

**DESIGN & CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242**

ADDENDUM NO. 7 TO PROJECT NO. 45857

**CONSTRUCTION, HVAC, PLUMBING AND ELECTRICAL WORK
REHABILITATE WASTEWATER TREATMENT PLANT
EASTERN CORRECTIONAL FACILITY
30 INSTITUTION RD.
NAPANOCH, NY**

December 10, 2020

NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

CONSTRUCTION WORK SPECIFICATIONS

1. SECTION 034113 PRECAST CONCRETE PLANK: Discard the Section bound in the Project Manual and substitute the accompanying Section (pages 034113 – 1 thru 034113 – 12) noted “Revised 12/10/2020”.
2. SECTION 406300 WASTE WATER SYSTEM CONTROL – INTEGRATION: Append the accompanying Table 406300-2 and Table 406300-3 Document (pages 406300 – 17 thru 406300 – 20) to the end of this specification section.

CONSTRUCTION WORK DRAWINGS

3. Revised Drawing:
 - a. Drawing No. C-000 noted “REVISED DRAWING 12/10/2020” accompanies this Addendum and supersedes the same numbered originally issued drawing.

END OF ADDENDUM

Erik T. Deyoe, P.E.
Director, Division of Design
Design & Construction

SECTION 034113

PRECAST CONCRETE PLANK

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Cast-In-Place Concrete: Section 033000.
- B. Construction Painting: Section 099101.
- C. Post-Installed Concrete and Masonry Anchors: Section 055050.

1.02 REFERENCES

- A. American Concrete Institute (ACI) Publications
 - 1. ACI 301 - Specifications for Structural Concrete
 - 2. ACI 304 - Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete
 - 3. ACI 308 - Guide to Curing Concrete
 - 4. ACI 309 - Practice for Consolidation of Concrete
 - 5. ACI 318 - Building Code Requirements for Reinforced Concrete
- B. American Society for Testing and Materials (ASTM) Publications
 - 1. A82 - Steel Wire, Plain, for Concrete Reinforcement
 - 2. A185 - Steel Welded Wire Fabric, Plain, for Concrete Reinforcement
 - 3. A416 - Uncoated Seven Wire Stress Relieved Steel Strand for Prestressed Concrete
 - 4. A421 - Uncoated Stress Relieved Steel Wire for Prestressed Concrete
 - 5. A497 - Welded Deformed Steel Wire Fabric for Concrete Reinforcement
 - 6. A615 - Deformed and Plain Billet Steel Bars for Concrete Reinforcement
 - 7. C33 - Concrete Aggregates
 - 8. C94 - Ready Mixed Concrete
 - 9. C150 - Portland Cement
 - 10. C260 - Air Entraining Admixtures for Concrete
 - 11. C494 - Chemical Admixtures for Concrete
 - 12. C595 - Blended Hydraulic Cements
- C. Precast/Prestressed Concrete Institute (PCI) Publication
 - 1. MNL 116 - Manual for Quality Control for Plants and Production of Precast Prestressed Concrete Products
 - 2. MNL-120 - Design Handbook - Precast and Prestressed Concrete
- D. Welding: Structural Welding Code - Steel AWS D1.1 by the American Welding Society (AWS Code).

1.03 DEFINITIONS

- A. Hollow Core Precast Plank/Precast Concrete Plank: Plant cast, non-prestressed, precast structural concrete slabs generally referred to in this Section as precast slabs.

1.04 DESIGN REQUIREMENTS

- A. Safety Factor: 4.
- B. Maximum Deflection Under Design Loads: $1/240$ of the span.
- C. Design Loads: Refer to the Drawings for design loads. Design to support equipment and accessories (with information provided by Contractor).
- D. Do not use concrete toppings in establishing the design strength of the precast planks.

1.05 SUBMITTALS

- A. Shop Drawings: Fully dimensioned shop and erection drawings that are prepared and sealed by a New York State licensed Professional Engineer. Submit shop drawings when the Contractor has completed their coordination of all equipment and accessory loads, and required opening locations and sizes. Include complete information for the fabrication, handling and erection of all precast planks. When shop drawings are marked "Approved as Noted", promptly resubmit copies of corrected shop drawings for formal approval and record. Include the following information, at minimum, on the shop and erection drawings:
 - 1. Layout of precast planks.
 - 2. Location and size of all openings verified by the Contractor.
 - 3. Details of joints and connections between planks.
 - 4. Connection details of planks to other construction (supporting structure) such as walls, beams, etc.
 - 5. Header sizes for openings, if required.
 - 6. Dimensions and surface finishes of each plank type.
 - 7. Estimated camber.
 - 8. Prestressing strand details and locations.
 - 9. Material properties of prestressing strands, concrete, and grout.
 - 10. All loads used in design such as live, dead, mechanical equipment and accessories (verified by Contractor), handling, and erection.
 - 11. Notation that indicates compliance with references and publications as listed in Article 1.02 above
- B. Product Data: Manufacturer's catalog sheets, specifications, and installation instructions for precast slabs and accessories. Include precast slab manufacturer's instructions and limitations for field cut openings.

- C. Quality Control Submittals:
1. Design Data: Submit design calculations, sealed by a New York State licensed Professional Engineer, with shop and erection drawings. Calculations shall include the complete design, including the stresses in steel and concrete, based on moment and shears obtained from loads shown on the Drawings.
 - a. Provide calculations for each type and length of precast plank with a stamped and sealed "Design Summary" cover sheet listing all the design criteria and loads used in the design(s). Only the Design Summary cover sheet will be reviewed, not the prepared calculations.
 2. Test Reports:
 - a. Submit load test data and load tables.
 - b. Submit certified mill test report for the prestressing strands.
 3. Certificates: Affidavit required under Quality Assurance Article.
 4. Manufacturer's Qualifications Data:
 - a. Firm name, address, and telephone number.
 - b. Period of time firm has manufactured precast concrete plank.
 5. Installer's Qualifications Data:
 - a. Name of each person who will be performing the Work and their employer's name, business address and telephone number.
 - b. Period of time installer has installed precast concrete plank.
 6. Concrete mix design for each strength and type of concrete. List materials including type and amount of cement and admixtures; and applicable reference specifications. Keep copies of test reports showing that the mix has been successfully tested to produce concrete with the properties specified.
 7. Near completion of project when all equipment and accessories have been installed on/from the precast planks and all saw cuts and holes have been made, the Contractor shall accurately map these items on the precast shop drawing plan and submit to precast manufacturer to confirm adequacy of precast plank designs. Actual loads (weights) of installed equipment and accessories shall be provided by Contractor. Any resulting deficiencies of installed precast planks shall be strengthened or replaced at Contractor's expense. Submit written confirmation of acceptance from precast plank supplier for file.

1.06 QUALITY ASSURANCE

- A. Manufacture: Precast slabs shall be plant fabricated.
- B. Certifications: Affidavit by the bar reinforcement manufacturer certifying that bar material meets the contract requirements.
 1. Submit evidence consisting of certification of source of material, copies of purchase orders and manufacturer's certifications. For stock material, submit copies of latest mill or purchase orders for material replacement.
 - a. Documentation to confirm compliance with General Conditions Article 25.4 Domestic Steel.

- C. The Contractor agrees, that if the value of this contract exceeds \$100,000 all structural steel, reinforcing steel and other major steel items to be incorporated in the Work of this Contract shall be produced and made in whole or substantial part in the United States, its territories or possessions.
- D. Qualifications:
1. Manufacturer: The firm manufacturing the Work of this Section shall have been regularly engaged in the manufacturer of precast concrete planks for a minimum of 5 years, and shall have manufactured precast concrete planks on 5 similar projects in the last 5 years. Manufacturer shall be a PCI-certified plant for production of precast planks as specified herein.
 - a. Work on the precast concrete planks shall not proceed until approval of the proposed manufacturer has been given by the Director.
 - b. If requested, the manufacturer shall permit representatives of the Director and/or designated inspection laboratory to inspect his plant facilities before shop drawings are submitted. The proposed manufacturer will not be approved if, in the opinion of the Director, his plant facilities are inadequate.
 2. Installer: The person(s) performing the Work of this Section and their Supervisor shall be personally experienced in the installation of precast concrete planks and shall have been regularly employed by a Company installing precast concrete planks for a minimum of 2 years.
- E. Precast Slabs for Fire Rated Assembly: Comply with Underwriters Laboratories, Inc. fire rated designs.
- F. Testing Agency: Load testing shall be performed by an independent testing laboratory.
- G. Fabricated precast planks shall meet the tolerances as specified in PCI MNL-116 and per MNL-120. In addition, the measured cambers for all precast planks shall not vary by more than 1/2 inch (+).
- H. A minimum of four 6-inch diameter test cylinders shall be taken during each day's casting operation.
- Compressive strength tests shall be run on each day's cylinders as follows: 2 shall be broken prior to prestress force release and 2 at the end of 28 days.
- Cylinders shall be prepared and tested in accordance with ACI 301.
- The manufacturer may test the concrete cylinders with his own forces and equipment. When requested, the manufacturer must demonstrate to the Engineer's satisfaction that only competent, trained personnel will be engaged in such work and that all testing equipment has been recently inspected and calibrated within the last year, and is in first class operating condition, otherwise an independent testing laboratory shall be used

1.07 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle precast slabs by methods that will prevent damage.
- B. Store precast concrete off the ground. Separate stacked members by battens across the full width of each bearing point

1.08 COORDINATION

- A. Transmit precast plank shop drawings to all other contractors and/or subcontractors of all the trades to obtain locations and sizes of all required openings, and to acquire loads (weights) of all approved equipment and accessories. This coordination shall be done prior to submission of shop drawings.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Cement: ASTM C 150, Type I or Type II Portland cement.
- B. Normal Weight Concrete Aggregates: ASTM C 33.
- C. Water: Potable, fresh, clear, and free from injurious amounts of oils, acids, alkalis, salts, organic matter, or other deleterious substances.
- D. Admixtures:
 - 1. Air-entraining - ASTM C 260.
 - 2. Accelerating - ASTM C494, Type C or E.
 - 3. Water Reducing - ASTM C494, Types A, E or F.
- E. Reinforcing Steel:
 - 1. Bars: ASTM A 615, Grade 60 deformed.
 - 2. Prestressing Stands:
 - a. Seven-Wire Stressed Relieved - ASTM A416 or ASTM A416 with supplement for low relaxation wire.
 - b. Single-Wire Stressed Relieved - ASTM A421 or ASTM A421 with supplement for low relaxation wire.
- F. Bearing Pads: As recommended and required by the manufacturer.
- G. Shop Paint: Manufacturer's standard primer.
- H. Exposed metal accessories: Hot-dip galvanized or Type 316 stainless steel.

2.02 PRECAST CONCRETE PLANKS

- A. Type: Structural precast slabs.

- B. Shape:
 - 1. Flat.
 - 2. Channel, with ends of legs dapped.
- C. Size: As indicated on the Drawings.
- D. Edges:
 - 1. Square on all 4 edges.
- E. Concrete:
 - 1. Weight: Normal weight concrete.
 - 2. Compressive Strength: As required by the calculations but not less than 5,000 psi at 28 days.
- F. Finishes:
 - 1. Concealed Surfaces to Receive Roofing: Provide commercial grade floated finish.
 - 2. Exposed Surface: Provide a standard grade surface finish acceptable to be painted. Fill all imperfections greater than 1/8 inch deep or 1/16 inches wide and grind smooth.

2.03 GROUT MIXES

- A. Precast slab manufacturer's standard Portland cement and sand grout mixes designed for the required plank and type of construction indicated on the Drawings.

2.04 JOINT MASTIC

- A. Mastic: High melting point asphaltic mastic complying with FS SS-C-153.
- B. Protective Covering: Asphalt-saturated felt, No. 15, without perforations, complying with ASTM D 226.

2.05 FABRICATION (PCI MNL 116 UNLESS SPECIFIED OTHERWISE)

- A. Forms shall be designed and constructed to insure close control of dimensions and details. Forms shall be constructed with tight joints and in a manner that will permit removal without defacing the cast concrete.
- B. Forming operations shall produce a smooth dense surface.
- C. Accurately locate and securely anchor reinforcing steel, weld plates, inserts, and other required embedded items with rigid devices that will not be exposed on or mar exposed surfaces of precast slabs. Embedded items shall be free of loose and flaky rust, and free of oil, paint and other coatings. Refer to ACI 318 for reinforcement placement and splicing. Provide connecting bars or other approved connection methods between precast and masonry or cast-in-place construction.

- D. Concrete:
1. Concrete Mixing - ASTM C94. Mixing operations shall produce batch to batch uniformity of strength, consistency and appearance.
 2. Concrete Placing - Concrete shall be compacted and vibrated as required to insure full contact with embedded items and to completely fill corners and angles of the forms. Provide minimum 1-1/4-inch strand cover for severe exposure. Conform to ACI 304 and ACI 309, unless otherwise specified.
 3. Concrete Curing - Precast slabs shall be cured and protected from premature drying. Commence curing immediately following the initial set and completion of surface finishing. Provide curing procedures to keep the temperature of the concrete between 50 degrees and 190 degrees F. When accelerated curing is used, apply heat at controlled rate and uniformly along the casting beds. Monitor temperatures at various points in a product line in different casts.
- E. Prestressing - Do not transfer prestressing forces until the concrete has reached a minimum compressive strength of 3000 psi unless a higher strength is required by the Contractor furnished design.
- F. Provide finishes as specified. Apply one coat of shop paint to surfaces of ferrous metal which will not be embedded in concrete or masonry.
- G. Condition:
1. Precast planks which consist of honeycombs or other surface defects deep enough to expose prestressing strands shall be rejected.
 2. Precast planks containing hairline cracks which are visible but less than 0.02 inches in width and not excessive in quantity require approval by Director's Representative prior to installation.
 3. Precast planks that are damaged or have cracks greater than 0.02 inches in width shall be rejected.
 4. Precast planks that do not meet the fabrication tolerances specified shall be rejected.
 5. All rejected planks, solely determined by the Director's Representative, shall be removed from the site and replaced at no additional cost.
- H. Dimensional Tolerances: As listed for precast concrete in ACI 117.

2.06 FLUID APPLIED DECK COATING

- A. Traffic Deck Coating Material:
1. Primer: Primer for concrete and metal flashings as required by manufacturer.
 2. Sheet Flashing: 6" or 12" wide non-staining elastomeric sheet flashing material having a minimum thickness of 60 mils or as required by manufacturer.
 3. Liquid Flashing: Polyurethane coating, or equal.

4. Aggregate: Silica (quartz) sand or other aggregate approved by manufacturer.
5. Elastomeric Base Coat: Polyurethane coating, gray in color.
6. Elastomeric Topcoat: Polyurethane coating, gray in color.
7. Sealant: Polyurethane urethane sealant as approved by manufacturer.

B. Material performance criteria

1. Minimum Performance Requirements: The minimum performance requirements for the coating system to be used on this project are:

PERFORMANCE REQUIREMENTS OF CURED FILM

<u>PHYSICAL PROPERTIES</u>	<u>BASECOAT</u>	<u>TOPCOAT</u>	<u>TEST METHOD</u>
Tensile Strength	1,200 psi	2,500 psi	ASTM D412
Elongation	400%	400%	ASTM D412
Permanent Set	<10%	<30%	ASTM D412
Tear Resistance	150 pli	200 pli	ASTM D1004
Water Resistance	<3%	<3%	ASTM D471
MVT @ 20 mils	2.6 English	2 English	ASTM E96
Taber Abrasion (cs17)	30 mg./1,000	25 mg./1,000	ASTM D4060
Shore "A"	70 - 75	75 - 80	ASTM D2240
Adhesion	300 psi	300 psi	ASTM D4541
Fire Resistance of System	Class A	Class A	ASTM E108
Standard Specifications for High Solids Content, Cold Applied Elastomeric Water-proofing Membrane with Integral Wearing Surface	System Exceeds Requirements		ASTM C957

C. Inspection

Concrete: Verify that the work done under other sections meets the following requirements:

1. That the concrete deck surface is free of ridges and sharp projections. If metal forms or decks are used they should be ventilated to permit adequate drying of concrete on the exterior exposed deck.
2. That the concrete was cured for a minimum of 28 days. (Minimum of 3,000 psi compressive strength). Water-cured treatment of concrete is preferred. The use of curing agents, if any, shall be of the sodium silicate base only; other require written approval by the deck coating manufacturer.
3. That the concrete was finished by a power or hand steel trowel followed by soft hair broom to obtain light texture or “sidewalk” finish.
4. That damaged areas of the concrete deck to be restored match adjacent areas. Use 100% solids epoxy and sand for filling and leveling.

D. Preparation

1. **Cleaning:** Surfaces contaminated with oil or grease shall be vigorously scrubbed with a power broom and a strong non-sudsing detergent. Thoroughly wash, clean, and dry. Areas where oil or other contaminants penetrate deep into the concrete may require removal by mechanical methods.
2. **Shot Blasting:** Mechanically prepare surface by shot blasting to industry standard surface texture (ICRI's CSP3-4) without causing additional surface defects in deck surface. Shot blasting does not remove deep penetrating oils, grease tar or asphalt stains. Proper cleaning procedures must be followed to insure proper bond of the deck coating.
3. **Cracks and Cold Joints:** Visible hairline cracks (up to 1/16” in width) in concrete and cold joints shall be cleaned, primed as required and treated with liquid flashing a minimum distance of 2” on each side of crack to yield a total thickness of 30 dry mils. Large cracks (over 1/16” in width) shall be routed and sealed with sealant. Sealant shall be applied to inside area of crack only, not applied to deck surface. Detail sealed cracks with liquid flashing a distance of 2” on each side of crack to yield a total thickness of 30 dry mils.
4. **Control Joints:** Seal secondary control joints with sealant. Sealant shall be applied to inside area of joint only, not applied to deck surface. Detail sealed joints with liquid flashing a distance of 2” on each side of joint to yield a total thickness of 30 dry mils.
5. **Sheet Flashing:** Install sheet flashing where indicated on the drawings and where required by the manufacturer prior to the application of the base coat.
6. **Surface Condition:** Surface shall be clean and dry prior to coating.

E. Application

1. Primer: Thoroughly mix and apply 1/3 gallon per 100 square feet (300 SF/gal) to all concrete surfaces in strict accordance with procedures outlined by manufacturer. Within 24 hours of application of primer, base coat must be applied. If base coat cannot be applied within 24 hours, re-prime.
2. Base Coat: Thoroughly mix and apply 1-½ gallons per 100 square feet (66 SF/gal) of elastomeric base coat to deck surfaces to yield an average 18 dry mils (24 wet mils) in strict accordance with procedures outlined by manufacturer. Extend base coat over cracks and control joints, which have received treatment.
3. Wearing Surface Coat: Thoroughly mix and apply ½ gallon per 100 square feet (200 SF/gal) of elastomeric topcoat to yield an average of 6 dry mils (8 wet mils) and immediately broadcast aggregate, evenly distributed, into wet coating at the rate of 10 pounds per 100 square feet. When dry, remove excess aggregate and re-coat surface with 2/3 gallon per 100 square feet (150 SF/gal) of elastomeric topcoat to yield an average of 8 dry mils (10 wet mils). Total system coating thickness averages 32 dry mils exclusive of primer and aggregate.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Examine surfaces to receive precast slabs for defects that will adversely affect the execution and quality of the Work. Check location and condition of bearing surfaces. Verify that required supports and anchors for connection to precast slabs have been installed. Verify bearing surfaces are sized to provide the required clearances. Do not proceed until unsatisfactory conditions are corrected. Correct bearing surface irregularities with non-shrink grout and/or grinding as required. Provide bearing pads as required by plank manufacturer's design.

- B. Verification of Pre-Cast Concrete Planks: Examine surfaces of precast concrete for damage such as cracking, spalling, and honeycombs. Precast concrete that does not meet the surface finish requirements specified in Part 2 shall be repaired or removed and replaced at the Contractor's expense.

3.02 PREPARATION

- A. Surface Preparation: Clean surfaces of adjoining construction free of dirt and other foreign matter.

3.03 INSTALLATION

- A. Install precast concrete plans after the concrete has attained the specified compressive strength, but shall not be fixed in position until the unit has "aged" 90 days after detensioning.
- B. Install precast slabs in their designed positions and in accordance with the manufacturer's approved erection drawings and instructions. Fit slabs around openings and projections through deck.
 - 1. Firmly mate tongue and groove joints to form tight joints.
 - 2. Reference PCI MNL-116 and MNL-120 for tolerances.
 - 3. Follow the plank manufacturer's recommendations for maximum construction loads.
 - a. Loads shall not be placed on these precast planks until all keyways have been fully grouted and/or as instructed by the plank manufacturer.
 - b. In no case shall concentrated loads or construction loads exceeding the design loads be placed on these precast planks.
 - 4. Place precast planks level, plumb, square and at right angles to the bearing surface, unless indicated otherwise, and draw up tight without forcing or distortion. Align plank ends.
- C. Securely fasten precast slabs in place.
 - 1. All plank end and sidelap connections to supporting structure(s) shall be installed in accordance with the details on the Contract Drawings or as approved on the shop drawings.
 - 2. Install concrete plank clips in accordance with precast slab manufacturer's recommendations.
 - 3. Field Welding: Unless otherwise indicated, comply with AWS Code for the procedures for shielded metal-arc welding. Connections which require welding shall be accomplished only by experienced and qualified personnel.
- D. Grout all keyways between adjacent units. Take care to solidly pack entire depth of keyway flush to top of precast. Prevent leakage or droppings of grout through the assembled deck. Any grout which seeps through the deck shall be removed before it hardens. Grouting shall not start until all units are in place.

- E. Differential Chamber – Differential chambers occurring between adjacent units at roof deck levels in excess of 1/4 inch shall be dressed with non shrink grout, or other approved material.

- F. Field-Installed Openings:
 - 1. The Contractor shall locate and receive prior approval from plank manufacturer for all openings to be field installed.
 - 2. Neatly field cut openings in precast slabs which were not designed as plant fabricated openings. Comply with the precast slab manufacturer's instructions and limitations for field cut openings.
 - 3. Finish off and/or trim any cores left exposed and visible after construction. This includes plank ends or exposed cores after saw cutting for openings. If not otherwise indicated on the Contract Drawings, all cores shall be sealed with backpainted aluminum trim
 - 4. Any openings cut oversized which result in a gap around equipment or mechanical fittings shall be trimmed off by the Contractor to neatly hide gaps using backpainted aluminum trim.

- G. Joint Treatment:
 - 1. Grouting: Grout the joints between precast slabs on upper side with slab manufacturer's recommended grout mix.

END OF SECTION

Item No.	Equipment Item	Equipment Designation	Description	Function Designation	Input or Output	I/O Type	Electrical Characteristic	In/Out Building?	Remarks
4600	Chemical Bulk Tanks Remote Fill Panel	CS-4600	Sodium Hypochlorite Tank Level High Active	LAH	Input	Discrete	24 VDC	Out	
			Sodium Bisulfite Tank Level High Active	LAH	Input	Discrete	24 VDC	Out	
			ACK PB Depressed	ACK	Input	Discrete	24 VDC	Out	
			Audible Alarm Energized	YA	Input	Discrete	24 VDC	Out	
Sodium Hypochlorite Feed System									
4601	Sodium Hypochlorite Bulk Storage Tank Level Transmitter	LIT-4601	Level Indication	LAHH, LAH, LAL, LALL, LR	Input	Analog	4-20 mA	In	
			Failure Indication	YA	Input	Discrete	24 VDC	In	
4610	Sodium Hypochlorite Feed Pump 1	CFP-4610	In Remote	HSI	Input	Discrete	24 VDC	In	
			Run Indication	YI, KQ, YQ	Input	Discrete	24 VDC	In	
			Failure Indication	YA	Input	Discrete	24 VDC	In	
			Start/Stop Control	OC/CC	Output	Discrete	24 VDC	In	
			Speed Control	SC	Output	Analog	4-20 mA	In	
4620	Sodium Hypochlorite Feed Pump 2	CFP-4620	In Remote	HSI	Input	Discrete	24 VDC	In	
			Run Indication	YI, KQ, YQ	Input	Discrete	24 VDC	In	
			Failure Indication	YA	Input	Discrete	24 VDC	In	
			Start/Stop Control	OC/CC	Output	Discrete	24 VDC	In	
			Speed Control	SC	Output	Analog	4-20 mA	In	
4630	Sodium Hypochlorite Day Tank Weight Transmitter	WIT-4630	Weight Indication	WAHH, WAH, WAL, WALL, LR	Input	Analog	4-20 mA	In	Weigh scale used to determine tank level
			Failure Indication	YA	Input	Discrete	24 VDC	In	
4640	Sodium Hypochlorite Containment Area Leak Detection	LSH-4640	Failure Indication	YA	Input	Discrete	24 VDC	In	Capacitance Probe
Sodium Bisulfite Feed System									
4701	Sodium Bisulfite Bulk Storage Tank Level Transmitter	LIT-4701	Level Indication	LAHH, LAH, LAL, LALL, LR	Input	Analog	4-20 mA	In	
			Failure Indication	YA	Input	Discrete	24 VDC	In	
4710	Sodium Bisulfite Feed Pump 1	CFP-4710	In Remote	HSI	Input	Discrete	24 VDC	In	
			Run Indication	YI, KQ, YQ	Input	Discrete	24 VDC	In	
			Failure Indication	YA	Input	Discrete	24 VDC	In	
			Start/Stop Control	OC/CC	Output	Discrete	24 VDC	In	
			Speed Control	SC	Output	Analog	4-20 mA	In	
4720	Sodium Bisulfite Feed Pump 2	CFP-4720	In Remote	HSI	Input	Discrete	24 VDC	In	
			Run Indication	YI, KQ, YQ	Input	Discrete	24 VDC	In	
			Failure Indication	YA	Input	Discrete	24 VDC	In	
			Start/Stop Control	OC/CC	Output	Discrete	24 VDC	In	
			Speed Control	SC	Output	Analog	4-20 mA	In	
4730	Sodium Bisulfite Day Tank Weight Transmitter	WIT-4730	Weight Indication	WAHH, WAH, WAL, WALL, LR	Input	Analog	4-20 mA	In	Weigh scale used to determine tank level
			Failure Indication	YA	Input	Discrete	24 VDC	In	
4740	Sodium Bisulfite Containment Area Leak Detection	LSH-4740	Leak Detected	YA	Input	Discrete	24 VDC	In	Capacitance Probe
4750	Chemical Fill Containment Sump Leak Detection	LSH-4750	Leak Detected	YA	Input	Discrete	24 VDC	In	Capacitance Probe
4850	Effluent Water Flow	FIT-4850	Flowrate Indication	FI, FAH, FAL, FR, FQ	Input	Analog	4-20 mA	Out	Ultrasonic Level Sensor over Parshall Flume

Item No.	Equipment Item	Equipment Designation	Description	Function Designation	Input or Output	I/O Type	Electrical Characteristic	In/Out Building?	Remarks
4860	Effluent Water Chlorine Residual Analyzer	AIT-4860	Totalizer Pulse	FQ	Input	Discrete	24 VDC	Out	
			Chlorine Residual	AI, AAHH, AAH, AAL, AALL, AR	Input	Analog	4-20 mA	In	0-5 mg/L
			Failure Indication	YA	Input	Discrete	24 VDC	In	
9801	Chemical Bulk Tanks Remote Fill Panel Eyewash/Shower Flow Switch	FS-9801	Flow Indication	FI	Input	Discrete	24 VDC	Out	
9802	Chemical Room Eyewash/Shower Flow Switch	FS-9802	Flow Indication	FI	Input	Discrete	24 VDC	In	
PLC Status									
			PLC Memory Battery		Internal Value	Internal Value			
			AC Power Loss	IA	Input	Discrete	24 VDC		N.O. contacts energized closed while power is On.
	Primary DC Power Supply Failure		Failure Indication	EAL	Input	Discrete	24 VDC		
	Secondary DC Power Supply Failure		Failure Indication	EAL	Input	Discrete	24 VDC		
	Uninterruptible Power Supply (UPS) Battery		UPS Battery Low	EAL	Input	Discrete	Modbus		
	PLC Cabinet Internal Temperature		Temperature Indication	TI, TAH, TAL, TR	Input	Analog			

Item No.	Equipment Item	Equipment Designation	Description	Function Designation	Input or Output	I/O Type	Electrical Characteristic	In/Out Building?	Remarks
5110	Primary Sludge Pump 1	P-5110	In Remote	HSI	Input	Discrete	24 VDC	Out	
			Run Indication	YI, KQ, YQ	Input	Discrete	24 VDC	Out	
			Failure Indication	YA	Input	Discrete	24 VDC	Out	
			Suction Pressure Low	PSL	Input	Discrete	24 VDC	Out	
			Discharge Pressure High	PSH	Input	Discrete	24 VDC	Out	
			Start/Stop Control	OC/CC	Output	Discrete	24 VDC	Out	
			Speed Indication	SI, SR	Input	Analog	4-20 mA	Out	
5120	Primary Sludge Pump 2	P-5120	Speed Control	SC	Output	Analog	4-20 mA	Out	
			In Remote	HSI	Input	Discrete	24 VDC	Out	
			Run Indication	YI, KQ, YQ	Input	Discrete	24 VDC	Out	
			Failure Indication	YA	Input	Discrete	24 VDC	Out	
			Suction Pressure Low	PSL	Input	Discrete	24 VDC	Out	
			Discharge Pressure High	PSH	Input	Discrete	24 VDC	Out	
			Start/Stop Control	OC/CC	Output	Discrete	24 VDC	Out	
5130	Primary Sludge Pump 3	P-5130	Speed Indication	SI, SR	Input	Analog	4-20 mA	Out	
			Speed Control	SC	Output	Analog	4-20 mA	Out	
			In Remote	HSI	Input	Discrete	24 VDC	Out	
			Run Indication	YI, KQ, YQ	Input	Discrete	24 VDC	Out	
			Failure Indication	YA	Input	Discrete	24 VDC	Out	
			Suction Pressure Low	PSL	Input	Discrete	24 VDC	Out	
			Discharge Pressure High	PSH	Input	Discrete	24 VDC	Out	
5150	Primary Sludge Pump Magnetic Flow Transmitter	FIT-5150	Start/Stop Control	OC/CC	Output	Discrete	24 VDC	Out	
			Speed Indication	SI, SR	Input	Analog	4-20 mA	Out	
			Speed Control	SC	Output	Analog	4-20 mA	Out	
			Flowrate Indication	FI, FAH, FAL, FR	Input	Analog	4-20 mA	Out	
5401	Sludge Holding Tank Level Transmitter	LIT-5401	Totalizer Pulse	FQ	Input	Discrete	24 VDC	Out	
			Level Indication	LAHH, LAH, LAL, LALL, LR	Input	Analog	4-20 mA	Out	
PLC Status									
			PLC Memory Battery		Internal Value	Internal Value			
			AC Power Loss	IA	Input	Discrete	24 VDC		N.O. contacts energized closed while power is On.
	Primary DC Power Supply Failure		Failure Indication	EAL	Input	Discrete	24 VDC		
	Secondary DC Power Supply Failure		Failure Indication	EAL	Input	Discrete	24 VDC		
	Uninterruptible Power Supply (UPS) Battery		UPS Battery Low	EAL	Input	Discrete	Modbus		
	PLC Cabinet Internal Temperature		Temperature Indication	TI, TAH, TAL, TR	Input	Analog			

CIVIL/MECHANICAL ABBREVIATIONS

AB	ANCHOR BOLT	E	EAST	LLH	LONG LEG HORIZONTAL	RO	ROUGH OPENING
ACOUS	ACOUSTICAL (SOUND DEADENING)	EA	EACH	LLV	LONG LEG VERTICAL	ROB	RUN OF BANK
ADDL	ADDITIONAL	ECC	ECCENTRIC	LP	LIGHT POLE	ROW	RIGHT OF WAY
ADJ	ADJUSTABLE	EF	EACH FACE	LT WT	LIGHT WEIGHT	RS	RETURN SLUDGE
AGR	AGGREGATE	EFF	EFFLUENT	LT	LIGHT	S	SOUTH / SUCTION
AGGR	AGGREGATE	EFW	EFFLUENT WATER	LV	LOW VERTICAL	SADL	SADDLE
ALLW	ALLOWANCE	EJ	EXPANSION JOINT	LWL	LOW WATER LEVEL	SAN	SANITARY
ALT	ALTERNATE	EL	ELEVATION	M	MOTOR	SCH	SCHEDULE
ALUM	ALUMINUM	ELB	ELBOW	MAS	MASONRY	SCP	STRUCTURAL CLAY PIPE
APC	AIR POLLUTION CONTROL	ELEC	ELECTRIC	MATL	MATERIAL	SEC	SEVERE ENVIRONMENTAL CONDITION
ARCH	ARCHITECT OR ARCHITECTURAL	EMH	EXISTING MANHOLE	MAX	MAXIMUM	SECT	SECTION
ASB	ASBESTOS	ENAM	ENAMEL	MCC	MOTOR CONTROL CENTER	SEL	SELECTION
ASPH	ASPHALT	ENG	ENGINE	MECH	MECHANICAL	SEW	SEWER
ASSY	ASSEMBLY	ENGR	ENGINEER	MEMB	MEMBRANE	SF	SQUARE FOOT OR SILT FENCE
B	BOTTOM	ENT	ENTRANCE	MEZZ	MEZZANINE	SG	SLIDE GATE
B/F	BOTTOM OF FOOTING	ETR	EXISTING TO REMAIN	MFR	MANUFACTURER	SHT	SHEET
BD	BOARD	EQ	EQUAL	MGD	MILLION GALLONS PER DAY	SIOPP	SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE
BTW	BETWEEN	F&C	FRAME AND COVER	MH	MANHOLE	SIM	SIMILAR
BF	BLIND FLANGE	F&G	FRAME AND GRATING	MIN	MINIMUM	STA	STATION
BIT	BITUMINOUS	FAB	FABRICATE	MIRR	MIRROR	STL JST	STEEL JOIST
BL	BUILDING LINE	FBE	FUSION BONDED EPOXY	MISC	MISCELLANEOUS	SLG	SLUICE GATE
BLDG	BUILDING	FC	FOOT CANDLE / FLUSHING CONNECTION	MJ	MECHANICAL JOINT	SOI	SPRAYED ON INSULATION
BM	BENCH MARK / BEAM	FD	FLOOR DRAIN	MO	MASONRY OPENING	SP	STOP PLATE / SOUTHERN PINE
BMK	BENCH MARK	FE	FIRE EXTINGUISHER	MS	MONITORING SYSTEM	SPEC	SPECIFICATION
BOT OR B	BOTTOM	FF	FACE / FINISHED FLOOR	MTG	MOUNTING	SQ	SQUARE
BP	BASE PLATE	FH	FIBERGLASS / FINISHED GRADE	MTL	METAL	SSST	STAINLESS STEEL
BRG	BEARING	FG	FLUSHING HYDRANT	MULT	MULTIPLE	ST	STANDARD
BRK	BRICK	FIN RAD	FIN RADIATOR	MX	MIXER	STD	STANDARD
BRZ	BRONZE	FIN	FINISH	N	NORTH	STIRR	STIRRUPS
BU	BUILT UP	FITG	FITTING	NAHS03	SODIUM BISULFITE	STL	STEEL
BV	BUTTERFLY VALVE	FIX	FIXTURE	NAT	NATURAL	STOR	STORAGE
CABN	CABINET	FL	FLANGE	NF	NEAR FACE	STRU	STRUCTURAL / STRUCTURE
CATG	CATALOG	FLG	FLOORING	NG	NATURAL GAS	SUR	SURFACE
CB	CATCH BASIN	FLR	FLOOR	NIC	NOT IN CONTRACT	SUSP	SUSPENDED / SUSPENSION
CC	CENTER TO CENTER	FLUOR	FLUORESCENT	NO OR #	NUMBER	SWD	SIDE WATER DEPTH
CEM	CEMENT	FM	FORCE MAIN / FLOW METER	NOM	NOMINAL	SYM	SYMMETRICAL
CEMS	CONTINUOUS EMISSIONS	FND	FOUNDATION	NPT	NATIONAL PIPE THREAD	T & B	TOP AND BOTTOM
CER	CERAMIC	FOC	FACE OF COLUMN	NPW	NON POTABLE WATER	T & G	TONGUE AND GROOVE
CF OR CU FT	CUBIC FEET	FRF	FIREPROOF	NS	NO SMOKING	T	TILE, TREAD OR TOP
CFM	CUBIC FEET PER MINUTE	FPS	FEET PER SECOND	NTS	NOT TO SCALE	T/C	TOP OF CONCRETE
CFS	CUBIC FEET PER SECOND	FRP	FIBERGLASS REINFORCED PLASTIC	OC	ON CENTERS / ODOR CONTROL	T/D	TOP OF DECK
CI	CAST IRON	FS	FOOTING STEP	OD	OUTSIDE DIAMETER	T/F	TOP OF FOOTING
CIP	CAST IRON PIPE	FST	FINAL SETTLING TANK	OF	OUTSIDE FACE	T/G	TOP OF GROUT / GRATING
CR	CIRCULAR	FT	FEET	OPER	OPERABLE	TM	TOP OF MASONRY
CIRCUMF	CIRCUMFERENCE	FTG	FOOTING	OPNG	OPENING	TP	TOP OF PIPE
CJ	CONSTRUCTION JOINT	FURR	FURRING / FURRED	OPP	OPPOSITE	T/S	TOP OF SLAB / STEEL
CL	CENTER LINE	G	GAS	ORIG	ORIGINAL	T/W	TOP OF WALL
CL JT	CONTROL JOINT	GA	GAUGE	ORP	OXIDATION REDUCTION POTENTIAL	TCB	TEMPORARY CONCRETE BARRIER
CLR	CLEAR/COLOR	GAL	GALLON	PLATE / PROPERTY LINE		TDH	TOTAL DYNAMIC HEAD
CL2	CHLORINE	GALV	GALVANIZED	P&ID	PROCESS INSTRUMENTATION DIAGRAM	TEL	TELEPHONE
CLF	CHAIN LINK FENCE	GC	GENERAL CONTRACTOR	PAR	PARALLEL	TEMP	TEMPERATURE / TEMPORARY / TEMPERED
CLG	CEILING	GEN	GENERATOR	PAT	PATTERN	TERT	TERTIARY
CMP	CORRUGATED METAL PIPE	GI	GALVANIZED IRON	PAVT	PAVEMENT	THK	THICK
CMU	CONCRETE MASONRY UNIT	GL	GLASS	PC	PIECE	TK	TANK
CMUG	GLAZED CONCRETE MASONRY UNIT	GPM	GALLONS PER MINUTE	PCF	POUNDS PER CUBIC FOOT	TOB	TOP OF BANK
CO	CLEANOUT	GR	GRADE / GUARDRAIL	PERF	PERFORATED	TOL	TOLERANCE
COL	COLUMN	GRAN	GRANITE	PERP	PERPENDICULAR	TRANS	TRANSFORMER
COMB	COMBINATION	GRTG	GRATING	PIL	PILASTER	TYP	TYPICAL
CONC	CONCRETE	GS	GALVANIZED STEEL	PIV	POST INDICATOR VALVE	UNO	UNLESS NOTED OTHERWISE
COND	CONDUIT	GV	GATE VALVE	PLAM	PLASTIC LAMINATE	UR	URINAL
CONN	CONNECTION	GYP	GYPSUM	PLAS	PLASTER / PLASTIC	UV	ULTRAVIOLET
CONST	CONSTRUCTION	H EXCH	HEAT EXCHANGER	PLGB	PLUMBING	V	VINYL / VERTICAL / VENT
CONT	CONTINUOUS	H&V	HEATING AND VENTILATING	PLYWD	PLYWOOD	VAT	VINYL ASBESTOS TILE
CONT	CONTINUOUS	HB	HOSE BIB	PNL	PANEL	VT	VITRIFIED TILE
CONTR	CONTRACTOR	HD	HEAVY DUTY	POLY	POLYETHYLENE	VT	VENT THROUGH ROOF
COORD	COORDINATE	HDBD	HARDBOARD	POR	PORCELAIN	W	WEST
CORR	CORRIDOR	HDPE	HIGH DENSITY POLYETHYLENE	PR	PAIR	W/	WITH
CP	CONCRETE PLANK	HDWR	HARDWARE	PREFAB	PREFABRICATED	W/O	WITHOUT
CPLG	COUPLING	HM	HOLLOW METAL	PRS	PRESSURE REDUCING STATION	WAS	WASTE ACTIVATED SLUDGE
CPVC	CHLORINATED POLYVINYL CHLORIDE	HMA	HOT MIX ASPHALT	PRV	PRESSURE RELIEF/REDUCING VALVE	WC	WATER CLOSET
CRF	CHEMICAL RESISTANT FINISH	HOR OR H	HORIZONTAL	PS	PUMP STATION	WD	WOOD / WIDTH
CRS	COURSE	HP	HORSEPOWER	PSF	POUNDS PER SQUARE FOOT	WG	WEIR GATE
CS	CARBON STEEL	HPT	HIGH POINT	PSI	POUNDS PER SQUARE INCH	WH	WALL HYDRANT
CS JT	CONSTRUCTION JOINT	HSS	HOLLOW STRUCTURAL SHAPE	PST	PRIMARY SETTLING TANKS	WI	WROUGHT IRON
CT	CERAMIC TILE	HT	HEIGHT	PT	POINT / PRESSURE TREATED	WL	WATER LEVEL
CTR	CONTRACT	HTR	HEATER	PTN	PARTITION	WO	WINDOW OPENING
CTRD	CENTERED	HWL	HIGH WATER LEVEL	PV	PLUG VALVE	WP	WHITE PINE
CU IN	CUBIC INCH	HYD	HYDRATING	PVC	POLYVINYL CHLORIDE	WP	WORKING POINT
CU	COPPER	I/O	INPUT / OUTPUT	PW	POTABLE WATER	WS	WATER SURFACE
CV	CHECK VALVE	I	IRON INLET	QT	QUANTITY	WS	WATERSTOP
CW	CIRCULAR WASHER	ID	INSIDE DIAMETER	QTY	QUANTITY	WST	WEIGHT
CY OR CU YD	CUBIC YARD	IF	INSIDE FACE	R	RISER / REACTION / RADIUS	WT	WATER VALVE
D	DISCHARGE	INCL	INCINERATOR	RAD	RADIUS / RADIATOR	WV	WELDED WIRE FABRIC
DEFL	DEFLECTION	INCL	INCLUDE	RAS	RETURN ACTIVATED SLUDGE	WWF	WELDED WIRE FABRIC
DET	DETAIL	INF	INFLUENT	RBR	RUBBER	YH	YARD HYDRANT
DF	DRINKING FOUNTAIN	INSUL	INSULATION	RCP	REINFORCED CONCRETE PIPE		
DH	DECK HYDRANT	INT	INTERIOR	RD	ROOF DRAIN / ROAD		
DIA, OR Ø	DIAMETER	INV	INVERT	RE	RIGHT END		
DIAG	DIAGONAL	IPS	INTERNAL PIPE SIZE	REC	RECESS / RECORD		
DIM	DIMENSION	ISO	ISOLATION	RECIR	RECIRCULATION		
DIP	DUCTILE IRON PIPE	JAN CLO	JANITOR'S CLOSET	REDR	REDUCER		
DIST	DISTRIBUTION, DISTANCE	JCT	JUNCTION	REF	REFERENCE / REFRIGERATOR		
DJ	DOUBLE JOIST	JST	JOIST	REG	REGISTER		
DL	DEAD LOAD	JT	JOINT	REIN	REINFORCING		
DN	DOWN	K	1000 POUNDS (1 KIP)	REM	REMOVE		
DO	DISSOLVED OXYGEN	KG	KNIFE GATE	REP	REPAIR		
DOZ	DOZEN	LP	LOW POINT	REQD	REQUIRED		
DR	DOOR / DRAIN	L	LINEAR FEET	REV	REVISE		
DWG	DRAWING	LF	LINER FEET	RF	ROOF		
DWL	DOWEL	LAM	LAMINATE/LAMINATED	RFG	ROOFING		
		LAV	LAVATORY	RL	ROOF LEADER		
		LE	LEFT END	RM	ROOM		
		L/G / LFG	LANDFILL GAS LENGTH / LONG				
		LG	LENGTH / LONG				
		LL	LIVE LOAD				

SYMBOLS

	PLUG VALVE		LUMBER (FINISHED GRADE)		COMPACTED GRAVEL BACKFILL
	GATE VALVE		LUMBER (STRUCTURAL GRADE)		INSULATION (LOOSE OR BLANKET)
	CHECK VALVE		CONCRETE BLOCK (PLAN)		INSULATION (RIGID)
	BALL VALVE		CONCRETE BLOCK (ELEVATION)		CONCRETE
	BUTTERFLY VALVE		BRICK (PLAN)		GROUT
	FLEX CONNECTION		EARTH		TURF REINFORCEMENT MATT
	SLUICE GATE				
	FLOW DIRECTION				
	FLANGED ADAPTER		PIPE SUPPORT SYSTEM TYPE 'J' PIPE SUPPORT		CHECK DAM
	FLANGED JOINT		WELDED JOINT		SILT FENCE
	MECHANICAL JOINT/RESTRAINED PUSH ON JOINT/PUSH ON JOINT		FLOOR STAND - TYPE 'K' SUPPORT		FIBER ROLL
	PIPE HANGER TYPE 'A' PIPE SUPPORT (SHOWN IN PLAN ONLY)		CONC. SUPPORT IN TRENCH W/U-BOLT TYPE 'L' PIPE SUPPORT		SANITARY PIPING
	PIPE STANCHION SADDLE W/U-BOLT TYPE 'B' PIPE SUPPORT		STEEL ANGLE SUPPORT W/U-BOLT TYPE 'M' PIPE SUPPORT		POTABLE WATER PIPING
	SPLIT PIPE CLAMP TYPE 'C' PIPE SUPPORT		STRAP W/S. BOLTS AND INSERTS TYPE 'D' PIPE SUPPORT		NON-POTABLE WATER PIPING
	PIPE SUPPORT IN TRENCH W/U-BOLT TYPE 'E' PIPE SUPPORT		WALL SLEEVE		ELECTRICAL CONDUIT
	CONCRETE BASE FITTING SUPPORT TYPE 'F' PIPE SUPPORT		PIPE COUPLING		CHAIN LINK FENCE
	CONCRETE PIPE SUPPORT TYPE 'G' PIPE SUPPORT		ECCENTRIC BLIND FLANGE W/FLUSHING CONNECTION OR PIPE DRAIN		FLUSHING HYDRANT
	WELDED STEEL BRACKET W/U-BOLT TYPE 'H' PIPE SUPPORT		FLEXIBLE CONNECTION		VALVE BOX
	PIPE CHANNEL SUPPORT TYPE 'I' PIPE SUPPORT		STATIC MIXER		BOLLARD
			SANITARY MANHOLE		POST INDICATOR VALVE
					SOIL BORING HOLE
					CLEAN OUT
					SANITARY MANHOLE

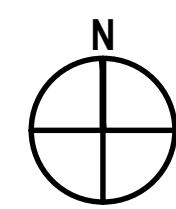
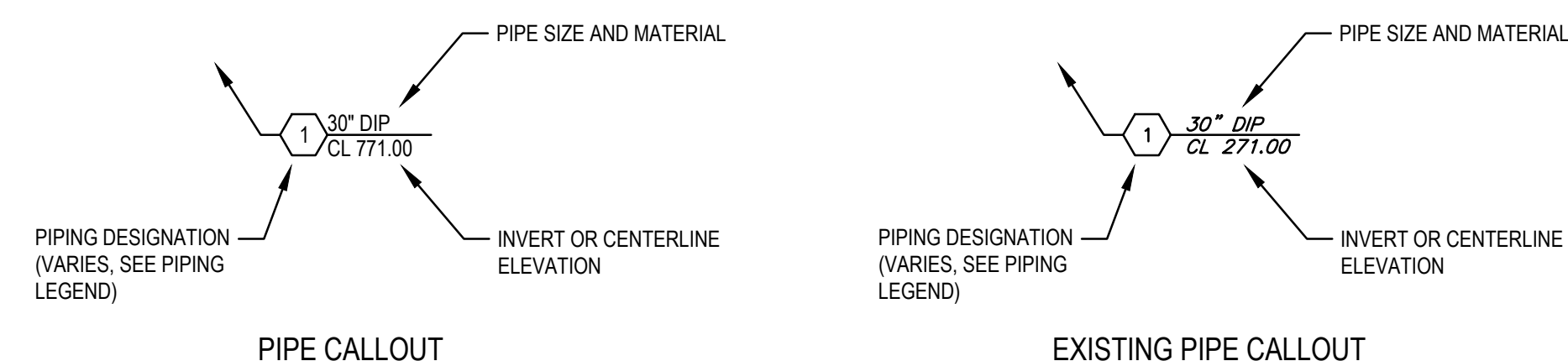
STANDARD NOTES - THESE NOTES APPLY TO EACH PRIME CONTRACT:

- EXISTING FACILITIES AND PIPING SHOWN LIGHT. NEW FACILITIES AND PIPING SHOWN DARK.
- UNDERGROUND FACILITIES AND STRUCTURES SHOWN ARE BASED UPON THE RECORD DRAWINGS AVAILABLE. EVIDENCE VISIBLE AT GROUND SURFACE, AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION AND IN ACCORDANCE WITH SECTION 02313. ALL ABOVE GROUND STRUCTURES AND SURFACE FEATURES SHOWN HEREON ARE THE RESULT OF A FIELD SURVEY UNLESS OTHERWISE NOTED.
- DATUMS:
VERTICAL - NAVD-88
HORIZONTAL - N.Y.S PLANE COORDINATE SYSTEM NAD83
CBN - COOPERATIVE BASE NETWORK CONTROL STATION
DESIGNATION - ELLENPORT
PID - AB387
LOCATION - JOSEPH Y. RESNIK AIRPORT, ELLENVILLE, NY
- ALL CONTRACTORS ARE ISSUED A COMPLETE SET OF CONTRACT DRAWINGS. WHILE EVERY EFFORT HAS BEEN MADE TO CONCENTRATE THE WORK OF TRADES ON SPECIFIC SHEETS AND LABELED ACCORDINGLY, THERE ARE NECESSARY INSTANCES WHERE WORK IS SHOWN ON, OR CROSS-REFERENCED TO, OTHER DRAWINGS. IT IS THE RESPONSIBILITY OF EACH CONTRACTOR TO REVIEW ALL DRAWINGS AND COORDINATE HIS WORK WITH EACH CONTRACT.
- FIELD VERIFY AND COORDINATE ALL EXISTING PIPING ELEVATIONS, LOCATIONS, SIZE AND TYPE OF MATERIAL WITH NEW PIPING PRIOR TO CONSTRUCTION. FIELD VERIFY AND COORDINATE ALL EXISTING EQUIPMENT DIMENSIONS AND ELEVATIONS PRIOR TO ORDERING NEW EQUIPMENT. IF DISCREPANCIES ARISE BETWEEN THESE CONTRACT DRAWINGS AND ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE DIRECTOR'S REPRESENTATIVE IMMEDIATELY IN WRITING.
- INFORMATION REGARDING EXISTING CONDITIONS AND FACILITIES ARE DERIVED FROM PREVIOUS CONTRACT AND AS-BUILT DRAWINGS.
- VERIFY AND COORDINATE CONSTRUCTION STAGING AREA WITH THE DIRECTOR'S REPRESENTATIVE PRIOR TO CONSTRUCTION MOBILIZATION.
- REPLACE ALL PAVEMENT THAT IS 1) SHOWN AS REPAIR / REPLACE ON THE CONTRACT DRAWINGS, 2) IMPACTED BY THE NEW CONSTRUCTION, AND 3) IMPACTED BY THE CONTRACTORS OPERATIONS. SAW CUT ALL PAVEMENT PRIOR TO RESTORATION.
- RESTORE ALL AREAS DISTURBED DURING CONSTRUCTION TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION UNLESS OTHERWISE NOTED.
- FINISH PAINT AND LABEL ALL NEW PIPING, COUPLINGS, VALVES AND EQUIPMENT IN ACCORDANCE WITH THE SPECIFICATIONS. TOUCH UP PAINT AS REQUIRED AFTER INSTALLATION.
- PROVIDE PIPE ADAPTOR FOR TRANSITION BETWEEN DIFFERENT PIPE MATERIALS.
- INSTRUMENTATION EQUIPMENT PROVIDED BY THE CONSTRUCTION CONTRACTOR. CONSTRUCTION CONTRACTOR TO COORDINATE FINAL INSTRUMENTATION WITH OTHER CONTRACTS AND THE DIRECTOR'S REPRESENTATIVE.
- WIRING AND ELECTRICAL CONNECTIONS ARE BY THE ELECTRICAL CONTRACTOR.
- LEGEND REPRESENTS STANDARD LINE TYPES, HATCHING AND SYMBOLS UNLESS INDICATED ON SPECIFIC DRAWINGS.
- INCLUDE A QUANTITY OF 6,800 CUBIC FEET OF OVER-EXCAVATION AND SELECT FILL WHEN FOR ENCOUNTERING TYPE II AND TYPE III SOILS (REFER TO DETAILS 2 AND 5 ON DRAWING C-007) WITH THE BID. QUANTITIES TO BE VERIFIED BY THE DIRECTOR'S REPRESENTATIVE.

GENERAL REMOVAL NOTES:

- DEMOLITION TO INCLUDE THE REMOVAL OF ALL RELATED AND / OR CONNECTED APPURTENANCES TO ITEMS DESIGNATED FOR DEMOLITION.
- ITEMS SHOWN AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
- FILED DOCUMENT ALL ELEVATIONS AND LOCATIONS. SEE SECTION 017123.
- PROTECT EXISTING STRUCTURES, EQUIPMENT AND PIPING TO REMAIN DURING REMOVAL. SUCH PROTECTION MAY INCLUDE BUT NOT BE LIMITED TO TEMPORARY ENCLOSURES, FRAMING, SHIELDING AND APPURTENANCES. ACCESS BY PLANT PERSONNEL TO FACILITIES, EQUIPMENT AND PIPING SHALL BE MAINTAINED AT ALL TIMES.
- REMOVE AND DISPOSE OF ALL SOLIDS AT A PERMITTED SOLID WASTE MANAGEMENT FACILITY. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASSOCIATED TIPPING FEES, COST FOR REMOVAL, COST AND PROCUREMENT OF ANY REQUIRED REGULATORY PERMITS AND TRANSPORTATION COST. INCLUDE A QUANTITY OF 8,000 CUBIC-FEET OF SOLIDS TO BE REMOVED FROM THE EXISTING STRUCTURES THAT ARE BEING DEMOLISHED WITH THE BID. REFER TO DRAWING D-003 FOR ADDITIONAL QUANTITIES TO BE REMOVED FROM THE EXISTING EQUALIZATION TANKS. QUANTITIES TO BE VERIFIED BY THE DIRECTORS REPRESENTATIVE.
- REMOVAL OF PIPING, CONVEYORS, AND OTHER FACILITIES EXTENDING THROUGH WALLS AND SLABS INCLUDES THE REMOVAL OF ASSOCIATED WALL / SLAB CASTINGS AND SLEEVES AND INCLUDE THE PATCHING AND SEALING OF THE OPENINGS AS SPECIFIED, OR AS SHOWN ON DRAWINGS.
- FILL IN VOIDS CREATED BY REMOVAL OF PIPES, BOLTS, REBAR FLUSH WITH SURROUNDING SURFACE. ALL ITEMS REMAINING ARE TO BE CUT AND GROUND FLUSH WITH SURROUNDING SURFACE. EMBEDDED METALS EXPOSED TO CORROSIVE ENVIRONMENTS TO BE COATED PER THE SPECIFICATIONS AFTER GRINDING FLUSH WITH THE SURROUNDING SURFACE.
- STRUCTURES, FACILITIES, PIPING, AND EQUIPMENT TO BE REMOVED MAY CONTAIN LIQUIDS AND/OR RESIDUALS. REMOVAL SHALL INCLUDE THE REMOVAL AND DISPOSAL OF THE REMAINING LIQUIDS AND RESIDUALS. THE RESIDUALS TO BE REMOVED ARE TYPICAL OF MUNICIPAL WASTEWATER AND MAY CONSIST OF GRIT, SCREENINGS, DEBRIS, SOLIDS, SLUDGE, FROM WITHIN TANKS AND PIPING. THE REMAINING LIQUIDS AND RESIDUALS SHALL BE DISPOSED OF OFFSITE AT A LANDFILL OR OTHER FACILITY PERMITTED FOR THEIR DISPOSAL. ONSITE DISPOSAL WILL NOT BE PERMITTED. THE CONTRACTOR SHALL NOT ALLOW ANY MATERIALS TO ENTER ANY DRAIN, GUTTER, SUMP, OR STORM WATER DRAINAGE SYSTEM.
- PROTECT FLOOR DRAINS, GUTTERS, SUMPS AND CATCH BASINS AT ALL TIMES DURING DEMOLITION. FLOOR DRAINS AND GUTTERS SHALL BE MECHANICALLY CLEANED AND PROTECTED AT THE COMPLETION OF OPERATIONS IN A PARTICULAR AREA.
- ALL EXISTING CONCRETE TO BE REMOVED IS STEEL REINFORCED UNLESS NOTED OTHERWISE. REINFORCING STEEL NOT SHOWN FOR CLARITY.
- CONTRACTOR SHALL COORDINATE WITH DIRECTOR'S REPRESENTATIVE FOR ITEMS NOT SPECIFICALLY DESIGNATED FOR REMOVAL THAT NECESSITATE TEMPORARY REMOVAL OR RELOCATION TO FACILITATE NEW CONSTRUCTION, REFER TO SPECIFICATIONS.
- THE DIRECTOR'S REPRESENTATIVE RESERVES THE RIGHT TO SALVAGE DEMOLISHED EQUIPMENT AND MATERIALS. CONTRACTOR AND DIRECTOR'S REPRESENTATIVE SHALL COORDINATE IN THE FIELD.
- FILL AND COMPACT VOIDS CREATED BY THE REMOVAL OF EXISTING STRUCTURES WITH SELECTED FILL AS DESCRIBED IN SECTION 310000. RESTORE LANDSCAPING TO MATCH EXISTING.

GENERAL LEGEND



NORTH ARROW

CONSULTANT



GHD Consulting Services Inc.

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.



CONSTRUCTION

TITLE: REHABILITATE WASTEWATER TREATMENT PLANT

LOCATION: EASTERN CORRECTIONAL FACILITY
30 INSTITUTION ROAD
NAPANOCH, NEW YORK

CLIENT: DEPARTMENT OF CORRECTIONS AND COMMUNITY SUPERVISION

2	12/10/2020	ADDENDUM 7
1	12/18/2019	BID DOCUMENTS
MARK	DATE	DESCRIPTION
PROJECT NUMBER:	45857	C
DESIGNED BY:	RAW	
DRAWN BY:	MAL	
FIELD CHECK:	CAF	
APPROVED:	CFM	
SHEET TITLE:		
NOTES, ABBREVIATIONS, SYMBOLS, AND LEGEND		
REVISED DRAWING		
12/10/2020		
DRAWING NUMBER: C-000		
SHEET 13 OF 159		