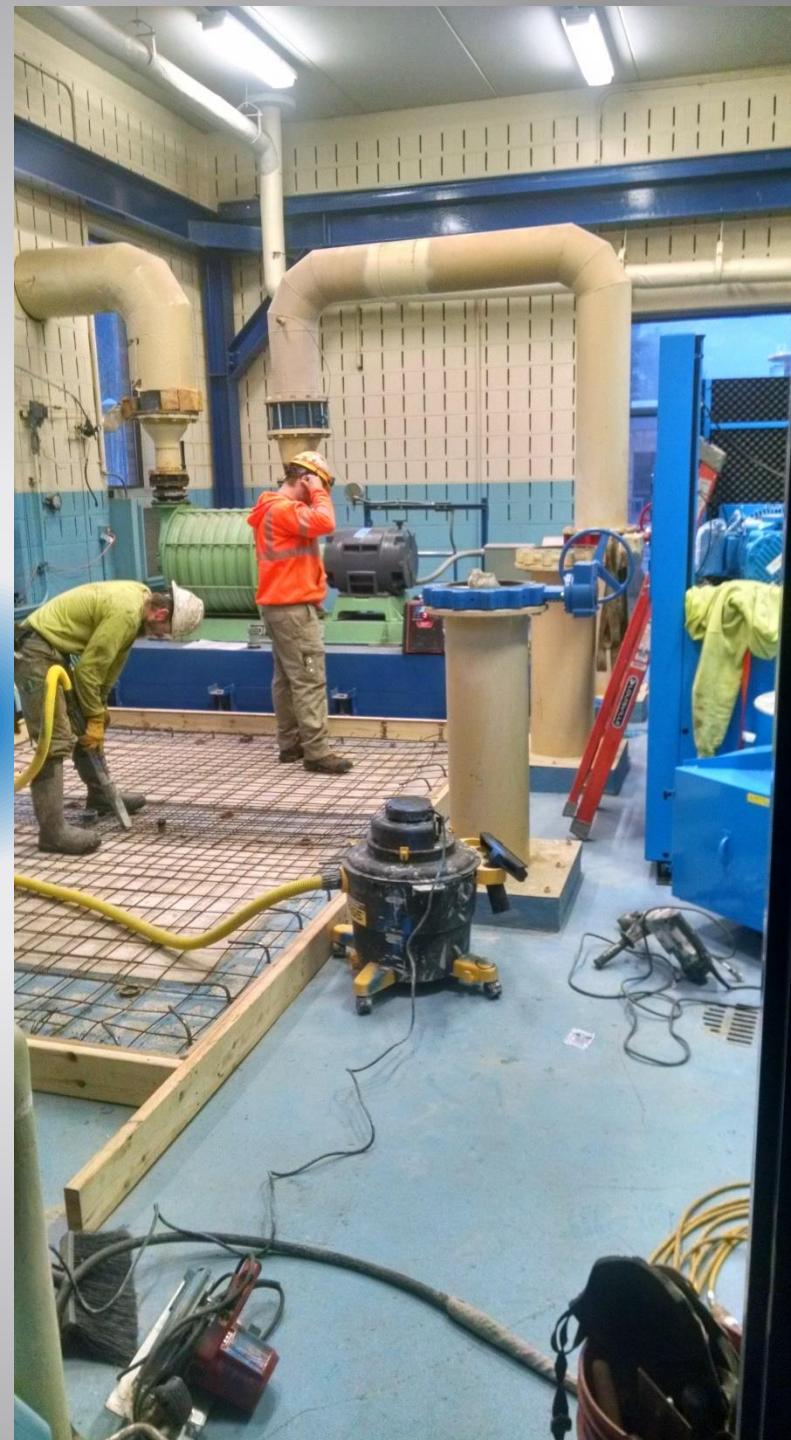
Aeration Blower Replacement

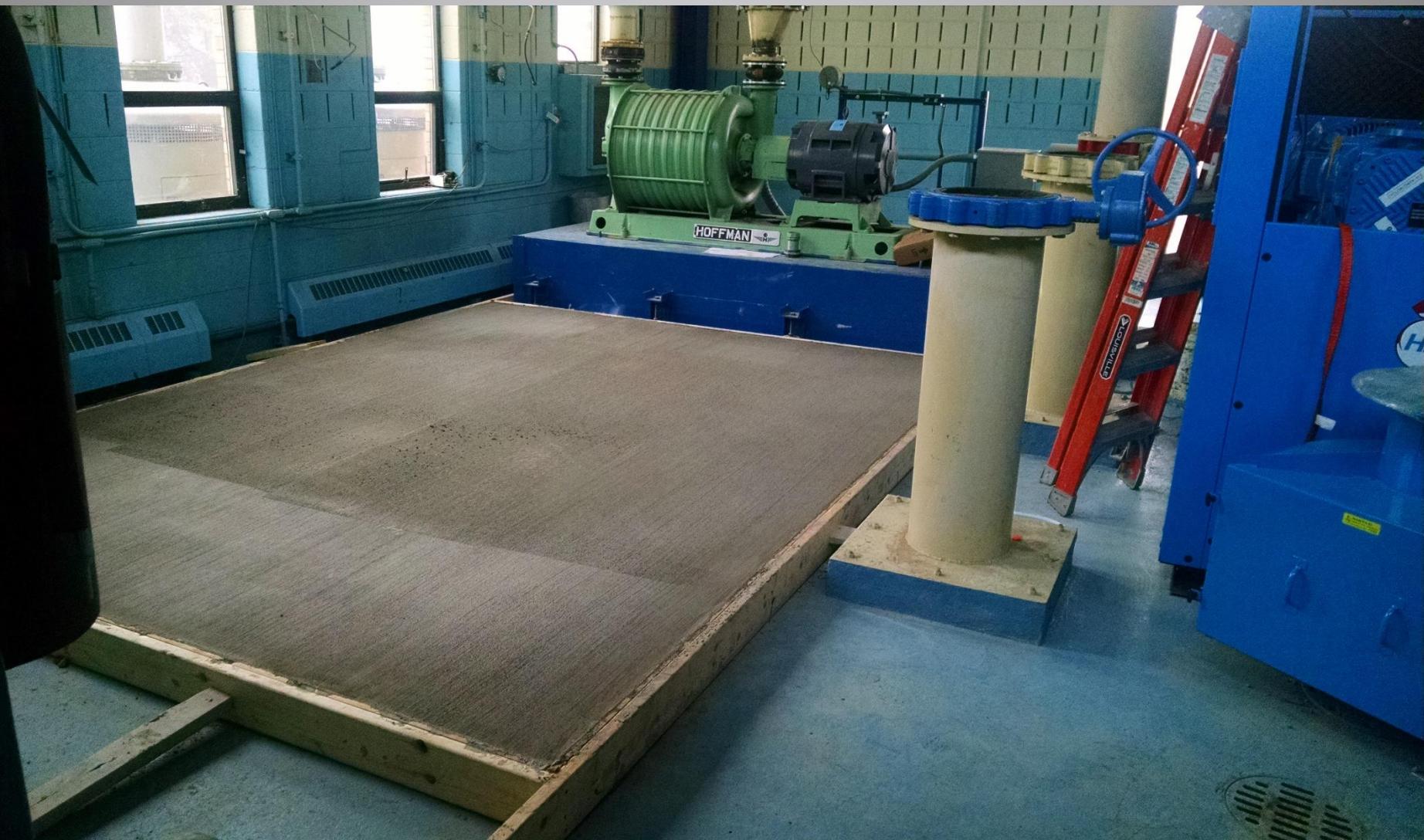
April - May 2019

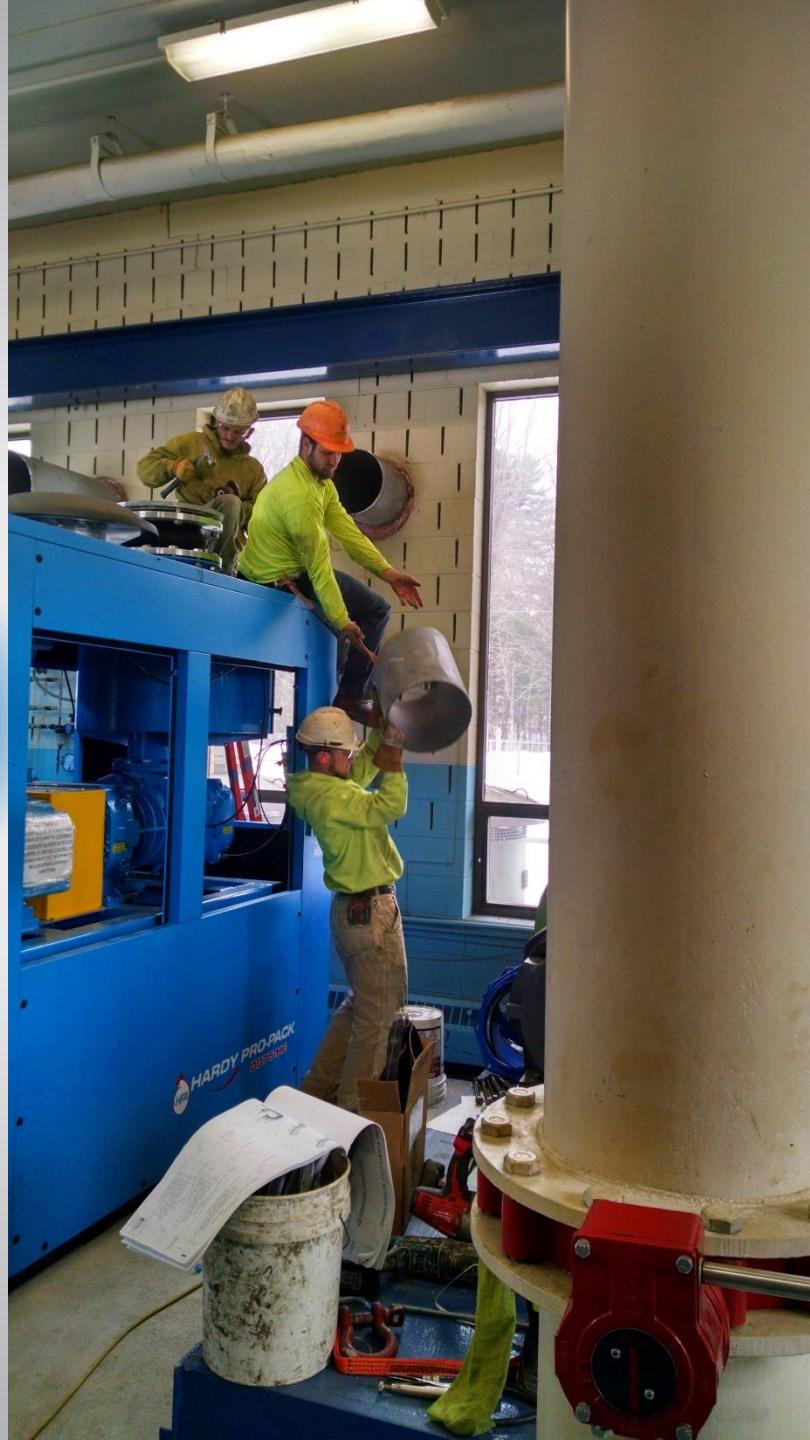
















Final Clarifier Dome Replacement

July – August 2019



























08/14/2020 21:59



08/14/2020 21:59

#3 Digester Floating Cover Replacement

June – August 2019



















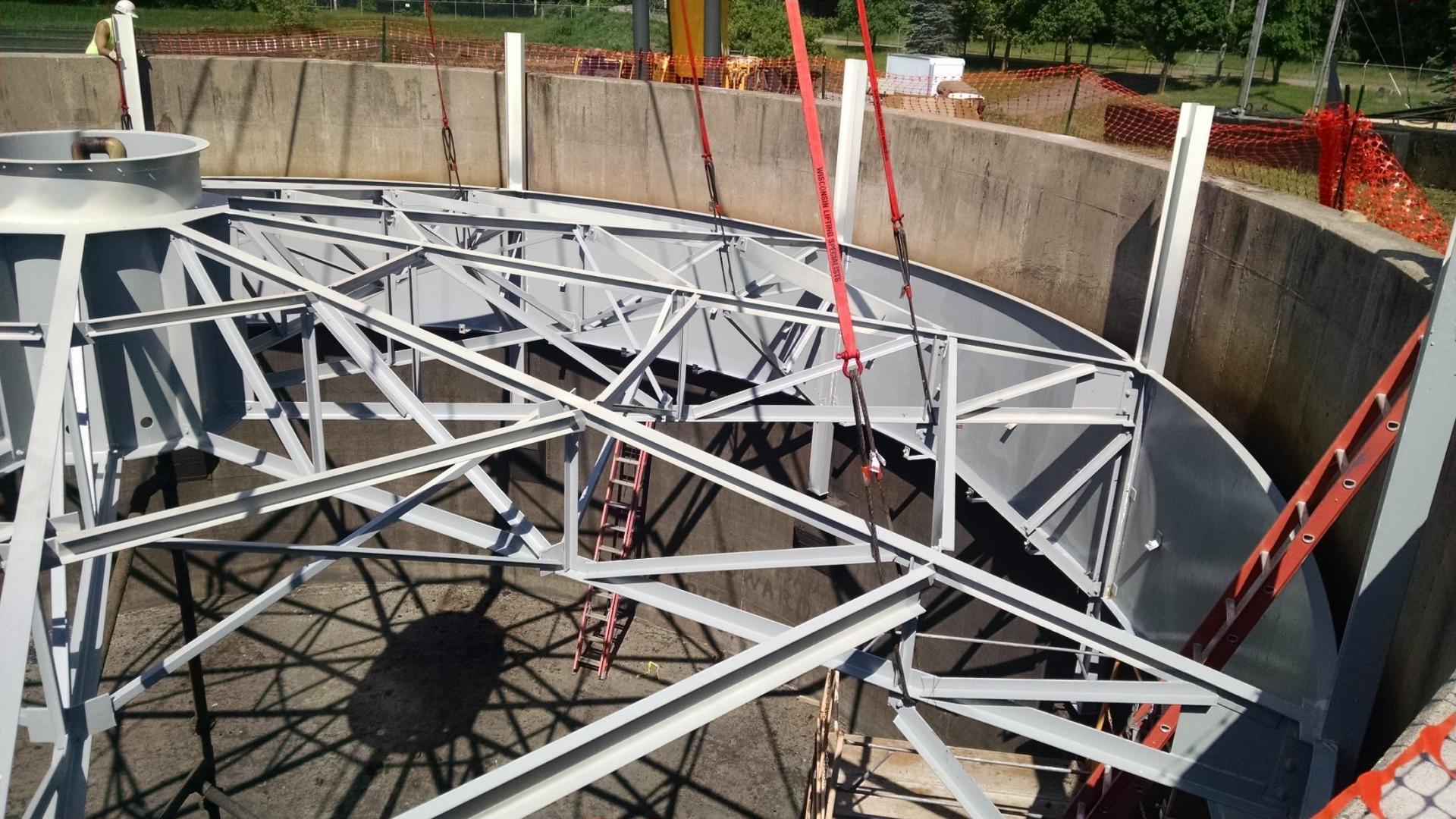
















08/14/2020 22:01



08/14/2020 22:01



08/14/2020 22:01

Primary Digesters – Heat Exchanger and Gas Lifter Replacement





09/18/2017 12:12



09/18/2017 12:12









08/14/2020 22:00



08/14/2020 22:01



08/14/2020 22:02



08/14/2020 22:02



08/14/2020 22:02

Electric Switch Gear/Transformer

September 2019 thru January 2020























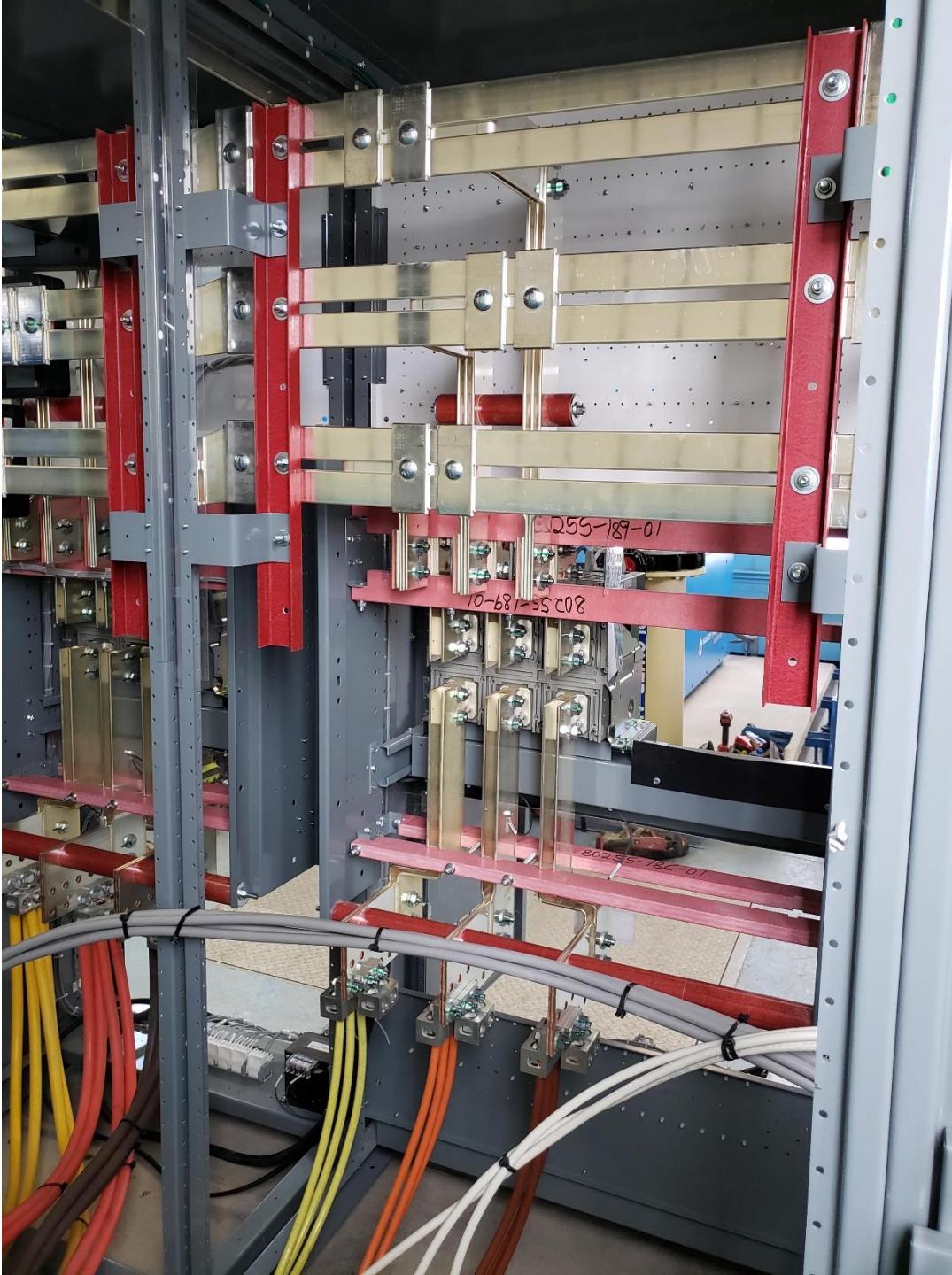


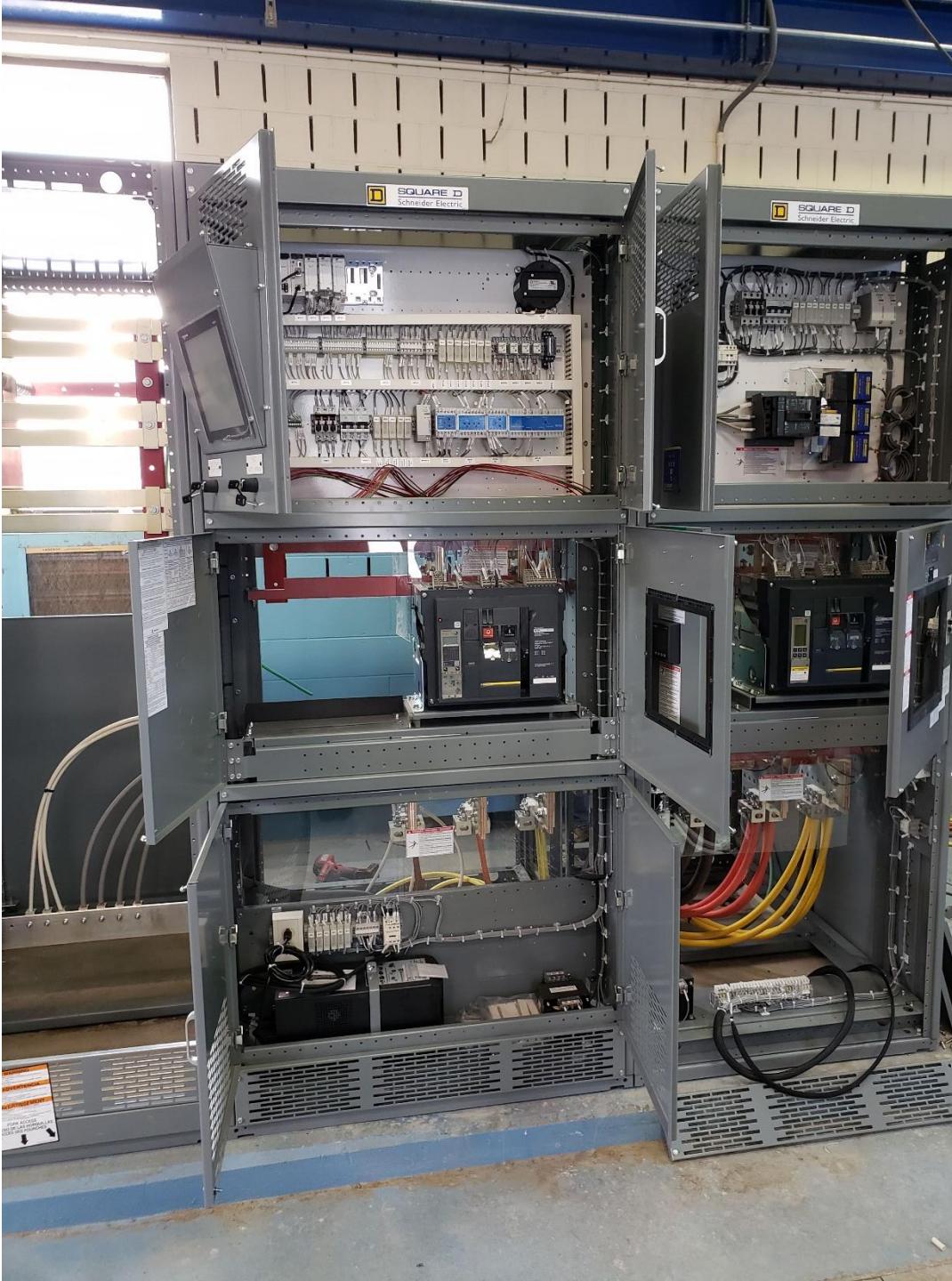






08/14/2020 22:04













MAIN 1 SOURCE DELAYS

SOURCE STABILIZATION 5 MINUTE(s)

1 SECOND(s)

SOURCE LOSS 10 SECOND(s)



TRANSITION TIMERS



TRANSFER TIMER 2 SECOND(s)

GENERATOR SOURCE DELAYS

SOURCE STABILIZATION 0 MINUTE(s)

10 SECOND(s)

SOURCE LOSS 3 SECOND(s)

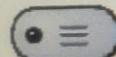


SECURITY TIMER



PASSWORD TIMEOUT 3 MINUTE(s)

GENERATOR SETTINGS



EXERCISER DISABLED

Sunday

CHOOSE EXERCISE DAY

EXERCISE INTERVAL: EVERY 1 WEEK(S)

EXERCISE START HOUR 13

(24 HOUR CLOCK)

EXERCISE DURATION 30 MINUTE(S)

EXERCISE START MINUTE 00



COOLDOWN 5 MINUTE(S)

1/15/2020 5:33

MAIN PAGE

CONFIGURE SYSTEM

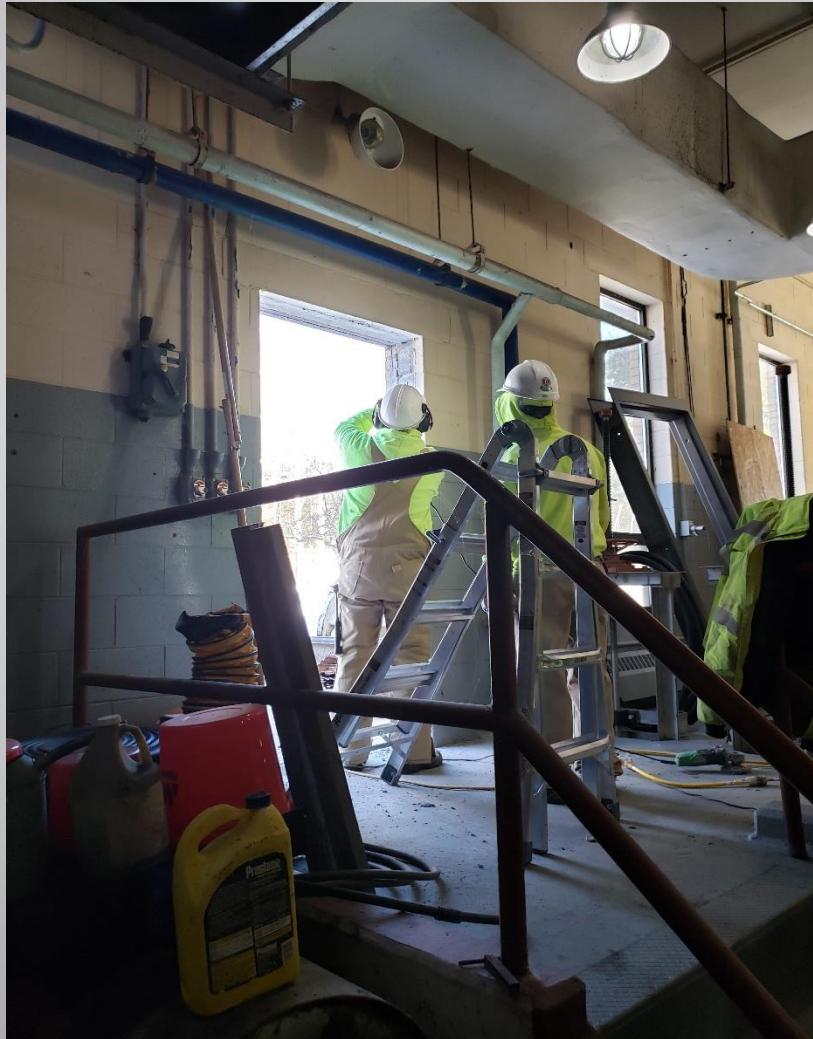
TIME SET

DATE SET

CHANGE PASSWORD 1

CHANGE PASSWORD 2

Door replacement added – Summer 2019





08/14/2020 21:21

Partial Roof Replacement added – Fall 2019





08/14/2020 21:56



08/14/2020 21:56



08/14/2020 21:56



08/14/2020 21:56

Project Complete October 2020

All items from original project list were completed with the exception of 2 roofs. The final clarifier domes were slated for repair but based on available contingency funds we replaced them instead. We were also able to add some repairs to #4 digester that were discovered during the project.

Engineer – GEI Consultants

General Contractor – Staab Construction, Marshfield Wis.