



6975 UNION PARK CENTER, #490 **MIDVALE, UTAH**

VACINITY MAP



AERIAL MAP

DRAWING INDEX

DWG NO.	TITLE
GENERAL	
G-00-0001	COVER
G-00-0002	DRAWING INDEX
G-00-0003	SEALS PAGE 1
G-00-0004	GENERAL LEGEND AND SYMBOLS
G-00-0005	ABBREVIATIONS
G-08-1001 G-08-1002	OVERALL SITE PLAN DEWATERING WELL LOCATIONS
PROCESS MECHAN	
PMD-08-1001	EAST CLARIFIERS E-1, E-2 DEMOLITION PLAN
PMD-08-1002	EAST CLARIFIERS E-3, DEMOLITION PLAN
PMD-08-3001	EAST CLARIFIERS E-1, E-2 DEMOLITION TYP SECTIONS
PMD-08-3002	EAST CLARIFIERS E-3 DEMOLITION TYP SECTION
PMD-08-8001	EAST CLARIFIERS E-1, E-2 DEMOLITION DETAILS
PMD-08-8002	EAST CLARIFIERS E-3 DEMOLITION DETAILS
PMD-08-8003	EAST CLARIFIER SPLITTER BOX ACTUATOR DEMOLITION DETAILS
ELECTRICAL DEMO	
ED-08-8001	EAST CLARIFIERS E-1 E-2 ELECTRICAL DEMOLITION DETAILS
ED-08-8002	EAST CLARIFIERS E-3 ELECTRICAL DEMOLITION DETAILS
CIVIL	
C-08-0001	CIVIL LEGEND AND SYMBOLS
C-08-0002 C-08-1001	CIVIL NOTES EAST CLARIFIERS CIVIL PLAN
C-08-5001	CIVIL DETAILS
	GIVE DETAILS
STRUCTURAL	
S-08-0001	STRUCTURAL GENERAL NOTES
PROCESS MECHAN	ICAL
PM-08-0001	LEGEND, SYMBOLS AND ABBREVIATIONS
PM-08-0002	PROCESS MECHANICAL DETAILS
PM-08-1001	EAST CLARIFIERS E-1, E-2, E-3 PIPE REHAB PLAN VIEW
PM-08-1002	EAST CLARIFIER E-1, E-2 PIPE REHAB TYP. PLAN VIEW
PM-08-3001	EAST CLARIFIERS E-1, E-2 PIPE REHAB TYP SECTION
PM-08-3002 PM-08-4001	EAST CLARIFIER E-3 VALVE VAULT PIPE REHAB TYP PLAN AND SECTION EAST CLARIFIERS E-1, E-2 PIPE PLAN AND PROFILE
PM-08-5001	EAST CLARIFIERS E-1, E-2 PIPE PLAN AND PROFILE EAST CLARIFIERS E-1, E-2 NSTALLATION SCHEMATIC PLAN
PM-08-5001 PM-08-5002	EAST CLARIFIERS E-1, E-2 INSTALLATION SCHEMATIC FLAN
PM-08-5003	EAST CLARIFIERS E-1, E-2 INSTALLATION SCHEMATIC SECTION
PM-08-5004	EAST CLARIFIERS E-3 INSTALLATION SCHEMATIC SECTION
ELECTRICAL	
E-08-0001	ELECTRICAL LEGEND AND SYMBOLS 1
E-08-0002	ELECTRICAL LEGEND AND SYMBOLS 2
E-08-0003	ELECTRICAL ABBREVIATIONS
E-08-1001	ELECTRICAL SITE PLAN
E-08-1002	CLARIFIER 1 POWER PLAN
E-08-1003	CLARIFIER 3 POWER PLAN
E-08-1004	SPLITTER BOX POWER PLAN
E-08-2001	SPLITTER BOX LIGHTING PLAN
E-08-3001	EAST CLARIFIERS E-1 E-2 ELECTRICAL SECTION
E-08-3002	EAST CLARIFIERS E-3 ELECTRICAL SECTION
E-08-5001 E-08-7001	ELECTRICAL DETAILS PANEL SCHEDULES
E-00-7001	I ANLL OUIEDULES

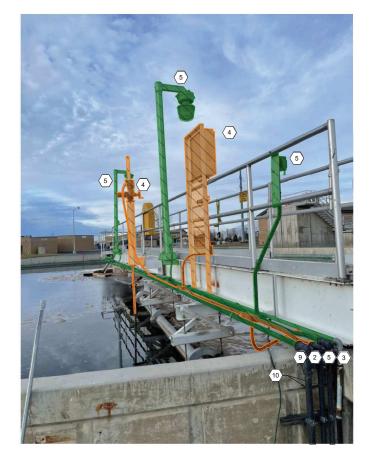
D

С



Salt Lake City, UT

			D
		BID SET	с
		TSSD Clean Water	
	UT CI	EAST FACILITY ILITIES AND LARIFIERS	
REV		ABILITATION PROJECT REVISIONS DESCRIPTION	-
	F	PROJECT REVISIONS	в
	F	PROJECT REVISIONS	в
	F	PROJECT REVISIONS	B
REV	DATE	REVISIONS DESCRIPTION DESCRIPTION	B
REV	DATE	PROJECT REVISIONS DESCRIPTION DESCRIPTION	B
REV DESIG	GNED: KED:	PROJECT REVISIONS DESCRIPTION	В
REV DESIG	F DATE □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	PROJECT REVISIONS DESCRIPTION DESCRIPTION DESCRIPTION DESCRIPTION DESCRIPTION DESCRIPTION DESCRIPTION LINE IS 2 INCHES AT FULL SIZE R.GREVE T.EASTMAN S. O'CONNELL N. KUNZ T.LINDLEY FILENAME 157492.2 DESCRIPTION	В
REV DESII DRAV CHECC CHEC		PROJECT REVISIONS DESCRIPTION	A
REV DESII DRAV CHECC CHEC	F DATE	PROJECT REVISIONS DESCRIPTION	



EAST CLARIFIER E-1, VIEW NORTH



EAST CLARIFIER E-1, VIEW NORTHWEST



EAST CLARIFIER E-1, VIEW NORTHWEST



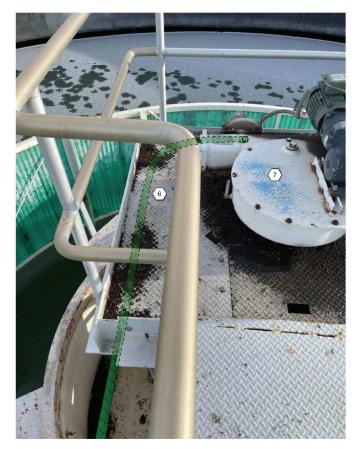
EAST CLARIFIER E-2, VIEW SOUTH

2



EAST CLARIFIER E-2, VIEW NORTH

3

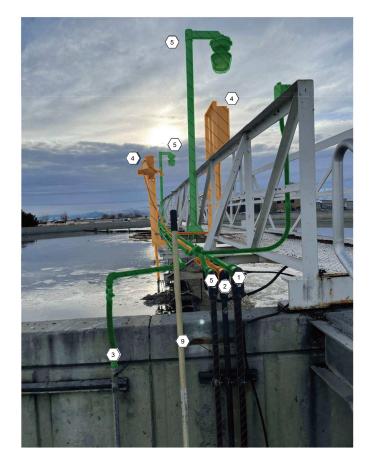


EAST CLARIFIER E-2, VIEW SOUTH

5

4

GENERAL NOTES		1
PHOTOS NOT TO SCALE. CONTRACTOR TO FIELD VERIFY REQUIRED MATERIALS, MATERIAL LENGTHS, DIMENSIONS, LOCATIONS, AND QUANTITIES.	Brown AND Caldwell	
REMOVE EXISTING CLARIFIER DRIVE CONDUIT. ONCE WALWAY REPLACEMENT IS COMPLETE, REINSTALL NEW CONDUIT AND CORRESPONDING CABLE. BID ALTERNATE: REINSTALL EXISTING CONDUIT AND WIRING WITH DRIVE REBUILD.	Salt Lake City, UT	D
2. REMOVE AND DISPOSE OF SCUM SKIMMER WIRING.		
 REMOVE AND DISPOSE OF SKIMMER SPRAY PIPING FROM THIS LOCATION. 		
 REMOVE AND DISPOSE OF SKIMMER CONTROL PANELS, ACTUATORS, (CONDUIT FROM KEYNOTE 2 LOCATION), AND WIRING. 		
 REMOVE LIGHT POSTS, LUMINARIES, LUMINAIRE SWITCHES AND CORRESPONDING CABLE, CONDUIT, AND REINSTALL ONCE WALKWAY REPLACEMENT IS COMPLETE, BID ALTERNATE: REMOVE AND REPLACE. 		
 BID ALTERNATE: REMOVE DRIVE CONDUIT AND CORRESPONDING CABLE UNDER WALKWAY, AND REINSTALL WITH REBUILT DRIVES ONCE WALKWAY REPLACEMENT IS COMPLTE. 		
 REMOVE AND THEN REPLACE CLARIFIER DRIVES, CORRSPONDING CONDUIT AND WIRING ONCE WALKWAY REPLACEMENT IS COMPLETE. CONTRACTOR TO COORDINATE WITH OWNER REGARDING SALVAGE OF EXISTING CLARIFIER DRIVES, BID ALTERNATE: REMOVE, REBUILD AND REINSTALL CLARIFIER DRIVES. 		
 BID ALTERNATE: REMOVE AND REINSTALL CLARIFIER DRIVE CONTROLS WITH REBUILT DRIVES ONCE WALKWAY REPLACEMENT IS COMPLETE. 		
 REMOVE EXISTING CLARIFIER DRIVE CONDUIT. ONCE WALWAY REPLACEMENT IS COMPLETE, REINSTALL NEW CONDUIT AND CORRESPONDING CABLE. BID ALTERNATE: REINSTALL EXISTING CONDUIT AND WIRING WITH DRIVE REBUILD. 	BID SET	С
10. DEMOLISH EXISTING CONDUIT FOR E-1 CLARIFIER REFEED. REPLACE WITH NEW CONDUIT. REPLACE PORTIONS OF THE SIDEWALK REMOVED FOR CONDUIT DEMOLITION AND REINSTALLATION.	20	
11. REMOVE PROCESS CONTROL PANELS AND CORRESPONDING CABLE (I.E. YSI). REINSTALL ONCE WALKWAYS HAVE BEEN REPLACED.	TSSD Clean Water	
	TP-4 EAST FACILITY UTILITIES AND CLARIFIERS REHABILITATION PROJECT REVISIONS REV DATE DESCRIPTION LINE IS 2 INCHES AT FULL SIZE DESIGNED: N.ANDERSON DRAWN: B.NURSUWITO CHECKED: APPROVED: N.ANDERSON FILENAME ED-08-8001.DWG CONSULTANT PROJECT NUMBER 157492 TSSD PROJECT NUMBER 157492 ELECTRICAL	в
ELECTRICAL ITEMS TO BE REMOVED, DISPOSED ELECTRICAL ITEMS TO BE REMOVED AND REINSTALLED	EAST CLARIFIERS E-1, E-2 ELECTRICAL DEMOLITION DETAILS DRAWING NUMBER ED-08-8001	A



EAST CLARIFIER E-3, VIEW SOUTHWEST



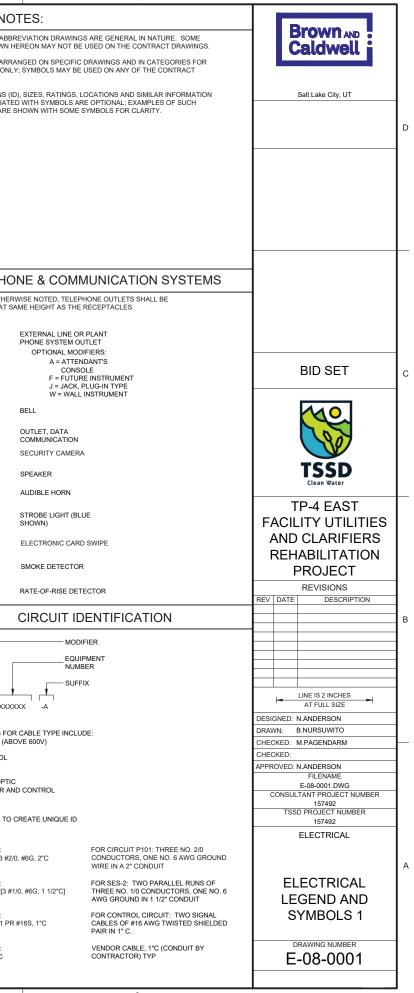
EAST CLARIFIER E-3, VIEW EAST

3



П

		1	2	3	4 5	
	F	RACEWAYS	DISTRIBUTION EQUIPMENT	LIGHTING CONTINUED	GROUNDING	GENERAL NO
	HH23	MANHOLE (MH), HANDHOLE (HH), PULLBOX (PB)	APPROXIMATE SHAPE AND SCALE REPRESENTED WHERE POSSIBLE. HOWEVER, EXACT SIZE AND NUMBER OF SECTIONS IS ESTIMATED	EXIT LIGHTS: SURFACE ON CEILING	GROUND ROD	SYMBOLS AND ABBR SYMBOLS SHOWN HE SYMBOLS ARE ARRAI CONVENIENCE ONLY
	J ^{JB1900}	JUNCTION BOX. OPTIONAL IDENTIFIER	FLOOR-STANDING DISTRIBUTION ASSEMBLY, SUCH AS A SWITCHBOARD, TRANSFORMER, OR MOTOR CONTROL CENTER	WALL MOUNTED	GROUND ROD WITH GROUND WELL GROUND CONNECTION, SEE SPECIFICATION 26 05 06.	3. IDENTIFICATIONS (ID SHOWN ASSOCIATED INFORMATION ARE S
D	тВ-1301 Т	TERMINAL BOX. OPTIONAL IDENTIFIER	EQUIPMENT DESIGNATION (REFER TO GENERAL SYMBOLS FOR SPECIFIC SYMBOL USE)	3a CIRCUIT IDENTIFIER: WHEN SHOWN ADJACENT TO FIXTURE IDENTIFIES CIRCUIT NUMBER AND SWITCH. EXAMPLE: CIRCUIT 3, CONTROLLED BY	- — G — — GROUNDING CONDUCTOR	
	PBD-1900-1,3,5	HOME RUN EXPOSED - SEE PANELBOARD, SWITCHBOARD, OR MCC SCHEDULE FOR CIRCUIT INFORMATION EXAMPLE: HOME TO PANELBOARD PBD-1900,	WALL-MOUNTED DISTRIBUTION ASSEMBLY, SUCH AS PANELBOARD, MOTOR STARTER PANEL, OR TERMINAL CABINET	SWITCH a PC PHOTO CELL	GROUND CONNECTION	
	<-x	CIRCUITS 1, 3, AND 5 HOME RUN CONCEALED - SEE PANELBOARD, SWITCHBOARD, OR MCC SCHEDULE FOR	EQUIPMENT DESIGNATION (REFER TO GENERAL SYMBOLS FOR SPECIFIC SYMBOL USE)	OS OCCUPANCY SENSOR	REINFORCEMENT IIGHTNING ROD/AIR TERMINAL	
	PBD-1900-1,3,5	CIRCUIT INFORMATION. EXAMPLE: HOME TO PANELBOARD PBD-1900, CIRCUITS 1, 3, AND 5	LIGHTING	WIRING DEVICES	MOTORS AND EQUIPMENT	TELEPHO
		CABLE TRAY MODIFIERS:	FIXTURE IDENTIFIER:	SWITCHES: UNLESS OTHERWISE NOTED, ALL SWITCHES ARE	MOTOR STARTER, INDIVIDUAL. NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY	UNLESS OTHERV MOUNTED AT SA
		CTS - 24VDC OR LESS CTC - 120V CONTROL CONDUCTORS CTP - 600V POWER CONDUCTORS	NUMBER OF FIXTURES (SHOWN ONLY WHEN REQUIRED FOR CLARITY)	WALL MOUNTED TOGGLE SWITCH, SINGLE POLE	COMBINATION MOTOR STARTER. NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY	▲ _A
С		CABLE #4/0 AND LARGER SHALL NOT BE STACKED VERTICALLY WHEN TWO TRAY MODIFIERS IDENTIFY A	FIXTURES OF THE SAME SHAPE WITHIN A ROOM OR AREA.	\$\$ GANGED SWITCHES IN COMMON BOX WITH COMMON WALL PLATE	DISCONNECT SWITCH, 60 NON-FUSED EXAMPLE: 60 AMP	Q
		SINGLE TRAY, THE CONTRACTOR MAY USE DIVIDER OR INSTALL SEPARATE TRAYS (CTC/CTS)	PC $2/40$ 8'-6" $G = GROUND$ $S = SURFACE$ P = P D = D = M = M = M = M = M = M = M = M =	\$ CIRCUIT CONTROLLED: a, b, c, ETC. MAY BE COMBINED WITH CIRCUIT NUMBER. EXAMPLE: 1a, 4b, ETC	DISCONNECT SWITCH, FUSED EXAMPLE: 100 AMP, 2P, 80 AMP FUSES	
		CABLE TRAY WITH COVER MODIFIER, AS ABOVE	MOUNTING HEIGHT, FLOOR TO BOTTOM OF FIXTURE UON. AHP= AS HIGH AS POSSIBLE. AD= ABOVE DOOR.	SUBSCRIPT MODIFIER INDICATES: 2 = DOUBLE POLE 3 = THREE WAY 4 = FOUR WAY	M MOTOR	
	P 05P1100	RACEWAY IDENTIFIER	NUMBER OF LAMPS/LAMP WATTAGE, OR TOTAL FIXTURE WATTAGE	K = KEY OPERATED MC = MOMENTARY CONTACT, THREE POSITION MS = MANUAL (MOTOR) STARTER OR	(SV) SOLENOID VALVE	H ¹ / ₁
		RACEWAY EXPOSED MODIFIERS FOR RACEWAY TYPE: H - POWER (ABOVE 600V) P - POWER	CONTROL: PHOTOCELL, SWITCH, CONTACTOR LIGHTING FIXTURE SHAPES AND SCALE ARE REPRESENTED WHERE POSSIBLE. THE EXAMPLES SHOWN BELOW ARE	SWITCH WITH OVERLOADS R = RHEOSTAT (DIMMER, SPEED CONTROL) O = OCCUPANCY SWITCH		CS (SD)
		C - CONTROL S - SIGNAL D - DATA	TYPICAL APPLICATIONS		WH WATER HEATER	R
в		F - FIBER OPTIC PC - POWER AND CONTROL X - SPARE	SUSPENDED PENDANT MOUNTED FIXTURE SURFACE MOUNTED FIXTURE			
	0	RACEWAY CONCEALED	NS LIGHTING FIXTURES IDENTIFIED WITH AN 'NS' SHALL FROM NON-SWITCHED POWER SOURCE, APPLIES TO ANY FIXTURE TYPE	RECEPTACLE MODIFIERS: WP = WEATHER PROOF GFI = GROUND FAULT CIRCUIT INTERRUPTER	LOCAL CONTROL STATION	
	•	THE VIEWER RACEWAY TURNED DOWN	LIGHTING FIXTURE WITH EMERGENCY FUNCTION (BATTERY) OR CENTRAL INVERTER)	HAZARDOUS AREA; EXPLOSION PROOF EXPLOSION PROOF, CLASS 1, DEAD FRONT,	EQUIPMENT DESIGNATION (REFER TO GENERAL SYMBOLS FOR SPECIFIC SYMBOL USE)	
-		CONDUIT CAPPED		45° ANGLE, TWO GANG	CONTROL PANEL, VFD, RVSS, APPROXIMATE SHAPE AND SCALE.	NOTE: MODIFIERS FOR H - POWER (ABC P - POWER C - CONTROL
	DB 05P1100	DUCT BANK IDENTIFIER (OPTIONAL) DUCT BANK, DIRECT	LIGHT FIXTURE PENDANT MOUNT	RECESSED FLOOR RECEPTACLE - ANY RECEPTACLE INSIDE A SQUARE		S - SIGNAL D - DATA F - FIBER OPTIC PC - POWER ANI X - SPARE
	– \ DB — — – —сdb— —	BURIED DUCT BANK, CONCRETE ENCASED	EMERGENCY FUNCTION	SURFACE FLOOR RECEPTACLE - ANY RECEPTACLE INSIDE A TRIANGLE	AREA CLASSIFICATION	X - SPARE SUFFIX: A - LETTER TO C
A	—RC—RC—	DUCTBANK, REINFORCED CONCRETE ENCASED OVERHEAD POWER LINE	LIGHT FIXTURE RECESSED CAN TYPE WITH EMERGENCY FUNCTION WALL MOUNTED	GANGED RECEPTACLES-IN COMMON BOX, WITH COMMON WALL PLATE	C1-D1 HAZARDOUS AREA CLASSIFICATION	EXAMPLE 1: P101-1: 3 #2/0
			FIXTURE DIRECTIONAL LIGHT	-C RECEPTACLE, CLOCK HANGER RECEPTACLE, DUPLEX ON EMERGENCY	C1-D2 HAZARDOUS AREA CLASSIFICATION	EXAMPLE 2: SES-2: 2[3 #1/
				EMERGENCY 480V RECEPTACLE		EXAMPLE 3: C111: 2-1 PR ; EXAMPLE 4:
			UNIT SELF CONTAINED			VND, 1"C
		1	2	3	4 5	



	1		3		4		
	GENERAL	CONTROL DIAGRAM SYMBOLS	N/IC	SCELLANEOUS	TRIP	ONE LINE DIAG	RAM SYMBOLS
		NORMALLY NORMALLY INITIATING	FU 30	FUSE WITH SIZE AND OPTIONAL IDENTIFICATION	TRIP FRAME	POWER CIRCUIT BREAKER (AIR, OIL, OR GAS) FRAME AND TRIP SETTING AND OPTIONAL I.D. SHOWN	600kW 480V G 480V 60 Hz 3P, 4W
D	CONDUCTORS NOT CONNECTED TERMINAL POINT FOR EXTERNAL CONNECTIONS	OPEN CLOSED VARIABLE SS SS	30A FU 30, 30A	FUSE WITH BLOWN FUSE INDICATOR	3P)) 100 AT 100 AF LSIG	CIRCUIT BREAKER W/ ADJUSTABLE ELECTRONIC TRIP OVER BREAKER FRAME SIZE. SOLID STATE TRIP FEATURES SHOWN: L = LONG DELAY S = SHORT DELAY	500
	EXISTING EQUIPMENT (SCREENED)		480 VAC		100 AT 100 AF LSIG	I = INSTANTANEOUS G = GROUND FAULT	(<u>55 k</u> var
		WS WS FORCE OR TORQUE	250VA	CONTROL TRANSFORMER PRIMARY AND SECONDARY SIZE AS SHOWN OR AS SPECIFIED			
	DIRECT CONNECTION DUSH TO TEST. TEST VOLTAGE TERMINAL SHOWN X1	ZS ZS POSITION	250/5 	CURRENT TRANSFORMER PRIMARY/SECONDARY TURNS RATIO SHOWN (OPTIONAL)		CIRCUIT BREAKER (DIFFERING ORIENTATION) MCP = MOTOR CIRCUIT PROTECTOR 3P = 3 POLE THERMAL MAGNETIC TRIP	
	LENS COLOR: (L = LENS COLOR) A = AMBER B= BLUE G= GREEN R= RED W= WHITE	FS FS FLOW	FU 30 	FUSE: 5A CLASS 'F' SHOWN	MCP 		
				RESISTOR	J 30A	FUSED SWITCH:	
	PUSHBUTTONS	8		SURGE OR ARC SUPPRESSION		FUSE RATING AND POLES SHOWN MODIFIERS: CLF = CURRENT LIMITING FUSE DE = DUAL ELEMENT	
С	HS-XXXX 	PS PS PRESSURE	<u>(55 K</u> VAR	CAPACITOR	Ϋ́	F = CLASS 'F' E = E RATED	
	HS-XXXX PUSHBUTTON, MOMENTARY CONTACT, NORMALLY CLOSED		 	CONNECTOR	 200A	DISCONNECT OR ISOLATING SWITCH 200 AMP SHOWN	
	HS-XXXX PUSHBUTTON WITH	TIMING RELAYS		DRAWOUT MECHANISM	↓ ↓ _{ATS#}	POWER TRANSFER SWITCH: DESIGNATION, AMP RATING, AND CONFIGURATION	- +
	ALA MUSHROOM HEAD, EMERGENCY STOP	TR OPERATING COIL SEC / MIN FUNCTION: ON OR OFF DELAY		SOLENOID VALVE: DEVICE ID 'CV-1000' SHOWN	100A, 3P	SHOWN ATS = AUTOMATIC TRANSFER SWITCH MTS = MANUAL TRANSFER SWITCH SUSE = SUITABLE FOR USE AS SERVICE ENTRANCE	
	SELECTOR SWITCHES	RANGE: SEC / MIN SET: SEC / MIN		BUS DUCT		AIR BREAK CONTACTOR, FVNR UON. NEMA	△ 480 VAC 30KVA
	HS-XXXXX 1 2 2 POSITION MAINTAINED	NORMALLY NORMALLY <u>OPEN CLOSED</u> TR3 TR3 TR3 TR3 OPEN TR3 Q<		GROUND CONNECTION	1 ⊥ FVR	SIZE 1 INDICATED FVR = FULL VOLTAGE, REVERSING STARTER 2S2W = TWO SPEED, TWO WINDING STARTER	5% Z 208/120V
		LINE 50		POTENTIOMETER		METERING (ANSI / IEEE FUNCTIONS SPECIFIED) POWER MONITOR (PM)	
ANDERSON		NORMALLY <u>OPEN</u> TR3 TR3 TR3 TR3 TR3 TR3 TR3 TR3 TR3 TR3 TR3 DELAY ON COIL DE-ENERGIZATION TC (ON DELAY) TO DELAY ON COIL TR3 TR3 TR3 DELAY ON COIL TR3 TR3 DELAY ON COIL TC TC TC TC TC TC TC T	—(н)—	METER W/ ALPHA IDENTIFIER: A = AMMETER H = ELAPSED TIME V = VOLTMETER		POWER MUALITY MONITOR (HARMONIC ANALYSIS) (POM) POWER QUALITY MONITOR (HARMONIC ANALYSIS) (POM) MOTOR MONITOR AND PROTECTION RELAY (MPR) FEEDER PROTECTION RELAY (FPR)	1 11111
USER: NATE	Contracts of the second s	LINE 50 LINE = ID OF LINE OR RUNG NUMBER (LINE OR RUNG NUMBER S0 SHOWN)	I CABLE ID	BATTERY	5 KVA	PACKAGED EQUIPMENT OR NON-MOTOR LOAD. KVA, KW, AMPS, AS NOTED.	480VAC - 120VAC
29 PM CAD	HS-XXXX 1 1 1 2	CONTACTORS		SHIELDED CABLE	XX HP ### AMPS	VARIABLE FREQUENCY DRIVE (VFD) NORMAL DUTY UON	^{250/5} 3
5/30/2023 4:	OXO STORE CONTACT X = CONTACTS OXO O O O O O O O O O O O O O O	OPERATING COLL:		LOCATED IN FIELD	VFD	HP IS INDICATED IF DIFFERENT THAN DRIVEN LOAD HP ##AMPS = RATED CONTINUOUS AMPS	WINDING
PLOT DATE:		C = CONTACTOR, LIGHTING, OR GENERAL USE F = FAST OR FORWARD M = MAIN OR LINE 1M = FIRST MAIN OR WYE 2N = STECONE MANN OR DEPT TA		DC TERMINAL BLOCK	RVSS	REDUCED VOLTAGE SOLID STATE STARTER	
DWG PL	CONTROL RELAYS	2M = SECOND MAIN OR DELTA R = RUN OR REVERSE S = SLOW OR START IC = ISOLATION CONTROL		PLC I/O POINTS DI = DIGITAL INPUT			
E-08-0002.I	CR FUNCTION OPERATION COIL: CR = CONTROL RELAY	ID ————————————————————————————————————		DO = DIGITAL OUTPUT AI = ANALOG INPUT AO = ANALOG OUTPUT	SPD	SURGE PROTECTION DEVICE	Ē.
FILENAME	L B MECHANICALLY LATCHED RELAY WITH UNLATCHED COIL OUTPUT CONTACTS. LINE NUMBER OF RELAY COIL	OPTIONAL MODIFIERS: FVR = FULL VOLTAGE REVERSING RVS = REDUCED VOLTAGE STARTER RVSS = REDUCED VOLTAGE SOLID STATE			64 N_3	ANSI C37.2 DEVICE & QUANTITIES SHOWN	50 AM 30 SE
AD2345536	CR1 CR2 SHOWN (OPTIONAL) H H OPERATING COLL FUNCTIONS: LINE 30 LINE 30 L = LATCH U = UNLATCH	STARTER RVAT = REDUCED VOLTAGE AUTOTRANSFORMER STARTER 2S2W = TWO SPEED, TWO WINDING STARTER					
ath: C:\BCPM	OL TR = TIMER RELAY LR = LATCH RELAY OVERLOAD RELAY	M VACUUM CONTACTOR, NEMA SIZE OPTIONAL					
₽.	1	2	3		4	5	I

GENERATOR WITH WINDING CONFIGURATION VOLTAGE, POWER, FREQUENCY SHOWN. POWER FACTOR OPTIONAL

MOTOR, HORSE POWER SHOWN

POWER FACTOR CORRECTIONS CAPACITOR KVAR RATING SHOWN

POTHEAD

STRESS CONE

PORTABLE CABLE

CABLE BUS

BUS CONDUCTOR

CABLE CONDUCTOR

SURGE ARRESTOR

LIGHTNING ARRESTOR

TEST DEVICE

POWER TRANSFORMER, VOLTAGES, SIZE, AND IMPEDANCE SHOWN

AC ISOLATION TRANSFORMER, VOLTAGES, SIZE, AND IMPEDANCE SHOWN AC

POTENTIAL TRANSFORMER, PT QUANTITY SHOWN (3) AND VOLTAGES SHOWN

CURRENT TRANSFORMER, CT QUANTITY AND 250:5 TURNS RATIO SHOWN

ING CONFIGURATIONS:

DELTA

WYE (GROUNDED)

50 AMP / 80 SEC

KIRK KEY INTERLOCK

NEUTRAL GROUNDING RESISTOR. AMPS/TIME RATING SHOWN

Brown AND Caldwell

Salt Lake City, UT

D

BID SET С Key Contraction **TSSD** Clean Water **TP-4 EAST** FACILITY UTILITIES AND CLARIFIERS REHABILITATION PROJECT REVISIONS REV DATE DESCRIPTION В LINE IS 2 INCHES DESIGNED: N.ANDERSON DRAWN: B.NURSUWITO HECKED: M.PAGENDARM CHECKED: PPROVED: N.ANDERSON FILENAME E-08-0002.DWG CONSULTANT PROJECT NUMBER 157492 TSSD PROJECT NUMBER 157492 ELECTRICAL А ELECTRICAL LEGEND AND

SYMBOLS 2

DRAWING NUMBER E-08-0002

	1	2	1	3	4	5
	Α	ABBREVIATIONS				GENERAL
A		1	Q			
A, AMF AC AFF	AMP(S), AMPERE(S) ALTERNATING CURRENT ABOVE FINISHED FLOOR	ICOM INTERCOM ID INSIDE DIAMETER IMC INTERMEDIATE METAL CONDUIT	QSB R	QUARTZ STANDBY		 THE ELECTRICAL DRAWINGS USE THE ONE LINE DIAGRA CONJUNCTION WITH SHOWING THE LOCATION OF THE E SHOWN ON THE PLAN DRAWINGS TO DEPICT THE WORK
AFF AHAP AIC	ABOVE FINISHED FLOOR AS HIGH AS POSSIBLE AMPS INTERRUPTING CAPACITY, SYMM.	INCAND INCANDESCENT INTLK INTERLOCK		RECEPTACLE		DETERMINE AND PROVIDE THE NECESSARY RACEWAY SHALL BE RUN EXPOSED AND ROUTED BY THE CONTRA
AL ARCH	ALUMINUM ARCHITECT(URAL)	INST INSTANTANEOUS I/O INPUT-OUTPUT	REF REQD	REFERENCE REQUIRED		WIRE USED SHALL BE AS SPECIFIED. 2. THE LOCATION OF THE CONTROL STATIONS SHOWN ON
ASYM ATS	ASYMMETRICAL AUTOMATIC TRANSFER SWITCH	IPB INSTRUMENT PULLBOX	RE STL RMS	REINFORCING STEEL ROOT MEAN SQUARE		LOCATION SHALL BE COORDINATED IN THE FIELD WITH AS PIPING, PROCESS EQUIPMENT, ETC.
AUTO AUX AWG	AUTOMATIC AUXILIARY AMERICAN WIRE GAUGE	J JB JUNCTION BOX	RTD RTU RVSS	RESISTANCE TEMPERATURE DETECTOR REMOTE TERMINAL UNIT REDUCED VOLTAGE SOLID STATE STARTER		3. THE CONTRACTOR SHALL COORDINATE WITH THE STR
B	AMERICAN WIRE GAUGE	K	RVS5	REDUCED VOLTAGE SOLID STATE STARTER		TERMINATION LOCATIONS.
BC	BARE COPPER	KCMIL 1000 CIRCULAR MIL	⊆ SA	SURGE ARRESTOR		
BLDG BOT	BUILDING BOTTOM	KV KILOVOLT KVA KILOVOLT-AMPERE	SCR SD	SILICON CONTROLLED RECTIFIER SMOKE DETECTOR		
<u>c</u>		KVAR KILOVOLT-AMPERE REACTIVE KW KILOWATT	SEC SEL	SECONDARY SELECTOR		
C CB	CONDUCTOR, CONDUIT CIRCUIT BREAKER	KWH KILOWATT-HOUR	SHH SMH SPEC	SIGNAL HANDHOLE SIGNAL MANHOLE SPECIFICATION		
CKT CLG	CIRCUIT CEILING	L LONG	SPD SPKR	SURGE PROTECTION DEVICE SPEAKER		
CM CND	CENTIMETERS CONDUIT	LC LIGHTING CONTACTOR LCP LOCAL CONTROL PANEL	ST STP	SHORT TIME SHIELDED TWISTED PAIR		
CNTL C.O.	CONTROL CONDUIT ONLY, SPARE	LCS LOCAL CONTROL STATION LED LIGHT EMITTING DIODE	SUB SW	SUBSTATION SWITCH		
CONC CPT	CONCRETE CONTROL POWER TRANSFORMER	LHH LOW VOLTAGE HANDHOLE LMH LOW VOLTAGE MANHOLE	SWBD SWGR	SWITCHBOARD SWITCHGEAR SYMMETRICAL		
CT CU	CURRENT TRANSFORMER COPPER	LP LIGHTING PANEL LT LONG TIME LTG LIGHTING	SYMM SYS	SYMMETRICAL SYSTEM		
므		LV LOW VOLTAGE	Τ			
DB	DUCT BANK, DIRECT BURIAL	M	TB TEL	TERMINAL BOX TELEPHONE		
DC DCU	DIRECT CURRENT, DATA CABLE DISTRIBUTED CONTROL UNIT	M METER MA MILLIAMPERE	TEMP TFR	TEMPERATURE TRANSFORMER		
DET DIAG	DETAIL DIAGRAM	MBS MANUAL BYPASS SWITCH MCC MOTOR CONTROL CENTER	TRI TV	TRIAD TELEVISION		
DISC DWG	DISCONNECT DRAWING	MCP MOTOR CIRCUIT PROTECTOR MPC MINI POWER CENTER MECH MECHANICAL	TVSS TYP	TRANSIENT VOLTAGE SURGE SUPPRESSOR TYPICAL		
Ē		MFR MANUFACTURE(R) MH MANHOLE, METAL HALIDE	<u>U</u>			
EA EC	EACH EMPTY CONDUIT	MIC MICROPHONE MIS MANAGEMENT INFORMATION STATION	U/G UON	UNDERGROUND UNLESS OTHERWISE NOTED		
ECP EDB	EQUIPMENT CONTROL PANEL ELECTRICAL DUCTBANK	MISC MISCELLANEOUS MM MILLIMETER	UPS	UNINTERRUPTIBLE POWER SUPPLY		
EG EL	ENGINE GENERATOR SET	MMH MEDIUM VOLTAGE MANHOLE MOV MOTOR OPERATED VALVES	<u>V</u>			
ELEC EMH EMER	ELECTRIC(AL) ELECTRICAL MANHOLE EMERGENCY	MTS MANUAL TRANSFER SWITCH MV MILLIVOLT, MEDIUM VOLTAGE MVMC MEDIUM VOLTAGE MOTOR CONTROL	V VA VAR	VOLT VOLTAMPERE VOLTAMPERE REACTIVE		
ENCL	ENCLOSURE/ENCLOSED ELECTRICAL PULLBOX		VC VC VCP	VACUUM CONTACTOR VENDOR CONTROL PANEL		
ETM	ELAPSED TIME METER EXPLOSION PROOF	N/A NOT APPLICABLE	VND	VENDOR		
EQUIP EX	EQUIPMENT EXISTING	N.C. NORMALLY CLOSED NEUT, N NEUTRAL NEUT,N	W			
E		NF NON-FUSED NIC NOT IN CONTRACT N.O. NORMALLY OPEN	W W/	WATT, WIRE, WIDE WITH WITHOUT		
FDR FL	FEEDER FLUORESCENT	N.O. NORMALLY OPEN NO. NUMBER NOM NOMINAL	W/O WW WG	WIREWAY WITH GROUND		
FLA	FULL LOAD AMPS FLEXIBLE CONDUIT	NP NAMEPLATE NTS NOT TO SCALE	WP	WEATHERPROOF		
F.O. FO	FAIL OPEN FIBER OPTIC	<u>o</u>	X			
B F.O. FO FUT	FUTURE	OC ON CENTER	XFMR XMTR	TRANSFORMER TRANSMITTER		
<u>G</u> GDR	GROUNDING RESISTOR	OCC OPERATION CONTROL CENTER OD OUTSIDE DIAMETER OH OVERHEAD	XP	EXPLOSION PROOF		
GEC	GROUNDING RESITOR GROUND ELECTRODE CONDUCTOR	OIS OPERATOR INTERFACE STATION OT OIL TIGHT	<u>Z</u> Z	IMPEDANCE		
GF GFI	GROUND FAULT GROUND FAULT INTERRUPTER	OWS OPERATOR WORKSTATION	L			
GND, O GRS		<u>P</u>				
н		P POLE, PHASE PBD PANEL BOARD				
н ндт	HIGH HEIGHT	PB PUSHBUTTON, PULLBOX PCP PROCESS CONTROL PANEL PF POWER FACTOR				
HH	HANDHOLE HIGH INTENSITY DISCHARGE	PF POWER ACTOR PH PHASE PLC PROGRAMMABLE LOGIC CONTROLLER				
HMI HP	HUMAN MACHINE INTERFACE HORSEPOWER	PMM POWER METERING MODULE PNL PANEL				
HPS HTR	HIGH PRESSURE SODIUM HEATER	PP POWER PANEL PR PAIR				
HV HVAC	HIGH VOLTAGE HEATING, VENTILATION, AND AIR CONDITIONING	PRI PRIMARY PT POTENTIAL TRANSFORMER				
HZ	HERTZ (CYCLES PER SECOND)	PVC POLYVINYL CHLORIDE PWR POWER				
4						

2

4

6

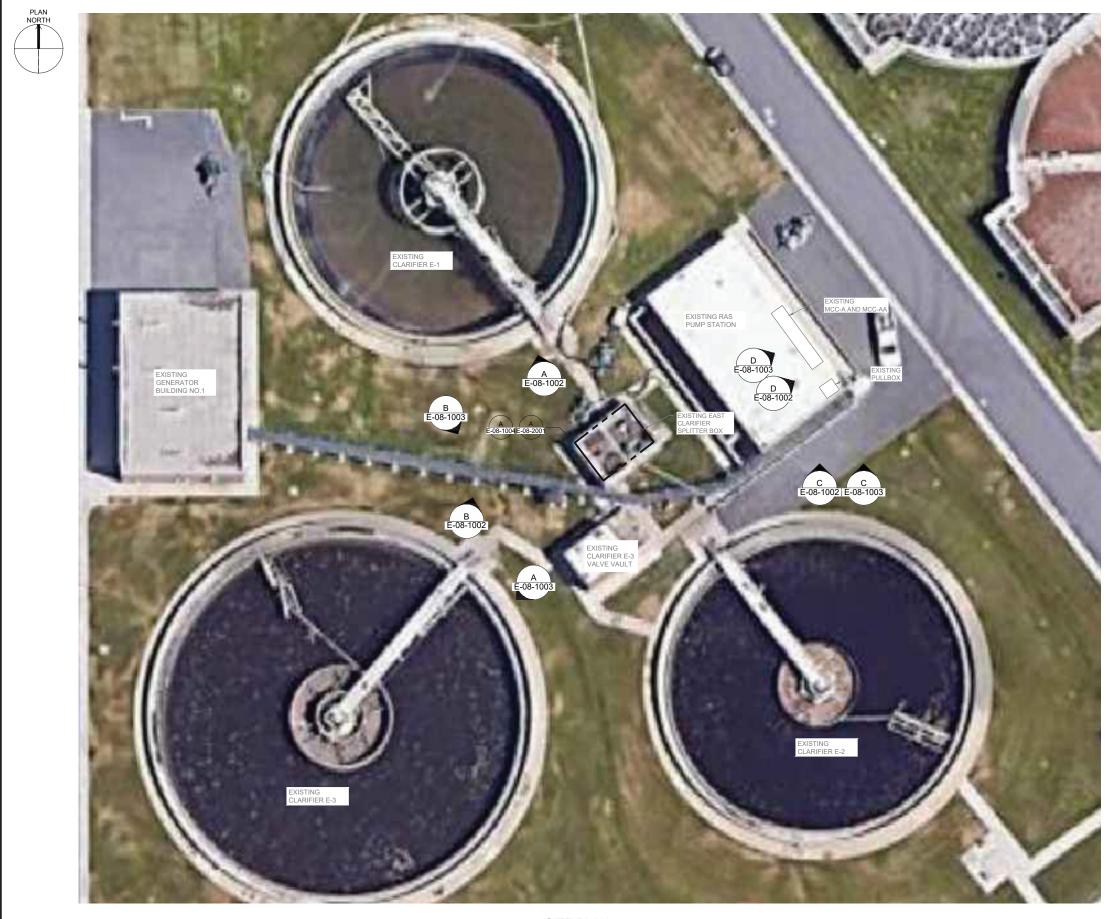
NOTES

RAMS AND RISER DIAGRAMS AND PANEL SCHEDULES IN ELECTRICAL/INSTRUMENTATION SOURCES AND LOADS/DEVICES K. THE CONTRACTOR SHALL USE THESE DOCUMENTS TO AND WIRING SYSTEM FOR EACH CIRCUIT. ALL INDOOR RACEWAY ACTOR, UNLESS OTHERWISE NOTED. THE TYPE OF RACEWAY AND

N THE PLAN DRAWINGS ARE DIAGRAMMATIC ONLY. THE ACTUAL THE CONSTRUCTION MANAGER AND ADJACENT EQUIPMENT SUCH

JCTURAL AND MECHANICAL DRAWINGS FOR CONDUIT STUB UP AND





SITE PLAN

2

NOS B

D

4

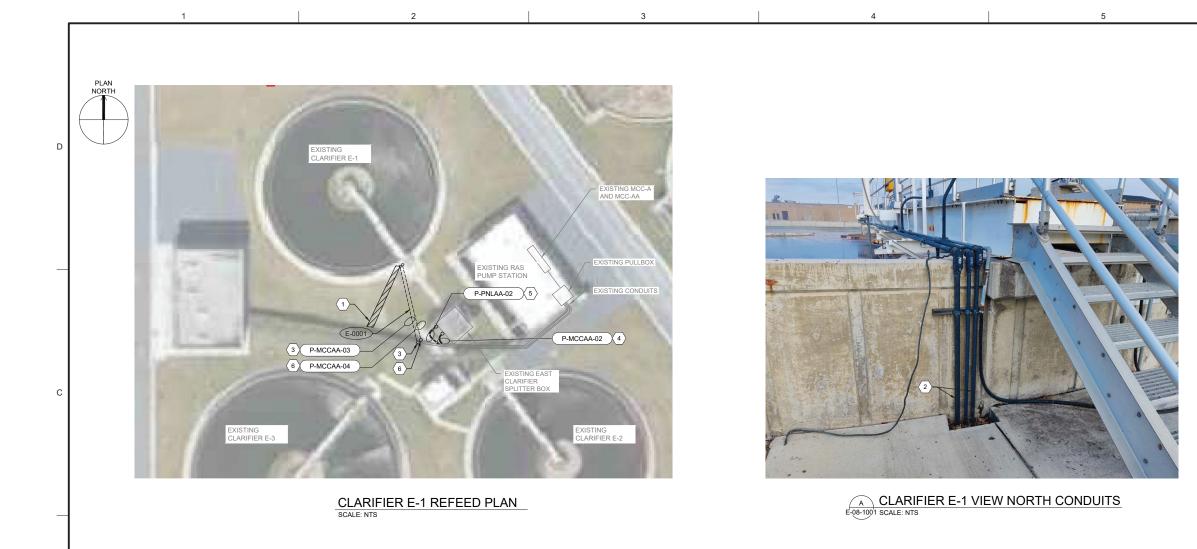
GENERAL NOTES

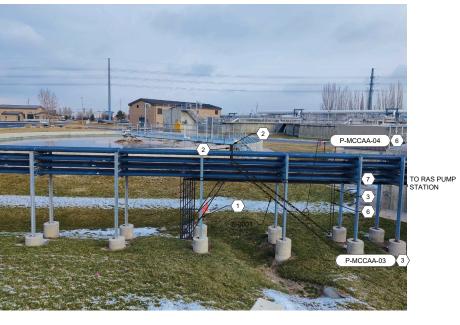
1. PLAN NOT TO SCALE. CONTRACTOR TO FIELD VERIFY REQUIRED MATERIALS, MATERIAL LENGTHS, DIMENSIONS, LOCATIONS, AND QUANTITIES.



ELECTRICAL SITE PLAN

DRAWING NUMBER









CONDUIT PENETRATIONS E-08-1001 SCALE: NTS



E-08-1001 SCALE: NTS

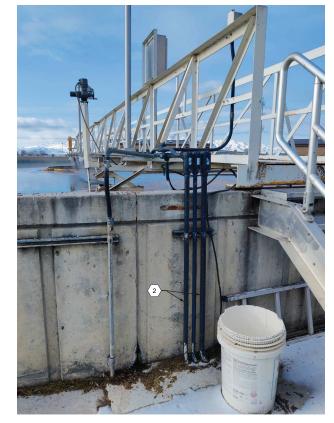
GE	ENERAL NOTES	
1.	PLAN AND PHOTOS NOT TO SCALE. CONTRACTOR TO FIELD VERIFY REQUIRED MATERIALS, MATERIAL LENGTHS, DIMENSIONS, LOCATIONS, AND QUANTITIES.	Brown AND Caldwell
٥I	KEY NOTES	
1.	DEMOLISH EXISTING CONDUIT AND CABLE FOR CLARIFIER E-1 DRIVE AND LIGHTING, DEMOLISH EXISTING UNDERGROUND CONDUITS, REPAIR PORTIONS OF SIDEWALK AND TURF REMOVED FOR CONDUIT DEMOLITION TO MATCH EXISTING, SEE SHEET ED-08-8001 FOR ADDITIONAL EAST CLARIFIER E-1 DEMOLITION SCOPE.	Salt Lake City, UT
2.	DEMOLISH EXISTING CONDUIT. REPLACE WITH NEW CONDUIT.	
3.	PULL NEW 480V CABLE FROM EXISTING MCC-AA TO CLARIFIER E-1 NEW DRIVE. UTILIZE NEW CONDUIT AND EXISTING OVERHEAD CONDUIT BANK AS NEEDED.	
4.	PROVIDE NEW CONDUIT FROM EXISTING OVERHEAD CONDUIT BANK TO DISCONNECT SWITCH FOR SPLITTER BOX SOUTHWEST LIFT GATE ACTUATOR. PULL NEW CABLE FROM MCC-AA SPARE BUCKET THROUGH EXISTING PULLBOX, THEN THROUGH EXISTING OVERHEAD CONDUITS, THEN THROUGH EXISTING OVERHEAD CONDUITS, THEN THROUGH THIS NEW CONDUIT PER KEYNOTE #1 ON SHEET E-08-7001.	
5.	PROVIDE NEW CONDUIT FROM EXISTING OVERHEAD CONDUIT BANK TO THE SPLITTER BOX LIGHT SWITCH. PULL NEW CABLE FROM MCC-AA PANEL AA CIRCUIT #24, THEN THROUGH EXISTING OVERHEAD CONDUITS, THEN THROUGH THIS NEW CONDUIT PER KEYNOTE #2 ON SHEET E-08-7001.	
6.	PULL NEW LUMINAIRE POWER CABLE FROM EXISTING MCC-AA PANEL AA TO CLARIFIER E-1 LUMINAIRES. UTILIZE NEW CONDUIT AND EXISTING OVERHEAD CONDUIT BANK AS NEEDED.	
7.	DEMOLISH EXISTING CONDUITS FOR CLARIFIER E-1 AND CLARIFIER E-3 WEST OF THIS POINT.	BID SET
		TSSD Clean Water
•	EXISTING MCC-AA BUCKET 'CLARIFIER 1"	TP-4 EAST FACILITY UTILITIES AND CLARIFIERS REHABILITATION PROJECT REVISIONS REV DATE DESCRIPTION
		DRAWING NUMBER



3

1

CLARIFIER E-3 REFEED PLAN



5

A CLARIFIER E-3 VIEW SOUTHWEST CONDUITS



B CLARIFIER E-3 CONDUIT RUNS

2



CONDUIT PENETRATIONS

4

3



RANGE B

E-08-1001 SCALE: NTS

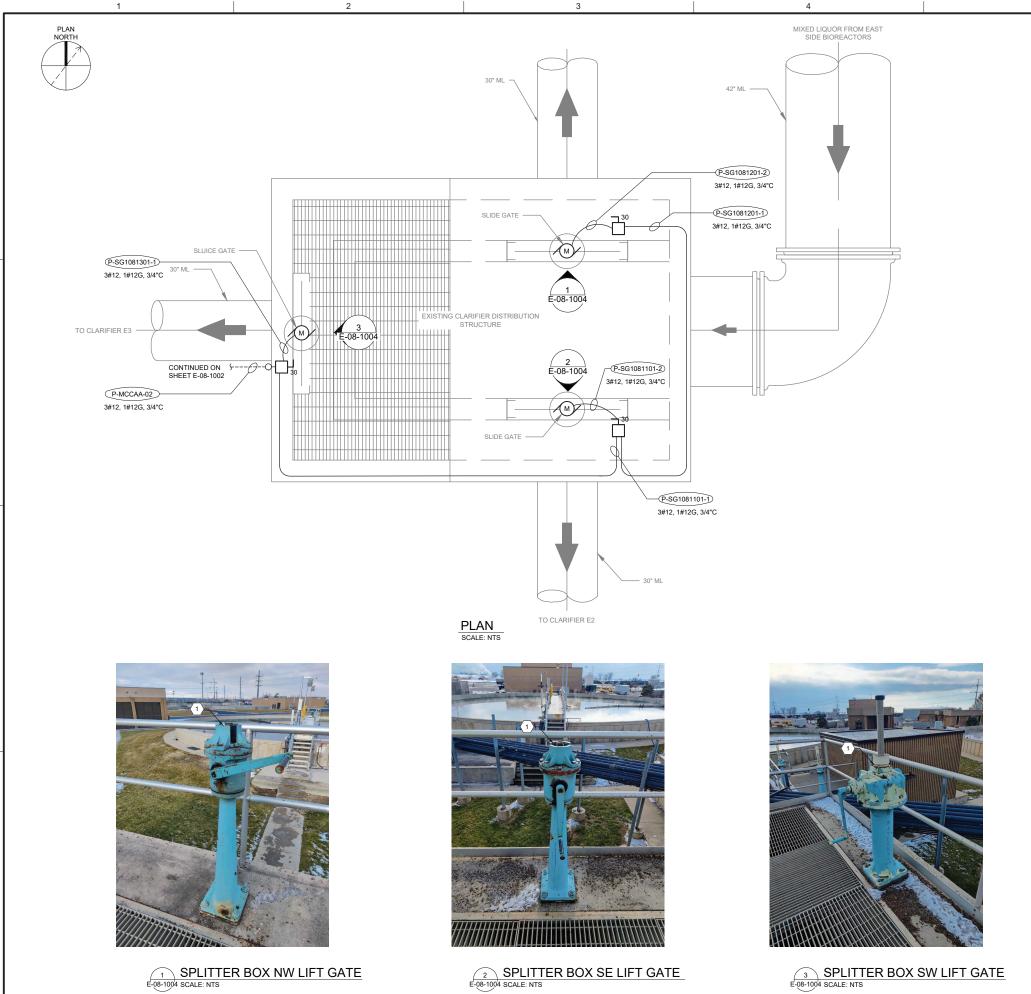
5

EXISTING MCC-AA BUCKET "CLARIFIER 3"

	6	
GE	NERAL NOTES	
1.	PLAN AND PHOTOS NOT TO SCALE. CONTRACTOR TO FIELD VERIFY REQUIRED MATERIALS, MATERIAL LENGTHS, DIMENSIONS, LOCATIONS, AND QUANTITIES.	Brown AND Caldwell
~ k	KEY NOTES	
1.	DEMOLISH EXISTING CONDUIT AND CABLE FOR CLARIFIER E-3 DRIVE AND LIGHTING. DEMOLISH EXISTING UNDERGROUND CONDUITS. REPAIR PORTIONS OF SIDEWALK AND TURF REMOVED FOR CONDUIT DEMOLITION TO MATCH EXISTING. SEE SHEET ED-08-8002 FOR ADDITIONAL EAST CLARIFIER E-3 DEMOLITION SCOPE.	Salt Lake City, UT
2.	DEMOLISH EXISTING CONDUIT. REPLACE WITH NEW CONDUIT.	
3.	PULL NEW 480V CABLE FROM EXISTING MCC-AA TO CLARIFIER E-3 NEW DRIVE. UTILIZE NEW CONDUIT AND EXISTING OVERHEAD CONDUIT BANK AS NEEDED.	
4.	PULL NEW LUMINAIRE POWER CABLE FROM EXISTING MCC-AA PANEL AA TO CLARIFIER E-3 LUMINAIRES. USE NEW CONDUIT AND EXISTING OVERHEAD CONDUIT BANK AS NEEDED.	
5.	DEMOLISH EXISTING CONDUITS FOR CLARIFIER E-1 AND CLARIFIER E-3 WEST OF THIS POINT.	

	D
BID SET	с
TSSD Clean Water	
	В
DESIGNED: N.ANDERSON DRAWN: B.NURSUWITO CHECKED: M.PAGENDARM CHECKED: N.ANDERSON FILENAME E-08-1003.DWG CONSULTANT PROJECT NUMBER 157492 TSSD PROJECT NUMBER 157492 ELECTRICAL	A
DRAWING NUMBER E-08-1003	

ISH EXISTIN FIER E-3 WES



D

2

3 SPLITT E-08-1004 SCALE: NTS

4

5

GENERAL NOTES

PLAN AND PHOTOS NOT TO SCALE. CONTRACTOR TO FIELD VERIFY REQUIRED MATERIALS, MATERIAL LENGTHS, DIMENSIONS, LOCATIONS, AND QUANTITIES. 1.

KEY NOTES

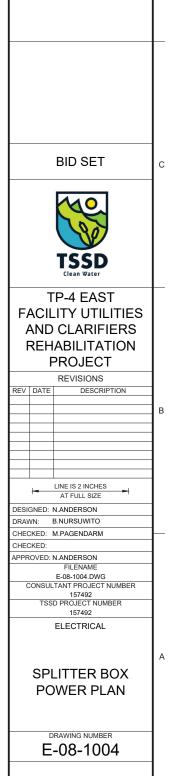
5

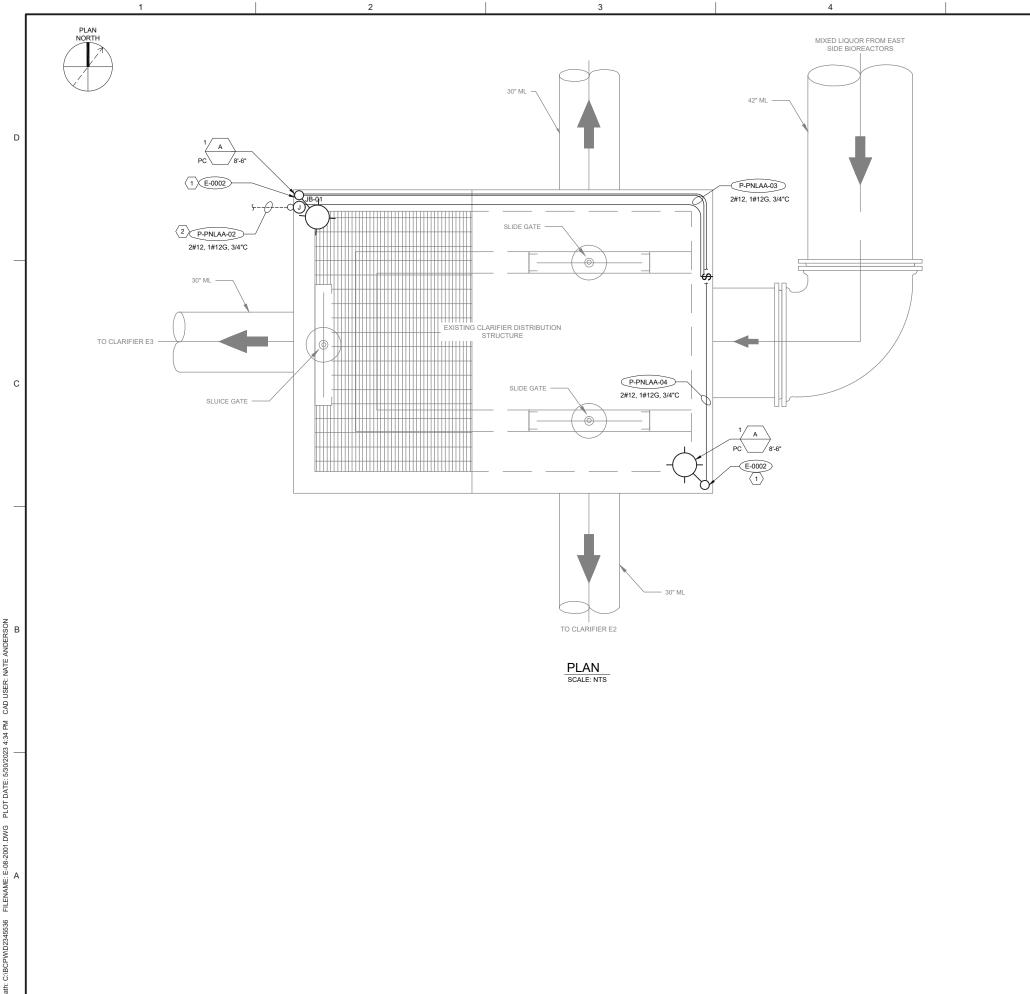
1. PROVIDE ONE ROTORK IQ3 SIZE 19 ACTUATOR FOR EACH SLIDE GATE. DESIGN, SUBMIT, FURNISH, AND INSTALL ALL HARDWARE REQUIRED TO CONNECT THE NEW MOTORIZED ROTORK ACTUATOR TO THE NEW GATE PEDESTALS SUCH THAT THE MOTORIZED ACTUATOR CAN MOVE THE GATE THROUGH ITS COMPLETE RANGE OF MOTION. COORDINATE DIRECTLY WITH THE NEW GATE PEDESTAL SUPPLIER TO OBTAIN ANY REQUIRED INFORMATION.



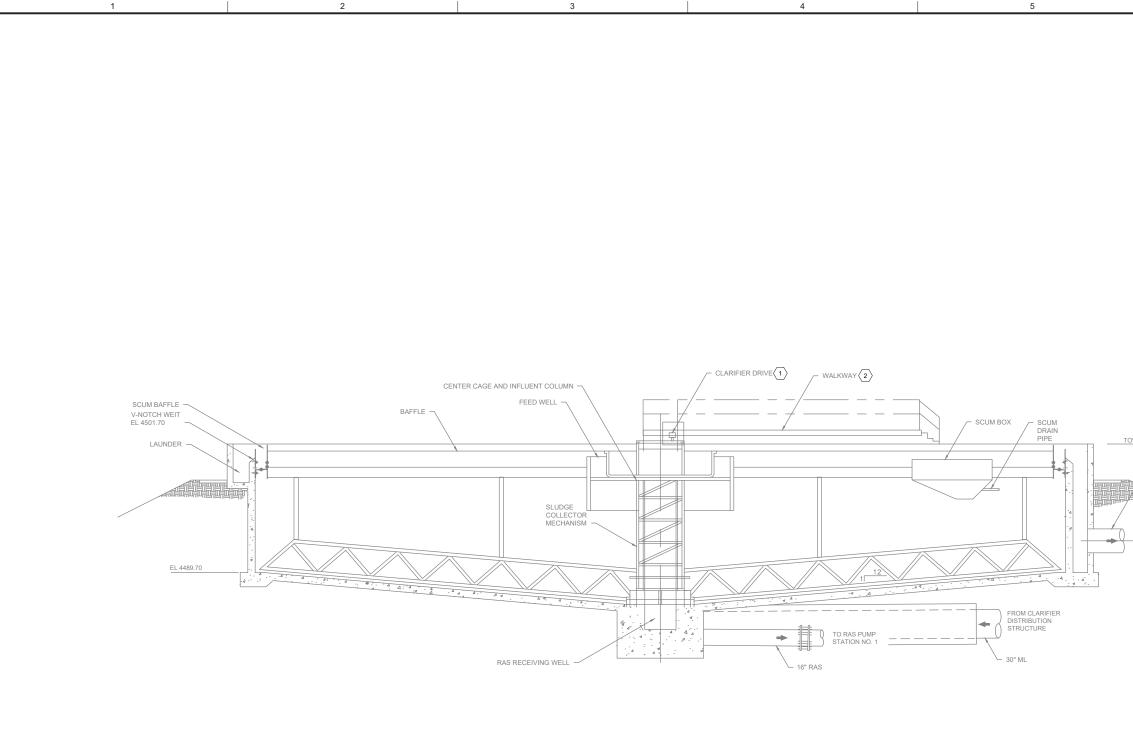
Salt Lake City, UT

D





GENERAL NOTES	
 PLAN NOT TO SCALE. CONTRACTOR TO FIELD VERIFY REQUIRED MATERIALS, MATERIAL LENGTHS, DIMENSIONS, LOCATIONS, AND QUANTITIES. 	Brown AND . Caldwell
○ KEY NOTES	
 PROVIDE NEW, STANCHION MOUNTED LUMINAIRES MANUFACTURED BY EATON CROUSE-HINDS, PART NUMBER "VMVL-3-N-P-R3-UNV1" OR EQUAL. 	Salt Lake City, UT
 PULL NEW CABLE FROM EXISTING 120/240V PANEL AA CIRCUIT #24 TO LIGHT SWITCH. PANEL AA IS INSIDE THE EXISTING RAS BUILDING MCC-AA 	
	-
	BID SET
	TSSD Clean Water
	TP-4 EAST
	FACILITY UTILITIES
	REHABILITATION PROJECT
	REVISIONS
	REV DATE DESCRIPTION
	DESIGNED: N.ANDERSON
	DRAWN: B.NURSUWITO CHECKED: M.PAGENDARM
	CHECKED: APPROVED: N.ANDERSON
	FILENAME E-08-2001.DWG
	CONSULTANT PROJECT NUMBER 157492 TSSD PROJECT NUMBER
	157492 ELECTRICAL
	SPLITTER BOX
	LIGHTING PLAN
	DRAWING NUMBER E-08-2001
6	
Ť	



2

SECONDARY CLARIFIER ILLUSTRATIVE SECTION SCALE: NTS

4

D

С

5

GENERAL NOTES

SECTION NOT TO SCALE. CONTRACTOR TO FIELD VERIFY REQUIRED MATERIALS, MATERIAL LENGTHS, DIMENSIONS, LOCATIONS, AND QUANTITIES. 1.

KEY NOTES

- 1. CLARIFIER DRIVES TO BE REPLACED. BID ALTERNATIVE: REMOVE, REBUILD, AND REINSTALL EXISTING CLARIFIER DRIVES.
- EXISTING LIGHTING TO BE REINSTALLED. BID ALTERNATIVE: FURNISH AND INSTALL NEW WALKWAY LUMINAIRES, EATON CROUSE-HINDS PART NUMBER "VMVL-3-N-P-R3-UNV1" OR EQUAL.



Salt Lake City, UT

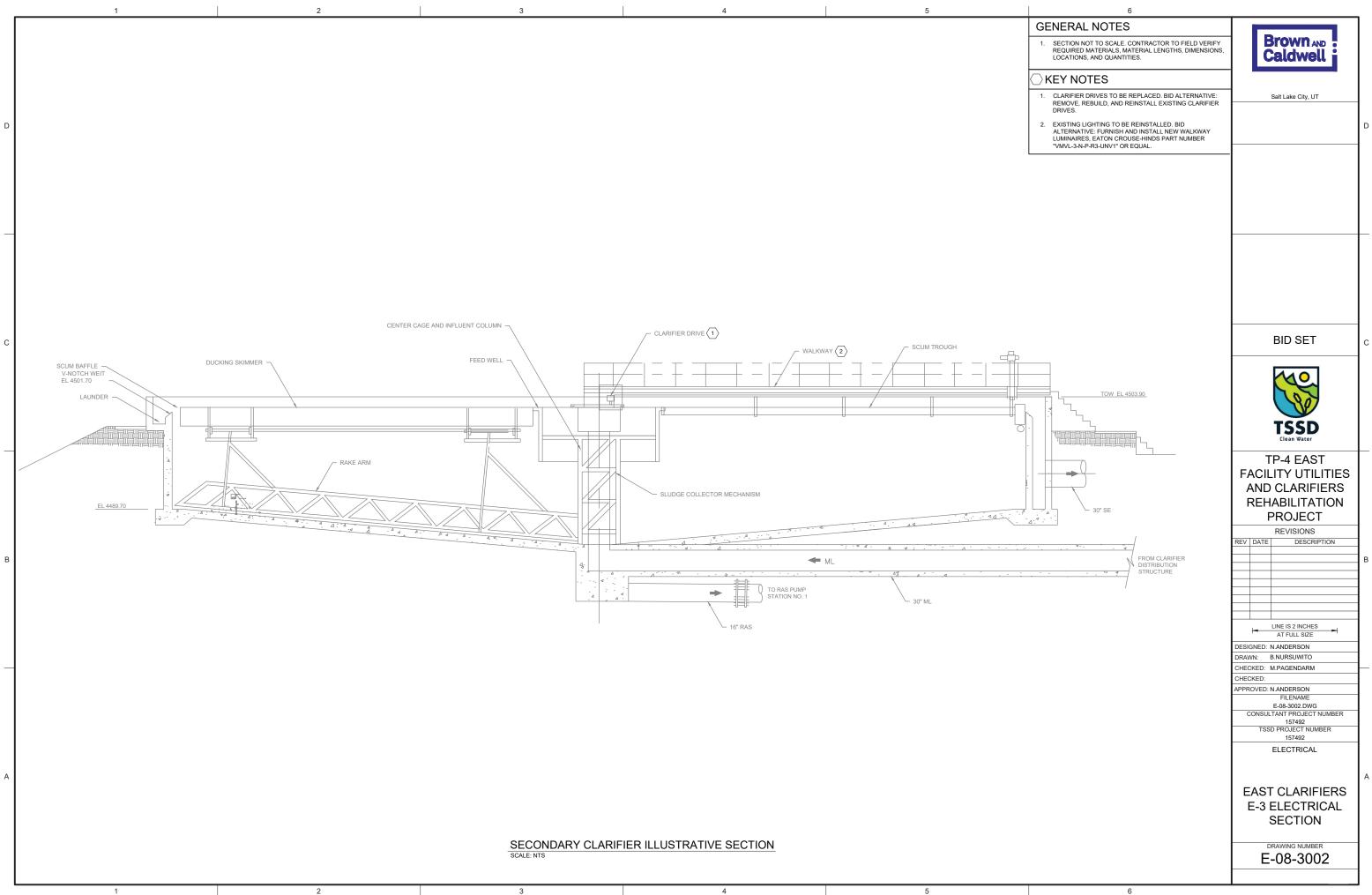
D

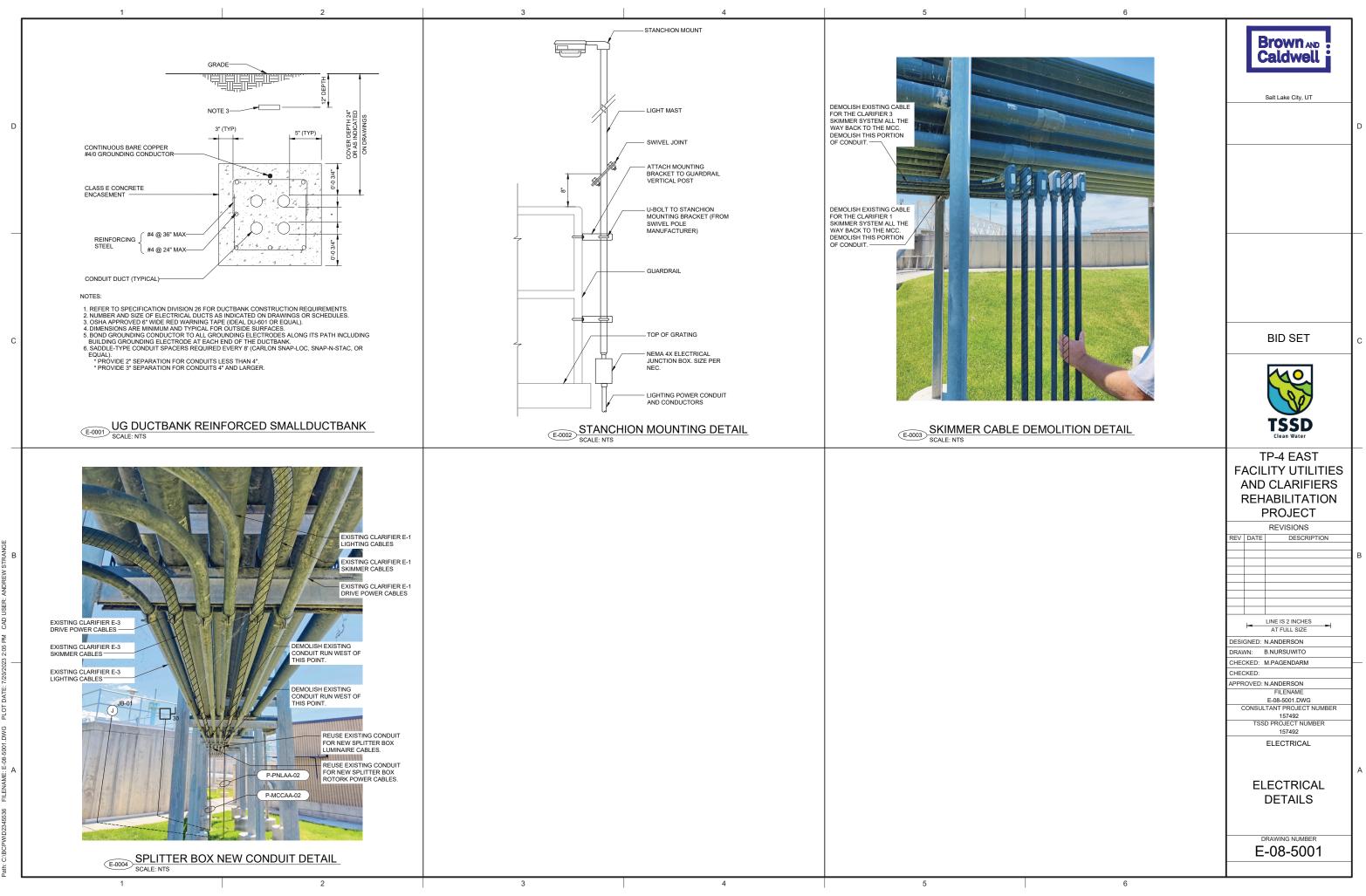
TOW EL 4503.90

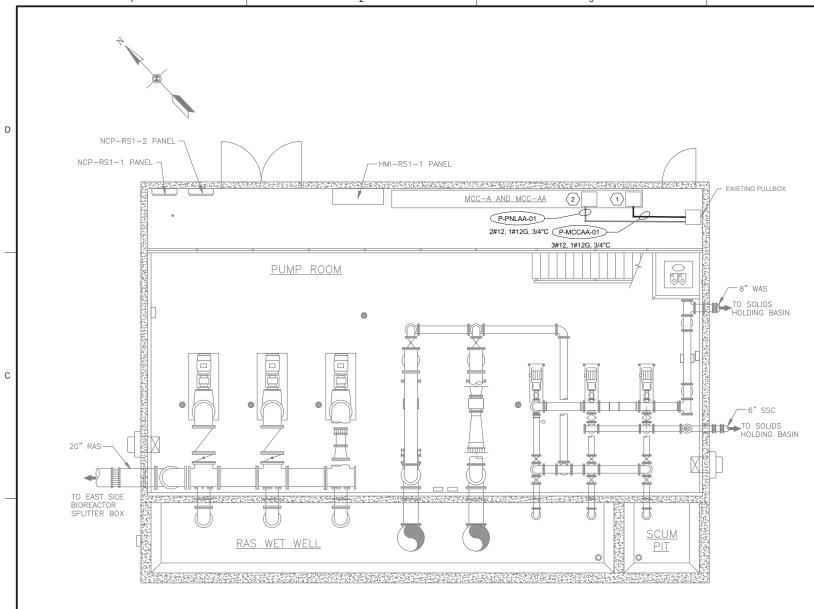
- 30" SE

_ TO UV DISINFECTION

BID SET	с
TSSD Clean Water	
TP-4 EAST FACILITY UTILITIES AND CLARIFIERS REHABILITATION PROJECT REVISIONS REV DATE DESCRIPTION LINE IS 2 INCHES AT FULL SIZE DESIGNED: NANDERSON DRAWN: B.NURSUWITO	В
CHECKED: M.PAGENDARM CHECKED: APPROVED: N.ANDERSON FILENAME E-08-3001.DWG CONSULTANT PROJECT NUMBER 157492 TSSD PROJECT NUMBER 157492 ELECTRICAL EAST CLARIFIERS E-1, E-2 ELECTRICAL SECTION DRAWING NUMBER E-08-3001	A







RAS PUMP STATION NO. 1 PLAN SCALE: NTS

3

2



EXISTING MCC-AA SPARE



EXISTING MCC-AA PANEL AA

4

GENERAL NOTES

1. PLAN AND PHOTO NOT TO SCALE. CONTRACTOR TO FIELD VERIFY REQUIRED MATERIALS, MATERIAL LENGTHS, DIMENSIONS, LOCATIONS, AND QUANTITIES.

KEY NOTES

- 1. CONFIRM EXISTING 3 POLE 15-AMP CIRCUIT BREAKER IS INSIDE MCC BUCKET. PROVIDE NEW CABLES FROM EXISTING SPARE MCC BUCKET TO EAST CLARIFIER SPLITTER BOX SOUTHEAST LIFT GATE ACTUATOR. ROUTE NEW CONDUIT FROM MCC-AA TO EXISTING PULLBOX.
- 2. PROVIDE NEW CABLES FROM EXISTING PANEL AA CIRCUIT #24 TO EAST CLARIFIER SPLITTER BOX LIGHT SWITCH. USE EXISTING CONDUIT FROM MCC-AA TO EXISTING PULLBOX.



Salt Lake City, UT

D

BID SET С 00 **TSSD TP-4 EAST** FACILITY UTILITIES AND CLARIFIERS REHABILITATION PROJECT REVISIONS REV DATE DESCRIPTION LINE IS 2 INCHES AT FULL SIZE DESIGNED: N.ANDERSON DRAWN: B.NURSUWITO HECKED: M.PAGENDARM CHECKED: PPROVED: N.ANDERSON FILENAME E-08-7001.DWG CONSULTANT PROJECT NUMBER 157492 TSSD PROJECT NUMBER 157492 ELECTRICAL PANEL SCHEDULES DRAWING NUMBER

E-08-7001