City of Greenville, Ohio
WWTP Solids Handling Facility and Administration Building

ADDENDUM 3

1.16.2025

Planholders of the City of Greenville, WWTP Solids Handling Facility and Administration Building are hereby notified of the following amendments to the Contract Documents. This Addendum is hereby made a part of the Contract Documents.

OTHER

Greenville Solids Handling and Administration Building Upgrades Prebid Meeting Sign Sheet

GENERAL CLARIFICATIONS

A3-G1:
Question: What pipelines need to be cleaned per 02112, if any?
Response: Specification 02112 was intended for cleaning the sludge force main prior to abandonment. Greenville will take care of flushing the sludge force main with plant water prior to abandonment by Contractor. Hence Spec 02112 is no longer needed and hence will be removed from Contract Documents.

A3-G2:
Question: Provide detail for buried sanitary cleanouts as shown on C-3.1 and 3.2
Response: Refer to Detail provided in Sheet C-0.4 included in Addendum 3.

A3-G3:
Question: Sheet R-0.2 shows an existing Blower Bldg being demolished. Are drawings available that show this structure? What are the extents of the demolition and backfill requirements?
Response: Drawings are not available for this structure. We have included a Removals sheet with photos of items that need removed.. Refer to R0.2 and R0.8 sheets included in Addendum 3.

A3-G4:
Question: Sheet R-0.3 shows an existing Sludge Holding Tank and Sludge Digester tank being demolished. Are drawings available that show these structures? What are the extents of the demolition and backfill requirements? Is there any sludge to remove? If so, who is responsible?
Response: Drawings are not available for this structure. We have included a Removals sheet with photos and notes to scope the removal work Refer to R0.7 and R0.9 sheets included in Addendum 3.
A3-G5:

Question: Drawing P1.3 Section 3 shows BFV 123 on the suction side of the blower. We don't recommend butterflies on the suction side. If someone accidentally closes it the blower will collapse the silencer and possibly damage the blower.
Response: Inlet isolation valves for each blower have been removed. Refer to updated sheets - PE 0.1, PE 1.3, PE 2.3, PE 2.4, G 0.5, and I 0.7 included in Addendum 3.

A3-G6:
Question: Are you accepting pre-bid substitution requests for this project? Division 13650-4, section 2.01, A., Available Manufacturers lists 5. "Or equal". I would like to get Kirby Building Systems added to the list. However, your ITB says you won't consider substitutions pre-bid.
Response: Refer to C410 Article 5 for the basis of Bid (Equipment and Manufacturer). Additionally See GC C-700 Article 7 for Or-Equal and Substitutes

A3-G7:
Question: On the above project, we would greatly appreciate it if you could consider naming EDGENG as an approved Manufacturer in the specification OR approve us Equal Status on this Project per the specification sections of Section 06610- FRP Gratings.
Response: Refer to C410 Article 5 for the basis of Bid (Equipment and Manufacturer). Additionally See GC C-700 Article 7 for Or-Equal and Substitutes

A3-G8:
Question: This is with regard to trenching for new power feed. The contractor is to trench in the new underground power lines. Do we have detailed trenching requirements for this?
Response: Minimum trench depth is 36" by 6" width. Coordinate with electrical utility AES prior to trenching.

A3-G9:

A.
Question: On the door schedule on Drawing A-0.1, door # D-2-2 is defined as 90 minute fire rated and this door is noted to be Aluminum. Our understanding is that this door is not available fire rated as Aluminum, Alternate choices are Hollow Metal or FRP or Stainless Steel. Clarify.
Response: A. On the door schedule on Drawing A-0.1: door # D-2-2 is required to be 90 minute fire rated, door & door frame material have been changed to FRP

B.
Question: Also, on Drawing A-0.1 the hardware set column is blank at doors # D-2-1/D-2-2/D-2-3/D-3-1. Clarify
Response: Door hardware Set 2.0 has been added for each of these doors in the door schedule. Provide door hardware acceptable for use on a 90 minute fire rated opening for door D-2-2.
C.
Question: On Drawing A-01 door # D-3-1 is defined as Fiberglass (FRP). Door frame at this opening should be FRP (not 'HM'). Clarify
Response: Door frame has been changed to FRP to match door.

D.
Question: There presently is no spec section published for FRP doors/door frames. Provide.
Response: There presently in no spec section published for FRP doors/door frames. FRP Door and door frame specification has been added to the Contract Documents in Addendum 03.

A3-G10:
Question: King Lighting - Request to get approval to quote our equal for types E2, F1 and L2.
Response: Refer to C410 Article 5 for the basis of Bid (Equipment and Manufacturer). Additionally See GC C-700 Article 7 for Or-Equal and Substitutes

A3-G11:
Question: Request for Pre-bid Meeting Sign-in Sheet
Response: Refer to attached Pre-Bid meeting sign in sheet

A3-G12:
Question: Spec section 14551-2.02.I Slide Gates
Requires 480V linear gate actuator. This section does not mention anything about controls. Will the system be controlled by the volute press or independently?
Response: The Slide Gates should be controlled via the Volute Press Control Panel PLC. Refer to updated Specification 14551.

A3-G13:
Question: Contract Drawing I.010 (sheet 180): shows the controls from the Press for the conveyor, but also shows a LCS for each of the (2) gates.
Response: The "LCS" shown for each slide gate on sheet I-0.10 is actually the slide gate actuator itself. Control for the slide gates will come from the Press Control Panel PLC, but an H-O-A switch local to the actuator was included in the design.

A3-G14:
Question: Should we include supply of these (2) LCS's or will these by the press supplier?
Response: H-O-A switch shown should be integral to the gate actuators. Refer to above responses.

A3-G15:
A
Question: Drawing page, A-5.2 does not have an elevation for Island. Clarify
Response: Island height is 3 feet from Finished Floor Elevation.

B
Question: Are we going to provide the Casework and countertop for the Island?
Response*: Per Specification Section 11600, 1.03, casework, work surfaces, laboratory fume hoods, equipment and accessories shall be manufactured or furnished by a single laboratory furniture company. Include island countertop in your scope of work.*

A3-G16:
Drawings A-5.2 and A-5.6 were updated to include laboratory equipment as specified by the Owner.

A3-G17:
Drawings P-0.2, P-5.4, and P-5.5 were updated to address the comments from the plumbing plan reviewer. The sump pump in the administration building garage is now encased in a vented fiberglass basin with a bolted lid.

A3G18
Question: Requesting the sequence of operations as well as the discharge orientation for the make-up air unit. They are also requesting more specs on the louvers, including specs on the explosion proof actuators.
Response: Sequence of operations for all mechanical equipment is on sheets M-0.7 & M-0.8
MAU is a front discharge (horizontal) as shown on the drawings and in spec 15540 2.02 D. Explosion proof type actuators for the louvers constructed to conform to Class I, Division 1, Group D of the National Electrical Code.

A3G19
Question: Roll gate drawn in sheet C-0.4 shows what we call a California or Florida roll gate- They are called that because they don't work in Ohio with snow and ice. Shouldn't this be a cantilever roll gate? They also show the gate rolling into a man gate- with an operator; this isn't even legal to do with UL 325 code. Should this be put right off the corner at least a foot from the gate?
Response: Gate shall be Cantilever roll gate, 6 feet tall and 30 feet wide (20 feet opening) with 1- feet barbed wire in top. Gate shall be galvanized steel and rust resistant. Refer to updated C0.4 Sheet included in Addendum 3.

A3G20
Question: Section 02710 4.02 specifies vinyl fence, but I cannot find any on the print.
Response: Refer to C1.1 for privacy fence.

A3G21
Question: After looking at Addenda #1, the catalog #'s are all the same and I can not use them as a reference as stated in ADD-1, section 12310, 2.01 – F. They are not valid #'s. Please advise. Could we just price generic items?
Response: For items noted in 12310, 2.01 – F, generic pricing is acceptable.

SPECIFICATIONS

Remove the following specifications:

02112 Pipeline Cleaning

Add the following specifications:

08230 - FRP Panel Doors and Frames

09250 – Gypsum Drywall Construction

Replace the following specifications with the attached:

14551 – Shaftless Screw Conveyors

DRAWINGS

Add the following drawings:

R-0.8 page 14

R-0.9 page 15

Replace the following drawings with the attached:

G-0.1 page 1

G-0.2 page 2

G-0.5 page 5

R-0.2 page 8

R-0.7 page 13

C 0.2 page 19

C-0.4 page 21

C-1.1 page 24

C-3.5 page 33

A-0.2 page 38

A-5.1 page 48

A-5.2 page 49

A-5.6 page 53

S-0.1 page 56

PE-0.1 page 93

PE-1.3 page 97

PE-2.3 page 100

PE-2.4 page 101

P-0.2 page 110

P-5.4 page 120

P-5.5 page 121

E-0.7 page 146

I-0.7 page 171

RECEIPT OF THIS ADDENDUM MUST BE ACKNOWLEDGED ON PAGE C-410-1 OF THE BID.

Attendance List

PROJECT: Greenville Solids Handling and Admin Building Upgrades -Prebid Meeting Sign In

CONTRACT: 039-8084

Those in attendance at the City of Greenville, Solids Handling and Admin Building Prebid Meeting held at **City of Greenville Conference Room, 100 Public Square, Greenville, Ohio 45331** on December 18, 2024, were as follows:

Sign In	Print Name	Company	Address	Numbers	E-Mail Address
	Dinesh Palaniswamy	Jones & Henry Eng	4357 Ferguson Drive, Ste 220 Cincinnati, OH 45245	P: 513-208-2929 F:	dpalaniswamy@jheng.com
	Ryan Delk	City of Greenville	100 Public Square Greenville, OH 45331	P: 937-548-1819 F:	rdelk@cityofgreenville.org
DAS	David Sturgill	City of Greenville	209 N. Ohio Street Greenville, OH 45331	P: 937-548-3530 F:	dsturgill@cityofgreenville.org
	Jeff Whitaker	City of Greenville Mayor	209 N. Ohio Street Greenville, OH 45331	P: 937-548-1482 F:	jwhitaker@cityofgreenville.org
	Jake Meinerding	Jones & Henry Eng	4357 Ferguson Drive, Ste 220 Cincinnati, OH 45245	P: 513-528-5599	jmeinerding@jheng.com
	Hunter Lear	Jones & Henry Eng	4357 Ferguson Drive, Ste 220 Cincinnati, OH 45245	P: 513-528-5599 F: F:	hlear@jheng.com
	Megan Bailey	City of Greenville	100 Public Square Greenville, OH 45331	P: 937-548-4930 F:	mbailey@cityofgreenville.org
				P: F:	

Sign In	Print Name	Company	Address	Numbers	E-Mail Address
	Ben Wetherill	PCC	18817 St. Rt. 501 Wapakoneta, OH	P: 419-941-2233 F:	bwetherill@petersonconstruction.com
	ROD KNAPKE	PCC		P: F:	RKNAPKE
	BILL SHERRY	W.C. SHERRY EXC.	5295 Hoppath Rd GREENVILLE, O	P: 937-548-6008 F:	
WCS	Colton Sherry	W.C. Sherry Exc	5295 Hoppath Rd Greenville OH	P: 937-459-2825 F:	colton@wcsherry.com
	Austin Schroeder	Tuttle	880 Shawnee Rd. Lima, OH 45805	P: 419-998-4870 F:	austins@tuttleconstruction.com
	Randy Siefker	Tuttle	Lima, OH 45805	P: F:	randys@tuttleconstructionfirm.com
	Mark Echols	Electro Controls	1625 Ferguson CT Sidney, OH	P: 937-205-4527 F:	Mechols@electro-controls.com
	Nate Childress	United Rentals	28363 Glenwood RD	P: 419-280-5071 F: 419-837-2425	Nchildress@ur.com

Sign In	Print Name	Company	Address	Numbers	E-Mail Address
	Marc Nusser	J Dwight Thompson	PO Box 505 Miamitown 45041	P: 513-800-9009 F:	marc@jdtco.com
	Matt Wilson	Skoog	2000 W Dorothy Lane Moraine OH 45439	P: 9373075733 F:	MWilson@skoogconstruction.c
				P: F:	
				P: F:	
				P: F:	
				P: F:	
				P: F:	
				P: F:	
				P: F:	

SECTION 14551
SHAFTLESS SCREW CONVEYORS

PART 1 GENERAL

1.01 SCOPE

A. The Contractor shall furnish, install, and place in satisfactory operation one horizontal shaftless screw conveyors complete with all supports, spare parts, accessories, and appurtenances as specified herein, shown on the Drawings, and as required for a complete and operable system. The conveyors shall be reversing to allow distribution to evenly fill containers or discharge to the sludge storage area as selected by the operator or for maintenance activities.

B. Each screw conveyor unit shall consist essentially of shaftless spiral, trough, trough ends, seals, inlet and discharge chutes, motor operated gate, drive units, safety devices and supporting steel together with any other items required for a complete conveying system.

C. All necessary provisions required to comply with OSHA safety requirements shall be included.

D. The Contractor shall be responsible for coordinating the placement of all supports necessary to secure the equipment and shall have the undivided responsibility for the system's structural integrity.

E. Additional product requirements are specified in Section 01350.

1.02 SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

1. Shop Drawings:
    a. The Contractor shall indicate all variances from the requirements of the Contract Documents.
    b. Plan and Elevation Drawings.
    c. List of accessories and appurtenances.
    d. Motor data in accordance with Section 11050.
    e. Fabrication drawings.
2. Information for the Record:
    a. Installation certification.
3. Operation and Maintenance Manual information.

1.03 QUALITY ASSURANCE

A. Manufacturer:

1. It is the intention of the specifications to cover minimum acceptable quality equipment for a complete installation.

2. The conveyor shall be as manufactured by Spirac, Keystone, Custom Conveyors JDV or equal. Basis of Design: SPIRAC U250-SPX/SS. ***(Addendum 1, December 16, 2024)***

B. Warranty:

1. The shaftless screw liner and spiral shall be warranted for a period of three years from start-up against wear.

a. Liner:

1) For a wear indicator (bi-color) liner, excessive wear shall be indicated by appearance of the bottom indicator layer (second color) along more than 30 percent of the conveyor length during the first three years of service. If these wear indications occur the conveyor supplier shall provide new formed liner in full length racks to replace all the liner in the conveyor that has excessive wear.

b. Screw:

1) Excessive wear on the screw shall be indicated by loss of more than 50 percent of the height of the main outer screw section over 30 percent of the total length of the screw. If excessive screw wear is found the conveyor supplier shall provide new screw to replace the screw in the conveyor that has excessive wear.

PART 2 PRODUCTS

2.01 DESIGN CRITERIA

A. The conveyors shall be designed to handle dewatered municipal sludge with solids content between 15 and 25 percent.

B. AC motor(s) shall conform to the latest applicable NEMA, IEEE, and ANSI standards. Reversing as required. Motor safety factor to be a minimum of 2 times.

C. The conveyor shall be capable of conveying sludge in a clean and efficient manner.

Conveyor Identification	All
Operating Schedule	Continuous Duty
Product to Convey	Dewatered Sludge
Dry Solids Load	1,050 dry pounds/hour
Wet Solids Load (18% Solids)	5,833 wet pounds/hour

Conveyor Identification	All
Design Material Density	65.0 lb/cf
Design Percent Solids	15%-25%
Degrees of Incline, Maximum Fill %	5%
Length of Trough/Screw	Coordinate per manufacturer
Minimum Screw Diameter	8-inches to 12 inches
Maximum Screw Speed	20 rpm, except vertical-30rpm
Minimum Drive Hp	5Hp
Trough Bottom Drain Size	3 inches
Special Requirements	Inclined – 3-inch drain (minimum)
Approximate Length	Volute conveyor 80 ft

2.02 DESCRIPTION OF EQUIPMENT

A. Shaftless Flighting:

1. Spiral flight shall be 1-inch thick by 3-inch wide and manufactured from chromium nickel alloy steel with a brinnel hardness of 250, and maximum yield strength of 80,000 psi.

2. The spiral flights shall be designed with the stability to prevent distortion and jumping in the trough. The torsional rating of the spiral shall be such that, at 150 percent of the motor nameplate horsepower, the drive unit cannot produce more torque than the torsional rating of the flighting.

3. Packing gland material consisting of two Teflon fiber packing rings shall seal the drive shaft at its penetration through the end plate, along with a greased labyrinth sealing system.

4. The flighting shall be capable of conveying the product capacity and all horsepower and torque loadings without deflection or compression exceeding 0.08-inch per foot.

5. If flighting sections require field welding, this work shall be performed by the Contractor, with full penetration welds or bolted as recommended by the conveyor manufacturer.

6. The flighting shall include a bolted connection to the drive shaft.

B. Drive:

1. Drive assembly shall consist of an integral gearmotor, mounted directly to the screw shaft. Gearmotor housing shall be cast iron, furnishing complete protection under all conditions of service. Gears shall be manufactured and rated for continuous duty in accordance with AGMA Standards, of heat-treated alloy steel. The drive shall have a minimum AGMA service factor of 1.4. Provide splash type gear lubrication. Gear reducer shall be Class II speed reducer as manufactured by Eurodrive or approved equal.

2. The conveyor shall be driven by a 460 volt, 3 phase, 60 Hz, 1800 RPM, TEFC severe duty motor with 1.15 SF and class F insulation.

3. The drive shall be connected to the spiral with a bolted connection to a C-1045 drive shaft. A flanged gland seal with Teflon coated packing rings shall be provided at the trough end of the shaft penetration.

4. The drive system shall be provided with an instantaneous trip current relay for torque overload protection. The relay shall be provided with a time delay (adjustable) to short the relay on start-up and initial motor amp draw.

5. Gearboxes and motors shall be factory-assembled on the conveyor, factory-tested and shipped fully assembled with the conveyors.

6. The gear reducer and drive shall be designed to provide an applied torque adequate to start a fully loaded conveyor.

7. The drive package is to operate the conveyor at speeds determined by the system manufacturer to meet the specified Design Handling Capacity.

8. Bearings shall have on AFBMA B-10 life of 30,000 hours.

C. Trough:

1. Trough shall conform to CEMA Standards. The conveyor flighting shall be housed in a 3/16-inch-thick minimum type 304 stainless steel U-trough with double rolled down top flanges and integral end flanges. A neoprene or rubber gasket shall be provided at each trough flange.

2. Trough ends shall be inch 1/2-inch (gear end) and 3/16-inch (non-gear end) minimum thickness stainless steel and shall include top flange and CEMA standard drilling for end flanges, bearings, and seals.

3. Provide removable trough stiffeners, secured to the trough by screws to a tapped block welded to the top inside of the trough. Drilling holes in the trough for stiffeners is not acceptable.

4. A 12-inch by 12-inch flanged inlet port shall be provided at locations along the conveyor as shown on the Drawings. A motorized gate, discharge or manual gate discharge supplied as part of the conveyor package shall be installed on the conveyors as shown on the P&ID drawings. Where shown on the Drawings, conveyor discharge shall include an 18 ounce per yard rubber impregnated canvas flex chute extension.

5. A 3-inch drain shall be mounted into the end of the inclined conveyor trough.

D. Trough Liner:

1. The inside trough surfaces of the conveyors shall be lined with a layer of ultra-high molecular weight polyethylene (UHMW-PE). The liner shall be a single piece, formed and bonded with two layers of the same material, each of a

different color, to provide a visible indication when the liner is nearing the end of its useful life. Liners using layers of different material shall not be accepted.

2. The liner shall be supplied in maximum 4-foot-long sections to provide ease of replacement. The liner shall be held in place with stainless steel cleats; no fasteners will be allowed.

3. Liner thickness shall be at a minimum 1/2-inch thick. Liners less than the specified minimum thickness, molecular weight, wear strips and steel or hardened steel shall not be acceptable.

4. The liner material shall have the following physical properties, as a minimum:

Property	Value/Unit	Testing Method
Density	61.2 lbs/ft^3	DIN53479
Molecular Weight	9.2 x 10^6 g/mol	Margolies
Ball Indentation Hardness	5,946 lbs/in^2	DIN53456
Shore Hardness D	64	DIN53505
Crystalline Melting Range	278 degrees F	
Dynamic Coefficient of Friction	0.1 – 0.12 ratio of tension / load	Plastic to steel

E. Covers:

1. The screw conveyor troughs shall include 12 gauge minimum 304 stainless steel covers with neoprene or rubber gasketing. Covers shall be held in place with stainless steel bolts on 24-inch maximum centers. Covers shall be manufactured in maximum four-foot length sections.

F. Supports:

1. Provide supports suitable for mounting at the approximate elevations and locations shown on the Drawings and as required by supplier’s design. The supports shall be capable of supporting the equipment weight when fully loaded. The supports shall be fabricated from standard shapes and made of 304 stainless steel. Supports shall be marked and shipped to the job site for installation in the field.

2. At a minimum, each conveyor shall be provided with supports at the inlet and discharge end, with intermediate supports at no more than 12 feet-0 inches on center and including provisions for anchoring to the floor or hanging style to loadout area ceiling structure.

3. . Supports shall be designed to avoid interference with other equipment or equipment supports.

4. Conveyor Supports inside Biosolids Storage Building shall need to be coordinated with Pre-Engineered Building Manufacturer.

G. Guards:

1. All exposed, accessible rotating parts shall be covered with an OSHA complaint guard. These guards are to be constructed of minimum 14 gauge stainless steel, epoxy coated safety yellow.

H. Zero Speed Switch and Safety Stop Switch:

1. The conveyors shall be provided with a non-contacting probe and relay type zero speed indication switch. The probe shall be a Milltronics/Siemens WM 100 or approved equal with stainless steel mounting hardware. Switch shall operate from 120v AC supply.

2. Each conveyor is to be provided with a NEMA-4X, safety pull cord stop switch. A continuous orange vinyl coated galvanized cable shall fully surround the conveyor. The cable shall be supported from the conveyor frame on 10-foot maximum centers.

I. Slide Gates

1. Slide gates shown on the Drawings shall be supplied by the conveyor manufacturer under this Section. The slide gate shall be designed so that in the full, open position at least one rotation of the flight or spiral is exposed to the opening in the direction of transport, the slide gates shall have an opening at least the full width of the conveyor.

2. The slide gate blade shall be positioned by an electromechanical linear actuator. The actuator shall have a 480 volt, 3 ph. TENV permanent split capacitor, high starting torque motor with a rod travel velocity of approximately 2-inches per second. The actuator shall include all metal gearing, two, independently adjustable, gear driven position indication switches, anti-friction drive bearings, manual override, nickel-plated drive rod and cast aluminum weatherproof enclosure.

3. The slide gate body shall be 1/4-inch minimum thickness and include either a dust-proof, heavy-duty, bolted cover plate and expanded metal guard or a bolted bonnet, arranged to cover the gate when in the retracted position and to facilitate safety and maintenance. Greater thickness shall be provided based on actual actuator thrust forces.

4. Slide gate shall be designed to prevent wedging of sludge cake material between the gate edge and the valve body.

5. Slide gate body shall be designed to withstand the thrust of the actuator or handwheel.

6. The slide gates shall be fabricated with stainless steel frame, gate blade, stem, and all wetted parts.

7. The slide gates guides and seals shall be machined UHMW PE.

8. The slide gates shall be controlled via the Volute Press Control Panel PLC. ***(Addendum 3, Issued January 16, 2025)***

J. General Requirements:

1. All welding to be in accordance with the latest AWS standards.

2. All component items shall be provided with manufacturer's standard finish. Shafting and other exposed machined surfaces shall be coated with a rust inhibitive compound.

K. All nuts, bolts, and washers used for assembly to be furnished by the conveyor manufacturer and shall be stainless steel.

PART 3 EXECUTION

3.01 COORDINATION

A. The screw conveyor shall be installed in accordance with the manufacturer’s written recommendations.

3.02 LUBRICANTS AND LUBRICATING EQUIPMENT

A. Provide and install necessary grade quality oils, greases and anti-seize compounds for initial operation of all equipment provided that requires oil, grease or anti-seize.

B. Anti-seize shall be applied to the threads of all stainless steel bolts before assembly at the factory and field assembly.

3.03 INSPECTION, STARTUP, AND TRAINING

A. The Contractor shall furnish a qualified representative of the manufacturer to perform inspection, start-up, and training services. The manufacturer's representative shall be experienced in the installation, start-up, operation, and maintenance of the equipment.

B. A factory trained manufacturer's representative shall be provided for a minimum of two trips with a minimum of two eight-hour days each to provide installation supervision, start-up and field-testing services. The installation services shall be coordinated between the Contractor and the manufacturer. The start-up and field-testing services shall be coordinated with the Engineer.

C. Within two weeks of start-up, the manufacturer shall submit to the Engineer a written report (minimum 4 copies) covering the representative's inspection and start-up of the equipment. This report shall include the manufacturer's certification that the installation is correct, and the equipment is operating satisfactorily.

D. After the installation, start up, field service testing and operation of the equipment has been certified, the manufacturer's representative shall train the Owner's personnel for one eight-hour day in the proper operation and maintenance of the equipment. The Owner may video tape the training.

END OF SECTION.

SECTION 08230
FRP PANEL DOORS AND FRAMES
(Addendum 3, Issued December 10, 2025)

PART 1 GENERAL

1.01 SCOPE

A. This Section includes furnishing and installing FRP panel doors, FRP door frames, hardware, and other accessories as required for completion of the Work.

B. Additional product requirements are specified in Section 01350.

1.02 SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

1. Shop Drawings for Review:

a. The Contractor shall indicate all variances from the requirements of the Contract Documents.

b. Door Schedule.

c. Dimensional Drawing.

d. Manufacturer's literature.

PART 2 PRODUCTS

2.01 GENERAL

A. Doors and frames shall be as manufactured by Chem-Pruf Door Company, Brownsville, Texas, 1-800-444-6924 or equal.

B. All materials utilized for fabrication of doors and frames shall be free from defects.

C. Door size is shown on door schedule on Drawings.

2.02 FRP DOORS AND FRAMES

A. Doors shall be made of fiberglass reinforced plastic (FRP) using resins tailored to a specific corrosive environment (stated by the purchaser at the time the order is placed) and have a fiberglass content of 25% by weight. The doors shall be flush construction, having no seams or cracks. All mortises shall be molded in at the factory. The doors shall be 1-3/4-inch thick with a 15 mil (plus or minus 3 mils) color gel coat and have an R-factor of 12. Secondary painting over pultrusions to achieve color is not acceptable.

B. Shall be constructed starting from the outside toward the inside of a 15 to 20 mil gel coat of the color specified followed by a matrix of at least three layers of 1.5 ounce per square foot of fiberglass mat. The stile and rail shall be molded in one continuous piece to a U-shaped configuration and to the exact dimensions of the door. In this manner, there will be no miter joints or disparate materials used to form the one-piece stile and rail. Pultrusions will not be acceptable for stiles and rails.

C. Door plates shall be molded in one continuous piece, starting with a 15-20 mil gel coat of the color specified, integrally molded with at least two layers of 1.5 ounce per square foot fiberglass mat and layer of 16 ounces per square yard unidirectional glass roving.

D. Adequate reinforcement and compression members shall be used to accommodate surface hinges, closers, locksets, kickplates, push or pull plates. When engineering considerations dictate, mild steel is buried in the fiberglass matrix to provide enhances screw holding power. In no case, should screws be used into fiberglass matrix to provide holding for hinges, lockers, closers, or any other structured attachment.

E. All voids between the door plates shall be completely filled with the equivalent of 4-6 pounds expanded polyurethane foam, having a flame spread of 25 or less per ASTM E84. A phenolic-coated kraft honeycomb may be substituted for urethane foam where engineering requirements dictate.

F. All reinforcing resins shall contain a halogenated additive or co-reactant plus Antimony Trioxide to achieve a flame spread of 25 or less per ASTM E84 and shall be self-extinguishing per ASTM D635.

G. The color of the door or frame shall be integrally molded as the part is made. Color shall be selected by Owner.

H. Frames shall be similar to the doors in construction and materials except the frames shall be solid fiberglass. The stop and frame will be molded all in one piece. The frame shall be integrally gel coated to the customer's color when molded. Mortises will be molded in. It is not permitted to rout in mortises or remove any material from the head or jambs to provide mortises.

I. Reinforcement for mounting hinges, closers, etc., shall be of mild steel plates strategically located and buried in the resin-glass matrix so they will not be exposed to the elements.

J. The jamb shall be flat on the backside (against the opening) and uniform in thickness so as to provide a solid, uniform surface against the wall opening. No wood blocks or spacers are permitted.

2.03 HARDWARE

A. All hardware where applicable (locksets, hinges, closers, etc.) shall be installed at the door manufacturing plant. The hardware manufacturer's warranty shall be included with the hardware installation.

B. Thresholds and sweeps shall be FRP.

C. All component parts of hardware shall be 316 stainless steel or FRP. All fasteners shall be 316 stainless steel.

D. Refer to Section 080671 for door hardware schedule, material requirements listed in this specification section 2.03A – 2.03C shall govern if there are any conflicts.

PART 3 EXECUTION

3.01 DELIVERY, HANDLING, AND STORAGE

A. Door shall be individually packaged in corrugated carton completely covering entire door to prevent damage to door. Door shall be "floated" within carton. Doors and frames shall be stored in an upright position in a manner that will prevent damage. No portion of the door or attached hardware shall be in contact with the outer corrugated shell.

3.02 INSTALLATION OF DOORS AND FRAMES

A. The Contractor shall install the doors and frames in accordance with the manufacturer's written recommendations. Frames shall be anchored securely with 316 SS anchors. Door shall be hung with all clearances accurately maintained.

PART 4 SPECIAL PROVISIONS

Not used.

END OF SECTION

CORBIN

Locksets

Specify:	Ordering Example:
Design	**662**-9551RH-US10
Function	662-**9551**RH-US10
Hand of Door	662-9551**RH**-US10
Finish	662-9551RH-**US10**

Also specify door thickness, special keying, strikes, screws, etc. when required.

Hand Of Door Is Always Determined From The Outside

1. The outside of an exterior door is the street or entrance side.
2. The outside of an auditorium or room door is the corridor or hall side.
3. The outside of a closet door is the room, corridor or hall side.
4. The outside of a single communicating door is the side from which the hinges are invisible when the door is closed.
5. The outside of twin communicating doors is the space between the two doors.

Left Hand

Right Hand

Left Hand Reverse Bevel (LHR)

Right Hand Reverse Bevel (RHR)

Exit Devices

Specify:	Ordering Example:
Number	**3726**-31A-RHR-US10

Specifier: **The following page is included as a reference guide for determining door swing only. Do not include in specifications.**

screws, etc. when required.

Door Closers

Specify:	Ordering Example:
Series	P**110**H-3-F-RH-SBL
Number	P**110H**-3-**F**-RH-SBL
Size	P110H-**3**-F-RH-SBL
Hand of Closer	P110H-3-F-**RH**-SBL
Finish	P110H-3-F-RH-**SBL**

Also specify Backcheck, Delayed Action, Door thickness, etc. when required.

Regular Application

Door: Left Hand
Closer: Left Hand

Door: Right Hand
Closer: Right Hand

Door: Left Hand Reverse Bevel
Closer: Right Hand

Door: Right Hand Reverse Bevel
Closer: Left Hand

Parallel Arm

Door: Left Hand Reverse Bevel
Closer: Right Hand

Door: Right Hand Reverse Bevel
Closer: Left Hand

Corner Bracket

Door: Left Hand Reverse Bevel
Closer: Left Hand

Door: Right Hand Reverse Bevel
Closer: Right Hand

Ordering

SECTION 09250
GYPSUM DRYWALL CONSTRUCTION
(Addendum 3, Issued January 10, 2025)

PART 1 GENERAL

1.01 SCOPE

A. This Section includes all metal stud partitions, stud bracing, stud tracks, bridging, fasteners, gypsum board panels, tapes and joint systems, metal trim, and accessories.

B. Additional product requirements are specified in Section 01350.

1.02 SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

1. Shop Drawings for Review:

a. The Contractor shall indicate all variances from the requirements of the Contract Documents.

b. Manufacturer's literature.

PART 2 PRODUCTS

2.01 METAL STUDS AND GYPSUM BOARD CONSTRUCTION

A. Metal studs shall be 20-gauge spaced at 16-inch on center, unless noted otherwise. The stud system shall be fastened together with screws suitable for light gage construction. Use Type "S" drywall screws to secure panels to studs. Provide light gage channel stiffeners between studs approximately 4 feet on center along the height of the wall. Support the tops of stud walls with light gage bracing to roof construction

B. Gypsum Board - 5/8-inch thick plain gypsum wallboard shall be used, unless otherwise noted on the Drawings or Specified in Part 4. Plain gypsum wallboard shall comply with ASTM C36 and FS SS-6-30D, Type 111, Grade R, Class I with a paper-face surface suitable to receive decorated finish. Edges shall be tapered to receive manufacturer's standard joint treatment, unless otherwise shown.

C. Gypsum Board (Fire Rated) - Fire-rated gypsum wallboard, 5/8-inch thick, shall be installed where shown on the Drawings or Specified in Part 4. Fire-rated gypsum wallboard shall comply with ASTM C36 and FS SS-L-30D, Type 111, Grade X, Class 1, with a paper-face surface suitable to receive decorated finish. Edges shall be tapered to receive manufacturer's standard joint treatment, unless otherwise shown.

D. Vinyl covered gypsum wallboard shall be installed where shown on the Drawings or specified in Part 4. Vinyl covered gypsum wallboard panels shall be 5/8-inch thick square

edge, gypsum board with colored, textured vinyl sheet laminated to the face; "Durasan" as manufactured by National Gypsum Company, US Gypsum Co., or equal. Color selection shall be by the Engineer. Panels shall be wood grained as selected from Standard Group and "Stipple" Pattern Standard Group. Provide all clips, anchors, screws, nails, interior and exterior corner trim, etc., required for a complete installation.

E. For all gypsum drywall work throughout the project, provide drywall materials, including wallboard, accessories, fasteners, and finishing materials produced by US Gypsum, National Gypsum, or equal.

F. Where drywall ceilings are indicated on the drawing the contractor shall provide a light gage metal support systems as required to support the ceiling, unless otherwise provided.

PART 3 EXECUTION

3.01 INSTALLATION

A. Provide all joint tape and joint compound for a complete joint installation. All joints shall be invisible after painting. Taping and sanding shall be by the Contractor.

B. All materials shall be installed in accordance with the manufacturer's recommendations and specifications. Materials as supplied by National Gypsum Co., US Gypsum Co., or equal.

C. Contractor shall provide wood blocking, steel blocking or steel plate reinforcement in the walls as required to support items that are attached to the wall.

D. Mastic to apply gypsum wallboard to other wallboards, concrete block walls, or insulation surface shall be "Gold Bond" modified contact adhesive.

E. Installation shall be complete and in accordance with the manufacturer's recommendations, the Engineer's instructions, and the Contract Documents.

PART 4 SPECIAL PROVISIONS

4.01 ADMINISTRATION BUILDING:

A. The stud walls shall be 20 gage, 4 inches deep with 1-5/8 -inch flange. Walls shall have 5/8-inch gypsum board on each face.

B. 4-inch batt insulation shall be placed between the gypsum board layers.

C. All gypsum boards shall be screwed attachment and all perimeters caulked.

D. Provide vinyl baseboards along the bottom of the stud walls on both sides.

E. Refer to Drawings for the Electrical Room ceiling construction.

F. Provide vinyl covered gypsum wallboard on all the walls of the restrooms and service closet.

4.02 BIOSOLIDS HANDLING BUILDING

A. Refer to Drawings for the Electrical Room ceiling construction.

END OF SECTION

This page was intentionally left blank.

DRAWING INDEX

CONST. NO.	SHEET NO.	DESCRIPTION
GENERAL		
0	G-0.0	COVER SHEET
1	G-0.1	INDEX
2	G-0.2	LEGENDS, ABBREVIATIONS, AND NOTES
3	G-0.3	OVERALL EXISTING SITE PLAN
4	G-0.4	OVERALL SITE PLAN
5	G-0.5	PARTIAL SOLIDS FLOW DIAGRAM
6	G-0.6	PARTIAL SOLIDS FLOW DIAGRAM
REMOVALS		
7	R-0.1	WWTP SITE - NORTHWEST PLAN
8	R-0.2	WWTP SITE - NORTHEAST PLAN
9	R-0.3	WWTP SITE - SOUTHEAST PLAN
10	R-0.4	WWTP SITE - NORTHWEST YARD PIPING PLAN
11	R-0.5	WWTP SITE - NORTHEAST YARD PIPING PLAN
12	R-0.6	WWTP SITE - SOUTHEAST YARD PIPING PLAN
13	R-0.7	WWTP SITE - PLANT SINGLE LINE DIAGRAM AND SWBD-1
14	R-0.8	WWTP SITE - BLOWER BUILDING REMOVALS
15	R-0.9	WWTP SITE - SLUDGE BUILDING, HOLDING TANK AND DIGESTER REMOVALS
14	R-100.1	SLUDGE STORAGE SITE - PLANS
15	R-100.2	SLUDGE STORAGE SITE - PLANS
16	R-100.3	SLUDGE STORAGE SITE - PROFILES AND DETAILS
17	R-100.4	SLUDGE STORAGE SITE - DETAILS
CIVIL		
18	C-0.1	LEGENDS, ABBREVIATIONS, AND NOTES
19	C-0.2	DETAILS
20	C-0.3	DETAILS
21	C-0.4	DETAILS
22	C-0.5	DETAILS
23	C-0.6	DETAILS
24	C-1.1	NORTHWEST SITE AND PAVING PLAN
25	C-1.2	NORTHEAST SITE AND PAVING PLAN
26	C-2.1	NORTHWEST GRADING PLAN
27	C-2.2	NORTHEAST GRADING PLAN
28	C-2.3	SOUTHEAST GRADING PLAN
29	C-3.1	NORTHWEST YARD PIPING PLAN
30	C-3.2	NORTHEAST YARD PIPING PLAN
31	C-3.3	SOUTHEAST YARD PIPING PLAN
32	C-3.4	YARD PIPING PROFILES
33	C-3.5	YARD PIPING PROFILES
34	C-4.1	NORTHWEST EROSION CONTROL PLAN
35	C-4.2	NORTHEAST EROSION CONTROL PLAN
36	C-4.3	SOUTHEAST EROSION CONTROL PLAN
ARCHITECTURAL		
37	A-0.1	LEGEND, ABBREVIATIONS, NOTES, AND SCHEDULES
38	A-0.2	SCHEDULES AND DETAILS
39	A-0.3	DETAILS
40	A-2.1	BIOSOLIDS HANDLING BUILDING - PLAN AT EL. 1012.00
41	A-2.2	BIOSOLIDS HANDLING BUILDING - ROOF PLAN
42	A-2.3	BIOSOLIDS HANDLING BUILDING - ELEVATIONS
43	A-2.4	BIOSOLIDS HANDLING BUILDING - PARTIAL PLANS AND SECTIONS
44	A-3.1	BIOSOLIDS STORAGE BUILDING - PLAN CUT AT 1012.00
45	A-3.2	BIOSOLIDS STORAGE BUILDING - ROOF PLAN
46	A-3.3	BIOSOLIDS STORAGE BUILDING - ELEVATIONS
47	A-5.0	ADMINISTRATION BUILDING - OVERALL PLAN
48	A-5.1	ADMINISTRATION BUILDING - LIFE SAFETY PLAN
49	A-5.2	ADMINISTRATION BUILDING - PLAN AT EL. 1012.00 - NORTH
50	A-5.3	ADMINISTRATION BUILDING - PLAN AT EL. 1012.00 - SOUTH
51	A-5.4	ADMINISTRATION BUILDING - ROOF PLAN
52	A-5.5	ADMINISTRATION BUILDING - ELEVATIONS

DRAWING INDEX

CONST. NO.	SHEET NO.	DESCRIPTION
53	A-5.6	ADMINISTRATION BUILDING - ELEVATIONS
54	A-5.7	ADMINISTRATION BUILDING - DETAILS
STRUCTURAL		
55	S-0.0	AGGREGATE PIER PLAN
56	S-0.1	LEGEND, ABBREVIATIONS, NOTES, AND SCHEDULES
57	S-0.2	DETAILS
58	S-0.3	DETAILS
59	S-0.4	DETAILS
60	S-0.5	DETAILS
61	S-0.6	DETAILS
62	S-0.7	DETAILS
63	S-0.8	DETAILS
64	S-0.9	DETAILS
65	S-0.10	DETAILS
66	S-1.1	AEROBIC DIGESTER TANKS - PLAN AT EL. 1004.00
67	S-1.2	AEROBIC DIGESTER TANKS - WALKWAY PLAN
68	S-1.3	AEROBIC DIGESTER TANKS - WALKWAY FRAMING PLANS AND SECTIONS
69	S-1.4	AEROBIC DIGESTER TANKS - SECTIONS AND DETAILS
70	S-1.5	AEROBIC DIGESTER TANKS - DETAILS
71	S-2.1	BIOSOLIDS HANDLING BUILDING - PLAN AT EL. 1006.00
72	S-2.2	BIOSOLIDS HANDLING BUILDING - PLAN AT EL. 1012.00
73	S-2.3	BIOSOLIDS HANDLING BUILDING - PLAN AT EL. 1020.92
74	S-2.4	BIOSOLIDS HANDLING BUILDING - STAIR AND PLATFORM PLANS AND SECTIONS
75	S-2.5	BIOSOLIDS HANDLING BUILDING - SECTIONS
76	S-2.6	BIOSOLIDS HANDLING BUILDING - SECTIONS
77	S-2.7	BIOSOLIDS HANDLING BUILDING - DETAILS
78	S-2.8	BIOSOLIDS HANDLING BUILDING - DETAILS
79	S-3.1	BIOSOLIDS STORAGE BUILDING - PLAN AT EL. 1006.00
80	S-3.2	BIOSOLIDS STORAGE BUILDING - PLAN CUT AT EL. 1012.00
81	S-3.3	BIOSOLIDS STORAGE BUILDING - SECTIONS
82	S-3.4	BIOSOLIDS STORAGE BUILDING - DETAILS
83	S-3.5	BIOSOLIDS STORAGE BUILDING - DETAILS
84	S-5.0	ADMINISTRATION BUILDING - OVERALL PLAN
85	S-5.1	ADMINISTRATION BUILDING - FOUNDATION PLAN
86	S-5.2	ADMINISTRATION BUILDING - PLAN AT EL. 1012.00 - NORTH
87	S-5.3	ADMINISTRATION BUILDING - PLAN AT EL. 1012.00 - SOUTH
88	S-5.4	ADMINISTRATION BUILDING - STAIR AND PLATFORM PLANS AND SECTIONS
89	S-5.5	ADMINISTRATION BUILDING - SECTIONS
90	S-5.6	ADMINISTRATION BUILDING - DETAILS
91	S-5.7	ADMINISTRATION BUILDING - DETAILS
92	S-5.8	ADMINISTRATION BUILDING - DETAILS
PIPING & EQUIPMENT		
93	PE-0.1	LEGEND, SCHEDULES, AND DETAILS
94	PE-0.2	DETAILS
95	PE-1.1	AEROBIC DIGESTER TANKS - PLAN AT EL. 1004.00
96	PE-1.2	AEROBIC DIGESTER TANKS - PLAN AT EL. 1026.00
97	PE-1.3	AEROBIC DIGESTER TANKS - SECTIONS
98	PE-2.1	BIOSOLIDS HANDLING BUILDING - PLAN AT EL. 1003.67
99	PE-2.2	BIOSOLIDS HANDLING BUILDING - PLAN AT EL. 1014.00 AND 1019.00
100	PE-2.3	BIOSOLIDS HANDLING BUILDING - PLAN AT EL. 1030.00
101	PE-2.4	BIOSOLIDS HANDLING BUILDING - SECTIONS
102	PE-2.5	BIOSOLIDS HANDLING BUILDING - SECTIONS
103	PE-2.6	BIOSOLIDS HANDLING BUILDING - SECTIONS
104	PE-2.7	BIOSOLIDS HANDLING BUILDING - ISOMETRICS
105	PE-2.8	BIOSOLIDS HANDLING BUILDING - ISOMETRICS
106	PE-3.1	BIOSOLIDS STORAGE BUILDING - PLAN AT EL. 1016.00
107	PE-3.2	BIOSOLIDS STORAGE BUILDING - SECTIONS AND ISOMETRICS
108	PE-4.0	SCUM PIPING AND BASKET DETAILS
PLUMBING		
109	P-0.1	LEGENDS, ABBREVIATIONS, AND NOTES
110	P-0.2	DETAILS
111	P-0.3	DETAILS
112	P-2.1	BIOSOLIDS HANDLING BUILDING - PLAN AT EL. 1003.67
113	P-2.2	BIOSOLIDS HANDLING BUILDING - PLAN AT EL. 1014.00
114	P-2.3	BIOSOLIDS HANDLING BUILDING - PLAN AT EL. 1030.00
115	P-2.4	BIOSOLIDS HANDLING BUILDING - ISOMETRICS
116	P-5.0	ADMINISTRATION BUILDING - OVERALL PLAN
117	P-5.1	ADMINISTRATION BUILDING - PLAN AT EL. 1012.00 - NORTH
118	P-5.2	ADMINISTRATION BUILDING - PLAN AT EL. 1012.00 - SOUTH
119	P-5.3	ADMINISTRATION BUILDING - PLAN CUT AT EL. 1018.00 - NORTH

DRAWING INDEX

CONST. NO.	SHEET NO.	DESCRIPTION
120	P-5.4	ADMINISTRATION BUILDING - PLAN CUT AT EL. 1018.00 - SOUTH
121	P-5.5	ADMINISTRATION BUILDING - ISOMETRICS
MECHANICAL		
122	M-0.1	LEGENDS, ABBREVIATIONS, AND NOTES
123	M-0.2	DETAILS
124	M-0.3	DETAILS
125	M-0.4	DETAILS
126	M-0.5	SCHEDULES
127	M-0.6	SCHEDULES
128	M-0.7	SEQUENCE OF OPERATIONS AND AIRFLOW SCHEMATICS
129	M-0.8	SEQUENCE OF OPERATIONS AND AIRFLOW SCHEMATICS
130	M-2.1	BIOSOLIDS HANDLING BUILDING - PLAN AT EL. 1012.00
131	M-2.2	BIOSOLIDS HANDLING BUILDING - PLAN CUT AT EL. 1024.00
132	M-2.3	BIOSOLIDS HANDLING BUILDING - SECTIONS
133	M-3.1	BIOSOLIDS STORAGE BUILDING - PLAN CUT AT 1012.00
134	M-3.2	BIOSOLIDS STORAGE BUILDING - SECTIONS
135	M-5.0	ADMINISTRATION BUILDING - OVERALL PLAN
136	M-5.1	ADMINISTRATION BUILDING - PLAN AT EL. 1012.00 - NORTH
137	M-5.2	ADMINISTRATION BUILDING - PLAN AT EL. 1012.00 - SOUTH
138	M-5.3	ADMINISTRATION BUILDING - PLAN AT EL. 1025.00 - NORTH
139	M-5.4	ADMINISTRATION BUILDING - SECTIONS
ELECTRICAL		
140	E-0.1	LEGENDS, ABBREVIATIONS, AND NOTES
141	E-0.2	DETAILS
142	E-0.3	DETAILS
143	E-0.4	ELECTRICAL LIGHTNING PROTECTION DETAILS
144	E-0.5	ELECTRICAL SCHEDULES
145	E-0.6	NORTHWEST SITE PLAN
146	E-0.7	NORTHEAST SITE PLAN
147	E-0.8	DUCT BANK SECTIONS
148	E-0.9	PLANT SINGLE LINE DIAGRAM
149	E-0.10	CHEMICAL BUILDING - POWER PLAN
150	E-1.1	AEROBIC DIGESTER TANKS - POWER PLAN
151	E-1.2	AEROBIC DIGESTER TANKS - LIGHTING PLAN
152	E-2.0	BIOSOLIDS HANDLING BUILDING - MCC-BHB-1 AND MCC-BHB-2 SINGLE LINE DIAGRAM
153	E-2.1	BIOSOLIDS HANDLING BUILDING - POWER PLAN
154	E-2.2	BIOSOLIDS HANDLING BUILDING - LIGHTING PLAN
155	E-2.3	BIOSOLIDS HANDLING BUILDING - LIGHTNING PROTECTION PLAN
156	E-2.4	BIOSOLIDS HANDLING BUILDING - SCHEDULES
157	E-2.5	BIOSOLIDS HANDLING BUILDING - MCC ELEVATIONS AND CONTROL DIAGRAM
158	E-2.6	BIOSOLIDS HANDLING BUILDING - ELECTRICAL SCHEMATICS
159	E-3.1	BIOSOLIDS STORAGE BUILDING - POWER PLAN
160	E-3.2	BIOSOLIDS STORAGE BUILDING - LIGHTING PLAN
161	E-3.3	BIOSOLIDS STORAGE BUILDING - ELECTRICAL SCHEMATICS
162	E-5.0	ADMINISTRATION BUILDING - MCC-AB SINGLE LINE DIAGRAM
163	E-5.1	ADMINISTRATION BUILDING - OVERALL PLAN
164	E-5.2	ADMINISTRATION BUILDING - POWER PLAN - NORTH
165	E-5.3	ADMINISTRATION BUILDING - POWER PLAN - SOUTH
166	E-5.4	ADMINISTRATION BUILDING - LIGHTING PLAN
167	E-5.5	ADMINISTRATION BUILDING - LIGHTNING PROTECTION PLAN
168	E-5.6	ADMINISTRATION BUILDING - SCHEDULES
169	E-5.7	ADMINISTRATION BUILDING - MCC ELEVATIONS AND CONTROL DIAGRAM
170	E-5.8	ADMINISTRATION BUILDING - ELECTRICAL SCHEMATICS
P&ID		
171	I-0.1	LEGENDS, ABBREVIATIONS, AND NOTES
172	I-0.2	EXISTING NETWORK DIAGRAM P&ID
173	I-0.3	PROPOSED NETWORK DIAGRAM P&ID
174	I-0.4	AEROBIC DIGESTER 3 P&ID
175	I-0.5	AEROBIC DIGESTER 2 P&ID
176	I-0.6	AEROBIC DIGESTER 1 P&ID
177	I-0.7	BLOWERS P&ID
178	I-0.8	SLUDGE FEED SYSTEM P&ID
179	I-0.9	DEWATERING SYSTEM P&ID
180	I-0.10	DEWATERING SYSTEM P&ID
181	I-0.11	RETENTION BASINS P&ID
182	I-0.12	EMERGENCY EYEWASH AND SHOWER UNITS P & ID
TOTAL = : 185		

STATE OF OHIO
DINESH KUMAR PALANISWAMY
E-72394
REGISTERED PROFESSIONAL ENGINEER
January 10, 2025

GENERAL INDEX

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
3	1/14/25	ADDED SHEETS	DKP

Jones & Henry Engineers, Ltd.
Fluid thinking®...
www.JHeng.com

JOB NO.: 039-8084.003
SCALE: NO SCALE
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
DKP	LKB	XXX

STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024
SHEET NO.
G-0.1
1 OF 182

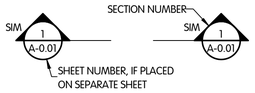
C:\USERS\LBROWN\DOCUMENTS\8084003-RM_LBROWN@JHENG.COM.RVT
1/10/2025 2:00:40 PM

STANDARD SHEET SYMBOLS

VIEW/DRAWING NAME
1" = 1'-0"
DRAWING VIEW TITLE

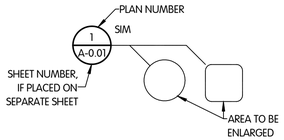
1 VIEW/DRAWING NAME
1" = 1'-0"
SECTION VIEW TITLE - NUMBERED PER DISCIPLINE

A VIEW/DRAWING NAME
1" = 1'-0"
DETAIL VIEW TITLE - LETTERED PER DISCIPLINE

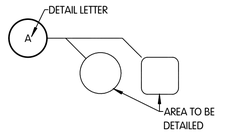


SECTION MARKER - SECTIONS ON PLAN VIEWS

DETAIL MARKER - DETAILS ON SAME SHEET



ENLARGED PLAN CALL OUT



ENLARGED PLAN CALL OUT

PLAN NORTH ARROW AND SITE NORTH ARROW

A-0.01
SHEET NUMBER
STRUCUTRE NUMBER
DISCIPLINE PREFIX
SHEET ID

REVISION NUMBER,
SEE TITLE BLOCK FOR NAME AND ISSUE DATE
REVISION TAG

1/A-0.01
SHEET NUMBER
ELEVATION NUMBER
ELEVATION MARKER

XXX-1-01
EQUIPMENT NUMBER
STRUCTURE NUMBER
EQUIPMENT ABBREVIATION
EQUIPMENT TAG, SEE ABBREVIATION LISTS FOR EQUIPMENT ABBREVIATIONS

NOTES:
- ACCURACY OF EXISTING ELEVATIONS AND DIMENSIONS IS NOT GUARANTEED. FIELD VERIFY BEFORE CONSTRUCTION.
- ALL NOTES ON THE DRAWINGS BEAR THE SAME IMPORTANCE SOME NOTES AND DIMENSIONS ARE BOLD TO AID IN READING THE DRAWINGS IN AREAS OF HIGH GRAPHIC DENSITY.

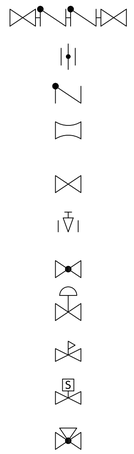
PIPING ABBREVIATIONS

MATERIAL	
ABS	ABS ACRYLONITRILE-BUTADIENE-STYRENE
ABSC	ABS COMPOSITE SEWER PIPE (TRUSS PIPE)
BSP	BLACK STEEL PIPE
CIP	CAST IRON PIPE
CISP	CAST IRON SOIL PIPE
CMP	CORRIGATED METAL PIPE
CPP	CONCRETE PRESSURE PIPE
CPT	CORRIGATED POLYETHYLENE TUBING
CPVC	CHLORINATED POLYVINYL CHLORIDE PIPE
CU	COPPER TUBING OR PIPING
DIP	DUCTILE IRON PIP
FRP	FIBERGLASS REINFORCED PIPE
GLDIP	GLASS-LINED DUCTILE IRON PIPE
GSP	GALVANIZED STEEL PIPE
PCP	PLAIN CONCRETE PIPE
PE	POLYETHYLENE
PP	POLYPROPYLENE
PPVC	PERFORATED VITRIFIED CLAY PIPE
PVC	POLYVYNYL CHLORIDE PIPE
PVCP	PERFORATED POLYVYNYL CHLORIDE
PVDF	POLYVINYL FLUORIDE (KYNAR)
RCP	REINFORCED CONCRETE PIPE
SP	STEEL PIPE
SSP	STAINLESS STEEL PIPE
SWS	SPIRAL WELDED STEEL
UPVC	UNPLATICIZED POLYVINYL CHLORIDE PIPE
VCP	VITRIFIED CLAY PIPE

VALVE	
BV	BALL VALVE
BFV	BUTTERFLY VALVE
CV	CHECK VALVE
DV	DIAPHRAGM VALVE
FG	FLAP GATE
FV	FOOT VALVE
GV	GATE VALVE
GLV	GLOBE VALVE
KV	KNIFE VALVE
MV	MUD VALVE
NV	NEEDLE VALVE
PNV	PINCH VALVE
PV	PLUG VALVE
PRV	PRESSURE REDUCING VALVE
PR	PRESSURE RELIEF VALVE
SG	SHEAR GATE
SV	SOLENOID VALVE
3PV	THREE-WAY PLUG VALVE
TV	TELESCOPING VALVE

WWTP SERVICE	
A	AIR
AA	AERATION AIR
AL	ALUM
C	CABLE (UNDERGROUND)*
CA	COMPRESSED AIR
CL	CHLORINE SOLUTION
CLG	CHLORINE GAS
CO	COMBINED SEWER
CS	CARBON SLURRY
DCW	DOMESTIC COLD WATER
DE	DECANT
DG	DIGESTER GAS
DHW	DOMESTIC HOT WATER
DS	DIGESTER SLUDGE
DTW	DOMESTIC TEMPERED WATER
DW	DILUTION WATER
E	ELECTRICAL (UNDERGROUND)*
ED	EQUIPMENT DRAIN
EW	EFFLUENT WASTE
FC	FERRIC/FERROUS CHLORIDE
FE	FINAL EFFLUENT
FI	FILTRATE
FM	FORCE MAIN
FO	FIBER OPTIC
FU	FUEL OIL
GT	GRIT
HWR	HOTWATER RETURN
HWS	HOT WATER SUPPLY
IC	IRON CHLORIDE
ML	MIXED LIQUOI
NG	NATURAL GAS
NPW	NON-POTABLE WATER
P	POLYMER
PE	PRIMARY EFFLUENT
PI	PRIMARY INFLUENT
PS	PRIMARY SLUDGE
RAS	RETURN ACTIVATED SLUDGE
REF	REFRIDGERANT
RS	RAW SEWAGE
RW	RAW WATER
S	SIGNAL (UNDERGROUND)*
SA	SANITARY SEWER
SB	SECONDARY BYPASS
SC	SCUM
SE	SECONDARY EFFLUENT
SL	SLUDGE
SM	STEAM
SP	SUPERNATANT
SPA	SPARE
ST	STORM SEWER
T	TELEPHONE (UNDERGROUND)*
TD	TANK DRAIN
TE	THICKENER EFFLUENT
TS	THICKENED SLUDGE
V	VENT
VSA	VACUUM SANITARY SEWER
W	CITY WATER
WAS	WASTE ACTIVATED SLUDGE

VALVE SYMBOL LEGEND



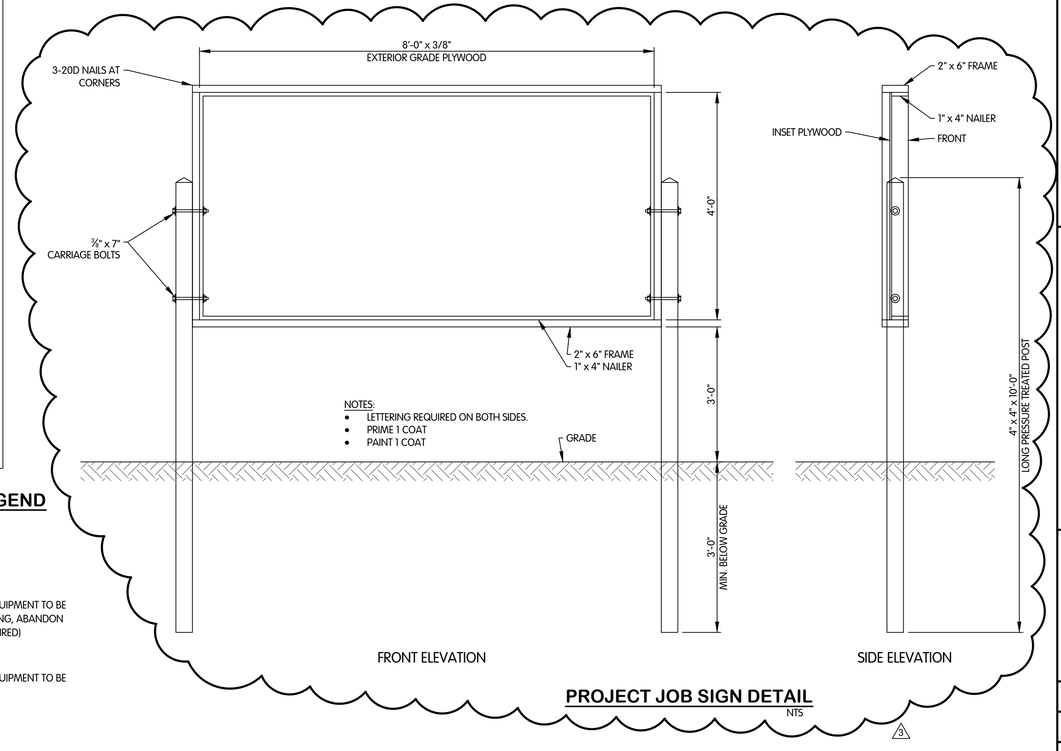
NOTES:
1. USED IN SPECIFICATIONS.
2. VALVE AND EQUIPMENT SYMBOLS ARE ILLUSTRATIVE AND MAY NOT APPEAR AS THE ACTUAL VALVE OR EQUIPMENT REQUIRED IN SPECIFICATIONS.
3. FOR SYMBOLS USED IN PIPING ISOMETRIC DRAWINGS, SEE PLUMBING OR INSTRUMENTATION & CONTROLS LEGENDS.

STANDARD ABBREVIATIONS

°C	DEGREES CENTIGRADE	EXT	EXTERIOR	O/C	ON CENTER
°F	DEGREES FAHRENHEIT	F	FLANGE	O/O	OUT TO OUT
ABAN	ABANDONED	F/F	FACE TO FACE	OD	OUTSIDE DIAMETER
ACC	ACRES	FF	FINISH FLOOR	OPP	OPPOSITE
ADJ	ADJACENT	FIG	FIGURE	PE	PLAIN END
AFF	ABOVE FINISHED FLOOR	FT OR '	FEET OR FOOT	PLUMB	PLUMBING
ALT	ALTERNATE	GAL	GALLON	PROJ	PROJECT
ALUM	ALUMINUM	GEN	GENERAL	R	RADIUS
APPROX	APPROXIMATE	GR	GRADE	REQ'D	REQUIRED
AVE	AVENUE	HORIZ	HORIZONTAL	RM	ROOM
BL	BASE LINE	ID	INSIDE DIAMETER	RR	RAILROAD
BLDG	BUILDING	INCH OR "	INCH	S	SOUTH
BM	BENCH MARK	INCL	INCLUDE	SCH	SCHEDULE
BOT	BOTTOM	INS/INS	INSIDE TO INSIDE	SECT	SECTION
C/C	CENTER TO CENTER	INV. EL.	INVERT ELEVATION	SIM	SIMILAR
CL	CENTERLINE	LAB	LABORATORY	SPEC	SPECIFICATION
CONST	CONSTRUCTION	LAT	LATERAL	SS	STAINLESS STEEL
CONT	CONTRACT	LG	LONG	ST	STREET
DET	DETAIL	MAX	MAXIMUM	STA	STATION
DIA	DIAMETER	MECH	MECHANICAL	STD	STANDARD
DIAG	DIAGONAL	MFD	MANUFACTURED	STR	STRUCTURAL
DIM	DIMENSION	MFG	MANUFACTORING	T&B	TOP AND BOTTOM
DWG	DRAWING	MH	MANHOLE	TEMP	TEMPERATURE
E	EAST	MIN	MINIMUM	TYP	TYPICAL
EA	EACH	MISC	MISCELLANEOUS	VERT	VERITCAL
EL.	ELEVATION	MJ	MECHANICAL JOINT	W	WEST
ENGR	ENGINEER	N	NORTH	W/	WITH
EST	ESTIMATE	NOM	NOMINAL	*SEE DISCIPLINE LEGEND SHEET FOR ADDITIONAL ABBREVIATIONS.	
EXIST	EXISTING	NTS	NOT TO SCALE		

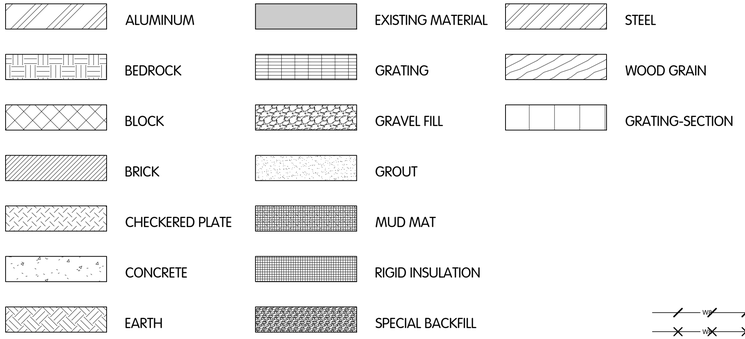
UTILITY CONTACTS:

ELECTRIC
JOSH BAUMANN, (937)-331-4449, JOSHUA.BAUMANN@AES.COM
CASEY LITTLE, (937)-475-8542, CASEY.LITTLE@AES.COM
CABLE/INTERNET
JASON WEBER, (888)-812-2519, JASON.WEBER@CHARTER.COM (SPECTRUM ENTERPRISE)
GAS
RANDY CECH, (937)-440-1830, RANDY.CECH@CENTERPOINTENERGY.COM
WATER AND SEWER
DAVE STURGILL, (937)-548-3530, DSTURGILL@CITYOFGREENVILLE.ORG
RAILROAD
RJ CORMAN RAILROAD COMPANY; (889)-881-7521

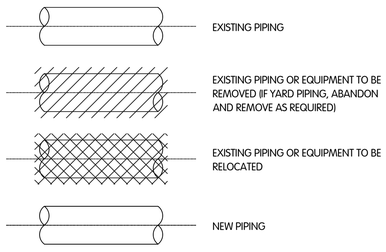


PROJECT JOB SIGN DETAIL
NTS

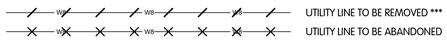
MATERIAL FILLS



PIPING AND EQUIPMENT LEGEND



TOPOGRAPHY



NOTES:
- ACCURACY OF EXISTING ELEVATIONS AND DIMENSIONS IS NOT GUARANTEED. FIELD VERIFY BEFORE CONSTRUCTION.
- ALL NOTES ON THE DRAWINGS BEAR THE SAME IMPORTANCE. SOME NOTES AND DIMENSIONS ARE BOLD TO AID IN READING THE DRAWINGS IN AREAS OF HIGH GRAPHIC DENSITY.

STATE OF OHIO
DINESH KUMAR PALANISWAMY
E-72394
PROFESSIONAL ENGINEER
January 10, 2025

LEGENDS, ABBREVIATIONS AND GENERAL NOTES

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	BY
1	1/8/25	JON

JOB SIGN UPDATES
REVISIONS AFTER ISSUED FOR BID

Jones & Henry Engineers, Ltd.
Fluid thinking©.
www.JHeng.com

JOB NO. 039-8084.003
SCALE AS NOTED
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
DKP	BJD	

STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024
SHEET NO.
G-0.2
2 OF 182

TOL-8084003\01-G-0.2 LEGENDS ABBREVIATIONS GENERAL NOTES
1/7/2025 11:25 AM - LBROWN
1/7/2025 11:25 AM

EXISTING MANHOLE TO RETURN TO HEADWORKS
SA-2560
BOLTED DOWN MANHOLE TO RETURN TO HEADWORKS
SA-2
SA-1
SUPERNATANT DRAIN
FUTURE AEROBIC DIGESTER TANK 4 T-103
FUTURE AEROBIC DIGESTER PUMP 4 ME-104
AIR
BFV-108
BFV-107
BFV-106
BFV-117
BFV-116
BFV-115
BFV-114
BFV-113
BFV-112
BFV-111
BFV-110
BFV-109
TSV-102
TSV-101
TSV-100
AEROBIC DIGESTER TANK 3 T-102
AEROBIC DIGESTER TANK 2 T-101
AEROBIC DIGESTER TANK 1 T-100
AEROBIC DIGESTER PUMP 3 ME-103
AEROBIC DIGESTER PUMP 2 ME-102
AEROBIC DIGESTER PUMP 1 ME-101
MV-102
MV-101
MV-100
DIGESTED SLUDGE
PV-111
SLUDGE TRANSFER
PV-110
PV-109
PV-123
CV-102
CV-101
CV-100
PV-105
PV-104
PV-103
PV-108
PV-107
PV-106
WAS FEED HEADER
SLUDGE DISCHARGE HEADER
PV-113
PV-125
PV-112
INLET AIR FILTER
INLET AIR
AIR RELEASE VALVE
LIQUID SLUDGE FROM DIGESTERS
PRESSATE BLOWER 1 ME-117
VOLUTE DEWATERING PRESS POLYMER SYSTEM (POLYMER SKID) ME-111
METERING PUMP
POLYMER TOTE TANK T-105
PRESSATE PUMP ME-115
PRESSATE HOLDING TANK T-106
AIR VENT
TANGENTIAL FLOW MIXER
FSL
PI
FE
SI
LIQUID SLUDGE FROM DIGESTERS
CV-106
NPW
LIQUID POLYMER
PRESS FEED
PV-126
PV-124
SV-100
SPRAY HEADS
3 DEWATERING DRUMS
FLOC. TANK
MIXING TANK
VOLUTE DEWATERING PRESS ME-114
3PV-119
PV-121
PRESSATE
FLOCCULATION TANK DRAIN
CONVEYOR DRAIN
DEWATERED CAKE
PRESSATE FROM PRESS
DAY TANK DRAIN
PRESSATE FROM STORAGE TANK
FERRIC CHLORIDE
VALVE BOX
BV-119
BV-118
RETENTION BASIN T-2
RETENTION BASIN T-3
BFV-120
BFV-121
TO RETENTION BASINS
BFV-104
BFV-122
BFV-105
BFV-103
BFV-102
BFV-101
BFV-100
AEROBIC DIGESTER BLOWER 4 ME-108
AEROBIC DIGESTER BLOWER 3 ME-107
AEROBIC DIGESTER BLOWER 2 ME-106
AEROBIC DIGESTER BLOWER 1 ME-105
INLET AIR
3
WAS FEED HEADER
PV-102
SLUDGE MACERATOR ME-100
PV-101
PV-100
AIR RELEASE VALVE
WAS FLOW METER FE-100
SLUDGE DISCHARGE HEADER
PV-115
PV-114
VOLUTE DEWATERING PRESS FEED PUMP 2 ME-110
VOLUTE DEWATERING PRESS FEED PUMP 1 ME-109
BIOSOLIDS STORAGE DAY TANK T-104
PV-126
CV-107
AIR VENT
PV-127
RECIRC PUMP ME-118
RECIRC PUMP SEAL WATER PANEL
OVERFLOW
PV-118
CV-104
CV-103
PV-117
PV-116
PUMP 2 SEAL WATER PANEL
PUMP 1 SEAL WATER PANEL
NPW
LIQUID POLYMER
PRESS FEED
FE-102
FE-103
AIR RELEASE VALVE
EXISTING SANITARY
EXISTING CHEMICAL BUILDING
EXISTING OVERFLOW CHAMBER TO RETURN TO HEADWORKS
TO HEADWORKS
TO FIRE HYDRANT
NPW
RPZ-100
BOOSTER PUMP 1 ME-112
BOOSTER PUMP 2 ME-113
BOOSTER PUMP SKID
10 GALLON BLADDER TANK
SANITARY
LIQUID SLUDGE FLOW METER FE-101
TRUCK FILL CONNECTION
PV-128
BIOSOLIDS HANDLING BUILDING
ADMINISTRATION BUILDING
TO EXISTING WL
SLUDGE HOLDING TANK (TO BE DEMOLISHED)
SCUM PUMP
SCUM WELL
SLUDGE WELL
MIXING CHAMBER
SLUDGE TRANSFER PUMPS
TRUCK FILLING STATION
SA-6
SA-7
SA-5
SA-4
SA-3
DB-101
NOTE 3
WATER LINE FROM OHIO STREET (BY OTHERS)
NPW TO BIOSOLIDS STORAGE BUILDING
DRAIN TO CATCH BASINS TOWARD HEADWORKS
DRAIN TO CATCH BASINS TOWARD HEADWORKS
BIOSOLIDS CONVEYOR ME-116
GATE 1
GATE 2
DEWATERED CAKE DROP FROM BIOSOLIDS CONVEYOR
BIOSOLIDS STORAGE BUILDING
YARD HYDRANTS AND FIRE HYDRANT

NOTE:
1. FLOOR DRAIN CONNECTIONS AND RELATED PIPING AND VALVES ARE NOT SHOWN IN THE DRAWING.
2. HOSE BIBS, YARD HYDRANTS ARE NOT SHOWN IN THIS DRAWING.
3. VALVES TO BE INSTALLED BY THE CITY OF GREENVILLE.

TOL-8084\005\G-0.5 SOLIDS FLOW DIAGRAM
11/5/2025 10:05 AM L.BROWN
11/01/2025 12:05 PM

GENERAL PARTIAL SOLIDS FLOW DIAGRAM

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

STATE OF OHIO
DINESH KUMAR PALANISWAMY
E-72394
PROFESSIONAL ENGINEER
January 10, 2025

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
5	1/8/25	VALVES REMOVED	HL

Jones & Henry Engineers, Ltd.
Fluid thinking©.
www.JHeng.com

JOB NO. 039-8084.003
SCALE NONE
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE
DESIGNED DKP | DRAWN BJD | CHECKED
STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024
SHEET NO. G-0.5
5 OF 182

LIMITS OF TREE/BRUSH REMOVAL (BY OTHERS)

REMOVE POWER POLE

REMOVE CHAIN LINK FENCE

STORM BASIN BLOWER BUILDING TO BE REMOVED AT END OF PROJECT. BUILDING TO BE KEPT IN SERVICE THROUGHOUT DURATION OF CONSTRUCTION TO ALLOW OPERATION OF STORM BASIN MIXERS AND DIFFUSERS UNTIL CUTOVER. SEE MCC-AB SINGLE-LINE DIAGRAM IN ELECTRICAL SHEETS FOR FURTHER INFORMATION. SEE SHEET R-0.8.

REMOVE POWER POLE

REMOVE CATCH BASIN

PROTECT TREE DURING CONSTRUCTION. TREE REMOVAL SHALL NOT BE DONE WITHOUT OWNERS CONSENT

REMOVE AND RELOCATE LIGHT POLE

REMOVE POWER POLE

REMOVE SIDEWALK

REMOVE STRUCTURE

REMOVE POWER POLE

MATCH LINE SHEET R-0.1

MATCH LINE SHEET R-0.3

Grass
Woods Area
Treeline
Chain Link Fence
Asphalt Pavement
Sidewalk
Conc.
Top Concrete 1013.40
Top Concrete 1013.45
Top Concrete 1013.56
Top Concrete 1013.60
Retention Basin T-2
Retention Basin T-3
Abandoned Interceptor
Underground pipes are approximate due to unknown plans
Anoxic Tank
Top Concrete 1013.45
Top Concrete 1009.22
Top Concrete 1009.24
Clarifier T-9
Clarifier T-10
Top Conc. 1015.42
Lift Station
Top Concrete 1009.04
North Oxidation Ditch
F.F.E. 1006.67
Administration Building
F.F.E. 1012.87
Chemical Feed Building
Diesel Generator
Garage F.F.E. 1010.96

KEY PLAN

1	2
3	4

STATE OF OHIO
DINESH KUMAR PALANISWAMY
E-72394
PROFESSIONAL ENGINEER
January 10, 2025

WWTP SITE REMOVALS NORTHEAST PLAN

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
5	1/8/25	BLOWER BLDG NOTE	ERK

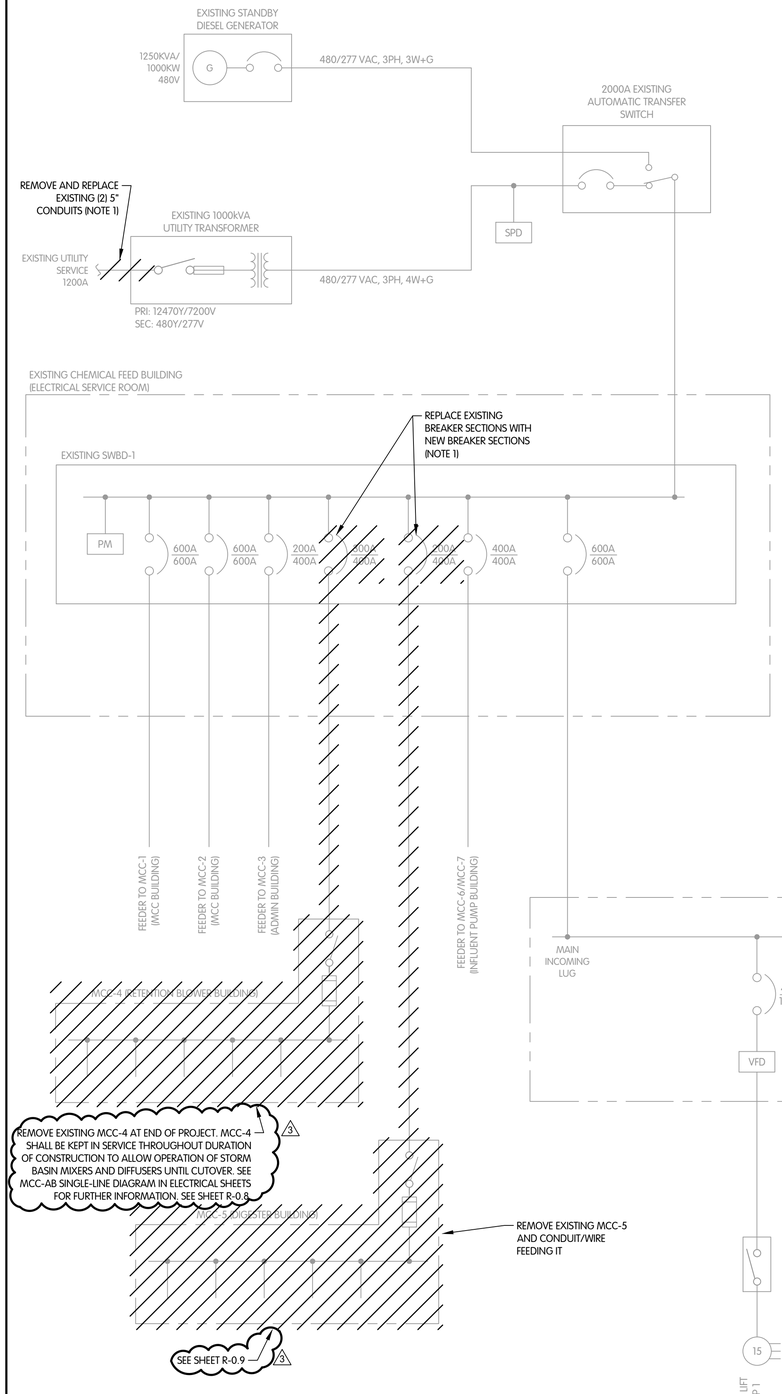
Jones & Henry Engineers, Ltd.
Fluid thinking©.
www.JHeng.com

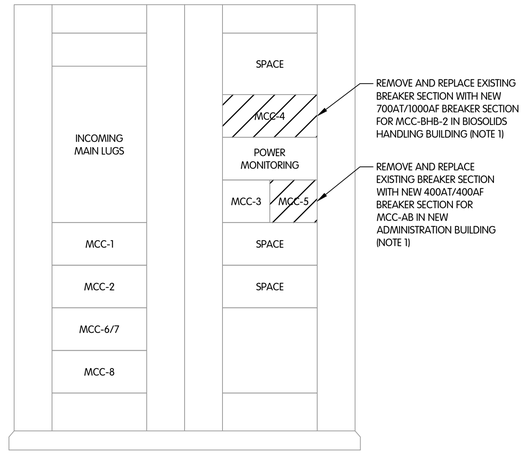
JOB NO. 039-8084.003
SCALE 1"=20'
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
DKP	BJD	

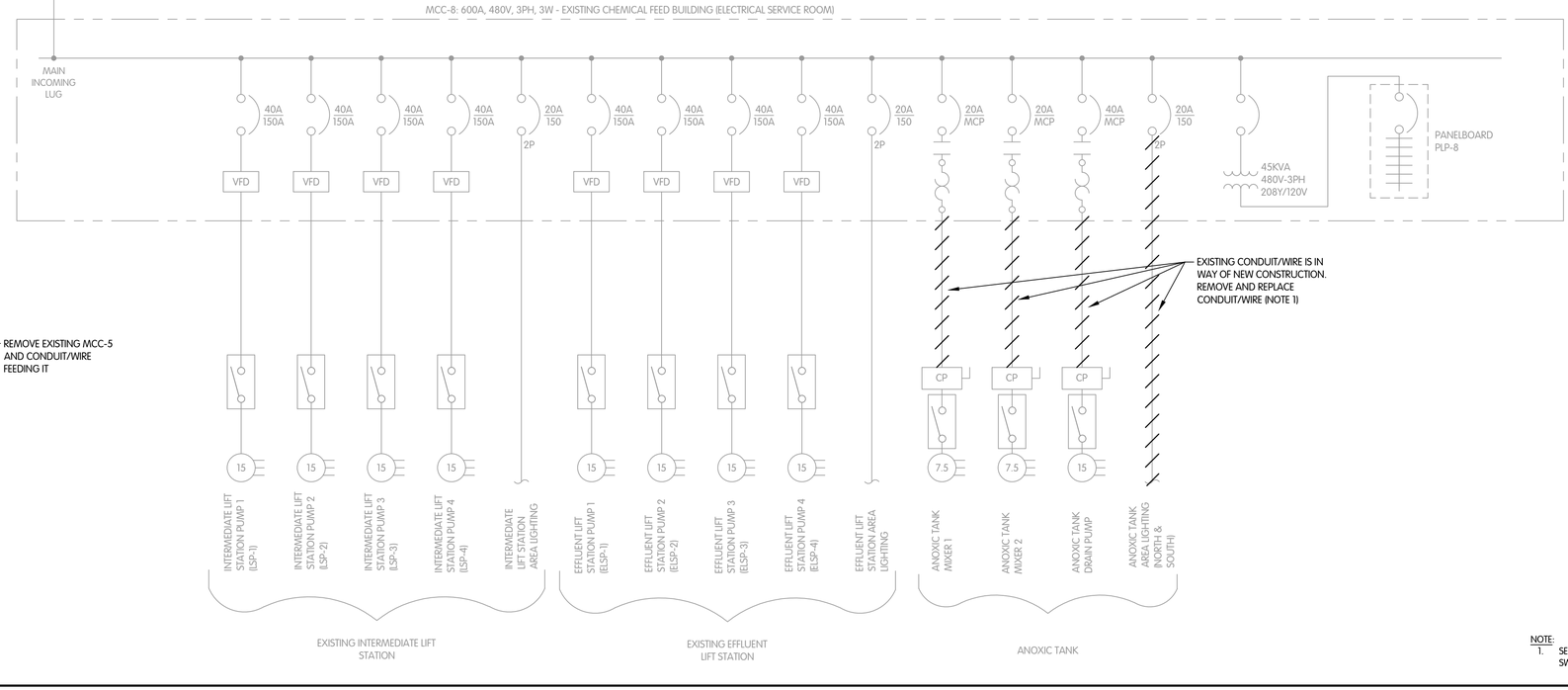
STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024
SHEET NO.
R-0.2
8 OF 182

T:\DL-8084\03R01-R-0.2 NORTHEAST SITE PLAN
1/7/2025 11:20 AM - LBROWN
1/7/2025 11:25 AM -





EXISTING SWITCHBOARD SWBD-1 REMOVAL
3/4" = 1'-0"



SHEET KEY NOTES:

(A) INSTALL NEW WIRE IN EXISTING CONDUIT FROM THE MCC-8 BREAKER TO THE EXISTING MANHOLE MH#5. CONSTRUCT NEW CONCRETE ENCASED DUCTBANK FROM EXISTING MH#5 TO THE ANOXIC TANK AS SHOWN ON THE ELECTRICAL SITE PLAN E-0.3. CONTRACTOR CAN USE EXISTING CONDUITS FROM THE UNDERGROUND JUNCTION BOX AT THE ANOXIC TANK TO DIFFERENT LOADS (MIXER-1 LCP, MIXER-2 LCP, DRAIN PUMP LCP, NORTH & SOUTH LIGHT POLES)

(B) CONTRACTOR SHALL VERIFY EXISTING CONTROL WIRING TERMINATIONS PRIOR TO REMOVAL OF THE EXISTING WIRING AND INSTALL NEW WIRES ACCORDINGLY

NOTE:
1. SEE PLANT SINGLE LINE DIAGRAM AND SWBD-1 ELEVATION ELECTRICAL SHEET.

STATE OF OHIO
DINESH KUMAR PALANISWAMY
E-72394
PROFESSIONAL ENGINEER
January 10, 2025

REMOVALS PLANT SINGLE LINE DIAGRAM AND SWBD-I

CITY OF GREENVILLE, OHIO

NO.	DATE	UPDATED NOTES	BY
1	1/8/25	REVISIONS AFTER ISSUED FOR BID	EBK

Jones & Henry Engineers, Ltd.
Fluid thinking©.
www.JHeng.com

JOB NO. 039-8084.003

SCALE AS NOTED

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
EBK	LKB	

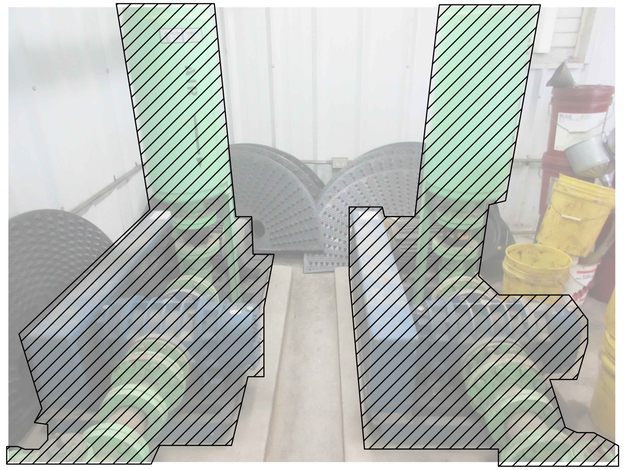
STATUS: ISSUED FOR BID

DATE: NOVEMBER 2024

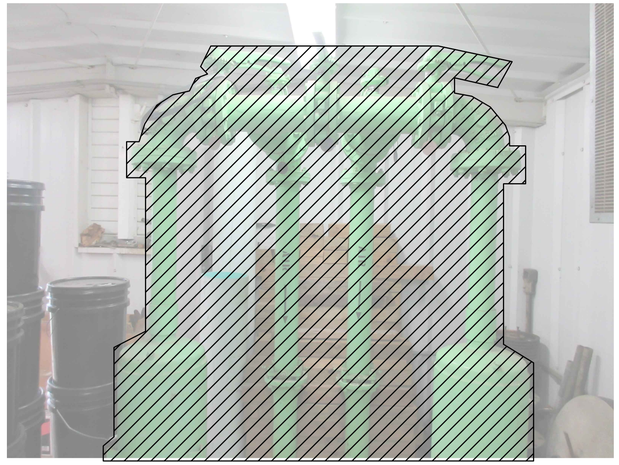
SHEET NO.
R-0.7
13 OF 182

TOL-8084005R07-R-0.7 PLANT SINGLE-LINE REMOVALS
1/10/2025 8:34 AM L.BROWN
1/7/2025 8:33 PM

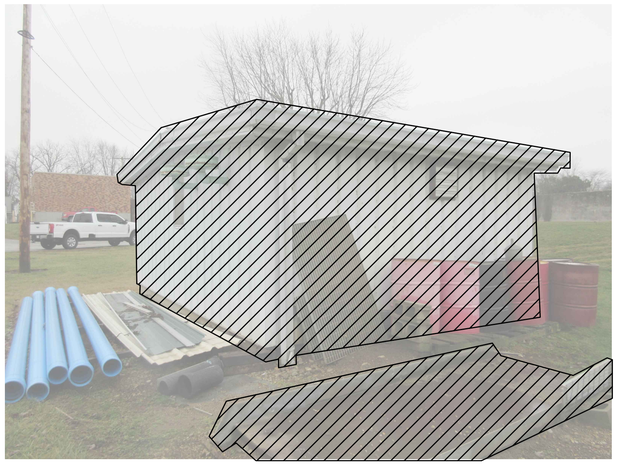
EXISTING STORM BASIN BLOWER BUILDING - INTERIOR



EXISTING STORM BASIN BLOWER BUILDING - INTERIOR



EXISTING STORM BASIN BLOWER BUILDING - INTERIOR



EXISTING STORM BASIN BLOWER BUILDING - NORTHEAST

EXISTING STORM BASIN BLOWER BUILDING - WEST

NOTES:

1. DEMOLITION WORK ON STORM BASIN BLOWER BUILDING TO START ONLY AFTER COMPLETION OF ELECTRICAL SYSTEM INSTALLATION AND ELECTRICAL/BLOWER PIPING TIE-INS TO STORM BASIN DIFFUSERS AND MIXERS.
2. ONCE ALL THE TIE-INS ARE DONE, THEN THE CONTRACTOR SHALL REMOVE ALL PIPING, EQUIPMENT AND APPURTENANCES INSIDE STORM BASIN BLOWER BUILDING.
3. UPON COMPLETION OF EQUIPMENT AND PIPING REMOVAL, STORM BLOWER BUILDING SHALL BE DEMOLISHED.
4. AS PART OF PROJECT SUBSTANTIAL COMPLETION, TEST OPERATION OF STORM BASIN AND ENSURE MIXERS AND DIFFUSERS ARE OPERATING SUCCESSFULLY.

STATE OF OHIO
DINESH KUMAR PALANISWAMY
E-72394
PROFESSIONAL ENGINEER
January 10, 2025

BLOWER BUILDING REMOVALS

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	BY
5		
4		
3		
2		
1	1/7/25	HSL

ADDED REMOVAL PHOTOS FOR BLOWER BUILDING
REVISIONS AFTER ISSUED FOR BID

Jones & Henry Engineers, Ltd.
Fluid thinking©.
www.JHeng.com

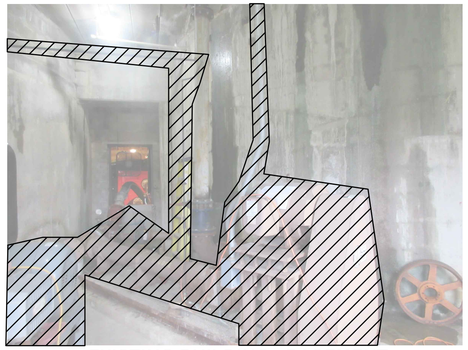
JOB NO. 039-8084.003
SCALE 1" = 1'
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
HSL	BJD	

STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024

SHEET NO.
R-0.8
---- OF 182

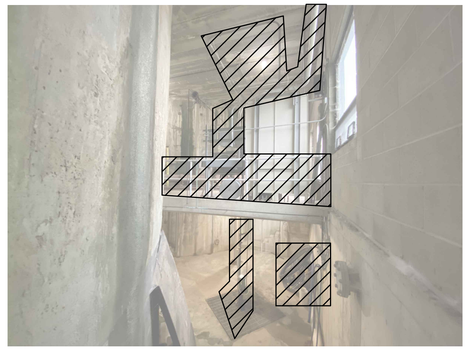
T:\DL-8084\003R04-R-0.8 REMOVALS BLOWER BUILDING
1/7/2025 7:43 AM - BSHILL
1/7/2025 11:26 AM



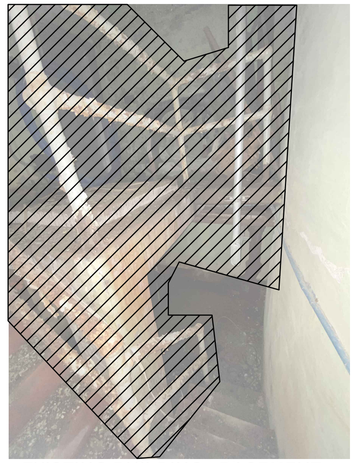
EXISTING BUILDING - BASEMENT

EXISTING BUILDING - BASEMENT

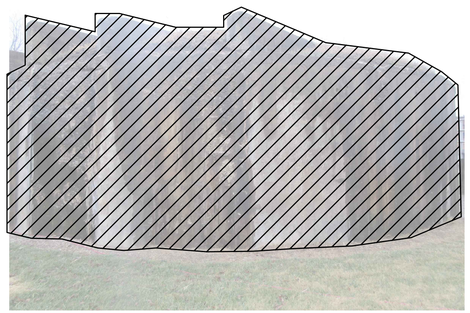
EXISTING BUILDING - BASEMENT



EXISTING BUILDING - BASEMENT

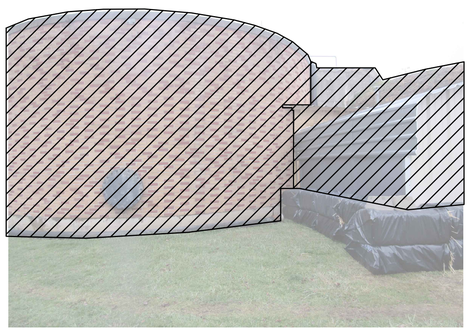


EXISTING BUILDING - BASEMENT



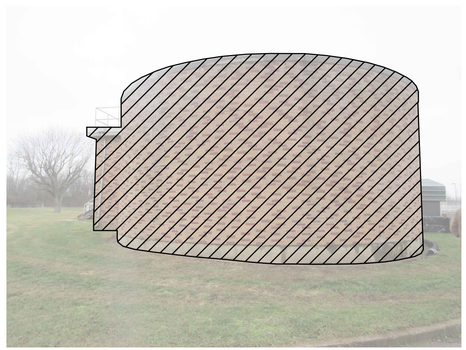
ABANDONED DIGESTER - NORTHEAST

CONTRACTOR TO FIELD VERIFY BURY
DEPTH ON TANK FOR DEMOLITION.



EXISTING SLUDGE HOLDING TANK - SOUTHEAST

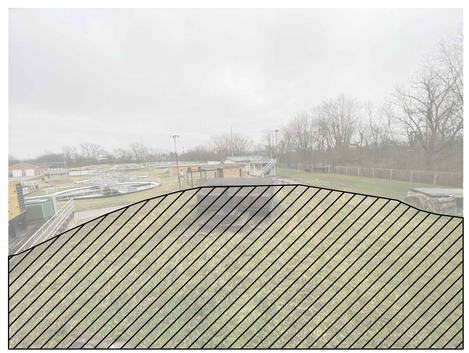
CONTRACTOR TO COORDINATE WITH OWNER TO REMOVE TEMPORARY
PUMP SHED AND PUMPING EQUIPMENT. PUMP AND EQUIPMENT NEED
TO BE SALVAGED AND RETURNED TO OWNER WITHOUT DAMAGE.



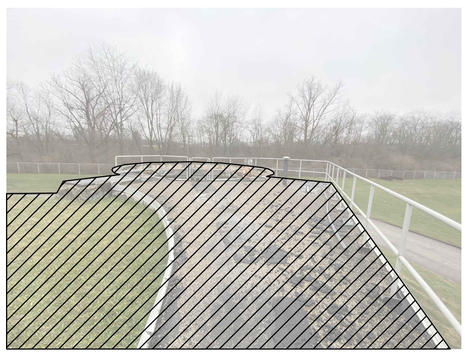
EXISTING SLUDGE HOLDING TANK - SOUTHWEST

EXISTING BUILDING - ROOF

REMOVE SIDEWALK, STAIRS AND
HANDRAIL TO BUILDING ROOF.



EXISTING BUILDING - ROOF



EXISTING BUILDING - ROOF

EXISTING SLUDGE HOLDING TANK - TOP

NOTES:

1. UPON COMPLETION AND OPERATION OF NEW SYSTEMS, REMOVE STRUCTURES TO 4' BELOW FINISHED GRADE. CORE HOLES IN BOTTOM SLABS. REMOVE ALL PIPING, EQUIPMENT AND APPURTENANCES WITHIN STRUCTURES.
2. EXISTING SLUDGE HANDLING TANKS AND ASSOCIATED EQUIPMENT SHALL BE ABANDONED ONLY AFTER THE SOLIDS HANDLING SYSTEM AND DIGESTERS ARE FULLY OPERATIONAL. CONTRACTOR TO COORDINATE WITH OWNER PRIOR TO ABANDONMENT OF EXISTING SLUDGE HANDLING FACILITY SYSTEM DEMOLITION.

STATE OF OHIO
DINESH KUMAR PALANISWAMY
E-72394
REGISTERED PROFESSIONAL ENGINEER

January 10, 2025

SLUDGE BUILDING, HOLDING TANK AND DIGESTER REMOVALS

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	1/7/25	ADDED REMOVALS FOR SLUDGE BUILDING, HOLDING TANK & DIGESTER	HSL

Jones & Henry Engineers, Ltd.

Fluid thinking©.
www.JHeng.com

JOB NO. 039-8084.003

SCALE 1" = 1'

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
HSL	BJD	

STATUS: ISSUED FOR BID

DATE: NOVEMBER 2024

SHEET NO.

R-0.9

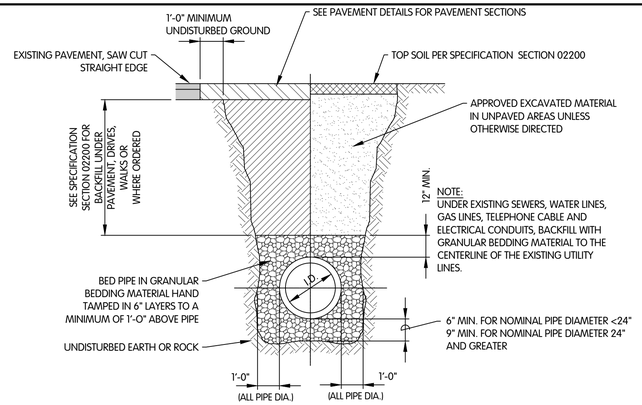
---- OF 182

TOL-8084\003\04-R-0.9 REMOVALS SLUDGE BUILDING AND DIGESTER
1/7/2025 8:54 AM LBROWN
1/10/2025 12:46 PM

EXISTING STRUCTURE DATA		
NAME	TYPE	DATA
2141	CATCH BASIN	CASTING EL. 1003.60 6" NE INV. EL. 1000.08
2145	CATCH BASIN	CASTING EL. 1003.72 6" SW INV. EL. 999.93 6" E INV. EL. 999.93
2175	CATCH BASIN	CASTING EL. 1003.65 6" W INV. EL. 998.79 12" SE INV. EL. 998.79
2239	SANITARY MANHOLE	CASTING EL. 1008.90 24" W INV. EL. 1000.80 24" E INV. EL. 1000.80
2298	SANITARY MANHOLE	CASTING EL. 1010.32 24" W INV. EL. 1002.62 24" E INV. EL. 1002.62
2416	SANITARY MANHOLE	CASTING EL. 1008.52 12" N INV. EL. 1004.06 12" E INV. EL. 1004.06
2558	SANITARY MANHOLE	CASTING EL. 1008.09 12" W INV. EL. 996.61 12" N INV. EL. 1003.75 16" E INV. EL. 1002.59
2560	SANITARY MANHOLE	CASTING EL. 1005.48 24" NE INV. EL. 1000.39 24" W INV. EL. 1000.39 24" S INV. EL. 1000.29
2561	SANITARY MANHOLE	CASTING EL. 1009.31 24" E INV. EL. 1000.61 24" SW INV. EL. 1000.61
2561A	SANITARY MANHOLE	CASTING EL. 1005.55 24" N INV. EL. 1002.48 24" W INV. EL. 1002.48
2691	STORM MANHOLE	CASTING EL. 1004.05 12" E INV. EL. 999.32 12" S INV. EL. 999.56 12" W INV. EL. 999.32
2692	SANITARY MANHOLE	CASTING EL. 1004.65 20" E INV. EL. 995.85 20" S INV. EL. 995.85
2767	CATCH BASIN	CASTING EL. 1003.76 6" S INV. EL. 1000.24 6" SW INV. EL. 1000.24 12" N INV. EL. 999.73
2996	CATCH BASIN	CASTING EL. 1003.45 12" NW INV. EL. 998.64 12" E INV. EL. 998.84 15" S INV. EL. 998.64
7068	CATCH BASIN	CASTING EL. 1008.11 6" E INV. EL. 1005.65 6" S INV. EL. 999.32
7370	CATCH BASIN	CASTING EL. 1003.61 12" W INV. EL. 999.55
7454	CATCH BASIN	CASTING EL. 1009.01 6" SW INV. EL. 1005.50
7454A	CATCH BASIN	CASTING EL. 1009.56 6" NW INV. EL. 1006.04
7844	SANITARY MANHOLE	CASTING EL. 1007.62 20" E INV. EL. -1012.98 27" S INV. EL. -1012.98
8038	STORM MANHOLE	CASTING EL. 1009.11 6" N INV. EL. 997.76 6" SE INV. EL. 998.81 6" NE INV. EL. 1000.01 8" W INV. EL. 997.46
8153	STORM MANHOLE	CASTING EL. 1007.43 8" E INV. EL. 996.83 8" N INV. EL. 995.33
8262	SANITARY MANHOLE	CASTING EL. 1006.54 24" N INV. EL. 992.47 21" W INV. EL. 1000.46 24" E INV. EL. 992.47

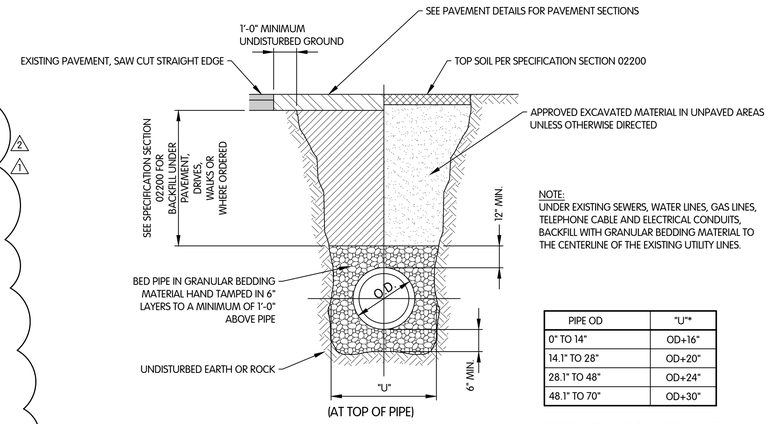
MANHOLE SCHEDULE					
NO.	NORTHING	EASTING	TYPE	CASTING EL.	PIPE DATA
SA-1	772,087.54	1,377,101.94	TYPE IIIS 6' DIA. DOGHOUSE	1004.81	12" E INV. EL. 1000.39
SA-2	772,087.54	1,377,177.60	TYPE IS 4' DIA. BOLT DOWN CASTING	1005.71	12" E INV. EL. 1000.60 12" W INV. EL. 1000.60
SA-3	771,957.88	1,377,150.68	TYPE I 4' DIA. BOLT DOWN CASTING	1004.82	12" E INV. EL. 1000.54 12" W INV. EL. 1000.54
SA-4	771,968.04	1,377,177.60	TYPE IS 4' DIA. (FLAT GRATE) 3'-0" SUMP	1004.00	12" E INV. EL. 1000.68 12" W INV. EL. 1000.58 12" N INV. EL. 1000.58
SA-5	771,998.58	1,377,177.60	TYPE IS 4' DIA. (FLAT GRATE) 3'-0" SUMP	1004.00	12" S INV. EL. 1000.68 6" NE INV. EL. 1001.63 12" N INV. EL. 1000.68 12" E INV. EL. 1000.68
SA-6	772,061.43	1,377,177.60	TYPE IS 4' DIA.	1005.20	12" E INV. EL. 1001.80 12" S INV. EL. 1000.79
SA-7	772,025.49	1,377,201.89	CB SQUARE (FLAT GRATE)	1004.84	6" SW INV. EL. 1002.50 6" NE INV. EL. 1002.50

CATCH BASIN SCHEDULE					
NO.	NORTHING	EASTING	TYPE	CASTING EL.	INVERT EL.
ST-1	771,905.50	1,376,950.03	CB ROUND (FLAT GRATE)	1003.45	15" NW INV. EL. 999.66 18" S INV. EL. 999.56
ST-2	771,936.65	1,376,934.86	CB ROUND (FLAT GRATE)	1003.65	12" W INV. EL. 999.91 15" SE INV. EL. 999.81
ST-3	771,951.93	1,376,821.94	CB ROUND (CURB GRATE)	1003.72	12" SW INV. EL. 1000.51 12" E INV. EL. 1000.41 8" NE INV. EL. 1001.75
ST-4	771,943.47	1,376,809.14	CB ROUND (FLAT GRATE)	1003.60	12" NE INV. EL. 1000.58
ST-5	771,921.81	1,377,329.76	CB ROUND (FLAT GRATE)	1006.91	8" NW INV. EL. 1003.31 12" SE INV. EL. 1003.31



TRENCH DETAIL FOR RIGID PIPE (DIP)

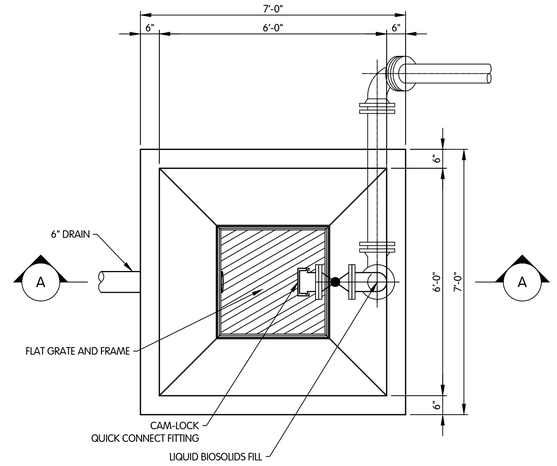
NTS



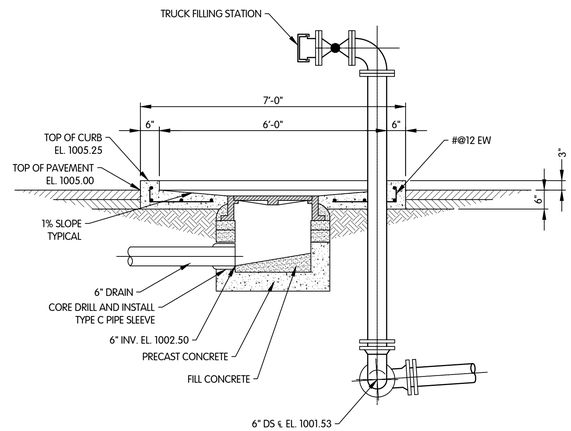
PIPE OD	"U"*
0" TO 14"	OD+16"
14.1" TO 28"	OD+20"
28.1" TO 48"	OD+24"
48.1" TO 70"	OD+30"

TRENCH SCHEDULE

* NOTE:
"U" IS THE MINIMUM WIDTH FOR FLEXIBLE PIPES IN ACCORDANCE WITH ASTM D-2321 AND D-2774.



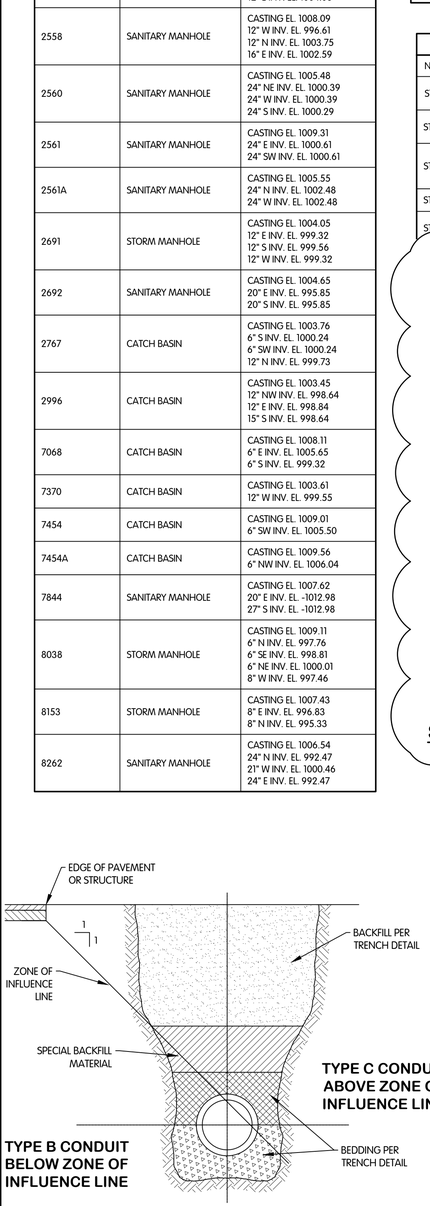
PLAN



SECTION

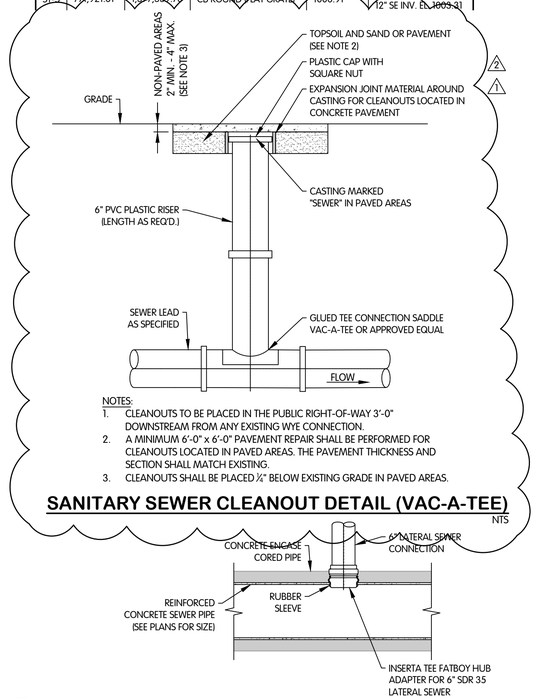
SLUDGE LOADING STATION

½"=1'-0"



PARALLEL ZONE OF INFLUENCE DETAIL

NTS



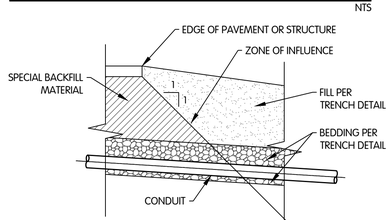
NOTES:
1. CLEANOUTS TO BE PLACED IN THE PUBLIC RIGHT-OF-WAY 3'-0" DOWNSTREAM FROM ANY EXISTING WYE CONNECTION.
2. A MINIMUM 6'-0" x 6'-0" PAVEMENT REPAIR SHALL BE PERFORMED FOR CLEANOUTS LOCATED IN PAVED AREAS. THE PAVEMENT THICKNESS AND SECTION SHALL MATCH EXISTING.
3. CLEANOUTS SHALL BE PLACED ½" BELOW EXISTING GRADE IN PAVED AREAS.

SANITARY SEWER CLEANOUT DETAIL (VAC-A-TEE)

NTS

SANITARY LATERAL CONNECTIONS TO REINFORCED CONCRETE PIPE SEWERS

NTS

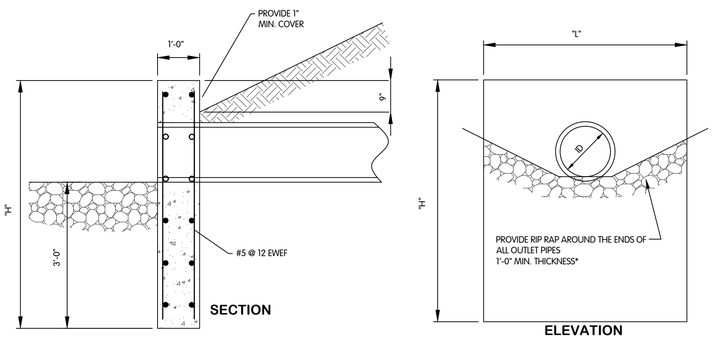


TRANSVERSE ZONE OF INFLUENCE

NTS

TRENCH DETAIL FOR FLEXIBLE PIPE

NTS

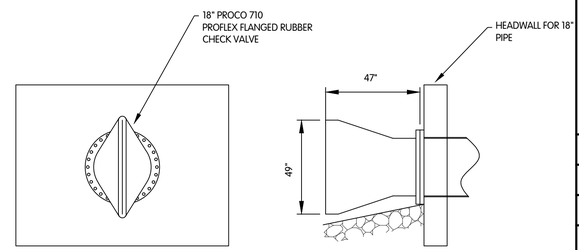


HEADWALL SCHEDULE			
ID	"H"	"L"	RIP RAP (L X W X T)
10"	5'-0"	3'-3"	3'-3" X 3'-3" X 1'
12" *	5'-6"	4'-0"	4'-0" X 4'-0" X 1'
(21)15"	6'-0"	8'-0"	8'-0" X 6'-8" X 1'
18"	6'-0"	5'-9"	5'-9" X 5'-9" X 1'

*NO RIP RAP REQUIRED FOR DRIVE CULVERTS. "L" DIMENSION FOR DRIVE CULVERTS SHALL BE 2'-0".

HEADWALL DETAIL

NTS



(SEE SHEET 5 FOR LOCATION)

HEADWALL W/ DUCKBILL

NTS

STATE OF OHIO
DINESH KUMAR PALANISWAMY
E-72394
PROFESSIONAL ENGINEER
January 10, 2025

CIVIL DETAILS

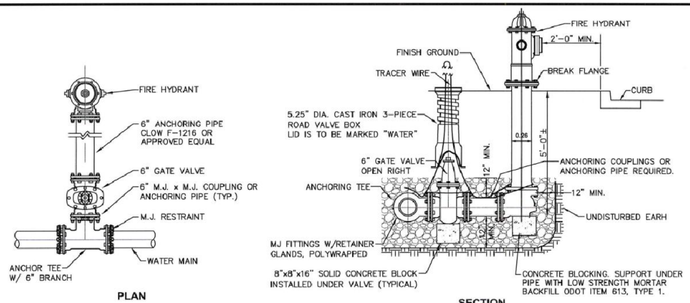
CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	12/27/24	SANITARY SEWER CLEANOUT	DMH
2	1/17/25	REVISED SANITARY SEWER CLEANOUT	DMH
3			BY
4			
5			

Jones & Henry Engineers, Ltd.
Fluid thinking©.
www.JHeng.com

JOB NO. 039-8084.003
SCALE AS NOTED
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE
DESIGNED DKP | DRAWN BDJ | CHECKED
STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024
SHEET NO. C-0.2
19 OF 182

T:\OL-8084\003\01-C-0.2 DETAILS
1/10/2025 10:45 AM - LBROWN
1/10/2025 2:12 PM



FIRE HYDRANT NOTES:

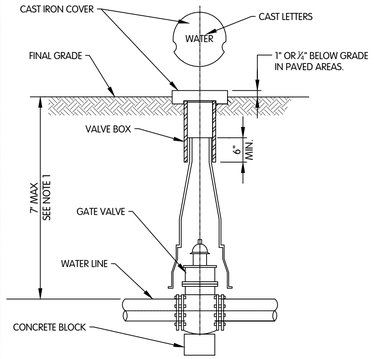
FIRE HYDRANT NOTES:

A. FIRE HYDRANTS SHALL BE AMERICAN DARLING B-84-B-5, 5' MINIMUM BURY DEPTH. ALL BOLTS SHALL BE STAINLESS STEEL.
B. HYDRANT BARRELS SHALL BE PAINTED SAFETY YELLOW AND HYDRANT TOPS SHALL BE PAINTED BLUE, CITY OF GREENVILLE SPECIFICATION.
C. HYDRANTS SHALL OPEN LEFT, BY TURNING IN A COUNTERCLOCKWISE DIRECTION.
D. 5" INTEGRAL STORZ CONNECTION SHALL FACE THE STREET. A THREADED ADAPTOR FOR THE STORZ CONNECTION WILL NOT BE PERMITTED.
E. HOSE NOZZLES: (2) 2.5" HOSE NOZZLES SHALL BE SUPPLIED, W/ NATIONAL STANDARD THREADS. NO CHAINS SHALL BE INCLUDED.
F. FIRE HYDRANT SHALL HAVE DRAIN PLUG INSTALLED AND WILL NOT BE SELF DRAINING.
G. FIRE HYDRANTS MUST BE INSTALLED AT THE PROPER GRADE. NO EXTENSIONS ARE PERMITTED TO OBTAIN PROPER GRADE. IF NEEDED FOR HEIGHT ADJUSTMENT, A GRADELOK ADAPTOR MAY BE INSTALLED AS THE LAST ITEM BEFORE THE HYDRANT RISER. THE ADAPTOR SHALL HAVE ANCHOR CONNECTIONS AT BOTH ENDS.
H. ALL COSTS ASSOCIATED WITH FURNISHING AND INSTALLING THE BRANCH PIPE FROM THE MAIN TO THE FIRE HYDRANT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE FIRE HYDRANT. THE TEE AND VALVE FOR THE BRANCH LINE SHALL BE ITEMIZED AND BID AS SEPARATE ITEMS.
I. FIRE HYDRANT AND ACCESSORIES SHALL CONFORM TO LOCAL FIRE DEPARTMENT STANDARDS.
J. THE NEAREST JOINT IN THE WATER MAIN SHALL BE A MINIMUM OF 5' FROM THE HYDRANT TEE.
K. HYDRANT WATCH VALVE SHALL BE AMERICAN SERIES 2500 VALVE, OR APPROVED EQUAL, AND SHALL CONFORM TO AWWA C-509 OR C-515. ALL BOLTS AND NUTS SHALL BE 316 STAINLESS STEEL.

CITY OF GREENVILLE
ChoiceOne Engineering

FIRE HYDRANT DETAIL

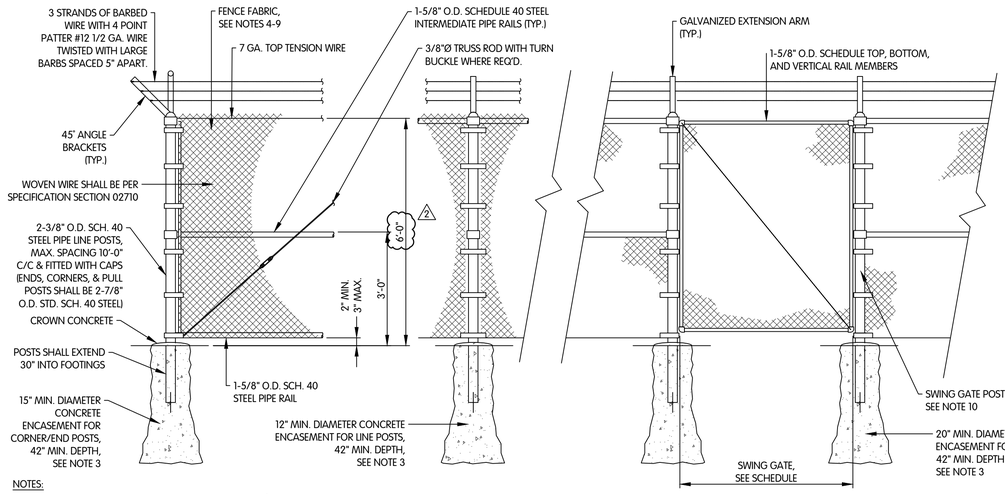
REVISIONS: | DATE APPROVED: (MON.) 2025 | PAGE No. 800-5



GATE VALVE DETAIL FOR 12" AND SMALLER WATER MAINS

NTS

NOTES:
1. VALVES WITH THE OPERATING NUT GREATER THAN 5-FEET BELOW GRADE SHALL BE PROVIDED WITH A VALVE EXTENSION.



NOTES:
1. ALL END & GATE POSTS BRACED HORIZONTAL WITH 1⅝" O.D. STEEL PIPE SECURELY TRUSSED.
2. PROVIDE MANUFACTURER'S STANDARD FOR VERTICAL & HORIZONTAL BRACING, AND LATCH & OR VISIONS FOR OWNERS LOCK.
3. CONCRETE FOUNDATIONS SHALL BE BELLED AS SHOWN. 42" MINIMUM FOR FENCE HEIGHT 7' OR LESS. OVER 7' SHALL BE DESIGNED.
4. FENCE FABRIC SHALL BE 2-INCH MESH OF CARBON STEEL WIRE AND SHALL BE GALVANIZED AFTER WEAVING IN ACCORDANCE WITH ASTM A392 CLASS II OR ALUMINUM-CLAD IN ACCORDANCE WITH ASTM A491 CLASS II. 2
5. WIRE SHALL BE 6 GAUGE ON 6-FEET FABRIC AND 9 GAUGE ON 4-FEET FABRIC.
6. PVC-COATED FENCES SHALL BE GALVANIZED MATERIALS AND CHEMICALLY CLEANED. A PHOSPHATE CONVERSION TREATMENT SHALL BE APPLIED TO PREPARE THE ZINC COATING TO RECEIVE THE POLYVINYL CHLORIDE COATING.
   A. A MINIMUM OF 7 MILS OF CLACK COMPOUND SHALL BE APPLIED TO THE MATERIALS. COATING APPLICATION SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
   B. FENCE FABRIC SHALL BE ATTACHED TO ALL POST RAILS AND TENSION WIRES WITH 12 GAUGE TIE WIRE AT A MAXIMUM OF 15-INCH CENTERS. TIRE WIRE SHALL BE ALUMINUM OR GALVANIZED STEEL.
7. FENCE FABRIC SHALL BE STRETCHED TAUT, SECURELY FASTENED TO THE POSTS, TENSION WIRE, AND TOP RAIL. FENCE FABRIC SHALL BE INSTALLED APPROXIMATELY 1 INCH ABOVE THE TOP RAIL.
8. FENCE FABRIC SHALL BE INSTALLED APPROXIMATELY 2 INCHES ABOVE FINISHED GRADE. FENCE FABRIC WHEN LIFTED SHALL NOT ALLOW AN OPENING GREATER THAN 5 INCHES.
9. FENCE FABRIC SHALL BE STRETCHED AT A MAXIMUM OF 30 FEET AND ALL TERMINAL POSTS.
10. POSTS FOR SWING GATES TO BE SIZED BY FENCE MANUFACTURER.
11. ALL PADLOCKS TO BE KEYED TO OWNER'S REQUIREMENTS.
12. FENCE SHALL BE GROUNDED WHEN ENCLOSING ELECTRICAL EQUIPMENT.

FENCE SYSTEM					
DESIGNATION	HEIGHT	FENCE FABRIC	GATE TYPE	GATE SIZE	ACCESSORIES
GA-1	6'	GALV	SWING	4'	1, 2 AND 4

ABBREVIATIONS:

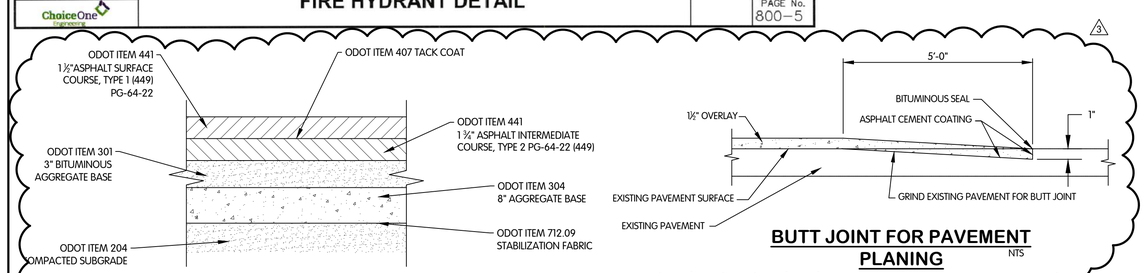
FENCE FABRIC
- PVC PVC COATED
- GALV GALVANIZED
- AL ALUMINUM CLAD

GATE TYPE
- SWING
- SLIDING

ACCESSORIES
1. BARB WIRE
2. TOP RAIL
3. TOP TENSION WIRE
4. LATCH/LOCK
5. BOTTOM RAIL

CHAIN LINK FENCE DETAIL

NTS

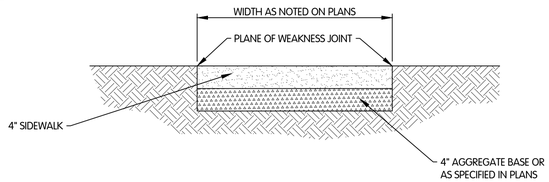


ASPHALT PAVEMENT SECTION

NTS

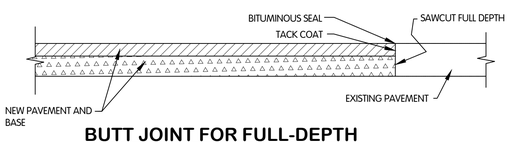
BUTT JOINT FOR PAVEMENT PLANING

NTS



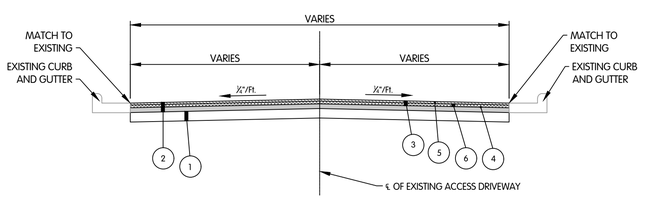
4" CONCRETE SIDEWALK

NTS



BUTT JOINT FOR FULL-DEPTH PAVEMENT REPLACEMENT

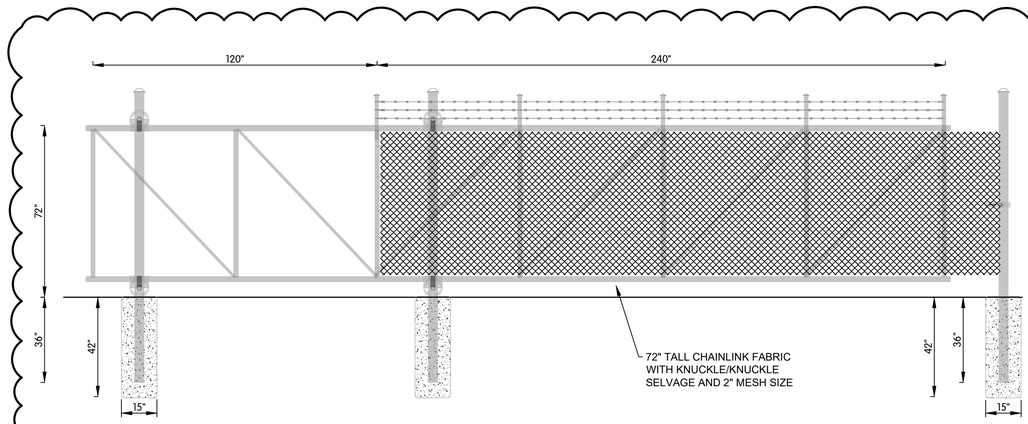
½"=1'-0"



1. EXISTING AGGREGATE BASE, VARIES
2. EXISTING ASPHALT CONCRETE PAVEMENT (6"-7")
3. ODOT ITEM 254 3" PAVEMENT PLANING, ASPHALT CONCRETE
4. TACK COAT ODOT ITEM 407 0.08 GAL/SQ.YD.
5. 1½" ODOT ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE I (448), PG-64-22
6. ODOT ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, VARIABLE, PG-64-22
7. 3" ODOT ITEM 411 STABILIZED CRUSHED AGGREGATE

EXISTING ACCESS DRIVEWAY PAVEMENT SECTION

½"=1'-0"



NOTES:
120" TALL, 4" DIAMETER GATE POSTS WITH 15" POST FOOTING DIAMETER AND 42" POST FOOTING DEPTH.

120" TALL, 4" DIAMETER LATCH POSTS WITH 15" POST FOOTING DIAMETER AND 42" POST FOOTING DEPTH.

THE OPENING WIDTH OF THE CANTILEVER GATE IS 20'.

THE GATE FRAME IS CONSTRUCTED WITH 2⅜" PIPE FOR THE HORIZONTALS, 1¼" PIPE FOR THE VERTICALS, 1¼" PIPE FOR THE DIAGONALS.

3 STRANDS OF BARB WIRE.

GATE IS HUNG USING CANTILEVER GATE ROLLERS WITH COVERS. GATE IS SECURED WITH A CANTILEVER LATCH.

MAXIMUM BRACE SPACING ON GATE SIDE: 60"

MAXIMUM BRACE SPACING ON BRACE SIDE: 60"

TIE WIRE SPACING IS EVERY 18" ON RAILS.

ROLLING GATE DETAIL

NTS

STATE OF OHIO
DINESH KUMAR PALANISWAMY
E-72394
PROFESSIONAL ENGINEER
January 10, 2025

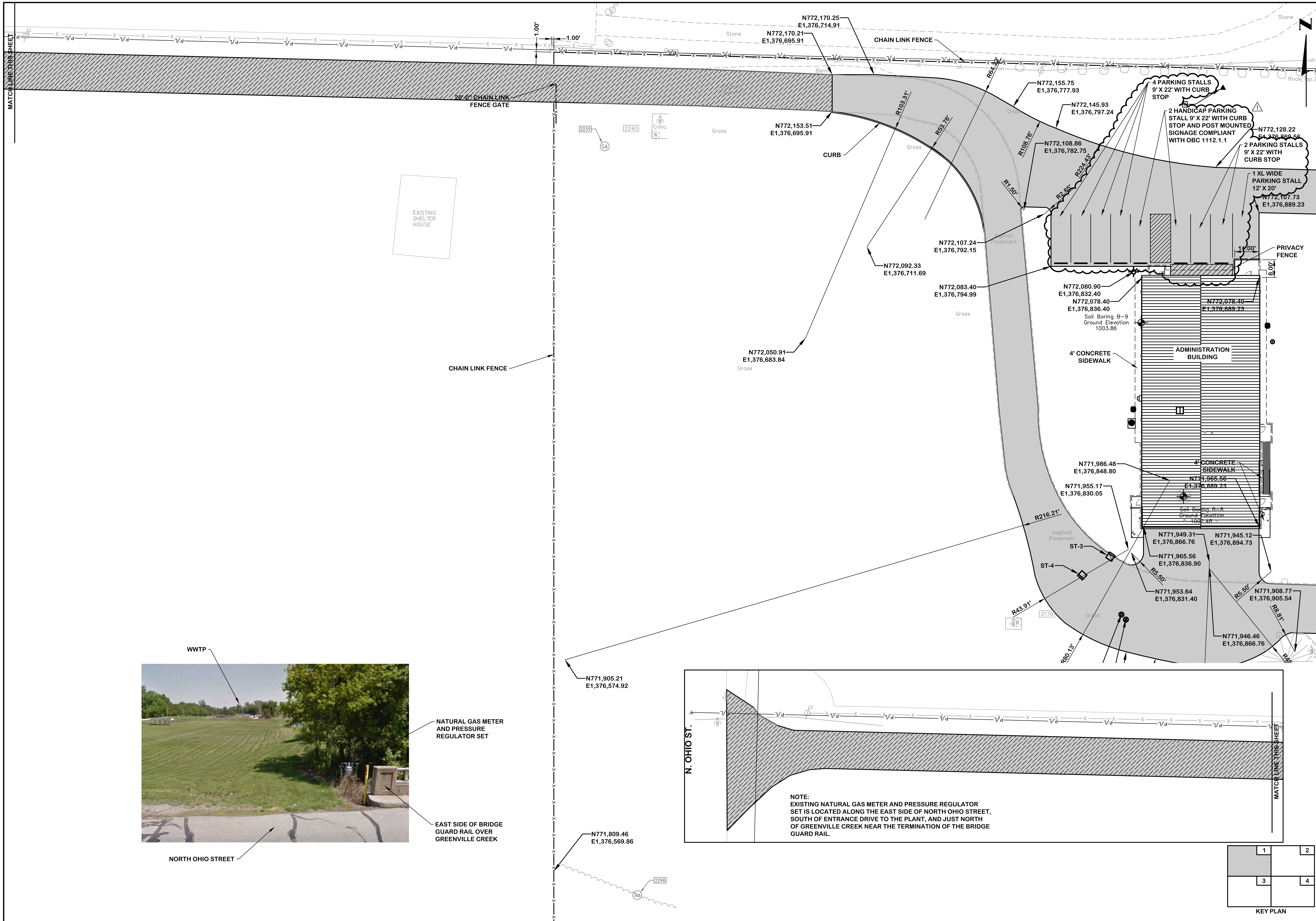
CIVIL DETAILS
CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	DETAIL UPDATES	BY
5			DMP
4			
3			
2			
1	1/10/25	REVISIONS AFTER ISSUED FOR BID	

Jones & Henry Engineers, Ltd.
Fluid thinking©.
www.JHeng.com

JOB NO. 039-8084.003
SCALE AS NOTED
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE
DESIGNED | DRAWN | CHECKED
STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024
SHEET NO. C-0.4
21 OF 182

T:\DL-8084\003\01-C-0.4 DETAILS
1/7/2025 9:44 AM - LBROWN
1/10/2025 9:22 AM


MATCH LINE THIS SHEET
1.00'
1.00'
20'-0" CHAIN LINK FENCE GATE
N772,170.25 E1,376,714.91
N772,170.21 E1,376,695.91
CHAIN LINK FENCE
N772,155.75 E1,376,777.93
4 PARKING STALLS 9' X 22' WITH CURB STOP
N772,145.93 E1,376,797.24
2 HANDICAP PARKING STALL 9' X 22' WITH CURB STOP AND POST MOUNTED SIGNAGE COMPLIANT WITH OBC 1112.1.1
N772,128.22 E1,376,869.56
2 PARKING STALLS 9' X 22' WITH CURB STOP
N772,153.51 E1,376,695.91
CURB
R103.31'
R53.76'
R64.13'
R108.76'
N772,108.86 E1,376,782.75
R224.43'
1 XL WIDE PARKING STALL 12' X 20'
N772,107.73 E1,376,889.23
R1.50'
R2.86'
EXISTING SHELTER HOUSE
N772,107.24 E1,376,792.15
PRIVACY FENCE
12.00'
8.00'
N772,092.33 E1,376,711.69
N772,083.40 E1,376,794.99
N772,080.90 E1,376,832.40
N772,078.40 E1,376,836.40
N772,078.40 E1,376,889.23
Soil Boring B-9 Ground Elevation 1003.86
N772,050.91 E1,376,683.84
CHAIN LINK FENCE
4' CONCRETE SIDEWALK
ADMINISTRATION BUILDING
N771,986.48 E1,376,848.80
4' CONCRETE SIDEWALK
N771,965.56 E1,376,889.23
N771,955.17 E1,376,830.05
Soil Boring B-8 Ground Elevation 1002.48
R216.21'
N771,949.31 E1,376,866.76
N771,945.12 E1,376,894.73
ST-3
N771,965.56 E1,376,836.90
ST-4
R5.50'
N771,953.64 E1,376,831.40
R5.50'
N771,908.77 E1,376,905.54
R43.91'
R8.81'
N771,946.46 E1,376,866.76
R80.13'
N771,905.21 E1,376,574.92
MATCH LINE SHEET C-1.2
N. OHIO ST.
MATCH LINE THIS SHEET
NOTE: EXISTING NATURAL GAS METER AND PRESSURE REGULATOR SET IS LOCATED ALONG THE EAST SIDE OF NORTH OHIO STREET, SOUTH OF ENTRANCE DRIVE TO THE PLANT, AND JUST NORTH OF GREENVILLE CREEK NEAR THE TERMINATION OF THE BRIDGE GUARD RAIL.
N771,809.46 E1,376,569.86
KEY PLAN
1
2
3
4
WWTP
NATURAL GAS METER AND PRESSURE REGULATOR SET
EAST SIDE OF BRIDGE GUARD RAIL OVER GREENVILLE CREEK
NORTH OHIO STREET

STATE OF OHIO
DINESH KUMAR PALANISWAMY
E-72394
REGISTERED PROFESSIONAL ENGINEER
January 10, 2025

CIVIL
NORTHWEST
SITE AND PAVING
PLAN

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO	DATE	REVISIONS	BY
1	1/7/25	ADDED PAVEMENT STRIPING REVISIONS AFTER ISSUED FOR BID	RGS

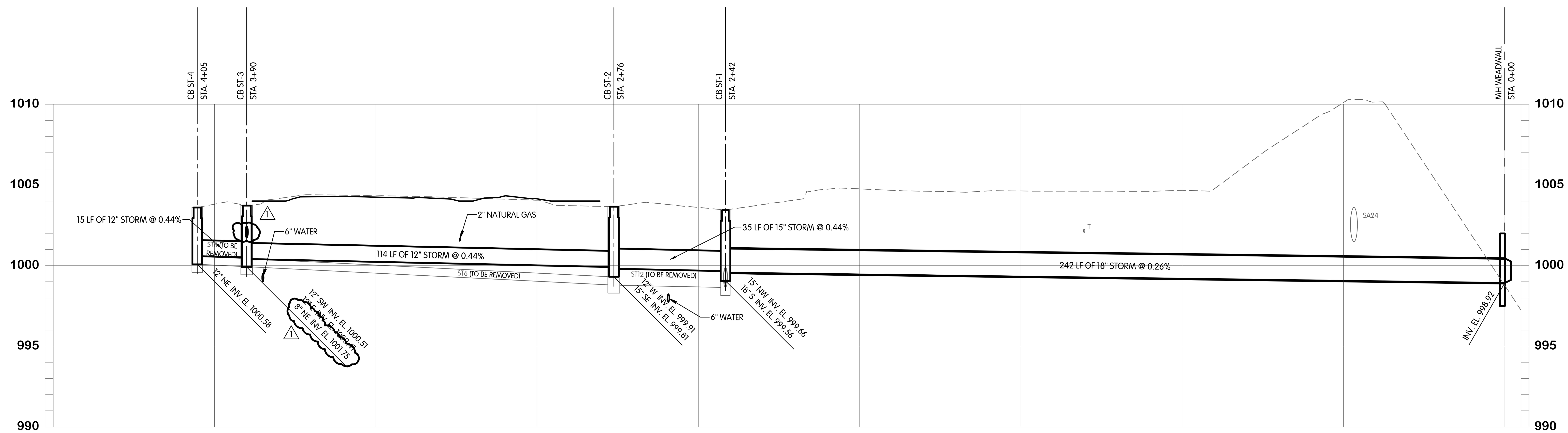
Jones & Henry Engineers, Ltd.
Fluid thinking®.
www.JHeng.com

JOB NO. 039-8084.003
SCALE 1"=20'
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

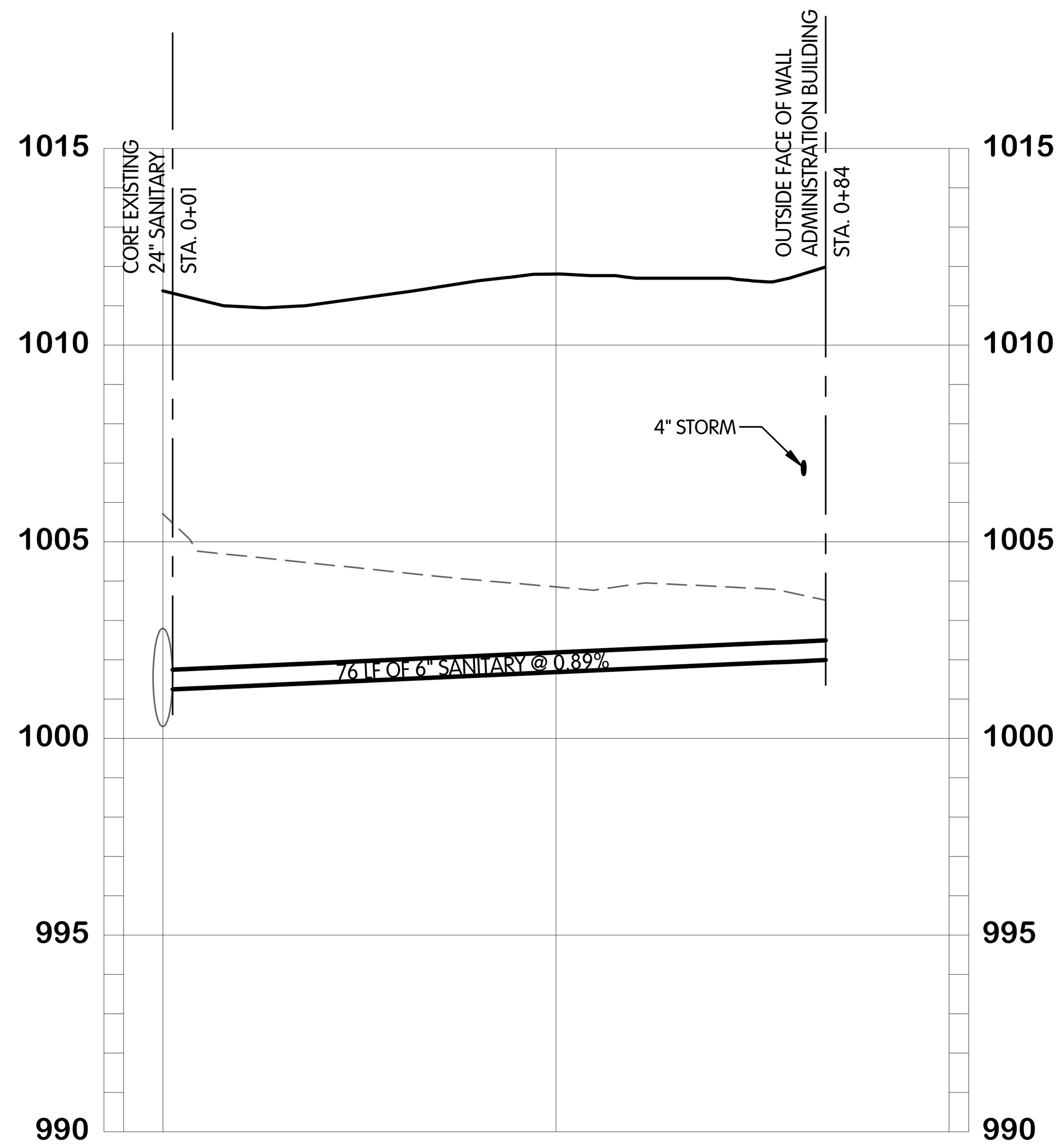
DESIGNED	DRAWN	CHECKED
DKP	BJD	

STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024
SHEET NO.
C-1.1
24 of 182

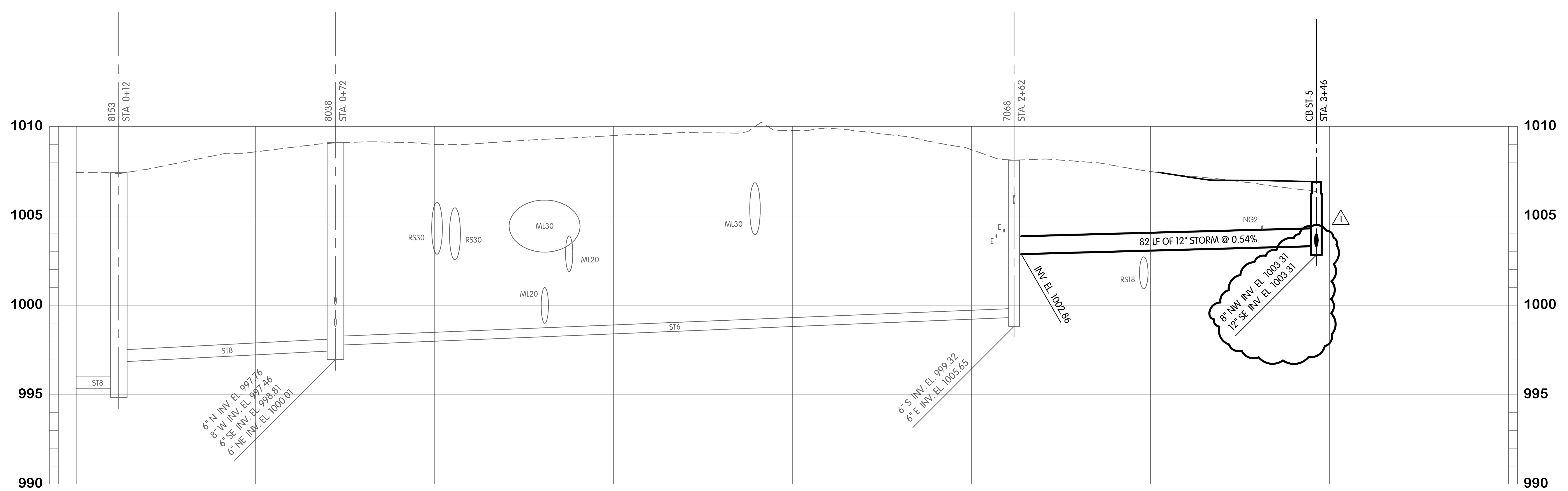
TOL-8084003C1-C-1.1 NORTHWEST SITE PLAN
1/7/2025 2:17 PM - LBROWN
1/7/2025 2:16 PM



STORM DRAIN 2



SANITARY DRAIN 5



STORM DRAIN 1

STATE OF OHIO
DINESH KUMAR PALANISWAMY E-72394
REGISTERED PROFESSIONAL ENGINEER
January 10, 2025

CIVIL
YARD PIPING
PROFILES

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	1/17/25	ADDED DOWNSPOUT TRUNK CONNECTIONS	RGS
2			
3			
4			
5			

Jones & Henry Engineers, Ltd.
Fluid thinking®.
www.JHeng.com

JOB NO. 039-8084.003
SCALE 1"=20'
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
DKP	BJD	

STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024

SHEET NO.
C-3.5
33 of 182

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	BASE	FLOOR	NORTH		EAST		SOUTH		WEST		CEILING			REMARKS
				MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	HEIGHT	
2-4	Room														
2-BIOSOLIDS HANDLING BUILDING															
2-1	BIOSOLIDS HANDLING ROOM	N/A	LH	METAL	PT	METAL	PT	METAL	PT	METAL	PT	N/A	N/A	N/A	
2-2	ELECTRICAL ROOM	N/A	LH	CMU	PT	CMU	PT	CMU	PT	CMU	PT	GYP. BD.	WHITE	N/A	2-HR FIRE RATED CEILING. PAINT BOTH SIDES OF CMU WALLS
3-BIOSOLIDS STORAGE BUILDING															
3-1	BIOSOLIDS STORAGE	N/A	LH	METAL	PT	METAL	PT	METAL	PT	METAL	PT	N/A	N/A	N/A	
5-ADMINISTRATION BUILDING															
5-1	FRONT LOBBY	EPOXY	EPOXY	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	ACT	WHITE	10'-0"	
5-2	HALLWAY	EPOXY	EPOXY	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	ACT	WHITE	10'-0"	
5-3	SUPERVISOR OFFICE	EPOXY	EPOXY	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	ACT	WHITE	10'-0"	
5-4	CONFERENCE ROOM	EPOXY	EPOXY	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	ACT	WHITE	10'-0"	
5-5	LAB	EPOXY	EPOXY	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	ACT	WHITE	10'-0"	
5-6	UNISEX REST ROOM	EPOXY	EPOXY	GYP. BD.	VINYL	GYP. BD.	VINYL	GYP. BD.	VINYL	GYP. BD.	VINYL	ACT	WHITE	10'-0"	
5-7	CHIEF OPERATOR OFFICE	EPOXY	EPOXY	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	ACT	WHITE	10'-0"	
5-8	MAIN CORRIDOR HALLWAY	EPOXY	EPOXY	GYP. BD.	PT	GYP. BD./CMU	PT	CMU	PT	GYP. BD.	PT	ACT	WHITE	10'-0"	
5-9	LUNCH/BREAK AREA	EPOXY	EPOXY	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	ACT	WHITE	10'-0"	
5-10	CLOSET	EPOXY	EPOXY	CMU	PT	GYP. BD.	VINYL	GYP. BD.	VINYL	GYP. BD.	VINYL	ACT	WHITE	10'-0"	
5-11	ELECTRICAL ROOM	EPOXY	EPOXY	CMU	PT	CMU	PT	CMU	PT	CMU	PT	GYP. BD.	PT	10'-0"	2-HR RATED CEILING
5-13	LOCKER AREA	EPOXY	EPOXY	CMU	PT	CMU	PT	GYP. BD.	PT	GYP. BD.	PT	ACT	WHITE	10'-0"	
5-14	FULL REST ROOM	EPOXY	EPOXY	GYP. BD.	VINYL	CMU	PT	GYP. BD.	VINYL	GYP. BD.	VINYL	ACT	WHITE	10'-0"	
5-15	LOCKER AREA	EPOXY	EPOXY	GYP. BD.	PT	CMU	PT	GYP. BD.	PT	GYP. BD.	PT	ACT	WHITE	10'-0"	
5-16	FULL REST ROOM	EPOXY	EPOXY	GYP. BD.	VINYL	CMU	PT	GYP. BD.	VINYL	GYP. BD.	VINYL	ACT	WHITE	10'-0"	
5-17	RECORDS STORAGE	EPOXY	EPOXY	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	ACT	WHITE	10'-0"	
5-18	OPERATORS OFFICE	EPOXY	EPOXY	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	GYP. BD.	PT	ACT	WHITE	10'-0"	
5-19	HVAC EQUIPMENT/GENERAL STORAGE ROOM	EPOXY	EPOXY	GYP. BD.	PT	GYP. BD.	PT	CMU	PT	GYP. BD.	PT	ACT	WHITE	10'-0"	
5-20	GARAGE	EPOXY	EPOXY	CMU	PT	CMU	PT	CMU	PT	CMU	PT	EXP.	N/A	N/A	

NOTES:
1. THE EXPOSED METAL FRAMING OF THE BIOSOLIDS HANDLING, BIOSOLIDS STORAGE AND ADMINISTRATION GARAGE BUILDINGS ARE TO BE PAINTED PER SPECIFICATION 09900.
2. THE INTERIOR METAL STUD WALLS OF THE RESTROOMS AND CLOSET SHALL HAVE VINYL BACKED GYPSUM BOARD AS INDICATED BY "VINYL" FOR THE FINISH IN THE FINISH SCHEDULE.

EPOXY - INDICATES A RESINOUS FLOOR COATING PER SPECIFICATION 096723.
PT - INDICATES PAINTED SURFACE PER SPECIFICATION 09900.
LH - INDICATES LIQUID FLOOR HARDENER PER SPECIFICATION 03300.
N/A - INDICATES NOT APPLICABLE

3

STATE OF OHIO
ANDREW R. KNOPP
17352
REGISTERED ARCHITECT

Andrew R. Knopp License #1817352
Expiration Date 12/31/2025

THOMAS PORTER ARCHITECTS

ARCHITECTURAL
SCHEDULES AND DETAILS

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
3	1/8/25	SCHEDULE UPDATES	JDN
2			
1			

Jones & Henry Engineers, Ltd.
Fluid thinking®...
www.JHeng.com

JOB NO.: 039-8084.003

SCALE:

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
JDN	LKB	XXX

STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024

SHEET NO.
A-0.2
38 OF 182

C:\USERS\LBROWN\DOCUMENTS\8084003-RM_LBROWN@JHENG.COM.RVT
1/7/2025 11:38:03 AM

CODE REVIEW - ADMINISTRATION BUILDING

BUILDING OFFICIAL JURISDICTION:	2024 OHIO BUILDING CODE 2021 NATIONAL ELECTRICAL CODE 2021 NATIONAL PLUMBING CODE 2021 NATIONAL MECHANICAL CODE ACCESSIBILITY CODE: ICC/ANSI A117.1 2017
PROJECT DESCRIPTION:	THE PROJECT SCOPE OF WORK INCLUDES THE CONSTRUCTION OF A NEW ADMINISTRATION BUILDING AND MISCELLANEOUS SOLIDS HANDLING FACILITIES FOR THE CITY OF GREENVILLE, OH. THE NEW ADMINISTRATION BUILDING WILL BE A TYPE IIB CONSTRUCTION, HAVE SEPARATED MIXED-USE GROUPS B & S-2, AND WILL NOT BE EQUIPPED WITH A FIRE SUPPRESSION SYSTEM OR FULL NOTIFICATION FIRE ALARM SYSTEM.
PROJECT ADDRESS:	209 N. OHIO STREET GREENVILLE, OHIO 45331

OBC-CHAPTER 3, USE AND OCCUPANCY:		
SECTION 304.1:	BUSINESS, GROUP B ADMINISTRATIVE OFFICES (NS)	
SECTION 311.3:	LOW-HAZARD STORAGE, GROUP S-2 PARKING GARAGE (NS)	
OBC-CHAPTER 4, SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY:		
SECTION 406.3.2:	SEPARATION. FOR OTHER THAN PRIVATE GARAGES ADJACENT TO DWELLING UNITS, THE SEPARATION OF PRIVATE GARAGES FROM OTHER OCCUPANCIES SHALL COMPLY WITH SECTION 508.	
SECTION 406.2.8:	MIXED OCCUPANCIES AND USES. MIXED USES SHALL BE ALLOWED IN THE SAME BUILDING AS PUBLIC PARKING GARAGES AND REPAIR GARAGES IN ACCORDANCE WITH SECTION 508.1. MIXED USES IN THE SAME BUILDING AS AN OPEN PARKING GARAGE ARE SUBJECT TO SECTIONS 402.4.2.3, 406.5.11, 508.1, 510.3, 510.4 AND 510.7.	
OBC-CHAPTER 5, GENERAL BUILDING HEIGHTS AND AREAS:		
TABLE 504.3/504.4/506.2/506.3:	ALLOWABLE BUILDING HEIGHT / # OF STORIES / AREA FACTOR OCCUPANCY CLASSIFICATION: B / S-2 (NON-SEPARATED) CONSTRUCTION TYPE: 2B, NON-SPRINKLERED (NS)	
ALLOWABLE BUILDING DATA:	55' / 3 STORY / 23,000 SF	
ACTUAL BUILDING DATA:	22' / 1 STORY / 5,540 GSF B ADMINISTRATIVE OFFICE AREAS: 3,510 GSF S-2 GARAGE AREAS: 2,030 GSF	
TABLE 508.4:	OCCUPANCY: B/S-2 (NS) REQUIRED SEPARATION: 2 HOUR	3
SECTION 508.4.4	SEPARATION. INDIVIDUAL OCCUPANCIES SHALL BE SEPARATED FROM ADJACENT OCCUPANCIES IN ACCORDANCE WITH TABLE 508.4.	
SECTION 508.4.4.1	CONSTRUCTION. REQUIRED SEPARATIONS SHALL BE FIRE BARRIERS CONSTRUCTED IN ACCORDANCE WITH SECTION 707 OR HORIZONTAL ASSEMBLIES CONSTRUCTED IN ACCORDANCE WITH SECTION 711, OR BOTH, SO AS TO COMPLETELY SEPARATE ADJACENT OCCUPANCIES.	
OBC-CHAPTER 6, TYPE OF CONSTRUCTION:		TYPE IIB
TABLE 601:	STRUCTURAL FRAME:	0 HR
	BEARING (EXTERIOR) WALLS:	0 HR
	BEARING (INTERIOR) WALLS:	0 HR
	NON BEARING WALLS:	0 HR
	FLOOR CONSTRUCTION:	0 HR
	ROOF CONSTRUCTION:	0 HR

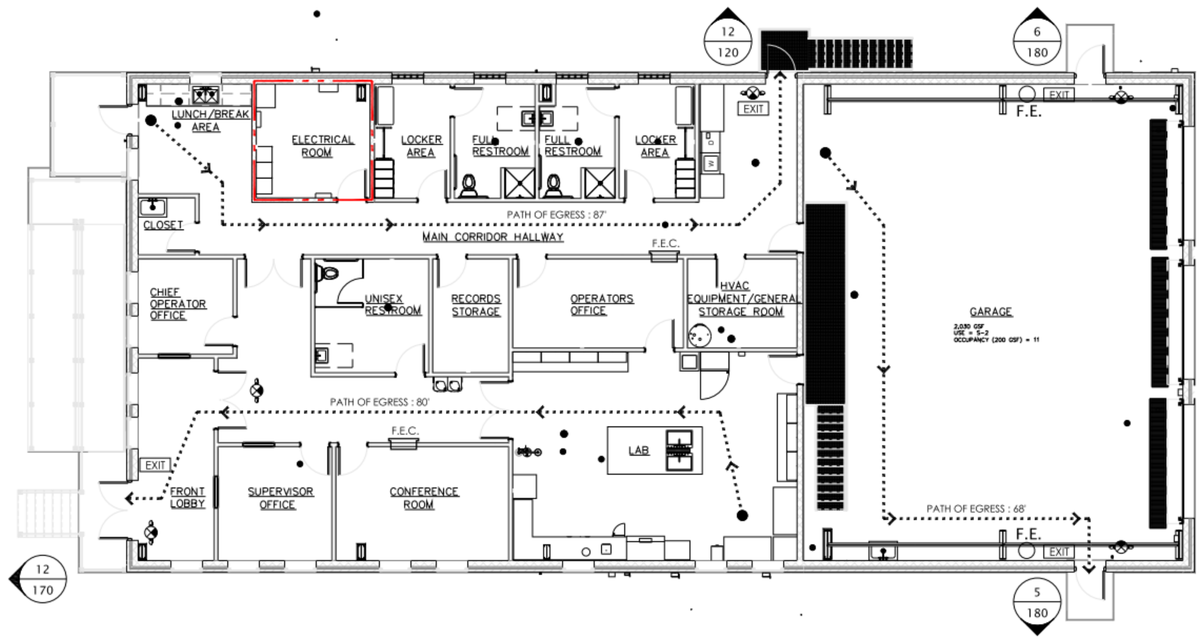
OBC-CHAPTER 7, FIRE & SMOKE PROTECTION		
TABLE 705.5:	CONSTRUCTION TYPE: IIB, GROUP B / S-2	
FIRE SEPARATION DISTANCE = X (FEET)	X< 5:	1 HR
	5 <X< 10:	1 HR
	10 <X< 30:	0 HR
	X> 30:	0 HR
SECTION 707.3.9	SEPARATED OCCUPANCIES. WHERE THE PROVISIONS OF SECTION 508.4 ARE APPLICABLE, THE FIRE BARRIER SEPARATING MIXED OCCUPANCIES SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN THAT INDICATED IN TABLE 508. 4 BASED ON THE OCCUPANCIES BEING SEPARATED.	3
TABLE 716.1(2)	FIRE BARRIER: 2 HR MINIMUM FIRE DOOR RATING: 1 1/2 HR DOOR VISION PANEL SIZE: 100 SQ. IN.	
TABLE 721.1(2)	3-1.3 LIMESTONE, CINDERS OR AIR-COOLED SLAG MIN. FINISHED THICKNESS FACE-TO-FACE = 7.625" FIRE RATING = 4 HOURS	
	4-1.1 CARBONATE AGGREGATE CONCRETE MIN. FINISHED THICKNESS FACE-TO-FACE = 8" FIRE RATING = 4 HOURS	

OBC-CHAPTER 8, INTERIOR FINISHES:			
SECTION 803.1.1	CLASS A - FLAME SPREAD INDEX 0- 25	SMOKE DEVELOPED INDEX 0- 450	
	CLASS B - FLAME SPREAD INDEX 26- 75	SMOKE DEVELOPED INDEX 0- 450	
	CLASS C - FLAME SPREAD INDEX 76-200	SMOKE DEVELOPED INDEX 0- 450	
TABLE 803.11:	INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY FOR USE GROUP B/S-2, NON-SPRINKLED FACILITY:	(USE B, NS)	(USE S-2, NS)
	EXIT ENCLOSURES AND EXIT PASSAGEWAYS	A	B
	CORRIDORS	B	B
	ROOMS AND ENCLOSED SPACES	C	C
CHAPTER 9, FIRE PROTECTION SYSTEMS:			
SECTION 903.2.10	NOT REQUIRED, NOT PROVIDED		
SECTION 906.1	PORTABLE FIRE EXTINGUISHERS: WHERE REQUIRED PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED: - IN GROUP B / S-2 OCCUPANCIES		
SECTION 907.2.10	NOT REQUIRED, NOT PROVIDED		
OBC-CHAPTER 10, MEANS OF EGRESS:			
TABLE 1004.5	ACCESSORY MECHANICAL ROOM AREAS:	300 SF / GROSS	
	BUSINESS AREAS:	150 SF / GROSS	
	PARKING GARAGE AREAS:	200 SF / GROSS	
CALCULATED OCCUPANT LOAD:	ADMINISTRATIVE OFFICE AREAS:	3,510 GSF = 24 OCCUPANTS	
	PARKING GARAGE AREAS:	2,030 GSF = 11 OCCUPANTS	
TABLE 1017.2	OCCUPANCY: B / NS / MAX TRAVEL DIST.: 200 FEET OCCUPANCY: S-2 / NS / MAX TRAVEL DIST.: 300 FEET		
OBC-CHAPTER 11, ACCESSIBILITY:			
1103.1:	WHERE REQUIRED. SITES, BUILDINGS, STRUCTURES, FACILITIES, ELEMENTS AND SPACES, TEMPORARY OR PERMANENT, SHALL BE ACCESSIBLE TO INDIVIDUALS WITH DISABILITIES.		

CHAPTER 29, PLUMBING SYSTEMS:		
TABLE 2902.1	MIN. REQUIRED :	USE: B | WC: 1/25 | LAV: 1/40 | DF: 1/100 | SERV. SK.: 1 USE: S-2 | WC: 1/100 | LAV: 1/100 | DF: 1/1000 | SERV. SK.: 1
	ACTUAL PROVIDED:	| WC: 3/35 | LAV: 3/35 | DF: 2/35 | SERV. SK.: 2
SECTION 2902.3.2	LOCATION OF TOILET FACILITIES IN OCCUPANCIES OTHER THAN MALLS. IN OCCUPANCIES OTHER THAN COVERED AND OPEN MALL BUILDINGS, THE REQUIRED PUBLIC AND EMPLOYEE TOILET FACILITIES SHALL BE LOCATED NOT MORE THAN ONE STORY ABOVE OR BELOW THE SPACE REQUIRED TO BE PROVIDED WITH TOILET FACILITIES, AND THE PATH OF TRAVEL TO SUCH FACILITIES SHALL NOT EXCEED A DISTANCE OF 500 FEET (152 M).	

LIFE SAFETY LEGEND

EXIT	TACTILE EXIT SIGN IN COMPLIANCE WITH ICC A117.1, SECTION 703. MOUNTING HEIGHT = 48" AFF TO CHARACTER BASELINE. MINIMUM CHARACTER HEIGHT = 5/8".
PATH OF EGRESS	ROOM NAME / 000 — ROOM NAME AND NUMBER
EXIT / XXX — EGRESS LOAD SPLIT BETWEEN TWO EXIT ROUTES	
EXIT / XXX — TOTAL OCCUPANT LOAD FROM SPACE	16 / 240 — ACTUAL OCCUPANT LOAD FOR THIS EXIT; ALLOWABLE OCCUPANT LOAD FOR THIS EXIT
F.E.C.	FIRE EXTINGUISHER AND CABINET; EXISTING
	1-HOUR FIRE RATING
F.E.	BRACKET MOUNTED FIRE EXTINGUISHER
	2-HOUR FIRE RATING
	EXIT SIGNAGE - SEE ELEC. DRAWINGS
SD	SMOKE DETECTOR - BY FIRE ALARM CONTRACTOR
	EGRESS LIGHTING - SEE ELECTRICAL DRAWINGS
X	ROOM OCCUPANT LOAD AND ROOM AREA



ADMINISTRATIVE BUILDING LIFE SAFETY PLAN
SCALE: 1/8" = 1'-0"

ANDREW R. KNAPP — 17352 — REGISTERED ARCHITECT
Andrew R. Knapp License # 1817352
Expiration Date 12/31/2025

THOMAS PORTER ARCHITECTS

ADMINISTRATION BUILDING
ARCHITECTURAL
LIFE SAFETY PLAN

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
3	1/14/25	CODE UPDATES	ARK

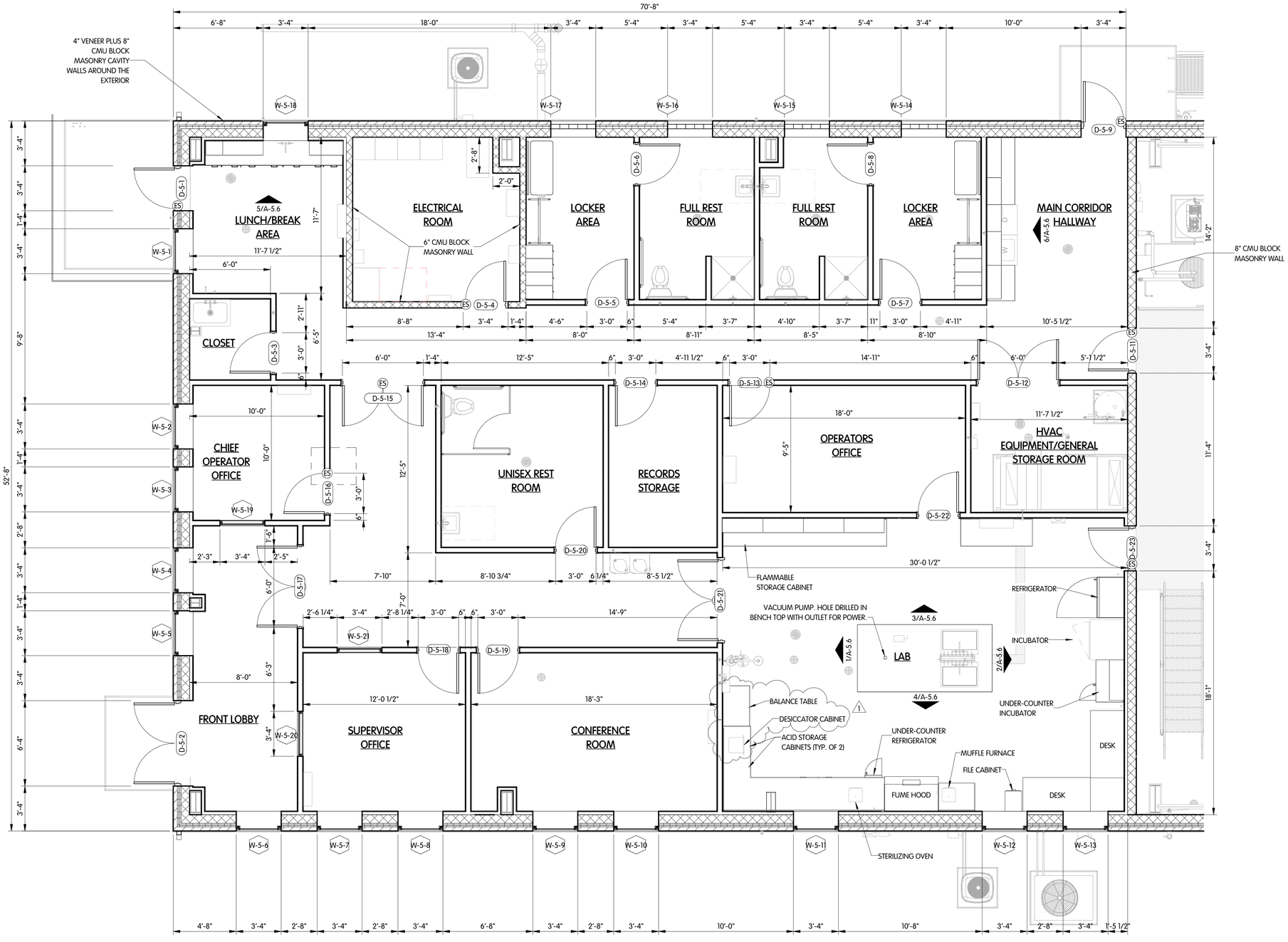
Jones & Henry Engineers, Ltd.
Fluid thinking®...
www.JHeng.com

JOB NO.:	039-8084.003
SCALE:	1/8" = 1'-0"
	THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
JDN	BJD	XXX

STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024
SHEET NO.
A-5.1
48 OF 182

C:\USERS\LBROWN\DOCUMENTS\8084003-RM_LBROWN@JHENG.COM.RVT
1/7/2025 11:38:09 AM



NOTE: DIMENSION ARE PROVIDE FROM EXTERIOR FACE OF MASONRY

PLAN AT EL. 1012.00 - NORTH

1/4" = 1'-0"

KEY PLAN

STATE OF OHIO
ANDREW R. KNAPP
17352
REGISTERED ARCHITECT
Andrew R. Knapp License #1817352
Expiration Date 12/31/2025

THOMAS PORTER ARCHITECTS

ADMINISTRATION BUILDING ARCHITECTURAL PLAN AT EL. 1012.00 - NORTH

CITY OF GREENVILLE, OHIO

WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	1/4/25	LAB UPDATES	HSL

Jones & Henry Engineers, Ltd.
Fluid thinking®...
www.JHeng.com

JOB NO.:	039-8084.003
SCALE:	1/4" = 1'-0"

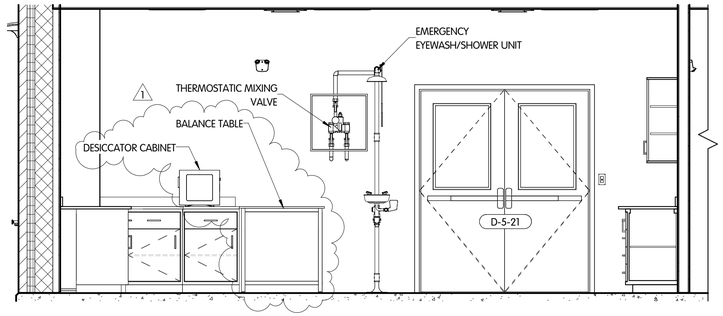
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
JDN	LKB	XXX

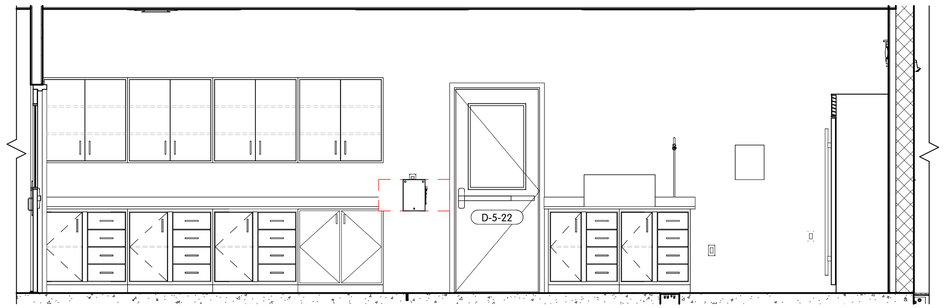
STATUS:	ISSUED FOR BID
DATE:	NOVEMBER 2024

SHEET NO.

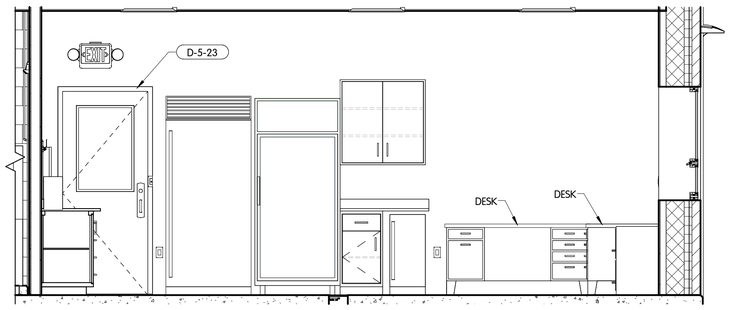
A-5.2



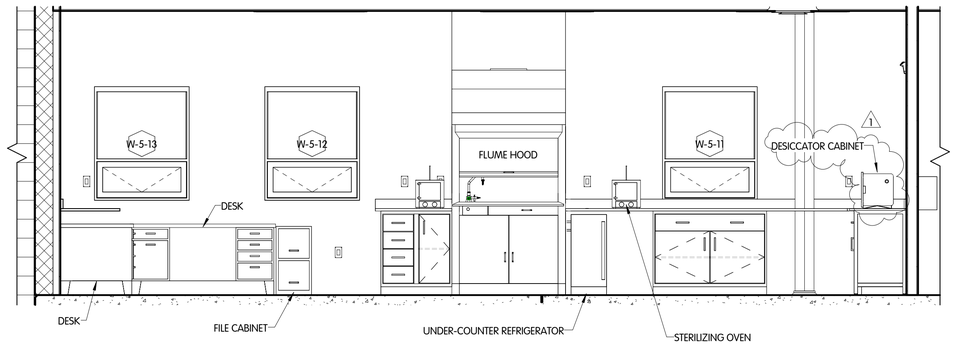
1 NORTH ELEVATION - LAB INTERIOR
3/8" = 1'-0"



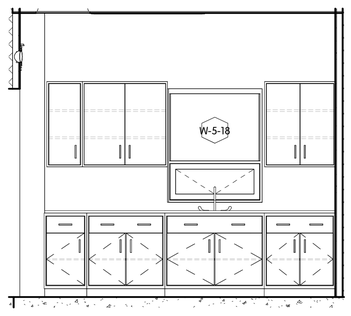
3 EAST ELEVATION - LAB INTERIOR
3/8" = 1'-0"



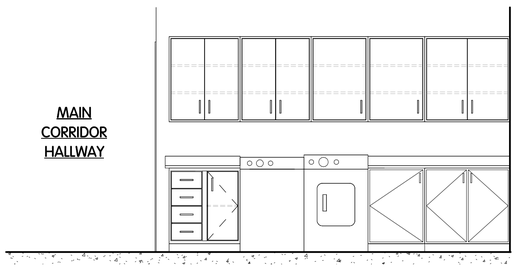
2 SOUTH ELEVATION - LAB INTERIOR
3/8" = 1'-0"



4 WEST ELEVATION - LAB INTERIOR
3/8" = 1'-0"



5 EAST ELEVATION - LUNCH/BREAK INTERIOR
3/8" = 1'-0"



6 NORTH ELEVATION - MAIN HALLWAY/LAUNDRY INTERIOR
3/8" = 1'-0"

NOTE: LABORATORY FURNITURE AND EQUIPMENT ARE SPECIFIED IN SECTION 11600. MODEL NUMBER ON DRAWINGS REPRESENT JAMESTOWN METAL PRODUCT. IF OTHER MANUFACTURERS ARE SELECTED, CONTRACTOR SHALL SUBMIT LAYOUT FOR APPROVAL BY OWNER AND ENGINEER.

STATE OF OHIO
ANDREW R. KNOPP
17352
REGISTERED ARCHITECT
Andrew R. Knopp License #1817352
Expiration Date 12/31/2025

THOMAS PORTER ARCHITECTS

ADMINISTRATION BUILDING
ARCHITECTURAL
ELEVATIONS

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	1/8/25	LAB UPDATES	HSL

Jones & Henry Engineers, Ltd.
Fluid thinking®...
www.JHeng.com

JOB NO.:	039-8084.003
SCALE:	3/8" = 1'-0"

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
JDN	LKB	XXX

STATUS:	ISSUED FOR BID
DATE:	NOVEMBER 2024

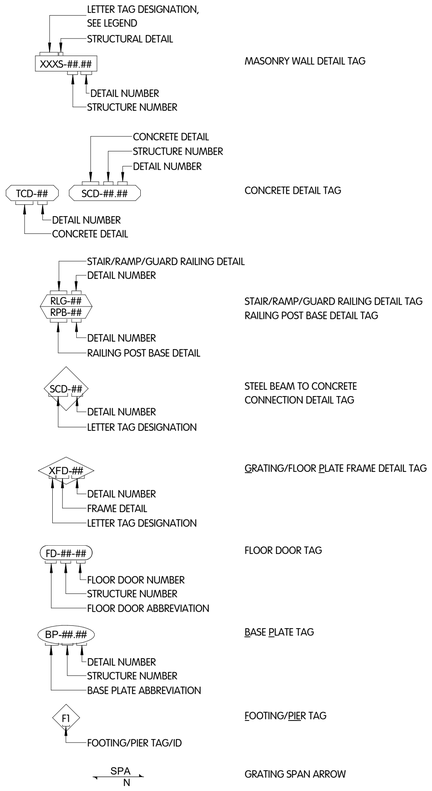
SHEET NO.
A-5.6
53 OF 182

C:\USERS\LBROWN\DOCUMENTS\8084003-RM_LBROWN@JHENG.COM.RVT
1/10/2025 7:11:25 AM

STRUCTURAL TAG LEGEND

TCD	-TYPICAL CONCRETE DETAILS
SCD	-STANDARD CONCRETE DETAILS
GFD	-GRATING FRAME DETAILS
PFD	-FLOOR PLATE FRAMES DETAILS
GSD	-GRATING SUPPORT DETAILS
STR	-STAIR RAILING DETAILS
RLG	-GUARD RAILING DETAILS
RPB	-RAILING POSE BASE DETAILS
PWTS	-PARAPET WALL TOP DETAILS, STRUCTURAL
WBS	-WALL BASE DETAILS, STRUCTURAL
WPCS	-WALL/PLANK CONNECTION DETAILS, STRUCTURAL
WTCS	-WALL/TRUSS CONNECTION DETAILS, STRUCTURAL

STRUCTURAL SHEET SYMBOLS



STRUCTURAL ABBREVIATIONS

ALUM	ALUMINUM
B	BOTTOM
BLDG	BUILDING
C/C	CENTER TO CENTER
CJ	CONTROL JOINT
CSJ	CONSTRUCTION JOINT
CONC	CONCRETE
DBR	DOWEL BAR REPLACMENT
DIA	DIAMTER
DEG	DEGREES
DIAG	DIAGONAL
DL	DEAD LOAD
EL	ELEVATION
EMB	EMBEDMENT
EXPJT	EXPANSION JOINT
EXT	EXTERIOR
EXIST	EXISTING
FRP	FIBER REINFORCED PLASTIC
FTG	FOOTING
GALV	GALVANIZED
HORIZ	HORIZONTAL
INT	INTERIOR
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
NTS	NOT TO SCALE
O/O	OUT TO OUT
REINF	REINFORCING
SL	SNOW LOAD
SS	STAINLESS STEEL
STD	STANDARD
T	TOP
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
WL	WIND LOAD
WS	WATERSTOP

TYPICAL STRUCTURAL NOTES

1. THE CONSTRUCTION SHALL CONFORM TO THE TYPICAL STRUCTURAL NOTES, DETAILS AND SCHEDULES, UNLESS NOTED OTHERWISE. TYPICAL NOTES, DETAILS AND SCHEDULES ARE PREFIXED WITH THE WORD "TYPICAL".
2. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SUPERVISION AND CONTROL OF DEWATERING OPERATIONS TO ENSURE THAT STABILITY OF EXCAVATED AND CONSTRUCTED SLOPES ARE NOT ADVERSELY AFFECTED BY INFLOW OF GROUNDWATER AND TO PERMIT PLACEMENT AND CURING OF CONCRETE UNDER CONTROLLED ENVIRONMENTS.
3. BACKFILL SHALL NOT BE PLACED AGAINST CONCRETE TANK OR RETAINING WALLS PRIOR TO PLACEMENT OF TOP SLAB AND ADJACENT WALLS, AND SHALL NOT BE BACKFILLED PRIOR TO 28 DAYS AFTER PLACEMENT, UNLESS IT IS DEMONSTRATED THAT FIELD CURED TEST SPECIMENS HAVE REACHED THE CONCRETE DESIGN STRENGTH, OR CONTRACTOR INSTALLS ADEQUATE SHORING. SHORING SHALL BE THE CONTRACTORS RESPONSIBILITY AND INSTALLED AT NO EXTRA COST TO OWNER.
4. BACKFILL UNDERNEATH BASE SLABS AND FOOTINGS SHALL BE SPECIAL BACKFILL, UNLESS OTHERWISE APPROVED. BACKFILL SHALL BE PLACED IN ACCORDANCE WITH THE SPECIFICATION 02200 AND SHALL BE WELL COMPACTED TO NOT LESS THAN 100% MAXIMUM DRY DENSITY IN ACCORDANCE WITH THE STANDARD PROCTOR TEST ASTM D-698.
5. VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND CONDITIONS AT THE INTERFACE BETWEEN EXISTING & NEW CONSTRUCTION PRIOR TO DETAILING STRUCTURAL STEEL OR REINFORCMENT. NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
6. THE CONTRACTOR SHALL ENSURE THAT FOUNDATIONS REST ON FIRM SOIL MATERIAL. THE TESTING LAB SHALL VERIFY THAT THE SOIL BEARING CAPACITY LISTED BY THE "STRUCTURAL DESIGN DATA" TABLE IS OBTAINED PRIOR TO FOUNDATION PLACEMENT. THE BEARING CAPACITY VERIFICATION IS REQUIRED AT REGULAR INTERVALS IN EACH DIRECTION. NOTIFY THE ENGINEER OF ANY UNSUITABLE SOIL ENCOUNTERED. SUCH SOIL SHALL BE REMOVED AND REPLACED PER SPECIFICATION 02200.
7. DURING EXCAVATION OPERATIONS THE CONTRACTOR SHALL PREVENT THE UNDERMINING OF, AND DAMAGE TO, NEARBY NEW AND EXISTING STRUCTURES, AND UTILITIES, WITH SOIL SUPPORT METHOD SUCH AS SHEET PILING, SHAFT CONSTRUCTION, SOIL NAILING, UNDERPINNING, SOLIDER PILE & LAGGING, OR OTHER SOIL SUPPORT METHODS. THE NEARBY STRUCTURES SHALL BE MONITORED FOR SETTLEMENT WHILE THE EXCAVATION REMAINS OPEN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF SOIL SUPPORT AND UNDERPINNING METHODS. WHEN SHEET PILING OR OTHER SOIL SUPPORT STRUCTURES RETAIN MORE THAN 20 FEET OF SOIL, THE CONTRACTOR SHALL EMPLOY A PROFESSIONAL ENGINEER TO DESIGN THE SUPPORT. THE CONTRACTOR'S EMPLOYED ENGINEER SHALL SUBMIT SEALED CALCULATIONS AND DRAWINGS TO THE ENGINEER OF RECORD.
8. WHEN TEMPORARY SOIL SUPPORT STRUCTURES ARE SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND SHALL EMPLOY A PROFESSIONAL ENGINEER TO DESIGN THE SUPPORT. THE TEMPORARY SUPPORT SHALL BE SHEET PILING OR OTHER TYPE OF SUPPORT STRUCTURE, AS REQUIRED TO SAFELY SUPPORT THE SOIL WHILE ACCOMMODATING THE FACILITY'S CONSTRUCTION. THE NEARBY STRUCTURES SHALL BE MONITORED FOR SETTLEMENT UNTIL THE FOUNDATION IS CONSTRUCTED AND BACKFILLED, AND THE SOIL SUPPORT IS REMOVED. THE CONTRACTOR'S EMPLOYED ENGINEER SHALL SUBMIT SEALED CALCULATIONS AND DRAWINGS TO THE ENGINEER OF RECORD.
9. METAL BUILDING FOUNDATIONS ARE BASED ON PRELIMINARY COLUMN REACTIONS AND MAY REQUIRED MODIFICATION BASED ON FINAL COLUMN REACTIONS GIVEN WITH THE METAL BUILDING SHOP DRAWINGS. FOUNDATION REVISIONS DUE TO THE FINAL REACTIONS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER. METAL BUILDING ANCHOR BOLT PLAN AND COLUMN REACTIONS SHOP DRAWINGS SHALL BE SUBMITTED AND APPROVED BY ENGINEER PRIOR TO FOUNDATION CONSTRUCTION.

STRUCTURAL DESIGN DATA

BUILDING CODE	2024 OHIO BUILDING CODE	
RISK CATEGORY	UNLESS NOTED OTHERWISE ADMINISTRATION BUILDING	= III = II
USE GROUP	UNLESS NOTED OTHERWISE ADMINISTRATION BUILDING DIGESTER TANKS	= F-2 = B AND S-2 = U
CONSTRUCTION TYPE		= 2-B
FLOOR	LIVE LOAD, UNLESS NOTED OTHERWISE ADMINISTRATION BUILDING	= 200 PSF = 100 PSF
ROOF	LIVE LOAD MECHANICAL & ELECTRICAL	= 20 PSF (MIN.) = 10 PSF
SNOW	GROUND SNOW LOAD TOP CHORD DEAD LOAD BOTTOM CHORD LIVE LOAD BOTTOM CHORD DEAD LOAD	= P_G = 20 PSF = C_E = 1.0 = I_S = 1.1 = C_T = 1.0
WIND	BASIC WIND SPEED WIND EXPOSURE	= 115 MPH = C
SEISMIC	SEISMIC IMPORTANCE FACTOR SITE CLASS SEISMIC DESIGN CATEGORY DESIGN SPECTRAL RESPONCE ACCELERATIONS ANALYSIS PROCEDURE	= IE = 1.25 = D = B = S_{DS} = 0.224 = S_{D1} = 0.128 = EQUIVALENT LATERAL FORCE
STAIRS	LIVE LOAD, UNLESS OTHERWISE NOTED	= 100 PSF
GRATING	LIVE LOAD, UNLESS OTHERWISE NOTED	= 100 PSF
PLATFORM	LIVE LOAD, UNLESS OTHERWISE NOTED	= 100 PSF
SOILS	NET DESIGN BEARING CAPACITY	= VARIES, REFER TO AGGREGATE PIER PLAN, SHEET S-0.0
CONCRETE	DESIGN STRENGTH AT 28 DAY	= 4500 PSI
FLOOD	100 YEAR ELEVATION	= 1012.00
DATUM		NAVD 1988

3

CONCRETE BEAM SCHEDULE

TAG/ID	SIZE WIDTH	SIZE DEPTH	REINFORCEMENT TOP CONT.	REINFORCEMENT TOP ADDITIONAL	REINFORCEMENT BOTTOM CONT.	REINFORCEMENT BOTTOM ADDITIONAL	STIRRUPS SIZE	STIRRUPS SPACING EACH END	NOTES
2-BIOSOLIDS HANDLING BUILDING									
CB-2.1	14"	24"	(3)#5	-	(4)#7	(4)#7	#3	@18" ACROSS BEAM LENGTH	SEE DETAIL 2.13 ON SHEET S-2.7
CB-2.2	14"	24"	(3)#7	(3)#7	(4)#7	(4)#7	#3	@10" ACROSS BEAM LENGTH	SEE DETAIL 2.13 ON SHEET S-2.7
CB-2.3	14"	14"	(3)#6	-	(3)#6		#3	@12" ACROSS BEAM LENGTH	SEE DETAIL 2.13 ON SHEET S-2.7
3-BIOSOLIDS STORAGE BUILDING									
CB-3.1	26"	30"							SEE DETAIL SCD-3.03 ON SHEET S-3.4
5-ADMINISTRATION BUILDING									
CB-5.1	14"	14"							SEE DETAIL SCD-5.05 ON SHEET S-5.6

FLOOR DOOR SCHEDULE

TAG / ID	SIZE (LXW)	FUNCTION	NOTES
2-BIOSOLIDS HANDLING BUILDING			
FD-2-1	48" X 48"		
FD-2-2	36" X 36"		
FD-2-3	48" X 48"		

PIPE PENETRATION SCHEDULE

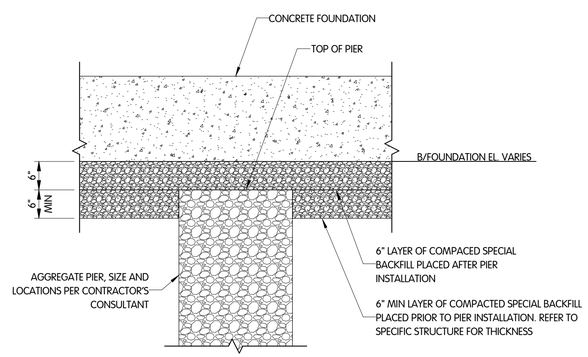
TAG/ID	SIZE	TYPE	CL PIPE EL (UNO)	CONNECTION	USE
1-AEROBIC DIGESTERS					
	4"	TYPE A		FL X FL	TD
	4"	TYPE A		FL X FL	TD
	4"	TYPE A		FL X FL	TD
	4"	TYPE A		FL X FL	TD
	4"	TYPE A		FL X FL	TD
	4"	TYPE A		FL X FL	TD
	4"	TYPE A		FL X FL	TD
	4"	TYPE A		FL X FL	FI
	4"	TYPE A		FL X FL	TD
	4"	TYPE A		FL X FL	TD
PP-1-1	6"	TYPE C	1019.33	N/A	A
PP-1-2	4"	TYPE A	1015.00	FL X FL	SL
PP-1-3	6"	TYPE A	1012.92	FL X FL	WAS
PP-1-4	8"	TYPE D	---	N/A	TD
PP-1-5	8"	TYPE D	---	N/A	TD
PP-1-6	4"	TYPE A	1013.50	FL X FL	SL
PP-1-7	6"	TYPE A	1012.92	FL X FL	WAS
PP-1-8	6"	TYPE C	1019.33	N/A	A
PP-1-9	4"	TYPE A	1015.00	FL X FL	SL
PP-1-10	8"	TYPE D	---	N/A	TD
PP-1-11	8"	TYPE D	---	N/A	TD
PP-1-12	6"	TYPE C	1019.33	N/A	A
PP-1-13	4"	TYPE A	1015.00	FL X FL	SL
PP-1-14	8"	TYPE D	---	N/A	TD
PP-1-15	8"	TYPE D	---	N/A	TD
PP-1-16	6"	TYPE A	1012.92	FL X FL	WAS
2-BIOSOLIDS HANDLING BUILDING					
PP-2-1	6"	TYPE A	1012.67	FL X FL	WAS
PP-2-2	4"	TYPE A	1010.67	FL X FL	TD

PIPE PENETRATION SCHEDULE

TAG/ID	SIZE	TYPE	CL PIPE EL (UNO)	CONNECTION	USE
PP-2-3	6"	TYPE D	---	N/A	V
PP-2-4	6"	TYPE D	---	N/A	SL
PP-2-5	6"	TYPE D	---	N/A	FI
PP-2-6	6"	TYPE D	---	N/A	FI
PP-2-7	6"	TYPE D	---	N/A	DS
PP-2-8	6"	TYPE D	---	N/A	WAS
PP-2-9	8"	TYPE D	---	N/A	A
PP-2-10	4"	TYPE A	1010.63	FL X FL	TD
PP-2-11	6"	TYPE A	1010.50	FL X FL	FI
PP-2-12	6"	TYPE A	1010.50	FL X FL	FI
PP-2-13	12"	TYPE A	1008.16	FL X FL	SA
PP-2-13	6"	TYPE A	1008.16	FL X FL	FI
PP-2-14	12"	TYPE A	1007.94	FL X FL	SA
PP-2-15	6"	TYPE A	1007.00	FL X FL	DS
PP-2-16	12"	TYPE A	1006.47	FL X FL	SA
PP-2-17	6"	TYPE A	1007.00	FL X FL	DS
PP-2-18	6"	TYPE A	1008.00	FL X FL	WAS
PP-2-19	8"	TYPE A	1007.00	FL X FL	A
PP-2-20	6"	TYPE A	1008.33	FL X FL	SA
PP-2-21	4"	TYPE D	---	N/A	A
PP-2-22	4"	TYPE D	---	N/A	SA
PP-2-23	4"	TYPE D	---	N/A	SA
PP-2-24	4"	TYPE D	---	N/A	SA
PP-2-25	4"	TYPE D	---	N/A	SA
PP-2-26	4"	TYPE D	---	N/A	SL
PP-2-27	4"	TYPE D	---	N/A	SL
PP-2-28	6"	TYPE A	1013.90	FL X FL	FI
PP-2-29	6"	TYPE A	1013.90	FL X FL	FI

PIPE PENETRATION SCHEDULE NOTES:

1. 4" AND LARGER PENETRATIONS SCHEDULED ONLY. PENETRATIONS SMALLER THAN 4" NOT SCHEDULED.



NOTES:
ALL STRUCTURE FOUNDATIONS SHALL BE SUPPORTED BY AGGREGATE PIER'S. REFER TO SPECIFICATION 02330.

AGGREGATE PIER DETAIL
3/4" = 1'-0"

NOTE:
SCHEDULES ARE NOT GUARANTEED TO BE COMPLETE. ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR WHETHER OR NOT LISTED IN THE FOLLOWING SCHEDULE.

STATE OF OHIO
JEAN-PIERRE D. NASSAUX
E-64177
REGISTERED PROFESSIONAL ENGINEER
1/10/2025

STRUCTURAL LEGEND, ABBREVIATIONS, NOTES, AND SCHEDULES

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	BY
3	1/8/25	JDN
2	USE GROUP UPDATE	
1	REVISIONS AFTER ISSUED FOR BID	

Jones & Henry Engineers, Ltd.
Fluid thinking®...
www.JHeng.com

JOB NO.: 039-8084.003
SCALE: AS INDICATED
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
JDN	LKB	XXX

STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024
SHEET NO.
S-0.1
56 OF 182

C:\USERS\LBROWN\DOCUMENTS\8084003-RVT_LBROWN@JHENG.COM.RVT
1/7/2025 11:38:21 AM

PIPE SYSTEM LEGEND

SYSTEM NAME	ABBREVIATION
AIR	A
COMPRESSED AIR	CA
CONDENSATE DRAIN	CON
DIGESTER SLUDGE	DS
DOMESTIC COLD WATER	DCW
DOMESTIC HOT WATER	DHW
DOMESTIC TEMPERED WATER	DTW
DOMESTIC WASTE	SA
EQUIPMENT DRAIN	ED
FERRIC/FERROUS CHLORIDE	FC
FILTRATE	FI
HOT WATER RETURN	HWR
NATURAL GAS	NG
NON-POTABLE WATER	NPW
POLYMER	P
REFRIGERANT	REF
SANITARY VENT	V
SLUDGE	SL
TANK DRAIN	TD
WASTE ACTIVATED SLUDGE	WAS

VALVE SCHEDULE

TAG/ID	SIZE	TYPE	CONNECTION	OPERATOR	USE	SERVICE
1-AEROBIC DIGESTER TANKS						
BFV-109	4"	BFV	FL	TW	A	O-C
BFV-110	4"	BFV	FL	TW	A	O-C
BFV-111	4"	BFV	FL	TW	A	O-C
BFV-112	4"	BFV	FL	TW	A	O-C
BFV-113	4"	BFV	FL	TW	A	O-C
BFV-114	4"	BFV	FL	TW	A	O-C
BFV-115	4"	BFV	FL	TW	A	O-C
BFV-116	4"	BFV	FL	TW	A	O-C
BFV-117	4"	BFV	FL	TW	A	O-C
MV-100	8"	MV	FL	HW	TD	O-C
MV-101	8"	MV	FL	HW	TD	O-C
MV-102	8"	MV	FL	HW	TD	O-C
PV-109	4"	PV	FL	TW	SL	O-C
PV-110	4"	PV	FL	TW	SL	O-C
PV-111	4"	PV	FL	TW	SL	O-C
PV-123	4"	PV	FL	TW	SL	O-C
TSV-100	8"	TSV	FL	RHW	TD	MO
TSV-101	8"	TSV	FL	RHW	TD	MO
TSV-102	8"	TSV	FL	RHW	TD	MO
2-BIOSOLIDS HANDLING BUILDING						
3PV-119	6"	3PV	FL	TW	FI	O-C
BFV-100	8"	BFV	FL	TW	A	O-C
BFV-101	8"	BFV	FL	TW	A	O-C
BFV-102	8"	BFV	FL	TW	A	O-C
BFV-103	8"	BFV	FL	TW	A	O-C
BFV-104	8"	BFV	FL	M	A	O-C
BFV-105	10"	BFV	FL	M	A	O-C
BFV-106	6"	BFV	FL	M	A	M
BFV-107	6"	BFV	FL	M	A	M
BFV-108	6"	BFV	FL	M	A	M
BFV-122	10"	BFV	FL	M	A	O-C
CV-100	4"	CV	FL	N/A	DS	N/A
CV-101	4"	CV	FL	N/A	DS	N/A
CV-102	4"	CV	FL	N/A	DS	N/A
CV-103	6"	CV	FL	N/A	DS	N/A
CV-104	6"	CV	FL	N/A	DS	N/A
PV-100	6"	PV	FL	TW	WAS	O-C
PV-101	6"	PV	FL	TW	WAS	O-C
PV-102	6"	PV	FL	TW	WAS	O-C
PV-103	6"	PV	FL	TW	WAS	O-C
PV-104	6"	PV	FL	TW	WAS	O-C
PV-105	6"	PV	FL	TW	WAS	O-C
PV-106	4"	PV	FL	TW	DS	O-C
PV-107	4"	PV	FL	TW	DS	O-C
PV-108	4"	PV	FL	TW	DS	O-C
PV-112	6"	PV	FL	TW	DS	O-C
PV-113	6"	PV	FL	TW	DS	O-C
PV-114	4"	PV	FL	TW	SL	O-C
PV-115	4"	PV	FL	TW	SL	O-C
PV-116	6"	PV	FL	TW	DS	O-C
PV-117	6"	PV	FL	TW	DS	O-C
PV-118	6"	PV	FL	TW	SL	O-C
PV-124	6"	PV	FL	C	DS	O-C
PV-125	6"	PV	FL	TW	DS	O-C
PV-126	6"	PV	FL	C	DS	O-C
PV-127	6"	PV	FL	TW	SL	O-C
5-ADMINISTRATION BUILDING						
BWV-100	6"	BWV	STD	N/A	SA	N/A

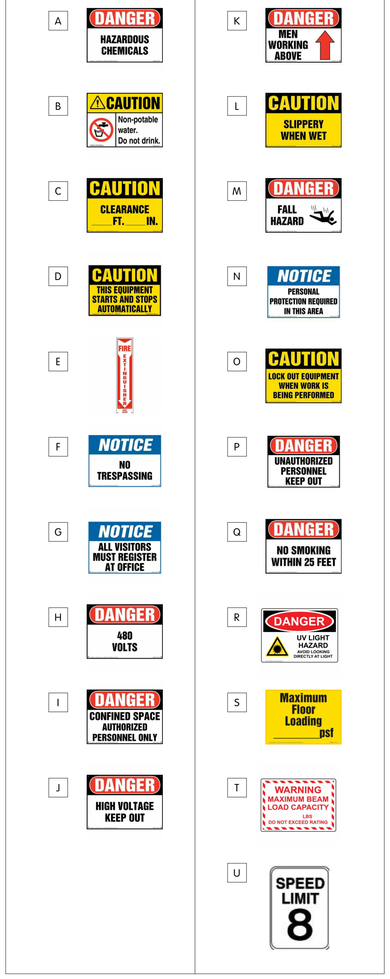
3

VALVE SCHEDULE NOTES:
1. 4" AND LARGER VALVES SCHEDULED ONLY. VALVES SMALLER THAN 4" NOT SCHEDULED.
2. SEE G-0.2 FOR STANDARD AND PIPING ABBREVIATIONS.

OPERATOR DESIGNATION
C - CHAIN
FB - FLOOR BOX
FS - FLOOR STAND
G - GEAR
HW - HANDWHEEL
L - LEVER
MO - MOTOR OPERATED
RHW - RIGHT ANGLE HANDWHEEL
TW - TEE WRENCH
VB - VALVE BOX

SERVICE DESIGNATION
M - MODULATION
O-C - OPEN CLOSE

SIGNS

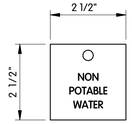


* NOT ALL SIGNS USED

SIGN TAG DESCRIPTION

E	LOCATED AT ALL FIRE HYDRANTS
F	QUANTITY AS DIRECTED BY OWNER (PERIMETER FENCE)
G	LOCATED AT MAIN GATE
H	LOCATED AT GENERATORS AND TRANSFORMERS
J	LOCATED AT MAIN TRANSFORMER AND AT GENERATOR
Q	LOCATED AT GENERATOR
U	POST SPEED LIMIT OF 8 MPH. LOCATED AT BIOSOLIDS STORAGE BUILDING. PLACE SIGN 6 FT ABOVE FLOOR ON CONCRETE WALL.

TAG DETAIL - NON POTABLE WATER



LOCATED AT ALL HOSE BIBS AND HYDRANTS INSIDE AND OUTSIDE OF STRUCTURES

STATE OF OHIO
DINESH KUMAR PALANISWAMY
E-72394
REGISTERED PROFESSIONAL ENGINEER
January 10, 2025

PIPING & EQUIPMENT
LEGEND, SCHEDULES, AND DETAILS

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

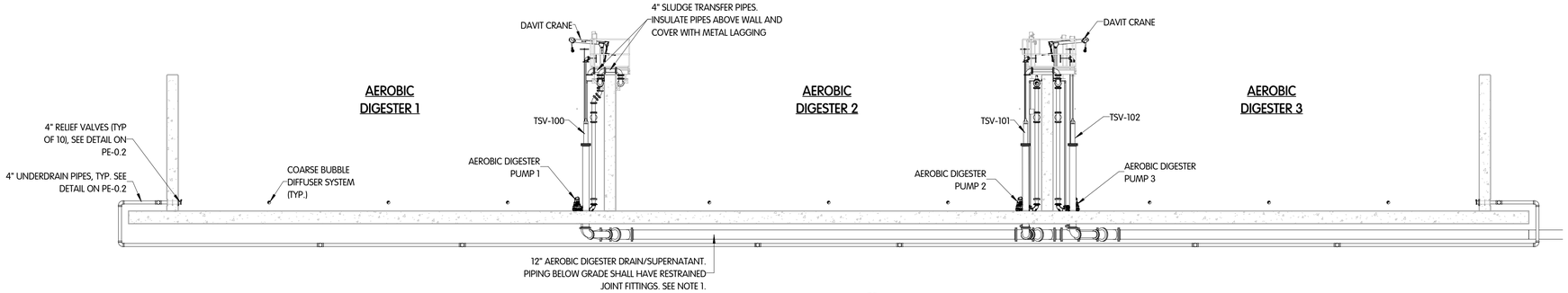
NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
3	1/8/25	VALVES REMOVED	HSL
2			
1			

Jones & Henry Engineers, Ltd.
Fluid thinking®...
www.JHeng.com

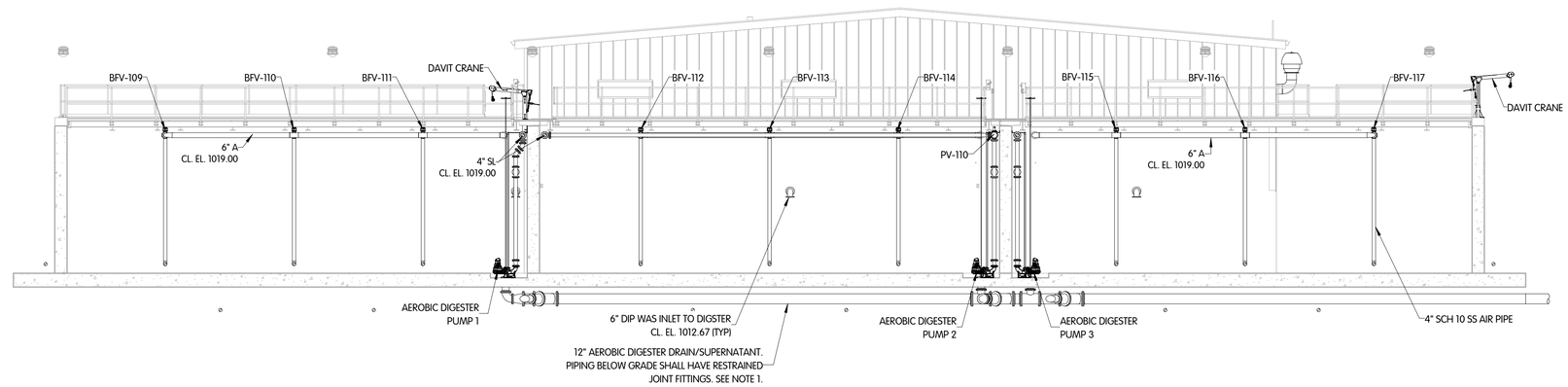
JOB NO.: 039-8084.003
SCALE: AS INDICATED
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
DKP	LKB	XXX

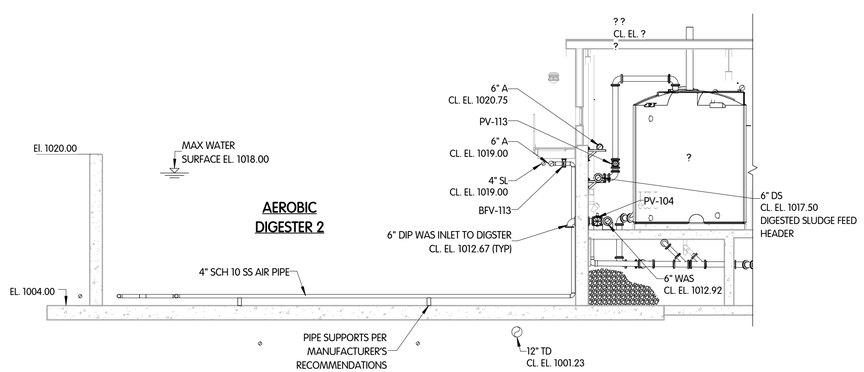
STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024
SHEET NO.
PE-0.1
93 OF 182



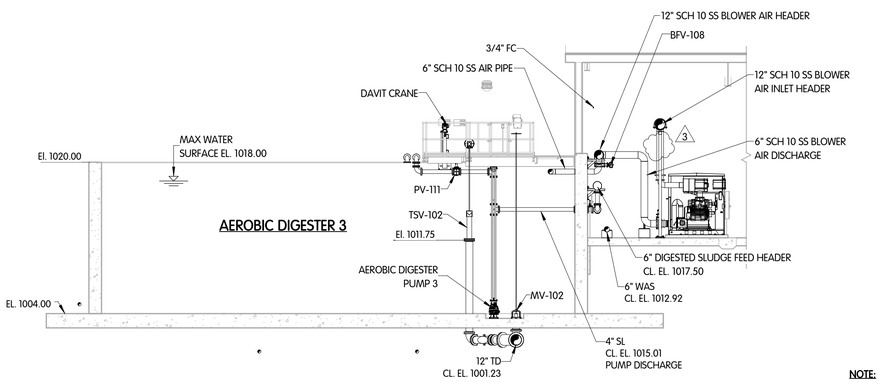
1 SECTION
1/8" = 1'-0"



2 SECTION
1/8" = 1'-0"



4 SECTION
1/8" = 1'-0"



3 SECTION
1/8" = 1'-0"

NOTE:

1. MANUFACTURED RESTRAINED JOINTS SHALL BE AMERICAN FLEX RING OR LOK RING, U.S. PIPE TR FLEX OR HP LOK, GRIFFIN SNAP-LOK OR CLOW SUPER LOCK OR EQUAL. RESTRAINING GASKET JOINTS SHALL BE ASSEMBLED WITH AMERICAN FAST-GRIP GASKETS OR U.S. PIPE FIELD LOK GASKET OR MCWANE SURE STOP 350 GASKET OR EQUAL.

STATE OF OHIO
DINESH KUMAR PALANISWAMY
E-72394
PROFESSIONAL ENGINEER
January 10, 2025

AEROBIC DIGESTER TANKS PIPING & EQUIPMENT SECTIONS

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	BY
3	1/8/25	HSL
2	VALVES REMOVED	
1	REVISIONS AFTER ISSUED FOR BID	

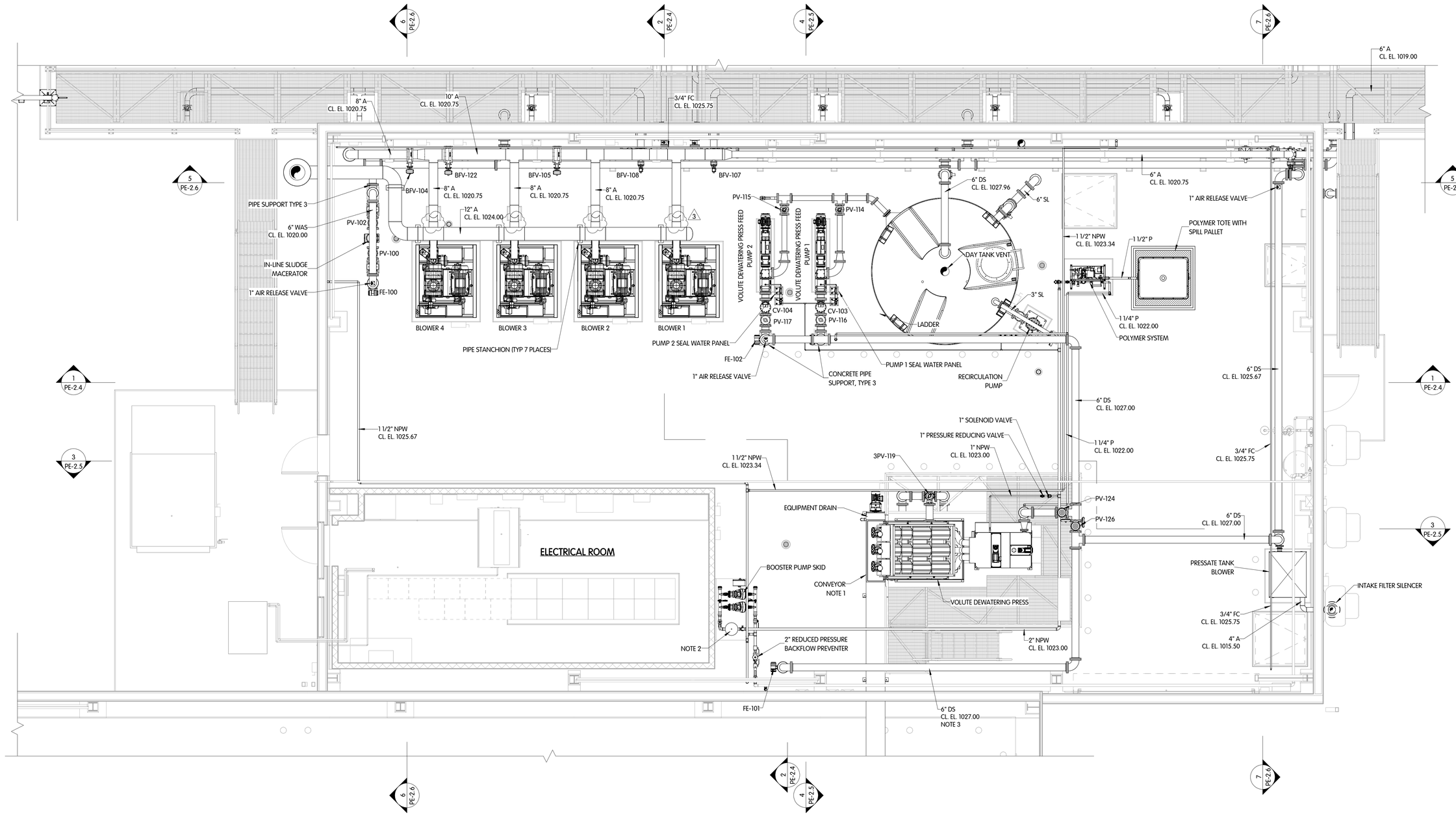
Jones & Henry Engineers, Ltd.
Fluid thinking®...
www.JHeng.com

JOB NO.: 039-8084.003
SCALE: 1/8" = 1'-0"
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
DKP	LKB	XXX

STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024
SHEET NO.
PE-1.3
97 OF 182

C:\USERS\LBROWN\DOCUMENTS\8084.003-RM_LBROWN@JHENG.COM.RVT
1/7/2025 11:38:43 AM



PLAN AT EL. 1030.00

1/4" = 1'-0"

NORTH

NOTES:

1. CONTRACTOR TO COORDINATE WITH PRESS AND CONVEYOR MANUFACTURER TO ENSURE THAT THE CHUTE DROP FROM PRESS ALIGNS WITH CONVEYOR SUCH THAT SOLIDS DROPPED FALL EXACTLY ON CONVEYOR.
2. DAY TANK ALIGNMENT SHALL BE COORDINATED AND CONFIRMED WITH TANK MANUFACTURER AND ENGINEER DURING SHOP DRAWINGS.
3. SLOPE THE TRUCK FILL SLUDGE PIPE AT A MINIMUM OF 1% TOWARDS DRAIN POINT.

C:\USERS\LBROWN\DOCUMENTS\8084003-RM_LBROWN@JHENG.COM.RVT
1/7/2025 11:38:56 AM

STATE OF OHIO
DINESH KUMAR PALANISWAMY
E-72394
REGISTERED PROFESSIONAL ENGINEER
January 10, 2025

BIOSOLIDS HANDLING BUILDING PIPING & EQUIPMENT PLAN AT EL. 1030.00

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	1/14/25	VALVES REMOVED	MSL

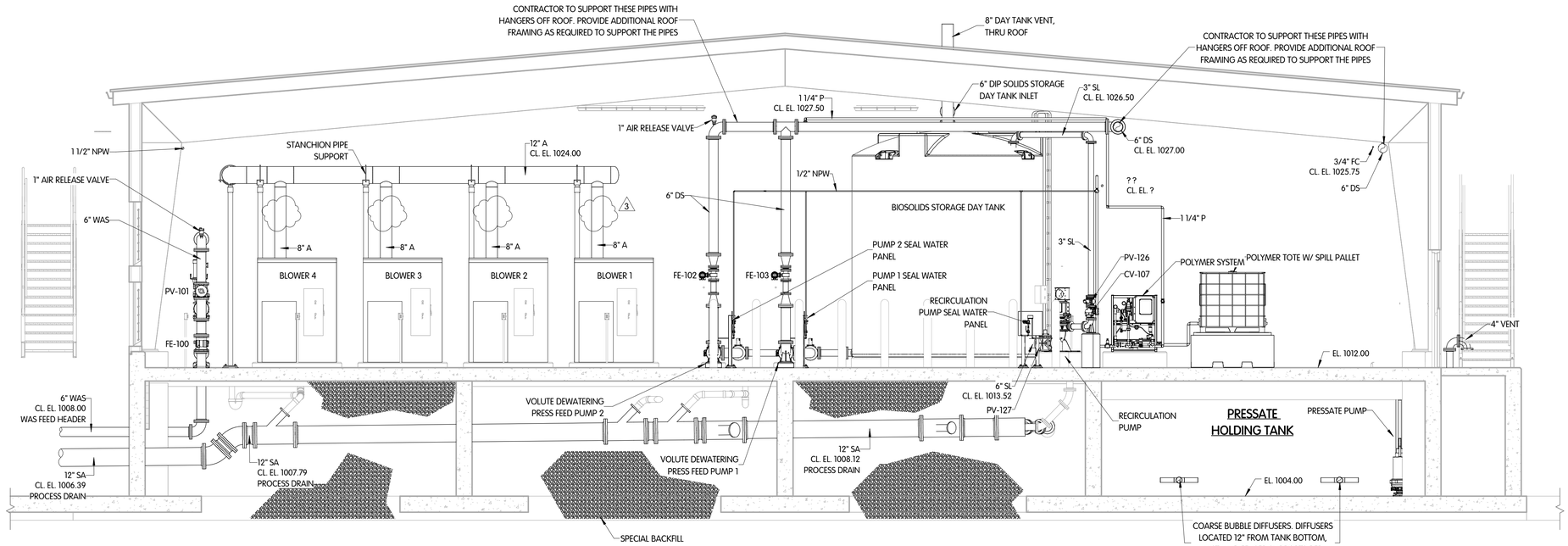
Jones & Henry Engineers, Ltd.
Fluid thinking®...
www.JHeng.com

JOB NO.:	039-8084.003
SCALE:	1/4" = 1'-0"

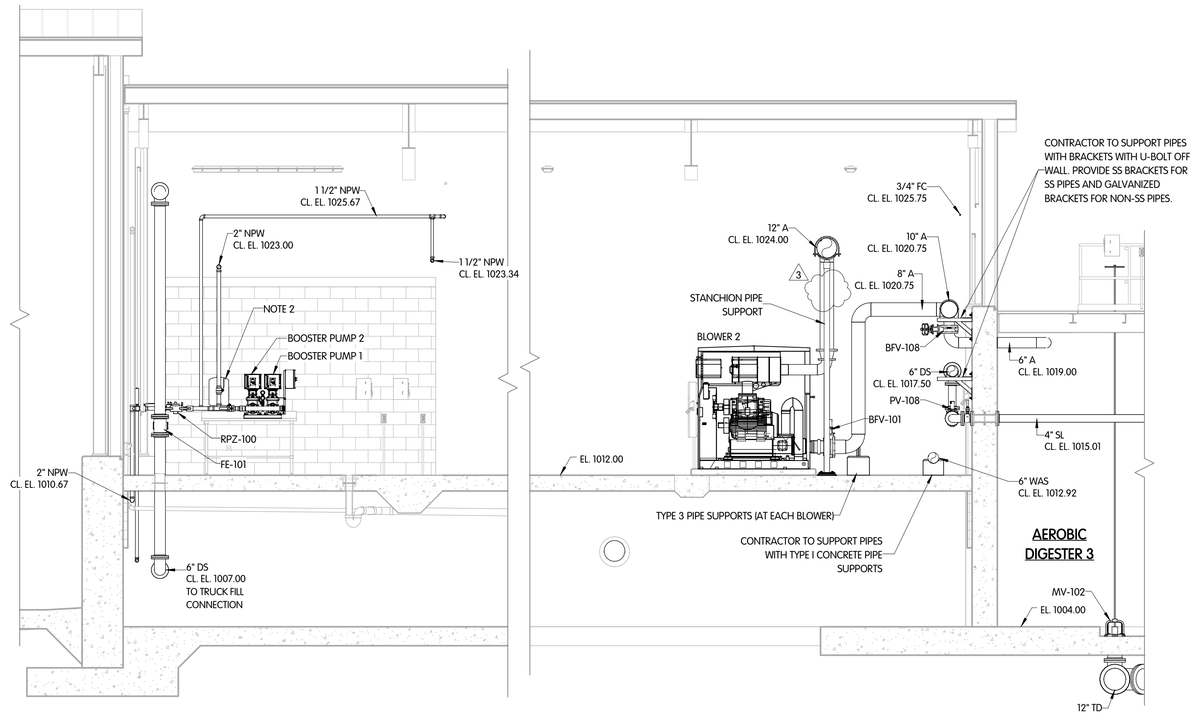
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
DKP	LKB	XXX

STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024
SHEET NO.
PE-2.3
100 OF 182



1 SECTION
1/4" = 1'-0"



2 SECTION
1/4" = 1'-0"

C:\USERS\LBROWN\DOCUMENTS\8084003-RM_LBROWN@JHENG.COM.RVT
1/7/2025 11:39:18 AM

STATE OF OHIO
DINESH KUMAR PALANISWAMY
E-72394
PROFESSIONAL ENGINEER
January 10, 2025

BIOSOLIDS HANDLING BUILDING PIPING & EQUIPMENT SECTIONS

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

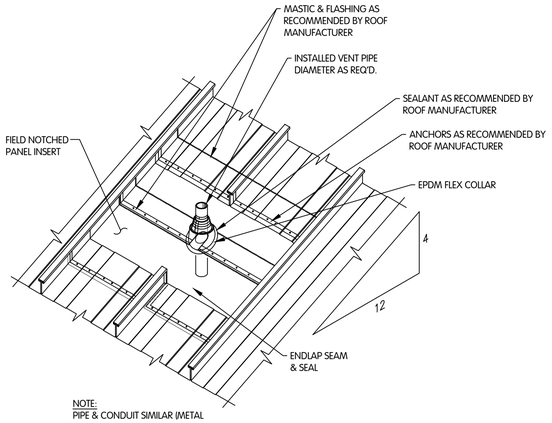
NO.	DATE	BY
1	1/14/25	MSL
2	VALVES REMOVED	
3	REVISIONS AFTER ISSUED FOR BID	

Jones & Henry Engineers, Ltd.
Fluid thinking®...
www.JHeng.com

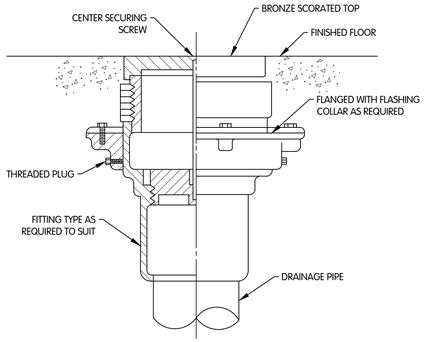
JOB NO.: 039-8084.003
SCALE: 1/4" = 1'-0"
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
DKP	LKB	XXX

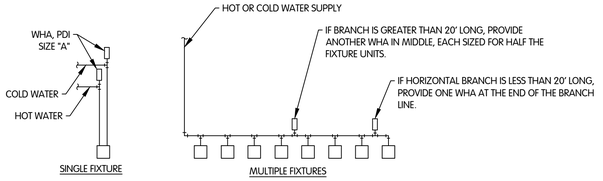
STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024
SHEET NO.
PE-2.4
101 OF 182



ROOF VENT PIPE DETAIL
NTS



FLOOR CLEANOUT DETAIL
NTS

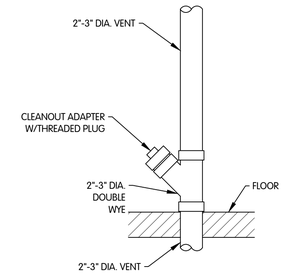


WATER HAMMER ARRESTER SIZE		
P.D.I. SIZE	PIPE SIZE (IN.)	FIXTURE UNITS (FU)
AA	1/2	1-3
A	1/2	1-11
B	3/4	12-32
C	1	33-60
D	1-1/4	61-113
E	1-1/2	114-154
F	2	155-330

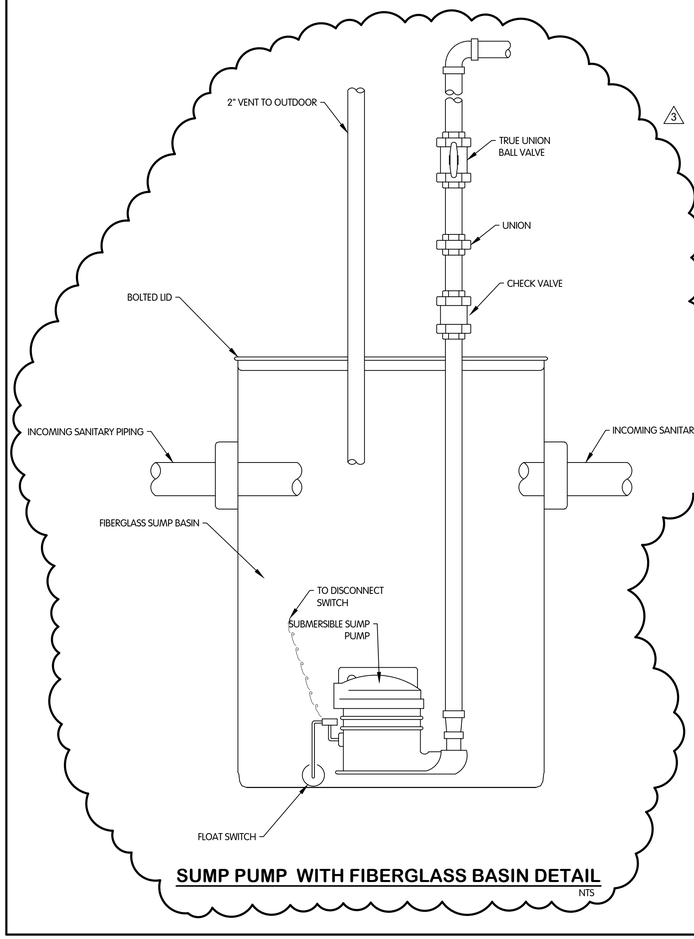
FIXTURE UNIT TABULATION		
FIXTURE	COLD	HOT
WATER CLOSET FLUSH VALVE	10	---
WATER CLOSET FLUSH TANK	5	---
URINAL FLUSH VALVE	5	---
SHOWER HEAD	3	3
SERVICE SINK/MOP SINK	2.25	2.25
LAVATORY	1.5	1.5
KITCHEN SINK	1	1
HOSE BIBB/WALL FAUCET	3	---
DRINKING FOUNTAIN	0.25	---

NOTE:
DO NOT PROVIDE AIR CHAMBERS. PROVIDE WATER HAMMER ARRESTERS BY PRECISION PLUMBING PRODUCTS, SIOUX CHIEF, WATTS, OR EQUAL, WITH PISTON AND O-RING CONSTRUCTION HAVING PDI #WH-201, ASSE #1010, AND ANSI #A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, NEVER IN THE UPSIDE DOWN POSITION. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS AS SHOWN ON THE DRAWINGS AND/OR PER TABLES SHOWN ABOVE. INSTALL PER PDI STANDARDS AND MANUFACTURER'S INSTRUCTIONS.

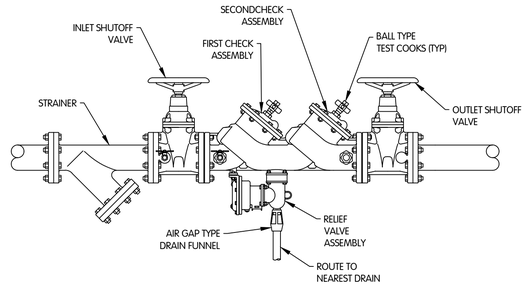
WATER HAMMER ARRESTER DETAIL
NTS



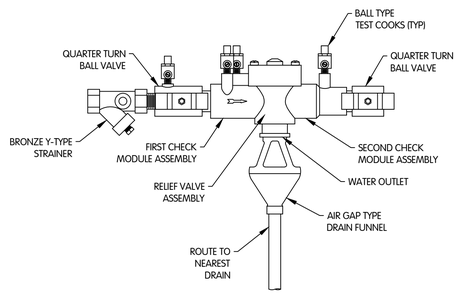
CLEANOUT IN VENT RISER DETAIL
NTS



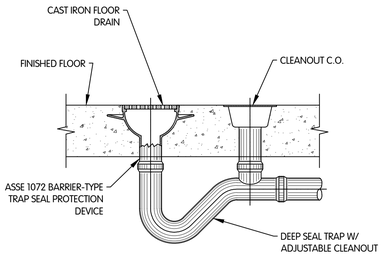
SUMP PUMP WITH FIBERGLASS BASIN DETAIL
NTS



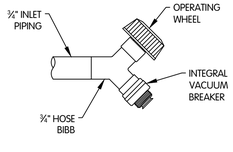
2 1/2 INCH AND LARGER BACKFLOW PREVENTER DETAIL
NTS



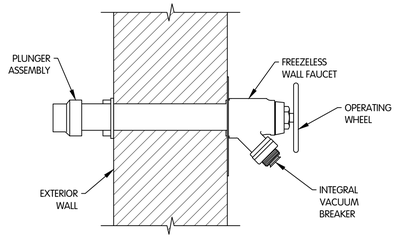
2 INCH AND SMALLER BACKFLOW PREVENTER DETAIL
NTS



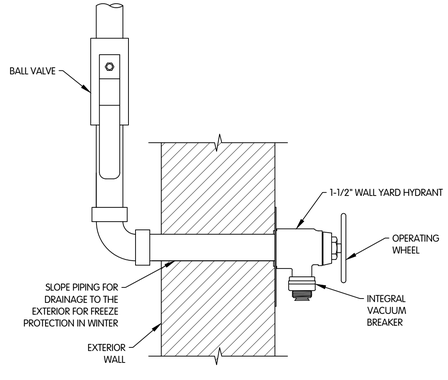
TYPE B FLOOR DRAIN DETAIL
NTS



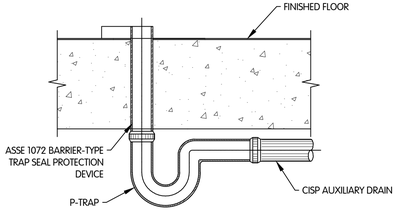
HOSE BIBB DETAIL
NTS



NON-FREEZE WALL HYDRANT DETAIL
NTS



WALL YARD HYDRANT DETAIL
NTS



EQUIPMENT DRAIN DETAIL
NTS

STATE OF OHIO
BRIAN D. LOHMANN
E-58395
1/10/2025
REGISTERED PROFESSIONAL ENGINEER

PLUMBING DETAILS

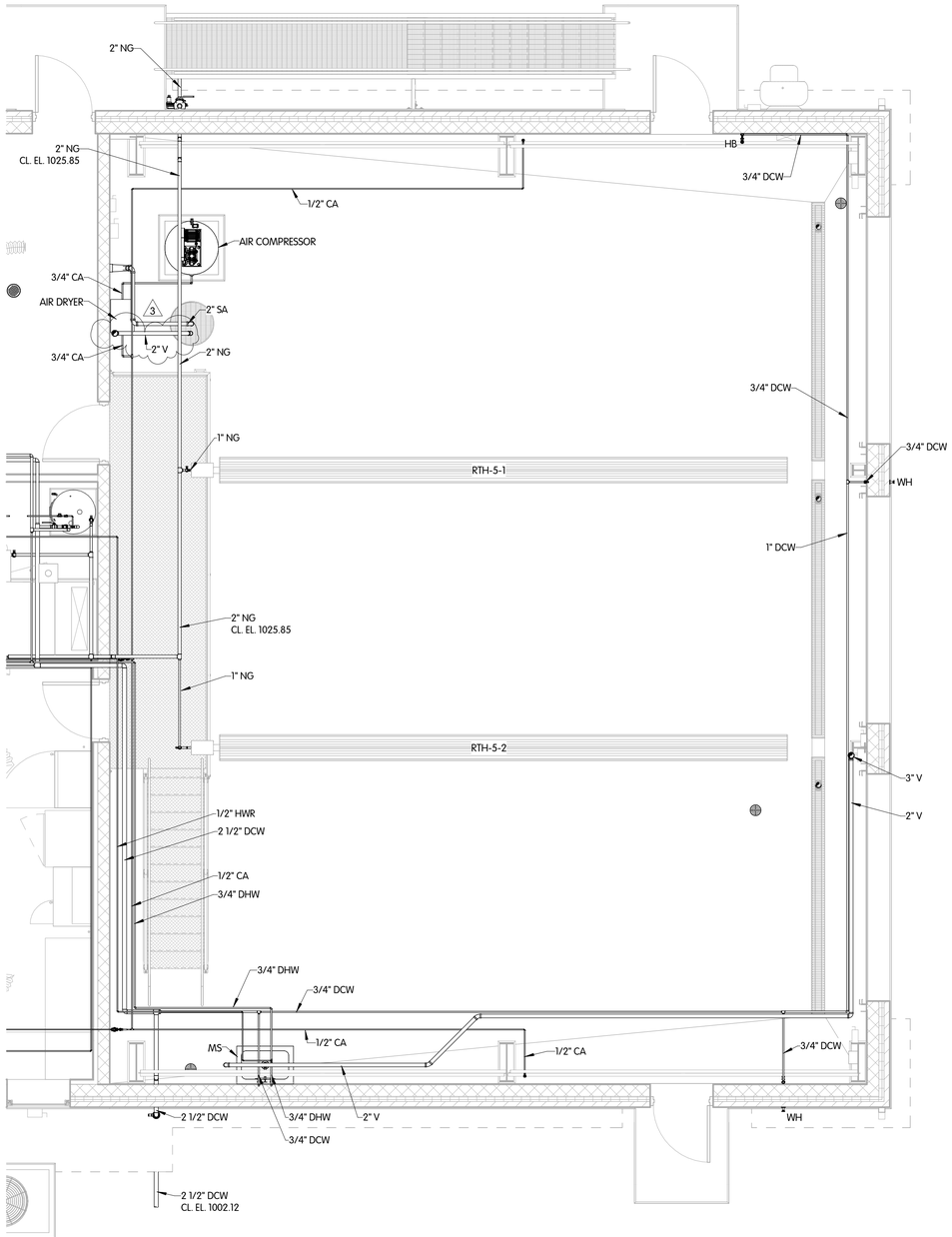
CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	1/8/25	SUMP PUMP DETAIL	ARB

Jones & Henry Engineers, Ltd.
Fluid thinking©.
www.JHeng.com

JOB NO.	039-8084.003
SCALE	AS NOTED
	THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE
DESIGNED	BDL
DRAWN	LKB
CHECKED	
STATUS:	ISSUED FOR BID
DATE:	NOVEMBER 2024
SHEET NO.	P-0.2
	110 OF 182

T:\DL-8084\003\01\P-0.2 DETAILS
1/7/2025 11:28 AM - LBROWN
1/7/2025 11:28 AM



PLAN CUT AT EL. 1018.00 - SOUTH

1/4" = 1'-0"

NORTH

KEY PLAN

C:\USERS\LBROWN\DOCUMENTS\8084003-RM_LBROWN@JHENG.COM.RVT
1/8/2025 11:52:18 AM

STATE OF OHIO
BRIAN D. LOHMANN
E-58395
1/8/2025
REGISTERED
PROFESSIONAL ENGINEER

ADMINISTRATION BUILDING
PLUMBING
PLAN CUT AT EL. 1018.00 - SOUTH

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
3	1/8/25	SUMP PUMP VENT	ASB

Jones & Henry Engineers, Ltd.

Fluid thinking®...
www.JHeng.com

JOB NO.:	039-8084.003
SCALE:	1/4" = 1'-0"

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
ASB	LKB	BDL

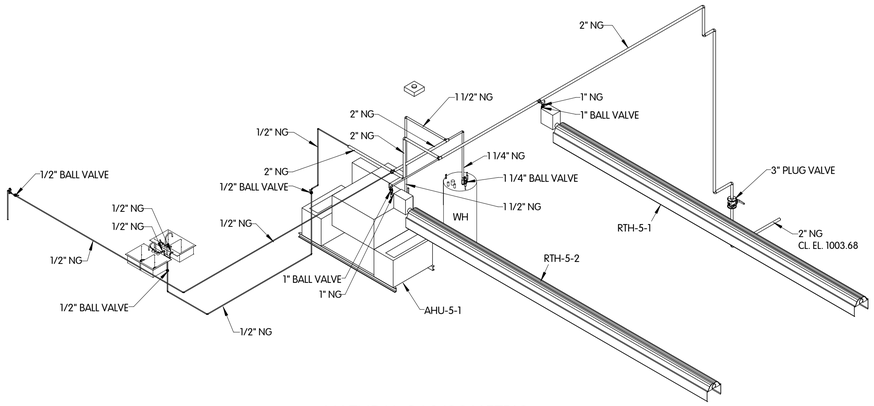
STATUS: ISSUED FOR BID

DATE: NOVEMBER 2024

SHEET NO.

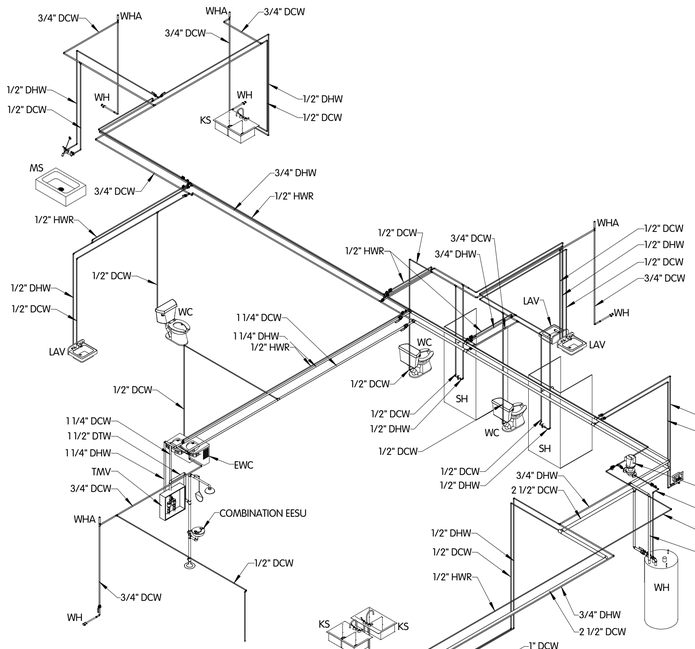
P-5.4

120 OF 182



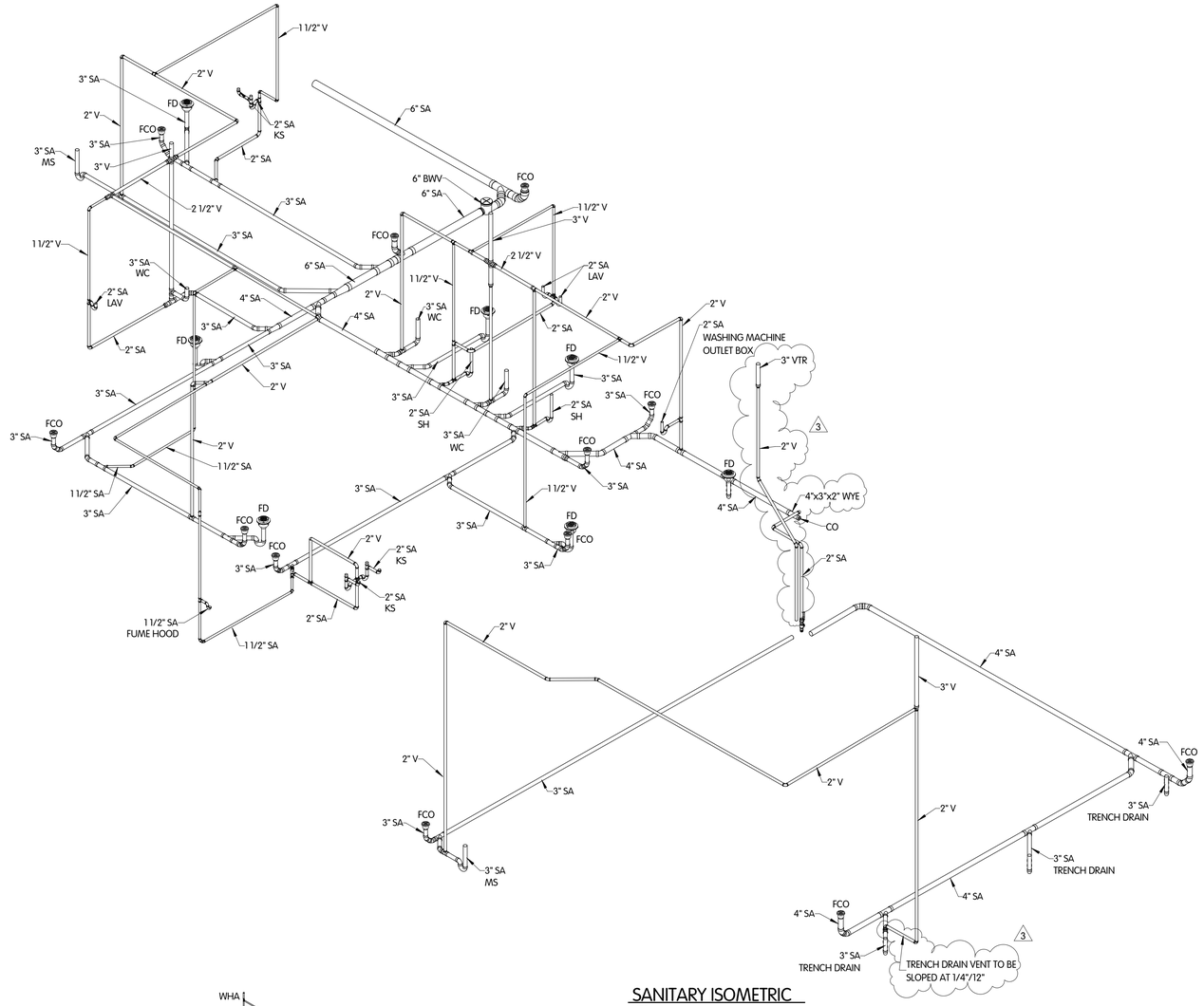
NATURAL GAS ISOMETRIC

NTS



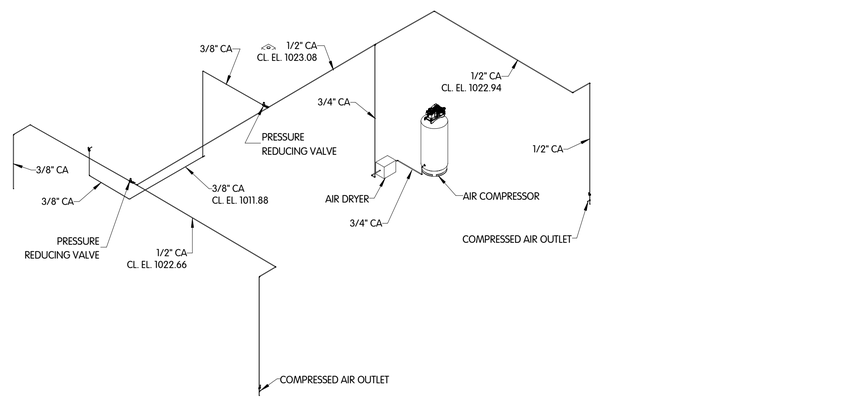
DOMESTIC WATER ISOMETRIC

NTS



SANITARY ISOMETRIC

NTS



COMPRESSED AIR ISOMETRIC

NTS

C:\USERS\LBROWN\DOCUMENTS\18084003-RM_LBROWN@JHENG.COM.RVT
1/7/2025 11:39:27 AM

STATE OF OHIO
BRIAN D. LOHMANN
E-58395
1/6/2025
REGISTERED
PROFESSIONAL ENGINEER

ADMINISTRATION BUILDING
PLUMBING
ISOMETRICS

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
3	1/8/25	SUMP PUMP VENT	ASB
2	–		
1	–		

Jones & Henry Engineers, Ltd.
Fluid thinking®...
www.JHeng.com

JOB NO.: 039-8084.003

SCALE:

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
ASB	LKB	BDL

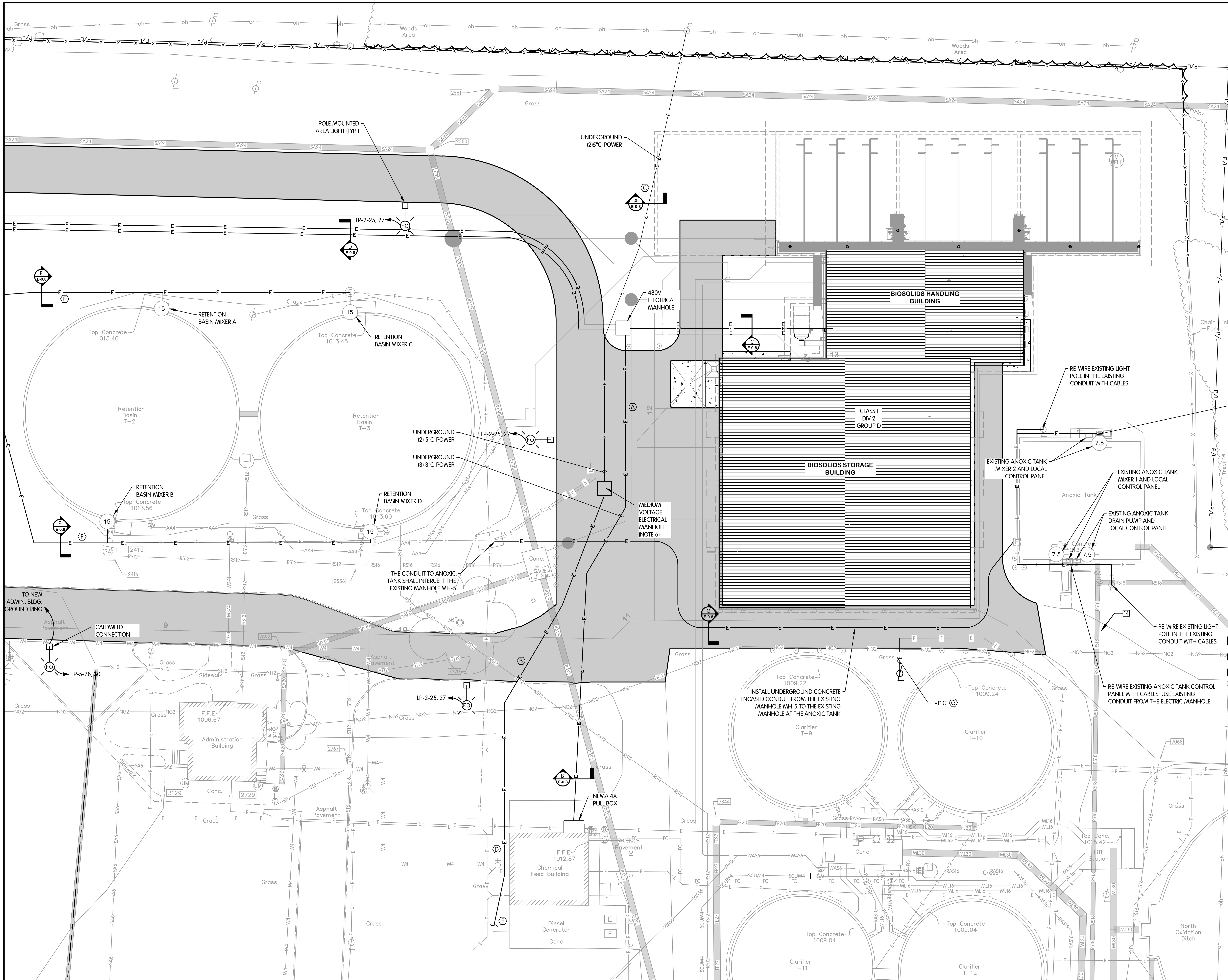
STATUS: ISSUED FOR BID

DATE: NOVEMBER 2024

SHEET NO.

P-5.5

121 OF 182



SHEET KEY NOTES:

(A) CONTRACTOR SHALL INSTALL UNDERGROUND CONCRETE ENCASED DUCT BANK. REFER TO SPECIFICATION 16130 FOR MORE INFORMATION.

(B) CONTRACTOR SHALL ENSURE TO NOT HAVE 45° BENDS ON THE SLOPE. COORDINATE WITH THE UTILITY, AES BEFORE CONSTRUCTION.

(C) CONTRACTOR SHALL LEAVE AT LEAST 200' OF OPEN TRENCH FROM THE OVERHEAD POLE FOR THE UTILITY TO PULL PRIMARY CABLES. CONTRACTOR SHALL COORDINATE WITH AES BEFORE STARTING AND DURING CONSTRUCTION. TRENCH WIDTH SHALL BE MINIMUM 6" AND TRENCH DEPTH SHALL BE MINIMUM 36". (3)

(D) CONTRACTOR SHALL MAINTAIN MINIMUM DISTANCE FROM THE WATER LINE AS PER THE CODE WHILE INSTALLING THE CONCRETE ENCASED CONDUITS UNDERGROUND.

(E) UNDERGROUND 5" CONDUITS SHALL INTERCEPT THE EXISTING 5" CONDUITS AT THE PREVIOUSLY LOCATED OVERHEAD POLE.

(F) INSTALL DIRECT BURIED CONDUIT FROM THE ADMINISTRATION BUILDING TO THE RETENTION BASIN MIXERS. REFER TO MCC-AB ONE-LINE DIAGRAM FOR CONDUIT AND WIRE INFORMATION.

(G) INSTALL A 1-1"C EXTENDING THE EXISTING CONDUIT UNDERGROUND TO THE RELOCATED OVERHEAD POLE AND RE-WIRE THE LIGHT POLE USING 2#10, 1#10 GND.

GENERAL NOTES:

1. CONTRACTOR SHALL ENSURE TO VERIFY ALL UNDERGROUND UTILITIES BEFORE CONSTRUCTION TO AVOID ANY CONFLICTS.
2. SEE LIGHT FIXTURE SCHEDULE ON NORTHWEST SITE PLAN FOR POLE-MOUNTED LIGHT DETAILS.
3. SEE DUCT BANK SECTIONS ELECTRICAL SHEET.
4. SEE ELECTRICAL DETAILS SHEET FOR ELECTRICAL MANHOLE DETAIL, LIGHT POLE BASE DETAIL, AND TYPICAL CONCRETE ENCASED CONDUIT DETAIL.
5. BOND NEW LIGHT POLES TO BIOSOLIDS HANDLING BUILDING GROUND RING UNLESS NOTED OTHERWISE. SEE BIOSOLIDS HANDLING BUILDING ELECTRICAL POWER PLAN FOR GROUND RING DETAILS.
6. MEDIUM VOLTAGE ELECTRICAL MANHOLE SHALL BE A QUAZITE POLYMER CONCRETE BOX WITH GALVANIZED STEEL FRAME AND H20 COVER (CAT. NO. PA1730S09), OR EQUAL.

STATE OF OHIO
PAUL EDWARD McNICHOL
E-64047
1/10/25
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL NORTHEAST SITE PLAN

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

REVISIONS AFTER ISSUED FOR BID

NO.	DATE		BY
5			
4			
3	1/8/25	TRENCH DESC. UPDATE	EBK
2			
1			

Jones & Henry Engineers, Ltd.
Fluid thinking®...
www.JHeng.com

JOB NO.	039-8084.003
SCALE	1"=20'

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
LR	LKB	

STATUS: ISSUED FOR BID
DATE: NOVEMBER 2024

SHEET NO.
E-0.7
146 OF 182

T0L-8084003E02-E-0.7 ELECTRICAL NORTHEAST SITE PLAN
1/7/2025 11:20 AM - LBROWN
1/7/2025 11:28 AM

REMOTE TELEMETRY UNIT RTU-2 (SOLIDS HANDLING BUILDING)

BFV-104 REMOTE E-STOP ACTIVATED

BFV-104 POSITION FEEDBACK

BFV-104 POSITION SETPOINT

BFV-104 FULL OPEN

BFV-104 FULL CLOSE

BFV-104 IN REMOTE

BFV-104 FAULT

BFV-104 IN SERVICE

DIGESTER BLOWER 4 REMOTE E-STOP OPERATED

BFV-122 REMOTE E-STOP ACTIVATED

BFV-122 POSITION FEEDBACK

BFV-122 POSITION SETPOINT

BFV-122 FULL OPEN

BFV-122 FULL CLOSE

BFV-122 IN REMOTE

BFV-122 FAULT

BFV-122 IN SERVICE

DIGESTER BLOWER 4 REMOTE E-STOP OPERATED

BFV-105 REMOTE E-STOP ACTIVATED

BFV-105 POSITION FEEDBACK

BFV-105 POSITION SETPOINT

BFV-105 FULL OPEN

BFV-105 FULL CLOSE

BFV-105 IN REMOTE

BFV-105 FAULT

BFV-105 IN SERVICE

DIGESTER BLOWER 4 REMOTE E-STOP OPERATED

DIGESTER BLOWER 4 REMOTE E-STOP OPERATED

REMOTE TELEMETRY UNIT RTU-2 (SOLIDS HANDLING BUILDING)

MCC-BHB-2

PRE-WIRED TO INTELLIGENT MCC-BHB-2 ETHERNET SWITCH AND TRANSMITTED TO SCADA VIA ETHERNET/FIBER

DIGESTER BLOWER 4 IN AUTO
DIGESTER BLOWER 4 SPEED FEEDBACK
DIGESTER BLOWER 4 SPEED CONTROL
DIGESTER BLOWER 4 IN AUTO
DIGESTER BLOWER 4 RUNNING
DIGESTER BLOWER 4 DRIVE FAULT
DIGESTER BLOWER 4 IN SERVICE
480V

AUTO JJ
RUNNING JJ
KEYPAD
START HN
STOP HN
MOTOR HIGH TEMP JJ
EY
VARIABLE FREQUENCY DRIVE (16421)

MCC-BHB-2

PRE-WIRED TO INTELLIGENT MCC-BHB-2 ETHERNET SWITCH AND TRANSMITTED TO SCADA VIA ETHERNET/FIBER

DIGESTER BLOWER 3 IN AUTO
DIGESTER BLOWER 3 SPEED FEEDBACK
DIGESTER BLOWER 3 SPEED CONTROL
DIGESTER BLOWER 3 IN AUTO
DIGESTER BLOWER 3 RUNNING
DIGESTER BLOWER 3 DRIVE FAULT
DIGESTER BLOWER 3 IN SERVICE
480V

AUTO JJ
RUNNING JJ
KEYPAD
START HN
STOP HN
MOTOR HIGH TEMP JJ
EY
VARIABLE FREQUENCY DRIVE (16421)

MCC-BHB-1

PRE-WIRED TO INTELLIGENT MCC-BHB-1 ETHERNET SWITCH AND TRANSMITTED TO SCADA VIA ETHERNET/FIBER

DIGESTER BLOWER 2 IN AUTO
DIGESTER BLOWER 2 SPEED FEEDBACK
DIGESTER BLOWER 2 SPEED CONTROL
DIGESTER BLOWER 2 IN AUTO
DIGESTER BLOWER 2 RUNNING
DIGESTER BLOWER 2 DRIVE FAULT
DIGESTER BLOWER 2 IN SERVICE
480V

AUTO JJ
RUNNING JJ
KEYPAD
START HN
STOP HN
MOTOR HIGH TEMP JJ
EY
VARIABLE FREQUENCY DRIVE (16421)

MCC-BHB-1

PRE-WIRED TO INTELLIGENT MCC-BHB-1 ETHERNET SWITCH AND TRANSMITTED TO SCADA VIA ETHERNET/FIBER

DIGESTER BLOWER 1 IN AUTO
DIGESTER BLOWER 1 SPEED FEEDBACK
DIGESTER BLOWER 1 SPEED CONTROL
DIGESTER BLOWER 1 IN AUTO
DIGESTER BLOWER 1 RUNNING
DIGESTER BLOWER 1 DRIVE FAULT
DIGESTER BLOWER 1 IN SERVICE
480V

AUTO JJ
RUNNING JJ
KEYPAD
START HN
STOP HN
MOTOR HIGH TEMP JJ
EY
VARIABLE FREQUENCY DRIVE (16421)

FIELD

480V FROM PP-2

OPEN JJ
CLOSED JJ
HS
ZC
LOCAL/REMOTE
HN OPEN
HN STOP
HN CLOSE
M
(15250) VALVE ACTUATOR BFV-104

H-O-A HS
HN EMERGENCY STOP
(16902 - 2.05E) NEMA 4X
LOCAL CONTROL STATION

IN SERVICE / CONTROL CKT. SHUTDOWN
TS
M

480V FROM PP-2

OPEN JJ
CLOSED JJ
HS
ZC
LOCAL/REMOTE
HN OPEN
HN STOP
HN CLOSE
M
(15250) VALVE ACTUATOR BFV-122

H-O-A HS
HN EMERGENCY STOP
(16902 - 2.05E) NEMA 4X
LOCAL CONTROL STATION

IN SERVICE / CONTROL CKT. SHUTDOWN
TS
M

480V FROM PP-2

OPEN JJ
CLOSED JJ
HS
ZC
LOCAL/REMOTE
HN OPEN
HN STOP
HN CLOSE
M
(15250) VALVE ACTUATOR

H-O-A HS
HN EMERGENCY STOP
(16902 - 2.05E) NEMA 4X
LOCAL CONTROL STATION

IN SERVICE / CONTROL CKT. SHUTDOWN
TS
M

H-O-A HS
HN EMERGENCY STOP
(16902 - 2.05E) NEMA 4X
LOCAL CONTROL STATION

IN SERVICE / CONTROL CKT. SHUTDOWN
TS
M

H-O-A HS
HN EMERGENCY STOP
(16902 - 2.05E) NEMA 4X
LOCAL CONTROL STATION

IN SERVICE / CONTROL CKT. SHUTDOWN
TS
M

TO AEROBIC DIGESTER TANK 3 (T-102) SEE SHEET I-0.4

TO AEROBIC DIGESTER TANK 2 (T-101) SEE SHEET I-0.5

TO AEROBIC DIGESTER TANK 1 (T-100) SEE SHEET I-0.6

TIE IN TO EXISTING STORM RETENTION BASIN DIFFUSER SYSTEM (SHEET I-0.11)

M BFV-104

M BFV-122

M BFV-105

AIR

BFV-103

BFV-102

BFV-101

BFV-100

TS PS

VENDOR SUPPLIED PRE-WIRED JUNCTION BOX WITH HIGH TEMPERATURE/ PRESSURE SHUT-OFF SWITCHES (TYP. OF ALL 4 BLOWERS)

BLOWER AIR INLET FILTER

AEROBIC DIGESTER BLOWER #4 ME-108 (11239)

AEROBIC DIGESTER BLOWER #3 ME-107 (11239)

AEROBIC DIGESTER BLOWER #2 ME-106 (11239)

AEROBIC DIGESTER BLOWER #1 ME-105 (11239)

3

AIR

STATE OF OHIO
PAUL EDWARD McNICHOL
E-69404
10/25
REGISTERED PROFESSIONAL ENGINEER

BLOWERS P & ID

CITY OF GREENVILLE, OHIO
WWTP SOLIDS HANDLING FACILITY AND ADMINISTRATION BUILDING

NO.	DATE	BY
5		HL
4		
3		
2		
1	11/8/25	VALVES REMOVED
		REVISIONS AFTER ISSUED FOR BID

Jones & Henry Engineers, Ltd.

Fluid thinking©.
www.JHeng.com

JOB NO. 039-8084.003

SCALE AS NOTED

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
DKP	LKB	

STATUS: ISSUED FOR BID

DATE: NOVEMBER 2024

SHEET NO.
I-0.7
177 OF 182

T:\DL_8084\003\07-I-0.7 BLOWERS P & ID
11/7/2025 11:28 AM - LBROWN
11/7/2025 11:28 AM