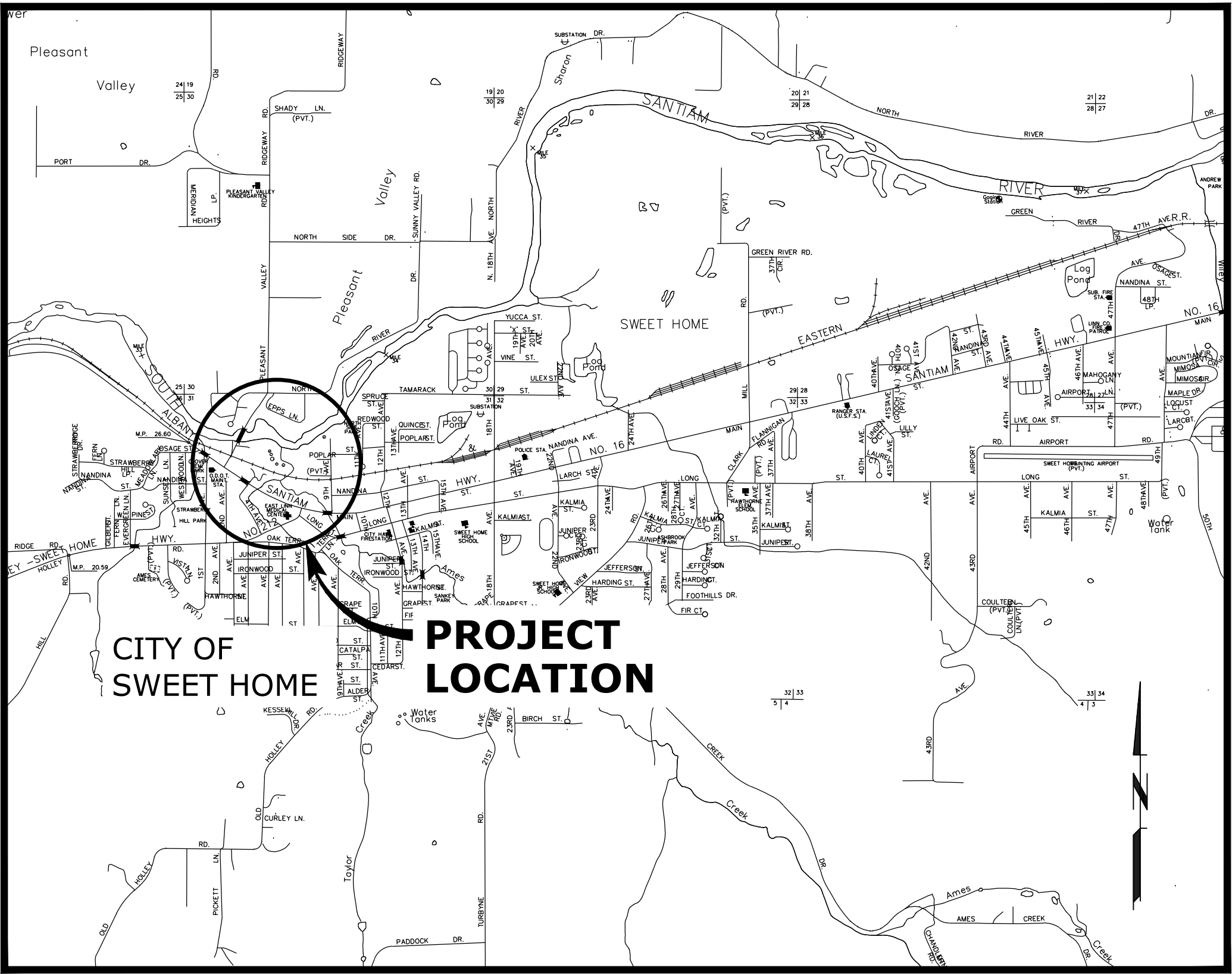


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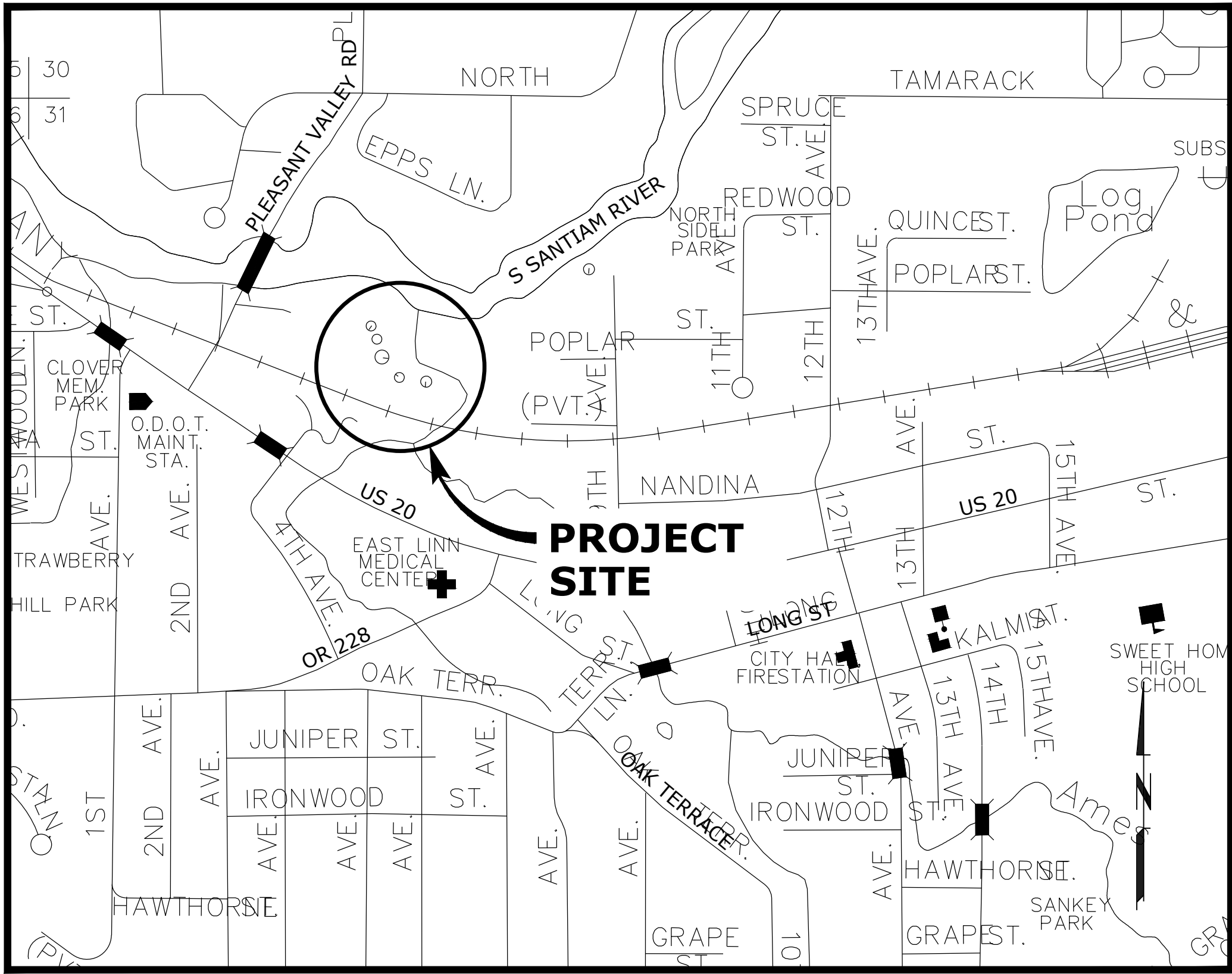


MAHLER WATER RECLAMATION FACILITY INTERIM IMPROVEMENTS PROJECT

FEBRUARY 2023 VOLUME 3 OF 3



VICINITY MAP
SCALE: 1"=2000'



LOCATION MAP
SCALE: 1"=500'



ATTENTION: OREGON LAW REQUIRES THE CONTRACTOR TO FOLLOW THE RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. THE CONTRACTOR MAY OBTAIN COPIES OF THE RULES BY CALLING THE UTILITY NOTIFICATION CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS 503-246-6699.)

C:\Users\bbarry\ACCDocs\Cadworks Inc\Sweet Home WWTP\Project Files\Active Design - CAD\2D Design\01_General\IIP\19-2605-OR-G.dwg G-001 2/13/2023 12:30 PM BBARRY 24.1s (LMS Tech)

DRAWING NO.	SHEET NO.	SHEET NO.
GENERAL		
1	G-000	COVER SHEET
2	G-001	DRAWING INDEX
3	G-002	GENERAL, CIVIL & MECHANICAL NOTES
4	G-003	SYMBOLS
5	G-004	ABBREVIATIONS
6	G-005	DESIGN CRITERIA, SOLIDS PROCESS SCHEMATIC DIAGRAM
CIVIL		
7	C-001	CIVIL DETAILS 1
8	C-002	CIVIL DETAILS 2
9	C-010	EXISTING CONDITIONS PLAN
10	C-011	EXISTING UTILITIES PLAN
11	C-020	SITE DEMOLITION PLAN
12	C-030	OVERALL SITE PLAN, STRUCTURE COORDINATES, STAGING AND ACCESS, SURVEY CONTROL POINTS
13	C-031	SOLIDS AREA SITE PLAN
14	C-040	EROSION CONTROL NOTES
15	C-041	EROSION CONTROL PLAN
16	C-042	EROSION CONTROL DETAILS
17	C-050	GRADING & DRAINAGE PLAN
18	C-060	YARD PIPING PLAN
STRUCTURAL		
19	S-001	GENERAL STRUCTURAL NOTES, STRUCTURAL ABBREVIATIONS
20	S-010	SCREW PRESS FOUNDATION PLAN
21	S-011	SCREW PRESS SECTIONS & DETAILS
22	S-012	SCREW PRESS CONVEYOR SUPPORT SECTION
23	S-013	SCREW PRESS CONVEYOR SUPPORT SECTIONS
MECHANICAL		
24	M-001	MECHANICAL DETAILS
25	M-010	SOLIDS AREA DETAIL PLAN
26	M-011	SLUDGE BLEND TANK SECTIONS AND DETAILS
27	M-012	SCREW PRESS SECTIONS AND DETAILS
ELECTRICAL		
28	E-001	ELECTRICAL ABBREVIATIONS
29	E-002	ELECTRICAL SYMBOL LEGEND
30	E-003	ELECTRICAL DETAILS
31	E-004	EXISTING MCC-3 ONE-LINE DIAGRAM
32	E-005	ELECTRICAL CONDUIT SCHEDULE
33	E-006	ELECTRICAL OVERALL SITE PLAN
34	E-010	ELECTRICAL SOLIDS AREA SITE PLAN
35	E-011	LCS-600-01 ELEVATION DETAIL
PROCESS & INSTRUMENTATION		
36	I-001	LEGEND, SYMBOLS AND ABBREVIATIONS 1
37	I-002	LEGEND, SYMBOLS AND ABBREVIATIONS 2
38	I-251	SOLIDS DEWATERING 1
39	I-252	SOLIDS DEWATERING 2
40	I-253	POLYMER MAKEDOWN
41	I-600	SLUDGE BLEND TANK AND MIXING
INSTRUMENTATION & CONTROLS		
42	IC-100	RCP-100 SCREW PRESS RADIO CONTROL PANEL

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NO.	DATE	BY	REVISION

NOTICE

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

WJS
DESIGNED
SMB
DRAWN
PLVM
CHECKED

EXPIRES : 6/30/2024

WEST YOST
Water. Engineered.

MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

DRAWING INDEX

PROJECT NO.: 936-50-21-09	SCALE: NO SCALE	DATE: February 2023
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GENERAL NOTES

1.

CONTRACTOR SHALL OBTAIN ALL NECESSARY LOCAL, COUNTY, STATE, AND UTILITY CONSTRUCTION PERMITS, AND SHALL CONTACT EACH PERMITTING AGENCY AT LEAST TWO (2) BUSINESS DAYS PRIOR TO STARTING WORK. CONTRACTOR SHALL OBTAIN ALL REQUIRED LICENSES BEFORE STARTING CONSTRUCTION.
2.

WHERE INTERRUPTION OF EXISTING FACILITIES IS REQUIRED, CONTRACTOR SHALL PROVIDE 72 HOUR NOTICE TO ENGINEER AND THE AFFECTED UTILITY. CONTRACTOR SHALL ARRANGE FOR THE RELOCATION OF ANY UTILITY IN CONFLICT WITH THE PROPOSED CONSTRUCTION.
3.

THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF ORS 757.542 TO 757.562. THE CONTRACTOR SHALL NOTIFY EACH UNDERGROUND UTILITY AT LEAST 48 BUSINESS-DAY HOURS, BUT NOT MORE THAN 10 BUSINESS DAYS, PRIOR TO EXCAVATING, BORING, OR POTHOLING.
4.

PROVIDE 24-HOUR ACCESS FOR OPERATIONS.
5.

TOPOGRAPHIC MAP WAS COMPILED BY UDELL ENGINEERING & LAND SURVEYING. THE HORIZONTAL DATUM IS OREGON STATE PLANE.
6.

ANY ALTERATION OR VARIANCE FROM THESE PLANS, EXCEPT MINOR FIELD ADJUSTMENT NEEDED TO MEET EXISTING FIELD CONDITIONS, SHALL FIRST BE APPROVED BY THE ENGINEER. ANY ALTERATIONS OR VARIANCE FROM THESE PLANS SHALL BE DOCUMENTED ON CONSTRUCTION FIELD PRINTS AND TRANSMITTED TO THE ENGINEER. ANY PROPOSED CHANGES IN CONSTRUCTION PLANS MUST BE SUBMITTED IN WRITING AND APPROVED BY ENGINEER PRIOR TO COMMENCING WORK.
7.

CONTRACTOR SHALL KEEP AND MAINTAIN A CURRENT SET OF DRAWINGS ON SITE. CONTRACTOR TO KEEP ACCURATE "AS-BUILT" RECORD COPY OF PLANS. "AS-BUILT" PLANS TO BE RETURNED TO ENGINEER AT COMPLETION OF PROJECT.
8.

CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER 48 HOURS BEFORE STARTING CONSTRUCTION, AND 24 HOURS BEFORE RESUMING WORK AFTER SHUTDOWNS EXCEPT FOR NORMAL RESUMPTION OF WORK FOLLOWING SATURDAYS, SUNDAYS, OR HOLIDAYS. CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS PRIOR TO ANY TESTING OR REQUIRED INSPECTION.
9.

THE LIMITS OF THE SITE THAT MAY BE USED FOR CONSTRUCTION, STORAGE, MATERIALS HANDLING, PARKING OF VEHICLES AND OTHER OPERATIONS RELATED TO THE PROJECT ARE SHOWN ON THE PLANS. LIMITS OF WORK ALSO INCLUDE RIGHTS OF ACCESS OBTAINED BY THE CONTRACTOR, SUBJECT TO ALL PUBLIC LAWS AND REGULATIONS AND RIGHTS OF ACCESS BY UTILITY COMPANIES AND OTHER HOLDERS OF EASEMENT RIGHTS.
10.

CONTRACTOR SHALL MAKE ALL ARRANGEMENTS NECESSARY TO OBTAIN SUFFICIENT WATER, POWER AND LIGHTING FOR CONSTRUCTION PURPOSES.
11.

THE DRAWINGS SHOW APPROXIMATE LOCATIONS OF EXISTING UNDERGROUND UTILITIES. BEFORE ORDERING MATERIALS OR BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL POT-HOLE AND VERIFY THE LOCATION/DEPTH OF EXISTING UNDERGROUND UTILITIES AND REPORT ANY POTENTIAL CONFLICTS TO THE CONSTRUCTION MANAGER AND ENGINEER. CONTRACTOR SHALL KEEP EXISTING UTILITIES IN SERVICE AND PROTECT THEM DURING CONSTRUCTION.
12.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
13.

CONTRACTOR TO FIELD CHECK ALL EXISTING STRUCTURES FOR VERIFICATION OF DIMENSIONS WHERE EQUIPMENT IS TO BE INSTALLED.
14.

CONTRACTOR SHALL REFER TO ALL RELATED DRAWINGS AND TO MANUFACTURER'S DRAWINGS FOR COMPLETE DETAILS OF A GIVEN FACILITY.
15.

EXISTING ELEVATIONS SHOWN ON DRAWINGS WERE BASED ON SURVEY DATA AND INFORMATION SUPPLIED BY THE UTILITY COMPANIES. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS SHOWN ON DRAWINGS.
16.

SEE ALL DISCIPLINE DRAWINGS FOR ADDITIONAL SYMBOLS AND NOTES.
17.

NOT ALL EXISTING UTILITIES AND UNDERGROUND STRUCTURES ARE SHOWN IN DRAWINGS. THE LOCATION OF EXISTING UTILITIES AND OTHER UNDERGROUND STRUCTURES SHOWN ON THE DRAWINGS IS APPROXIMATE AND THEIR ACTUAL LOCATIONS MAY VARY FROM THAT SHOWN. CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND FEATURES THAT MAY BE AFFECTED BY THE WORK.
18.

CONTRACTOR SHALL PROTECT ALL EXISTING APPURTENANCES THAT REMAIN INCLUDING THOSE LOCATED WITHIN PAVED AREAS, WHETHER OR NOT SHOWN ON THE DRAWINGS, UNTIL READJUSTED. SUCH ITEMS INCLUDE, BUT ARE NOT LIMITED TO, VALVE CANS, ELECTRICAL MANHOLES, PULL BOXES, CATHODIC PROTECTION TEST STATIONS, MANHOLE AND CLEANOUT CASTINGS, AND SURVEY MONUMENTS.
19.

CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER WHERE THE WORK MIGHT CAUSE SURVEY MONUMENTS TO BECOME DISTURBED OR DESTROYED. CONTRACTOR SHALL PROVIDE A LICENSED LAND SURVEYOR TO SET REFERENCES AND RESTORE SURVEY MONUMENTS IN ACCORDANCE WITH COUNTY AND CITY STANDARDS.
20.

ALL AREAS DISTURBED OUTSIDE THE WORK AREA SHALL BE RESTORED TO THE PRE-DISTURBED CONDITION.

21.

REFER TO SECTION 01 12 16 FOR WORK RESTRICTIONS INCLUDING SEQUENCING REQUIREMENTS AND REQUIREMENTS TO MAINTAIN DESIGNATED FACILITIES AND UTILITIES IN SERVICE DURING CONSTRUCTION. THE CITY OF SWEET HOME WASTEWATER FACILITIES IMPROVEMENTS REQUIRES DETAILED PLANNING OF CONSTRUCTION SEQUENCING, SPECIAL COORDINATION AND COMPREHENSIVE PROGRAMMING, COMBINED WITH OTHER SPECIAL WORK ACTIVITIES. CONTRACTOR SHALL PREPARE AND SUBMIT A DETAILED WORK SEQUENCE PLAN TO THE ENGINEER FOR REVIEW AT THE PRE-CONSTRUCTION CONFERENCE.
22.

CONTRACTOR SHALL COORDINATE AND NOTIFY THE CONSTRUCTION MANAGER AND ENGINEER WHEN WORK IS READY FOR INSPECTIONS. PRESENCE OR ABSENCE OF INSPECTOR WILL NOT RELIEVE CONTRACTOR OF FULL RESPONSIBILITY FOR PROPER PERFORMANCE OR WORK.
23.

CONTRACTOR SHALL REMOVE AND LEGALLY DISPOSE OF ALL MATERIALS THAT ARE TO BE REMOVED FROM THE SITE INCLUDING, SURPLUS EXCAVATION MATERIALS AND DEBRIS. ITEMS DESIGNATED BY THE OWNER FOR SALVAGING SHALL REMAIN THE PROPERTY OF THE OWNER, AND SHALL BE CAREFULLY REMOVED AND STORED AS DIRECTED.
24.

CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS AND SECURITY, INCLUDING PROTECTION OF PUBLIC AND PRIVATE PROPERTY ADJACENT TO WORK DURING THE CONSTRUCTION OF THE PROJECT.
25.

CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL CURRENTLY APPLICABLE SAFETY LAWS OF ANY JURISDICTIONAL BODY. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL BARRICADES, SAFETY DEVICES, AND CONTROL TRAFFIC WITHIN CONSTRUCTION AREAS AS REQUIRED. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR COMPLIANCE WITH ADDITIONAL PUBLIC SAFETY REQUIREMENTS WHICH MAY ARISE DURING CONSTRUCTION.
26.

CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR PROTECTING ANY TREES NOT DESIGNATED FOR REMOVAL. ANY TREE DAMAGE SHALL BE REPLACED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.
27.

CONTRACTOR MUST MAINTAIN SEWER, POWER AND WATER SERVICES FOR THE WWTP OPERATION THROUGHOUT CONSTRUCTION.
28.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE NATURE AND CONDITION OF ALL FACILITIES TO BE DEMOLISHED, MODIFIED OR ALTERED PRIOR TO SUBMITTAL OF BID. INSPECTION SHALL TAKE PLACE DURING PRE-BID VISIT TO SITE CONDUCTED BY OWNER.
29.

CONTRACTOR SHALL PROTECT FROM DAMAGE ANY EXTERIOR PLANTINGS, STRUCTURES AND EQUIPMENT NOT SUBJECT TO REMOVAL.
30.

CONTRACTOR IS REQUIRED TO COORDINATE ALL DEMOLITION WORK WITH THE OPERATION OF THE WWTP. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH COORDINATION.
31.

SITE PREPARATION, DEMOLITION AND REMOVAL SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS AND AS APPROVED BY THE CONSTRUCTION MANAGER AND ENGINEER.
32.

UTILITIES OR INTERFERING PORTIONS OF UTILITIES THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO ACCOMPLISH THE WORK. IDENTIFY LENGTHS AND ELEVATIONS OF ABANDONED PIPING THAT ARE NOT REMOVED FOR RECORD DRAWING PURPOSES. ALL PIPELINES SHALL BE REMOVED OR PLUGGED.
33.

DEMO WORK TO INCLUDE REMOVAL AND OFFSITE DISPOSAL OF ALL ASPHALT CONCRETE, CONCRETE, PIPING, EQUIPMENT AND OTHER NON-NATIVE MATERIALS AND SELECT VEGETATION TO THE DEPTH OF EXCAVATION REQUIRED FOR CONSTRUCTION OF THIS PROJECT.

6.

CONTRACTOR SHALL RESTORE ALL EXISTING FEATURES, INCLUDING BUT NOT LIMITED TO, ROADWAYS, STRUCTURES, CURBS, SIDEWALKS, FENCES, WALLS, PLANTINGS, MAILBOXES, SIGNS, PIPING, AND UTILITIES DISTURBED DURING CONSTRUCTION TO EXISTING CONDITIONS UNLESS OTHERWISE SPECIFIED. SUCH RESTORATION WILL BE CONSIDERED INCIDENTAL.
7.

ALL SURVEY AND STAKING NECESSARY FOR CONSTRUCTION SHALL BE PROVIDED BY THE CONTRACTOR. THE CONTRACTOR SHALL DEVELOP AND MAKE ALL DETAIL SURVEYS NECESSARY TO ESTABLISH PRINCIPAL LINES AND GRADES. SURVEY CONTROL BENCHMARKS ARE PROVIDED ON SHT C-030.
8.

PROTECT FRESHLY POURED CONCRETE FROM VANDALISM OR OTHER DAMAGE FOR A MINIMUM OF TWENTY-FOUR (24) HOURS OR UNTIL CURED ENOUGH TO SUPPORT TYPICAL USE, WHICHEVER IS LONGER. ANY CONCRETE DAMAGED BY VANDALISM OR OTHER CAUSES SHALL BE REPLACED AT NO COST TO THE CITY.

MECHANICAL NOTES

1.

CONTRACTOR SHALL PROVIDE ALL PIPING, EQUIPMENT, AND APPURTENANT DEVICES, INCLUDING ALL THAT ARE INDICATED IN EITHER THE MECHANICAL DRAWINGS, PROCESS AND INSTRUMENTATION DIAGRAMS, OR THE SPECIFICATIONS TO PROVIDE COMPLETE PROCESS SYSTEMS.
2.

EQUIPMENT AND PIPING COORDINATION AND INSTALLATION DRAWINGS ARE REQUIRED. SEE DIVISION 40 SPECIFICATIONS. THE CIVIL, YARD PIPING, AND MECHANICAL DRAWINGS SHOW ADDITIONAL PIPING DETAILS.
3.

THE NUMBER OF PIPE SUPPORTS SHOWN IN THE DRAWINGS IS THE MINIMUM. PROVIDE CALCULATIONS SHOWING THE REQUIRED SIZE AND SPACING OF ALL PIPE SUPPORTS.
4.

PIPE PENETRATIONS THROUGH STRUCTURE WALLS, FLOOR, AND CEILINGS SHALL BE PROVIDED AS SHOWN ON MECHANICAL DRAWINGS UNLESS OTHERWISE NOTED.

PIPELINE NOTES

1.

ALL FORCE MAIN JOINTS SHALL BE RESTRAINED. RESTRAIN ALL VALVES, TEES, BENDS, AND FITTINGS WITH MECHANICAL JOINT RESTRAINTS. ALL FITTINGS TO BE MECHANICAL JOINT UNLESS OTHERWISE NOTED.
2.

CONTRACTOR TO PROVIDE "AS CONSTRUCTED" DRAWINGS INDICATING FINAL LOCATION AND ELEVATION, GRADE, ALIGNMENT, FITTINGS AND MATERIALS INSTALLED AND ALL OTHER UTILITIES OR OBSTACLES SHOWN ON THESE PLANS AND SHALL BE UPDATED CONTINUOUSLY THROUGHOUT CONSTRUCTION. AS CONSTRUCTED DRAWINGS SHALL BE "RED LINES" OF THE DESIGN DRAWINGS.
3.

AT THE END OF EACH WORKDAY, ALL OPEN TRENCHES SHALL BE BACKFILLED OR COVERED AND SECURED WITH PINNED PLATES. ALL TRENCHES IN TRAFFIC AREAS SHALL BE PAVED WITH TEMPORARY HOT MIX ASPHALT.
4.

CONTRACTOR SHALL COMPLY WITH ALL OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) REQUIREMENTS IN THE DISPOSAL OF CHLORINATED WATER. SEE SPECIFICATIONS.
5.

SEE SPECIFICATION SECTION 01 12 16 WORK SEQUENCE FOR PROJECT SPECIFIC WORK CONSTRAINTS.

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NO.	DATE	BY	REVISION

NOTICE

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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

WJS

DESIGNED

SMB

DRAWN

PLVM


CHECKED

REGISTERED PROFESSIONAL
CIVIL ENGINEER
5161SPE
OREGON
JAN. 02, 1999
PRESTON VAN METER

EXPIRES : 6/30/2024

WEST YOST

Water. Engineered.



MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

GENERAL, CIVIL & MECHANICAL NOTES

PROJECT NO.: 936-50-21-09 | SCALE: NO SCALE | DATE: February 2023

SHEET

G-002

3 of 42

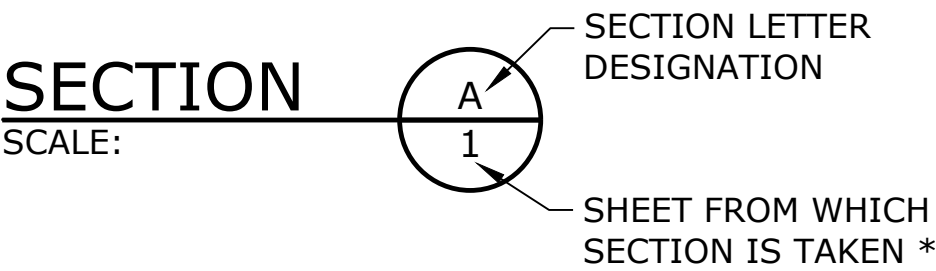
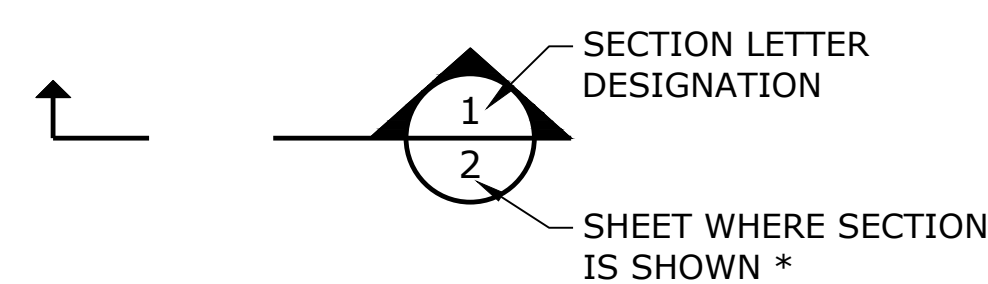
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PIPE & FITTING SYMBOLS

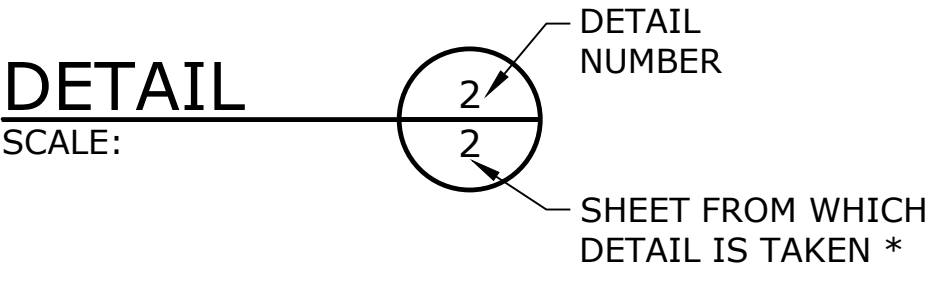
PLANT	SCHEMATIC	
		WELDED JOINT
		FLANGED JOINT
		GROOVED END JOINT
		MECHANICAL JOINT
		PUSH-ON JOINT (RUBBER GASKET)
		FLANGED COUPLING ADAPTER
		DOUBLE BALL FLEXIBLE EXTENSION COUPLING
		FLEXIBLE COUPLING W/ THRUST RING
		90° BEND UP
		90° BEND DOWN
		TEE UP
		TEE DOWN
		LATERAL UP
		LATERAL DOWN
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		UNION
		BLIND FLANGE
		CAP
		LONG SLEEVE
		FLEXIBLE COUPLING
		FITTING (45°)

SECTION AND DETAIL DESIGNATIONS

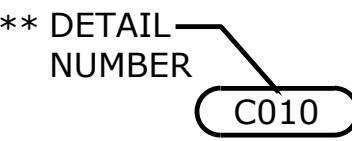
SECTION DESIGNATIONS



DETAIL DESIGNATIONS



DETAIL CALL OUT



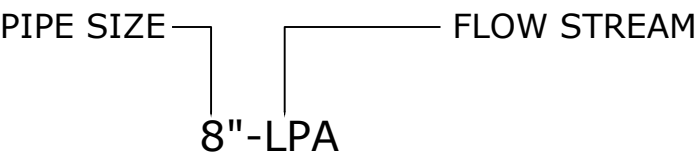
STANDARD DETAIL CALL OUT

* NOTE: IF PLAN AND SECTION FOR DETAIL CALL-OUT AND DETAIL ARE SHOWN ON THE SAME DRAWING, DRAWING NUMBER IS REPLACED WITH A DASH.
**STANDARD DETAILS ARE ON DETAIL SHEETS

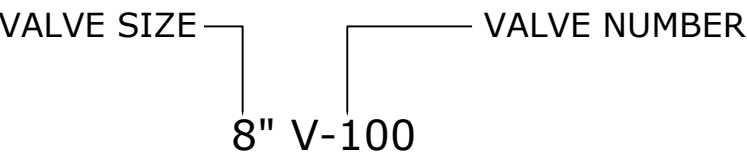
VALVE SYMBOLS

PLANT	SCHEMATIC	
		BUTTERFLY VALVE
		BALL VALVE
		PLUG VALVE (TOP)
		3-WAY PLUG VALVE
		CHECK VALVE
		DOUBLE CHECK ASSEMBLY
		BALL SWING CHECK
		REDUCED PRESSURE BACKFLOW PREVENTER W/ GATE VALVES
		GATE VALVE
		NEEDLE VALVE
		GLOBE VALVE
		HOSE VALVE
		RELIEF VALVE
		PRESSURE REDUCING VALVE
		SOLENOID VALVE
		HOSE BIBB

EXAMPLE PIPE CALL OUT



EXAMPLE VALVE CALL OUT



FLOW STREAM ABBREVIATIONS

DR	DRAIN (PROCESS)	PSC	PRIMARY SCUM
FM	INFILTRANT PUMP STATION FORCEMAIN	SD	STORM DRAIN
INF	INFILTRANT PUMP STATION DISCHARGE	SL-D	DIGESTED SLUDGE
INF	INFILTRANT PUMP STATION INLET	SL-WAS	WAS SLUDGE
PFD	PERFORATED DRAIN	SS	SANITARY SEWER
PS	PRIMARY SLUDGE	W	POTABLE WATER

TOPOGRAPHIC LEGEND

	EXISTING	PROPOSED
WATERLINE	----- 10"W -----	----- 12"DI W -----
ELECTRICITY UNDERGROUND	----- E -----	----- E -----
ELECTRICITY OVERHEAD	----- OVHD -----	
GAS	----- 4"G -----	----- 4"G -----
TELEPHONE/TELEMETRY	----- T -----	----- T -----
CABLE TELEVISION	----- CATV -----	----- CATV -----
SANITARY SEWER LINE	----- 8"SS -----	----- 8"SS -----
SANITARY SEWER FORCE MAIN	----- 6"FM -----	----- 6"FM -----
STORM DRAIN	----- 8"SD -----	----- 8"SD -----
CULVERT	=====	----- 18"D -----
ABANDON PIPE		+++++
REMOVE PIPE/ STRUCTURE		XXXXXXXXXXXX
DRAINAGE DITCH	-----	-----
CHAIN LINK FENCE	-----	-----
TEMPORARY SILT FENCE		-----
GUARDRAIL	-----	
ROCK WALL	-----	
TREE/BUSH LINE	-----	
CENTERLINE	-----	-----
EASEMENT/PROPERTY LINE	-----	-----
RIGHT-OF-WAY	-----	-----
EDGE OF PAVEMENT/AC	-----	-----
EDGE OF GRAVEL	-----	-----
CURB	=====	=====
SIDEWALK	----- S/W -----	-----
STRUCTURE OR FACILITY	-----	-----
CONTOUR MINOR	-----	-----
CONTOUR MAJOR	----- 200 -----	----- 200 -----
MANHOLE	●	●
CLEAN-OUT	○	○
CATCH BASIN/FIELD INLET	□	□
THRUST BLOCK	△	▲
VALVE	⊗	⊙
AIR RELEASE ASSEMBLY	⊕	⊕
FIRE HYDRANT ASSEMBLY	⊕	⊕
WATER METER	⊕	⊕
PULL BOX/JUNCTION BOX	⊕	⊕
UTILITY POLE	⊕	⊕
GUY WIRE	⊕	⊕
LIGHT POST	⊕	⊕
MAILBOX	⊕	⊕
SIGN	⊕	⊕
BENCHMARK	⊕	⊕
TREE DECIDUOUS	⊕	⊕
TREE CONIFEROUS	⊕	⊕
TREE TO BE REMOVED	⊕	⊕
SURFACE ELEVATION	+ 176.63	+ 176.63

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

WJS
DESIGNED
SMB
DRAWN
PLVM
CHECKED

REGISTERED PROFESSIONAL
ENGINEER
5161SPE
OREGON
JAN. 02, 1993
PRESTON VAN METER
EXPIRES : 6/30/2024

WEST YOST
Water. Engineered.

Sweet Home
Oregon
let's best!

MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

SYMBOLS

PROJECT NO.: 936-50-21-09
SCALE: NO SCALE
DATE: February 2023

SHEET
G-003
4 of 42

C:\Users\lbbarry\Documents\Cadworks Inc\Sweet Home WWTP\Project Files\Active Design - CAD\2D Design\01_General\IIP\19-2605-OR-G.dwg G-004 2/13/2023 12:30 PM BBARRY 24.1s (LMS Tech)

@ AASHTO	AT AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS	CNT CO COL COMB CONC CONN CONST CONT CONTR COORD COP CORP CORR CP CPLG CPVC CR CS CSP CT CTR CU CULV CV CW CY CYL	CONTROL POINT CLEANOUT COLUMN COMBINATION CONCRETE CONNECTION CONSTRUCTION CONTINUOUS / CONTINUATION CONTRACT(OR) COORDINATE COPPER CORPORATION CORRUGATED CONTROL POINT COUPLING CHLORINATED POLYVINYL CHLORIDE CRUSHED ROCK COMBINED SLUDGE CONCRETE SEWER PIPE COURT CENTER CUBIC CULVERT CONTROL VALVE CLOCKWISE / COLD WATER CUBIC YARDS CYLINDER LOCK	FLR FM FO FOC FOF FOM FOS FPM FPS FRP FT FTG FUT FXTR	FLOOR FORCE MAIN FIBER OPTIC FACE OF CONCRETE FACE OF FINISH FACE OF MASONRY FACE OF STUDS FEET PER MINUTE FEET PER SECOND FIBERGLASS REINFORCED PLASTIC FEET / FOOT FOOTING FUTURE FIXTURE	JUNC KPL KVA KW KWY L LAB LAV LB LF LIN LOC LONG LP LPT LRG LS LT LVL LWL	JUNCTION KICK PLATE KILOVOLT AMPERE KILOWATT KEYWAY LENGTH LABORATORY LAVATORY POUND LINEAR FOOT LINEAL LOCATION LONGITUDINAL LOW PRESSURE LOW POINT LARGE LONG SLEEVE / LUMP SUM LEFT LEVEL LOW WATER LINE	POL POLY PP PRC PRCST PREP PRESS PRKG PROP PRV PS PSC PSIG PSL PSPT PV PVC PVMT PWR	POLYMER POLYETHYLENE POWER POLE POINT OF REVERSE CURVATURE PRECAST PREPARATION PRESSURE PARKING PROPERTY PRESSURE REDUCING VALVE PUMP STATION/PRIMARY SLUDGE PRIMARY SCUM POUNDS PER SQUARE INCH GAUGE PIPE SLEEVE PIPE SUPPORT PLUG VALVE POLYVINYL CHLORIDE PAVEMENT POWER	STRUCT SUBMG SUCT SV S/W SWD SWGR SYMM SYS	STRUCTURE / STRUCTURAL SUBMERGED SUCTION SOLENOID VALVE SIDEWALK SIDEWATER DEPTH SWITCH GEAR SYMMETRICAL SYSTEM
APPROX APPVD APWA ARCH ARV ASCE	APPROXIMATE APPROVED AMERICAN PUBLIC WORKS ASSOCIATION ARCHITECTURAL AIR RELEASE VALVE AMERICAN SOCIETY OF CIVIL ENGINEERS	DC DEFL DEG DET DI DIA DIM DIPS DIR DIST DN DR DS DWG DWL DWV DWY	DIRECT CURRENT DEFLECTION DEGREE DETAIL DUCTILE IRON DIAMETER DIMENSION DUCTILE IRON PIPE SIZE DIRECTION DISTANCE DOWN DRAIN DIGESTER SLUDGE DRAWING DOWEL DRAIN WASTE AND VENT DRIVEWAY	GR GR LN GRTG GV GRVL GYP	GAS GAUGE GALLON GALVANIZED GROOVED COUPLING GENERATOR GROOVED FLANGE ADAPTER GALVANIZED IRON GALVANIZED IRON PIPE GRIP JOINT GLASS GLOBE VALVE GROUND GALLONS PER DAY GALLONS PER HOUR GALLONS PER MINUTE GALLONS PER SECOND, GLOBAL POSITIONING SYSTEM GRIT GRADE LINE GRATING GATE VALVE GRAVEL GYPSUM	MAN MAT MAX MCC MCP MEB MECH MET MFR MGD MH MIN MIPT MISC MJ MON MOT MP MSL MTD	MANUAL MATERIAL MAXIMUM MOTOR CONTROL CENTER MASTER CONTROL PANEL MAIN ELECTRICAL & BLOWER BUILDING MECHANICAL METAL MANUFACTURER MILLION GALLONS PER DAY MANHOLE MINIMUM MALE IRON PIPE THREAD MISCELLANEOUS MECHANICAL JOINT MONUMENT / MONOLITHIC MOTOR MILEPOST MEAN SEAL LEVEL MOUNTED	R, RAD RAS RC RCP RD RDCR RDPS REF REINF REQ'D RESTR RFA	RADIUS RETURN ACTIVATED SLUDGE REINFORCED CONCRETE REINFORCED CONCRETE PIPE ROAD / ROOF DRAIN REDUCER RECYCLE DRAIN PUMP STATION REFERENCE REINFORCE(D)(ING)(MENT) REQUIRED RESTRAINED RESTRAINED FLANGE COUPLING ADAPTER ROOM ROUND ROUGH OPENING RIGHT-OF-WAY REDUCED PRESSURE BACKFLOW PREVENTION DEVICE RED PLASTIC CAP REVOLUTIONS PER MINUTE RAILROAD RAW SEWAGE REINFORCED STEEL RIGHT	TRANS TSP TST TW TWAS TYP	TRANSITION TRI-SODIUM PHOSPHATE TOP OF STEEL TOP OF WALL THICKENED WASTE ACTIVATED SLUDGE TYPICAL
ATM AUTO AUX AVE AVG AWWA	ATMOSPHERE AUTOMATIC AUXILIARY AVENUE AVERAGE AMERICAN WATER WORKS ASSOCIATION	E OR ELEC EA ECC EF EFF EL ELB ENCL EOP EP EQ EQL SP EQUIP ESMT EW EXC (E), EXIST EXP EXP BT EXP JT EXT	ELECTRICAL EACH ECCENTRIC EACH FACE EFFLUENT ELEVATION ELBOW ENCLOSURE EDGE OF PAVEMENT EDGE OF PAVEMENT EQUAL EQUALLY SPACED EQUIPMENT EASEMENT EACH WAY EXCAVATE EXISTING EXPANSION EXPANSION BOLT EXPANSION JOINT EXTERIOR	HW HWL HWY HYD HYDR	HOSE BIBB HOLLOW CORE HIGH DENSITY POLYETHYLENE HEADER HARDWARE HANGER HEIGHT HANDHOLD HOLLOW METAL HOT MIX ASPHALT CONCRETE HANDRAIL HAND-OFF-AUTO HAND-OFF-REMOTE / HORIZONTAL HIGH PRESSURE / HORSEPOWER HIGH PRESSURE GAS HIGH POINT HOUR HIGH STRENGTH BOLT HUB AND TACK HOSE VALVE HEATING, VENTILATION, AIR CONDITIONING HOT WATER HIGH WATER LINE HIGHWAY HYDRANT HYDRAULIC	(P) P&ID	PROPOSED / NEW PROCESS & INSTRUMENTATION DIAGRAM	RM RND RO R/W RPBPD	ROOM ROUND ROUGH OPENING RIGHT-OF-WAY REDUCED PRESSURE BACKFLOW PREVENTION DEVICE RED PLASTIC CAP REVOLUTIONS PER MINUTE RAILROAD RAW SEWAGE REINFORCED STEEL RIGHT	UG UH UN UNO USGS UW	UNDERGROUND UNIT HEATER UNION UNLESS NOTED OTHERWISE UNITED STATES GEOLOGIC SURVEY UTILITY WATER
B&S BC BF BFD BFILL BFV BHP BKGD BLDG BLVD BM BMP BO BOC BS BSMT BTF BTU BV BW	BELL & SPIGOT BOLT CIRCLE BOTH FACE BACKFLOW PREVENTION DEVICE BACKFILL BUTTERFLY VALVE BRAKE HORSEPOWER BACKGROUND BUILDING BOULEVARD BENCHMARK / BEAM BEST MANAGEMENT PRACTICES BLOW-OFF BACK OF CURB BOTH SIDES BASEMENT BOTTOM FACE BRITISH THERMAL UNIT BALL VALVE BOTH WAYS	F F TO F FAB FB FCA FCO FD FDN FE FEXT FF FG FGL FH FIN FIPT FITG FL FLEX FLG FLL	FAHRENHEIT FACE TO FACE FABRICATE FLAT BAR FLANGED COUPLING ADAPTER FLOOR CLEANOUT FLOOR DRAIN FOUNDATION FINAL EFFLUENT FIRE EXTINGUISHER FAR FACE FINISH GRADE FIBERGLASS FIRE HYDRANT FINISH(ED) FEMALE IRON PIPE THREAD FITTING FLOOR LINE FLEXIBLE FLANGE FLOW LINE	I&C ID IE IF IMPVT IN INCC INFL INJ INSTL INSUL INTER INTR INV IP IPS IPT IR IRRIG	INSTRUMENTATION & CONTROL INSIDE DIAMETER INVERT ELEVATION INSIDE FACE IMPROVEMENT INCH INCLUDE(D)(ING) INFLUENT INJECTION INSTALLATION / INSTALL INSULATION INTERCEPTOR INTERIOR INVERT IRON PIPE INFLUENT PUMP STATION IRON PIPE THREAD IRON ROD IRRIGATION	PA PC PCC PCVC	PROCESS AIR POINT OF CURVE POINT OF COMPOUND CURVE POINT OF CURVATURE ON VERTICAL CURVE PRIMARY EFFLUENT PERFORATED PERMANENT PERPENDICULAR CROSS-LINKED POLYETHYLENE PRESSURE GAUGE PIPE HANGER PRIMARY INFLUENT POINT OF INTERSECTION ON VERTICAL CURVE SURVEY "PK" NAIL PROPERTY LINE / PLATE / PLASTIC	RPC RPM RR RS RST RT	RED PLASTIC CAP REVOLUTIONS PER MINUTE RAILROAD RAW SEWAGE REINFORCED STEEL RIGHT	V VAC VB VBOX VC VERT VFD VOL VCP VTR	VENT / VOLT VACUUM VACUUM BREAKER VALVE BOX VERTICAL CURVE VERTICAL VARIABLE FREQUENCY DRIVE VOLUME VITRIFIED CLAY PIPE VENT THROUGH ROOF
C C TO C CAK CARV CAS CATV CB CCP CCW CFM CFS CHAN CHEM CHFR CHKV CI CIP CIPC CISP CJ CL OR C/L CL2 CLG CLJ CLR CLSM CMP CMU CND	CELSIUS CENTER TO CENTER BIOSOLIDS CAKE COMBINATION AIR RELEASE VALVE CAUSTIC SODA CABLE TELEVISION CATCH BASIN CONCRETE CYLINDER PIPE COUNTER CLOCKWISE CUBIC FEET PER MINUTE CUBIC FEET PER SECOND CHANNEL CHEMICAL CHAMFER CHECK VALVE CAST IRON CAST IRON PIPE CAST IN PLACE CONCRETE CAST IRON SOIL PIPE CONSTRUCTION JOINT CENTER LINE CHLORINE CEILING CONTROL JOINT CLEAR CONTROLLED LOW STRENGTH MATERIAL CORRUGATED METAL PIPE CONCRETE MASONRY UNIT CONDUIT	EXP EXP BT EXP JT EXT	EXPANSION EXPANSION BOLT EXPANSION JOINT EXTERIOR	HW HWL HWY HYD HYDR	HOT WATER HIGH WATER LINE HIGHWAY HYDRANT HYDRAULIC	PE PERF PERM PERP PEX PG PH PI PVC	PROPOSED / NEW PROCESS & INSTRUMENTATION DIAGRAM PROCESS AIR POINT OF CURVE POINT OF COMPOUND CURVE POINT OF CURVATURE ON VERTICAL CURVE PRIMARY EFFLUENT PERFORATED PERMANENT PERPENDICULAR CROSS-LINKED POLYETHYLENE PRESSURE GAUGE PIPE HANGER PRIMARY INFLUENT POINT OF INTERSECTION ON VERTICAL CURVE SURVEY "PK" NAIL PROPERTY LINE / PLATE / PLASTIC	SD SDI SDL SDLAT SDR SECT SHLDR SHT SIM SL SLD SLP SLV SOLN SP SPCL SPEC(S) SPG SPL SPRT SQ SQ FT SQ IN SQ YD SS SSCO SST ST STA STD STL STOR STR	SLOPE SALVAGE SANITARY SOLID CORE SECONDARY CLARIFIER EFFLUENT SCHEDULE SCUM SCREENINGS STORM DRAIN STORM DRAIN INLET SADDLE STORM DRAIN LATERAL STANDARD DIMENSION RATIO SECTION SHOULDER SHEET SIMILAR SLUDGE DIGESTED SLUDGE SLOPE SLEEVE SOLUTION SOIL PIPE / SEWER PIPE SPECIAL SPECIFICATION(S) SPACING SPOOL SUPPORT SQUARE SQUARE FOOT SQUARE INCH SQUARE YARD SANITARY SEWER SANITARY SEWER CLEANOUT STAINLESS STEEL STREET STATION STANDARD STEEL STORAGE STRAIGHT	W1 W2 W/ W/IN W/O W/W WAS WD WF WH WI WM WP WS WSDOT	POTABLE WATER NON-POTABLE WATER WITH WITHIN WITHOUT WALL TO WALL WASTE ACTIVATED SLUDGE WOOD WIDE FLANGE WATER HEATER WROUGHT IRON WATER METER WORKING POINT / WATERPROOFING WATER SERVICE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION WEIGHT WATER TREATMENT PLANT WATER WATERTIGHT WELDED WIRE FABRIC WASTEWATER TREATMENT FACILITY WASTEWATER TREATMENT PLANT

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PRESTON VAN METER

EXPIRES : 6/30/2024

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Water. Engineered.

Sweet Home

Oregon
it's the best!

MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

ABBREVIATIONS

PROJECT NO.: 936-50-21-09 SCALE: NO SCALE DATE: February 2023

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G-004

5 of 42

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POPULATION	CURRENT	YEAR 2045
INFLUENT FLOWS	9,820	11,643
AVERAGE DRY WEATHER FLOW (ADWF)	0.9 MGD	1.1 MGD
ANNUAL AVERAGE FLOW (AAF)	1.5 MGD	1.9 MGD
AVERAGE WET WEATHER FLOW (AWWF)	2.2 MGD	2.6 MGD
MAX MONTH DRY WEATHER FLOW (MMDWF)	2.6 MGD	3.1 MGD
MAX MONTH WET WEATHER FLOW (MMWWF)	3.6 MGD	4.3 MGD
MAX DAY WET WEATHER FLOW (MDWWF)	7.8 MGD	9.4 MGD
PEAK INSTANTANEOUS FLOW (PIF)	11.8 MGD	12.4 MGD

INFLUENT LOADS	CURRENT	YEAR 2045
cBOD		
ANNUAL AVERAGE	1,200 LB/DAY	1,400 LB/DAY
MAX MONTH DRY	1,700 LB/DAY	2,000 LB/DAY
MAX MONTH WET	1,800 LB/DAY	2,100 LB/DAY
TSS		
ANNUAL AVERAGE	1,700 LB/DAY	2,000 LB/DAY
MAX MONTH DRY	2,600 LB/DAY	3,000 LB/DAY
MAX MONTH WET	2,900 LB/DAY	3,400 LB/DAY

NPDES PERMIT LIMITS	AVERAGE EFFLUENT				MAX DAILY	
	MONTHLY		WEEKLY		mg/L LB/D	
MAY 1 - OCT 31	mg/L	LB/D	mg/L	LB/D		
CBOD5 <	10	120	15	180		
TSS <	10	120	15	180		
TOTAL AMMONIA-NITROGEN <	5.1					
pH	6.3-9				11	
NOV 1 - APRIL 30					6.3-9	
CBOD5 <	15	290	23	460	630	
TSS <	20	350	30	520	690	
TOTAL AMMONIA-NITROGEN <	5.1				11	
pH	6.3-9				6.3-9	

SLUDGE BLEND TANK

SIZE	
TOTAL VOLUME	99,300 GAL
WORKING VOLUME	93,300 GAL

SLUDGE BLEND TANK MIXING SYSTEM

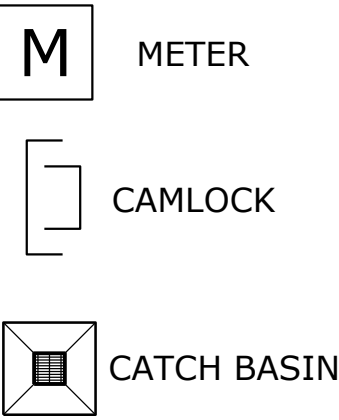
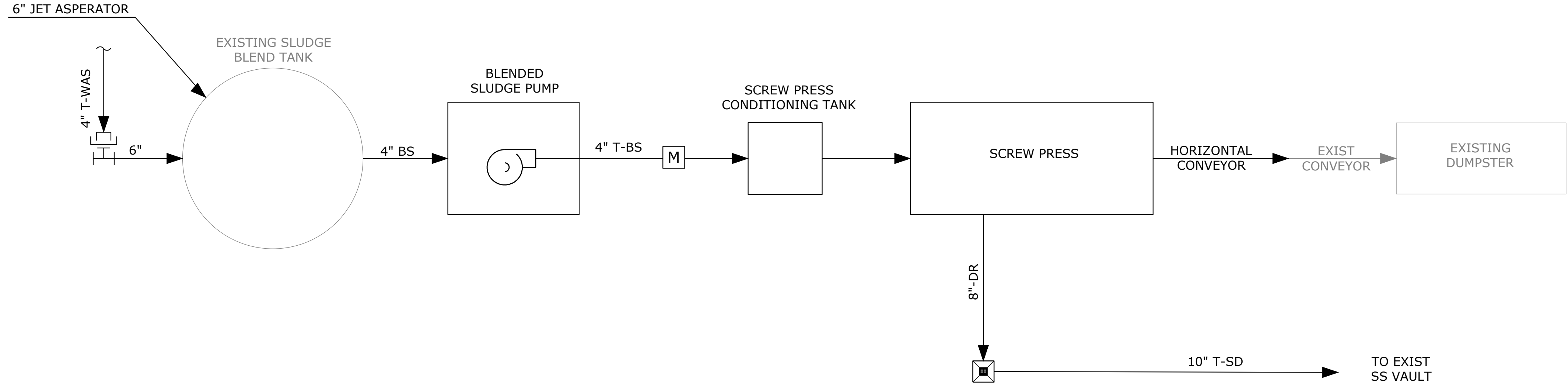
JET ASPIRATOR PUMP	
PUMP TYPE	CHOPPER PUMP
NUMBER	2
HP	5

BLENDED SLUDGE PUMPS

HIGH FLOW	
PUMP TYPE	ROTARY LOBE
NUMBER	2 (1 DUTY; 1 SHELF SPARE)
CONTROL	VFD
HP (EACH)	2
DESIGN POINT (ONE PUMP)	45 GPM @ 10' TDH

HORIZONTAL CONVEYOR

CONVEYOR TYPE	SHAFTLESS SCREW
NUMBER	2
CAPACITY	70 CF/HR, EA
DIMENSIONS	PER MECHANICAL PLANS



SOLIDS PROCESS SCHEMATIC DIAGRAM

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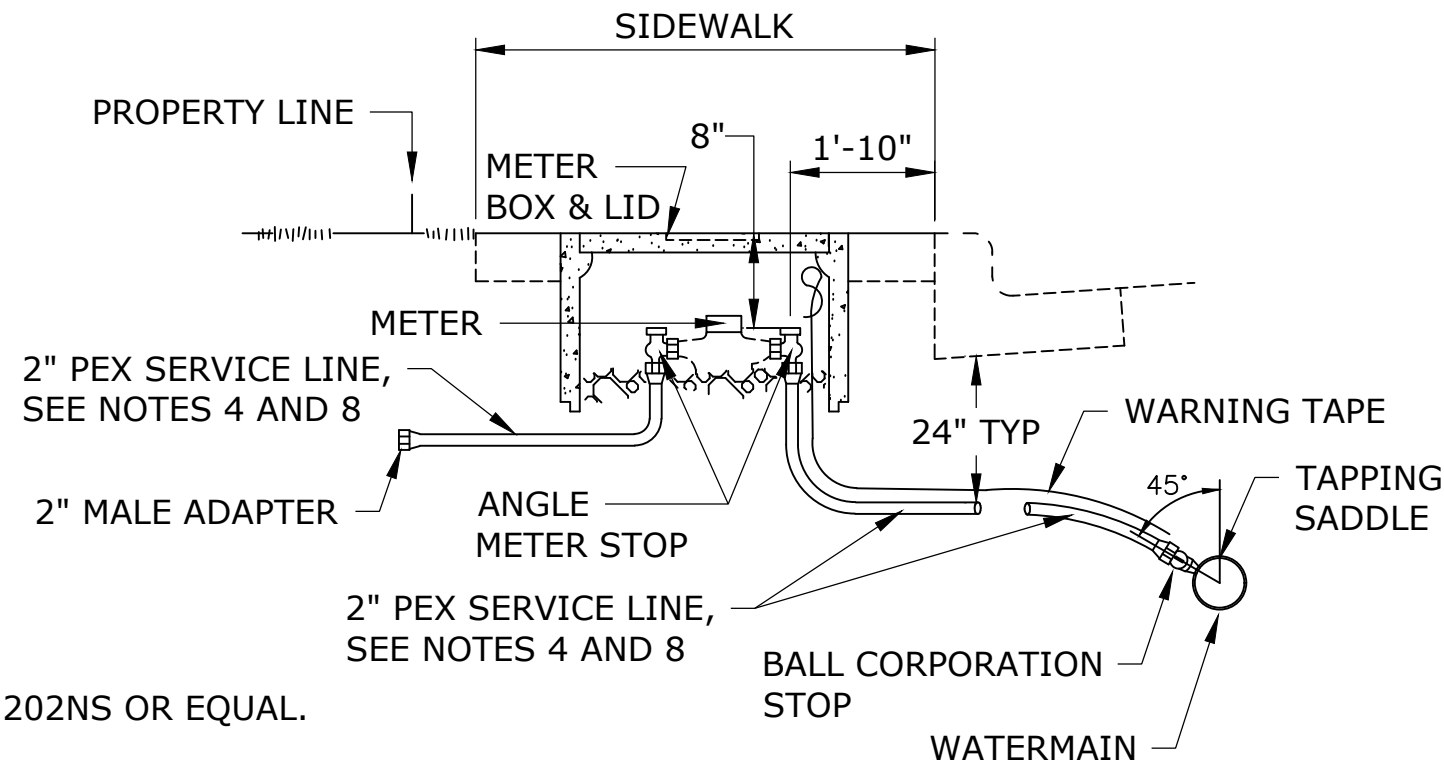


MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

DESIGN CRITERIA, SOLIDS PROCESS SCHEMATIC DIAGRAM			
PROJECT NO.:	936-50-21-09	SCALE:	NO SCALE
DATE:	February 2023		

SHEET
G-005
6 of 42

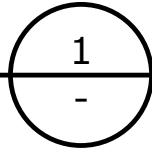
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- NOTES:
1. TAPPING SADDLE SHALL BE ROMAC, 202NS OR EQUAL.
 2. 2" BALL CORPORATION STOP SHALL BE FB1100-7-NL
 3. FOR 2" SERVICE PROVIDE LOCKING WING LEAD FREE FORD METER CURB STOP WITH METER SWIVEL NUT, FORD 2" LEAD FREE ANGLE METER COUPLING WITH METER SWIVEL NUT.
 4. WATER SERVICE LINE SHALL BE 2" AWWA C904-06 CROSS-LINKED POLYETHYLENE (PEX) BLUE WATER SERVICE LINE, SDR 9, CTS MUNICIPEX (PEXA) BY REHAU, OR EQUAL.
 5. PROVIDE DFW 13"24"X12" GRAY "WIDE BODY" METER BOX BODY POLYMER H20 RATED DFW1324C4-12-BODY, WITH DFW 13"24" GRAY SOLID METER BOX COVER WITH MAGNET POLYMER DFW1324SL-4MA2-NHK-LID.
 6. BACKFILL IN METER BOX SHALL BE 3/4"-0 CRUSHED ROCK.MINIMUM THICKNESS SHALL BE 2" BELOW THE BASE OF THE METER BOX.
 7. PROVIDE AND INSTALL KAMSTRUP FLOWIQ 3101 -2"-160 GPM LEAD FREE METER.
 8. ATTACH COPPERHEAD IND. 12 AWG SUPERFLEX TRACER WIRE TO THE PEX SERVICE LINE WITH ZIP-TIES,AT 10 FOOT INTERVALS, AND BE ROUTED INTO THE METER BOX WITH A MINIMUM OF 12" EXTENDED AND COILED. TRACER WIRE CONNECTION JUNCTIONS SHALL BE COPPERHEAD IND. BLUE SNAKEBITE LOCKING CONNECTORS.
 9. INLCUDE COMPRESSION JOINT FITTINGS, WITH STAINLESS STEEL INSERT-STIFFENERS FORD INSERT 53-72-Q OR EQUAL.

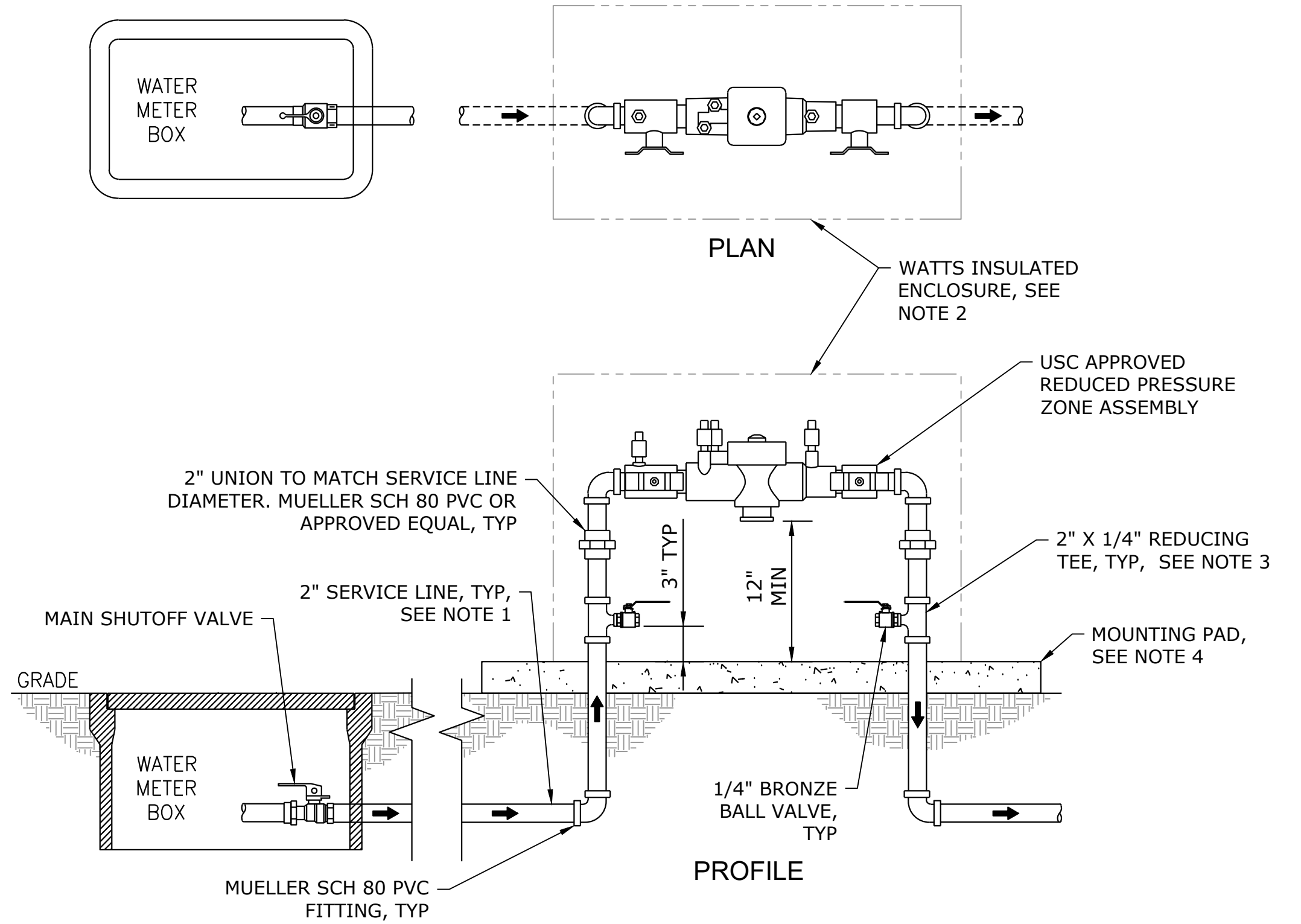
2" WATER SERVICE

SCALE: NTS



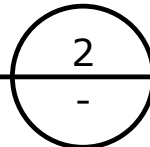
NOTES:

1. SERVICE LINE SHALL BE SCH 40 PVC PIPE W/SCH 80 PVC FITTINGS.
2. UNHEATED, INSULATED ENCLOSURE, USE WATTS WB SERIES. CONTRACTOR TO CONFIRM AND SUBMIT SIZE WITH REDUCED PRESSURE ZONE ASSEMBLY SUBMITTAL.
3. THROUGH TEE DIAMETER TO MATCH SERVICE LINE DIAMETER.
4. ANCHORAGE AND MOUNTING PAD DIMENSIONS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
5. INSTALL BACKFLOW ASSEMBLY AS REQUIRED BY LOCAL CODES AND THE OREGON HEALTH AUTHORITY. VERIFY CODES AND REQUIREMENTS PRIOR TO INSTALLATION.



2" BACKFLOW ASSEMBLY

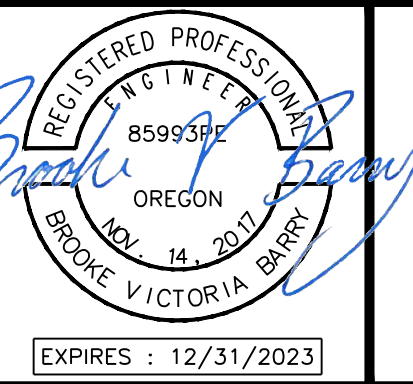
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MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
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CIVIL DETAILS 2			
PROJECT NO.:	936-50-21-09	SCALE:	AS SHOWN
DATE:	FEBRUARY 2023		

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8 of 42

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MAHLER WATER
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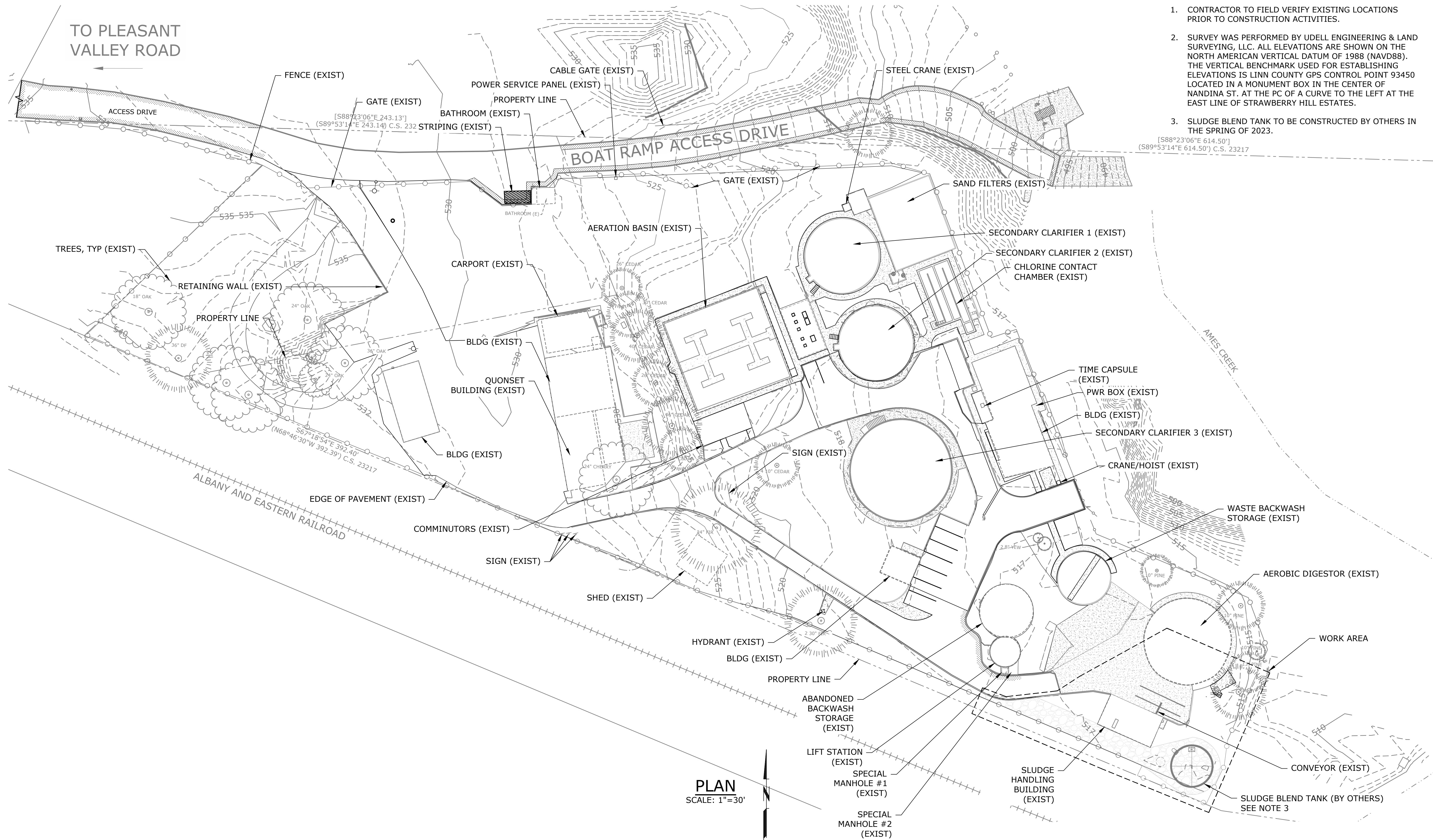
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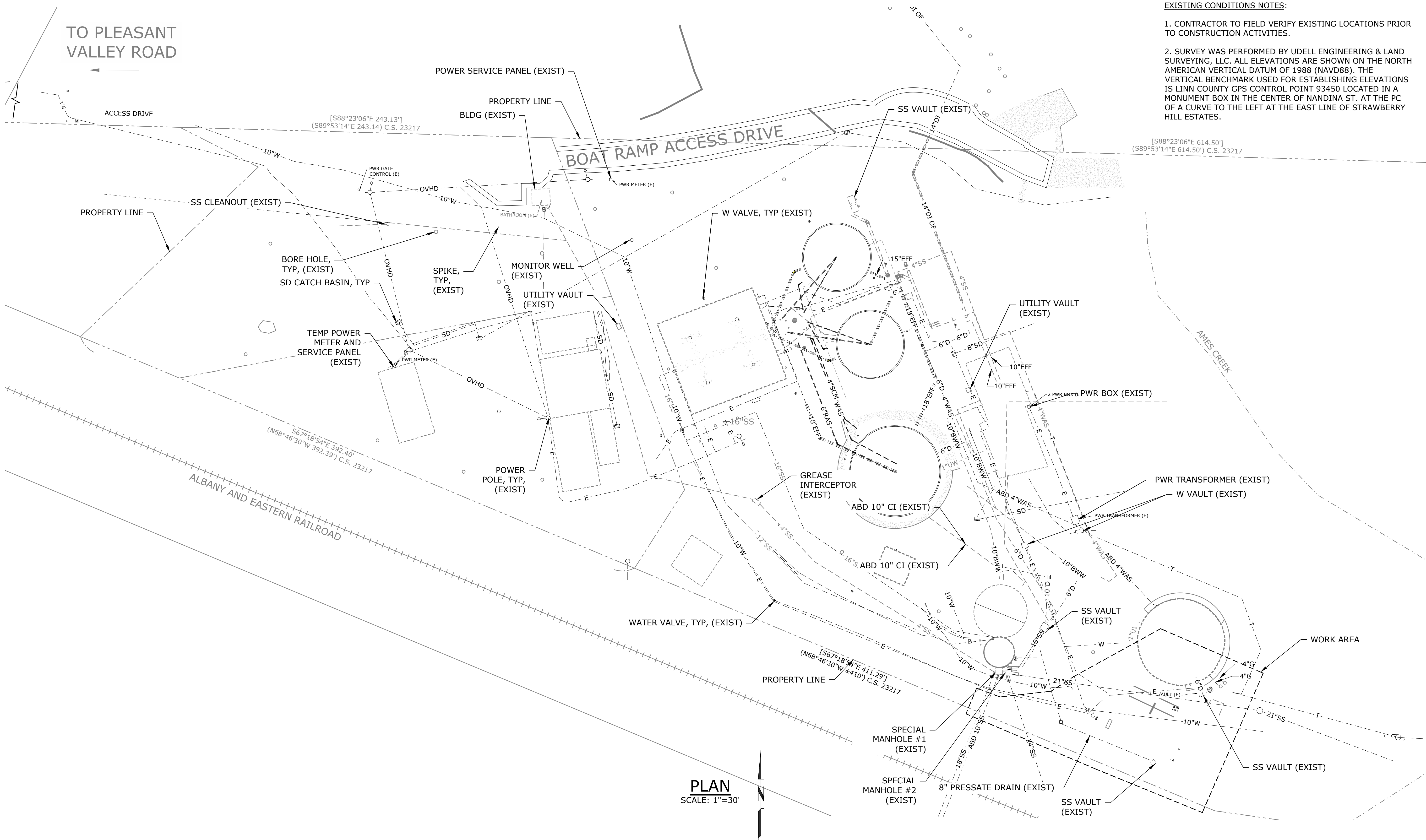
9 of 42

1. CONTRACTOR TO FIELD VERIFY EXISTING LOCATIONS PRIOR TO CONSTRUCTION ACTIVITIES.
2. SURVEY WAS PERFORMED BY UDELL ENGINEERING & LAND SURVEYING, LLC. ALL ELEVATIONS ARE SHOWN ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). THE VERTICAL BENCHMARK USED FOR ESTABLISHING ELEVATIONS IS LINN COUNTY GPS CONTROL POINT 93450 LOCATED IN A MONUMENT BOX IN THE CENTER OF NANDINA ST. AT THE PC OF A CURVE TO THE LEFT AT THE EAST LINE OF STRAWBERRY HILL ESTATES.
3. SLUDGE BLEND TANK TO BE CONSTRUCTED BY OTHERS IN THE SPRING OF 2023.

[S88°23'06"E 614.50']
(S89°53'14"E 614.50') C.S. 23217



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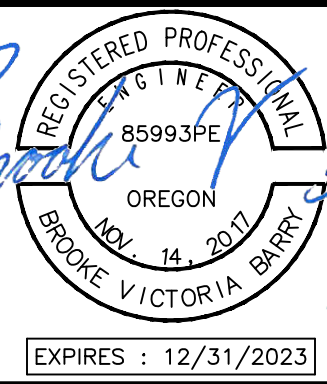
- EXISTING CONDITIONS NOTES:
1. CONTRACTOR TO FIELD VERIFY EXISTING LOCATIONS PRIOR TO CONSTRUCTION ACTIVITIES.
 2. SURVEY WAS PERFORMED BY UDELL ENGINEERING & LAND SURVEYING, LLC. ALL ELEVATIONS ARE SHOWN ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). THE VERTICAL BENCHMARK USED FOR ESTABLISHING ELEVATIONS IS LINN COUNTY GPS CONTROL POINT 93450 LOCATED IN A MONUMENT BOX IN THE CENTER OF NANDINA ST. AT THE PC OF A CURVE TO THE LEFT AT THE EAST LINE OF STRAWBERRY HILL ESTATES.

PLAN
SCALE: 1"=30'

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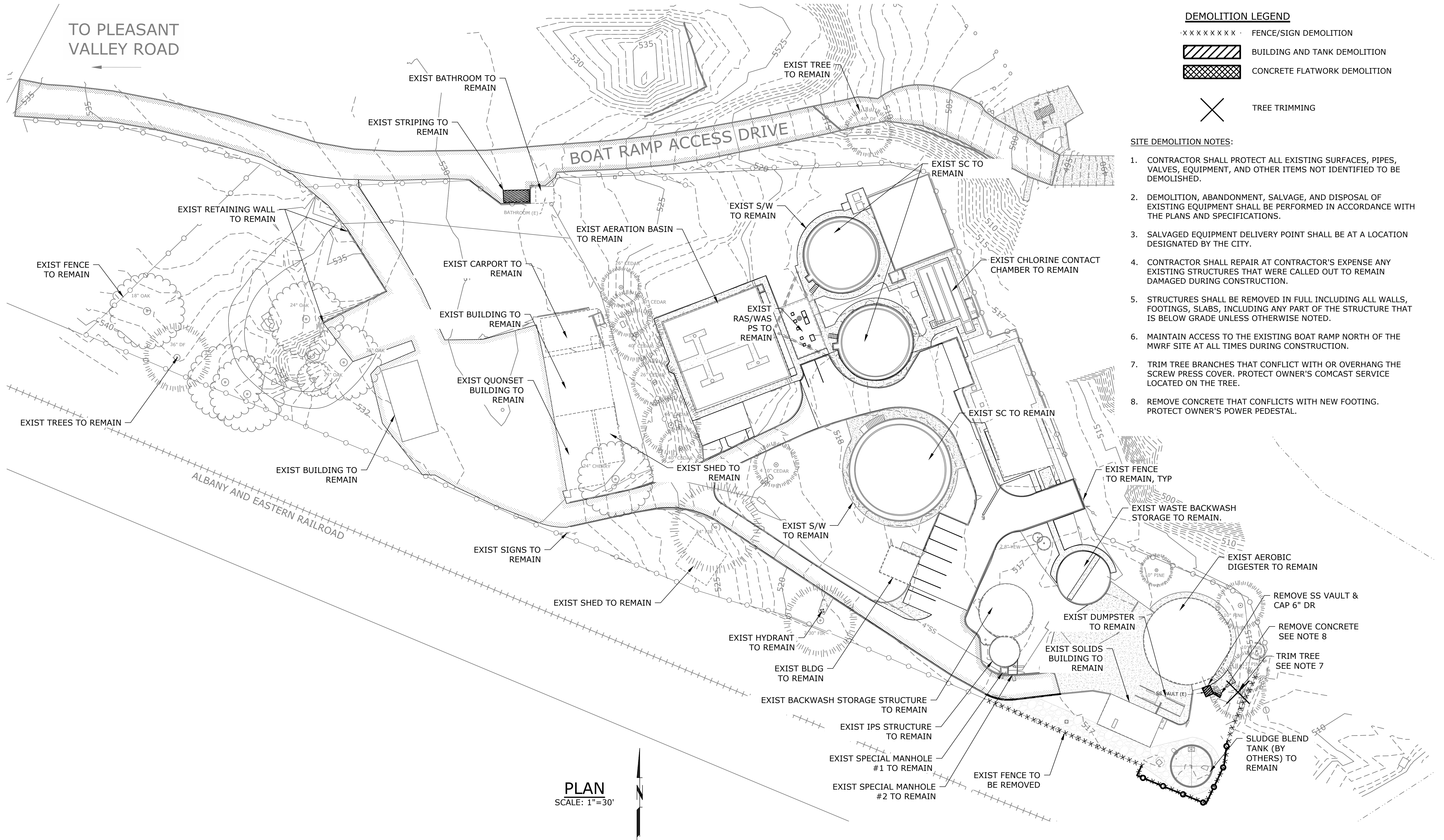
MAHLER WATER
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EXISTING UTIITIES PLAN

PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBRUARY 2023

SHEET
C-011
10 of 42

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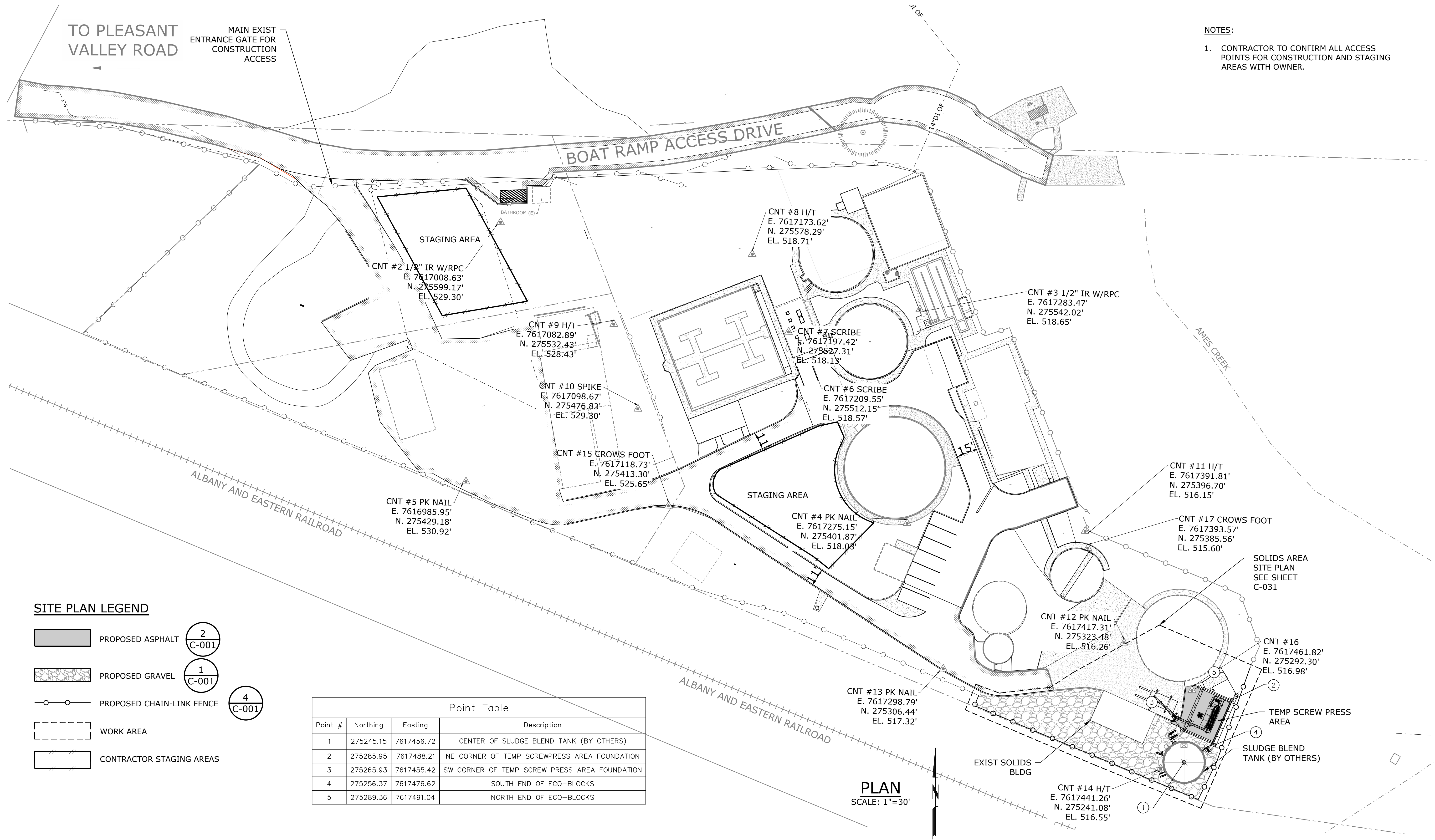
MAHLER WATER RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

SITE DEMOLITION PLAN

PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBRUARY 2023

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C-020
11 of 42

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- NOTES:
- CONTRACTOR TO CONFIRM ALL ACCESS POINTS FOR CONSTRUCTION AND STAGING AREAS WITH OWNER.

SITE PLAN LEGEND

- PROPOSED ASPHALT (2 C-001)
- PROPOSED GRAVEL (1 C-001)
- PROPOSED CHAIN-LINK FENCE (4 C-001)
- WORK AREA
- CONTRACTOR STAGING AREAS

Point Table			
Point #	Northing	Easting	Description
1	275245.15	7617456.72	CENTER OF SLUDGE BLEND TANK (BY OTHERS)
2	275285.95	7617488.21	NE CORNER OF TEMP SCREW PRESS AREA FOUNDATION
3	275265.93	7617455.42	SW CORNER OF TEMP SCREW PRESS AREA FOUNDATION
4	275256.37	7617476.62	SOUTH END OF ECO-BLOCKS
5	275289.36	7617491.04	NORTH END OF ECO-BLOCKS

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BVB DESIGNED

BVB DRAWN

PLVM CHECKED

REGISTERED PROFESSIONAL ENGINEER

OREGON

NOV 14 2017

BROOK VICTORIA BARRETT

EXPIRES : 12/31/2023

WEST YOST

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Sweet Home

Oregon

né les best!

MAHLER WATER RECLAMATION FACILITY INTERIM IMPROVEMENTS PROJECT

OVERALL SITE PLAN, STRUCTURE COORDINATES, STAGING AND ACCESS, SURVEY CONTROL POINTS

PROJECT NO.: 936-50-21-09

SCALE: AS SHOWN

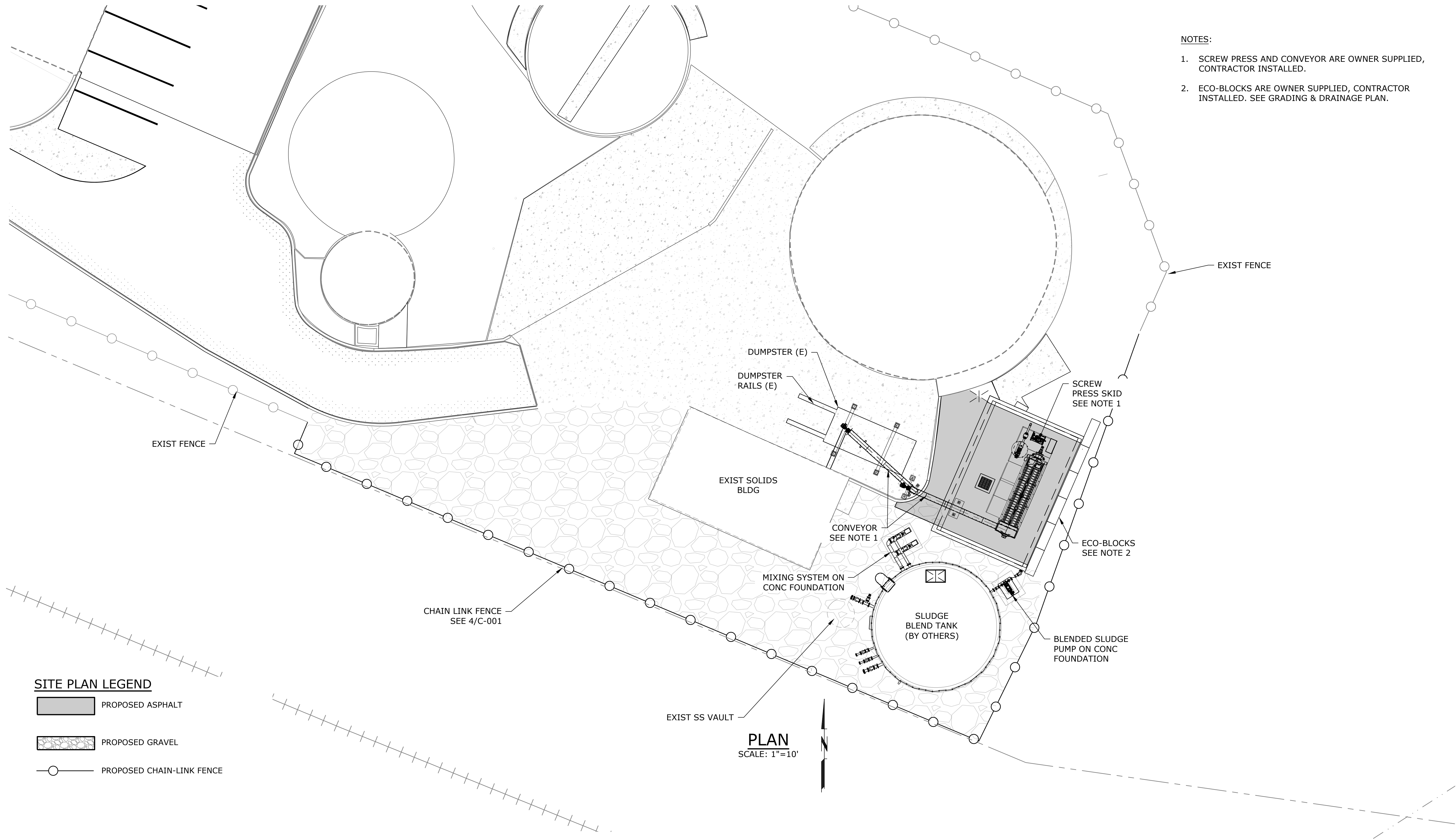
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C-030

12 of 42

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- NOTES:
1. SCREW PRESS AND CONVEYOR ARE OWNER SUPPLIED, CONTRACTOR INSTALLED.
 2. ECO-BLOCKS ARE OWNER SUPPLIED, CONTRACTOR INSTALLED. SEE GRADING & DRAINAGE PLAN.

SITE PLAN LEGEND

PROPOSED ASPHALT

PROPOSED GRAVEL

PROPOSED CHAIN-LINK FENCE

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

BVB
DESIGNED
BVB
DRAWN
PLVM
CHECKED

REGISTERED PROFESSIONAL ENGINEER

55993PE

OREGON

NOV 14 2011

BROOKE VICTORIA BBARRY

EXPIRES : 12/31/2023

WEST YOST

Water. Engineered.



MAHLER WATER RECLAMATION FACILITY INTERIM IMPROVEMENTS PROJECT

PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBRUARY 2023

SOLIDS AREA SITE PLAN

SHEET

C-031

13 of 42

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EROSION CONTROL NOTES

1. CONTRACTOR TO OBTAIN PERMITS FOR STORMWATER MANAGEMENT DURING CONSTRUCTION INCLUDING 1200C STORMWATER DISCHARGE PERMIT.
2. SWEEP STREETS AS NEEDED OR WHEN DIRECTED BY OWNER OR OWNER’S REPRESENTATIVE.
3. PRIOR TO ANY GROUND DISTURBANCE ON THE SITE, ALL NECESSARY APPROVALS SHALL BE OBTAINED.
4. ISSUANCE OF AN EROSION PREVENTION PERMIT APPROVES PROTECTION MEASURES, NOT CONSTRUCTION OR GROUND DISTURBING ACTIVITIES. IT DOES NOT RELIEVE THE CONTRACTOR FROM OTHER PERMITTING REQUIREMENTS. OTHER PERMITS MAY BE REQUIRED.
5. CONSTRUCTION SHALL CONFORM TO THE CURRENT EDITION OF THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION.
6. EROSION AND SEDIMENT CONTROL MEASURES, AND OTHER NATURAL RESOURCE PROTECTION FENCING AND BARRIERS, SHOWN ON THE EROSION CONTROL PLAN (ECP) ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING CONSTRUCTION, MEASURES SHALL BE UPGRADED, AS NEEDED OR AS DIRECTED BY THE CITY OR ENGINEER.
7. CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF EROSION AND SEDIMENT CONTROL MEASURES AND PROTECTION FENCING IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED.
8. BOUNDARIES OF THE CLEARING AND GRADING LIMITS SHALL BE WITHIN THE SEDIMENT FENCED AREA AND SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING CONSTRUCTION, NO DISTURBANCE BEYOND THE FLAGGED CLEARING AND GRADING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION. IN ADDITION, WETLAND AND RIPARIAN AREAS SHALL BE IDENTIFIED AND PROTECTED WITH APPROPRIATE FENCING PRIOR TO CONSTRUCTION AND SHALL NOT BE DISTURBED UNLESS THE PROPER PERMITS ARE OBTAINED.
9. EROSION AND SEDIMENT CONTROL MEASURES MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DOES NOT ENTER WATERWAYS, THE STORMWATER SYSTEM, ROADWAYS, ADJACENT PROPERTY OR VIOLATE APPLICABLE WATER QUALITY STANDARDS. WHEN DESIGNING AND IMPLEMENTING MEASURES, THE CONTRACTOR SHALL CONSIDER THE SEASONAL VARIATION OF RAINFALL, TEMPERATURE, AND OTHER CLIMATIC FACTORS RELATIVE TO THE TIMING OF LAND DISTURBANCE ACTIVITIES.
10. EROSION AND SEDIMENT CONTROL MEASURES ON ACTIVE SITES SHALL BE INSPECTED AND MAINTAINED DAILY AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES OF RAIN PER 24 HOUR PERIOD. ANY REQUIRED REPAIRS OR ADJUSTMENTS SHALL BE MADE IMMEDIATELY. THE EROSION AND SEDIMENT CONTROL MEASURES ON INACTIVE SITES SHALL BE INSPECTED A MINIMUM OF ONCE EVERY MONTH AND/OR WITHIN 48 HOURS FOLLOWING STORM EVENTS. ADDITIONALLY, SITES COVERED UNDER DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) PERMITS (1200–C, 1200–CN) MUST COMPLY WITH THOSE PERMIT MONITORING AND RECORD–KEEPING REQUIREMENTS.
11. DURING THE WET WEATHER SEASON (OCTOBER 15 TO APRIL 30), ALL EXPOSED SOIL AND STOCKPILE AREAS SHALL BE COVERED, OR OTHERWISE PROTECTED BY A FACILITY (OR COMBINATION OF FACILITIES) THAT RESULT IN NO STORMWATER RUNOFF LEAVING THE SITE DURING A 5–YEAR STORM EVENT.
12. ALL ADJACENT PROPERTIES, WATER FEATURES, AND RELATED NATURAL RESOURCES ARE TO BE KEPT FREE OF DEPOSITS OR DISCHARGES OF SOIL, SEDIMENT OR CONSTRUCTION–RELATED MATERIAL FROM THE CONSTRUCTION SITE.
13. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROTECTED FROM DAMAGE AT ALL TIMES. EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL VEGETATION HAS BEEN ESTABLISHED AND THE SITE IS PERMANENTLY STABILIZED. ANY MEASURES THAT ARE DAMAGED OR DESTROYED SHALL BE REPAIRED OR REPLACED IMMEDIATELY.
14. STABILIZE ALL DISTURBED AREAS WITHIN 50 FEET OF WATERWAYS, WETLANDS OR OTHER SENSITIVE AREAS WITHIN 7 DAYS OF EXPOSURE.
15. STREETS ADJACENT TO CONSTRUCTION ENTRANCES AND ALONG HAUL ROUTES SHALL BE SWEEPED AS NEEDED OR WHEN DIRECTED BY THE CITY TO ENSURE PUBLIC RIGHTS–OF–WAY ARE KEPT CLEAN AND FREE OF DEBRIS.
16. WHEN TRUCKING SATURATED SOILS TO OR FROM THE SITE, WATER–TIGHT TRUCKS SHALL BE USED. SEDIMENT LADEN WATER WILL NOT BE ALLOWED TO ENTER THE STORMWATER SYSTEM.
17. EXTRACTED GROUND WATER FROM EXCAVATED TRENCHES SHALL BE DISPOSED OF IN A SUITABLE MANNER WITHOUT DISCHARGING SEDIMENT TO ADJACENT PROPERTIES, THE CITY’S STORMWATER SYSTEM, WATER FEATURES, OR RELATED NATURAL RESOURCES. DEWATERING SYSTEMS SHALL BE DESIGNED AND OPERATED SO AS TO PREVENT REMOVAL OF THE NATURAL SOILS AND SO THAT THE GROUNDWATER LEVEL OUTSIDE THE EXCAVATION IS NOT REDUCED TO THE EXTENT THAT WOULD DAMAGE OR ENDANGER ADJACENT STRUCTURES OR PROPERTY. APPROVAL OF THE DEWATERING SYSTEM DOES NOT GUARANTEE THAT IT WILL MEET THE OUTCOMES OR BE ACCEPTABLE FOR USE IN ALL SITUATIONS. MODIFICATIONS TO THE SYSTEM WILL BE REQUIRED IF THE OUTCOMES CANNOT BE MET. AT NO TIME WILL SEDIMENT LADEN WATER BE ALLOWED TO LEAVE THE CONSTRUCTION SITE.

18. A SUPPLY OF MATERIALS NECESSARY TO MEET THE OUTCOMES AND IMPLEMENT THE EROSION PRACTICES UNDER ALL WEATHER CONDITIONS SHALL BE MAINTAINED AT ALL TIMES ON THE CONSTRUCTION SITE.
19. NO HAZARDOUS SUBSTANCES, SUCH AS PAINTS, THINNERS, FUELS AND OTHER CHEMICALS SHALL BE RELEASED ONTO THE SITE, ADJACENT PROPERTIES, OR INTO WATER FEATURES, THE STORMWATER SYSTEM, OR RELATED NATURAL RESOURCES.
20. NO DISCHARGE INTO THE STORMWATER SYSTEM OR RELATED NATURAL RESOURCES OF CONSTRUCTION RELATED CONTAMINANTS RESULTING FROM ACTIVITIES SUCH AS, BUT NOT LIMITED TO, CONCRETE SAWING, CLEANING OR WASHING OF EQUIPMENT, TOOLS, OR VEHICLES, SHALL OCCUR.
21. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL WORK PERFORMED BY UTILITY COMPANIES FOR THIS PROJECT, INCLUDING PLACEMENT OF APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES, FINISHED GRADING, SEEDING, MULCHING AND CLEAN UP MEETS THE REQUIREMENTS OF THE PERMIT.
22. INSTALL ADDITIONAL EROSION CONTROL DEVICES SUCH AS CHECK DAMS, TIRE WASH FACILITIES, AS NEEDED TO MEET EROSION CONTROL REQUIREMENTS.
23. REFER TO EROSION CONTROL DETAILS ON C–042.

MATERIAL DELIVERY AND STORAGE

1. TEMPORARY STORAGE AREA SHALL BE LOCATED AWAY FROM VEHICULAR TRAFFIC.
2. MATERIAL SAFETY DATA SHEETS (MSDS) SHALL BE SUPPLIED FOR ALL MATERIALS STORED.
3. ALL MATERIAL DELIVERY AND STORAGE SHALL TAKE PLACE WITHIN THE DESIGNATED STAGING AREAS.
4. STORAGE OF REACTIVE, IGNITABLE, OR FLAMMABLE LIQUIDS MUST COMPLY WITH LOCAL FIRE CODES.
5. HAZARDOUS MATERIALS STORAGE ONSITE SHALL BE MINIMIZED.
6. HAZARDOUS MATERIALS SHALL BE HANDLED AS INFREQUENTLY AS POSSIBLE.
7. DURING THE RAINY SEASON, MATERIALS SHALL BE STORED IN A COVERED AREA. STORE MATERIALS IN SECONDARY CONTAINMENTS SUCH AS EARTHEN DIKE, HORSE TROUGH, OR EVEN A CHILDREN’S WADING POOL FOR NON – REACTIVE MATERIALS SUCH AS DETERGENTS, OIL, GREASE, AND PAINTS. SMALL AMOUNTS OF MATERIAL MAY BE SECONDARILY CONTAINED IN CONCRETE MIXING TRAYS.
8. DO NOT STORE CHEMICALS, DRUMS, OR BAGGED MATERIALS DIRECTLY ON THE GROUND. PLACE THESE ITEMS ON A PALLET AND, WHEN POSSIBLE, IN SECONDARY CONTAINMENT.
9. IF DRUMS MUST BE KEPT UNCOVERED, USE DOMED PLASTIC COVERS OR STORE THEM AT A SLIGHT ANGLE TO REDUCE PONDING OF RAINWATER ON THE LIDS TO REDUCE CORROSION.
10. CHEMICALS SHALL BE KEPT IN THEIR ORIGINAL LABELED CONTAINERS.
11. EMPLOYEES AND SUBCONTRACTORS SHALL BE TRAINED ON THE PROPER MATERIAL DELIVERY AND STORAGE PRACTICES.
12. EMPLOYEES TRAINED IN EMERGENCY SPILL CLEANUP PROCEDURES MUST BE PRESENT WHEN DANGEROUS MATERIALS OR LIQUID CHEMICALS ARE UNLOADED.
13. COVER AND BERM LOOSE STOCKPILED CONSTRUCTION MATERIALS THAT ARE NOT ACTIVELY BEING USED SUCH AS SOILS, SPOILS, AGGREGATE, FLY–ASH, STUCCO AND HYDRATED LIME.
14. IMPLEMENT BMPs TO PREVENT THE OFF–SITE TRACKING OF LOOSE CONSTRUCTION AND LANDSCAPE MATERIALS.
15. DISCONTINUE THE APPLICATION OF ANY ERODIBLE LANDSCAPE MATERIAL WITHIN 2 DAYS BEFORE A FORECASTED RAIN EVENT OR DURING PERIODS OF PRECIPITATION. APPLY ERODIBLE LANDSCAPE MATERIALS AT QUANTITIES AND APPLICATION RATES ACCORDING TO MANUFACTURER RECOMMENDATIONS OR BASED ON WRITTEN SPECIFICATION BY EXPERIENCED FIELD PERSONNEL.

VEHICLE AND EQUIPMENT CLEANING, FUELING AND MAINTENANCE NOTES

1. THE CONTRACTOR SHALL PERFORM ALL CLEANING OFF SITE OR CONTRACT WITH EITHER AN OFFSITE OR MOBILE COMMERCIAL WASHING BUSINESS FOR ALL NECESSARY CLEANING.
2. THE CONTRACTOR SHALL USE OFFSITE FUELING STATIONS AND REPAIR SITES AS MUCH AS POSSIBLE.
3. THE CONTRACTOR SHALL DISCOURAGE “TOPPING OFF” OF FUEL TANKS.
4. THE CONTRACTOR SHALL MAKE AVAILABLE ABSORBENT SPILL CLEANUP MATERIALS AND SPILL KITS IN FUELING AREAS AND ON FUELING TRUCKS.
5. THE CONTRACTOR SHALL USE DRIP PANS OR ABSORBENT PADS DURING VEHICLE AND EQUIPMENT FUELING AND MAINTENANCE WORK THAT INVOLVES FLUIDS.
6. THE CONTRACTOR SHALL USE ABSORBENT MATERIALS EVEN ON SMALL SPILLS. DO NOT HOSE DOWN OR BURY THE SPILL.
7. THE CONTRACTOR SHALL REMOVE THE ABSORBENT MATERIALS PROMPTLY AND DISPOSE OF PROPERLY.
8. FUELING AND MAINTENANCE SHALL TAKE PLACE ONLY IN THE DESIGNATED AREA. THE CONTRACTOR SHALL AVOID MOBILE FUELING AND MAINTENANCE OF MOBILE CONSTRUCTION EQUIPMENT AROUND THE SITE; RATHER, TRANSPORT THE EQUIPMENT TO DESIGNATED AREA.
9. THE CONTRACTOR SHALL TRAIN EMPLOYEES AND SUBCONTRACTORS IN PROPER FUELING, MAINTENANCE, AND SPILL CLEANUP PROCEDURES.
10. FUELING AND MAINTENANCE SHALL BE PERFORMED ON LEVEL–GRADE AREAS.
11. THE CONTRACTOR SHALL PROTECT FUELING AND MAINTENANCE AREAS WITH APPROPRIATE BMPs.
12. NOZZLES USED IN VEHICLE AND EQUIPMENT FUELING SHALL BE EQUIPPED WITH AN AUTOMATIC SHUTOFF TO CONTROL DRIPS. FUELING OPERATIONS SHALL NOT BE LEFT UNATTENDED.
13. THE CONTRACTOR SHALL OBSERVE FEDERAL, STATE, AND LOCAL REQUIREMENTS FOR ANY STATIONARY ABOVE GROUND STORAGE TANKS.
14. THE CONTRACTOR SHALL INSPECT ONSITE VEHICLES AND EQUIPMENT DAILY AT STARTUP FOR LEAKS, AND REPAIR IMMEDIATELY. KEEP VEHICLES AND EQUIPMENT CLEAN; DO NOT ALLOW EXCESSIVE BUILD UP OF OIL AND GREASE.
15. THE CONTRACTOR SHALL SEGREGATE AND RECYCLE WASTES, SUCH AS GREASES, USED OIL OR OIL FILTERS, ANTIFREEZE CLEANING SOLUTIONS, AUTOMOTIVE BATTERIES, HYDRAULIC AND TRANSMISSION FLUIDS. PROVIDE SECONDARY CONTAINMENT AND COVERS FOR THESE MATERIALS IF STORED ONSITE.
16. THE CONTRACTOR SHALL PROPERLY DISPOSE OF USED OILS, FLUIDS, LUBRICANTS, BATTERIES, AND SPILL CLEANUP MATERIALS.

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MAHLER WATER RECLAMATION FACILITY INTERIM IMPROVEMENTS PROJECT

EROSION CONTROL NOTES

PROJECT NO.: 936-50-21-09SCALE: AS SHOWNDATE: FEBRUARY 2023

SHEET

C-040

14 of 42

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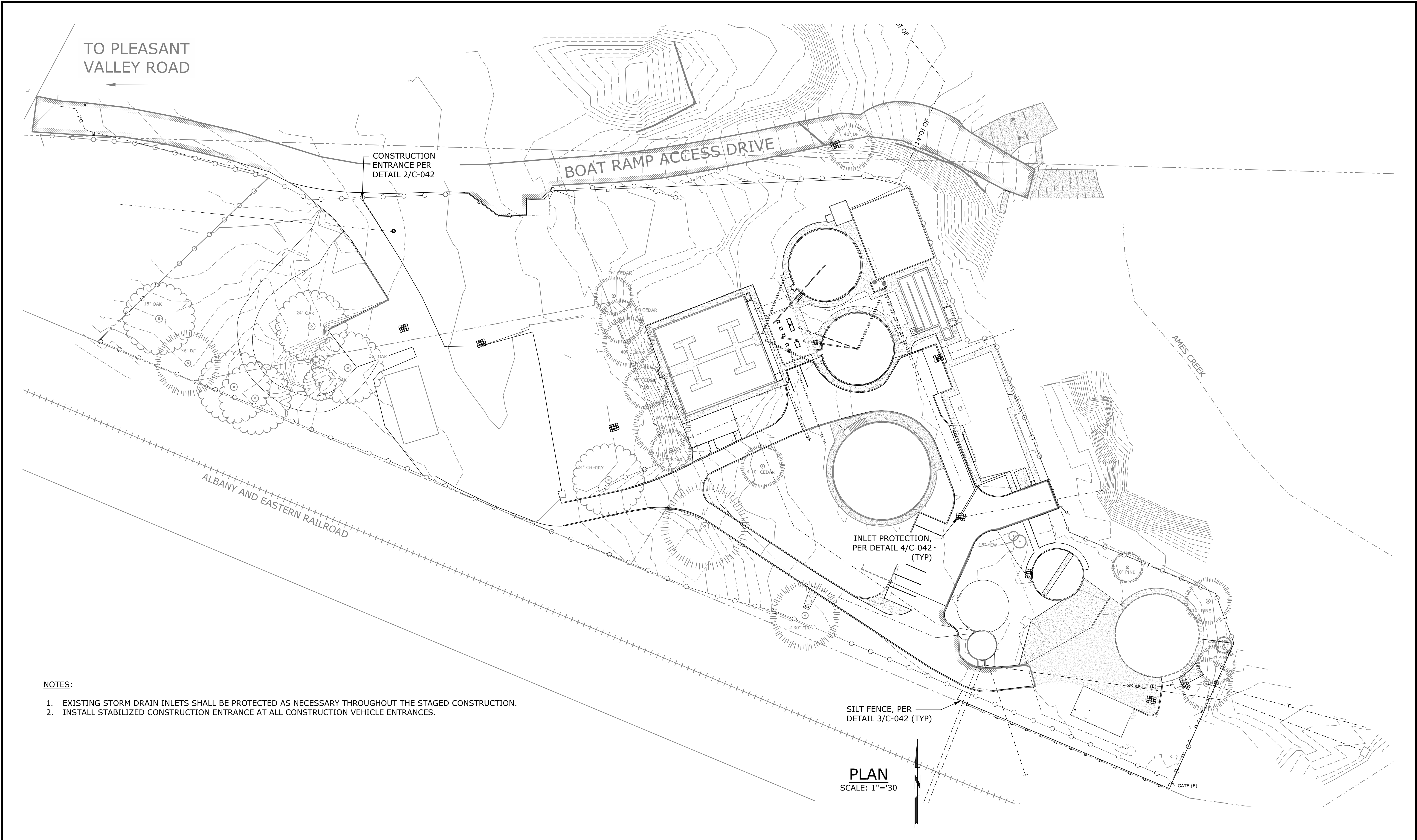


<h1 style="text-align: center;">EROSION CONTROL PLAN</h1>			
PROJECT NO.: 936-50-21-09	SCALE:	AS SHOWN	DATE: FEBRUARY 2023

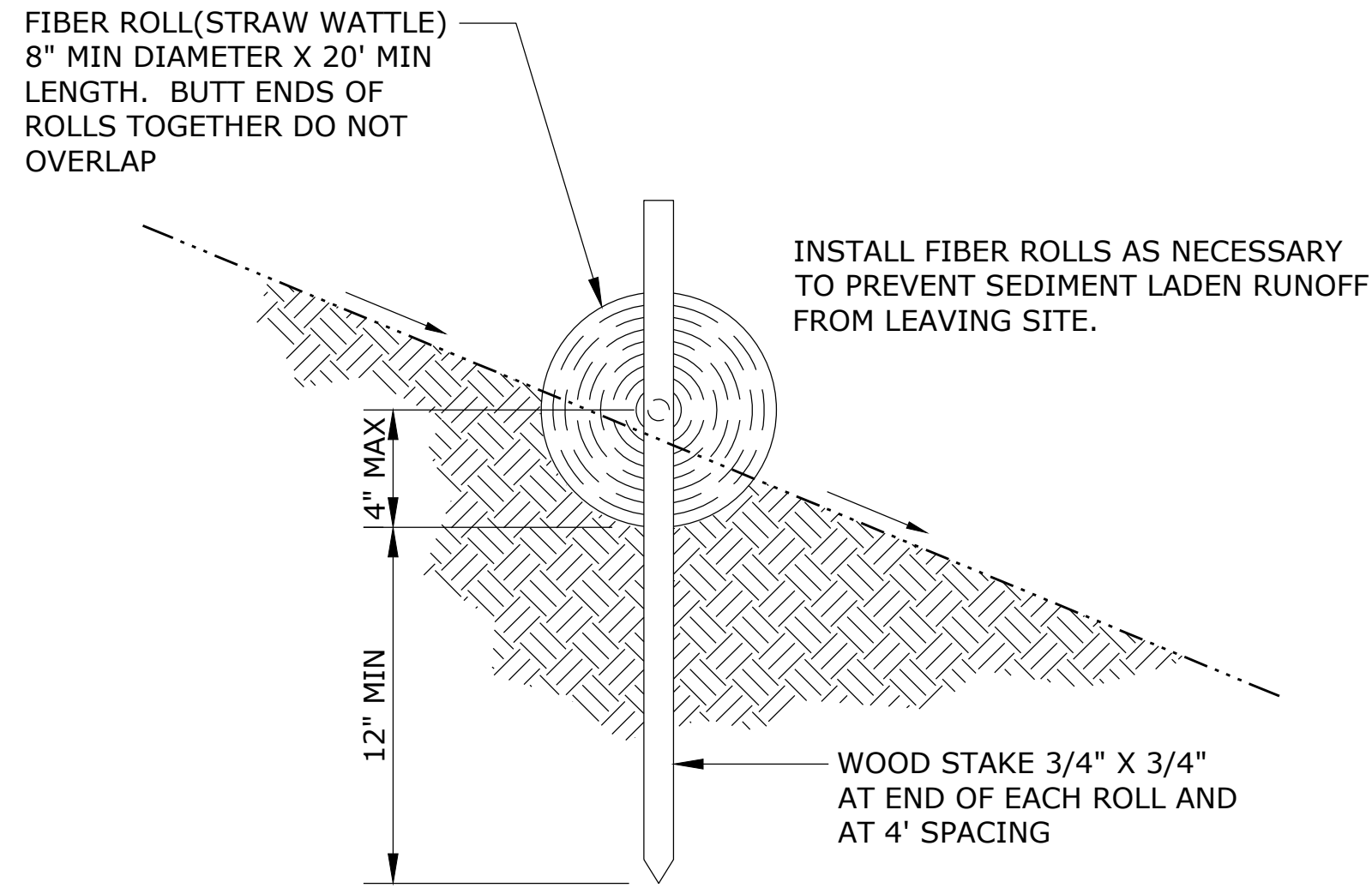
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C-041

15 of 42

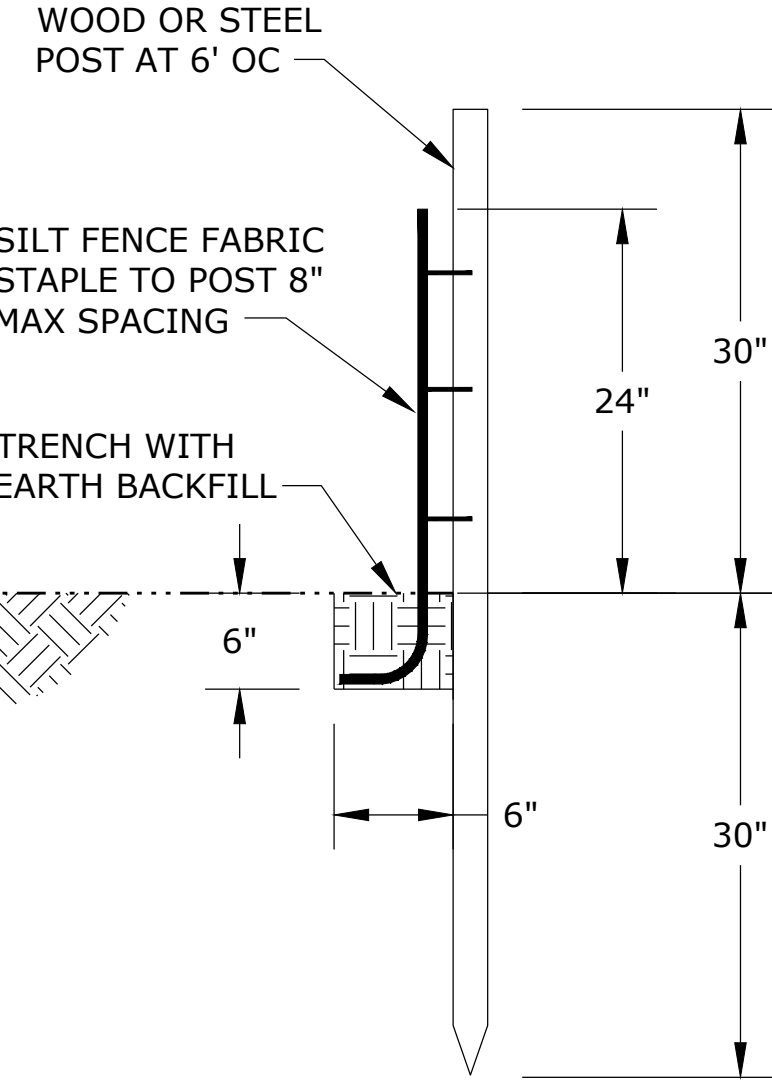


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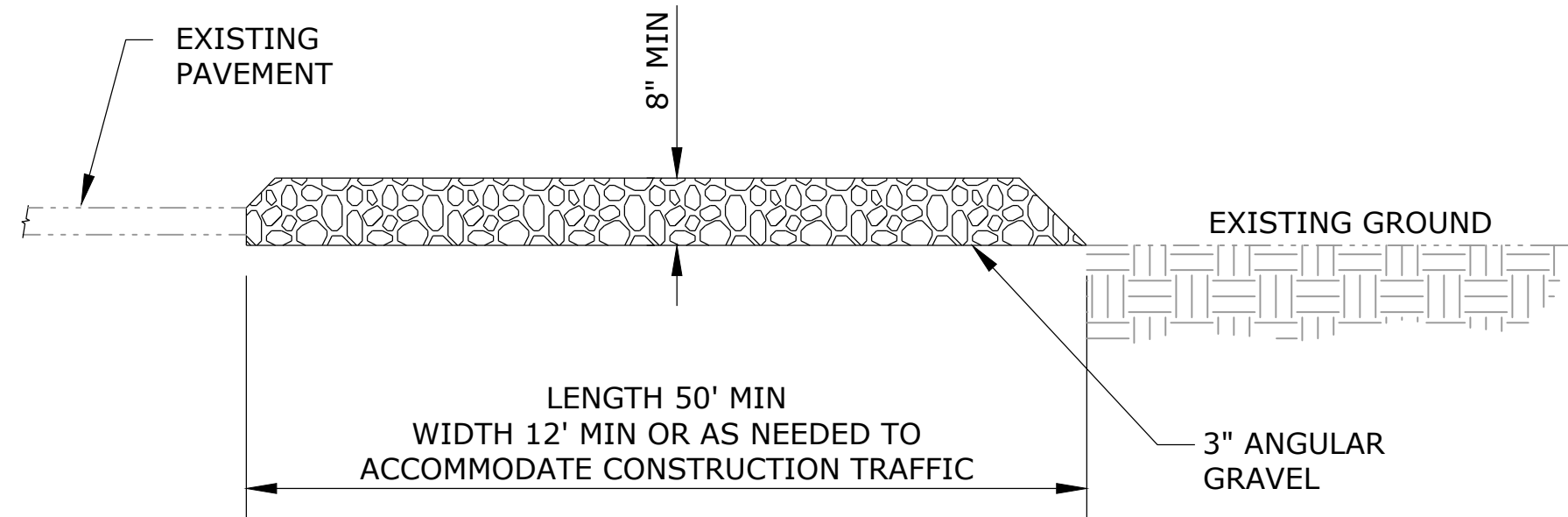
FIBER ROLL
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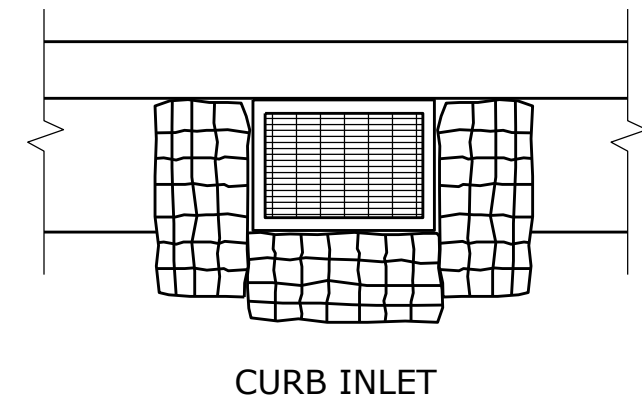
SILT FENCE
SCALE: NTS

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C-041



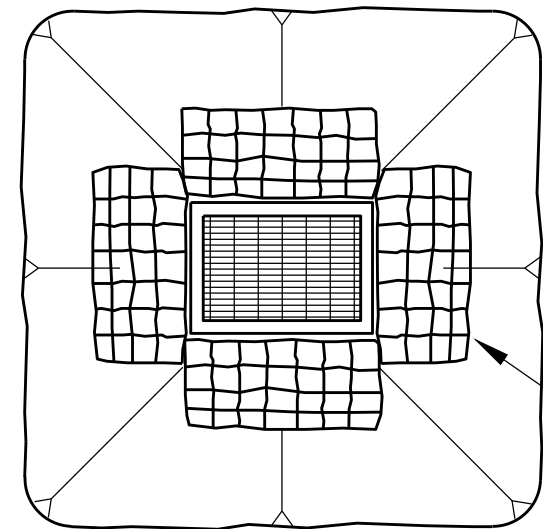
STABILIZED CONSTRUCTION ENTRANCE
SCALE: NTS

2
C-041



CURB INLET

- NOTES:
1. REMOVE SEDIMENT FROM BEHIND BIOBAGS WHEN IT REACHES 2 INCHES IN DEPTH.
 2. INSTALL INLET INSERT .



DRAIN INLET

BIOFILTER BARRIER

INLET PROTECTION
SCALE: NTS

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C-041

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NOV 14 2017
BROOKE VICTORIA (BARRY)
EXPIRES : 12/31/2023

WEST YOST
Water. Engineered.

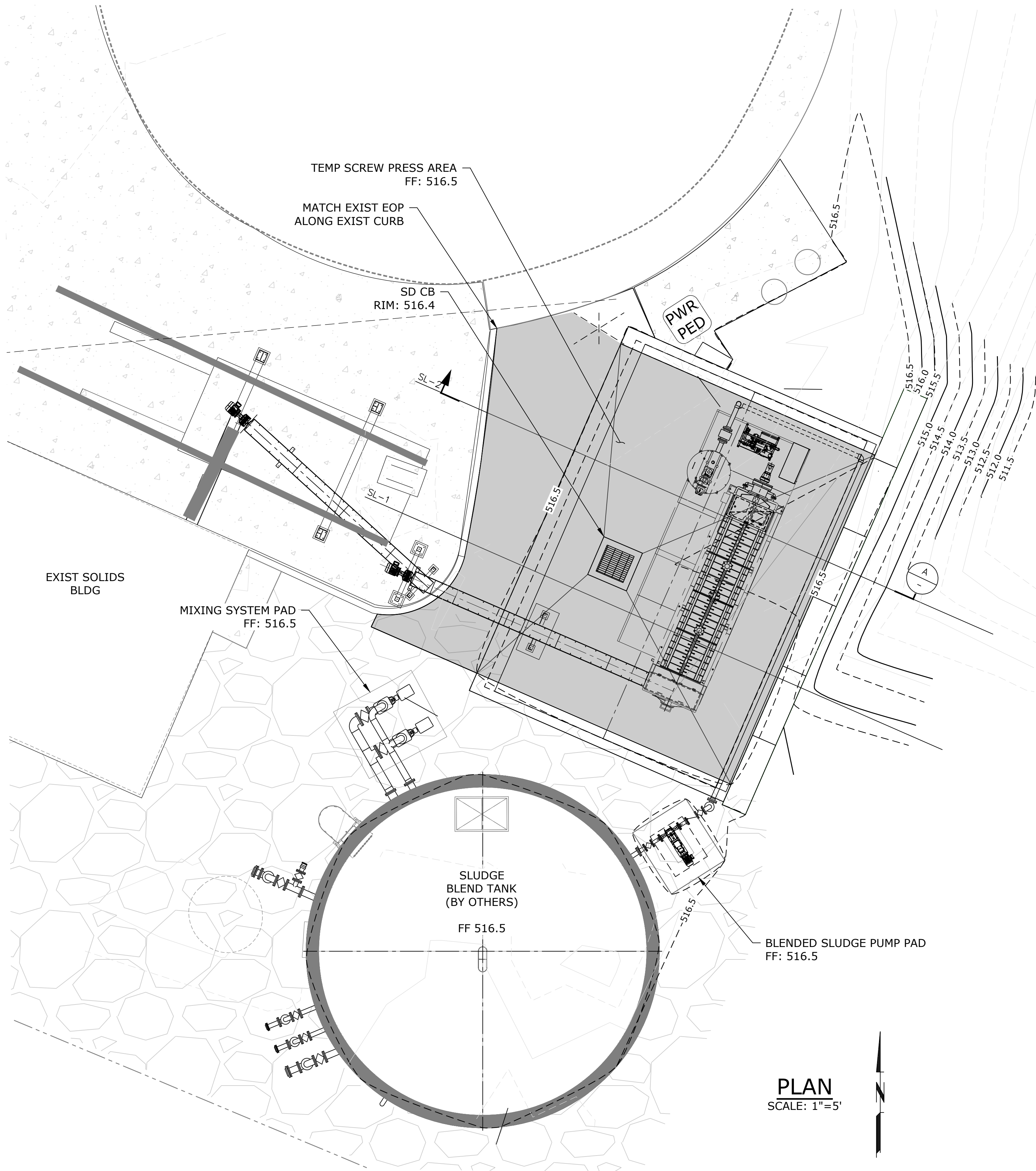


MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

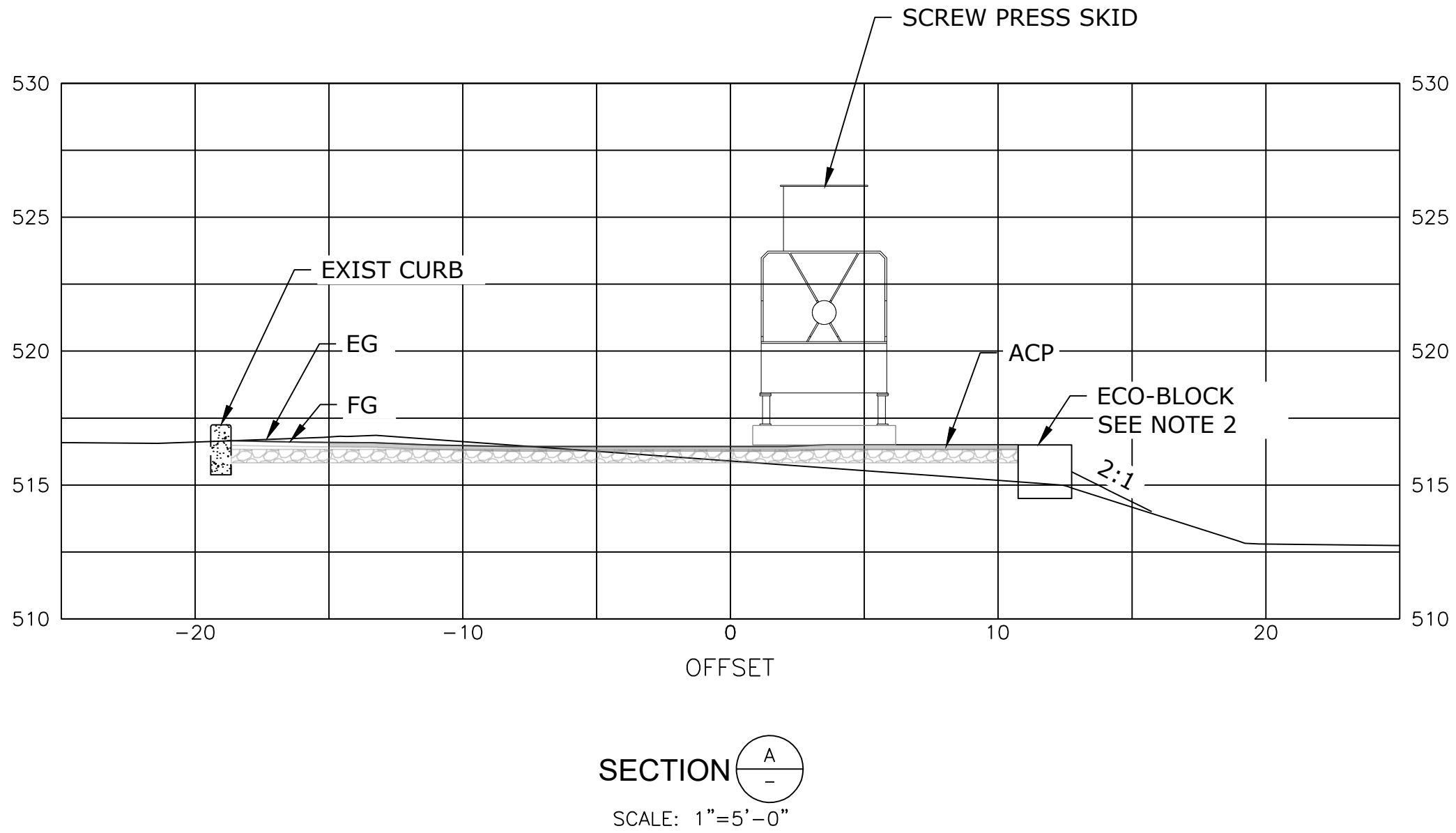
EROSION CONTROL DETAILS			
PROJECT NO.:	936-50-21-09	SCALE:	AS SHOWN
DATE:	FEBRUARY 2023		

SHEET
C-042
16 of 42

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- NOTES:
1. PROTECT EXIST UTILITIES. SEE SHEET C-011.
 2. ECO-BLOCKS ARE OWNER FURNISHED, CONTRACTOR INSTALLED.



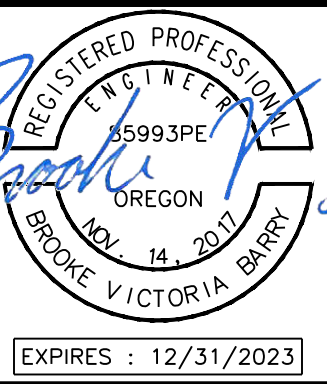
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MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBRUARY 2023

SHEET
C-050
17 of 42

YARD PIPING SCHEDULE

TEMP STORM DRAIN

- 1 FURNISH & INSTALL
DRAIN INLET
I.E. 10" OUT=512.5
SEE DETAIL 3, DWG C-001
- 2 FURNISH & INSTALL
45-DEG BEND
- 3 FURNISH & INSTALL
25 LF T-SD PIPE
MIN. S=2%
- 4 FURNISH & INSTALL
16 LF T-SD PIPE
MIN. S=2%
- 5 CONNECT T-SD
TO EXIST SS VAULT

TEMP BS PIPE

- ① CONNECT TO DI MJ FITTING
SEE MECH SHEETS
- ② FURNISH & INSTALL
29 LF T-BS PIPE
3-FEET COVER
- ③ FURNISH & INSTALL
90-DEG BEND
- ④ FURNISH & INSTALL
10.5 LF T-BS PIPE
- ⑤ FURNISH & INSTALL
90-DEG BEND UP
TRANSITION TO DI PIPE
SEE MECH SHEETS

TEMP WAS PIPELINE

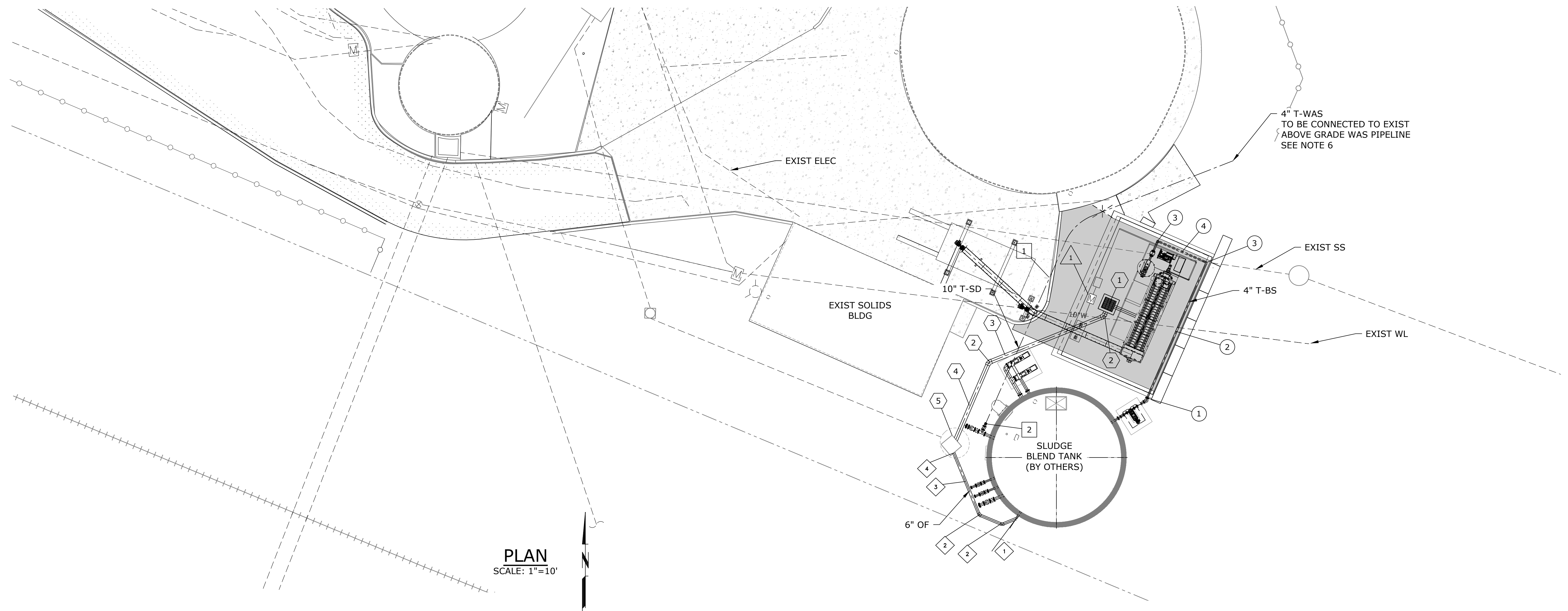
1. INSTALL OWNER SUPPLIED TEMP 4" PIPE/TUBING TEMP PIPE SHALL BE INSTALLED ABOVE GRADE SEE NOTE 6
 2. CONNECT T-WAS TO CAMLOCK SEE MECH SHEETS
- OF PIPELINE
1. CONNECT TO DI M1 FITTING SEE MECH SHEETS
 2. FURNISH & INSTALL 45-DEG BEND
 3. FURNISH & INSTALL 21 LF OF PIPE MIN. S=2%
 4. CONNECT OF TO EXIST SS VAULT

TEMP POTABLE WATER SERVICE

- 1 INSTALL 2" WATER SERVICE
W/2" BACKFLOW ASSEMBLY
SEE DETAILS ON SHEET C-002
CONNECT 1" PW TO POLYMER
CONNECT 2" PW TO SCREW PRESS
SEE MECHANICAL SHEETS


NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION AND PIPE MATERIAL OF ALL EXISTING PIPES TO BE CONNECTED TO PRIOR TO ORDERING MATERIALS. PROTECT ALL EXISTING PIPELINES TO REMAIN FROM DAMAGE DURING CONSTRUCTION.
2. CONTRACTOR SHALL PROVIDE AND INSTALL VERTICAL BENDS IN PROPOSED FORCEMAINS AS NECESSARY TO RESOLVE CROSSING CONFLICTS. SUBMIT PROPOSED UTILITY CONFLICT RESOLUTIONS TO THE ENGINEER FOR APPROVAL.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ADEQUATE THRUST RESTRAINT SYSTEMS (RESTRAINED PIPE JOINTS). THRUST BLOCKS ARE NOT ALLOWED.
4. FINAL ALIGNMENT OF PIPING AND CONDUITS AND LOCATION OF CONNECTIONS TO EXISTING PIPING AND CONDUITS (HORIZONTAL & VERTICAL) TO BE DETERMINED BY CONTRACTOR BASED ON ACTUAL LOCATION OF EXISTING UTILITIES AND SURFACE FEATURES, WITH PRIOR APPROVAL BY ENGINEER.
5. SEE SPECIFICATION SECTION 40 0510 FOR PIPE TYPE SCHEDULE. 3-FOOT MIN. COVER UNLESS NOTED OTHERWISE.
6. CONTRACTOR TO VERIFY QUANTITY OF TEMPORARY PIPE FROM EXIST WAS PIPE TO SLUDGE BLEND TANK AND CONNECTION LOCATION TO EXIST WAS.



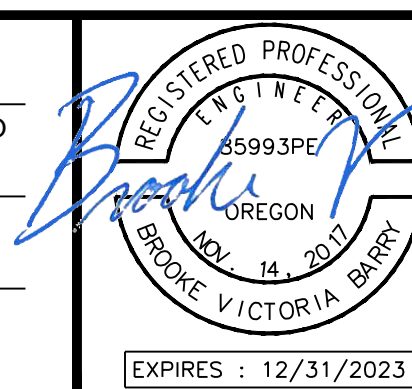
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Water. Engineered.



MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

YARD PIPING PLAN

SHEET

C-060

3 of 42

SPECIAL INSPECTIONS:			
VERIFICATION AND INSPECTION		CONTINUOUS	PERIODIC
REFERENCED STANDARD			
OSSC TABLE 1705.6, SOILS:			
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.			X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.			X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.			X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X		
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.			X
OSSC TABLE 1705.3, CONCRETE CONSTRUCTION:			
1. INSPECT REINFORCEMENT AND VERIFY PLACEMENT.		X	OSSC 1908.4
2. REINFORCING BAR WELDING: A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706. B. INSPECT SINGLE PASS FILLET WELDS, MAXIMUM 5/16". C. INSPECT ALL OTHER WELDS.	X	X X	
3. INSPECT ANCHORS CAST IN CONCRETE.		X	
4. INSPECT ANCHORS POST INSTALLED IN HARDENED CONCRETE MEMBERS. A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	X	X	
5. VERIFY USE OF REQUIRED MIX DESIGN.		X	OSSC 1904.1, 1904.2 1908.2, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X		OSSC 1908.10
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X		OSSC 1908.6, 1908.7 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		X	OSSC 1908.9
9. INSPECT PRESTRESSED CONCRETE FOR: A. APPLICATION OF PRESTRESSING FORCES. B. GROUTING OF BONDED PRESTRESSING TENDONS.	X X		
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.		X	
11. VERIFY IN-SITU CONCRETE STRENGTH PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.		X	
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		X	
OSSC TABLE 1705.2, STEEL CONSTRUCTION:			
1. MATERIAL VERIFICATION OF HIGH STRENGTH BOLTS, NUTS AND WASHERS: A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS AND SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS. B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.		X X	AISC 360, SECTION A3.3 AND APPLICABLE ASTM MATERIAL STANDARDS
2. INSPECTION OF HIGH STRENGTH BOLTING: A. SNUG TIGHT JOINTS. B. PRETENSIONED AND SLIP CRITICAL JOINTS USING TURN OF THE NUT WITHOUT MATCHMAKING, TWIST OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION. C. PRETENSIONED AND SLIP CRITICAL JOINTS USING TURN OF THE NUT METHOD MATCHMAKING OR CALIBRATED WRENCH METHODS OF INSTALLATION.	X	X X	AISC 360 SECTION M2.5
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL: A. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360. B. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS. C. MANUFACTURER'S CERTIFIED TEST REPORTS.		X X X	AISC 360, SECTION N2.1 APPLICABLE ASTM MATERIAL STANDARDS
4. MATERIAL VERIFICATION OF COLD FORMED STEEL DECK: A. MANUFACTURER'S CERTIFIED TEST REPORTS.		X	
5. MATERIAL VERIFICATION OF WELD FILLER MATERIALS: A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS. B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.		X X	AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS
6. INSPECTION OF WELDING: A. STRUCTURAL STEEL AND COLD FORMED STEEL DECK 1. COMPLETE AND PARTIAL PENETRATION GROOVE WELDS. 2. MULTIPASS FILLET WELDS. 3. SINGLE PASS FILLET WELDS > 5/16". 4. PLUG AND SLOT WELDS. 5. SINGLE PASS FILLET WELDS < 5/16". 6. FLOOR AND ROOF DECK WELDS.	X X X X	 X	AWS D1.1 AWS D1.3
B. REINFORCING STEEL: 1. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706. 2. REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT. 3. SHEAR REINFORCEMENT. 4. OTHER REINFORCING STEEL.	 X X	 X	AWS D1.4 ACI 318, SECTION 4.2.2
7. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE: A. DETAILS SUCH AS BRACING AND STIFFENING. B. MEMBER LOCATION. C. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.		X X X	

NOTE: SPECIAL INSPECTION SHALL BE PROVIDED FOR ALL STRUCTURAL ELEMENTS REQUIRING SPECIAL INSPECTION REGARDLESS OF WHETHER THE WORK IS PERFORMED ONSITE OR OFFSITE (SHOP).

STRUCTURAL SUBMITTALS

SHOP DRAWINGS AND PRODUCT DATA SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO ORDERING, FABRICATION AND CONSTRUCTION REGARDING ALL STRUCTURAL ITEMS INCLUDING:

CONCRETE MIX DESIGNS
CONCRETE AND MASONRY REINFORCING STEEL
ITEMS EMBEDDED IN CONCRETE
STRUCTURAL STEEL
METAL COVER

IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF OREGON. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND ARE SUBJECT TO THE REVIEW AND ACCEPTANCE OF THE ENGINEER.

DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS, INCLUDING: METAL COVER, AND MANUFACTURER SUPPLIED CONVEYOR SUPPORTS. SHALL BEAR THE SEAL AND SIGNATURE OF A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF OREGON AND SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FABRICATION. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE, CONSIDERING LOCALIZED EFFECTS ON THE STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED ON THE REQUIREMENTS OF THE OSSC.

SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC. CONTRACTOR SHALL NOT BE RELIEVED FROM RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS OR SUBMITTALS BY THE ENGINEER'S REVIEW.

CONTRACTOR RESPONSIBILITIES

CONTRACTOR RESPONSIBILITIES: THE CONTRACTOR IS RESPONSIBLE FOR CARRYING OUT THE REQUIREMENTS OF THESE DOCUMENTS THROUGH THE USE OF THEIR OWN EFFORTS OR THAT OF SUB-CONTRACTORS.

THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION METHODS, TECHNIQUES, SEQUENCING AND SAFETY REQUIRED TO COMPLETE THE WORK. ALL INSTRUCTIONS CONTAINED IN THESE DOCUMENTS ARE INTERPRETED TO BE INSTRUCTIONS TO THE CONTRACTOR AND ARE THE RESPONSIBILITY OF THE CONTRACTOR TO FULFIL.

VERIFY EXISTING CONDITIONS PRIOR TO PROCEEDING WITH CONSTRUCTION. IMMEDIATELY BRING DISCREPANCIES TO THE ATTENTION OF THE ENGINEER OF RECORD (EOR).

MEASURE DIMENSIONS OF ANY EXISTING STRUCTURES ASSOCIATED WITH THE WORK AND COORDINATE WITH REQUIRED DIMENSIONS FOR NEW CONSTRUCTION. DRAWINGS SCALES ARE INDICATED FOR REFERENCE TO ASSIST WITH CLARIFYING THE WORK AND PROVIDING PROPORTIONS THAT RESEMBLE ACTUAL CONDITIONS. DO NOT MEASURE DRAWINGS FOR CONSTRUCTION. USE TEXT DIMENSIONS PROVIDED. REQUEST UNKNOWN DIMENSIONS FROM THE ENGINEER WITH SUFFICIENT LEAD TIME TO PREVENT CONSTRUCTION DELAYS. FIELD VERIFY DIMENSIONS.

ARRANGE FOR AND COORDINATE WORK BY TRADES AND SUPPLIERS. FACILITATE REQUIRED INSPECTIONS, SPECIAL INSPECTIONS AND TESTS SPECIFIED BY THE CONTRACT DOCUMENTS, BUILDING CODE AND PERMIT. WHERE COVERINGS OR WORK CONCEALS ITEMS OR AREAS TO BE INSPECTED PRIOR TO SATISFACTORY APPROVAL THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF COVERINGS OR WORK AS NECESSARY WITHOUT COST TO THE OWNER OR ENGINEER.

THE STRUCTURES SHALL BE FULLY BRACED FOR DEAD, LIVE, SNOW, SOIL, FLUID, WIND AND SEISMIC LOADS DURING CONSTRUCTION. THE CONTRACTOR SHALL BRACE THE WORK UNTIL THE PERMANENT LATERAL FORCE RESISTING SYSTEM IS COMPLETED.

INSTALL ITEMS MANUFACTURED OR SUPPLIED BY OTHERS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

WHERE DETAILS OF CONSTRUCTION ARE NOT EXPLICITLY SHOWN, PROVIDE MATERIALS AND CONSTRUCTION OF THE SAME TYPE AND CHARACTER AS THAT OF SIMILAR CONDITIONS USED ON THE PROJECT. THE ACTUAL DETAILS USED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING MATERIALS OR BEGINNING CONSTRUCTION.

ANY CONFLICT OR DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD FOR CLARIFICATION AND RESOLUTION PRIOR TO ORDERING MATERIALS OR BEGINNING CONSTRUCTION.

GENERAL STRUCTURAL NOTES

GENERAL: DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE TYPICAL AND APPLY TO SIMILAR SITUATIONS ELSEWHERE, EXCEPT AS OTHERWISE INDICATED. ADAPT REQUIREMENTS OF DETAILS, SECTIONS, PLANS, AND NOTES AT LOCATIONS WHERE CONDITIONS ARE SIMILAR.

CENTER ALL FOOTINGS AND PIERS UNDER COLUMNS AND WALLS ABOVE UNLESS SPECIFICALLY DIMENSIONED OTHERWISE.

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, CIVIL AND LANDSCAPE DRAWINGS. CONSULT THESE DRAWINGS FOR SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.

CONTRACTOR SHALL LOCATE ALL CONCEALED UTILITIES PRIOR TO EXCAVATION OR SELECTIVE DEMOLITION WORKS. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED OF POTENTIAL CONFLICTS BETWEEN FOUNDATIONS AND BURIED UTILITIES.

CODE REQUIREMENTS: THE STRUCTURES ARE DESIGNED IN ACCORDANCE WITH THE 2022 OREGON STRUCTURAL SPECIALTY CODE (OSSC) AND REFERENCE DOCUMENTS (ADM, ACI, AISC, AISI, ANSI, APA, ASCE/SEI, ASTM, AWC, AWWA, AWS, ICC, SDI, SJI, TMS, UL, WCLIB, ETC). FOLLOW ALL APPLICABLE PROVISIONS FOR ALL PHASES OF CONSTRUCTION.

TEMPORARY CONDITIONS: THE STRUCTURAL INTEGRITY OF THE COMPLETED STRUCTURE DEPENDS ON INTERACTION OF VARIOUS CONNECTED COMPONENTS. PROVIDE ADEQUATE BRACING, SHORING, AND OTHER TEMPORARY SUPPORTS AS REQUIRED TO SAFELY COMPLETE THE WORK. THE STRUCTURE SHOWN ON THE DRAWINGS HAS BEEN DESIGNED FOR STABILITY UNDER FINAL CONFIGURATION ONLY.

EXISTING CONDITIONS: ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY SIGNIFICANT DISCREPANCIES FROM CONDITIONS SHOWN ON THE DRAWINGS.

EXISTING STRUCTURE: EXERCISE EXTREME CARE AND CAUTION WHEN EXCAVATING AND FILLING ADJACENT TO EXISTING STRUCTURES. UNDER NO CIRCUMSTANCES SHALL THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURES BE IMPAIRED IN ANY WAY BY CONSTRUCTION OPERATIONS AND PROCEDURES. DO NOT EXCAVATE OR DISTURB SOIL ADJACENT TO OR BENEATH EXISTING FOOTINGS.

DESIGN CRITERIA: THE FOLLOWING CRITERIA WERE USED TO DETERMINE PROJECT LOADS.

VERTICAL LOADS:
GROUND SNOW LOAD: 20 PSF SL
RAIN ON SNOW SURCHARGE: 5 PSF

FLOOR LIVE LOADS:
PROCESS 125 PSF LL, 2000 LB CONCENTRATED

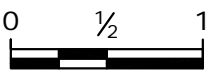
LATERAL LOADS:
SEISMIC: RISK CATEGORY 3, SITE CLASS B, S_s=0.63, S_i=0.34, F_a=1.00, F_v=1.00, S_{MS}=0.63g, S_{M1}=0.34g, S_S=0.42g, S_{D1}=0.23g, MCE_G=0.29g, F_{PGA}=1.00, SEISMIC DESIGN CATEGORY=D.

WIND: BASIC WIND SPEED: V=104 MPH, V_{std}=85 MPH, EXPOSURE B.

SOIL:
ALLOWABLE SOIL BEARING PRESSURE FOR BELOW GRADE STRUCTURES: 5,000 PSF
ALLOWABLE SOIL BEARING PRESSURE FOR AT-GRADE STRUCTURES: 2,000 PSF
PREPARE SITE SOILS IN ACCORDANCE WITH GEOTECHNICAL ENGINEERING REPORT BY McMILLEN JACOBS ASSOCIATES, DECEMBER 2019. CONTACT McMILLEN JACOBS ASSOCIATES TO OBSERVE THE FOUNDATION EXCAVATED SURFACE PRIOR TO PLACEMENT OF STRUCTURAL FILL. ALLOW McMILLEN JACOBS TO OBSERVE PLACEMENT OF STRUCTURAL FILL. McMILLEN JACOBS ASSOCIATES: (503) 227-1800.

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NO.	DATE	BY	REVISION

NOTICE



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

ATG
DESIGNED
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DRAWN
PVM
CHECKED



MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

GENERAL STRUCTURAL NOTES
STRUCTURAL ABBREVIATIONS

SHEET

S-001

19 of 42

PROJECT NO.: 19-2605 SCALE: NONE DATE: FEBRUARY 2023

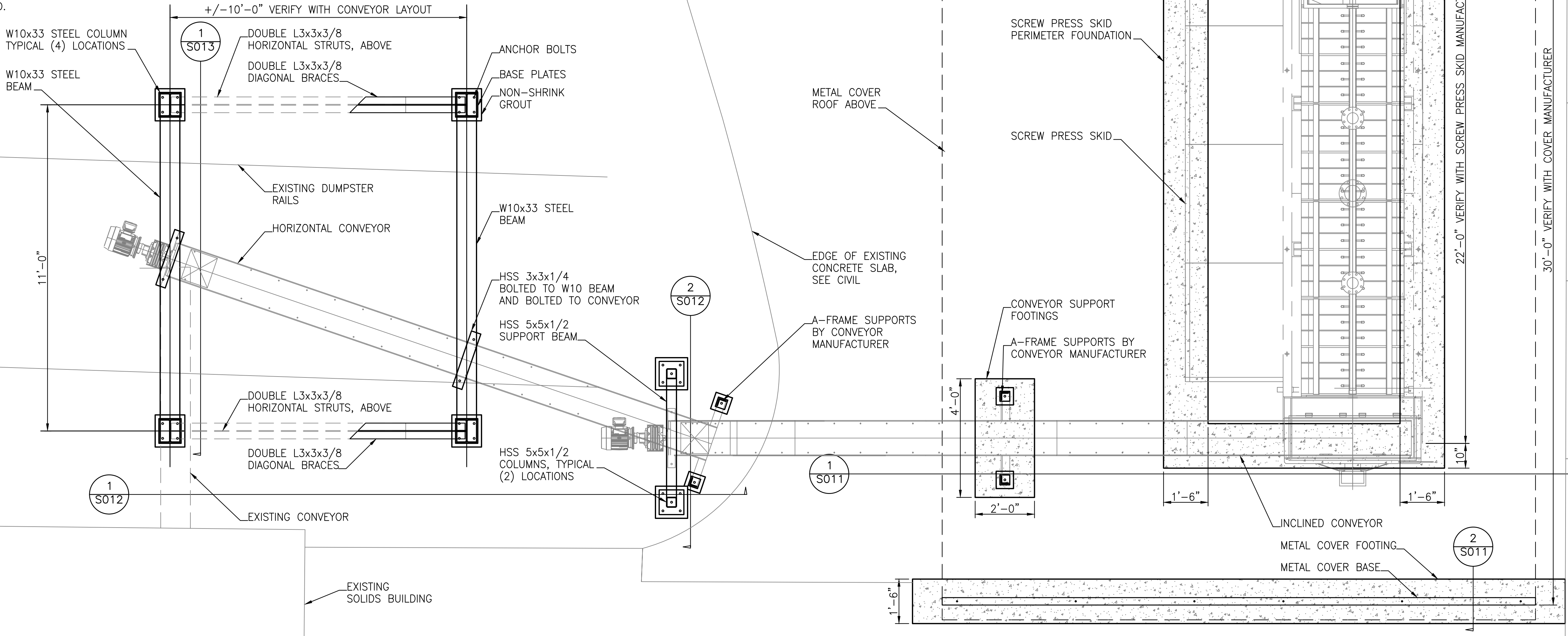
GENERAL DEFERRED SUBMITTALS:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEFERRED SUBMITTALS FOR ANCHORAGE AND RESTRAINT OF EQUIPMENT MEETING THE CRITERIA LISTED IN POINTS 1-4 BELOW AND AS FURTHER SPECIFIED. REFER TO DEFERRED SUBMITTAL LIST FOR SPECIFIC EQUIPMENT. ACCORDING TO SPECIFICATION SECTION 013300, DEFERRED SUBMITTALS MAY REQUIRE 12 OR MORE WEEKS OF REVIEW BY THE PERMITTING AGENCY, FROM CONTRACTOR SUBMISSION TO FINAL DATE OF APPROVAL.

- 400 POUNDS OR MORE ON GROUND.
- 75 POUNDS OR MORE SUSPENDED FROM CEILING.
- 5 POUNDS PER FOOT OR MORE OF PIPING OR CONDUITS.
- ALL MECHANICAL AND ELECTRICAL COMPONENT SUPPORT AND CONNECTIONS TO THE STRUCTURE UNLESS EXEMPT BY ASCE 7-16 AS MODIFIED BY THE 2022 OSSC.

METAL COVER DEFERRED SUBMITTAL:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEFERRED SUBMITTAL OF THE DESIGN, DRAWINGS, DETAILS AND STRUCTURAL CALCULATIONS FOR THE METAL COVER OVER THE SCREW PRESS. SEE SPECIFICATIONS AND S-001 FOR STRUCTURAL DESIGN CRITERIA. THE DEFERRED SUBMITTAL OF THE METAL COVER MAY REQUIRE 12 OR MOR WEEKS OF REVIEW BY THE PERMITTING AGENCY, FROM CONTRACTOR SUBMISSION TO FINAL DATE OF APPROVAL.

SCREW PRESS CONVEYOR SUPPORTS:
STRUCTURAL STEEL CONVEYOR SUPPORTS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION. PROVIDE SHOP DRAWINGS WITH VENT/DRAIN HOLES SHOWN IN LOCATIONS OF LEAST STRESS. TOUCH UP FIELD WELDS & HOLES WITH TWO COATS OF HIGH ZINC COLD GALVANIZING COMPOUND.

FOUNDATION NOTES:
1. ALL FOOTINGS SHALL BEAR ON SOIL PREPARED TO THE SATISFACTION OF THE PROJECT GEOTECHNICAL ENGINEER. OBTAIN GEOTECHNICAL ENGINEER'S APPROVAL PRIOR TO PLACING FILL, REBAR OR FORMWORK.
MCMILLEN JACOBS REPORT JULY 2022, (503)227-1800.
ALL FOOTINGS SHALL BEAR ON SOIL CAPABLE OF SUPPORTING AN ALLOWABLE BEARING PRESSURE OF 2000 PSF.
2. EXCAVATIONS SHALL COMPLY WITH OSHA REQUIREMENTS AND ANY OTHER GOVERNING AGENCY. AT NO TIME SHALL THE CONTRACTOR ALLOW UNSAFE CONDITIONS DURING CONSTRUCTION.
3. SEE MECHANICAL DRAWINGS FOR LOCATION AND DIMENSION OF OPENINGS.
4. SEE CIVIL DRAWINGS FOR EXTERIOR SLABS AND NON-STRUCTURAL ITEMS NOT PART OF THE STRUCTURE.
5. DO NOT WET SET ANCHOR BOLTS, REINFORCING OR OTHER ITEMS TO BE EMBEDDED IN CONCRETE.



1 S010 SCREW PRESS CONVEYOR FOUNDATION PLAN
SCALE: 1/2"=1'-0"

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NOTICE
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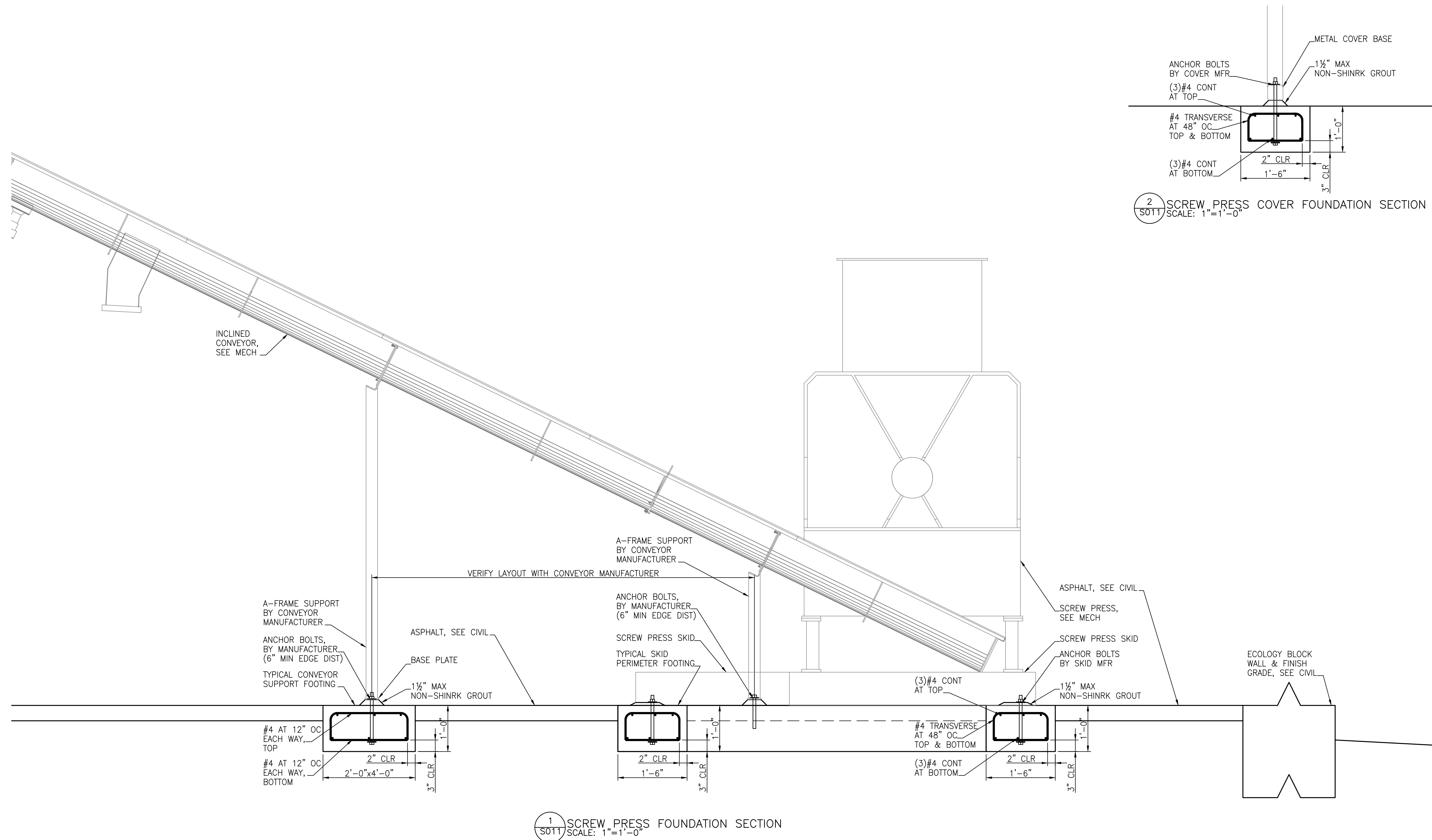
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MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

SCREW PRESS FOUNDATION PLAN

PROJECT NO.: 19-2605 SCALE: AS NOTED DATE: FEBRUARY 2023



NO.	DATE	BY	REVISION

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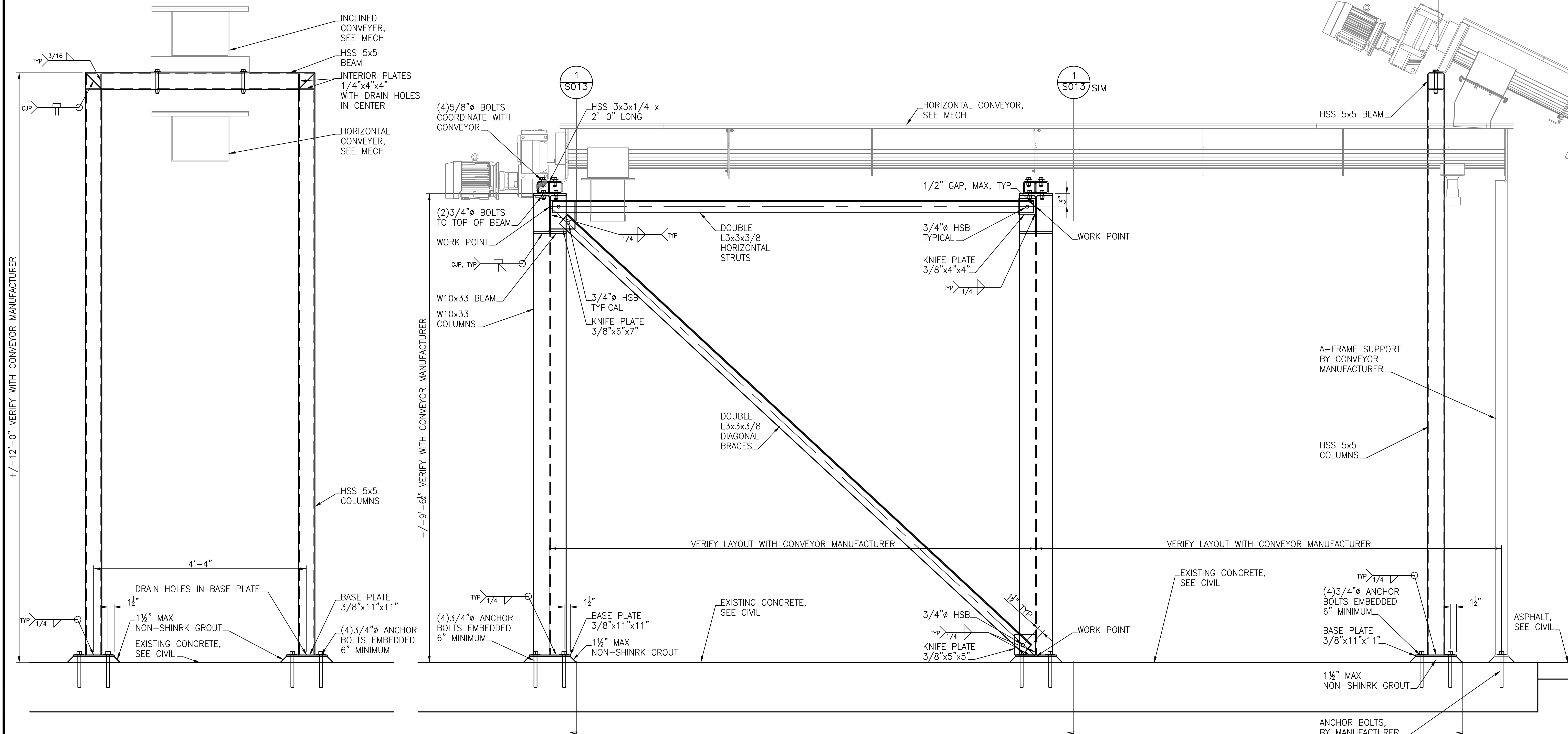
MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

SCREW PRESS SECTIONS & DETAILS			
PROJECT NO.:	19-2605	SCALE:	AS NOTED
DATE:	FEBRUARY 2023		

SHEET

S-011

21 of 42



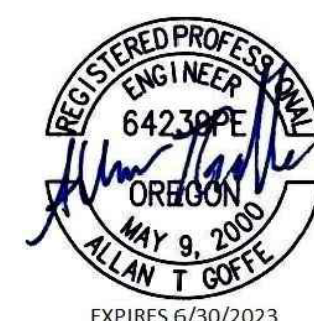
2
S012 BRIDGING CONVEYOR SUPPORT ELEVATION
SCALE: 1"=1'-0"

1
S012 SCREW PRESS CONVEYOR SUPPORTS SECTION
SCALE: 1"=1'-0"

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MAHLER WATER
RECLAMATION FACILITY
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PROJECT

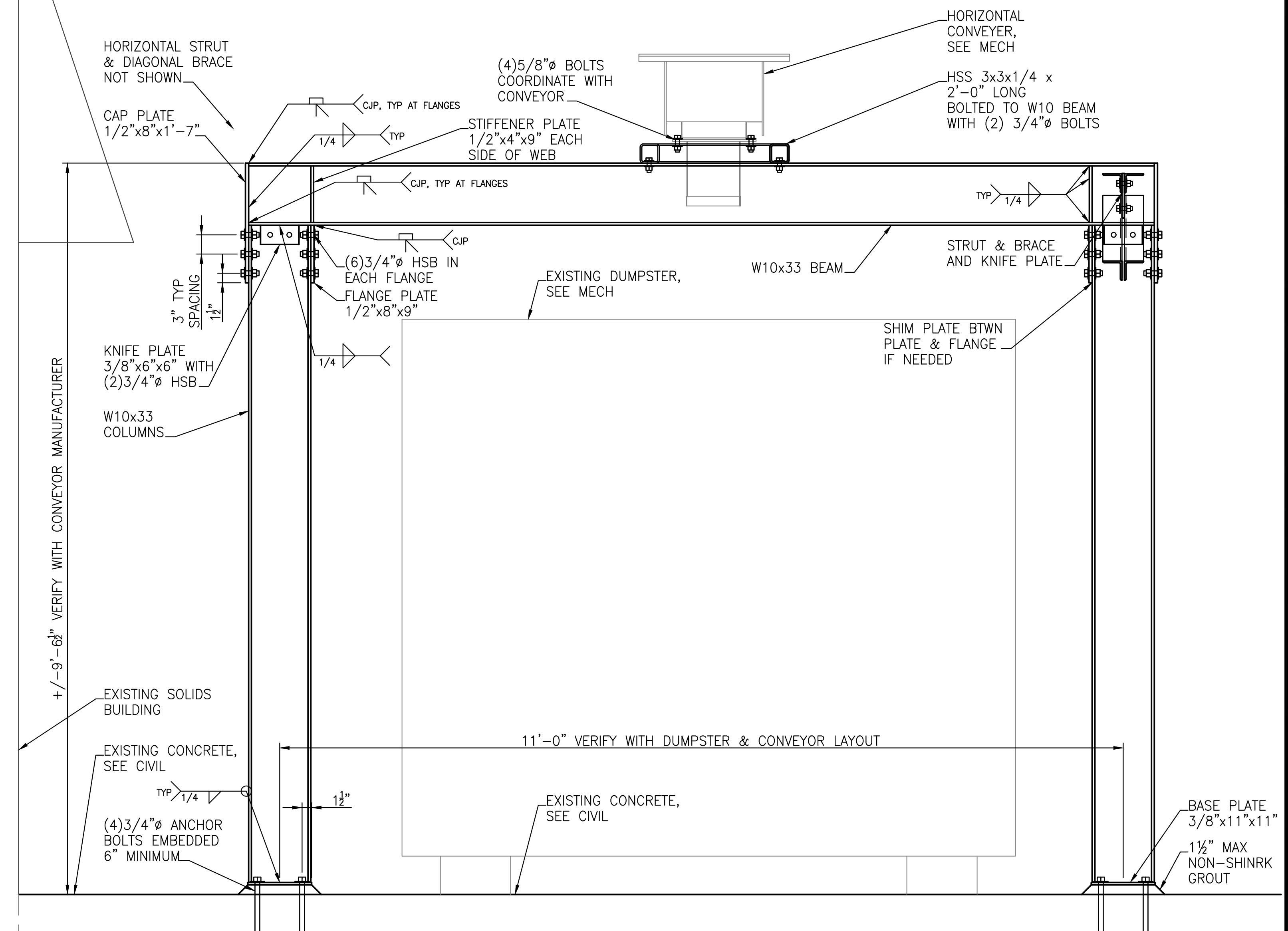
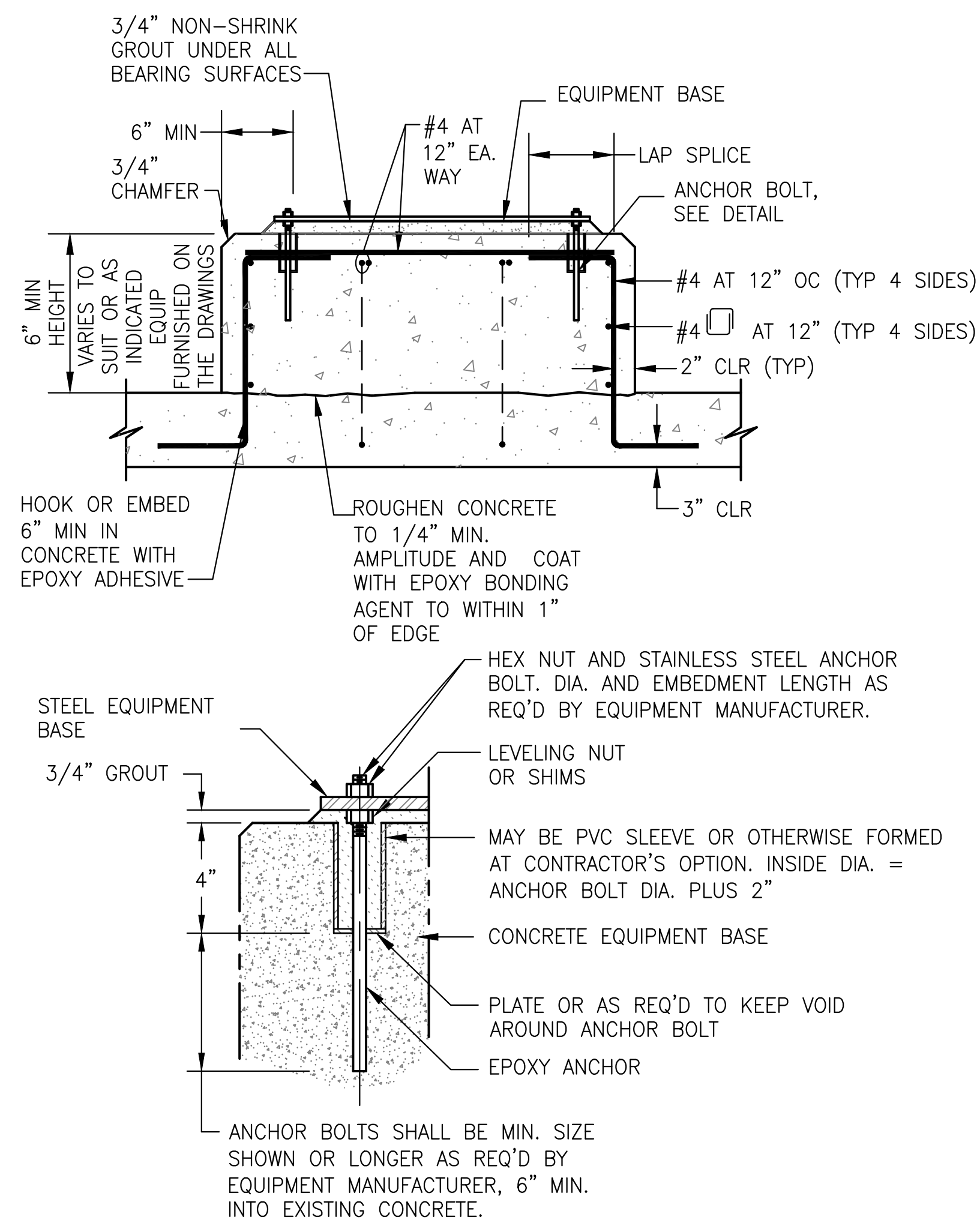
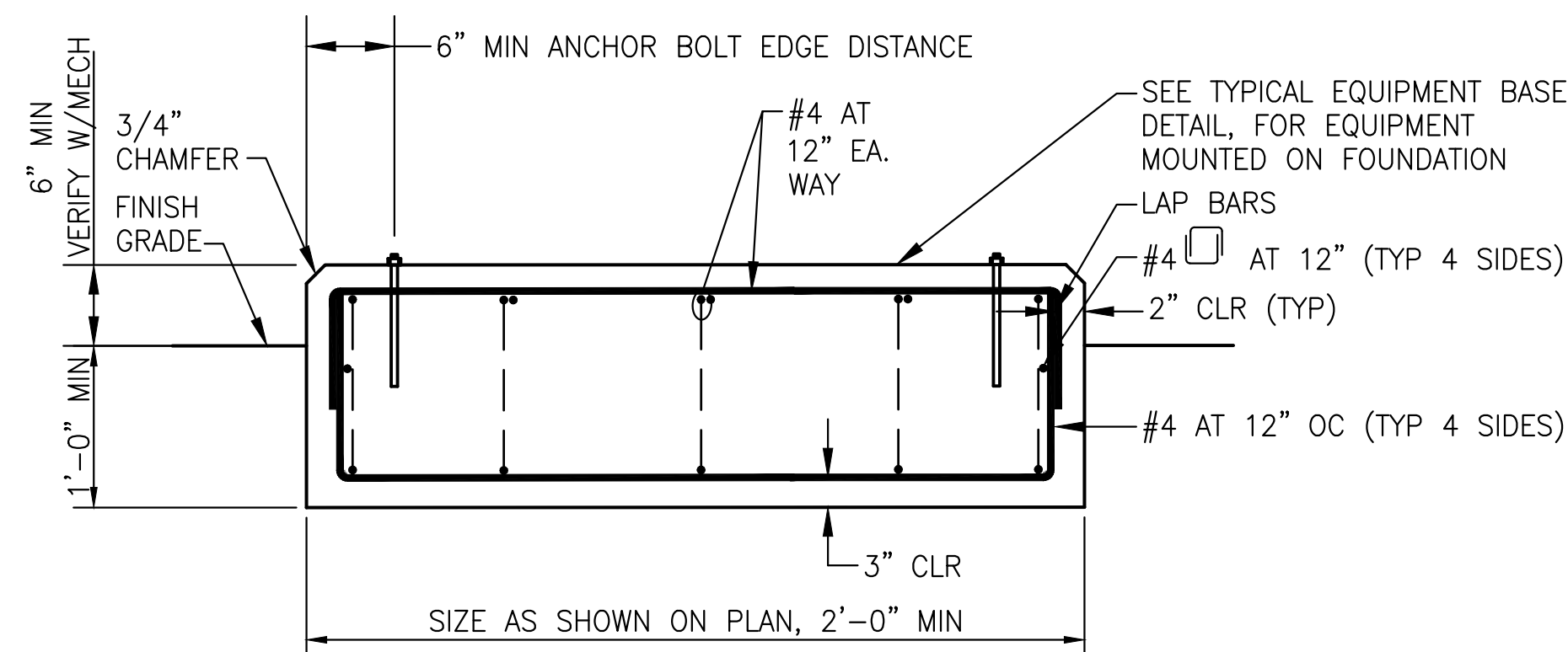
SCREW PRESS CONVEYOR SUPPORT SECTION

PROJECT NO.: 19-2605 SCALE: AS NOTED DATE: FEBRUARY 2023

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S-012

22 of 42



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MAHLER WATER
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INTERIM IMPROVEMENTS
PROJECT

<p>SCREW PRESS CONVEYOR SUPPORT SECTIONS</p>			
PROJECT NO.:	19-2605	SCALE:	AS NOTED
		DATE:	FEBRUARY 2023

SHEET

S-013

23 of 42

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MODULAR MECHANICAL
EXPANDING NITRILE
RUBBER SEAL WITH BOLTS,
NUTS, & PRESSURE PLATE

TANK SIDE OF WALL
SEE NOTES 1 & 2

PIPE

PACK EXTRA SPACE FOR
NON-SHRINK GROUT

PIPE SLEEVE,
MIN SCH 20

TANK WALL PIPE PENETRATION (DOUBLE LINK SEAL)

DETAIL 1
VAR

NOT TO SCALE

NOTES:

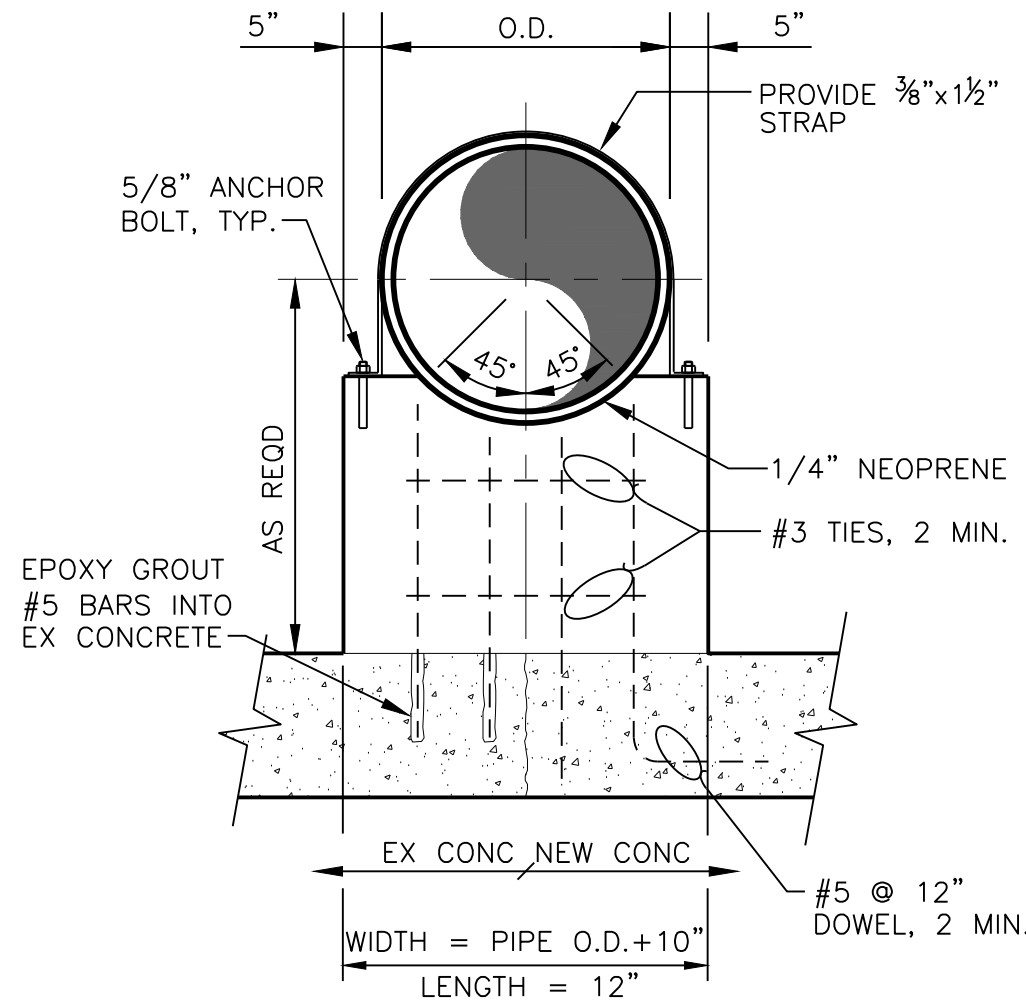
1. SLEEVE DIAMETER SHALL BE AS RECOMMENDED BY THE MECHANICAL SEAL MANUFACTURER.
2. SLEEVE NOT REQUIRED FOR PENETRATION IN EXISTING WALLS.
3. WEEP RINGS SHALL HAVE A MINIMUM DIAMETER EQUAL TO THE PIPE OR PIPE SLEEVE OUTSIDE DIAMETER PLUS 3-INCHES.
4. "TANK SIDE OF WALL" SHALL MEAN SIDE OF WALL NORMALLY EXPOSED TO LIQUID, EARTH, OR OUTSIDE ATMOSPHERE.
5. SEAL WITH MASTIC SEALANT WHERE WALL IS EXPOSED TO LIQUID, EARTH, OR EXPLOSION HAZARD AREA.

ADJUSTABLE PIPE SADDLE SUPPORT SCHEDULE					
DIMENSIONS IN INCHES					
SIZE OF SUPPORTED PIPE	PIPE SIZE "A"	PIPE SIZE "B"	"C"	"D"	
				MINIMUM	MAXIMUM
2 1/2	2 1/2	1 1/2	12	8	13
3	2 1/2	1 1/2	12	8 1/2	13 1/2
3 1/2	2 1/2	1 1/2	12	8 1/2	13 1/2
4	3	2 1/2	12	9 1/2	14
6	3	2 1/2	12	10 1/2	15 1/2
8	3	2 1/2	12	11 1/2	16 1/2
10	3	2 1/2	12	13 1/2	18 1/2
12	3	2 1/2	12	15	19 1/2

* USE 2 1/2" SUPPORTS FOR PIPES LESS THAN 2 1/2" DIAMETER

NOTE:

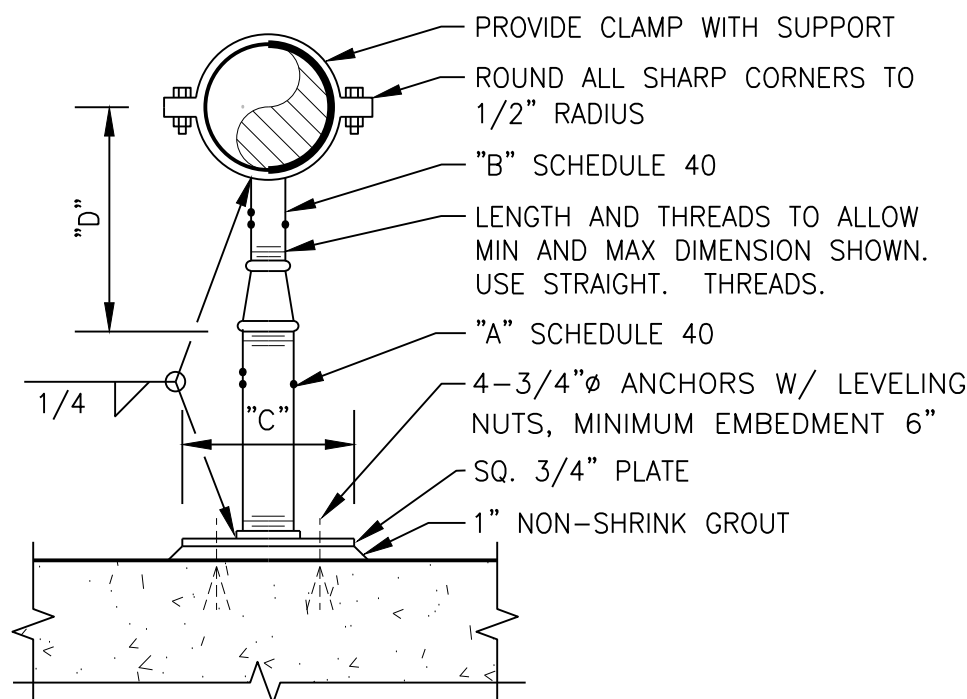
1. FOR CONNECTION TO STEEL DECK, WELD ALL AROUND WITH 1/4" FILLET.



CONCRETE PIPE SUPPORT

DETAIL 5
VAR

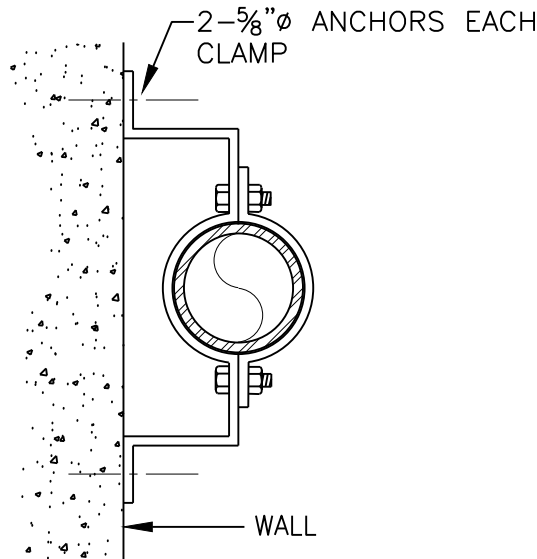
NOT TO SCALE



ADJUSTABLE PIPE SUPPORT

DETAIL 6
VAR

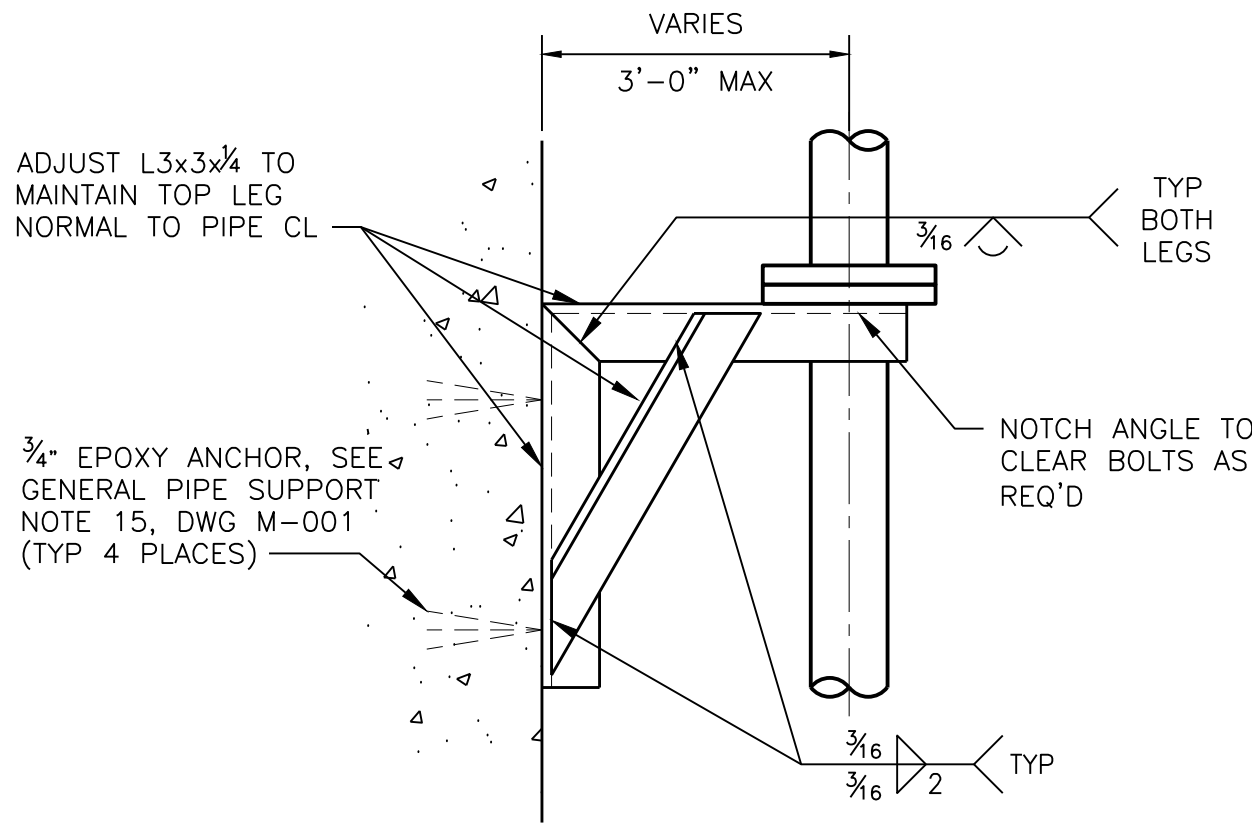
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TYPE 11 PIPE HANGER
3/4" THROUGH 8" PIPE

DETAIL 2
VAR

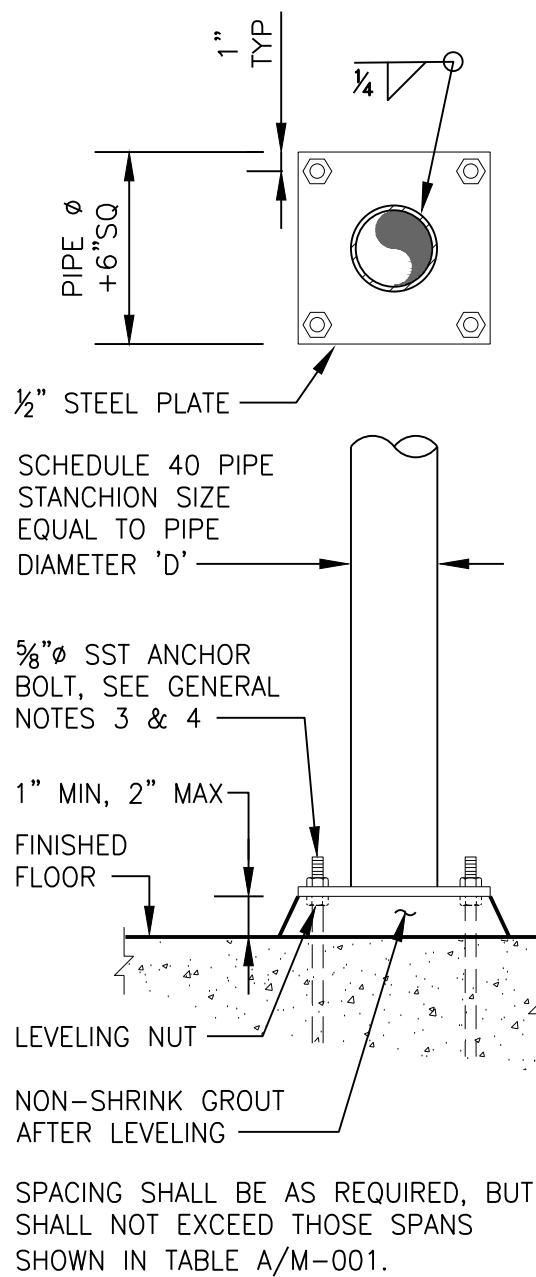
NOT TO SCALE



PIPE SUPPORT

DETAIL 3
VAR

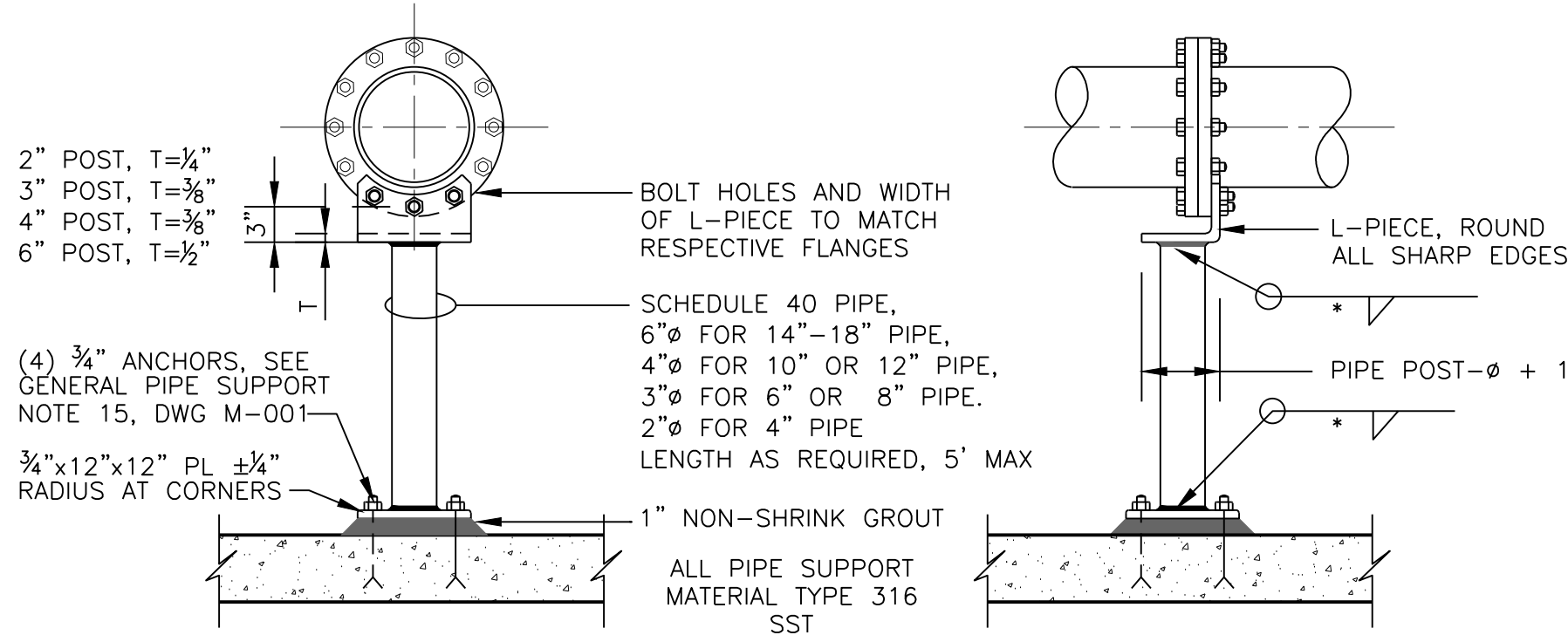
NOT TO SCALE



TYPE N STRUCTURAL ATTACHMENT

DETAIL 7
VAR

NOT TO SCALE



FLANGE MOUNTED PIPE SUPPORT

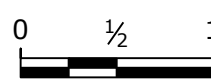
DETAIL 4
VAR

NOT TO SCALE

*NOTE:
WELD SIZE 1/4" FOR 2" -
4" POST; 3/8" FOR 6" POST.

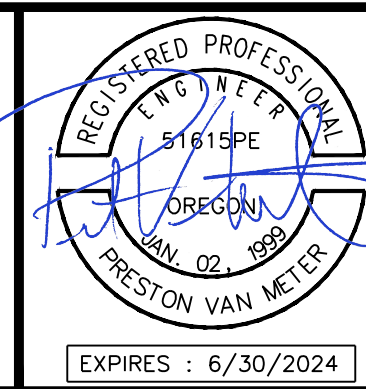
NO.	DATE	BY	REVISION

NOTICE



IF THIS BAR DOES
NOT MEASURE 1"
THEN DRAWING IS
NOT TO SCALE

HLJC
DESIGNED
SMB
DRAWN
PLVM
CHECKED



WEST YOST
Water. Engineered.



MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

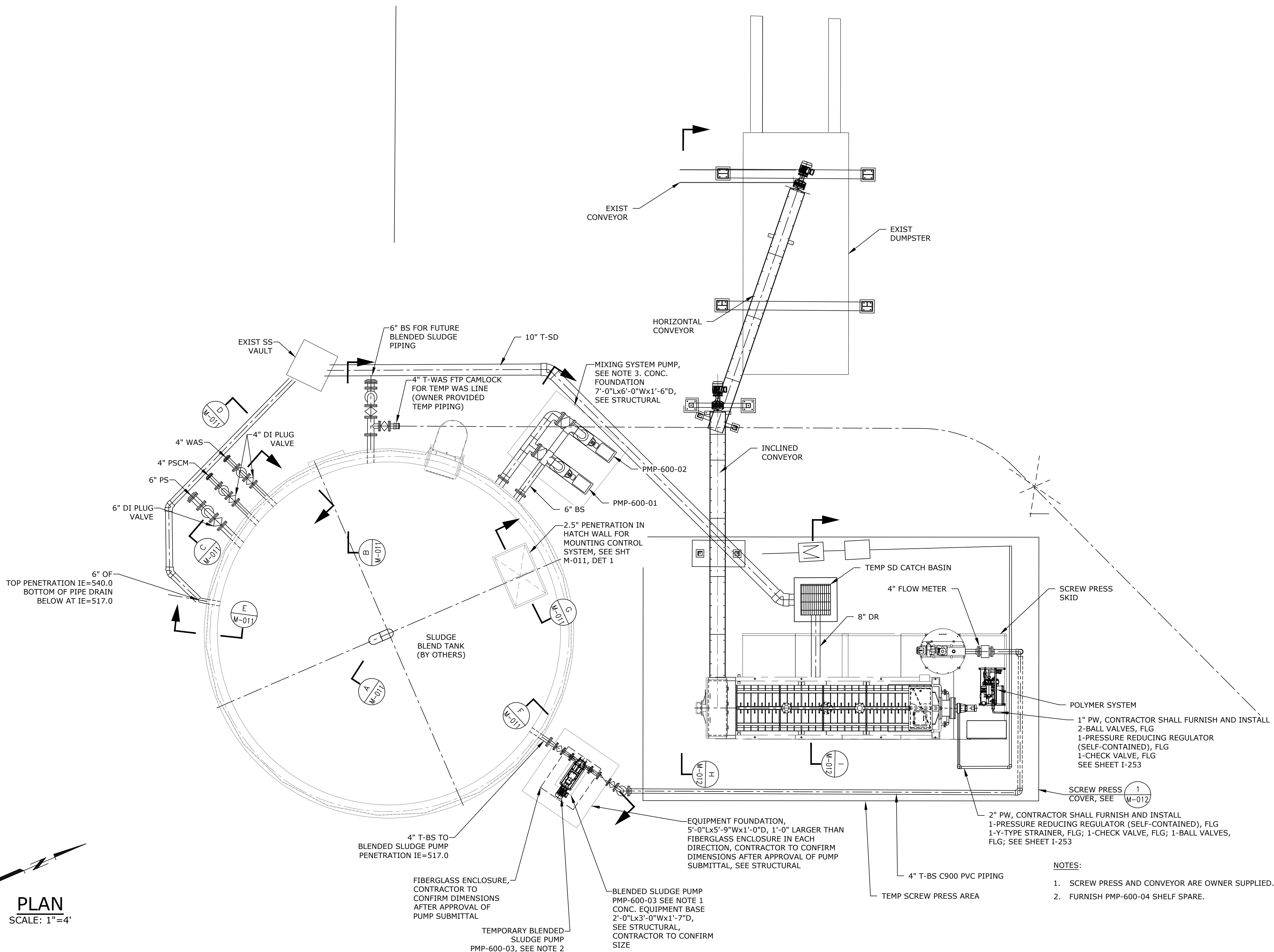
PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBRUARY 2023

SHEET

M-001

24 of 42

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- NOTES:
- 1. SCREW PRESS AND CONVEYOR ARE OWNER SUPPLIED.
 - 2. FURNISH PMP-600-04 SHELF SPARE.

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

HLJC
DESIGNED
EMR
DRAWN
PLVM
CHECKED

REGISTERED PROFESSIONAL
ENGINEER
51675 PE
OREGON
PRISTON VAN METER
EXPIRES : 6/30/2024

WEST YOST
Water. Engineered.

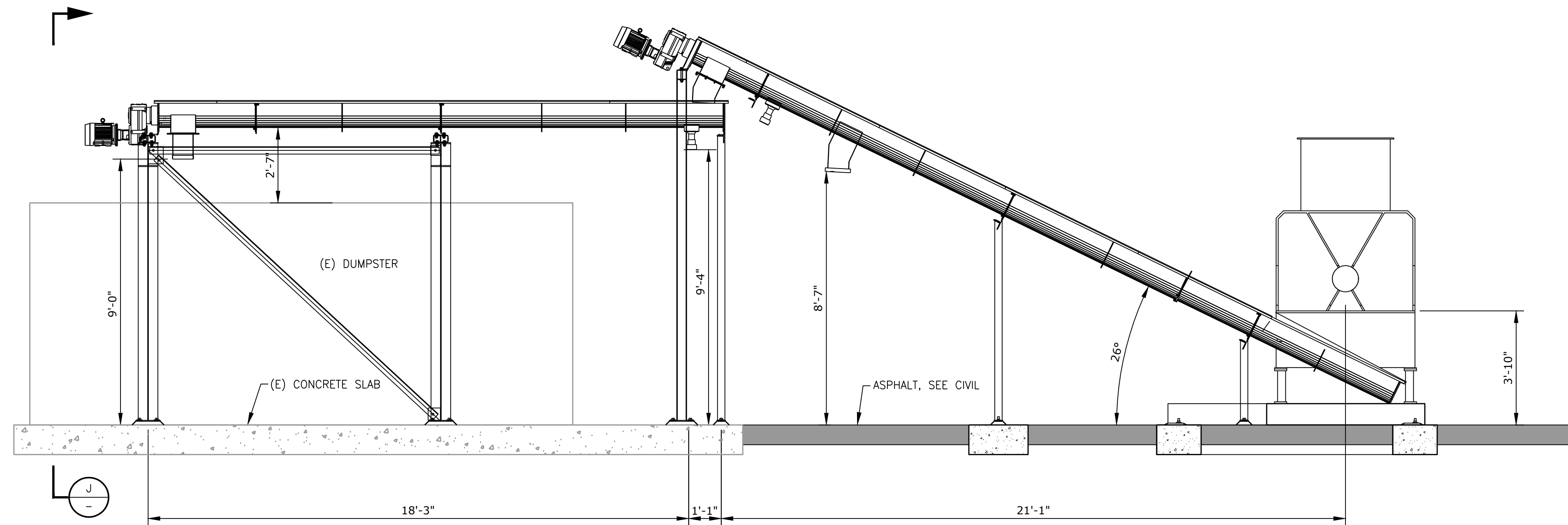
Sweet Home
Oregon
né les best!

MAHLER WATER RECLAMATION FACILITY INTERIM IMPROVEMENTS PROJECT

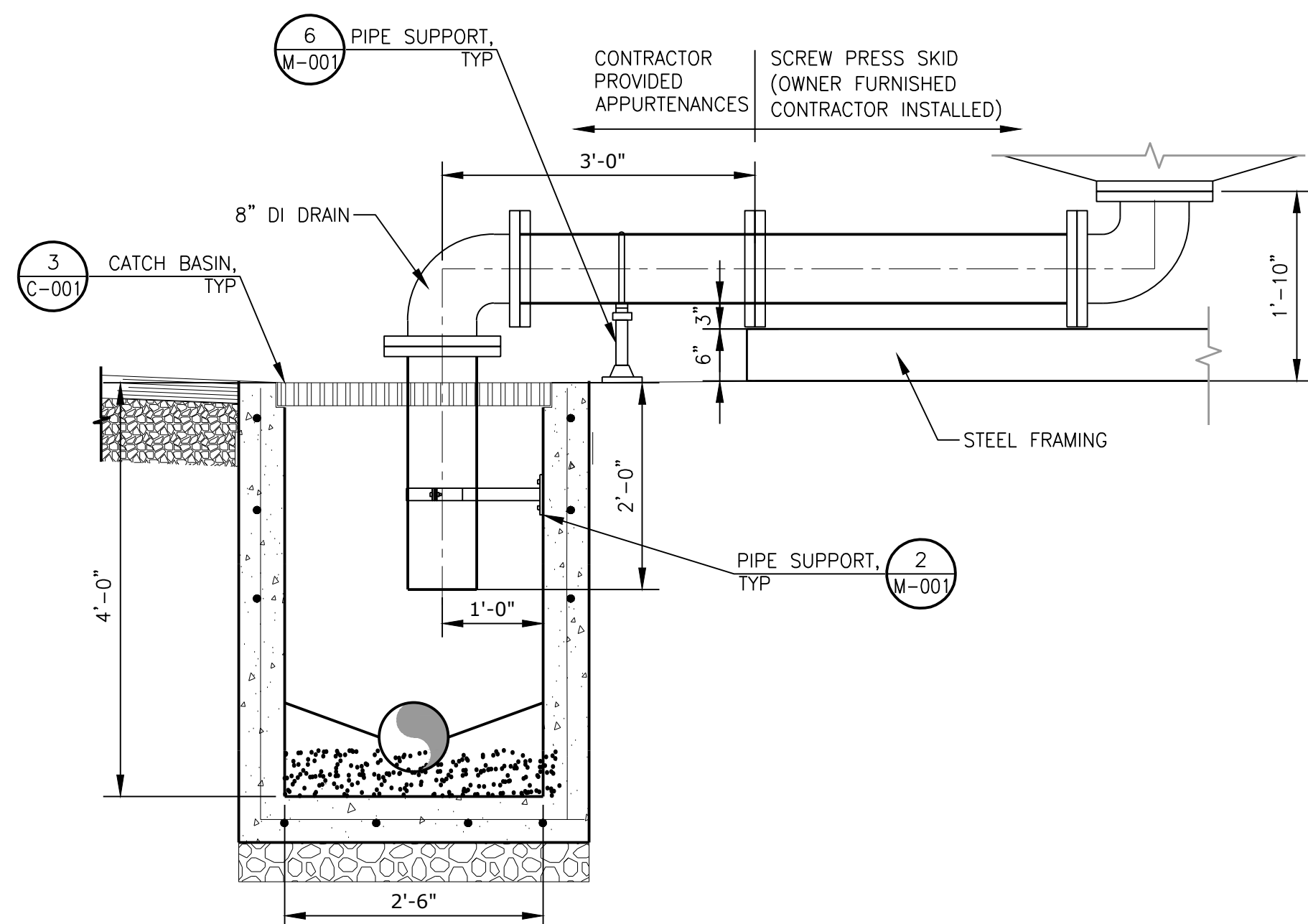
SOLIDS AREA DETAIL PLAN

PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBRUARY 2023

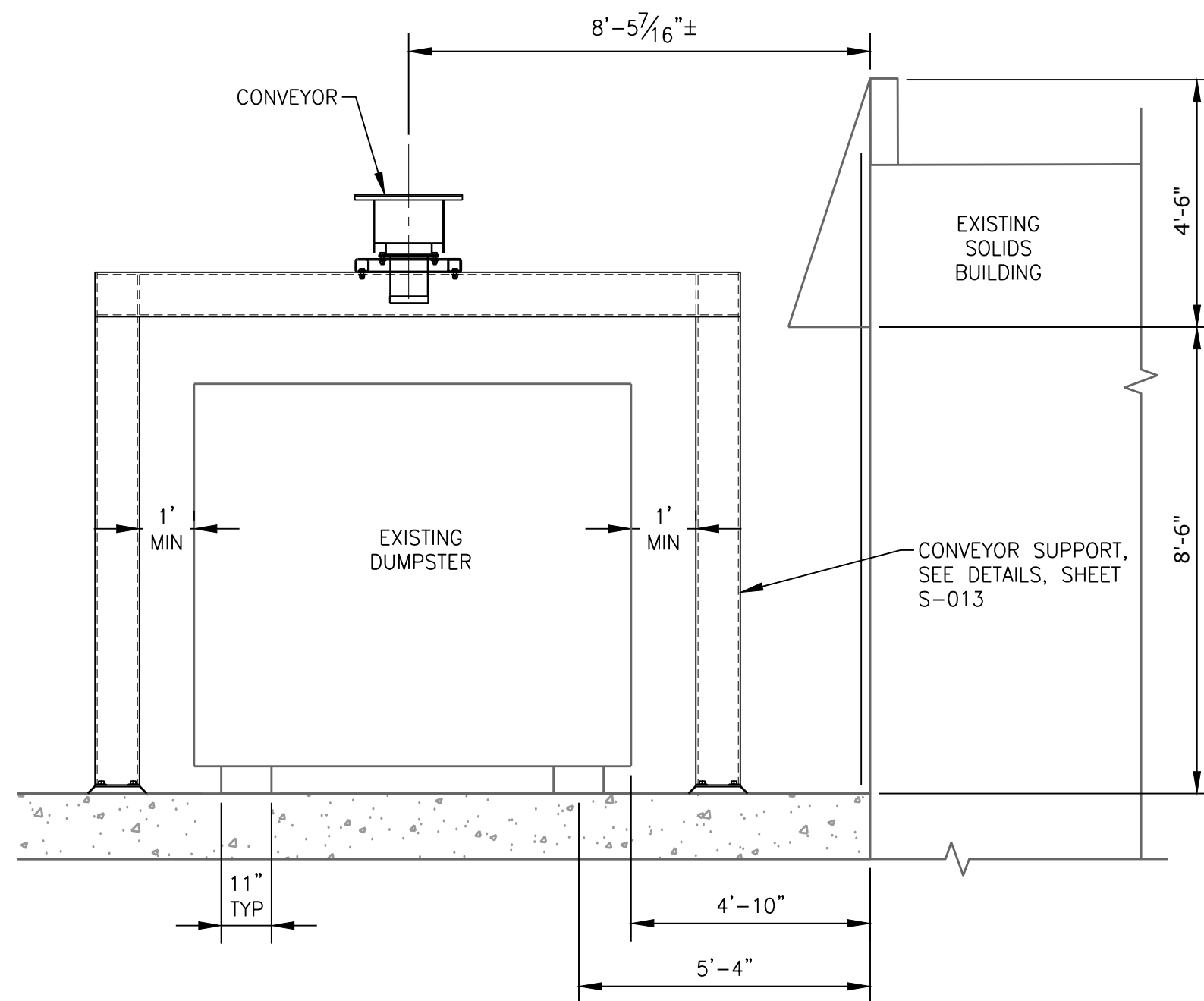
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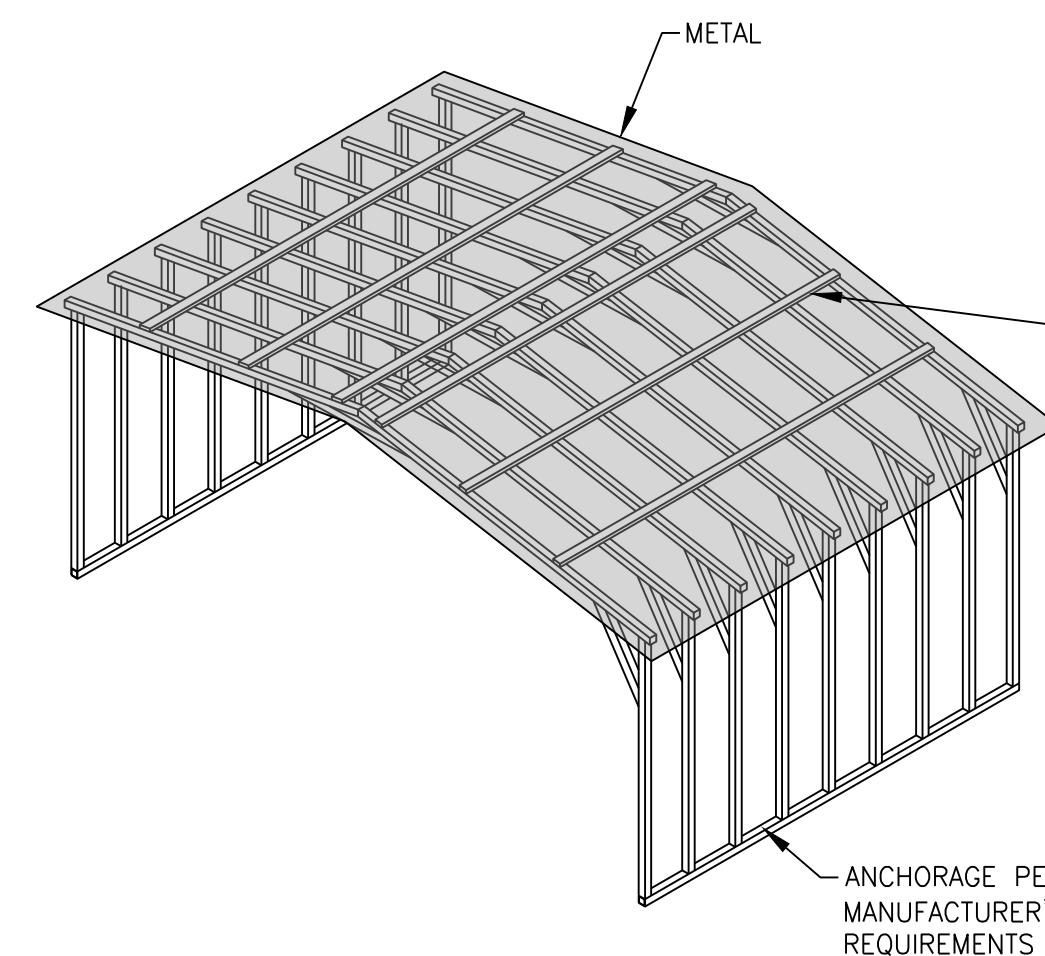
SECTION H
W-010
SCALE: 3/8"=1'-0"



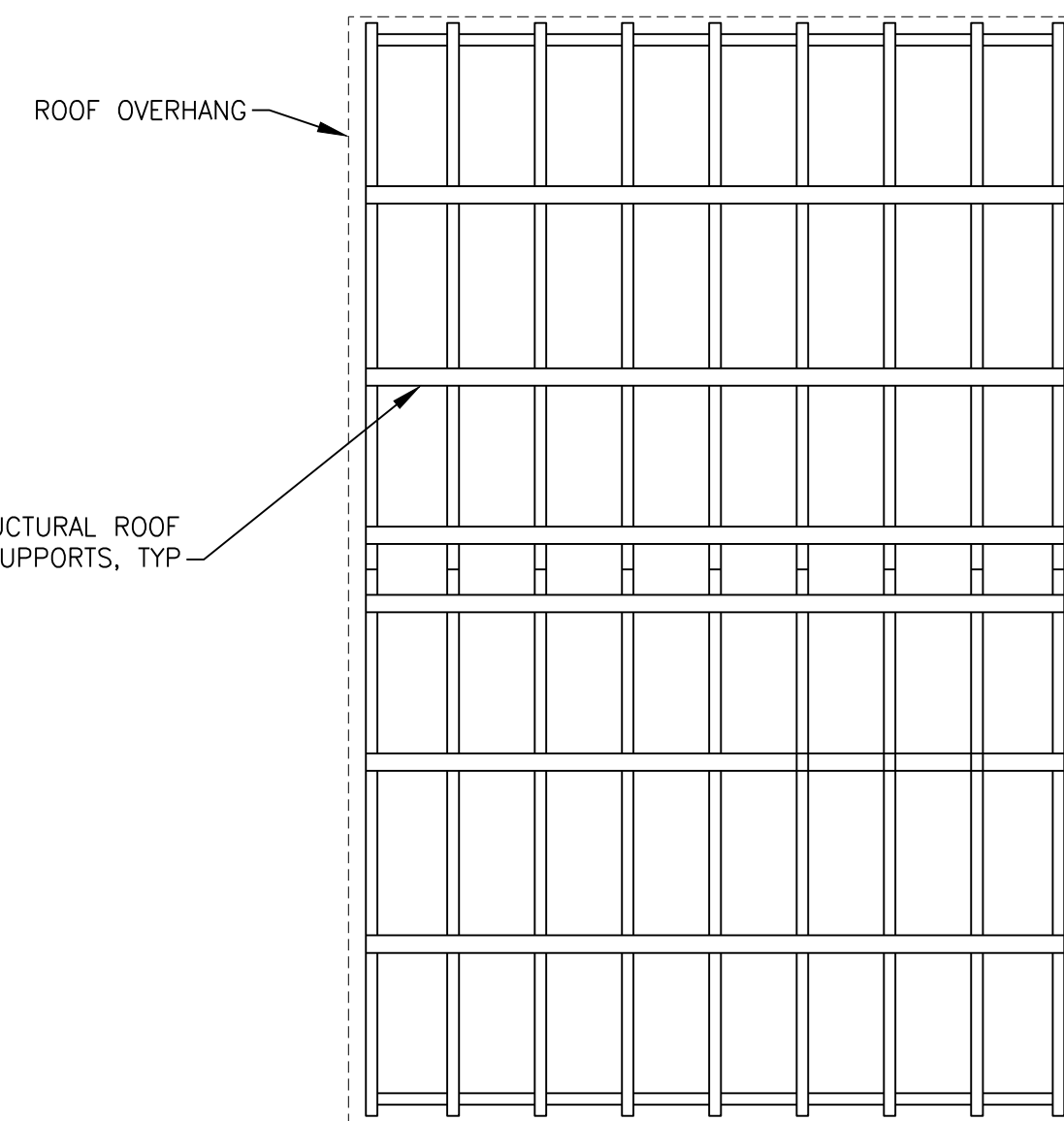
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W-010
SCALE: 3/4"=1'-0"



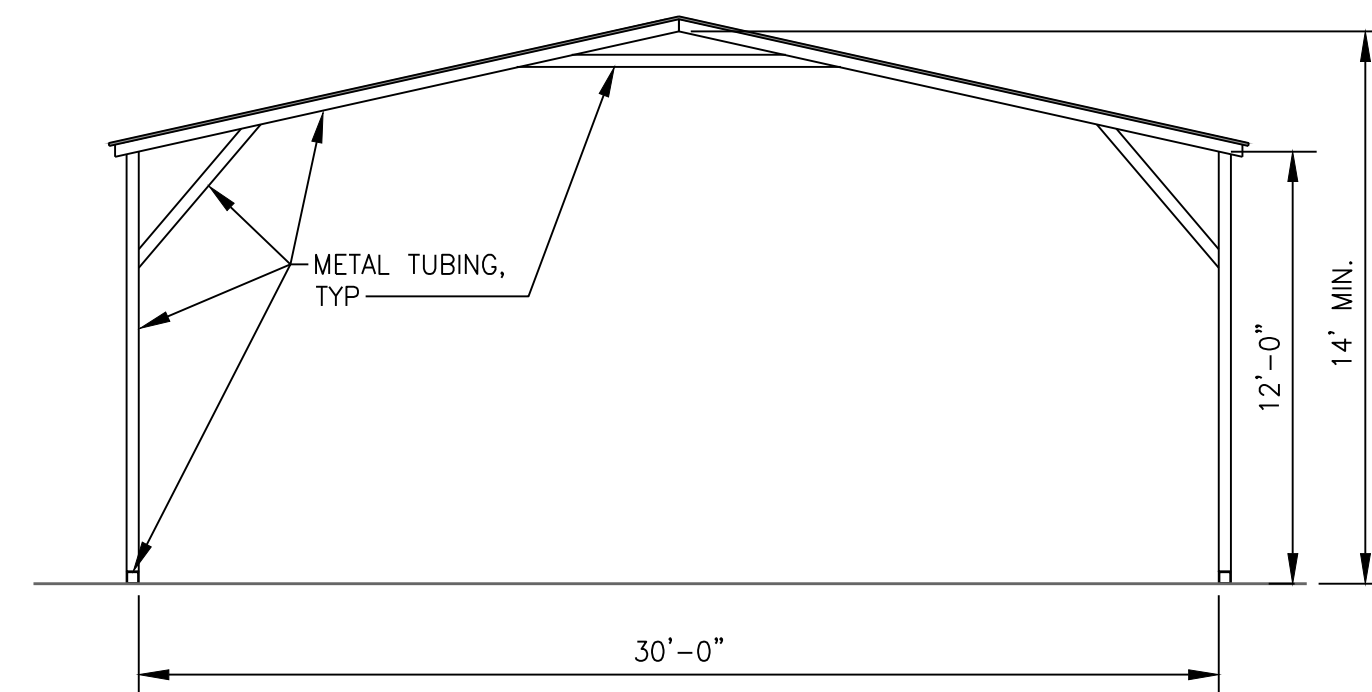
SECTION J
W-010
SCALE: 3/8"=1'-0"



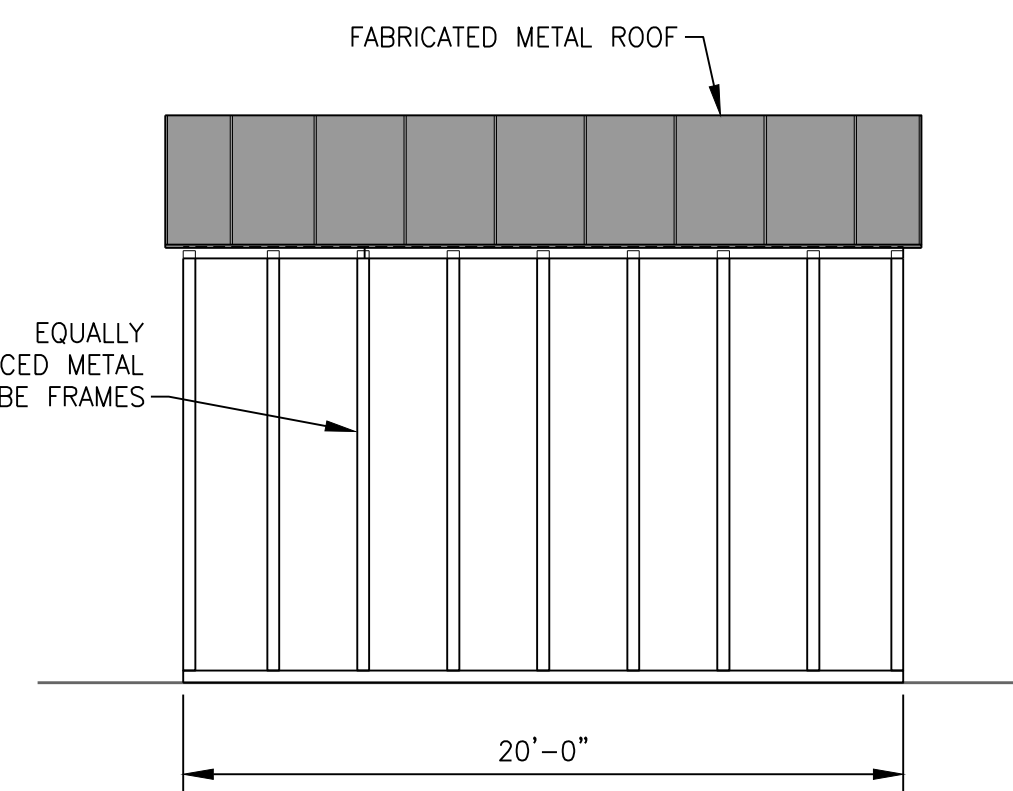
ISOMETRIC VIEW
NOT TO SCALE



PLAN



FONT (BACK) ELEVATION VIEW



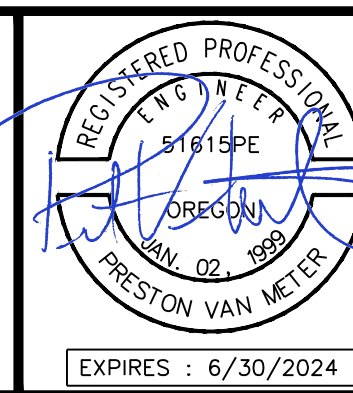
SIDE ELEVATION VIEW

SCREW PRESS COVER
DETAIL 1
W-010
SCALE: 3/16"=1'-0"

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
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WEST YOST
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MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

SCREW PRESS SECTIONS AND DETAILS

PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBRUARY 2023

SHEET
M-012
27 of 42

Electrical Abbreviations, General Notes, & Symbol Legend

Abbreviations

A	AMPERE	MCA	MINIMUM CIRCUIT AMPACITY
AC	ALTERNATING CURRENT, AIR CONDITIONING UNIT	MCC	MOTOR CONTROL CENTER
AHJ	AUTHORITY HAVING JURISDICTION	MCP	MOTOR CIRCUIT PROTECTOR
AI	ANALOG INPUT	MDF	MAIN DISTRIBUTION FRAME
AIC	AVAILABLE INTERRUPTING CAPACITY	MHz	MEGAHERTZ
AF	AMPERE FRAME / AMPERE FUSED	MISC	MISCELLANEOUS
AFC	ABOVE FINISHED CEILING	MLO	MAIN LUGS ONLY
AFF	ABOVE FINISHED FLOOR	MOCP	MAXIMUM OVERCURRENT PROTECTION
AFG	ABOVE FINISHED GRADE		
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	N	NEUTRAL
AO	ANALOG OUTPUT	NAC	NOTIFICATION APPLIANCE CIRCUIT
ARMS	ARC FLASH REDUCTION MAINTENANCE SYSTEM	N/A	NOT APPLICABLE
AT	AMPERE TRIP	NC	NORMALLY CLOSED
AV	AUDIO / VIDEO	NEC	NATIONAL ELECTRICAL CODE
AWG	AMERICAN WIRE GAUGE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
		NEX	REPLACE EXISTING WIRING DEVICE AND FACEPLATE WITH NEW. BACK BOX AND CONDUIT SHALL REMAIN.
BAS	BUILDING AUTOMATION SYSTEM	NL	NIGHT LIGHT
BFG	BELOW FINISHED GRADE	NO	NORMALLY OPEN
BLDG	BUILDING	NTS	NOT TO SCALE
C	CONDUIT	OC	ON CENTER
CAT	CATEGORY	OFCl	OWNER FURNISHED, CONTRACTOR INSTALLED
CB	CIRCUIT BREAKER	OFOI	OWNER FURNISHED, OWNER INSTALLED
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED		
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED	Ø	PHASE
CKT	CIRCUIT		
CPT	CONTROL POWER TRANSFORMER	PB	PULL BOX, PANIC BUTTON, PUSH BUTTON
CR	CONTROL RELAY	PE	PHOTO EYE
CU	COPPER	PNL	PANEL
		POE	POWER OVER ETHERNET
dB	DECIBAL	PTZ	PAN, TILT, ZOOM
DC	DIRECT CURRENT		
DI	DIGITAL INPUT	RF	RADIO FREQUENCY
DIM	DIMENSION	RFI	REQUEST FOR INFORMATION
DIV	DIVISION		
DO	DIGITAL OUTPUT	SLC	SIGNALING LINE CIRCUIT
DTL	DETAIL	SPD	SURGE PROTECTION DEVICE
DWG	DRAWING	STD	STANDARD
		SW	SWITCH
EIP	ETHERNET IP		
EL	ELEVATION	T/M	THERMAL MAGNETIC CIRCUIT BREAKER
EMT	ELECTRICAL METALLIC TUBING	TBD	TO BE DETERMINED
EOLR	END OF LINE RESISTOR	TV	TELEVISION / MONITOR OUTLET
		TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
FACP	FIRE ALARM CONTROL PANEL	TYP	TYPICAL
FF	FINISH FLOOR		
FLA	FULL LOAD AMPERES	UH	UNIT HEATER
FT	FOOT, FEET	UG	UNDERGROUND
FBO	FURNISHED BY OTHERS	UL	UNDERWRITERS LABORATORIES
		UPS	UNINTERRUPTIBLE POWER SUPPLY
G, GND	GROUND	UON	UNLESS OTHERWISE NOTED
GD	GAS DETECTOR	USB	UNIVERSAL SERIAL BUS
GFCI	GROUND FAULT CIRCUIT INTERRUPTER		
		V	VOLTS, VOLTAGE
HH	HAND HOLE	VA	VOLT-AMPERE
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
ID	IDENTIFICATION	W	WATT, WIRE
IDC	INITIATING DEVICE CIRCUIT	WAN	WIDE AREA NETWORK
IDF	INTERMEDIATE DISTRIBUTION FRAME	WAP	WIRELESS ACCESS POINT
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS	WI-FI	WIRELESS FIDELITY
IG	ISOLATED GROUND	W/	WITH
IT	INFORMATION TECHNOLOGY	W/O	WITHOUT
JB	JUNCTION BOX	XFMR	TRANSFORMER
KAIC	THOUSAND AMPS INTERRUPTING CURRENT	Y	WYE
KCMIL	THOUSAND CIRCULAR MILS		
KVA	KILOVOLT-AMPERE	1P	ONE POLE
KW	KILOWATT	2P	TWO POLE
		3P	THREE POLE
LAN	LOCAL AREA NETWORK	4P	FOUR POLE
LED	LIGHT EMITTING DIODE		
LS	LIMIT SWITCH		
LSI	ELECTRONIC TRIP UNIT ADJUSTABLE LONG TIME DELAY, SHORT TIME DELAY, INSTANTANEOUS TRIP		
LSIG	ELECTRONIC TRIP UNIT WITH ADJUSTABLE LONG TIME DELAY, SHORT TIME DELAY, INSTANTANEOUS TRIP, AND GROUND FAULT		
LV	LOW VOLTAGE		

General Electrical Notes

- ALL LIGHTING BRANCH CIRCUITS SHALL BE 2#10, 1#10G IN 3/4" CONDUIT, UON.
- ALL 20-AMP RECEPTACLE AND HARDWIRED BRANCH CIRCUITS SHALL BE 2#12, 1#12G IN 3/4" CONDUIT, UON.
- ALL EXIT SIGNS SHALL BE WIRED TO THE LOCAL LIGHTING BRANCH CIRCUIT AHEAD OF ALL SWITCHING.
- PROVIDE 0-10V DIMMING CONDUCTORS TO ALL LUMINAIRES WHICH ARE CONTROLLED BY 0-10V DIMMERS SHOWN ON THE DRAWINGS.

Annotation

- (N)

INDICATES NEW EQUIPMENT.
- (E)

INDICATES EXISTING EQUIPMENT TO REMAIN.
- (D)

INDICATES EXISTING EQUIPMENT TO BE DEMOLISHED.
- (RR)/(RD)

INDICATED EXISTING EQUIPMENT OR DEVICE TO BE REMOVED AND REINSTALLED.
- CONDUIT & CONDUCTOR CALLOUT. REFER TO CONDUIT & CONDUCTOR SCHEDULE.
- KEYED NOTE CALLOUT. REFER TO CORRESPONDING SHEET KEYNOTES.
- KEYED NOTE CALLOUT. REFER TO CORRESPONDING SHEET KEYNOTES.
- KEYED NOTE CALLOUT. REFER TO CORRESPONDING SHEET KEYNOTES.
- MECHANICAL EQUIPMENT CALLOUT. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE.
- DETAIL CALLOUT. REFER TO DETAIL AND SHEET AS INDICATED ON CALLOUT.
- FIXTURE MOUNTING CALLOUT. HEIGHT ABOVE FINISHED FLOOR (A.F.F.)
- EQUIPMENT CALLOUT. REFER TO NEMA CONNECTION SCHEDULE.
- SECTION CALLOUT. REFER TO SECTION AND SHEET AS INDICATED ON CALLOUT.
- ELEVATION CALLOUT. REFER TO ELEVATION AND SHEET AS INDICATED ON CALLOUT.

NO.	DATE	BY	REVISION

NOTICE

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MB

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JL

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MAHLER WATER RECLAMATION FACILITY INTERIM IMPROVEMENTS PROJECT

ELECTRICAL ABBREVIATIONS

PROJECT NO.: 936-50-21-09 | SCALE: AS SHOWN | DATE: FEBURARY 2023

SHEET

E-001

28 of 42

Electrical Symbol Legend

Power Distribution

	DUPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
	SIMPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
	QUADPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
	GFCI DUPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
	GFCI QUADPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
	TAMPER RESISTANT DUPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
	TAMPER RESISTANT QUADPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
	SWITCHED DUPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
	NEMA SPECIAL RECEPTACLE, MOUNTED AT 18" AFF, UON. NEMA CONFIGURATION AS INDICATED.
	CENTER HATCHED RECEPTACLE TO BE WIRED TO EMERGENCY CIRCUIT.
	RECEPTACLE MOUNTED ON CEILING.
	RECEPTACLE MOUNTED IN-COUNTER.
	DISCONNECT SWITCH.
	FUSED DISCONNECT SWITCH.
	ENCLOSED CIRCUIT BREAKER.
	COMBINATION STARTER.
	FLOORBOX COMBINATION POWER & DATA.
	FLOORBOX POWER.
	POKETHRU COMBINATION POWER & DATA.
	POKETHRU POWER.
	POWER/DATA POLE.
	PANELBOARD SURFACE MOUNT.
	PANELBOARD FLUSH MOUNT.
	MAIN DISTRIBUTION PANEL.
	UTILITY CT METER.
	UTILITY TRANSFORMER.

Drawing Symbol Variables

3	THREE WAY SWITCH.
4	FOUR WAY SWITCH.
#J	QUANTITY OF JACKS AND HORIZONTAL CABLES. J = CAT6, JA = CAT6A, JE = CAT5E
+XX	MOUNTING UNITS EXPRESSED IN INCHES TO CENTERLINE ABOVE FINISHED FLOOR OR GRADE.
C	MOUNTED HORIZONTALLY AT 4" ABOVE COUNTERTOP.
CL	CLOCK.
DR	DUAL RELAY.
E	RED EMERGENCY SWITCH.
EL	ELEVATOR RECALL.
ETR	EXISTING DEVICE SHALL REMAIN.
G	GLASS BREAK SENSOR.
K	KEYED SWITCH.
LF	LOW FREQUENCY.
LV	LOW VOLTAGE SWITCH.
M	MOTOR RATED TOGGLE SWITCH.
NEX	REPLACE EXISTING WIRING DEVICE AND FACEPLATE WITH NEW. BACK BOX AND CONDUIT SHALL REMAIN.
O	INTEGRAL OCCUPANCY SENSOR.
P	ADA PHONE, VERIFY HEIGHT WITH ARCHITECT / OWNER.
REX	REMOVE EXISTING DEVICE / EQUIPMENT.
TK	MOUNTED IN TOE KICK OF CASEWORK.
TV	MOUNTED ADJACENT TO TV AT 60" AFF, UON.
V	VANDAL RESISTANT.
WG	WIREGUARD.
WP	WEATHERPROOF.

Lighting

	TROFFER LUMINAIRE, SURFACE OR RECESS MOUNTED AS INDICATED ON THE DRAWINGS.
	DOWNLIGHT LUMINAIRE, SURFACE, RECESS, OR PENDANT MOUNTED AS INDICATED ON THE DRAWINGS.
	UNDERCABINET LUMINAIRE.
	EMERGENCY BATTERY PACK LUMINAIRE, WALL OR CEILING MOUNTED.
	LINEAR PENDANT MOUNTED LUMINAIRE.
	LINEAR WALL MOUNTED LUMINAIRE.
	BOLLARD LUMINAIRE.
	SITE LUMINAIRE POLE MOUNTED. NUMBER OF HEADS AS SHOWN.
	TRACK LUMINAIRE.
	SPOT LUMINAIRE.
	WALL MOUNTED LUMINAIRE.
	EXIT SIGN, WALL OR CEILING MOUNTED, SINGLE FACE WITH DIRECTIONAL CHEVRONS AS INDICATED ON DRAWINGS.
	EXIT SIGN, WALL OR CEILING MOUNTED, DOUBLE FACE WITH DIRECTIONAL CHEVRONS AS INDICATED ON DRAWINGS.
	HALF HATCHED LUMINAIRE TO BE WIRED TO EMERGENCY CIRCUIT.
	FULL HATCHED LUMINAIRE TO BE WIRED TO NIGHTLIGHT CIRCUIT.
	WALL WASH LUMINAIRE POINTED IN DIRECTION AS SHOWN

Raceways

	CONDUIT AND/OR CONDUCTORS INSTALLED ABOVE GRADE, CONCEALED IN WALL OR CEILING SPACE.
	CONDUIT AND/OR CONDUCTORS INSTALLED BELOW GRADE, BELOW SLAB.
	CONDUIT TURNED DOWN.
	CONDUIT TURNED UP.
	CONDUIT STUBBED AND CAPPED.
	CONDUIT DIRECT CONNECTION TO EQUIPMENT.
	FLEXIBLE CONNECTION TO EQUIPMENT.
	CONDUIT / WIRING CONTINUATION.
	HOMERUN TO PANELBOARD.
	CABLE TRAY. SIZE AND TYPE AS INDICATED ON DRAWINGS.

Switches

	SINGLE POLE SWITCH - MOUNTED AT 42" AFF, UON.
	LOW VOLTAGE 0-10 VOLT DIMMING SWITCH - MOUNTED AT 42" AFF, UON.
	OCCUPANCY SENSOR - CEILING OR WALL MOUNTED.
	OCCUPANCY SENSOR POWER PACK.
	PHOTOCELL - CEILING OR WALL MOUNTED.
	ADA DOOR PUSHPLATE.
	EMERGENCY STOP SWITCH, MUSHROOM HEAD.
	PUSHBUTTON, SINGLE OR DOUBLE.

One-Line Diagram

	CIRCUIT BREAKER.
	DRAWOUT CIRCUIT BREAKER.
	ENCLOSED CIRCUIT BREAKER.
	MOTOR STARTER CONTACT.
	DISCONNECT SWITCH.
	ENCLOSED DISCONNECT SWITCH.
	FUSED DISCONNECT SWITCH.
	ENCLOSED FUSED DISCONNECT SWITCH.
	CURRENT TRANSFORMER METER.
	FUSE, RATING AS SHOWN ON DRAWINGS.
	GENERATOR, CONFIGURATION AS INDICATED ON DRAWING.
	GROUND ROD.
	EQUIPMENT GROUND.
	MOTOR, RATED AS INDICATED ON DRAWINGS.
	NEMA CONNECTION.
	PANEL.
	MINI POWER CENTER.
	SHUNT TRIP.
	HEATER.
	REMOTE ANNUNCIATOR.
	BATTERY CHARGER.
	SURGE SUPPRESSION DEVICE.
	DIGITAL METER.
	VARIABLE FREQUENCY DRIVE.
	SOFT STARTER.
	TRANSFER SWITCH, WITH FUSES OR BREAKERS AS SHOWN ON DRAWINGS.
	TRANSFORMER.

Miscellaneous

	JUNCTION BOX (ROUND, SQUARE).
	THERMOSTAT.
	RELAY.
	CORD REEL.
	MOTOR / EXHAUST FAN.
	CEILING FAN.
	UTILITY POLE.
	WEATHERHEAD.
	GROUND ROD.
	GROUND ROD WITH TEST WELL.
	SURFACE RACEWAY / WIREMOLD.
	FIRE RATED BACKBOARD.
	GROUND BUS BAR.

Access Control & Security

	ACCESS CONTROL - DOOR CONTACT. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
	ACCESS CONTROL - CARD READER. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
	ACCESS CONTROL - ELECTRIC STRIKE. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
	ACCESS CONTROL - KEY PAD. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
	ACCESS CONTROL - MAGNETIC LOCK. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
	ACCESS CONTROL - REQUEST TO EXIT. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
	ACCESS CONTROL - ELECTRIFIED PANIC BAR. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
	ACCESS CONTROL - SECURITY JUNCTION BOX. SIZED AS RECOMMENDED BY SECURITY SYSTEM MANUFACTURER.
	ACCESS CONTROL - CAMERA / INTERCOM.
	ACCESS CONTROL - PANIC BUTTON.
	SECURITY CAMERA - CEILING MOUNTED. PROVIDE ONE (1) CAT6.
	SECURITY CAMERA - WALL MOUNTED. PROVIDE ONE (1) CAT6.
	INTRUSION SENSOR - CEILING MOUNTED.
	INTRUSION SENSOR - WALL MOUNTED.
	INTRUSION KEYPAD.

Low Voltage

	ETHERNET OUTLET MOUNTED AT 18" AFF, UON.
	COAXIAL OUTLET MOUNTED AT 18" AFF, UON.
	PHONE OUTLET MOUNTED AT 18" AFF, UON.
	LOW VOLTAGE OUTLET CEILING MOUNTED.
	WIRELESS ACCESS POINT CEILING MOUNTED.
	WIRELESS ACCESS POINT WALL MOUNTED.
	DIGITAL CLOCK.
	FLOORBOX DATA.
	POKETHRU DATA.
	IT RACK.
	VERTICAL WIRE MANAGEMENT.

NO.	DATE	BY	REVISION

NOTICE

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

MB

DESIGNED

JL

DRAWN

BP

CHECKED

REGISTERED PROFESSIONAL ENGINEER

86683

Digitally Signed

OREGON

MAY 08, 2012

BERNARD E. PERRY

EXPIRES: 12-31-2024

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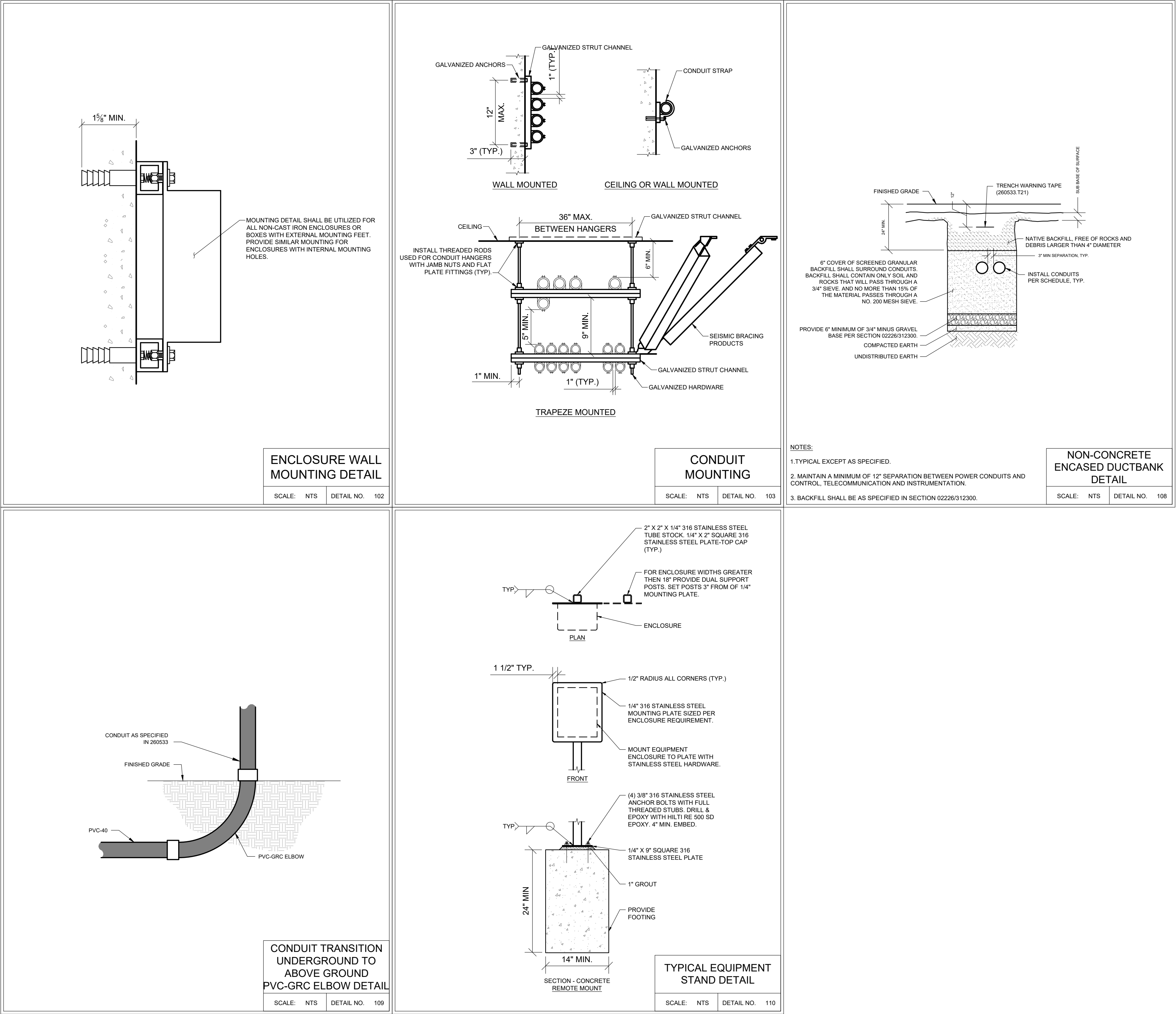
ELECTRICAL SYMBOL LEGEND

PROJECT NO.: 936-50-21-09 | SCALE: AS SHOWN | DATE: FEBURARY 2023

SHEET

E-002

29 of 42



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NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
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MB
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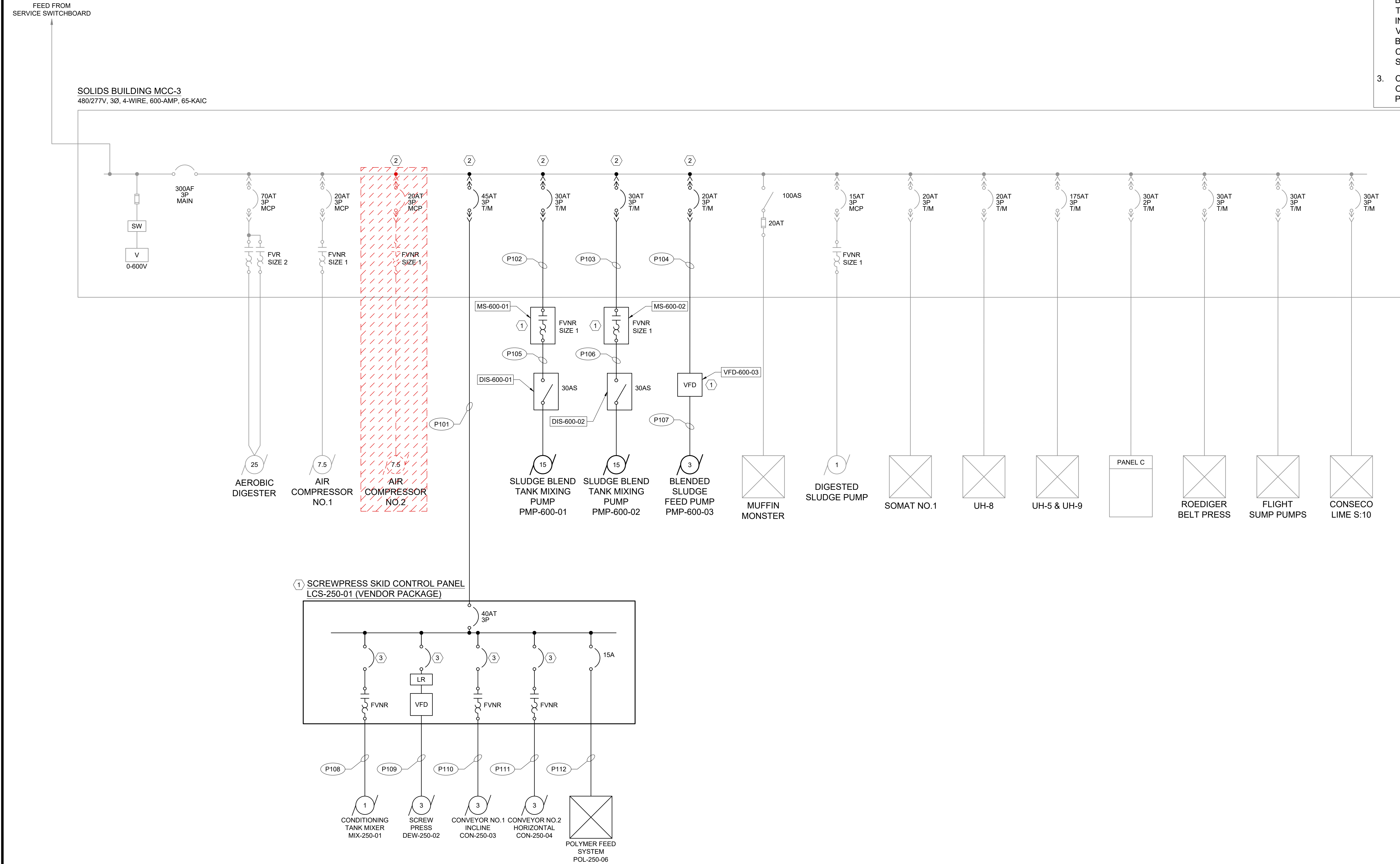
MAHLER WATER RECLAMATION FACILITY INTERIM IMPROVEMENTS PROJECT

PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBURARY 2023

ELECTRICAL DETAILS

SHEET KEY NOTES

- OWNER FURNISHED, CONTRACTOR INSTALLED.
- REPLACE AIR COMPRESSOR NO.2 BUCKET AND EMPTY SPACE BELOW TO PROVIDE NEW BREAKER BUCKETS IN MCC-3. CONTRACTOR SHALL FIELD VERIFY WHETHER DUAL BREAKER BUCKETS ARE REQUIRED DURING CONSTRUCTION. REFERENCE SECTION 26 28 16.
- CONTRACTOR SHALL REDLINE OVERCURRENT PROTECTION RATING PER APPROVED SUBMITTALS.



NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

MB

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MAHLER WATER RECLAMATION FACILITY INTERIM IMPROVEMENTS PROJECT

EXISTING MCC-3 ONE-LINE DIAGRAM

PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBURARY 2023

SHEET

E-004

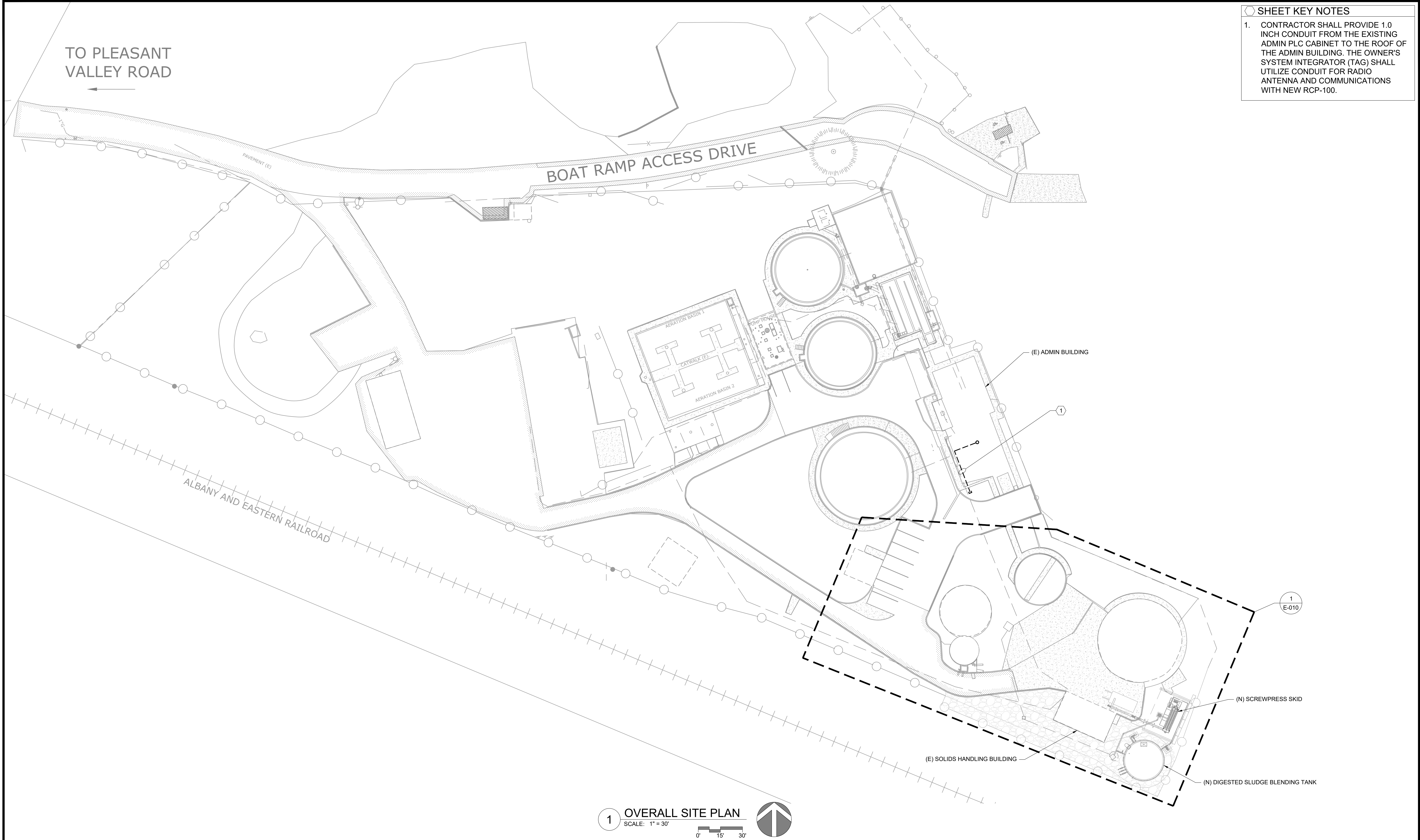
31 of 42

POWER CONDUIT / CONDUCTOR SCHEDULE											
CONDUIT ID NO.	CONDUIT		CONDUCTORS PER CONDUIT					FROM	TO	DESCRIPTION	NOTES
	QUANTITY	SIZE	UNGROUND	GROUND	GROUNDING	CABLE	SPARE				
P101	1	1.0 INCH	3 - #6	-	1 - #10	-	-	EXISTING MCC-3	LCS-250-01	SCREWPRESS SKID CONTROL PANEL	-
P102	1	0.75 INCH	3 - #10	-	1 - #10	-	-	EXISTING MCC-3	MS-600-01	SLUDGE BLEND TANK MIXING PUMP NO. 1 MOTOR STARTER POWER	-
P103	1	0.75 INCH	3 - #10	-	1 - #12	-	-	EXISTING MCC-3	MS-600-02	SLUDGE BLEND TANK MIXING PUMP NO. 2 MOTOR STARTER POWER	-
P104	1	0.75 INCH	3 - #12	-	1 - #12	-	-	EXISTING MCC-3	VFD-600-03	BLENDED SLUDGE FEED PUMP VFD POWER	-
P105	1	0.75 INCH	3 - #10	-	1 - #10	-	-	MS-600-01	PMP-600-01	SLUDGE BLEND TANK MIXING PUMP NO. 1	1
P106	1	0.75 INCH	3 - #10	-	1 - #12	-	-	MS-600-02	PMP-600-02	SLUDGE BLEND TANK MIXING PUMP NO. 2	1
P107	1	0.75 INCH	3 - #12	-	1 - #12	-	-	VFD-600-03	PMP-600-03	BLENDED SLUDGE FEED PUMP	-
P108	1	0.75 INCH	3 - #12	-	1 - #12	-	-	LCS-250-01	MIX-250-01	CONDITIONING TANK MIXER	2
P109	1	0.75 INCH	3 - #12	-	1 - #12	-	-	LCS-250-01	DEW-250-02	SCREW PRESS MOTOR	2
P110	1	0.75 INCH	3 - #12	-	1 - #12	-	-	LCS-250-01	CON-250-03	INCLINE CONVEYOR	2
P111	1	0.75 INCH	3 - #12	-	1 - #12	-	-	LCS-250-01	CON-250-04	HORIZONTAL CONVEYOR	2
P112	1	0.75 INCH	3 - #12	-	1 - #12	-	-	LCS-250-01	POL-250-06	POLYMER FEED SYSTEM	2
P113	1	0.75 INCH	3 - #12	-	1 - #12	-	-	EXISTING PANEL 'C'	RCP-100	CKT. 12, RADIO TELEMETRY PANEL	3

NOTES:
[1] ROUTE CONDUIT VIA LOCAL DISCONNECT AS IDENTIFIED ON ONE-LINE AND SITE PLAN.
[2] EQUIPMENT IS PART OF OWNER FURNISHED, CONTRACTOR INSTALLED SCREWPRESS SKID PACKAGE. COORDINATE FINAL LOCATION OF EQUIPMENT WITH MECHANICAL AND SCREWPRESS VENDOR.
[3] PROVIDE 20A CIRCUIT BREAKER FOR EXISTING PANEL 'C' FOR THE OWNER FURNISHED, CONTRACTOR INSTALLED RADIO TELEMETRY PANEL, RCP-100.

CONTROL CONDUIT / CONDUCTOR SCHEDULE											
CONDUIT ID NO.	CONDUIT		CONDUCTORS PER CONDUIT					FROM	TO	DESCRIPTION	NOTES
	QUANTITY	SIZE	UNGROUND	GROUND	GROUNDING	CABLE	SPARE				
C101	1	0.75 INCH	-	-	1 - #14	1 - CAT6	-	RCP-100	LCS-250-01	TELEMETRY E/IP COMMUNICATIONS	-
C102	1	0.75 INCH	14 - #14	-	1 - #14	-	-	LCS-250-01	MS-600-01	SLUDGE TANK MIXING PUMP NO.1 DISCRETE I/O: OVERLOAD, HIGH TEMP, HIGH PRESSURE ALARMS, MOTOR READY, IN-REMOTE, MOTOR RUNNING, AND START COMMAND	-
C103	1	0.75 INCH	14 - #14	-	1 - #14	-	-	LCS-250-01	MS-600-02	SLUDGE TANK MIXING PUMP NO.2 DISCRETE I/O: OVERLOAD, HIGH TEMP, HIGH PRESSURE ALARMS, MOTOR READY, IN-REMOTE, MOTOR RUNNING, AND START COMMAND	-
C104	1	0.75 INCH	12 - #14	-	1 - #14	-	-	LCS-250-01	VFD-600-03	BLENDED SLUDGE PUMP DISCRETE I/O: VFD FAIL, HIGH TEMP, HIGH PRESSURE ALARMS, MOTOR READY, IN-REMOTE, MOTOR RUNNING	-
C105	1	1.0 INCH	-	-	1 - #14	2 - TSP	-	LCS-250-01	VFD-600-03	BLENDED SLUDGE PUMP ANALOG I/O: SPEED FEEDBACK, SPEED SETPOINT	-
C106	1	0.75 INCH	-	-	1 - #14	1 - CAT6	-	LCS-250-01	FE/FIT-250-00	FLOWMETER E/IP CONNECTION	-
C107	1	0.75 INCH	2 - #14	-	1 - #14	-	-	LCS-250-01	FE/FIT-250-00	FLOWMETER 24VDC POWER	-
C108	-	-	-	-	-	-	-	-	-	-	-
C109	-	-	-	-	-	-	-	-	-	-	-
C110	-	-	-	-	-	-	-	-	-	-	-
C111	-	-	-	-	-	-	-	-	-	-	-
C112	-	-	-	-	-	-	-	-	-	-	-
C113	-	-	-	-	-	-	-	-	-	-	-
C114	1	0.75 INCH	6 - #14	-	1 - #14	-	-	LCS-250-01	CON-250-03	INCLINE CONVEYOR I/O: ZERO SPEED SWITCH (POWER & ALARM), E-STOP PULL CORD	3
C115	1	0.75 INCH	6 - #14	-	1 - #14	-	-	LCS-250-01	CON-250-04	HORIZONTAL CONVEYOR I/O: ZERO SPEED SWITCH (POWER & ALARM), E-STOP PULL CORD	3
C116	-	-	-	-	-	-	-	-	-	-	-
C117	-	-	-	-	-	-	-	-	-	-	-
C118	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	LCS-250-01	LIT-600-01	-	-
C119	1	1.0 INCH	18 - #14	-	1 - #14	-	-	MS-600-01	LCS-600-01	LCS DEVICES: LOR, START, OFF, FAST STOP, RUNNING AND FAULT LIGHTS, PRESSURE & OVERTEMP ALARM	1
C120	1	1.0 INCH	18 - #14	-	1 - #14	-	-	MS-600-02	LCS-600-01	LCS DEVICES: LOR, START, OFF, FAST STOP, RUNNING AND FAULT LIGHTS, PRESSURE & OVERTEMP ALARM	1
C121	1	0.75 INCH	2 - #14	-	1 - #14	-	-	PSH-600-01	LCS-600-01	PRESSURE ALARM	2
C122	1	0.75 INCH	2 - #14	-	1 - #14	-	-	PSH-600-02	LCS-600-01	PRESSURE ALARM	2
C123	1	0.75 INCH	2 - #14	-	1 - #14	-	-	PSH-600-03	VFD-600-03	PRESSURE ALARM	-
C124	1	0.75 INCH	2 - #14	-	1 - #14	-	-	PMP-600-01	LCS-600-01	HIGH TEMPERATURE ALARM	2
C125	1	0.75 INCH	2 - #14	-	1 - #14	-	-	PMP-600-02	LCS-600-01	HIGH TEMPERATURE ALARM	2
C126	1	0.75 INCH	2 - #14	-	1 - #14	-	-	PMP-600-03	VFD-600-03	HIGH TEMPERATURE ALARM	-
C127	-	-	-	-	-	-	-	-	-	-	-
C128	-	-	-	-	-	-	-	-	-	-	-

NOTES:
[1] ROUTE TEMPERATURE AND PRESSURE ALARMS VIA LCS-600-01 BACK TO THE CORRESPONDING MOTOR STARTER AS FAILSAFE ALARMS.
[2] ROUTE VIA LCS-600-01.
[3] INSTRUMENT IS PART OF OWNER FURNISHED, CONTRACTOR INSTALLED SCREWPRESS SKID PACKAGE. COORDINATE FINAL LOCATION OF INSTRUMENTS WITH MECHANICAL AND SCREWPRESS VENDOR.



- SHEET KEY NOTES**
- CONTRACTOR SHALL PROVIDE 1.0 INCH CONDUIT FROM THE EXISTING ADMIN PLC CABINET TO THE ROOF OF THE ADMIN BUILDING. THE OWNER'S SYSTEM INTEGRATOR (TAG) SHALL UTILIZE CONDUIT FOR RADIO ANTENNA AND COMMUNICATIONS WITH NEW RCP-100.

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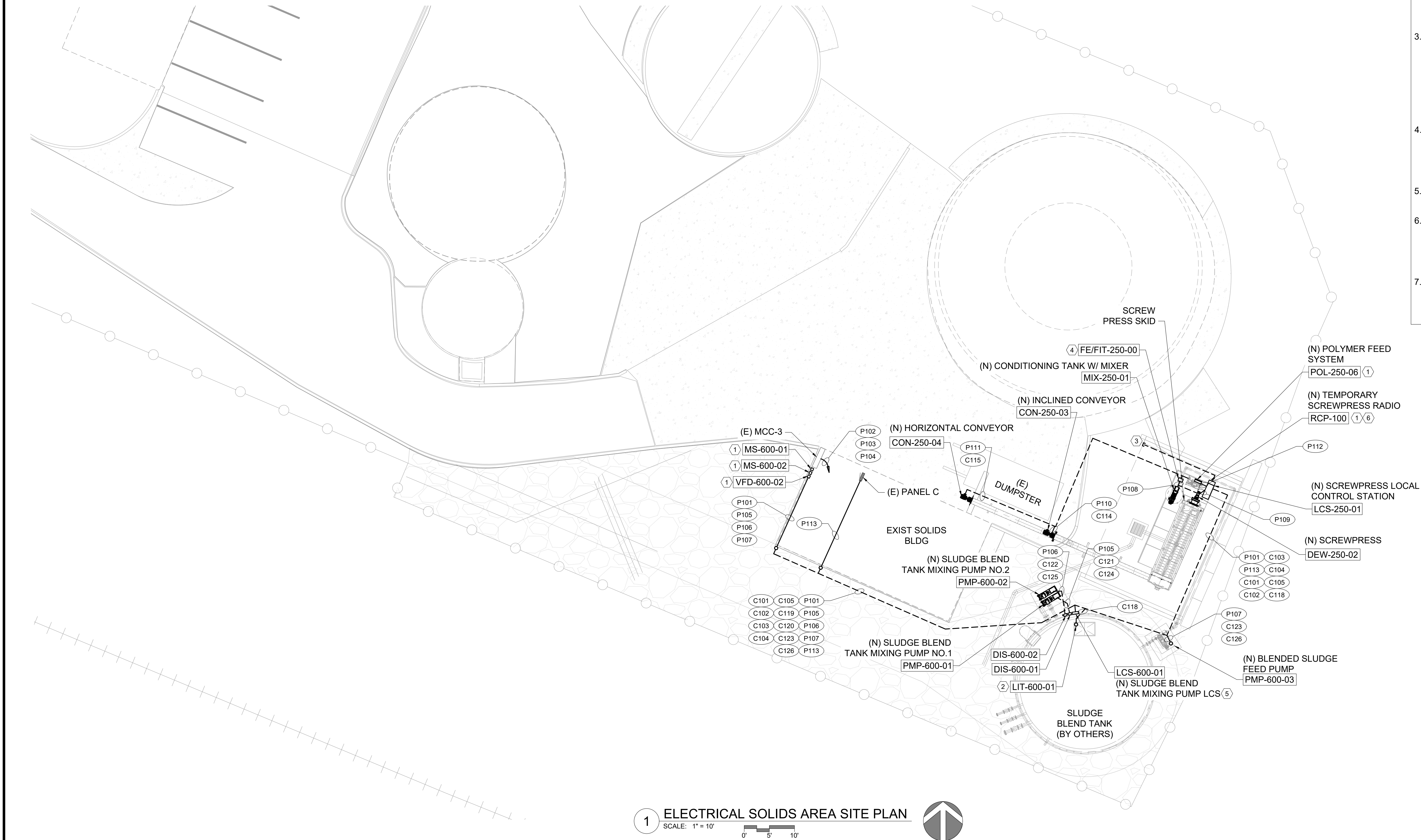
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MAHLER WATER RECLAMATION FACILITY INTERIM IMPROVEMENTS PROJECT

OVERALL SITE PLAN			
PROJECT NO.:	936-50-21-09	SCALE:	AS SHOWN
DATE:	FEBURARY 2023		



- SHEET KEY NOTES
1.

OWNER FURNISHED, CONTRACTOR INSTALLED.
2.

COORDINATE WITH MECHANICAL ON FINAL LOCATION OF PENETRATION FOR LEVEL TRANSMITTER. INSTALL 1'-0" BELOW BLEND TANK COVER. PROVIDE STAINLESS STEEL CORD CONNECTOR TO SUPPORT CABLE IN TANK.
3.

CONTRACTOR SHALL PROVIDE 1.0" CONDUIT FROM TEMPORARY SCREWPRESS RADIO RCP-100 TO ROOF OF SCREWPRESS SKID COVER. MOUNT AT 13'-0" AFF. THE OWNER'S SYSTEM INTEGRATOR SHALL UTILIZE CONDUIT FOR COMMUNICATIONS WITH PLANT SCADA SYSTEM.
4.

DIGESTED SLUDGE FLOWMETER. COORDINATE WITH MECHANICAL FINAL LOCATION. PROVIDE CONDUITS C106 AND C107 AS IDENTIFIED ON THE CONTROL CONDUIT SCHEDULE.
5.

REFERENCE DRAWING E-011 FOR LOCAL CONTROL STATION DETAIL.
6.

INSTALL RCP-100 ADJACENT TO SCREWPRESS LOCAL CONTROL STATION. LCS-250-01. REFERENCE DRAWING E-003, DETAIL NO. 110 FOR EQUIPMENT STAND REQUIREMENTS.
7.

REFER TO MECHANICAL FOR FINAL LOCATION OF PRESSURE SWITCH, ROUTE PRESSURE SWITCH CONDUCTORS THROUGH LCS-600-01.

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REGISTERED PROFESSIONAL ENGINEER

86683

Digitally Signed

OREGON

MAY 08, 2012

BENJAMIN E. PERRY

EXPIRES: 12-31-2024

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ELECTRICAL SOLIDS AREA SITE PLAN

PROJECT NO.: 936-50-21-09

SCALE: AS SHOWN

DATE: FEBURARY 2023

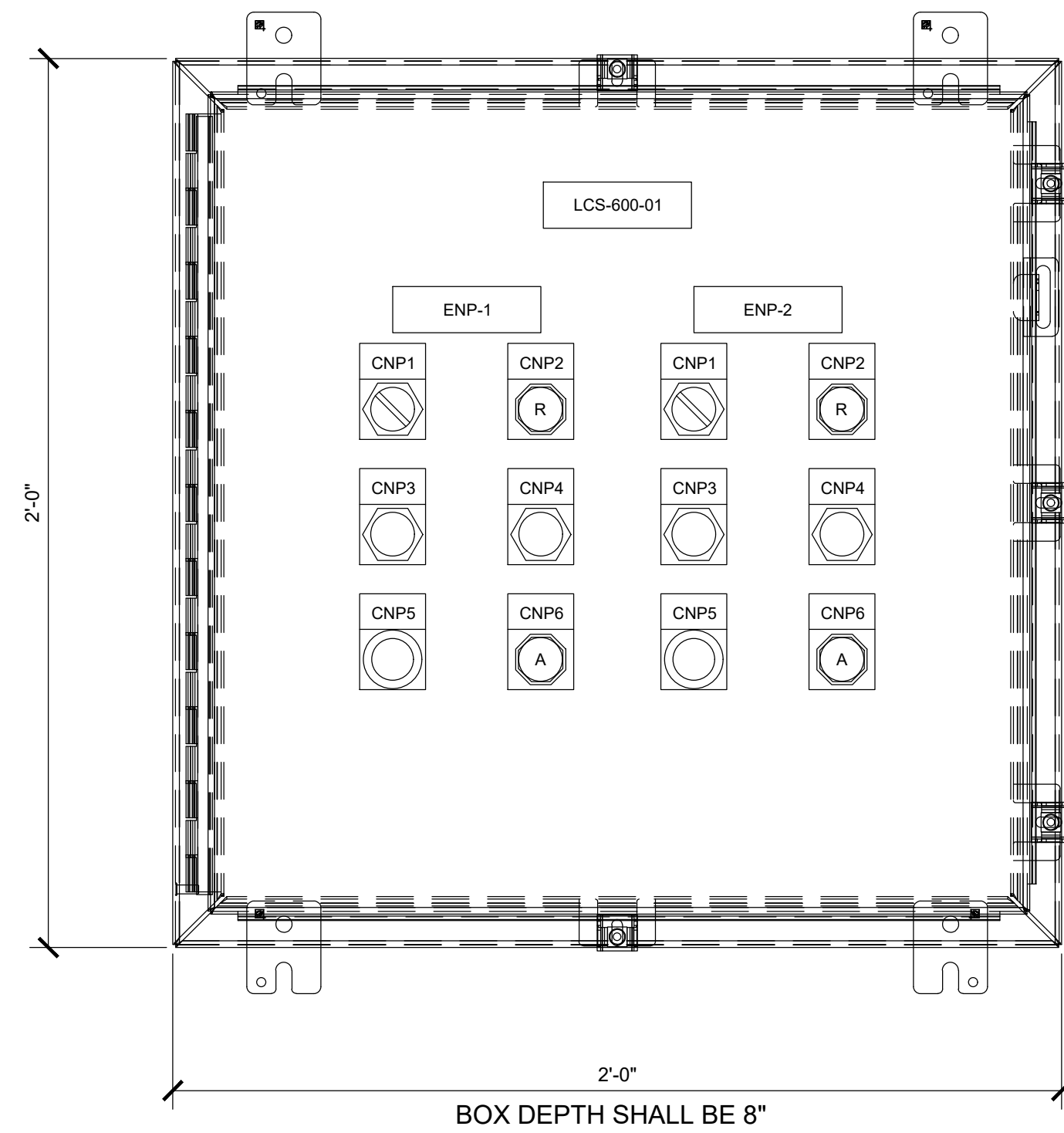
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E-010

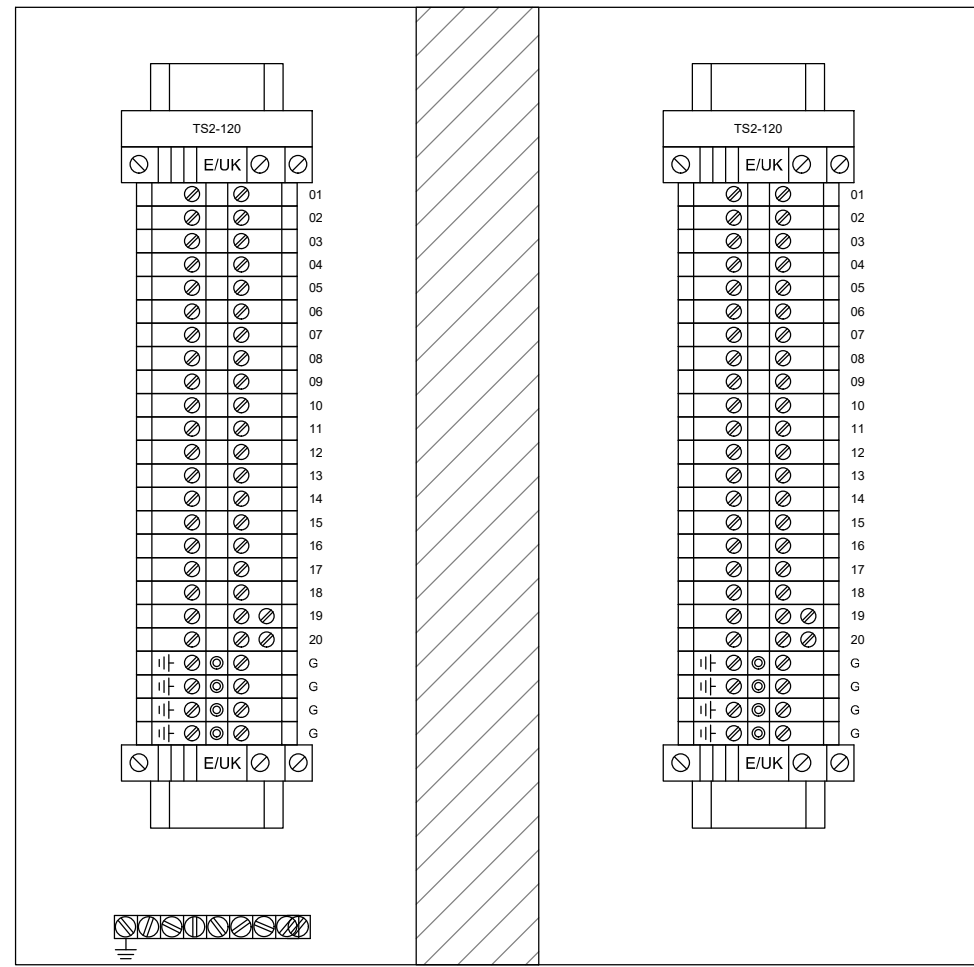
34 of 42

GENERAL SHEET NOTES

1. WIRING ON THE MOTOR SCHEMATIC IS TYPICAL FOR BOTH PUMPS.



1 LCS-600-01 FRONT ELEVATION
SCALE: NTS

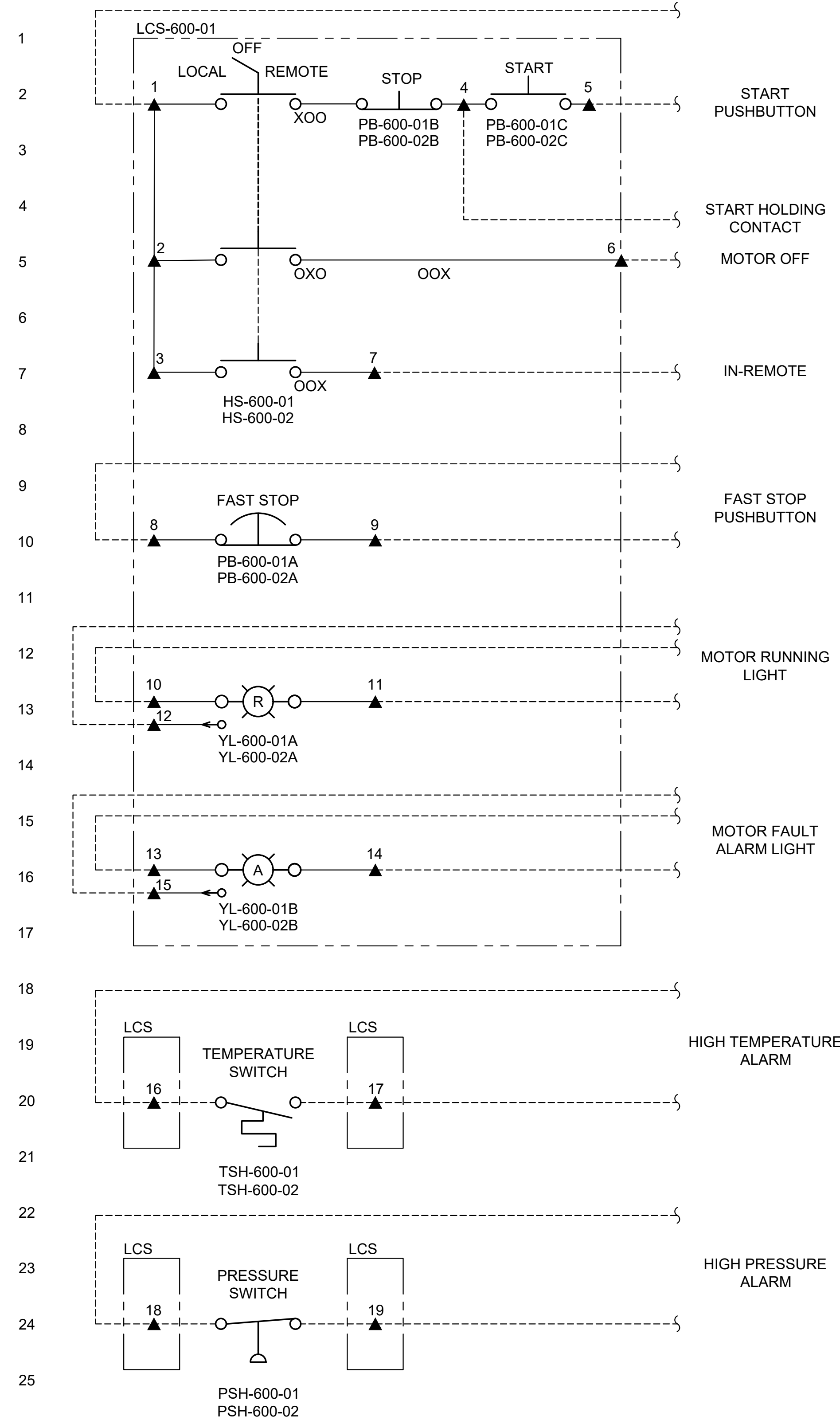


2 LCS-600-01 INTERIOR ELEVATION
SCALE: NTS

SLUDGE BLEND TANK MIXING PUMP LOCAL CONTROL STATION PARTS LIST		
QUANTITY	REFERENCE KEYNOTE #	DESCRIPTION
1	407800.E01	STAINLESS STEEL, NEMA 4X ENCLOSURES
2	407800.S01	SELECTOR SWITCHES
4	407800.S02	PUSHBUTTON SWITCH
4	407800.L20	INDICATOR LIGHTS
AS REQ'D	407800.D10	DIN MOUNTING RAIL
AS REQ'D	407800.W21	NARROW SLOT WIRE DUCTS (NARROW SLOT)
AS REQ'D	407800.T10	LOW CURRENT TERMINAL BLOCKS
AS REQ'D	407800.T60	GROUNDING TERMINAL BLOCKS
1	407800.T15	TERMINAL STRIP IDENTIFICATION BLOCK
1	407800.G06	GROUND BARS

SLUDGE BLEND TANK MIXING PUMP LCS TITLE NAMEPLATE		
ENP	EQUIPMENT TAG	DESCRIPTION
1	PMP-600-01	SLUDGE BLEND TANK MIXING PUMP 1
2	PMP-600-02	SLUDGE BLEND TANK MIXING PUMP 2

3 LCS-600-01
NAMEPLATE & PARTS LIST
SCALE: NTS



4 LCS-600-01 WIRING SCHEMATIC
SCALE: NTS

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MAHLER WATER RECLAMATION FACILITY INTERIM IMPROVEMENTS PROJECT

LCS-600-01 ELEVATION DETAIL

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E-011

35 of 42

PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBURARY 2023

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GENERAL INSTRUMENT SYMBOLS

LOCATION/ACCESSIBILITY	DISCRETE INSTRUMENTS	SHARED DISPLAY AND CONTROL (DCS)	PLC	DISCRETE HARDWARE INTERLOCK
FIELD MOUNTED 1. FIELD OR LOCALLY MOUNTED. 2. ACCESSIBLE TO AN OPERATOR AT DEVICE.				
PRIMARY LOCATION NORMALLY ACCESSIBLE TO AN OPERATOR 1. CENTRAL OR MAIN CONTROL ROOM. 2. FRONT OF MAIN PANEL OR CONSOLE MOUNTED. 3. VISIBLE ON VIDEO DISPLAY. 4. ACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE.				
PRIMARY LOCATION NORMALLY INACCESSIBLE TO AN OPERATOR 1. CENTRAL OR MAIN CONTROL ROOM. 2. REAR OF PANEL OR CABINET MOUNTED. 3. NOT VISIBLE ON VIDEO DISPLAY. 4. NOT NORMALLY ACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE.				
AUXILIARY LOCATION NORMALLY ACCESSIBLE TO AN OPERATOR 1. SECONDARY OR LOCAL CONTROL ROOM. 2. FIELD OR LOCAL CONTROL PANEL. 3. FRONT OF SECONDARY OR LOCAL PANEL MOUNTED. 4. VISIBLE ON VIDEO DISPLAY. 5. ACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE.				
AUXILIARY LOCATION NORMALLY INACCESSIBLE TO AN OPERATOR 1. SECONDARY OR LOCAL CONTROL ROOM. 2. FIELD OR LOCAL CONTROL PANEL. 3. REAR OF SECONDARY OR LOCAL PANEL OR CABINET MOUNTED. 4. NOT VISIBLE ON VIDEO DISPLAY. 5. NOT NORMALLY ACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE.				

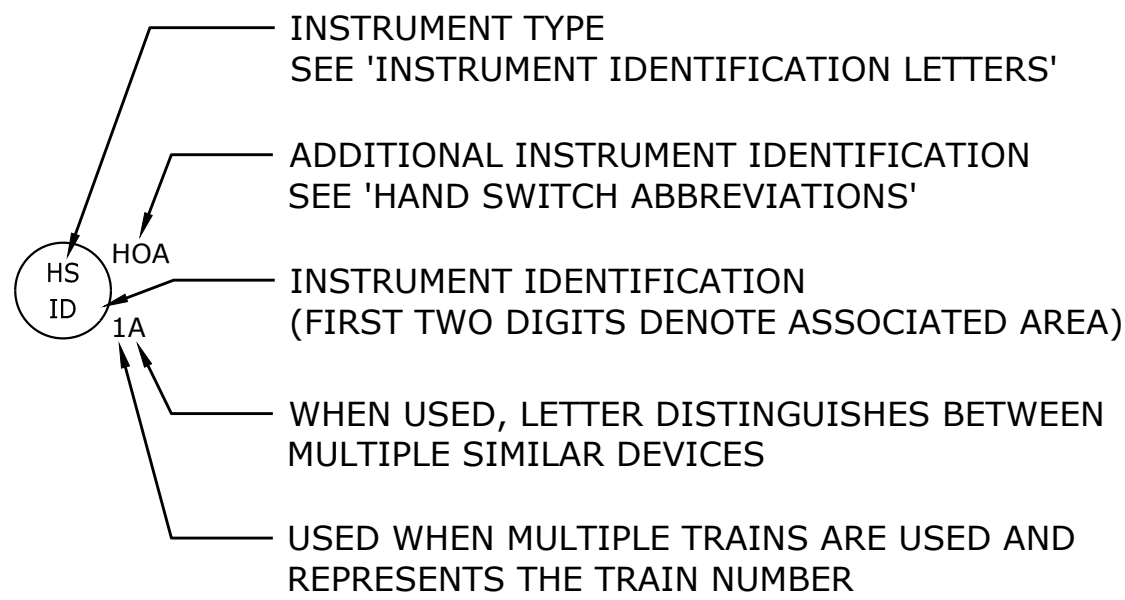
ABBREVIATIONS

AB	AERATION BASIN	MTL	MATERIAL
AG	ABOVE GROUND	MCC	MOTOR CONTROL CENTER
ATM	ATMOSPHERE	MCP	MAIN CONTROL PANEL
BL	BATTERY LIMIT	MIN	MINIMUM
BTL	BOTTOM TANGENT LINE	MOV	MOTOR OPERATED VALVE
BYP	BYPASS	MW	MANWAY
CC	CHEMICAL CLEANOUT	NC	NORMALLY CLOSED
CL	CENTERLINE	NNF	NORMALLY NO FLOW
CO	CLEANOUT	NO	NORMALLY OPEN
CONN	CONNECTION	NOZ	NOZZLE
CSC	CAR SEAL CLOSED	O/C	OPEN/CLOSE
CSO	CAR SEAL OPEN	O/O	ON/OFF
CTR	CENTER	OIT	OPERATOR INTERFACE TERMINAL
DCS	DISTRIBUTED CONTROL SYSTEM	OP	OUTPUT
DES	DESIGN	OSBL	OUTSIDE BATTERY LIMITS
DIA	DIAMETER	OVHD	OVERHEAD
DP	DESIGN PRESSURE	PECS	PRIMARY EFFLUENT CONTROL STRUCTURE
D/P	DIFFERENTIAL PRESSURE	PC	PRIMARY CLARIFIER
DRN	DRAIN	PICS	PRIMARY INFLUENT CONTROL STRUCTURE
DT	DESIGN TEMPERATURE	PLC	PROGRAMMABLE LOGIC CONTROLLER
DWG	DRAWING	PRESS	PRESSURE
(E)	EXISTING	PV	PROCESS VARIABLE
EL	ELEVATION	(R)	RELOCATED
ESD	EMERGENCY SHUTDOWN	REQD	REQUIRED
FOF	FACE OF FLANGE	RIO	REMOTE IO PANEL
(F)	FURNISHED	RTD	RESISTANCE TEMPERATURE DETECTOR
FC	FAIL CLOSED	SC	SECONDARY CLARIFIER
FI	FAIL INDETERMINATE	SCH	SCHEDULE
FL	FAIL LOCKED (LAST POSITION)	SD	SHUTDOWN
FLG	FLANGE	SG	SPECIFIC GRAVITY
FO	FAIL OPEN	SIS	SAFETY INSTRUMENTED SYSTEM
FP	FULL PORT	SO	STEAM OUT
FV	FULL VACUUM	SP	SET POINT
GO	GEAR OPERATED	SS	STAINLESS STEEL S/S START/STOP
GR	GRADE	STD	STANDARD
HC	HOSE CONNECTION	T/C	THERMOCOUPLE
HDR	HEADER	TDH	TOTAL DIFFERENTIAL HEAD
HH	HAND HOLE	TEMP	TEMPERATURE
HOA	HAND/OFF/AUTOMATIC	THRD	THREADED
HP	HIGH PRESSURE	TYP	TYPICAL
HPT	HIGH POINT	UG	UNDERGROUND
IAS	INSTRUMENT AIR SUPPLY	UV	ULTRAVIOLET
ISBL	INSIDE BATTERY LIMITS	UVT	ULTRAVIOLET TRANSMITTANCE
LC	LOCKED CLOSED	UVI	ULTRAVIOLET INTENSITY
LCP	LOCAL CONTROL PANEL	VNT	VENT
LO	LOCKED OPEN	VAC	VACUUM
LP	LOW PRESSURE	VB	VORTEX BREAKER
LPT	LOW POINT	VFD	VARIABLE FREQUENCY DRIVE
MAX	MAXIMUM	W/	WITH
MLCS	MIXED LIQUOR CONTROL STRUTURE	W/O	WITHOUT

INSTRUMENT IDENTIFICATION LETTERS

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

TYPICAL INSTRUMENT TAG NUMBERS & DESIGNATION



HAND SWITCH ABBREVIATIONS

AO = AUTO/OFF	LOS = LOCKOUT/STOP
AM = AUTO/MANUAL	LA = LOCAL/AUTO
CM = COMPUTER/MANUAL	LR = LOCAL/REMOTE
CL = COMPUTER LOCAL	OC = OPEN/CLOSE
ES = EMERGENCY STOP	OCA = OPEN/CLOSE/AUTO
FR = FORWARD/REVERSE	OO = ON/OFF
FOR = FORWARD/OFF/REVERSE	OOA = ON/OFF/AUTO
FS = FAST/SLOW	OSC = OPEN/STOP/CLOSE
FOS = FAST/OFF/SLOW	RES = RESET
HOA = HAND/OFF/AUTOMATIC	RSL = RAISE/STOP/LOWER
LLS = LEAD/LAG/STANDBY	SS = START/STOP
LO = LOCAL/OFF	SOR = START/OFF/RESET
LOC = LOCAL/OFF/COMPUTER	V/B = VFD/BYPASS
LOR = LOCAL/OFF/REMOTE	

PIPING LINE SYMBOLS

PRIMARY (AG & UG)	
SECONDARY / UTILITY (AG & UG)	
FUTURE OR EXISTING ON NEW P&IDs	
JACKETED OR DOUBLE CONTAINMENT	
NOT A PIPE	

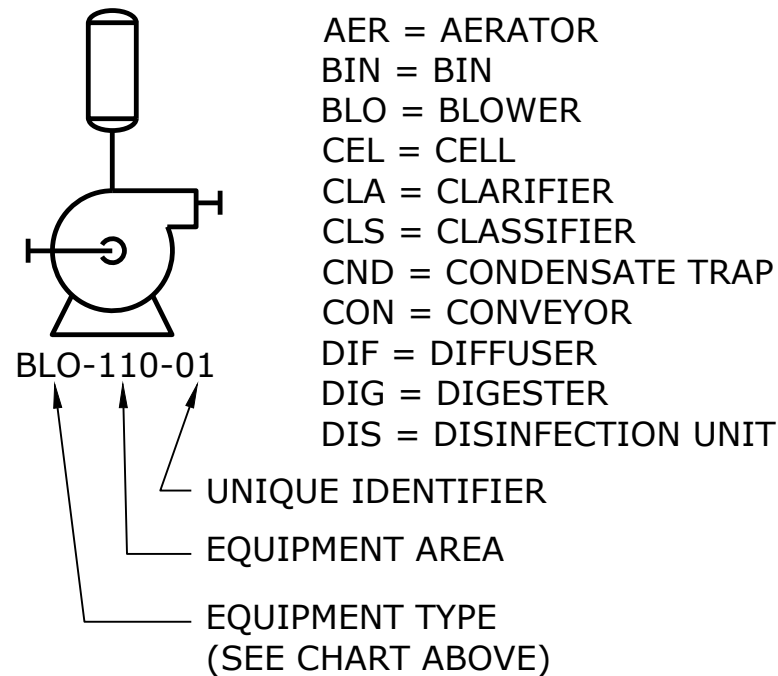
INSTRUMENT LINE SYMBOLS

INSTRUMENT SUPPLY OR CONNECTION TO PROCESS	
PNEUMATIC SIGNAL	
ELECTRIC SIGNAL (ANALOG)	
ELECTRIC SIGNAL (DISCRETE)	
HYDRAULIC SIGNAL	
CAPILLARY TUBE	
ELECTROMAGNETIC, SONIC, OPTICAL, OR NUCLEAR SIGNAL	
SOFTWARE OR DATA LINK	
MECHANICAL LINK	

FLOW STREAM IDENTIFIERS

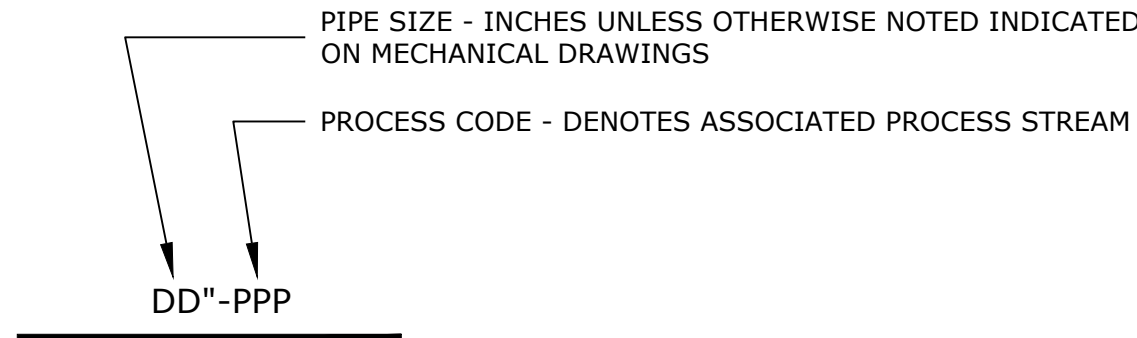
ATM = ATMOSPHERIC AIR	PI = PRIMARY INFLUENT
BS = BLENDED SLUDGE	POL = POLYMER
CAS = CAUSTIC SODA	PS = PRIMARY SLUDGE
DB = DIGESTER BYPASS	PSCM = PRIMARY SCUM
DE = DECANT	PT = PRESSATE
DG = DIGESTER GAS	PW = POTABLE WATER
DR = DRAIN	RAS = RETURN ACTIVATED SLUDGE
DS = DIGESTER SOLIDS	RD = RECYCLE/DRAIN
FA = FOUL AIR	RS = RAW SEWAGE
FBW = FILTER BACKWASH	SCRN = SCREENINGS
FE = FINAL EFFLUENT	SE = SECONDARY EFFLUENT
FT = FILTRATE	SSCM = SECONDARY SCUM
GR = GRIT	STM = STORM
HW = HOT WATER	TBS = THICKENED BLENDED SLUDGE
ML = MIXED LIQUOR	TE = TERTIARY EFFLUENT
OF = OVERFLOW	UW = UTILITY WATER
PA = PROCESS AIR	WAS = WASTE ACTIVATED SLUDGE
PE = PRIMARY EFFLUENT	

TYPICAL EQUIPMENT TAG NUMBERS & DESIGNATION



AER = AERATOR	FED = FEEDER
BIN = BIN	FLT = FILTER
BLO = BLOWER	HEX = HEAT EXCHANGER
CEL = CELL	MIX = MIXER
CLA = CLARIFIER	PMP = PUMP
CLS = CLASSIFIER	PRS = PRESS
CND = CONDENSATE TRAP	SCN = SCREEN
CON = CONVEYOR	SMP = SUMP
DIF = DIFFUSER	THK = THICKENER
DIG = DIGESTER	TNK = TANK
DIS = DISINFECTION UNIT	WEL = WET WELL

PIPELINE IDENTIFICATION DESCRIPTION



OFF-PAGE CONNECTORS AND TIE-IN SYMBOL

A. OFF-PLOT CONNECTOR

CONNECTOR NUMBER

XX

P&ID No

▶

SERVICE DESCRIPTION

ORIGIN/DESTINATION

B. PRIMARY/SECONDARY LINES AND INSTRUMENT SIGNAL CONNECTOR

CONNECTOR NUMBER

XX

P&ID No

➤

SERVICE DESCRIPTION

ORIGIN /DESTINATION

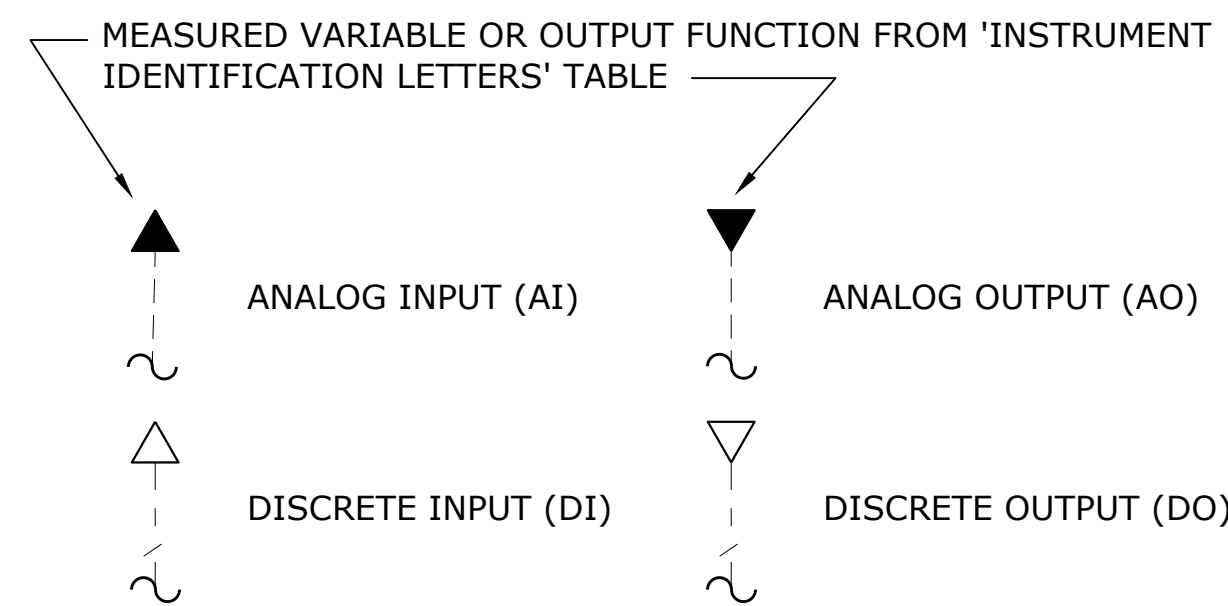
C. UTILITY CONNECTOR

CONNECTOR NUMBER

XX

P&ID No

INPUT / OUTPUT SIGNALS



DRAIN CONNECTORS

CLOSED DRAIN	OPEN DRAIN
CONNECTOR NUMBER	CONNECTOR NUMBER
DESTINATION LINE SERVICE CODE	DESTINATION LINE SERVICE CODE
CLOSED DRAIN (NO P&ID)	OPEN DRAIN (NO P&ID)
DESTINATION LINE SERVICE CODE	DESTINATION LINE SERVICE CODE

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LEGEND, SYMBOLS AND ABBREVIATIONS 1

PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBRUARY 2023

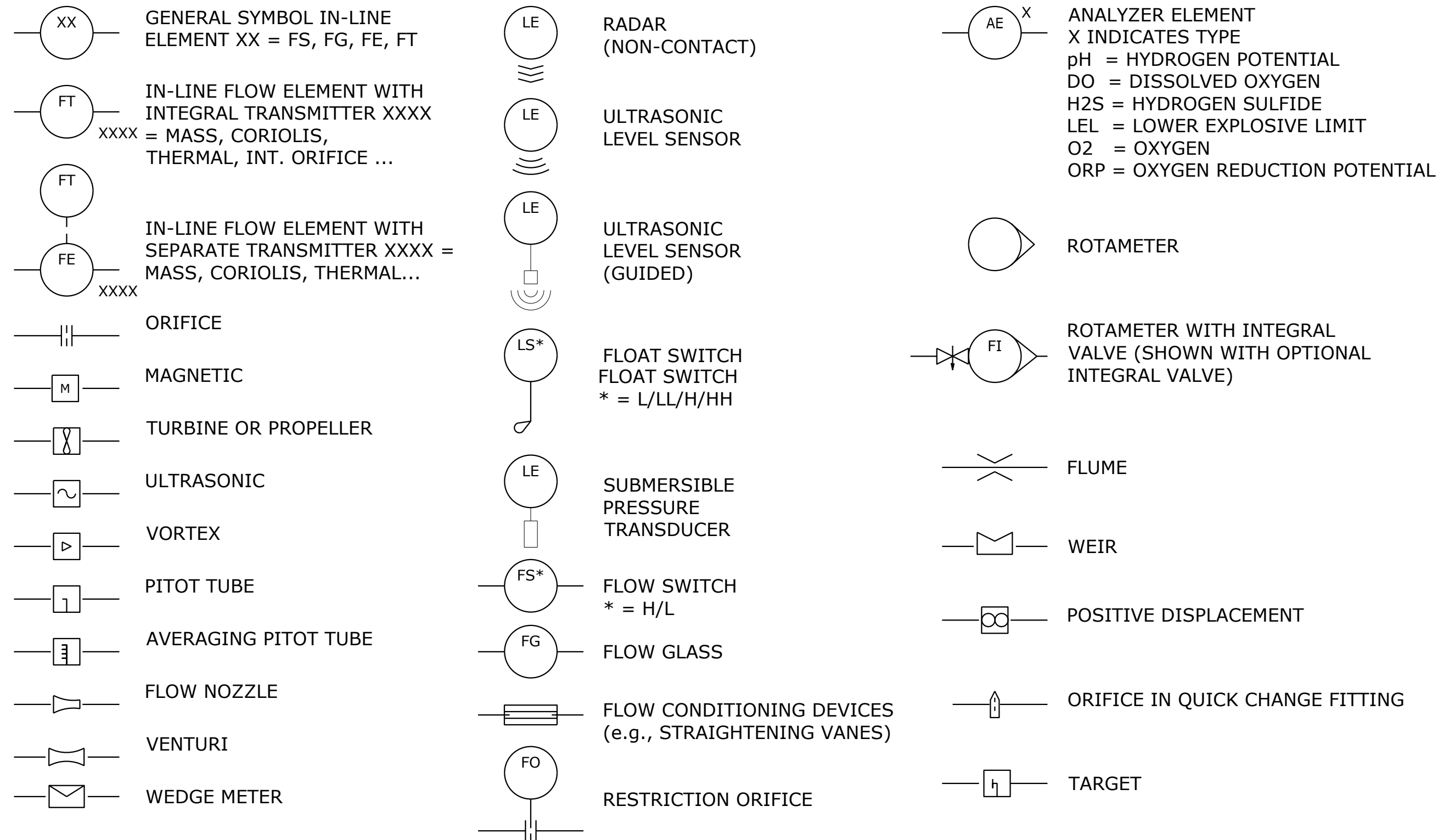
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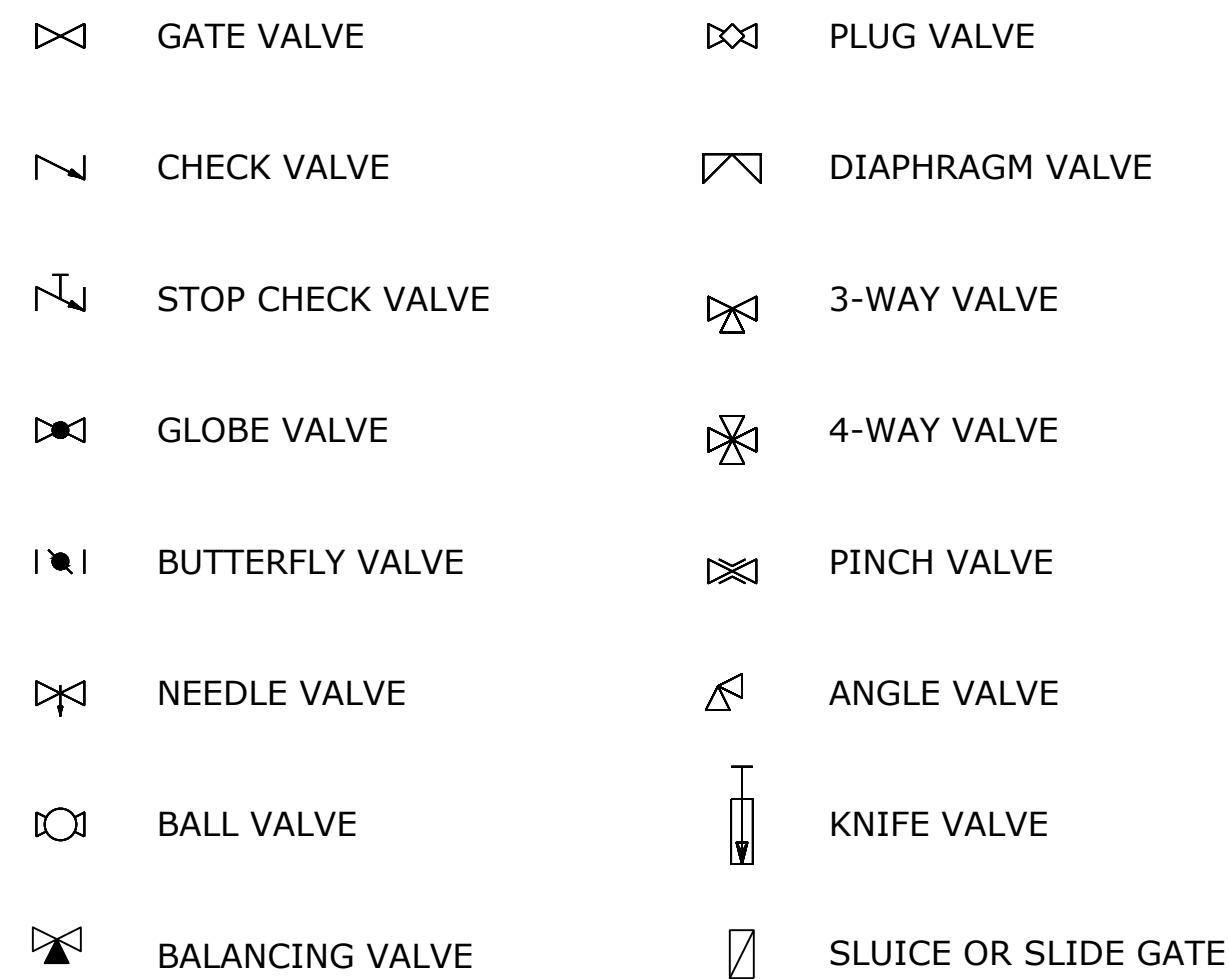
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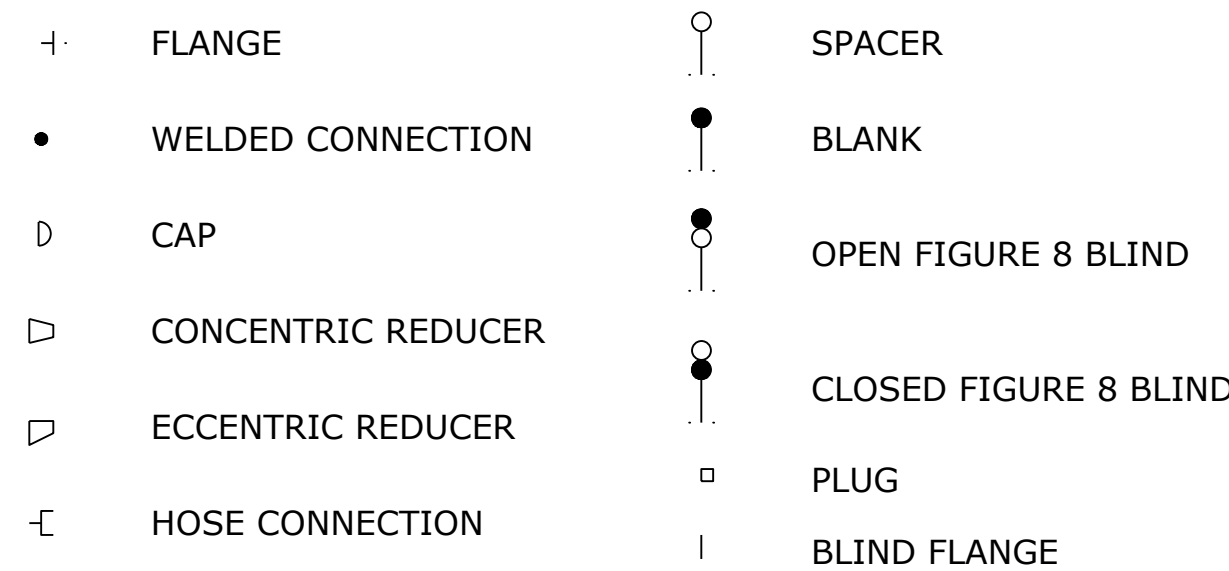
PRIMARY ELEMENT SYMBOLS



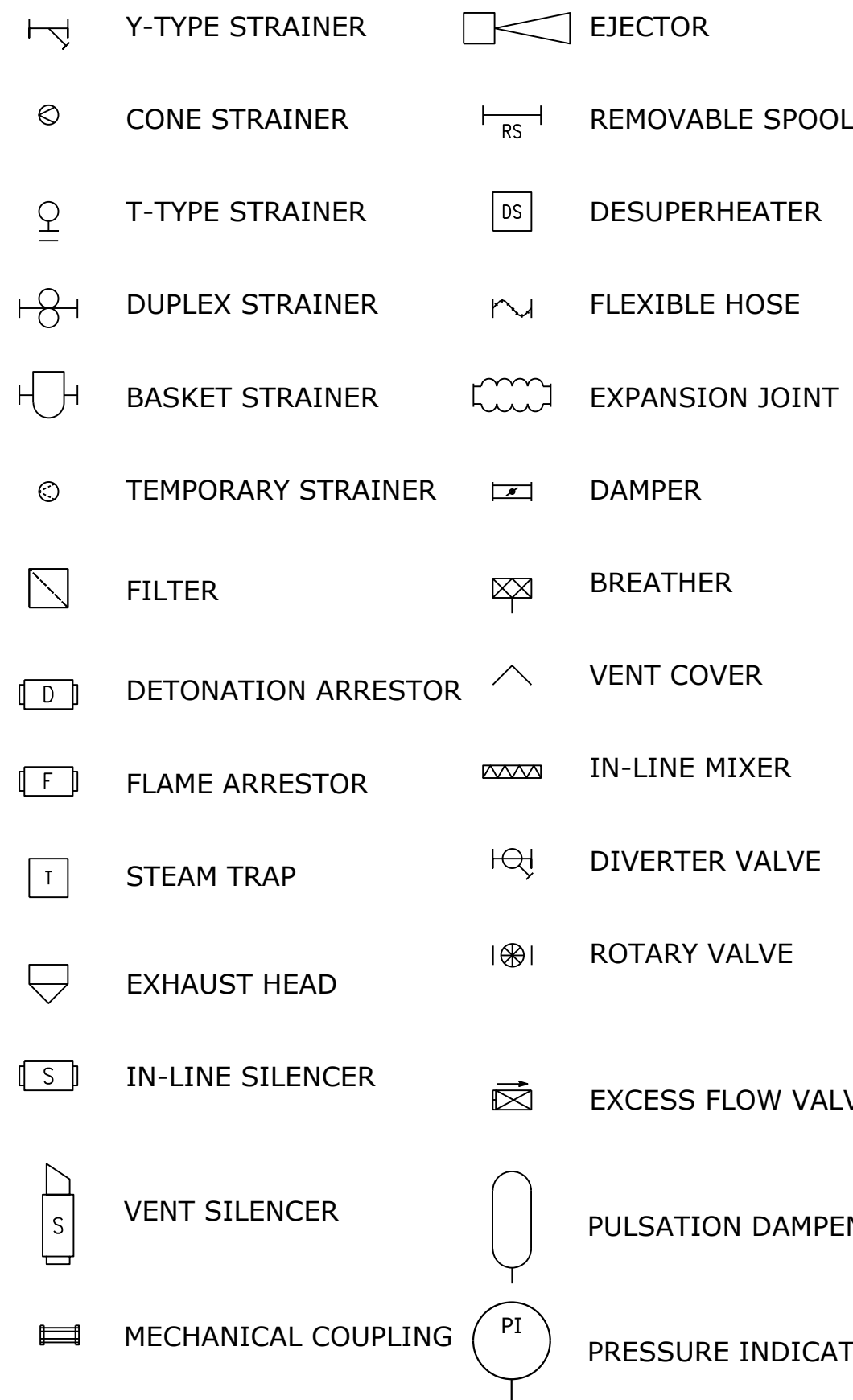
VALVE SYMBOLS (N.C. WHEN SHADED)



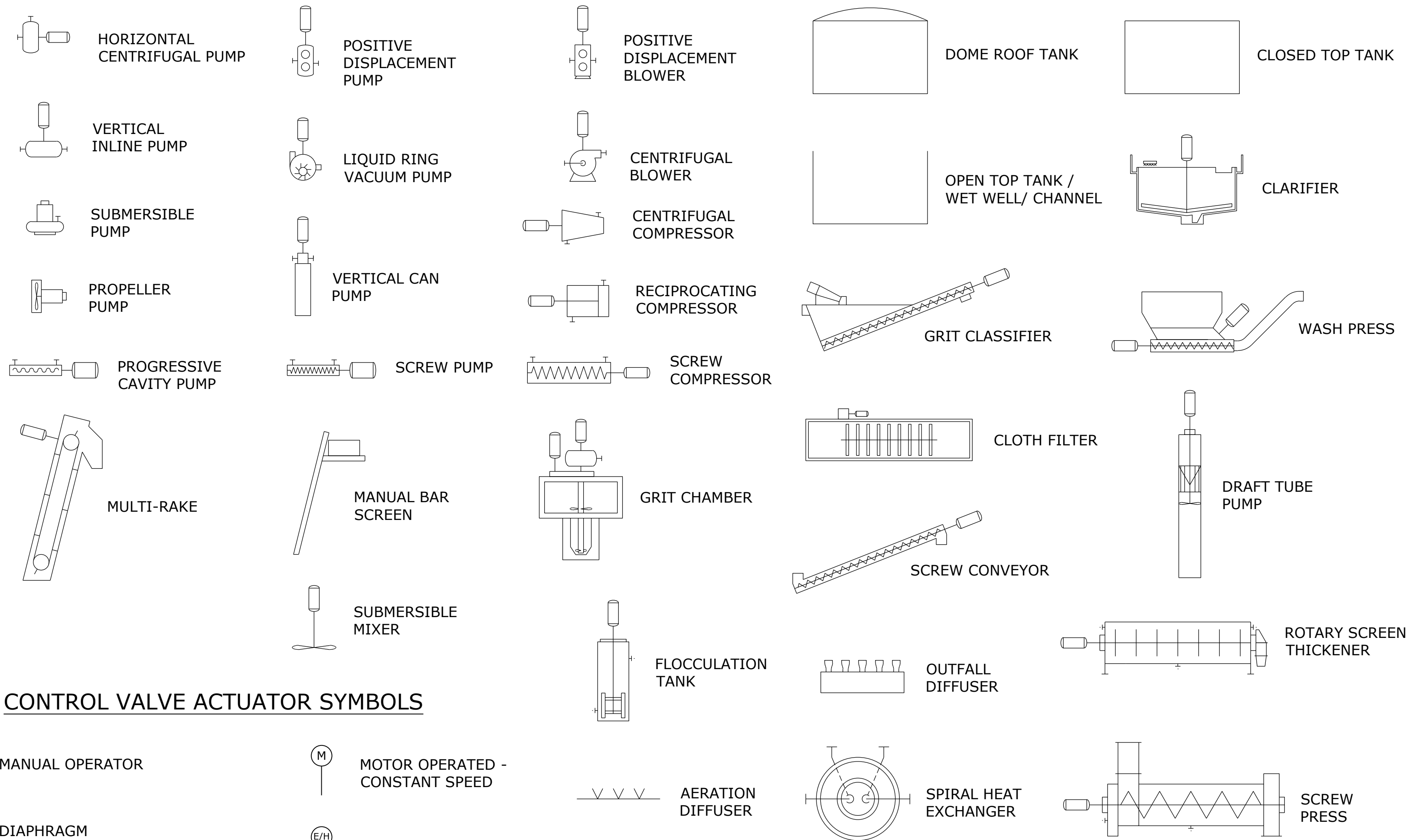
PIPING FITTINGS



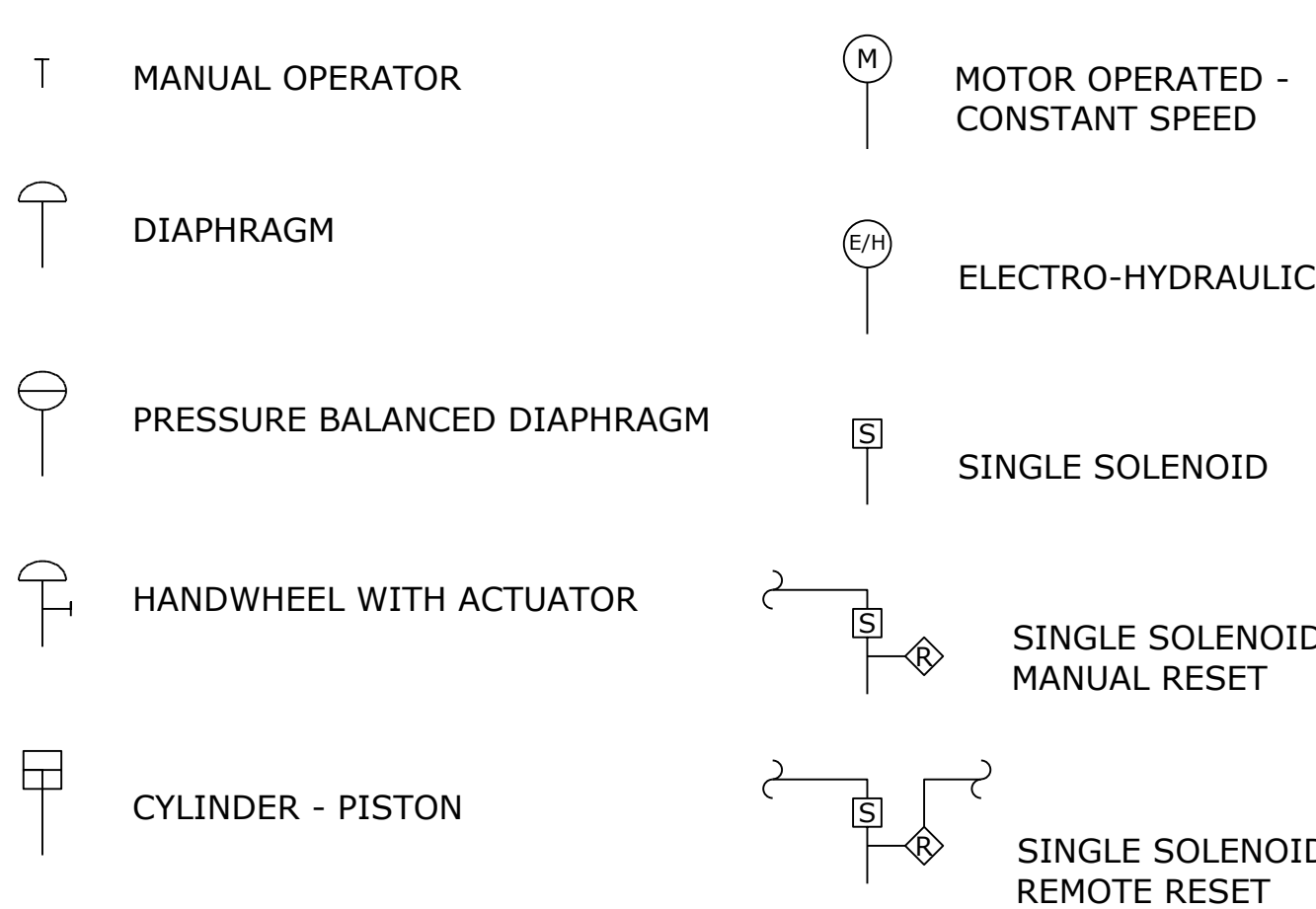
PIPING SPECIALTY ITEMS



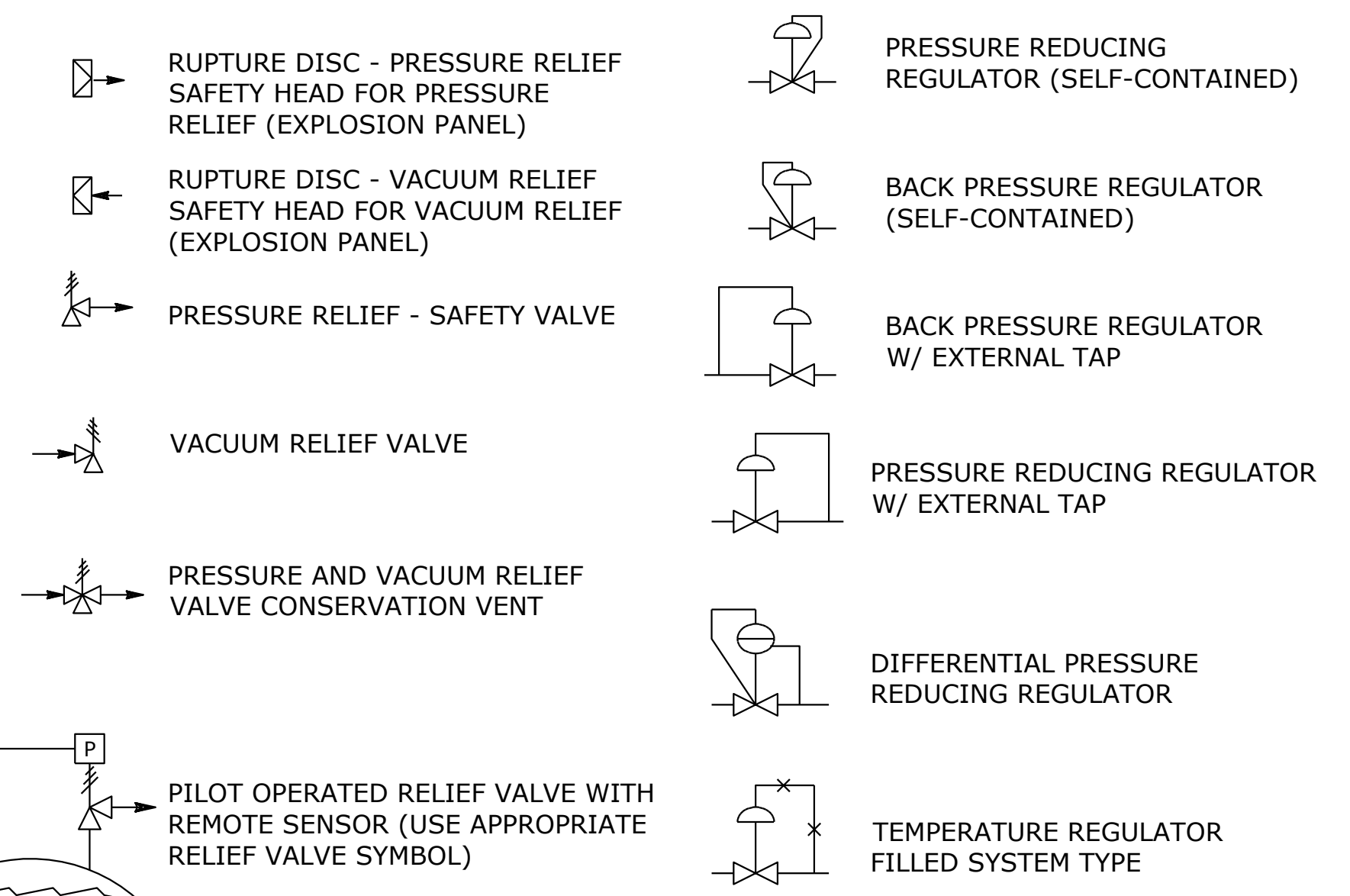
PROCESS EQUIPMENT



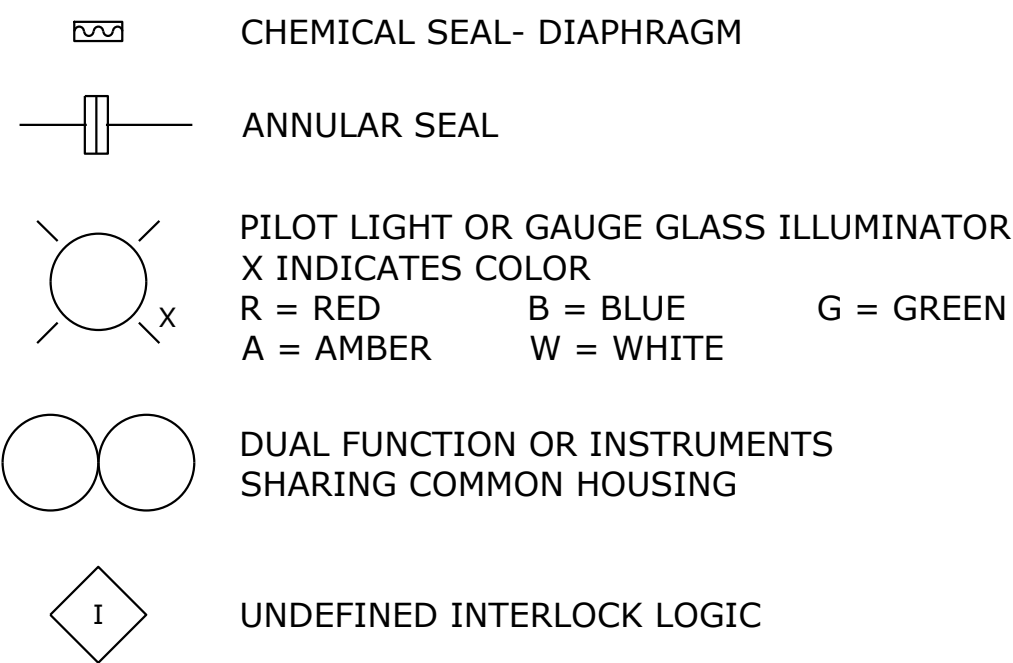
CONTROL VALVE ACTUATOR SYMBOLS



SELF-ACTUATED DEVICES



MISCELLANEOUS INSTRUMENT SYMBOLS



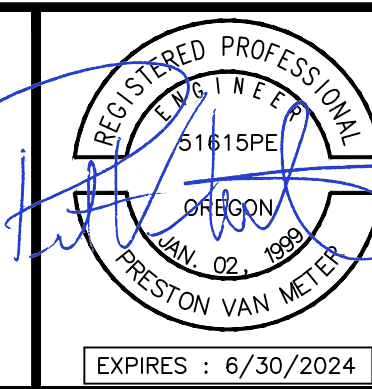
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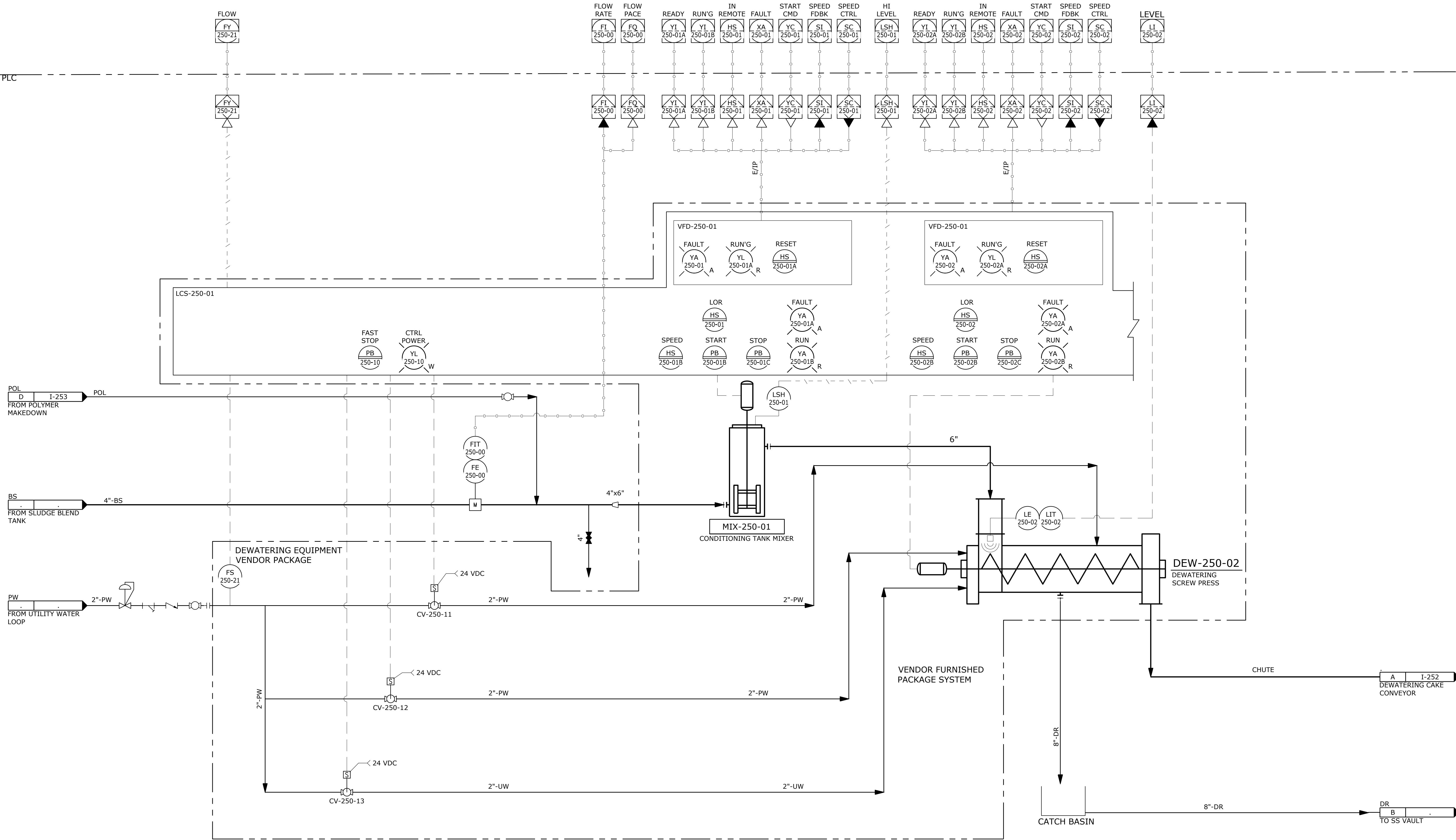
LEGENDS, SYMBOLS AND ABBREVIATIONS 2

PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBRUARY 2023

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37 of 42



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REGISTERED PROFESSIONAL
ENGINEER
OREGON
JAN. 02, 1998
PRESTON VAN METTER
EXPIRES : 6/30/2024

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Water. Engineered.

Sweet Home
Oregon
at its best!

MAHLER WATER RECLAMATION FACILITY INTERIM IMPROVEMENTS PROJECT

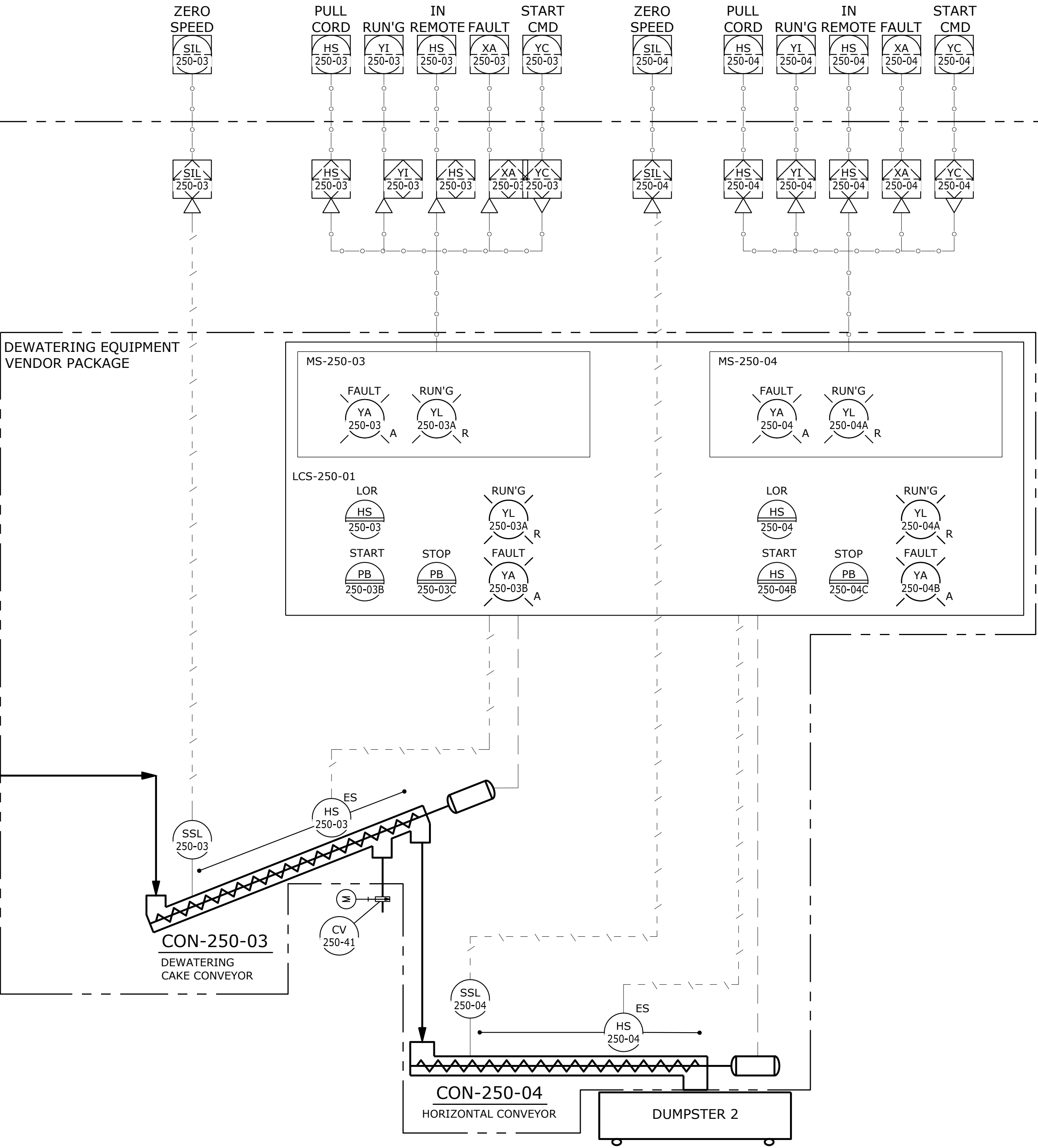
SOLIDS DEWATERING 1

PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBRUARY 2023

SHEET
I-251
38 of 42

SCADA

PLC



I-252.dwg I-252 2/15/2023 11:00 AM AARON

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NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

WJS/MB
DESIGNED
AT
DRAWN
JMC/PLVM
CHECKED



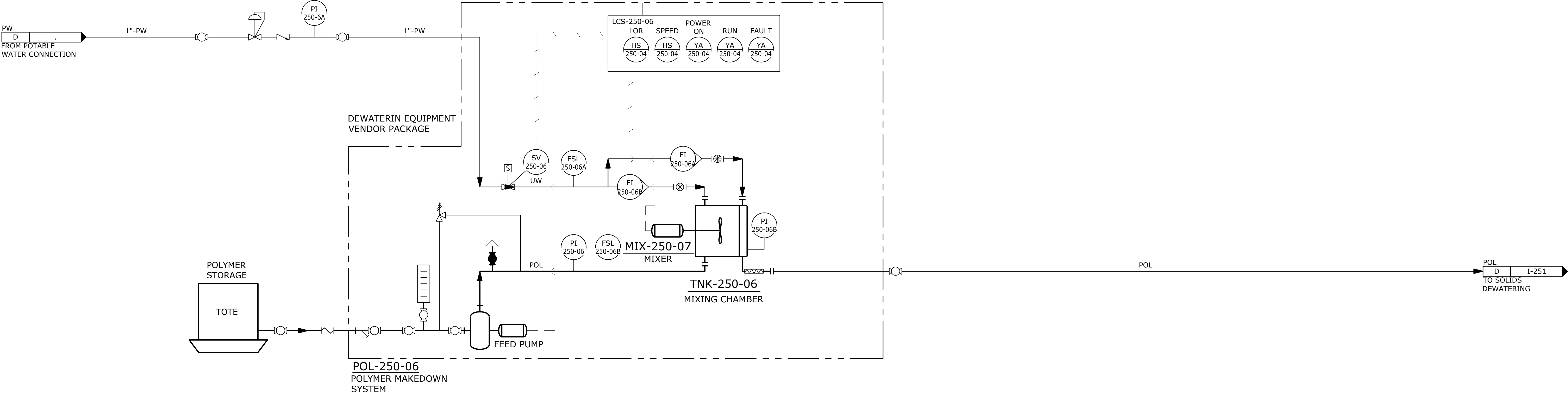
MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

PROJECT NO.: 936-50-21-09			
SCALE:	AS SHOWN	DATE:	FEBRUARY 2023

SHEET
I-252
39 of 42

SCADA

PLC



I-253.dwg I-253 2/14/2023 5:43 PM AARON

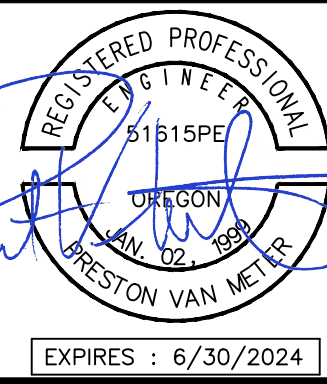
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NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

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DESIGNED
AT
DRAWN
JMC/PLVM
CHECKED



MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

POLYMER MAKEDOWN

PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBRUARY 2023

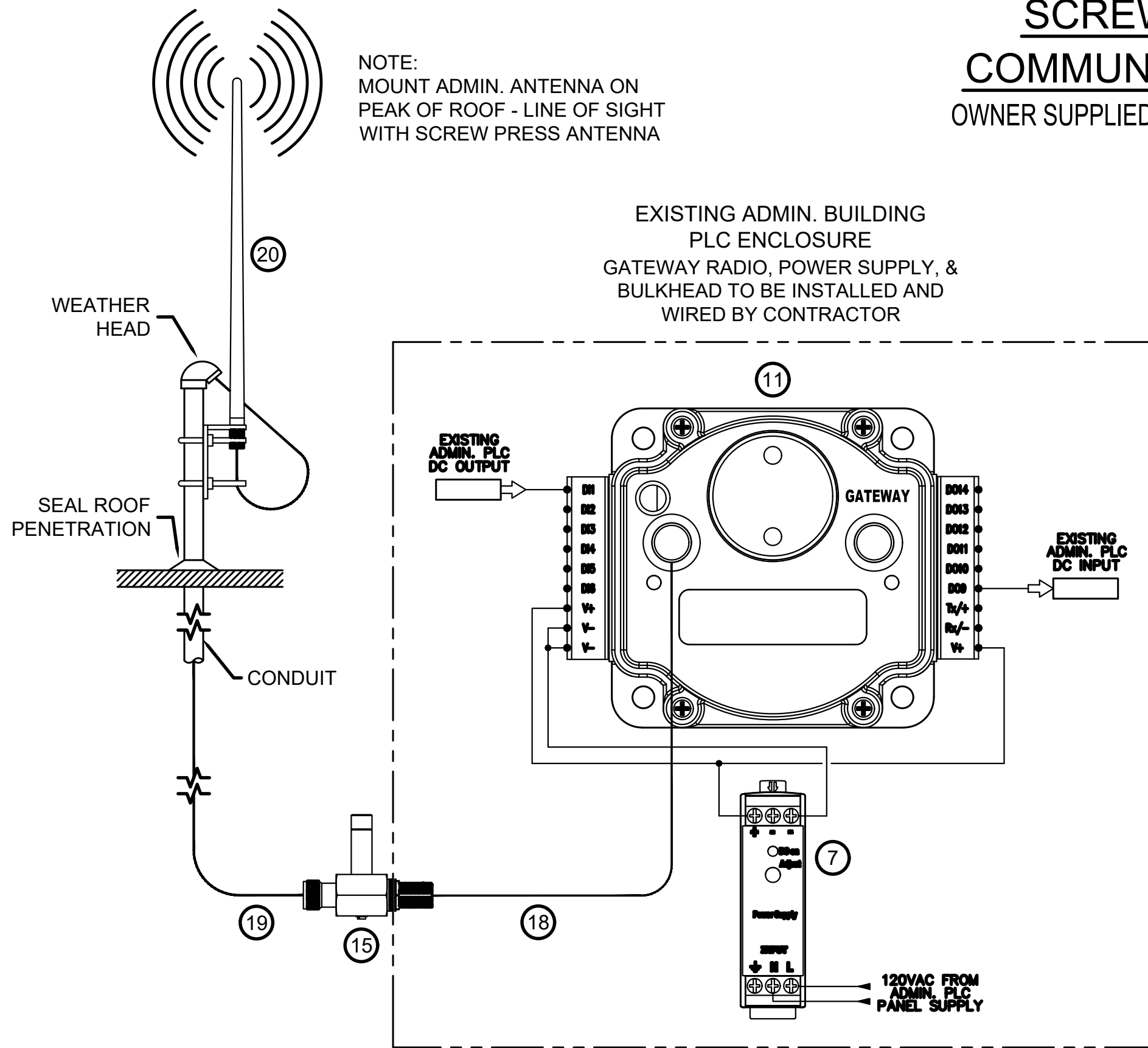
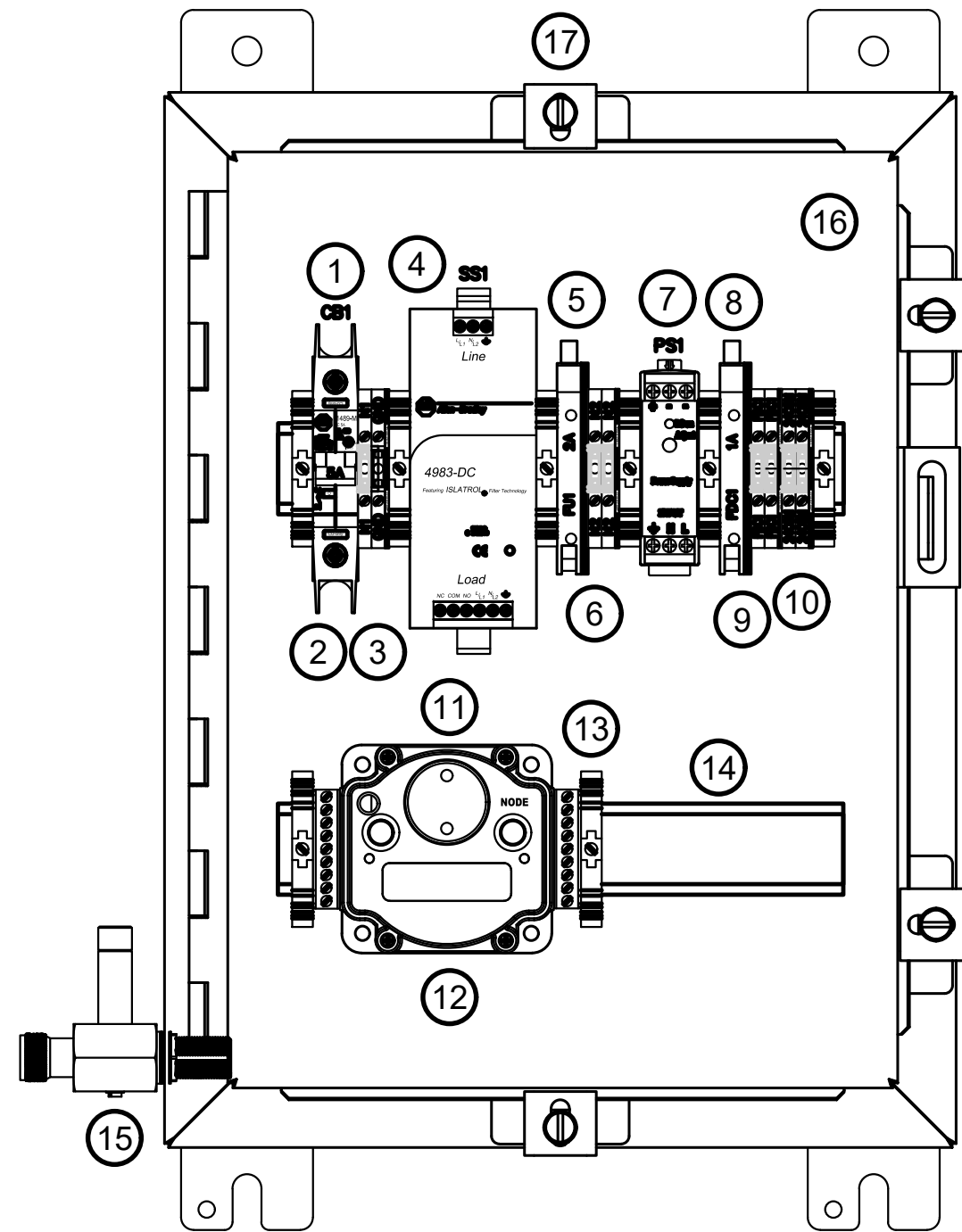
SHEET

I-253

40 of 42

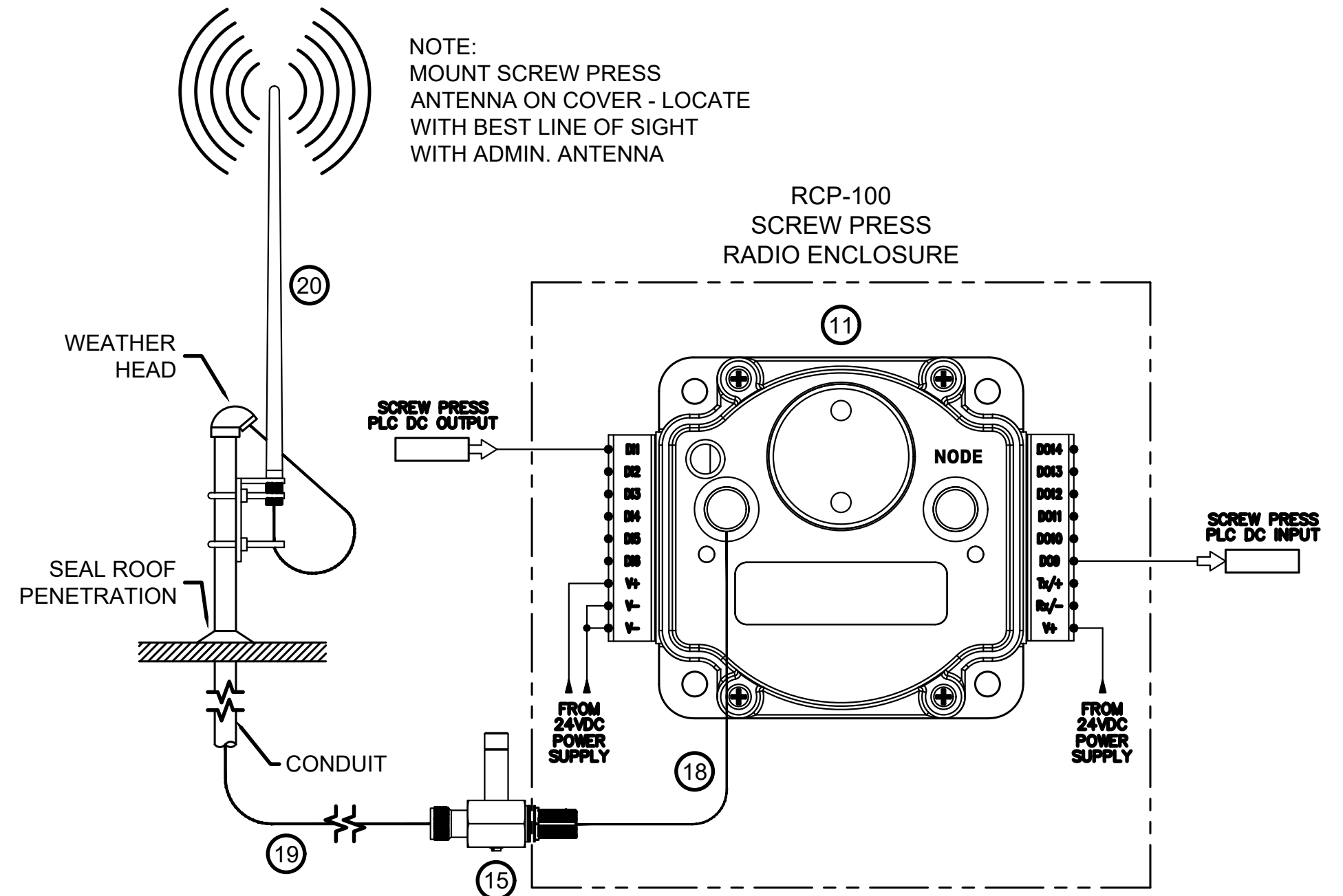
RCP-100
SCREW PRESS RADIO
PANEL LAYOUT

OWNER SUPPLIED - INSTALLATION BY CONTRACTOR



SCREW PRESS RADIO
COMMUNICATION DIAGRAM

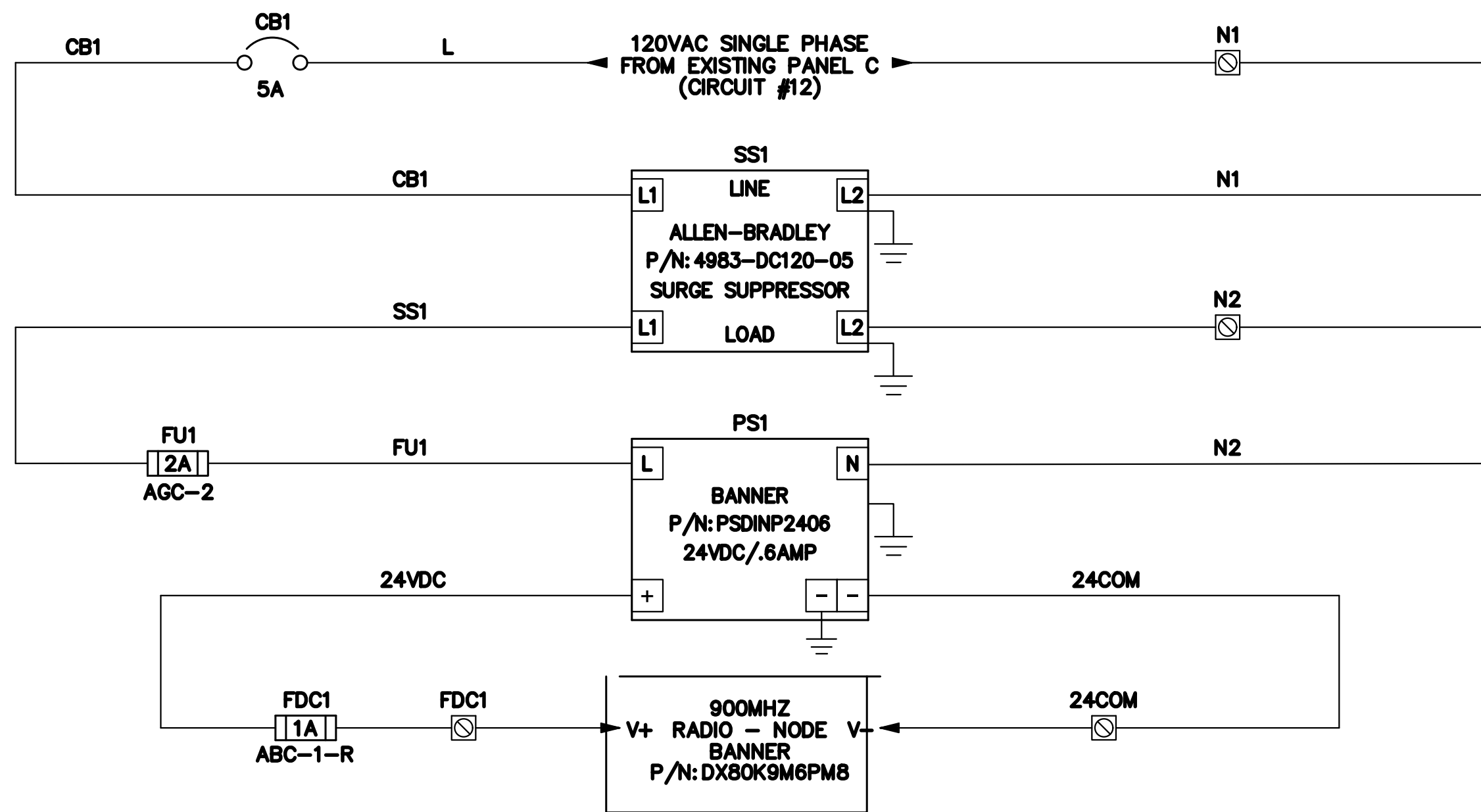
OWNER SUPPLIED - INSTALLATION BY CONTRACTOR



GENERAL SHEET NOTES

1. RCP-100 SHALL BE OWNER FURNISHED CONTRACTOR INSTALLED.
2. ALL FIELD WIRING SHALL BE PROVIDED BY THE CONTRACTOR.

RCP-100
POWER DISTRIBUTION



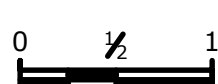
BILL OF MATERIAL

OWNER SUPPLIED

ITEM	QTY	PART #	MANUFACTURER	DESCRIPTION
1	1	1489-M1C050	ALLEN BRADLEY	CIRCUIT BREAKER, 5 AMP, 277VAC/48VDC, C-TRIP CURVE, 1-POLE DIN MOUNT
2	3	1492-J3	ALLEN BRADLEY	TERMINAL BLOCK , GRAY, 0.20"
3	1	1492-JG3	ALLEN BRADLEY	TERMINAL BLOCK , GREEN/YELLOW, GROUND
4	1	4983-DC120-05	ALLEN BRADLEY	120VAC, 5AMP SURGE SUPPRESSOR, 10KAIC
5	1	1492-H4	ALLEN BRADLEY	FUSE HOLDER, 100-300V AC, RED IND, 1/4 X 1-1/4
6	2	1492-N37	ALLEN BRADLEY	END BARRIER, 1492-H SERIES
7	2	PSDINP2406	BANNER	.6AMP 24VDC POWER SUPPLY
8	1	1492-H5	ALLEN BRADLEY	FUSE HOLDER, 10-57V DC, RED LED, 1/4 X 1-1/4
9	4	1492-J3B	ALLEN BRADLEY	TERMINAL BLOCK , BLUE, 0.20"
10	3	1492-EBJ3	ALLEN BRADLEY	END BARRIER, 1492-J SERIES
11	1	DX80K9M6PM8	BANNER	PM8 SERIES RADIO KIT (ONE GATEWAY, ONE NODE RADIO)
12	2	SMBDX80DIN	BANNER	RADIO DIN MOUNTING KIT
13	8	1492-EAJ35	ALLEN BRADLEY	END ANCHOR
14	2	1492-DR1	ALLEN BRADLEY	35MM X 7.5MM STANDARD DIN RAIL
15	2	BWCPRC827DC	BANNER	ANTENNA CABLE SURGE SUPPRESSOR BULKHEAD
16	1	A16P12	HOFFMAN	13"H X 9"W BACK PANEL
17	1	A16H12BLP	HOFFMAN	16"H X 12"W X 8"D TYPE 4 ENCLOSURE
18	2	BWC1MRSNMN05	BANNER	.5 METER LMR200 ANTENNA COAX CABLE (RADIO TO BULKHEAD)
19	2	BWC4MNFN15	BANNER	15 METER LMR400 ANTENNA COAX CABLE (BULKHEAD TO ANTENNA)
20	2	BWA9O6AS	BANNER	900MHZ 6 DBI FIBERGLASS OMNI ANTENNA

NO.	DATE	BY	REVISION

NOTICE



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MB

DESIGNED
JL
DRAWN
BP
CHECKED



LANDIS
CONSULTING
Salem | Lake Oswego
503-584-1576
www.landisconsulting.com



MAHLER WATER
RECLAMATION FACILITY
INTERIM IMPROVEMENTS
PROJECT

RCP-100 SCREW PRESS RADIO CONTROL
PANEL

PROJECT NO.: 936-50-21-09 SCALE: AS SHOWN DATE: FEBURARY 2023

SHEET

IC-100

42 of 42