ELECTRICAL SYMBOLS

F1 1 a	LINEAR LIGHTING FIXTURES "F1" INDICATES FIXTURE TYPE – TYPICAL FOR ALL FIXTURES "1" INDICATES CIRCUIT NUMBER – TYPICAL FOR ALL FIXTURE "a" INDICATES THE SWITCH CONTROL – TYPICAL FOR ALL FIXTURES
	WALL MOUNTED LIGHTING FIXTURE.
	SURFACE OR PENDANT MOUNTED FIXTURE.
	POLE MOUNTED SITE LIGHT FIXTURE
	EMERGENCY EXIT SIGN
	EMERGENCY LIGHTING BATTERY UNIT WITH TWO LIGHT HEADS
	REMOTE EMERGENCY LIGHTING UNIT WITH TWO LIGHTING HEADS PROVIDE 3/4", 2#10, 1#10GND TO NEAREST THE EMEGENCY LIGHTING BATTERY UNIT
S_a^{WP}	SINGLE POLE SWITCH 120V, 20A "a" INDICATES THE SWITCH CONTROL, "WP" INDICATES WITH WEATHERPROOF COVER
S_2	2-POLE SWITCH 120V, 20A 1 POLE FOR ROOM LIGHT FIXTURES, 1-POLE FOR EXHAUST FAN CONTROL
S_{3a}	3-WAY SWITCH 120V, 20A "a" INDICATES THE SWITCH CONTROL
S_{4a}	4-WAY SWITCH 120V, 20A "a" INDICATES THE SWITCH CONTROL
TC	DIGITAL TIME CLOCK SWITCH
TM	MECHANICAL TIMER SWITCH
OC	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR/SWITCH
S	LOW VOLTAGE SWITCH
	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR
LCP	LIGHTING CONTROL PANEL
1	DUPLEX RECEPTACLE, WEATHER-RESISTANT 120V, 20A WITH WEATHERPROOF COVER "1" INDICATES CIRCUIT NUMBER – TYPICAL FOR ALL RECEPTACLES
GF	DUPLEX RECEPTACLE, 120V, 20A "GF" INDICATES GROUND FAULT TYPE RECEPTACLE
WP	(2) DUPLEX (QUAD) RECEPTACLES, 120V, 20A "WP" INDICATES WITH WEATHERPROOF COVER
WP	SIMPLEX RECEPTACLE, WP INDICATES WEATHER RESISTANT 120V, 20A UNFUSED DISCONNECT SWITCH, "30" INDICATES 30 AMP RATING, PROVIDE 3-POLE "WP" INDICATES WITH WEATHERPROOF COVER
30	UNLESS OTHERWISE INDICATED.
F 20	FUSED DISCONNECT SWITCH, "20" INDICATES 20 AMP FUSE RATING, PROVIDE 3-POLE UNLESS OTHERWISE INDICATED.
	3-PHASE RECEPTACLE
MCP FVNR	WALL MOUNTED COMBINATION MOTOR STARTER WITH MOTOR CIRCUIT PROTECTOR, "FVNR" INDICATES TYPE OF MOTOR STARTER
MCP FVNR	MOTOR STARTER WITH MOTOR CIRCUIT PROTECTOR, "FVNR" INDICATES TYPE OF MOTOR STARTER
VFD	ENCLOSED VARIABLE FREQUENCY DRIVE
Sm	MANUAL MOTOR STARTER 120V, 20A
J J	JUNCTION BOX
HH	POLYMER CONCRETE HAND HOLE
AR1	ALARM RELAY, "AR1" REFERS TO RELAY NAME DESIGNATION
CR1	CONTROL RELAY, "CR1" REFERS TO RELAY NAME DESIGNATION
M	MOTOR START RELAY
TR1	TIMING RELAY, "TR1" REFERS TO RELAY NAME DESIGNATION
	NORMALLY OPEN RELAY CONTACT
	NORMALLY CLOSED RELAY CONTACT
	OPERATOR PUSH BUTTON NORMALLY OPEN CONTACT
	OPERATOR PUSH BUTTON NORMALLY CLOSED CONTACT
	PRESSURE SWITCH – CLOSES ON HIGH PRESSURE
	PRESSURE SWITCH – CLOSES ON LOW PRESSURE

ELECTRICAL SYMBOLS

	UNDERGROUND CONDUIT DUCT BANK
PP1(1)	HOMERUN DESIGNATION TO PANEL PP1 CIRCUIT #1, WITH THE FOLOWING CONDUIT/WIRES UNLESS OTHERWISE NOTED: • 3/4"C WITH 2#12, 1#12GND FOR 20AMP SINGLE PHASE CIRCUITS. • 3/4"C WITH 3#12, 1#12GND FOR 20AMP THREE PHASE CIRCUITS. • 3/4"C WITH 2#10, 1#10GND FOR 30AMP SINGLE PHASE CIRCUITS. • 3/4"C WITH 3#10, 1#10GND FOR 30AMP THREE PHASE CIRCUITS. • 3/4"C WITH 2#8, 1#10GND FOR 40AMP & 50AMP SINGLE PHASE CIRCUITS. • 3/4"C WITH 3#8, 1#10GND FOR 40AMP & 50AMP THREE PHASE CIRCUITS.
	EYS TYPE CONDUIT SEAL
SPD	SURGE PROTECTION DEVICE
GFM	GROUND FAULT MONITOR AND INDICATION LIGHT
	UTILITY POLE
20 100 LSIG	MOLDED CASE CIRCUIT BREAKER, 3-POLE UNLESS OTHERWISE INDICATED, "20" INDICATES TRIP AMPERE RATING, "100" INDCATES FRAME SIZE, "LSIG" LONG, SHORT, INSTANTANEOUS AND GROUND FAULT PROTECTION RESPECTIVELY
	DRY TYPE TRANSFORMER
HH	CONCRETE HAND HOLE (REFER TO SITE DETAILS)
	3/4"ø X 10'-0" COPPER CLAD GROUND ROD
	BUILDING GROUNDING SYSTEM
10	MOTOR, "10" INDICATES HORSEPOWER RATING
XX	CABLE/CONDUIT DESIGNATION, "XX" REFERS CABLE CONDUIT REFERENCE, REFER TO CABLE/CONDUIT SCHEDULES.
OS-XXXX YYY	OPERATOR STATION (SUPPLIED BY OTHER DIV. 16 UNO), "XXXX" REFERS TO TAGNAME ID, "YYY" REFERS TO THE TYPE OF OPERATOR STATION
XX-XXXX	UNLESS OTHERWISE NOTED INSTRUMENATION OR PROCESS EQUIPMENT (SUPPLIED BY OTHER DIVISIONS) "XX-XXXX" REFERS TO TAGNAME ID
E	GENERATOR EMERGENCY STOP, PROVIDE WITH 3 SEPARATE NORMALLY CLOSED CONTACTS
O	OCCUPIED/UNOCCUPIED SELECTOR SWITCH. (SUPPLIIED BY DIV. 16)
T	THERMOSTAT (SUPPLIED BY DIV. 15)
M	MOTOR OPERATED DAMPER (SUPPLIED BY DIV. 15)
F XKW	ELECTRIC UNIT HEATER, "X" INDICATES UNIT ELECTRIC COIL RATING (SUPPLIED BY DIV. 15)
CUH 1 P11-LP (21)	EQUIPMENT CIRCUIT NUMBER DESIGNATION TO PANEL PP1-LP CIRCUIT #21,

TELE/DATA LEGEND

1T 2D	WALL MOUNTED DATA OUTLET, 2D INDICATES (2) CAT6 TERMINAL DATA CONNECTORS, 1T INDICATES (1) CAT6 TERMINAL TELEPHONE CONNECTOR
WAP	CEILING MOUNTED WIRELESS ACCESS POINT WITH (1) CAT6 CABLE

DEMOLITION NOTES

1. UNLESS OTHERWISE NOTED, ALL EXISTING ELECTRICAL SYSTEMS WITHIN HATCH MARKS (POWER, LIGHTING, LOW VOLTAGE, CONTROLS, ETC) AND ASSOCIATED EQUIPMENT IS TO BE DEMOLISHED OR SALVAGED. DISCONNECT AND DE-ENERGIZE THE EQUIPMENT. REMOVE THE EQUIPMENT TO BE DEMOLISHED OR SALVAGED PER SECTION 02050. ALL CONTROL DEVICES, CONDUIT, CABLING, BOXES, SUPPORTS, ETC, ASSOCIATED WITH THE DEMOLISHED EQUIPMENT SHALL BE REMOVED. THE CONDUIT AND CABLING SHALL BE REMOVED BACK TO SOURCE.
2. NO DEVICE OR EQUIPMENT INDICATED FOR DEMOLITION WILL BE REUSED OR SALVAGED UNLESS SPECIFICALLY NOTED AS SUCH. ALL EQUIPMENT REMOVED SHALL BE REMOVED FROM SITE AND PROPERLY DISPOSED OF, PRIOR TO REMOVAL OF EQUIPMENT COORDINATE WITH OWNER FOR ANY EQUIPMENT THE OWNER WILL KEEP.
3. EXISTING EQUIPMENT INDICATED ON THE DEMOLITION PLANS ARE BASED ON SITE OBSERVATIONS AND IT IS NOT THE INTENTION OF THESE DRAWINGS TO SHOW ALL EQUIPMENT AND MATERIALS TO BE DISCONNECTED AND/OR REMOVED.
4. DEMOLITION ONE LINE DIAGRAMS ONLY INDICATE CURRENT ACTIVE EQUIPMENT AND DO NOT INDICATE ABANDONED EQUIPMENT NO LONGER IN SERVICE. DEMOLITION PLAN DRAWINGS INDICATE BOTH ACTIVE AND ABANDONED EQUIPMENT THAT IS REQUIRED TO BE DEMOLISHED.
5. RING OUT CIRCUITS PRIOR TO DEMOLITION TO DETERMINE ACTIVE CIRCUITS AND DEMOLISH ACTIVE CIRCUITS IN ACCORDANCE TO PHASING PLAN.

ELECTRICAL SYMBOLS

GDC	GAS DETECTION SYSTEM – CONTROL PANEL (SUPPLIED BY DIV. 17)
GD	GAS DETECTION SYSTEM – GAS SENSOR DETECTOR (SUPPLIED BY DIV. 17)
A	GAS DETECTION SYSTEM – AMBER ALARM BEACON (SUPPLIED BY DIV. 17)
H	GAS DETECTION SYSTEM – ALARM HORN (SUPPLIED BY DIV.17)

FIRE ALARM SYSTEM SYMBOLS

F	MANUAL FIRE ALARM STATION
F	FIRE ALARM AUDIO/VISUAL DEVICE
F V	FIRE ALARM VISUAL ONLY DEVICE
	FIRE ALARM BEACON
S	SMOKE DETECTOR
S D	DUCT SMOKE DETECTOR
RTS	REMOTE TEST STATION AND ALARM FOR DUCT SMOKE DETECTOR
H	HEAT DETECTOR, COMBINATION RATE-OF-RISE AND FIXED TEMPERATURE
C	CARBON MONOXIDE DETECTOR
M	INPUT MONITORING MODULE
C	RELAY CONTROL MODULE
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR PANEL
	REMOTE ALARM INDICATING LIGHT
	MASTER BOX
K	KEY DEPOSITORY – KNOX BOX

GENERAL NOTES

1. GENERAL CONTRACTOR TO PROVIDE CONCRETE HOUSEKEEPING AND MOUNTING PADS ON ALL FLOOR AND GRADE MOUNTED ELECTRICAL EQUIPMENT, THE FOLLOWING EQUIPMENT IS THE MINIMUM REQUIREMENT FOR PADS. ADDITIONAL PADS MAYBE REQUIRED BASED ON THE ELECTRICAL CONTRACTORS MOUNTING METHODS, ELECTRICAL CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR ALL PAD SIZES AND LOCATIONS.
   - 1.1. OIL FILLED TRANSFORMER
   - 1.2. SWITCHBOARDS
   - 1.3. GENERATOR
   - 1.4. DISTRIBUTION PANELBOARDS
   - 1.5. DRY TYPE TRANSFORMERS
   - 1.6. FREE STANDING VFDS AND CONTROL PANELS
2. ALL CONDUIT AND EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND APPLICABLE LOCAL CODES.
3. BONDING JUMPERS, CONDUIT CLAMPS AND POINTS OF ATTACHMENT ARE NOT SHOWN ON DRAWINGS. SIZE BONDING JUMPERS IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. THE POINTS OF ATTACHMENT OF THE GROUND CLAMPS SHALL BE ACCESSIBLE LOCATIONS.
4. EQUIPMENT & CONDUIT INSTALLATIONS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS.
5. CONDUITS SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO MOTORS AND OTHER EQUIPMENT.
6. NO CONDUIT SMALLER THAN 3/4" PIPE SIZE NOR WIRE SMALLER THAN NO. 12 A.W.G. SHALL BE USED UNLESS OTHERWISE NOTED.
7. RECEPTACLES AND SWITCHES SHALL BE MOUNTED 45" ABOVE FINISHED FLOOR.
8. THE WIRING AND BLOCK DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL AND PROCESS 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.

TEMPORARY WORK NOTES

1. WORK INDICATED AS TEMPORARY SHALL BE DONE ACCORDANCE WITH NEC ARTICLE 590, INSTALLED IN A NEAT MANNER AND WORKMAN LIKE MANNER.
2. THE USE OF PVC CONDUIT, SE CABLE, AND TRAY CABLE WHERE ALLOWED BY NEC SHALL BE ACCEPTABLE FOR TEMPORARY WORK.
3. SE CABLE AND TRAY CABLE FOR INTERIOR TEMPORARY WORK SHALL BE PROPERLY FASTENED TO BUILDING STRUCTURES AND INSTALLED IN SUCH A MANNER NOT TO INHIBIT ACCESS TO AND AROUND EQUIPMENT.
4. SE CABLE FOR EXTERIOR TEMPORARY WORK SHALL BE PROPERLY FASTENED TO BUILDING EXTERIOR SURFACES AND PROPERLY PROTECTED FROM VEHICLE DAMAGE WHERE RUN BETWEEN BUILDINGS.

ABBREVIATIONS

(2)1"C, 3#8, #10GND	2, 1-INCH CONDUITS EACH CONDUIT CONTAINING 3-#8 AWG WIRES AND 1-#10 GROUND CONDUCTOR
3/4" CE	EMPTY CONDUIT. NUMERAL DENOTES SIZE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AR	ALARM RELAY
ATS	AUTOMATIC TRANSFER SWITCH
CR	CONTROL RELAY
CP	CONTROL PANEL
DRG. DWG.	DRAWING
EAN	EXCEPT AS NOTED
EC	ELECTRICAL CONTRACTOR
ETM	ELAPSED TIME METER
FE	FLOW ELEMENT
FIT	FLOW INDICATOR TRANSMITTER
FS	FLOW SWITCH
FT	FLOW TRANSMITTER
FVNR	FULL VOLTAGE NON-REVERSING
GND, GRD	GROUNDING CONDUCTOR (EQUIPMENT)
HOA	HAND-OFF-AUTOMATIC
HH	HANDHOLE
J OR JB	JUNCTION BOX
JPB	JOG PUSHBUTTON
LE	LEVEL ELEMENT
LIT	LEVEL INDICATOR TRANSMITTER
LL	LOW LEVEL
LS	LEVEL SWITCH
LT	LEVEL TRANSMITTER
MC	MOTOR CONTROLLER (STARTER)
MCC	MOTOR CONTROL CENTER
MH	MANHOLE
MFR	MANUFACTURER
MS	MOTION SENSOR
NTS	NOT TO SCALE
OEM	ORIGINAL EQUIOPMENT MANUFACTURE SUPPLIED
OH	OVERHEAD
OL	MOTOR OVERLOAD HEATER
OS	OPERATOR STATION
PB	PUSHBUTTON CONTROL STATION MOMENTARY CONTACT TYPE, STOP START
PBE	PUSHBUTTON CONTROL STATION MAINTAINED EMERGENCY STOP TYPE, TWIST TO RELEASE
PBL	PUSHBUTTON CONTROL STATION MOMENTARY TYPE WITH LOCK-OUT DEVICE, STOP-START
PBM	PUSHBUTTON CONTROL STATION MAINTAINED CONTACT TYPE, STOP START
PIT	PRESSURE INDICATOR TRANSMITTER
PL	PUSHBUTTON CONTROL STATION MOMENTARY TYPE WITH LOCK-OUT DEVICE, STOP
PS	PRESSURE SWITCH
PT	PRESSURE TRANSMITTER
RGS	RIGID GALVANIZED STEEL
RVNR	REDUCED VOLTAGE NON-REVERSING
SPD	SURGE SUPPRESSOR DEVICE
SOV	SOLENOID VALVE
S/S	SOFT STARTER
TB	TERMINAL BOX
TD	MOTOR TEMPERATURE DETECTOR
TR	TIMING RELAY
TS	TEMPERATURE SWITCH
TSP	TWISTED SHEILDED PAIR
TSTW	TWO SPEED TWO WINDING
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS OTHERWISE NOTED
VFD	VARIABLE FREQUENCY DRIVE
WP	WATER PROOF
WSH	HIGH TORQUE SWITCH
XFMR	TRANSFORMER

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL LEGEND AND NOTES

NO.	REVISIONS	DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
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SCALE

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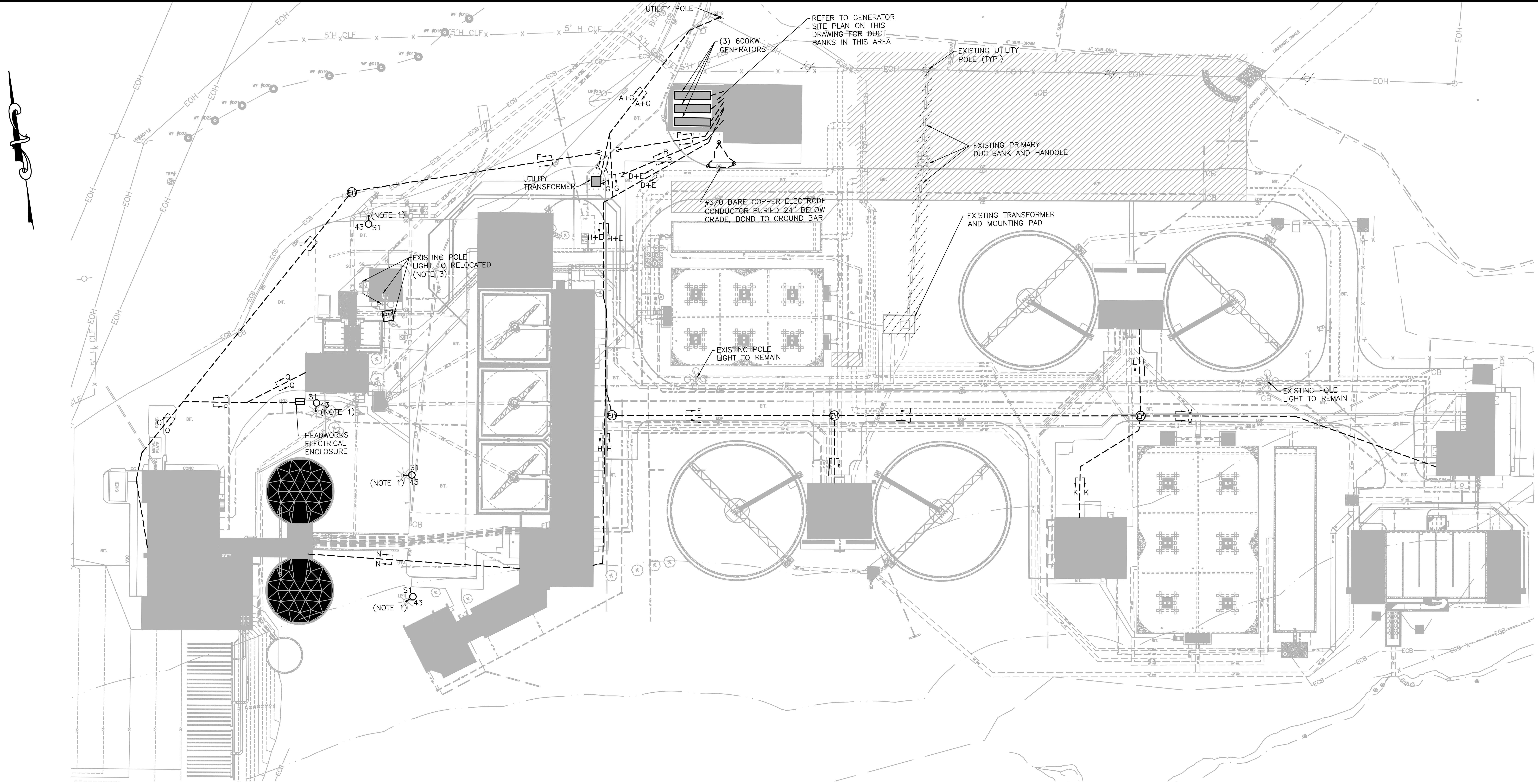
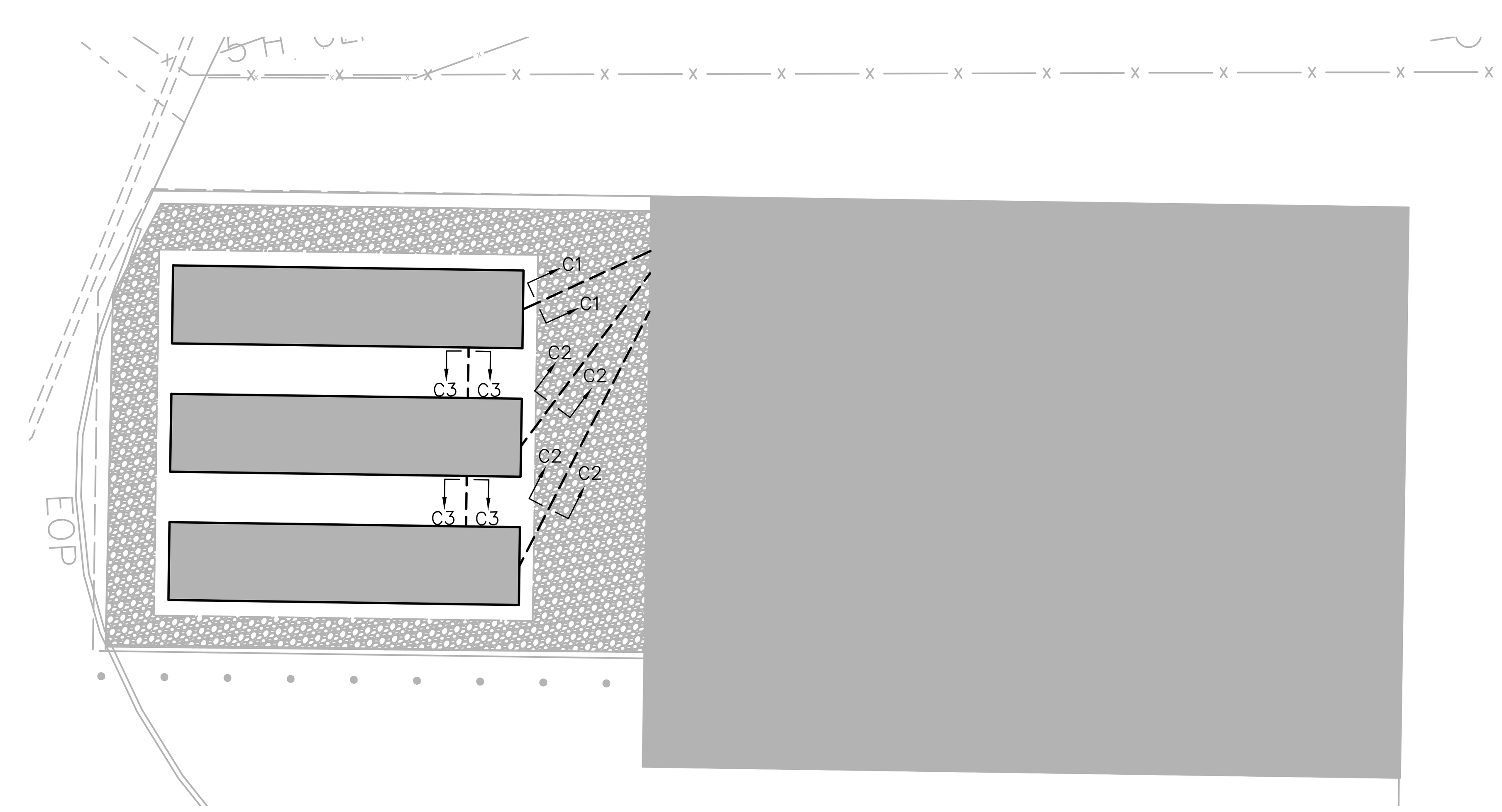
SHEET NO. E-0.1

6/30/2021 10:12 AM W:\T-PROJECTS\T-18009.00 - TAUNTON WWTF UPGRADES\ELECTRICAL DEPARTMENT\18009.00 ELEC LEGEND-PHASE 1.DWG (BETA STB BW.STB)



ELECTRICAL SITE PLAN

SCALE: 1" = 40'-0"



ELECTRICAL SITE GENERATOR PLAN

SCALE: 1" = 10'-0"

NOTES:

1. REMOVE EXISTING 12' CONCRETE POLE AND LIGHT, EXISTING WIRING TO BE RE-UTILIZED FOR NEW LIGHT FIXTURE. CUT BACK EXISTING BOLTS, DRILL INTO EXISTING BASE AND INSTALL EPOXY BOLT ANCHORS TO MATCH NEW LIGHT FIXTURE BOLT PATTERN. EXTEND EXISTING WIRING TO NEW LIGHT FIXTURE THROUGH NEW POLE.

2. DISCONNECT AND RELOCATE POLE MOUNTED LIGHTS AND A 30' (APPROXIMATE) POLE, DIG UP AND UNCOVER EXISTING FEEDER TO LIGHT POLE BACK 30' TOWARDS SOURCE AND INSTALL NEW HAND HOLE. INSTALL NEW UNDERGROUND 1"C WITH 2#12, 1#12G TO NEW LIGHT POLE LOCATION. PROVIDE NEW POLE BASE.

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Site Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

40 0 40 80

SCALE IN FEET: 1"=40'

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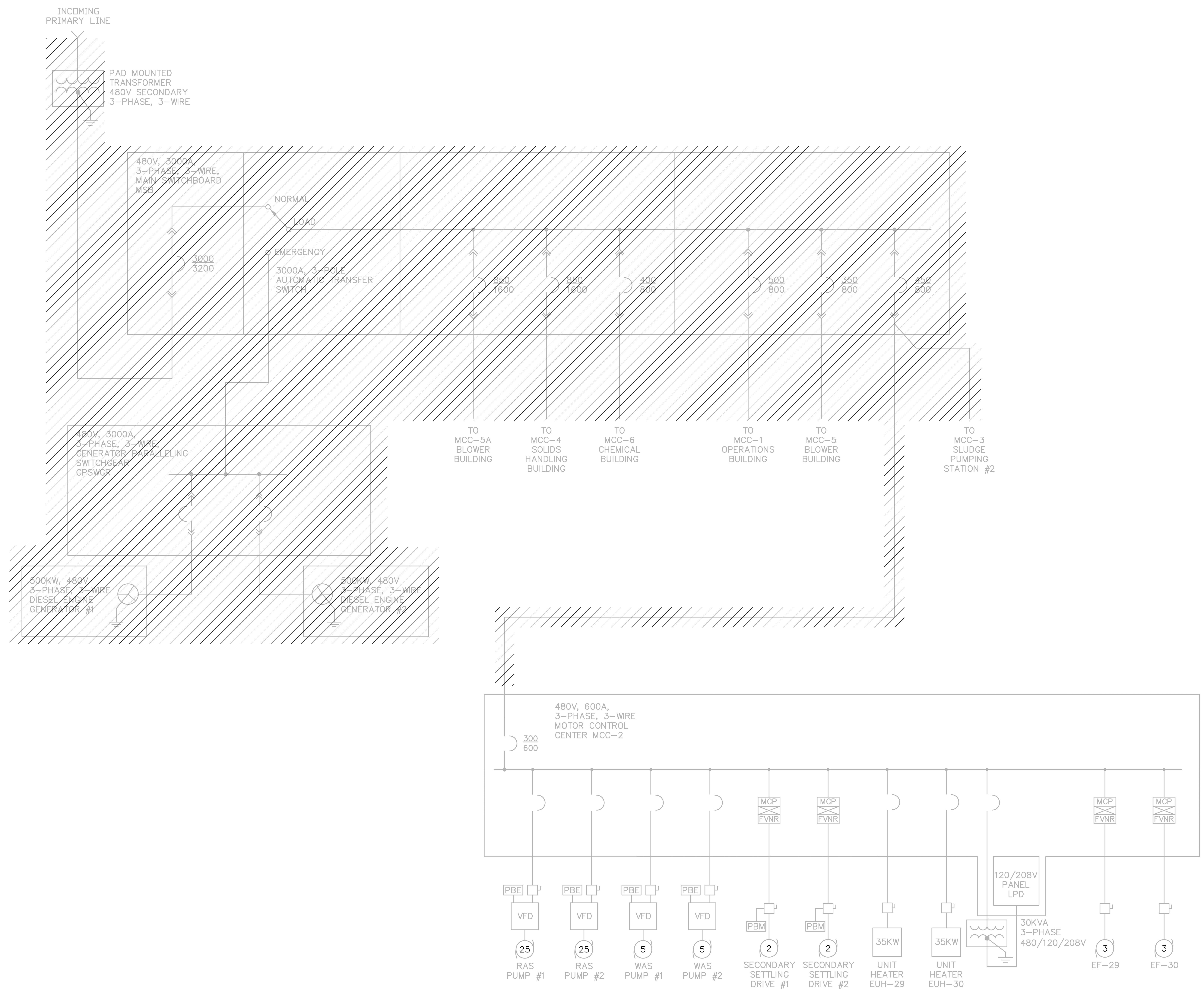
SHEET NO.

E-0.2



MAIN SWITCHBOARD & SLUDGE PUMPING STATION #1 ONE LINE DIAGRAM – DEMOLITION

NOT TO SCALE

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL MAIN SWITCHBOARD & SLUDGE PUMPING STATION #1 ONE LINE DIAGRAM - DEMOLITION

NO.	REVISIONS	DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

NONE

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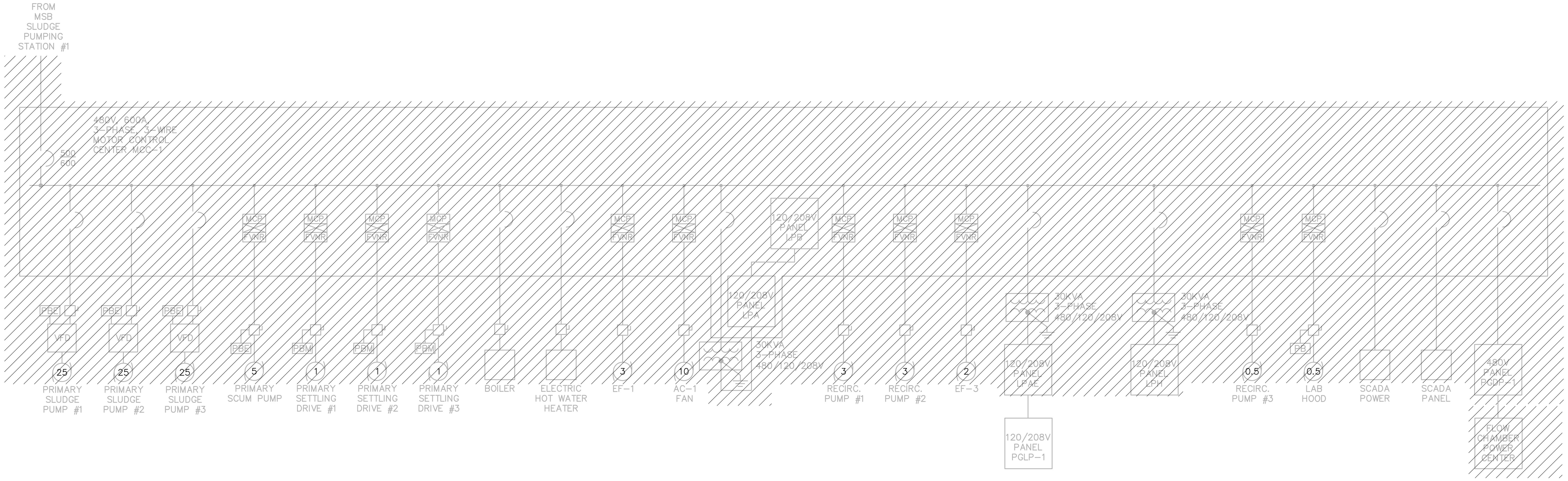
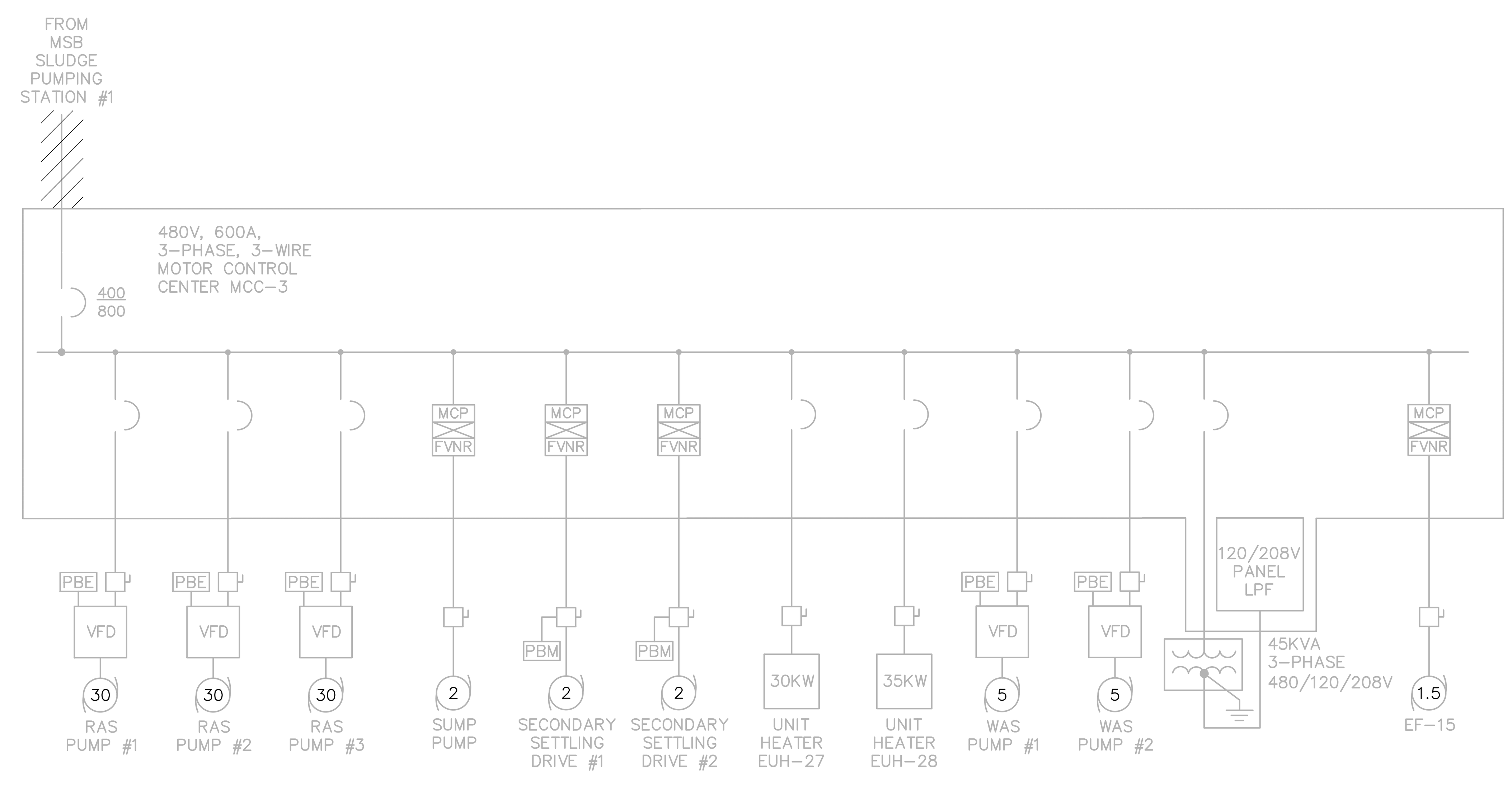
SHEET NO.

E-0.3



OPERATIONS BUILDING ONE LINE DIAGRAM – DEMOLITION
NOT TO SCALE



SLUDGE PUMPING STATION #2 ONE LINE DIAGRAM – DEMOLITION
NOT TO SCALE

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Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL
OPERATION BUILDING & SLUDGE PUMPING STATION #2
ONE LINE DIAGRAM - DEMOLITION

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SCALE

NONE

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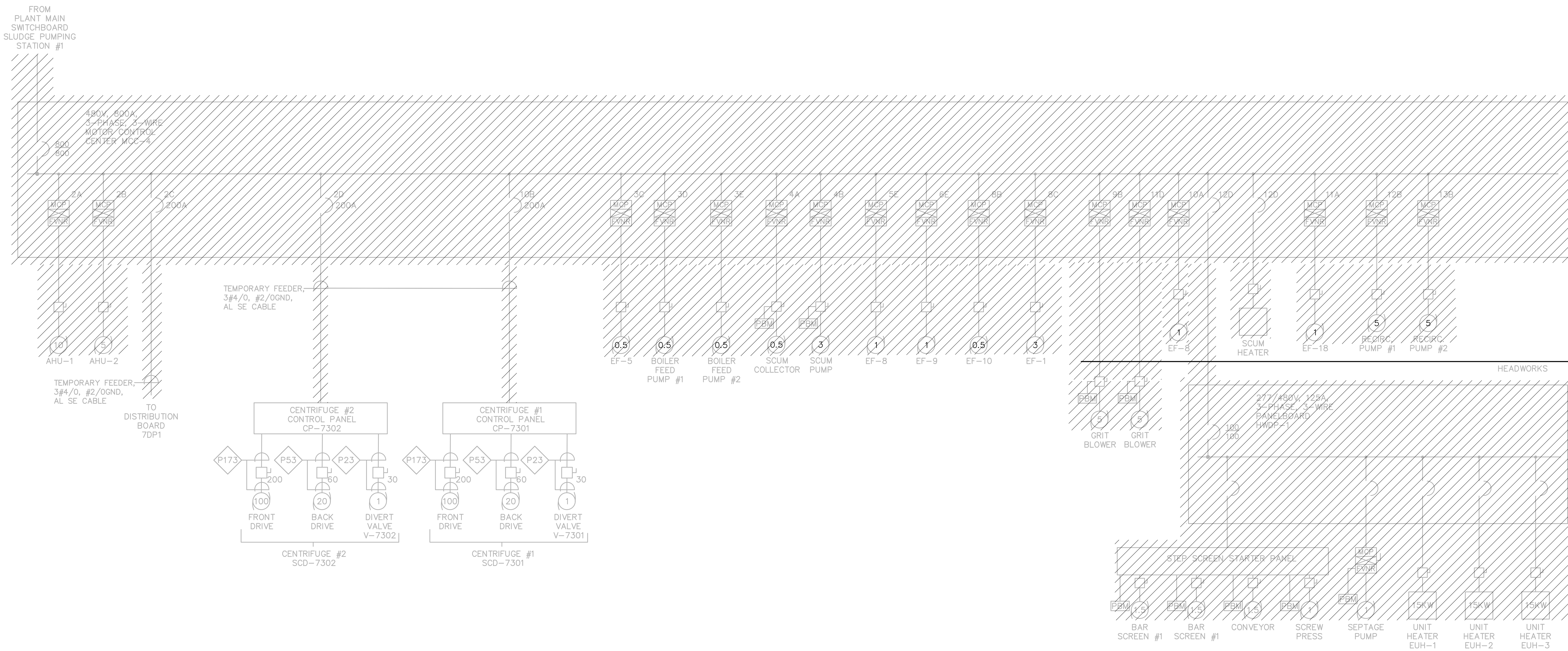
SHEET NO.
E-0.4



SOLIDS HANDLING BUILDING AND HEADWORKS ONE LINE DIAGRAM – DEMOLITION

NOT TO SCALE

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL SOLIDS HANDLING BUILDING & HEADWORKS ONE LINE DIAGRAM - DEMOLITION

NO.	REVISIONS	DATE

DRAWN BY: RB

DESIGNED BY: MC

CHECKED BY: MC

ISSUE DATE: 7/2/21

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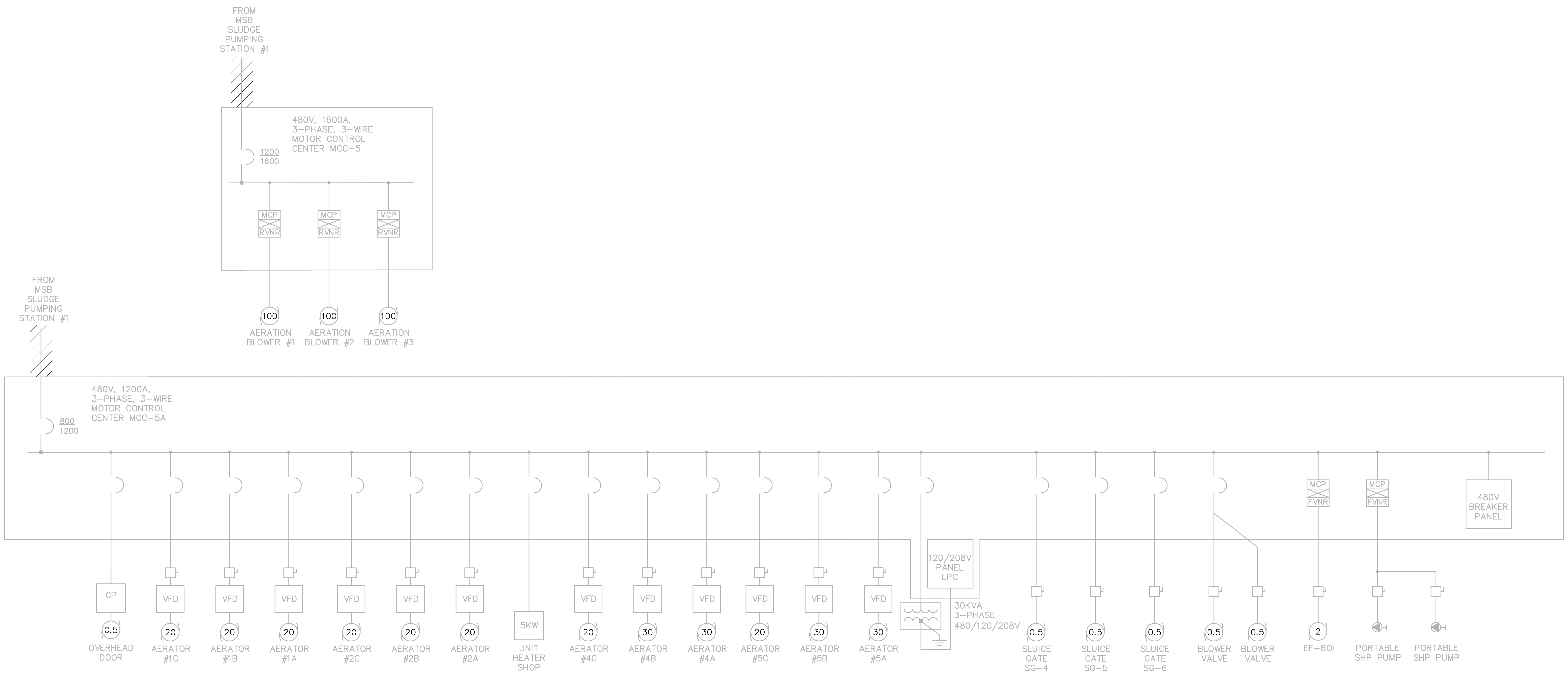
SCALE

NONE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

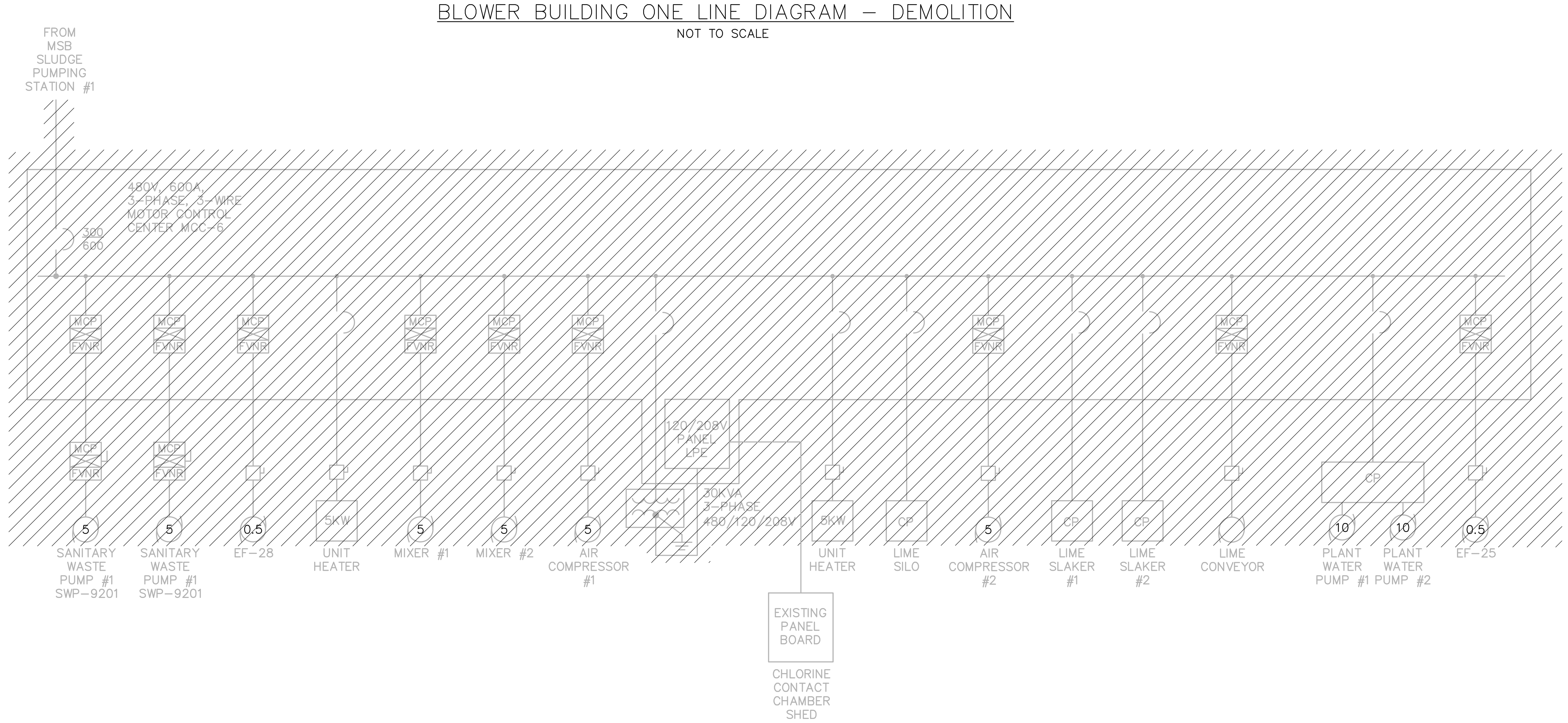
SHEET NO.

E-0.5



BLOWER BUILDING ONE LINE DIAGRAM – DEMOLITION

NOT TO SCALE



CHEMICAL BUILDING ONE LINE DIAGRAM – DEMOLITION

NOT TO SCALE

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Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL EXISTING BLOWER BUILDING & CHEMICAL BUILDING ONE LINE DIAGRAM - DEMOLITION

NO.	REVISIONS	DATE

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DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

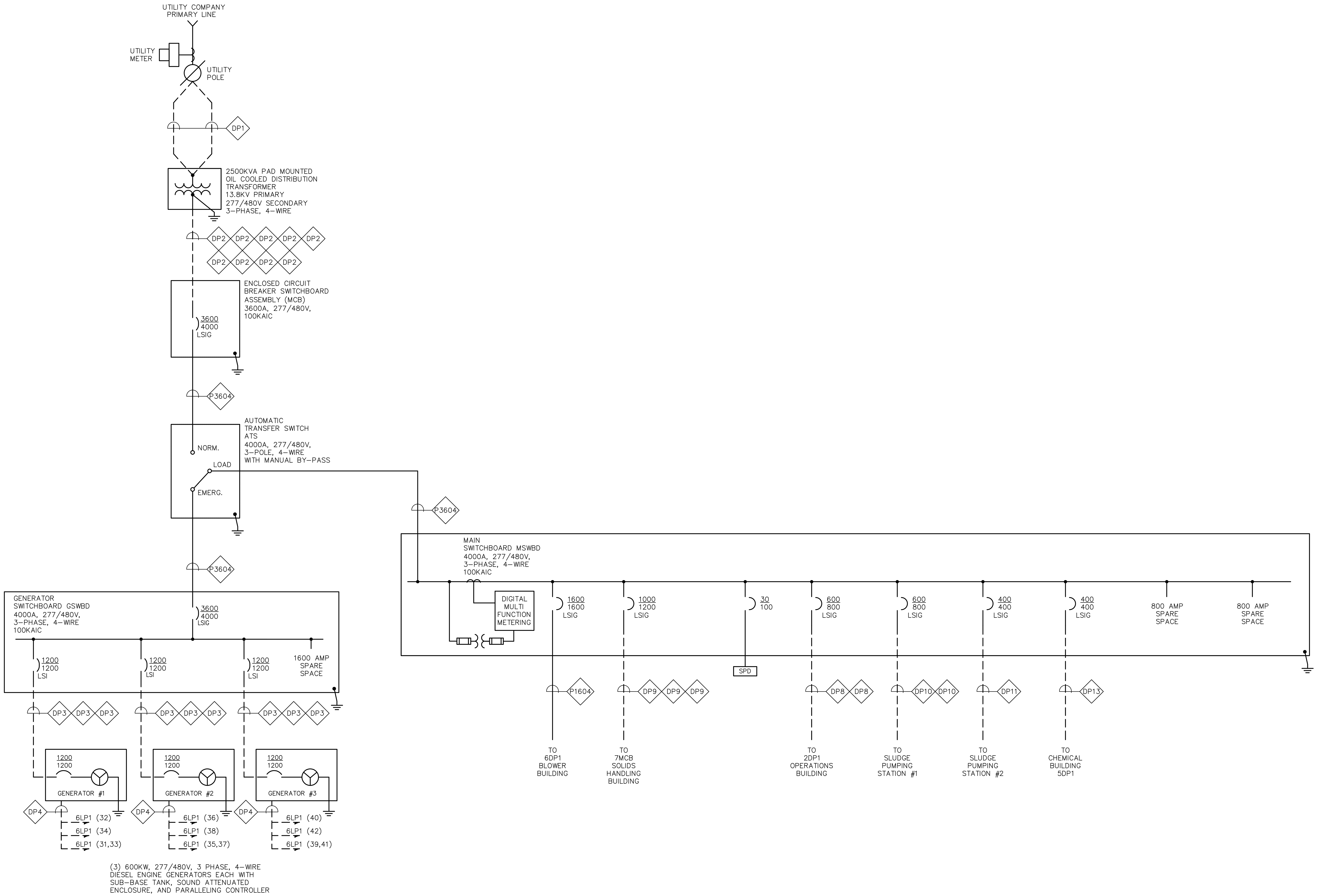
SCALE

NONE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-0.6



MAIN SWITCHBOARD ONE LINE DIAGRAM

NOT TO SCALE

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Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL MAIN SWITCHBOARD ONE LINE DIAGRAM

NO.	REVISIONS	DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

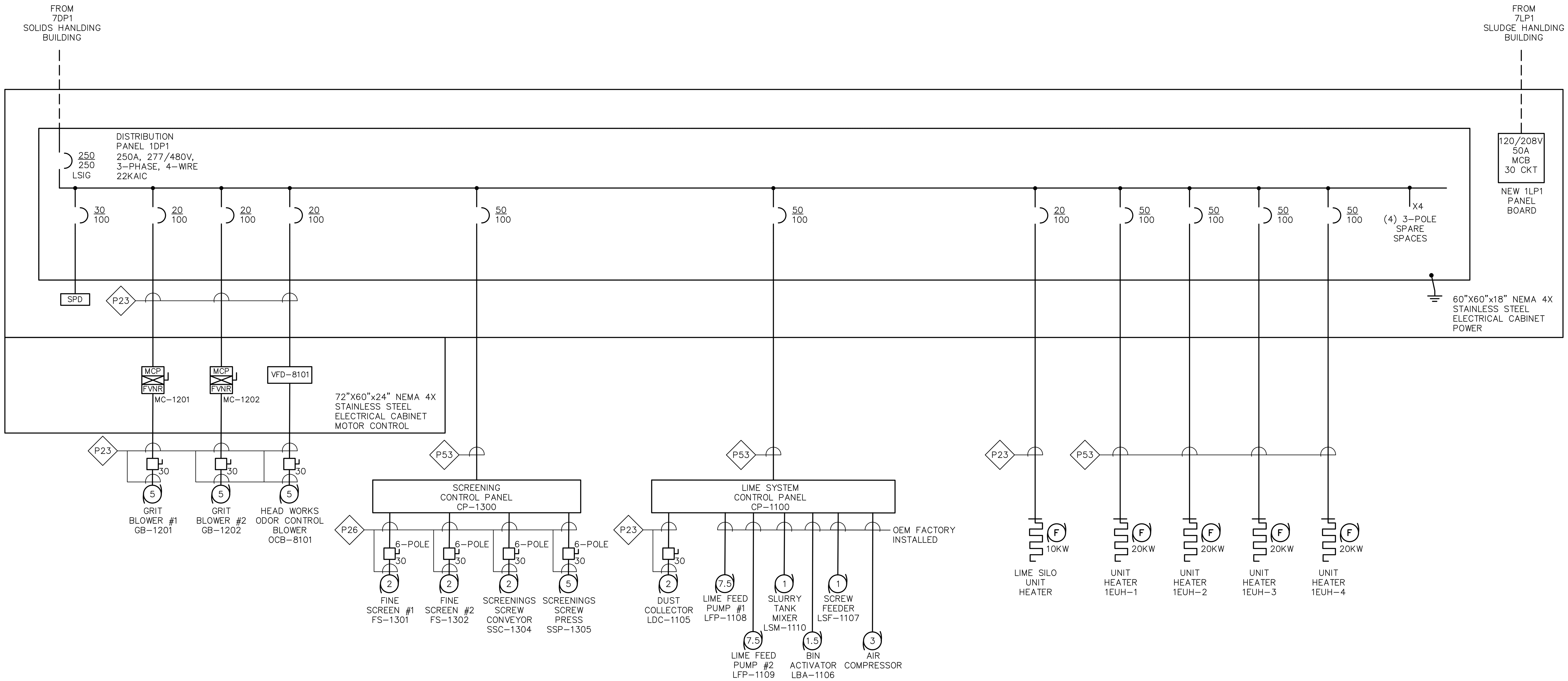
SCALE

NONE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-0.7



HEADWORKS ONE LINE DIAGRAM

NOT TO SCALE

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL
HEADWORKS
ONE LINE DIAGRAM

NO.	REVISIONS	DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

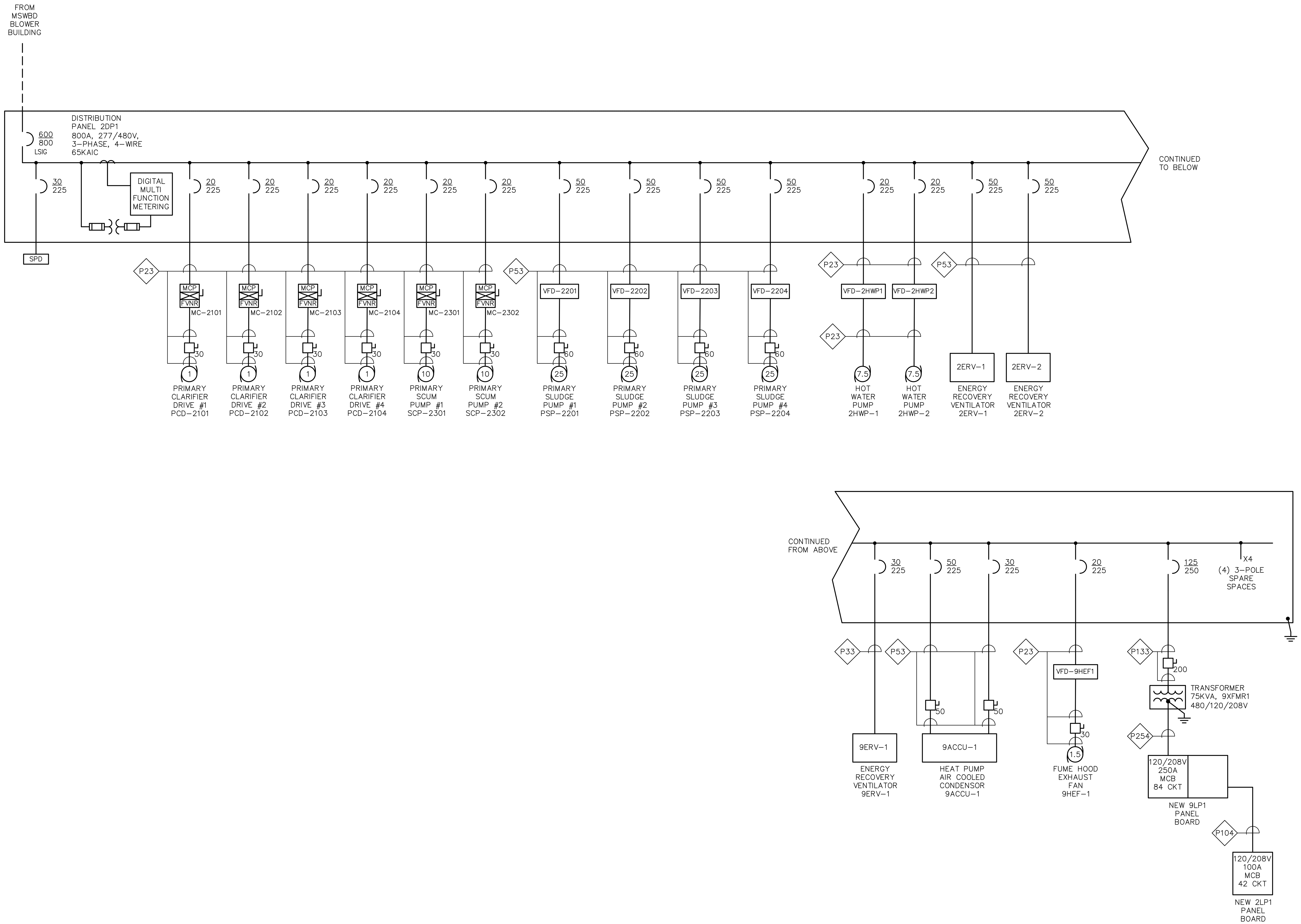
SCALE

NONE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-0.8



OPERATIONS BUILDING ONE LINE DIAGRAM

NOT TO SCALE

PREPARED BY

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COMMONWEALTH OF MASSACHUSETTS MICHAEL J. COTTER ELECTRICAL No. 40999 REGISTERED PROFESSIONAL ENGINEER

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL OPERATIONS BUILDING ONE LINE DIAGRAM

NO.	REVISIONS	DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

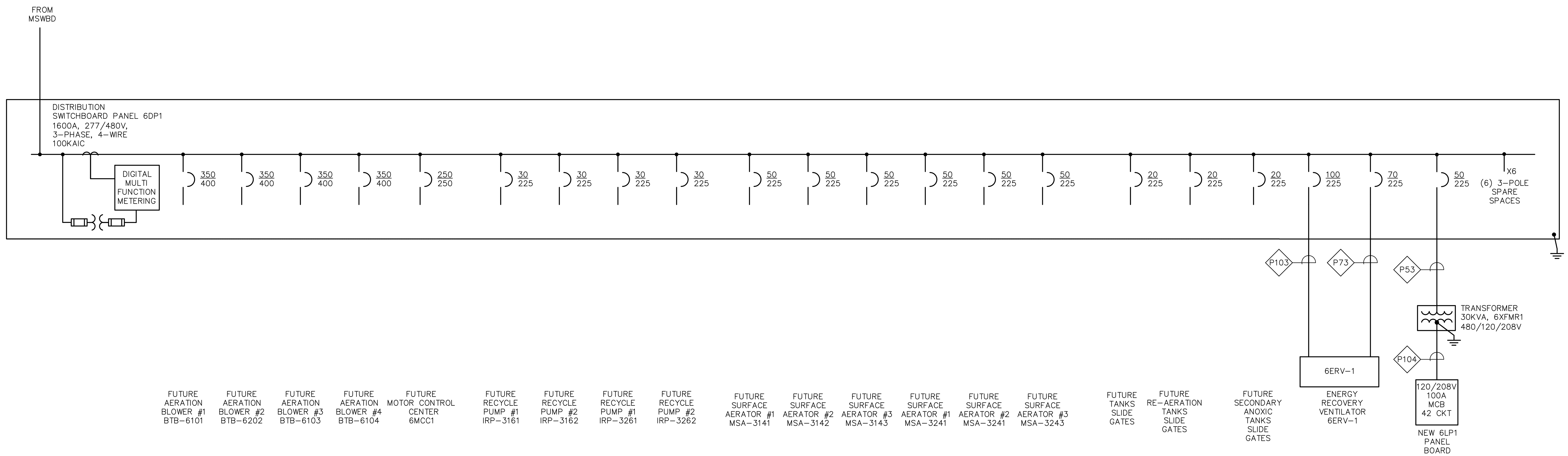
SCALE

NONE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

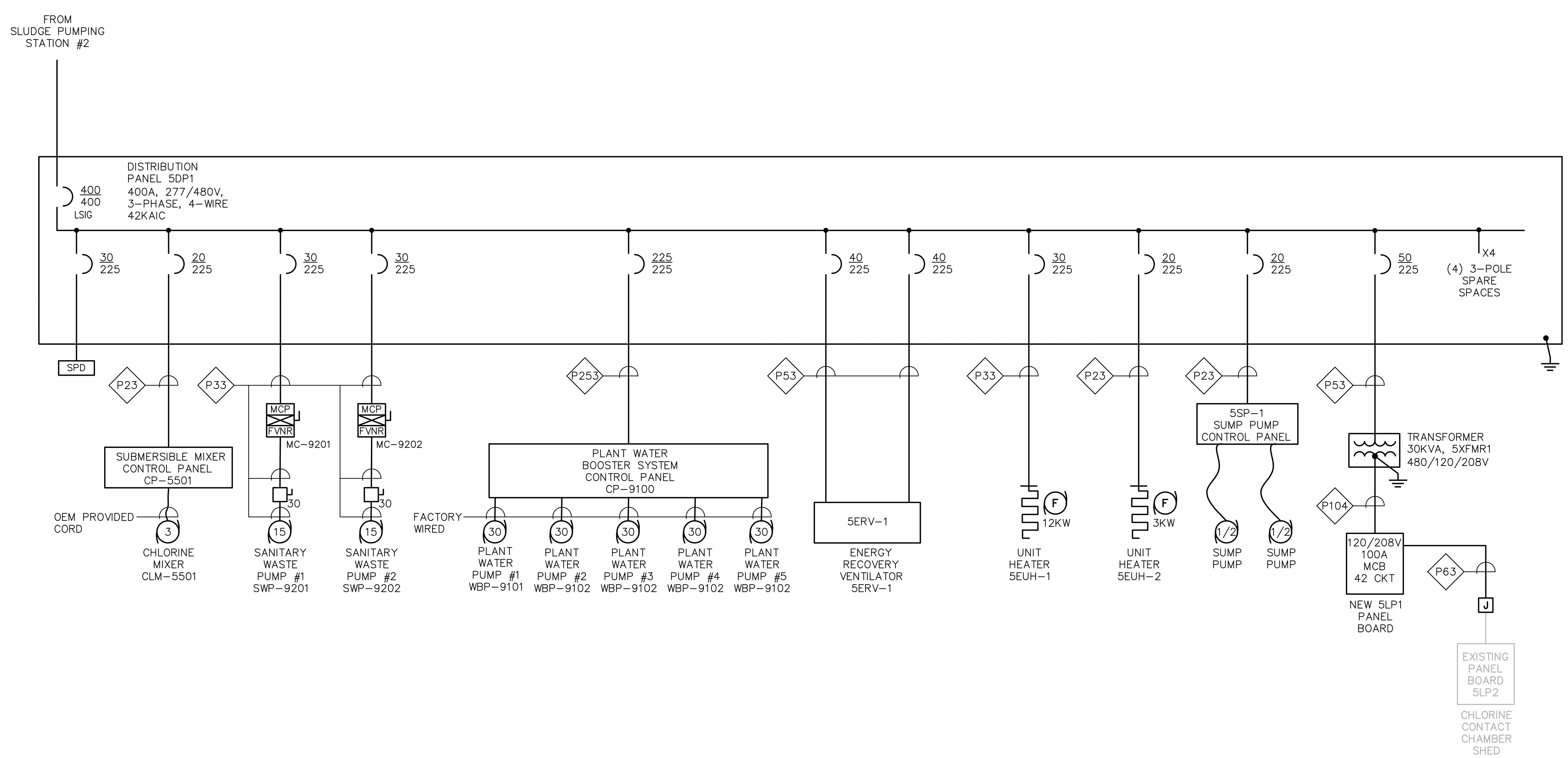
SHEET NO.

E-0.9



NEW BLOWER BUILDING ONE LINE DIAGRAM

NOT TO SCALE



CHEMICAL BUILDING ONE LINE DIAGRAM

NOT TO SCALE

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL
NEW BLOWER BUILDING
& CHEMICAL BUILDIING
ONE LINE DIAGRAM

NO.	REVISIONS	DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

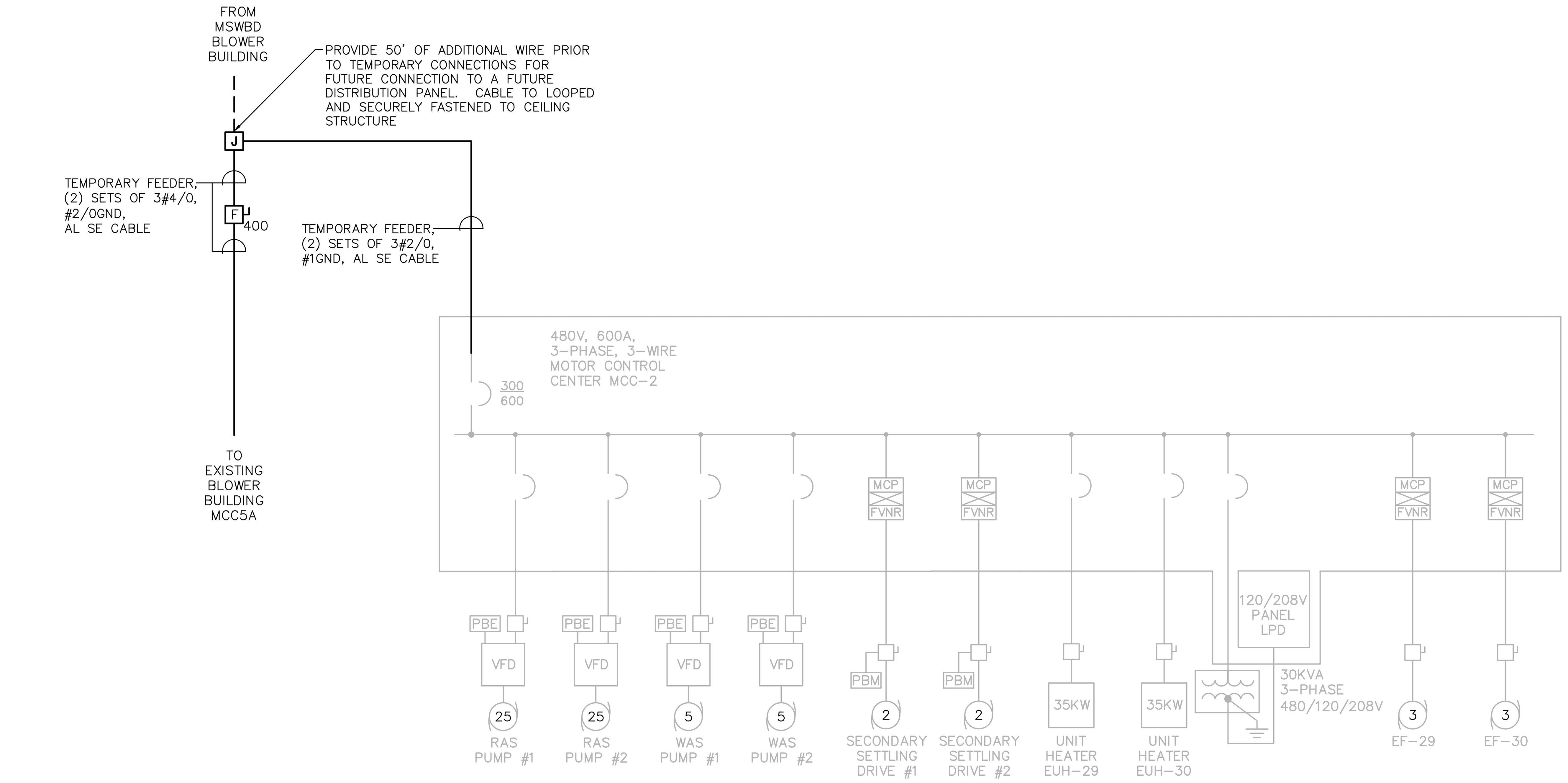
SCALE

NONE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

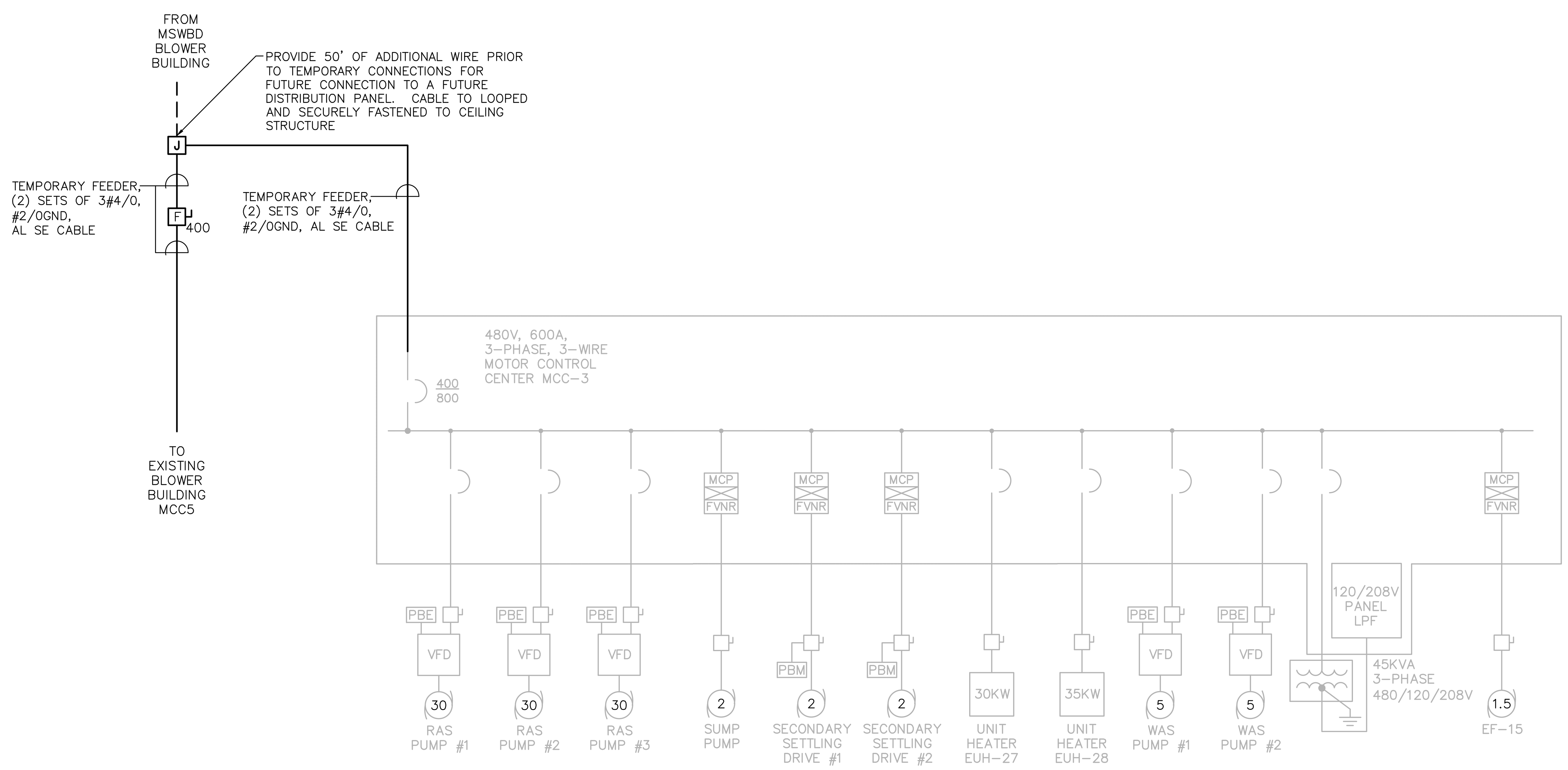
SHEET NO.

E-0.10



SLUDGE PUMPING STATION #1 ONE LINE DIAGRAM

NOT TO SCALE



SLUDGE PUMPING STATION #2 ONE LINE DIAGRAM

NOT TO SCALE

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL SLUDGE PUMPING STATION #1 & SLUDGE PUMPING STATION #2 ONE LINE DIAGRAM

NO.	REVISIONS	DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

NONE

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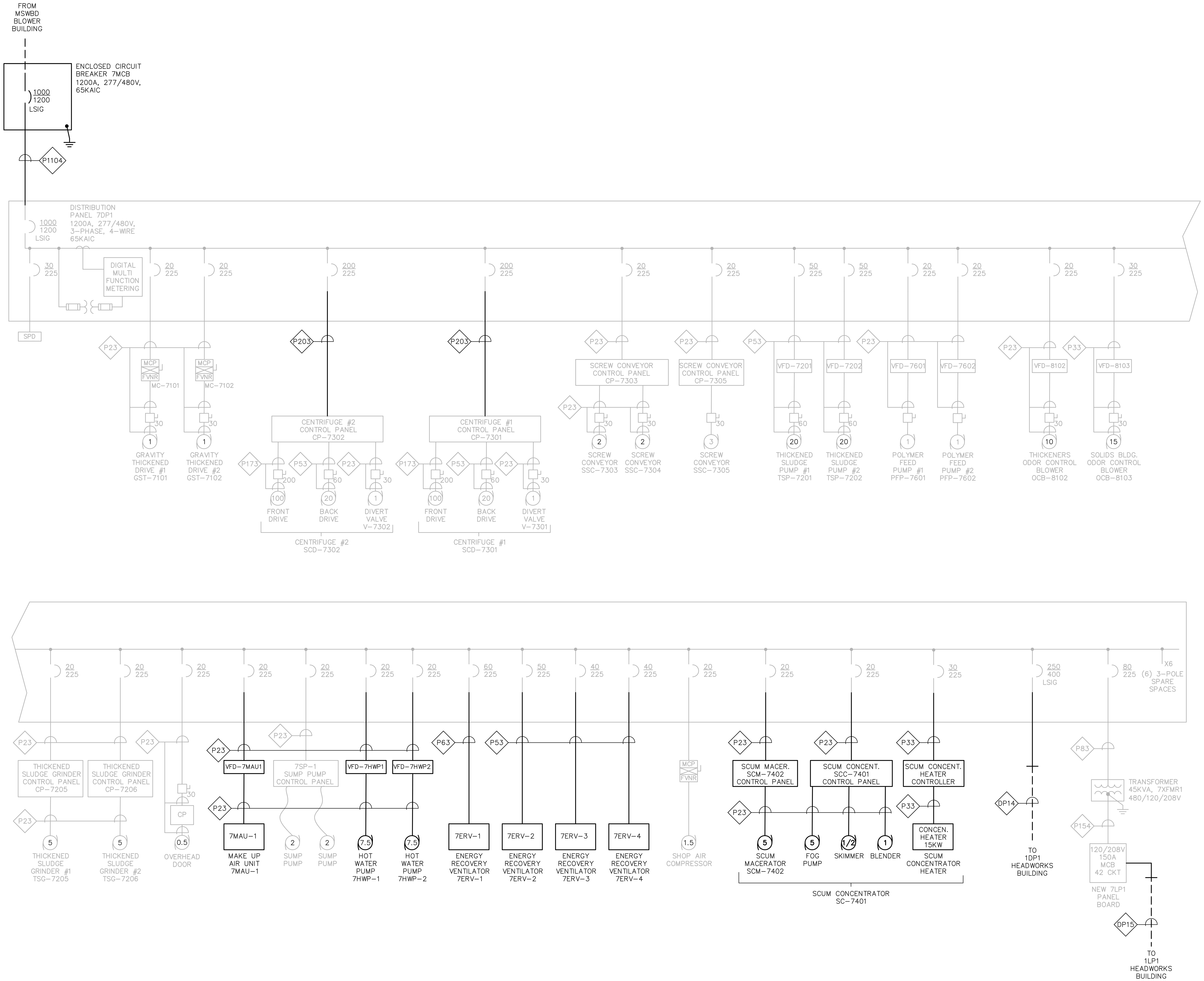
SHEET NO. E-0.11

6/30/2021 10:18 AM W:\T-PROJECTS\T-16009.00 - TAUNTON WWTF UPGRADES\ELECTRICAL DEPARTMENT\16009.00 ELEC ONE LINE - PHASE 1.DWG (BETA STB BW.STB)



SOLIDS HANDLING BUILDING ONE LINE DIAGRAM

NOT TO SCALE

PREPARED BY

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL
SOLIDS HANDLING BUILDING
ONE LINE DIAGRAM

NO.	REVISIONS	DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

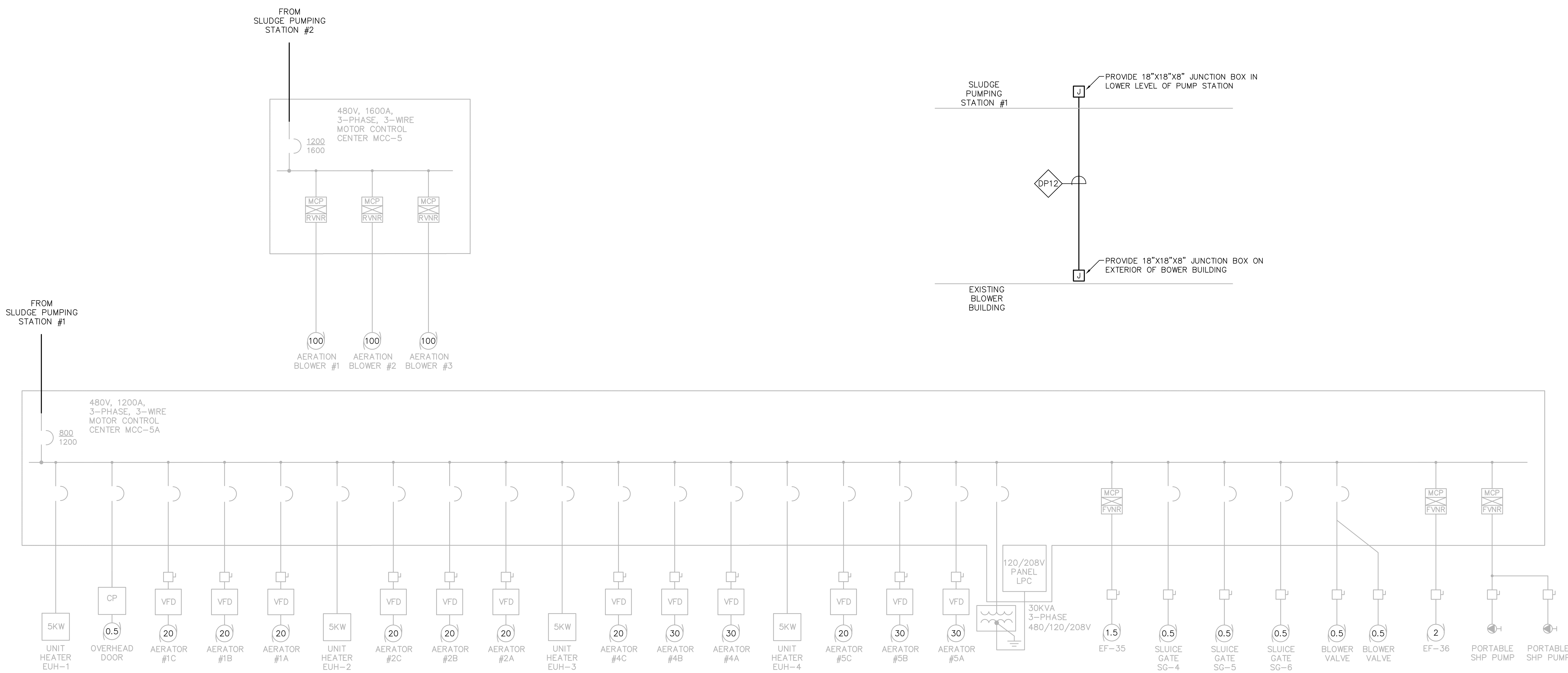
SCALE

NONE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-0.12



EXISTING BLOWER BUILDING ONE LINE DIAGRAM

NOT TO SCALE

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS MICHAEL J. COTTER ELECTRICAL No. 40999 REGISTERED PROFESSIONAL ENGINEER

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL EXISTING BLOWER BUILDING ONE LINE DIAGRAM

NO.	REVISIONS	DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

NONE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-0.13

PANELBOARD SCHEDULE

NO. 1LP1 LOCATION: HEADWORKS ELECTRICAL CABINET

120/208 V, 3 PH, 4 W, 100 A MAINS | 100 A SOLID NEUTRAL | 50 A MCB
10,000 AIC AT 120 V | 100 A GROUND BUS | – A MLO | SURFACE MOUNTING

CIRCUIT	DESCRIPTION OF LOAD	LOAD (KVA) AØ	BØ	CØ	BREAKER TRIP	POLE	BREAKER POLE	TRIP	LOAD (KVA) AØ	BØ	CØ	DESCRIPTION OF LOAD	CIRCUIT
1	HEADWORKS BLDG. INTERIOR LIGHTING	0.95			20	1	1	20	0.20			GAS DETECTION SYSTEM	2
3	HEADWORKS BLDG. EXTERIOR LIGHTING		0.25		20	1	1	20		0.20		ENCLOSURE RECEPTACLE	4 *
5	HEADWORKD BLDG. RECEPTACLES			1.0	20	1	1	20			0.40	SAMPLER ENCLOSURE	6 *
7	LIME SILO SPARE 120VAC CIRCUIT	1.0			20	1	1	20	–			SPARE	8
9	SPARE		–		20	1	1	20		–		SPARE	10
11	SPARE			–	20	1	1	20			–	SPARE	12
13	SPARE	–			20	1	1	20	–			SPARE	14
15	SPARE		–		20	1	1	20		–		SPARE	16
17	SPARE			–	20	1	1	20			–	SPARE	18
19	SPARE	–			20	1	1	20	–			SPARE	20
21	SPARE		–		20	1	1	20		–		SPARE	22
23	SPARE			–	20	1	1	20			–	SPARE	24
25	SPARE	–			20	1	1	20	–			SPARE	26
27	SPARE		–		20	1	1	20		–		SPARE	28
29	SPARE			–	20	1	1	20			–	SPARE	30
	SUB-TOTAL CONNECTED	0.95	0.25	1.00					0.20	–	–	SUB-TOTAL CONNECTED	

*PROVIDE GFCI BREAKER

SUB-TOTAL CONNECTED KVA AØ =	1.15
SUB-TOTAL CONNECTED KVA BØ =	0.25
SUB-TOTAL CONNECTED KVA CØ =	1.00
TOTAL CONNECTED KVA =	2.40

PANELBOARD SCHEDULE

NO. 2LP1 LOCATION: PRIMARY PIPE GALLERY

120/208 V, 3 PH, 4 W, 100 A MAINS | 100 A SOLID NEUTRAL | 100 A MCB
10,000 AIC AT 120 V | 100 A GROUND BUS | – A MLO | SURFACE MOUNTING

CIRCUIT	DESCRIPTION OF LOAD	LOAD (KVA) AØ	BØ	CØ	BREAKER TRIP	POLE	BREAKER POLE	TRIP	LOAD (KVA) AØ	BØ	CØ	DESCRIPTION OF LOAD	CIRCUIT
1	PRIMARY GALLERY & EXTERIOR LIGHTING	0.8			20	1	1	20	0.2			FLOW METER	2
3	PRIMARY GALLERY LIGHTING		0.7		20	1	1	20		0.4		LEVEL TRANSMITTERS	4
5	PRIMARY GALLERY RECEPTACLES			1.0	20	1	1	20			1.15	HOT WATER UNIT HEATERS	6
7	PRIMARY GALLERY RECEPTACLES	1.0			20	1	1	20	–			EXTERIOR RECEPTACLES	8
* 9	CLARIFIER RECEPTACLES		0.8		20	1	1	20		1.0		RTU-2 SCADA CONTROL PANEL	10
11	CLARIFIER LIGHTING			0.85	20	1	1	20			–	SPARE	12
13	SPARE	–			20	1	1	20	–			SPARE	14
15	SPARE		–		20	1	1	20		–		SPARE	16
17	SPARE			–	20	1	1	20			–	SPARE	18
19	SPARE	–			20	1	1	20	–			SPARE	20
21	SPARE		–		20	1	1	20		–		SPARE	22
23	SPARE			–	20	1	1	20			–	SPARE	24
25	SPARE	–			20	1	1	20	–			SPARE	26
27	SPARE		–		20	1	1	20		–		SPARE	28
29	SPARE			–	20	1	1	20			–	SPARE	30
31	SPARE	–			20	1	1	20	–			SPARE	32
33	SPARE		–		20	1	1	20		–		SPARE	34
35	SPARE			–	20	1	1	20			–	SPARE	36
37	SPARE	–			20	1	1	20	–			SPARE	38
39	SPARE		–		20	1	1	20		–		SPARE	40
41	SPARE			–	20	1	1	20			–	SPARE	42
	SUB-TOTAL CONNECTED	–	–	–					–	–	–	SUB-TOTAL CONNECTED	

*PROVIDE GFCI BREAKER

SUB-TOTAL CONNECTED KVA AØ =	–
SUB-TOTAL CONNECTED KVA BØ =	–
SUB-TOTAL CONNECTED KVA CØ =	–
TOTAL CONNECTED KVA =	–

PANELBOARD SCHEDULE

NO. 5LP1 LOCATION: CHEMICAL HANDLING BUILDING

120/208 V, 3 PH, 4 W, 100 A MAINS | 100 A SOLID NEUTRAL | 100 A MCB
10,000 AIC AT 120 V | 100 A GROUND BUS | – A MLO | SURFACE MOUNTING

CIRCUIT	DESCRIPTION OF LOAD	LOAD (KVA) AØ	BØ	CØ	BREAKER TRIP	POLE	BREAKER POLE	TRIP	LOAD (KVA) AØ	BØ	CØ	DESCRIPTION OF LOAD	CIRCUIT
1	UPPER LEVEL & EXTERIOR LIGHTING	0.82			20	1	1	20	0.40			FLOW METERS	2
3	LOWER LEVEL LIGHTING		0.55		20	1	1	20		0.40		ANALIZERS	4
5	UPPER LEVEL RECETPACLES			–	20	1	1	20			1.0	RTU-5 SCADA CONTROL PANEL	6
7	LOWER LEVEL RECEPTACLES	–			20	1	1	20	0.20			SANITARY LEVEL TRANSMITTER	8
9	FIRE ALARM CONTROL PANEL		0.50		20	1	1	20		0.30		NaOCl LEVEL TRANSMITTER & FILL STATION	10
11	CHEMICAL ROOM RECEPTACLES			0.40	20	1	1	20			0.30	NaHSO LEVEL TRANSMITTER & FILL STATION	12
13	LOWER LEVEL RECEPTACLES	1.20			20	1	1	20	1.0			NaOCL PUMP #1 & NaHSO PUMP #1	14
15	UPPER LEVEL RECEPTACLES		0.60		20	1	1	20		1.0		NaOCL PUMP #2 & NaHSO PUMP #2	16
17	UPPER LEVEL RECEPTACLES			1.0	20	1	1	20			0.10	EYEWASH/SHOWER ALARMS	18
19	ROOFTOP RECEPTACLES	0.30			20	1	1	20	–			SPARE	20
21	EXHAUST FAN 5EF-1		0.69		20	1	1	20		–		SPARE	22
23	EXHAUST FAN 5EF-2			0.69	20	1	1	20			–	SPARE	24
25	STAFF ROOM RECEPTACLES	0.80			20	1	1	20	–			SPARE	26
27	STAFF ROOM RECEPTACLES		0.80		20	1	1	20		–		SPARE	28
29	SPARE			–	20	1	1	20			–	SPARE	30
31	SPARE	–			20	1	1	20	–			SPARE	32
33	SPARE		–		20	1	1	20		–		SPARE	34
35	SPARE			–	20	1	1	20			–	SPARE	36
37	SPARE	–			20	1	3	50	2.0			EXISTING PANELBOARD AT CHLORINE CONTACT CHAMBER	38
39	SPARE		–		20	1				2.0			40
41	SPARE			–	20	1					2.0		42
	SUB-TOTAL CONNECTED	–	–	–					–	–	–	SUB-TOTAL CONNECTED	

*PROVIDE GFCI BREAKER

SUB-TOTAL CONNECTED KVA AØ =	–
SUB-TOTAL CONNECTED KVA BØ =	–
SUB-TOTAL CONNECTED KVA CØ =	–
TOTAL CONNECTED KVA =	–

PANELBOARD SCHEDULE

NO. 6LP1 LOCATION: BLOWER BUILDING

120/208 V, 3 PH, 4 W, 100 A MAINS | 100 A SOLID NEUTRAL | 100 A MCB
10,000 AIC AT 120 V | 100 A GROUND BUS | – A MLO | SURFACE MOUNTING

CIRCUIT	DESCRIPTION OF LOAD	LOAD (KVA) AØ	BØ	CØ	BREAKER TRIP	POLE	BREAKER POLE	TRIP	LOAD (KVA) AØ	BØ	CØ	DESCRIPTION OF LOAD	CIRCUIT
1	LIGHTING	0.70			20	1	1	20	1.0			RTU-3 SCADA CONTROL PANEL	2
3	BLOWER RM. RECEPTACLES		1.0		20	1	1	20		–		SPARE	4
5	ELEC RM RECEPTACLES			0.40	20	1	1	20			–	SPARE	6
7	FIRE ALARM CONTROL PANEL	0.50			20	1	1	20	–			SPARE	8
9	ROOFTOP LIGHTING AND RECEPTACLES		0.30		20	1	1	20		–		SPARE	10
11	SPARE			–	20	1	1	20			–	SPARE	12
13	SPARE	–			20	1	1	20	–			SPARE	14
15	SPARE		–		20	1	1	30		–		SPARE	16
17	SPARE			–	20	1	1	30			–	SPARE	18
19	SPARE	–			20	1	1	30	–			SPARE	20
21	SPARE		–		20	1	1	30		–		SPARE	22
* 23	SPARE			–	20	1	1	20			–	SPARE	24 *
* 25	SPARE	–			20	1	1	20	–			SPARE	26 *
27	SPARE		–		20	1	1	20		–		SPARE	28
29	SPARE			–	20	1	1	20			–	SPARE	30
31	SPARE	–			20	1	1	20	–			SPARE	32
33	SPARE		–		20	1	1	20		–		SPARE	34
35	SPARE			–	20	1	1	20			–	SPARE	36
37	SPARE	–			20	1	1	20	–			SPARE	38
39	SPARE		–		20	1	1	30		–		SPARE	40
41	SPARE			–	20	1	1	30			–	SPARE	42
43	GENERATOR #1 BLOCK JACKET HEATER	2.0			30	2	1	20	1.0			GENERATOR #1 ALTERNATOR HEATER	44
45			2.0				1	20		0.5		GENERATOR #1 BATTERY CHARGER	46
47	GENERATOR #2 BLOCK JACKET HEATER			2.0	30	2	1	20			1.0	GENERATOR #2 ALTERNATOR HEATER	48
49		2.0					1	20	0.5			GENERATOR #2 BATTERY CHARGER	50
51	GENERATOR #3 BLOCK JACKET HEATER		2.0		30	2	1	20		1.0		GENERATOR #3 ALTERNATOR HEATER	52
53				2.0			1	20			0.5	GENERATOR #3 BATTERY CHARGER	54
	SUB-TOTAL CONNECTED	9.70	5.30	4.40					2.50	1.50	1.50	SUB-TOTAL CONNECTED	

*PROVIDE GFCI BREAKER

SUB-TOTAL CONNECTED KVA AØ =	12.20
SUB-TOTAL CONNECTED KVA BØ =	6.80
SUB-TOTAL CONNECTED KVA CØ =	5.90
TOTAL CONNECTED KVA =	24.90

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
ELECTRICAL
No. 40999
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL PANELBOARD SCHEDULES

NO.	REVISIONS	DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO. E-0.14

PANELBOARD SCHEDULE

NO. 9LP1 – 1ST TUB — LOCATION: OPERATIONS BLDG. ELECTRIC ROOM

120/208 V, 3 PH, 4 W, 400 A MAINS — 400 A SOLID NEUTRAL — 250 A MCB

22,000 AIC AT 120 V — 400 A GROUND BUS — – A MLO — SURFACE MOUNTING

CIRCUIT	DESCRIPTION OF LOAD	LOAD (KVA) AØ	LOAD (KVA) BØ	LOAD (KVA) CØ	BREAKER TRIP	BREAKER POLE	BREAKER POLE	BREAKER TRIP	LOAD (KVA) AØ	LOAD (KVA) BØ	LOAD (KVA) CØ	DESCRIPTION OF LOAD	CIRCUIT
1	1ST FLR LIGHTING	1.21			20	1	1	20	1.0			915 BREAK ROOM REFRIGATOR	2
3	1ST FLR LIGHTING		0.85		20	1	1	20		0.60		915 BREAK ROOM RECEPTACLES	4
5	1ST FLR LIGHTING			1.43	20	1	1	20			0.60	915 BREAK ROOM RECEPTACLES	6
7	911 CONTROL ROOM RECEPTACLES	1.20			20	1	1	20	1.40			911 CONTROL ROOM RECEPTACLES	8
9	1ST FLOOR CORRIDOR RECEPTACLES		1.0		20	1	1	20		0.80		922 OFFICE RECEPTACLES	10
11	924 FIRST AID RECEPTACLES			0.60	20	1	1	20			0.80	1ST FLOOR CORRIDOR RECEPTACLES	12
13	935 IND. WASTE OFFICE RECEPTACLES	0.80			20	1	1	20	1.20			934 PLANT SUPER RECEPTACLES	14
15	928 OFFICE RECEPTACLES		0.80		20	1	1	20		0.60		929 CONFERENCE RECEPTACLES	16
17	916 CHEMICAL LAB RECEPTACLES			0.60	20	1	1	20			0.80	916 CHEMICAL LAB RECEPTACLES	18
19	916 CHEMICAL LAB RECEPTACLES	1.0			20	1	1	20	1.0			916 CHEMICAL LAB LAB HOOD	20
21	921 BACTERIOLOGY RECEPTACLES		0.80		20	1	1	20		1.0		921 BACTERIOLOGY RECEPTACLES	22
23	CABINET UNIT HEATERS			–	20	1	1	20			0.60	LOCKER RM RECEPTACLES	24
25	9DWH–1	0.25			20	1	1	20	–			RECIRC PUMPS	26
27	916 CHEMICAL LAB REFRIGERATOR		0.80		20	1	1	20		0.50		FIRE ALARM CONTROL PANEL	28
29	BOILER CONTROL PANEL			0.50	20	1	1	20			0.60	BOILER ROOM RECETPACLES	30
31	SCADA CONTROL PANEL MTU–CP	0.50			20	1	2	20	1.4			BOILER	32
33	9DWH–2		2.25		X	2				1.4			34
35				2.25			2	20			0.45	HEAT PUMPS	36
37	PANELBOARD 2LP1	–			100	3			0.45				38
39			–				2	20		0.50		HEAT PUMPS	40
41				–							0.50		42

* PROVIDE GFCI BREAKER

PANELBOARD SCHEDULE

NO. 9LP1 – 2ND TUB — LOCATION: OPERATIONS BLDG. ELECTRIC ROOM

120/208 V, 3 PH, 4 W, 400 A MAINS — 400 A SOLID NEUTRAL — – A MCB

22,000 AIC AT 120 V — 400 A GROUND BUS — 400 A MLO — SURFACE MOUNTING

CIRCUIT	DESCRIPTION OF LOAD	LOAD (KVA) AØ	LOAD (KVA) BØ	LOAD (KVA) CØ	BREAKER TRIP	BREAKER POLE	BREAKER POLE	BREAKER TRIP	LOAD (KVA) AØ	LOAD (KVA) BØ	LOAD (KVA) CØ	DESCRIPTION OF LOAD	CIRCUIT
43	SITE LIGHTING – NEW S1 FIXTURES & EXISTING SPOT LIGHT	1.25			20	1	1	20	0.50			ROOFTOP RECEPTACLES	44
45	SITE LIGHTING – EXISTING HIGH MAST FIXTURES		1.5		20	1	1	20		0.90		LOWER LEVEL LIGHTING	46
47				1.5			1	20			0.50	WASHER	48
49	DISHWASHER	1.2			20	1	2	30	2.5			DRYER	50
51	EQUIPMENT RACK POWER		0.40		20	1				2.5			52
* 53	930/931 MENS/WOMENS RESTROOMS RECEPTACLES			0.40	20	1	1	20			–	SPARE	54
55	SPARE	–			20	1	1	20	–			SPARE	56
57	SPARE		–		20	1	1	20		–		SPARE	58
59	SPARE			–	20	1	1	20			–	SPARE	60
61	SPARE	–			20	1	1	20	–			SPARE	62
63	SPARE		–		20	1	1	20		–		SPARE	64
65	SPARE			–	20	1	1	20			–	SPARE	66
67	SPARE	–			20	1	1	20	–			SPARE	68
69	SPARE		–		20	1	1	20		–		SPARE	70
71	SPARE			–	20	1	1	20			–	SPARE	72
77	SPARE	–			20	1	1	20	–			SPARE	74
75	SPARE		–		20	1	1	20		–		SPARE	76
77	SPARE			–	20	1	1	20			–	SPARE	78
79	SPARE	–			20	1	1	20	–			SPARE	80
81	SPARE		–		20	1	1	20		–		SPARE	82
83	SPARE			–	20	1	1	20			–	SPARE	84
	SUB–TOTAL CONNECTED	7.66	8.40	7.28					9.45	8.80	4.38	SUB–TOTAL CONNECTED	

* PROVIDE GFCI BREAKER

SUB–TOTAL CONNECTED	KVA AØ =	17.11
SUB–TOTAL CONNECTED	KVA BØ =	17.20
SUB–TOTAL CONNECTED	KVA CØ =	11.66
TOTAL CONNECTED	KVA =	45.97

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MICHAEL J. COTTER
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL PANELBOARD SCHEDULES

NO.	REVISIONS	DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO. E-0.15

POWER CABLE/CONDUIT SCHEDULE			
SYMBOL	CONDUIT SIZE*	CONDUCTORS*	GND*
P22	3/4"	(2)#12	(1)#12
P23	3/4"	(3)#12	(1)#12
P26	3/4"	(6)#12	(1)#12
P32	3/4"	(2)#10	(1)#10
P33	3/4"	(3)#10	(1)#10
P53	3/4"	(3)#8	(1)#10
P54	3/4"	(4)#8	(1)#10
P63	1"	(3)#6	(1)#8
P64	1"	(4)#6	(1)#8
P83	1 1/4"	(3)#4	(1)#8
P84	1 1/4"	(4)#4	(1)#8
P103	1 1/2"	(3)#3	(1)#6
P104	1 1/2"	(4)#3	(1)#6
P113	1 1/2"	(3)#2	(1)#6
P114	1 1/2"	(4)#2	(1)#6
P133	2"	(3)#1	(1)#6
P134	2"	(4)#1	(1)#6
P153	2"	(3)#1/0	(1)#6
P154	2"	(4)#1/0	(1)#6
P173	2 1/2"	(3)#2/0	(1)#6
P174	2 1/2"	(4)#2/0	(1)#6
P203	2 1/2"	(3)#3/0	(1)#4
P204	2 1/2"	(4)#3/0	(1)#4
P233	3"	(3)#4/0	(1)#4
P234	3"	(4)#4/0	(1)#4
P253	3"	(3)250KCMIL	(1)#4
P254	3"	(4)250KCMIL	(1)#4
P404	4"	(4)500KCMIL	(1)#3
P804	(2)4"	(8)500KCMIL	(2)#1/0
P1104	(3)4"	(12)500KCMIL	(3)#2/0
P1604	(4)4"	(16)600KCMIL	(4)#4/0
P3604	(9)4"	(36)600KCMIL	(9)500KCMIL

SIGNAL CABLE/CONDUIT SCHEDULE		
SYMBOL	CONDUIT SIZE	CONDUCTORS
S	1"	VENDER PROVIDED
S1	3/4"	1-2/C#16 TSP
S13	3/4"	1-3/C#16 TSP
S2	3/4"	2-2/C#16 TSP
S23	3/4"	2-3/C#16 TSP
S3	1"	3-2/C#16 TSP
S33	1"	3-3/C#16 TSP
S4	1"	4-2/C#16 TSP
S5	1"	5-2/C#16 TSP
S6	1 1/2"	6-2/C#16 TSP
S7	1 1/2"	7-2/C#16 TSP
S8	1 1/2"	8-2/C#16 TSP
S9	1 1/2"	9-2/C#16 TSP
S10	2"	10-2/C#16 TSP
TC1	3/4"	8/C#18

TELE/DATA CABLE/CONDUIT SCHEDULE		
SYMBOL	CONDUIT SIZE	CABLES
TD1	1"	1-CAT6
TD2	1"	2-CAT6
F06	1"	6 STRAND FIBER OPTIC
F012	2"	12 STRAND FIBER OPTIC

CONTROL CABLE/CONDUIT SCHEDULE		
SYMBOL	CONDUIT SIZE	CONDUCTORS
C2	3/4"	2#14
C4	3/4"	4#14
C5	3/4"	5#14
C6	3/4"	6#14
C7	3/4"	7#14
C8	3/4"	8#14
C9	3/4"	9#14
C10	3/4"	10#14
C12	3/4"	12#14
C16	1"	16#14
C20	1"	20#14
C30	1"	30#14
C50	1 1/2"	50#14

NOTE: CONDUIT AND CONDUCTOR SIZES ARE TO BE PER THE ABOVE SCHEDULES UNLESS OTHERWISE NOTED.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER & CATALOG SERIES	LAMPS		VOLTS	WATTS	MOUNTING		REMARKS
			TYPE	LUMENS			TYPE	HEIGHT	
F1	96" LED ENCLOSED AND GASKETED INDUSTRIAL LIGHTING FIXTURE.	LITHONIA FEM-L96-9000LM-IMAFL-MVOLT-35K-80CRI	LED 3500K	8124lm	120	54	PENDANT	13'-5"ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED	
F2	48" LED ENCLOSED AND GASKETED INDUSTRIAL LIGHTING FIXTURE.	LITHONIA FEM-L48-4000LM-IMAFL-MVOLT-35K-80CRI	LED 3500K	3615lm	120	24	PENDANT	13'-5"ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED	
F3	48" LED ENCLOSED AND GASKETED INDUSTRIAL LIGHTING FIXTURE.	LITHONIA FEM-L48-4000LM-IMAFL-MVOLT-35K-80CRI	LED 3500K	3615lm	120	24	SURFACE		
F4	CLASS I DIV.1 EXPLOSION PROOF LED GLOBE LIGHT FIXTURE	HUBBELL HLEML-45-30-X2-AN	LED 5000K	2880lm	120	45	PENDANT	12'-0"ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED	
F5	2x2 LED LIGHTING FIXTURE	LITHONIA 2BLT2-20L-33LHE-ADP-MVOLT	LED –	2065	120	26	RECESSED		
F6	2x2 LED LIGHTING FIXTURE	LITHONIA 2WRTL-G-L24-3000LM-OAW-AFL-120-EZ1-35K-90CRI	LED –	3000	120	26	RECESSED		
F7	LED FLOOD LIGHT KNUCKLE MOUNT WITH 1/2" THREADED PIPE	LITHONIA OFL1-LED-P1-40K-MVOLT-THK-M	LED 4000K	2295lm	120	21	PIPE		
W1	EXTERIOR BUILDING MOUNTED LED WALL PACK LIGHT FIXTURE	LITHONIA TWP-LED-20C-700-50K-T3M-120-PE-DDXB	LED 5000K	4233lm	120	45	WALL		FIXTURE CIRCUIT TO BE CONNECTED TO AND CONTROLLED BY A TIME CLOCK SWITCH
W2	EXTERIOR BUILDING MOUNTED LED MINI WALL PACK LIGHT FIXTURE	LITHONIA TWS-LED-P1-50K	LED 5000K	1476lm	120	25	WALL		FIXTURE CIRCUIT TO BE CONNECTED TO AND CONTROLLED BY A TIME CLOCK SWITCH
S1	LED SITE LIGHT FIXTURE WITH 12' SQUARE POLE TYPE 3 OPTICS, BRONZE COLOR	HUBBELL LIGHTING ASL-A-16L-5K-140-3-U-DB	LED 5000K	7410lm	120	56	POLE		MOUNTED ON 12' SQUARE STRAIGHT POLE WITH BASE COVER AND POLE CAP #SSS-H-12-40-A-1L-S2-DB-UL
	SELF CONTAINED EMERGENCY LIGHTING BATTERY UNIT NEMA 4 WITH TWO LIGHTING HEADS	REFER TO SPECIFICATIONS	LED	–	120	8	WALL		INSTALL 3/4"C, 2#12, 1#12GND TO REMOTE HEADS
	SEALED-BEAM WEATHERPROOF REMOTE LIGHTING FIXTURE WITH TWO LIGHTING HEADS	REFER TO SPECIFICATIONS	LED	–	120	8	WALL		
	EMERGENCY EXIT SIGN LED TYPE WITH BATTERY BACK-UP NEMA 4X	REFER TO SPECIFICATIONS	LED	–	120	3	WALL		

LIGHTING FIXTURE SCHEDULES NOTES:

1. THE CATALOG NUMBERS LISTED ARE GIVEN AS A GUIDE TO THE DESIGN AND QUALITY OF FIXTURE DESIRED. EQUIVALENT DESIGNS, MATERIALS, DIMENSIONS, COEFFICIENT OF UTILIZATIONS AND EQUAL QUALITY FIXTURES OF OTHER MANUFACTURERS WILL BE ACCEPTABLE.

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL LIGHTING, & CABLE/CONDUIT SCHEDULES

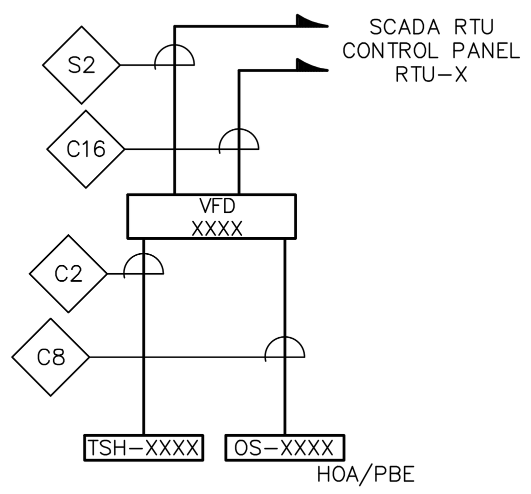
NO.	REVISIONS	DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

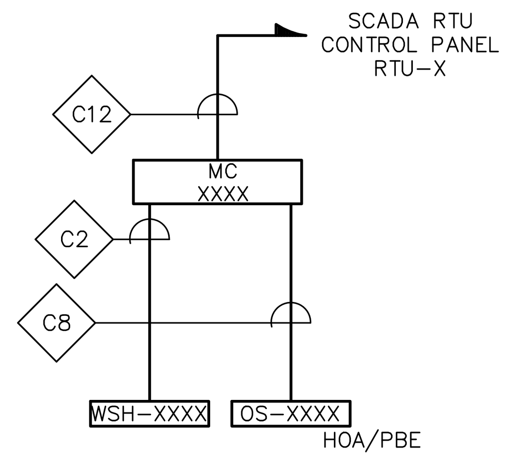
SHEET NO. E-0.16



CONTROL BLOCK WIRING DIAGRAM
PRIMARY SLUDGE PUMPS
NOT TO SCALE

TYPICAL FOR:

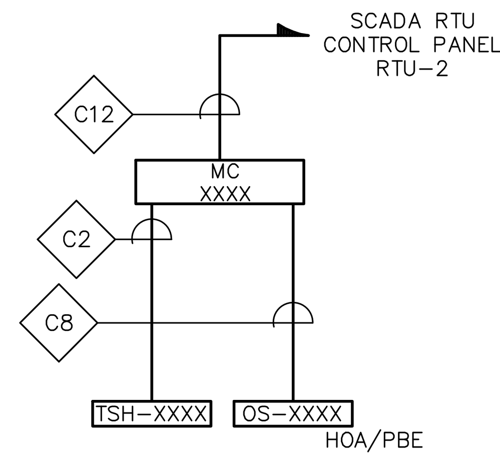
- VFD–2201/OS–2201/TSH–2201 – RTU–2
- VFD–2202/OS–2202/TSH–2202 – RTU–2
- VFD–2203/OS–2203/TSH–2203 – RTU–2
- VFD–2204/OS–2204/TSH–2204 – RTU–2



CONTROL BLOCK WIRING DIAGRAM
PRIMARY CLARIFIER DRIVES
NOT TO SCALE

TYPICAL FOR:

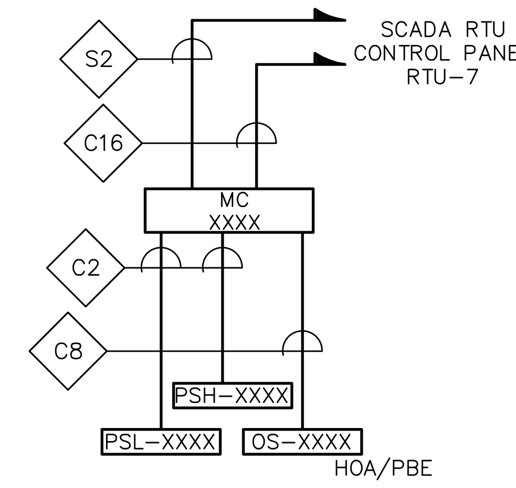
- MC–2101/OS–2101/WSH–2101 – RTU–2
- MC–2102/OS–2102/WSH–2102 – RTU–2
- MC–2103/OS–2103/WSH–2103 – RTU–2
- MC–2104/OS–2104/WSH–2104 – RTU–2



CONTROL BLOCK WIRING DIAGRAM
PRIMARY SCUM PUMPS
NOT TO SCALE

TYPICAL FOR:

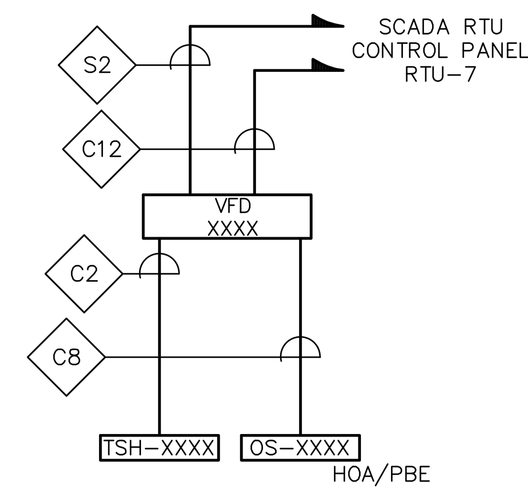
- MC–2301/OS–2301/TSH–2301
- MC–2302/OS–2302/TSH–2302



CONTROL BLOCK WIRING DIAGRAM
GRIT BLOWERS
NOT TO SCALE

TYPICAL FOR:

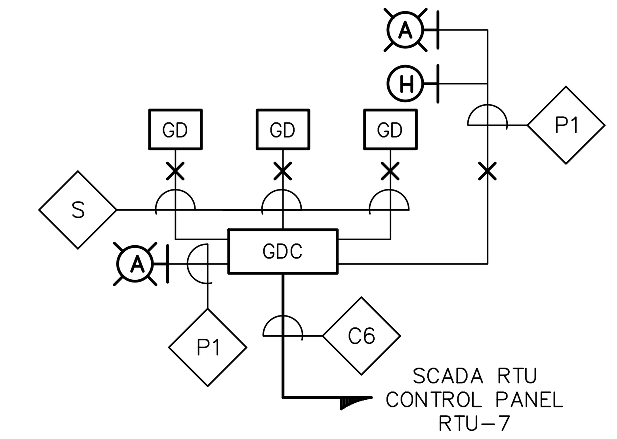
- MC–1201/OS–1201/PSL–1201/PSH–1201
- MC–1202/OS–1202/PSL–1202/PSH–1202



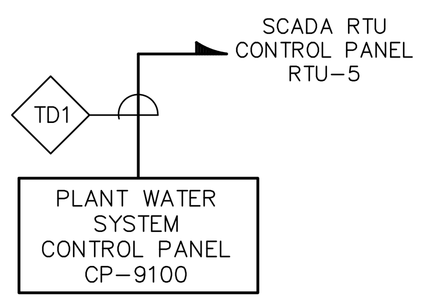
CONTROL BLOCK WIRING DIAGRAM
ODOR CONTROL BLOWER
NOT TO SCALE

TYPICAL FOR:

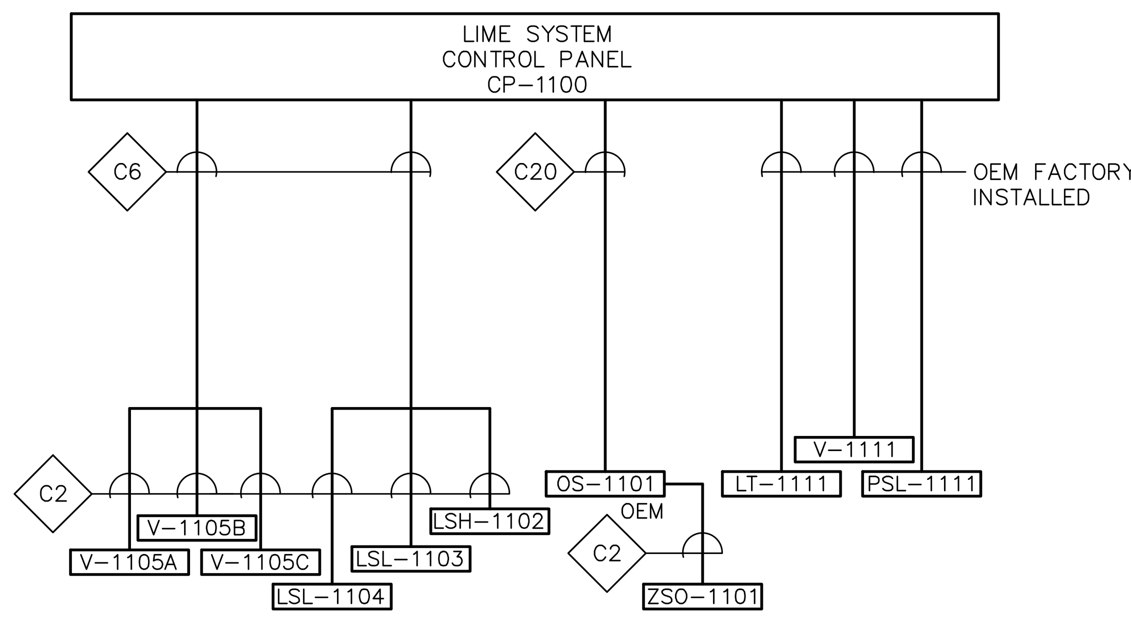
- VFD–8101/OS–8101/TSH–8101



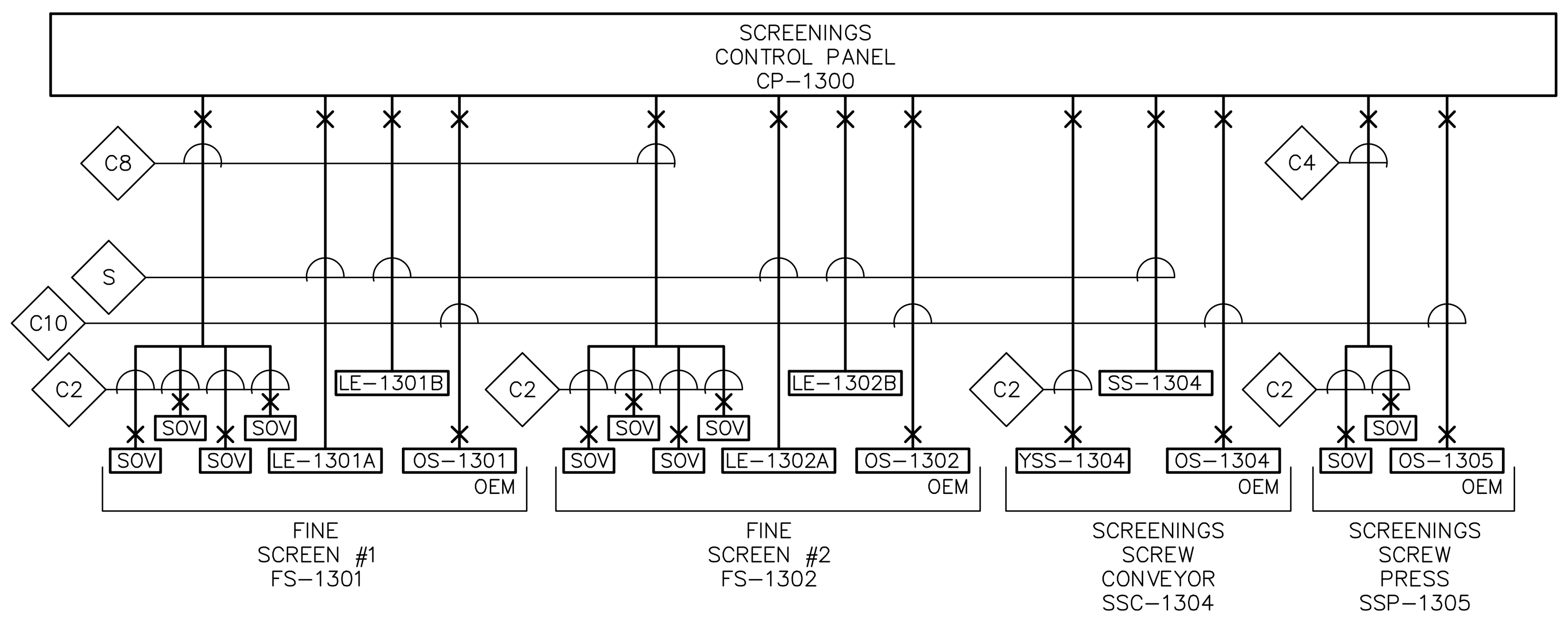
CONTROL BLOCK WIRING DIAGRAM
GAS DETECTION SYSTEM
NOT TO SCALE



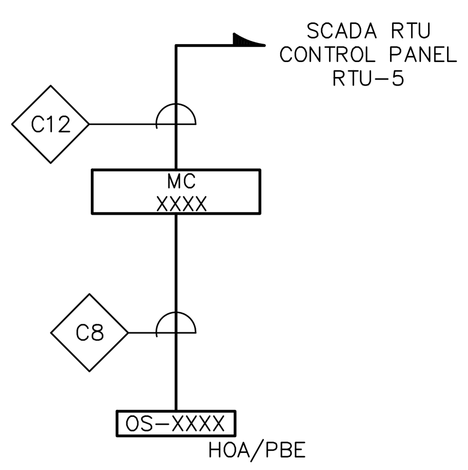
CONTROL BLOCK WIRING DIAGRAM
PLANT WATER SYSTEM
NOT TO SCALE



CONTROL BLOCK WIRING DIAGRAM
LIME SYSTEM
NOT TO SCALE



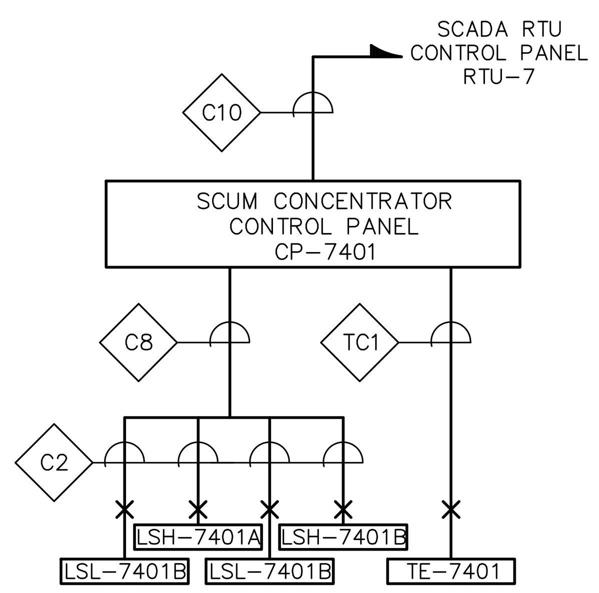
CONTROL BLOCK WIRING DIAGRAM
HEAD WORKS SCREENINGS
NOT TO SCALE



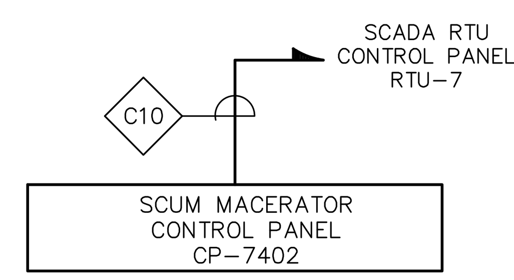
CONTROL BLOCK WIRING DIAGRAM
SANITARY WASTE PUMPS
NOT TO SCALE

TYPICAL FOR:

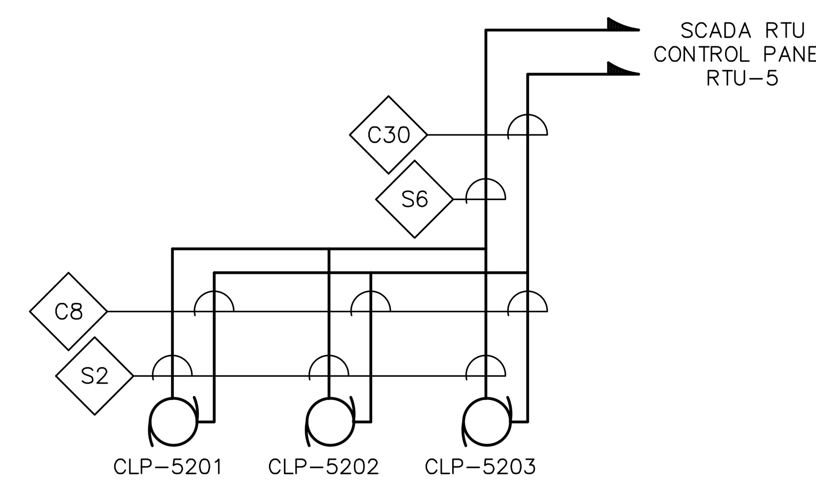
- MC–9201/OS–9201
- MC–9202/OS–9202



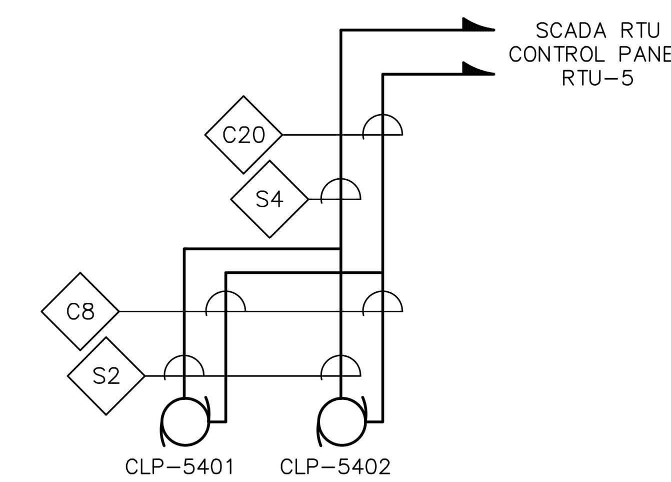
CONTROL BLOCK WIRING DIAGRAM
SCUM CONCENTRATOR
NOT TO SCALE



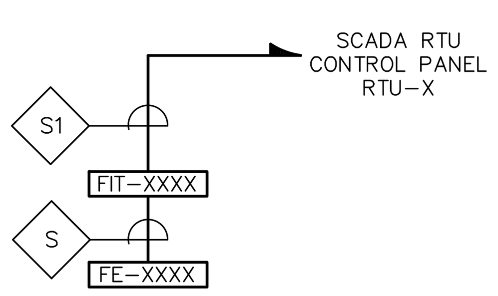
CONTROL BLOCK WIRING DIAGRAM
SCUM MACERATOR
NOT TO SCALE



CONTROL BLOCK WIRING DIAGRAM
CHLOR. CHEMICAL FEED PUMPS
NOT TO SCALE



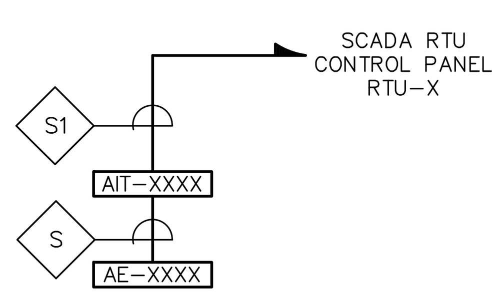
CONTROL BLOCK WIRING DIAGRAM
DE-CHLOR. CHEMICAL FEED PUMPS
NOT TO SCALE



CONTROL BLOCK WIRING DIAGRAM
FLOW METERS
NOT TO SCALE

TYPICAL FOR:

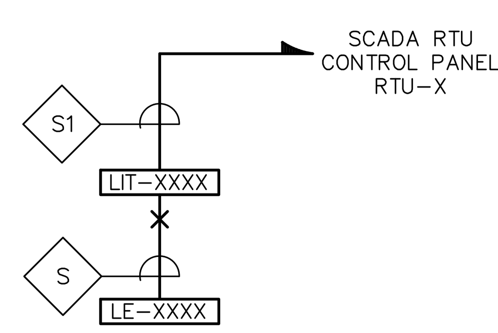
- FE–2205/FIT–2205 – RTU–2
- FE–5502/FIT–5502 – RTU–5
- FE–5503/FIT–5503 – RTU–5



CONTROL BLOCK WIRING DIAGRAM
ANALYZERS
NOT TO SCALE

TYPICAL FOR:

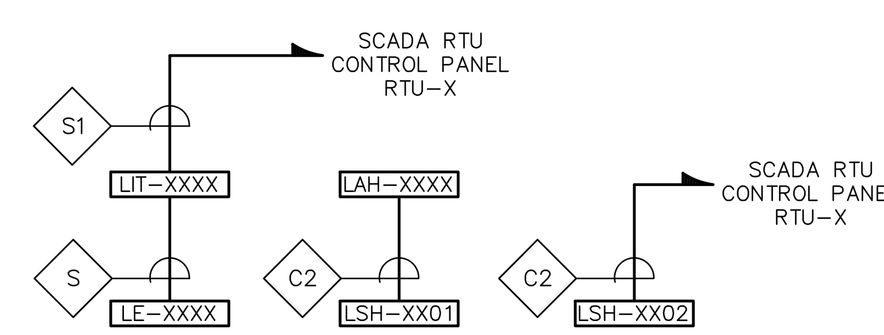
- AE–5504/AIT–5504 – RTU–5
- AE–5505/AIT–5505 – RTU–5



CONTROL BLOCK WIRING DIAGRAM
SCUM & SANITARY WELLS ULTRASONIC LEVEL TRANSMITTERS
NOT TO SCALE

TYPICAL FOR:

- LE–2303/LIT–2303 – RTU–2
- LE–2304/LIT–2304 – RTU–2
- LE–9203/LIT–9203 – RTU–5



CONTROL BLOCK WIRING DIAGRAM
CHEMICAL TANKS LEVEL MONITORING
NOT TO SCALE

TYPICAL FOR:

- LE–5101/LIT–5101/LSH–5101/LAH–5101/LSH–5102 – RTU–5
- LE–5301/LIT–5301/LSH–5301/LAH–5301/LSH–5302 – RTU–5

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL CONTROL BLOCK WIRING DIAGRAMS

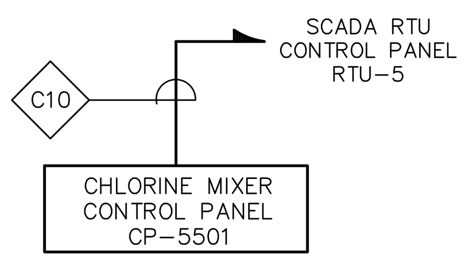
NO.	REVISIONS	DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

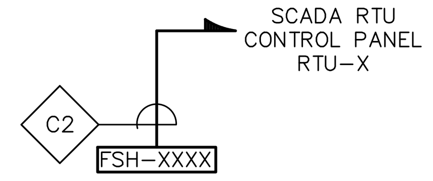
SCALE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO. E-0.17



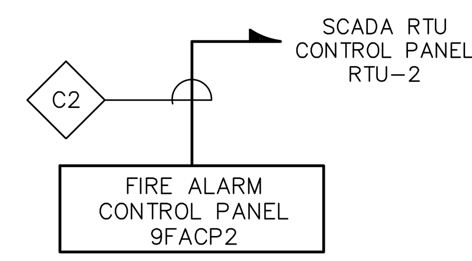
CONTROL BLOCK WIRING DIAGRAM
CHLORINE MIXER
NOT TO SCALE



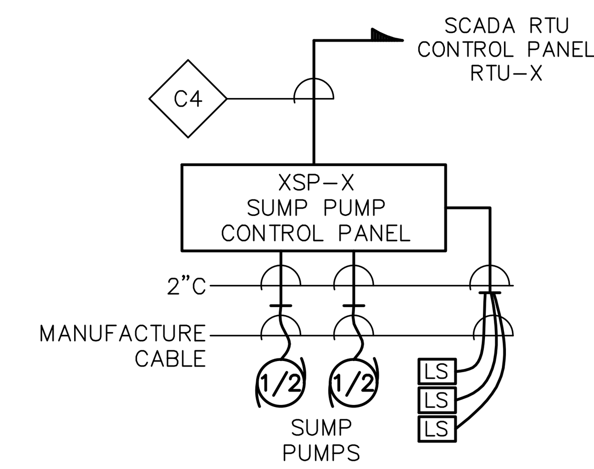
CONTROL BLOCK WIRING DIAGRAM
EMERGENCY EYEWASH/SHOWERS
NOT TO SCALE

TYPICAL FOR:

- FSH-9301 – RTU-5
- FSH-9302 – RTU-5



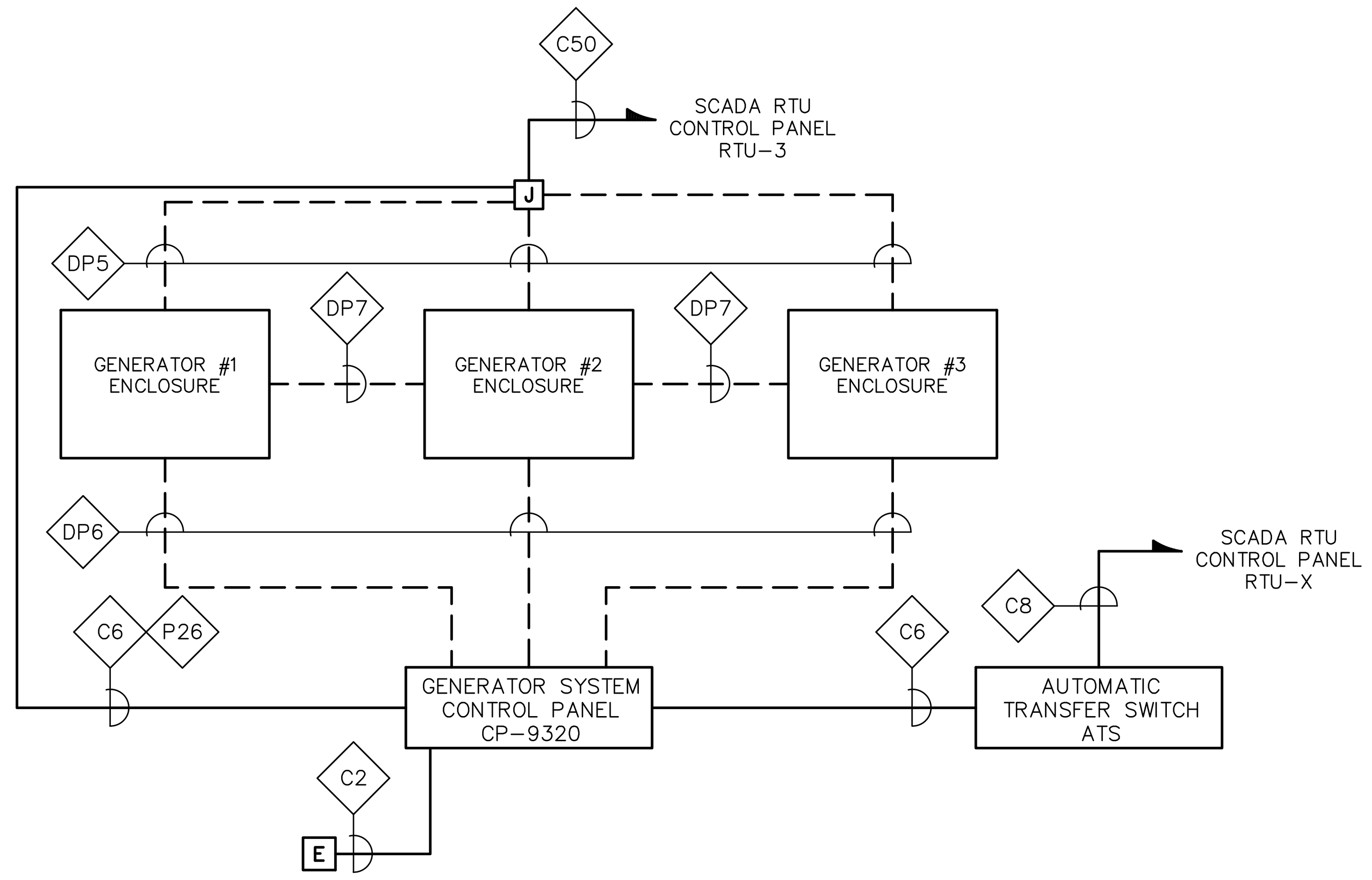
CONTROL BLOCK WIRING DIAGRAM
FIRE ALARM MONITORING
NOT TO SCALE



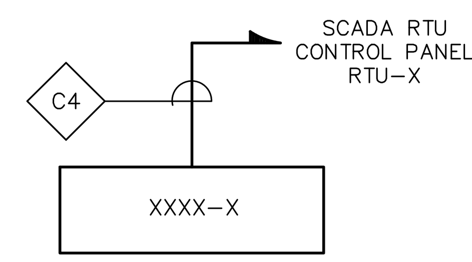
SUMP PUMP BLOCK WIRING DIAGRAM
NOT TO SCALE

TYPICAL FOR:

- 5SP-1 – RTU-5



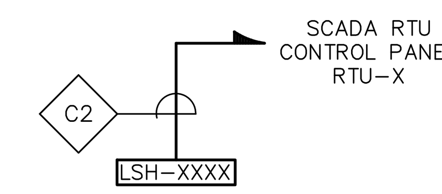
CONTROL BLOCK WIRING DIAGRAM
GENERATOR SYSTEM
NOT TO SCALE



CONTROL BLOCK WIRING DIAGRAM
HVAC UNIT MONITORING
NOT TO SCALE

TYPICAL FOR:

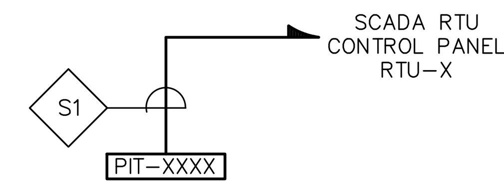
- 2ERV-1 – RTU-2
- 2ERV-2 – RTU-2
- 9ERV-1 – RTU-2
- 3ERV-1 – RTU-3
- 5ERV-1 – RTU-5
- 7ERV-1 – RTU-7
- 7ERV-2 – RTU-7
- 7ERV-3 – RTU-7
- 7ERV-4 – RTU-7
- 7MAU-1 – RTU-7



CONTROL BLOCK WIRING DIAGRAM
LEVEL SWITCHES
NOT TO SCALE

TYPICAL FOR:

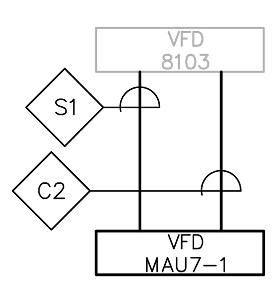
- LSH-9350 – RTU-2
- LSH-9351 – RTU-2



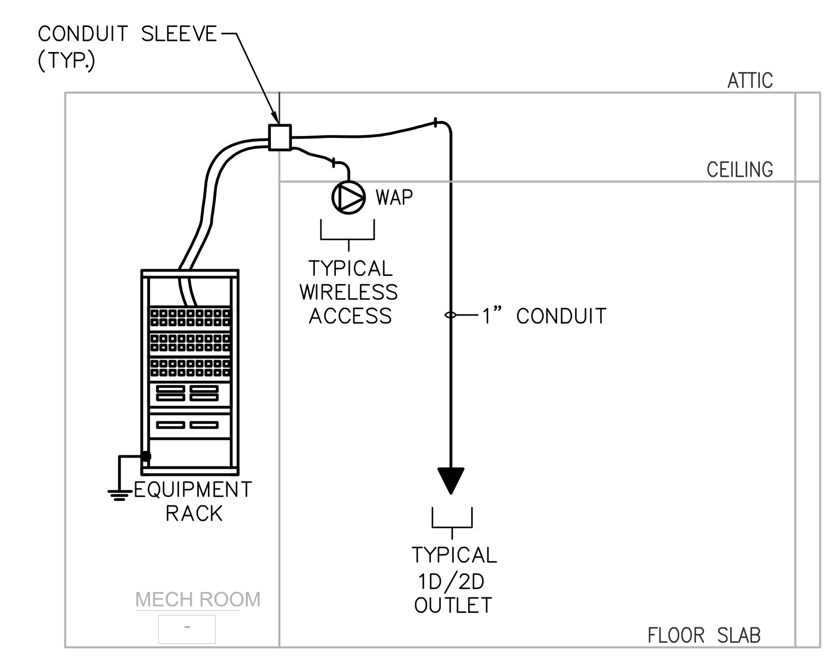
CONTROL BLOCK WIRING DIAGRAM
PRESSURE TRANSMITTERS
NOT TO SCALE

TYPICAL FOR:

- PIT-1203 – RTU-7
- PIT-1204 – RTU-7



CONTROL BLOCK WIRING DIAGRAM
EXISTING ODOR CONTROL BLOWER VFD-8103
NOT TO SCALE



NOTES:

1. REFER TO SPECIFICATION FOR RACEWAY REQUIREMENTS
2. REFER TO TECHNOLOGY PLAN DRAWINGS FOR QUANTITY OF TELE/DATA RACKS IN EACH ROOM

TECHNOLOGY RISER DIAGRAM
NOT TO SCALE

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL CONTROL BLOCK WIRING DIAGRAMS

NO.	REVISIONS	DATE

DRAWN BY:	RB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

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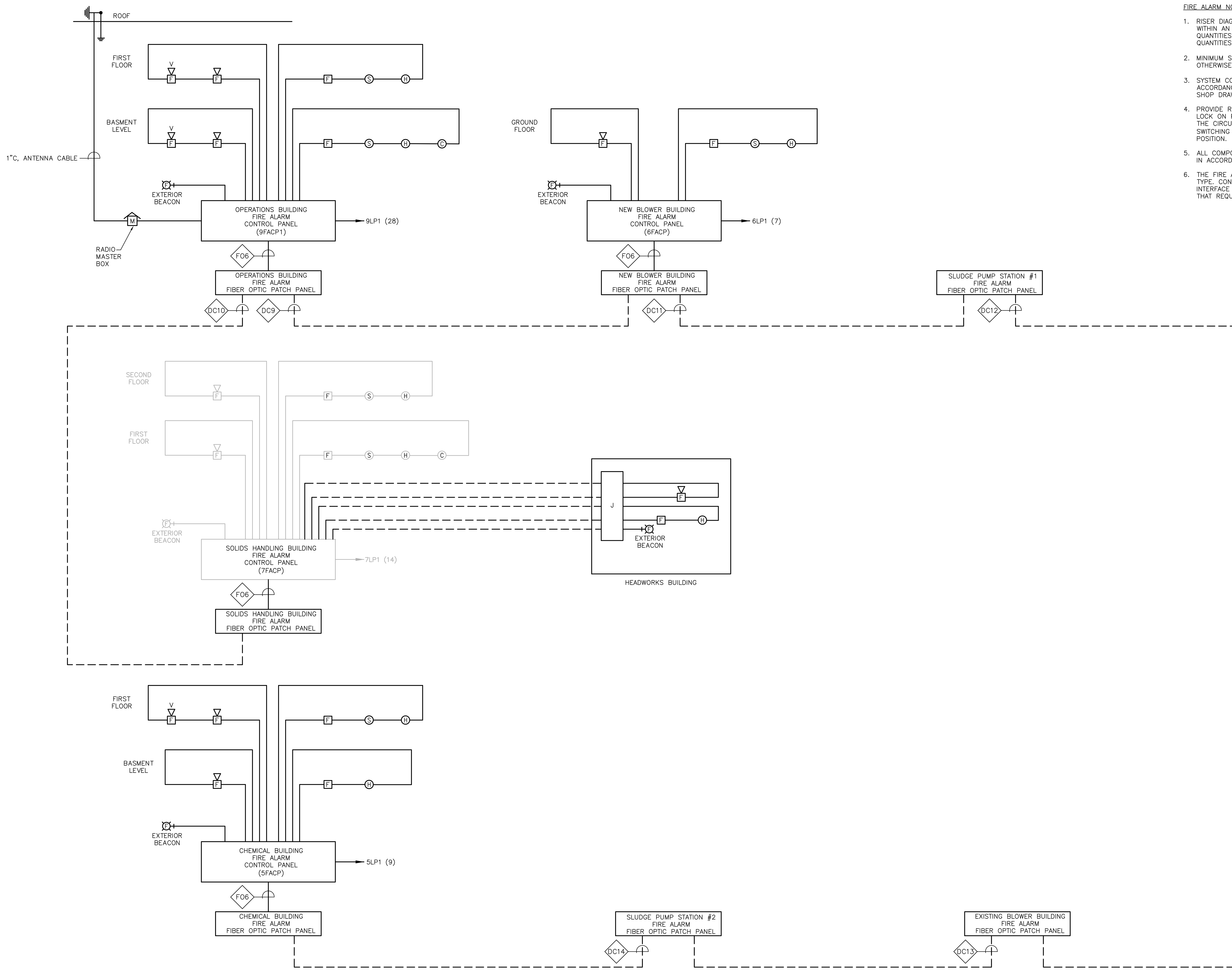
E-0.18



FIRE ALARM RISERS & PANEL INTERCONNECTION DIAGRAM

NOT TO SCALE

FIRE ALARM NOTES:

1. RISER DIAGRAM ONLY REPRESENTS TYPE OF DEVICES WITHIN AN AREA AND DOES NOT REPRESENT ACTUAL QUANTITIES. REFER TO PLAN DRAWINGS FOR EXACT QUANTITIES AND LOCATIONS OF DEVICES.
2. MINIMUM SIZE CONDUIT SHALL BE 3/4" UNLESS NOTED OTHERWISE.
3. SYSTEM CONDUIT/CABLING SHALL BE INSTALLED IN ACCORDANCE WITH EQUIPMENT SUPPLIERS APPROVED SHOP DRAWINGS AND WIRING DIAGRAMS.
4. PROVIDE RED COLORED CIRCUIT BREAKER HANDLE LOCK ON POWER CIRCUIT. HANDLE LOCK SHALL ALLOW THE CIRCUIT BREAKER TO TRIP, BUT PREVENT SWITCHING OF THE CIRCUIT BREAKER TO THE "OFF" POSITION.
5. ALL COMPONENTS OF THE SYSTEM SHALL BE MOUNTED IN ACCORDANCE WITH ADA REQUIREMENTS.
6. THE FIRE ALARM SYSTEM SHALL BE ADDRESSABLE TYPE. CONTRACTOR TO PROVIDE THE NECESSARY INTERFACE MODULES FOR THE FIRE ALARM DEVICES THAT REQUIRES THEM.

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

ELECTRICAL FIRE ALARM RISERS & PANEL INTERCONNECTION DIAGRAM

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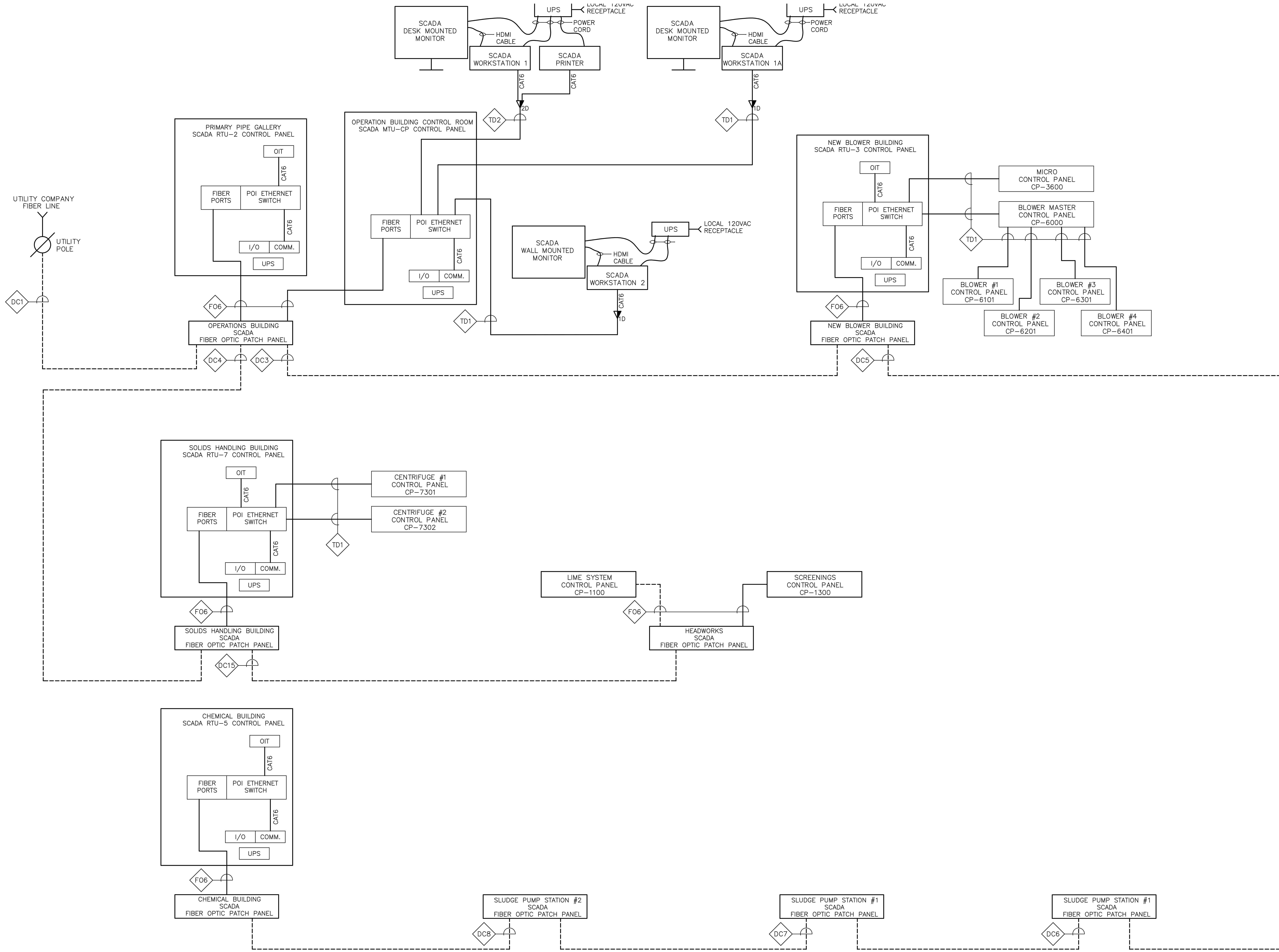

SCADA SYSTEM INTERCONNECTION DIAGRAM

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ELECTRICAL SCADA PANEL INTERCONNECTION DIAGRAM

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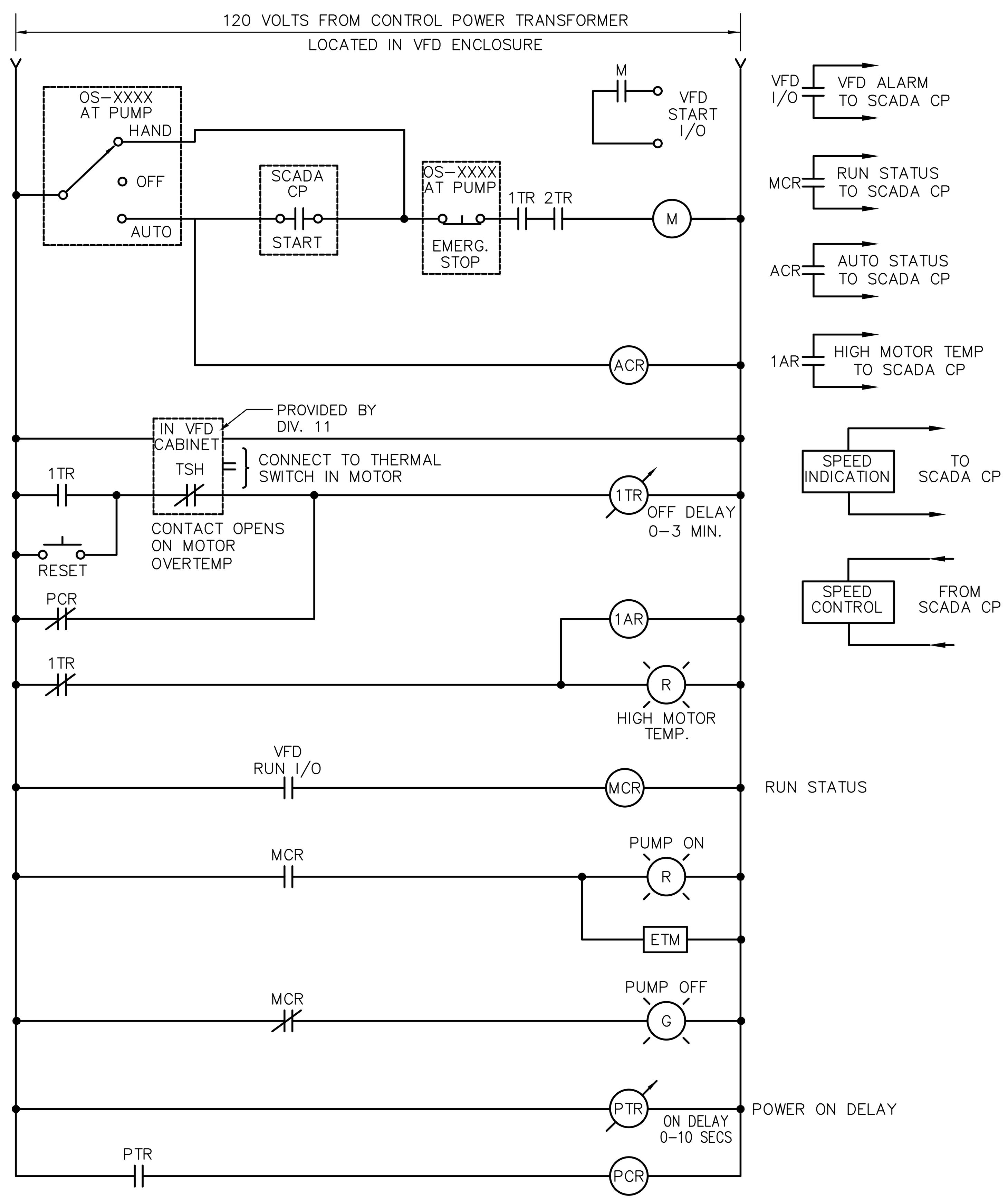
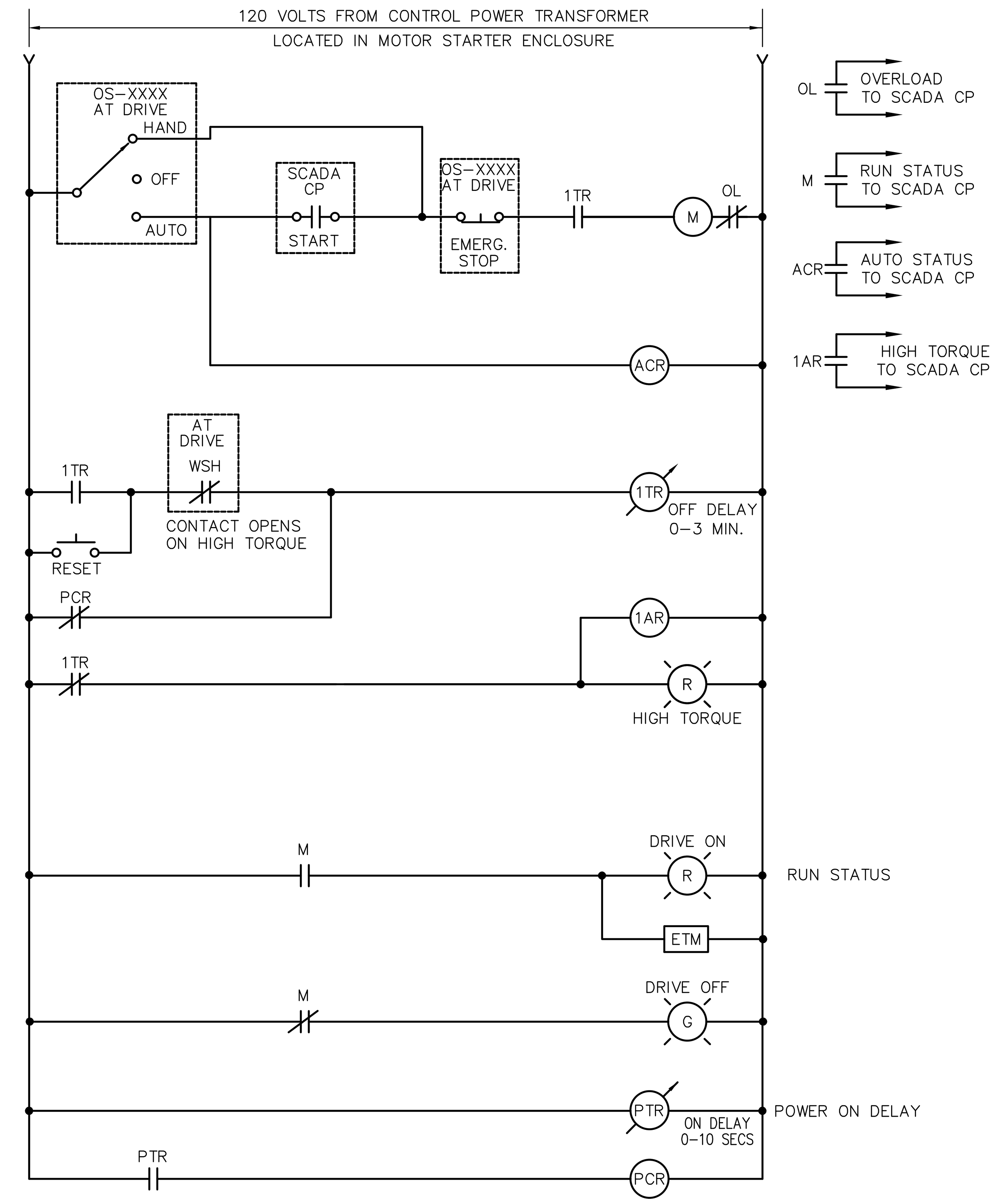
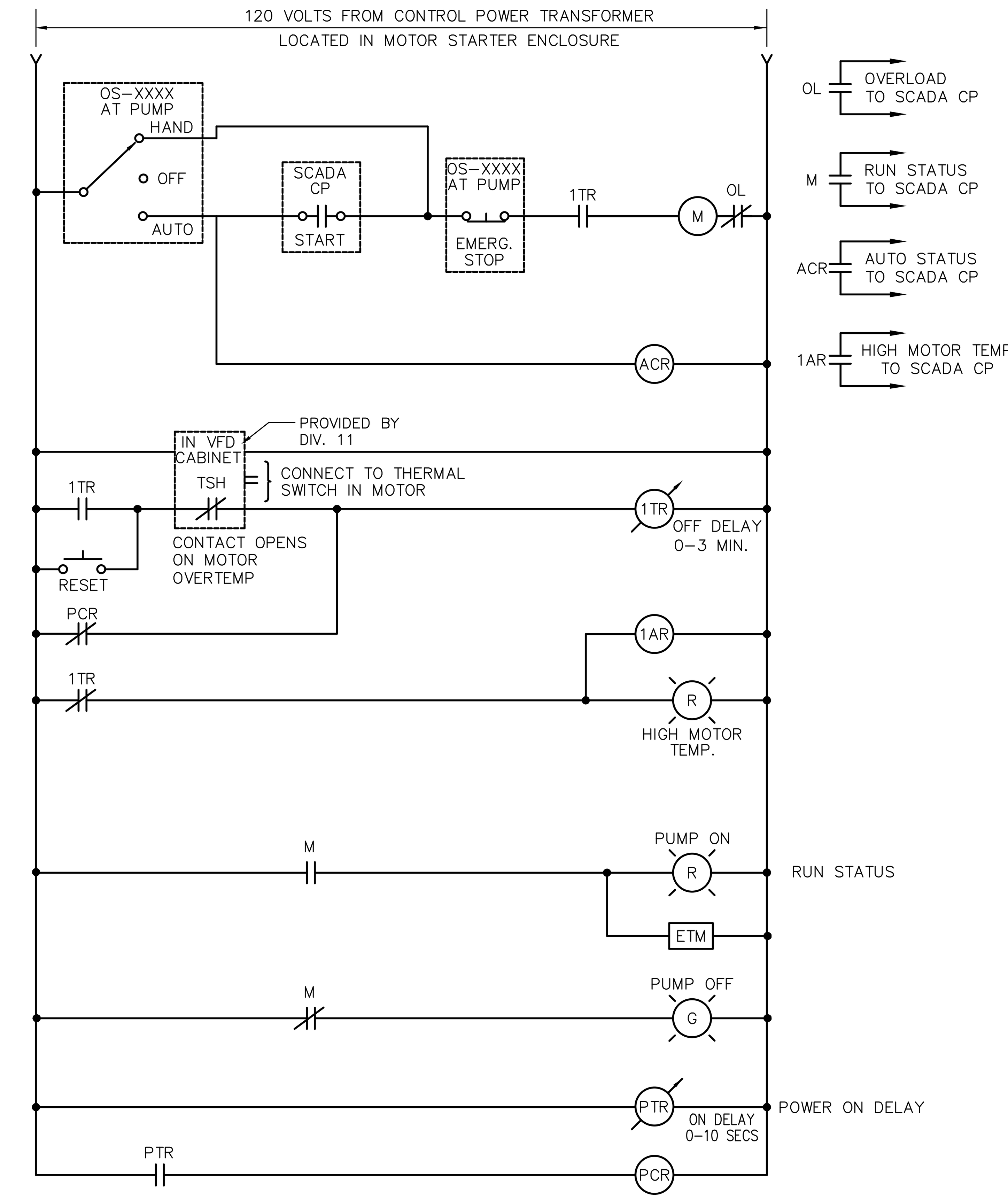


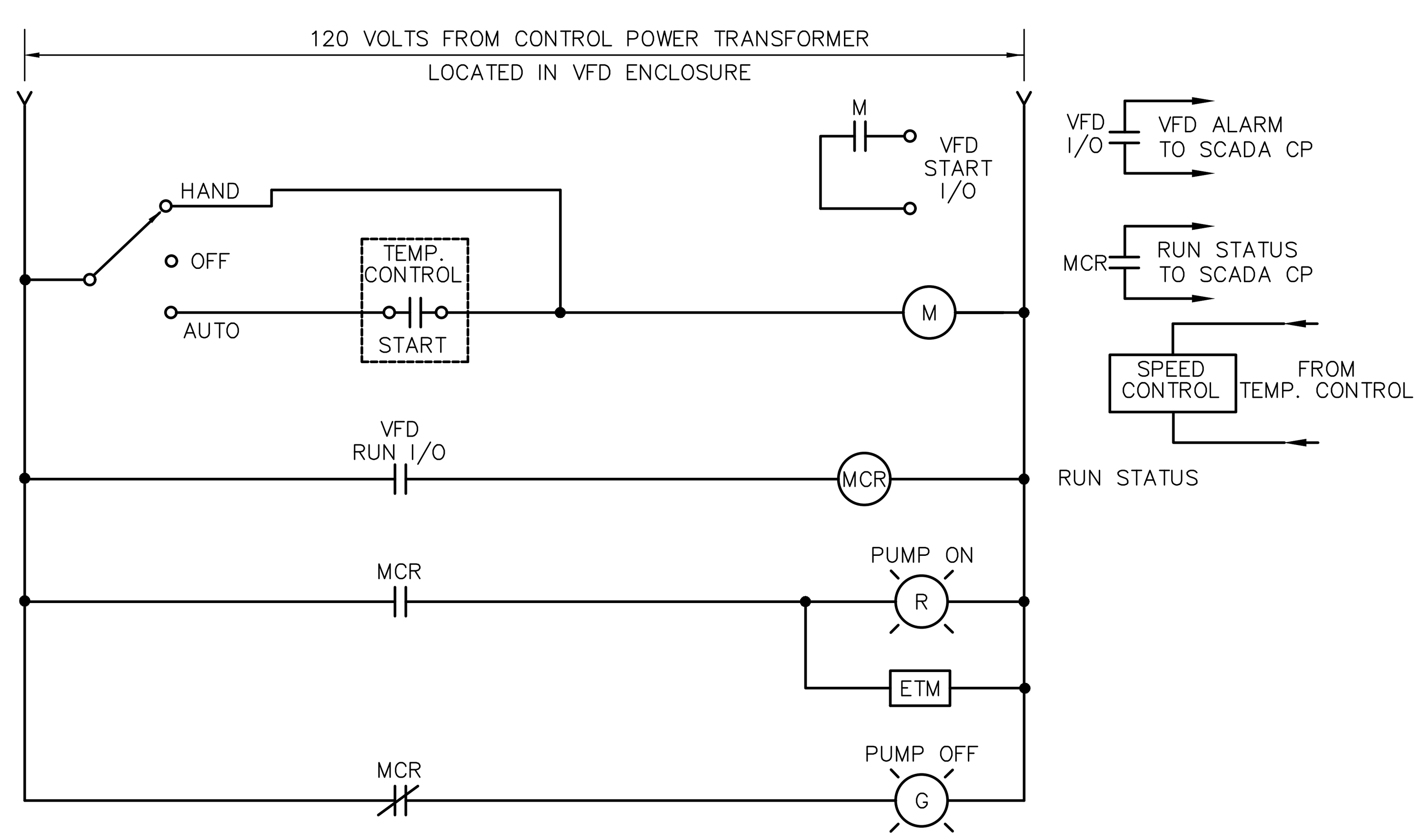
MOTOR CONTROL WIRING DIAGRAM
PRIMARY SLUDGE PUMPS
NOT TO SCALE



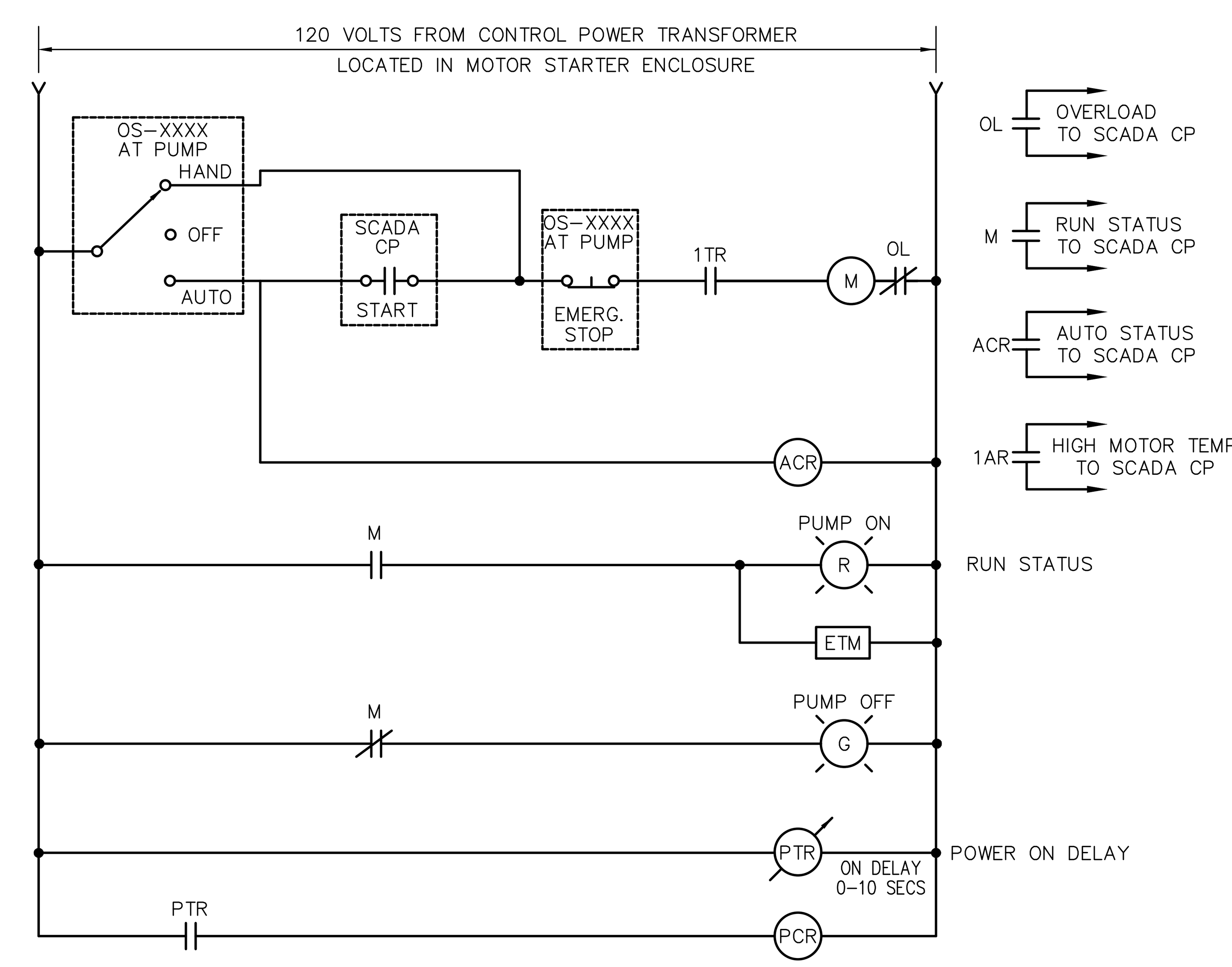
MOTOR CONTROL WIRING DIAGRAM
PRIMARY CLARIFIER DRIVES
NOT TO SCALE



MOTOR CONTROL WIRING DIAGRAM
PRIMARY SCUM PUMPS
NOT TO SCALE



MOTOR CONTROL WIRING DIAGRAM
HOT WATER PUMPS
NOT TO SCALE



MOTOR CONTROL WIRING DIAGRAM
SANITARY WASTE PUMPS
NOT TO SCALE

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Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

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ELECTRICAL MOTOR CONTROL WIRING DIAGRAMS

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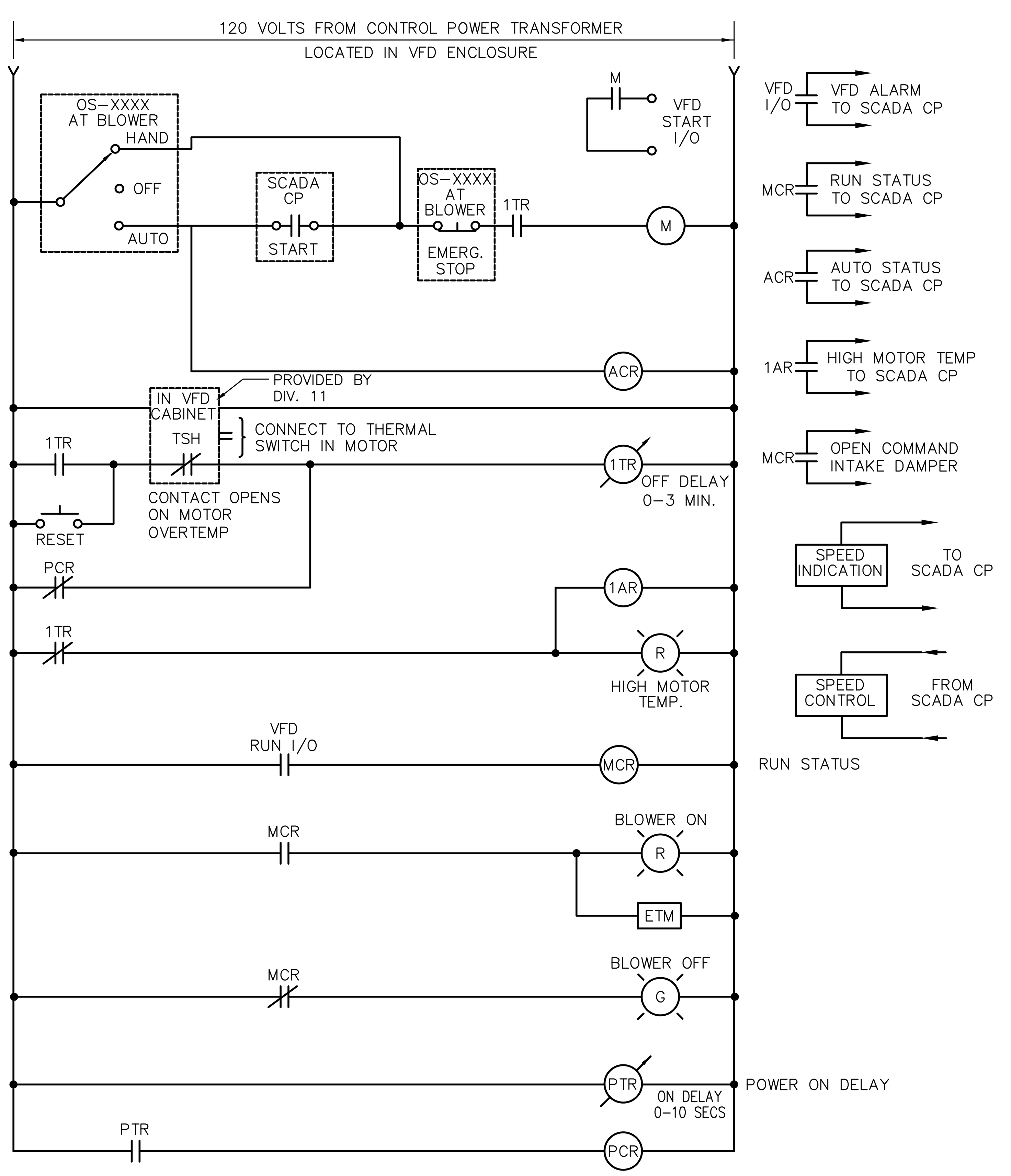
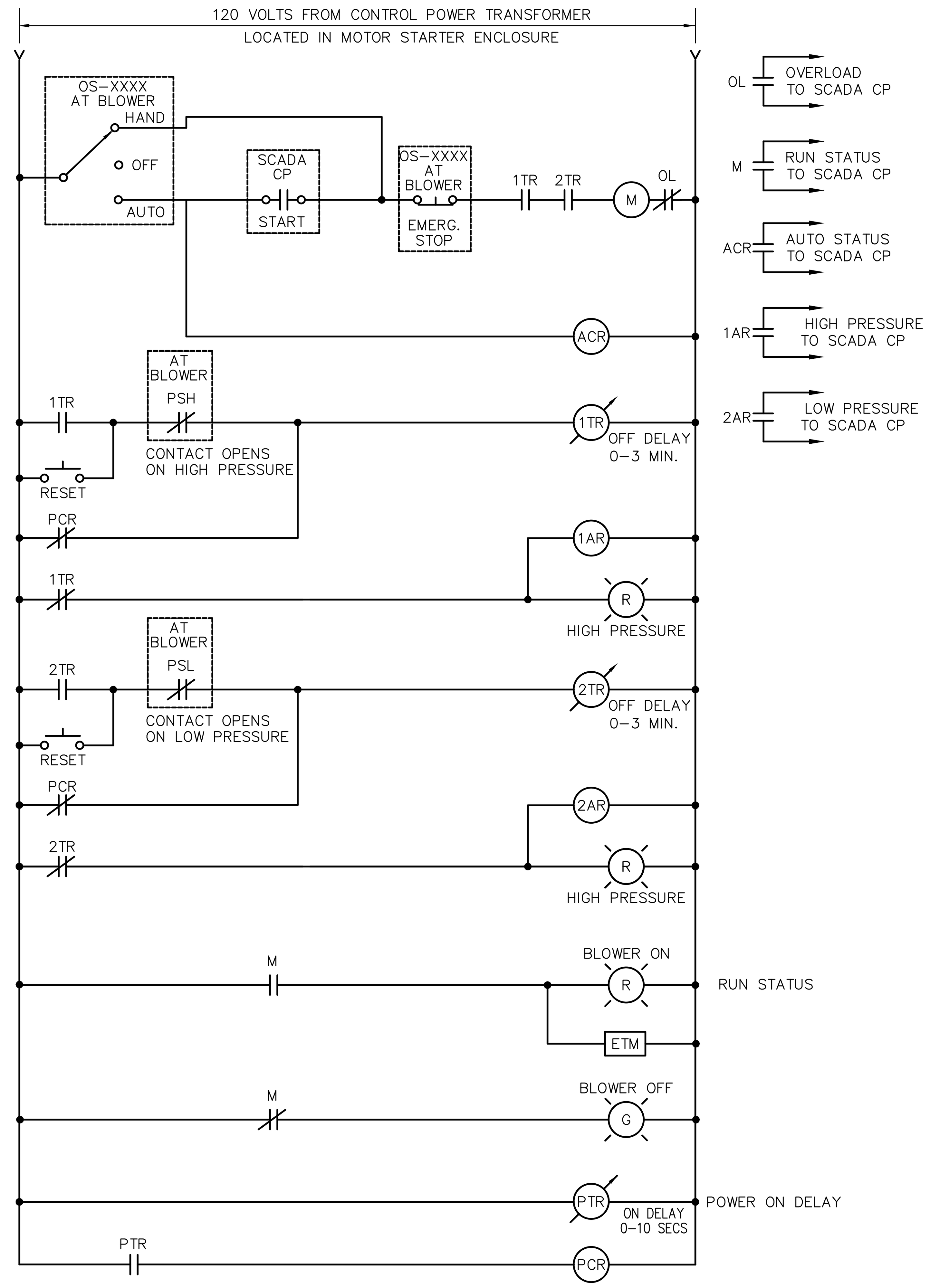
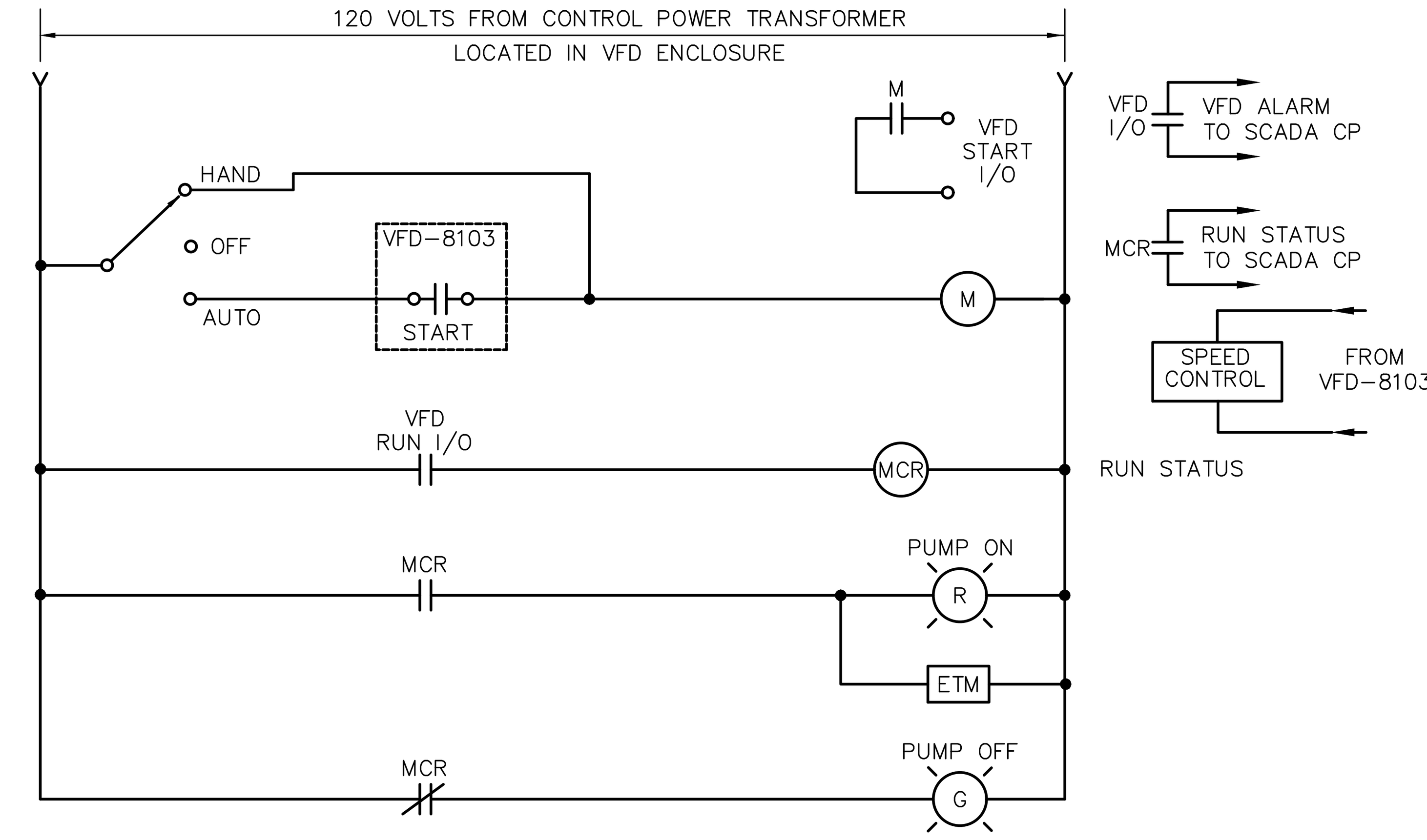


MOTOR CONTROL WIRING DIAGRAM
ODOR CONTROL BLOWERS
NOT TO SCALE



MOTOR CONTROL WIRING DIAGRAM
GRIT BLOWERS
NOT TO SCALE



MOTOR CONTROL WIRING DIAGRAM
7MAU-1
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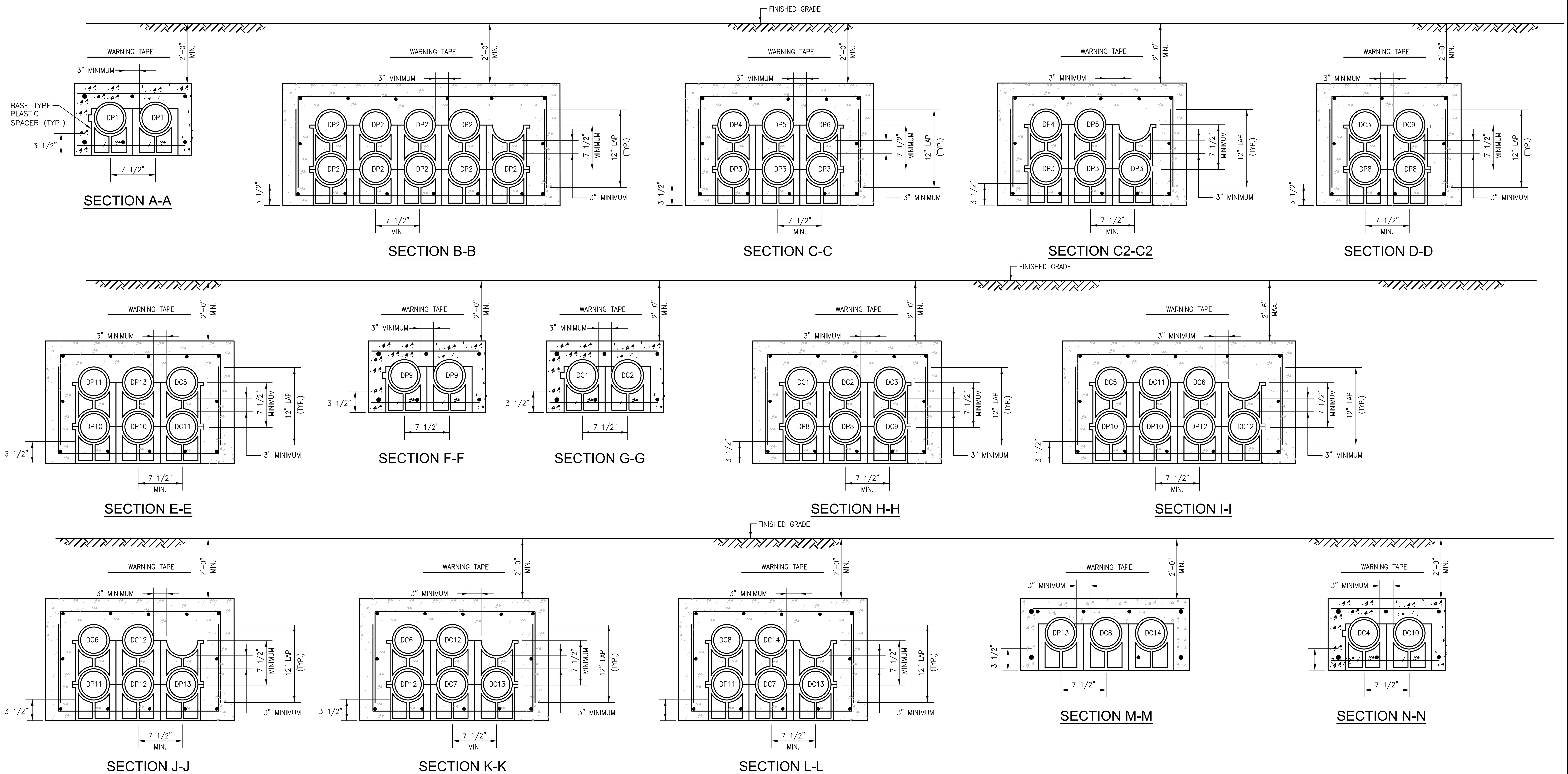
SHEET NO. E-0.22

POWER DUCT / CABLE SCHEDULE				
DUCT NO.	SIZE	CONDUCTORS	FROM	TO
DP1	4"	(3) #4/0 AL 15KV CABLE	UTILITY POLE	UTILITY TRANSFORMER
DP2	4"	(4) 600kcmiL	UTILITY TRANSFOMER	MCB
DP3	4"	(4) 600kcmiL, #3/0 GND	GENERATOR	GSWBD1
DP4	1"	(4) #12, #12GND, (2) #10, #10GND	6LP1	GENERATOR AUXILLARY SYSTEMS
DP5	1"	(20) #14, (2) #12	GENERATOR	GENERATOR MASTER CONTROL PANEL, RTU-3
DP6	1"	(1) RS-485 CABLE	GENERATOR MASTER CONTROL PANEL	GENERATOR CONTROL PANEL
DP7	1"	(2) RS-485 CABLES	GENERATOR CONTROL PANEL	GENERATOR CONTROL PANEL
DP8	4"	(4) 350kcmiL, #1 GND	MSWBD1	OPERATON BUILDING – 2DP1
DP9	4"	(4) 500kcmiL, #2/0 GND	MSWBD1	SOLIDS HANDLING BUILDING – 7MCB
DP10	4"	(4) 350kcmiL, #1 GND	MSWBD1	SLUDGE PUMPING STATION #1
DP11	5"	(4) 600kcmiL, #3 GND	MSWBD1	SLUDGE PUMPING STATION #2
DP12	3"	PULL STRING FOR FUTURE FEEDER	SLUDGE PUMPING STATION #1	EXISTING BLOWER BUILDING
DP13	5"	(4) 600kcmiL, #3 GND	MSWBD1	CHEMICAL HANDLING BUILDING – 5DP1

COMMUNICATION DUCT / CABLE SCHEDULE				
DUCT NO.	SIZE	CONDUCTORS	FROM	TO
DC1	3"	FIBER OPTIC CABLE (SCADA)	UTILITY POLE	ADMINISTRATION BLDG. FIBER PATCH PANEL
DC2	3"	PULL STRING	UTILITY POLE	TELE/COM DEMARK BACKBOARD
DC3	3"	12 STRAND FIBER OPTIC CABLE (SCADA)	ADMINISTRATION BLDG. FIBER PATCH PANEL	BLOWER BLDG. FIBER PATCH PANEL
DC4	3"	12 STRAND FIBER OPTIC CABLE (SCADA)	ADMINISTRATION BLDG. FIBER PATCH PANEL	SLUDGE HANDLING BLDG. FIBER PATCH PANEL
DC5	3"	12 STRAND FIBER OPTIC CABLE (SCADA)	BLOWER BLDG. FIBER PATCH PANEL	SLUDGE PUMPING STATION #1 FIBER PATCH PANEL
DC6	3"	12 STRAND FIBER OPTIC CABLE (SCADA)	SLUDGE PUMPING STATION #1 FIBER PATCH PANEL	EXISTING BLOWER BUILDING FIBER PATCH PANEL
DC7	3"	12 STRAND FIBER OPTIC CABLE (SCADA)	STORAGE BUILDING FIBER PATCH PANEL	SLUDGE PUMPING STATION #2 FIBER PATCH PANEL
DC8	3"	12 STRAND FIBER OPTIC CABLE (SCADA)	SLUDGE PUMPING STATION #2 FIBER PATCH PANEL	CHEMICAL BLDG. FIBER PATCH PANEL
DC9	3"	12 STRAND FIBER OPTIC CABLE (FIRE ALARM)	ADMINISTRATION BLDG. FIBER PATCH PANEL	BLOWER BLDG. FIBER PATCH PANEL
DC10	3"	12 STRAND FIBER OPTIC CABLE (FIRE ALARM)	ADMINISTRATION BLDG. FIBER PATCH PANEL	SLUDGE HANDLING BLDG. FIBER PATCH PANEL
DC11	3"	12 STRAND FIBER OPTIC CABLE (FIRE ALARM)	BLOWER BLDG. FIBER PATCH PANEL	SLUDGE PUMPING STATION #1 FIBER PATCH PANEL
DC12	3"	12 STRAND FIBER OPTIC CABLE (FIRE ALARM)	SLUDGE PUMPING STATION #1 FIBER PATCH PANEL	EXISTING BLOWER FIBER PATCH PANEL
DC13	3"	12 STRAND FIBER OPTIC CABLE (FIRE ALARM)	STORAGE BUILDING FIBER PATCH PANEL	SLUDGE PUMPING STATION #2 FIBER PATCH PANEL
DC14	3"	12 STRAND FIBER OPTIC CABLE (FIRE ALARM)	SLUDGE PUMPING STATION #2 FIBER PATCH PANEL	CHEMICAL BLDG. FIBER PATCH PANEL



NOTES:

1. BACKFILL DUCT BANK IN LAYERS AND MANUALLY TAMP OR "PUDDLE" CONCRETE FILL. PROVIDE RED DUCT BANK MARKER TAPES, READING "CAUTION – ELECTRICAL LINES BELOW", OVER ENTIRE LENGTH OF DUCTLINE. LOCATE TAPES 12 INCHES BELOW GRADE. PROVIDE A TAPE FOR EVERY 12 INCHES OF WIDTH OF DUCTLINE.
2. A MINIMUM OF 12" SEPARATION SHALL BE KEPT BETWEEN DUCT BANK SECTIONS WITHIN SAME TRENCH.
3. A MINIMUM 3" OF CONCRETE SHALL KEPT BETWEEN CONDUITS AND THE PERIMETER OF ALL DUCTBANKS.

DUCTBANK SECTIONS - PART 1

NO SCALE

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PROJECT

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Taunton, MA

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ELECTRICAL DUCT BANK SECTIONS

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POWER DUCT / CABLE SCHEDULE

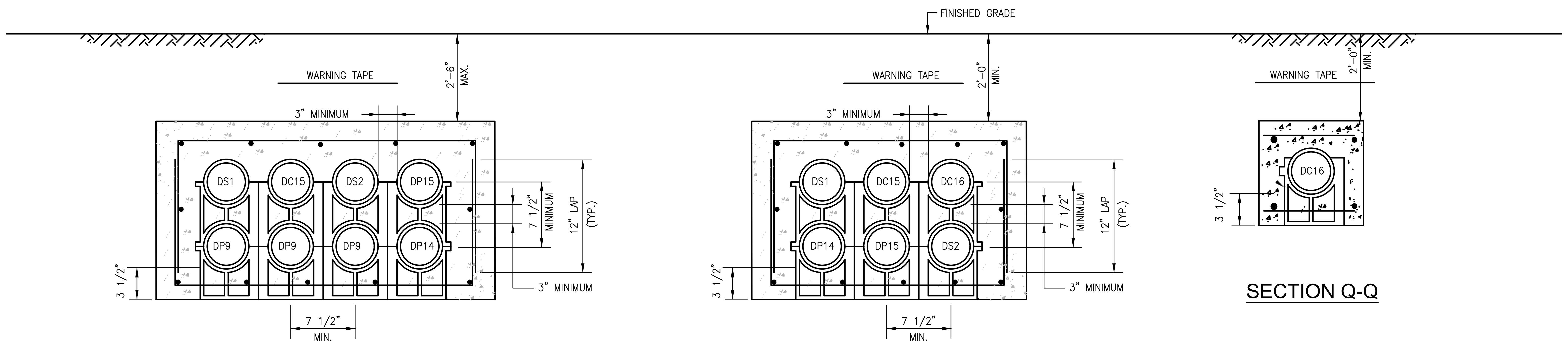
DUCT NO.	SIZE	CONDUCTORS	FROM	TO
DP14	4"	(4) 250kcmiL, #4 GND	7DP1	1DP1
DP15	2"	(4) #6, #10 GND	7LP1	1LP1

SCADA I/C DUCT / CABLE SCHEDULE

DUCT NO.	SIZE	CONDUCTORS	FROM	TO
DS1	3"	(8) 2/C#16 TSP	HEADWORKS EQUIPMENT VIA ELECTRICAL ENCL.	RTU-7 SCADA CONTROL PANEL
DS2	3"	(60) #14	HEADWORKS EQUIPMENT VIA ELECTRICAL ENCL.	RTU-7 SCADA CONTROL PANEL

COMMUNICATION DUCT / CABLE SCHEDULE

DUCT NO.	SIZE	CONDUCTORS	FROM	TO
DC15	3"	12 STRAND FIBER OPTIC CABLE (SCADA)	SLUDGE HANDLING BLDG. FIBER PATCH PANEL	HEADWORKS ELECTRICAL ENCL. FIBER PATCH PANEL
DC16	3"	3-SECTION INNER DUCT WITH FIRE ALARM CABLING FOR DEVICE INITIATING AND AND DEVICE ALARM CIRCUITS	SLUDGE HANDLING BLDG. 7FACP	HEADWORKS BUILDING FIRE ALARM DEVICES



SECTION O-O

SECTION P-P

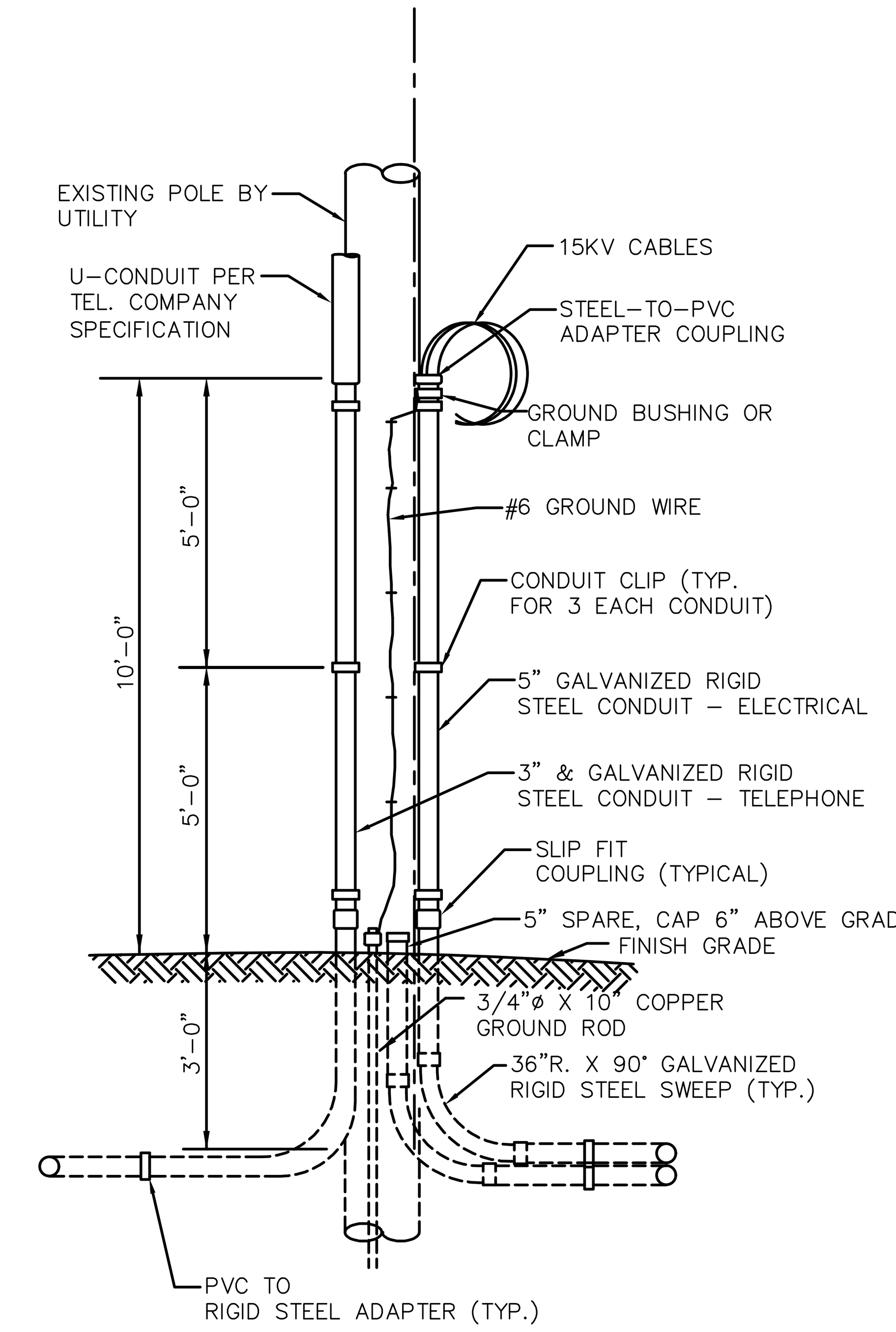
SECTION Q-Q

NOTES:

1. BACKFILL DUCT BANK IN LAYERS AND MANUALLY TAMP OR "PUDDLE" CONCRETE FILL. PROVIDE RED DUCT BANK MARKER TAPES, READING "CAUTION – ELECTRICAL LINES BELOW", OVER ENTIRE LENGTH OF DUCTLINE. LOCATE TAPES 12 INCHES BELOW GRADE. PROVIDE A TAPE FOR EVERY 12 INCHES OF WIDTH OF DUCTLINE.
2. A MINIMUM OF 12" SEPARATION SHALL BE KEPT BETWEEN DUCT BANK SECTIONS WITHIN SAME TRENCH.

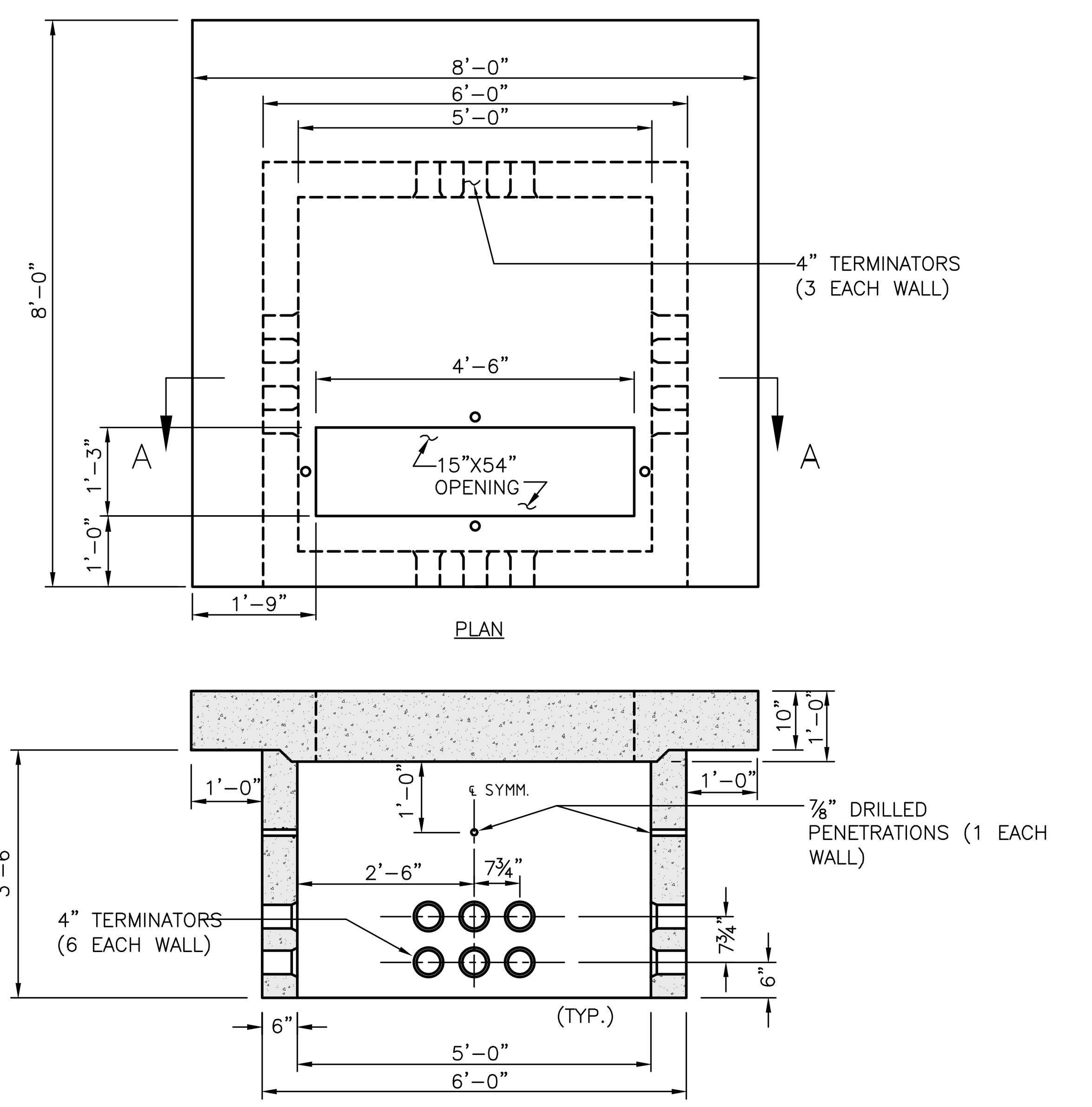
DUCTBANK SECTIONS - PART 2

NO SCALE



UTILITY POLE SERVICE RISER DETAIL

NOT TO SCALE

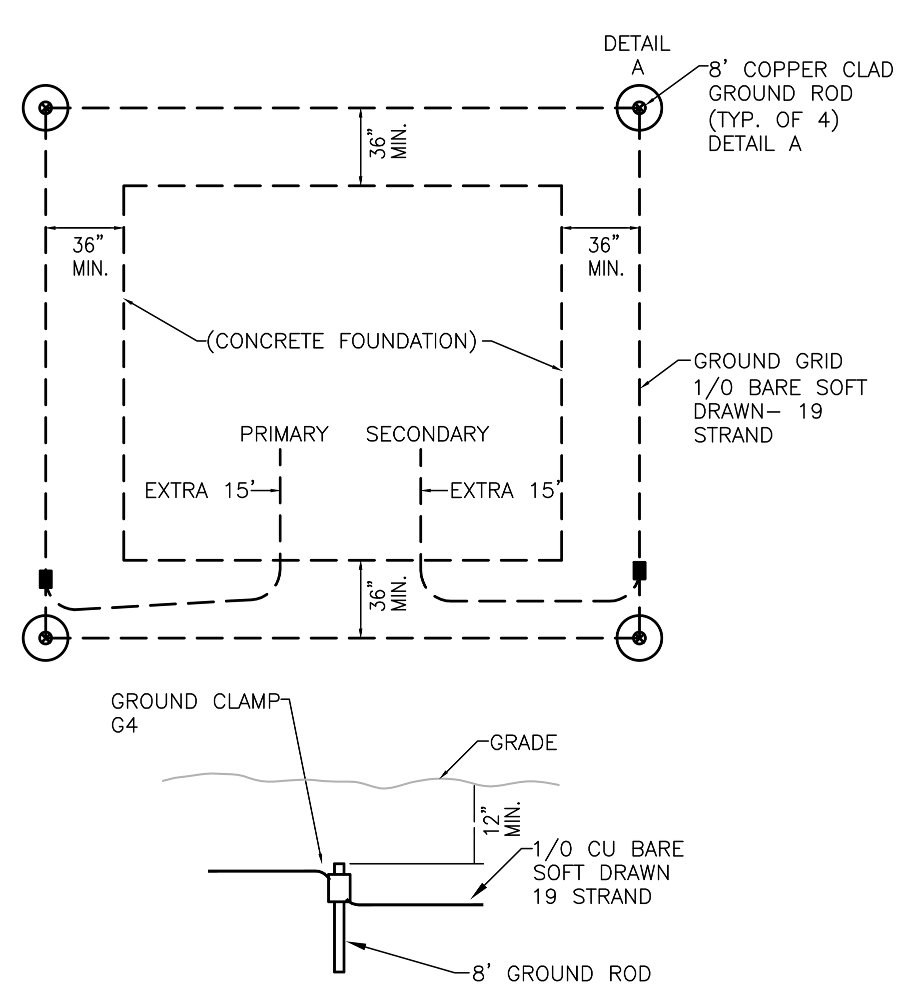


NOTES:

1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGN LOADING: AASHTO HS20-44, 0 TO 5 FEET COVER.
3. DESIGN SPECIFICATIONS – ACI 318 & AASHTO LOAD FACTOR DESIGN METHOD.
4. STEEL REINFORCEMENT CONFORMS TO ASTM A615, GRADE 60. MINIMUM STEEL COVER 1½".
5. ALL TERMINATORS SHALL HAVE BELL ENDS FLUSH WITH THE INSIDE WALL.

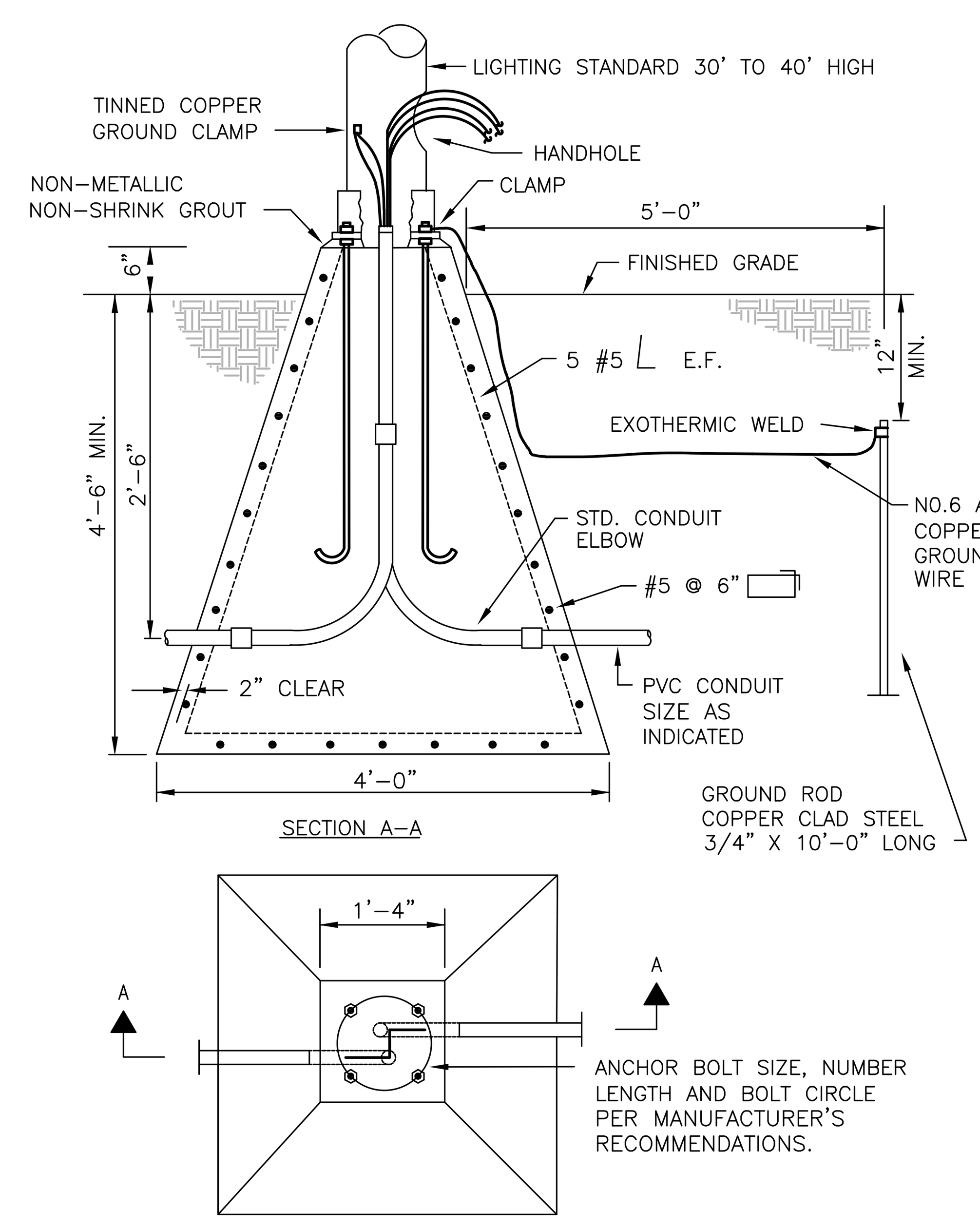
TRANSFORMER PAD

NO SCALE



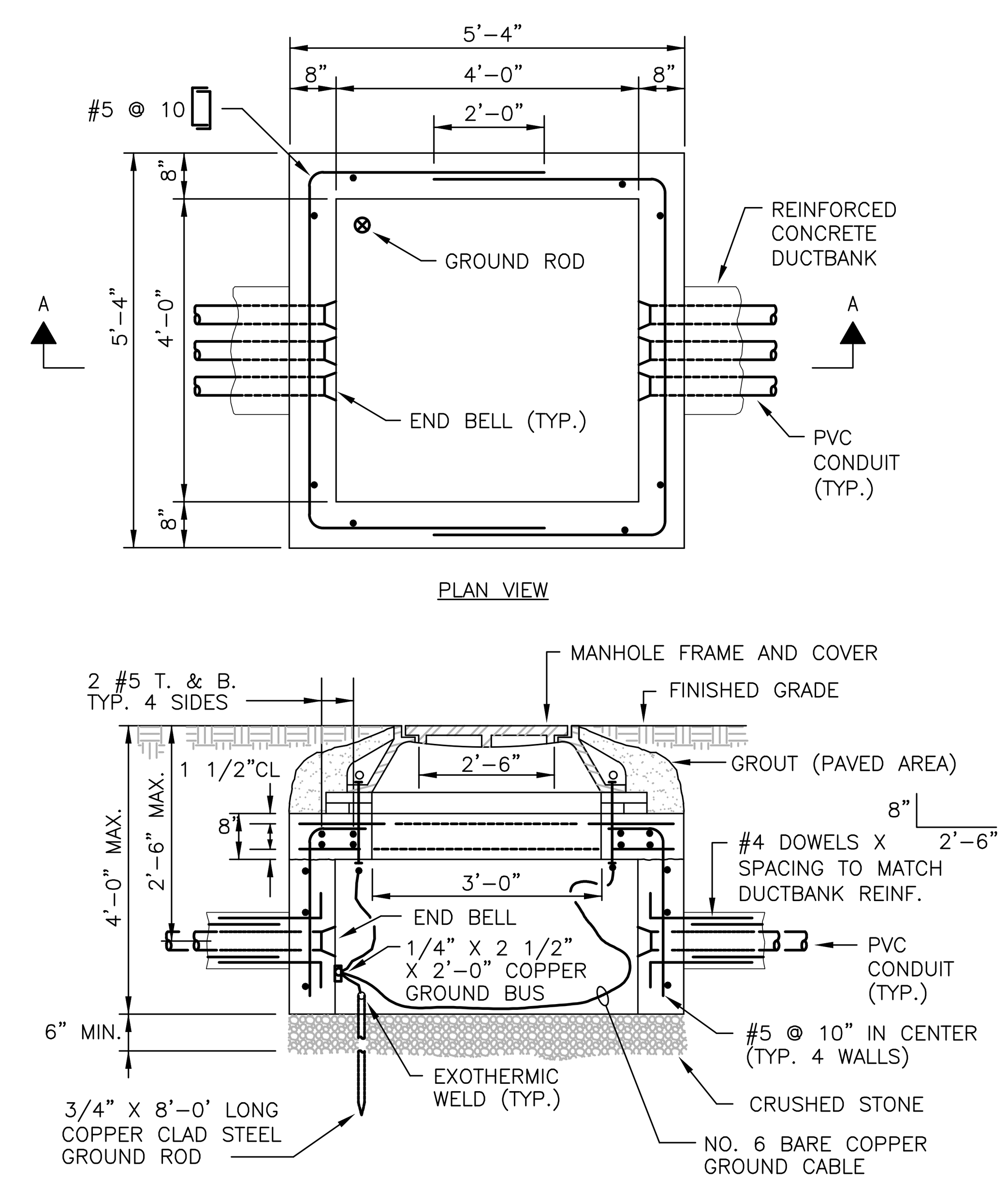
PAD MOUNTED TRANSFORMER GROUNDING PLAN

NO SCALE



UTILITY HANDHOLE DETAIL

NO SCALE



NOTES:

1. CHIMNEY HEIGHT IS KEPT TO MINIMUM TO FACILITATE PLACING COMPLETED SPLICES IN HANDHOLE FROM ABOVE GRADE
2. CONCRETE PER SPECIFICATIONS WITH MINIMUM STRENGTH OF 5,000 PSI AT 28 DAYS
3. PROVIDE HANDHOLE FRAME, RING AND COVER.
4. REFER TO DUCTBANK SECTIONS FOR THE REQUIRED NUMBER OF CONDUIT ENTRANCES. PROVIDE CONDUIT ENTRY SPACE ON NON-USED SIDES FOR A MINIMUM (8) 4" FUTURE CONDUITS.

UTILITY HANDHOLE DETAIL

NO SCALE

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PROJECT

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Taunton, MA

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ELECTRICAL DUCT BANK SECTIONS & SITE DETAILS

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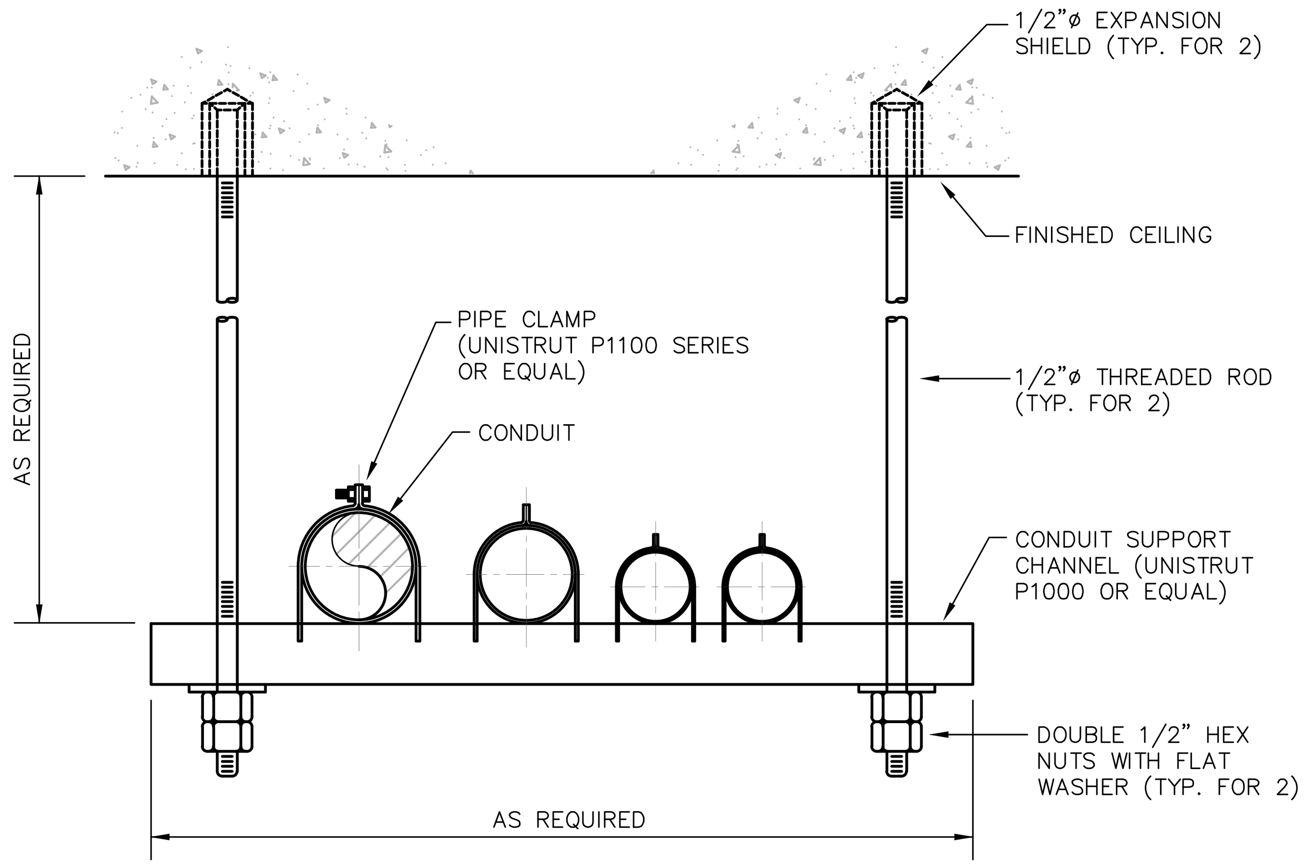
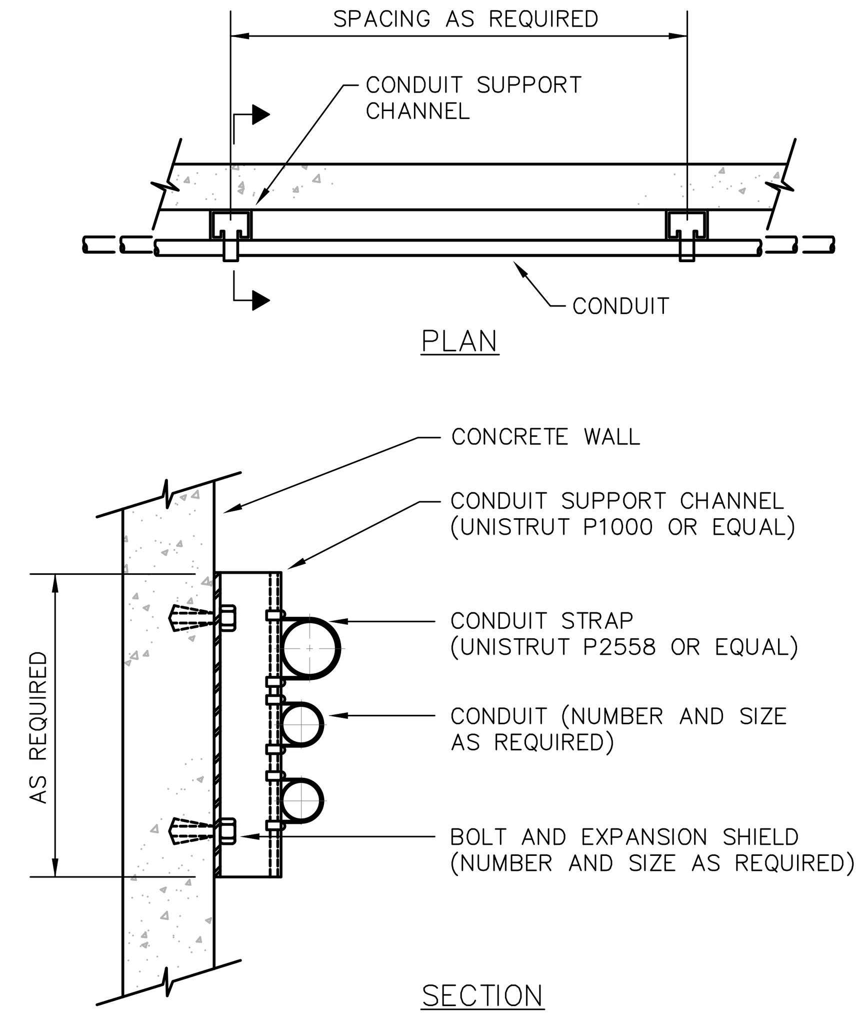


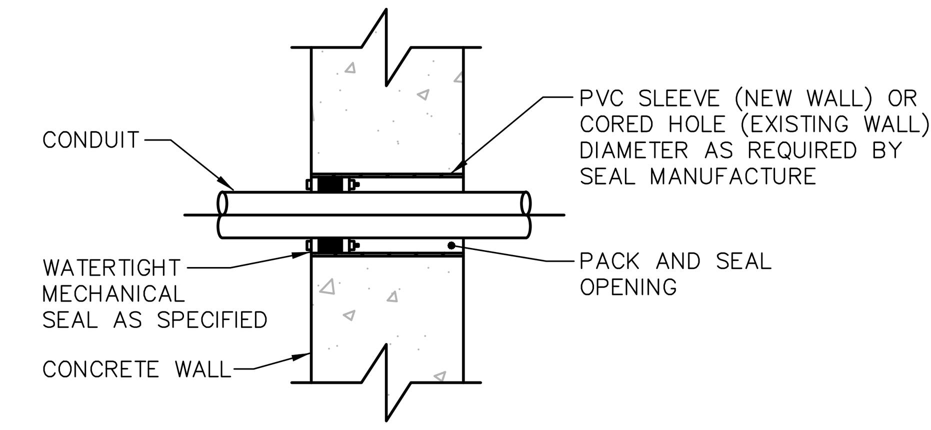
TYPICAL CONDUIT CEILING SUPPORT

NOT TO SCALE



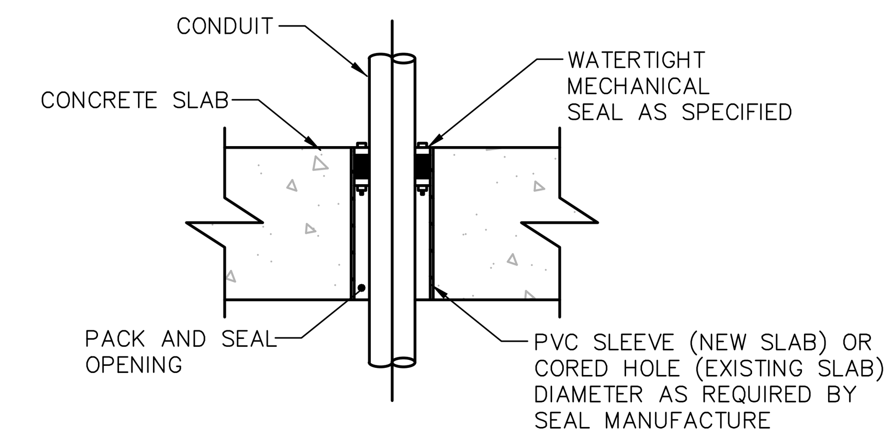
TYPICAL CONDUIT WALL SUPPORT

NOT TO SCALE



CONDUIT PENETRATION THROUGH NEW & EXISTING CONCRETE WALL

NOT TO SCALE

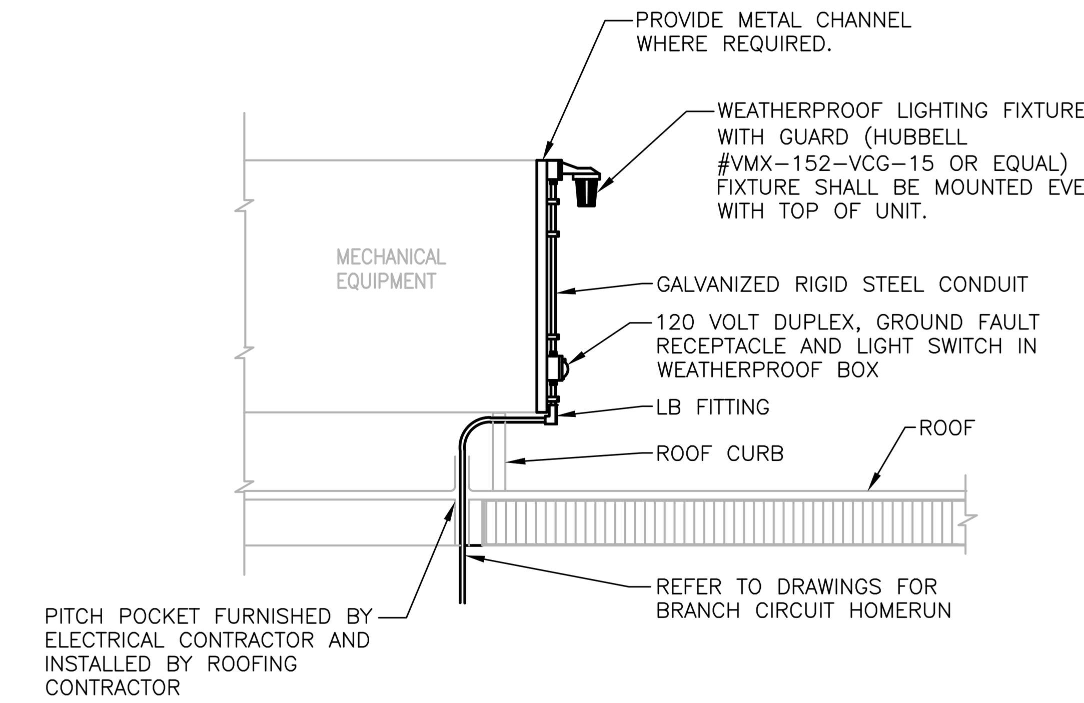


CONDUIT PENETRATION PASSING THROUGH NEW & EXISTING CONCRETE SLAB

NOT TO SCALE

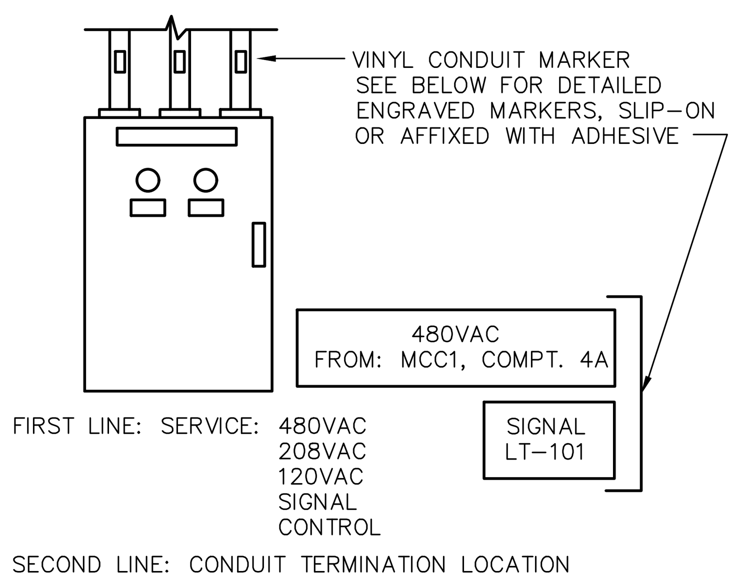
GENERAL NOTES:

1. ALL MOUNTING BRACKETS, SUPPORTS, FASTENERS, AND ECT. WITHIN THE WET WELL SHALL BE STAINLESS STEEL.



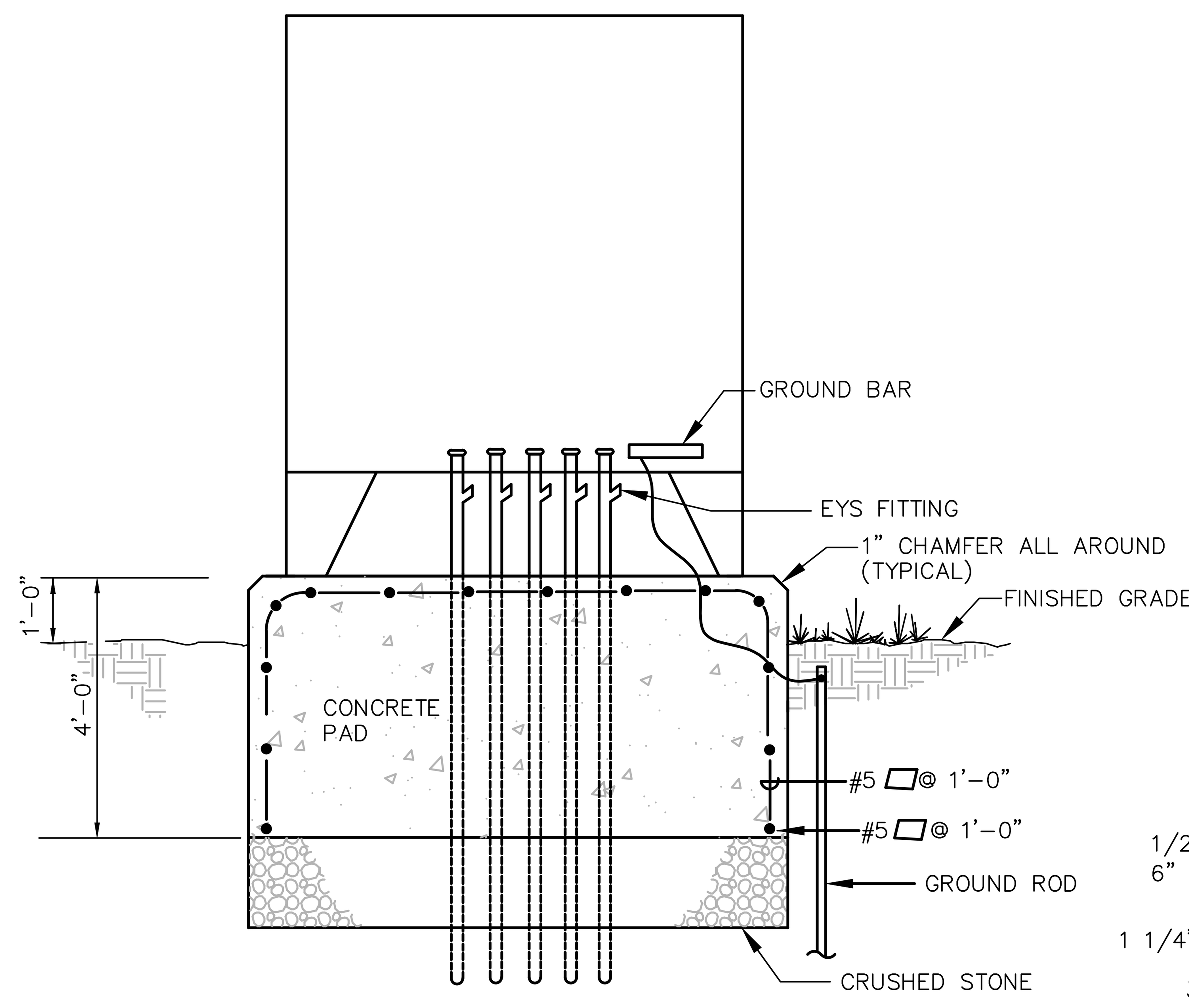
ROOFTOP LIGHT AND RECEPTACLE DETAIL

NOT TO SCALE



CONDUIT MARKER DETAIL

NOT TO SCALE

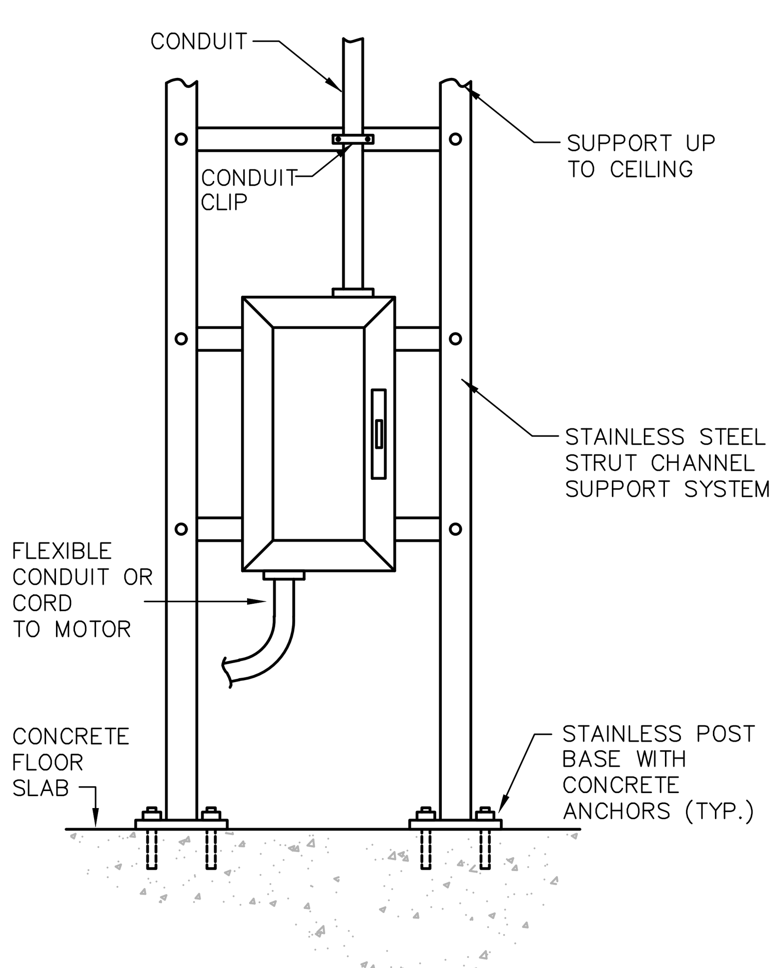


NOTES:

1. FOR REINFORCING REQUIREMENTS SEE STRUCTURAL SPECIFICATIONS.

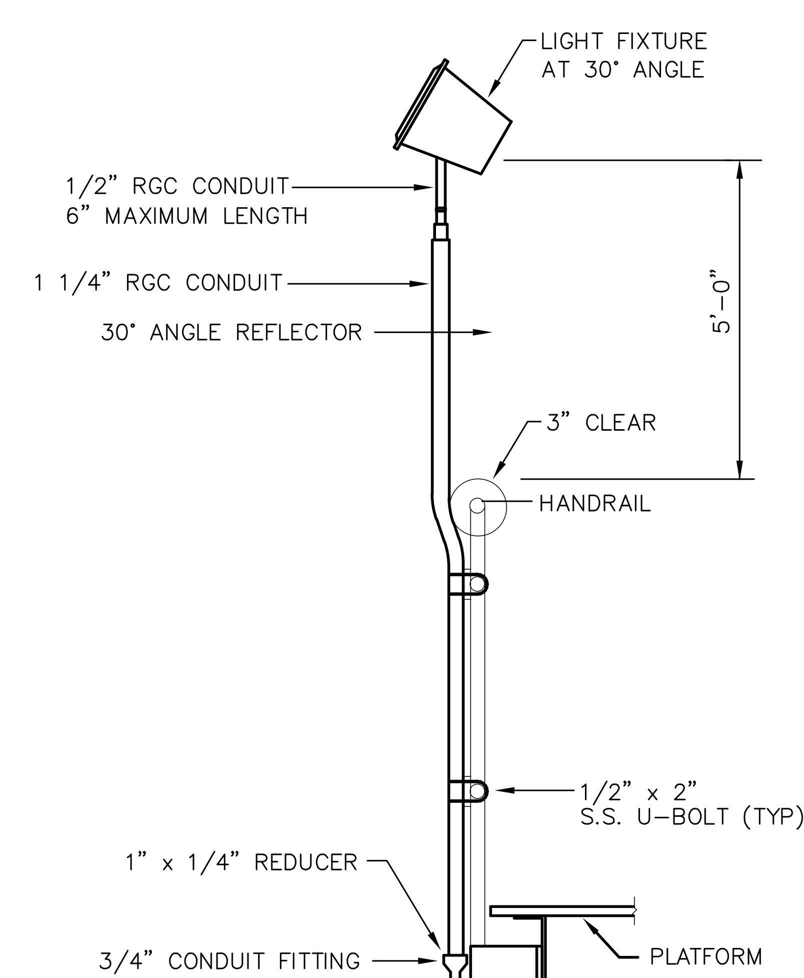
HEADWORKS ELECTRICAL ENCLOSURE BASE DETAIL

NOT TO SCALE



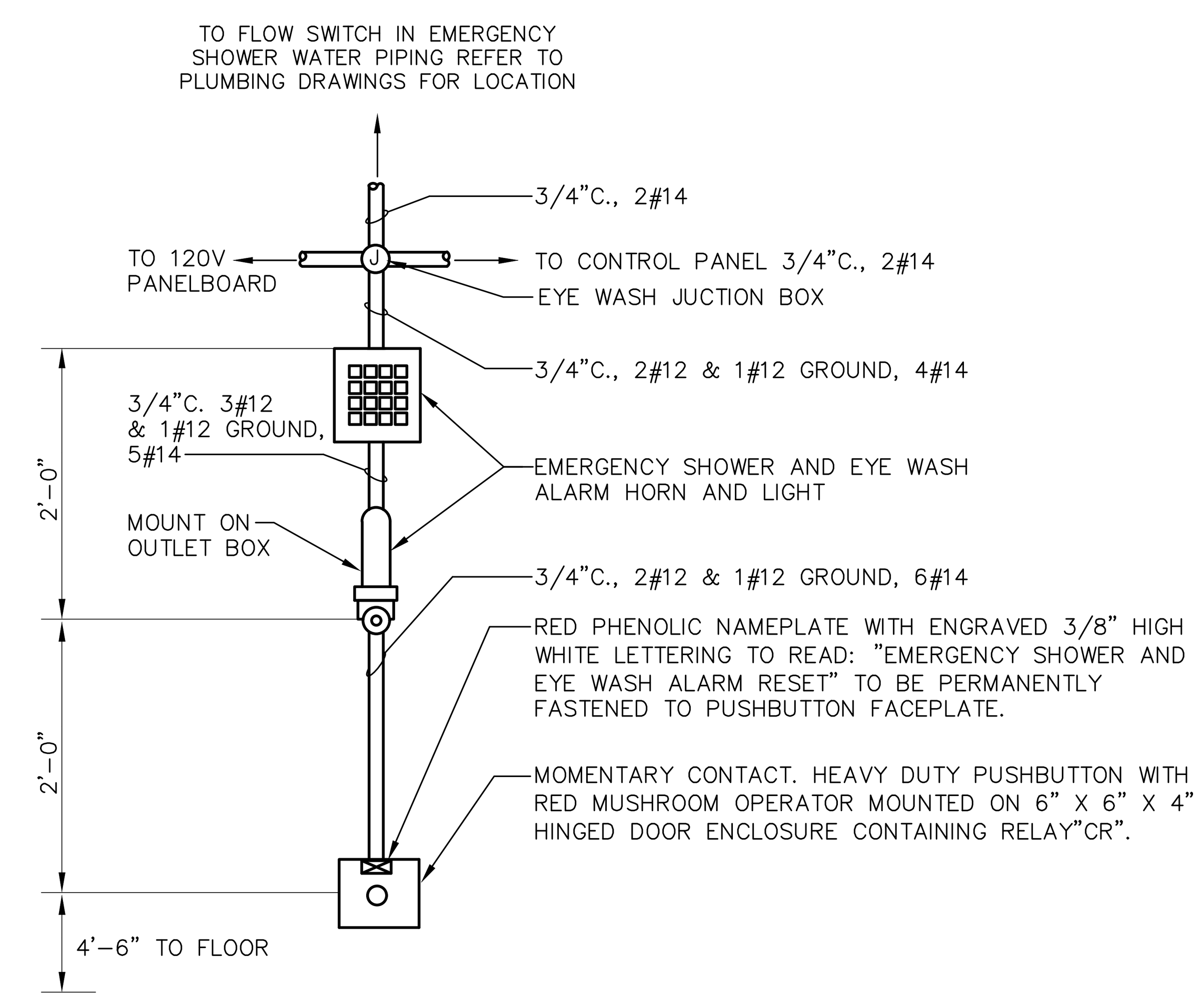
ELECTRICAL EQUIPMENT STANCHION MOUNTING DETAIL

NOT TO SCALE



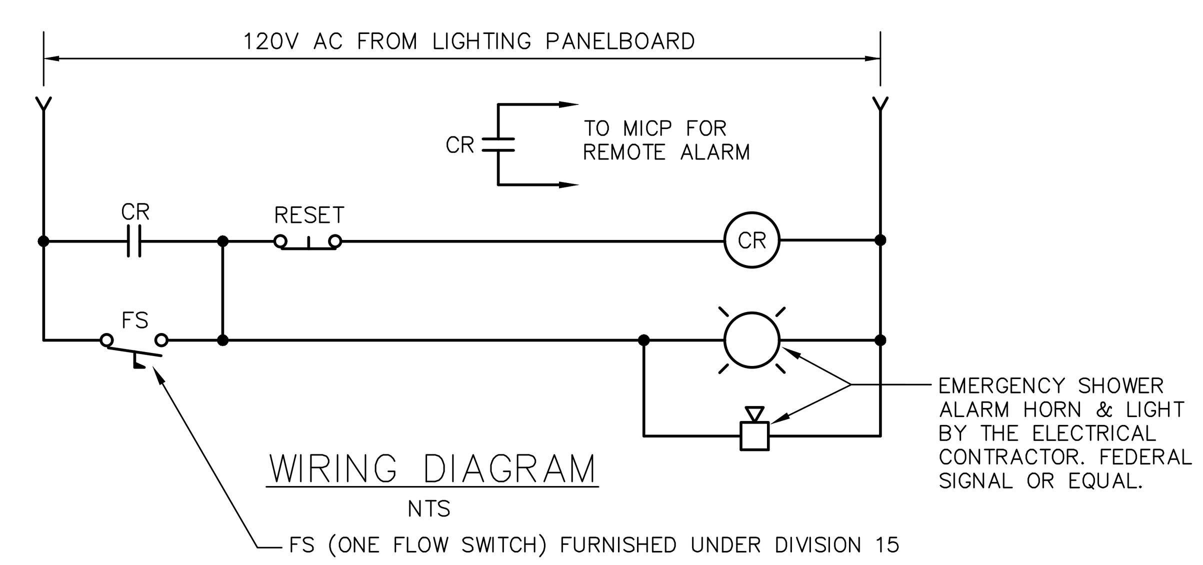
LIGHT FIXTURE AT CLARIFIERS RAIL MOUNTING DETAIL

NOT TO SCALE



ELEVATION VIEW

NOT TO SCALE



WIRING DIAGRAM

NTS

NOTE:
1. ALL EXPOSED SURFACES OF COMPONENTS SHALL HAVE A YELLOW ENAMEL FINISH, INCLUDING CONDUIT (WITHIN 10'-0" RADIUS OF THE STATION, BOXES, ENCLOSURE AND HORN GRILLE.

2. ALARM STATION TO BE MOUNTED OUTSIDE OF EACH CHEMICAL ROOM CONTAINING A EMERGENCY SHOWER. REFER TO PLAN DRAWINGS FOR EYEWASH JUNCTION BOX LOCATIONS.

EMERGENCY EYE WASH ALARM STATION

NOT TO SCALE

PREPARED BY

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SCALE

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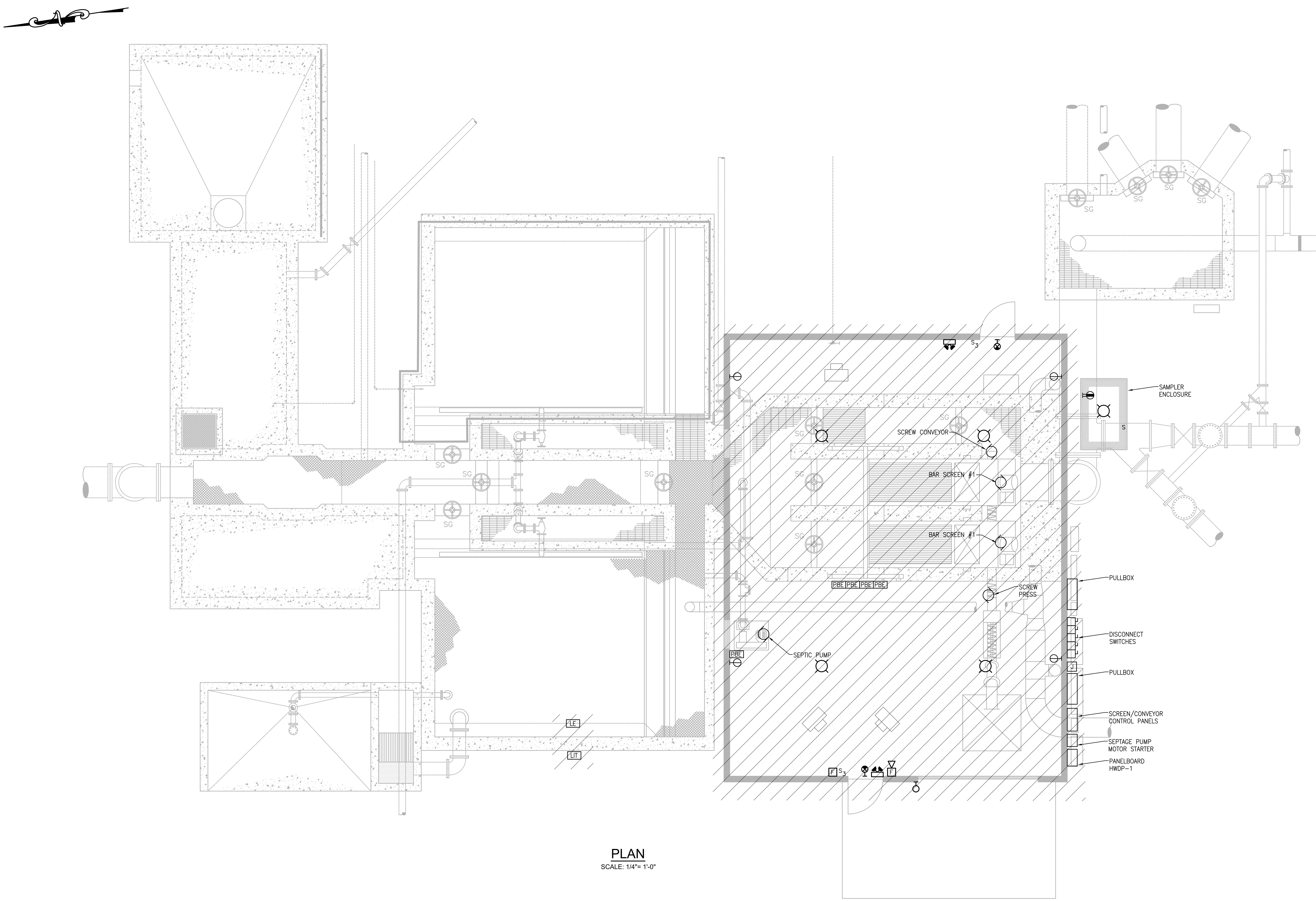
SHEET NO.

E-0.25



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

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
ELECTRICAL
No. 40999
REGISTERED PROFESSIONAL ENGINEER

SUBCONSULTANT

SAR ENGINEERING, INC.
Mechanical/Electrical Engineers
150 Grossman Drive, Suite 309
Braintree, Massachusetts 02184
617 328-9215
web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Existing Conditions Headworks Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

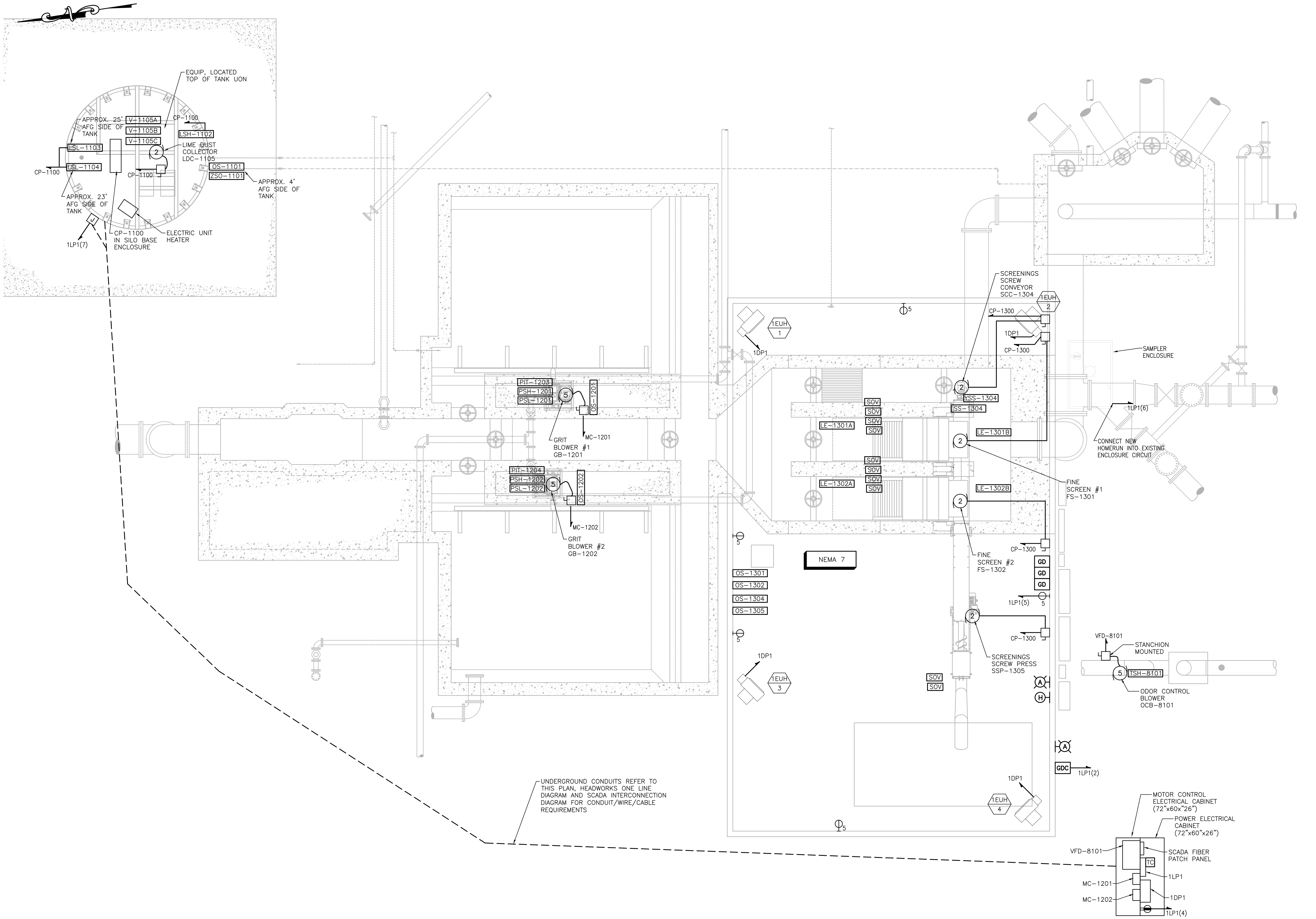
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-1.1



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

PREPARED BY

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MICHAEL J. COTTER
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Headworks Power Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

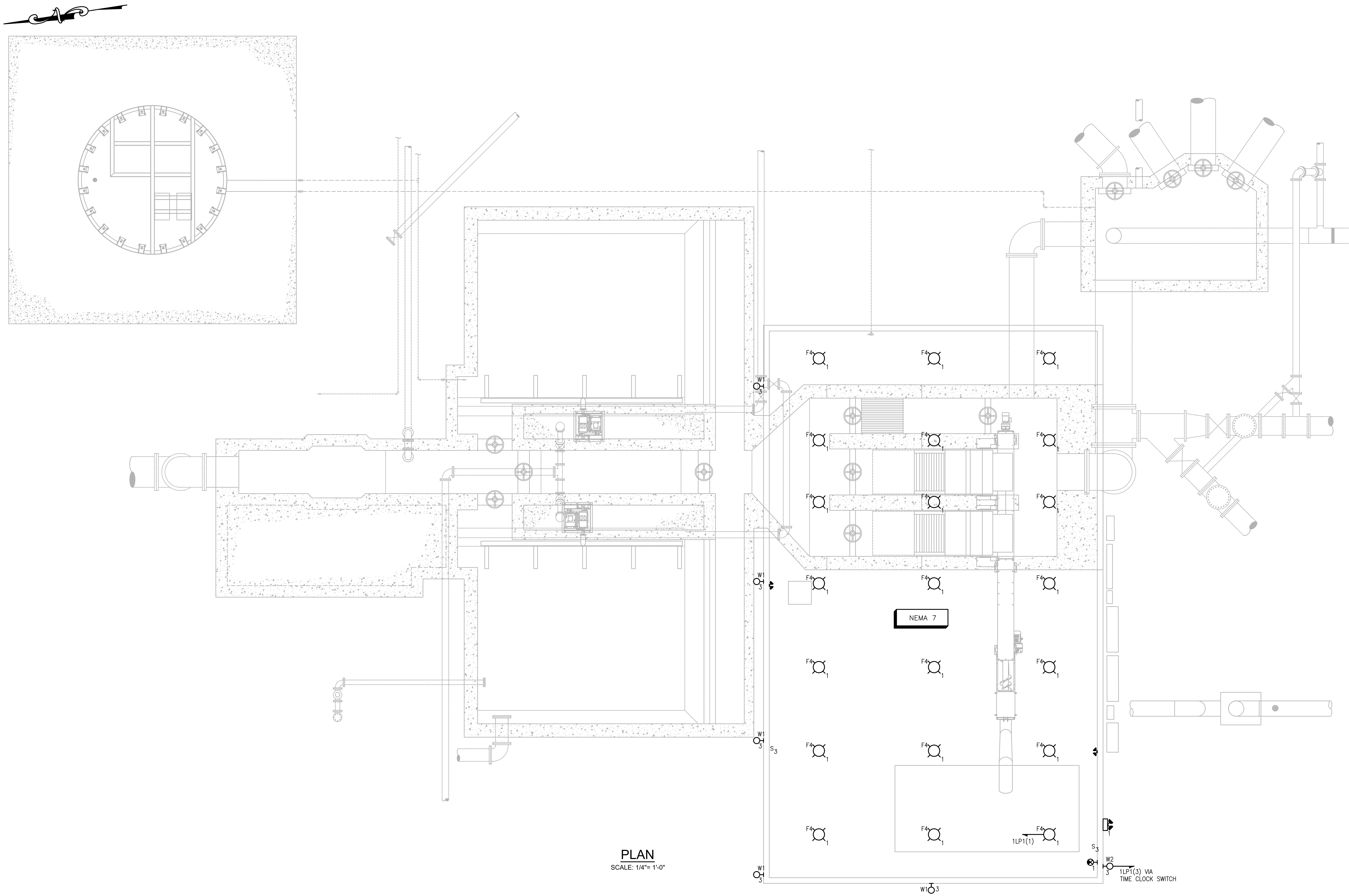
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-1.2



PLAN

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

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COMMONWEALTH OF MASSACHUSETTS MICHAEL J. COTTER ELECTRICAL No. 40999 REGISTERED PROFESSIONAL ENGINEER

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Headworks Lighting Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

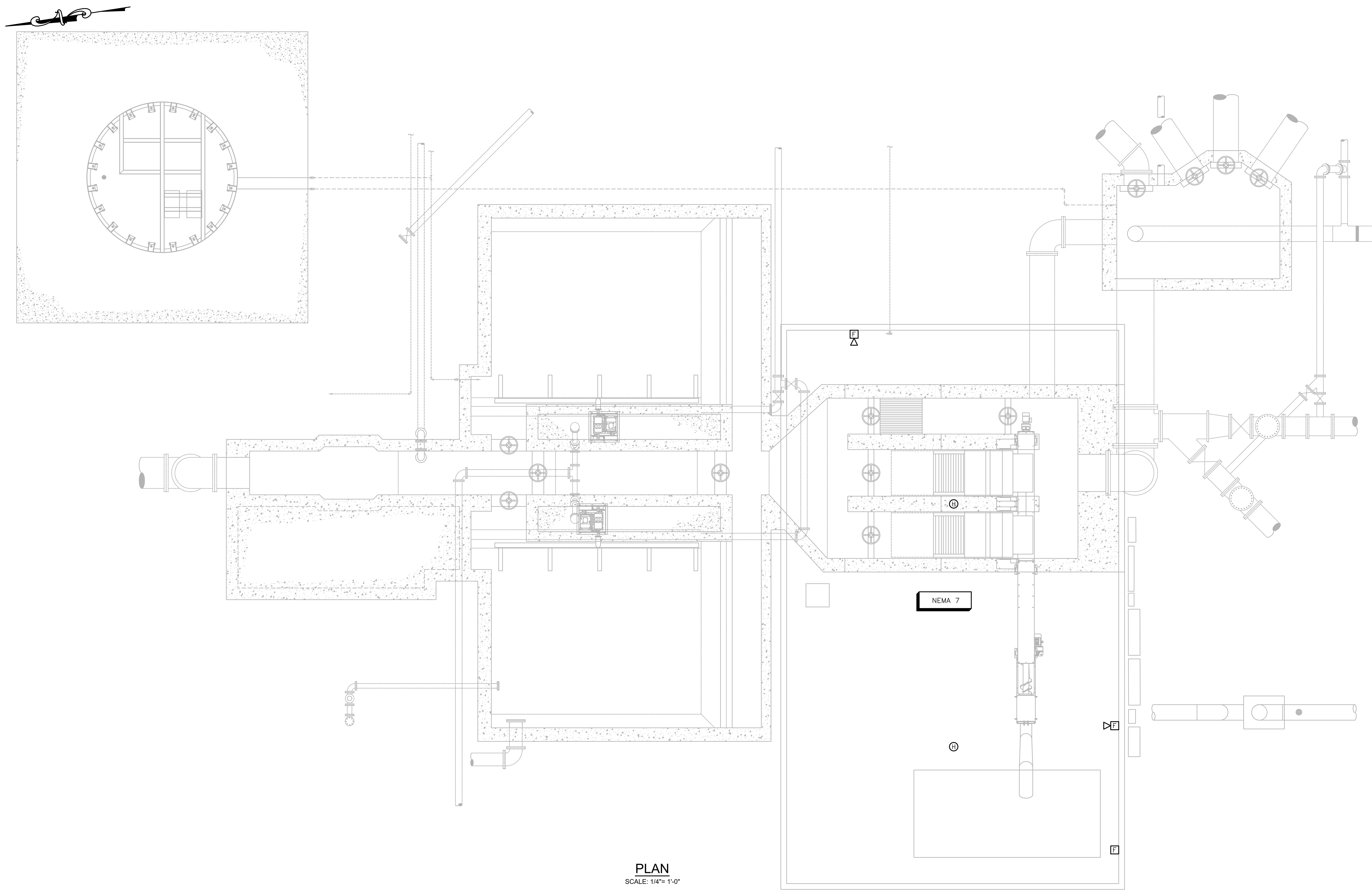
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-1.3



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

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical
Headworks
Fire Alarm Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

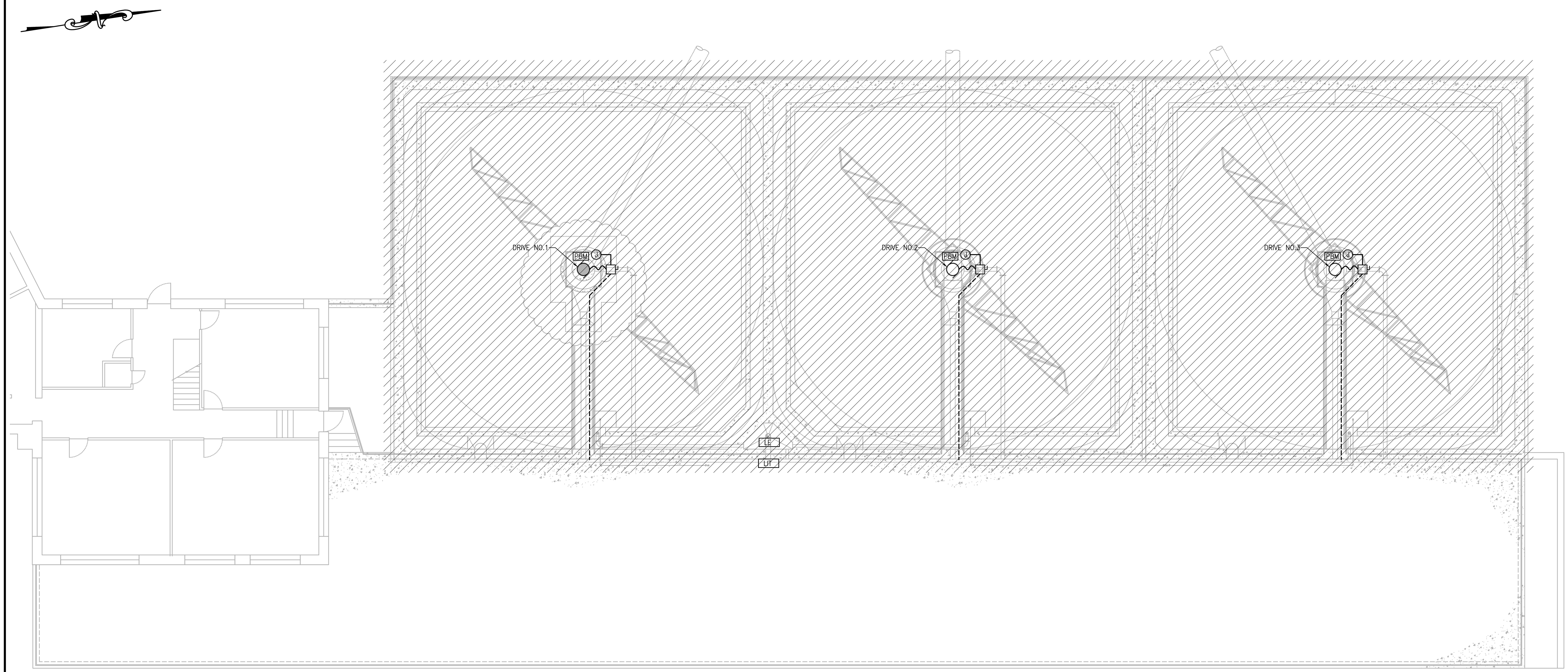
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-1.4



PLAN

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

PREPARED BY

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Demolition Primary Clarifiers Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

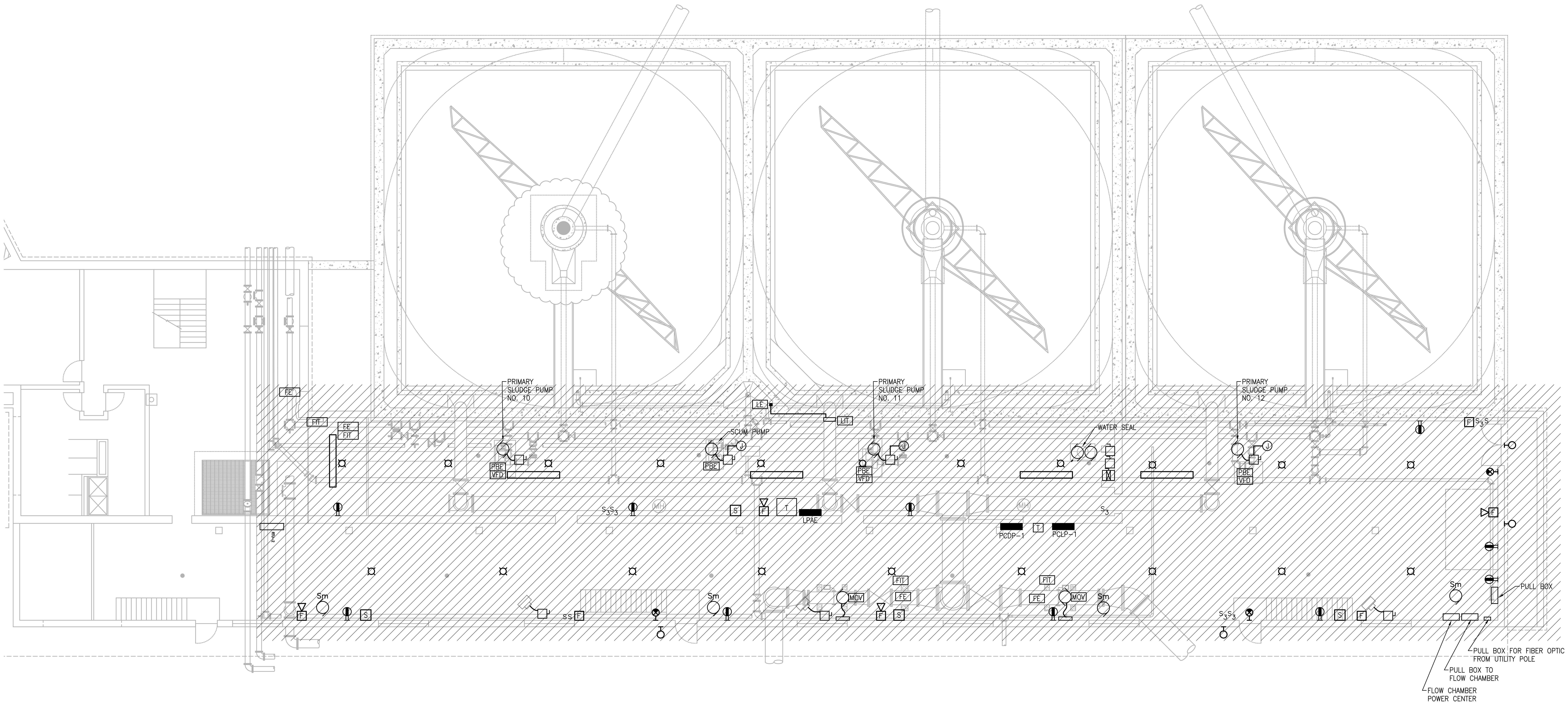
AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-2.1

6/30/2021 10:24 AM W:\T-PROJECTS\T-18009.00 - TAUNTON WWTF UPGRADES\ELECTRICAL DEPARTMENT\18009.00 ELEC PRIMARY CLARIFIERS & SLUDGE PS-PHASE 1.DWG (BETA STB BW.STB)



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

PREPARED BY

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Demolition Primary Sludge Pump Station Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

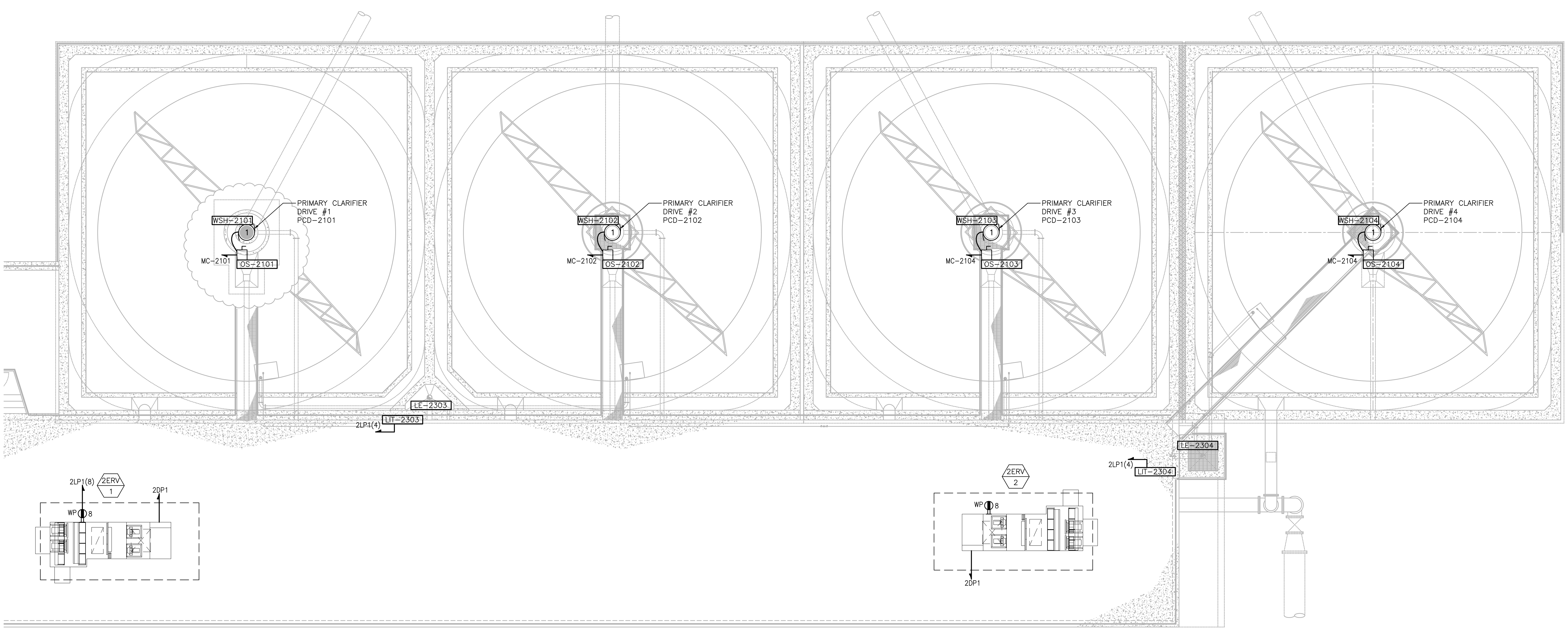
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-2.2



PLAN

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

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MICHAEL J.
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Power Primary Clarifiers Power Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

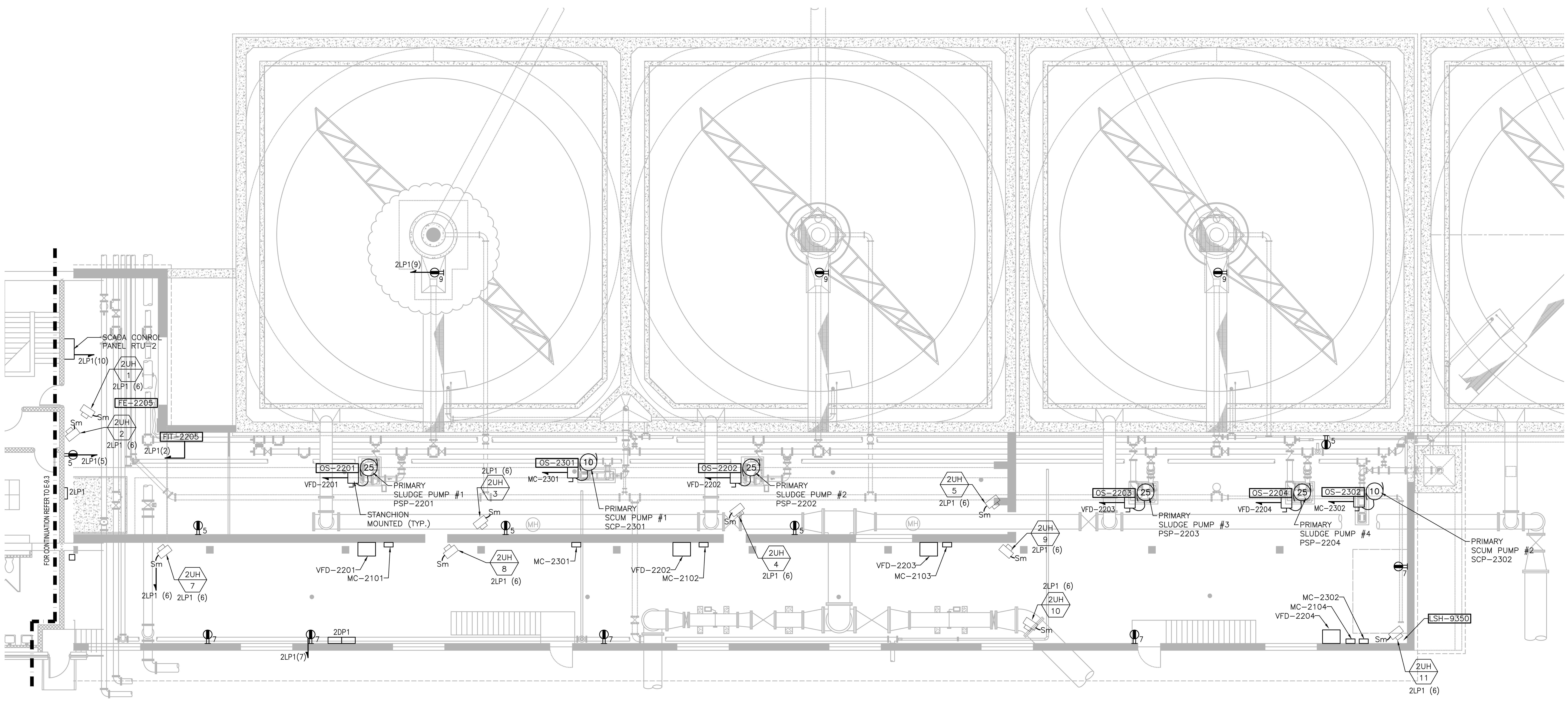
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-2.3



PLAN

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

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Primary Sludge Pump Station Power Plan

NO.	REVISIONS	DATE

DRAWN BY: RLB

DESIGNED BY: MC

CHECKED BY: MC

ISSUE DATE: 7/2/21

BETA JOB NO.: 6050

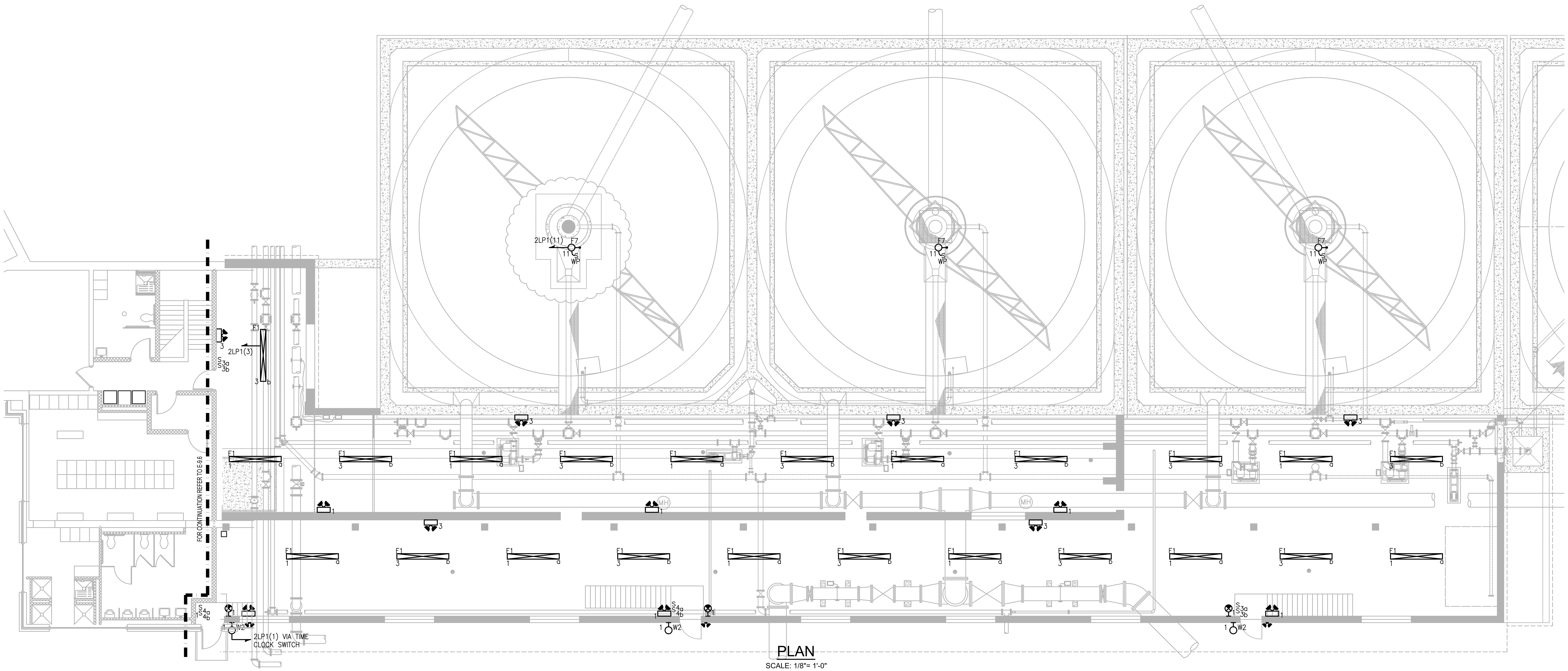
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-2.4



PLAN

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

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Primary Sludge Pump Station Lighting Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

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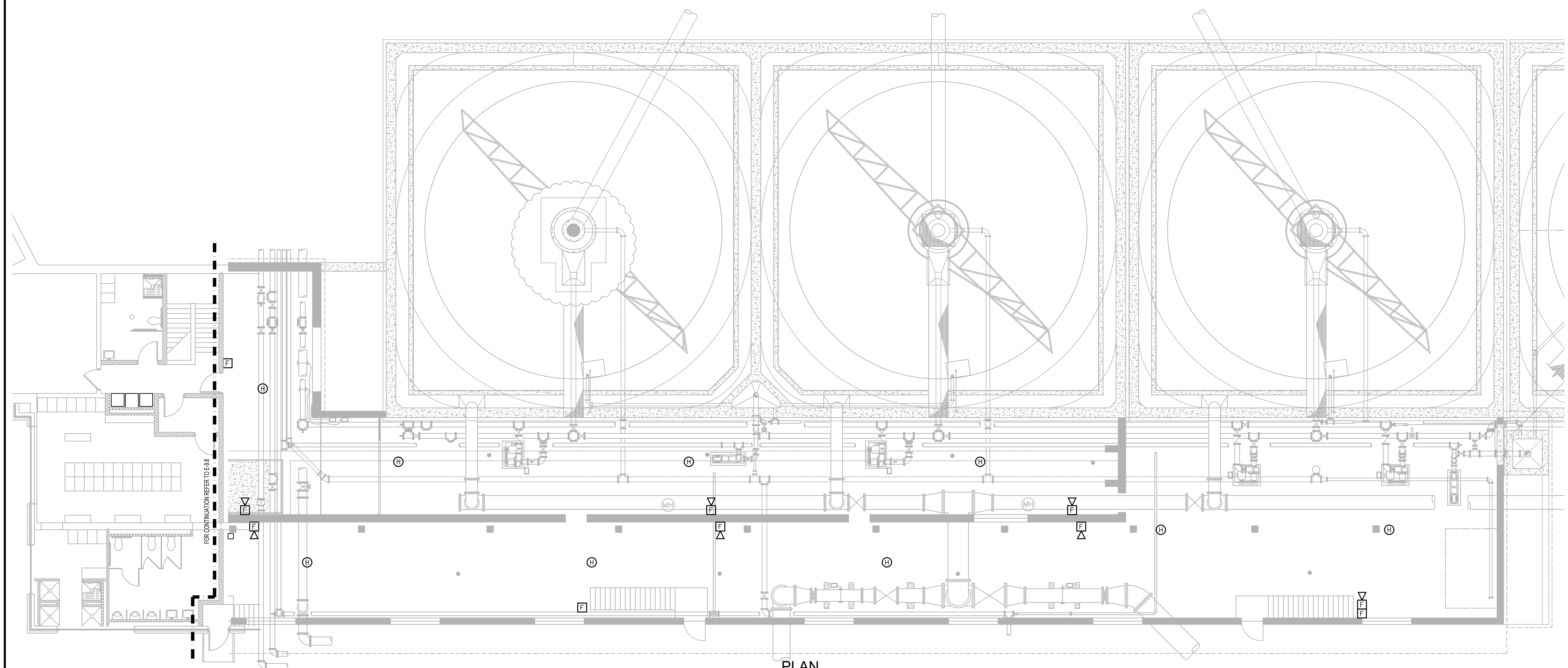
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-2.5



PLAN

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

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Primary Sludge Pump Station Fire Alarm Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

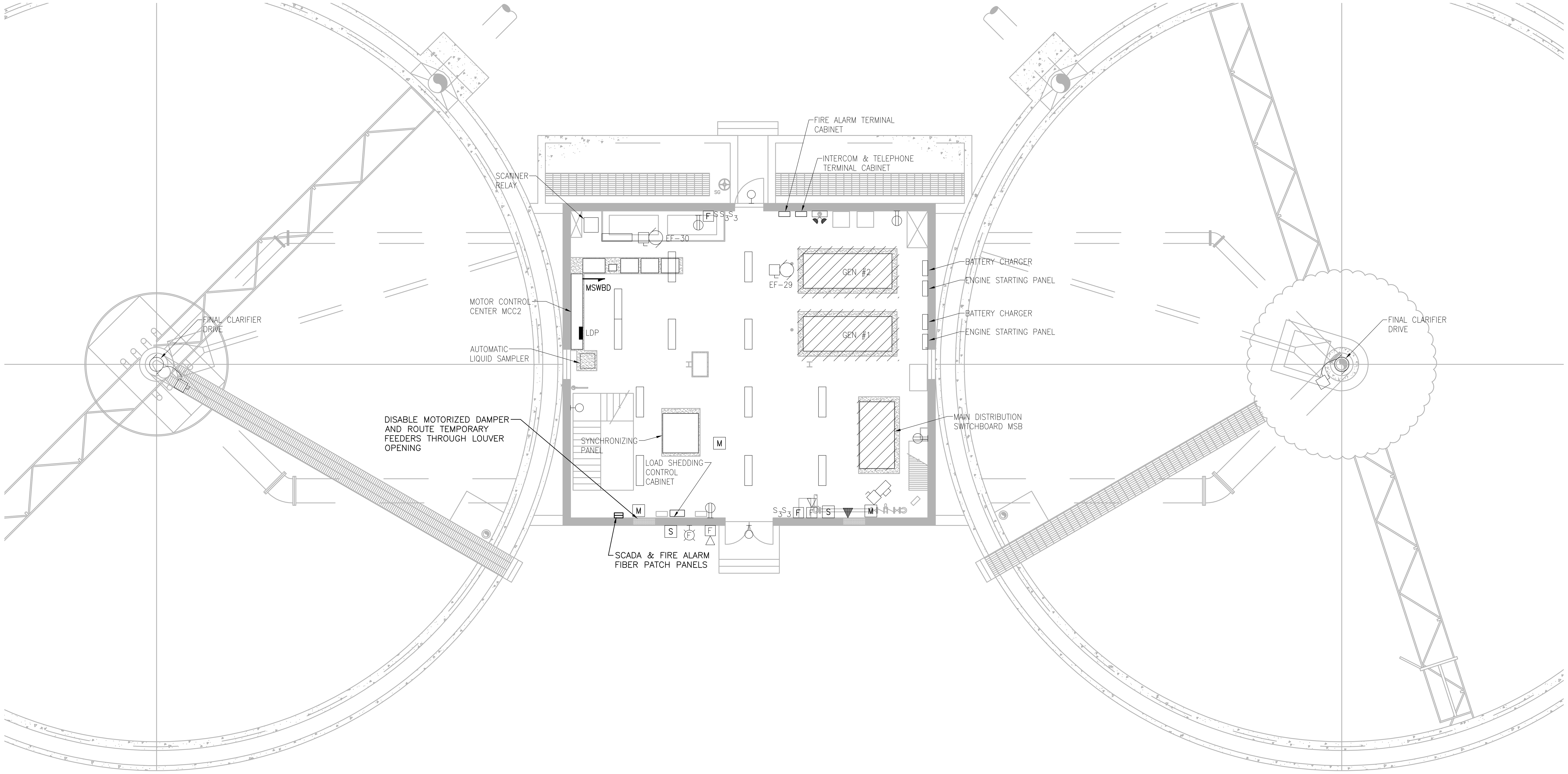
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

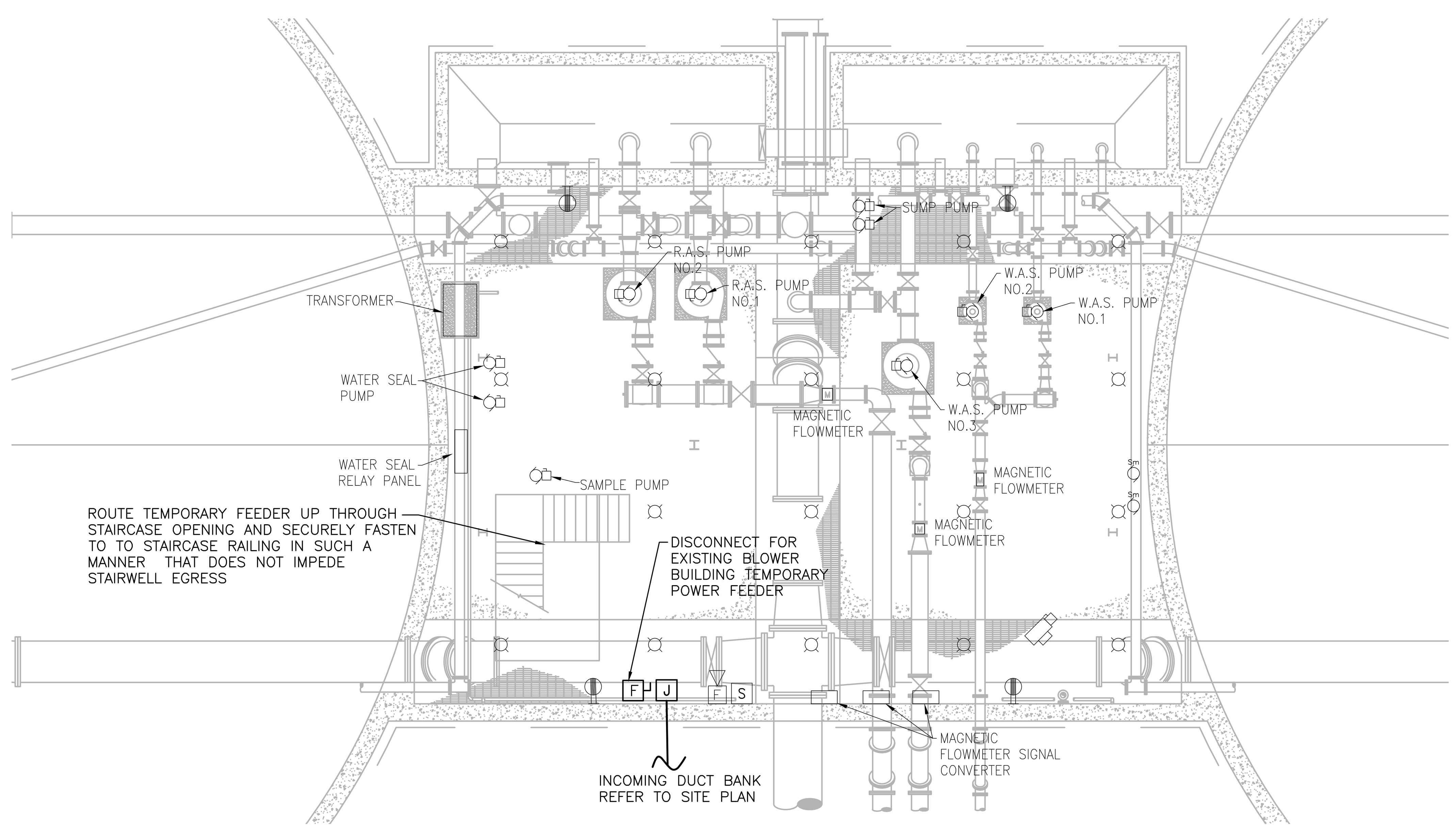
SHEET NO.

E-2.6



UPPER LEVEL PLAN

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



LOWER LEVEL PLAN

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

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
ELECTRICAL
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150 Grossman Drive, Suite 309
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617 328-9215
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Final Clarifiers No. 1 & 2 Plan & Sludge Pump Station No.1 Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

NONE

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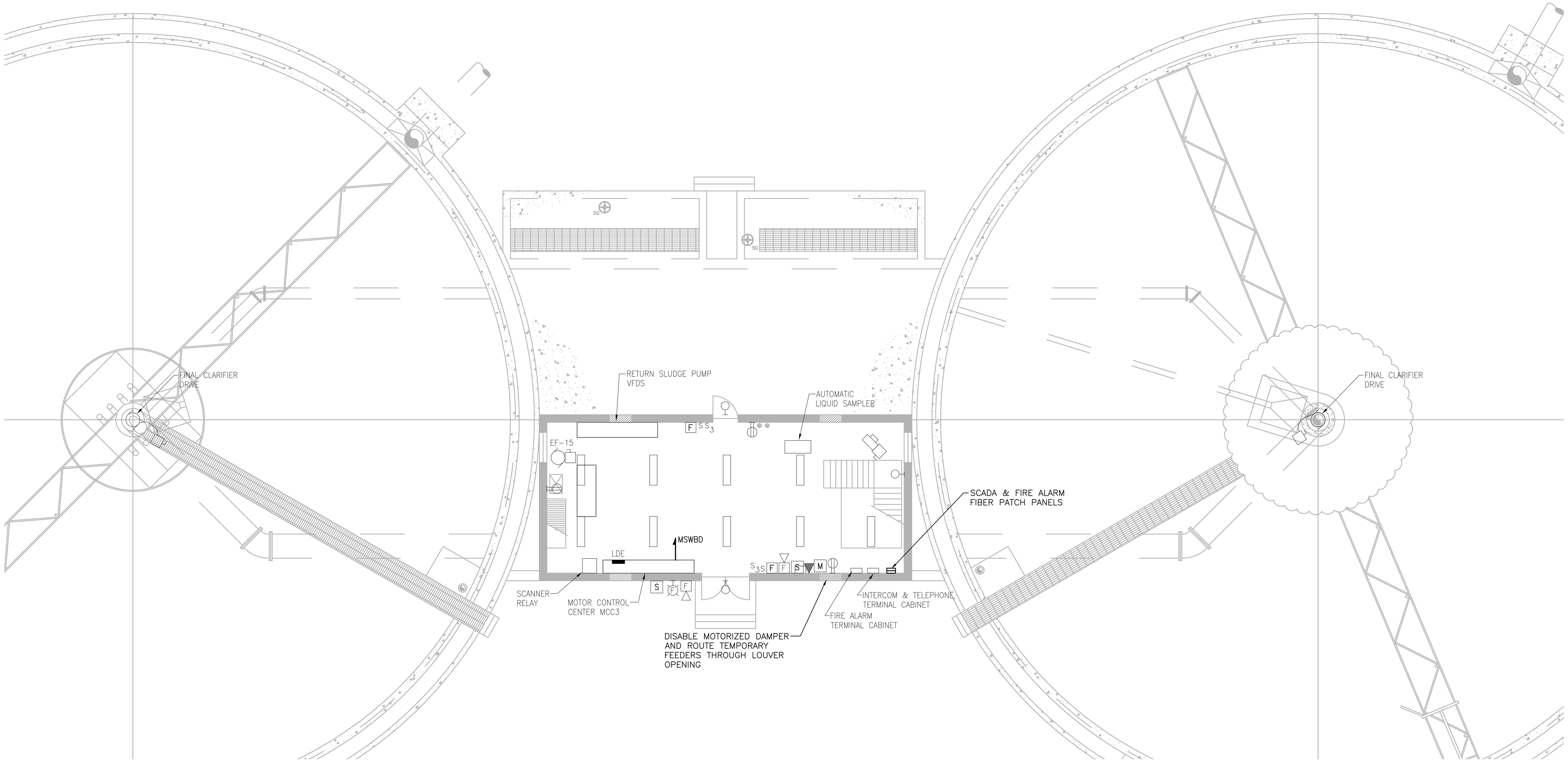
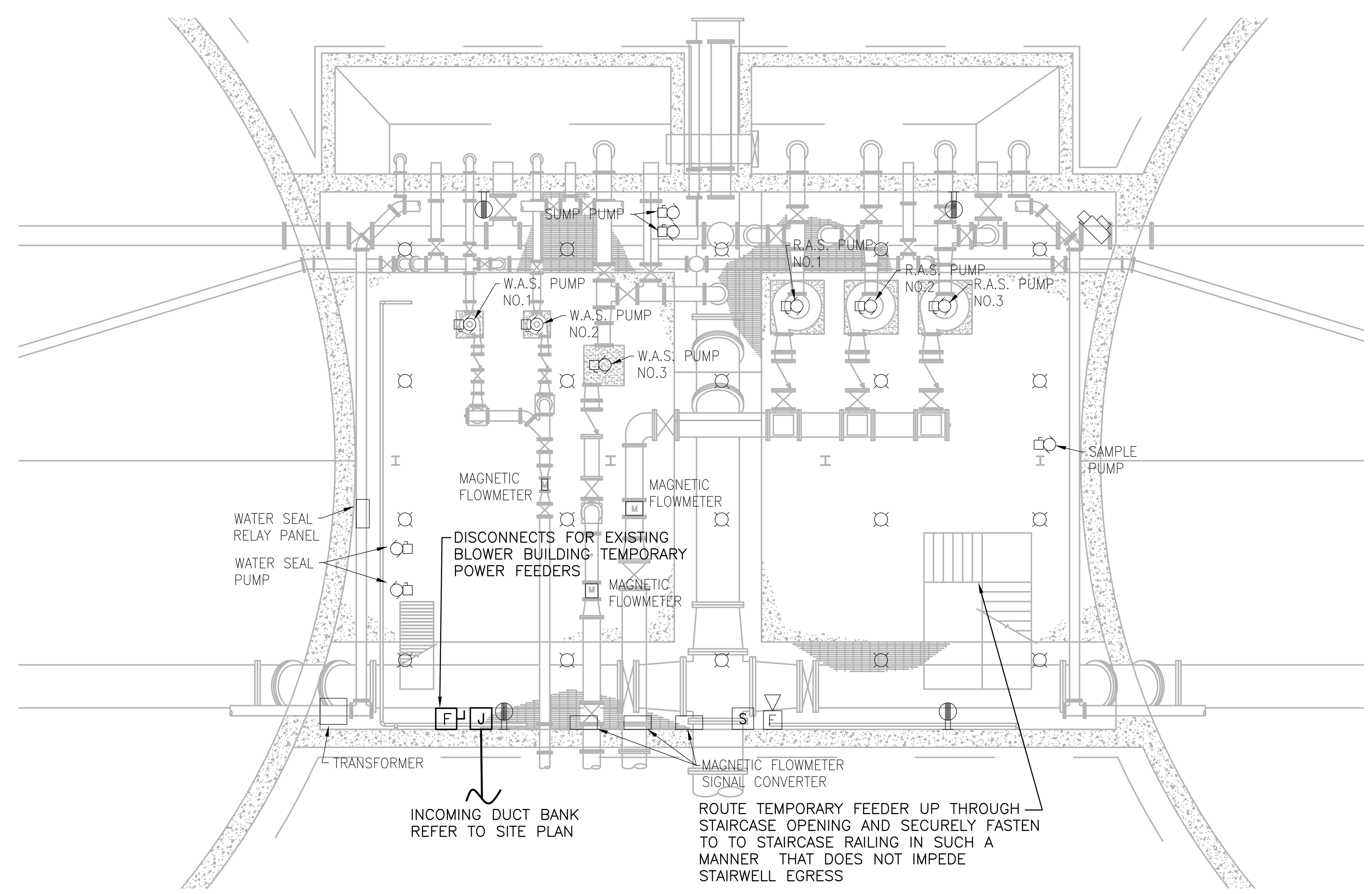
SHEET NO.

E-4.1



UPPER LEVEL PLAN
SCALE: 1/8"= 1'-0"



LOWER LEVEL PLAN
SCALE: 1/8"= 1'-0"

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS MICHAEL J. COTTER ELECTRICAL No. 40999 REGISTERED PROFESSIONAL ENGINEER

SUBCONSULTANT

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Mechanical/Electrical Engineers
150 Grossman Drive, Suite 309
Braintree, Massachusetts 02184
617 328-9215
web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Final Clarifiers No. 3 & 4 Plan & Sludge Pump Station No.2 Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

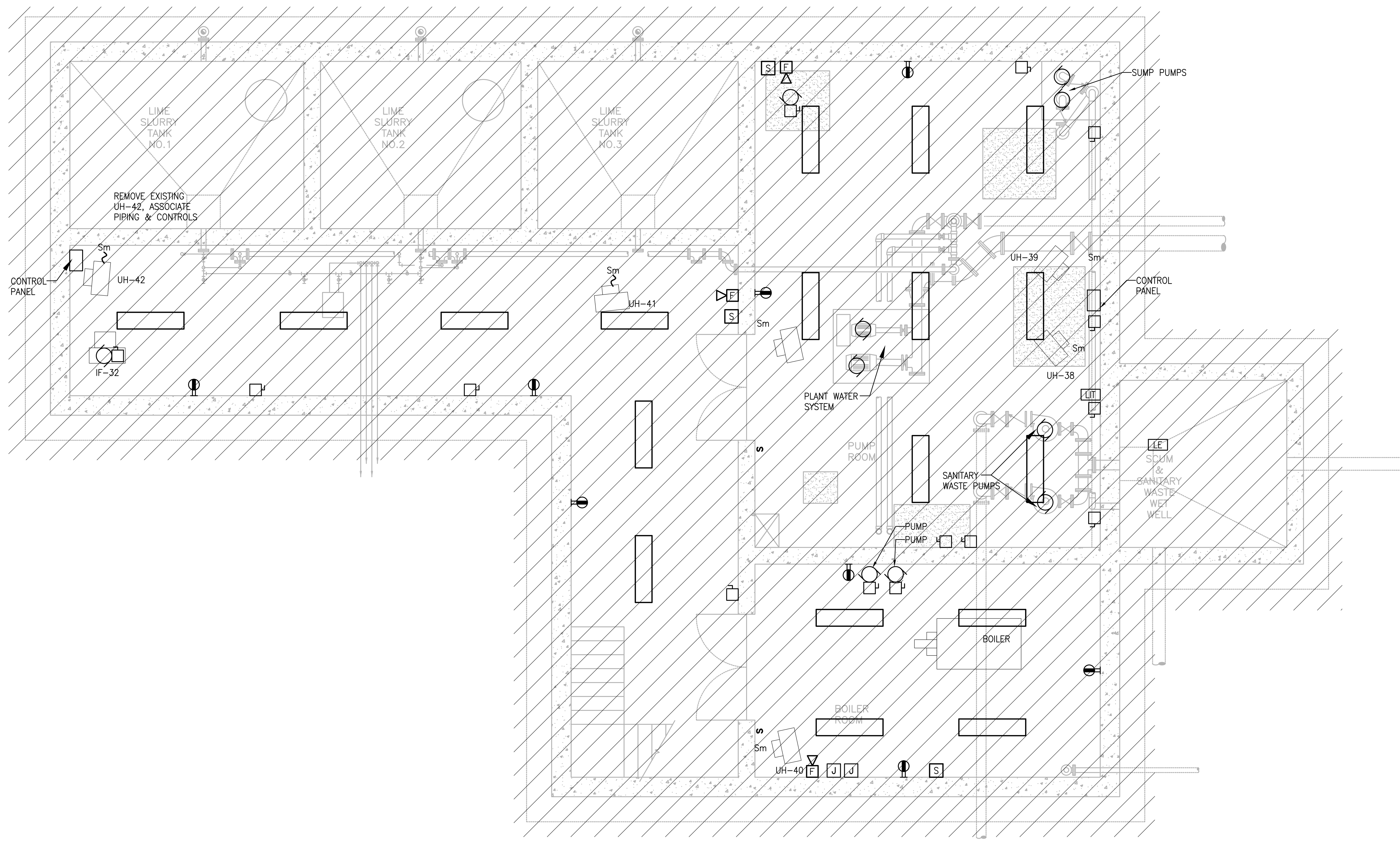
SCALE

NONE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-4.2



BASEMENT - PLAN

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

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
ELECTRICAL
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Demolition
Chemical Handling
Building
Basement Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

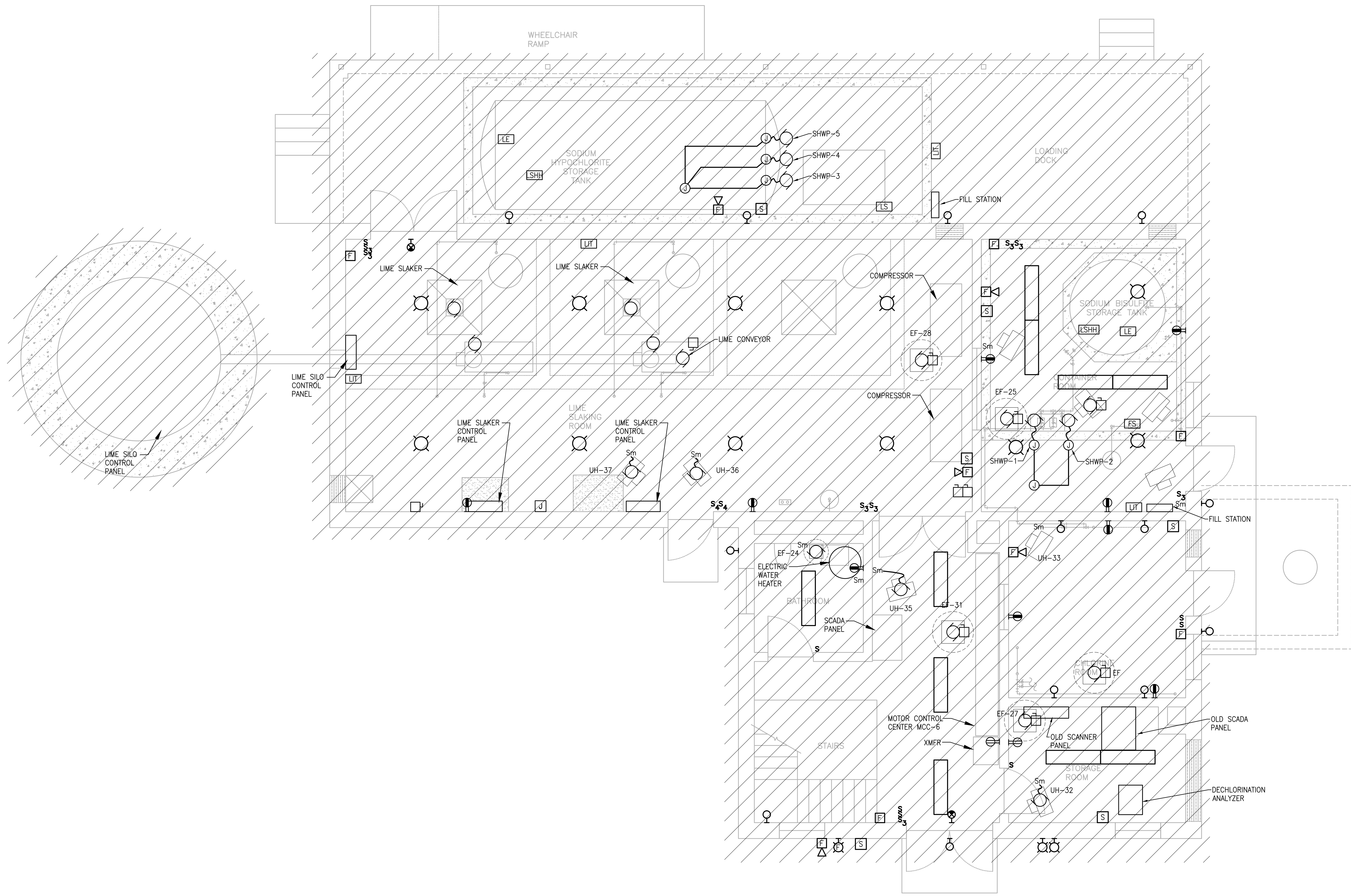
AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-5.1

6/30/2021 10:07 AM W:\T-PROJECTS\T-18009.00 - TAUNTON WWTF UPGRADES\ELECTRICAL DEPARTMENT\18009.00 ELEC CHEMICAL HANDLING BUILDING-PHASE 1.DWG (BETA STB BW.STB)



FIRST FLOOR - PLAN

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

PREPARED BY

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COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
ELECTRICAL
No. 40999
REGISTERED PROFESSIONAL ENGINEER

SUBCONSULTANT

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150 Grossman Drive, Suite 309
Braintree, Massachusetts 02184
617 328-9215
web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Demolition Chemical Handling Building First Floor Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

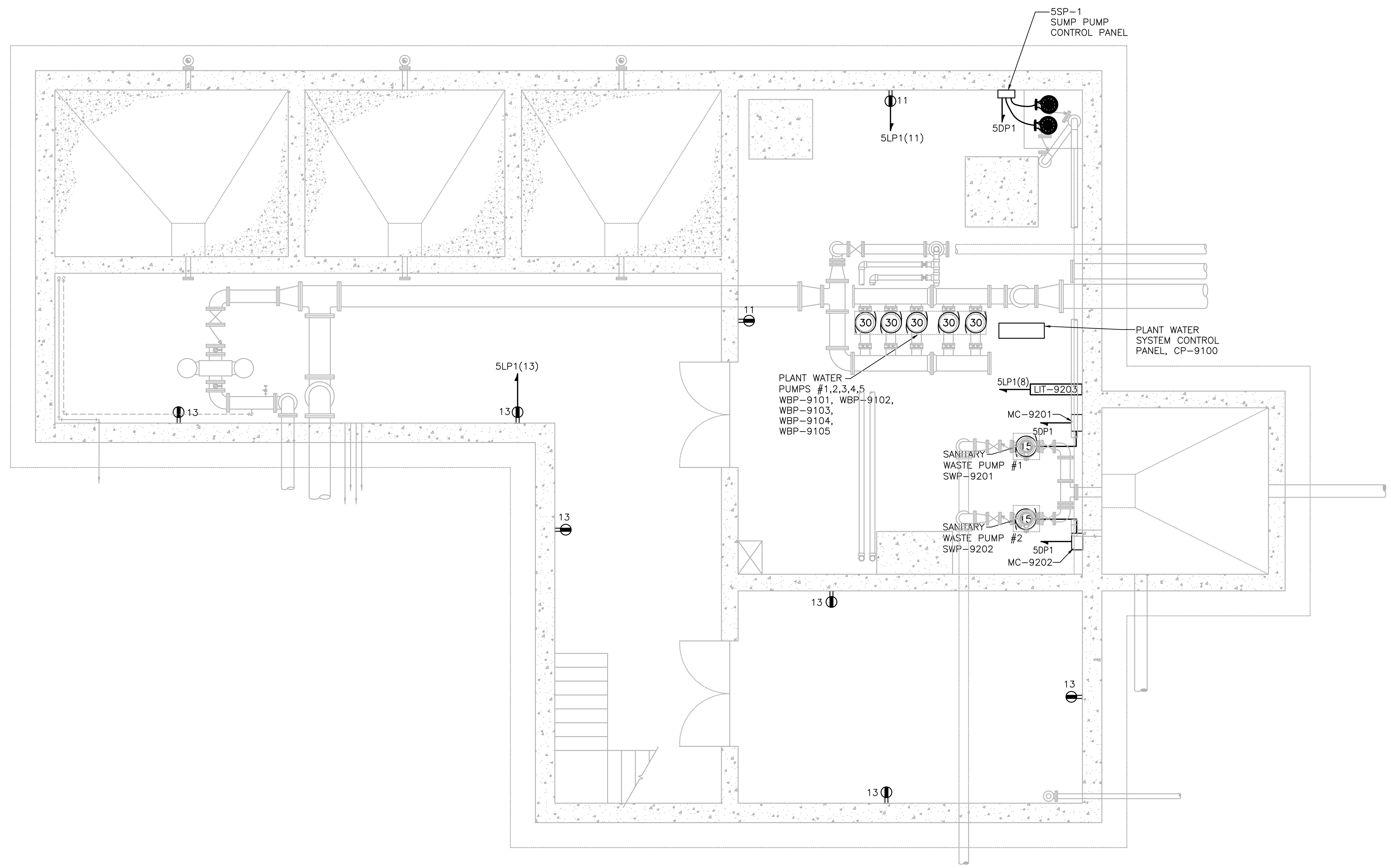
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-5.2



BASEMENT - PLAN

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

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
ELECTRICAL
No. 40999
REGISTERED
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SUBCONSULTANT

SAR
ENGINEERING, INC.
Mechanical/Electrical Engineers
150 Grossman Drive, Suite 309
Braintree, Massachusetts 02184
617 328-9215
web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Chemical Handling Building Basement Power Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

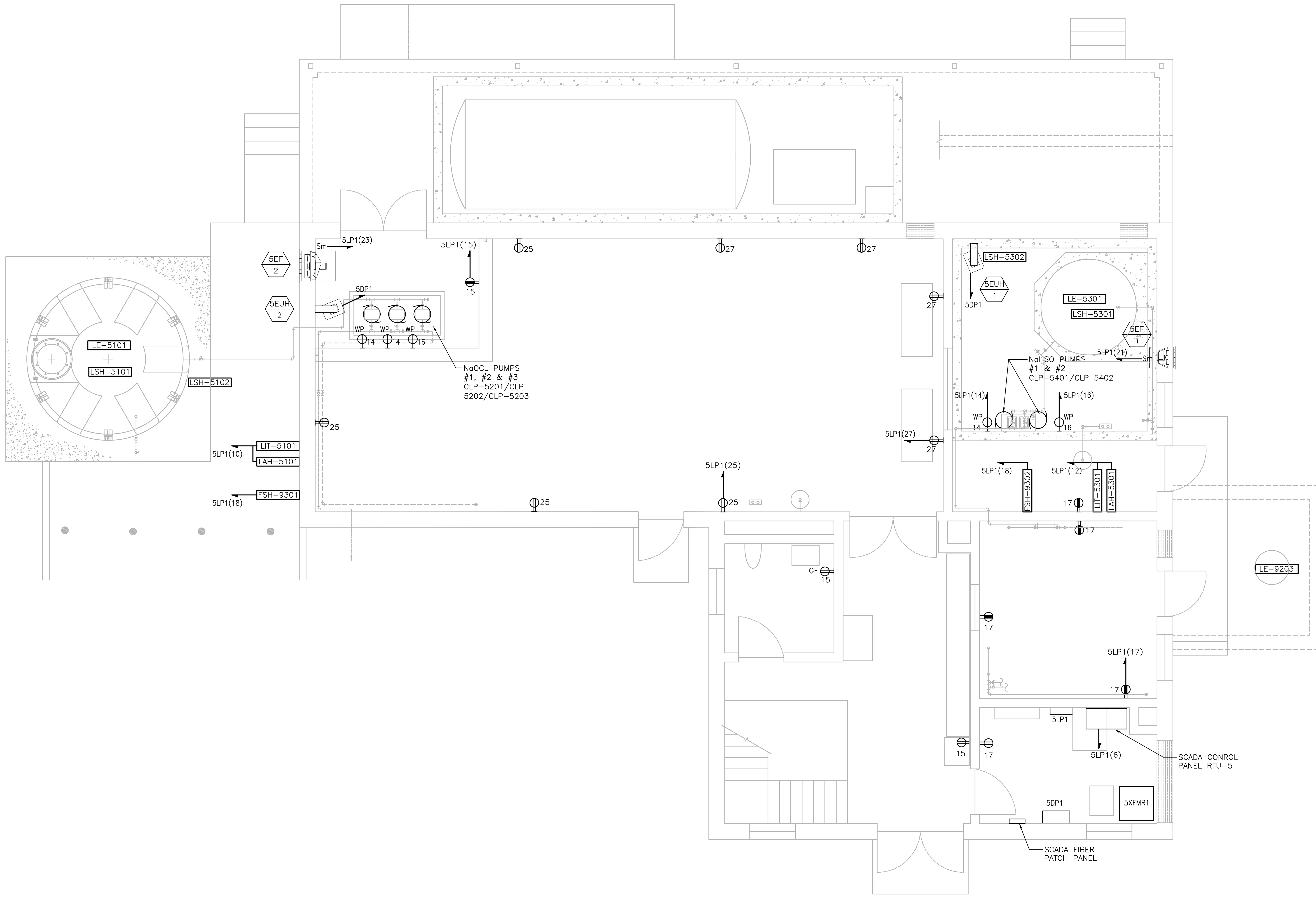
AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-5.3

6/30/2021 10:07 AM W:\T-PROJECTS\T-18009.00 - TAUNTON WWTF UPGRADES\ELECTRICAL DEPARTMENT\18009.00 ELEC CHEMICAL HANDLING BUILDING-PHASE 1.DWG (BETA STB BW.STB)



FIRST FLOOR - PLAN
SCALE: 1/4"= 1'-0"

PREPARED BY

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MICHAEL J. COTTER
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Chemical Handling Building First Floor Power Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

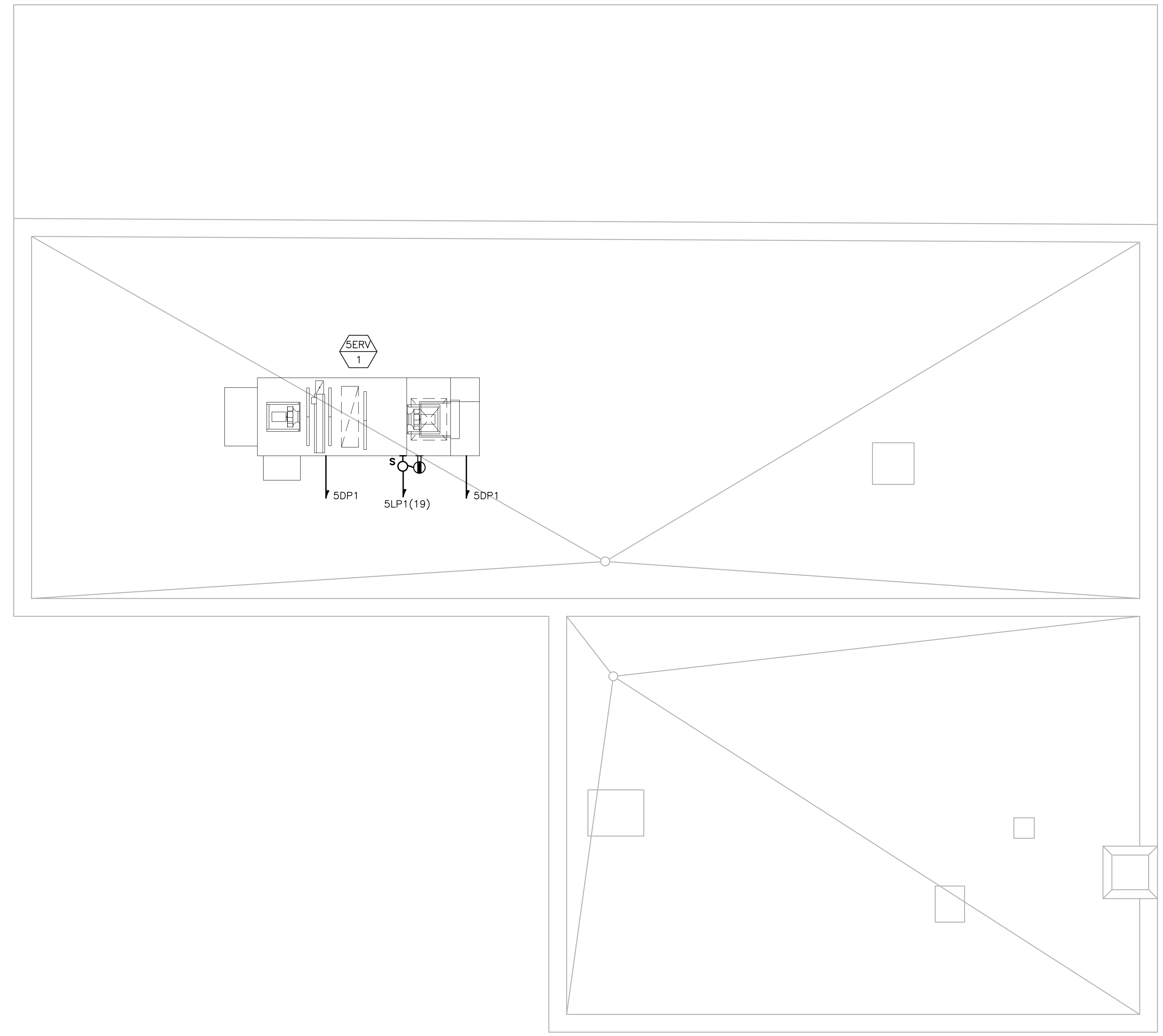
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-5.4



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

PREPARED BY

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MICHAEL J. COTTER
ELECTRICAL
No. 40999
REGISTERED PROFESSIONAL ENGINEER

SUBCONSULTANT

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Mechanical/Electrical Engineers
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web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical
Chemical
Handling Building
Roof Power Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

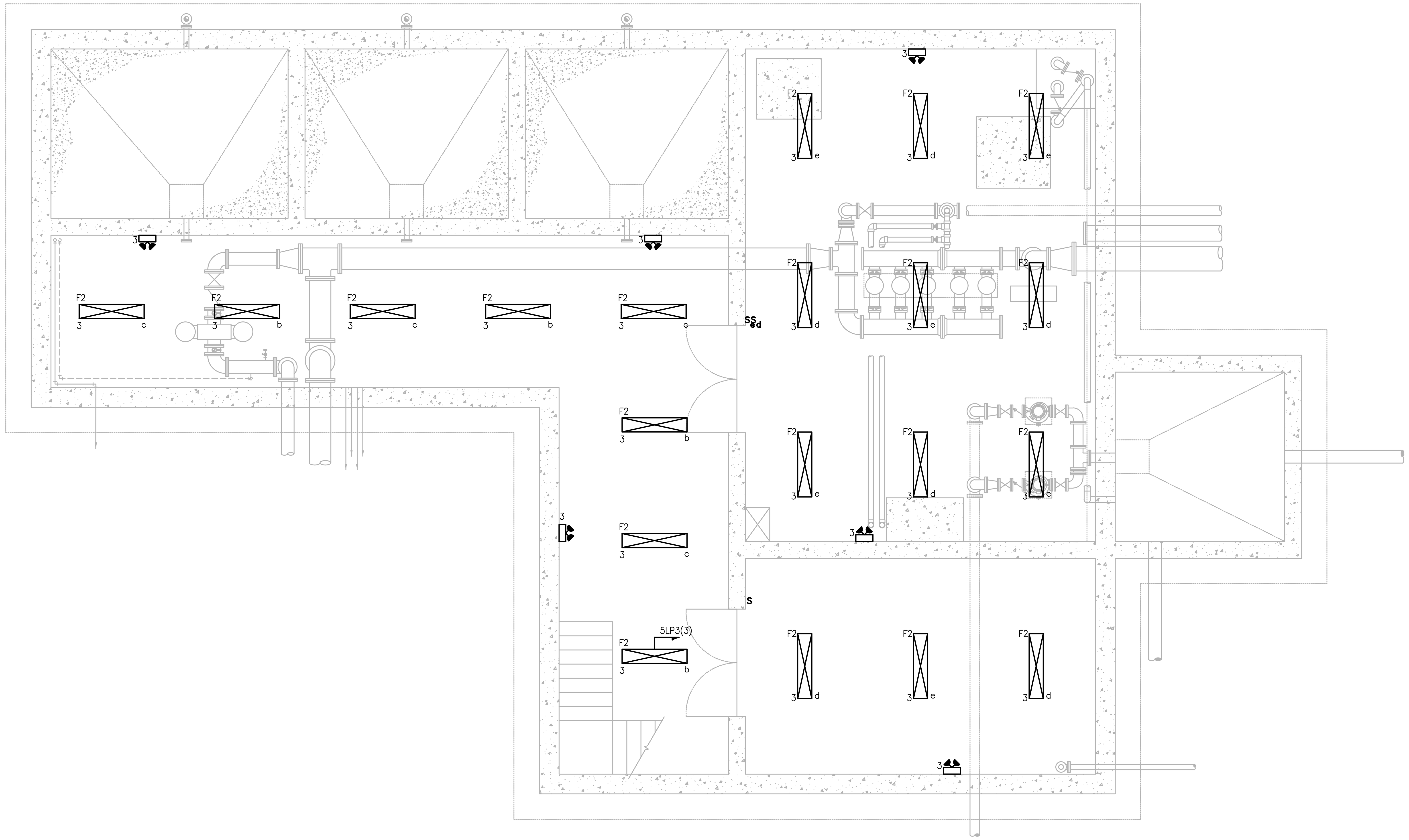
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-5.5



BASEMENT - PLAN

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

PREPARED BY

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MICHAEL J. COTTER
ELECTRICAL
No. 40999
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SUBCONSULTANT

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web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Chemical Handling Building Basement Lighting Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

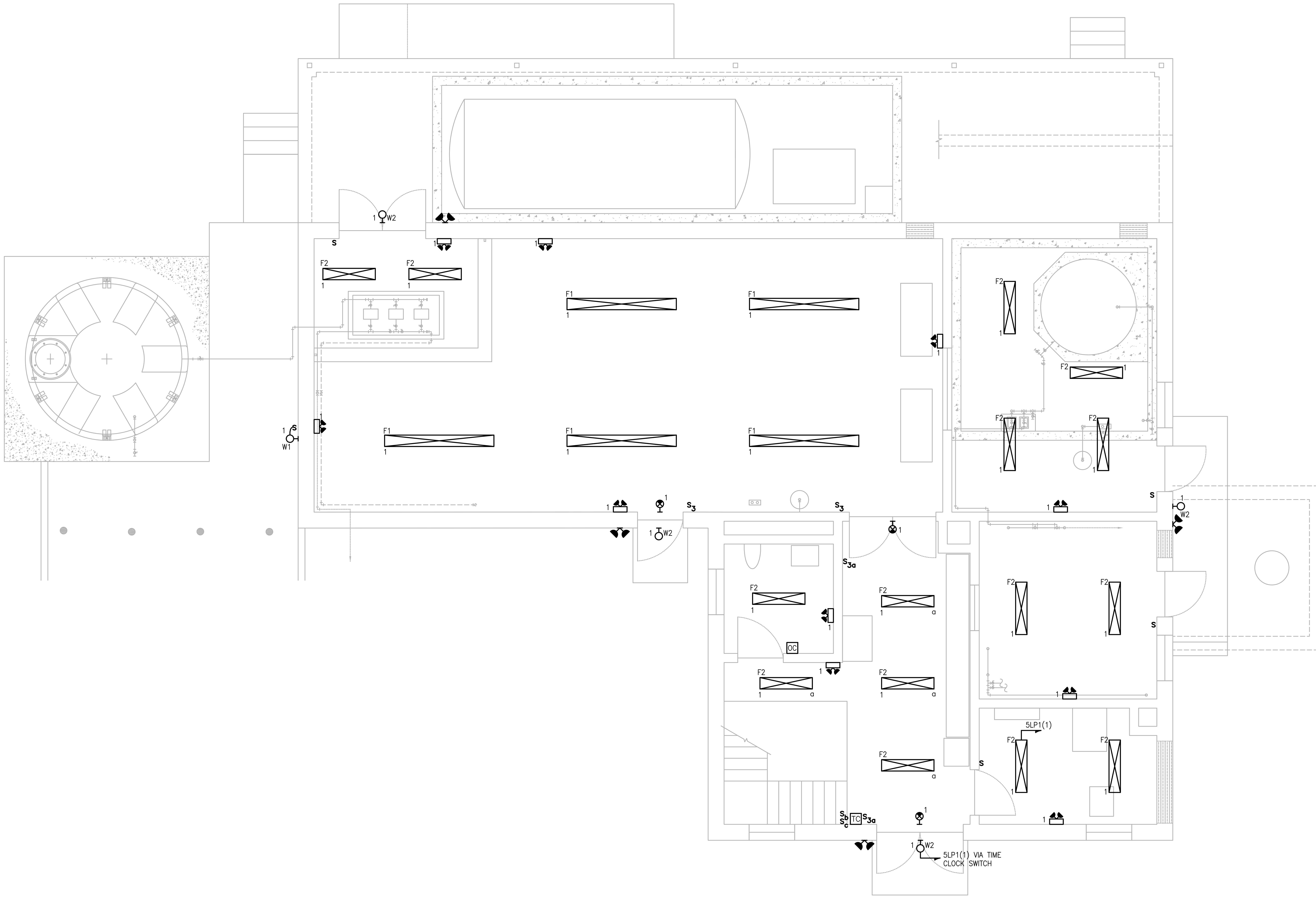
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-5.6



FIRST FLOOR - PLAN
SCALE: 1/4"= 1'-0"

PREPARED BY
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MICHAEL J. COTTER
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No. 40999
REGISTERED PROFESSIONAL ENGINEER

SUBCONSULTANT
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PROJECT
Taunton Wastewater Treatment Facility Improvements Phase 1
Taunton, MA

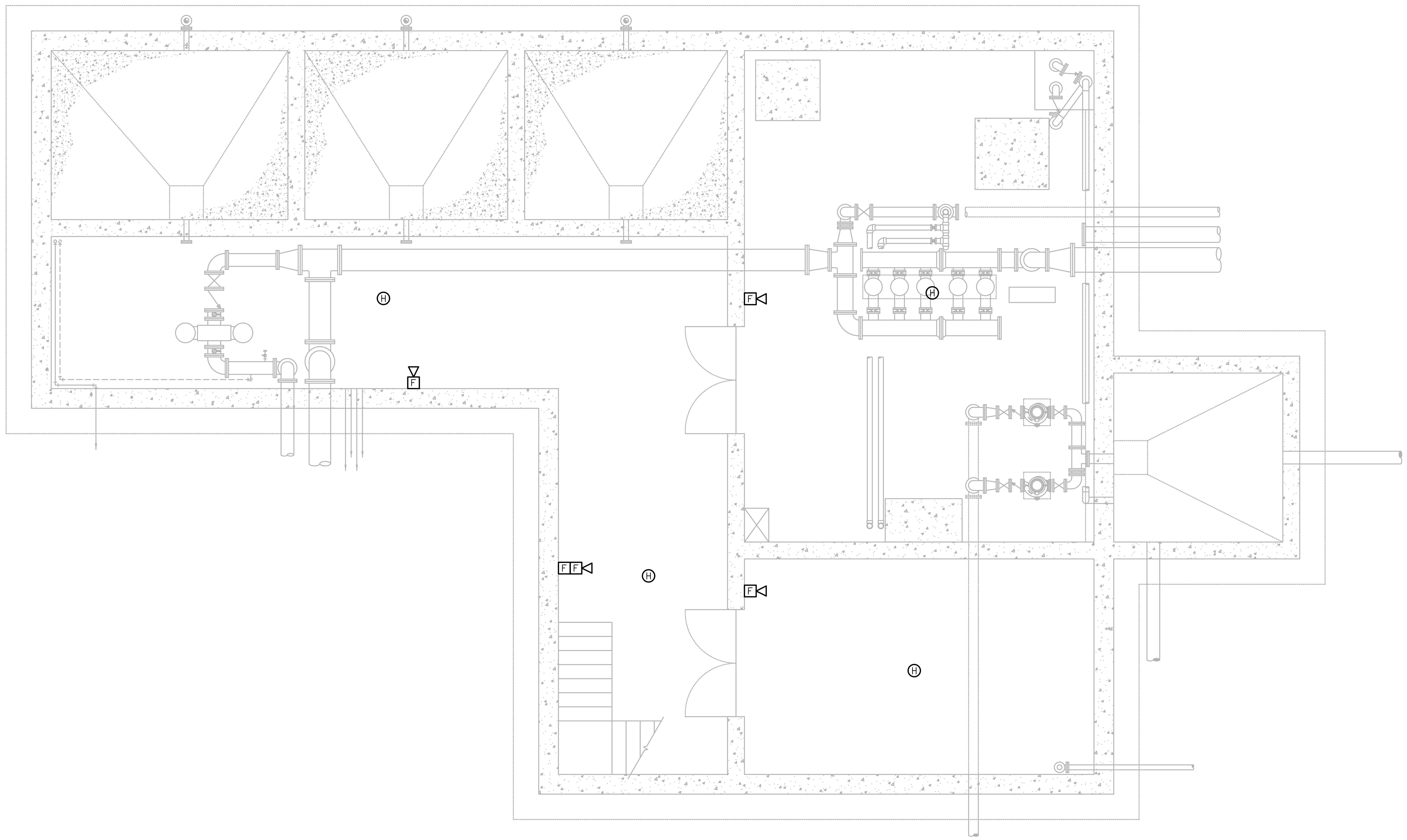
TITLE
Electrical Chemical Handling Building First Floor Lighting Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE
AS SHOWN
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.
E-5.7



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

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
ELECTRICAL
No. 40999
REGISTERED
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SUBCONSULTANT

SAR ENGINEERING, INC.
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150 Grossman Drive, Suite 309
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617 328-9215
web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Chemical Handling Building Basement Fire Alarm Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

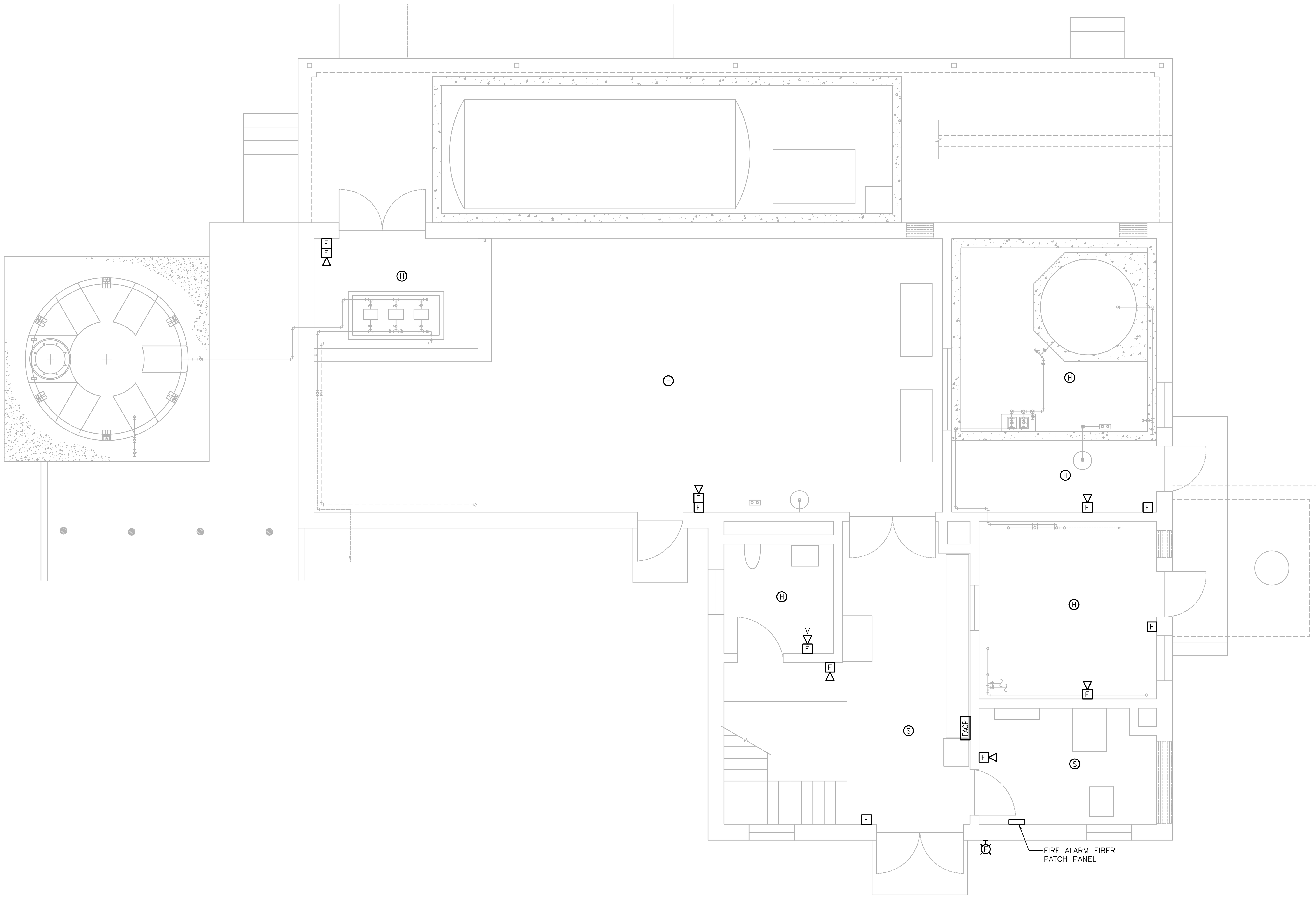
AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-5.8

6/30/2021 10:08 AM W:\T-PROJECTS\T-18009.00 - TAUNTON WWTF UPGRADES\ELECTRICAL DEPARTMENT\18009.00 ELEC CHEMICAL HANDLING BUILDING-PHASE 1.DWG (BETA STB BW.STB)



FIRST FLOOR - PLAN

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

PREPARED BY

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COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
ELECTRICAL
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical
Chemical
Handling Building
First Floor Fire
Alarm Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

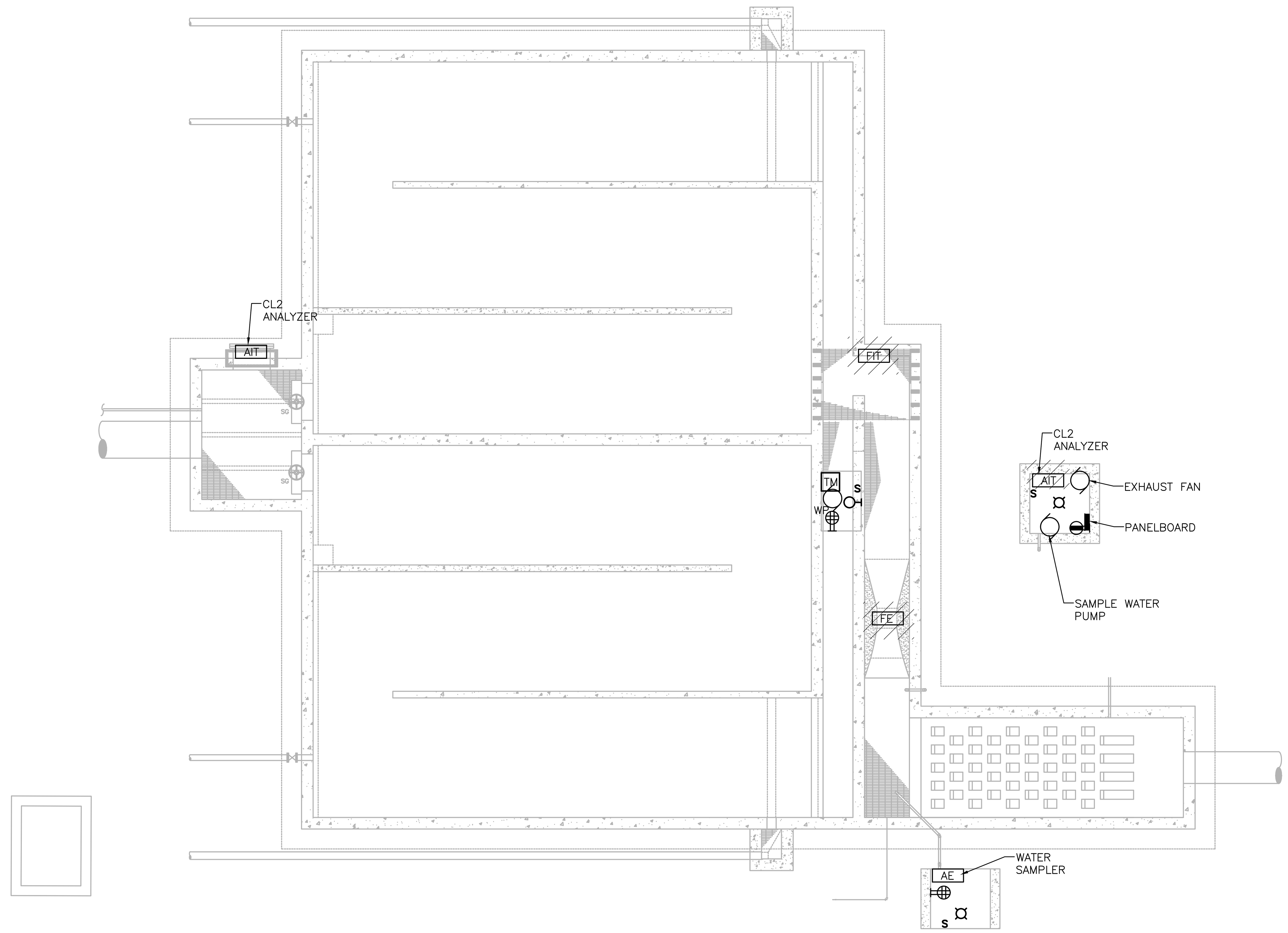
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-5.9



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

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J.
COTTER
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Demolition
Chlorine Contact Tank
Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

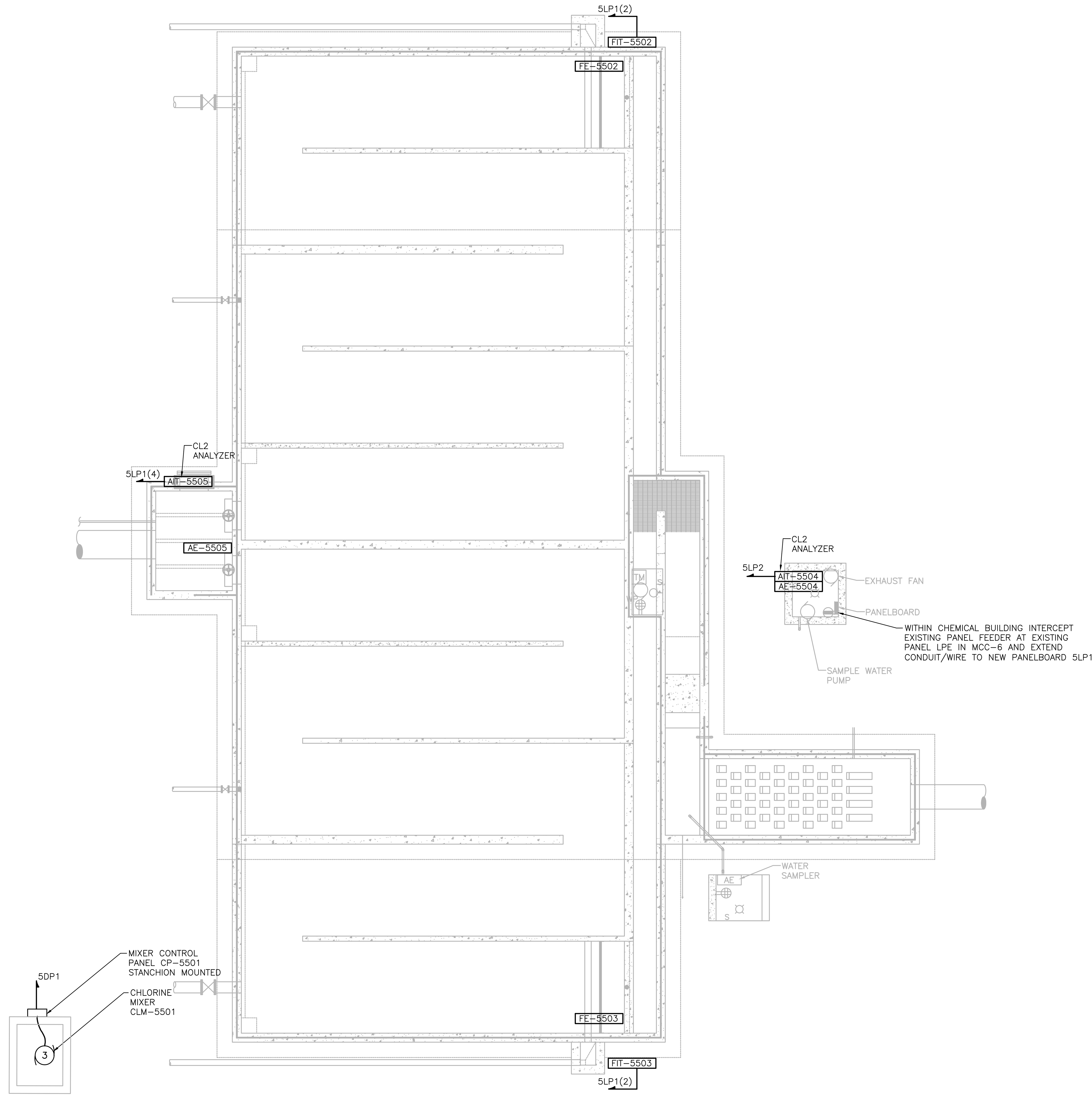
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-5.10



PLAN

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

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS MICHAEL J. COTTER ELECTRICAL No. 40999 REGISTERED PROFESSIONAL ENGINEER

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Chlorine Contact Tank Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

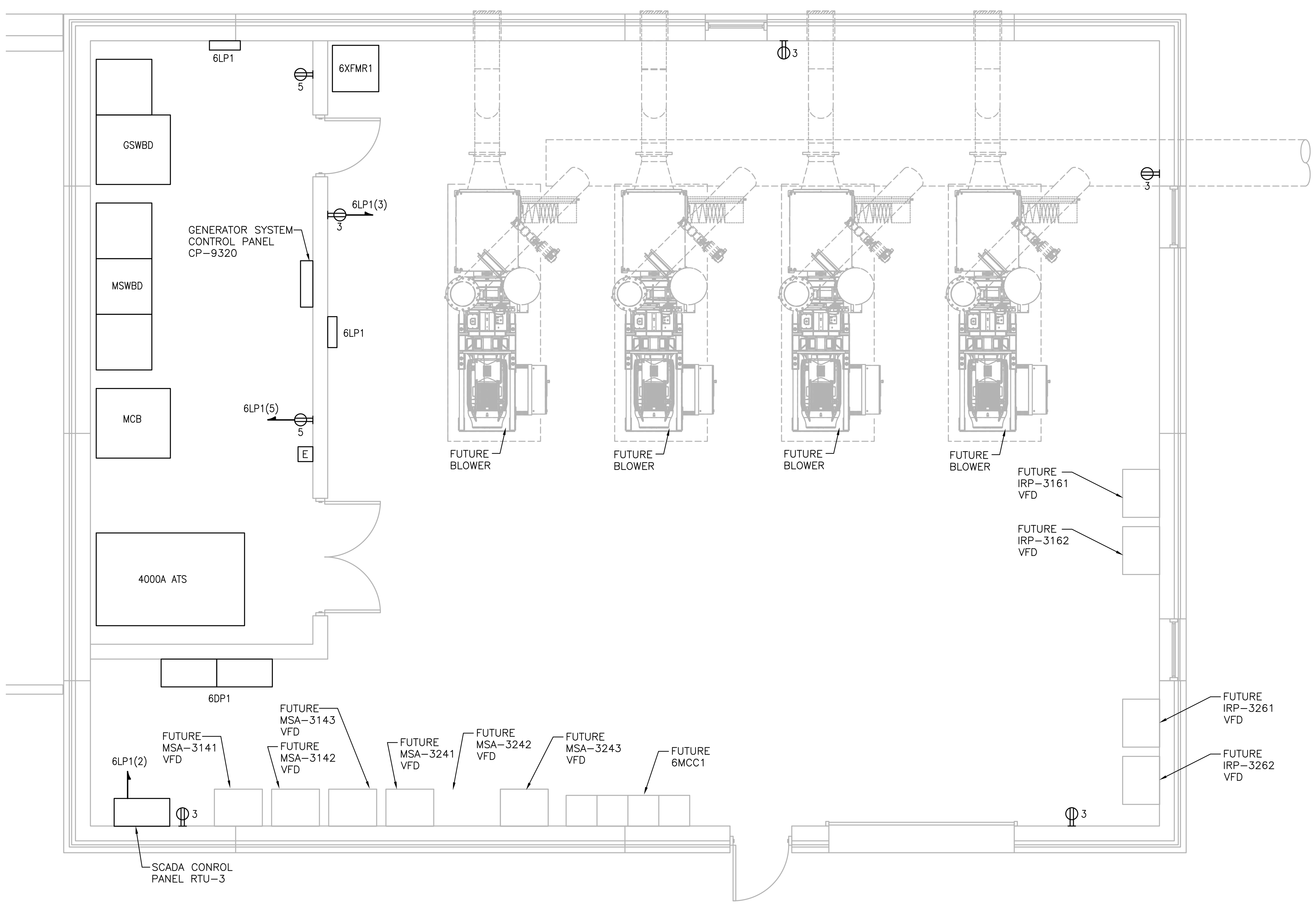
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-5.11



PLAN

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

PREPARED BY

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COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Blower Building Power Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

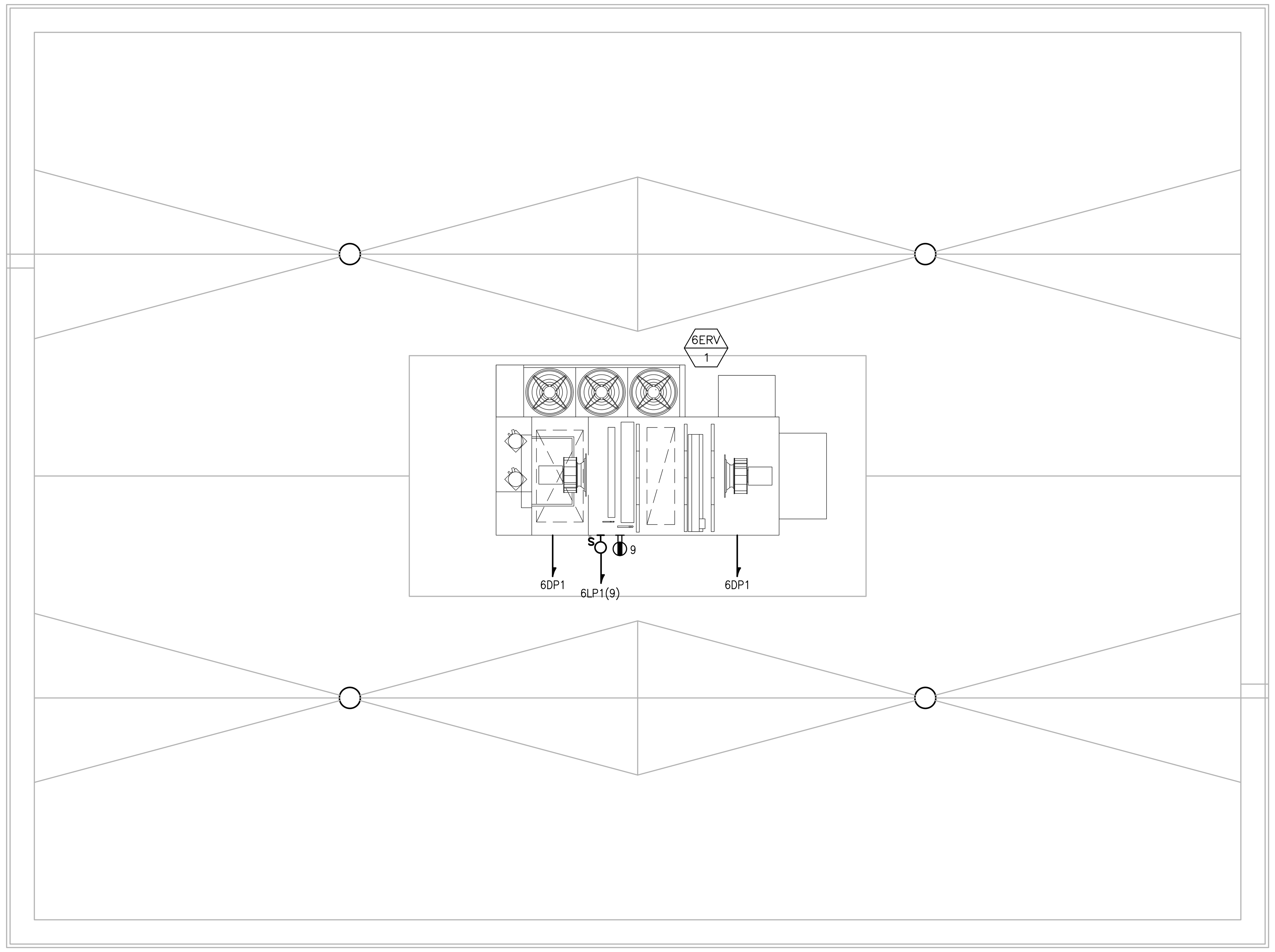
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-6.1



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

PREPARED BY

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Blower Building Power Roof Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

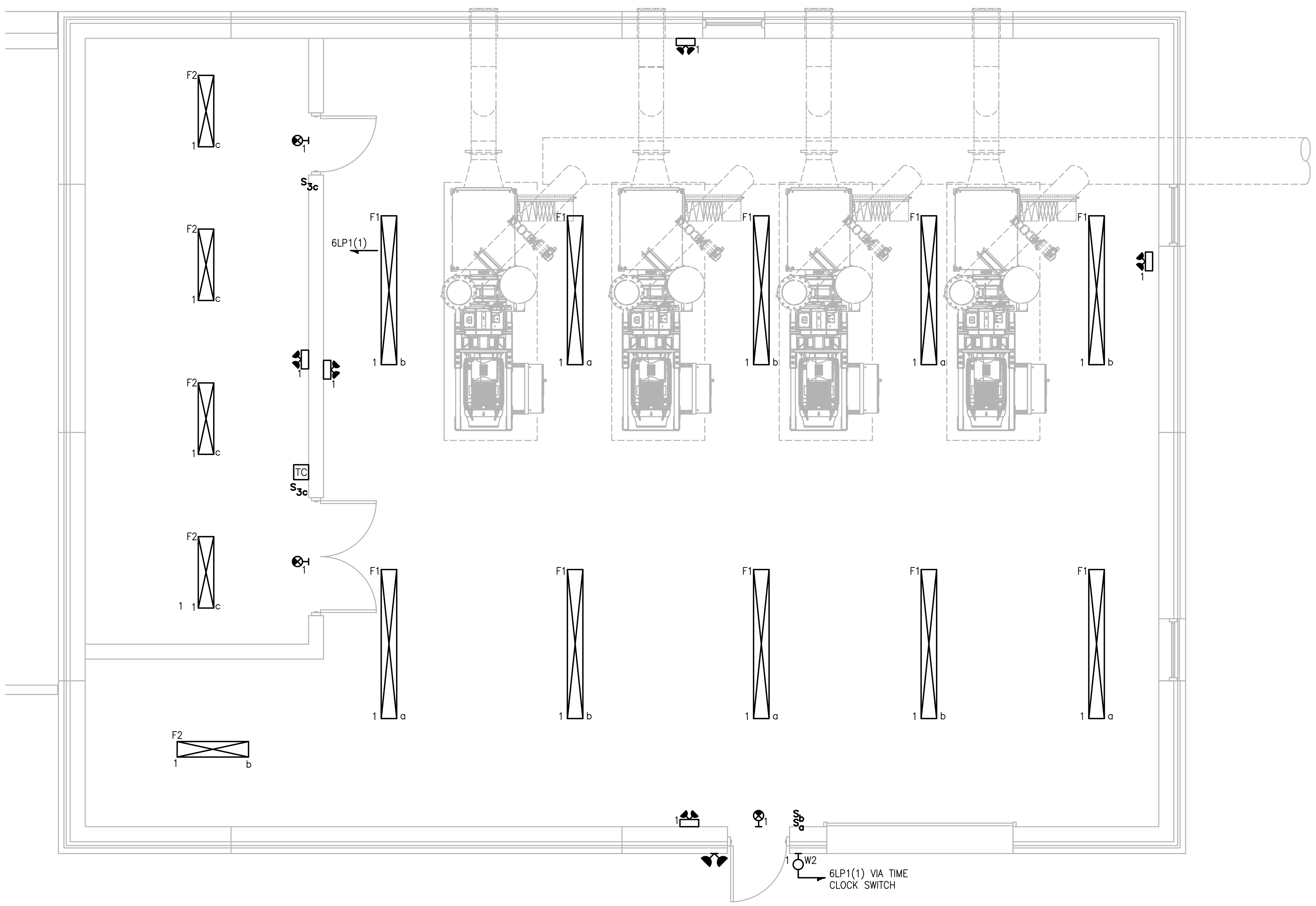
AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-6.2

6/30/2021 10:23 AM W:\T-PROJECTS\T-18009.00 - TAUNTON WWTF UPGRADES\ELECTRICAL DEPARTMENT\18009.00 ELEC NEW BLOWER BUILDING-PHASE 1.DWG (BETA STB BW.STB)



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

PREPARED BY
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COMMONWEALTH OF MASSACHUSETTS
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PROJECT
Taunton Wastewater Treatment Facility Improvements Phase 1
Taunton, MA

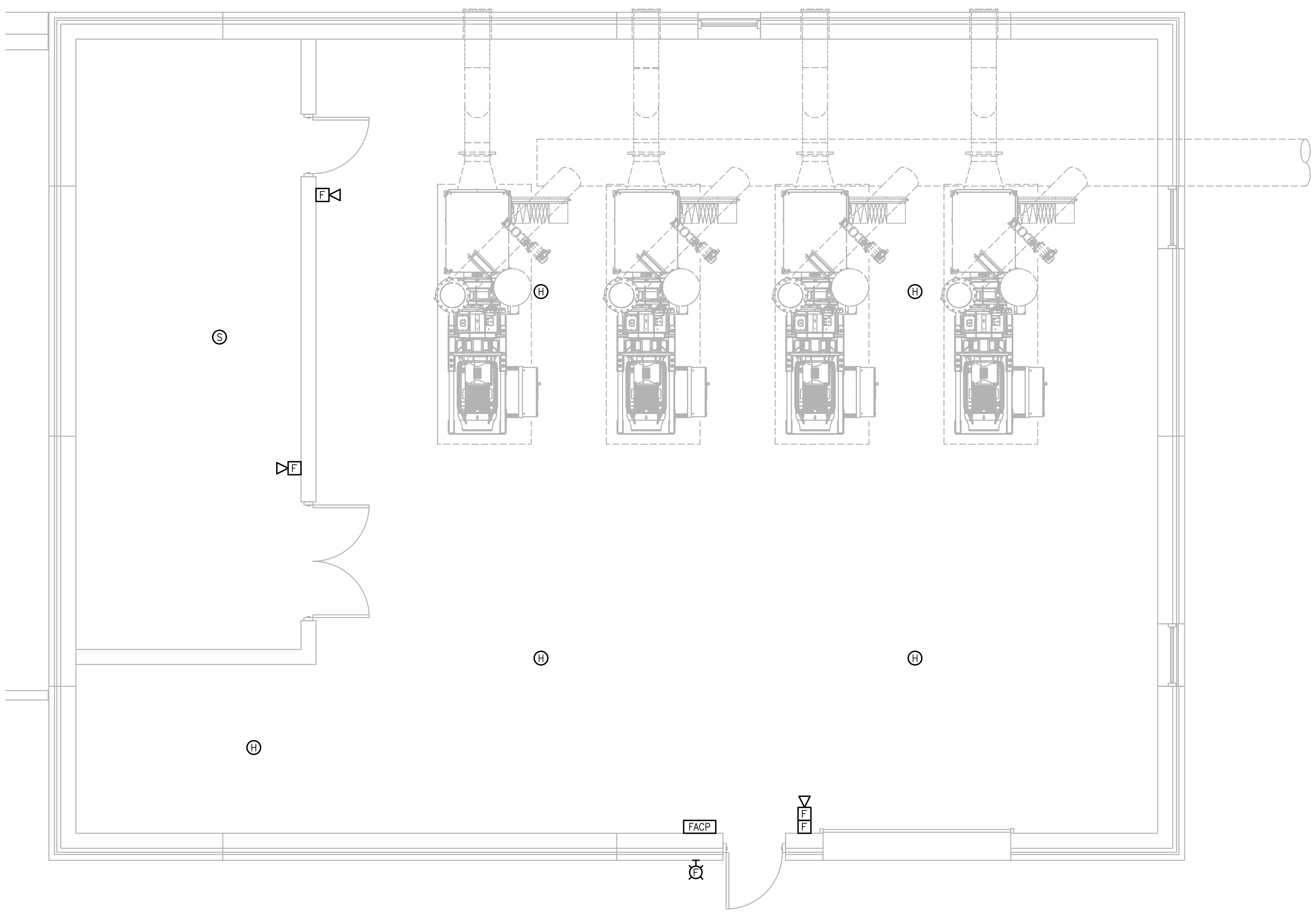
TITLE
Electrical Blower Building Lighting Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE
AS SHOWN
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.
E-6.3



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

PREPARED BY

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Blower Building
Fire Alarm Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

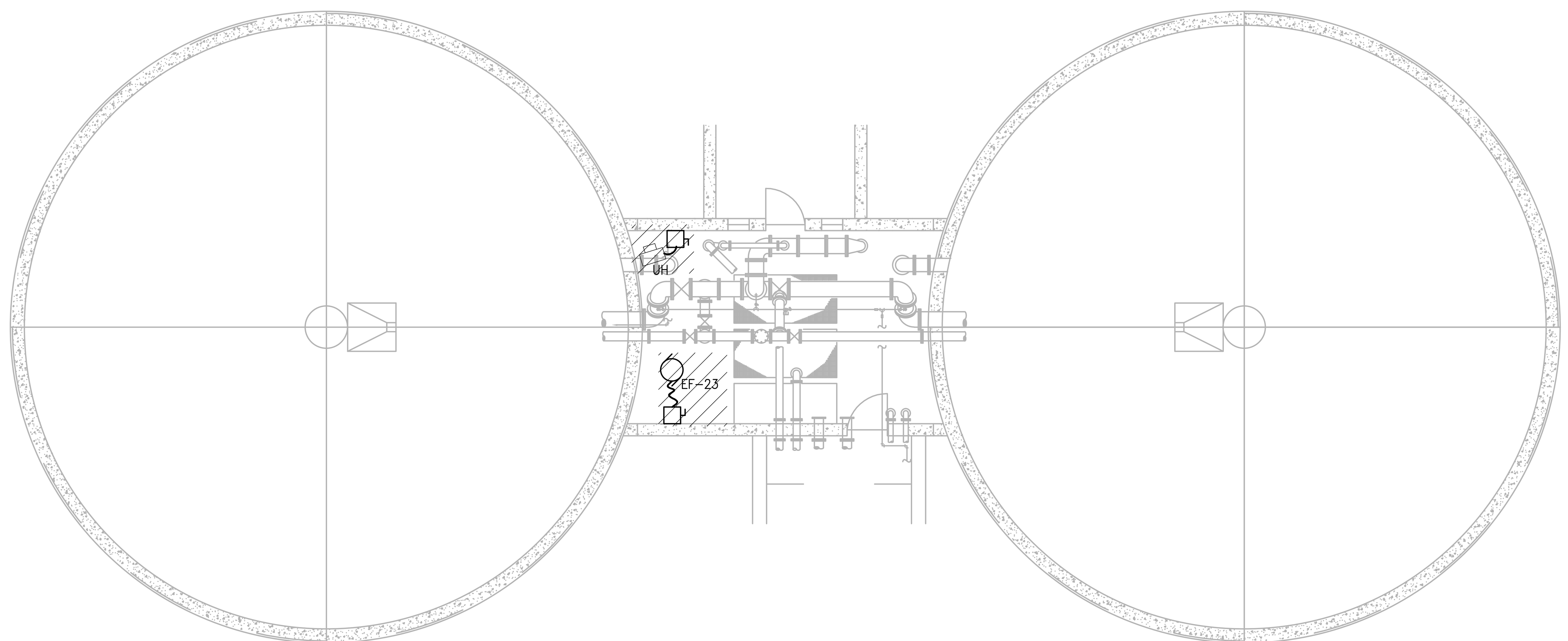
AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

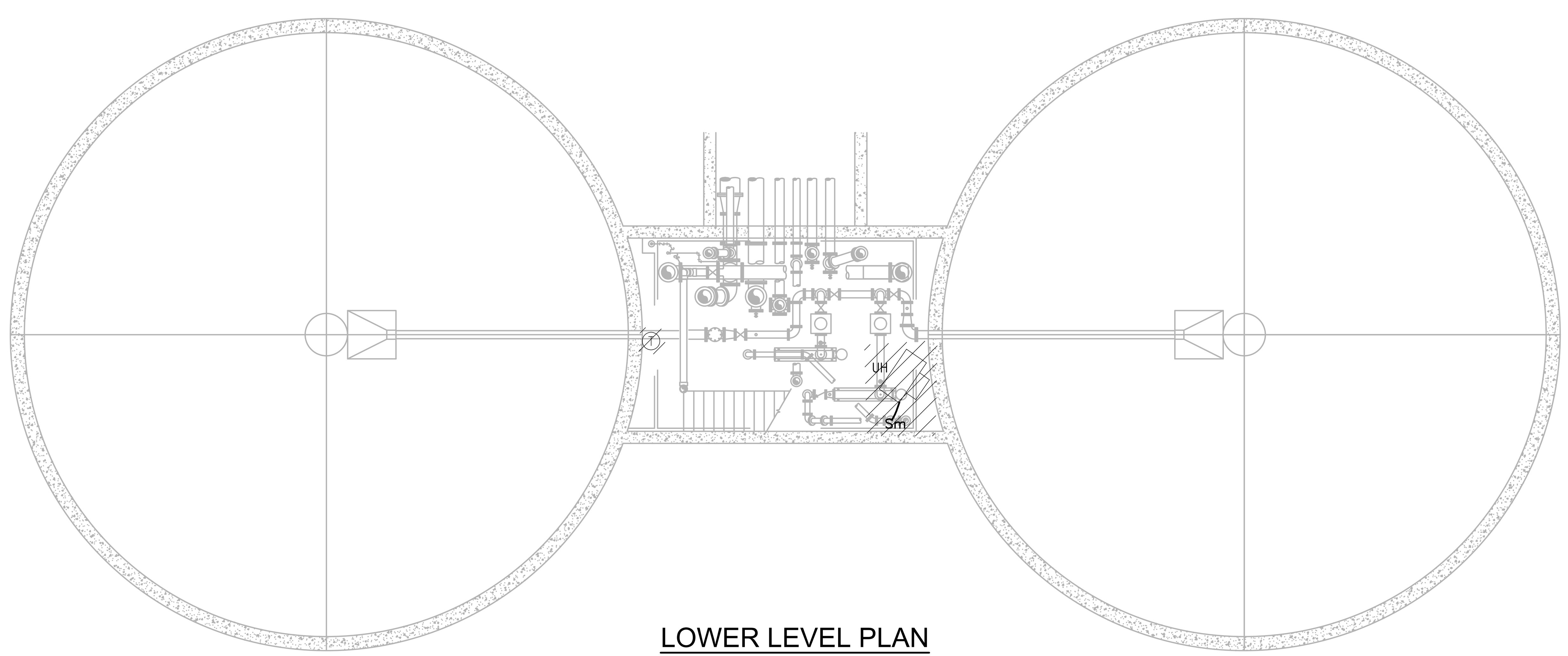
E-6.4

6/30/2021 10:23 AM W:\T-PROJECTS\T-18009.00 - TAUNTON WWTF UPGRADES\ELECTRICAL DEPARTMENT\18009.00 ELEC NEW BLOWER BUILDING-PHASE 1.DWG (BETA STB BW.STB)



MID LEVEL PLAN

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



LOWER LEVEL PLAN

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

PREPARED BY

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Demolition Gravity Thickening Tanks Plans

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

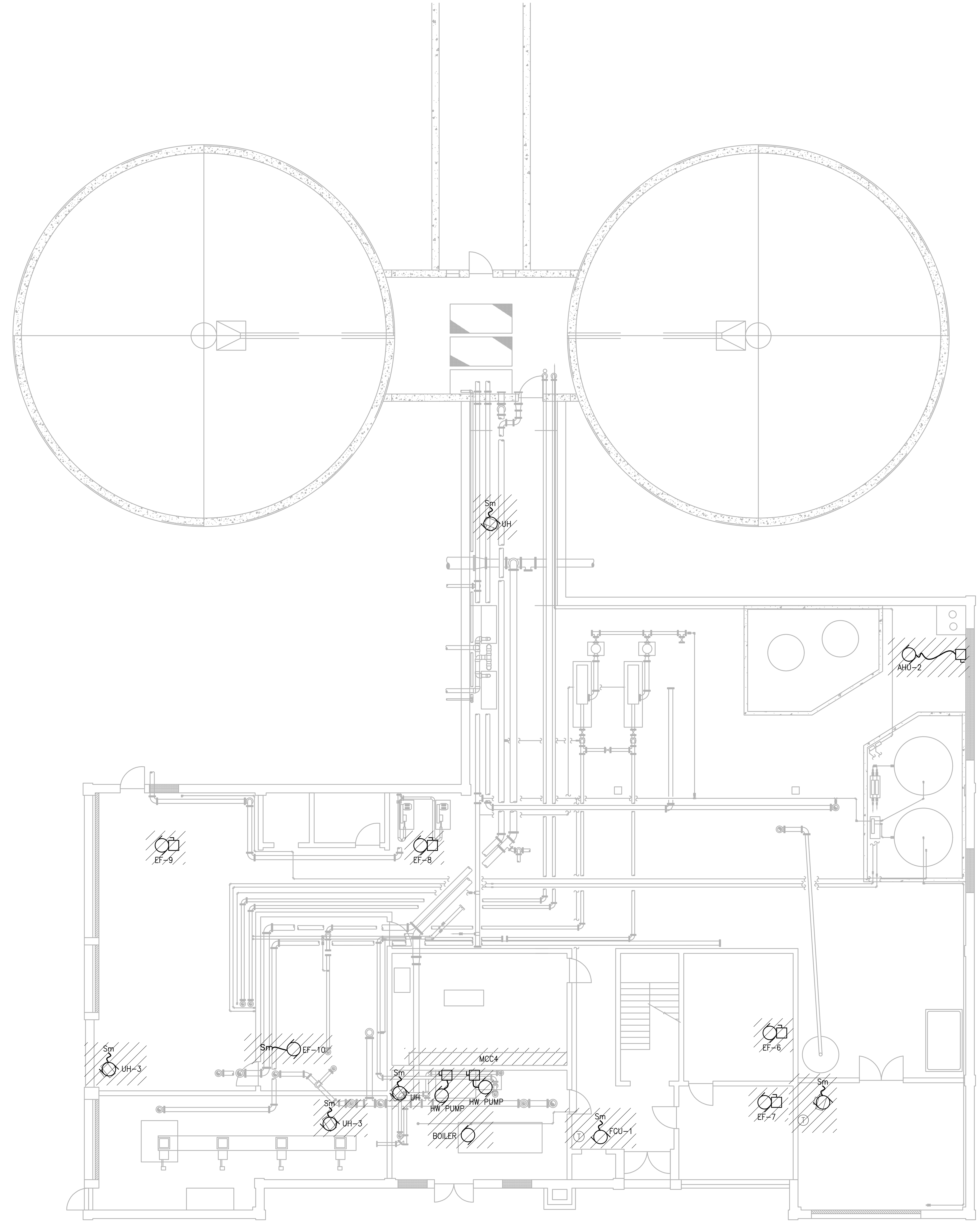
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-7.1



FIRST FLOOR - PLAN

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

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Demolition Solids Handling Building First Floor Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

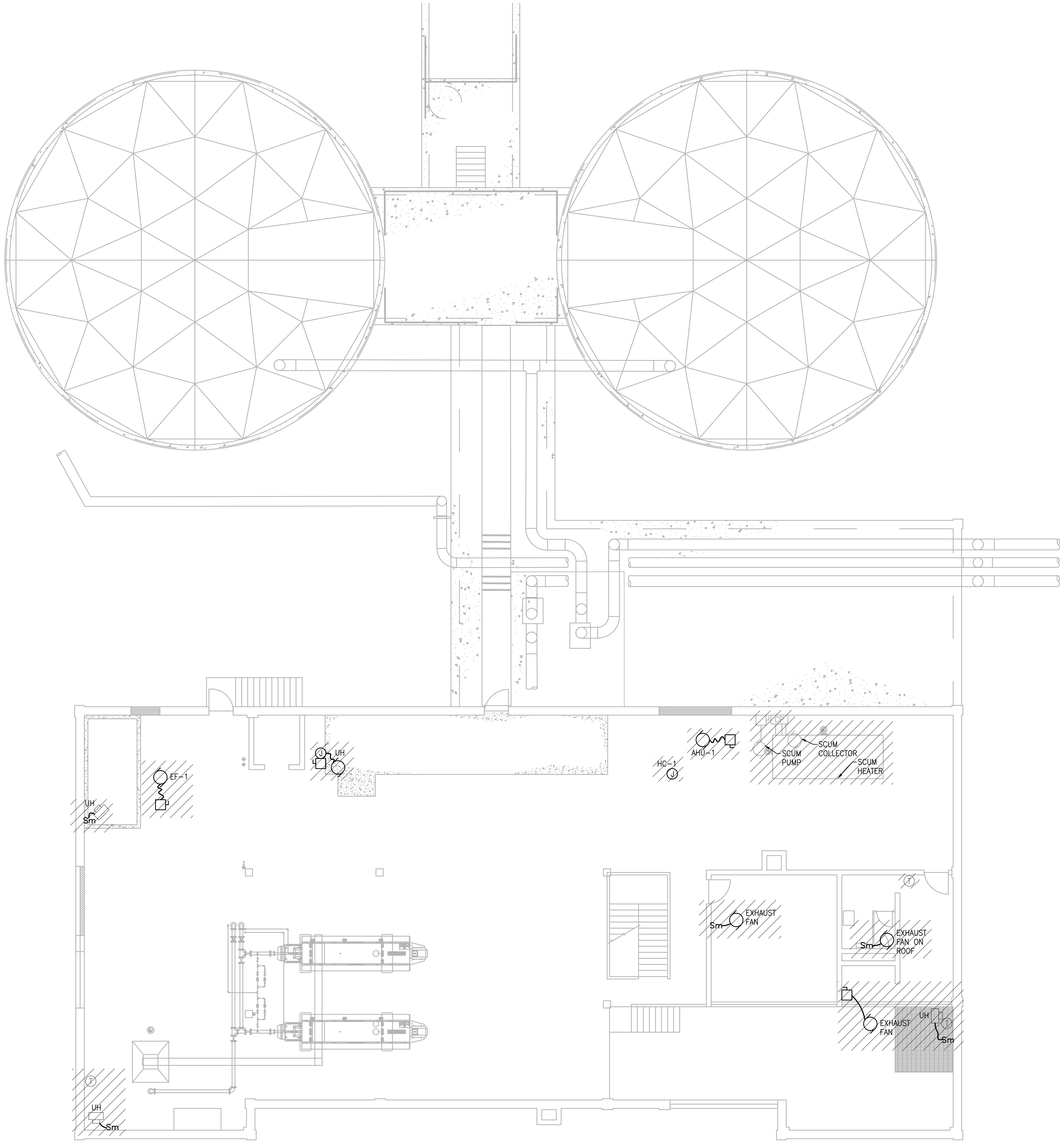
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-7.2



SECOND FLOOR - PLAN

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

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
ELECTRICAL
No. 40999
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Braintree, Massachusetts 02184
617 328-9215
web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Demolition Solids Handling Building Second Floor Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

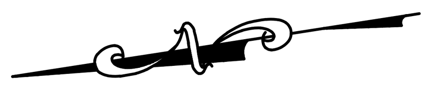
AS SHOWN

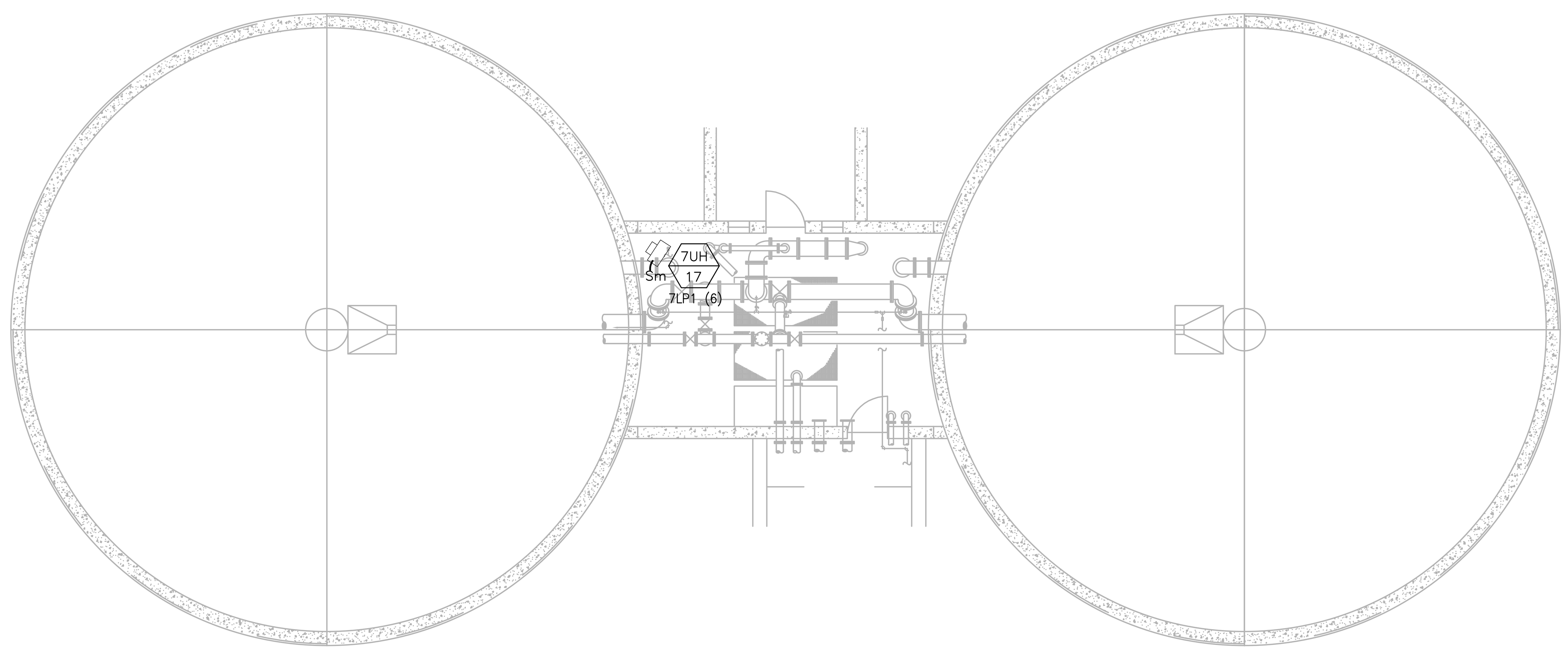
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-7.3

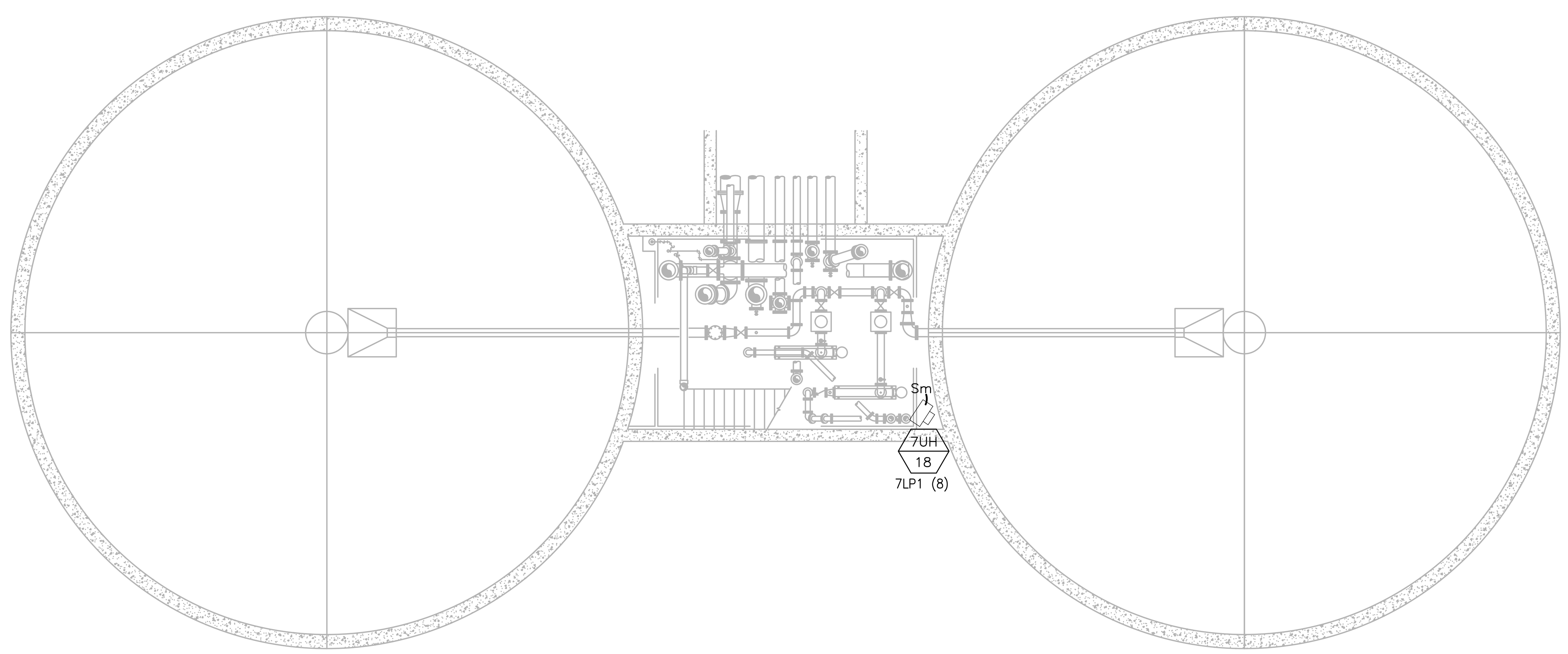
6/30/2021 11:17 AM W:\T-PROJECTS\T-18009.00 - TAUNTON WWTF UPGRADES\ELECTRICAL DEPARTMENT\18009.00 ELEC SOLIDS HANDLING BUILDING-PHASE 1.DWG (BETA STB BW.STB)





MID LEVEL PLAN

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



LOWER LEVEL PLAN

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

PREPARED BY

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SUBCONSULTANT

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ENGINEERING, INC.
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical
Gravity Thickening
Tanks
New Work Power
Plans

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

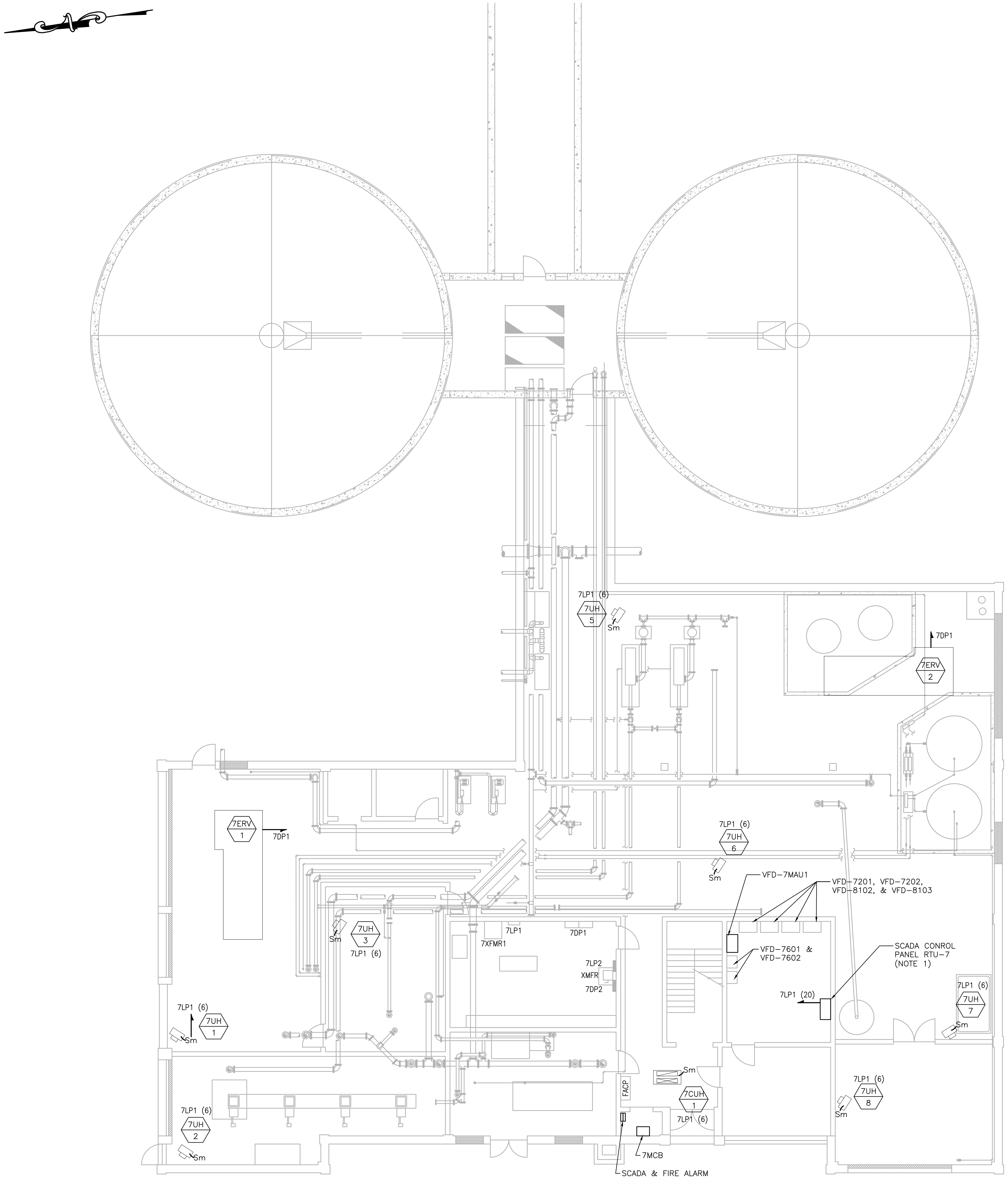
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-7.4

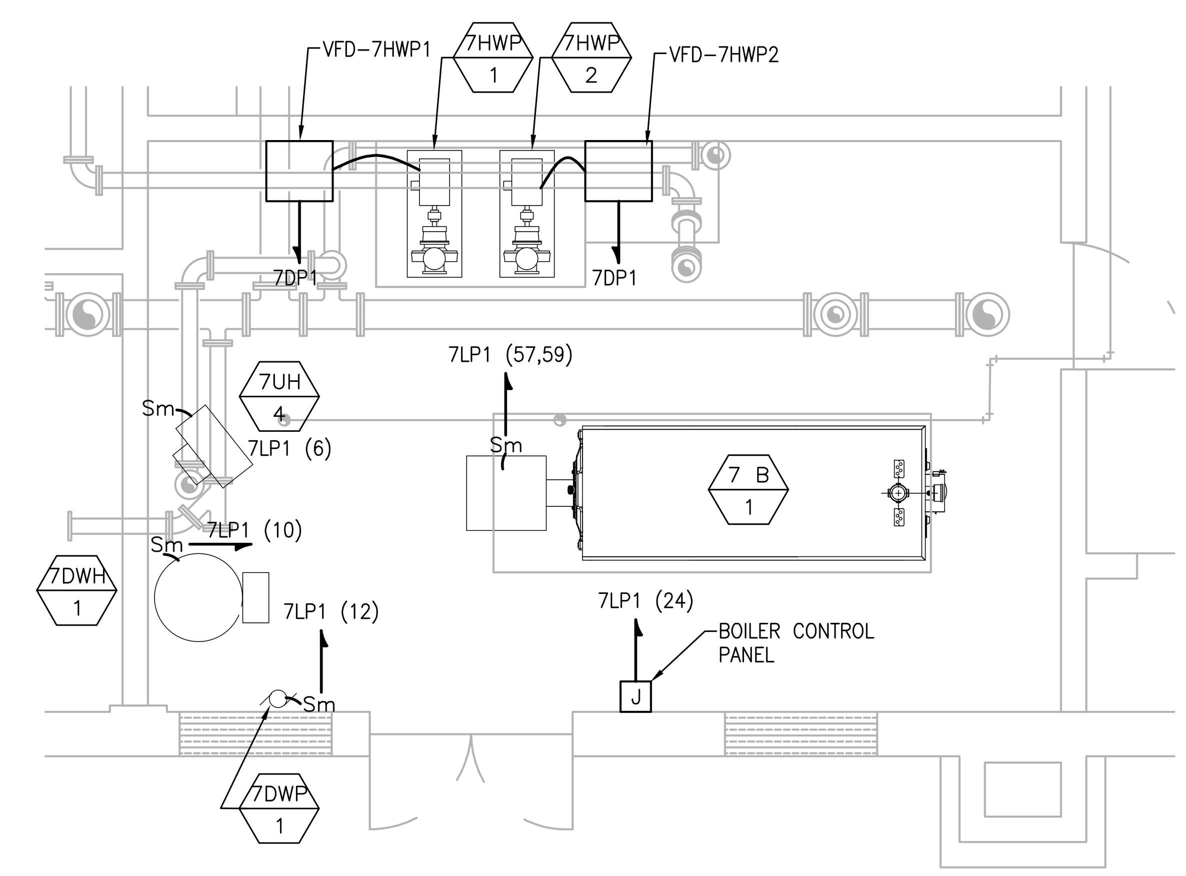


FIRST FLOOR - PLAN

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

NOTES:

1. TERMINATE EXISTING INSTRUMENTATION/CONTROL SIGNAL WIRING/CABLE IN RTU-7 THAT HAS BEEN PREVIOUS INSTALLED UNDER PHASE 1A AND EXTEND THE EXISTING ASSOCIATED CONDUIT. REFER TO INSTRUMENTATION AND CONTROLS P&ID DRAWINGS FOR THE QUANTITY AND TYPES OF SIGNALS BEING CONNECTED TO RTU-7.



BOILER ROOM PART PLAN

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

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
ELECTRICAL
No. 40999
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Mechanical/Electrical Engineers
150 Grossman Drive, Suite 309
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617 328-9215
web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Solids Handling Building First Floor New Work Power Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

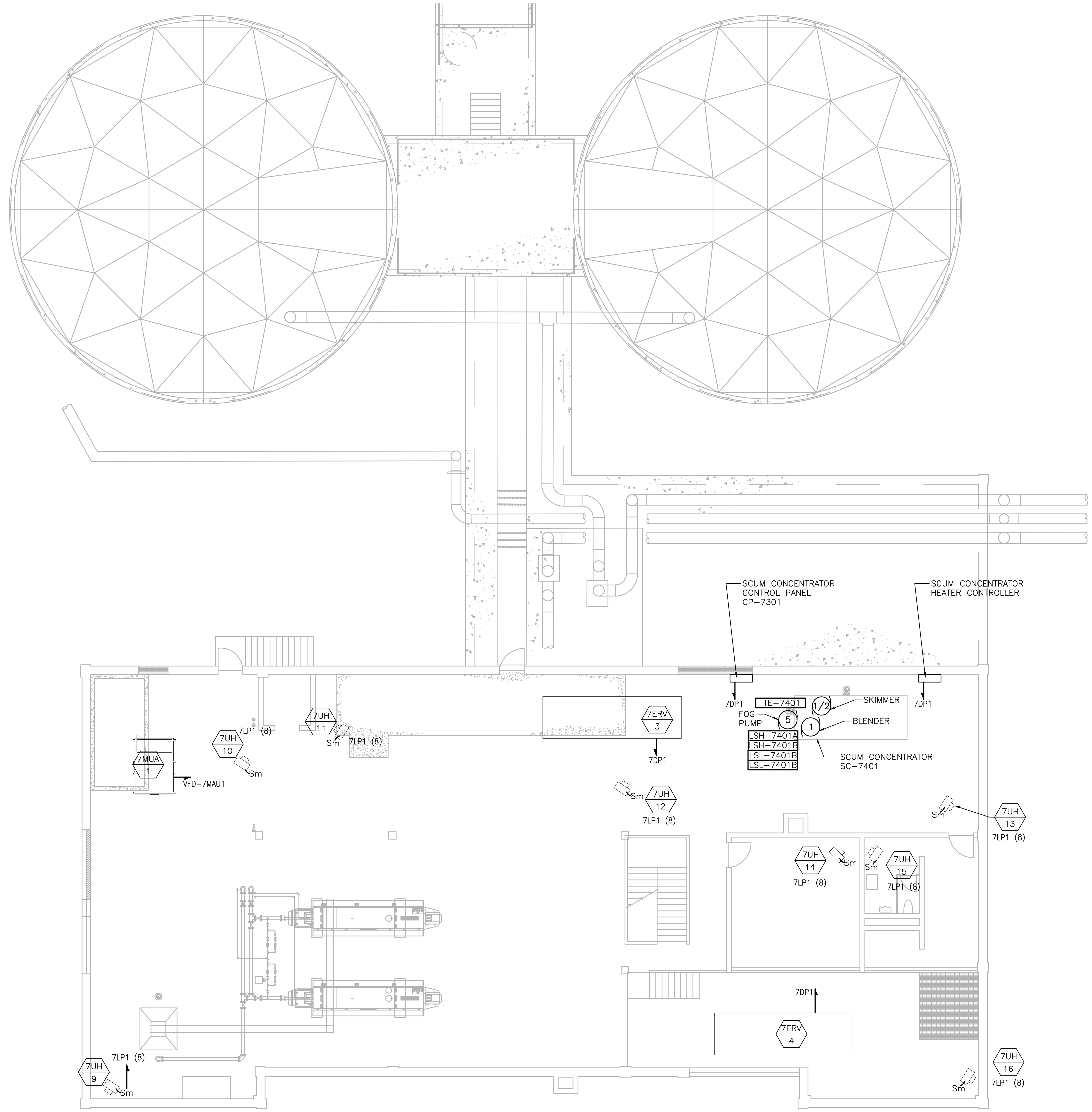
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-7.5



SECOND FLOOR - PLAN

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

PREPARED BY

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COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
ELECTRICAL
No. 40999
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Braintree, Massachusetts 02184
617 328-9215
web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical
Solids Handling Building
Second Floor
New Work
Power Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

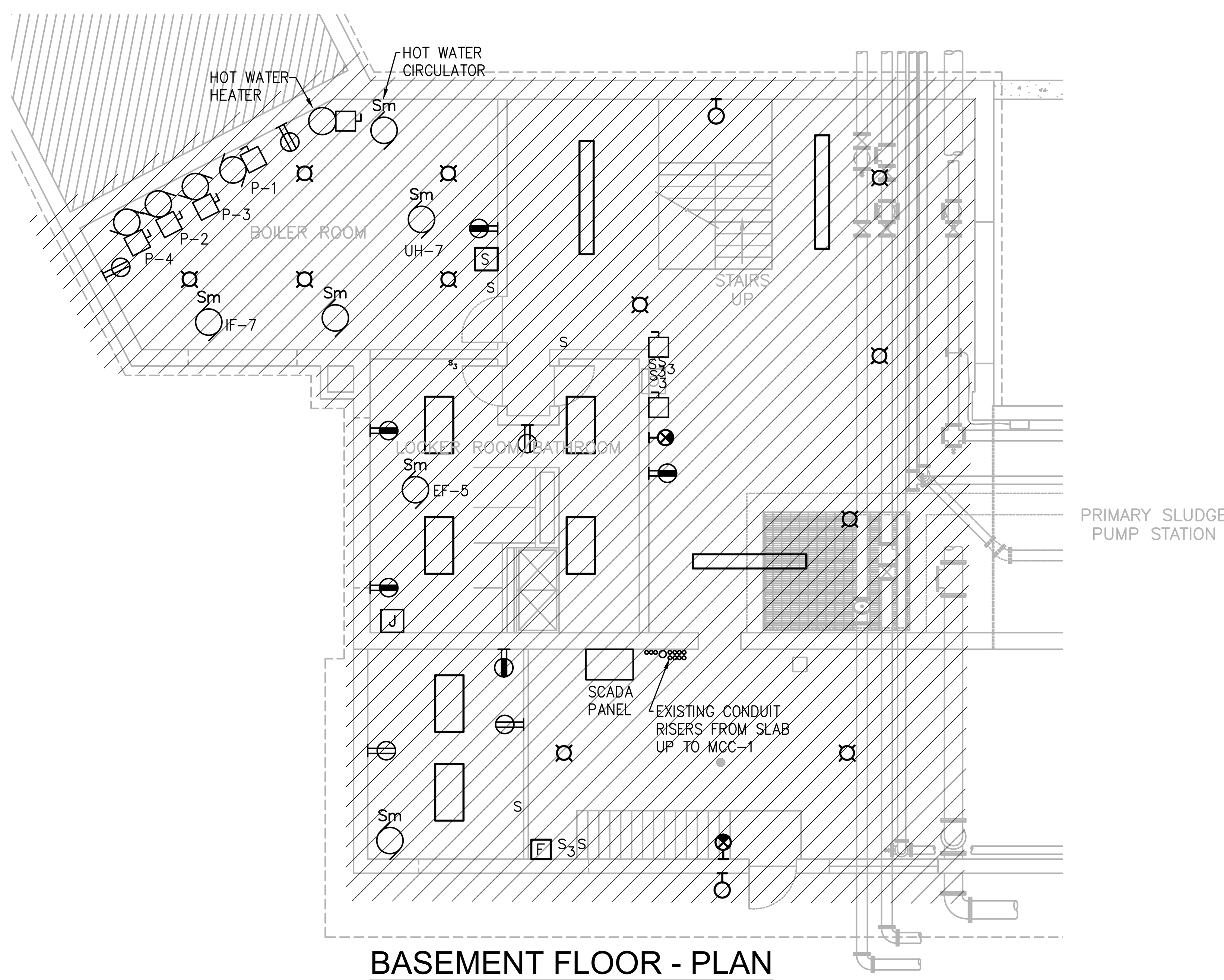
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-7.6



BASEMENT FLOOR - PLAN

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

PREPARED BY

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MICHAEL J. COTTER
ELECTRICAL
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web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Demolition Control & Admin. Building Basement Plan

NO.	REVISIONS	DATE

DRAWN BY: RLB

DESIGNED BY: MC

CHECKED BY: MC

ISSUE DATE: 7/2/21

BETA JOB NO.: 6050

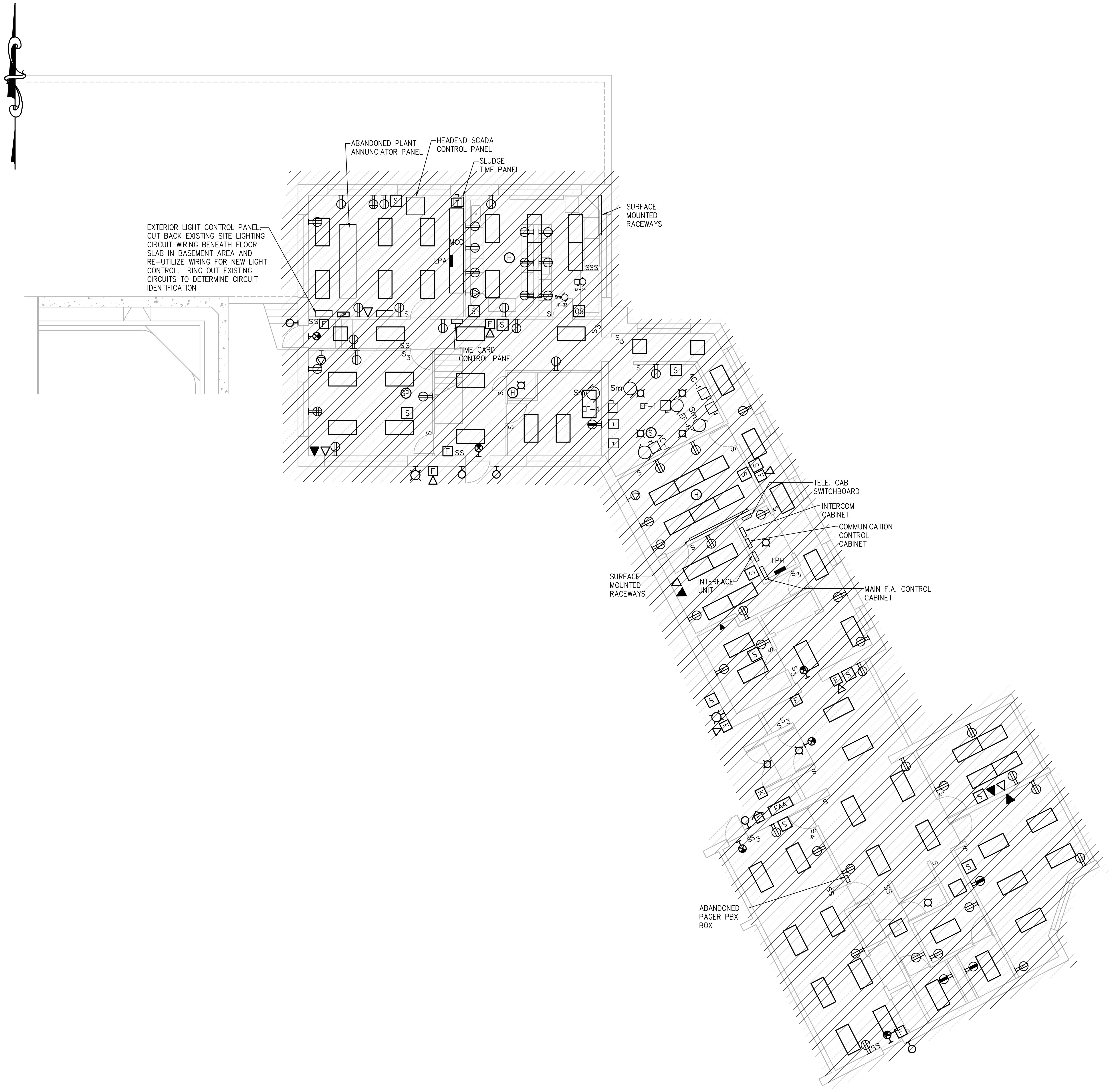
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-9.1



FIRST FLOOR - PLAN

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

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
ELECTRICAL
No. 40999
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web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Demolition Control & Admin. Building First Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

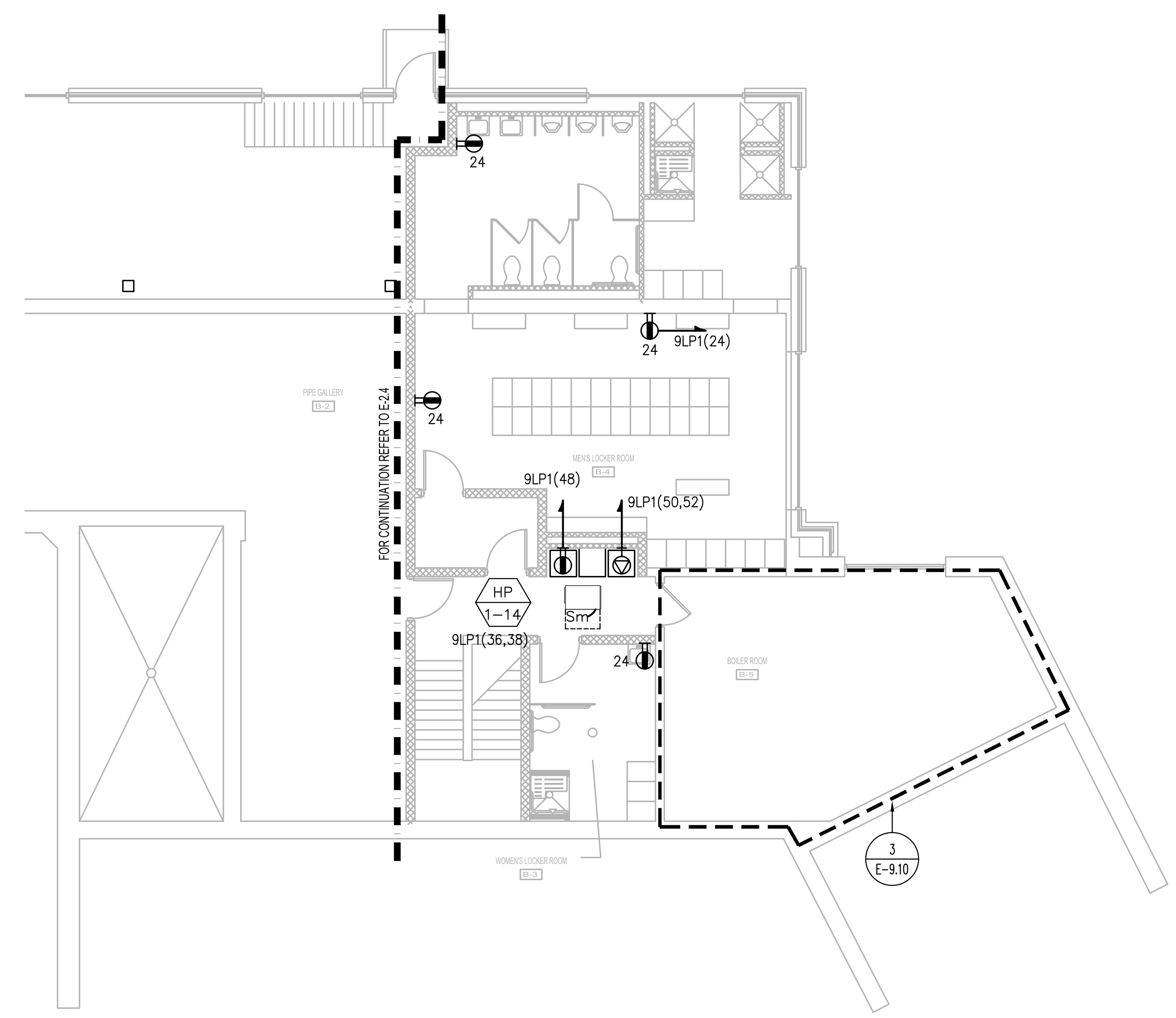
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-9.2



BASEMENT FLOOR - PLAN

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

PREPARED BY

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150 Grossman Drive, Suite 309
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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Control & Admin. Building Basement Power Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

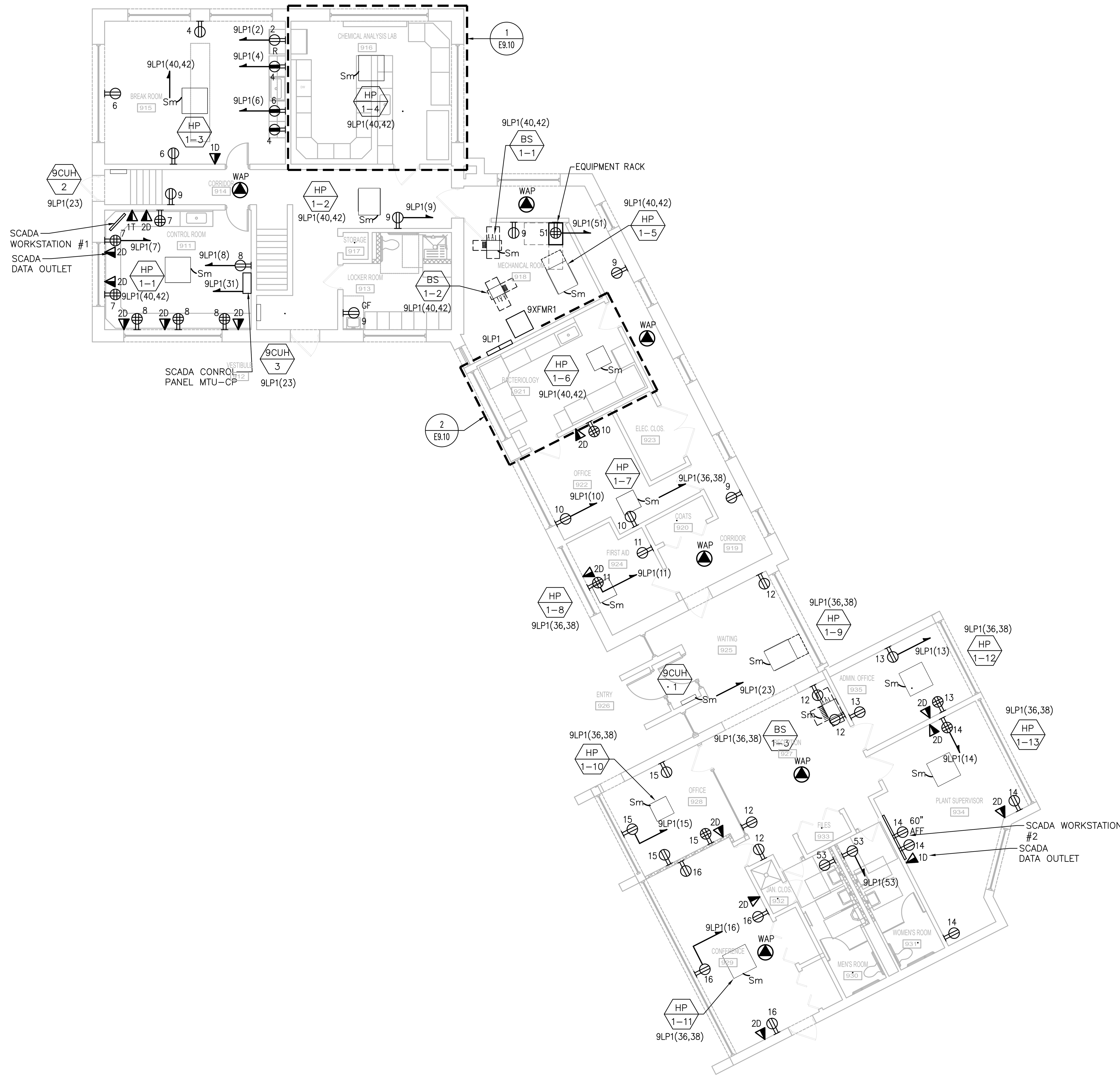
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-9.3



FIRST FLOOR - PLAN

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

PREPARED BY

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REGISTERED PROFESSIONAL

COMMONWEALTH OF MASSACHUSETTS
MICHAEL J. COTTER
ELECTRICAL
No. 40999
REGISTERED PROFESSIONAL ENGINEER

SUBCONSULTANT

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web: www.sar.com

PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Control & Admin. Building First Floor Power Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

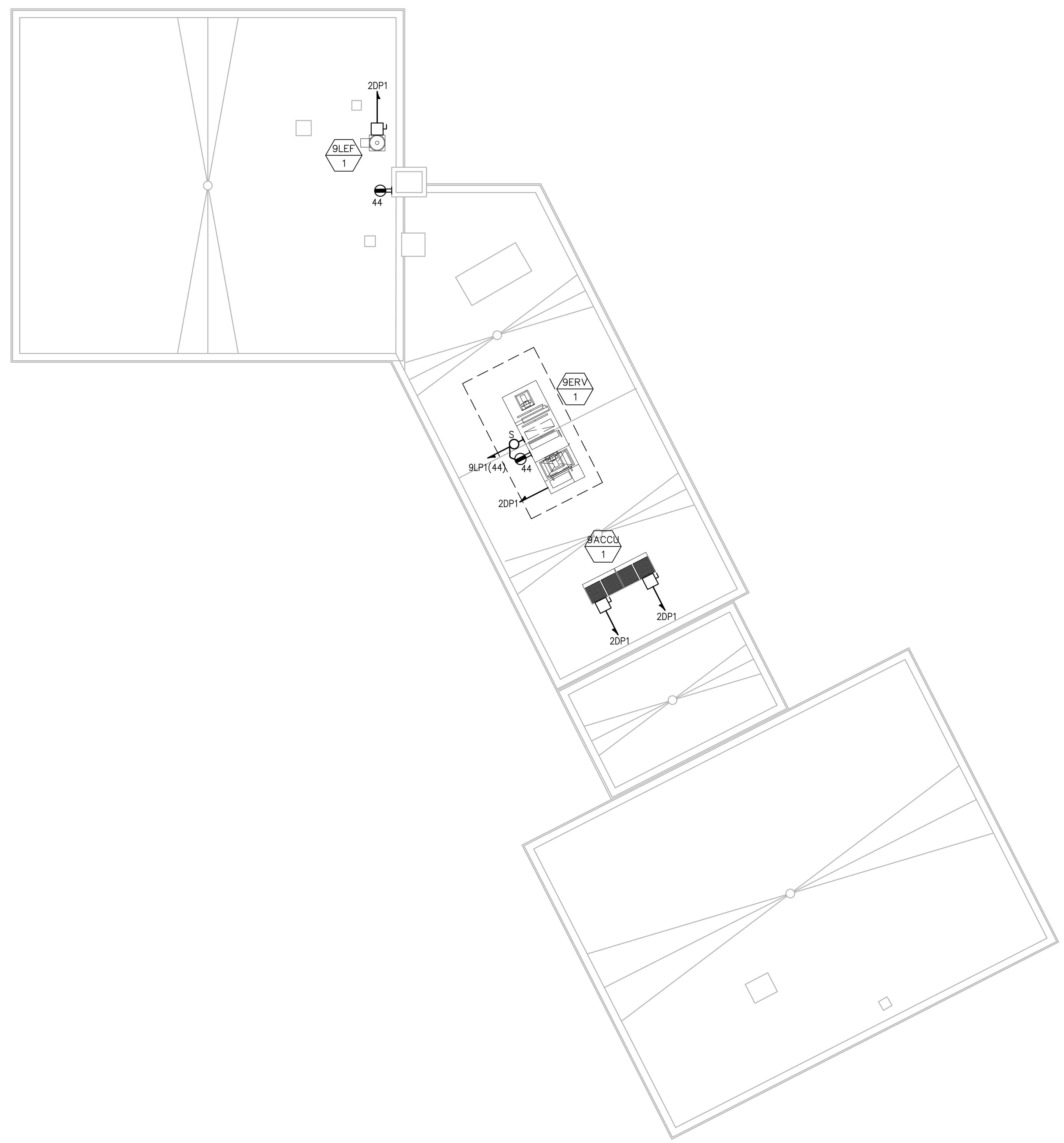
SCALE

AS SHOWN

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

SHEET NO.

E-9.4



ROOF - PLAN

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

PREPARED BY

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Control & Admin. Building Roof Power Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

AS SHOWN

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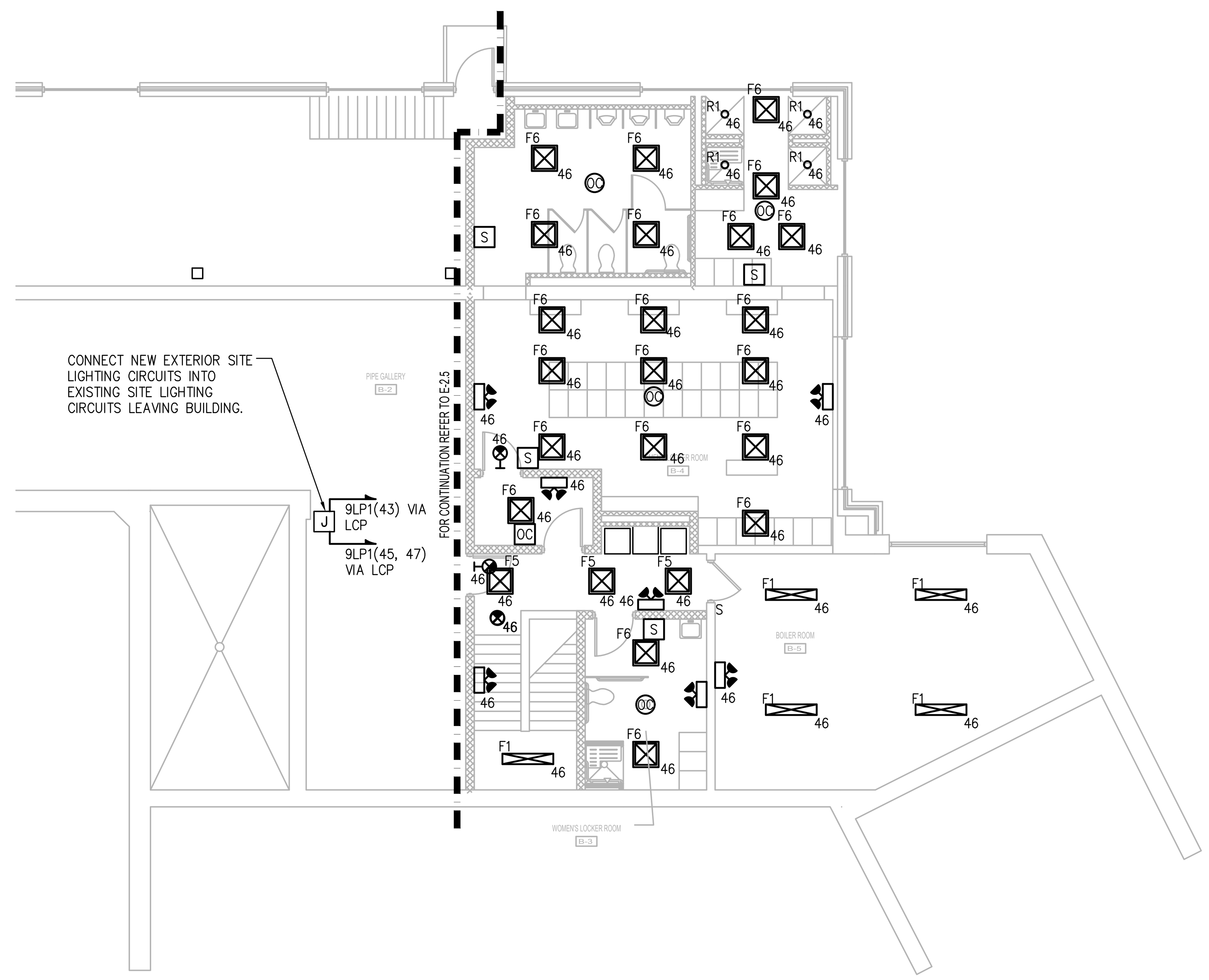
SHEET NO.

E-9.5



BASEMENT FLOOR - PLAN

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

PREPARED BY

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Control & Admin. Building Basement Lighting Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

AS SHOWN

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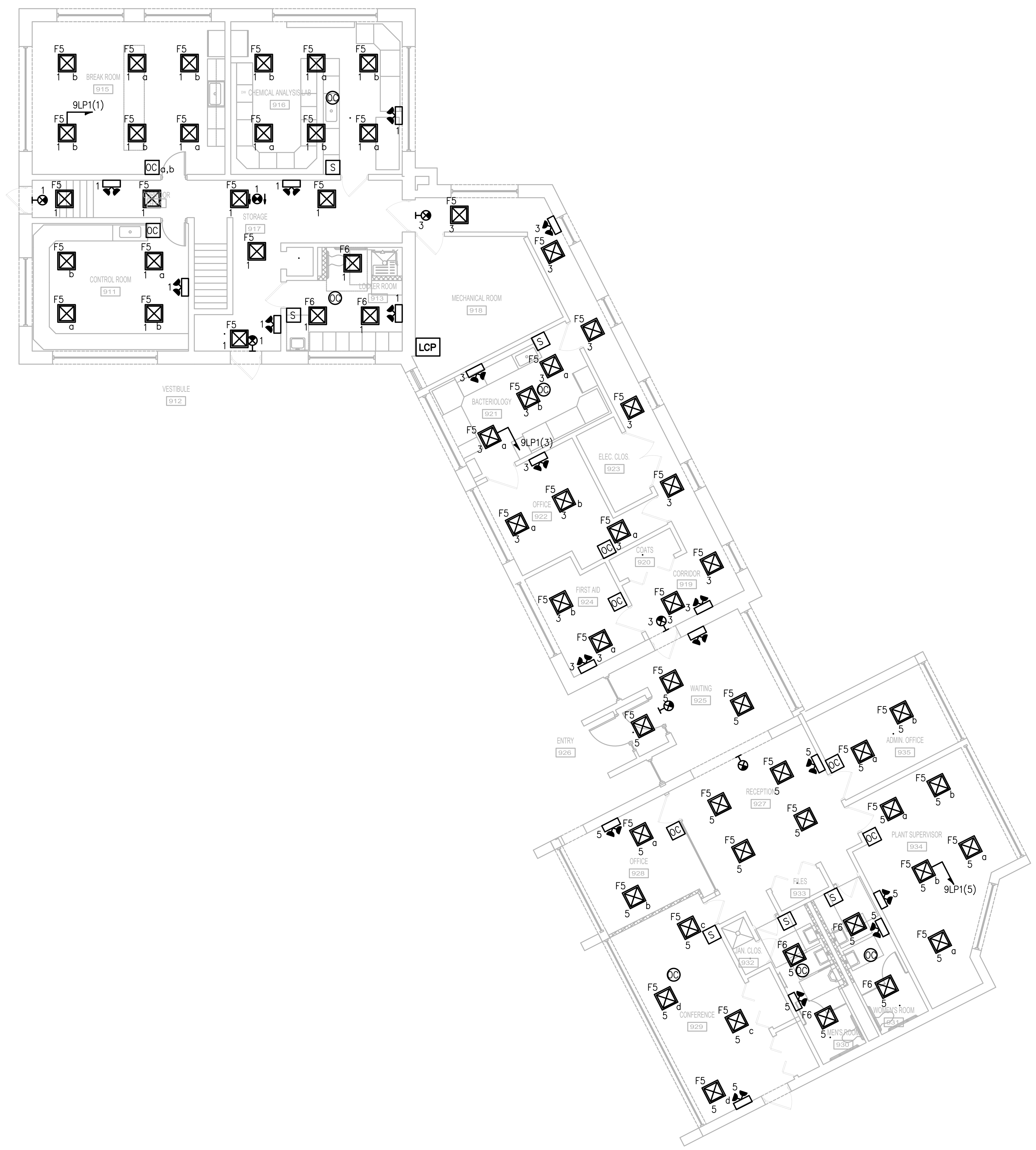
SHEET NO.

E-9.6



FIRST FLOOR - PLAN

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

PREPARED BY

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Control & Admin. Building First Floor Lighting Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

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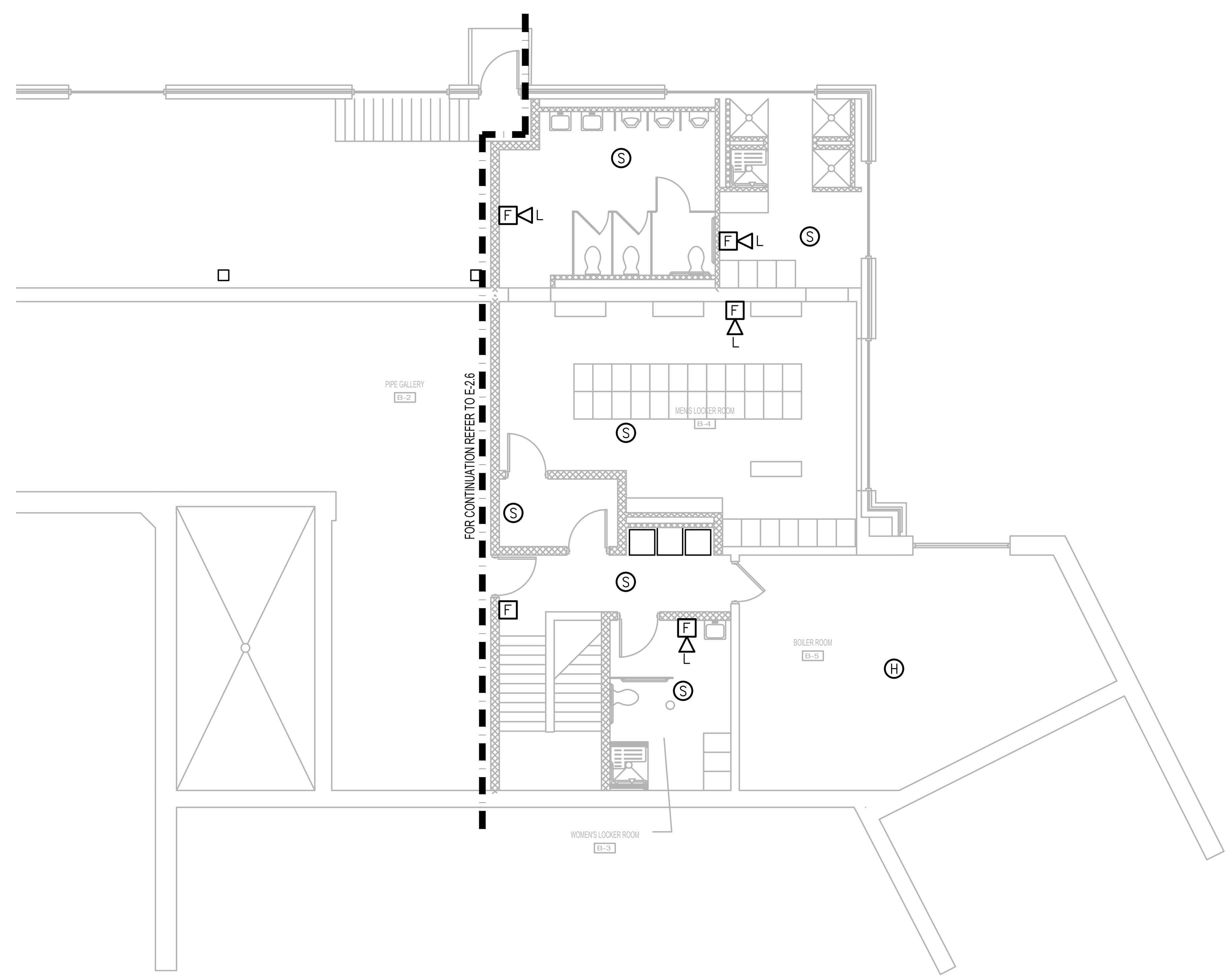
SHEET NO.

E-9.7



BASEMENT FLOOR - PLAN
SCALE: 1/8"= 1'-0"

PREPARED BY

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Control & Admin. Building Basement Fire Alarm Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

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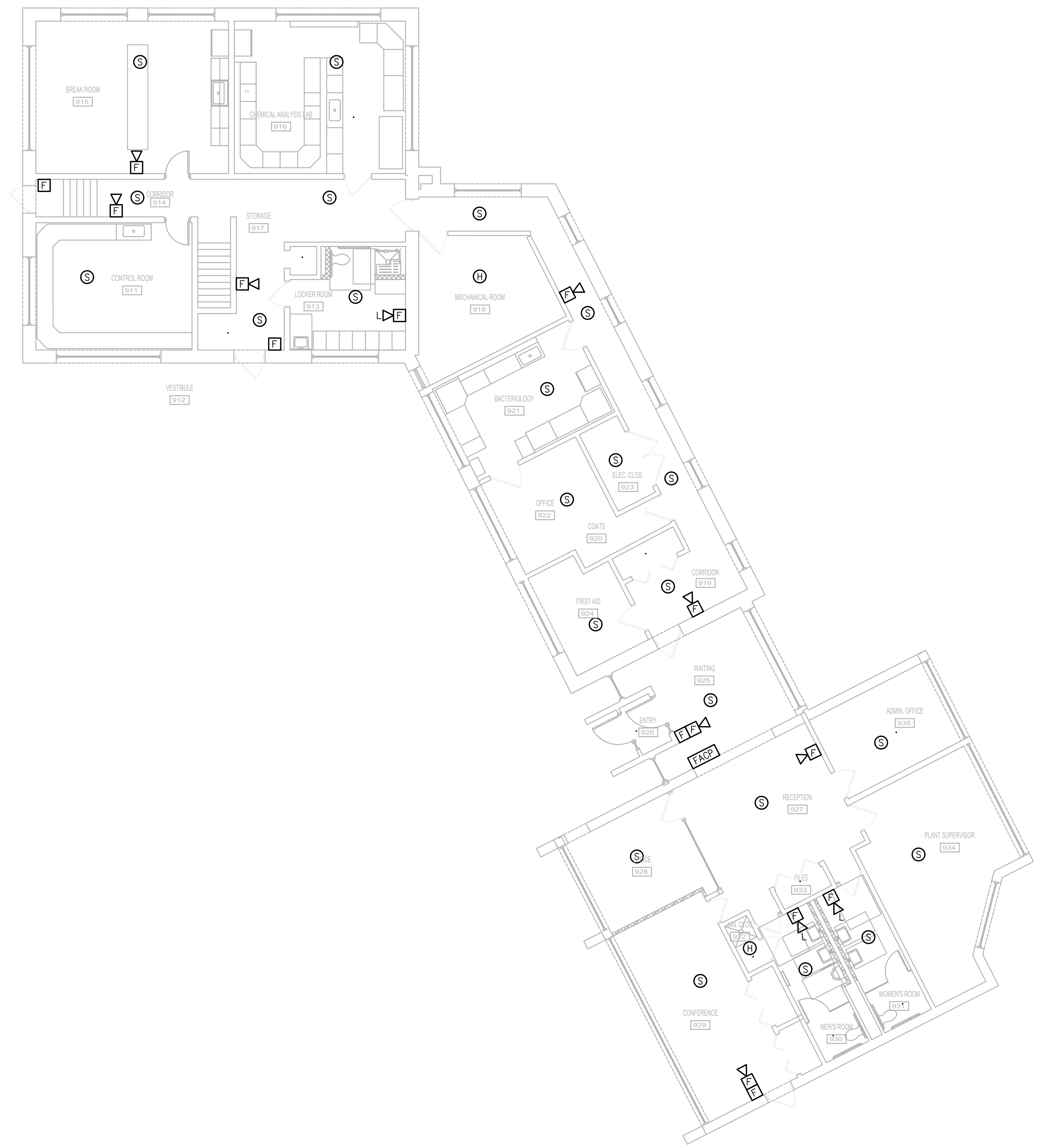
SHEET NO.

E-9.8



FIRST FLOOR - PLAN
SCALE: 1/8"= 1'-0"

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PROJECT
Taunton Wastewater Treatment Facility Improvements Phase 1
Taunton, MA

TITLE
Electrical Control & Admin. Building First Floor Fire Alarm Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE
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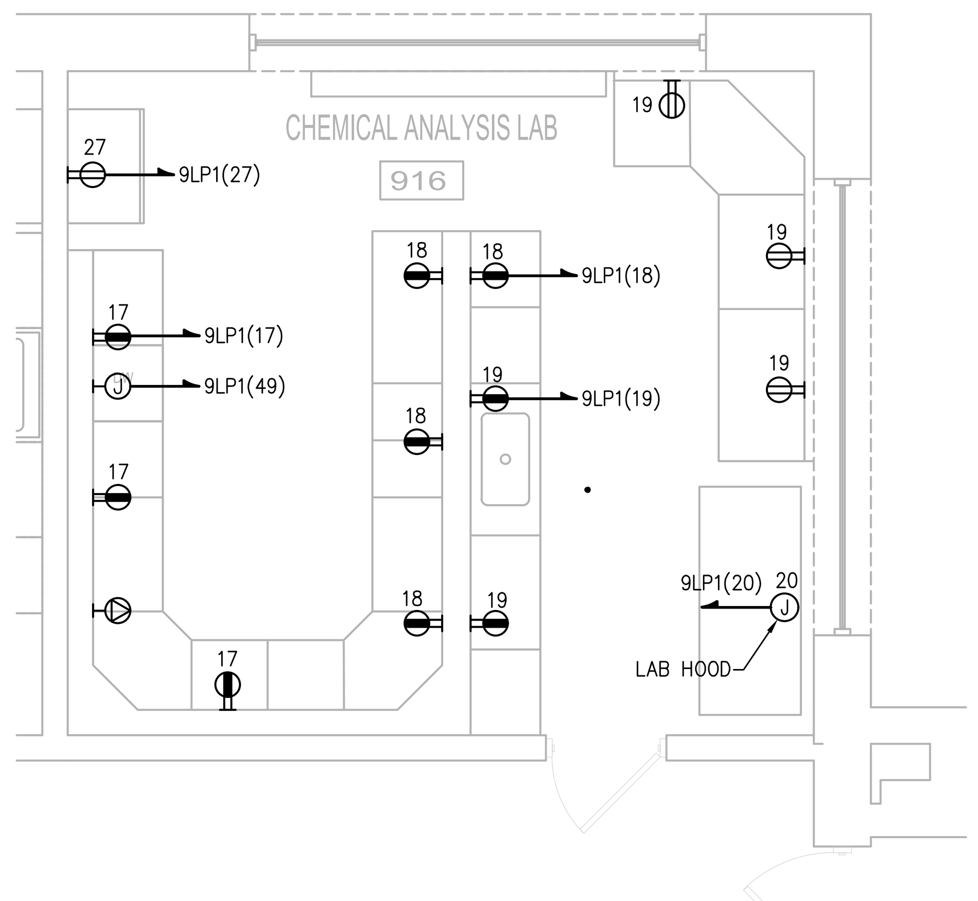
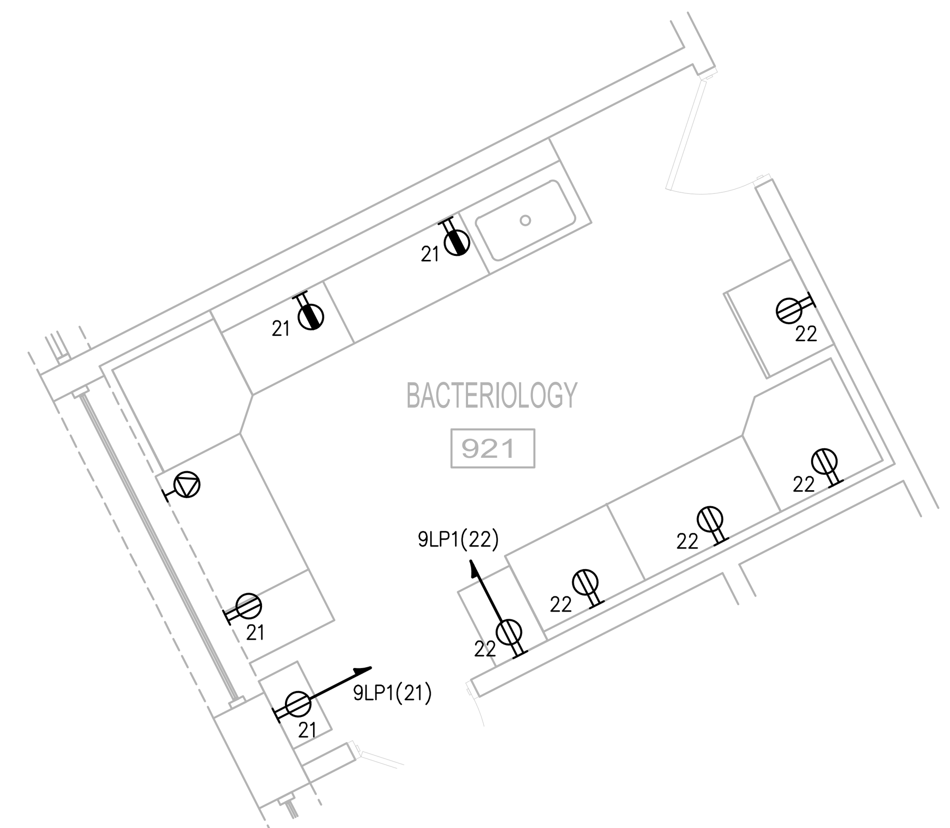
SHEET NO.
E-9.9

6/30/2021 10:32 AM W:\T-PROJECTS\T-18009.00 - TAUNTON WWTF UPGRADES\ELECTRICAL DEPARTMENT\18009.00 ELEC CONTROL-ADMIN BUILDING-PHASE 1.DWG (BETA STB BW.STB)



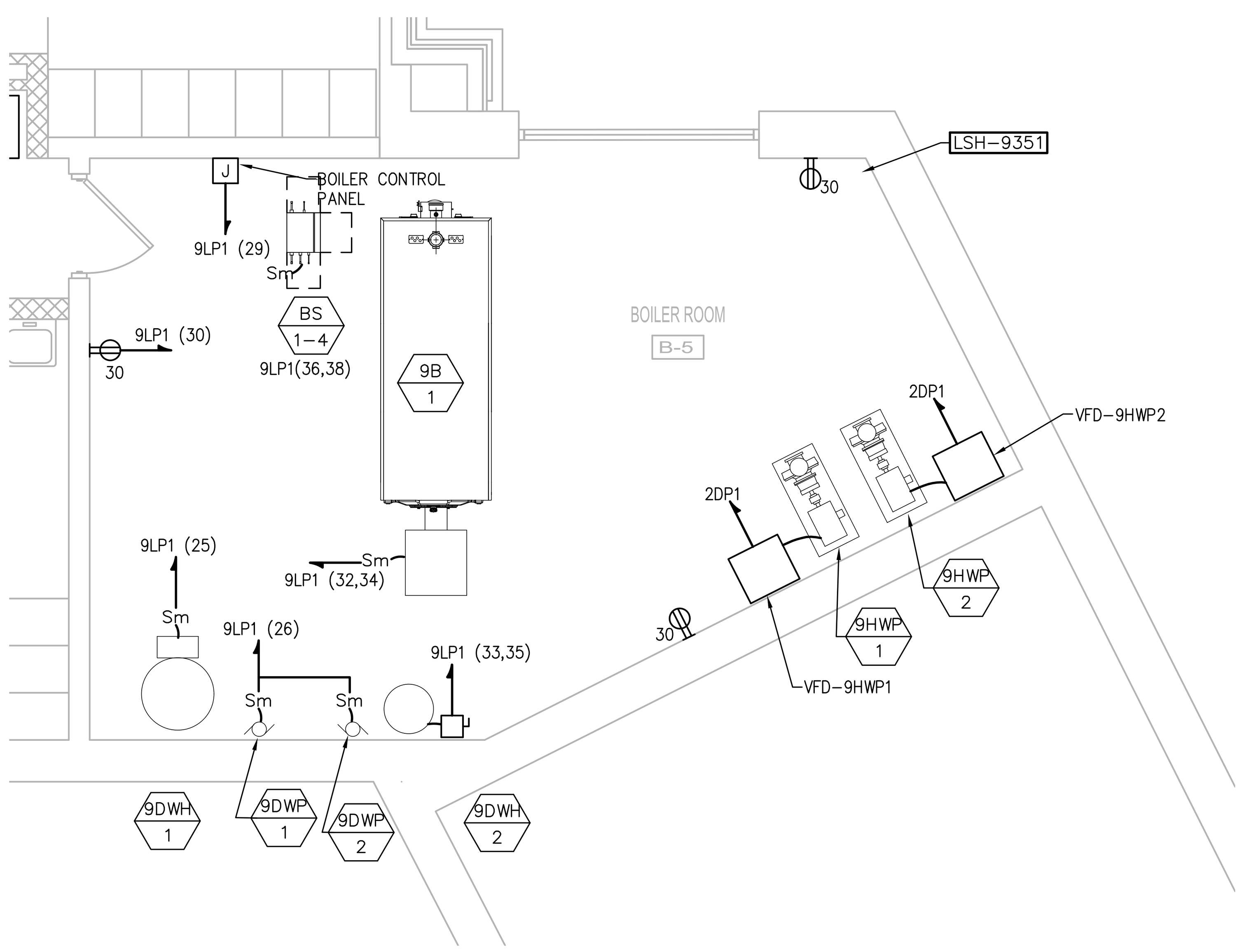
CHEMICAL ANALYSIS LAB PART PLAN

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



BACTERIOLOGY PART PLAN

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



BOILER ROOM PART PLAN

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

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Part Plans

NO.	REVISIONS	DATE

DRAWN BY:	RLB
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ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

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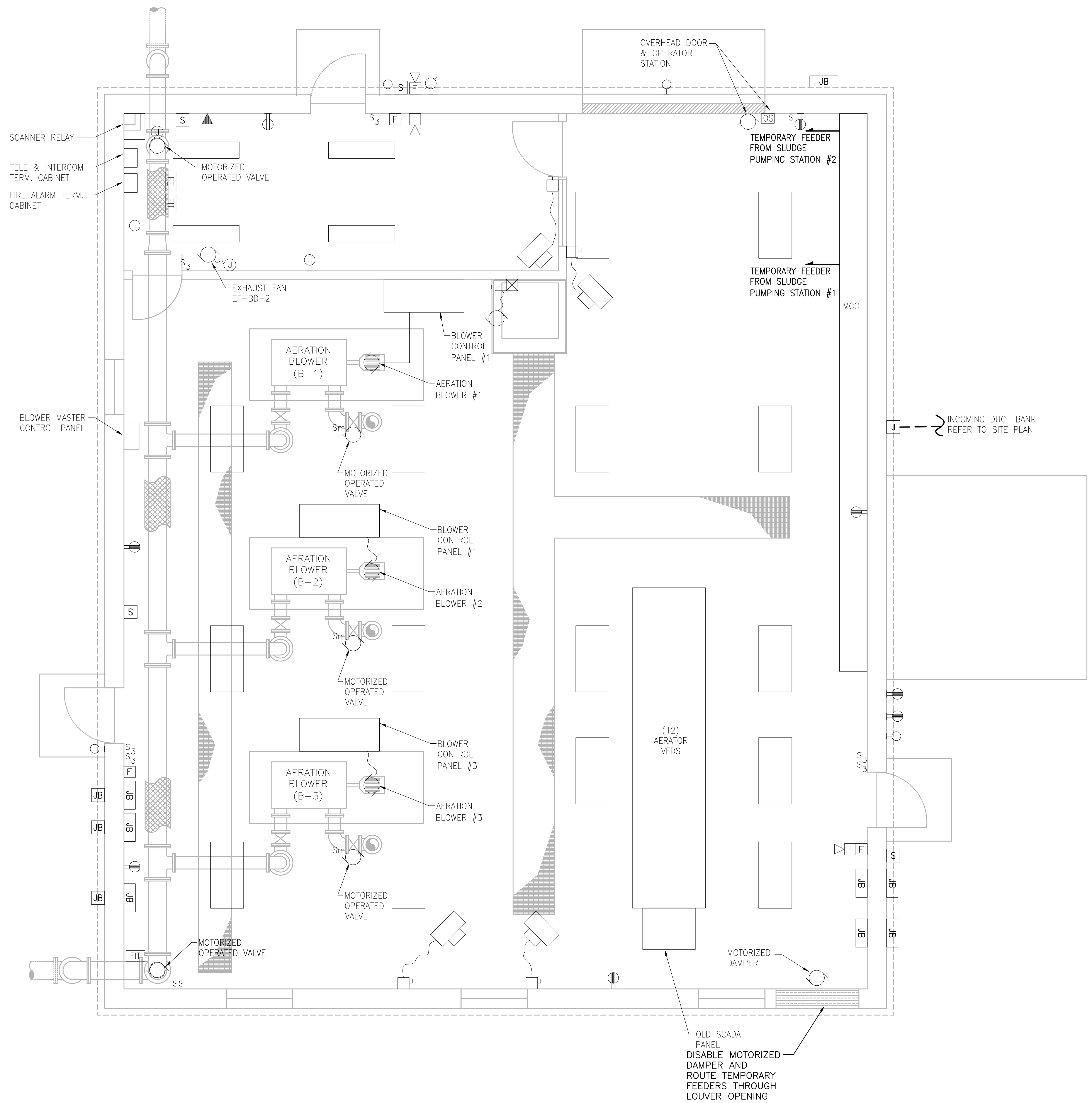
SHEET NO.

E-9.10



PLAN

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

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PROJECT

Taunton Wastewater Treatment Facility Improvements Phase 1

Taunton, MA

TITLE

Electrical Existing Blower Building Plan

NO.	REVISIONS	DATE

DRAWN BY:	RLB
DESIGNED BY:	MC
CHECKED BY:	MC
ISSUE DATE:	7/2/21
BETA JOB NO.:	6050

SCALE

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E-9.11