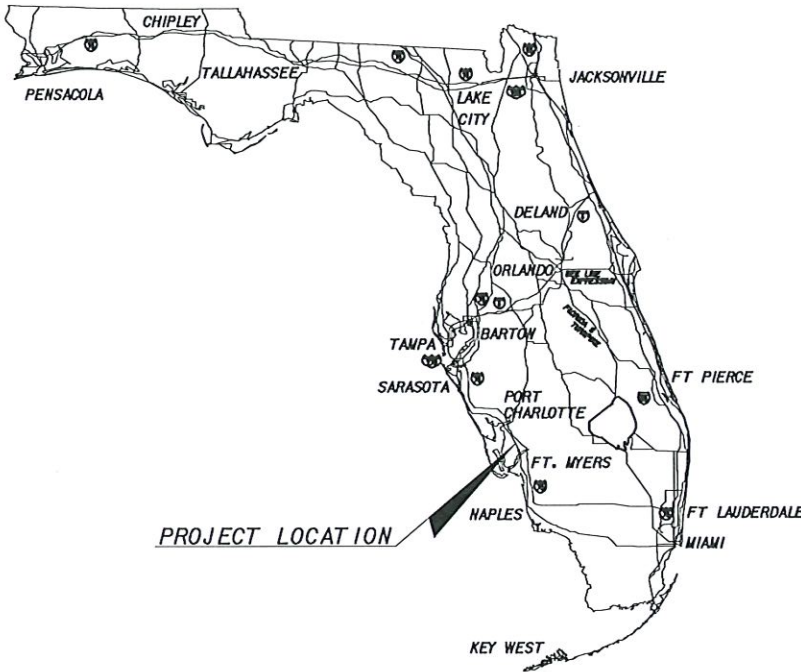


36" RAW WATER MAIN
SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)



COMPONENTS OF CONTRACT PLAN SET

RAW WATER PIPE LINE PLANS
PUMP STATION PLANS (P)
ELECTRICAL PLANS (E)

INDEX OF PUMP STATION PLANS

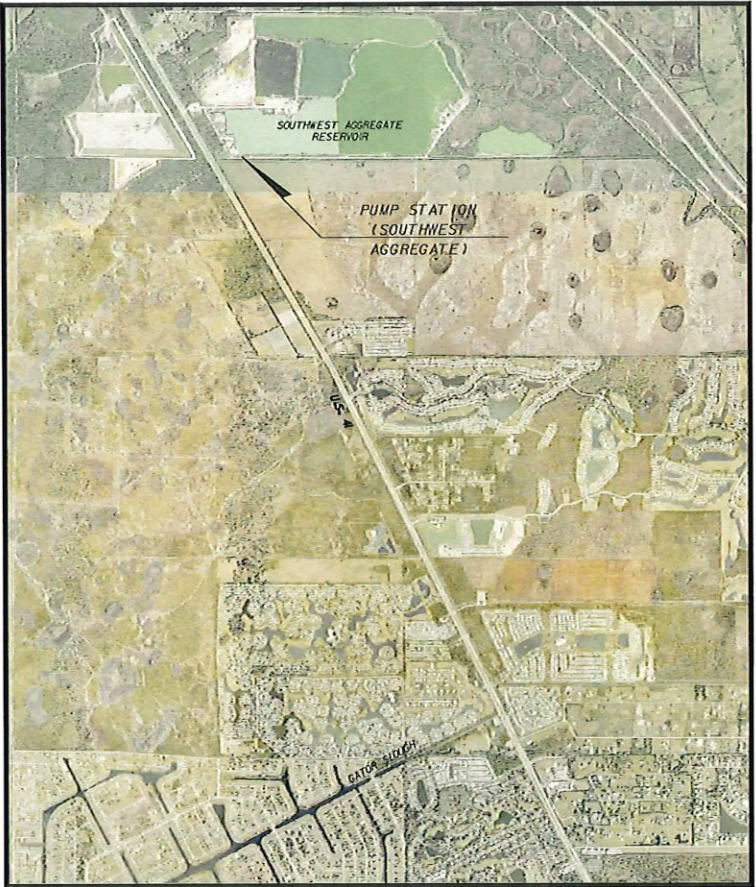
P-01	Cover
P-02	Notes & Legend
P-03	Proposed Site Plan
P-04	Proposed Pump Station
P-05	Proposed Site Plan Detail
P-06	Electrical Plans
E-01	ELECTRICAL NOTES
E-02	P & ID
E-03	SITE PLAN VIEW
E-04	ELECTRICAL RM. PLAN VIEW
E-05	ELECTRICAL RM. INTERIOR WEST WALL ELEVATION
E-06	ELECTRICAL RM. GROUNDING PLAN
E-07	SINGLE LINE DIAGRAM
E-08	ELECTRICAL ROOM PHOTOMETRICS
E-09	SITE PHOTOMETRICS
E-20	CONTROL PANEL INTERIOR
E-21	CONTROL PANEL SCHEMATIC
E-22	CONTROL PANEL IO AND BOM
E-23	NETWORK SCHEMATIC
E-30	FIELD BOM
E-31	GROUNDING DETAIL
E-32	WIRING DETAILS
E-33	WIRING DETAILS
E-34	SECTION A-A PUMP DISCONNECTS
E-35	SECTION B-B TERMINAL JB
E-36	SECTION C-C FLOW TRANSMITTER
E-37	SECTION D-D PRESSURE SENSORS
E-38	SECTION E-E ELEC. RM. EXT. WEST WALL ELEV.
D-01	Details 1 of 16
D-02	Details 2 of 16
D-03	Details 3 of 16
D-04	Details 4 of 16
D-05	Details 5 of 16
D-06	Details 6 of 16
D-07	Details 7 of 16
D-08	Details 8 of 16
D-09	Details 9 of 16
D-10	Details 10 of 16
D-11	Details 11 of 16
D-12	Details 12 of 16
D-13	Details 13 of 16
D-14	Details 14 of 16
D-15	Details 15 of 16
D-16	Details 16 of 16

UTILITY PLANS
ENGINEER OF RECORD: DAVID BRICE TROUTEAUD, P.E.

FLORIDA P.E. NO. 69783

FISCAL
YEAR

SHEET
NO.
P-01



PROJECT MAP

PLANS PREPARED BY:



660 CHARLOTTE STREET, SUITE 8
PUNTA GORDA, FLORIDA 33950
PHONE: (941)837-9655
FAX: (941)837-1149
WEB: www.sedfl.com
CERTIFICATE OF AUTHORIZATION NO. 26551

SURVEY AND PUMP STATION BY:



JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET
P.O. BOX 1550
FORT MYERS, FLORIDA 33902-1550
PHONE: (239) 334-0046
E.B. #642 & L.B. #642

FOR:



GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
DESIGN STANDARDS DATED 2013,
AND STANDARD SPECIFICATIONS FOR ROAD AND
BRIDGE CONSTRUCTION DATED 2013,
AS AMENDED BY CONTRACT DOCUMENTS.



NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

PLAN SHEET REVISIONS	
DATE	DESCRIPTION

100% DESIGN PLANS
APRIL 2025



Digitally
signed by
David B
Trouteaud

Date:
2025.04.16
10:12:11
-04'00'

ACRE
 ALTERNATE
 APPROX.
 ASBESTOS
 BENCH MARK
 BUILDING
 BOTTOM
 CATCH BASIN
 CUBIC FEET
 CUBIC FEET PER MINUTE
 CAST IRON
 CAST IRON PIPE
 CONSTRUCTION JOINT
 CORRUGATED METAL PIPE
 CLEANOUT
 CHECK VALVE
 CUBIC FOOT
 CUBIC YARD
 CENTER LINE
 CAULKING
 CHAIN LINK FENCE
 COLUMN, COLOR
 CONCRETE
 CONSTRUCTION
 CONTINUOUS
 CONTRACTOR
 CENTERS
 COPPER
 CUBIC INCH
 DIAMETER, #
 DIAGONAL
 DIMENSION
 DISTANCE
 DUCTILE IRON PIPE
 DRAINAGE EASEMENT
 DRAWING
 EAST
 ELEVATION
 EQUIPMENT
 ELLIPTICAL REINFORCED CONCRETE PIPE
 EASEMENT
 EXISTING
 FINISHED FLOOR
 FINISHED FLOOR ELEVATION
 FORMWORK
 FIRE DEPARTMENT CONNECTION
 FOUNDATION
 FINISH
 FIBERGLASS REINFORCED PLASTIC
 FEET
 NATURAL GAS
 GENERAL CONTRACTOR
 GALVANIZED IRON
 GALLONS PER MINUTE
 GATE VALVE
 GAUGE
 GALVAN
 GALVANIZED
 GRADE
 HIGH DENSITY POLYETHYLENE
 HORIZONTAL
 HYDRANT
 INSIDE DIAMETER
 INVERT
 IRON
 LAKE ACCESS EASEMENT
 LEAK
 LEAK PREVENTENCE EASEMENT
 LAKE MAINTENANCE TRACT
 MILLION GALLONS PER DAY
 MANHOLE
 MECHANICAL JOINT
 MAXIMUM
 MECHANICAL
 MITERED END SECTION
 MANUFACTURER
 MINIMUM
 MISCELLANEOUS
 NORTH
 NORTHEAST
 NORTHWEST
 NOT POTABLE WATER
 NOT TO SCALE
 NUMBER
 NOMINAL
 NATURAL GAS
 ON CENTERS
 ON CENTER EACH WAY
 OUTSIDE DIAMETER
 POUNDS PER CUBIC FOOT
 POUNDS PER SQUARE FOOT
 PLUMBING
 POUNDS PER SQUARE INCH
 POLYVINYL CHLORIDE
 POLYETHYLENE
 PAVEMENT
 POINT OF CURVATURE
 PROPOSED GRADE LINE
 PRIORITY LINE
 PLUMBING
 PLYWOOD
 POTABLE WATER
 POINT OF TANGENCY
 PUBLIC UTILITY EASEMENT
 POINT OF VERTICAL INTERSECTION
 QUANTITY
 RADIUS
 ROAD
 REINFORCED CONCRETE PIPE
 REQUIRED
 RIGHT OF WAY
 REUSE LINE
 RAW WATER MAIN
 RIGHT OF WAY
 SOUTH
 SOUTHEAST
 SOUTHWEST
 SANITARY SEWER
 SANITARY
 SCHEDULE
 SECTION
 SEWER
 SHEET
 SPECIFICATION
 SQUARE
 STREET
 STATION
 STEEL
 STANDARD
 SURFACE
 SYMMETRICAL
 TOE OF SLOPE
 TOP OF BANK
 THICK
 TELEPHONE
 TEMPERATURE
 TRANSFORMER
 TYPICAL
 UTILITY EASEMENT
 VERTICAL
 WATER
 WATER MAIN
 WITH
 WITHOUT
 WOOD
 WEIGHT
 WATER VALVE
 WALL HYDRANT

	GATE VALVE
	CHECK VALVE
	TEE ASSEMBLY
	REDUCER
	BLOW OFF
	FIRE HYDRANT
	FIRE HYDRANT ASSEMBLY W/ GATE VALVE
	MITERED END SECTION
	MANHOLE W/ NUMBER
	PLUG VALVE
	AIR RELEASE VALVE
	11.25° BEND
	22.5° BEND
	45° BEND
	90° BEND
	VERTICAL DEFLECTION
	WYE
	WATER SERVICE (DOUBLE)
	WATER SERVICE (SINGLE)
	IRRIGATION SERVICE (DOUBLE)
	IRRIGATION SERVICE (SINGLE)
	SEWER SERVICE (DOUBLE)
	SEWER SERVICE (SINGLE)
	HEADWALL
	DRAINAGE INLET (SEE PLAN FOR TYPES)
	THROAT INLET
	FLARED END SECTION

	EXISTING	PROPOSED
WATER MAIN	EX WM	WM
WATER MAIN WITH SIZE	EX 8" WM	PR. 8" WM
WATER SERVICE	EX WS	PR. WS
FORCE MAIN	EX FM	FM
FORCE MAIN WITH SIZE	EX 8" FM	PR. 8" FM
IRRIGATION MAIN	EX IRR	IRR
IRRIGATION MAIN WITH SIZE	EX 8" IRR	PR. 8" IRR
REUSE MAIN	EX RJ	RU
REUSE MAIN WITH SIZE	EX 8" RJ	PR. 8" RU
IQ MAIN	EX IQ	IQ
IQ MAIN WITH SIZE	EX 8" IQ	PR. 8" IQ
RAW WATER MAIN	EX RW	RW
RAW WATER MAIN WITH SIZE	EX 8" RW	PR. 8" RW
SANITARY SEWER	EX SS	SS
SANITARY SEWER WITH SIZE	EX 8" SS	PR. 8" SS
CABLE TELEVISION	EX TV	
CLOSED CIRCUIT TELEVISION	EX CCTV	
MISC. COMMUNICATION	EX COMM	
ELECTRIC	EX ELEC	
OVERHEAD ELECTRIC	EX OHE	
UNDERGROUND ELECTRIC	EX UHE	
GAS MAIN	EX GAS	
GAS MAIN WITH SIZE	EX 8" GAS	
FIRE MAIN	EX FIRE	
DRAINAGE	EX SD	
DRAINAGE WITH SIZE	EX 8" DR	
STORM WATER	EX STW	
TELEPHONE	EX TEL	
UNDERGROUND TELEPHONE	EX UGT	

PRINTING FULL SIZE OR 22"x34" PLANS:

- 22"x34" PLANS ARE MEANT TO BE PLOTTED AT 20 SCALE.
(SEE INDIVIDUAL SCALE BARS ON EACH SHEET FOR DEVIATIONS)
- WHEN PRINTING FULL SIZE PLANS (22"x34") MAKE SURE THE PROPER SIZE PAPER IS USED, FAILURE TO DO SO WILL RESULT IN PLANS THAT ARE NOT TO SCALE.
- WHEN PRINTING 22"x34" PDF'S FROM ADOBE SELECT "ACTUAL SIZE" & "CHOOSE PAPER SOURCE BY PDF PAGE SIZE"

PRINTING 1/2 SIZE OR 11"x17" PLANS:

- 11"x17" PLANS ARE MEANT TO BE PLOTTED AT 40 SCALE.
(SEE INDIVIDUAL SCALE BARS ON EACH SHEET FOR DEVIATIONS)
- WHEN PRINTING 1/2 SIZE PLANS (11"x17") MAKE SURE THE PROPER SIZE PAPER IS USED, FAILURE TO DO SO WILL RESULT IN PLANS THAT ARE NOT TO SCALE.
- WHEN PRINTING 11"x17" PDF'S FROM ADOBE SELECT "ACTUAL SIZE" & "CHOOSE PAPER SOURCE BY PDF PAGE SIZE"

ASPHALT DRIVE	ASPH. SIDEWALK
CONCRETE DRIVE PAINTED OR STAMPED	BRICK SIDEWALK
CONCRETE DRIVE	CONC. SIDEWALK
BRICK DRIVE	ROADWAY
GRAVEL/DIRT DRIVE	ROADWAY TRENCH



NOTICE TO ALL CONTRACTORS

IT'S THE LAW IN FLORIDA
2 BUSINESS DAYS BEFORE YOU DIG
CALL SUNSHINE 1-800-432-4770

STATE, COUNTIES & CITIES ARE "NOT"
PART OF THE ONE CALL SYSTEM.
THEY MUST BE CALLED INDIVIDUALLY.

STATE OF FLORIDA DOT
ALL INTERSTATE ROUTE 95+WAY
HIGHMAST LIGHTING
7-DAY NOTICE REQUIRED
239-656-7811
239-656-7742 FAX

**Know what's below.
Call before you dig.**

STATE OF FLORIDA DOT
ALL INTERSTATE RIGHT-OF-WAY
HIGHEST LIGHTING
7-DAY NOTICE REQUIRED
239-656-7811
239-656-7742 FAX

ALL FIELD LAYOUT AND SURVEYING FOR CONSTRUCTION OF THIS PROJECT SHALL BE PROVIDED BY THE CONTRACTOR AT THEIR EXPENSE, UNDER THE DIRECTION OF A LICENSED PROFESSIONAL LAND SURVEYOR.

2. BENCH MARK DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988).

3. EXISTING SUBSURFACE UTILITY HORIZONTAL ALIGNMENTS WERE ESTABLISHED THROUGH THE USE OF AVAILABLE RECORDS AND, THEREFORE, ARE SHOWN IN APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE UTILITY COMPANIES NO LATER THAN 72 HOURS PRIOR TO COMMENCING WORK IN A SPECIFIC AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF ALL UTILITIES SIZE AND LOCATIONS WITHIN THE WORK AREA PRIOR TO BEGINNING WORK IN THE SPECIFIC AREA.

4. CONTACT SUNSHINE STATE ONE CALL OF FLORIDA (SSOCOF) (811 or 1-800-432-4770) FOR ASSISTANCE IN FIELD LOCATING UNDERGROUND UTILITIES AT LEAST THREE WORKING DAYS BEFORE STARTING WORK IN A PROJECT AREA. UTILITIES IDENTIFIED AS POTENTIALLY BEING WITHIN THE PROJECT LIMITS UNDERGROUND:

UTILITY	TELEPHONE
CAPE CORAL UTILITIES COLLECTION DISTRIBUTION DIVISION	(239) 574-0852
LEE COUNTY ELECTRIC CO-OPERATIVE	(239) 656-2206
FLORIDA POWER & LIGHT	(239) 332-9129
CENTURYLINK TELEPHONE	(941) 964-7009
COMCAST CABLE	(941) 342-3578
VERIZON	(941) 906-6722
TECO (PEOPLES GAS)	(239) 690-5517
AMERIGAS	(941) 255-9900
CHARLOTTE COUNTY UTILITIES (WAT. & SEWER)	(941) 764-4364
CHARLOTTE COUNTY LIGHTING DISTRICT	(941) 575-3632
WASTE MANAGEMENT	(941) 628-7823

5. BURIED PHONE LINES EXIST THROUGHOUT THE LIMITS OF WORK BUT MAY NOT BE IDENTIFIED ON THE DRAWINGS. PROCEED WITH CAUTION TO MAINTAIN THE PHONE SERVICES. DAMAGES TO, OR RELOCATION OF PHONE LINES DURING CONSTRUCTION SHALL BE REPORTED IMMEDIATELY TO AND/OR COORDINATED WITH CENTURYLINK TELEPHONE AND REPAIRED OR RELOCATED AT THE CONTRACTOR'S EXPENSE.

6. WATER SERVICES EXIST THROUGHOUT THE LIMITS OF WORK BUT MAY NOT BE IDENTIFIED ON THE DRAWINGS. PROCEED WITH CAUTION TO MAINTAIN THE WATER SERVICES. DAMAGES TO, OR RELOCATION OF WATER SERVICES DURING CONSTRUCTION SHALL BE REPORTED IMMEDIATELY TO AND/OR COORDINATED WITH CAPE CORAL UTILITIES COLLECTION DISTRIBUTION DIVISION (UCD) AND REPAIRED OR RELOCATED AT THE CONTRACTOR'S EXPENSE.

7. OVERHEAD AND UNDERGROUND ELECTRIC LINES EXIST THROUGHOUT THE LIMITS OF WORK BUT MAY NOT BE SHOWN ON THE DRAWINGS. PROCEED WITH CAUTION TO PROTECT THE ELECTRIC LINES AND POLES. DAMAGES TO, OR RELOCATION OF ELECTRIC LINES OR POLES SHALL BE REPORTED IMMEDIATELY TO AND/OR COORDINATED WITH POWER COMPANY AND REPAIRED OR RELOCATED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL ARRANGE AND PAY FOR ALL UTILITY POLE BRACING REQUIRED BY HIS OPERATIONS.

8. BURIED CABLE AND FIBER OPTIC LINES EXIST THROUGHOUT THE LIMITS OF WORK BUT MAY NOT BE SHOWN ON THE DRAWINGS. PROCEED WITH CAUTION TO PROTECT THE BURIED CABLE AND FIBER OPTIC LINES. DAMAGES TO OR RELOCATION OF CABLE AND FIBER OPTIC LINES SHALL BE REPORTED IMMEDIATELY TO AND/OR COORDINATED WITH THE CABLE COMPANY AND REPAIRED OR RELOCATED AT THE CONTRACTOR'S EXPENSE.

9. DISRUPTION OR DAMAGE TO EXISTING UTILITY LINES SHALL BE REPORTED TO THE UTILITY OWNER, CITY OF CAPE CORAL AND ENGINEER IMMEDIATELY.

10. CONTRACTOR SHALL EXCAVATE TEST PITS FOR THE PURPOSE OF PROTECTING AND CONFIRMING LOCATION AND DEPTH OF EXISTING UTILITIES OR STRUCTURES IN ADVANCE OF CONSTRUCTION. TEST PITS SHALL BE DUG BY HAND AND BACKFILLED IMMEDIATELY AFTER THEIR PURPOSE HAS BEEN SATISFIED AND SHALL NOT REMAIN OPEN DURING NONWORKING HOURS.

11. THE CONTRACTOR SHALL NOTIFY THE CITY OF CAPE CORAL UCD A MINIMUM OF 72 HOURS IN ADVANCE OF ANY AND ALL WORK REQUIRING DISRUPTION OF WATER, OR SANITARY SEWER SERVICE. DISRUPTION IN SERVICE TO ANY PROPERTY OWNER SHALL NOT EXCEED TWO HOURS FOR WATER AND FOUR HOURS FOR SANITARY SEWER SERVICE. ACCESS TO PROPERTY SHALL BE MAINTAINED AT ALL TIMES.

12. AFTER THE CITY OF CAPE CORAL UCD APPROVES OF A DISRUPTION OF WATER, OR SANITARY SEWER SERVICE, THE CONTRACTOR SHALL NOTIFY THE AFFECTED PROPERTY OWNERS A MINIMUM OF 48 HOURS IN ADVANCE OF ANY AND ALL WORK REQUIRING DISRUPTION OF WATER, OR SANITARY SEWER SERVICE.

13. DISINFECTION AND SAMPLING WILL BE REQUIRED WHEREVER AN EXISTING WATER MAIN OR SERVICE IS DISTURBED DUE TO CONSTRUCTION ACTIVITY AT THE CONTRACTOR'S EXPENSE. THE CITY WITH ASSISTANCE FROM THE CONTRACTOR WILL SUPPLY THE AFFECTED PROPERTY OWNERS WITH A NOTICE TO BOIL WATER WHEREVER THE EXISTING WATER MAINS OR SERVICES ARE DISTURBED.

14. THE CONTRACTOR SHALL MINIMIZE THE DISRUPTION OF SERVICE TO ANY EXISTING FIRE HYDRANTS. THE FIRE DEPARTMENT SHALL BE NOTIFIED A MINIMUM OF 72 HOURS IN ADVANCE OF ANY AND ALL WORK REQUIRING DISRUPTION.

15. HORIZONTAL AND VERTICAL SEPARATION OF WATER, SANITARY SEWER AND OTHER UTILITIES SHALL CONFORM TO GENERAL DETAIL SHEET XX AND MEET THE CURRENT REQUIREMENTS OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) AND THE SPECIFIC REQUIREMENTS OF THE PROJECT PERMITS.

16. LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES EXPOSED DURING CONSTRUCTION SHALL BE ACCURATELY RECORDED ON THE CONSTRUCTION DRAWINGS. THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY CONFLICTS WITH THE PROPOSED CONSTRUCTION.

17. CONTRACTOR SHALL PROVIDE SUPPLEMENTAL PHYSICAL SUPPORT FOR EXISTING UTILITIES THAT ARE EXPOSED BY EXCAVATION FOR GREATER THAN 10 FT (THAT IS TRENCH WIDTH AT THE TOP) AS DIRECTED BY ENGINEER. THERE SHALL BE NO VISIBLE DEFLECTION ON EXISTING UTILITIES AS THEY ARE UNDERMINED FOR TRENCHING.

18. ANY AND ALL AREAS DISTURBED DURING CONSTRUCTION ACTIVITIES SHALL BE COMPLETELY RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING PRIOR TO CONSTRUCTION.

19. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SHAPE THE PAVEMENT AT INTERSECTIONS, STREETS, AND DRIVEWAYS SO THAT POSITIVE DRAINAGE WILL BE MAINTAINED WITH NO PONDING OF WATER AS A RESULT OF THE NEW CONSTRUCTION.

20. PROPERTY MARKERS, SURVEY MONUMENTS AND PERMANENT MARKERS SHALL BE PROTECTED BY THE CONTRACTOR, THE CONTRACTOR'S REGISTERED SURVEYOR SHALL REPLACE ANY MARKERS THAT ARE DISTURBED.

21. CONTRACTOR IS REMINDED THAT ACCORDING TO FLORIDA STATUTE 177.121 IT IS A MISDEMEANOR TO MOLEST MONUMENT, OR DEFACE OR DESTROY MAP OR PLAT. IT IS A MISDEMEANOR OF THE SECOND DEGREE, PUNISHABLE AS PROVIDED IN STATUTE 775.082 OR STATUTE 775.083, FOR ANY PERSON TO MOLEST ANY MONUMENTS ESTABLISHED ACCORDING TO CHAPTER 177 OR TO DEFACE OR DESTROY ANY MAP OR PLAT PLACED ON PUBLIC RECORD.

22. EXISTING GRAVITY SEWER MAIN FLOW PATH SHALL BE MAINTAINED IN OPERATION AT ALL TIMES. BYPASS PUMPING AS REQUIRED BY THE CONTRACTOR'S ACTIVITIES SHALL BE AT THE CONTRACTOR'S COST.

23. ALL EXISTING CITY TRAFFIC SIGNS WITHIN THE PROPOSED CONSTRUCTION LIMITS ARE TO BE PROTECTED BY THE CONTRACTOR. CAUTION SHOULD BE EXERCISED WHILE RELOCATING EXISTING SIGNS WHERE DIRECTED. IF THE SIGNS ARE DAMAGED BEYOND USE, SIGNS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

24. FOR CONFLICT ADJUSTMENTS OF PROPOSED WATER AND SEWER FORCE MAIN, PIPE DEFLECTION SHALL MEET REQUIREMENTS SET FORTH IN THE SPECIFICATION MANUAL. OTHERWISE, UTILIZE FITTINGS TO MATCH CURVATURE, AS REQUIRED.

25. THE CONTRACTOR SHALL ADJUST (AS REQUIRED) PIPELINE ALIGNMENTS HORIZONTALLY AND/OR VERTICALLY TO AVOID CONFLICTS WITH ACTUAL FIELD CONDITIONS AS UNCOVERED DURING CONSTRUCTION. FIELD ADJUSTMENT SHALL BE COORDINATED WITH, AND APPROVED BY, THE ENGINEER.

26. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY AND SHALL PROVIDE ALL SHORING, SHEETING, AND BRACING NECESSARY TO PROTECT WORKMEN, ADJACENT STRUCTURES, UTILITIES, EXISTING PAVEMENT, OR TO MINIMIZE TRENCH WIDTH.

27. IF USED, INSTALL TEMPORARY STEEL SHEET PILING IN ACCORDANCE WITH FOOT STANDARD SPECIFICATIONS SECTIONS 455-8 AND 455-9. SUBMIT SHEETING CALCULATIONS SEALED BY FLORIDA LICENSED PROFESSIONAL ENGINEER A MINIMUM OF 7 DAYS PRIOR TO INSTALLATION.

28. THE CONTRACTOR IS RESPONSIBLE FOR PUMPING ALL WELL POINT DEWATERING FLOWS IN ACCORDANCE WITH THE CONTRACTOR OBTAINED DEWATERING PERMIT. THE CONTRACTOR SHALL BE KNOWLEDGEABLE OF THE CITY DRAINAGE STORM WATER SYSTEM. THE CONTRACTOR MAY REVIEW THE CITY DRAINAGE SYSTEM AT CITY HALL UPON NOTIFICATION TO THE PURCHASING/CONTRACTS DEPARTMENT.

29. PROTECT AND MAINTAIN DRAINAGE SYSTEMS. CLEAN DRAINAGE SYSTEMS AFFECTED BY THE WORK AT THE END OF CONSTRUCTION. FURNISH, INSTALL AND MAINTAIN SITE SPECIFIC EROSION AND SEDIMENT CONTROL PROCEDURES TO PROTECT BOTH EXISTING AND CONSTRUCTED FACILITIES, PROPERTY AND WATER BODIES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, OWNER'S WATER USE PERMIT, AND APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. OBTAIN NPDES PERMIT WHERE REQUIRED AS SPECIFIED IN THE NPDES REQUIREMENTS. KEEP A COPY OF ALL APPLICABLE PERMITS ONSITE..

30. FURNISH AND MAINTAIN MAINTENANCE OF TRAFFIC EQUIPMENT AND LABOR (BARRICADES, SIGNS, FLAGMEN, ETC.) IN ACCORDANCE WITH SECTION 01570 - MAINTENANCE OF TRAFFIC OF THE CONTRACT DOCUMENTS, THE CURRENT EDITION OF THE MANUAL ON THE UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS UNTIL PAVING OVERLAY IS COMPLETED.

31. EXCESS SOIL FROM EXCAVATION AND MILLED OR EXCAVATED ASPHALT SHALL BE THE PROPERTY OF THE CONTRACTOR. INCLUDE THE COST FOR DISPOSING OF THESE WASTE MATERIALS IN THE UNIT PRICE OF THE ITEM TO WHICH IT PERTAINS OR IS MOST CLOSELY ASSOCIATED. NO SEPARATE PAYMENT ITEM FOR THESE ACTIVITIES WILL BE PERMISSIBLE.

32. REPLACE IN KIND SIDEWALKS, DRIVES, LAWNS, MAIL BOXES, SPRINKLERS, ETC., REMOVED OR DAMAGED DURING CONSTRUCTION OR THE STAGING OF MATERIAL OR DEWATERING.

33. ROAD RESTORATION SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

34. ALL DIRT AND DEBRIS TRACKED ON TO CITY STREETS OUTSIDE OF CONSTRUCTION AREA MUST BE CLEANED UP AND BROOMED DAILY.

SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)
RAW WATER PIPE LINE

100% Design Plans
Notes & Legend

SHEET NUMBER

P-02

SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)
RAW WATER PIPE LINE

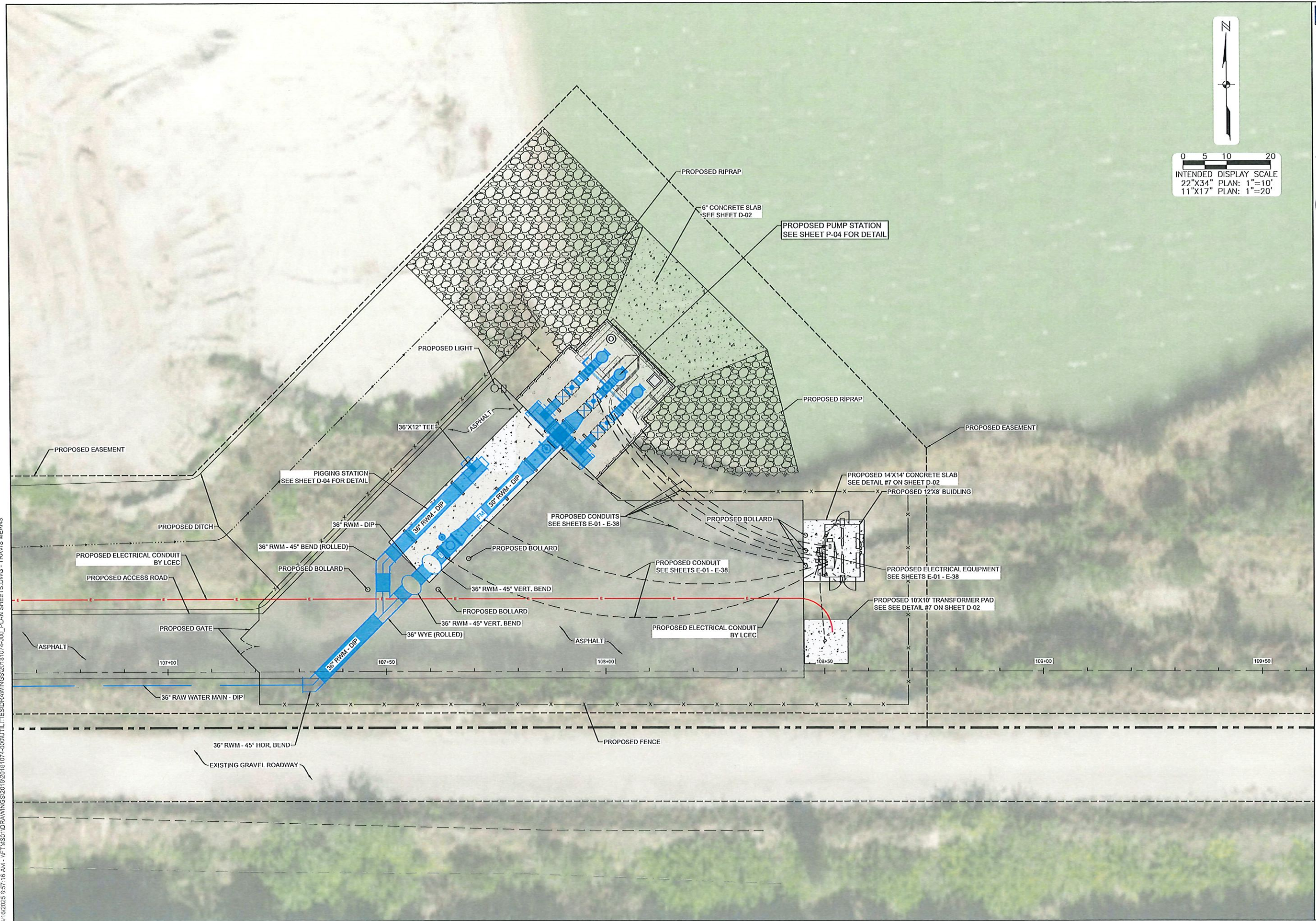
[illegible]

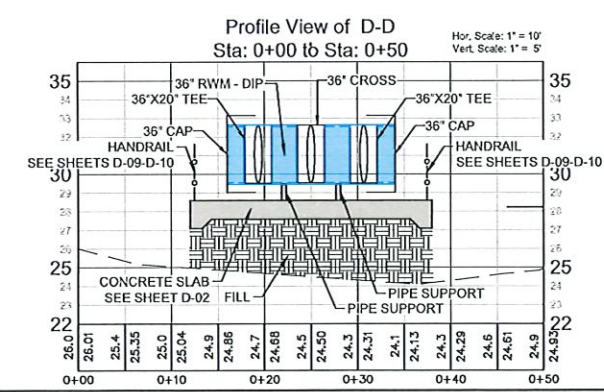
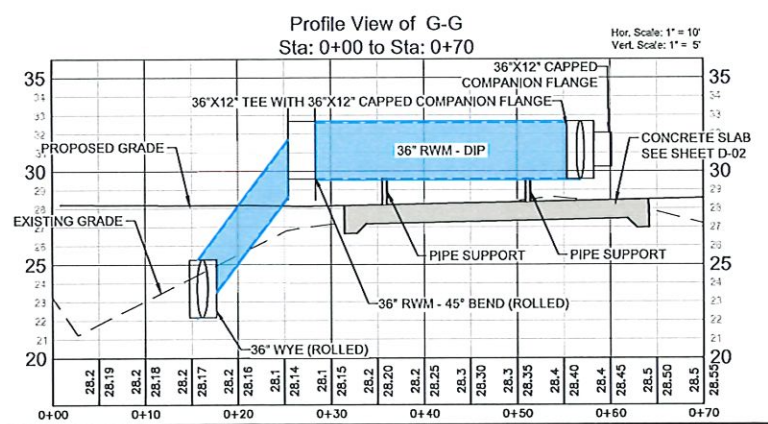
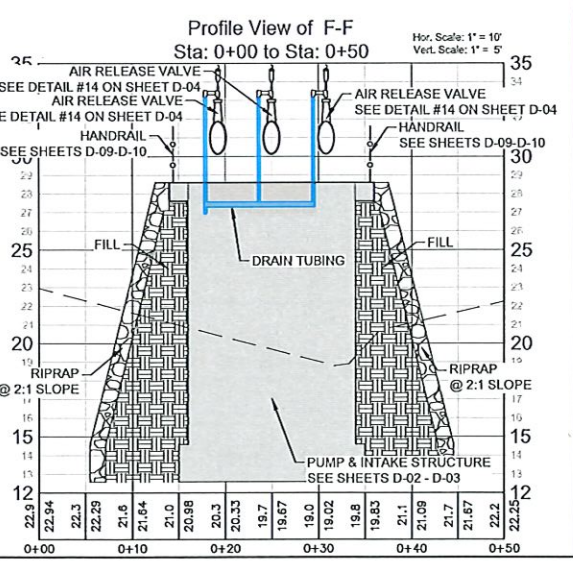
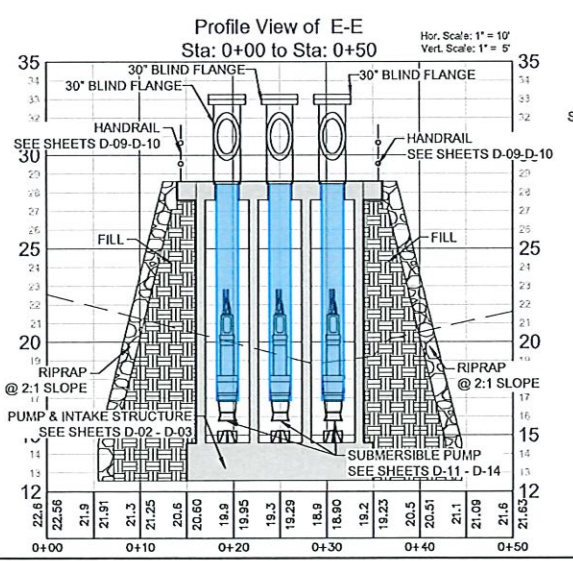
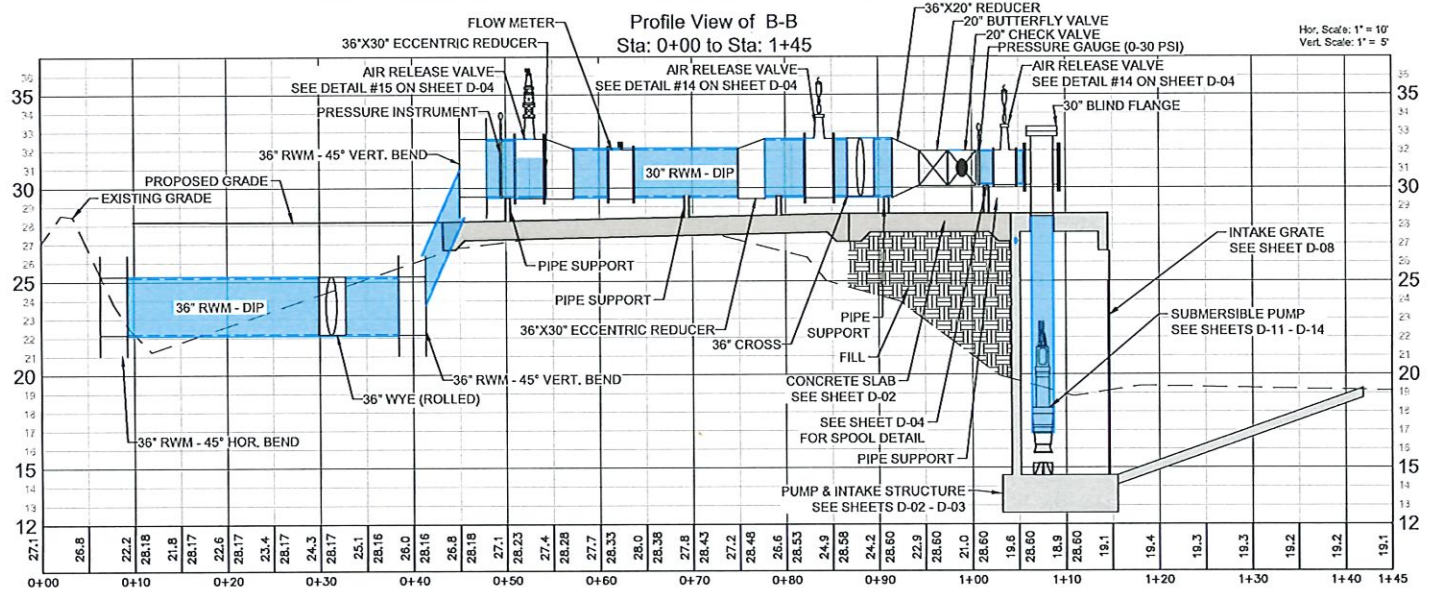
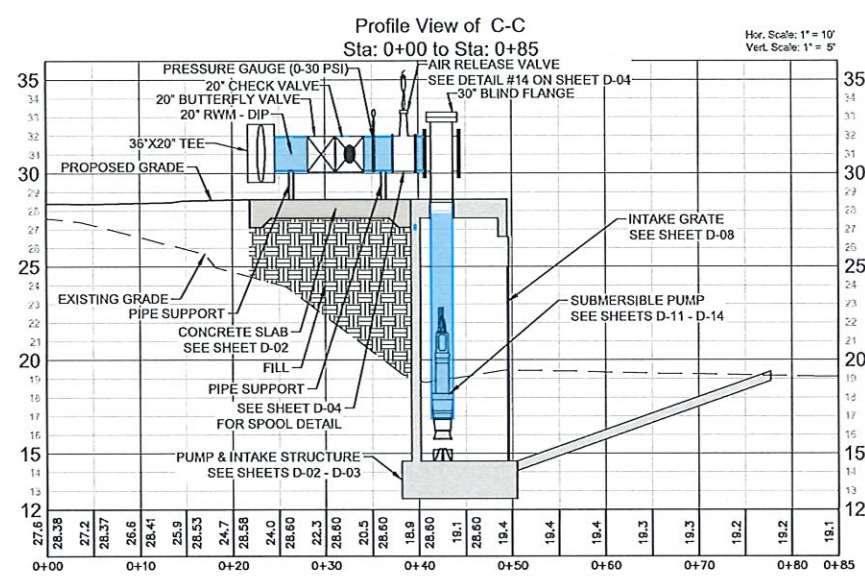
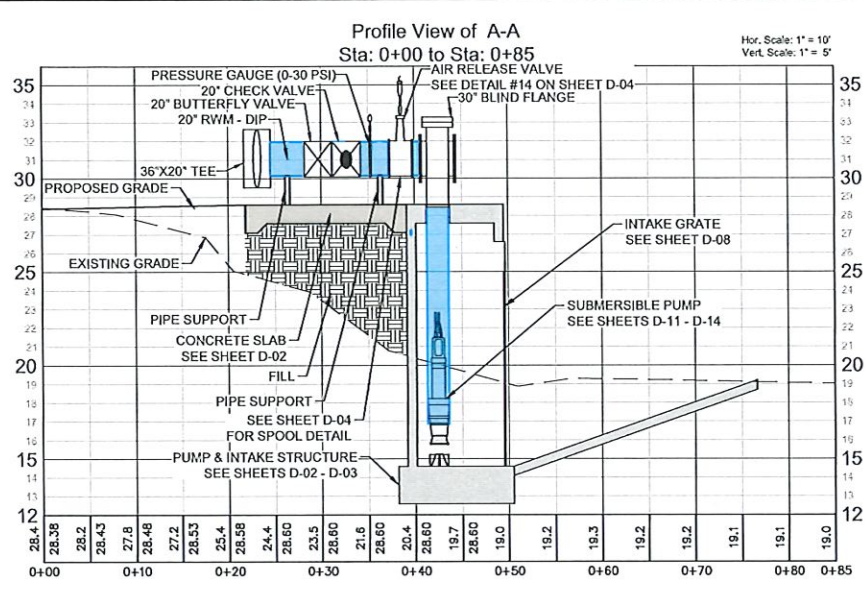
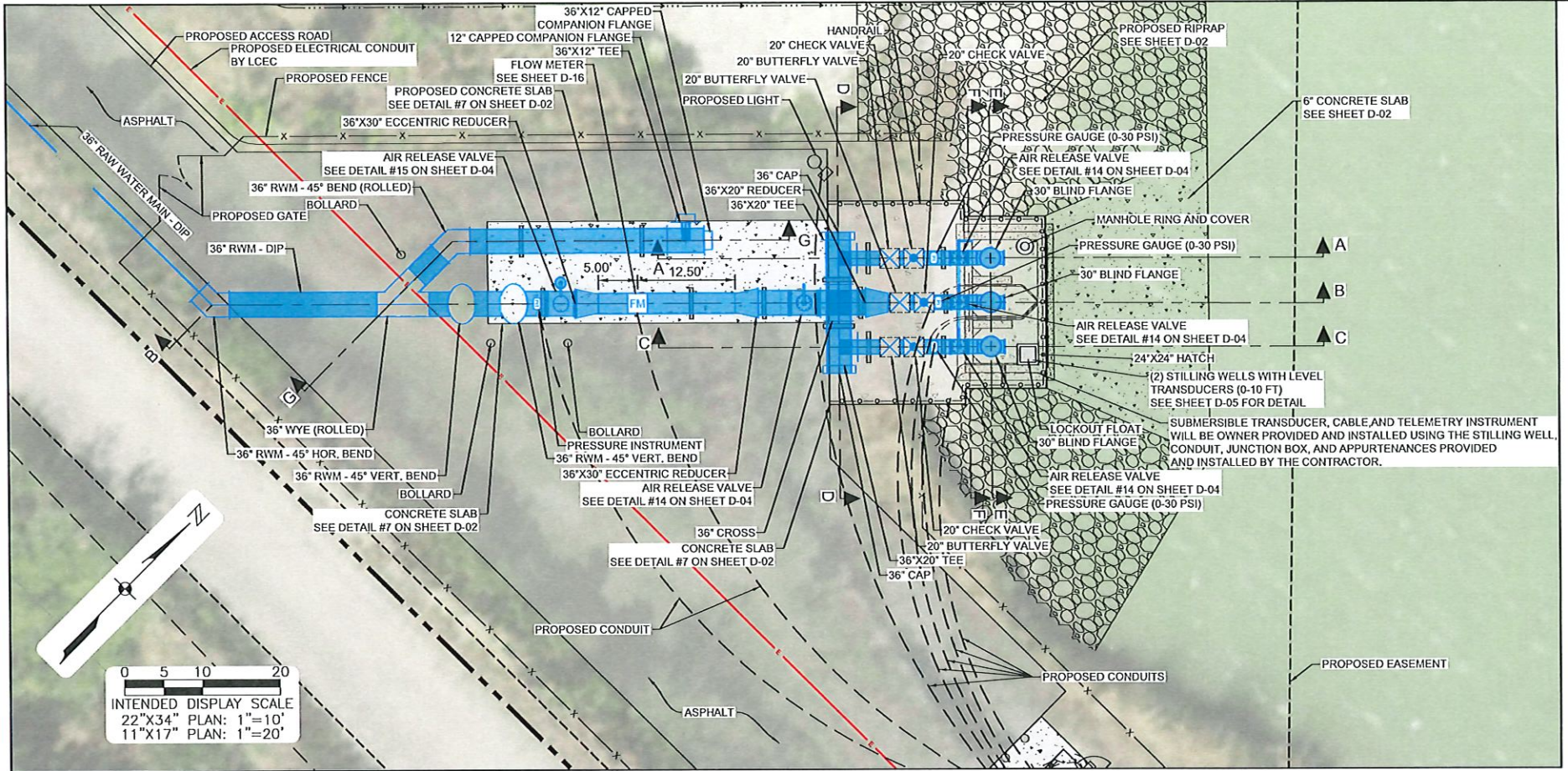
DATE:	APRIL 16, 2025
PROJECT NO.	15-0252.06
FILE NO.	29-42-24
SCALE:	AS SHOWN

100% Design Plans
Proposed Site Plan

SHEET NUMBER

P-03





JOHNSON ENGINEERING
JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET
P.O. BOX 1550
FORT MYERS, FLORIDA 33902-1550
PHONE: (239) 334-0048
E.B. #642 & L.B. #642

DAVID BRICE TROUPEAU, PE
FL License No. 69783



SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)
RAW WATER PIPE LINE

REVISIONS	DATE
DESCRIPTION	
NO.	

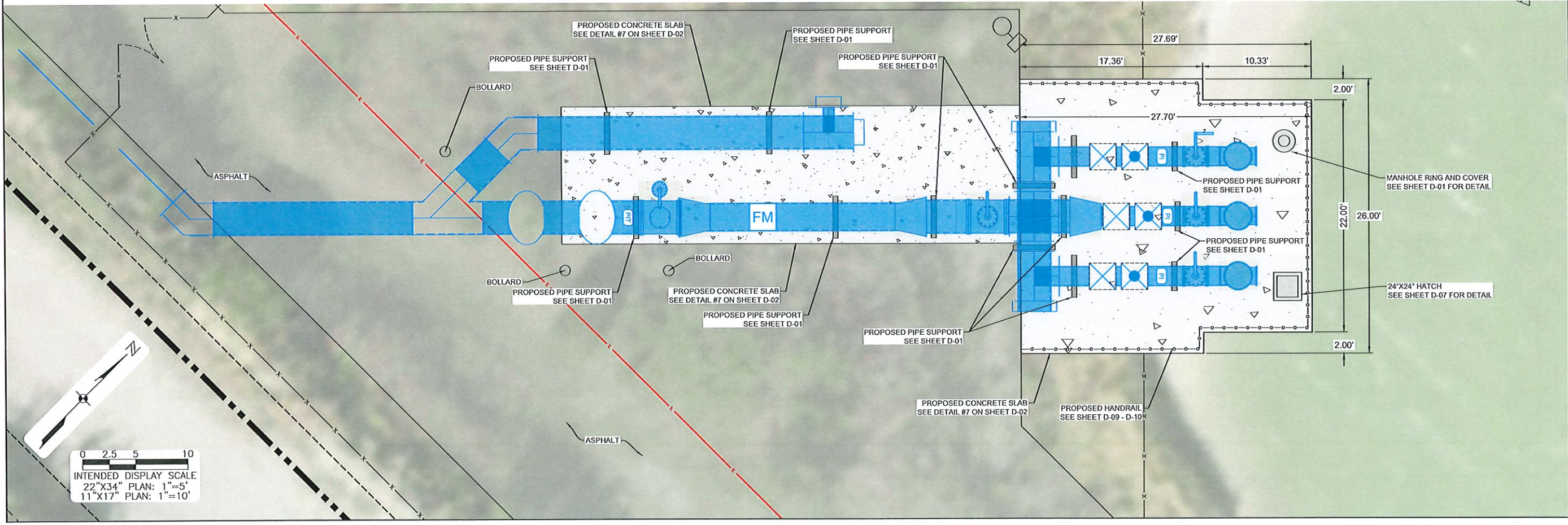
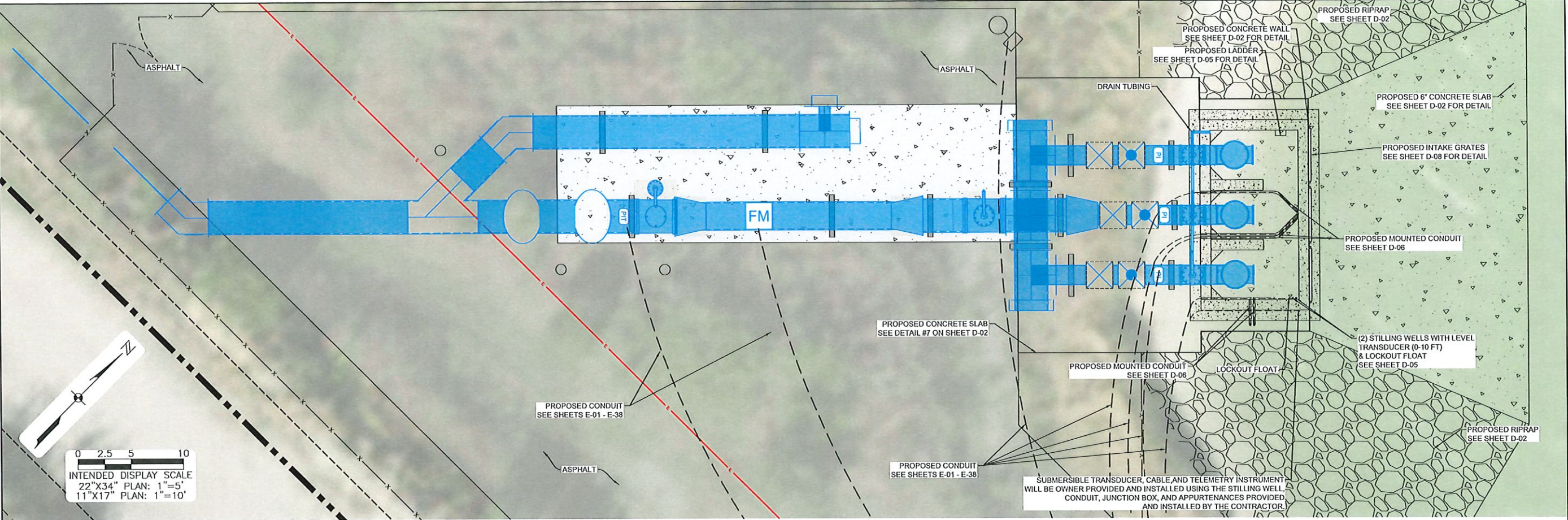
DATE: APRIL 16, 2025
PROJECT NO. 15-0252.06
FILE NO. 29-42-24
SCALE: AS SHOWN

100% Design Plans
Proposed Pump Station

SHEET NUMBER
P-04

4/19/2025 8:57:50 AM - \FTNS01\DRAWINGS\2018\20181074-000\UTILITIES\DRAWINGS\20181074-000_PLAN SHEETS.DWG - TRAVIS MEANS

4/16/2025 8:55:04 AM - \\FTN\SD\DRAWINGS\2018\1074-000\UTILITIES\DRAWINGS\2018\1074-000_PLAN SHEETS.DWG - TRAVIS MEANS



**JOHNSON
ENGINEERING**
JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET
P.O. BOX 1550
FORT MYERS, FLORIDA 33902-1550
PHONE: (239) 334-0048
E.B. #642 & L.B. #642

DAVID BRICE TROUTEAU, PE
FL License No. 69783



SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)
RAW WATER PIPE LINE

NO.	REVISIONS DESCRIPTION	DATE

DATE: APRIL 16, 2025
PROJECT NO. 15-0252.06
FILE NO. 29-42-24
SCALE: AS SHOWN

100% Design Plans
Proposed Site Plan Detail

SHEET NUMBER
P-05

4/16/2025 8:55:46 AM - O:201802181074-000ELECTRICAL\20181074-000 - TRAVIS MEANS

ABBREVIATIONS		SYMBOLS		GENERAL ELECTRICAL NOTES	
A	AMPERES, AMBER OR ALARM		MAGNETIC FLOW INDICATING TRANSMITTER		DUPLEX RECEPTACLE
AG	ABOVE GROUND				NORMALLY OPEN CONTACT
AL	ALARM LIGHT		PRESSURE INDICATING TRANSMITTER		NORMALLY CLOSED CONTACT
ALM	ALARM		FLOW INDICATING TRANSMITTER		LIMIT SWITCH, NORMALLY OPEN
ARC	ALUMINUM RIGID CONDUIT		FLOW ELEMENT		LIMIT SWITCH, NORMALLY CLOSED
AHU	AIR HANDLING UNIT		LEVEL (FLOAT) SWITCH		PRESSURE SWITCH, NORMALLY OPEN
AIC	AMPS INTERRUPTING CURRENT		PRESSURE SWITCH		PRESSURE SWITCH, NORMALLY CLOSED
ATS	AUTOMATIC TRANSFER SWITCH		FLOW SWITCH		FLOAT SWITCH, NORMALLY OPEN
AUX	AUXILIARY		MOTOR OPERATED VALVE (MOV)		FLOAT SWITCH, NORMALLY CLOSED
BAT	BATTERY				FLOW SWITCH, NORMALLY OPEN
BPC	BACKUP PUMP CONTROLLER				FLOW SWITCH, NORMALLY CLOSED
BOM	BILL OF MATERIAL		SOLENOID VALVE (SV)		TEMP. SWITCH, NORMALLY OPEN
CB	CIRCUIT BREAKER		SOLENOID VALVE (SV)		TEMP. SWITCH, NORMALLY CLOSED
C	CONDUIT				NORMALLY OPEN TIMED TO CLOSE CONTACT
CP	CONTROL PANEL				NORMALLY CLOSED TIMED TO OPEN CONTACT
CPSA	CONTROL PANEL SURGE ARRESTOR				NORMALLY CLOSED TIMED TO CLOSE CONTACT
CT	CURRENT TRANSFORMER		DIAPHRAGM VALVE		NORMALLY OPEN TIMED TO OPEN CONTACT
CU	COPPER		VOLTMETER		LIMIT SWITCH
DISC	DISCONNECT		AMMETER		TORQUE SWITCH
DO	DIGITAL OUTPUT		GROUND FAULT INTERRUPTER		PRESSURE SWITCH
DPDT	DOUBLE POLE DOUBLE THROW		DRAW-OUT CIRCUIT BREAKER		VIBRATION SWITCH
DPST	DOUBLE POLE SINGLE THROW		MOTOR WITH HP RATING		ALARM RELAY
EG	EQUIPMENT GROUND		EQUIPMENT GROUND		CONTROL RELAY
ETM	ELAPSED TIME METER				MOTOR STARTER
F	FUSE				TIMING RELAY
FLT	FAULT				INDICATING LIGHT WITH COLOR
FPL	FLORIDA POWER AND LIGHT				NORMALLY OPEN PUSHBUTTON
FMC	FLEXIBLE METALLIC CONDUIT				NORMALLY CLOSED PUSHBUTTON
FS	FLOAT SWITCH				MAINTAINED SWITCH
GEN	GENERATOR				FUSE WITH RATING
GFCI	GROUND FAULT CIRCUIT INTERRUPTER				REMOTE TERMINAL POINT
GND, G	GROUND				HORN
GRS	GALVANIZED RIGID STEEL				PUMP
H	HIGH				SURGE SUPPRESSOR (PROTECTED/UNPROTECTED)
HS	HAND SWITCH				FUSED LEVER-TYPE TERMINAL BLOCK WITH LED INDICATOR
HOA	HAND-OFF-AUTOMATIC				
HOR	HAND-OFF-REMOTE				
HMI	HUMAN MACHINE INTERFACE				
I	INDICATOR				
I&C	INSTRUMENTATION & CONTROL				
INTR	INTRUSION				
JB	JUNCTION BOX				
L	LEVEL OR LOW				
LR	LINE REACTOR				
NEUT, N	NEUTRAL				
NTS	NOT TO SCALE				
O/C	OPEN / CLOSE				
OIT	OPERATOR INTERFACE TERMINAL				
MOV	MOTOR OPERATED VALVE				
NF	NON-FUSIBLE				
P	PRESSURE				
PB	PUSHBUTTON				
PLC	PROGRAMMABLE LOGIC CONTROLLER				
PH, Ø	PHASE				
PC	PHOTOCELL				
PCP	PUMP CONTROL PANEL				
PM	PHASE MONITOR				
PS	POWER SUPPLY				
PTT	PUSH-TO-TEST				
Q	TOTALIZER				
RECPT.	RECEPTACLE				
R	RELAY, TREND, RESISTOR				
RTU	REMOTE TELEMETRY UNIT				
SCCR	SHORT CIRCUIT CURRENT RATING				
SHLD	SHIELDED				
SPD	SURGE PROTECTION DEVICE				
S	SWITCH				
SS	SELECTOR SWITCH				
SSOL	SOLID STATE OVERLOAD				
SV	SOLENOID VALVE				
TB	TERMINAL BLOCK				
TD	TIME DELAY				
TSP	TWISTED SHIELDED PAIR				
UG	UNDERGROUND				
UPS	UNINTERRUPTABLE POWER SUPPLY				
VFD	VARIABLE FREQUENCY DRIVE				
XFMR	TRANSFORMER				
Z	POSITION				
	100% Design Plans				
PROJECT ELECTRICAL NOTES					
1. INSTALLATION OF (3) 480V, 75 HP PUMP MOTORS (1 DESIGNATED AS STANDBY).					
2. UTILITY IS LCEC.					
3. ALL NEW CONSTRUCTION SHALL COMPLY WITH APPLICABLE N.E.C. AND LOCAL CODES.					
4. CONDUCTORS SHALL NOT BE SPLICED.					
5. ALL CONDUCTORS SHALL BE 600-VOLT RATED, STRANDED COPPER. #8AWG AND LARGER SHALL BE RATED 90 DEGREE CELSIUS INSULATED STRANDED COPPER CONDUCTORS, THHN-2 OR XHHW-2. ALL MULTICONDUCTOR CONTROL CABLE SHALL BE #14 AWG XHHW-2, OMNISCABLE P/N AS114XX, OR EQ, UNLESS NOTED.					
6. ALL UG CONDUIT SHALL BE SCHEDULE 80 PVC CONDUIT.					
7. ALL AG CONDUIT AND UG CONDUIT SWEEPS SHALL BE ALUMINUM RIGID CONDUIT (ARC) COATED WITH MASTIC WHEN IN CONTACT WITH CONCRETE.					
8. ALL INDOOR CONDUIT ROUTED INSIDE THE ELECTRICAL ROOM BETWEEN EQUIPMENT SHALL BE EMT.					
9. ALL BONDING CONDUCTORS SHALL BE ROUTED IN SCHEDULE 80 PVC CONDUIT. GROUND WIRE FROM SERVICE SHALL BE INSTALLED IN SCH. 40 CONDUIT.					
10. TOP PENETRATIONS OF ELECTRICAL ENCLOSURES ARE NOT PERMITTED, EXCEPT IN INDOOR LOCATIONS.					
11. ALL RACEWAYS WHICH ARE INSTALLED FOR FUTURE USE SHALL HAVE A NYLON PULLCORD.					
12. PVC CONDUIT JOINTS SHALL BE SOLVENT-WELDED, EXCEPT FOR RIGID METALLIC TO PVC COUPLINGS.					
13. MINIMUM CONDUIT SIZE SHALL BE 3/4". MINIMUM LIQUIDTIGHT FLEXIBLE STEEL CONDUIT SIZE SHALL BE 1/2".					
14. ALL RACEWAYS SHALL BE RUN IN NEAT AND WORKMANLIKE MANNER AND SHALL BE PROPERLY SUPPORTED PER N.E.C.					
15. ALL CONNECTIONS TO MOTORS AND OTHER VIBRATING EQUIPMENT OR AT OTHER LOCATIONS WHERE REQUIRED SHALL BE MADE WITH FLEXIBLE LIQUID-TIGHT STEEL CONDUIT 12" TO 36" IN LENGTH.					
16. ALL FEEDER AND BRANCH CIRCUIT WIRING SHALL BE COLOR CODED AS FOLLOWS:					
3-PHASE 480Y/277VAC (A/B/C/N/G) : PUR/BRN/YEL/WHT/GRN					
3-PHASE 240/120VAC (A/B(HI)/C/N/G) : BLK/RED(ORG)/BLU/WHT/GRN					
1-PHASE AC POWER : BLK, 12 AWG MIN.					
AC POWER HOT : BLK, 12 AWG MIN.					
AC POWER NEUTRAL : WHT, 12 AWG MIN.					
AC SWITCHED : RED, 16 AWG MIN.					
EXTERNALLY POWERED : YEL, 16 AWG MIN.					
GROUND : GRN, 12 AWG MIN.					
DC + : BLU, 16 AWG MIN.					
DC - : BLU WITH WHT STRIPE, 16 AWG MIN.					
TSP (+/-) : RED/BLK, 16 AWG. MIN., BELDEN 1118A, OR EQ.					
17. CONTROL PANEL WIRING TO UTILIZE SCREW TYPE TERMINALS WITH LOCKING FORK TONGUE OR RING TONGUE LUGS.					
MAX. OF ONE WIRE TO BE TERMINATED IN A CRIMP LUG. MAX. OF TWO LUGS TO BE INSTALLED IN A SCREW TERMINAL.					
18. DC AND AC CIRCUITS SHALL BE ON SEPARATE TERMINAL BLOCK STRIPS.					
19. ETHERNET CABLE SHALL BE CAT-5e 600V UL AWM RATED					
20. ALL WIRES AND CABLES SHALL BE MARKED USING WHITE HEAT SHRINK MARKERS.					
21. BRANCH CIRCUITS EXCEEDING 75' SHALL BE WIRED WITH MINIMUM #10AWG WIRE.					
22. ALL OUTDOOR ENCLOSURES TO MEET FBC WIND LOAD REQUIREMENTS FOR 150MPH.					
23. PROVIDE DESSICANT PACKETS IN DISCONNECT SWITCHES AND CONTROL PANEL ENCLOSURES, SIZED ACCORDINGLY.					
24. ALL RACEWAYS SHALL BE RUN IN NEAT AND WORKMANLIKE MANNER, PROPERLY SUPPORTED.					
25. ALL EXISTING EQUIPMENT, CABLING, AND CONDUIT DESIGNATED TO BE REPLACED SHALL BE DEMOED AND REMOVED BY THE CONTRACTOR.					
26. COORDINATE ALL SERVICE ENTRANCE WORK WITH FP&L, AND ADHERE TO ALL UTILITY STANDARDS.					
27. PROVIDE TYPED CIRCUIT DIRECTORIES FOR ALL PANELBOARDS.					
28. CONTRACTOR SHALL APPLY FOR AND SCHEDULE INSTALLATION OF NEW SERVICES AND REQUEST CONFIRMATION PER PLANS OF MAX AVAILABLE FAULT CURRENT FROM THE UTILITY.					
29. CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THE WORK AND FURNISHING ALL MATERIALS OUTLINED IN THESE PLANS AND ANY OTHER MATERIALS AND WORK NECESSARY FOR A FULLY OPERATIONAL SYSTEM.					
30. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL EXTERNALLY-MOUNTED SURGE PROTECTOR AS SHOWN. INSTALL SPD AND CUT SPD LEADS SO THAT LEADS ARE AS SHORT AND STRAIGHT AS POSSIBLE. MOUNT TO ENCLOSURE BOTTOM WITH STATUS LIGHTS FACING FRONT. INSTALL AND BIND THE LEAD WIRES TOGETHER WITH ONE TWIST/INCH TO REDUCE THE LEAD WIRE IMPEDANCE.					
31. CUSTOM ELECTRICAL ENCLOSURES TO BE UL508A LISTED.					
32. ALL ELECTRICAL ENCLOSURES TO HAVE PADLOCKING PROVISIONS.					
33. NAMEPLATES TO BE ADHESIVE BACKED, PHENOLIC, UV RATED.					
34. PROVIDE 2" MIN. SPACE FROM TERMINAL BLOCKS TO WIRE DUCT.					
35. DC AND AC CIRCUIT WIRING TO BE TERMINATED ON SEPARATE TERMINAL STRIPS.					
36. ALL WIRES 10 AWG AND SMALLER TO UTILIZE FORK TONGUE, RING TONGUE, OR FERRULES. WIRE CRIMP LUGS TO HAVE ONLY ONE WIRE, TERMINAL BLOCKS TO HAVE NO MORE THAN TWO WIRES PER LUG.					
37. ONLY A PORTION OF THE REQUIRED CONDUIT RUNS ARE SHOWN.					
38. LABEL ALL ELECTRICAL EQUIPMENT USING MIN. 1/2" BLACK LETTERING ON WHITE PLASTIC LABELS SS SCREW MOUNTED ON TO FRONT OF ALL PANELS AND CABINETS.					
39. MAJOR COMPONENTS AND GENERAL ARRANGEMENT ARE PROVIDED AS A BASIS FOR DESIGN. ALL REQUIRED COMPONENTS ARE NOT SHOWN. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A FULLY FUNCTIONAL SYSTEM.					
40. ALL BELOW GRADE GROUND CONNECTIONS SHALL BE MADE VIA EXOTHERMIC WELD.					
41. ALL ABOVE GRADE BOND CONNECTIONS SHALL BE MADE VIA BOLTED CONNECTION, BURNDY TYPE QDA-QIKLUG.					
42. ALL REQUIRED CONDUIT AND CONDUCTORS ARE NOT SHOWN. SEE SINGLE LINE DIAGRAM FOR CONDUITS AND CONDUCTORS REQUIRED FOR CONTROL AND POWER CIRCUITS.					
43. PROVIDE COUNTY SIGNED INSPECTION OR PHOTO OF ALL CAD-WELDED SPLICES AND UNDERGROUND TAPS. PROVIDE GROUND TEST REPORT TO COUNTY VERIFYING COUNTERPOISE RESISTANCE IS 5 OHMS MAX. CONTRACTOR TO PROVIDE ADDITIONAL GROUNDING, IF NECESSARY, TO ACHIEVE 5 OHMS MAX. GROUND RESISTANCE.					
44. EXOTHERMICALLY BOND GROUNDING JUMPERS TO COUNTERPOISE. GROUND POTENTIAL SHALL BE CONSISTENT FOR ENTIRE SITE. COUNTERPOISE SHALL BE #2/0 BARE COPPER. GROUNDING JUMPERS SHALL BE #2 AWG. GROUND RODS SHALL BE 3/4" X 20' COPPER-CLAD GROUND RODS. EXOTHERMICALLY WELD OR IRREVERSIBLE CLAMP CONNECTIONS BELOW GRADE. MECHANICALLY CONNECT CONNECTIONS ABOVE GRADE. MECHANICAL LUGS SHALL ONLY HAVE ONE WIRE LANDED IN EACH TERMINATION. EACH LUG SHALL BE FASTENED WITH A STAINLESS STEEL NUT AND BOLT. STACKING OF INDIVIDUAL LUGS WILL NOT BE ACCEPTABLE.					
45. GROUND BOXES SHALL BE QUAZITE #PC1118CA0024, INSTALL LEVEL WITH THE ADJACENT GROUND, PROVIDE 57 STONE OR MATCH SITE STONE IN BOX, WITH GROUND ROD LOCATED OFF CENTER OF BOX. QUAZITE BOX COVER TO READ "GROUND". EXPOSED GROUNDING SHALL BE IN 1" SCHEDULE 80 PVC OR LIQUID TIGHT FLEXIBLE CONDUIT.					

JOHNSON
ENGINEERING

JOHNSON ENGINEERING, INC.
2122 JOHNSON STREET
FORT MYERS, FLORIDA 33902
PHONE: (239) 334-0048
E.B. #642 & L.B. #642

WAYNE WILDEY WRIGHT, PE
FL License No. 58220



SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)
RAW WATER PIPE LINE

REVISIONS

NO.	DESCRIPTION	DATE

DATE: APRIL 16, 2025

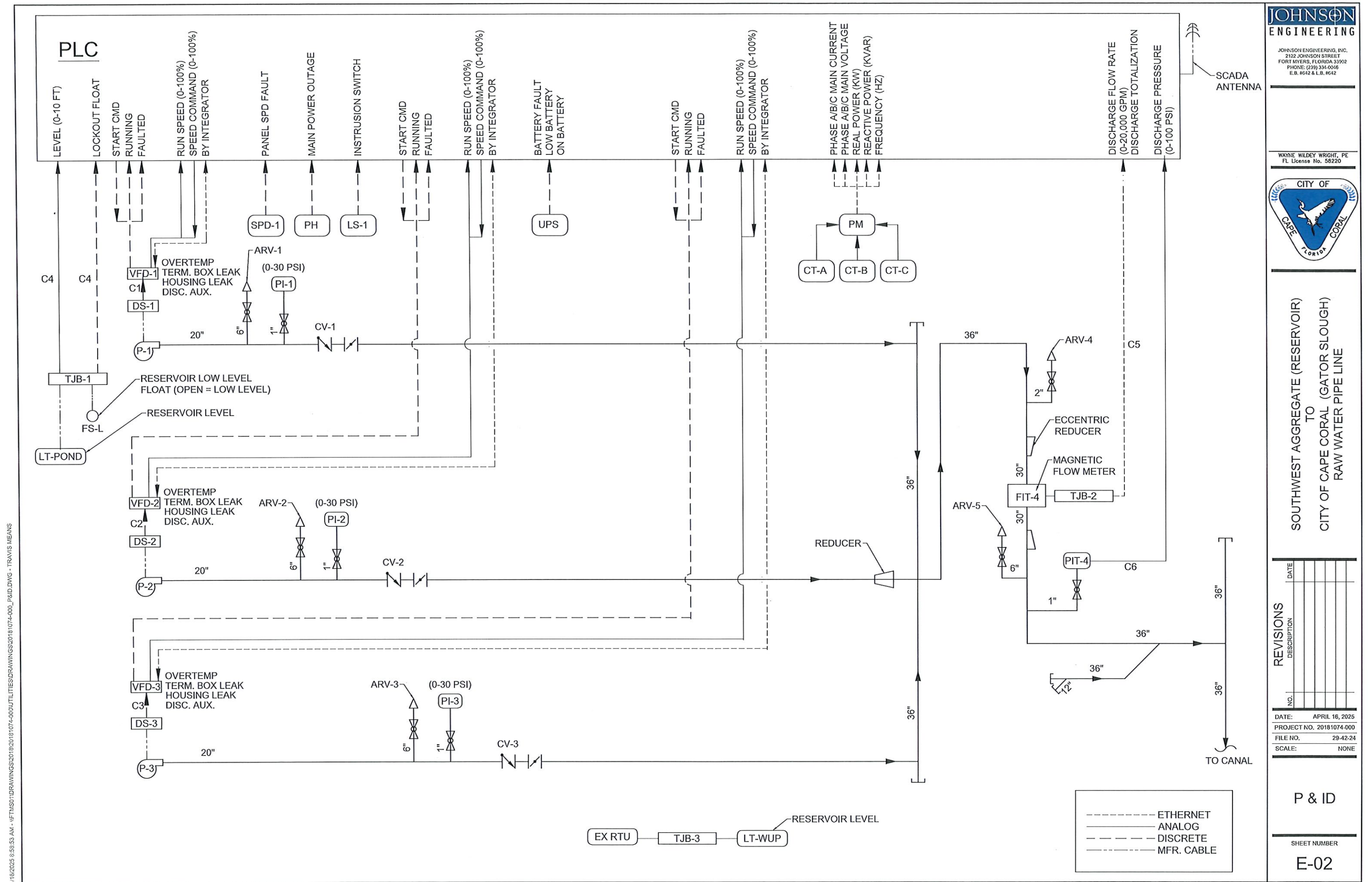
PROJECT NO. 20181074-000

FILE NO. 29-42-24

SCALE: NONE

ELECTRICAL
NOTES

SHEET NUMBER
E-01

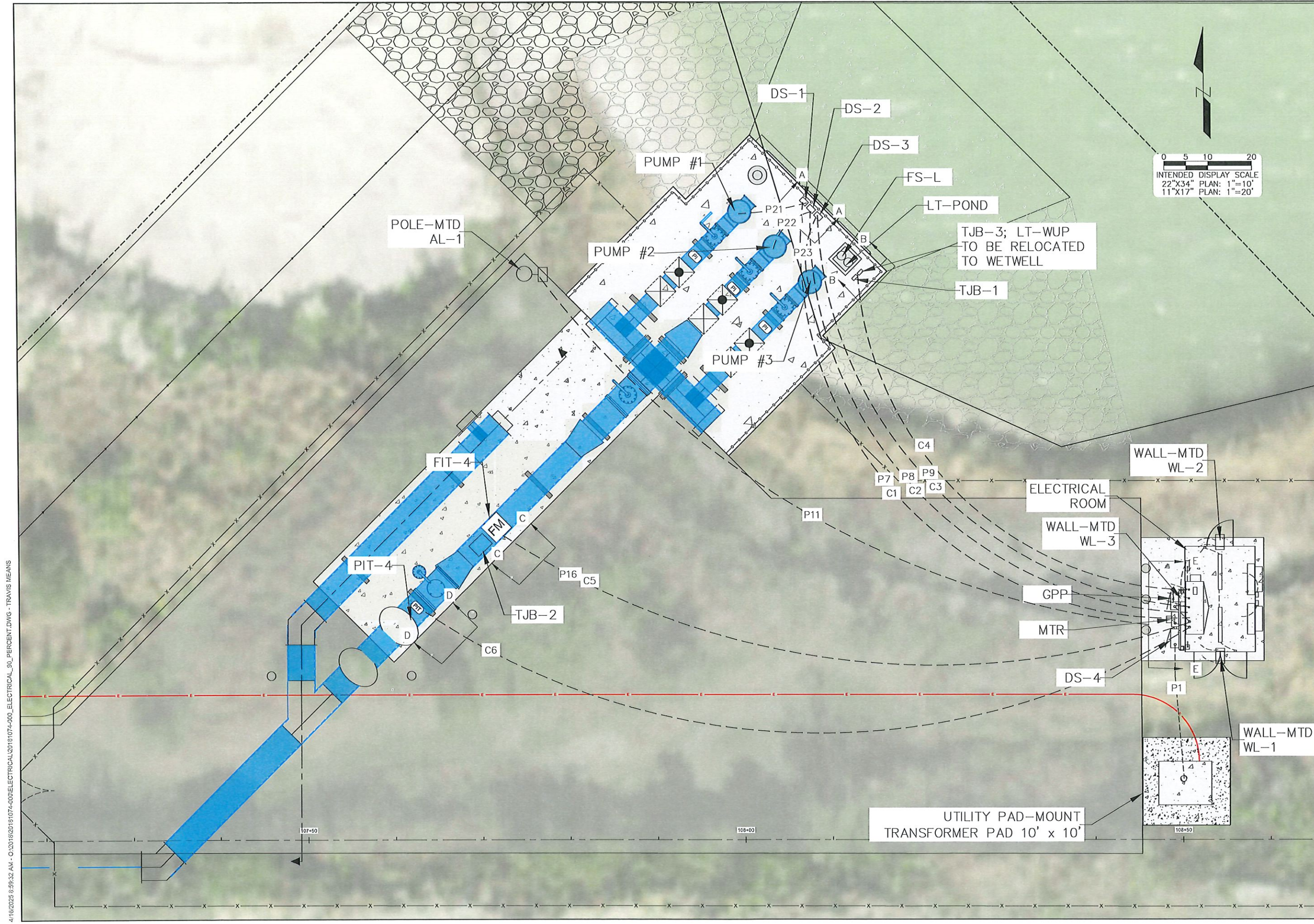


REVISIONS						
NO.	DESCRIPTION	DATE				

DATE: APRIL 16, 2025
PROJECT NO. 20181074-006
FILE NO. 29-42-24
SCALE: NONE

SHEET NUMBER

E-03



NOTES:
1. UG CONDUITS C10, P20 AND P21 ARE 1" SPARE FROM THE MCP TO SITE, CAPPED FOR FUTURE USE.



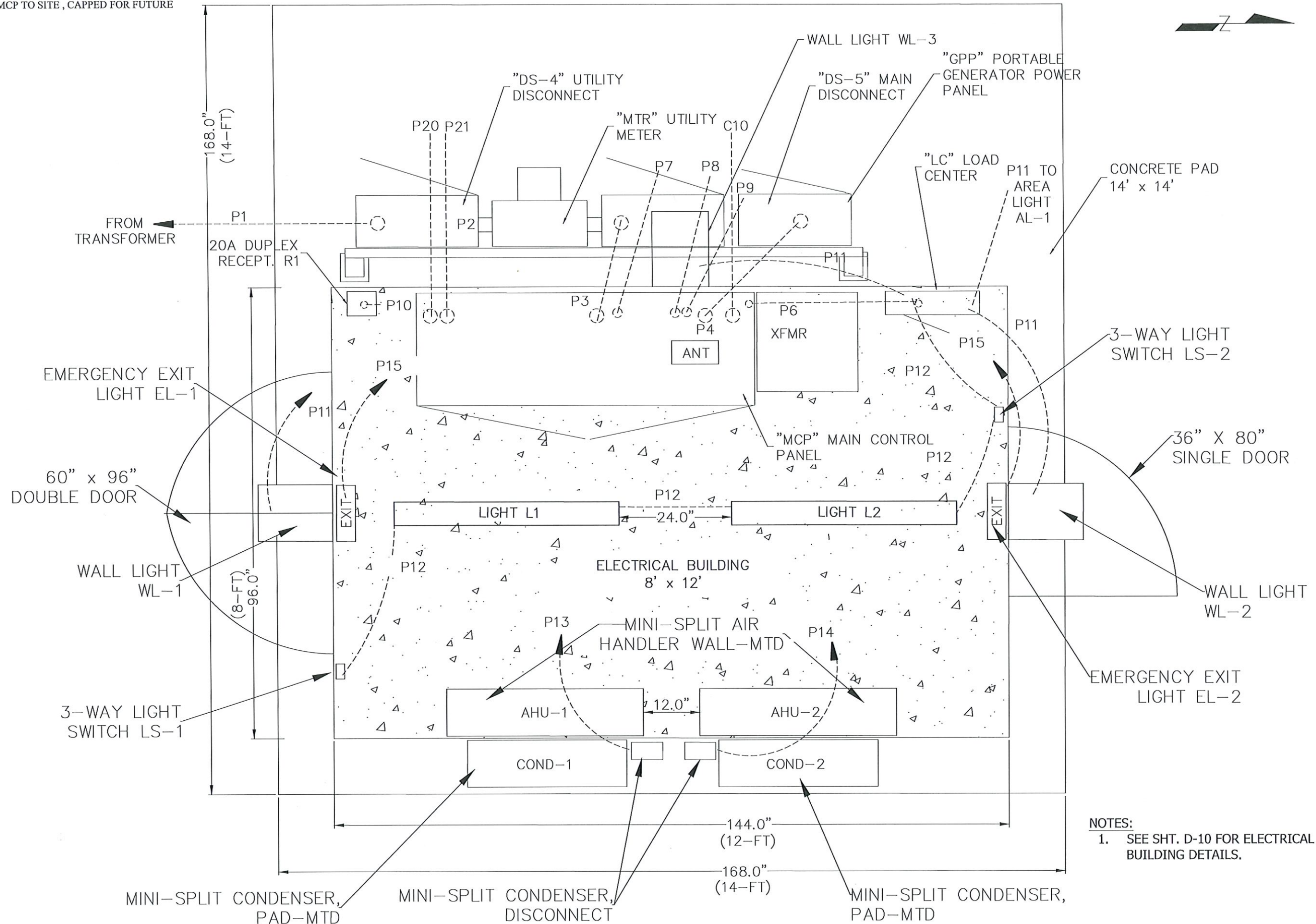
SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)
RAW WATER PIPE LINE

REVISIONS	DATE
DESCRIPTION	
NO.	
DATE:	APRIL 16, 2025
PROJECT NO.	20181074-000
FILE NO.	29-42-24
SCALE:	1" = 10'

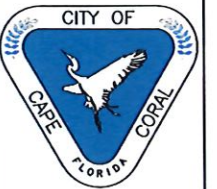
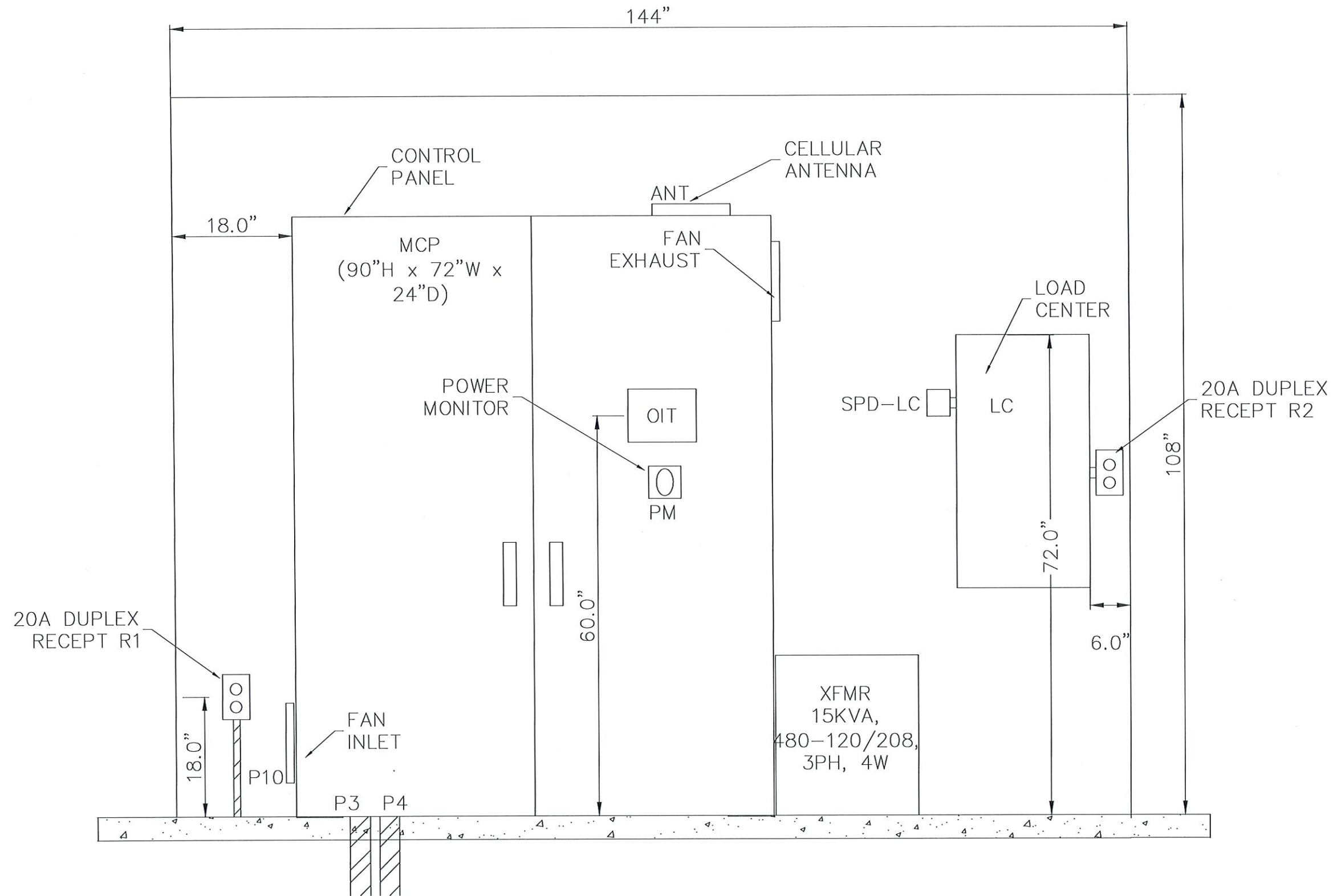
ELECTRICAL RM.
PLAN VIEW

SHEET NUMBER

E-04



4/16/2025 8:59:41 AM - C:\2018\20181074-000\ELECTRICAL\20181074-000_ELECTRICAL_90_PERCENT.DWG - TRAVIS MEANS



SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)
RAW WATER PIPE LINE

NO.	DESCRIPTION	DATE	
		DATE	DESCRIPTION

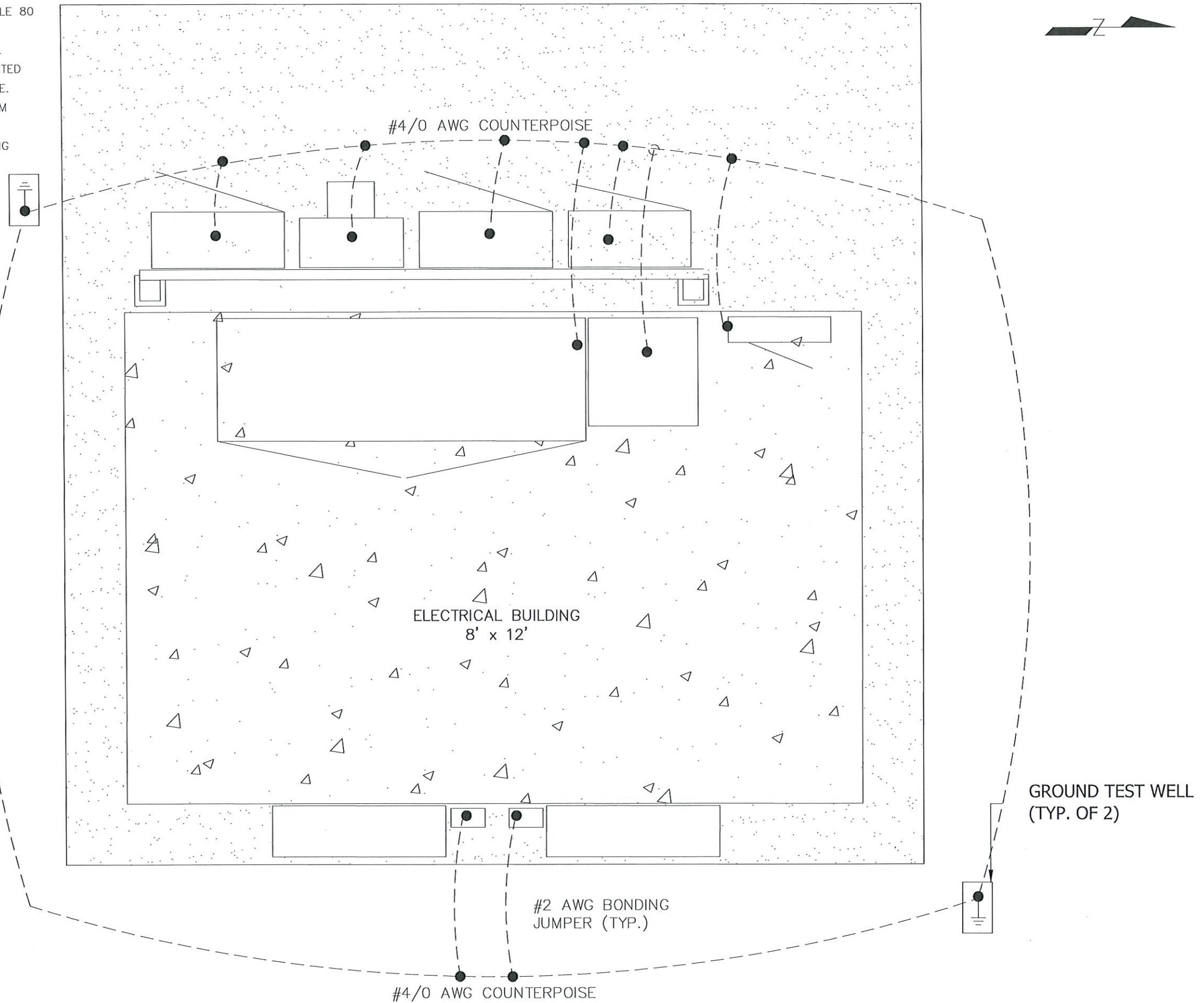
DATE: APRIL 16, 2025
PROJECT NO. 20181074-000
FILE NO. 29-42-24
SCALE:

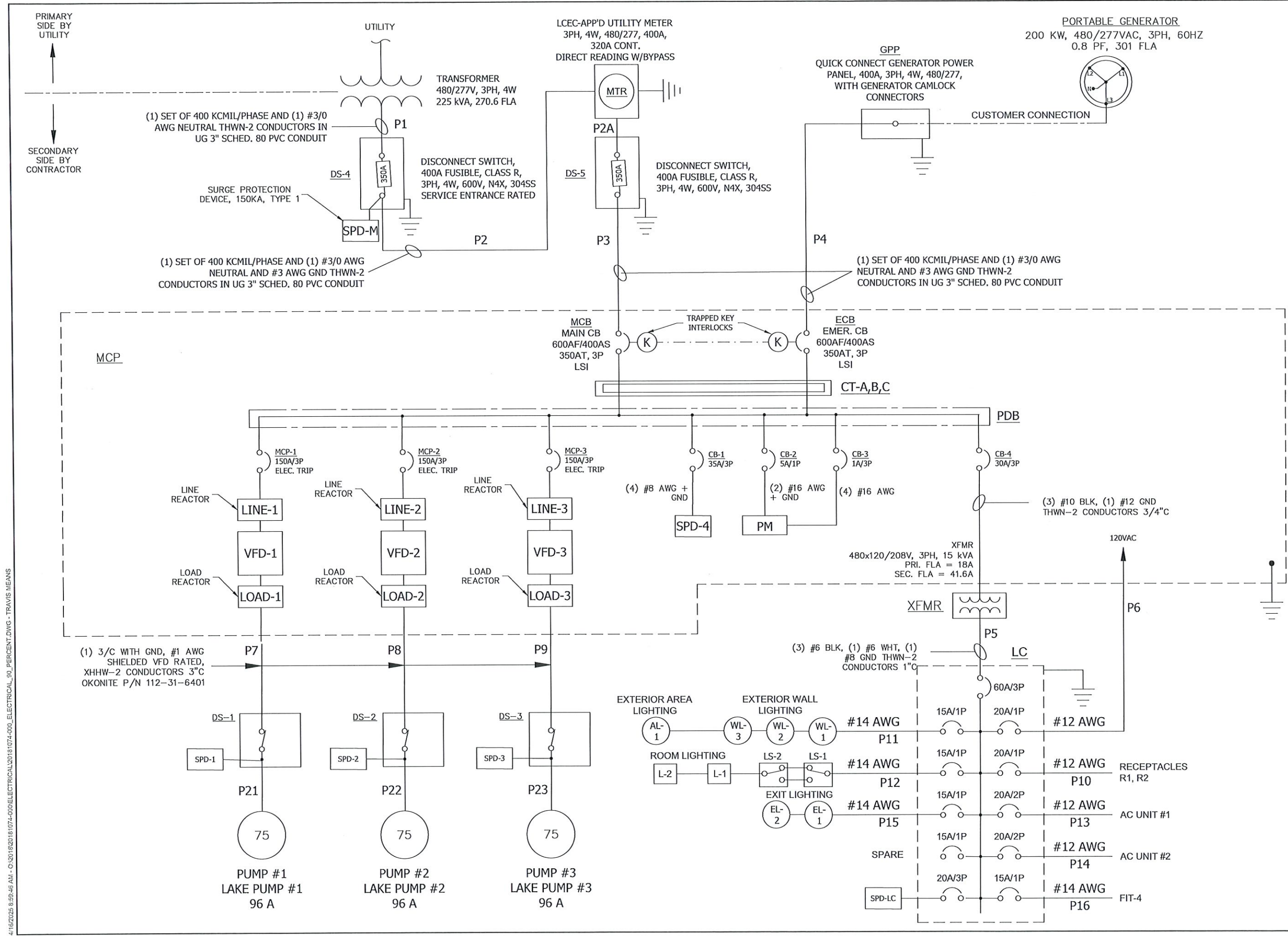
ELECTRICAL RM.
INTERIOR WEST
WALL ELEVATION

SHEET NUMBER

E-05

1. ALL UG CONDUIT RUNS SHALL BE SCHEDULE 80 PVC CONDUIT.
2. ALL AG CONDUIT OUTSIDE THE ELECTRICAL ROOM SHALL BE ALUMINUM RIGID CONDUIT COATED WITH MASTIC WHEN IN CONTACT WITH CONCRETE.
3. ALL CONDUIT INSIDE THE ELECTRICAL ROOM SHALL BE EMT.
4. SEE SHEET D-10 FOR ELECTRICAL BUILDING DETAILS.

[illegible]



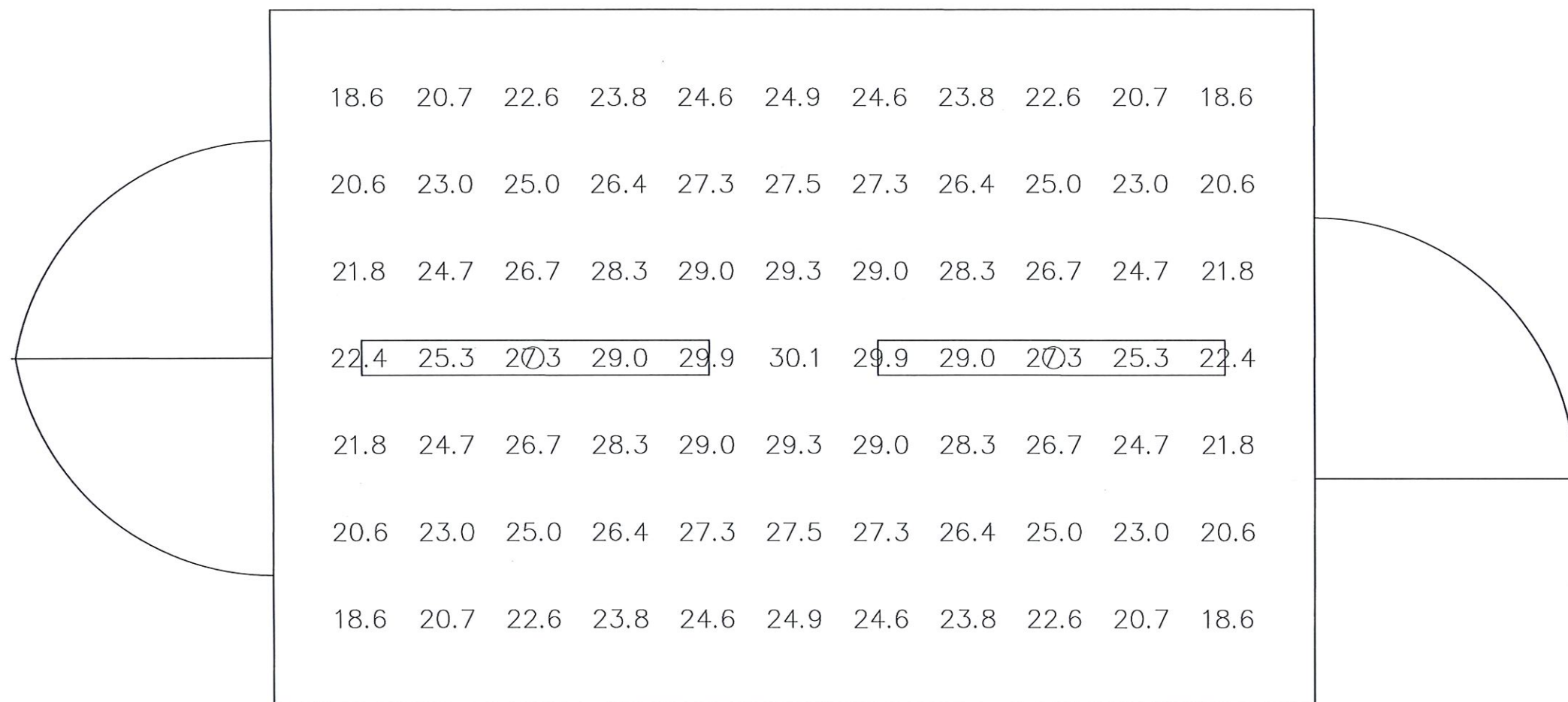
SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)
RAW WATER PIPE LINE

REVISIONS	DATE	DESCRIPTION
NO.		
DATE:	APRIL 16, 2025	
PROJECT NO.	20181074-000	
FILE NO.	29-42-24	
SCALE:	NONE	

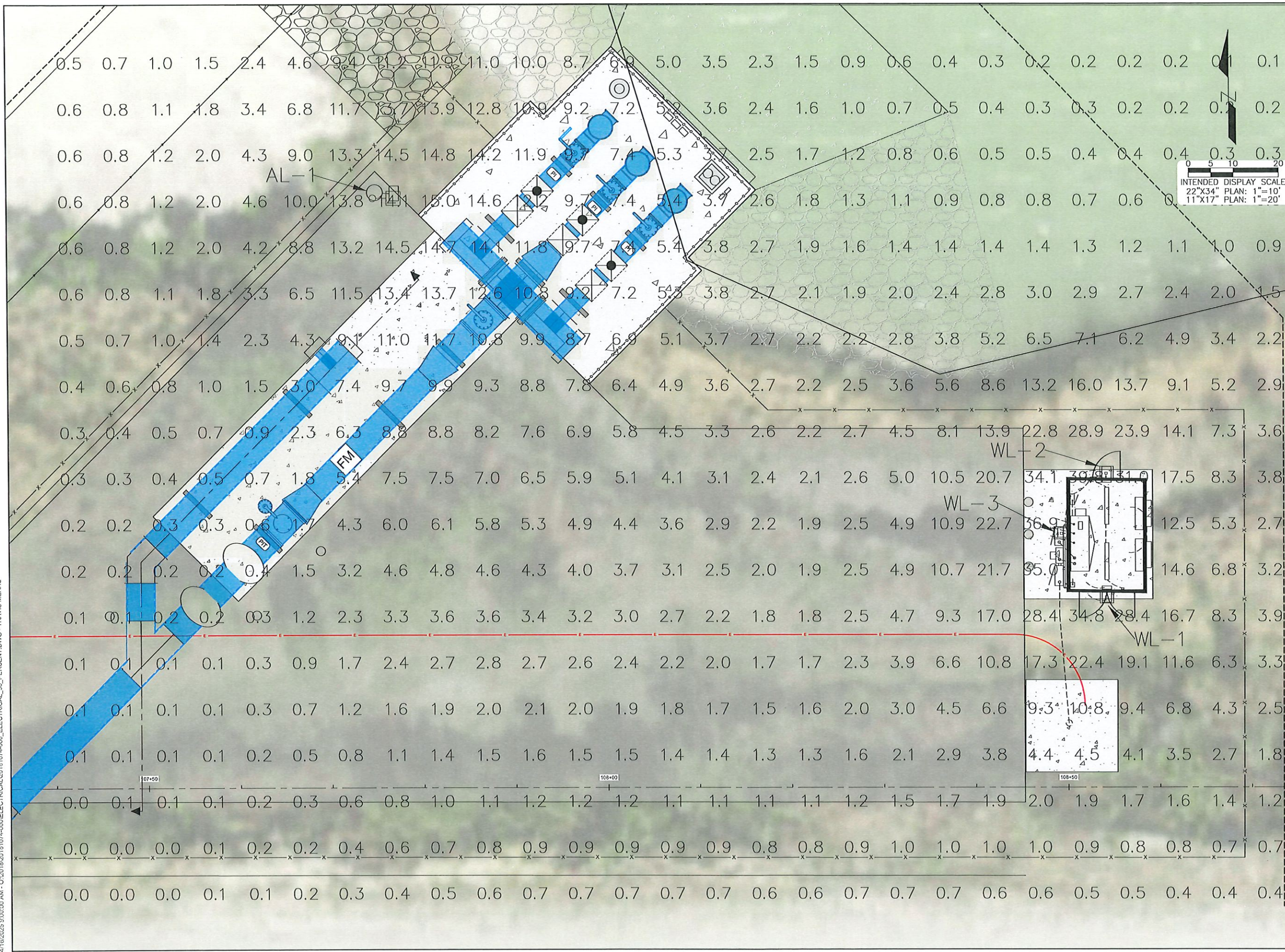
SINGLE LINE
DIAGRAM

SHEET NUMBER
E-07

4/16/2025 8:59:46 AM - O:\2018\20181074-000\ELECTRICAL\90_PERCENT.DWG - TRAVIS MEANS



4/16/2025 9:00:00 AM - O:\2018\20181074-000\ELECTRICAL\90_PERCENT.DWG - TRAVIS MEANS

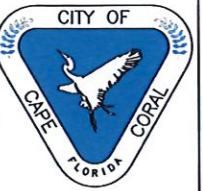


SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)
RAW WATER PIPE LINE

REVISIONS		DATE	
DESCRIPTION			
NO.			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60			
61			
62			
63			
64			
65			
66			
67			
68			
69			
70			
71			
72			
73			
74			
75			
76			
77			
78			
79			
80			
81			
82			
83			
84			
85			
86			
87			
88			
89			
90			
91			
92			
93			
94			
95			
96			
97			
98			
99			
100			

SITE
PHOTOMETRICS

SHEET NUMBER
E-09



SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)
RAW WATER PIPE LINE

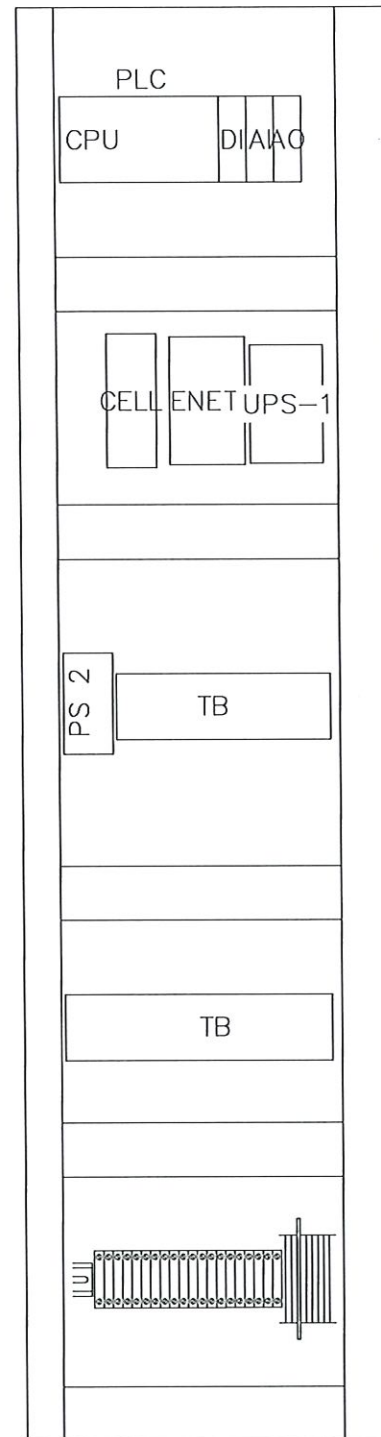
[illegible]

DATE:	APRIL 16, 2025
PROJECT NO.	20181074-000
FILE NO.	29-42-24
SCALE:	NONE

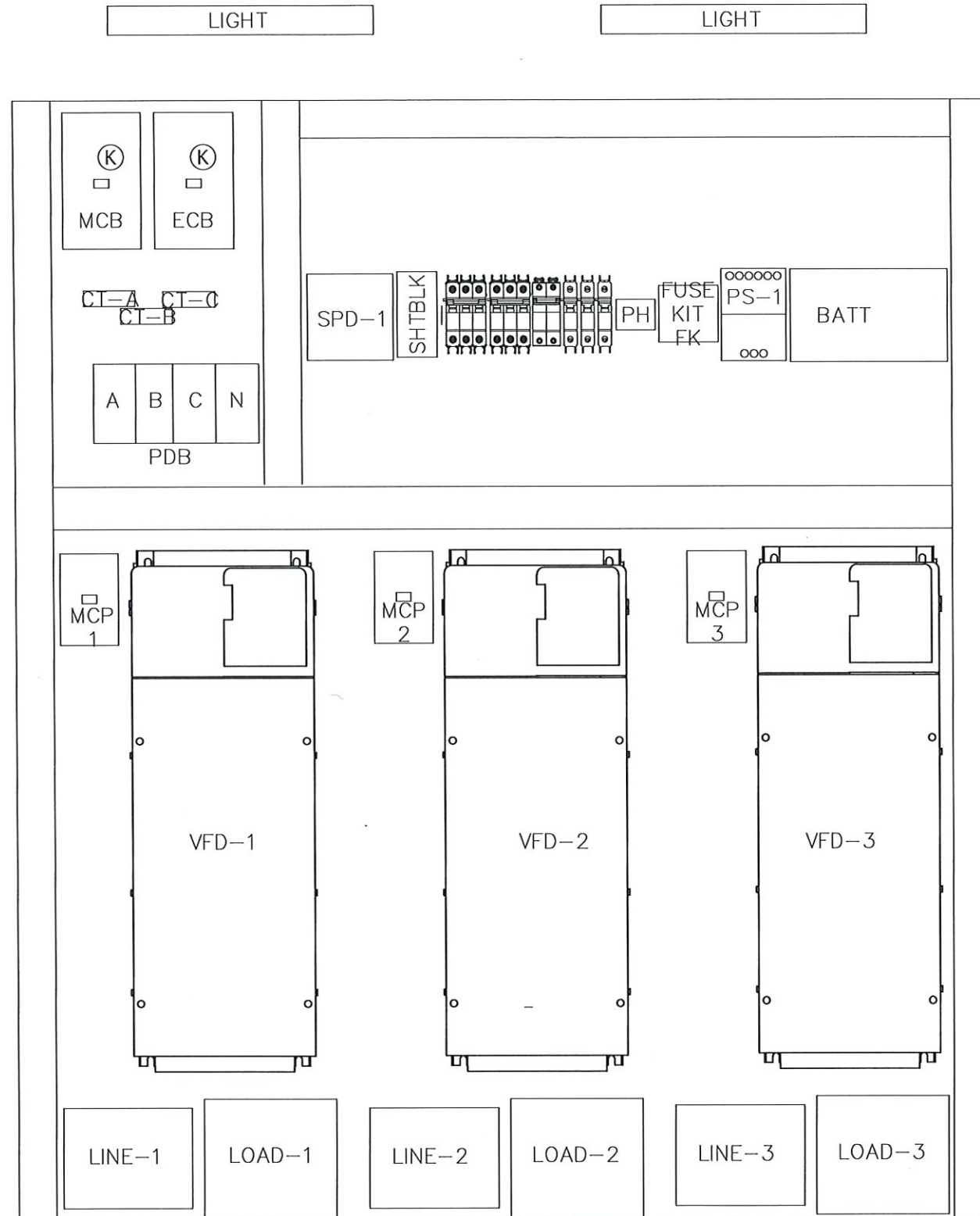
CONTROL PANEL
INTERIOR

SHEET NUMBER

E-20

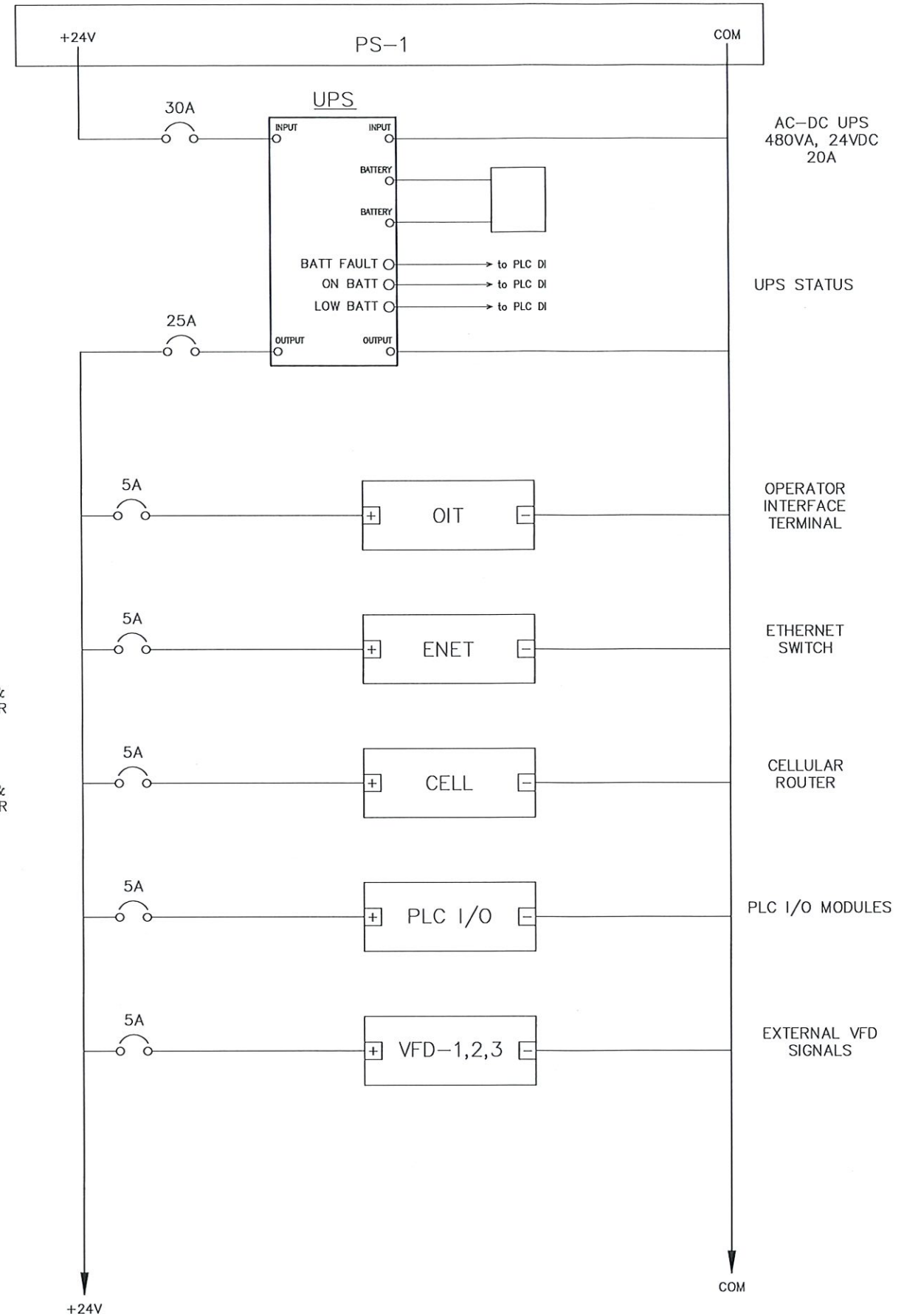
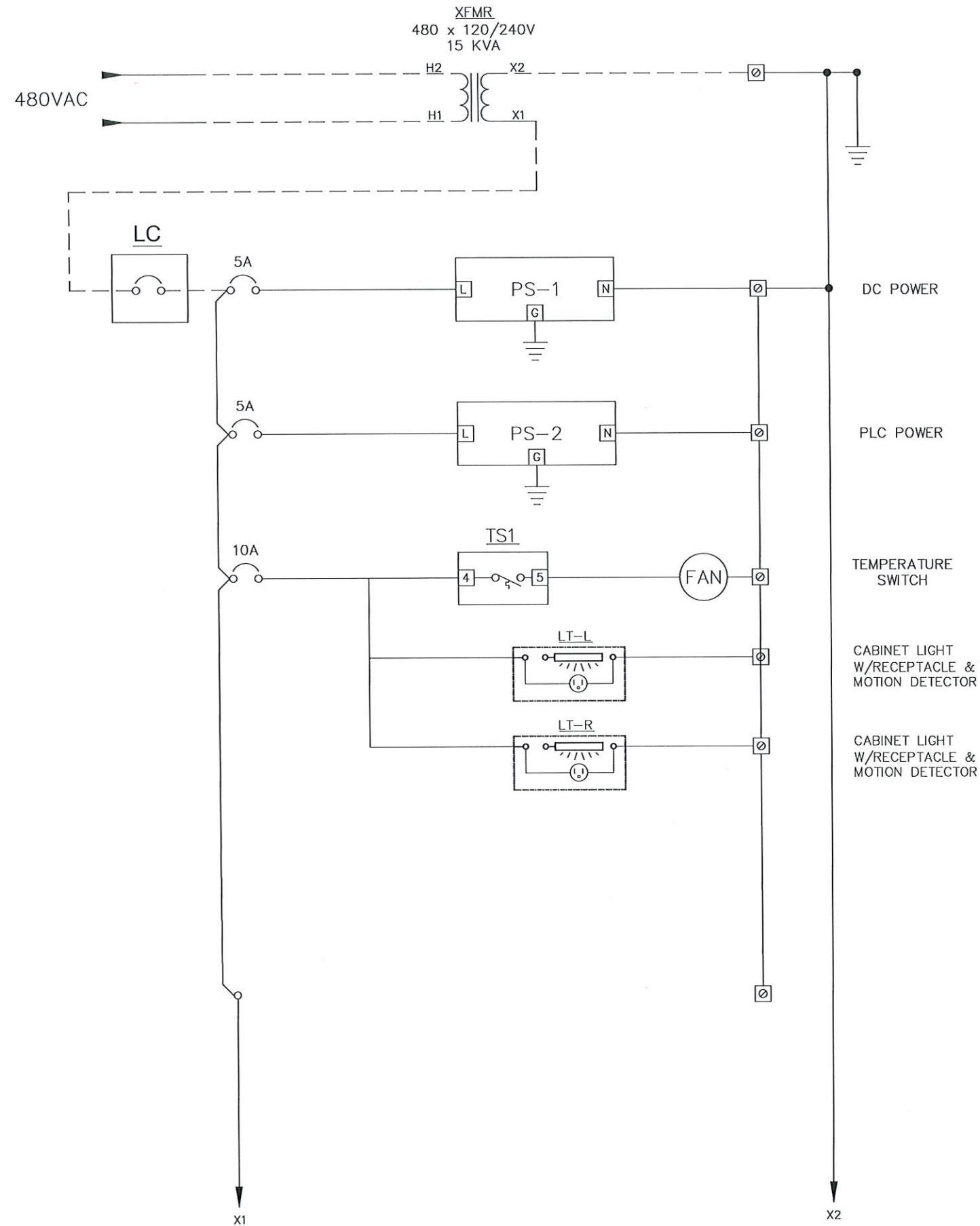


SIDE-PANEL



SUB-PANEL

4/18/2025 9:00:11 AM - O:\2018\20181074-000\ELECTRICAL\20181074-000_ELECTRICAL_30_PERCENT.DWG - TRAVIS MEANS



SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)
RAW WATER PIPE LINE

REVISIONS	DESCRIPTION	NO.	DATE	

DATE: APRIL 16, 2025
PROJECT NO. 20181074-000
FILE NO. 29-42-24
SCALE: NONE

CONTROL PANEL
SCHEMATIC

SHEET NUMBER

E-21

HARD-WIRED PLC IO

BASE INPUTS	
INPUTS	DESCRIPTION
DI-1	PUMP 1 RUNNING
DI-2	PUMP 1 FAULTED
DI-3	PUMP 2 RUNNING
DI-4	PUMP 2 FAULTED
DI-5	PUMP 3 RUNNING
DI-6	PUMP 3 FAULTED
DI-7	INTRUSION ALARM
DI-8	POWER LOSS (PHASE MONITOR)
DI-9	SPARE
DI-10	SPARE
DI-11	SPARE
DI-12	SPARE
DI-13	SPARE
DI-14	SPARE
BASE OUTPUTS	
OUTPUTS	DESCRIPTION
RO-1	PUMP 1 START COMMAND
RO-2	PUMP 2 START COMMAND
RO-3	PUMP 3 START COMMAND
RO-4	SPARE
RO-5	SPARE
RO-6	SPARE
RO-7	SPARE
RO-8	SPARE
RO-9	SPARE
RO-10	SPARE
16-PT DISCRETE INPUT EXPANSION MODULE #1	
INPUTS	DESCRIPTION
DI-1	RESERVOIR LOW LEVEL FLOAT
DI-2	PANEL SPD FAULT
DI-3	UPS BATTERY FAULT
DI-4	UPS ON BATTERY
DI-5	UPS LOW BATTERY
DI-6	SPARE
DI-7	SPARE
DI-8	SPARE
DI-9	SPARE
DI-10	SPARE
DI-11	SPARE
DI-12	SPARE
DI-13	SPARE
DI-14	SPARE
DI-15	SPARE
DI-16	SPARE
8-PT ANALOG INPUT EXPANSION MODULE #2	
INPUTS	DESCRIPTION
AI-1	PUMP 1 SPEED FEEDBACK
AI-2	PUMP 2 SPEED FEEDBACK
AI-3	PUMP 3 SPEED FEEDBACK
AI-4	DISCHARGE PRESSURE
AI-5	RESERVOIR LEVEL
AI-6	SPARE
AI-7	SPARE
AI-8	SPARE
4-PT ANALOG OUTPUT EXPANSION MODULE #3	
INPUTS	DESCRIPTION
AO-1	PUMP 1 SPEED COMMAND
AO-2	PUMP 2 SPEED COMMAND
AO-3	PUMP 3 SPEED COMMAND
AO-4	SPARE

- NOTE:
1. SYSTEMS INTEGRATOR SHALL ACQUIRE VARIOUS NETWORK DATA FROM ETHERNET-ENABLED DEVICES PER P&ID:
- FLOW METER FIT-4 (E/IP)
 - PUMP #1 VFD-1 (E/IP)
 - PUMP #2 VFD-2 (E/IP)
 - PUMP #3 VFD-3 (E/IP)
 - POWER METER PM (E/IP)

MCP BILL OF MATERIALS					
ITEM	QTY	ID	DESCRIPTION	MFR.	PART #
1	1	PLC	MICRO 870 PLC, ETHERNET, 14-DI, 10-RO	ALLEN BRADLEY	2080-L70E-24QWB
2	1	AI	PLC ANALOG INPUT EXPANSION MODULE, 8-PT		2085-IF8
3	1	AO	PLC ANALOG OUTPUT EXPANSION MODULE, 4-PT		2085-OF4
4	1	DI	PLC DISCRETE INPIT EXPANSION MODULE, 16-PT 24VDC		2085-IQ16
5	1	PS-2	PLC 24VDC, 1.6ADC POWER SUPPLY		2080-PS120-240VAC
6	1	ECR	PLC BUS TERMINATOR END CAP		2085-ECR
7	1	ENET	STRATIX 5700 MANAGED ETHERNET SWITCH, 8-COPPER PORT, 2-COMBO PORT, LITE	SOLA	1783-BMS10CL
8	1	PS-1	24VDC POWER SUPPLY, 480W, 20A, 120V AC, DIN RAIL		SDN-20-24-100P
9	1	UPS-1	480VA, 24V/20A DIN RAIL UPS POWER MODULE		SDU 20-24
10	1	BATT	24V DIN RAIL/PANEL MOUNT BATTERY MODULE W/CABLE	ELECTRO INDUSTRIES	SDU 24-BAT
11	1	PM	POWER METER, I/O CARD ETH I/P, 60HZ, DC, CLASS 10		SHARK200-60-10-V1-D-INP300S
12	1	SHTBLK	SIX POLE CT SHORTING BLOCK		EI-SB-6TC
13	1	FK	PANEL METER PROTECTIVE FUSE KIT	ATC DIVERSIFIED	EI-CP
14	3	CT-A,B,C	SPLIT CORE CURRENT TRANSFORMER, 400:5A		EI-WC4-400-RA05
15	1	PH	PHASE MONITOR, OCTAL PLUG IN,		SLA-440-A-S-A
16	1		RELAY SOCKET BASE FOR PHASE MONITOR		PF083A
17	1	CELL	INDUSTRIAL CELLULAR GATEWAY, VERIZON	PROSOFT TECHNOLOGY	ICX35-HWC-A
18	1	MCP	FLOOR MOUNT ENCLOSURE, DOUBLE DOOR, TYPE 12, CARBON STEEL, H = 90", W = 72", D = 24", THREE POINT LATCH	SCHAEFER	SPFSD-907224
19	1		SUB PANEL, H = 78", W = 68"		SP-90P72F2
20	1		SIDE PANEL, H = 78", W = 20"		SP-90SMP20
21	1	TS-1	TWIN THERMOSTAT, 1 N0, 1NC		FLZ-541
22	1	FAN	295 CFM FILTER FAN		PF 66000
23	1		EXHAUST FILTER		PFA60000
24	2	LIGHT	CONTROL PANEL LIGHT W/SOCKET AND MOTION	RITTAL	2500314
25	LOT	SPDD-X	PLUG, 24VDC DISCRETE SURGE PROTECTIVE DEVICE, 2-PT	PHEONIX CONTACT	2856087
26	LOT		BASE, 24VDC DISCRETE SURGE PROTECTIVE DEVICE, 2-PT		2856139
27	LOT	SPDA-X	PLUG, ANALOG SIGNAL SURGE PROTECTIVE DEVICE, 1-CKT		2856032
28	LOT		BASE, ANALOG SIGNAL SURGE PROTECTIVE DEVICE, 1-CKT		2856113
29	LOT	TB-	TERMINAL BLOCKS, FEED-THRU, GREY, SCREW, 24A, 12 AWG		3044076
30	2	MCB, EMB	CIRCUIT BREAKER, THERMAL-MAG, MOLDED CASE, 480VAC, 600AF/400AS/350AT, 80%, LSI ELEC. TRIP	SCHNEIDER	LJL36400U33X
31	2		KEY LOCK ADAPTER		S32604
32	1		2 RONIS KEYLOCKS WITH 1 KEY		S41950
33	3	MCP-1,2,3	MOTOR CIRCUIT PROTECTOR, 150A/3P, 58-130A ELEC. TRIP		HJL36150M74
34	LOT	CB-1,2,3,4 MISC.	MINIATURE CIRCUIT BREAKER, MULTI9 SERIES		M9FXXXXX
35	1	LS-1	ENCLOSURE DOOR LIMIT SWITCH WITH TERMINALS	SCHNEIDER	XCKN2110G11
36	1	PDB	POWER DISTRIBUTION BLOCK, 3-POLE, ENCLOSED, 760A CU, 600V, 2 LINE SIDE LUG (AWG 4 to 500 KCMIL), 8 LOAD SIDE LUG (AWG 14 TO 2/0 CU), DIN RAIL		9080LBA365208
37	1		POWER DISTRIBUTION BLOCK, 1-POLE, ENCLOSED, 760A CU, 600V, 2 LINE SIDE LUG (AWG 4 to 500 KCMIL), 8 LOAD SIDE LUG (AWG 14 TO 2/0 CU), DIN RAIL		9080LBA165208
38	1		COVER		9080LB53
39	1		COVER		9080LB51
40	3	VFD-1,2,3	VARIABLE FREQUENCY DRIVE, 480V, OPEN, 55KW, 75HP, 97.2A, ND, WITH ETHERNET/IP OPTION CARD		ATV630D55N4 WITH VN3A3721
41	1	ANT	ANTENNA, CELLULAR, 4G LTE, SMA	TAOGLAS	MA412.A.BI.003
42	1	OIT	OPERATOR TERMINAL, 10.1" TOUCHSCREEN, (1) RJ-R5 ENET	MAPLE	HMI 5102L
43	1	SPD-4	SURGE PROTECTION DEVICE, 3PH, 4W, 480/277V, 100KA/PH W/ AUDIBLE ALARM/LED/RELAY, TYPE 2	ASCO	430-277Y-P-10-A-C-A-J-2
44	3	LINE-1,2,3	INPUT REACTOR, 75HP, 96A, 3% IMP.	MTE	RLW-010403
45	3	LOAD-1,2,3	OUTPUT REACTOR, 75HP, 96A		RLW-013005
46					
47					
48					
49					
50					



SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)
RAW WATER PIPE LINE

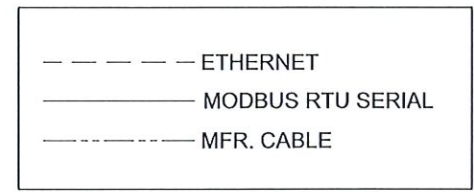
REVISIONS
DESCRIPTION

NO.	DATE	DESCRIPTION

DATE: APRIL 16, 2025
PROJECT NO. 20181074-000
FILE NO. 29-42-24
SCALE: NONE

CONTROL PANEL
IO AND BOM

SHEET NUMBER
E-22



SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)
RAW WATER PIPE LINE

REVISIONS					
NO.	DESCRIPTION	DATE			
DATE:		APRIL 16, 2025			
PROJECT NO.		20181074-000			
FILE NO.		29-42-24			
SCALE:		NONE			

NETWORK
SCHEMATIC

SHEET NUMBER

E-23

4/18/2025 9:00:24 AM - O:\2018\20181074-000\ELECTRICAL\20181074-000_ELECTRICAL_30_PERCENT.DWG - TRAVIS MEANS

FIELD DEVICE BILL OF MATERIAL					
ITEM	QTY	ID	DESCRIPTION	MFR.	PART #
1	1	FIT-4	MAGNETIC FLOWMETER, 30", 120VAC, 0-16,500 GPM, 30"DIA, 120VAC, ETHERNET/IP OUTPUT, WITH GROUNDING DISKS	ENDRESS + HAUSER	PROMAG W-400
2	1	LC	LOAD CENTER, NQ SERIES, MAIN CIRCUIT BREAKER, 3PH, 4W, 120/208V, 18 SPACES, 100A, NEMA1, SURFACE-MTD, BREAKERS AS SHOWN, COPPER BUS	SQUARE D	NQ418L1C / MH38
3	3	DS-1,2,3	100A, 100HP, THREE PHASE, SS NEMA 4X, NON-FUSIBLE DISCONNECT		HU363DS
4	3		INTERLOCK, SAFETY SWITCH, 1 X NO, 1 X NC CONTACT, GENERAL DUTY SERIES F 100A TO 200A RATED OR HEAVY DUTY SERIES F5/F6/F7		EIK1
5	2	DS-4,5	NEMA TYPE 4X, 304SS, FUSIBLE, 400A DISCONNECT, CLASS R FUSES, ELECTRICAL INTERLOCK KIT		H365NDS-CLR-E1
6	2		CLASS R FUSE KIT, 600V		HRK4060
7	6		CLASS R FUSES, 350A, 600V	EATON BUSSMAN	FRS-R-350
8	3	SPD-1,2,3	SURGE PROTECTIVE DEVICE, 20KA, 480V, 3PH + GND, SIDE NIPPLE Ver. "A"	CITEL	P/N 751704
9	1	SPD-LC	SURGE PROTECTIVE DEVICE, 20KA, 480V, 3PH, 4W + GND, SIDE NIPPLE Ver. "A"		P/N 751101
10	1	MTR	UTILITY METER, 3PH, 4W, 320 AMP CONT., DIRECT READING, ALUM., RINGLESS WITH LEVER BYPASS	MILBANKS	UAP3566-X-HSP
11	1	PIT-4	GAGE PRESSURE INDICATING TRANSMITTER, CALIBRATED 0-100 PSI, 4-20MA OUTPUT, 1/2"NPTF PROCESS, 1/2" NPTF CONDUIT, MTG BRKT, LCD DISP W/INTERFACE, SS ISO. DIAPHRAGM	ROSEMOUNT	2051T-G-2-A-2B-2-1-J-B4-IS-M4-D4-V5
12	1	LT-1	LEVELGAGE - GENERAL PURPOSE SUBMERSIBILE LEVEL TRANSMITTER	KELLER	LEVELGAGE
13	1	SPD-M	SURGE PROTECTION DEVICE, 3PH, 4W, 480/277V, 150KA/PH W/ AUDIBLE ALARM/LED/RELAY, TYPE 1	ASCO	430-277Y-P-15-A-C-A-J-1
14	1	SPD-6	SURGE SUPPRESSOR, PIPE NIPPLE, 1/2" W/CAP	EDCO	SS64-036-1
15	1	GPP	QUICK CONNECT CAMLOCK POWER PANEL, GENERATOR INPUT, 100% GROUND, 3-POLE, 400A, 480V, N3R, 316SS	ASCO	3QC-NC-A-A-3-0400-N-0-S
16	2	EL-1,2	EMERGENCY LIGHTING, 120/277, LED, BATTERY BACKUP	Cooper Lighting	AP2SQLED
17	3	WL-1,2,3	WALL MTD LIGHT, 9612 LUMENS, 107W, 4000K, 120-277V, T4W DIST, DUSK-TO-DAWN OPERATION, SILVER, SURF-MTD		ASYX-WM-S-2-00-D-40-1-UNV-S-C-STD-SV-
18	2	L-1,2	LED, 4-FT. VAPOR TIGHT, LINEAR FIXTURE, 5000k, 5156 LUMEN, 39W, 120-277V		4APVTLD-40L850
19	2	COND-1,2 AHU-1,2	MINI SPLIT DUCTLESS SYSTEM, OUTDOOR, COOLING ONLY, 30,000 BTU/H, 2.5 TONS, 17.5 SEER, 240V, 1PH.	DAIKIN	FTX30NVJU / RK30NMVJU
20					
21	1	PI-4	PRESSURE GAUGE, DIGITAL, 1/2"MNPT, 0-30 PSIG, 2.5"	ASHCROFT	DG25-5-1-L-2-M04-L-30#
22	LOT	SPDD-X	PLUG, 24VDC DISCRETE SURGE PROTECTIVE DEVICE, 2-PT	PHEONIX CONTACT	2856087
23	LOT		BASE, 24VDC DISCRETE SURGE PROTECTIVE DEVICE, 2-PT		2856139
24	LOT	SPDA-X	PLUG, ANALOG SIGNAL SURGE PROTECTIVE DEVICE, 1-CKT		2856032
25	LOT		BASE, ANALOG SIGNAL SURGE PROTECTIVE DEVICE, 1-CKT		2856113
26	LOT	TB-	TERMINAL BLOCKS, FEED-THRU, GREY, SCREW, 24A, 12 AWG		3044076
27	1	XFMR	TRANSFORMER, 15 KVA, 3PH TRANSFORMER, 480-208Y/120V, COPPER WINDINGS	SQUARE D	EXN15T3HCU
28	3	PI-1,2,3	PRESSURE GAUGE, DIGITAL, 1/2"MNPT, 0-30 PSIG, 2.5"	ASHCROFT	DG25-5-1-L-2-M04-L-30#
29	1	AL-1	POLE, ROUND TAPERED ALUMINUM, 20' MOUNTING HT., NO ARM, .125 WALL THICKNESS, 6" BUTT DIAMETER, FBC DIRECT BURIED, SATIN ALUM. FINISH, EPA = 4.2 @160MPH	HAPCO	RTA20B6BD-01
30	1		FIXTURE, 5000K, 120-277V, TYPE III DIST, GREY FINISH, 333W, 42,313 LUMENS, STD. ARM, COASTAL FINISH, BUTTON PHOTOCELL, EPA =1.0	COOPER LIGHTING	GLEON SA6-C-750-U-T3-AP-CC-BPC
31	1	TJB-2	ETHERNET SURGE PROTECTION	PHOENIX	2881007
32	1		120V POWER SURGE PROTECTION	CITEL	DS240-110DC
33	1		10" x 10"W x 8"D, 304SS, N4X, HINGED, W/SUB-PANEL	SCHAEFER	SPJH4SS-10108 / SPPJ-1010
34	2	TJB-1,3	14"H x 12"W x 8"D, 304SS, N4X, HINGED, W/SUB-PANEL	SCHAEFER	SPJH4SS-14128 / SPPJ-1412
35					



SOUTHWEST AGGREGATE (RESERVOIR)
TO
CITY OF CAPE CORAL (GATOR SLOUGH)
RAW WATER PIPE LINE

REVISIONS
DESCRIPTION

NO.	DATE

DATE: APRIL 16, 2025
PROJECT NO. 20181074-000
FILE NO. 29-42-24
SCALE: NONE

FIELD BOM

SHEET NUMBER
E-30

