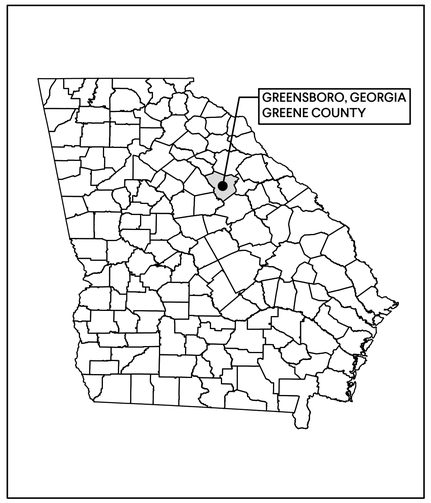
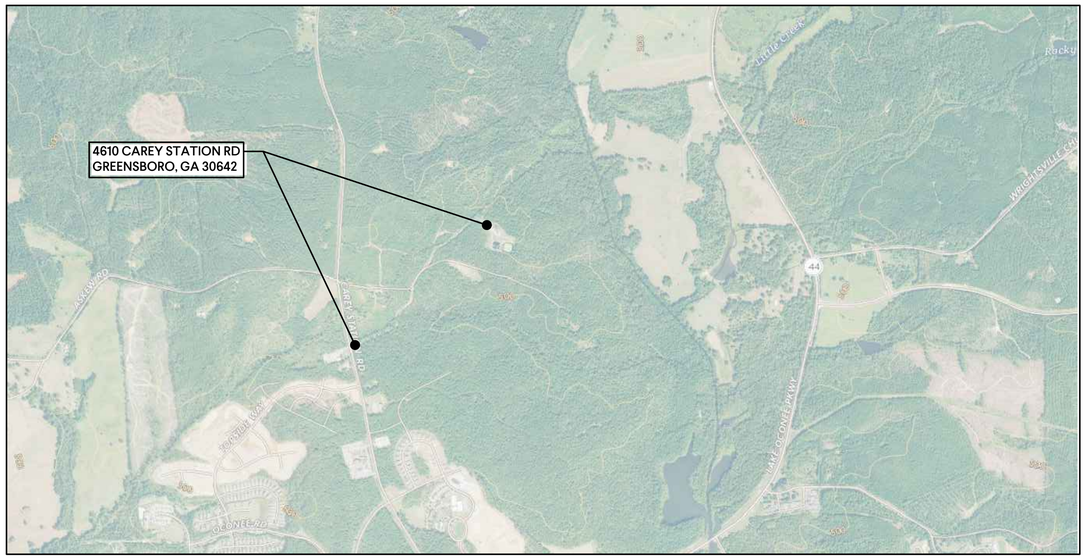
CAREY STATION URBAN WATER REUSE FACILITY 0.5 MGD TO 1.0 MGD EXPANSION

GREENE COUNTY, GEORGIA
GMC PROJECT #CAUG230002

PIEDMONT WATER COMPANY



LOCATION MAP:
STATE OF GEORGIA



VICINITY MAP

- *OWNER*
  PIEDMONT WATER COMPANY
  5170 PEACHTREE ROAD, BLDG. 100 STE. 120
  ATLANTA, GA 30341
  PH.: (706) 484-0848

- *24 Hour Contact*
  BRANDON DOW
  LAKESHORE ENGINEERING, LLC
  PH.: (404) 456-2054
  bdow@lakeshoreengineering.com

- *Site Contractor*
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  1259 ELLSWORTH DRIVE
  ATLANTA, GA 30318
  PH.: (404) 456-2054
  bdow@lakeshoreengineering.com

SEP 2025

CONFORMED SET

I certify that I have been in responsible charge of the design of this project in accordance with the rules of the Georgia State Board of Registration for Professional Engineers and Land Surveyors. I further certify, to the best of my knowledge and belief, that these plans and specifications were prepared in accordance with current standard engineering practices and accurately reflect the Design Development Report (DDR) previously reviewed and concurred in by EPD. I further certify that the system as designed can reasonably be expected to consistently meet all currently applicable permit limits, conditions, and regulatory requirements, provided the facility is constructed as designed and properly operated and maintained.

Liang Wang 09/03/2025
Liang Wang, PE

PROJECT TEAM

GOODWYN MILLS CAWOOD, LLC	Civil & Process Engineering
EDEC, INC	Electrical Engineering
KORNEGAY ENGINEERING, INC	Structural Engineering

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REVIEWS/PERMITS/ESM'T		SUBMIT	STATUS
1.	LAND DISTURBING ACTIVITY PERMIT	06.03.2024	RETURNED WITH REVIEW COMMENTS
2.	ES&PCP REVISIONS PER REVIEW COMMENTS	07.12.2024	APPROVED
3.	MINOR PLAN REVISIONS	10.04.2024	APPROVED
4.	MINOR PLAN REVISIONS	07.22.2025	APPROVED

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STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE | DATE

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100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
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CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 07/22/2025 No. PE037638 PROFESSIONAL ENGINEER Liang Wang LIANG WANG

COVER SHEET

G-001

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWGs+PLANS\01 Bid Drawings\REVISED SUBMITTAL_1.0 MGD\G-001 CAUG230002 Cover.dwg
PLOTTED: Jul 23, 2025 - 12:15pm

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DRAWN BY:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 07/22/2025 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

DRAWING INDEX

G-002

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PLOTTED: Jul 23, 2025 - 12:55pm

COMMON ABBREVIATIONS

A	AIR	DISTR	DISTRIBUTION	HP	HORSEPOWER	OD	OUTSIDE DIAMETER	RR	RAILROAD	VERT	VERTICAL
AB	ANCHOR BOLT	DL	DEAD LOAD	HR	HOUR	OF	OUTSIDE FACE OR OVERFLOW	RTN	RETURN	VP	VENT PIPE
AC	AIR CONDITIONING	DMJ	DUCTILE MECHANICAL JOINT	HS	HIGH STRENGTH	OPNG	OPENING	SALV	SALVAGE	VTR	VENT THROUGH ROOF
ACP	ASPHALTIC CONCRETE PAVING	DN	DOWN	HVAC	HEATING, VENTILATION, AIR CONDITIONING	OPP	OPPOSITE	SCFM	STANDARD CUBIC FEET PER MINUTE	W/	WITH
ADDL	ADDITIONAL	DWG	DRAWING	HW	HOT WATER	OPT	OPTIONAL	SCH	SCHEDULE	W/O	WITHOUT
ADDM	ADDENDUM	EA	EACH	HWL	HIGH WATER LEVEL	PC	POINT OF CURVE OF PORTLAND CEMENT	SCN	SCREENINGS	WC	WATER CLOSET
ADJ	ADJUSTABLE	ECC	ECCENTRIC	HWY	HIGHWAY	P&C	PIN AND CAP	SDR	STANDARD DIMENSION RATIO	WCO	WALL CLEANOUT
AFF	ABOVE FINISHED FLOOR	EF	EACH FACE OR ELECTRICAL FAN	HYD	HYDRANT	PCO	PRESSURE CLEAN OUT	SECT	SECTION	WD	WIDTH OR WOOD
AFS	AIR FLOW SWITCH	EJ	EXPANSION JOINT	ID	INSIDE DIAMETER	PCP	PROGRESSIVE CAVITY PUMP	SHLDR	SHOULDER	WDW	WINDOW
AHU	AIR HANDLING UNIT	EL	ELEVATION	IF	INSIDE FACE	PCR	POINT OF CURVE RETURN	SHT	SHEET	WF	WIDE FLANGE
AL	ALUMINUM	ELEC	ELECTRICAL	INCL	INCLUDED	PE	PLAIN END	SIM	SIMILAR	WH	WALL HYDRANT
ALT	ALTERNATE	ENGR	ENGINEER	INCR	INCREASER	PERM	PERMANENT	SOTE	STANDARD OXYGEN TRANSFER EFFICIENCY	WL	WIND LOAD
APPROX	APPROXIMATE	EOA	EDGE OF ASPHALT	INF	INFLUENT	PERP	PERPENDICULAR	SP	SPACE (ING)	WP	WEIR PLATE
ARCH	ARCHITECT(URAL)	EOP	EDGE OF PAVEMENT	INSTL	INSTALLATION	PI	POINT OF INTERSECTION	SPEC	SPECIFICATION	WS	WETTED SURFACE
ARV	AIR RELIEF VALVE	EQ	EQUAL	INSTR	INSTRUMENT	PL	PLATE OR PROPERTY LINE	SQ	SQUARE	WT	WEIGHT
ASME	AMERICAN SOCIETY MECHANICAL ENGINEERS	EQUIP	EQUIPMENT	INSUL	INSULATION	PLBG	PLUMBING	SQ FT	SQUARE FOOT	WWF	WELDED WIRE FABRIC
ASPH	ASPHALT	EQUIV	EQUIVALENT	INV	INVERT	PLYWD	PLYWOOD	SQ IN	SQUARE INCH	WWTP	WASTEWATER TREATMENT PLANT
ASSY	ASSEMBLY	ESMT	EASEMENT	INT	INTERIOR	PNT	PAINT	SQ YD	SQUARE YARD	X SECT	CROSS SECTION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	EST	ESTIMATE	INV EL	INVERT ELEVATION	POC	POINT ON VERTICAL CURVE	SRT	SOLIDS RETENTION TIME	XMR	TRANSFORMER
ATM	ATMOSPHERE	EUH	ELECTRIC UNIT HEATER	ISA	INSTRUMENT SOCIETY OF AMERICA	POLY	POLYETHYLENE	SST	STAINLESS STEEL	YCO	YARD CLEANOUT
ATS	AUTOMATIC TRANSFER SWITCH	EW	EACH WAY	JST	JOIST	PPM	PARTS PER MILLION	SST BT	STAINLESS STEEL BOLT	YH	YARD HYDRANT
AUTO	AUTOMATIC	EWS	EQUIPMENT WATER STATION	JTS	JOINTS	PREFAB	PREFABRICATED	ST	STREET		
AVS	AUTOMATIC VALVE STATION	EXP JT	EXPANSION JOINT	KO	KNOCKOUT	PREFIN	PREFINISHED	STA	STATION		
AWG	AMERICAN WIRE GAGE	EXST	EXISTING	KWY	KEYWAY	PRELIM	PRELIMINARY	STD	STANDARD		
BE	BELL END	EXST GR	EXISTING GRADE	L	LEFT OR LITER	PREP	PREPARATION	STL	STEEL		
BF	BOTTOM FACE	EXT	EXTERIOR	LAB	LABORATORY	PROJ	PROJECT	STL JST	STEEL JOIST		
BFD	BUTTERFLY DAMPER	F/F	FACE TO FACE	LAV	LAVATORY	PROP	PROPERTY	STL PL	STEEL PLATE		
BFV	BUTTERFLY VALVE	FA	FOUL AIR	LB(S)	POUND(S)	PRS	PRESSURE REDUCING STATION	STRUCT	STRUCTURAL		
BLDG	BUILDING	FAD	FOUL AIR DUCT	LEL	LOW EXPLOSIVE LIMIT	PRV	PRESS. REDUCING VALVE OR PRESS. RELIEF VALVE	SV	SOLENOID VALVE		
BLK	BLOCK	FCA	FLANGE COUPLING ADAPTER	LF	LINEAR FOOT	PS	PIPE SUPPORT	SVC	SERVICE		
BLM	BUREAU OF LAND MANAGEMENT	FCS	FLUSH CONTROL STATION	LL	LIVE LOAD OR LOOSE LINTEL	PSF	POUNDS PER SQUARE FOOT	SWD	SIDE WATER DEPTH		
BM	BENCH MARK	FD	FLOOR DRAIN	LOC	LOCATION	PSI	POUNDS PER SQUARE INCH	SYMM	SYMMETRICAL		
BOD	BIOCHEMICAL OXYGEN DEMAND	FDN	FOUNDATION	LP	LOW PRESSURE OR LIGHT POLE	PSIA	POUNDS PER SQUARE INCH ABSOLUTE	SYS	SYSTEM		
BOT	BOTTOM	FES	FLARED END SECTION	LR	LONG RADIUS	PSIG	POUNDS PER SQUARE INCH GAGE	T&B	TOP AND BOTTOM		
BU	BELL UP	FF EL	FINISH FLOOR ELEVATION	LS	LICENSED SURVEYOR	PSV	PRESSURE SUSTAINING VALVE	T&G	TONGUE AND GROOVE		
BV	BALL VALVE	FH	FIRE HYDRANT	LT	LIGHT	PT	POINT OR POINT OF TANGENCY	T&P	TEMPERATURE AND PRESSURE		
C/C	CENTER TO CENTER	FIN	FINISH	LT WT	LIGHTWEIGHT	PV	PLUG VALVE	T	TEE		
CCP	CONCRETE CYLINDER PIPE	FIN FL	FINISH FLOOR	LWL	LOW WATER LEVEL	PVC	POLYVINYL CHLORIDE OR POINT OF VERTICAL CURVE	TB	TOP OF BEAM		
CCW	COUNTER CLOCKWISE	FIN GR	FINISH GRADE	MAINT	MAINTENANCE	PVG	PAVING	TBM	TEMPORARY BENCH MARK		
CFM	CUBIC FEET PER MINUTE	FL	FLANGE	MAN	MANUAL	PVI	POINT OF VERTICAL CURVE INTERSECTION	TE	TOP ELEVATION		
CHKV	CHECK VALVE	FLR	FLOOR	MATL	MATERIAL	PVMT	PAVEMENT	TEMP	TEMPORARY		
CIP	CAST IRON PIPE	FPM	FEET PER MINUTE	MAX	MAXIMUM	Q AVG	AVERAGE DAILY FLOW	TFA	TO FLOOR ABOVE		
CISP	CAST IRON SOIL PIPE	FPS	FEET PER SECOND	MCC	MOTOR CONTROL CENTER	Q MAX	MAXIMUM DAILY FLOW	TFB	TO FLOOR BELOW		
CJ	CONSTRUCTION JOINT	FRP	FIBERGLASS REINFORCED PLASTIC	MECH	MECHANICAL	Q PEAK	PEAK HOUR FLOW	TFF	TOP OF FINISH FLOOW		
CL	CENTER LINE OR CHAIN LINK	FT	FEET	MED	MEDIUM	QTR	QUARTER	TH	TEST HOLE		
CLR	CLEAR	FTG	FOOTING OR FITTING	MFM	MAGNETIC FLOW METER	QTY	QUANTITY	THD	THREAD (ED)		
CMP	CORRUGATED METAL PIPE	G	GAS	MFR	MANUFACTURER	RAD	RADIUS	THK	THICK		
CMU	CONCRETE MASONRY UNIT	GA	GAUGE	MG	MILLION GALLONS OR MILLIGRAMS	RC	REINFORCED CONCRETE	TJ	TOP OF JOIST		
CO	CLEAN OUT	GAL	GALLON	MGD	MILLION GALLONS PER DAY	RCP	REINFORCED CONCRETE PIPE	TOA	TOP OF ASPHALT		
CONC	CONCRETE	GALV	GALVANIZED	MGMT	MANAGEMENT	RD	ROOF DRAIN	TOC	TOP OF CONCRETE OR TOP OF CURB		
CONN	CONNECTION	GND	GROUND	MH	MANHOLE	RECT	RECTANGULAR	TOE	THREADED ONE END		
CONSTR	CONSTRUCTION	GPD	GALLONS PER DAY	MIN	MINIMUM	RED	REDUCER	TOF	TOP OF FOOTING		
CONT	CONTINUOUS(ATION)	GPM	GALONS PER MINUTE	MISC	MISCELLANEOUS	RE:	REFER TO	TOS	TOP OF STEEL		
COR	CORNER	GR	GRIT	MJ	MECHANICAL JOINT	REF	REFERENCE	TOW	TOP OF WALL		
CPLG	COUPLING	GRC	GALVANIZED RIGID CONDUIT	MNPT	MALE NATIONAL PIPE THREAD	REHAB	REHABILITATION	TP	TOP OF PAVEMENT		
CPVC	CHLORINATED POLYVINYL CHLORIDE	GSP	GALVANIZED STEEL PIPE	MO	MASONRY OPENING	REINF	REINFORCE (D) (ING) (MENT)	TSL	TOP OF SLAB		
CTR	CENTER	GV	GATE VALVE	MRGB	MOISTURE RESISTANT GYPSUM WALL BOARD	REQD	REQUIRED	TSS	TOTAL SUSPENDED SOLIDS		
CV	CHECK VALVE	GW	GROUNDWATER	MTG	MOUNTING	RESIL	RESILIENT	TYP	TYPICAL		
CW	COLD WATER	GWB	GYPSUM WALL BOARD	NA	NOT APPLICABLE	RFCA	RESTRAINED FLANGED COUPLING ADAPTER	UBC	UNIFORM BUILDING CODE		
CY	CUBIC YARDS	GYP	GYPSUM	NIC	NOT IN CONTRACT	RH	RIGHT HAND	UGE	UNDERGROUND ELECTRIC		
DBIO	DEWATERED BIOSOLIDS	HB	HOSE BIBB	NPL	NAMEPLATE	RM	ROOM	ULT	ULTIMATE		
DEMO	DEMOLITION	HDWL	HEADWALL	NPT	NATIONAL PIPE THREAD	RO	ROUGH OPENING	UN	UNION		
DIA	DIAMETER	HNDRL	HAND RAIL	NRS	NON-RISING STEM	ROW	RIGHT OF WAY	UNGD	UNDERGROUND		
DIM	DIMENSION	HNDWL	HAND WHEEL	NTS	NOT TO SCALE	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER	VB	VALVE BOX		
DIP	DUCTILE IRON PIPE	HORIZ	HORIZONTAL	OC	ON CENTER	RPM	REVOLUTIONS PER MINUTE	VCP	VITRIFIED CLAY PIPE		

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GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026
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DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 07/22/2025 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

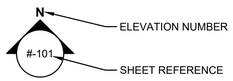
ABBREVIATIONS

G-003

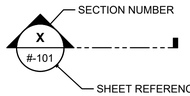
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GRAPHICS LEGEND

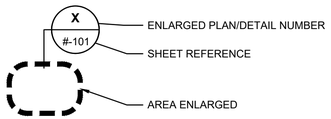
ELEVATION INDICATOR



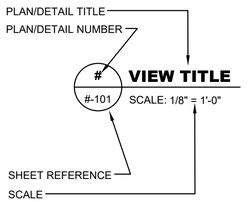
SECTION INDICATOR



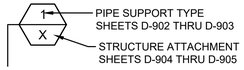
ENLARGED PLAN/DETAIL INDICATOR



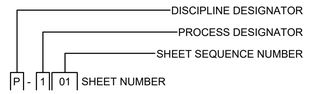
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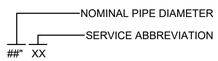
PIPE SUPPORT INDICATOR



SHEET NUMBERING



PIPE LINE IDENTIFICATION



PROCESS DESIGNATORS

PROCESS SHEETS (WASTEWATER)	DESIGNATOR
NOTES, LEGEND, ABBREVIATIONS, DEMOLITION, EXISTING CONDITIONS, ETC.	0
PRELIMINARY TREATMENT	1
PRIMARY TREATMENT	2
BIOLOGICAL TREATMENT	3
SECONDARY TREATMENT	4
TERTIARY TREATMENT	5
DISINFECTION AND EFFLUENT PUMPING	6
SLUDGE STORAGE AND PROCESSING	7
MISCELLANEOUS SYSTEMS	8
DETAILS / SCHEDULES	9

CIVIL DESIGNATORS

CIVIL	DESIGNATOR
NOTES, LEGEND, ABBREVIATIONS, DEMOLITION, EXISTING CONDITIONS, ETC.	0
SITE PLAN AND GEOMETRIC CONTROLS	1
GRADING AND DRAINAGE	2
UTILITIES/YARD PIPING	3
ROAD PLAN AND PROFILES (IF REQUIRED)	4
ROAD CROSS SECTIONS (IF REQUIRED)	5
SEDIMENT AND EROSION CONTROL	6
RESERVED	7
RESERVED	8
DETAILS / SCHEDULES	9

OWNER

DESCRIPTION	NAME	PHONE NUMBER	EMAIL ADDRESS
CHIEF OPERATING OFFICER	BRENT HURST	706.484.0848	bhurst@piedmontwater.com
PROJECT MANAGER	MARK PITTARD	770.402.8452	mpittard@piedmontwater.com
OPERATIONS SUPERVISOR	STEVE MORELLI	706.816.0336	smorelli@piedmontwater.com
INSPECTOR	TBD	TBD	TBD

CONTRACTOR

DESCRIPTION	NAME	PHONE NUMBER	EMAIL ADDRESS
PROJECT MANAGER	BRANDON DOW	(404) 456-2054	bdow@lakeshoreengineering.com
SUPERINTENDENT	MICHAEL BOWEN	(404) 838-7375	mbowen@lakeshoreengineering.com

ENGINEER

DESCRIPTION	NAME	PHONE NUMBER	EMAIL ADDRESS
PROJECT MANAGER	MARVIN PIERRE	757.636.7859	marvin.pierre@gmcnetwork.com
ENGINEER	LIANG WANG	315.256.3222	liang.wang@gmcnetwork.com
ENGINEER	DANIEL PHILLIPS	706.829.4598	daniel.phillips@gmcnetwork.com

PIPE SYMBOLS

DESCRIPTION	SINGLE LINE	DOUBLE LINE
EXISTING BURIED PIPE		
EXISTING ABOVE GRADE PIPE		
NEW BURIED PIPE		
NEW ABOVE GRADE PIPE		
WELDED JOINT		
FLANGED JOINT		
FLANGED ADAPTOR		
FLANGED COUPLING		
MECHANICAL JOINT		
JOINT		
EXPANSION JOINT		

HATCHING LEGEND

DESCRIPTION	EXISTING	PROPOSED
ASPHALT PAVING (PLAN)		
ALUMINUM GRATING		
CONCRETE (ELEVATION)		
CONCRETE (PLAN)		
CONCRETE (SECTION)		
CRUSHED STONE (SECTION)		
EARTH OR BACKFILL (SECTION)		
GRAVEL DRIVE (PLAN)		
GROUT FILL (PLAN & SECTION)		
LAKE, RIVER OR POND (PLAN)		
REMOVAL OR DEMOLITION (PLAN & SECTION)		
UNPAVED DRIVE (PLAN)		

DISCIPLINE DESIGNATORS

DISCIPLINE	DESIGNATOR
GENERAL	G
HAZARDOUS MATERIALS	H
INSTRUMENTATION	I
DEMOLITION	X
SURVEY/MAPPING	V
GEOTECHNICAL	B
CIVIL	C
LANDSCAPE	L
STRUCTURAL	S
ARCHITECTURAL	A
FIRE PROTECTION	F
MECHANICAL	M
PLUMBING	P
PROCESS	D
ELECTRICAL	E

GENERAL NOTES

1. THE CONTRACTOR IS EXPECTED TO CAREFULLY EXAMINE THE PLANS, PROPOSAL AND SITE OF THE WORK. THEREFORE, IT WILL BE ASSUMED THAT THE BIDDER HAS SATISFIED HIMSELF AS TO THE CONDITIONS TO BE ENCOUNTERED IN REGARDS TO THE CHARACTER, QUALITY, AND QUANTITIES OF WORK TO BE PERFORMED AND MATERIALS TO BE FURNISHED, AND AS TO THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS, SPECIAL PROVISIONS AND CONTRACT. THE SUBMISSION OF A PROPOSAL BY A BIDDER WILL BE CONSIDERED PRIMA FACIE EVIDENCE THAT THE BIDDER HAS MADE SUCH AN EXAMINATION.
2. THE CONTRACTOR IS REQUIRED TO MAINTAIN AN AS-BUILT SET OF DRAWINGS DURING PROJECT CONSTRUCTION. THE COMPLETE AS-BUILT MAP WILL CONTAIN ALL INSTALLED ELECTRICAL, STRUCTURAL ENTITIES, LINES, VALVES, METERS, AND CONNECTIONS WITH REFERENCE DISTANCES TO PERMANENT ABOVE GROUND STRUCTURES.
3. ALL EXISTING UTILITIES SHOWN ABOVE AND BELOW GROUND ARE APPROXIMATE AND ARE NOT NECESSARILY ALL THAT EXIST. THE DETERMINATION OF THE EXISTENCE, LOCATION, AND DEPTH OF ALL UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED BY CONTRACTOR FOR ONE YEAR AFTER ACCEPTANCE BY THE OWNER PER SPECIFICATION 011000.
5. IN THE EVENT THAT THERE IS A DISCREPANCY BETWEEN THE CIVIL DRAWINGS AND THE ARCHITECTURAL/STRUCTURAL DRAWINGS, THE ARCHITECTURAL/STRUCTURAL DRAWINGS SHALL HAVE PRECEDENCE. THE CONTRACTOR SHALL ADVISE THE ENGINEER OF ANY CONFLICT IN THE PLANS/SPECS FOR CLARIFICATION PRIOR TO BID. SHOULD CONFLICTING DOCUMENTS NOT BE CLARIFIED AT THE REQUEST OF THE BIDDING CONTRACTOR, THE MORE COSTLY ALTERNATIVE AS IDENTIFIED IN THE PLAN & SPECS SHALL BE INCLUDED IN THE PRICE BID.
6. ALL HAZARDOUS SUBSTANCES USED FOR THIS PROJECT, INCLUDING, BUT NOT LIMITED TO, PAINT, OIL, GREASE, AND OTHER PETROLEUM PRODUCTS SHALL BE STORED IN ACCORDANCE WITH "SPILL PREVENTION, CONTROL & COUNTERMEASURE" REGULATIONS. THESE SUBSTANCES SHALL BE STORED AWAY FROM STORM DRAINS, DITCHES, AND GUTTERS IN WATERTIGHT CONTAINERS. DISPOSAL OF THESE SUBSTANCES SHALL BE IN ACCORDANCE WITH STATE & FEDERAL AGENCY REGULATIONS. CONTRACTOR SHALL PROVIDE ADEQUATE TRASH CONTAINERS ON SITE FOR THE DISPOSAL OF CONSTRUCTION MATERIALS WASTE. CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY TRASH OR OTHER POLLUTANTS FROM ENTERING STORM DRAINS & WATERS OF THE STATE.

GMC
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Augusta, GA 30901
T 706.303.3272

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

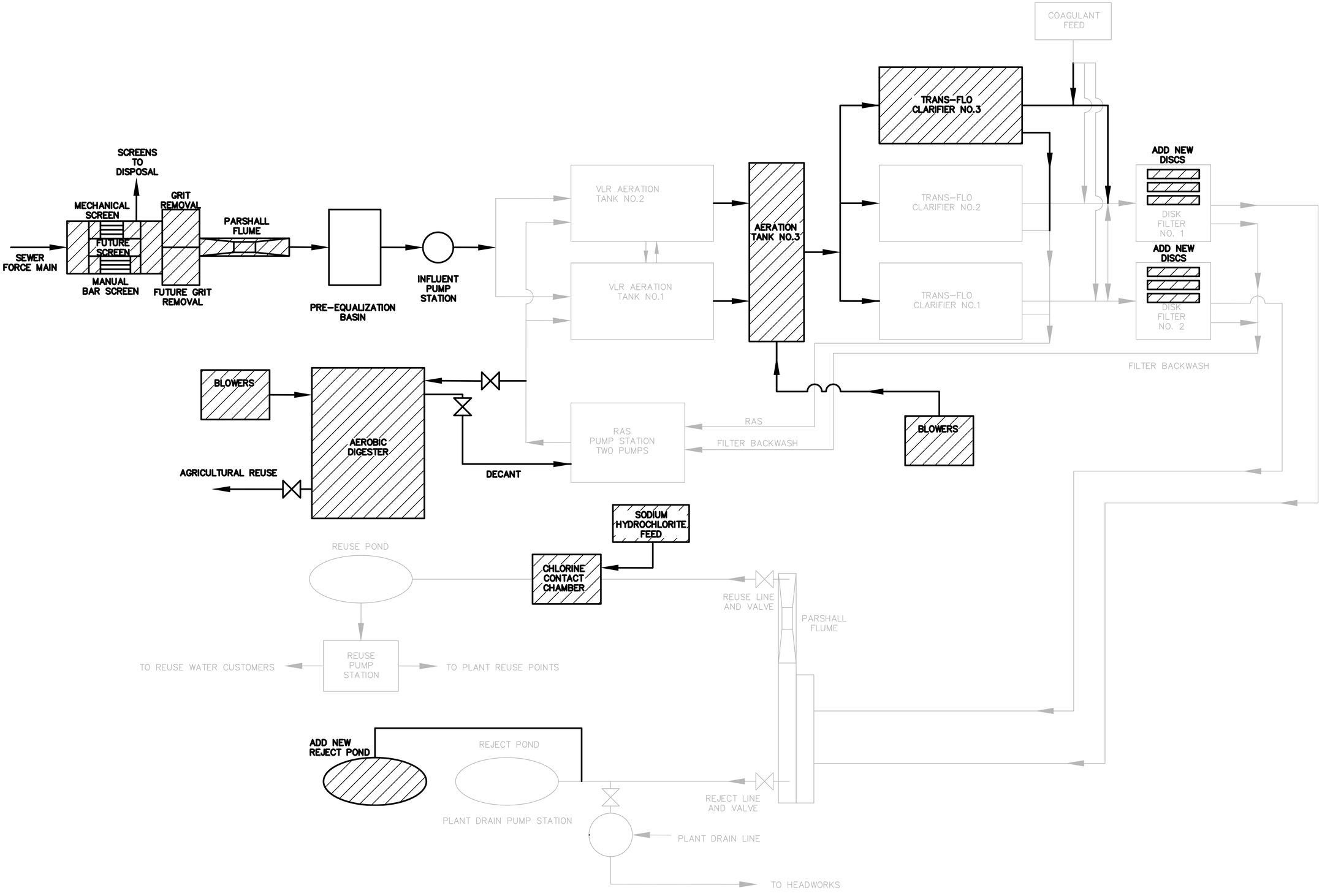
GMC Project #CAUG230002

GEORGIA REGISTERED 07/22/2025 No. PE037638 PROFESSIONAL ENGINEER Liang Wang LIANG WANG

GENERAL NOTES, LEGENDS, SYMBOLS, & LOCATION MAP

G-004

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GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
STATE OF GEORGIA
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE	
60% SUBMITTAL	03.15.2024	
90% SUBMITTAL	05.13.2024	
100% SUBMITTAL	10.04.2024	
BID SET	09.03.2025	
CONFORMED SET		
PROJECT MANAGER:		MP
ENGINEER:		LW/DP
DESIGNER:		LW
DRAWN BY:		DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA
REGISTERED
10/04/2024
No. PE037638
PROFESSIONAL
ENGINEER
LIANG WANG

PROCESS FLOW DIAGRAM

G-005

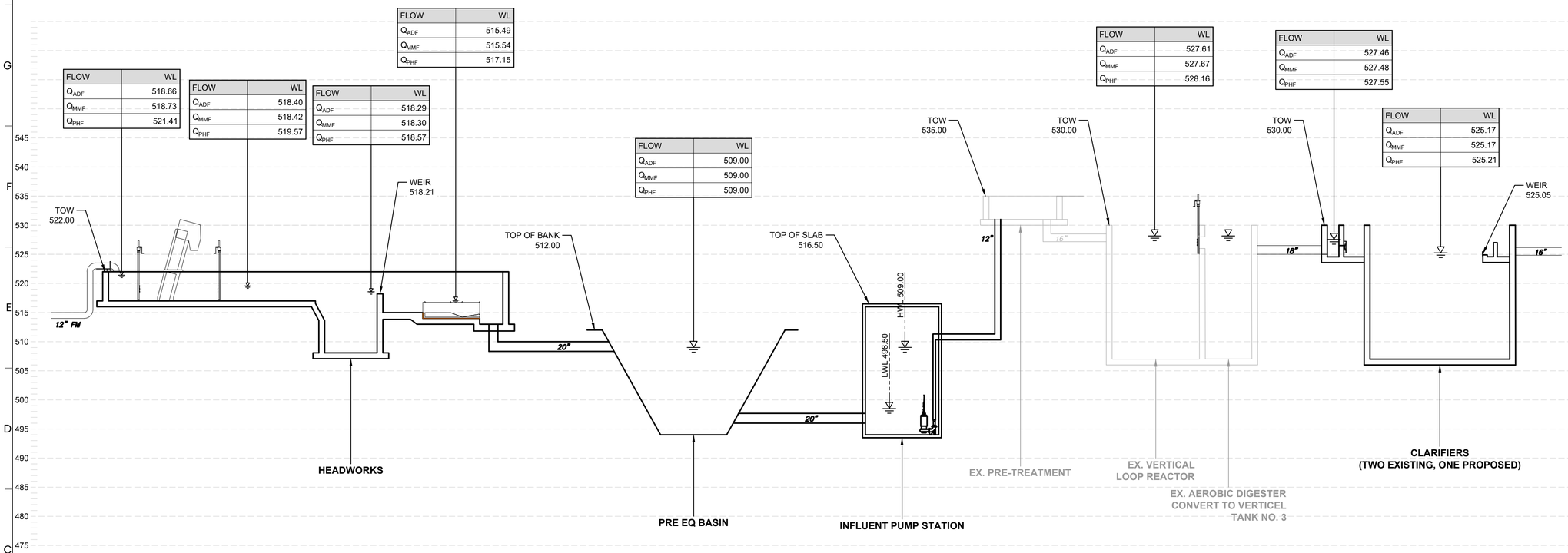
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PLOTTED: Oct 04, 2024 - 3:58pm

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HYDRAULIC PROFILE NOTES:

1. THE 100 YEAR FLOOD ELEVATION IS NOT SHOWN ON THE HYDRAULIC PROFILE BECAUSE THERE IS NO BASE FLOOD ELEVATION WITHIN THE TREATMENT FACILITY PROPERTY.
2. THE WATER LEVELS ARE BASED OFF THE PROCESS EQUIPMENT SHOWN ON THE DRAWINGS, BASED ON EQUIPMENT SELECTED BY ENGINEER AND INFORMATION AVAILABLE TO ENGINEER.
3. THE WATER LEVEL ELEVATIONS SHOWN ARE BASED ON FLOW RATES AS INDICATED IN THE TABLE BELOW THROUGH THE TREATMENT FACILITY.

LEGEND	
Average Daily Flow (Q_{ADF})	0.87 MGD
Maximum Monthly Flow (Q_{MMF})	1.0 MGD
Peak Hourly Flow (Q_{PHF} Before EQ Basin)	4.2 MGD
Peak Hourly Flow (Q_{PHF} After EQ Basin)	2.0 MGD



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STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
60% SUBMITTAL	03.15.2024
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG
Liang Wang

HYDRAULIC PROFILE (1 OF 2)

G-006

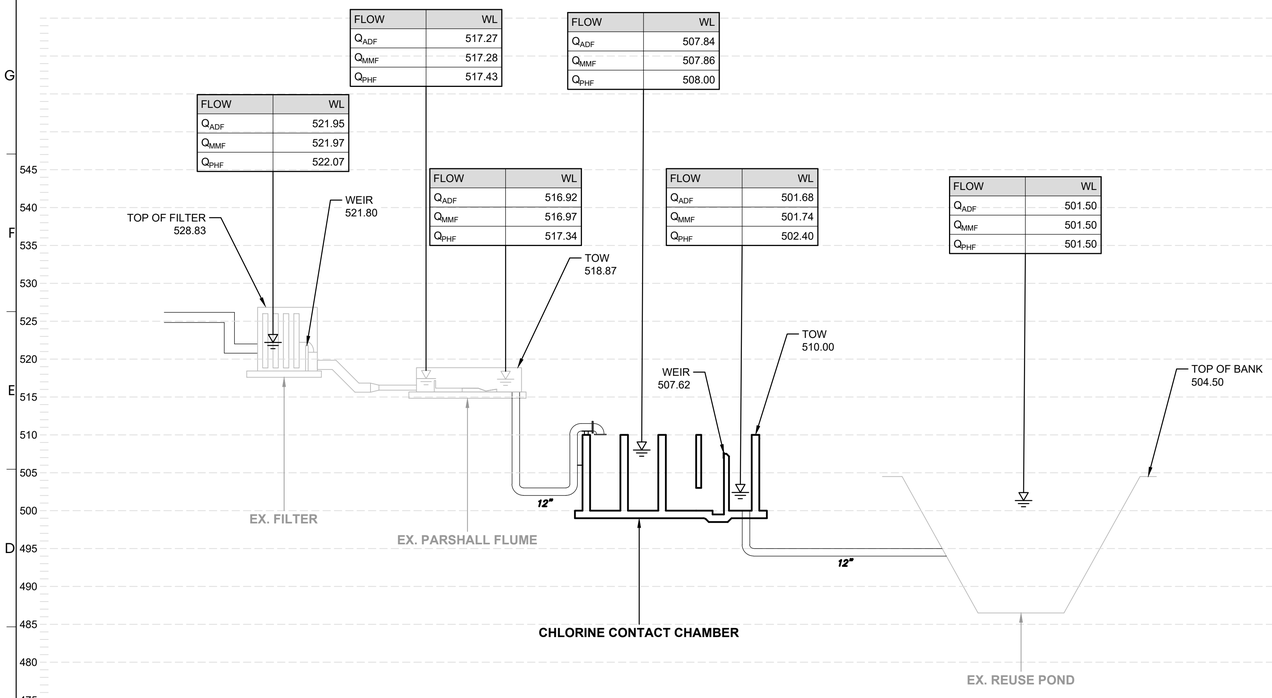
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PLOTTED: Oct 04, 2024 - 3:58pm

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HYDRAULIC PROFILE NOTES:

1. THE 100 YEAR FLOOD ELEVATION IS NOT SHOWN ON THE HYDRAULIC PROFILE BECAUSE THERE IS NO BASE FLOOD ELEVATION WITHIN THE TREATMENT FACILITY PROPERTY.
2. THE WATER LEVELS ARE BASED OFF THE PROCESS EQUIPMENT SHOWN ON THE DRAWINGS, BASED ON EQUIPMENT SELECTED BY ENGINEER AND INFORMATION AVAILABLE TO ENGINEER.
3. THE WATER LEVEL ELEVATIONS SHOWN ARE BASED ON FLOW RATES AS INDICATED IN THE TABLE BELOW THROUGH THE TREATMENT FACILITY.

LEGEND	
Average Daily Flow (Q_{ADF})	0.87 MGD
Maximum Monthly Flow (Q_{MMF})	1.0 MGD
Peak Hourly Flow (Q_{PHF} Before EQ Basin)	4.2 MGD
Peak Hourly Flow (Q_{PHF} After EQ Basin)	2.0 MGD



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STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" 1"
.5"

ISSUE	DATE
60% SUBMITTAL	03.15.2024
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA
REGISTERED
10/04/2024
No. PE037638
PROFESSIONAL
Liang Wang
ENGINEER
LIANG WANG

HYDRAULIC PROFILE (2 OF 2)

G-007

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DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWGs+PLANS\01 Bid Drawings\01 GENERAL\G-006 CAUG230002 Hydraulic Profile.dwg
PLOTTED: Oct 04, 2024 - 3:59pm

PROCESS PIPING

SERVICE ABBREVIATION	DESCRIPTION (SEE NOTE 1)	PIPE MATERIAL (SEE SCHEDULE TO RIGHT)				FIELD TESTING REQUIREMENTS (SEE NOTE 4& DEVIATION TABLE)		
		EXPOSED PIPING (SEE NOTE 2)		BURIED PIPING (SEE NOTE 3)				
		3" DIA & SMALLER	4" DIA & LARGER	3" DIA & SMALLER	4" DIA & LARGER	MIN TEST PRESSURE (PSI)	TESTING MEDIUM	LEAKAGE ALLOWANCE
A	AIR	8	8	1,8	5	25	AIR	NOTE 8
AL	ALUM	9	9	9	9	125	WATER	NOTE 7
BR	BRINE			-				
BW	BACKWASH	-	5	-	5	NOTE 9	WATER	NOTE 7
BWW	BACKWASH WASTE	-	5		5	75	WATER	NOTE 7
C	CARBON	NOTE 11	NOTE 11	NOTE 11	NOTE 11	125	-	NOTE 7,11
CD	CHEMICAL DRAIN	10	10	10	10	NOTE 10	-	
CEN	CENTRATE	-	4,5	-	4,5	75	WATER	NOTE 7
CL	CHLORINE	4	1	4	1	150	AIR	NOTE 7
CLS	CHLORINE SOLUTION	9	9	9	9	125	WATER	NOTE 7
CPA	COMPRESSED AIR	7,13	2	13	2	200	AIR	NOTE 7,8
CWR	COOLING WATER RETURN	8,13	4,8	2,9,13	4,5	125	WATER	NOTE 7
CWS	COOLING WATER SUPPLY	8,13	4,8	2,9,13	4,5	125	WATER	NOTE 7
D	DRAIN	9	5	9	5	NOTE 10	-	
DS	DIGESTED SLUDGE	-	5	-	5	125	WATER	NOTE 7
FE	FILTER EFFLUENT	2,7,13	5	2,13	5	25	WATER	NOTE 7
FG	FEED GAS	7	7	7	7	125	AIR	NOTE 7
FM	FORCE MAIN	-	5	-	5,12	125	WATER	NOTE 7
FNE	FINAL EFFLUENT	-	5	-	5	125	WATER	NOTE 7
FOG	FOUL AIR GAS	11	11	11	11	125	AIR	NOTE 7
GR	GRIT SLURRY	-	15	-	17	125	WATER	NOTE 10
HCl	HYDROCHLORIC ACID	9	9	9	9	125	WATER	NOTE 7
HOCL	SODIUM HYPOCHLORITE	9	9	9	9	125	WATER	NOTE 7
LS	LIME SYSTEM	NOTE 11	NOTE 11	NOTE 11	NOTE 11	125	-	NOTE 7
LSG	LOW PRESSURE SLUDGE GAS	7	7	7	7	125	AIR	NOTE 7
ML	MIXED LIQUOR	-	4,5	-	4,5	125	WATER	NOTE 7
NAOH	SODIUM HYDROXIDE (CAUSTIC)	9	9	9	9	125	WATER	NOTE 7
NG	NATURAL GAS	2,7,13	1	2,7,13	1	150	AIR	NOTE 7
NPW	NON-POTABLE WATER		5	2,9,13	5	125	WATER	NOTE 7
OF	OVERFLOW	-	5	-	5	NOTE 9	WATER	NOTE 7
OFG	OFF GAS	7	7	7	7	125	AIR	NOTE 7
PA	PLANT AIR	1	-	1	-	300	AIR	NOTE 7,8
PAC	POLY ALUMINUM CHLORIDE	9	9	9	9	125	WATER	NOTE 7
PD	PUMPED DRAIN	2,9	2,5	2,9	5,9	125	WATER	NOTE 7
PE	PRIMARY EFFLUENT	-	16	-	16	125	WATER	NOTE 7
POL	POLYMER SOLUTION	9	-	9	-	125	WATER	NOTE 7
PS	PRIMARY SLUDGE	-	15	-	17	125	WATER	NOTE 7
PSC	PRIMARY SCUM	15	15	15	15	125	WATER	NOTE 7
RAS	RETURN ACTIVATED SLUDGE	-	5	-	5	125	WATER	NOTE 7
RCS	RECIRCULATED SLUDGE	-	5	-	5	125	WATER	NOTE 7
RUW	REUSE WATER	-	5	-	5	125	WATER	NOTE 7
RWW	RAW WASTEWATER	-	16	-	16	125	WATER	NOTE 7
SA	SAMPLE WATER	8, 9,11,13	-	9,11,13	-	125	WATER	NOTE 7
SE	SECONDARY EFFLUENT	-	5	-	5	125	WATER	NOTE 7
SN	SUPERNATANT	9		9	5	75	WATER	NOTE 7
SP	SODIUM PERMANGANATE	9	-	9	-	125	WATER	NOTE 7
SS	SANITARY SEWER	6	6	6	6	125	WATER	
SSC	SECONDARY SCUM	15, 17	15, 17	15, 17	15, 17	125	WATER	NOTE 7
SSL	SECONDARY SLUDGE	-	5	-	5	125	WATER	NOTE 7
TD	TANK DRAIN	-	5	-	5	75	WATER	NOTE 7
TWAS	THICKENED WASTED ACTIVATED SLUDGE	-	16	-	16	125	WATER	NOTE 7
V	VENT	9	9	-	-	125	WATER	
VAC	VACUUM	2, 8	3,8	-	-	125	AIR	NOTE 7
W	WATER	2,7,13	5	2,9,13	5	125	WATER	NOTE 7
WAS	WASTE ACTIVATED SLUDGE	-	16	-	16	125	WATER	NOTE 7
WW	WASTE WASHWATER	-	5	-	5	125	WATER	NOTE 7

PROCESS PIPING MATERIAL SCHEDULE (NOTE 5, NOTE 6)

GROUP NO.	PIPE MATERIAL	SPECIFICATION SECTION	FITTINGS	COMMENTS
1	STEEL, ASTM A53, SCH 40, BLACK, WELDED	40 05 24	3" AND SMALLER, MALLEABLE IRON, ANSIB16.3, THREADED BLASK 150 PSI OR STEEL ANSIB16.9 BUTT-WELDED 4" AND LARGER, CAST IRON, ANSIB16.1, FLANGED OR MECH COUPLING	
2	STEEL, ASTM A53, SCH 40, GALVANIZED	40 05 24	3" AND SMALLER, MALLEABLE IRON, ANSIB16.3, THREADED GALVANIZED 150 PSI 4" AND LARGER, CAST IRON, ANSIB16.1, FLANGED OR MECH COUPLING	
3	WELDED STEEL,AWWA C200, UNLINED	40 05 24	WELDED STEEL, AWWA C200 FABRICATED, UNLINED	
4	WELDED STEEL,AWWA C200,	40 05 24	WELDED STEEL, AWWA C200 FABRICATED,	
5	DUCTILE IRON, AWWA C151, 150 PSI, PUSH-ON, MECHANICAL JOINT OR 125 PSI FLANGED, UNLINED FOR AIR LINES	40 05 19	DUCTILE IRON AWWA 110, PUSH-ON, MECHANICAL JOINT 250 PSI (PR), 12" AND SMALLER, 150 SSI (PR). FLANGED JOINTS 125PSI ANSI B16.1	
6	CAST IRON SOIL PIPE ASTM A74, SERVICE WEIGHT, BELL & SPIGOT OR NO-HUB, SYSTEM 5 MAY BE SUBSTITUTED	40 05 19	CAST IRON ASTM A74, SERVICE WEIGHT, BELL & SPIGOT OR NO-HUB, SYSTEM 5 MAY BE SUBSTITUTED	
7	STAINLESS STEEL, TYPE 316, ASTM A312, SCHEDULE 40	40 05 23	STAINLESS STEEL TYPE 316, ANSI B16.3, THREADED, 150 PSI, ANSIB16.9, BUTT-WELDED SCH 40 OR 150 PSI FLANGED	
8	STAINLESS STEEL, TYPE 304, ASTM A312, SCHEDULE 10S	40 05 23	STAINLESS STEEL TYPE 304, ANSIB16.9, BUTT-WELDED SCH 10S OR 150 PSI FLANGED	
9	POLYVINYL CHLORIDE (PVC), SCHEDULE 80, ASTM D1785	40 05 31	PVC SCHEDULE 80, ASTM D2467 SOCKET SOLVENT WELD JOINTS	
10	POLYPROPYLENE, ASTMD2146, SCHEDULE 40, HEAT FUSED JOINTS	40 05 31	POLYPROPYLENE, SCHEDULE 40, DRAINAGE TYPE WITH HEAT FUSED SOCKET JOINTS	
11	FIBERGLASS REINFORCED PLASTIC (FRP), ASTMD2996, FILAMENT WOUND SOCKET AND SPIGOT JOINTS, ADHESIVE BONDED	40 05 36	FRP, FILAMENT WOUND, SOCKET ENDS, ADHESIVE BONDED OR FIBERGLASS FLANGES	
12	POLYVINYL CHLORIDE (PVC) PRESSURE PIPE ASTM D2241, WITH BELL & SPIGOT JOINTS	40 05 31	DUCTILE IRON, AWWA C110, CEMENT LINED, AWWA C104	
13	COPPER, ASTM B88, TYPE K, SOFT TEMPERED WHERE BURIED, HARD TEMPERED WHERE EXPOSED	40 05 17	WROUGHT COPPER ANSIB16.22 SOLDER JOINT, 150 PSI OR COMPRESSION FITTINGS (FOR COMPRESSED AIR USE TIN-ANTIMONY SOLDER)	
14	HDPE DR 9 FOR PRESSURE RATING 150 PSI OR MORE, OTHERWISE DR17	40 05 33	HDPE FABRICATED OR MOLDED	
15	DUCTILE IRON(GLASS LINED), AWWA C151, 150 PSI, PUSH-ON, MECHANICAL JOINT OR 125 PSI FLANGED	40 05 19	DUCTILE IRON AWWA 110, PUSH-ON, MECHANICAL JOINT 250 PSI (PR), 12" AND SMALLER, 150 SSI (PR). FLANGED JOINTS 125PSI ANSI B16.1	
16	DUCTILE IRON(CERAMIC EPOXY LINED), AWWA C151, 150 PSI, PUSH-ON, MECHANICAL JOINT OR 125 PSI FLANGED	40 05 19	DUCTILE IRON AWWA 110, PUSH-ON, MECHANICAL JOINT 250 PSI (PR), 12" AND SMALLER, 150 SSI (PR). FLANGED JOINTS 125PSI ANSI B16.1	
17	STEEL (GLASS LINED), AWWA C200, WELDED	40 05 19	WELDED STEEL, AWWA C200 FABRICATED, UNLINED	

NOTES:

1. THIS SCHEDULE INCLUDES SOME PROCESS DESIGNATIONS NOT USED IN THIS PROJECT.
2. EXPOSED PIPING SHALL BE COATED IN ACCORDANCE WITH THE SPECIFICATIONS. COLORS WILL BE SELECTED BY THE ENGINEER.
3. SEE SPECIFICATIONS FOR PIPE LINING AND COATING.
4. SEE SPECIFICATION SECTION 400513 FOR ADDITIONAL TESTING REQUIREMENTS.
5. DEVIATIONS FROM THIS SCHEDULE OF MATERIALS OR TESTING REQUIREMENTS ARE NOTED IN THE SPECIFICATIONS OR ADDITIONAL NOTATIONS ON THE DRAWINGS.
6. SEE VALVE SCHEDULE FOR VALVE TYPE FOR EACH SERVICE.
7. FOR PIPING THAT IS NOT ABLE TO BE PRESSURE TESTED, NO LEAKAGE SHALL SHOW AT MAXIMUM TANK WATER SURFACE ELEVATIONS. FOR PIPING THAT IS ABLE TO BE PRESSURE TESTED, LEAKAGE SHALL BE NO MORE THAN 0.02 GALLONS PER HOUR PER INCH DIAMETER PER 100 FEET OF BURIED PIPE.
8. LOSS OF PRESSURE SHALL BE LESS THAN 5 PERCENT.
9. PERFORM STATIC WATER TEST WITH SURFACE 5 FEET ABOVE HIGHEST POINT ON PIPE.
10. INSPECTION AND TESTING SHALL BE IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODE.
11. PIPING MATERIAL SHALL BE ABRASION RESISTANT FLEXIBLE RUBBER HOSE & QUICK CONNECT COUPLINGS WITH SYSTEM 1 PIPING AT EQUIPMENT CONNECTIONS. PIPE SHALL SHOW ZERO LEAKAGE AT NORMAL OPERATING CONDITIONS.
12. ALL INSTRUMENT SENSING OR GAUGE PIPING SHALL BE 304 SS THREADED TUBING

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GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026
STATE OF GEORGIA CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE | DATE

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PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

PROCESS PIPING SCHEDULE

G-008

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INFLUENT CHARACTERISTICS	
PARAMETER	VALUE
FLOW (MGD)	
DESIGN	1.0
MAX DAY	2.0
PEAK HOURLY (BEFORE EQ BASIN)	4.2
PEAK HOURLY (AFTER EQ BASIN)	2.0
BOD (MG/L)	260
TSS (MG/L)	250
NH_3-N (MG/L)	42
TKN (MG/L)	50
TP (MG/L)	21
pH	7.2
SUMMER TEMPERATURE (°C)	20.0
WINTER TEMPERATURE (°C)	12.0

HEADWORKS - SCREEN	
PARAMETER	VALUE
MECHANICAL SCREEN	
NUMBER OF SCREENS INSTALLED	1.0
PEAK CAPACITY PER SCREEN (MGD)	4.2
TYPE OF SCREENS	CONTINUOUS ROTATING CHAIN
CHANNEL WIDTH (FT)	3
CHANNEL DEPTH (FT)	5
INCLINATION ANGLE (DEGREE)	65
PERFORATED OPENING SIZE (MM)	3
WASHWATER FLOW (GPM)	42
WASHWATER PRESSURE (PSI)	50-60
MANUAL BYPASS SCREEN	
NUMBER OF SCREEN	1
CHANNEL WIDTH (FT)	3
BAR SPACING (MM)	25
SCREENING WASHER/COMPACTOR	
NUMBER OF SCREENING WASHER/COMPACTOR	1
MAXIMUM SOLIDS CAPACITY (CONTINUOUS, FT^3/HR)	206
MAXIMUM SOLIDS CAPACITY (BATCH, FT^3/HR)	120
WASHWATER PRESSURE (PSI)	60
MAXIMUM WATER (LAUNDER) CAPACITY (GPM)	160

HEADWORKS - GRIT REMOVAL	
PARAMETER	VALUE
NUMBER OF UNIT	1.0
GRIT CONCENTRATOR SIZE (DIAMETER, FT)	6
NUMBER OF TRAYS PER UNIT	6
SURFACE AREA PER UNIT (FT2)	170
PEAK LOADING RATE (GPM/FT2)	16.8
GRIT CLASSIFICATION	
NUMBER OF GRIT CLASSIFICATION	1
SIZE (DIAMETER, INCH)	24
DESIGN FLOW PER UNIT (GPM)	150
GRIT DEWATERING CONVEYOR	
NUMBER OF UNIT	1.0
MAXIMUM FLOW RATE (GPM)	125
MAXIMUM GRIT LOAD (CYD/HR)	0.75
CLARIFIER SIZE (WIDE, INCH)	60
CLARIFIER SURFACE AREA (SQ FT)	14.5

HEADWORKS - FLOW MEASUREMENT	
PARAMETER	VALUE
NUMBER OF DEVICE	1
TYPE	PARSHALL FLUME
THROAT SIZE (IN)	12
MAX FLOW (MGD)	15.9

PRE-EQUALIZATION BASIN	
PARAMETER	VALUE
BASINS	
BASIN DIMENSION	
LENGTH (FT)	200
WIDTH (FT)	126
DEPTH (FT)	18.0
SIDE WATER DEPTH (FT)	15.0
VOLUME (MG)	0.93
SURFACE AERATOR	
NUMBER OF DEVICE	2
TYPE	SURFACE MECHANICAL AERATOR
MOTOR (HP)	15

INFLUENT PUMP STATION	
PARAMETER	VALUE
[1]FIRM CAPACITY (MGD)	2.4
NUMBER OF PUMPS	2 INSTALLED, 1 FUTURE
WETWELL	
INSIDE DIAMETER (FT)	12
LWL (FT)	498.50
HWL (FT)	509.00
WORKING VOLUME (GAL)	8037
INFLUENT PUMP NO.1/NO.2	
NUMBER OF PUMPS	2
TYPE OF PUMPS	SUBMERSIBLE
CAPACITY (GPM)	1570
DESIGN HEAD (FT)	49
DISCHARGE PORT SIZE (IN)	6
MOTOR (HP)	30.0

[1]FIRM CAPACITY = ONE (1) LARGER PUMP OUT OF SERVICE, FOR CURRENT PHASE

BIOLOGICAL REACTORS (VERTICEL SYSTEM)	
PARAMETER	VALUE
VERTICEL TANK #1 & #2 (EXISTING)	
VOLUME PER BASIN (GAL)	219927
BASIN DIMENSION	
LENGTH (FT)	56
WIDTH (FT)	25
HEIGHT (FT)	23
SIDE WATER DEPTH (FT)	21
HYDRAULIC RESIDENCE TIME (HR)	5.28
DESIGN MLSS (MG/L)	4300
DISC AERATORS PER BASIN	1
MOTOR (HP)	20.0
VERTICEL TANK #3 (CONVERT FROM EXIS. AEROBIC DIGESTER)	
VOLUME PER BASIN (GAL)	151985
BASIN DIMENSION	
LENGTH (FT)	43
WIDTH (FT)	22.5
HEIGHT (FT)	23
SIDE WATER DEPTH (FT)	21
HYDRAULIC RESIDENCE TIME (HR)	3.65
DESIGN MLSS (mg/L)	4300
NUMBER OF FINE BUBBLE DIFUSSERS	112
MAX SCFM PER DIFFUSER	4.0
BLOWERS FOR VERTICEL TANK #3	
AIR FLOW REQUIREMENT (SCFM)	151
DISCHARGE PRESSURE (PSI)	9.81
BLOWER POWER RATING (HP)	30
NUMBER OF BLOWERS	2

SECOND CLARIFIERS	
PARAMETER	VALUE
CLARIFIER #1 & #2 (EXISTING)	
BASIN DIMENSION (FOR EACH)	
LENGTH (FT)	50
WIDTH (FT)	25
HEIGHT (FT)	23
SIDE WATER DEPTH (FT)	18
WEIR LENGTH	44.8
SLUDGE COLLECTOR DRIVE MOTOR (HP)	0.5
CLARIFIER #3 (PROPOSED)	
BASIN DIMENSION	
LENGTH (FT)	50
WIDTH (FT)	25
HEIGHT (FT)	23
SIDE WATER DEPTH (FT)	18
WEIR LENGTH	44.8
SLUDGE COLLECTOR DRIVE MOTOR (HP)	0.5

TERTIARY FILTERS	
PARAMETER	VALUE (EACH FILTER)
FILTER #1 & #2 (EXISTING)	
TYPE OF FILTERS	CLOTH MEDIA DISC
TREATMENT CAPACITY AT AVERAGE FLOW (MGD)	1.0
TREATMENT CAPACITY AT PEAK FLOW (MGD)	2.5
NUMBER OF DISCS PER FILTER	8
EXISTING	4
NEW	4
MAX FILTER INFLUENT TSS (MG/L)	25
MAX FILTER EFFLUENT TSS (MG/L)	5
MAX EFFLUENT TURBIDITY (NTU)	3

DISINFECTION (BY SODIUM HYPOCHLORITE)	
PARAMETER	VALUE
CHEMICAL STORAGE TANKS	
NUMBER	
CURRENT PHASE INSTALLED	1
FUTURE ADD	1
CAPACITY (GAL)	2000
CHEMICAL FEED PUMPS	
TYPE OF PUMP	PERISTALTIC
NUMBER OF PUMPS (WITH SKID)	2
FLOW RANGE (GPH)	0.05-15
CHLORINE CONTACT CHAMBER	
NUMBER OF BASINS	1
VOLUME (GAL)	21900
DETENTION TIME AT PAEK HOURLY FLOW	15

REJECT POND	
PARAMETER	VALUE
NUMBER	2
EXISTING	1
NEW	1
BASIN DIMENSION (FOR NEW POND)	
LENGTH (FT)	222
WIDTH (FT)	144
DEPTH (FT)	18.0
SIDE WATER DEPTH (FT)	15.0
VOLUME (MG)	1.5

AEROBIC DIGESTERS	
PARAMETER	VALUE
AEROBIC DIGESTERS	
NUMBER OF DIGESTERS	2
BASIN DIMENSION (FOR EACH)	
LENGTH (FT)	39
WIDTH (FT)	20
HEIGHT (FT)	23
SIDE WATER DEPTH (FT)	20
VOLUME (GAL)	116688
DIFFUSER TYPE	COARSE BUBBLE
BLOWERS	
AIR FLOW RATE (SCFM)	1066
DISCHARGE PRESSURE (PSI)	8.5
BLOWER POWER RATING (HP)	75
NUMBER OF BLOWERS	2

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DRAWN BY:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA
REGISTERED
10/04/2024
No. PE037638
PROFESSIONAL
ENGINEER
LIANG WANG

PROCESS DESIGN CRITERIA

G-009

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PLOTTED: Jan 16, 2025 - 8:59am

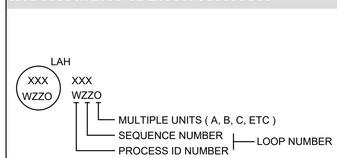
INSTRUMENT IDENTIFICATION LETTERS

	FIRST LETTER		SUCCEEDING LETTER		
	MEASURED OR INITIATED VARIABLE		READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER FLAME				
C	CONDUCTIVITY (ELECTRICAL)			CONTROL	CLOSE
D	DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL	DELAY		
E	VOLTAGE (EMF)		PRIMARY ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G	GAUGING		GLASS		
H	HAND (MANUALLY INITIATED)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME OR SCHEDULE			CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOISTURE OR HUMIDITY	MOMENTARY			MIDDLE OR INTERMEDIATE
N	UNCLASSIFIED				
O	UNCLASSIFIED		ORIFICE (RESTRICTION)		OPEN
P	PRESSURE OR VACCUM		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE OR TOTALIZE			
R	RADIOACTIVITY		RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT OR TRANSMITTER	
U	MULTIVARIABLE		MULTI FUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION MECHANICAL ANALYSIS			VALVE, DAMPER OR LOUVER	
W	WEIGHT OR FORCE		WELL		
X	EVENT			UNCLASSIFIED	
Y	UNCLASSIFIED			RELAY, COMPUTE, OR CONVERT	
Z	POSITION			DRIVE, ARTICULATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

P&ID ABBREVIATIONS

CONC	CONCENTRIC
CP	CONTROL PANEL
DO	DISSOLVED OXYGEN
ECC	ECCENTRIC
EL	ELEVATION
ES	EMERGENCY STOP
FC	FAIL CLOSE
FCP	FACTORY CONTROL PANEL (FURNISHED BY EQUIPMENT MANUFACTURER)
FI	FAIL INTERMEDIATE
FL	FAIL LOCKED
FLG	FLANGE
FO	FAIL OPEN
FOR	FORWARD/OFF/REVERSE (MAINTAINED)
FSR	FORWARD/STOP/REVERSE (MAINTAINED)
FWE	FURNISHED WITH EQUIPMENT
GPM	GALLONS PER MINUTE
HMI	HUMAN MACHINE INTERFACE
HOA	HAND/OFF/AUTO
HP	HIGH PRESSURE
LC	LOCKED CLOSE
LCP	LOCAL CONTROL PANEL (FURNISHED BY SYSTEMS INTEGRATOR)
LO	LOCKED OPEN
LOR	LOCAL/OFF/REMOTE
LP	LOW PRESSURE
LR	LOCAL/REMOTE
LT	LOW TEMPERATURE
MA	MANUAL/AUTO
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MCP	MAIN CONTROL PANEL
MIN	MINIMUM
MW	MANWAY
NC	NORMALLY CLOSED
NLL	NORMALLY LIQUID LEVEL
NO	NORMALLY OPEN
OC	OPEN/CLOSE
OCA	OPEN/CLOSE/AUTO
OCR	OPEN/CLOSE/REMOTE
OO	ON/OFF
ORIF	ORIFICE
ORP	OXIDATION REDUCTION POTENTIAL
OS	OPERATION SWITCH
PC	PARTICLE COUNT
pH	HYDROGEN ION CONCENTRATION
R	RESET
RED	REDUCER
RS	RUN/STOP (AUTO RESET/RUN @ POWER INTERRUPTION)
RSJ	RUN/STOP/JOG
S	SILENCE
SCN	SAMPLE CONNECTION
SC	STREAMING CURRENT
SCH	SCHEDULE
SD	SHUTDOWN
SLBL	SLUDGE BLANKET LEVEL
SP	SAMPLE POINT
SR	SAFE/RUN
SST	STAINLESS STEEL
SSR	START/STOP (MANUAL RESET @ POWER INTERRUPTION)
STD	STANDARD
T	TEST
TOR	TORQUE
TURB	TURBIDITY
TYP	TYPICAL
UD	UP/DOWN

INSTRUMENT IDENTIFICATION



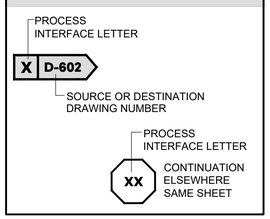
EXAMPLE ALARMS OR ACTIONS

HA	HIGH ALARM
LAH	LEVEL ALARM HIGH
LAHH	LEVEL ALARM HIGH HIGH
HOA	HAND/OFF/AUTO
LAL	LOW
LAU	LOW LOW
OO	ON / OFF

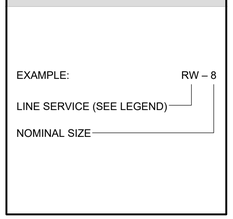
NOTES

1. THE PROCESS AND INSTRUMENTATION DIAGRAMS (P&ID) ARE BASED ON PROCESS EQUIPMENT SELECTED BY THE ENGINEER, AS SHOWN ON THE DRAWINGS.
2. THE ARRANGEMENT OF PROCESS AND INSTRUMENTATION DIAGRAMS REPRESENTS THE BASIS OF DESIGN FOR EACH TYPE OF EQUIPMENT, AS DESCRIBED IN THE SPECIFICATIONS. CHANGES TO THE LISTED BASIS OF DESIGN THAT DIFFER FROM THE SHOWN ARRANGEMENT SHALL BE THE CONTRACTOR'S RESPONSIBILITY. HOWEVER, NO ADDITIONAL PAYMENT WILL BE MADE TO THE CONTRACTOR FOR SUCH MODIFICATIONS.
3. IF APPROVED BY THE ENGINEER, THE MANUFACTURER MAY ELECT TO MODIFY PROCESS AND INSTRUMENTATION DIAGRAM TO IMPROVE SYSTEM FUNCTION.
4. THE CONFIGURATION SHOWN ON THE PROCESS AND INSTRUMENTATION DIAGRAM SHALL NOT BE USED FOR CONSTRUCTION AS THE LAYOUT OF THE PROCESS FLOW DIAGRAM IS NOT TO SCALE AND IS NOT REPRESENTATIVE OF THE ACTUAL FIELD LAYOUT.
5. FOR PIPE SERVICE ABBREVIATIONS, SEE GENERAL SHEETS.

SHEET CONTINUATION



LINE SYMBOLS



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CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

P&ID ABBREVIATIONS, & NOTES

I-001

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWGs\PLANS\01 Bid Drawings\02 INSTRUMENTATION\I-001 PID NOTES.dwg
PLOTTED: Oct 04, 2024 - 2:48pm

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GENERAL EQUIPMENT

CENTRIFUGAL PUMP	HEAT EXCHANGER
POSITIVE DISPLACEMENT PUMP	PERISTALTIC PUMP
VERTICAL TURBINE PUMP	STATIC MIXER
HORIZONTAL SPLIT-CASE PUMP	MIXER
ROTARY SCREW COMPRESSOR	SILENCER
PROGRESSIVE CAVITY PUMP	DRAIN
GRINDER	VENT
DIAPHRAGM PUMP	FLEXIBLE HOSE OR JOINT
EDUCTOR	DIAPHRAGM OR LOAD CELL
CENTRIFUGAL FAN / BLOWER	UNION
BLOWER (POSITIVE DISPLACEMENT)	ANNULAR SEAL RING
SPRAY NOZZLE	SINGLE ARCH EXPANSION JOINT
FILTER/STRAINER	SLIDE GATE
HEATER	HIGH-SPEED TURBO BLOWER

VALVES

- GATE
- GLOBE
- CHECK
- DIAPHRAGM
- BALL
- FLOAT
- DUCKBILL CHECK
- NEEDLE
- BUTTERFLY
- SAFETY RELIEF
- PRESSURE REGULATING
- PLUG
- 3-WAY
- AIR RELEASE
- MUD OR FOOT
- PINCH
- KNIFE GATE

INSTRUMENTS

- FLOWMETER - MAG
- FLOWMETER - PROPELLER
- FLOWMETER - VENTURI
- FLOWMETER - THERMAL MASS
- ROTAMETER
- PARSHALL FLUME
- LEVEL ELEMENT (ULTRASONIC)
- FLOAT SWITCH
- VIBRATING FORK LEVEL SWITCH

GENERAL FITTINGS

- REDUCER
- FLANGE/BOLTED
- END CAP
- RESTRICTING ORIFICE
- COUPLER CONNECTION

ACTUATORS

- MOTOR OPERATOR
- SOLENOID
- PNEUMATIC ACTUATOR

LINE LEGEND

- PRIMARY PROCESS LINE
- SECONDARY PROCESS LINE
- EXISTING
- ELECTRICAL SIGNAL
- ES 120/1 — ELECTRIC SUPPLY VOLTAGE/PHASE
- INSULATED
- HEAT TRACED
- E — E — ETHERNET
- PA — A — PLANT AIR SUPPLY
- IA — A — INSTRUMENT AIR SUPPLY
- NPW — NON-POTABLE WATER SUPPLY
- PRW — REUSE WATER SUPPLY
- BY VENDOR

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DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

P&ID LEGENDS

I-002

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PLOTTED: Oct 04, 2024 - 5:46pm

MECHANICAL SCREEN NO.1

WASHER/COMPACTOR NO.1

SCADA

FCP1010

HIGH LVL ALARM LAH 1000

SCN IN AUTO XI 1010A

RUN XI 1010B

FAULT XA 1010

LDIT 1010A

LDSH 1010A

COM. IN AUTO XI 1015A

RUN XI 1015B

FAULT XA 1015

HOA HS 1010A

CALL TO RUN XC 1010A

XI 1010A

CNTL PWR XI 1010B

XA 1010C

RESET HS 1010B

KQI 1010

ETM HS 1010C

ESTOP

BRUSH CALL TO RUN XC 1010B

HIGH TRQE WAH 1010B

WASH WTR HOA HS 1014

CALL TO OPEN XC 1014

LDIT 1010A

LDSH 1010A

HOA HS 1015A

CALL TO RUN XC 1015

XI 1015A

XA 1015B

RESET HS 1015B

ETM KQI 1015

HIGH TRQE WAH 1015

ESTOP HS 1015C

WASH WTR HOA HS 1018

CALL TO OPEN XC 1018

WASH VALVE OPEN ZIO 1018

1.5" PSW 42 GPM @ 50 PSIG

V1011

CV1012

V1013

PI 1011

EV1014

SCR1010

LE 1010A

LE 1010B

WAH 1010

SCN HOA HS 1010A

SCN FOR HS 1010B

COMP HOA HS 1015A

COMP FOR HS 1015B

E-STOP HS 1010C

FCP 1010A

VENDOR PACKAGE

SG1012

PI 1012

V1017

EV1018

CV1016

V1015

1" PSW - WASH 30 GPM @ 40 PSIG

SWC1015

WAH 1015

LSH 1000

RWW

SG1011

SG1031

SG1021

12" RWW FM

INFLUENT CHANNEL

MANUAL BAR SCREEN

SCR1030

SG1032

SG1022

1 I-102

TO GRIT REMOVAL SYSTEM

FUTURE SCREEN FOR 2.0 MGD EXPANSION

FUTURE SCREENINGS WASHER/COMPACTOR

DUMPSTER

1 WHEN SCR1010 IN AUTO, CALL TO RUN INITIATED BY LEVEL DIFFERENTIAL.

2 WHEN EV1014 IN AUTO, CALL TO OPEN INITIALED BY SCREEN RUNNING.
WHEN BRUSH IN AUTO, CALL TO RUN INITIATED BY SCREEN RUNNING.
WHEN SWC1015 IN AUTO, CALL TO RUN INITIATED BY SCREEN RUNNING.
WHEN SCR1010 TURNED OFF, SWC1015 SHALL CONTINUE RUNNING FOR PRE-SET PERIOD THEN STOP.

SCR1010
PERFORATED PLATE SCREEN
SPEC: 46 21 15
CAPACITY: 4.2 MGD
HP (SCREEN): 2
HP (BRUSH): 1

SCR1030
MANUAL BAR SCREEN
SPEC: 46 21 01
CAPACITY: 8.4 MGD

SWC1015
SCREENINGS WASHER/COMPACTOR
SPEC: 46 21 15
CAPACITY: 206 CU. FT./HR
HP: 5

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No. PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" 5" 1"

ISSUE	DATE
60% SUBMITTAL	03.15.2024
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

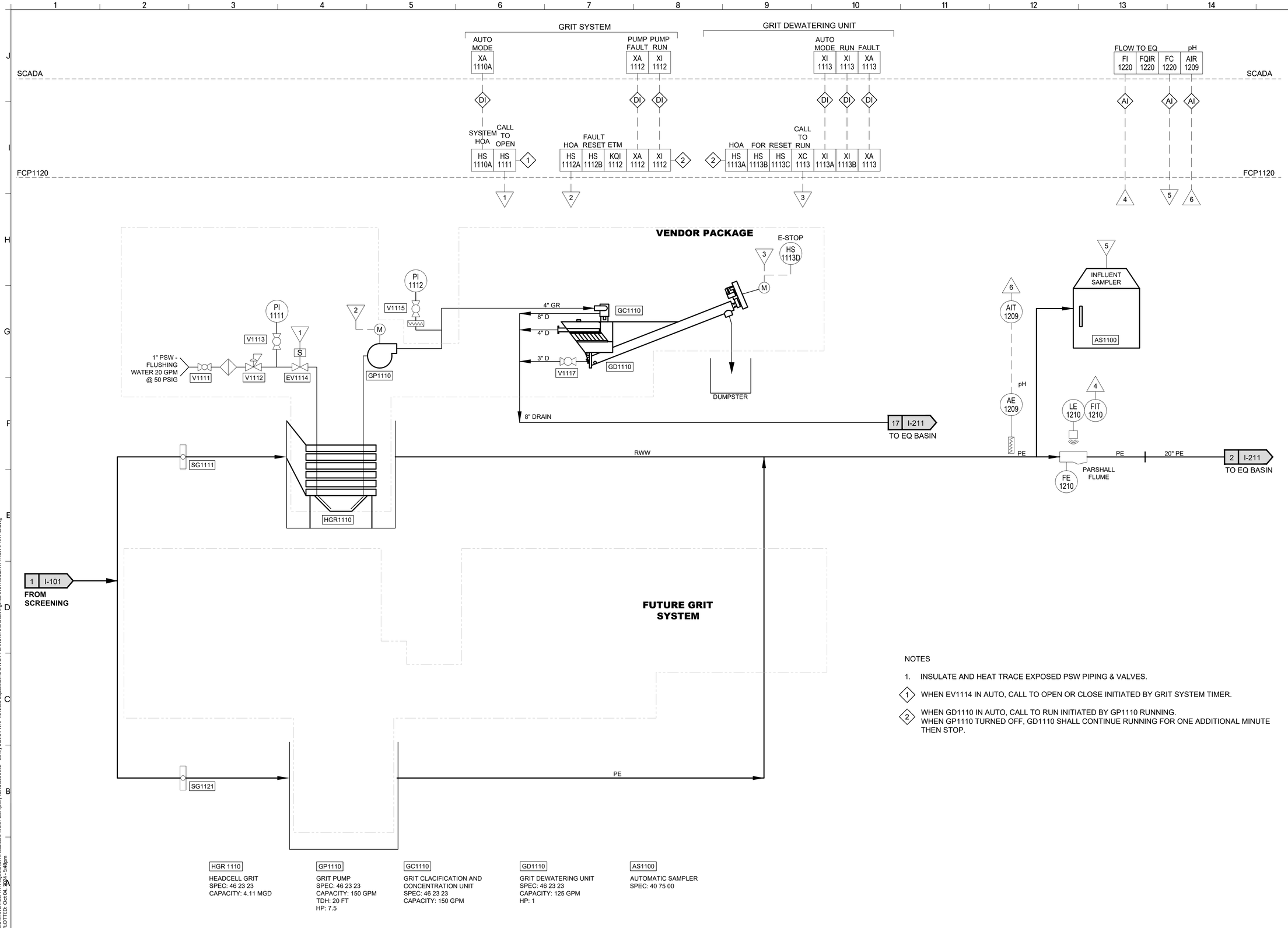
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

P & ID SCREENING

I-101

DRAWING FILE: T:\1Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0.DWGS+PLANS\01 Bid Drawings\02 INSTRUMENTATION\I-101 PID.dwg
PLOTTED: Jan 14, 2025 - 4:23pm

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NOTES

1. INSULATE AND HEAT TRACE EXPOSED PSW PIPING & VALVES.

◇1 WHEN EV1114 IN AUTO, CALL TO OPEN OR CLOSE INITIATED BY GRIT SYSTEM TIMER.

◇2 WHEN GD1110 IN AUTO, CALL TO RUN INITIATED BY GP1110 RUNNING.
WHEN GP1110 TURNED OFF, GD1110 SHALL CONTINUE RUNNING FOR ONE ADDITIONAL MINUTE THEN STOP.

HGR 1110
HEADCELL GRIT
SPEC: 46 23 23
CAPACITY: 4.11 MGD

GP1110
GRIT PUMP
SPEC: 46 23 23
CAPACITY: 150 GPM
TDH: 20 FT
HP: 7.5

GC1110
GRIT CLACIFICATION AND CONCENTRATION UNIT
SPEC: 46 23 23
CAPACITY: 150 GPM

GD1110
GRIT DEWATERING UNIT
SPEC: 46 23 23
CAPACITY: 125 GPM
HP: 1

AS1100
AUTOMATIC SAMPLER
SPEC: 40 75 00

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CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

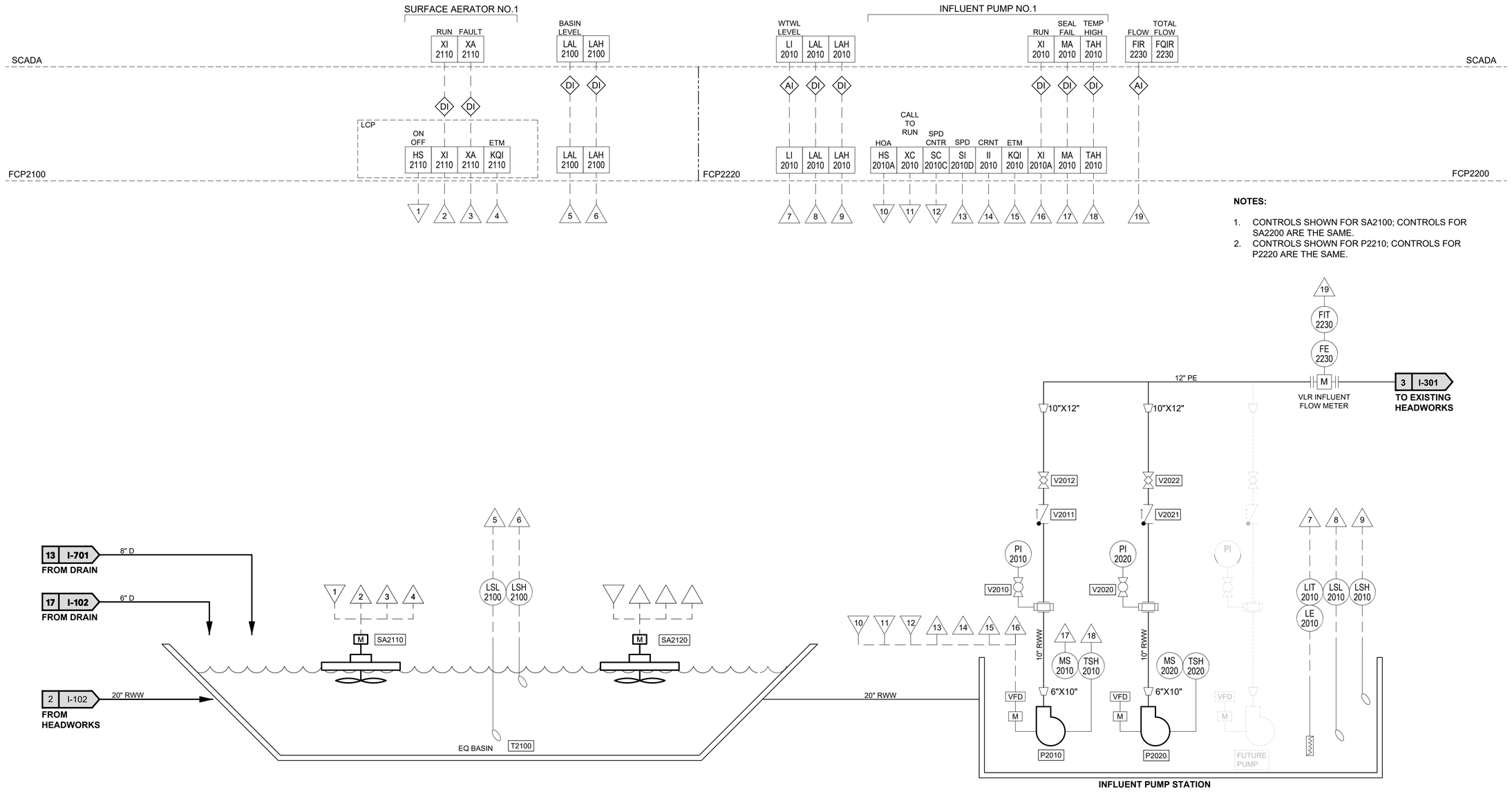
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P & ID
GRIT REMOVAL

I-102

DRAWING FILE: T:\1Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWGS\+PLANS\01 Bid Drawings\02 INSTRUMENTATION\I-101.PID.dwg
PLOTTED: Oct 04, 2024 - 5:48pm

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NOTES:

1. CONTROLS SHOWN FOR SA2100; CONTROLS FOR SA2200 ARE THE SAME.
2. CONTROLS SHOWN FOR P2210; CONTROLS FOR P2220 ARE THE SAME.

T2100
EQUALIZATION BASIN
VOLUME: 0.92 MG

SA2110
EQ SURFACE AERATOR NO.1
SPEC: 43 26 80
HP: 15

SA2120
EQ SURFACE AERATOR NO.2
SPEC: 43 26 80
HP: 15

P2010
INFLUENT PUMP NO.1
TYPE: SUBMERSIBLE CENTRIFUGAL
SPEC: 43 25 13
CAPACITY: 1,570 GPM
TDH: 48.9 FT
DRIVE: 30 HP

P2020
INFLUENT PUMP NO.2
TYPE: SUBMERSIBLE CENTRIFUGAL
SPEC: 43 25 13
CAPACITY: 1,570 GPM
TDH: 48.9 FT
DRIVE: 30 HP

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DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER Liang Wang LIANG WANG

P & ID EQUALIZATION BASIN & INFLUENT PUMP STATION

I-211

DRAWING FILE:T:\1Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG\~PLANS\01 Bid Drawings\02 INSTRUMENTATION\I-101PID.dwg
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SCADA

SCADA

ORP
AIR
3012

1
AIR
3012

FCP3100

FCP310

1

NOTES:

1. INTERLOCK WITH BLOWERS FOR SPEED CONTROL

16 I-302
FROM BLOWERS FOR FINE BUBBLE DIFFUSERS TANK

EXISTING 4" AIR

14 I-701
FROM EXISTING RAS/WAS PS

8" RAS

V3102

M

WG3100

V3101

EXISTING VERTICAL LOOP REACTOR TANK NO. 1 T3100

1
AIT
3012

4" AIR

ORP
AE
3012

18" ML

4 I-401
TO CLARIFIER SPLITTER BOX

FINE BUBBLE DIFFUSER

EXISTING SLUDGE AEROBIC DIGESTER CONVERT TO AERATION BASIN T3300

EXISTING HEADWORKS ALL EQUIPMENT DEMOLISHED

14 I-701
FROM EXISTING RAS/WAS PS

8" RAS

V3202

11 I-601
FROM EXISTING DRAIN PUMP STATION

16" RWW

M

3 I-211
FROM INFLUENT PUMP STATION

12" PE

WG3200

V3201

EXISTING VERTICAL LOOP REACTOR TANK NO. 2 T3200

T3100
EXISTING VERTICAL LOOP REACTOR TANK NO. 1
VOLUME: 0.22 MG

T3200
EXISTING VERTICAL LOOP REACTOR TANK NO. 2
VOLUME: 0.22 MG

T3300
EXISTING SLUDGE AEROBIC DIGESTER CONVERT TO VLR TANK NO. 3 (FINE BUBBLE DIFFUSERS TANK)
VOLUME: 0.15 MG

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DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

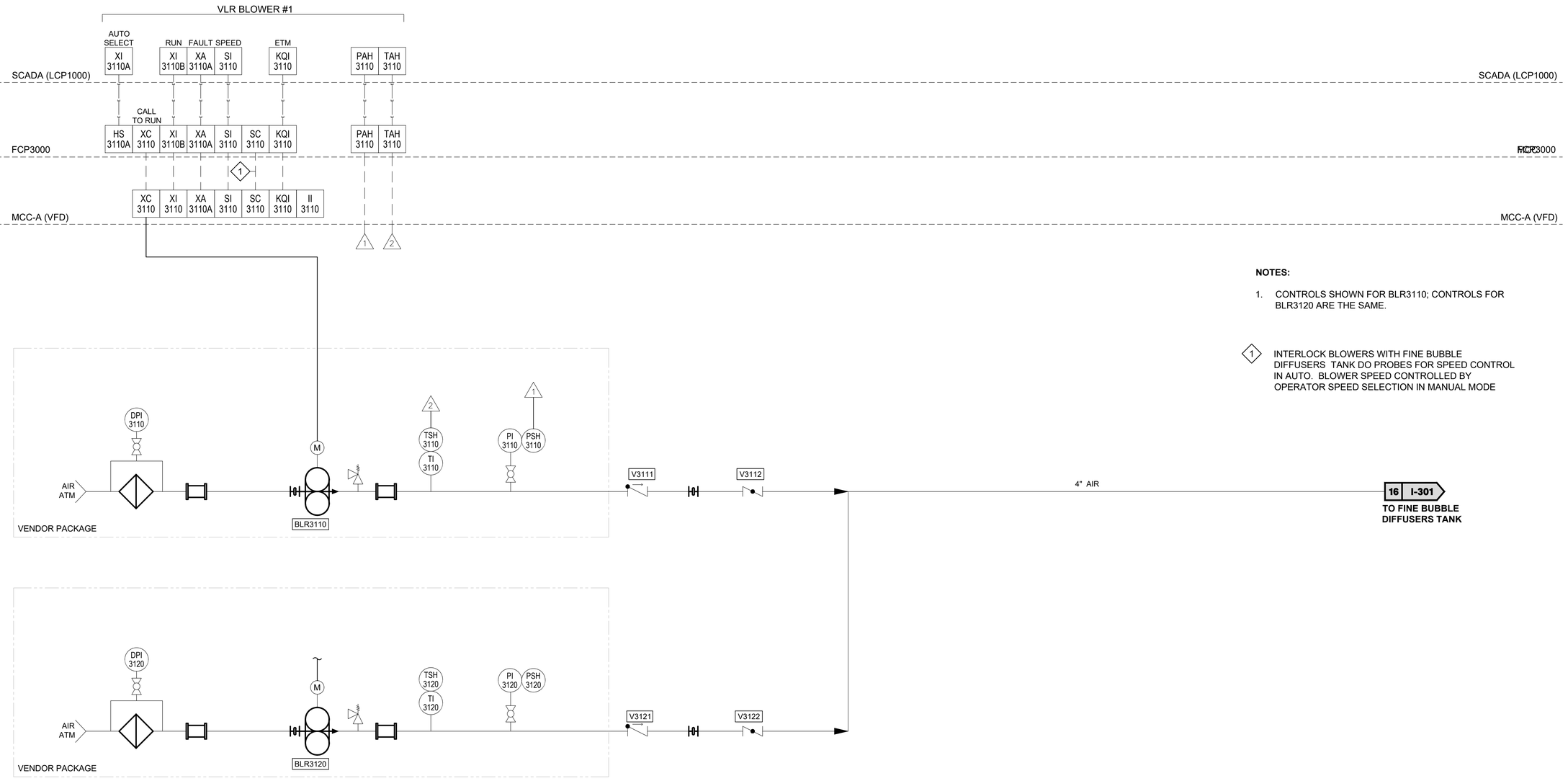
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

P & ID VLR TANKS

I-301

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NOTES:

1. CONTROLS SHOWN FOR BLR3110; CONTROLS FOR BLR3120 ARE THE SAME.

1 INTERLOCK BLOWERS WITH FINE BUBBLE DIFFUSERS TANK DO PROBES FOR SPEED CONTROL IN AUTO. BLOWER SPEED CONTROLLED BY OPERATOR SPEED SELECTION IN MANUAL MODE

BLR3110

VLR BLOWER NO.1
SPEC: 43 53 54
CAPACITY: 151 SCFM
DISCHARGE PRESSURE: 9.8 PSIG
HP: 30

BLR3120

VLR BLOWER NO.2
SPEC: 43 53 54
CAPACITY: 151 SCFM
DISCHARGE PRESSURE: 9.8 PSIG
HP: 30

GMC
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ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA
REGISTERED
10/04/2024
No. PE037638
PROFESSIONAL
ENGINEER
LIANG WANG
LIANG WANG

P & ID
BLOWERS FOR
FINE BUBBLE DIFFUSERS
TANK

I-302

DRAWING FILE:T:\Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG\~PLANS\01 Bid Drawings\I02 INSTRUMENTATION\I-301PID.dwg
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SCADA

FCP4100

LCP3210

	RUN	FAULT	TORQ ALARM
	XI 3210	XA 3210	NA 3210

	SLDG BLKT
	AIR 3201

	RUN	FAULT
	XI 3310	XA 3310

S/S	CALL TO RUN	RUN	FAULT	TORQ ALARM
HS 3210	XC 3210	XI 3210	XA 3210	NA 3210

	SLDG BLKT
	AIR 3201

		HOA		RUN	FAULT
LALL 3310	LIT 3310	HS 3310	XC 3310	XI 3310	XA 3310

DI, I, 1, 2, 3, 4

SCADA

FCP4100

3" SSC

3" SSC → 6 I-701 TO WAS/RAS PUMP STATION

PI

LIT 4310

LE 4310

M

16" SE

14" SL

16" SE → 5 I-501 TO FILTERS

14" SL → 7 I-701 TO WAS/RAS PUMP STATION

EXISTING CLARIFIER NO. 1 CL4100

EXISTING CLARIFIER NO. 2 CL4200

16" SE

14" SL

3" SSC

V4312

V4311

V4310

PI 4310

16" SL

18" SE

LIT 4310

LE 4310

P4310

4 I-301 FROM FINE BUBBLE DIFFUSERS TANK

18" ML

SB4100

WG4110

WG4120

WG4130

CLARIFIER SPLITTER BOX

AIT 4201

AE 4201

CLARIFIER NO. 3 CL4300

CL4100
EXISTING SECONDARY CLARIFIER NO.1
LENGTH X WIDTH: 50 FT X 25 FT

CL4200
EXISTING SECONDARY CLARIFIER NO.2
LENGTH X WIDTH: 50 FT X 25 FT

CL4300
SECONDARY CLARIFIER NO.3
SPEC: 46 43 21
LENGTH X WIDTH: 50 FT X 25 FT
HP: 0.5

P4310
SCUM PUMP
SPEC: 43 25 13
CAPACITY: 130 GPM
TDH: 18 FT
HP: 1.0

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ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

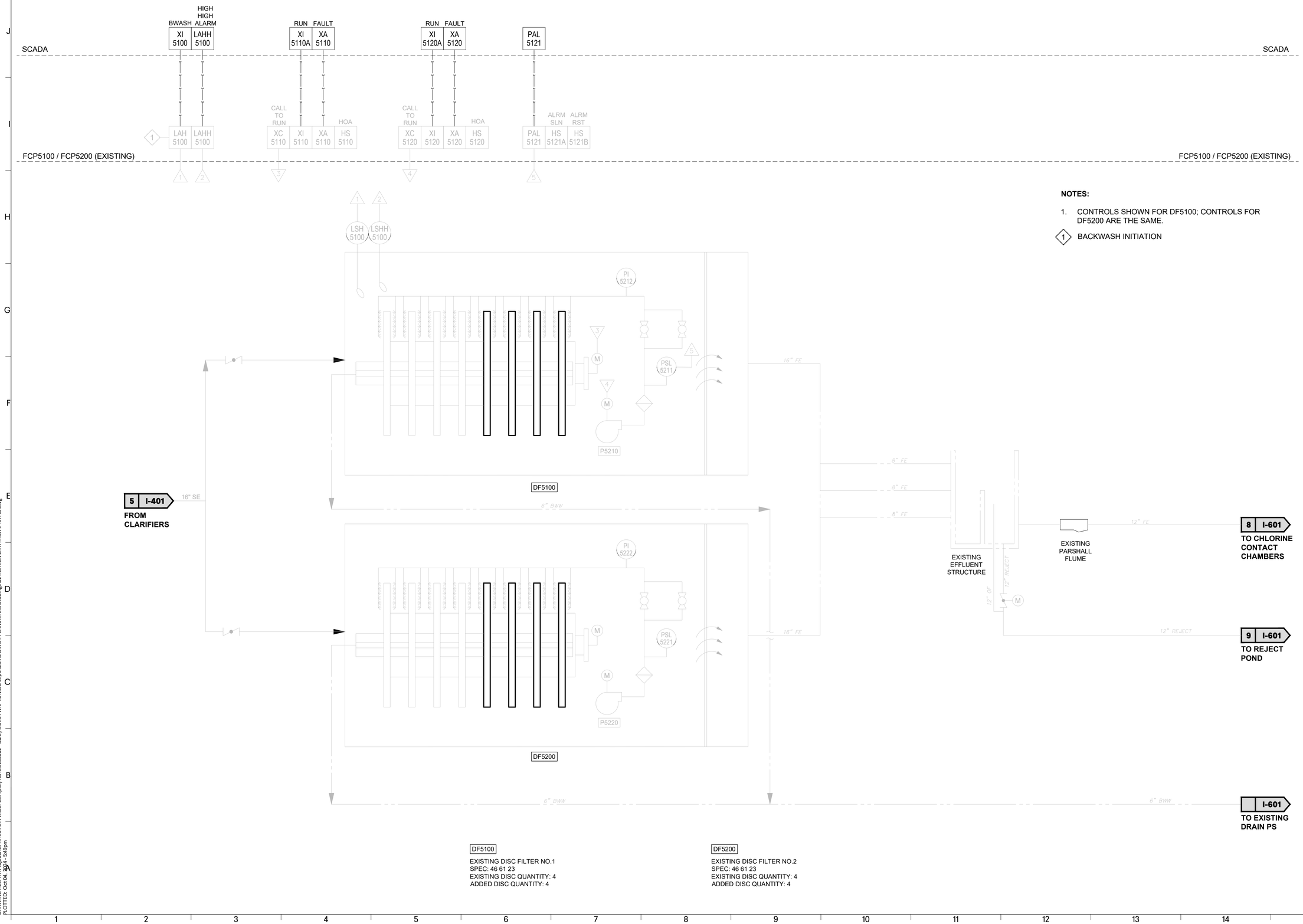
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

P & ID CLARIFIERS

I-401

DRAWING FILE: T:\1-Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 10 MGD Expansion\10 DWGs\PLANS\01 Bid Drawings\02 INSTRUMENTATION\I-501 PID.dwg
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NOTES:

1. CONTROLS SHOWN FOR DF5100; CONTROLS FOR DF5200 ARE THE SAME.

(1) BACKWASH INITIATION

DF5100

EXISTING DISC FILTER NO.1
SPEC: 46 61 23
EXISTING DISC QUANTITY: 4
ADDED DISC QUANTITY: 4

DF5200

EXISTING DISC FILTER NO.2
SPEC: 46 61 23
EXISTING DISC QUANTITY: 4
ADDED DISC QUANTITY: 4

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P & ID
FILTERS
& EFFLUENT STRUCTURE

I-501

DRAWING FILE:T:\Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG\~PLANS\01 Bid Drawings\02 INSTRUMENTATION\I-501.PID.dwg
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SCADA

SCADA

pH
AIR 6001

RESIDUAL CHLORINE
AIR 6002

AI

AI

1

2

1

2

AIT 6001

AIT 6002

AE 6001

AE 6002

10 I-801
HOCL FROM CHEM FEED

V8250

V8251

1/2" HOCL

8 I-501
FROM EXISTING EFFLUENT STRUCTURE

12" FE

12" FNE

V6001

6" DRAIN

CHLORINE CONTACT CHAMBER CCC6100

10" RUW

REUSE WATER PUMP TO REYNOLDS GOLF COURSE PONDS

EXISTING REUSE POND

EXISTING REUSE PUMP STATION

6" REJECT

11 I-301
TO EXISTING HEADWORKS

9 I-501
FROM EXISTING EFFLUENT STRUCTURE

12" REJECT

12" CONNECTION PIPE

EXISTING REJECT POND NO. 1

PROPOSED REJECT POND NO. 2 T6200

EXISTING PLANT DRAIN PUMP STATION

CCC6100
CHLORINE CONTACT CHAMBER
VOLUME: 21,900 GALLON

T6200
REJECT POND NO. 2
VOLUME: 1,500,000 GALLON

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG\+PLANS\01 Bid Drawings\02 INSTRUMENTATION\I-101 PID.dwg
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DESIGNER:		LW
DRAWN BY:		DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

P & ID
CHLORINE CONTACT CHAMBER, PONDS & REUSE AND REJECT PS

I-601

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SCADA (LCP1000)

MCC-B

DIGESTER LEVEL: LI 7101 / LAH 7101 → AI → 1, 2

DO / TEMP / FAULT: AIR 7101 / TIR 7101 / XA 7101 → AI, AI, DI → 3, 4, 5

WAS FLOW: FIR 7010 / FQIR 7010 → AI → 6

RAS FLOW: FIR 7020 / FQIR 7020 → AI → 7

NOTES:

1. INSTRUMENTS SHOWN FOR T7100; SAME FOR T7200

12 I-711
FROM BLOWERS

10" AIR

8" WAS

8" RAS/WAS

6" AIR

V7001 V7002 V7003 V7004 V7005 V7006 V7010 V7011 V7012 V7013 V7014 V7020 V7021 V7022 V7101 V7103 V7201 V7203

ES 120/1

FIT 7010 / FE 7010

FIT 7020 / FE 7020

LIT 7101 / LSH 7101 / LE 7101

LIT 7102 / LSH 7102 / LE 7102

AIT 7101 / AE 7101

AIT 7102 / AE 7102

DO TEMP

1" D

M

8" DS

8" RAS

8" DRAIN

6" SN

DECANTER

AEROBIC DIGESTER NO. 1

T7100

AEROBIC DIGESTER NO. 2

T7200

COARSE BUBBLE DIFFUSERS

TO SLUDGE TRUCK

15 TO SLUDGE TRUCK

13 I-211 TO EQ BASIN

14 I-301 TO VLR BASINS

6 I-401 FROM CLARIFIERS — 3" SSC

7 I-401 FROM CLARIFIERS — 14" SL

EXISTING RAS/WAS PUMP STATION

T7100
AEROBIC DIGESTER NO.1
SIZE: 39'X20'
SWD: 20'
CAPACITY: 0.117 MG

T7200
AEROBIC DIGESTER NO.2
SIZE: 39'X20'
SWD: 20'
CAPACITY: 0.117 MG

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STATE OF GEORGIA — GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026 — CERTIFICATE OF AUTHORIZATION

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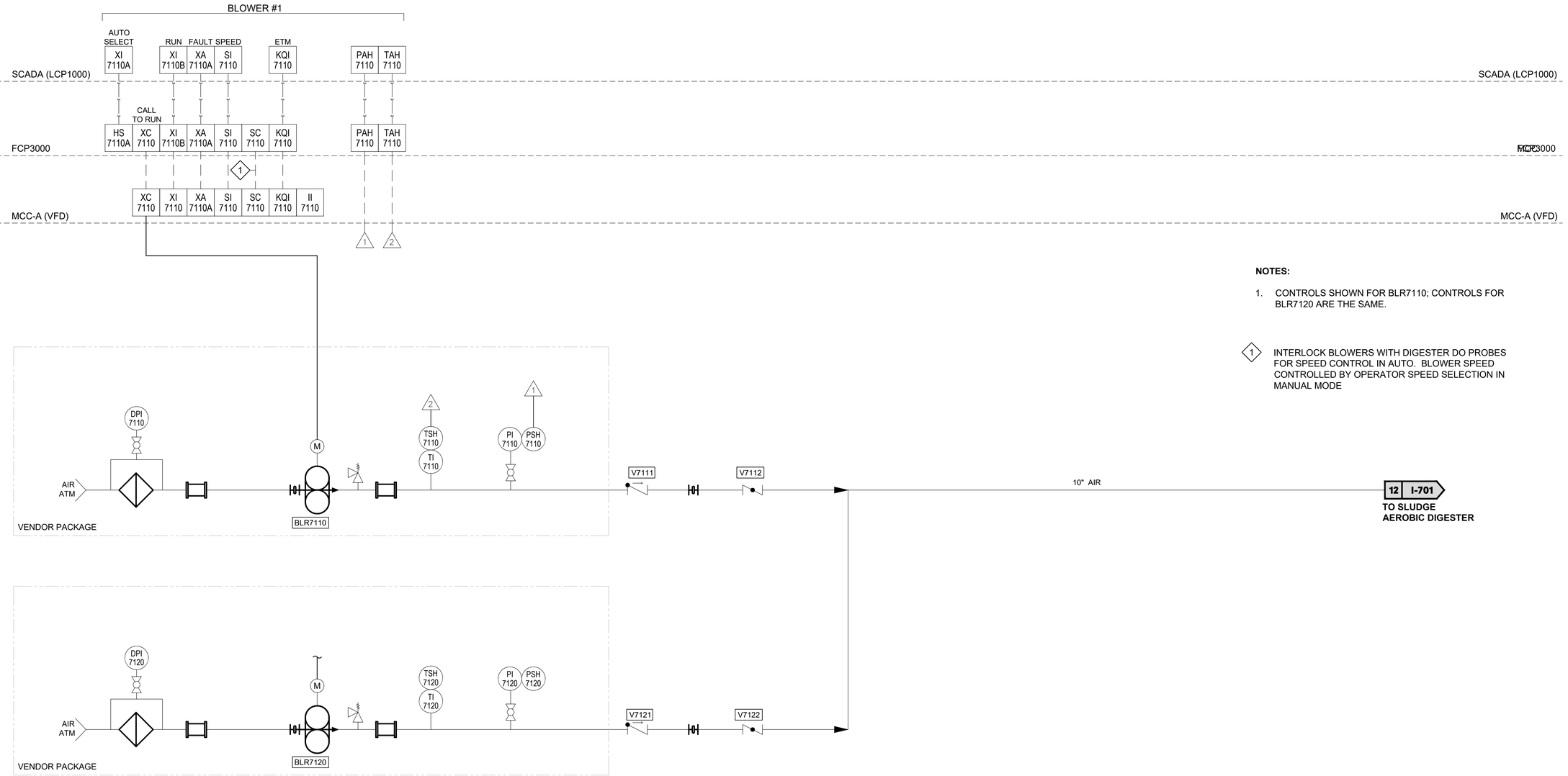
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

P & ID
AEROBIC DIGESTER

I-701

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NOTES:

1. CONTROLS SHOWN FOR BLR7110; CONTROLS FOR BLR7120 ARE THE SAME.

1 INTERLOCK BLOWERS WITH DIGESTER DO PROBES FOR SPEED CONTROL IN AUTO. BLOWER SPEED CONTROLLED BY OPERATOR SPEED SELECTION IN MANUAL MODE

BLR7110

BLOWER NO.1
SPEC: 43 53 54
CAPACITY: 1066 SCFM
DISCHARGE PRESSURE: 8.5 PSIG
HP: 75

BLR7120

BLOWER NO.2
SPEC: 43 53 54
CAPACITY: 1066 SCFM
DISCHARGE PRESSURE: 8.5 PSIG
HP: 75

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ISSUE	DATE
60% SUBMITTAL	03.15.2024
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

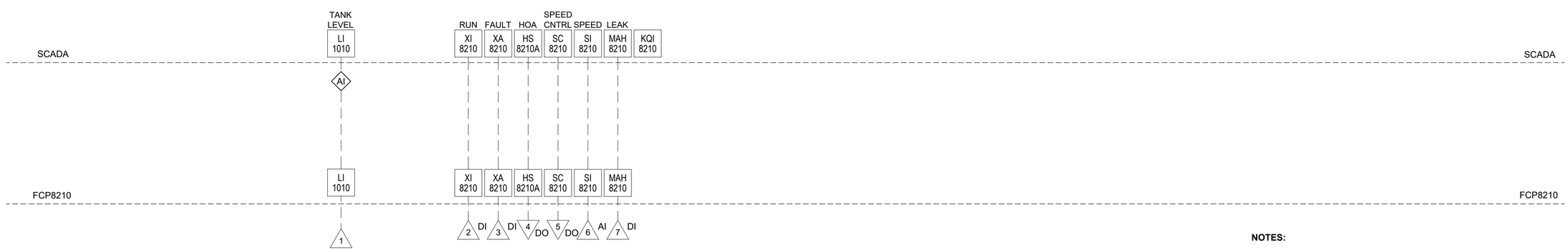
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG
Liang Wang

P & ID
DIGESTER BLOWERS

I-711

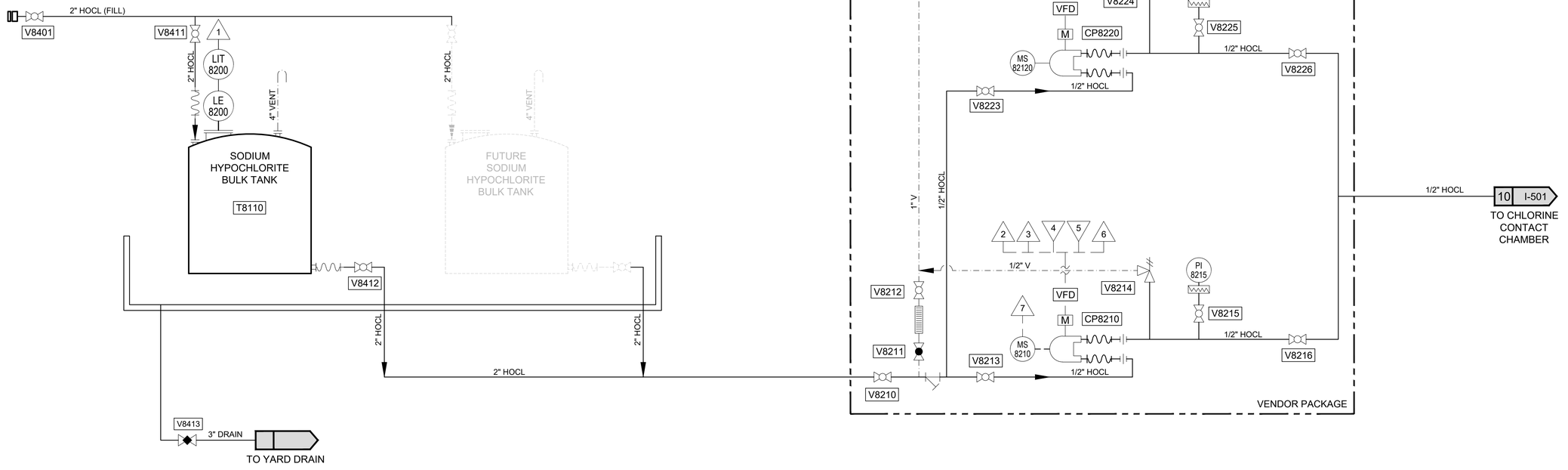
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PLOTTED: Oct 04, 2024 - 5:50pm

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NOTES:

1. CONTROLS SHOWN FOR CP8210; CONTROLS FOR CP8220 ARE THE SAME.



T8110

SODIUM HYPOCHLORITE TANK NO. 1
SPEC: 43 41 46
VOLUME: 2000 GAL

CP8210

HYPOCHLORITE FEED PUMP NO. 1
SPEC: 46 33 41
CAPACITY: 0.05 - 15.00 GPH
MAX BACK PRESSURE: 22 PSI

CP8220

HYPOCHLORITE FEED PUMP NO. 2
SPEC: 46 33 41
CAPACITY: 0.05 - 15.00 GPH
MAX BACK PRESSURE: 80 PSI

GMC
801 Broad Street Suite 900
Augusta, GA 30901
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GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
STATE OF GEORGIA
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
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ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG
Liang Wang

P & ID
CHEMICAL FEED
SODIUM HYPOCHLORITE

I-801

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG\+PLANS\00 Bid Drawings\02 INSTRUMENTATION\I-501 PID.dwg
PLOTTED: Oct 04, 2024 - 5:50pm

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	Tag No.	Service Description	Device Type	Output Type	Range/Setpoint	Supplied By	P&ID	Power Type	Service	Spec	Comments
1000	LSH1000	Influent Channel Level Switch	Level Switch	Digital		Contractor	I-101	120 VAC	RWW	40 72 76	
	LE1010A	Mechanical Screen Upstream Level	Ultrasonic Level Transducer	Analog	0-6 ft	Equipment Vendor	I-101	120 VAC	RWW	46 21 15	
	LE1010B	Mechanical Screen Downstream Level	Ultrasonic Level Transducer	Analog	0-6 ft	Equipment Vendor	I-101	120 VAC	RWW	46 21 15	
	PI1011	Mechanical Screen Wash Water Pressure Indicator	Pressure Gauge	N/A	0-100 psig	Contractor	I-101	N/A	NPW	40 73 13	
	PI1012	Screenings Washer/Compactor Wash Water Pressure Indicator	Pressure Gauge	N/A	0-100 psig	Contractor	I-101	N/A	NPW	40 73 13	
	PI1111	Grti Flushing Water Pressure Indicator	Pressure Gauge	N/A	0-100 psig	Contractor	I-102	N/A	NPW	40 73 13	
	PI1112	Grit Pump Discharge Pressure	Pressure Gauge	N/A	0-100 psig	Contractor	I-102	N/A	NPW	40 73 13	
	AE/AIT1209	Influent pH Measurement	pH	Analog	0-14	Contractor	I-102	120 VAC	RWW	40 75 13	
	FE1210	Flow Measurement	Parshall Flume	N/A	0-10.4 MGD	Contractor	I-102	N/A	RWW	40 71 69	Throat Size: 12 inch
	LE/FIT1210	Parshall Flume Level/Flow Indicator	Ultrasonic Level Transmitter	Analog	0-8.32 MGD	Contractor	I-102	120 VAC	RWW	40 72 13	
2000	LSL2100	EQ Basin Low Level Switch	Level Switch	Digital	-	Contractor	I-211	120 VAC	RWW	40 72 76	
	LSH2100	EQ Basin High Level Switch	Level Switch	Digital	-	Contractor	I-211	120 VAC	RWW	40 72 76	
	LE/LIT2010	Influent Pump Station Wetwell Level Transmitter	Submersible Level Transmitter	Analog	0-10 ft	Equipment Vendor	I-211	120 VAC	RWW	40 72 43	
	LSL2010	Influent Pump Station Low Level Switch	Level Switch	Digital	-	Equipment Vendor	I-211	120 VAC	RWW	40 72 76	
	LSH2010	Influent Pump Station High Level Switch	Level Switch	Digital	-	Equipment Vendor	I-211	120 VAC	RWW	40 72 76	
	PI2010	Influent Pump No.1 Discharge Pressure	Pressure Gage	-	0-100 psig	Contractor	I-211	-	RWW	40 73 13	Annular Seal
	MS2010	Influent Pump No.1 Moisture Switch	Moisture Switch	-		Equipment Vendor	I-211	-	RWW	43 25 13	
	TSH2010	Influent Pump No.1 Temperature Switch	Temperature Switch	-		Equipment Vendor	I-211	-	RWW	43 25 13	
	PI2020	Influent Pump No.2 Discharge Pressure	Pressure Gage	-	0-100 psig	Contractor	I-211	-	RWW	40 73 13	Annular Seal
	MS2020	Influent Pump No.2 Moisture Switch	Moisture Switch	-		Equipment Vendor	I-211	-	RWW	43 25 13	
	TSH2020	Influent Pump No.2 Temperature Switch	Temperature Switch	-		Equipment Vendor	I-211	-	RWW	43 25 13	
	FE/FIT2230	Influent Pump Station Discharge Flow Meter	Magnetic Flow Meter	Analog	0-8.32 MGD	Contractor	I-211		RWW	40 71 13	
3000	AE/AIT3012	Fine Bubble Diffusers Tank ORP Sensor	Analytic Instrument	Analog		Equipment Vendor	I-301		ML	46 51 15	
	TI/TAH3110	VLR Blower No.1 Discharge Temperature Sensor	High Temperature Switch	Digital	Vender Recommended	Equipment Vendor	I-302		A	46 53 54	
	PI3110	VLR Blower No.1 Discharge Pressure	Pressure Gauge	-		Equipment Vendor	I-302		A	46 53 54	
	PSH3110	VLR Blower No.1 High Pressure Cutout	Pressure Switch	Digital	Vender Recommended	Equipment Vendor	I-302		A	46 53 54	
	TI/TAH3120	VLR Blower No.2 Discharge Temperature Sensor	High Temperature Switch	Digital	Vender Recommended	Equipment Vendor	I-302		A	46 53 54	
	PI3120	VLR Blower No.2 Discharge Pressure	Pressure Gauge	-		Equipment Vendor	I-302		A	46 53 54	
	PSH3120	VLR Blower No.2 High Pressure Cutout	Pressure Switch	Digital	Vender Recommended	Equipment Vendor	I-302		A	46 53 54	
4000	AE/AIT4201	Clarifier Sludge Blanket Depth	DOB meter	Analog	Vender Recommended	Equipment Vendor	I-401	120 VAC	ML	46 43 21	
	PI4310	Scum Pump Discharge Pressure	Pressure Gage	-	0-100 psig	Contractor	I-401	-	SSC	43 25 13	Annular Seal
	LE/LIT4310	Scum Pit Level Transmitter	Submersible Level Transmitter	Analog	0-10 ft	Contractor	I-211	120 VAC	SCC	40 72 43	
6000	AE/AIT6001	Effluent pH Measurement	pH	Analog	0-14	Contractor	I-601	120 VAC	FNE	40 75 13	
	AE/AIT6002	Effluent Residual Chlorine Measurement	Chlorine Measurement	Analog	0-10 ppm	Contractor	I-601	120 VAC	FNE	40 75 33	
7000	FE/FIT7010	Waste Activated Sludge Discharge Flow Meter	Magnetic Flow Meter	Analog	0-4 MGD	Contractor	I-701		WAS	40 71 13	
	FE/FIT7020	Return Activated Sludge Discharge Flow Meter	Magnetic Flow Meter	Analog	0-4 MGD	Contractor	I-701		RAS	40 71 13	
	LE/LIT7101	Aerobic Digester No. 1 Level Transmitter	Submersible Level Transmitter	Analog	0-25 ft	Contractor	I-701	120 VAC	WAS	40 72 43	
	LSH7101	Aerobic Digester No. 1 High Level Switch	Level Switch	Digital	-	Contractor	I-701	120 VAC	WAS	40 72 76	
	AE/AIT7101	Aerobic Digester No. 1 Dissolved Oxygen	Dissolved Oxygen Probe	Analog	0-20 mg/L	Contractor	I-701	120 VAC	WAS	40 75 43	
	LE/LIT7102	Aerobic Digester No. 2 Level Transmitter	Submersible Level Transmitter	Analog	0-25 ft	Contractor	I-701	120 VAC	WAS	40 72 43	
	LSH7102	Aerobic Digester No. 2 High Level Switch	Level Switch	Digital	-	Contractor	I-701	120 VAC	WAS	40 72 76	
	AE/AIT7102	Aerobic Digester No. 2 Dissolved Oxygen	Dissolved Oxygen Probe	Analog	0-20 mg/L	Contractor	I-701	120 VAC	WAS	40 75 43	
	TI/TAH7110	Digester Blower No.1 Discharge Temperature Sensor	High Temperature Switch	Digital	Vender Recommended	Equipment Vendor	I-711		A	46 53 54	
	PI7110	Digester Blower No.1 Discharge Pressure	Pressure Gauge	-		Equipment Vendor	I-711		A	46 53 54	
	PSH7110	Digester Blower No.1 High Pressure Cutout	Pressure Switch	Digital	Vender Recommended	Equipment Vendor	I-711		A	46 53 54	
	TI/TAH7120	Digester Blower No.2 Discharge Temperature Sensor	High Temperature Switch	Digital	Vender Recommended	Equipment Vendor	I-711		A	46 53 54	
	PI7120	Digester Blower No.2 Discharge Pressure	Pressure Gauge	-		Equipment Vendor	I-711		A	46 53 54	
	PSH7120	Digester Blower No.2 High Pressure Cutout	Pressure Switch	Digital	Vender Recommended	Equipment Vendor	I-711		A	46 53 54	
	LE/LIT8200	Chemical Tank Level/Flow Indicator	Ultrasonic Level Transmitter	Analog	0-10 ft	Contractor	I-801	120 VAC	HOCL	40 72 13	
8000	PI8215	Hypochlorine Feed Pump No. 1 Discharge Pressure	Pressure Gauge	N/A	0-100 psig	Equipment Vendor	I-801	N/A	HOCL	40 73 13	
	PI8225	Hypochlorine Feed Pump No. 2 Discharge Pressure	Pressure Gauge	N/A	0-100 psig	Equipment Vendor	I-801	N/A	HOCL	40 73 13	
	MS8210	Hypochlorine Feed Pump No. 1 Tubing Rupture Detector	Tubing Rupture Detector Sensor	Analog		Equipment Vendor	I-801	120 VAC	HOCL	46 33 41	
	MS8220	Hypochlorine Feed Pump No. 2 Tubing Rupture Detector	Tubing Rupture Detector Sensor	Analog		Equipment Vendor	I-801	121 VAC	HOCL	46 33 41	

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE | DATE

60% SUBMITTAL	03.15.2024
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ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER Liang Wang LIANG WANG

INSTRUMENTATION SCHEDULE

I-911

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\10 DWGs\PLANS\101 Bid Drawings\102 INSTRUMENTATION\I-911 Instrumentation schedule.dwg
PLOTTED: Oct 04, 2024 - 11:58am

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GMC

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS — MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS — MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

GMC
801 Broad Street Suite 900
Augusta, GA 30901
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GOODWYN MILLS CAWOOD, LLC
No.PEF007898
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1" 0" .5" 1"

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DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER
Liang Wang
LIANG WANG

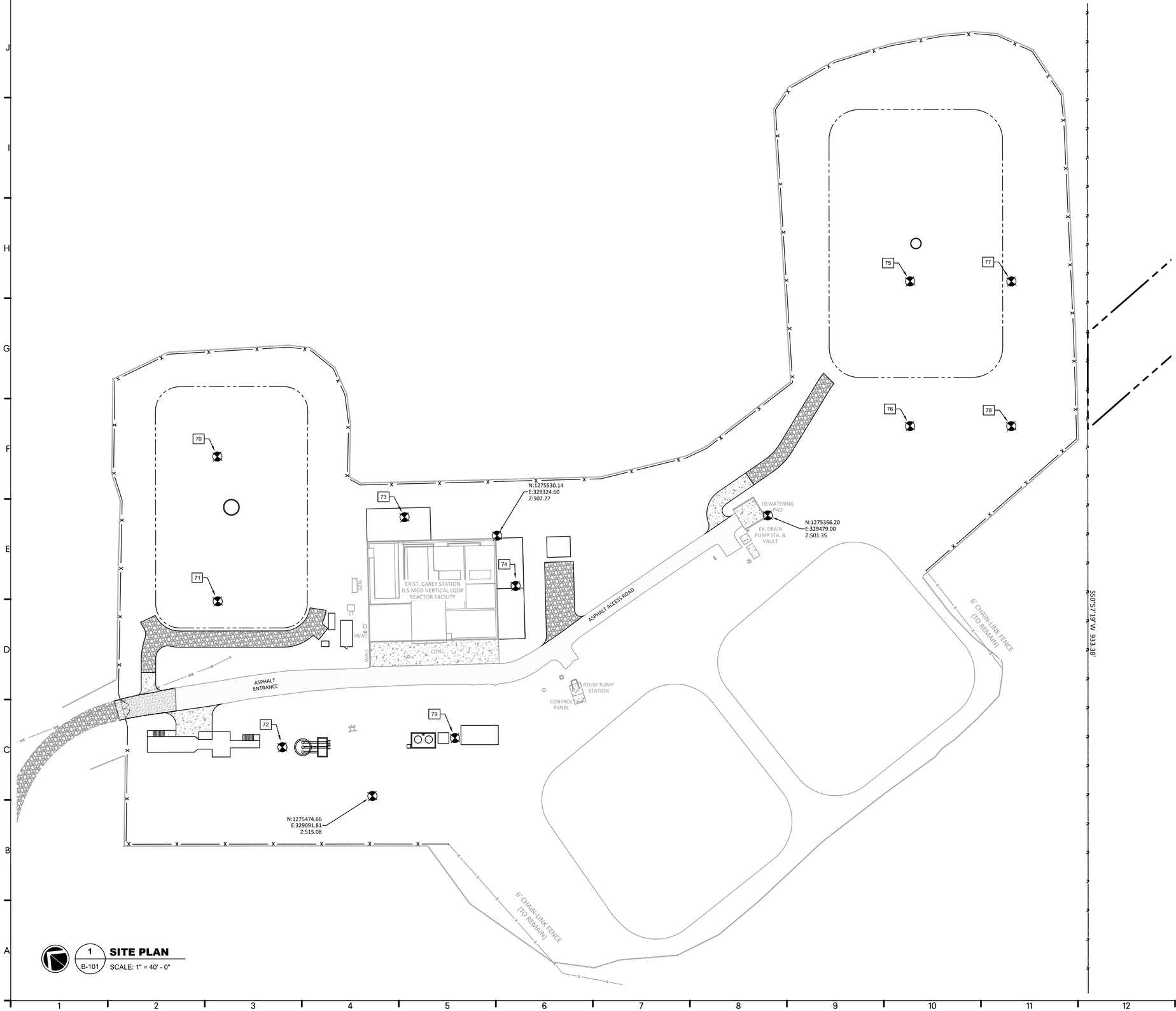
CIVIL SITE PLAN - GEOTECHNICAL LEGEND

B-001

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG\+PLANS\01 Bid Drawings\03 CIVIL\CAUG230002-GEOTEC.dwg
PLOTTED: Oct 04, 2024 - 11:17am

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Point Table			
Point #	Northing	Easting	Description
70	1275751.73	329229.54	B-1
71	1275675.99	329136.46	B-2
72	1275558.15	329076.23	B-3
73	1275599.43	329288.22	B-4
74	1275491.96	329301.89	B-5
75	1275396.51	329704.14	B-6
76	1275321.07	329610.81	B-7
77	1275331.18	329756.94	B-8
78	1275255.75	329663.62	B-9
79	1275451.68	329172.26	B-10



1 B-101 **SITE PLAN**
SCALE: 1" = 40' - 0"

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
STATE OF GEORGIA
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1" 5" 0" 1"

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ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG
Liang Wang

CIVIL SITE PLAN - GEOTECH BORING LOCATIONS

B-101

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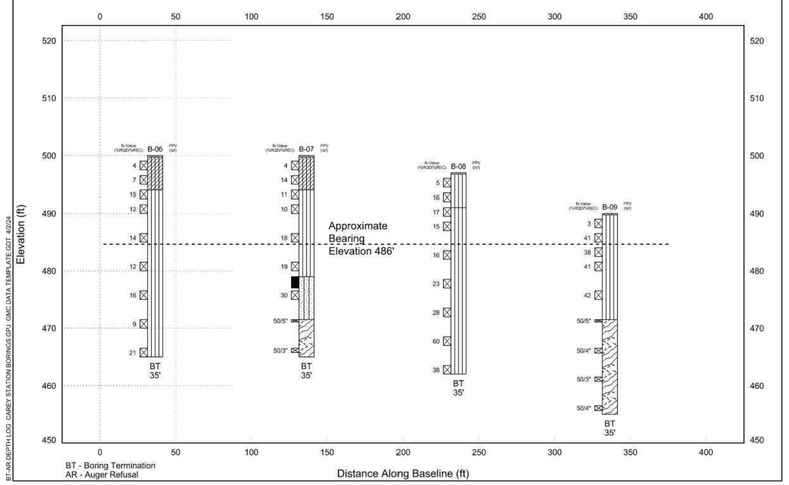
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PLOTTED: Oct 04, 2024 - 11:11am

SUBSURFACE DIAGRAM A

GMC

CLIENT Piedmont Water Company
PROJECT NAME Carey Station Water Reuse Facility
PROJECT NUMBER GAUG230004
PROJECT LOCATION Greensboro, Georgia

TOPSOIL | ML-CL | ML | SM | GNEISS

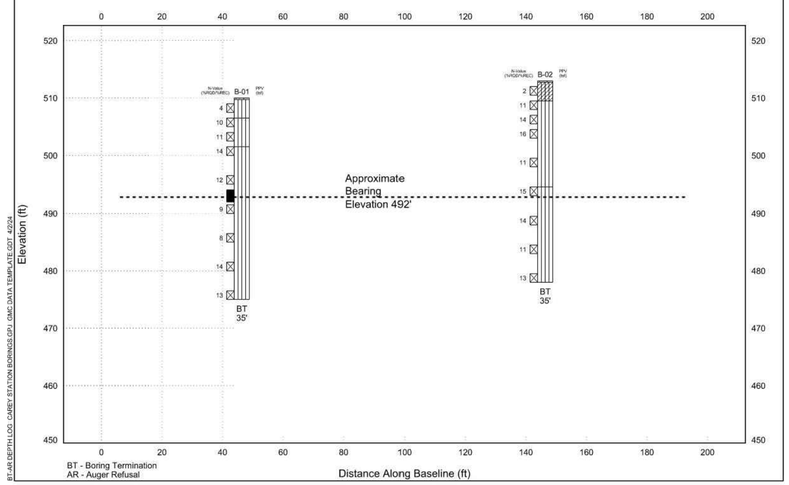


SUBSURFACE DIAGRAM B

GMC

CLIENT Piedmont Water Company
PROJECT NAME Carey Station Water Reuse Facility
PROJECT NUMBER GAUG230004
PROJECT LOCATION Greensboro, Georgia

TOPSOIL | ML | ML-CL

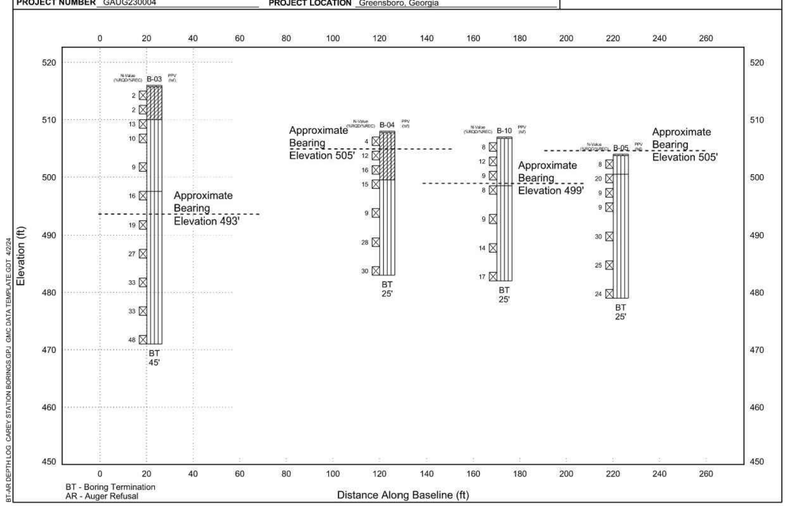


SUBSURFACE DIAGRAM C

GMC

CLIENT Piedmont Water Company
PROJECT NAME Carey Station Water Reuse Facility
PROJECT NUMBER GAUG230004
PROJECT LOCATION Greensboro, Georgia

TOPSOIL | ML-CL | ML



GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

"GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026"
STATE OF GEORGIA
CERTIFICATE OF AUTHORIZATION

1" 0" 5" 1"

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90% SUBMITTAL	05.13.2024	
100% SUBMITTAL	10.04.2024	
BID SET		
CONFORMED SET	09.03.2025	
PROJECT MANAGER:		MP
ENGINEER:		LW/DP
DESIGNER:		LW
DRAWN BY:		DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

CIVIL SITE PLAN - GEOTECHNICAL SUBSURFACE DIAGRAMS

B-201

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG\+PLANS\01 Bid Drawings\03 CIVIL\CAUG230002-GEOTEC.dwg
PLOTTED: Oct 04, 2024 - 11:21am

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BORING NUMBER B-01

PAGE 1 OF 1

CLIENT Piedmont Water Company
PROJECT NAME Carey Station Water Reuse Facility
PROJECT NUMBER GAUG230004
PROJECT LOCATION Greensboro, Georgia
DATE STARTED 2/20/24 **COMPLETED** 2/20/24
GROUND ELEVATION 510 ft **HOLE SIZE** 3.25"
DRILLING CONTRACTOR Premier Drilling
GROUND WATER LEVELS:
DRILLING METHOD CME 550 ATV, Auto-Hammer, HSA w/ SPT
AT TIME OF DRILLING Not Encountered
LOGGED BY S. Nickerson **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
510	0		Organic Laden Material (OLM) - 3 inches										
			SILT (ML), brown, medium to very stiff	SS		1-2-2 (4)							
			, light brown and gray	SS		3-5-5 (10)							
				SS		6-5-6 (11)							
500	10		, brown and light brown	SS		6-7-7 (14)							
				SS		5-6-6 (12)							
				ST						38	27	11	62
490	20			SS		4-5-4 (9)							
				SS		3-4-4 (8)							
480	30			SS		6-7-7 (14)							
				SS		7-6-7 (13)							
470	40		Boring was terminated at 35.0 feet.										
460	50												

BORING NUMBER B-02

PAGE 1 OF 1

CLIENT Piedmont Water Company
PROJECT NAME Carey Station Water Reuse Facility
PROJECT NUMBER GAUG230004
PROJECT LOCATION Greensboro, Georgia
DATE STARTED 2/20/24 **COMPLETED** 2/20/24
GROUND ELEVATION 513 ft **HOLE SIZE** 3.25"
DRILLING CONTRACTOR Premier Drilling
GROUND WATER LEVELS:
DRILLING METHOD CME 550 ATV, Auto-Hammer, HSA w/ SPT
AT TIME OF DRILLING Not Encountered
LOGGED BY S. Nickerson **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
	0		Organic Laden Material (OLM)- 3 inches										
510			SILTY CLAY (ML-CL), red, very soft	SS		1-1-1 (2)							
			SANDY SILT (ML), light brown, medium to stiff	SS		6-5-6 (11)							
				SS		6-7-7 (14)							
	10			SS		7-9-7 (16)							
500				SS		6-5-6 (11)							
	20		, light brown and gray	SS		6-7-8 (15)							
490													
				SS		8-7-7 (14)							
	30			SS		6-5-6 (11)							
480													
				SS		7-6-7 (13)							
	40		Boring was terminated at 35.0 feet.										
470													
	50												

BORING NUMBER B-03

PAGE 1 OF 1

CLIENT Piedmont Water Company
PROJECT NAME Carey Station Water Reuse Facility
PROJECT NUMBER GAUG230004
PROJECT LOCATION Greensboro, Georgia
DATE STARTED 2/20/24 **COMPLETED** 2/20/24
GROUND ELEVATION 516 ft **HOLE SIZE** 3.25"
DRILLING CONTRACTOR Premier Drilling
GROUND WATER LEVELS:
DRILLING METHOD CME 550 ATV, Auto-Hammer, HSA w/ SPT
AT TIME OF DRILLING Not Encountered
LOGGED BY S. Nickerson **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
	0		Organic Laden Material (OLM)- 3 inches										
510			SILTY CLAY (ML-CL), red, very soft	SS		1-1-1 (2)							
				SS		1-1-1 (2)							
	10		SANDY SILT (ML), brown, medium to hard	SS		4-6-7 (13)							
				SS		4-5-5 (10)							
500													
				SS		4-4-5 (9)							
	20		, light brown and gray	SS		5-7-9 (16)							
490													
				SS		7-9-10 (19)							
	30			SS		8-12-15 (27)							
480													
				SS		5-14-19 (33)							
	40			SS		13-18-15 (33)							
470													
				SS		13-20-28 (48)							
	50		Boring was terminated at 45.0 feet.										

BORING NUMBER B-04

PAGE 1 OF 1

CLIENT Piedmont Water Company
PROJECT NAME Carey Station Water Reuse Facility
PROJECT NUMBER GAUG230004
PROJECT LOCATION Greensboro, Georgia
DATE STARTED 2/20/24 **COMPLETED** 2/20/24
GROUND ELEVATION 508 ft **HOLE SIZE** 3.25"
DRILLING CONTRACTOR Premier Drilling
GROUND WATER LEVELS:
DRILLING METHOD CME 550 ATV, Auto-Hammer, HSA w/ SPT
AT TIME OF DRILLING Not Encountered
LOGGED BY S. Nickerson **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
	0		Organic Laden Material (OLM)- 2 inches										
			SILTY CLAY (ML-CL), red, medium to stiff	SS		3-2-2 (4)							
				SS		3-5-7 (12)							
500				SS		5-7-9 (16)							
	10		SANDY SILT (ML), brown, medium to hard	SS		7-7-8 (15)							
				SS		5-4-5 (9)							
490													
	20			SS		12-14-14 (28)							
				SS		10-15-15 (30)							
480			Boring was terminated at 25.0 feet.										
	30												
470													
	40												
460													
	50												

BORING NUMBER B-05

PAGE 1 OF 1

CLIENT Piedmont Water Company
PROJECT NAME Carey Station Water Reuse Facility
PROJECT NUMBER GAUG230004
PROJECT LOCATION Greensboro, Georgia
DATE STARTED 2/20/24 **COMPLETED** 2/20/24
GROUND ELEVATION 504 ft **HOLE SIZE** 3.25"
DRILLING CONTRACTOR Premier Drilling
GROUND WATER LEVELS:
DRILLING METHOD CME 550 ATV, Auto-Hammer, HSA w/ SPT
AT TIME OF DRILLING Not Encountered
LOGGED BY S. Nickerson **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
	0		Organic Laden Material (OLM)- 1 inch										
			SANDY SILT (ML), red, medium to hard	SS		6-4-4 (8)							
500				SS		6-9-11 (20)							
	10		, brown and light brown	SS		4-4-5 (9)							
				SS		4-5-4 (9)							
490													
	20			SS		11-15-15 (30)							
				SS		8-10-15 (25)							
480			Boring was terminated at 25.0 feet.										
	30			SS		9-11-13 (24)							
470													
	40												
460													
	50												

BORING NUMBER B-06

PAGE 1 OF 1

CLIENT Piedmont Water Company
PROJECT NAME Carey Station Water Reuse Facility
PROJECT NUMBER GAUG230004
PROJECT LOCATION Greensboro, Georgia
DATE STARTED 2/20/24 **COMPLETED** 2/20/24
GROUND ELEVATION 500 ft **HOLE SIZE** 3.25"
DRILLING CONTRACTOR Premier Drilling
GROUND WATER LEVELS:
DRILLING METHOD CME 550 ATV, Auto-Hammer, HSA w/ SPT
AT TIME OF DRILLING Not Encountered
LOGGED BY S. Nickerson **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
500	0		Organic Laden Material (OLM)- 3 inches										
			SILTY CLAY (ML-CL), red, medium to stiff	SS		2-2-2 (4)							
				SS		3-3-4 (7)							
			SANDY SILT (ML), light brown, stiff to very stiff	SS		7-7-8 (15)							
490	10			SS		6-6-6 (12)							
				SS		5-6-8 (14)							
480	20			SS		5-6-6 (12)							
				SS		7-7-9 (16)							
470	30			SS		5-4-5 (9)							
				SS		8-9-12 (21)							
460	40		Boring was terminated at 35.0 feet.										
	50												

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"GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026" STATE OF GEORGIA CERTIFICATE OF AUTHORIZATION

1" 0" 5" 1"

ISSUE	DATE
60% SUBMITTAL	03.15.2024
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

CIVIL SITE PLAN - GEOTECHNICAL BORE PROFILES

B-202

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DRAWING FILE: T:\1Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\10 DWG's+PLANS\01 Bid Drawings\03 CIVIL\CAUG230002-GEOTEC.dwg
PLOTTED: Oct 04, 2024 - 11:28am

BORING NUMBER B-07

PAGE 1 OF 1

CLIENT Piedmont Water Company
PROJECT NAME Carey Station Water Reuse Facility
PROJECT NUMBER GAUG230004
PROJECT LOCATION Greensboro, Georgia
DATE STARTED 2/20/24 **COMPLETED** 2/20/24
GROUND ELEVATION 500 ft **HOLE SIZE** 3.25"
DRILLING CONTRACTOR Premier Drilling
GROUND WATER LEVELS:
DRILLING METHOD CME 550 ATV, Auto-Hammer, HSA w/ SPT
AT TIME OF DRILLING Not Encountered
LOGGED BY S. Nickerson **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (ROD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
500	0		Organic Laden Material (OLM)- 4 inches										
			SILTY CLAY (ML-CL), red, medium to stiff	SS		2-2-2 (4)							
				SS		6-7-7 (14)							
			SANDY SILT (ML), light brown, stiff to very stiff	SS		5-6-5 (11)							
490	10			SS		5-5-5 (10)							
				SS		7-8-10 (18)							
480	20			SS		7-9-10 (19)							
			SILTY SAND (SM), gray, medium	ST						32	27	5	45
				SS		10-13-17 (30)							
470	30		PARTIALLY WEATHERED ROCK - Sampled as POORLY GRADED SAND with SILT (SP-SM), gray, very dense	SS		50/5"							
				SS		10-50/3"							
460	40		Boring was terminated at 35.0 feet.										
450	50												

Y:\GMC BORINGS_GAUG230004 CAREY STATION\GPJ - GMC DATA TEMPLATE.GDT - 5/5/24

BORING NUMBER B-08

PAGE 1 OF 1

CLIENT Piedmont Water Company
PROJECT NAME Carey Station Water Reuse Facility
PROJECT NUMBER GAUG230004
PROJECT LOCATION Greensboro, Georgia
DATE STARTED 2/20/24 **COMPLETED** 2/20/24
GROUND ELEVATION 497 ft **HOLE SIZE** 3.25"
DRILLING CONTRACTOR Premier Drilling
GROUND WATER LEVELS:
DRILLING METHOD CME 550 ATV, Auto-Hammer, HSA w/ SPT
AT TIME OF DRILLING Not Encountered
LOGGED BY S. Nickerson **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (ROD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
	0		Organic Laden Material (OLM)- 3 inches										
			SANDY SILT (ML), brown, medium to very stiff	SS		3-3-2 (5)							
				SS		10-9-7 (16)							
490			, light brown, stiff to hard	SS		8-10-7 (17)							
	10			SS		7-7-8 (15)							
				SS		6-7-9 (16)							
480													
	20			SS		8-10-13 (23)							
470				SS		10-13-15 (28)							
	30			SS		14-28-32 (60)							
460			Boring was terminated at 35.0 feet.										
	40												
450													
	50												

Y:\GMC BORINGS_GAUG230004 CAREY STATION\GPJ - GMC DATA TEMPLATE.GDT - 5/5/24

BORING NUMBER B-09

PAGE 1 OF 1

CLIENT Piedmont Water Company
PROJECT NAME Carey Station Water Reuse Facility
PROJECT NUMBER GAUG230004
PROJECT LOCATION Greensboro, Georgia
DATE STARTED 2/20/24 **COMPLETED** 2/20/24
GROUND ELEVATION 490 ft **HOLE SIZE** 3.25"
DRILLING CONTRACTOR Premier Drilling
GROUND WATER LEVELS:
DRILLING METHOD CME 550 ATV, Auto-Hammer, HSA w/ SPT
AT TIME OF DRILLING Not Encountered
LOGGED BY S. Nickerson **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (ROD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
490	0		Organic Laden Material (OLM)- 4 inches										
			SANDY SILT (ML), light brown, soft to hard	SS		1-1-2 (3)							
				SS		12-23-18 (41)							
				SS		14-19-19 (38)							
480	10			SS		13-19-22 (41)							
				SS		10-19-23 (42)							
470	20		PARTIALLY WEATHERED ROCK - Sampled as POORLY GRADED SAND with SILT (SP-SM), light brown, very dense	SS		50/5"							
				SS		27-50/4"							
460	30			SS		25-50/3"							
				SS		30-50/4"							
450	40		Boring was terminated at 35.0 feet.										
440	50												

Y:\GMC BORINGS_GAUG230004 CAREY STATION\GPJ - GMC DATA TEMPLATE.GDT - 5/5/24

BORING NUMBER B-10

PAGE 1 OF 1

CLIENT Piedmont Water Company
PROJECT NAME Carey Station Water Reuse Facility
PROJECT NUMBER GAUG230004
PROJECT LOCATION Greensboro, Georgia
DATE STARTED 2/20/24 **COMPLETED** 2/20/24
GROUND ELEVATION 507 ft **HOLE SIZE** 3.25"
DRILLING CONTRACTOR Premier Drilling
GROUND WATER LEVELS:
DRILLING METHOD CME 550 ATV, Auto-Hammer, HSA w/ SPT
AT TIME OF DRILLING Not Encountered
LOGGED BY S. Nickerson **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (ROD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
	0		Organic Laden Material (OLM)- 2 inches										
			SANDY SILT (ML), brown, medium to very stiff	SS		3-4-4 (8)							
				SS		6-6-6 (12)							
500				SS		3-4-5 (9)							
	10		, light brown	SS		4-4-4 (8)							
				SS		4-5-4 (9)							
490													
	20			SS		6-7-7 (14)							
480				SS		9-8-9 (17)							
	30		Boring was terminated at 25.0 feet.										
470													
	40												
460													
	50												

Y:\GMC BORINGS_GAUG230004 CAREY STATION\GPJ - GMC DATA TEMPLATE.GDT - 5/5/24

GMC
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Augusta, GA 30901
T 706.251.9099

GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026
STATE OF GEORGIA
CERTIFICATE OF AUTHORIZATION

1" 5" 0" 1"

ISSUE	DATE
60% SUBMITTAL	03.15.2024
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

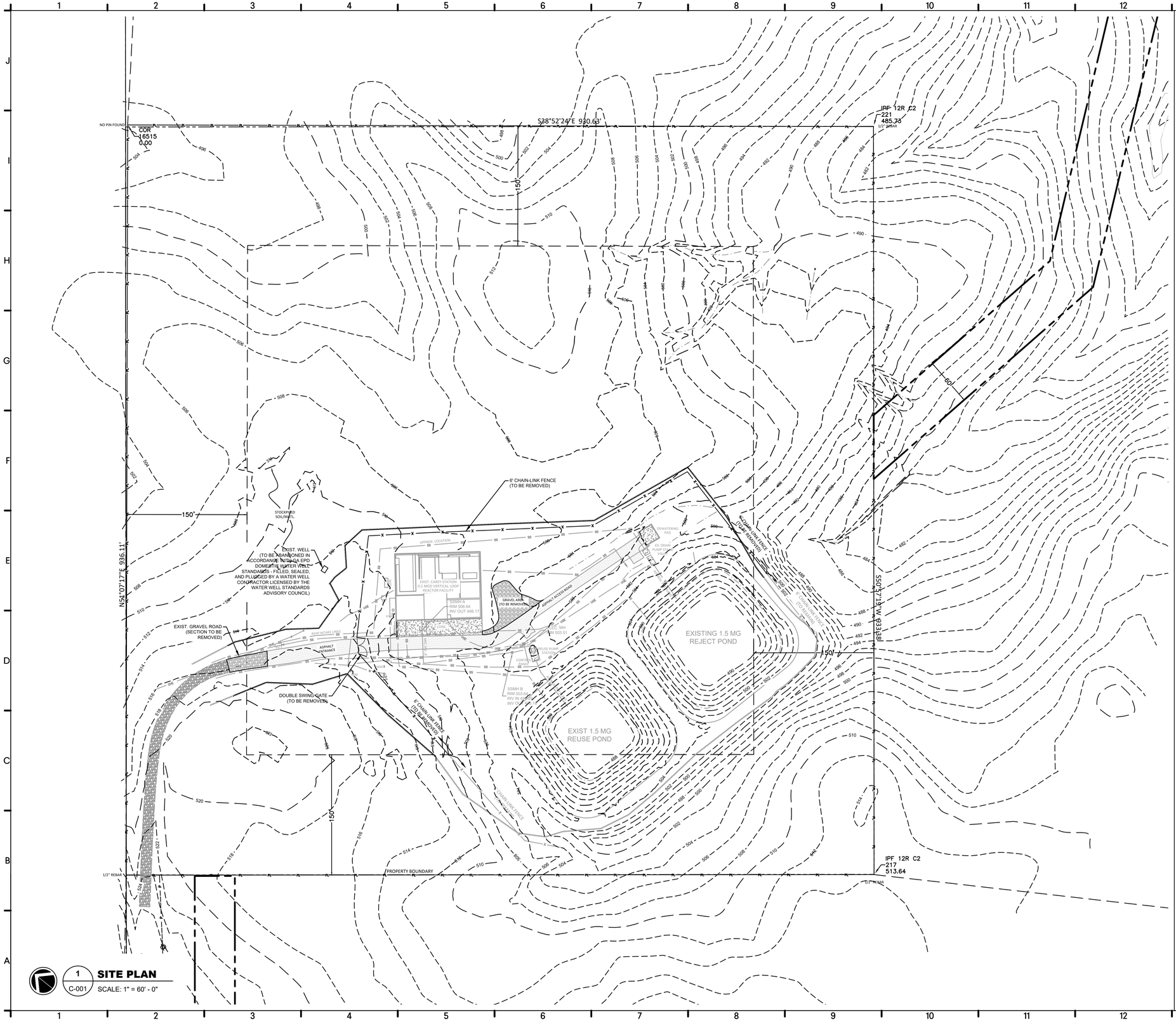
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

CIVIL SITE PLAN - GEOTECHNICAL BORE PROFILES

B-203

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF\10 MGD Expansion\0 DWG\+PLANS\01 Bid Drawings\03 Civil\CAUG230002-GEOTEC.dwg
PLOTTED: Oct 04, 2024 - 11:31am

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1 C-001 **SITE PLAN**
SCALE: 1" = 60' - 0"

SITE NOTES:

1. THE CONTRACTOR SHALL ADHERE TO THE LOCATIONS AND GEOMETRIC SHAPES FOR CONCRETE PADS OTHER THAN THE BUILDING AS SHOWN ON THE SITE PLAN UNLESS SPECIFIC DETAILS ARE PROVIDED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
2. ANY PROPERTY CORNERS OR PERMANENT SURVEY MARKERS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A LICENSED SURVEYOR AT CONTRACTORS EXPENSE.
3. ANY PAVEMENT OR CURBING DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED AND RESTORED TO LIKE OR BETTER CONDITION.
4. SITE SECURITY AND EQUIPMENT STORAGE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. PROPERTY OWNERSHIP INFORMATION IS SHOWN FOR GENERAL INFORMATION ONLY AND MAY NOT BE THE MOST RECENT OWNERSHIP ON RECORD.
6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE AND RESET FENCING TO ORIGINAL CONDITION WHERE REQUIRED AT NO ADDITIONAL COST.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAR AND GRUB AS NECESSARY
8. CONTRACTOR SHALL MINIMIZE THE DISTURBANCE TO ANY EXISTING LANDSCAPING AND TREES, UNLESS APPROVED BY THE ENGINEER AND OWNER.
9. ANY LANDSCAPING (SHRUBS, FLOWERS, ORNAMENTAL GRASS, ETC.) DISTURBED DURING PROJECT CONSTRUCTION ACTIVITIES SHALL BE REPLACED AND OR TRANSPLANTED TO THE SATISFACTION OF THE OWNER TO PRE-CONSTRUCTION CONDITION. THIS MAY INCLUDE SOD REPLACEMENT AS DEEMED NECESSARY BY THE OWNER. ALL RELATED COSTS FOR SUCH WORK SHALL BE INCLUDED IN THE BID PRICE.
10. THE CONTRACTOR MUST ADJUST ALL VALVE BOXES, COVERS, METERS, FIRE HYDRANTS, AND OTHER WATER SERVICE APPURTENANCES, TO FINAL GRADE. THE COST OF THESE ADJUSTMENTS SHALL BE INCLUDED IN THE PRICE BID.

DEMOLITION NOTES:

1. BEFORE STARTING DEMOLITION, THE CONTRACTOR MUST CHECK TO DETERMINE THAT ALL UTILITY SERVICES, SUCH AS WATER, GAS, ELECTRICITY, TELEPHONE, ETC. ARE DISCONNECTED AT THE SERVICE MAIN, IN ACCORDANCE WITH THE RULES AND REGULATIONS GOVERNING THE UTILITY INVOLVED.
2. CONTRACTOR SHALL PROVIDE SAFEGUARDS, INCLUDING WARNING SIGNS, BARRICADES, TEMPORARY FENCES, WARNING LIGHTS AND OTHER ITEMS THAT ARE REQUIRED FOR PROTECTION OF ALL PERSONNEL DURING DEMOLITION AND REMOVAL OPERATIONS.
3. ACCEPTABLE METHODS FOR DEMOLITION SHALL BE APPROVED BY THE ENGINEER. HAND DISMANTLING, PNEUMATIC AND HYDRAULIC BREAKERS, SAW CUTTING, MECHANICAL BREAKING, WATER JETTING, AND THERMAL LANCING ARE ACCEPTABLE. THE USE OF CHEMICALS AND EXPLOSIVES ARE NOT ACCEPTABLE.
4. ANY DAMAGE TO SURROUNDING EQUIPMENT, STRUCTURES, UTILITIES OR ADJACENT ITEMS SHALL BE RESTORED TO THE ENTITIES ORIGINAL CONDITION AT NO COST TO THE OWNER.
5. BEFORE CUTTING, EXAMINE THE SURFACES TO BE CUT AND PATCHED AND THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. IF UNSAFE OR OTHERWISE UNSATISFACTORY CONDITIONS ARE ENCOUNTERED, TAKE CORRECTIVE ACTION BEFORE PROCEEDING WITH THE WORK.
6. USE METHODS THAT ARE LEAST LIKELY TO DAMAGE WORK TO BE RETAINED OR ADJOINING WORK. IN GENERAL, WHERE CUTTING IS REQUIRED USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING OR GRINDING, NOT HAMMERING AND CHOPPING. CUT THROUGH CONCRETE AND MASONRY USING A CUTTING MACHINE SUCH AS A CARBORUNDUM SAW OR CORE DRILL TO INSURE A NEAT HOLE. CUT HOLES AND SLOTS NEATLY TO SIZE REQUIRED WITH MINIMUM DISTURBANCE OF ADJACENT WORK. TO AVOID MARRING EXISTING FINISHED SURFACES, CUT OR DRILL FROM THE EXPOSED OR FINISHED SIDE INTO CONCEALED SURFACES. TEMPORARILY COVER OPENINGS WHEN NOT IN USE.
7. RESTORE EXPOSED FINISHES OF PATCHED AREAS AND WHERE NECESSARY EXTEND FINISH RESTORATION INTO RETAINED ADJOINING WORK IN A MANNER WHICH WILL ELIMINATE EVIDENCE OF PATCHING AND REFINISHING.
8. SECURELY SEAL AND OR PLUG ALL STORM AND SANITARY SEWERS LEADING FROM THE STRUCTURE TO BE DEMOLISHED.
9. DEMOLISH STRUCTURES IN SUCH A MANNER AS TO AVOID HAZARDS TO PERSONS AND PROPERTY INTERFERENCE WITH THE USE OF ADJACENT BUILDINGS, AND INTERRUPTION OF FREE PASSAGE TO AND FROM SUCH BUILDINGS.
10. PROMPTLY DISPOSE OF DEBRIS, RUBBISH, AND OTHER MATERIALS RESULTING FROM BUILDING SITE DEMOLITION OPERATIONS. NO BURNING IS ALLOWED. ALL WASTE MATERIALS SHALL BE REMOVED FROM THE PROJECT SITE AND LEGALLY DISPOSED OF IN AN EPA AND OWNER-APPROVED LANDFILL OR RECYCLING FACILITY. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS.

GMC
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STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	09.03.2025
CONFORMED SET	MP
PROJECT MANAGER:	LW/DP
ENGINEER:	LW
DESIGNER:	DS
DRAWN BY:	

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

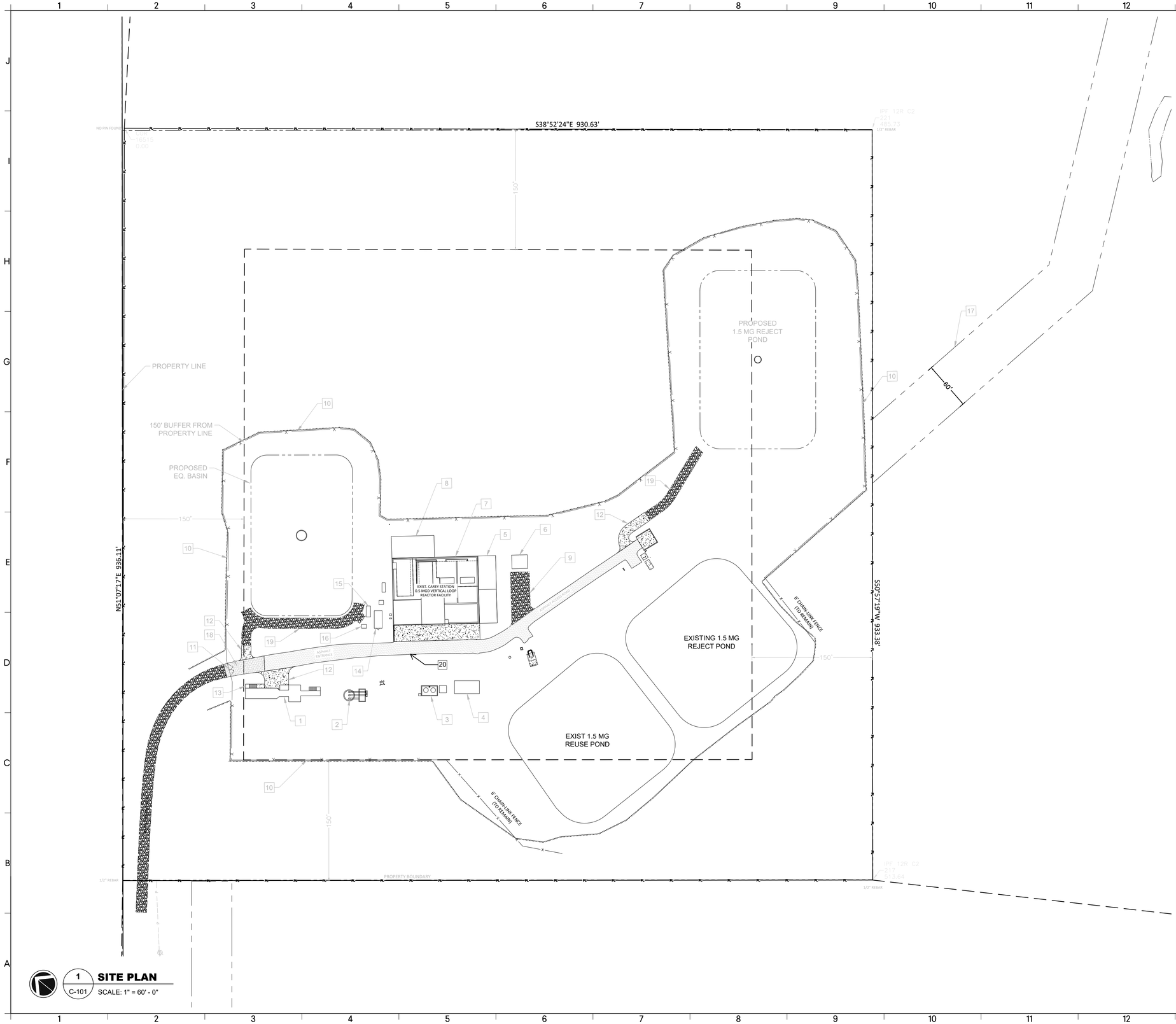
GEORGIA
REGISTERED
No. PE045414
PROFESSIONAL
07/22/2025
ENGINEER
DANIEL LAMAR PHILLIPS

CIVIL SITE PLAN - EXISTING CONDITIONS & DEMOLITION PLAN

C-001

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG's+PLANS\01 Bid Drawings\REVISED SUBMITTAL_1.0 MGD\CAUG230002-BASE - Package Plant.dwg
PLOTTED: Jul 23, 2025 - 12:16pm

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1 C-101 **SITE PLAN**
SCALE: 1" = 60' - 0"

KEY NOTES: #

1. PROPOSED HEADWORKS
2. PROPOSED INFLUENT PUMP STATION
3. PROPOSED CHEMICAL STORAGE TANK & CHEMICAL PUMP ROOM
4. PROPOSED CHLORINE CONTACT CHAMBER
5. PROPOSED SLUDGE AEROBIC DIGESTERS
6. PROPOSED BLOWERS FOR AEROBIC DIGESTERS
7. PROPOSED ADDITIONAL FILTER DISCS INSIDE EX. BUILDING
8. PROPOSED ADDITIONAL CLARIFIER
9. PROPOSED GRAVEL AREA
10. PROPOSED 6' CHAIN-LINK FENCE
11. PROPOSED 16' DOUBLE SWING GATE
12. PROPOSED CONCRETE APRON
13. PROPOSED ALUMINUM STAIRCASE
14. PROPOSED ELECTRICAL ROOM
15. PROPOSED TRANSFORMER
16. PROPOSED DIESEL GENERATOR
17. 60'-0" SEWER EASEMENT
18. PROPOSED STANDARD DUTY ASPHALT PAVEMENT (WITHIN EXTENT OF EXISTING GRAVEL DRIVEWAY)
19. PROPOSED GRAVEL ACCESS DRIVE
20. REPLACE EXISTING ASPHALT ROAD (PER ADDENDUM NO. 1)

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Augusta, GA 30901
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GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
STATE OF GEORGIA
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

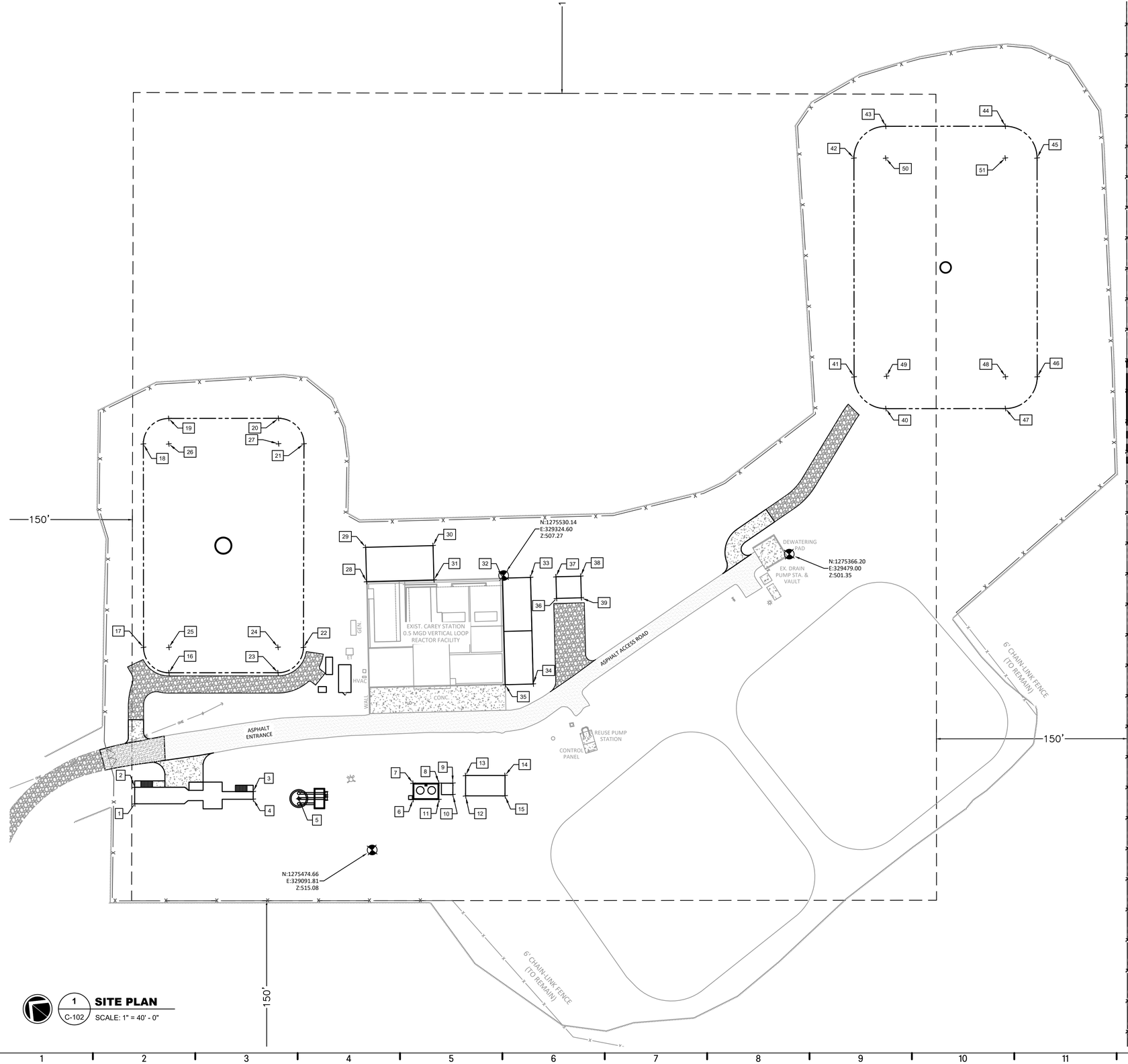
GEORGIA REGISTERED 07/22/2025 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

CIVIL SITE PLAN

C-101

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PLOTTED: Jul 23, 2025 - 12:18pm



Point Table			
Point #	Northing	Easting	Description
1	1275642.62	329002.55	CRNR
2	1275650.81	329012.64	CRNR
3	1275576.24	329068.65	CRNR
4	1275572.46	329063.99	CRNR
5	1275544.95	329086.94	CEN
6	1275474.65	329142.90	CRNR
7	1275482.74	329152.87	CRNR
8	1275466.94	329165.68	CRNR
9	1275458.40	329172.61	CRNR
10	1275452.73	329165.62	CRNR
11	1275458.86	329155.71	CRNR
12	1275444.34	329171.14	CRNR
13	1275454.42	329183.57	CRNR
14	1275430.34	329203.10	CRNR
15	1275420.26	329190.67	CRNR
16	1275686.53	329099.59	TAN
17	1275714.65	329102.53	TAN
18	1275815.44	329226.77	TAN
19	1275812.51	329254.90	TAN
20	1275745.50	329309.29	TAN
21	1275717.31	329306.30	TAN
22	1275616.92	329181.64	TAN
23	1275619.91	329153.57	TAN
24	1275632.50	329169.11	CEN
25	1275699.12	329115.13	CEN
26	1275799.91	329239.37	CEN
27	1275732.90	329293.76	CEN
28	1275610.89	329253.04	CRNR
29	1275628.41	329273.58	CRNR
30	1275588.09	329307.98	CRNR
31	1275570.56	329287.43	CRNR
32	1275529.49	329322.47	CRNR
33	1275512.76	329336.75	CRNR
34	1275458.36	329272.99	CRNR
35	1275475.09	329258.72	CRNR
36	1275486.51	329336.80	CRNR
37	1275497.54	329349.73	CRNR
38	1275482.71	329362.39	CRNR
39	1275471.67	329349.46	CRNR
40	1275379.14	329615.76	TAN
41	1275414.30	329619.43	TAN
42	1275522.65	329753.02	TAN
43	1275518.98	329788.18	TAN
44	1275445.98	329847.40	TAN
45	1275410.81	329843.73	TAN
46	1275302.46	329710.14	TAN
47	1275306.13	329674.98	TAN
48	1275321.88	329694.39	CEN
49	1275394.81	329635.88	CEN
50	1275503.23	329768.77	CEN
51	1275430.23	329827.98	CEN

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GOODWYN MILLS CAWOOD, LLC
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1" 0" .5" 1"

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ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA
REGISTERED
07/22/2025
No. PE037638
PROFESSIONAL
ENGINEER
LIANG WANG

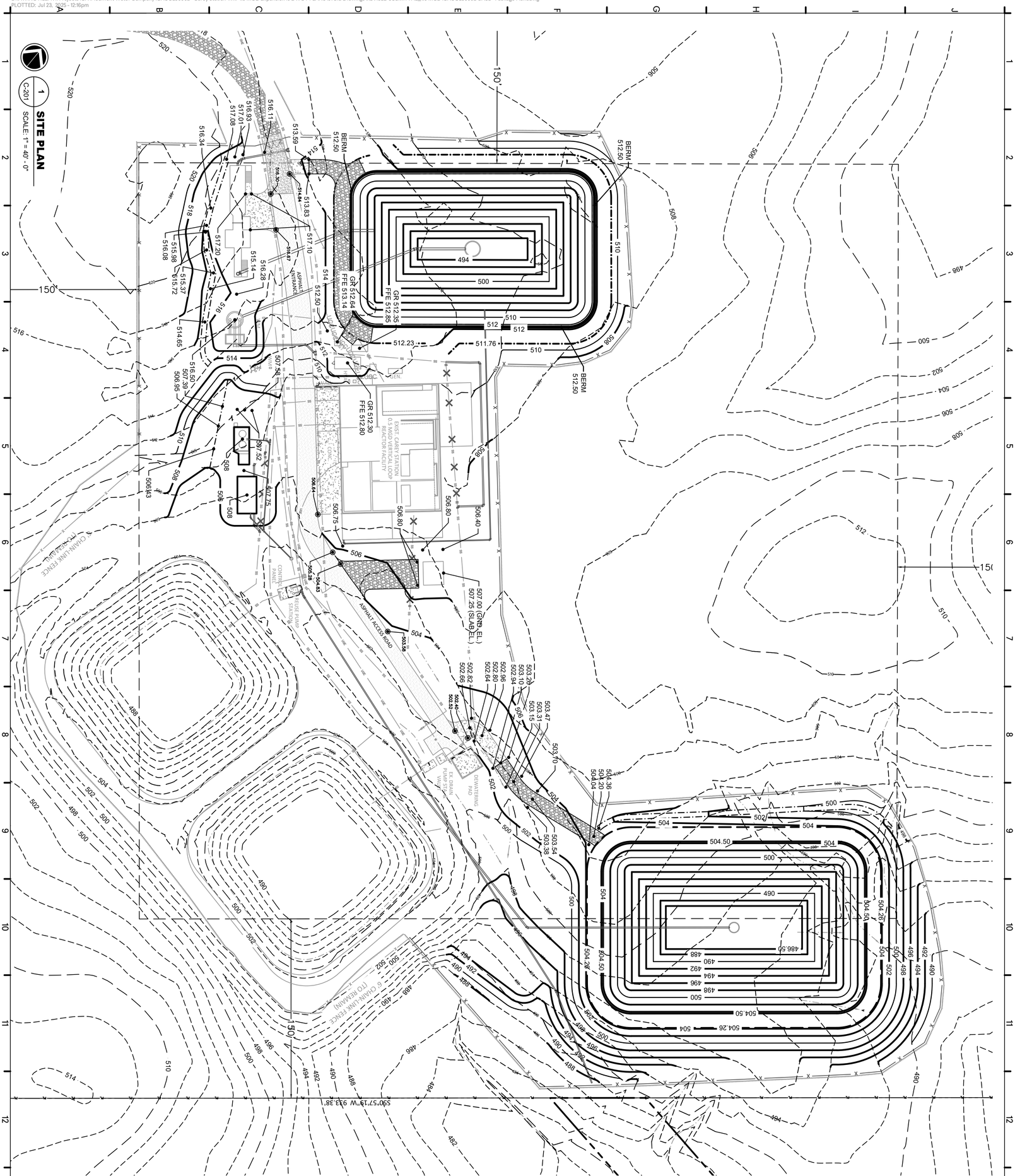
CIVIL SITE PLAN -
GEOMETRIC CONTROLS

C-102

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PLOTTED: Jul 23, 2025 - 12:16pm



CIVIL SITE PLAN - GRADING AND DRAINAGE PLAN

C-201

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

ISSUE	DATE
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ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

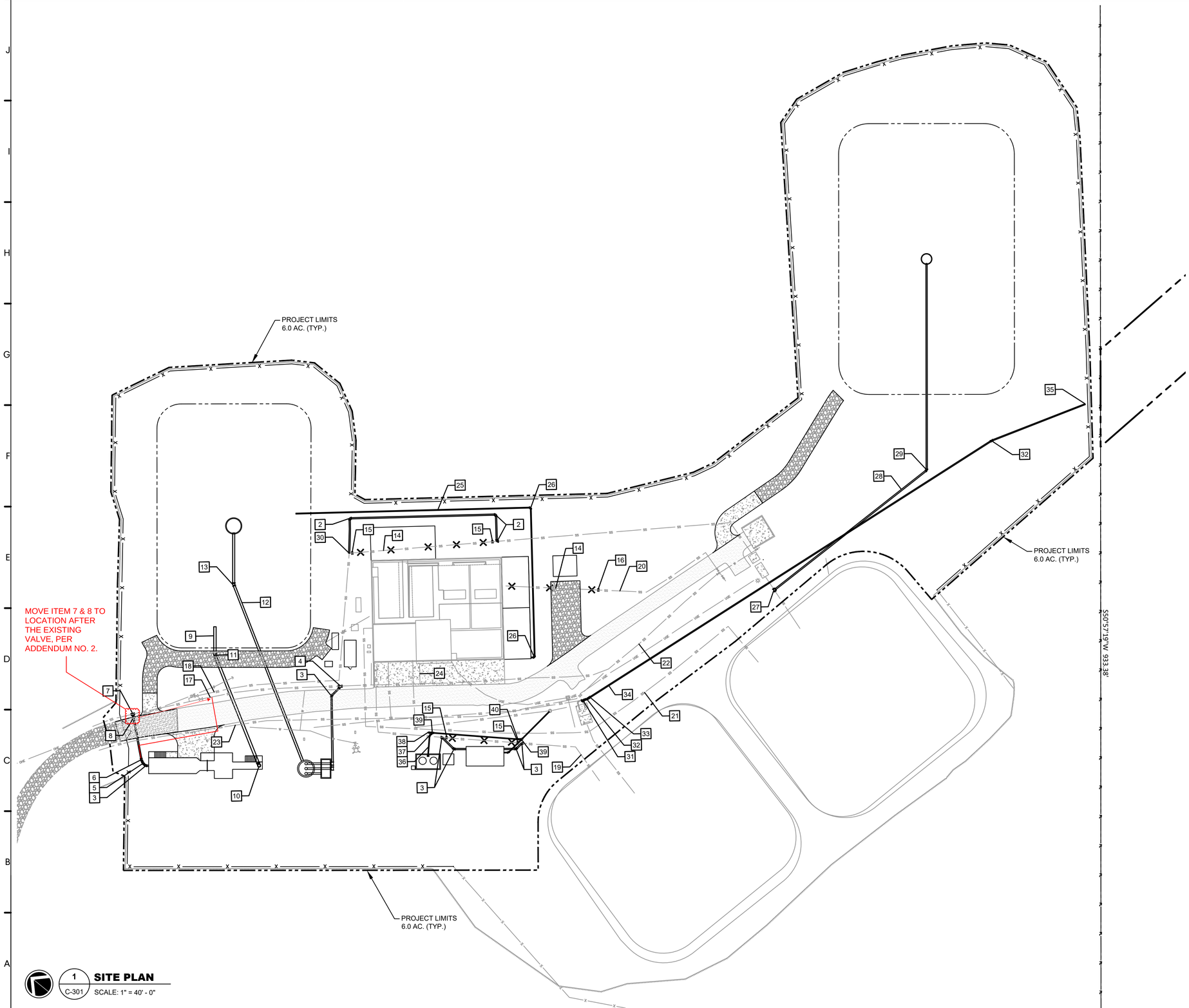
GEORGIA REGISTERED PROFESSIONAL ENGINEER DANIEL LAYMAR PHILLIPS No. PE045414 07/22/2025

STATE OF GEORGIA GOODWYN MILLS CAWOOD LLC No. PEF007898 Exp. 06.30.2026 CERTIFICATE OF AUTHORIZATION

1" 5" 0" 1"

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1 C-301 **SITE PLAN**
SCALE: 1" = 40' - 0"

PIPING NOTES:

1. CONTRACTOR SHALL INCLUDE ANY REQUIRED BENDS TO AVOID ANY PIPING CONFLICTS DUE TO LIMITED AREA OF CONSTRUCTION AND UNFAVORABLE GRADE.
2. ALL BURIED PIPE MUST HAVE MINIMUM COVER DEPTH OF 30" OR AS OTHERWISE INDICATED IN THE SPECIFICATIONS OR DETAILS.
3. ALL NECESSARY APPURTENANCES REQUIRED TO MAKE THE PROCESS PIPING FULLY FUNCTIONAL SHALL BE PROVIDED BY THE CONTRACTOR. THIS INCLUDES BUT NOT LIMITED TO MIXING RINGS, INJECTORS, SPARGERS, TAPS, FLANGE ADAPTERS, COUPLINGS, PIPE SUPPORTS, ETC.
4. CONTRACTOR SHALL VERIFY VALVE LOCATIONS AND INTENDED USE AS REQUIRED BY THE PROCESS MANUFACTURER. IF VALVE RELOCATION IS DESIRED, IT SHALL BE AT THE ENGINEER'S DISCRETION.
5. ELECTRICAL CONDUIT AND YARD PIPING CONFLICTS SHALL BE RESOLVED IN THE FIELD BY THE INSPECTOR/ENGINEER.
6. CONTRACTOR SHALL PROVIDE HEAT TRACING, INSULATION AND ELECTRICAL APPURTENANCES FOR ALL EXTERIOR ABOVE GROUND PIPING AND POLYETHYLENE TANKS PER SPECIFICATION GOVERNING WATER AND SEWER PIPING. AIR PIPING IS EXCLUDED FROM THIS REQUIREMENT.
7. CONTRACTOR SHALL REFER TO EROSION CONTROL AND GRADING PLANS FOR SEQUENCING REQUIRED BY DISTURBANCE.
8. VALVES, PIPES, MOTORS, ELECTRICAL PANELS, ETC. SHALL BE POSITIONED SO THAT THEY DO NOT INTERFERE WITH PEDESTRIAN TRAFFIC.
9. PIPE PENETRATIONS THROUGH ALUMINUM GRATING SHALL BE CLEAN PENETRATIONS AND MAINTAIN A MAXIMUM OF A 1" BETWEEN THE EDGE OF THE GRATING AND O.D. OF THE PIPE. GRATING SUPPORTS SHALL BE DESIGNED SUCH THAT PENETRATIONS DO NOT COMPROMISE THE INTEGRITY OF THE GRATING. BANDING & SUPPORT FOR SPECIFIED LOADS IS REQUIRED TO PROVIDE CLEAN PENETRATIONS.

KEY NOTES: [#]

1. 12" DIP
2. 12" 90° MJ BEND
3. 12" 45° MJ BEND
4. 12" x 12" MJ WYE
5. 12" 22 1/2° MJ BEND
6. 12" 11 1/4° MJ BEND
7. 12" X 12" MJ TEE
8. 12" PLUG VALVE
9. 20" DIP EQ BASIN INFLUENT
10. 20" 90° MJ VERTICAL BEND UP
11. 20" 22 1/2° MJ BEND
12. 20" DIP EQ BASIN EFFLUENT
13. 20" 22 1/2° MJ BEND
14. EX. PIPELINE TO BE ABANDONED AND REMOVED
15. 12" CUT AND PLUG
16. 6" CUT AND PLUG
17. EX. 12" DIP INFLUENT FORCE MAIN
18. EX. 12" DIP PLANT BY-PASS LINE
19. EX. 12" DIP RE-USE LINE
20. EX. 6" POLYETHYLENE BY-PASS LINE
21. EX. 12" DIP REJECT LINE
22. EX. 6" DIP FORCE MAIN TO EX. HEADWORKS
23. EX. 10" PVC REUSE LINE
24. EX. 12" DIP FORCE MAIN
25. 8" DIP DRAIN LINE TO EQ BASIN
26. 8" 90° MJ BEND
27. 8" X 8" MJ TEE, MEGALUG RESTRAINED
28. 8" DIP LINE
29. 8" 45° MJ BEND
30. CONNECT TO EXIST. 12"
31. REPLACE EXIST. 10" 90° BEND WITH 10" MJ TEE
32. 10" 11 1/4° MJ BEND
33. 10" PLUG VALVE
34. 10" DIP
35. 10" MJ PLUG
36. 6" DRAIN
37. 6" 45° MJ BEND
38. 6" CLEANOUT
39. 6" MJ WYE
40. 6" 11 1/4° MJ BEND

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GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
STATE OF GEORGIA
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
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90% SUBMITTAL	05.13.2024
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ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

CIVIL SITE PLAN - YARD PIPING PLAN

C-301

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PLOTTED: Oct 04, 2024 - 10:42am

SILT FENCE SENSITIVE Sdf-S

OUTFALL SAMPLING LOCATION #2

STONE CHECK DAM Cd-S

TEMPORARY SEDIMENT TRAP #2 Sd4-C

DRAINAGE AREA #4

STONE CHECK DAM Cd-S

CHANNEL STABILIZATION VEGETATED LINING Ch-V

CLEARING & GRUBBING AREA (3.57 AC.)

DUST CONTROL Du

TEMPORARY GRASSING Ds2

DRAINAGE AREA #1

SILT FENCE SENSITIVE Sdf-S

DRAINAGE AREA #2

LIMITS OF DISTURBANCE (6.0 AC.)

SILT FENCE SENSITIVE Sdf-S

DRAINAGE AREA #5

DIVERSION EARTHEN BERM Di

TOPSOILING Tp

TEMPORARY SEDIMENT TRAP #1 Sd4-C

OUTFALL SAMPLING LOCATION #1

STONE CHECK DAM Cd-S

SILT FENCE SENSITIVE Sdf-S

150'

DEWATERING PAD

EX. DRAIN PUMP STA. VAULT

EXIST. CAREY STATION 0.5 MGD VERTICAL LOOP REACTOR FACILITY

ASPHALT ACCESS ROAD

6' CHAIN-LINK FENCE (TO REMAIN)

S30°57'19"W 933.38'

RAW INTAKE LINES

ASPHALT ENTRANCE

REUSE PUMP STATION

CONTROL PANEL

SILT FENCE SENSITIVE Sdf-S

130'

CONSTRUCTION ENTRANCE/EXIT 33.502375 °N 83.239893 °W (UTILIZE EXISTING GRAVEL DRIVEWAY) Co

CLEARING & GRUBBING AREA (0.42 AC.)

SILT FENCE SENSITIVE Sdf-S

LIMITS OF DISTURBANCE (6.0 AC.)

DRAINAGE AREA #3

6' CHAIN-LINK FENCE (TO REMAIN)

DUST CONTROL Du

TEMPORARY GRASSING Ds2

1 SITE PLAN
C-601 SCALE: 1" = 40' - 0"

LEVEL II CERTIFICATION #69394 DANIEL L. PHILLIPS 08/07/2026

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GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION
STATE OF GEORGIA

1" 0" .5" 1"

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DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

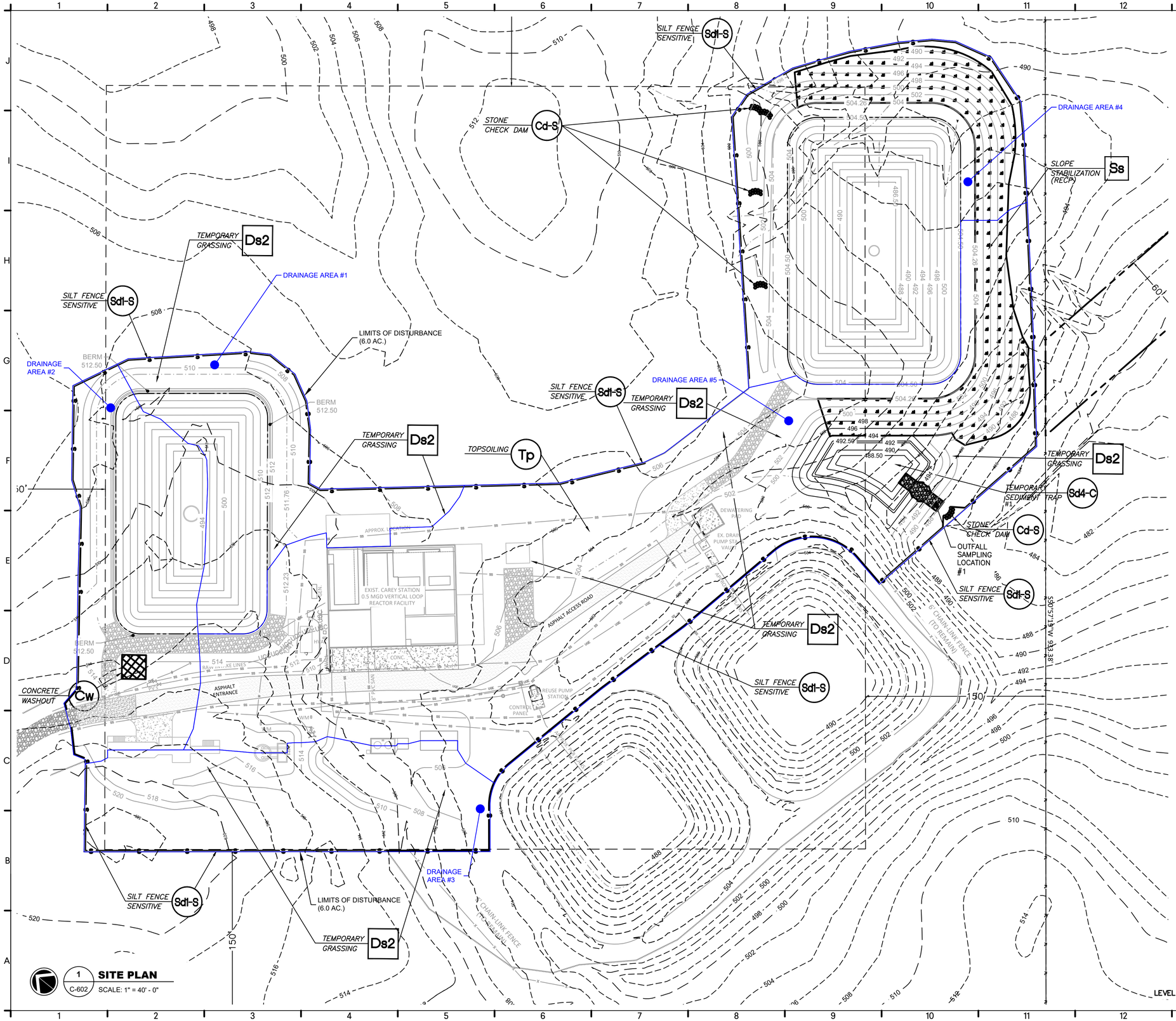
GEORGIA REGISTERED No. PE045414 PROFESSIONAL 07/22/2025 ENGINEER
DANIEL LAMAR PHILLIPS

INITIAL PHASE - EROSION & SEDIMENT CONTROL PLAN

C-601

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PLOTTED: Jul 23, 2025 - 12:16pm



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DESIGNER:	DS
DRAWN BY:	

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED No. PE045414 PROFESSIONAL 07/22/2025 ENGINEER DANIEL LAMAR PHILLIPS

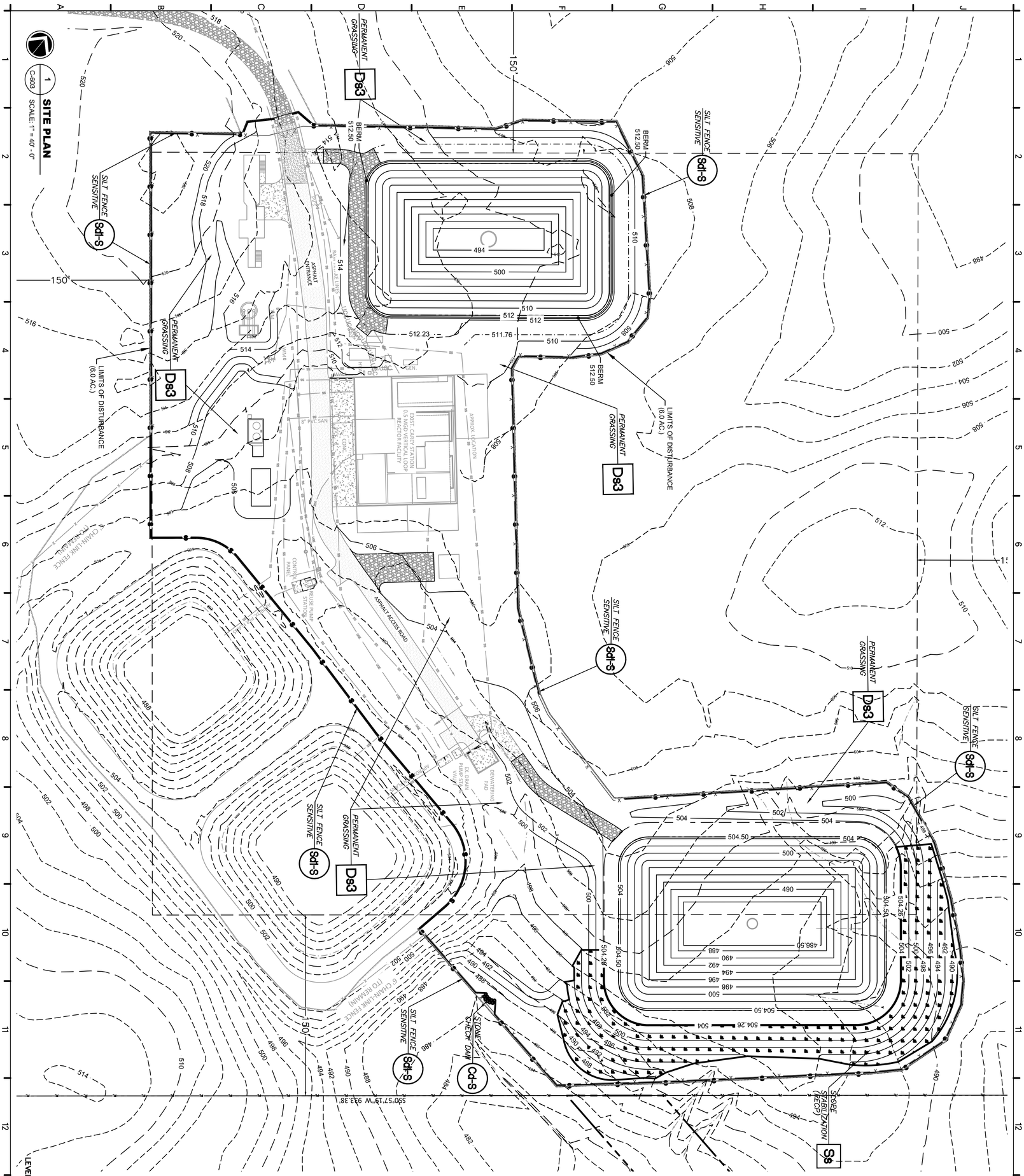
INTERMEDIATE PHASE - EROSION & SEDIMENT CONTROL PLAN

C-602

LEVEL II CERTIFICATION #69394 DANIEL L. PHILLIPS 08/07/2026

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PLOTTED: Jul 23, 2025 - 12:16pm



LEVEL II CERTIFICATION #69394 DANIEL L. PHILLIPS 08/07/2026

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FINAL PHASE - EROSION & SEDIMENT CONTROL PLAN

C-603

GEORGIA REGISTERED PROFESSIONAL ENGINEER DANIEL LAMAR PHILLIPS No. 69394 07/22/2025

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

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DESIGNER:	LW
DRAWN BY:	DS

CERTIFICATE OF AUTHORIZATION GOODWYN MILLS CAWOOD LLC No. PEF007898 Exp. 06.30.2026

1" 5" 0" 1"

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801 Broad Street Suite 900
Augusta, GA 30901
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EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS GAR100001

SWCD: Piedmont

Project Name: Carey Station Urban Water Reuse Facility Exp. **Address:** 4610 Carey Station Road, Greensboro, GA

Local Issuing Authority: Greene County **Date on Plans:** 07.22.2025

Name & Email of person filling out checklist: Daniel Phillips (daniel.phillips@gmcnetwork.com)

Plan Page #	Included Y/N		TO BE SHOWN ON ES&PC PLAN
C-604	Y	1	The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed. **Permit IV.D.1. pg 27**
C-601 - C-612	Y	2	Level II certification number issued by the Commission, signature and seal of the certified design professional. Signature, seal and Level II number must be on each sheet pertaining to ES&PC Plan or the Plan will not be reviewed. The Level II certification must be issued to the Design Professional, **after completion of a GSWCC approved course**, and whose signature and seal are on the Plan.
--	N/A	3	Limits of disturbance shall be **less than** 50 acres at any one time without prior written authorization from the GAEPD District Office. If GAEPD approves the request to disturb 50 acres or more at any one time, the Plan must include the GAEPD approval letter and completed Appendix 1 of this checklist with at least 4 of the chosen BMPs. * A copy of the written approval by GAEPD must be attached to the Plan for the Plan to be reviewed. **Permit IV.D.3. pg 28**
C-605	Y	4	The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution controls.
C-605	Y	5	Provide the name, address, email address, and phone number of Primary Permittee.
C-605	Y	6	Note total and disturbed acreages of the project or phase under construction.
C-601	Y	7	Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
G-001	Y	8	Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
C-605	Y	9	Descriptions of the nature of construction activity and existing site conditions.
C-606	Y	10	Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
C-605	Y	11	Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
C-605	Y	12	Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on **Part IV page 20** of the permit.
C-605	Y	13	Design professional's certification statement and signature that the Permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on **Part IV page 20** of the permit. *
C-605	Y	14	Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect **and certify** the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." *
C-605	Y	15	Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
C-605	Y	16	Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
C-605	Y	17	Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." *
C-605	Y	18	Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." *
C-605	Y	19	Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
C-605	Y	20	Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
C-605	Y	21	Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
C-605	N/A	22	Any construction activity which discharges storm water into a Biota Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as any portion of a Biota Impaired Stream Segment, must comply with **Part III.C.** of the permit. Include the completed Appendix 1 of this checklist with at least 4 of the chosen BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *
--	N/A	23	If a TMDL Implementation Plan for sediment has been finalized for the Biota Impaired Stream Segment (identified in Item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. *
C-608	Y	24	BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Include statement that washout of the drum at the construction site is prohibited. *
C-608	Y	25	Provide BMPs for the remediation of all petroleum spills and leaks.
C-605	Y	26	Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. *
C-605	Y	27	Description of practices to provide cover for building materials and building products on site. *
C-605	Y	28	Description of the practices that will be used to reduce the pollutants in storm water discharges. *
C-606	Y	29	Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, grading, infrastructure, temporary and final stabilization).
C-609	Y	30	Provide complete requirements of Inspections and record keeping by the Primary Permittee. *
C-609	Y	31	Provide complete requirements of Sampling Frequency and Reporting of sampling results. *
C-609	Y	32	Provide complete details for Retention of Records as per **Part IV.F.** of the permit. *
C-610	Y	33	Description of analytical methods to be used to collect and analyze the samples from each location. *
C-610	Y	34	Appendix B rationale for NTU values at all outfall sampling points where applicable. *
C-601, C-602	Y	35	Delineate all sampling locations on **all phases of** the Plan, and perennial and intermittent streams and other water bodies into which storm water is discharged. *
C-601 - C-605	Y	36	A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial sediment storage requirements and initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all BMPs into a single phase plan. *
C-601 - C-603	Y	37	Graphic scale and North arrow.
C-601 - C-603	Y	38	Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Map Scale	Ground Slope	Contour Intervals, ft.
1 inch = 100ft or larger scale	Flat 0 - 2% Rolling 2 - 8% Steep 8% +	0.5 or 1 1 or 2 2, 5 or 10

--	N	39	Use of Alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by GAEPD or the Georgia Soil and Water Conservation Commission). Refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov.
--	N	40	Use of Alternative BMP for application to the Equivalent BMP List. Refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. *
--	N/A	41	Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State Waters and any additional buffers as required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
--	N/A	42	Delineation of all State Waters and wetlands located on or within 200 feet of the project site.
HYDRO	Y	43	Delineation and acreage of contributing drainage basins on the project site.
HYDRO	Y	44	Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. *
HYDRO	Y	45	Estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed. **For solar farm projects, post-construction impervious area shall be calculated as 70% of total solar panel square footage.**
--	N/A	46	Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate at all storm water discharge points.
C-612	Y	47	Soil series for the project site and their delineation.
C-601 - C-603	Y	48	The limits of disturbance for each phase of construction.
C-601 - C-605	Y	49	Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, Permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.
C-601 - C-605	Y	50	Location of Best Management Practices that are consistent with, and no less stringent than, the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual Chapter 6, with legend.
C-606 - C-608	Y	51	Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
C-606 - C-608	Y	52	Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.

* **If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream, the * checklist items would be N/A.**

Effective January 1, 2025

LEVEL II CERTIFICATION #69394 DANIEL L. PHILLIPS 08/07/2026

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

GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE | DATE

90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED No. PE045414 PROFESSIONAL 07/22/2025 ENGINEER DANIEL LAMAR PHILLIPS

ES & PC CHECKLIST

C-604

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG\+PLANS\01 Bid Drawings\8EVISED SUBMITTAL_10 MGD\CAUG230002-ERCS.dwg
PLOTTED: Jul 23, 2025 - 12:16pm

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GENERAL NOTES

1. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS BUT MAY NOT BE ABSOLUTELY CORRECT. THERE MAY BE OTHER IMPROVEMENTS, UTILITIES, ETC. WHICH ARE WITHIN THE PROJECT AREA AND WHICH HAVE BEEN INSTALLED AND CONSTRUCTED SINCE THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE PLANS) AFFECTING HIS WORK. IN ADDITION TO CONTACTING THE LOCAL UTILITY AGENCIES, THE CONTRACTOR SHALL GIVE THREE WORKING DAYS NOTICE TO THE UTILITIES PROTECTION CENTER AT 1-800-282-7411 PRIOR TO ANY EXCAVATION.
2. THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
3. THE MAIN UTILITY RESPONSIBLE FOR THE PROJECT IS THE PIEDMONT WATER COMPANY, 24 HR. CONTACT: STEVEN MORELLI PH. (706) 816-0336 EMAIL: SMORELLI@PIEDMONTWATER.COM.
4. CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO PROTECT EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR SHALL PROTECT, REPAIR, REMOVE AND/OR RELOCATE ANY UTILITIES DURING CONSTRUCTION WITH LIKE MATERIALS AND CONSTRUCTION METHODS AS APPROVED BY THE ENGINEER AND THE OWNER AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ANY UTILITY RELOCATION AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL MAINTAIN A CLEAR PATH FOR ALL SURFACE WATER DRAINAGE STRUCTURES AND DITCHES DURING ALL PHASES OF CONSTRUCTION AND SHALL USE WHATEVER MEANS NECESSARY TO MANAGE STORM WATER SUCH THAT IMPACT TO CONSTRUCTION IS MINIMIZED.
6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS BETWEEN DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED.
7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH EXISTING STATE, COUNTY, AND CITY DESIGN AND CONSTRUCTION STANDARDS UNLESS THOSE STANDARDS CONFLICT WITH THESE CONTRACT DOCUMENTS IN WHICH CASE THESE CONTRACT DOCUMENTS SHALL GOVERN. SUCH CONFLICTS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
8. DEWATERING SHALL BE PROVIDED BY CONTRACTOR IN ACCORDANCE WITH PROJECT SPECIFICATIONS AS NECESSARY TO INSTALL/CONSTRUCT THE WORK PROPERLY. DEWATERING DISCHARGE SHALL BE IN ACCORDANCE WITH APPLICABLE REGULATIONS AND REQUIREMENTS OF AGENCIES HAVING JURISDICTION.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BECOME FAMILIAR WITH THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) STANDARDS FOR EXCAVATIONS (29 CFR PART 1926-OCT 1989) AND TO ABIDE BY THEM. SAFETY IN, ON OR ABOUT THE SITE IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR ALONE.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE 1992 GEORGIA HIGH VOLTAGE SAFETY ACT AND TO NOTIFY THE UTILITIES PROTECTION CENTER AT 1-800-282-7411 BEFORE WORKING WITHIN 10 FEET OF OVERHEAD POWER LINES OF 750 VOLTS OR MORE.
11. THE OWNER RESERVES THE RIGHT TO REJECT ANY AND ALL BIDS AND TO WAIVE ANY INFORMALITY IN BIDS RECEIVED WHENEVER SUCH REJECTION OR WAIVER IS IN ITS INTEREST.
12. A PRE-CONSTRUCTION CONFERENCE WITH THE ENGINEER IS REQUIRED PRIOR TO BEGINNING WORK.
13. ANY CHANGES IN THE APPROVED PLANS MUST BE COORDINATED WITH THE ENGINEER AND MUST BE APPROVED PRIOR TO PROCEEDING.
14. MATERIAL AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH REQUIREMENTS OF THE GDOT STANDARD SPECIFICATIONS CONSTRUCTION OF TRANSPORTATION SYSTEMS, (GDOTSS) LATEST EDITION.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL SHRUBBERY, TREES, OR STRUCTURES WITHIN THE WORKING AREA THROUGHOUT THE COURSE OF CONSTRUCTION. ANY TREES, SHRUBS, OR STRUCTURES DAMAGED OR DISTURBED SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD STAKING.
17. VEHICLE FUELING AND MAINTENANCE SHALL TAKE PLACE ONLY IN AREAS DESIGNATED BY THE OWNER.
18. NO SANITARY SEWER OR SEPTIC TANKS ARE BEING INSTALLED DURING THIS PROJECT.
19. NOTIFY WATER & SEWER INSPECTOR PRIOR TO START OF CONSTRUCTION.
20. CUT AND FILL SLOPES NOT TO EXCEED 2H:1V.
21. THE CONTRACTOR SHALL FURNISH APPROPRIATE AUTHORITY OR DEPT. WITH A SCHEDULE OF ANTICIPATED STARTING AND COMPLETION DATES FOR EACH SEQUENCE OF LAND DISTURBING ACTIVITIES.
22. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH TEMPORARY HOLDING OF POWER/GUY POLES AND/OR GUY WIRES. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS OF INSTALLING NEW POWER/GUY POLES AND/OR GUY WIRES AT PROPOSED SITE. POWER COMPANY IS RESPONSIBLE FOR ALL COSTS TO BRING POWER TO THE SITE.

Sediment Storage (S.S.) Requirements

- Need to provide appropriate BMPs to provide 67 cubic yards of storage per acre drained for each common drainage location until final stabilization of the site. The appropriate initial BMPs must be installed on the site PRIOR to any land-disturbing activities.

Silt Fence (Sd1) - 0.25 ac. for every 100 LF of Sd1
- 0.1675 cu. yd. per LF of Sd1

V = 0.4 x A x D

Temporary Sediment Trap w/ Rock Outlet (Sd4-C)
- V = Sediment storage volume (below invert of emergency spillway)
- A = Surface Area (at level of emergency spillway)
- A = L x W
- L = 2W (L:W 2:1)
- D = Maximum depth (from emergency spillway invert)

Sediment Storage (Initial Phase)

Drainage Basin	Area	S.S. Required	Sd4 Required?	Sd1 Provided	S.S. Provided	Sd4-C #	S.S. Provided		Total S.S. Provided
1	0.80 ac.	53.6 cu. yd.	No	416 LF	69.7 cu. yd.	--	--	--	69.7 cu. yd.
2	0.58 ac.	38.9 cu. yd.	No	377 LF	63.2 cu. yd.	--	--	--	63.2 cu. yd.
3	0.17 ac.	11.4 cu. yd.	No	384 LF	64.3 cu. yd.	--	--	--	64.3 cu. yd.
4	1.15 ac.	77.1 cu. yd.	Yes	581 LF	97.3 cu. yd.	2	89.7 cu. yd.		187.0 cu. yd.
5	3.23 ac.	216.4 cu. yd.	Yes	800 LF	134.0 cu. yd.	1	322.9 cu. yd.		456.9 cu. yd.
Total	5.93 ac.	397.4 cu. yd.		2558 LF	428.5 cu. yd.		412.6 cu. yd.		841.1 cu. yd.

Sediment Storage (Intermediate Phase)

Drainage Basin	Area	S.S. Required	Sd4 Required?	Sd1 Provided	S.S. Provided	Sd4-C #	S.S. Provided		Total S.S. Provided
1	0.41 ac.	27.5 cu. yd.	No	351 LF	58.8 cu. yd.	--	--	--	58.8 cu. yd.
2	0.32 ac.	21.4 cu. yd.	No	377 LF	63.2 cu. yd.	--	--	--	63.2 cu. yd.
3	0.66 ac.	44.2 cu. yd.	No	465 LF	77.9 cu. yd.	--	--	--	77.9 cu. yd.
4	0.58 ac.	38.9 cu. yd.	No	581 LF	97.3 cu. yd.	--	--	--	97.3 cu. yd.
5	2.67 ac.	178.9 cu. yd.	Yes	784 LF	131.3 cu. yd.	1	322.9 cu. yd.		454.2 cu. yd.
Total	4.64 ac.	310.9 cu. yd.		2558 LF	428.5 cu. yd.		322.9 cu. yd.		751.4 cu. yd.

1.29 ac. in self-contained structures (Reject Pond and EQ Basin)

SOIL EROSION & SEDIMENTATION CONTROL NOTES

1. PRIMARY PERMITTEE:
   OWNER: PIEDMONT WATER COMPANY
   5170 PEACHTREE RD, BLDG. 100 STE. 120
   ATLANTA, GA 30341
   706.484.0848
   24-HR CONTACT: BRANDON DOW
   (404) 456-2054
   bdow@lakeshoreengineering.com
2. SITE SIZE: 20.0 AC.
3. PROJECT AREA: 6.0 AC.
4. DISTURBED AREA: 6.0 AC.
5. GPS COORDINATES OF THE CONSTRUCTION EXIT (Co):
   33.502375 °N
   83.239893 °W
6. DESCRIPTION OF THE NATURE OF CONSTRUCTION ACTIVITY AND EXISTING SITE CONDITIONS:
   6.1. THE PROJECT IS LOCATED AT 4610 CAREY STATION ROAD IN GREENSBORO - GREENE COUNTY, GEORGIA [PARCEL # 054000010B, ZONING DISTRICT HEAVY INDUSTRIAL (HI), AND 20 ACRES IN SIZE]. THE PROJECT SITE IS APPROXIMATELY 2.7 MILES SOUTH OF INTERSTATE 20 AND 0.3 MILES NORTH OF THE GREENE COUNTY FIRE RESCUE - STATION 9. THE SITE IS THE EXISTING CAREY STATION URBAN WATER REUSE FACILITY AND IS SURROUNDED BY WOODED AREAS. THE PROJECT INVOLVES MODIFICATIONS TO THE EXISTING FACILITY TO INCREASE THE CAPACITY FROM 0.5 MGD TO 1.0 MGD. THE PROJECT CONSISTS OF CONSTRUCTING A REJECT POND, A EQ. BASIN, NEW HEADWORKS, INFLUENT PUMP STATION, CHEMICAL STORAGE TANK & CHEMICAL PUMP ROOM, CHLORINE CONTACT CHAMBER, SLUDGE AEROBIC DIGESTER (ONTO THE EXISTING BUILDING), AEROBIC DIGESTER BLOWERS, AN ADDITIONAL CLARIFIER (ONTO THE EXISTING BUILDING), GRAVEL ACCESS DRIVES, ELECTRICAL ROOM, TRANSFORMER, AND GENERATOR. PROJECT RECEIVING WATERS IS RICHLAND CREEK.
7. THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPs WITHIN 7 DAYS AFTER INSTALLATION. (IN ACCORDANCE WITH PART IV.A.5 PAGE 25 OF THE PERMIT)
8. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.
9. THERE ARE NO JURISDICTIONAL WATERS PRESENT ON THE SITE.
10. THERE ARE NO STATE WATERS ON OR WITHIN 200 FEET OF THE PROJECT SITE. THEREFORE, THERE ARE NO BUFFERS WITHIN THE SITE.
11. THE PROJECT DOES NOT IMPACT/DISTURB WETLAND AREAS.
12. NO PORTIONS OF THE PROJECT LIE WITHIN ZONE A 100 YEAR FLOOD PLAIN PER FIRM 13133C0190B EFFECTVE 12-17-2010 AS SHOWN ON SHEET C-611 FEMA FLOODPLAIN MAPS.
13. AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMPs WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
14. NO SECTION 404 PERMIT HAS BEEN AUTHORIZED FOR THIS PROJECT; THEREFORE, NO WASTE MATERIALS SHALL BE DISCHARGED INTO STATE WATERS.
15. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.
16. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
17. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.
18. THE SITE DRAINS TO RICHLAND CREEK. RICHLAND CREEK IS LISTED AS AN IMPAIRED STREAM SEGMENT AND IDENTIFIED AS GAR030701011106. THE SITE IS WITHIN ONE (1) LINEAR MILE UPSTREAM. DUE TO THE IMPAIRED STREAM SEGMENT CAUSED BY FECAL COLIFORM (FC) AND NOT BIO F AND/OR BIO M, THE REQUIREMENT OF SECTION 3 IS NOT APPLICABLE (NPDES PERMIT NO. GAR100001, PART III. SECTION C. DISCHARGES INTO, OR WITHIN ONE MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF A BIOTA IMPAIRED STREAM SEGMENT).
19. CONTRACTOR SHALL VERIFY CLEARING LIMITS AND ENSURE THAT ADEQUATE CLEARANCE IS PROVIDED WITHIN THE CLEARING LIMITS FOR PROPER PLACEMENT OF SILT FENCE, WITHOUT INTERFERING WITH GRADING ACTIVITIES.
20. WASHOUT OF CONCRETE DRUMS AND EQUIPMENT AT THE CONSTRUCTION SITE IS PROHIBITED.
21. DESCRIPTION OF MEASURES/PRACTICES INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORMWATER DISCHARGES (FOR CONSTRUCTION & POST-CONSTRUCTION/COMPLETION): STORMWATER RUNOFF THRU DISTURBED AREAS TO BE MINIMIZED THROUGH THE INSTALLATION OF (Sd1) SILT FENCE, TEMPORARY SEDIMENT TRAPS WITH ROCK OUTLET (Sd4-C), TEMPORARY SEDIMENT TRAPS WITH OVERFLOW (Sd4-A), STONE CHECK DAMS WITHIN SWALES (Cd-S), DUST CONTROL (Du), (Ds1) MULCH, (Ds2) TEMPORARY SEEDING, (Ds3) PERMANENT VEGETATION, AND (Ss) SLOPE STABILIZATION.
22. CONTRACTOR SHALL STORE AND PROTECT PRODUCTS IN ACCORDANCE WITH MANUFACTURERS' INSTRUCTIONS. STORE WITH SEALS AND LABELS INTACT AND LEGIBLE. STORE SENSITIVE PRODUCTS IN WEATHER TIGHT, CLIMATE CONTROLLED, ENCLOSURES IN AN ENVIRONMENT FAVORABLE TO PRODUCT. FOR EXTERIOR STORAGE OF FABRICATED PRODUCTS, PLACE ON SLOPED SUPPORTS ABOVE GROUND. COVER PRODUCTS SUBJECT TO DETERIORATION WITH IMPERVIOUS SHEET COVERING. PROVIDE VENTILATION TO PREVENT CONDENSATION AND DEGRADATION OF PRODUCTS. PROVIDE EQUIPMENT AND PERSONNEL TO STORE PRODUCTS BY METHODS TO PREVENT SOILING, DISFIGUREMENT, OR DAMAGE. ARRANGE STORAGE OF PRODUCTS TO PERMIT ACCESS FOR INSPECTION. PERIODICALLY INSPECT TO VERIFY PRODUCTS ARE UNDAMAGED AND ARE MAINTAINED IN ACCEPTABLE CONDITION. CONTRACTOR SHALL NOT LEAVE ANY WASTE PRODUCTS ON THE GROUND, BUT SHALL REMOVE AND DISPOSE OF THEM PROMPTLY AND IN APPROVED LOCATIONS.
23. ALL BMPs (STRUCTURAL AND VEGETATIVE) SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.
24. SILT FENCE FABRIC SHALL BE COMPRISED OF GDOT QUALIFIED PRODUCTS LIST 36, FOR SILT FENCE FABRIC.
25. SILT FENCE SHALL BE CLEANED OR REPLACED AND MAINTAINED IN FUNCTIONAL CONDITION UNTIL PERMANENT EROSION CONTROL MEASURES ARE ESTABLISHED.
26. SILT FENCE AND ALL ACCUMULATED SEDIMENT SHALL BE REMOVED ONCE THE SITE IS FULLY STABILIZED.
27. THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC STREETS.
28. ANY ADDITIONAL CONSTRUCTION ACTIVITIES, OTHER THAN SHOWN ON THIS PLAN, WILL REQUIRE SEPARATE AND ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES AND APPROVAL.
29. ALL DISTURBED AREAS SHALL BE PERMANENTLY LANDSCAPED AND GRASSED AS SOON AS CONSTRUCTION PHASES PERMIT.
30. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE EROSION CONTROL MEASURES FOR THE ENTIRE LENGTH OF THE PROJECT AND SHALL ADD ADDITIONAL MEASURES AS NECESSARY TO PREVENT EROSION AND SEDIMENTATION RUN-OFF FROM THE DISTURBED AREAS.
31. PHASED EROSION CONTROL (INITIAL, INTERMEDIATE & FINAL) PLANS ARE PRACTICAL FOR STAND ALONE PROJECTS. IN ORDER TO PROVIDE THE REQUIRED AMOUNT OF SEDIMENT STORAGE THROUGHOUT THE DURATION OF CONSTRUCTION, FIVE (5) TEMPORARY SEDIMENT TRAPS (2 Sd4-C AND 3 Sd4-A) AND SILT FENCE (Sd1) HAS BEEN PROPOSED.
   31.1. CLEARING & GRUBBING - DOWNSTREAM AREAS PROTECTED BY SILT FENCE, DUST CONTROL, AND TEMPORARY GRASSING;
   31.2. ASPHALT PAVING WITHIN THE EXISTING GRAVEL DRIVE;
   31.3. TRENCHING/EXCAVATION FOR THE YARD PIPING WITH PERMANENT STABILIZATION TO FOLLOW;
   31.4. CONSTRUCTION OF PERMANENT STRUCTURES WITH ASSOCIATED GRADING (ROUGH AND FINE) AND PERMANENT STABILIZATION TO FOLLOW;
   31.5. MAJORITY OF DISTURBANCE IS RELATED TO THE GRADING OF THE REJECT POND AND EQ. BASIN. THE PONDS ARE SELF-CONTAINED AND SILT FENCE, SLOPE STABILIZATION, AND PERMANENT GRASSING IS TO BE PROVIDED FOR THE EMBANKMENT.

CONSTRUCTION SEQUENCE

1. THE CONTRACTOR SHALL HAVE ALL UTILITIES MARKED AND COOPERATE WITH ANY NECESSARY RELOCATION OF ANY EXISTING UNDERGROUND AND ABOVE GROUND UTILITIES ON THE PROJECT SITE.
2. THE CONTRACTOR IS RESPONSIBLE FOR ATTENDING THE PRE-CONSTRUCTION AND BI-WEEKLY PROJECT MEETINGS. CONTRACTOR SHALL CONTACT PIEDMONT WATER TO SCHEDULE A PRE-CONSTRUCTION MEETING PRIOR TO COMMENCING WORK.
3. DURING THIS TIME, THE CONTRACTOR SHALL BEGIN COORDINATION WITH THE PRIVATE UTILITY COMPANIES IN REFERENCE TO PERMANENTLY OR TEMPORARILY RELOCATING THE EXISTING UTILITY LINES AND STRUCTURES IN CONFLICT WITH PROPOSED CONSTRUCTION.
4. SUBMITTALS AND / OR SHOP DRAWINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO BEGINNING ANY WORK.
5. INSTALL EROSION CONTROL MEASURES AS LISTED WITHIN THESE PLANS AND / OR SPECIFICATIONS. CONTRACTOR SHALL ONLY CLEAR ENOUGH TO INSTALL SEDIMENT AND EROSION CONTROL DEVICES. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AND APPROVED BY THE STORM WATER CONTROL INSPECTOR. AFTER SITE APPROVAL FOR SEDIMENT AND EROSION CONTROL DEVICES IS GRANTED, SITE WORK CAN COMMENCE.
6. ONCE APPROVED BY THE OWNER, THE CONTRACTOR SHALL BEGIN CLEARING AND GRUBBING THE SITE.
7. AFTER CLEARING AND GRUBBING, DEMOLITION OF EXISTING STRUCTURES CAN COMMENCE WITH THE CONTRACTOR FOLLOWING ALL PROCEDURES INDICATED WITHIN THESE DRAWINGS AND / OR SPECIFICATIONS.
8. AFTER DEMOLITION DEBRIS HAS BEEN REMOVED FROM THE SITE AND DISPOSED OF, CONSTRUCTION OF NEW STRUCTURES AND ALIGNMENT CAN COMMENCE FOLLOWING ALL PROCEDURES INDICATED WITHIN THE DRAWINGS AND / OR SPECIFICATIONS.
9. ONCE ALL NEW CONSTRUCTION IS COMPLETE, CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION MEASURES, CONSTRUCTION MATERIALS AND OTHER RELATED MEASURES. THE CONTRACTOR SHALL INSTALL AND PERFORM ALL WORK TO RESTORE ALL DISTURBED AREAS BACK TO PRE-CONSTRUCTION/PLAN CONDITIONS. THIS WORK SHALL BE DONE UNDER THE DIRECTION OF THE OWNER.
10. THE CONTRACTOR TO PREPARE SITE FOR CLOSEOUT, INCLUDING FINAL CLEANING AND FINAL INSPECTION.
11. CONTRACTOR SHALL PROVIDE FINAL AS-BUILT DRAWINGS IN ACCORDANCE WITH GENERAL CONDITIONS.

Best Management Practices (BMPs)
Heavy Equipment & Earth-Moving Activities

Heavy Equipment Operation Problems

Soil excavation and grading operations often contribute to urban runoff pollution. By loosening large amounts of soil and sediment, earth-moving activities can cause sediment to flow into gutters, storm drains and streams. Sediment is the most common pollutant washed from worksites, creating multiple problems once it enters the stream. Sediment clogs the gills of fish, blocks light transmission and increases stream water temperature, all of which harm life, disturbing the food chain upon which both fish and people depend upon.

Sediment also carries with it other worksite pollutants such as pesticides, cleaning solvents, cement wash, asphalt and car fluids like motor oil, grease and fuel. Thus, poorly maintained vehicles and heavy equipment leaking fuel and oil at the construction site, also contribute to ocean pollution.

Solutions
Best Management Practices (BMPs) such as handling, storing, and disposing of materials properly can prevent pollutants from entering the storm drains.

General Business Practices
Schedule excavation and grading work for dry weather.
Use as little water as possible for dust control.

Clean Up Spills
Never hose down "dirty" pavement or impermeable surfaces where fluids have spilled.
Use dry cleanup methods (sawdust, kitty litter, and/or rags) and dispose of properly.
Sweep up dry spilled materials immediately. Never attempt to bury them or "wash them away" with water.
Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
Report significant spills to the appropriate spill response agencies immediately.

Vehicle & Equipment Maintenance

Maintain all vehicle and heavy equipment in good working order and inspect frequently for leaks.
Conduct all vehicle/equipment maintenance and refueling at one location--away from storm drains.
Perform major maintenance, repair jobs and vehicle/equipment washing off-site.
Use gravel approaches where truck traffic is frequent, to reduce soil compaction and limit the tracking of sediment into streets.
Use drip pans or drop cloths to catch drips and spills if you drain and replace motor oil, radiator coolant
or other fluids on site. Collect all used fluids, store in separate containers and recycle whenever possible; otherwise make certain they are disposed of properly.
Do not use diesel oil to lubricate equipment or parts.
Washout of the drum at the construction site is prohibited.

Erosion Prevention
After clearing, grading or excavating, exposed soil poses a clear and immediate danger for stormwater pollution. Revegetation (permanent or temporary) is an excellent form of erosion control for any site.
Avoid excavation and grading activities during wet weather.
Construct diversion dikes to channel runoff around the site.
Line channels with grass or roughened pavement to reduce runoff velocity.
Cover stockpiles and excavated soil with secured tarps or plastic sheeting.
Remove existing vegetation only when absolutely necessary. Large projects should be conducted in phases.
Consider planting temporary vegetation for erosion control on slopes or where construction is not immediately planned.
Plant permanent vegetation as soon as possible, once excavation and grading activities are complete.

Vehicle Fueling

Description and Purpose
Vehicle equipment fueling procedures and practices are designed to prevent fuel spills and leaks, and reduce or eliminate contamination of stormwater. This can be accomplished by using offsite facilities, fueling in designated areas only, enclosing or covering stored fuel, implementing spill controls, and training employees and subcontractors in proper fueling procedures.

Suitable Applications
These procedures are suitable on all construction sites where vehicle and equipment fueling takes place.

Limitations
Onsite vehicle and equipment fueling should only be used where it is impractical to send vehicles and equipment offsite for fueling. Sending vehicles and equipment offsite should be done in conjunction with Co, Stabilized Construction Entrance/ Exit.

Implementation
Use offsite fueling stations as much as possible. These businesses are better equipped to handle fuel and spills properly. Performing this work offsite can also be economical by eliminating the need for a separate fueling area at a site. Discourage "topping-off" of fuel tanks.

Spill Response Agencies
GA EPD – 912-264-7284
NRC – 800-424-8802

Concrete Waste Management

Description and Purpose
Prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout off-site, performing on-site washout in a designated area, and training employees and subcontractors.

Suitable Applications
These procedures are suitable on all construction sites where concrete work takes place.

Implementation
- Store dry and wet materials under cover, away from drainage areas.
- Avoid mixing excess amounts of fresh concrete or cement on-site.
- Perform washout of concrete trucks off-site or in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped on-site, except in designated areas.
- When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by draining the water within a bermed or level area.
- Train employees and subcontractors in proper concrete waste management.
- Washout of the drum at the construction site is prohibited.

LEVEL II CERTIFICATION #69394 DANIEL L. PHILLIPS 08/07/2026

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801 Broad Street Suite 900
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T 706.303.3272

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE | DATE

90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	08.03.2025
CONFORMED SET	MP
PROJECT MANAGER:	LW/DP
ENGINEER:	LW
DESIGNER:	DS
DRAWN BY:	

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. PE045414 07/22/2025 DANIEL LAMAR PHILLIPS

ES & PC GENERAL NOTES

C-605

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DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG\+PLANS\01 Bid Drawings\REVISED SUBMITTAL_10 MGD\CAUG230002-EROS.dwg
PLOTTED: Jul 23, 2025 - 12:18pm

GEORGIA
UNIFORM CODING SYSTEM
FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES
GEORGIA SOIL AND WATER CONSERVATION COMMISSION

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION			An earth channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd4	TEMPORARY SEDIMENT TRAP			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Tp	TOPSOILING			The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)		Ds1	Establishing temporary protection for disturbed areas where seedings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP. SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM. SEEDING)		Ds3	Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.
Ss	SLOPE STABILIZATION		Ss	A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.

GaSWCC (Amended – 2013)

I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORMWATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR100001.

DANIEL L. PHILLIPS
LEVEL II CERTIFICATION #69394
EXPIRES 08/07/2026

Signed — 07/22/2025 Date

I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT UNDER MY SUPERVISION.

Signed — 07/22/2025 Date

I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF: (A) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES, OR (B) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, I HAVE DETERMINED IN MY PROFESSIONAL JUDGMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR100001, THAT THE INCREASE IN THE TURBIDITY OF EACH SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER.

DANIEL L. PHILLIPS
LEVEL II CERTIFICATION #69394
EXPIRES 08/07/2026

Signed — 07/22/2025 Date

I CERTIFY UNDER PENALTY OF LAW THAT THIS REPORT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT CERTIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

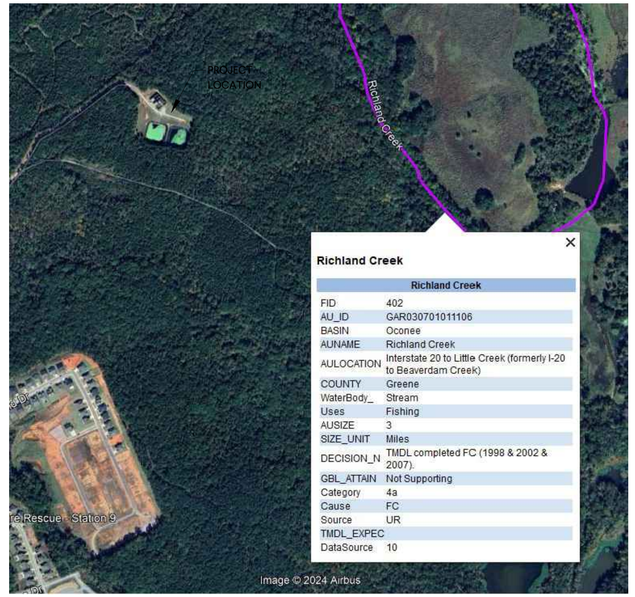
Owner — 07/22/2025 Date

GEORGIA811 www.Georgia811.com

ANTICIPATED ACTIVITY SCHEDULE

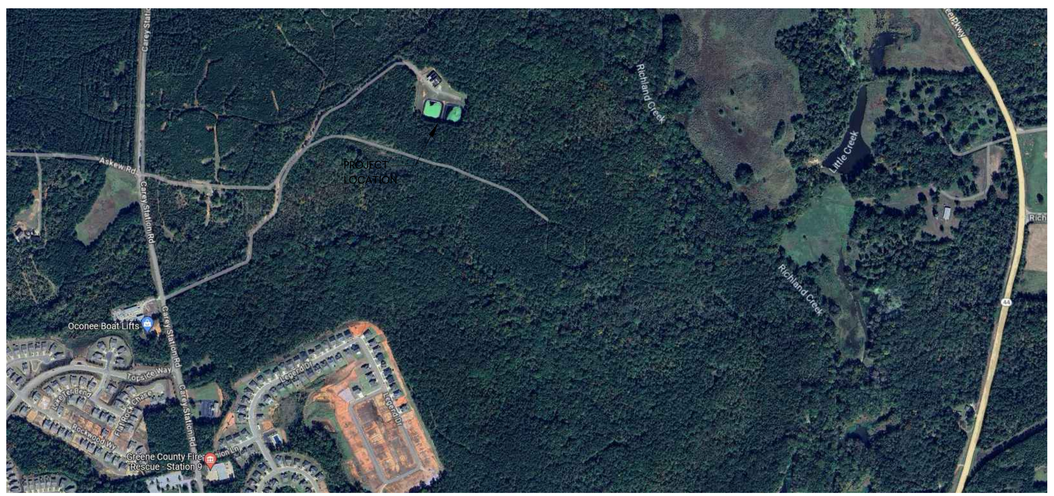
	MONTHS	START DATE 1	2	3	4	5	6	7	8	9
1	BEGIN PROJECT									
2	INSTALL INITIAL BMPs									
3	CLEARING & GRUBBING									
4	GRASS & MULCH (TEMP.) (PERM.)									
5	GRADING (ROUGH & FINE)									
6	UTILITY INSTALLATION									
7	BUILDING CONSTR. & PAVING									
8	MAINTAIN EROSION CONTROL									
9	CLEAN UP									
10	FINAL STABILIZATION									

NOTE: THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.



INFORMATION REGARDING IMPAIRED STREAM SEGMENTS WITHIN VICINITY OF THE PROJECT.

NOTE: RICHLAND CREEK IS LOACATED APPROXIMATELY 1700' EAST OF THE PROJECT AREA. IT IS A NON-SUPPORTING STREAM BUT NOT BIOTA IMPAIRED THEREFORE NO ADDITIONAL BMPs ARE REQUIRED.



VICINITY MAP
N.T.S.

LEVEL II CERTIFICATION #69394 DANIEL L. PHILLIPS 08/07/2026

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DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED No. PE045414 PROFESSIONAL 07/22/2025 ENGINEER DANIEL LAMAR PHILLIPS

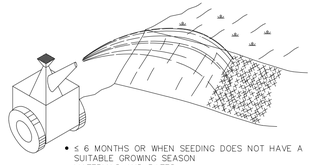
ES & PC GENERAL NOTES & LEGENDS

C-606

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PLOTTED: Jul 23, 2025 - 12:56pm

A TEMPORARY COVER OVER BASE AREAS TO PREVENT EROSION AND REDUCE RUNOFF; TO CONSERVE MOISTURE; TO PREVENT SURFACE COMPACTION OR CRUSTING; TO CONTROL UNDESIRABLE VEGETATION; TO MODIFY SOIL TEMPERATURE AND TO INCREASE BIOLOGICAL ACTIVITY IN THE SOIL.

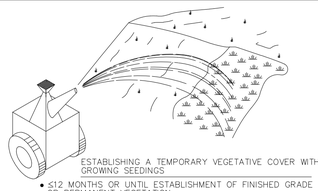


- ≤ 6 MONTHS OR WHEN SEEDING DOES NOT HAVE A SUITABLE GROWING SEASON
MATERIALS AND RATES:

MATERIAL	RATE
STRAW OR HAY	2" to 4" DEEP
WOOD WASTE, CHIPS, SAWDUST OR BARK	2"–3" DEEP (ABOUT 6 TO 9 TONS/ACRE)
POLYETHYLENE FILM	COMPLETELY COVER AREA

- MAY BE NECESSARY TO ANCHOR

Ds1 (Ds1) DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)



ESTABLISHING A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS

- ≤12 MONTHS OR UNTIL ESTABLISHMENT OF FINISHED GRADE OR PERMANENT VEGETATION
- SITE PREPARATION
  - GRADING AND SHAPING
  - SEED BED PREPARATION
  - APPLY LIME AND FERTILIZER
  - PLANT SEEDING, SELECT SPECIES BY SEASON AND REGION
  - APPLY MULCHING MATERIAL IF NEEDED
  - IRRIGATE IF NEEDED BUT NOT AT A RATE TO CAUSE EROSION
- PLANTING DATES DEPEND ON SPECIES AND REGION (MOUNTAIN, PIEDMONT OR COASTAL)

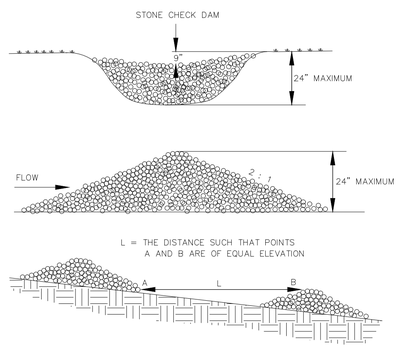
PLANTING RATES AND PLANTING DATES FOR TEMPORARY COVER

SPECIES	RATE PER 1,000 SQ. FT.	RATE PER ACRE	PLANTING DATES MOUNTAINS	PIEDMONT	COASTAL
RYE	3.9 LB.	3 BU. (168 LBS)	8/15–10/31	9/15–11/30	10/1–12/31
RYEGRASS ANNUAL	0.9 LB.	40 LBS.	8/15–11/15	9/1–12/15	9/15–12/31
ANNUAL LESPEDEZA	0.9 LB.	40 LBS.	3/1–3/31	3/1–3/31	2/1–2/28
WEEPING LOVEGRASS	0.1 LB.	4 LBS.	4/1–5/31	4/1–5/31	3/1–5/31
SUDANGRASS	1.4 LB.	60 LBS.	5/1–7/31	5/1–7/31	4/1–7/31
BROWNTOP MILLET	0.9 LB.	40 LBS.	4/15–6/15	4/15–6/30	4/15–6/30
WHEAT	4.1 LB.	3 BU. (180 LBS)	9/15–11/30	10/1–12/15	10/15–12/31

UNUSUAL SITE CONDITIONS MAY REQUIRE HEAVIER SEEDING RATES. SEEDING DATES MAY NEED TO BE ALTERED TO FIT TEMPERATURE VARIATIONS AND LOCAL CONDITIONS.

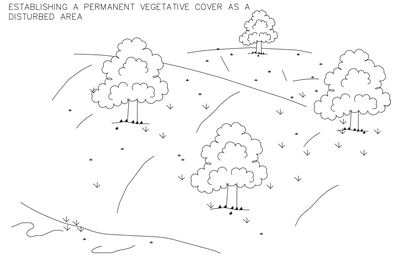
Ds2 (Ds2) DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDINGS)

TO PREVENT EROSION BY REDUCING THE VELOCITY OF STORM WATER IN AREAS OF CONCENTRATED FLOW



Cd-S (Cd-S) STONE CHECK DAM

ESTABLISHING A PERMANENT VEGETATIVE COVER AS A DISTURBED AREA



- APPLICABLE ON HIGHLY ERODIBLE OR SEVERELY ERODED AREAS, SOMETIMES CALLED "CRITICAL AREAS" INCLUDING:
  - CUT OR FILL SLOPES
  - EARTH SPILLWAYS
  - BORROW AREAS
  - CHANNEL BANKS
  - BERMS
  - ROADSIDES
  - SPOIL AREAS
  - GULLIED LANDS
- GRADING AND SHAPING REQUIRED WHERE FEASIBLE AND PRACTICAL
- SEED BED PREPARATION
  - NOT REQUIRED IF USING HYDRAULIC SEEDING AND FERTILIZING
  - WHEN REQUIRED

SLOPE	SEED BED
3:1 OR FLATTER	≥4" DEEP
2:1 TO 3:1	1" TO 4" DEEP
2:1 OR STEEPER	DEPRESSIONS EVERY 6" TO 8" APART WITH HAND TOOL

- HAVE SOIL ANALYZED FOR LIME AND FERTILIZER RATE
- MULCH SHALL BE APPLIED TO COVER 90% OF THE SOIL SURFACES.
- ANCHOR MULCH IMMEDIATELY

PERMANENT GRASSING — GRASS SEED ON LEVEL OR SLIGHTLY SLOPING GROUND SHALL CONSIST OF THE FOLLOWING FOR THE PLANTING DATES SPECIFIED:

(A)	MARCH 1 TO JUNE 30	
	COMMON BERMUDA (HULLED)	10 LBS/ACRE
	TALL FESCUE	50 LBS/ACRE
(B)	AUGUST 1 TO NOVEMBER 1	
	TALL FESCUE	50 LBS/ACRE
	COMMON BERMUDA (UNHULLED)	10 LBS/ACRE
(C)	NOVEMBER 1 TO MARCH 1	
	COMMON BERMUDA (UNHULLED)	10 LBS/ACRE

PERMANENT GRASSING — GRASS SEED ON LEVEL OR SLOPES 3:1 OR STEEPER AND INFREQUENTLY MOWED AREAS SHALL CONSIST OF THE FOLLOWING FOR THE PLANTING DATES SPECIFIED:

(A)	MARCH 1 TO JUNE 15	
	WEEPING LOVEGRASS	4 LBS/ACRE
	SERICEA LESPEDEZA (SCARIFIED)	60 LBS/ACRE
(B)	AUGUST 1 TO NOVEMBER 1	
	TALL FESCUE	50 LBS/ACRE
	SERICEA LESPEDEZA (UNSCARIFIED)	75 LBS/ACRE
(C)	NOVEMBER 1 TO MARCH 1	
	COMMON BERMUDA (UNHULLED)	10 LBS/ACRE
	SERICEA LESPEDEZA (UNSCARIFIED)	75 LBS/ACRE

WHEN AS DIRECTED BY THE ENGINEER, SEED OF AN APPROVED QUICK GROWING SPECIES OF GRASS, SUCH AS RYE, ITALIAN RYE, MILLET OR OTHER CEREAL GRASS, SHALL BE APPLIED AT A RATE OF 30 LBS/ACRE IN CONJUNCTION WITH AND IN ADDITION TO THE SEED MIXTURE SPECIFIED ABOVE ABOVE.

FERTILIZER — COMMERCIAL FERTILIZER SHALL COMPLY WITH THE STATE FERTILIZER LAWS AND SHALL BE OF AN ACCEPTED AND APPROVED COMMERCIAL BRAND. FERTILIZER SHALL BE A READY MIXED MATERIAL CONTAINING THE SOIL NUTRIENTS AS SPECIFIED AND IN A SUITABLE FORM COMPATIBLE WITH THE EQUIPMENT USED TO ACHIEVE UNIFORM DISTRIBUTION OF THE FERTILIZER. THE FERTILIZER MIXTURE SHALL CONTAIN THE FOLLOWING NUTRIENTS EXPRESSED IN PERCENT OF THE TOTAL WEIGHT: 6% NITROGEN 12% AVAILABLE PHOSPHORIC ACID, AND 12% WATER SOLUBLE POTASH (6–12–12) ANALYSIS. CONTAINER TAGS SHALL HAVE THE NAME AND ADDRESS OF THE MANUFACTURER, THE BRAND NAME, NET WEIGHT, AND CHEMICAL COMPOSITION OF ANALYSIS. FERTILIZER SHALL BE APPLIED AT THE RATE OF 1,500 LBS PER ACRE AT THE TIME OF SEEDING.

LIME — AGRICULTURAL DOLOMETIC LIME SHALL BE A PULVERIZED LIMESTONE HAVING A CALCIUM CARBONATE EQUIVALENT CONTENT OF NOT LESS THAN 90%, OF THE TOTAL MATERIAL SHALL PASS A 10–MESH SIEVE AND AT LEAST 25% SHALL PASS A 100–MESH SIEVE. LIME SHALL BE APPLIED AS INDICATED BY THE SOIL TEST. OR THE RATE OF 1 TO 2 TONS PER ACRE.

WATER — THE WATER USED IN THE GRASSING OPERATIONS MAY BE OBTAINED FROM ANY APPROVED SPRING, POND, LAKE, STREAM, OR MUNICIPAL WATER SYSTEM. THE WATER SHALL BE FREE OF EXCESS AND HARMFUL CHEMICALS, ACIDS, ALKALIZES, OR ANY SUBSTANCE WHICH MIGHT BE HARMFUL TO PLANT GROWTH.

WATERING MAINTENANCE AND RESEEDING — CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE PROPER MOISTURE CONTENT OF THE SOIL TO INSURE ADEQUATE PLANT GROWTH UNTIL A SATISFACTORY STAND OF GRASS IS OBTAINED. WATERING SHALL BE PERFORMED TO MAINTAIN AN ADEQUATE WATER CONTENT IN THE SOIL.

THE CONTRACTOR SHALL MOW AND MAINTAIN ALL SEEDED AREAS WITHOUT ADDITIONAL PAYMENT UNTIL FINAL ACCEPTANCE OF THE WORK BY THE OWNER, AND ANY REGRADING, REFERTILIZING, RELIMING, RESEEDING OR REMULCHING SHALL BE DONE AT HIS OWN EXPENSE. SEEDING WORK SHALL BE REPEATED ON DEFECTIVE AREAS UNTIL A SATISFACTORY UNIFORM STAND OF GRASS IS ACCOMPLISHED. DAMAGE RESULTING FROM EROSION, GULLIES, WASHOUTS, OR OTHER CAUSES SHALL BE REPAIRED BY FILLING WITH TOPSOIL, COMPACTING, AND PREPARING THE SEEDING WORK AT HIS EXPENSE.

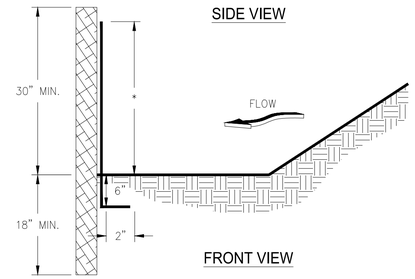
EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION AND SEDIMENT CONTROL WILL BE INSTALLED IF DEEMED NECESSARY BY ON–SITE INSPECTION.

THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES SHALL BE INSTALLED PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.

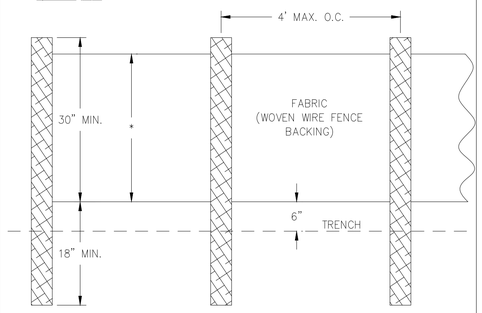
Ds3 (Ds3) DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)

SILT FENCE - TYPE SENSITIVE

SIDE VIEW



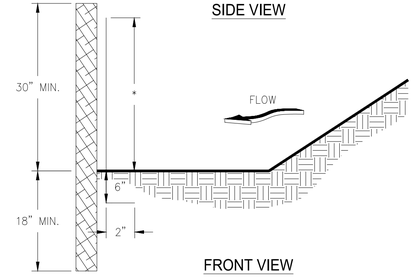
FRONT VIEW



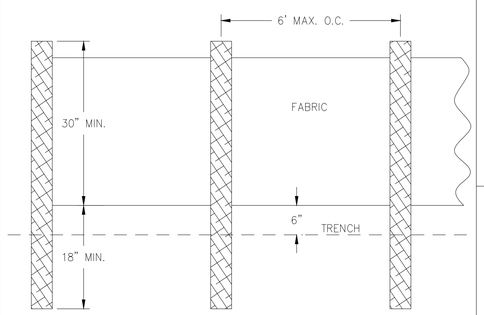
NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

SILT FENCE - TYPE NON-SENSITIVE

SIDE VIEW



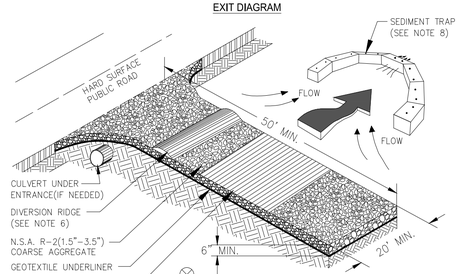
FRONT VIEW



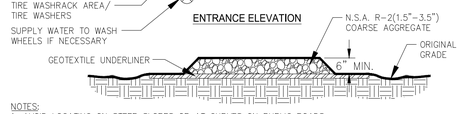
NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Sd1 SEDIMENT BARRIER
(Sd1–S) TYPE SENSITIVE
(Sd1–NS) TYPE NON–SENSITIVE

EXIT DIAGRAM



ENTRANCE ELEVATION



NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R–2 (1.5"–3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS–OF–WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Co TEMPORARY CONSTRUCTION EXIT

PURPOSE: 1. TO PREVENT THE MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES

2. PREVENT THE MOVEMENT OF AIRBORNE SUBSTANCES THAT MAY BE HARMFUL TO HEALTH.

INSTALLATION: 1. APPLY ACCORDINGLY TO APPROVED PLAN, IF SHOWN.

2. MULCH DISTURBED AREAS AND TACKIFY WITH RESINS SUCH AS ASPHALT, CURASOL OR TERRATACK ACCORDING TO MANUFACTURERS RECOMMENDATIONS

3. STABILIZE DISTURBED AREAS WITH TEMPORARY OR PERMANENT VEGETATION.

4. IRRIGATE DISTURBED AREAS UNTIL SURFACE IS WET.

5. COVER SURFACES WITH CRUSHED STONE OR GRAVEL.

6. APPLY CALCIUM CHLORIDE AT A RATE TO KEEP SURFACE MOIST.

7. APPLY SPRAY–ON ADHESIVES TO MINERAL SOILS (NOT MUCK SOILS) AS DESCRIBED IN TABLE 1

TABLE 1

ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1,200
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIN–IN–WATER EMULSION	4:1	FINE SPRAY	300

MAINTENANCE: 1. PROHIBIT TRAFFIC ON SURFACE AFTER SPRAYING.

2. SUPPLEMENTAL SURFACE COVERING AS NEEDED.

REFERENCES: 1. Ds1
2. Ds2
2. Ds3
2. Ds4

Du DUST CONTROL ON DISTURBED AREAS

LEVEL II CERTIFICATION #69394 DANIEL L. PHILLIPS 08/07/2026

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

GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026 — STATE OF GEORGIA — CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE | DATE

90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

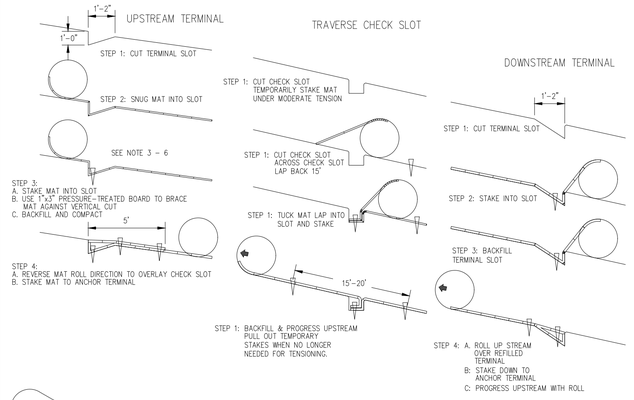
GEORGIA — REGISTERED — No. PE045414 PROFESSIONAL — 07/22/2025 — ENGINEER — DANIEL LAMAR PHILLIPS

ES & PC CONTROL DETAILS

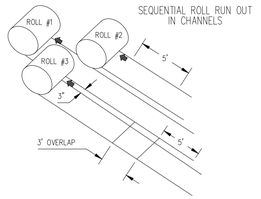
C-607

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG's +PLANS\01 Bid Drawings\REVISED SUBMITTAL_1.0 MGD\CAUG230002-EROS.dwg
PLOTTED: Jul 23, 2025 - 12:18pm

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PICTORIAL VIEW OF TRANSVERSE SLOT



START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.

FIRST ROLL IS CENTERED LONGITUDINALLY IN MID CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.

SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND FIRST ROLL. USE CENTER ROLL FOR ALIGNMENT TO CHANNEL CENTER.

WORK OUTWARDS FROM CHANNEL CENTER TO EDGE.

USE 3" OVERLAP AND STAKE AT 5' INTERVAL ALONG SEAMS.

USE 3" OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT LINING AT ROLL ENDS.

Ss SLOPE STABILIZATION

Temporary Erosion Control Blankets

This includes temporary "combination" blankets (rolled erosion control blankets-RECB) consisting of a plastic netting which covers and is intertwined with a natural organic or manmade mulch; or, a jute mesh which is typically homogeneous in design and can act alone as a soil stabilization blanket.

Temporary blankets as a minimum shall be used to stabilize concentrated flow areas with a velocity less than 5 ft/sec and slopes 2:5:1 or steeper with a height of 10 feet or greater. Because temporary blankets will deteriorate in a short period of time, they provide no enduring reduction in erosion protection.

Benefits of using erosion control blankets include the following:

1. Protection of the seed and soil from raindrop impact and subsequent displacement.
2. Thermal consistency and moisture retention for seedbed area.
3. Stronger and faster germination of grasses and legumes.
4. Planing off excess stormwater runoff.
5. Prevention of sloughing of topsoil added to steeper slopes.

Permanent Erosion Control Matting

Consists of a permanent non-degradable, three-dimensional plastic structure which can be filled with soil prior to planting. These mats are also known as permanent soil reinforcing mats (turf reinforcement matting). Roots penetrate and become entangled in the matrix, forming a continuous anchorage for surface growth and promoting enhanced energy dissipation. Matting shall be used when a vegetative lining is desired in stormwater conveyance channels where the velocity is between five and ten per second.

Benefits of using erosion control matting include the following:

1. All benefits gained from using erosion control blankets.
2. Causes soil to drop out of stormwater and fill matrix with fine soils which become the growth medium for the development of roots.
3. Acts with the vegetative root system to form an erosion resistant cover which resists hydraulic lift and shear forces when embedded in the soil within stormwater channels.

Materials

All blanket and matting materials shall be on the Georgia Department of Transportation Qualified Products List (QPL #62 for blankets, QPL #49 for matting).

All blankets shall be nontoxic to vegetation and to the germination of seed and shall not be injurious to the unprotected skin of humans. At a minimum, the plastic netting shall be intertwined with the mulching material/fiber to maximize strength and provide for ease of handling.

Temporary Blankets

Machine produced temporary combination blankets shall have a consistent thickness with the organic material evenly distributed over the entire blanket area. All combination blankets shall have a minimum width of 48 inches. Machine produced combination blankets include the following:

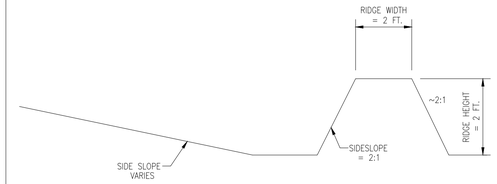
1. Straw blankets are combination blankets that consist of weed-free straw from agricultural crops formed into a blanket. Blankets with a top side of photodegradable plastic mesh with a maximum mesh size of 5/16 x 5/16 inch and sewn to the straw with biodegradable thread is appropriate for slopes. The blanket shall have a minimum thickness of 3/8 inch and minimum dry weight of 0.5 pounds per square yard.
2. Excelsior blankets are combination blankets that consist of curled wood excelsior (80% of fibers are six inches or longer) formed into a blanket. The blanket shall have clear markings indicating the top- side of the blanket and be smolder resistant. Blankets shall be photodegradable plastic mesh having a maximum mesh size of 1 1/2 x 3 inches. The blanket shall have a minimum thickness of 1/4 of an inch and a minimum dry weight of 0.8 pounds per square yard. Slopes require excelsior matting with the topside of the blanket covered in the plastic mesh, and for waterways, both sides of the blanket require plastic mesh.
3. Coconut fiber blankets are combination blankets that consist of 100% coconut fiber formed into a blanket. The minimum thickness of the blanket shall be 1/4 of an inch with a minimum dry weight of 0.5 pounds per square yard. Blankets shall have photodegradable plastic mesh, with a maximum mesh size of 5/8 x 5/8 inch and sewn to the fiber with a breakdown resistant synthetic yarn. Plastic mesh is required on both sides of the blanket is used in waterways. A maximum of two inches is allowable for the stitch pattern and row spacing.
4. Wood fiber blankets are combination blankets that consist of reprocessed wood fibers that do not possess or contain any growth or germination inhibiting factors. The blanket shall have a photodegradable plastic mesh, with a maximum mesh size of 5/8 x 3/4 inch, securely bonded to the top of the mat. The blanket shall have a minimum dry weight of 0.35 pounds per square yard. A maximum of two inches is allowable for the stitch pattern and row spacing. This practice shall be applied only to slopes.
5. Jute Mesh can be applied to slopes. Jute mesh with a 48 inch width shall show between 76 and 80 warpings and a one yard length shall show between 39 to 43 weftings. The woven mesh shall be at least 45 inches wide. Yarn shall have a unit weight of at least 0.9 pounds per square yard, but not more than 1.5 pounds per square yard.

Permanent Matting

Permanent matting shall consist of a lofty web of mechanically or melt bonded polymer nettings, monofilaments or fibers which are entangled to form a strong and dimensionally stable matrix. Polymer welding, thermal of polymer fusion, or the placement of fibers between two high strength, biaxially oriented nets bound securely together by parallel lock stitching with polyolefin, nylon or polyester threads are all appropriate bonding methods. Mats shall maintain their shape before, during, and after installation, under dry or water saturated conditions. Mats must be stabilized against ultraviolet degradation and shall be inert to chemicals normally encountered in a natural soil environment.

The mat shall conform to the following physical properties:

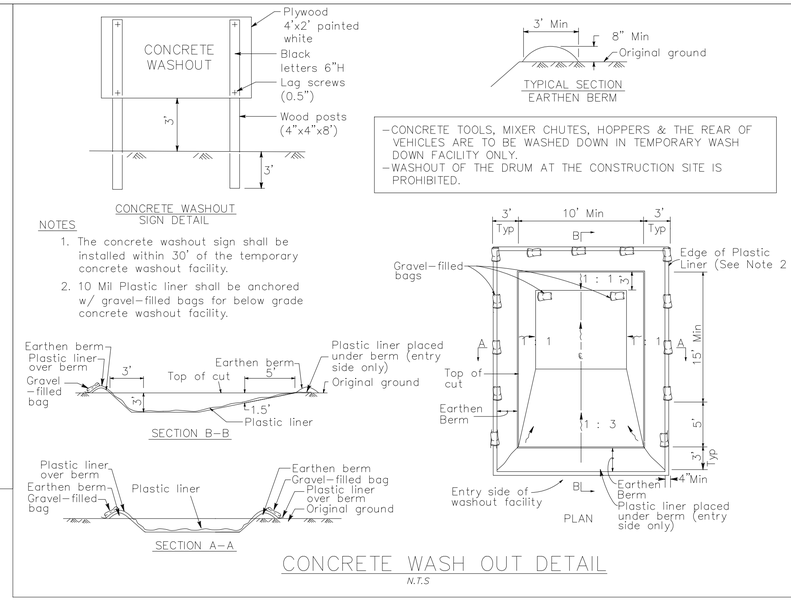
Property	Minimum Value
Thickness	0.5 inch
Weight	0.6 PSY
Roll Width	38 inches
Tensile Strength	
Length (50% elongation)	15 lbs./in.
Length (ultimate)	20 lbs./in.



CONSTRUCTION SPECIFICATIONS

1. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the diversion.
2. The diversion shall be excavated or shaped to line, grade, and cross section as required to meet the criteria specified herein and free of irregularities which will impede normal flow.
3. All fills shall be machine compacted as needed to prevent unequal settlement that would cause damage in the completed diversion.
4. All earth removed and not needed in construction shall be spread or disposed of so that it will not interfere with the functioning of the diversion.
5. Diversion channel shall be stabilized in accordance with specification Ch - Channel Stabilization.

Di DIVERSION



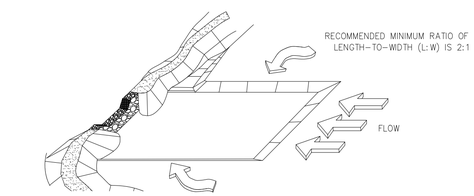
CONCRETE WASH OUT DETAIL

N.T.S

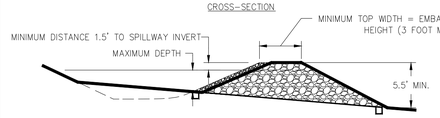
TEMPORARY SEDIMENT TRAP

COURTESY OF CITY OF KNOXVILLE BMP EROSION AND SEDIMENT

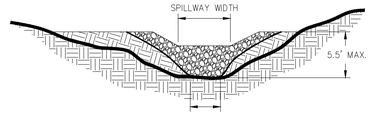
ROCK OUTLET



CROSS-SECTION



PROFILE THROUGH EMBANKMENT



TYPICAL WIDTH = 3 FEET

Sd4 (Sd4-C) TEMPORARY SEDIMENT TRAP WITH ROCK OUTLET

Sd4-C #	1	2
Drainage Basin	5	4
Bottom of Sd4	488.5 ft.	490.5 ft.
Spillway Invert	492.5 ft.	494.5 ft.
Depth	4.0 ft.	4.0 ft.
Volume	322.9 cu. yd.	89.7 cu. yd.
Top of Berm	494.0 ft.	496.0 ft.
Spillway Depth	1.5 ft.	1.5 ft.
Cleanout Volume	107.6 cu. yd.	29.9 cu. yd.
Cleanout Elevation	490.5 ft.	493.0 ft.

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Augusta, GA 30901
T 706.303.3272

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	08.03.2025
CONFORMED SET	MP
PROJECT MANAGER:	LW/DP
ENGINEER:	LW
DESIGNER:	DS
DRAWN BY:	

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED No. PE045414 PROFESSIONAL 07/22/2025 ENGINEER DANIEL LAMAR PHILLIPS

ES & PC CONTROL DETAILS

C-608

LEVEL II CERTIFICATION #69394 DANIEL L. PHILLIPS 08/07/2026

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CMP SAMPLING METHODS & PROCEDURES
GENERAL PERMIT No. GAR 100001 - EFFECTIVE AUGUST 1, 2023

REPRESENTATIVE SAMPLING ON STAND ALONE CONSTRUCTION PROJECT
Receiving water samples and storm water discharge samples will be collected by "grab samples", as specified in Part IV.D.6 of the GAR 100001 permit. All "grab samples" will be collected using the following methods and procedures.

SAMPLING REQUIREMENTS:

SAMPLING FREQUENCY:
(1). The primary permittee must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any storm water discharge to a monitored receiving water and/or from a monitored outfall location within forty-five (45) minutes or as soon as possible.

(2). However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the storm water discharge.

(3). Sampling by the permittee shall occur for the following qualifying events:

(a). For each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a storm water discharge that occurs during normal business hours as defined in this permit. after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the representative sampling location;

(b). In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a storm water discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the representative sampling location, whichever comes first;

(c). At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained;

(d). Where sampling pursuant to (a), (b) or (c) above is required but not possible (or not required because there was no discharge), the permittee, in accordance with Part IV.D.4.a.(6), must include a written justification in the inspection report of why sampling was not performed. Providing this justification does not relieve the permittee of any subsequent sampling obligations under (a), (b) or (c) above; and

(e). Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.

*Note that the Permittee may choose to meet the requirements of (a) and above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for sampling at any time of the day or week.

INSPECTIONS:
(1). Each day when any type of construction activity has taken place at a primary permittee's site, certified personnel provided by the primary permittee shall inspect: (a) all areas at the primary permittee's site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment and (b) all locations at the primary permittee's site where vehicles enter or exit the site for evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination is submitted.

(2). Measure and record rainfall within disturbed areas of the site that have not met final stabilization once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday. The data collected for the purpose of compliance with this permit shall be representative of the monitored activity. Measurement of rainfall may be suspended if all areas of the site have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region.

(3). Certified personnel (provided by the primary permittee) shall inspect the following at least once every fourteen (14) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any nonworking Saturday, non-working Sunday or any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first): (a) disturbed areas of the primary permittee's construction site ; {b) areas used by the primary permittee for storage of materials that are exposed to precipitation ; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the primary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). For areas of a site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region, the permittee must comply with Part IV.D.4.a.(4). These inspections must be conducted until a Notice of Termination is submitted.

INSPECTIONS CONTINUED:
(4). Certified personnel (provided by the primary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination is submitted to EPD) the areas of the site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s).

(5). Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following each inspection.

(6). A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e., initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.D.4.a.(5). of the permit shall be made and retained at the site or be readily available at a designated alternate location until the entire site or that portion of a construction project that has been phased has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily available by end of the second business day and/or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify any incidents, the inspection report shall contain a statement that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit.

REPORTING:
1. The applicable permittees are required to submit the sampling results to the EPD by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any stormwater discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. Sampling reports must be submitted to EPD using the electronic submittal service provided by EPD. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with Part VI.

2. All sampling reports shall include the following information:

a. The rainfall amount, date, exact place and time of sampling or measurements;
b. The name(s) of the certified personnel who performed the sampling and measurements;
c. The date(s) analyses were performed;
d. The time(s) analyses were initiated;
e. The name(s) of the certified personnel who performed the analyses;
f. References and written procedures, when available, for the analytical techniques or methods used;
g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results;
h. Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU;" and
i. Certification statement that sampling was conducted as per the Plan.

3. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI.

RETENTION OF RECORDS:
1. The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:

a. A copy of all Notices of Intent submitted to EPD;
b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
d. A copy of all sampling information, results, and reports required by this permit;
e. A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit;
f. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and
g. Daily rainfall information collected in accordance with Part IV.D.4.a.(2). of this permit.

2. Copies of all Notices of Intent, Notices of Termination, inspection reports, sampling reports (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), or other reports requested by the EPD, Erosion, Sedimentation and Pollution Control Plans, records of all data used to complete the Notice of Intent to be covered by this permit and all other records required by this permit shall be retained by the permittee who either produced or used it for a period of at least three years from the date that the NOT is submitted in accordance with Part VI of this permit. These records must be maintained at the permittee's primary place of business or at a designated alternative location once the construction activity has ceased at the permitted site. This period may be extended by request of the EPD at any time upon written notification to the permittee.

GMC
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GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
STATE OF GEORGIA
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED
No. PE045414
PROFESSIONAL
07/22/2025
ENGINEER
DANIEL LAMAR PHILLIPS

COMPREHENSIVE MONITORING PROGRAM GENERAL NOTES

C-609

LEVEL II CERTIFICATION #69394 DANIEL L. PHILLIPS 08/07/2026

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DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG\+PLANS\01 Bid Drawings\REVISED SUBMITTAL_1.0 MGD\CAUG230002-NPDES.dwg
PLOTTED: Jul 23, 2025 - 12:17pm

DESCRIPTION OF ANALYTICAL METHODS TO BE USED TO COLLECT AND ANALYZE THE SAMPLES:

The method used to collect and analyze the water samples shall be in accordance with the following procedures:

- All samples shall be grab samples.
- Analysis of samples must be conducted in accordance with methodology and test procedures established by 40 CFR Part 136 (unless other test procedures have been approved), the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.
- Sample containers should be labeled prior to collecting the samples.
- Samples should be well mixed before transferring to a secondary container.
- Large mouth, well cleaned and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.
- Manual or automatic sampling may be utilized. Samples required by this permit should be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. Samples are not required to be cooled. Dilution of samples is not required. Samples may be analyzed directly with a properly calibrated turbidimeter.
- Sampling and analysis of the receiving water(s) or outfalls beyond the minimum frequency stated in the permit must be reported to EPD as specified in Part IV.E of the permit.
- The upstream sample for each receiving water(s) must be taken immediately upstream of the confluence of the first storm water discharge from the permitted activity but downstream of any other storm water discharges not associated with the permitted activity.
- The downstream sample for each receiving water(s) must be taken downstream of the confluence of the last storm water discharge from the permitted activity but upstream of any other storm water discharge not associated with the permitted activity.
- Samples should be taken from the horizontal and vertical center of the receiving water(s) or the storm water outfall channel(s).
- Care should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall storm water channel.
- The sampling container should be held so that the opening faces upstream.
- The samples should be kept free from floating debris.

Deviations from these methods and procedures shall be documented by the primary permittee.

Sampling must be done in such a way as to accurately reflect whether storm water runoff from the site is in compliance with the standard set forth in the permit.

Measurement of rainfall must be recorded daily (once each twenty-four hour period) at the site.

The primary permittee must sample all perennial and intermittent streams and other water bodies or all outfalls into such streams and other water bodies as indicated on the map referenced in the permit.

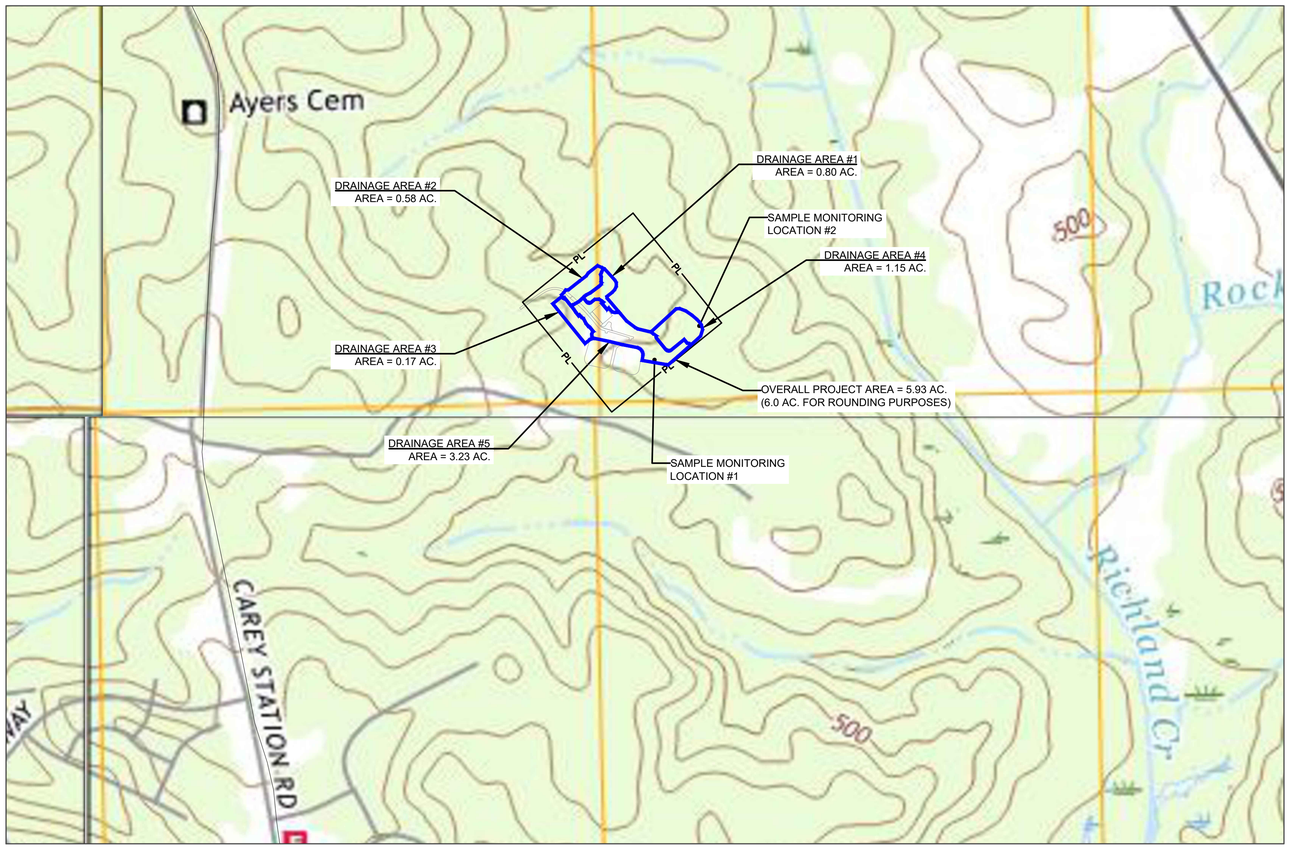
For infrastructure construction projects, monitoring obligations shall cease for any phase of the project that has been stabilized in accordance with Part IV.D.6.c.(1).(g).

APPENDIX B RATIONAL

Waters Supporting Warm Water Fisheries

Site Size, acres	Surface Water Drainage Area, square miles							
	0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
1.00-10	75	150	200	400	750	750	750	750
10.01-25	50	100	100	200	300	500	750	750
25.01-50	50	50	100	100	200	300	750	750
50.01-100	50	50	50	100	100	150	300	600
100.01+	50	50	50	50	50	100	200	100

ONLY USE IF SAMPLING FROM OUTFALLS



WATERSHED, SITE MONITORING LOCATIONS AND DRAINAGE AREA MAP

SCALE: 1" = 500'

SAMPLING POINTS:

For this project two (2) outfalls will be sampled for the Stand Alone construction in accordance with current NPDES General Permit No. GAR 100001.

The project is located in Greene County, GA as indicated on the vicinity map and plan sheets. Based on the existing terrain of the project (disturbed) area, the site drains to five (5) locations prior to going offsite. The total drainage area for the analyzed area is 38.09 acres with a project area of 5.93 acres. All runoff ultimately converges at Richland Creek. Stormwater Monitoring will be required at two (2) locations [Sd4-C #1 and #2]. Due to proposed grading and construction of the EQ Basin and Reject Pond, Sd4-C #2 will be removed during the Intermediate Phase of the ES&PC Plan. The two (2) basins are self-contained and therefore been removed from the drainage area. Drainage Basin #4 will be reduced to 0.58 ac. in the Intermediate Phase and therefore sampling would no longer be required. Sd4-C #1 will remain in place until such time Drainage Basin #5 is fully stabilized.

Drainage Basin	Disturbed Area	Monitoring Station Location	Allowable NTU (per Appendix B)
#1	0.80 AC. (0.001 SQ. MI.)	N/A	N/A
#2	0.58 AC. (0.001 SQ. MI.)	N/A	N/A
#3	0.17 AC. (0.0003 SQ. MI.)	N/A	N/A
#4	1.15 AC. (0.002 SQ. MI.)	Sd4-C #2 OUTLET	75
#5	3.23 AC. (0.005 SQ. MI.)	Sd4-C #1 OUTLET	75

The aforementioned tributary is a continuously flowing stream.

The sampling location for the disturbed drainage basins above shall be monitored concurrent with land disturbance/clearing. Sampling is required during construction and until all disturbed areas are stabilized. Permanent/Final Stabilization is defined as 100% cover with 70% density of the disturbed soil surface uniformly covered in permanent vegetation or equivalent permanent stabilization measures have been employed.

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CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED PROFESSIONAL ENGINEER DANIEL LAMAR PHILLIPS No. PE045414 PROFESSIONAL 07/22/2025

WATERSHED, DRAINAGE AREA AND SITE MONITORING LOCATIONS

C-610

LEVEL II CERTIFICATION #69394 DANIEL L. PHILLIPS 08/07/2026

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National Flood Hazard Layer FIRMette

FEMA

83°14'27"W 33°30'21"N



Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/29/2024 at 9:40 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

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STATE OF GEORGIA — GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026 — CERTIFICATE OF AUTHORIZATION

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CAREY STATION URBAN WATER REUSE FACILITY
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GMC Project #CAUG230002

GEORGIA — REGISTERED — No. PE045414 PROFESSIONAL 07/22/2025 ENGINEER — DANIEL LAMAR PHILLIPS

FEMA FLOODPLAIN MAP

C-611

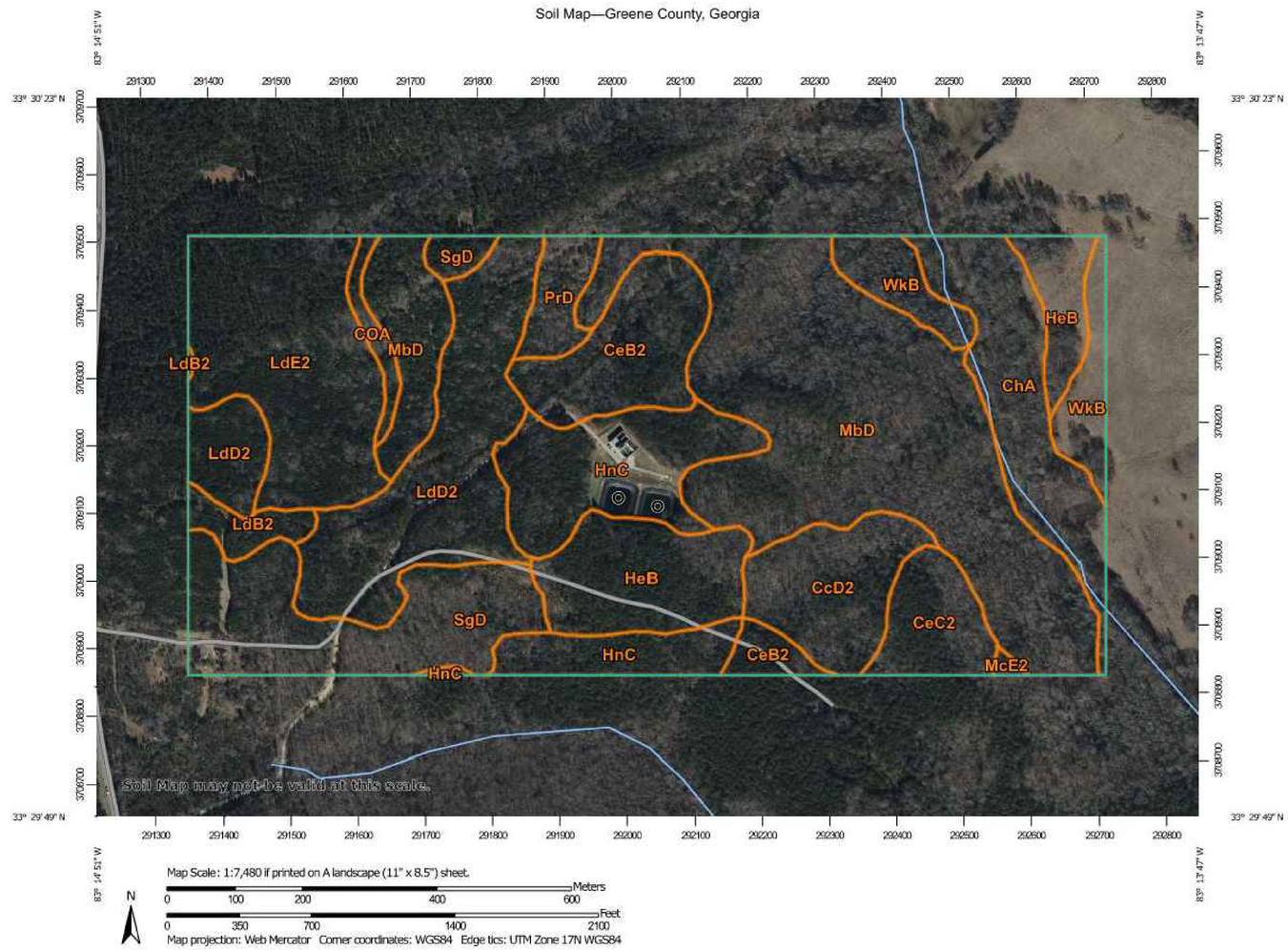
LEVEL II CERTIFICATION #69394 DANIEL L. PHILLIPS 08/07/2026

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Greene County, Georgia

Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H
CcD2—Cataula-Cecil complex, 6 to 15 percent slopes, moderately eroded														
Cataula, moderately eroded		60 D	0-3	Sandy loam, gravelly sandy loam, sandy clay loam, loam	SC, SM, CL	A-4, A-1-b, A-7-6	0- 0- 0	0- 0- 0	100-100-100	63-100-100	42-77- 96	19-41- 60	17-27 -45	########
			7-Mar	Loam, sandy clay loam, sandy loam	CL, SC-SM	A-6, A-2-4, A-7-6	0- 0- 0	0- 0- 0	85-100-100	84-100-100	60-87- 97	29-50- 60	20-34 -44	########
			17-Jul	Clay, clay loam	CH, SC	A-7-6, A-6	0- 0- 0	0- 0- 8	84-98-100	84-98-100	59-87-100	49-74- 91	36-52 -66	19-32-43
			17-47	Clay loam, clay, sandy clay, sandy clay loam, loam	CL, SC, CH	A-6, A-7-6	0- 0- 0	0- 0- 0	90-100-100	89-100-100	67-85-100	36-50- 80	29-38 -65	13-20-43
			47-72	Sandy clay loam, sandy loam	SC, SM, CL	A-2-4, A-4, A-7-6	0- 0- 0	0- 0- 0	90-100-100	89-100-100	60-77- 97	27-40- 60	16-25 -44	2/9/2024
Cecil, moderately eroded		40 B	0-3	Sandy clay loam, sandy loam, gravelly sandy loam	SC, SM, CL	A-7-6, A-4, A-2-4	0- 0- 0	0- 0- 0	100-100-100	76-100-100	52-77- 98	23-39- 60	17-26 -45	2/9/2024
			10-Mar	Gravelly sandy clay loam, sandy clay loam	SC, CL	A-6, A-7-6	0- 0- 0	0- 0- 0	100-100-100	77-100-100	58-80- 90	33-48- 58	29-34 -44	13-17-24
			Oct-40	Sandy clay, clay loam, clay	CH, SC	A-7-6	0- 0- 0	0- 0- 0	100-100-100	84-92-100	63-78-100	38-51- 71	42-52 -66	24-32-43
			40-55	Sandy clay loam	SC, SC	A-6, A-7-6	0- 0- 0	0- 0- 4	86-98-100	84-98-100	62-80- 88	36-49- 57	29-37 -44	13-19-24
			55-60	Loam, sandy loam, sandy clay loam	SC, SM, CL	A-6, A-2-4	0- 0- 0	0- 0- 0	92-100-100	85-100-100	54-77- 89	22-39- 51	16-28 -39	########
CeB2—Cecil gravelly sandy loam, 2 to 6 percent slopes, moderately eroded														
Cecil, moderately eroded		90 B	0-3	Gravelly sandy loam, gravelly sandy clay loam, sandy clay loam	SC	A-2-6, A-1	0- 0- 0	0- 0- 0	86-88-100	44-52-100	32-40- 96	16-20- 58	21-26 -44	########
			7-Mar	Sandy clay loam, gravelly sandy clay loam	SC	A-2-4, A-2-6	0- 0- 0	0- 0- 0	88-92-100	51-60-100	41-52- 92	23-30- 55	29-34 -40	########
			Jul-56	Clay, clay loam	CH	A-7-6, A-7	0- 0- 0	0- 1- 5	95-95-100	94-94-100	75-87-100	63-76- 92	42-54 -66	14-27-39
			56-72	Clay loam, sandy clay loam	CL	A-6	0- 0- 0	0- 0- 5	83-100-100	82-100-100	68-91- 95	52-71- 75	29-37 -42	########
HeB—Helena loamy coarse sand, 2 to 6 percent slopes														
Helena		70 D	0-3	Sandy loam, loamy sand, coarse sandy loam, loamy coarse sand	SC-SM	A-1-b	0- 0- 0	0- 0- 4	91-100-100	90-100-100	40-50- 58	########	17-22 -33	2/6/2012
			8-Mar	Sandy loam, loamy coarse sand, loamy sand, coarse sandy loam	SC-SM	A-1-b	0- 0- 0	0- 0- 4	91-100-100	90-100-100	40-50- 58	########	17-22 -33	2/6/2012
			19-Aug	Sandy clay loam, coarse sandy loam	SC	A-6, A-4	0- 0- 0	0- 0- 5	95-100-100	95-100-100	60-65- 83	38-42- 60	22-25 -42	6/8/2021
			19-42	Clay loam, sandy clay, clay, sandy clay loam	CH	A-7-6	0- 0- 0	0- 0- 5	95-100-100	95-100-100	63-84-100	36-55- 73	37-53 -69	18-30-44
			42-60	Sandy clay loam, clay loam, sandy loam	CL	A-7-6	0- 0- 0	0- 0- 0	83-96-100	82-96-100	60-88- 96	44-69- 76	26-43 -49	########
HnC—Helena loamy sand, 6 to 10 percent slopes														
Helena		80 D	0-5	Loamy coarse sand, coarse sandy loam, loamy sand, sandy loam	SC-SM	A-2-4, A-1-b	0- 0- 0	0- 0- 4	91-100-100	90-100-100	40-50- 58	########	17-23 -33	2/6/2012
			18-May	Loamy sand	SC-SM	A-2-6, A-4	0- 0- 0	0- 0- 12	86-100-100	86-100-100	62-78- 85	30-41- 48	16-23 -31	2/7/2012
			18-55	Clay loam, sandy clay loam, clay, sandy clay	SM, SC, ML, CH	A-7-6	0- 0- 0	0- 0- 5	95-100-100	95-100-100	63-84-100	36-55- 73	37-53 -69	18-30-44
			55-60	Sandy clay loam, coarse sandy loam	SC	A-6	0- 0- 0	0- 0- 5	95-100-100	95-100-100	72-86- 96	34-46- 56	22-32 -42	########
MbD—Mecklenburg-Crawfordville complex, 6 to 15 percent slopes														
Mecklenburg		35 C	0-5	Loam, sandy loam	CL, CL-ML, SM, SC-SM	A-4	0- 0- 0	0- 0- 0	100-100-100		92-97-100	68-75- 82	42-47- 54	19-23 -31	3/6/2010
			12-May	Loam, sandy loam	CL, CL-ML, SM, SC-SM	A-4	0- 0- 0	0- 0- 0	100-100-100		92-97-100	68-75- 82	42-47- 54	19-23 -31	3/6/2010
			Dec-43	Clay	CH	A-7-6	0- 0- 0	0- 0- 0	100-100-100		90-96-100	77-91-100	62-75- 93	43-53 -67	25-32-44
			43-60	Clay loam, loam	CL	A-6	0- 0- 0	0- 0- 0	100-100-100		97-98-100	82-89- 95	63-70- 75	29-35 -40	13-18-21
Crawfordville		30 D	0-3	Sandy loam, loamy sand	SC, SM, SC-SM	A-4, A-2-4	0- 0- 0	0- 0- 0	100-100-100		84-95-100	59-71- 80	23-31- 38	17-23 -31	2/6/2010
			7-Mar	Sandy loam, loamy sand	SC, SM, SC-SM	A-4, A-2-4	0- 0- 0	0- 0- 0	100-100-100		84-95-100	59-71- 80	23-31- 38	17-23 -31	2/6/2010
			13-Jul	Clay loam, clay	CH	A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	83-93- 98	61-71- 76	45-55 -61	25-33-37	
			13-35	Clay	CH	A-7, A-7-6	0- 0- 0	0- 7- 17	100-100-100	100-100-100	84-94- 99	69-79- 84	54-64 -69	32-40-44	
			35-38	Clay loam, clay	CH	A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	83-93- 98	61-71- 76	45-55 -61	25-33-37	
			38-40	Bedrock	—	—	—	—	—	—	—	—	—	—	



USDA **Natural Resources Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

2/29/2024
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Greene County, Georgia
Survey Area Data: Version 18, Aug 30, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 4, 2023—Feb 18, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

LEVEL II CERTIFICATION #69394 DANIEL L. PHILLIPS 08/07/2026

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GMC Project #CAUG230002

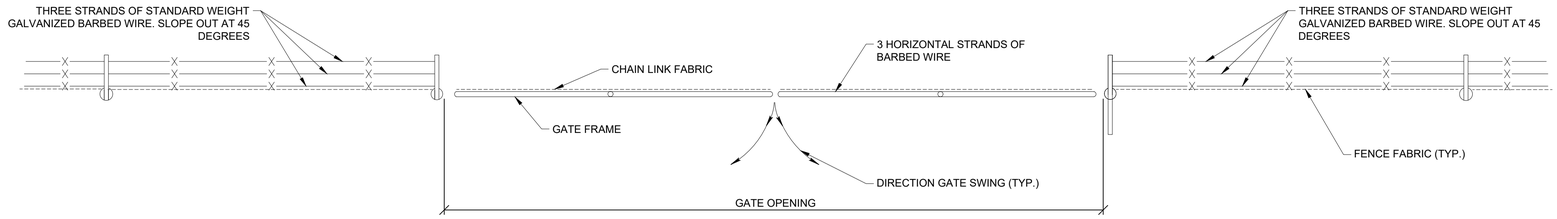
GEORGIA REGISTERED No. PE045414 PROFESSIONAL 07/22/2025 ENGINEER DANIEL LAMAR PHILLIPS

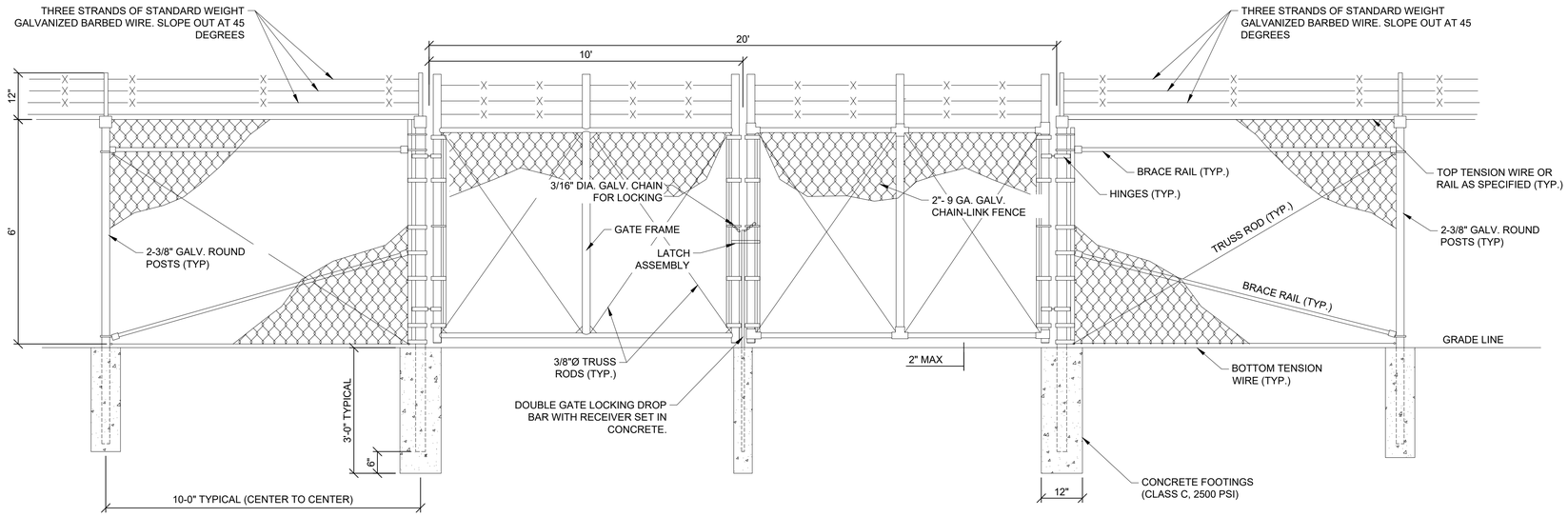
SOILS MAP

C-612

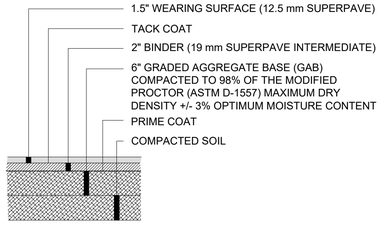
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DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG+PLANS\01 Bid Drawings\REVISED SUBMITTAL_1.0 MGD\CAUG230002-SOILS.dwg
PLOTTED: Jul 23, 2025 - 12:07pm

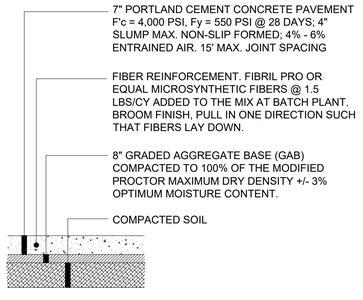




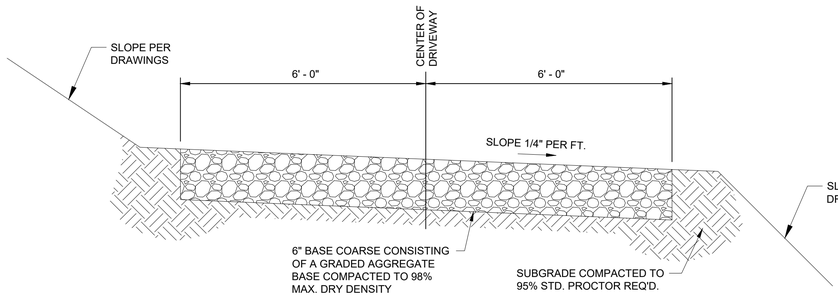
A C-101 **DOUBLE SWING GATE**
SCALE: NOT TO SCALE



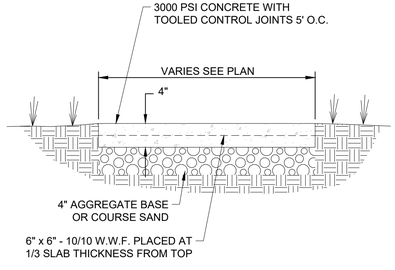
1 C-613 **STANDARD DUTY ASPH. PAV'T.**
SCALE: NOT TO SCALE



2 C-613 **HEAVY DUTY CONCRETE PAV'T.**
SCALE: NOT TO SCALE



3 C-613 **TYPICAL ACCESS ROAD**
SCALE: NOT TO SCALE



NOTES:
1. CONCRETE SIDEWALK TO HAVE 6" x 6" - 10/10 W.W.F. MAXIMUM 4" SLUMP FOR NON-SLIP FORMED AND 2" SLUMP WHEN SLIP FORMED.
2. 4% - 6% ENTRAINED AIR
3. SUBGRADE COMPACTED TO 98% MODIFIED PROCTOR MAXIMUM DRY DENSITY.

4 C-613 **SIDEWALK WITHOUT CURB**
SCALE: NOT TO SCALE

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

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE | DATE

90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

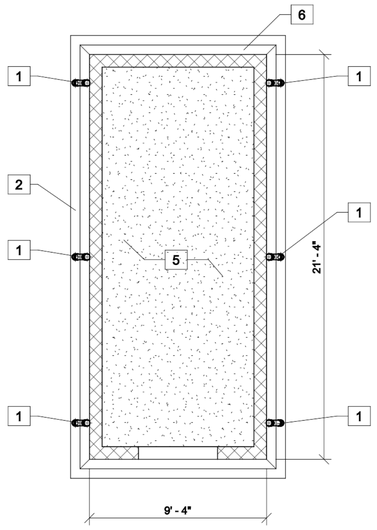
GEORGIA
No. PE045414
PROFESSIONAL
07/22/2025
ENGINEER
DANIEL LAMAR PHILLIPS

CIVIL DETAILS

C-613

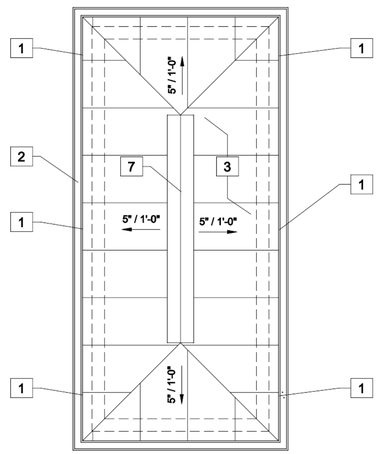
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DRAWING FILE: T:\1Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG\+PLANS\01 Bid Drawings\REVISED SUBMITTAL_1.0 MGD\CAUG230002-MISC.dwg
PLOTTED: Jul 23, 2025 - 12:57pm



A A-811 **REFLECTED CEILING PLAN**

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

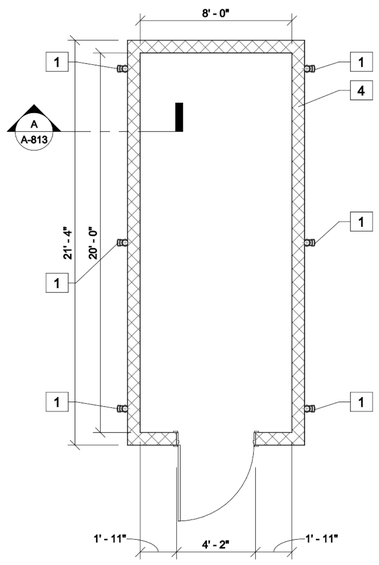


B A-811 **ROOF PLAN**

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

KEY NOTES: #

1. DOWNSPOUT
2. ALUMINUM GUTTERS
3. METAL PANEL ROOF
4. SPLIT FACE 8" CMU
5. GWB OVER METAL STUDS FRAMING
6. FASCIA
7. RIDGE VENT



C A-811 **FLOOR PLAN**

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

GMC
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STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
NO.PEF007898
Exp.06.30.2026
CERTIFICATION OF AUTHORIZATION

1" 0" 5" 1"

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90% Submittal	10.04.2024
Bid Set	
Conformed Set	09.03.2025
Project Manager:	MP
Engineer:	LW/DP
Designer:	LW
Drawn By:	

CAREY STATION URBAN
WATER REUSE FACILITY

0.5 MGD TO 1.0 MGD EXPANSION

GMC PROJECT # CAUG230002

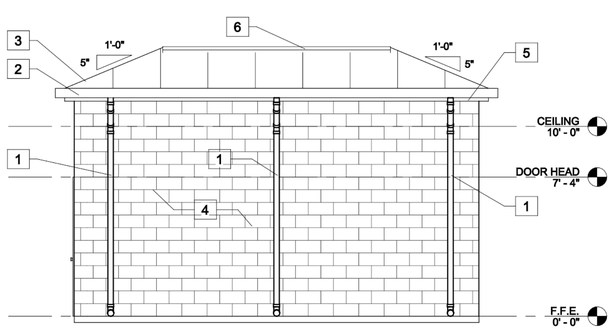
GEORGIA
REGISTERED
10/04/2024
No. PE037638
PROFESSIONAL
ENGINEER
LIANG WANG
Liang Wang

**MAIN ELECT. BLDG.
FLOOR PLAN AND
ROOF PLAN**

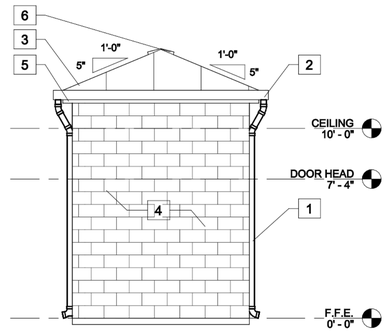
A-811

CAUG230002 Cary Station Building_detached.rvt
9/9/2024 4:03:23 AM

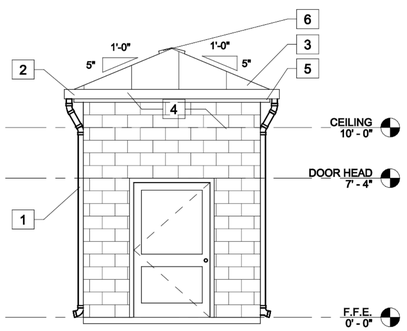
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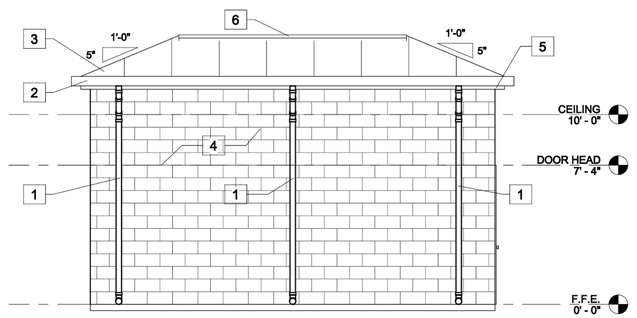
1 EXTERIOR ELEVATION - EAST
A-812 SCALE: 1/4" = 1'-0"



2 EXTERIOR ELEVATION - NORTH
A-812 SCALE: 1/4" = 1'-0"



4 EXTERIOR ELEVATION - SOUTH
A-812 SCALE: 1/4" = 1'-0"



3 EXTERIOR ELEVATION - WEST
A-812 SCALE: 1/4" = 1'-0"

KEY NOTES: #

1. ALUMINUM DOWNSPOUT
2. ALUMINUM GUTTER
3. STANDING SEAM METAL ROOF
4. SPLIT FACE 8" CMU
5. FASCIA
6. RIDGE VENT

GMC
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Designer:	LW
Drawn By:	

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC PROJECT # CAUG230002

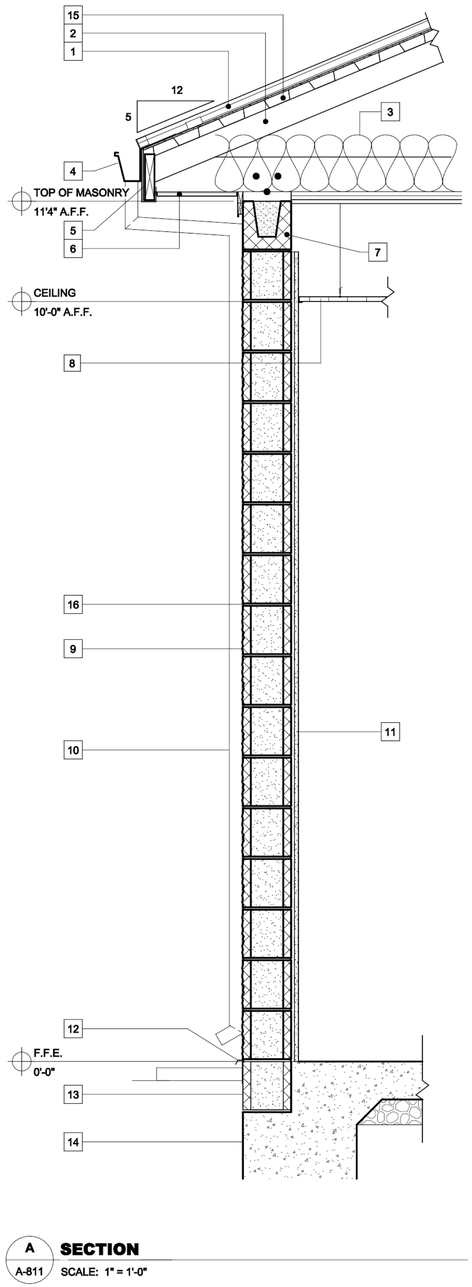
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

MAIN ELECT. BLDG.
EXTERIOR
ELEVATIONS

A-812

CAUG230002 Cary Station Building_detached.rvt
9/9/2024 4:03:23 AM

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A SECTION
A-811 SCALE: 1" = 1'-0"

KEY NOTES: #

1. STANDING SEAM METAL ROOFING
2. PRE-ENGINEERED METAL TRUSS @ 4'-0" O.C.
3. BATT INSULATION ON SUSPENSION SYSTEM
4. ALLUMINIUM GUTTER
5. PRE-FINISHED METAL FASCIA ON P.T. 2X SUBFASCIA
6. PRE-FINISHED VENTED METAL SOFFIT WITH CLIPS
7. SMOOTH FACE BOND BEAM (SEE STRUCT.)
8. SUSPENDED ACOUSTICAL TILE CEILING
9. SPLIT FACE 8" CMU
10. ALUMINIUM DOWNSPOUT
11. 5/8" GYPSUM BOARD
12. FLASHING
13. SMOOTH FACE CMU AT BASE
14. CONCRETE
15. 1 1/2" METAL ROOF DECK
16. APPLY WATER REPELLENT ON THE SURFACE OF SPLIT FACE 8" CMU

GMC
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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC PROJECT # CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

MAIN ELECT. BLDG.
WALL SECTIONS

A-813

CAUG230002 Cary Station Building_detached.rvt
9/9/2024 4:03:28 AM

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DOOR SCHEDULE

DOOR #	DOOR				FRAMES					COMMENTS
	SIZE		TYPE	MATERIAL	TYPE	MATERIAL	DETAILS			
	WIDTH	HEIGHT					HEAD	JAMB	SILL	
101A	4' - 0"	7' - 0"								

WALLS LEGEND

NUMBER	TYPE	DESCRIPTION
PNT-1	PAINT	PRODUCT EQUAL TO; MANUFACTURER; TNEMEC COLOR: BY OWNER
FRP-1	4' HIGH FRP WALL PANELS	PRODUCT EQUAL TO; MANUFACTURER; MARLITE, STYLE'COLOR: BY OWNER, SIZE 4'X8'X3/32"
GYP-1	TYPE X GYPSUM BOARD	PRODUCT EQUAL TO; PAINTED GYP BOARD, STYLE/COLOR: BY OWNER; REFER TO SPECIFICATION 09 29 00
GYP-2	TYPE XP GYPSUM BOARD	PRODUCT EQUAL TO; PAINTED GYP BOARD, STYLE/COLOR: BY OWNER; REFER TO SPECIFICATION 09 29 00

CEILING LEGEND

NUMBER	TYPE	DESCRIPTION
ACT-2	ACOUSTICAL CEILING TILE SYSTEM	PRODUCT EQUAL TO; REGER TO SPECIFICATION 09 51 13
PLY-1	PLYWOOD	PRODUCT EQUAL TO; PAINTED TREATED PLYWOOD, STYLE/COLOR: BY OWNER

MISCELLANEOUS LEGEND

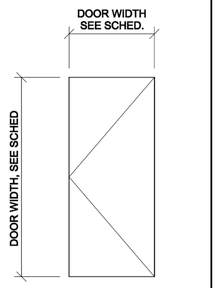
NUMBER	TYPE	DESCRIPTION
SSC-1	SOLID SURFACE COUNTERTOP	PRODUCT EQUAL TO; PHENOIC RESIN COUNTERTOPS
CMU-1	CONCRETE MASONRY UNITS	PRODUCT EQUAL TO; COLOR: BY OWNER
SSMR	METAL ROOF	PRODUCT EQUAL TO; COLOR: BY OWNER

ABBREVIATIONS

ACT-2	LAY-IN ACOUSTICAL CEILING TILE- MOISTURE RESISTANT
ALUM	ANODIZED INSULATED ALUMINUM
CONC	CONCRETE
FRP	FIBER REINFORCED PLASTIC
GYP-1	TYPE X GYPSUM BOARD
GYP-2	TYPE XP GYPSUM BOARD
HM	HOLLOW METAL
PNT	PAINT
RUB-1	4" RUBBER BASE
TCF-1	TROWEL CONCRETE FINISH
VCT-1	VINYL COMPOSITE TILE

DOOR TYPES

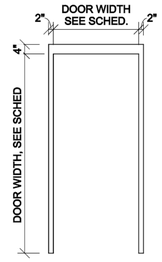
SCALE: 3/8" = 1'-0"



DR-1

FRAME TYPES

SCALE: 3/8" = 1'-0"



FR-1

SIGNAGE NOTES

1. RAISED CHARACTERS SHALL BE 1/32 INCH MINIMUM ABOVE THEIR BACKGROUND.
2. CHARACTERS SHALL BE UPPERCASE.
3. CHARACTERS SHALL BE SANS SERIF. CHARACTERS SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF OTHER UNUSUAL FORMS.
4. CHARCTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTCH OF THE UPPERCASE LETTER "O" IS 55 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPPERCASE LETTER "I".
5. STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 15 PERCENT MAXIMUM OF HEIGHT OF CHARACTER.
6. SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF RAISED CHARACTERS WITHIN A MESSAGE SHALL BE 135 PERCENT MINIMUM AND 170 PERCENT MAXIMUM OF THE RAISED CHARACTER HEIGHT.

NOTES

1. ALL BUILDING MATERIALS STYLE/COLOR SHALL BE COORDINATED WITH THE OWNER VIA THE SUBMITTAL PROCESS AS OUTLINED IN SPECIFICATION 01330 PRIOR TO PLACING ORDERS.
2. THRESHOLDS AT DOORWAYS SHALL NOT EXCEED 1/2" IN HEIGHT. RAISED THRESHOLDS AND DOOR LEVEL CHANGES AT ACCESSIBLE DOORWAYS SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.
3. SEE SPECIFICATIONS FOR HARDWARE INFORMATION.

GMC
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Augusta, GA 30901
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STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
NO.PEF007898
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CERTIFICATION OF AUTHORIZATION

1" 0" 5" 1"

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Drawn By:	

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC PROJECT # CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

MAIN ELECT. BLDG.
SCHEDULE

A-814

CAUG230002 Cary Station Building_detached.rvt
9/9/2024 4:03:25 AM

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GENERAL

1. SEE PROJECT SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO GENERAL NOTES. COORDINATE THESE DRAWINGS WITH EXISTING CONDITIONS, AND COORDINATE ALL DIMENSIONS AND WALL LOCATIONS WITH THE *CIVIL DRAWINGS*. THE GENERAL CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CIVIL AND THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES WITHIN THE CONSTRUCTION DOCUMENTS

2. THE STRUCTURAL DRAWINGS SHOULD NOT BE USED TO SIZE OR LOCATE DOORS, WINDOWS, TOILET PARTITIONS, OR NON-LOAD BEARING WALLS.

3. SEE *CIVIL* FOR ALL *EXPANSION JOINT COVERS* AND PROCESS DETAILS.

4. DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE *2018 INTERNATIONAL BUILDING CODE*, WITH GEORGIA AMENDMENTS.

5. DESIGN LOADS:
   - *LIVE LOAD INFORMATION*
     - A. BLOWER = 3,805 LB EACH
     - B. SODIUM HYPOCHLORITE STORAGE TANK = 20,000 LB EACH
     - C. SLAB ON GRADE = 100 PSF
   - *DEAD LOADING INFORMATION*
     - A. WEIGHT OF STRUCTURE
   - *WIND LOAD INFORMATION*
     - A. ULT. WIND SPEED = 115 MPH
     - B. ASD WIND SPEED = 89 MPH
     - C. WIND IMPORTANCE FACTOR (IW) = 1.0
     - D. RISK CATEGORY = III
     - E. WIND EXPOSURE = B
   - *SEISMIC DESIGN INFORMATION*
     - A. SEISMIC IMPORTANCE FACTOR (IE) = 1.25
     - B. SEISMIC DESIGN CATEGORY = C
     - C. 0.2 SECOND SPECTRAL RESPONSE ACCELERATION (SS) = 0.224
     - D. 1 SECOND SPECTRAL RESPONSE ACCELERATION (S1) = 0.085
     - E. 0.2 DESIGN SPECTRAL RESPONSE ACCELERATION (SDS) = 0.239
     - F. 1 DESIGN SECOND SPECTRAL RESPONSE ACCELERATION (SD1) = 0.136
     - G. SITE CLASS = D (PER GEOTECHNICAL REPORT)
     - H. RESPONSE MODIFICATION COEFFICIENT (R) = 4 (2 FOR ELECTRIC BLDG)
     - I. SYSTEM OVERSTRENGTH FACTOR = 2.5
     - J. DEFLECTION AMPLIFICATION FACTOR (CD) = 4 (1.75 FOR ELECTRIC BLDG)
     - K. SEISMIC RESPONSE COEFFICIENT (CS) = 0.0747 (0.15 FOR ELECTRIC BLDG)
     - L. DESIGN BASE SHEAR (VX) = VARIES
     - M. BASIC SEISMIC FORCE RESISTING SYSTEM - BEARING WALL SYSTEM - ORDINARY RC SHEAR WALLS (ORDINARY REINFORCED MASONRY SHEAR WALLS FOR ELECTRIC BLDG)
     - N. ANALYSIS PROCEDURE - EQUIVALENT LATERAL FORCE PROCEDURE

6. ALL THE SAFETY REGULATIONS, METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIAL SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING, BRACING, AND FRAMEWORK, ETC. AS REQUIRED.

7. DIMENSIONS ARE NOT TO BE DERIVED BY SCALING THESE DRAWINGS. IF THERE IS ANY QUESTION ABOUT DETAILS OR DIMENSIONS, CONTACT THE CIVIL AND STRUCTURAL ENGINEER FOR CLARIFICATION.

8. WHERE A DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL ALSO APPLY FOR ALL LIKE OR SIMILAR CONDITIONS, UNLESS NOTED OTHERWISE.

SUBMITTALS

1. THE CONTRACT DOCUMENTS ARE THE STRUCTURAL ENGINEER'S INSTRUMENTS OF SERVICE TO CONVEY DESIGN INTENT. THEY ARE NOT TO BE CONSIDERED FABRICATION OR LAYOUT DRAWINGS.

2. THE FOLLOW ARE REQUIRED SUBMITTALS:
   - A. *CONCRETE MIX DESIGN(S)*
   - *B. REINFORCING BAR DRAWINGS*
   - C. *CONCRETE ACCESSORIES INCLUDING WATER STOPS, CURING METHODS, CURING COMPOUNDS, JOINT SEALANTS AND JOINT MATERIALS*
   - D. *GRATING SHOP DRAWINGS*
   - E. *PRE-ENGINEERED COLD-FORMED STEEL TRUSSES*
   - F. OTHER SUBMITTALS AS NOTED ON THE DRAWINGS AND SPECIFICATIONS

   ALL GRATING SHALL BE ENGINEERED BY THE MANUFACTURER. GRATING SHOP DRAWINGS SHALL BE DEVELOPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. THE DRAWINGS SHALL BE SIGNED AND SEALED OR A COVER LETTER PROVIDED STATING THE ACCEPTANCE OF THE SHOP DRAWING BY THE PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.

3. SUBMITTALS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMISSION TO THE STRUCTURAL ENGINEER AND SHALL BEAR THE CONTRACTOR'S STAMP ATTESTING TO THE SAME. DRAWINGS NOT STAMPED WILL NOT BE REVIEWED. SUBCONTRACTOR'S UNCHECKED SUBMITTAL DRAWINGS WILL NOT BE REVIEWED.

4. SUBMITTALS TO BE REVIEWED BY THE STRUCTURAL ENGINEER SHALL BE SUBMITTED TO THE *CIVIL ENGINEER*. THE STRUCTURAL ENGINEER WILL NOT ACCEPT SUBMITTALS DIRECTLY FROM CONTRACTORS WITHOUT THE STRUCTURAL ENGINEER'S PRIOR APPROVAL.

5. UPON COMPLETION OF THE STRUCTURAL ENGINEER'S REVIEW, SUBMITTALS WILL BE RETURNED TO THE *CIVIL ENGINEER* FOR THEIR REVIEW.

6. ANY DEVIATION IN DESIGN, DETAILS, DIMENSIONS, ETC. FROM THE CONSTRUCTION DOCUMENTS SHALL BE CLOUDED ON THE SUBMITTAL AND VERIFICATION OF THE CHANGE SHALL BE REQUESTED.

CONSOLIDATING CONCRETE:

1. CONSOLIDATE CONCRETE BY MEANS OF INTERNAL VIBRATORS OPERATED BY COMPETENT WORKMEN.

2. USE VIBRATORS HAVING A MINIMUM HEAD DIAMETER OF AT LEAST 2-INCHES, A MINIMUM CENTRIFUGAL FORCE OF 700-POUNDS AND A MINIMUM FREQUENCY OF 8,000 VIBRATIONS PER SECOND.

3. VIBRATORS FOR CONFINED AREAS: IN CONFINED AREAS, USE ADDITIONAL VIBRATORS HAVING A MINIMUM HEAD DIAMETER OF 1 1/2-INCHES, A MINIMUM CENTRIFUGAL FORCE OF 300-POUNDS AND A MINIMUM FREQUENCY OF 9,000 VIBRATIONS PER SECOND.

4. KEEP ONE SPARE VIBRATOR FOR EACH THREE IN USE ON THE SITE DURING ALL CONCRETE PLACING OPERATIONS.

5. INSERT AND WITHDRAW VIBRATORS AT POINTS APPROXIMATELY 18-INCHES APART. AT EACH INSERTION OPERATE VIBRATOR FOR 5 TO 10 SECONDS. DO NOT TRANSPORT CONCRETE IN THE FORMS OR IN SLABS BY MEANS OF VIBRATORS.

REF. SHEET S-811 FOR MASONRY NOTES

FOUNDATIONS

1. THE FOUNDATION IS DESIGNED USING A NET ALLOWABLE SOIL BEARING CAPACITY OF *2000 PSF* PER GEOTECHNICAL REPORT BY *GMC* DATED MAY 9, 2024 WITH PROJECT NUMBER: *GAUG230004* . IF THE BEARING CONDITIONS VARY FROM WHAT IS SHOWN, OR IF THE SOIL BEARING CAPACITY IS QUESTIONABLE, THE *CIVIL* AND STRUCTURAL ENGINEER ARE TO BE NOTIFIED IMMEDIATELY.

2. ALL BUILDING AREAS SHALL BE COMPACTED TO 98% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH ASTM D698, CURRENT EDITION.

3. A REGISTERED GEOTECHNICAL ENGINEER REPRESENTING THE OWNER SHALL BE PRESENT TO MONITOR COMPACTION AND SETTLEMENT AND VERIFY THE BEARING CAPACITY. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND ON-SITE GEOTECHNICAL ENGINEER.

4. REMOVE ALL TOPSOIL, ROOT SYSTEM OR OTHER DELETERIOUS MATERIAL UNDER PROPOSED SLAB AND COLUMN FOOTINGS AND REPLACE WITH SUITABLE COMPACTED FILL OR CRUSHED STONE. STRUCTURAL ENGINEER'S DECISION ON QUESTIONABLE MATERIAL SHALL BE FINAL.

5. BACKFILLING SHALL BE PERFORMED IN EQUAL LIFTS NOT TO EXCEED 8" IN THICKNESS PER LIFT AROUND THE BUILDING PERIMETER TO BALANCE LATERAL EARTH PRESSURE ON THE BUILDING. WALK BEHIND COMPACTION EQUIPMENT IS REQUIRED WITHIN A DISTANCE OF TWO TIMES THE WALL HEIGHT.

6. BACKFILL AGAINST STRUCTURAL WALLS SHALL NOT BE PERFORMED UNTIL WALL AND SLAB ON GRADE HAS OBTAINED SPECIFIED STRENGTH.

7. IF REQUIRED BY THE GEOTECHNICAL REPORT OR THE ON-SITE GEOTECHNICAL ENGINEER, THE GROUND WATER TABLE SHALL BE LOWERED.

8. ALL FOOTINGS TO BE CENTERED UNDER THE COLUMNS OR WALLS THEY SUPPORT, UNLESS NOTED OTHERWISE ON THE DRAWING.

9. UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL IN WRITING. THE CONTRACTOR SHALL LOCATE ANY EXISTING UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION.

10. INSPECTIONS BY GEOTECH FIRM ARE REQUIRED FOR EXISTING SOILS CONDITIONS, MONITORING A PROOF ROLL, FILL PLACEMENT, AND LOAD BEARING REQUIREMENTS:
    - A. SITE PREPARATION: PRIOR TO PLACEMENT OF PREPARED FILL, THE INSPECTOR SHALL DETERMINE THAT THE SITE HAS BEEN PREPARED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT NOTED ABOVE FOR THE REQUIRED BEARING PRESSURE NOTED.
    - B. FILL PLACEMENT: DURING PLACEMENT AND COMPACTION OF FILL MATERIAL, THE INSPECTOR SHALL DETERMINE THAT THE PROPER FILL MATERIAL IS BEING USED AND THAT THE MAXIMUM LIFT THICKNESS IS FOLLOWED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT NOTED ABOVE.
    - C. EVALUATION OF IN-PLACE DENSITY: THE INSPECTOR SHALL DETERMINE, AT THE FREQUENCIES DETERMINED IN THE SOILS REPORT AND PROJECT SPECIFICATIONS, THAT THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL COMPLIES WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT NOTED ABOVE.

REINFORCING STEEL

1. REINFORCING STEEL SHALL BE NEW BILLET STEEL, DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, AND SHALL BE FREE FROM ANY FORM RELEASE AGENTS.

2. REINFORCING BENDS SHALL CONFORM TO CRSI.

3. WELDED WIRE FABRIC SHALL BE SHEETS OF NEW BILLET STEEL COLD DRAWN, CONFORMING TO ASTM SPECIFICATION A1064, GRADE 60.

4. REINFORCING IS TO BE SUPPORTED AND SPACED WITH WIRE BAR SUPPORTS ACCORDING TO CRSI "PLACING REINFORCING BARS" UNLESS NOTED OTHERWISE.

5. BAR SUPPORTS, DESIGN, DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 318 AND "THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315.

6. SPLICES FOR CONTINUOUS BARS SHALL BE CLASS B, UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL BE LAPPED 12" MINIMUM.

7. PROVIDE BENT HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF ALL WALLS AND FOOTINGS. BENT BARS ARE TO MATCH THE SIZE AND SPACING OF HORIZONTAL BARS IN WALL OR FOOTING. USE CLASS B SPLICE EACH SIDE.

8. PROVIDE DIAGONAL BARS AT CORNERS OF OPENINGS IN SLABS AND CONCRETE WALLS. SEE DETAILS "RECTANGULAR OPENING WALL SLAB" AND "CIRCLE OPENING WALL SLAB". PROVIDE 2" CLEAR COVER BETWEEN THE OPENING AND THE CORNER REINFORCING BARS.

9. WALL FOOTING REINFORCEMENT SHALL BE CONTINUOUS THROUGH COLUMN FOOTING.

10. EXTEND ALL FOOTING REINFORCEMENT TO FAR SIDE OF FOOTING. SEE NOTE BELOW FOR CONCRETE COVERAGE.

    PROVIDE DOWELS IN WALL FOOTING TO MATCH WALL VERTICALS UNLESS NOTED OTHERWISE ON DRAWINGS. PROVIDE CLASS B SPLICE. USE STANDARD ACI 90 DEGREE HOOK WITH 3" CLEAR TO BOTTOM OF FOOTING UNLESS NOTED OTHERWISE. SEE DETAIL "CORNER BAR & SPLICE LENGTH DETAIL (IN CONCRETE)"

CLASS B SPLICE OR CORNER BAR PER ACI 318 FOR: FOOTING BOTTOM MAT, SLAB ON GRADES AND VERTICAL WALL BARS WITH LESS THAN 12" OF CONCRETE BELOW BAR			
BAR #	4000 PSI CONCRETE MIN. SPLICE (INCHES)	4500 PSI CONCRETE MIN. SPLICE (INCHES)	
4	25	24	
5	31	30	
6	37	35	
7	54	51	
8	62	59	
9	70	66	
10	78	73	
11	85	80	

CLASS B SPLICE OR CORNER BAR PER ACI 318 FOR: HORIZONTAL WALL BARS AND FOOTING TOP BARS WHERE MORE THAN 12" OF CONCRETE IS BELOW BAR			
BAR #	4000 PSI CONCRETE MIN. SPLICE (INCHES)	4500 PSI CONCRETE MIN. SPLICE (INCHES)	
4	32	31	
5	40	38	
6	48	46	
7	70	67	
8	80	76	
9	90	86	
10	102	95	
11	114	106	

11. MINIMUM CONCRETE COVERAGE SHALL BE AS FOLLOWS. IF CONSTRUCTION DOCUMENTS INDICATE A LARGER COVERAGE, IT SHALL BE USED. IF STIRRUPS, TIES, OR SPIRALS ARE USED, COVERAGE SHALL BE TO THE OUTERMOST FACE OF THESE ELEMENTS:
    - A. FOOTINGS, CAISSONS, AND OTHER MEMBERS WHERE CONCRETE IS DEPOSITED AGAINST SOIL (EXCEPT SLABS ON GRADE) = 3"
    - B. CONCRETE EXPOSED TO WEATHER OR SOIL BUT IS NOT DEPOSITED AGAINST SOIL:
      - #6 BAR AND LARGER = 2"
      - #5 BAR AND SMALLER = 1 1/2"
    - C. CONCRETE NOT EXPOSED TO WEATHER OR SOIL:
      - SLABS, WALLS, JOISTS #14 BAR AND LARGER = 1 1/2"
      - SLABS, WALLS, JOISTS #11 BAR AND SMALLER = 3/4"
      - BEAMS AND COLUMNS = 1 1/2"

CONCRETE:

1. ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE CODE REFERENCED EDITION OF ACI-318: "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"

2. PROVIDE A 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES FOR WALLS AND BEAMS.

3. CONCRETE MIX DESIGN REQUIREMENTS AND COMPRESSIVE STRENGTH AT 28 DAYS.

DESCRIPTION	28 DAY STRENGTH (PSI)	WEIGHT PER CUBIC FOOT (PCF)	CONCRETE CLASSES FOR ACI 318 MIXTURE REQUIREMENTS	W/C RATIO, COMMENTS
FOUNDATION SLABS	*4500*	145	F2, S0, W1, C1 S1 FOR DIGESTER & CLARIFIER	*0.45 MAX.*
WALLS	*4500*	145	F2, S0, W1, C1 S1 FOR DIGESTER & CLARIFIER	*0.45 MAX. W/ 5 LB/CY OF XYPEX C-500NF*
CHLORINE CONTACT STRUCTURE	*5000*	145	F2, S1, W1, C2	*0.4 MAX.*

FLY ASH SHALL NOT BE USED. WATER REDUCING ADMIXTURES MAY BE USED TO ACHIEVE SLUMP REQUIREMENTS.

4. LOCATION OF ALL CONSTRUCTION JOINTS, EXCLUDING SLABS ON GRADE, SHALL BE COORDINATED WITH STRUCTURAL ENGINEER.

5. SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER SHOWING PROPOSED LOCATIONS OF ANY MATERIAL SUCH AS BUT NOT LIMITED TO CONDUITS, EMBEDMENTS, OR FIXTURES TO BE PLACED INSIDE ANY STRUCTURAL CONCRETE MEMBER SUCH AS BEAMS, WALLS, SLABS, COLUMNS OR FOOTINGS. THIS IS NOT REQUIRED FOR SLABS ON GRADE OF 4" OR LESS IN THICKNESS.

6. CONCRETE SLAB FLATNESS AND LEVELNESS TOLERANCES SHALL BE IN CONFORMANCE WITH ACI 117, AND SHALL BE SPECIFIED BY THE OWNER. UNLESS SUPERSEDED BY THE OWNER'S CRITERIA, CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS:

   A. PROVIDE A FLOOR SURFACE WHISH IS TRUE AND LEVEL AND ACHIEVES "F NUMBERS" OF *FF = 30* AND *FL = 20* MINIMUM OVERALL COMPOSITE AND *FF = 20* AND *FL = 15* MINIMUM AT ANY INDIVIDUAL SECTION, WHEN TESTED IN ACCORDANCE WITH ASTM E1155, REMOVE SURFACE IRREGULARITIES TO PROVIDE A CONTINUOUS SMOOTH FINISH.

   B. ALL INTERIOR SLABS TO RECEIVE A SMOOTH TROWEL FINISH UNLESS NOTED.

8. UNLESS SPECIFIED OTHERWISE IN THE SPECIFICATION, TESTING OF CONCRETE SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF ACI 318.

9. THE FOLLOWING PROCEDURES SHALL MEET THE REQUIREMENTS OF THE REFERENCED CODE SECTIONS:

PROCEDURE	*REFERENCE SECTION*
PREPARATION AND PLACING	ACI 304 - "GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE"
CONSOLIDATION	ACI 309 - "GUIDE FOR CONSOLIDATION OF CONCRETE"
CURING	ACI 308 - "GUIDE TO EXTERNAL CURING OF CONCRETE"
HOT WEATHER CONCRETING	ACI 305 - "HOT WEATHER CONCRETING"
COLD WEATHER CONCRETING	ACI 306 "COLD WEATHER CONCRETING"

10. SLAB ON GRADE AND TURNDOWN REINFORCING SHALL BE PROPERLY SUPPORTED AT 48" O.C. MAX BY CHAIRS OR CONCRETE BRICKS WITH EQUAL COMPRESSIVE STRENGTH AS SLAB.

11. TOP MAT OF SLABS SHALL BE SUPPORTED WITH STANDEES AT A MAXIMUM OF 4'-0" O.C. EACH DIRECTION.

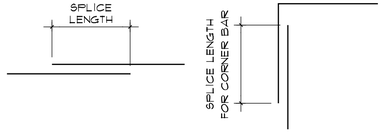
12. VERTICAL WALL REINFORCING SHALL BE TIED IN PLACE USING SPREADER BARS TO ENSURE CORRECT BAR SPACING FULL HEIGHT OF WALL. EXCESSIVE COVER IS NOT ACCEPTABLE.

CONTAINING CONCRETE STRUCTURES:

1. ALL WATERSTOP SHALL BE PVC WATERSTOP AS MANUFACTURED BY DURAJOINT OR APPROVED EQUAL UNO. IT SHALL BE AN EXTRUSION OF VIRGIN POLYVINYL CHLORIDE AND ADDITIONAL RESINS, PLASTICIZERS AND STABLEIZERS WHICH MEET OR EXCEED THE REQUIREMENTS OF THE CORPS OF ENGINEERS SPECIFICATIONS. TYPES AND DISMENSIONS OF WATERSTOP SHALL BE THOSE SHOWN IN THE PROJECT SPECIFICATIONS. THE WATERSTOP SHALL BE SECURED TO THE REINFORCING STEEL USING HOG RINGS SPACED AT 12" O.C. TO PREVENT THE WATERSTOP FROM COLLAPSING DURING THE PLACEMENT OF CONCRETE. SPLICES AND CONNECTIONS TO WATERSTOPS SHALL BE EITHER FACTORY MADE OR COMPLETED IN THE FIELD FOLLOWING CONTRACTOR TRAINING. THE CONTRACTOR SHOULD SUBMIT FIELD MADE SPLICES FOR THE STRUCTURAL ENGINEERS REVIEW PRIOR TO PLACEMENT.

2. PVC WATERSTOPS SHALL BE TYPE 11 UNLESS NOTED OTHERWISE. TYPE 10 IS USED IN EXPANSION JOINT LOCATIONS (WHERE NOTED).

3. TAPER TIE PLUGS SHALL BE MECHANICAL PLUG FOR TAPER TIE VOIDS, SUCH AS SIKA X-PLUG, OR APPROVED EQUAL.



SEE TABLE *"CLASS B SPLICE OR CORNER BAR PER ACI 318"* ON NOTES SHEET FOR SPLICE LENGTH IN CONCRETE

CORNER BAR AND SPLICE LENGTH DETAIL (IN CONCRETE)

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STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	09.03.2025
CONFORMED SET	
PROJECT MANAGER:	DA
ENGINEER:	DA
DESIGNER:	NK
DRAWN BY:	MS

GEORGIA REGISTERED
NO. SE000027
PROFESSIONAL STRUCTURAL ENGINEER
DOUGLAS B. AYCOCK
KEI Project 24-025
09/03/2025

Kornegay Engineering Inc.
Structural Consultant
1450 Greene St.
Suite 520
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Project No: 24-025

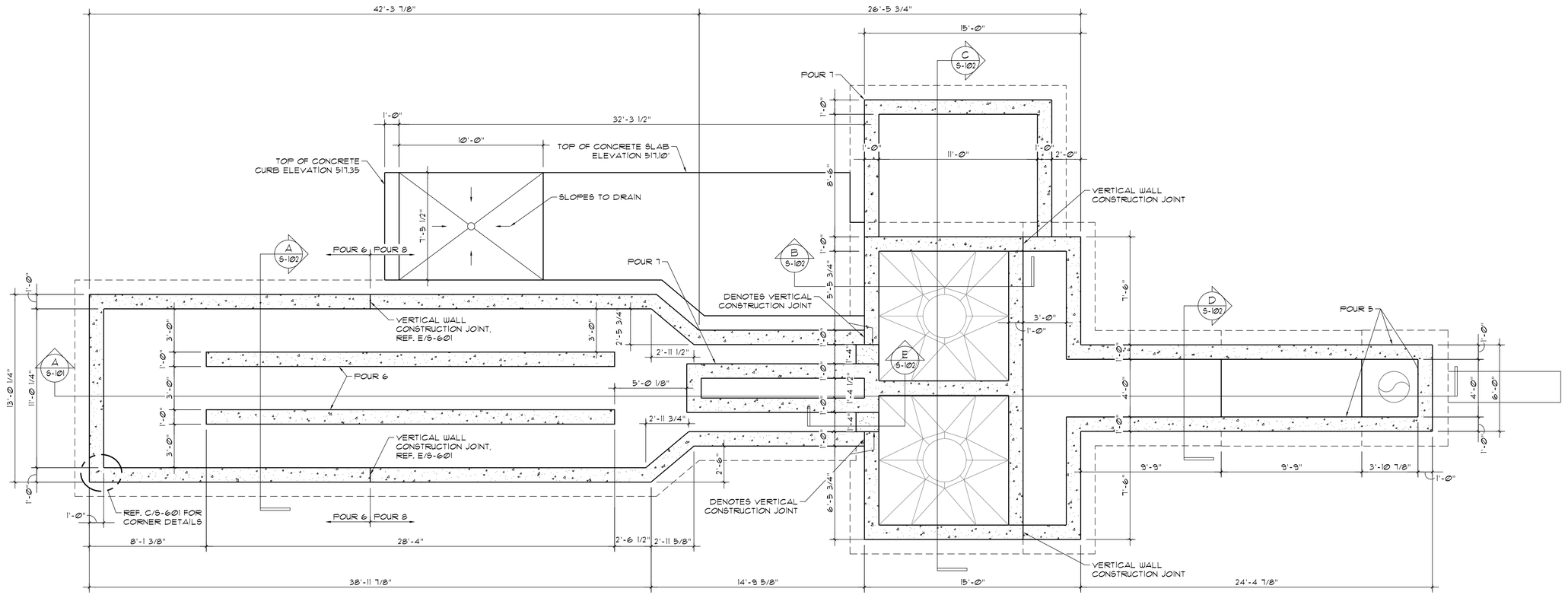
CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GENERAL NOTES AND DETAILS

S-000

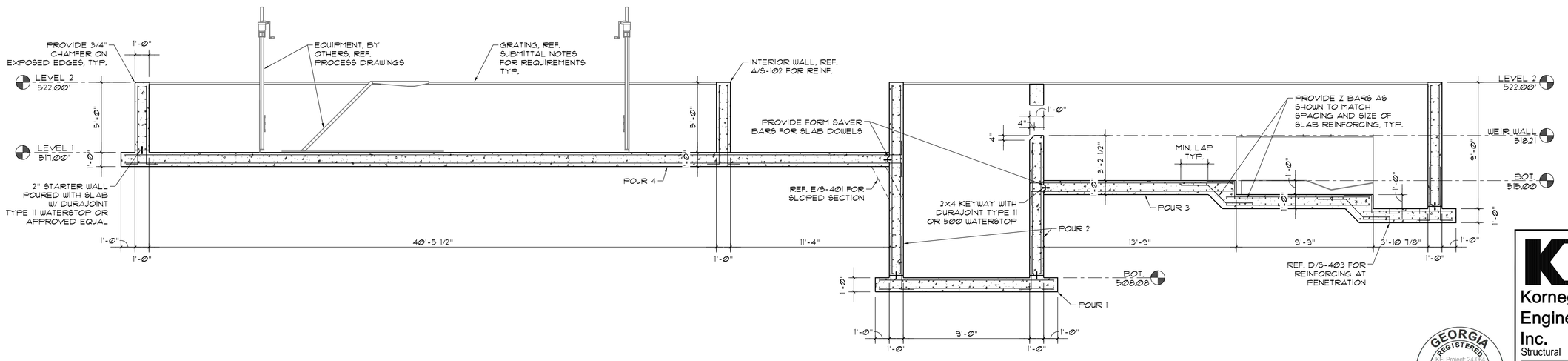
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POUR SEQUENCE IS INDICATED ON DRAWINGS. CONTRACTOR MAY SUBMIT ALTERNATE POUR SEQUENCE FOR REVIEW AND APPROVAL.

HEADWORKS FOUNDATION PLAN

SCALE: ¼" = 1'-Ø"



HEADWORKS SECTION

A S-101

SCALE: ¼" = 1'-Ø"

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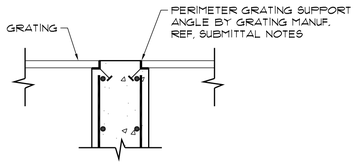
HEADWORKS FOUNDATION PLAN, SECTIONS & DETAILS

S-101

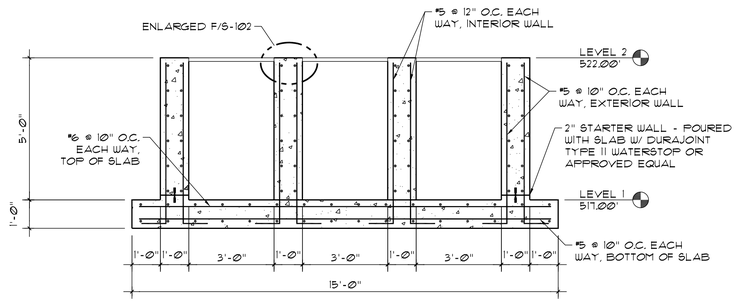
Kornegay Engineering Inc.
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Project No: 24-025

GEORGIA REGISTERED — Kei Project 24-025 — NO. SE000027 — PROFESSIONAL STRUCTURAL ENGINEER — DOUGLAS A. AYCOCK
09/03/2025

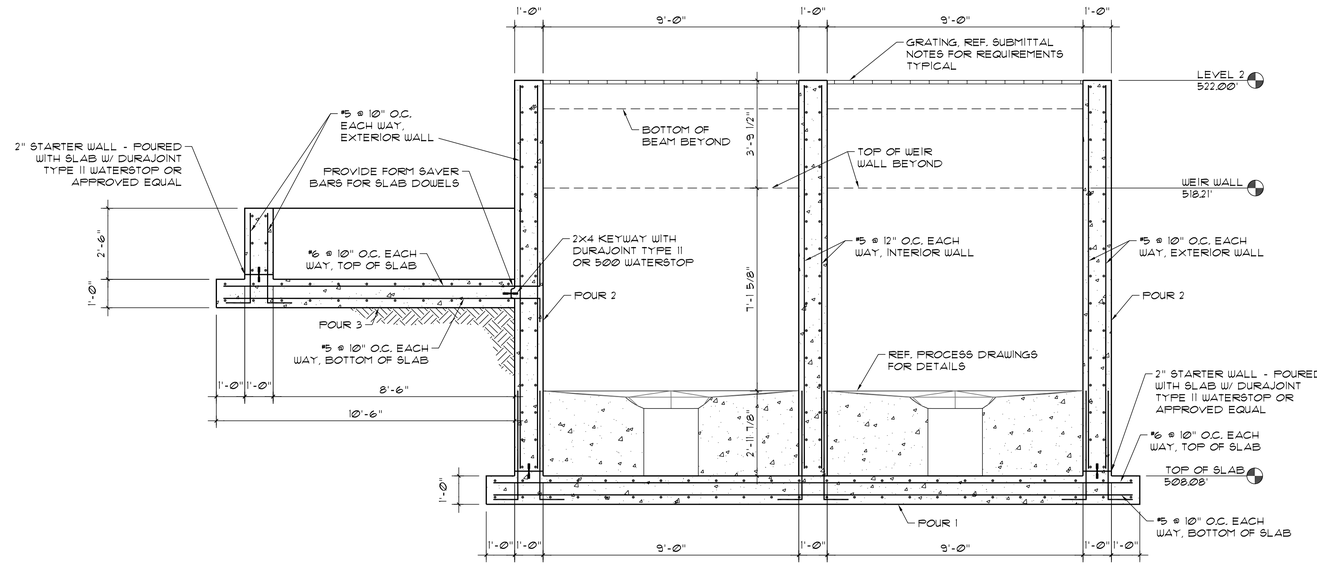
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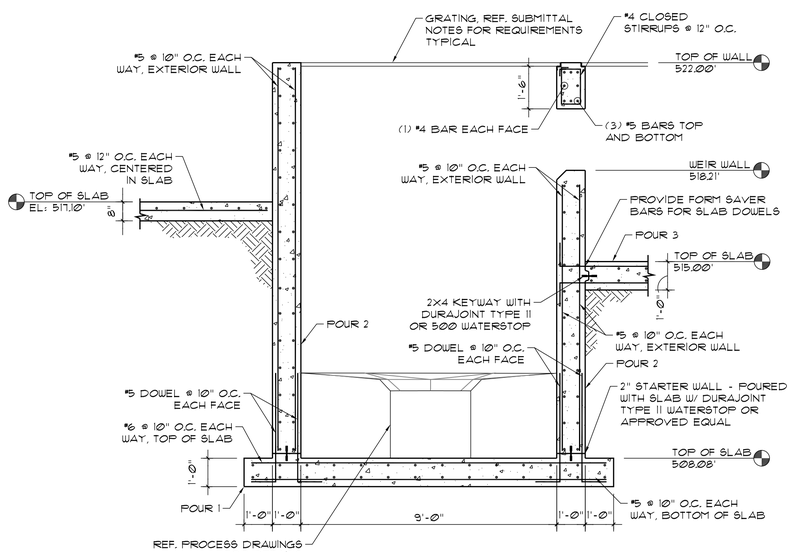
TYPICAL TOP OF WALL AT GRATING SUPPORT (F / S-102)
SCALE: ¾" = 1'-0"



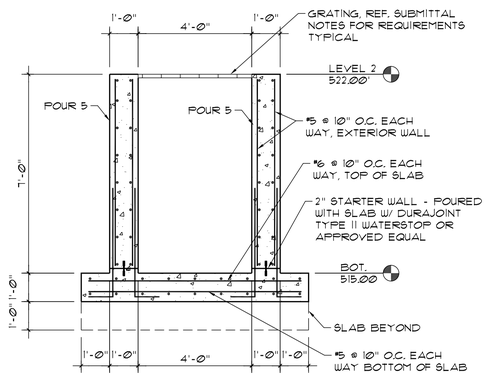
HEADWORKS SECTION (A / S-102)
SCALE: ⅜" = 1'-0"



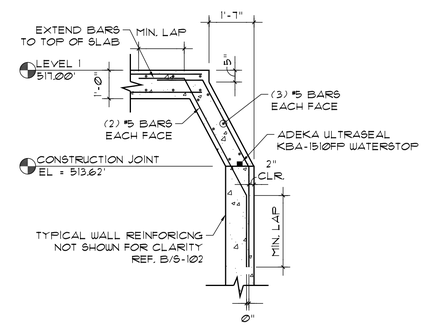
HEADWORKS SECTION (C / S-102)
SCALE: ⅜" = 1'-0"



HEADWORKS SECTION (B / S-102)
SCALE: ⅜" = 1'-0"



HEADWORKS SECTION (D / S-102)
SCALE: ⅜" = 1'-0"



WALL SECTION (E / S-102)
SCALE: ⅜" = 1'-0"

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0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

HEADWORKS SECTIONS & DETAILS

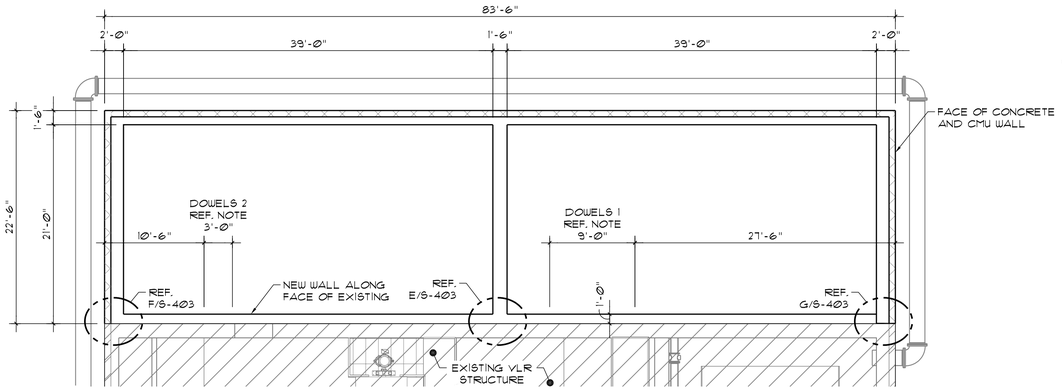
S-102

GEORGIA REGISTERED — NO. SE000027 — PROFESSIONAL STRUCTURAL ENGINEER — DOUGLAS B. AYCOCK
09/03/2025

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Project No: 24-025

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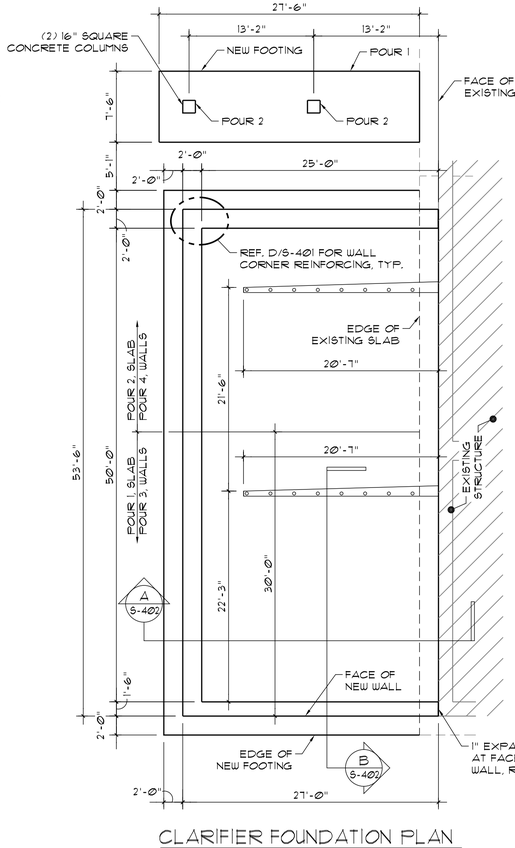


DOWELS 2: WHERE NOTED, INSTALL 3 ROWS OF DOWELS AT 18" OC, FULL HEIGHT OF EXISTING WALL, AT LOCATIONS OUTSIDE OF AREA NOTED AS "DOWEL", SPACE AS SHOWN IN DETAIL G/S402.

DOWELS 1: WHERE NOTED, INSTALL 7 ROWS OF DOWELS AT 18" OC, FULL HEIGHT OF EXISTING WALL, AT LOCATIONS OUTSIDE OF AREA NOTED AS "DOWEL", SPACE AS SHOWN IN DETAIL G/S402.

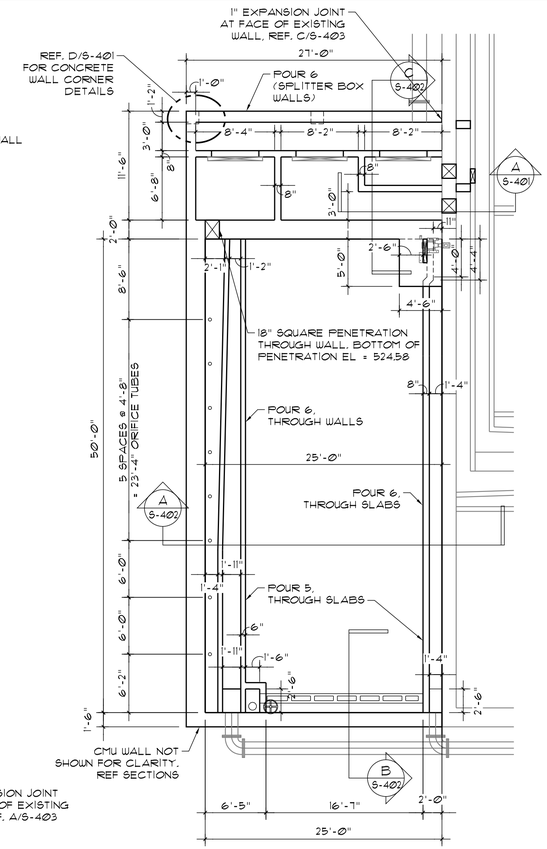
DIGESTER TOP OF WALL PLAN

SCALE: 1/8" = 1'-0"



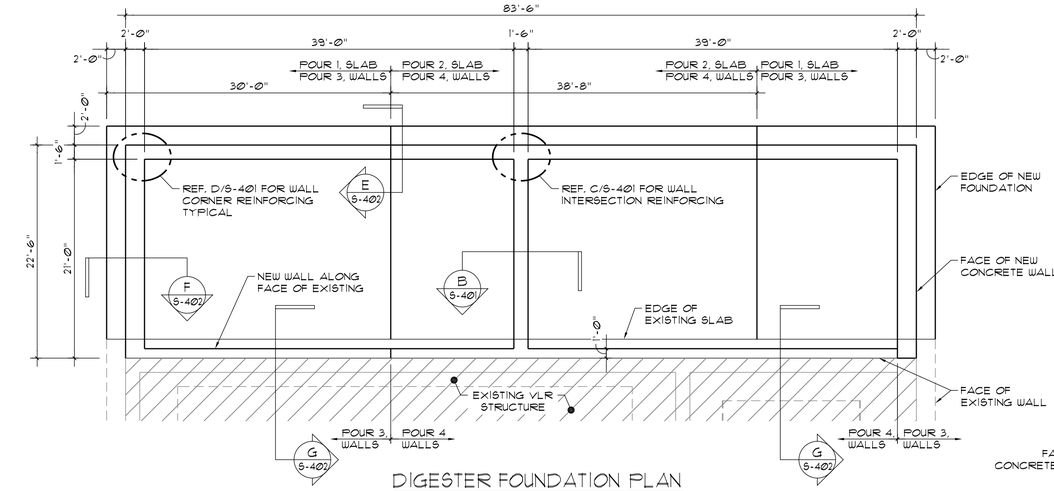
CLARIFIER FOUNDATION PLAN

SCALE: 1/8" = 1'-0"



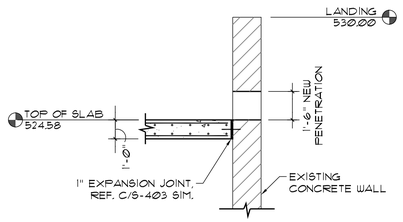
CLARIFIER TOP OF WALL PLAN

SCALE: 1/8" = 1'-0"



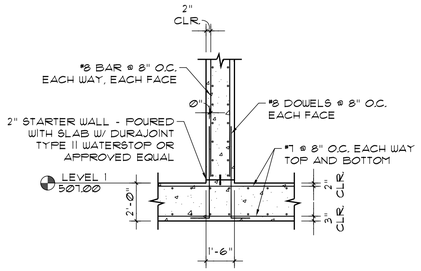
DIGESTER FOUNDATION PLAN

SCALE: 1/8" = 1'-0"



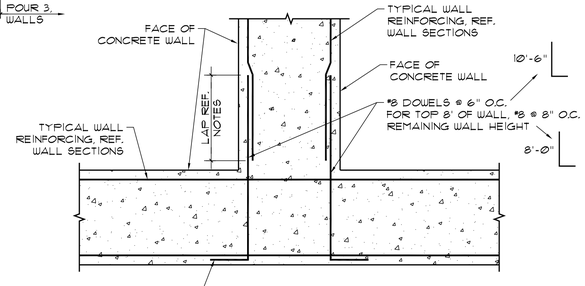
SECTION A

SCALE: 1/4" = 1'-0" (A S-401)



SECTION B

SCALE: 1/4" = 1'-0" (B S-401)

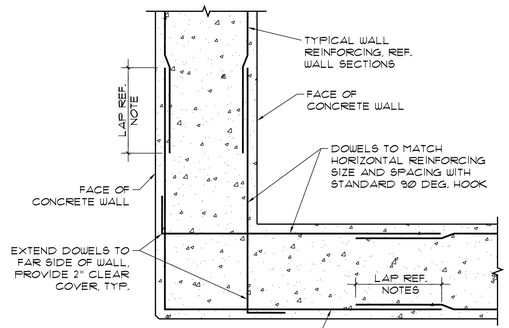


NOTE: LAP LENGTH SHALL MATCH SPLICE LENGTH FOR LARGER BAR SIZE, TYPICAL

NOTE: VERTICAL REINFORCING NOT SHOWN FOR CLARITY, REF. WALL SECTIONS FOR SIZE AND ORIENTATION

REINFORCING AT INTERIOR WALL INTERSECTION

SCALE: NONE (C S-401)



NOTE: VERTICAL REINFORCING NOT SHOWN FOR CLARITY, REF. WALL SECTIONS FOR SIZE AND ORIENTATION

REINFORCING AT TANK CORNERS

SCALE: NONE (D S-401)

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1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	09.03.2025
CONFORMED SET	
PROJECT MANAGER:	DA
ENGINEER:	DA
DESIGNER:	NK
DRAWN BY:	MS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

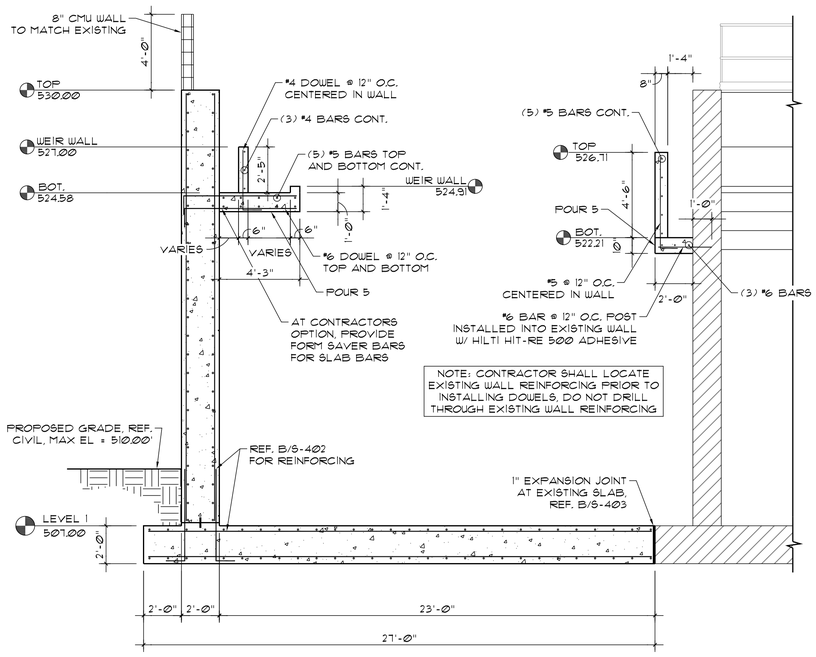
GEORGIA REGISTERED NO. SE000027 PROFESSIONAL ENGINEER STRUCTURAL DOUGLAS B. AYCOCK
Not Project: 24-025
09/03/2025

Kornegay Engineering Inc.
Structural Consultant
1450 Greene St.
Suite 520
Augusta, GA 30901
(706)955-4745 ph
Project No: 24-025

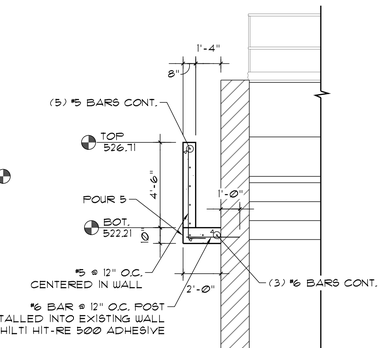
CLARIFIER & DIGESTER
PLANS & DETAILS

S-401

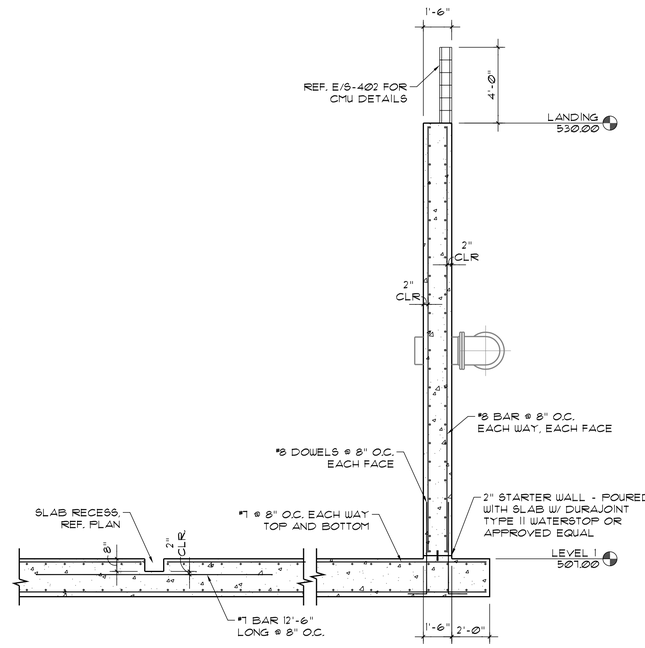
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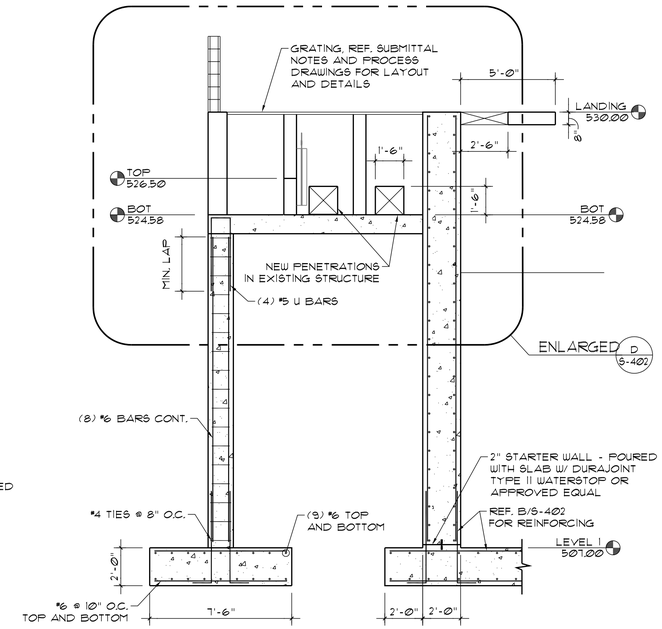
SECTION A
SCALE: ¼" = 1'-0" S-402



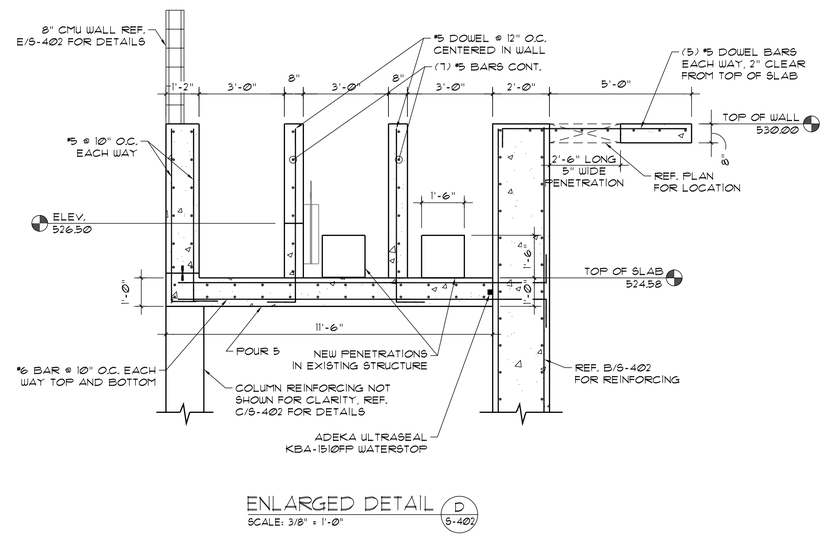
NOTE: CONTRACTOR SHALL LOCATE EXISTING WALL REINFORCING PRIOR TO INSTALLING DOWELS, DO NOT DRILL THROUGH EXISTING WALL REINFORCING



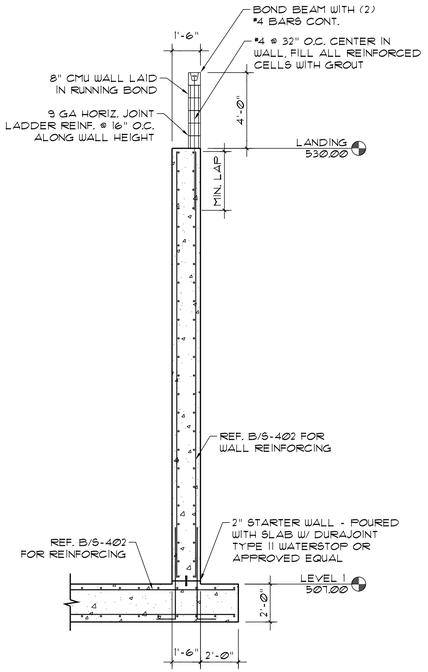
SECTION B
SCALE: ¼" = 1'-0" S-402



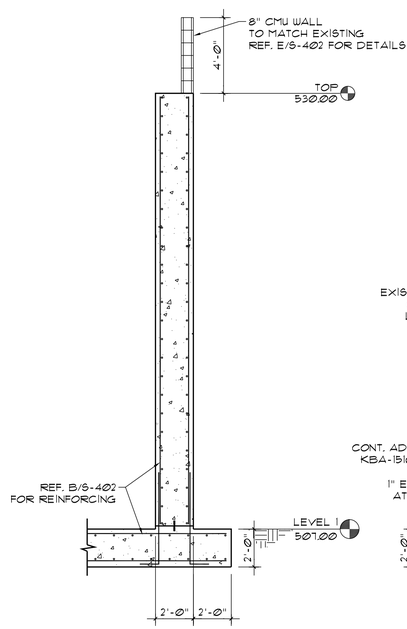
SECTION C
SCALE: ¼" = 1'-0" S-402



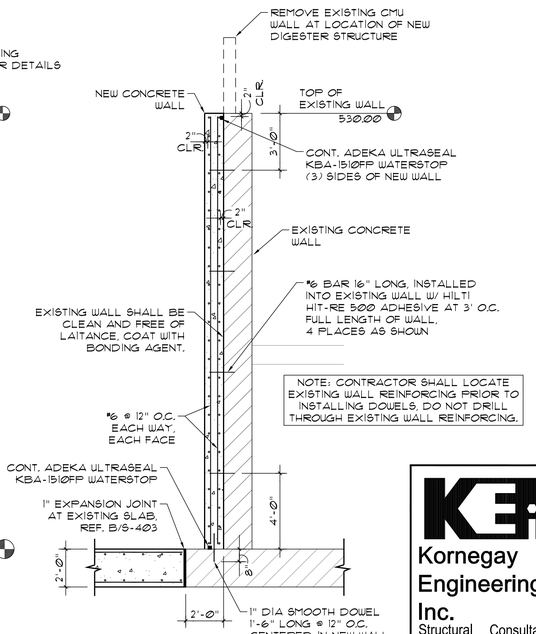
ENLARGED DETAIL D
SCALE: 3/8" = 1'-0" S-402



SECTION E
SCALE: ¼" = 1'-0" S-402



SECTION F
SCALE: ¼" = 1'-0" S-402



SECTION G
SCALE: ¼" = 1'-0" S-402

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

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CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

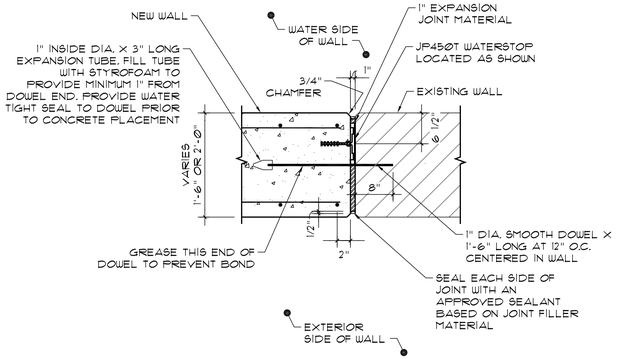
GEORGIA REGISTERED PROFESSIONAL ENGINEER
NO. SE000027
STRUCTURAL
DOUGLAS B. AYCOCK
09/03/2025

CLARIFIER & DIGESTER SECTIONS & DETAILS

S-402

Kornegay Engineering Inc.
Structural Consultant
1450 Greene St.
Suite 520
Augusta, GA 30901
(706)955-4745 ph
Project No: 24-025

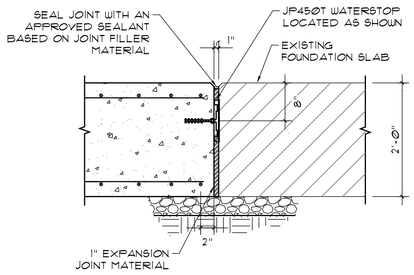
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SMOOTH DOWELS TO BE EPOXY COATED OR APPROVED EQUAL CORROSION PROTECTION

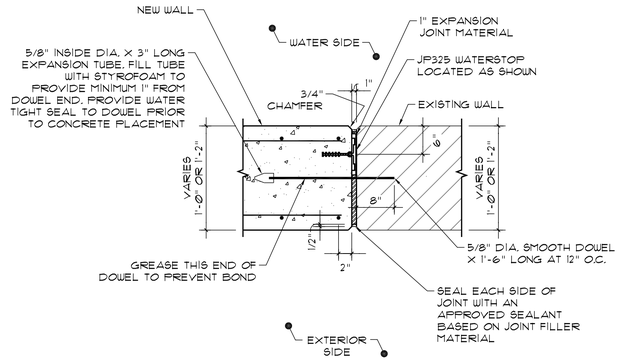
EXPANSION JOINT MATERIAL TO BE SPONGE RUBBER TYPE MEETING ASTM D1752, TYPE I OR APPROVED EQUAL

WALL EXPANSION JOINT DETAIL A
SCALE: NONE — S-403



EXPANSION JOINT MATERIAL TO BE SPONGE RUBBER TYPE MEETING ASTM D1752, TYPE I OR APPROVED EQUAL

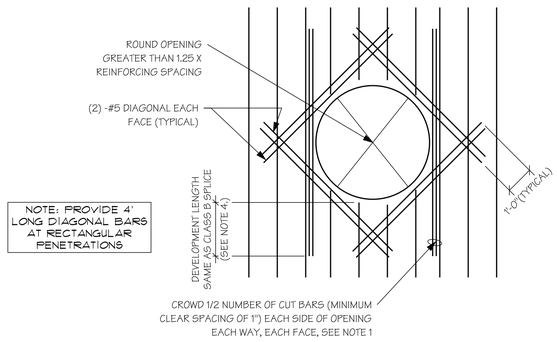
SLAB EXPANSION JOINT DETAIL B
SCALE: NONE — S-403



SMOOTH DOWELS TO BE EPOXY COATED OR APPROVED EQUAL CORROSION PROTECTION

EXPANSION JOINT MATERIAL TO BE SPONGE RUBBER TYPE MEETING ASTM D1752, TYPE I OR APPROVED EQUAL

WALL EXPANSION JOINT DETAIL C
SCALE: NONE — S-403

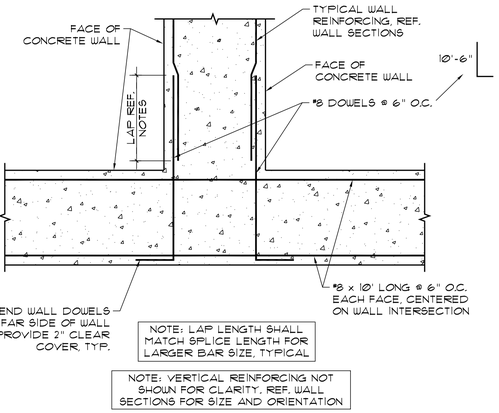


NOTE: PROVIDE 4' LONG DIAGONAL BARS AT RECTANGULAR PENETRATIONS

NOTES:

1. BARS SHOWN IN ONE DIRECTION FOR CLARITY. INSTALL BARS IN OTHER DIRECTION IN SAME MANNER.
2. DETAIL TO BE USED AT ALL WALL/SLAB PENETRATIONS MEETING OPENING CRITERIA ABOVE. AT SMALL OPENINGS, SPREAD REINFORCING AROUND OPENING.
3. CROWDED BARS ARE NOT REQUIRED AT AN OPENING EDGE PARALLEL TO AND WITHIN 6 INCHES OF A WALL OR BEAM.
4. PROVIDE STANDARD HOOK IF FULL DEVELOPMENT LENGTH IS NOT POSSIBLE.
5. REINFORCING STEEL IS TO BE CARRIED ACCROSS ALL CONSTRUCTION JOINTS.
6. CIRCULAR PENETRATION SHOWN, RECTANGULAR PENETRATION SIMILAR. (LOCATE DIAGONAL BARS AT CORNERS.)

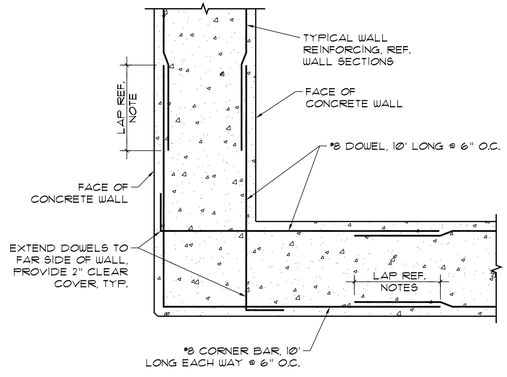
PENETRATION IN WALL/SLABS D
SCALE: NONE — S-403



NOTE: LAP LENGTH SHALL MATCH SPLICE LENGTH FOR LARGER BAR SIZE, TYPICAL

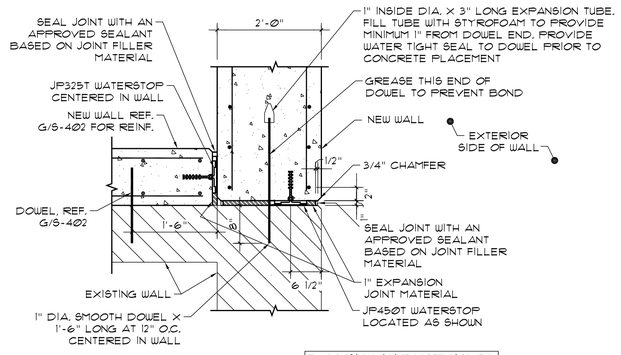
NOTE: VERTICAL REINFORCING NOT SHOWN FOR CLARITY. REF. WALL SECTIONS FOR SIZE AND ORIENTATION

REINFORCING AT INTERIOR WALL INTERSECTION E
SCALE: NONE — S-403



NOTE: VERTICAL REINFORCING NOT SHOWN FOR CLARITY. REF. WALL SECTIONS FOR SIZE AND ORIENTATION

REINFORCING AT TANK CORNERS F
SCALE: NONE — S-403



SMOOTH DOWELS TO BE EPOXY COATED OR APPROVED EQUAL CORROSION PROTECTION

EXPANSION JOINT MATERIAL TO BE SPONGE RUBBER TYPE MEETING ASTM D1752, TYPE I OR APPROVED EQUAL

WALL EXPANSION JOINT DETAIL G
SCALE: NONE — S-403

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

STATE OF GEORGIA — GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026 — CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

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DESIGNER:	NK
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CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

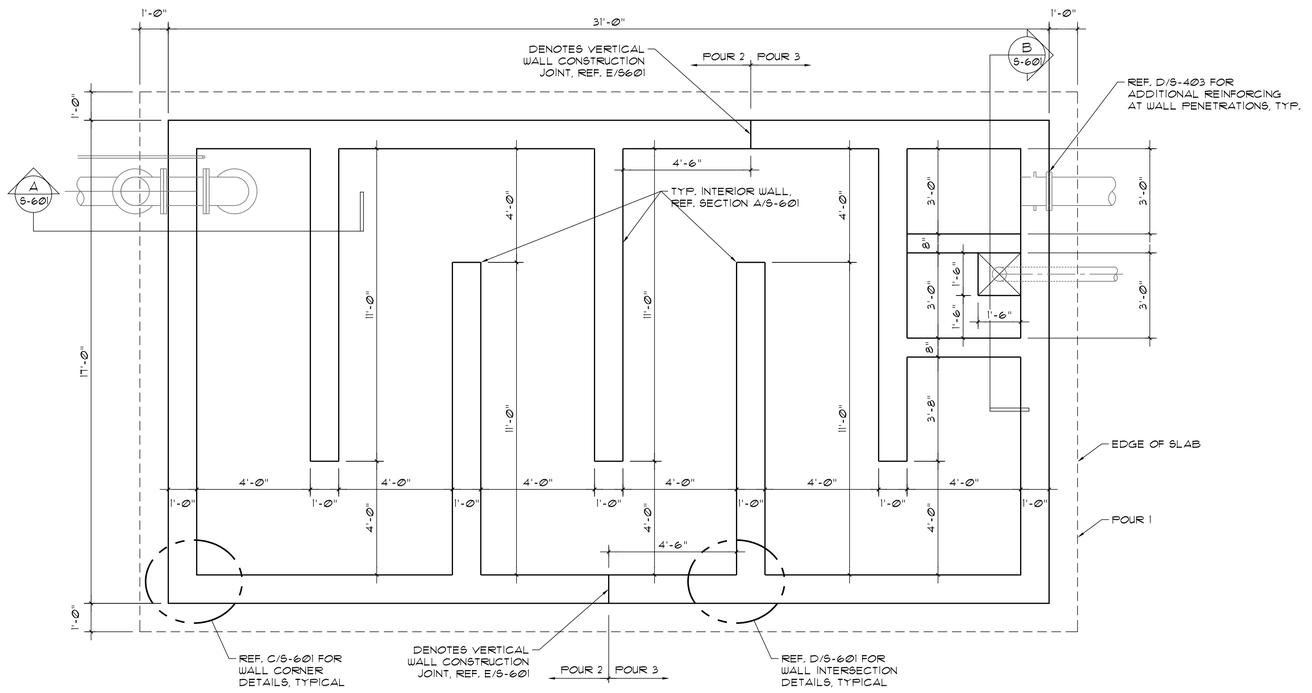
CLARIFIER & DIGESTER SECTIONS & DETAILS

S-403

GEORGIA REGISTERED — KEi Project 24-025 — NO. SE000027 PROFESSIONAL STRUCTURAL ENGINEER — DOUGLASS B. AYCOCK
09/03/2025

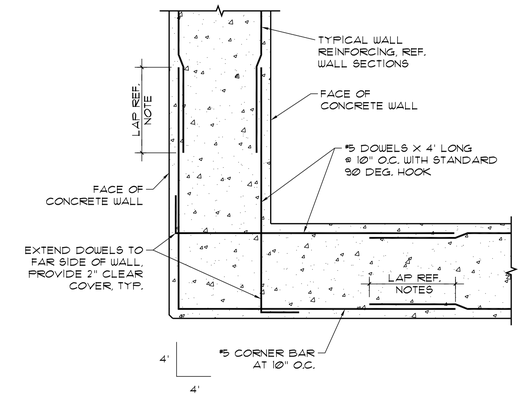
Kornegay Engineering Inc.
Structural Consultant
1450 Greene St.
Suite 520
Augusta, GA 30901
(706)955-4745 ph
Project No: 24-025

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CHLORINE CONTACT CHAMBER FOUNDATION PLAN

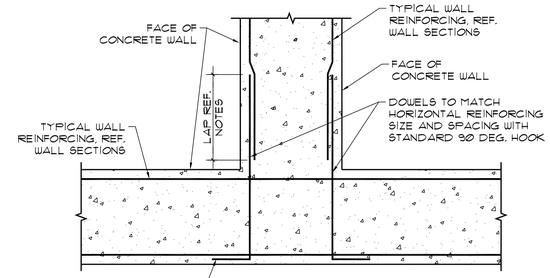
SCALE: ⅜" = 1'-0"



NOTE: VERTICAL REINFORCING NOT SHOWN FOR CLARITY, REF. WALL SECTIONS FOR SIZE AND ORIENTATION

REINFORCING AT TANK CORNERS C S-601

SCALE: NONE

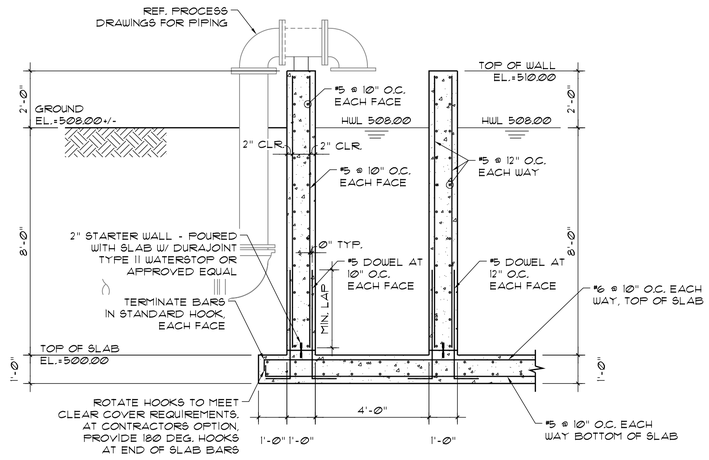


NOTE: LAP LENGTH SHALL MATCH SPLICE LENGTH FOR LARGER BAR SIZE, TYPICAL

NOTE: VERTICAL REINFORCING NOT SHOWN FOR CLARITY, REF. WALL SECTIONS FOR SIZE AND ORIENTATION

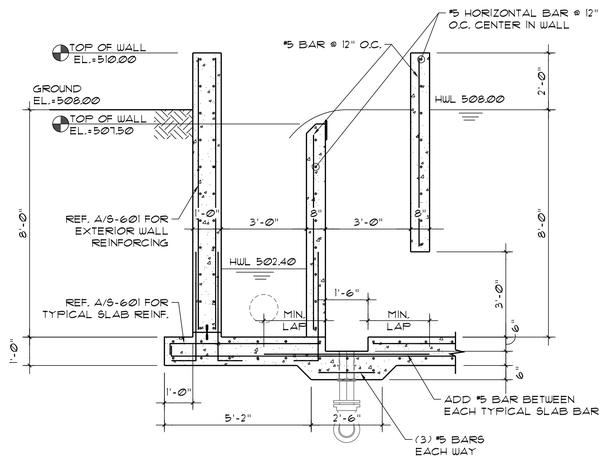
REINFORCING AT INTERIOR WALL INTERSECTION D S-601

SCALE: NONE



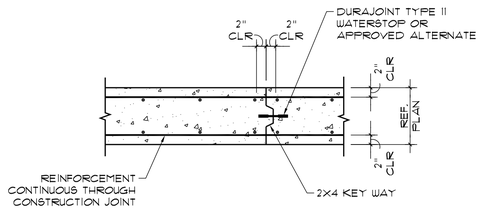
CHLORINE CONTACT CHAMBER SECTION A S-601

SCALE: ⅜" = 1'-0"



CHLORINE CONTACT CHAMBER SECTION B S-601

SCALE: ⅜" = 1'-0"



TYPICAL CONSTRUCTION JOINT E S-601

SCALE: ¾" = 1'-0"

GEORGIA REGISTERED NO. SE000027 PROFESSIONAL STRUCTURAL ENGINEER DOUGLAS B. AYCOCK
09/03/2025

Kornegay Engineering Inc.
Structural Consultant
1450 Greene St.
Suite 520
Augusta, GA 30901
(706)955-4745 ph

Project No: 24-025

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

STATE OF GEORGIA GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026 CERTIFICATE OF AUTHORIZATION

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DRAWN BY:	

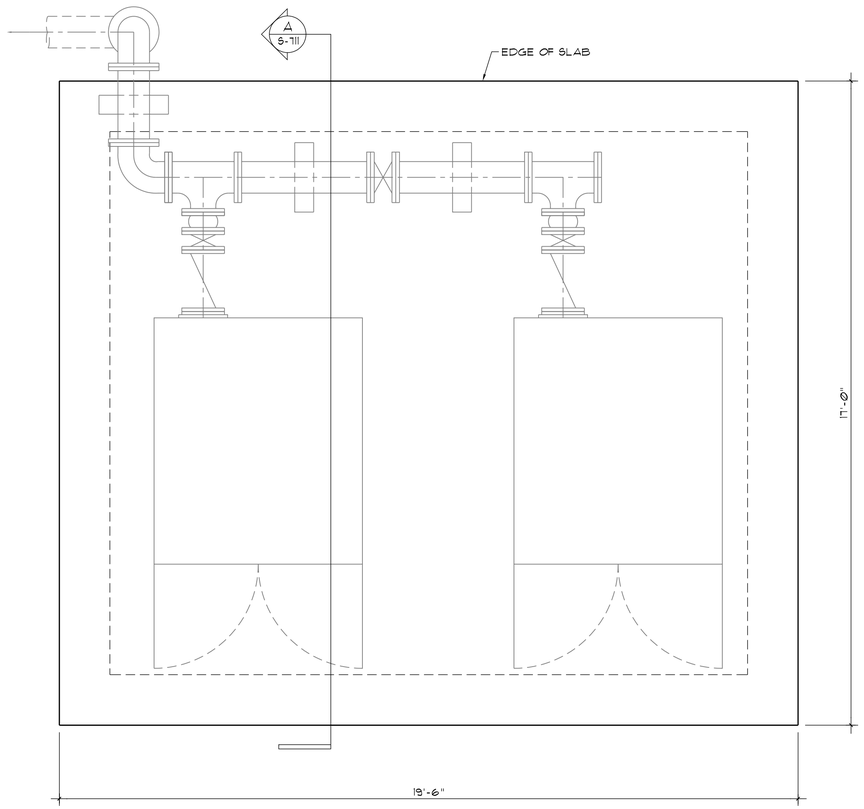
CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

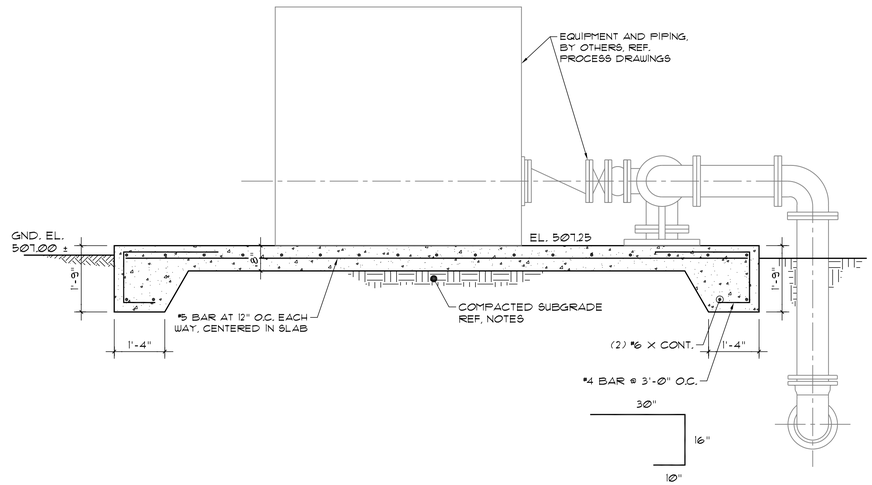
CHLORINE CONTACT CHAMBER FOUNDATION PLAN, SECTIONS & DETAILS

S-601

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BLOWER PAD FOUNDATION PLAN
SCALE: ½" = 1'-0"



BLOWER PAD SECTION
SCALE: ½" = 1'-0"
A
S-711

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
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DESIGNER:	MS
DRAWN BY:	

GEORGIA REGISTERED
No. PE0000027
PROFESSIONAL ENGINEER
STRUCTURAL
DOUGLAS A. AYCOCK
09/03/2025

Kornegay Engineering Inc.
Structural Consultant
1450 Greene St.
Suite 520
Augusta, GA 30901
(706)955-4745 ph
Project No: 24-025

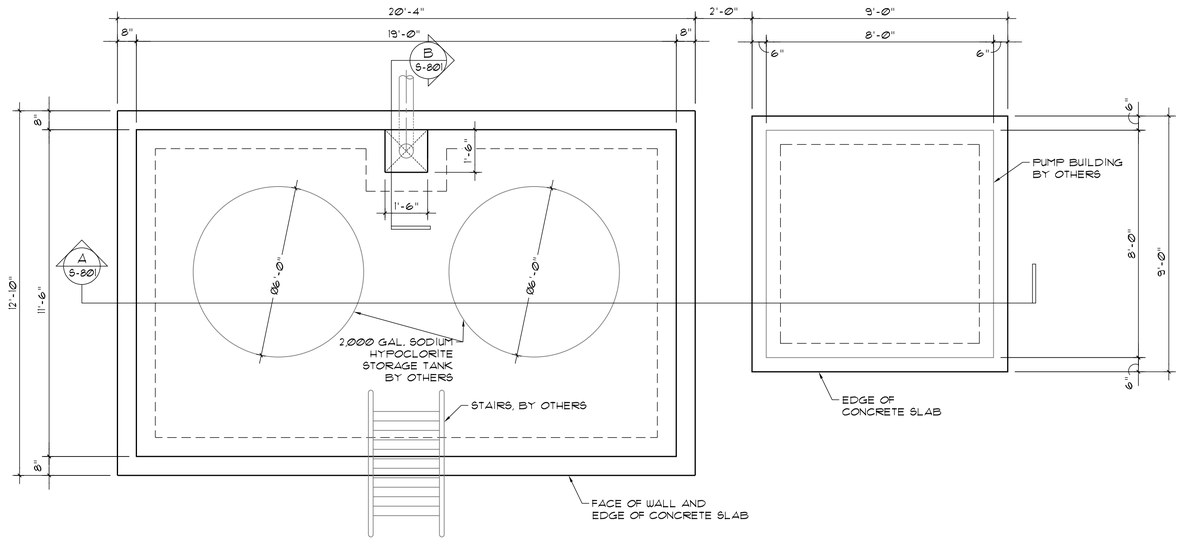
CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

BLOWER FOUNDATION PLAN, SECTIONS & DETAILS

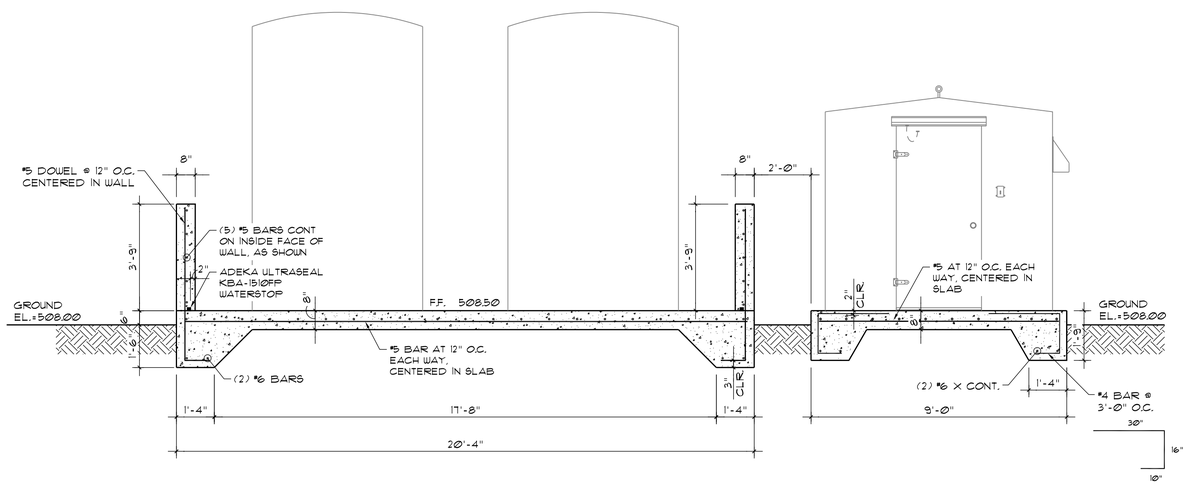
S-711

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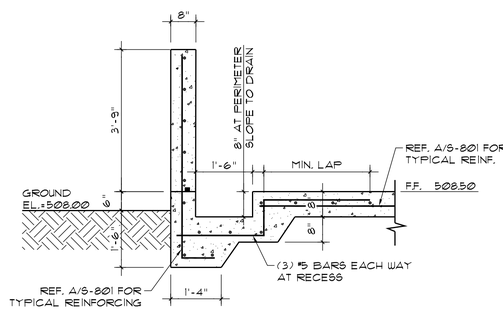
CHEMICAL TANK FARM & PUMP BUILDING FOUNDATION PLAN

SCALE: ⅜" = 1'-0"



CHEMICAL TANK FARM & PUMP BUILDING SECTION (A / S-801)

SCALE: ⅜" = 1'-0"



FOUNDATION SECTION (B / S-801)

SCALE: ½" = 1'-0"

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

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1"

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GEORGIA REGISTERED PROFESSIONAL ENGINEER
NO. SE000027
STRUCTURAL
DOUGLAS B. AYCOCK
09/03/2025

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Structural Consultant
1450 Greene St.
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(706)955-4745 ph

Project No: 24-025

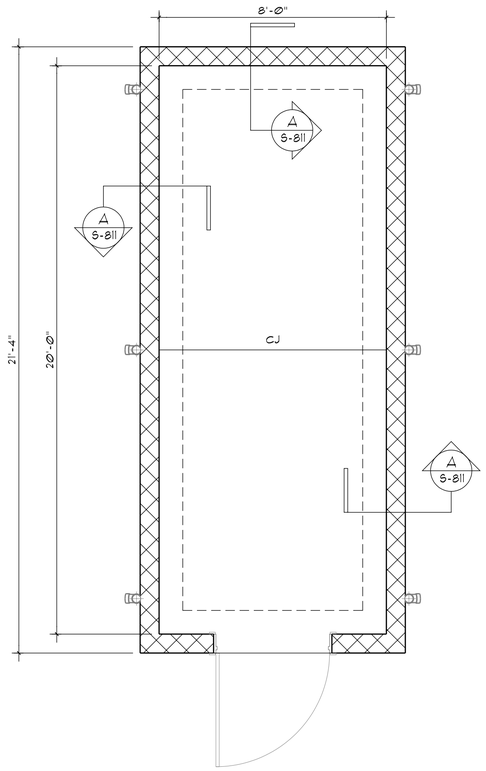
CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

CHEMICAL TANK FARM & PUMP BLDG. FOUNDATION PLAN, SECTIONS & DETAILS

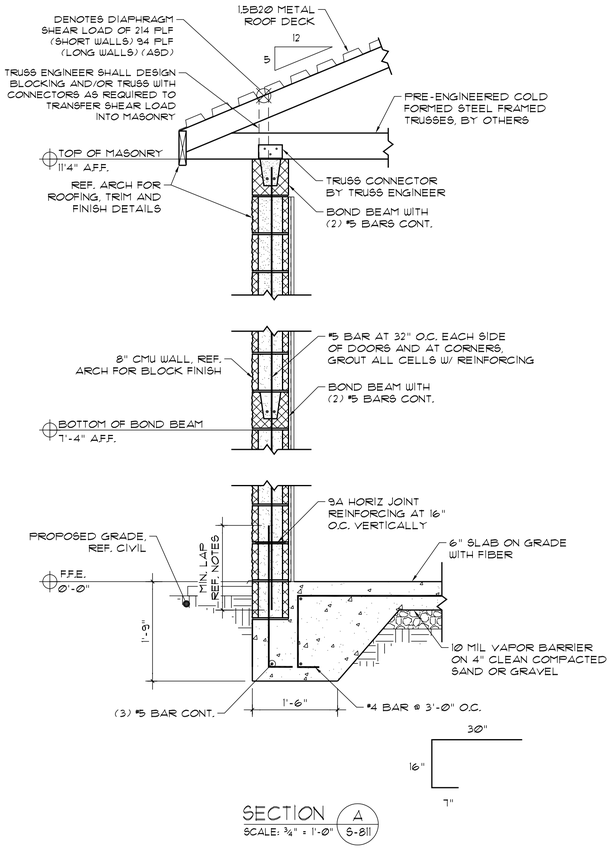
S-801

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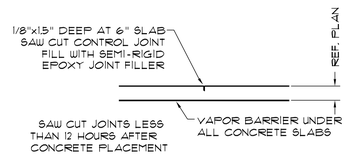
FOUNDATION PLAN

SCALE: 3/8" = 1'-0"



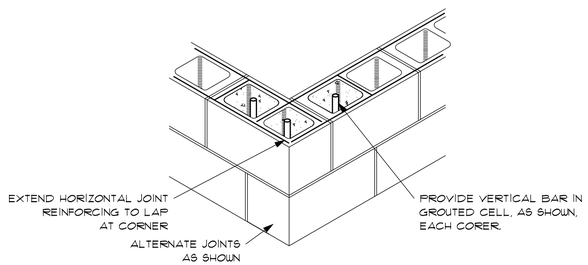
SECTION A S-811

SCALE: 3/4" = 1'-0"



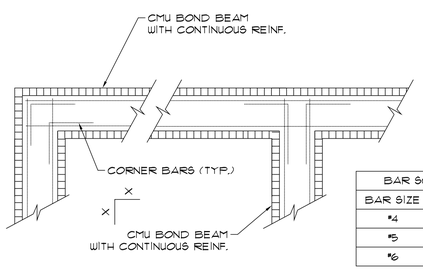
TYPICAL CONTROL JOINT (C.J.)

N.T.S.



TYPICAL CMU CORNER DETAIL

SCALE: 1" = 1'-0"



BAR SCHEDULE	
BAR SIZE	X
#4	24"
#5	30"
#6	36"

REINF @ BOND BEAM INTERSECTION

SCALE: N.T.S.

STRUCTURAL MASONRY

1. ALL MASONRY WORK TO BE DONE IN ACCORDANCE WITH THE CODE-REFERENCED EDITION OF ACI-530 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES", AND ACI-530.1 "SPECIFICATION FOR MASONRY STRUCTURES."
2. MORTAR SHALL BE PORTLAND CEMENT-LIME AND CONFORM TO ASTM C270.
3. CLAY MASONRY UNITS SHALL HAVE TYPE N MORTAR. NET AREA COMPRESSIVE STRENGTH OF UNITS SHALL BE 6200 PSI. NET AREA COMPRESSIVE STRENGTH OF INSTALLED MASONRY (F'M) SHALL BE 2000 PSI. REFER TO ARCHITECTURAL DOCUMENTS FOR ASTM DESIGNATIONS.
4. CONCRETE MASONRY UNITS ABOVE AND BELOW GRADE SHALL HAVE TYPE S MORTAR. NET AREA COMPRESSIVE STRENGTH OF UNITS SHALL BE 1900 PSI. NET AREA COMPRESSIVE STRENGTH OF INSTALLED MASONRY (F'M) SHALL BE 1500 PSI. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90.
5. BLOCK FILL FOR REINFORCED MASONRY SHALL BE FINE GROUT IN CONFORMANCE WITH ASTM C476 MINIMUM COMPRESSIVE STRENGTH METHOD. GROUT SHALL BE 2000 PSI AT 28 DAYS. GROUT SLUMP SHALL BE 8 TO 11 INCHES.
6. REINFORCING: ASTM A615 - GRADE 60. SEE TABLE BELOW FOR MINIMUM LAP SPLICE LENGTH AND EMBEDMENT OF REINFORCING BARS.

MASONRY REINFORCING LAP SPLICES AND EMBED LENGTH		
BAR SIZE	LAP SPLICE LENGTH (IN)	EMBEDMENT (IN)
#4	24	18
#5	30	24
#6	36	28
#7	42	32
#8	48	36
#9	54	42

7. MASONRY PREPARATION, CONSTRUCTION AND PROTECTION IN HOT OR COLD WEATHER (GREATER THAN 90 DEGREES FAHRENHEIT OR LESS THAN 40 DEGREES FAHRENHEIT) SHALL BE IN CONFORMANCE WITH ACI 530.1 SECTION 1.8.
8. EMBEDDED CONDUITS, PIPES AND SLEEVES SHALL BE COMPATIBLE WITH MASONRY AND SHALL NOT BE LOCATED IN GROUTED CELLS. PIPES CONTAINING WATER SUBJECT TO FREEZING, MATERIALS IN EXCESS OF 150 DEGREE FAHRENHEIT OR PIPES UNDER PRESSURE IN EXCESS OF 55 PSI SHALL NOT BE EMBEDDED IN MASNORY. GENERAL CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL EMBEDDED ITEMS WITH THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
9. ALL MASONRY WALLS SHALL BE REINFORCED WITH HORIZONTAL JOINT REINFORCEMENT @ 16" O.C. VERTICALLY AS FOLLOWS. THE SPACE BETWEEN THESE WIRES SHALL BE THE WIDEST THAT THE MORTAR JOINT WILL ACCOMMODATE.

CMU SIZE	HORIZONTAL JOINT REINFORCING	
	RUNNING BOND	
4"	(1) WL7 @ 16" O.C.	
6" OR 8"	(2) WL7 @ 16" O.C.	
12"	(2) WL7 @ 16" O.C.	

10. VERTICAL REBAR SHALL BE CENTERED IN BLOCK WALLS LAID IN RUNNING BOND U.N.O.
11. MASONRY CELLS ON WHICH STEEL OR MASONRY LINTELS BEAR MUST BE REINFORCED WITH SAME REINFORCING AS WALL AND MUST BE FILLED WITH GROUT. IF NO WALL REINFORCING IS SHOWN A #4 BAR SHALL BE ASSUMED.
12. PROVIDE HORIZONTAL BOND BEAMS IN ALL MASONARY WALLS AT 10'-0" O.C. MAX VERTICALLY AND WITHIN 8" OF THE TOP OF THE WALL. REINFORCING IN BOND BEAM SHALL BE 1 #4 X CONT CENTERED IN 6" CMU, 2 #5 X CONT SPACED 3 1/2" O.C. HORIZONTALLY FOR 8" CMU, AND 2 #5 X CONT SPACED 7" O.C. HORIZONTALLY FOR 12" CMU. BOND BEAMS SHALL CONSIST OF "KNOCKOUT" STYLE BLOCKS.
13. THE MINIMUM LEVEL OF QUALITY ASSURANCE BASED ON ACI 530-11 SHALL BE LEVEL C. REFER TO TABLE 1.5.3 IN ACI 530-11.
14. WHERE CONCRETE BLOCK IS ABOVE AND BELOW EQUIPMENT PLATFORM, FIT BLOCK TIGHT TO UNDERSIDE OF BEAM PRIOR TO CONSTRUCTING BLOCK ABOVE.
15. MASONRY CELLS SHALL BE GROUTED ROUTINELY TO MINIMIZE GROUT FALL HEIGHT TO A MAXIMUM OF 4'-0".

CONCRETE

1. REF. SHEET S-000 FOR ADDITIONAL NOTES.
2. CONCRETE MIX DESIGN REQUIREMENTS AND COMPRESSIVE STRENGTH AT 28 DAYS.

DESCRIPTION	28 DAY STRENGTH (PSI)	WEIGHT PER CUBIC FOOT (PCF)	CONCRETE CLASSES FOR ACI 318 MIXTURE REQUIREMENTS	W/C RATIO, COMMENTS
SLAB ON GRADE ELECT. BLDG	*4000*	145	F0, S0, W1, C1	*FIBERMESH AT 1.5 LB/CY*

FIBERMESH SHALL BE A SYNTHETIC MICRO-FIBER: ASTM D7508/D7508M, FIBRILLATED POLYPROPYLENE MICRO-FIBERS ENGINEERED AND DESIGNED FOR USE IN CONCRETE, COMPLYING WITH ASTM C1116/C1116M, TYPE III AND SECTION 4.1.3 NOTE 2, (Ø.75" OR MULTI-LENGTH).

COLD-FORMED STEEL FRAMING AND TRUSSES

1. ALL COLD-FORMED STRUCTURAL STEEL MEMBERS, UNLESS FULLY DETAILED HERE IN, ACCESSORIES, AND CONNECTIONS SHALL BE DESIGNED BY PROFESSIONAL ENGINEER LICENSED IN THE STATE OF PROJECT LOCATION IN ACCORDANCE WITH THE REFERENCED CODE. DESIGN SHALL BE IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STRUCTURAL STEEL MEMBERS", ALL COLD-FORMED STEEL STUD FRAMING SHALL BE MANUFACTURED BY CURRENT MEMBERS OF THE STEEL STUD MANUFACTURER'S ASSOCIATION (SSMA). THE INSTALLATION SHALL COMPLY WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. ALL STRUCTURAL MEMBERS SHALL BE FORMED FROM CORROSION-RESISTANT STEEL CORRESPONDING TO THE REQUIREMENTS OF ASTM 1003 (OR ASTM-A653), WELDS SHALL BE TOUCHED UP WITH A ZINC RICH PROTECTIVE PAINT FOR CORROSION RESISTANCE. STRUCTURAL STEEL STUDS SHALL HAVE A MINIMUM THICKNESS OF 33 MILS AND SHALL HAVE A MINIMUM YIELD STRENGTH 33 KSI. ANY FREAMING WITH GAUGE 16 (54 MILS) OR THICKER SHALL HAVE A MINIMUM YIELD STRENGTH OF 50 KSI.

COLD-FORMED STEEL STRUCTURAL MEMBERS				
THICKNESS (MILS)	GAUGE		THICKNESS (MILS)	GAUGE
			68	14
43	18		97	12
54	16		118	10

3. DESIGNER SHALL PROVIDE SEALED SHOP DRAWINGS SHOWING DESIGN CRITERIA, MEMBER SIZE AND SPACING, HEADER AND JAMB CONDITIONS, CONNECTIONS BETWEEN MEMBERS AND TO THE BUILDING STRUCTURE. ALL MEMBERS SHALL HAVE A MINIMUM THICKNESS OF 18 GAUGE.
4. SCREWS SHALL BE SELF DRILLING WITH A LENGTH THAT ENSURES THREE EXPOSED THREADS BEYOND PENETRATION OF THE JOINED MATERIAL. MINIMUM SCREW SPACING SHALL BE 3/4", MINIMUM EDGE DISTANCE SHALL BE 3/8". SCREW CAPACITIES SHALL BE EQUAL TO OR GREATER THAN THOSE GIVEN BY THE STEEL STUD MANUFACTURER'S ASSOCIATION WITH A 3.0 FACTOR OF SAFETY.
5. ALL COLD FORMED STEEL FRAMING ACCESSORIES OR BASIC CLIPS SHALL BE FORMED FROM STRUCTURAL QUALITY STEEL WITH MINIMUM YIELD STRENGTH OF 50 KSI AND HAVE MINIMUM PROTECTIVE COATING COMPLYING WITH ASTM 1003/A1003M (OR ASTM A653/A653M) G-60 GALVANIZED COATING.
6. ROOF TRUSS DESIGN LOADS SHALL BE AS FOLLOWS:

ROOF

TOP CHORD LIVE LOAD..... 20 PSF
TOP CHORD DEAD LOAD..... 12 PSF
BOTTOM CHORD LIVE LOAD..... 0 PSF
BOTTOM CHORD DEAD LOAD..... 14 PSF
TOP CHORD WIND UPLIFT LOAD..... IN ACCORDANCE W/ ASCE7-16
SEE GENERAL NOTES FOR OTHER DESIGN LOADS. SEE PLANS FOR ADDITIONAL POINT LOADS.

7. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY BRACING FOR THE TRUSSES DURING ERECTION.
8. TRUSS DESIGN SHALL ACCOUNT FOR LOAD IMPOSED UPON TRUSSES BY WEIGHT OF MECHANICAL UNITS. SEE PLANS FOR UNIT LOCATION. VERIFY WEIGHT OF UNIT W/ EQUIP. SELECTED.

STEEL DECK

1. MATERIAL, DESIGN, FABRICATION, AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE STEEL DECK INSTITUTE. (SDI)
2. STEEL DECK SHALL BE CUT TO LENGTHS TO PROVIDE A MINIMUM OF THREE SPAN CONDITION. STEEL DECK SUBMITTAL DRAWINGS SHALL CLEARLY INDICATE BY CLOUDING ONE OR TWO SPAN CONDITIONS.
3. STEEL DECK SHALL BE FASTENED THROUGH THE DECK ONTO THE SUPPORTING MEMBERS AND AT SIDELAPS PER THE DRAWINGS. USE WELDING WASHERS AS REQUIRED TO PREVENT BURN-THROUGH OF STEEL DECK.
4. ALL STEEL ROOF DECK SHALL BE G90 GALVANIZED IN CONFORMANCE WITH ASTM A653.
5. STEEL DECK MANUFACTURER SHALL PROVIDE ALL REQUIRED ACCESSORIES.
6. FASTEN ROOF DECK TO STEEL SUPPORTING MEMBERS AT EDGE AND INTERIOR RIBS WITH A SUFFICIENT NUMBER OF #12 TEK SCREWS FOR A 36/4 PATTERN. AT EDGES PROVIDE #12 TEK SCREWS @ 12" O.C. MAX. USE 1 #10 TEK SCREWS PER SIDELAP IN THE FIELD AND AT PLACES WHERE DECK IS CANTILEVERED.

REF. SHEET S-000 FOR ADDITIONAL NOTES

GMC
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T 706.251.9099

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" .5" 0" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	09.03.2025
CONFORMED SET	DA
PROJECT MANAGER:	DA
ENGINEER:	NK
DESIGNER:	MS
DRAWN BY:	

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

ELECTRICAL BUILDING FOUNDATION PLAN, SECTIONS & DETAILS

S-811

Kornegay Engineering Inc.
Structural Consultant
1450 Greene St.
Suite 520
Augusta, GA 30901
(706)955-4745 ph

Project No: 24-025

GEORGIA REGISTERED PROFESSIONAL STRUCTURAL ENGINEER
DOUGLAS B. AYCOCK
09/03/2025

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MECHANICAL SPECIFICATIONS

1) PROVIDE ALL HEATING, VENTILATION AND AIR CONDITIONING ITEMS INDICATED ON THE DRAWINGS, DESCRIBED IN THIS SPECIFICATION OR REQUIRED FOR A COMPLETE AND PROPER INSTALLATION.

2) COMPLY WITH ALL PERTINENT CODES, ORDINANCES AND REGULATIONS. REFER TO WEBSITE FOR DEPT. OF COMMUNITY AFFAIRS FOR CURRENT CODES EDITIONS.

3) THE CONTRACTOR SHALL NOT ATTEMPT TO PRECISELY SCALE DIMENSIONS FROM THESE DRAWINGS TO OBTAIN CONSTRUCTION DIMENSIONS AND CLEARANCES. THE CONTRACTOR SHALL VERIFY ALL ACTUAL DIMENSIONS AND CLEARANCES. ALTHOUGH THESE PLANS ARE DIAGRAMMATIC IN NATURE, THEY SHALL BE FOLLOWED AS CLOSELY AS SITE CONDITIONS, NEW CONSTRUCTION, AND WORK BY OTHER TRADES SHALL PERMIT. DEVIATIONS FROM THESE DRAWINGS, WHICH ARE REQUIRED TO CONFORM TO THE AVAILABLE SPACE OR THE ACTUAL BUILDING CONSTRUCTION, SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.

4) FURNISH WITHOUT EXTRA CHARGE, ANY ADDITIONAL MATERIAL AND LABOR REQUIRED TO COMPLY WITH THE ABOVE CODES AND STANDARDS, EVEN THOUGH THE WORK MAY NOT BE DESCRIBED IN THE CONTRACT DOCUMENTS. WHERE THE REQUIREMENTS OF THE CONTRACT DOCUMENTS EXCEED THE REQUIREMENTS OF THE ABOVE CODES AND STANDARDS, THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE.

5) ALL EQUIPMENT AND MATERIAL SHALL BE NEW AND OF FIRST QUALITY. EQUIPMENT AND MATERIAL SHALL BE THE SAME OR EQUAL TO THE BASIS OF DESIGN LISTED ON THESE DRAWINGS AND SHALL BE UL LISTED.

6) COOPERATE AND COORDINATE WITH OTHER TRADES IN ORDER THAT ALL SYSTEMS IN THE WORK MAY BE INSTALLED IN THE BEST ARRANGEMENT.

7) EXAMINE THE AREAS AND CONDITIONS UNDER WHICH WORK OF THIS SECTION WILL BE INSTALLED. CORRECT CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

8) AVOID INTERFERENCE WITH STRUCTURE, AND WITH WORK OF OTHER TRADES. INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS. INSTALL ACCESSIBLE PARTS, INCLUDING EQUIPMENT, COILS, VALVES, DAMPERS, CONTROLS, AND FILTERS WITH ADEQUATE CLEARANCE FOR INSPECTION, ADJUSTMENTS, REPAIR AND REPLACEMENT.

9) ALL OTHER MATERIALS NOT SPECIFICALLY DESCRIBED BUT REQUIRED FOR A COMPLETE AND PROPER INSTALLATION SHALL BE AS SELECTED BY THE CONTRACTOR SUBJECT TO ACCEPTANCE BY THE ENGINEER.

10) CONDENSATE DRAIN PIPING SHALL BE ASTM D2665 PVC WITH SOLVENT WELDED FITTINGS. DRAIN PIPING SHALL BE NO SMALLER THAN THE DRAIN CONNECTION SIZE ON EQUIPMENT. SLOPE AT 1/8 INCH PER FOOT CONTINUOUSLY TOWARD DRAINS. ALL INDOOR CONDENSATE DRAIN PIPING SHALL BE INSULATED WITH PREFORMED FLEXIBLE PLASTIC CELLULAR FOAM. ALL OUTDOOR CONDENSATE DRAIN PIPING SHALL BE PRIMED AND PAINTED WITH A COATING SYSTEM RECOMMENDED BY THE PIPING MANUFACTURER FOR PROTECTION AGAINST DETERIORATION FROM WEATHER AND UV-LIGHT EXPOSURE. ALL PIPING SHALL BE ADEQUATELY SUPPORTED TO MAINTAIN PROPER SLOPE AND AVOID SAGGING.

11) REFRIGERANT PIPING SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS. REFRIGERANT PIPING SHALL BE ASTM B280 TYPE ACR OR ASTM B88 TYPE L DRAWN COPPER TUBING WITH WROUGHT COPPER FITTINGS. INSULATE SUCTION LINE WITH ½" THICK FLEXIBLE FOAMED PLASTIC CELLULAR FOAM (ARMAFLEX OR EQUIVALENT). ALL PIPING SHALL BE ADEQUATELY SUPPORTED. INSULATION INSTALLED OUTDOORS SHALL BE PAINTED WITH TWO COATS OF ARMACELL WB COATING OR EQUIVALENT.

12) THERMOSTATS: PROVIDE 24 VOLT, PROGRAMMABLE 24-HOUR, 7-DAY THERMOSTAT TO CONTROL HEATING STAGES IN SEQUENCE WITH DELAY BETWEEN STAGES AND SUPPLY FAN TO MAINTAIN TEMPERATURE SETTING. FOR HEAT PUMPS INCLUDE SYSTEM SELECTION SWITCH HEAT-OFF-COOL AND FAN CONTROL SWITCH (AUTO-ON), EMERGENCY HEAT SWITCH (AUXILIARY/EMERGENCY HEAT INDICATOR LIGHTS).

13) PROVIDE FIRE AND SMOKE RATED FLEXIBLE CONNECTIONS BETWEEN FANS AND DUCTS. MATERIAL SHALL COMPLY WITH NFPA 90A REQUIREMENTS FOR MATERIAL IN SUPPLY AIR STREAM.

14) INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS INCLUDING CLEARANCES RECOMMENDED FOR PROPER OPERATION OR SERVICE. ALL FILTERS AND SERVICEABLE PARTS SHALL BE READILY ACCESSIBLE.

15) DO NOT CUT INTO OR REDUCE THE SIZE OF ANY STRUCTURAL MEMBER WITHOUT THE PERMISSION OF THE ARCHITECT.

16) PROVIDE WEATHER-PROOF FLASHING AT ALL DUCT AND PIPE PENETRATIONS THROUGH THE BUILDING WALLS AND ROOF. AS A MINIMUM, FLASHINGS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS. FLASHINGS SHALL BE GUARANTEED WEATHERPROOF.

17) SUPPORT ALL HVAC UNITS, DUCTWORK, PIPING AND OTHER APPURTENANCES FROM STRUCTURE, PROVIDE VIBRATION ISOLATION AT ALL FANS WHICH ARE NOT INTERNALLY ISOLATED. PROVIDE HANGER ROD WITH BUILT IN RUBBER-IN-SHEAR ISOLATOR. BETWEEN DRAIN PAN AND UNIT PROVIDE 4 EACH RUBBER-IN-SHEAR ISOLATOR. DO NOT ATTACH VIBRATION ISOLATOR TO DRAIN PAN. DO NOT SCREW OR DRIVE FASTENERS INTO NON-STRUCTURAL COMPONENTS SUCH AS ROOF DECKS OR NON-LOAD BEARING WALLS.

18) THOROUGHLY CLEAN ALL COMPONENTS AND REMOVE ALL DIRT, SCALE, OIL, AND OTHER FOREIGN SUBSTANCES. PROVIDE CLEAN AIR FILTERS FOR ALL EQUIPMENT.

19) PERFORM ALL TESTS NECESSARY TO DEMONSTRATE THE INTEGRITY OF THE COMPLETE INSTALLATION TO THE APPROVAL OF THE ENGINEER AND ALL OTHER AUTHORITIES HAVING JURISDICTION. MAKE ALL ADJUSTMENTS NECESSARY AND BALANCE THE COMPLETED SYSTEM IN ACCORDANCE WITH THE DATA SHOWN. BALANCE THE SYSTEMS IN ACCORDANCE WITH NEBB OR AABC STANDARDS. ACCEPTABLE TOLERANCES SHALL BE MINUS TEN PERCENT TO PLUS FIVE PERCENT OF ALL MEASUREMENTS. BALANCING SHALL BE DONE BY AN INDEPENDENT LICENSED (BY NEBB OR AABC) TAB CONTRACTOR. MAKE THE FOLLOWING TESTS AND SUBMIT REPORTS TO THE ARCHITECT:
   a) AIRFLOW RATE AT EACH SUPPLY, RETURN AND EXHAUST OUTLET OR INLET.
   b) TOTAL AIRFLOW RATE AND TOTAL STATIC PRESSURE FOR EACH SUPPLY AND EXHAUST FAN. TEST EXHAUST FANS WITH ROOM DOORS CLOSED.
   c) MOTOR SPEED, FOR MULTIPLE SPEED FANS (E.G., HIGH, MEDIUM, LOW).
   d) FOR DIRECT DRIVE FANS, PROVIDE SPEED SETTINGS AND ACTUAL RPM, INCLUDING ECM MOTOR DRIVEN FANS
   e) PROVIDE FAN AND MOTOR RPM FOR BELT DRIVEN FANS. PROVIDE SHEAVE SIZES.
   f) OUTSIDE AIRFLOW RATE TO EACH HVAC UNIT AND SUPPLY FAN.
   g) MOTOR CURRENT (AND COMPARE WITH NAMEPLATE DATA) AT ALL MOTORS.
   h) ENTERING AND LEAVING AIR DRY-BULB AND WET-BULB CONDITIONS AT ALL COOLING COILS.
   i) HEAT OUTPUT CAPACITY FOR UNIT HEATERS, HEATING DEVICES AND COILS (KW OR MBH).
   j) MANUFACTURER, MODEL AND SERIAL NUMBER FOR EACH PIECE OF HVAC EQUIPMENT SCHEDULED ON DRAWINGS.
   k) CALIBRATE THERMOSTATS TO BE WITHIN ONE DEGREE OF ACTUAL TEMPERATURE AT THERMOSTAT.
   l) VERIFY THAT ALL HVAC DEVICES OPERATE AS SCHEDULED OR INDICATED (I.E., ON-OFF, 2-STAGE, VARIABLE OUTPUT (SCR HEATERS), ETC.

20) THE ENTIRE SYSTEM SHALL BE WARRANTED FOR A PERIOD OF ONE (1) YEAR BEGINNING WITH OWNER'S ACCEPTANCE OF THE WORK. COMPRESSORS SHALL INCLUDE A MINIMUM OF FIVE (5) YEAR PARTS ONLY WARRANTY FROM THE MANUFACTURER. ALL LABOR AND MATERIALS NECESSARY TO REPAIR OR REPLACE THE SYSTEM OR PORTIONS THEREOF, DURING THAT TIME SHALL BE WARRANTED FOR A PERIOD OF ONE (1) YEAR FROM THE REPAIR OF REPLACEMENT.

21) SUBMITTALS AND SUBMITTAL PROCEDURES:
   a. CONTRACTOR SHALL REVIEW THE SUBMITTAL DATA AND CHECK FOR THE PURPOSE OF COMPLIANCE WITH SAFETY REQUIREMENTS, VERIFICATION OF DIMENSIONS, CONTRACT DOCUMENTS AND METHODS AND MEANS PRIOR TO SUBMITTING TO DESIGN PROFESSIONAL. CONTRACTOR SHALL INDICATE APPROVAL BY INDICATING SUCH ON THE SUBMITTAL.
   b. TRANSMIT EACH SUBMITTAL ELECTRONICALLY IN PDF FORMAT.
   c. SEQUENTIALLY NUMBER SUBMITTAL FILES AND TRANSMITTAL FORM. REVISE SUBMITTALS WITH ORIGINAL NUMBER AND A SEQUENTIAL ALPHABETIC SUFFIX. FILE NAMES SHALL DESCRIBE ITEM INCLUDED IN FILE.
   d. IDENTIFY PROJECT, THE CONTRACTOR, SUBCONTRACTOR OR SUPPLIER; PERTINENT DRAWING AND DETAIL NUMBER, AND SPECIFICATION SECTION NUMBER, AS APPROPRIATE ON EACH COPY. EACH FILE SHALL INCLUDE AN INDEX OF ITEMS INCLUDED IN FILE.
   e. APPLY THE CONTRACTOR'S STAMP, SIGNED OR INITIALED CERTIFYING THAT REVIEW, APPROVAL, VERIFICATION OF PRODUCTS REQUIRED, FIELD DIMENSIONS, ADJACENT CONSTRUCTION WORK, AND COORDINATION OF INFORMATION IS IN ACCORDANCE WITH THE REQUIREMENTS OF THE WORK AND CONTRACT DOCUMENTS.
   f. SUBMITTAL DATA FOR ALL ITEMS IN PROJECT SHALL BE SUBMITTED AT ONE TIME. SUBMITTAL SHALL BE DIVIDED INTO GROUPS WITH FILE SIZES NOT EXCEEDING 6 MB. IF THERE IS UNAVAILABLE DATA SUCH AS CONTROL SUBMITTAL, ETC., THESE MAY BE SUBMITTED LATER IF NOT DOING SO WOULD DELAY PROJECT PROGRESS. DATA SHALL INCLUDE CAPACITIES, COMPLETE INSTALLATION INSTRUCTIONS, DIMENSIONAL DATA AND ELECTRICAL DATA, BHP, MOTOR HP, OPERATING WEIGHTS AND LOAD DISTRIBUTION AT MOUNTING POINTS.
   g. DELIVER SUBMITTALS ELECTRONICALLY TO THE DESIGN PROFESSIONAL.
   h. SCHEDULE SUBMITTALS TO EXPEDITE THE PROJECT, AND COORDINATE SUBMISSION OF RELATED ITEMS.
   i. FOR EACH SUBMITTAL FOR REVIEW, ALLOW 15 DAYS EXCLUDING DELIVERY TIME TO AND FROM THE CONTRACTOR.
   j. IDENTIFY VARIATIONS FROM CONTRACT DOCUMENTS AND PRODUCT OR SYSTEM LIMITATIONS THAT MAY BE DETRIMENTAL TO SUCCESSFUL PERFORMANCE OF THE COMPLETED WORK.
   k. PROVIDE SPACE FOR THE CONTRACTOR AND THE ARCHITECT/ REVIEW STAMPS.
   l. WHEN REVISED FOR RESUBMISSION, IDENTIFY ALL CHANGES MADE SINCE PREVIOUS SUBMISSION.
   m. DISTRIBUTE COPIES OF REVIEWED SUBMITTALS AS APPROPRIATE. INSTRUCT PARTIES TO PROMPTLY REPORT ANY INABILITY TO COMPLY WITH REQUIREMENTS.
   n. SUBMITTALS NOT REQUESTED WILL NOT BE RECOGNIZED OR PROCESSED.
   o. PROVIDE FILES CONTAINING ONLY RELATED ITEMS (SUCH AS PIPING, EQUIPMENT, AIR DISTRIBUTION, ETC.)

22) INSTRUCT OWNER'S REPRESENTATIVE IN THE OPERATION OF THE SYSTEMS, USING THE OPERATION AND MAINTENANCE MANUAL AS A TEACHING AID.

23) PROVIDE AN OPERATION AND MAINTENANCE MANUAL. AS A MINIMUM, THE MANUAL SHALL CONTAIN:
   a. A COMPLETE LIST OF ALL EQUIPMENT AND APPURTENANCES WITH EQUIPMENT DESIGNATIONS (PER DRAWINGS), MANUFACTURERS, AND CATALOG NUMBERS.
   b. COPIES OF MANUFACTURERS' BROCHURES AND INSTRUCTIONS FOR OPERATION AND MAINTENANCE OF ALL MECHANICAL EQUIPMENT, INCLUDING REPLACEMENT PARTS LISTS.
   c. TYPED SYSTEM OPERATION AND MAINTENANCE INSTRUCTIONS, INCLUDING INSPECTION, LUBRICATION, AND SERVICE INSTRUCTIONS AND SCHEDULES.
   d. LIST OF NAMES, ADDRESSES AND PHONE NUMBERS OF DISTRIBUTORS OF ALL EQUIPMENT AND APPURTENANCES.
   e. MANUFACTURERS' WARRANTIES.

24) WALL MOUNTED AIR-CONDITIONING UNIT: INDOOR, DIRECT-EXPANSION, WALL-MOUNTED FAN COIL. UNIT SHALL BE COMPLETE WITH COOLING/HEATING COIL, FAN, FAN MOTOR, PIPING CONNECTORS, ELECTRICAL CONTROLS, MICROPROCESSOR CONTROL SYSTEM, AND INTEGRAL TEMPERATURE SENSING. UNIT SHALL BE FURNISHED WITH INTEGRAL WALL MOUNTING BRACKET AND MOUNTING HARDWARE. CABINET DISCHARGE AND INLET GRILLES SHALL BE ATTRACTIVELY STYLED, HIGH-IMPACT POLYSTYRENE. CABINET SHALL BE FULLY INSULATED FOR IMPROVED THERMAL AND ACOUSTIC PERFORMANCE. FAN SHALL BE TANGENTIAL DIRECT-DRIVE BLOWER TYPE WITH AIR INTAKE AT THE TOP OF THE UNIT AND DISCHARGE AT THE BOTTOM FRONT. AUTOMATIC, MOTOR-DRIVEN VERTICAL AIR SWEEP SHALL BE PROVIDED STANDARD. AIR SWEEP OPERATION SHALL BE USER SELECTABLE. THE VERTICAL SWEEP MAY BE ADJUSTED (USING THE REMOTE CONTROL) AND THE HORIZONTAL AIR DIRECTION MAY BE SET MANUALLY. COIL SHALL BE COPPER TUBE WITH ALUMINUM FINS AND GALVANIZED STEEL TUBE SHEETS. FINS SHALL BE BONDED TO THE TUBES BY MECHANICAL EXPANSION AND GOLDEN HYDROPHILIC PRE-COATED. A DRIP PAN UNDER THE COIL SHALL HAVE A DRAIN CONNECTION FOR HOSE ATTACHMENT TO REMOVE CONDENSATE. CONDENSATE PAN SHALL HAVE INTERNAL TRAP. MOTORS SHALL BE OPEN DRIP-PROOF, PERMANENTLY LUBRICATED BALL BEARING WITH INHERENT OVERLOAD PROTECTION. FAN MOTORS SHALL BE 4-SPEED. CONTROLS SHALL CONSIST OF A MICROPROCESSOR-BASED CONTROL SYSTEM WHICH SHALL CONTROL SPACE TEMPERATURE, DETERMINE OPTIMUM FAN SPEED, AND RUN SELF-DIAGNOSTICS. THE TEMPERATURE CONTROL RANGE SHALL BE FROM 62F TO 86F (17C TO 30C) IN INCREMENTS OF 1F OR 1C, AND HAVE 46F HEATING MODE (HEATING SETBACK). THE WIRELESS OR WIRED REMOTE CONTROLLER SHALL HAVE THE ABILITY TO ACT AS THE TEMPERATURE SENSING LOCATION FOR ROOM COMFORT. REFER TO SCHEDULE FOR PREFERENCE ON WIRED OR WIRELESS THERMOSTAT. THE UNIT SHALL HAVE THE FOLLOWING FUNCTIONS AS A MINIMUM: AN AUTOMATIC RESTART AFTER POWER FAILURE AT THE SAME OPERATING CONDITIONS AS AT FAILURE. A TIMER FUNCTIONS TO PROVIDE A MINIMUM 24-HOUR TIMER CYCLE FOR SYSTEM AUTO START/STOP. TEMPERATURE-SENSING CONTROLS SHALL SENSE RETURN AIR TEMPERATURE. INDOOR COIL FREEZE PROTECTION. WIRELESS INFRARED REMOTE CONTROL AND/OR WIRED REMOTE CONTROL AS SCHEDULED TO ENTER SET POINTS AND OPERATING CONDITIONS. AUTOMATIC AIR SWEEP CONTROL TO PROVIDE ON OR OFF ACTIVATION OF AIR SWEEP LOUVERS. DEHUMIDIFICATION MODE SHALL PROVIDE INCREASED LATENT REMOVAL CAPABILITY BY MODULATING SYSTEM OPERATION AND SET POINT TEMPERATURE. FAN-ONLY OPERATION TO PROVIDE ROOM AIR CIRCULATION WHEN NO COOLING IS REQUIRED. DIAGNOSTICS SHALL PROVIDE CONTINUOUS CHECKS OF UNIT OPERATION AND WARN OF POSSIBLE MALFUNCTIONS. ERROR MESSAGES SHALL BE DISPLAYED AT THE UNIT. FAN SPEED CONTROL SHALL BE USER-SELECTABLE: HIGH, MEDIUM, LOW, OR MICROPROCESSOR CONTROLLED AUTOMATIC OPERATION DURING ALL OPERATING MODES. AUTOMATIC HEATING-TO-COOLING CHANGEOVER IN HEAT PUMP MODE. CONTROL SHALL INCLUDE DEAD BAND TO PREVENT RAPID MODE CYCLING BETWEEN HEATING AND COOLING. INDOOR COIL HIGH TEMPERATURE PROTECTION SHALL BE PROVIDED TO DETECT EXCESSIVE INDOOR DISCHARGE TEMPERATURE WHEN UNIT IS IN HEAT PUMP MODE. UNIT SHALL HAVE FILTER TRACK WITH FACTORY-SUPPLIED CLEANABLE FILTERS. INDOOR FAN MOTOR TO OPERATE ON 115V ON MODEL SIZE 12 AND ON 208-230V ON MODEL SIZES 09-36, AS SPECIFIED. POWER IS SUPPLIED FROM THE OUTDOOR UNIT. ALL UNITS SHOULD HAVE REFRIGERANT LINES THAT CAN BE ORIENTED TO CONNECT FROM THE LEFT, RIGHT OR BACK OF UNIT. BOTH REFRIGERANT LINES NEED TO BE INSULATED. THE CONDENSATE PUMP SHALL REMOVE CONDENSATE FROM THE DRAIN PAN WHEN GRAVITY DRAINAGE CANNOT BE USED. PUMP SHALL BE DESIGNED FOR QUIET OPERATION. PUMP SHALL CONSIST OF TWO PARTS: AN INTERNAL RESERVOIR/SENSOR ASSEMBLY, AND A REMOTE SOUND-SHIELDED PUMP ASSEMBLY. A LIQUID LEVEL SENSOR IN THE RESERVOIR SHALL STOP COOLING OPERATION IF THE LIQUID LEVEL IN THE RESERVOIR IS UNACCEPTABLE. REFER TO SCHEDULE FOR PROVIDING CONDENSATE PUMP. ONLY PROVIDE CONDENSATE PUMP WERE INDICATED ON SCHEDULE.

25) SMALL SPLIT CONDENSING UNIT: CASING: HOUSE COMPONENTS IN WELDED STEEL FRAME WITH GALVANIZED STEEL PANELS WITH WEATHER RESISTANT, BAKED ENAMEL FINISH. MOUNT CONTACTORS AND CONTROLS IN WEATHERPROOF PANEL PROVIDED WITH FULL OPENING ACCESS DOORS. PROVIDE REMOVABLE ACCESS DOORS OR PANELS WITH QUICK FASTENERS. COMPRESSOR: HERMETICALLY SEALED, 3600 RPM MAXIMUM, RESILIENTLY MOUNTED WITH POSITIVE LUBRICATION AND INTERNAL MOTOR PROTECTION. COMPRESSOR: HERMETIC RECIPROCATING TYPE OR HERMETIC SCROLL TYPE. CONDENSER COILS: ALUMINUM FINS MECHANICALLY BONDED TO SEAMLESS COPPER TUBING OR ALL ALUMINUM FINS AND TUBE. AIR TEST UNDER WATER TO 425 PSIG, AND VACUUM DEHYDRATE. SEAL WITH HOLDING CHARGE OF REFRIGERANT. COIL GUARD: LOUVERED OR PVC COAT STEEL WIRE. FANS AND MOTORS: DIRECT DRIVEN PROPELLER TYPE CONDENSER FANS WITH FAN GUARD ON DISCHARGE. WEATHERPROOF MOTORS SUITABLE FOR OUTDOOR USE, SINGLE PHASE PERMANENT SPLIT CAPACITOR WITH PERMANENT LUBRICATED BALL BEARINGS AND BUILT-IN THERMAL OVERLOAD PROTECTION. FAN GUARD: PVC COAT STEEL WIRE. REFRIGERANT CIRCUIT: FOR EACH REFRIGERANT CIRCUIT, PROVIDE: FILTER DRYER LIQUID LINE. SUCTION ACCUMULATOR. SUCTION AND LIQUID LINE SERVICE VALVES AND GAGE PORTS. CHARGING VALVE. CONDENSER PRESSURE RELIEF MECHANISM. FACTORY WIRED WITH SINGLE POINT POWER CONNECTION. FACTORY WIRED CONTROL CIRCUIT SHALL INCLUDE CONTACTOR, HIGH- AND LOW-PRESSURE CUTOUTS, INTERNAL WINDING THERMOSTAT FOR COMPRESSOR, CONTROL CIRCUIT TRANSFORMER, NON-CYCLING RESET RELAY. PROVIDE A SURGE CAPACITOR AND LIGHTNING ARRESTOR IN UNIT CABINET FOR PROTECTION FROM POWER SURGES DUE TO LIGHTNING AND SWITCHING TRANSIENTS. PROVIDE CONTROLS TO PERMIT OPERATION DOWN TO 0 DEGREES F AMBIENT TEMPERATURE WERE SCHEDULED TO INCLUDE: CRANKCASE HEATER WITH THERMOSTAT. HEAD PRESSURE SWITCH TO CYCLE FAN MOTORS IN RESPONSE TO REFRIGERANT CONDENSING PRESSURE. SOLID STATE CONTROL TO VARY SPEED OF ONE CONDENSER FAN MOTOR IN RESPONSE TO REFRIGERANT CONDENSING PRESSURE. REFER TO SCHEDULE ON DRAWINGS FOR ADDITIONAL SPECIFICATIONS.

26) WALL FANS SHALL BE DIRECT- OR BELT-DRIVEN PROPELLER FANS, AS SCHEDULED, CONSISTING OF WALL HOUSING, WHEEL, FAN SHAFT, BEARINGS, MOTOR AND DISCONNECT SWITCH, DRIVE ASSEMBLY, AND ACCESSORIES INCLUDING BUT NOT LIMITED TO ½" MESH BIRD SCREEN, FLANGED WALL DISCHARGE SHUTTER, AND OSHA GUARD. HOUSING SHALL BE HEAVY-GAGE, GALVANIZED STEEL OR PAINTED ALUMINUM, WITH A VENTURI INLET CONE.

27) BASIC MOTOR REQUIREMENTS: BASIC REQUIREMENTS APPLY TO MECHANICAL EQUIPMENT MOTORS, UNLESS OTHERWISE INDICATED. MOTORS 1/2 HP AND LARGER: POLYPHASE, UNLESS OTHERWISE SCHEDULED. MOTORS SMALLER THAN 1/2 HP: SINGLE PHASE. FREQUENCY RATING: 60 HZ. SERVICE FACTOR: ACCORDING TO NEMA MG 1, GENERAL PURPOSE CONTINUOUS DUTY, DESIGN TYPE "B." ENCLOSURE: OPEN DRIP-PROOF, UNLESS OTHERWISE INDICATED. EFFICIENCY: MOTORS SHALL HAVE A HIGHER EFFICIENCY RATING THAN INDUSTRY STANDARD AVERAGE MOTOR AS DELINEATED IN IEEE STANDARD 112, TEST METHOD 13. THERMAL PROTECTION: WHERE INDICATED OR REQUIRED, INTERNAL PROTECTION AUTOMATICALLY OPENS POWER SUPPLY CIRCUIT TO MOTOR WHEN WINDING TEMPERATURE EXCEEDS A SAFE VALUE CALIBRATED TO TEMPERATURE RATING OF MOTOR INSULATION. THERMAL PROTECTION DEVICE AUTOMATICALLY RESETS WHEN MOTOR TEMPERATURE RETURNS TO NORMAL RANGE, UNLESS OTHERWISE INDICATED.

28) SEALANT MATERIALS: JOINT AND SEAM SEALANTS, GENERAL: THE TERM "SEALANT" IS NOT LIMITED TO MATERIALS OF ADHESIVE OR MASTIC NATURE BUT INCLUDES TAPES AND COMBINATIONS OF OPEN-WEAVE FABRIC STRIPS AND MASTICS. JOINT AND SEAM TAPE: 2 INCHES WIDE; GLASS-FIBER FABRIC REINFORCED. JOINT AND SEAM SEALANT: ONE-PART, NONSAG, SOLVENT-RELEASE-CURING, POLYMERIZED BUTYL SEALANT, FORMULATED WITH A MINIMUM OF 75 PERCENT SOLIDS. FLANGED JOINT MASTICS: ONE-PART, ACID-CURING, SILICONE, ELASTOMERIC JOINT SEALANTS, COMPLYING WITH ASTM C 920, TYPE S, GRADE NS, CLASS 25, USE O.

29) UNIT HEATERS-ELECTRIC: ELECTRIC UNIT BLOWER HEATERS SHALL BE UL LISTED, CSA CERTIFIED AND CE MARKED FOR USE IN DIRTY AND CORROSIVE ENVIRONMENTS. THE HEATER SHALL BE NEMA 4X RATED FOR HOSE DOWN REQUIREMENTS. HEATERS TO ALLOW MOUNTING POSITIONING FOR HORIZONTAL OR VERTICAL OPERATION. HEATER TO BE OF THE KW RATING, VOLTAGE, PHASE AND CYCLES SPECIFIED IN THE SCHEDULE. HEATING ELEMENTS SHALL BE TYPE 316 STAINLESS STEEL TUBING AND TYPE 316 STAINLESS STEEL FINS FOR MAXIMUM HEAT DISSIPATION. THE ELEMENTS SHALL CONSIST OF HIGH-QUALITY RESISTANCE WIRE IMBEDDED IN A COMPACTED MAGNESIUM OXIDE REFRACTORY FOR EXCELLENT DIELECTRIC STRENGTH AND OPTIMUM THERMAL CONDUCTIVITY. THE HEATERS SHALL BE PROTECTED BY A HIGH TEMPERATURE CUTOUT. THE FAN ASSEMBLY SHALL INCLUDE A UL LISTED AND CSA CERTIFIED, TOTALLY ENCLOSED, EPOXY PAINTED MOTOR WITH PERMANENTLY LUBRICATED BALL BEARINGS DESIGNED TO RESIST MOISTURE AND CORROSION. THE EPOXY COATED ALUMINUM FAN BLADE SHALL BE DYNAMICALLY BALANCED FOR VIBRATION FREE OPERATIONAL EXPOSED SHEET METAL SURFACES SHALL BE CONSTRUCTED OF TYPE 304 STAINLESS STEEL; THE 20-GAUGE CASE SHALL BE ROLL FORMED WITH BEADED EDGES TO INSURE RIGIDITY. A LOUVERED OUTLET GRILL SHALL BE PAINTED WITH ZINC CHROMATE PRIMER AND TWO COATS OF CORROSION RESISTANT EPOXY PAINT. A NEMA 4X CONTROL ENCLOSURE SHALL CONTAIN THE PRE-WIRED BUILT-IN CONTROLS: AUTOMATIC RESET OVER-TEMPERATURE CUTOUT, FAN DELAY RELAY, HEATER CONTACTOR, MOTOR CONTACTOR, TERMINAL BLOCK AND 120V CONTROL TRANSFORMER. STANDARD MOUNTING HARDWARE SHALL CONSIST OF THREE (3) L SHAPED GAUGE 304 STAINLESS STEEL MOUNTING BRACKETS FOR MOUNTING THE HEATER DIRECTLY TO A WALL FOR HORIZONTAL AIRFLOW OR CEILING FOR VERTICAL AIRFLOW. REFER TO DRAWING FOR ADDITIONAL INFORMATION.

30) ALL HVAC EQUIPMENT SUCH AS AH, CU, EF, AC, HP, AND RTU SHALL HAVE VISIBLE NAMEPLATES WITH THEIR ASSOCIATED MARKS ON THEM.

31) LOUVERS: 4" DEEP, 12 GAUGE (0.081) ETCHED AND 30-MINUTE CLEAR ANODIZED EXTRUDED ALUMINUM, DRAINABLE BLADES AND FRAME; BACK MOUNTED 1/2" MESH 19-GAUGE SCREEN; FLANGE FRAME. LOUVER SHALL BE RATED FOR NO WATER CARRY-THROUGH AT 900 FACE VELOCITY, 0.15" MAXIMUM PRESSURE DROP FOR 4-FOOT SQUARE SAMPLE TESTED ACCORDING TO AMCA STANDARD 500, 1973.

32) CEILING VENTILATOR SHALL HAVE CORROSION RESISTANT GALVANIZED STEEL HOUSING WITH FOUR-POINT MOUNTING CAPABILITY. IT SHALL BE DUCTED TO A CAP ON WALL OR ROOF USING ROUND DUCTWORK. BLOWER ASSEMBLY SHALL BE REMOVABLE, HAVE A CENTRIFUGAL-TYPE BLOWER WHEEL AND A PERMANENTLY LUBRICATED MOTOR DESIGNED FOR CONTINUOUS OPERATION. NON-METALLIC DAMPER/DUCT CONNECTOR SHALL BE INCLUDED. AIR DELIVERY SHALL BE NO LESS THAN SCHEDULED AND SOUND LEVEL NO GREATER THAN SCHEDULED. ALL AIR AND SOUND RATINGS SHALL BE CERTIFIED BY HVI. CEILING VENTILATOR SHALL BE ENERGY STAR® QUALIFIED AND HAVE AN ENERGY EFFICIENT PERMANENT SPLIT CAPACITOR MOTOR.

33) ELECTRIC WALL MOUNT HEATER: HEATER SHALL BE UL LISTED AND LABELLED WITH TERMINAL BOX AND COVER, AND BUILT-IN CONTROLS. HEATER SHALL BE MADE IN THREE PIECES CONSISTING OF BACK ENCLOSURE, HEATER ASSEMBLY AND FRONT PANEL. FRONT PANEL SHALL BE ATTACHED WITH CONCEALED FASTENERS. HEATING ELEMENTS: NICKEL-CHROMIUM HEATING ELEMENT WIRE SHALL BE ENCASED IN A STEEL OR COPPER SHEATH. ALUMINUM FINS SHALL BE PRESSURE BONDED TO THE SHEATH. ENCLOSURE: ENCLOSURE SHALL BE MINIMUM 20-GAUGE PAINTED STEEL FOR SURFACE MOUNTING. FRONT PANEL: BAR GRILLE TYPE WITH DOWN DEFLECTION TOWARD FLOOR. FINISH SHALL BE PAINT ON STEEL BARS. GRILLE SHALL BE SURROUNDED BY DECORATIVE SATIN FINISHED ALUMINUM ACCENT FRAME. UNIT SHALL BE FAN FORCED TYPE INCLUDING FAN MOTOR, FAN AND CONTROLS WITH THERMOSTAT ADJUSTMENT ACCESSIBLE THROUGH FRONT GRILLE. UNIT SHALL ALSO INCLUDE THERMAL SAFETY CUTOUTS IN THE EVENT OF OVER TEMPERATURE CONDITIONS. REFER TO SCHEDULE ON DRAWINGS FOR ADDITIONAL SPECIFICATIONS.

34) ACCEPTABLE MANUFACTURERS ARE:

SMALL SPLIT UNITS:	CARRIER, MITSUBISHI, DAIKIN, HITACHI, TOSHIBA
FANS:	TWIN-CITY, COOK, GREENHECK, PENN BARRY, ACME, AMERICAN COOL AIR, CAPTIVE AIR
ELECTRIC HEATERS:	MARKEL, Q-MARK, RAY WALL, CROMALOX, INDEECO
LOUVERS/DAMPERS:	UNITED ENERTECH, GREENHECK, RUSKIN, ARROW UNITED, AIR BALANCE (COLOR SELECTION SUBMITTED TO ARCHITECT)
CONTROLS-PROVIDED WITH UNIT:	PROVIDE THERMOSTATS BY SAME MANUFACTURER AS EQUIPMENT

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GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION
STATE OF GEORGIA

1" 0" .5" 1"

ISSUE | DATE

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ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

MECHANICAL LEGEND AND NOTES

M-001

EDEC
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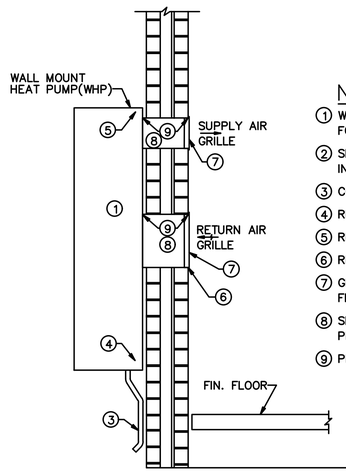
MECHANICAL SYMBOLS & ABBREVIATIONS LEGEND

	NEW PIPE, DUCTWORK OR EQUIPMENT
24x12 24x12	DUCT SIZE: FIRST DIMENSION IS SIDE DRAWN
	FLEXIBLE ROUND DUCTWORK
F , SCD SD	FIRE DAMPER, SMOKE DAMPER, SMOKE DETECTOR
	CEILING SUPPLY DIFFUSER
	CEILING RETURN OR EXHAUST AIR
	S.A DUCT OUT OF TU BOX WITH DUCT LINER FOR THR FIRST FIVE FEET OF DUCT OUT OF TU BOX
	SIDEWALL REGISTER OR GRILLE
	CHANGE IN PIPE OR DUCT SIZE OR SHAPE
R	REFRIGERANT PIPING
D	CONDENSATE OR OTHER DRAIN PIPING
	ELBOW TURNED DOWN OR TURNED UP IN PIPING
T	THERMOSTAT, ARROW SHOWS CONTROL WIRING PATH
TC	TIME CLOCK
ø	DIAMETER
U.C.	UNDER-CUT DOOR 3/4", UNLESS OTHER SIZE NOTED
AD P16	INDICATES EQUIPMENT ON PLANS; TOP ITEM SHOWS TYPE OF EQUIPMENT AND BOTTOM ITEM SHOWS SPECIFIC MARK NUMBER
4 S1 8"ø 300	ITEM IN HEXAGON SHOWS AIR DEVICE MARK NUMBER, ITEM ABOVE LINE SHOWS NECK SIZE, ITEM BELOW LINE SHOWS AIR FLOW THROUGH DEVICE, AND NUMBER IN FRONT SHOWS QUANTITY IF MORE THAN ONE
AFF	ABOVE FINISHED FLOOR
ACU	AIR CONDITIONING UNIT
BDD	GRAVITY INTAKE DAMPER
BTUH, MBH	BRITISH THERMAL UNITS, THOUSAND BRITISH THERMAL UNITS
CAP	CAPACITY
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
DB, WB	DRY BULB TEMPERATURE, WET BULB TEMPERATURE
EA, EG	EXHAUST AIR, EXHAUST GRILLE
EF	EXHAUST FAN
EXT SP	EXTERNAL STATIC PRESSURE (USUALLY EXPRESSED IN INCHES OF WATER IN GAGE)
HPU	HEAT PUMP UNIT
MVD, VD	MANUAL VOLUME DAMPER
OA	OUTSIDE AIR
RA, RG	RETURN AIR, RETURN GRILLE
SA	SUPPLY AIR
SF	SUPPLY FAN FOR SHOP VENTILATION
VAC, PH	VOLTS ALTERNATING CURRENT, NUMBER OF PHASES
W, KW	WATTS, KILOWATTS
UH	UNIT HEATER

OUTDOOR WALL MOUNTED HEAT PUMP SCHEDULE

MARK	SUPPLY AIR CFM	EXT. SP. IN. W.G.	EVAP. FAN HP	EVAP. COIL ENTERING AIR DESIGN CONDITIONS		EVAP. COIL LEAVING AIR DESIGN CONDITIONS		SYSTEM COOLING MAX. REQUIREMENTS (MBH)		HEAT PUMP HEATING CAP MBH	SUPPL. HEAT KW	WEIGHT (LBS)	POWER VAC/PH	MANUFACTURER BARD	NOTES
				DB °F	WB °F	DB °F	WB °F	TOTAL	SENSIBLE						
WHP-1	1550	0.40	3/4	77.5	64.5	55.0	54.0	52.0	42.0	50.0	9.0	650	460/3ø	T48S1-C09PXXXX	1:2:3:4:5:6

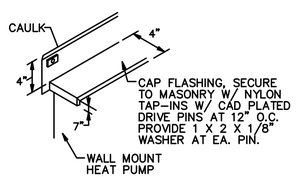
1. VERIFY ELECTRIC POWER REQUIREMENTS WITH ELECTRICAL PLANS, WHICH TAKE PRECEDENCE OVER THIS INFORMATION.
2. PROVIDE DOUBLE DEFLECTION SUPPLY GRILLE. TYPICAL BARD SG-5W SERIES. SUPPLY AIR SHALL BE THROUGH FRONT OF UNIT.
3. PROVIDE RETURN AIR FILTER GRILLE SUPPLIED WITH FILTER. TYPICAL BARD RFG-5W SERIES. RETURN SHALL BE THROUGH FRONT OF UNIT.
4. PROVIDE DIGITAL 7-DAY PROGRAMMABLE THERMOSTAT.
5. RATED @95 F DB AMBIENT OUTDOOR TEMPERATURE.
6. PROVIDE LOW AMBIENT CONTROL,TWO STAGE COMPRESSORS, ECM EVAPORATOR FAN MOTOR, BLANK-OFF PLATE, AND MANUFACTURER'S WALL MOUNT ACCESSORIES.



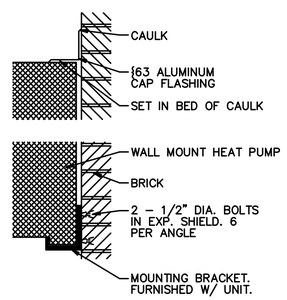
NOTES: (THIS DETAIL ONLY)

1. WALL MOUNT HEAT PUMP. REFER TO PLANS FOR SIZES AND LOCATION.
2. SEE ARCHITECTURAL DETAILS FOR ADDITIONAL INSTALLATION REQUIREMENTS.
3. CONDENSATE DRAIN. PIPE TO WITHIN 6" OF GRADE.
4. REFER TO DETAIL FOR MOUNTING BRACKET.
5. REFER TO DETAIL FOR FLASHING DETAIL.
6. REFER TO ARCHITECTURAL FOR MOUNTING HEIGHT.
7. GRILLE. SEE PLANS FOR DESIGNATION. PROVIDE TRANSISITION FROM UNIT CONNECTION SIZE TO GRILLE SIZE
8. SHEET METAL DUCT SAME SIZE AS UNIT OPENING. (INSULATE) PROVIDE TRANSITION TO GRILLE SIZE.
9. PROVIDE AIR TIGHT SEALS.

1 WALL MOUNT HEAT PUMP
NOT TO SCALE



2 WALL MOUNT HEAT PUMP FLASHING DETAIL
NOT TO SCALE



3 WALL MOUNT HEAT PUMP MOUNTING BRACKET AND METAL FLASHING DETAIL
NOT TO SCALE

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"GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026" STATE OF GEORGIA CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

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CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

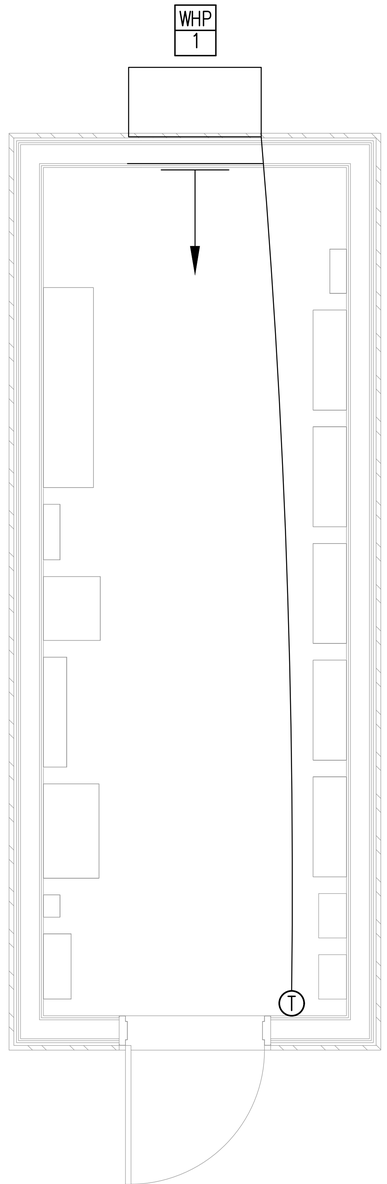
GEORGIA REGISTERED NO. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

MECHANICAL SCHEDULES AND DETAILS

M-002

EDEC, INC.
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1 ELECTRICAL ROOM MECHANICAL PLAN
SCALE: 1/2" = 1' - 0"

GRAPHIC SCALE
2 0 1 2 4 8
(IN FEET)
1/2 inch = 1 ft.

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CAREY STATION URBAN
WATER REUSE FACILITY
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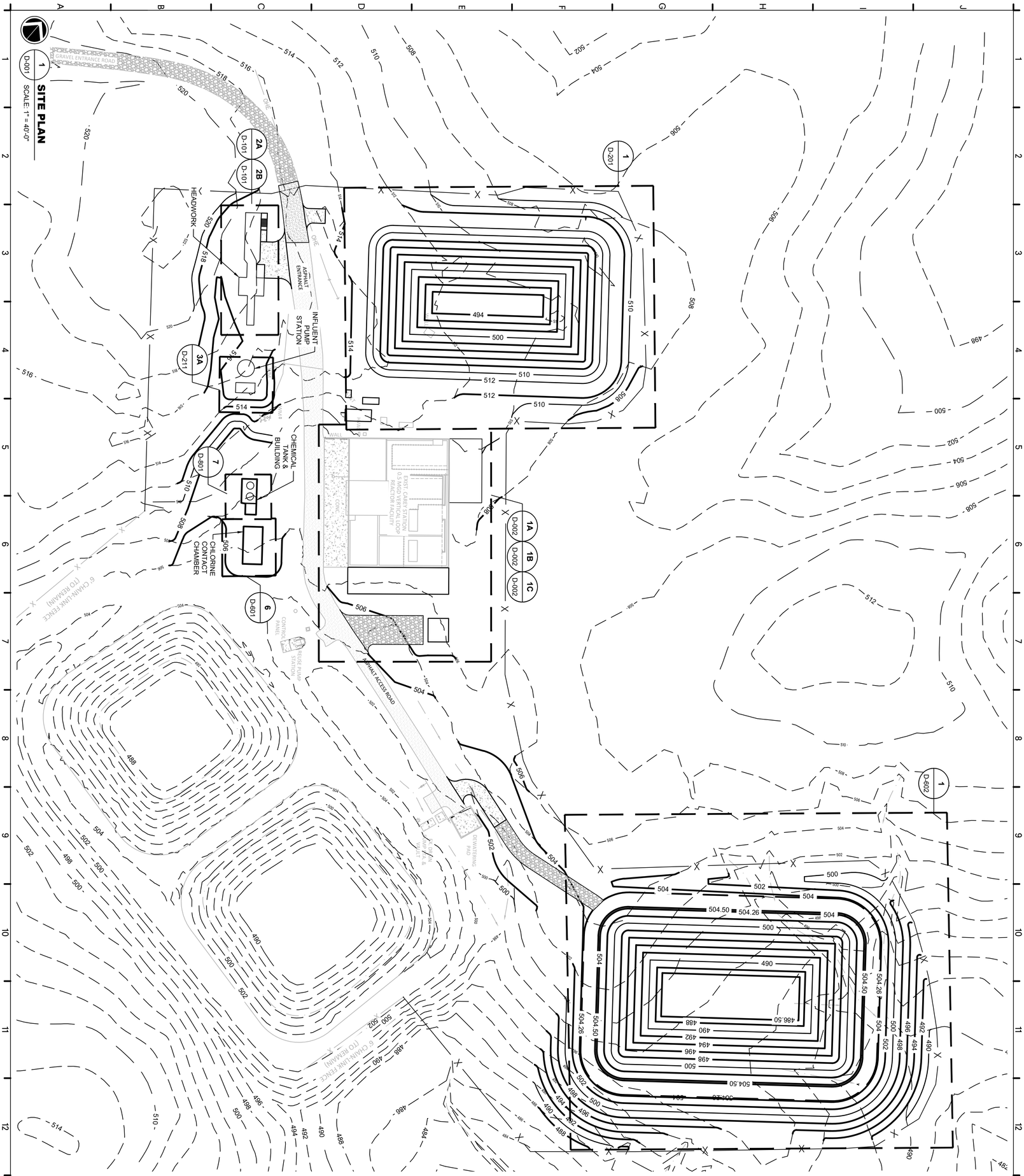
GEORGIA
REGISTERED
No. 50137
PROFESSIONAL
ENGINEER
DENIS VYSTROPOV

MECHANICAL PLAN

M-101

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KEY NOTES:

#	
1.	XXXXXXXX
2.	XXXXXXXX
3.	XXXXXXXX

PROCESS KEY PLAN

D-001

GEORGIA REGISTERED PROFESSIONAL ENGINEER LIANG WANG No. PE012058 RD 04/2026

CAREY STATION URBAN WATER REUSE FACILITY

0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

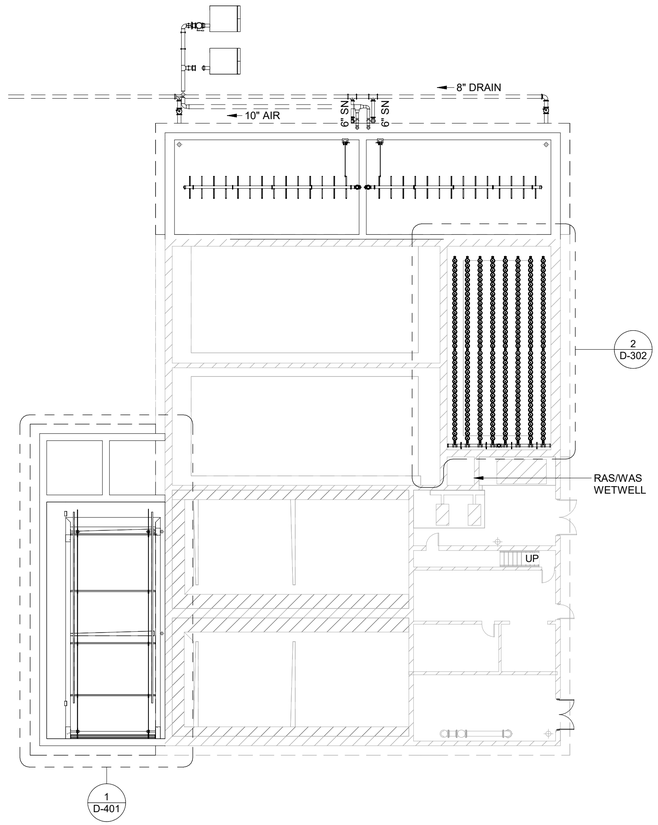
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ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

STATE OF GEORGIA GOODWYN MILLS CAWOOD LLC No. PEF007898 Exp. 06.30.2026 CERTIFICATE OF AUTHORIZATION

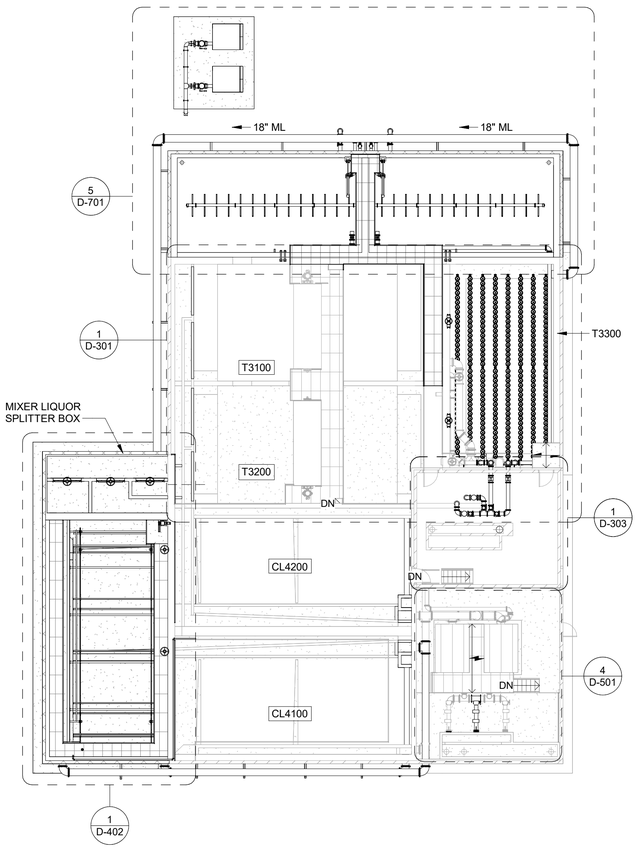
1" 5" 0" 1"

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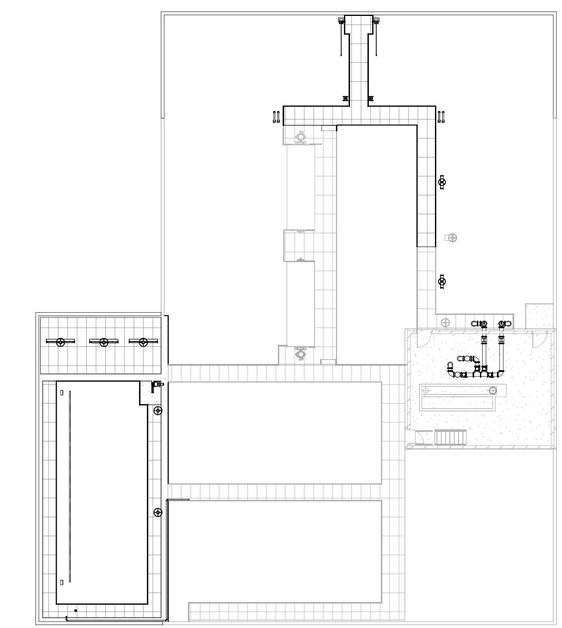
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1A D-002 **LOWER PLAN**
SCALE: 1/16" = 1'-0"



1B D-002 **INTERMEDIATE PLAN**
SCALE: 1/16" = 1'-0"



1C D-002 **UPPER PLAN**
SCALE: 1/16" = 1'-0"

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1" 0" .5" 1"

ISSUE	DATE
60% Submittal	03.15.2024
90% Submittal	05.13.2024
100% Submittal	10.04.2024
Bid Set	
Conformed Set	09.03.2025
Project Manager:	MP
Engineer:	LW/DP
Designer:	LW
Drawn By:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

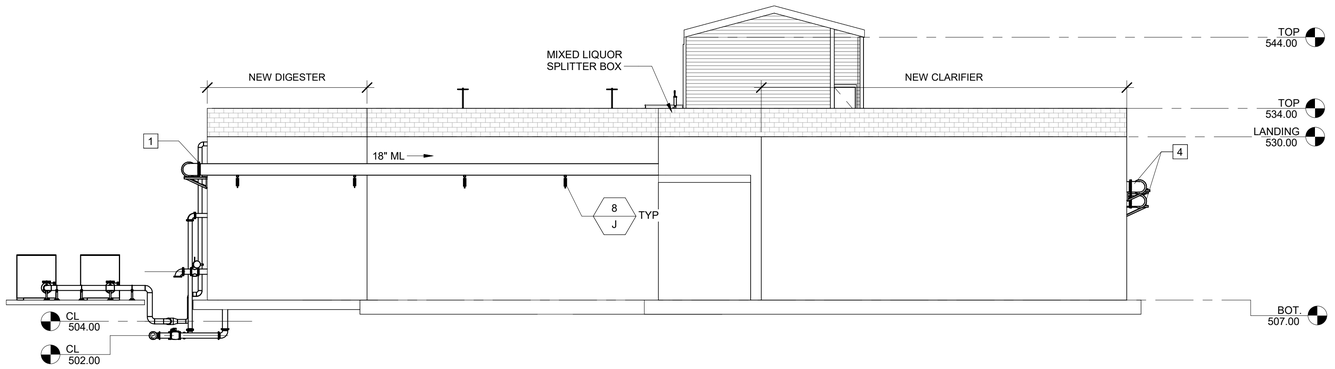
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

BIOLOGICAL PROCESS KEY PLAN

D-002

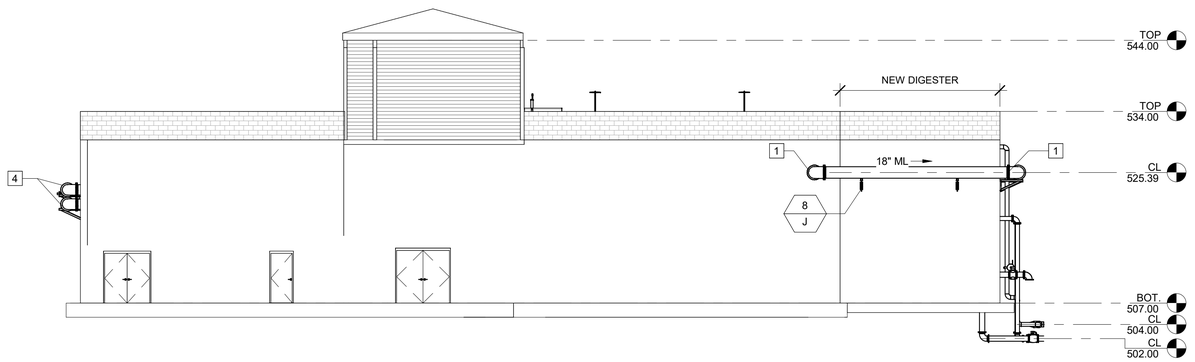
Autodesk Docs://CAUG230002 Cary Station WRF/VLR Building.rvt
10/4/2024 9:46:17 AM

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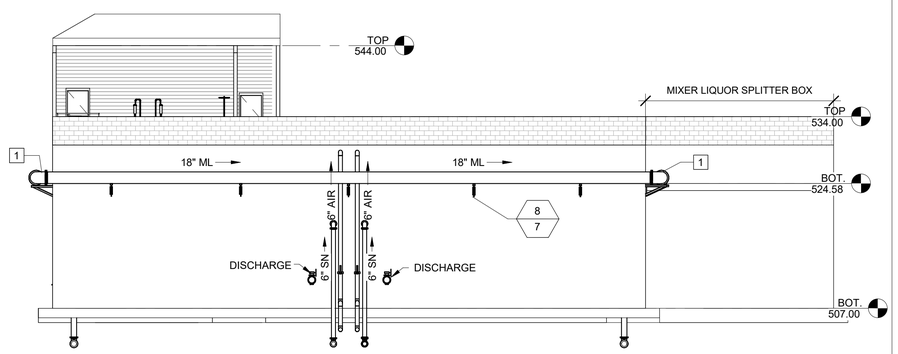
A D-003 **EXTERIOR ELEV.**

SCALE: 3/32" = 1'-0"



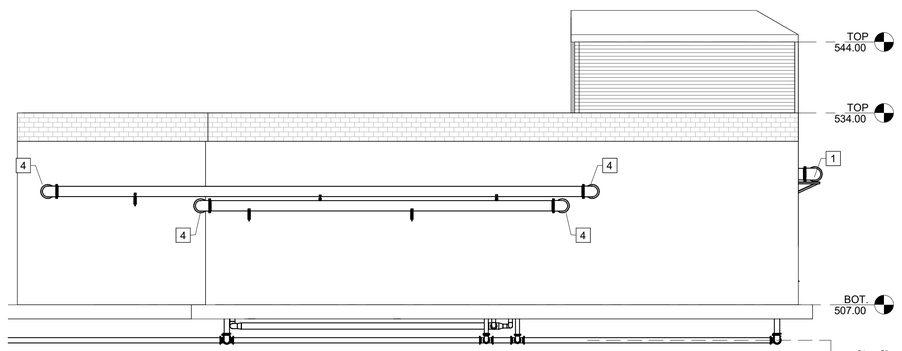
B D-003 **EXTERIOR ELEV.**

SCALE: 3/32" = 1'-0"



C D-003 **EXTERIOR ELEV.**

SCALE: 3/32" = 1'-0"



D D-003 **EXTERIOR ELEV.**

SCALE: 3/32" = 1'-0"

KEY NOTES: #

1. 18" FL 90° BEND
2. 16" X 14" REDUCER
3. 14" FL 90° BEND
4. 16" FL 90 BEND

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1" 0" .5" 1"

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Designer:	LW
Drawn By:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

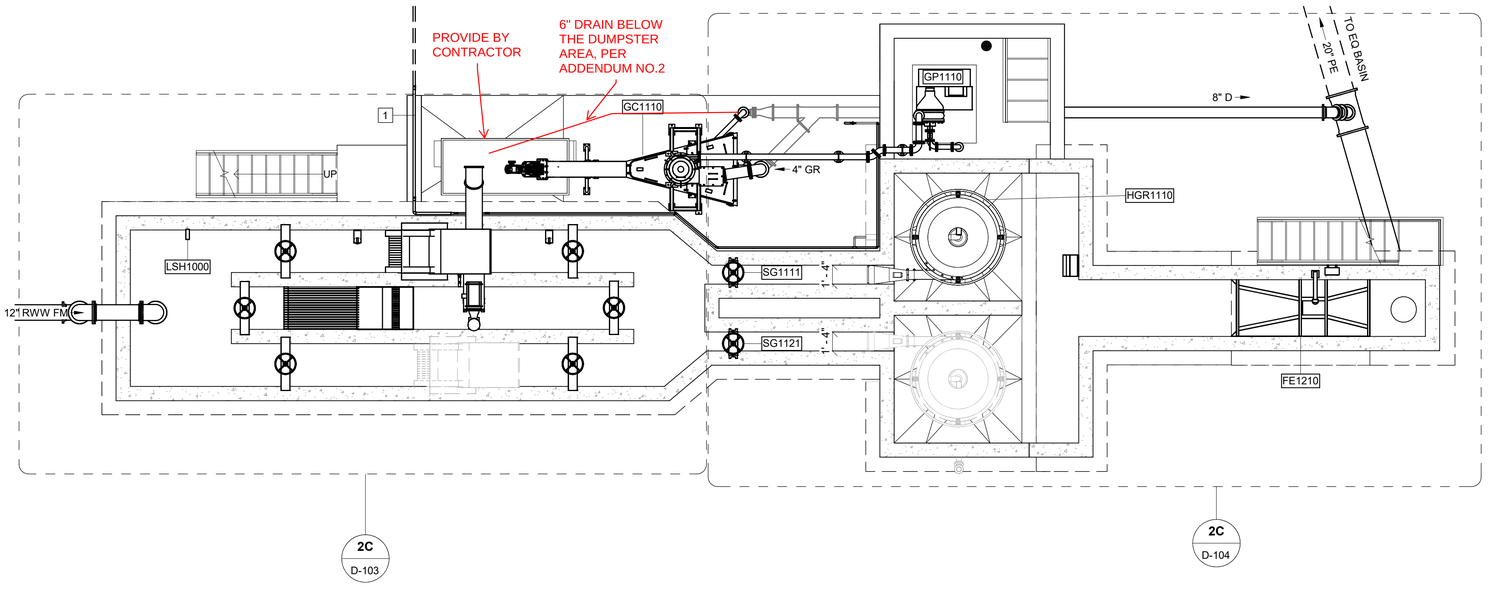
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

EXTERIOR ELEVATION

D-003

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10/4/2024 9:45:03 AM

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2A / D-101 **PLAN**

SCALE: 3/16" = 1'-0"

KEY NOTES: [#]

1. 1.5" WATER LINE ABOVE GROUND, HEAT TRACED

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CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

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HEADWORK- LOWER PLAN

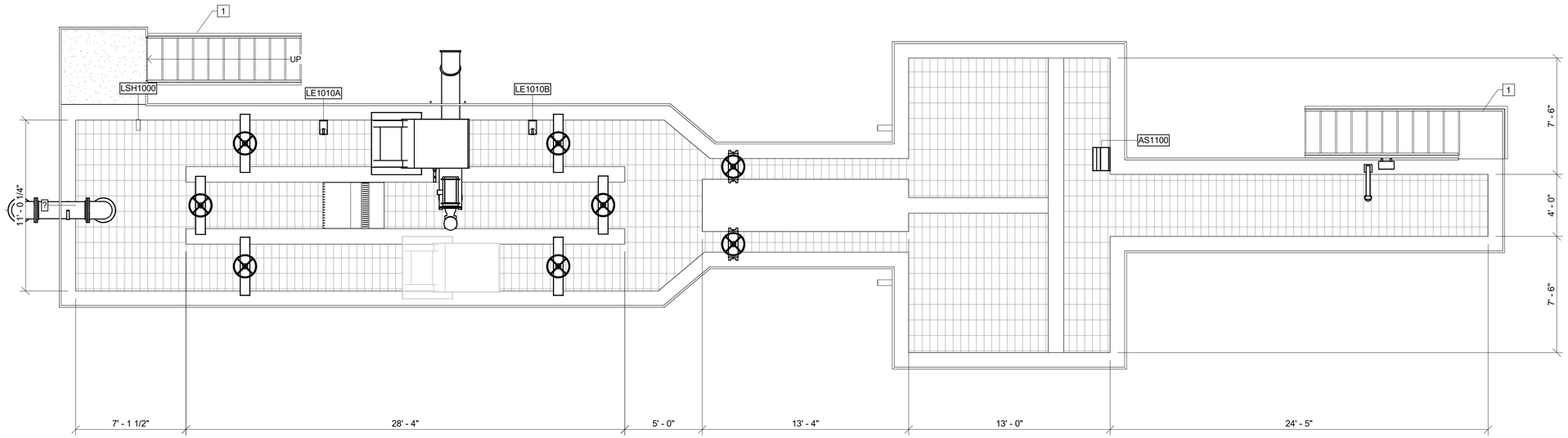
D-101

Autodesk Docs://CAUG230002 Cary Station WRF/HEADWORK.rvt
10/4/2024 4:45:32 PM

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KEY NOTES: [#]

1. ALUMINUM STAIRS (TYP.)



2B **PLAN**
D-102 SCALE: 1/4" = 1'-0"

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1" 0" .5" 1"

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Drawn By:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

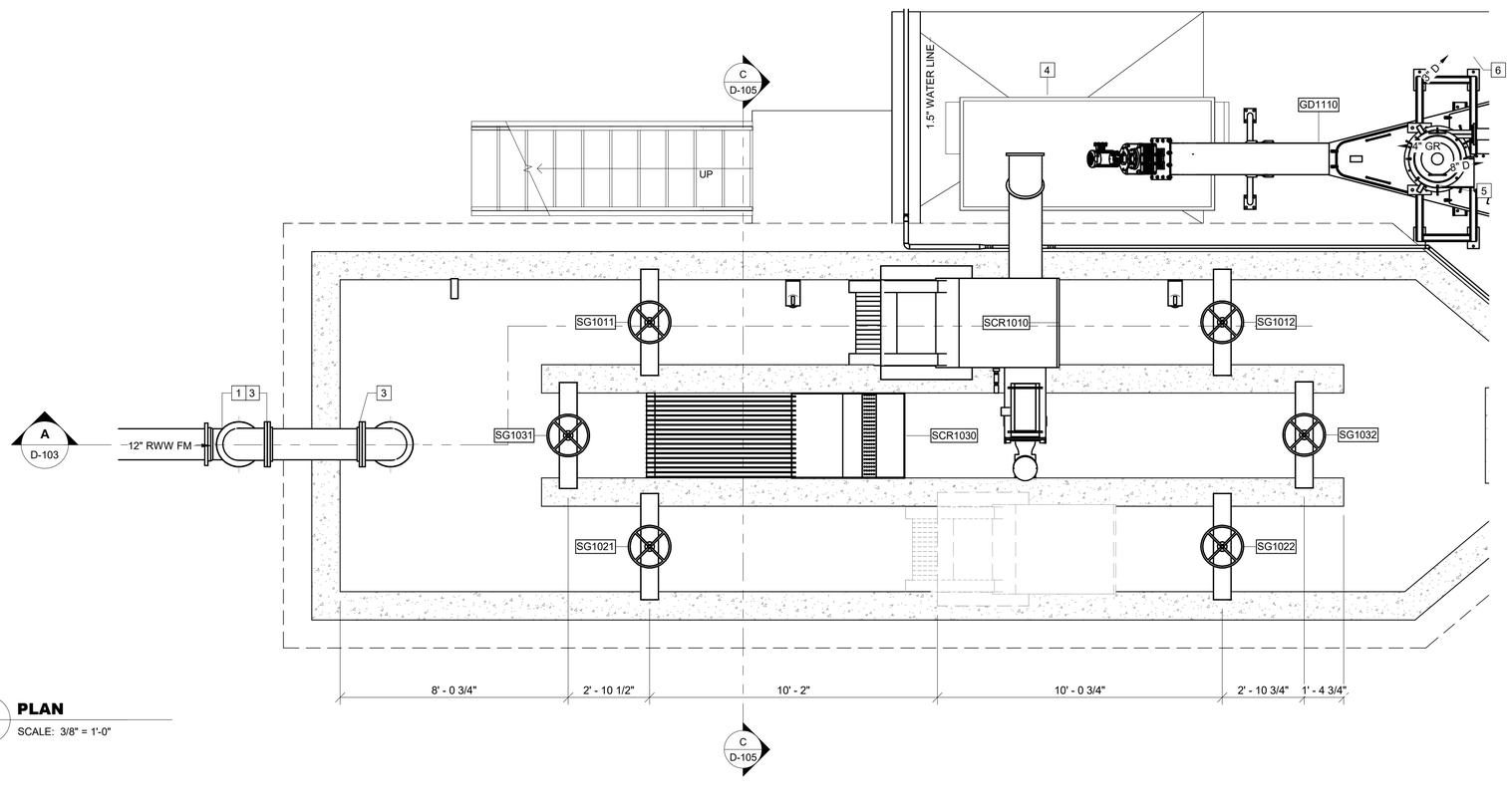
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

HEADWORK- UPPER LEVEL

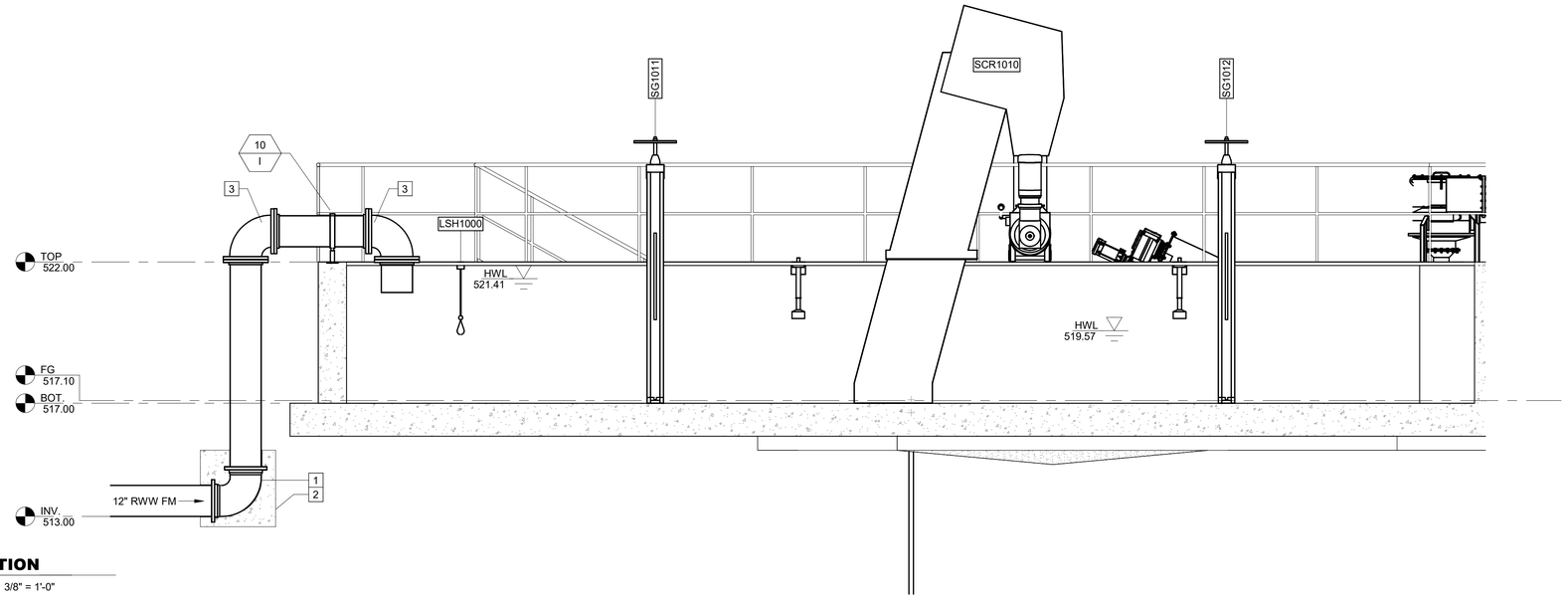
D-102

Autodesk Docs://CAUG230002 Cary Station WRF/HEADWORK.rvt
10/4/2024 4:45:35 PM

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2C D-101 **PLAN**
SCALE: 3/8" = 1'-0"



A D-103 **SECTION**
SCALE: 3/8" = 1'-0"

KEY NOTES: [#]

1. 12" 90° MJ BEND, RESTRAINED
2. CONCRETE ENCASEMENT
3. 12" 90 FL BEND
4. DUMPSTER
5. 8" 90° FL BEND
6. 3" 90° FL BEND

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Drawn By:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

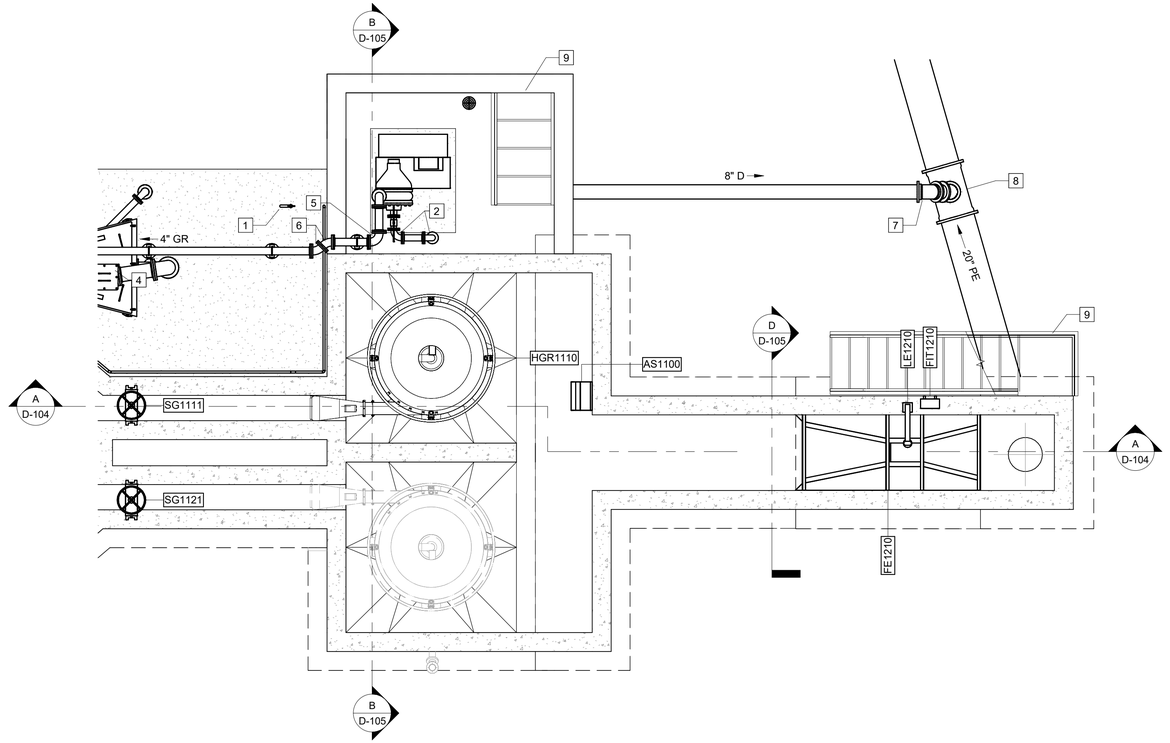
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

HEADWORK - PLAN & SECTION

D-103

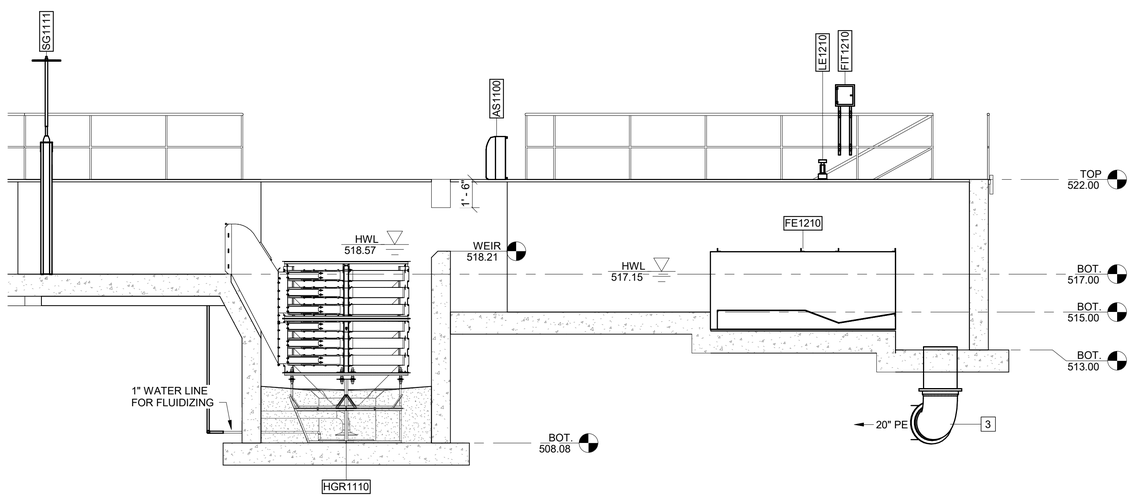
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2C / D-101 **PLAN**

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



A / D-104 **SECTION**

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

KEY NOTES: #

1. YARD HYDRANT
2. 3" 90° FL BEND
3. 20" 90° MJ BEND
4. 8" 90° FL BEND
5. 4" 90° FL BEND
6. 4" 45° FL BEND
7. 20" 45° MJ BEND
8. 20" X 8" MJ TEE
9. ALUMINUM STAIRS

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Designer:	LW
Drawn By:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

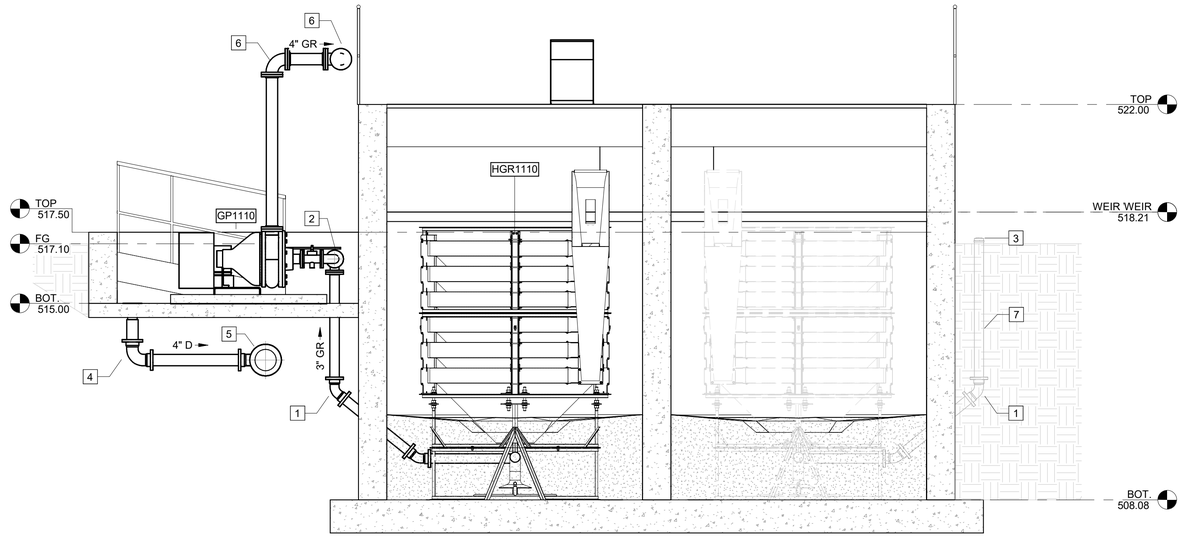
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HEADWORK- PLAN & SECTION

D-104

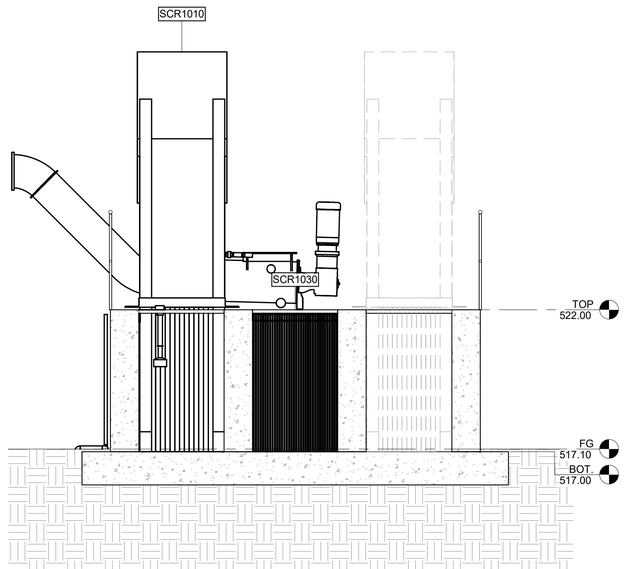
Autodesk Docs://CAUG230002 Cary Station WRF/HEADWORK.rvt
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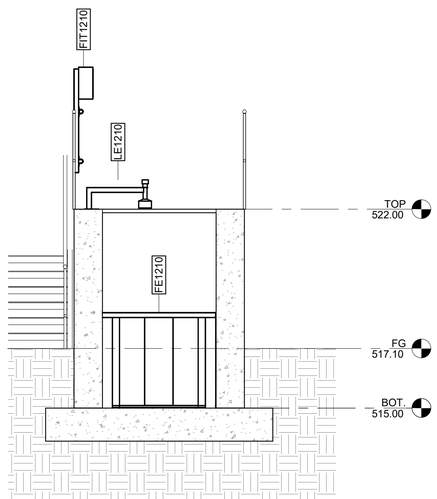
B D-104 **SECTION**

SCALE: 3/8" = 1'-0"



C D-105 **SECTION**

SCALE: 3/8" = 1'-0"



D D-105 **SECTION**

SCALE: 3/8" = 1'-0"

KEY NOTES: [#]

1. 3" 45 MJ BEND
2. 3" 90 FL BEND
3. 3" MJ PLUG
4. 4" 90 MJ BEND
5. 8" X 4" MJ TEE
6. 4" 90 FL BEND
7. INSTALL 3" GRIT LINE AND 1" FLUIDIZING WATER LINE FOR FUTURE GRIT SYSTEM, PLUG PIPE END.

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CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

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Designer:	LW
Drawn By:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

GEORGIA
REGISTERED
10/04/2024
No. PE037638
PROFESSIONAL
ENGINEER
LIANG WANG

HEADWORK - SECTIONS

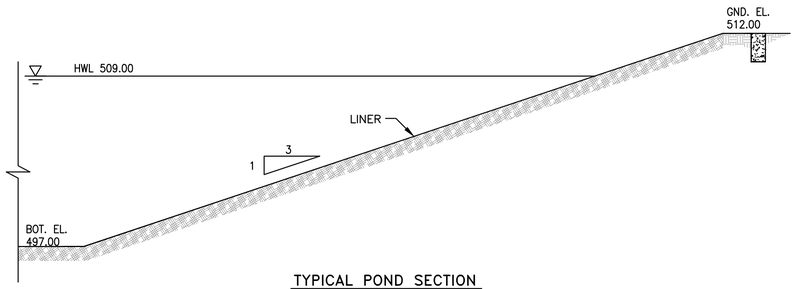
D-105

Autodesk Docs://CAUG230002 Cary Station WRF/HEADWORK.rvt
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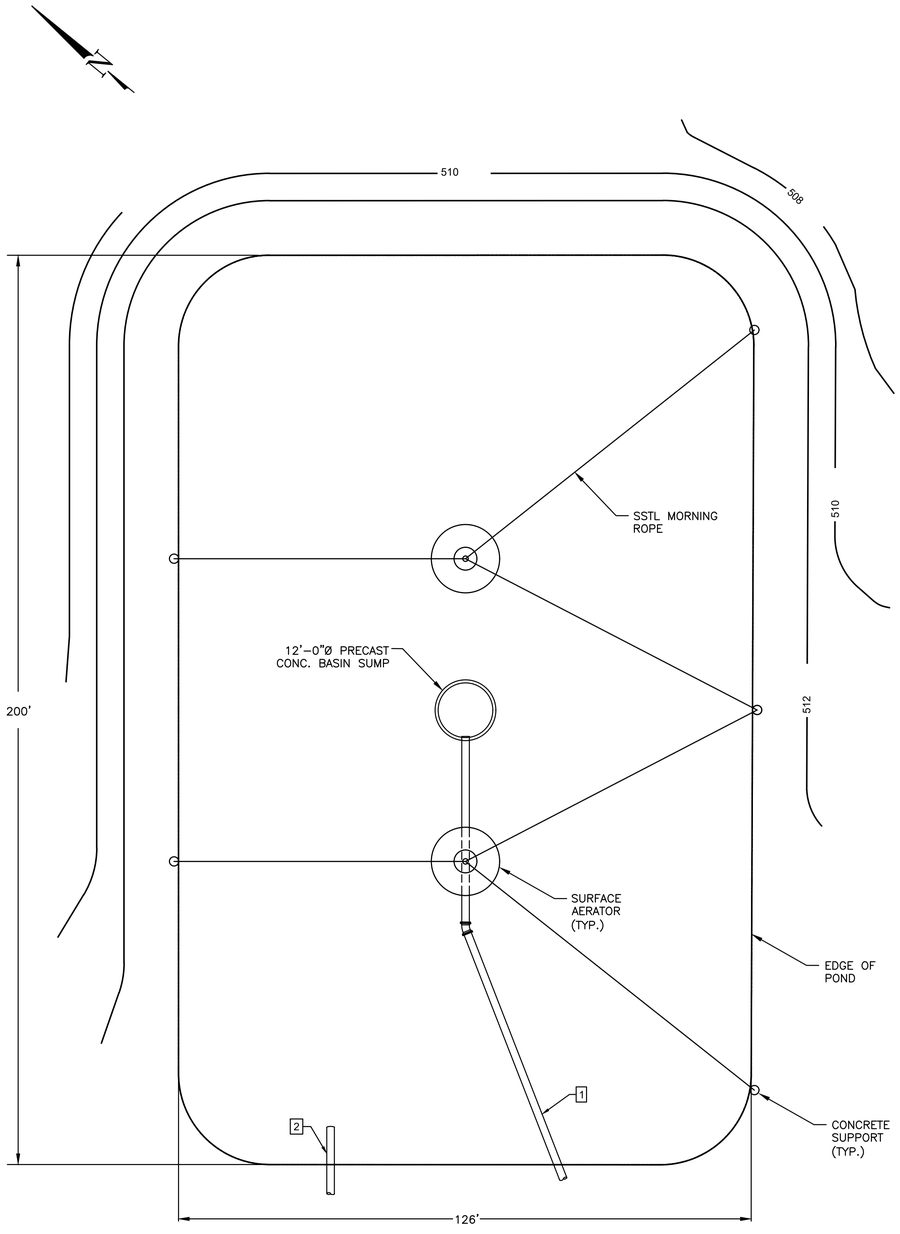
KEY NOTES:

1. 20" DIP EQ BASIN EFFLUENT
2. 20" DIP EQ BASIN INFLUENT



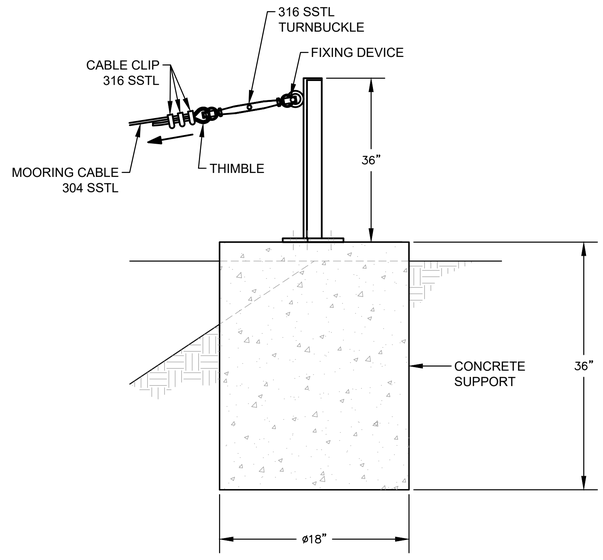
TYPICAL POND SECTION

SCALE: 3/16"=1'-0"



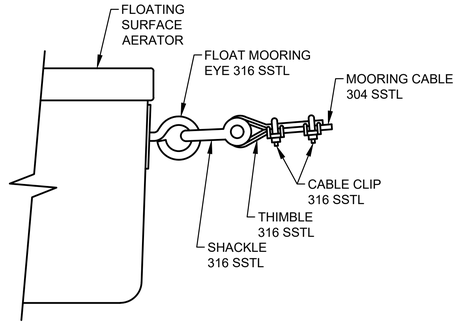
EQUALIZATION BASIN PLAN VIEW

SCALE: 1"=200'



DETAIL – MOORING CABLE & CONC. SUPPORT

NOT TO SCALE



DETAIL – FLOAT MOORING DETAIL

NOT TO SCALE

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DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

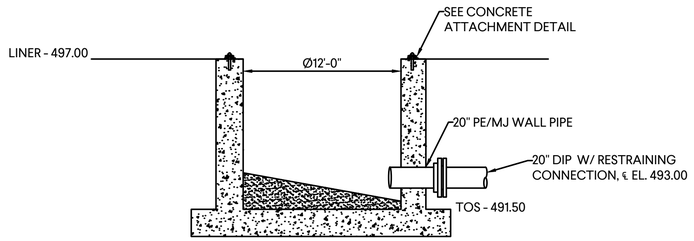
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

EQUALIZATION BASIN

D-201

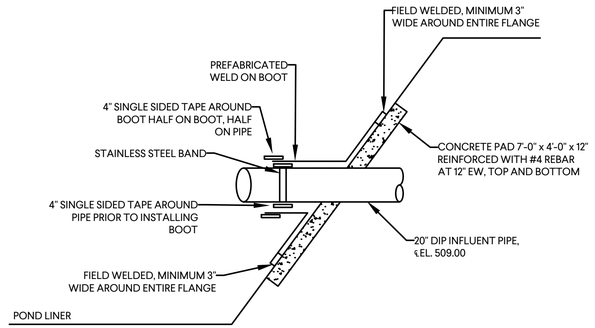
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PLOTTED: Oct 04, 2024 4:47pm

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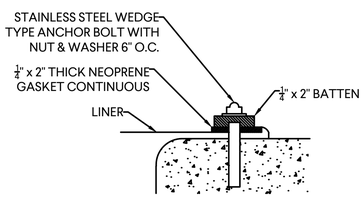
EQ BASIN CONCRETE SUMP

N.T.S



WELD ON BOOT DETAIL

N.T.S



TYPICAL CONCRETE ATTACHMENT

N.T.S

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DRAWN BY:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

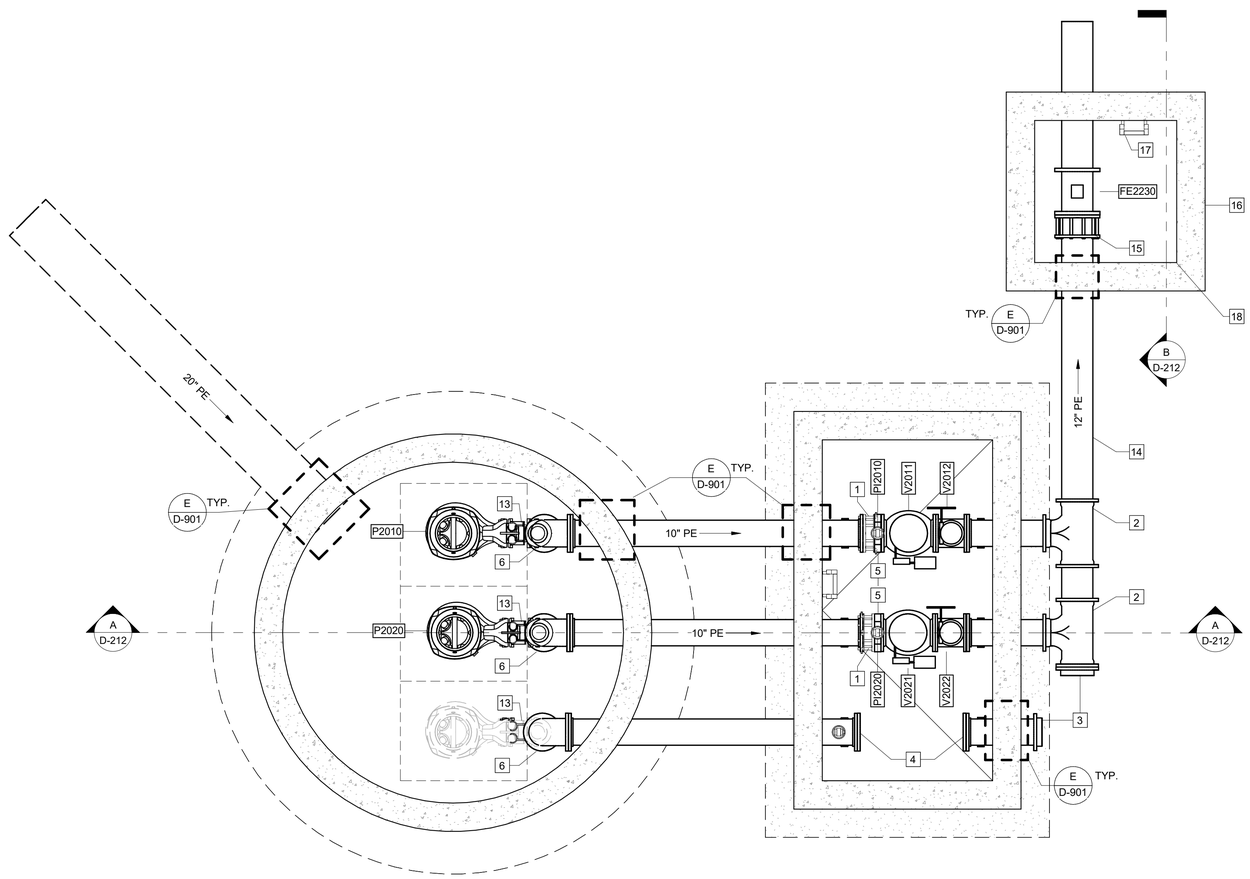
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

EQUALIZATION BASIN - DETAILS

D-202

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWGs\+PLANS\01 Bid Drawings\10 PROCESS\D-201 EQ-Basin.dwg
PLOTTED: Oct 04, 2024 - 4:41pm

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KEY NOTES: [#]

1. 10" FL COUPLING ADAPTER (RESTRAINED)
2. 12" X 10" MJ TEE (RESTRAINED)
3. 12" PLUG (RESTRAINED)
4. 10" FL BLIND
5. 10" ANNULAR SEAL
6. 10" 90° FL BEND
7. MINIMUM 6" NO.57 STONE BASE
8. 10" X 6" ECCENTRIC REDUCER
9. 12' ⌀ PRECAST CONCRETE WETWELL
10. 6' X 12" PRECAST VALVE VAULT
11. 4" 304 SSTL VENT SCREEN W/ RETAINING FL
12. GRATING
13. TWO (2) - 2" SCH 40 304 SSTL GUIDE RAIL
14. 12" PE X PE PIPE, LENGTH = 10 FEET
15. 12" FL COUPLING ADAPTER
16. 5' X 5' PRECAST CONCRETE VAULT
17. ACCESS STEPS
18. DOUBLE LEAF HATCH

3A D-601 **LOWER LEVEL**

SCALE: 3/8" = 1'-0"

GMC
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Augusta, GA 30901
T 706.251.9099

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Ex.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
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90% Submittal	05.13.2024
100% Submittal	10.04.2024
Bid Set	09.03.2025
Conformed Set	
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Engineer:	LW/DP
Designer:	LW
Drawn By:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

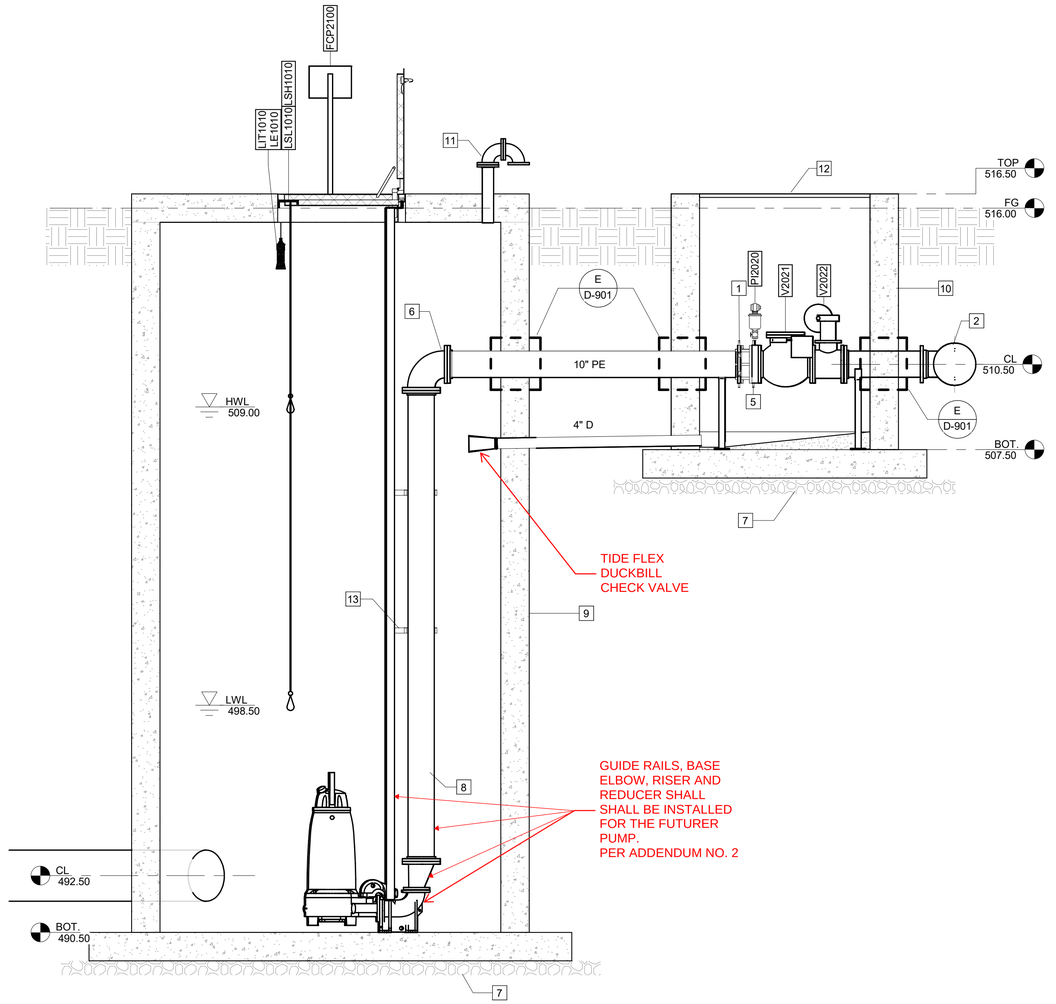
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

INFLUENT PUMP STATION AND FLOW METER VAULT - PLAN

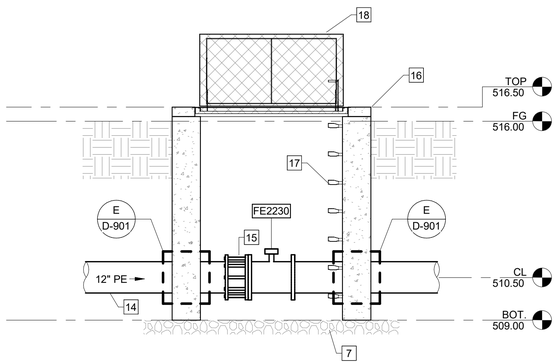
D-211

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A **SECTION**
D-211 SCALE: 3/8" = 1'-0"



B **SECTION**
D-211 SCALE: 3/8" = 1'-0"

KEY NOTES: [#]

1. 10" FL COUPLING ADAPTER (RESTRAINED)
2. 12" X 10" MJ TEE (RESTRAINED)
3. 12" PLUG (RESTRAINED)
4. 10" FL BLIND
5. 10" ANNULAR SEAL
6. 10" 90° FL BEND
7. MINIMUM 6" NO.57 STONE BASE
8. 10" X 6" ECCENTRIC REDUCER
9. 12' Ø PRECAST CONCRETE WETWELL
10. 6' X 12" PRECAST VALVE VAULT
11. 4" 304 SSTL VENT SCREEN W/ RETAINING FL
12. GRATING
13. TWO (2) - 2" SCH 40 304 SSTL GUIDE RAIL
14. 12" PE X PE PIPE, LENGTH = 10 FEET
15. 12" FL COUPLING ADAPTER
16. 5' X 5' PRECAST CONCRETE VAULT
17. ACCESS STEPS
18. DOUBLE LEAF HATCH

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Drawn By:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

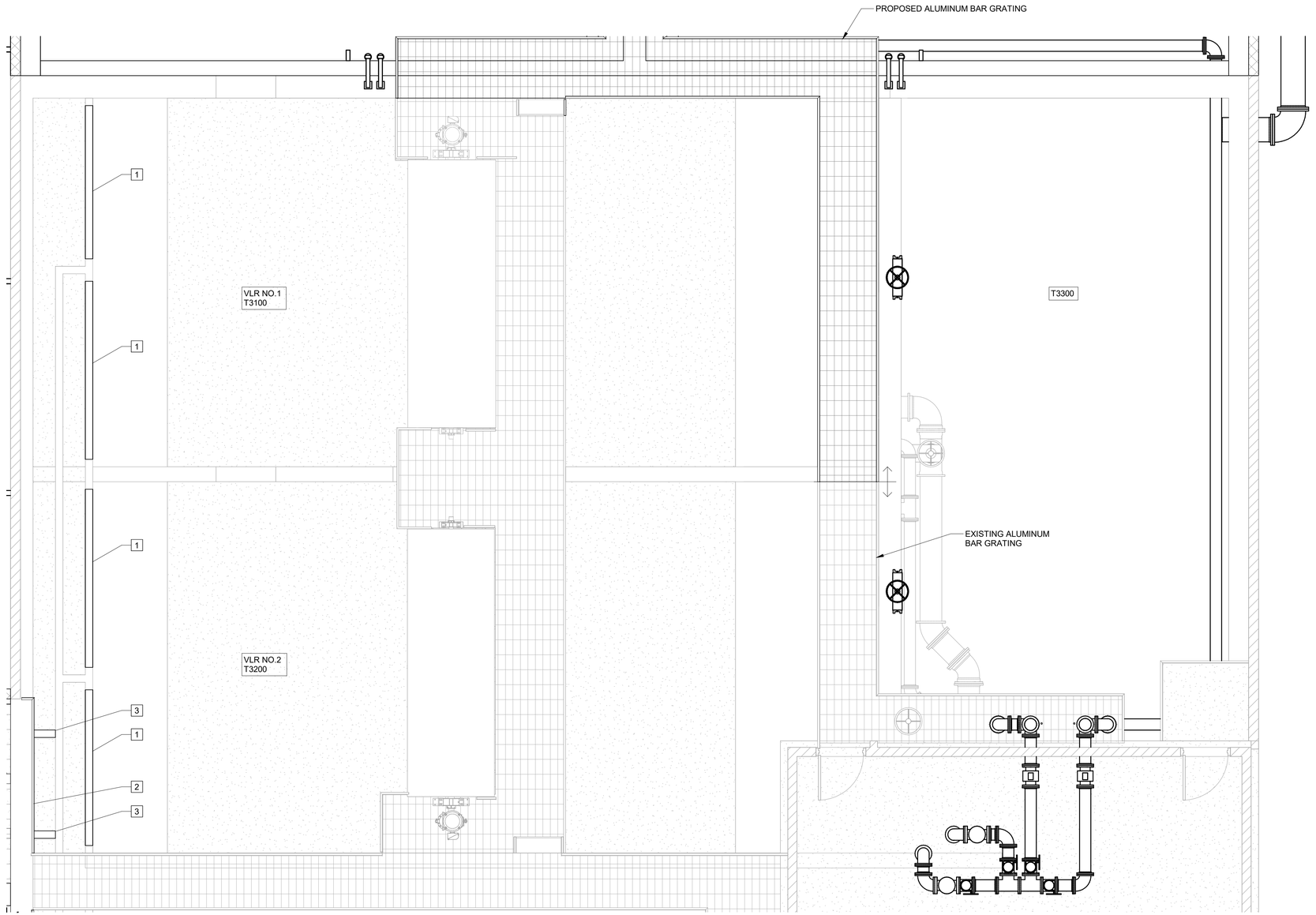
GEORGIA REGISTERED 10/04/2024 No. PEG037638 PROFESSIONAL ENGINEER LIANG WANG

INFLUENT PUMP STATION AND FLOW METER VAULT - SECTIONS

D-212

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1 UPPER PLAN
1/4" = 1'-0"

KEY NOTES: #

1. DEMOLISH EXISTING WEIRS. RAISE THE WALL ELEVATION TO 528.25, FLUSH WITH EXISTING TOP OF CHANNEL WALL.
2. PROPOSED HANDRAIL
3. BRICK BLOCK, FROM BOTTOM OF CHANNEL TO TOP OF CHANNEL.

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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

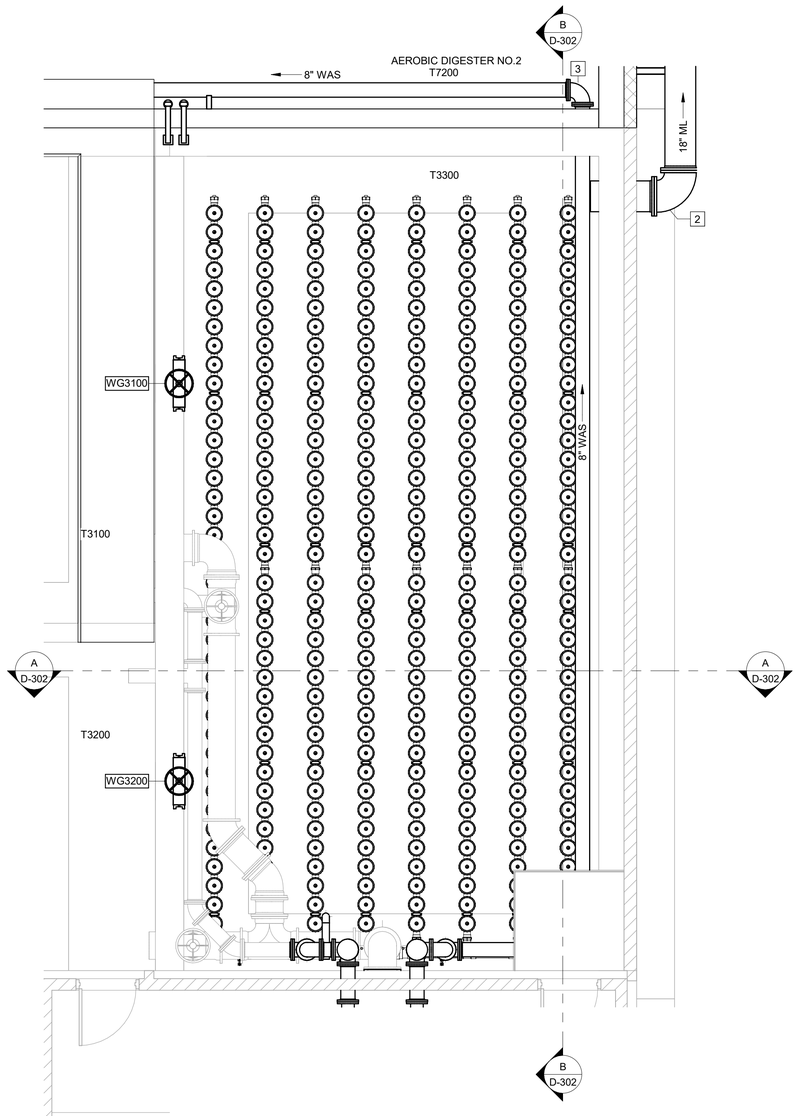
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REGISTERED
10/04/2024
No. PE037638
PROFESSIONAL
ENGINEER
LIANG WANG

VLR BASINS - UPPER PLAN

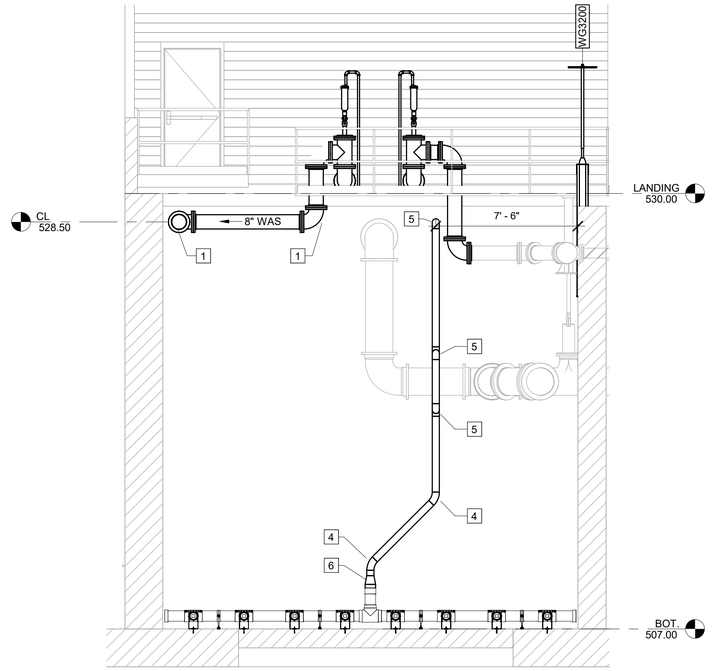
D-301

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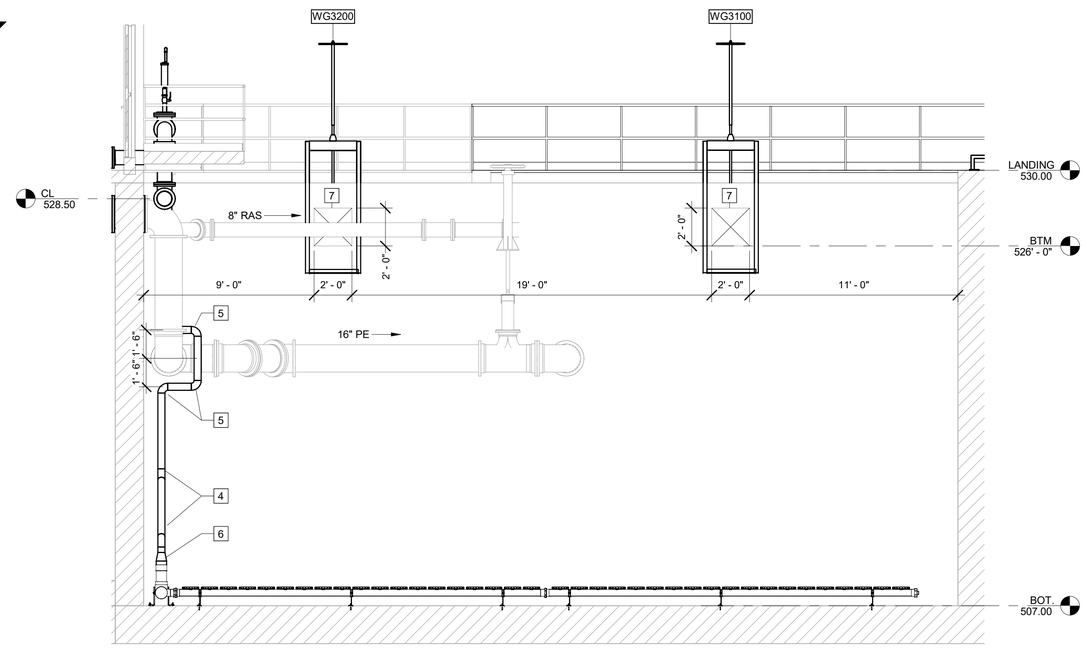
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2 LOWER PLAN
D-002 SCALE: 1/4" = 1'-0"



A SECTION
D-302 SCALE: 1/4" = 1'-0"



B SECTION
D-302 SCALE: 1/4" = 1'-0"

KEY NOTES: #

1. 8" 90° FL BEND
2. 18" 90° FL BEND
3. 8" 90° FL BEND
4. 4" 45° BEND SSTL
5. 4" 90° BEND SSTL
6. 6" x 4" REDUCER SSTL
7. CREATE 24" X 24" OPENING ON EXISTING WALL.

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Drawn By:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

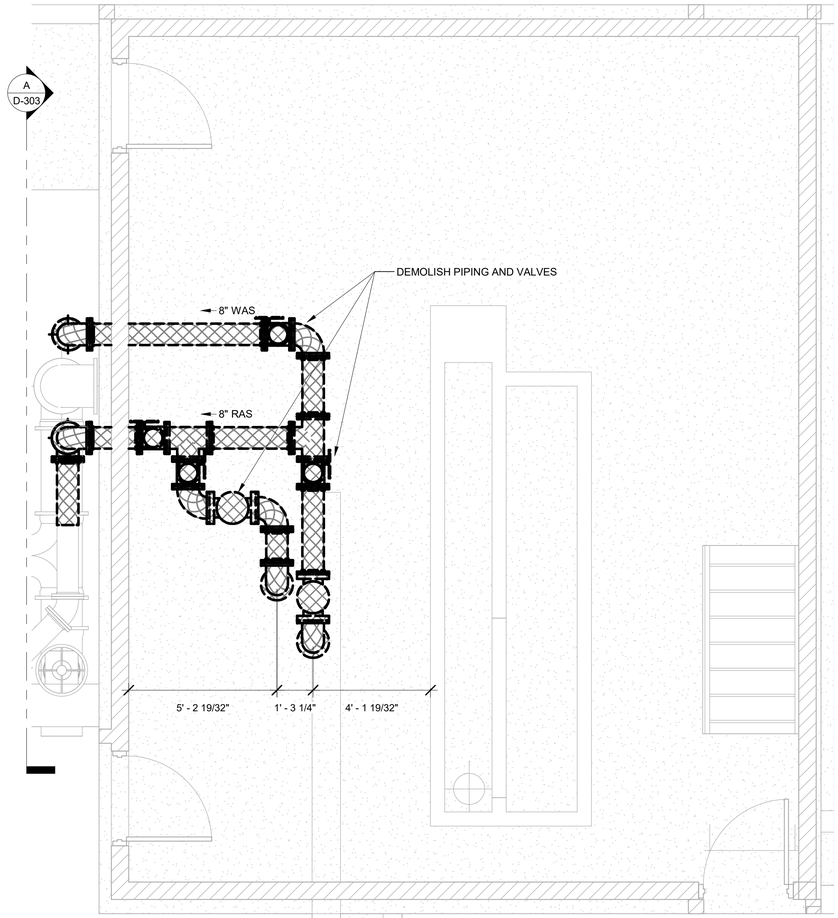
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

AERATION BASIN NO.3 - LOWER PLAN & SECTIONS

D-302

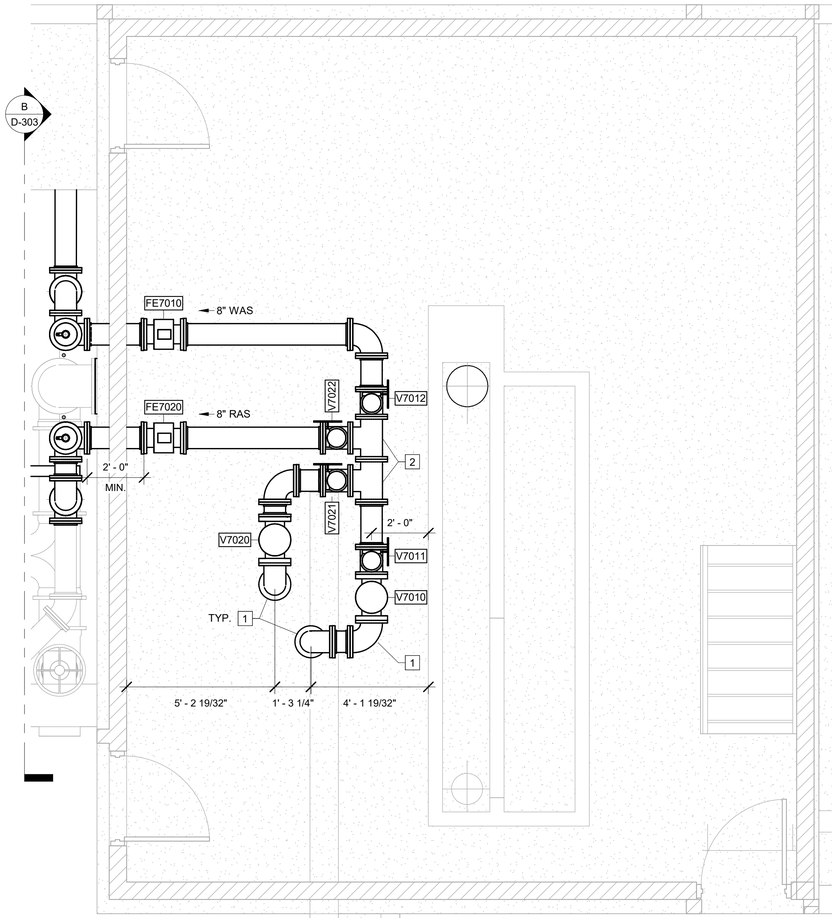
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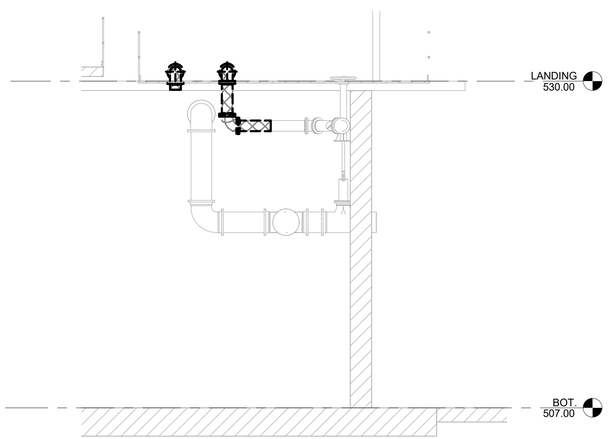
1 DEMOLITION PLAN

D-303 SCALE: 3/8" = 1'-0"



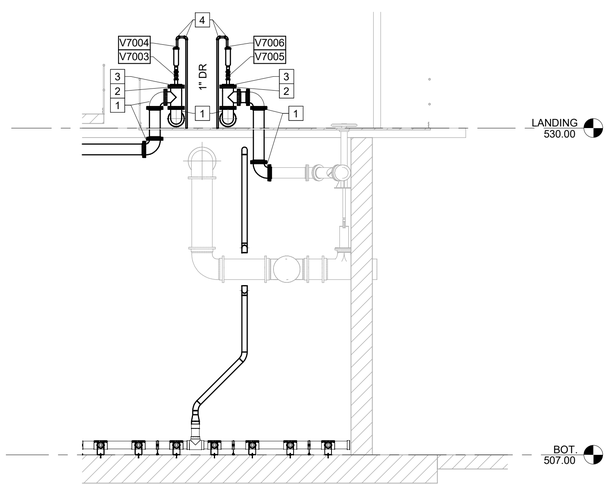
2 PLAN

D-303 SCALE: 3/8" = 1'-0"



A SECTION

D-303 SCALE: 3/16" = 1'-0"



B SECTION

D-303 SCALE: 3/16" = 1'-0"

KEY NOTES: #

1. 8" 90° FL BEND
2. 8" FL TEE
3. 8" BLIND FLANGE
4. 1" 90° BEND

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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

RAS/WAS PIPE GALLERY - PLAN AND SECTION

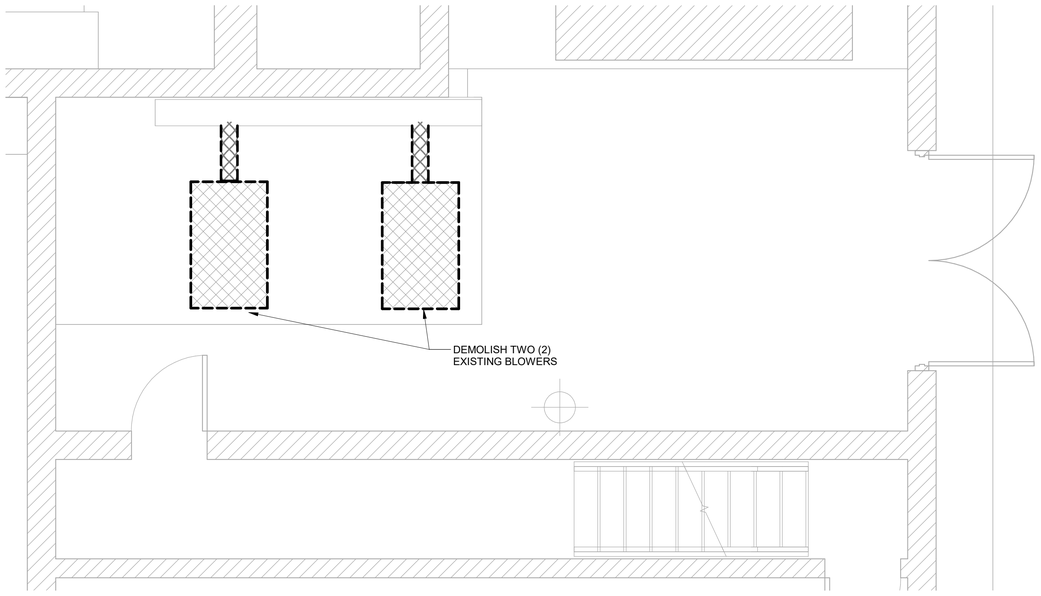
D-303

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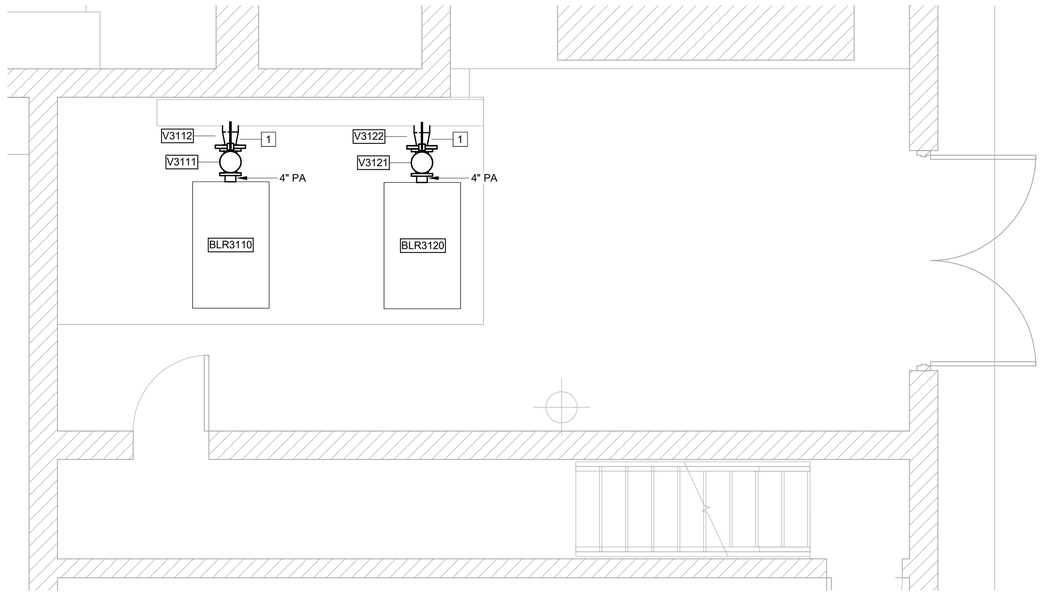
KEY NOTES: [#]

1. 6" X 4" REDUCER



1 D-304 **DEMOLITION PLAN**

SCALE: 3/8" = 1'-0"



2 D-304 **PLAN**

SCALE: 3/8" = 1'-0"

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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

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BLOWER GALLERY - PLANS

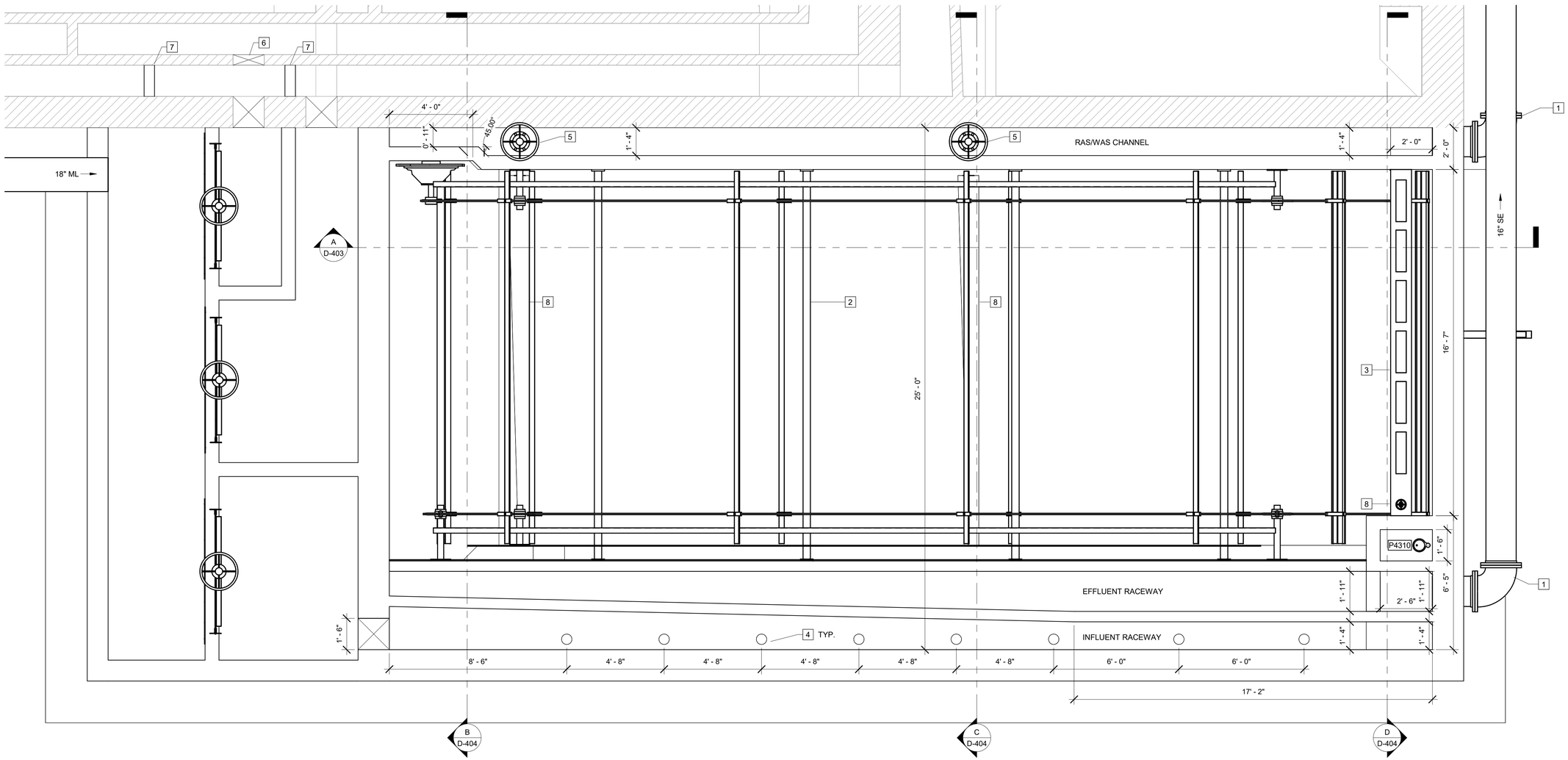
D-304

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10/4/2024 10:41:40 AM

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KEY NOTES: [#]

1. 16" 90° BEND
2. CHAIN AND SCRAPER COLLECTION SYSTEM
3. SCUM PIPE
4. ORIFICE TUBE
5. SLUDGE CONTROL VALVE
6. ADD 18" X 18" OPENING AT EXISTING WALL BOTTOM ELEVATION 524.58
7. BRICK BLOCK, FROM BOTTOM OF CHANNEL TO TOP OF CHANNEL
8. SCUM CONTROL VALVE
9. SLUDGE HEADER, WIDTH VARIES



1 D-401 **PLAN**

SCALE: 3/8" = 1'-0"

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CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

GEORGIA REGISTERED PROFESSIONAL ENGINEER
10/04/2024
No. PE037638
LIANG WANG

CLARIFIER AND SPLITTER BOX - LOWER PLAN

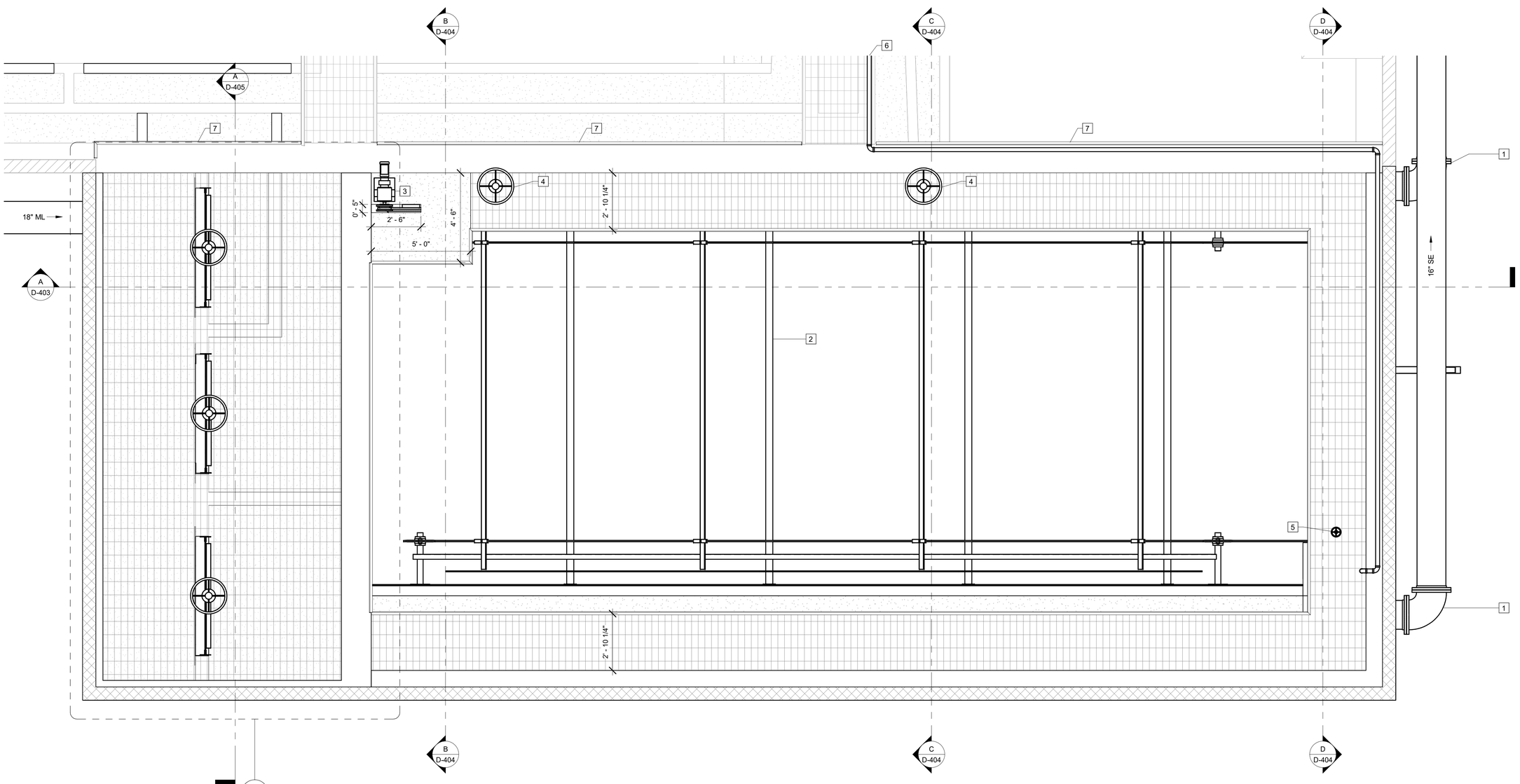
D-401

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KEY NOTES: [#]

1. 16" 90° BEND
2. CHAIN AND SCRAPER COLLECTION SYSTEM
3. DRIVE UNIT
4. SLUDGE CONTROL VALVE
5. SCUM CONTROL VALVE
6. 3" PVC SCUM PIPE. RUN CONTINUOUSLY TO CONNECT TO EXISTING 3" SCUM PIPE.
7. ADD NEW ALUMINUM HAND RAIL.



1 D-402 **PLAN**
SCALE: 3/8" = 1'-0"

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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

GEORGIA
REGISTERED
10/04/2024
No. PE037638
PROFESSIONAL
ENGINEER
LIANG WANG

CLARIFIER AND SPLITTER BOX - UPPER PLAN

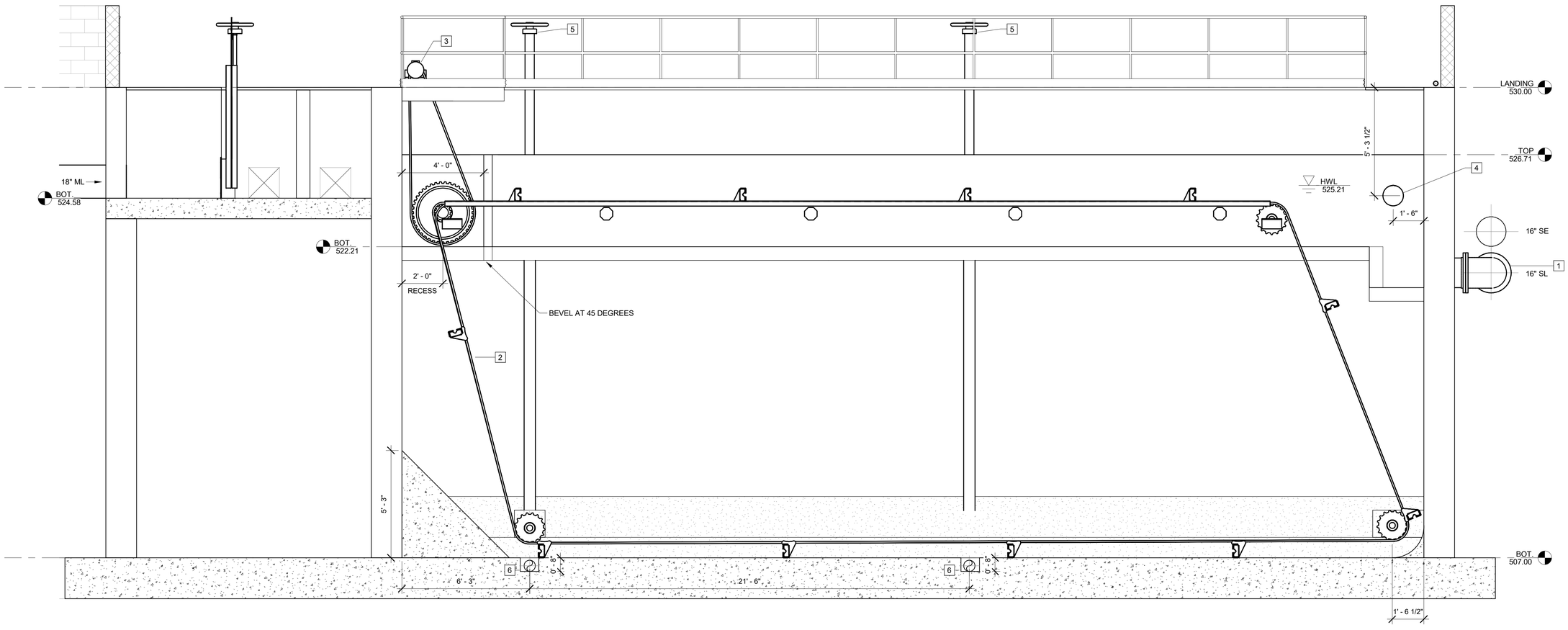
D-402

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KEY NOTES: #

1. 16" 90° BEND
2. CHAIN AND SCRAPER COLLECTION SYSTEM
3. DRIVE UNIT
4. SCUM PIPE
5. SLUDGE CONTROL VALVE
6. SLUDGE HEADER, WIDTH VARIES



A SECTION
D-401 SCALE: 3/8" = 1'-0"

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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

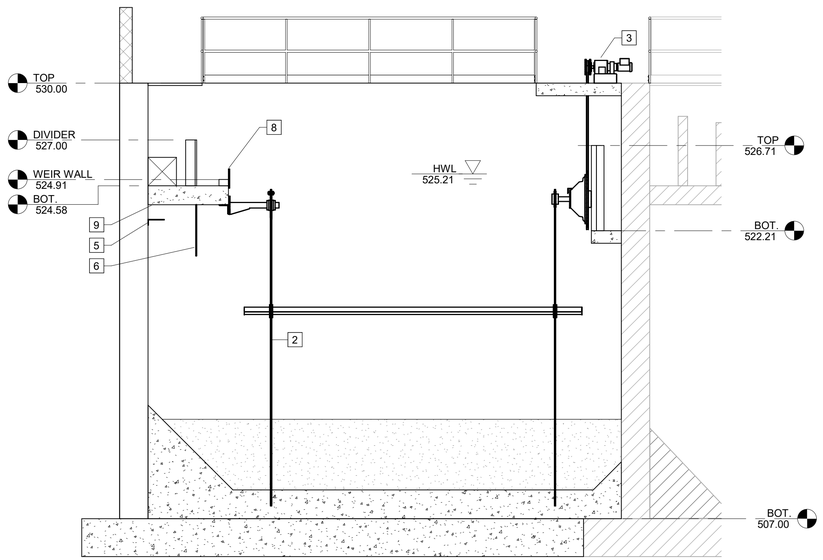
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CLARIFIER AND SPLITTER BOX - SECTIONS

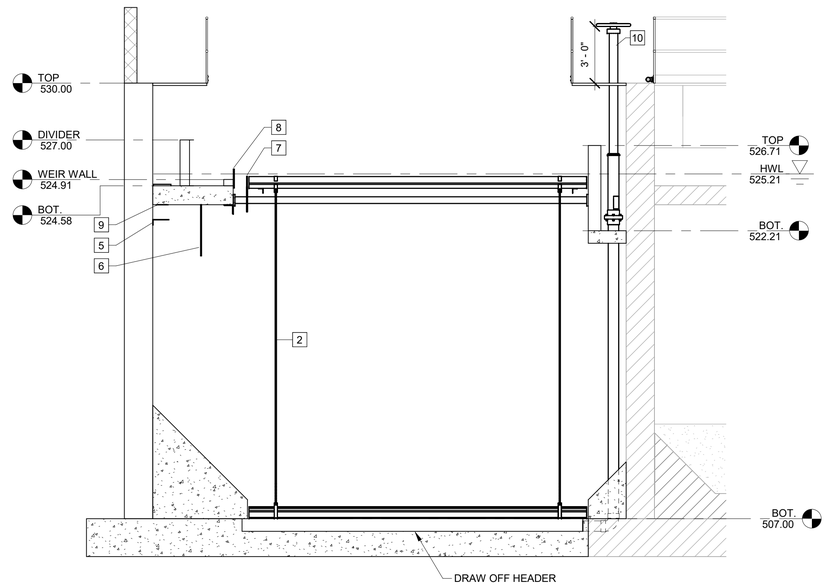
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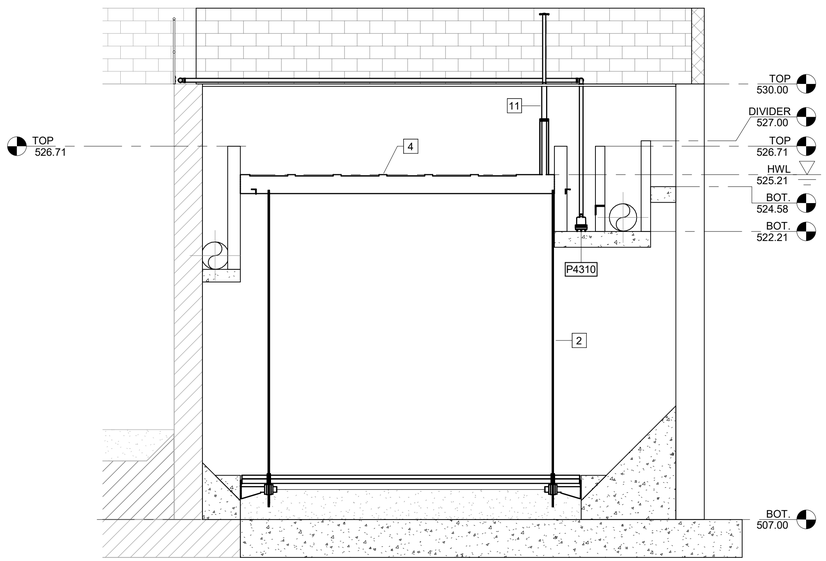
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B **SECTION**
D-404 SCALE: 1/4" = 1'-0"



C **SECTION**
D-404 SCALE: 1/4" = 1'-0"



D **SECTION**
D-404 SCALE: 1/4" = 1'-0"

KEY NOTES: [#]

1. 16" 90° BEND
2. CHAIN AND SCRAPER COLLECTION SYSTEM
3. DRIVE UNIT
4. SCUM PIPE
5. TARGET BAFFLE
6. SKIRT BAFFLE
7. SCUM BAFFLE
8. EFFLUENT WEIR
9. INLET ORIFICE TUBE
10. SLUDGE CONTROL VALVE
11. SCUM CONTROL VALVE

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Augusta, GA 30901
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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

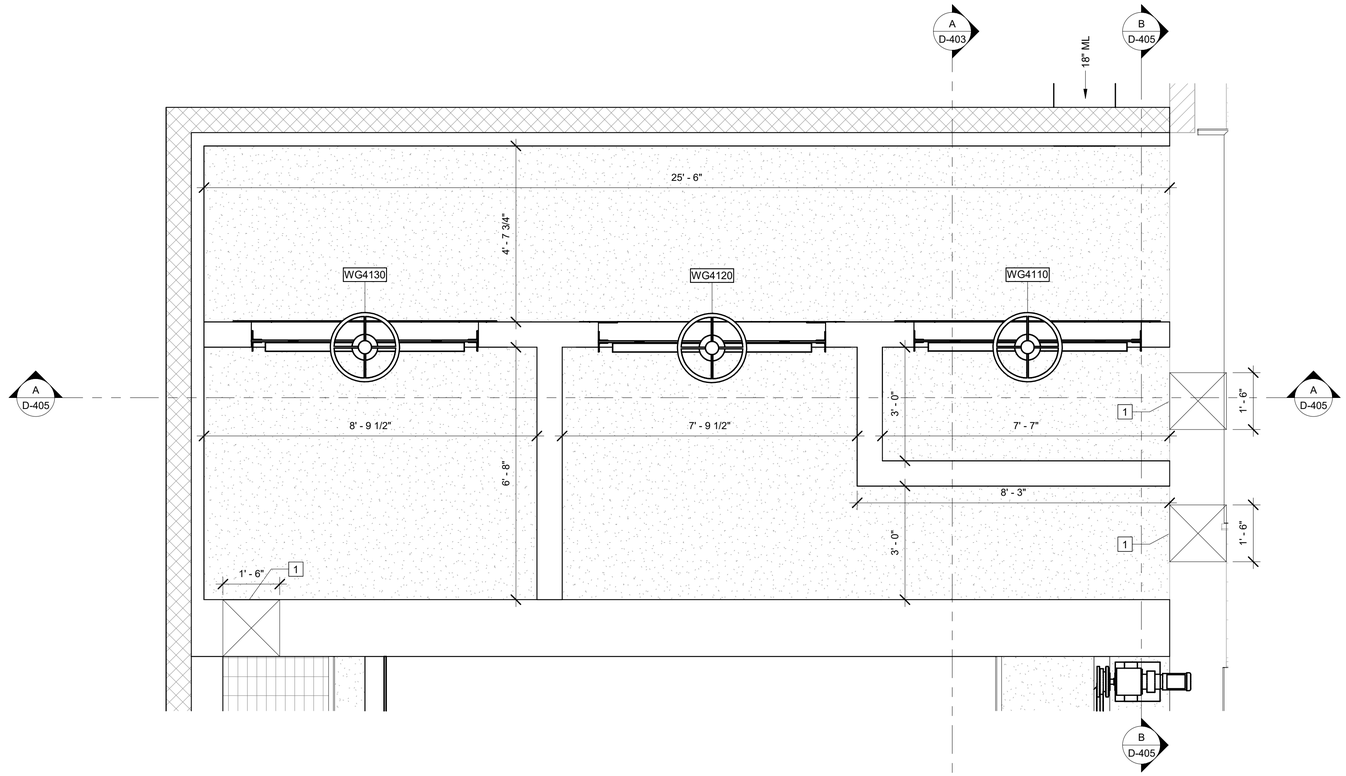
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

CLARIFIER AND SPLITTER BOX - SECTIONS

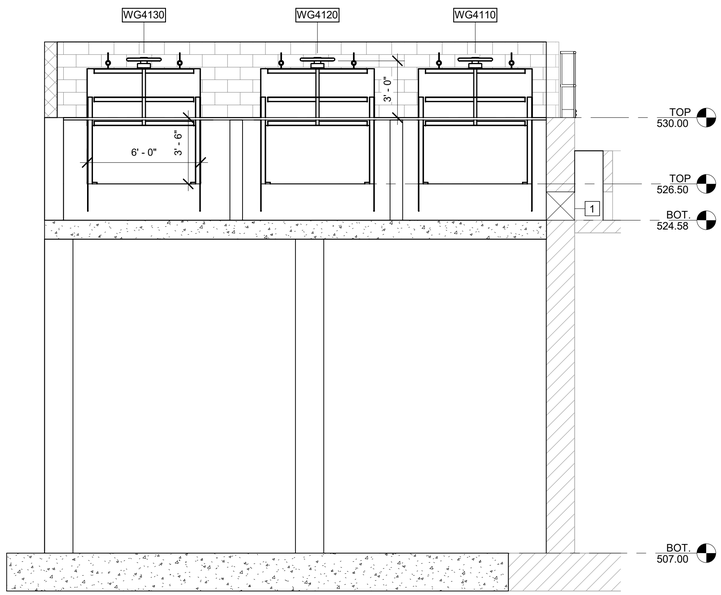
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10/4/2024 9:45:04 AM

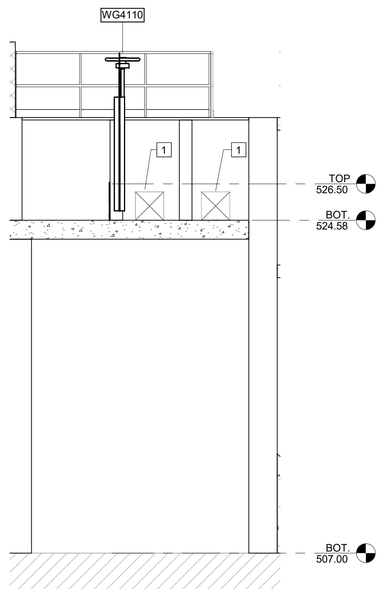
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3B D-402 **PLAN**
SCALE: 1/2" = 1'-0"



A D-402 **SECTION**
SCALE: 1/4" = 1'-0"



B 102 **SECTION**
SCALE: 1/4" = 1'-0"

KEY NOTES: #

1. 1.5' X 1.5' OPENING

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Ex.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
60% Submittal	03.15.2024
90% Submittal	05.13.2024
100% Submittal	10.04.2024
Bid Set	
Conformed Set	09.03.2025
Project Manager:	MP
Engineer:	LW/DP
Designer:	LW
Drawn By:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

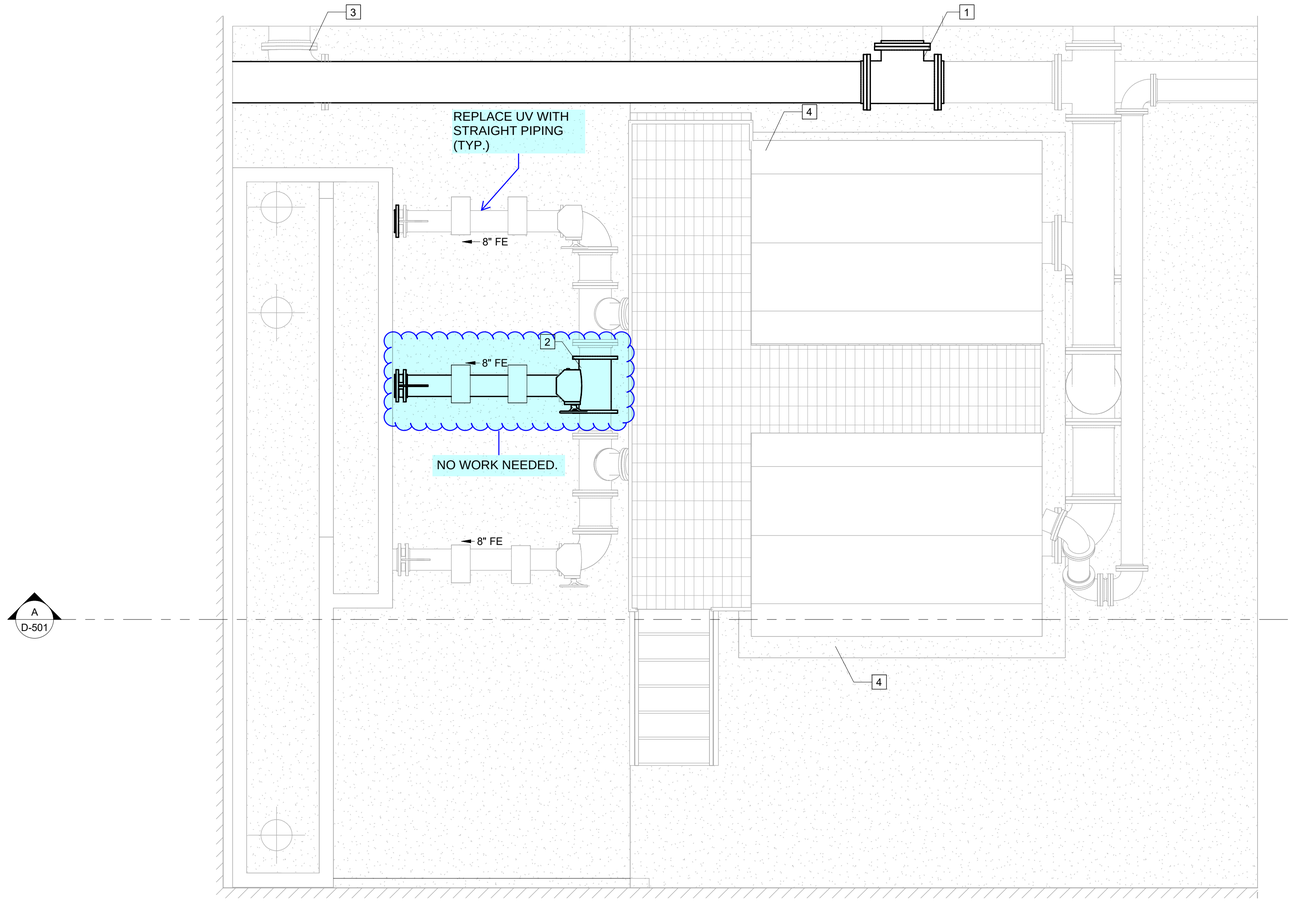
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG
Liang Wang

CLARIFIER AND SPLITTER BOX - PLAN & SECTIONS

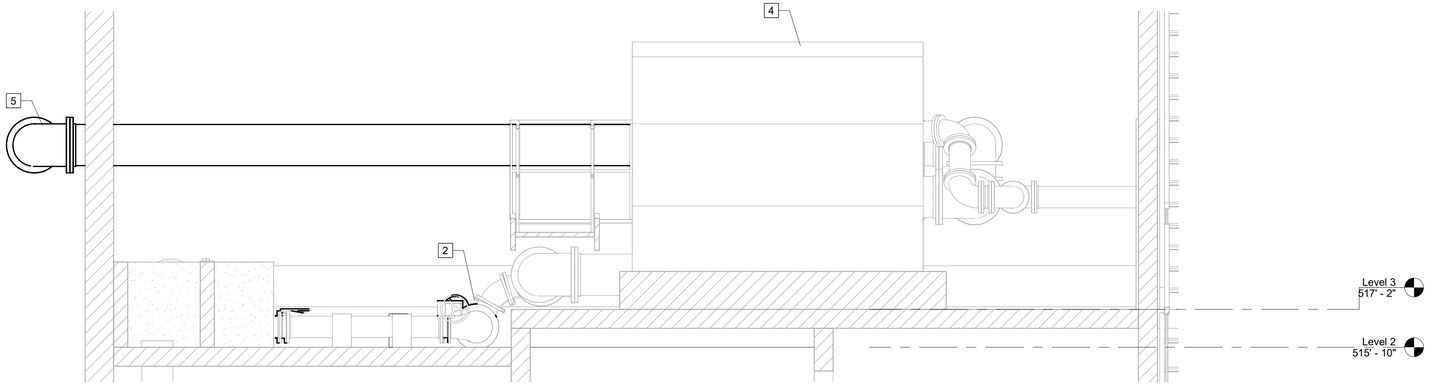
D-405

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10/4/2024 9:46:19 AM

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4 PLAN
D-002 SCALE: 3/8" = 1'-0"



A SECTION
D-501 SCALE: 3/8" = 1'-0"

KEY NOTES: #

1. 16" TEE TO REPLACE EXISITNG 16" 90° BEND
2. 8X12" TEE
3. 14" X 12" TEE TO REPLACE EXISTING 12" X 14" 90° REDUCING BEND
4. ADD FOUR (4) DISC FOR EACH FILTER
5. 16" 90° FL BEND

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

STATE OF GEORGIA
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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

FILTERS PLAN VIEW

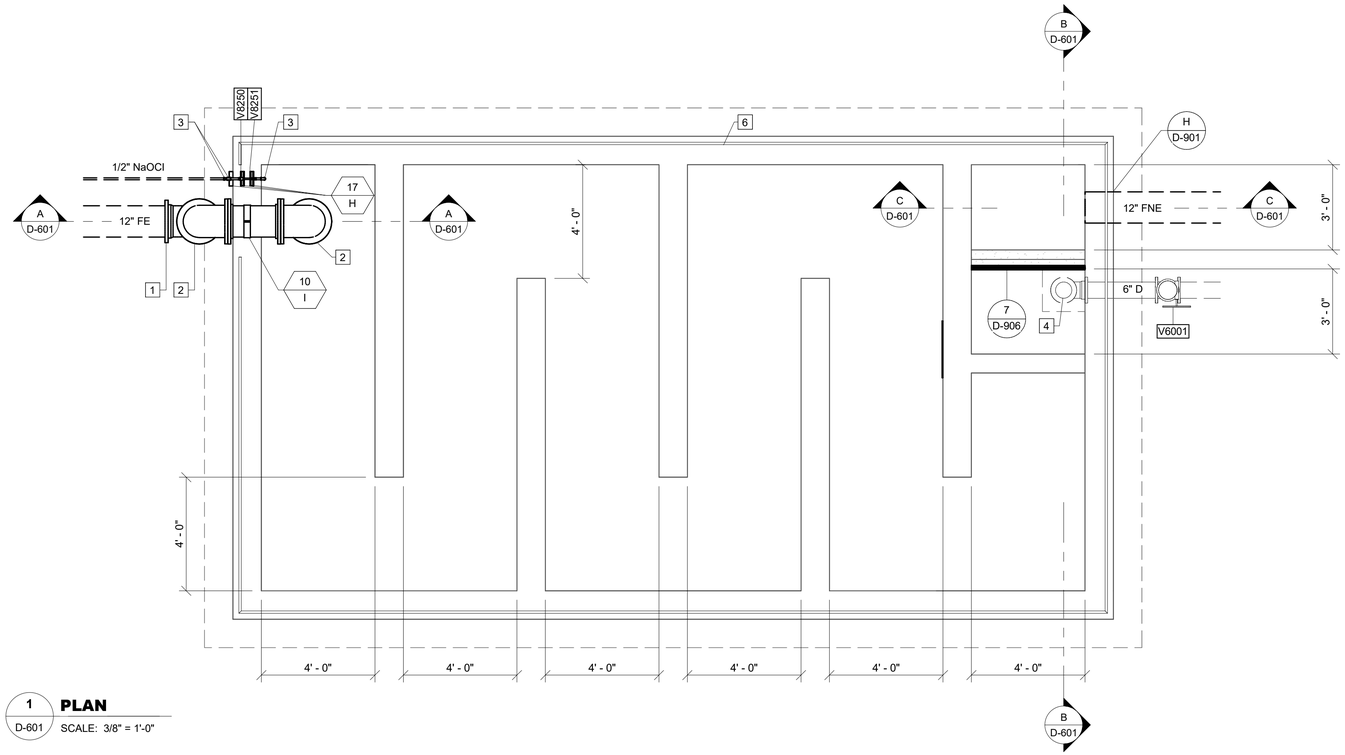
D-501

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10/4/2024 9:48:38 AM

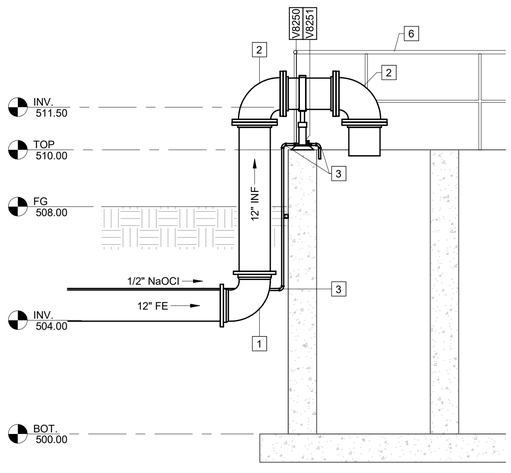
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KEY NOTES: [#]

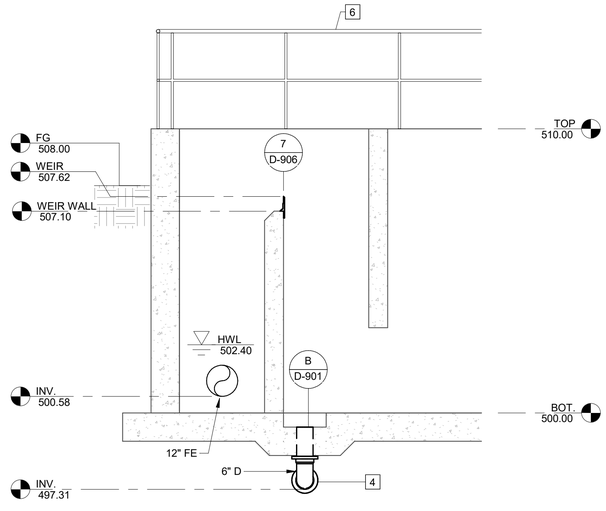
1. 12" 90° MJ BEND
2. 12" 90° FL BEND
3. 1/2" 90° BEND
4. 6" 90° MJ BEND, RESTRAINED
5. GROUT
6. HANDRAIL



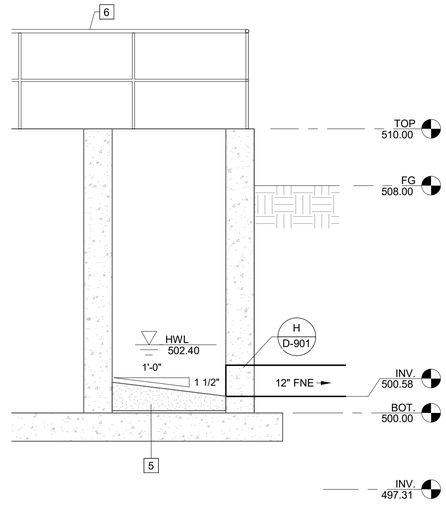
1 D-601 **PLAN**
SCALE: 3/8" = 1'-0"



A D-601 **SECTION**
SCALE: 3/8" = 1'-0"



B D-601 **SECTION**
SCALE: 3/8" = 1'-0"



C D-601 **SECTION**
SCALE: 3/8" = 1'-0"

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Ex.06.30.2026
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1" 0" .5" 1"

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Designer:	LW
Drawn By:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

CHLORINE CONTACT CHAMBER - PLAN

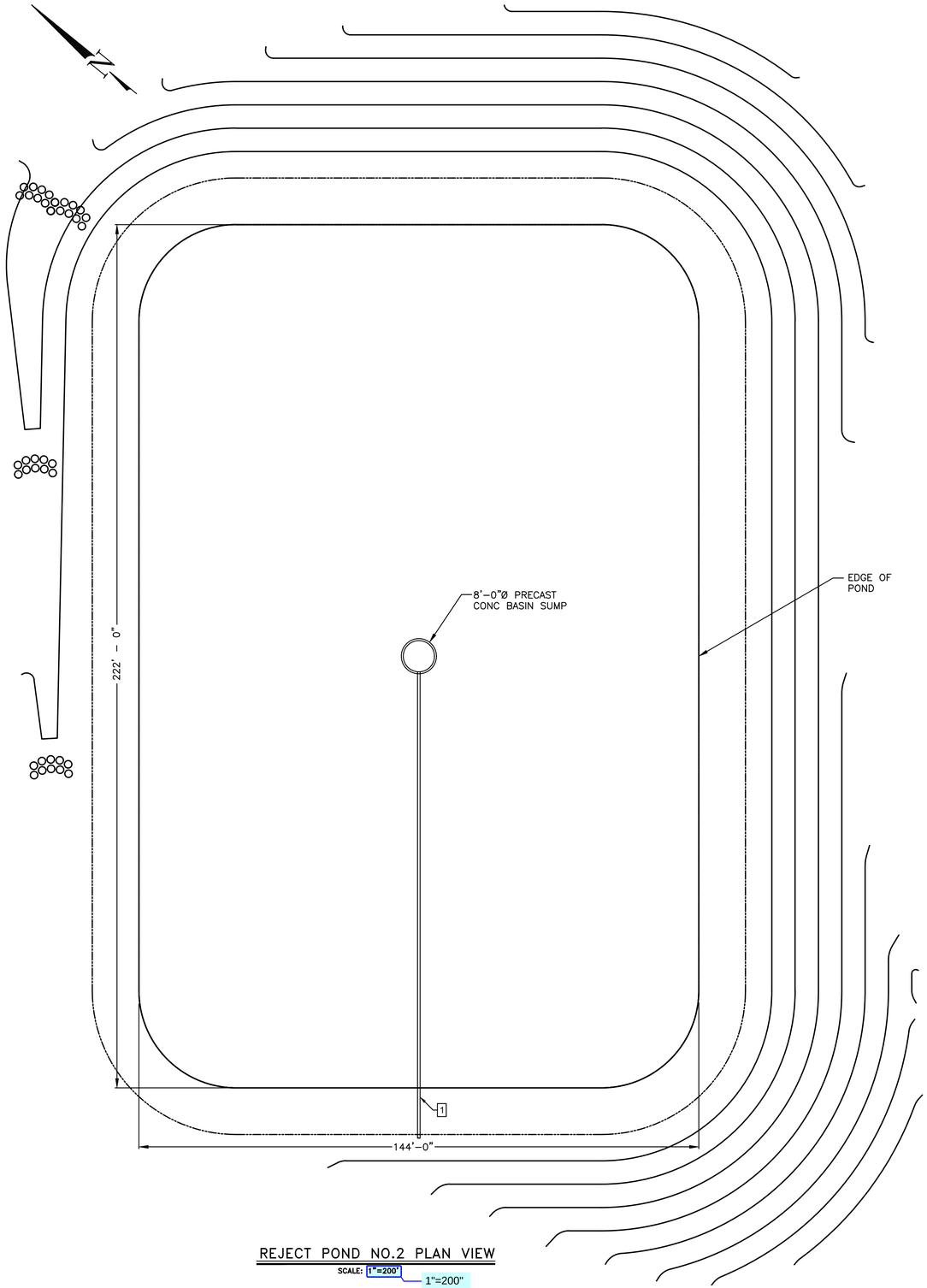
D-601

Autodesk Docs://CAUG230002 Cary Station WRF/Chlorine Contact Chamber.rvt
10/4/2024 9:51:04 AM

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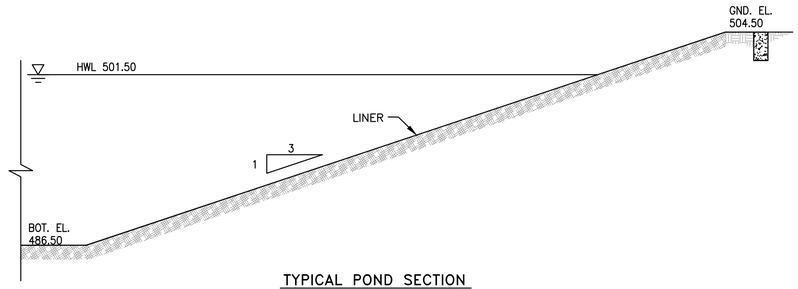
KEY NOTES:

1. 8" DIP LINE - CONNECT TO EXISTING REJECT POND



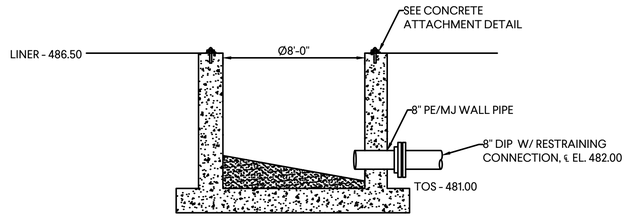
REJECT POND NO.2 PLAN VIEW

SCALE: 1"=200' 1"=200"



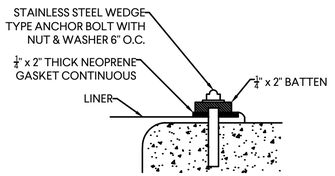
TYPICAL POND SECTION

SCALE: 3/16"=1'-0"



REJECT POND CONCRETE SUMP

N.T.S



TYPICAL CONCRETE ATTACHMENT

N.T.S

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

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BID SET		
CONFORMED SET	09.03.2025	
PROJECT MANAGER:		MP
ENGINEER:		LW/DP
DESIGNER:		LW
DRAWN BY:		DS

CAREY STATION URBAN WATER REUSE FACILITY

0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

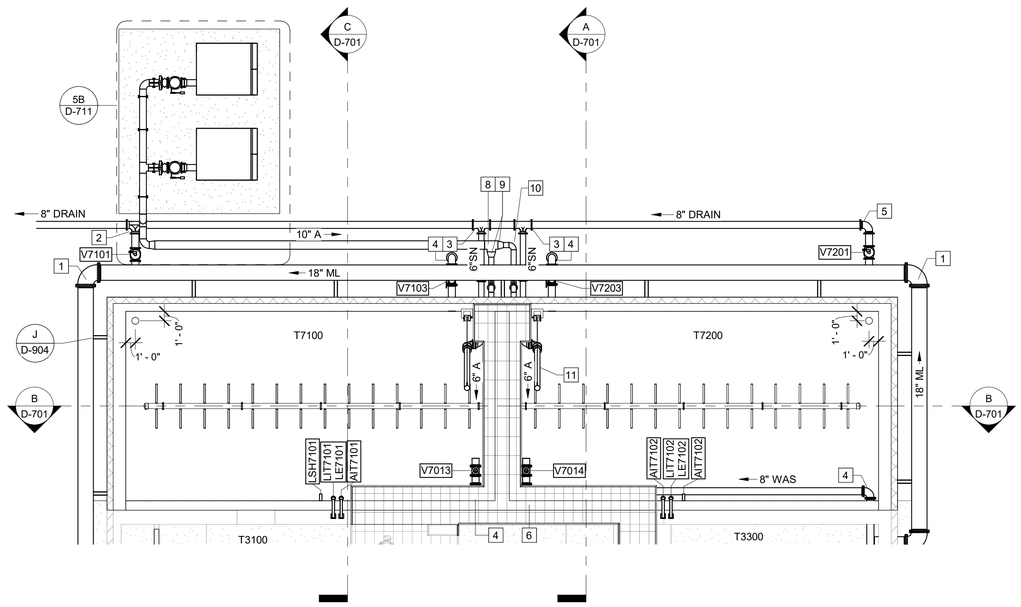
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

REJECT POND NO.2

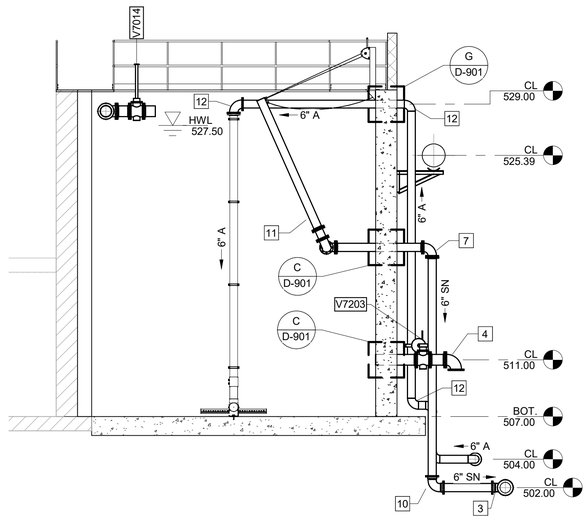
D-602

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\10 DWG\+PLANS\101 Bid Drawings\10 PROCESS\D-201 EQ-Basin.dwg
PLOTTED: Oct 09, 2024 - 4:43pm

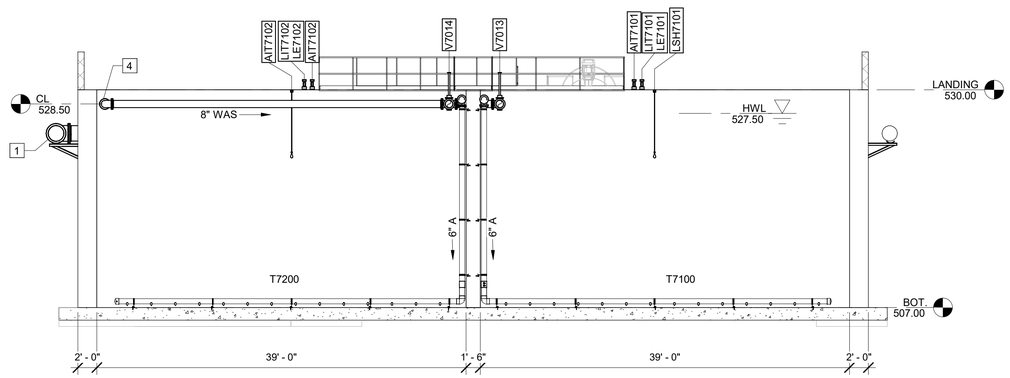
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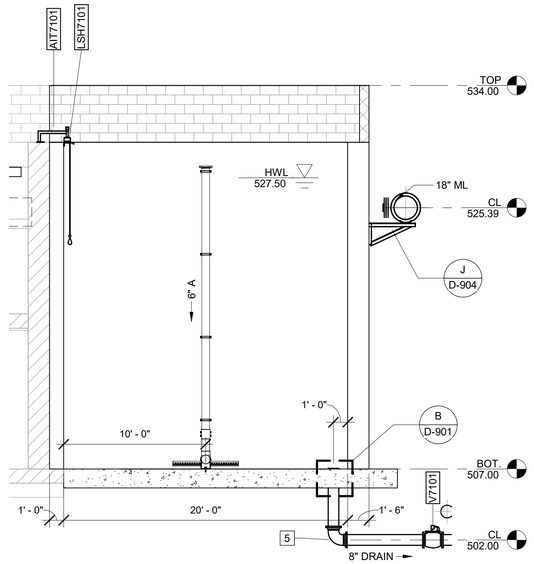
5 LOWER LEVEL
D-002 SCALE: 1/8" = 1'-0"



A SECTION
D-701 SCALE: 3/16" = 1'-0"



B SECTION
D-701 SCALE: 1/8" = 1'-0"



C SECTION
D-701 SCALE: 3/16" = 1'-0"

KEY NOTES: #

1. 18" 90° FL BEND
2. 8" MJ TEE
3. 8" X 6" MJ TEE
4. 8" 90° FL BEND
5. 8" 90° MJ BEND
6. 8" FL TEE
7. 6" 90° FL BEND
8. 10" TEE, SSTL
9. 10" X 6" DECREASER, SSTL
10. 6" 90° MJ BEND
11. DECANTER
12. 6" 90° BEND, SSTL

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

STATE OF GEORGIA
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Designer:	LW
Drawn By:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

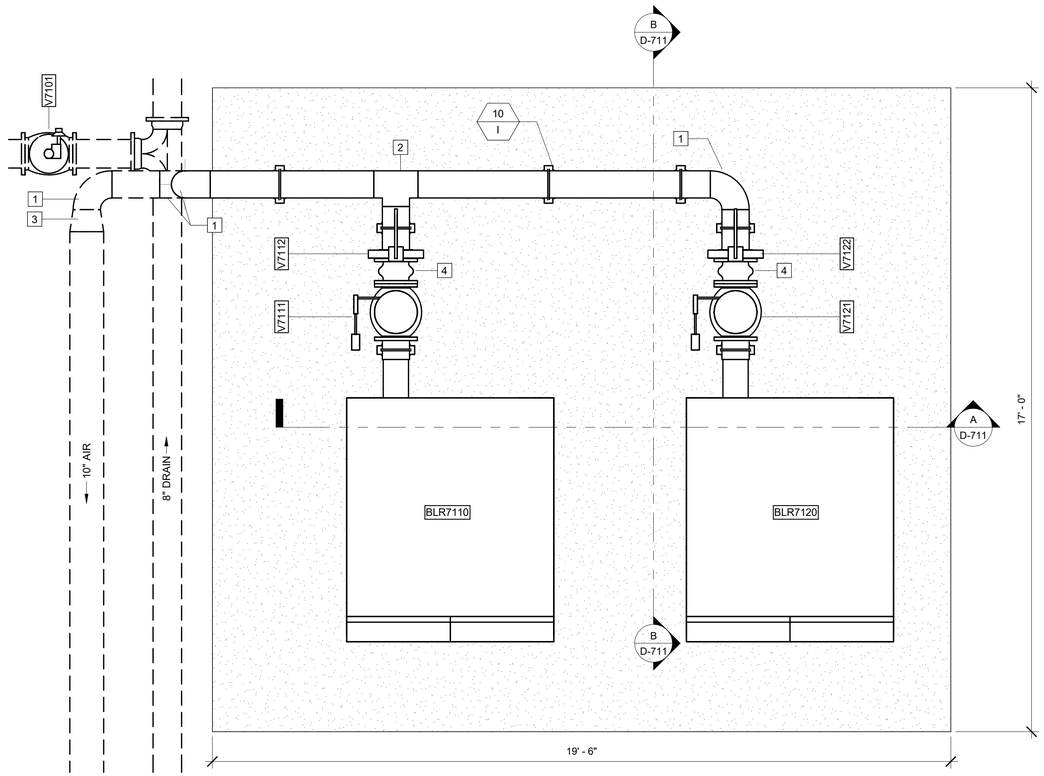
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

AEROBIC DIGESTER - PLAN & SECTIONS

D-701

Autodesk Docs://CAUG230002 Cary Station WRF/VLR Building.rvt
10/4/2024 9:45:24 AM

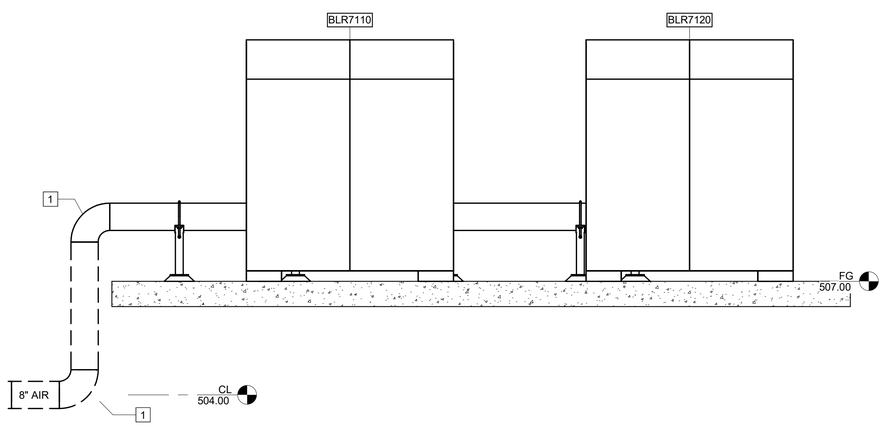
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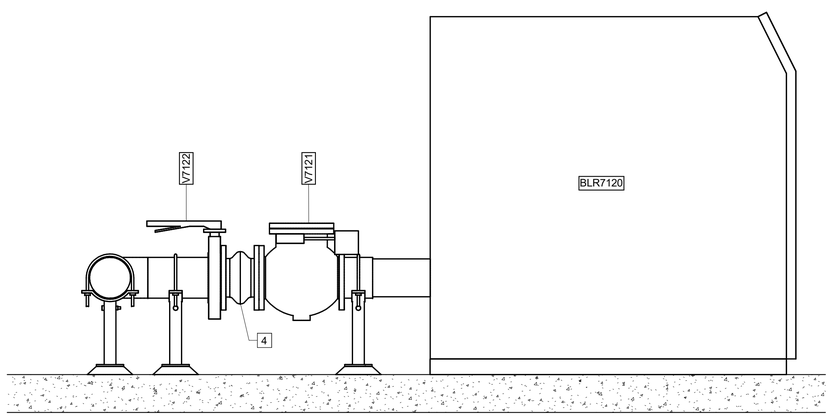
KEY NOTES: [#]

1. 8" 90° BEND, SSTL
2. 8" TEE, SSTL
3. 8" X 10" INCREASER, SSTL
4. EXPANSION JOINT

5B D-701 **ENLARGED PLAN**
SCALE: 1/2" = 1'-0"



A D-711 **SECTION**
SCALE: 1/2" = 1'-0"



B D-711 **SECTION**
SCALE: 3/4" = 1'-0"

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
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Designer:	LW
Drawn By:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

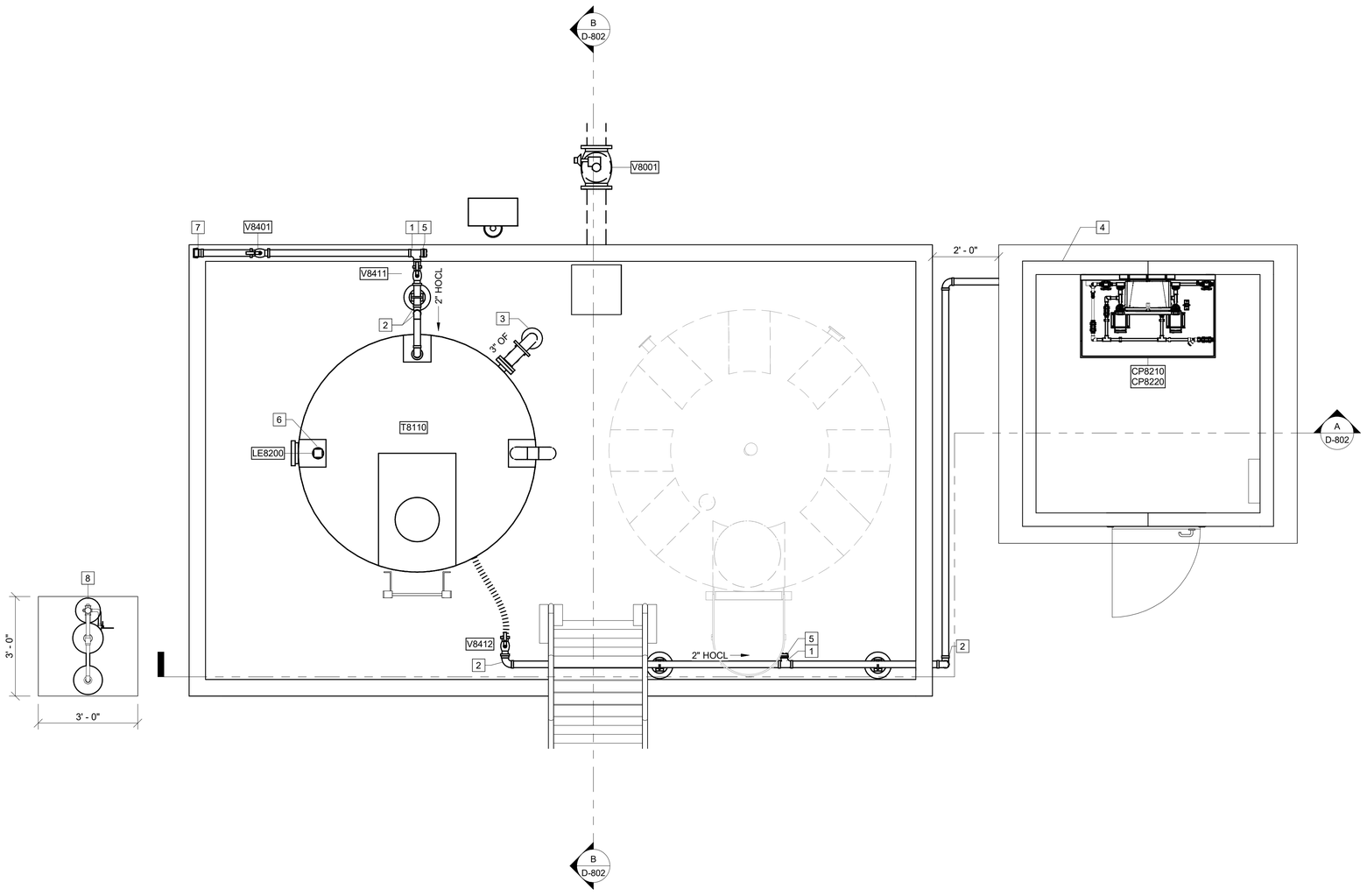
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

DIGESTER BLOWERS

D-711

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10/4/2024 9:48:40 AM

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KEY NOTES: [#]

1. 2" TEE
2. 2" 90° BEND
3. 3" 90° FL BEND
4. PRE-MANUFACTURED FIBERGLASS BUILDING, SEE SPECIFICATION 133100
5. BLIND FLANGE
6. 3" FLANGE NOZZLE FOR LEVEL INSTRUMENT
7. 2" MALE CAMLOCK FITTING
8. CONCRETE PAD 3'-0" X 3'-0" X 8" REINFORCED WITH #4 REBAR AT 12" E.W.

1 D-801 **PLAN**

SCALE: 1/2" = 1'-0"

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

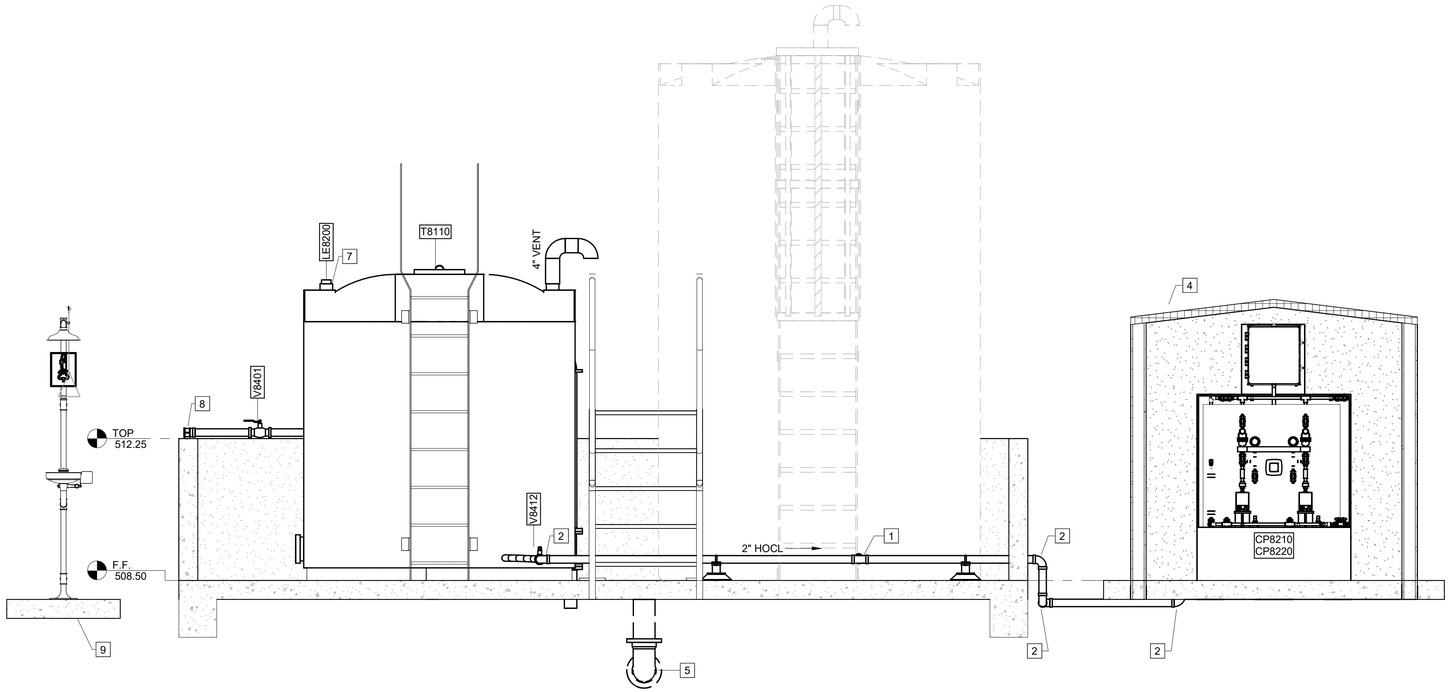
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

CHEMICAL TANK FARM AND BUILDING PLAN

D-801

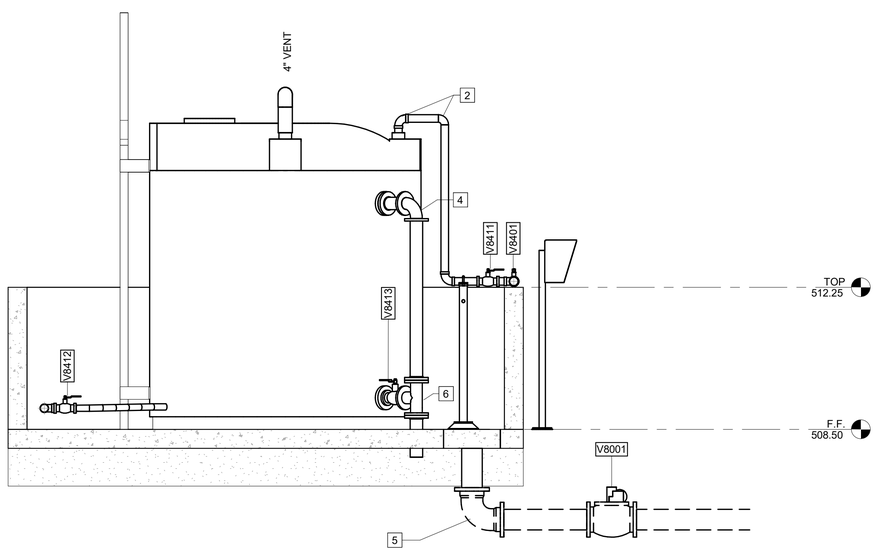
Autodesk Docs://CAUG230002 Cary Station WRF/Chemical Tank And Building.rvt
10/4/2024 9:54:09 AM

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A D-801 **SECTION**

SCALE: 1/2" = 1'-0"



B D-801 **SECTION**

SCALE: 1/2" = 1'-0"

KEY NOTES: #

1. 2" TEE
2. 2" 90° BEND
3. PRE-MANUFACTURED FIBERGLASS BUILDING, SEE SPECIFICATION 133100
4. 3" 90 BEND
5. 6" 90 MJ BEND
6. 3" TEE
7. 3" FLANGE NOZZLE FOR LEVEL INSTRUMENT
8. 2" MALE CAMLOCK FITTING
9. CONCRETE PAD 3'-0" X 3'-0" X 8" REINFORCED WITH #4 REBAR AT 12" E.W.

GMC
801 Broad Street Suite 900
Augusta, GA 30901
T 706.251.9099

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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

PROJECT # CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

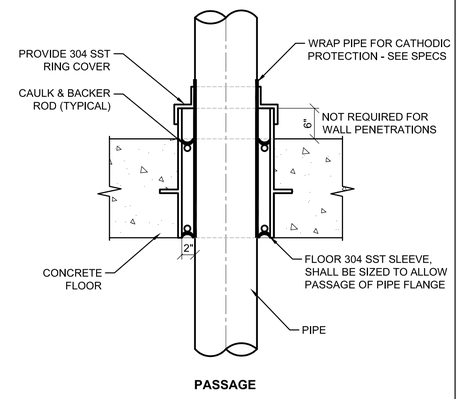
CHEMICAL TANK FARM SECTIONS

D-802

Autodesk Docs://CAUG230002 Cary Station WRF/Chemical Tank And Building.rvt
10/4/2024 9:54:10 AM

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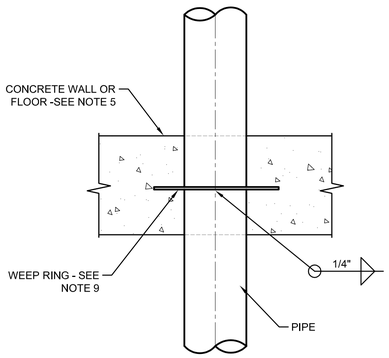
FOR FLOORS



A D-901 **FLOOR SLEEVE W/ RING COVER**

SCALE: NOT TO SCALE

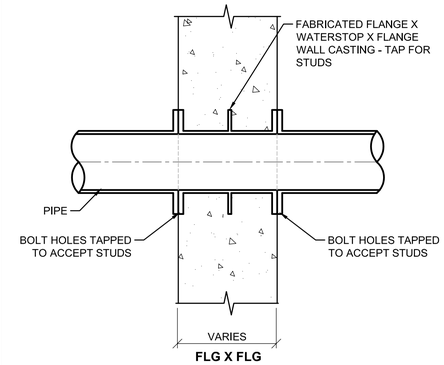
FOR WALLS, FLOORS AND CEILINGS



B D-901 **FLOOR/WALL PIPE (WEEP RING)**

SCALE: NOT TO SCALE

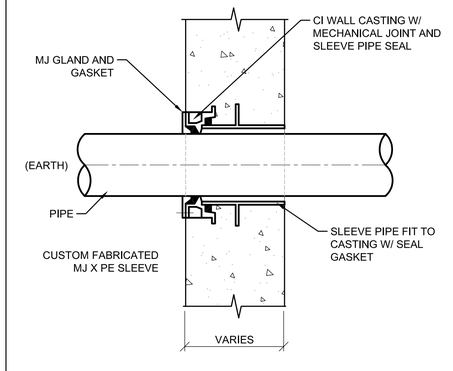
FOR WALLS



C D-901 **WALL PIPE (FLG X FLG)**

SCALE: NOT TO SCALE

FOR WALLS



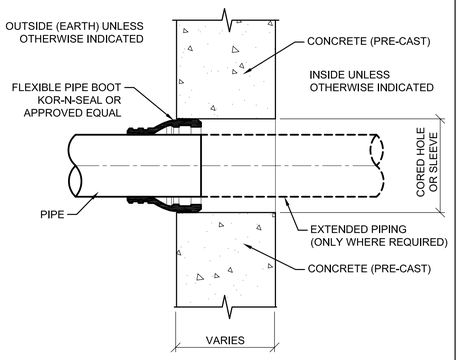
D D-901 **WALL PIPE (MJ GLAND)**

SCALE: NOT TO SCALE

PIPE PENETRATION NOTES:

1. ALL SLEEVES SHALL BE 304 STAINLESS STEEL, SCH 20 UNLESS NOTED OTHERWISE.
2. SEAL FLANGES SHALL BE DRILLED TO 150 POUND STANDARD. EACH JOINT SHALL BE GASKETED.
3. WHERE NOTED, DUCTILE IRON FLANGES MAY BE INSTALLED FLUSH W/ WALL & TAPPED FOR STUDS.
4. PROVIDE CURB WHERE PENETRATING FLOOR EXCEPT FOR PENETRATION TYPE A. CURB SHALL BE 4" HIGH & 3" WIDE.
5. PROVIDE A MINIMUM OF 3" CLEARANCE BETWEEN REINFORCING STEEL & PIPE PENETRATIONS.
6. FLEXIBLE JOINTS SHALL BE PROVIDED FOR UNDERGROUND PIPING AS SPECIFIED.
7. RESTRAINED FLEXIBLE COUPLINGS FOR STEEL PIPE SHALL BE DESIGNED FOR 100 PSI LINE PRESSURE IN ACCORDANCE W/ AWWA MANUAL M11. FIGURES 19.15 & 19.16 & TABLE 19.17 SHALL BE UTILIZED.
8. INSULATION SHALL NOT EXTEND THROUGH SLEEVES UNLESS OTHERWISE NOTED.
9. WEEP RINGS SHALL HAVE A MINIMUM DIAMETER EQUAL TO THE PIPE DIAMETER PLUS 3 INCHES.
10. SLEEVED DIAMETER SHALL BE AS RECOMMENDED BY THE MECHANICAL SEAL MANUFACTURER.
11. ALL WALL PIPE SHALL BE CAST UNLESS OTHERWISE NOTED.
12. PROVIDE PIPE JOINT WITHIN TWO (2) FEET OF EXTERIOR WALL FACE OF WALL AT CONNECTION TO ALL NEW & EXISTING STRUCTURES OR MANHOLES.
13. DETAIL NUMBERS G, H, I, & J REPRESENT MODIFICATIONS TO EXISTING STRUCTURES & NEW CONSTRUCTION.

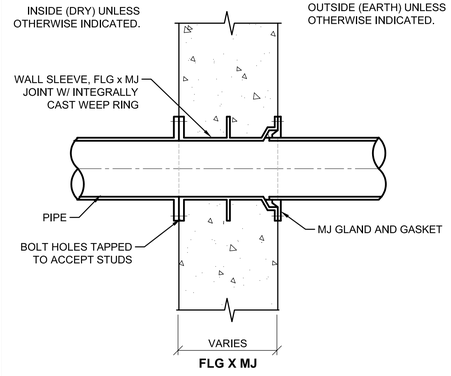
FOR PRECAST WALLS



E D-901 **CORED/PRECAST OPENING W/ PIPE BOOT**

SCALE: NOT TO SCALE

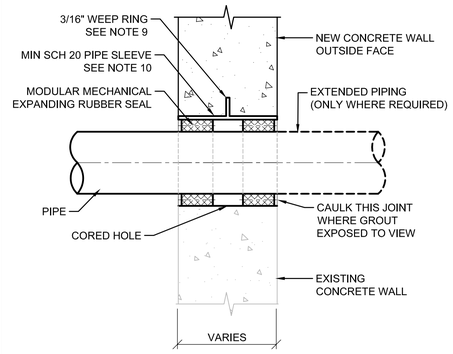
FOR WALLS



F D-901 **WALL PIPE (FLG X MJ/RJ)**

SCALE: NOT TO SCALE

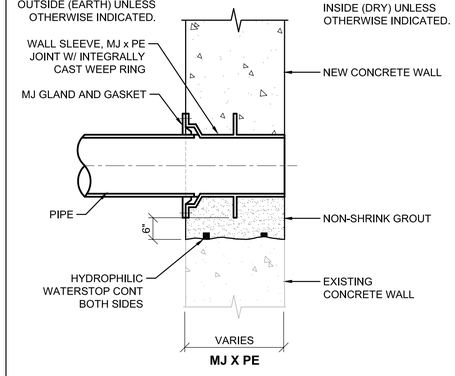
FOR WALLS AND FLOORS



G D-901 **WALL SLEEVE W/ MODULAR LINK TYPE SEAL**

SCALE: NOT TO SCALE

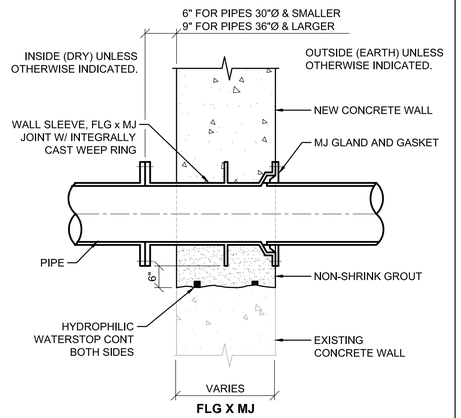
FOR WALLS



H D-901 **WALL PIPE (MJ X PE)**

SCALE: NOT TO SCALE

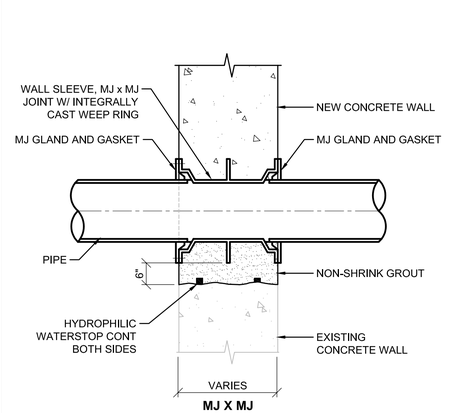
FOR WALLS



J D-901 **WALL PIPE (FLG X MJ/RJ)**

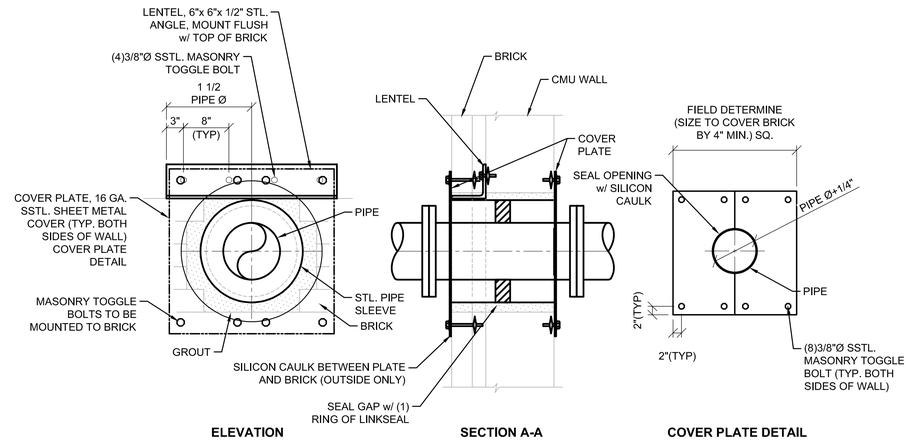
SCALE: NOT TO SCALE

FOR WALLS



K D-901 **WALL PIPE (MJ/RJ X MJ/RJ)**

SCALE: NOT TO SCALE



L D-901 **EXISTING CMU WALL PENETRATION**

SCALE: NOT TO SCALE

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STATE OF GEORGIA — GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026 — CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
60% SUBMITTAL	03.15.2024
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER Liang Wang LIANG WANG

PIPE PENETRATIONS DETAILS

D-901

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DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG\+PLANS\01 Bid Drawings\10 PROCESS\D-901 PIPE PENETRATIONS v1.2.dwg
PLOTTED: Oct-04, 2024 - 5:20pm

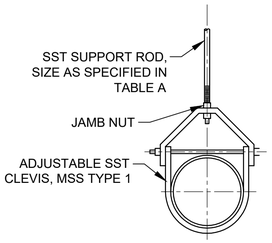
TABLE A								
NOMINAL PIPE SIZE (INCHES)	SUPPORT ROD SIZE AND MAXIMUM LOAD PER ROD SEE NOTES 2 AND 3				MAXIMUM PIPE SPAN (FEET) SEE NOTE 4			
	ONE ROD SUPPORT SYSTEM		TWO ROD SUPPORT SYSTEM					
	ROD SIZE (INCHES)	MAX LOAD (POUNDS)	ROD SIZE (INCHES)	MAX LOAD (POUNDS)	STEEL SEE NOTE 3	COPPER	PLASTIC SEE NOTE 5	CAST IRON SEE NOTE 6
3/8 TO 3/4	3/8	610	3/8	610	5	5	CONTINUOUS	- - -
1	3/8	610	3/8	610	5	5	5	- - -
1 1/4	3/8	610	3/8	610	5	5	5	- - -
1 1/2	3/8	610	3/8	610	5	5	5	- - -
2	3/8	610	3/8	610	10	5	5	
2 1/2	3/8	610	3/8	610	10	10	5	
3	3/8	610	3/8	610	10	20	5	
4	1/2	1130	3/8	610	10	20	10	
6	5/8	1810	1/2	1130	15	20	20	12 FEET FOR DUCTILE IRON / 10 FEET FOR CAST IRON
8	3/4	2710	1/2 (5/8)	1130 (1810)	15	20	20	
10	3/4 (1)	2710 (4960)	5/8 (3/4)	1810 (2710)	20	- - -	20	
12	7/8 (1 1/4)	3770 (8000)	3/4 (7/8)	2710 (3370)	20	- - -	20	
14	1	4960			20	- - -	- - -	
16	1	4960			20	- - -	- - -	
18	1	4960			20	- - -	- - -	
20	1 1/4	8000			20	- - -	- - -	
24	1 1/4	8000			20	- - -	- - -	
30	1 1/2	12,000	1 1/2	24,000	20	- - -	- - -	

TABLE A NOTES:

1. DESIGN WEIGHT SHALL BE TWICE THE WEIGHT OF THE PIPE FULL OF WATER PLUS THE WEIGHT OF VALVES, FITTINGS, INSULATING MATERIALS, AND SUSPENDED HANGER COMPONENTS ON THE RUN OF PIPE BEING SUPPORTED.
2. ROD SIZES SHOWN ARE FOR THE SUPPORT OF A SINGLE PIPE. WHEN SUPPORTING MORE THAN ONE PIPE, ROD SHALL BE SIZED USING THE DESIGN WEIGHTS (SEE NOTE 1) TO DETERMINE THE TOTAL DESIGN LOAD. THE TOTAL DESIGN LOAD SHALL NOT EXCEED THE MAXIMUM LOADS IN THE TABLE ABOVE.
3. ROD SIZES AND MAXIMUM LOADS IN PARENTHESIS ARE FOR 8", 10" OR 12" STEEL PIPE ONLY, AT SPANS SHOWN.
4. PIPE SHALL NOT HAVE POCKETS FORMED IN THE SPAN DUE TO SAGGING OF THE PIPE BETWEEN SUPPORTS CAUSED BY THE WEIGHT OF THE PIPE, MEDIUM IN THE PIPE, INSULATION, VALVES AND FITTINGS.
5. SPAN SHOWN IS FOR SCHEDULE 80 PVC PIPE AT 100 DEGREES F. SPANS FOR OTHER PLASTICS, OTHER PVC PIPE SCHEDULES, AND PIPES AT HIGHER TEMPERATURES, SHALL BE SHORTENED IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS. CONTINUOUS MEANS PIPE SHALL BE IN UNISTRUT OR SIMILAR CHANNEL.
6. PROVIDE A MINIMUM OF ONE PIPE HANGER PER PIPE LENGTH, WITHIN 4 INCHES OF THE BELL.
7. PIPE HANGER AND SUPPORT SELECTION SHALL BE IN ACCORDANCE WITH TABLE B.

TABLE B							
X INDICATES PIPE HANGERS SUITABLE FOR CONDITIONS LISTED BELOW:	PIPE HANGER TYPE						
	1	2	3	4	5	6	7
SERVICE TEMPERATURE							
33° F - 59° F INSULATED			X	X	X		
120° F - 450° F OR UNINSULATED	X	X	X	X	X	X	X
60° F - 119° F	X	X	X			X	X
PIPING MATERIALS							
STEEL	X	X	X	X	X	X	X
COPPER		X		X		X	X
PLASTIC	X	X		X	X	X	X
CAST IRON	X	X		X	X	X	X

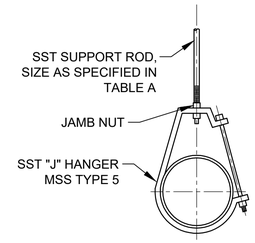
NOTE: FOR SERVICES OTHER THAN THOSE SHOWN IN TABLE "B", PIPE ATTACHMENTS SHALL BE THOSE SPECIFIED IN THE PIPE SPECS.



1/2" THROUGH 12" PIPE

1 D-902 **DETAIL - TYPE 1 PIPE HANGER**

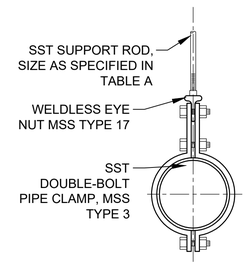
SCALE: NOT TO SCALE



1/2" THROUGH 8" PIPE

2 D-902 **DETAIL - TYPE 2 PIPE HANGER**

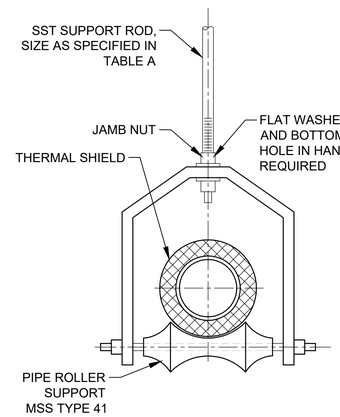
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3/4" THROUGH 12" PIPE

3 D-902 **DETAIL - TYPE 3 PIPE HANGER**

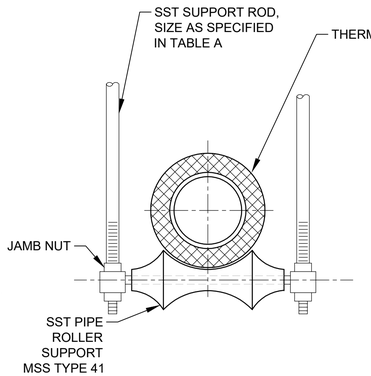
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3/8" THROUGH 12" PIPE

4 D-902 **DETAIL - TYPE 4 PIPE HANGER**

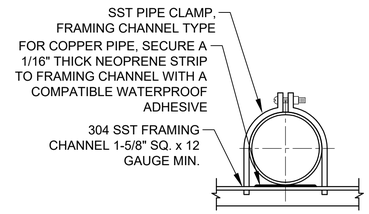
SCALE: NOT TO SCALE



3/8" THROUGH 12" PIPE

5 D-902 **DETAIL - TYPE 5 PIPE HANGER**

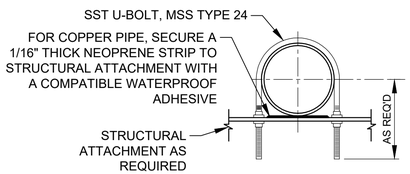
SCALE: NOT TO SCALE



3/8" THROUGH 8" PIPE

6 D-902 **DETAIL - TYPE 6 PIPE HANGER**

SCALE: NOT TO SCALE



1/2" THROUGH 12" PIPE

7 D-902 **DETAIL - TYPE 7 PIPE HANGER**

SCALE: NOT TO SCALE

GENERAL NOTES:

1. WHERE NO REFERENCE TO PIPE SUPPORT SYSTEMS ARE GIVEN ON THE DRAWINGS. THE CONTRACTOR SHALL USE AN APPROPRIATE SYSTEM. SEE TABLE "B". PIPE AND CONDUIT SUPPORT SYSTEMS SHALL BE UNISTRUT, ELCEN, OR EQUAL, AND SHALL BE DESIGNED BY THE CONTRACTOR TO MEET THE MINIMUM LOAD AND SPAN REQUIREMENTS AS SPECIFIED.
2. MATERIALS FOR HANGERS, SUPPORTS AND ASSOCIATED HARDWARE SHALL BE 304 OR 316 SST.
3. UNLESS OTHERWISE SPECIFIED, EXPANSION ANCHORS SHALL NOT BE USED.
4. MSS REFERS TO THE MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY, STANDARD PRACTICE SP58 AND SP69.
5. HANGER BRACKETS AND SUPPORT COMPONENTS MAY BE INTERCHANGED.
6. CONCRETE INSERTS IN AREA BELOW WATER SURFACE OR NORMALLY SUBJECT TO SUBMERGING SHALL BE EMBEDDED ANCHOR BOLTS OR EQUAL.
7. PROVIDE PLASTIC OR RUBBER CHANNEL END CAPS AT EXPOSED ENDS OF CHANNELS 7'-0" ABOVE FLOOR AND BELOW.
8. MAXIMUM DESIGN WEIGHTS AND LOADS SHALL BE AS SHOWN IN TABLE "A" OR AS SHOWN IN THE DETAILS ON THIS DRAWING.
9. WHEN SUPPORT PIPING REQUIRES HORIZONTAL FLEXIBILITY NORMAL TO A STEEL BEAM AXIS, USE STRUCTURAL ATTACHMENTS C AND D AS SHOWN ON DRAWING D-504.
10. ALL PIPING SUPPORTED BY HANGERS AND/OR STRUCTURAL ATTACHMENTS SHALL BE BRACED AGAINST HORIZONTAL, VERTICAL, AXIAL, AND LONGITUDINAL SWAY. BRACINGS SHALL BE CALCULATED TO RESIST SEISMIC LOADINGS AS SPECIFIED BY SMACNA AND AS INDICATED IN THE SPECIFICATIONS.
11. FITTINGS SHALL NOT BE LESS THAN MSS CL B.
12. UNLESS OTHERWISE SPECIFIED, TRAPEZE AND PIPE RACK COMPONENTS SHALL HAVE A MINIMUM THICKNESS OF 12 GAGE WITH A MAXIMUM DEFLECTION 1/240 OF THE SPAN. MINIMUM CHANNEL COMPONENT SIZE SHALL BE 1 5/8" SQUARE 316 SST AS MANUFACTURED BY SUPER STRUT, UNISTRUT, ELCEN, OR EQUAL.

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GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
STATE OF GEORGIA
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
60% SUBMITTAL	03.15.2024
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100% SUBMITTAL	10.04.2024
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

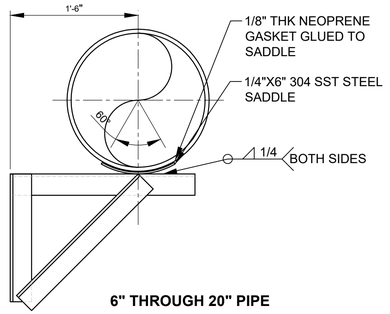
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER Liang Wang LIANG WANG

PROCESS PIPE SUPPORT DETAILS

D-902

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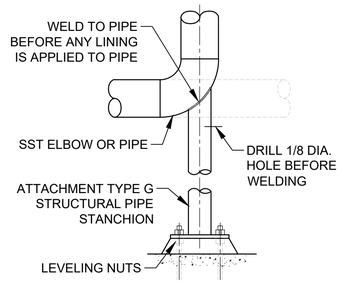
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PLOTTED: Oct 04, 2024 - 5:25pm



6" THROUGH 20" PIPE

8 D-903 **DETAIL - TYPE 8 PIPE HANGER**

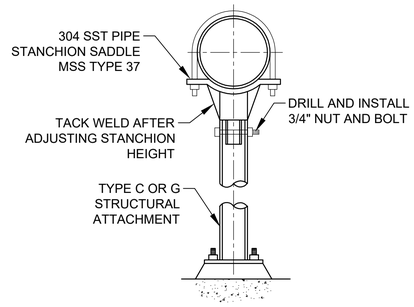
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2-1/2" THROUGH 14" PIPE

9 D-903 **DETAIL - TYPE 9 PIPE HANGER**

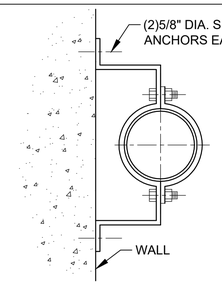
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4" THROUGH 12" PIPE

10 D-903 **DETAIL - TYPE 10 PIPE HANGER**

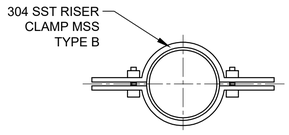
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FOR VERTICAL PIPE ONLY
3/4" THROUGH 8" PIPE

11 D-903 **DETAIL - TYPE 11 PIPE HANGER**

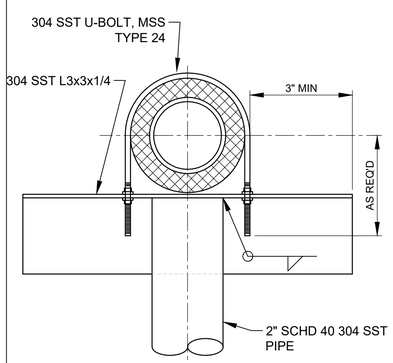
SCALE: NOT TO SCALE



FOR VERTICAL PIPE ONLY
1/2" THROUGH 12" PIPE

12 D-903 **DETAIL - TYPE 12 PIPE HANGER**

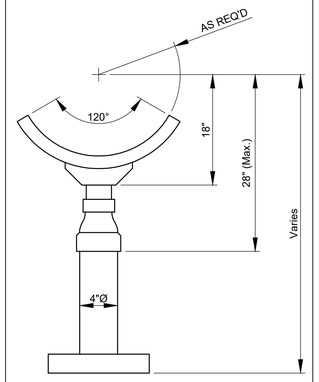
SCALE: NOT TO SCALE



1/2" THROUGH 3" PIPE

13 D-903 **DETAIL - TYPE 13 PIPE HANGER**

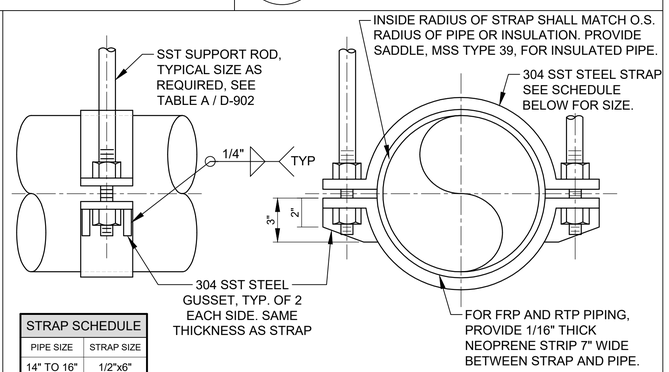
SCALE: NOT TO SCALE



16" THROUGH 30" PIPE

14 D-903 **DETAIL - TYPE 14 PIPE HANGER**

SCALE: NOT TO SCALE



STRAP SCHEDULE	
PIPE SIZE	STRAP SIZE
14" TO 16"	1/2"x6"
18" TO 20"	5/8"x6"
24" TO 30"	3/4"x6"

SUPPORT NOTES:

1. SPACING SHALL BE AS SPECIFIED IN TABLE A / D-902.
2. TOTAL LOADS ON END CONNECTIONS SHALL NOT EXCEED 1/2 THE MAXIMUM ALLOWABLE LOAD AT MID-POINT.

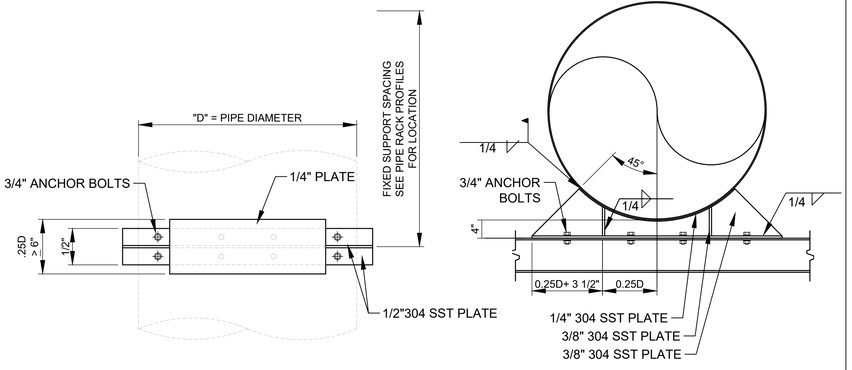
14" THROUGH 30" PIPE

15 D-903 **DETAIL - TYPE 15 PIPE HANGER**

SCALE: NOT TO SCALE

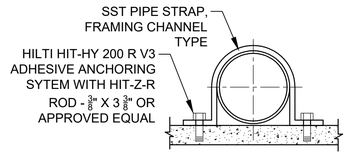
GENERAL NOTES:

1. WHERE NO REFERENCE TO PIPE SUPPORT SYSTEMS ARE GIVEN ON THE DRAWINGS. THE CONTRACTOR SHALL USE AN APPROPRIATE SYSTEM. SEE TABLE "B". PIPE AND CONDUIT SUPPORT SYSTEMS SHALL BE UNISTRUT, ELCEN, OR EQUAL, AND SHALL BE DESIGNED BY THE CONTRACTOR TO MEET THE MINIMUM LOAD AND SPAN REQUIREMENTS AS SPECIFIED.
2. MATERIALS FOR HANGERS, SUPPORTS AND ASSOCIATED HARDWARE SHALL BE 316 SST.
3. UNLESS OTHERWISE SPECIFIED, EXPANSION ANCHORS SHALL NOT BE USED.
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8. MAXIMUM DESIGN WEIGHTS AND LOADS SHALL BE AS SHOWN IN TABLE "A" OR AS SHOWN IN THE DETAILS ON THIS DRAWING.
9. WHEN SUPPORT PIPING REQUIRES HORIZONTAL FLEXIBILITY NORMAL TO A STEEL BEAM AXIS, USE STRUCTURAL ATTACHMENTS C AND D AS SHOWN.
10. ALL PIPING SUPPORTED BY HANGERS AND/OR STRUCTURAL ATTACHMENTS SHALL BE BRACED AGAINST HORIZONTAL, VERTICAL, AXIAL, AND LONGITUDINAL SWAY. BRACINGS SHALL BE CALCULATED TO RESIST SEISMIC LOADINGS AS SPECIFIED BY SMACNA AND AS INDICATED IN THE SPECIFICATIONS.
11. FITTINGS SHALL NOT BE LESS THAN MSS CL B.
12. UNLESS OTHERWISE SPECIFIED, TRAPEZE AND PIPE RACK COMPONENTS SHALL HAVE A MINIMUM THICKNESS OF 12 GAGE WITH A MAXIMUM DEFLECTION 1/240 OF THE SPAN. MINIMUM CHANNEL COMPONENT SIZE SHALL BE 1 5/8" SQUARE 316 SST AS MANUFACTURED BY SUPER STRUT, UNISTRUT, ELCEN, OR EQUAL.



16 D-903 **FIXED PIPE SUPPORT - 14"-48" Ø PIPE**

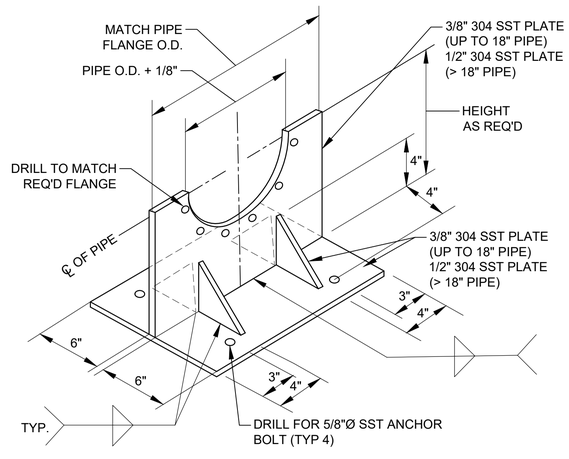
SCALE: NOT TO SCALE



3/8" THROUGH 4" PIPE

17 D-903 **DETAIL - TYPE 17 PIPE HANGER**

SCALE: NOT TO SCALE



19 D-903 **DETAIL - TYPE 19 PIPE SUPPORT**

SCALE: NOT TO SCALE

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T 706.251.9099

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
60% SUBMITTAL	03.15.2024
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BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

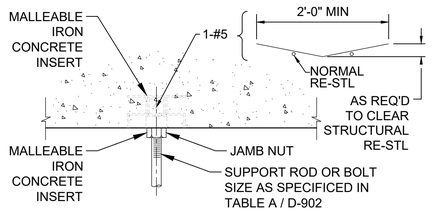
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG

PROCESS PIPE SUPPORT DETAILS

D-903

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWGs\PLANS\01 Bid Drawings\10 PROCESS\D-902-904 PIPE SUPPORTS.dwg
PLOTTED: Oct 04, 2024 - 5:21pm

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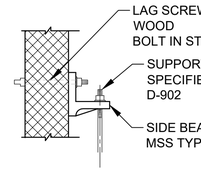
MAXIMUM ALLOWABLE LOAD:

ROD SIZE	LOAD
3/8"	610 LBS
1/2"	1130 LBS
5/8" - 7/8"	1140 LBS

SPACING SHALL BE AS REQUIRED BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A / D-902

A D-904 **DETAIL - TYPE A ATTACHMENT**

SCALE: NOT TO SCALE



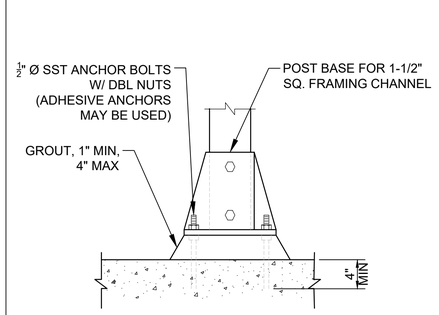
MAXIMUM ALLOWABLE LOAD:

ROD SIZE	LOAD WOOD	LOAD CONCRETE/STEEL
3/8"	390 LBS	610 LBS
1/2"	640 LBS	1130 LBS
5/8"	760 LBS	1810 LBS
3/4"	830 LBS	2710 LBS
7/8"	830 LBS	3770 LBS

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED SPANS SHOWN IN TABLE A / D-902

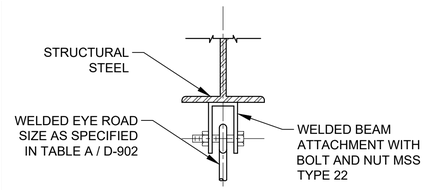
B D-904 **DETAIL - TYPE B ATTACHMENT**

SCALE: NOT TO SCALE



C D-904 **DETAIL - TYPE C ATTACHMENT**

SCALE: NOT TO SCALE



MAXIMUM ALLOWABLE LOAD:

ROD SIZE	LOAD
3/8"	610 LBS
1/2"	1130 LBS
5/8"	1810 LBS
3/4"	2710 LBS
7/8"	3770 LBS
1"	4960 LBS

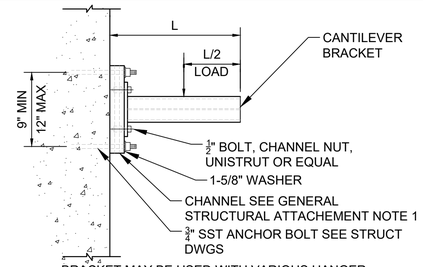
SPACING SHALL BE AS REQUIRED BUT SHALL NOT EXCEED THOSE SPANS SHOWN IN TABLE A / D-902

D D-904 **DETAIL - TYPE D ATTACHMENT**

SCALE: NOT TO SCALE

GENERAL NOTES:

1. FOR EXISITNG CONCRETE, NEW PRECAST CONCRETE OR NEW CONCRETE MASONRY UNITS USE SURFACE MOUNT CHANNEL UNISTRUT P-1000 OR EQUAL. FOR ALL POURED-IN-PLACE CONCRETE, USED EMBEDDED CONCRETE INSERT CHANNELS, UNISTRUT P3200 OR EQUAL AND DELETE THE SURFACE MOUNT ANCHOR BOLTS.



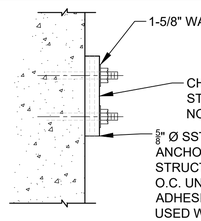
BRACKET MAY BE USED WITH VARIOUS HANGER, ROLLER, GUIDE AND CLAMP ASSEMBLIES

CAPACITY AT MID-POINT:

L	LOAD
12"	2000 LBS
18"	1300 LBS
24"	1000 LBS
30"	800 LBS

E D-904 **DETAIL - TYPE E ATTACHMENT**

SCALE: NOT TO SCALE



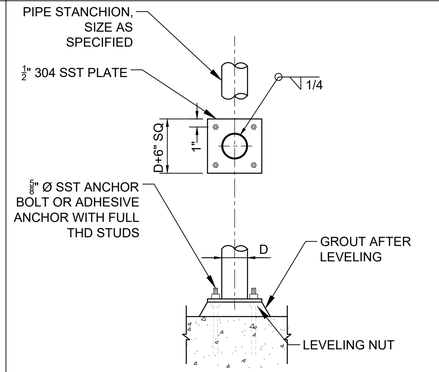
BRACKET MAY BE WALL OR CEILING MOUNTED, AND MAY BE USED WITH VARIOUS HANGER, GUIDE, RACK, OR ANCHOR, AND SWAY BRACE ASSEMBLIES

MAXIMUM LOAD CAPACITY SHALL BE AS RECOMMENDED BY THE CHANNEL MANUFACTURER.

SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED SPANS SHOWN IN TABLE A / D-902

F D-904 **DETAIL - TYPE F ATTACHMENT**

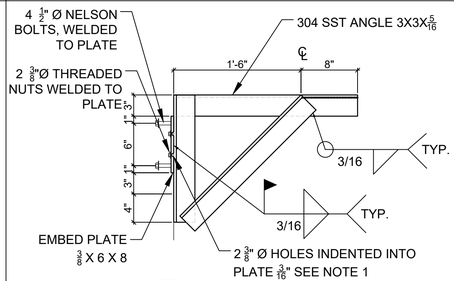
SCALE: NOT TO SCALE



SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED SPANS SHOWN IN TABLE A / D-902

G D-904 **DETAIL - TYPE G ATTACHMENT**

SCALE: NOT TO SCALE



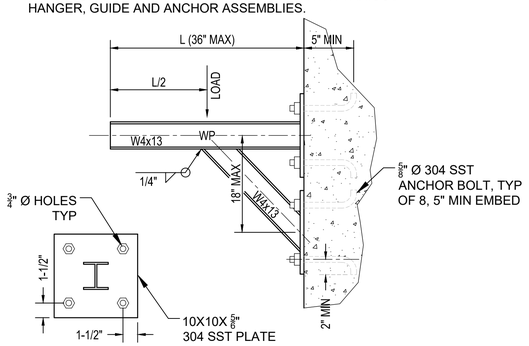
NOTES:

1. PROVIDE FLAT HEADED BOLTS 3/8"Øx1-1/2"L SCREWED IN PLACE TO CREATE FLUSH SURFACE WITH PLATE, PRIOR TO POURING CONCRETE. THESE BOLTS ARE TO BE REMOVED AND REPLACED WITH 2" L BOLTS AFTER CURING FOR SUPPORT ATTACHMENT.

H D-904 **DETAIL - TYPE H ATTACHMENT**

SCALE: NOT TO SCALE

STRUCTURAL ATTACHMENTS MAY BE USED WITH VARIOUS HANGER, GUIDE AND ANCHOR ASSEMBLIES.

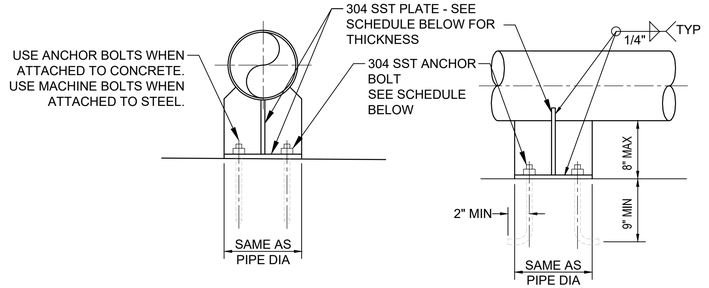


WALL PLATE ELEVATION

SPACING SHALL BE AS REQUIRED BUT SHALL NOT EXCEED SPANS SHOWN IN TABLE A / D-902

J D-904 **DETAIL - TYPE J ATTACHMENT**

SCALE: NOT TO SCALE



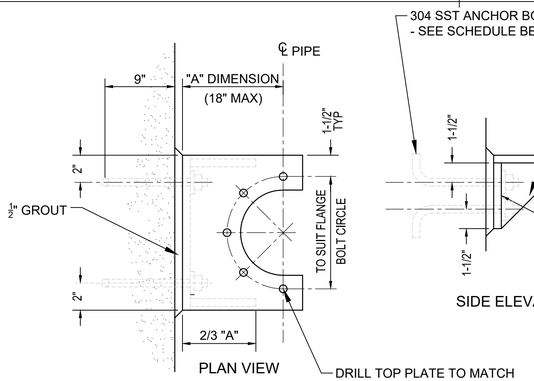
TYPE K
STRUCTURAL ATTACHMENT
COMPONENT SCHEDULE

PIPE SIZE (INCHES)	BOLT SIZE (INCHES)	PL THK (INCHES)
2 & 2-1/2	3/8	1/4
3 TO 6	1/2	3/8
8 TO 12	5/8	3/8
14 TO 16	3/4	1/2
18 TO 20	7/8	5/8

SPACING SHALL BE AS REQUIRED BUT SHALL NOT EXCEED SPANS SHOWN IN TABLE A / D-902

K D-904 **DETAIL - TYPE K ATTACHMENT**

SCALE: NOT TO SCALE



SPACING SHALL BE AS REQUIRED BUT SHALL NOT EXCEED SPANS SHOWN IN TABLE A / D-902

TYPE L
COMPONENT SCHEDULE

PIPE SIZE (INCHES)	BOLT SIZE (INCHES)	PLATE THICKNESS (INCHES)
2 & 2-1/2	3/8	1/4
3 TO 6	1/2	3/8
8 TO 12	5/8	3/8
14 TO 16	3/4	1/2
18 TO 20	7/8	5/8
24 TO 30	1	3/4

L D-904 **DETAIL - TYPE L ATTACHMENT**

SCALE: NOT TO SCALE

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GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026 STATE OF GEORGIA CERTIFICATE OF AUTHORIZATION

1" .5" 0" 1"

ISSUE | DATE

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CONFORMED SET	MP
PROJECT MANAGER:	LW/DP
ENGINEER:	LW
DESIGNER:	DS
DRAWN BY:	

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

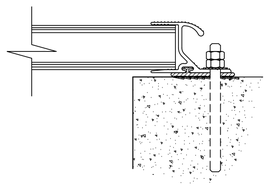
GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER Liang Wang LIANG WANG

PROCESS PIPE STRUCTURAL ATTACHMENTS

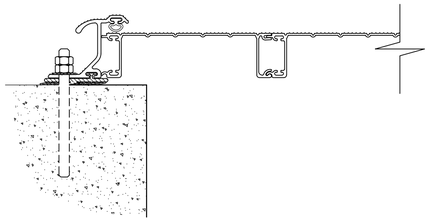
D-904

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWGs\PLANS\01 Bid Drawings\10 PROCESS\D-902-904 PIPE SUPPORTS.dwg
PLOTTED: Oct 04, 2024 - 5:21pm

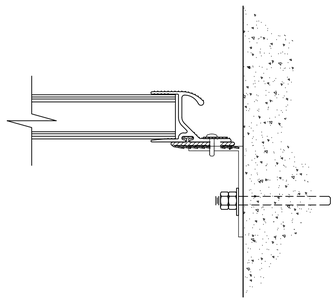
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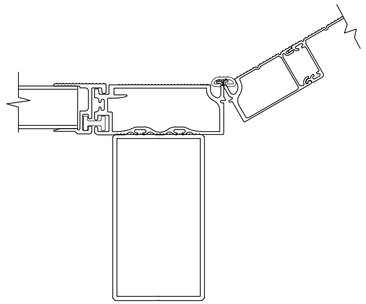
1 D-906 **ODOR CONTROL COVER EDGE**
SCALE:3" = 1'-0"



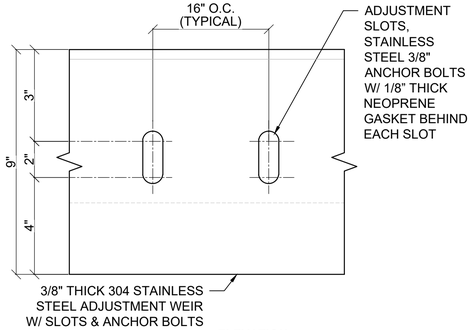
2 D-906 **ODOR CONTROL COVER END**
SCALE:3" = 1'-0"



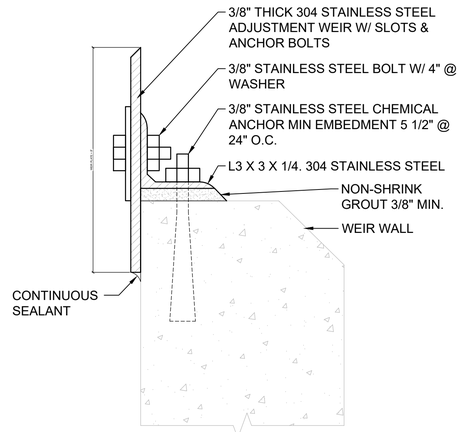
3 D-906 **COVER EDGE @ VERT WALL**
SCALE:3" = 1'-0"



4 D-906 **COVER EDGE @ PUMP HATCH**
SCALE:3" = 1'-0"

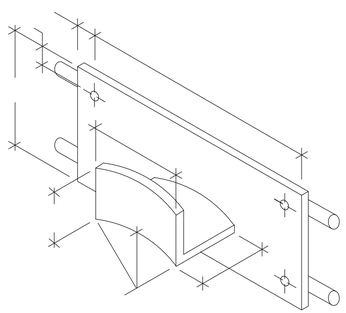


ELEVATION

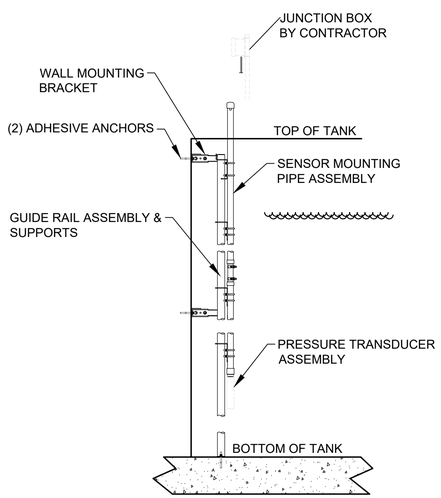


SECTION

7 D-906 **DETAIL - WEIR**
SCALE:NOT TO SCALE



5 D-906 **RAIL-MOUNTED HOSE RACK DETAIL**
SCALE:NOT TO SCALE



6 D-906 **LEVEL TRANSDUCER MOUNT**
SCALE:NOT TO SCALE

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ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED 10/04/2024 No. PE037638 PROFESSIONAL ENGINEER LIANG WANG
Liang Wang

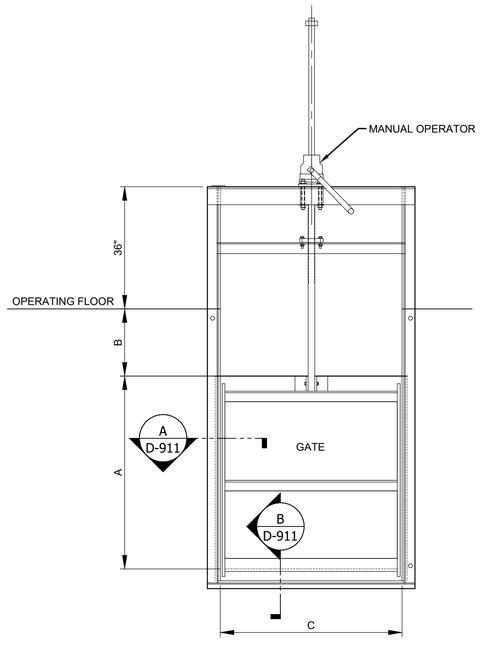
PROCESS DETAILS

D-906

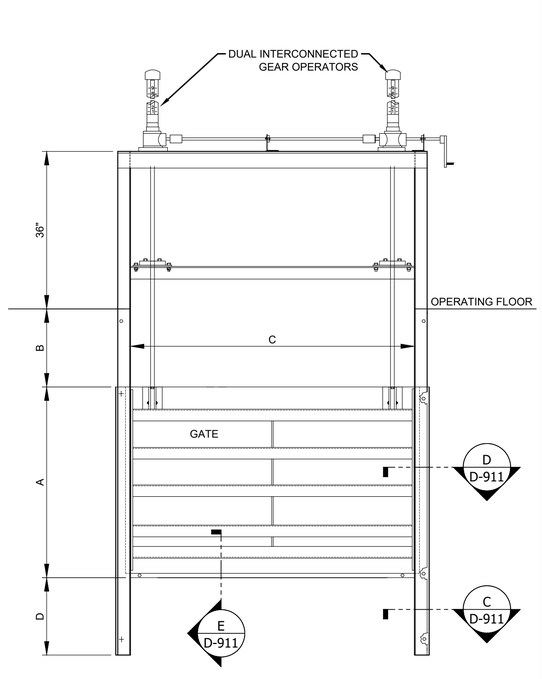
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PLOTTED: Oct 04, 2024 - 5:21pm

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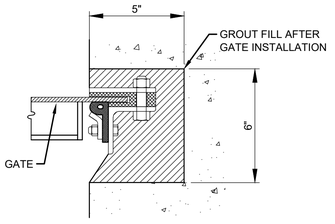
TAG	TYPE	LOCATION	MOUNTING	OPERATOR & OPERATOR SUPPORT	HEIGHT A (INCHES)	HEIGHT B (INCHES)	WIDTH C (INCHES)	HEIGHT D (INCHES)	DESIGN SEATING HEAD (INCHES)	DESIGN UNSEATING HEAD (INCHES)	NOTES	P&ID Sheet Number	Process Sheet Number	Labeled
SG1011	Slide Gate	Mechanical Screen	Embedded	Handwheel	54	6	36		53			I-101	D-103	
SG1012	Slide Gate	Mechanical Screen	Embedded	Handwheel	36	24	36		31			I-101	D-103	
SG1021	Slide Gate	Manual Bar Screen	Embedded	Handwheel	54	6	36		53			I-101	D-103	
SG1022	Slide Gate	Manual Bar Screen	Embedded	Handwheel	36	24	36		31			I-101	D-103	
SG1031	Slide Gate	Mechanical Screen	Embedded	Handwheel	54	6	36		53			I-101	D-103	
SG1032	Slide Gate	Mechanical Screen	Embedded	Handwheel	36	24	36		31			I-101	D-103	
SG1111	Slide Gate	Headcell Grit System	Embedded	Handwheel	36	24	16		31			I-102	D-104	
SG1121	Slide Gate	Headcell Grit System	Embedded	Handwheel	36	24	16		31			I-102	D-104	
WG3100	Weir Gate	VLR tank No. 1	Wall Mounted	Handwheel	30	18	24	30	26			I-301	D-301	
WG3200	Weir Gate	VLR tank No. 2	Wall Mounted	Handwheel	30	18	24	30	26			I-301	D-301	
WG4110	Weir Gate	Clarifier Splitter Box	Wall Mounted	Handwheel	24	33	72	8	13			I-401	D-405	
WG4120	Weir Gate	Clarifier Splitter Box	Wall Mounted	Handwheel	24	33	72	8	13			I-401	D-405	
WG4130	Weir Gate	Clarifier Splitter Box	Wall Mounted	Handwheel	24	33	72	8	13			I-401	D-405	



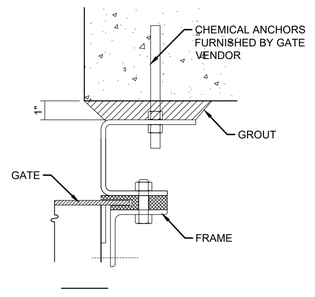
1 D-911 **SECTION - UPWARD OPENING SLIDE GATE**
SCALE: NOT TO SCALE



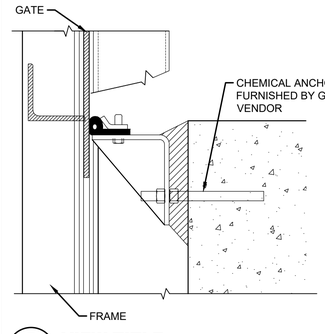
2 D-911 **SECTION - DOWNWARD OPENING SLIDE GATE**
SCALE: NOT TO SCALE



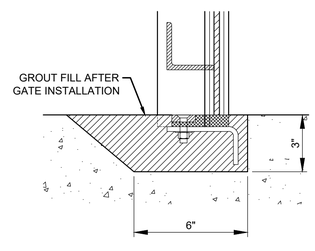
A D-911 **DETAIL**
SCALE: NOT TO SCALE



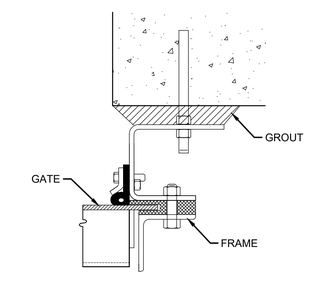
C D-911 **DETAIL**
SCALE: NOT TO SCALE



E D-911 **VIEW TITLE**
SCALE: NOT TO SCALE



B D-911 **DETAIL**
SCALE: NOT TO SCALE



D D-911 **DETAIL**
SCALE: NOT TO SCALE

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0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED PROFESSIONAL ENGINEER
No. PE037638
10/04/2024
LIANG WANG

GATE SCHEDULE & DETAILS

D-911

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DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG's+PLANS\01 Bid Drawings\10 PROCESS\D-911 GATE SCHEDULE & DETAILS.dwg
PLOTTED: Oct 04, 2024 - 11:12am

VALVE SCHEDULE

	TAG	SERVICE	TYPE	SIZE (INCHES)	CONNECTION	OPERATOR	NOTES
1000	V1011	W	BALL	1 1/2	THD	Lever	Furnished by Equipment Manufacturer
	CV1012	W	PRESSURE REGULATING	1 1/2	THD	N/A	Furnished by Equipment Manufacturer
	V1013	W	BALL	1/4	THD	Lever	Furnished by Equipment Manufacturer
	EV1014	W	SOLENOID	1 1/2	THD	Electric Actuated	Furnished by Equipment Manufacturer
	V1015	W	BALL	1 1/2	THD	Lever	Furnished by Equipment Manufacturer
	CV1016	W	PRESSURE REGULATING	1 1/2	THD	N/A	Furnished by Equipment Manufacturer
	V1017	W	BALL	1/4	THD	Lever	Furnished by Equipment Manufacturer
	EV1018	W	SOLENOID	1 1/2	THD	Electric Actuated	Furnished by Equipment Manufacturer
	V1111	W	BALL	1	THD	Lever	Furnished by Equipment Manufacturer
	V1112	W	PRESSURE REGULATING	1	THD	N/A	Furnished by Equipment Manufacturer
	V1113	W	BALL	1/4	THD	Lever	Furnished by Equipment Manufacturer
	V1114	W	SOLENOID	1	THD	Electric Actuated	Furnished by Equipment Manufacturer
	V1115	GR	BALL	1/4	THD	N/A	
	V1117	D	BALL	3	THD	Lever	Furnished by Equipment Manufacturer
2000	V2010	RWW	BALL	1/4	THD	Lever	
	V2011	RWW	SWING CHECK	10	FLG	N/A	
	V2012	RWW	PLUG	10	FLG	Handwheel	
	V2020	RWW	BALL	1/4	THD	Lever	
	V2021	RWW	SWING CHECK	10	FLG	N/A	
	V2022	RWW	PLUG	10	FLG	Handwheel	
3000	V3111	AIR	CHECK	4	FLG	N/A	
	V3112	AIR	BUTTERFLY	4	WFR	Manual Lever	
	V3121	AIR	CHECK	4	FLG	N/A	
	V3122	AIR	BUTTERFLY	4	WFR	Manual Lever	
4000	V4310	SSC	BALL	1/4	THD	Lever	
	V4311	SSC	SWING CHECK	3	FLG	N/A	
	V4312	SSC	PLUG	3	FLG	Handwheel	
7000	V7001	AIR	BUTTERFLY	6	WFR	Manual Lever	
	V7002	AIR	BUTTERFLY	6	WFR	Manual Lever	
	V7003	WAS	BALL	1/4	THD	LEVER	
	V7004	WAS	AIR RELEASE	2	THD	N/A	
	V7005	RAS	BALL	1/4	THD	LEVER	
	V7006	RAS	AIR RELEASE	2	THD	N/A	
	V7010	RAS/WAS	SWING CHECK	8	FLG	N/A	
	V7011	RAS/WAS	PLUG	8	FLG	Handwheel	
	V7012	WAS	PLUG	8	FLG	Handwheel	
	V7013	WAS	PLUG	8	FLG	Handwheel	
	V7014	WAS	PLUG	8	FLG	Handwheel	
	V7020	RAS/WAS	SWING CHECK	8	FLG	N/A	
	V7021	RAS/WAS	PLUG	8	FLG	Handwheel	
	V7022	WAS	PLUG	8	FLG	Handwheel	
	V7101	D	PLUG	8	MJ	2" NUT	Provided Valve Box
	V7103	DS	PLUG	8	FLG	Handwheel	
	V7201	D	PLUG	8	MJ	2" NUT	Provided Valve Box
	V7203	DS	PLUG	8	FLG	Handwheel	
	V7111	AIR	CHECK	8	FLG	N/A	
	V7112	AIR	BUTTERFLY	8	WFR	Manual Lever	
	V7121	AIR	CHECK	8	FLG	N/A	
	V7122	AIR	BUTTERFLY	8	WFR	Manual Lever	
8000	V8210	NaHOCl	BALL	1/2	FLG	Manual Lever	Furnished by Equipment Manufacturer
	V8211	V	BALL	1/2	THD	Manual Lever	Furnished by Equipment Manufacturer
	V8212	V	BALL	1/2	THD	Manual Lever	Furnished by Equipment Manufacturer
	V8213	NaHOCl	BALL	1/2	THD	Manual Lever	Furnished by Equipment Manufacturer
	V8214	NaHOCl	SAFETY RELIEF	1/2	THD	N/A	Furnished by Equipment Manufacturer
	V8215	NaHOCl	BALL	1/2	THD	Manual Lever	Furnished by Equipment Manufacturer
	V8216	NaHOCl	BALL	1/2	THD	Manual Lever	Furnished by Equipment Manufacturer
	V8223	NaHOCl	BALL	1/2	THD	Manual Lever	Furnished by Equipment Manufacturer
	V8224	NaHOCl	SAFETY RELIEF	1/2	THD	N/A	Furnished by Equipment Manufacturer
	V8225	NaHOCl	BALL	1/2	THD	Manual Lever	Furnished by Equipment Manufacturer
	V8226	NaHOCl	BALL	1/2	THD	Manual Lever	Furnished by Equipment Manufacturer
	V8250	NaHOCl	CHECK	1/2	TRUE UNION	N/A	
	V8251	NaHOCl	BALL	1/2	TRUE UNION	Manual Lever	
	V8401	NaHOCl	BALL	2	FLG	Manual Lever	
	V8411	NaHOCl	BALL	2	FLG	Manual Lever	
	V8412	NaHOCl	BALL	2	FLG	Manual Lever	
	V8413	D	BALL	3	FLG	Manual Lever	

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STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE | DATE

60% SUBMITTAL	03.15.2024
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	MP
ENGINEER:	LW/DP
DESIGNER:	LW
DRAWN BY:	DS

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA
REGISTERED
10/04/2024
No. PE037638
PROFESSIONAL
ENGINEER
LIANG WANG

VALVE SCHEDULE

D-921

DRAWING FILE: T:\1 Projects\GA\Piedmont Water Company\CAUG230002 - Carey Station WRF 1.0 MGD Expansion\0 DWG+PLANS\01 Bid Drawings\10 PROCESS\D-921 VALVE SCHEDULE.dwg
PLOTTED: Oct 04, 2024 - 11:49am

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SCHEMATIC DIAGRAM SYMBOLS:

- CONDUCTORS CONNECTED
- CONDUCTORS NOT CONNECTED
- CONNECTION POINT
- XX — TERMINAL POINT FOR OUTGOING CONDUCTORS, WITH IDENTIFICATION. "XX" DENOTES CONTRACTOR ASSIGNED.
- MCPXXX–XX / XXA — MAGNETIC–ONLY CIRCUIT BREAKER (MCP), WITH CURRENT RATING
- CBXXX–XX / XXA — CIRCUIT BREAKER, THERMAL–MAGNETIC UNLESS OTHERWISE NOTED, WITH FRAME SIZE AND TRIP RATING
- FUXXX–XX / XXA — FUSE WITH SIZE AND OPTIONAL IDENTIFICATION.
- DSXXX–XX / XXXA — DISCONNECT SWITCH. RATING OPTIONAL. 30 AMP, 600V RATED MINIMUM UNLESS OTHERWISE NOTED.
- FUXXX–XX / XXA — FUSE DISCONNECT SWITCH. RATING OPTIONAL. 30 AMP, 600V MINIMUM UNLESS OTHERWISE NOTED.
- XX M–XXX — MOTOR (HP AS SHOWN, PHASES AS REQUIRED)
- MSR–XXX / XX XX — MOTOR STARTER COIL
- OL–XXX — THERMAL MOTOR OVERLOAD
- M–XXX — MOTOR CONTACT
- LSXXX–XX / LSXXX–XX — LIMIT SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- PSXXX–XX / PSXXX–XX — PRESSURE SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- TSXXX–XX / TSXXX–XX — TEMPERATURE SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- FSXXX–XX / FSXXX–XX — FLOW SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- FLTXXX–XX / FLTXXX–XX — LEVEL SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- PRSXXX–XX / PRSXXX–XX — PROXIMITY SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- PCSXXX–XX / PCSXXX–XX — PULLCORD SWITCH NORMALLY CLOSED AND NORMALLY OPEN
- SVXXX–XX — SOLENOID VALVE
- PBXXX–XX / PBXXX–XX — MOMENTARY PUSHBUTTON NORMALLY CLOSED AND NORMALLY OPEN
- SSXXX–XX / OX OX — SELECTOR SWITCH NORMALLY NORMALLY CLOSED AND NORMALLY OPEN
- LTXXX–XX / X — PILOT LIGHT X = LENS COLOR
  - A = AMBER
  - B = BLUE
  - G = GREEN
  - R = RED
  - W = WHITE
- CRXXX–XX — CONTROL RELAY
- CRXXX–XX / CRXXX–XX — CONTROL RELAY CONTACT NORMALLY CLOSED AND NORMALLY OPEN
- ALXXX–XX — ALARM LIGHT
- AHXXX–XX — ALARM HORN
- H1 H2 / X1 X2 TFRXXX–XX — CONTROL POWER TRANSFORMER, PRIMARY AND SECONDARY VOLTAGE SHOWN. SIZE AS SHOWN OR SPECIFIED.
- C.T. CTXXX–XX — CURRENT TRANSFORMER. PRIMARY/SECONDARY TURNS RATIO AS SHOWN.

FIRE ALARM SYMBOLS:

- S — 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, %Z, SIZE SHOWN
- XS — CURRENT TRANSFORMER: RATIO SHOWN (3 INDICATES NO. OF CT'S)
  METER SWITCH, xS:
  AS – AMMETER SWITCH
  VS – VOLTMETER SWITCH
  FS – FREQUENCY SWITCH
- PT — POTENTIAL TRANSFORMER PRIMARY & SECONDARY VOLTAGES & WINDINGS SHOWN. (x) UNITS
- METER

  METER:

A	–	AMMETER
W	–	WATTMETER
KWH	–	WATT–HOUR METER
F	–	FREQUENCY METER
VAR	–	VAR METER
V	–	VOLTMETER

- FVNR / SIZE X — FULL VOLTAGE, NON–REVERSING MAGNETIC MOTOR STARTER. NEMA SIZE INDICATED
- FVR / SIZE X — FULL VOLTAGE, REVERSING MAGNETIC MOTOR STARTER. NEMA SIZE INDICATED
- XXHP VFD–XXX — VARIABLE FREQUENCY DRIVE. NEMA SIZE INDICATED
- XXHP RVSS–XXX — REDUCED VOLTAGE SOLID STATE DRIVE (SOFT START). NEMA SIZE INDICATED
- XX / M–XXX — MOTOR (HP AS SHOWN, PHASES AS REQUIRED)
- GENERATOR RECEPTACLE
- N E MTS–XXX — MANUAL TRANSFER SWITCH
- P–XXX–X — CABLE TAG:
  P – POWER CABLE
  C – CONTROL CABLE
  S – SHIELDED SIGNAL CABLE
- Gx — 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)
- PBD A–1,3,5 — HOME RUN – SEE PANELBOARD SCHEDULE FOR CIRCUIT INFORMATION
  EXAMPLE: HOME TO PANELBOARD PBD A, CIRCUITS 1, 3, AND 5

GENERAL ABBREVIATIONS:

AR	ALARM RELAY
AS	AMMETER SELECTOR SWITCH
A, AMP	AMP(S), AMPERE(S)
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AHAP	AS HIGH AS POSSIBLE
AIC	AMPS INTERRUPTING CAPACITY, SYMM.
AL	ALUMINUM
AT	AMPERE TRIP
AF	AMPERE FRAME
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER CONDUCTOR
BKR	BREAKER
C	CONDUCTOR/CONTACTOR
CB	CIRCUIT BREAKER
CJB	CIRCUIT JUNCTION BOX
CKT	CIRCUIT
CLG	CEILING
CR	CONTROL RELAY
CND	CONDUIT
CONC	CONCRETE
CS	CONTROL SWITCH
CONT	CONTROL
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CU	COPPER
D	DIAMETER
DB	DUCT BANK
DC	DIRECT CURRENT
DET	DETAIL
DIAG	DIAGRAM
DPSH	DIFFERENTIAL PRESSURE SWITCH
DS	DISCONNECT SWITCH
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EL	ELEVATION
ELEC	ELECTRIC(AL)
EMER	EMERGENCY
ENCL	ENCLOSURE/ENCLOSED
EP	EXPLOSION PROOF EQUIP.
EX, E	EXISTING
FCP	FURNISHED WITH EQUIPMENT PANEL
FDR	FEEDER
FLA	FULL LOAD AMPS
FPP	FIBER OPTIC DISTRIBUTION PANEL
FS	FLOW SWITCH
FU	FUSE
FUT	FUTURE
FVNR	FULL VOLTAGE NON–REVERSING
FVR	FULL VOLTAGE REVERSING
GALV	GALVANIZED
GEN	GENERATOR
GFR	GROUND FAULT RELAY
GRD	GROUND
GRS	GALVANIZED RIGID STEEL
H	HIGH
HGT	HEIGHT
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HS	HAND STATION (SWITCH)
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
HZ	HERTZ (CYCLES PER SECOND)
HOA	HAND/OFF/AUTO
HOR	HAND/OFF/REVERSE
HMH	HIGH VOLTAGE MANHOLE
ID	INSIDE DIAMETER
IMC	INDIVIDUAL MOTOR CONTROLLER
INTLK	INTERLOCK
INST	INSTANTANEOUS
INSTR	INSTRUMENT
I/O	INPUT–OUTPUT
JB	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT–AMPERE
KVAR	KILOVOLT–AMPERE REACTIVE
KW	KILOWATT
KWH	KILOWATT–HOUR
KAIC	KILO AMPERE INTERRUPTING CURRENT
L–O–R	LOCAL–OFF–REMOTE
L	LONG
LC	LIGHTING CONTACTOR
LCP	LOCAL CONTROL PANEL
LP	LIGHTING PANEL
LOS	LOCK–OUT STOP
LSIG	LONG, SHORT, INSTANTANEOUS TRIP SETTING AND GROUND FAULT PROTECTION
LSL	LEVEL SWITCH LOW
LSO	LIMIT SWITCH OPEN
LSC	LIMIT SWITCH CLOSED
LTG	LIGHTING
LV	LOW VOLTAGE
LSH	LEVEL SWITCH HIGH
M	MOTOR CONTACTOR
mA	MILLIAMPERE
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CONTROL PANEL/MOTOR CIRCUIT PROTECTOR
MECH	MECHANICAL
MFR	MANUFACTURE(R)
MH	MANHOLE
MIC	MICROPHONE
MIN	MINIMUM
MISC	MISCELLANEOUS
mM	MILLIMETER
mV	MILLIVOLT
MCM	MILLI CIRCULAR MILLS
MOP	MOTOR OPERATOR PANEL
MPR	MOTOR PROTECTION RELAY
MCB	MAIN CIRCUIT BREAKER
MTR	MOTOR
MVS	MEDIUM VOLTAGE STARTER
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEUT,N	NEUTRAL
NF	NON–FUSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NP	NAMEPLATE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OL's	OVERLOADS
OT	OIL TIGHT
P	POLE
PA	PUBLIC ADDRESS
PB	PUSHBUTTON, PULLBOX
PE	PHOTO ELECTRIC CELL
PF	POWER FACTOR
PH	PHASE
PJB	POWER JUNCTION BOX
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PP	POWER PANEL
PR	PAIR
PRI	PRIMARY
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
PWR	POWER
QSH	SHEAR PIN LIMIT SWITCH
RCPT	RECEPTACLE
RCT	REACTOR
REF	REFERENCE REQ'D REQUIRED
RMS	ROOT MEAN SQUARE
RTD	RESISTANCE TEMPERATURE DETECTOR
SCH	SCHEDULE
RVAT	REDUCED VOLTAGE AUTO TRANSFORMER TYPE STARTER
SE	SPEED SENSOR
SEC	SECONDARY
SEL	SELECTOR
SER	SERVICE ENTRANCE RATED
SPDT	SINGLE POLE DOUBLE THROW
SPEC	SPECIFICATION
SPHTR	MOTOR SPACE HEATER
SPKR	SPEAKER
SS	STAINLESS STEEL
SSL	SPEED SWITCH
SUB	SUBSTATION
SW	SWITCH
SYMM	SYMMETRICAL
SYS	SYSTEM
SV	SOLENOID OPERATED VALVE
SPB	SIGNAL PULL BOX
TB	TERMINAL BOX
TEL	TELEPHONE
TEMP	TEMPERATURE
TFR	TRANSFORMER
TH	THERMOSTAT
TJB	TERMINAL JUNCTION BOX
TSH	TEMPERATURE SWITCH HIGH
TV	TELEVISION
TYP	TYPICAL
TR	TIMING RELAY
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TSP	TWISTED SHIELDED PAIR
UG	UNDERGROUND
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
V	VOLT
VA	VOLT AMPERE
VAR	VOLT AMPERE REACTIVE
VFD	VARIABLE FREQUENCY DRIVE
VSH	VIBRATION SWITCH
W	WATT, WIRE, WIDE
W/	WITH
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
- G G — GROUNDING CONDUCTOR (CONCEALED), #4/0 AWG BARE COPPER (UNLESS OTHERWISE NOTED)
- GG GG GG — 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 METERIALS 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:

- M — MOTOR CONNECTION
- MOTOR STARTER, INDIVIDUAL –– NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY
- COMBINATION MOTOR STARTER/DISCONNECT INDIMDUAL –– 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)
- $X — 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
- DUPLEX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 6" ABOVE COUNTER, DESK, OR CABINET.
- GFCI DUPLEX 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.
- JB — 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

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"GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026" — STATE OF GEORGIA — CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	09.03.2025
CONFORMED SET	DV
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

ELECTRICAL LEGEND & NOTES

E-001

EDEC
EDEC, INC.
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TEL. (770) 493-8685

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ELECTRICAL EQUIPMENT MATERIALS RATING										
		INSTALLATION AREA AND DESIGN CRITERIA								
NO.	EQUIPMENT	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)	EXPLOSIONPROOF FLEXIBLE COUPLING	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT (LFMC), RATED FOR CLASSIFIED AREA	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 – ONLY WHEN USED WITH CABLE TYPES PERMITTED PER NEC ARTICLE 500	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 7	NEMA 4X, TYPE 304 SS (WHEN NO SWITCHING CONTACTS OR ARCING DEVICES ARE IN THE JUNCTION BOX), OTHERWISE, USE 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 7	NEMA 4X, TYPE 304 SS (WHEN NO SWITCHING CONTACTS OR ARCING DEVICES ARE IN THE JUNCTION BOX), OTHERWISE, USE 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 6P	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						
	MATERIAL	SERVICE ENTRANCE	VFD MOTOR FEEDERS	POWER	CONTROL	SIGNAL
CABLE TYPES	COPPER, UNLESS NOTED OTHERWISE	XHHW, 600V	SHIELDED VFD CABLES, 1000V	THWN-2, 600V	THWN-2, 600V	SHIELDED TWISTED TYPE, 600V

NOTES:

1. POWER CABLES REQUIREMENTS:
   - 1.1. MINIMUM ALLOWED WIRE GAUGE: #12 AWG.
   - 1.2. MAXIMUM ALLOWED WIRE GAUGE: 600KCMIL.
   - 1.3. MAXIMUM MULTICONDUCTOR CABLES SIZE: #1 AWG.
   - 1.4. MAXIMUM SOLID CORE CABLES SIZE: #10 AWG.
2. CONTROL CABLES REQUIREMENTS:
   - 2.1. CABLES CONSTRUCTION TYPE: SINGLE CONDUCTOR.
   - 2.2. MINIMUM ALLOWED WIRE GAUGE: #14 AWG.
3. SIGNAL CABLES REQUIREMENTS:
   - 3.1. CABLES CONSTRUCTION TYPE: MULTICONDUCTOR CONDUCTOR WITH OVERALL SHIELD AND DRAIN WIRE.
   - 3.2. MINIMUM ALLOWED WIRE GAUGE: #16 AWG.
   - 3.3. MAXIMUM NUMBER OF PAIRS/TRIADS IN MULTI-PAIR/TRID CABLE: 2.

INSTALLATION REQUIREMENTS:

GENERAL:

1. ALL ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE UL LISTED.
2. ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED OUTDOORS SHALL BE UV RESISTANT.
3. ALL ELECTRICAL EQUIPMENT AND MATERIALS OF THE SAME TYPE SHALL BE OF THE SAME MANUFACTURER AND MODEL LINE.
4. ALL FREESTANDING EQUIPMENT SHALL BE INSTALLED ON 4" HOUSEKEEPING PAD, ELEVATED ABOVE THE SURROUNDING SURFACE.
5. ALL ELECTRICAL, INSTRUMENTATION AND CONTROL SYSTEM COMPONENTS LOCATIONS SHALL BE ADJUSTED TO PROVIDE NEC REQUIRED WORKING CLEARANCES.
6. ALL ELECTRICAL EQUIPMENT INSTALLED OUTDOORS SHALL HAVE CONCRETE PADS EXTENDING 3 FT IN FRONT OF THE EQUIPMENT.
7. CONTRACTOR SHALL ADJUST CIRCUIT BREAKER SIZES, CABLES AND CONDUITS FOR ELECTRICAL EQUIPMENT AT NO ADDITIONAL COST BASED ON THE ACTUAL ACCEPTED SHOP DRAWINGS.
8. 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.
9. 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.
10. ALL MOTORS USED WITH VARIABLE FREQUENCY DRIVES SHALL BE INVERTER DUTY RATED TYPE.
12. 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:

1. ALL CONDUITS ENDS SHALL BE FREE OF METAL SHAVINGS AND BE PROVIDED WITH FITTINGS WITH INSULATED BUSHING.
2. ALL EXPOSED CONDUITS SHALL BE MINIMUM OF 3/4". ALL BURIED CONDUIT SHALL BE MINIMUM OF 1".
3. ALL UNDERGROUND CONDUITS SHALL HAVE RIGID STEEL ELBOWS.
4. ALL METAL CONDUITS SHALL BE PROTECTED WITH A BITUMINOUS COATING WHEN INSTALLED UNDERGROUND OR WHEN IN CONTACT WITH CONCRETE.
5. 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.
6. 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.
7. CONTRACTOR SHALL PROVIDE ALL REQUIRED PULL BOXES AND/OR CONDULETS TO MEET NEC ARTICLE 314 FOR CABLE PULLS.
8. ALL CABLES INSTALLED IN CABLE TRAYS SHALL BE TC RATED.
9. CONDUIT FITTING CONNECTION TYPES SHALL BE AS FOLLOWS:
   - 9.1. FOR RMC AND IMC CONDUITS – THREADED TYPE;
   - 9.2. FOR EMT CONDUITS – COMPRESSION TYPE.
10. RIGID CONDUIT CONNECTIONS TO ENCLOSURES SHALL BE MADE WITH MYERS HUBS.
11. ALL OPEN CONDUIT ENDS SHALL BE PROTECTED FROM ELEMENTS PENETRATION TO THE INSIDE THE CONDUIT WITH DUCT SEAL.
12. 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.
13. THE CONTRACTOR SHALL INSTALL EXPANSION COUPLINGS AS REQUIRED TO PREVENT CONDUIT DAMAGE DUE TO LONGITUDAL MOVEMENT AND/OR THERMAL EXPANSION.
14. THE CONTRACTOR SHALL INSTALL DEFLECTION COUPLINGS FOR CONDUITS RUNS THAT ARE SUBJECT TO ANGULAR AND PARALLEL MISALIGNMENT.
15. 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.
16. THE CONTRACTOR SHALL INSTALL DRAIN FITTINGS AT LOW POINTS OF CONDUIT RUN TO DRAIN ACCUMULATED CONDENSATE AND TO PROVIDE VENTILATION TO MINIMIZE CONDENSATION.
17. FOR OVERHEAD SERVICES THE CONTRACTOR SHALL INSTALL WEATHERED FITTINGS AS REQUIRED, FOR SERVICE CABLE INSTALLATION THROUGH THE ROOF, USE SERVICE ENTRANCE MAST KITS.
18. THE CONTRACTOR SHALL INSTALL GROUNDING BUSHING AS REQUIRED BY NEC, AS WELL AS FOR THE FOLLOWING CONDITIONS:
    - 18.1. FOR METALLIC RACEWAYS CONTAINING SERVICE CONDUCTORS
    - 18.2. FOR METALLIC RACEWAYS TERMINATED AT NON-METALLIC ENCLOSURES
    - 18.3. FOR METALLIC RACEWAYS TERMINATED ON RING KNOKOUTS REMAINING AND THE CIRCUIT EXCEEDING 250V TO GROUND NOMINAL
    - 18.4. FOR METALLIC RACEWAYS NOT TERMINATED AT ENCLOSURE

INSTRUMENTATION AND CONTROLS:

1. ALL FIELD MOUNTED INDICATING TRANSMITTERS SHALL BE PROVIDED WITH SUN/RAIN HOOD.
2. ALL CONTROL CABINETS INSTALLED OUTDOORS SHALL BE PROVIDED WITH SUN PROTECTING COVER OVER DISPLAYS TO AVOID DETERIORATION FROM UV EXPOSURE.

GROUNDING:

1. MAXIMUM DISTANCE BETWEEN DRIVEN GROUND RODS IS NOT TO EXCEED 50' UNLESS OTHERWISE NOTED.
2. ALL GROUNDING CONDUCTORS TO BE BARE, STRANDED, SOFT DRAWN, COPPER, SIZED AS INDICATED ON THE DESIGN DRAWINGS.
3. MAIN RING GROUND WIRE TO BE MAXIMUM 3' OUTSIDE FOUNDATIONS AND 2'-6" BELOW FINISH GRADE.
4. 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.
5. 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.
6. 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.
7. PIGTAILS SHOULD BE INSTALLED THRU 1" PVC CONDUIT, 10' LONG U.N.O.
8. 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.
9. ALL ABOVE GROUND GROUNDING CONNECTIONS SHALL EMPLOY PROPERLY RATED COMPRESSION CONNECTORS.
10. THE MAIN GROUNDING RING CONDUCTOR SHALL BE RUN AS MECHANICALLY CONTINUOUS AS POSSIBLE WITH A MINIMUM OF CUTS AND SPLICES.

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STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	09.03.2025
CONFORMED SET	DV
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

ELECTRICAL MATERIALS SCHEDULE

E-002

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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-R0	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 #: DSX1LED-P4-40K-70CRI-T2M-MVOLT-SPA5-DDBXD POLE MODEL #: SSA-20-5G-DM19AS-DDBXD	OUTDOOR; CORROSIVE & NON-CORROSIVE; WET	N/A	LED 120V, 1PH 125WATTS	POLE
I1	STANCHION MOUNTED (25 DEG. ANGLED) LIGHT FIXTURE FIXTURE COLOR: GRAY COLOR TEMPERATURE: 4000K FIXTURE ACCESSORIES: NONE BASIS OR DESIGN: BRAND: CROUSE-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 #: DSX1LED-P4-40K-70CRI-T2M-MVOLT-SPA5-DDBXD POLE MODEL #: SSA-20-5G-DM28AS-DDBXD	OUTDOOR; CORROSIVE & NON-CORROSIVE; WET	N/A	LED 120V, 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-R0 (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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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED PROFESSIONAL ENGINEER
No. 36132
DENIS VYSTROPOV

LIGHTING FIXTURES SCHEDULE

E-003

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GRADE

MAGNETIC WARNING TAPE

(1) (2) — 1/0 GND BARE COPPER

DB-1

1) 3" C. (480/277V POWER TO ELECTRICAL ROOM)
2) 3" C. (480/277V POWER TO ELECTRICAL ROOM)

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) (4) (5) — 1/0 GND BARE COPPER

DB-2

1) 2" C. (480/277V POWER FROM GENERATOR)
2) 1.25" C. (208/120V POWER TO GENERATOR)
3) 1" C. (CONTROLS TO GENERATOR)
4) 1" C. (CONTROL TO SCADA)
5) 1" C. (SPARE)

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
(11) (12) (13) (14) (15) (16) (17) (18) (19) (20)
(21) (22) (23) (24) (25) (26) (27) (28) (29) (30)
(31) (32) (33) (34) (35) (36) (37) (38) (39) (40)
(41) (42) (43) — 1/0 GND BARE COPPER

DB-3

1) 2.5" C. (480V POWER TO INFLUENT PUMP #1 (P2210))
2) 2.5" C. (480V POWER TO INFLUENT PUMP #2 (P2220))
3) 2.5" C. (480V POWER TO FUTURE INFLUENT PUMP #3 (P2230))
4) 1" C. (CONTROLS TO INFLUENT PUMP #1 (P2210))
5) 1" C. (CONTROL FROM DISCONNECT SWITCH (DS-P2020))
6) 1" C. (CONTROLS FROM INFLUENT PUMP #2 (P2220))
7) 1" C. (CONTROL FROM DISCONNECT SWITCH (DS-P2020))
8) 1" C. (CONTROLS FROM FUTURE INFLUENT PUMP #3 (P2220))
9) 1" C. (CONTROL FROM FUTURE DISCONNECT SWITCH (DS-P2020))
10) 1" C. (CONTROLS FROM INFLUENT LEVEL SWITCH (LSLL-IPS -1/ LSHH-IPS -1))
11) 1" C. GRS (SIGNAL FROM SUBMERSIBLE PRESSURE TRANSDUCER (PT-IPS-1))
12) 1" C. (120V POWER TO FLOW TRANSMITTER (FIT2200))
13) 1" C. GRS (SIGNAL FROM FLOW TRANSMITTER (FIT2200))
14) 1" C. (480V POWER TO GRID SYSTEM CONTROL PANEL (FCP1120))
15) 2" C. (CONTROLS FROM GRID SYSTEM CONTROL PANEL (FCP1120))
16) 1" C. (120V POWER TO INFLUENT FLOW TRANSMITTER (FIT1210))
17) 1" C. GRS (SIGNAL FROM INFLUENT FLOW TRANSMITTER (FIT1210))
18) 1" C. (120V POWER TO (pH) TRANSMITTER (FIT1209))
19) 1" C. GRS (SIGNAL FROM (pH) TRANSMITTER (FIT1209))
20) 1" C. (120V POWER TO INFLUENT SAMPLER (S1100))
21) 1" C. (CONTROL FROM INFLUENT SAMPLER (S1100))
22) 1" C. GRS (SIGNAL FROM INFLUENT SAMPLER (S1100))
23) 1" C. (120V POWER TO RECEPTECLE)
24) 1" C. (120V POWER TO HEAT TRACING (JB-GS-1))
25) 1" C. (480V POWER TO FINE SCREEN CP (FVP1010))
26) 1.5" C. (CONTROLS FROM FINE SCREEN CP (FVP1010))
27) 1" C. (CONTROL FROM HIGH LEVEL SWITCH (LSH1000))
28) 1" C. (120V POWER TO HEAT TRACING (JB-FS-1))
29) 1" C. (120V POWER TO HEAT TRACING (JB-FS-1))
30) 1" C. (480V POWER TO MPZ (MPZ-CH))
31) 1.25" C. (CONTROL FROM CHEMICAL METERING PUMP (VFD-P8210))
32) 1" C. GRS (SIGNAL FROM CHEMICAL METERING PUMP (VFD-P8210))
33) 1.25" C. (CONTROL FROM CHEMICAL METERING PUMP (VFD-P8220))
34) 1" C. GRS (SIGNAL FROM CHEMICAL METERING PUMP (VFD-P8220))
35) 1" C. GRS (SIGNAL FROM FILLING PANEL (LCP-TB8110))
36) 1" C. GRS (SIGNAL FROM FITURE FILLING PANEL (LCP-TB8120))
37) 1" C. (CONTROL FROM LEAK DETECTOR CP (CP-TB8110A))
38) 1" C. (CONTROL FROM FUTURE LEAK DETECTOR CP (CP-TB8120A))
39) 1" C. (CONTROL FROM FLOAT SWITCH (LSH-CH-1))
40) 1" C. (277V POWER TO LIGHTING)
41) 1" C. GRS (SIGNAL FROM (pH) TRANSMITTER (AIT 6001))
42) 1" C. GRS (SIGNAL FROM CHLORINE TRANSMITTER (AIT 6002))
43) 1" C. (COTROL FROM REUSE PS CP)

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
(11) (12) (13) (14) (15) (16) (17) (18) (19) (20)
(21) (22) (23) (24) (25) (26) (27) (28) (29) — 1/0 GND BARE COPPER

DB-4

1) 2.5" C. (480V POWER TO INFLUENT PUMP #1 (P2210))
2) 2.5" C. (480V POWER TO INFLUENT PUMP #2 (P2220))
3) 2.5" C. (480V POWER TO FUTURE INFLUENT PUMP #3 (P2230))
4) 1" C. (CONTROLS TO INFLUENT PUMP #1 (P2210))
5) 1" C. (CONTROL FROM DISCONNECT SWITCH (DS-P2020))
6) 1" C. (CONTROLS FROM INFLUENT PUMP #2 (P2220))
7) 1" C. (CONTROL FROM DISCONNECT SWITCH (DS-P2020))
8) 1" C. (CONTROLS FROM FUTURE INFLUENT PUMP #3 (P2220))
9) 1" C. (CONTROL FROM FUTURE DISCONNECT SWITCH (DS-P2020))
10) 1" C. (CONTROLS FROM INFLUENT LEVEL SWITCH (LSLL-IPS -1/ LSHH-IPS -1))
11) 1" C. GRS (SIGNAL FROM SUBMERSIBLE PRESSURE TRANSDUCER (PT-IPS-1))
12) 1" C. (120V POWER TO FLOW TRANSMITTER (FIT2200))
13) 1" C. GRS (SIGNAL FROM FLOW TRANSMITTER (FIT2200))
14) 1" C. (480V POWER TO GRID SYSTEM CONTROL PANEL (FCP1120))
15) 2" C. (CONTROLS FROM GRID SYSTEM CONTROL PANEL (FCP1120))
16) 1" C. (120V POWER TO INFLUENT FLOW TRANSMITTER (FIT1210))
17) 1" C. GRS (SIGNAL FROM INFLUENT FLOW TRANSMITTER (FIT1210))
18) 1" C. (120V POWER TO (pH) TRANSMITTER (FIT1209))
19) 1" C. GRS (SIGNAL FROM (pH) TRANSMITTER (FIT1209))
20) 1" C. (120V POWER TO INFLUENT SAMPLER (S1100))
21) 1" C. (CONTROL FROM INFLUENT SAMPLER (S1100))
22) 1" C. GRS (SIGNAL FROM INFLUENT SAMPLER (S1100))
23) 1" C. (120V POWER TO RECEPTECLE)
24) 1" C. (120V POWER TO HEAT TRACING (JB-GS-1))
25) 1" C. (480V POWER TO FINE SCREEN CP (FVP1010))
26) 1.5" C. (CONTROLS FROM FINE SCREEN CP (FVP1010))
27) 1" C. (CONTROL FROM HIGH LEVEL SWITCH (LSH1000))
28) 1" C. (120V POWER TO HEAT TRACING (JB-FS-1))
29) 1" C. (120V POWER TO HEAT TRACING (JB-FS-1))

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) (4) (5) (6) (7) — 1/0 GND BARE COPPER

DB-5

1) 2.5" C. (480V POWER TO INFLUENT PUMP #1 (P2210))
2) 2.5" C. (480V POWER TO INFLUENT PUMP #2 (P2220))
3) 2.5" C. (480V POWER TO FUTURE INFLUENT PUMP #3 (P2230))
4) 1" C. (CONTROLS TO INFLUENT PUMP #1 (P2210))
5) 1" C. (CONTROL FROM DISCONNECT SWITCH (DS-P2020))
6) 1" C. (CONTROLS FROM INFLUENT PUMP #2 (P2220))
7) 1" C. (CONTROL FROM DISCONNECT SWITCH (DS-P2020))
8) 1" C. (CONTROLS FROM FUTURE INFLUENT PUMP #3 (P2220))
9) 1" C. (CONTROL FROM FUTURE DISCONNECT SWITCH (DS-P2020))
10) 1" C. (CONTROLS FROM INFLUENT LEVEL SWITCH (LSLL-IPS -1/ LSHH-IPS -1))
11) 1" C. GRS (SIGNAL FROM SUBMERSIBLE PRESSURE TRANSDUCER (PT-IPS-1))
12) 1" C. (120V POWER TO FLOW TRANSMITTER (FIT2200))
13) 1" C. GRS (SIGNAL FROM FLOW TRANSMITTER (FIT2200))

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) (4) (5) (6) (7) (8) (9)
(10) (11) (12) (13) (14) (15) (16) — 1/0 GND BARE COPPER

DB-6

1) 1" C. (480V POWER TO GRID SYSTEM CONTROL PANEL (FCP1120))
2) 2" C. (CONTROLS FROM GRID SYSTEM CONTROL PANEL (FCP1120))
3) 1" C. (120V POWER TO INFLUENT FLOW TRANSMITTER (FIT1210))
4) 1" C. GRS (SIGNAL FROM INFLUENT FLOW TRANSMITTER (FIT1210))
5) 1" C. (120V POWER TO (pH) TRANSMITTER (FIT1209))
6) 1" C. GRS (SIGNAL FROM (pH) TRANSMITTER (FIT1209))
7) 1" C. (120V POWER TO INFLUENT SAMPLER (S1100))
8) 1" C. (CONTROL FROM INFLUENT SAMPLER (S1100))
9) 1" C. GRS (SIGNAL FROM INFLUENT SAMPLER (S1100))
10) 1" C. (120V POWER TO RECEPTECLE)
11) 1" C. (120V POWER TO HEAT TRACING (JB-GS-1))
12) 1" C. (480V POWER TO FINE SCREEN CP (FVP1010))
13) 1.5" C. (CONTROLS FROM FINE SCREEN CP (FVP1010))
14) 1" C. (CONTROL FROM HIGH LEVEL SWITCH (LSH1000))
15) 1" C. (120V POWER TO HEAT TRACING (JB-FS-1))
16) 1" C. (120V POWER TO HEAT TRACING (JB-FS-1))

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) (4) (5) (6) (7) (8) — 1/0 GND BARE COPPER

DB-7

1) 1" C. (480V POWER TO GRID SYSTEM CONTROL PANEL (FCP1120))
2) 2" C. (CONTROLS FROM GRID SYSTEM CONTROL PANEL (FCP1120))
3) 1" C. (120V POWER TO INFLUENT FLOW TRANSMITTER (FIT1210))
4) 1" C. GRS (SIGNAL FROM INFLUENT FLOW TRANSMITTER (FIT1210))
5) 1" C. (120V POWER TO (pH) TRANSMITTER (FIT1209))
6) 1" C. GRS (SIGNAL FROM (pH) TRANSMITTER (FIT1209))
7) 1" C. (120V POWER TO INFLUENT SAMPLER (S1100))
8) 1" C. (CONTROL FROM INFLUENT SAMPLER (S1100))
9) 1" C. GRS (SIGNAL FROM INFLUENT SAMPLER (S1100))
10) 1" C. (120V POWER TO RECEPTECLE)
11) 1" C. (120V POWER TO HEAT TRACING (JB-GS-1))

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) (4) (5) (6) — 1/0 GND BARE COPPER

DB-8

1) 1" C. (480V POWER TO FINE SCREEN CP (FVP1010))
2) 1.5" C. (CONTROLS FROM FINE SCREEN CP (FVP1010))
3) 1" C. (CONTROL FROM HIGH LEVEL SWITCH (LSH1000))
4) 1" C. (120V POWER TO HEAT TRACING (JB-FS-1))
5) 1" C. (120V POWER TO HEAT TRACING (JB-FS-1))

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) (4) (5) (6) (7) (8)
(9) (10) (11) (12) (13) (14) — 1/0 GND BARE COPPER

DB-9

1) 1" C. (480V POWER TO MPZ (MPZ-CH))
2) 1.25" C. (CONTROL FROM CHEMICAL METERING PUMP (VFD-P8210))
3) 1" C. GRS (SIGNAL FROM CHEMICAL METERING PUMP (VFD-P8210))
4) 1.25" C. (CONTROL FROM CHEMICAL METERING PUMP (VFD-P8220))
5) 1" C. GRS (SIGNAL FROM CHEMICAL METERING PUMP (VFD-P8220))
6) 1" C. GRS (SIGNAL FROM FILLING PANEL (LCP-TB8110))
7) 1" C. GRS (SIGNAL FROM FITURE FILLING PANEL (LCP-TB8120))
8) 1" C. (CONTROL FROM LEAK DETECTOR CP (CP-TB8110A))
9) 1" C. (CONTROL FROM FUTURE LEAK DETECTOR CP (CP-TB8120A))
10) 1" C. (CONTROL FROM FLOAT SWITCH (LSH-CH-1))
11) 1" C. (277V POWER TO LIGHTING)
12) 1" C. GRS (SIGNAL FROM (pH) TRANSMITTER (AIT 6001))
13) 1" C. GRS (SIGNAL FROM CHLORINE TRANSMITTER (AIT 6002))
14) 1" C. (COTROL FROM REUSE PS CP)

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) (4) (5) — 1/0 GND BARE COPPER

DB-10

1) 1" C. (120V POWER TO (pH) TRANSMITTER (AIT 6001))
2) 1" C. GRS (SIGNAL FROM (pH) TRANSMITTER (AIT 6001))
3) 1" C. (120V POWER TO CHLORINE TRANSMITTER (AIT 6002))
4) 1" C. GRS (SIGNAL FROM CHLORINE TRANSMITTER (AIT 6002))
5) 1" C. (COTROL FROM REUSE PS CP)

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) (4) — 1/0 GND BARE COPPER

DB-11

1) 1" C. (120V POWER TO (pH) TRANSMITTER (AIT 6001))
2) 1" C. GRS (SIGNAL FROM (pH) TRANSMITTER (AIT 6001))
3) 1" C. (120V POWER TO CHLORINE TRANSMITTER (AIT 6002))
4) 1" C. GRS (SIGNAL FROM CHLORINE TRANSMITTER (AIT 6002))

GRADE

MAGNETIC WARNING TAPE

(1) — 1/0 GND BARE COPPER

DB-12

1) 1" C. (COTROL FROM REUSE PS CP)

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) (4) (5) (6) (7) — 1/0 GND BARE COPPER

DB-13

1) 1" C. (480V POWER TO EQ BASIN AERATOR #1 (M2110))
2) 1" C. (CONTROL FROM DISCONNECT SWITCH (DS-M2110))
3) 1" C. (120V POWER TO SPACE HEATER (XZ-M2110))
4) 1" C. (CONTROLS FROM FLOAT SWITHES (LSL2100/LSH2100))
5) 1" C. (480V POWER TO EQ BASIN AERATOR #2 (M2120))
6) 1" C. (CONTROL FROM DISCONNECT SWITCH (DS-M2120))
7) 1" C. (120V POWER TO SPACE HEATER (XZ-M2120))

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) (4) — 1/0 GND BARE COPPER

DB-14

1) 1" C. (480V POWER TO EQ BASIN AERATOR #1 (M2110))
2) 1" C. (CONTROL FROM DISCONNECT SWITCH (DS-M2110))
3) 1" C. (120V POWER TO SPACE HEATER (XZ-M2110))
4) 1" C. (CONTROLS FROM FLOAT SWITHES (LSL2100/LSH2100))

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) — 1/0 GND BARE COPPER

DB-15

1) 1" C. (480V POWER TO EQ BASIN AERATOR #2 (M2120))
2) 1" C. (CONTROL FROM DISCONNECT SWITCH (DS-M2120))
3) 1" C. (120V POWER TO SPACE HEATER (XZ-M2120))

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) (4) (5) (6)
(7) (8) (9) (10) — 1/0 GND BARE COPPER

DB-16

1) 3" C. (480V POWER TO DIGESTER BLOWER #1 (B7110))
2) 3" C. (480V POWER TO DIGESTER BLOWER #2 (B7120))
3) 1" C. (PTC-RESISTOR (PTC-B7110))
4) 1" C. (PTC-RESISTOR (PTC-B7120))
5) 1" C. (120V POWER TO SPACE HEATER(XZ-B7110/FAN(F-B7110)))
6) 1" C. (120V POWER TO SPACE HEATER(XZ-B7120/FAN(F-B7120)))
7) 1" C. (120V POWER TO FLOW TRANSMITTER (FIT7100))
8) 1" C. GRS (SIGNAL FROM FLOW TRANSMITTER (FIT7100))
9) 1" C. GRS (SIGNAL FROM PRESSURE TRANSMITTER (PIT7100))
10) 1" C. (COMMENTS FROM PLANT DRAIN PS CP)

GRADE

MAGNETIC WARNING TAPE

(1) (2) (3) — 1/0 GND BARE COPPER

DB-17

1) 3" C. (480V POWER TO DIGESTER BLOWER #1 (B7110))
2) 3" C. (480V POWER TO DIGESTER BLOWER #2 (B7120))
3) 1" C. (PTC-RESISTOR (PTC-B7110))
4) 1" C. (PTC-RESISTOR (PTC-B7120))
5) 1" C. (120V POWER TO SPACE HEATER(XZ-B7110/FAN(F-B7110)))
6) 1" C. (120V POWER TO SPACE HEATER(XZ-B7120/FAN(F-B7120)))
7) 1" C. (120V POWER TO FLOW TRANSMITTER (FIT7100))
8) 1" C. GRS (SIGNAL FROM FLOW TRANSMITTER (FIT7100))
9) 1" C. GRS (SIGNAL FROM PRESSURE TRANSMITTER (PIT7100))

GRADE

MAGNETIC WARNING TAPE

(1) — 1/0 GND BARE COPPER

DB-18

1) 1" C. (COMMENTS FROM PLANT DRAIN PS CP)

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

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" 5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

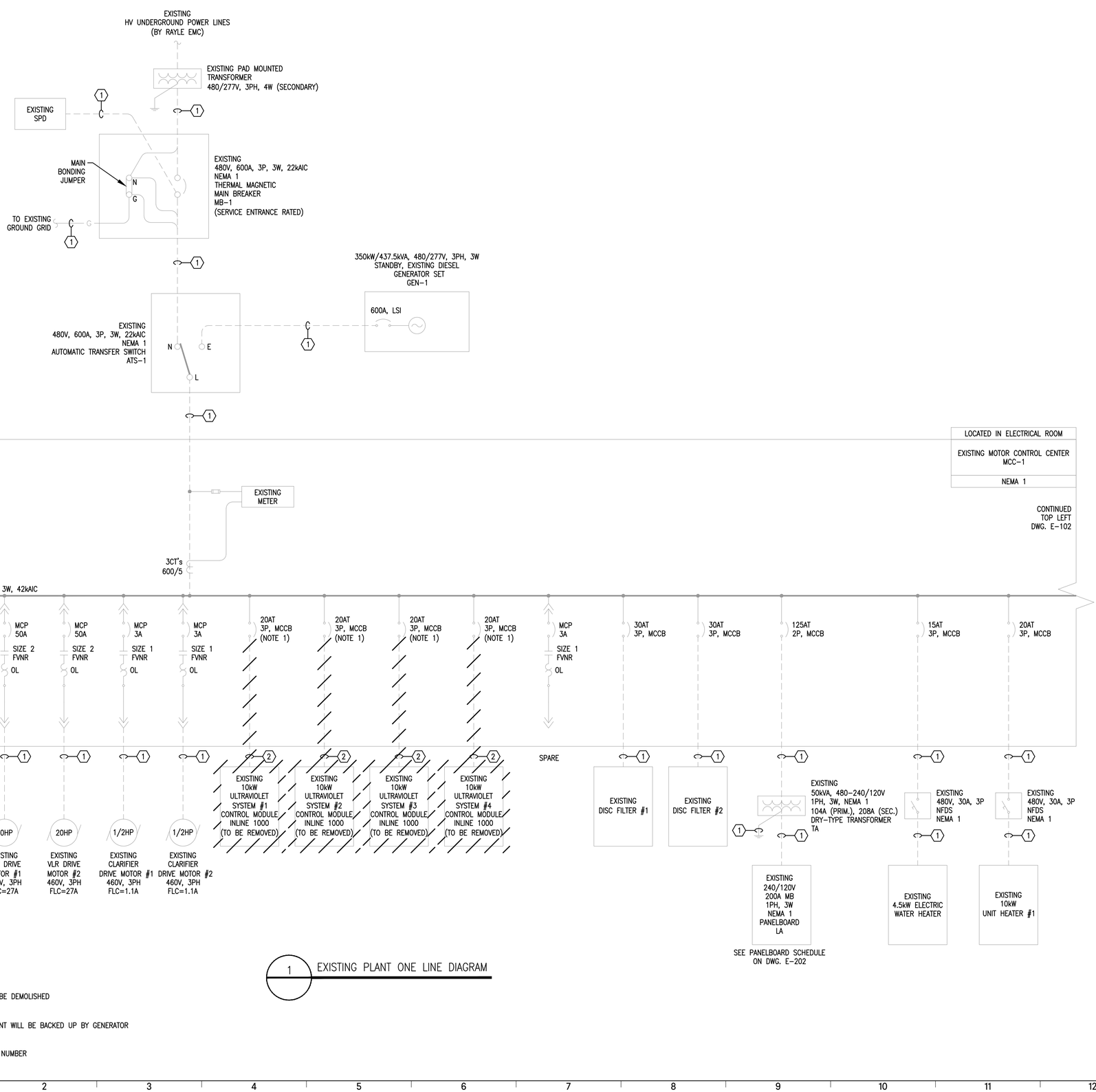
GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

DUCTBANK SECTIONS

E-004

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

This drawing is and shall remain the property of Goodwyn, Mills and Cawood, Inc. (GMC) and Goodwyn Mills Cawood LLC (GMC). Unauthorized use of any kind including use on other projects is prohibited. In the event that a conflict arises between the sealed drawings and the electronic files, the sealed drawings will govern.



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

1 EXISTING PLANT ONE LINE DIAGRAM

LEGEND:

– EQUIPMENT TO BE DEMOLISHED

G X – DENOTES EQUIPMENT WILL BE BACKED UP BY GENERATOR
- GENERATOR STEP NUMBER
- GENERATOR LOAD

NOTES:

1. THE CONTRACTOR SHALL LABEL THE EXISTING MCC BUCKETS WITH ENGRAVED PHENOLIC NAMEPLATES READING: "SPARE".
2. 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.

EDEC, INC.
4120 CHATTAHOOCHEE TRACE
SUITE A
DULUTH, GEORGIA 30097
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GMC
801 Broad Street Suite 900
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1" 0" .5" 1"

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BID SET	09.03.2025
CONFORMED SET	
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED ENGINEER DENIS VYSTROPOV NO. 50137 PROFESSIONAL

EXISTING PLANT ONE LINE DIAGRAM

E-101

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CONTINUED
TOP RIGHT
DWG. E-101

LOCATED IN ELECTRICAL ROOM

EXISTING MOTOR CONTROL CENTER
MCC-1

NEMA 1

600A BUS, 480V, 3PH, 3W, 42kAIC

MCP
7A
SIZE 1
FVNR
OL

300AT
3P, MCCB

150AT
3P, MCCB

SPARE

80AT
3P, MCCB

70AT
3P, MCCB

MCP
100A
SIZE 3
FVNR
OL

70AT/100AF
3P, MCCB
(NOTE 1)

MCP
100A
SIZE 3
FVNR
OL

70AT/100AF
3P, MCCB
(NOTE 1)

20AT
3P, MCCB

20AT
3P, MCCB

MCP
3A
SIZE 1
FVNR
OL

MCP
3A
SIZE 1
FVNR
OL
(NOTE 4)

MCP
3A
SIZE 1
FVNR
OL
(NOTE 4)

20AT
3P, MCCB

EXISTING
480V, 30A, 3P
NFDS
NEMA 4X

EXISTING
REUSE PUMP STATION
CONTROL PANEL

EXISTING RAS PUMP STATION
CONTROL PANEL
(BY VENDOR)

EXISTING PLANT DRAIN
PUMP STATION
CONTROL PANEL
(BY VENDOR)
LCP-XXX

T.E.
MCP
100A
VFD
AFE OR
18-PULSE
C.T.
T.E.

BLOWER #1
VFD CABINET
VFD-B1
(NEMA 1, 42kAIC)
(NOTE 5)

T.E.
MCP
100A
VFD
AFE OR
18-PULSE
C.T.
T.E.

BLOWER #2
VFD CABINET
VFD-B2
(NEMA 1, 42kAIC)
(NOTE 5)

EXISTING
480V, 30A, 3P
NFDS
NEMA 4X

EXISTING
480V, 30A, 3P
NFDS
NEMA 4X

480V, 30A, 3P
NFDS
NEMA 4X SS
DS-M4300

480V, 30A, 3P
NFDS
NEMA 4X SS
DS-P4310

EXISTING
CONTROL
PANEL
DIGESTER
MIXER

EXISTING
480V, 100A, 3P
NFDS
NEMA 4X SS
DS-B1
(NOTE 3)

EXISTING
480V, 100A, 3P
NFDS
NEMA 4X SS
DS-B2
(NOTE 3)

3HP
EXISTING
ODOR CONTROL
FAN #1
460V, 3PH
FLC=4.8A

75HP
EXISTING
REUSE PUMP #1
460V, 3PH
FLC=96A

75HP
EXISTING
REUSE PUMP #2
460V, 3PH
FLC=96A

EXISTING
FLOATS
(BY VENDOR)

18HP
EXISTING
SUBMERSIBLE
RAS PUMP #1
460V, 3PH
FLC=24.6A

18HP
EXISTING
SUBMERSIBLE
RAS PUMP #2
460V, 3PH
FLC=24.6A

EXISTING
FLOATS
(BY VENDOR)

10HP
EXISTING
SUBMERSIBLE
PLANE DRAIN
PUMP #1
460V, 3PH
FLC=14A

10HP
EXISTING
SUBMERSIBLE
PLANE DRAIN
PUMP #2
460V, 3PH
FLC=14A

EXISTING
MULTITRODE

50HP
EXISTING
BLOWER #1
B1
460V, 3PH
FLC=65A
(TO BE REMOVED)

30HP
BLOWER #1
B1
460V, 3PH
FLC=40A

50HP
EXISTING
BLOWER #2
B2
460V, 3PH
FLC=65A
(TO BE REMOVED)

30HP
BLOWER #2
B2
460V, 3PH
FLC=40A

EXISTING
REJECT VALVE

EXISTING
REUSE VALVE

1/2HP
CLARIFIER #3
MOTOR
M4300
460V, 3PH
FLC=1.1A

1HP
SCUM
PUMP
P4310
460V, 3PH
FLC=2.1A

1HP
EXISTING
SCUM PUMP #1
460V, 3PH
FLC=1.8A

1 EXISTING PLANT ONE LINE DIAGRAM

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

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:

1. THE CONTRACTOR SHALL PROVIDE AND INSTALL 480V, 70AT/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.
2. 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.
3. THE CONTRACTOR SHALL PROVIDE AN INSTALL A SET OF DRY CONTACTS FOR DISCONNECT SWITCH STATUS POSITION AS INDICATED. REFER TO SCHEMATIC WIRING DIAGRAM E-612 FOR ADDITIONAL DETAILS.
4. 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.
5. THE CONTRACTOR CAN CONSIDER AN ALTERNATIVE SOLUTION FOR THE VFD CABINET – 6-PULSE DRIVE WITH A PASSIVE INPUT FILTER. THE CONTRACTOR SHALL CONFIRM THE AVAILABLE SPACE IN THE ELECTRICAL ROOM AND ADJUST THE SELECTED DRIVE DIMENTIONS AS NEEDED TO FIT THE AVAILABLE SPACE.

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

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STATE OF GEORGIA
"GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026"
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	09.03.2025
CONFORMED SET	DV
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

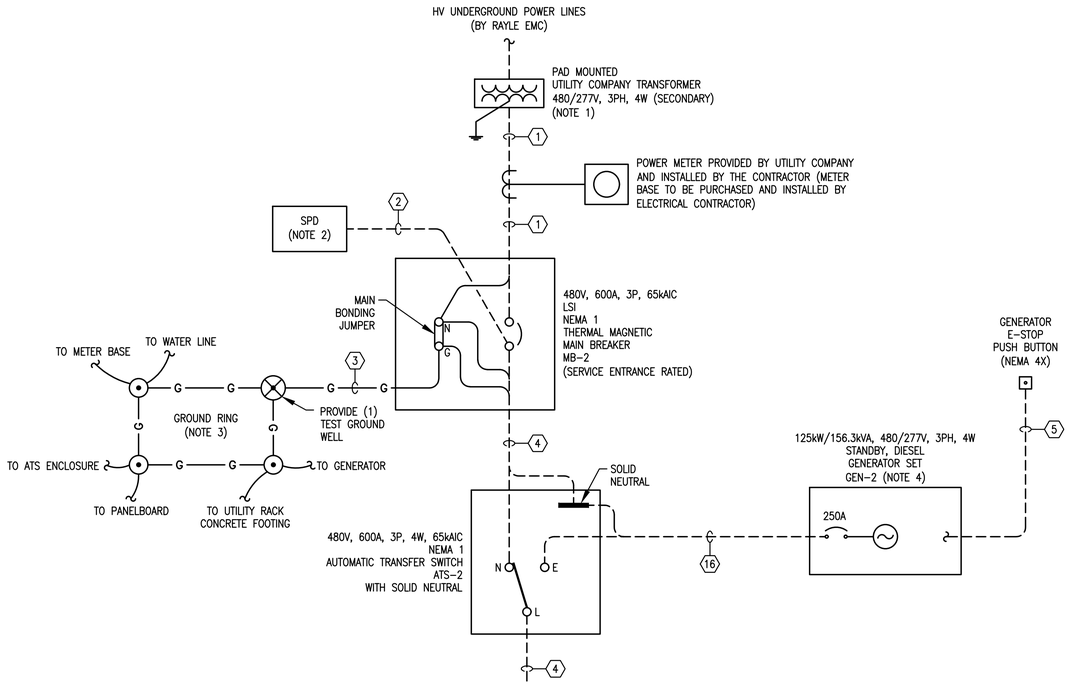
GMC Project #CAUG230002

GEORGIA REGISTERED No. 30153 PROFESSIONAL ENGINEER DENIS VYSTROPOV

EXISTING PLANT
ONE LINE DIAGRAM

E-102

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CONDUCTOR/CONDUIT SCHEDULE
(1) 2 RUNS OF 4 #350KCMIL IN 3" C.
(2) 5 #6 IN 1" C. (3 FT MAX)
(3) 1 #2/0 GND IN 1" C.
(4) 2 RUNS OF 4 #350KCMIL & 1 #1 GND IN 3" C.
(5) 2 #14 IN 1" C.
(6) SPARE 1.25" C.
(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 #1/0 & 1 #4 GND IN 3" 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) 4 #250 KCMIL & 1 #4 GND IN 2.5" C.
(17) SPARE 2.5" C.
(18) 3 #6 & 1 #8 GND IN 2.5" C. (VFD SHIELDED)
(19) 3 #4 & 1 #8 GND IN 1.25" C.

NOTES:

1. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF THE PAD MOUNTED UTILITY TRANSFORMER WITH RAYLE EMC, JIM BENNETT (TEL: 706-678-2116). THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL COSTS ASSOCIATED WITH BRINGING POWER SERVICE TO THE SITE AND PROVIDING METER INSTALLATION AND ASSOCIATED HARDWARE AS REQUIRED BY UTILITY COMPANY.
2. THE CONTRACTOR SHALL PROVIDE SURGE PROTECTION DEVICE (SPD) IN NEMA 1 ENCLOSURE. SPD SHALL BE EATON CAT#: SPD-160-480Y-3-M WITH INTEGRAL DISCONNECT SWITCH OR APPROVED EQUAL.
3. THE CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE GROUND GRID AROUND THE UTILITY RACK, WETWELL AND MAKE CONNECTIONS TO THE SERVICE ENTRANCE RATED BREAKER ENCLOSURE. GRID SHALL CONSIST OF #2/0 BARE COPPER GROUND CONDUCTOR, 5-3/4" DIAMETER 10' GROUND RODS AND CADWELD CONNECTIONS TO GROUND RODS.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE 125kW/156.3kVA, 480/277V, 3PH STANDBY DIESEL GENERATOR SET. THE GENERATOR SET SHALL INCLUDE: GENERATOR; GENERATOR CONTROL PANEL; MAIN CIRCUIT BREAKER; GENERATOR PAD; 24HR RATED FUEL TANK AND AUTOMATIC TRANSFER SWITCH IN NEMA 1 ENCLOSURE.
   THE GENERATOR HOUSING SHALL BE WEATHERPROOF (73 DBA AT 23 FT). SEE GENERATOR SPEC 26 32 13 FOR ADDITIONAL INFORMATION. VOLTAGE DIP AND FREQUENCY DIP SHOULD NOT EXCEED 25% AND 10% ACCORDINGLY. THE GENERATOR SUPPLIER SHALL CONFIRM THE GENERATOR CALCULATIONS PRIOR TO BID, BASED ON SPECIFIED LOADS. IF A LARGER GENERATOR IS REQUIRED TO RUN THE LOADS, THEN CONTRACTOR SHALL INCLUDE A LARGER GENERATOR AND UPSIZE CABLES/CONDUITS AS REQUIRED. A LETTER OF GUARANTEE SHALL BE PROVIDED INCLUDING LOAD CALCULATIONS TO VERIFY THE GENERATOR SELECTION. THE CONTRACTOR SHALL VERIFY GENERATOR BREAKER SIZE AND ADJUST CABLE SIZE PER NEC 310.16 AS REQUIRED.
   THE GENERATOR SHALL INCLUDE 120VAC, 2A RATED CONTACTS:
   - GENERATOR RUNNING;
   - GENERATOR LOW FUEL LEVEL ALARM;
   - GENERATOR COMMON FAULT.

   AUTOMATIC TRANSFER SWITCH SHALL INCLUDE 120VAC, 2A RATED CONTACTS:
   - ATS IN NORMAL POSITION;
   - ATS IN EMERGENCY POSITION;
   - ATS NORMAL POWER LOSS.

   GENERATOR STEPS:
   STEP 1:
   - 30kVA MISCELLANEOUS LOADS;
   - 30kVA MPZ CHEMICAL AREA;
   - 19 kVA WALL MOUNTED HEAT PUMP.

   STEP 2:
   - ONE (1) 2HP SCREEN MOTOR #1 (FVR);
   - ONE (1) 1HP BRUSH MOTOR #1 (FVNR);
   - ONE (1) 5HP SCREEN WASHER/COMPACTOR MOTOR #1 (FVNR).

   STEP 3:
   - ONE (1) 5HP GRIT PUMP MOTOR #1 (VFD);
   - ONE (1) 1HP GRIT DEWATERING CONVEYOR MOTOR #1 (VFD).

   STEP 4:
   - ONE (1) 30HP INFLUENT PUMP #1 (FVNR).

   THE CONTRACTOR SHALL COORDINATE THE EQUIPMENT STARTING SEQUENCE AND DELAYS WITH THE SYSTEM INTEGRATOR AND EQUIPMENT SUPPLIERS (SUPPLYING PLC CONTROL PANELS) TO ENSURE PROPER LOAD STAGGERING DURING POWER OUTAGE AND GENERATOR OPERATION.
5. THE CONTRACTOR SHALL PROVIDE AND INSTALL MINI POWER CENTER IN NEMA 3R SS ENCLOSURE WHICH SHALL BE A COMBINATION OF 30kVA, 480-208/120V, 3PH, 4W TRANSFORMER AND 24 CKT. PANELBOARD. SEE PANELBOARD SCHEDULE ON DWG. E-201.
6. THE CONTRACTOR SHALL CONFIRM VFD TYPES WITH THE EQUIPMENT VENDORS (CONSTANT TORQUE VS VARIABLE TORQUE) PRIOR TO BID AND PROVIDE CONFIRMATION TO THE ENGINEER FOR REVIEW.

LOCATED IN ELECTRICAL ROOM
PANELBOARD PP-2
NEMA 1, 72 CKT. SURFACE MOUNTED

CONNECTED LOAD: 423.2A
RUNNING LOAD: 423.2A
FUTURE CONNECTED LOAD: 463.2A
FUTURE RUNNING LOAD: 463.2A

600A, 3P LSI

600A BUS, 480/277V, 3PH, 4W, 65kAIC

CB, 3P 30A	CB, 3P 30A	CB, 3P 40A	CB, 3P 40A	CB, 3P 70A	CB, 3P 70A	CB, 3P 70A	CB, 3P 150A	CB, 3P 150A	CB, 3P 50A	CB, 3P 50A	CB, 3P 50A	CB, 3P 20A	CB, 3P 20A	CB, 3P 30A	CB, 3P 50A	SPARE	SPARE	SPARE	SPARE			
FINE SCREEN CONTROL PANEL FCP1010 (NEMA 4X SS, 25kAIC)	GRIT SYSTEM CONTROL PANEL FCP1120 (NEMA 4X SS, 25kAIC)	EQ BASIN AERATOR #1 RVSS CABINET RVSS-M2110 (NEMA 1, 42kAIC)	EQ BASIN AERATOR #2 RVSS CABINET RVSS-M2120 (NEMA 1, 42kAIC)	MCP 100A; 5% LINE REACTOR; VFD 6-PULSE; INFLUENT PUMP #1 VFD CABINET VFD-P2210 (NEMA 1, 42kAIC); DV/DT FILTER (NOTE 6)	MCP 100A; 5% LINE REACTOR; VFD 6-PULSE; INFLUENT PUMP #2 VFD CABINET VFD-P2220 (NEMA 1, 42kAIC); DV/DT FILTER (NOTE 6)	MCP 100A; 5% LINE REACTOR; VFD 6-PULSE; FUTURE INFLUENT PUMP #3 VFD CABINET VFD-2230 (NEMA 1, 42kAIC); DV/DT FILTER (NOTE 6)	MCP 150A; VFD AFE; DV/DT FILTER; DIGESTER BLOWER #1 VFD CABINET VFD-B7110 (NEMA 1, 42kAIC) (NOTE 6)	MCP 150A; VFD AFE; DV/DT FILTER; DIGESTER BLOWER #2 VFD CABINET VFD-B7120 (NEMA 1, 42kAIC) (NOTE 6)	30kVA, 480-208/120V 3PH, 4W, NEMA 1 36A (PRIM.), 83A (SEC.) DRY-TYPE TRANSFORMER TFR-2	208/120V 100A MB 3PH, 4W NEMA 1 PANELBOARD LP-2					480V, 30A, 3P NFDS NEMA 4X SS DS-WHP-2	WALL MOUNTED HEAT PUMP WHP-2 FLA=22	MINI-POWER ZONE PANELBOARD MPZ-CH 30kVA, 3PH 480-208/120V NEMA 3R SS 25kAIC (NOTE 5)			
FVR / FVNR / FVNR	VFD / VFD	RVSS	RVSS																			
		480V, 30A, 3P NFDS NEMA 4X SS DS-M2110	480V, 30A, 3P NFDS NEMA 4X SS DS-M2120	480V, 60A, 3P NFDS NEMA 4X SS DS-IPS-1	480V, 60A, 3P NFDS NEMA 4X SS DS-IPS-2	FUTURE 480V, 60A, 3P NFDS NEMA 4X SS DS-IPS-3	480V, 150A, 3P NFDS NEMA 4X SS DS-B7110	480V, 150A, 3P NFDS NEMA 4X SS DS-B7120														
2HP / 1HP / 5HP	7.5HP / 1HP	15HP	15HP	30HP	30HP	30HP	75HP	75HP														
SCREEN MOTOR #1 M1010 460V, 3PH FLC=3.4A; BRUSH MOTOR #1 M1015 460V, 3PH FLC=2.1A; SCREEN WASHER/ COMPACTOR MOTOR #1 M1020 460V, 3PH FLC=7.6A	GRIT PUMP MOTOR #1 P1110 460V, 3PH FLC=11A; GRIT DEWATERING CONVEYOR MOTOR #1 M1110 460V, 3PH FLC=2.1A	EQ BASIN SURFACE AERATOR #1 M2110 460V, 3PH FLC=21A	EQ BASIN SURFACE AERATOR #2 M2120 460V, 3PH FLC=21A	SUBMERSIBLE INFLUENT PUMP #1 P2210 460V, 3PH FLC=40A	SUBMERSIBLE INFLUENT PUMP #2 P2220 460V, 3PH FLC=40A	FUTURE SUBMERSIBLE INFLUENT PUMP #3 P-IPS-3 460V, 3PH FLC=40A	DIGESTER BLOWER #1 B7110 460V, 3PH FLC=96A	DIGESTER BLOWER #2 B7120 460V, 3PH FLC=96A	SEE PANELBOARD SCHEDULE ON DWG. E-201												
G2 / G2 / G2	G3 / G3			G4					G1								G1	G1				

LEGEND:
G X – DENOTES EQUIPMENT WILL BE BACKED UP BY GENERATOR
- GENERATOR STEP NUMBER
- GENERATOR LOAD

1 ONE LINE DIAGRAM

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1" 0" .5" 1"

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100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED PROFESSIONAL ENGINEER NO. 50137 DENIS VYSTROPOV

ONE LINE DIAGRAM

E-111

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PANELBOARD	PP-2	(LOCATED IN ELECTRICAL ROOM)
VOLTAGE (L-N):	277V	ENCLOSURE TYPE: NEMA 1
VOLTAGE (L-L):	480V	MOUNTING: SURFACE
PHASE, WIRES:	3 ϕ, 4 W	AIC RATING (A): 65,000 AIC
MINIMUM BUS CAPACITY (A):	600A	NOTES:
MAIN O.C. DEVICE (A):	600A, 3P MAIN BREAKER	

CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP) A	A	B	B	C	C	POLE	TRIP AMPS	DESCRIPTION	CKT NO
1	FINE SCREEN CONTROL PANEL (FCP1010)	20	3	6.5	10.7					3	30	GRIT SYSTEM CONTROL PANEL (FCP1120)	2
3						6.5	10.7						4
5								6.5	10.7				6
7	EQ BASIN AERATOR #1 MOTOR STARTER (RVSS-M2110)	40	3	22.0	22.0					3	40	EQ BASIN AERATOR #2 MOTOR STARTER (RVSS-M2120)	8
9						22.0	22.0						10
11								22.0	22.0				12
13	INFLUENT VFD CABINET #1 (VFD-P2210)	70	3	40.0	97.0					3	150	DIGESTER BLOWER VFD CABINET #1 (VFD-B7110)	14
15						40.0	97.0						16
17								40.0	97.0				18
19	DIGESTER BLOWER VFD CABINET #2 (VFD-B7120)	150	3	97.0	0.0					3	20	SPARE	20
21						97.0	0.0						22
23								97.0	0.0				24
25	DRY-TYPE TRANSFORMER (TFR-1)	50	3	36.0	22.0					3	30	WALL MOUNTED HEAT PUMP (WHP-2)	26
27						36.0	22.0						28
29								36.0	22.0				30
31	INFLUENT VFD CABINET #2 (VFD-P2220)	70	3	40.0	36.0					3	50	MINI-POWER ZONE (MPZ-CH)	32
33						40.0	36.0						34
35								40.0	36.0				36
37	FUTURE INFLUENT VFD CABINET #3 (VFD-P2230)	70	3	40.0	0.0					3	20	SPARE	38
39						40.0	0.0						40
41								40.0	0.0				42
43	SPARE	50	3	0.0	0.0					3	50	SPARE	44
45						0.0	0.0						46
47								0.0	0.0				48
49	SPACE			0.0	0.0							SPACE	50
51	SPACE					0.0	0.0					SPACE	52
53	SPACE							0.0	0.0			SPACE	54
55	SPACE			0.0	0.0							SPACE	56
57	SPACE					0.0	0.0					SPACE	58
59	SPACE							0.0	0.0			SPACE	60
61	SPACE			0.0	0.0							SPACE	62
63	SPACE					0.0	0.0					SPACE	64
65	SPACE							0.0	0.0			SPACE	66
67	SPACE			0.0	0.0							SPACE	68
69	SPACE					0.0	0.0					SPACE	70
71	SPACE							0.0	0.0			SPACE	72
USE THE FOLLOWING CONDUCTORS FOR PANELBOARD CIRCUITS: 20A – #12AWG; 30A – #10AWG; 40A – #8AWG; 50A – #6AWG; 60A – #4AWG; 150A – #1/0 AWG				CONNECTED LOAD PHASE TOTALS (AMP)									
				469.2		469.2		469.2					

1 PP-2 – 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) A	A	B	B	C	C	POLE	TRIP AMPS	DESCRIPTION	CKT NO
1	POLE LIGHTING	20	1	1.0	20.0					1	30	PLANT SCADA (LCP-2)	2
3	GRIT SYSTEM HEAT TRACE	20 (*)	1			0.0	0.0			1	20	SPARE	4
5	INFLUENT FLOW METER (LE/FIT1210)	20	1					1.0	1.0	1	20	INFLUENT PS POLE LIGHT	6
7	HEADWORKS POLE LIGHTS	20	1	2.0	0.0					1	20	SPARE	8
9	FINE SCREEN HEAT TRACE	20 (*)	1			5.0	1.0			1	20	HEADWORKS pH SENSOR (AIT/AE-1209)	10
11	HEADWORKS RECEPTACLE #2	20	1					1.5	1.0	1	20	ELECTRICAL ROOM INTERIOR LIGHTING	12
13	INFLUENT PS RECEPTACLE	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	FLOW INDICATING TRANSMITTER (FE/FIT2200)	20	1					1.0	1.5	1	20	HEADWORKS RECEPTACLE #1	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								10.0	0.0	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
USE THE FOLLOWING CONDUCTORS FOR PANELBOARD CIRCUITS: 20A – #12AWG; 30A – #10AWG; 40A – #8AWG; 50A – #6AWG; 60A – #4AWG				CONNECTED LOAD PHASE TOTALS (AMP)						(*) – 30mA, EGFP CIRCUIT BREAKER			
				34.6		23.5		17.0					

2 LP-2 – PANELBOARD SCHEDULE

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.	

CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP) A	A	B	B	C	C	POLE	TRIP AMPS	DESCRIPTION	CKT NO
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					0.9	1.0	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					

3 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: (PROVIDE BY CHEM BLD. VENDOR)
MAIN O.C. DEVICE (A):	50A, 3P MAIN BREAKER	

CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (AMP) A	A	B	B	C	C	POLE	TRIP AMPS	DESCRIPTION	CKT NO
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	20	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							SPACE	20
21	SPACE					0.0	0.0					SPACE	22
23	SPACE							0.0	0.0			SPACE	24
25	SPACE			0.0	0.0							SPACE	26
27	SPACE					0.0	0.0					SPACE	28
29	SPACE							0.0	0.0			SPACE	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					

4 LP-CH – PANELBOARD SCHEDULE

GMC
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Augusta, GA 30901
T 706.303.3272

GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026
STATE OF GEORGIA CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

PANELBOARD SCHEDULES

E-201

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

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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) A	PHASE LOADS (AMP) B	POLE	TRIP AMPS	DESCRIPTION	CKT NO
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	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	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	20	EXISTING LOAD	12
13	MAINTENANCE RECEPTACLE	20	2	0.5	0.8	1	20	EXISTING LOAD	14
15	〃	〃	〃		0.5	2	20	EXISTING LOAD	16
17	HOT WATER RECIRCULATION PUMP	20	1	0.4	0.9	〃	〃	〃	18
19	AHU–1 (1)	50	2		3.0	2	20	EXISTING LOAD	20
21	〃	〃	〃	3.0	1.2	〃	〃	〃	22
23	EF–2	20	2		0.6	2	20	EXISTING LOAD	24
25	〃	〃	〃	0.6	0.6	〃	〃	〃	26
27	WALKWAY/VLR LIGHTING	20	1		1.2	2	20	EXISTING LOAD	28
29	INFLUENT SCREEN ROOM RECEPTACLES	20	1	0.6	0.6	〃	〃	〃	30
31	VLR CATWALK LIGHTING	20	1		0.2	2	20	EXISTING LOAD	32
33	INFLUENT SAMPLER	20	1	0.1	0.5	〃	〃	〃	34
35	UV SOLENOID PANEL	20	1		0.2	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	1	20	EXISTING LOAD	40
41	〃	〃	〃	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) A	PHASE LOADS (AMP) B	POLE	TRIP AMPS	DESCRIPTION	CKT NO
1	RECEPTICALS @ 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	1	20	EF–6	4
5	GENERATOR JACKET HEATER	30	2	0.0	0.0	1	20	HP–1	6
7	〃	〃	〃		0.0	〃	〃	〃	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	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	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			SPACE	20
				CONNECTED LOAD PHASE TOTALS (AMP)					
				2.0	26.6				

2 EXISTING LB – PANELBOARD SCHEDULE

GMC
801 Broad Street Suite 900
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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

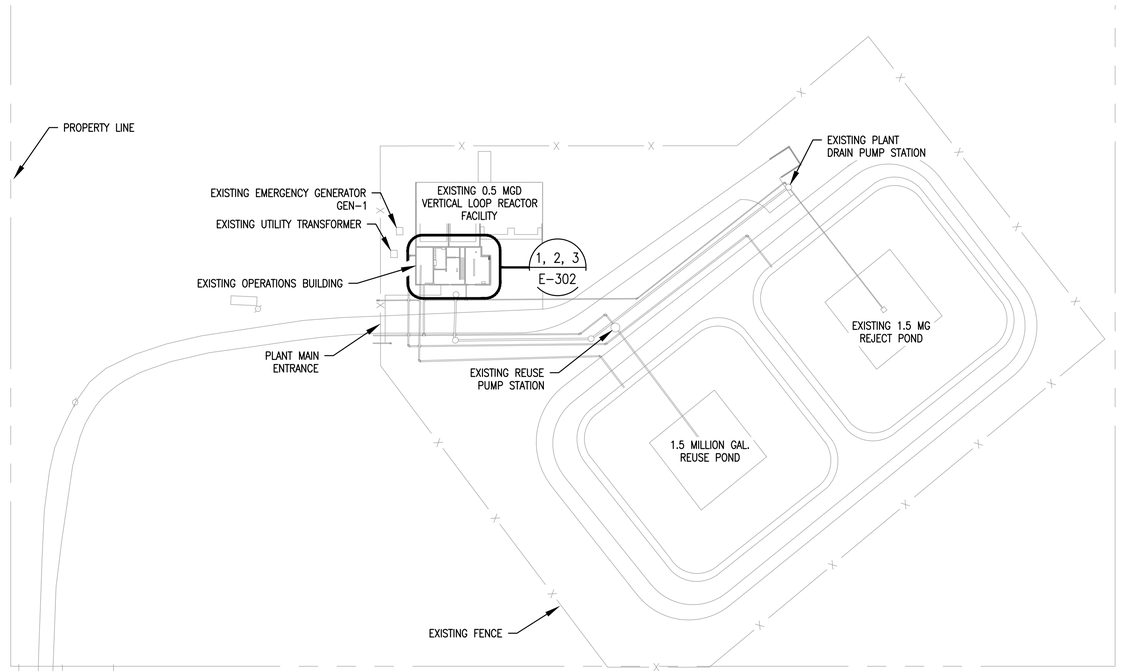
GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

PANELBOARD SCHEDULES

E-202

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

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1 EXISTING OVERALL PLANT ELECTRICAL PLAN – DEMOLITION

SCALE: 1/64" = 1'-0"

GRAPHIC SCALE

64 0 32 64 128 256

(IN FEET)

1/64 inch = 1 ft.

GMC

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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED PROFESSIONAL ENGINEER
No. 50133
DENIS VYSTROPOV

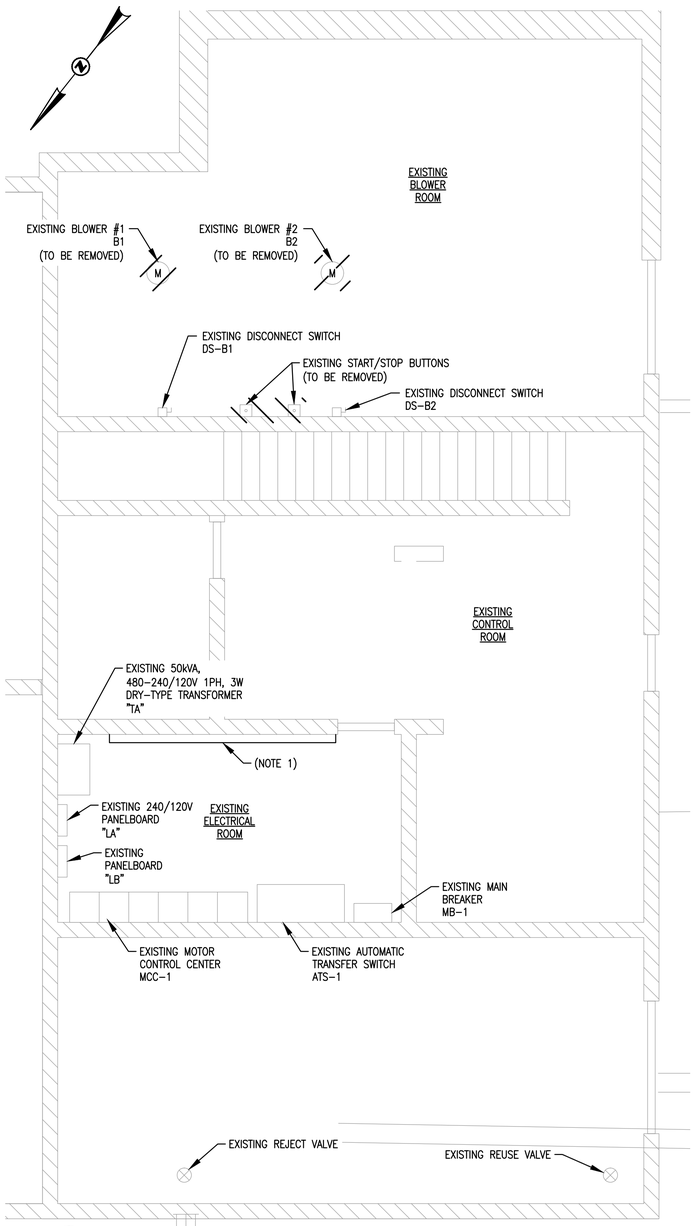
EXISTING OVERALL PLANT ELECTRICAL PLAN DEMOLITION

E-301

EDEC

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

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

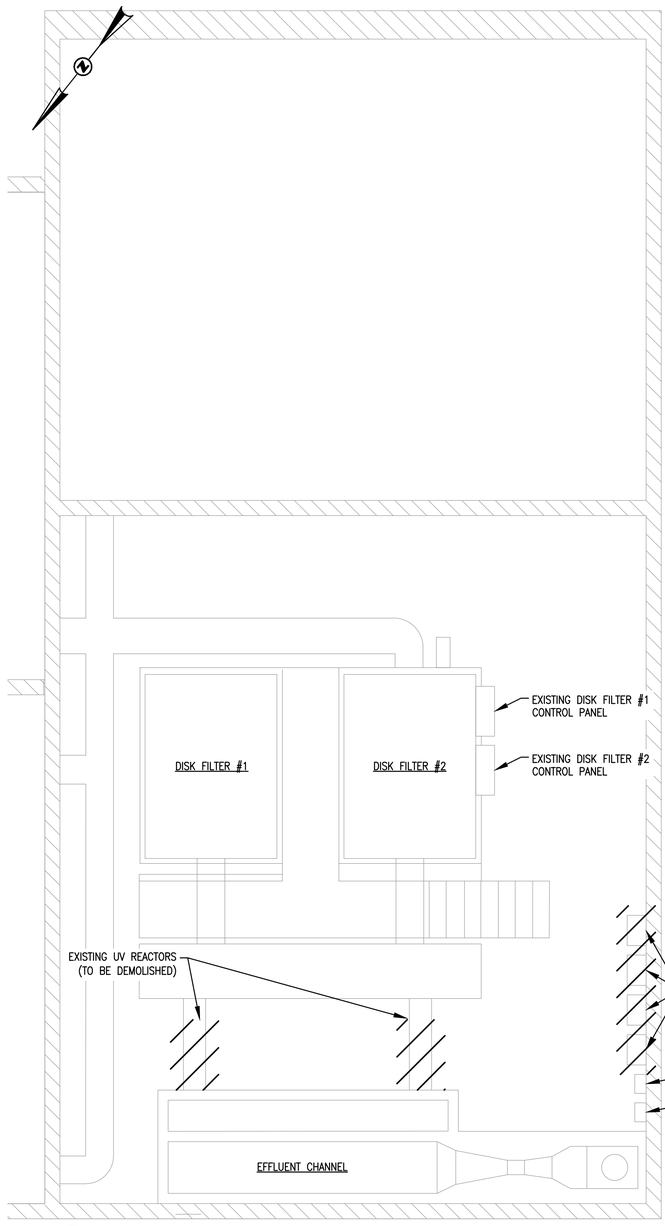
DEMOLITION

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

GRAPHIC SCALE

4 0 2 4 8 16

(IN FEET)
1/4 inch = 1 ft.



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

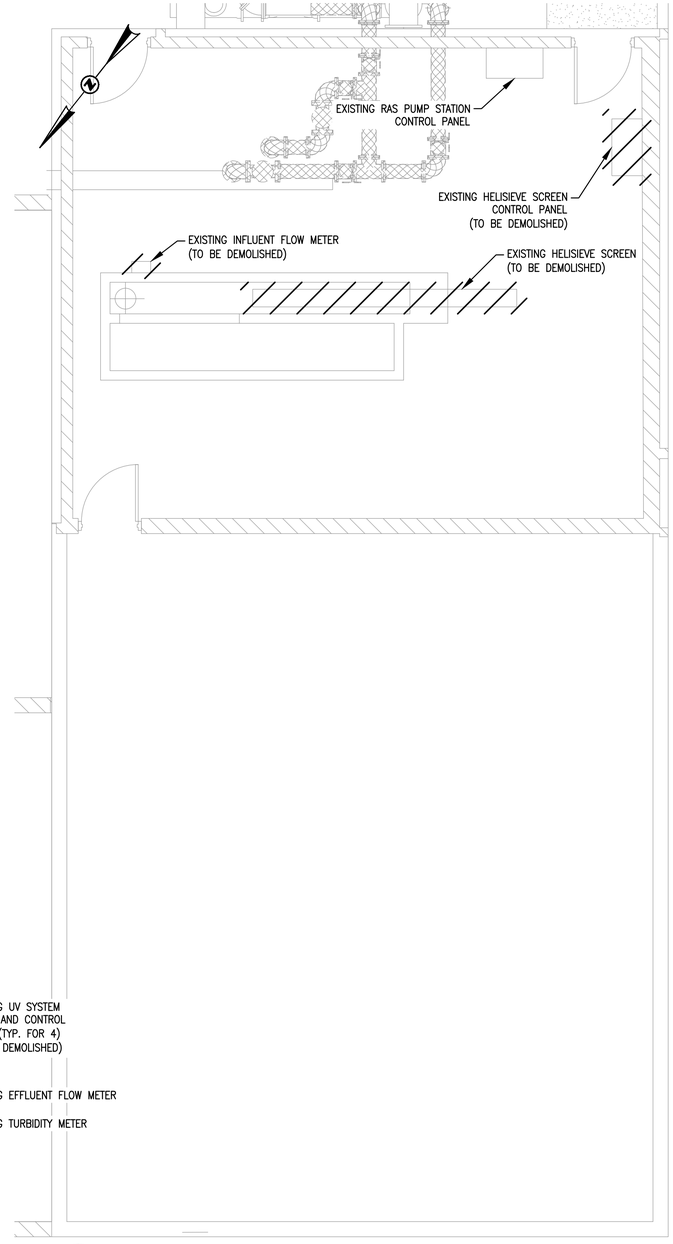
DEMOLITION

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

GRAPHIC SCALE

4 0 2 4 8 16

(IN FEET)
1/4 inch = 1 ft.



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

DEMOLITION

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

GRAPHIC SCALE

4 0 2 4 8 16

(IN FEET)
1/4 inch = 1 ft.

LEGEND:

– EQUIPMENT TO BE DEMOLISHED

NOTES:

1. THE CONTRACTOR SHALL REMOVE AND RELOCATE EXISTING RECEPTACLES AND LIGHT SWITCHES AS WELL AS ANY EXISTING CABLES/CONDUITS FROM THE WALL TO ALLOW INSTALLATION OF THE BLOWERS #1 AND #2 VFD CABINETS. INCLUDE ALL THE REQUIRED CABLES AND CONDUITS EXTENSION TO ALLOW PROPER CABLES REROUTING.
2. 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.

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CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

EXISTING OPERATIONS BLDG ELECTRICAL PLAN DEMOLITION

E-302

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

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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.

PROPERTY LINE
EQ. BASIN
1 E-318
PROPOSED 1.5 MG REJECT POND
CLARIFIER #3
1 E-316
UNDERGROUND PULL BOX UPB-2 (NOTE 1)
UNDERGROUND PULL BOX UPB-3 (NOTE 1)
DB-15 E-004
DB-16 E-004
DB-17 E-004
DB-18 E-004
DB-13 E-004
EXISTING PLANT DRAIN PUMP STATION
EXISTING EMERGENCY GENERATOR GEN-1
EXISTING UTILITY TRANSFORMER
EXISTING ELECTRICAL ROOM
AERATION BASIN
AEROBIC DIGESTER BLOWERS
1 E-317
2 E-320
ELECTRICAL ROOM
EMERGENCY GENERATOR GEN-2
UTILITY PAD MOUNTED TRANSFORMER
SLUDGE AEROBIC DIGESTER
EXISTING BLOWER ROOM
EXISTING CONTROL ROOM
ROAD
1 E-312
1 E-319
DB-12 E-004
EXISTING REUSE PUMP STATION
1 E-320
EXISTING 1.5 MG REJECT POND
DB-8 E-004
DB-6 E-004
DB-3 E-004
DB-9 E-004
ROAD
1.5 MILLION GAL. REUSE POND
UNDERGROUND PULL BOX UPB-1 (NOTE 1)
1 E-313
1 E-314
DB-4 E-004
1, 2, 3 E-315
3 E-320
CHLORINE CONTACT CHAMBER
HEADWORKS
INFLUENT PUMP STATION
CHEMICAL STORAGE TANK & CHEMICAL PUMP ROOM
EXISTING 1.5 MG REUSE POND
1.5 MILLION GAL. REUSE POND
FENCE

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

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

GRAPHIC SCALE
32 0 16 32 64 128
(IN FEET)
1/32 inch = 1 ft.

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CAREY STATION URBAN WATER REUSE FACILITY
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GMC Project #CAUG230002

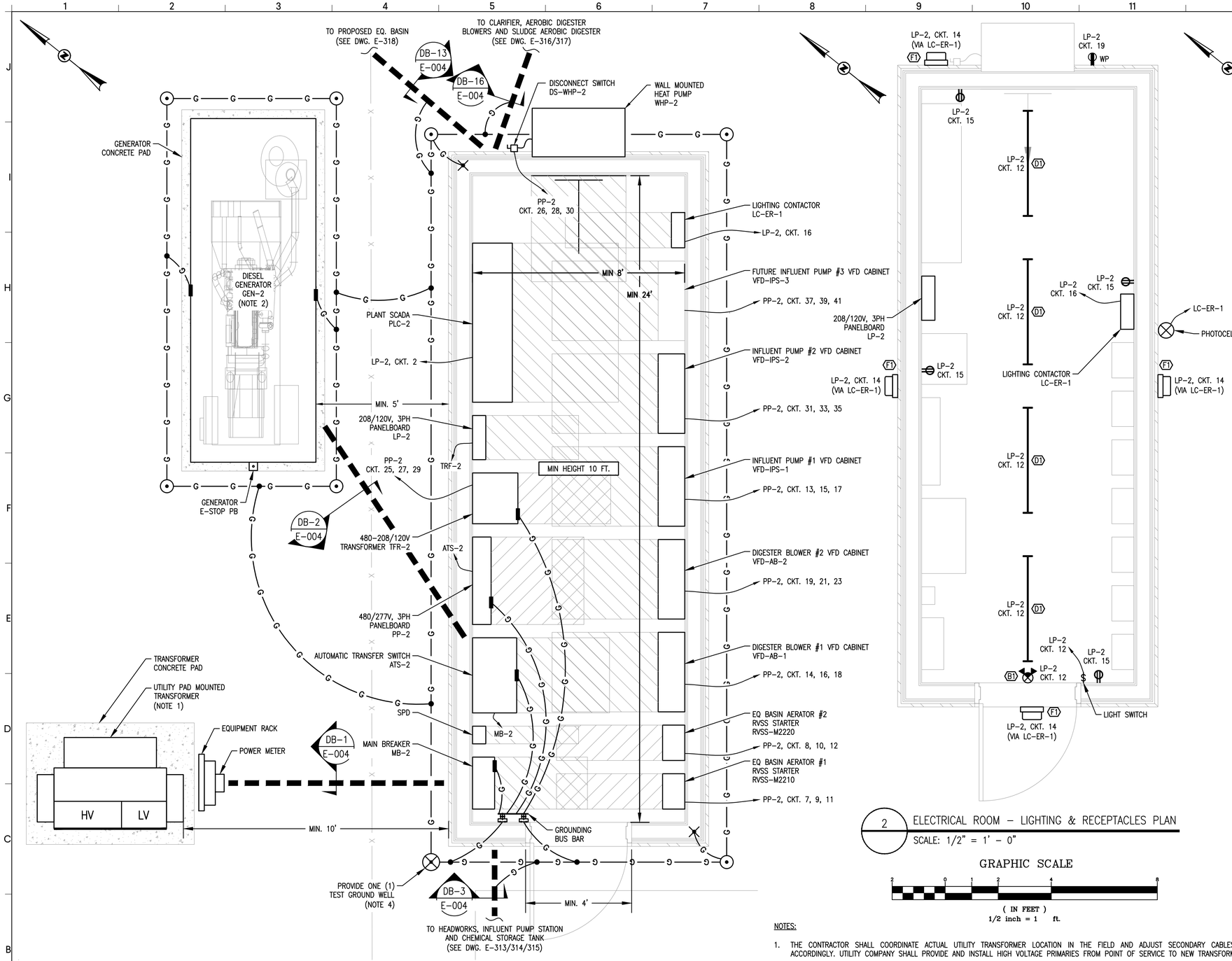
GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

OVERALL ELECTRICAL SITE PLAN

E-311

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

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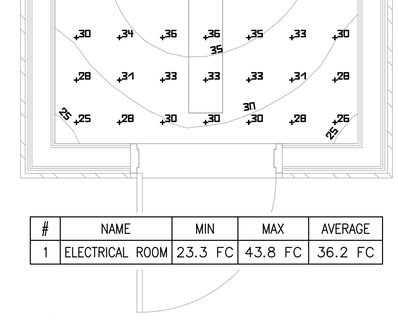


1 ELECTRICAL ROOM – POWER PLAN

SCALE: 1/2" = 1' – 0"

2 ELECTRICAL ROOM – LIGHTING & RECEPTACLES PLAN

SCALE: 1/2" = 1' – 0"



#	NAME	MIN	MAX	AVERAGE
1	ELECTRICAL ROOM	23.3 FC	43.8 FC	36.2 FC

3 ELECTRICAL ROOM – PHOTOMETRIC PLAN

SCALE: 1/2" = 1' – 0"

GRAPHIC SCALE

(IN FEET)
1/2 inch = 1 ft.

LEGEND:

– – – – DIRECT BURIED UNDERGROUND DUCTBANK

NOTES:

1. THE CONTRACTOR SHALL COORDINATE ACTUAL UTILITY TRANSFORMER LOCATION IN THE FIELD AND ADJUST SECONDARY CABLES/CONDUITS ROUTING ACCORDINGLY. UTILITY COMPANY SHALL PROVIDE AND INSTALL HIGH VOLTAGE PRIMARIES FROM POINT OF SERVICE TO NEW TRANSFORMER.
2. THE CONTRACTOR SHALL PROVIDE AND INSTALL STAND-BY GENERATOR IN LOCATION AS SHOWN AND WITH THE REQUIRED WORKING CLEARANCES. REFER TO ONE LINE DIAGRAM ON DWG. E-111 FOR FURTHER REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE GENERATOR PAD AS PER DETAIL "C" ON DWG. E-901.
3. COORDINATE THE EXACT ELECTRICAL EQUIPMENT LOCATION IN THE FIELD TO PROVIDE NEC REQUIRED WORKING CLEARANCES.
4. THE CONTRACTOR SHALL PROVIDE A GROUND GRID CONSISTING OF 3/4" DIAMETER x 10' LONG COPPER CLAD GROUND RODS. THE RODS SHALL BE DRIVEN IN GROUND CONNECTED TOGETHER WITH #2/0 AWG BARE STRANDED COPPER CONDUCTORS. PROVIDE A GROUND WELL FOR ONE ROD. SEE DETAIL "A" AND "B" ON DWG. E-901 FOR GROUND WELL INSTALLATION DETAILS.
5. ONLY MAJOR UNDERGROUND CONDUITS ARE SHOWN FOR CLARITY. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND CONDUIT RUNS WITH OTHER UNDERGROUND UTILITIES. DUCTBANKS UNDER THE ROADS SHALL BE CONCRETE ENCASED. SEE DETAIL "D", "E" ON DRAWING E-901.
6. ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT IN ELECTRICAL ROOM SHALL BE PROVIDED WITH 4" HOUSE KEEPING PADS.

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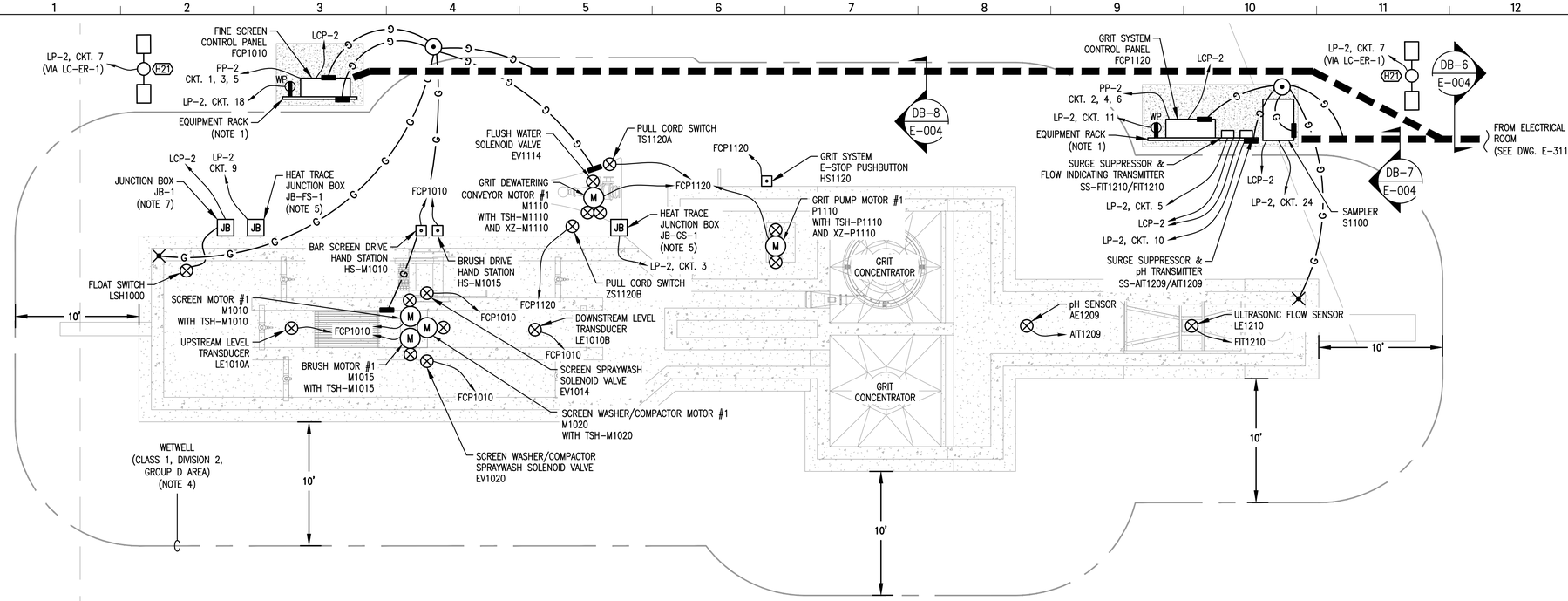
GEORGIA REGISTERED No. 50131 PROFESSIONAL ENGINEER DENIS VYSTROPOV

ELECTRICAL ROOM - POWER AND LIGHTING PLAN

E-312

EDEC, INC.
4120 CHATTAHOOCHEE TRACE
SUITE A
DULUTH, GEORGIA 30097
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1 HEADWORKS ELECTRICAL PLAN

SCALE: 3/16" = 1' – 0"

GRAPHIC SCALE

5.33 0 2.67 5.33 10.67 21.33

(IN FEET)

3/16 inch = 1 ft.

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.

LEGEND:

– DIRECT BURIED UNDERGROUND DUCTBANK

RC RC – REINFORCED CONCRETE ENCASED UNDERGROUND DUCTBANK

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0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

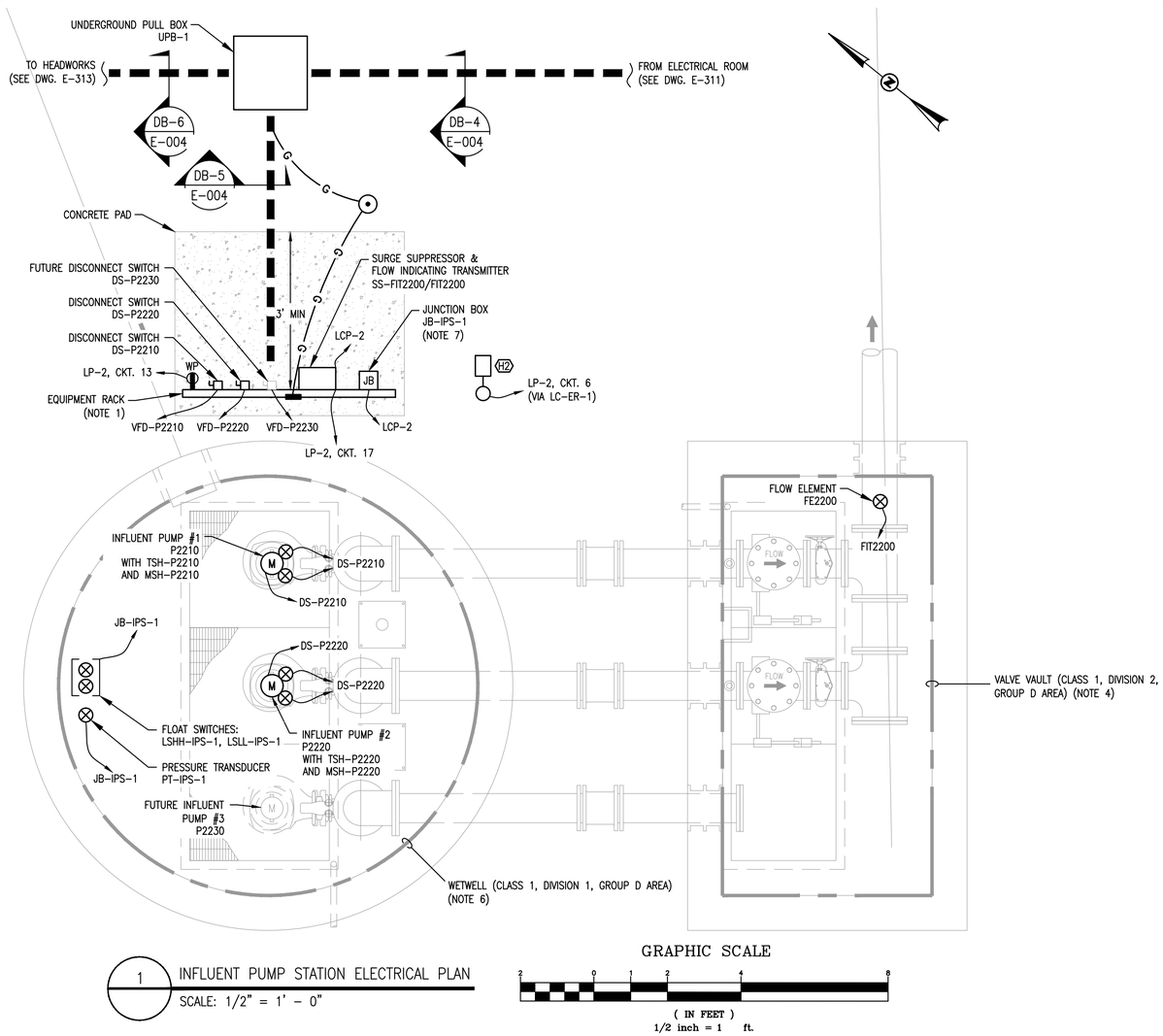
GEORGIA REGISTERED PROFESSIONAL ENGINEER
NO. 50137
DENIS VYSTROPOV

HEADWORKS ELECTRICAL PLAN

E-313

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

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1 INFLUENT PUMP STATION ELECTRICAL PLAN

SCALE: 1/2" = 1' – 0"

GRAPHIC SCALE

2 0 1 2 4 8

(IN FEET)
1/2 inch = 1 ft.

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.

LEGEND:

– DIRECT BURIED UNDERGROUND DUCTBANK

RC RC – REINFORCED CONCRETE ENCASED UNDERGROUND DUCTBANK

EDEC, INC.
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TEL. (770) 493-8685

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

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

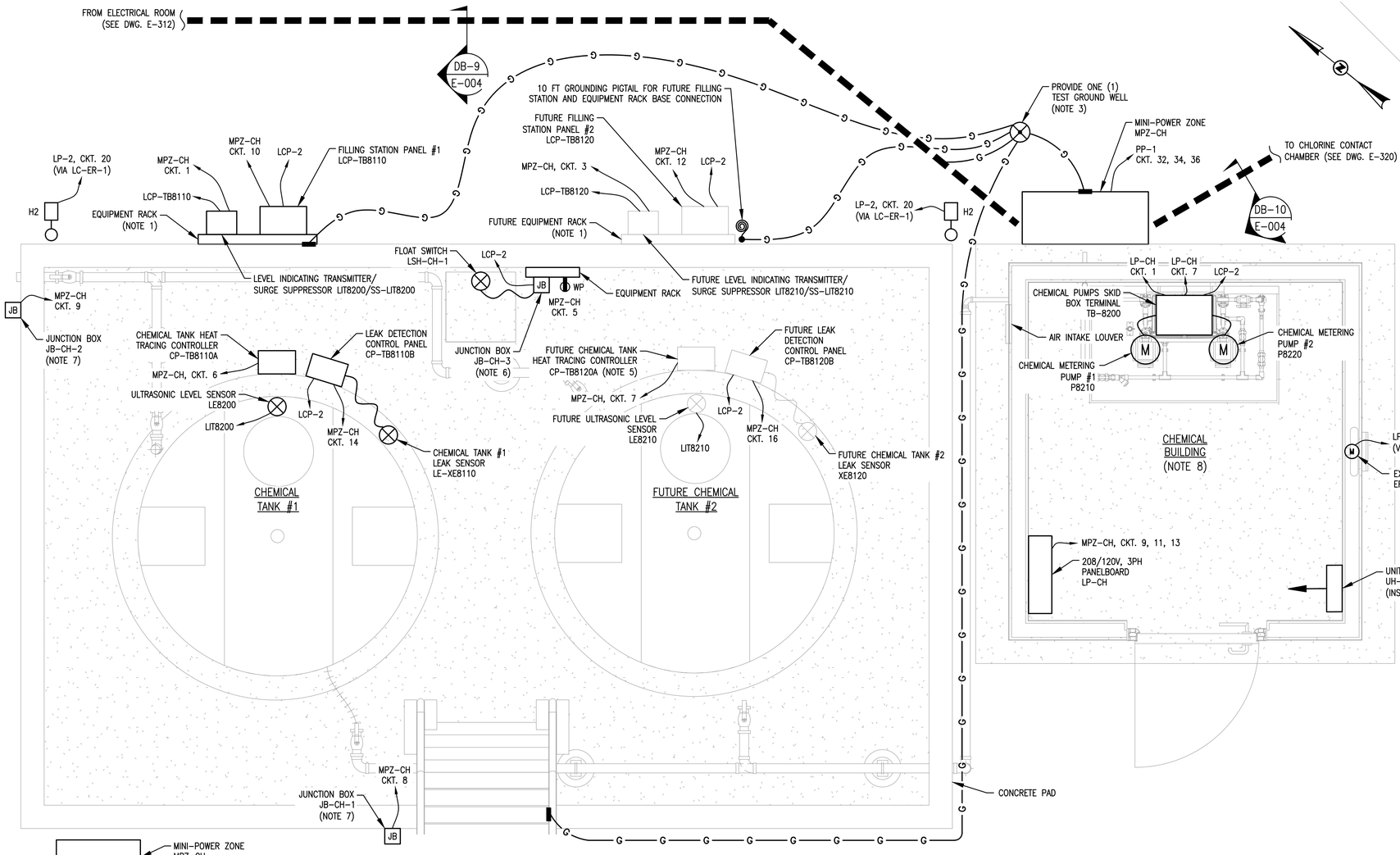
GMC Project #CAUG230002

GEORGIA REGISTERED PROFESSIONAL ENGINEER
No. 50137
DENIS VYSTROPOV

INFLUENT PUMP STATION ELECTRICAL PLAN

E-314

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

GRAPHIC SCALE
1.33 0 0.67 1.33 2.67 5.33
(IN FEET)
3/4 inch = 1 ft.

2 CHEMICAL BUILDING – LIGHTS & RECEPTACLES PLAN
SCALE: 1/2" = 1' – 0"

GRAPHIC SCALE
2 0 1 2 4 8
(IN FEET)
1/2 inch = 1 ft.

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 NEC 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.

GMC
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GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
STATE OF GEORGIA
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

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CONFORMED SET	09.03.2025
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

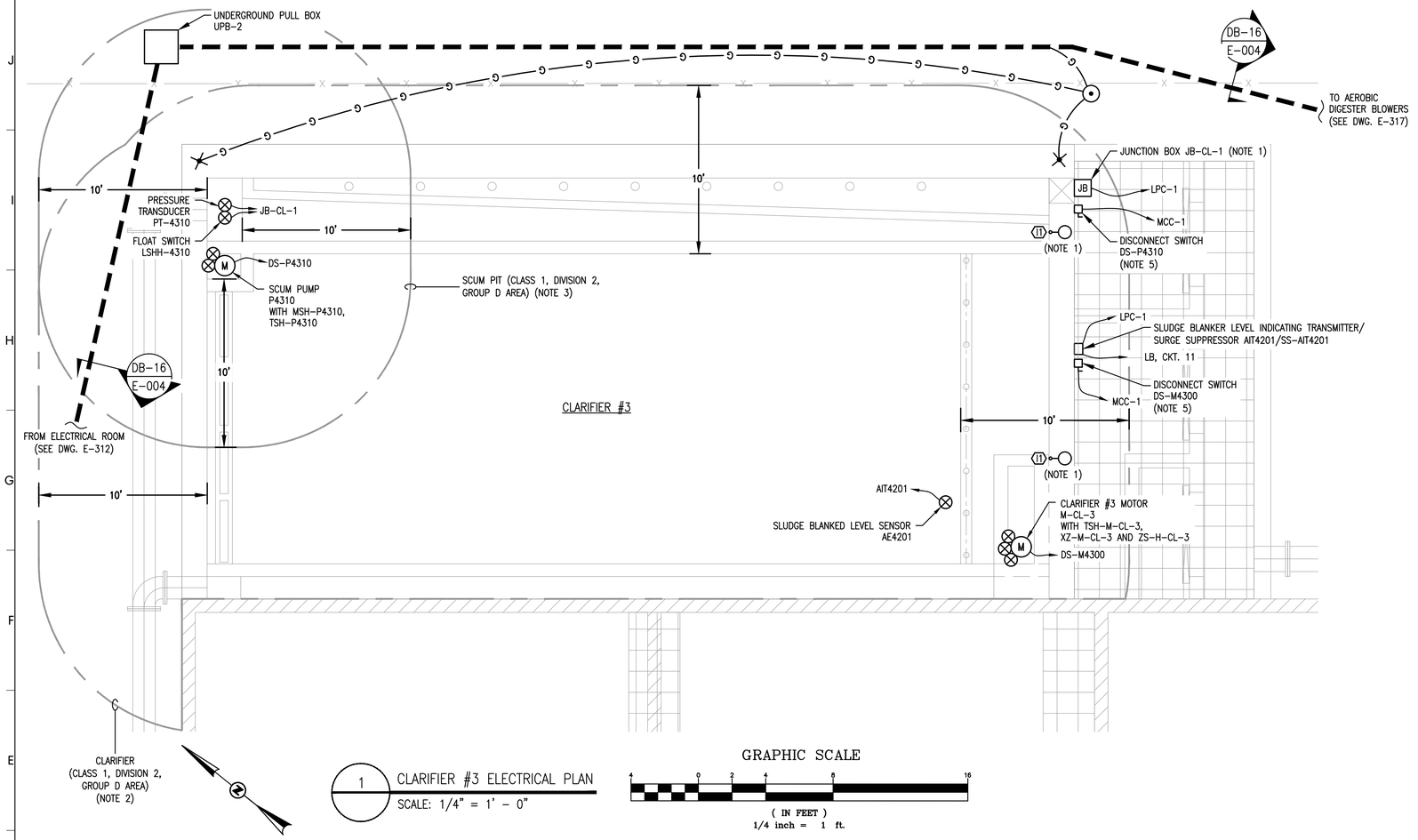
GEORGIA REGISTERED No. 36132 PROFESSIONAL ENGINEER DENIS VYSTROPOV

CHEMICAL STORAGE AREA ELECTRICAL PLAN

E-315

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

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1 CLARIFIER #3 ELECTRICAL PLAN

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

GRAPHIC SCALE

4 0 2 4 8 16

(IN FEET)

1/4 inch = 1 ft.

NOTES:

1. THE CONTRACTOR SHALL EXTEND POWER CIRCUIT FROM EXISTING STANCHION MOUNTED LIGHTS AT THE CLARIFIER #1 AND #2 TO FEED THE NEW LIGHTS. USE 2 #12 & 1 #12 GND IN 0.75" C.

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 4.2.2 ROW 7C.

   CLASS 1, DIVISION 2, GROUP D AREA:
   CLASSIFIED AREA EXTENDS WITHIN ENTIRE CLARIFIER SPACE.

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 4.2.2 ROW 4C.

   CLASS 1, DIVISION 2, GROUP D AREA:
   CLASSIFIED AREA EXTENDS WITHIN ENTIRE SCUM PIT SPACE.

GMC
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T 706.303.3272

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

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ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA
REGISTERED
No. 50137
PROFESSIONAL
ENGINEER
DENIS VYSTROPOV

CLARIFIER
ELECTRICAL PLAN

E-316

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

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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.

LB CKT. 16
LCP-1
ORP PROBE INDICATING TRANSMITTER WITH SURGE SUPPRESSOR AIT3012/SS-AIT3012
ORP PROBE SENSOR AE3012
DIGESTER
DISSOLVED OXYGEN INDICATING TRANSMITTER WITH SURGE SUPPRESSOR AIT7010/SS-AIT7010
DISSOLVED OXYGEN INDICATING TRANSMITTER WITH SURGE SUPPRESSOR AIT7020/SS-AIT7020
DO SENSOR AE7020
FLOAT SWITCH LSH7102
PRESSURE TRANSMITTER PT7102
LB, CKT. 13
LCP-2
JB
JUNCTION BOX JB-AD-2 (NOTE 1)
LB, CKT. 9
LCP-2
JB
JUNCTION BOX JB-AD-2 (NOTE 1)
DO SENSOR AE7010
FLOAT SWITCH LSH7101
PRESSURE TRANSMITTER PT7101
10'
AEROBIC DIGESTER #2
AEROBIC DIGESTER #1
10'
FROM ELECTRICAL ROOM (SEE DWG. E-312)
DB-16 E-004
10'
AEROBIC DIGESTER (CLASS 1, DIVISION 2, GROUP D AREA) (NOTE 2)
FLOW ELEVENT FE7100
FIT7100
SS-PIT7100
PRESSURE INDICATING TRANSMITTER PIT7100
DB-17 E-004
UNDERGROUND PULL BOX UPB-3 (NOTE 1)
DB-18 E-004
DIGESTER BLOWER #1 B7120 WITH EF-B7120, PTC-B7120, XZ-B7120
DS-B7120
DISCONNECT SWITCH DS-B7110
VFD-B7110
LP-2 CKT. 26
VFD-B7120
LCP-2
DISCONNECT SWITCH DS-B7120
DIGESTER BLOWER #2 B7110 WITH EF-B7110, PTC-B7110, XZ-B7110
DS-B7110
SURGE SUPPRESSOR & FLOW INDICATING TRANSMITTER SS-FIT7100/FIT7100
SURGE SUPPRESSOR SS-PIT7100
TO EXISTING PLANT DRAIN PS (SEE DWG. E-320)

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

GRAPHIC SCALE
5.33 0 2.67 5.33 10.67 21.33
(IN FEET)
3/16 inch = 1 ft.

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

GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
STATE OF GEORGIA
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

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DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

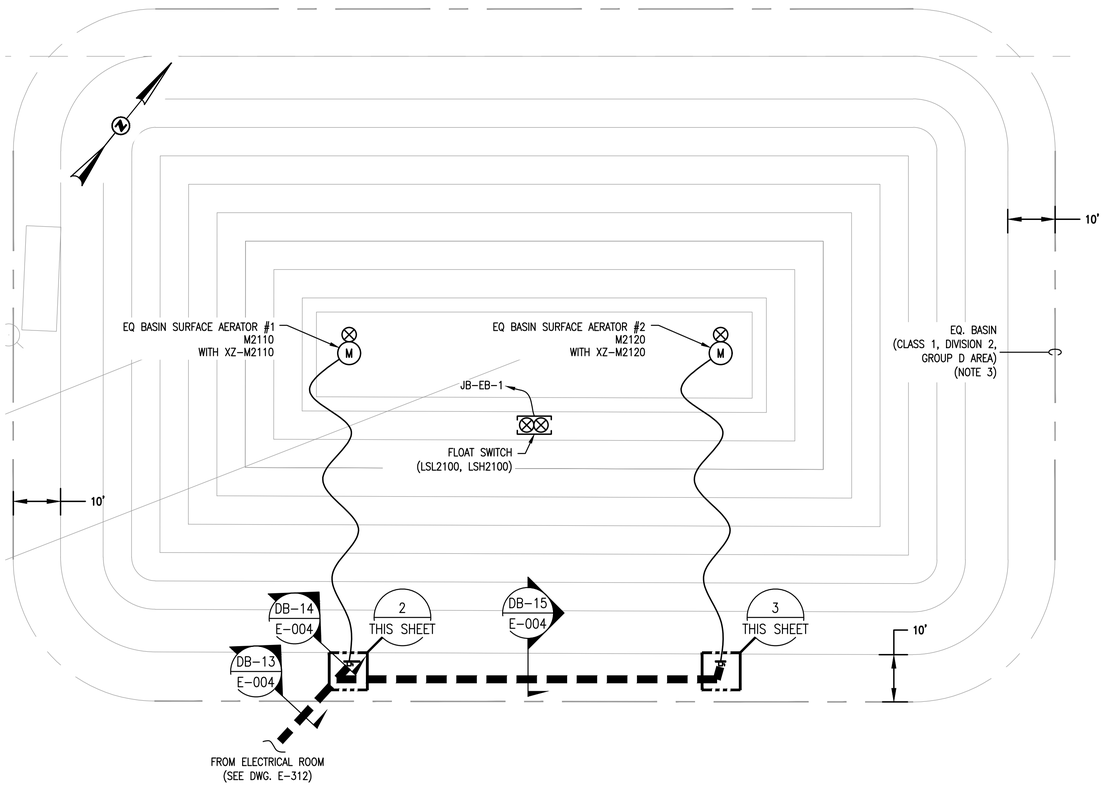
GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

AEROBIC DIGESTER BLOWERS ELECTRICAL PLAN

E-317

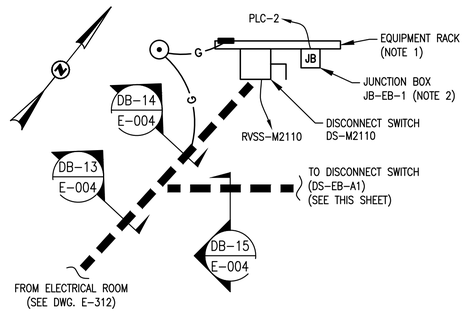
EDEC
EDEC, INC.
4120 CHATTAHOOCHEE TRACE
SUITE A
DULUTH, GEORGIA 30097
TEL. (770) 493-8685

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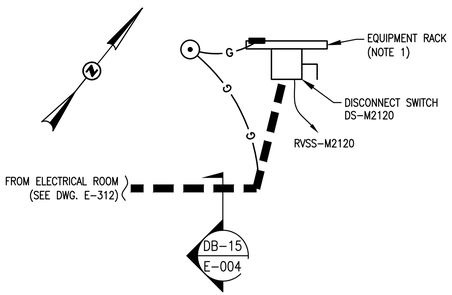
1 EQ. BASIN ELECTRICAL PLAN
SCALE: 1/16" = 1' - 0"

GRAPHIC SCALE
16 0 8 16 32 64
(IN FEET)
1/16 inch = 1 ft.



2 AERATOR #1 RACK DETAIL
SCALE: 1/2" = 1' - 0"

GRAPHIC SCALE
2 0 1 2 4 8
(IN FEET)
1/2 inch = 1 ft.



3 AERATOR #2 RACK DETAIL
SCALE: 1/2" = 1' - 0"

GRAPHIC SCALE
2 0 1 2 4 8
(IN FEET)
1/2 inch = 1 ft.

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.

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

GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
STATE OF GEORGIA
CERTIFICATE OF AUTHORIZATION

ISSUE	DATE
90% SUBMITTAL	05.13.2024
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PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

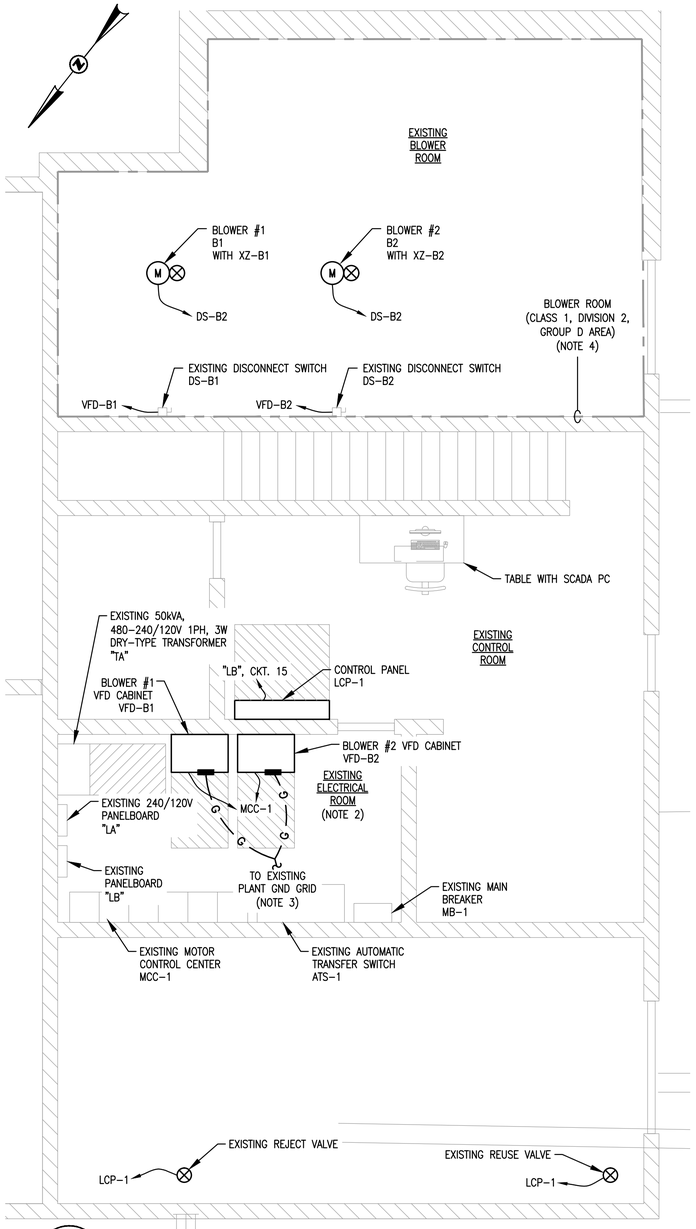
GEORGIA
REGISTERED
NO. 50137
PROFESSIONAL
ENGINEER
DENIS VYSTROPOV

EQ. BASIN
ELECTRICAL PLAN

E-318

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

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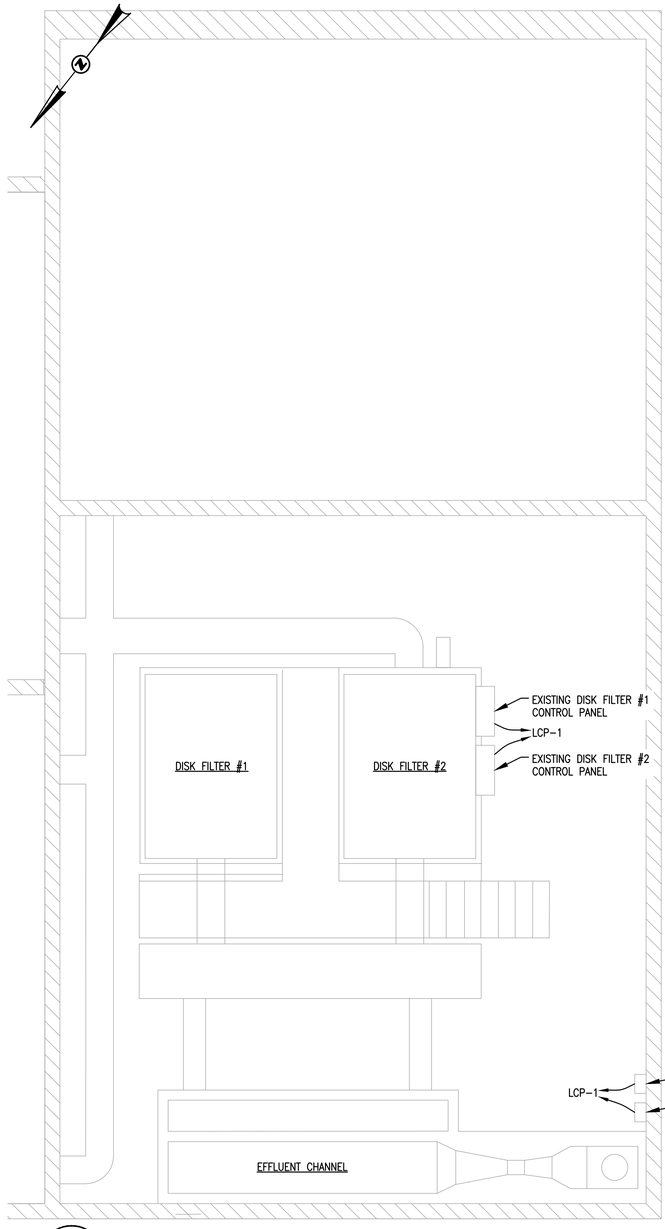
1 EXISTING OPERATIONS BUILDING ELECTRICAL PLAN (1-ST FLOOR) – EL. 0.00

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

GRAPHIC SCALE

4 0 2 4 8 16

(IN FEET)
1/4 inch = 1 ft.



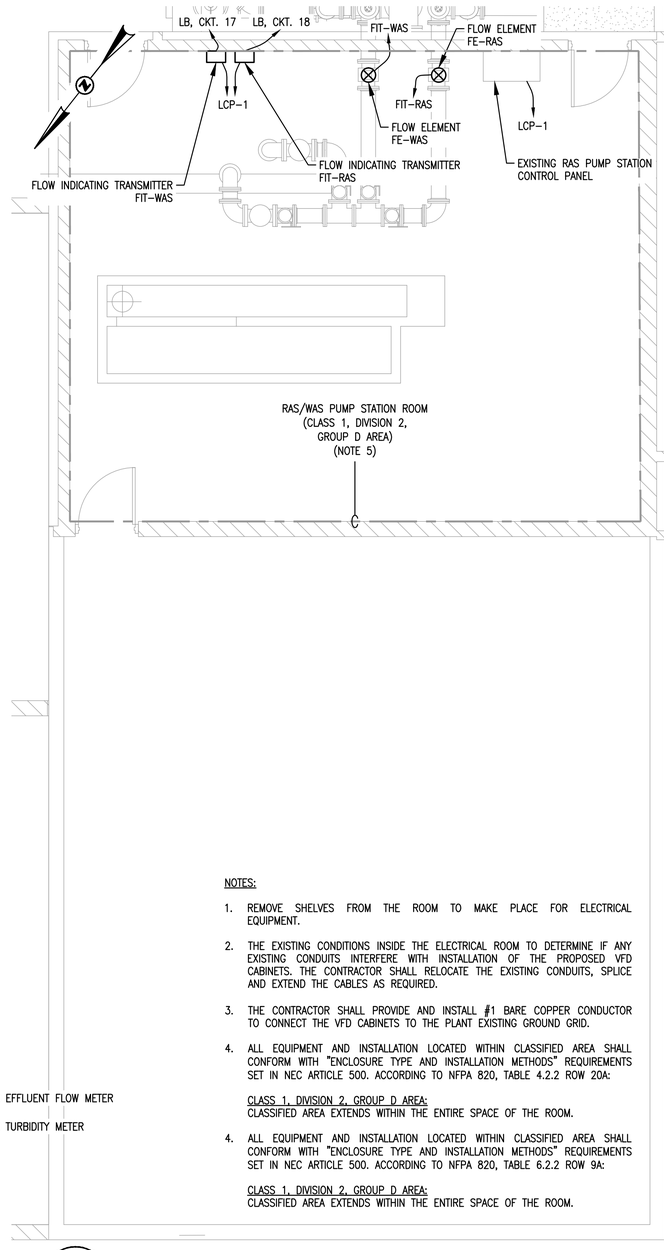
2 EXISTING OPERATIONS BUILDING ELECTRICAL PLAN (2-ND FLOOR) – EL. 10.17

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

GRAPHIC SCALE

4 0 2 4 8 16

(IN FEET)
1/4 inch = 1 ft.



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

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

GRAPHIC SCALE

4 0 2 4 8 16

(IN FEET)
1/4 inch = 1 ft.

NOTES:

1. REMOVE SHELVES FROM THE ROOM TO MAKE PLACE FOR ELECTRICAL EQUIPMENT.
2. THE EXISTING CONDITIONS INSIDE THE ELECTRICAL ROOM TO DETERMINE IF ANY EXISTING CONDUITS INTERFERE WITH INSTALLATION OF THE PROPOSED VFD CABINETS. THE CONTRACTOR SHALL RELOCATE THE EXISTING CONDUITS, SPLICE AND EXTEND THE CABLES AS REQUIRED.
3. THE CONTRACTOR SHALL PROVIDE AND INSTALL #1 BARE COPPER CONDUCTOR TO CONNECT THE VFD CABINETS TO THE PLANT EXISTING GROUND GRID.
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 20A:

   CLASS 1, DIVISION 2, GROUP D AREA:
   CLASSIFIED AREA EXTENDS WITHIN THE ENTIRE SPACE OF THE ROOM.

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 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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T 706.303.3272

STATE OF GEORGIA
GOODWYN MILLS CAWOOD, LLC
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1" 0" .5" 1"

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DRAWN BY:	DV

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

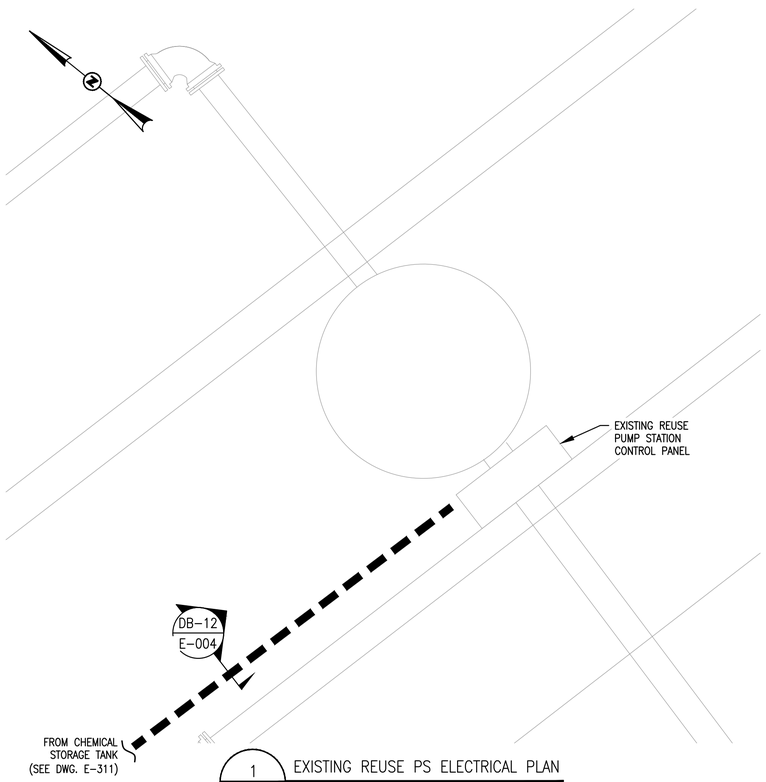
GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

EXISTING OPERATINONS BUILDING ELECTRICAL PLAN

E-319

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

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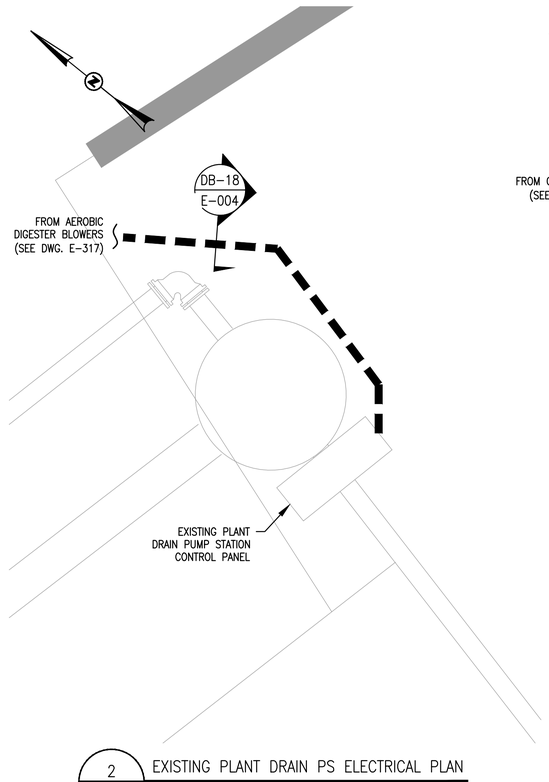


1 EXISTING REUSE PS ELECTRICAL PLAN
SCALE: 3/8" = 1' - 0"

GRAPHIC SCALE

2.67 0 1.33 2.67 5.33 10.67

(IN FEET)
3/8 inch = 1 ft.

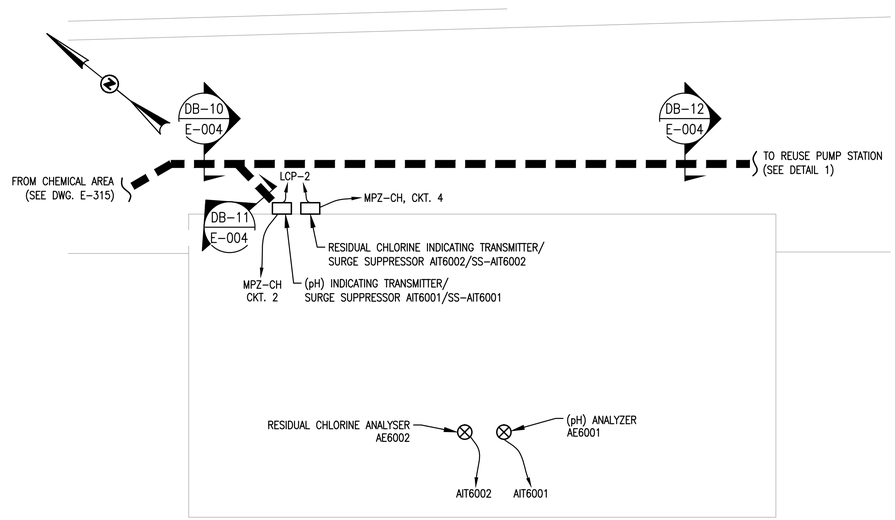


2 EXISTING PLANT DRAIN PS ELECTRICAL PLAN
SCALE: 3/8" = 1' - 0"

GRAPHIC SCALE

2.67 0 1.33 2.67 5.33 10.67

(IN FEET)
3/8 inch = 1 ft.



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

GRAPHIC SCALE

4 0 2 4 8 16

(IN FEET)
1/4 inch = 1 ft.

GMC
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Augusta, GA 30901
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GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
STATE OF GEORGIA
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
BID SET	
CONFORMED SET	09.03.2025
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

GMC Project #CAUG230002

GEORGIA REGISTERED
No. 50137
PROFESSIONAL ENGINEER
DENIS VYSTROPOV

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

E-320

EDEC, INC.
4120 CHATTAHOOCHEE TRACE
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SCADA CONTROL PANEL
LCP-2

FINE SCREEN CONTROL PANEL
FCP1010
(BY VENDOR)
(NOTE 2)

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

SYSTEM CALL TO RUN (DO)
SYSTEM COMMON FAULT (DI)
SCREEN: RUNNING (DI), AUTO (DI)
BRUSH: RUNNING (DI), AUTO (DI)
12 #14 & 4 #14 SPARE IN 1.5" C.
SYSTEM CALL TO RUN
SYSTEM COMMON FAULT
SCREEN: RUNNING, AUTO
BRUSH: RUNNING, AUTO
4 SPARE
4 SPARE

L, N, GND
2 #10 & 1 #10 GND IN 1" C.
LP-2 30A, 1P
L, N, GND
120V, 1PH, 60HZ

PP-2 20A,3P
480V, 3PH, 60HZ: L1, L2, L3, GND
SEE ONE LINE DWG. E-111
L1, L2, L3, GND

FVR FVR-M1010
T1, T2, T3, GND
SEE ONE LINE DIAGRAM DWG. E-111
WINDING OVERTEMP
2 #14 IN 1" C.
SCREEN MOTOR HOUSING
2 HP
SCREEN MOTOR M1010
TEMPERATURE SWITCH TSH-M1010A

FNVR FNVR-M1015
T1, T2, T3, GND
SEE ONE LINE DIAGRAM DWG. E-111
WINDING OVERTEMP
2 #14 IN 1" C.
BRUSH MOTOR HOUSING
1 HP
BRUSH MOTOR M1015
TEMPERATURE SWITCH TSH-M1015

FNVR FNVR-M1020
T1, T2, T3, GND
SEE ONE LINE DIAGRAM DWG. E-111
WINDING OVERTEMP
2 #14 IN 1" C.
SCREEN WASHER/COMPACTOR MOTOR HOUSING
5 HP
SCREEN WASHER/COMPACTOR MOTOR M1020
TEMPERATURE SWITCH TSH-M1020

LEVEL TRANSMITTER LIT1010A
UPSTREAM LEVEL
JB-LE1010A (BY VENDOR)
1 STP #16 IN 0.75" C.
CABLE BY VENDOR IN 1" C.
LE1010A
UPSTREAM LEVEL ULTRASONIC TRANSDUCER

LEVEL TRANSMITTER LIT1010B
DOWNSTREAM LEVEL
JB-LE1010B (BY VENDOR)
1 STP #16 IN 0.75" C.
CABLE BY VENDOR IN 1" C.
LE1010B
DOWNSTREAM LEVEL ULTRASONIC TRANSDUCER

CALL TO OPEN: 120V, 1PH, 60HZ (L, N, GND)
2 #14 AND 1 #14 GND IN 1" C.
EV1014
SCREEN SPRAYWASH SOLENOID VALVE

CALL TO OPEN: 120V, 1PH, 60HZ (L, N, GND)
2 #14 AND 1 #14 GND IN 1" C.
EV1020
SCREEN WASHER/COMPACTOR SPRAYWASH SOLENOID VALVE

HS-M1010
(NEMA 7)
E-STOP ACTIVATED
7 #14 AND 4 #14 SPARE IN 1" C.
SCREEN: AUTO MODE, HAND MODE, RUN FORWARD, RUN REVERSE
4 SPARE
SCREEN E-STOP PB
SCREEN HOA SWITCH
SCREEN FOR-OFF-REV SWITCH
4 SPARE

HS-M1015
(NEMA 7)
BRUSH: HAND MODE, AUTO MODE
4 #14 AND 4 #14 SPARE IN 1" C.
4 SPARE
BRUSH HOA SWITCH
4 SPARE

HEADWORKS CHANNEL HIGH LEVEL
2 #14 IN 1" C.
JB-1 NEMA 4X SS
CABLE BY VENDOR IN 1" C.
LSH1000
HIGH LEVEL SWITCH

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.

2. 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:
   - A. CONTROL PANEL SCCR SHALL BE 42kAIC MINIMUM.
   - B. ENCLOSURE: 3-POINT LATCHING WALL MOUNTED NEMA 4X 304 SS WITH INNER DOORS, FOLDING SHELF, INTERIOR LIGHT FIXTURE WITH DOOR SWITCH.
   - C. MAIN DEVICE: THERMAL MAGNETIC CIRCUIT BREAKER 20A, 480V, 3P WITH LOCKABLE DISCONNECT HANDLE.
   - D. ONE (1) 480V, 3PH FULL VOLTAGE REVERSING MOTOR STARTER (FVR) WITH MOTOR CIRCUIT PROTECTORS, RATED FOR SCREEN MOTOR.
   - E. ONE (1) 480V, 3PH FULL VOLTAGE NON-REVERSING MOTOR STARTER (FVNR) WITH MOTOR CIRCUIT PROTECTORS, RATED FOR BRUSH MOTORS.
   - F. 1kVA, 480-240/120V CONTROL POWER TRANSFORMER WITH PRIMARY AND SECONDARY CIRCUIT BREAKERS.
   - G. SURGE PROTECTION DEVICE.
   - H. LIGHTNING ARRESTOR.
   - I. PHASE MONITOR TO SENSE LOW VOLTAGE AND LOSS OF PHASE AND POWER.
   - J. ONE(1) GFCI/WP 120V, 20A DUPLEX RECEPTACLE.
   - K. THREE (3) 120V, 20A, 1P CIRCUIT BREAKERS: INTERNAL DUPLEX RECEPTACLE, AND TWO (2) SPARE BREAKERS.
   - L. STRIP HEATER, FAN & THERMOSTAT.
   - M. CONTROLLER: ALLEN-BRADLEY MICROLOGIX 1400 PLC.
   - N. CONTROLLER OIT: 12" HMI TOUCH SCREEN BY ALLEN-BRADLEY.
   - O. SELECTOR SWITCHES, PUSH BUTTONS, PILOT LIGHTS, ETC. AS REQUIRED FOR PROPER EQUIPMENT OPERATION.
   - R. SELECTOR SWITCHES:
     - R.A. MASTER LOCAL/REMOTE SWITCH.
     - R.B. HOA SWITCHES:
       - R.B.A. SCREEN MOTOR;
       - R.B.B. BRUSH MOTOR.
     - R.C. OPEN-AUTO-CLOSE SWITCHES:
       - R.C.A. SCREEN SPRAYWASH SOLENOID VALVE.
   - S. PUSH BUTTONS:
     - S.A. SCREEN MOTOR START.
     - S.B. BRUSH MOTOR STOP.
     - S.C. E-STOP.
     - S.D. ALARM SILENCE.
     - S.E. ALARM RESET.
   - T. 24 VDC POWER SUPPLY.
   - U. 120V, 5A RATED DRY CONTACTS, AND SIGNAL WIRING PREWIRED TO FIELD TERMINALS:
     - U.A. SCREEN MOTOR RUNNING;
     - U.B. SCREEN MOTOR AUTO;
     - U.C. BRUSH MOTOR RUNNING;
     - U.D. BRUSH MOTOR AUTO.
   - V. INTRINSICALLY SAFE RELAYS FOR ALL DEVICES LOCATED IN THE HAZARDOUS AREA.
   - W. INDICATING LIGHTS FOR:
     - W.A. CONTROL POWER ON (WHITE);
     - W.B. SCREEN MOTOR RUNNING (GREEN);
     - W.C. SCREEN MOTOR FAULT (RED);
     - U.C. BRUSH MOTOR RUNNING (GREEN);
     - U.D. BRUSH MOTOR FAULT (RED).
   - V. 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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DESIGNER:		DV
DRAWN BY:		DV

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

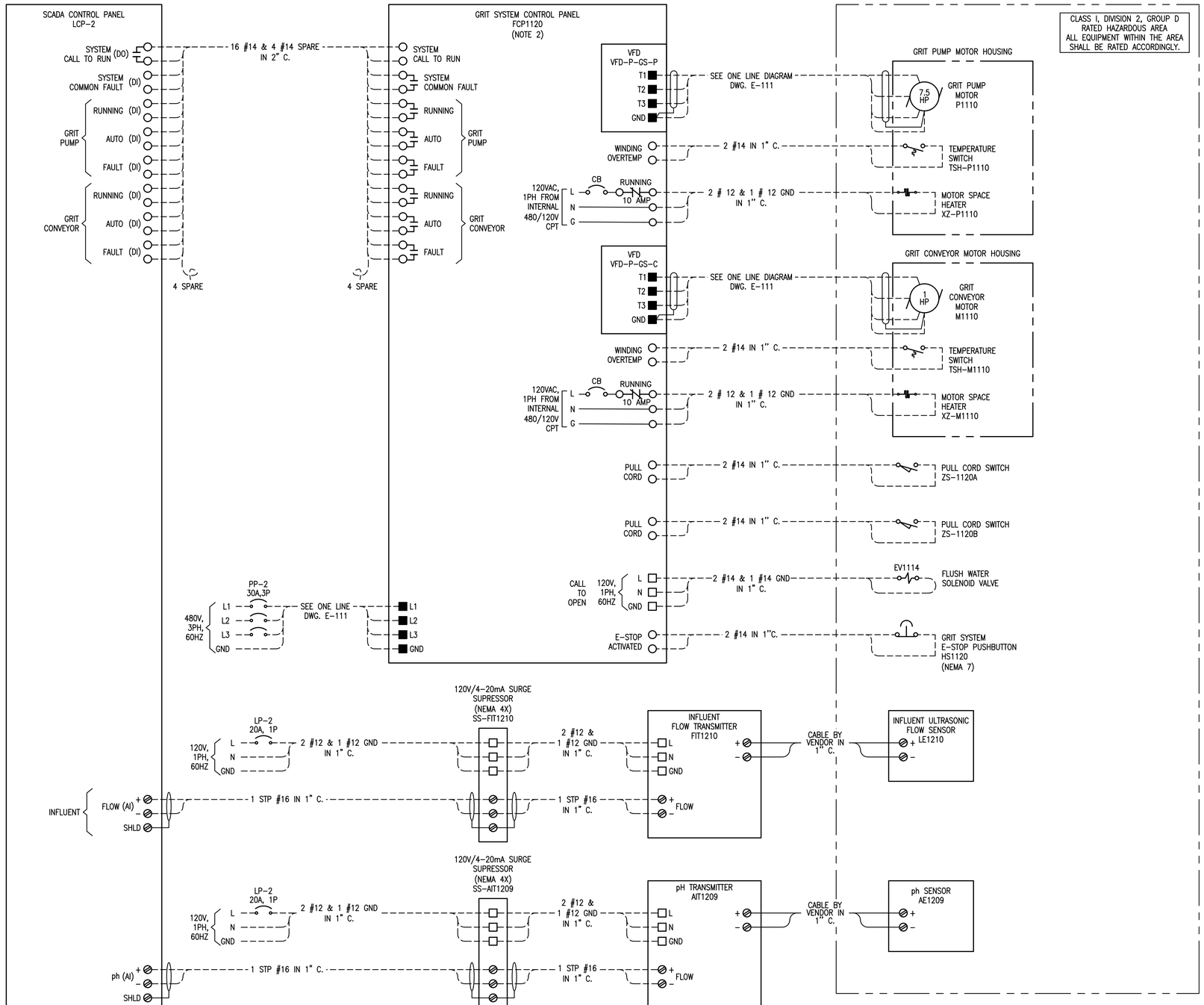
GMC Project #CAUG230002

GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

FINE SCREEN
SCHEMATIC WIRING
DIAGRAM

E-601

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

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.

2. 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:
   - A. CONTROL PANEL SCCR SHALL BE 42kAIC MINIMUM.
   - B. ENCLOSURE: 3-POINT LATCHING WALL MOUNTED NEMA 4X 304 SS WITH INNER DOORS, FOLDING SHELF, INTERIOR LIGHT FIXTURE WITH DOOR SWITCH.
   - C. MAIN DEVICE: THERMAL MAGNETIC CIRCUIT BREAKER 30A, 480V, 3P WITH LOCKABLE DISCONNECT HANDLE.
   - D. 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.
   - E. 1kVA, 480-240/120V CONTROL POWER TRANSFORMER WITH PRIMARY AND SECONDARY CIRCUIT BREAKERS.
   - F. SURGE PROTECTION DEVICE.
   - G. LIGHTNING ARRESTOR
   - H. PHASE MONITOR TO SENSE LOW VOLTAGE AND LOSS OF PHASE AND POWER.
   - I. EXTERNALLY MOUNTED 480V, 1PH AIR CONDITIONER IN NEMA 4X SS. ENCLOSURE SIZED TO KEEP PANEL INTERNAL TEMPERATURE BELOW 90° F.
   - J. ONE(1) GFCI/WP 120V, 20A DUPLEX RECEPTACLE.
   - K. THREE (3) 120V, 20A, 1P CIRCUIT BREAKERS: INTERNAL DUPLEX RECEPTACLE, AND TWO (2) SPARE BREAKERS.
   - L. STRIP HEATER, FAN & THERMOSTAT.
   - M. CONTROLLER: NONE (RELAY LOGIC).
   - N. CONTROLLER OIT: NONE.
   - O. SELECTOR SWITCHES, PUSH BUTTONS, PILOT LIGHTS, ETC. AS REQUIRED FOR PROPER EQUIPMENT OPERATION.
   - R. SELECTOR SWITCHES:
     - R.A. MASTER LOCAL/REMOTE SWITCH,
     - R.B. HOA SWITCHES:
       - R.B.A. GRIT PUMP;
       - R.B.B. GRIT CONVEYOR.
     - R.C. OPEN-AUTO-CLOSE SWITCHES:
       - R.C.A. FLUSH WATER SOLENOID VALVE.
     - R.D. SPEED POTENTIOMETERS:
       - R.D.A. GRIT PUMP;
       - R.D.B. GRIT CONVEYOR.
   - S. 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.
   - T. ANALOG INDICATORS:
     - T.A. GRIT PUMP SPEED;
     - T.B. GRIT CONVEYOR SPEED.
   - U. 24 VDC POWER SUPPLY.
   - V. 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.
   - W. INTRINSICALLY SAFE RELAYS FOR ALL DEVICES LOCATED IN THE HAZARDOUS AREA.
   - X. 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).
   - Y. 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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DESIGNER:	DV	
DRAWN BY:	DV	

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

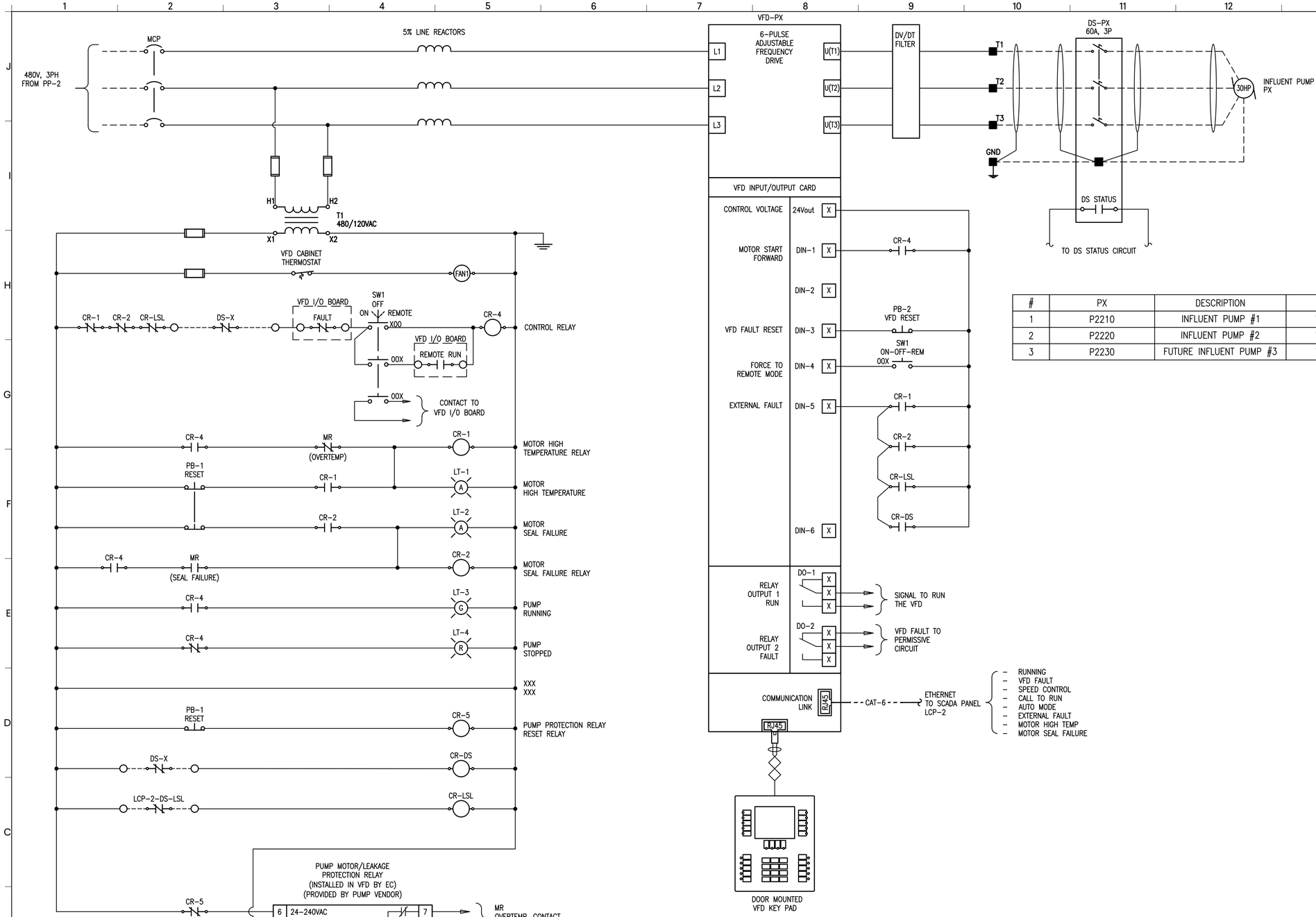
GMC Project #CAUG230002

GEORGIA REGISTERED PROFESSIONAL ENGINEER
No. 50137
DENIS VYSTROPOV

GRIT SYSTEM SCHEMATIC WIRING DIAGRAM

E-602

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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

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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DRAWN BY:	DV

CAREY STATION URBAN
WATER REUSE FACILITY
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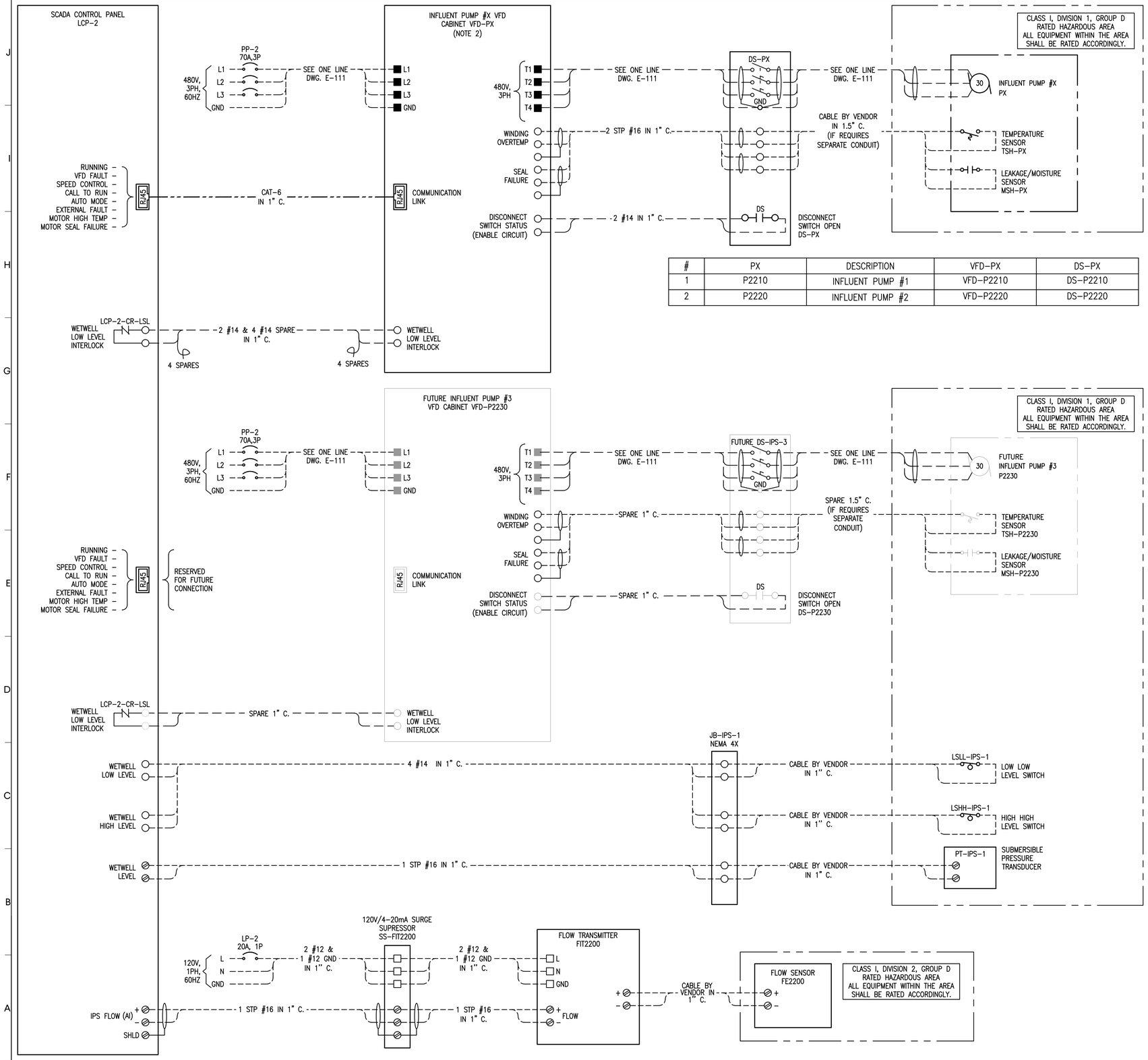
GMC Project #CAUG230002

GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

INFLUENT PUMP STATION SCHEMATIC WIRING DIAGRAM

E-603

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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

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.
2. 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:
   - A. CABINET SCCR SHALL BE 42kAIC MINIMUM.
   - B. ENCLOSURE: WALL MOUNTED NEMA 4X 304 SS WITH INNER DOORS, FOLDING SHELF, INTERIOR LIGHT FIXTURE WITH DOOR SWITCH.
   - C. MAIN DEVICE: THERMAL MAGNETIC CIRCUIT BREAKER 70A, 480V, 3P WITH LOCKABLE DISCONNECT HANDLE.
   - D. VARIABLE FREQUENCY DRIVE (VFD):
     - D.A. THE VFD CABINET MANUFACTURER SHALL COORDINATE WITH THE EQUIPMENT MANUFACTURER WHETHER VARIABLE OR CONSTANT TORQUE DRIVE SHALL BE PROVIDED AND PROVIDE A CONFIRMATION LETTER.
     - D.B. 6 PULSE DRIVE WITH MOTOR CIRCUIT PROTECTORS, RATED FOR 30 HP MOTOR.
     - D.C. 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.
   - E. 1kVA, 480-240/120V CONTROL POWER TRANSFORMER WITH PRIMARY AND SECONDARY CIRCUIT BREAKERS.
   - F. EXTERNALLY MOUNTED 480V, 1PH AIR CONDITIONER IN NEMA 4X SS ENCLOSURE SIZED TO KEEP CABINET INTERNAL TEMPERATURE BELOW 90° F.
   - G. STRIP HEATER, FAN & THERMOSTAT.
   - H. SELECTOR SWITCHES, PUSH BUTTONS, PILOT LIGHTS, ETC. AS REQUIRED FOR PROPER EQUIPMENT OPERATION.
   - R. OPERATOR INTERFACE DEVICES:
     - R.A. VFD KEY PAD MOUNTED ON THE FRONT DOOR;
     - R.A. HOA SWITCH;
     - R.B. FORWARD-REVERSE SWITCH;
     - R.C. SPEED POTENTIOMETER FOR HAND MODE.
   - S. PUSH BUTTONS:
     - S.A. START;
     - S.B. STOP;
     - S.C. E-STOP.
   - T. ANALOG INDICATORS:
     - T.A. SPEED;
     - T.B. CURRENT.
   - U. INDICATING LIGHTS FOR:
     - U.A. CONTROL POWER ON (WHITE);
     - U.B. PUMP RUNNING (GREEN);
     - U.C. PUMP FAULT (AMBER).
   - V. MEANS OF I/O'S COMMUNICATION:
     - V.A. 120V, 5A RATED DRY CONTACTS, PREWIRED TO FIELD TERMINALS:
       - V.A.A. PHASE LOSS ALARM;
       - V.A.B. SCREEN COMMON FAULT;
       - V.A.C. SCREW CONVEYOR COMMON FAULT.
     - U.B. HARDWIRED SIGNALS PREWIRED TO FIELD TERMINALS:
       - U.B.A. SPEED CONTROL INPUT 4-20mA;
       - U.B.B. SPEED FEEDBACK OUTPUT 4-20mA;
       - U.B.C. CURRENT OUTPUT 4-20mA.
     - U.C. COMMUNICATION LINKS:
       - U.C.A. ETHERNET/IP (RJ-45).
   - V. HARDWIRED SAFETY INTERLOCKS SHALL INCLUDE:
     - V.A. DISCONNECT SWITCH STATUS;
     - V.B. LOW LEVEL CUTOFF;
     - V.C. VFD FAULT.
   - X. 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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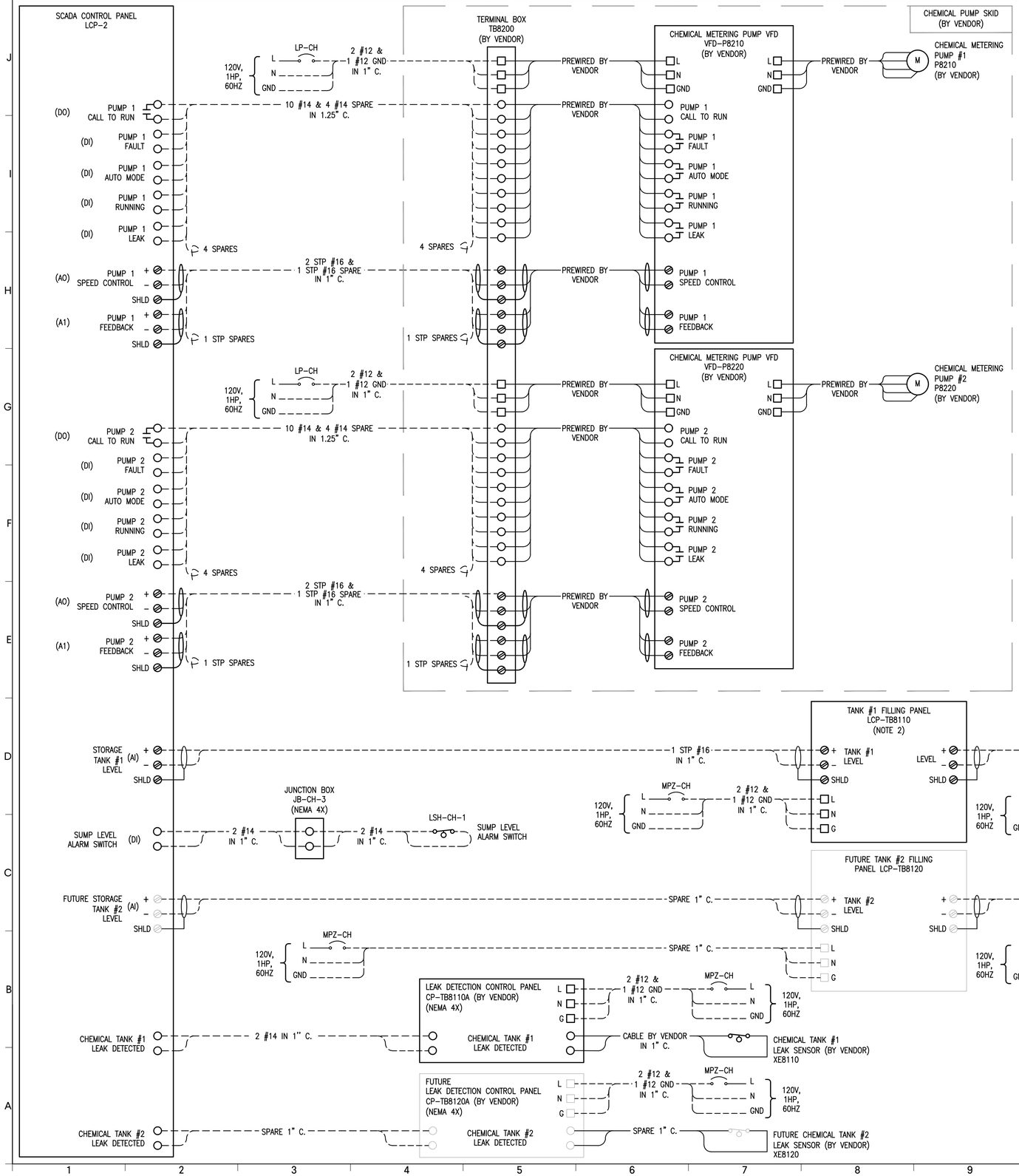
GMC Project #CAUG230002

GEORGIA REGISTERED No. 30153 PROFESSIONAL ENGINEER DENIS VYSTROPOV

INFLUENT PUMP
STATION SCHEMATIC
WIRING DIAGRAM

E-604

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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.

2. THE CONTRACTOR SHALL PROVIDE AND INSTALL CHEMICAL TANK FILLING PANEL IN NEMA 4X SS ENCLOSURE WHICH INCLUDES, BUT NOT LIMITED TO THE FOLLOWING:
   A. SILENCE PUSH BUTTON, RELAYS, FUSES AND TERMINALS AS REQUIRED FOR PROPER CONTROL PANEL OPERATION.
   B. INDICATING LIGHTS FOR:
      B.1. CHEMICAL TANK HIGH LEVEL ALARM (RED LIGHT);
      B.2. CHEMICAL TANK LOW LEVEL ALARM (RED LIGHT).
   C. ALARM HORN FOR HIGH LEVEL CONDITION.
   D. LEVEL INDICATOR WITH THE FOLLOWING INPUTS AND OUTPUTS:
      D.1. ONE (1) 4-20mA ANALOG INPUT (SIGNAL FROM LEVEL TRANSMITTER);
      D.2. ONE (1) 4-20mA ANALOG OUTPUT (LEVEL SIGNAL TO SCADA);
      D.3. TWO (2) 2A RELAY OUTPUTS (FOR ALARM LIGHTS AND HORN).
   E. SUN PROTECTOR FOR LEVEL INDICATOR DISPLAY.
   F. MAIN 10A, 1P CIRCUIT BREAKER.

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

LEGEND:

- □ – 120V POWER TERMINAL
- ■ – 480V POWER TERMINAL
- ○ – CONTROL TERMINAL
- ⊘ – SIGNAL TERMINAL

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

GMC
801 Broad Street Suite 900
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T 706.303.3272

GOODWYN MILLS CAWOOD, LLC
No.PEF007898
Exp.06.30.2026
STATE OF GEORGIA
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
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CONFORMED SET	09.03.2025
PROJECT MANAGER:	DV
ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

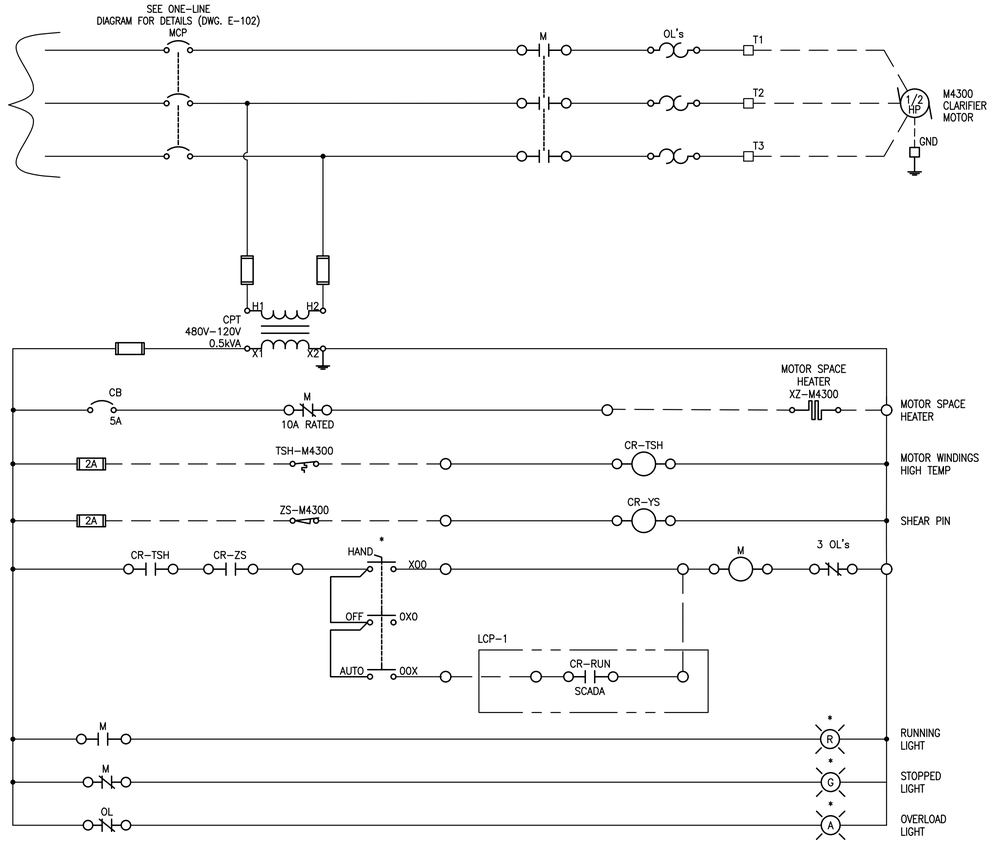
GMC Project #CAUG230002

GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

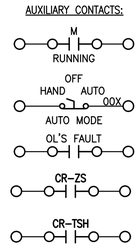
CHEMICAL STORAGE AREA SCHEMATIC WIRING DIAGRAM

E-605

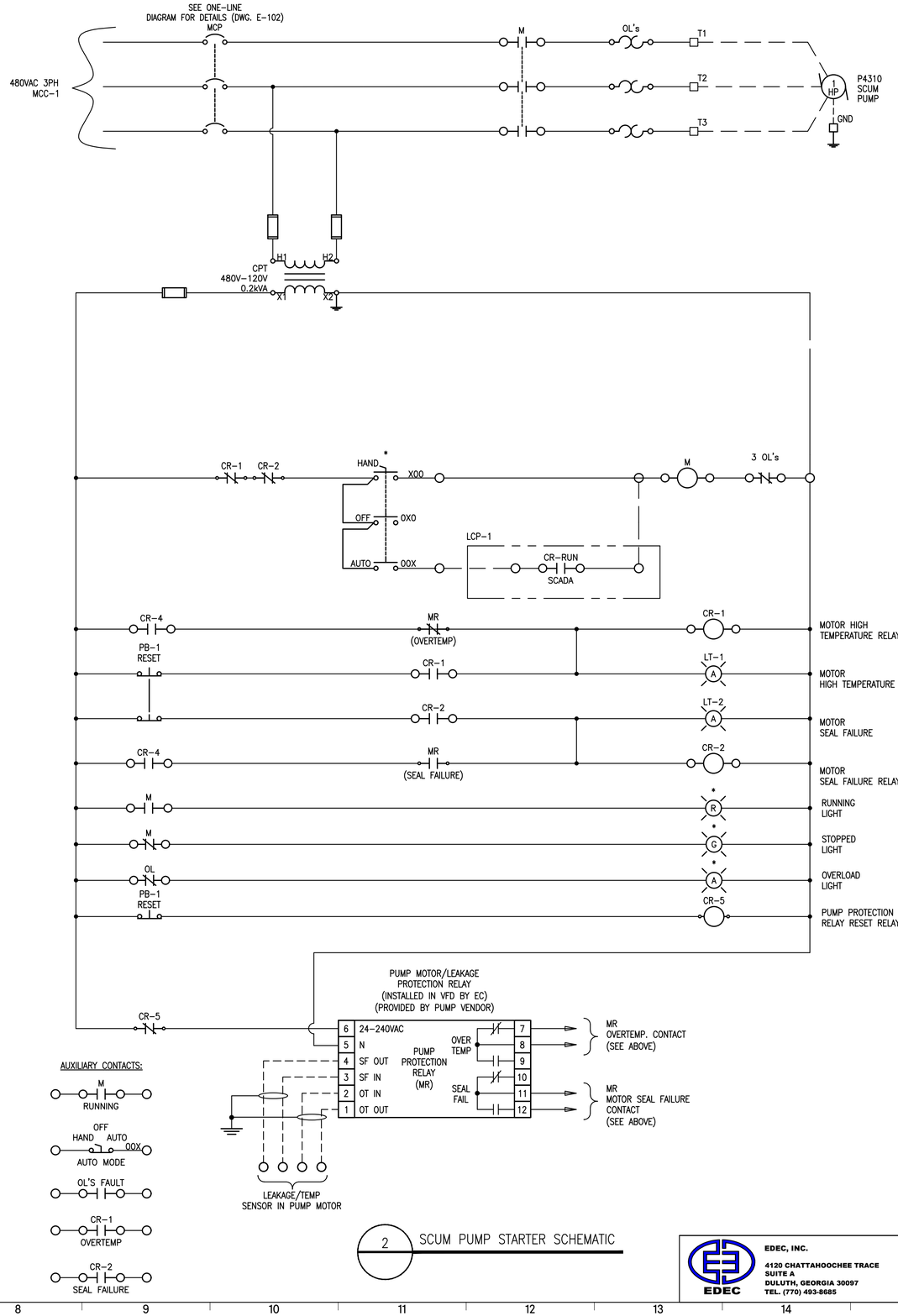
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AUXILIARY CONTACTS:



1 CLARIFIER MOTOR STARTER SCHEMATIC



AUXILIARY CONTACTS:

2 SCUM PUMP STARTER SCHEMATIC

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

GMC
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CAREY STATION URBAN WATER REUSE FACILITY
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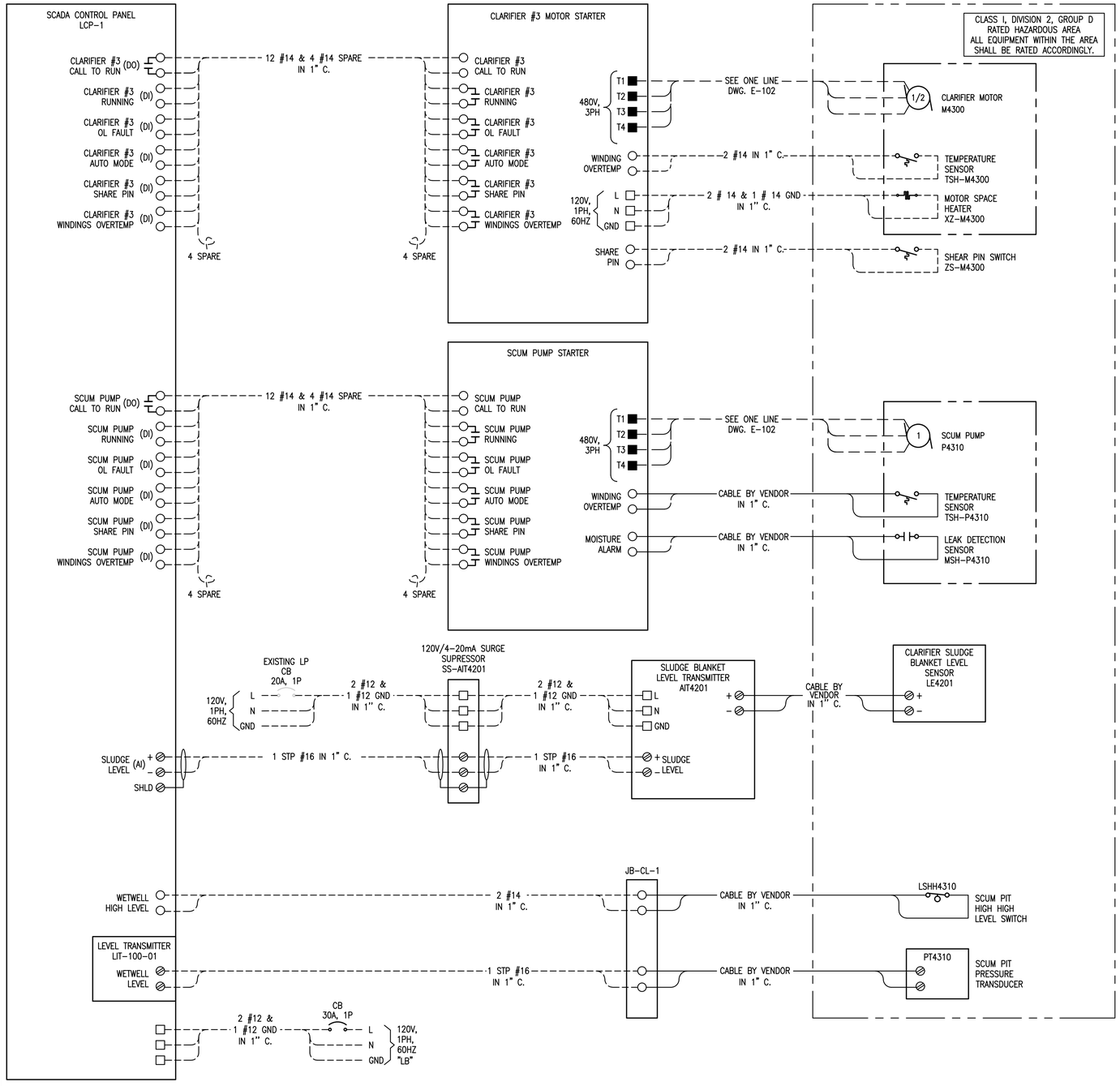
GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

CLARIFIER SCHEMATIC WIRING DIAGRAM

E-606

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4120 CHATTAHOOCHEE TRACE
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NOTES:

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LEGEND:

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- ■ – 480V POWER TERMINAL
- ○ – CONTROL TERMINAL
- ⊘ – SIGNAL TERMINAL

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GOODWYN MILLS CAWOOD, LLC No.PEF007898 Exp.06.30.2026 STATE OF GEORGIA CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

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CAREY STATION URBAN
WATER REUSE FACILITY
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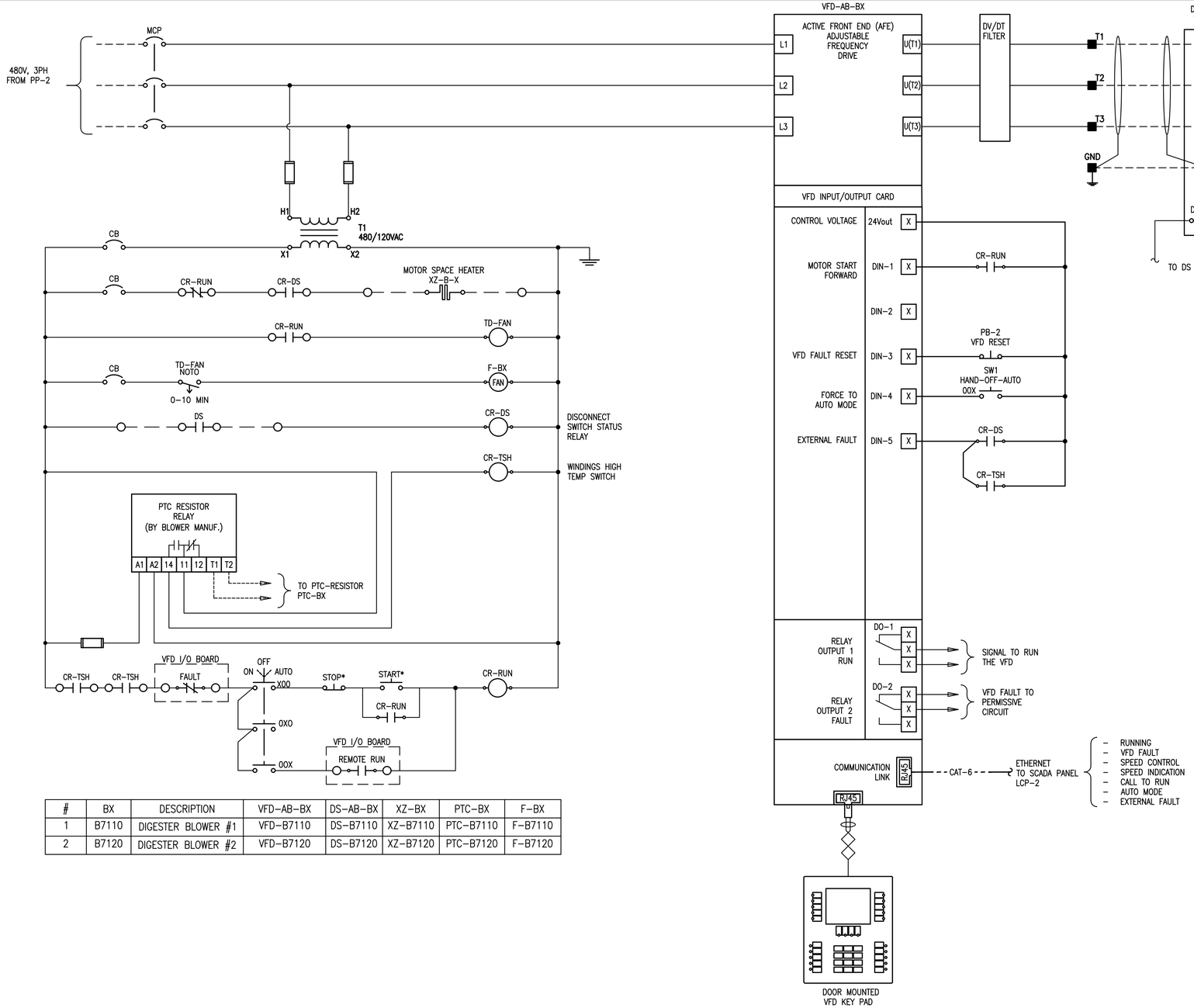
GMC Project #CAUG230002

GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

CLARIFIER SCHEMATIC WIRING DIAGRAM

E-607

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#	BX	DESCRIPTION	VFD-AB-BX	DS-AB-BX	XZ-BX	PTC-BX	F-BX
1	B7110	DIGESTER BLOWER #1	VFD-B7110	DS-B7110	XZ-B7110	PTC-B7110	F-B7110
2	B7120	DIGESTER BLOWER #2	VFD-B7120	DS-B7120	XZ-B7120	PTC-B7120	F-B7120

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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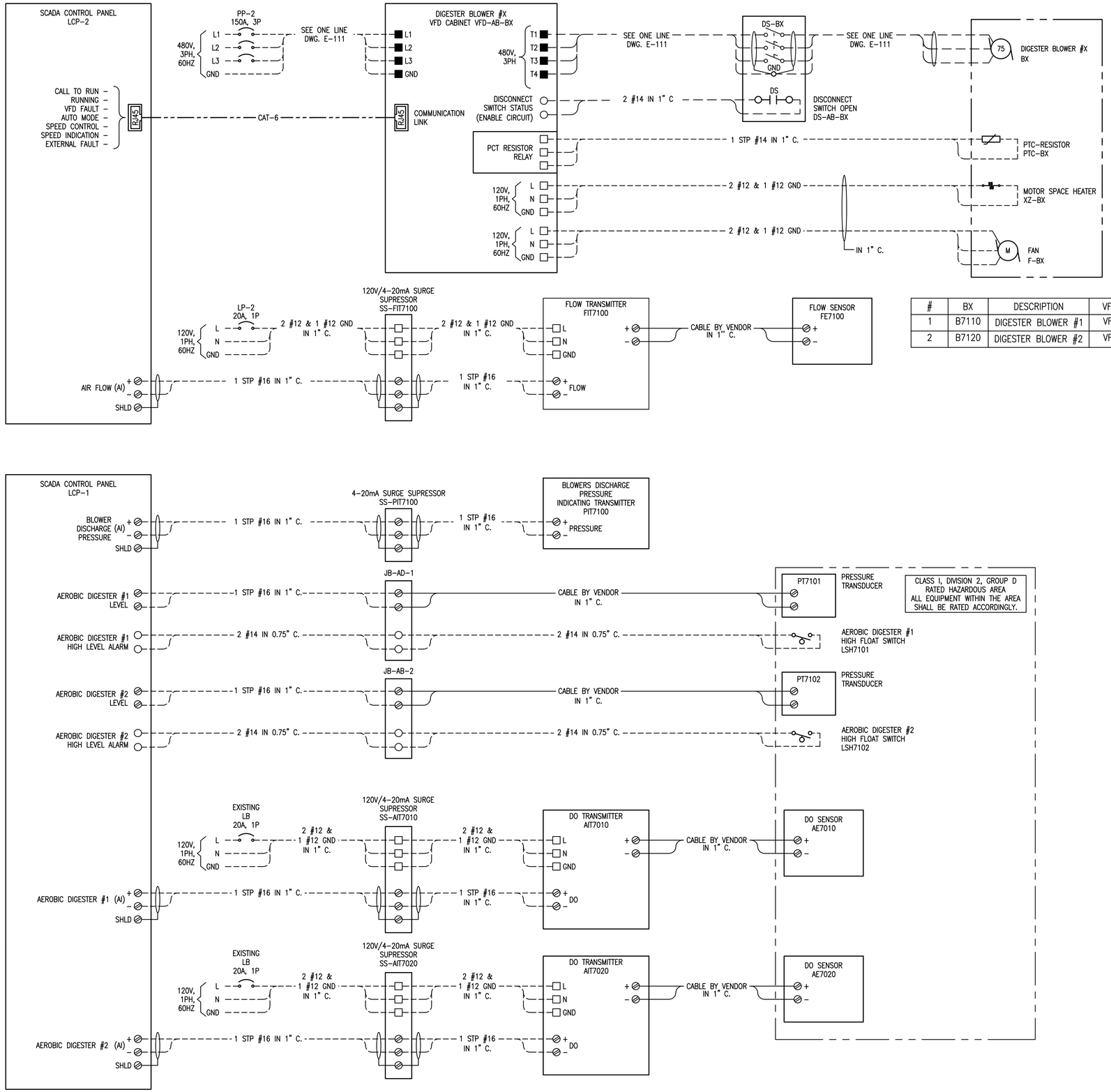
GMC Project #CAUG230002

GEORGIA REGISTERED No. 30153 PROFESSIONAL ENGINEER DENIS VYSTROPOV

DIGESTER SCHEMATIC WIRING DIAGRAM

E-608

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NOTES:

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#	BX	DESCRIPTION	VFD-AB-BX	DS-AB-BX	XZ-BX	PTC-BX	F-BX
1	B7110	DIGESTER BLOWER #1	VFD-B7110	DS-B7110	XZ-B7110	PTC-B7110	F-B7110
2	B7120	DIGESTER BLOWER #2	VFD-B7120	DS-B7120	XZ-B7120	PTC-B7120	F-B7120

LEGEND:

- □ – 120V POWER TERMINAL
- ■ – 480V POWER TERMINAL
- ○ – CONTROL TERMINAL
- ⊘ – SIGNAL TERMINAL

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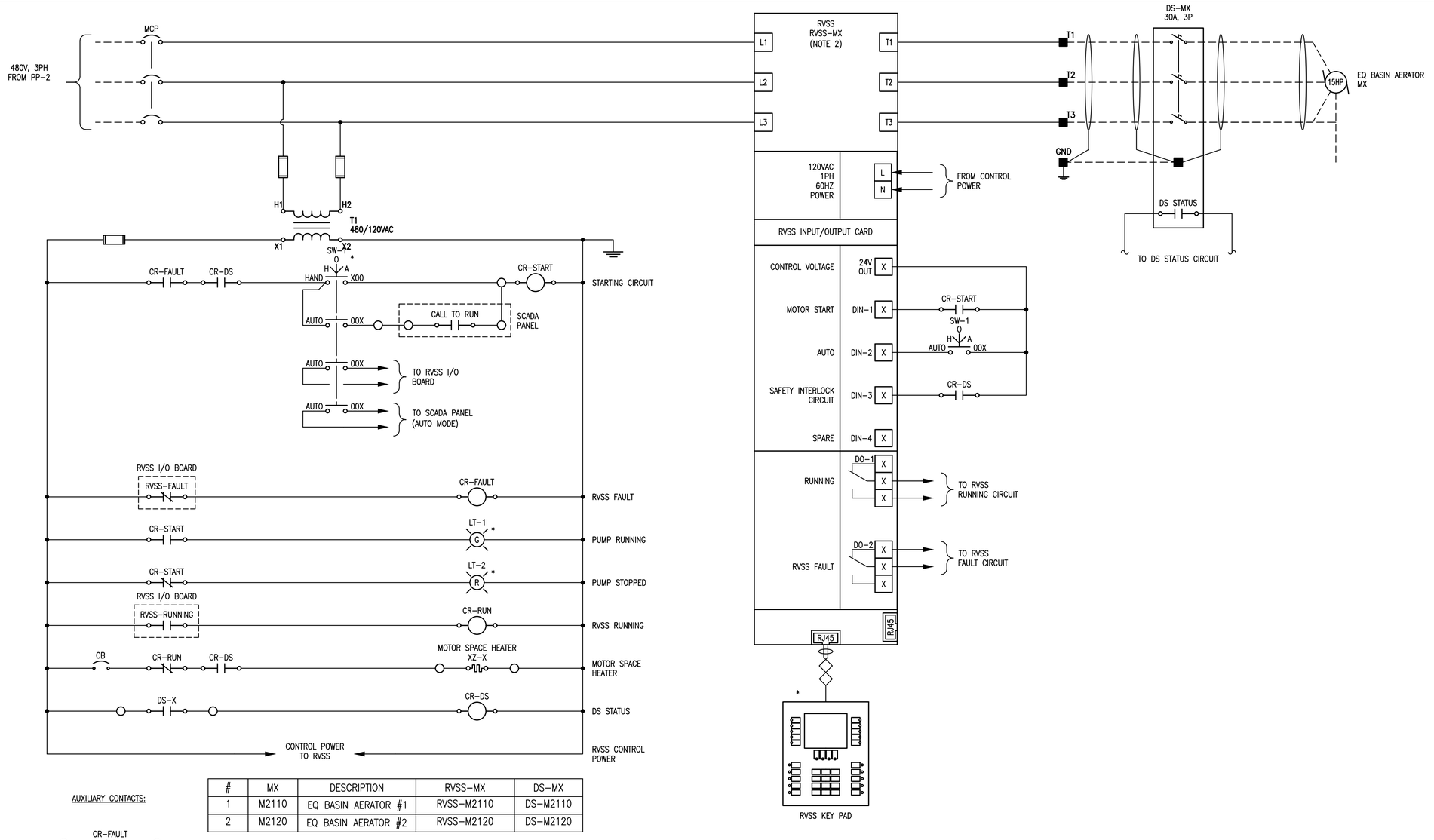
GMC Project #CAUG230002

GEORGIA REGISTERED PROFESSIONAL ENGINEER
NO. 50137
DENIS VYSTROPOV

DIGESTER SCHEMATIC WIRING DIAGRAM

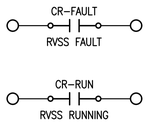
E-609

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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

AUXILIARY CONTACTS:



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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CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

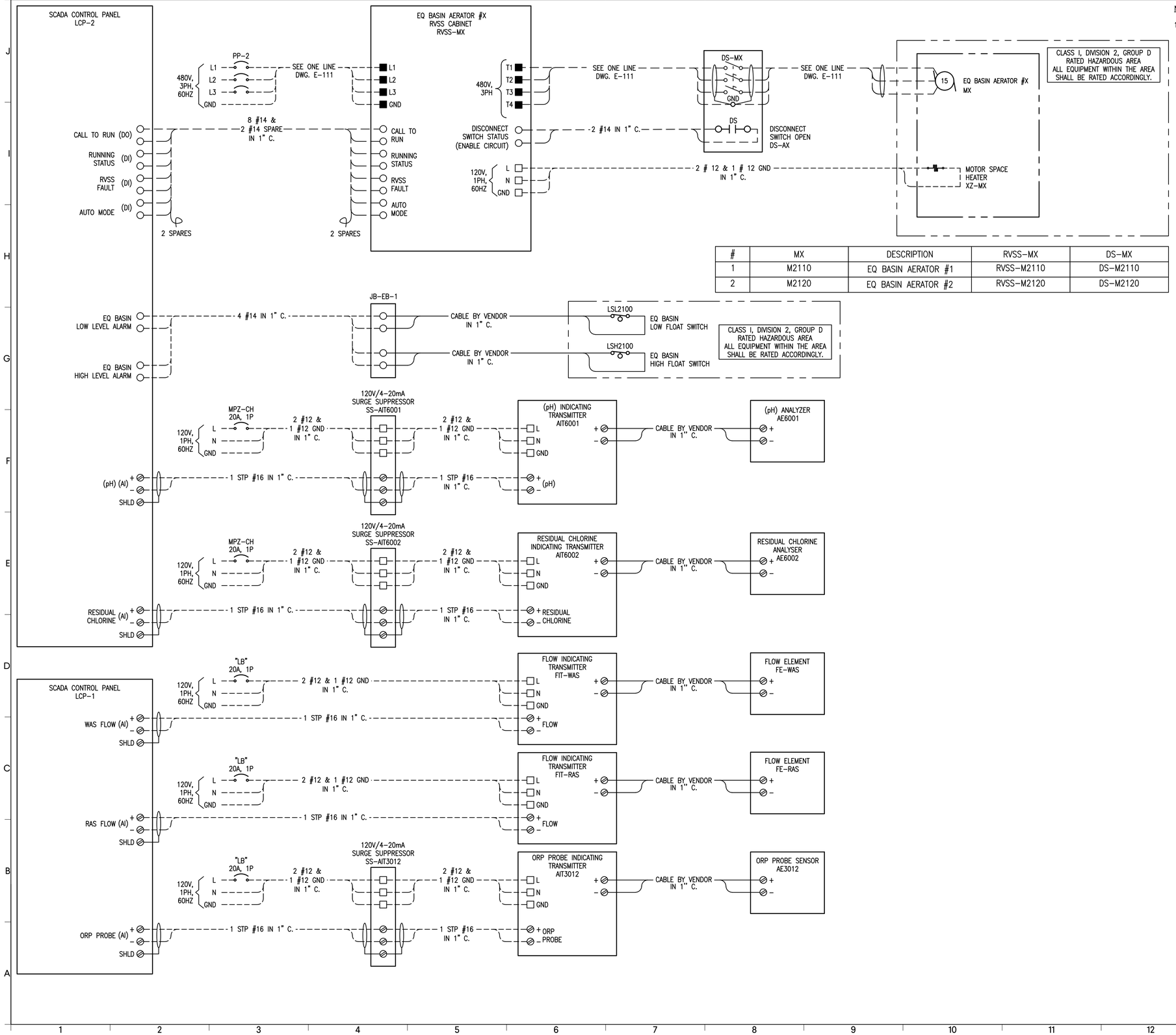
GMC Project #CAUG230002

GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

EQ BASIN
SCHEMATIC WIRING
DIAGRAM

E-610

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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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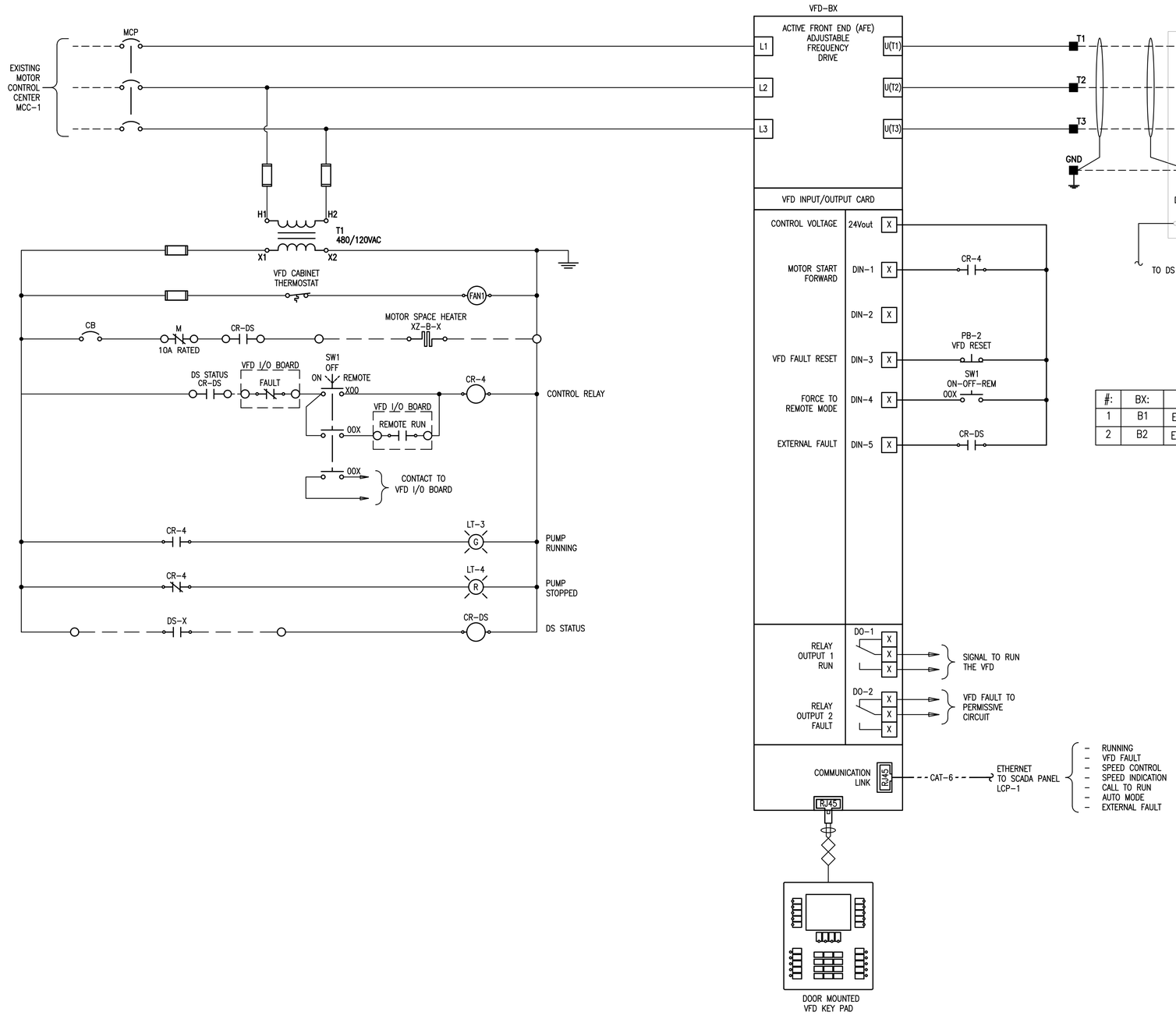
GMC Project #CAUG230002

GEORGIA
DENIS VYSTROPOV
No. 50137
PROFESSIONAL ENGINEER

EQ BASIN SCHEMATIC WIRING DIAGRAM

E-611

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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.
2. SEE DWG. E-102, NOTE 3.

#:	BX:	DESCRIPTION:	VFD-BX:	DS-BX:
1	B1	EXISTING AERATION BLOWER #1	VFD-B1	DS-B1
2	B2	EXISTING AERATION BLOWER #2	VFD-B2	DS-B2

LEGEND:

- □ – 120V POWER TERMINAL
- ■ – 480V POWER TERMINAL
- ○ – CONTROL TERMINAL
- ⊘ – SIGNAL TERMINAL

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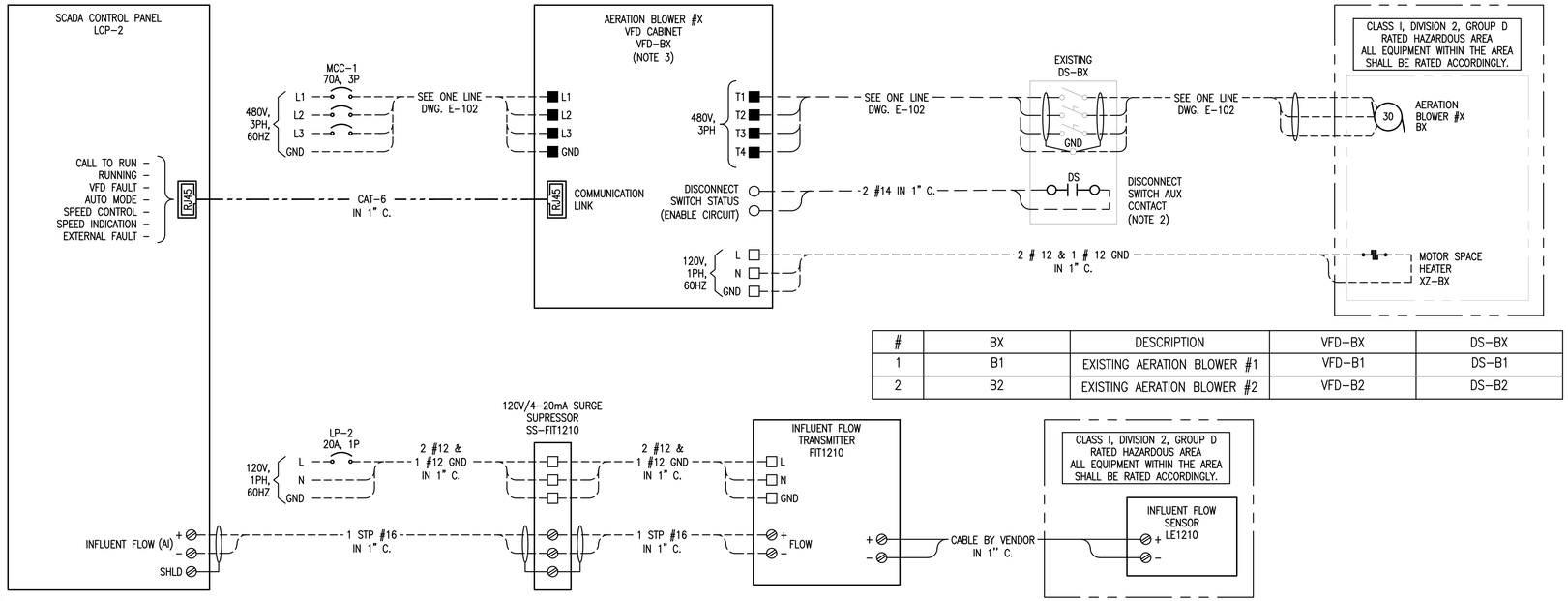
GEORGIA REGISTERED No. 50137 PROFESSIONAL ENGINEER DENIS VYSTROPOV

AERATION BASIN SCHEMATIC WIRING DIAGRAM

E-612

EDEC, INC.
4120 CHATTAHOOCHEE TRACE
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#	BX	DESCRIPTION	VFD-BX	DS-BX
1	B1	EXISTING AERATION BLOWER #1	VFD-B1	DS-B1
2	B2	EXISTING AERATION BLOWER #2	VFD-B2	DS-B2

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.
2. SEE DWG. E-102, NOTE 3.
3. THE EQUIPMENT VENDOR SHALL FURNISH AND CONTRACTOR SHALL INSTALL AERATION BLOWER VFD CABINET WHICH INCLUDES ALL NECESSARY POWER AND CONTROLS COMPONENTS INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:

A. CABINET SCCR SHALL BE 42kAIC MINIMUM.
B. ENCLOSURE: WALL MOUNTED NEMA 4X 304 SS WITH INNER DOORS, FOLDING SHELF, INTERIOR LIGHT FIXTURE WITH DOOR SWITCH.
C. MAIN DEVICE: THERMAL MAGNETIC CIRCUIT BREAKER 100A, 480V, 3P WITH LOCKABLE DISCONNECT HANDLE.
D. VARIABLE FREQUENCY DRIVE (VFD):
   D.A. THE VFD CABINET MANUFACTURER SHALL COORDINATE WITH THE EQUIPMENT MANUFACTURER WHETHER VARIABLE OR CONSTANT TORQUE DRIVE SHALL BE PROVIDED AND PROVIDE A CONFIRMATION LETTER.
   D.B. 18 PULSE OR ACTIVE FRONT END (AFE) DRIVE WITH MOTOR CIRCUIT PROTECTORS, RATED FOR 30HP MOTOR.
   D.C. 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. INCLUDE LINE REACTORS, DV/DT FILTERS, ETC. AS REQUIRED FOR PROPER EQUIPMENT OPERATION BASED ON THE INSTALLATION CONDITIONS.
E. 1kVA, 480-240/120V CONTROL POWER TRANSFORMER WITH PRIMARY AND SECONDARY CIRCUIT BREAKERS.
F. EXTERNALLY MOUNTED 480V, 1PH AIR CONDITIONER IN NEMA 4X SS ENCLOSURE SIZED TO KEEP CABINET INTERNAL TEMPERATURE BELOW 90° F.
G. STRIP HEATER, FAN & THERMOSTAT.
H. SELECTOR SWITCHES, PUSH BUTTONS, PILOT LIGHTS, ETC. AS REQUIRED FOR PROPER EQUIPMENT OPERATION.
I. OPERATOR INTERFACE DEVICES:
   I.A. VFD KEY PAD MOUNTED ON THE FRONT DOOR;
   I.A. HOA SWITCH;
   I.B. SPEED POTENTIOMETER FOR HAND MODE.
J. PUSH BUTTONS:
   J.A. START;
   J.B. STOP;
   J.C. E-STOP.
K. ANALOG INDICATORS:
   K.A. SPEED;
   K.B. CURRENT.
L. INDICATING LIGHTS FOR:
   L.A. CONTROL POWER ON (WHITE);
   L.B. PUMP RUNNING (GREEN);
   L.C. PUMP FAULT (AMBER).
M. MEANS OF I/O'S COMMUNICATION:
   M.A. 120V, 5A RATED DRY CONTACTS, PREWIRED TO FIELD TERMINALS:
      M.A.A. PHASE LOSS ALARM;
      M.A.B. AERATION BLOWER COMMON FAULT;
      M.A.C. AERATION BLOWER COMMON FAULT.
   M.B. HARDWIRED SIGNALS PREWIRED TO FIELD TERMINALS:
      U.B.A. SPEED CONTROL INPUT 4-20mA;
      U.B.B. SPEED FEEDBACK OUTPUT 4-20mA;
      U.B.C. CURRENT OUTPUT 4-20mA.
   U.C. COMMUNICATION LINKS:
      U.C.A. ETHERNET/IP (RJ-45).
V. HARDWIRED SAFETY INTERLOCKS SHALL INCLUDE:
   V.A. DISCONNECT SWITCH STATUS;
   V.B. LOW LEVEL CUTOFF;
   V.C. VFD FAULT.
W. 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.PEF007898
Exp.06.30.2026
STATE OF GEORGIA
CERTIFICATE OF AUTHORIZATION

1" 0" .5" 1"

ISSUE	DATE
90% SUBMITTAL	05.13.2024
100% SUBMITTAL	10.04.2024
100% SUBMITTAL - UPDATED	07.22.2025
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CONFORMED SET	09.03.2025
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ENGINEER:	DV
DESIGNER:	DV
DRAWN BY:	DV

CAREY STATION URBAN
WATER REUSE FACILITY
0.5 MGD TO 1.0 MGD EXPANSION

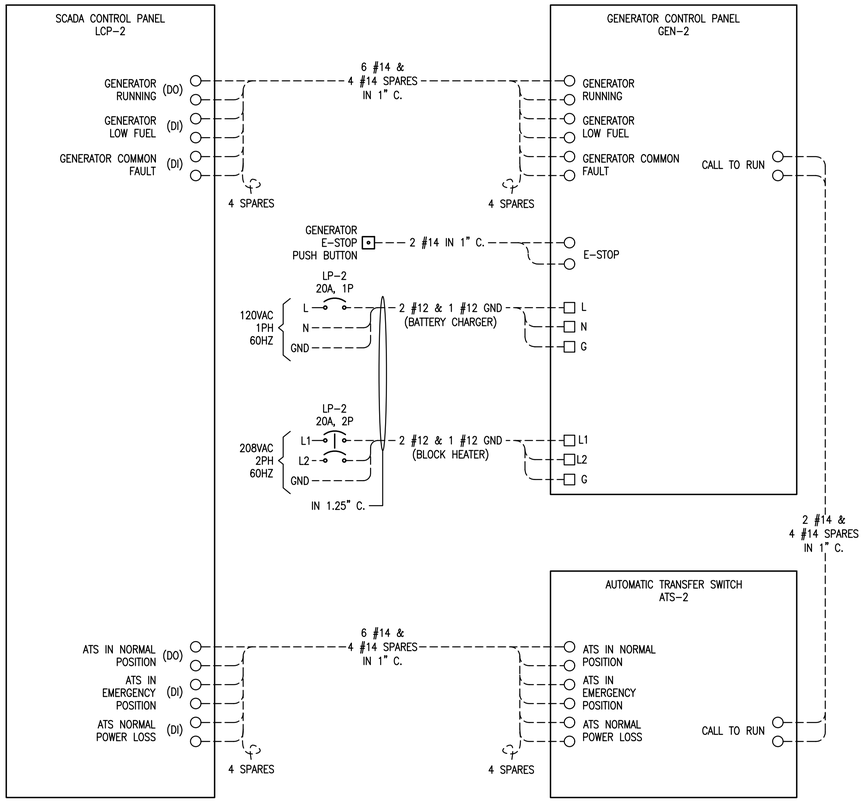
GMC Project #CAUG230002

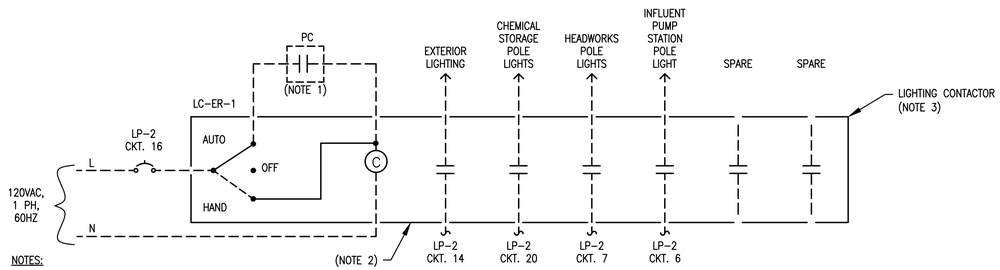
GEORGIA REGISTERED
No. 36137
PROFESSIONAL
ENGINEER
DENIS VYSTROPOV

AERATION BASIN SCHEMATIC WIRING DIAGRAM

E-613

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NOTES:

1. "PC" – PHOTOCELL, 120V. LOCATE ON THE EQUIPMENT RACK FACING NORTH.
2. 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.
3. 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 ECCO3 OR ACCEPTED EQUAL.

2 LIGHTING CONTACTOR LC-ER-1 SCHEMATIC

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:

- □ – 208/120V POWER TERMINAL
- ■ – 480V POWER TERMINAL
- ○ – CONTROL TERMINAL
- ⊘ – SIGNAL TERMINAL

EDEC, INC.
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GMC
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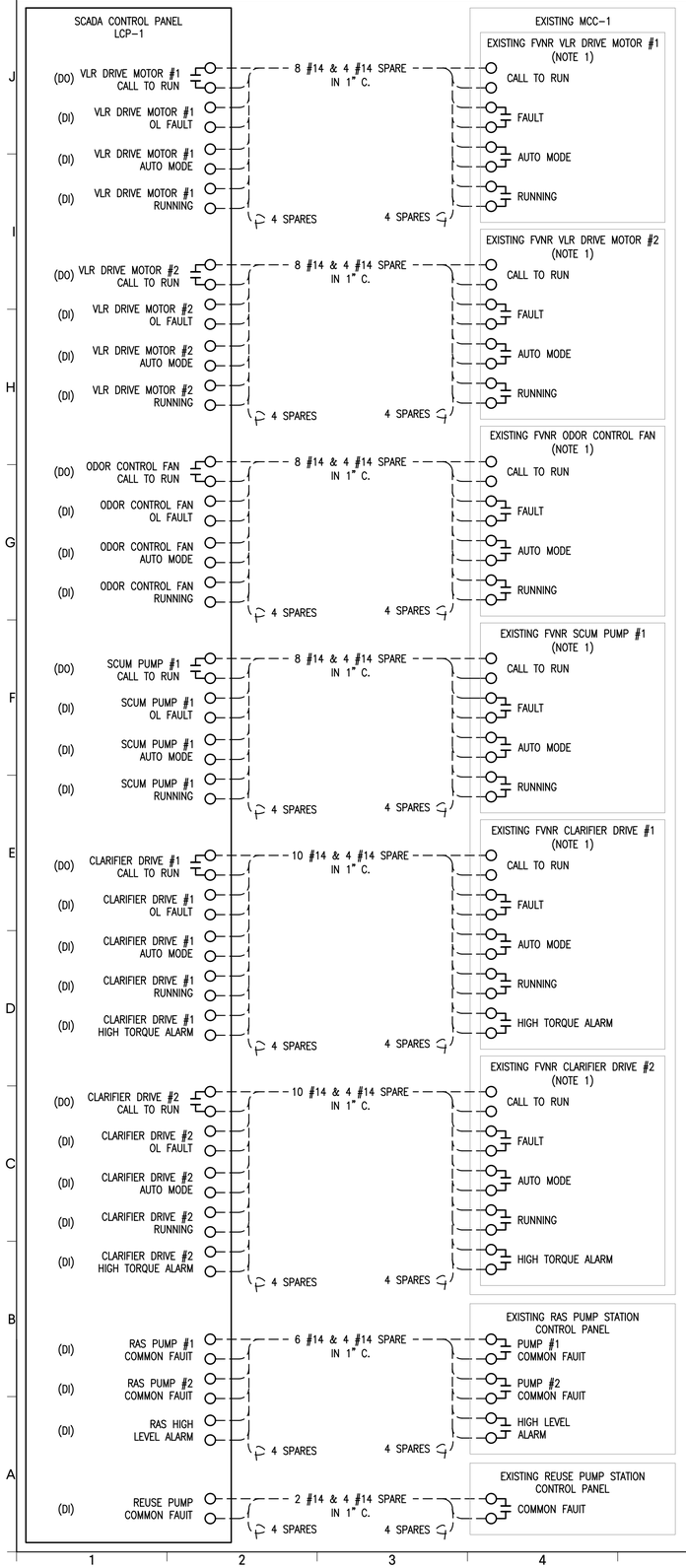
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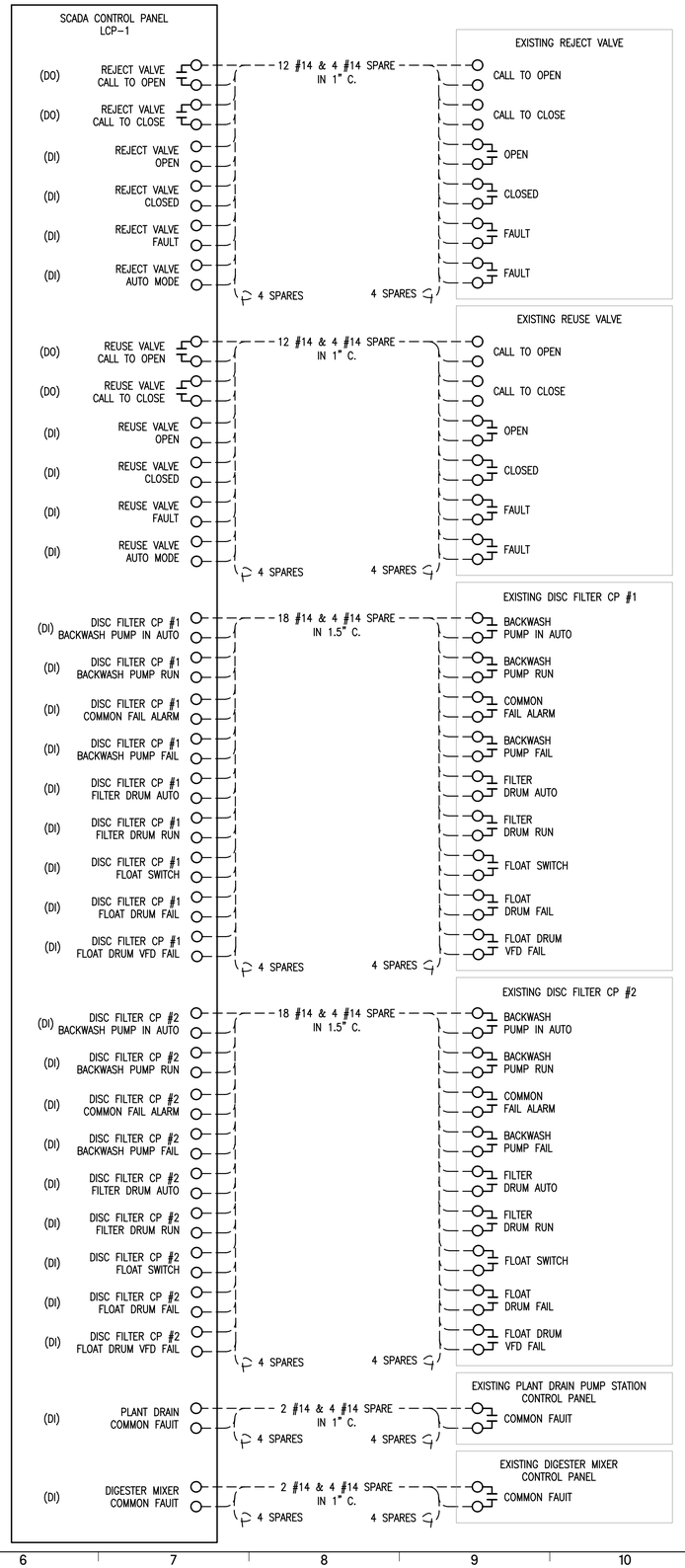
GEORGIA REGISTERED PROFESSIONAL ENGINEER
No. 50133
DENIS VYSTROPOV

ATS AND GENERATOR SCHEMATIC WIRING DIAGRAM

E-614

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NOTES:

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

1 EXISTING EQUIPMENT CONNECT TO LCP-1 SCHEMATIC

EDEC, INC.
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DULUTH, GEORGIA 30097
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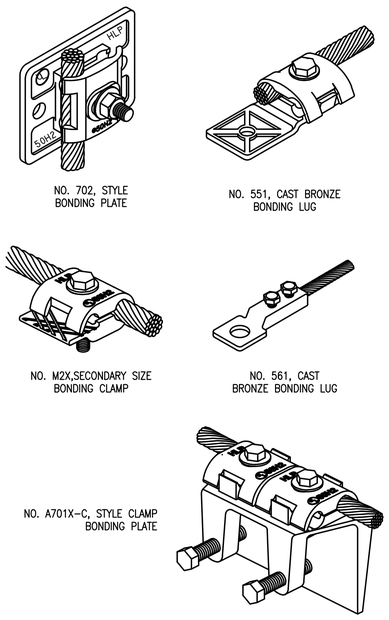
GMC Project #CAUG230002

GEORGIA REGISTERED PROFESSIONAL ENGINEER DENIS VYSTROPOV NO. 50137

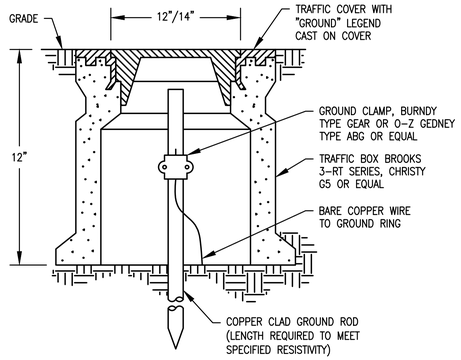
SCHEMATIC WIRING DIAGRAM

E-615

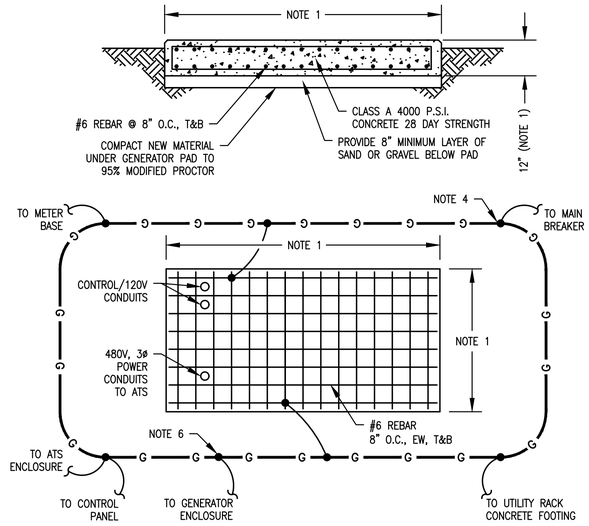
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A BONDING LUGS AND PLATES



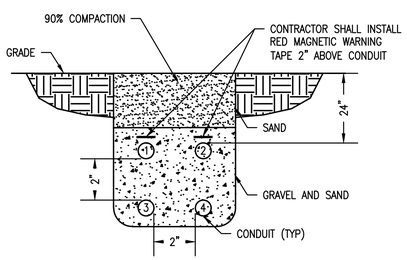
B GROUND TEST WELL



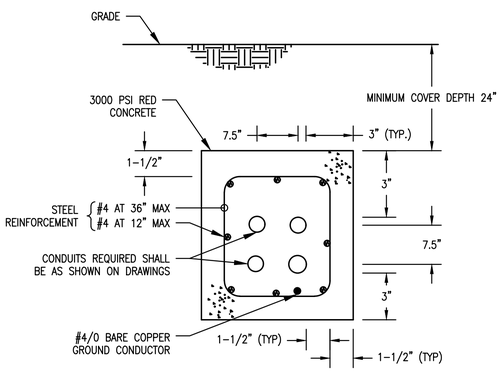
C GENERATOR PAD

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



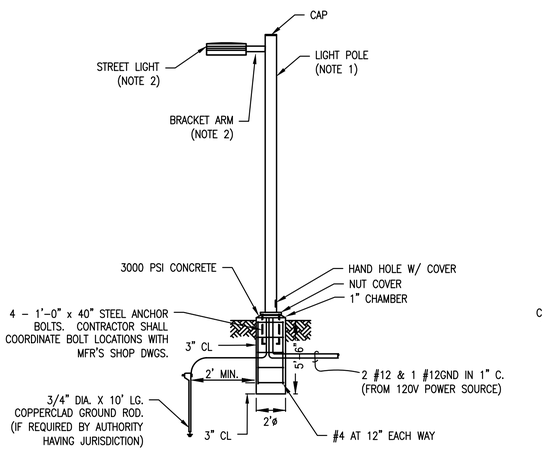
(DIMENSIONS ARE MINIMUM)

REINFORCED DUCTBANK

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.

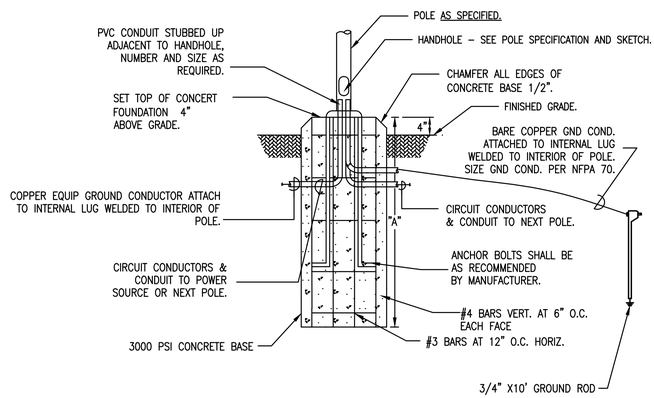
E REINFORCED DUCTBANK INSTALLATION DETAIL



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-MVOLT-SPUMBA-KMA-SF-DDBXD WITH "PER" PHOTOCELL 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

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

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801 Broad Street Suite 900
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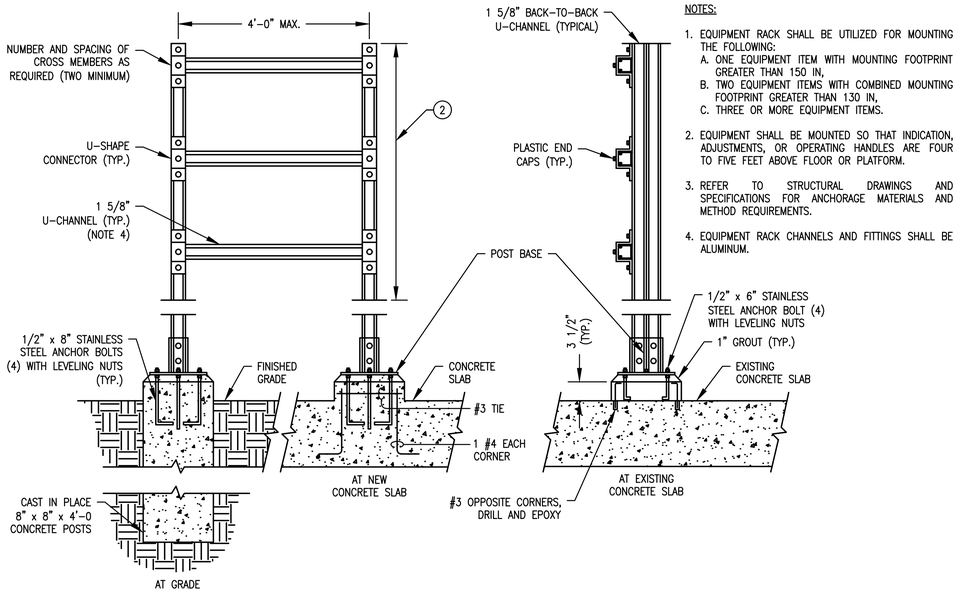
GMC Project #CAUG230002

GEORGIA REGISTERED No. 50133 PROFESSIONAL ENGINEER DENIS VYSTROPOV

ELECTRICAL INSTALLATION DETAILS

E-901

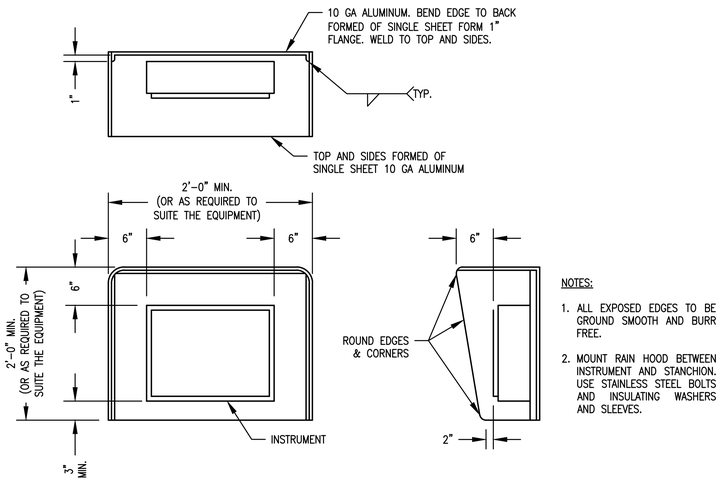
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NOTES:

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

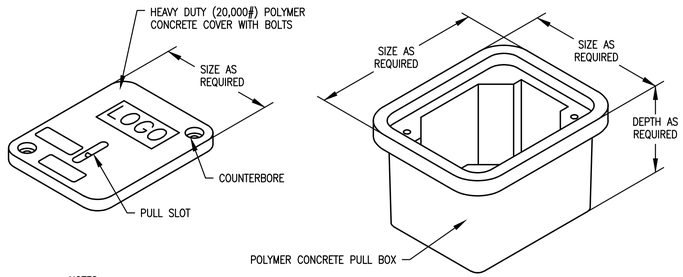
A EQUIPMENT RACK



NOTES:

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

B SUN/RAIN HOOD
FOR INSTRIMENTS AND CONTROL PANELS



NOTES:

1. PULL BOX TO BE MADE WITH PRECAST POLYMER CONCRETE FIBERGLASS REINFORCED, STACKABLE WITH SELF-ALIGNING, REPLACEABLE EZ-NUT.
2. 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.
3. "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

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ELECTRICAL INSTALATION DETAILS

E-902

EDEC
EDEC, INC.
4120 CHATTAHOOCHEE TRACE
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TEL. (770) 493-8685

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