

SCHEMATIC DIAGRAM SYMBOLS:	
	CONDUCTORS CONNECTED
	CONDUCTORS NOT CONNECTED
	CONNECTION POINT
	TERMINAL POINT FOR OUTGOING CONDUCTORS, WITH IDENTIFICATION. "XX" DENOTES CONTRACTOR ASSIGNED.
	MCPXXX-XX MCPXXX-XXA MAGNETIC-ONLY CIRCUIT BREAKER (MCP), WITH CURRENT RATING
	CBXXX-XX Circuit breaker, thermal-magnetic unless otherwise noted, with frame size and trip rating
	FUXXX-XX FUSE WITH SIZE AND OPTIONAL IDENTIFICATION.
	DSXXX-XX DISCONNECT SWITCH. RATING OPTIONAL. 30 AMP, 600V RATED MINIMUM UNLESS OTHERWISE NOTED.
	FUXXX-XX FUSE DISCONNECT SWITCH. RATING OPTIONAL. 30 AMP, 600V MINIMUM UNLESS OTHERWISE NOTED.
	M-XXX MOTOR (HP AS SHOWN, PHASES AS REQUIRED)
	MSR-XXX MOTOR STARTER COIL
	OL-XXX THERMAL MOTOR OVERLOAD
	M-XXX MOTOR CONTACT
	LSXXX-XX LIMIT SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	PSXXX-XX PRESSURE SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	TSXXX-XX TEMPERATURE SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	FSXXX-XX FLOW SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	FLTXXX-XX LEVEL SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	PRSXXX-XX PROXIMITY SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	PCSXXX-XX PULLCORD SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	SVXXX-XX SOLENOID VALVE
	PBXXX-XX MOMENTARY PUSHBUTTON NORMALLY CLOSED AND NORMALLY OPEN
	SSXXX-XX SELECTOR SWITCH NORMALLY NORMALLY CLOSED AND NORMALLY OPEN
	LTXXX-XX PILOT LIGHT X = LENS COLOR A = AMBER B = BLUE G = GREEN R = RED W = WHITE
	CRXXX-XX CONTROL RELAY
	CRXXX-XX CONTROL RELAY CONTACT NORMALLY CLOSED AND NORMALLY OPEN
	ALXXX-XX ALARM LIGHT
	AHXXX-XX ALARM HORN
	TFRXXX-XX CONTROL POWER TRANSFORMER, PRIMARY AND SECONDARY VOLTAGE SHOWN. SIZE AS SHOWN OR SPECIFIED.
	CTXXX-XX CURRENT TRANSFORMER. PRIMARY/SECONDARY TURNS RATIO AS SHOWN.

FIRE ALARM SYMBOLS:	
	SMOKE DETECTOR, 120VAC RATED

ONE LINE DIAGRAM SYMBOLS:	
	CB-XXX LOW VOLTAGE POWER CIRCUIT AND BREAKER DRAWOUT TYPE, FRAME TRIP SHOWN
	CB-XXX MOLDED CASE CIRCUIT BREAKER, FRAME AND TRIP ID SHOWN
	LIGHTNING ARRESTOR AND GROUND
	DS-XXX DISCONNECT OR ISOLATING SWITCH: CONTINUOUS RATING SHOWN
	MCP-XXX MAGNETIC-ONLY CIRCUIT BREAKER (MCP), DRAWOUT TYPE, WITH CURRENT RATING
	FS-XXX FUSED SWITCH: FUSE AND SWITCH CONTINUOUS RATINGS SHOWN
	TFR-XXX POWER TRANSFORMER: PRIMARY & SECONDARY VOLTAGES, %, SIZE SHOWN
	CURRENT TRANSFORMER: RATIO SHOWN (3 INDICATES NO. OF CT'S) METER SWITCH, X,S: AS - AMMETER SWITCH VS - VOLT METER SWITCH FS - FREQUENCY SWITCH
	POTENTIAL TRANSFORMER PRIMARY & SECONDARY VOLTAGES & WINDINGS SHOWN. (x) UNITS
	METER: A - AMMETER W - WATTMETER KWH - WATT-HOUR METER F - FREQUENCY METER VAR - VAR METER V - VOLT METER
	FVNR FULL VOLTAGE, NON-REVERSING MAGNETIC MOTOR STARTER. NEMA SIZE INDICATED
	FVR FULL VOLTAGE, REVERSING MAGNETIC MOTOR STARTER. NEMA SIZE INDICATED
	VFD-XXX VARIABLE FREQUENCY DRIVE. NEMA SIZE INDICATED
	RVSS-XXX REDUCED VOLTAGE SOLID STATE DRIVE (SOFT START). NEMA SIZE INDICATED
	M-XXX MOTOR (HP AS SHOWN, PHASES AS REQUIRED)
	GENERATOR RECEPTACLE
	MTS-XXX MANUAL TRANSFER SWITCH
	CABLE TAG: P - POWER CABLE C - CONTROL CABLE S - SHIELDED SIGNAL CABLE
	GENERATOR TAG: G - EQUIPMENT TO RUN OFF GENERATOR X - STEP NUMBER FOR EQUIPMENT STARTING OFF THE GENERATOR

CIRCUIT AND RACEWAY SYMBOLS:	
	RACEWAY OR WIRING SYSTEM ABOVE FLOOR LEVEL BELOW CEILING, EXPOSED. (UNLESS OTHERWISE NOTED)
	RACEWAY OR WIRING SYSTEM BELOW FLOOR LEVEL, ABOVE CEILING, HIDDEN, OR EXISTING CABLE/CONDUIT. (UNLESS OTHERWISE NOTED)
	SCHEMATIC DIAGRAM FIELD WIRING. (UNLESS OTHERWISE NOTED)
	ONE LINE DIAGRAM EQUIPMENT ENCLOSURE. (UNLESS OTHERWISE NOTED)
	HOME RUN - SEE PANELBOARD SCHEDULE FOR CIRCUIT INFORMATION EXAMPLE: HOME TO PANELBOARD PBD A, CIRCUITS 1, 3, AND 5

GENERAL ABBREVIATIONS:			
AR	ALARM RELAY	M	MOTOR CONTACTOR
AS	AMMETER SELECTOR SWITCH	mA	MILLIAMPERE
A, AMP	AMP(S), AMPERE(S)	MAX	MAXIMUM
AC	ALTERNATING CURRENT	MCB	MAIN CIRCUIT BREAKER
AF	ABOVE FINISHED FLOOR AS HIGH AS POSSIBLE	MCC	MOTOR CONTROL CENTER
AHAP	AMPS INTERRUPTING CAPACITY, SYMM.	MCP	MOTOR CONTROL PANEL/MOTOR CIRCUIT PROTECTOR
AL	ALUMINUM	MECH	MECHANICAL
AL	ALUMINUM	MFR	MECHANICAL MANUFACTURE(R)
AT	AMPERE TRIP	MH	MANHOLE
AF	AMPERE FRAME	MIC	MICROPHONE
AUTO	AUTOMATIC	MIN	MINIMUM
AUX	AUXILIARY	MISC	MISCELLANEOUS
AWG	AMERICAN WIRE GAUGE	mM	MILLIMETER
BC	BARE COPPER CONDUCTOR	mV	MILLIVOLT
BKR	BREAKER	MCM	MILLI CIRCULAR MILLS
C	CONDUCTOR/CONTACTOR	MOP	MOTOR OPERATOR PANEL
CB	CIRCUIT BREAKER	MPR	MOTOR PROTECTION RELAY
CJB	CIRCUIT JUNCTION BOX	MCB	MAIN CIRCUIT BREAKER
CKT	CIRCUIT	MTR	MOTOR
CLG	CEILING	MVS	MEDIUM VOLTAGE STARTER
CR	CONTROL RELAY	N/A	NOT APPLICABLE
CND	CONDUIT	NC	NORMALLY CLOSED
CONC	CONCRETE	NEUT,N	NEUTRAL
CS	CONTROL SWITCH	NF	NON-FUSED
CONT	CONTROL	NIC	NOT IN CONTRACT
CPT	CONTROL POWER TRANSFORMER	NO	NORMALLY OPEN
CT	CURRENT TRANSFORMER	NOM	NOMINAL
CU	COPPER	NP	NAMEPLATE
D	DIAMETER	NTS	NOT TO SCALE
DB	DUCT BANK	OC	ON CENTER
DC	DIRECT CURRENT	OD	OUTSIDE DIAMETER
DET	DETAIL	OH	OVERHEAD
DIAG	DIAGRAM	OL	OVERLOADS
DPSH	DIFFERENTIAL PRESSURE SWITCH	OT	OIL TIGHT
DS	DISCONNECT SWITCH	P	POLE
DWG	DRAWING	PA	PUBLIC ADDRESS
EA	EACH	PB	PUSHBUTTON, PULLBOX
EC	ELECTRICAL CONTRACTOR	PE	PHOTO ELECTRIC CELL
EF	EXHAUST FAN	PF	POWER FACTOR
EL	ELEVATION	PH	PHASE
ELEC	ELECTRIC(AL)	PJB	POWER JUNCTION BOX
EMER	EMERGENCY	PLC	PROGRAMMABLE LOGIC CONTROLLER
ENCL	ENCLOSURE/ENCLOSED	PNL	PANEL
EP	EXPLOSION PROOF EQUIP.	PP	POWER PANEL
EX, E	EXISTING	PR	PAIR
F	FURNISHED WITH EQUIPMENT PANEL	PRI	PRIMARY
FDR	FEEDER	PS	PRESSURE SWITCH
FLA	FULL LOAD AMPS	PT	POTENTIAL TRANSFORMER
FPP	FIBER OPTIC DISTRIBUTION PANEL	PVC	POLYVINYL CHLORIDE
FS	FLOW SWITCH	PWR	POWER
FU	FUSE	QSH	SHEAR PIN LIMIT SWITCH
FUT	FUTURE	RCPT	RECEPTACLE
FVNR	FULL VOLTAGE NON-REVERSING	RCT	RECEPTACLE
FVR	FULL VOLTAGE REVERSING	REF	REFERENCE REQ'D REQUIRED
GALV	GALVANIZED	RMS	ROOT MEAN SQUARE
GEN	GENERATOR	RTD	RESISTANCE TEMPERATURE DETECTOR
GFR	GROUND FAULT RELAY	SCH	SCHEDULE
GRD	GROUND	RVAT	REDUCED VOLTAGE AUTO TRANSFORMER
GRS	GALVANIZED RIGID STEEL	SE	SECONDARY
H	HEIGHT	SEC	SELECTOR
HGT	HANDHOLE	SEL	SERVICE ENTRANCE RATED
HID	HIGH INTENSITY DISCHARGE	SER	SINGLE POLE DOUBLE THROW
HP	HORSEPOWER	SPDT	SPECIFICATION
HS	HAND STATION (SWITCH)	SPKR	SPEAKER
HVAC	HEATING, VENTILATION AND AIR CONDITIONING	SS	STAINLESS STEEL
HZ	HERTZ (CYCLES PER SECOND)	SSL	SPEED SWITCH
HOA	HAND/OFF/AUTO	SUB	SUBSTATION
HOR	HAND/OFF/REVERSE	SW	SWITCH
HMH	HIGH VOLTAGE MANHOLE	SYMM	SYMMETRICAL
ID	INSIDE DIAMETER	SYS	SYSTEM
IMC	INDIVIDUAL MOTOR CONTROLLER	SV	SOLENOID OPERATED VALVE
INTLK	INTERLOCK	SPB	SIGNAL PULL BOX
INST	INSTANTANEOUS	TB	TERMINAL BOX
INSTR	INSTRUMENT	TEL	TELEPHONE
I/O	INPUT-OUTPUT	TEMP	TEMPERATURE
JB	JUNCTION BOX	TFR	TRANSFORMER
KV	KILOVOLT	TH	THERMOSTAT
KVA	KILOVOLT-AMPERE	TJB	TERMINAL JUNCTION BOX
KVAR	KILOVOLT-AMPERE REACTIVE	TJSW	TEMPERATURE SWITCH HIGH
KW	KILOWATT-HOUR	TV	TELEVISION
KIAC	KILO AMPERE INTERRUPTING CURRENT	TYP	TYPICAL
L-O-R	LOCAL-OFF-REMOTE	TR	TIMING RELAY
L	LONG	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
LC	LIGHTING CONTACTOR	TSP	TWISTED SHIELDED PAIR
LCP	LOCAL CONTROL PANEL	UG	UNDERGROUND
LP	LIGHTING PANEL	UH	UNIT HEATER
LOS	LOCK-OUT STOP	UON	UNLESS OTHERWISE NOTED
LSIG	LONG, SHORT, INSTANTANEOUS TRIP SETTING AND GROUND FAULT PROTECTION	V	VOLT
LSL	LEVEL SWITCH LOW	VA	VOLT AMPERE
LSO	LIMIT SWITCH OPEN	VAR	VOLT AMPERE REACTIVE
LSC	LIMIT SWITCH CLOSED	VFD	VARIABLE FREQUENCY DRIVE
LTC	LIGHTING	VSD	VARIABLE FREQUENCY DRIVE
LV	LOW VOLTAGE	VSH	VIBRATION SWITCH
LSH	LEVEL SWITCH HIGH	W	WATT, WIRE, WIDE
		W/O	WITHOUT
		WE	WEIGHT LOAD CELL
		WIT	WEIGHT INDICATING TRANSMITTER
		WP	WEATHERPROOF
		XL	WARNING HORN/LIGHT
		XT	ANEMOMETER
		ZS	POSITION (LIMIT) SWITCH
		ZSO	POSITION (LIMIT) SWITCH OPEN
		ZSC	POSITION (LIMIT) SWITCH CLOSED
		ZT	POSITION TRANSMITTER

GROUNDING SYMBOLS:	
	GROUND ROD, 3/4" x 10'-0", COPPERCLAD (UNLESS OTHERWISE NOTED)
	GROUND ROD AND TEST WELL
	COMPRESSION TYPE GROUNDING BOND TO MOTOR CASING OR EQUIPMENT
	EXOTHERMIC TYPE GROUNDING BOND TO CABLE OR CONCRETE REBAR OR RISER
	GROUNDING CONDUCTOR (CONCEALED), #4/0 AWG BARE COPPER (UNLESS OTHERWISE NOTED)
	GROUNDING CONDUCTOR (EXPOSED), #4/0 AWG INSULATED COPPER (UNLESS OTHERWISE NOTED)

GENERAL NOTES:	
1. SCOPE:	
A.	FURNISH ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS REQUIRED TO COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEM INCLUDING BUT NOT LIMITED TO WIRING, BOXES, LIGHT FIXTURES, PANELS, SWITCHES, RECEPTACLES, DISCONNECTS, STARTERS, AND ALL OTHER WORK INDICATED ON THE DRAWINGS OR AS SPECIFIED HEREIN.
B.	OBTAIN ALL PERMITS, INSPECTIONS, AND APPROVALS AS REQUIRED BY THE LOCAL AUTHORITIES HAVING JURISDICTION AND DELIVER CERTIFICATE OF APPROVAL TO THE GENERAL CONTRACTOR. ALL ASSOCIATED FEES SHALL BE PAID BY THE CONTRACTOR.
C.	ALL MATERIALS AND EQUIPMENT OF THE ELECTRICAL SYSTEM NECESSARY FOR ITS PROPER AND SAFE OPERATION OR OTHERWISE REQUIRED BY CODE, BUT NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS, SHALL BE FURNISHED AND INSTALLED WITHOUT ADDITIONAL CHARGE.
D.	WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF NATIONAL ELECTRICAL CODE, THE LATEST STANDARD BUILDING CODE, NFPA 820, ANY OTHER LOCALLY ADOPTED CODES AND LOCAL AUTHORITIES HAVING JURISDICTION.
2.	ALL SUBSTITUTIONS FOR EQUIPMENT AND MATERIAL SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO PURCHASING.
3.	CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL OTHER TRADES. IT IS THE RESPONSIBILITY OF CONTRACTOR TO VERIFY THE ACTUAL LOCATION OF EQUIPMENT, DUCTWORK, PIPING, ETC. AND COORDINATED THE INSTALLATION ACCORDINGLY. THE EQUIPMENT WIRING SHALL INCLUDE ALL NECESSARY CABLES AND CONDUIT REQUIRED FOR THE PROPER AND SAFE EQUIPMENT OPERATION.
4.	CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND DISTANCES IN THE FIELD. IN CASE OF DISCREPANCY, CONTRACTOR SHALL INCLUDE A MORE EXPENSIVE OPTION.
5.	ALL MATERIALS SELECTION SHALL BE AS PER THE SCHEDULE SHOWN ON DWG. E-002, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
6.	ALL ITEMS DESIGNED TO BE REMOVED SHALL BECOME THE PROPERTY OF CONTRACTOR, WITH THE EXCEPTION OF THE ITEMS IDENTIFIED BY THE PIEDMONT WATER COMPANY DURING THE CONSTRUCTION.

PLAN DRAWING SYMBOLS:	
	MOTOR CONNECTION
	MOTOR STARTER, INDIVIDUAL -- NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY
	COMBINATION MOTOR STARTER/DISCONNECT INDIVIDUAL -- NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY
	DISCONNECT SWITCH. DISCONNECT SWITCHES ARE HEAVY DUTY, SINGLE THROW, WITH NEMA 4X ENCLOSURE UNLESS OTHERWISE NOTED. MOUNT AT 4'-8" TO CENTER OF DISCONNECT.
	FUSED DISCONNECT, NON-FUSED. PROVISION FOR CLASS R FUSES.
	FIELD INSTRUMENT CONNECTION
	START/STOP HAND STATION MOUNTED TO HANDRAIL (NEMA 4X UNLESS OTHERWISE NOTED)
	120V, 20A, 1P TOGGLE SWITCH [BLANK] = 1P TOGGLE SWITCH 2 = 2P TOGGLE SWITCH 3 = 3P TOGGLE SWITCH D = SLIDE DIMMER M = MOTOR RATED S = TOGGLE WITH OCCUPANCY SENSOR
	DUPLIX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 6" ABOVE COUNTER, DESK, OR CABINET.
	GFCI DUPLIX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 6" ABOVE COUNTER, DESK, OR CABINET.
	QUADRAPLEX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 6" ABOVE COUNTER, DESK, OR CABINET.
	TELEPHONE BOX. MOUNT 18" A.F.F., INSTALL A 1/2" CONDUIT FROM BOX TO 6" ABOVE CEILING. PROVIDE PULL CORD FOR FUTURE CONNECTIONS AS REQUIRED.
	ETHERNET CAT-6 BOX. MOUNT 18" A.F.F., INSTALL A 1/2" CONDUIT FROM BOX TO 6" ABOVE CEILING. PROVIDE PULL CORD FOR FUTURE CONNECTIONS AS REQUIRED.
	JUNCTION BOX
	RECESSED FLOOR JUNCTION BOX
	60A, 480V, 3PH WELDING RECEPTACLE WITH INTERLOCKED 60A (NEMA 4X FUSED DISCONNECT SWITCH UNLESS OTHERWISE NOTED)
	EXHAUST FAN
	CCTV CAMERA

801 Broad Street, Suite 900
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ISSUE	DATE	PROJECT MANAGER:	ENGINEER:	DESIGNER:	DRAWN BY:

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

CAUG25007
NOT RELEASED FOR CONSTRUCTION

ELECTRICAL LEGEND & NOTES

E-001

EDEC, INC.
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DULUTH, GEORGIA 30097
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ELECTRICAL EQUIPMENT MATERIALS RATING										
NO.	EQUIPMENT	INSTALLATION AREA AND DESIGN CRITERIA								
		INDOOR NON-PROCESS: EXPOSED INSTALLATION (ELECTRICAL & CONTROL ROOMS, OFFICES, LAB, UNDER RAISED FLOORS, ETC.) ENVIRONMENT: NON-CORROSIVE; DRY	INDOOR PROCESS (PIPING GALLERY, PUMPS ROOM, ETC.) ENVIRONMENT: CORROSIVE; DAMP	INDOOR CHEMICAL ROOM ENVIRONMENT: CORROSIVE; DAMP	OUTDOOR CHEMICALS STORAGE AREA ENVIRONMENT: CORROSIVE; WET	OUTDOOR GENERAL AREAS ENVIRONMENT: CORROSIVE; WET	BELOW GRADE VAULTS (METERING VAULT, VALVE VAULT, ETC.) ENVIRONMENT: CORROSIVE; WET	CLASS 1, DIVISION 1, GROUP D HAZARDOUS AREA ENVIRONMENT: CORROSIVE; WET	CLASS 1, DIVISION 2, GROUP D HAZARDOUS AREA ENVIRONMENT: CORROSIVE; WET	UNDERGROUND AND DIRECT BURIED ENVIRONMENT: CORROSIVE; WET
1	RIGID CONDUITS	RMC - ALUMINUM	RMC - ALUMINUM	RC - PVC SCH. 80	PVC COATED ALUMINUM	RMC - ALUMINUM	RMC - ALUMINUM	RMC - ALUMINUM	RMC - ALUMINUM	DIRECT BURIED - PVC 40; CONCRETE ENCASED - PVC 40.
2	FLEXIBLE CONDUITS	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT (LFMC)	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT (LFMC)	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT (LFNC)	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT (LFMC)	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT (LFMC)	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT (LFMC)	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT (LFMC)	EXPLOSIONPROOF FLEXIBLE COUPLING	N/A
3	CABLE TRAYS	LADDER TYPE - ALUMINUM	LADDER TYPE - ALUMINUM	FIBERGLASS REINFORCED PLASTIC	FIBERGLASS REINFORCED PLASTIC	LADDER TYPE - ALUMINUM	LADDER TYPE - ALUMINUM	LADDER TYPE - ALUMINUM	LADDER TYPE - ALUMINUM - ONLY WHEN USED WITH CABLE TYPES PERMITTED PER NEC ARTICLE 500	N/A
4	JUNCTION BOXES	STEEL - NEMA 1	NEMA 4X, TYPE 304 SS	NEMA 4X, PLASTIC	NEMA 4X, TYPE 316 SS	NEMA 4X, TYPE 304 SS	NEMA 4X, TYPE 304 SS	NEMA 4X, TYPE 304 SS	NEMA 7	POLYMER CONCRETE
5	PULL BOXES	STEEL - NEMA 1	NEMA 4X, TYPE 304 SS	NEMA 4X, PLASTIC	NEMA 4X, TYPE 316 SS	NEMA 4X, TYPE 304 SS	NEMA 4X, TYPE 304 SS	NEMA 4X, TYPE 304 SS (WHEN NO SWITCHING CONTACTS OR ARCING DEVICES ARE IN THE JUNCTION BOX), OTHERWISE, USE NEMA 7	NEMA 7	POLYMER CONCRETE
6	EQUIPMENT RACKS/SUPPORTS/HARDWARE	ALUMINUM	ALUMINUM	STAINLESS STEEL 316	STAINLESS STEEL 316	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM	STAINLESS STEEL 304
7	FASTENERS	ALUMINUM	ALUMINUM	STAINLESS STEEL 316	STAINLESS STEEL 316	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM	STAINLESS STEEL 304
8	SWITCHGEAR	NEMA 1	N/A	N/A	N/A	NEMA 3R	N/A	N/A	N/A	N/A
9	SWITCHBOARD	NEMA 1	N/A	N/A	N/A	NEMA 3R	N/A	N/A	N/A	N/A
10	MOTOR CONTROL CENTER	NEMA 1	N/A	N/A	N/A	NEMA 3R	N/A	N/A	N/A	N/A
11	PANELBOARDS	NEMA 1	NEMA 4X, TYPE 304 SS	NEMA 4X, TYPE 316 SS	NEMA 4X, TYPE 316 SS	NEMA 4X, TYPE 304 SS	N/A	N/A	N/A	N/A
12	DRY TYPE TRANSFORMERS	NEMA 2	NEMA 4X, TYPE 304 SS	NEMA 4X, TYPE 316 SS	NEMA 4X, TYPE 316 SS	NEMA 4X, TYPE 304 SS	N/A	N/A	N/A	N/A
13	DISCONNECT SWITCHES	NEMA 1	NEMA 4X, TYPE 304 SS	NEMA 4X, TYPE 316 SS	NEMA 4X, TYPE 316 SS	NEMA 4X, TYPE 304 SS	NEMA 4X, TYPE 304 SS	NEMA 7	NEMA 7	N/A
14	MOTOR STARTERS	NEMA 1	NEMA 4X, TYPE 304 SS	NEMA 4X, TYPE 316 SS	NEMA 4X, TYPE 316 SS	NEMA 4X, TYPE 304 SS	NEMA 4X, TYPE 304 SS	NEMA 7	NEMA 7	N/A
15	CONTACTORS	NEMA 1	NEMA 4X, TYPE 304 SS	NEMA 4X, TYPE 316 SS	NEMA 4X, TYPE 316 SS	NEMA 4X, TYPE 304 SS	NEMA 4X, TYPE 304 SS	NEMA 7	NEMA 7	N/A
16	CONTROL PANELS	NEMA 1	NEMA 4X, TYPE 304 SS	NEMA 4X, TYPE 316 SS	NEMA 4X, TYPE 316 SS	NEMA 4X, TYPE 304 SS	N/A	NEMA 7	NEMA 7	N/A
17	MOTOR HOUSING MINIMUM PROTECTION RATING	ODP	TEFC	TEFC	TEFC	TEFC	TEFC	EXPLOSION PROOF, RATED FOR CLASSIFIED AREA	TEFC, RATED FOR CLASSIFIED AREA	N/A
18	INSTRUMENTATION MINIMUM PROTECTION RATING	NEMA 1	NEMA 4X	NEMA 4X	NEMA 4X	NEMA 4X	NEMA 4X	EXPLOSION PROOF, RATED FOR CLASSIFIED AREA OR USED WITH INTRINSICALLY SAFE BARRIERS	EXPLOSION PROOF, RATED FOR CLASSIFIED AREA OR USED WITH INTRINSICALLY SAFE BARRIERS	NEMA 6P
19	VALVE ACTUATORS	N/A	NEMA 4	NEMA 4	NEMA 4	NEMA 4	NEMA 4	EXPLOSION PROOF, RATED FOR CLASSIFIED AREA	EXPLOSION PROOF, RATED FOR CLASSIFIED AREA	N/A
20	WIRING DEVICE BOXES	DIE-CAST ALUMINUM; WEATHERPROOF	DIE-CAST ALUMINUM; WEATHERPROOF	PLASTIC; WEATHERPROOF	ALUMINUM, PVC COATED; WEATHERPROOF	DIE-CAST ALUMINUM; WEATHERPROOF	DIE-CAST ALUMINUM; WEATHERPROOF	EXPLOSION PROOF, RATED FOR CLASSIFIED AREA	EXPLOSION PROOF, RATED FOR CLASSIFIED AREA	N/A
21	DEVICES COVER PLATES	STAINLESS STEEL; NON-WEATHERPROOF (WITH GASKET)	DIE-CAST ALUMINUM; WEATHERPROOF (WITH GASKET)	PLASTIC; WEATHERPROOF (WITH GASKET)	ALUMINUM, PVC COATED; WEATHERPROOF (WITH GASKET)	DIE-CAST ALUMINUM; WEATHERPROOF (WITH GASKET)	DIE-CAST ALUMINUM; WEATHERPROOF (WITH GASKET)	EXPLOSION PROOF, RATED FOR CLASSIFIED AREA	EXPLOSION PROOF, RATED FOR CLASSIFIED AREA	N/A
22	OUTLET BOX HOODS	N/A	ALUMINUM; WEATHERPROOF (WHILE-IN-USE COVER) (WITH GASKET)	PLASTIC; WEATHERPROOF (WHILE-IN-USE COVER) (WITH GASKET)	PLASTIC; WEATHERPROOF (WHILE-IN-USE COVER) (WITH GASKET)	ALUMINUM; WEATHERPROOF (WHILE-IN-USE COVER) (WITH GASKET)	ALUMINUM; WEATHERPROOF (WHILE-IN-USE COVER) (WITH GASKET)	EXPLOSION PROOF, RATED FOR CLASSIFIED AREA	EXPLOSION PROOF, RATED FOR CLASSIFIED AREA	N/A

CABLE TYPES REQUIREMENTS					
CABLE TYPES	MATERIAL	SERVICE ENTRANCE	VFD MOTOR FEEDERS	POWER	SIGNAL
CABLE TYPES	COPPER, UNLESS NOTED OTHERWISE	XHHW, 600V	SHIELDED VFD CABLES, 1000V	THWN-2, 600V	SHIELDED TWISTED TYPE, 600V

- NOTES:**
- POWER CABLES REQUIREMENTS:
 - MINIMUM ALLOWED WIRE GAUGE: #12 AWG.
 - MAXIMUM ALLOWED WIRE GAUGE: 600KCMIL.
 - MAXIMUM MULTICONDUCTOR CABLES SIZE: #1 AWG.
 - MAXIMUM SOLID CORE CABLES SIZE: #10 AWG.
 - CONTROL CABLES REQUIREMENTS:
 - CABLES CONSTRUCTION TYPE: SINGLE CONDUCTOR.
 - MINIMUM ALLOWED WIRE GAUGE: #14 AWG.
 - SIGNAL CABLES REQUIREMENTS:
 - CABLES CONSTRUCTION TYPE: MULTICONDUCTOR CONDUCTOR WITH OVERALL SHIELD AND DRAIN WIRE.
 - MINIMUM ALLOWED WIRE GAUGE: #16 AWG.
 - MAXIMUM NUMBER OF PAIRS/TRIADS IN MULTI-PAIR/TRID CABLE: 2.

- INSTRUMENTATION AND CONTROLS:**
- ALL FIELD MOUNTED INDICATING TRANSMITTERS SHALL BE PROVIDED WITH SUN/RAIN HOOD.
 - ALL CONTROL CABINETS INSTALLED OUTDOORS SHALL BE PROVIDED WITH SUN PROTECTING COVER OVER DISPLAYS TO AVOID DETERIORATION FROM UV EXPOSURE.
- GROUNDING:**
- MAXIMUM DISTANCE BETWEEN DRIVEN GROUND RODS IS NOT TO EXCEED 50' UNLESS OTHERWISE NOTED.
 - ALL GROUNDING CONDUCTORS TO BE BARE, STRANDED, SOFT DRAWN, COPPER, SIZED AS INDICATED ON THE DESIGN DRAWINGS.
 - MAIN RING GROUND WIRE TO BE MAXIMUM 3' OUTSIDE FOUNDATIONS AND 2'-6" BELOW FINISH GRADE.
 - CONTRACTOR TO DETERMINE ACTUAL LOCATION OF ANY EQUIPMENT UTILIZING BONDS TO GROUNDING TAILS. CONTRACTOR TO LOCATE 1" PVC GROUNDING STUB-UPS IN ACCORDANCE WITH EQUIPMENT VENDOR INFORMATION OR DRAWING REQUIREMENTS.
 - FOR COMPRESSION APPLICATIONS, APPLY A COAT OF "NO-OXIDE" COMPOUND ONTO COPPER CABLE AND COMPRESSION CONNECTORS PRIOR TO CRIMPING CONNECTION OR USE PRE-FILLED CONNECTORS.
 - ALL GROUND CABLES STUBBING UP THROUGH CONCRETE SHALL STUB UP THRU PVC CONDUIT, SIZED PER PLAN DRAWINGS. PVC CONDUIT SHALL EXTEND A MINIMUM OF 6" ABOVE AND 6" BELOW THE CONCRETE.
 - PIGTAILS SHOULD BE INSTALLED THRU 1" PVC CONDUIT, 10' LONG U.N.O.
 - ALL UNDERGROUND CONNECTIONS SHALL BE EITHER MADE WITH EXOTHERMIC WELDS OR CRIMP CONNECTORS. ALL SUCH CONNECTIONS SHALL BE INSPECTED BY THE SITE ENGINEER REPRESENTATIVE PRIOR TO COVER.
 - ALL ABOVE GROUND GROUNDING CONNECTIONS SHALL EMPLOY PROPERLY RATED COMPRESSION CONNECTORS.
 - THE MAIN GROUNDING RING CONDUCTOR SHALL BE RUN AS MECHANICALLY CONTINUOUS AS POSSIBLE WITH A MINIMUM OF CUTS AND SPLICES.

- INSTALLATION REQUIREMENTS:**
- GENERAL:**
- ALL ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE UL LISTED.
 - ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED OUTDOORS SHALL BE UV RESISTANT.
 - ALL ELECTRICAL EQUIPMENT AND MATERIALS OF THE SAME TYPE SHALL BE OF THE SAME MANUFACTURER AND MODEL LINE.
 - ALL FREESTANDING EQUIPMENT SHALL BE INSTALLED ON 4" HOUSEKEEPING PAD, ELEVATED ABOVE THE SURROUNDING SURFACE.
 - ALL ELECTRICAL, INSTRUMENTATION AND CONTROL SYSTEM COMPONENTS LOCATIONS SHALL BE ADJUSTED TO PROVIDE NEC REQUIRED WORKING CLEARANCES.
 - ALL ELECTRICAL EQUIPMENT INSTALLED OUTDOORS SHALL HAVE CONCRETE PADS EXTENDING 3 FT IN FRONT OF THE EQUIPMENT.
 - CONTRACTOR SHALL ADJUST CIRCUIT BREAKER SIZES, CABLES AND CONDUITS FOR ELECTRICAL EQUIPMENT AT NO ADDITIONAL COST BASED ON THE ACTUAL ACCEPTED SHOP DRAWINGS.
 - CONTRACTOR SHALL CONFIRM ELECTRICAL EQUIPMENT DIMENSIONS PRIOR TO RELEASING FOR FABRICATION LOCATED IN THE AREAS WITH LIMITED AVAILABLE SPACE TO ENSURE PROPER EQUIPMENT INSTALLATION PROVIDING NEC REQUIRED WORKING CLEARANCES.
 - FOR NEW CONSTRUCTION, INSTALLATION AND/OR DEMOLITION THAT INTERRUPTS ANY POWER, CONTROL OR SIGNAL WIRING TO EXISTING EQUIPMENT OR DEVICES THAT SHALL REMAIN IN OPERATION. CONTRACTOR SHALL INCLUDE ALL REQUIRED BREAKERS, CABLES/CONDUITS AND/OR ANY OTHER EQUIPMENT AS REQUIRED TO KEEP THE EXISTING SYSTEM FUNCTIONAL.
 - ALL MOTORS USED WITH VARIABLE FREQUENCY DRIVES SHALL BE INVERTER DUTY RATED TYPE.
 - ALL OUTDOOR ENCLOSURES CABLES ENTRY POINTS SHALL BE IN THE BOTTOM OF THE ENCLOSURE. IN CASE OF INABILITY TO MAKE BOTTOM PENETRATION, SIDE CONNECTION WOULD BE ACCEPTABLE. ENCLOSURES TOP ENTRY ARE NOT ALLOWED.
- POWER DISTRIBUTION AND CONDUITS INSTALLATION REQUIREMENTS:**
- ALL CONDUITS ENDS SHALL BE FREE OF METAL SHAVINGS AND BE PROVIDED WITH FITTINGS WITH INSULATED BUSHING.
 - ALL EXPOSED CONDUITS SHALL BE MINIMUM OF 3/4". ALL BURIED CONDUIT SHALL BE MINIMUM OF 1".
 - ALL UNDERGROUND CONDUITS SHALL HAVE RIGID STEEL ELBOWS.
 - ALL METAL CONDUITS SHALL BE PROTECTED WITH A BITUMINOUS COATING WHEN INSTALLED UNDERGROUND OR WHEN IN CONTACT WITH CONCRETE.
 - CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CABLES AND EQUIPMENT LUG SIZES, IN CASE THE CABLE IS OF A LARGER SIZE THAN THE EQUIPMENT LUG, CONTRACTOR SHALL PROVIDE THE REQUIRED CONNECTOR AT NO ADDITIONAL CHARGE TO OWNER.
 - CONTRACTOR SHALL PROVIDE PULL STRING AND PERMANENTLY ATTACHED IDENTIFICATION LABELS AT EACH CONDUIT END FOR ALL SPARE CONDUITS. EACH TAG SHALL INCLUDE CONDUIT NUMBER, SIZE AND DESTINATION POINT.
 - CONTRACTOR SHALL PROVIDE ALL REQUIRED PULL BOXES AND/OR CONDULETS TO MEET NEC ARTICLE 314 FOR CABLE PULLS.
 - ALL CABLES INSTALLED IN CABLE TRAYS SHALL BE TC RATED.
 - CONDUIT FITTING CONNECTION TYPES SHALL BE AS FOLLOWS:
 - FOR RMC AND IMC CONDUITS - THREADED TYPE;
 - FOR EMT CONDUITS - COMPRESSION TYPE.
 - RIGID CONDUIT CONNECTIONS TO ENCLOSURES SHALL BE MADE WITH MYERS HUBS.
 - ALL OPEN CONDUIT ENDS SHALL BE PROTECTED FROM ELEMENTS PENETRATION TO THE INSIDE THE CONDUIT WITH DUCT SEAL.
 - TO EQUIPMENT ENCLOSURES THAT ARE NOT SUITABLE FOR RIGID OR FLEXIBLE CONDUIT CONNECTION, THE CONTRACTOR SHALL PROVIDE A CORD GRIP AT THE CONDUIT END TO PROTECT THE FROM ELEMENTS PENETRATION TO THE INSIDE THE CONDUIT.
 - THE CONTRACTOR SHALL INSTALL EXPANSION COUPLINGS AS REQUIRED TO PREVENT CONDUIT DAMAGE DUE TO LONGITUDINAL MOVEMENT AND/OR THERMAL EXPANSION.
 - THE CONTRACTOR SHALL INSTALL DEFLECTION COUPLINGS FOR CONDUITS RUNS THAT ARE SUBJECT TO ANGULAR AND PARALLEL MISALIGNMENT.
 - THE CONTRACTOR SHALL INSTALL DRAIN FITTING IN VERTICAL CONDUIT RUNS AT LOW POINTS IN CONDUIT SYSTEM TO PREVENT ACCUMULATION OF CONDENSATE ABOVE SEAL-OFF FITTINGS.
 - THE CONTRACTOR SHALL INSTALL DRAIN FITTINGS AT LOW POINTS OF CONDUIT RUN TO DRAIN ACCUMULATED CONDENSATE AND TO PROVIDE VENTILATION TO MINIMIZE CONDENSATION.
 - FOR OVERHEAD SERVICES THE CONTRACTOR SHALL INSTALL WEATHERED FITTINGS AS REQUIRED, FOR SERVICE CABLE INSTALLATION THROUGH THE ROOF, USE SERVICE ENTRANCE MAST KITS.
 - THE CONTRACTOR SHALL INSTALL GROUNDING BUSHING AS REQUIRED BY NEC, AS WELL AS FOR THE FOLLOWING CONDITIONS:
 - FOR METALLIC RACEWAYS CONTAINING SERVICE CONDUCTORS
 - FOR METALLIC RACEWAYS TERMINATED AT NON-METALLIC ENCLOSURES
 - AND THE CIRCUIT EXCEEDING 250V TO GROUND NOMINAL
 - FOR METALLIC RACEWAYS NOT TERMINATED AT ENCLOSURE

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STATE OF GEORGIA
 GOODWYN MILLS
 CAWOOD, LLC
 No. PEFD07888
 Exp. 06.30.2028
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF ALABAMA

ISSUE DATE: _____
 PROJECT MANAGER: _____
 ENGINEER: _____
 DESIGNER: _____
 DRAWN BY: _____

CAREY STATION URBAN WATER REUSE FACILITY
 0.5 MGD TO 1.5 MGD EXPANSION
 For Piedmont Water Company
 Greensboro, Georgia

CAUG250007
 NOT RELEASED FOR CONSTRUCTION

ELECTRICAL MATERIALS SCHEDULE
E-002

LIGHTING/POLE SCHEDULE					
SYMBOL/TYPE	DESCRIPTION	INSTALLATION ENVIRONMENT	HAZARDOUS AREA	LAMP/VOLTAGE	MOUNTING
 B1	EMERGENCY LIGHT/EXIT COMBO FIXTURE COLOR: WHITE ACCESSORIES: INTERNAL BATTERY BASIS OR DESIGN: BRAND: LITHONIA MODEL #: LHQM-LED-R-RO	INDOOR & OUTDOOR; CORROSIVE & NON-CORROSIVE; DRY AND DAMP	N/A	LED 120/277V, 1PH 6WATTS	CEILING/ WALL/ SURFACE
 D1	INDUSTRIAL STRIP LIGHT, 4FT ENCLOSURE COLOR: WHITE COLOR TEMPERATURE: 4000K ACCESSORIES: NONE BASIS OR DESIGN: BRAND: LITHONIA MODEL #: ZL1N-L48-SMR-5000LM-FST-MVOLT-40K-80CRI-WH	INDOOR; NON-CORROSIVE; DRY	N/A	LED 120/277V, 1PH 34WATTS	CEILING/ SURFACE
 F1	INDUSTRIAL WALLPACK FIXTURE (ADJUSTABLE LIGHT OUTPUT) ENCLOSURE COLOR: DARK BRONZE COLOR TEMPERATURE: 4000K ACCESSORIES: NONE BASIS OR DESIGN: BRAND: LITHONIA MODEL #: #TWPLED-ALO-40K-T3M-MVOLT-DDBXD	INDOOR AND OUTDOOR; CORROSIVE & NON-CORROSIVE; DRY, DAMP AND WET	N/A	LED 120/277V, 1PH 11-48WATTS	WALL/ SURFACE
 H2	20FT, 4" DIA. SQUARE STRAIGHT ALUMINUM POLE WITH A SINGLE AREA LIGHT FIXTURE POLE COLOR: DARK BRONZE FIXTURE COLOR: DARK BRONZE COLOR TEMPERATURE: 4000K FIXTURE ACCESSORIES: NONE BASIS OR DESIGN: BRAND: LITHONIA FIXTURE MODEL #: DSK1LED-P4-40K-70CRI-T2M-MVOLT-SPA5-DDBXD POLE MODEL #: SSA-20-5G-DM19AS-DDBXD	OUTDOOR; CORROSIVE & NON-CORROSIVE; WET	N/A	LED 120/277V, 1PH 125WATTS	POLE
 I1	STANCHION MOUNTED (25 DEG. ANGLED) LIGHT FIXTURE FIXTURE COLOR: GRAY COLOR TEMPERATURE: 4000K FIXTURE ACCESSORIES: NONE BASIS OR DESIGN: BRAND: GROUSE-HINDS FIXTURE MODEL #: PVML 5 N J R3 UNV1 STANCHION MODEL #: JM5	INDOOR AND OUTDOOR; CORROSIVE & NON-CORROSIVE; DRY, DAMP AND WET	N/A	LED 120-277V, 1PH 67WATTS	STANCHION
 H21	20FT, 4" DIA. SQUARE STRAIGHT ALUMINUM POLE WITH A TWO (@180 DEG.) AREA LIGHT FIXTURES POLE COLOR: DARK BRONZE FIXTURE COLOR: DARK BRONZE COLOR TEMPERATURE: 4000K FIXTURE ACCESSORIES: NONE BASIS OR DESIGN: BRAND: LITHONIA FIXTURE MODEL #: DSK1LED-P4-40K-70CRI-T2M-MVOLT-SPA5-DDBXD POLE MODEL #: SSA-20-5G-DM28AS-DDBXD	OUTDOOR; CORROSIVE & NON-CORROSIVE; WET	N/A	LED 120/277V, 1PH 125WATTS (EACH)	POLE
 V1	INDUSTRIAL STRIP LIGHT, 4FT ENCLOSURE COLOR: WHITE COLOR TEMPERATURE: 4000K ACCESSORIES: NONE BASIS OR DESIGN: BRAND: LITHONIA MODEL #: FEM-L48-4000LM-IMACD-WD-MVOLT-40K-80CRI-WLFEND2 (PREWIRED BY BUILDING MANUFACTURER)	INDOOR; CORROSIVE & NON-CORROSIVE; DRY, DAMP AND WET	N/A	LED 120/277V, 1PH 34WATTS	CEILING/ SURFACE
 V2	INDUSTRIAL WALLPACK FIXTURE (ADJUSTABLE LIGHT OUTPUT) ENCLOSURE COLOR: DARK BRONZE COLOR TEMPERATURE: 4000K ACCESSORIES: NONE BASIS OR DESIGN: BRAND: LITHONIA MODEL #: #TWPLED-ALO-40K-T3M-MVOLT-DDBXD (PREWIRED BY BUILDING MANUFACTURER)	INDOOR AND OUTDOOR; CORROSIVE & NON-CORROSIVE; DRY, DAMP AND WET	N/A	LED 120/277V, 1PH 11-48WATTS	WALL/ SURFACE
 V3	EMERGENCY LIGHT/EXIT COMBO FIXTURE COLOR: WHITE ACCESSORIES: INTERNAL BATTERY BASIS OR DESIGN: BRAND: LITHONIA MODEL #: LHQM-LED-R-RO (PREWIRED BY BUILDING MANUFACTURER)	INDOOR & OUTDOOR; CORROSIVE & NON-CORROSIVE; DRY AND DAMP	N/A	LED 120/277V, 1PH 6WATTS	CEILING/ WALL/ SURFACE

NOTE:
DESIGN IS BASED ON THE EQUIPMENT SHOWN IN THE ABOVE SCHEDULE. LIGHTS AND POLE SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR PER SCHEDULE.
ANY SUBSTITUTIONS SHALL BE APPROVED BY ENGINEER PRIOR TO PURCHASE/INSTALLATION.



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90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	09.03.2025

PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

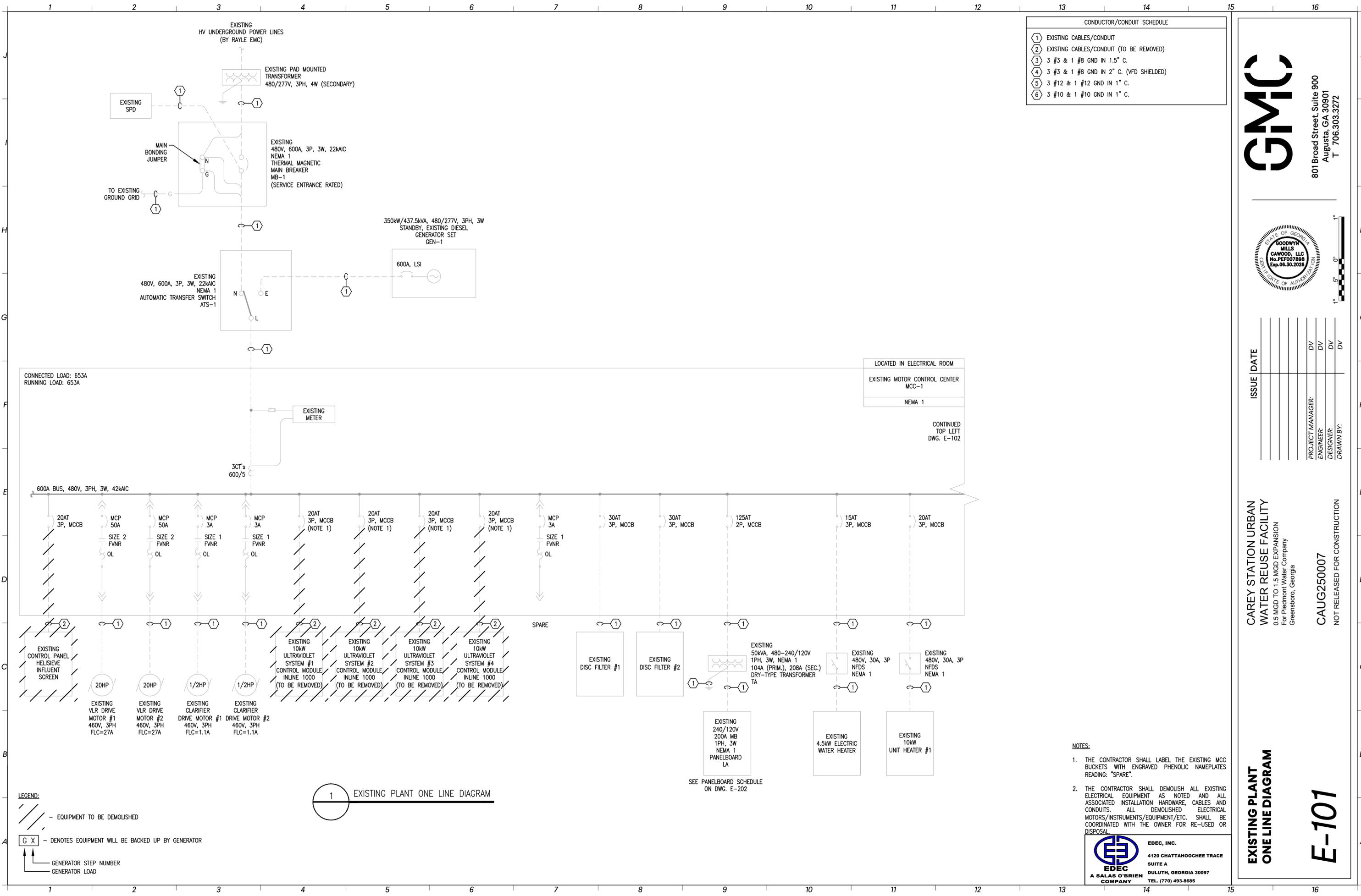
CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

CAUG250007
NOT RELEASED FOR CONSTRUCTION

**LIGHTING
FIXTURES SCHEDULE**

E-003





CONDUCTOR/CONDUIT SCHEDULE

①	EXISTING CABLES/CONDUIT
②	EXISTING CABLES/CONDUIT (TO BE REMOVED)
③	3 #3 & 1 #8 GND IN 1.5" C.
④	3 #3 & 1 #8 GND IN 2" C. (VFD SHIELDED)
⑤	3 #12 & 1 #12 GND IN 1" C.
⑥	3 #10 & 1 #10 GND IN 1" C.



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CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
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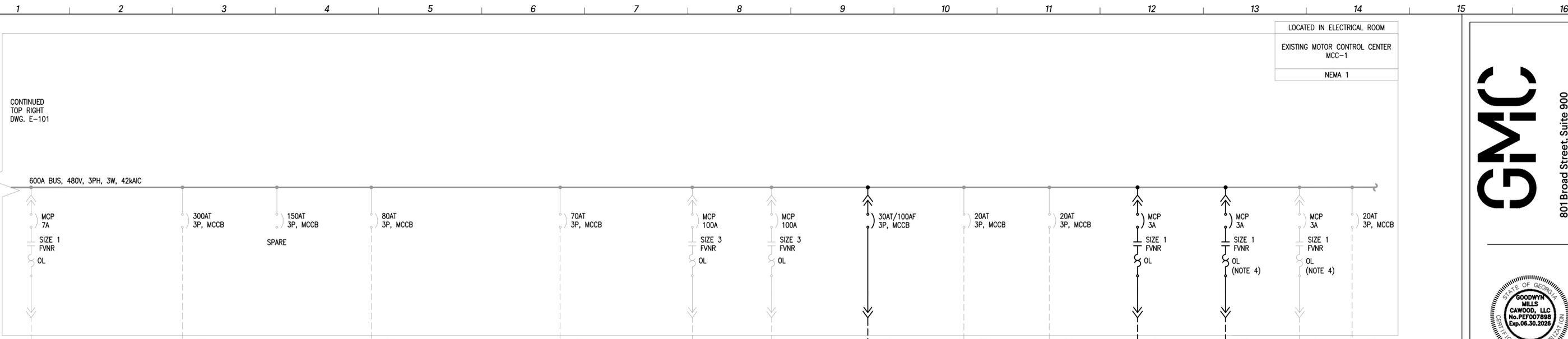
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EXISTING PLANT ONE LINE DIAGRAM

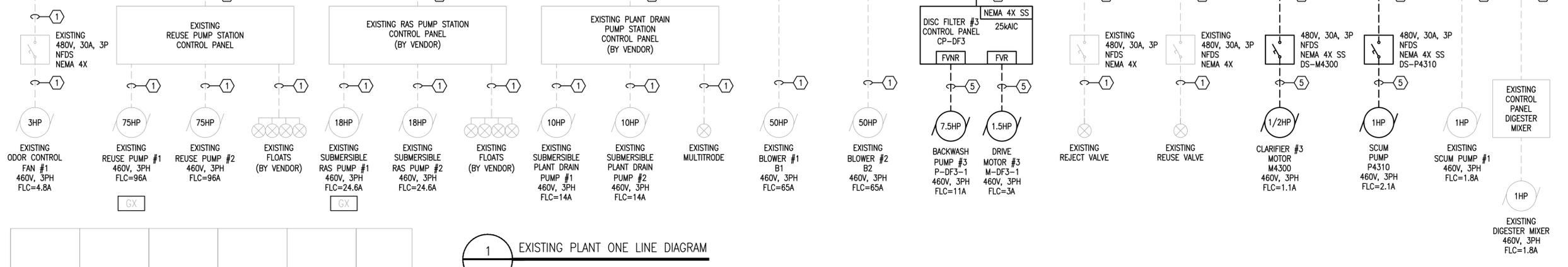
E-101

- NOTES:**
- THE CONTRACTOR SHALL LABEL THE EXISTING MCC BUCKETS WITH ENGRAVED PHENOLIC NAMEPLATES READING: "SPARE".
 - THE CONTRACTOR SHALL DEMOLISH ALL EXISTING ELECTRICAL EQUIPMENT AS NOTED AND ALL ASSOCIATED INSTALLATION HARDWARE, CABLES AND CONDUITS. ALL DEMOLISHED ELECTRICAL MOTORS/INSTRUMENTS/EQUIPMENT/ETC. SHALL BE COORDINATED WITH THE OWNER FOR RE-USED OR DISPOSAL.

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LOCATED IN ELECTRICAL ROOM
EXISTING MOTOR CONTROL CENTER
MCC-1
NEMA 1



EXISTING VLR DRIVE #1	EXISTING BLOWER #1	EXISTING CLARIFIER #1 DRIVE	SCUM PUMP	EXISTING REJECT VALVE	EXISTING RAS PUMP STATION
EXISTING VLR DRIVE #2	EXISTING ODOR CONTROL FAN	EXISTING CLARIFIER #2 DRIVE	DISC FILTER #3 CP-DF3 (NOTE 1)	EXISTING DISC FILTER #1	EXISTING WATER HEATER
EXISTING SCUM PUMP	EXISTING SCUM PUMP	CLARIFIER #3 MOTOR	EXISTING SPARE	EXISTING DISC FILTER #2	EXISTING PLANT DRAIN PUMP STATION
EXISTING POWER METER	EXISTING SCUM PUMP	EXISTING TRANSFORMER TA	EXISTING SPARE	EXISTING DIGEST MIXER	EXISTING REUSE PUMP STATION
MAIN LUGS	EXISTING BLOWER #2	EXISTING SPARE	EXISTING UNIT HEATER #1	EXISTING REUSE VALVE	
				EXISTING SPARE	

1 EXISTING PLANT ONE LINE DIAGRAM

2 EXISTING MOTOR CONTROL CENTER MCC-1 - FRONT

LEGEND:
C.T. - VFD - CONSTANT TORQUE VFD
V.T. - VFD - VARIABLE TORQUE VFD
--- EQUIPMENT TO BE DEMOLISHED

- NOTES:
- THE CONTRACTOR SHALL PROVIDE AND INSTALL 480V, 30AT/100AF, 3P CIRCUIT BREAKER. THE CIRCUIT BREAKER SHALL BE OF THE SAME MANUFACTURER AND SHALL HAVE THE SAME AIC RATING AS THE EXISTING MOTOR CONTROL CENTER (MCC-1). INCLUDE MCC BUCKET FRONT DOOR AND DISCONNECT HANDLE AS REQUIRED.
 - THE CONTRACTOR SHALL DEMOLISH ALL EXISTING ELECTRICAL EQUIPMENT AS NOTED AND ALL ASSOCIATED INSTALLATION HARDWARE, CABLES AND CONDUITS. ALL DEMOLISHED ELECTRICAL MOTORS/INSTRUMENTS/EQUIPMENT/ETC. SHALL BE COORDINATED WITH THE OWNER FOR RE-USED OR DISPOSAL.
 - THE CONTRACTOR SHALL PROVIDE AND INSTALL MOTOR STARTER AS SHOWN. THE STARTER SHALL BE OF THE SAME MANUFACTURER AND SHALL HAVE THE SAME AIC RATING AS THE EXISTING MOTOR CONTROL CENTER (MCC-1). INCLUDE MCC BUCKET FRONT DOOR AND DISCONNECT HAND AS REQUIRED.

CONDUCTOR/CONDUIT SCHEDULE	
1	EXISTING CABLES/CONDUIT
2	EXISTING CABLES/CONDUIT (TO BE REMOVED)
3	3 #3 & 1 #8 GND IN 1.5" C.
4	3 #3 & 1 #8 GND IN 2" C. (VFD SHIELDED)
5	3 #12 & 1 #12 GND IN 1" C.
6	3 #10 & 1 #10 GND IN 1" C.

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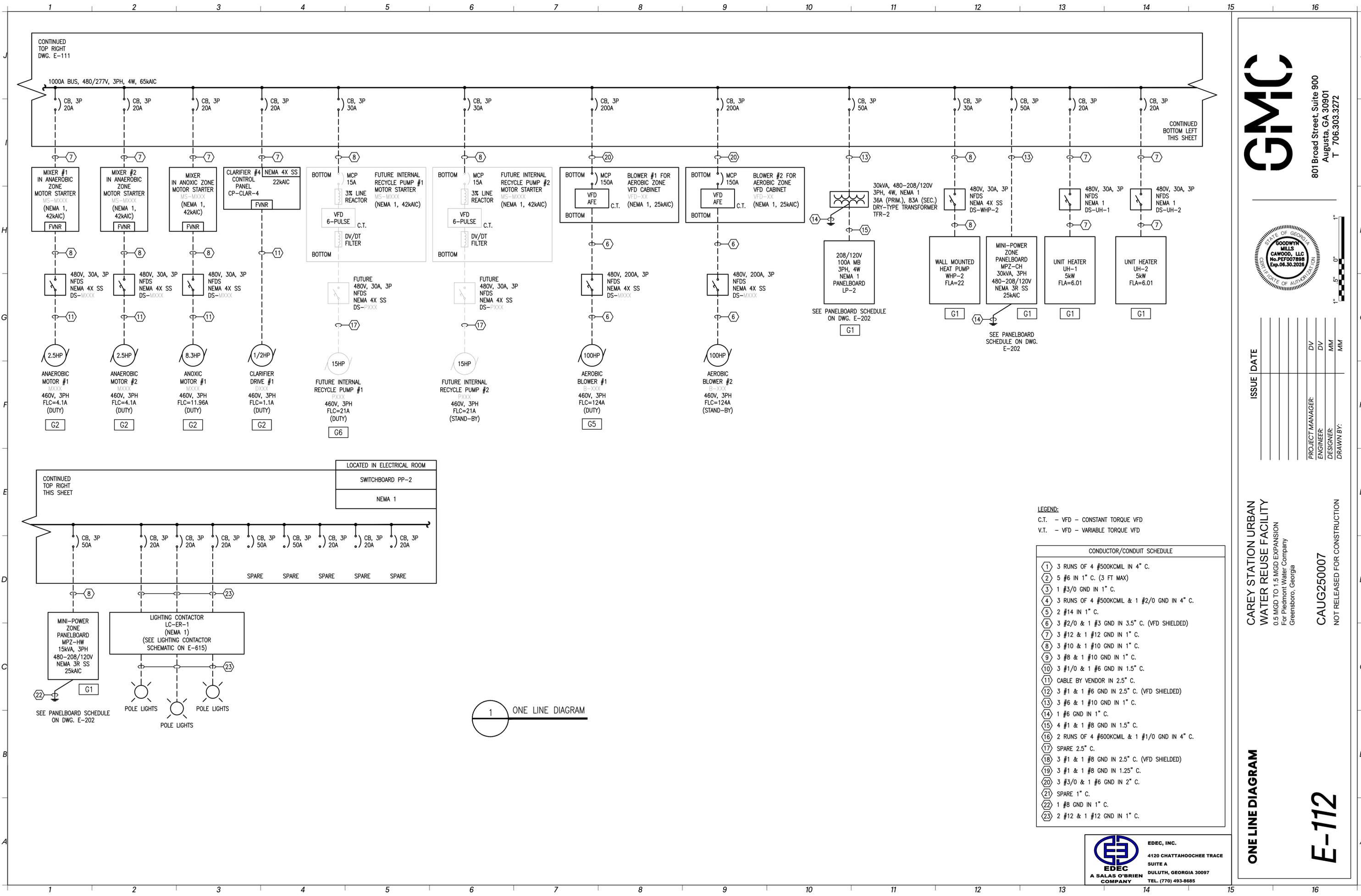
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ISSUE	DATE	PROJECT MANAGER:	ENGINEER:	DESIGNER:	DRAWN BY:
		DV	DV	DV	DV

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia
CAUG250007
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EXISTING PLANT ONE LINE DIAGRAM
E-102



GMC

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ISSUE	DATE	PROJECT MANAGER:	DESIGNER:	DRAWN BY:
		DV	DV	MM
				MM

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ONE LINE DIAGRAM

E-112

- LEGEND:**
 C.T. - VFD - CONSTANT TORQUE VFD
 V.T. - VFD - VARIABLE TORQUE VFD
- CONDUCTOR/CONDUIT SCHEDULE**
- ① 3 RUNS OF 4 #500KCMIL IN 4" C.
 - ② 5 #6 IN 1" C. (3 FT MAX)
 - ③ 1 #3/0 GND IN 1" C.
 - ④ 3 RUNS OF 4 #500KCMIL & 1 #2/0 GND IN 4" C.
 - ⑤ 2 #14 IN 1" C.
 - ⑥ 3 #2/0 & 1 #3 GND IN 3.5" C. (VFD SHIELDED)
 - ⑦ 3 #12 & 1 #12 GND IN 1" C.
 - ⑧ 3 #10 & 1 #10 GND IN 1" C.
 - ⑨ 3 #8 & 1 #10 GND IN 1" C.
 - ⑩ 3 #1/0 & 1 #6 GND IN 1.5" C.
 - ⑪ CABLE BY VENDOR IN 2.5" C.
 - ⑫ 3 #1 & 1 #6 GND IN 2.5" C. (VFD SHIELDED)
 - ⑬ 3 #6 & 1 #10 GND IN 1" C.
 - ⑭ 1 #6 GND IN 1" C.
 - ⑮ 4 #1 & 1 #8 GND IN 1.5" C.
 - ⑯ 2 RUNS OF 4 #600KCMIL & 1 #1/0 GND IN 4" C.
 - ⑰ SPARE 2.5" C.
 - ⑱ 3 #1 & 1 #8 GND IN 2.5" C. (VFD SHIELDED)
 - ⑲ 3 #1 & 1 #8 GND IN 1.25" C.
 - ⑳ 3 #3/0 & 1 #6 GND IN 2" C.
 - ㉑ SPARE 1" C.
 - ㉒ 1 #8 GND IN 1" C.
 - ㉓ 2 #12 & 1 #12 GND IN 1" C.

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MINI-POWER ZONE				MPZ-CH				(LOCATED AT THE CHEMICAL SHED)							
VOLTAGE (L-N):		120V		ENCLOSURE TYPE:		NEMA 3R SS		VOLTAGE (L-L):		208V		MOUNTING:		SURFACE	
PHASE WIRES:		3 ϕ , 4 W		AIC RATING (A):		25,000 AIC AT 480V		MINIMUM BUS CAPACITY (A):		125A		NOTES:		THE MPZ SHALL BE EQUIPPED WITH 30KVA, 480-208/120V, 3PH, 4W TRANSFORMER	
MAIN O.C. DEVICE (A):		50A, 3P MB PRIM.; 100A, 3P MB SEC.		PHASE LOADS (AMP)				POLE		TRIP AMPS		DESCRIPTION		CKT NO	
CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP)			POLE	TRIP AMPS	DESCRIPTION	CKT NO					
				A	B	C									
1	LEVEL INDICATING TRANSMITTER (LIT8110)	20	1	1.0	0.0		1	20	(pH) TRANSMITTER (AIT/AE6001)	2					
3	FUTURE LEVEL INDICATING TRANSMITTER (LIT8120)	20	1		1.0	0.0	1	20	RESIDUAL CHLORINE TRANSMITTER (AIT/AE6002)	4					
5	CONVENIENCE RECEPTACLE	20	1			1.5	20.0	1	30 (*)	CHEMICAL TANK HEAT TRACING CONTROLLER (CP-TB8110A)	6				
7	FUTURE CHEMICAL TANK HEAT TRACING CONTROLLER (CP-TB8120A)	30 (*)	1	20.0	15.0		1	20 (*)	CHEMICAL TANKS PIPING HEAT TRACE	8					
9	CHEMICAL TANKS FILING PIPING HEAT TRACE	20 (*)	1		15.0	1.0	1	20	FILLING STATION PANEL #1 (LCP-TB8110)	10					
11	PANELBOARD (LP-CH)	50	3				1	20	FUTURE FILLING STATION PANEL #2 (LCP-TB8120)	12					
13				13.7	0.5		1	20	LEAK DETECTION SYSTEM TANK (TB8110) (CP-TB8110B)	14					
15					10.9	0.0	1	20	FUTURE LEAK DET. SYSTEM (CP-TB8120B)	16					
17	SPACE					0.0	0.0		SPACE	18					
19	SPACE			0.0	0.0				SPACE	20					
21	SPACE				0.0	0.0			SPACE	22					
23	SPACE					0.0	0.0		SPACE	24					
USE THE FOLLOWING CONDUCTORS FOR PANELBOARD CIRCUITS: 20A - #12AWG; 30A - #10AWG; 50A - #6AWG;				CONNECTED LOAD PHASE TOTALS (AMP)			(*) - 30mA, EGFP CIRCUIT BREAKER								
				50.2	27.9	23.4									

1 MPZ-CH - PANELBOARD SCHEDULE

PANELBOARD				LP-CH				(LOCATED IN CHEMICAL BUILDING)							
VOLTAGE (L-N):		120V		ENCLOSURE TYPE:		NEMA 4X SS		VOLTAGE (L-L):		208V		MOUNTING:		SURFACE	
PHASE WIRES:		3 ϕ , 4 W		AIC RATING (A):		10,000 AIC		MINIMUM BUS CAPACITY (A):		125A		NOTES:		(PROVIDED BY CHEM BLD. VENDOR)	
MAIN O.C. DEVICE (A):		50A, 3P MAIN BREAKER		PHASE LOADS (AMP)				POLE		TRIP AMPS		DESCRIPTION		CKT NO	
CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP)			POLE	TRIP AMPS	DESCRIPTION	CKT NO					
				A	B	C									
1	CHEMICAL PUMP #1 (P8210)	20	1	5.0	1.5		1	20	CONVENIENCE RECEPTACLE (PREWIRED BY BUILDING VENDOR)	2					
3	CONVENIENCE RECEPTACLE (PREWIRED BY BUILDING VENDOR)	20	1		1.5	2.2	1	20	CHEMICAL BUILDING EXHAUST FAN (EF-CB) (PREWIRED BY BUILDING VENDOR)	4					
5	CHEMICAL BUILDING INTERIOR LIGHTING (PREWIRED BY BUILDING VENDOR)	20	1			0.5	0.4	1	CHEMICAL BUILDING OUTDOOR LIGHTING (PREWIRED BY BUILDING VENDOR)	6					
7	CHEMICAL PUMP #2 (P8220)	20	1	5.0	7.2		2	20	CHEMICAL BUILDING UNIT HEATER (CB-UH) (PREWIRED BY BUILDING VENDOR)	8					
9	SPACE				0.0	7.2				10					
11	SPACE					0.0	0.0	1	20	SPARE	12				
13	SPACE			0.0	0.0		1	20	SPARE	14					
15	SPACE				0.0	0.0	1	20	SPARE	16					
17	SPACE					0.0	0.0	1	20	SPARE	18				
19	SPACE			0.0	0.0					20					
21	SPACE				0.0	0.0				22					
23	SPACE					0.0	0.0			24					
25	SPACE			0.0	0.0					26					
27	SPACE				0.0	0.0				28					
29	SPACE					0.0	0.0			30					
USE THE FOLLOWING CONDUCTORS FOR PANELBOARD CIRCUITS: 20A - #12AWG				CONNECTED LOAD PHASE TOTALS (AMP)			(*) - 30mA, EGFP CIRCUIT BREAKER								
				18.7	10.9	0.9									

2 LP-CH - PANELBOARD SCHEDULE



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WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
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PANELBOARD
SCHEDULES

E-201

EXISTING PANELBOARD				LA				(LOCATED IN ELECTRICAL ROOM)			
VOLTAGE (L-N):		120V		ENCLOSURE TYPE:		NEMA 1					
VOLTAGE (L-L):		240V		MOUNTING:		SURFACE					
PHASE, WIRES:		1 ϕ , 3 W		AIC RATING (A):		14,000 AIC					
MINIMUM BUS CAPACITY (A):		200A		NOTES:							
MAIN O.C. DEVICE (A):		200A, 2P MAIN BREAKER									
CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP)				POLE	TRIP AMPS	DESCRIPTION	CKT NO
				A	B	C	D				
1	BLOWER ROOM RECEPTACLES	20	1	0.4	1.0			1	20	EXISTING LOAD	2
3	CTRL. RM/ REST RM. RECEPTACLES	20	1		1.2	1.6		1	20	EXISTING LOAD	4
5	LAB REFRIGERATOR	20	1	1.0	1.6			1	20	EXISTING LOAD	6
7	ELEC. RM & MAINT. RM LIGHTING	20	1		0.7	0.8		1	20	EXISTING LOAD	8
9	LAB/ CTRL RM/ REST RM LIGHTING	20	1	0.8	0.7			1	20	EXISTING LOAD	10
11	TURB. METER/EFFL. SAMPLER/FLOW METER	20	1		0.3	1.1		1	20	EXISTING LOAD	12
13	MAINTENANCE RECEPTACLE	20	2	0.5	0.8			1	20	EXISTING LOAD	14
15		20	1		0.5	0.9		2	20	EXISTING LOAD	16
17	HOT WATER RECIRCULATION PUMP	20	1	0.4	0.9			2	20	EXISTING LOAD	18
19	AHU-1 (1)	50	2		3.0	1.2		2	20	EXISTING LOAD	20
21		20	1	3.0	1.2			1	20	EXISTING LOAD	22
23	EF-2	20	2		0.6	0.6		2	20	EXISTING LOAD	24
25		20	1	0.6	0.6			1	20	EXISTING LOAD	26
27	WALKWAY/VLR LIGHTING	20	1		1.2	0.6		2	20	EXISTING LOAD	28
29	INFLUENT SCREEN ROOM RECEPTACLES	20	1	0.6	0.6			1	20	EXISTING LOAD	30
31	VLR CATWALK LIGHTING	20	1		0.2	0.5		2	20	EXISTING LOAD	32
33	INFLUENT SAMPLER	20	1	0.1	0.5			1	20	EXISTING LOAD	34
35	UV SOLENOID PANEL	20	1		0.2	0.8		1	20	EXISTING LOAD	36
37	REJECT/REUSE VALVES PANEL	20	1	0.2	1.8			1	20	EXISTING LOAD	38
39	PANEL "LB"	100	2		6.0	0.5		1	20	EXISTING LOAD	40
41		20	1	6.0	0.4			1	20	EXISTING LOAD	42
				CONNECTED LOAD PHASE TOTALS (AMP)							
				23.6		22.4					

1 EXISTING LA - PANELBOARD SCHEDULE

EXISTING PANELBOARD				LB				(LOCATED IN ELECTRICAL ROOM)			
VOLTAGE (L-N):		120V		ENCLOSURE TYPE:		NEMA 1					
VOLTAGE (L-L):		240V		MOUNTING:		SURFACE					
PHASE, WIRES:		1 ϕ , 3 W		AIC RATING (A):		14,000 AIC					
MINIMUM BUS CAPACITY (A):		200A		NOTES:							
MAIN O.C. DEVICE (A):		200A, 2P MAIN BREAKER									
CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP)				POLE	TRIP AMPS	DESCRIPTION	CKT NO
				A	B	C	D				
1	RECEPTACLES @ HP-1 & HP-2	20	1	0.0	0.0			1	20	INFLUENT SCREEN RM. RECEPTACLE	2
3	POLYMER FEED PUMP	20	1		0.0	0.0		1	20	EF-6	4
5	GENERATOR JACKET HEATER	30	2	0.0	0.0			1	20	HP-1	6
7		20	1		0.0	0.0		1	20		8
9	AEROBIC DIGESTER #1 DO (AIT7010)	20	1	0.5	0.0			1	20	EF-4	10
11	SLUDGE BLANKET MONITOR (AIT4201)	20	1		1.0	0.0		1	20	PLANT DRAIN P.S. REC & LIGHT	12
13	AEROBIC DIGESTER #2 DO (AIT7020)	20	1	0.5	0.0			1	20	WELL PUMP CONTROL	14
15	SCADA PANEL (LCP-1)	30	1		24.0	0.5		1	20	ORP PROBE TRANSMITTER (AIT/AE3012)	16
17	WAS FLOW TRANSMITTER (FIT-WAS)	20	1	0.5	0.5			1	20	RAS FLOW TRANSMITTER (FIT-RAS)	18
19	SPACE				1.1	0.0				SPACE	20
				CONNECTED LOAD PHASE TOTALS (AMP)							
				2.0		26.6					

2 EXISTING LB - PANELBOARD SCHEDULE

PANELBOARD				LP-2				(LOCATED IN ELECTRICAL ROOM)			
VOLTAGE (L-N):		120V		ENCLOSURE TYPE:		NEMA 1					
VOLTAGE (L-L):		208V		MOUNTING:		SURFACE					
PHASE, WIRES:		3 ϕ , 4 W		AIC RATING (A):		10,000 AIC					
MINIMUM BUS CAPACITY (A):		100A		NOTES:							
MAIN O.C. DEVICE (A):		100A, 3P MAIN BREAKER									
CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP)			POLE	TRIP AMPS	DESCRIPTION	CKT NO	
				A	B	C					
1	POLE LIGHTING	20	1	1.0	20.0		1	30	PLANT SCADA (LCP-2)	2	
3	SPARE	20	1		0.0	0.0		1	20	SPARE	4
5	SPARE	20	1			0.0	0.0	1	20	SPARE	6
7	SPARE	20	1	0.0	0.0			1	20	SPARE	8
9	SPARE	20	1		0.0	0.0		1	20	SPARE	10
11	SPARE	20	1			0.0	1.0	1	20	ELECTRICAL ROOM INTERIOR LIGHTING	12
13	SPARE	20	1	1.5	1.6			1	20	ELECTRICAL ROOM EXTERIOR LIGHTING	14
15	ELECTRICAL ROOM INTERIOR RECEPTACLES	20	1		6.0	0.5		1	20	LIGHTING CONTACTOR (LC-ER-1)	16
17		20	1			1.0	1.5	1	20	SPARE	18
19	ELECTRICAL ROOM EXTERIOR RECEPTACLES	20	1	1.5	1.0			1	20	CHEMICAL STORAGE POLE LIGHTS	20
21	GENERATOR BLOCK HEATER	20	2		10.0	1.0		1	20	SPARE	22
23		20	1			10.0	1.0	1	20	INFLUENT SAMPLER (S1100)	24
25	GENERATOR BATTERY CHARGER	20	1	5.0	1.0			1	20	BLOWERS AIR FLOW TRANSMITTER (FIT7100)	26
27	SPACE				0.0	0.0				SPACE	28
29	SPACE					0.0	0.0			SPACE	30
31	SPACE			0.0	0.0					SPACE	32
33	SPACE				0.0	0.0				SPACE	34
35	SPACE					0.0	0.0			SPACE	36
37	SPACE			0.0	0.0					SPACE	38
39	SPACE				0.0	0.0				SPACE	40
41	SPACE					0.0	0.0			SPACE	42
				CONNECTED LOAD PHASE TOTALS (AMP)							
				32.6		17.5		14.5			

3 LP-2 - PANELBOARD SCHEDULE

MINI-POWER ZONE				MPZ-HW				(LOCATED IN ELECTRICAL ROOM)			
VOLTAGE (L-N):		120V		ENCLOSURE TYPE:		NEMA 3R STAINLESS STEEL					
VOLTAGE (L-L):		208V		MOUNTING:		SURFACE					
PHASE, WIRES:		3 ϕ , 4 W		AIC RATING (A):		25,000 AIC AT 480V					
MINIMUM BUS CAPACITY (A):		100A CU		NOTES:		THE MPZ SHALL BE EQUIPPED WITH 15KVA, 480-208/120V, 3PH, 4W TRANSFORMER					
MAIN O.C. DEVICE (A):		30A, 3P MB PRIM.; 50A, 3P MB SEC.									
CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP)			POLE	TRIP AMPS	DESCRIPTION	CKT NO	
				A	B	C					
1	HEADWORKS pH SENSOR (AIT/AE-1209)	20	1	1.0	1.0		1	20	INFLUENT FLOW METER (LE/FIT1210)	2	
3	INFLUENT PS RECEPTACLE	20	1		1.5	5.0		1	20 (*)	FINE SCREEN HEAT TRACE	4
5	HEADWORKS RECEPTACLE #1	20	1			1.5	1.5	1	20	HEADWORKS RECEPTACLE #2	6
7	GRIT SYSTEM HEAT TRACE	20 (*)	1	5.0	1.0			1	20	FLOW INDICATING TRANSMITTER (FE/FIT2200)	8
9	SPARE	20	1		0.0	0.0		20	1	SPARE	10
11	SPACE					0.0	0.0			SPACE	12
13	SPACE			0.0	0.0					SPACE	14
15	SPACE				0.0	0.0				SPACE	16
17	SPACE					0.0	0.0			SPACE	18
				CONNECTED LOAD PHASE TOTALS (AMP)				(*) - 30mA, EGFPP CIRCUIT BREAKER			
				8.0		6.5		3.0			

4 MPZ-HW - PANELBOARD SCHEDULE



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ISSUE DATE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	09.03.2025

PROJECT MANAGER:	DESIGNER:	DRAWN BY:
DV	DV	DV

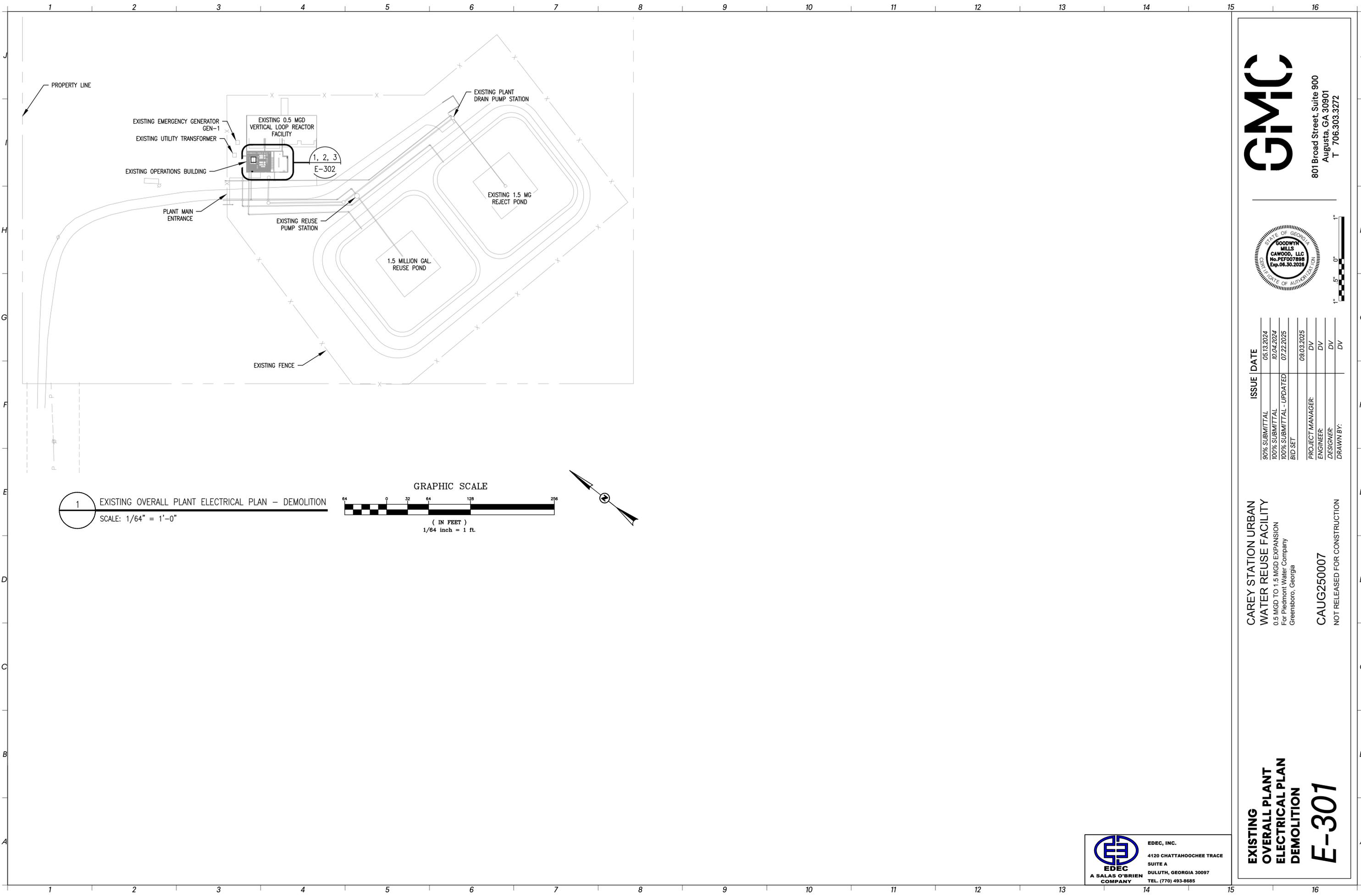
CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

CAUG250007
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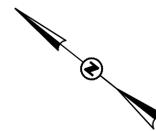
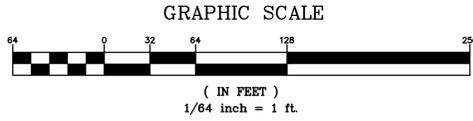


PANELBOARD SCHEDULES

E-202



1 EXISTING OVERALL PLANT ELECTRICAL PLAN - DEMOLITION
 SCALE: 1/64" = 1'-0"



GMC

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 T 706.303.3272



ISSUE	DATE
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PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
 WATER REUSE FACILITY
 0.5 MGD TO 1.5 MGD EXPANSION
 For: Piedmont Water Company
 Greensboro, Georgia

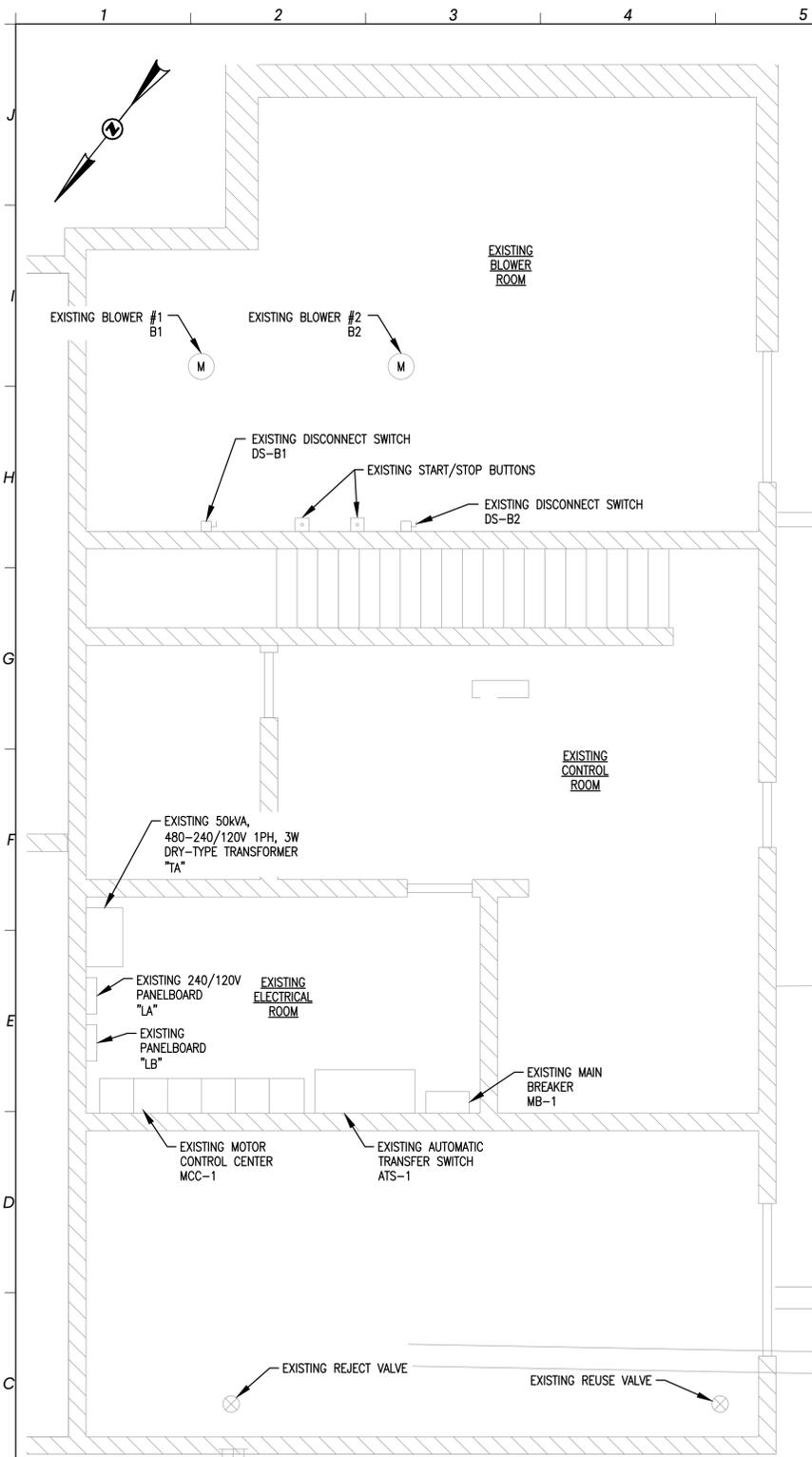
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 COMPANY

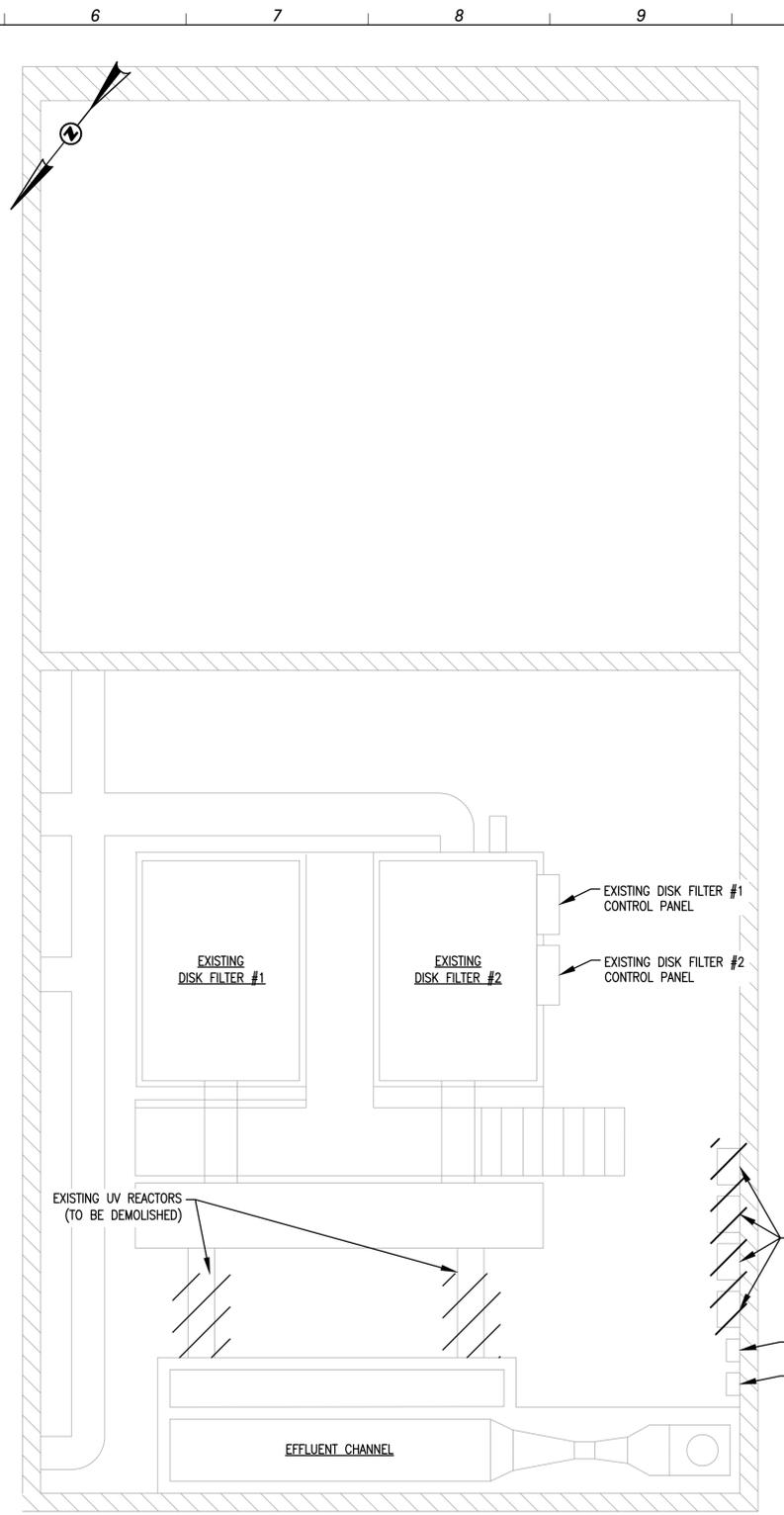
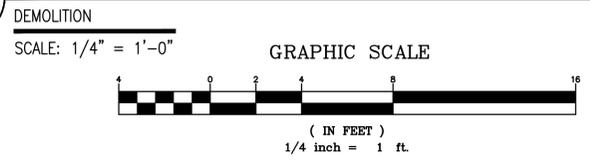
EDEC, INC.
 4120 CHATTAHOOCHEE TRACE
 SUITE A
 DULUTH, GEORGIA 30097
 TEL. (770) 493-8685

**EXISTING
 OVERALL PLANT
 ELECTRICAL PLAN
 DEMOLITION**

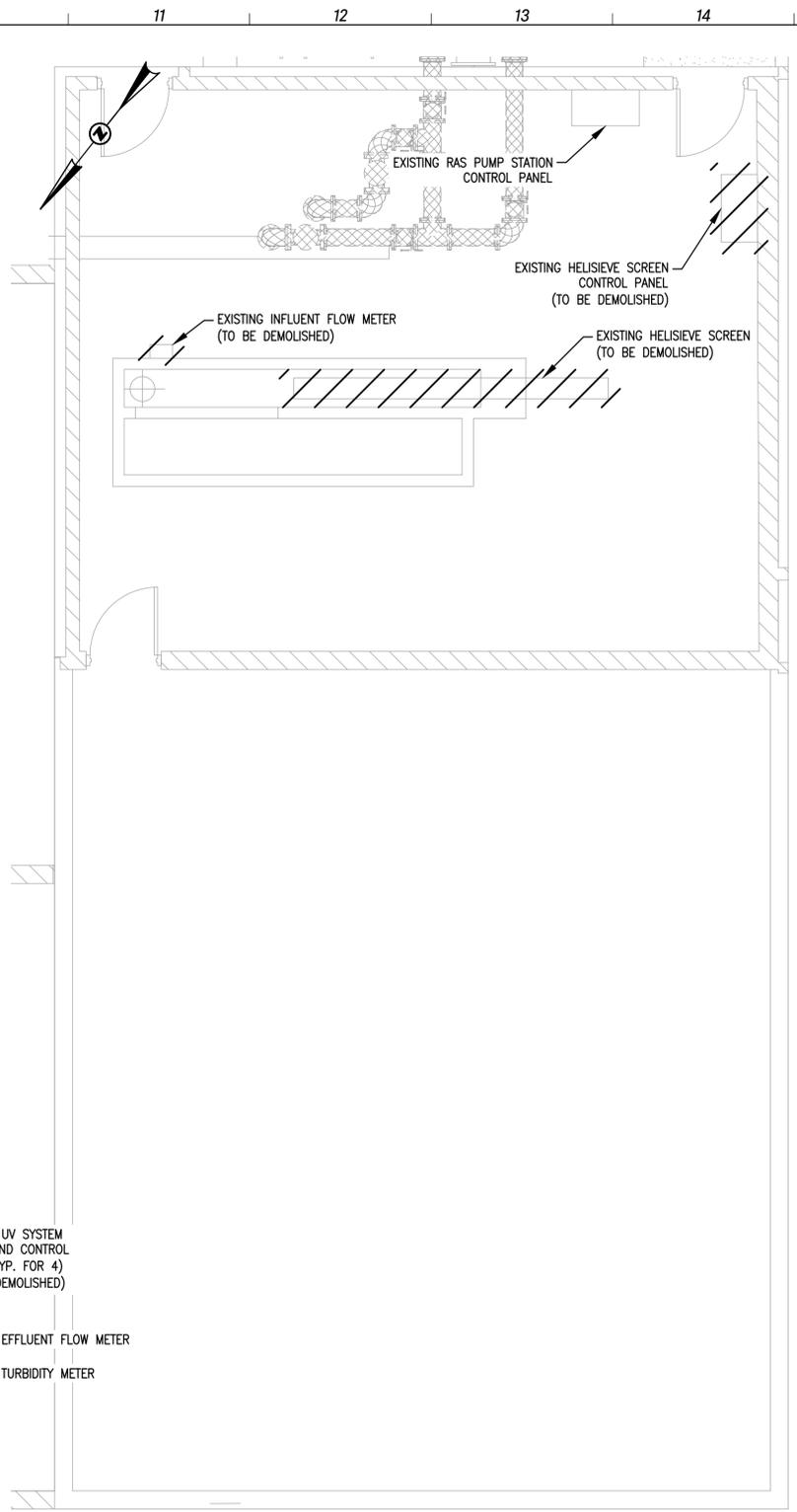
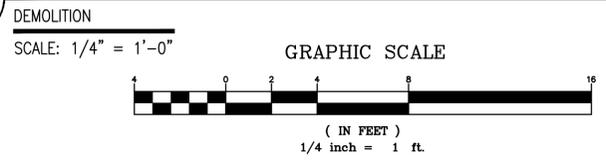
E-301



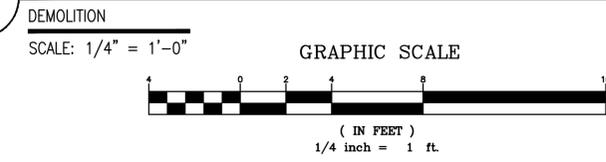
1 EXISTING OPERATIONS BUILDING ELECTRICAL PLAN (1-ST FLOOR) - EL. 0.00



2 EXISTING OPERATIONS BUILDING ELECTRICAL PLAN (2-ND FLOOR) - EL. 10.17



3 EXISTING OPERATIONS BUILDING ELECTRICAL PLAN (3-RD FLOOR) - EL. 23.00



NOTES:

1. THE CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING EQUIPMENT AS SHOWN. COORDINATE DISPOSAL OR STORAGE OF THE DEMOLISHED EQUIPMENT WITH THE OWNER. REFER TO MECHANICAL AND CIVIL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING THE REQUIRED DEMOLITION SCOPE.

LEGEND:

--- EQUIPMENT TO BE DEMOLISHED

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100% SUBMITTAL - UPDATED 07.22.2025	DESIGNER: DV
BID SET 09.03.2025	DRAWN BY: DV

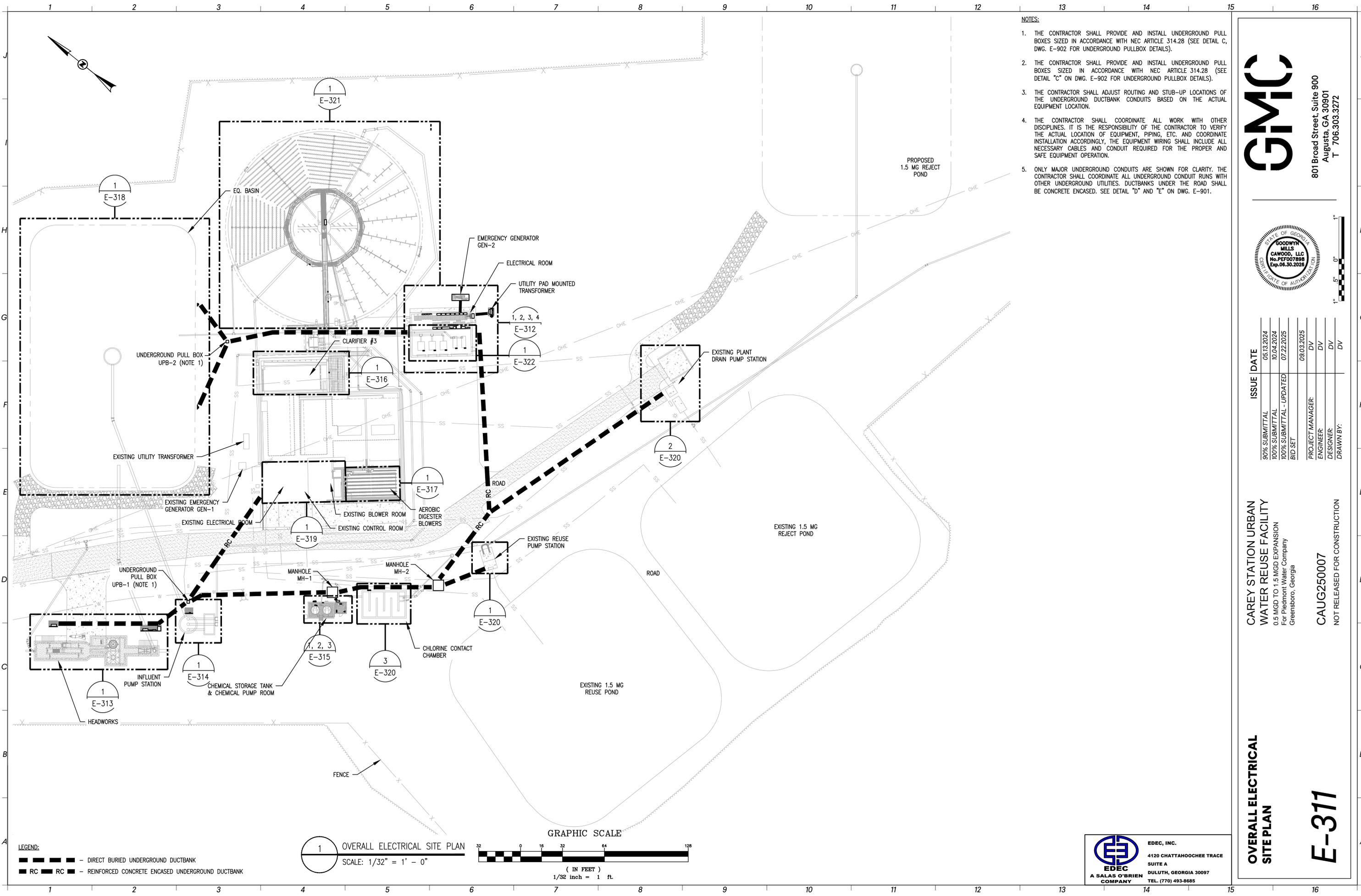
CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

CAUG250007
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EXISTING
OPERATIONS BLDG
ELECTRICAL PLAN
DEMOLITION

E-302





- NOTES:**
1. THE CONTRACTOR SHALL PROVIDE AND INSTALL UNDERGROUND PULL BOXES SIZED IN ACCORDANCE WITH NEC ARTICLE 314.28 (SEE DETAIL C, DWG. E-902 FOR UNDERGROUND PULLBOX DETAILS).
 2. THE CONTRACTOR SHALL PROVIDE AND INSTALL UNDERGROUND PULL BOXES SIZED IN ACCORDANCE WITH NEC ARTICLE 314.28 (SEE DETAIL "C" ON DWG. E-902 FOR UNDERGROUND PULLBOX DETAILS).
 3. THE CONTRACTOR SHALL ADJUST ROUTING AND STUB-UP LOCATIONS OF THE UNDERGROUND DUCTBANK CONDUITS BASED ON THE ACTUAL EQUIPMENT LOCATION.
 4. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER DISCIPLINES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACTUAL LOCATION OF EQUIPMENT, PIPING, ETC. AND COORDINATE INSTALLATION ACCORDINGLY, THE EQUIPMENT WIRING SHALL INCLUDE ALL NECESSARY CABLES AND CONDUIT REQUIRED FOR THE PROPER AND SAFE EQUIPMENT OPERATION.
 5. ONLY MAJOR UNDERGROUND CONDUITS ARE SHOWN FOR CLARITY. THE CONTRACTOR SHALL COORDINATE ALL UNDERGROUND CONDUIT RUNS WITH OTHER UNDERGROUND UTILITIES. DUCTBANKS UNDER THE ROAD SHALL BE CONCRETE ENCASED. SEE DETAIL "D" AND "E" ON DWG. E-901.

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100% SUBMITTAL - UPDATED	07.22.2025
BID SET	09.03.2025

PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

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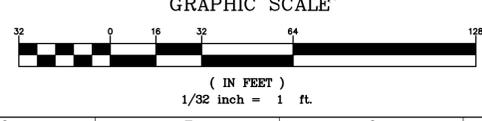
OVERALL ELECTRICAL
SITE PLAN

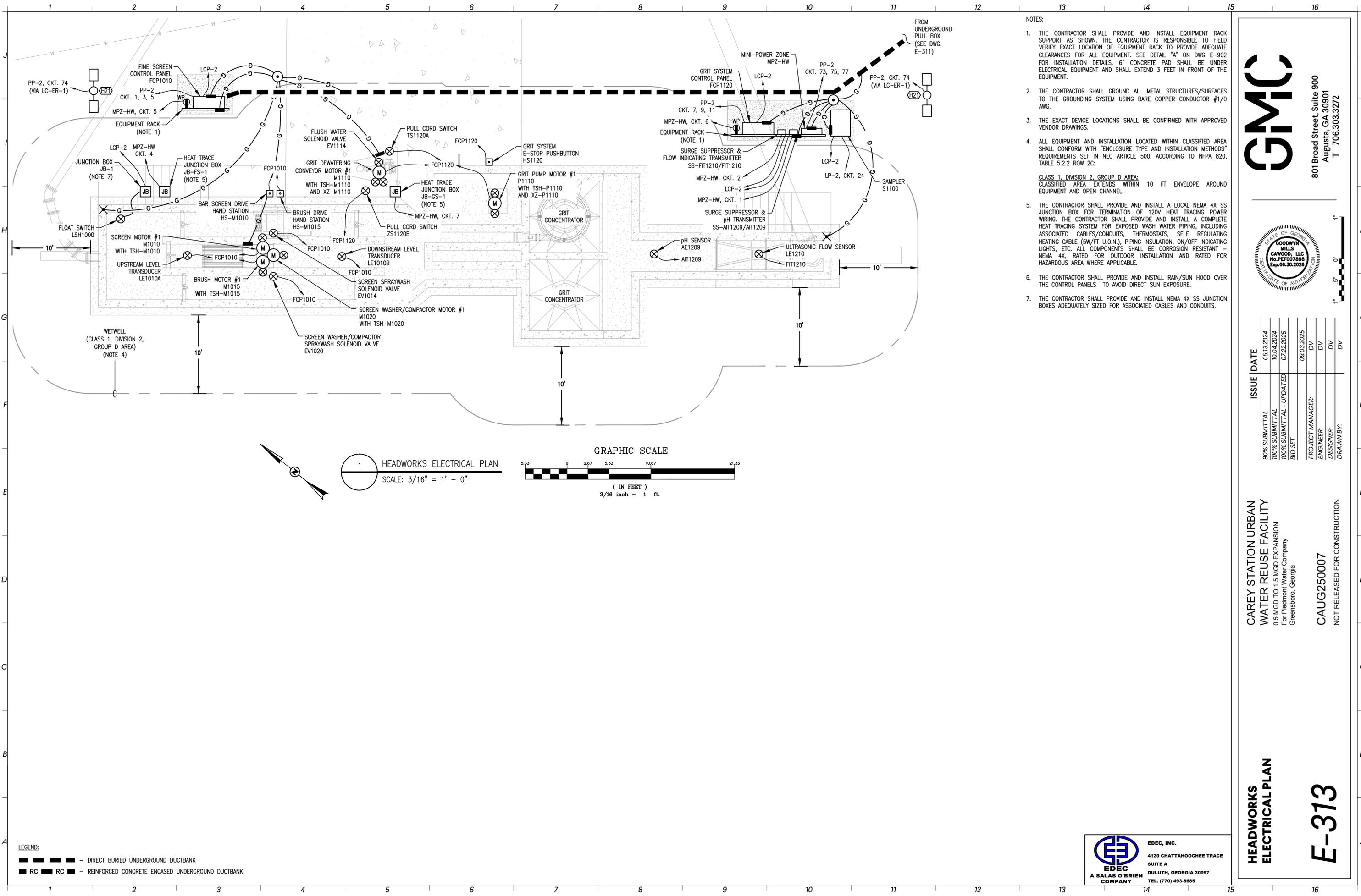
E-311

EDEC
A SALAS O'BRIEN COMPANY
4120 CHATTAHOOCHEE TRACE
SUITE A
DULUTH, GEORGIA 30097
TEL. (770) 493-8685

LEGEND:
 - DIRECT BURIED UNDERGROUND DUCTBANK
 - RC - REINFORCED CONCRETE ENCASED UNDERGROUND DUCTBANK

1 OVERALL ELECTRICAL SITE PLAN
SCALE: 1/32" = 1' - 0"





- NOTES:**
1. THE CONTRACTOR SHALL PROVIDE AND INSTALL EQUIPMENT RACK SUPPORT AS SHOWN. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY EXACT LOCATION OF EQUIPMENT RACK TO PROVIDE ADEQUATE CLEARANCES FOR ALL EQUIPMENT. SEE DETAIL "A" ON DWG. E-902 FOR INSTALLATION DETAILS. 6" CONCRETE PAD SHALL BE UNDER ELECTRICAL EQUIPMENT AND SHALL EXTEND 3 FEET IN FRONT OF THE EQUIPMENT.
 2. THE CONTRACTOR SHALL GROUND ALL METAL STRUCTURES/SURFACES TO THE GROUNDING SYSTEM USING BARE COPPER CONDUCTOR #1/0 AWG.
 3. THE EXACT DEVICE LOCATIONS SHALL BE CONFIRMED WITH APPROVED VENDOR DRAWINGS.
 4. ALL EQUIPMENT AND INSTALLATION LOCATED WITHIN CLASSIFIED AREA SHALL CONFORM WITH "ENCLOSURE TYPE AND INSTALLATION METHODS" REQUIREMENTS SET IN NEC ARTICLE 500. ACCORDING TO NFPA 820, TABLE 5.2.2 ROW 2C:

CLASS 1, DIVISION 2, GROUP D AREA:
CLASSIFIED AREA EXTENDS WITHIN 10 FT ENVELOPE AROUND EQUIPMENT AND OPEN CHANNEL.
 5. THE CONTRACTOR SHALL PROVIDE AND INSTALL A LOCAL NEMA 4X SS JUNCTION BOX FOR TERMINATION OF 120V HEAT TRACING POWER WIRING. THE CONTRACTOR SHALL PROVIDE AND INSTALL A COMPLETE HEAT TRACING SYSTEM FOR EXPOSED WASH WATER PIPING, INCLUDING ASSOCIATED CABLES/CONDUITS, THERMOSTATS, SELF REGULATING HEATING CABLE (5W/FT U.O.N.), PIPING INSULATION, ON/OFF INDICATING LIGHTS, ETC. ALL COMPONENTS SHALL BE CORROSION RESISTANT - NEMA 4X, RATED FOR OUTDOOR INSTALLATION AND RATED FOR HAZARDOUS AREA WHERE APPLICABLE.
 6. THE CONTRACTOR SHALL PROVIDE AND INSTALL RAIN/SUN HOOD OVER THE CONTROL PANELS TO AVOID DIRECT SUN EXPOSURE.
 7. THE CONTRACTOR SHALL PROVIDE AND INSTALL NEMA 4X SS JUNCTION BOXES ADEQUATELY SIZED FOR ASSOCIATED CABLES AND CONDUITS.

GMC

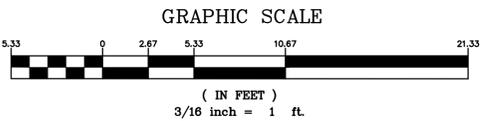
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PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

1 HEADWORKS ELECTRICAL PLAN
SCALE: 3/16" = 1' - 0"



LEGEND:
 - DIRECT BURIED UNDERGROUND DUCTBANK
 - RC - REINFORCED CONCRETE ENCASED UNDERGROUND DUCTBANK

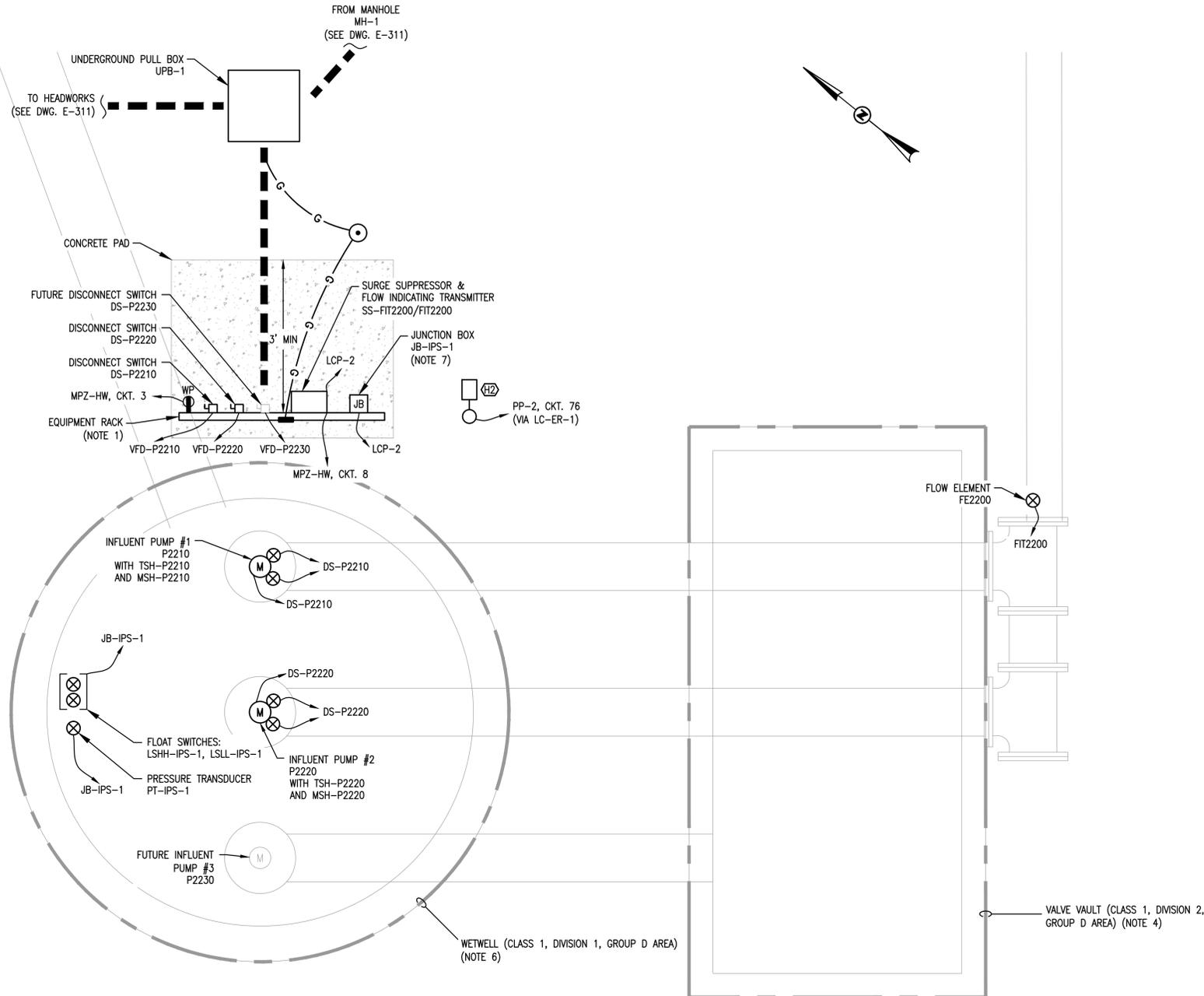
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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

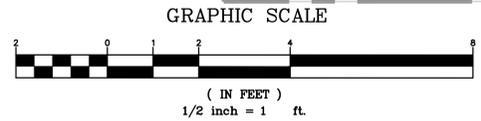
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**HEADWORKS
ELECTRICAL PLAN**

E-313



1 INFLUENT PUMP STATION ELECTRICAL PLAN
SCALE: 1/2" = 1' - 0"



- NOTES:**
1. THE CONTRACTOR SHALL PROVIDE AND INSTALL EQUIPMENT RACK SUPPORT AS SHOWN. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY EXACT LOCATION OF EQUIPMENT RACK TO PROVIDE ADEQUATE CLEARANCES FOR ALL EQUIPMENT. SEE DETAIL "A" ON DWG. E-902 FOR INSTALLATION DETAILS. 6" CONCRETE PAD SHALL BE UNDER ELECTRICAL EQUIPMENT AND SHALL EXTEND 3 FEET IN FRONT OF THE EQUIPMENT.
 2. THE CONTRACTOR SHALL GROUND ALL METAL STRUCTURES/SURFACES TO THE GROUNDING SYSTEM.
 3. THE EXACT DEVICE LOCATIONS SHALL BE CONFIRMED WITH APPROVED VENDOR DRAWINGS.
 4. ALL EQUIPMENT AND INSTALLATION LOCATED WITHIN CLASSIFIED AREA SHALL CONFORM WITH "ENCLOSURE TYPE AND INSTALLATION METHODS" REQUIREMENTS SET IN NEC ARTICLE 500. ACCORDING TO NFPA 820, TABLE 4.2.2 ROW 31A.
CLASS 1, DIVISION 2, GROUP D AREA:
CLASSIFIED AREA EXTENDS WITHIN ENTIRE VALVE VAULT SPACE.
 5. THE CONTRACTOR SHALL USE BARE COPPER CONDUCTOR 1/0 AWG TO MAKE CONNECTIONS TO THE PLANT GROUNDING SYSTEM.
 6. ALL EQUIPMENT AND INSTALLATION LOCATED WITHIN CLASSIFIED AREA SHALL CONFORM WITH "ENCLOSURE TYPE AND INSTALLATION METHODS" REQUIREMENTS SET IN NEC ARTICLE 500. ACCORDING TO NFPA 820, TABLE 4.2.2 ROW 16B.
CLASS 1, DIVISION 1, GROUP D AREA:
CLASSIFIED AREA EXTENDS WITHIN ENTIRE WETWELL SPACE.
 7. THE CONTRACTOR SHALL PROVIDE AND INSTALL NEMA 4X SS JUNCTION BOXES ADEQUATELY SIZED FOR ASSOCIATED CABLES AND CONDUITS.



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PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

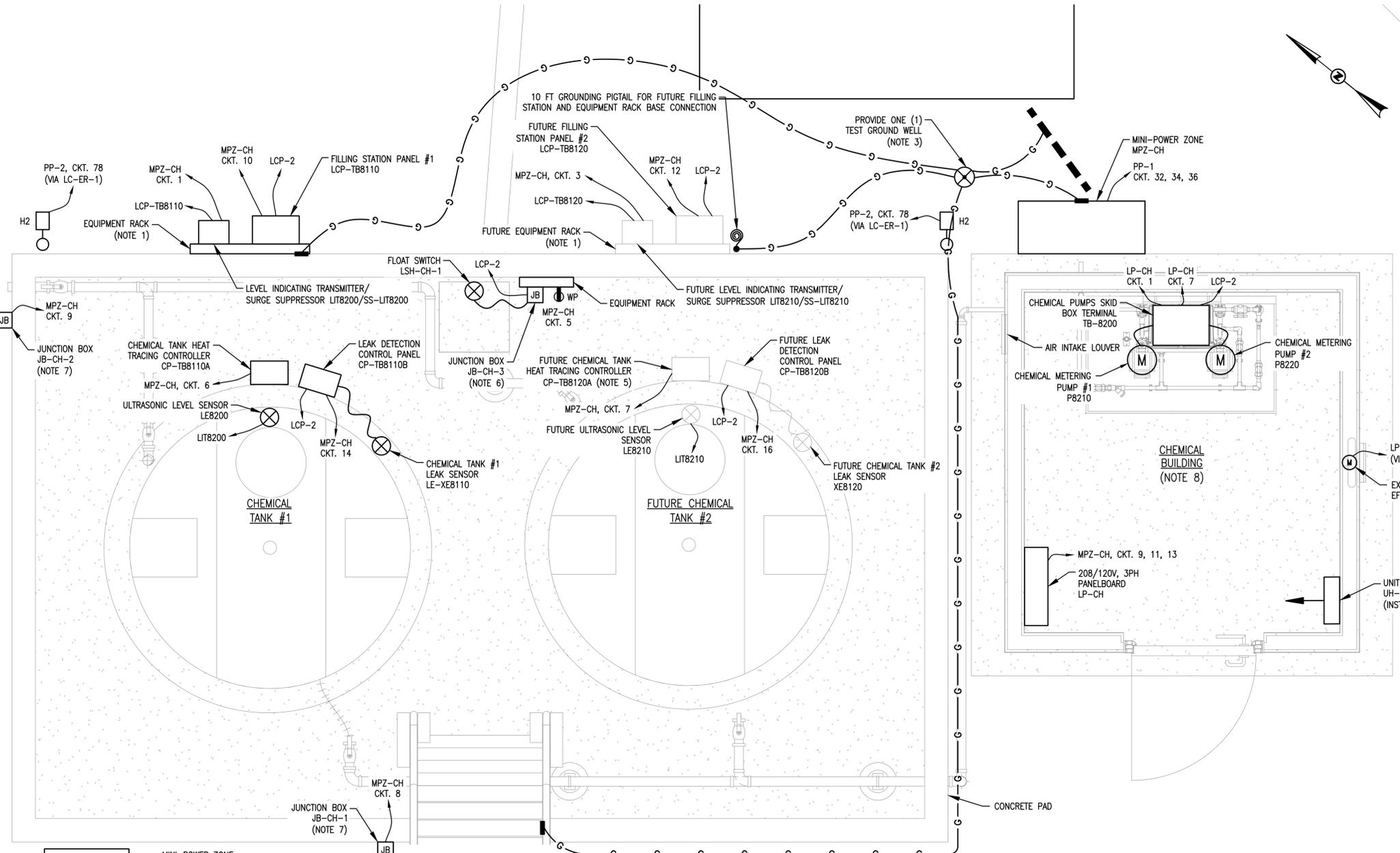
CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

CAUG250007
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**INFLUENT PUMP
STATION
ELECTRICAL PLAN**

E-314

EDEC, INC.
4120 CHATTAHOOCHEE TRACE
SUITE A
DULUTH, GEORGIA 30097
TEL. (770) 493-8685



- NOTES:**
1. THE CONTRACTOR SHALL PROVIDE AND INSTALL EQUIPMENT RACK SUPPORT AS SHOWN. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY EXACT LOCATION OF EQUIPMENT RACK TO PROVIDE ADEQUATE CLEARANCES FOR ALL EQUIPMENT. SEE DETAIL "A" ON DWG. E-902 FOR INSTALLATION DETAILS. 6" CONCRETE PAD SHALL BE UNDER ELECTRICAL EQUIPMENT AND SHALL EXTEND 3 FEET IN FRONT OF THE EQUIPMENT.
 2. THE CONTRACTOR SHALL PROVIDE THE REQUIRED STUB-UPS FOR FUTURE EQUIPMENT CONNECTIONS.
 3. THE CONTRACTOR SHALL PROVIDE AND INSTALL #1/0 BARE COPPER GROUND WIRE TO CONNECT EQUIPMENT TO THE CLOSEST POINT OF PLANT EXISTING GROUND GRID. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING GROUND GRID IN THE FIELD.
 4. THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND DISTANCES IN THE FIELD BASED ON THE ACTUAL PURCHASED EQUIPMENT. ADJUST INSTALLATION ACCORDINGLY TO MEET NEG WORKING SPACE REQUIREMENTS.
 5. INCLUDE SPARE CONDUITS FOR FUTURE INSTALLATION.
 6. THE CONTRACTOR SHALL PROVIDE AND INSTALL NEMA 4X SS JUNCTION BOXES ADEQUATELY SIZED FOR ASSOCIATED CABLES AND CONDUITS.
 7. THE CONTRACTOR SHALL PROVIDE AND INSTALL A LOCAL NEMA 4X SS JUNCTION BOX FOR TERMINATION OF 120V HEAT TRACING POWER WIRING. THE CONTRACTOR SHALL PROVIDE AND INSTALL A COMPLETE HEAT TRACING SYSTEM FOR EXPOSED CHEMICAL PIPING, INCLUDING ASSOCIATED CABLES/CONDUITS, THERMOSTATS, SELF REGULATING HEATING CABLE (5W/FT U.O.N.), PIPING INSULATION, ON/OFF INDICATING LIGHTS, ETC. ALL COMPONENTS SHALL BE CORROSION RESISTANT - NEMA 4X, RATED FOR OUTDOOR INSTALLATION AND RATED FOR HAZARDOUS AREA WHERE APPLICABLE.
 8. ALL ELECTRICAL EQUIPMENT SUPPLIED WITH THE PRE-FAB CHEMICAL BUILDING SHALL BE PROVIDED PRE-WIRED TO A LOCAL LOW VOLTAGE PANELBOARD.



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ISSUE DATE	DATE
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BID SET	09.03.2025

PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

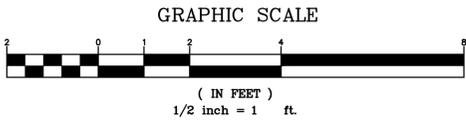
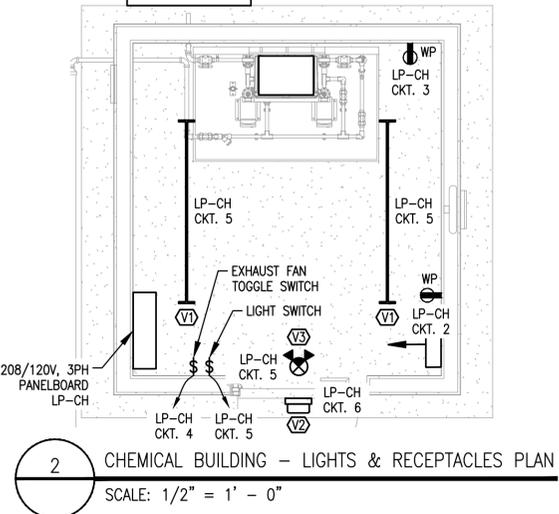
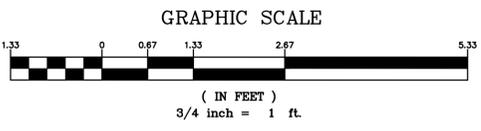
CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

CAUG250007
NOT RELEASED FOR CONSTRUCTION

CHEMICAL STORAGE AREA ELECTRICAL PLAN

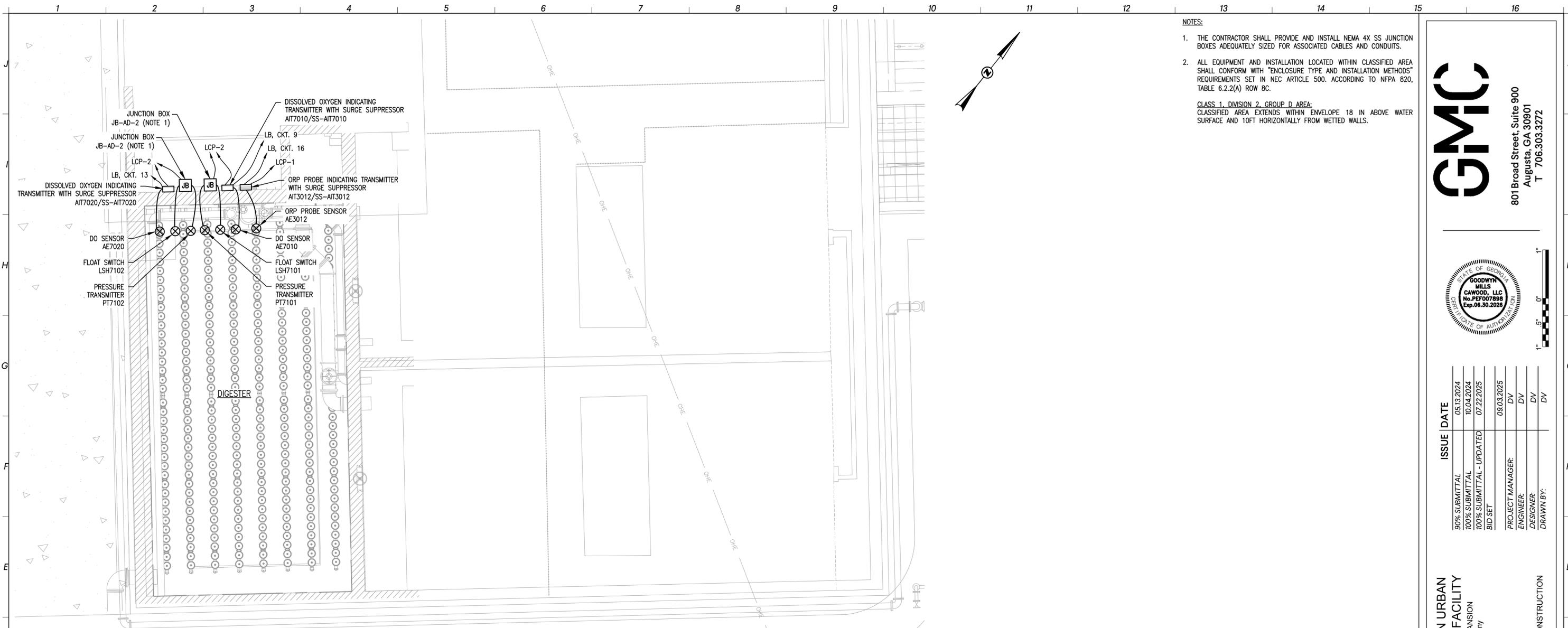
E-315

1 CHEMICAL STORAGE AREA ELECTRICAL PLAN
SCALE: 3/4" = 1' - 0"



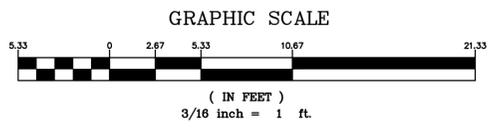
- LEGEND:**
- DIRECT BURIED UNDERGROUND DUCTBANK
 - RC — REINFORCED CONCRETE ENCASED UNDERGROUND DUCTBANK

EDEC, INC.
4120 CHATTAHOOCHEE TRACE
SUITE A
DULUTH, GEORGIA 30097
TEL. (770) 493-8685



- NOTES:**
1. THE CONTRACTOR SHALL PROVIDE AND INSTALL NEMA 4X SS JUNCTION BOXES ADEQUATELY SIZED FOR ASSOCIATED CABLES AND CONDUITS.
 2. ALL EQUIPMENT AND INSTALLATION LOCATED WITHIN CLASSIFIED AREA SHALL CONFORM WITH "ENCLOSURE TYPE AND INSTALLATION METHODS" REQUIREMENTS SET IN NEC ARTICLE 500, ACCORDING TO NFPA 820, TABLE 6.2.2(A) ROW 8C.
- CLASS 1, DIVISION 2, GROUP D AREA:**
 CLASSIFIED AREA EXTENDS WITHIN ENVELOPE 18 IN ABOVE WATER SURFACE AND 10FT HORIZONTALLY FROM WETTED WALLS.

1 AEROBIC DIGESTERS AND BLOWERS ELECTRICAL PLAN
 SCALE: 3/16" = 1' - 0"



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PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
 WATER REUSE FACILITY
 0.5 MGD TO 1.5 MGD EXPANSION
 For Piedmont Water Company
 Greensboro, Georgia

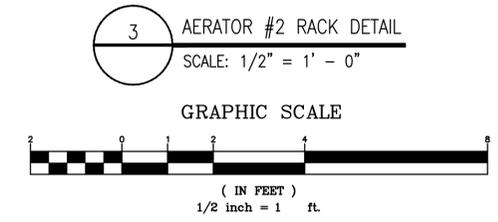
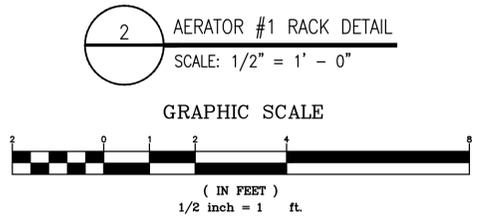
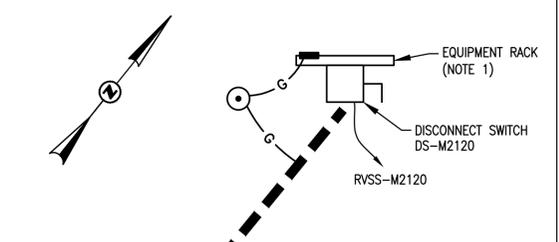
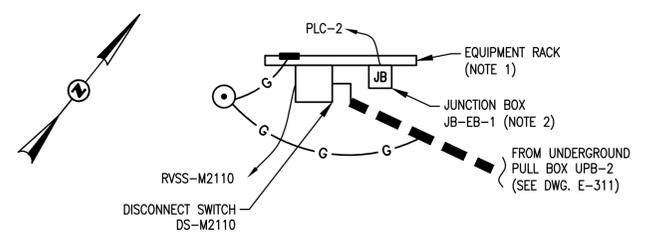
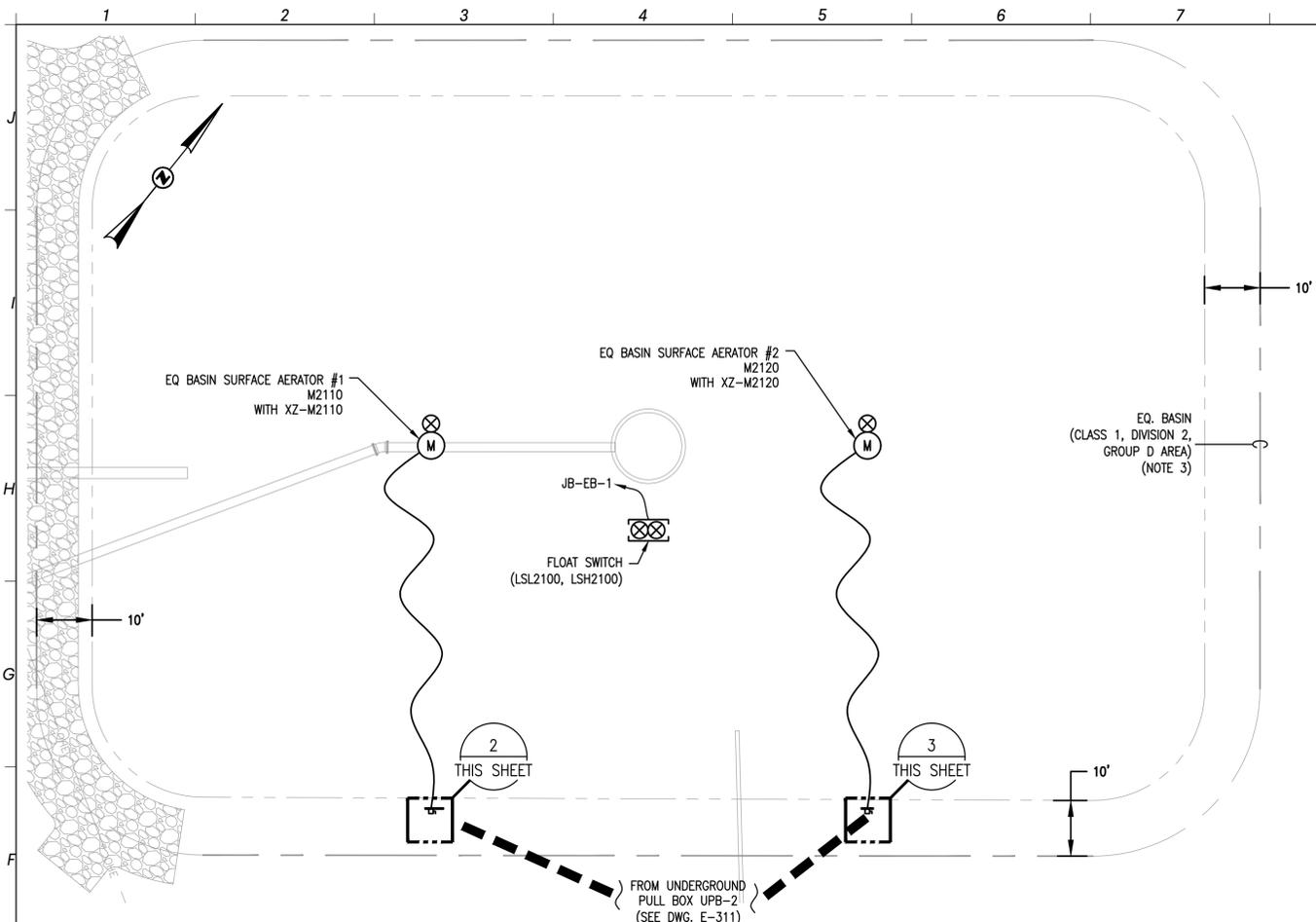
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**AEROBIC DIGESTER
 BLOWERS
 ELECTRICAL PLAN**

E-317



- NOTES:**
1. THE CONTRACTOR SHALL PROVIDE AND INSTALL EQUIPMENT RACK SUPPORT AS SHOWN. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY EXACT LOCATION OF EQUIPMENT RACK TO PROVIDE ADEQUATE CLEARANCES FOR ALL EQUIPMENT. SEE DETAIL "A" ON DWG. E-902 FOR INSTALLATION DETAILS. 6" CONCRETE PAD SHALL BE UNDER ELECTRICAL EQUIPMENT AND SHALL EXTEND 3 FEET IN FRONT OF THE EQUIPMENT.
 2. THE CONTRACTOR SHALL PROVIDE AND INSTALL NEMA 4X SS JUNCTION BOXES ADEQUATELY SIZED FOR ASSOCIATED CABLES AND CONDUITS.
 3. ALL EQUIPMENT AND INSTALLATION LOCATED WITHIN CLASSIFIED AREA SHALL CONFORM WITH "ENCLOSURE TYPE AND INSTALLATION METHODS" REQUIREMENTS SET IN NEC ARTICLE 500. ACCORDING TO NFPA 820, TABLE 5.2.2 ROW 4C.
- CLASS 1, DIVISION 2, GROUP D AREA:**
CLASSIFIED AREA EXTENDS WITHIN A 10FT ENVELOPE AROUND EQUIPMENT AND OPEN CHANNED.

- LEGEND:**
- DIRECT BURIED UNDERGROUND DUCTBANK
 - RC — REINFORCED CONCRETE ENCASED UNDERGROUND DUCTBANK

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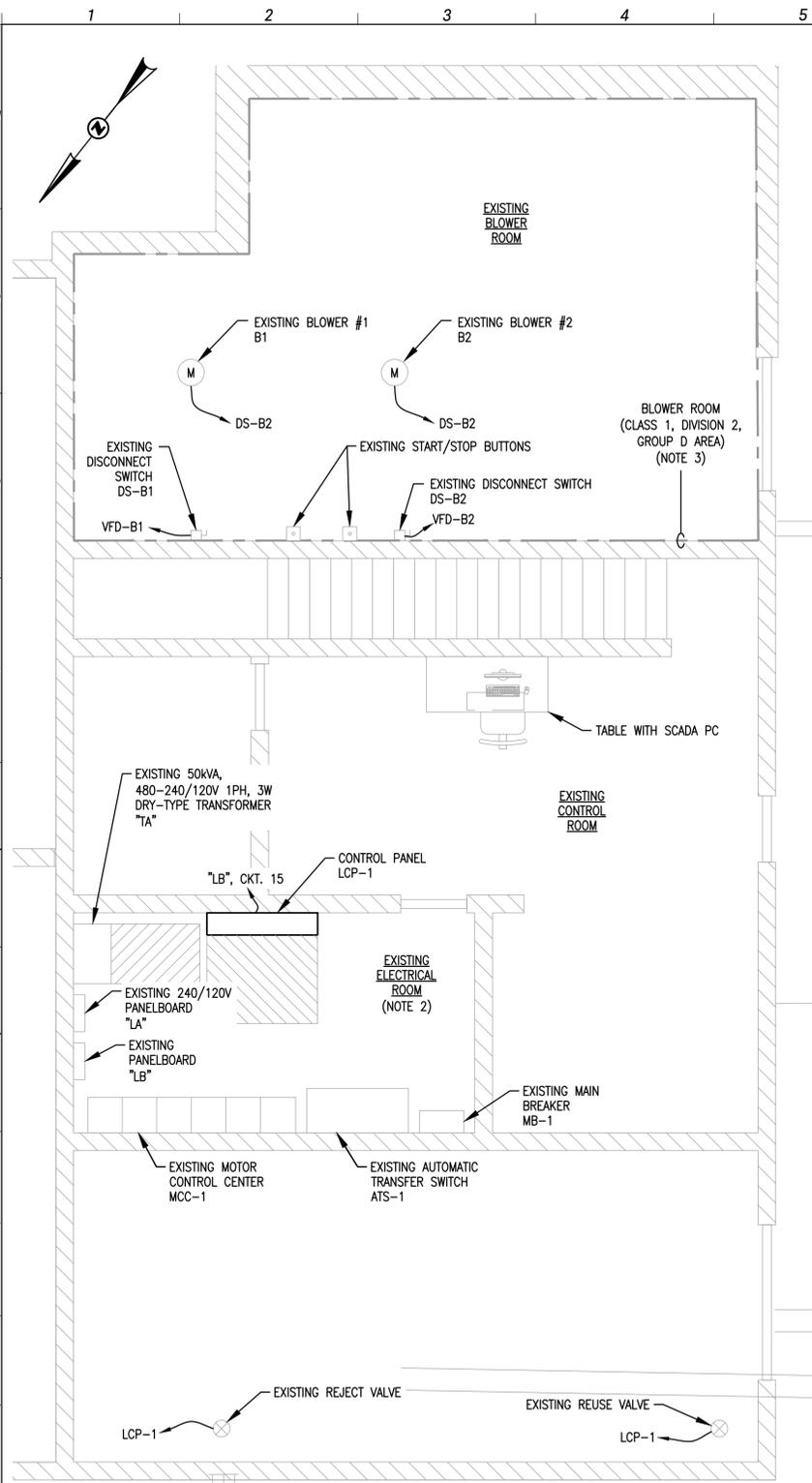
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

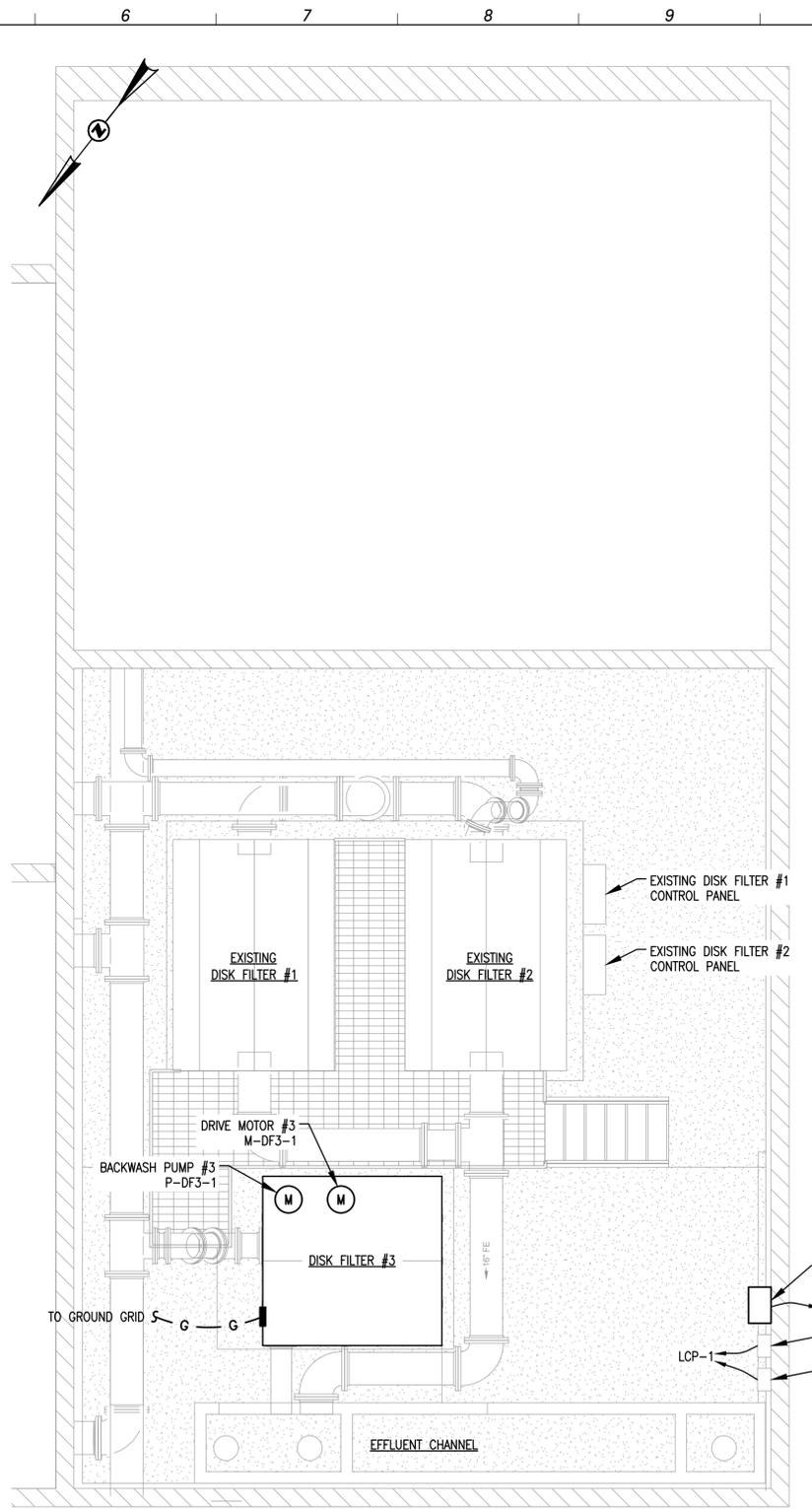
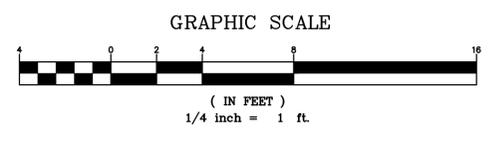
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**EQ. BASIN
ELECTRICAL PLAN**

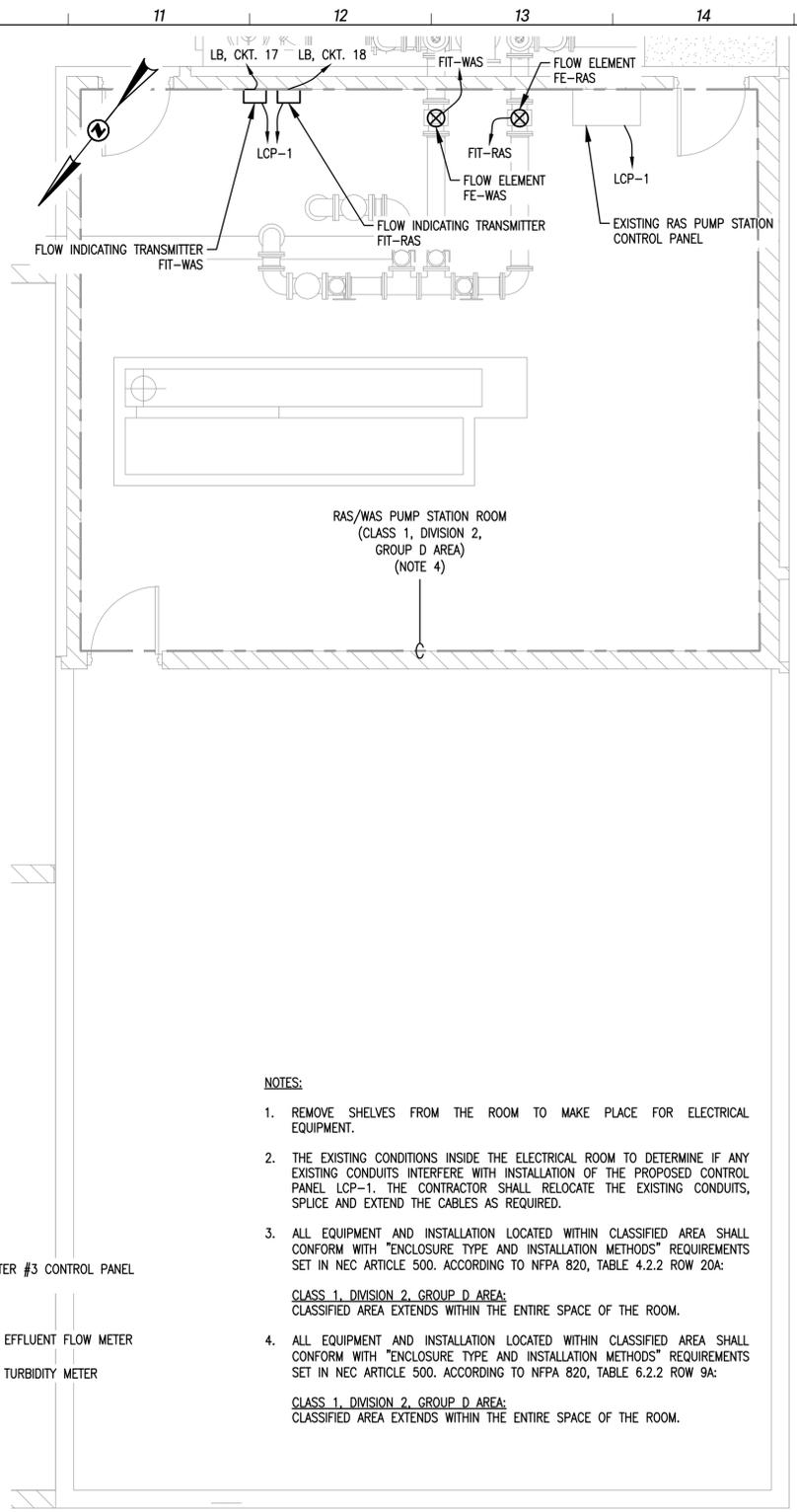
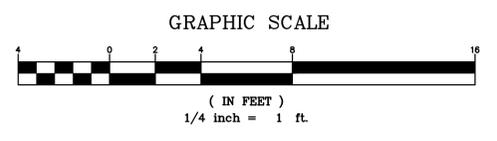
E-318



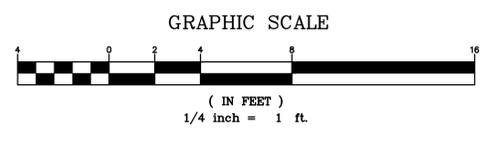
1 EXISTING OPERATIONS BUILDING ELECTRICAL PLAN (1-ST FLOOR) - EL. 0.00
SCALE: 1/4" = 1'-0"



2 EXISTING OPERATIONS BUILDING ELECTRICAL PLAN (2-ND FLOOR) - EL. 10.17
SCALE: 1/4" = 1'-0"



3 EXISTING OPERATIONS BUILDING ELECTRICAL PLAN (3-RD FLOOR) - EL. 23.00
SCALE: 1/4" = 1'-0"



- NOTES:**
- REMOVE SHELVES FROM THE ROOM TO MAKE PLACE FOR ELECTRICAL EQUIPMENT.
 - THE EXISTING CONDITIONS INSIDE THE ELECTRICAL ROOM TO DETERMINE IF ANY EXISTING CONDUITS INTERFERE WITH INSTALLATION OF THE PROPOSED CONTROL PANEL LCP-1. THE CONTRACTOR SHALL RELOCATE THE EXISTING CONDUITS, SPLICE AND EXTEND THE CABLES AS REQUIRED.
 - ALL EQUIPMENT AND INSTALLATION LOCATED WITHIN CLASSIFIED AREA SHALL CONFORM WITH "ENCLOSURE TYPE AND INSTALLATION METHODS" REQUIREMENTS SET IN NEC ARTICLE 500. ACCORDING TO NFPA 820, TABLE 4.2.2 ROW 20A:
CLASS 1, DIVISION 2, GROUP D AREA:
CLASSIFIED AREA EXTENDS WITHIN THE ENTIRE SPACE OF THE ROOM.
 - ALL EQUIPMENT AND INSTALLATION LOCATED WITHIN CLASSIFIED AREA SHALL CONFORM WITH "ENCLOSURE TYPE AND INSTALLATION METHODS" REQUIREMENTS SET IN NEC ARTICLE 500. ACCORDING TO NFPA 820, TABLE 6.2.2 ROW 9A:
CLASS 1, DIVISION 2, GROUP D AREA:
CLASSIFIED AREA EXTENDS WITHIN THE ENTIRE SPACE OF THE ROOM.

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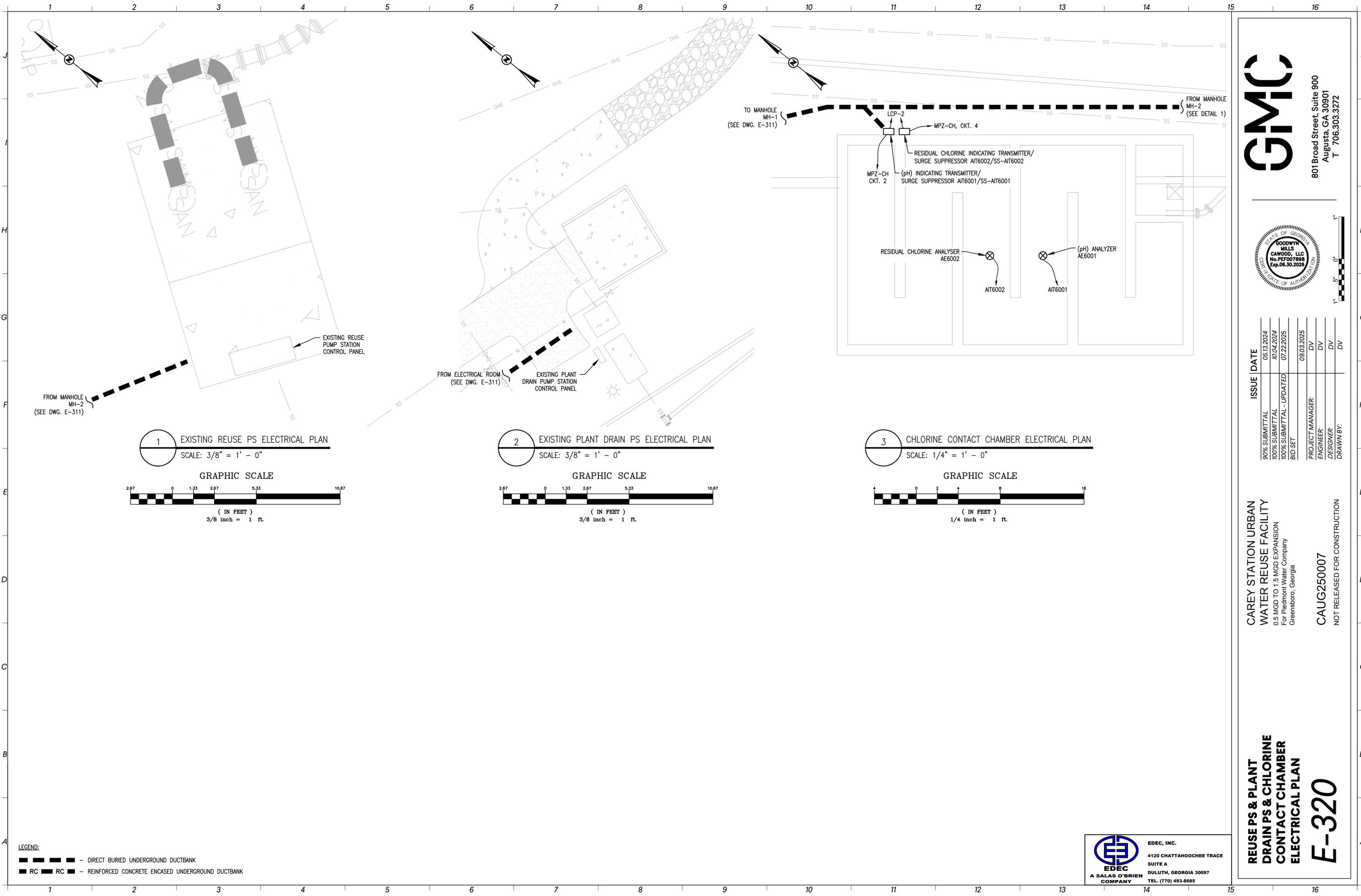
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

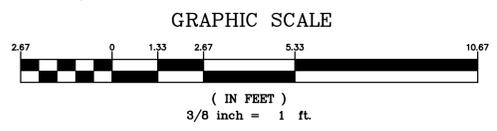
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EXISTING
OPERATIONS
BUILDING
ELECTRICAL PLAN
E-319

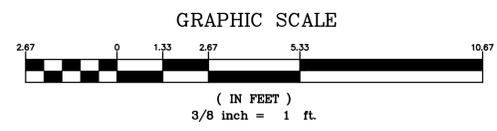




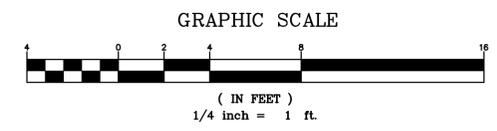
1 EXISTING REUSE PS ELECTRICAL PLAN
SCALE: 3/8" = 1' - 0"



2 EXISTING PLANT DRAIN PS ELECTRICAL PLAN
SCALE: 3/8" = 1' - 0"



3 CHLORINE CONTACT CHAMBER ELECTRICAL PLAN
SCALE: 1/4" = 1' - 0"



LEGEND:
 ■■■■■ DIRECT BURIED UNDERGROUND DUCTBANK
 ■■■■■ RC ■■■■■ REINFORCED CONCRETE ENCASED UNDERGROUND DUCTBANK

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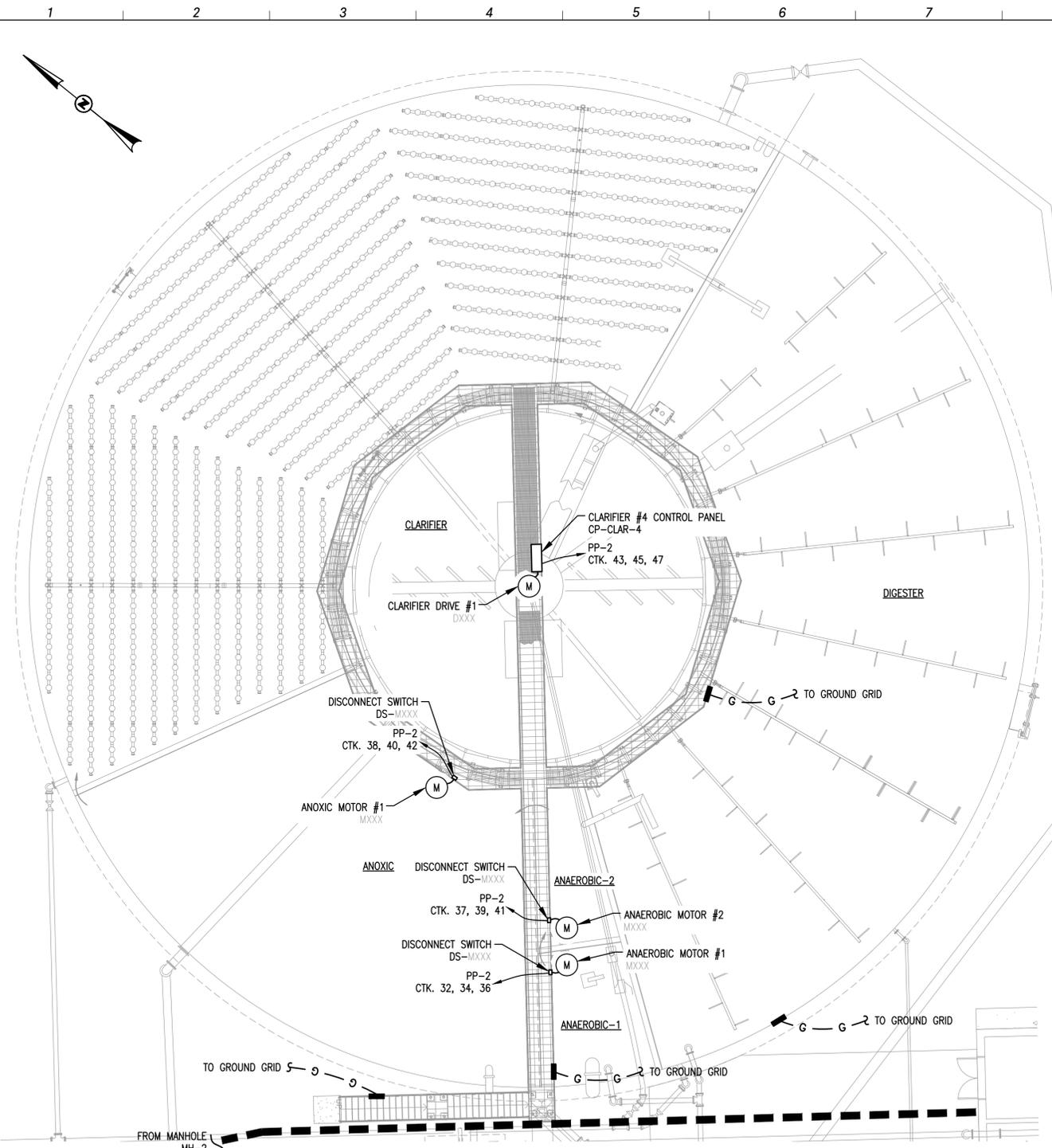
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
 WATER REUSE FACILITY
 0.5 MGD TO 1.5 MGD EXPANSION
 For Piedmont Water Company
 Greensboro, Georgia

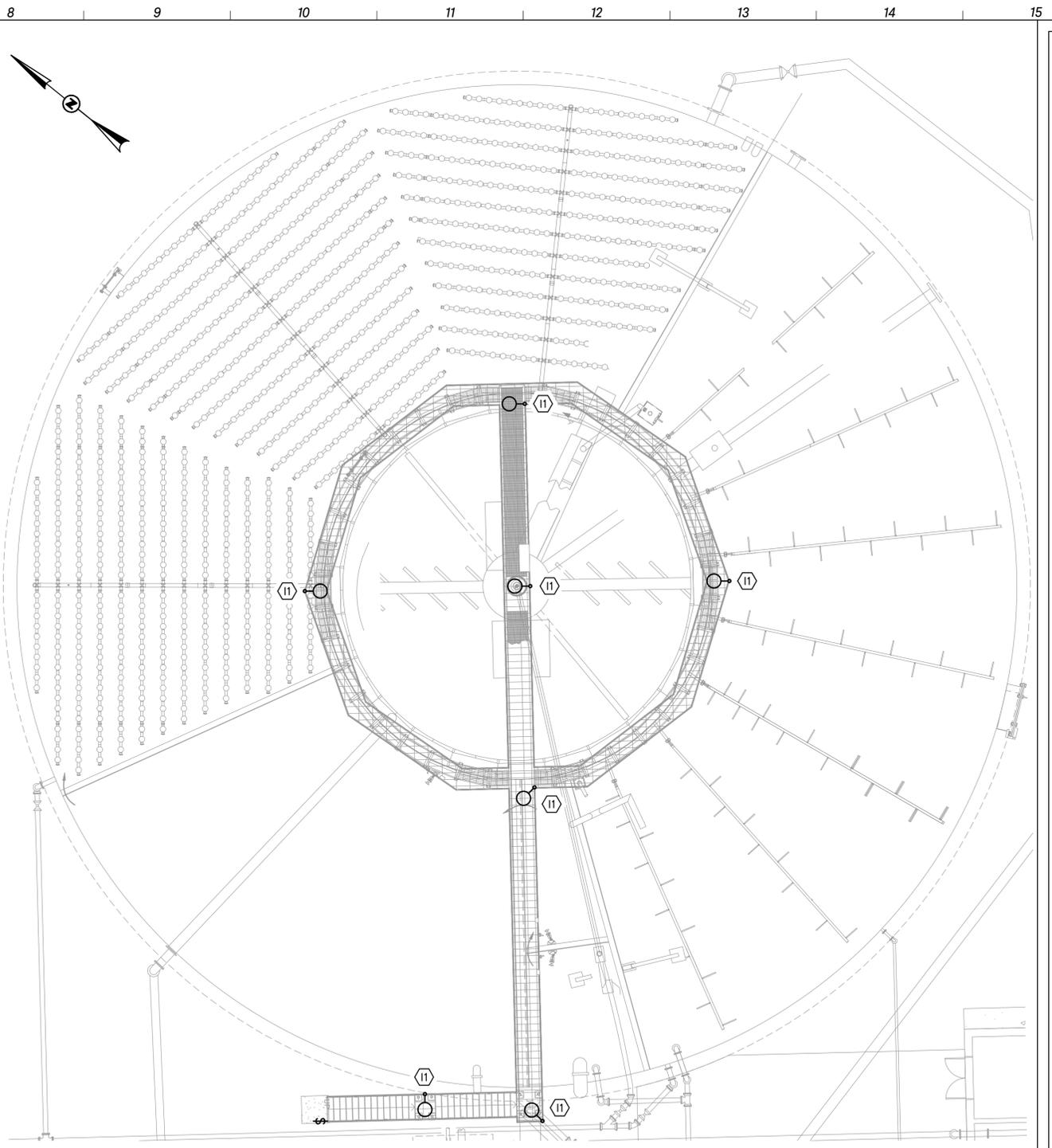
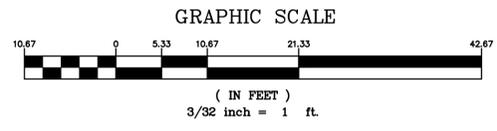
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REUSE PS & PLANT
 DRAIN PS & CHLORINE
 CONTACT CHAMBER
 ELECTRICAL PLAN

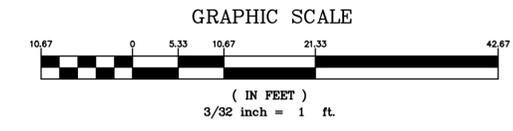
E-320



1 CLARIFIER ELECTRICAL PLAN
SCALE: 3/32" = 1' - 0"



2 CLARIFIER LIGHTING PLAN
SCALE: 3/32" = 1' - 0"



LEGEND:
 DIRECT BURIED UNDERGROUND DUCTBANK
 REINFORCED CONCRETE ENCASED UNDERGROUND DUCTBANK

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CLARIFIER
AND LIGHTING PLAN

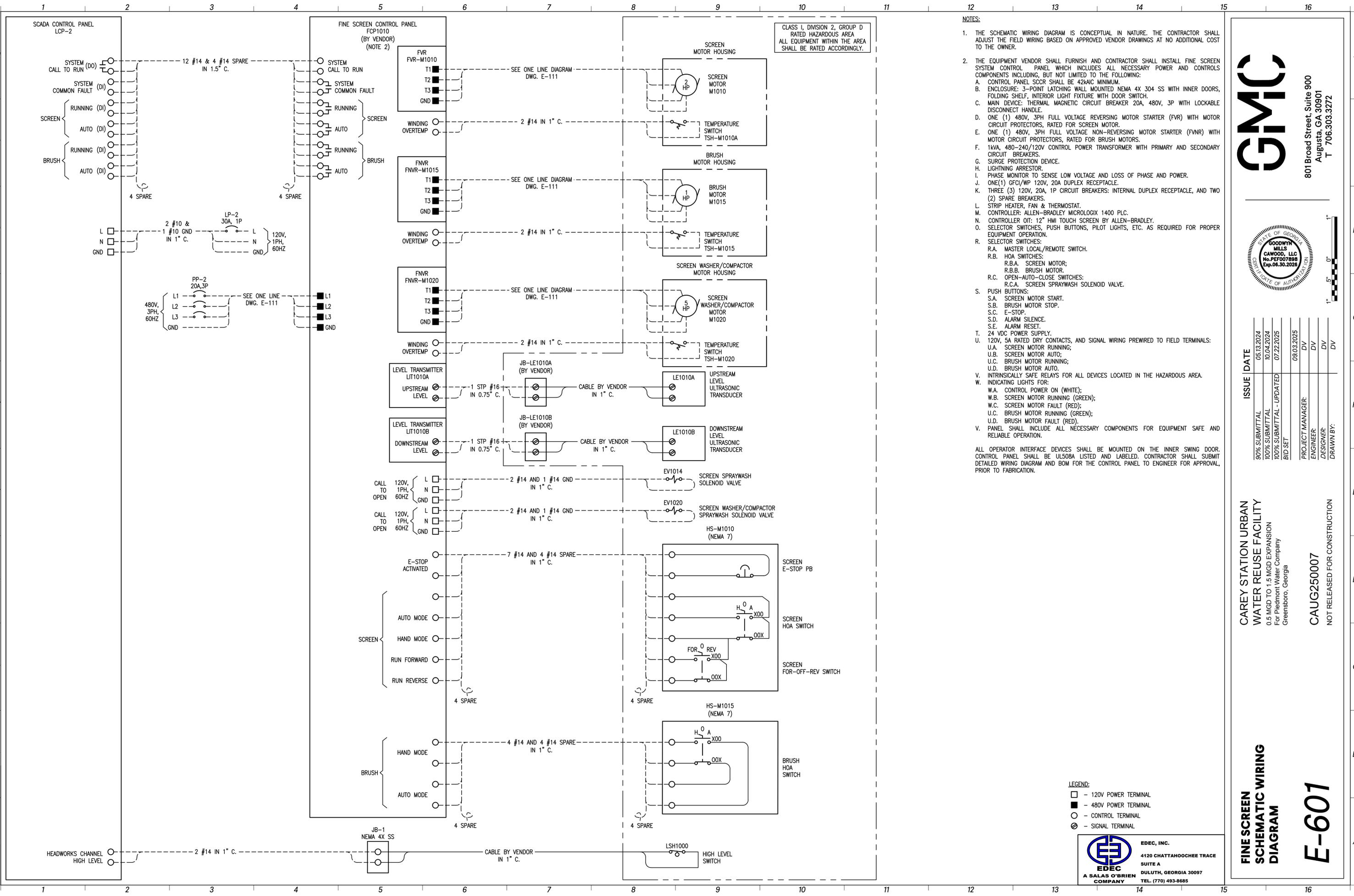
E-321

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

CAUG250007
NOT RELEASED FOR CONSTRUCTION

ISSUED FOR REVIEW	ISSUE DATE	02-23-24
PROJECT MANAGER:	DV	MM
ENGINEER:	MM	MM
DESIGNER:	MM	MM
DRAWN BY:	MM	MM





CLASS 1, DIVISION 2, GROUP D
RATED HAZARDOUS AREA
ALL EQUIPMENT WITHIN THE AREA
SHALL BE RATED ACCORDINGLY.

NOTES:

- THE SCHEMATIC WIRING DIAGRAM IS CONCEPTUAL IN NATURE. THE CONTRACTOR SHALL ADJUST THE FIELD WIRING BASED ON APPROVED VENDOR DRAWINGS AT NO ADDITIONAL COST TO THE OWNER.
 - THE EQUIPMENT VENDOR SHALL FURNISH AND CONTRACTOR SHALL INSTALL FINE SCREEN SYSTEM CONTROL PANEL WHICH INCLUDES ALL NECESSARY POWER AND CONTROLS COMPONENTS INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
 - CONTROL PANEL SCRR SHALL BE 42KVA MINIMUM.
 - ENCLOSURE: 3-POINT LATCHING WALL MOUNTED NEMA 4X 304 SS WITH INNER DOORS, FOLDING SHELF, INTERIOR LIGHT FIXTURE WITH DOOR SWITCH.
 - MAIN DEVICE: THERMAL MAGNETIC CIRCUIT BREAKER 20A, 480V, 3P WITH LOCKABLE DISCONNECT HANDLE.
 - ONE (1) 480V, 3PH FULL VOLTAGE REVERSING MOTOR STARTER (FVR) WITH MOTOR CIRCUIT PROTECTORS, RATED FOR SCREEN MOTOR.
 - ONE (1) 480V, 3PH FULL VOLTAGE NON-REVERSING MOTOR STARTER (FVNR) WITH MOTOR CIRCUIT PROTECTORS, RATED FOR BRUSH MOTORS.
 - 1KVA, 480-240/120V CONTROL POWER TRANSFORMER WITH PRIMARY AND SECONDARY CIRCUIT BREAKERS.
 - SURGE PROTECTION DEVICE.
 - LIGHTNING ARRESTOR.
 - PHASE MONITOR TO SENSE LOW VOLTAGE AND LOSS OF PHASE AND POWER.
 - ONE(1) GFCI/WP 120V, 20A DUPLEX RECEPTACLE.
 - THREE (3) 120V, 20A, 1P CIRCUIT BREAKERS: INTERNAL DUPLEX RECEPTACLE, AND TWO (2) SPARE BREAKERS.
 - STRIP HEATER, FAN & THERMOSTAT.
 - CONTROLLER: ALLEN-BRADLEY MICROLOGIX 1400 PLC.
 - CONTROLLER OIT: 12" HMI TOUCH SCREEN BY ALLEN-BRADLEY.
 - SELECTOR SWITCHES, PUSH BUTTONS, PILOT LIGHTS, ETC. AS REQUIRED FOR PROPER EQUIPMENT OPERATION.
 - SELECTOR SWITCHES:
 - MASTER LOCAL/REMOTE SWITCH.
 - HOA SWITCHES:
 - SCREEN MOTOR;
 - BRUSH MOTOR.
 - OPEN-AUTO-CLOSE SWITCHES:
 - SCREEN SPRAYWASH SOLENOID VALVE.
 - PUSH BUTTONS:
 - SCREEN MOTOR START.
 - BRUSH MOTOR STOP.
 - E-STOP.
 - ALARM SILENCE.
 - ALARM RESET.
 - 24 VDC POWER SUPPLY.
 - 120V, 5A RATED DRY CONTACTS, AND SIGNAL WIRING PREWIRED TO FIELD TERMINALS:
 - SCREEN MOTOR RUNNING;
 - SCREEN MOTOR AUTO;
 - BRUSH MOTOR RUNNING;
 - BRUSH MOTOR AUTO.
 - INTRINSICALLY SAFE RELAYS FOR ALL DEVICES LOCATED IN THE HAZARDOUS AREA.
 - INDICATING LIGHTS FOR:
 - CONTROL POWER ON (WHITE);
 - SCREEN MOTOR RUNNING (GREEN);
 - SCREEN MOTOR FAULT (RED);
 - BRUSH MOTOR RUNNING (GREEN);
 - BRUSH MOTOR FAULT (RED).
 - PANEL SHALL INCLUDE ALL NECESSARY COMPONENTS FOR EQUIPMENT SAFE AND RELIABLE OPERATION.
- ALL OPERATOR INTERFACE DEVICES SHALL BE MOUNTED ON THE INNER SWING DOOR. CONTROL PANEL SHALL BE UL508A LISTED AND LABELED. CONTRACTOR SHALL SUBMIT DETAILED WIRING DIAGRAM AND BOM FOR THE CONTROL PANEL TO ENGINEER FOR APPROVAL, PRIOR TO FABRICATION.

- LEGEND:
- - 120V POWER TERMINAL
 - - 480V POWER TERMINAL
 - - CONTROL TERMINAL
 - ⊗ - SIGNAL TERMINAL

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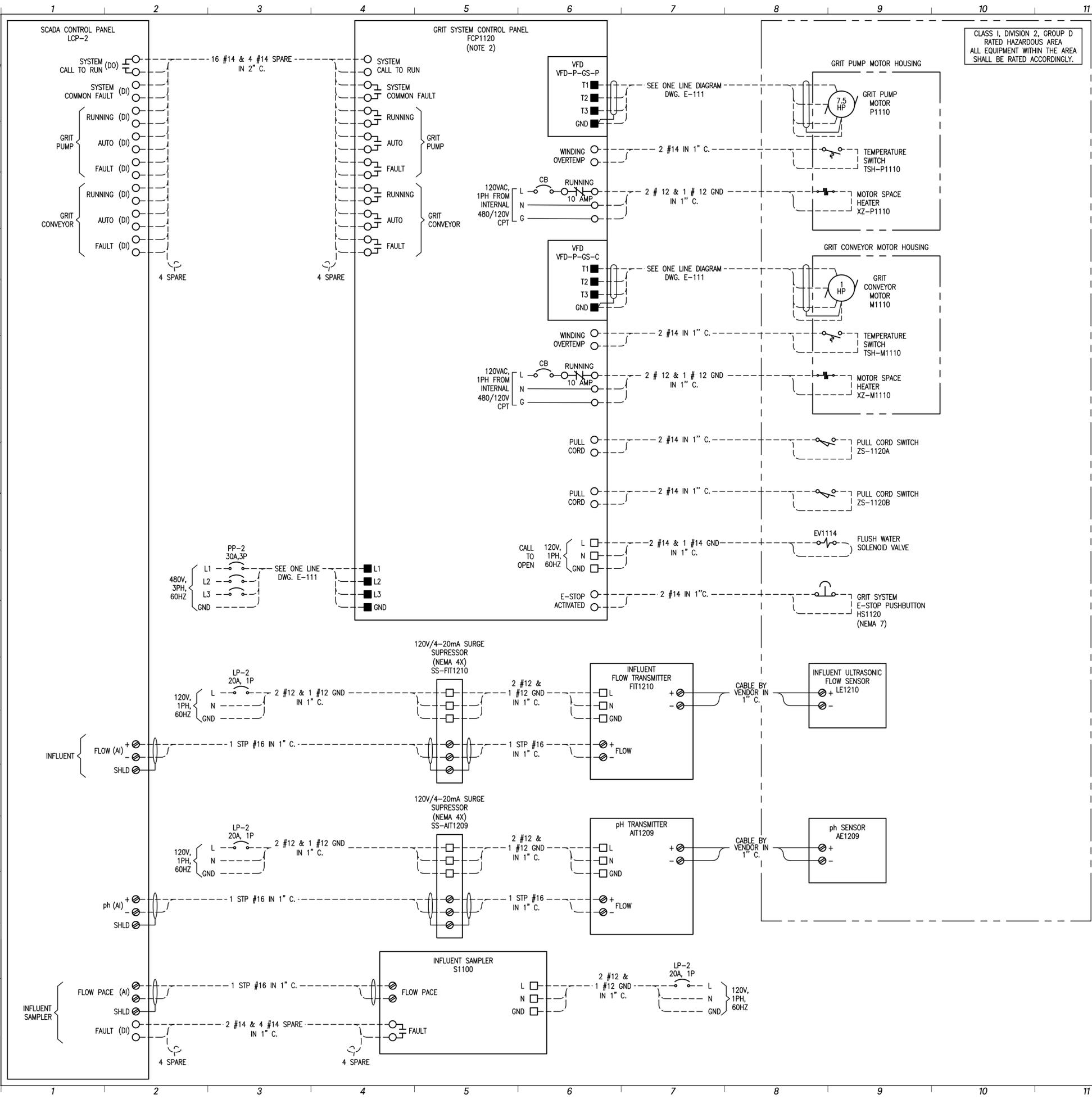
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

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FINE SCREEN
SCHEMATIC WIRING
DIAGRAM

E-601



CLASS 1, DIVISION 2, GROUP D
RATED HAZARDOUS AREA
ALL EQUIPMENT WITHIN THE AREA
SHALL BE RATED ACCORDINGLY.

NOTES:

- THE SCHEMATIC WIRING DIAGRAM IS CONCEPTUAL IN NATURE. THE CONTRACTOR SHALL ADJUST THE FIELD WIRING BASED ON APPROVED VENDOR DRAWINGS AT NO ADDITIONAL COST TO THE OWNER.
- THE EQUIPMENT VENDOR SHALL FURNISH AND CONTRACTOR SHALL INSTALL GRIT SYSTEM CONTROL PANEL WHICH INCLUDES ALL NECESSARY POWER AND CONTROLS COMPONENTS INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
 - CONTROL PANEL SCOR SHALL BE 42x42x12 MINIMUM.
 - ENCLOSURE: 3-POINT LATCHING WALL MOUNTED NEMA 4X 304 SS WITH INNER DOORS, FOLDING SHELF, INTERIOR LIGHT FIXTURE WITH DOOR SWITCH.
 - MAIN DEVICE: THERMAL MAGNETIC CIRCUIT BREAKER 30A, 480V, 3P WITH LOCKABLE DISCONNECT HANDLE.
 - TWO (2) VARIABLE FREQUENCY DRIVES (VFD), (IN: 480V, 3PH; OUT: 480V, 3PH) RATED FOR 7.5HP AND 1HP MOTORS WITH MOTOR CIRCUIT PROTECTORS. VFD'S SHALL INCLUDE ALL NECESSARY COMPONENTS (REACTORS, FILTERS, ETC.) TO LIMIT TOTAL HARMONIC DISTORTION LEVELS AS REQUIRED BY IEEE 519.
 - 1KVA, 480-240/120V CONTROL POWER TRANSFORMER WITH PRIMARY AND SECONDARY CIRCUIT BREAKERS.
 - SURGE PROTECTION DEVICES.
 - LIGHTNING ARRESTOR
 - PHASE MONITOR TO SENSE LOW VOLTAGE AND LOSS OF PHASE AND POWER. EXTERNALLY MOUNTED 480V, 1PH AIR CONDITIONER IN NEMA 4X SS. ENCLOSURE SIZED TO KEEP PANEL INTERNAL TEMPERATURE BELOW 90° F.
 - ONE(1) GFCI/WP 120V, 20A DUPLEX RECEPTACLE.
 - THREE (3) 120V, 20A, 1P CIRCUIT BREAKERS: INTERNAL DUPLEX RECEPTACLE, AND TWO (2) SPARE BREAKERS.
 - STRIP HEATER, FAN & THERMOSTAT.
 - CONTROLLER: NONE (RELAY LOGIC).
 - CONTROLLER: OIT: NONE.
 - SELECTOR SWITCHES: PUSH BUTTONS, PILOT LIGHTS, ETC. AS REQUIRED FOR PROPER EQUIPMENT OPERATION.
 - SELECTOR SWITCHES:
 - MASTER LOCAL/REMOTE SWITCH,
 - HOA SWITCHES:
 - R.A. GRIT PUMP;
 - R.B.B. GRIT CONVEYOR;
 - OPEN-AUTO-CLOSE SWITCHES:
 - R.C.A. FLUSH WATER SOLENOID VALVE.
 - SPEED POTENTIOMETERS:
 - R.D.A. GRIT PUMP;
 - R.D.B. GRIT CONVEYOR.
 - PUSH BUTTONS:
 - S.A. GRIT PUMP START;
 - S.B. GRIT PUMP STOP;
 - S.C. GRIT CONVEYOR START;
 - S.D. GRIT CONVEYOR STOP;
 - S.E. E-STOP;
 - S.F. ALARM SILENCE;
 - S.G. ALARM RESET.
 - ANALOG INDICATORS:
 - T.A. GRIT PUMP SPEED;
 - T.B. GRIT CONVEYOR SPEED.
 - 24 VDC POWER SUPPLY.
 - 120V, 5A RATED DRY CONTACTS, AND SIGNAL WIRING PREWIRED TO FIELD TERMINALS:
 - V.A. PHASE LOSS ALARM;
 - V.B. GRIT PUMP COMMON FAULT;
 - V.C. GRIT CONVEYOR COMMON FAULT.
 - INTRINSICALLY SAFE RELAYS FOR ALL DEVICES LOCATED IN THE HAZARDOUS AREA.
 - INDICATING LIGHTS FOR:
 - X.A. CONTROL POWER ON (WHITE);
 - X.B. GRIT PUMP RUNNING (GREEN);
 - X.C. GRIT PUMP FAULT (RED);
 - X.D. GRIT CONVEYOR RUNNING (GREEN);
 - X.E. GRIT CONVEYOR FAULT (RED).
- ALL OPERATOR INTERFACE DEVICES SHALL BE MOUNTED ON THE INNER SWING DOOR. CONTROL PANEL SHALL BE UL508A LISTED AND LABELED. CONTRACTOR SHALL SUBMIT DETAILED WIRING DIAGRAM AND BOM FOR THE CONTROL PANEL TO ENGINEER FOR APPROVAL, PRIOR TO FABRICATION.

- LEGEND:
- - 120V POWER TERMINAL
 - - 480V POWER TERMINAL
 - - CONTROL TERMINAL
 - ⊗ - SIGNAL TERMINAL

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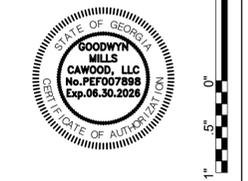
CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

GRIT SYSTEM
SCHEMATIC WIRING
DIAGRAM

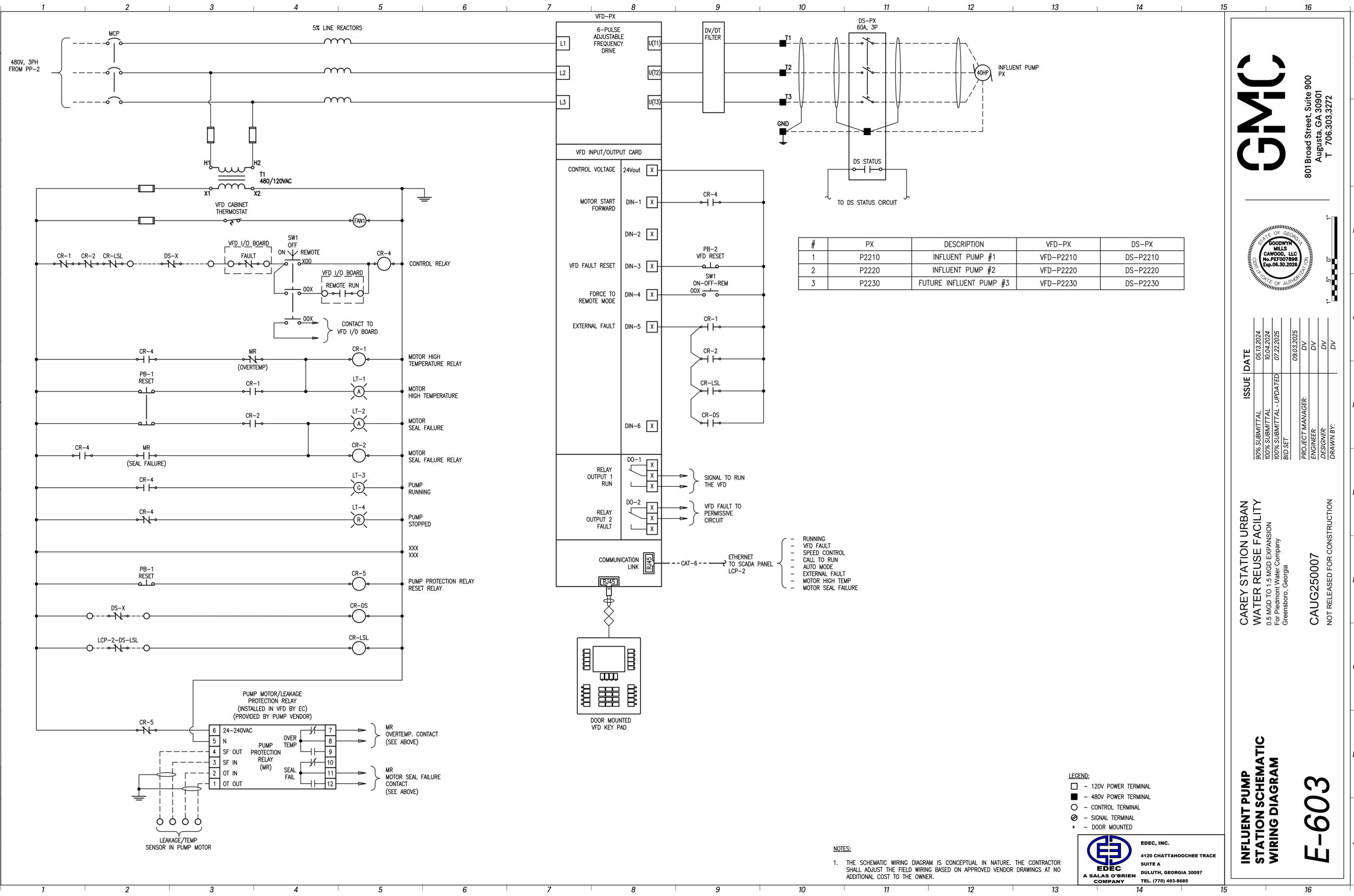
E-602

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BID SET	09.03.2025

PROJECT MANAGER:	ENGINEER:	DESIGNER:	DRAWN BY:
DV	DV	DV	DV



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#	PX	DESCRIPTION	VFD-PX	DS-PX
1	P2210	INFLUENT PUMP #1	VFD-P2210	DS-P2210
2	P2220	INFLUENT PUMP #2	VFD-P2220	DS-P2220
3	P2230	FUTURE INFLUENT PUMP #3	VFD-P2230	DS-P2230

- RUNNING
- VFD FAULT
- SPEED CONTROL
- CALL TO RUN
- AUTO MODE
- EXTERNAL FAULT
- MOTOR HIGH TEMP
- MOTOR SEAL FAILURE

- LEGEND:
- - 120V POWER TERMINAL
 - - 480V POWER TERMINAL
 - - CONTROL TERMINAL
 - ⊗ - SIGNAL TERMINAL
 - * - DOOR MOUNTED

NOTES:
 1. THE SCHEMATIC WIRING DIAGRAM IS CONCEPTUAL IN NATURE. THE CONTRACTOR SHALL ADJUST THE FIELD WIRING BASED ON APPROVED VENDOR DRAWINGS AT NO ADDITIONAL COST TO THE OWNER.

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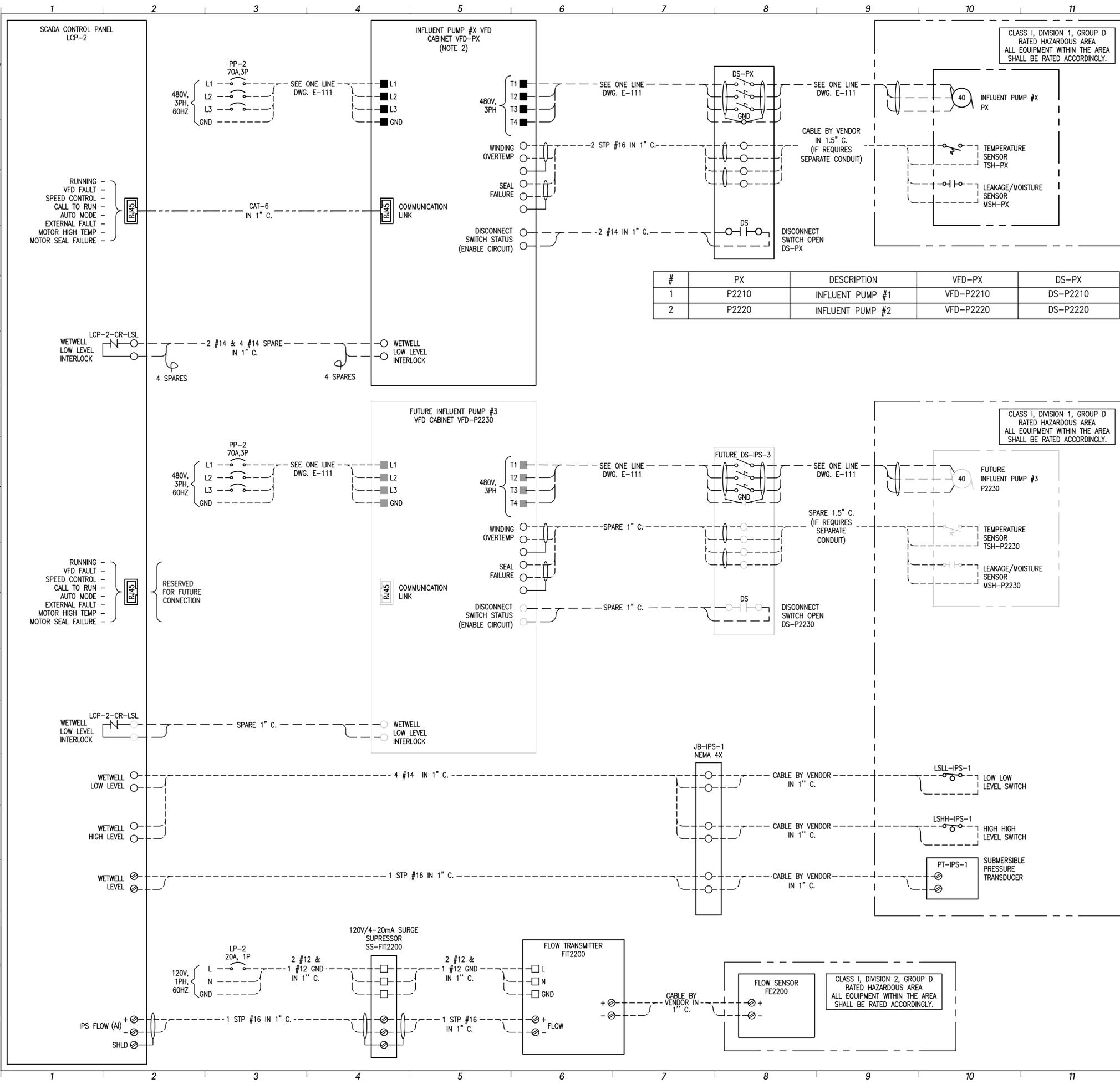
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
 WATER REUSE FACILITY
 0.5 MGD TO 1.5 MGD EXPANSION
 For Piedmont Water Company
 Greensboro, Georgia

CAUG250007
 NOT RELEASED FOR CONSTRUCTION

**INFLUENT PUMP
 STATION SCHEMATIC
 WIRING DIAGRAM**

E-603



NOTES:

- THE SCHEMATIC WIRING DIAGRAM IS CONCEPTUAL IN NATURE. THE CONTRACTOR SHALL ADJUST THE FIELD WIRING BASED ON APPROVED VENDOR DRAWINGS AT NO ADDITIONAL COST TO THE OWNER.
- THE EQUIPMENT VENDOR SHALL FURNISH AND CONTRACTOR SHALL INSTALL INFLUENT PUMP VFD CABINET WHICH INCLUDES ALL NECESSARY POWER AND CONTROLS COMPONENTS INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
 - CABINET SCCR SHALL BE 42kAIC MINIMUM.
 - ENCLOSURE: WALL MOUNTED NEMA 4X 304 SS WITH INNER DOORS, FOLDING SHELF, INTERIOR LIGHT FIXTURE WITH DOOR SWITCH.
 - MAIN DEVICE: THERMAL MAGNETIC CIRCUIT BREAKER 70A, 480V, 3P WITH LOCKABLE DISCONNECT HANDLE.
 - VARIABLE FREQUENCY DRIVE (VFD):
 - THE VFD CABINET MANUFACTURER SHALL COORDINATE WITH THE EQUIPMENT MANUFACTURER WHETHER VARIABLE OR CONSTANT TORQUE DRIVE SHALL BE PROVIDED AND PROVIDE A CONFIRMATION LETTER.
 - 6 PULSE DRIVE WITH MOTOR CIRCUIT PROTECTORS, RATED FOR 40 HP MOTOR.
 - 5% LINE REACTOR, DV/DT FILTER, THE CABINET MANUFACTURER SHALL PERFORM A HARMONIC ANALYSIS BASED ON THE SELECTED VFD MODEL TO ENSURE THAT THE HARMONIC DISTORTIONS ARE WITHIN IEEE519 LIMITS AND PROVIDE REPORT FOR ENGINEERS REVIEW.
 - 1kVA, 480-240/120V CONTROL POWER TRANSFORMER WITH PRIMARY AND SECONDARY CIRCUIT BREAKERS.
 - EXTERNALLY MOUNTED 480V, 1PH AIR CONDITIONER IN NEMA 4X SS ENCLOSURE SIZED TO KEEP CABINET INTERNAL TEMPERATURE BELOW 90° F.
 - STRIP HEATER, FAN & THERMOSTAT.
 - SELECTOR SWITCHES, PUSH BUTTONS, PILOT LIGHTS, ETC. AS REQUIRED FOR PROPER EQUIPMENT OPERATION.
 - OPERATOR INTERFACE DEVICES:
 - VFD KEY PAD MOUNTED ON THE FRONT DOOR;
 - HOA SWITCH;
 - FORWARD-REVERSE SWITCH;
 - SPEED POTENTIOMETER FOR HAND MODE.
 - PUSH BUTTONS:
 - START;
 - STOP;
 - E-STOP;
 - ANALOG INDICATORS:
 - SPEED;
 - CURRENT;
 - INDICATING LIGHTS FOR:
 - CONTROL POWER ON (WHITE);
 - PUMP RUNNING (GREEN);
 - PUMP FAULT (AMBER).
 - MEANS OF I/O'S COMMUNICATION:
 - 120V, 5A RATED DRY CONTACTS, PREWIRED TO FIELD TERMINALS:
 - PHASE LOSS ALARM;
 - SCREEN COMMON FAULT;
 - SCREW CONVEYOR COMMON FAULT.
 - HARDWIRED SIGNALS PREWIRED TO FIELD TERMINALS:
 - SPEED CONTROL INPUT 4-20mA;
 - SPEED FEEDBACK OUTPUT 4-20mA;
 - CURRENT OUTPUT 4-20mA.
 - COMMUNICATION LINKS:
 - ETHERNET/IP (RJ-45).
 - HARDWIRED SAFETY INTERLOCKS SHALL INCLUDE:
 - DISCONNECT SWITCH STATUS;
 - LOW LEVEL CUTOFF;
 - VFD FAULT.
- CABINET SHALL INCLUDE ALL NECESSARY COMPONENTS FOR EQUIPMENT SAFE AND RELIABLE OPERATION.

THE CABINET SHALL BE MANUFACTURED BY EATON, SCHNEIDER ELECTRIC, ALLEN-BRADLEY, ABB, SIEMENS OR APPROVED EQUAL MANUFACTURER, THE CABINET SHALL BE UL LISTED AND LABELED. CONTRACTOR SHALL SUBMIT DETAILED WIRING DIAGRAM AND BOM FOR THE CONTROL PANEL TO ENGINEER FOR APPROVAL, PRIOR TO FABRICATION.

- LEGEND:**
- - 120V POWER TERMINAL
 - - 480V POWER TERMINAL
 - - CONTROL TERMINAL
 - ⊗ - SIGNAL TERMINAL

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GOODWYN MILLS
 CAWOOD, LLC
 No. PEFD07888
 Exp. 06.30.2026

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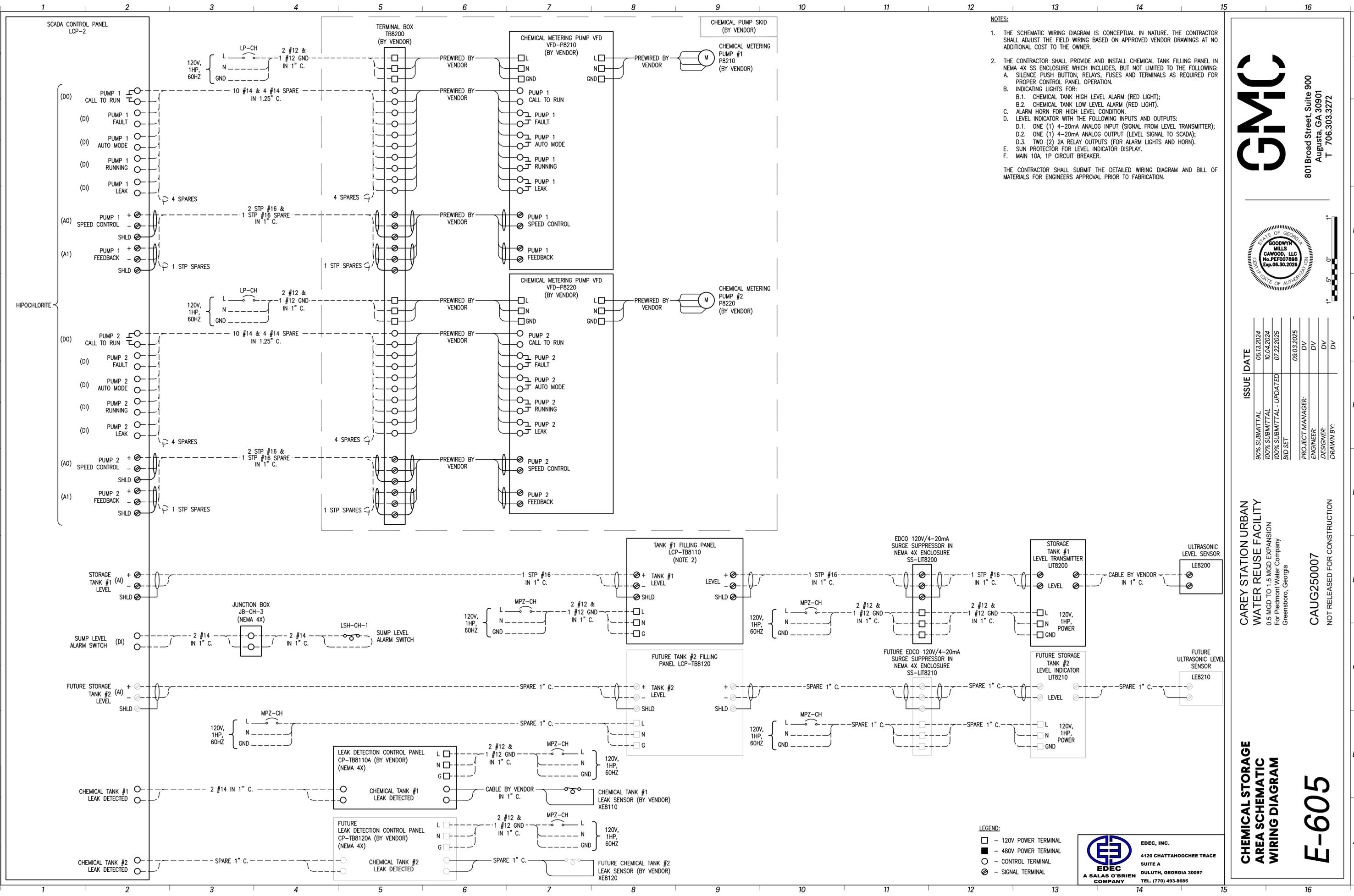
PROJECT MANAGER: DV
 ENGINEER: DV
 DESIGNER: DV
 DRAWN BY: DV

CAREY STATION URBAN WATER REUSE FACILITY
 0.5 MGD TO 1.5 MGD EXPANSION
 For Piedmont Water Company
 Greensboro, Georgia

CAUG250007
 NOT RELEASED FOR CONSTRUCTION

INFLUENT PUMP STATION SCHEMATIC WIRING DIAGRAM

E-604



NOTES:

- THE SCHEMATIC WIRING DIAGRAM IS CONCEPTUAL IN NATURE. THE CONTRACTOR SHALL ADJUST THE FIELD WIRING BASED ON APPROVED VENDOR DRAWINGS AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL CHEMICAL TANK FILLING PANEL IN NEMA 4X SS ENCLOSURE WHICH INCLUDES, BUT NOT LIMITED TO THE FOLLOWING:
 - SILENCE PUSH BUTTON, RELAYS, FUSES AND TERMINALS AS REQUIRED FOR PROPER CONTROL PANEL OPERATION.
 - INDICATING LIGHTS FOR:
 - CHEMICAL TANK HIGH LEVEL ALARM (RED LIGHT);
 - CHEMICAL TANK LOW LEVEL ALARM (RED LIGHT).
 - ALARM HORN FOR HIGH LEVEL CONDITION.
 - LEVEL INDICATOR WITH THE FOLLOWING INPUTS AND OUTPUTS:
 - ONE (1) 4-20mA ANALOG INPUT (SIGNAL FROM LEVEL TRANSMITTER);
 - ONE (1) 4-20mA ANALOG OUTPUT (LEVEL SIGNAL TO SCADA);
 - TWO (2) 2A RELAY OUTPUTS (FOR ALARM LIGHTS AND HORN).
 - SUN PROTECTOR FOR LEVEL INDICATOR DISPLAY.
 - MAIN 10A, 1P CIRCUIT BREAKER.

THE CONTRACTOR SHALL SUBMIT THE DETAILED WIRING DIAGRAM AND BILL OF MATERIALS FOR ENGINEERS APPROVAL PRIOR TO FABRICATION.



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CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

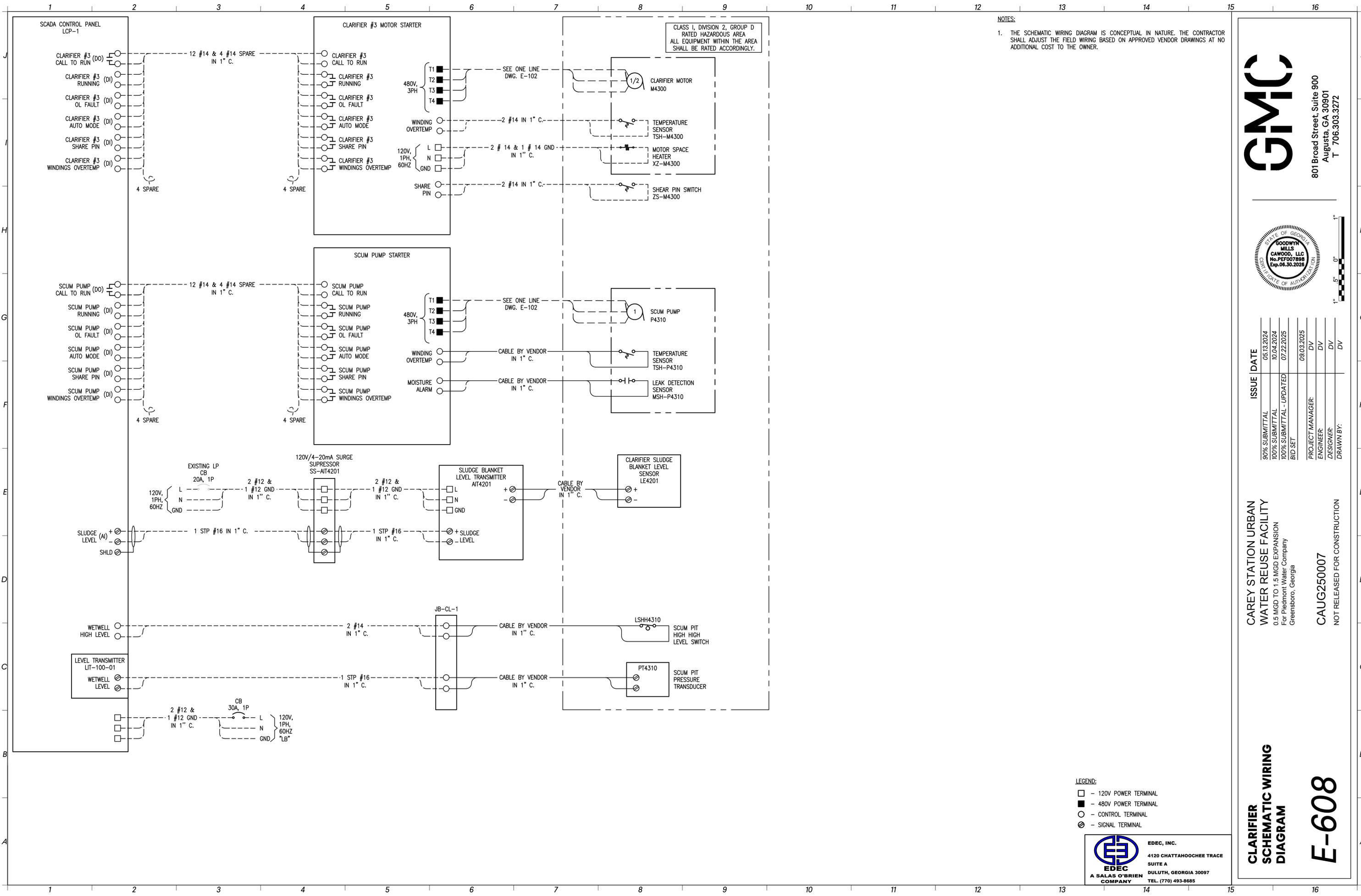
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CHEMICAL STORAGE AREA SCHEMATIC WIRING DIAGRAM

E-605

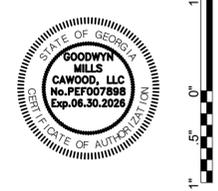
- LEGEND:**
- - 120V POWER TERMINAL
 - - 480V POWER TERMINAL
 - - CONTROL TERMINAL
 - ⊙ - SIGNAL TERMINAL





NOTES:
 1. THE SCHEMATIC WIRING DIAGRAM IS CONCEPTUAL IN NATURE. THE CONTRACTOR SHALL ADJUST THE FIELD WIRING BASED ON APPROVED VENDOR DRAWINGS AT NO ADDITIONAL COST TO THE OWNER.

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CAREY STATION URBAN
 WATER REUSE FACILITY
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 For Piedmont Water Company
 Greensboro, Georgia

CAUG250007
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- LEGEND:**
- - 120V POWER TERMINAL
 - - 480V POWER TERMINAL
 - - CONTROL TERMINAL
 - ⊗ - SIGNAL TERMINAL

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**CLARIFIER
 SCHEMATIC WIRING
 DIAGRAM**

E-608

NOT USED



**DIGESTER
SCHEMATIC WIRING
DIAGRAM**

E-609

**CAREY STATION URBAN
WATER REUSE FACILITY**
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

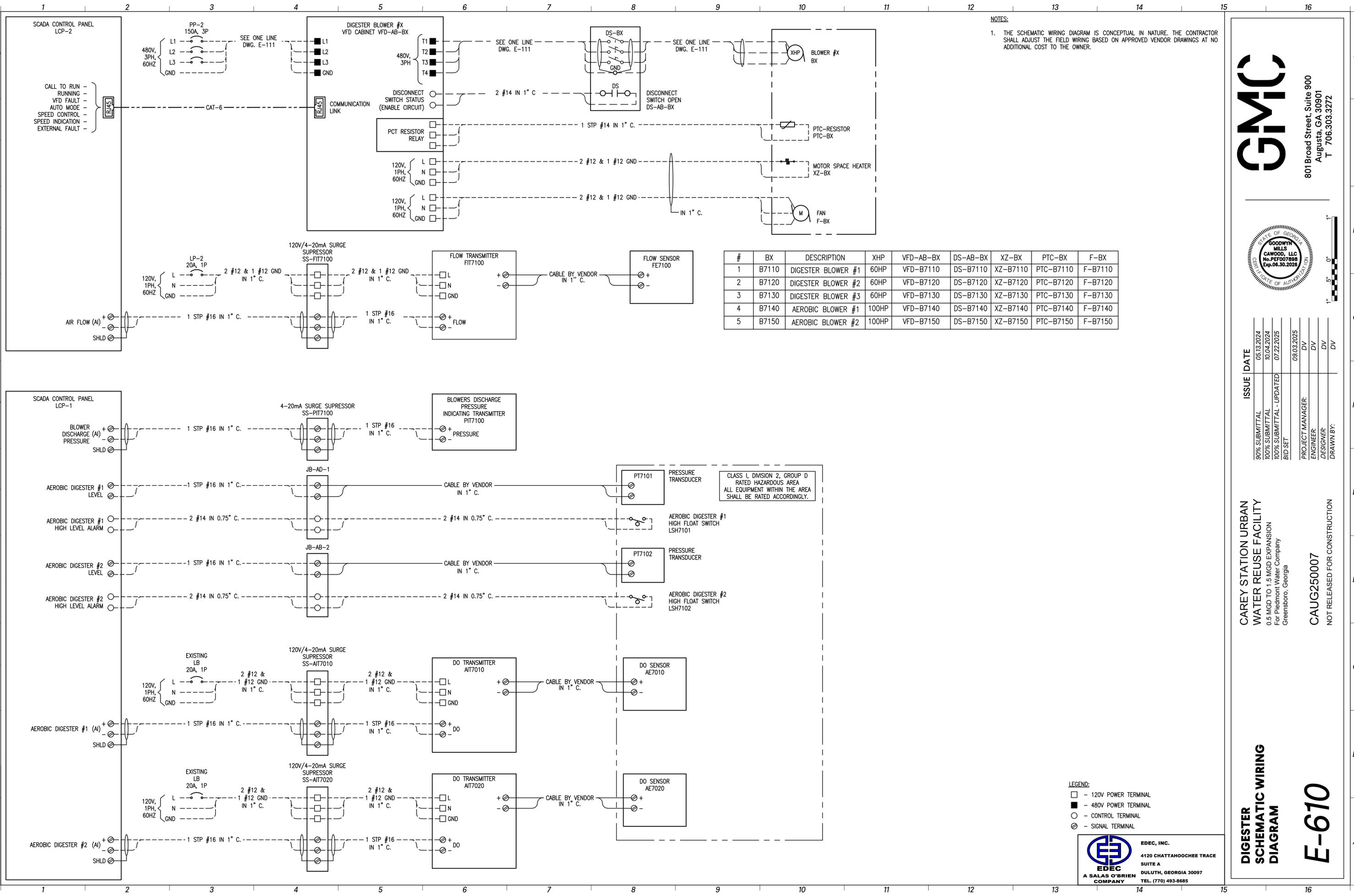
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DESIGNER:	DV
DRAWN BY:	DV



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NOTES:
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DV	DV	DV	DV

CAREY STATION URBAN
 WATER REUSE FACILITY
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 For Piedmont Water Company
 Greensboro, Georgia

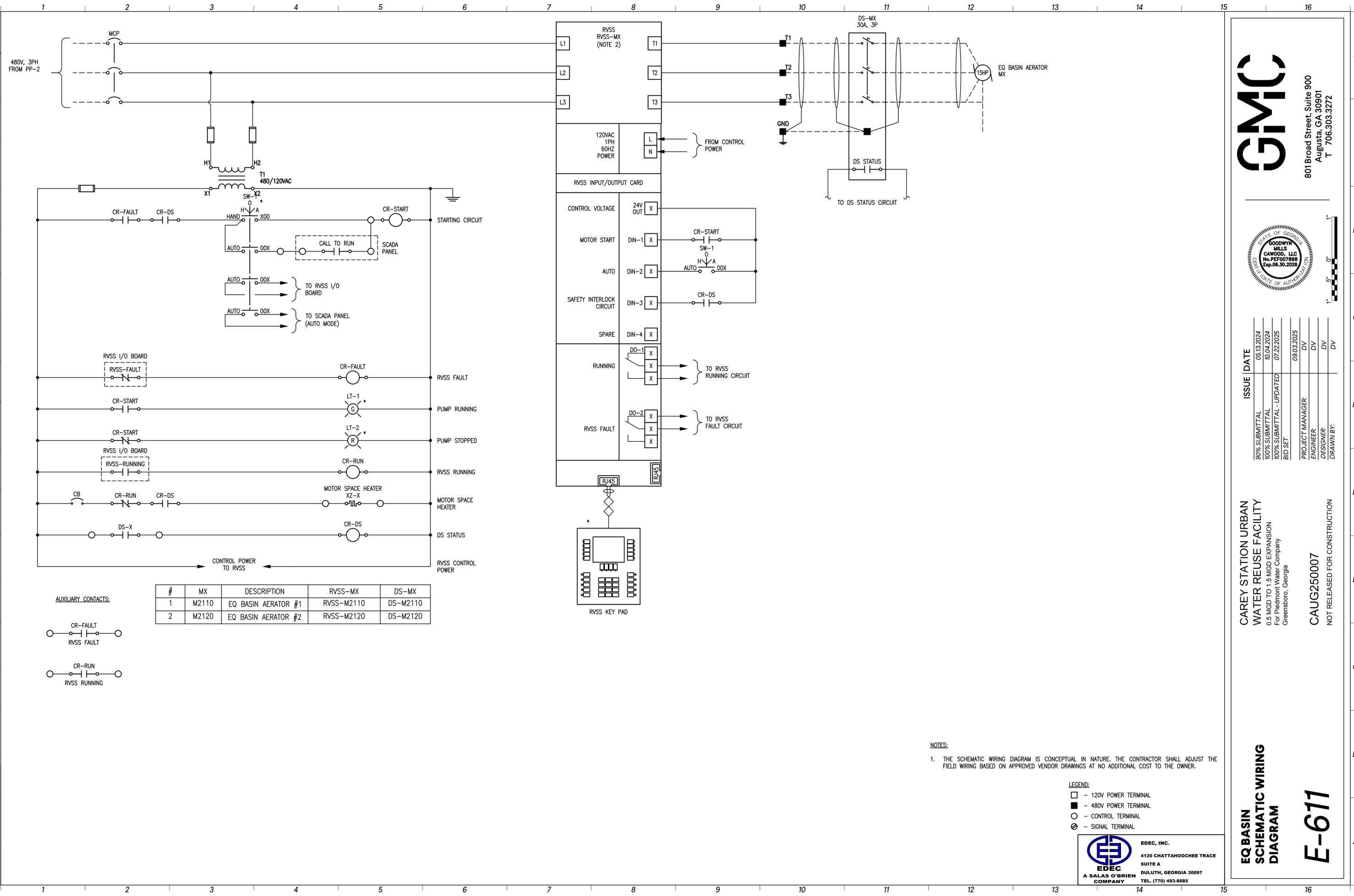
CAUG250007
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**DIGESTER
 SCHEMATIC WIRING
 DIAGRAM**

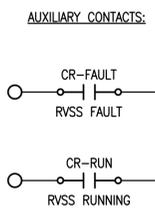
E-610

- LEGEND:**
- - 120V POWER TERMINAL
 - - 480V POWER TERMINAL
 - - CONTROL TERMINAL
 - ⊗ - SIGNAL TERMINAL

EDEC, INC.
 4120 CHATTAHOOCHEE TRACE
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#	MX	DESCRIPTION	RVSS-MX	DS-MX
1	M2110	EQ BASIN AERATOR #1	RVSS-M2110	DS-M2110
2	M2120	EQ BASIN AERATOR #2	RVSS-M2120	DS-M2120

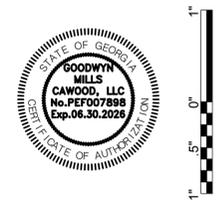


NOTES:
 1. THE SCHEMATIC WIRING DIAGRAM IS CONCEPTUAL IN NATURE. THE CONTRACTOR SHALL ADJUST THE FIELD WIRING BASED ON APPROVED VENDOR DRAWINGS AT NO ADDITIONAL COST TO THE OWNER.

- LEGEND:**
- - 120V POWER TERMINAL
 - - 480V POWER TERMINAL
 - - CONTROL TERMINAL
 - ⊗ - SIGNAL TERMINAL

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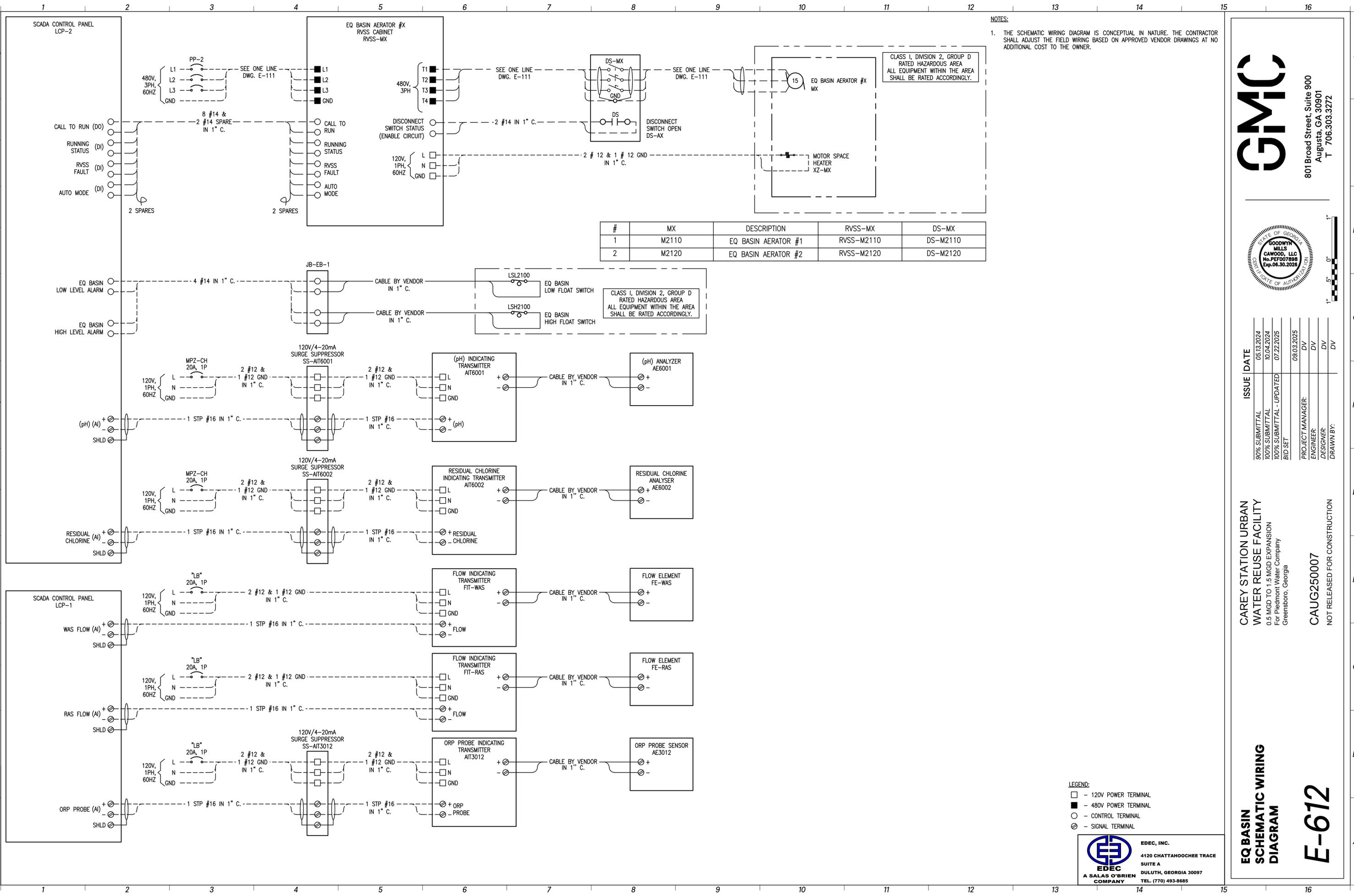
ISSUE DATE	ISSUE DATE
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100% SUBMITTAL 10.04.2024	ENGINEER: DV
100% SUBMITTAL - UPDATED 07.22.2025	DESIGNER: DV
BID SET 09.03.2025	DRAWN BY: DV

**CAREY STATION URBAN
 WATER REUSE FACILITY
 0.5 MGD TO 1.5 MGD EXPANSION
 For Piedmont Water Company
 Greensboro, Georgia**

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**EQ BASIN
 SCHEMATIC WIRING
 DIAGRAM**

E-611



NOTES:
 1. THE SCHEMATIC WIRING DIAGRAM IS CONCEPTUAL IN NATURE. THE CONTRACTOR SHALL ADJUST THE FIELD WIRING BASED ON APPROVED VENDOR DRAWINGS AT NO ADDITIONAL COST TO THE OWNER.

CLASS I, DIVISION 2, GROUP D RATED HAZARDOUS AREA
 ALL EQUIPMENT WITHIN THE AREA SHALL BE RATED ACCORDINGLY.

CLASS I, DIVISION 2, GROUP D RATED HAZARDOUS AREA
 ALL EQUIPMENT WITHIN THE AREA SHALL BE RATED ACCORDINGLY.

LEGEND:
 □ - 120V POWER TERMINAL
 ■ - 480V POWER TERMINAL
 ○ - CONTROL TERMINAL
 ⊗ - SIGNAL TERMINAL

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 Greensboro, Georgia

CAUG250007
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EQ BASIN SCHEMATIC WIRING DIAGRAM

E-612

NOT USED



**AERATION BASIN
SCHEMATIC WIRING
DIAGRAM**

E-613

**CAREY STATION URBAN
WATER REUSE FACILITY**
0.5 MGD TO 1.5 MGD EXPANSION
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**AERATION BASIN
SCHEMATIC WIRING
DIAGRAM**

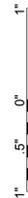
E-614

**CAREY STATION URBAN
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Greensboro, Georgia

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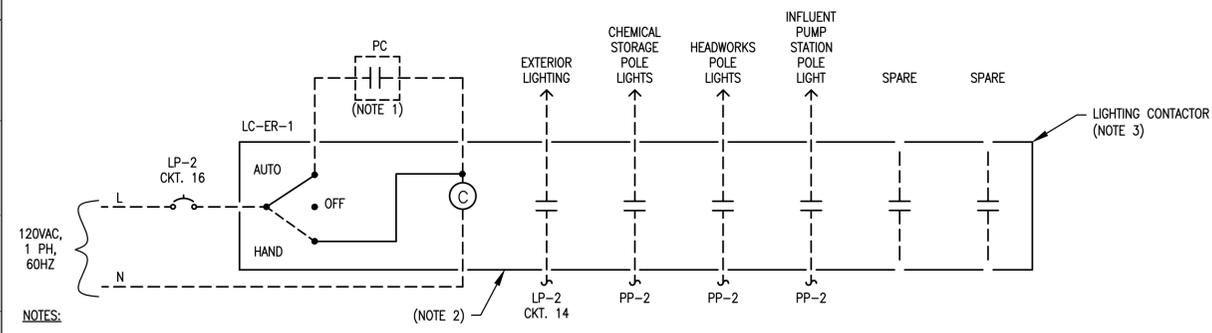
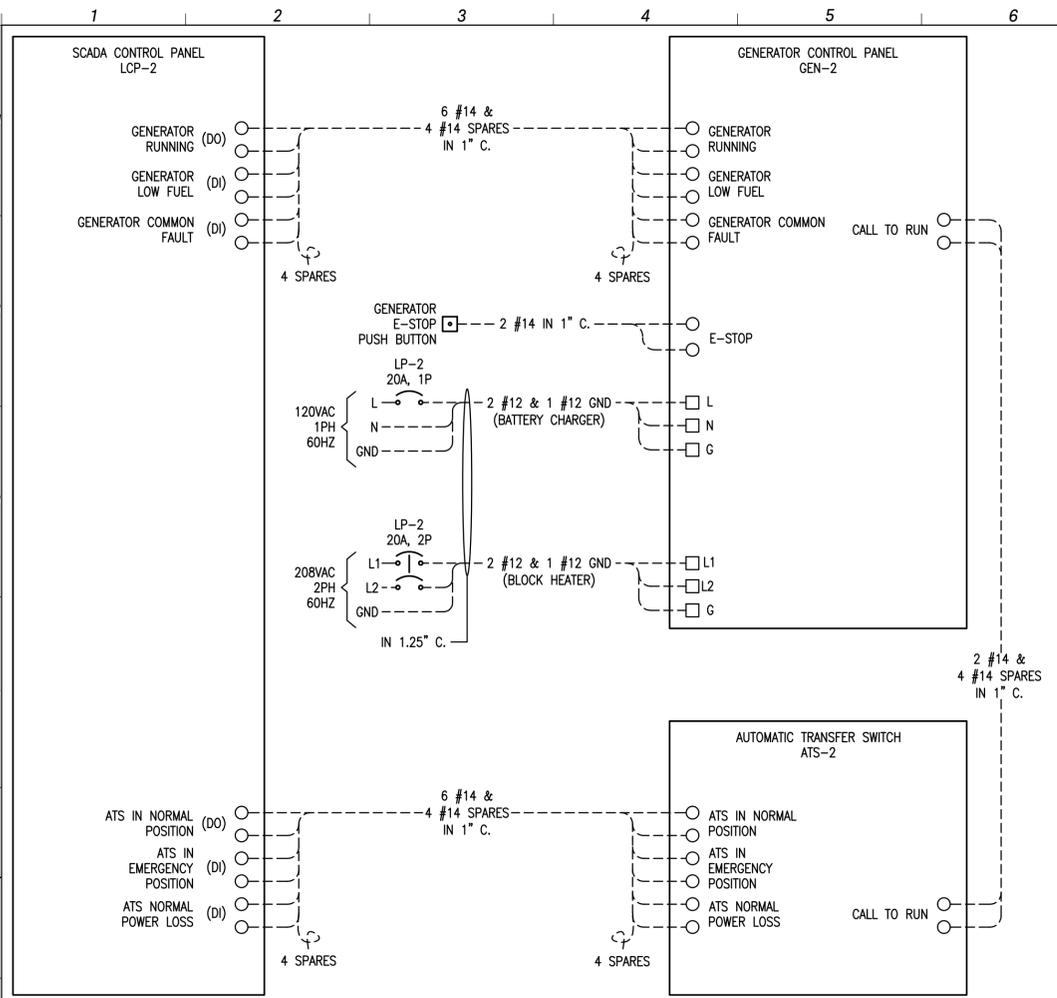
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ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV



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- NOTES:
- "PC" - PHOTOCCELL, 120V. LOCATE ON THE EQUIPMENT RACK FACING NORTH.
 - ELECTRICALLY-HELD HEAVY-DUTY LIGHTING CONTACTOR. 5 POLES, 20A RATED CONTACTS. TAG THE CONDUCTORS ON THE LINE SIDE OF THE LIGHTING CONTACTOR WITH THEIR RESPECTIVE CIRCUIT NUMBER.
 - INSTALL LIGHTING CONTROL IN NEMA 1, 12 GAUGE GALVANIZED STEEL CABINET, FINISHED IN GRAY ENAMEL WITH HINGED DOOR AND LOCKING HANDLE. THE CONTACTOR SHALL BE 3 POLES, 120V COIL VOLTAGE EATON CLASS ECC03 OR ACCEPTED EQUAL.

2 LIGHTING CONTACTOR LC-ER-1 SCHEMATIC

NOTES:
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CAREY STATION URBAN
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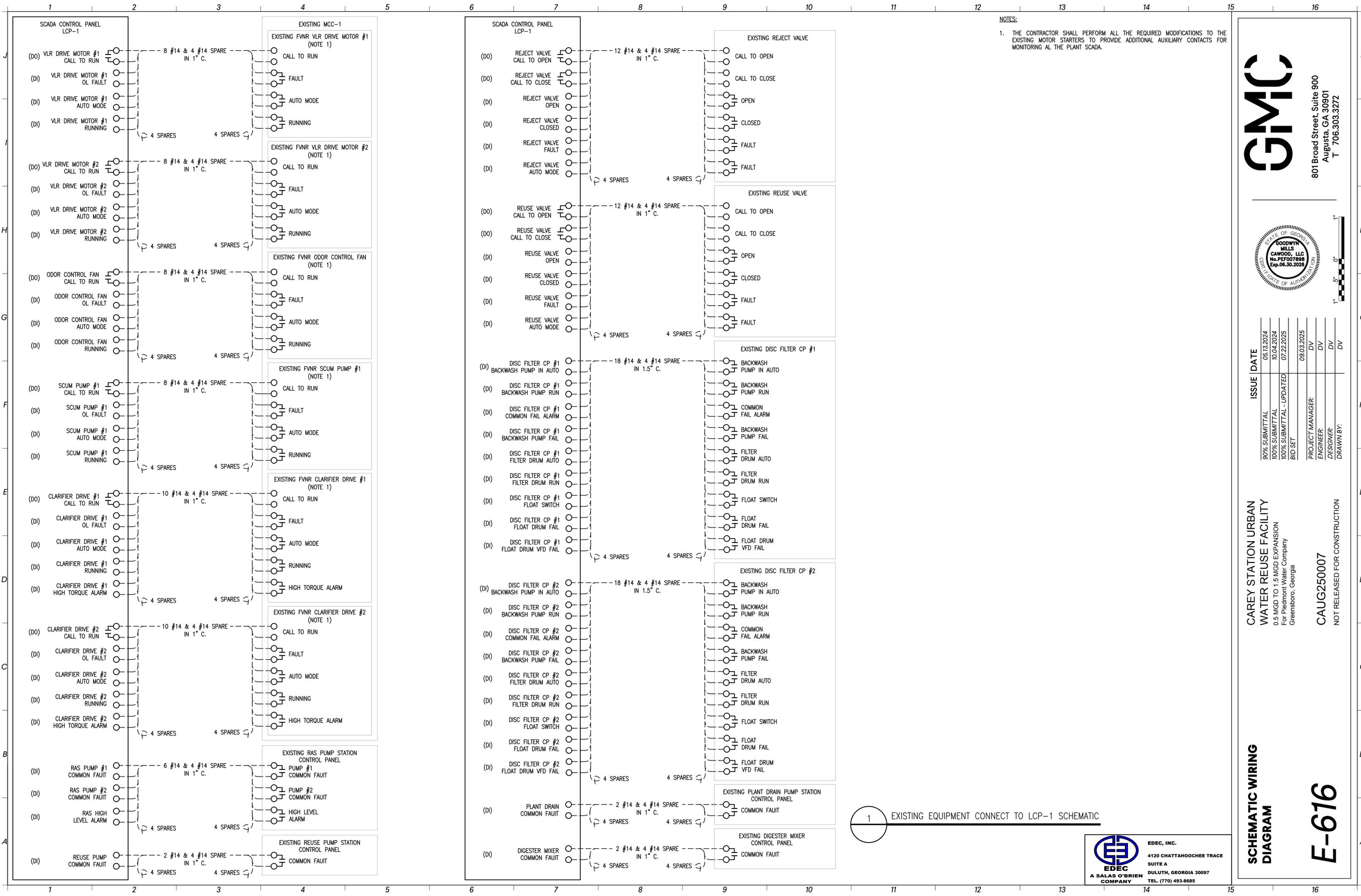
CAUG250007
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- LEGEND:
- - 208/120V POWER TERMINAL
 - - 480V POWER TERMINAL
 - - CONTROL TERMINAL
 - ⊗ - SIGNAL TERMINAL

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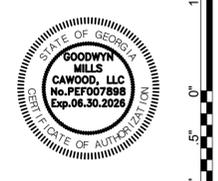
ATS AND GENERATOR
 SCHEMATIC WIRING
 DIAGRAM

E-615



NOTES:
 1. THE CONTRACTOR SHALL PERFORM ALL THE REQUIRED MODIFICATIONS TO THE EXISTING MOTOR STARTERS TO PROVIDE ADDITIONAL AUXILIARY CONTACTS FOR MONITORING AT THE PLANT SCADA.

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 For Piedmont Water Company
 Greensboro, Georgia

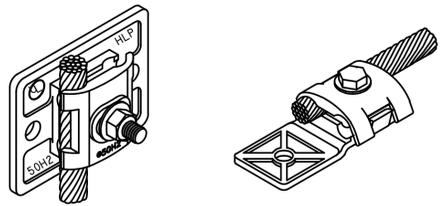
**SCHEMATIC WIRING
 DIAGRAM**

E-616

CAUG250007
 NOT RELEASED FOR CONSTRUCTION

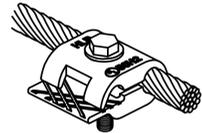
1 EXISTING EQUIPMENT CONNECT TO LCP-1 SCHEMATIC

EDEC
 A SALAS O'BRIEN COMPANY
 4120 CHATTAHOOCHEE TRACE
 SUITE A
 DULUTH, GEORGIA 30097
 TEL. (770) 493-8685

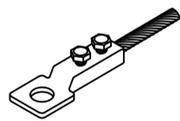


NO. 702, STYLE BONDING PLATE

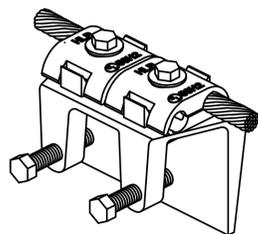
NO. 551, CAST BRONZE BONDING LUG



NO. M2X, SECONDARY SIZE BONDING CLAMP

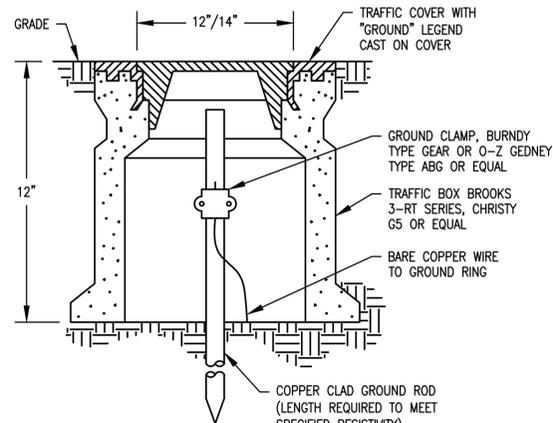


NO. 561, CAST BRONZE BONDING LUG

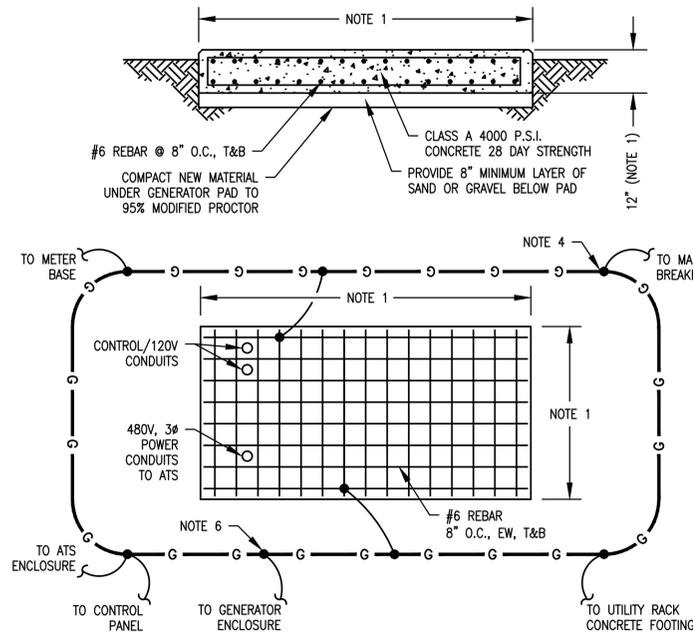


NO. A701X-C, STYLE CLAMP BONDING PLATE

A BONDING LUGS AND PLATES



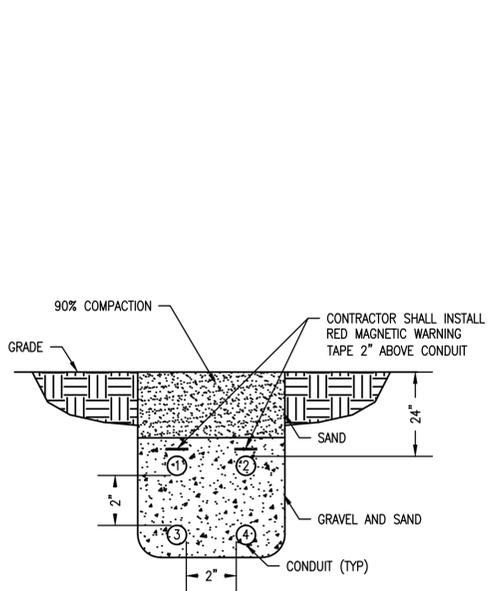
B GROUND TEST WELL



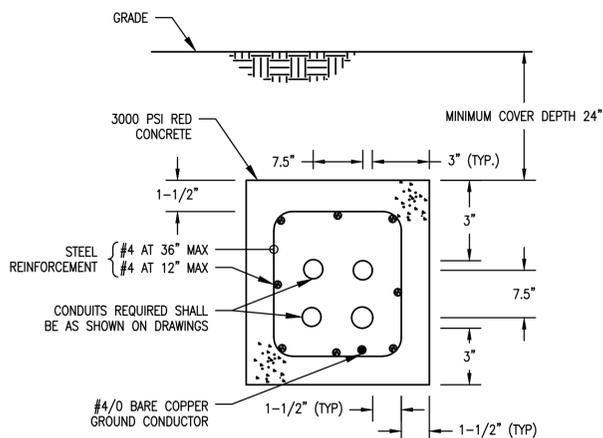
C GENERATOR PAD

NOTES:

1. REVIEW DIMENSIONS OF GEN. SET, INCLUDING W.P. HOUSING, TO DETERMINE ACTUAL DIMENSIONS OF GEN. PAD. PAD SHALL BE INSTALLED AS RECOMMENDED BY THE GENERATOR MANUFACTURER.
2. PAD SHALL BE 12" LARGER ON ALL SIDES THAN THE GENERATOR BASE AND ENCLOSURE.
3. VERIFY CONDUIT PENETRATIONS WITH GENERATOR MANUFACTURER.
4. PROVIDE FOUR (4) 10' x 3/8" COPPER CLAD STEEL GROUND RODS AS SHOWN WITH #1/0 BARE COPPER GROUND WIRE AROUND THE GENERATOR PAD. CONNECT GROUND WIRE TO THE GENERATOR ENCLOSURE.
5. EXACT GENERATOR PAD SIZE SHALL BE DETERMINED BY THE GENERATOR MANUFACTURER'S SHOP DRAWING PRIOR TO INSTALLATION.
6. GENERATOR HOUSING SHALL BE GROUNDED, NOT THE NEUTRAL.



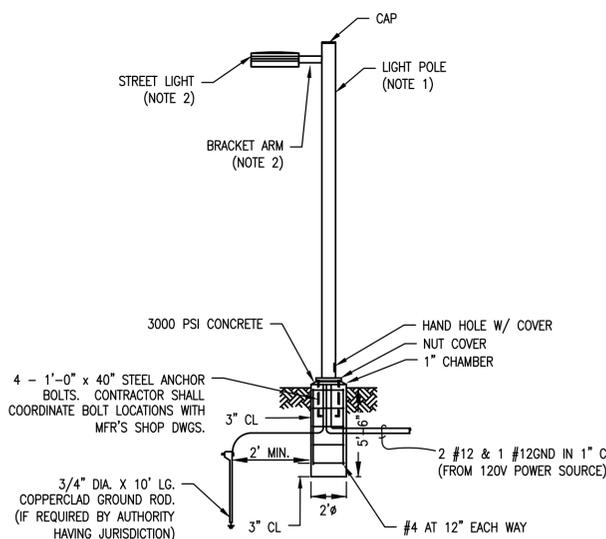
D CONDUIT SECTION IN TRENCH



DUCT BANK NOTES:

1. ALL DUCTBANKS CROSSING ROADS OR HEAVY TRAFFIC AREAS SHALL BE REINFORCED WITHIN 5 (FIVE) FEET OF TRAFFIC AREAS.
2. CONTRACTOR SHALL FIELD COORDINATE EXACT DUCTBANK ROUTING WITH EXISTING UTILITIES.

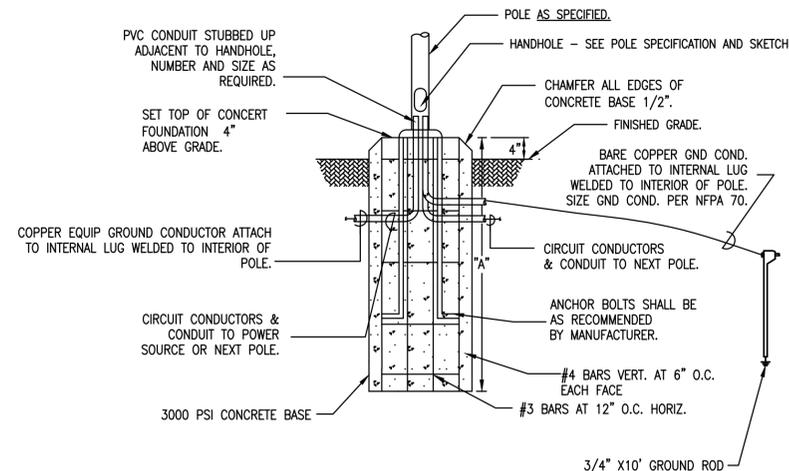
E REINFORCED DUCTBANK INSTALLATION DETAIL



LIGHT POLE NOTES:

1. WIRING TO BE CONTINUOUS TO FIXTURE. NO SPLICING IN CONDUIT IS PERMITTED.
2. STREET LIGHT MUST BE MOUNTED ON A SQUARE STRAIGHT ALUMINUM POLE FEET IN HEIGHT. LIGHT POLE SHALL BE LITHONIA #SSA-20"-DDB WITH ALL THE REQUIRED ANCHORING AND MOUNTING ACCESSORIES.
3. STREET LIGHT ATTACHED TO THE TOP OF THE POLE SHALL BE A 102W LED LIGHTING FIXTURE LITHONIA #DSX1LED-P3-40K-T3M-1VOLT-SPUMBA-KMA-SF-DDBYD WITH "PER" PHOTOCCELL OR APPROVED EQUAL OR ALTERNATE ACCEPTABLE TO THE COUNTY.

F LIGHT POLE INSTALLATION DETAIL



POLE HEIGHT	A	B
8' - 12'	3'-0"	1'-0"
13' - 20'	4'-6"	1'-6"
21' - 25'	6'-0"	2'-0"

G LIGHTING POLE BASE DETAIL



801 Broad Street, Suite 900
Augusta, GA 30901
T 706.303.3272



ISSUE DATE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	09.03.2025

PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

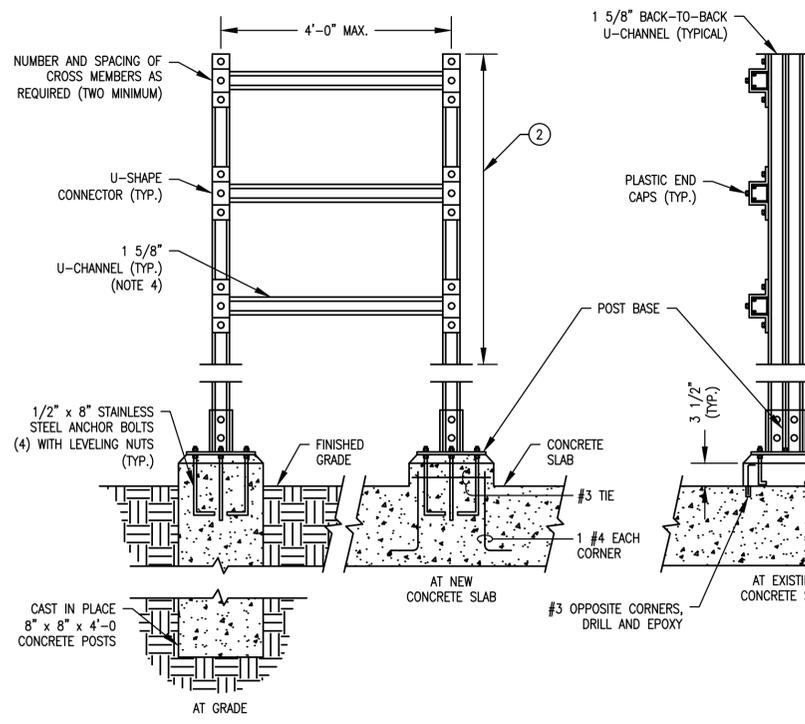
CAUG250007

NOT RELEASED FOR CONSTRUCTION

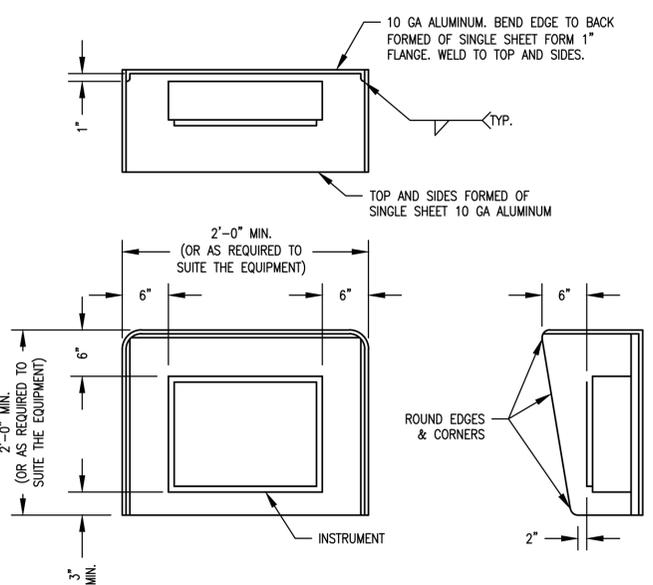


ELECTRICAL INSTALLATION DETAILS

E-901



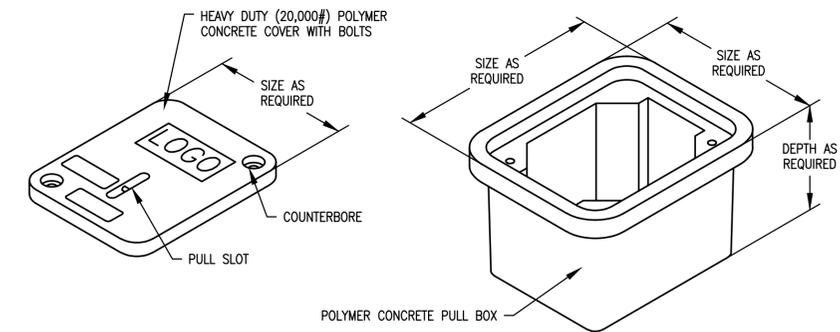
- NOTES:**
- EQUIPMENT RACK SHALL BE UTILIZED FOR MOUNTING THE FOLLOWING:
 - ONE EQUIPMENT ITEM WITH MOUNTING FOOTPRINT GREATER THAN 150 IN.
 - TWO EQUIPMENT ITEMS WITH COMBINED MOUNTING FOOTPRINT GREATER THAN 130 IN.
 - THREE OR MORE EQUIPMENT ITEMS.
 - EQUIPMENT SHALL BE MOUNTED SO THAT INDICATION, ADJUSTMENTS, OR OPERATING HANDLES ARE FOUR TO FIVE FEET ABOVE FLOOR OR PLATFORM.
 - REFER TO STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ANCHORAGE MATERIALS AND METHOD REQUIREMENTS.
 - EQUIPMENT RACK CHANNELS AND FITTINGS SHALL BE ALUMINUM.



- NOTES:**
- ALL EXPOSED EDGES TO BE GROUND SMOOTH AND BURR FREE.
 - MOUNT RAIN HOOD BETWEEN INSTRUMENT AND STANCHION. USE STAINLESS STEEL BOLTS AND INSULATING WASHERS AND SLEEVES.

A EQUIPMENT RACK

B SUN/RAIN HOOD FOR INSTRUMENTS AND CONTROL PANELS



- NOTES:**
- PULL BOX TO BE MADE WITH PRECAST POLYMER CONCRETE FIBERGLASS REINFORCED, STACKABLE WITH SELF-ALIGNING, REPLACEABLE EZ-NUT.
 - THE CONTRACTOR SHALL SIZE THE PULLBOXES BASED ON THE NUMBER OF CONDUITS. USE MANHOLES WHERE PULLBOX WIDTH/HEIGHT IS NOT SUFFICIENT TO ACCEPT ALL ENTERING/EXITING CONDUITS.
 - "LOGO" ENGRAVING SHALL READ "ELECTRICAL" FOR ALL ELECTRICAL/FIBER UNDERGROUND DUCTBANKS.

TIER TYPE	APPLICATION DESCRIPTION	NOTES
8	SIDEWALK APPLICATIONS, NOT EXPOSED TO ANY VEHICLE TRAFFIC	
15	OFF-ROADWAY APPLICATIONS SUBJECT TO OCCASIONAL NON-DELIBERATE VEHICLE TRAFFIC	
22	DRIVEWAY AND PARKING LOT APPLICATIONS SUBJECT TO OCCASIONAL NON-DELIBERATE HEAVY VEHICULAR TRAFFIC	
AASHTO H-20	DRIVEWAY, PARKING LOT, AND OFF-ROADWAY APPLICATIONS SUBJECT TO HEAVY VEHICLE TRAFFIC	UTILIZE PRECAST HANDHOLES FOR AASHTO H-20 APPLICATIONS

C UNDERGROUND PULL BOX

GMC

801 Broad Street, Suite 900
Augusta, GA 30901
T 706.303.3272



ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	

PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.5 MGD EXPANSION
For Piedmont Water Company
Greensboro, Georgia

CAUG25007
NOT RELEASED FOR CONSTRUCTION



**ELECTRICAL
INSTALLATION
DETAILS**

E-902