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ColorTable: gshade.ctb
Model: Layout1
LAST SAVED BY: jtelevre

South Valley Water Reclamation Facility

Drawings for the Construction of

PROJECT 5

MARCH 2019

VOLUME 5

REV	DATE	BY	DESCRIPTION

DESIGNED JD
DRAWN KHB
CHECKED RWB/JD
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
No. 4775621-2202
BRAD D. JEPPSON
STATE OF UTAH

carollo

South Valley
WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
GENERAL
COVER SHEET

VERIFY SCALES
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JOB NO. 10548A.10
DRAWING NO. G-01
SHEET NO. 1 OF 159

Plot Date: 28-FEB-2019 11:48:50 AM
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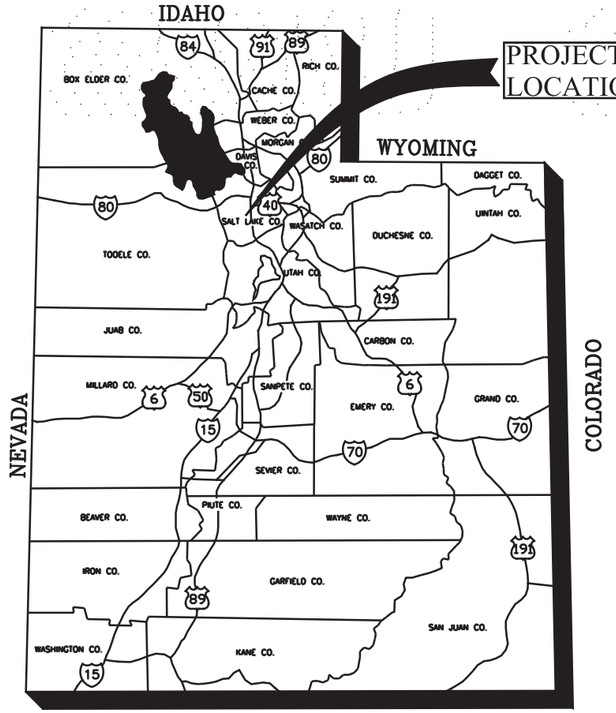
LAST SAVED BY: dscheele



PROJECT LOCATION MAP
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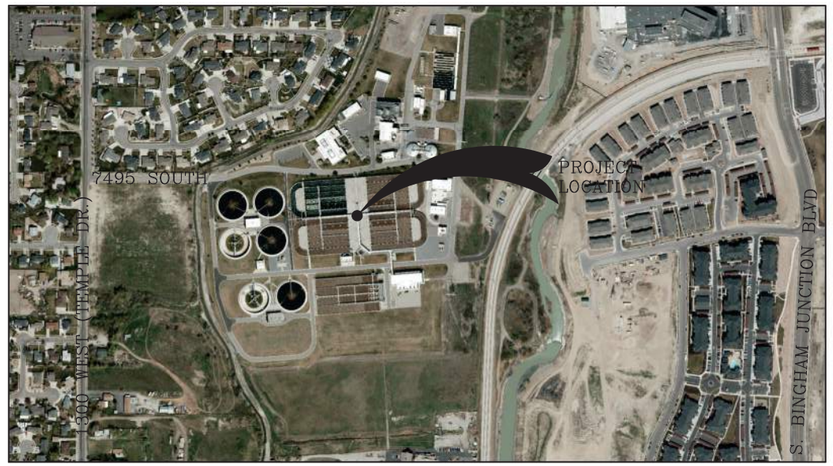

VICINITY MAP
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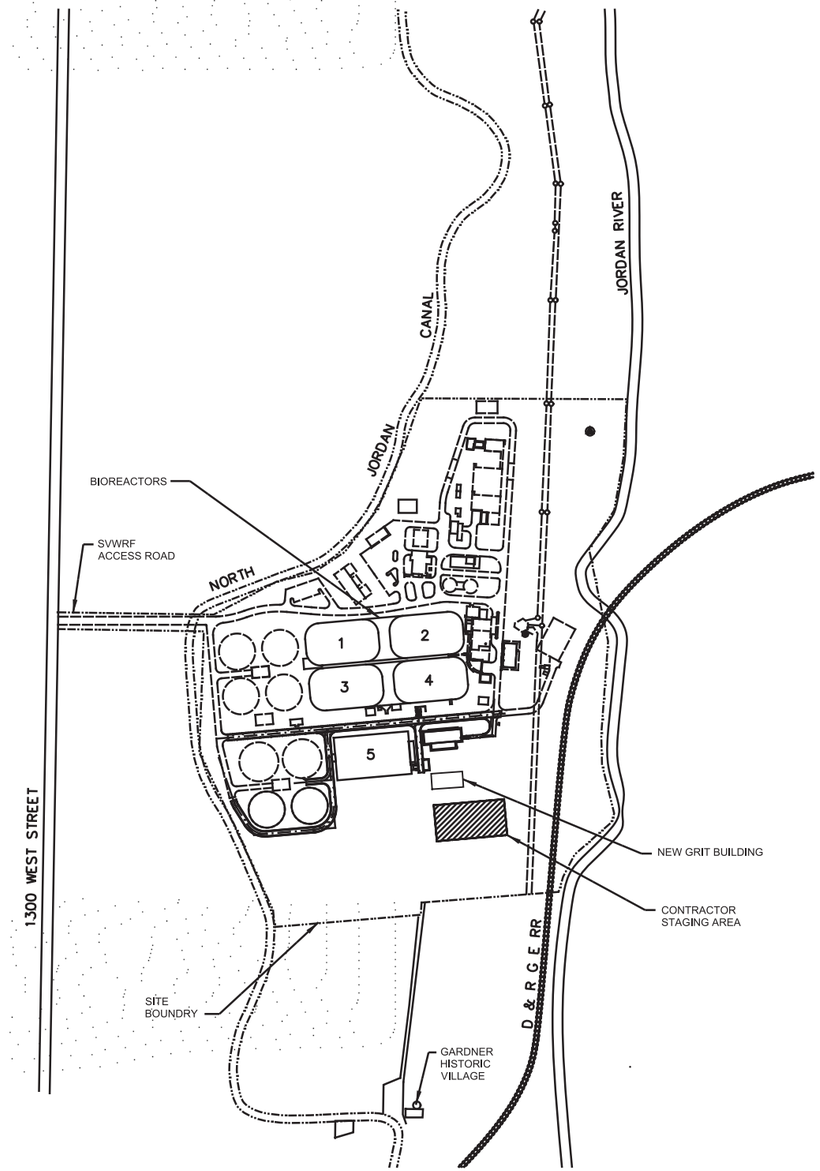

SITE MAP
NO SCALE

REV	DATE	BY	DESCRIPTION

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DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER — No. 9039577-2202 — JAMES W. DIXON — STATE OF UTAH

REGISTERED PROFESSIONAL ENGINEER — No. 4771621-2202 — BRAD D. JEPPSON — STATE OF UTAH

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South Valley WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
GENERAL
LOCATION, VICINITY AND SITE MAPS

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JOB NO. 10548A.10
DRAWING NO. G-02
SHEET NO. 2 OF 159

SHEET NUMBER	DRAWING NUMBER	TITLE
		GENERAL
1	G-01	COVER SHEET
2	G-02	LOCATION, VICINITY AND SITE MAPS
3	G-03	SHEET INDEX
		ELECTRICAL
4	GE-01	ELECTRICAL LEGEND
5	GE-02	ELECTRICAL ABBREVIATIONS
6	GE-03	ELECTRICAL TYPICAL DETAILS 1
7	GE-04	ELECTRICAL TYPICAL DETAILS 2
8	GE-05	ELECTRICAL TYPICAL DETAILS 3
9	GE-06	ELECTRICAL TYPICAL DETAILS 4
10	GE-07	ELECTRICAL TYPICAL DETAILS 5
11	GE-08	ELECTRICAL TYPICAL DETAILS 6
12	GE-09	ELECTRICAL TYPICAL DETAILS 7
13	GE-SC-01	PANELBOARD SCHEDULES - I
14	GE-SC-02	PANELBOARD SCHEDULES - II
15	GE-SC-03	LUMINAIRE, DISCONNECT AND MANHOLE SCHEDULE
16	GE-OL-ES5-1	ES-5 ELEVATION
17	GE-OL-ES5-2	ES-5 ONE-LINE DIAGRAM - I
18	GE-OL-ES5-3	ES-5 ONE-LINE DIAGRAM - II
19	GE-OL-ES5-4	ES-5 ONE-LINE DIAGRAM - III
20	GE-OL-ES5-5	ES-5 ONE-LINE DIAGRAM - IV
21	GE-OL-ES5-6	ES-5 ONE-LINE DIAGRAM - V
22	GE-OL-16-1	BR-MCC-2 REVISED ELEVATION
23	GE-OL-16-2	BR-MCC-2 REVISED ONE-LINE DIAGRAM - I
24	GE-OL-16-3	BR-MCC-2 REVISED ONE-LINE DIAGRAM - II
25	GE-OL-16-4	BR-MCC-2 REVISED ONE-LINE DIAGRAM - III
26	GE-OL-16-5	BR-MCC-3 REVISED ELEVATION
27	GE-OL-16-6	BR-MCC-3 REVISED ONE-LINE DIAGRAM - I
28	GE-OL-16-7	BR-MCC-3 REVISED ONE-LINE DIAGRAM - II
29	GE-OL-16-8	BR-MCC-3 REVISED ONE-LINE DIAGRAM - III
30	GE-OL-16-9	BR-MCC-4 REVISED ELEVATION
31	GE-OL-16-10	BR-MCC-4 REVISED ONE-LINE DIAGRAM - I
32	GE-OL-16-11	BR-MCC-4 REVISED ONE-LINE DIAGRAM - II
33	GE-OL-16-12	BR-MCC-4 REVISED ONE-LINE DIAGRAM - III
34	GE-OL-16-13	BR-MCC-2A ELEVATION
35	GE-OL-16-14	BR-MCC-2A ONE-LINE DIAGRAM - I
36	GE-OL-16-15	BR-MCC-2A ONE-LINE DIAGRAM - II
37	GE-OL-16-16	BR-MCC-3A ELEVATION
38	GE-OL-16-17	BR-MCC-3A ONE-LINE DIAGRAM - I
39	GE-OL-16-18	BR-MCC-3A ONE-LINE DIAGRAM - II
40	GE-OL-16-19	BR-MCC-4A ELEVATION
41	GE-OL-16-20	BR-MCC-4A ONE-LINE DIAGRAM - I
42	GE-OL-16-21	BR-MCC-4A ONE-LINE DIAGRAM - II
43	GE-OL-21-1	GRB-MCC-1 ELEVATION
44	GE-OL-21-2	GRB-MCC-1 ONE-LINE DIAGRAM - I
45	GE-OL-21-3	GRB-MCC-1 ONE-LINE DIAGRAM - II
46	GE-OL-21-4	GRB-MCC-1 ONE-LINE DIAGRAM - III
47	GE-OL-SG-1	SG-EDA ONE-LINE DIAGRAM MODIFICATIONS
48	GE-SE-01	OVERALL SITE PLAN
49	GE-SE-18	SITE PLAN AREA 18
50	GE-SE-19	SITE PLAN AREA 19
51	GE-SE-37	DUCT BANK SECTIONS
52	E11-1	EMERGENCY GENERATOR BUILDING PLAN
53	E13-1	BLOWER BUILDING NO. 3 PARTIAL PLAN
54	E16-1	BIOREACTOR 1-4 SITE PLAN
55	E16-2	BIOREACTOR 1 POWER PLAN
56	E16-3	BIOREACTOR 2 POWER PLAN
57	E16-4	BIOREACTOR 3 POWER PLAN
58	E16-5	BIOREACTOR 4 POWER PLAN
59	E16-7	BIOREACTOR 2 CONTROL PLAN
60	E16-8	BIOREACTOR 3 CONTROL PLAN
61	E16-9	BIOREACTOR 4 CONTROL PLAN
62	E16-10	BIOREACTOR MCC POWER CENTERS PLAN
63		NOT USED
64	E16-12	BIOREACTOR WIREWAY SECTION
65	E16-13	BIOREACTOR NO. 5 ELECTRICAL ROOM PLAN
66	E21-1	GRIT REMOVAL BUILDING LOWER LEVEL UNDERGROUND POWER AND CONTROL PLAN
67	E21-2	GRIT REMOVAL BUILDING LOWER LEVEL POWER AND CONTROL DETAIL
68	E21-3	GRIT REMOVAL BUILDING LOWER LEVEL OVERHEAD POWER AND CONTROL PLAN
69	E21-4	GRIT REMOVAL BUILDING UPPER LEVEL POWER AND CONTROL PLAN
70	E21-5	GRIT REMOVAL BUILDING LOWER LEVEL LIGHTING AND GROUNDING PLAN
71	E21-6	GRIT REMOVAL BUILDING UPPER LEVEL LIGHTING AND GROUNDING PLAN
72	E21-7	BIOFILTER ELECTRICAL PLAN

SHEET NUMBER	DRAWING NUMBER	TITLE
		INSTRUMENTATION
73	GI-01	SYMBOLS AND ABBREVIATIONS - I
74	GI-02	SYMBOLS AND ABBREVIATIONS - II
75	GI-03	SYMBOLS AND ABBREVIATIONS - III
76	GI-04	SYMBOLS AND ABBREVIATIONS - IV
77	GI-05	SCHEMATIC SYMBOLS
78	GI-06	INSTRUMENTATION TYPICAL DETAIL 1
79	GI-07	INSTRUMENTATION TYPICAL DETAIL 2
80	GI-09	INSTRUMENTATION TYPICAL DETAIL 4
81	GI-10	INSTRUMENTATION TYPICAL DETAIL 5
82	GI-11	INSTRUMENTATION TYPICAL DETAIL 6
83	GI-12	CONTROL SYSTEM BLOCK DIAGRAM - I
84	GI-13	CONTROL SYSTEM BLOCK DIAGRAM - II
85	GI-14	CONTROL SYSTEM BLOCK DIAGRAM - III
86	GI-15	BIOREACTORS NO. 2 AND NO. 3 VALVE NETWORKS
87	GI-16	BIOREACTOR NO. 4 AND GRIT BASIN VALVE NETWORKS
88	GI-17	BIOREACTOR ANALYZER NETWORKS
89	GI-18	PCM-600A EXTERNAL ELEVATION
90	GI-19	PCM-600A INTERNAL ELEVATION
91	GI-20	PCM-2100 EXTERNAL ELEVATION
92	GI-21	PCM-2100 INTERNAL ELEVATION
93	GI-22	DIGITAL NETWORK TABLES - I
94	GI-23	DIGITAL NETWORK TABLES - II
95	GI-24	SAMPLE LOOP DRAWING
96	IS-01	CONTROL SCHEMATICS - I
97	IS-02	CONTROL SCHEMATICS - II
98	IS-03	CONTROL SCHEMATICS - III
99	IS-04	CONTROL SCHEMATICS - IV
100	IS-05	CONTROL SCHEMATICS - V
101	PI16-01	BIOREACTOR NO. 2 ZONE AN-1 P&ID
102	PI16-02	BIOREACTOR NO. 2 ZONE AN-2 & AN-3 P&ID
103	PI16-03	BIOREACTOR NO. 2 ZONE AX-1 & AX-2 P&ID
104	PI16-04	BIOREACTOR NO. 2 ZONE AX-3 P&ID
105	PI16-05	BIOREACTOR NO. 2 ZONE OX-4 P&ID
106	PI16-06	BIOREACTOR NO. 2 ZONE OX-5 P&ID
107	PI16-07	BIOREACTOR NO. 2 ZONE OX-6 P&ID
108	PI16-08	BIOREACTOR NO. 2 ZONE OX-7 P&ID
109	PI16-09	BIOREACTOR NO. 2 ZONE OX-8 P&ID
110	PI16-10	BIOREACTOR NO. 2 ZONE OX-9 P&ID
111	PI16-11	BIOREACTOR NO. 2 ZONE OX-10 PART 1 P&ID
112	PI16-12	BIOREACTOR NO. 2 ZONE OX-10 PART 2 P&ID
113	PI16-13	BIOREACTOR NO. 2 AIR DISTRIBUTION P&ID
114	PI16-14	BIOREACTOR NO. 3 ZONE AN-1 P&ID
115	PI16-15	BIOREACTOR NO. 3 ZONE AN-2 & AN-3 P&ID
116	PI16-16	BIOREACTOR NO. 3 ZONE AX-1 & AX-2 P&ID
117	PI16-17	BIOREACTOR NO. 3 ZONE AX-3 P&ID
118	PI16-18	BIOREACTOR NO. 3 ZONE OX-4 P&ID
119	PI16-19	BIOREACTOR NO. 3 ZONE OX-5 P&ID
120	PI16-20	BIOREACTOR NO. 3 ZONE OX-6 P&ID
121	PI16-21	BIOREACTOR NO. 3 ZONE OX-7 P&ID
122	PI16-22	BIOREACTOR NO. 3 ZONE OX-8 P&ID
123	PI16-23	BIOREACTOR NO. 3 ZONE OX-9 P&ID
124	PI16-24	BIOREACTOR NO. 3 ZONE OX-10 PART 1 P&ID

SHEET NUMBER	DRAWING NUMBER	TITLE
		INSTRUMENTATION CONTINUED
125	PI16-25	BIOREACTOR NO. 3 ZONE OX-10 PART 2 P&ID
126	PI16-26	BIOREACTOR NO. 3 AIR DISTRIBUTION P&ID
127	PI16-27	BIOREACTOR NO. 4 ZONE AN-1 P&ID
128	PI16-28	BIOREACTOR NO. 4 ZONE AN-2 & AN-3 P&ID
129	PI16-29	BIOREACTOR NO. 4 ZONE AX-1 & AX-2 P&ID
130	PI16-30	BIOREACTOR NO. 4 ZONE AX-3 P&ID
131	PI16-31	BIOREACTOR NO. 4 ZONE OX-4 P&ID
132	PI16-32	BIOREACTOR NO. 4 ZONE OX-5 P&ID
133	PI16-33	BIOREACTOR NO. 4 ZONE OX-6 P&ID
134	PI16-34	BIOREACTOR NO. 4 ZONE OX-7 P&ID
135	PI16-35	BIOREACTOR NO. 4 ZONE OX-8 P&ID
136	PI16-36	BIOREACTOR NO. 4 ZONE OX-9 P&ID
137	PI16-37	BIOREACTOR NO. 4 ZONE OX-10 PART 1 P&ID
138	PI16-38	BIOREACTOR NO. 4 ZONE OX-10 PART 2 P&ID
139	PI16-39	BIOREACTOR NO. 4 AIR DISTRIBUTION P&ID
140	PI16-40	BIOREACTORS MISCELLANEOUS SIGNALS P&ID
141	PI21-01	GRIT BASIN NO. 1 P&ID
142	PI21-02	GRIT BASIN NO. 2 P&ID
143	PI21-03	GRIT BASIN NO. 3 P&ID
144	PI21-04	GRIT PUMPS NO. 1 & 2 P&ID
145	PI21-05	GRIT PUMPS NO. 3 & 4 P&ID
146	PI21-06	GRIT PUMPS NO. 5 & 6 P&ID
147	PI21-07	GRIT WASHER NO. 1 P&ID
148	PI21-08	GRIT WASHER NO. 2 P&ID
149	PI21-09	GRIT WASHER NO. 3 P&ID
150	PI21-10	GRIT REMOVAL BUILDING ODOR CONTROL P&ID - 1
151	PI21-11	GRIT REMOVAL BUILDING ODOR CONTROL P&ID - 2
152	PI21-12	GRIT REMOVAL BUILDING FIRE ALARM SYSTEM P&ID
153	PI21-13	GRIT REMOVAL BUILDING GAS DETECTION P&ID
154	PI21-14	GRIT REMOVAL BUILDING MISCELLANEOUS SIGNALS P&ID
155	PI21-15	GRIT REMOVAL BUILDING HVAC P&ID - I
156	PI21-16	GRIT REMOVAL BUILDING HVAC P&ID - II
157	PI21-17	GRIT REMOVAL BUILDING HVAC P&ID - III
158	PI21-18	GRIT REMOVAL BUILDING HVAC P&ID - IV
159	PI21-19	GRIT REMOVAL BUILDING HVAC P&ID - V

REV	DATE	BY	DESCRIPTION

DESIGNED JD
DRAWN JRL
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REGISTERED PROFESSIONAL ENGINEER — No. 4775621-2202 — BRAD D. JEPPSON — STATE OF UTAH

carollo

South Valley WATER RECLAMATION FACILITY
7495 South 1300 West
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SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
GENERAL
SHEET INDEX

VERIFY SCALES
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JOB NO. 10548A.10
DRAWING NO. G-03
SHEET NO. 3 OF 159

Plot Date: 01-MAR-2019 4:22:27 PM
User: svcPW
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ColorTable: gshade.ctb
Model: Layout1
LAST SAVED BY: jlefevre

PROJECT NO. 10548A10 FILE NAME: 10548A1000G03b.dgn

ELECTRICAL PLAN SYMBOLS

IDENTIFICATION SYMBOLS

- EQUIP # — ELECTRICAL EQUIPMENT IDENTIFICATION
- PROCESS EQUIPMENT IDENTIFICATION
- INSTRUMENT IDENTIFICATION
- EQUIPMENT/INSTRUMENT LOCATOR
- LUMINAIRE IDENTIFICATION
  a = DEVICE SWITCHED FROM
  b = CIRCUIT DESIGNATION
  c = MOUNTING HEIGHT IN FEET TO BOTTOM OF FIXTURE
- XXXX — CONDUIT IDENTIFICATION
  XXXX = CONDUIT NUMBER,
  REFER TO CONDUIT SCHEDULE
- 1 — INDICATES KEYNOTE 1
  (PERTAINS ONLY TO SHEET WHERE NOTE IS FOUND)
- 1 — OPERATOR INTERFACE STATION
  1 = STATION TYPE
- EQUIPMENT ENCLOSURE

GROUNDING

- UNDERGROUND GROUND GRID #4/0 SDBC UNLESS OTHERWISE NOTED
- GROUND ROD
- GROUND ROD AND GROUND WELL
- COMPRESSION OR EXOTHERMIC GROUNDING CONNECTION

LUMINAIRES

- 2', 4', OR 8' FLUORESCENT STRIP
- 2' X 2' LAY-IN TROFFER
  REFER TO LUMINAIRE SCHEDULE
- 2' X 4' LAY-IN TROFFER
  REFER TO LUMINAIRE SCHEDULE
- LUMINAIRE POLE MOUNTED
- STROBE
  a = COLOR
  R = RED
  G = GREEN
  A = AMBER
- LUMINAIRE, EMERGENCY BATTERY-POWERED
- LUMINAIRE, EMERGENCY/EXIT BATTERY-POWERED
- LUMINAIRE, EMERGENCY BATTERY-POWERED REMOTE
- LUMINAIRE, SURFACE OR PENDANT MOUNTED
- LUMINAIRE, WALL MOUNTED
- LUMINAIRE, FLOOD/SPOT
- LUMINAIRE, EXIT ONE OR TWO FACES AS INDICATED.
  ARROW POINTS IN DIRECTION OF EGRESS.
- LUMINAIRE, WALL WASHER

SWITCHES/RECEPTACLES

- SINGLE POLE SWITCH
  a = DEVICE SWITCHED DESIGNATION
  b = CIRCUIT DESIGNATION
- IF c =
  2 = DOUBLE POLE SWITCH
  3 = THREE-WAY SWITCH
  4 = FOUR-WAY SWITCH
  K = KEY OPERATED SWITCH
  F = SWITCH AND FUSESTAT HOLDER
  P = SWITCH AND PILOT LIGHT
  T = THERMOSTAT
  D = DIMMER SWITCH
  L = LOW VOLTAGE LIGHT SWITCH
  M = MANUAL MOTOR STARTER
- OCCUPANCY SENSOR
  a = CIRCUIT DESIGNATION
  b = DEVICE SWITCHED DESIGNATION
- SWITCH AND SINGLE RECEPTACLE
  a = CIRCUIT DESIGNATION
  b = DEVICE TYPE DESIGNATION
  S = SWITCH AND SINGLE RECEPTACLE
- DUPLEX RECEPTACLE
  a = CIRCUIT DESIGNATION
  b = DEVICE TYPE DESIGNATION
- QUADRUPLEX RECEPTACLE
  a = CIRCUIT DESIGNATION
  b = DEVICE TYPE DESIGNATION
- IN FLOOR DUPLEX RECEPTACLE
  a = CIRCUIT DESIGNATION
  b = DEVICE TYPE DESIGNATION
- IN FLOOR QUADRUPLEX RECEPTACLE
  a = CIRCUIT DESIGNATION
  b = DEVICE TYPE DESIGNATION
- DUPLEX RECEPTACLE w/SPLIT WIRE
  a = CIRCUIT DESIGNATION
  b = DEVICE TYPE DESIGNATION
- WELDING OR APPLIANCE RECEPTACLE
  a = CIRCUIT DESIGNATION
  b = DEVICE TYPE DESIGNATION
- WELDING RECEPTACLE
  a = CIRCUIT DESIGNATION
  b = DISCONNECT TYPE
- SPECIAL PURPOSE RECEPTACLE
  a = CIRCUIT DESIGNATION
  b = DEVICE TYPE DESIGNATION
- CLOCK RECEPTACLE
  a = MOUNTING HEIGHT
- FAN RECEPTACLE
  a = MOUNTING HEIGHT
- TWIST LOCK RECEPTACLE
  a = AMP RATING
- TELEPHONE OUTLET
  a = MOUNTING HEIGHT
- DATA COMMUNICATIONS OUTLET
  a = MOUNTING HEIGHT
- DISCONNECT SWTICH
  a = TYPE, REFER TO DISCONNECT SCHEDULE
- PE — PHOTOCELL
- SMOKE DETECTOR
  a = TYPE
  I = IONIZATION
  P = PHOTOELECTRIC
  d = DUCT DETECTOR
- FACP — FIRE ALARM CONTROL PANEL
- F — FIRE ALARM PULL STATION
- F — FIRE ALARM HORN/STROBE COMBINATION
- F — FIRE ALARM STROBE
- FIRE SPRINKLER
  F = FLOW SWITCH
  T = TAMPER SWITCH

RACEWAY

- EXPOSED CONDUIT
- INDICATES BREAK IN CONDUIT RUN
- EXPOSED CONDUIT HIDDEN BEHIND WALLS, FLOORS OR OTHER STRUCTURES
- UNDERGROUND CONDUIT, DIRECT BURIED OR IN DUCTBANK
- CONDUIT IN FLOOR SLAB
- CONDUIT VERTICAL CHANGE IN DIRECTION
- J — JUNCTION BOX
- CONDUIT SEAL

DUCTBANK
APPROXIMATE DIMENSIONS
SHOWN ON DUCTBANK SCHEDULE

CONDUIT SIZE AND CONDUCTORS

INDIVIDUAL CONDUCTORS

W"C-(3-X (Ø), 1-#Y (N) & 1-Z (G))

W"C (WHERE INDICATED); W = CONDUIT TRADE SIZE

3-X (Ø):
3 = QUANTITY
X = SIZE OF CONDUCTORS
(Ø) = DESIGNATES PHASE CONDUCTORS

1-Y (N)(WHERE INDICATED):
1 = QUANTITY
Y = SIZE OF CONDUCTORS
(N) = DESIGNATES NEUTRAL CONDUCTORS

1-Z (G)(WHERE INDICATED):
1 = QUANTITY
Z = SIZE OF CONDUCTORS
(G) = DESIGNATES GROUND CONDUCTORS

U(3-X (Ø) & 1-X (G))
U = NUMBER OF PARALLEL RUNS

MULTI CONDUCTOR CABLES

K/2/C#16S
K (WHERE INDICATED) = NUMBER OF PAIRS
2/C#16S = TWO CONDUCTOR, 16 GAUGE, TWISTED SHIELDED PAIR

K/3/C#16S
K (WHERE INDICATED) = NUMBER OF TRIPLETS
3/C#16S = THREE CONDUCTOR, 16 GAUGE, TWISTED SHIELDED TRIPLETS

N/CX
N = NUMBER OF CONDUCTORS IN THE CABLE
X = SIZE OF CONDUTORS

FIBER OPTIC CABLES

FO/N
N = NUMBER OF INDIVIDUAL FIBERS

ELECTRICAL ONE-LINE SYMBOLS

MEDIUM VOLTAGE

- 52 — CIRCUIT BREAKER, MEDIUM VOLTAGE
  a = CIRCUIT BREAKER NUMBER
  b = FRAME SIZE
- ANSI RELAY DEVICE
  a = ANSI DEVICE FUNCTION
  b = QUANTITY
- MEDIUM VOLTAGE DISCONNECT SWITCH NON-FUSED CUT OUT
- MEDIUM VOLTAGE DISCONNECTING FUSE SINGLE FUSE CUT OUT
- MEDIUM VOLTAGE DISCONNECTING FUSE DOUBLE FUSE CUT OUT
- MEDIUM VOLTAGE SINGLE FUSE
- MEDIUM VOLTAGE DOUBLE FUSE
- MEDIUM VOLTAGE LIVE FRONT TERMINATOR
- MEDIUM VOLTAGE ELBOW
- MEDIUM VOLTAGE T
- MEDIUM VOLTAGE CONTACTOR
- MEDIUM VOLTAGE STARTER
- MOV-ELBOW ARRESTOR
- K — KIRK KEY INTERLOCK

LOW VOLTAGE

- LOW VOLTAGE CIRCUIT BREAKER
  a = TYPE
  MCP = MOTOR CIRCUIT PROTECTOR
  TM = THERMAL MAGNETIC
  SS = SOLID STATE
  b = FRAME SIZE (MANUFACTURER TO DETERMINE FRAME SIZE UNLESS INDICATED)
  c = NUMBER OF POLES
  d = TRIP SETTING (AT = AMP TRIP)
  (AC = MCP CONTINUOUS SETTING)
  e = DESIGNATION
  f = INTERRUPTING RATING
- LOW VOLTAGE CIRCUIT BREAKER AUXILIARY OPERATOR
  * = S = SHUNT TRIP
  = K = KIRK KEY INTERLOCK
  = G = GROUND FAULT INTERRUPTER
  = V = SOLENOID KEY RELEASE
- a — DISCONNECT SWITCH
  a = TYPE, REFER TO DISCONNECT SCHEDULE
- a — FUSED DISCONNECT SWITCH
  a = TYPE, REFER TO DISCONNECT SCHEDULE
  b = FUSE RATING
- FUSE
- COMBINATION STARTER WITH CONTROL POWER TRANSFORMER
  a = CIRCUIT BREAKER DISCONNECT, TYPE AS NOTED
  b = STARTER TYPE
  c = NEMA STARTER SIZE
  d = OVERLOAD HEATERS
- VARIABLE FREQUENCY DRIVE WITH FEATURES AS NOTED
  a = INPUT CONTACTOR
  b = OUTPUT CONTACTOR
  c = BYPASS STARTER
  d = INPUT CIRCUIT BREAKER
  LR — LINE REACTOR
  LL — LOAD REACTOR
- RVSS / BC — REDUCED VOLTAGE SOLID STATE STARTER WITH FEATURES AS SHOWN
  BC = BYPASS CONTACTOR

MISCELLANEOUS

- HP — MOTOR
  HP = HORSEPOWER RATING
  FULL LOAD AMPS AS NOTED
- PACKAGED EQUIPMENT
  LOAD RATING AS INDICATED
  a = NUMERIC VALUE
  b = HP, KW, KVA AS INDICATED
- TRANSFORMER
  a = DEVICE I.D.
  b = KVA RATING
  c = NUMBER OF PHASES
  d = PRIMARY VOLTAGE
  e = SECONDARY VOLTAGE
- GROUNDED WYE CONNECTION
- DELTA CONNECTION
- G — ENGINE-GENERATOR RATINGS AS INDICATED ON THE DRAWINGS
  a = KVA/KW
  b = VOLTAGE/CONNECTION
  c = PHASE
  d = WIRE
  e = pf
- CURRENT TRANSFORMER WITH SHORTING TERMINAL BLOCK
  a = QUANTITY
  b = RATIO
- POTENTIAL TRANSFORMER
  a = QUANTITY
  b = RATIO
- SSM — SOLID STATE MULTIFUNCTION METER
- ATP — AMMETER TEST POINT
- VTP — VOLTAGE TEST POINT
- UTILITY METER
- LIGHTNING ARRESTER
- TVSS — TRANSIENT VOLTAGE SURGE SUPRESSOR
- DRAWOUT CONNECTIONS
- GROUND
- CAPACITOR
- BATTERY

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER — No. 366286 — CHRISTOPHER A. CARVALHO — STATE OF UTAH

carollo

South Valley WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
ELECTRICAL LEGEND

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 — 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-1
SHEET NO. 4 OF 159

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PROJECT NO. 10548A10 FILE NAME: 10548A10_00GE001.dgn

ABBREVIATIONS

A	AMP
ABS	ABSOLUTE
AC	ALTERNATING CURRENT
ACK	ACKNOWLEDGE
ACTR	ACTUATOR
AF	AMP FRAME
AFC	AUTOMATIC FREQUENCY CONTROL
AIC	AMP INTERRUPTING CAPACITY
AM	AMMETER
ANN	ANNUNCIATOR
ANT	ANTENNA
APU	AUXILIARY POWER UNIT
ARM	ARMORED CABLE
AS	AMMETER SWITCH
ASYM	ASYMMETRICAL
AT	AMP TRIP
ATO	AUTOMATIC THROW OVER
ATP	AMMETER TEST POINT
ATS	AUTOMATIC TRANSFER SWITCH
AUTO XFMR	AUTOMATIC TRANSFORMER
AUX	AUXILIARY
AWG	AMERICAN WIRE GAGE
B	BELL
BAT	BATTERY
BFG	BELOW FINISHED GRADE
BHP	BRAKE HORSEPOWER
BKR	BREAKER
BRF	BELOW RAISED FLOOR
C	CONDUIT / CONTINUOUS LOAD
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CCW	COUNTER CLOCKWISE
CKT	CIRCUIT
COAX	COAXIAL CABLE
COM	COMMON
COMM	COMMUNICATION
CPT	CONTROL POWER TRANSFORMER
CS	CONTROL SWITCH
CT	CURRENT TRANSFORMER
CV	CONTROL VALVE
CW	CLOCKWISE / COOL WHITE
DC	DIRECT CURRENT
DCS	DISTRIBUTED CONTROL SYSTEM
DCU - X	DISTRIBUTED CONTROL UNIT NO. X
DEMO	DEMOLITION
DISC	DISCONNECT SWITCH
DM	DEMAND METER
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
DS	DOOR SWITCH
E/G	EMERGENCY GENERATOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
ENG	ENGINE
ENT	ELECTRICAL NON-METALLIC TUBING
EP	EXPLOSION PROOF
ETM	ELAPSED TIME METER
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FDR	FEEDER
FLA	FULL LOAD AMPS
FLX	FLEXIBLE CONDUIT
FO	FIBER OPTIC
FRC	FIBERGLASS RIGID CONDUIT
FREQ	FREQUENCY
FU	FUSE
FU	SW FUSED SWITCH
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
FWD	FORWARD
G	GROUND / EQUIPMENT GROUND / GROUND FAULT
GEN	GENERATOR
GRC	GALVANIZED STEEL RIGID CONDUIT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER (RECEPTACLE)
GFI	GROUND FAULT INTERRUPTER (BREAKER)
GFR	GROUND FAULT RELAY
H	HOT-LEG
HF	HIGH FREQUENCY
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HR	HOUR
HSTAT	HUMIDISTAT
HV	HIGH VOLTAGE
HVAC	HEATING/VENTILATION/AIR CONDITIONING
HZ	HERTZ
I	INSTANTANEOUS LOAD
IC	INTERRUPTING CAPACITY
IJB	INSTRUMENT JUNCTION BOX
IMC	INTERMEDIATE METAL CONDUIT
INST	INSTANTANEOUS
INT	INTERLOCK
INTERCOM	INTERCOMMUNICATION
J	JUNCTION BOX
K	KEY INTERLOCK
KA	KILOAMP
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KVAR	KILOVAR (REACTANCE)
KW	KILOWATT
KWD	KILOWATT DEMAND
KWH	KILOWATT HOUR
L	LONG-TIME
L-B	LINE-BUS
L-G	LINE-GROUND
LA	LIGHTNING ARRESTOR
LBL	LABEL
LC	LIGHTING CONTACT OR
LCP- X	LOCAL CONTROL PANEL NO. X
LL	LEAD-LAG LOAD REACTOR
LP	LIGHT POLE
LP - X	LIGHTING PANEL NO. X
LTG	LIGHTING
LV	LOW VOLTAGE
LVL	LEVEL
M-X	MOTOR CONTROLLER NO. X
MA	MILLIAMPERE
MCA	MOTOR CIRCUIT AMPS
MCC - X	MOTOR CONTROL CENTER NO. X
MCP	MOTOR CIRCUIT PROTECTOR
MH	MANHOLE / MOUNTING HEIGHT
MLO	MAIN LUGS ONLY
MOD	MOTOR OPERATED DAMPER
MOV	METAL OXIDE VARISTOR
MRP	MOTOR PROTECTION RELAY
MS-X	MOTOR STARTER NO. X
MSP	MOTOR STARTING PANEL
MTO	MANUAL THROW OVER
MTR-X	MOTOR NO. X
MTS	MANUAL TRANSFER SWITCH
MV	MEGAVOLT
MVA	MEGAVOLT-AMPERES
MVS	MEDIUM VOLTAGE SWITCH
MW	MEGAWATT
N	NEUTRAL
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NFC	NONMETALLIC FLEXIBLE CONDUIT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NP	NAMEPLATE
O	OPEN OR OPENED
OH	OVERHEAD
OL	OVERLOAD RELAY
P	POLE
PA	PUBLIC ADDRESS
PB	PUSHBUTTON / PULL BOX
PCS	PVC COATED GALVANIZED STEEL CONDUIT
PCM	PROCESS CONTROL MODULE
PE	PHOTOCELL
PF	POWER FACTOR
PFCC	POWER FACTOR CORRECTION CAPACITOR
PFR	PHASE FAILURE RELAY
PH	PHASE
PNL	PANEL
PPX	POWER PANEL NO. X
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE RIGID PLASTIC CONDUIT
PWR	POWER
RAC	RIGID ALUMINUM CONDUIT
RECPT	RECEPTACLE
REV	REVERSE
RF	RADIO FREQUENCY
RMS	ROOT MEAN SQUARED
RVAT	REDUCED VOLTAGE AUTO TRANSFORMER
RVNR	REDUCED VOLTAGE NON-REVERSING
RVSS	REDUCED VOLTAGE SOLID STATE
S	SHIELD / SHORT-TIME
SA	SURGE ARRESTER
SC	SHORT CIRCUIT
SDBC	SOFT DRAWN BARE COPPER
SFL	SUB FEED LUGS
SLT	SEALTIGHT LIQUIDTIGHT FLEXIBLE CONDUIT
SM	SURFACE MOUNTED
SP	SINGLE POLE
SPD	SURGE PROTECTIVE DEVICE
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
SPKR	SPEAKER
SS	SOLID STATE
STB	SHORTING TERMINAL BLOCK
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMMETRICAL
TACH	TACHOMETER
TB - X	TERMINAL BLOCK - UNIT X
TC	THERMOCOUPLE / TIME CLOCK / TRAY CABLE
TD	TEMPERATURE DETECTOR RELAY
TE	TOTALLY ENCLOSED
TEFC	TOTALLY ENCLOSED FAN COOLED
TENV	TOTALLY ENCLOSED NON-VENTILATED
TERM	TERMINAL
TJB	TERMINAL JUNCTION BOX
TM	THERMAL MAGNETIC
TP	TWISTED PAIR
TS	TEMPERATURE SWITCH
TS1W	TWO SPEED CONSEQUENT POLE, ONE WINDING
TS2W	TWO SPEED SEPARATE WINDING
TSTAT	THERMOSTAT
UHF	ULTRA HIGH FREQUENCY
UNG	UNGROUNDED
UPS	UNINTERRUPTABLE POWER SUPPLY
UVR	UNDER VOLTAGE RELAY
V	VOLT
VA	VOLT AMPERE
VAR	VARMETER
VCP	VENDOR CONTROL PANEL
VFD	VARIABLE FREQUENCY DRIVE
VHF	VERY HIGH FREQUENCY
VM	VOLTMETER
VP	VAPORPROOF
VR	VOLTAGE REGULATOR
VS	VOLTAGE SWITCH
VT	VOLTAGE TRANSFORMER
VTP	VOLTAGE TEST POINT
W	WATT / WEST
WT	WATER TIGHT
WP	WEATHER PROOF
XFMR	TRANSFORMER

POWER DEVICE FUNCTION NUMBERS

1	MASTER ELEMENT
2	TIME-DELAY STARTING OR CLOSING RELAY
3	CHECKING OR INTERLOCKING RELAY
4	MASTER CONTACTOR
5	STOPPING DEVICE
6	STARTING CIRCUIT BREAKER
7	ANODE CIRCUIT BREAKER
8	CONTROL POWER DISCONNECTING DEVICE
9	REVERSING DEVICE
10	UNIT SEQUENCE SWITCH
11	MULTIFUNCTION DEVICE
12	OVER-SPEED DEVICE
13	SYNCHRONOUS-SPEED DEVICE
14	UNDER-SPEED DEVICE
15	SPEED OR FREQUENCY MATCHING DEVICE
16	DATA COMMUNICATIONS DEVICE
17	SHUNTING OR DISCHARGE SWITCH
18	ACCELERATING OR DECELERATING DEVICE
19	STARTING-TO-RUNNING TRANSITION CONTACTOR
20	ELECTRICALLY OPERATED VALVE
21	DISTANCE RELAY
22	EQUALIZER CIRCUIT BREAKER
23	TEMPERATURE CONTROL DEVICE
24	VOLTS PER HERTZ RELAY
25	SYNCHRONIZING OR SYNCHRONISM-CHECK DEVICE
26	APPARATUS THERMAL DEVICE
27	UNDERVOLTAGE RELAY
27N	GROUND FAULT UNDERVOLTAGE RELAY
28	FLAME DETECTOR
29	ISOLATING CONTACTOR
30	ANNUNCIATOR RELAY
31	SEPARATE EXCITATION DEVICE
32	DIRECTIONAL POWER RELAY
33	POSITION SWITCH
34	MASTER SEQUENCE DEVICE
35	BRUSH-OPERATING OR SLIP-RING SHORT-CIRCUITING DEVICE
36	POLARITY DEVICE
37	UNDERCURRENT OR UNDERPOWER RELAY
38	BEARING PROTECTIVE DEVICE
39	MECHANICAL CONDITION MONITOR
40	FIELD RELAY
41	FIELD CIRCUIT BREAKER
42	RUNNING CIRCUIT BREAKER
43	MANUAL TRANSFER OR SELECTOR DEVICE
44	UNIT SEQUENCE STARTING RELAY
45	ABNORMAL ATMOSPHERIC CONDITION MONITOR
46	REVERSE-PHASE OR BALANCE CURRENT RELAY
47	PHASE-BALANCE OR PHASE-SEQUENCE VOLTAGE RELAY
48	INCOMPLETE SEQUENCE RELAY
49	MACHINE OR TRANSFORMER THERMAL RELAY
50	INSTANTANEOUS OVERCURRENT RELAY
51	AC TIME OVERCURRENT RELAY
52	AC CIRCUIT BREAKER
53	FIELD EXCITATION RELAY
54	TURNING GEAR ENGAGING DEVICE
55	POWER FACTOR RELAY
56	FIELD APPLICATION RELAY
57	SHORT-CIRCUITING OR GROUNDING DEVICE
58	RECTIFICATION FAILURE RELAY
59	OVERVOLTAGE RELAY
60	VOLTAGE OR CURRENT BALANCE RELAY
61	DENSITY SWITCH OR SENSOR
62	TIME-DELAY STOPPING OR OPENING RELAY
63	PRESSURE SWITCH
64	GROUND DETECTOR RELAY
65	GOVERNOR
66	NOTCHING OR JOGGING DEVICE
67	AC DIRECTIONAL OVERCURRENT RELAY
68	BLOCKING OR OUT OF STEP RELAY
69	PERMISSIVE CONTROL DEVICE
70	RHEOSTAT
71	LIQUID LEVEL SWITCH
72	DC CIRCUIT BREAKER
73	LOAD-RESISTOR CONTACTOR
74	ALARM RELAY
75	POSITION CHANGING MECHANISM
76	DC OVERCURRENT RELAY
77	TELEMETERING DEVICE
78	PHASE-ANGLE MEASURING RELAY
79	AC RECLOSING RELAY
80	FLOW SWITCH
81	FREQUENCY RELAY
82	DC LOAD MEASURING RECLOSING RELAY
83	AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY
84	OPERATING MECHANISM
85	PILOT COMMUNICATIONS, CARRIER OR PILOT-WIRE RELAY
86	LOCKOUT RELAY
87	DIFFERENTIAL PROTECTIVE RELAY
88	AUXILIARY MOTOR OR MOTOR GENERATOR
89	LINE SWITCH
90	REGULATING DEVICE
91	VOLTAGE DIRECTIONAL RELAY
92	VOLTAGE AND POWER DIRECTIONAL RELAY
93	FIELD-CHANGING CONTACTOR
94	TRIPPING OR TRIP-FREE RELAY

COMMONLY USED SUFFIX LETTERS APPLIED TO POWER DEVICE FUNCTION NUMBERS

A	ALARM ONLY
B	BUS PROTECTION
G	GROUND FAULT PROTECTION (RELAY CT IN A SYSTEM NEUTRAL CIRCUIT OR GENERATOR PROTECTION)
GS	GROUND FAULT PROTECTION (RELAY CT IN TOROIDAL OR GROUND SENSOR TYPE)
L	LINE PROTECTION
M	MOTOR PROTECTION
N	GROUND FAULT PROTECTION (RELAY COIL CONNECTED IN RESIDUAL CT CIRCUIT)
T	TRANSFORMER PROTECTION
V	VOLTAGE
P	PHASE PROTECTION

ABBREVIATIONS

AFD	- ARC FLASH DETECTOR
CLK	- CLOCK OR TIMING SOURCE
DDR	- DYNAMIC DISTURBANCE RECORDER
DFR	- DIGITAL FAULT RECORDER
ENV	- ENVIRONMENTAL DATA
HIZ	- HIGH IMPEDANCE FAULT DETECTOR
HMI	- HUMAN MACHINE INTERFACE
HST	- HISTORIAN
LGC	- SCHEME LOGIC
MET	- SUBSTATION METERING
PDC	- PHASOR DATA CONCENTRATOR
PMU	- PHASOR MEASUREMENT UNIT
PQM	- POWER QUALITY MONITOR
RIO	- REMOTE I/O DEVICE
RTU	- REMOTE TELEMETRY UNIT/REMOTE TERMINAL UNIT
SER	- SEQUENCE OF EVENTS RECORDER
TCM	- TRIP CIRCUIT MONITOR

NOTES:

1. REFER TO SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL ABBREVIATIONS.

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

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carollo

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7495 South 1300 West
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SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
ELECTRICAL ABBREVIATIONS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

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DRAWING NO. GE-2
SHEET NO. 5 OF 159

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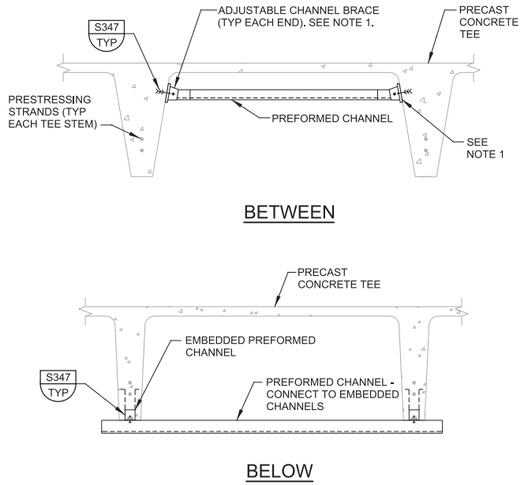
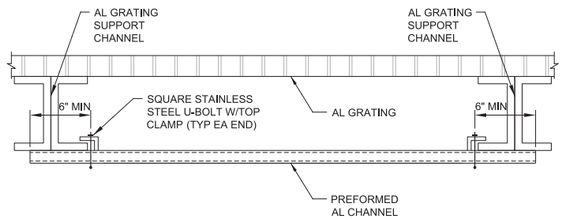


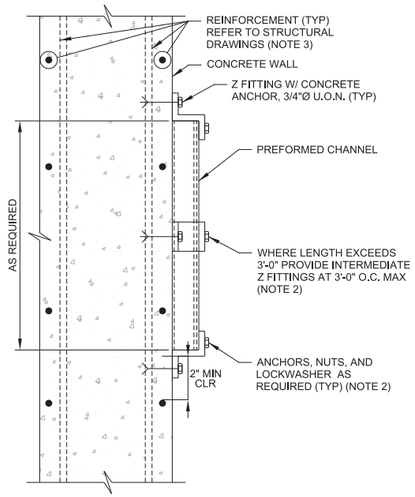
NOTES:

1. FASTEN ADJUSTABLE CHANNEL BRACES TO TEE. SEE STRUCTURAL TYPICAL DETAIL FOR CONNECTION LOCATION.

EA010 TYP S ATTACHMENT TO PRECAST TEES



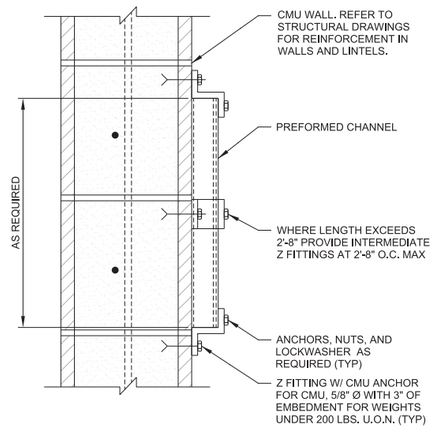
EA060 TYP S ATTACHMENT TO ALUMINUM GRATING SUPPORTS



NOTES:

1. THIS DETAIL TYPICAL FOR BOTH VERTICAL AND HORIZONTAL MOUNTING.
2. SUPPORTS TO BE SPACED IN ACCORDANCE WITH NEC REQUIREMENTS. CONCRETE ANCHORS SHALL BE PER THE SPECIFICATIONS.
3. REFER TO STRUCTURAL DRAWINGS FOR ORIENTATION OF REINFORCEMENT AND BARS.

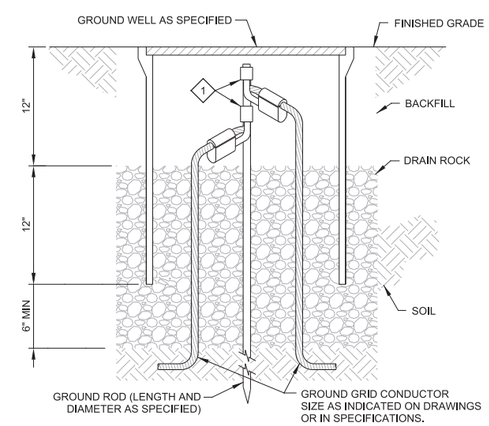
EA070 TYP S PREFORMED CHANNEL ATTACHMENT TO CONCRETE WALL



NOTES:

1. THIS DETAIL TYPICAL FOR BOTH VERTICAL AND HORIZONTAL MOUNTING.
2. SUPPORTS TO BE SPACED IN ACCORDANCE WITH NEC REQUIREMENTS. CONCRETE ANCHORS FOR CMU SHALL BE PER THE SPECIFICATIONS.

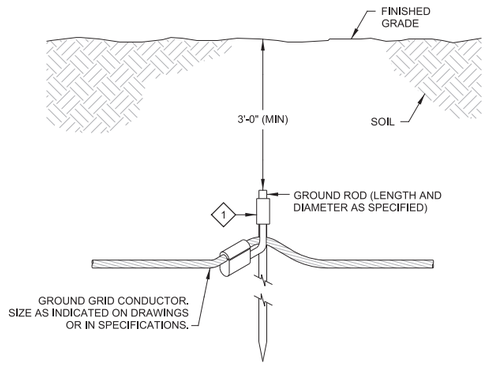
EA080 TYP S PREFORMED CHANNEL ATTACHMENT TO FULLY GROUTED CMU WALL



KEY NOTES:

1 GROUND ROD TO GROUND GRID CROSS CONNECTOR. SIZE FOR ROD AND CABLE PER CONNECTOR MANUFACTURERS GUIDELINES.

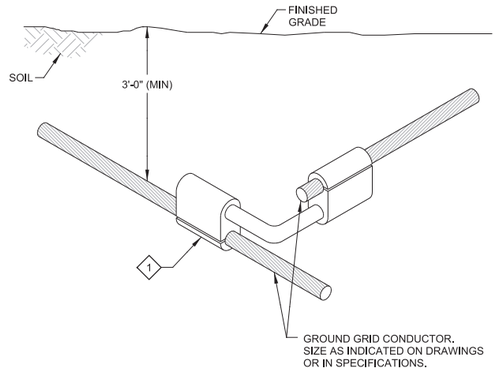
EG001 TYP S GROUND ROD AND GROUNDWELL COMPRESSION CONNECTION



KEY NOTES:

1 GROUND ROD TO GROUND GRID CROSS CONNECTOR. SIZE FOR ROD AND CABLE PER CONNECTOR MANUFACTURERS GUIDELINES.

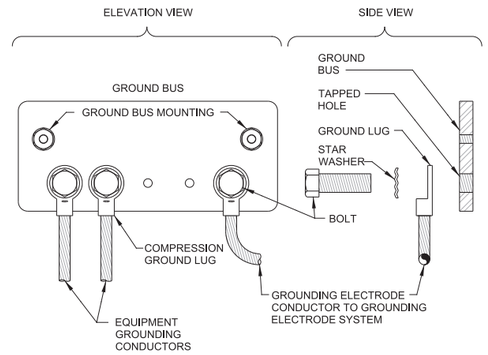
EG002 TYP S GROUND ROD COMPRESSION CONNECTION



KEY NOTES:

1 GROUND GRID CROSS CONNECTOR. SIZE FOR CABLE PER CONECTOR MANUFACTURERS GUIDELINES.

EG101 TYP S COPPER GROUNDING CABLE CONNECTION COMPRESSION CONNECTION



EG204 TYP S GROUND BUS CONNECTIONS

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
No. 366286
CHRISTOPHER A. CARVALHO
STATE OF UTAH

carollo

South Valley WATER RECLAMATION FACILITY
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SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
TYPICAL DETAILS
ELECTRICAL TYPICAL DETAILS 1

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

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DRAWING NO. GE-03
SHEET NO. 6 OF 159

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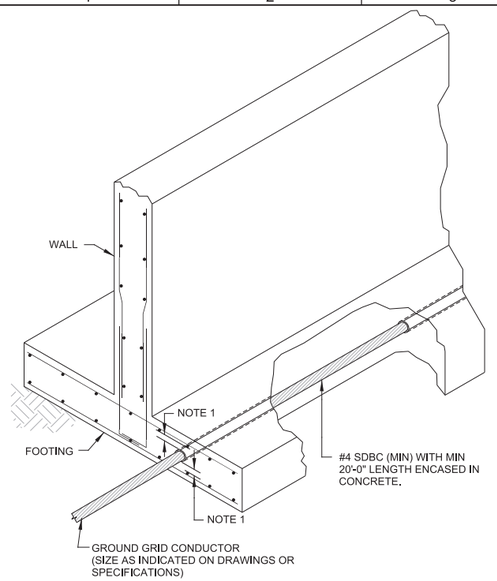
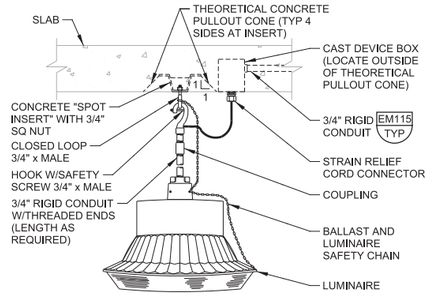


NOTES:

1. GROUND GRID CONDUCTOR TO BE FULLY ENCASED IN CONCRETE. PROVIDE MIN 1 1/2" CLEAR BETWEEN CONDUCTOR & REINFORCEMENT, OR BETWEEN CONDUCTOR AND FACE OF CONCRETE .

EG304 TYP S — GROUNDING CONNECTION TO FOOTING (UFER)



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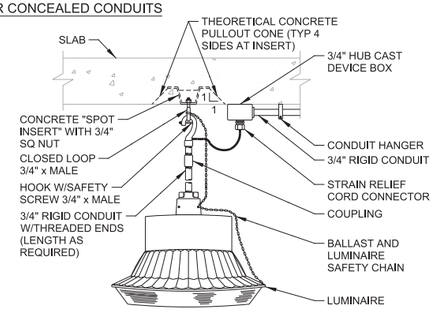
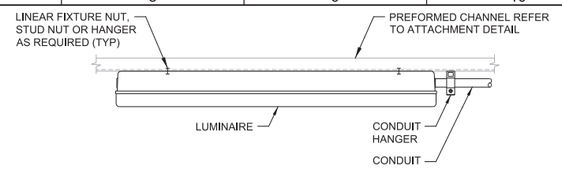
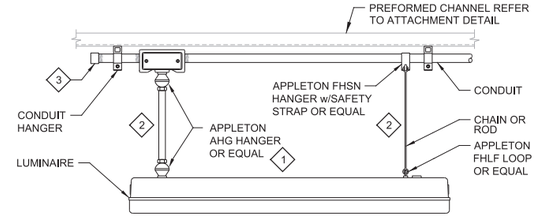


FOR EXPOSED CONDUITS

EL112 TYP S — PENDANT LUMINAIRE MOUNTING BELOW CONCRETE SLAB



FLUSH MOUNTED

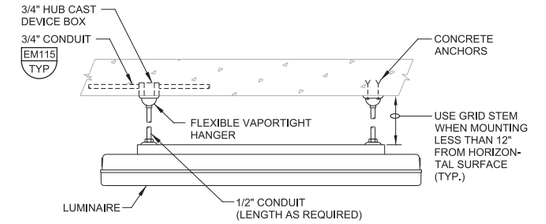


SUSPENDED

KEY NOTES:

1. USE MEYERS HUB IN WET AND/OR CORROSIVE AREAS.
2. LENGTH AS REQUIRED FOR INDICATED MOUNTING HEIGHT.
3. CAP END CONDUIT AS REQUIRED.

EL200 TYP S — LINEAR LUMINAIRE MOUNTING



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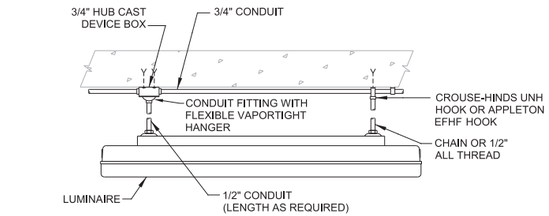
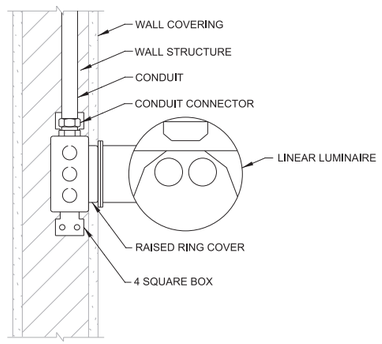
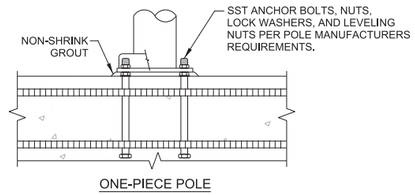


FOR EXPOSED CONDUIT

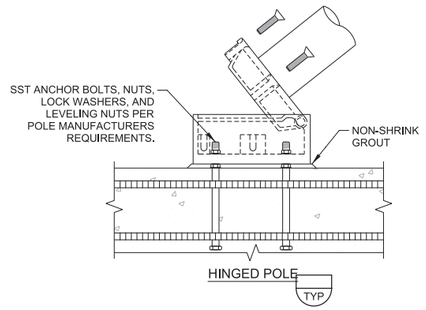
EL203 TYP S — LINEAR LUMINAIRE MOUNTING TO CONCRETE ROOF



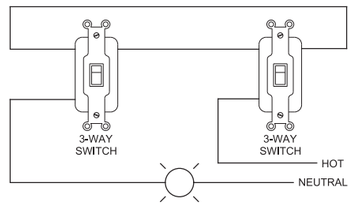
EL206 TYP S — LINEAR WALL FIXTURE



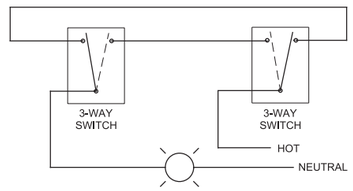
ONE-PIECE POLE



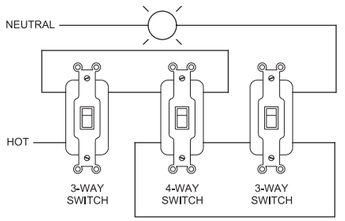
EL502 TYP S — ANCHOR BASE FOR LIGHT POLE MOUNTED ON SLAB



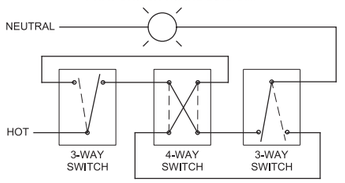
3-WAY SWITCH WIRING DIAGRAM



EL700 TYP S — 3-WAY SWITCH ONE-LINE DIAGRAM



4-WAY SWITCH WIRING DIAGRAM



EL701 TYP S — 4-WAY SWITCH ONE-LINE DIAGRAM

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN
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carollo

South Valley WATER RECLAMATION FACILITY
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SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
TYPICAL DETAILS
ELECTRICAL TYPICAL DETAILS 2

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-04
SHEET NO. 7 OF 159

PROJECT NO. 10548A10 FILE NAME: 10548A1000TE002.dgn

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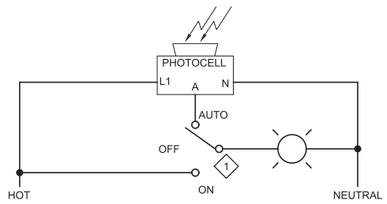
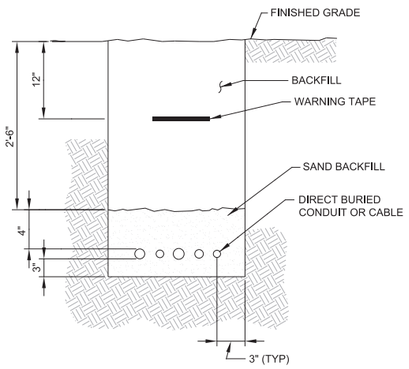


KEY NOTES:

1 REFER TO THE SPECIFICATIONS FOR SWITCH REQUIREMENTS.

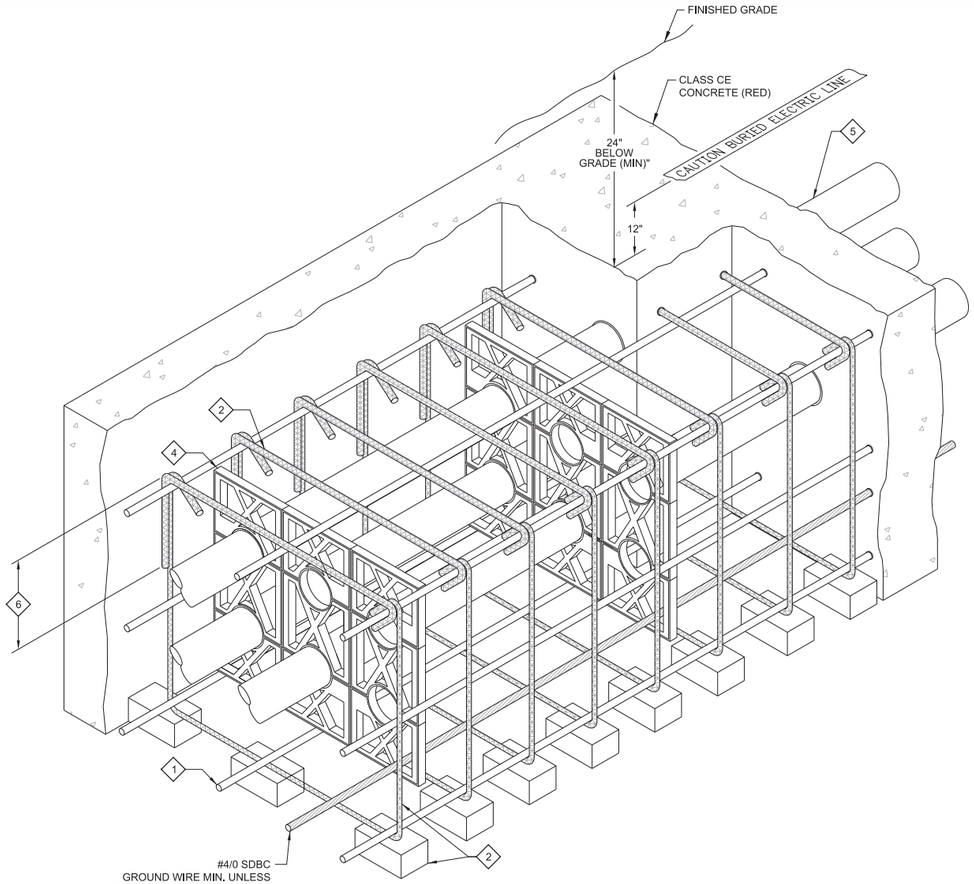
EL703 TYP S PHOTO-ELECTRIC EYE CONTROL



NOTES:

1. ALL DIMENSIONS ARE MINIMUM UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
2. REFER TO THE SPECIFICATIONS FOR TRENCH BACKFILL REQUIREMENTS.

EM015 TYP S DIRECT BURIED CONDUIT OR CABLE



NOTES:

1. DIMENSIONS SHOWN ARE MINIMUM.
2. ADJUST SIZE OF DUCT BANK BASED UPON THESE GUIDELINES AND THE DUCT BANK SPECIFICATION TO ACCOMMODATE ACTUAL NUMBER OF CONDUITS WITHIN DUCT BANK. REFER TO DUCT BANK SECTIONS, AND CONDUIT SCHEDULE FOR NUMBER AND SIZE OF CONDUITS.
3. MAKE PROVISIONS TO PREVENT CONDUIT FLOTATION DURING CONCRETE PLACEMENT & CURING.

KEY NOTES:

1 #4 REINFORCING STEEL 12" MAXIMUM ON CENTER AROUND ENTIRE PERIMETER OF DUCT BANK.

2 #4 REINFORCING STEEL TIES MAXIMUM 24" ON CENTER ALONG LENGTH OF DUCT BANK.

3 MINIMUM OF TWO PRECAST CONCRETE BAR SUPPORTS PLACED UNDER A TIE AT EACH PVC CONDUIT SPACER ALONG LENGTH OF DUCT BANK. PROVIDE PRECAST BAR SUPPORTS AT INTERVALS OF 24" TO REDUCE DEFLECTION.

4 PVC CONDUIT SPACERS ON 8'-0" CENTERS (MAXIMUM). LOCATE 12" FROM TIES.

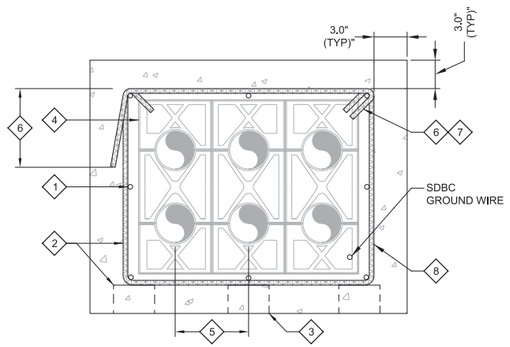
5 REFER TO DUCT BANK SECTIONS AND CONDUIT SCHEDULES FOR CONDUIT REQUIREMENTS.

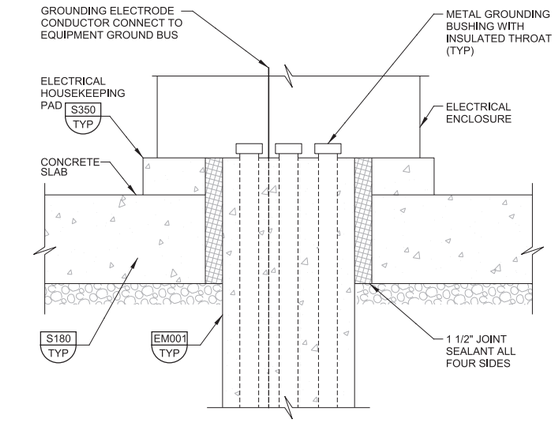
6 1'-4" OR 135 DEGREE HOOK FOR SHALLOW DUCT BANKS SHALLOWER THAN 21"

7 CONTRACTOR'S OPTION TO PROVIDE 1'-4" LAP LENGTH EACH SIDE OF HORIZONTAL TIE.

8 LOWER PORTION OF TIES COULD BE U-BARS IF UPPER PORTIONS PROVIDES 1'-4" VERTICAL LEGS EACH SIDE.

EM001 TYP S REINFORCED CONCRETE DUCT BANK

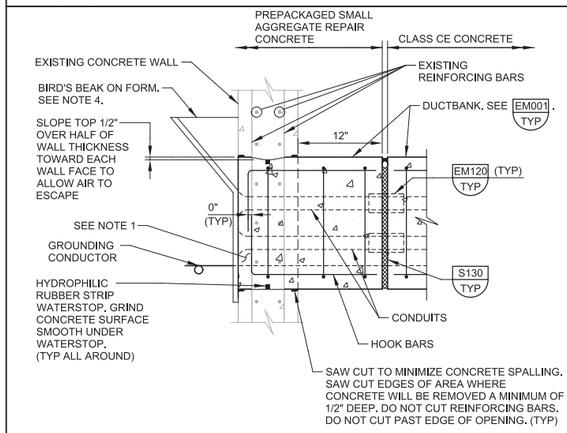




NOTES:

1. OPENING SIZE IN CONCRETE HOUSE KEEPING PAD IS SET BY CONDUIT SIZE AND NUMBER OF CONDUITS. CONDUITS AT TOP OF HOUSE KEEPING PAD MUST FIT IN MANUFACTURER PROVIDED WINDOW IN BOTTOM OF ELECTRICAL ENCLOSURE.

EM022 TYP S DUCT BANK ENTRY INTO ELECTRICAL EQUIPMENT



NOTES:

1. USE NON-DESTRUCTIVE REINFORCE BAR LOCATOR TO LOCATE EXISTING REINFORCING BARS IN WALL. ADJUST LOCATION OF CONDUITS IN DUCTBANK TO MISS EXISTING REINFORCING BARS IN WALL.
2. REMOVE CONCRETE AS SHOWN FOR NEW DUCTBANK PENETRATION THROUGH WALL. DO NOT CUT EXISTING REINFORCING BARS.
3. ROUGHEN CONCRETE TO 1/4" AMPLITUDE AND COAT WITH EPOXY RESIN/PORTLAND CEMENT BONDING AGENT.
4. USE FORM WITH "BIRD'S BEAK" FOR ACCESS FOR VIBRATOR AND TO ALLOW CONCRETE TO BE PLACED UNDER SLIGHT PRESSURE. AFTER FORMS ARE REMOVED, REMOVE PROJECTING CONCRETE AND FINISH TO MATCH FINISH OF EXISTING CONCRETE.

EM039 TYP NS DUCTBANK CONNECTION TO EXISTING WALL

08/13/13

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REGISTERED PROFESSIONAL ENGINEER — No. 366286 — CHRISTOPHER A. CARVALHO — STATE OF UTAH

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West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
TYPICAL DETAILS
ELECTRICAL TYPICAL DETAILS 3

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-05
SHEET NO. 8 OF 159

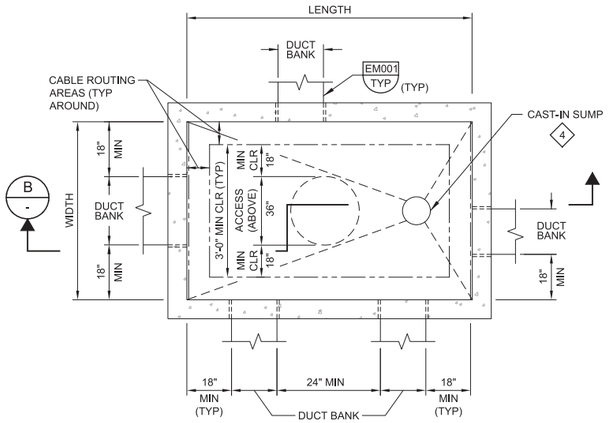
PROJECT NO. 10548A10 FILE NAME: 10548A1000TE003.dgn

NOTES:

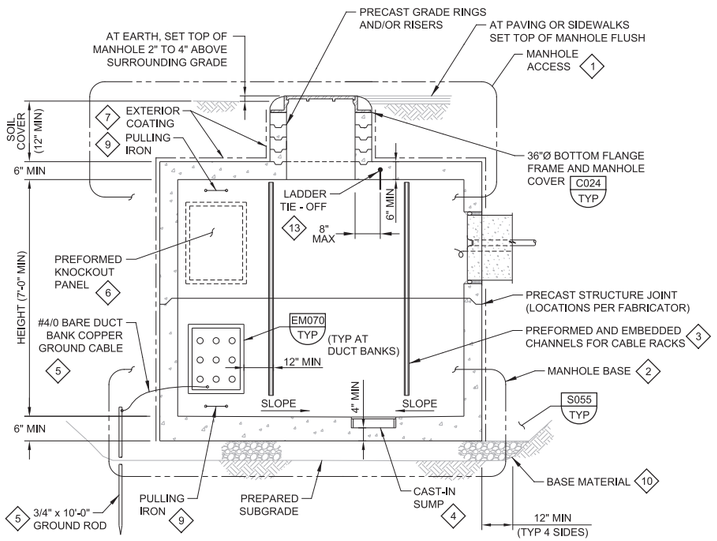
1. PROVIDE MINIMUM INTERIOR DIMENSIONS AS SHOWN IN THE ELECTRICAL HANDHOLE AND MANHOLE SCHEDULE.
2. PROVIDE MANHOLE ALTERNATES (TOP OR BASE) AS SHOWN IN THE HANDHOLE AND MANHOLE SCHEDULE.
3. BOND ALL METALLIC ITEMS INSIDE MANHOLE TO GROUND ROD USING #4 AWG BARE COPPER CABLE.
4. SEE DRAWINGS FOR ORIENTATION, NUMBER, AND SIZE OF DUCT BANKS AND PENETRATIONS AT EACH MANHOLE.
5. RACK MEDIUM VOLTAGE CABLES USING PORCELAIN INSULATOR CLAMPS PER TYPICAL DETAIL EM076.

KEY NOTES:

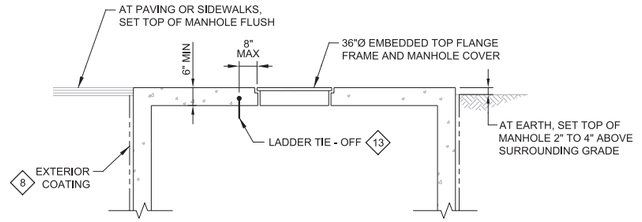
1. MANHOLE ACCESS FOR BURIED MANHOLE SHOWN IN SECTION B. FOR MANHOLES WITH EXPOSED TOP SLAB, SEE SECTION C (ALTERNATE 1).
2. STANDARD MANHOLE BASE SHOWN. FOR MANHOLES WITH DEEPER SUMP OR CONCRETE BALLAST TO RESIST FLOTATION, SEE SECTION D (ALTERNATE 2).
3. SPACE EMBEDDED CHANNELS TO CLEAR DUCT BANK KNOCKOUTS AND MAXIMUM 24" ON CENTER AROUND PERIMETER OF MANHOLE.
4. MINIMUM 12" DIAMETER x MIN 2" DEEP SUMP WITH REMOVABLE SLOTTED COVER. LOCATE SUMP OUTSIDE VERTICAL ACCESS CORRIDOR BELOW MANHOLE COVER.
5. BOND DUCT BANK AND INTERIOR GROUND CABLE TO GROUND ROD. SEE SPECIFICATIONS FOR CONNECTION REQUIREMENTS.
6. INSTALL DUCT BANKS ONLY THROUGH BLOCKOUTS, WINDOWS OR PREFORMED KNOCKOUT PANELS. PROVIDE KNOCKOUTS ON EACH WALL AROUND MANHOLE.
7. COAT EXTERIOR WALLS AND BURIED TOP SLAB OF MANHOLE WITH BITUMINOUS DAMP PROOFING.
8. COAT EXTERIOR WALLS OF MANHOLE WITH BITUMINOUS DAMP PROOFING. LEAVE EXPOSED TOP SLAB UNCOATED.
9. PROVIDE ONE PULLING IRON ON EACH WALL ABOVE OR BELOW EACH DUCT BANK PENETRATION.
10. PROVIDE MIN 12" COMPACTED AGGREGATE BASE COURSE.
11. MINIMUM 12" DIAMETER SUMP WITH REMOVABLE SLOTTED COVER. LOCATE SUMP OUTSIDE VERTICAL CORRIDOR BELOW MANHOLE COVER.
12. SEE SPECIFICATIONS FOR CAST-IN-PLACE CONCRETE FULL MIXING, PLACING, FINISHING AND CURING REQUIREMENTS.
13. AT ONE SIDE OF MANHOLE ACCESS, PROVIDE LADDER TIE - OFF PER DETAIL E.



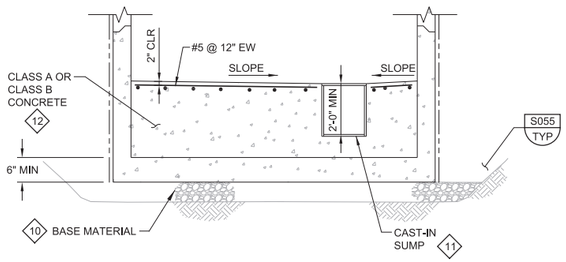
A PLAN - LAYOUT



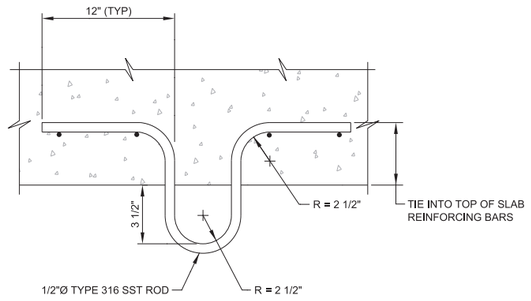
B SECTION



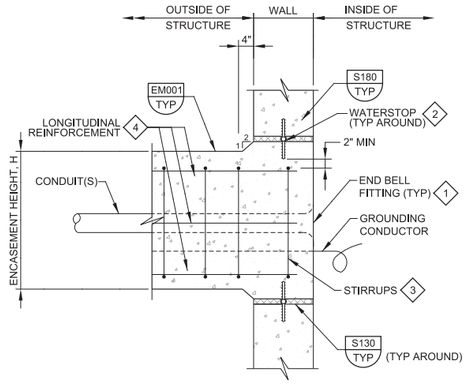
C ALTERNATE 1: SECTION EXPOSED TOP SLAB



D ALTERNATE 2: SECTION BASE WITH SUMP OR BALLAST



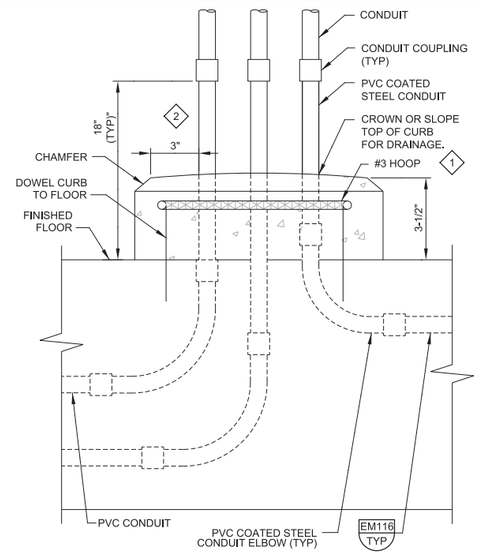
E LADDER TIE-OFF



KEY NOTES:

1. PROVIDE GROUNDING FITTING FOR METALLIC CONDUITS ENTERING MANHOLE, BOND GROUNDING FITTING TO DUCTBANK GROUNDING CONDUCTOR.
2. 6" PVC CENTERBULB WATERSTOP TYPICAL AROUND PERIMETER OF ENCASEMENT.
3. FOR FIRST 12'-0" FROM INSIDE FACE OF STRUCTURE, STIRRUP SPACING, IN INCHES = (H-4)/2, WHERE H = CONCRETE ENCASEMENT HEIGHT IN INCHES.
4. ADDITIONAL #4 x 12'-0" @ 12" ON ALL FOUR FACES OF ENCASEMENT. ALTERNATE WITH TYPICAL REINFORCEMENT FOR 6" SPACING.

EM071 TYP S ENCASED CONDUITS AT MANHOLES OR STRUCTURES - WITH WATERSTOP



KEY NOTES:

1. COORDINATE REINFORCING STEEL REQUIREMENTS WITH THE GENERAL CONTRACTOR.
2. TYPICAL BOTH SIDES, FRONT AND REAR.

EM107 TYP S CONDUIT HOUSEKEEPING CURB

EM062 TYP S ELECTRICAL MANHOLE: PRECAST CONCRETE

REV	DATE	BY	DESCRIPTION

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carollo

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7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
TYPICAL DETAILS
ELECTRICAL TYPICAL DETAILS 4

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-06
SHEET NO. 9 OF 159

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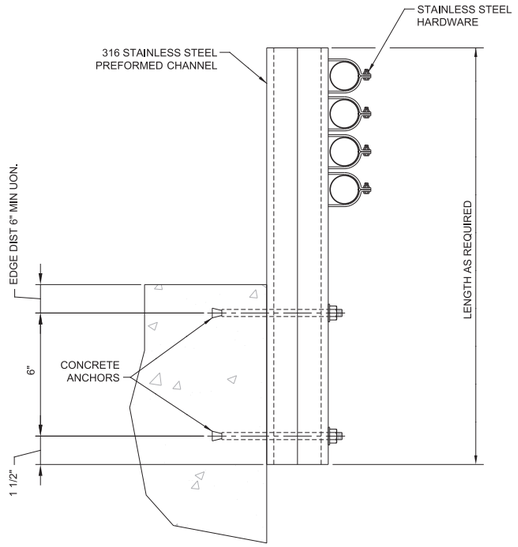
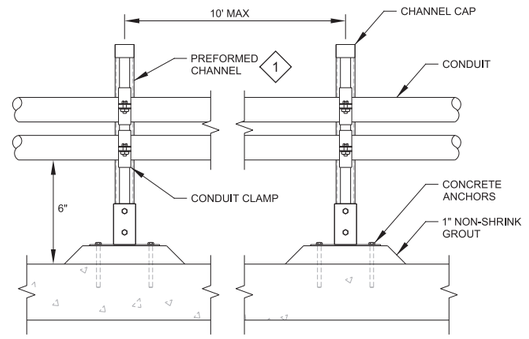


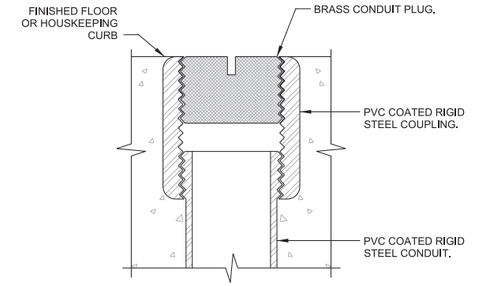
EM103 TYP S CONDUIT SUPPORT



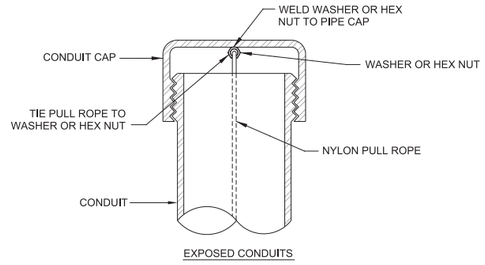
KEY NOTES:

1 SIZE PREFORMED CHANNEL FOR CONDUITS INDICATED ON THE DRAWINGS.

EM104 TYP S CONDUIT FLOOR SUPPORT FOR ELECTRICAL CONDUITS



ENCASED CONDUITS

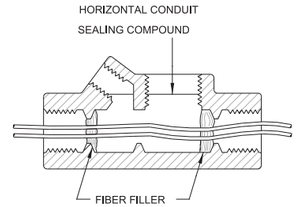


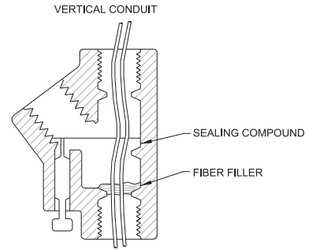
EXPOSED CONDUITS

NOTES:

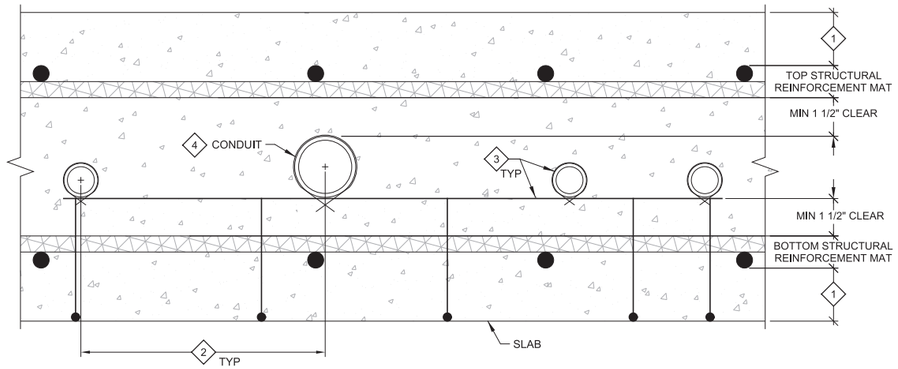
1. PROVIDE 2" MIN CLEAR BETWEEN ADJACENT CONDUITS

EM105 TYP S SPARE CONDUIT DETAIL





EM108 TYP S CONDUIT SEAL DAMMING AND POURING DETAIL



NOTES:

1. MOVE CONDUITS TO AVOID CONFLICTS WITH WATERSTOPS. WHERE HORIZONTAL & VERTICAL CLEARANCES CANNOT BE MAINTAINED, CONTACT ENGINEER FOR INSTRUCTION'S BEFORE PLACING CONCRETE.

KEY NOTES:

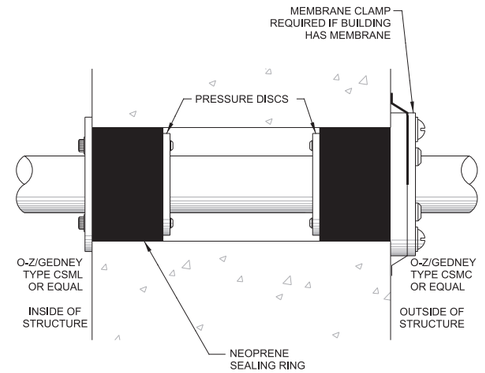
1 FOR REQUIRED TOP AND BOTTOM COVER OVER REINFORCEMENT SEE DETAIL. S101 TYP

2 MINIMUM ON CENTER HORIZONTAL SPACING OF PARALLEL CONDUITS = 4X OUTSIDE DIAMETER OF THE LARGER CONDUIT.

3 SUPPORT CONDUITS ON ADDED REINFORCEMENT CHAIRS OR BOLSTERS. TIE CONDUITS TO SUPPORTS & ANCHOR TO PREVENT FLOTATION.

4 CENTER LARGEST DIAMETER CONDUIT BETWEEN TOP AND BOTTOM REINFORCEMENT MATS.

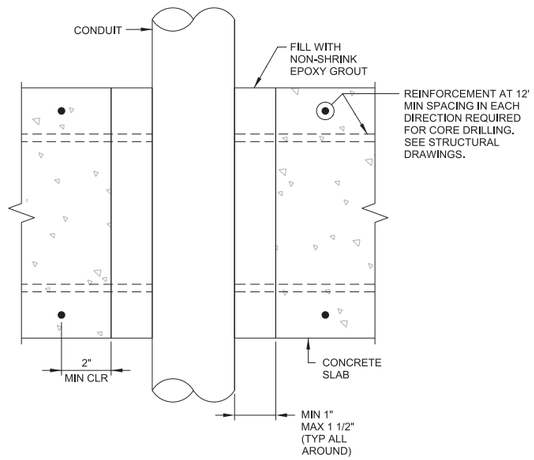
EM115 TYP S EMBEDDED CONDUIT IN CONCRETE SLAB SINGLE RUN



NOTES:

1. REFER TO SPECIFICATIONS FOR CORE-DRILLING REQUIREMENTS.

EM133 TYP S CONDUIT WALL PENETRATION BELOW GRADE



NOTES:

1. PROVIDE NON-DESTRUCTIVE TESTING TO DETERMINE LOCATIONS OF REINFORCEMENT. MAINTAIN MIN 2" CLEAR BETWEEN CORE DRILLED OPENING AND REINFORCEMENT.
2. APPLY EPOXY CEMENT BONDING AGENT PRIOR TO GROUTING.
3. PROVIDE CAST-IN SLEEVE FOR PENETRATIONS IN WALLS WITH REINFORCEMENT SPACING LESS THAN 2" IN EACH DIRECTION. REFER TO STRUCTURAL DRAWINGS.

EM139 TYP S CORE DRILLED PENETRATION CONCRETE SLAB

REV	DATE	BY	DESCRIPTION

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carollo

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SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
TYPICAL DETAILS
ELECTRICAL TYPICAL DETAILS 5

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-07
SHEET NO. 10 OF 159

PROJECT NO. 10548A10 FILE NAME: 10548A1000TE005.dgn

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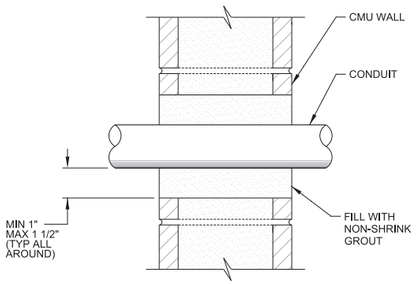
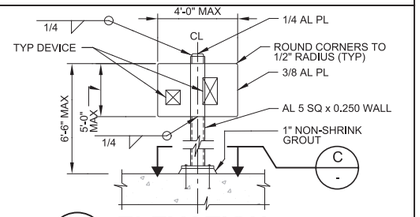


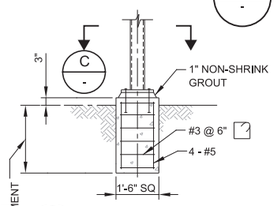
NOTES:

1. PROVIDE NON-DESTRUCTIVE TESTING TO DETERMINE LOCATIONS OF REINFORCEMENT. MAINTAIN MIN 2" CLEAR BETWEEN CORE DRILLED OPENING AND REINFORCEMENT.
2. ROUGHEN SURFACE OF OPENING TO A 1/4" AMPLITUDE AND APPLY EPOXY CEMENT BONDING AGENT IMMEDIATELY PRIOR TO GROUTING.
3. PROVIDE 8" MINIMUM CENTER-TO-CENTER SPACING FOR CONDUITS.

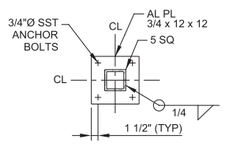
EM173 TYP S CORE HOLE PENETRATION FULLY GROUTED CMU WALL



A ELEVATION



B SECTION

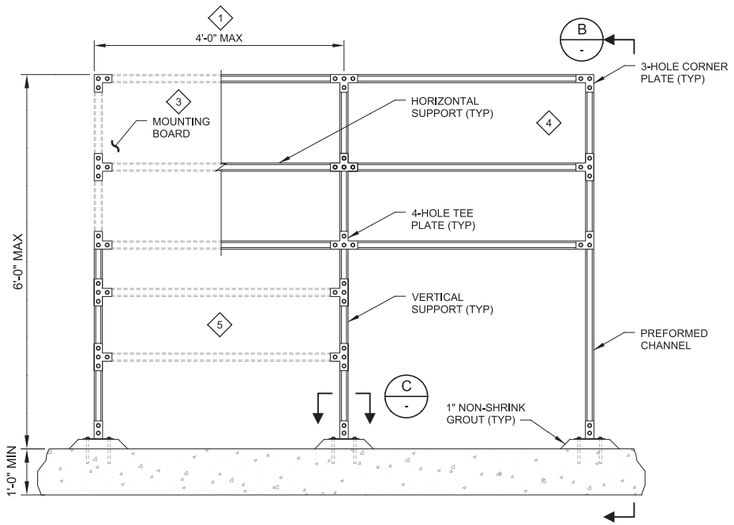


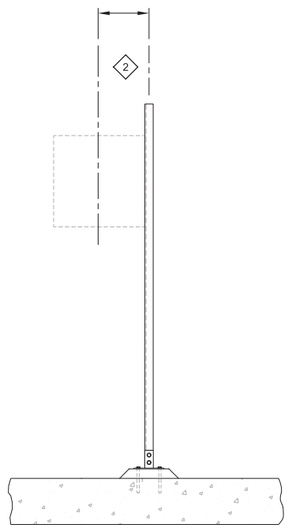
C SECTION

NOTES:

1. WHERE SEPARATE FOUNDATION IS REQUIRED, SEE SECTION B.
2. COAT ALUMINUM SURFACES IN CONTACT W/ CONCRETE PER SPECIFICATIONS.
3. USE STAINLESS STEEL FASTENERS FOR MOUNTING DEVICES.
4. WEIGHT OF DEVICE(S) SHALL NOT EXCEED 300 POUNDS.

EM202 TYP S DEVICE SUPPORT AND MOUNTING





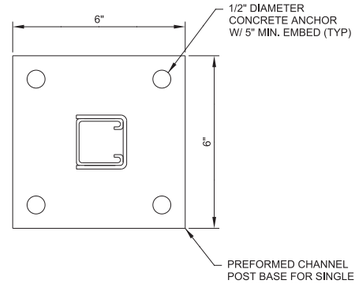
B SECTION

NOTES:

1. AS SHOWN, THE MOUNTING STAND IS SUITABLE FOR THE FOLLOWING DESIGN CRITERIA.
   - STAINLESS STEEL OR HOT-DIPPED GALVANIZED PREFORMED CHANNEL
   - SEISMIC DESIGN CATEGORY: A THROUGH D
   - RISK CATEGORY: III AND IV
   - MAXIMUM EQUIPMENT LOAD OF 100 LBS PER VERTICAL SUPPORT

   SUBMIT DESIGN CALCULATIONS FOR EACH INSTALLATION THAT EXCEEDS THE SPECIFIED DESIGN CRITERIA OR DIMENSIONAL LIMITATIONS IN THIS DETAIL. REFER TO THE SPECIFICATIONS FOR DESIGN CALCULATION SUBMITTAL REQUIREMENTS
2. REFER TO THE SPECIFICATIONS FOR MATERIAL REQUIREMENTS.

EM210 TYP S INDOOR EQUIPMENT MOUNTING STAND

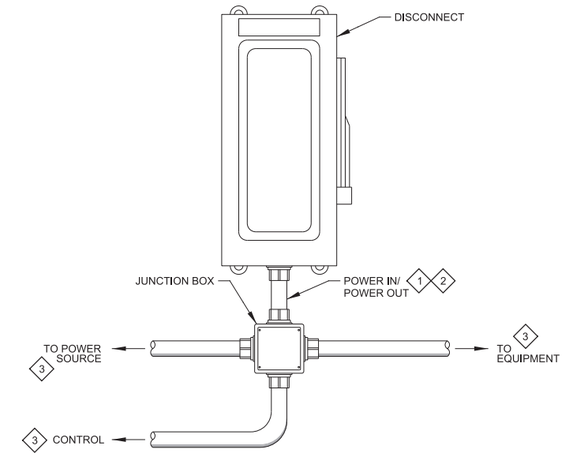


C POST BASE

3. WHERE CONCRETE ANCHORS COME IN CONTACT WITH DISSIMILAR METALS, ISOLATE DISSIMILAR METALS AS SPECIFIED IN THE SPECIFICATIONS.
4. HORIZONTAL AND VERTICAL SUPPORTS SHALL CONSIST OF PREFORMED SINGLE CHANNELS.

KEY NOTES:

1. FOR MOUNTING STANDS WIDER THAN 4 FEET PROVIDE EQUALLY SPACED VERTICAL SUPPORTS AT 4 FOOT MAXIMUM SPACING.
2. MAXIMUM OFFSET TO THE CENTERLINE OF EQUIPMENT OR ENCLOSURES IS 1'-6".
3. PROVIDE A MOUNTING BOARD FOR INSTRUMENTS AND DEVICES WEIGHTING LESS THAN 20 POUNDS THAT CANNOT BE MOUNTED DIRECTLY TO PREFORMED CHANNEL. EQUIPMENT ANCHORAGE TO THE MOUNTING BOARD SHALL BE DESIGNED BY THE CONTRACTOR.
4. PROVIDE ADDITIONAL PREFORMED CHANNEL SUPPORTS FOR ENCLOSURES THAT CAN BE MOUNTED DIRECTLY TO THE PREFORMED CHANNEL.
5. OPTIONAL HORIZONTAL SUPPORTS AND AVAILABLE SPACE FOR JUNCTION BOXES.



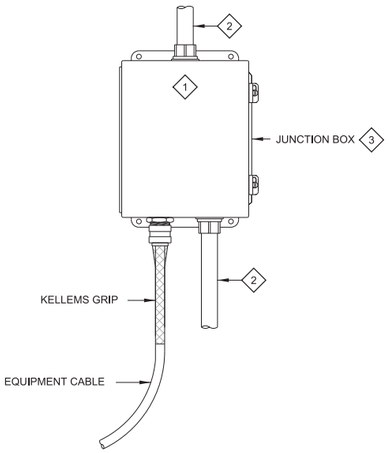
NOTES:

1. CONDUIT AND ENCLOSURE REQUIREMENTS AS SPECIFIED.

KEY NOTES:

1. CONDUIT IS NOT INCLUDED IN THE CONDUIT SCHEDULE.
2. SIZE CONDUIT IN ACCORDANCE WITH THE NEC.
3. REFER TO CONDUIT SCHEDULE FOR CONDUIT SIZE, WIRE SIZE AND QUANTITY.

EM221 TYP S DISCONNECT CONDUIT INSTALLATION



KEY NOTES:

1. PROVIDE TERMINAL STRIPS TO TRANSITION FROM THE EQUIPMENT CABLE TO FIELD WIRING.
2. POWER AND CONTROL CONDUITS. REFER TO THE ELECTRICAL DRAWINGS, CONDUIT AND CABLE SCHEDULE FOR DETAILS.
3. REFER TO SPECIFICATIONS AND PLANS FOR NEMA TYPE.

EM315 TYP S SUBMERSIBLE EQUIPMENT CABLE CONNECTION DETAIL

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER — No. 366286 — CHRISTOPHER A CARVALHO — STATE OF UTAH

carollo

South Valley WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
TYPICAL DETAILS
ELECTRICAL TYPICAL DETAILS 6

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-08
SHEET NO. 11 OF 159

PROJECT NO. 10548A10 FILE NAME: 10548A1000TE006.dgn

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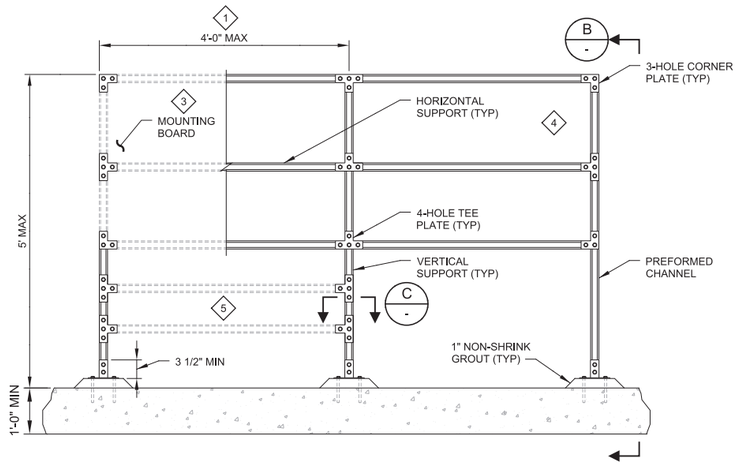
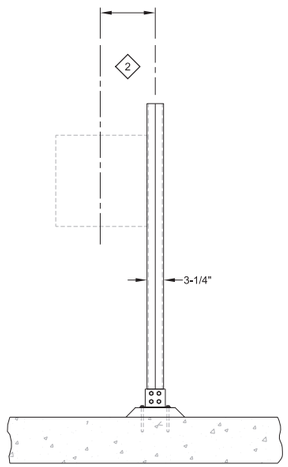
Model: Layout1
LAST SAVED BY: jlefevre





B SECTION

NOTES:

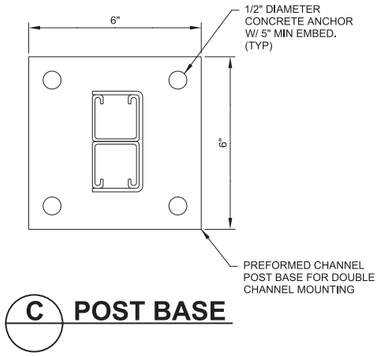
1. AS SHOWN, THE MOUNTING STAND IS SUITABLE FOR THE FOLLOWING DESIGN CRITERIA.
   - STAINLESS STEEL OR HOT-DIPPED GALVANIZED PREFORMED CHANNEL
   - BASIC WIND SPEED (3 SECOND GUST. 33 FEET ABOVE GROUND) : 120 MPH
   - WIND EXPOSURE CATEGORY: C
   - NON -SPECIAL WIND REGIONS
   - SEISMIC DESIGN CATEGORY: A THROUGH D
   - RISK CATEGORY: III AND IV
   - MAXIMUM EQUIPMENT LOAD OF 100 LBS PER VERTICAL SUPPORT

   SUBMIT DESIGN CALCULATIONS FOR EACH INSTALLATION THAT EXCEEDS THE SPECIFIED DESIGN CRITERIA OR DIMENSIONAL LIMITATIONS IN THIS DETAIL. REFER TO THE SPECIFICATIONS FOR DESIGN CALCULATION SUBMITTAL REQUIREMENTS.
2. THE TOTAL SURFACE AREA OF ALL EQUIPMENT AND MOUNTING BOARDS SHALL NOT EXCEED 12 SQUARE FEET PER VERTICAL SUPPORT.
3. REFER TO THE SPECIFICATIONS FOR MATERIAL REQUIREMENTS.
4. WHERE CONCRETE ANCHORS COME IN CONTACT WITH DISSIMILAR METALS, ISOLATE DISSIMILAR METALS AS SPECIFIED IN THE SPECIFICATIONS.
5. VERTICAL SUPPORTS SHALL CONSIST OF PREFORMED DOUBLE CHANNELS. HORIZONTAL SUPPORTS SHALL CONSIST OF PREFORMED SINGLE CHANNELS.

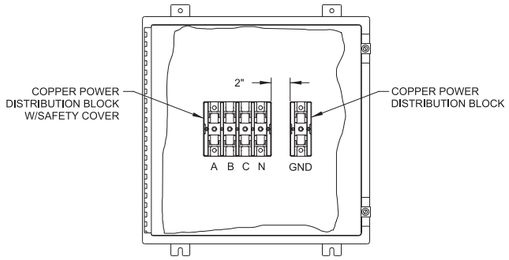
KEY NOTES:

1. FOR MOUNTING STANDS WIDER THAN 4 FEET PROVIDE EQUALLY SPACED VERTICAL SUPPORTS AT 4 FOOT MAXIMUM SPACING.
2. MAXIMUM OFFSET TO THE CENTERLINE OF EQUIPMENT OR ENCLOSURES IS 1'-6".
3. PROVIDE A MOUNTING BOARD FOR INSTRUMENTS AND DEVICES WEIGHTING LESS THAN 20 POUNDS THAT CANNOT BE MOUNTED DIRECTLY TO PREFORMED CHANNEL. EQUIPMENT ANCHORAGE TO THE MOUNTING BOARD SHALL BE DESIGNED BY THE CONTRACTOR.
4. PROVIDE ADDITIONAL PREFORMED CHANNEL SUPPORTS FOR ENCLOSURES THAT CAN BE MOUNTED DIRECTLY TO THE PREFORMED CHANNEL.
5. OPTIONAL HORIZONTAL SUPPORTS AND AVAILABLE SPACE FOR JUNCTION BOXES.

EM211 TYP S — OUTDOOR EQUIPMENT MOUNTING STAND



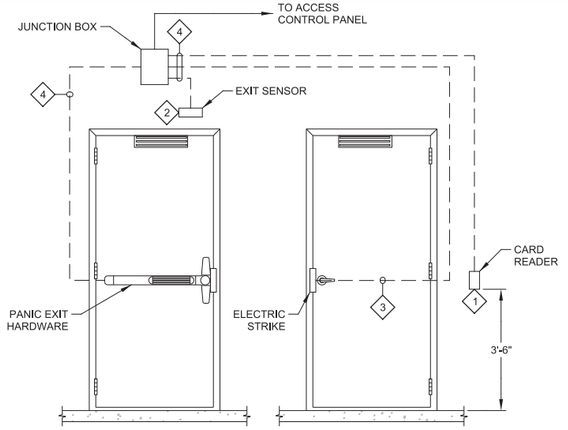
C POST BASE



NOTES:

1. CONTRACTOR TO SIZE BOX AND POWER BLOCKS SPACING TO CONFORM TO N.E.C. REQUIREMENTS.
2. REFER TO THE SPECIFICATIONS FOR ENCLOSURE MATERIAL AND NEMA TYPE REQUIREMENTS.

EM480 TYP S — TYPICAL POWER J-BOX DETAIL



NOTES:

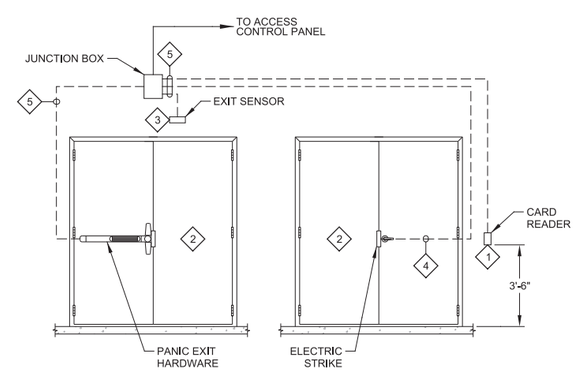
1. EXIT SENSOR AND CARD READER WILL BE PROVIDED UNDER SEPARATE CONTRACT.

KEY NOTES:

1. PROVIDE EMBEDDED SINGLE GANG BOX WITH COVER FOR CARD READER. INSTALL FLUSH WITH EXTERIOR WALL.
2. PROVIDE SINGLE GANG BOX AND COVER FOR EXIT SENSOR. SURFACE MOUNT WITH HEIGHT RANGE FROM 7 TO 15 FEET ABOVE FLOOR.
3. 3/4" CONDUIT STUBBED INTO DOOR FRAME.
4. 3/4" EMBEDDED CONDUIT.

ES91C TYP J — SINGLE DOOR SECURITY WITH CARD READER

2/26/19



NOTES:

1. EXIT SENSOR AND CARD READER WILL BE PROVIDED UNDER SEPARATE CONTRACT.

KEY NOTES:

1. PROVIDE EMBEDDED SINGLE GANG BOX AND COVER FOR CARD READER. INSTALL FLUSH WITH EXTERIOR WALL.
2. DOOR IS MANUAL FLUSH BOLT OPERATED. NO FINISH HARDWARE IS PROVIDED.
3. PROVIDE SINGLE GANG BOX AND COVER FOR EXIT SENSOR. SURFACE MOUNT WITH HEIGHT RANGE FROM 7 TO 15 FEET ABOVE FLOOR.
4. 3/4" CONDUIT STUBBED INTO FOOR FRAME.
5. 3/4" EMBEDDED CONDUIT.

ES92C TYP J — DOUBLE DOOR SECURITY WITH CARD READER

2/26/19

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER — No. 366286 — CHRISTOPHER A. CARVALHO — STATE OF UTAH

carollo

South Valley WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
TYPICAL DETAILS
ELECTRICAL TYPICAL DETAILS 7

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-09
SHEET NO. 12 OF 159

Plot Date: 01-MAR-2019 3:41:13 PM
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ColorTable: gshade.ctb
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LAST SAVED BY: jlefevre

KEY NOTES:

1. EXISTING GE A-SERIES PANELBOARD.
2. USE EXISTING SPARE CIRCUIT BREAKERS TO FEED LOADS IN NEW ELECTRICAL ENCLOSURE.
3. INSTALL NEW CIRCUIT BREAKER TO FEED HVAC UNIT IN NEW ELECTRICAL ENCLOSURE.

PANEL LP-MCC-BR (EXISTING) 2/27/2019

LOCATION: MCC BUILDING | NEMA: 12 | PH A WEIGHTED VA 14679
VOLTS: 208 / 120 | FEED: BOTTOM | PH B WEIGHTED VA 15519
PHASE & WIRE: 3PH 4W | MTG. SURFACE | PH C WEIGHTED VA 13730 (1)
INTERRUPT: 22 KAIC | BUS RATING: 150
MAIN: CB | EQUIP SIZING VA 46557
MAIN RATING 225 AF 150 AT | PANEL AMPS 129.2

I/C/F	DESCRIPTION	LOAD (VA)	BKR	CIR	Ø	CIR	BKR	LOAD (VA)	DESCRIPTION	I/C/F
C	MCC BUILDING ROOM LIGHTING	480	20A-1P	1	A	2		2000	MCC BUILDING HAVC	C
C	PCM 600 LIGHTS/OUTLETS		20A-1P	3	B	4	30A-3P	2000		C
C	MCC BUILDING EXTERIOR LIGHTING	190	20A-1P	5	C	6		2000		C
I	MCC BUILDING EAST RECEPTACLES	720	20A-1P	7	A	8	20A-2P	437	EMV-604	C
I	MCC BUILDING WEST RECEPTACLES	1080	20A-1P	9	B	10		437		C
C	PCM 600 CONTROL POWER		20A-1P	11	C	12	20A-1P	160	NEW MCC BUILDING INTERIOR LIGHTS	C
C	EMV-601	437	20A-2P	13	A	14	20A-1P	720	NEW MCC BUILDING RECEPTACLES	I
C		437		15	B	16	20A-1P	1440	PCM-600A CONTROL POWER	C
C	EMV-602	437	20A-2P	17	C	18	20A-1P	960	PCM-600A AUXILIARY POWER	C
C		437		19	A	20		4800	LP-MCC-BR 1	C
C	EMV-603	437	20A-2P	21	B	22	50A-3P	4800		C
C		437		23	C	24		4800		C
	SPACE			25	A	26		2000	NEW MCC BUILDING HVAC	C
	SPACE			27	B	28	30A-3P	2000		C
	SPACE			29	C	30		2000		C

(2) (3)

PANEL BR-DPP-2A 2/18/2019

LOCATION: BIOREACTOR AREA | NEMA: 1 | PH A WEIGHTED VA 3000
VOLTS: 480 | FEED: BOTTOM | PH B WEIGHTED VA 3000
PHASE & WIRE: 3PH 3W | MTG. MCC | PH C WEIGHTED VA 3000
INTERRUPT: 65 KAIC | BUS RATING: 100
OPTIONS: SPD | MAIN: MLO | EQUIP SIZING VA 9000
PANEL AMPS 10.8

I/C/F	DESCRIPTION	LOAD (VA)	BKR	CIR	Ø	CIR	BKR	LOAD (VA)	DESCRIPTION	I/C/F
C		300		1	A	2		300		C
C	EAM-16.221 AIR FLOW CONTROL VALVE	300	15A-3P	3	B	4	15A-3P	300	EAM-16.225 AIR FLOW CONTROL VALVE	C
C		300		5	C	6		300		C
C		300		7	A	8		300		C
C	EAM-16.222 AIR FLOW CONTROL VALVE	300	15A-3P	9	B	10	15A-3P	300	EAM-16.226 AIR FLOW CONTROL VALVE	C
C		300		11	C	12		300		C
C		300		13	A	14		300		C
C	EAM-16.223 AIR FLOW CONTROL VALVE	300	15A-3P	15	B	16	15A-3P	300	EAM-16.227 AIR FLOW CONTROL VALVE	C
C		300		17	C	18		300		C
C		300		19	A	20		300		C
C	EAM-16.224 AIR FLOW CONTROL VALVE	300	15A-3P	21	B	22	15A-3P	300	EAM-16.228 AIR FLOW CONTROL VALVE	C
C		300		23	C	24		300		C
				25	A	26				
	SPARE		20A-3P	27	B	28	20A-3P		SPARE	
				29	C	30				
				31	A	32				
	SPARE		20A-3P	33	B	34	20A-3P		SPARE	
				35	C	36				
				37	A	38				
	SPACE			39	B	40			SPACE	
				41	C	42				

PANEL BR-DPP-3A 2/27/2019

LOCATION: BIOREACTOR AREA | NEMA: 1 | PH A WEIGHTED VA 3000
VOLTS: 480 | FEED: BOTTOM | PH B WEIGHTED VA 3000
PHASE & WIRE: 3PH 3W | MTG. MCC | PH C WEIGHTED VA 3000
INTERRUPT: 65 KAIC | BUS RATING: 100
OPTIONS: SPD | MAIN: MLO | EQUIP SIZING VA 9000
PANEL AMPS 10.8

I/C/F	DESCRIPTION	LOAD (VA)	BKR	CIR	Ø	CIR	BKR	LOAD (VA)	DESCRIPTION	I/C/F
C		300		1	A	2		300		C
C	EAM-16.321 AIR FLOW CONTROL VALVE	300	15A-3P	3	B	4	15A-3P	300	EAM-16.325 AIR FLOW CONTROL VALVE	C
C		300		5	C	6		300		C
C		300		7	A	8		300		C
C	EAM-16.322 AIR FLOW CONTROL VALVE	300	15A-3P	9	B	10	15A-3P	300	EAM-16.326 AIR FLOW CONTROL VALVE	C
C		300		11	C	12		300		C
C		300		13	A	14		300		C
C	EAM-16.323 AIR FLOW CONTROL VALVE	300	15A-3P	15	B	16	15A-3P	300	EAM-16.327 AIR FLOW CONTROL VALVE	C
C		300		17	C	18		300		C
C		300		19	A	20		300		C
C	EAM-16.324 AIR FLOW CONTROL VALVE	300	15A-3P	21	B	22	15A-3P	300	EAM-16.328 AIR FLOW CONTROL VALVE	C
C		300		23	C	24		300		C
				25	A	26				
	SPARE		20A-3P	27	B	28	20A-3P		SPARE	
				29	C	30				
				31	A	32				
	SPARE		20A-3P	33	B	34	20A-3P		SPARE	
				35	C	36				
				37	A	38				
	SPACE			39	B	40			SPACE	
				41	C	42				

PANEL BR-DPP-2B 2/18/2019

LOCATION: BIOREACTOR AREA | NEMA: 1 | PH A WEIGHTED VA 3000
VOLTS: 480 | FEED: BOTTOM | PH B WEIGHTED VA 3000
PHASE & WIRE: 3PH 3W | MTG. MCC | PH C WEIGHTED VA 3000
INTERRUPT: 65 KAIC | BUS RATING: 100
OPTIONS: SPD | MAIN: MLO | EQUIP SIZING VA 9000
PANEL AMPS 10.8

I/C/F	DESCRIPTION	LOAD (VA)	BKR	CIR	Ø	CIR	BKR	LOAD (VA)	DESCRIPTION	I/C/F
C		300		1	A	2		300		C
C	EAM-16.229 AIR FLOW CONTROL VALVE	300	15A-3P	3	B	4	15A-3P	300	EAM-16.231 AIR FLOW CONTROL VALVE	C
C		300		5	C	6		300		C
C		300		7	A	8		300		C
C	EAM-16.230 AIR FLOW CONTROL VALVE	300	15A-3P	9	B	10	15A-3P	300	EAM-16.232 AIR FLOW CONTROL VALVE	C
C		300		11	C	12		300		C
C		300		13	A	14		300		C
C	EAM-16.233 AIR FLOW CONTROL VALVE	300	15A-3P	15	B	16	15A-3P	300	EAM-16.235 AIR FLOW CONTROL VALVE	C
C		300		17	C	18		300		C
C		300		19	A	20		300		C
C	EAM-16.234 AIR FLOW CONTROL VALVE	300	15A-3P	21	B	22	15A-3P	300	EAM-16.236 AIR FLOW CONTROL VALVE	C
C		300		23	C	24		300		C
				25	A	26				
	SPARE		20A-3P	27	B	28	20A-3P		SPARE	
				29	C	30				
				31	A	32				
	SPARE		20A-3P	33	B	34	20A-3P		SPARE	
				35	C	36				
				37	A	38				
	SPACE			39	B	40			SPACE	
				41	C	42				

PANEL BR-DPP-3B 2/27/2019

LOCATION: BIOREACTOR AREA | NEMA: 1 | PH A WEIGHTED VA 3000
VOLTS: 480 | FEED: BOTTOM | PH B WEIGHTED VA 3000
PHASE & WIRE: 3PH 3W | MTG. MCC | PH C WEIGHTED VA 3000
INTERRUPT: 65 KAIC | BUS RATING: 100
OPTIONS: SPD | MAIN: MLO | EQUIP SIZING VA 9000
PANEL AMPS 10.8

I/C/F	DESCRIPTION	LOAD (VA)	BKR	CIR	Ø	CIR	BKR	LOAD (VA)	DESCRIPTION	I/C/F
C		300		1	A	2		300		C
C	EAM-16.329 AIR FLOW CONTROL VALVE	300	15A-3P	3	B	4	15A-3P	300	EAM-16.331 AIR FLOW CONTROL VALVE	C
C		300		5	C	6		300		C
C		300		7	A	8		300		C
C	EAM-16.330 AIR FLOW CONTROL VALVE	300	15A-3P	9	B	10	15A-3P	300	EAM-16.332 AIR FLOW CONTROL VALVE	C
C		300		11	C	12		300		C
C		300		13	A	14		300		C
C	EAM-16.333 AIR FLOW CONTROL VALVE	300	15A-3P	15	B	16	15A-3P	300	EAM-16.335 AIR FLOW CONTROL VALVE	C
C		300		17	C	18		300		C
C		300		19	A	20		300		C
C	EAM-16.334 AIR FLOW CONTROL VALVE	300	15A-3P	21	B	22	15A-3P	300	EAM-16.336 AIR FLOW CONTROL VALVE	C
C		300		23	C	24		300		C
				25	A	26				
	SPARE		20A-3P	27	B	28	20A-3P		SPARE	
				29	C	30				
				31	A	32				
	SPARE		20A-3P	33	B	34	20A-3P		SPARE	
				35	C	36				
				37	A	38				
	SPACE			39	B	40			SPACE	
				41	C	42				

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

Digitally signed by Christopher A Carvalho
Date: 2019.03.01 15:41:13 -07'00'
REGISTERED PROFESSIONAL ENGINEER
No. 366286
CHRISTOPHER A CARVALHO
STATE OF UTAH

carollo

South Valley WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
PANELBOARD SCHEDULES - I

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-SC-1
SHEET NO. 13 OF 159

PROJECT NO. 10548A10 FILE NAME: 10548A10_GESC1.dgn

PANEL BR-DPP-4A
2/27/2019

LOCATION: BIOREACTOR AREA — NEMA: 1 — PH A WEIGHTED VA 3000
VOLTS: 480 — FEED: BOTTOM — PH B WEIGHTED VA 3000
PHASE & WIRE: 3PH 3W — MTG. MCC — PH C WEIGHTED VA 3000
INTERRUPT: 65 KAIC — BUS RATING: 100
OPTIONS: SPD — MAIN: MLO — EQUIP SIZING VA 9000
PANEL AMPS 10.8

I/C/F	DESCRIPTION	LOAD (VA)	BKR	CIR	Ø	CIR	BKR	LOAD (VA)	DESCRIPTION	I/C/F
C		300		1	A	2		300		C
C	EAM-16.421 AIR FLOW CONTROL VALVE	300	15A-3P	3	B	4	15A-3P	300	EAM-16.425 AIR FLOW CONTROL VALVE	C
C		300		5	C	6		300		C
C		300		7	A	8		300		C
C	EAM-16.422 AIR FLOW CONTROL VALVE	300	15A-3P	9	B	10	15A-3P	300	EAM-16.426 AIR FLOW CONTROL VALVE	C
C		300		11	C	12		300		C
C		300		13	A	14		300		C
C	EAM-16.423 AIR FLOW CONTROL VALVE	300	15A-3P	15	B	16	15A-3P	300	EAM-16.427 AIR FLOW CONTROL VALVE	C
C		300		17	C	18		300		C
C		300		19	A	20		300		C
C	EAM-16.424 AIR FLOW CONTROL VALVE	300	15A-3P	21	B	22	15A-3P	300	EAM-16.428 AIR FLOW CONTROL VALVE	C
C		300		23	C	24		300		C
				25	A	26				
	SPARE		20A-3P	27	B	28	20A-3P		SPARE	
				29	C	30				
				31	A	32				
	SPARE		20A-3P	33	B	34	20A-3P		SPARE	
				35	C	36				
				37	A	38				
	SPACE			39	B	40			SPACE	
				41	C	42				

PANEL BR-DPP-4B
2/27/2019

LOCATION: BIOREACTOR AREA — NEMA: 1 — PH A WEIGHTED VA 3000
VOLTS: 480 — FEED: BOTTOM — PH B WEIGHTED VA 3000
PHASE & WIRE: 3PH 3W — MTG. MCC — PH C WEIGHTED VA 3000
INTERRUPT: 65 KAIC — BUS RATING: 100
OPTIONS: SPD — MAIN: MLO — EQUIP SIZING VA 9000
PANEL AMPS 10.8

I/C/F	DESCRIPTION	LOAD (VA)	BKR	CIR	Ø	CIR	BKR	LOAD (VA)	DESCRIPTION	I/C/F
C		300		1	A	2		300		C
C	EAM-16.429 AIR FLOW CONTROL VALVE	300	15A-3P	3	B	4	15A-3P	300	EAM-16.431 AIR FLOW CONTROL VALVE	C
C		300		5	C	6		300		C
C		300		7	A	8		300		C
C	EAM-16.430 AIR FLOW CONTROL VALVE	300	15A-3P	9	B	10	15A-3P	300	EAM-16.432 AIR FLOW CONTROL VALVE	C
C		300		11	C	12		300		C
C		300		13	A	14		300		C
C	EAM-16.433 AIR FLOW CONTROL VALVE	300	15A-3P	15	B	16	15A-3P	300	EAM-16.435 AIR FLOW CONTROL VALVE	C
C		300		17	C	18		300		C
C		300		19	A	20		300		C
C	EAM-16.434 AIR FLOW CONTROL VALVE	300	15A-3P	21	B	22	15A-3P	300	EAM-16.436 AIR FLOW CONTROL VALVE	C
C		300		23	C	24		300		C
				25	A	26				
	SPARE		20A-3P	27	B	28	20A-3P		SPARE	
				29	C	30				
				31	A	32				
	SPARE		20A-3P	33	B	34	20A-3P		SPARE	
				35	C	36				
				37	A	38				
	SPACE			39	B	40			SPACE	
				41	C	42				

PANEL GRB-LP-1
3/1/2019

LOCATION: GRIT HANDLING FACILITY — NEMA: 1 — PH A WEIGHTED VA 9529
VOLTS: 208 / 120 — FEED: BOTTOM — PH B WEIGHTED VA 12264
PHASE & WIRE: 3PH 4W — MTG. SURFACE — PH C WEIGHTED VA 6999
INTERRUPT: 10 KAIC — BUS RATING: 150
OPTIONS: SPD — MAIN: CB — EQUIP SIZING VA 36792
MAIN RATING: 150 AF 150 AT — PANEL AMPS 102.1

I/C/F	DESCRIPTION	LOAD (VA)	BKR	CIR	Ø	CIR	BKR	LOAD (VA)	DESCRIPTION	I/C/F
C	AHU-21.880	624	20A-2P	1	A	2	40A-2P	2912	HP-21.880	C
C	INDOOR MINI-SPLIT AHU	624		3	B	4		2912	OUTDOOR MINI-SPLIT AHU	C
	SPARE		20A-1P	5	C	6	20A-1P	189	INTERIOR STAIRS LIGHTS	I
C	ELECTRICAL ROOM LIGHTS (LOWER)	444	20A-1P	7	A	8	20A-1P	720	ELECTRICAL ROOM RECEPTACLES (LOWER)	I
C	PROCESS ROOM LIGHTS (LOWER)	1452	20A-1P	9	B	10	20A-1P	1080	PROCESS ROOM RECEPTACLES (LOWER)	I
C	PROCESS ROOM LIGHTS (UPPER)	1328	20A-1P	11	C	12	20A-1P	1620	PROCESS ROOM RECEPTACLES (UPPER)	I
C	EXTERIOR LIGHTS (PHOTOEYE)	357	20A-1P	13	A	14	20A-1P	1800	EXTERIOR RECEPTACLES	I
C	PCM-2100 CLEAN POWER	1440	20A-1P	15	B	16	20A-1P	50	RESTROOM LIGHT (LOWER) / EXF-21.870	I
C	PCM-2100 AUX POWER	960	20A-1P	17	C	18	20A-1P	180	RESTROOM RECEPTACLE (LOWER)	I
I	EDR-21.113	650	20A-1P	19	A	20	20A-1P	500	FACP-21.800	C
I	EDR-21.123	650	20A-1P	21	B	22	30A-2P	1500	RESTROOM	I
I	EDR-21.133	650	20A-1P	23	C	24		1500	WATER HEATER	I
C	VCP-21.531	250	20A-1P	25	A	26	20A-1P		SPARE	
C	EXTERIOR LIGHTS (PHOTOEYE)	759	20A-1P	27	B	28	20A-1P		SPARE	
	SPARE		20A-1P	29	C	30	20A-1P		SPARE	
	SPARE		20A-1P	31	A	32	20A-1P		SPARE	
	SPARE		20A-1P	33	B	34	20A-1P		SPARE	
	SPARE		20A-1P	35	C	36	20A-1P		SPARE	
	SPARE		20A-1P	37	A	38	20A-1P		SPARE	
	SPARE		20A-1P	39	B	40	20A-1P		SPARE	
	SPARE		20A-1P	41	C	42	20A-1P		SPARE	

PANEL GRB-DPP-1
3/1/2019

LOCATION: GRIT HANDLING FACILITY — NEMA: 1 — PH A WEIGHTED VA 10948
VOLTS: 480 — FEED: BOTTOM — PH B WEIGHTED VA 10948
PHASE & WIRE: 3PH 3W — MTG. SURFACE — PH C WEIGHTED VA 10948
INTERRUPT: 65 KAIC — BUS RATING: 100
OPTIONS: SPD — MAIN: MLO — EQUIP SIZING VA 32844
PANEL AMPS 39.5

I/C/F	DESCRIPTION	LOAD (VA)	BKR	CIR	Ø	CIR	BKR	LOAD (VA)	DESCRIPTION	I/C/F
I	EDR-21.111	305		1	A	2		305	EDR-21.211	I
I	GRIT BASIN INLET GATE NO. 1	305	15A-3P	3	B	4	15A-3P	305	GRIT PUMP SUCTION VALVE NO. 1	I
I		305		5	C	6		305		I
				7	A	8		305	EDR-21.231	I
	SPARE		15A-3P	9	B	10	15A-3P	305	GRIT PUMP SUCTION VALVE NO. 3	I
				11	C	12		305		I
				13	A	14		305	EDR-21.251	I
	SPARE		15A-3P	15	B	16	15A-3P	305	GRIT PUMP SUCTION VALVE NO. 5	I
				17	C	18		305		I
I	EDR-21.115	305		19	A	20		305	EDR-21.116	I
I	GRIT BASIN FILL VALVE NO. 1	305	15A-3P	21	B	22	15A-3P	305	GRIT BASIN DRAIN VALVE NO. 1	I
I		305		23	C	24		305		I
I	EDR-21.131	305		25	A	26		305	EDR-21.135	I
I	GRIT BASIN INLET GATE NO. 3	305	15A-3P	27	B	28	15A-3P	305	GRIT BASIN FILL VALVE NO. 3	I
I		305		29	C	30		305		I
				31	A	32		305	EDR-21.136	I
	SPARE		15A-3P	33	B	34	15A-3P	305	GRIT BASIN DRAIN VALVE NO. 3	I
				35	C	36		305		I
I	GRW-21.310	1330		37	A	38		1330	GRW-21.330	I
I	GRIT WASHER NO. 1	1330	20A-3P	39	B	40	20A-3P	1330	GRIT WASHER NO. 3	I
I		1330		41	C	42		1330		I
I	MAU-21.810	5543		43	A	44				
I	MAU NO. 1	5543	25A-3P	45	B	46			SPACE	
I		5543		47	C	48				
				49	A	50				
	SPACE			51	B	52			SPACE	
				53	C	54				

PANEL GRB-DPP-2
3/1/2019

LOCATION: GRIT HANDLING FACILITY — NEMA: 1 — PH A WEIGHTED VA 11845
VOLTS: 480 — FEED: BOTTOM — PH B WEIGHTED VA 11845
PHASE & WIRE: 3PH 3W — MTG. SURFACE — PH C WEIGHTED VA 11845
INTERRUPT: 65 KAIC — BUS RATING: 100
OPTIONS: SPD — MAIN: MLO — EQUIP SIZING VA 35535
PANEL AMPS 42.7

I/C/F	DESCRIPTION	LOAD (VA)	BKR	CIR	Ø	CIR	BKR	LOAD (VA)	DESCRIPTION	I/C/F
C	EDR-21.121	305		1	A	2		305	EDR-21.221	C
C	GRIT BASIN INLET GATE NO. 2	305	15A-3P	3	B	4	15A-3P	305	GRIT PUMP SUCTION VALVE NO. 2	C
C		305		5	C	6		305		C
I		322		7	A	8		305	EDR-21.241	C
I	ROLL UP DOOR 103-2	322	15A-3P	9	B	10	15A-3P	305	GRIT PUMP SUCTION VALVE NO. 4	C
I		322		11	C	12		305		C
I		322		13	A	14		305	EDR-21.261	C
I	ROLL UP DOOR 103-3	322	15A-3P	15	B	16	15A-3P	305	GRIT PUMP SUCTION VALVE NO. 6	C
I		322		17	C	18		305		C
C	EDR-21.125	305		19	A	20		305	EDR-21.126	C
C	GRIT BASIN FILL VALVE NO. 2	305	15A-3P	21	B	22	15A-3P	305	GRIT BASIN DRAIN VALVE NO. 2	C
C		305		23	C	24		305		C
I		322		25	A	26			SPARE	
I	ROLL UP DOOR 103-4	322	15A-3P	27	B	28	15A-3P			
I		322		29	C	30				
	SPARE			31	A	32			SPARE	
			15A-3P	33	B	34	15A-3P			
				35	C	36				
C	GRW-21.320	1330		37	A	38		5543	MAU-21.820	C
C	GRIT WASHER NO.2	1330	20A-3P	39	B	40	25A-3P	5543	MAU NO. 2	C
C		1330		41	C	42		5543		C
	SPACE			43	A	44			SPACE	C
				45	B	46				C
				47	C	48				C
	SPACE			49	A	50			SPACE	C
				51	B	52				C
				53	C	54				C

REV	DATE	BY	DESCRIPTION

DESIGNED: CAC
DRAWN: AAW
CHECKED: BJR
DATE: MARCH 2019

REGISTERED PROFESSIONAL ENGINEER No. 366286 CHRISTOPHER A. CARVALHO STATE OF UTAH

carollo®

South Valley WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
PANELBOARD SCHEDULES - II

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 — 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-SC-2
SHEET NO. 14 OF 159

Plot Date: 01-MAR-2019 3:40:06 PM User: svcPW PlotScale: 2:1 DesignScript: Carollo_Std_Pen_v0905.pen ColorTable: gshade.ctb Model: Layout1 LAST SAVED BY: jlefevre

LUMINAIRE SCHEDULE

2/26/2019

ITEM	DESCRIPTION	MOUNTING METHOD	LAMP QUANTITY	LAMP TYPE	MANUFACTURER	CATALOG	VOLTS	VA
A1	SEALED, AND GASKETED LED LUMINAIRE, CLEAR POLYCARBONATE LENS 80 CRI, SUITABLE FOR WET LOCATIONS, w/ HIGH EFFICIENCY LEDs FOR AMBIENT TEMPERATURES -29 TO 40 DEG C, L80 AT 75,000 HOURS 0-10V DIMMING	CEILING MOUNT OR SUSPENDED AS NEEDED	N/A	LED 4000K	HOLOPHANE	EVT4 4000LM FST WD MVOLT GZ10 40K 80 CRI	120	37
A2	SEALED, AND GASKETED LED LUMINAIRE, CLEAR POLYCARBONATE LENS 80 CRI, SUITABLE FOR WET LOCATIONS, w/ HIGH EFFICIENCY LEDs FOR AMBIENT TEMPERATURES -29 TO 40 DEG C, L80 AT 75,000 HOURS 0-10V DIMMING	CEILING MOUNT OR SUSPENDED AS NEEDED	N/A	LED 4000K	HOLOPHANE	EVT4 12000LM FST WD MVOLT GZ10 40K 80 CRI	120	110
B	PHUZION LED HIGH BAY LUMINAIRE MAXIMUM AMBIENT RATING 65 DEG C CSA CERTIFIED FOR USE IN WET LOCATIONS 0-10V DIMMING STANDARD	PENDANT MOUNT	N/A	LED 4000K	HOLOPHANE	PHZ 24L 4K 80CRI AS P G W	120	190
C	D-SERIES SIZE 1 WALLPACK, BLACK FINISH MINIMUM TEMPERATURE RATING OF -40°C, IP65 RATED 0-10V DIMMING	WALL MOUNT	N/A	LED 3000K	LITHONIA	DSXW1 LED 20C 700 30K T3M MVOLT DMG DBLXD	120	51
D	D-SERIES SIZE 1 LED AREA LUMINAIRE, BLACK FINISH 70 CRI, MINIMUM TEMPERATURE RATING OF -40 DEG C, IP65 RATED SQUARE POLE MOUNTING	POLE MOUNT	N/A	LED 3000K	LITHONIA LITHONIA	DSX1LED P1 30K T4M MVOLT SPA PER DBLXD DLL127F 1.5 JU	120	60
E	DELEON DLTL EL94V-0 FLAME RATING, WET LOCATION LISTED TEMPERATURE RATING OF -20°C TO 50°C	WALL MOUNT	N/A	LED	HOLOPHANE	DLTL W 1 G EL	120	4
F	CHAMP MLL SERIES LED LUMINAIRE, DIFFUSED POLYCARBONATE LENS SUITABLE FOR HAZARDOUS LOCATIONS, GRAY EPOXY PAINTED FOR AMBIENT TEMPERATURES -40 TO 65 DEG C, COOL WHITE	CEILING MOUNT OR SUSPENDED AS NEEDED	N/A	LED	CROUSE-HINDS	MLL 4/UNVI S903D P	120	73

DISCONNECT SCHEDULE

		A	B	C	D	S
VOLTAGE	120 VAC					XXX
	240 VAC					
	600 VAC	XXX	XXX	XXX	XXX	
	125 VDC					
	250 VDC					
	500 VDC					
POLES	1P					XXX
	2P					
	3P	XXX	XXX	XXX	XXX	
	6P					
	NEUT.					
	GND.					
AMPS	30A	XXX		XXX	XXX	XXX
	60A		XXX			
	100A					
	200A					
	400A					
	600A					
	1200A					
NEMA CLASS	1					
	2					
	3					
	3R					
	4					
	4X					
	4X-SS	XXX	XXX		XXX	XXX
	7					
	9					
	12			XXX		
TYPE	NON-FUSED	XXX	XXX	XXX	XXX	
	FUSED					
	CIRCUIT BREAKER					
	MAN. START w/ OL					XXX
	MAN. STARTER w/o OL					
RATINGS	HORSEPOWER					
	FUSE SIZE					
	BREAKER AF/AT					
ACCESSORIES					1	

ACCESSORY CODE: 1= AUX CONTACT CLOSED WHEN DISCONNECT IS CLOSED

ELECTRICAL HANDHOLE AND MANHOLE SCHEDULE

2/19/2019

TAG NO	MINIMUM INTERIOR DIMENSIONS (INCHES) WIDTH	LENGTH	DEPTH	CONSTRUCTION	TYPICAL DETAIL	SURFACE LOADING	COMMENTS
EMH-1	72	72	84	PRECAST	EM062	ROADWAY	

NOTES:
1. SEE SPECIFICATION 02581 FOR PRECAST ELECTRICAL HANDHOLES AND MANHOLES.
2. ALTERNATES: PROVIDE PER TYPICAL DETAIL EM062 IF INDICATED UNDER "COMMENTS".

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN EYP
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER No. 366286 CHRISTOPHER A. CARVALHO STATE OF UTAH

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South Valley WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
LUMINAIRE, DISCONNECT AND MANHOLE SCHEDULE

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-SC-3
SHEET NO. 15 OF 159

PROJECT NO. 10548A10 FILE NAME: 10548A10_GESC3.dgn

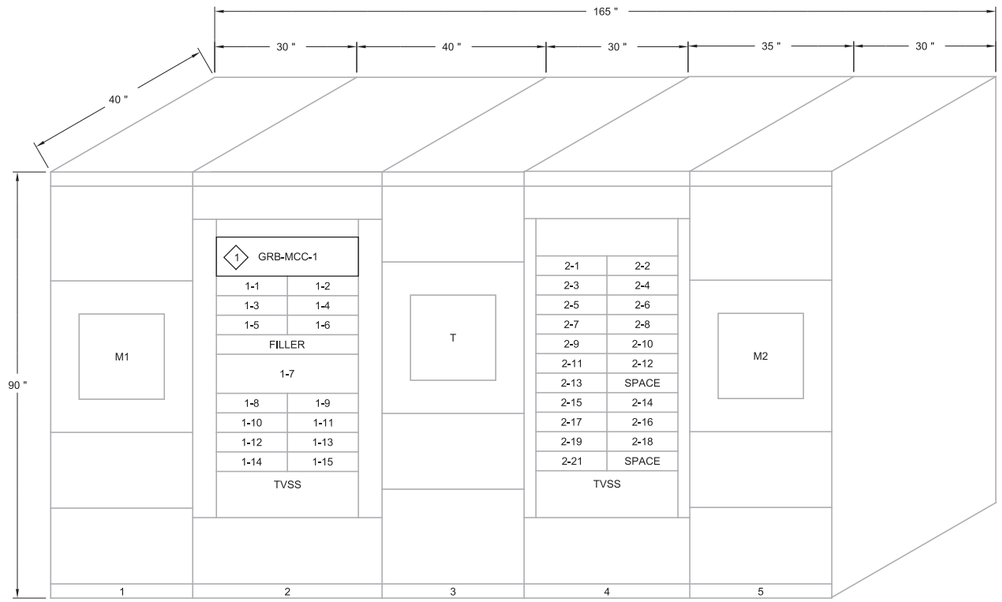
Plot Date: 01-MAR-2019 3:40:10 PM User: svcPW PlotScale: 2:1 DesignScript: Carollo_Std_Pen_v0905.pen ColorTable: gshade.ctb Model: Layout1 LAST SAVED BY: jlefevre

GENERAL NOTES:

1. SWITCHBOARD ES-5 IS A GE SPECTRA SERIES SWITCHBOARD ORDER NO. MEB8750049D.

KEY NOTES:

(1) INSTALL A NEW CIRCUIT BREAKER FOR THE GRIT REMOVAL BUILDING IN THE EXISTING 6X SPACE.



REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
No. 366286
CHRISTOPHER A CARVALHO
STATE OF UTAH

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WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
ES-5 ELEVATION

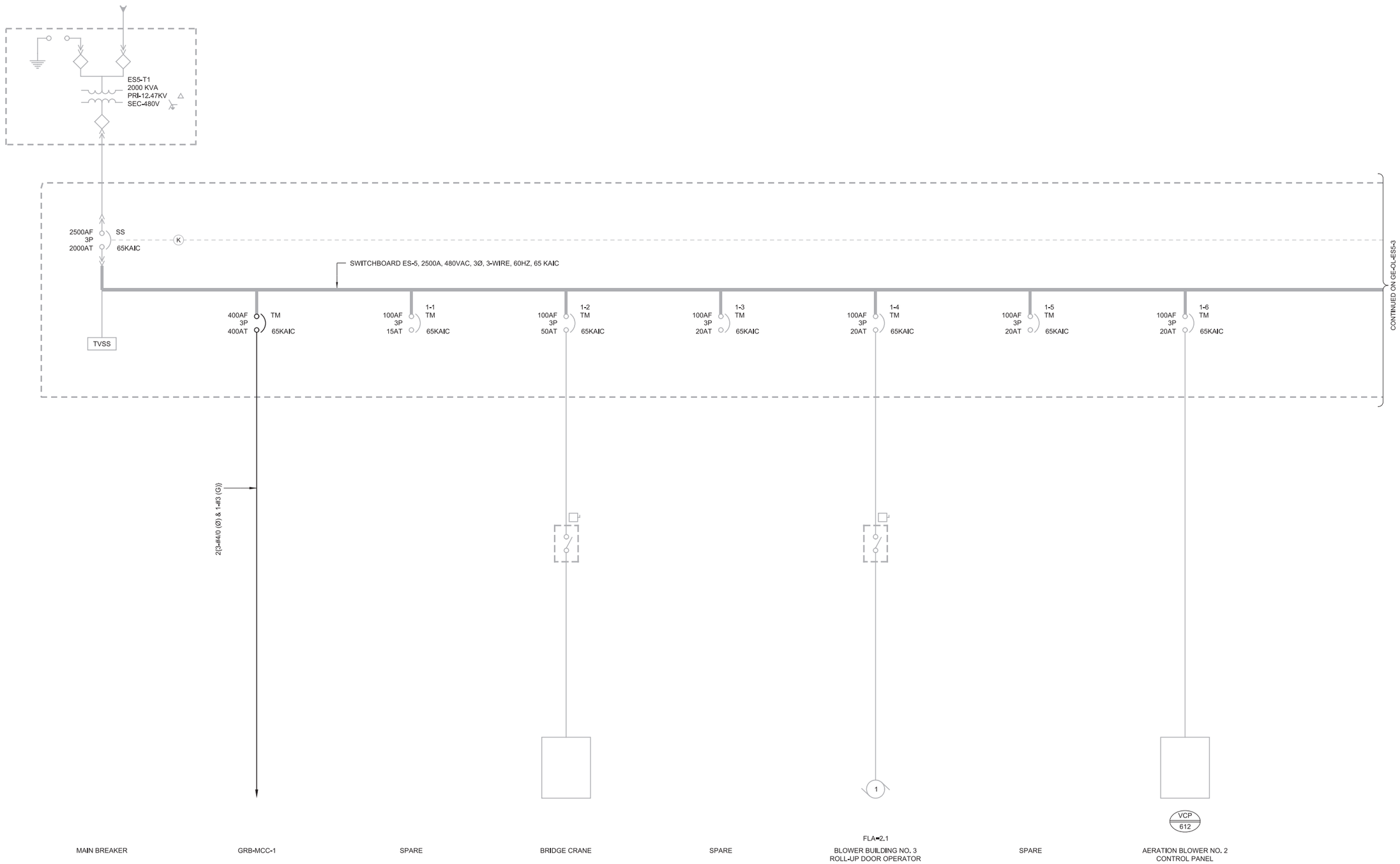
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-ES5-1
SHEET NO. 16 OF 159

LAST SAVED BY: jlefevre

PROJECT NO. 10548A10 FILE NAME: 10548A10_GEOLES501.dgn

Plot Date: 01-MAR-2019 3:43:50 PM
User: svcPW
PlotScale: 2:1
DesignScript: Carollo_Std_Pen_v0905.pen
ColorTable: gshade.ctb
Model: Layout1
LAST SAVED BY: jlefevre



REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
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CHRISTOPHER A. CARVALHO
STATE OF UTAH

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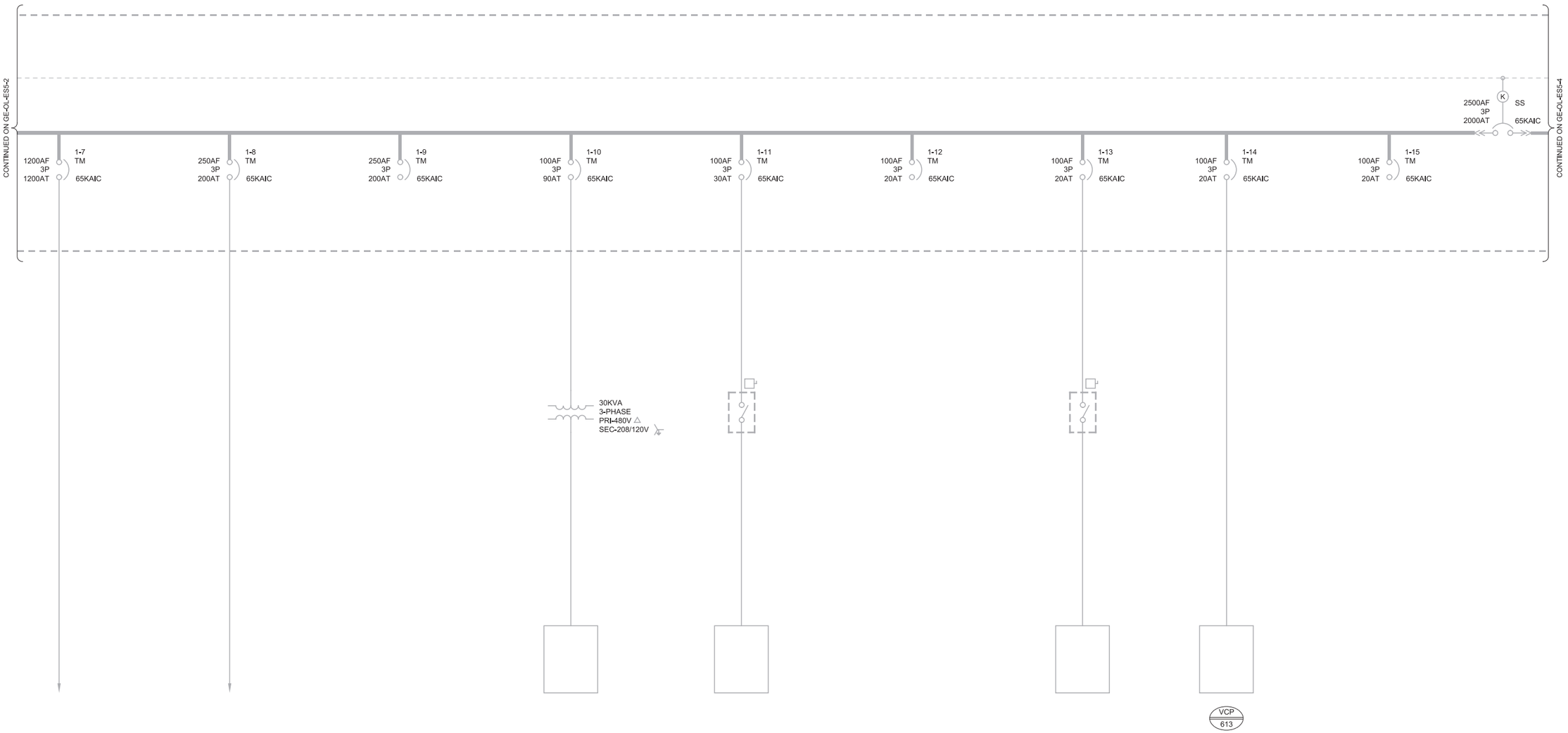
SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
ES-5
ONE-LINE DIAGRAM - I

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-ES5-2
SHEET NO. 17 OF 159



REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BR
DATE MARCH 2019

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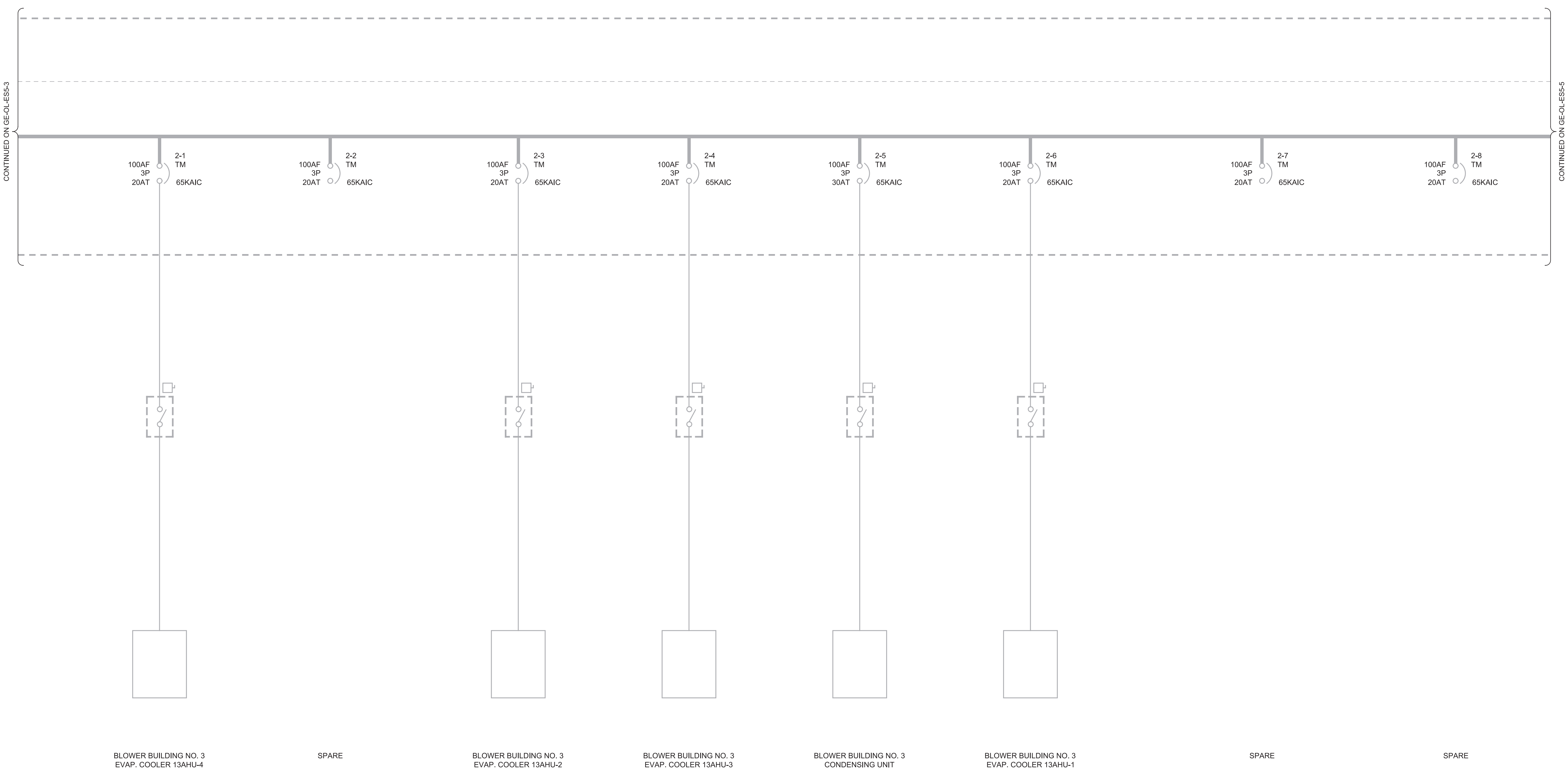
SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
ES-5
ONE-LINE DIAGRAM - II

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-ES5-3
SHEET NO. 18 OF 159



REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER No. 366286 CHRISTOPHER A. CARVALHO STATE OF UTAH

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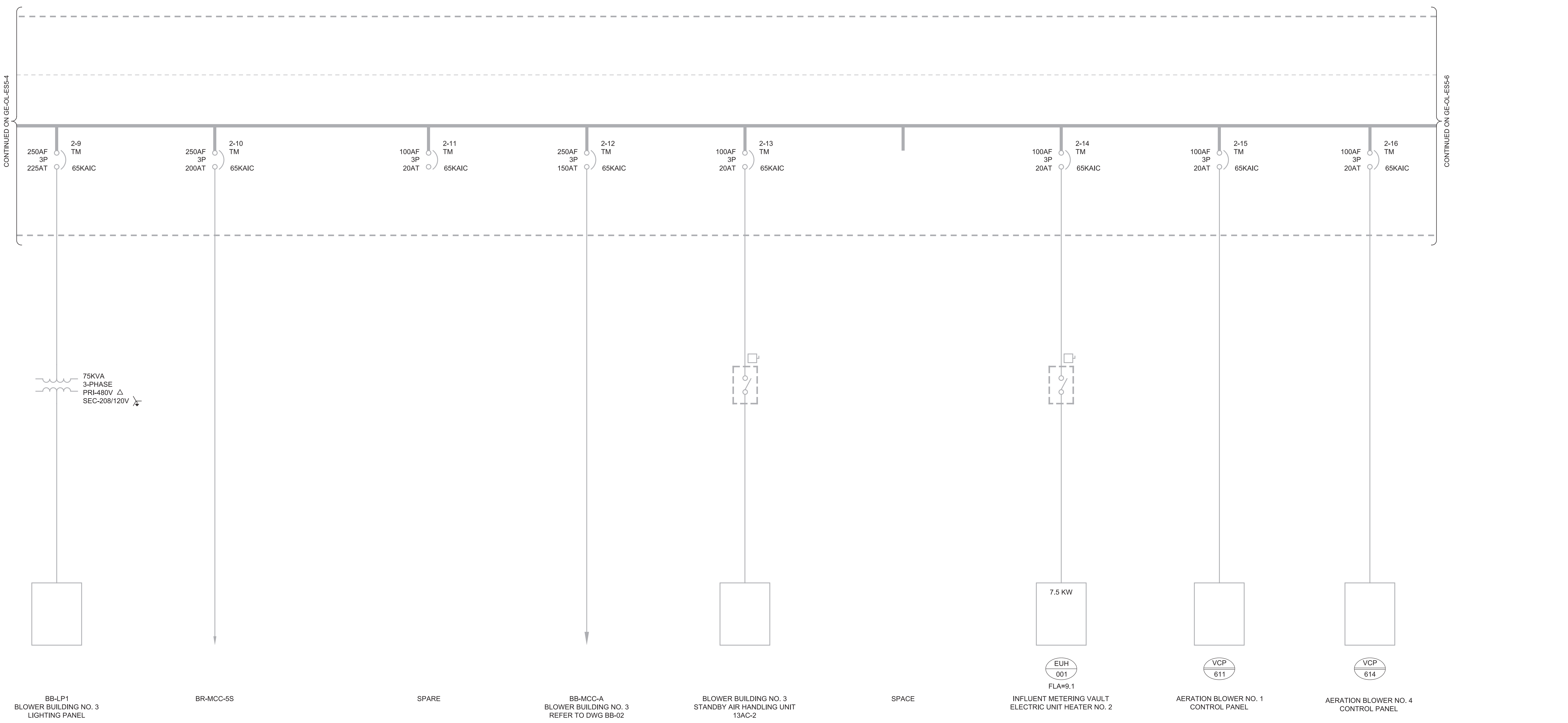
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
ES-5
ONE-LINE DIAGRAM - III

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-ES5-4
SHEET NO. 19 OF 159

Plot Date: 01-MAR-2019 3:41:57 PM User: svcPW
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 2:1
LAST SAVED BY: jlefevre



REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER No. 366286 CHRISTOPHER A. CARVALHO STATE OF UTAH

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West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
ES-5
ONE-LINE DIAGRAM - IV

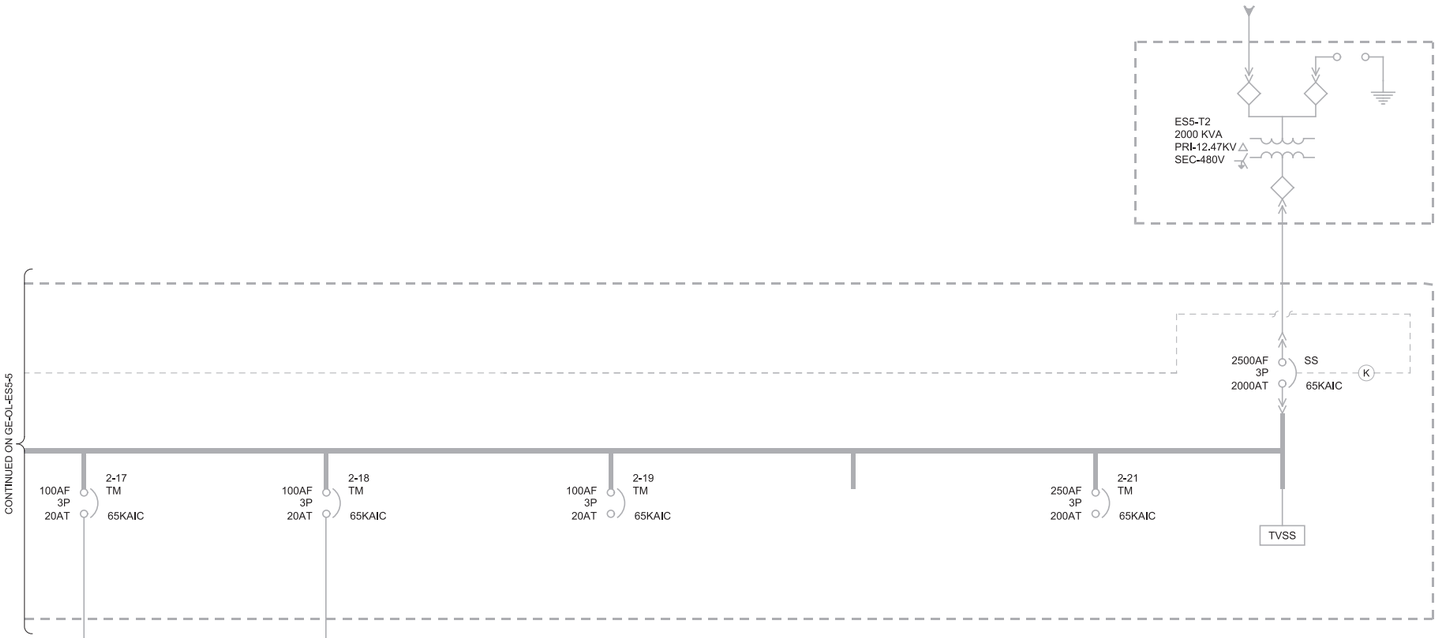
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-ES5-5
SHEET NO. 20 OF 159

PROJECT NO. 10548A10 FILE NAME: 10548A10_GEOLES505.dgn

Plot Date: 01-MAR-2019 3:40:02 PM User: svcPW PlotScale: 2:1 DesignScript: Carollo_Std_Pen_v0905.pen ColorTable: gshade.ctb Model: Layout1 LAST SAVED BY: jlefevre

Plot Date: 01-MAR-2019 3:40:04 PM
User: svcPW
PlotScale: 2:1
DesignScript: Carollo_Std_Pen_v0905.pen
ColorTable: gshade.ctb
Model: Layout1
LAST SAVED BY: jlefevre



REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
No. 366286
CHRISTOPHER A. CARVALHO
STATE OF UTAH

carollo

South Valley
WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
ES-5
ONE-LINE DIAGRAM - V

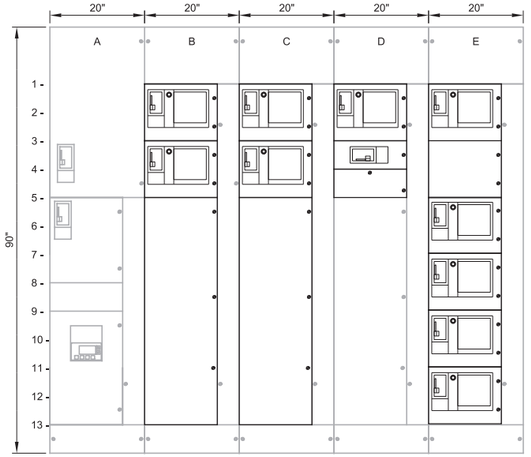
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-ES5-6
SHEET NO. 21 OF 159

Plot Date: 01-MAR-2019 3:40:25 PM
User: svcPW
PlotScale: 2:1
DesignScript: Carollo_Std_Pen_v0905.pen
ColorTable: gshade.ctb
Model: Layout1
LAST SAVED BY: jtefevre

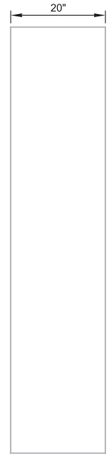
GENERAL NOTES:

1. GE EVOLUTION SERIES E9000 MOTOR CONTROL CENTER



FRONT VIEW

SCALE: 3/4"=1'-0"
FILE: 10548A1003E621



SIDE VIEW

SCALE: 3/4"=1'-0"
FILE: 10548A1003E621

A1- MAIN CB	B1- BIOREACTOR 2 SHAFT MIXER BRXA-602	C1- BIOREACTOR 2 SHAFT MIXER BRXB-602	D1- BIOREACTOR 2 FLOATING MIXER BRXC-602
A5- LP-MCC-BR	B3- BIOREACTOR 2 FLOATING MIXER BRXE-602	C3- BIOREACTOR 2 FLOATING MIXER BRXF-602	D3- BR-MCC-2A
A8- SPACE	B5- SPACE	C5- SPACE	D4- SPACE
A9- TVSS			D5- SPACE

E1- BIOREACTOR 2 FLOATING MIXER BRXD-602
E3- ETHERNET SWITCH
E5- BIOREACTOR 2 SHAFT MIXER BRX-16.209
E7- BIOREACTOR 2 SHAFT MIXER BRX-16.210
E9- BIOREACTOR 2 FLOATING MIXER BRX-16.207
E11- BIOREACTOR 2 FLOATING MIXER BRX-16.208

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
No. 366286
CHRISTOPHER A. CARVALHO
STATE OF UTAH

carollo

South Valley
WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-2
REVISED ELEVATION

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-1
SHEET NO. 22 OF 159

PROJECT NO. 10548A10 FILE NAME: 10548A10_GEOL161.dgn

KEY NOTES:

1. RECONNECT FIELD POWER AND CONTROL WIRING TO THE NEW STARTERS.
2. KEY INTERLOCK WITH CIRCUT BREAKER IN BR-MCC-1.

BR-MCC-2, 600AMPS, 480V, 3Ø, 3WIRE, 65KASC

A1	A5	A8	A9	B1	B3	B5	C1	C3
400AF 3P 350AT TM 65KAIC	150AF 3P 125AT TM 65KAIC K1 2		TVSS	3P 15AC MCP 65KAIC FVNR SIZE1 IS001 IS-01	3P 15AC MCP 65KAIC FVNR SIZE1 1 IS001 IS-01		3P 15AC MCP 65KAIC FVNR SIZE1 IS001 IS-01	3P 15AC MCP 65KAIC FVNR SIZE1 1 IS001 IS-01
				3-#12 (Ø) & 1-#12 (G) 3-#12 (Ø) & 1-#12 (G) 5,0 BRXA 602	3-#12 (Ø) & 1-#12 (G) 3-#12 (Ø) & 1-#12 (G) 5,0 BRXE 602		3-#12 (Ø) & 1-#12 (G) 3-#12 (Ø) & 1-#12 (G) 5,0 BRXB 602	3-#12 (Ø) & 1-#12 (G) 3-#12 (Ø) & 1-#12 (G) 5,0 BRXF 602
INCOMING LINE FROM SWITCHGEAR ES-3	TO T-LP-MCC-BR	SPACE	TVSS	BIOREACTOR 2 SHAFT MIXER	BIOREACTOR 2 FLOATING MIXER	SPACE	BIOREACTOR 2 SHAFT MIXER	BIOREACTOR 2 FLOATING MIXER

CONTINUED ON GE-OL-16-3

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

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SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-2 REVISED ONE-LINE DIAGRAM - I

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-2
SHEET NO. 23 OF 159

PROJECT NO. 10548A10 FILE NAME: 10548A10_GEOL162.dgn

Plot Date: 01-MAR-2019 3:40:54 PM
User: svcPW
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 2:1
LAST SAVED BY: jlefevre

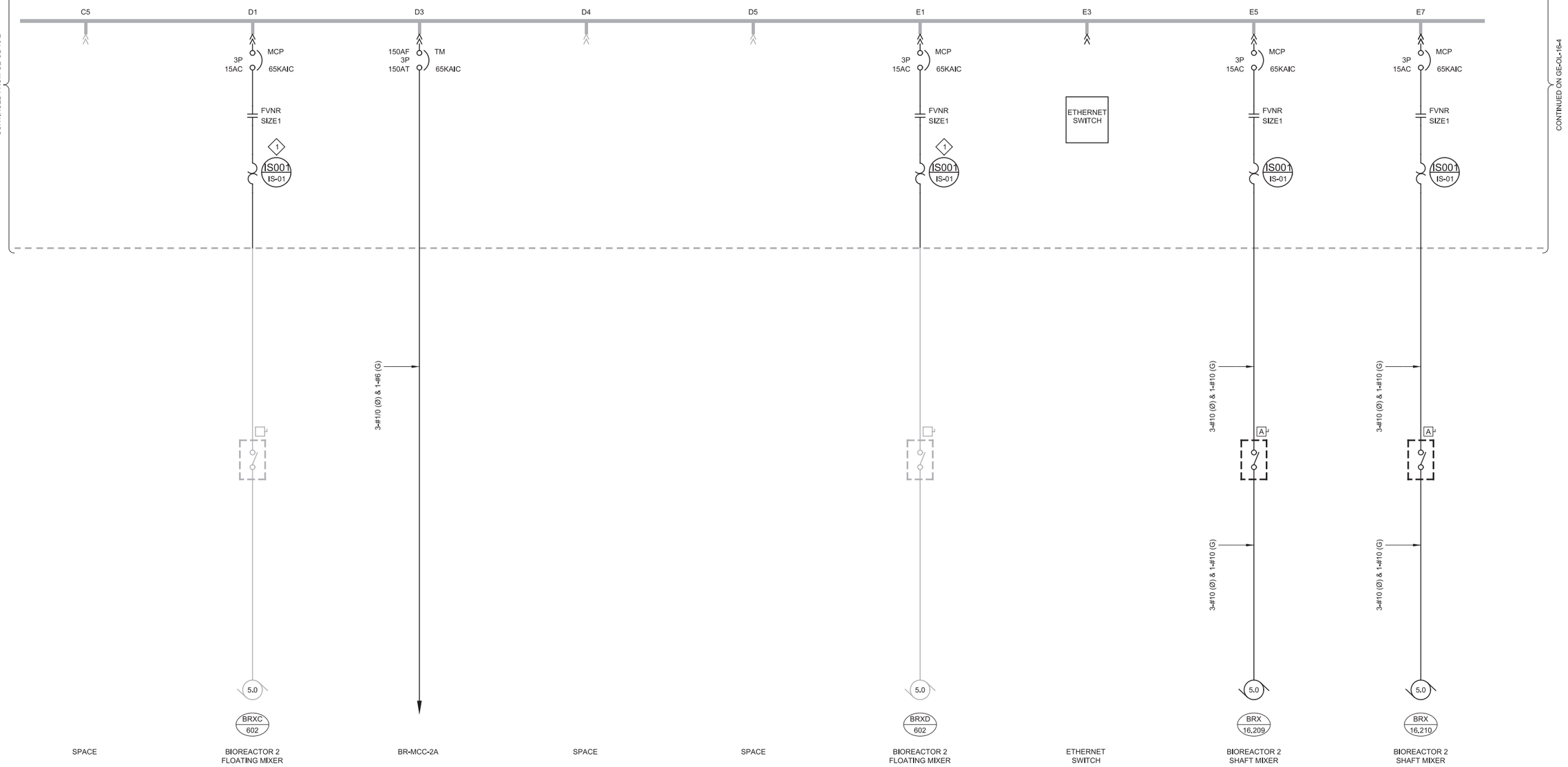
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 2:1 User: svcPW Plot Date: 01-MAR-2019 3:40:28 PM

KEY NOTES:

1. RECONNECT FIELD POWER AND CONTROL WIRING TO THE NEW STARTERS.

CONTINUED FROM GE-OL-16-2

CONTINUED ON GE-OL-16-4



REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

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STATE OF UTAH

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SOUTH VALLEY WATER RECLAMATION FACILITY

PROJECT 5

ELECTRICAL

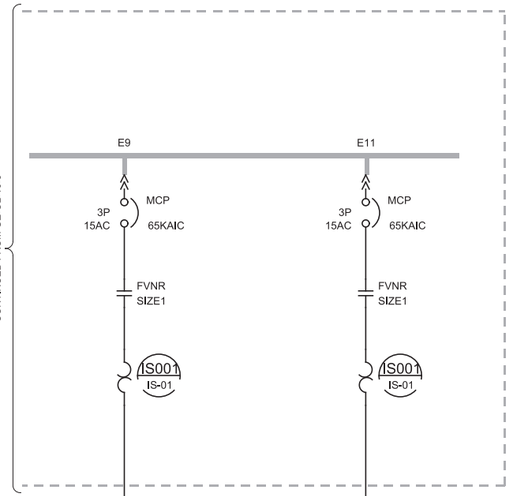
BR-MCC-2
REVISED ONE-LINE DIAGRAM - II

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-3
SHEET NO. 24 OF 159

LAST SAVED BY: Jlefevre

Plot Date: 01-MAR-2019 3:41:36 PM
User: svcPW
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 2:1
LAST SAVED BY: jtelevre



REV	DATE	BY	DESCRIPTION

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DATE MARCH 2019

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SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-2
REVISED ONE-LINE DIAGRAM - III

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-4
SHEET NO. 25 OF 159

Plot Date: 01-MAR-2019 3:40:48 PM
User: svcPW
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 2:1
LAST SAVED BY: jlefevre

GENERAL NOTES:

1. GE EVOLUTION SERIES E9000 MOTOR CONTROL CENTER

FRONT VIEW

SCALE: 3/4"=1'-0"
FILE: 10548A1003E622

SIDE VIEW

SCALE: 3/4"=1'-0"
FILE: 10548A1003E622

A1- BIOREACTOR 3 SHAFT MIXER BRXA-603	B1- BIOREACTOR 3 SHAFT MIXER BRXB-603	C1- BIOREACTOR 3 FLOATING MIXER BRXC-603	D1- BIOREACTOR 3 FLOATING MIXER BRXD-603	E1- MAIN CB
A3- BIOREACTOR 3 FLOATING MIXER BRXE-603	B3- BIOREACTOR 3 FLOATING MIXER BRXF-603	C3- BR-MCC-3A	D3- ETHERNET SWITCH	E5- SPARE
A5- BIOREACTOR 3 SHAFT MIXER BRX-16.309	B5- SPACE	C4- SPACE	D5- SPACE	E6- SPACE
A7- BIOREACTOR 3 SHAFT MIXER BRX-16.310		C5- SPACE		E8- SPACE
A9- BIOREACTOR 3 FLOATING MIXER BRX-16.307				E9- TVSS
A11- BIOREACTOR 3 FLOATING MIXER BRX-16.308				

REV	DATE	BY	DESCRIPTION

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CHECKED BJR
DATE MARCH 2019

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STATE OF UTAH

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SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-3
REVISED ELEVATION

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-5
SHEET NO. 26 OF 159

Plot Date: 01-MAR-2019 3:40:33 PM
User: svcPW
PlotScale: 2:1
DesignScript: Carollo_Std_Pen_v0905.pen
ColorTable: gshade.ctb
Model: Layout1
LAST SAVED BY: jlefevre

KEY NOTES:

1. RECONNECT FIELD POWER AND CONTROL WIRING TO THE NEW STARTERS.

BR-MCC-3, 600AMPS, 480V, 3Ø, 3WIRE, 65KASC

A1	A3	A5	A7	A9	A11	B1	B3	B5
3P 15AC MCP 65KAIC	3P 15AC MCP 65KAIC	3P 15AC MCP 65KAIC	3P 15AC MCP 65KAIC	3P 15AC MCP 65KAIC	3P 15AC MCP 65KAIC	3P 15AC MCP 65KAIC	3P 15AC MCP 65KAIC	
FVNR SIZE1	FVNR SIZE1	FVNR SIZE1	FVNR SIZE1	FVNR SIZE1	FVNR SIZE1	FVNR SIZE1	FVNR SIZE1	
1 IS001 IS-01	1 IS001 IS-01	IS001 IS-01	IS001 IS-01	IS001 IS-01	IS001 IS-01	1 IS001 IS-01	1 IS001 IS-01	
		3-#10 (Ø) & 1-#10 (G)	3-#10 (Ø) & 1-#10 (G)	3-#10 (Ø) & 1-#10 (G)	3-#10 (Ø) & 1-#10 (G)			
		A	A	A	A			
		3-#10 (Ø) & 1-#10 (G)	3-#10 (Ø) & 1-#10 (G)	MANUFACTURER'S CABLE	MANUFACTURER'S CABLE			
5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
BRXA 603	BRXE 603	BRX 16,309	BRX 16,310	BRX 16,307	BRX 16,308	BRXB 603	BRXF 603	
BIOREACTOR 3 SHAFT MIXER	BIOREACTOR 3 FLOATING MIXER	BIOREACTOR 3 SHAFT MIXER	BIOREACTOR 3 SHAFT MIXER	BIOREACTOR 3 FLOATING MIXER	BIOREACTOR 3 FLOATING MIXER	BIOREACTOR 3 SHAFT MIXER	BIOREACTOR 3 FLOATING MIXER	SPACE

CONTINUED ON GE-OL-16-7

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
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DATE MARCH 2019

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CHRISTOPHER A. CARVALHO
STATE OF UTAH

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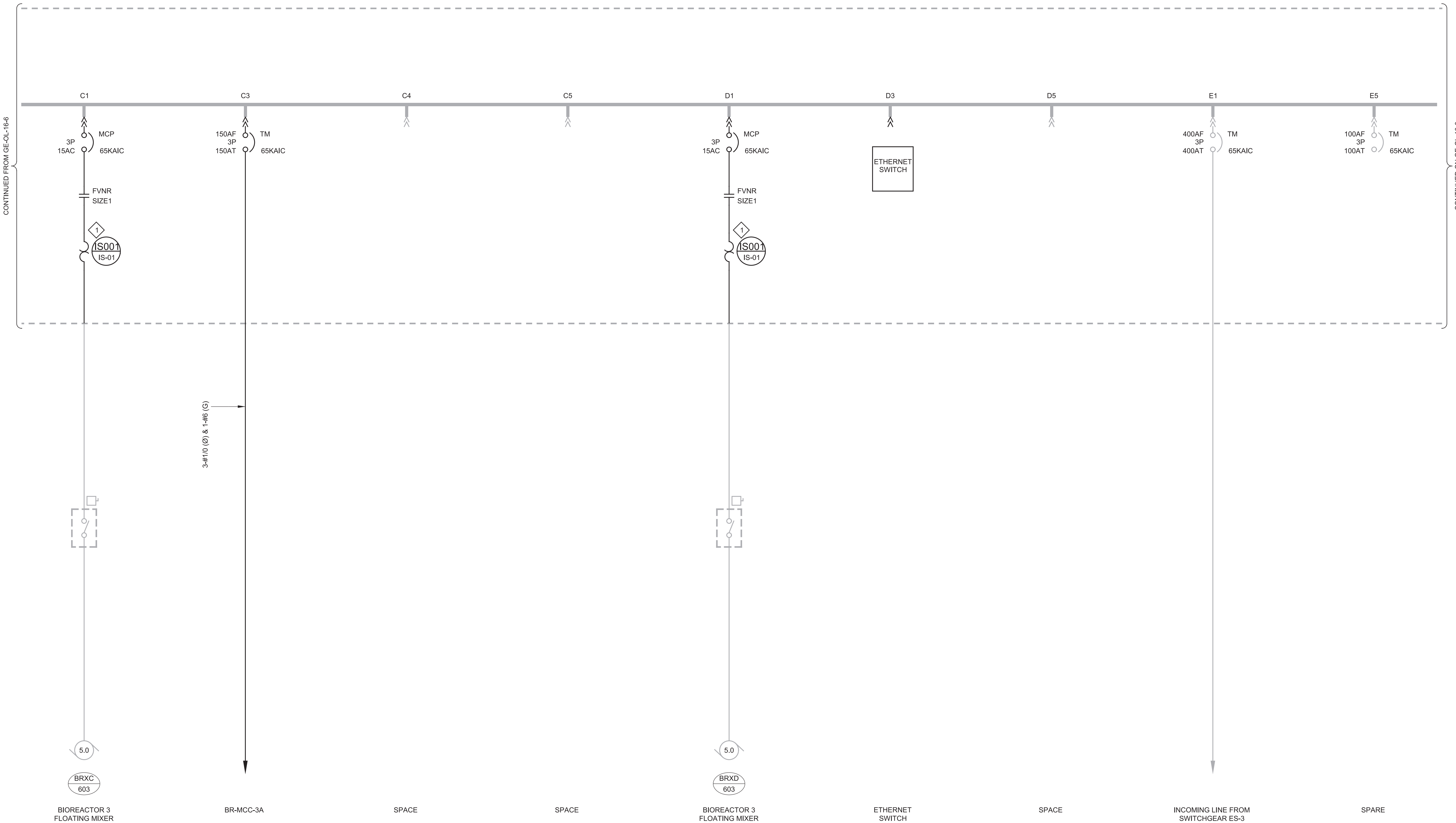
SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-3
REVISED ONE-LINE DIAGRAM - I

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-6
SHEET NO. 27 OF 159

KEY NOTES:

1. RECONNECT FIELD POWER AND CONTROL WIRING TO THE NEW STARTERS.



REV	DATE	BY	DESCRIPTION

DESIGNED: CAC
DRAWN: AAW
CHECKED: BJR
DATE: MARCH 2019

REGISTERED PROFESSIONAL ENGINEER No. 366286 CHRISTOPHER A. CARVALHO STATE OF UTAH

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SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-3
REVISED ONE-LINE DIAGRAM - II

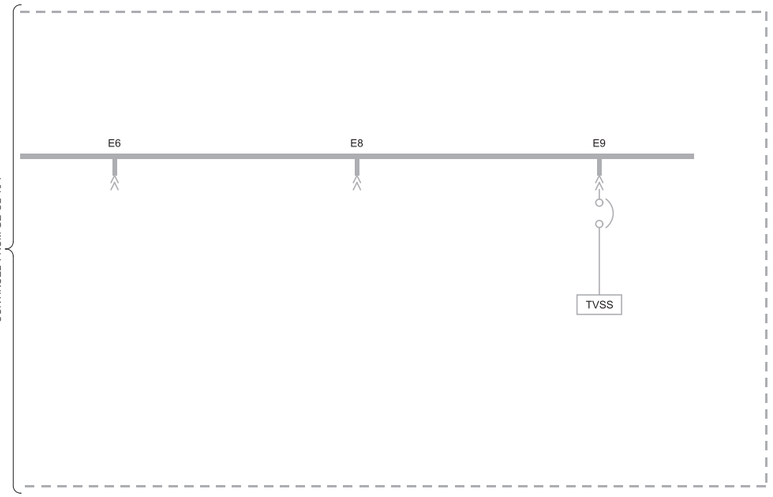
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-7
SHEET NO. 28 OF 159

PROJECT NO. 10548A10 FILE NAME: 10548A10_GEOL167.dgn

LAST SAVED BY: jlefevre Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 2:1 User: svcPW Plot Date: 01-MAR-2019 3:40:56 PM

Plot Date: 01-MAR-2019 3:41:18 PM
User: svcPW
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 2:1
LAST SAVED BY: jlefevre



SPACE SPACE TVSS

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
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STATE OF UTAH

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SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-3
REVISED ONE-LINE DIAGRAM - III

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

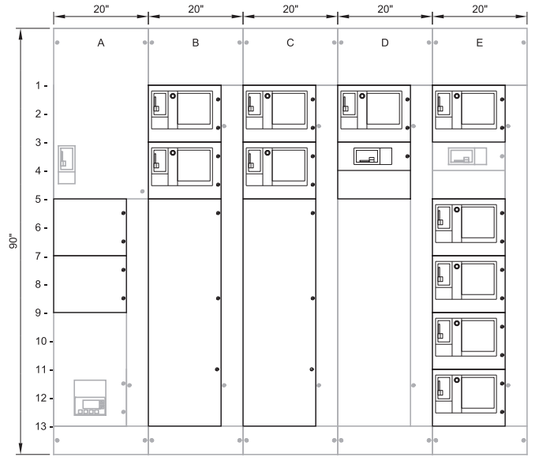
JOB NO. 10548A.10
DRAWING NO. GE-OL-16-8
SHEET NO. 29 OF 159

PROJECT NO. 10548A10 FILE NAME: 10548A10_GEOL168.dgn

Plot Date: 01-MAR-2019 3:40:40 PM
User: svcPW
PlotScale: 2:1
DesignScript: Carollo_Std_Pen_v0905.pen
ColorTable: gshade.ctb
Model: Layout1
LAST SAVED BY: jlefevre

GENERAL NOTES:

1. GE EVOLUTION SERIES E9000 MOTOR CONTROL CENTER



FRONT VIEW

SCALE: 3/4"=1'-0"
FILE: 10548A1003E623

SIDE VIEW

SCALE: 3/4"=1'-0"
FILE: 10548A1003E623

A1- MAIN CB	B1- BIOREACTOR 4 SHAFT MIXER BRXA-604	C1- BIOREACTOR 4 SHAFT MIXER BRXB-604	D1- BIOREACTOR 4 FLOATING MIXER BRXC-604	E1- BIOREACTOR 4 FLOATING MIXER BRXD-604
A5- SPACE	B3- BIOREACTOR 4 FLOATING MIXER BRXE-604	C3- BIOREACTOR 4 FLOATING MIXER BRXF-604	D3- BR-MCC-4A	E3- SPARE
A7- ETHERNET SWITCH	B5- SPACE	C5- SPACE	D4- SPACE	E4- SPACE
A9- TVSS			D5- SPACE	E5- BIOREACTOR 4 SHAFT MIXER BRX-16.409
				E7- BIOREACTOR 4 SHAFT MIXER BRX-16.410
				E9- BIOREACTOR 4 FLOATING MIXER BRX-16.407
				E11- BIOREACTOR 4 FLOATING MIXER BRX-16.408

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
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DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
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West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-4
REVISED ELEVATION

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

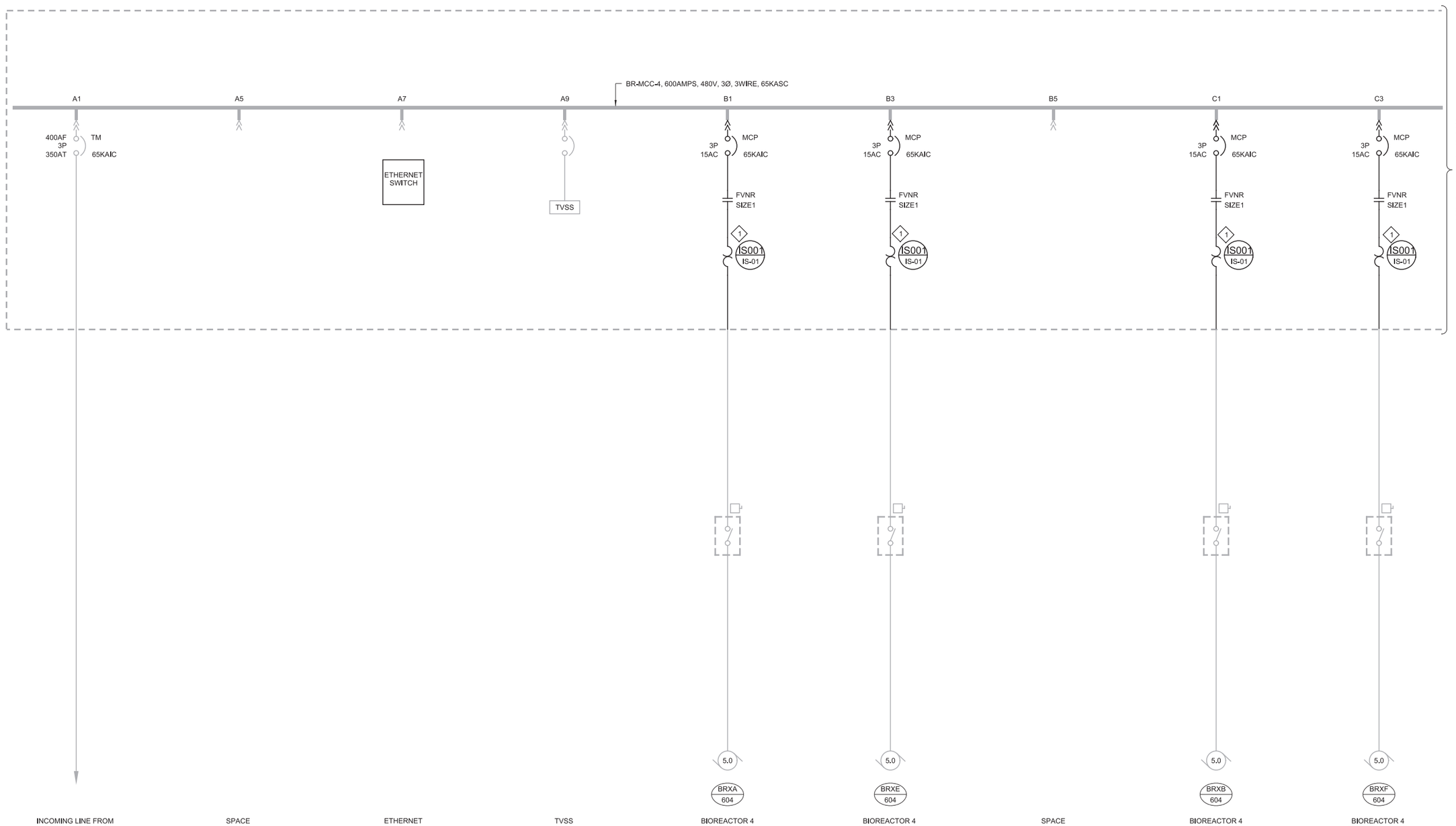
JOB NO. 10548A.10
DRAWING NO. GE-OL-16-9
SHEET NO. 30 OF 159

PROJECT NO. 10548A10 FILE NAME: 10548A10_GEOL169.dgn

Plot Date: 01-MAR-2019 3:41:06 PM
User: svcPW
PlotScale: 2:1
DesignScript: Carollo_Std_Pen_v0905.pen
ColorTable: gshade.ctb
Model: Layout1
LAST SAVED BY: jlefevre

KEY NOTES:

1. RECONNECT FIELD POWER AND CONTROL WIRING TO THE NEW STARTERS.



REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

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West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-4
REVISED ONE-LINE DIAGRAM - I

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

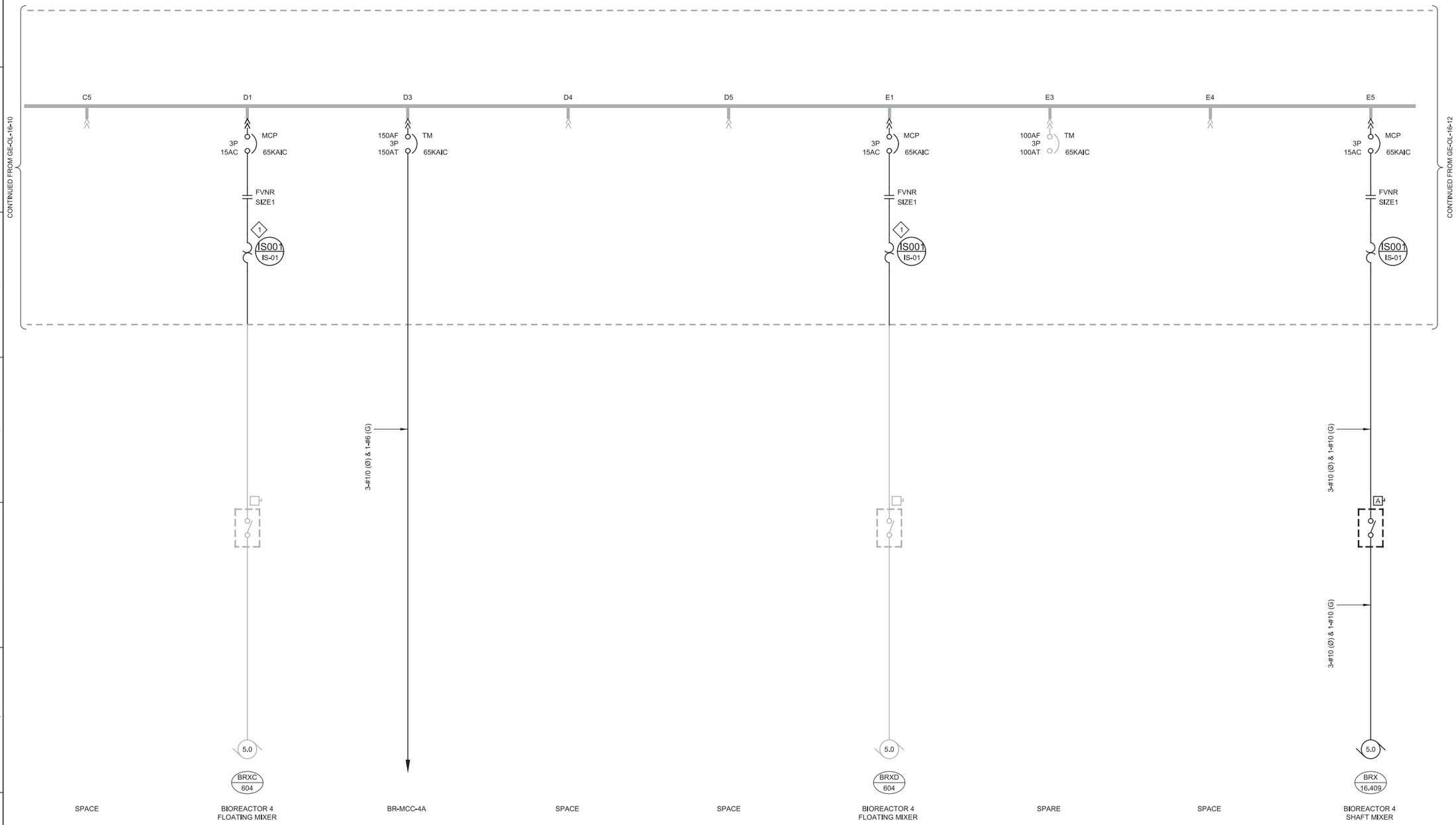
JOB NO. 10548A.10
DRAWING NO. GE-OL-16-10
SHEET NO. 31 OF 159

PROJECT NO. 10548A10
FILE NAME: 10548A10_GEOL1610.dgn

Plot Date: 01-MAR-2019 3:40:31 PM
User: svcPW
PlotScale: 2:1
DesignScript: Carollo_Std_Pen_v0905.pen
ColorTable: gshade.ctb
Model: Layout1
LAST SAVED BY: Jlefevre

KEY NOTES:

1. RECONNECT FIELD POWER AND CONTROL WIRING TO THE NEW STARTERS.



REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

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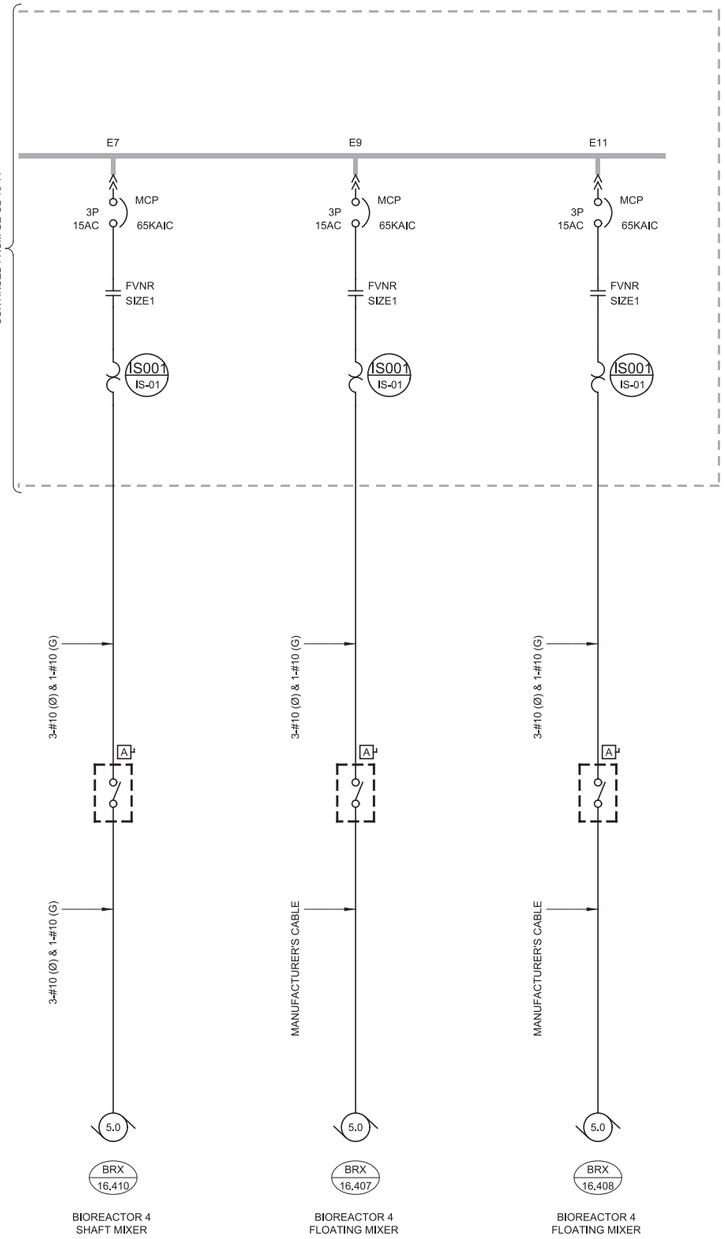
SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-4
REVISED ONE-LINE DIAGRAM - II

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-11
SHEET NO. 32 OF 159

Plot Date: 01-MAR-2019 3:41:23 PM
User: svcPW
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 2:1
LAST SAVED BY: Jlefevre

CONTINUED FROM GE-OL-16-11



REV	DATE	BY	DESCRIPTION

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CHECKED BJR
DATE MARCH 2019

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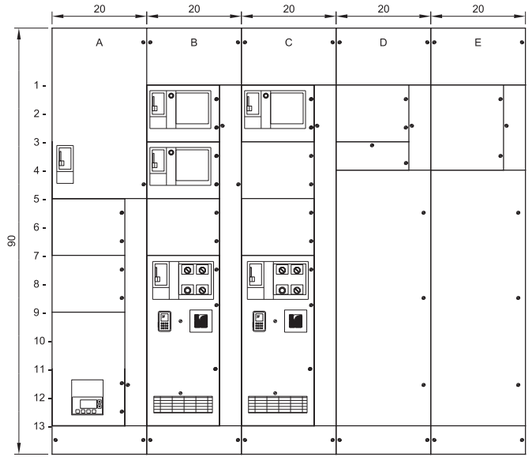
SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-4
REVISED ONE-LINE DIAGRAM - III

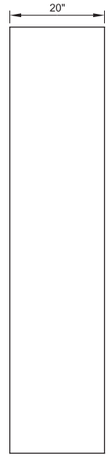
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-12
SHEET NO. 33 OF 159



FRONT VIEW

SCALE: 3/4"=1'-0"
FILE: 10548A1003E626



SIDE VIEW

SCALE: 3/4"=1'-0"
FILE: 10548A1003E626

A1- MAIN CB

A5- SPACE

A7- SPACE

A9- SPD

B1- SPARE

B3- SPARE

B5- SPACE

B7- BIOREACTOR 2 INTERNAL RECYCLE PUMP PMP-16.261

C1- SPARE

C3- SPACE

C5- SPACE

C7- BIOREACTOR 2 INTERNAL RECYCLE PUMP PMP-16.262

D1- SPACE

D3- SPACE

D4- BR-DPP-2A

E1- ETHERNET SWITCH

E4- BR-DPP-2B

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
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CHRISTOPHER A. CARVALHO
STATE OF UTAH

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West Jordan, Utah 84084

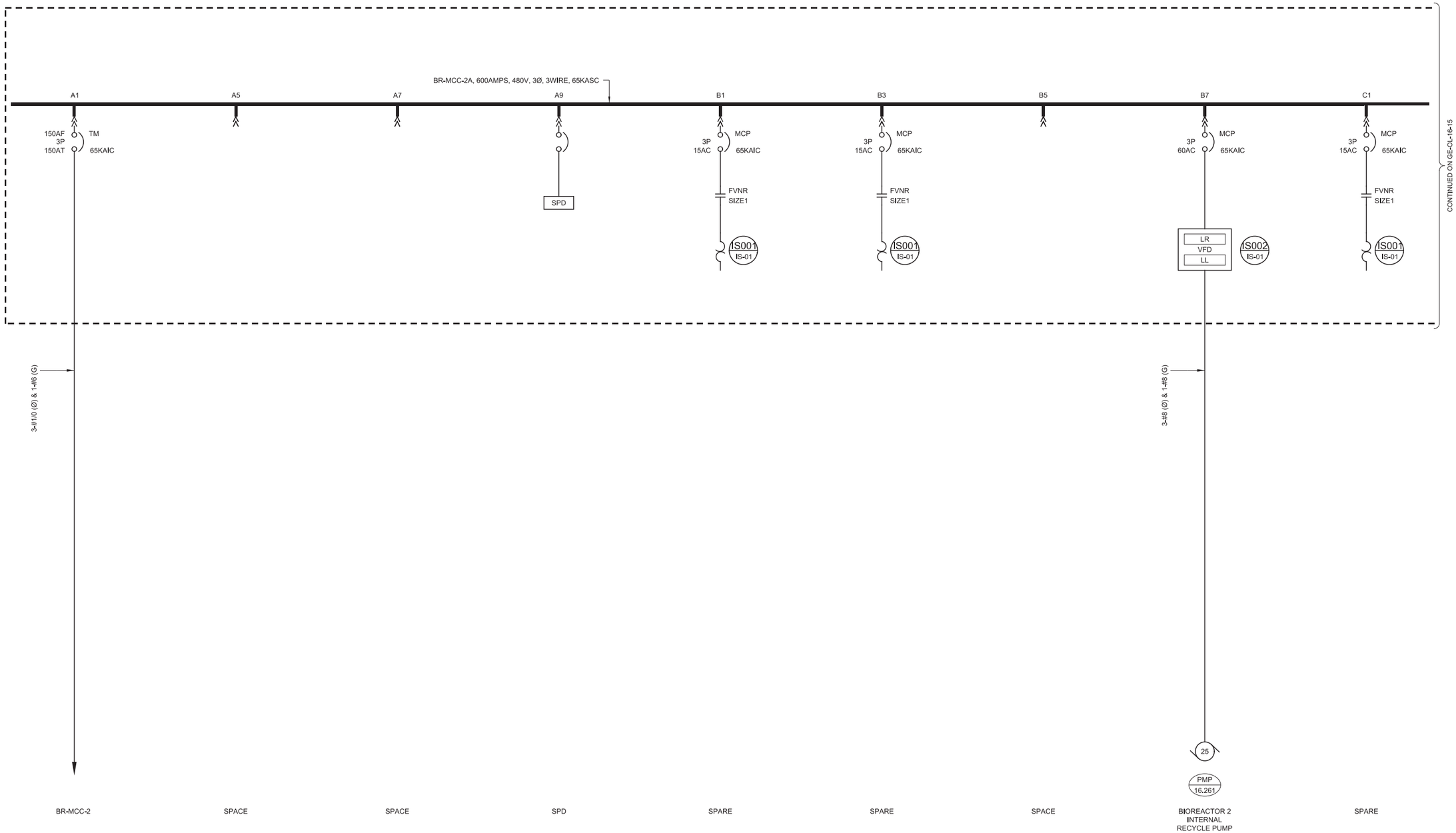
SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-2A
ELEVATION

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-13
SHEET NO. 34

PROJECT NO. 10548A10
FILE NAME: 10548A10_GEOL1613.dgn

Plot Date: 01-MAR-2019 3:41:24 PM
User: svcPW
PlotScale: 2:1
DesignScript: Carollo_Std_Pen_v0905.pen
ColorTable: gshade.ctb
Model: Layout1
LAST SAVED BY: jlefevre



REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
No. 366286
CHRISTOPHER A. CARVALHO
STATE OF UTAH

carollo

South Valley
WATER RECLAMATION FACILITY
7495 South 1300 West
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-2A
ONE-LINE DIAGRAM - I

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-14
SHEET NO. 35 OF 159

PROJECT NO. 10548A10
FILE NAME: 10548A10_GEOL1614.dgn

Plot Date: 01-MAR-2019 3:40:03 PM
User: svcPW
PlotScale: 2:1
DesignScript: Carollo_Std_Pen_v0905.pen
ColorTable: gshade.ctb
Model: Layout1
LAST SAVED BY: jlefevre

Plot Date: 01-MAR-2019 3:41:23 PM
User: svcPW
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 2:1
LAST SAVED BY: jlefevre

CONTINUED FROM GE-OL-16-14

BR-MCC-2A, 800AMPS, 480V, 3Ø, 3WIRE, 65KASC

C3	C5	C7	D1	D3	D4	E1	E4
		3P 60AC MCP 65KAIC			150AF 3P 100AT TM 65KAIC	ETHERNET SWITCH	150AF 3P 100AT TM 65KAIC
		LR VFD LL IS002 IS-01					
		3-#8 (Ø) & 1-#8 (G)					
		25 PMP 16.262					
SPACE	SPACE	BIOREACTOR 2 INTERNAL RECYCLE PUMP	SPACE	SPACE	PANELBOARD BR-DPP-2A	ETHERNET SWITCH	PANELBOARD BR-DPP-2B

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

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CHRISTOPHER A. CARVALHO
STATE OF UTAH

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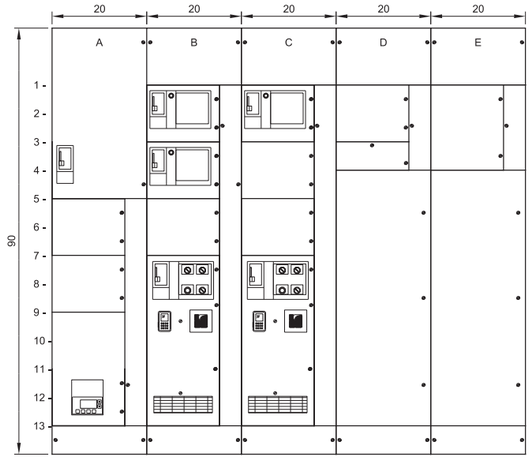
SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-2A ONE-LINE DIAGRAM - II

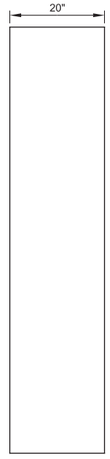
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-15
SHEET NO. 36 OF 159



FRONT VIEW

SCALE: 3/4"=1'-0"
FILE: 10548A1003E631



SIDE VIEW

SCALE: 3/4"=1'-0"
FILE: 10548A1003E631

A1- MAIN CB
B1- SPARE
C1- SPARE
D1- SPACE
E1- ETHERNET SWITCH

A5- SPACE
B3- SPARE
C3- SPACE
D3- SPACE
E4- BR-DPP-3B

A7- SPACE
B5- SPACE
C5- SPACE
D4- BR-DPP-3A

A9- SPD
B7- BIOREACTOR 3 INTERNAL RECYCLE PUMP PMP-16.361
C7- BIOREACTOR 3 INTERNAL RECYCLE PUMP PMP-16.362

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
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DATE MARCH 2019

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SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-3A
ELEVATION

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-16
SHEET NO. 37 OF 159

PROJECT NO. 10548A10
FILE NAME: 10548A10_GEOL1616.dgn

Plot Date: 01-MAR-2019 3:40:17 PM
User: svcPW
PlotScale: 2:1
DesignScript: Carollo_Std_Pen_v0905.pen
ColorTable: gshade.ctb
Model: Layout1
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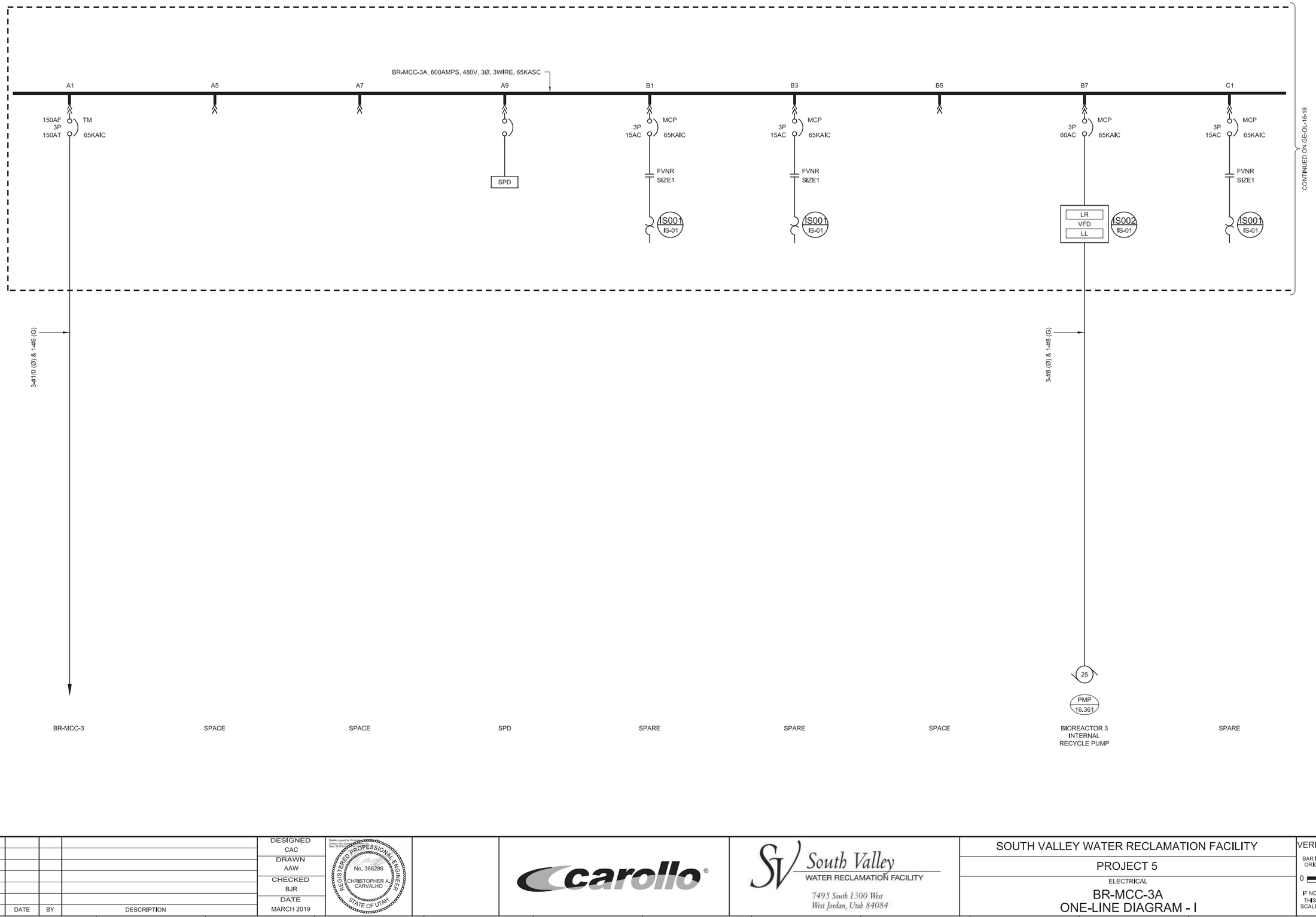

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

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SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-3A
ONE-LINE DIAGRAM - I

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

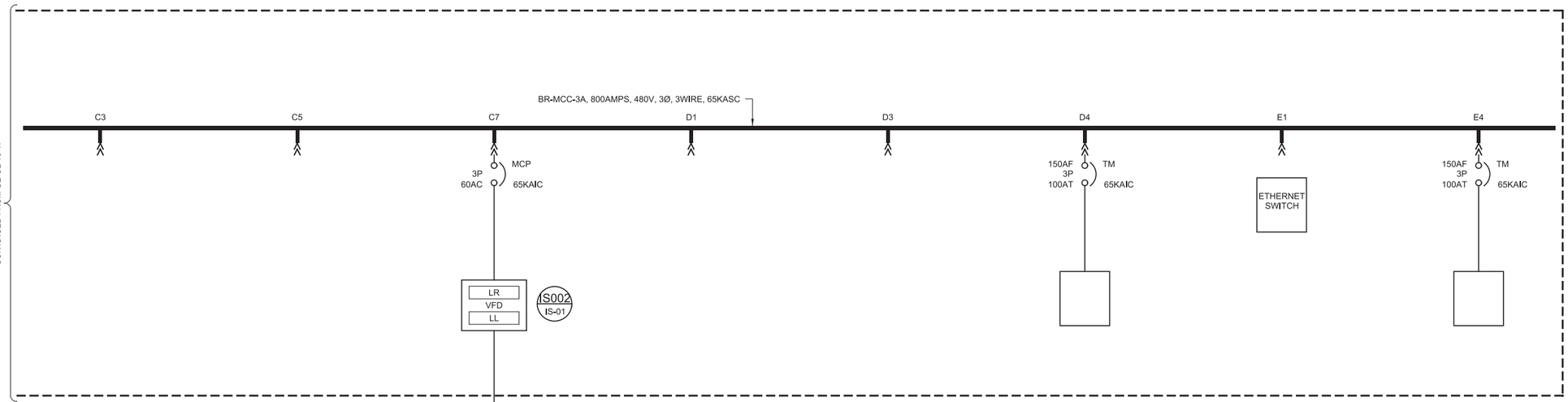
JOB NO. 10548A.10
DRAWING NO. GE-OL-16-17
SHEET NO. 38

PROJECT NO. 10548A10
FILE NAME: 10548A10_GEOL1617.dgn

Plot Date: 01-MAR-2019 3:40:45 PM
User: svcPW
PlotScale: 2:1
DesignScript: Carollo_Std_Pen_v0905.pen
ColorTable: gshade.ctb
Model: Layout1
LAST SAVED BY: jlefevre

Plot Date: 01-MAR-2019 3:40:21 PM
User: svcPW
PlotScale: 2:1
DesignScript: Carollo_Std_Pen_v0905.pen
ColorTable: gshade.ctb
Model: Layout1
LAST SAVED BY: jlefevre

CONTINUED FROM GE-OL-16-17



3-#8 (Ø) & 1-#8 (G)

25

PMP
16.362

SPACE	SPACE	BIOREACTOR 3 INTERNAL RECYCLE PUMP	SPACE	SPACE	PANELBOARD BR-DPP-3A	ETHERNET SWITCH	PANELBOARD BR-DPP-3B

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
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CHRISTOPHER A. CARVALHO
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SOUTH VALLEY WATER RECLAMATION FACILITY

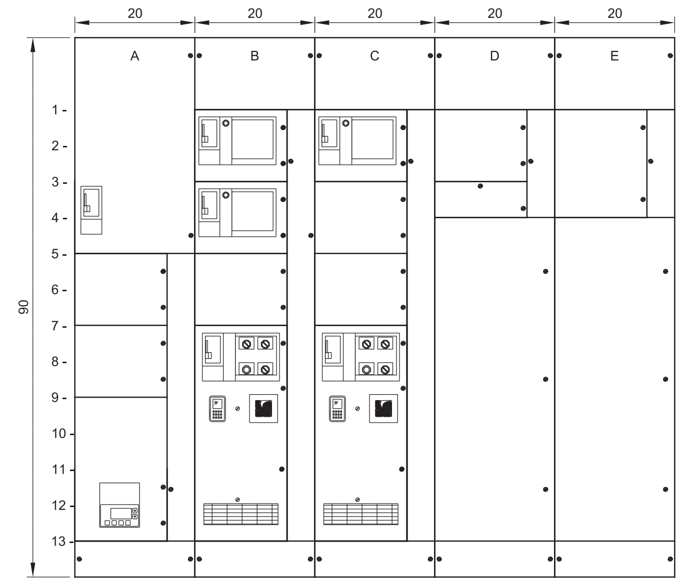
PROJECT 5

ELECTRICAL

BR-MCC-3A ONE-LINE DIAGRAM - II

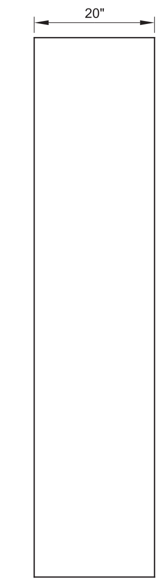
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-18
SHEET NO. 39 OF 159



FRONT VIEW

SCALE: 3/4"=1'-0"
FILE: 10548A1003E630



SIDE VIEW

SCALE: 3/4"=1'-0"
FILE: 10548A1003E630

A1- MAIN CB
A5- SPACE
A7- SPACE
A9- SPD

B1- SPARE
B3- SPARE
B5- SPACE
B7- BIOREACTOR 4 INTERNAL RECYCLE PUMP PMP-16.461

C1- SPARE
C3- SPACE
C5- SPACE
C7- BIOREACTOR 4 INTERNAL RECYCLE PUMP PMP-16.462

D1- SPACE
D3- SPACE
D4- BR-DPP-4A

E1- ETHERNET SWITCH
E4- BR-DPP-4B

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN EYP
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER No. 366286 CHRISTOPHER A. CARVALHO STATE OF UTAH

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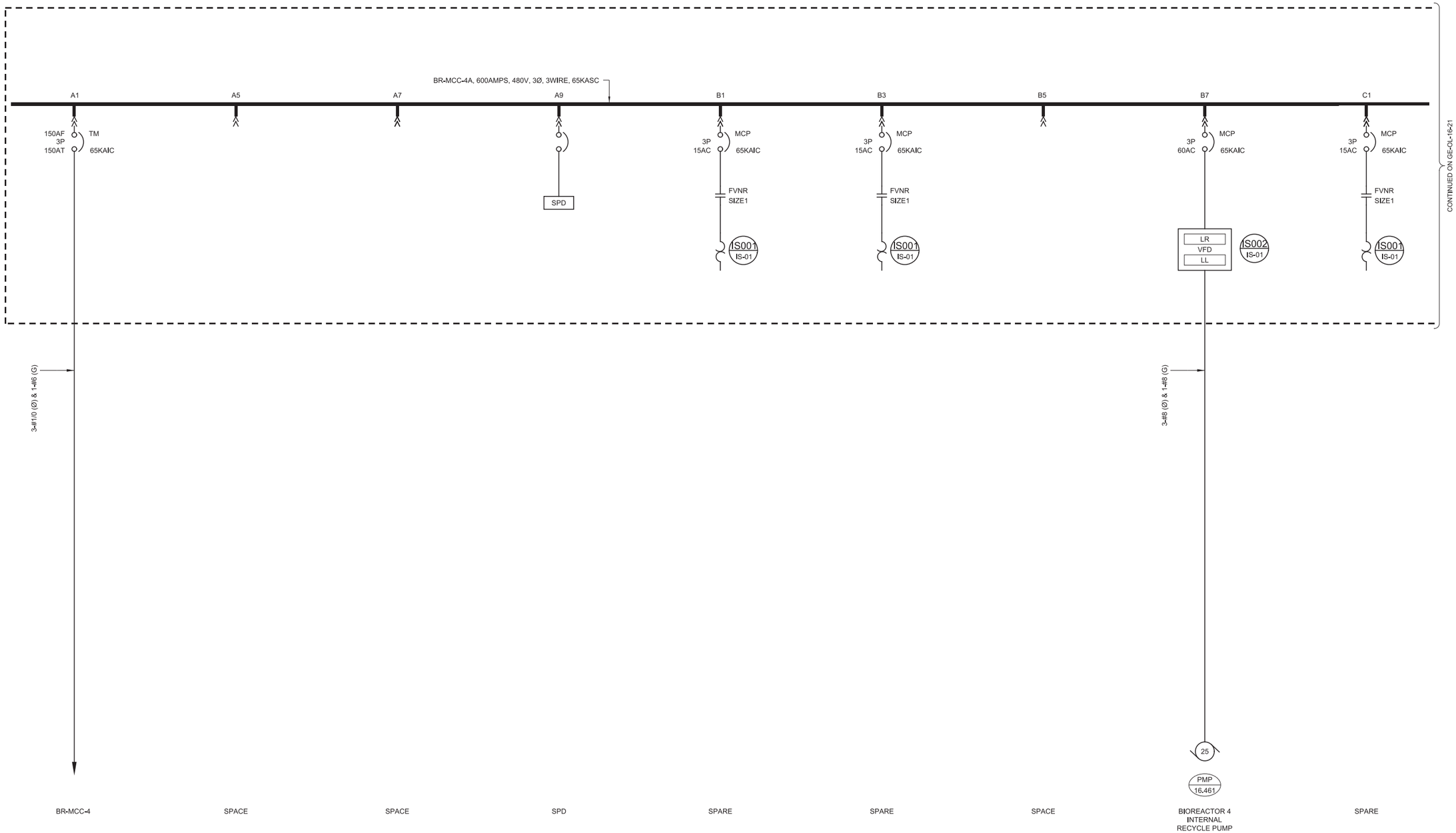
SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-4A
ELEVATION

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-19
SHEET NO. 40 OF 159

Plot Date: 01-MAR-2019 3:40:38 PM User: svcPW PlotScale: 2:1 DesignScript: Carollo_Std_Pen_v0905.pen ColorTable: gshade.ctb Model: Layout1 LAST SAVED BY: jlefevre



REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN EYP
CHECKED BJR
DATE MARCH 2019

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CHRISTOPHER A. CARVALHO
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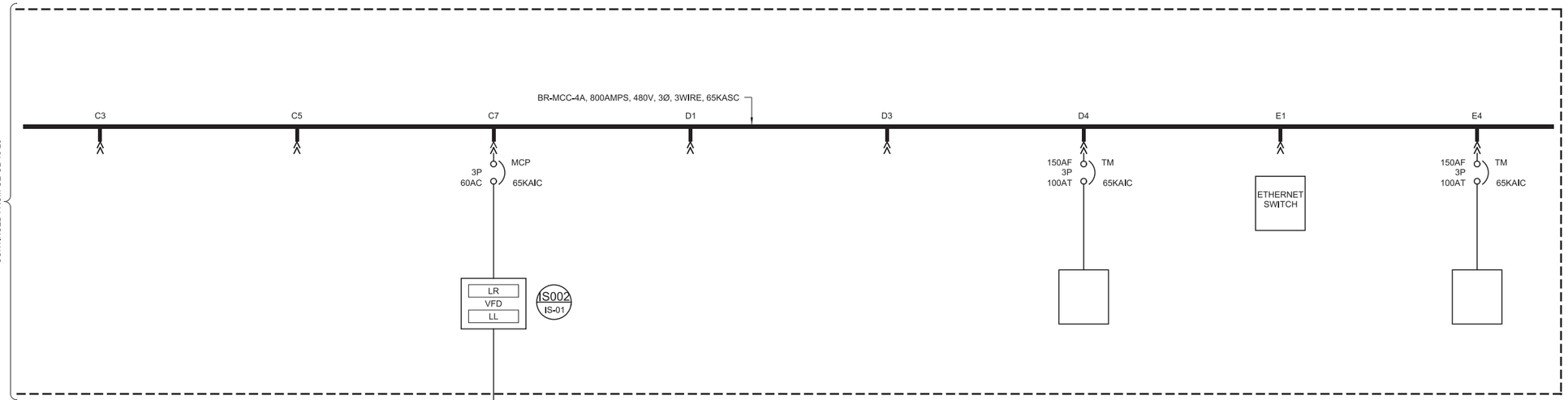
SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-4A
ONE-LINE DIAGRAM - I

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-20
SHEET NO. 41 OF 159

PROJECT NO. 10548A10
FILE NAME: 10548A10_GEOL1620.dgn

Plot Date: 01-MAR-2019 3:40:15 PM
User: svcPW
PlotScale: 2:1
DesignScript: Carollo_Std_Pen_v0905.pen
ColorTable: gshade.ctb
Model: Layout1
LAST SAVED BY: jlefevre



3-#8 (Ø) & 1-#8 (G)

25

PMP
16.462

SPACE	SPACE	BIOREACTOR 4 INTERNAL RECYCLE PUMP	SPACE	SPACE	PANELBOARD BR-DPP-4A	ETHERNET SWITCH	PANELBOARD BR-DPP-4B

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN EYP
CHECKED BJR
DATE MARCH 2019

REGISTERED PROFESSIONAL ENGINEER
No. 366286
CHRISTOPHER A. CARVALHO
STATE OF UTAH

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West Jordan, Utah 84084

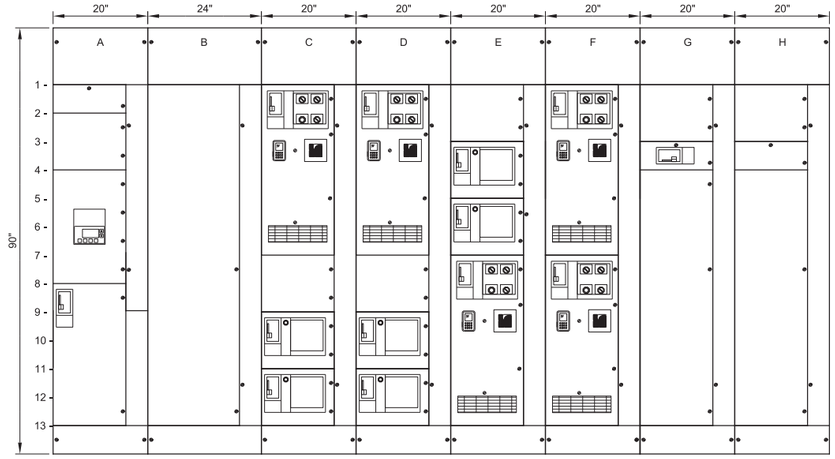
SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
BR-MCC-4A
ONE-LINE DIAGRAM - II

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-16-21
SHEET NO. 42 OF 159

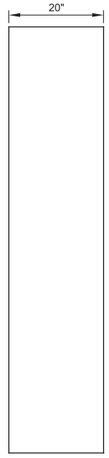
PROJECT NO. 10548A10
FILE NAME: 10548A10_GEOL1621.dgn

Plot Date: 01-MAR-2019 3:40:43 PM
User: svcPW
Model: Layout1
ColorTable: gshade.ctb
DesignScript: Carollo_Std_Pen_v0905.pen
PlotScale: 2:1
LAST SAVED BY: jlefevre



FRONT VIEW

SCALE: 3/4"=1'-0"
FILE: 10548A1003E627



SIDE VIEW

SCALE: 3/4"=1'-0"
FILE: 10548A1003E627

A1- SPACE	B1- AUTOMATIC TRANSFER SWITCH	C1- EXHAUST FAN NO.1 EXH-21.830	D1- EXHAUST FAN NO.2 EXH-21.840	E1- SPACE	F1- EXHAUST FAN NO.3 EXH-21.850	G1- SPACE	H1- ETHERNET SWITCH
A2- SPACE		C7- SPACE	D7- SPACE	E3- GRIT PUMP #1 PMP-21.210	F7- EXHAUST FAN NO.4 EXH-21.860	G3- GRB-XFMR-1	H3- SPACE
A4- SPD		C9- GRIT PUMP #5 PMP-21.250	D9- GRIT PUMP #3 PMP-21.230	E5- GRIT PUMP #2 PMP-21.220		G4- GRB-DPP-1	H4- GRB-DPP-2
A8- MAIN BREAKER		C11- GRIT PUMP #6 PMP-21.260	D11- GRIT PUMP #4 PMP-21.240	E7- ODOR CONTROL FAN FAB-21.500			

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

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STATE OF UTAH

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West Jordan, Utah 84084

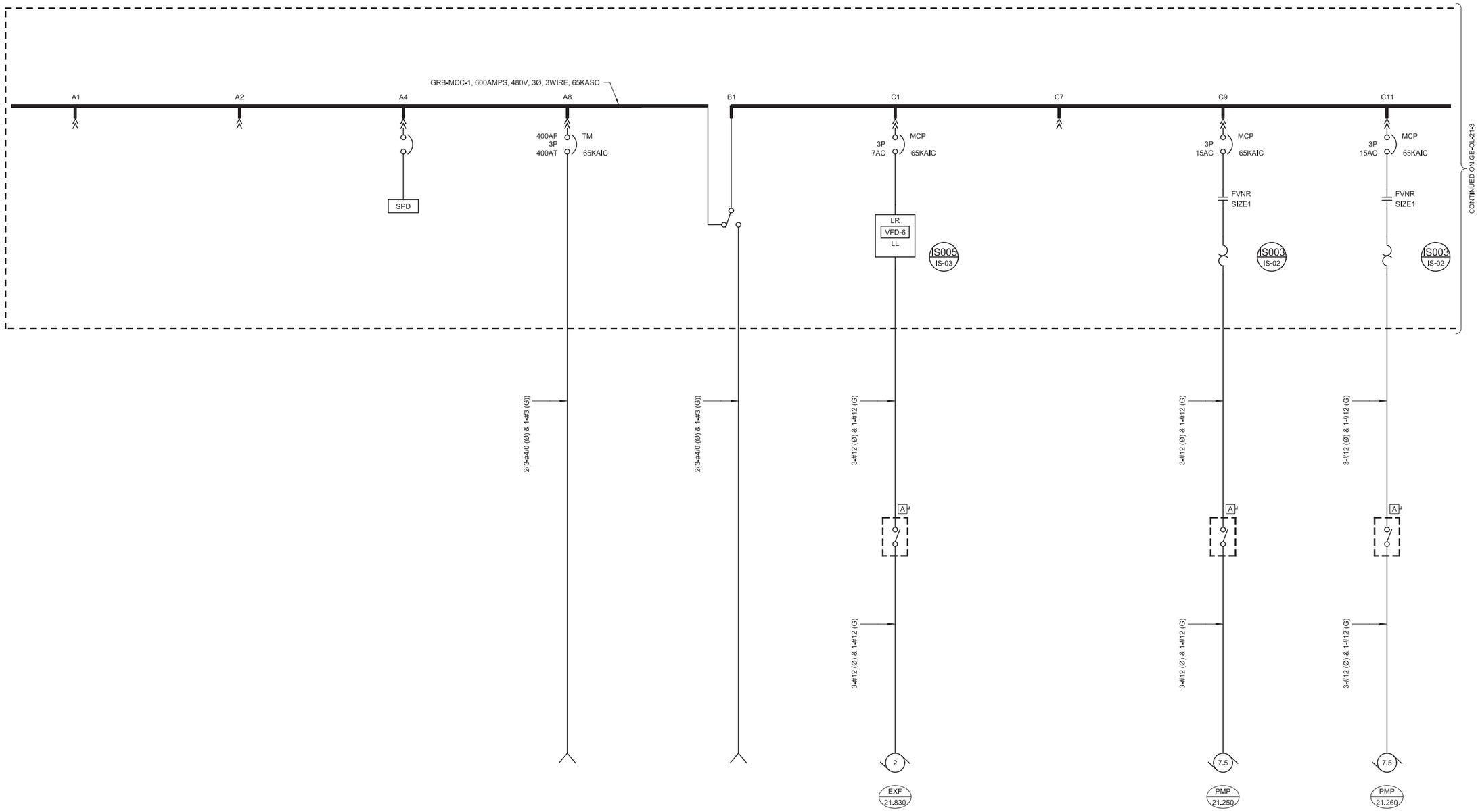
SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
GRB-MCC-1 ELEVATION

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-21-1
SHEET NO. 43 OF 159

LAST SAVED BY: jlefevre

PROJECT NO. 10548A10 FILE NAME: 10548A10_GEOL2101.dgn



REV	DATE	BY	DESCRIPTION

DESIGNED CAC
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DATE MARCH 2019

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SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
GRB-MCC-1
ONE-LINE DIAGRAM - I

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-21-2
SHEET NO. 44 OF 159

LAST SAVED BY: jlefevre

PROJECT NO. 10548A10 FILE NAME: 10548A10_GEOL2102.dgn

CONTINUED FROM GE-OL-21-2

CONTINUED ON GE-OL-21-4

D1	D7	D9	D11	E1	E3	E5	E7	F1
3P 7AC MCP 65KAIC		3P 15AC MCP 65KAIC	3P 15AC MCP 65KAIC		3P 15AC MCP 65KAIC	3P 15AC MCP 65KAIC	3P 30AC MCP 65KAIC	3P 7AC MCP 65KAIC
		FVNR SIZE1	FVNR SIZE1		FVNR SIZE1	FVNR SIZE1		
LR VFD-6 LL							LR VFD-6 LL	LR VFD-6 LL
IS005 IS-03		IS003 IS-02	IS003 IS-02		IS003 IS-02	IS003 IS-02	IS004 IS-02	IS005 IS-03
3-#12 (Ø) & 1-#12 (G)		3-#12 (Ø) & 1-#12 (G)	3-#12 (Ø) & 1-#12 (G)		3-#12 (Ø) & 1-#12 (G)	3-#12 (Ø) & 1-#12 (G)	3-#10 (Ø) & 1-#10 (G)	3-#12 (Ø) & 1-#12 (G)
A		A	A		A	A		A
3-#12 (Ø) & 1-#12 (G)		3-#12 (Ø) & 1-#12 (G)	3-#12 (Ø) & 1-#12 (G)		3-#12 (Ø) & 1-#12 (G)	3-#12 (Ø) & 1-#12 (G)		3-#12 (Ø) & 1-#12 (G)
2		7.5	7.5		7.5	7.5	10	1
EXF 21.840		PMP 21.230	PMP 21.240		PMP 21.210	PMP 21.220	FAB 21.500	EXF 21.850
EXHAUST FAN NO. 2	SPACE	GRIT PUMP #3	GRIT PUMP #4	SPACE	GRIT PUMP #1	GRIT PUMP #2	ODOR CONTROL FAN	EXHAUST FAN NO. 3

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

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SOUTH VALLEY WATER RECLAMATION FACILITY

PROJECT 5

ELECTRICAL

GRB-MCC-1
ONE-LINE DIAGRAM - II

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-21-3
SHEET NO. 45 OF 159

LAST SAVED BY: jlefevre

PROJECT NO. 10548A10 FILE NAME: 10548A10_GEOL2103.dgn

CONTINUED FROM GE-OL-21-3

F7 — 3P 7AC — MCP — 65KAIC — LR VFD-6 LL — IS005 IS-03 — 3-#12 (Ø) & 1-#12 (G) — A — 3-#12 (Ø) & 1-#12 (G) — 1 — EXF 21.860 — EXHAUST FAN NO. 4

G1 — SPACE

G3 — 150AF 3P 125AT — TM — 65KAIC — 3-#1 (Ø) & 1-#6 (G) — GRB-XFMR-1 45 KVA 3 PHASE PRI 480V SEC-120/208V — 3-#1/0 (Ø), 1-#1/0 (N), & 1-#6 (G) — PANELBOARD GRB-LP-1

G4 — 150AF 3P 100AT — TM — 65KAIC — PANELBOARD GRB-DPP-1

H1 — ETHERNET SWITCH

H3 — SPACE

H4 — 150 AF 3P 100 AT — TM — 65KAIC — PANELBOARD GRB-DPP-2

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

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SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
GRB-MCC-1
ONE-LINE DIAGRAM - III

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-21-4
SHEET NO. 46 OF 159

LAST SAVED BY: Jlefevre

PROJECT NO. 10548A10 FILE NAME: 10548A10_GEOL2104.dgn

Plot Date: 01-MAR-2019 3:40:05 PM
User: svcPW
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Std_Pen_v0905.pen PlotScale: 2:1
LAST SAVED BY: Jlefevre

EGU-3510
1100KW/1375KVA
0,8PF
480V, 3Ø
4 WIRE, 60Hz

1600AF 3P 1600AT — TM — 65KAIC

1600AF 3P 1600AT — SS — 65KAIC

SG-EDA, 1600A, 480V, 3Ø, 3WIRE, 60 Hz, 50KAIC

6	5	4	3	2	1
150AF 3P 100AT — TM	150AF 3P 70AT — TM	225AF 3P 225AT — TM	400AF 3P 400AT — TM	1200AF 3P 1200AT — SS	1600AF 3P 1600AT — SS
TO RW-MCC-E2 VIA TRANSFER SWITCH IN RW-MCC-C	TO RW-MCC-E VIA TRANSFER SWITCH IN RW-MCC-A	SPARE	TO GRB-MCC-1	TO HW-MCC A	SPARE

KTU1200

2{3-#4/0 (Ø) & 1-#3 (G)}

GENERAL NOTES:

1. THE STANDBY POWER SWITCHBOARD, SG-EDA, CONSISTS OF:
   - GENERAL ELECTRIC
     1,6000 AMP
     3Ø, 3W
     JOB NO. 65103
     50 KAIC
     STYLE 2D
     PLANT T
   -MAIN BREAKER
     POWER BREAK
     CAT NO. TPVVF5616
     FRAME TPVVF5
     SERIAL NO. V62842
     SENSOR 1,600 AMP

REV	DATE	BY	DESCRIPTION

DESIGNED CAC
DRAWN AAW
CHECKED BJR
DATE MARCH 2019

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West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY
PROJECT 5
ELECTRICAL
SG-EDA ONE-LINE DIAGRAM MODIFICATIONS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 — 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10
DRAWING NO. GE-OL-SG-1
SHEET NO. 47 OF 159

PROJECT NO. 10548A10 FILE NAME: 10548A10_GEOLSG1.dgn