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# CENTRAL ELMORE WATER TREATMENT PLANT UPGRADE



VICINITY MAP  
1" = 2000'



LOCATION MAP  
1" = 250'

FOR:  
CENTRAL ELMORE WATER AND  
SEWER AUTHORITY

716 U.S. HIGHWAY 231  
WETUMPKA, AL  
36093



200 CLINTON AVE. WEST  
SUITE 704  
HUNTSVILLE, AL 35801  
Phone: (265) 203-9501  
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License #2610



PLANT MANAGER  
JAMES BROWN

CENTRAL ELMORE WATER AND SEWER  
AUTHORITY BOARD OF DIRECTORS

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FRED BRASWELL III	CHAIRMAN
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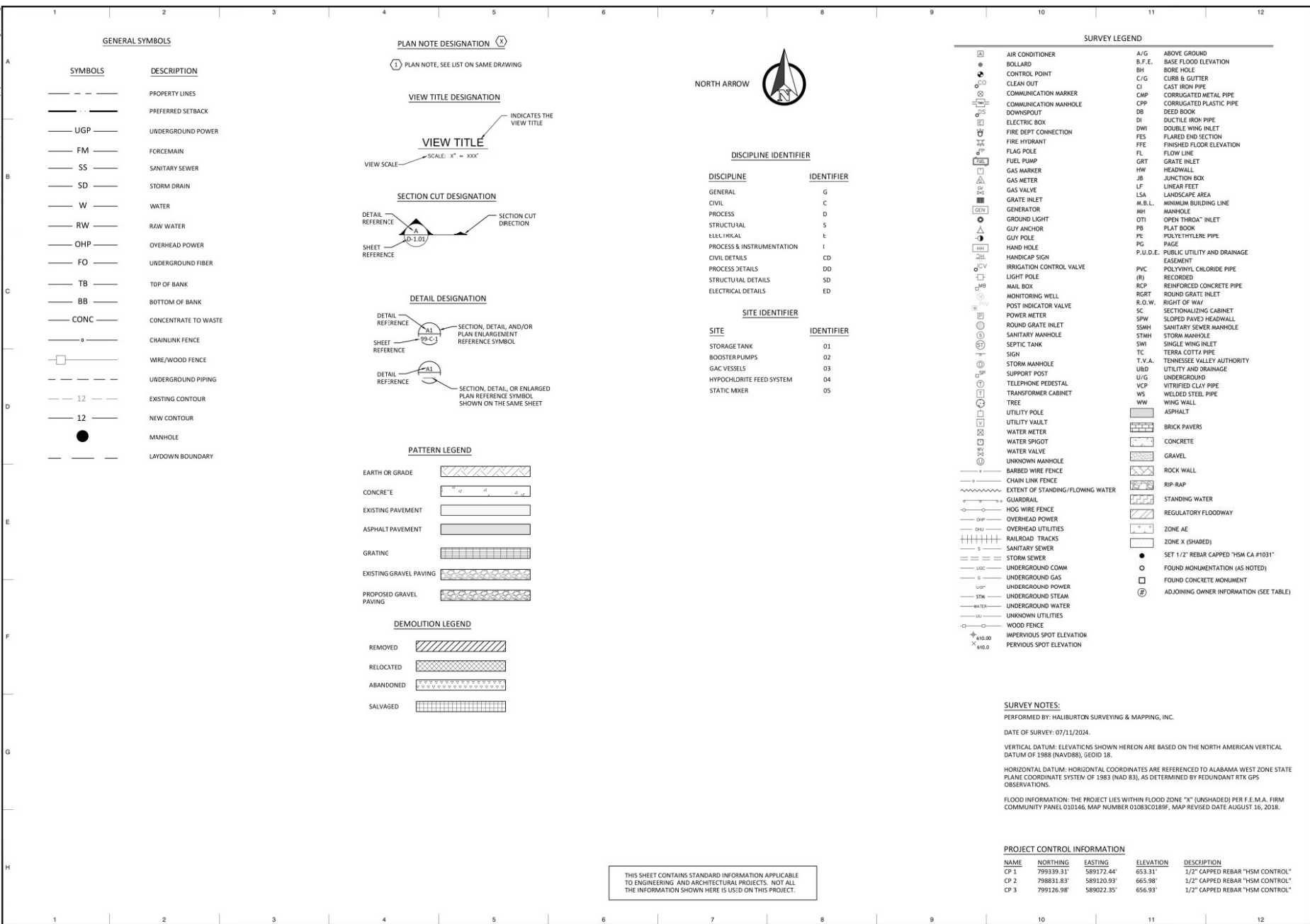
NO.		DATE	REVISION	BY
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JOB NO:		2024-0718-00
DATE:		07/19/2024

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 SCALE FEET 0      ##      ##	
 <b>ARDURRA</b> <small>COLLABORATE. INSPIRE. CREATE.</small> 200 CLINTON AVE. WEST SUITE 300 HUNTSVILLE, AL 35891 Phone: (256) 263-0501 <a href="http://www.Ardurra.com">www.Ardurra.com</a> ELicense: J26-B5	
<b>CEW&amp;S</b> <small>QUALITY • INTEGRITY • SERVICE</small> <i>Civil, Mechanical, Electrical &amp; Survey Engineering</i>	
<b>CENTRAL ELMORE WATER AND SEWER AUTHORITY</b> 716 U.S. HIGHWAY 231 WETUMPKA, AL 36093	
	BY _____  REVISION _____  DATE _____  NO. _____
<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CENTRAL ELMORE WATER TREATMENT PLANT UPGRADE</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">DRAWING INDEX AND PROJECT NOTES</div> </div>	
 JOB NO.: 0024-0776-00 DATE: 07/16/2024	
<h1 style="margin: 0;">G-01</h1> <p style="font-size: small; margin-top: 10px;">100% ISSUE FOR BIDD 07/11/2025</p>	



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 <p><b>CEW&amp;SA</b> QUALITY • INTEGRITY • SERVICE General Excavation, Water &amp; Sewer Alignment <b>CENTRAL ELMORE WATER AND SEWER AUTHORITY</b> 716 U.S. HIGHWAY 231 WETUMPKA, AL 36093</p>	
<h2 style="margin: 0;">CENTRAL ELMORE WATER TREATMENT PLANT UPGRADE</h2> <h2 style="margin: 0;">LEGEND AND SYMBOLS</h2>	
 <p style="text-align: right;"><i>07/11/2025</i></p> <p>JOB NO.:            2024-0716-00 DATE:                07/16/2024</p>	
<h1 style="margin: 0;">G-02</h1> <p style="font-size: small;">100% ISSUE FOR BID 07/11/2025</p>	

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A												
	GENERAL ABBREVIATIONS						CIVIL ABBREVIATIONS					
	ABDN	ABANDON/ABANDONED	GA	GAUGE	REF	REFERENCE	THRU	THROUGH	ACP	ASBESTOS - CEMENT PIPE	GRTG	GRATING
	ADDL	ADDITIONAL	GR	GRADE	REM	REMOVABLE	TYP	TYPICAL	ANC	ANCHOR	GSP	GALVANIZED STEEL PIPE
	ADJ	ADJUSTABLE	HDW	HARDWARE	REQD	REQUIRED	UNO	UNLESS NOTED OTHERWISE	AP	AERIAL POWER	HB	HOSE BIBB
	AFF	ABOVE FINISH FLOOR	HORIZ	HORIZONTAL	RH	RIGHT HAND	VERT	VERTICAL	ASPH	ASPHALT	HDPE	HIGH DENSITY POLYETHYLENE
	AL	ALUMINUM	HP	HIGH POINT	RM	ROOM	W	WEST	AT	AERIAL TELEPHONE	INL	INLET
B	ALT	ALTERNATE	HT OR HGT	HEIGHT	RPM	REVOLUTIONS PER MINUTE	W/	WITH	BNDY	BOUNDARY	INV	INVERT
	APPROX	APPROXIMATE	HVAC	HEATING, VENTILATING, AND AIR CONDITIONING	RT	RIGHT	W/O	WITHOUT	BFO	BURIED FIBER OPTIC	IP	IRON PIN
	ASSY	ASSEMBLY	ID	INSIDE DIAMETER	S	SOUTH	YR	YEAR	BM	BENCH MARK	LF	LINEAR FEET
	AUX	AUXILIARY	IN	INCHES	SCH	SCHEDULE			RO	RI-OFF	MMH	MANHOLE
	AVG	AVERAGE	INSL	INSTALLATION	SEC	SECONDARY			BOC	BACK OF CURB	PE	PLAIN END
	B/	BOTTOM OF	INT	INTERIOR	SECT	SECTION			C&G	CURB AND GUTTER	PEX	PEX PIPE
	BLDG	BUILDING	L	ANGLE	SHT	SHEET			CB	CATCH BASIN	PH	POST HYDRANT
	BOT	BOTTOM	LB	POUND	SIM	SIMILAR			CI	CURB INLET	PL	PROPERTY LINE
C	C/C	CENTER TO CENTER	LDG	LANDING	SL	SLOPE			CIP	CAST IRON PIPE	PP	POWER POLE
	CCW	COUNTER CLOCKWISE	LH	LEFT HAND	SP	SPACE OR SPACING			CMP	CORRUGATED METAL PIPE	PSI	POUNDS PER SQUARE INCH
	CL	CENTERLINE	LOC	LOCATION	SQ or SQR	SQUARE			CO	CLEAN OUT	PT	POINT OF TANGENCY
	CLR	CLEAR	LP	LOW POINT	SS or SST	STAINLESS STEEL			DI	DUCTILE IRON PIPE	ROW	RIGHT OF WAY
	CONC	CONCRETE	MATL	MATERIAL	STA	STATION			DR	DRAIN	RP	RAD US POINT
	CONT	CONTINUOUS	MAX	MAXIMUM	STAG	STAGGERED			ENCMT	ENCASEMENT	RCP	REINFORCED CONCRETE PIPE
	CONTR	CONTRACTOR	MCC	MOTOR CONTROL CENTER	STL	STEEL			EOA	EDGE OF ASPHALT	RET	RETAINING
	CTR	CENTER	MECH	MECHANICAL	STR	STRUCTURE			EOR	EDGE OF ROAD	SD	STORM DRAIN
	CW	CLOCKWISE	MEMB	MEMBRANE	SYM	SYMMETRICAL			EXC	EXCAVATE	SLP	STRUCTURAL LAYOUT POINT
	DBL	DOUBLE	MFG	MANUFACTURED	T&B	TOP AND BOTTOM			FDN	FOUNDATION	SS	SAN TARY SEWER
D	DEF	DEFLECTION	MFR	MANUFACTURING	T/	TOP OF			FH	FIRE HYDRANT	TBM	TEMPORARY BENCH MARK
	DEG	DEGREE	MISC	MISCELLANEOUS	TAN	TANGENT			FLG	FLANGE	TS&V	TAPPING SLEEVE AND VALVE
	DET	DETAIL	MTL	METAL	TEMP	TEMPERATURE			FM	FORCEMAIN	UC	UNDERGROUND CABLE
	DIA OR Ø	DIAMETER	N	NORTH					FOC	FACE OF CURB	UG	UNDERGROUND GAS
	DIAG	DIAGRAM	NA	NOT AFFICABLE					FTG	FOOTING	UP	UNDERGROUND POWER
	DIM	DIMENSION	NIC	NOT IN CONTRACT					G	GAS LINE	UT	UNDERGROUND TELEPHONE
	DISCH	DISCHARGE	NO	NUMBER					GD	GUARD	VCP	VITRIFIED CLAY PIPE
	DN	DOWN	NTS	NOT TO SCALE							W	WATER
	DR	DRIVE	OC	ON CENTER							WL	WATERLINE
E	DWG	DRAWING	OD	OUTSIDE DIAMETER							YH	YARD HYDRANT
	E	EAST	OPNG	OPENING								
	EA	EACH	OPP	OPPOSITE								
	EL or ELEV	ELEVATION	P&ID	PROCESS AND INSTRUMENTATION DIAGRAM								
	ELEC	ELECTRIC	PC	POINT OF CURVATURE								
	EQ	EQUAL	PJF	PREFORMED JOINT FILLER								
	EQUIP	EQUIPMENT	PI	POINT OF INTERSECTION								
	EW	EACH WAY	PNL	PANEL								
F	EXP	EXPANSION	PRESS	PRESSURE								
	EXT	EXISTING	PT	POINT OF TANGENCY								
	EXT	EXTERIOR	PTD	PAINTED								
	FF	FINISH FLOOR	PVC	POLYVINYL CHLORIDE								
	FIN	FINISH	PVI	POINT OF VERTICAL INTERSECTION								
	FL	FLUSH OR FLOOR	R	RISER								
	FLEX	FLEXIBLE	RAD	RADIUS								
	FRP	FIBERGLASS REINFORCED PLASTIC										
	FT	FOOT/FEET										
G												



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Central Elmore Water & Sewer Authority  
716 U.S. HIGHWAY 231  
WETUMPKA, AL  
36093

BY	
REVISION	
DATE	
NO.	

CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE

GENERAL AND CIVIL ABBREVIATIONS



07/13/2024

JOB NO. 2024-0776-00  
DATE: 07/10/2024

**G-03**

100% ISSUE FOR BID  
07/11/2025





	1	2	3	4	5	6	7	8	9	10	11	12
A	GENERAL NOTES:			DESIGN CRITERIA:			CONCRETE STRUCTURAL OUTLINE SPECIFICATIONS:			STATEMENT OF SPECIAL INSPECTIONS (STRUCTURAL)		
	1. CONTRACTOR SHALL COORDINATE BETWEEN ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND OTHER DRAWINGS. ANY DISCREPANCIES OR CONFLICTS (INCLUDING DIMENSIONAL CONFLICTS) BETWEEN DRAWINGS OF DIFFERENT DISCIPLINES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. CONTRACTOR SHALL NOT PROCEED WITH SHOP DRAWING PREPARATION OR ANY CONSTRUCTION UNTIL THE ARCHITECT HAS GIVEN DIRECTION OF RESOLUTION OF THE DISCREPANCY OR CONFLICT.			1. BUILDING CODES AND STANDARDS: A. INTERNATIONAL BUILDING CODE 2021 B. AMERICAN SOCIETY OF CIVIL ENGINEERS, ASCE 7 C. AMERICAN CONCRETE INSTITUTE, ACI 318			1. G.C. IS RESPONSIBLE FOR DESIGN OF FORMWORK AND SHORING IN COMPLIANCE WITH ACI 301 "SPECIFICATION FOR STRUCTURAL CONCRETE." COMPLY WITH ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION MATERIALS." PROTECT FRESHLY PLACED CONCRETE FROM PRECIPITATION DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES IN ACCORDANCE WITH ACI 308, ACI 308.1 & ACI 301.			1. PER THE INTERNATIONAL BUILDING CODE (2021 & 17) SPECIAL INSPECTIONS AND TESTING ARE REQUIRED PER THESE NOTES AND THE SCHEDULE OF SPECIAL INSPECTIONS.		
	2. CONSTRUCTION METHODS, SEQUENCES AND PROCEDURES ARE THE CONTRACTORS RESPONSIBILITY. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT AND MAINTAIN THE STRUCTURAL INTEGRITY OF ALL NEW AND EXISTING CONSTRUCTION AT ALL STAGES. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY AND ERECTION REQUIREMENTS OF ALL GOVERNING PUBLIC AGENCIES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE ADJACENT PROPERTY AND ROADWAYS WITH SHORING OR OTHER NECESSARY MEANS.			2. GRAVITY DESIGN LIVE LOADS: A. EQUIPMENT WEIGHT = 100 PSF			2. SUBMIT SHOP DRAWINGS DETAILING THE FABRICATION OF ALL COMPONENTS TO BE EMBEDDED INTO CONCRETE, INCLUDING REINFORCING BARS.			2. THE OWNER OR REGISTERED DESIGN PROFESSIONAL, IN RESPONSIBLE CHARGE ACTING AS AN OWNERS AGENT AS ALLOWED BY IBC 2021 SECTION 1704.2, SHALL ENGAGE A SPECIAL INSPECTION AGENCY, WHICH MEETS THE QUALIFICATIONS OF THE BUILDING OFFICIAL, FOR SPECIAL INSPECTION SERVICES REQUIRED BY THE BUILDING CODE AND AS DEFINED IN THE CONTRACT DOCUMENTS.		
	3. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING, CIVIL AND ELECTRICAL DRAWINGS AND VERIFY THE LOCATIONS AND SIZES OF CHASES, INSERTS, OPENINGS, SLEEVES, FINISHES, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS.			3. GRAVITY DESIGN SNOW LOADS: A. GROUND SNOW LOAD (Pg) = 5 PSF B. SNOW EXPOSURE FACTOR (Ce) = 0.9 C. SNOW LOAD IMPORTANCE FACTOR (Ia) = 1.1 D. THERMAL FACTOR (Ct) = 1.2			3. AFTER APPLYING FLOAT FINISH TO SLABS, APPLY FIRST TROWEL FINISH AND CONSOLIDATE CONCRETE BY HAND OR POWER-DRIVEN TROWEL. CONTINUE TROWELLING PASSES AND RESTRAIGHTEN UNTIL SURFACE IS UNIFORM IN TEXTURE AND APPEARANCE. FINISH AND MEASURE SURFACE SO GAP AT ANY POINT BETWEEN CONCRETE SURFACE AND AN UNLEVEL PRESTANDING 10-FOOT LONG STRAIGHTEDGE, RESTING ON TWO HIGH SPOTS AND PLACED ANYWHERE ON THE SURFACE, DOES NOT EXCEED 18 INCH (HARD MACHINE TROWELLING OF AIR-ENTRAINED CONCRETE SLABS IS NOT RECOMMENDED DUE TO THE INCREASED UNLINED OF SURFACE DELAMINATION. THE G.C. SHALL TAKE SPECIAL CARE IN CONCRETING OPERATIONS, INCLUDING DELAYING TROWEL FINISHING OPERATIONS AS LONG AS POSSIBLE, AND MINIMIZING THE INTENSITY AND DURATION OF TROWELLING).			3. THE SPECIAL INSPECTION AGENCY SHALL PROVIDE SPECIAL INSPECTIONS, TESTING, AND PROCEDURES IN ACCORDANCE WITH CHAPTER 17 OF IBC 2021 THESE INSPECTIONS SHALL BE IN ADDITION TO THOSE SPECIFIED IN IBC SECTION 110.		
B	4. USE MANUFACTURERS CERTIFIED DRAWINGS, DETAILS AND SPECIFICATIONS FOR EQUIPMENT ANCHORAGE AND INSTALLATION.			4. LATERAL DESIGN LOADS: A. WIND PER IBC & ASCE 7, WIND SPEED Vult = 123 MPH (Vdes = 96 MPH) B. EARTHQUAKE: PER IBC & ASCE 7			4. CURE CONCRETE SLABS ACCORDING TO ACI 308.1 BY MOISTURE-CURING OR BY APPLICATION OF A CURING COMPOUND CONFORMING TO ASTM C309, TYPE 1, CLASS B.			4. THE SPECIAL INSPECTORS SHALL BE QUALIFIED IN ACCORDANCE WITH IBC 2021 SECTION 1704.2.		
	5. ALL CONSTRUCTION JOINTS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE. ADDITIONAL CONSTRUCTION JOINTS TO FACILITATE CONSTRUCTION SHALL BE LOCATED AND DETAILED ON THE SHOP DRAWINGS FOR REVIEW.			CONCRETE:			5. CONCRETE MIX DESIGNS SHALL BE SUBMITTED FOR APPROVAL, AND SHALL COMPLY WITH THE FOLLOWING:			5. DUTIES OF THE SPECIAL INSPECTION AGENCY INCLUDES, BUT ARE NOT LIMITED TO: 5.1. PROVIDE THE INSPECTION SERVICES DEFINED IN THE LIST OF SPECIAL INSPECTIONS AND TESTING ARE REQUIRED PER THESE NOTES AND THE SCHEDULE OF SPECIAL INSPECTIONS. 5.2. OBSERVE THE WORK FOR CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS AND SPECIFICATIONS, BRINGING ANY DISCREPANCIES TO THE IMMEDIATE ATTENTION OF THE GENERAL CONTRACTOR FOR CORRECTION. IF UNCORRECTED, THE ENGINEER AND BUILDING OFFICIAL ARE TO BE NOTIFIED. 5.3. REPORTING FOR SPECIAL INSPECTIONS AND TESTING SHALL BE COMPLETED AT THE END OF EACH WEEK. A FINAL REPORT SHALL BE COMPLETED AT THE END OF THE PROJECT. REPORTS ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL, CLIENT, AND DESIGN PROFESSIONAL, BRINGING ANY DISCREPANCIES TO THE IMMEDIATE ATTENTION OF THE GENERAL CONTRACTOR FOR CORRECTION. IF INCORRECTED, THE ENGINEER AND BUILDING OFFICIAL ARE TO BE NOTIFIED. 5.4. MAINTAIN A DISCREPANCY LOG, DOCUMENTING ITEMS THAT DID NOT MEET APPROVED CONSTRUCTION DOCUMENT REQUIREMENTS, AND HOW/WHEN IT WAS CORRECTED. THIS LOG SHALL BE SUBMITTED WITH THE INSPECTION REPORTS. 5.5. FOR RISK CATEGORY II OR III STRUCTURES ONLY (PER DESIGN CRITERIA NOTES), THE SPECIAL INSPECTION AGENCY SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO PROVIDE SUPERVISORY OBSERVATION IN ACCORDANCE WITH SECTION 1704.6 OF IBC 2021. THIS STRUCTURAL OBSERVER SHALL VISUALLY OBSERVE REPRESENTATIVE LOCATIONS OF STRUCTURAL SYSTEMS, DETAILS AND LOAD PATHS FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS.		
	6. STRUCTURAL MEMBERS & CONNECTIONS SHOWN, HAVE BEEN DESIGNED TO CARRY IN PLACE DESIGN LOADS ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUPPORT OF ANY ADDITIONAL LOADS AND FORCES IMPOSED DURING CONSTRUCTION, TRUCKING, ERECTING AND HANDLING.			1. CONCRETING OPERATIONS SHALL COMPLY WITH ACI 117 AND ACI 301. 2. CONCRETE COVER OVER REINFORCING (UN.C.) A. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3 IN. B. EXPOSED TO EARTH, LIQUID, WEATHER, OR BEARING ON WORK MAT OR SLABS SUPPORTING EARTH COVER: 2 IN. SLABS AND JOISTS: BEAMS AND COLUMNS: STIRRUPS, SPIRALS, AND TIES: 2 IN. C. AIRWAY REINFORCEMENT: 2 IN. WALLS: FOOTINGS AND BASE SLABS: 2 IN. FORMED SURFACES: TOP OF FOOTINGS AND BASE SLABS: 2 IN.			6. CONCRETE MIX DESIGNS SHALL BE SUBMITTED FOR APPROVAL, AND SHALL COMPLY WITH THE FOLLOWING: A. COMPRESSIVE STRENGTH: 4500 PSI B. AGGREGATE: WELL-GRADED WITH 3/4 INCH NOMINAL MAXIMUM AGGREGATE SIZE C. AIR CONTENT & WATER-CEMENTitious MATERIALS RATIO CONCRETE EXPOSED TO WEATHER: 5.0% +/- 1.5% w/c = 0.40 max CONCRETE NOT EXPOSED TO WEATHER: 4.5% +/- 1.5% w/c = 0.40 max D. MAXIMUM SLUMP: 5 INCHES (WITHOUT ADDITION OF WATER REDUCER) E. LIMIT THE PERCENTAGE, BY WEIGHT, OF CEMENTITIOUS MATERIALS OTHER THAN PORTLAND CEMENT IN CONCRETE AS FOLLOWS: FLY ASH: 25 PERCENT 2. COMBINED FLY ASH & POZZOLAN: 25 PERCENT F. DO NOT USE ADMIXTURES CONTAINING CALCIUM CHLORIDE			5.6. FOR RISK CATEGORY II OR III STRUCTURES ONLY (PER DESIGN CRITERIA NOTES), THE SPECIAL INSPECTION AGENCY SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO PROVIDE SUPERVISORY OBSERVATION IN ACCORDANCE WITH SECTION 1704.6 OF IBC 2021. THIS STRUCTURAL OBSERVER SHALL VISUALLY OBSERVE REPRESENTATIVE LOCATIONS OF STRUCTURAL SYSTEMS, DETAILS AND LOAD PATHS FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS.		
C	7. THE CONTRACTOR SHALL ENSURE THAT CONSTRUCTION LOADS DO NOT EXCEED THE DESIGN LIVE LOADS INDICATED ON THE STRUCTURAL DRAWINGS AND THAT THESE LOADS ARE NOT PUT ON THE STRUCTURAL MEMBERS PRIOR TO THE TIME THAT THE CONCRETE REACHES THE FULL SPECIFIED DESIGN STRENGTH. STEEL MEMBERS & THEIR CONNECTIONS ARE FULLY BOLTED AND/OR WELDED, AND ALL OTHER FRAMING MEMBERS AND THEIR CONNECTIONS ARE IN PLACE.			3. ALL CONSTRUCTION JOINTS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE. ADDITIONAL CONSTRUCTION JOINTS TO FACILITATE CONSTRUCTION SHALL BE LOCATED AND DETAILED ON THE SHOP DRAWINGS FOR REVIEW. APPLY A BONDING AGENT (MEETING ASTM C1169, TYPE II) WHERE FRESH CONCRETE IS PLACED AGAINST HARDENED (OR PARTIALLY HARDENED) CONCRETE SURFACES.			7. A QUALIFIED INDEPENDENT TESTING AGENCY SHALL BE ENGAGED TO SAMPLE CONCRETE, PERFORM TESTS AND SUBMIT TEST REPORTS DURING CONCRETE PLACEMENT. TESTING AGENCY WILL CONDUCT AND INTERPRET TESTS AND STATE IN EACH REPORT WHETHER TESTED WORK COMPLIES WITH OR DEVIATES FROM REQUIREMENTS. MINIMUM TESTING REQUIREMENTS ARE AS FOLLOWS: A. VERIFY SIZE AND PLACEMENT OF REINFORCING AND EMBEDDED ITEMS B. OBTAIN ONE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIX EXCEEDING 5 CU. YARDS, BUT LESS THAN 25 CU. YARDS. PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YARDS. C. TESTS SHALL INCLUDE SLUMP (ASTM C143), AIR CONTENT (ASTM C231), TEMPERATURE (ASTM C1064) UNIT WEIGHT (ASTM C867), AND COMPRESSIVE STRENGTH (ASTM C1313). D. FAST AND LABORATORY CURE ONE SET OF FOUR STANDARD CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE. E. TEST ONE SPECIMEN AT 7 DAYS AND TWO AT 28 DAYS. HOLD ONE SPECIMEN IN RESERVE IF NEEDED FOR 90-DAY VERIFICATION MEASUREMENT.			6.1. NOTIFY SPECIAL INSPECTOR THAT WORK IS READY FOR INSPECTION PRIOR TO WORK BEING PERFORMED. 6.2. COOPERATE WITH SPECIAL INSPECTOR BY PROVIDING ACCESS TO WORK MATERIAL FOR SAMPLES, AND TIME FOR INSPECTIONS. 6.3. PROVIDE SPECIAL INSPECTOR WITH ACCESS TO APPROVED CONSTRUCTION DOCUMENTS AND SPECIFICATIONS AT THE JOB SITE. 6.4. MAINTAIN JOB SITE COPIES OF ALL REPORTS SUBMITTED BY THE SPECIAL INSPECTOR.		
	8. CONTRACTOR SHALL BRACE ALL BASEMENT-TYPE WALLS RETAINING EARTH. REINSTRAINING SLABS & STRUCTURAL ELEMENTS ARE IN PLACE AND REACH REQUIRED DESIGN STRENGTH.			4. LOCATE HORIZONTAL JOINTS IN WALLS AND COLUMNS AT UNDERSIDE OF FLOOR STRUCTURE (BOTTOM OF BEAMS, JOISTS & GIRDERS, OR BOTTOM OF SLABS IN FRAMING SYSTEMS THAT DO NOT INCLUDE BEAMS) AND AT THE TOP OF FOOTINGS OR FLOOR SLABS (EXCEPT WHERE SPECIFICALLY INDICATED).			8. CORRECT DEFICIENCIES IN OR REMOVE AND REPLACE CONCRETE & REINFORCING THAT INSPECTIONS AND TEST REPORTS INDICATE DO NOT COMPLY WITH SPECIFIED REQUIREMENTS. ADDITIONAL TESTING, AT CONTRACTORS EXPENSE, WILL BE PERFORMED TO DETERMINE COMPLEY OF CORRECTED WORK WITH SPECIFIED REQUIREMENTS.			7. DEFINITIONS: 7.1. CONTINUOUS SPECIAL INSPECTION - SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED. 7.2. PERIODIC SPECIAL INSPECTION - SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED. (ALL ITEMS LISTED AS "PERIODIC" ARE REQUIRED TO BE FULLY INSPECTED. HOWEVER, THESE INSPECTIONS MAY BE PERFORMED AFTER A CERTAIN AMOUNT OF THE WORK HAS BEEN PERFORMED, BUT PRIOR TO THE WORK BEING CONCEALED OR CONFINED BY ON-GOING CONSTRUCTION.)		
	9. ALL THE CONTRACTORS PROPOSED SUBSTITUTIONS MUST BE APPROVED BY ARCHITECT/ENGINEER PRIOR TO FABRICATION OR ANY PERTINENT WORK.			5. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN BEAMS, SLABS, JOISTS, FOOTINGS OR WALLS, UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.			9. SPECIAL INSPECTIONS AND TESTING ARE REQUIRED PER THESE NOTES AND PER CHAPTER 17 OF IBC 2021 FOR THE FOLLOWING PORTIONS OF CONSTRUCTION: SHOP FABRICATIONS PER SECTION 1704.2.5 & 1705.11 CONCRETE CONSTRUCTION PER SECTION 1705.3 & TABLE 1705.3			10. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.		
D	10. THE DETAILS DESIGNATED AS "TYPICAL DETAILS" AND THE SECTIONS APPLY GENERALLY TO THE DRAWINGS IN AREAS WHERE CONDITIONS ARE SIMILAR TO THOSE DESCRIBED OR DEPICTED, UNLESS SPECIFICALLY NOTED OTHERWISE.			6. CONSTRUCTION JOINTS IN CONCRETE BEAMS, FOOTINGS, JOISTS & SLABS SHALL BE AT OR NEAR MIDSPAN, WITH VERTICAL, BULKHEAD AND HORIZONTAL KEYS, UNLESS SHOWN OTHERWISE.			10. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
	11. ALL DIMENSIONS SHOWN TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS, AND DETAILS. DO NOT SCALE THE DRAWINGS.			7. ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED. CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL DRAWINGS FOR REVEALS, FORM TIES, STEPS, NOTCHES AND LOCATIONS OF CONSTRUCTION JOINTS IN EXPOSED CONCRETE.			11. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
	12. ALL SECONDARY STRUCTURAL ELEMENTS AND NON-STRUCTURAL ELEMENTS THAT ARE NOT SPECIFICALLY DETAILED IN THE CONSTRUCTION DOCUMENTS SHALL BE DESIGNED BY THE CONTRACTOR, UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ALABAMA, TO MEET ALL APPLICABLE BUILDING CODE REQUIREMENTS. EXAMPLES OF THESE ELEMENTS MAY INCLUDE BUT ARE NOT LIMITED TO: LIGHT-GAUGE FRAMING, ALUMINUM CANOPIES, EQUIPMENT SUPPORT ABOVE THE PRIMARY ROOF STRUCTURE, SEISMIC BRACING FOR P.I.P.E., COMPONENTS, ELEVATOR SUPPORT RAILS AND BEAMS, RACK STORAGE SYSTEMS, STAIRS & HANDRAILS, LADDERS, LIGHT POLE FOUNDATIONS AND RETAINING WALLS INDEPENDENT OF THE PRIMARY BUILDING.			8. EPOXY ANCHORS SHALL BE "HY-200" OR "HY-100" BY H.L.T. OR "SET-3G" BY SIMPSON. SCREW-TYPE ANCHORS SHALL BE "NKK-HW-2" BY H.L.T. OR "TITEN HD" BY SIMPSON. DO NOT USE EXPANSION BOLTS WHERE EPOXY ANCHORS OR SCREW ANCHORS ARE INDICATED.			12. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
	13. THE CONTRACTOR SHALL FIELD-VERIFY ALL RELEVANT EXISTING CONDITIONS & DIMENSIONS PRIOR TO PERFORMING ANY PERTINENT WORK. THIS INFORMATION SHALL BE INCORPORATED INTO THE SHOP DRAWINGS PRIOR TO ARCHITECT/ENGINEER REVIEW.			9. ALUMINUM MATERIAL SHALL NOT BE EMBEDDED IN CONCRETE UNLESS THE MATERIAL IS FIRST SUFFICIENTLY COATED TO PREVENT ALUMINUM-CONCRETE REACTION OR ELECTROLYTIC REACTIONS.			13. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
E	14. ELM HAS NOT REVIEWED FOR SUITABILITY OR ADEQUACY ANY PORTION OF THIS PROJECT NOT SPECIFICALLY DEPICTED AND DETAILED IN THESE DRAWINGS. ELM'S SERVICES HAVE BEEN PERFORMED UNDER THE PRESUMPTION THAT THE REMAINING PORTIONS OF THE WORK HAVE BEEN DESIGNED, SPECIFIED AND/OR CONSTRUCTED TO MEET OR EXCEED THE REQUIREMENTS OF THE JURISDICTIONS BUILDING CODE, WHERE SUCH ELEMENTS HAVE BEEN GENERICALLY INDICATED IN THESE DRAWINGS, THEY HAVE BEEN SHOWN ONLY FOR THE CONTRACTORS REFERENCE.			10. HORIZONTAL CONDUITS, SLEEVES OR PLUMBING SHALL NOT BE PERMITTED IN FOOTINGS, BEAMS OR SLABS WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.			14. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
	15. ELM HAS NOT REVIEWED FOR SUITABILITY OR ADEQUACY ANY PORTION OF THIS PROJECT NOT SPECIFICALLY DEPICTED AND DETAILED IN THESE DRAWINGS. ELM'S SERVICES HAVE BEEN PERFORMED UNDER THE PRESUMPTION THAT THE REMAINING PORTIONS OF THE WORK HAVE BEEN DESIGNED, SPECIFIED AND/OR CONSTRUCTED TO MEET OR EXCEED THE REQUIREMENTS OF THE JURISDICTIONS BUILDING CODE, WHERE SUCH ELEMENTS HAVE BEEN GENERICALLY INDICATED IN THESE DRAWINGS, THEY HAVE BEEN SHOWN ONLY FOR THE CONTRACTORS REFERENCE.			11. VERTICAL CONDUITS, SLEEVES OR PLUMBING MAY BE PLACED THROUGH SLABS AS REQUIRED. MULTIPLE SLEEVES/CORES THROUGH SLABS MUST BE SPACED WITH A MINIMUM OF 3" DIAMETERS ON-CENTER, BUT NOT LESS THAN 8" CLEAR BETWEEN SLEEVES/CORES. THE SLAB REINFORCING MUST BE PRESERVED BETWEEN ADJACENT SLEEVES.			15. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
	16. ELM HAS NOT REVIEWED FOR SUITABILITY OR ADEQUACY ANY PORTION OF THIS PROJECT NOT SPECIFICALLY DEPICTED AND DETAILED IN THESE DRAWINGS. ELM'S SERVICES HAVE BEEN PERFORMED UNDER THE PRESUMPTION THAT THE REMAINING PORTIONS OF THE WORK HAVE BEEN DESIGNED, SPECIFIED AND/OR CONSTRUCTED TO MEET OR EXCEED THE REQUIREMENTS OF THE JURISDICTIONS BUILDING CODE, WHERE SUCH ELEMENTS HAVE BEEN GENERICALLY INDICATED IN THESE DRAWINGS, THEY HAVE BEEN SHOWN ONLY FOR THE CONTRACTORS REFERENCE.			REINFORCING:			16. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
	17. ELM HAS NOT REVIEWED FOR SUITABILITY OR ADEQUACY ANY PORTION OF THIS PROJECT NOT SPECIFICALLY DEPICTED AND DETAILED IN THESE DRAWINGS. ELM'S SERVICES HAVE BEEN PERFORMED UNDER THE PRESUMPTION THAT THE REMAINING PORTIONS OF THE WORK HAVE BEEN DESIGNED, SPECIFIED AND/OR CONSTRUCTED TO MEET OR EXCEED THE REQUIREMENTS OF THE JURISDICTIONS BUILDING CODE, WHERE SUCH ELEMENTS HAVE BEEN GENERICALLY INDICATED IN THESE DRAWINGS, THEY HAVE BEEN SHOWN ONLY FOR THE CONTRACTORS REFERENCE.			1. ALL REINFORCING SHALL CONFORM TO THE LATEST REVISION OF ASTM SPECIFICATION A615, GRADE 60, UNLESS NOTED OTHERWISE.			17. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
	18. ELM HAS NOT REVIEWED FOR SUITABILITY OR ADEQUACY ANY PORTION OF THIS PROJECT NOT SPECIFICALLY DEPICTED AND DETAILED IN THESE DRAWINGS. ELM'S SERVICES HAVE BEEN PERFORMED UNDER THE PRESUMPTION THAT THE REMAINING PORTIONS OF THE WORK HAVE BEEN DESIGNED, SPECIFIED AND/OR CONSTRUCTED TO MEET OR EXCEED THE REQUIREMENTS OF THE JURISDICTIONS BUILDING CODE, WHERE SUCH ELEMENTS HAVE BEEN GENERICALLY INDICATED IN THESE DRAWINGS, THEY HAVE BEEN SHOWN ONLY FOR THE CONTRACTORS REFERENCE.			2. ALL REINFORCING SHALL BE DETAILED IN ACCORDANCE WITH A.C.I. STANDARD 315, OF LATEST EDITION. SUBMIT FABRICATION & PLACEMENT DRAWINGS FOR REVIEW.			18. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
F	1. STRIP THE BUILDING PAD OF ALL PAVEMENT, ORGANIC MATERIALS AND TOPSOIL. EXCAVATE, WHERE REQUIRED, TO BUILDING AND STRUCTURE SUBGRADE.			3. NO REINFORCING BAR SHALL BE WELDED IN ANY MANNER, UNLESS SPECIFICALLY SHOWN OR NOTED ON THE DRAWINGS. IF ALLOWED, ALL WELDING SHALL COMPLY WITH AWS D1.4, AND REINFORCING BARS SHALL BE ASTM A706 WELDABLE REBAR ONLY.			19. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
	2. UNDERCUT ALL SOFT AREAS AS DIRECTED BY THE GEOTECHNICAL ENGINEER. ROCK REMOVAL SHALL BE PER THE GEOTECHNICAL REPORT RECOMMENDATIONS. BACKFILL FINISH SUBGRADE WITH COMPACTED ENGINEERED FILL. PROPERLY PREPARE SLAB SUBGRADE WITHIN THE STRUCTURAL FOOTPRINT TO PROVIDE A MODULUS OF SUBGRADE REACTION (K) OF 120 P.CI (MINIMUM).			4. PROVIDE FULL EMBEDMENT FOR ALL DOWELS. IF NOT OTHERWISE SPECIFIED, DOWEL SIZE AND SPACING SHALL BE THE SAME AS MARK REINFORCING, AND SHALL BE TERMINATED WITH ACI STANDARD HOOKS.			20. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
	3. ACCEPTABLE FILL MATERIAL SHALL BE FREE OF ORGANICS, AND HAVE A P.I. OF LESS THAN 55, LL OF LESS THAN 60, MAXIMUM STONE SIZE OF 2" AND A MAXIMUM DRY DENSITY OF GREATER THAN 95 PCF.			5. PROVIDE CORNER BARS IN FOOTINGS, WALLS, TURNDOWN SLABS & BOND BEAMS TO MATCH THE SIZE AND SPACING OF THE HORIZONTAL REINFORCING. LEG LENGTH SHALL BE EQUIVALENT TO A CLASS "A" LAP SPLICE UNLESS NOTED OTHERWISE.			21. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
	4. FILL, WHERE REQUIRED, IS TO BE PLACED IN 8" LOOSE LIFTS AND COMPACTED TO 98% STANDARD PROCTOR (ASTM D-688), WITHIN 42% OF OPTIMUM MOISTURE CONTENT. PERFORM FIELD DENSITY TESTING FOR EACH 2500 SQUARE FEET PER FOOT OF FILL.			6. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185, AND SHALL BE LAPPED A MINIMUM OF 6" FOR PLAIN WIRE (OR 8" FOR DEFORMED WIRE) AND SHALL BE FURNISHED IN SHEETS ONLY (NO ROLLS).			22. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
G	5. BACKFILL FOUNDATION AND RETAINING WALLS WITH CRUSHED STONE MEETING THE REQUIREMENTS OF A.I.D. No. 27 STONE PLACED IN 4-65 DEGREE WEDGE EXTENDING FROM THE BASE OF THE WALL UP TO 12" BELOW FINISHED GRADE, UN.C. PLACE STONE IN 6" LIFTS & COMPACT WHILE MONITORED BY THE GEOTECHNICAL ENGINEER.			7. ALL WALL AND/OR SLAB OPENINGS SHALL BE DETAILED ON THE SHOP DRAWINGS FOR ARCHITECT/ENGINEER REVIEW. INCLUDING ADDED REINFORCEMENT AS SHOWN IN TYPICAL DETAILS. UNLESS NOTED OTHERWISE, AT OPENINGS LARGER THAN 12" IN CONCRETE WALLS AND FLOOR SLABS PROVIDE 2# BARS AT FOUR SIDES AND FOUR CORNERS OF THE OPENING. EXTEND BARS 2'-0" BEYOND CORNERS OF OPENING.			23. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
	6. FOUNDATIONS SHALL BEAR ON MATERIAL CAPABLE OF SUPPORTING A MINIMUM OF 3000 PSF.			8. SPLICES FOR REINFORCING ARE SHOWN SPECIFICALLY ON STRUCTURAL DRAWINGS. ADDITIONAL SPLICES TO FACILITATE CONSTRUCTION SHALL BE CLASS "B" TENSION LAP SPLICES, AND SHALL BE DETAILED ON THE SHOP DRAWINGS FOR REVIEW.			24. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
	7. GEOTECHNICAL NOTE: FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT BY GTEC, PROJECT NO. 1362 AND DATED OCTOBER 18, 2024.			9. CONCRETE BEAM LONGITUDINAL REINFORCING BARS MAY BE SPLICED ONLY AS SHOWN ON THE DRAWINGS EXCEPT THE REINFORCING DESIGNATED AS "CONTINUOUS" SHALL HAVE A CLASS "B" LAP SPLICE. THE LAP SPLICES SHALL BE MADE OVER SUPPORTS FOR BOTTOM & INTERMEDIATE BARS AND AT MID-SPAN FOR TOP BARS. HOOKS & BOTTOM BARS AT EXTERIOR SUPPORTS & TERMINATIONS. TOP & BOTTOM BAR HOOKS AND INTERMEDIATE BARS SHALL EXTEND TO WITHIN 2" OF THE EXTERIOR FACE OF CONCRETE.			25. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
	8. THE GENERAL CONTRACTOR SHALL OBTAIN A COPY OF THE GEOTECHNICAL REPORT AND SHALL ADHERE TO ALL REQUIREMENTS AND RECOMMENDATIONS THEREIN.			10. ELM'S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE INFORMATION GIVEN AND DESIGN CONCEPT EXPRESSED IN THE STRUCTURAL CONTRACT DOCUMENTS. ELM'S REVIEW OF SUBMITTALS IS NOT CONDUCTED FOR THE PURPOSE OF DETERMINING THE ACCURACY OR COMPLETENESS OF OTHER DETAILS SUCH AS DIMENSIONS AND QUANTITIES, OR FOR SUBSTANTIATING PERFORMANCE OF SYSTEMS DESIGNED BY THE CONTRACTOR, ALL OF WHICH REMAIN THE RESPONSIBILITY SOLELY OF THE GENERAL CONTRACTOR.			26. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
	9. ALL FOUNDATION BEARING SURFACES SHALL BE REVIEWED BY THE GEOTECHNICAL ENGER PRIOR TO PLACING CONCRETE TO ENSURE THEIR COMPLIANCE WITH THE BEARING PRESSURES AND SLAB SUBGRADE REQUIREMENTS NOTED. ALL FOUNDATION BEARING ELEVATIONS ARE ESTIMATED AND MAY BE ADJUSTED IN THE FIELD BY THE GEOTECHNICAL ENGINEER AS REQUIRED.			11. ELM'S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE INFORMATION GIVEN AND DESIGN CONCEPT EXPRESSED IN THE STRUCTURAL CONTRACT DOCUMENTS. ELM'S REVIEW OF SUBMITTALS IS NOT CONDUCTED FOR THE PURPOSE OF DETERMINING THE ACCURACY OR COMPLETENESS OF OTHER DETAILS SUCH AS DIMENSIONS AND QUANTITIES, OR FOR SUBSTANTIATING PERFORMANCE OF SYSTEMS DESIGNED BY THE CONTRACTOR, ALL OF WHICH REMAIN THE RESPONSIBILITY SOLELY OF THE GENERAL CONTRACTOR.			27. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
H	10. THE GENERAL CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR DEVIATIONS FROM REQUIREMENTS OF THE CONTRACT DOCUMENTS BY ELM'S APPROVAL OF SUBMITTALS UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED ELM IN WRITING OF SUCH DEVIATION AT THE TIME OF SUBMITTAL AND ELM HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION. THE GENERAL CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR ERRORS OR OMISSIONS IN A SUBMITTAL BY ELM'S APPROVAL OF THE SUBMITTAL.			12. ELM'S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE INFORMATION GIVEN AND DESIGN CONCEPT EXPRESSED IN THE STRUCTURAL CONTRACT DOCUMENTS. ELM'S REVIEW OF SUBMITTALS IS NOT CONDUCTED FOR THE PURPOSE OF DETERMINING THE ACCURACY OR COMPLETENESS OF OTHER DETAILS SUCH AS DIMENSIONS AND QUANTITIES, OR FOR SUBSTANTIATING PERFORMANCE OF SYSTEMS DESIGNED BY THE CONTRACTOR, ALL OF WHICH REMAIN THE RESPONSIBILITY SOLELY OF THE GENERAL CONTRACTOR.			28. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1 OF IBC 2021.			NO		
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MEANINGS OF IDENTIFICATION LETTERS

LETTER	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	USER'S CHOICE			CONTROL	CLOSE
D	USER'S CHOICE	DIFFERENCE OR DIFFERENTIAL			DEVIATION
E	VOLTAGE (EMF)		SENSOR OR PRIMARY ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G	USER'S CHOICE		GLASS, GAUGE, OR VIEWING DEVICE		
H	HAND (MANUALLY INITIATED)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER		SCAN		
K	TIME OR TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	USER'S CHOICE				MIDDLE OR INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE (RESTRICTION)		OPEN
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE OR TOTALIZE	INTEGRATE OR TOTALIZE		
R	RADIATION		RECORD		RUN
S	SPEED OR FREQUENCY	SAFETY		SWITCH	STOP
T	TEMPERATURE		MULTIFUNCTION	TRANSMIT	STOP
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	
V	VIBRATION OR MECHANICAL ANALYSIS		VALVE, DAMPER, OR LOUVER		
W	WEIGHT OR FORCE		WELL OR PROBE		
X	UNCLASSIFIED	X AXIS	ACCESSORY DEVICES OR UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE	Y AXIS		AUXILIARY DEVICES	
Z	POSITION, DIMENSION	Z AXIS OR SAFETY INSTRUMENTED SYSTEM		DRIVER, ACTUATOR, OR UNCLASSIFIED FINAL CONTROL ELEMENT	

GENERAL INSTRUMENT SYMBOLS

	FIELD MOUNTED DISCRETE INSTRUMENTS/SIGNALS
	PILOT LIGHT
	DISCRETE INSTRUMENT MOUNTED ON FACE OF PRIMARY PANEL
	DISCRETE INSTRUMENT MOUNTED BEHIND OR INSIDE OF PRIMARY PANEL
	DISCRETE INSTRUMENT MOUNTED ON FACE OF LOCAL PANEL
	DISCRETE INSTRUMENT MOUNTED BEHIND OR INSIDE OF LOCAL PANEL
	PROGRAMMABLE LOGIC CONTROLLER SYSTEM I/O POINT SEE ABBREVIATION
	HMI INDICATOR/PLC SIGNAL
	HORN
	BEACON
	ANALOG INPUT
	ANALOG OUTPUT
	DIGITAL INPUT
	DIGITAL OUTPUT
	PULSE INPUT
	GENERAL CONTROL INTERLOCK FUNCTION

FUNCTION DESIGNATION AND ABBREVIATIONS

HAND SWITCH DESIGNATION

FR	FORWARD-REVERSE
HDA	HAND-OFF-AUTO
HDR	HAND-OFF-REMOTE
LOA	LOCAL-OFF-AUTO
LOR	LOCAL-OFF-REMOTE
LRA	LOCAL-REMOTE
OCA	OPEN-CLOSE-AUTO
ODA	OPEN-OFF-AUTO
OOR	OPEN-OFF-REMOTE
OC	OPEN-CLOSE
OD	ON-OFF
OSC	OPEN-STOP-CLOSE
SS	START - STOP

MEASUREMENT PRINCIPLE NOTATIONS

CON	CONDUCTANCE
DP	DIFFERENTIAL PRESSURE SENSING
FLN	FLOW NOZZEL
FLT	FLOW TUBE
GWR	GUIDE WAVE
RAD	RADAR
US	ULTRASONIC
VENT	VENTURI TUBE

INSTRUMENT FUNCTION

CH4	METHANE
CL2	CHLORINE RESIDUAL
CO2	CARBON DIOXIDE
DO	DISSOLVE OXYGEN
H2S	HYDROGEN SULFIDE
LEL	LOWER EXPLOSIVE LIMIT
MLSS	MIXED LIQUOR SUSPENDED SOLID
NH3	AMMONIA
NO2	NITRITE
NO3	NITRATE
O2	OXYGEN (PURITY)
O3	OZONE
ORP	OXIDATION REDUCTION POTENTIAL
pH	PH
TCL	TOTAL CHLORINE
TURB	TURBIDITY
TOC	TOTAL ORGANIC CARBON
TSS	TOTAL SUSPENDED SOLIDS

INDICATING LIGHT/ALARM DESIGNATION

OVRLD	OVERLOAD
TRQ HI	TORQUE HIGH
TRQ HI-HI	TORQUE HIGH-HIGH

POWER SUPPLY ABBREVIATIONS

AS	AIR SUPPLY
ES	ELECTRIC SUPPLY
GS	GAS SUPPLY
HS	HYDRAULIC SUPPLY
NS	NITROGEN SUPPLY
SS	STEAM SUPPLY
WS	WATER SUPPLY
220VAC	220VAC
240VAC	240VAC
480VAC	480VAC
120V	POWER SUPPLY SOURCE LABEL USED ONLY WHERE NECESSARY TO HELP CLARIFY AN INSTRUMENT OR SYSTEM FUNCTION.

INSTRUMENT AND I/O ABBREVIATION DEFINITION

AAX	ANALYZER HORN	PE	PRIMARY PRESSURE
AAL	STROBE ALARM LIGHT	PG	ELEMENT/SENSOR
AE	ANALYZER SENSOR	PI	PRESSURE GAUGE
AI	ANALYZER INDICATING	PIT	PRESSURE INDICATING
ASH	TRANSMITTER	PSL	PRESSURE SWITCH LOW
ASHH	ANALYZER SWITCH HIGH	PSH	PRESSURE SWITCH HIGH
CB	CONTROL BLOCK REFERENCE (SCADA LEVEL)	SI	SPEED INDICATION (LED OR SCREEN)
FAL	FLOW ALARM LOW	SC	SPEED CONTROL
FAH	FLOW ALARM HIGH	SIT	SPEED INDICATING TRANSMITTER
FC	FLOW CONTROLLER	SS	START-STOP SWITCH
FI	FLOW INDICATOR	SSL	SPEED SWITCH LOW
FC	FLOW INDICATING CONTROLLER	SSH	SPEED SWITCH HIGH
FE	PRIMARY FLOW	TAL	TEMPERATURE ALARM LOW
FEL	ELEMENT/SENSOR	TAH	TEMPERATURE ALARM HIGH
FG	FLOW SIGHT GAUGE	TAHH	TEMPERATURE ALARM HIGH-HIGH
FT	FLOW INDICATING TRANSMITTER	TDI	DIFFERENTIAL TEMPERATURE INDICATOR (LED OR SCREEN)
FTT	FLOW TOTALIZING INDICATING TRANSMITTER	TE	TEMPERATURE SENSOR / DETECTOR
FSL	FLOW SWITCH LOW	TSH	TEMPERATURE SWITCH LOW
FSH	FLOW SWITCH HIGH	TSH	TEMPERATURE SWITCH HIGH
FY	FLOW SIGNAL CONVERTER, REPEATER OR ISOLATOR	TSI	TEMPERATURE INDICATOR (LED OR SCREEN)
HIC	HAND INDICATING CONTROLLER	TIT	TEMPERATURE INDICATING TRANSMITTER
HMS	MOMENTARY PUSHBUTTON OR SELECTOR SWITCH	UA	MULTIVARIABLE/COMMON ALARM/COMMON FAULT
IAH	HAND SWITCH	UCR	RUN COMMAND
IE	CURRENT ELEMENT/SENSOR	UCS	STOP COMMAND
IL	CURRENT ALARM HIGH (MOTOR OVERLOAD)	VAH	VIBRATION ALARM HIGH
ISH	CURRENT SWITCH HIGH	WE	WEIGHT INDICATING TRANSMITTER
J	POWER FAILURE	WIT	WEIGHT INDICATING TRANSMITTER
JIT	POWER INDICATING LIGHT	YI	GENERAL ALARM EVENT
KQI	POWER INDICATING TRANSMITTER	YI	EVENT INDICATION (LED OR SCREEN)
LE	TIME TOTALIZING INDICATOR	YIR	RUNNING INDICATION
LG	PRIMARY LEVEL	YIS	STOPPED INDICATION
LE	ELEMENT/SENSOR	YL	EVENT INDICATING LIGHT
LG	LEVEL SIGHT GAUGE	YLR	RUNNING INDICATING LIGHT
LI	LEVEL INDICATOR (LED OR SCREEN)	YLS	STOPPED INDICATING LIGHT
LIT	LEVEL INDICATING TRANSMITTER	ZI	POSITION INDICATING LIGHT
LSL	LEVEL SWITCH LOW	ZIC	CLOSED INDICATION
LSH	LEVEL SWITCH HIGH	ZIO	CLOSED INDICATING LIGHT
LY	LEVEL SIGNAL CONVERTER, REPEATER OR ISOLATOR	ZIC	OPEN INDICATION
NI	STROKE POSITION SWITCH	ZLO	OPEN INDICATING LIGHT
NC	STROKE POSITION COMMAND	ZSC	CLOSED POSITION SWITCH
QAH	TORQUE ALARM HIGH	ZSO	OPEN POSITION SWITCH
QAHH	TORQUE ALARM HIGH-HIGH	ZIT	POSITION INDICATING TRANSMITTER
PDG	DIFFERENTIAL PRESSURE	ZT	POSITION TRANSMITTER
PDI	INDICATOR (LED OR SCREEN)		

TYPICAL TAG NUMBERS AND DESIGNATION

INSTRUMENTATION SYMBOLOGY AND DESIGNATION

SCADA SYSTEM ARCHITECTURE SYMBOLS

OFFICE EQUIPMENT

	PRINTER		WALL MONITOR
	SCADA WS		LAPTOP
	SCADA WS - DOUBLE		

SECURITY

	SECURITY CAMERA - FISHEYE
	SECURITY CAMERA - DIRECTIONAL
	KEYPAD
	CARD READER
	CAMERA INTERCOM

FIELD EQUIPMENT ANTENNAS

	YAGI ANTENNA
	MICROWAVE ANTENNA
	CELLULAR ANTENNA
	OMNIDIRECTIONAL ANTENNA

FIELD EQUIPMENT


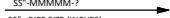


































































































































































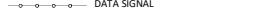

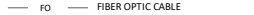
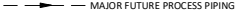

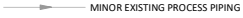









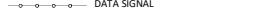

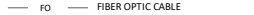
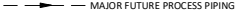

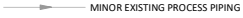





























































































































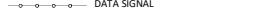

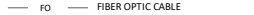
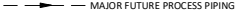

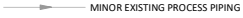
































































	OIT - OPERATOR INTERFACE TERMINAL		ESW - ETHERNET SWITCH DIN RAIL MOUNT
	MC - MEDIA CONVERTER		ESW - ETHERNET SWITCH DIN RAIL MOUNT WITH FIBER CAPABILITIES
	RADIO		PQM - POWER QUALITY METER
	PLC - PROGRAMMABLE LOGIC CONTROLLER		RIO - REMOTE INPUT/OUTPUT
	ROUTER - DIN RAIL MOUNT		CTL - OEM CONTROLLER
	ACCESS CONTROLLER		SA - SURGE ARRESTOR
	ENPP - ETHERNET PATCH PANEL DIN RAIL MOUNT		
	UPS - UNINTERRUPTIBLE POWER SUPPLY		

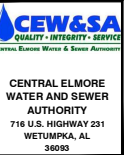
RACK MOUNTED EQUIPMENT

	SER - SERVER		PDU - POWER DISTRIBUTION UNIT
	FW - FIREWALL		ROUTER
	PMCS - POWER MONITORING CONTROL SYSTEM		FOPP - FIBER OPTIC PATCH PANEL
	SVS - SERVER, SECURITY		ENPP - ETHERNET PATCH PANEL
	SVH - SERVER, HISTORY		ESW - ETHERNET SWITCH
	KVM - KEYBOARD VIDEO MOUSE		UPS - UNINTERRUPTIBLE POWER SUPPLY
	NAS - NETWORK ATTACHED STORAGE		

 <b>ARDURRA</b> <small>CALCULATORS, MEASURING, ETC.</small> 206 CLINTON AVE. WEST SUITE 704 HUNTSVILLE, AL 35801 Phone: (205) 297-6565 <a href="http://www.Ardurra.com">www.Ardurra.com</a>	
 <b>CEW&amp;S</b> <small>CENTRAL ELMORE WATER &amp; SEWER AUTHORITY</small>	
<b>CENTRAL ELMORE WATER AND SEWER AUTHORITY</b> 716 U.S. HIGHWAY 231 WETUMPKA, AL 36093	
	REVISION
	DATE
	NO.
<p style="margin: 0;"><b>CENTRAL ELMORE WATER TREATMENT PLANT UPGRADE</b></p> <hr/> <p style="margin: 0;"><b>PROCESS AND INSTRUMENTATION LEGEND</b></p> <hr/> <p style="margin: 0;"><b>SHEET 1 OF 2</b></p>	
	
JOB NO:	2024-0776-02
DATE:	01/16/2025
<h2 style="margin: 0;">G-06</h2>	
10% ISSUE FOR BID 07/11/2025	

July 30, 2023 7:34am (revised) C:\Users\jmc\OneDrive\Documents\2024\CEW&SA\Central Elmore Water and Sewer Authority\G&ID\G&ID.dwg (6/6/24) dwg

EQUIPMENT IDENTIFICATION DESCRIPTION		PIPELINE IDENTIFICATION DESCRIPTION		PRIMARY ELEMENTS		PUMP SYMBOLS & ABBREVIATIONS (PMP)																																																																																																																																																																																					
<div><div></div><div>AA - BASIN OR DISTRICT BB - AREA CODE CC - FUNCTION CODE DD - PROCESS SEQUENCE EE - QUANTITY OF LIKE EQUIPMENT</div></div> <div><p><b>PIPE MATERIAL CODE</b></p><table><tr><td>CS</td><td>CARBON STEEL</td></tr><tr><td>DI</td><td>DUCTILE IRON PIPE</td></tr><tr><td>FRP</td><td>FIBER REINFORCED PIPE</td></tr><tr><td>GC</td><td>GROOVED CLASS</td></tr><tr><td>HDPE</td><td>HIGH DENSITY POLYETHYLENE</td></tr><tr><td>PVC</td><td>PVC</td></tr><tr><td>PVC40</td><td>SCHEDULE 40 PVC</td></tr><tr><td>PVC80</td><td>SCHEDULE 80PVC</td></tr><tr><td>SS</td><td>STAINLESS STEEL</td></tr></table></div>		CS	CARBON STEEL	DI	DUCTILE IRON PIPE	FRP	FIBER REINFORCED PIPE	GC	GROOVED CLASS	HDPE	HIGH DENSITY POLYETHYLENE	PVC	PVC	PVC40	SCHEDULE 40 PVC	PVC80	SCHEDULE 80PVC	SS	STAINLESS STEEL	<div><div></div><div>SS' - PIPE SIZE (INCHES) MMMM - PIPELINE MATERIAL CODE PPP - PROCESS CODE</div></div> <div><p><b>PROCESS CODE</b></p><table><tr><td>OC</td><td>ODOR CONTROL</td></tr><tr><td>RQ</td><td>RAW WATER</td></tr><tr><td>RWP</td><td>RAW WATER PUMPING</td></tr><tr><td>RWS</td><td>RAW WATER STORAGE</td></tr><tr><td>SEP</td><td>SEPTAGE</td></tr><tr><td>SEW</td><td>SEWAGE</td></tr><tr><td>STS</td><td>STORM SEWER</td></tr></table></div>		OC	ODOR CONTROL	RQ	RAW WATER	RWP	RAW WATER PUMPING	RWS	RAW WATER STORAGE	SEP	SEPTAGE	SEW	SEWAGE	STS	STORM SEWER	<div><table><tr><td></td><td>FLUME</td><td></td><td>THERMAL MASS FLOW METER</td></tr><tr><td></td><td>MAGNETIC FLOWMETER</td><td></td><td>TURBINE OR PROPELLER TYPE</td></tr><tr><td></td><td>ORIFICE PLATE</td><td></td><td>ULTRASONIC FLOWMETER</td></tr><tr><td></td><td>PITOT TUBE</td><td></td><td>VENTURI TUBE, FLOW NOZZLE OR FLOW TUBE</td></tr><tr><td></td><td>POSITIVE DISPLACEMENT</td><td></td><td>WEIR</td></tr><tr><td></td><td>ROTAMETER</td><td></td><td></td></tr></table></div>			FLUME		THERMAL MASS FLOW METER		MAGNETIC FLOWMETER		TURBINE OR PROPELLER TYPE		ORIFICE PLATE		ULTRASONIC FLOWMETER		PITOT TUBE		VENTURI TUBE, FLOW NOZZLE OR FLOW TUBE		POSITIVE DISPLACEMENT		WEIR		ROTAMETER			<div><table><tr><td></td><td>CLP - CENTRIFUGAL PUMP</td><td></td><td>SSP - SUMP PUMP</td></tr><tr><td></td><td>SCP - HORIZONTAL PUMP</td><td></td><td>SMP - SUBMERSIBLE PUMP</td></tr><tr><td></td><td>P - POSITIVE DISPLACEMENT PUMP</td><td></td><td>VWP - VERTICAL TURBINE PUMP</td></tr><tr><td></td><td>VEP - VERTICAL INLINE PUMP</td><td></td><td>VEP - METERING PUMP</td></tr><tr><td></td><td>VP - VERTICAL CAN PUMP</td><td></td><td>PSP - PERISTALTIC METERING PUMP</td></tr><tr><td></td><td>PCP - PROGRESSIVE CAVITY PUMP</td><td></td><td>DMP - DIAPHRAGM METERING PUMP</td></tr></table></div>			CLP - CENTRIFUGAL PUMP		SSP - SUMP PUMP		SCP - HORIZONTAL PUMP		SMP - SUBMERSIBLE PUMP		P - POSITIVE DISPLACEMENT PUMP		VWP - VERTICAL TURBINE PUMP		VEP - VERTICAL INLINE PUMP		VEP - METERING PUMP		VP - VERTICAL CAN PUMP		PSP - PERISTALTIC METERING PUMP		PCP - PROGRESSIVE CAVITY PUMP		DMP - DIAPHRAGM METERING PUMP																																																																																																				
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CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE  
PROCESS AND INSTRUMENTATION LEGEND  
SHEET 2 OF 2



JOB NO: 2024-0778-00  
DATE: 07/15/2024

G-07  
100% ISSUE FOR BID  
07/11/2025



[illegible]

PROCESS FLOW DIAGRAM



JOB NO:	2024-0776-00
DATE:	07/26/2024

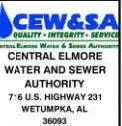
**G-08**

100% ISSUE FOR  
07/11/2025

## GENERAL NOTES

A	OR AMP	AMPERES	UG	UNDERGROUND
AFF		ABOVE FINISH FLOOR	UL	UNDERWRITER'S LABORATORIES
AHU		AIR HANDLING UNIT	UNO	UNLESS NOTED OTHERWISE
AIC		AMPERE INTERRUPTING CAPACITY	V	VOLTS
AM		AMMETER	VFD	VARIABLE FREQUENCY DRIVE
AS		AMMETER SELECTION SWITCH	VM	VOLTMETER
ASYM		ASYMMETRICAL	VMS	VOLTMETER SELECTOR SWITCH
ATS		AUTOMATIC TRANSFER SWITCH	W	WIDTH
AT		AUTOMATIC TRANSFORMER	W/	WITH
BCP		BACKUP CONTROL PANEL	WHDM	WATT HOUR DEMAND METER
C		CONDUIT	WM	WATTMETER
CB		CIRCUIT BREAKER	WMP	WEATHER PROOF
CKT		CIRCUIT	XFMR	TRANSFORMER
CLF		CURRENT LIMITING FUSE	Y	WYE CONNECTION
CNL		CONTROL		
CT		CURRENT TRANSFORMER		
Δ		DELTA CONNECTION		
D		DEPTH		
DP		DISTRIBUTION PANELBOARD		
DS OR DISC		DISCONNECT SWITCH		
DIC		DATA TERMINAL CABINET		
EF		EXHAUST FAN		
EG		EQUIPMENT GROUND		
EMCP		ENERGY MANAGEMENT CONTROL PANEL		
EGC		EQUIPMENT GROUNDING CONDUCTOR		
EMT		ELECTRICAL METALLIC TUBING		
ESTOP		EMERGENCY STOP		
ETR		EXISTING TO REMAIN		
EX OR EXIST.		EXISTING		
EXP		EXPLOSION PROOF		
F		FUSE		
FA		FIRE ALARM		
FCR		FLOAT CONTROL RELAY		
FLR		FLOOR		
FACP		FIRE ALARM CONTROL PANEL		
FMPX		FIRE ALARM MULTIPLEX PANEL		
G CR GND		GROUND		
GEC		GROUNDING ELECTRODE CONDUCTOR		
GF		GROUND FAULT		
GI		GROUND FAULT INTERRUPTING		
H		HEIGHT		
HP		HORSEPOWER		
HV		HIGH VOLTAGE, 600VAC		
HVAC		HEATING, VENTILATION AND AIR		
IMC		INTERMEDIATE METAL CONDUIT		
JB OR J		JUNCTION BOX		
KVA		KILOVOLT — AMP'S		
KW		KILOWATTS		
KWH		KILOWATT—HOUR		
L		LENGTH		
LA		LIGHTING ARRESTOR		
LCP		LIGHTING CONTROL PANEL		
LFMC		LIQUIDTIGHT FLEXIBLE METAL CONDUIT		
LP		LIGHTING PANELBOARD		
LV		LOW VOLTAGE, 240VAC		
MCE OR MB		MAIN CIRCUIT BREAKER		
MCC		MOTOR CONTROL CENTER		
MFR		MANUFACTURER		
MH OR MTG		MOUNTING HEIGHT		
MLO		MAIN LUG ONLY		
MMS		MICROPROCESSOR—BASED METERING SYSTEM		
MT OR MTD		MOUNT OR MOUNTED		
N		NEUTRAL		
NC		NORMALLY CLOSED		
NEC		NATIONAL ELECTRICAL CODE		
NEMA		NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION		
NF		NON—FUSIBLE		
NFPA		NATIONAL FIRE PROTECTION ASSOCIATES		
NO		NORMALLY OPEN		
NTS		NOT TO SCALE		
P		POLE		
PFC		POWER FACTOR CAPACITOR		
PLC		PROGRAMMABLE LOGIC CONTROLLER		
PMT		PAD MOUNT TRANSFORMER		
PNL		PANEL		
PVC		POLYVINYLCHLORIDE CONDUIT		
RC		REMOTE CONTROL SWITCH		
REC OR RECP		RECEPTACLE		
RG		RIGID GALVANIZED CONDUIT		
RGS		ROOT MEAN SQUARE		
RMS		REMOTE TERMINAL UNIT		
RTU		STAINLESS STEEL, SOFT START		
SS		SWITCH		
SW		SWITCHBOARD		
SWED		SYMMETRICAL		
SYM		TELEPHONE BACKBOARD		
TBB		TEMPERATURE CONTROL PANEL		
TCP		TELEPHONE TERMINAL CABINET		
TC		TRANSIENT VOLTAGE SURGE SUPPRESSOR		
TVSS		TYPICAL		
TYP				

- ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS:
  - 1.1. NFPA 70, NATIONAL ELECTRICAL CODE.
  - 1.2. NFPA 101 LIFE SAFETY CODE.
  - 1.3. NFPA 820 STANDARD FOR FIRE PROTECTION IN WASTEWATER TREATMENT AND COLLECTION FACILITIES.
2. WET WELLS ARE CLASS 1, DIV. 1, SPACES.
3. ALL ELECTRICAL CIRCUITS SHALL INCLUDE A GREEN GROUNDING CONDUCTOR SIZED PER NEC.
4. CONDUIT AND DEVICE LOCATIONS ARE SHOWN DIAGRAMMATICALLY ONLY. CONTRACTOR SHALL FIELD LOCATE OR ROUTE AS REQUIRED.
5. ALL CONDUIT SHALL BE INSTALLED PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE.
6. ALL PANEL LEGENDS SHALL BE RETYPED TO REFLECT UP TO DATE CONDITIONS. ALL PANEL LEGENDS SHALL INDICATE THE PANEL'S FEEDER CKT. SOURCE PANEL (OR SUBSTATION) AND ITS LOCATION.
7. ELECTRICAL EQUIPMENT AND DEVICES SHALL BE PROVIDED WITH PHENOLIC NAMEPLATES. ALL NAMEPLATES SHALL BE MECHANICALLY FASTENED WITH S.S. SCREWS OR RIVETS. THE USE OF ADHESIVE NAMEPLATES SHALL NOT BE ALLOWED.
8. CONTRACTOR SHALL MAINTAIN A SET OF PRINTS AND MARK-UP DURING CONSTRUCTION TO REFLECT "AS-BUILT" CONDITIONS. PRINTS SHALL BE DELIVERED TO THE ENGINEER UPON COMPLETION OF THE PROJECT AS A COMPLETE SET OF RECORD DRAWINGS. IN ADDITION, THE CONTRACTOR SHALL PROVIDE ELECTRONIC COPIES OF ALL UPDATES "AS-BUILT" DRAWINGS IN AUTOCAD 2007 FORMAT.
9. THE CONTRACTOR SHALL PROVIDE PULL BOXES IN POWER CIRCUIT CONDUIT AS REQUIRED, SO AS TO LIMIT THE NUMBER OF BENDS TO A MAXIMUM OF 360 DEGREES OR FOUR 90 DEGREE TURNS.
10. PROVIDE CONDUIT EXPANSION FITTINGS AS CONDUIT CROSSES BUILDING EXPANSION JOINTS.
11. ALL EXTERIOR ELECTRICAL ENCLOSURES SHALL BE NEMA 4X STAINLESS STEEL UNLESS OTHERWISE NOTED.
12. ALL SUPPORTING AND FASTENING DEVICES SHALL BE STAINLESS STEEL.
13. CONTRACTOR MAY COMBINE HOMERUNS TO ALL PANEL BOARDS PER NEC.
14. ALL RECEPTACLE BRANCH CIRCUITS OVER 75' IN LENGTH SHALL USE #10 AWG CONDUCTOR (FOR VOLTAGE DROP).
15. CONTRACTOR TO PROVIDE ALL REQUIRED POWER AND STARTERS FOR PROCESS EQUIPMENT (COORDINATE WITH PROCESS EQUIPMENT SUPPLIER).
16. ALL SERVICE ENTRANCE CONDUITS SHALL BE SCH. 80 PVC BURIED 4' BELOW GRADE WITH MARKER TAPE 6" ABOVE TOP OF CONDUIT.
17. CONTRACTOR SHALL PAY ALL FEES ASSESSED BY ELECTRICAL UTILITY CO.
18. CONTRACTOR SHALL COORDINATE INSTALLATION OF ELECTRICAL SERVICE WITH UTILITY COMPANY.
19. CONTRACTOR SHALL PROVIDE 2 SPARE FUSES FOR EACH FUSE INSTALLED INCLUDING ALL EQUIPMENT AND CONTROLS.
20. CONTROL AND POWER CONDUITS SHALL BE SEPARATED BY 12" MIN. AND SHALL BE IN SEPARATE JUNCTION BOXES AND DUCT BANKS. MAINTAIN 12" SEPARATION BETWEEN DUCT BANKS.
21. CONTRACTOR SHALL MAINTAIN OPERATION OF THE ELECTRICAL SERVICE DURING THE UPGRADE.
22. CONTRACTOR SHALL PROVIDE A GROUNDING SYSTEM AS DETAILED IN PLANS. THE INSTALLED GROUNDING SYSTEM SHALL HAVE A RESISTANCE OF LESS THAN 5 OHMS TO GROUND.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR READING ALL PROJECT SPECIFICATIONS AND WILL BE RESPONSIBLE FOR MEETING ALL REQUIREMENTS OUTLINED IN THE SPECIFICATIONS.
24. ALL CONDUITS ABOVE GRADE, IN NON-HAZARDOUS LOCATIONS, SHALL BE RIGID ALUMINUM.
25. ALL CONDUITS BELOW GRADE SHALL BE PVC.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COORDINATED ELECTRICAL SYSTEM IN ACCORDANCE WITH NEC ARTICLE 240.12 AND ARTICLE 700.27.
27. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DETAILED ELECTRICAL EQUIPMENT LAYOUT DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

[illegible]

ELECTRICAL NOTES



JOB NO:	2024-0776-00
DATE:	07/19/2024

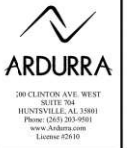
**G-09**

0% ISSUE FOR BID  
07/11/2025

SYMBOL	DESCRIPTION
	CONTACT, NORMALLY OPEN
	CONTACT, NORMALLY CLOSED
	OPERATING COIL * DESIGNATION: C - CONTACTOR R - CONTROL RELAY M - MAGNETIC MOTOR STARTER - NON REVERSING MF - MAGNETIC MOTOR STARTER - FORWARD MR - MAGNETIC MOTOR STARTER - REVERSE MO - MAGNETIC MOTOR STARTER - OPEN MC - MAGNETIC MOTOR STARTER - CLOSE MH - MAGNETIC MOTOR STARTER - HIGH SPEED ML - MAGNETIC MOTOR STARTER - LOW SPEED SOV - SOLENOID OPERATED VALVE TD - TIME DELAY RELAY T - PROGRAMMABLE TIMER
	METER, ELAPSED TIME
	INDICATING LIGHT - FULL VOLTAGE TRANSFORMER OR LED * DESIGNATION: A - AMBER R - RED B - BLUE W - WHITE G - GREEN Y - YELLOW
	INDICATING LIGHT, PUSH -TO-TEST * DESIGNATION: A - AMBER R - RED B - BLUE W - WHITE G - GREEN Y - YELLOW
	SWITCH, PUSHBUTTON, NORMALLY OPEN CIRCUIT
	SWITCH, PUSHBUTTON, NORMALLY CLOSED CIRCUIT
	SWITCH, PUSHBUTTON, TAG LINE, NORMALLY CLOSED CIRCUIT WITH MAINTAINED CONTACT
	SWITCH, PUSHBUTTON, TWO CIRCUIT, NORMALLY OPEN AND NORMALLY CLOSED
	SWITCH, EMERGENCY SHUTDOWN, MUSHROOM-HEAD PUSHBUTTON, NORMALLY CLOSED CIRCUIT WITH MAINTAINED CONTACT
	SWITCH, MASTER OR CONTROL X - INDICATES CONTACT CLOSED
	MOMENTARY-CONTACT SWITCH
	SWITCH PRESSURE/VACUUM OPERATED, NORMALLY OPEN, CLOSING ON RISING PRESSURE
	SWITCH PRESSURE/VACUUM OPERATED, NORMALLY CLOSED OPENING ON RISING PRESSURE
	SWITCH, FLOW ACTUATED, NORMALLY OPEN, CLOSING ON INCREASE IN FLOW
	SWITCH, FLOW ACTUATED, NORMALLY CLOSED OPENING ON INCREASE IN FLOW
	SWITCH, TEMPERATURE ACTUATED, NORMALLY CLOSED OPENING ON RISING TEMPERATURE
	SWITCH, TEMPERATURE ACTUATED, NORMALLY OPEN CLOSING ON RISING TEMPERATURE
	CONTACT, TIME DELAY, NORMALLY OPEN WITH TIME DELAY CLOSING
	CONTACT, TIME DELAY, NORMALLY OPEN WITH TIME DELAY OPENING
	CONTACT, TIME DELAY, NORMALLY CLOSED WITH TIME DELAY OPENING
	CONTACT, TIME DELAY, NORMALLY CLOSED WITH TIME DELAY CLOSING
	SWITCH, LIMIT
	SWITCH, TORQUE
	SWITCH, LIQUID LEVEL ACTUATED, CLOSING ON RISING LEVEL
	SWITCH, LIQUID LEVEL ACTUATED, OPENING ON RISING LEVEL

SYMBOL	DESCRIPTION
	25A FUSE (AMPERE RATING SHOWN)
	FUSED DISCONNECT SWITCH, 3 POLE * DESIGNATION: LS - LOAD BREAK SWITCH DS - DISCONNECT SWITCH
	1200A POWER CIRCUIT BREAKER, MEDIUM-VOLTAGE, DRAWOUT TYPE (AMPERE RATING SHOWN)
	500A/600AF CIRCUIT BREAKER, DRAWOUT TYPE, 600VAC OR LESS, 3P (TRIP AND FRAME AMPERE RATING SHOWN)
	60AT CIRCUIT BREAKER, THERMOMAGNETIC, 600 VAC OR LESS, 3P (AMPERE RATING SHOWN)
	600AT/1000AF CIRCUIT BREAKER, THERMOMAGNETIC, 600 VAC OR LESS, 3P ADJUSTABLE TRIP (TRIP & FRAME AMPERE RATING SHOWN)
	7A MOTOR CIRCUIT PROTECTOR, 600V AC OR LESS, 3P UON (CONTINUOUS AMPERE RATING SHOWN)
	3P/20A CONTACTOR (NUMBER OF POLES AND AMPERE RATING SHOWN)
	MAGNETIC MOTOR STARTER * NEMA SIZE ** DESIGNATION: NONE - FULL VOLTAGE, NON-REVERSING FVR - FULL VOLTAGE, REVERSING RVNR - REDUCED VOLTAGE, NON-REVERSING RVR - REDUCED VOLTAGE, REVERSING
	MANUAL MOTOR STARTER
	VARIABLE FREQUENCY DRIVE / INVERTER
	750KVA/4.16/0.48KV POWER TRANSFORMER (KVA RATING, VOLTAGES AND WINDINGS CONNECTIONS SHOWN)
	7= X R SERIES REACTOR (LINE OR LOAD RATING SHOWN)
	(2) 4200/120V VOLTAGE TRANSFORMER (QUANTITY AND VOLTAGE RATIO SHOWN)
	(3) 800/5A CURRENT TRANSFORMER (QUANTITY AND CURRENT RATIO SHOWN)
	(3) 2200/5A SET AT 1200/5A MULTI-RATIO CURRENT TRANSFORMER (QUANTITY, MAXIMUM CURRENT RATIO AND SETTING SHOWN)
	800/5A ZERO SEQUENCE CURRENT TRANSFORMER (CURRENT RATIO SHOWN)
	CAPACITOR
	GROUND CONNECTION
	(3) SURGE ARRESTER (QUANTITY SHOWN)
	3P/400A TRANSFER SWITCH (NUMBER OF POLES AND AMPERE RATING SHOWN)
	125VDC BATTERY (RATING SHOWN)
	(10) MOTOR, INDUCTION (HORSEPOWER SHOWN)

SYMBOL	DESCRIPTION
	XXXXW/XXXV 3-PHASE GENERATOR (KW RATINGS, VOLTAGE AND PHASE SHOWN)
	THERMISTOR
	DIODE, SEMICONDUCTOR
	RTD RESISTANCE TEMPERATURE DETECTOR
	RESISTOR
	SPACE HEATER
	500VA/480/120V CONTROL POWER TRANSFORMER, (VA RATING VOLTAGES)
	AMMETER SWITCH
	VOLTMETER SWITCH
	CONTROL SWITCH
	METER * DESIGNATION: AM - AMMETER VM - VOLTMETER PFM - POWER FACTOR WM - WATTMETER FMM - FREQUENCY METER WHM - WATTHOUR METER PM - POWER MONITORING DEVICE
	PROTECTIVE RELAY OR DEVICE * DESIGNATION: 11 - MULTIFUNCTION PROTECTIVE RELAY 25 - SYNCHRONIZING OR SYNCHRONISM-CHECK RELAY 26 - APPARATUS THERMAL DEVICE 27 - UNDERVOLTAGE RELAY 32 - DIRECTIONAL POWER RELAY 37 - UNDERCURRENT OR UNDERPOWER RELAY 40 - FIELD RELAY 46 - REVERSE-PHASE OR PHASE-BALANCE CURRENT RELAY 49 - MACHINE OR TRANSFORMER THERMAL RELAY 50 - INSTANTANEOUS OVERCURRENT RELAY 50GS - INSTANTANEOUS GROUND FAULT RELAY 51 - AC TIME OVERCURRENT RELAY 51GS - AC TIME GROUND FAULT RELAY 51V - AC TIME OVERCURRENT RELAY (VOLTAGE RESTRAINT) 55 - POWER FACTOR RELAY 59 - OVERVOLTAGE RELAY 60 - VOLTAGE OR CURRENT BALANCE RELAY 63 - PRESSURE SWITCH 64 - GROUND DETECTOR RELAY 67 - AC DIRECTIONAL OVERCURRENT RELAY 81 - FREQUENCY RELAY 86 - LOCKOUT RELAY 87 - DIFFERENTIAL PROTECTIVE RELAY 87G - GENERATOR DIFFERENTIAL GROUND FAULT RELAY



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**CENTRAL ELMORE WATER TREATMENT PLANT UPGRADE**

**ELECTRICAL SYMBOLS**



JOB NO: 2024-0718-00  
DATE: 07/18/2024

**G-10**

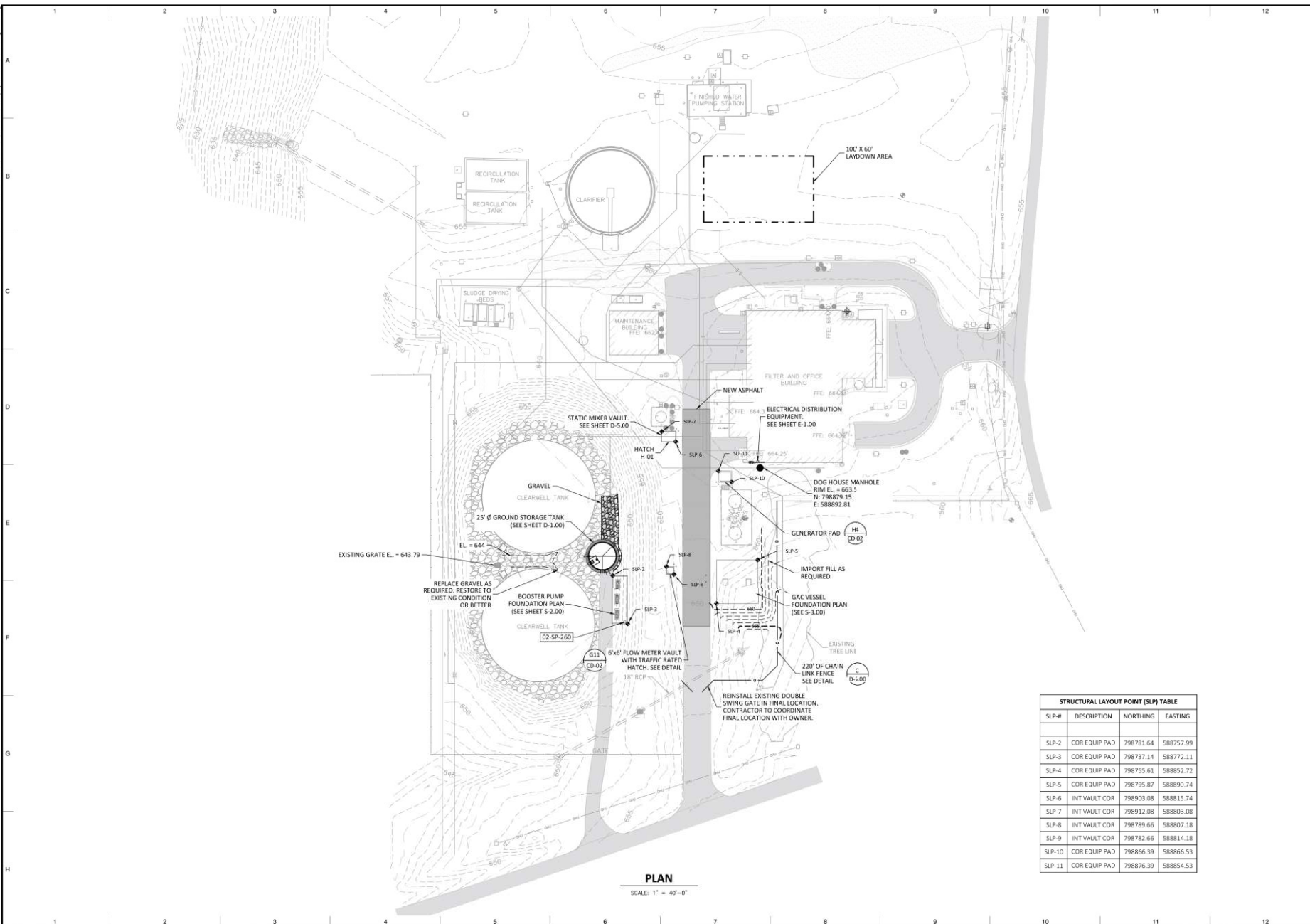
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716 U.S. HIGHWAY 231  
WETUMPKA, AL  
36093

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CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE

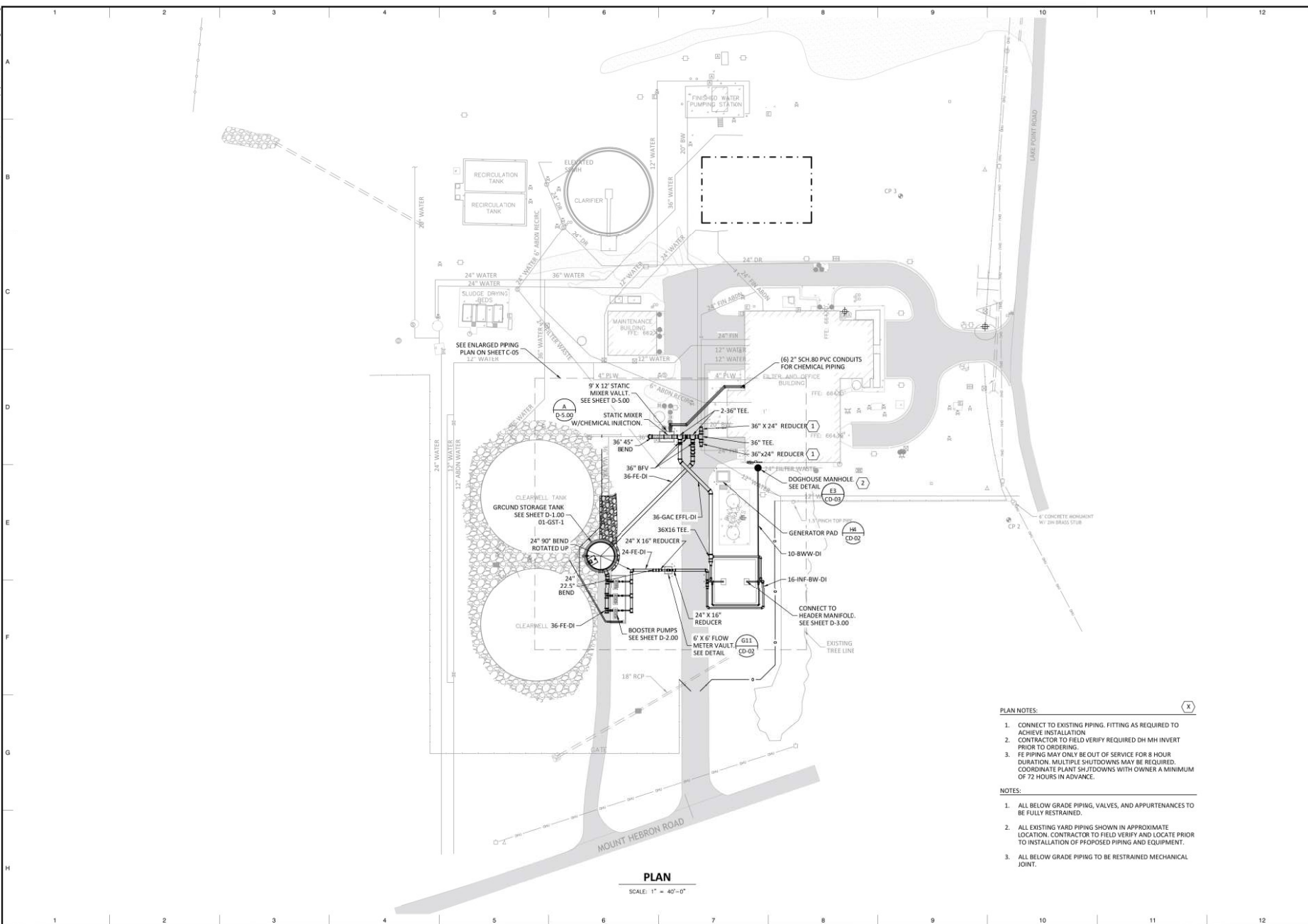
SITE PLAN




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DATE:	07/19/2024

C-03

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36093

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CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE



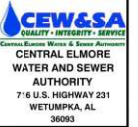
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TREATMENT PLANT UPGRADE

OVERALL ELECTRICAL SITE PLAN



JOB NO:	2024-0776-00
DATE:	07/19/2024

**CE-01**

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07/11/2025

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**CENTRAL MORE WATER  
TREATMENT PLANT UPGRADE**



JOB NO:	2024-0776-00
DATE:	07/19/2024

**CE-02**

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TREATMENT PLANT UPGRADE

## GROUND STORAGE TANK ELECTRICAL PLAN



JOB NO:	2024-0776-00
DATE:	07/19/2024

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07/11/2025

**JOB NO:** 2024-0776-00  
**DATE:** 07/19/2024

**I-1.00**

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**07/11/2025**

FROM FILTERED DIST. SHEET C-04

36" DI-FIN

PIPE SUPPORT (TYP.)

12" FLEXIBLE EXPANSION JOINT (TYP.)

12" BFV (TYP.)

36"x12" TEE (TYP.)

1" PEX SAMPLE LINES

36" BLIND FLANGE

BOOSTER PUMP, TYP. SEE SPECIFICATIONS FOR DETAILS

RETAINING WALL

13'-5"

3'-2"

PRESSURE GAUGE (TYP.)

PI 210

10" BFV (TYP.)

10" CHECK VALVE (TYP.)

10" FLEXIBLE EXPANSION JOINT (TYP.)

PI 220

24"x10" TEE (TYP.)

13'-5"

44'-5"

24" DI-FE

TO GAC CONTACTOR (T-C-04)

10" FLEXIBLE EXPANSION JOINT (TYP.)

PI 230

10" BFV (TYP.)

10" CHECK VALVE (TYP.)

10" FLEXIBLE EXPANSION JOINT (TYP.)

PI 240

24"x10" TEE (TYP.)

13'-5"

44'-5"

24" BLIND FLANGE

SAMPLE PUMP GOULDS JRD7 CONVERTIBLE JET PUMP

02-SF-260

34'-1"

11'-3"

4'-2" TYP.

6'-9" TYP.

9'-11" (TYP.)

3'-7" (TYP.)

3'-2"

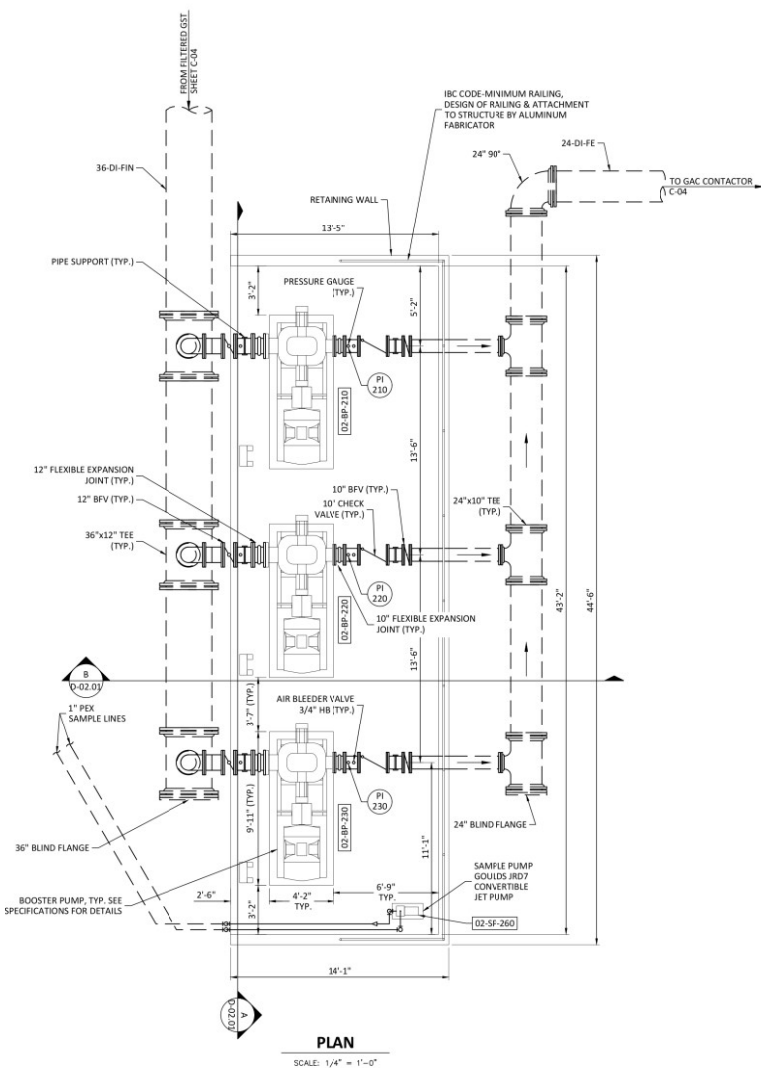
2'-6"

PLAN

SCALE: 1/4" = 1'-0"

NOTE:

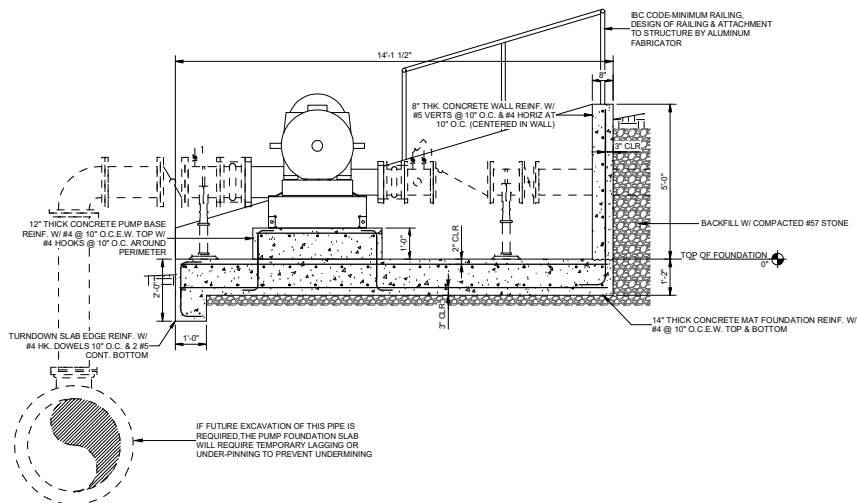
1. ALL BELOW GRADE PIPING TO BE RESTRAINED MECHANICAL JOINT.



		SCALE FEET 0          4          8	
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			RY
			REVISION
		-	
		-	DATE
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CENTRAL ELMORE WATER TREATMENT PLANT UPGRADE		BOOSTER PUMPS	
<p align="center">07/11/2025</p> <p>JOB NO.: 2024-0716/00 DATE: 07/16/2024</p> <h2 align="center">D-2.00</h2> <p align="center">10% ISSUE FOR BID 8/11/1/2025</p>			



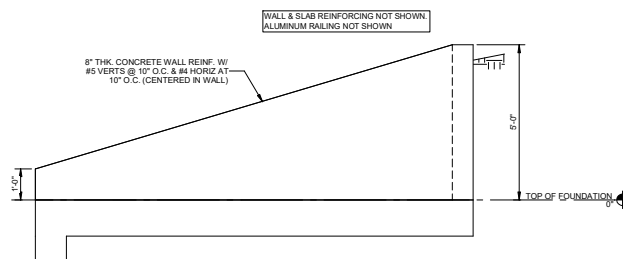




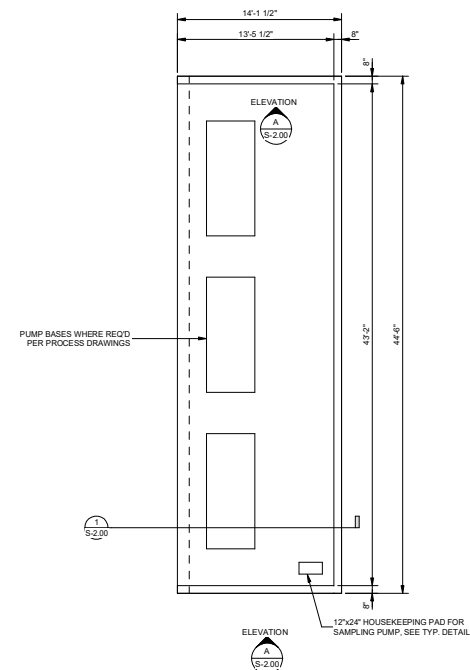
(BOOSTER PUMP PAD SECTION)

**SECTION**

1  
S-2.00 1/2" = 1'-0"

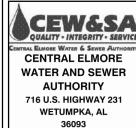


**ELEVATION**



## BOOSTER PUMP FOUNDATION PLAN

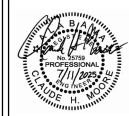
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**CENTRAL ELMORE WTP UPGRADE**

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**BOOSTER PUMPS FOUNDATION PLAN &  
SECTIONS**



JOB NO:	2024-0776-00
DATE:	7/11/25

**S-2.00**

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**ELM** 2707 Arline Street  
Suite 21  
Huntsville, AL 35895  
Phone: 256.864.2540  
Echols, Lindsey & Moore  
Structural Engineers, Inc.  
Project No. 24185



- (A) BOOSTER PUMP, TYP. OF 3
- (B) DISCONNECT SWITCH, TYP OF 3
- (C) PRESSURE TRANSDUCER
- (D) FLOW METER
- (E) AREA LIGHT. SHALL BE AN LSI SWA-LED-28L-ACR-3-UNV-DM-40-BRZ-PM FIXTURE (OR APPROVED EQUAL) PROVIDED WITH A 1' POLE, INTEGRATED RECEPTACLE, AND SWITCH. SEE DRAWING ED-20 FOR DETAIL.

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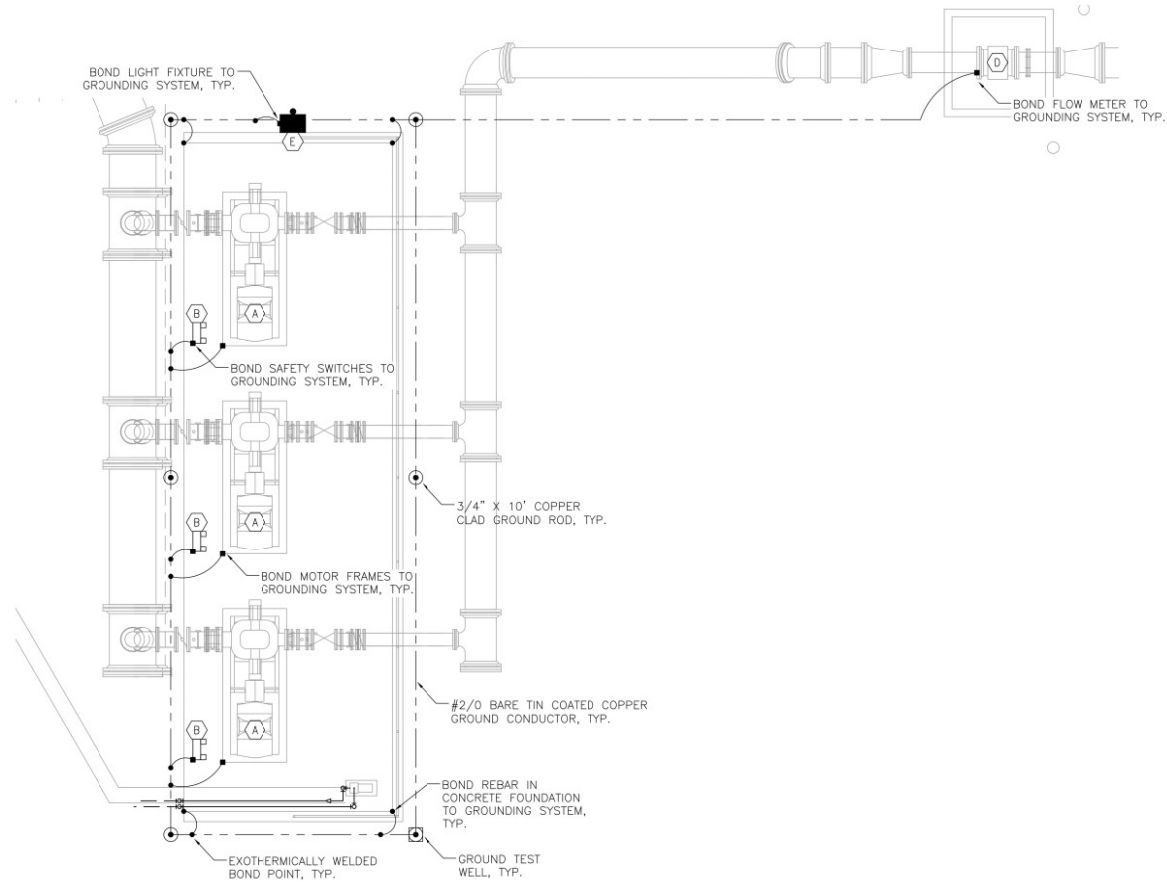
CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE



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DATE:	07/19/2024

E-2.00

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### BOOSTER PUMP GROUNDING PLAN

SCALE:  $1/4" = 1'$

KEY NOTES:

- (A) BOOSTER PUMP, TYP. OF 3
- (B) DISCONNECT SWITCH, TYP. OF 3
- (C) PRESSURE TRANSDUCER
- (D) FLOW METER
- (E) AREA LIGHT



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TREATMENT PLANT UPGRADE

## BOOSTER PUMPS GROUNDING PLAN

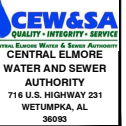
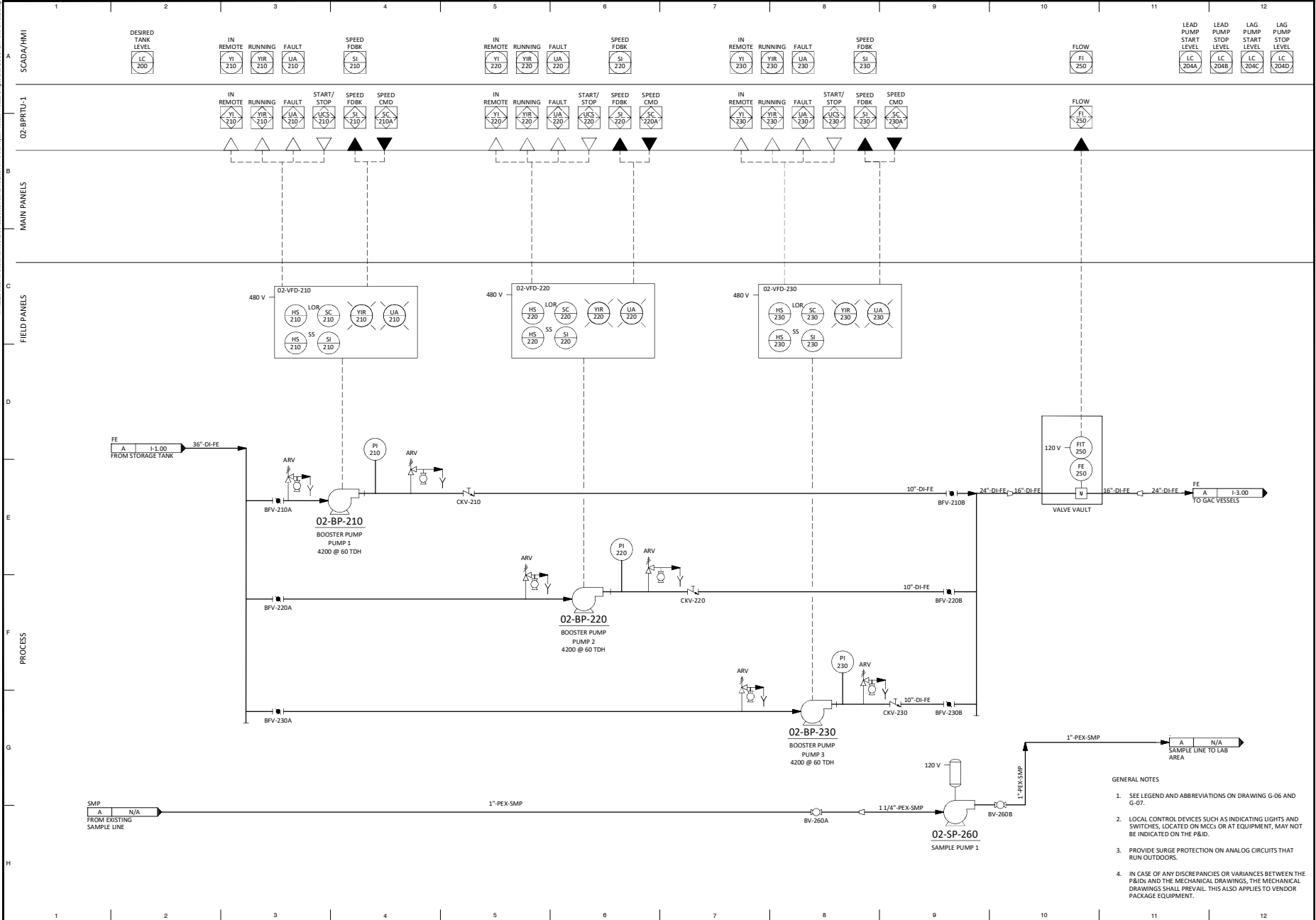


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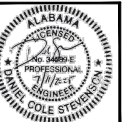
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CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE  
BOOSTER PUMPS PROCESS AND  
INSTRUMENTATION DIAGRAM



JOB NO: 2024-0718-00  
DATE: 07/18/2024

I-2.00

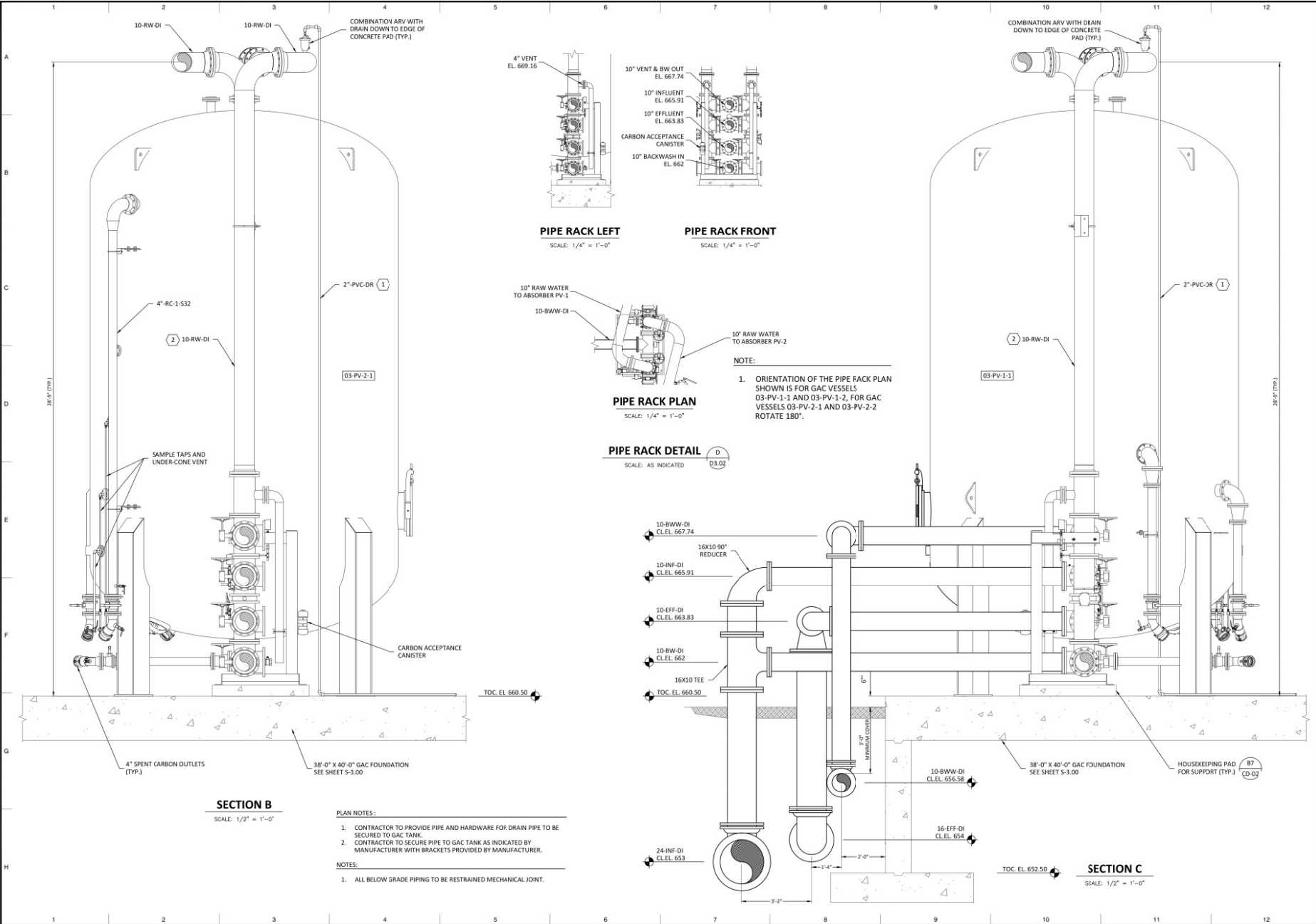
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- SECTION B**  
SCALE: 1/2" = 1'-0"
- SECTION C**  
SCALE: 1/2" = 1'-0"
- PIPE RACK LEFT**  
SCALE: 1/4" = 1'-0"
- PIPE RACK FRONT**  
SCALE: 1/4" = 1'-0"
- PIPE RACK PLAN**  
SCALE: 1/4" = 1'-0"
- PIPE RACK DETAIL**  
SCALE: AS INDICATED
- PIPE RACK FRONT ELEVATIONS:**  
4" VENT EL. 669.16  
10" VENT & BW OUT EL. 667.74  
10" INFLUENT EL. 665.91  
10" EFFLUENT EL. 663.83  
CARBON ACCEPTANCE CANISTER  
10" BACKWASH IN EL. 662
- PIPE RACK PLAN ELEVATIONS:**  
10" RAW WATER TO ABSORBER PV-1  
10-BWW-DI  
10" RAW WATER TO ABSORBER PV-2
- PIPE RACK DETAIL ELEVATIONS:**  
10-BWW-DI CLEL 667.74  
10-INF-DI CLEL 665.91  
10-EFF-DI CLEL 663.83  
10-BW-DI CLEL 662  
TOC EL. 660.50  
16X10 90° REDUCER  
16X10 TEE  
TOC EL. 660.50  
24-INF-DI CLEL 653  
10-BWW-DI CLEL 656.58  
16-EFF-DI CLEL 654  
TOC EL. 652.50
- SECTION B ELEVATIONS:**  
28'-0" (TYP.)  
4"-RC-1-S32  
2"-PVC-DR (1)  
10-RW-DI (2)  
03-PV-2-1  
SAMPLE TAPS AND UNDER-CONE VENT  
CARBON ACCEPTANCE CANISTER  
4" SPENT CARBON OUTLETS (TYP.)  
38'-0" X 40'-0" GAC FOUNDATION SEE SHEET S-3.00  
TOC EL. 660.50
- SECTION C ELEVATIONS:**  
28'-0" (TYP.)  
2"-PVC-DR (1)  
10-RW-DI (2)  
03-PV-1-1  
HOUSEKEEPING PAD FOR SUPPORT (TYP.) CD-02  
38'-0" X 40'-0" GAC FOUNDATION SEE SHEET S-3.00  
TOC EL. 652.50
- PIPE RACK DETAIL ELEVATIONS:**  
16X10 90° REDUCER  
16X10 TEE  
TOC EL. 660.50  
24-INF-DI CLEL 653  
10-BWW-DI CLEL 656.58  
16-EFF-DI CLEL 654  
TOC EL. 652.50
- PIPE RACK FRONT ELEVATIONS:**  
4" VENT EL. 669.16  
10" VENT & BW OUT EL. 667.74  
10" INFLUENT EL. 665.91  
10" EFFLUENT EL. 663.83  
CARBON ACCEPTANCE CANISTER  
10" BACKWASH IN EL. 662
- PIPE RACK PLAN ELEVATIONS:**  
10" RAW WATER TO ABSORBER PV-1  
10-BWW-DI  
10" RAW WATER TO ABSORBER PV-2
- PIPE RACK DETAIL ELEVATIONS:**  
10-BWW-DI CLEL 667.74  
10-INF-DI CLEL 665.91  
10-EFF-DI CLEL 663.83  
10-BW-DI CLEL 662  
TOC EL. 660.50  
16X10 90° REDUCER  
16X10 TEE  
TOC EL. 660.50  
24-INF-DI CLEL 653  
10-BWW-DI CLEL 656.58  
16-EFF-DI CLEL 654  
TOC EL. 652.50

SCALE: 1" = 10'

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**CENTRAL ELMORE WATER TREATMENT PLANT UPGRADE**  
GAC VESSELS SECTIONS AND DETAILS

**D-3.02**  
100% ISSUE FOR BID  
07/11/2025

[illegible]

[illegible]CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE

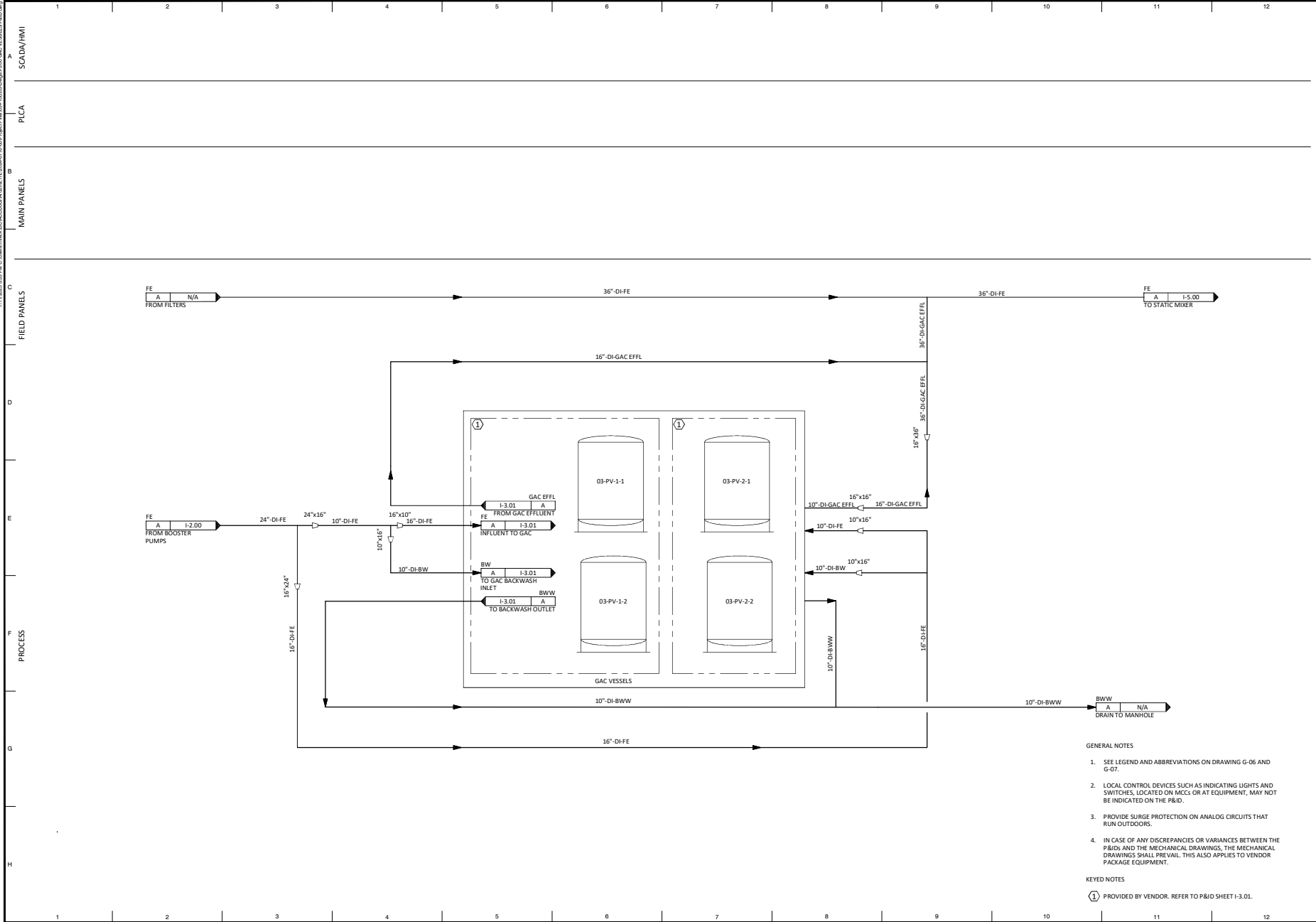
GAG ELECTRICAL PLAN



JOB NO:	2024-0776-00
DATE:	07/19/2024

**E-3.00**

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36093

[illegible]

**CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE**

**GAC VESSELS PROCESS AND  
INSTRUMENTATION DIAGRAM 1 OF 2**



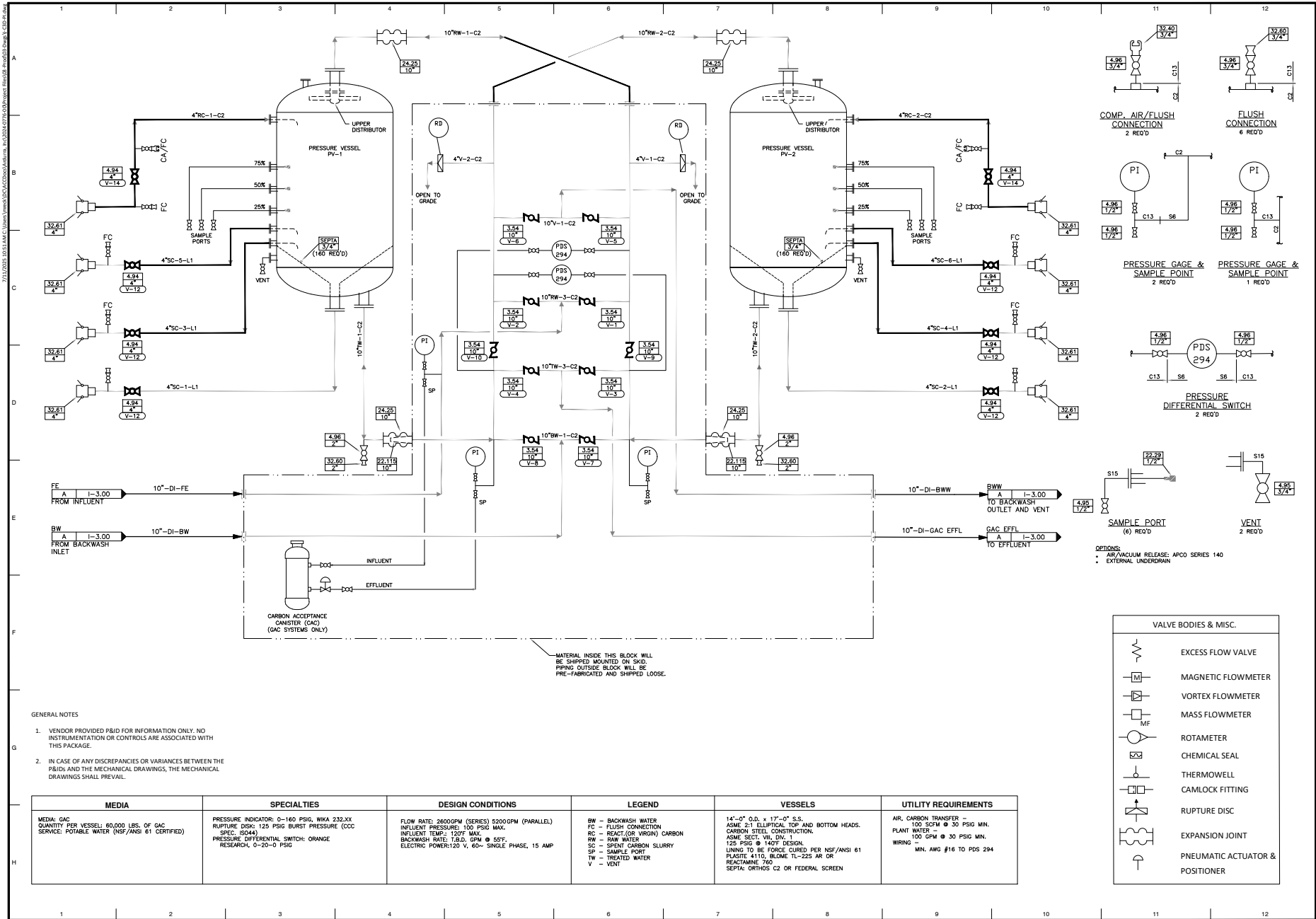
JOB NO:	2024-0776-00
DATE:	07/12/2024

**I-3.00**

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07/11/2025



7/1/2025 10:51 AM C:\Users\james.DAVIDSON\Documents\10201-0776-04-Process-Inst-02.dwg J. Davidson



CENTRAL ELMORE WATER TREATMENT PLANT UPGRADE

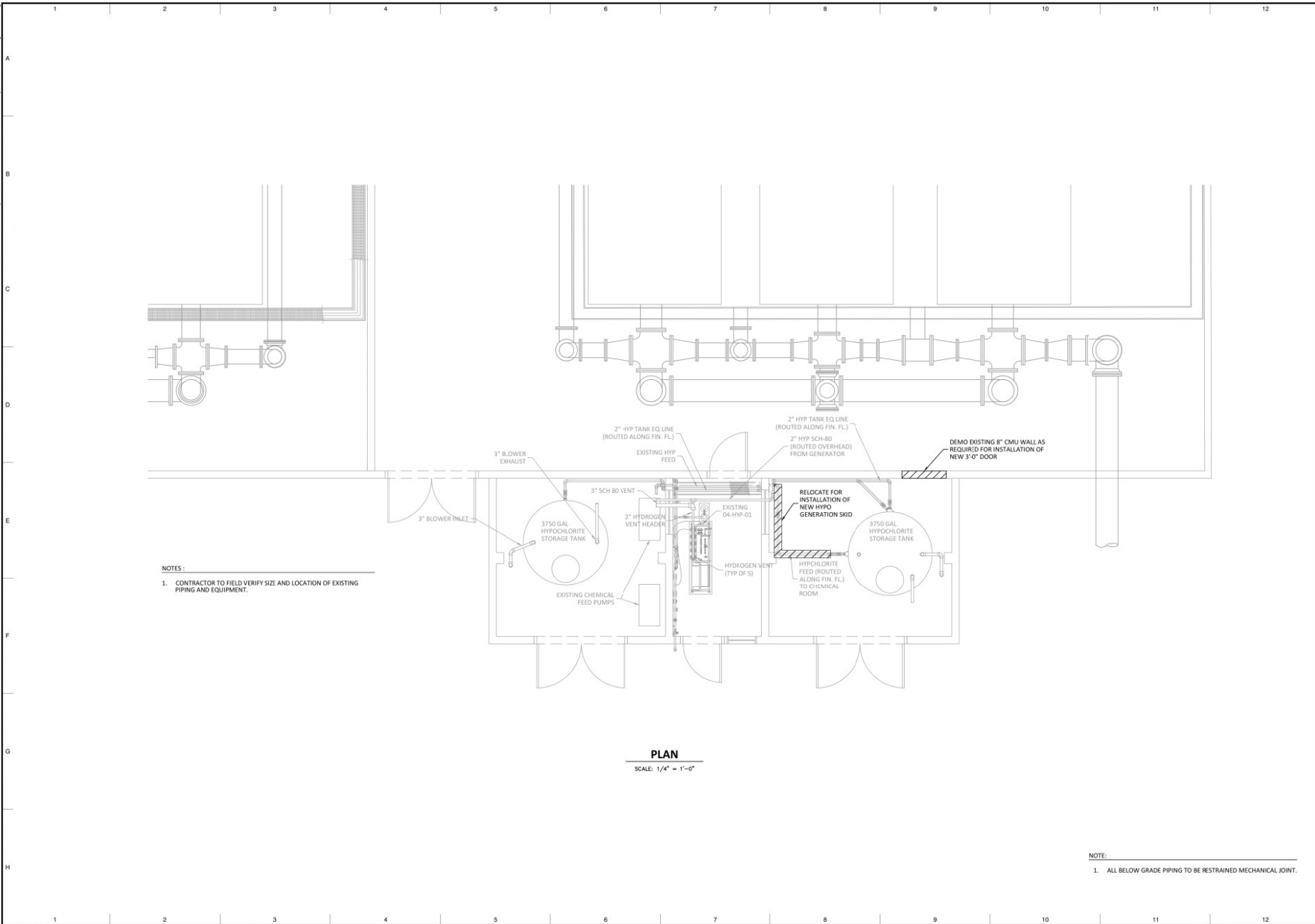
GAC VESSELS PROCESS AND INSTRUMENTATION DIAGRAM 2 OF 2



JOB NO: 2024-0776-00  
DATE: 07/15/2024

**I-3.01**

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**CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE**



JOB NO:	2024-0776-00
DATE:	07/19/2024

**D-4.00**

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<p align="center"><b>CENTRAL ELMORE WATER AND SEWER AUTHORITY</b></p> <p align="center">716 U.S. HIGHWAY 231 VIETNAMIA, AL 36093</p>	
	DT  REGISTRATION  DATE
<h2 style="margin: 0;">CENTRAL ELMORE WATER TREATMENT PLANT UPGRADE SODIUM HYPOCHLORITE GENERATION SYSTEM SECTIONS AND DETAILS</h2>	
JOB NO.	0024-0776-00
DATE:	07/16/2024
<span style="background-color: black; color: white; padding: 10px 20px; font-weight: bold; font-size: large;">D-4.02</span>	
NOT TO SCALE FOR INFO DT/11/2025	

1 2 3 4 5 6 7 8 9 10 11 12

A

B

C

D

E

F

G

H

1 2 3 4 5 6 7 8 9 10 11 12

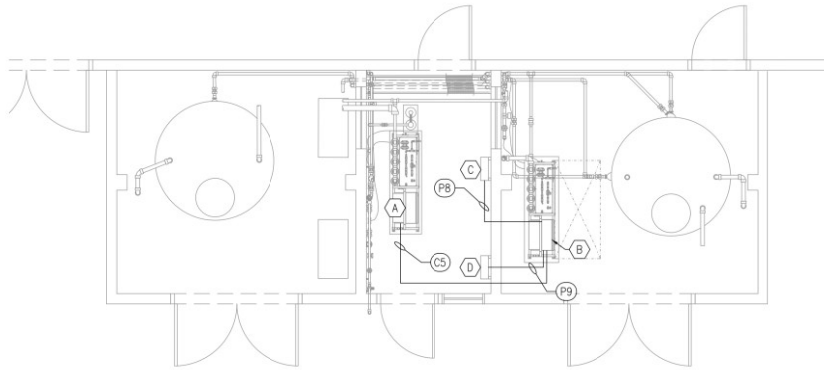
KEY NOTES:

- (A) EXISTING HYPOCHLORITE GENERATION SYSTEM
- (B) NEW HYPOCHLORITE GENERATION SYSTEM
- (C) P2-HYPO POWER DISTRIBUTION PANEL (EXISTING)
- (D) R2-HYPO POWER DISTRIBUTION PANEL (EXISTING)

The diagram is a detailed electrical site plan for a hypochlorite system. It shows a rectangular building footprint with two large circular tanks on the left and right sides. In the center, there is a complex arrangement of electrical equipment. A central vertical line represents a main bus or conduit. To the left of this central line, there is a circular tank labeled (A) and a rectangular panel labeled (C). To the right of the central line, there is another circular tank labeled (B) and a rectangular panel labeled (D). Various lines and symbols represent electrical connections, switches, and other components. The plan is oriented with a north arrow pointing towards the top right. The title 'HYPO SYSTEM ELECTRICAL SITE PLAN' is centered below the drawing, with a scale of 1/4" = 1'.

**HYPO SYSTEM ELECTRICAL SITE PLAN**

SCALE: 1/4" = 1'




**HYPO SYSTEM ELECTRICAL SITE PLAN**

SCALE: 1/4" = 1'

(A) EXISTING HYPOCHLORITE GENERATION SYSTEM  
(B) NEW HYPOCHLORITE GENERATION SYSTEM  
(C) P<sup>2</sup>-HYPO POWER DISTRIBUTION PANEL (EXISTING)  
(D) R<sup>2</sup>-HYPO POWER DISTRIBUTION PANEL (EXISTING)



  
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[illegible]

CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE

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SODIUM HYPOCHLORITE GENERATE  
ELECTRICAL EQUIPMENT PLAN

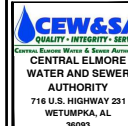
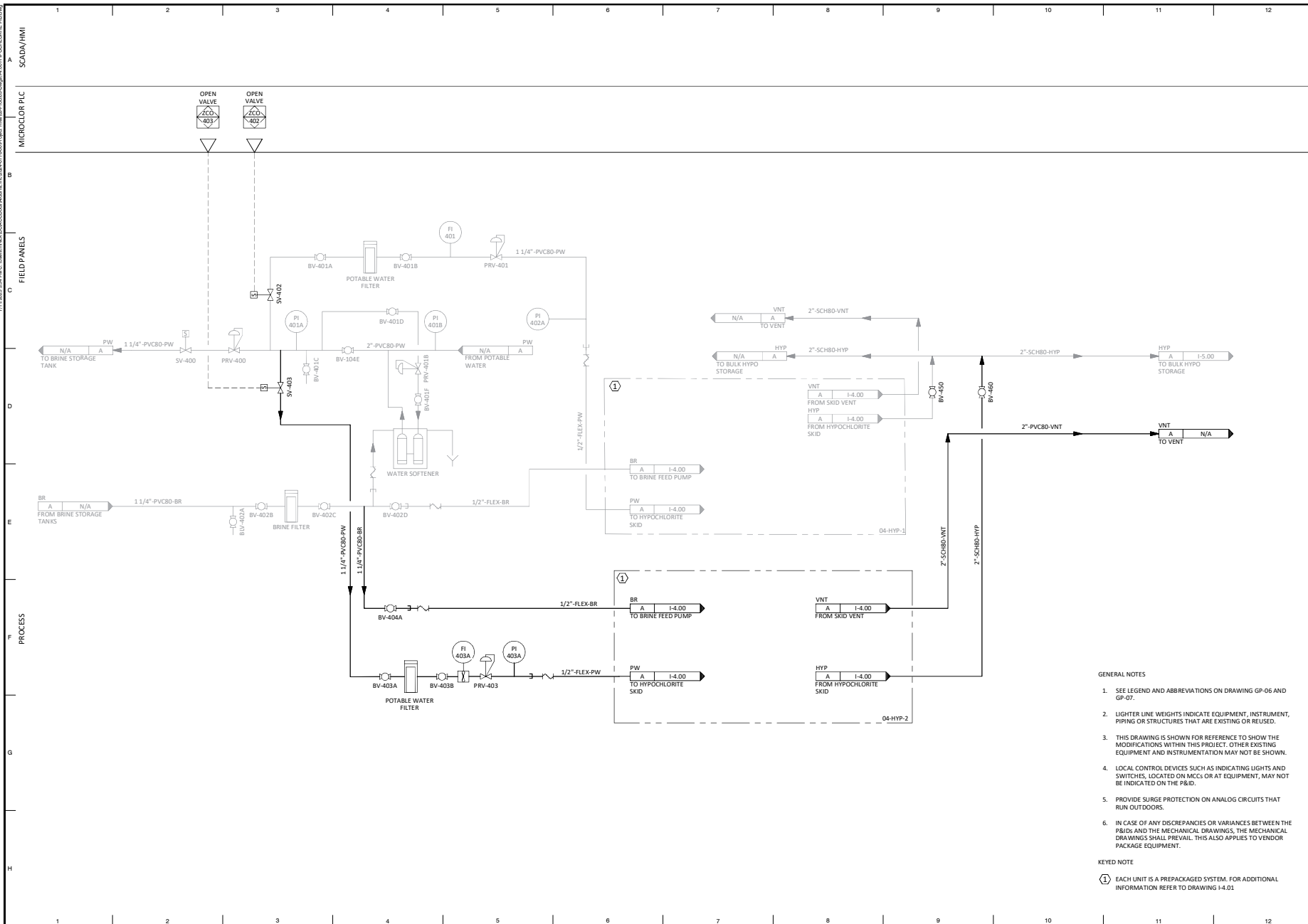


JOB NO:	2024-0776-00
DATE:	07/19/2024

**E-4.00**

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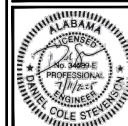


[illegible]

**CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE**

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**SODIUM HYPOCHLORITE GENERATION  
PROCESS & INSTRUMENTATION DIAGRAM**



JOB NO:	2024-0776-0
DATE:	07/19/2024

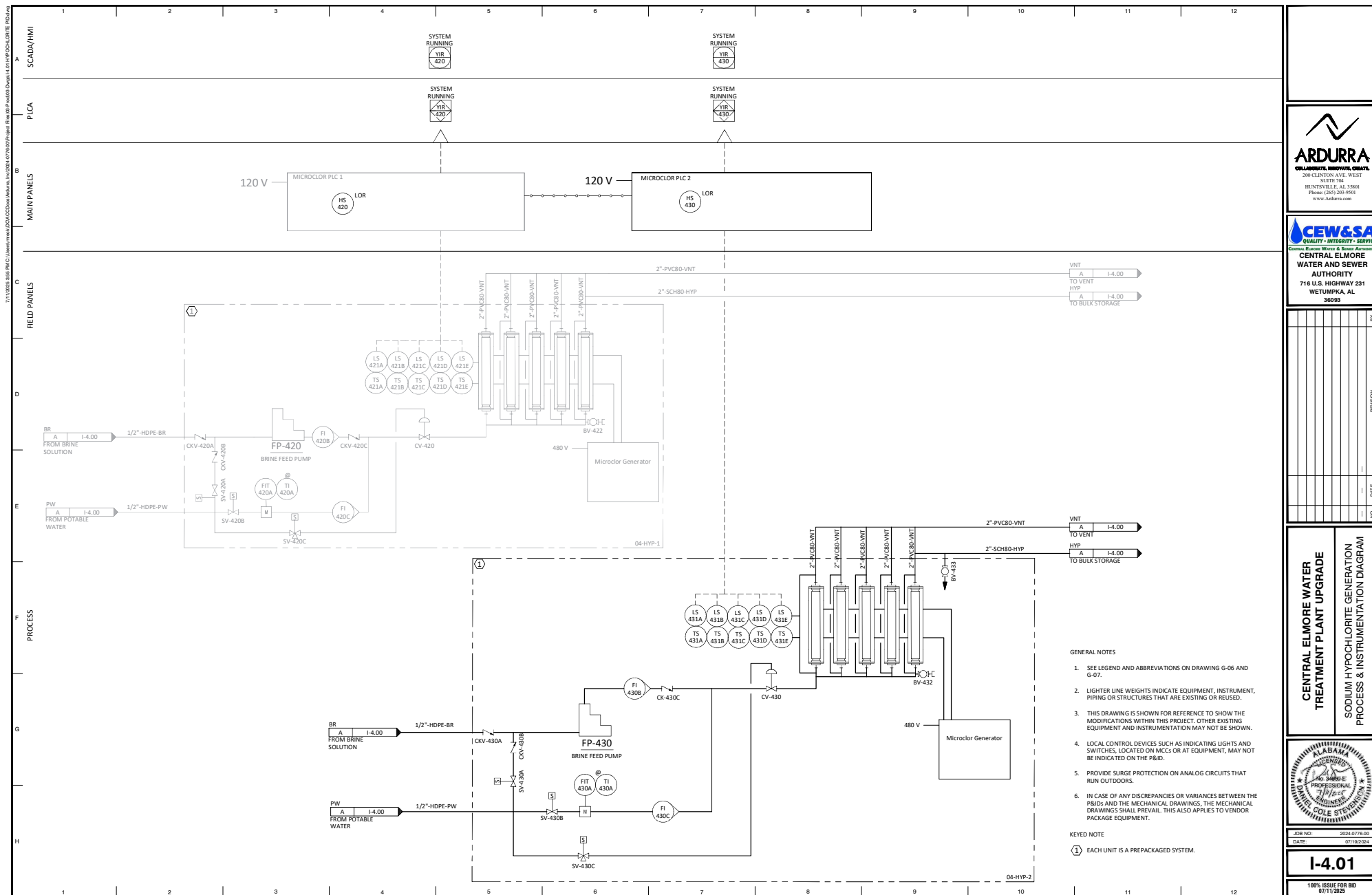
**I-4.00**

100% ISSUE FOR BID  
07/11/2025

- GENERAL NOTES**
1. SEE LEGEND AND ABBREVIATIONS ON DRAWING GP-06 AND GP-07.
  2. LIGHTER LINE WEIGHTS INDICATE EQUIPMENT, INSTRUMENT, PIPING OR STRUCTURES THAT ARE EXISTING OR REUSED.
  3. THIS DRAWING IS SHOWN FOR REFERENCE TO SHOW THE MODIFICATIONS WITHIN THIS PROJECT. OTHER EXISTING EQUIPMENT AND INSTRUMENTATION MAY NOT BE SHOWN.
  4. LOCAL CONTROL DEVICES SUCH AS INDICATING LIGHTS AND SWITCHES, LOCATED ON MCCs OR AT EQUIPMENT, MAY NOT BE INDICATED ON THE P&ID.
  5. PROVIDE SURGE PROTECTION ON ANALOG CIRCUITS THAT RUN OUTDOORS.
  6. IN CASE OF ANY DISCREPANCIES OR VARIANCES BETWEEN THE P&ID AND THE MECHANICAL DRAWINGS, THE MECHANICAL DRAWINGS SHALL PREVAIL. THIS ALSO APPLIES TO VENDOR PROVIDED EQUIPMENT.

**KEYED NOTE**

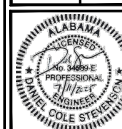
**1** EACH UNIT IS A PREPACKAGED SYSTEM. FOR ADDITIONAL INFORMATION REFER TO DRAWING I-4.01



**CENTRAL ELMORE WATER AND SEWER  
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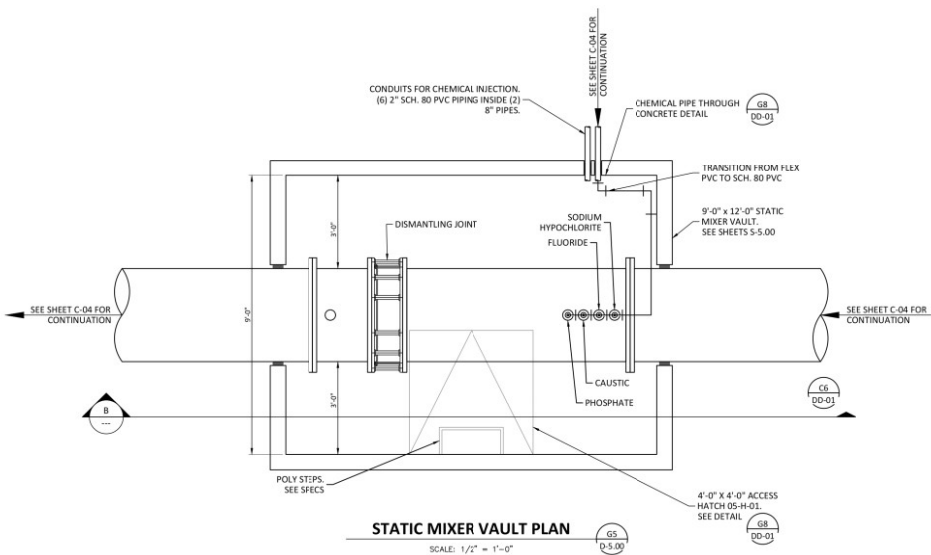
**CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE**



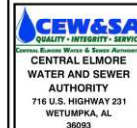
JOB NO:	2024-0776
DATE:	07/19/20

**I-4.01**

100% ISSUE FOR BID



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CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE



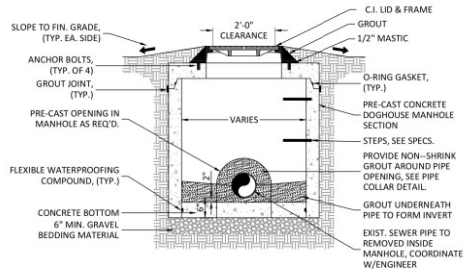
JOB NO:	2024-0776-00
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D-5.00

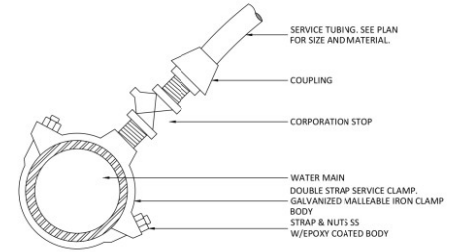
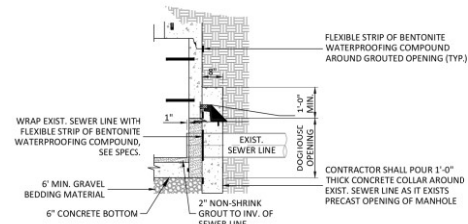
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07/11/2025

**I-5.00**  
100% ISSUE FOR BID  
07/11/2025

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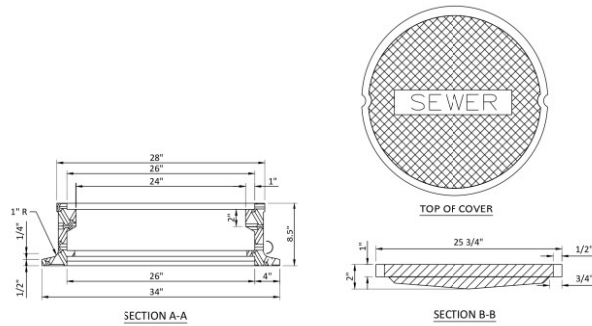


**DOGHOUSE MANHOLE DETAIL** (CS)  
SCALE: NTS (CD-03)

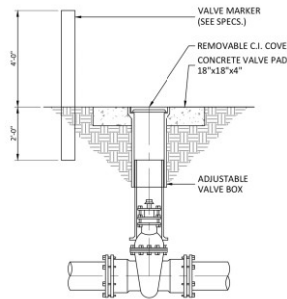


- NOTES:
1. 2" TAPS SHALL BE SS FULL CIRCLE TAPPING SADDLES.
  2. 2" SERVICE SHALL BE SCH 80 PVC

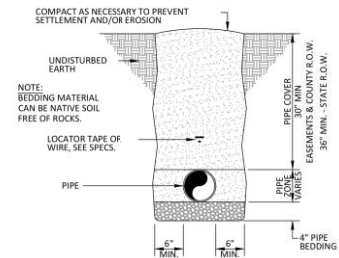
**WATER SERVICE CONNECTION DETAIL** (C1)  
SCALE: NTS (CD-01)



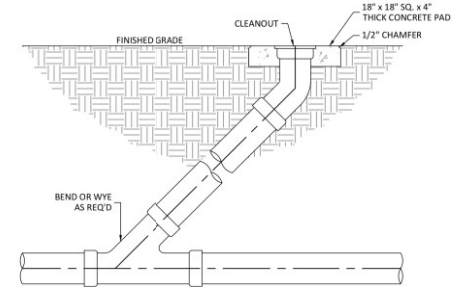
**STANDARD MANHOLE COVER & RING DETAIL** (H4)  
SCALE: NTS (CD-03)



**TYP. BURIED VALVE & BOX** (HB)  
SCALE: NTS (CD-03)



**TYP. WATER TRENCH DETAIL** (F12)  
SCALE: NTS (CD-01)



**TYP. LINE CLEANOUT DETAIL** (H11)  
SCALE: NTS (CD-01)



CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE

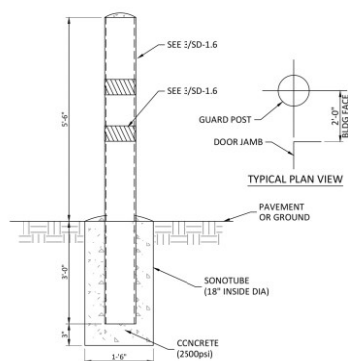
CIVIL DETAILS SHEET 1 OF 3



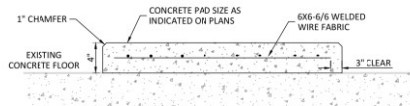
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**CD-01**

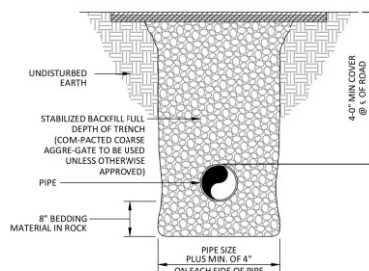
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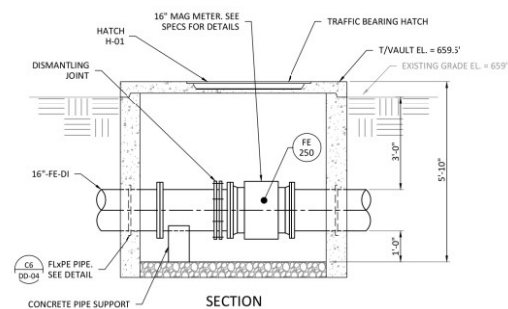
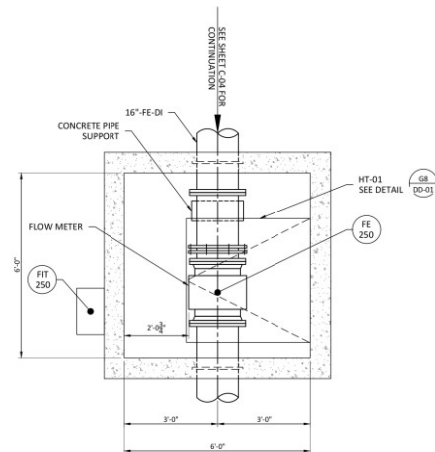
CD-02



87  
CD-02



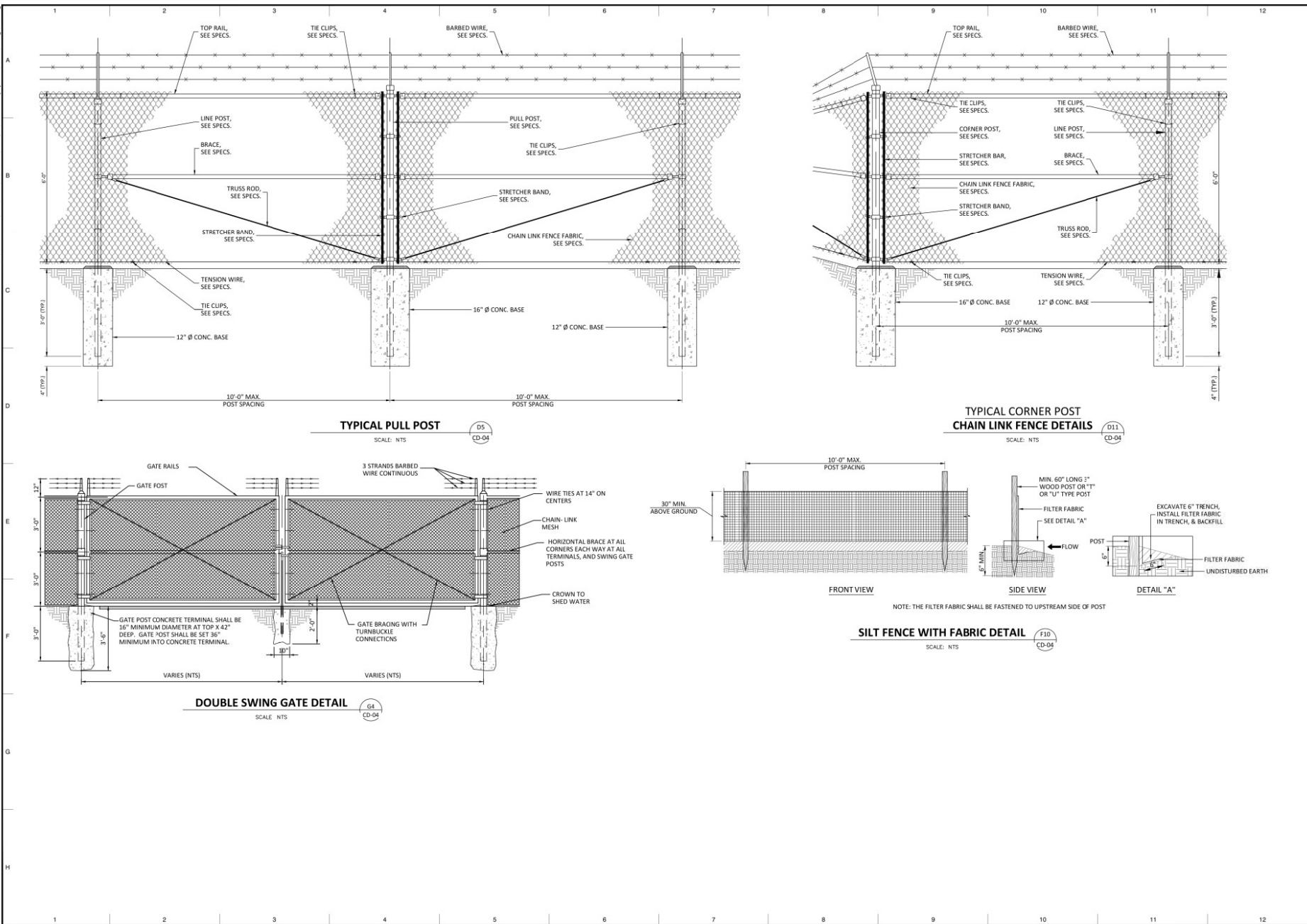
F8  
CD-01

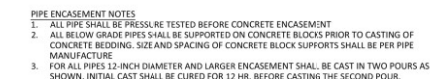


G11  
CD-0









SCALE: NTS



SCALE: NTS



1. ALUMINUM HATCHES TO BE SUPPLIED WITH STAINLESS STEEL HARDWARE.
2. ALL HATCHES TO BE SUPPLIED WITH SAFETY CHAINS. CORNER POST WITH FLOOR INSERTS MUST ALSO BE PROVIDED FOR SINGLE LEAF HATCHES.
3. ALL HATCHES TO BE SUPPLIED WITH HIGH SECURITY DETENTION LOCKS.
4. HINGE PINS SHALL NOT BE ACCESSIBLE WHEN THE HATCH IS IN THE CLOSED POSITION.

SCALE: NTS

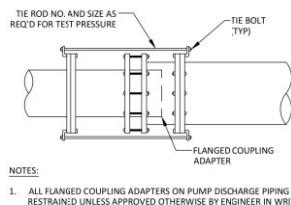
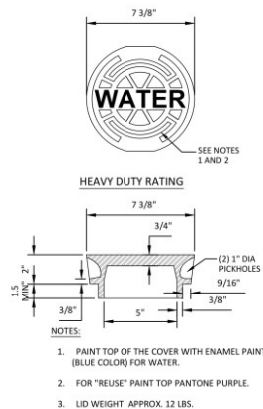
NOTES:  
1. DOOR DETAILS AND ALL REQUIRED STRUCTURAL FRAMING MEMBERS, FLASHING, TRIM, AND SEALANT TO BE MANUFACTURER'S STANDARD METHOD FOR METAL BUILDING SYSTEM SPECIFIED.



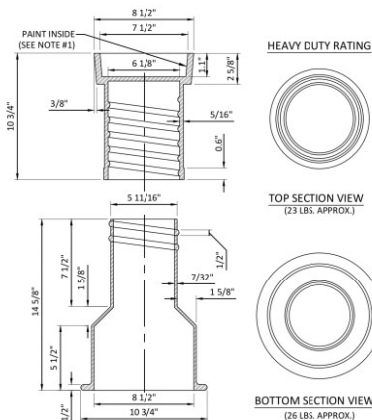
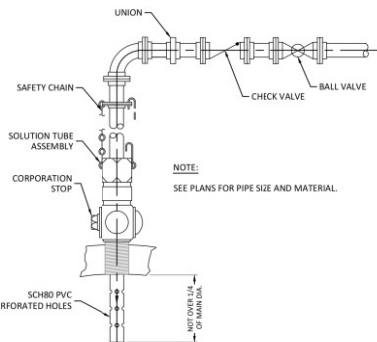
1. ALL PIPE AND FITTINGS ON AIR ASSEMBLY VALVE SHALL BE 316 SST.
2. SEE SPECIFICATION SECTION 2.20 FOR ADDITIONAL REQUIREMENTS.
3. ALL PIPE AND FITTINGS SHALL BE SAME NOMINAL SIZE AS THE ASSOCIATED AIR VALVE ASSEMBLY.
4. ARV'S SHALL BE LOW PRESSURE TYPE.

SCALE: NTS

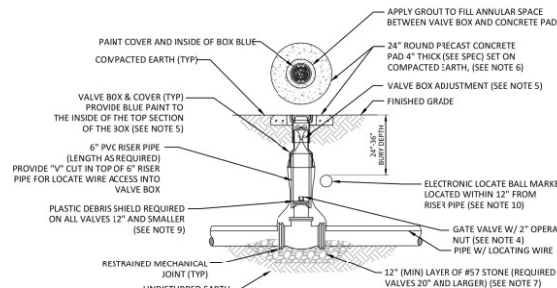
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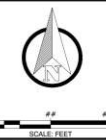
**316 SST RESTRAINED FLANGED COUPLING ADAPTER DETAIL**  
SCALE: NTS  
E4 DD-01



**WATER SYSTEM VALVE BOX DETAIL**  
SCALE: NTS  
D6 ED-02



**WATER SYSTEM VALVE INSTALLATION DETAIL**  
SCALE: NTS  
D6 DD-02



NO.	DATE	REVISION	BY

CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE  
PROCESS DETAILS SHEET 2 OF 5



JOB NO. 2024-0776-00  
DATE: 07/10/2024

**DD-02**

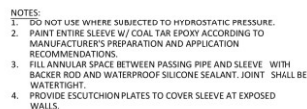
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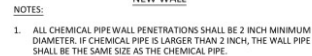




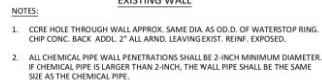
CORE DRILLED OPENING AND MECHANICAL SEAL  
PENETRATION THROUGH EXISTING CONCRETE



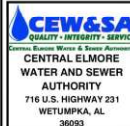
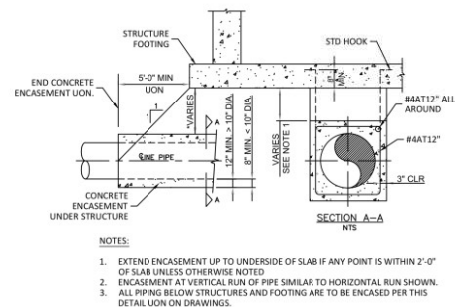
**WALL PIPE SLEEVE DETAIL** C6  
PD-04



**CHEMICAL PIPE WALL PENETRATION DETAIL** G8  
SCALE: NTS DD-04



**PIPE ENCASEMENT DETAIL** G12  
SCALE: NTS DD-04



Year	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	2031-2032	2032-2033	2033-2034	2034-2035	2035-2036	2036-2037	2037-2038	2038-2039	2039-2040	2040-2041	2041-2042	2042-2043	2043-2044	2044-2045	2045-2046	2046-2047	2047-2048	2048-2049	2049-2050	2050-2051	2051-2052	2052-2053	2053-2054	2054-2055	2055-2056	2056-2057	2057-2058	2058-2059	2059-2060	2060-2061	2061-2062	2062-2063	2063-2064	2064-2065	2065-2066	2066-2067	2067-2068	2068-2069	2069-2070	2070-2071	2071-2072	2072-2073	2073-2074	2074-2075	2075-2076	2076-2077	2077-2078	2078-2079	2079-2080	2080-2081	2081-2082	2082-2083	2083-2084	2084-2085	2085-2086	2086-2087	2087-2088	2088-2089	2089-2090	2090-2091	2091-2092	2092-2093	2093-2094	2094-2095	2095-2096	2096-2097	2097-2098	2098-2099	2099-2100	2100-2101	2101-2102	2102-2103	2103-2104	2104-2105	2105-2106	2106-2107	2107-2108	2108-2109	2109-2110	2110-2111	2111-2112	2112-2113	2113-2114	2114-2115	2115-2116	2116-2117	2117-2118	2118-2119	2119-2120	2120-2121	2121-2122	2122-2123	2123-2124	2124-2125	2125-2126	2126-2127	2127-2128	2128-2129	2129-2130	2130-2131	2131-2132	2132-2133	2133-2134	2134-2135	2135-2136	2136-2137	2137-2138	2138-2139	2139-2140	2140-2141	2141-2142	2142-2143	2143-2144	2144-2145	2145-2146	2146-2147	2147-2148	2148-2149	2149-2150	2150-2151	2151-2152	2152-2153	2153-2154	2154-2155	2155-2156	2156-2157	2157-2158	2158-2159	2159-2160	2160-2161	2161-2162	2162-2163	2163-2164	2164-2165	2165-2166	2166-2167	2167-2168	2168-2169	2169-2170	2170-2171	2171-2172	2172-2173	2173-2174	2174-2175	2175-2176	2176-2177	2177-2178	2178-2179	2179-2180	2180-2181	2181-2182	2182-2183	2183-2184	2184-2185	2185-2186	2186-2187	2187-2188	2188-2189	2189-2190	2190-2191	2191-2192	2192-2193	2193-2194	2194-2195	2195-2196	2196-2197	2197-2198	2198-2199	2199-2200	2200-2201	2201-2202	2202-2203	2203-2204	2204-2205	2205-2206	2206-2207	2207-2208	2208-2209	2209-2210	2210-2211	2211-2212	2212-2213	2213-2214	2214-2215	2215-2216	2216-2217	2217-2218	2218-2219	2219-2220	2220-2221	2221-2222	2222-2223	2223-2224	2224-2225	2225-2226	2226-2227	2227-2228	2228-2229	2229-2230	2230-2231	2231-2232	2232-2233	2233-2234	2234-2235	2235-2236	2236-2237	2237-2238	2238-2239	2239-2240	2240-2241	2241-2242	2242-2243	2243-2244	2244-2245	2245-2246	2246-2247	2247-2248	2248-2249	2249-2250	2250-2251	2251-2252	2252-2253	2253-2254	2254-2255	2255-2256	2256-2257	2257-2258	2258-2259	2259-2260	2260-2261	2261-2262	2262-2263	2263-2264	2264-2265	2265-2266	2266-2267	2267-2268	2268-2269	2269-2270	2270-2271	2271-2272	2272-2273	2273-2274	2274-2275	2275-2276	2276-2277	2277-2278	2278-2279	2279-2280	2280-2281</
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**CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE**

PROCESS DETAILS SHEET 4 OF 5



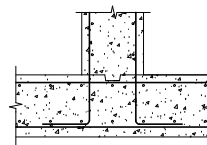
JOB NO:	2024-0776-00
DATE:	07/19/2024

DD-04

100% ISSUE FOR BID  
07/11/2025







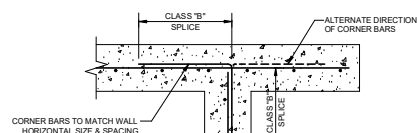
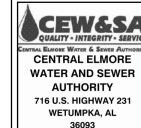
WALL-TO-WALL JOINT  
WALL-TO-FOOTING JOINT

NOTE: MAXIMUM HORIZONTAL SPACING OF CONSTRUCTION JOINTS SHALL NOT EXCEED 25'-0" OC.

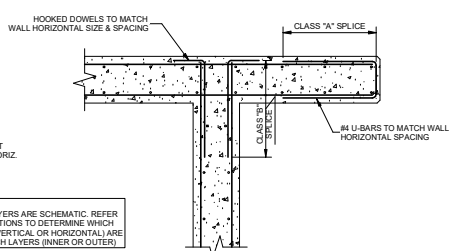
TOP BARS ARE HORIZONTAL REINFORCING WITH MORE THAN 12" OF CONCRETE CAST BELOW THE REINFORCING.



**ARDURRA**  
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LICENCE #2610



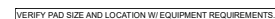
### SINGLE-MAT REINFORCING



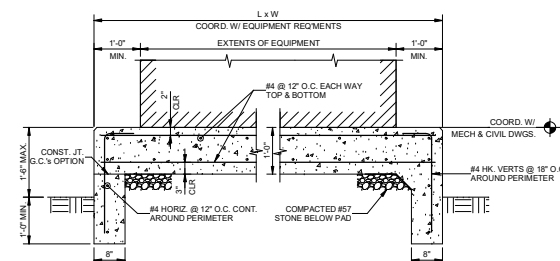
**NOTE:**  
BAR LAYERS ARE SCHEMATIC. REFER  
TO SECTIONS TO DETERMINE WHICH  
BARS (VERTICAL OR HORIZONTAL) ARE  
IN WHICH LAYERS (INNER OR OUTER)

### DOUBLE-MAT REINFORCING

### TYPICAL CORNER, INTERSECTION & END DETAILS AT CONCRETE WALLS



### TYPICAL HOUSEKEEPING PAD DETAIL

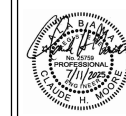


### CONCRETE PAD AT OUTDOOR EQUIPMENT

APPLY THIS DETAIL AT EQUIPMENT WHERE FOUNDATION SLAB OR CONCRETE BASE IS NOT SPECIFICALLY DETAILED

CENTRAL ELMORE WTP UPGRADE

## STRUCTURAL TYPICAL DETAILS



JOB NO:	2024-0776
DATE:	7/11

SD-01

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**ELM** 2707 Artes Street  
Suite 21  
Huntsville, AL 35892  
Phone: 256.864.2542

Echols, Lindsey & Moore  
Structural Engineers, Inc.  
Project No. 24185



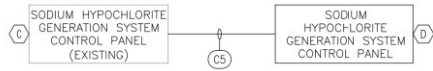
1. A NEW UTILITY SERVICE SHALL BE ESTABLISHED TO ACCOMMODATE THE NEW EQUIPMENT. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF THE NEW SERVICE WITH THE UTILITY COMPANY AND SHALL PROVIDE ALL EQUIPMENT REQUIRED FOR THE NEW SERVICE NOT BEING SUPPLIED BY THE UTILITY COMPANY (SUCH AS THE METER BASE). COORDINATION SHALL INCLUDE DETAILS SUCH AS THE POLE MOUNT OR PAD MOUNT TRANSFORMERS, REQUIRED METER BASE, ETC....

A EXISTING PLANT CONTROL SYSTEM. THE SYSTEM INTEGRATOR SHALL INTEGRATE ALL OF THE NEW PROCESS EQUIPMENT INTO THE PLANT CONTROL SYSTEM IN CONJUNCTION WITH THE PROJECT PLANS AND SPECIFICATIONS.

- (B) BOOSTER PUMP RTU. SHALL CONTAIN ALL NECESSARY COMPONENTS (BREAKERS, FUSES, POWER SUPPLIES, PLCs, I/O, ETC...) TO MONITOR AND CONTROL THE NEW PROCESS EQUIPMENT AS DETAILED IN THE PROJECT PLANS AND SPECIFICATIONS.
- (C) EXISTING HYPO GENERATION SYSTEM. SHALL BE MODIFIED (IF NECESSARY) AND PROGRAMMED BY THE NEW HYPO GENERATION SYSTEM SUPPLIER TO PROVIDE A RUNNING STATUS OUTPUT (VIA DRY CONTACTS) THAT SHALL BE UTILIZED BY THE NEW HYPO GENERATION SYSTEM TO PREVENT ITS OPERATION IN THE EVENT THAT THE EXISTING SYSTEM IS RUNNING. IN ADDITION, IT SHALL BE MODIFIED (IF NECESSARY) AND PROGRAMMED TO ACCEPT A PERMISSIVE SIGNAL (DRY CONTACT) FROM THE NEW HYPO GENERATION SYSTEM TO PREVENT OPERATION OF THE EXISTING SYSTEM WHENEVER THE NEW HYPO SYSTEM IS RUNNING.
- (D) NEW HYPO GENERATION SYSTEM. SHALL INCLUDE A RUNNING STATUS OUTPUT (VIA DRY CONTACTS) THAT SHALL BE UTILIZED BY THE EXISTING HYPO GENERATION SYSTEM TO PREVENT ITS OPERATION IN THE EVENT THAT THE NEW SYSTEM IS RUNNING. IN ADDITION, IT SHALL INCLUDE THE ABILITY TO ACCEPT A PERMISSIVE SIGNAL FROM THE EXISTING HYPO GENERATION SYSTEM TO PREVENT OPERATION OF THE NEW SYSTEM WHENEVER THE EXISTING HYPO SYSTEM IS RUNNING.

### BOOSTER PUMP CONTROL SINGLE LINE DIAGRAM

SCALE: NONE



### HYPO GEN SYSTEM CONTROL SINGLE LINE DIAGRAM

SCALE: NONE

C1)	3#14 IN A 3/4" C
C2)	2#18 TSP CABLE IN A 3/4" C
C3)	MANUFACTURER CABLE, CONDUIT AS REQUIRED
C4)	CAT6 CABLE, 1" C
C5)	4#14 IN A 3/4" C
C6)	6#14 IN A 3/4" C
C7)	3 - 2#18 TSP CABLE IN A 1" C
C8)	10#14 IN A 1" C

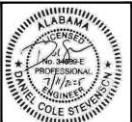
## CONTROL CONDUIT AND CONDUCTOR SCHEDULE

SCALE: NONE

[illegible]

**CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE**

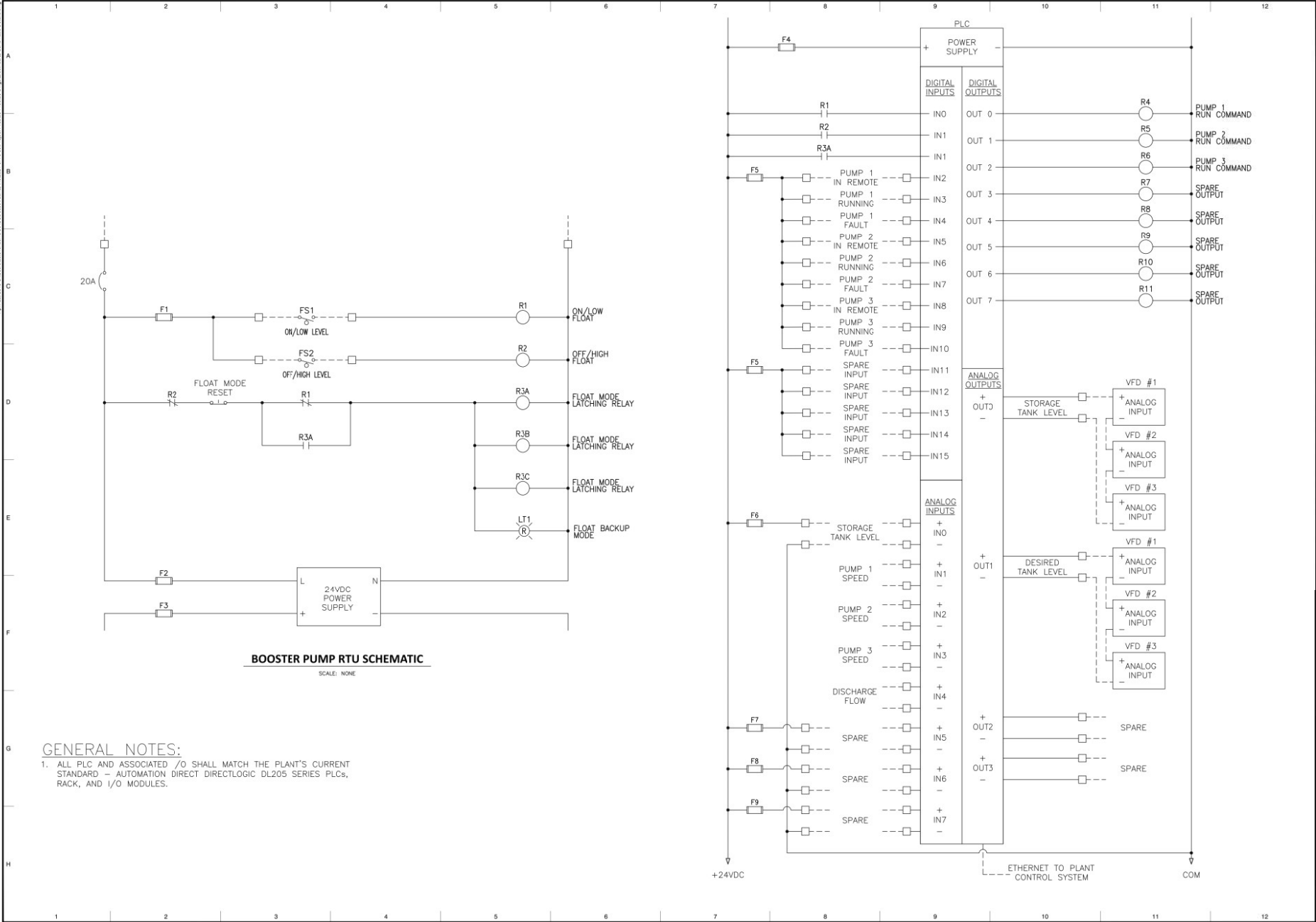
**CONTROL SINGLELINE DIAGRAMS**



JOB NO:	2024-0776-00
DATE:	07/19/2024

ED-02

**100% ISSUE FOR BID**  
**07/11/2025**

[illegible]CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE

BOOSTER FORM R10

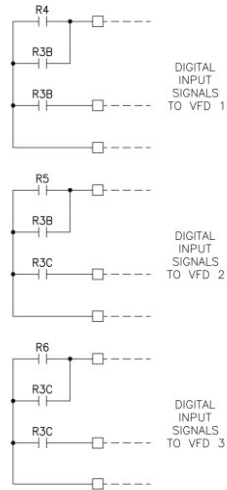


JOB NO:	2024-0776-00
DATE:	07/19/2024

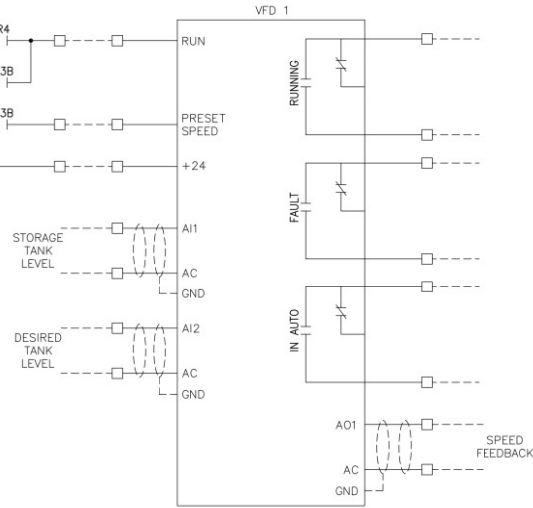
ED-03

100% ISSUE FOR BID  
07/11/2025

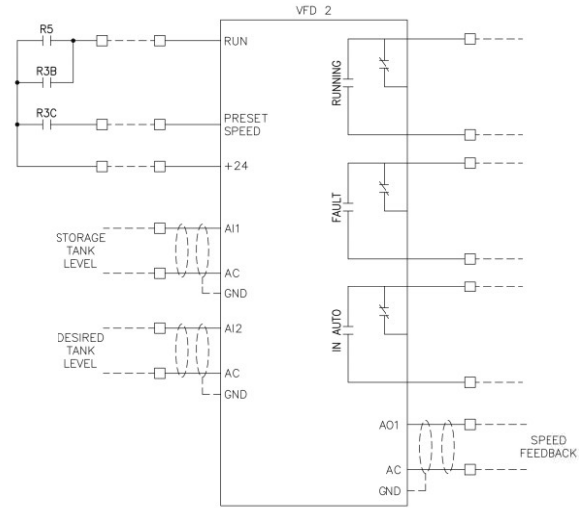
Rev B3 2024-07-18: Updated VFD Control Schematics for Boosters 1, 2, & 3. Original Design: 07/18/2024. Date: 07/18/2024.



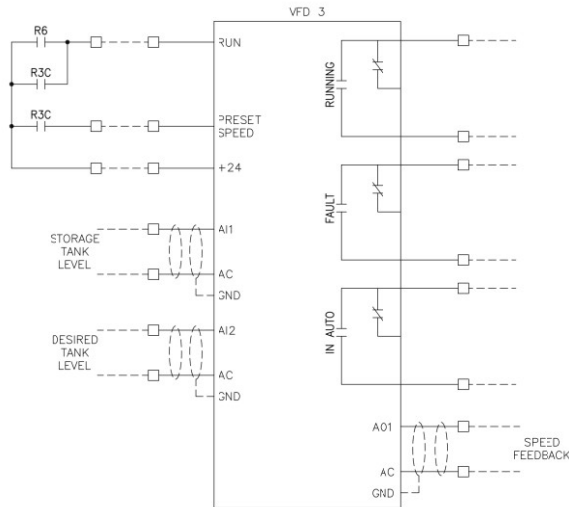
**BOOSTER PUMP RTU SCHEMATIC CONT.**  
SCALE: NONE



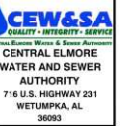
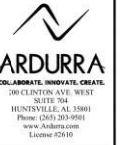
**BOOSTER PUMP 1 VFD CONTROL SCHEMATIC**  
SCALE: NONE



**BOOSTER PUMP 2 VFD CONTROL SCHEMATIC**  
SCALE: NONE



**BOOSTER PUMP 3 VFD CONTROL SCHEMATIC**  
SCALE: NONE



NO.	REVISION	DATE
1		
2		
3		
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12		

**CENTRAL ELMORE WATER  
TREATMENT PLANT UPGRADE**

**BOOSTER PUMP VFD CONTROL WIRING**



JOB NO: 2024-0718-00  
DATE: 07/18/2024

**ED-04**

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07/17/2024

1. PROVIDE EXPLOSION-PROOF SEAL OFF FITTINGS AT ALL AREAS REQUIRED BY THE NEC FOR THE NOTED CLASSIFIED AREA. FITTINGS SHALL BE CAST ALUMINUM.
2. WHERE POLES ARE MOUNTED TO STRUCTURES, POLE MANUFACTURER SHALL PROVIDE DESIGN FOR ANCHOR TO MEET THE SPECIFIED WIND RATINGS.



1. TO IMPROVE SYSTEM RESISTANCE, ERICO GEM MAY BE USED AS A BACKFILL MATERIAL IN AN AUGERED HOLE



NOTE:  
ALL HARDWARE SHALL BE  
316 STAINLESS STEEL.

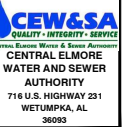
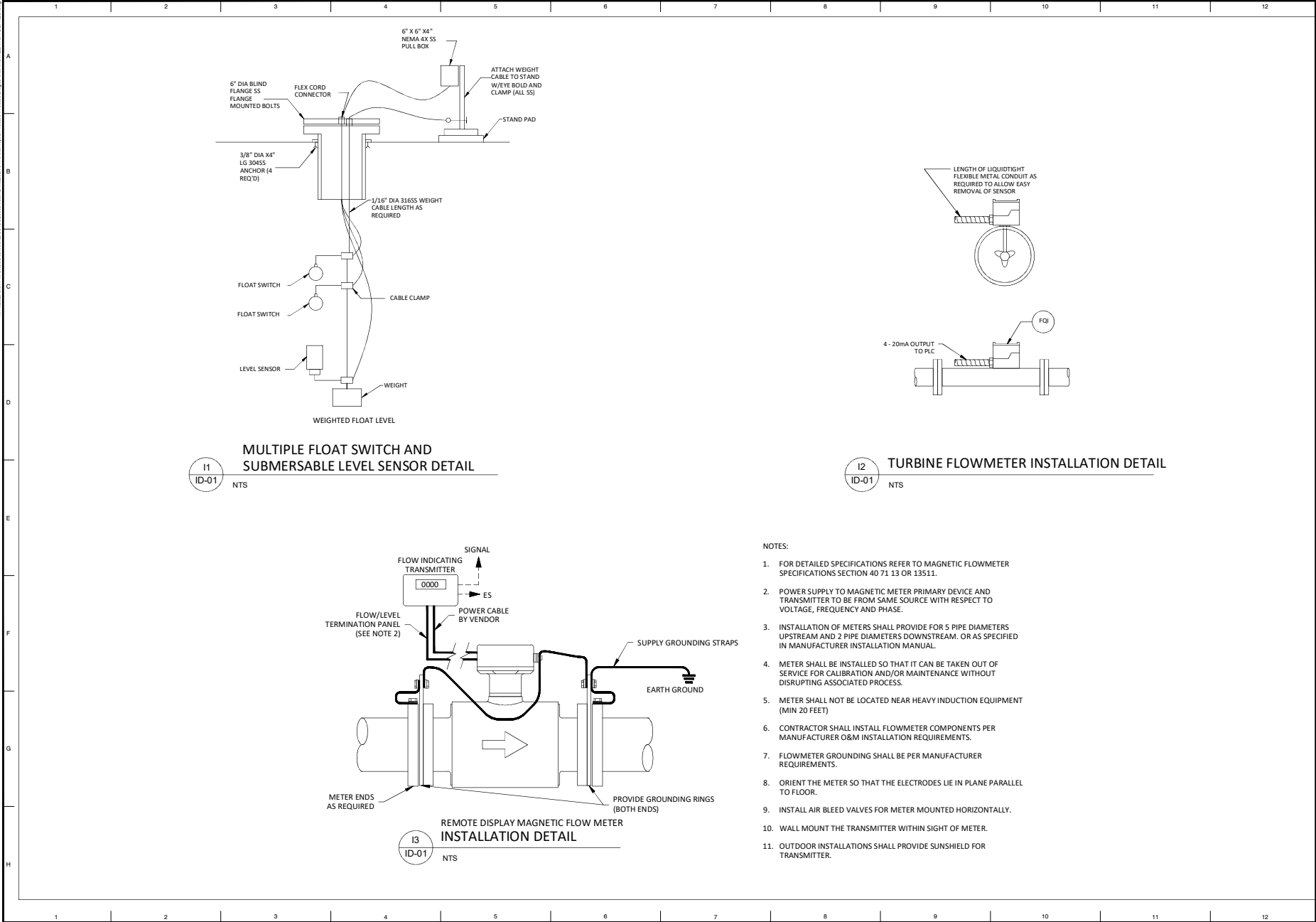


1. DO NOT SPLICE CABLES IN PULL BOXES UNLESS OTHERWISE NOTED.
2. ALL MOUNTING HARDWARE SHALL BE 316 SS.
3. PULLBOX TO BE PLACED ON 6" BASE OF GRAVEL.







[illegible]

## CENTRAL ELMORE WATER TREATMENT PLANT UPGRADE



ICB NO:	2024-0776-00
DATE:	07/19/2024

**ID-01**

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