CONSTRUCTION DRAWINGS

FOR

CITY OF VALDOSTA, GEORGIA

VALDOSTA
A City Without Limits

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

GEORGIA
Eastman
Fitzgerald
Savannah
Statesboro
Valdosta
Albany
Thomasville
Bainbridge
Cairo
Tifton
Douglas
Waycross
Brunswick
Hazlehurst
Vidalia
Swainsboro
Dublin
Cordele
Perry
Macon
Milledgeville
Sandersville
Eatonton
Gainesville
Athens
Atlanta
Rome
Dalton
Cartersville
Marietta
Newnan
Griffin
Carrollton
LaGrange
Columbus
Cuthbert
Dawson
Blakely
Donalsonville
Moultrie
Adel
Nashville
Douglas
Blackshear
Hinesville
Jesup
Darien
Folkston
Kingsland
Woodbine
Statesville
Mount Vernon
Claxton
Metter
Sylvania
Louisville
Wrightsville
Hawkinsville
Cochran
Eastman
Alma
Baxley
Everett
Thomson
Lincolnton
Washington
Madison
Monroe
Elberton
Toccoa
Clayton
Blairsville
Ellijay
Jasper
Canton
Douglasville
Fairburn
Hamilton
Fortson
Manchester
Greenville
Zebulon
Thomaston
Pine Mountain
Warner Robins
Buford
Lawrenceville
Gainesville
Cleveland
Helen
Dahlonega
Cumming
Alpharetta
Roswell
Decatur
Stone Mountain
Lithonia
Covington
Conyers
Jonesboro
Fayetteville
Newnan
Carrollton
Douglasville
Cartersville
Rome
Dalton
Chatsworth
Ellijay
Blairsville
Toccoa
Clayton
Helen
Dahlonega
Cumming
Alpharetta
Roswell
Decatur
Stone Mountain
Lithonia
Covington
Conyers
Jonesboro
Fayetteville
Newnan
Carrollton
Douglasville
Fairburn
Hamilton
Fortson
Manchester
Greenville
Zebulon
Thomaston
Pine Mountain
Warner Robins
Buford
Lawrenceville
Gainesville
Cleveland

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY IOANNIS M. POLEMATIDIS, P.E. NO. 044163 ON THE DATE ADJACENT TO THE SEAL

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GEORGIA

Ioannis M Polematidis

G-0 COVER SHEET AND LOCATION MAP
G-1 INDEX TO DRAWINGS, GENERAL NOTES AND LEGEND

M-1 BELT FILTER PRESS DEMOLITION PLAN
M-2 BELT FILTER PRESS DEMOLITION SECTIONS
M-3 BELT FILTER PRESS MODIFICATION PLAN
M-4 BELT FILTER PRESS MODIFICATIONS SECTION
MD-1 MECHANICAL DETAILS

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY SPENCER J. PERRY, P.E. NO. 036494 ON THE DATE ADJACENT TO THE SEAL

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GEORGIA

Spencer J Perry
GA No. 036494
2025.10.02 14:17:24-04'00'

E-1 ELECTRICAL LEGEND I
E-2 ELECTRICAL LEGEND II
E-3 ELECTRICAL NOTES
E-4 EXISTING SWRD-WWA AND MCC ONE-LINE POWER DIAGRAMS (DEMOLITION)
E-5 EXISTING SWRD-WWA AND MCC ONE-LINE POWER DIAGRAMS (MODIFICATIONS)
E-6 RISER DIAGRAMS
E-7 DEWATERING BUILDING ELECTRICAL DEMOLITION PLAN
E-8 DEWATERING BUILDING ELECTRICAL MODIFICATIONS PLAN
ED-1 ELECTRICAL DETAILS

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY JUSTIN S. BOGGS, P.E. NO. 061701 ON THE DATE ADJACENT TO THE SEAL

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GEORGIA

Justin S Boggs
GA No. 061701
2025.10.02 15:12:46-04'00'

S-1 STRUCTURAL GENERAL NOTES
S-2 DEWATERING BUILDING DEMOLITION PLAN, SECTIONS, AND DETAILS
S-3 DEWATERING BUILDING MODIFICATION PLAN, SECTIONS AND DETAILS

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY WILLIAM SCOTT WHITMON, P.E. NO. 047927 ON THE DATE ADJACENT TO THE SEAL

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GEORGIA

William S Whitmon
GA PE 047927
2025.10.02 14:42:16-04'00'

I-1 INSTRUMENTATION LEGEND I
I-2 INSTRUMENTATION LEGEND II
I-3 PROCESS AND INSTRUMENTATION DIAGRAM - BELT FILTER PRESS AND POLYMER SYSTEM
ID-1 INSTRUMENTATION DETAILS

REV NO	DATE	DRAWN	CHKD	REMARKS

DESIGNED BY A. MASSAIS
DRAWN BY S. DALVI
SHEET CHK'D BY A. MASSAIS
CROSS CHK'D BY A. MARATTIE
APPROVED BY I. POLEMATIDIS
DATE SEPTEMBER 2025

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GA COA No. 1770001B, EXP. DATE 06/30/2027

VALDOSTA
A City Without Limits

CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

SIGNATURE SHEET

PROJECT NO. 20790-2xx44
FILE NAME CDGANFSC.DW

SHEET NO.
G-0-A

ISSUED FOR BI

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PROCESS PIPE IDENTIFICATION

PROCESS FLOW STREAMS

DRN	DRAIN
POL	POLYMER SOLUTION
PSW	PLANT SERVICE WATER
WAS	WASTE ACTIVATED SLUDGE

PROCESS EQUIPMENT

BFP	BELT FILTER PRESS
BP	BOOSTER PUMP
CNV	CONVEYOR
GBT	GRAVITY BELT THICKENER
TSL	THICKENED SLUDGE LINE

PIPE MATERIALS

CI	CAST IRON
DI	DUCTILE IRON
HDPE	HIGH DENSITY POLYETHYLENE
PVC	POLYVINYL CHLORIDE PRESSURE PIPE (SCHEDULE 80 UON)
SCH 80	SCHEDULE 80 PVC
SS304	304 STAINLESS STEEL
SS316	316 STAINLESS STEEL
STL	CARBON STEEL

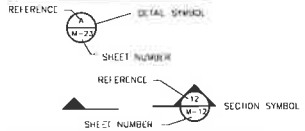
PIPE JOINTS

FLG	FLANGE
MJ	MECHANICAL JOINT
PE	PLAIN END

VALVES

ARV	AIR RELEASE VALVE
AVV	AIR VACUUM VALVE
BFV	BUTTERFLY VALVE
BV	BALL VALVE
CAV	COMBINATION AIR VALVE
CV	CHECK VALVE
GLV	GLOBE VALVE
GV	GATE VALVE
PRV	PRESSURE REGULATING VALVE
SV	SOLENOID VALVE

MISCELLANEOUS SYMBOLS



LEGENDS SYMBOLS AND ABBREVIATIONS SHOWN ON SHEETS M-1 INDICATE STANDARD SYMBOLS AND ABBREVIATIONS AND ARE PERTINENT TO THE CONDITIONS ON THIS SET OF DRAWINGS TO THE EXTENT APPLICABLE

ADDITIONAL LEGENDS AND/OR ABBREVIATIONS MAY APPEAR IN THIS SET OF DRAWINGS TO INDICATE SPECIFIC CONDITIONS

LEGEND

TO BE DEMOLISHED

GENERAL NOTES

1. PROCESS EQUIPMENT DIMENSIONS, LOCATIONS AND PIPING SYSTEM LAYOUTS ARE BASED ON EQUIPMENT SELECTED AND SPECIFIED BY THE DESIGN ENGINEER, PER SPECIFICATION SECTION 46 7621 FOR BELT FILTER PRESS. IF THE CONTRACTOR PROPOSES TO FURNISH EQUIPMENT THAT REQUIRES AN ARRANGEMENT ON SPACE DIFFERING FROM THAT INDICATED ON THE DRAWINGS OR SPECIFIED, THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER AND OWNER FOR APPROVAL DETAILED STRUCTURAL, MECHANICAL, PLUMBING, INSTRUMENTATION, AND ELECTRICAL DRAWINGS AND EQUIPMENT LISTS SHOWING ALL NECESSARY CHANGES AND EMBODYING ALL FEATURES OF THE EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER. THIS INFORMATION SHALL INCLUDE, BUT NOT BE LIMITED TO, PROCESS SYSTEM PROPOSED, PLANS, SECTIONS, DETAILS AND SCHEMATICS OF ALL APPURTENANCES REQUIRED.
2. SIZES OF EQUIPMENT FOUNDATIONS AND EQUIPMENT PADS INDICATED ON THE DRAWINGS ARE APPROXIMATE. EXACT DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FOR THE EQUIPMENT FURNISHED. ALL FLOOR MOUNTED EQUIPMENT SHALL BE SET ON CONCRETE PADS CONFORMING TO DETAILS SHOWN ON THE STRUCTURAL DRAWINGS.
3. CONTRACTOR SHALL COORDINATE EXACT LOCATION AND LENGTHS REQUIRED FOR ALL PIPING CONNECTIONS WITH THE EQUIPMENT SUPPLIERS, AND OWNER.
4. WATER SUPPLY CONNECTIONS TO PROCESS EQUIPMENT AND PROCESS PIPES ARE SHOWN ON THE MECHANICAL DRAWINGS. DETAILS OF CONTROL VALVE STATIONS, MAKE-UP WATER CONNECTIONS, FLUSHING CONNECTIONS ETC. ARE SHOWN ON THE MECHANICAL DRAWINGS. IF APPLICABLE, LIMITS OF WORK ARE SHOWN ON THE MECHANICAL, INSTRUMENTATION, ELECTRICAL AND PLUMBING DRAWINGS.
5. DIELECTRIC COUPLINGS, FLANGES OR UNIONS SHALL BE INSTALLED AT ALL CONNECTIONS OF DISSIMILAR METALS AND AS INDICATED ON DRAWINGS.
6. MECHANICAL PLANS AND SECTIONS DO NOT SHOW ALL VALVES, GAUGES, SWITCHES, OPERATORS, DRAINS, VENTS, ETC. REQUIRED FOR THE COMPLETE SYSTEM. CERTAIN SMALL DIAMETER PROCESS PIPING RUNS MAY NOT BE SHOWN IN THEIR ENTIRETY. GENERALLY, SMALL PIPING IS SHOWN DIAGRAMMATICALLY IN THE INSTRUMENTATION DRAWINGS. SHOULD A POTENTIAL ROUTING INTERFERENCE BE DISCOVERED, NOTIFY ENGINEER AND OWNER. THE CONTRACTOR SHALL FURNISH, INSTALL AND TEST ALL PIPING SYSTEMS AS INDICATED ON THE INSTRUMENTATION DRAWINGS AND SPECIFICATIONS TO PROVIDE THE COMPLETE SYSTEM.
7. UNLESS OTHERWISE SHOWN ON THE MECHANICAL DRAWINGS, ALL FLOORSLAB, WALL AND TANK PENETRATIONS SHALL BE AS SHOWN ON THE PENETRATION DETAILS INCLUDED IN THE MECHANICAL CONSTRUCTION DETAILS. ABOVE GROUND EXTERIOR WALL AND ROOF PENETRATIONS SHALL BE AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
8. STANDARD PIPE SUPPORT DETAILS ARE PROVIDED IN THE MECHANICAL DETAIL DRAWINGS. SUPPORT PIPES IN ACCORDANCE WITH SPECIFICATION SECTION 400507, "HANGERS AND SUPPORTS FOR PROCESS PIPING".
9. ALL EQUIPMENT BASES AND PIPING HAVING DRAIN OUTLETS SHALL BE PIPED TO THE NEAREST OPEN END DRAIN (OED) OR TRENCH DRAIN USING SCHEDULE 80 PVC PIPE OF APPROPRIATE DIAMETER AS INDICATED ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER.
10. PIPING SHALL BE INSTALLED SUCH THAT ANY PIPE, LAYER OF PIPING OR EQUIPMENT CAN BE REMOVED WITHOUT DISTURBING REMAINING PIPES AND SUPPORTS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAGGING ALL PROCESS PIPING VALVES AND EQUIPMENT AND RECORDING AS-BUILT LOCATIONS FOR THE SAME. PROCESS IDENTIFICATION SYSTEM SHALL BE AS DETAILED IN THE SPECIFICATIONS.
12. PORTIONS OF NON-PROCESS PIPING (PLUMBING) ARE NOT SHOWN FOR CLARITY AND FOR COORDINATION BETWEEN DISCIPLINES. REFER TO APPROPRIATE DRAWINGS AND SPECIFICATIONS.
13. DELEGATED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW DURING THE CONSTRUCTION PHASE OF THE PROJECT. REFER TO SPECIFICATION SECTION 46 7621 FOR DELEGATED DESIGN.
14. DELEGATED SUBMITTAL ITEMS SHALL BE SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF GEORGIA.
15. DELEGATED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE ENGINEER OF RECORD HAS REVIEWED THE SUBMITTAL DOCUMENTS AND INDICATED THAT THEY HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE WITH THE INTENT OF THE DESIGN.
16. THE LAYOUT DRAWINGS SHOWN IN THIS SET ARE BASED ON THE RECORD DRAWINGS PRODUCED BY PARSONS WATER AND INFRASTRUCTURE, INC. DATED AUGUST 25, 2016.

EQUIPMENT TAG

BW - 1, 2, 3 OR AB11

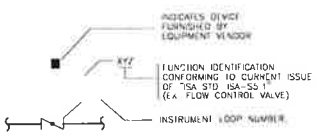
- INDIVIDUAL EQUIPMENT NUMBER
- EQUIPMENT TYPE DESIGNATION

VALVE TAG

BV - 001 OR F102

- INDIVIDUAL VALVE NUMBER
- VALVE TYPE (E.G. BUTTERFLY VALVE)

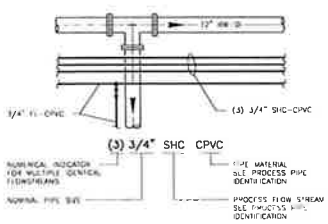
PROCESS VALVE LOOP IDENTIFICATION



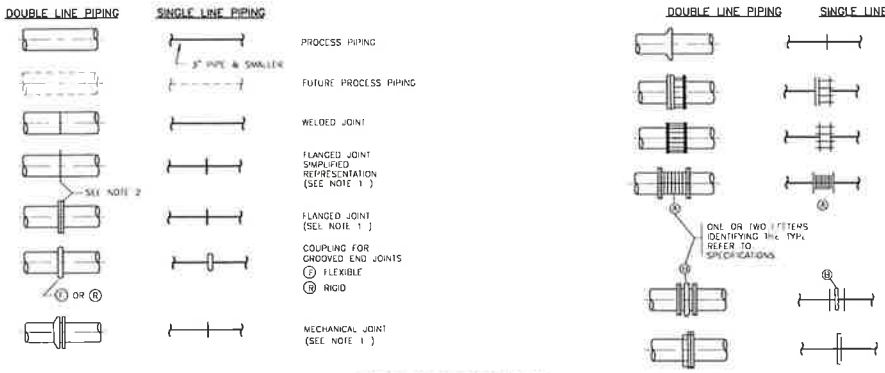
MECHANICAL DRAWINGS SHOW ONLY PRIMARY INSTRUMENT ELEMENTS FOR ADDITIONAL DETAILS REFER TO INSTRUMENTATION SPECIFICATIONS

TYPICAL INSTRUMENTATION AND LOOP TAG

PIPE TAG



PIPE AND FITTING SYMBOLS



PIPE AND FITTING SYMBOLS NOTES:

1. GENERIC JOINT SYMBOL IS USED FOR ALL SINGLE LINE PIPING SHOWN ON THE INTERIOR AND EXTERIOR PIPING DRAWINGS.
2. BOTH DETAILED AND SIMPLIFIED FLANGE REPRESENTATION SYMBOLS MAY BE SHOWN ON THE DRAWINGS.
3. UNLESS MODIFIED BY THE GENERAL PROJECT NOTES OR DETAILED ON THE LAYOUT AND SCHEMATIC DRAWINGS, PIPE AND FITTING JOINT REQUIREMENTS FOR THE VARIOUS PIPE MATERIALS ARE DEFINED IN THE SPECIFICATIONS AND ARE INDICATED ON THE PROCESS PIPE SCHEDULES.

REV NO	DATE	DRWN	CHKD	REMARKS

DESIGNED BY A. MASSAIS
DRAWN BY N. ANSIPA
SHEET CHKD BY A. MASSAIS
CROSS CHKD BY A. MAKATHL
APPROVED BY I. POLEMAHOIS
DATE SEPTEMBER 2025

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Jacksonville, FL 32216
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CERTIFICATE OF AUTHORIZATION

VALDOSTA
A City Without Limits

CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

INDEX TO DRAWINGS, GENERAL NOTES AND LEGEND

PROJECT NO 10190-29847
FILE NAME G001INFLEG.DW
SHEET NO G-1

ISSUED FOR BI

GENERAL NOTES

DESIGN CRITERIA

CODE:

- INTERNATIONAL BUILDING CODE, 2018 EDITION WITH GEORGIA AMENDMENTS
- ENVIRONMENTAL STRUCTURES: ACI 350-06 "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES"

ACI 318-14 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"

DESIGN LOADS

FIXED LOADS

- PROCESS SLABS ON GRADE 200 PSF

WIND DESIGN DATA ASCE 7-16

- ULTIMATE DESIGN WIND SPEED, V_{ult} (3-SECOND GUST) 121 MPH
- NOMINAL DESIGN WIND SPEED, V_{nom} 94 MPH
- RISK CATEGORY III
- WIND EXPOSURE CATEGORY C
- ENCLOSURE CLASSIFICATION PARTIALLY ENCLOSED
- INTERNAL PRESSURE COEFFICIENT ±0.55

EARTHQUAKE

- SEISMIC DESIGN CATEGORY B
- RISK CATEGORY III
- SOIL SITE CLASS D
- SEISMIC IMPORTANCE FACTOR, I_e 1.25
- MAPPED SPECTRAL RESPONSE ACC. S_S 0.09
- MAPPED SPECTRAL RESPONSE ACC. S_1 0.055
- SPECTRAL RESPONSE COEFFICIENT, S_{DS} 0.097
- SPECTRAL RESPONSE COEFFICIENT, S_{D1} 0.088

CONCRETE 28-DAY STRENGTH

- SLABS 4000 PSI

REINFORCING STEEL

- ALL BARS ASTM A615, GRADE 60

FOUNDATION

- PRESUMPTIVE VERTICAL BEARING CAPACITY 2000 PSI

GENERAL CONDITIONS

ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE MECHANICAL, CIVIL, ELECTRICAL AND SHOP DRAWINGS AND SPECIFICATIONS

THE CONTRACTOR SHALL REVIEW AND VERIFY DIMENSIONS SHOWN IN ALL PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FACILITY. SHOULD DISCREPANCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING TO OBTAIN ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH THE WORK

FOR ALL ITEMS EMBEDDED IN OR PASSED THROUGH CONCRETE, THE CONTRACTOR SHALL INITIALLY REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR TYPES, SIZES, LOCATION AND SPECIAL INSTALLATION REQUIREMENTS FOR THESE ITEMS

THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY MEASURES TO PROTECT EXISTING STRUCTURES FROM DAMAGE WHEN WORKING IN AND AROUND EXISTING STRUCTURES PERFORMING WORK SUCH AS DEMOLITION, FOUNDATION EXCAVATION AND OTHERS

SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE PER EQUIPMENT MANUFACTURER'S REQUIREMENTS

ANY EQUIPMENT THAT MAY INDUCE VIBRATION TO THE STRUCTURE SHALL BE ADEQUATELY ISOLATED FROM THE STRUCTURES

ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN

CONCRETE

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 350 REQUIREMENTS

ALL CONCRETE SHALL BE AIR-ENTRAINED AT 28 DAYS UNLESS OTHERWISE NOTED

WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494

ALL CONCRETE SURFACES EXPOSED TO AIR, UNLESS OTHERWISE NOTED IN SPECIFICATIONS, SHALL BE TREATED WITH AN APPROPRIATE CURING COMPOUND AS SOON AS CEMENT FINISHING IS COMPLETED OR FORMS ARE REMOVED

ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE A MINIMUM CHAMFER OF ¾" UNLESS OTHERWISE NOTED

THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATION OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWING

DELEGATED SUBMITTALS

1. THE FOLLOWING PORTIONS OF THE PROJECT ARE DELEGATED SUBMITTAL ITEMS AND HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD
   a. EQUIPMENT AND CONDUIT SUPPORT ANCHORAGES
2. DELEGATED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW DURING THE CONSTRUCTION PHASE OF THE PROJECT
3. DELEGATED SUBMITTAL ITEMS SHALL BE SIGNED AND SEALED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF GEORGIA
4. DELEGATED SUBMITTAL ITEMS SHALL NOT BE ERECTED OR INSTALLED UNTIL THE ENGINEER OF RECORD HAS REVIEWED THE SUBMITTAL DOCUMENTS AND INDICATED THAT THEY HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE STRUCTURE

ABBREVIATIONS:

AL	ALUMINUM	MIN	MINIMUM
BLDG	BUILDING	MISC	MISCELLANEOUS
BOT	BOTTOM	NF	NEAR FACE
℄	CENTER LINE	NTS	NOT TO SCALE
CC	CENTER TO CENTER	OC	ON CENTER
CJ	CONTROL JOINT	PCJ	PARTIAL CONTRACTION JOINT
CMU	CONCRETE MASONRY UNIT	PL	PLATE
CONC	CONCRETE	PLF	POUNDS PER LINEAR FOOT
CONST JT	CONSTRUCTION JOINT	PROJ	PROJECTION
CONT	CONTINUOUS	PSF	POUNDS PER SQUARE FOOT
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DWG	DRAWING	REINF	REINFORCEMENT
EF	EACH FACE	SIM	SIMILAR
EJ	EXPANSION JOINT	SPECS	SPECIFICATIONS
EL	ELEVATION	SS	STAINLESS STEEL
EW	EACH WAY	STD	STANDARD
FF	FAR FACE	T&B	TOP AND BOTTOM
FTG	FOOTING	T/STRUCTURE	TOP OF STRUCTURE
HORIZ	HORIZONTAL	TYP	TYPICAL
HP	HIGH POINT	UON	UNLESS OTHERWISE NOTED
ID	INSIDE DIAMETER	VERT	VERTICAL
LP	LOW POINT	WSTP	WATERSTOP
MAT'L	MATERIAL	WWF	WELDED WIRE FABRIC
MAX	MAXIMUM		

NOTE: THESE ABBREVIATIONS ARE FOR USE ON STRUCTURAL DRAWINGS ONLY.

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REV NO	DATE	DRWN	CHKD	REMARKS

DESIGNED BY K. FRANCOFORTE
DRAWN BY K. FRANCOFORTE
SHEET DWG BY P. KALARIA
CROSS CHKD BY M. TRAPP
APPROVED BY J. BOGGS
DATE SEPTEMBER 2023

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Tel: (904) 731-7700
CA 6108 No. 41100010b EXP DATE 02/28/2024

VALDOSTA A City Without Limits

CITY OF VALDOSTA, GA

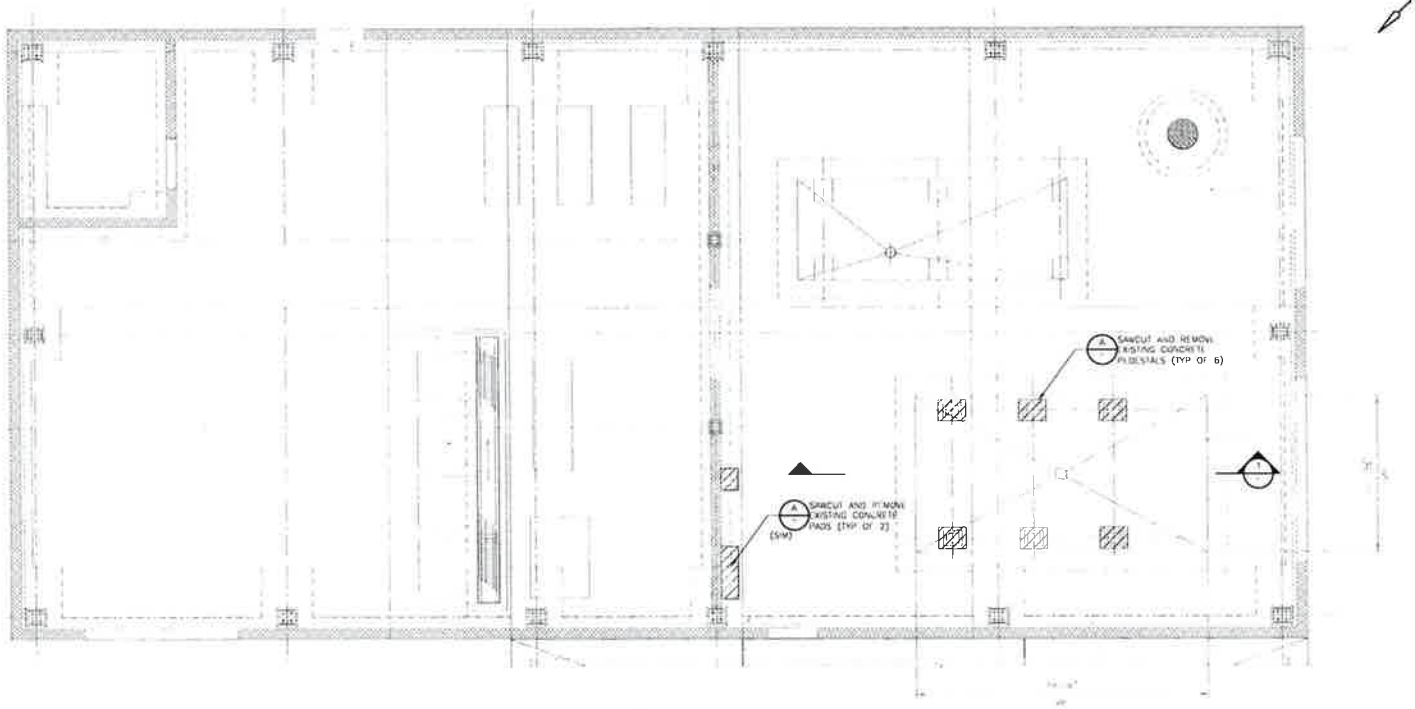
WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

STRUCTURAL GENERAL NOTES

PROJECT NO. 20192-29444
FILE NAME 50015761.DW

SHEET NO. S-1

ISSUED FOR BI



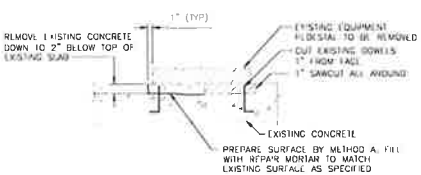
DEMOLITION

PLAN

1/8" = 1'-0"

NOTES

1. SLANTED AND SCREENED TEXT INDICATES INFORMATION OR DIMENSIONS TAKEN FROM DRAWINGS PRODUCED BY PARSONS WATER & INFRASTRUCTURE, INC., TITLED "NEW WITHLACOOCHEE WATER POLLUTION CONTROL – PACKAGE 4" DATED MAY 2015. ALL EXISTING INFORMATION AND DIMENSIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO FABRICATION AND CONSTRUCTION

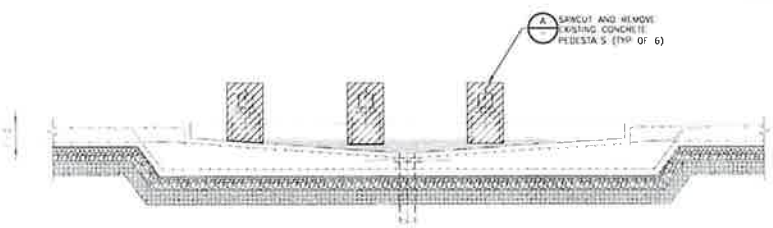


NOTE: REFER TO MODIFICATION TO CONCRETE SPECIFICATION 03013071

EXISTING EQUIPMENT PAD REMOVAL

DETAIL A

N/S



SECTION 1

1/8" = 1'-0"

REV NO	DATE	DRWN	CHKD	REMARKS

DESIGNED BY K. FRANCOFORTE
DRAWN BY K. FRANCOFORTE
SHEET CHK'D BY P. KALARIA
CROSS CHK'D BY M. FRANK
APPROVED BY J. BOGGS
DATE SEPTEMBER 2025

CDM Smith
4951 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7100
CA COA No. 8570, EXP. DATE 02/28/2027

VALDOSTA
A City of Great Events

CITY OF VALDOSTA, GA

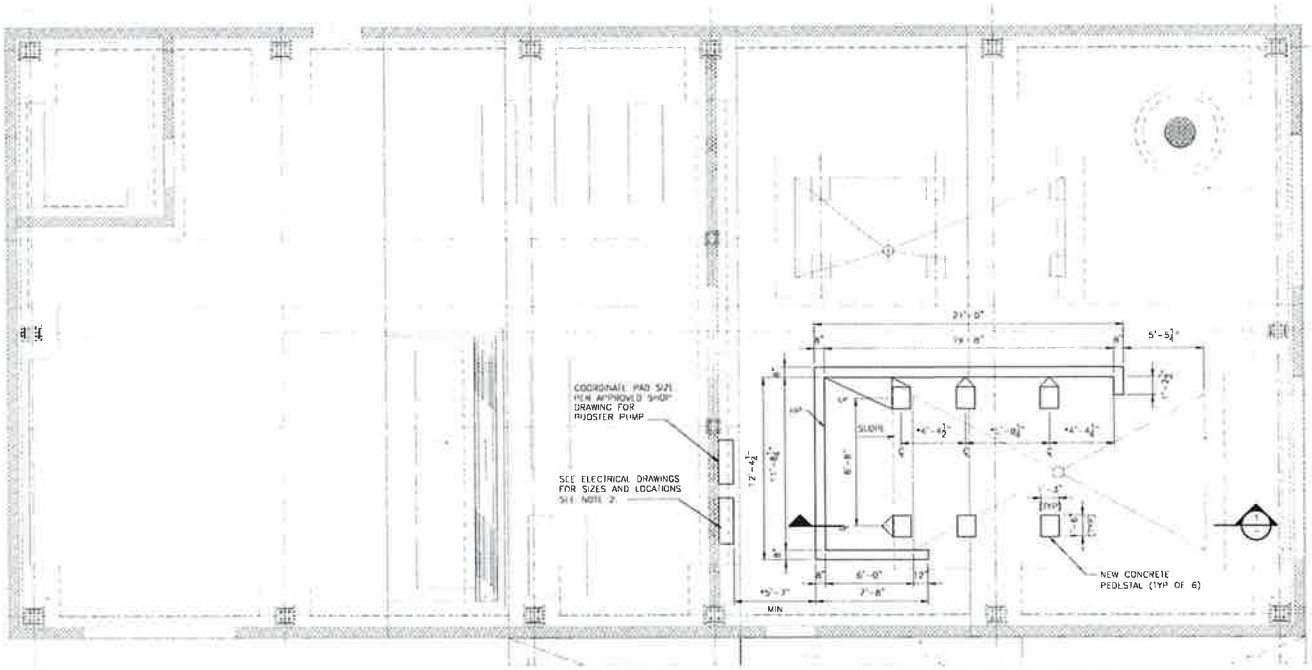
WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

DEWATERING BUILDING
DEMOLITION PLAN, SECTIONS AND DETAILS

PROJECT NO. 20790-25944
FILE NAME S002BFOM.DWG
SHEET NO. S-2

ISSUED FOR BI

THESE CONTRACT DOCUMENTS AND DESIGNS PROVIDED BY PROFESSIONAL SERVICE INCORPORATED HEREIN, ARE THE PROPERTY OF CDM SMITH AND ARE NOT TO BE USED IN WHOLE OR PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CDM SMITH.



MODIFICATION

PLAN

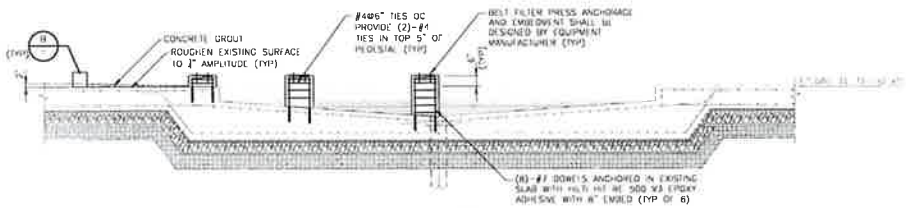
1/4" = 1'-0"

NOTES

1. SCANTED AND SCREENED TEXT INDICATES INFORMATION OR DIMENSIONS TAKEN FROM DRAWINGS PRODUCED BY PARSONS WATER & INFRASTRUCTURE, INC., TITLED "NEW WITHLACOOCHEE WATER POLLUTION CONTROL – PACKAGE 4" DATED MAY 2015. ALL EXISTING INFORMATION AND DIMENSIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO FABRICATION AND CONSTRUCTION.

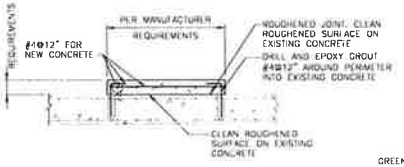
2. * INDICATES DIMENSIONS AND/OR INFORMATION TO BE COORDINATED BY THE CONTRACTOR WITH THE MANUFACTURER OF THE APPROVED EQUIPMENT PRIOR TO FABRICATION AND CONSTRUCTION.

3. TIP – EL 197.67



SECTION 1

3/8" = 1'-0"

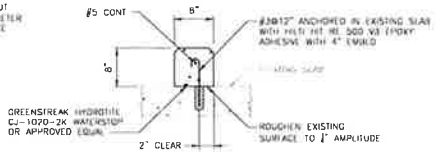


SEE SPECIFICATION SECTION 03130.21 FOR MODIFICATION AND REPAIR DETAILS

HOUSEKEEPING PAD FOR EXISTING SLAB

DETAIL A

NTS



CURB ON EXISTING SLAB

DETAIL B

NTS

REV No	DATE	DRAWN	CHKD	REMARKS

DESIGNED BY K. FRANCOFORTE
DRAWN BY K. FRANCOFORTE
SHEET CHKD BY P. KALARIA
CROSS CHKD BY M. THAPA
APPROVED BY J. BOGGS
DATE SEPTEMBER 2025

CDM Smith
4651 Salisbury Road Suite 420
Jacksonville FL 32256
tel (904) 731-7109
GA COA No. PLT006106, CDM SMITH INCORPORATED

VALDOSTA A City With Great Details

CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

DEWATERING BUILDING
MODIFICATION PLAN, SECTIONS AND DETAILS

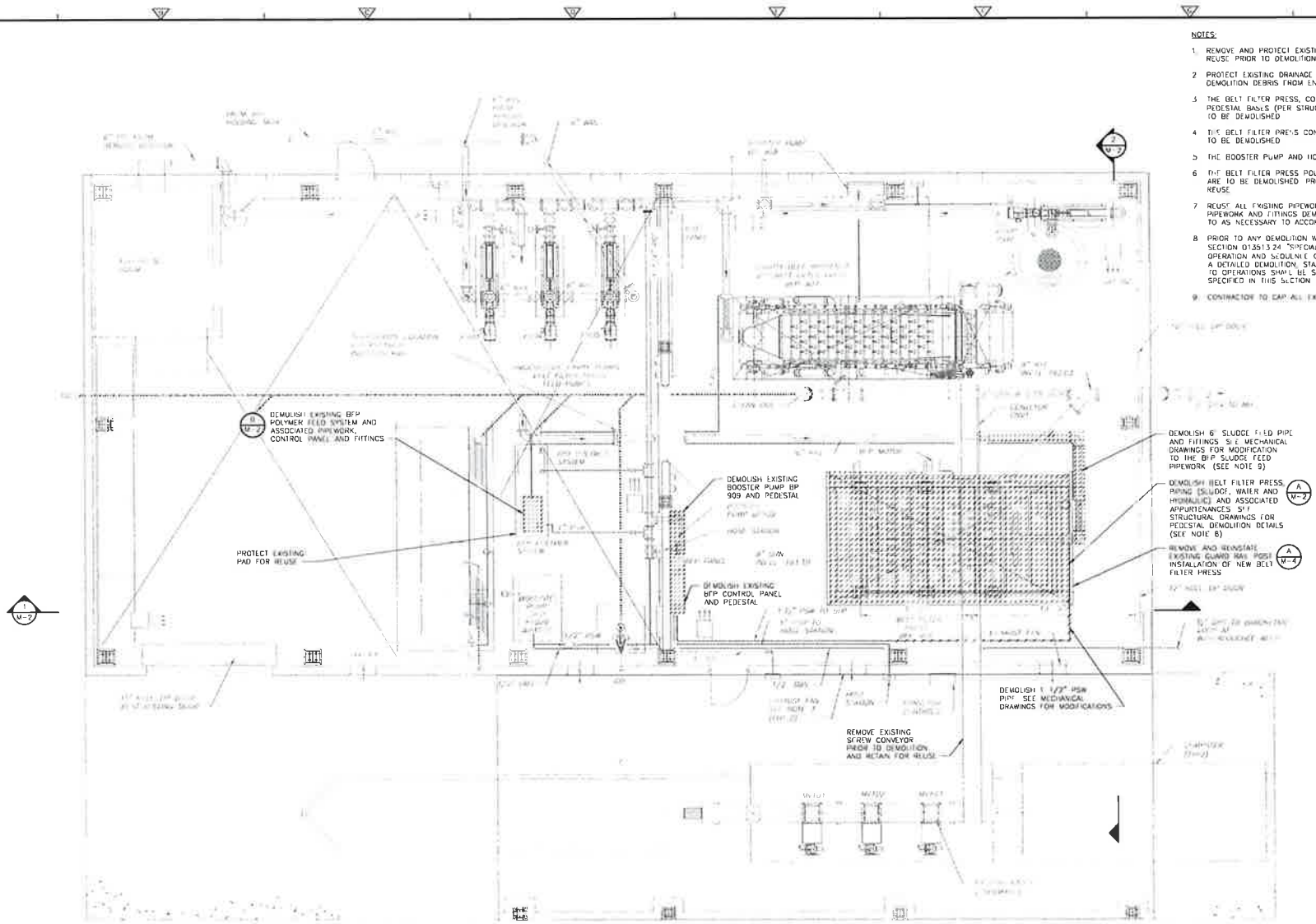
PROJECT NO 20290-20844
FILE NAME 500.30 FL.DWG
SHEET NO S-3

ISSUED FOR BI

THIS DOCUMENT AND DESIGNS PROVIDED BY PROFESSIONAL SERVICE INCORPORATED HEREIN, ARE THE PROPERTY OF CDM SMITH AND ARE NOT TO BE USED IN WHOLE OR PART FOR ANY OTHER PROJECT WITHOUT WRITTEN AUTHORIZATION OF CDM SMITH

NOTES:

1. REMOVE AND PROTECT EXISTING SCREW CONVEYOR NO. 1 AND 2 FOR REUSE PRIOR TO DEMOLITION
2. PROTECT EXISTING DRAINAGE BASIN FOR REUSE. PLUG TO PREVENT DEMOLITION DEBRIS FROM ENTERING EXISTING DRAIN SYSTEM
3. THE BELT FILTER PRESS, CONNECTING PIPE TO EXTENTS SHOWN, AND PEDESTAL BASES (PER STRUCTURAL DRAWINGS AND SPECIFICATIONS) ARE TO BE DEMOLISHED
4. THE BELT FILTER PRESS CONTROL PANEL AND HOUSEKEEPING PAD ARE TO BE DEMOLISHED
5. THE BOOSTER PUMP AND HOUSEKEEPING PAD ARE TO BE DEMOLISHED
6. THE BELT FILTER PRESS POLYMER FEED SYSTEM AND CONTROL PANEL ARE TO BE DEMOLISHED. PROTECT THE EXISTING HOUSEKEEPING PAD FOR REUSE
7. REUSE ALL EXISTING PIPEWORK AND FITTINGS WHERE POSSIBLE. ALL PIPEWORK AND FITTINGS DEMOLITION IS TO EXTENTS SHOWN OR LIMITED TO AS NECESSARY TO ACCOMMODATE OR CONNECT TO NEW EQUIPMENT
8. PRIOR TO ANY DEMOLITION WORK, CONTRACTOR SHALL REFER TO SECTION 013513.24 "SPECIAL PROCEDURES FOR MAINTENANCE OF PLANT OPERATION AND SEQUENCE OF CONSTRUCTION" AND SUBMIT TO ENGINEER A DETAILED DEMOLITION, STARTUP, AND TESTING PLAN. ANY INTERRUPTION TO OPERATIONS SHALL BE SCHEDULED WITH ADVANCED NOTICE AS SPECIFIED IN THIS SECTION
9. CONTRACTOR TO CAP ALL EXISTING ABANDONED CONDUITS AND PIPES



PLAN
1/4" = 1'-0"

1/4" = 1'-0"

REV NO	DATE	DRAWN	CHKD	REMARKS

DESIGNED BY: A. NAKATHE
DRAWN BY: A. MANIMARAN
SHEET CHKD BY: H. KALE
CROSS CHKD BY: A. NAKATHE
APPROVED BY: I. POLEMATIDIS
DATE: NOVEMBER 2020

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel (904) 731-7109
GA LGA No. PE7000104, EXP DATE 06/30/2024

VALDOSTA
A City of Good Choice

CITY OF VALDOSTA, GA

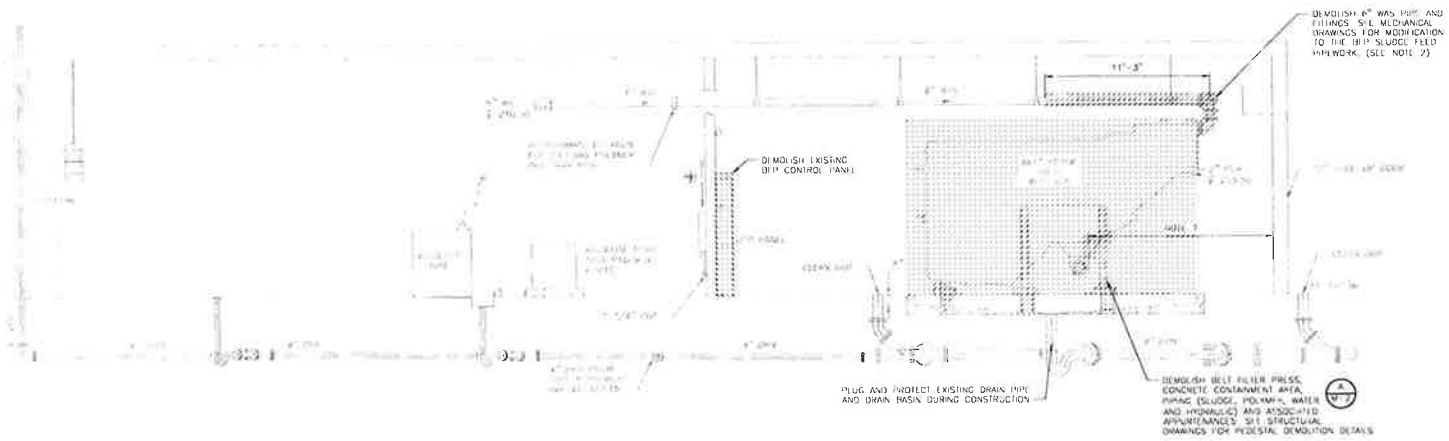
WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

BELT FILTER PRESS DEMOLITION PLAN

PROJECT NO: 20190-25844
FILE NAME: MODIFIEDDW.DW

SHEET NO.
M-1

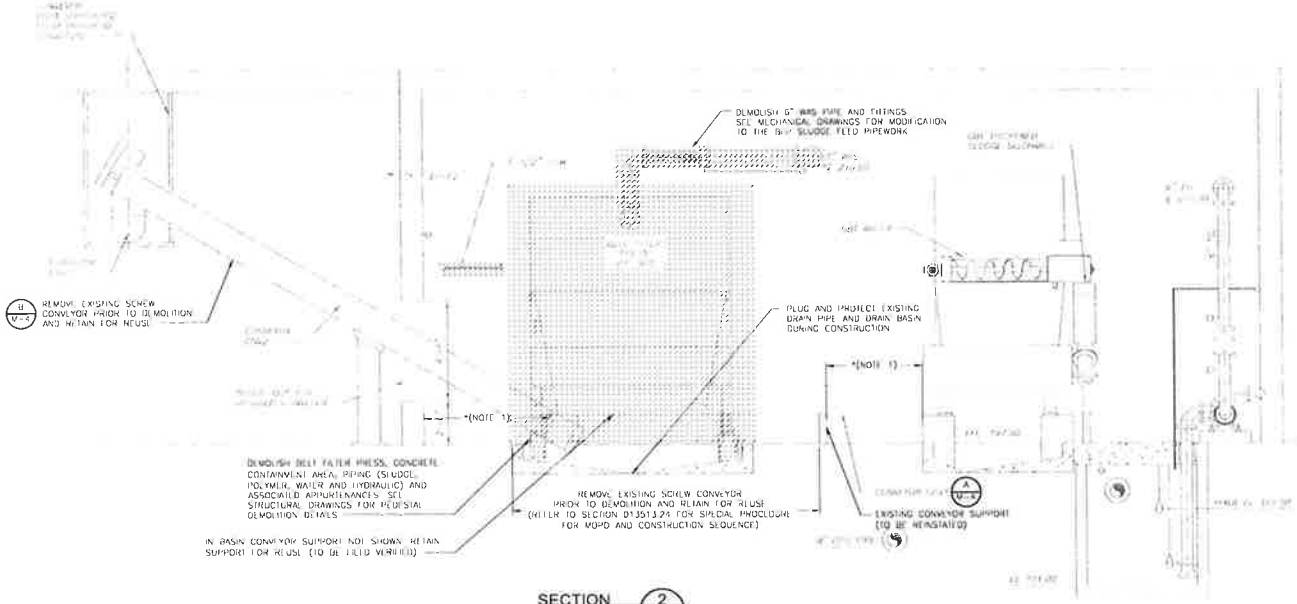
ISSUED FOR BI



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

EXISTING BELT FILTER PRESS – TO BE DEMOLISHED

DETAIL A
NTS



SECTION 2
3/8" = 1'-0"
M-1

EXISTING POLYMER SKID – TO BE DEMOLISHED

DETAIL B
NTS

NOTES

1. FIELD VERIFY AND RECORD MEASUREMENT PRIOR TO CONVEYOR REMOVAL FOR PROPER REINSTALLATION AND ALIGNMENT OF CONVEYORS NO. 1 AND 2. PROTECT CONVEYOR STRUCTURAL SUPPORTS OR MARK FOR REINSTALLATION AFTER DEMOLITION/ CONSTRUCTION
2. CONTRACTOR TO FIELD VERIFY EXTENT OF DEMOLITION TO ACCOMMODATE CONNECTION TO NEW BFP

3/8" = 1'-0"

1/4" = 1'-0"

REV NO	DATE	DRAWN	CHKD	REMARKS

DESIGNED BY A. MARATHE
DRAWN BY A. MANIVANAN
SHEET CHK'D BY H. KALE
CROSS CHK'D BY A. MARATHE
APPROVED BY I. POLEMATIDIS
DATE SEPTEMBER 2025

CDM Smith
2651 Salzedo Blvd Suite 420
Jacksonville FL 32204
Tel (904) 741 5100
GA CERTIFICATE OF AUTHORIZATION: CAP-0000622

VALDOSTA
A City Without Limits

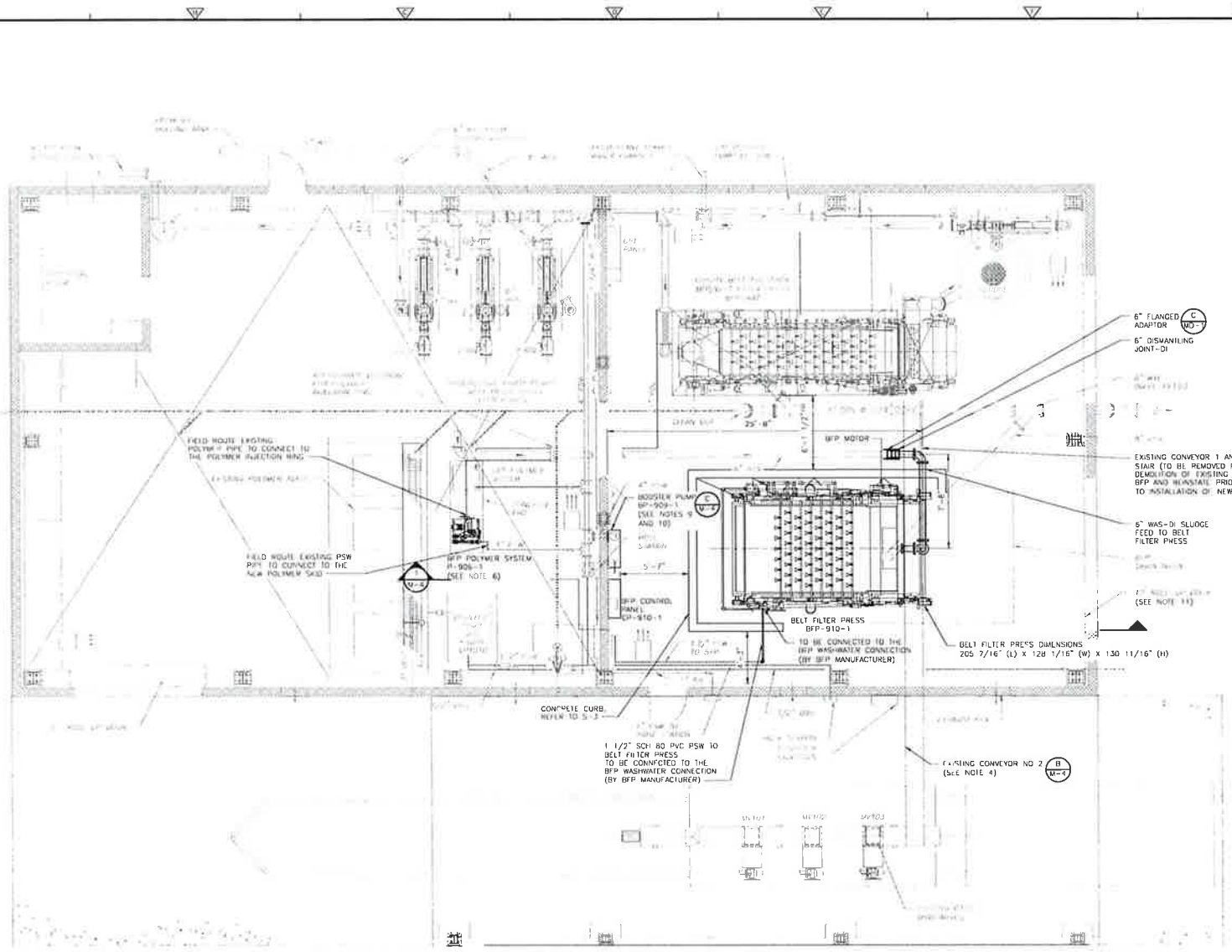
CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

BELT FILTER PRESS DEMOLITION SECTIONS

PROJECT NO 30290-20844
FILE NAME M0021P-DM DW
SHEET NO
M-2

ISSUED FOR BI



PLAN
1/4" = 1'-0"

NOTES:

1. CONTRACTOR SHALL CLEAN AND FLUSH EXISTING FLOOR DRAIN SYSTEM SCHEDULED TO REMAIN. CONTRACTOR SHALL PROTECT AND PLUG EXISTING FLOOR DRAIN SYSTEM DURING CONSTRUCTION AND DEMOLITION ACTIVITIES
2. NOT ALL PIPE SUPPORTS ARE SHOWN. WHERE STANDARD MECHANICAL PIPE SUPPORT DETAILS DO NOT APPLY AND STRUCTURAL DRAWINGS DO NOT ADDRESS, CONTRACTOR SHALL DESIGN PIPE SUPPORTS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS
3. EXISTING SOLENOID VALVES FOR WASHWATER SHALL BE INCORPORATED INTO THE BELT FILTER PRESS AUTOMATIC START/STOP SEQUENCE. CONTRACTOR SHALL WIRE AND CONNECT
4. REMOVE EXISTING SCREW CONVEYOR PRIOR TO DEMOLITION AND RETAIN FOR REUSE
5. REFER TO 013513.24 "SPECIAL PROCEDURE FOR MOPO AND CONSTRUCTION SEQUENCE" FOR DETAILED CONSTRUCTION SEQUENCING
6. CONTRACTOR TO CONNECT PROPOSED POLYMER SKID TO EXISTING POLYMER FEED PIPE. FIELD ROUTE PIPING AS NEEDED AND INCLUDE ALL NECESSARY FITTINGS FOR THE CONNECTION
7. REFER TO SPECIFICATION SECTION 46/621 FOR BELT FILTER PRESS DETAILS
8. REFER TO SPECIFICATION SECTION 463333 FOR POLYMER SKID AND METERING PUMP DETAILS
9. FIELD ROUTE SUCTION AND DISCHARGE PIPING TO THE NEW BOOSTER PUMP.
10. BOOSTER PUMP WILL BE A DELEGATED DESIGN PER SPECIFICATION SECTION 46/621 FOR BELT FILTER PRESS. CONTRACTOR TO COORDINATE WITH APPROVED PUMP SHOP DRAWING TO PROVIDE HOUSE KEEPING PAD
11. THE NEW BELT FILTER PRESS AND EXISTING BELT FILTER PRESS NEED TO PASS THROUGH 10' WIDE AND 12' HIGH ROLL UP DOOR. CONTRACTOR TO FIELD VERIFY DIMENSIONS. BELT FILTER PRESS PIPING AND ACCESSORIES SHALL BE REMOVABLE TO FACILITATE PASSING THROUGH THE ROLL UP DOOR

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

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY A. MARATHE
DRAWN BY A. MANIMARAN
SHEET CHK'D BY H. KALE
CROSS CHK'D BY A. MARATHE
APPROVED BY I. POLEMAIDIS
DATE SEPTEMBER 2025

CDM Smith
4651 Salisbury Road, Suite 470
Jacksonville, FL 32256
Tel (904) 731-7108
CA EB No. PC7000106, EXP. DATE 04/30/2024

VALDOSTA
A City Worth Living

CITY OF VALDOSTA, GA

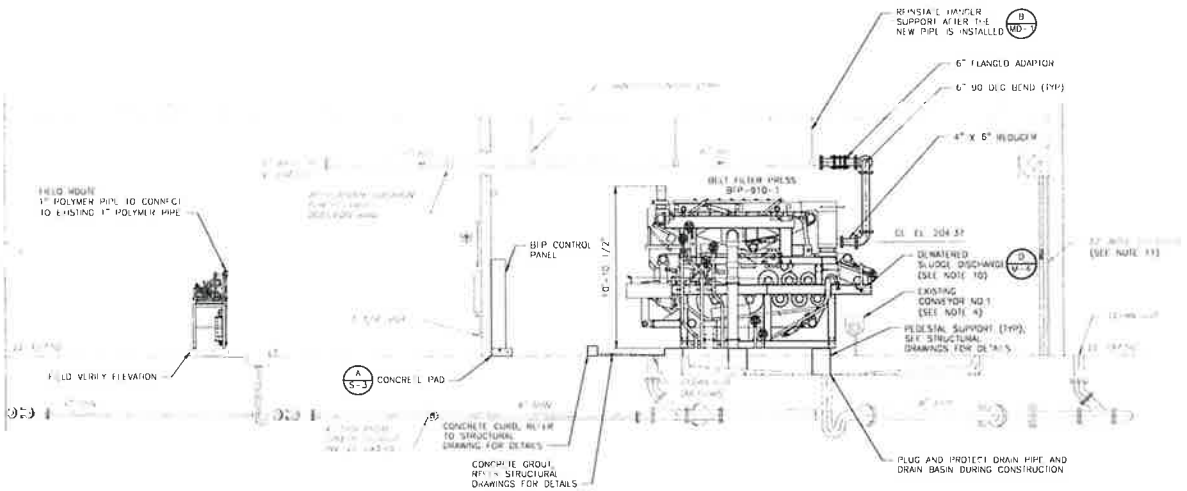
WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

BELT FILTER PRESS MODIFICATION PLAN

PROJECT NO. 20790-29844
FILE NAME M0039FPL.DW

SHEET NO.
M-3

ISSUED FOR BI



SECTION 1 (M-3)
1/4" = 1'-0"

NOTES:

1. CONTRACTOR SHALL CLEAN AND FLUSH EXISTING FLOOR DRAIN SYSTEM SCHEDULED TO REMAIN. CONTRACTOR SHALL PROTECT AND PLUG EXISTING FLOOR DRAIN SYSTEM DURING CONSTRUCTION AND DEMOLITION ACTIVITIES.
2. NOT ALL PIPE SUPPORTS ARE SHOWN. WHERE STANDARD MECHANICAL PIPE SUPPORT DETAILS DO NOT APPLY AND STRUCTURAL DRAWINGS DO NOT ADDRESS, CONTRACTOR SHALL DESIGN PIPE SUPPORTS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. EXISTING SOLENOID VALVE FOR WASHWATER SHALL BE INCORPORATED INTO THE BELT FILTER PRESS AUTOMATIC START/STOP SEQUENCE. CONTRACTOR SHALL WIRE AND CONNECT. REFER TO DRAWING E-3.
4. REMOVE EXISTING SCREW CONVEYOR PRIOR TO DEMOLITION AND RETAIN FOR REUSE.
5. REFER TO 013513.24 "SPECIAL PROCEDURE FOR MOPO AND CONSTRUCTION SEQUENCE" FOR DETAILED CONSTRUCTION SEQUENCING.
6. CONTRACTOR TO CONNECT PROPOSED POLYMER SKID TO EXISTING POLYMER FEED PIPE. FIELD ROUTE PIPING AS NEEDED AND INCLUDE ALL NECESSARY FITTINGS FOR THE CONNECTION.
7. REFER TO SECTION 46 1621 FOR BELT PRESS DETAILS.
8. REFER TO SECTION 463333 FOR POLYMER SKID AND METERING PUMP DETAILS.
9. FIELD PRIME NEW SCH 80 PVC SUCTION AND DISCHARGE PIPING AND VALVES TO THE NEW BOOSTER PUMP.
10. CONTRACTOR TO PROVIDE MIN 1/4 INCH THICK STAINLESS STEEL FABRICATED DEWATERED SLUDGE DISCHARGE CHUTE TO CONNECT TO THE EXISTING CONVEYOR NO. 1. PROVIDE SHOP DRAWING FOR REVIEW.
11. THE NEW BELT FILTER PRESS AND EXISTING BELT FILTER PRESS NEED TO PASS THROUGH 10' WIDE AND 12' HIGH ROLL UP DOOR. CONTRACTOR TO FIELD VERIFY DIMENSIONS.

EXISTING CONVEYOR NO.1 AND CROSS OVER STAIR
DETAIL A
NTS

EXISTING CONVEYOR NO. 2
DETAIL B
NTS

EXISTING BOOSTER PUMP SUCTION AND DISCHARGE PIPE
DETAIL C
NTS

EXISTING DEWATERED SLUDGE DISCHARGE CONNECTION TO THE CONVEYOR
DETAIL D
NTS

1/4" = 1'-0"

REV NO	DATE	DRAWN	CHKD	REMARKS

DESIGNED BY A. MARATHE
DRAWN BY S. DALVI
SHEET CHK'D BY H. KALE
CROSS CHK'D BY A. MARATHE
APPROVED BY C. POLEMARIDIS
DATE SEPTEMBER 2025

CDM Smith
4051 Sunbury Road, Suite 420
Jacksonville, FL 32224
Tel (904) 777-7100
CA COA No. AP-00000-0000 EXP. DATE 00/00/0000

VALDOSTA A City Without Limits

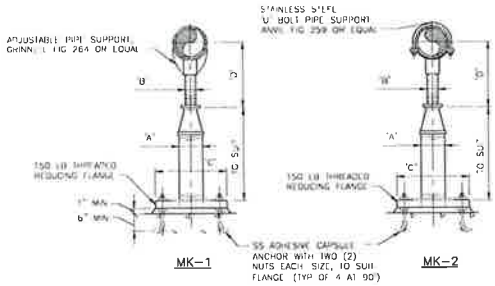
CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

BELT FILTER PRESS MODIFICATION SECTION

PROJECT NO. 20230-25644
FILE NAME M0D4W SC DW
SHEET NO
M-4

ISSUED FOR BI



ADJUSTABLE PIPE SUPPORT APPROX DIMENSIONS IN INCHES					
PIPE SIZE	A	B	C	D MIN	D MAX
2 1/2	2 1/2	1 1/2	9	8	11 1/2
3	2 1/2	1 1/2	9	8 1/4	11 3/4
3 1/2	2 1/2	1 1/2	9	8 1/2	12
4	3	2 1/2	9	10 1/4	14
6	3	2 1/2	9	11 5/8	15 1/4
8	3	2 1/2	9	13 5/8	16 1/2
10	3	2 1/2	9	14 5/8	18 1/4
12	3	2 1/2	9	15 5/8	19 3/4
14	4	3	11	18 5/8	20 3/4
16	4	3	11	19 7/8	22 1/4
18	5	3 1/2	13 1/2	21 1/4	24
20	6	3 1/2	13 1/2	23 1/4	25 1/2
24	6	4	13 1/2	26 1/2	28 1/4
30	6	4	13 1/2	29 5/8	31 1/4
32	6	4	13 1/2	30 5/8	32 3/4
36	6	4	13 1/2	32 5/8	34 3/4

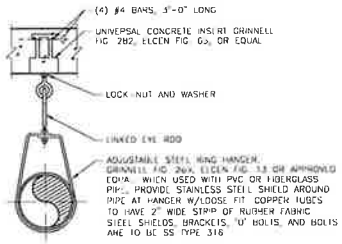
NOTES

1. UNDER VALVES, METERS OR OTHER SPECIAL APPURTENANCES, A FABRICATED SUPPORT PIECE MAY BE UTILIZED AS ACCEPTABLE TO ENGINEER
2. CONTRACTOR SHALL COAT/PAINT THE SUPPORT IMMEDIATELY AFTER INSTALLATION

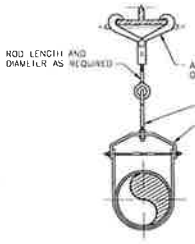
ADJUSTABLE PIPE SUPPORT

DETAIL A

NTS



TYPE 'A'
FOR HANGER RODS
3/4" DIA AND SMALLER



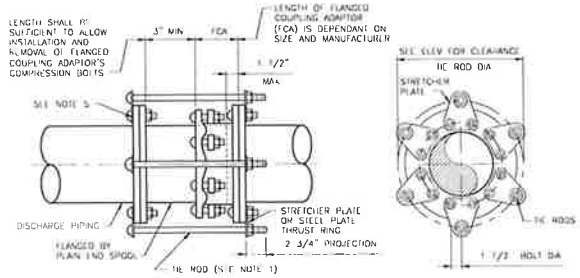
TYPE 'B'
FOR HANGER RODS 7/8" DIA
AND LARGER

PIPE HANGER RODS & SUPPORT SPACING					
PIPE DIA (INCHES)	ROD DIA (INCHES)	MAX SUPPORT SPACING (FEET)		WEIGHT LIMIT (LBS)	
		STL PIPE	CI/DI PIPE	TYPE 'A'	TYPE 'B'
1 & SMALLER	3/8	5	MAX 1 HANGER PER PIPE LENGTH AND FIT MAX SPACING 5 FEET ONLY WHEN HANGER CLOSE TO EACH CONNECTION	610	---
1 1/4 TO 2	3/8	5		610	---
2 1/2 TO 3 1/2	1/2	10		610	---
4 TO 5	3/8	10		610	---
6	3/4	10		610	---
8, 10, 12	7/8	10		610	---
14, 16	1	10		610	---

PIPE HANGER

DETAIL B

NTS



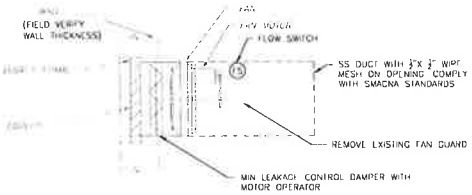
NOTES:

1. EVENLY SPACE INSTALLATION OF THE TIE RODS. LENGTH OF TIE RODS TO BE DETERMINED BY CONTRACTOR BASED ON SIZE AND FLANGED COUPLING ADAPTOR AND FINAL LENGTH OF SPOOL PIECE
2. PROVIDE STRETCHER PLATE FOR ATTACHMENT OF TIE RODS
3. MATERIALS – BOLTS 316 STAINLESS STEEL STRETCHER PLATE ASTM A36 STEEL HOT DIP GALVANIZED FLEXIBLE COUPLING PER SPECIFICATIONS
4. WELD TO DEVELOP MIN THE STRENGTH OF PIPE REPAIR COATINGS AS REQUIRED
5. WHERE CALLED OUT AND/OR SHOWN, PROVIDE HARNESS LUG
6. WRAP ALL COUPLING BURIED BELOW GRADE IN PROTECTIVE TAPE
7. AFTER ASSEMBLY, BACK OUT THE NUT ON ONE END OF THE THRUST ROD BY A FEW REVOLUTIONS TO ALLOW EXPANSION AND CONTRACTION

FLANGE ADAPTOR

DETAIL C

NTS



NOTE

1. PROVIDE FLUID COMPONENTS INTERNATIONAL MODEL FLT9.BI FLOW SWITCH, OR APPROVED EQUAL. INSTALL IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS

FLOW SWITCH
DUCTED WALL FAN

DETAIL D

NTS

REV NO	DATE	DRAWN	CHKD	REMARKS

DESIGNED BY A. MAKAFNE
DRAWN BY S. DALY
SHEET CHKD BY H. KALE
CODES CHKD BY A. MAKAFNE
APPROVED BY I. POLEMARIDIS
DATE SEPTEMBER 2025

CDM Smith
8601 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel 904.641.7100
C.A. Certificate of Authorization: EAC 0000

VALDOSTA
A City Without Limits

CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

MECHANICAL DETAILS

PROJECT NO 30290-20844
FILE NAME MZ00101.DW
SHEET NO
MD-1

ISSUED FOR BI

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
52 CS	—	MEDIUM VOLTAGE DRAWOUT TYPE POWER CIRCUIT BREAKER CS=CONTROL SWITCH
FRAME TRIP	CB	LOW VOLTAGE AIR OR MOLDED CASE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED
SIZE AMPS TYPE		COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC MOTOR STARTER, FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE NOTED * FVR - FULL VOLTAGE REVERSING RVNR - REDUCED VOLTAGE NON-REVERSING RVAT - REDUCED VOLTAGE AUTOTRANSFORMER RVSS - REDUCED VOLTAGE SOLID STATE 2S1W - TWO SPEED, ONE WINDING 2S2W - TWO SPEED, TWO WINDING (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
		NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE * AMPERE RATING NOTED IF OTHER THAN 30A (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	F	FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE, * AMPERE RATING AND FUSE SIZE AS NOTED * AMPERE RATING NOTED IF OTHER THAN 30A FUSE RATING (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	P 2	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD HEATER, 1 POLE UNLESS OTHERWISE NOTED "P" INDICATES WITH PILOT LIGHT "2" INDICATES TWO POLE (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	—	DRAWOUT TYPE EQUIPMENT OR DEVICE
	—	MEDIUM VOLTAGE CABLE TERMINATION
	—	MEDIUM VOLTAGE AIR INTERRUPTER SWITCH
	—	MEDIUM VOLTAGE FUSED AIR INTERRUPTER SWITCH * FUSE RATING
	—	MEDIUM VOLTAGE FUSED MOTOR CONTROLLER
XFMR NO. 1 4160V 480V KVA 120/208V 3Ø, 4W	T	TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED UNLESS OTHERWISE NOTED ON THE SINGLE LINE DIAGRAMS. ALL DRY TYPE TRANSFORMERS SERVICING ADMINISTRATIVE AND LABORATORY SPACES SHALL HAVE A K FACTOR OF 4. ISOLATION TRANSFORMERS SHALL HAVE A K-20 RATING
* A 10 5	—	CURRENT TRANSFORMER * QUANTITY A = PRIMARY AMPERES
* V 70 120	—	POTENTIAL TRANSFORMER * QUANTITY V = PRIMARY VOLTAGE
	G	GENERATOR, RATINGS AND CONNECTIONS AS NOTED
ATS N S 100A	—	AUTOMATIC OR MANUAL TRANSFER SWITCH NO 1 (ATS-1). (MTS-1) "N" INDICATES NORMAL OR PREFERRED SOURCE "S" INDICATES STANDBY OR ALTERNATE SOURCE 100A INDICATES CONTINUOUS CURRENT RATING
		VARIABLE SPEED DRIVE CONTROLLER * DC = DC DRIVE CONTROLLER SCR = SILICON CONTROLLED RECTIFIER VFD = VARIABLE FREQUENCY DRIVE
L #KW	E	UNIT HEATER - ELECTRIC HEATING COIL AND FAN # - RATING
—	U	UNIT HEATER - GAS FIRED, STEAM OR WATER HEATING COIL AND FAN
S	M	MOTOR, NUMERAL INDICATES HORSEPOWER
VS VM *	—	VOLTMETER WITH SWITCH, 3 PHASE
AS AM *	—	AMMETER WITH SWITCH, 3 PHASE

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	—	METER * WM - WATTMETER WHM - WATTHOUR METER WHDM - WATTHOUR DEMAND METER WHDR - WATTHOUR DEMAND RECORDER PF - POWER FACTOR METER DMU - DIGITAL METERING UNIT TRANSDUCER AX - CURRENT TRANSDUCER WX - WATT TRANSDUCER WHX - WATTHOUR TRANSDUCER
		RELAY, NO AS INDICATED 25 - SYNCHRONISM CHECK RELAY 27 - UNDERVOLTAGE RELAY 32 - DIRECTIONAL POWER RELAY 38 - BEARING PROTECTIVE DEVICE 40 - LOSS OF EXCITATION RELAY 42 - RUNNING CONTACTOR/PILOT RELAY 46 - REVERSE PHASE/PHASE BALANCE/CURRENT RELAY 47 - PHASE SEQUENCE VOLTAGE RELAY 49 - MACHINE OR TRANSFORMER THERMAL RELAY 50/51 - INSTANTANEOUS/TIME OVERCURRENT RELAY 50G - INSTANTANEOUS GROUND 51 - TIME OVERCURRENT RELAY 51G - TIME OVERCURRENT RELAY, GROUNDING RESISTOR TYPE 51N - TIME OVERCURRENT RELAY, RESIDUAL TYPE 51V - TIME OVERCURRENT RELAY WITH VOLTAGE RESTRAINT 51X - AUXILIARY RELAY (TRIPS CB AND ALARMS) 59 - OVERVOLTAGE RELAY 60 - NEGATIVE SEQUENCE VOLTAGE RELAY 62 - TIME DELAY RELAY 63 - OVERPRESSURE RELAY 64 - GENERATOR FIELD GROUND RELAY 67 - AC DIRECTIONAL OVERCURRENT RELAY 74 - ALARM LATCHING RELAY 85 - AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY 86 - LOCKING-OUT RELAY 87 - DIFFERENTIAL PROTECTIVE RELAY B - SUFFIX INDICATES "BUS" G - SUFFIX INDICATES "GENERATOR" GF - GROUND FAULT SH - SHUNT TRIP T - SUFFIX INDICATES "TRANSFORMER" X - SUFFIX INDICATES "AUXILIARY"
	—	SPECIAL CAPACITOR * SC - SURGE CAPACITOR PF - POWER FACTOR CORRECTION CAPACITOR
	—	TUNED POWER FACTOR CORRECTION CAPACITOR
	—	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY CLOSED
	—	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY OPEN
	ES	EMERGENCY STOP PUSHBUTTON WITH RED MUSHROOM HEAD OPERATOR (MAINTAINED CONTACT)
STOP START	PBL	START-STOP PUSHBUTTON CONTROL STATION (MOMENTARY CONTACT) WITH LOCKOUT DEVICE ON STOP
	PBM	START-STOP PUSHBUTTON CONTROL STATION, MAINTAINED CONTACT WITH LOCKOUT DEVICE ON STOP
OFF ON	S/S	OFF/ON SELECTOR SWITCH
L R (XO) (OX)	LR	LOCAL/REMOTE SELECTOR SWITCH
A B C * (XOO) (OXO) (OOX)	*	3 POSITION SELECTOR SWITCH, MAINTAINED CONTACT O-OPEN X-CLOSED POSITION / TOP CONTACT / MIDDLE CONTACT / BOTTOM CONTACT A X O O B O X O C O O X NAMEPLATE (A/B/C) HOA - HAND/OFF/AUTO HOR - HAND/OFF/REMOTE LOR - LOCAL/OFF/REMOTE RSL - RAISE/STOP/LOWER TOA - TEST/OFF/AUTO

GD/VF #	GD/VF #	GAS DETECTOR / VENTILATION FAILURE ALARM
		# INDICATES TYPE OF UNIT
		1=MASTER, 2=REMOTE

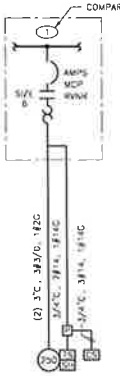
42 #	—	MOTOR STARTER COIL, NUMBER AS INDICATED TO DENOTE INTERLOCKING ONLY
CR #	—	CONTROL RELAY COIL, NUMBER AS INDICATED

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	—	PILOT LIGHT, COLOR AS NOTED * R - RED G - GREEN B - BLUE W - WHITE A - AMBER
	—	PILOT LIGHT, PUSH-TO-TEST TYPE, COLOR AS NOTED ABOVE.
RANGE SETPOINT		TIME DELAY RELAY RANGE AS NOTED SETPOINT AS NOTED * NUMBER AS INDICATED * TDC - TIME DELAY AFTER ENERGIZATION ON DELAY TDD - TIME DELAY AFTER DE-ENERGIZATION OFF DELAY NOTC - NORMALLY OPEN, TIMED CLOSING WHEN ENERGIZED NCTO - NORMALLY CLOSED, TIMED OPENING WHEN ENERGIZED NOTO - NORMALLY OPEN, TIMED OPENING WHEN DE-ENERGIZED NCTC - NORMALLY CLOSED, TIMED CLOSING WHEN DE-ENERGIZED
—	* ##	FIELD INSTRUMENT, TAG NO AS INDICATED * INDICATES INSTRUMENT TYPE DEFINED ON LOOP SHEETS OR IP & ID ## INDICATES LOOP NO
LS OR ■		LIQUID LEVEL (FLOAT) SWITCH NORMALLY OPEN, CLOSES ON RISING LEVEL NORMALLY CLOSED, OPENS ON RISING LEVEL
PS OR ■		PRESSURE OR VACUUM SWITCH NORMALLY OPEN, CLOSES ON RISING PRESSURE NORMALLY OPEN, CLOSES ON DROPPING PRESSURE NORMALLY CLOSED, OPENS ON RISING PRESSURE NORMALLY CLOSED, OPENS ON DROPPING PRESSURE
TS OR T OR ■		TEMPERATURE SWITCH OR THERMOSTAT NORMALLY OPEN, CLOSES ON RISING TEMPERATURE NORMALLY OPEN, CLOSES ON DROPPING TEMPERATURE NORMALLY CLOSED, OPENS ON RISING TEMPERATURE NORMALLY CLOSED, OPENS ON DROPPING TEMPERATURE
FS OR ■		FLOW SWITCH (AIR, WATER, ETC.) NORMALLY OPEN, CLOSES ON INCREASED FLOW NORMALLY CLOSED, OPENS ON INCREASED FLOW
ZS OR ■		POSITION (LIMIT) SWITCH NORMALLY OPEN NORMALLY OPEN - HELD CLOSED NORMALLY CLOSED NORMALLY CLOSED - HELD OPEN
WS OR ■		TORQUE SWITCH NORMALLY OPEN, CLOSES ON HIGH TORQUE NORMALLY CLOSED, OPENS ON HIGH TORQUE
	—	UTILIZED IN CONJUNCTION WITH OTHER CONTROL SCHEMATIC SYMBOLS TO DEPICT THE PHYSICAL LOCATION OF THE DEVICE # REPRESENTS LOCATION SEE LOCATION LEGEND ON DRAWING
	—	CONDUCTORS OR CONDUITS CROSSING PATHS BUT NOT CONNECTED
	—	CONDUCTORS ELECTRICALLY CONNECTED
	S	SOLENOID VALVE

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
LA	—	LIGHTNING ARRESTER
		GROUND OR GROUND ROD
30A	—	FUSE, AMPERE RATING AS NOTED
	HTR	STRIP HEATER OR HEATING ELEMENT
	—	INDUCTOR
	TG	TACHOMETER GENERATOR
	—	CONTACT, NORMALLY OPEN (NO)
	—	CONTACT, NORMALLY CLOSED (NC)
	—	OVERLOAD RELAY HEATER
	—	* K - KEY INTERLOCK E - ELECTRICAL INTERLOCK
	TB	TERMINAL OR TEST BLOCK
	RTD	RESISTANCE TEMPERATURE DETECTOR
VE OR VE	—	VIBRATION DETECTOR
	DM	DAMPER MOTOR
	ETM	ELAPSED TIME METER
M	M	MOTOR OPERATED VALVE OR GATE
	—	INDICATES LIMITS OF ELECTRICAL EQUIPMENT OR WIRING ENCLOSURE

EXISTING WORK | NEW WORK | FUTURE EXPANSION

EXISTING, NEW OR FUTURE CONDITION DESIGNATION



(2) 3"C, 3#3/0, 1#2G DENOTES A QUANTITY OF TWO (2) 3-INCH CONDUITS EACH CONTAINING THREE NO. 3/0 AWG CONDUCTORS AND 1 NO. 2 AWG GROUND CONDUCTOR, FROM NEMA SIZE 6 STARTER IN MCC-1 TO 250HP MOTOR LOAD

3/4"C, 7#14, 1#14G DENOTES ONE 3/4-INCH CONDUIT CONTAINING SEVEN NO 14 AWG CONTROL CONDUCTORS AND 1 NO 14 AWG GROUND CONDUCTOR

NOTES:
1. PROTECTIVE/CONTROL DEVICE AS SHOWN
2. CONTROL/AUXILIARY DEVICES AT OR NEAR EQUIPMENT. EQUIPMENT SHALL BE INSTALLED AND WIRED AS REQUIRED BY EQUIPMENT FURNISHED AND/OR CONTROL DIAGRAM

TYPICAL ONE LINE DIAGRAM SHOWING POWER AND CONTROL TO EQUIPMENT

NOTES:

1. IN GENERAL CONDUIT ROUTING FOR EQUIPMENT AND DEVICES IS NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING ALL CONDUITS WHICH SHALL INCLUDE CONDUITS SHOWN ON ONE-LINE AND RISER DIAGRAMS AND HOME-RUNS SHOWN ON PLAN DRAWINGS. REFER TO SPECIFICATIONS FOR MATERIALS AND INSTALLATION REQUIREMENTS.
2. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUITS REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.
3. SWITCHGEAR AND MOTOR CONTROL CENTER COMPARTMENT DESIGNATIONS AS INDICATED BELOW:
   - BLANK: NOT INTENDED FOR USE. PLATE ONLY
   - SPACE: EQUIPPED WITH REQUIRED BUS AND HARDWARE FOR THE FUTURE ADDITION OF BREAKERS AND/OR STARTERS WITHIN THE SIZE AND RANGE SHOWN.
   - SPARE: CONTAINS A COMPLETELY INSTALLED BREAKER AND/OR STARTER OF SIZE AND TYPE INDICATED FOR FUTURE USE.
4. INTERPRETATION OF ELECTRICAL DRAWINGS: CIRCUIT IDENTIFICATION, ROUTING, AND SIZES OF CONDUITS AND WIRES ARE SHOWN ON THE FOLLOWING DRAWINGS:

A. ONE LINE POWER DIAGRAMS: POWER, CONTROL AND SIGNAL WIRING REQUIREMENTS FOR ELECTRICAL DISTRIBUTION EQUIPMENT AND UTILIZATION EQUIPMENT POWERED FROM SWITCHGEAR, SWITCHBOARDS, MOTOR CONTROL CENTERS AND MAJOR POWER DISTRIBUTION PANELBOARDS ARE TYPICALLY SHOWN ON THE ONE LINE DIAGRAMS. THE PARAMETERS IDENTIFIED ON THE ONE LINE DIAGRAMS ARE CIRCUIT IDENTIFICATION, CIRCUIT ORIGIN AND DESTINATION, CONDUIT SIZE, WIRE SIZE AND QUANTITY FOR COMPLETE CIRCUIT LENGTH, AND AUXILIARY DEVICES ASSOCIATED WITH THE CONTROL/PROTECTION OF THE POWERED EQUIPMENT, AND SIZE OF THE GROUNDING ELECTRODE CONDUCTORS.

B. INSTRUMENTATION AND CONTROL RISER DIAGRAM: POWER, CONTROL, SIGNAL AND DATA HIGHWAY WIRING REQUIREMENTS FOR INSTRUMENTS AND CONTROL DEVICES CONTROLLED/MONITORED FROM INSTRUMENTATION AND CONTROL PANELS SUCH AS RTUS, PLCS, TERMINAL CABINETS, AND REMOTE I/O PANELS ARE TYPICALLY SHOWN ON THE INSTRUMENTATION AND CONTROL ONE LINE DIAGRAMS. THE PARAMETERS IDENTIFIED ON THE ONE LINE DIAGRAMS ARE: CIRCUIT IDENTIFICATION, CIRCUIT ORIGIN AND DESTINATION, CONDUIT SIZE, WIRE SIZE QUANTITY AND TYPE FOR COMPLETE CIRCUIT LENGTH, AND AUXILIARY DEVICES ASSOCIATED WITH THE CONTROL/PROTECTION OF THE POWERED EQUIPMENT.

C. FLOOR PLANS: FOR DETERMINING THE LENGTH OF CIRCUITS LOCATED WITHIN STRUCTURES. FLOOR PLANS SHOW THE LOCATION OF ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROL PANELS, UTILIZATION EQUIPMENT, INSTRUMENTS, ANCILLARY EQUIPMENT AND DEVICES AND THE ANTICIPATED PENETRATION LOCATIONS WHERE CONDUITS EXIT/ENTER THE STRUCTURE. HOMERUNS MAY ALSO BE SHOWN FROM MISCELLANEOUS EQUIPMENT NOT SHOWN ON A ONE LINE OR RISER DIAGRAM.

D. SITE PLANS: FOR DETERMINING THE LENGTH OF CIRCUITS EXTERIOR TO STRUCTURES AND TO IDENTIFY THE SPECIFIC REQUIREMENTS OF THE UNDERGROUND CONDUITS OR DUCT BANKS. SITE PLANS SHOW THE GENERAL ROUTING OF UNDERGROUND CONDUITS AND DUCT BANKS WITH SECTIONS INDICATING THE CONDUIT SIZE, ARRANGEMENT AND CIRCUIT ROUTING.

E. NOTE THAT CONDUIT SIZE WITHIN THE STRUCTURE IS INDICATED ON ONE-LINE DIAGRAM AND UNDERGROUND SIZE IS INDICATED ON DUCT BANK SECTIONS.

GENERAL NOTE
THIS IS A STANDARD LEGEND. SOME SYMBOLS MAY NOT APPEAR ON THE DRAWINGS.

REV NO.	DATE	DRWN	CHKD	REMARKS

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DRAWN BY R. RUCK
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VALDOSTA
A City Without Limits

CITY OF VALDOSTA, GA
WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

ELECTRICAL LEGEND I

PROJECT NO. 20790-21884
FILE NAME: E001ELEG.DWG
SHEET NO. E-1

ISSUED FOR BI

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SYMBOL	DESCRIPTION
	LIGHTING FIXTURE "A" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "b" - CONTROLLED BY SWITCH "b" "3" - CIRCUIT NUMBER
	LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	WALL MOUNTED TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	CROSS HATCH INDICATES LIGHTING FIXTURE THAT IS UNSWITCHED AND SHALL REMAIN ON AT ALL TIMES. NOTATIONS SAME AS ABOVE
	SHADED AREA INDICATES LIGHTING FIXTURE THAT IS EQUIPPED WITH EMERGENCY BACKUP POWER SOURCE. NOTATIONS SAME AS ABOVE.
	POLE MOUNTED AREA TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	POLE MOUNTED ROADWAY TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	EMERGENCY LIGHTING BATTERY UNIT WITH TWO LAMP HEADS "EM" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "3" - SUPERVISORY CIRCUIT "*" - FIXTURE TAG #
	REMOTE EMERGENCY ADJUSTABLE WALL LIGHTING FIXTURE WITH TWO LAMP HEADS "R-2" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "*" - HOME RUN TO BATTERY UNIT INDICATED. CONDUIT SHALL BE 3/4" AND CONTAIN (2) NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND (1) NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE INDICATED
	COMBINATION BATTERY UNIT AND EXIT SIGN. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN
	CEILING MOUNTED EXIT SIGN. NOTATIONS SAME AS ABOVE. WHEN USED, ARROW INDICATES DIRECTION OF EGRESS. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN (DOUBLE FACE DOUBLE CHEVRONS SHOWN)
	WALL MOUNTED EXIT SIGN. NOTATIONS SAME AS ABOVE. WHEN USED, ARROW INDICATES DIRECTION OF EGRESS. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN
	REMOTE EMERGENCY CEILING LIGHTING FIXTURE "RH-3" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "3" - SUPERVISORY CIRCUIT "*" - HOME RUN TO BATTERY UNIT INDICATED. CONDUIT SHALL BE 3/4" AND CONTAIN 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE INDICATED
	HOME RUN TO DESIGNATED EQUIPMENT. BRANCH CIRCUIT CONDUIT WITH 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE NOTED. NUMBER OF ARROWS INDICATE NUMBER OF CIRCUITS. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS
	CONDUIT CONCEALED IN WALL, IN SLAB ABOVE, OR ABOVE CEILING
	CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND
	CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OF WALL
	"X" INDICATES EXPLOSION PROOF CONDUIT SEAL FITTING
	CONCRETE ENCASED DUCTBANK. WIDTH VARIES. SEE DUCTBANK SECTION/DETAILS FOR REQUIREMENTS AND WIDTH
	CONDUIT STUBBED OUT AND CAPPED.
(2) 3"C.	DENOTES A QUANTITY OF TWO (2) 3-INCH CONDUITS EACH CONTAINING THREE NO. 3/0 AWG CONDUCTORS AND 1 NO. 2 AWG GROUND CONDUCTOR
2-2/C#16 SH	DENOTES A QUANTITY OF TWO INSTRUMENT CABLES. EACH CABLE TO CONSIST OF TWO NO. 16 AWG CONDUCTORS TWISTED TOGETHER AND COVERED WITH A METALLIC SHIELD AND AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED
2-3/C#16 SH	SAME AS ABOVE EXCEPT CABLE TO CONSIST OF THREE NO. 16 AWG CONDUCTORS TWISTED, SHIELDED AND COVERED WITH AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED
(3) 4"C	THREE 4-INCH CONDUITS
	FLEXIBLE METAL CONDUIT "WHIP" (3/4"C., 2#12, 1#12G UNLESS OTHERWISE NOTED) FOR LIQUID TIGHT MOTOR CONNECTIONS
	"X" INDICATES CONDUIT SEAL FITTING IN OTHER THAN CODE REQUIRED LOCATIONS
	INDICATES MOTOR STARTER AND/OR MOTOR CONTROL EQUIPMENT WITHIN THE ENCLOSURE.

SYMBOL	DESCRIPTION
$a	SINGLE POLE SWITCH "a" INDICATES FIXTURES CONTROLLED
$a2	DOUBLE POLE SWITCH "a" INDICATES FIXTURES CONTROLLED
$c3	THREE WAY SWITCH "c" INDICATES FIXTURES CONTROLLED
$a4	FOUR WAY SWITCH "a" INDICATES FIXTURES CONTROLLED
$a D	DIMMER SWITCH "a" INDICATES FIXTURES CONTROLLED
$OS	SINGLE POLE SWITCH "OS" INDICATES A PASSIVE INFRARED OCCUPANCY SENSOR
$OS2	DOUBLE POLE SWITCH "OS" INDICATES PROGRAMMABLE OCCUPANCY SENSOR CAPABLE OF INBOARD/OUTBOARD SWITCHING
$OI	SINGLE POLE SWITCH "OI" INDICATES DUAL TECHNOLOGY PROGRAMMABLE OCCUPANCY SENSOR CAPABLE OF SENSING MOTION AND SOUND
C 3	LIGHTING CONTACTOR WITH NUMBER OF POLES AS INDICATED
TM	TIME SWITCH
	PUSH BUTTON STATION
TYPE A	INDICATES ALL LIGHTING FIXTURES WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE TYPE "A" UNLESS OTHERWISE NOTED. SEE LIGHTING FIXTURE SCHEDULE FOR TYPES
	LIGHTING PANELBOARD (LP-#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
	POWER PANELBOARD (PP-#) OR DISTRIBUTION PANELBOARD (DP-#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
	LIGHTING CONTACTOR PANELBOARD (LCP-#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W * GFCI - GROUND FAULT CIRCUIT INTERRUPTER TYPE WP - WEATHERPROOF WHEN WHILE-IN-USE-COVER XP - EXPLOSION PROOF T - TRANSIENT VOLTAGE SURGE SUPPRESSOR IG - ISOLATED GROUND 4 - CIRCUIT NUMBER
	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W MOUNTED ABOVE COUNTER-TOP OR 42" AFF * - NOTATIONS SAME AS ABOVE
	SPECIAL PURPOSE RECEPTACLE * - VOLT RATING "3" - NUMBER OF POLES "60" - AMPERE RATING "4W" - 4 WIRES IN ADDITION TO GROUND
	MULTI-OUTLET ASSEMBLY. SYMBOL DENOTES RECEPTACLE TYPE
	FLUSH FLOOR OUTLET BOX WITH TYPE OUTLET INDICATED
	UNDER FLOOR DUCT SYSTEM WITH TYPE OUTLETS INDICATED
	THREE CELL UNDER FLOOR DUCT SYSTEM JUNCTION BOX
J OR J	JUNCTION BOX
P	PULL BOX
TC	TERMINAL CABINET
OS	OCCUPANCY SENSOR
PC	PHOTOCELL
ESA	EMERGENCY EYEWASH/SHOWER ALARM STATION WITH FLOW SWITCH(ES)
	INDICATED EQUIPMENT AND MATERIALS TO BE DEMOLISHED
DUST	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 12 CONSTRUCTION (OR GASKETED AND SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
DAMP OR WET	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4X CONSTRUCTION (OR GASKETED AND SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
CORROSIVE	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4X CONSTRUCTION (OR CORROSION RESISTANT CONSTRUCTION SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED
CLASS I, DIV. 1 GROUP D	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL CONFORM TO N.E.C. REQUIREMENTS FOR THE HAZARDOUS AREA CLASSIFICATION SHOWN

SYMBOL	DESCRIPTION
	GROUND SYSTEM GRID OR LOOP, 36" BELOW FINISHED GRADE UNLESS OTHERWISE NOTED
	EXOTHERMIC WELD CONNECTION
	3/4" x 10'-0" GROUND ROD UNLESS SPECIFIED OTHERWISE
	GROUND ROD TEST WELL STATION (SEE DETAIL SHEET FOR REQUIREMENTS)
	COMMUNICATION SYSTEMS
K	TELEPHONE OUTLET FOR DESK TYPE HANDSET K = KEY SYSTEM
K	TELEPHONE OUTLET FOR WALL TYPE HANDSET (MOUNT UP 4'-0") K = KEY SYSTEM
	PAGE/PARTY TELEPHONE OUTLET FOR DESK TYPE HANDSET
	PAGE/PARTY TELEPHONE OUTLET FOR WALL TYPE HANDSET, MOUNT UP 4'-6"
H W	PAGING SPEAKER, WALL MOUNTED H = HORN TYPE W = WIDE ANGLE TYPE
S W	PAGING SPEAKER, WALL MOUNTED, BI DIRECTIONAL, HORN TYPE W = WIDE ANGLE TYPE
S	PAGING SPEAKER, FLUSH MOUNTED CEILING TYPE
S	PAGING SPEAKER, SURFACE MOUNTED CEILING TYPE
VC	REMOTE WALL MOUNTED VOLUME CONTROL FOR CEILING SPEAKER, MOUNT UP 5'-0"
A	PAGING SPEAKER AMPLIFIER ASSEMBLY
TN	TELEPHONE CABINET OR BACKBOARD AS NOTED
P OR C	"C" - CAMERA SYSTEM WORKSTATION DATA OUTLET (CAT6 RJ-45 JACK) "P" - PROCESS COMPUTER SYSTEM (CAT6 RJ-45 JACK)
CO/VF #	GAS DETECTOR/VENTILATION FAILURE ALARM. # INDICATES TYPE OF UNIT 1 - MASTER, 2 - REMOTE
CB	GAS DETECTION/VENTILATION FAILURE WEATHERPROOF DUAL-LITE BEACON MOUNT TOP OF DEVICE UP 6'-8" AFF
E	GAS DETECTION/VENTILATION FAILURE HORN/STROBE MOUNT TOP OF DEVICE UP 6'-8" AFF
G	GAS DETECTION/VENTILATION FAILURE HORN. MOUNT TOP OF DEVICE UP 6'-8" AFF
G	GAS DETECTION/VENTILATION FAILURE STROBE. MOUNT TOP OF DEVICE UP 6'-8" AFF
	SECURITY SYSTEMS
SACP	SECURITY ALARM CONTROL PANEL
DS	SECURITY ALARM DOOR SWITCH
	MASTER CONTROL STATION - VIDEO/INTERCOM/ACCESS CONTROL FOR GATE AND ELECTRIFIED DOORS
	VIDEO/INTERCOM/CARD READER
WS	SECURITY ALARM WINDOW SWITCH
	SECURITY ALARM MOTION DETECTOR
CCTV	CLOSED CIRCUIT TV CAMERA
PTZ	PAN, TILT, ZOOM CAMERA LENS CONTROLS
GB	GLASS BREAK DETECTOR
	FIRE ALARM SYSTEMS
H 200 R	FIRE ALARM HEAT DETECTOR 135 FIXED TEMPERATURE UNLESS OTHERWISE NOTED "200" - 200 FIXED TEMPERATURE "R" - FIXED TEMPERATURE RATE-OF-RISE TYPE
I	FIRE ALARM SMOKE DETECTOR PHOTOELECTRIC TYPE UNLESS OTHERWISE NOTED "I" - IONIZATION TYPE
I D	FIRE ALARM DUCT SMOKE DETECTOR
FACP	FIRE ALARM CONTROL PANEL
FV	FIRE ALARM VENTILATION PANEL WITH GRAPHIC PANEL
FA	REMOTE FIRE ALARM ANNUNCIATOR PANEL

SYMBOL	DESCRIPTION
F	FIRE ALARM MASTER BOX
F	FIRE ALARM HORN, MOUNT UP 7'-6"
15 F	FIRE ALARM STROBE, MOUNT UP 6'-8" 15 = CANDELA RATING
15 F	FIRE ALARM HORN AND STROBE LIGHT COMBINATION, MOUNT UP 6'-8" 15 = CANDELA RATING
F	FIRE ALARM MANUAL PULL STATION, MOUNT UP 4'-0"
VSS	SPRINKLER VALVE SUPERVISORY SWITCH
SFS	SPRINKLER FLOW ALARM SWITCH
FO	FIRE ALARM BELL
FB	WEATHERPROOF HI-INTENSITY FIRE ALARM STROBE LIGHT WITH HORN
PIR	PASSIVE INFRARED DETECTOR
R	SMOKE BEAM DETECTOR (RECEIVER)
T	SMOKE BEAM DETECTOR (TRANSMITTER)
	FIRE ALARM SMOKE DETECTOR REMOTE INDICATOR AND TEST SWITCH

ABBREVIATIONS
A - AMPS AC - ALTERNATING CURRENT AFF - ABOVE FINISHED FLOOR AFG - ABOVE FINISHED GRADE AL - ALUMINUM AIC - AMPERE INTERRUPTING CAPACITY AMP - AMPERE ATS - AUTOMATIC TRANSFER SWITCH AUTO - AUTOMATIC AUX - AUXILIARY AWG - AMERICAN WIRE GAUGE BKR - BREAKER BLDG - BUILDING C - CONDUIT CB - CIRCUIT BREAKER CGD - COMBUSTIBLE GAS DETECTOR CKT - CIRCUIT CHH - COMMUNICATIONS HANDHOLE CP - CONTROL PANEL CPT - CONTROL POWER TRANSFORMER CR - CONTROL RELAY CS - CONTROL SWITCH/CONTROL STATION CT - CURRENT TRANSFORMER CU - COPPER CWS - CONDUIT WALL SEAL DC - DIRECT CURRENT DIA - DIAMETER DMU - DIGITAL METERING UNIT DN - DOWN EC - EMPTY CONDUIT ELEC - ELECTRICAL ELEV - ELEVATION EM - EMERGENCY ENCL - ENCLOSURE OR ENCLOSED

ABBREVIATIONS (CONTINUED)
EQUIP - EQUIPMENT ES - EMERGENCY STOP EWC - ELECTRIC WATER COOLER EWH - ELECTRIC WATER HEATER EX - EXISTING FO - FIBER OPTIC FU - FUSE GCP - GENERATOR CONTROL PANEL GEN - GENERATOR G, GND - GROUND GFI - GROUND FAULT INTERRUPTER GRS - GALVANIZED RIGID STEEL HACR - HEATING & AIR CONDITIONING RATED HH - HANDHOLE HT - HEIGHT HID - HIGH INTENSITY DISCHARGE HP - HORSEPOWER HZ - HERTZ ID - IDENTIFICATION INSTR - INSTRUMENT K - KILO (PREFIX) kcmil - 1000 CIRCULAR MILS KVA - KILOVOLT AMPERES KW - KILOWATTS LA - LIGHTNING ARRESTER LTG - LIGHTING LP - LIGHTING PANEL LV - LOW VOLTAGE MAX - MAXIMUM MCB - MAIN CIRCUIT BREAKER MCC - MOTOR CONTROL CENTER MCP - MOTOR CIRCUIT PROTECTOR MDP - MAIN DISTRIBUTION PANEL MFR - MANUFACTURER MH - MANHOLE MIN - MINIMUM MLO - MAIN LUGS ONLY MTD - MOUNTED MTS - MANUAL TRANSFER SWITCH MV - MEDIUM VOLTAGE N - NEUTRAL NC - NORMALLY CLOSED NO - NORMALLY OPEN OR NUMBER NTS - NOT TO SCALE OL - OVERLOAD PB - PULL BOX PCP - PUMP CONTROL PANEL PH - PHASE PHH - POWER HANDHOLE PMH - POWER MANHOLE PNL - PANEL OR PANELBOARD PR - PAIR PRI - PRIMARY PT - POTENTIAL TRANSFORMER PVC - POLYVINYL CHLORIDE RECPT - RECEPTACLE REQD - REQUIRED QTY - QUANTITY SA - SURGE ARRESTER SEC - SECONDS OR SECONDARY SH - SHIELDED OR SPACE HEATER SHH - SIGNAL HANDHOLE SPD - SURGE PROTECTIVE DEVICE SS - STAINLESS STEEL SV - SOLENOID VALVE SW - SWITCH SWBD - SWITCHBOARD SWGR - SWITCHGEAR TC - TIME TO CLOSE OR TRAY CABLE TEL - TELEPHONE TO - TIME TO OPEN TS - TWISTED SHIELDED OR THERMAL SWITCH TTC - TELEPHONE TERMINAL CABINET TYP - TYPICAL UG - UNDERGROUND UON - UNLESS OTHERWISE NOTED UPS - UNINTERRUPTIBLE POWER SUPPLY V - VOLTS VA - VOLT AMPS VFD - VARIABLE FREQUENCY DRIVE W - WATTS, WIDTH, WITH, WIRE WP - WEATHERPROOF XP - EXPLOSION PROOF XFMR - TRANSFORMER

A / E-4 — SHEET NO. WHERE DETAIL IS DRAWN

SYMBOL WHERE THERE IS A DETAIL

DETAIL A / E-3 — SHEET NO. WHERE THERE IS A DETAIL

1/4" = 1'-0"

SYMBOL WHERE DETAIL IS DRAWN

DETAIL SYMBOL

1 / E-4 — SHEET NO. WHERE SECTION IS DRAWN

SYMBOL WHERE THERE IS A SECTION

SECTION 1 / E-3 — SHEET NO. WHERE SECTION IS TAKEN

1/4" = 1'-0"

SYMBOL WHERE SECTION IS DRAWN

SECTION SYMBOL

GENERAL NOTE

THIS IS A STANDARD LEGEND. SOME SYMBOLS MAY NOT APPEAR ON THE DRAWINGS.

REV NO	DATE	DRWN	CHKD	REMARKS

DESIGNED BY J. SANCHEZ
DRAWN BY N. NUCK
SHEET CHKD BY S. PERRY
CROSS CHKD BY A. SRIRAM
APPROVED BY S. PERRY
DATE SEPTEMBER 2025

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Sustainable Performance. Enduring Impact.

VALDOSTA
A City of Excellence

CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

ELECTRICAL LEGEND II

PROJECT NO. 20790-29844
FILE NAME E002NELC.DWG

SHEET NO.
E-2

ISSUED FOR BI

Last saved by: LAVALLEE, Yves, 9/23/2025 - 1:00 AM
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Design Services: N:\P\A\00 Electrical\C BIM_CAD\E002NELC.dwg

SCOPE OF WORK:

1. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED AND INSTALL COMPLETE AND MAKE OPERATIONAL, ELECTRICAL AND PROCESS INSTRUMENTATION SYSTEMS AT THE WITHLACOOCHEE WPCP UNIT FILTER PRESS REPLACEMENT PROJECT AS SHOWN ON THE DRAWINGS AND AS SPECIFIED IN DIVISION 26
2. THE WORK SHALL INCLUDE FURNISHING, INSTALLING AND TESTING THE EQUIPMENT AND MATERIALS SPECIFIED IN OTHER SECTIONS OF THE DIVISION 26 SPECIFICATIONS AND SHOWN ON THE DRAWINGS
3. CONDUIT, WIRE AND FIELD CONNECTIONS FOR ALL MOTORS, MOTOR CONTROLLERS, CONTROL DEVICES, CONTROL PANELS AND ELECTRICAL EQUIPMENT FURNISHED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS
4. CONDUIT, WIRING AND TERMINATIONS FOR ALL FIELD MOUNTED INSTRUMENTS FURNISHED UNDER OTHER DIVISIONS, INCLUDING PROCESS INSTRUMENTATION, PRIMARY ELEMENTS, TRANSMITTERS, LOCAL INDICATORS AND CONTROL PANELS, LIGHTNING AND SURGE PROTECTION EQUIPMENT WIRING AT PROCESS INSTRUMENTATION TRANSMITTERS. INSTALL VENDOR FURNISHED CABLES SPECIFIED UNDER OTHER DIVISIONS
5. POWER WIRING FOR ALL HEATING, VENTILATING, AND AIR CONDITIONING (HVAC) EQUIPMENT FURNISHED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS, INCLUDING POWER WIRING FOR 120V UNIT HEATER MOTORS, THERMOSTATS, FAN MOTORS, DAMPERS AND OTHER HVAC INLINE UNIT WIRING SHOWN ON THE DRAWINGS
6. A COMPLETE RACEWAY SYSTEM FOR THE DATA HIGHWAY CABLES AND SPECIALTY CABLE SYSTEMS. INSTALL THE DATA HIGHWAY (FIBER OPTIC, ETHERNET, ETC.) CABLES AND OTHER SPECIALTY CABLE SYSTEMS FURNISHED UNDER DIVISION 40 IN ACCORDANCE WITH THE SYSTEM MANUFACTURERS' INSTALLATION INSTRUCTIONS. REVIEW THE RACEWAY LAYOUT, PRIOR TO INSTALLATION, WITH THE SCADA/COMPUTER INSTRUMENTATION SYSTEM SUPPLIER (ISS) AND THE CABLE MANUFACTURER TO ENSURE RACEWAY COMPATIBILITY WITH THE SYSTEMS AND MATERIALS BEING FURNISHED. WHERE REDUNDANT CABLES ARE FURNISHED, INSTALL CABLES IN SEPARATE RACEWAYS
7. IT IS THE INTENT OF THE DRAWINGS AND DIVISION 26 SPECIFICATIONS THAT THE ELECTRICAL SYSTEM SHALL BE SUITABLE IN EVERY WAY FOR THE SERVICE REQUIRED. ALL MATERIAL AND ALL WORK WHICH MAY BE REASONABLY IMPLIED AS BEING INCIDENTAL TO THE WORK OF THE DIVISION 26 SPECIFICATIONS SHALL BE FURNISHED AT NO EXTRA COST
8. PROVIDE ELECTRICAL AND INSTRUMENTATION CONDUIT LAYOUT SHOP DRAWINGS FOR YARD ELECTRICAL, WITHIN AND UNDER ALL ROADS, BUILDINGS AND STRUCTURES TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK. LAYOUTS SHALL INCLUDE BUT NOT BE LIMITED TO EQUIPMENT, PULL BOXES, MANHOLES, CONDUIT ROUTING, DIMENSIONING, METHODS AND LOCATIONS OF SUPPORTS, REINFORCING, ENCASEMENT, MATERIALS, CONDUIT SIZING, EQUIPMENT ACCESS, POTENTIAL CONFLICTS, BUILDING AND YARD LIGHTING, AND ALL OTHER PERTINENT TECHNICAL SPECIFICATIONS FOR ALL ELECTRICAL AND INSTRUMENTATION CONDUITS AND EQUIPMENT TO BE FURNISHED. THE LAYOUTS SHALL BE BASED ON APPROVED MANUFACTURERS' EQUIPMENT SHOP DRAWINGS. ALL LAYOUTS SHALL BE DRAWN TO SCALE ON 24" X 36" SHEETS
9. IN ADDITION TO MANUFACTURER'S EQUIPMENT SHOP DRAWINGS, SUBMIT ELECTRICAL INSTALLATION WORKING DRAWINGS CONTAINING THE FOLLOWING:
   a. CONDUIT LAYOUTS, SHOWN ON FLOOR PLANS DRAWN AT NOT LESS THAN 1/4" = 1'-0" SCALE. THE LAYOUTS SHALL INCLUDE LOCATIONS OF PROCESS EQUIPMENT, MOTOR CONTROL CENTERS, SWITCHBOARDS, TRANSFORMERS, PANELBOARDS, CONTROL PANELS AND EQUIPMENT, MOTORS, SWITCHES, MOTOR STARTERS, LARGE JUNCTION OR PULL BOXES, INSTRUMENTS AND ANY OTHER ELECTRICAL DEVICES CONNECTED TO CONDUITS. THE LAYOUTS SHALL BE BASED ON APPROVED MANUFACTURERS EQUIPMENT SHOP DRAWINGS
   b. PLANS SHALL BE DRAWN ON HIGH QUALITY REPRODUCIBLE PAPER AND SHALL BE PRESENTED IN A NEAT, PROFESSIONAL MANNER. IN ADDITION TO THE HARD COPIES, LAYOUT DRAWINGS SHALL BE SUBMITTED IN PDF FORMAT
   c. CONCRETE FLOORS AND/OR WALLS CONTAINING CONCEALED CONDUITS SHALL NOT BE POURED UNTIL CONDUIT LAYOUTS ARE APPROVED
10. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING AT THE COMPLETION OF WORK AND MAKING ANY MINOR CORRECTION CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE ENTIRE SYSTEM AND ALL EQUIPMENT. ALL WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY, SUBSTANDARD WORK WILL BE REJECTED
11. A SINGLE MANUFACTURER SHALL PROVIDE SWITCHBOARDS, MOTOR STARTERS, TRANSFORMERS, DISCONNECT SWITCHES, PANELBOARDS, ETC
12. CONTRACTOR SHALL PROVIDE THEIR OWN TEMPORARY POWER FOR MISCELLANEOUS POWER (DRILLS, PUMPS, ETC.). NO FACILITY CIRCUITS SHALL BE USED UNLESS APPROVED IN WRITING BY THE ENGINEER. ANY TEMPORARY ADDED SHALL BE REMOVED AT JOB COMPLETION
13. COMPLETE COORDINATION WITH OTHER CONTRACTORS. CONTRACTOR SHALL COORDINATE WITH ALL OTHER CONTRACTORS EQUIPMENT SUBMITTALS AND OBTAIN ALL RELEVANT SUBMITTALS
14. MOUNT TRANSMITTERS, CONTROL PANELS, PROCESS INSTRUMENTS, OPERATORS STATIONS, ETC. FURNISHED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS

GENERAL NOTES:

1. ELECTRICAL DRAWINGS ARE INTENDED TO SHOW THE GENERAL LAYOUT OF WORK TO BE INSTALLED UNDER THIS CONTRACT WITHOUT ATTEMPTING TO SHOW ALL DETAILS. FURNISH LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM AS SHOWN ON THE CONTRACT DOCUMENTS
2. COORDINATE WORK WITH OTHER TRADES AND THE OWNER
3. CONTRACTOR'S WORK SHALL INCLUDE COMPLETE TESTING OF EQUIPMENT AND WIRING INCLUDING MAKING MINOR CORRECTIONS, CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT. WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY, SUBSTANDARD WORK WILL BE REJECTED
4. DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO MECHANICAL, STRUCTURAL DRAWINGS, AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR EXACT LOCATION OF EQUIPMENT. EXCEPT WHERE DIMENSIONS ARE SHOWN, LOCATIONS OF EQUIPMENT, FIXTURES, OUTLETS, AND SIMILAR DEVICES ARE APPROXIMATE
5. WORK SHALL COMPLY WITH NEC AND LOCAL CODES
6. DO NOT SPLICE CONDUCTORS EXCEPT AS NOTED
7. POWER AND CONTROL CONDUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR WIRE SIZED PER TABLE 250.122 OF THE NEC (MIN)
8. CONCEAL CONDUITS TO GREATEST EXTENT PRACTICABLE
9. WHERE LOCAL DISCONNECTS AND CONTROL PANELS ARE SHOWN ON PLAN VIEWS, LOCATIONS ARE APPROXIMATE. ADJUST LOCATION AS REQUIRED TO COMPLY WITH NEC ARTICLE 110 FOR WORKING CLEARANCES
10. DO NOT INSTALL MAJOR CONDUIT RUNS THROUGH AREAS DESIGNATED FOR FUTURE STRUCTURES

SUBMITTALS:

1. SUBMIT SHOP DRAWINGS FOR EQUIPMENT, MATERIALS AND OTHER ITEMS FURNISHED UNDER DIVISION 26
2. SUBMIT CONDUIT SHOP DRAWINGS FOR YARD ELECTRICAL, WITHIN AND UNDER ROADS, BUILDINGS AND STRUCTURES PRIOR TO COMMENCING WORK. DO NOT POUR CONCRETE UNTIL ENGINEER HAS APPROVED THE ASSOCIATED SHOP DRAWING
3. SUBMIT OPERATION AND MAINTENANCE MANUALS FOR EQUIPMENT FURNISHED UNDER DIVISION 26
4. SUBMIT STARTUP/COMMISSIONING PLANS FOR EQUIPMENT FURNISHED UNDER DIVISION 26
5. SUBMIT TESTING AND SERVICE REPORTS FOR EQUIPMENT AND MATERIALS FURNISHED UNDER DIVISION 26
6. SUBMIT TRAINING PLANS FOR EQUIPMENT FURNISHED UNDER DIVISION 26
7. SUBMIT RECORD DOCUMENTATION TO ACCURATELY SHOW COMPLETED INSTALLATION. INCLUDE MODIFICATIONS TO CONTRACT DOCUMENTS (ONE LINE POWER DIAGRAMS, EQUIPMENT ELEVATIONS, PANEL SCHEDULES, ELEMENTARY CONTROL DIAGRAMS, RISER DIAGRAMS, PLANS, CONDUIT AND DUCTBANK ROUTING, ETC) ALONG WITH ADDITIONAL DRAWINGS OR SKETCHES CREATED TO CONVEY COMPLETED INSTALLATION

CLEANING:

1. REMOVE ALL RUBBISH AND DEBRIS FROM INSIDE AND AROUND ELECTRICAL EQUIPMENT AND ENCLOSURES
2. REMOVE DIRT, DUST OR CONCRETE SPATTER FROM INTERIOR AND EXTERIOR OF EQUIPMENT USING BRUSHES, VACUUM CLEANER OR CLEAN LINT-FREE RAGS. DO NOT USE COMPRESSED AIR

DELEGATED DESIGN / PROFESSIONAL ENGINEERING SERVICES:

1. WHEN ENGINEERING SERVICES ARE SPECIFIED TO BE PROVIDED BY CONTRACTOR, CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PERFORM THE SERVICES. ENGINEER SHALL BE LICENSED AT THE TIME SERVICES ARE PERFORMED AND LICENSED IN THE STATE IN WHICH PROJECT IS LOCATED. THE STATE ISSUES DISCIPLINE SPECIFIC LICENSES. ENGINEER SHALL BE LICENSED IN THE APPLICABLE DISCIPLINE. ENGINEER SHALL BE EXPERIENCED IN THE TYPE OF WORK BEING PERFORMED
2. ENGINEERING WORK SHALL BE DONE ACCORDING TO THE APPLICABLE REGULATIONS FOR PROFESSIONAL ENGINEERS TO INCLUDE SIGNING, SEALING AND DATING DOCUMENTS

NEC CLASSIFIED HAZARDOUS AREAS:

1. THIS PROJECT INCLUDES NEC CLASSIFIED HAZARDOUS AREAS. THE FOLLOWING NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARD APPLY:
   - NFPA 820 – STANDARD FOR FIRE PROTECTION IN WASTEWATER TREATMENT AND COLLECTION FACILITIES
2. EQUIPMENT, MATERIALS, AND INSTALLATION SHALL COMPLY WITH NEC ARTICLES 500, 501, 502, AND 503

CONTROL STATIONS AND INDICATORS:

1. CONTROL STATIONS SHALL BE HEAVY-DUTY TYPE, WITH FULL SIZE (30.5mm) NEMA 4X OR 7 OPERATORS, INDICATORS, ETC
2. INDICATORS SHALL BE FULL VOLTAGE AND PUSH-TO-TEST TYPE. INDICATORS LOCATED INDOORS SHALL BE LED AND INDICATORS LOCATED OUTDOORS SHALL BE INCANDESCENT LAMP TYPE
3. NEMA 4X ENCLOSURES SHALL BE STAINLESS STEEL
4. NEMA 7 ENCLOSURE SHALL BE CAST ALUMINUM
5. CONTROL STATIONS SHALL BE SQUARE D COMPANY CLASS 9001 OR SIMILAR BY EATON OR GENERAL ELECTRIC

DEMOLITION AND DISPOSITION OF EQUIPMENT:

1. DRAWING PLANS SHOWING REMOVAL OF MAJOR MECHANICAL AND ELECTRICAL EQUIPMENT IS NOT INTENDED TO SHOW ALL COMPONENTS TO BE DEMOLISHED. NOT ALL PIPING, CONDUITS, DUCTS, EQUIPMENT, ANCILLARY DEVICES, ETC ARE SHOWN. THE CONTRACTOR IS TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID
2. UNLESS OTHERWISE SPECIFICALLY NOTED, REMOVE UNUSED EXPOSED CONDUIT AND SUPPORT SYSTEMS BACK TO SOURCE AND/OR POINT OF CONCEALMENT INCLUDING ABOVE ACCESSIBLE CEILING FINISHES. WIRING SHALL BE REMOVED
3. CUT FLUSH WITH SLAB, CEILING, OR WALL ABANDONED CONCEALED CONDUIT. SUITABLY PLUG CONDUITS
4. REPAIR AND RESTORE ADJACENT CONSTRUCTION AND FINISHES AFTER DEMOLITION IS COMPLETE
5. MATERIAL AND EQUIPMENT INDICATED FOR REMOVAL OR DEMOLITION IS TO BECOME CONTRACTOR'S PROPERTY UPON REMOVAL, UNLESS NOTED OTHERWISE. REMOVED MATERIAL TO BE PROPERLY HANDLED AND DISPOSED

INTERPRETATION OF CONTRACT DOCUMENTS:

1. IF DURING PERFORMANCE OF WORK, THERE IS A CONFLICT, ERROR OR DISCREPANCY BETWEEN OR AMONG CONTRACT DOCUMENTS AND LAWS AND REGULATIONS, PROVIDE THE HIGHER PERFORMANCE STANDARD UNLESS OTHERWISE DIRECTED BY ENGINEER.
2. PRIORITY OF DOCUMENTS. FIGURED DIMENSIONS GOVERN OVER SCALED DIMENSIONS; DETAILED DRAWINGS GOVERN OVER GENERAL DRAWINGS; LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS; CHANGE ORDER DRAWINGS SUPERSEDE ORIGINAL CONTRACT DRAWINGS; AND CONTRACT DRAWINGS GOVERN SHOP DRAWINGS
3. IN GENERAL, DRAWINGS DO NOT SHOW CONDUIT ROUTING. PLAN AND ROUTE CONDUITS IN COMPLIANCE WITH SPECIFICATIONS AND DRAWING DETAILS. COORDINATE INSTALLATION WITH OTHER TRADES AND ACTUAL SUPPLIED EQUIPMENT
4. DUCTBANK ROUTING SHOWN ON ELECTRICAL SITE PLANS IS DIAGRAMMATIC IN NATURE AND MAY NOT INCLUDE INTERFERENCES THAT MAY BE PRESENT
5. SEE ADDITIONAL NOTES ON ELECTRICAL LEGEND II SHEET

ENCLOSURE TYPES:

PROVIDE THE FOLLOWING NEMA TYPE ELECTRICAL ENCLOSURES, UNLESS OTHERWISE NOTED

1. NEMA 1 IN DRY, NON-PROCESS INDOOR LOCATIONS
2. NEMA 12 IN "DUST" LOCATIONS SHOWN ON THE DRAWINGS
3. NEMA 4X STAINLESS STEEL IN OUTDOOR LOCATIONS, ROOMS BELOW GRADE INCLUDING BASEMENTS AND BURIED VAULTS AND "DAMP" OR "WET" LOCATIONS SHOWN ON THE DRAWINGS
4. NEMA 4X STAINLESS STEEL IN "CORROSIVE" LOCATIONS SHOWN ON THE DRAWINGS
5. NEMA 7 AND LISTED FOR THE SPECIFIC NEC HAZARDOUS AREA CLASSIFICATION AS SHOWN ON THE DRAWINGS

MATERIALS AND EQUIPMENT:

1. PROVIDE NEW MATERIALS AND EQUIPMENT UNLESS SPECIFICALLY NOTED OTHERWISE
2. ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE LISTED BY UNDERWRITER'S LABORATORIES, INC., AND SHALL BEAR APPROPRIATE UL LISTING MARK OR CLASSIFICATION MARKING. EQUIPMENT, MATERIALS, ETC. UTILIZED NOT BEARING A UL CERTIFICATION SHALL BE FIELD OR FACTORY UL CERTIFIED PRIOR TO EQUIPMENT ACCEPTANCE AND USE
3. PROVIDE MAJOR ELECTRICAL EQUIPMENT BY A SINGLE MANUFACTURER (I.E. UNIT SUBSTATIONS, SWITCHGEAR, MOTOR CONTROL CENTERS, DISCONNECT SWITCHES, TRANSFORMERS, PANELBOARDS, ETC.)

EQUIPMENT SIZE, HANDLING AND STORAGE:

1. COORDINATE WITH EQUIPMENT MANUFACTURER SHIPPING SPLITS TO PERMIT SAFE HANDLING AND PASSAGE OF EQUIPMENT TO FINAL INSTALLATION LOCATION
2. COMPLY WITH MANUFACTURER'S INSTRUCTIONS FOR UPRIGHT EQUIPMENT ORIENTATION DURING TRANSPORTATION
3. PROTECT EQUIPMENT FROM MECHANICAL INJURY, OR EXPOSURE TO MOISTURE, CHEMICALS, OR CORROSIVE GASES. DO NOT STORE ELECTRICAL EQUIPMENT OUTDOORS
4. PROVIDE AND ENERGIZE TEMPORARY SPACE HEATERS IF REQUIRED TO CONTROL MOISTURE DURING STORAGE

CUTTING AND PATCHING:

1. CUT AND PATCH IN A WORKMANLIKE MANNER AS REQUIRED TO INSTALL ELECTRICAL WORK
2. CUTTING OF STRUCTURAL MEMBERS SUCH AS JOISTS, BEAMS, GIRDERS OR COLUMNS IS PROHIBITED
3. PATCH SURFACES TO RESTORE TO ORIGINAL INTEGRITY (WATERPROOF OR FIREPROOF AS REQUIRED) AND APPEARANCE

REV NO	DATE	DRAWN	CHKD	REMARKS

DESIGNED BY J. SANCHEZ
DRAWN BY R. RUCK
SHEET CHK'D BY S. PERRY
CROSS CHK'D BY A. SRIRAM
APPROVED BY S. PERRY
DATE SEPTEMBER 2025

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VALDOSTA
A City Without Limits

CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

ELECTRICAL NOTES

PROJECT NO 20750-20844
FILE NAME E03750-01-03
SHEET NO
E-3

ISSUED FOR BI

Last Saved by: Lee, Ryan, Thursday, 9/18/2025 1:11:14 PM
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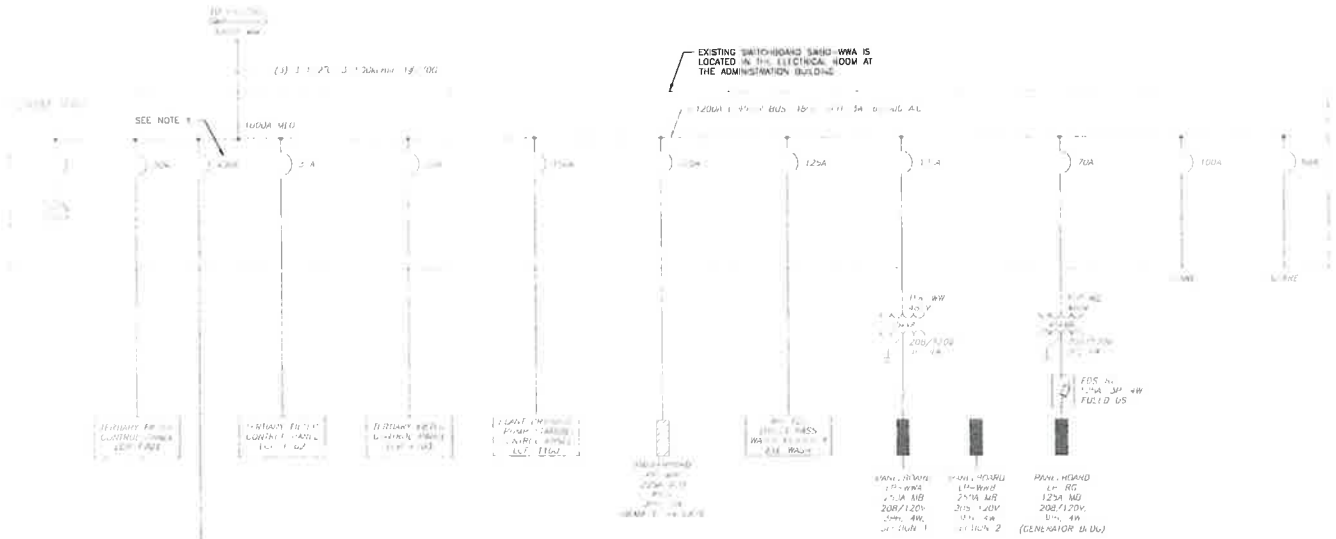
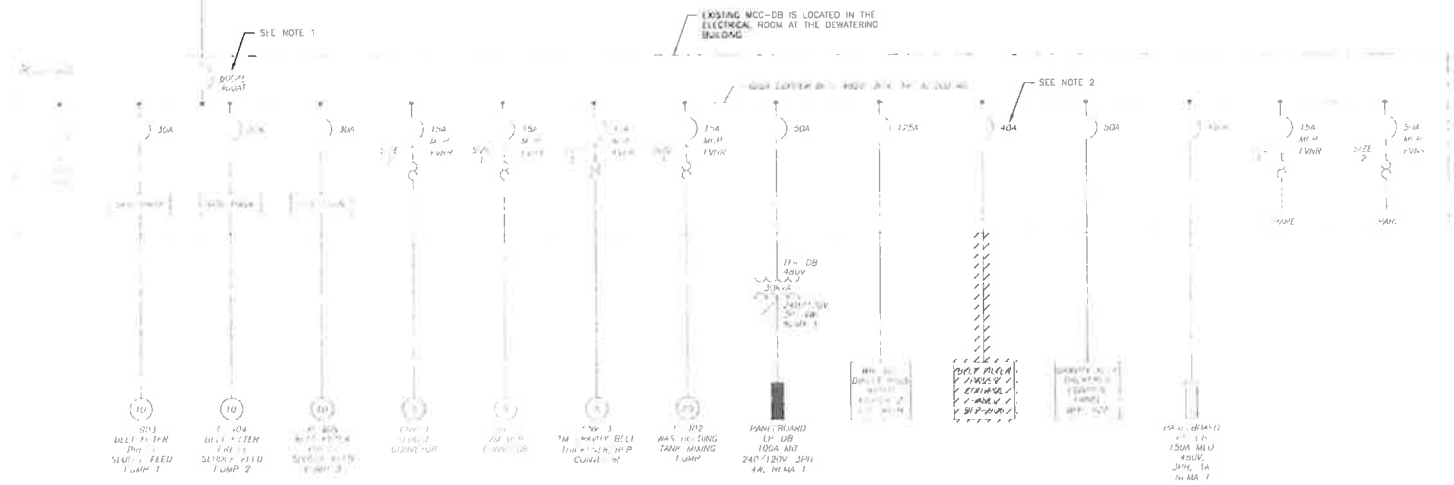


EXISTING SWBD–WWA

ONE LINE POWER DIAGRAM

(DEMOLITION)



EXISTING MCC–DB

ONE LINE POWER DIAGRAM

(DEMOLITION)

NOTES:

1. EXISTING 80% RATED CIRCUIT BREAKER TO BE REPLACED WITH A 100% RATED CIRCUIT BREAKER MATCH EXISTING MANUFACTURER, TYPE, AND AIC RATING
2. EXISTING FEEDER CIRCUIT BREAKER TO BE REPLACED MATCH EXISTING MANUFACTURER, TYPE, AND AIC RATING

REV NO	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: A. SRIRAM
APPROVED BY: S. PERRY
DATE: SEPTEMBER 2025

CDM Smith

VALDOSTA

CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

EXISTING SWBD-WWA AND MCC-DB ONE LINE POWER DIAGRAMS (DEMOLITION)

PROJECT NO 30730-20844
FILE NAME E004MDL.DW

SHEET NO

E-4

ISSUED FOR BI

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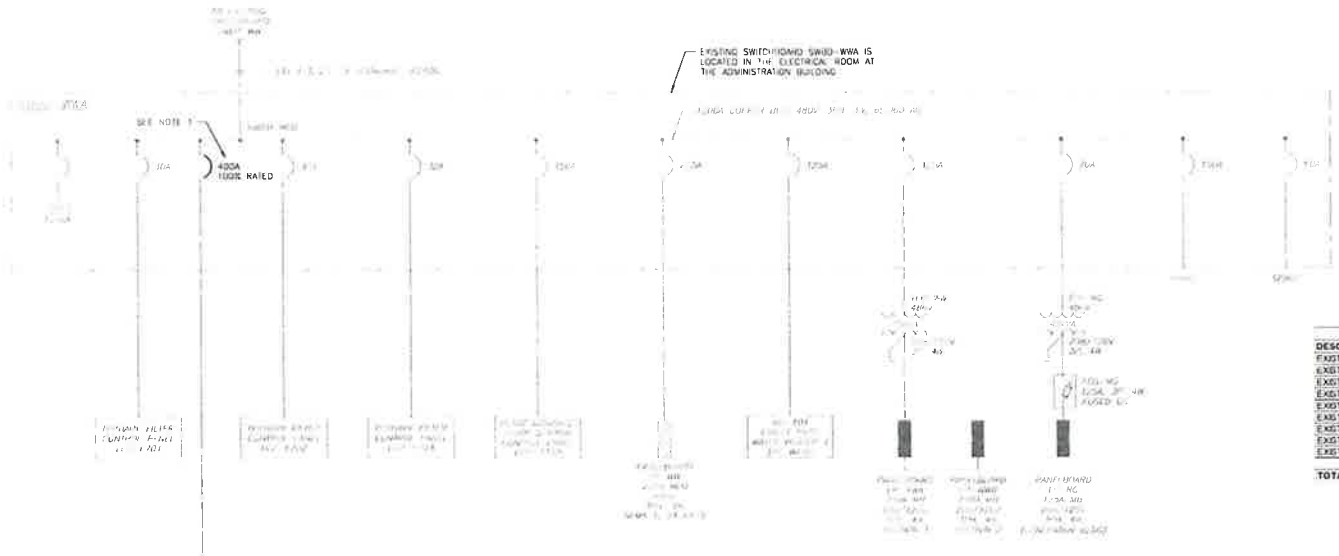
NOTE:

1. PROVIDE A NEW 100% RATED CIRCUIT BREAKER. MATCH EXISTING MANUFACTURER, TYPE, AND AIC RATING.

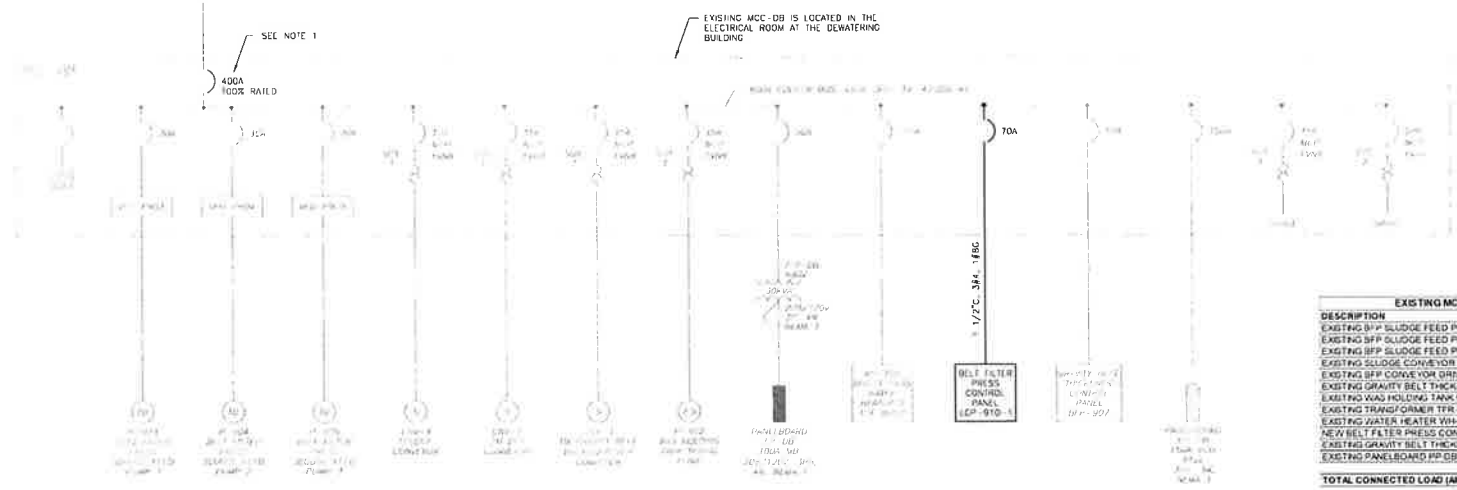


EXISTING SWBD–WWA

ONE LINE POWER DIAGRAM

(MODIFICATIONS)

SWBD-WWA CONNECTED LOAD SCHEDULE	
DESCRIPTION	LOAD (AMPERES)
EXISTING TERTIARY FILTER CONTROL PANEL LCP-F701	8
EXISTING TERTIARY FILTER CONTROL PANEL LCP-F702	8
EXISTING TERTIARY FILTER CONTROL PANEL LCP-F703	8
EXISTING PLANT DRAINAGE PUMP STATION CONTROL PANEL LCP-1100	120
EXISTING PANELBOARD PP-WW	181
EXISTING DIRECT PASS WATER HEATER WH-101	96
EXISTING PANELBOARD LP-WWA	68
EXISTING PANELBOARD LP-RG	40
EXISTING MCC-DB	373
TOTAL CONNECTED LOAD (AMPERES @ 480V, 3-PHASE) *	903



EXISTING MCC–DB

ONE LINE POWER DIAGRAM

(MODIFICATIONS)

EXISTING MCC-DB CONNECTED LOAD SCHEDULE	
DESCRIPTION	LOAD (AMPERES)
EXISTING BFP SLUDGE FEED PUMP 1	14
EXISTING BFP SLUDGE FEED PUMP 2	14
EXISTING BFP SLUDGE FEED PUMP 3 (STANDBY)	14
EXISTING SLUDGE CONVEYOR DRIVE CNV-1	8
EXISTING BFP CONVEYOR DRIVE CNV-2	8
EXISTING GRAVITY BELT THICKEN CONVEYOR DRIVE CNV-3	8
EXISTING WAS HOLDING TANK MIXING PUMP	11
EXISTING TRANSFORMER TFR DB (3-PHASE)	27
EXISTING WATER HEATER WH-102	95
NEW BELT FILTER PRESS CONTROL PANEL LCP-910-1	47
EXISTING GRAVITY BELT THICKENER CONTROL PANEL BFP-907	40
EXISTING PANELBOARD PP-DB	88
TOTAL CONNECTED LOAD (AMPERES @ 480V, 3-PHASE) *	373

NOTE: THREE-PHASE AC MOTOR FULL LOAD CURRENTS PER NEC TABLE 430.250.

REV NO	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. CARTER
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: A. SHAMM
APPROVED BY: S. PERRY
DATE: SEPTEMBER 2025

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GA COA No. PE7000196 EXP DATE 06/30/2026

VALDOSTA
A City Without Limits

CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

EXISTING SWBD-WWA AND MCC-DB ONE LINE POWER DIAGRAMS (MODIFICATIONS)

PROJECT NO: 20790-29844
FILE NAME: E005AF01_DW

SHEET NO.
E-5

ISSUED FOR BI

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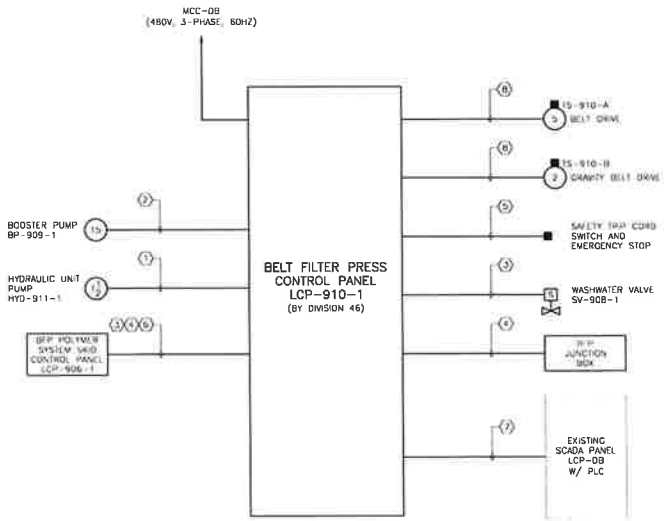
CONDUIT AND WIRE LEGEND
(NUMBERS REFERENCE THIS SHEET ONLY)

NO	DESCRIPTION
1	3/4"C, 3#12, 1#12G
2	1"C, 3#8, 1#10G
3	3/4"C, 2#12, 1#12G
4	1"C, 16#14, 1#14G
5	3/4"C, 2#14, 1#14G
6	1"C, 2-2/C#16SH
7	1"C, CAT6 ETHERNET CABLE
8	1"C, 3#12, 2#14, 1#12G



BELT FILTER PRESS
RISER DIAGRAM

REV NO	DATE	DRWN	CHKD	REMARKS

DESIGNED BY J. SANCHEZ
DRAWN BY R. CARTER
SHEET CHKD BY S. PERRY
CROSS CHKD BY A. SRIRAM
APPROVED BY S. PERRY
DATE SEPTEMBER 2020

CDM Smith
VALDOSTA A City Without Limits

CITY OF VALDOSTA, GA
WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

RISER DIAGRAMS

PROJECT NO 30590-2984
FILE NAME E006NFRD DW
SHEET NO
E-6

ISSUED FOR BI

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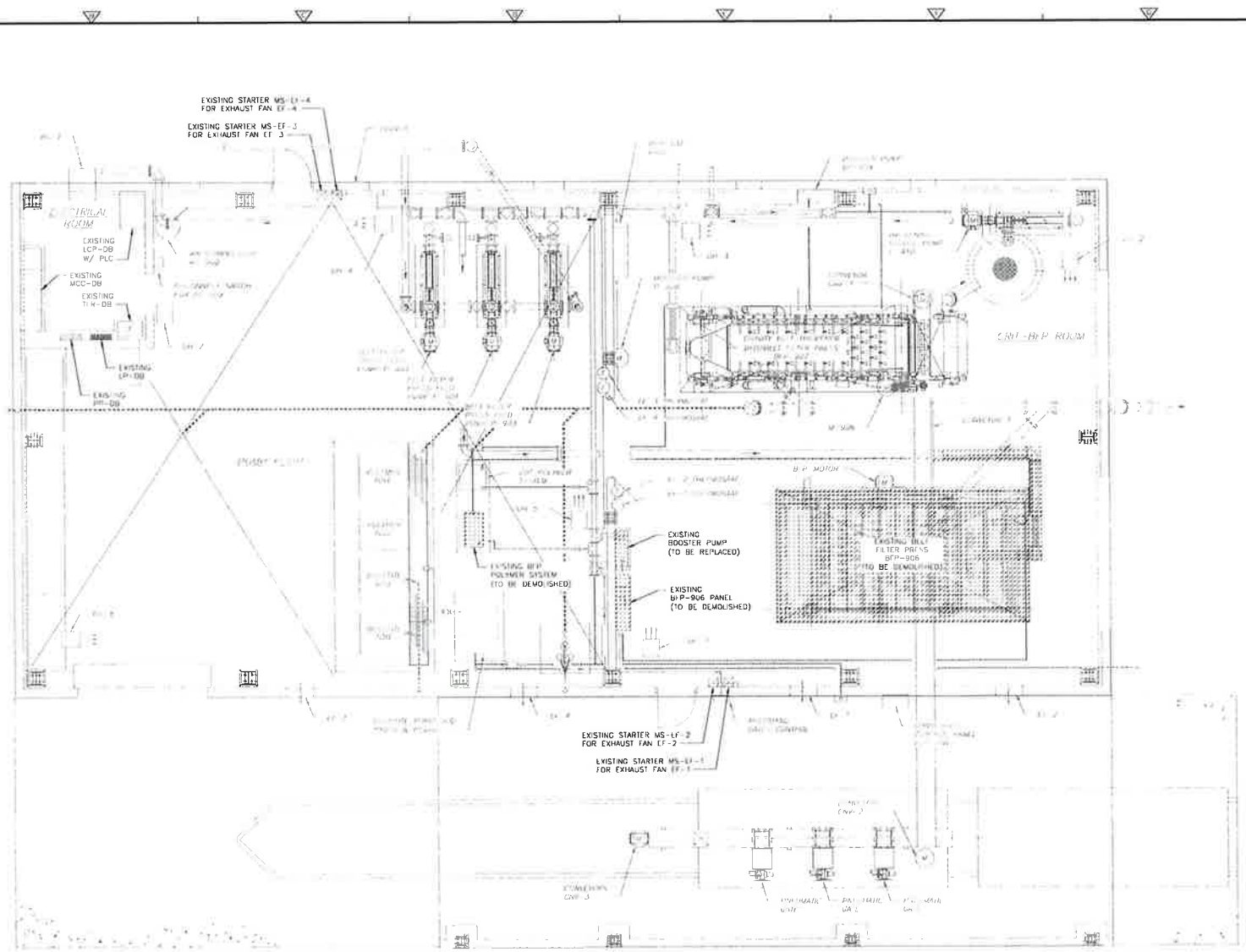

PLAN
1/4" = 1'-0"

REV No.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY J. SANCHEZ
DRAWN BY R. RUCK
SHEET CHK'D BY S. PERRY
CROSS CHK'D BY A. SHAWAN
APPROVED BY S. PERRY
DATE SEPTEMBER 2025

CDM Smith
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VALDOSTA
A City Without Limits

CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

DEWATERING BUILDING
ELECTRICAL DEMOLTION PLAN

PROJECT NO. 20790-21844
FILE NAME E007DEM.DWG
SHEET NO.
E-7

ISSUED FOR BI

Last saved by CDM Smith time 9/22/2025 / 15:09 HW
pw:\\cdsmith-pw02-pw.bentley.com:pw_pw1\20790\298446\04 Design Services NW_Bldg\09 Electrical\10 BIM_CADD\E007DWG.dwg
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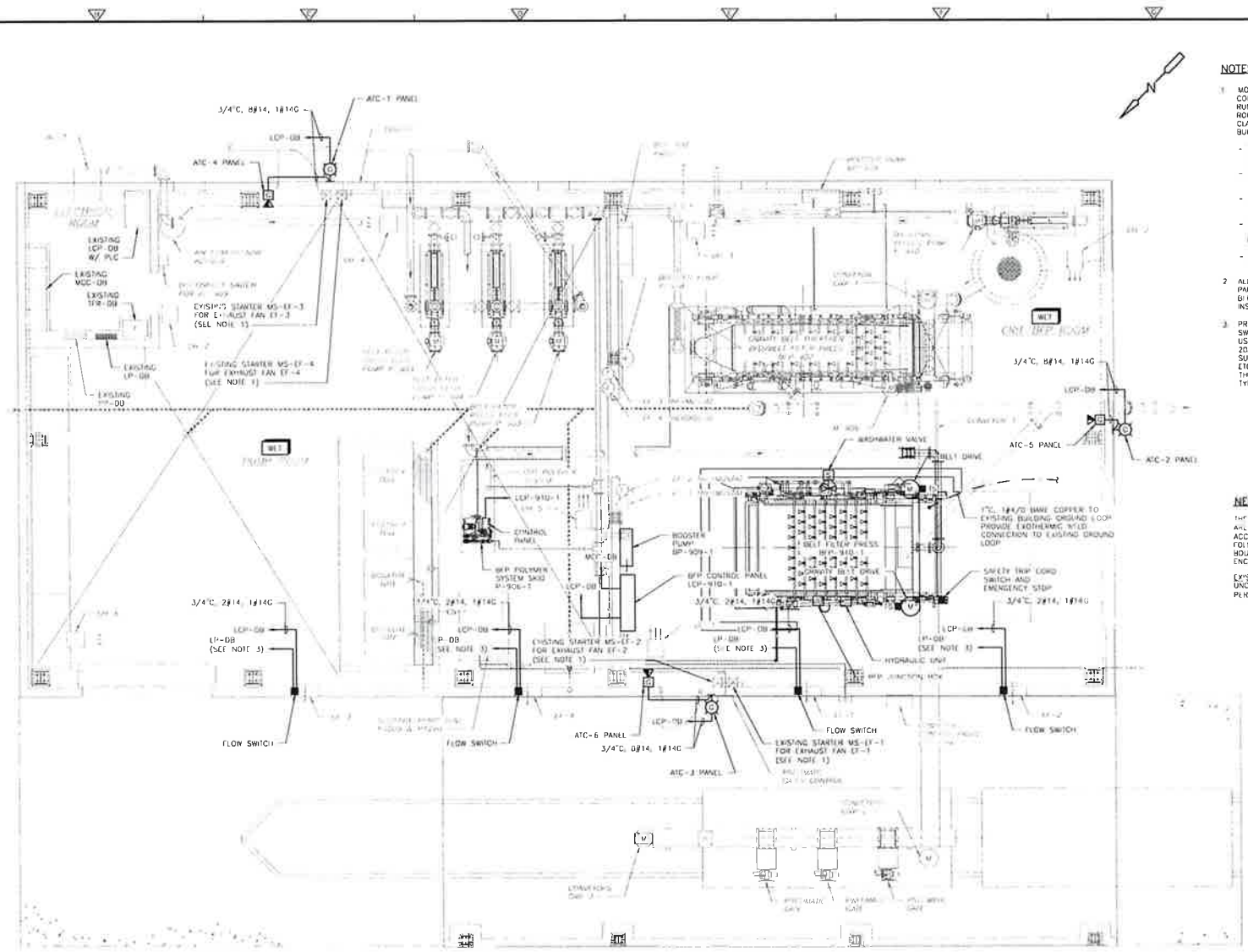


PLAN
1/4" = 1'-0"

NOTES:

1. MODIFY THE EXISTING EXHAUST FAN MOTOR STARTER CONTROLS AND OPERATION SO THAT THE EXHAUST FAN RUNS CONTINUOUSLY ON HIGH SPEED ALL YEAR ROUND TO MEET NFPA 820 HAZARDOUS AREA CLASSIFICATION REQUIREMENTS FOR THE DEWATERING BUILDING
   - REMOVE SLOW CONTACTOR, OVERLOADS, RESET BUTTON, RELAYS, AND ASSOCIATED CONTROL WIRING
   - REMOVE SLOW SPEED CONDUCTORS FROM STARTER TO MOTOR
   - REPLACE THE "SLOW/OFF/FAST" SELECTION SWITCH WITH AN "ON/OFF" SELECTOR SWITCH
   - PROVIDE COVER PLATES IN THE MOTOR STARTER ENCLOSURE DOOR FOR HOLES LEFT BY REMOVED DEVICES.
   - PROVIDE WIRING, TERMINALS, ETC AS REQUIRED FOR THE MODIFICATIONS
2. ALL NEW CONDUITS TO AND FROM THE BFP CONTROL PANEL LCP-910-1 TO THE BELT FILTER PRESS SKID, BFP POLYMER SKID AND BOOSTER PUMP SHALL BE INSTALLED EXPOSED AND OVERHEAD
3. PROVIDE 3/4"C, 2#12, 1#12G FROM THE FLOW SWITCH TO THE EXISTING LIGHTING PANEL LP-DB USE SPARE 20A 1P CIRCUIT BREAKER. PROVIDE A 20A 1P CIRCUIT BREAKER AS REQUIRED OR PROVIDE A SUB-PANEL WITH CIRCUIT BREAKERS, CONDUIT, WIP, ETC AS REQUIRED FOR THE 120V POWER SUPPLY TO THE FLOW SWITCH. MATCH EXISTING MANUFACTURER, TYPE AND AIC RATING

NEC HAZARDOUS AREAS:

THERE ARE MULTIPLE LOCATIONS WITHIN THE FACILITY THAT ARE CLASSIFIED AS NEC CLASS I, HAZARDOUS AREAS IN ACCORDANCE WITH NFPA 820 (2024 EDITION). THE FOLLOWING ARE THE NEC HAZARDOUS AREAS AND THEIR BOUNDARIES THAT THE CONTRACTOR IS ANTICIPATED TO ENCOUNTER ON THIS PROJECT

EXISTING DEWATERING BUILDING
UNCLASSIFIED
PER NFPA 820, TABLE 6.2.2(a), ROW 12(a)

REV NO	DATE	DRWN	CHKD	REMARKS

DESIGNED BY J. SANCHEZ
DRAWN BY R. MUCK
SHEET QA'D BY S. PERRY
CROSS CHK'D BY A. SIRAM
APPROVED BY S. PERRY
DATE SEPTEMBER 2025

CDM Smith

VALDOSTA A City Without Limits

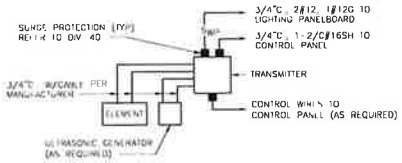
CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

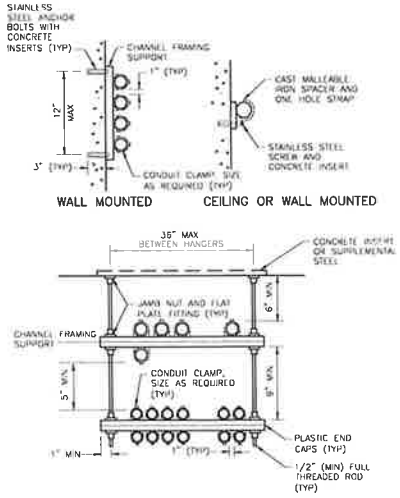
DEWATERING BUILDING
ELECTRICAL MODIFICATIONS PLAN

PROJECT NO 20750-2084
FILE NAME E-DEWATERING.DWG
SHEET NO E-8

ISSUED FOR BI



TYPICAL TRANSMITTER
DETAIL A
NTS



CONDUIT MOUNTING
DETAIL B
NTS

REV NO	DATE	DRWN	CHKD	REMARKS

DESIGNED BY J. SANCHEZ
DRAWN BY R. RUCK
SHEET CHKD BY S. PERRY
CROSS CHKD BY A. SRAMAN
APPROVED BY S. PERRY
DATE SEPTEMBER 2025

CDM Smith
VALDOSTA A City Without Limits

CITY OF VALDOSTA, GA
WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

ELECTRICAL DETAILS

PROJECT NO 20190-2584
FILE NAME ED01NF01.DW
SHEET NO
ED-1

ISSUED FOR BI

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GENERAL INSTRUMENT OR FUNCTION SYMBOLS

SHARED DISPLAY/ SHARED CONTROL				
PRIMARY CHOICE	SECONDARY CHOICE	COMPUTER SOFTWARE	DISCRETE	LOCATION AND ACCESSIBILITY
				FIELD MOUNTED AND NORMALLY OPERATOR ACCESSIBLE
				PRIMARY CONTROL PANEL MOUNTED AND NORMALLY OPERATOR ACCESSIBLE
				PRIMARY CONTROL PANEL MOUNTED AND NOT NORMALLY OPERATOR ACCESSIBLE
				SECONDARY CONTROL PANEL MOUNTED AND NORMALLY OPERATOR ACCESSIBLE
				SECONDARY CONTROL PANEL MOUNTED AND NOT NORMALLY OPERATOR ACCESSIBLE

INSTRUMENTS SHARING COMMON HOUSING

PILOT LIGHT

INSTRUMENTATION FUNCTION CODE

	FIRST LETTERS		SUCCEEDING LETTERS		
	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
	MEASURED/ INITIATING VARIABLE	VARIABLE MODIFIER	READOUT/PASSIVE FUNCTION	OUTPUT/ACTIVE FUNCTION	FUNCTION MODIFIER
A	ANALYSIS		ALARM (2)		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	COMMUNICATION			CONTROL	CLOSED
D	USER'S CHOICE	DIFFERENCE, DIFFERENTIAL			DEVIATION
E	VOLTAGE		SENSOR, PRIMARY ELEMENT		
F	FLOW, FLOW RATE	RATIO			FAULT
G	USER'S CHOICE		GLASS, GAUGE, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT		INDICATE (2)		
J	POWER		SCAN		
K	TIME, SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (2)		LOW
M	MOISTURE				MIDDLE, INTERMEDIATE
N	TORQUE		ENABLE (READY)	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION		OPEN
P	PRESSURE		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE, TOTALIZE	INTEGRATE, TOTALIZE		
R	RADIATION		RECORD		RUN
S	SPEED, FREQUENCY	SAFETY		SWITCH (2)	STOP
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTICHANNEL	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL, PROBE		WARNING
X	UNCLASSIFIED (1)	X-AXIS	ACCESSORY DEVICES, UNCLASSIFIED (1)	UNCLASSIFIED (1)	UNCLASSIFIED (1)
Y	EVENT, STATE, PRESENCE	Y-AXIS		AUXILIARY DEVICES	
Z	POSITION, DIMENSION	Z-AXIS, SAFETY INSTRUMENT SYSTEM		DRIVER, ACTUATOR, UNCLASSIFIED, FINAL CONTROL ELEMENT	

TABLE NOTES:
1 WHEN USED SPACE OR SIGNAL LINE IS ANNOTATED
2 FUNCTION ALLOWS FOR MODIFIER (COLUMN 5)

EQUIPMENT TAG DESIGNATION

P-1000-1A

- WHEN USED, LETTER DISTINGUISHES BETWEEN MULTIPLE, SIMILAR DEVICES
- USED WHEN MULTIPLE TRAINS ARE USED AND REPRESENTS THE TRAIN NUMBER
- EQUIPMENT IDENTIFICATION (FIRST TWO DIGITS DENOTE ASSOCIATED AREA)
- EQUIPMENT TYPE

NEW — EXISTING — FUTURE

P-1000-1A — P-1000-1A

INSTRUMENT TAG DESIGNATION

- INSTRUMENT TYPE
  SEE "INSTRUMENTATION FUNCTION CODE" TABLE
- ADDITIONAL INSTRUMENT IDENTIFICATION
  SEE "HAND SWITCH ABBREVIATIONS"
  OR "PRIMARY ELEMENTS" (DWG 1002)
- 4-DIGIT INSTRUMENT IDENTIFICATION (FIRST TWO DIGITS DENOTE ASSOCIATED AREA)
- USED TO DENOTE THE DIVISION THE INSTRUMENT IS SUPPLIED UNDER
  - 22 - PROVIDED BY PLUMBING
  - 23 - PROVIDED BY HVAC
  - 26 - PROVIDED BY ELECTRICAL
  - 40 - PROVIDED BY PCSS
  - 40# - PROVIDED BY PROCESS MECHANICAL
  - 41 - PROVIDED BY PROCESS MECHANICAL
  - 43 - PROVIDED BY PROCESS MECHANICAL
  - 44 - PROVIDED BY PROCESS MECHANICAL
  - 46 - PROVIDED BY VENDOR
- WHEN USED, LETTER DISTINGUISHES BETWEEN MULTIPLE, SIMILAR DEVICES
- USED WHEN MULTIPLE TRANS ARE USED AND REPRESENTS THE TRAIN NUMBER

NEW — EXISTING — FUTURE

VALVE TAG DESIGNATION

GV-1000-1A

- WHEN USED, LETTER DISTINGUISHES BETWEEN MULTIPLE, SIMILAR DEVICES
- USED WHEN MULTIPLE TRANS ARE USED AND REPRESENTS THE TRAIN NUMBER
- VALVE IDENTIFICATION (FIRST TWO DIGITS DENOTE ASSOCIATED AREA)
- VALVE TYPE

NEW — EXISTING — FUTURE

GV-1000-1A — GV-1000-1A

OFF PAGE CONNECTORS

PROCESS FLUID / DWG NO / TO/FROM LOCATION — P&ID CONTINUATION

PROCESS FLUID / DWG NO / TO/FROM LOCATION — BOUNDARY LIMITS - THE DETAILS OF PIPING/SYSTEM CONNECTING TO THIS P&ID ARE OUTSIDE OF THIS PROJECT SCOPE

PROCESS FLUID / DWG NO / TO/FROM LOCATION — BI-DIRECTIONAL P&ID CONTINUATION

ELECTRICAL / AIR SOURCES

- UPS — UPS ELECTRICAL SOURCE
- 120VAC — NON UPS ELECTRICAL SOURCE
- IA — INSTRUMENT AIR SOURCE
- ES — ELECTRICAL SOURCE

I/O SIGNALS

DIGITAL INPUT (DI) — LOOP NO XXXX-X — DESCRIPTION 1 / DESCRIPTION 2
DIGITAL OUTPUT (DO) — LOOP NO XXXX-X — DESCRIPTION 1 / DESCRIPTION 2
ANALOG INPUT (AI) — LOOP NO. XXXX-X — DESCRIPTION 1 / DESCRIPTION 2
ANALOG OUTPUT (AO) — LOOP NO XXXX-X — DESCRIPTION 1 / DESCRIPTION 2

FS / P — FAIL SAFE - PULSE INPUT
TC / K*D — THERMOCOUPLE INPUT - RTD INPUT

** MEASURED VARIABLE OR OUTPUT FUNCTION FROM "INSTRUMENTATION FUNCTION CODE" TABLE
** FAIL SAFE - NORMALLY CLOSED CONTACT UNDER NORMAL PROCESS CONDITIONS

INSTRUMENT LINE SYMBOLS

	NEW	EXISTING
CAPILLARY TUBE		
INSTRUMENT SUPPLY LINE		
ELECTRICAL SIGNAL		
SOFTWARE SIGNAL		
HYDRAULIC SIGNAL		
PNEUMATIC SIGNAL		
TELEPHONE SIGNAL		
RADIO		
VENDOR SUPPLIED CABLE		

PIPE TAG DESIGNATION

FLOW DIRECTION

SPEC — SERVICE — SIZE — REFER PROCESS MECHANICAL LEGEND SHEET FOR PIPE SPEC AND SERVICE

PROCESS LINES TYPES

	NEW	EXISTING	FUTURE
DOUBLE WALLED PIPE			
ELECTRIC (OR STEAM) TRACING	E (S)		E (S)
MAJOR PROCESS LINE			
MINOR PROCESS LINE			
PROCESS AREA BOUNDARY			(FUTURE)
VENDOR PACKAGE BOUNDARY			(FUTURE)

MOTOR CONTROL SYMBOLS

- M — MOTOR
- VFD — VFD MOTOR
- NCC — INDICATES INTERLOCK OR LOGIC IN A MOTOR CONTROL CENTER
- 1 — INDICATES GENERAL OR MISCELLANEOUS HARDWIRED INTERLOCK
- MS — MOTOR STARTER
- VFD — VARIABLE FREQUENCY DRIVE
- SCR — SILICON CONTROL RECTIFIER

GENERAL ABBREVIATIONS

AI	ANALOG IN
AO	ANALOG OUT
CCTV	CLOSED CIRCUIT TELEVISION
CPU	CENTRAL PROCESSING UNIT
DI	DIGITAL OR DISCRETE INPUT
DO	DIGITAL OUTPUT
DVR	DIGITAL VIDEO RECORDER
ES	ETHERNET SWITCH (UNMANAGED) OR ELECTRICAL SOURCE
ETM	ELAPSED TIME METER
FC	FAIL CLOSED
FO	FAIL OPEN OR FIBER OPTIC
FOCE	FIBER OPTIC COMMUNICATION ENCLOSURE
FOES	FIBER OPTIC ETHERNET SWITCH
FOPP	FIBER OPTIC PATCH PANEL
FW	FIREWALL
HIM	HUMAN INTERFACE MODULE
HMI	HUMAN MACHINE INTERFACE
I/O	INPUT/OUTPUT
ISP	INTERNET SERVICE PROVIDER
KVM	KEYBOARD VIDEO MONITOR
LCP	LOCAL CONTROL PANEL
LCS	LOCAL CONTROL STATION
MC	MEDIA CONVERTER
MCC	MOTOR CONTROL CENTER
MES	MANAGED ETHERNET SWITCH
MS	MOTOR STARTER
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NVR	NETWORK VIDEO RECORDER
OED	OPEN EQUIPMENT DRIVE
OIT	OPERATOR INTERFACE TERMINAL
OWS	OPERATOR WORKSTATION
PLC	PROGRAMMABLE LOGIC CONTROLLER
PS	POWER SUPPLY
RAD	RADIO
RIO	REMOTE INPUT/OUTPUT
RT	RUN TIME
RTU	REMOTE TERMINAL UNIT
SPD	SURGE PROTECTION DEVICE
TC	THIN CLIENT
TKC	THICK CLIENT
UPS	UNINTERRUPTIBLE POWER SUPPLY
VFD	VARIABLE FREQUENCY DRIVE
VPN	VIRTUAL PRIVATE NETWORK

HAND SWITCH ABBREVIATIONS

A/O	AUTO/OFF
A/M	AUTO/MANUAL
C/L	COMPUTER/LOCAL
C/M	COMPUTER/MANUAL
E-STOP	EMERGENCY STOP
F/R	FORWARD/REVERSE
F/O/R	FORWARD/OFF/REVERSE
F/S	FAST/SLOW
F/O/S	FAST/OFF/SLOW
H/O/A	HAND/OFF/AUTO
H/O/R	HAND/OFF/REMOTE
L/A	LOCAL/AUTO
L/R	LOCAL/REMOTE
L/L/S	LEAD/LAG/STANDBY
L/O/A	LOCAL/OFF/AUTO
L/O/R	LOCAL/OFF/REMOTE
LO/S	LOCKOUT/STOP
O/C	OPEN/CLOSE
O/C/A	OPEN/CLOSE/AUTO
O/C/R	OPEN/CLOSE/REMOTE
O/O	ON/OFF
O/O/A	ON/OFF/AUTO
O/O/R	ON/OFF/REMOTE
O/S/C	OPEN/STOP/CLOSE
R/S/L	RAISE/STOP/LOWER
S/O/R	START/OFF/RESET
S/S	START/STOP

GENERAL NOTES

1. THIS LEGEND APPLIES TO P&IDS ONLY AND MAY DIFFER FROM LEGENDS FOR OTHER SHEETS
2. IN GENERAL THIS LEGEND SHEET AND THE P&IDS ARE BASED ON THE INTERNATIONAL SOCIETY OF AUTOMATION (ISA) STANDARDS AND RECOMMENDED PRACTICES FOR INSTRUMENTATION AND CONTROL. SOME MODIFICATIONS, ADDITIONS AND ALTERATIONS HAVE BEEN MADE AS REQUIRED TO ACCOMMODATE PROJECT REQUIREMENTS
3. SOME PROCESS ITEMS SUCH AS EQUIPMENT ISOLATION VALVES, BYPASS LINES, ETC., WHICH ARE NOT CRITICAL FOR AN UNDERSTANDING OF THE INSTRUMENTATION FUNCTIONS ARE NOT SHOWN ON THE P&IDS
4. SEE ELECTRICAL AND MECHANICAL SHEETS AND SPECIFICATIONS FOR ADDITIONAL CONTROL AND INTERLOCK REQUIREMENTS

SYSTEM ARCHITECTURE SYMBOLS

- COMPUTER
- LAPTOP
- LARGE SCREEN MONITOR
- OIT
- PRINTER
- RADIO TOWER
- OMNI ANTENNA
- YAGI ANTENNA
- THIN CLIENT — THIN CLIENT SERVER
- PLC
- MANAGED ETHERNET SWITCH
- MANAGED ETHERNET SWITCH WITH FIBER PORTS
- UNMANAGED ETHERNET SWITCH
- UPS
- SERVER — SERVER (RACK MOUNTED)
- SERVER (TOWER MOUNTED)
- FOPP — FIBER OPTIC PATCH PANEL
- MODEM — CELLULAR MODEM
- FIREWALL
- MC — MEDIA CONVERTER

SYSTEM ARCHITECTURE LINETYPES

- CAT 6 CABLE
- FIBER OPTIC CABLE
- COAXIAL CABLE
- HDMI CABLE
- SERIAL CABLE RS232
- SERIAL CABLE RS485
- DOCCEMT
- FOUNDATION FIELDBUS

REV NO	DATE	DRWN	CHKD	REMARKS

DESIGNED BY B. NEAL
DRAWN BY D. BENN
SHEET CHK'D BY B. NEAL
CROSS CHK'D BY W. WHITMORE
APPROVED BY D. NEAL
DATE SEPTEMBER 2025

CDM Smith — VALDOSTA A City of Excellence

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CA License: CT-0000026, Exp. DATE 01/31/2026

CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

INSTRUMENTATION LEGEND I

PROJECT NO 20780-25844
FILE NAME 1001SMW.DW

SHEET NO I-1

ISSUED FOR BI

VALVE SYMBOLS

- BACKFLOW PREVENTER (BFP)
- BALL CHECK VALVE (BCV)
- BALL VALVE (BV)
- BUTTERFLY VALVE (BFV)
- CONE VALVE (CONV)
- DIAPHRAGM VALVE (DV)
- DOUBLE DISC CHECK VALVE (DDCV)
- DUCKBILL CHECK VALVE (DBCV)
- GATE VALVE (GV)
- GLOBE BODY SILENT CHECK VALVE (GBCV)
- GLOBE VALVE (GLV)
- KNIFE VALVE (KNV)
- MUD VALVE (MV)
- NEEDLE VALVE (NV)
- PINCH VALVE (PCHV)
- PLUG VALVE (PV)
- RUBBER FLAPPER CHECK VALVE (RFCV)
- RUPTURE DISC (RD)
- STOP CHECK VALVE (SCV)
- SWING CHECK VALVE (CV)
- TELESCOPIC VALVE (TV)
- V NOTCH BALL VALVE (VNBV)
- BACK PRESSURE REGULATING VALVE (BPV)
- DIFFERENTIAL PRESSURE REGULATING VALVE W/ EXTERIOR TAPS
- PRESSURE REGULATING VALVE (PRCV)
- SELF CONTAINED DIFFERENTIAL PRESSURE REGULATING VALVE
- SELF-CONTAINED DIFFERENTIAL PRESSURE REGULATING VALVE (SOLENOID OPERATED)
- SOLENOID VALVE (SV)
- 3-WAY SOLENOID VALVE (SV)
- DAMPER (D)
- AIR RELIEF VALVE (ARV) OR PRESSURE RELIEF VALVE (PRV)
- AIR VACUUM VALVE (AVV)
- VACUUM BREAKER VALVE (VBV)
- COMBINATION AIR VALVE (CVV)

GATE SYMBOLS

- BULK HEAD GATE/STOP LOG
- CAST IRON SLIDE GATE (SG)
- BUTTERFLY GATE
- FABRICATED SLIDE GATE (SLG)
- FLAP GATE
- WEIR SLIDE GATE (WSG)

VALVE ACTUATORS

- DIAPHRAGM, PRESSURE-BALANCED
- DIAPHRAGM, SPRING OPPOSED
- SOLENOID
- ELECTROHYDRAULIC
- CYLINDER, SINGLE-ACTING OR DOUBLE ACTING, SPRING OPPOSED WITHOUT POSITIONER OR PILOT
- EXAMPLE OF CYLINDER WITH POSITIONER
- ANY CYLINDER THAT IS ASSEMBLED WITH A PILOT SO THAT ASSEMBLY IS ACTUATED BY ONE CONTROLLED INPUT. PILOT MAY BE POSITIONER, SOLENOID VALVE, SIGNAL CONVERTER, etc.
- SYMBOLIZES MOTORIZED ACTUATION WITH H/O/A SWITCH, OPEN/STOP/CLOSE PUSHBUTTONS AND STATUS LIGHT AS REQUIRED. REFER TO ACTUATOR SPECIFICATIONS ADDSSY FOR MORE DETAILED INFORMATION.
  - 46 - PROVIDED BY VENDOR
  - 40* - PROVIDED BY PROCESS MECHANICAL
- SYMBOLIZES MOTORIZED ACTUATOR WITH H/O/A SWITCH, STATUS LIGHT AND POSITION FEEDBACK AND CONTROL AS REQUIRED. REFER TO ACTUATOR SPECIFICATIONS ADDSSY FOR MORE DETAILED INFORMATION.
  - 46 - PROVIDED BY VENDOR
  - 40* - PROVIDED BY PROCESS MECHANICAL

PIPE LINE SYMBOLS

- PIPE UNION
- PIPE FLANGE
- CONTINUED PIPE
- BLIND FLANGE
- FLEXIBLE BELLOWS TYPE COUPLING
- FLEXIBLE COUPLING (GENERAL SYMBOL)
- QUICK CONNECT TYPE COUPLING
- END CAP
- HOSE CONNECTION
- REDUCER/ENLARGER
- ECCENTRIC REDUCER/ENLARGER
- THREADED DIAPHRAGM SEAL
- ANNULAR SEAL
- Y-STRAINER
- BASKET STRAINER
- BELLOW
- HOSE BIB (HB)
- OPEN EQUIPMENT DRAIN
- DIFFUSER
- AIR FILTER
- EDUCTOR
- EJECTOR
- PULSATION DAMPENER

MISCELLANEOUS SYMBOLS

- PURGE OR FLUSHING DEVICE

PRIMARY ELEMENTS

FLOW INSTRUMENTS

- AVERAGING PITOT TUBE FLOW METER
- CORIOLIS FLOW METER
- FLUME FLOW METER (OPEN CHANNEL)
- MAGNETIC FLOW METER
- ORIFICE PLATE FLOW METER
- PITOT TUBE FLOW METER
- POSITIVE DISPLACEMENT FLOW METER
- ROTAMETER
- TARGET FLOW METER
- THERMAL MASS FLOW METER
- TURBINE OR PROPELLER FLOW METER
- ULTRASONIC FLOW METER (DOPPLER)
- ULTRASONIC FLOW METER (TRANSIT TIME)
- VENTURI FLOW METER
- INSERT VENTURI FLOW METER
- VORTEX FLOW METER
- WEIR
- GENERAL INSERTION FLOW METER
  - IV - INSERT VAC
- FLOW SWITCH
  - TD - THERMAL DISPERSION
  - V - VANE ACTUATED

LEVEL INSTRUMENTS

- RADAR LEVEL SENSOR (GUIDED WAVE)
- RADAR LEVEL SENSOR (NON CONTACT)
- SUBMERSIBLE HYDROSTATIC LEVEL SENSOR
- ULTRASONIC LEVEL SENSOR
- LASER LEVEL SENSOR
- BUBBLER SYSTEM
- CAPACITANCE LEVEL SENSOR
- MAGNETOSTRICTIVE LEVEL SENSOR
- DISPLACEMENT LEVEL SENSOR
- FLOAT SWITCH
- ULTRASONIC GAP SWITCH
- VIBRATING TUNING FORK LEVEL SWITCH
- CAPACITANCE LEVEL SWITCH
- PADDLE LEVEL SWITCH

PRESSURE INSTRUMENTS

- PRESSURE GAUGE
- PRESSURE DIFFERENTIAL GAUGE
- PRESSURE INDICATING TRANSMITTER
- PRESSURE DIFFERENTIAL TRANSMITTER
- PRESSURE SWITCH
- PRESSURE DIFFERENTIAL SWITCH

TEMPERATURE INSTRUMENTS

- TEMPERATURE GAUGE
- TEMPERATURE SENSOR
  - TC - THERMOCOUPLE
  - RTD - RESISTANCE TEMPERATURE DETECTOR
- TEMPERATURE SENSOR WITH THERMOWELL
- TEMPERATURE INDICATING TRANSMITTER
- TEMPERATURE SWITCH

TORQUE INSTRUMENTS

- TORQUE SENSOR
- TORQUE SWITCH

WEIGHT INSTRUMENTS

- WEIGHT ELEMENT (LOAD CELL)
- WEIGHT INDICATING TRANSMITTER

ANALYZER INSTRUMENTS

- GENERAL ANALYZER
  - ALK - ALKALINITY
  - CEMS - CONTINUOUS EMISSIONS MONITORING SYSTEM
  - COND - CONDUCTIVITY
  - CL2F - FREE CHLORINE RESIDUAL
  - CL2T - TOTAL CHLORINE RESIDUAL
  - CL2(G) - CHLORINE GAS
  - CO - CARBON MONOXIDE
  - CO2 - CARBON DIOXIDE
  - DEW - DEW POINT
  - DO - DISSOLVED OXYGEN
  - Fe - IRON
  - F - FLUORIDE
  - H2S - HYDROGEN SULFIDE
  - LEL - % LOWER EXPLOSIVE LIMIT
  - Mn - MANGANESE
  - MONOCL - MONOCHLORAMINE
  - NH3 - DISSOLVED AMMONIA
  - NH3(G) - AMMONIA GAS
  - NO3 - NITRATE
  - N2 - NITROGEN
  - ORP - OXIDATION REDUCTION POTENTIAL
  - O2(G) - OXYGEN GAS
  - O3 - DISSOLVED OZONE
  - O3(G) - OZONE GAS
  - P - PHOSPHOROUS
  - PC - PARTICLE COUNTER
  - pH - HYDROGEN ION
  - pH/TEMP - pH/TEMPERATURE
  - SBI - SLUDGE BLANKET
  - SC - STREAMING CURRENT
  - SDI - SILT DENSITY INDEX
  - SO2 - SULPHUR DIOXIDE
  - THM - TRIHALOMETHANES
  - TOC - TOTAL ORGANIC CARBON
  - TSS - TOTAL SUSPENDED SOLIDS
  - TURB - TURBIDITY
  - UVI - ULTRAVIOLET INTENSITY
  - UVT - ULTRAVIOLET TRANSMITTANCE
- SINGLE PARAMETER ANALYZER TRANSMITTER
- MULTI-PARAMETER ANALYZER TRANSMITTER

EQUIPMENT

- AIR COMPRESSOR
- AIR-OPERATED DIAPHRAGM PUMP
- CENTRIFUGAL BLOWER OR FAN
- CENTRIFUGAL PUMP
- DIAPHRAGM METERING PUMP
- PERISTALTIC PUMP
- PISTON PUMP
- DOUBLE-DISK PUMP
- PROGRESSIVE CAVITY PUMP
- ROTARY BLOWER
- ROTARY LOBE COMPRESSOR
- ROTARY LOBE PUMP
- VERTICAL TURBINE PUMP
- POLYMER SYSTEM

REV No.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY B. NEAL
DRAWN BY D. BENIL
SHEET CHKD BY B. NEAL
CROSS CHKD BY W. WHITMORE
APPROVED BY B. NEAL
DATE SEPTEMBER 2025

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GA COA No. PE036936; CAP COA# 0000044

VALDOSTA
A City Without Limits

CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

INSTRUMENTATION LEGEND II

PROJECT NO 25289-24444
FILE NAME 00259M0.DW

SHEET NO
I-2

ISSUED FOR BI

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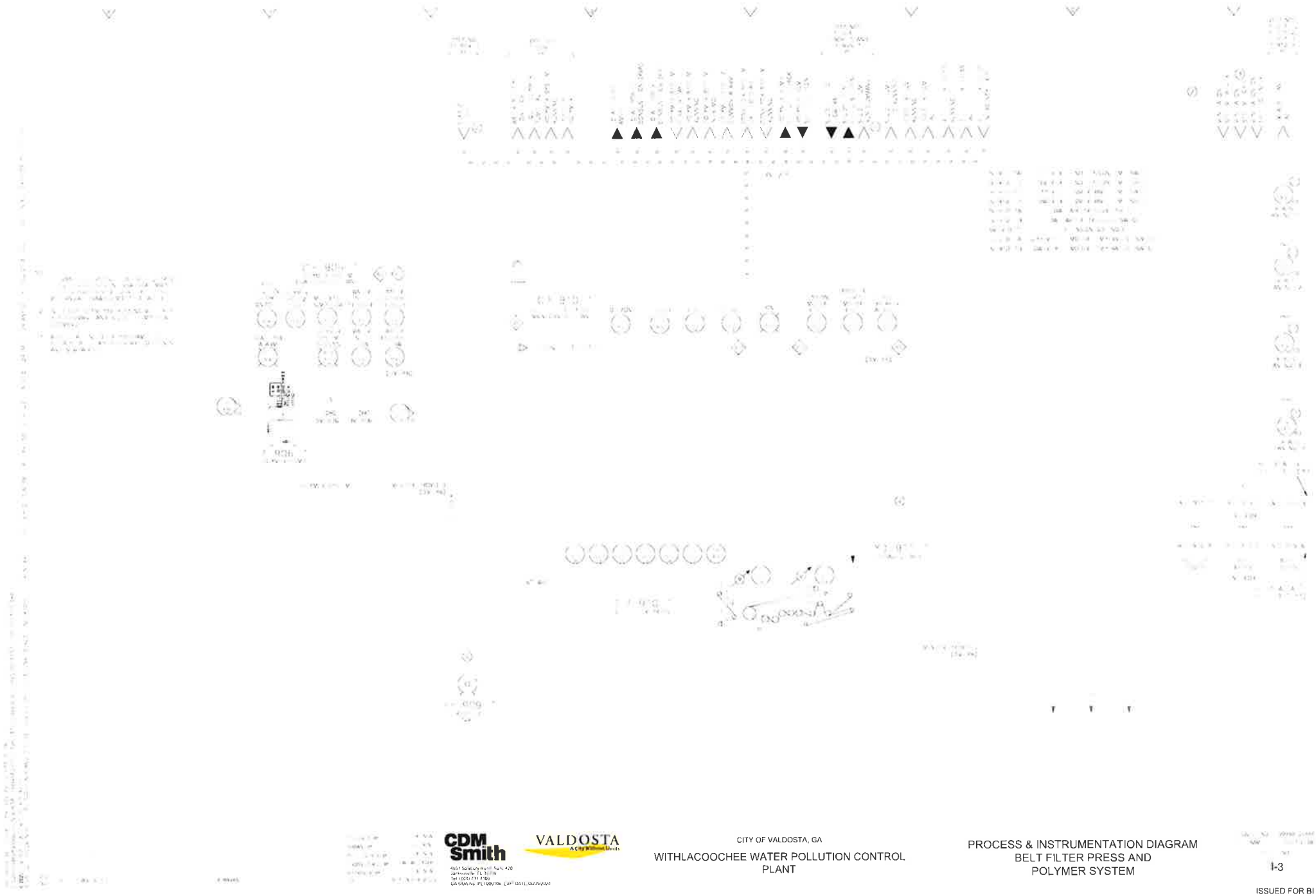


CDM Smith

VALDOSTA

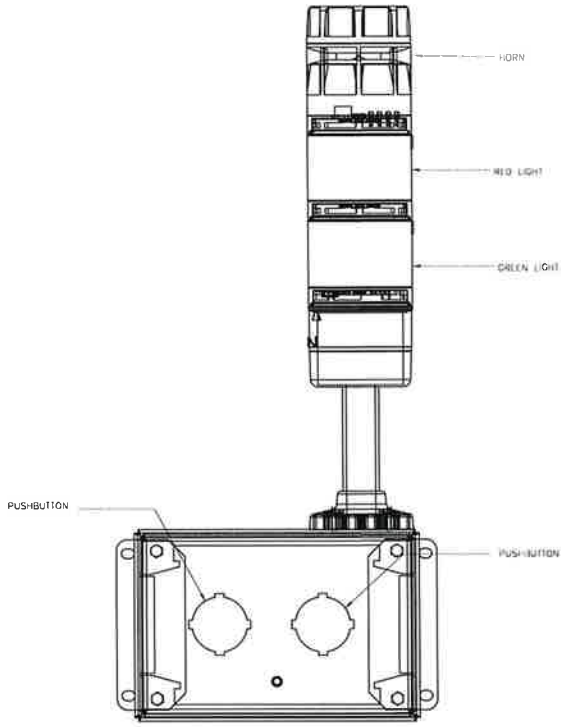
CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

PROCESS & INSTRUMENTATION DIAGRAM
BELT FILTER PRESS AND
POLYMER SYSTEM

I-3

ISSUED FOR BI



ATC–4 THROUGH 6 (INTERIOR)
LOCAL ALARM STATION

DETAIL A
(DIV 40)

NOTES

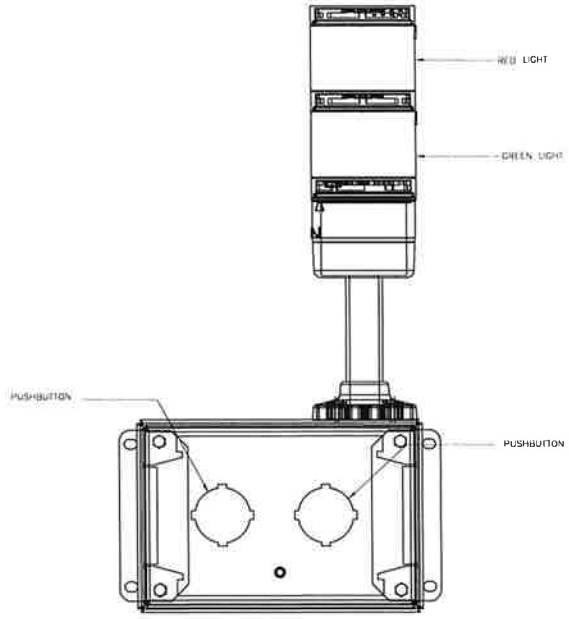
1 PROVIDE HOFFMAN 2-HOLE PBX STATION, SS 304, NEMA 4x, OR APPROVED EQUAL

2 PROVIDE ALLEN BRADLEY TYPE 800T 30 MM PUSHBUTTONS, OR APPROVED EQUAL

3 PUSHBUTTONS ARE ACKNOWLEDGE AND SILENCE PUSHBUTTONS

4 LED STACK LIGHT WITH ALARM AND MOUNTING BASE SHALL BE ALLEN BRADLEY BULLETIN 855 CONTROL TOWER STACK LIGHTS

5 EXTERIOR AND INTERIOR ALARM STATION (UNCLASSIFIED AREAS) – VISIBLE GREEN LIGHT/RED LIGHT (GO/NO GO) PROVIDE A STAINLESS STEEL NEMA 4X ENCLOSURE WITH TWO LED STACK LIGHTS GREEN STACK LIGHT SHALL BE LABELLED "VENTILATION SYSTEM NORMAL OPERATION" AND SHALL BE A GREEN STEADY BURN NEMA 4 LED STACK RED STACK LIGHT SHALL BE LABELLED "VENTILATION SYSTEM FAILURE" AND SHALL BE A RED FLASHING NEMA 4 LED STACK ALARM HORN SHALL SOUND WHILE RED LIGHT FLASHES ALARM STATION SHALL BE FIELD WIRED TO CHANGE FROM FLASHING RED LIGHT TO STEADY BURN RED LIGHT AND HORN SHALL SILENCE WHEN ALARM IS SILENCED/ACKNOWLEDGED AT THE ATC PANEL SILENCE PUSHBUTTON. STEADY BURN RED ALARM STACK SHALL REMAIN ON UNTIL RESET AT THE ATC PANEL



ATC–1 THROUGH 3 (EXTERIOR)
LOCAL ALARM STATION

DETAIL B
(DIV 40)

NOTES

1 PROVIDE HOFFMAN 2-HOLE PBX STATION, SS 304, NEMA 4x, OR APPROVED EQUAL

2 PROVIDE ALLEN BRADLEY TYPE 800T 30 MM PUSHBUTTONS, OR APPROVED EQUAL

3 PUSHBUTTONS ARE ACKNOWLEDGE AND SILENCE PUSHBUTTONS

4 LED STACK LIGHT WITH ALARM AND MOUNTING BASE SHALL BE ALLEN BRADLEY BULLETIN 855 CONTROL TOWER STACK LIGHTS

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REV NO	DATE	DRAWN	CHKD	REMARKS

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DRAWN BY D. BENIL
SHEET CHK'D BY B. NEAL
CROSS CHK'D BY W. WHITMORE
APPROVED BY B. NEAL
DATE SEPTEMBER 2025

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GA COA No. PE13001E, EXP. DATE 06/30/2026

VALDOSTA
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CITY OF VALDOSTA, GA

WITHLACOOCHEE WATER POLLUTION CONTROL PLANT

INSTRUMENTATION DETAILS

PROJECT NO 20190-20844
FILE NAME 00010107.DW

SHEET NO
ID-1

ISSUED FOR BI