MOBILE AREA WATER & SEWER SYSTEM

April 8, 2026

Addendum #1 - IFB 26-014 Myers WTP Electrical Query Project

Prospective Bidders:

The above solicitation is amended as set forth below; bidders **MUST** acknowledge receipt of this addendum. **Please sign & return this form with your sealed bid**.

1. Attached are the updated drawings for the subject bid.
2. Bid due date has been changed to 10:30 am on April 20, 2026.

Item #'s 3-9 below are comments and/or questions discussed during the pre-bid meeting.

3. The original IFB documents reference and contain the section 10 excerpt from the MAWSS Standard Specifications. Section 13 is the most relevant section to this project. The IFB documents are updated to replace the section 10 excerpt with one from section 13 (attached for Joyce). MAWSS standard specifications must be adhered to for this project.
4. The original IFB drawings do not distinguish between the base bid and alternates. The drive for pump #2 is the base bid item. The drives for pumps 1 and 3 are additive alternates. The IFB document drawings are updated to indicate the change.
5. Will a warranty be required for this project? Yes, section 13 of the MAWSS Standard Specifications detail the warranty requirements for this project. All items require a minimum warranty of 2 years, and the drive requires a 6-year warranty. The standard specifications excerpt gives specific warranty requirements for this project.
6. What are the approved manufacturers? The approved manufacturer list is given within section 13 of the MAWSS Standard Specifications. This is the valid list of drive manufacturers for this project.

7. Will equivalency be considered for this project? Equivalency is determined at the sole discretion of both MAWSS and the Engineer. Equivalency will not be reviewed prior to the bid opening. If equivalency is a concern, please submit multiple bids with any exceptions noted to ensure compliance.
8. Will the drive need to communicate with the plant? An ethernet communication port is required on the drive. This is an addition from the original specifications.
9. There is a 1.5" drain line at the base of the doorway to the room the drive will be installed in. Can that be removed? Yes, we can remove that line while equipment is being brought in.

Printed Name	Date
Signature	Email Address
Company Name	Telephone Number
Company Address	City, State, Zip

Joyce Sawyer, Buyer II
Board of Water and Sewer Commisioners

MOBILE AREA WATER AND SEWER SYSTEM
MYERS WATER TREATMENT FACILITY
ELECTRICAL QUERY PROJECT

ISAIAH ENGINEERING INC. PROJECT NO. IEMAWSS-0106

DRAWING INDEX

SHEET NO.	DESCRIPTION
ELECTRICAL	
G-1.0	TITLE SHEET
E-1.0	ELECTRICAL - SYMBOLS, NOTES AND LEGENDS
E-1.1	ELECTRICAL - ONE-LINE AND PLANS
E-2.0	ELECTRICAL - CONTROL DIAGRAM AND CONTROL LOGIC
I-1.0	ELECTRICAL - PID

MYER WATER TREATMENT FACILITY VICINITY MAP

MOBILE AREA WATER AND SEWER SYSTEMS
MYERS WATER TREATMENT FACILITY
ELECTRICAL QUERY
HUBERT PIERCE ROAD, MOBILE, ALABAMA 36608

ISAIAH ENGINEERING
Building The Future

DATA
SCALE: AS NOTED
PROJECT NO.: IE–106 MAWSS
DRAWN BY: B.BERTRAND
DESIGN BY: N.EVERETT
REVIEWED BY: R.MUNIZ
APPROVED BY: N.EVERETT

REVISIONS
1 4/7/26 ADDENDUM NO. 1

ALABAMA REGISTERED No. 21407 PROFESSIONAL ENGINEER NATHANIEL R. EVERETT

STAMP VALID ONLY IF SIGNED & DATED

FILE: MAWSS MYERS WTP ELECT. QUERY PROJECT
DATE: 3/20/26

G–1.0
TITLE SHEET

ABBREVIATIONS

A	AMPS
A/C	AIR CONDITIONING
A.F.F.	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
A.I.C.	AMPS INTERRUPTING CAPACITY (SHORT CIRCUIT)
Al	ALUMINUM
AM	AMMETER
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
B	BARE
C.	CONDUIT
C.B.	CIRCUIT BREAKER
CH.	CHILLED
CKT	CIRCUIT
Cu	COPPER
CONN.	CONNECTED
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
C.O.	CONDUIT ONLY
C.T.	CURRENT TRANSFORMER
D.	DEEP
DC	DIRECT CURRENT
DISC.	DISCONNECT
DN	DOWN
EA.	EACH
E.O.	ELECTRIC OPERATOR
ELEC	ELECTRIC
E, EM	EMERGENCY
EX. RE.	EXIST. RELOCATED
EQ.	EQUIPMENT (GROUND)
FA	FIRE ALARM
FU	FUSE(S)
FUT	FUTURE
G, GR.	GROUND
GRDG.	GROUNDING
GFI	GROUND FAULT INTERRUPTING
H.	HIGH, (MOUNTING HEIGHT TO CENTER LINE)
H.O.A.	HAND-OFF AUTOMATIC SWITCH
HT	HEAT
IG	ISOLATED GROUND
ISO	ISOLATED
IN	INPUT
INS.	INSULATED
INST.	INSTALL OR INSTRUMENT
J.B.	JUNCTION BOX
K.O.	KNOCK OUT
kW	KILOWATTS
LTG.	LIGHTING
LTS	LIGHTS
LG	LONG
MAG	MAGNETIC (METER or STARTER)
MAN	MANUAL
M.B.	MAIN BREAKER
MCM	THOUSAND CIRCULAR MILS
MCS	MOLDED CASE SWITCH
MECH.	MECHANICALLY (HELD)
MT.	MOUNT
MTD.	MOUNTED
N, NEUT	NEUTRAL
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
OHE	OVER HEAD ELECTRICAL LINE
O.L.'s	OVERLOADS (THERMAL)
OUT	OUTPUT
P	POLE(S)
PNL	PANEL OR PANELBOARD
P.T.	POTENTIAL TRANSFORMER
#(SUFFIX)	POUNDS WEIGHT
#(PREFIX)	WIRE GAUGE (AWG)
ø	PHASE
REC.	RECEPTACLE
RECEPT	RECEPTACLE
S.C.	SHORT CIRCUIT (DUTY)
SN	SOLID NEUTRAL
SOL	SOLID (CONDUCTOR)
SQ.	SQUARE
ST	SHUNT TRIP
STR.	STARTER
SW.	SWITCH
TEL	TELEPHONE
TEMP.	TEMPERATURE (CONTROL)
T.O.E.	TIMED ON ENERGIZAITON
TYP.	TYPICAL
UPS	UNINTERRUPTIBLE POWER SYSTEM
UG	UNDERGROUND
UGP	UNDERGROUND PRIMARY
UGS	UNDERGROUND SECONDARY
V	VOLTS
VAC	VOLTS ALTERNATING CURRENT
VM	VOLTMETER
W	WATTS OR WIRE (USE CONTEXT) 100W (WATTS) 3W (WIRE)
W.H.	WATER HEATER
WP	WEATHERPROOF
WW	WIREWAY (or GUTTER)

ELECTRICAL LEGEND POWER, LIGHTING & FIRE

- A — WALL MOUNTED EXTERIOR LIGHT, SEE FIXTURE SCHEDULE
- EM — WALL MOUNTED, SELF-CONTAINED EMERGENCY LIGHT, SEE FIXTURE SCHEDULE
- L.A. — SURGE SUPPRESSOR
- CEILING/WALL MOUNTED EXIT LIGHT, SEE FIXTURE SCHEDULE
- DUPLEX RECEPTACLE, 20A, 125V, 2P, 3W,, GRDG, NEMA 5-20R, MOUNTED 18" H. ADDITIONAL MARKS FOR RECEPTS: G = GROUND FAULT INTERRUPTING TYPE; WP = GROUND FAULT & WEATHERPROOF BOX & COVER PLATE FOR WET LOCATIONS; XX"H. INDICATES HEIGHT ABOVE FINISHED FLOOR IF NOT STANDARD
- S — SINGLE POLE LIGHTING SWITCH, 20A, 120/277VAC, SILENT TOGGLE
- S_3 — THREE-WAY LIGHTING SWITCH, 20A, 120/277VAC, SILENT TOGGLE
- S_4 — FOUR-WAY LIGHTING SWITCH, 20A, 120/277VAC, SILENT TOGGLE
- S^a — "a" INDICATES OUTLET(S) OR LIGHTING CIRCUITS SWITCHED
- S_M — MANUAL MOTOR STARTING SWITCH, WHEN USED FOR THERMAL PROTECTION, INSTALL HEATERS
- SAFETY DISCONNECT SWITCH, NON-FUSED, SIZE/NO. OF POLES & ENCLOSURE NOTED
- ENCLOSED CIRCUIT BREAKER, SIZE/NO. OF POLES & ENCLOSURE NOTED
- JUNCTION BOX, 4" SQ. UNLESS NOTED, FURNISH BLANK COVER PLATE INCREASE SIZE AS PER CODE REQUIRED VOLUME
- JUNCTION BOX, WALL MOUNTED, 4" SQ. OR LARGER AS REQUIRED
- MAIN OR DISTRIBUTION PANEL OR SWITCHBOARD, 277/480V, 3PH., SURFACE TRIM
- LIGHTING OR MISCELLANEOUS POWER PANEL, SURFACE TRIM, SEE SCHEDULES
- WIRING IN CONDUIT, CONCEALED IN WALLS OR CEILING, HATCH MARKS INDICATE NO. OF CURRENT CARRYING WIRES IF MORE THAN 2. WHEN NOT MARKED 1/2" C. w/2-#12 & 1-#12 GR. (GROUND WIRES NOT MARKED, BUT REQUIRED; MINIMUM SIZE #12, GREEN INSULATED COPPER)
- WIRING IN EXPOSED CONDUIT, RUN PARALLEL AND PERPENDICULAR TO BUILDING LINES & STRUCTURAL ELEMENTS, WIRES SAME AS NOTES ABOVE
- WIRING IN UNDERGROUND PVC CONDUIT, 18" MIN. COVER (GREATER WHEN NOTED) SEE NOTES FOR CONCEALED WIRING ABOVE
- HOME RUN TO PANEL, SEE NOTES FOR EXPOSED & CONCEALED WIRING, PANEL-CIRCUIT(S) NOTED
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- M — MOTOR, AC INDUCTION; HORSEPOWER MARKED, VOLTAGE & PHASE NOTED
- T — DRY TYPE TRANSFORMER
- T — THERMOSTAT
- OPEN/CLOSE/AUTOMATIC (OCA)) STARTER, RELAY OR CONTACTOR; SEE PLANS FOR NOTES (FA = FIRE ALARM, LC = LIGHTING CONTACTOR)
- GROUND
- GROUND TEST STATION

INSTRUMENT IDENTIFICATION LETTERS

	FIRST-LETTER		SUCCEEDING-LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	
C	USER'S CHOICE			CONTROL	USER'S CHOICE
D	DISSOLVED OXYGEN	DIFFERENTIAL	DENSITY		
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			
G	USER'S CHOICE		GLASS, VIEWING DEVICE		
H	HAND (MANUAL)				
I	CURRENT (ELECT.) OR INTERLOCK		INDICATE		HIGH
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		
M	MOTION OR MOISTURE	MOMENTARY			LOW
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	MIDDLE, INTERMEDIATE
O	USER'S CHOICE		ORIFICE, RESTRICTION		USER'S CHOICE
P	PRESSURE OR VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY OR EVENT	INTEGRATE, TOTALIZE			
R	RATIO		RECORD		
S	SPEED, FREQUENCY OR SOLENOID	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	MULTIFUNCTION
W	WEIGHT, FORCE		WELL		
X	TORQUE OR USER' S CHOICE	X AXIS	UNCLASSIFIED	UNCLASSIFIED	
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	UNCLASSIFIED
Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED, FINAL CONTROL ELEMENT	

(*) pH, CL RES., DO , OR AS NOTED ABOVE BUBBLE

INSTRUMENT PLAN SYMBOLS

(SHOWN ON ELECTRICAL PLANS)

- HS XXX — HAND SWITCH LIGHT
- FT XXX — TRANSMITTER
- FY XXX — TRANSDUCER, I/P, ETC..
- LS XXX — LEVEL SWITCH, PRESSURE SWITCH, ETC..
- TT XXX — TEMPERATURE WELL AND TRANSMITTER
- ANALYZER OR FIELD PANEL
- M — MAGMETER FLOW TUBE
- PNEUMATIC CONTROL VALVE
- BUTTERFLY VALVE w/PNEUMATIC OPERATOR
- M — MOTOR OPERATED PINCH VALVE
- M — MOTOR OPERATED PLUG VALVE
- M — MOTOR OPERATED KNIFE GATE VALVE
- S — SOLENOID VALVE, 120VAC COIL
- TS-3 — TEMPERATURE SWITCH IN MOTOR
- FS-3 — LIMIT SWITCH
- LS-1 — LEVEL SWITCH
- 1/8A DIN RAIL MOUNTED FUSE
- GENERAL CONTROL PATH
- ELECTRONIC, FREQUENCY, ETC.
- PNEUMATIC LINE
- DATA OR LOGIC PERFORMED BY COMPUTER
- FUNCTION EXPLANATION OR UNITS / INSTRUMENT CONTROL FUNCTION TAG / LOOP NUMBER
- DENOTES MOUNTED INSIDE PANEL (OR REAR)
- W/O LINE DENOTES PRIMARY ELEMENT OR LOCALLY MOUNTED
- PANEL MOUNTED INSTRUMENT
- DI — COMPUTER FUNCTION / INPUT OR OUTPUT: D = DIGITAL I = INPUT; A = ANALOG O = OUTPUT
- PLC FUNCTION
- FUNCTION TAG / LOOP NUMBER
- R — INDICATOR LIGHT (LETTER=COLOR)
- M — MOTOR OR MOTORIZED ACTUATOR
- SURGE ARRESTOR
- INTERLOCK
- QI — STATUS OR EVENT
- JI — POWER ON
- MS — MOISTURE SWITCH
- TS — TEMPERATURE SWITCH
- TI — TEMPERATURE SWITCH ACTIVATED
- LS — LEVEL SWITCH
- LI — LEVEL SWITCH ACTIVATED
- QS — DIGITAL CLOSURE EQUIVALENT

ELECTRICAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE, THE OCCUPATIONAL SAFETY AND HEALTH ACT, AND ALL ELECTRICAL CODES LOCALLY BEING ENFORCED BY LOCAL AUTHORITY HAVING JURISDICTION (AHJ) IN THE PROJECT AREA.
2. CONTRACTOR TO OBTAIN AND PAY FOR ALL PERMITS, INSPECTION AND CONNECTION FEES.
3. CONTRACTOR TO PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND SUPERVISION FOR AND INCIDENTAL TO THE COMPLETION OF A FULLY FUNCTIONAL, SAFE AND COMPLETE ELECTRICAL SYSTEM.
4. CONTRACTOR TO TEST SYSTEM THOROUGHLY IN THE PRESENCE OF OWNER AND RENDER IT FREE FROM DEFECTS. CONTRACTOR TO PROVIDE OWNER WITH A ONE YEAR WARRANTY AFTER ACCEPTANCE.
5. THE CONTRACTOR SHALL PROPERLY SEAL ALL PENETRATIONS.
6. ELECTRICAL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID ANY CONFLICTS AND/OR CREATING A SAFETY HAZARD.
7. ELECTRICAL CONTRACTOR TO COORDINATE WITH THE OWNER FOR ANY ELECTRICAL REQUIREMENTS FOR SPECIAL EQUIPMENT.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL CIRCUITS ASSOCIATED WITH THE PROJECT WORK AREA.
9. ALL EQUIPMENT AND MATERIALS SHALL MEET OR EXCEED THE SCHEDULED AND/OR REQUIRED ITEMS. SUBMIT FOR PRIOR APPROVAL FOR ANY DEVIATIONS.
10. NO CHANGES SHALL BE MADE IN MATERIALS OR INSTALLATION WITHOUT ENGINEER AND OWNER'S APPROVAL.
11. CONTRACTOR SHALL VERIFY CLEARANCE SPACE AVAILABLE, OFFSETS REQUIRED, STRUCTURAL OPENINGS, AND WORK BY OTHER TRADES.
12. CONDUCTORS SHALL BE COPPER. MINIMUM SIZE FOR POWER CONDUCTORS SHALL BE #12 AWG. CONTROL CABLES SHALL BE TYPE THHW STRANDED COPPER, MINIMUM SIZE #14 AWG. SIGNAL CABLES SHALL BE TWISTED AND SHIELD, #16 AWG MINIMUM. CABLES SHALL BE U.L. LISTED AND SHALL BE MANUFACTURED BY G.E., GENERAL CABLE, ROME, COLLYER, OR AN ENGINEER APPROVED EQUIVALENT.
13. SCHEDULE 80 PVC CONDUITS SHALL BE PROVIDED FOR UNDERGROUND INSTALLATION. ALL EXPOSED CONDUITS SHALL BE RIGID GALVANIZED STEEL.
14. SPLICING OF CABLES INSIDE CONDUIT AND AREAS THAT ARE DAMP IS NOT PERMITTED.
15. THE SCADA SYSTEM SHALL BE PROGRAMMED TO ACCEPT THE NEW INPUTS AND OUTPUTS SIGNALS AS INDICATED BY THE PLANS.
16. ALL ELECTRICAL EQUIPMENT SHALL BE PURCHASED FROM LOCAL DISTRIBUTION WITHIN 100 MILES OF PROJECT UNLESS OTHERWISE SPECIFIED.
17. ALL EXTERIOR RECEPTACLES WITH WEATHERPROOF (WP) COVERS SHALL BE THE "WHILE IN USE" POLYCARBONATE TYPE.
18. THE ELECTRICAL SYSTEM SHALL MEET OR EXCEED THE IEEE 519 REQUIREMENTS FOR HARMONICS.
19. THESE DRAWING IS BASED ON THE EXISTING CONTROL DRAWINGS PROVIDED BY THE CLIENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE EXISTING CONTROL SYSTEM.
20. PLANS ARE BASED ON PLANS PROVIDED BY THE CLIENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BUT SHALL NOT BE LIMITED TO FIELD VERIFYING ALL DIMENSIONS, EXISTING AND NEW EQUIPMENT LAYOUT, ALL ELECTRICAL PANELS AND CIRCUITS AS REQUIRED TO PROVIDE FULLY FUNCTIONAL AND WORKING SYSTEM.
21. ALL VARIABLE FREQUENCY DRIVES SHALL BE PROVIDED WITH BACNET ETHERNET CARDS. (1)

MOBILE AREA WATER AND SEWER SYSTEMS
MYERS WATER TREATMENT FACILITY
ELECTRICAL QUERY
HUBERT PIERCE ROAD, MOBILE, ALABAMA 36608

ISAIAH ENGINEERING Building The Future

DATA
SCALE: AS NOTED
PROJECT NO.: IE-106 MAWSS
DRAWN BY: B.BERTRAND
DESIGN BY: N.EVERETT
REVIEWED BY: R.MUNIZ
APPROVED BY: N.EVERETT

REVISIONS
(1) 4/7/26 ADDENDUM NO. 1

ALABAMA REGISTERED No. 21407 PROFESSIONAL ENGINEER NATHANIEL R. EVERETT

STAMP VALID ONLY IF SIGNED & DATED

FILE: MAWSS MYERS WTP ELECT. QUERY PROJECT
DATE: 3/20/26

E-1.0

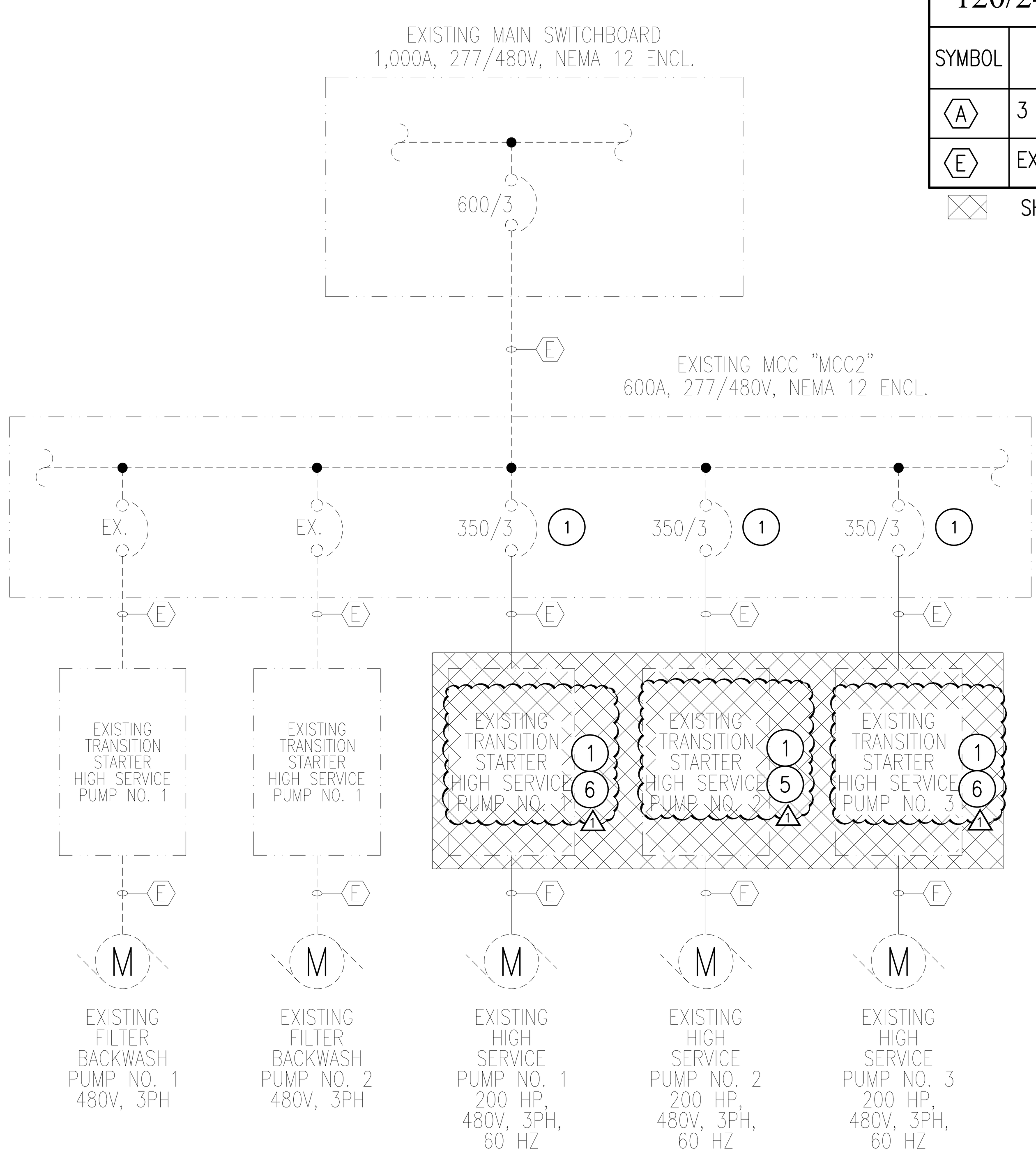
SYMBOLS, NOTES AND LEGENDS

KEY NOTES:

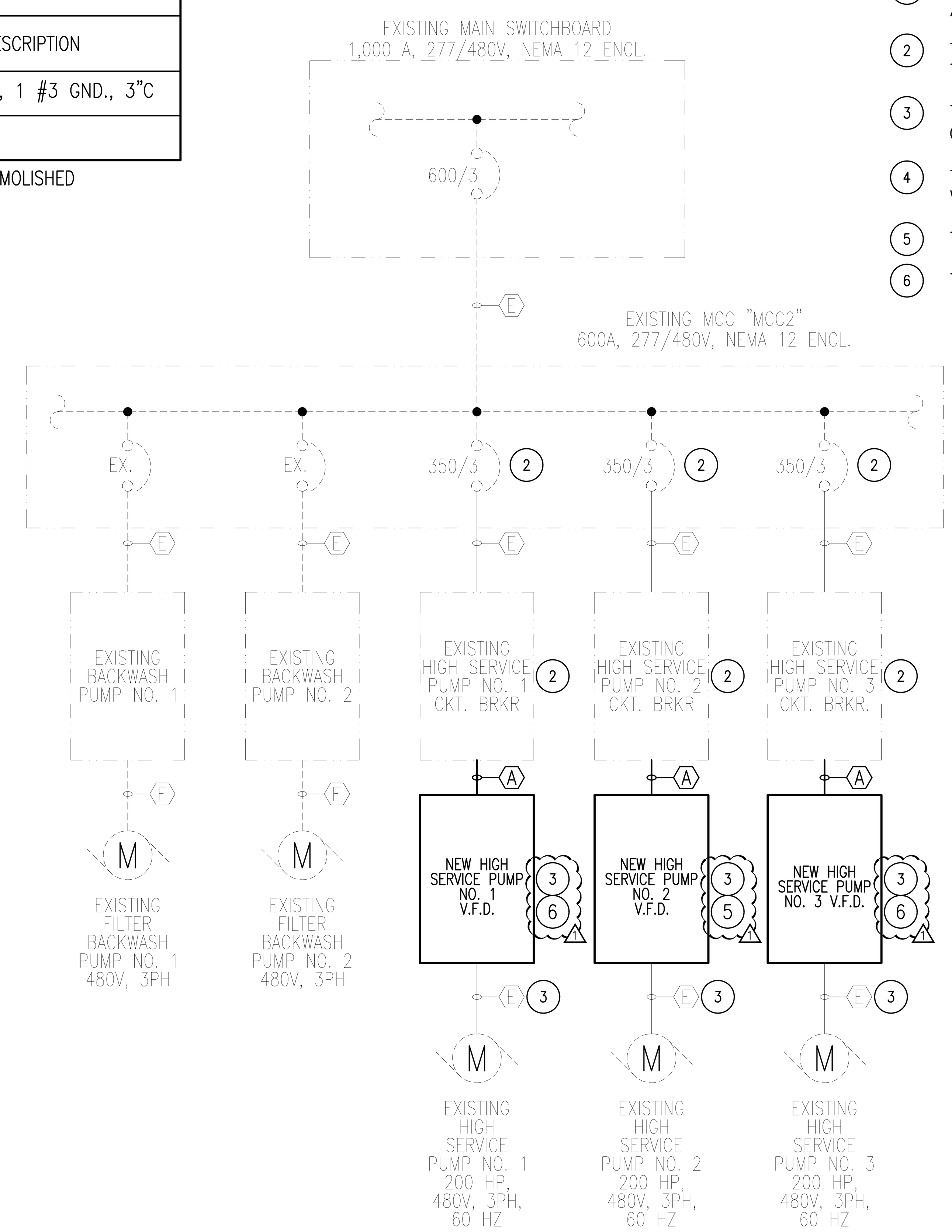
1. THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO REMOVE THE EXISTING HIGH SERVICE PUMP TRANSITIONAL STARTERS AND CLEAN THE EXISTING MCC SECTION. THE EXISTING CIRCUIT BREAKER SHALL REMAIN IN SERVICE.
2. THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO CLEAN AND REUSED EXISTING MCC SECTIONS AND CIRCUIT BREAKERS TO PROVIDE POWER THE NEW VFDS IN THE ROOM LOCATED BELOW.
3. THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO REUSED THE EXISTING CONDUCTORS, CABLE TRAYS AND CONDUITS TO CONNECT THE EXISTING HIGH SERVICE MOTORS TO THE NEW VARIABLE FREQUENCY DRIVES AND THE EXISTING MOTORS.
4. THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO RELOCATE THE EXISTING CONDUIT/CONDUCTORS TO A LOCATION THAT WILL NOT BE OBSTRUCTED BY THE NEW MCC.
5. THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO INSTALL THIS VFD ENCLOSURE IN THE BASE BID.
6. THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO INSTALL THIS VFD IN THE ALTERNATE BID ITEMS.

120/240V Cable Schedule

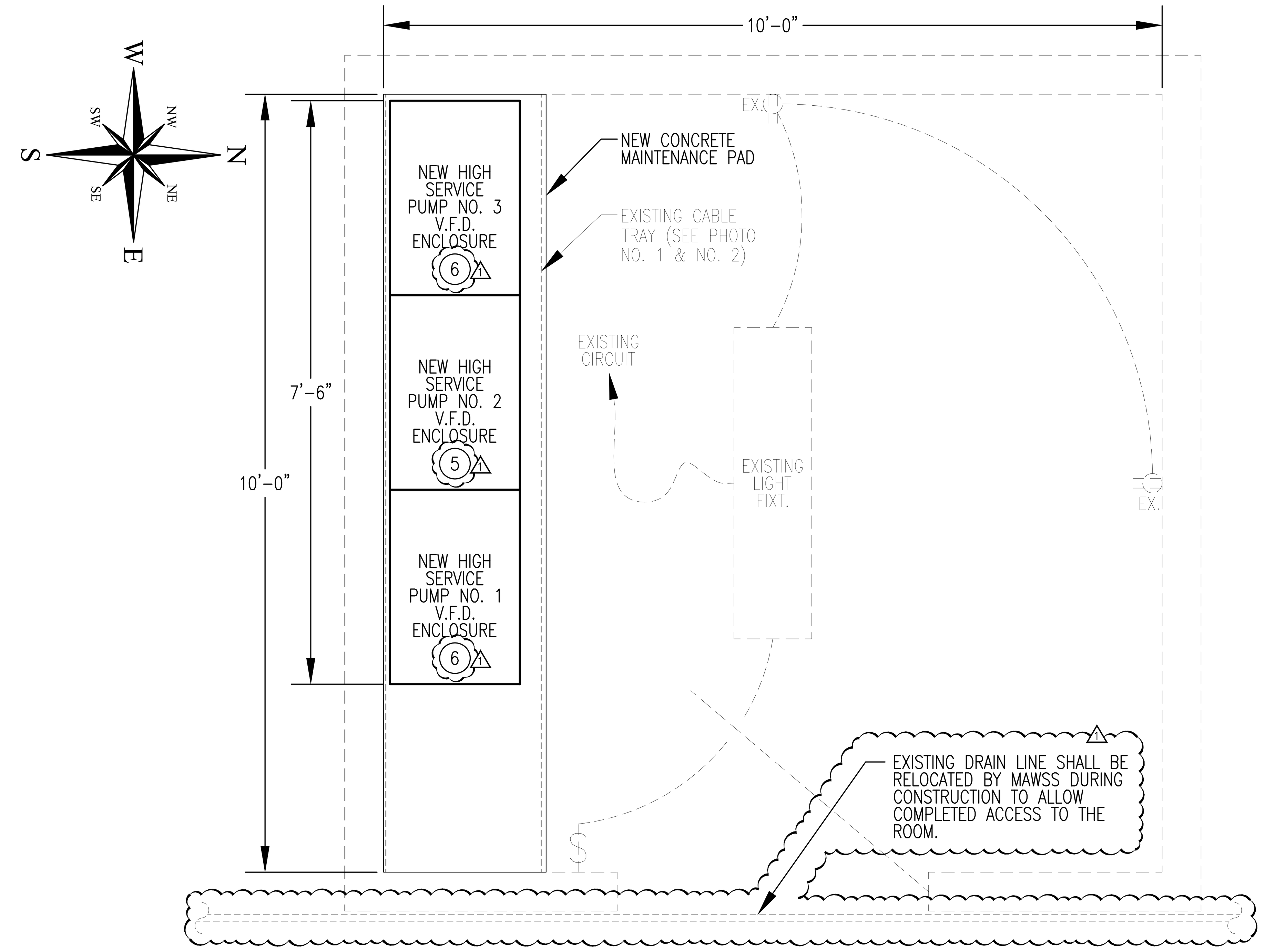
SYMBOL	DESCRIPTION
A	3 #350 KCM, 1 #3 GND., 3"C
E	EXISTING
☒	SHALL BE DEMOLISHED



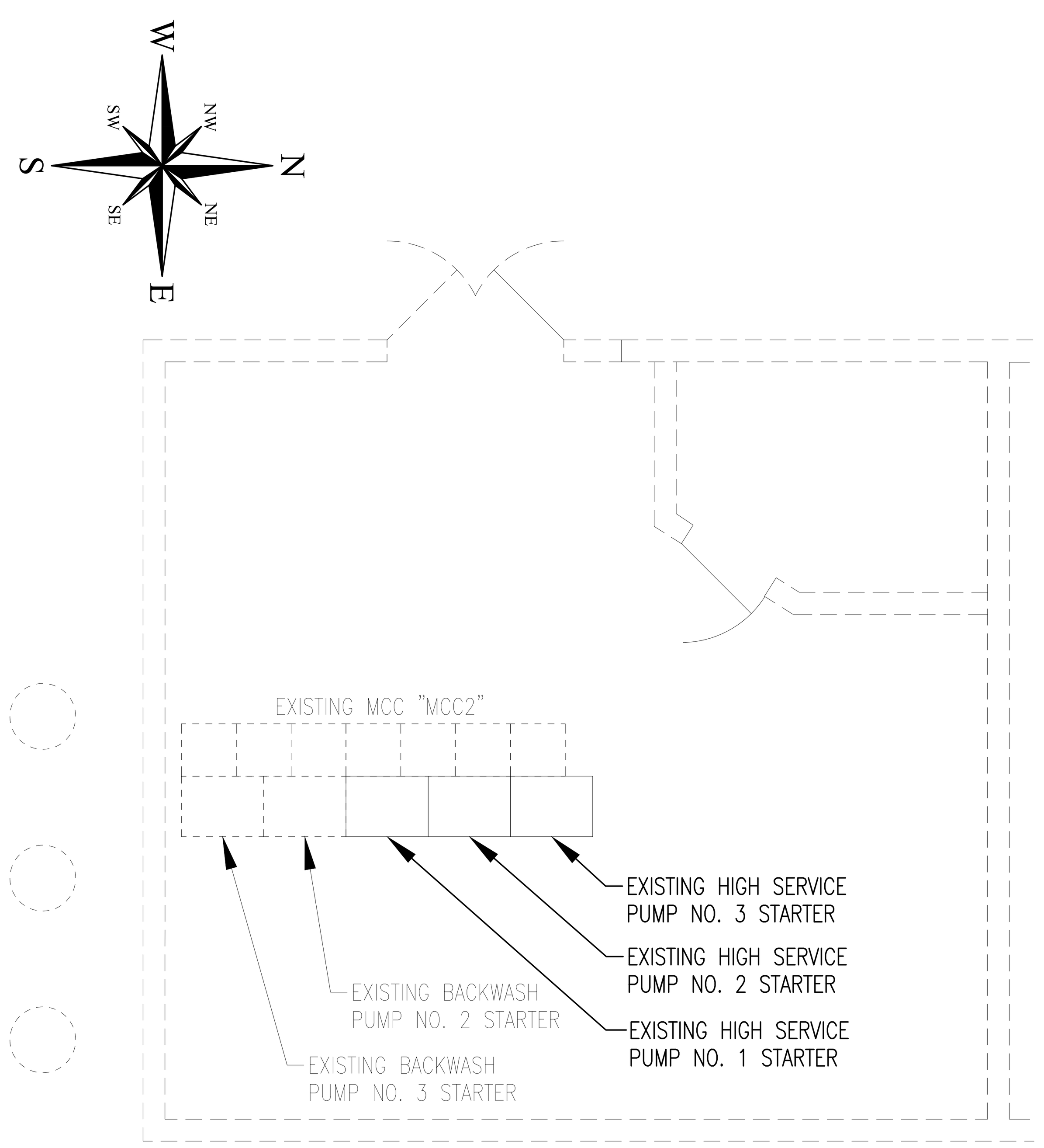
EXISTING 277/480 V ELECTRICAL ONE-LINE DIAGRAM
NOT TO SCALE



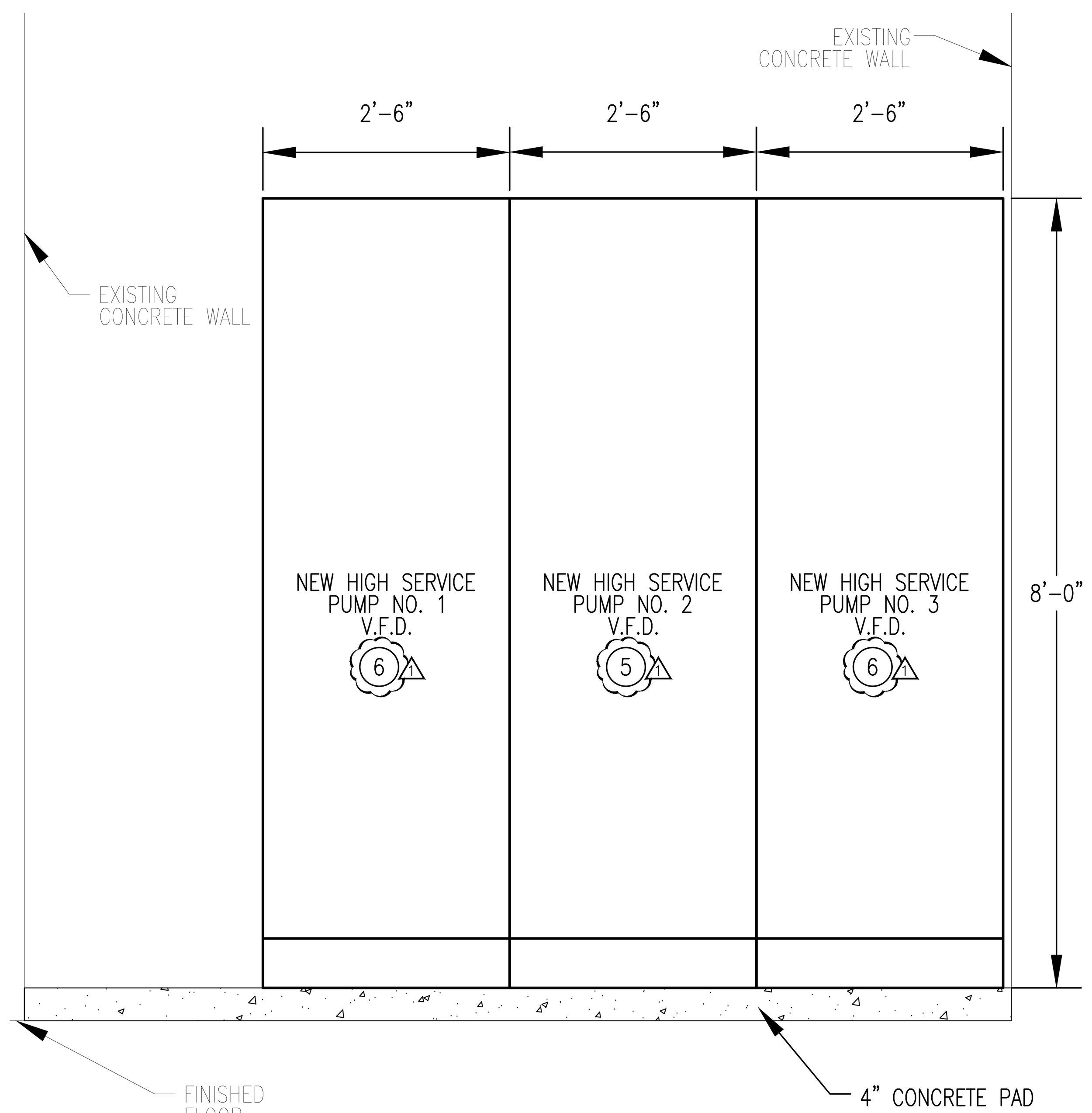
NEW WORK: 277/480 V ELECTRICAL ONE-LINE DIAGRAM
NOT TO SCALE



NEW VFD ROOM PLAN
(LOCATED BELOW EXISTING MCC ROOM)
SCALE: 3/4" = 1' – 0"



EXISTING MCC "MCC2" PLAN
NOT TO SCALE



NEW VFD ENCLOSURE ELEVATION

VFD ROOM PHOTO NO. 1 (EAST)

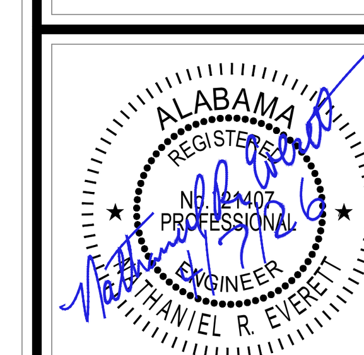
VFD ROOM PHOTO NO. 3 (WEST)

MOBILE AREA WATER AND SEWER SYSTEMS
MYERS WATER TREATMENT FACILITY
ELECTRICAL QUERY
HUBERT PIERCE ROAD, MOBILE, ALABAMA 36608

ISAIAH ENGINEERING
Building The Future
413-C Azalea Road | Mobile, Alabama | 36609
Office: 251.344.2022 | Fax: 251.494.3022
Email: info@isaiahengineering.com
www.isaiahengineering.com

DATA
SCALE: AS NOTED
PROJECT NO.: IE–106 MAWSS
DRAWN BY: B.BERTRAND
DESIGN BY: N.EVERETT
REVIEWED BY: R.MUNIZ
APPROVED BY: N.EVERETT

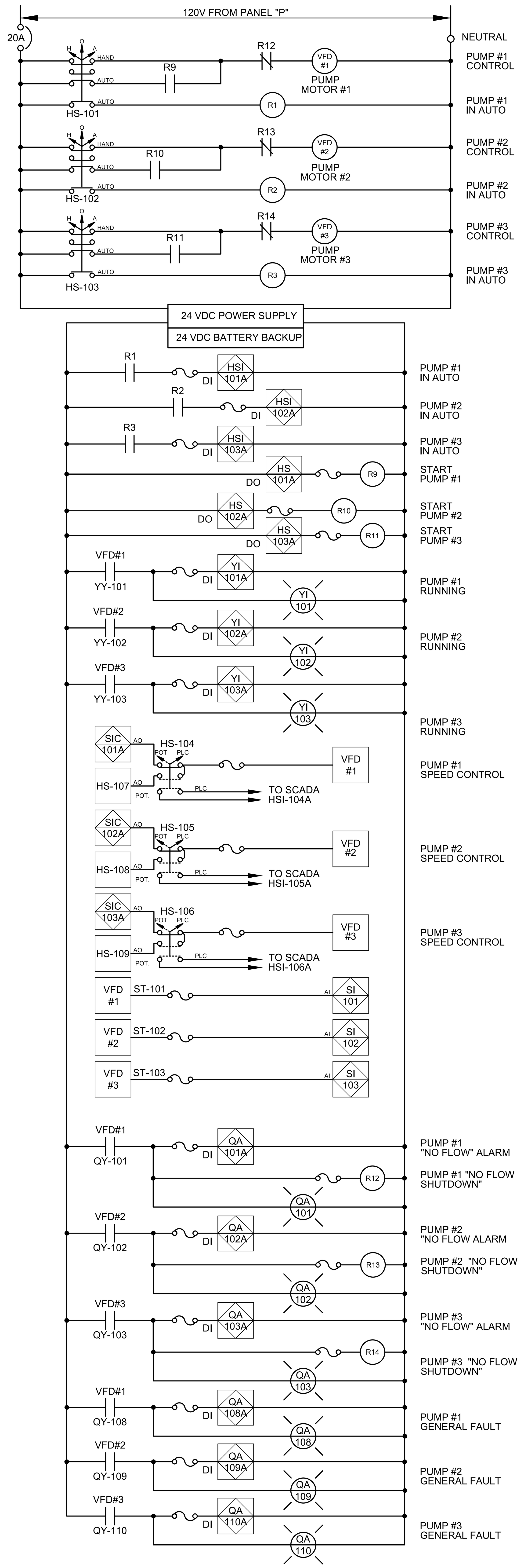
REVISIONS
1 4/7/26 ADDENDUM NO. 1



STAMP VALID ONLY IF SIGNED & DATED

FILE: MAWSS MYERS WTP ELECT. QUERY PROJECT
DATE: 3/20/26

E–1.1
ONE-LINE AND PLANS



CONTROL PANEL DIAGRAM

	SITUATION	FIELD ACTION		PLC/SCADA ACTION	ALRM
1.	PUMP MOTOR NO. 1 HOA SWITCH PLACED IN AUTO POSITION	HS–101 CLOSES CONTACT HSI–101 AND RELAY R1 IS ACTIVATED TO CLOSE CONTACT R1	A.	NOTIFY PLC LOGIC THAT PUMP MOTOR NO. 1 IS AVAILABLE	NO
2.	PUMP MOTOR NO. 1 H–0–A SWITCH IS PLACED IN HAND POSITION	HS–101 OPENS CONTACT HSI–101 AND VFD RUN STATUS IS ACTIVATED. VFD SHALL RUN AT DEFAULT SPEED SETTING UNLESS STATION IS IN MANUAL CONTROL MODE.	A.	NOTIFY SCADA THAT PUMP MOTOR NO. 1 IS "RUNNING IN MANUALLY".	NO
3.	H–0–A SWITCH FOR PUMP MOTOR NO. 1 IS PLACED IN OFF POSITION	HS–101 OPENS CONTACT HSI–101	A.	NOTIFY SCADA THAT PUMP MOTOR NO. 1 IS "OFF OR OUT OF SERVICE".	NO
			B.	CONTROL LOGIC SHALL REMOVE PUMP FROM CONTROL SEQUENCE AND CONTROL ALL AVAILABLE PUMP MOTORS WITH SELECTOR SWITCH IN THE AUTO POSITION	NO
4.	MOTOR NO. 2 HOA SWITCH PLACED IN AUTO POSITION	HS–102 CLOSES CONTACT HSI–102 AND RELAY R2 IS ACTIVATED TO CLOSE CONTACT R2	A.	NOTIFY PLC LOGIC THAT PUMP MOTOR NO. 2 IS AVAILABLE	NO
5.	H–0–A SWITCH FOR PUMP MOTOR NO. 2 IS PLACED IN HAND POSITION	HS–102 OPENS CONTACT HSI–102 AND VFD RUN STATUS IS ACTIVATED. VFD SHALL RUN AT DEFAULT SPEED SETTING UNLESS STATION IS IN MANUAL CONTROL MODE.	A.	NOTIFY SCADA THAT PUMP MOTOR NO. 2 IS "RUNNING IN MANUALLY".	NO
6.	H–0–A SWITCH FOR PUMP MOTOR NO. 2 IS PLACED IN OFF POSITION	HS–102 IS DE–ACTIVATED AND OPENS CONTACT HSI–102	A.	NOTIFY SCADA THAT PUMP MOTOR NO. 2 IS "OFF OR OUT OF SERVICE".	NO
			B.	CONTROL LOGIC SHALL REMOVE PUMP FROM CONTROL SEQUENCE AND CONTROL ALL AVAILABLE PUMP MOTORS WITH SELECTOR SWITCH IN THE AUTO POSITION	NO
7.	MOTOR NO. 3 HOA SWITCH PLACED IN AUTO POSITION	HS–103 CLOSES CONTACT HSI–103 AND RELAY R3 IS ACTIVATED TO CLOSE CONTACT R3	A.	NOTIFY PLC LOGIC THAT PUMP MOTOR NO. 3 IS AVAILABLE	NO
8.	H–0–A SWITCH FOR PUMP MOTOR NO. 3 IS PLACED IN HAND POSITION	HS–103 OPENS CONTACT HSI–103 AND VFD RUN STATUS IS ACTIVATED. VFD SHALL RUN AT DEFAULT SPEED SETTING UNLESS STATION IS IN MANUAL CONTROL MODE.	A.	NOTIFY SCADA THAT PUMP MOTOR NO. 3 IS "RUNNING IN MANUALLY".	NO
9.	H–0–A SWITCH FOR PUMP MOTOR NO. 3 IS PLACED IN OFF POSITION	HS–103 OPENS CONTACT HSI–103	A.	NOTIFY SCADA THAT PUMP MOTOR NO. 3 IS "OFF OR OUT OF SERVICE".	NO
			B.	CONTROL LOGIC SHALL REMOVE PUMP FROM CONTROL SEQUENCE AND CONTROL ALL AVAILABLE PUMP MOTORS WITH SELECTOR SWITCH IN THE AUTO POSITION	NO
10.	PUMP MOTOR NO. 1 IS STARTED	VFD NO. 1 RUN CONTACT IS ACTIVATED AND ENGERGIZES RELAY R7.	A.	NOTIFY SCADA THAT MOTOR NO. 1 IS RUNNING	NO
			B.	START MOTOR TOTALIZE RUN TIMER "T101"	NO
11.	PUMP MOTOR NO. 2 IS STARTED	VFD NO. 2 RUN CONTACT IS ACTIVATED AND ENGERGIZES RELAY R8	A.	NOTIFY SCADA THAT MOTOR NO. 2 IS RUNNING	NO
			B.	START MOTOR TOTALIZE RUN TIMER "T102"	NO
12.	PUMP MOTOR NO. 3 IS STARTED	VFD NO. 3 RUN CONTACT IS ACTIVATED AND ENGERGIZES RELAY R11	A.	NOTIFY SCADA THAT MOTOR NO. 3 IS RUNNING	NO
			B.	START MOTOR TOTALIZE RUN TIMER "T103"	NO
13.	PUMP MTR NO. 1 IS STARTED AND MOTOR CURRENT IS LESS THAN MINIMUM PUMPING CURRENT	VFD RUN STATUS ACTIVATES RELAY TIMER TDR101 IS STARTED, TDR101 HAS TIMED OUT AND CLOSES CONTACT TDR101.	A.	PROVIDE ALARM MESSAGE TO SCADA AND PLC "NO FLOW ON WELL PUMP MOTOR NO. 1".	YES
			B.	STOP OR PREVENT PUMP MOTOR NO. 1 START COMMAND AND START NEXT PUMP MOTOR WITH HOA IN AUTO POSITION.	NO
14.	PUMP MTR NO. 2 IS STARTED AND MOTOR CURRENT IS LESS THAN MINIMUM PUMPING CURRENT	VFD RUN STATUS ACTIVATES RELAY TIMER TDR102 IS STARTED, TDR102 HAS TIMED OUT AND CLOSES CONTACT TDR102.	A.	PROVIDE ALARM MESSAGE TO SCADA AND PLC "NO FLOW ON WELL PUMP MOTOR NO. 2".	YES
			B.	STOP OR PREVENT PUMP MOTOR NO. 2 START COMMAND AND START NEXT PUMP MOTOR WITH HOA IN AUTO POSITION.	NO
15.	PUMP MTR NO. 3 IS STARTED AND MOTOR CURRENT IS LESS THAN MINIMUM PUMPING CURRENT	VFD RUN STATUS ACTIVATES RELAY TIMER TDR103 IS STARTED, TDR103 HAS TIMED OUT AND CLOSES CONTACT TDR103.	A.	PROVIDE ALARM MESSAGE TO SCADA AND PLC "NO FLOW ON PUMP MOTOR NO. 3".	YES
			B.	STOP OR PREVENT PUMP MOTOR NO. 3 START COMMAND AND START NEXT PUMP MOTOR WITH HOA IN AUTO POSITION.	NO
16.	GENERAL VFD NO. 1 ALARM	VFD NO. 1 GENERAL FAULT ALARM CONTACT (QY–108) CLOSES	A.	PROVIDE TO PLC AND SCADA THE ALARM MESSAGE "VFD NO. 1 GENERAL FAULT ALARM ACTIVATED".	YES
			B.	STOP OR PREVENT PUMP MOTOR NO. 1 START COMMAND AND START NEXT PUMP MOTOR WITH HOA IN AUTO POSITION.	NO
17.	GENERAL VFD NO. 2 ALARM	VFD NO. 2 GENERAL FAULT ALARM CONTACT CLOSES (QY–109)	A.	PROVIDE TO PLC AND SCADA THE ALARM MESSAGE "VFD NO. 2 GENERAL FAULT ALARM ACTIVATED".	YES
			B.	STOP OR PREVENT PUMP MOTOR NO. 2 START COMMAND AND START NEXT PUMP MOTOR WITH HOA IN AUTO POSITION.	NO
18.	GENERAL VFD NO. 3 ALARM	VFD NO. 3 GENERAL FAULT ALARM CONTACT CLOSES (QY–110)	A.	PROVIDE TO PLC AND SCADA THE ALARM MESSAGE "VFD NO. 3 GENERAL FAULT ALARM ACTIVATED".	YES
			B.	STOP OR PREVENT PUMP MOTOR NO. 3 START COMMAND AND START NEXT PUMP MOTOR WITH HOA IN AUTO POSITION.	NO

NOTES:

1. ALL INSTRUMENT TAG NUMBERS ARE ARBITRARILY ASSIGN FOR CLARITY ONLY, IT SHALL BE THE CONTRACTOR RESPONSIBILITY FOR ASCERTAINING THE ACTUAL EXISTING INSTRUMENT TAG NUMBERS AND THE AVAILABLE NUMBERS REQUIRED TO REPROGRAM THE EXISTING SCADA SYSTEM TO PROVIDE A COMPLETE AND FULLY FUNCTIONAL HIGH SERVICE PUMP SYSTEM.

MOBILE AREA WATER AND SEWER SYSTEMS

MYERS WATER TREATMENT FACILITY

ELECTRICAL QUERY

HUBERT PIERCE ROAD, MOBILE, ALABAMA 36608

ISAIAH ENGINEERING

Building The Future

413-C Azalea Road | Mobile, Alabama | 36609

Office: 251.344.2022 | Fax: 251.494.3022

Email: info@isaiahengineering.com

www.isaiahengineering.com

DATA

SCALE: AS NOTED

PROJECT NO.: IE–106 MAWSS

DRAWN BY: B.BERTRAND

DESIGN BY: N.EVERETT

REVIEWED BY: R.MUNIZ

APPROVED BY: N.EVERETT

REVISIONS

1 4/7/26 ADDENDUM NO. 1

ALABAMA REGISTERED No. 21407 PROFESSIONAL ENGINEER NATHANIEL R. EVERETT

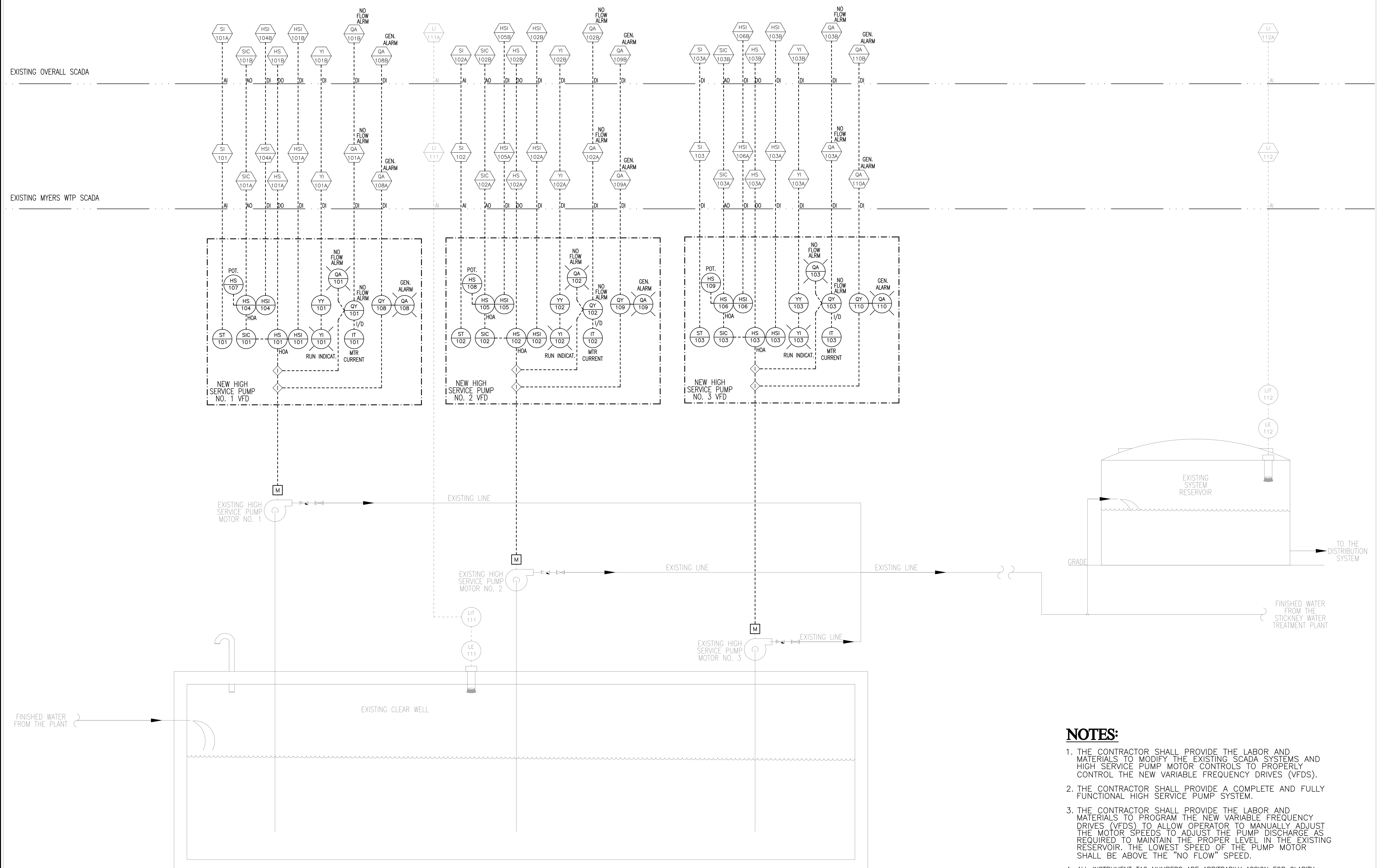
STAMP VALID ONLY IF SIGNED & DATED

FILE: MAWSS MYERS WTP ELECT. QUERY PROJECT

DATE: 3/20/26

E–2.0

CONTROL DIAGRAM AND CONTROL LOGIC



NOTES:

1. THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO MODIFY THE EXISTING SCADA SYSTEMS AND HIGH SERVICE PUMP MOTOR CONTROLS TO PROPERLY CONTROL THE NEW VARIABLE FREQUENCY DRIVES (VFDS).
2. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND FULLY FUNCTIONAL HIGH SERVICE PUMP SYSTEM.
3. THE CONTRACTOR SHALL PROVIDE THE LABOR AND MATERIALS TO PROGRAM THE NEW VARIABLE FREQUENCY DRIVES (VFDS) TO ALLOW OPERATOR TO MANUALLY ADJUST THE MOTOR SPEEDS TO ADJUST THE PUMP DISCHARGE AS REQUIRED TO MAINTAIN THE PROPER LEVEL IN THE EXISTING RESERVOIR. THE LOWEST SPEED OF THE PUMP MOTOR SHALL BE ABOVE THE "NO FLOW" SPEED.
4. ALL INSTRUMENT TAG NUMBERS ARE ARBITRARILY ASSIGN FOR CLARITY ONLY, IT SHALL BE THE CONTRACTOR RESPONSIBILITY FOR ASCERTAINING THE ACTUAL EXISTING INSTRUMENT TAG NUMBERS AND THE AVAILABLE NUMBERS REQUIRED TO REPROGRAM THE EXISTING SCADA SYSTEM TO PROVIDE A COMPLETE AND FULLY FUNCTIONAL HIGH SERVICE PUMP SYSTEM.

MOBILE AREA WATER AND SEWER SYSTEMS
MYERS WATER TREATMENT FACILITY
ELECTRICAL QUERY

HUBERT PIERCE ROAD, MOBILE, ALABAMA 36608

ISAIAH ENGINEERING
Building The Future

DATA
SCALE: AS NOTED
PROJECT NO.: IE–106 MAWSS
DRAWN BY: B.BERTRAND
DESIGN BY: N.EVERETT
REVIEWED BY: R.MUNIZ
APPROVED BY: N.EVERETT

REVISIONS
1 4/7/26 ADDENDUM NO. 1

ALABAMA REGISTERED No. 21407 PROFESSIONAL ENGINEER NATHANIEL R. EVERETT

STAMP VALID ONLY IF SIGNED & DATED

FILE: MAWSS MYERS WTP ELECT. QUERY PROJECT

DATE: 3/20/26

I–1.0

PID