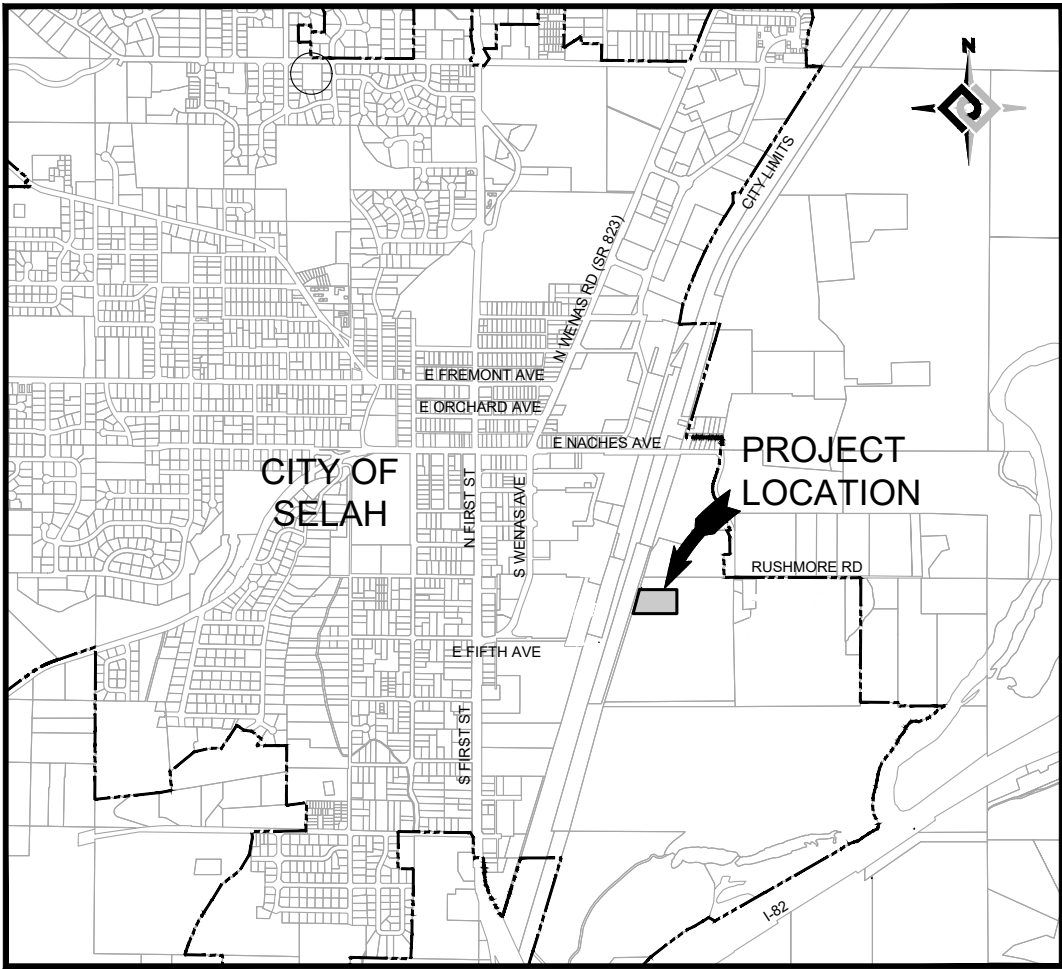




VICINITY MAP
NOT TO SCALE

CITY OF SELAH

YAKIMA COUNTY WASHINGTON

PHASE 2 - WASTEWATER TREATMENT PLANT IMPROVEMENTS

HLA PROJECT NO. 23166

JULY 2026



Know what's below.
Call before you dig.

LOCATION OF ALL UNDERGROUND UTILITIES SHOWN
HEREON ARE APPROXIMATE AND ARE BASED ON FIELD
LOCATIONS OF ALL VISIBLE STRUCTURES SUCH AS:
CATCH BASINS, MANHOLES, WATER GATES, ETC. AND
COMPILING INFORMATION FROM PLANS SUPPLIED BY
VARIOUS UTILITY COMPANIES. ALL CONTRACTORS MUST
CALL 509-248-0202 OR 1-800-424-5555 PRIOR TO
ANY EXCAVATION WORK.



DATUM ELEVATION

ELEVATIONS BASED ON WASHINGTON STATE
REFERENCE NETWORK (WSRN) NAVD88



2803 River Road
Yakima, WA 98902
(509) 966-7000
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REVISION	DATE

JOB NUMBER: 23166	DATE: 07/07/26
FILE NAMES: DRAWING: Sheets-G-Phase 1.dwg	
PLAN: 23166.dwg	
DESIGNED BY: RJS	
ENTERED BY: DAS	

CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS

COVER SHEET

G-1

SHEET
1 OF 82

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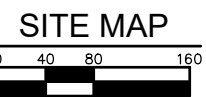
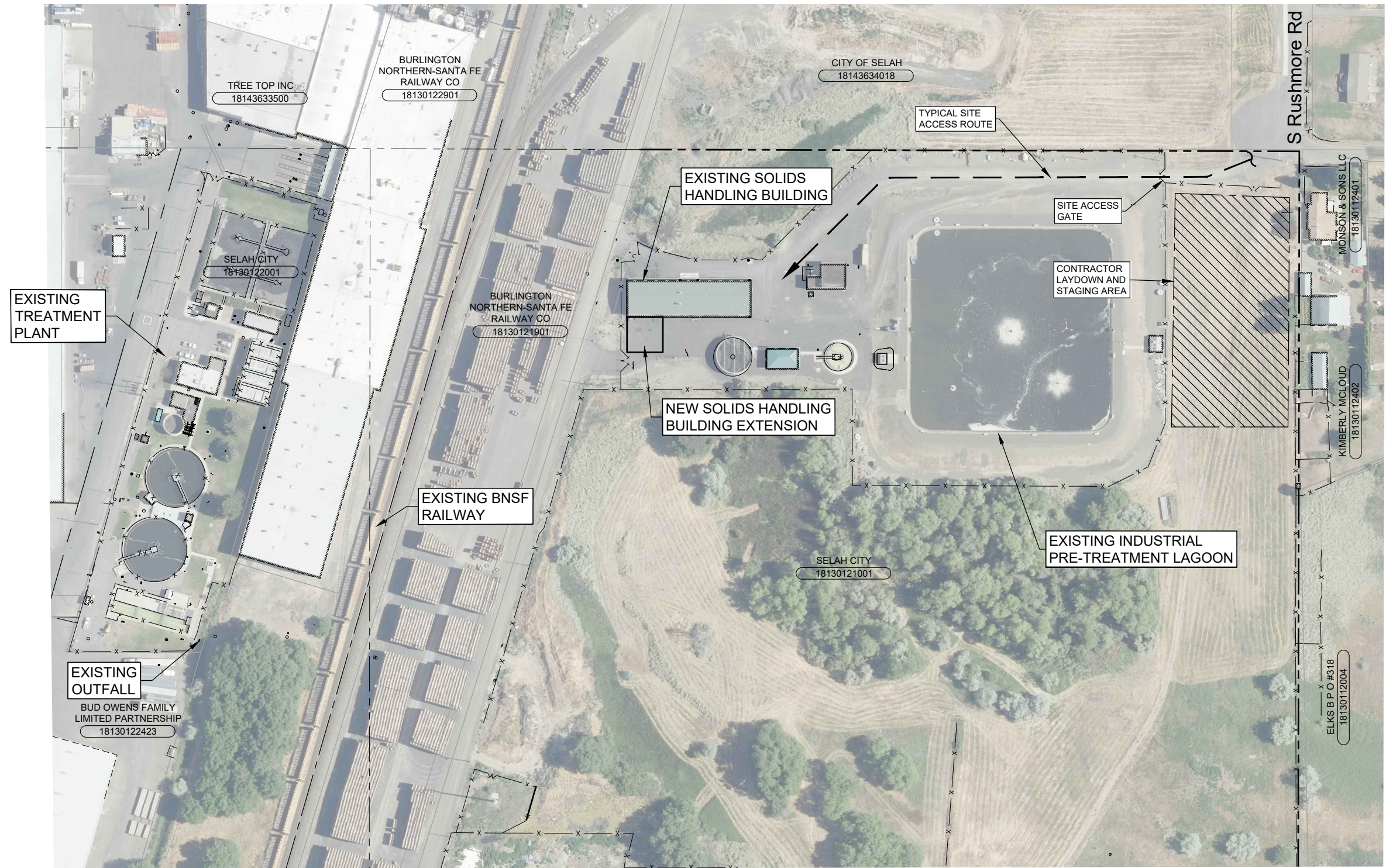
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CITY OF SELAH
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SHEET INDEX



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CITY OF SELAH
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SITE MAP

G-3

SHEET

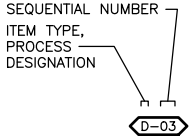
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SCHEDULED ITEM LEGEND

DOOR		SEE SCHEDULE ON SHEET GA-1
ROOM NUMBER		
WINDOW TYPE		
WALL TYPE		
HVAC EQUIPMENT		SEE SCHEDULE ON SHEET GM-1

SCHEDULED ITEM EXAMPLE:

DOOR #3 WOULD BE CALLED OUT AS (SEE SCHEDULE FOR COMPLETE LIST):



SCHEDULED ITEM NOTES:

- SEE ADDITIONAL SCHEDULES ELSEWHERE IN THE PLAN SET.
- NOT ALL SCHEDULED ITEMS ARE CALLED OUT ON THE SHEETS. SCHEDULES REFERENCED HEREIN ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE AND SHOULD NOT BE CONSIDERED A COMPREHENSIVE LIST OF THE REQUIRED EQUIPMENT.

CIVIL SITE PLAN LEGEND

EXISTING FEATURES

FENCE	
POTABLE WATER	
IRRIGATION WATER	
STORM DRAIN	
UNDERGROUND POWER	
OVERHEAD POWER	
GAS	
CHLORINE SOLUTION	
CAUSTIC SOLUTION (SODIUM HYDROXIDE)	
POLYMER SOLUTION	
RAW SEWER	
SEWER FORCE MAIN	
SCUM/HUMUS	
SLUDGE	
WASTE ACTIVATED SLUDGE	
DRAIN (STORM)	
EFFLUENT	
OVERHEAD TELEPHONE	
SIGNAL	
INSTRUMENTATION/CONTROL	
FIBER OPTIC	
WETLAND BOUNDARY	

TREE	
UTILITY POLE	
MANHOLE	
DRYWELL	
CATCH BASIN	
WATER VALVE	
SPLICE BOX	
CLEANOUT	
FIRE HYDRANT	
YARD HYDRANT	
IRRIGATION VALVE	
GAS METER	
BOLLARD	
ANCHOR	
LIGHT	
CONTOUR	

NEW FEATURES

ASPHALT PAVEMENT	
GRAVEL SURFACING	
HYDROSEED	
STRAIGHT CURB	
INTEGRAL CURB	
CEMENT CONCRETE SIDEWALK/FLATWORK	
POTABLE WATER LINE	
PROCESS/SEWER LINE	
IRRIGATION WATER LINE	
DRAIN LINE	
AIR LINE	
NEW AND/OR RELOCATED CHAINLINK FENCE	
MANHOLE	
YARD HYDRANT	
BOLLARD	
FIRE HYDRANT	
CLEANOUT	
WATER VALVE	
SPOT ELEVATION	
CONTOUR	

VALVE SYMBOLS

DOUBLE LINE	SINGLE LINE	
		GATE
		BUTTERFLY
		BALL
		PLUG
		CHECK
		CONTROL VALVE
		BALL CHECK VALVE
		DIAPHRAGM VALVE
		PRESSURE REGULATING VALVE

PIPE AND FITTING SYMBOLS

DOUBLE LINE	SINGLE LINE	
		NEW PIPE
		FLANGED JOINT
		MECHANICAL JOINT
		FLANGE COUPLING ADAPTER
		RESTRAINED FLANGE COUPLING ADAPTER
		FLEXIBLE BOLTED SLEEVE COUPLING
		ELASTOMER BELLOWS EXP JOINT
		ELBOW UP
		ELBOW DOWN
		TEE UP
		TEE DOWN
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		UNION
		ELBOW, 90 DEGREE
		TEE
		ELBOW, 45 DEGREE
		HOSE BIBB

SYMBOL NOTES:

- FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLE LINE FITTINGS. FITTINGS WITH OTHER END PATTERNS ARE SHOWN SIMILARLY ON THE CONSTRUCTION DRAWINGS.
- SYMBOLS SHOWN HERE FOR SINGLE LINE FITTINGS ARE GENERIC ONLY. REFER TO PIPING SPECIFICATIONS FOR SPECIFIC END CONNECTIONS FOR SINGLE LINE PIPE AND FITTINGS.
- EXISTING PIPE AND EQUIPMENT IS SHOWN LIGHT-LINED AND/OR SCREENED AND IS NOTED AS EXISTING. NEW PIPING AND EQUIPMENT IS SHOWN HEAVY-LINED.

GENERAL PIPING NOTES:

- LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.
- SIZE OF FITTINGS SHOWN ON PLANS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
- LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. FINAL SUPPORT REQUIREMENTS SHALL BE DETERMINED IN THE FIELD AND REVIEWED BY THE ENGINEER PRIOR TO INSTALLATION. MAXIMUM SPACING SHALL BE AS SPECIFIED.
- ALL JOINTS SHALL BE WATERTIGHT. WALL PIPES SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL.
- ALL FLEXIBLE CONNECTORS OR FLANGED COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST TIES, BLOCKS, OR ANCHORS, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.
- ALL BURIED DUCTILE IRON PIPING SHALL BE MECHANICAL JOINT OR PUSH-ON JOINT PIPE. ALL JOINTS BENEATH STRUCTURES SHALL BE RESTRAINED JOINTS.
- ALL FITTINGS IN BURIED PRESSURE PIPE SHALL BE RESTRAINED USING RESTRAINED JOINTS OR CONCRETE THRUST BLOCKING. WHEN RESTRAINED JOINTS ARE USED, RESTRAIN ADJOINING PIPE JOINTS THE MINIMUM DISTANCE SPECIFIED.
- NUMBER AND LOCATION OF UNIONS SHOWN ON PLANS IS ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
- WHERE A FLANGED COUPLING ADAPTER IS SHOWN, A STANDARD FLANGE SHALL BE JOINED TO THE COUPLING ADAPTER. THE USE OF UNI-FLANGE OR SIMILAR FLANGE ADAPTERS WILL NOT BE ALLOWED.
- PIPE LOCATION DIMENSIONS ARE MEASURED TO NOMINAL FACE OF WALL OR FINISHED FLOOR UNLESS NOTED OTHERWISE.
- EQUIPMENT SCHEDULES DO NOT LIST ALL REQUIRED PIPING. THE CONTRACTOR IS RESPONSIBLE FOR HIS OWN QUANTITY TAKE-OFF FOR PIPE, FITTINGS, AND VALVES.
- ALL DUCTILE IRON SLUDGE PIPING AND FITTINGS USED ON THIS PROJECT SHALL BE GLASS-LINED.



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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS

LEGEND AND SYMBOL SCHEDULE

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PUBLISHED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT), THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA) AND THE SPECIAL PROVISIONS OF THE CITY OF SELAH.
2. THE CONTRACTOR IS ADVISED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES SHOWN HEREON ARE BASED UPON UTILITY INFORMATION OF RECORD, INFORMATION PROVIDED TO HLA ENGINEERING AND LAND SURVEYING, INC. AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS.
3. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION REQUEST CENTER NOT LESS THAN 72 HOURS NOR MORE THAN 10 BUSINESS DAYS BEFORE ANY EXCAVATION, TO REQUEST FIELD LOCATIONS OF UTILITIES. THE TELEPHONE NUMBER FOR THE ONE CALL CENTER FOR THIS PROJECT IS 1-800-424-5555. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT THE CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY WHERE EXISTING UTILITIES ARE FOUND TO CONFLICT WITH PROJECT IMPROVEMENTS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR POTHOLING OR VERIFICATION OF EXISTING UTILITY LOCATIONS.
4. ANY DAMAGE TO PUBLIC UTILITIES OR ADJACENT PROPERTIES AS A RESULT OF THE CONSTRUCTION ACTIVITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MADE IN A TIMELY MANNER TO THE SATISFACTION OF THE DAMAGED PARTY.
5. EXCAVATION OF MATERIAL OF WHATEVER NATURE ENCOUNTERED AND DEWATERING FOR ALL UNDERGROUND ITEMS SHALL BE INCIDENTAL TO AND INCLUDED IN THE BID ITEMS. NO SEPARATE PAYMENT FOR ROCK EXCAVATION OR DEWATERING SHALL BE MADE. CONTRACTORS WHO ARE PROSPECTIVE BIDDERS ARE INSTRUCTED TO EXAMINE THE EXCAVATION AREAS TO DETERMINE THE LIKELIHOOD OF ENCOUNTERING ROCK OR WATER TO THEIR OWN SATISFACTION.
6. THE CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE. NO BURNING WILL BE ALLOWED. THE CONTRACTOR SHALL BE REQUIRED TO SECURE AND OPERATE HIS OWN WASTE DISPOSAL SITE AT HIS OWN EXPENSE FOR THE DISPOSAL OF ALL UNSUITABLE MATERIAL, ASPHALT, CONCRETE, DEBRIS, WASTE MATERIAL, AND ANY OTHER OBJECTIONABLE MATERIAL WHICH IS DIRECTED TO WASTE. THE CONTRACTOR SHALL COMPLY WITH THE STATE OF WASHINGTON REGULATIONS REGARDING DISPOSAL OF WASTE MATERIAL AS OUTLINED IN WAC 173-304, SUBCHAPTER 461.
7. AT ALL TIMES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING ON-SITE EROSION DUE TO WIND AND RUNOFF.
8. A PRECONSTRUCTION MEETING WITH THE ENGINEER, THE CONTRACTOR, AND INTERESTED UTILITY COMPANIES SHALL BE HELD A MINIMUM OF ONE WEEK PRIOR TO BEGINNING CONSTRUCTION. CITY INSPECTOR SHALL BE GIVEN 48-HOURS MINIMUM NOTICE PRIOR START OF WORK.
9. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE APPROVED PLANS, ONE (1) COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS, AND A COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB, ON-SITE AT ALL TIMES.
10. IF WORKERS ENTER ANY TRENCH OR OTHER EXCAVATION FOUR FEET OR MORE IN DEPTH THAT DOES NOT MEET THE OPEN PIT REQUIREMENTS OF WSDOT/APWA SECTION 2-09.3(3)B, IT SHALL BE SHORED AND CRIBBED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR WORKER SAFETY AND THE ENGINEER ASSUMES NO RESPONSIBILITY. ALL TRENCH SAFETY SYSTEMS SHALL MEET THE REQUIREMENTS OF THE WASHINGTON INDUSTRIAL SAFETY AND HEALTH ACT, CHAPTER 49.17 RCW.
11. IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED BY THE CONTRACTOR, HIS SUBCONTRACTORS, OR OTHER AFFECTED PARTIES, WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER ACTIONS NEEDED TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THIS CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY AND ALL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED BY THE CONSTRUCTION ACTIVITIES. ALL SECTIONS OF THE WSDOT/APWA STANDARD SPECIFICATIONS SECTION 1-10, TEMPORARY TRAFFIC CONTROL, SHALL APPLY IF WORK WITHIN THE RIGHT OF WAY WILL INTERRUPT NORMAL TRAFFIC OPERATION.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND DIRT TRACKED FROM THE SITE.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT INFORMATION ON A SET OF RECORD DRAWINGS KEPT AT THE CONSTRUCTION SITE, AND AVAILABLE TO THE CITY AND ENGINEER AT ALL TIMES. THE CONTRACTOR SHALL DELIVER THESE DRAWINGS TO THE ENGINEER AT THE COMPLETION OF THE WORK.

GENERAL NOTES CONT.

15. PROVIDE AN AUTOMATIC FIRE SPRINKLER SYSTEM FOR PROTECTION OF THE SOLIDS HANDLING BUILDING, INCLUDING NEWLY ENCLOSED AREA, IN ACCORDANCE WITH NFPA 13. DETERMINE HAZARD CLASSIFICATIONS OF THE INTERIOR SPACE IN ACCORDANCE WITH CHAPTER 4.3 AND PROVIDE APPLICATION DENSITIES AND HOSE ALLOWANCES IN ACCORDANCE WITH CHAPTER 19. THE AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE DESIGNED BY A LICENSED FIRE PROTECTION ENGINEER OR WASHINGTON STATE CERTIFICATE OF COMPETENCY HOLDER. PREPARE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS IN ACCORDANCE WITH CHAPTER 27 AND SUBMIT TO THE AUTHORITY HAVING JURISDICTION AND OBTAIN THEIR APPROVAL. OBTAIN FIRE FLOW INFORMATION FOR THE UTILITY SUPPLYING THE AUTOMATIC FIRE SPRINKLER SYSTEM. CALCULATED SYSTEM DEMAND SHALL BE A MINIMUM OF 10% BELOW THE AVAILABLE WATER SUPPLY CURVE. PIPE MATERIALS, SPRINKLERS, AND ACCESSORIES SHALL BE IN ACCORDANCE WITH CHAPTER 7. UPRIGHT SPRINKLERS SHALL BE PROVIDED IN AREAS WITHOUT SUSPENDED CEILINGS. SEMI-RECESSED PENDENT SPRINKLERS SHALL BE PROVIDED IN AREAS WITH SUSPENDED CEILINGS. PIPING SHALL BE SUPPORTED AND SEISMICALLY BRACED IN ACCORDANCE WITH CHAPTERS 17 & 18. THE AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY TESTED IN ACCORDANCE WITH CHAPTER 28. SUBMIT TEST CERTIFICATES AND OBTAIN ALL FINAL APPROVALS OF THE COMPLETE SYSTEM FROM THE AUTHORITIES HAVING JURISDICTION. COORDINATE INTERFACES WITH THE BUILDING FIRE ALARM SYSTEM AND ASSIST WITH TESTING OF FIRE ALARM SYSTEMS AS NECESSARY. SUBMIT AS-BUILT SHOP DRAWINGS, HYDRAULIC CALCULATIONS, AND SYSTEM COMPONENT DATASHEETS FOR INCLUSION IN PROJECT OPERATION AND MAINTENANCE MANUALS. PROVIDE MINIMUM 1-YEAR WARRANTY FOR SYSTEM COMPONENTS AND INSTALLATION WORKMANSHIP.
1. CONTRACTOR TO DETERMINE EXTENT OF FACILITIES NECESSARY TO ADEQUATELY CONTROL DEWATERING WATER. GROUNDWATER CONDITIONS AT THE PROJECT SITE ARE GENERALLY KNOWN. A GEOTECHNICAL REPORT WAS PREPARED FOR THIS PROJECT LOCATED IN APPENDIX B OF THE PROJECT SPEC WHICH IDENTIFIES A GROUNDWATER DEPTH OF 6.2 TO 7.6 FEET. WITH PRIOR APPROVAL FROM CITY OF SELAH, THE CONTRACTOR MAY CONDUCT EXPLORATORY OPERATIONS NECESSARY TO DETERMINE THE EXTENT OF DEWATERING PRIOR TO BID. SOIL EXPLORATIONS MUST BE COORDINATED WITH THE CITY PRIOR TO EXCAVATION AT NO COST TO THE OWNER.
2. CONTRACTOR SHALL DESIGN, FURNISH, INSTALL, TEST, OPERATE, MONITOR, AND MAINTAIN DEWATERING SYSTEM OF SUFFICIENT SCOPE, SIZE, AND CAPACITY TO CONTROL GROUND WATER FLOW INTO EXCAVATIONS AND PERMIT CONSTRUCTION TO PROCEED ON DRY, STABLE SUBGRADES INCLUDING ANY WELLS, WELL POINTS, OR SIMILAR METHODS COMPLETE WITH PUMP EQUIPMENT, STANDBY POWER AND PUMPS, FILTER MATERIAL, VALVES, APPURTENANCES, WATER DISPOSAL, AND SURFACE WATER CONTROLS. NO ADDITIONAL COMPENSATION WILL BE MADE.
3. CONTRACTOR SHALL PROVIDE A PLAN SHOWING THE ARRANGEMENT, LOCATIONS, AND DETAILS OF DEWATERING DISCHARGE MEANS PRIOR TO IMPLEMENTATION TO ENSURE COMPLIANCE OF KNOWN AGREEMENTS WITH PROPERTY OWNERS AND CITY OF SELAH REQUIREMENTS.
4. CONTRACTOR SHALL MAINTAIN DEWATERING OPERATIONS TO ENSURE EROSION CONTROL, STABILITY OF EXCAVATIONS AND CONSTRUCTED SLOPES, AND, THAT EXCAVATIONS DO NOT FLOOD OR SUSTAIN DAMAGE.
5. CONTRACTOR SHALL PREVENT SURFACE WATER FROM ENTERING EXCAVATIONS BY GRADING, CREATING DIKES, AND ANY MEANS NECESSARY TO CONTROL THE MOVEMENT OF WATER.
6. CONTRACTOR SHALL PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY DEWATERING OPERATIONS. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR DAMAGE DUE TO DEWATERING OPERATIONS.
7. CONTRACTOR SHALL PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING THE SITE AND SURROUNDING AREAS.
8. CONTRACTOR SHALL NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM THE OWNER. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS OR ACCESS POINT IF REQUIRED BY THE CITY OF SELAH.
9. BEFORE EXCAVATING BELOW GROUND WATER LEVEL, PLACE SYSTEM INTO OPERATION TO LOWER WATER TO SPECIFIED LEVELS. OPERATE SYSTEM CONTINUOUSLY UNTIL UTILITIES AND STRUCTURES HAVE BEEN CONSTRUCTED AND FILL MATERIALS HAVE BEEN PLACED, OR UNTIL DEWATERING IS NO LONGER REQUIRED.
10. PROVIDE STANDBY EQUIPMENT ON-SITE, INSTALLED AND AVAILABLE FOR IMMEDIATE OPERATION, TO MAINTAIN DEWATERING ON A CONTINUOUS BASIS IF ANY PART OF SYSTEM BECOMES INADEQUATE OR FAILS. IF DEWATERING REQUIREMENTS ARE NOT SATISFIED DUE TO INADEQUACY OR FAILURE OF DEWATERING SYSTEM, RESTORE DAMAGED STRUCTURES AND FOUNDATION SOILS AT NO ADDITIONAL EXPENSE TO THE OWNER.
11. REMOVE DEWATERING SYSTEM FROM PROJECT SITE UPON COMPLETION OF DEWATERING.
12. ANY DAMAGES TO ADJACENT FACILITIES CAUSED BY DEWATERING OPERATIONS SHALL BE REPAIRED WITHIN 48 HOURS.
13. CONTRACTOR SHALL DISPOSE OF ALL WATER IN A MANNER THAT MEETS THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS.
14. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL PERMITS.

GENERAL DEMOLITION NOTES

1. ALL DEMOLITION WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND REQUIREMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, HAZARDOUS MATERIALS, DISPOSAL, AND HOURS OF OPERATION.
2. THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM ALL UTILITY COMPANIES AFFECTED, PRIOR TO ANY DEMOLITION WORK OR DISCONNECTION OF ANY SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ALL REQUIREMENTS OF THE RESPECTIVE UTILITY COMPANIES.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES WHICH ARE TO REMAIN IN SERVICE, INCLUDING BUT NOT LIMITED TO, ELECTRIC, GAS, SEWER, WATER, STORM WATER, AND IRRIGATION.
4. ANY DAMAGE TO PUBLIC OR PRIVATE UTILITIES OR ADJACENT PROPERTIES AS A RESULT OF DEMOLITION ACTIVITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL REPAIR COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MADE IN A TIMELY MANNER TO THE SATISFACTION OF THE DAMAGED PARTY.
5. ALL UTILITIES THAT ARE TO BE VACATED, INCLUDING ELECTRICAL SERVICE CONDUIT, SHALL BE COMPLETELY REMOVED FROM THE GROUND AND DISPOSED OF OFF SITE, UNLESS OTHERWISE SPECIFIED.
6. ANY UNFORESEEN CONDITIONS WHICH MAY BE UNCOVERED DURING DEMOLITION SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER. ADDITIONAL EXPENSES INCURRED BY THESE CONDITIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE ADDITIONAL WORK BEING PERFORMED.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSPECT THE PROPERTY FOR TYPE AND QUANTITY OF DEMOLITION REQUIRED, PRIOR TO SUBMISSION OF A BID.
8. THE CONTRACTOR SHALL HAVE WATER ON SITE FOR DUST ABATEMENT AT ALL TIMES DURING DEMOLITION ACTIVITIES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE DISPOSAL OF ALL DEBRIS. BURNING ON SITE SHALL NOT BE PERMITTED. NO DEBRIS, INCLUDING CONCRETE OR ASPHALT, MAY BE PLACED IN ANY FILL AREAS UNLESS APPROVED BY THE ENGINEER.
10. EXISTING EQUIPMENT AND MATERIALS THAT ARE SCHEDULED TO REMAIN OR BE REUSED SHALL BE PROTECTED AT ALL TIMES DURING DEMOLITION AND CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF DAMAGED EQUIPMENT AND MATERIALS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

GENERAL NOTES - CONSTRUCTION SEQUENCE

1. THE SPECIFICS OF THE ORDER OF WORK SHALL BE AT THE CONTRACTOR'S OPTION, BUT WORK MUST COORDINATE WITH THE CONSTRUCTION SEQUENCE DESCRIBED HEREIN. ALL WORK SHALL BE SCHEDULED SO THE EXISTING WASTEWATER TREATMENT FACILITIES CAN REMAIN IN OPERATION AT ALL TIMES.
2. THE CONTRACTOR SHALL MAKE ALL PIPING CHANGEOVERS, BUT ONLY AFTER REVIEW BY THE ENGINEER. ALL PIPING SHALL BE EXPOSED, AND ALL LABOR, TOOLS, MATERIALS, AND EQUIPMENT NECESSARY TO MAKE THE CONNECTION SHALL BE ON HAND PRIOR TO BEGINNING WORK. THE CONNECTION SHALL THEN BE MADE IN THE MINIMUM TIME POSSIBLE TO MINIMIZE THE IMPACTS TO THE TREATMENT PROCESS.
3. COORDINATE AND SCHEDULE POWER UTILITY WORK WITH OPERATIONS STAFF AND UTILITY COMPANY. PLANT OPERATIONS STAFF SHALL BE GIVEN A MINIMUM OF 3-DAY NOTICE PRIOR TO ANY POWER SERVICE SHUTDOWNS AND/OR INTERRUPTIONS THAT MAY TAKE PLACE THROUGHOUT THE CONSTRUCTION DURATION.
4. COORDINATE AND SCHEDULE PROCESS REVISIONS WITH OPERATIONS STAFF. PLANT OPERATIONS STAFF SHALL BE GIVEN A MINIMUM OF 3-DAY NOTICE PRIOR TO ANY FLOW REALIGNMENT AND/OR BYPASS PUMPING PLAN BEING STARTED OR STOPPED TO ALLOW APPROPRIATE PLANT OPERATIONS TO BE MODIFIED.
5. CONSTRUCTION SEQUENCING SHALL INCLUDE PROVISIONS FOR ALLOWING CITY TO CONTINUE OPERATIONS OF EXISTING SOLIDS HANDLING EQUIPMENT. CITY STAFF SHALL BE PROVIDED WITH MUTUALLY-AGREED UPON ACCESS TO DEWATERED SLUDGE FOR REMOVAL FROM SITE.

OVERALL CONSTRUCTION SEQUENCE

1. INSTALL REQUIRED TESC AND BMPS FOR STORMWATER RUNOFF CONTROL SYSTEMS.
2. PERFORM SITE PIPING EXTERIOR TO NEW BIOSOLIDS STORAGE AND HANDLING AREA PRIOR TO ITS CONSTRUCTION.
3. CONSTRUCT NEW BIOSOLIDS STORAGE AND HANDLING AREA.
4. THE CONTRACTOR SHALL MAINTAIN CLEAR TRUCK ACCESS WITHIN THE EXISTING LOADING BAY TO THE DISCHARGE CHUTE OF EXISTING BIOSOLIDS CONVEYOR 09-C-04 UNTIL THE NEW BIOSOLIDS STORAGE AND HANDLING AREA CONCRETE SLAB IS CURED AND BIOSOLIDS CONVEYOR 09-C-03 IS TESTED AND COMMISSIONED.

SLUDGE DEWATERING AREA SEQUENCE

1. SAW CUT EXISTING SLUDGE LOADING BAY SLAB AND PERFORM SUBGRADE WORK.
2. PHASING OF ABOVE GRADE WORK MAY BE COMPLETED AT CONTRACTOR'S DISCRETION.
3. SLUDGE SHALL NOT BE DISCHARGED TO THE NEW CENTRIFUGE OR DRYER UNTIL THE NEW HVAC IN THE SLUDGE DEWATERING AREA IS OPERATIONAL.

EXISTING SOLIDS HANDLING BUILDING SEQUENCE

1. PHASING OF WORK MAY BE COMPLETED AT CONTRACTOR'S DISCRETION.



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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS

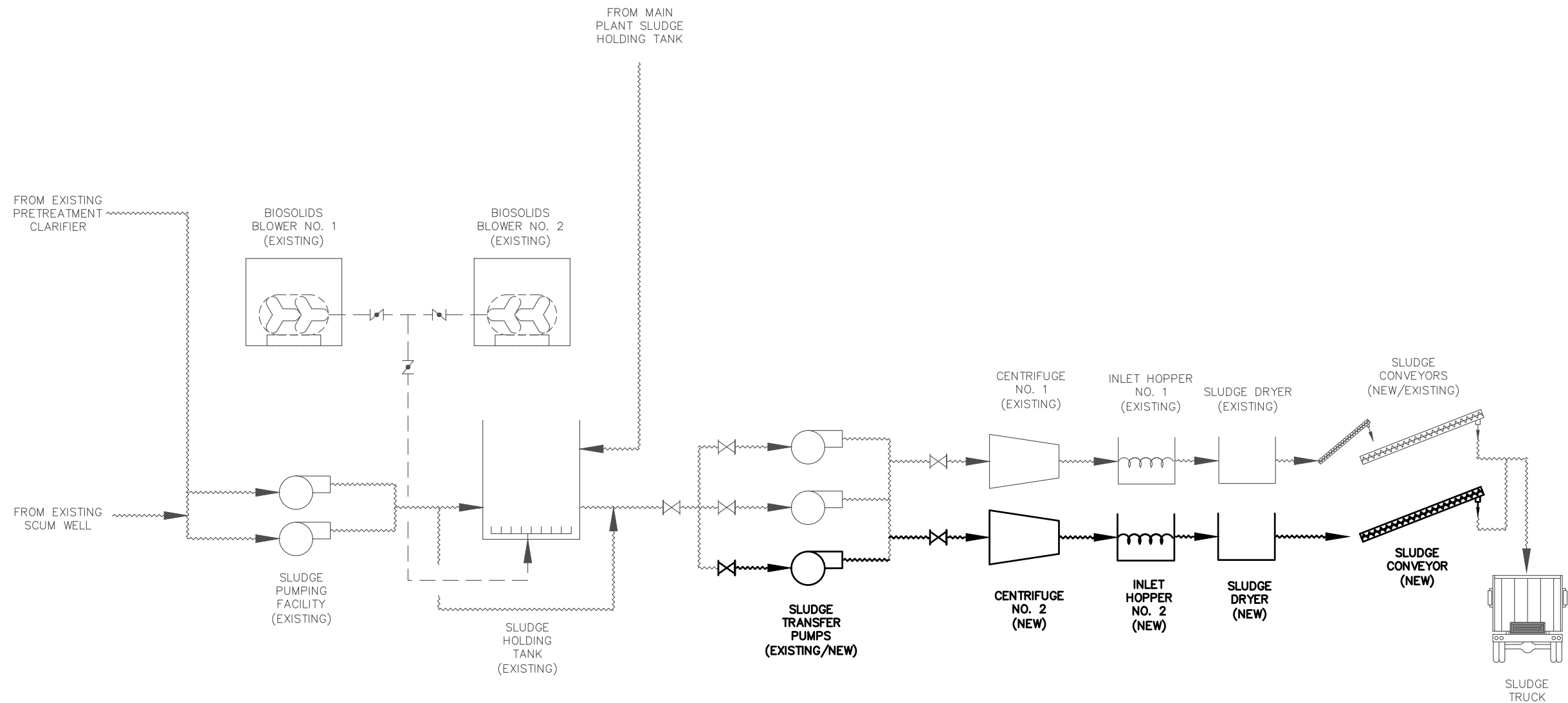
CONSTRUCTION SEQUENCE AND GENERAL NOTES

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PLANT DESIGN CRITERIA		PLANT DESIGN CRITERIA CONT.	
<u>INDUSTRIAL PLANT CAPACITY</u> MAXIMUM MONTHLY FLOW MAXIMUM MONTH BOD5 MAXIMUM MONTH TSS	0.40 MGD 4,000 LBS/DAY 1,500 LBS/DAY	<u>NEW SLUDGE DRYER</u> QUANTITY EVAPORATION RATE BIO-SOLIDS OUTPUT RATE INLET SLUDGE CONCENTRATION OUTLET SLUDGE CONCENTRATION DEMAND	1 1,507 LBS/HR 431 LBS/HR 20% 90% 2.4 MMBTU/HR
<u>MAIN PLANT CAPACITY</u> AVERAGE ANNUAL FLOW (AAF) MAXIMUM MONTHLY FLOW (MMF) MAXIMUM DAY FLOW (MDF) PEAK HOURLY FLOW MAXIMUM MONTH BOD5 LOADING MAXIMUM MONTH TSS LOADING MAXIMUM MONTH TKN LOADING	1.2 MGD 2.0 MGD 2.4 MGD 3,400 GPM 4,170 LBS/DAY 5,000 LBS/DAY 927 LBS/DAY	<u>NEW THERMAL FLUID HEATER</u> QUANTITY TYPE CAPACITY FLOW RATE DUTY (LHV) MOTORS	1 FT--0320--CU HEATER 154 G 150 GPM 1.82 MMBTU/HR 20 HP
<u>PRETREATMENT LIFT STATION</u> TYPE NUMBER CAPACITY SPEED CONTROL MOTOR ESTIMATED MAXIMUM OXYGEN TRANSFER CAPAOTY	DRY PIT SUBMERSIBLE 2 800 GPM VFD 20 HP 6,650 LB O2/DAY	<u>THERMAL FLUID FILTER</u> QUANTITY TYPE CAPACITY	1 SIDE STREAM 15 GPM
<u>PRETREATMENT LAGOON</u> VOLUME BOTTOM DIMENSIONS MAXIMUM DEPTH NUMBER OF SMALL AERATORS NUMBER OF LARGE AERATORS MOTOR (SMALL AERATORS) MOTOR (LARGE AERATORS) ESTIMATED MAX. O2 TRANSFER CAPACITY	6.4 MG 250' L X 250' W 13 FT 4 1 40 HP 75 HP 6,650 LB--O2/DAY	<u>NEW SLUDGE TRANSFER PUMP</u> QUANTITY TYPE CAPACITY MOTORS	1 ROTARY LOBE, POSITIVE DISPLACEMENT 150 GPM 7.5 HP, 460 V, 3 PHASE, 60 HZ
<u>PRETREATMENT CLARIFIER</u> TYPE NUMBER SIDEWATER DEPTH DIAMETER SURFACE AREA	CENTER FEED; PERIPHERAL WITHDRAWAL 1 14 FT 35 FT 962 FT2	<u>NEW POLYMER SYSTEM</u> QUANTITY TYPE MODEL CAPACITY POLYMER FEED	2 PUMPS LIQUID FEED PMS--M--5--P--120--R 20 LB POLYMER / DRY TON SOLIDS 5 GPH
<u>EXISTING POLYMER SYSTEM</u> QUANTITY TYPE MODEL CAPACITY	2 LIQUID FEED DYNABLEND MODEL L6P--1800--6P--13--3 20 LB POLYMER / DRY TON SOLIDS	<u>EXISTING SLUDGE GRINDER</u> QUANTITY TYPE MODEL CAPACITY	[09--POL--01] [09--POL--02]
<u>EXISTING CENTRIFUGE</u> QUANTITY MODEL CAPACITY CAPACITY MAIN DRIVE MOTOR SCROLL DRIVE MOTOR	1 IN--LINE MUFFIN MONSTER MODEL 30004--1204--DI 450 GPM	<u>EXISTING SLUDGE DRYER</u> QUANTITY MODEL WEIGHT CAPACITY EVAPORATION RATE BATCH VOLUME CAPACITY INLET SLUDGE CONCENTRATION OUTLET SLUDGE CONCENTRATION	[09--CNT--02] [09--DR--02] [09--PMP--01] [09--PMP--02]
<u>EXISTING SLUDGE TRANSFER PUMPS</u> QUANTITY TYPE CAPACITY MOTORS	2 ROTARY LOBE, POSITIVE DISPLACEMENT 150 GPM 7.5 HP, 460 V, 3 PHASE, 60 HZ	<u>EXISTING SLUDGE STORAGE TANK</u> DIAMETER SIDEWATER DEPTH VOLUME OXYGEN SUPPLY RATE	[09--CNT--01]
<u>NEW CENTRIFUGE</u> QUANTITY FEED RATE SOLIDS LOADING MAIN DRIVE MOTOR SCROLL DRIVE MOTOR BOWL VFD SCROLL VFD	1 160 GPM 800 LBS/HR 75 HP 20 HP 75 HP 20 HP		



LEGEND

----- EXISTING SLUDGE/SCUM

----- EXISTING AIR

----- NEW SLUDGE/SCUM



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CITY OF SELAH PHASE 2 - WASTEWATER TREATMENT PLANT IMPROVEMENTS

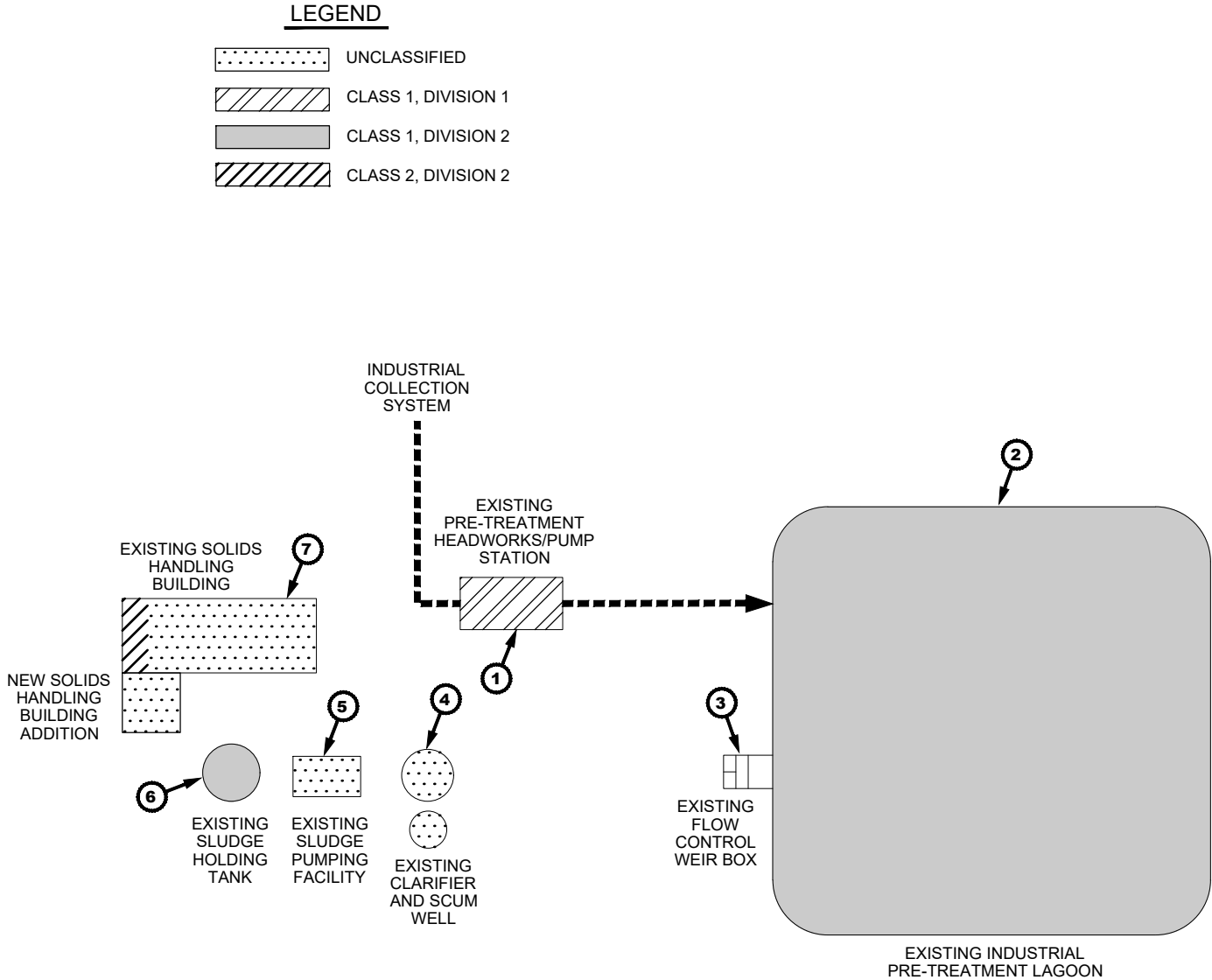
PROCESS FLOW DIAGRAM

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SUMMARY OF ELECTRICAL HAZARDOUS LOCATION CLASSIFICATIONS			
NUMBER	EXISTING/PLANNED INSTALLATION	EFFECTIVE LOCATION EXTENTS (FT)	CLASSIFICATION
①	EXISTING PRE-TREATMENT HEADWORKS/PUMP STATION	WITHIN 10' ENVELOPE AROUND EQUIPMENT AND OPEN CHANNEL	CLASS 1, DIVISION 1
②	EXISTING INDUSTRIAL PRE-TREATMENT LAGOON	INTERIOR OF TANK, ENVELOPE 18 IN ABOVE TOP OF WALL, EXTENDING 10 FT HORIZONTALLY FROM EXTERIOR WALLS.	CLASS 1, DIVISION 2
③	EXISTING FLOW CONTROL WEIR BOX	ENTIRE STRUCTURE	UNCLASSIFIED
④	EXISTING CLARIFIER AND SCUM WELL	ENTIRE STRUCTURE	UNCLASSIFIED
⑤	EXISTING SLUDGE PUMPING FACILITY	ENTIRE STRUCTURE	UNCLASSIFIED
⑥	EXISTING SLUDGE HOLDING TANK	INTERIOR OF TANK, ENVELOPE 18 IN ABOVE TOP OF WALL, EXTENDING 10 FT HORIZONTALLY FROM EXTERIOR WALLS.	CLASS 1, DIVISION 2
⑦	SOLIDS HANDLING BUILDING	ENTIRE STRUCTURE	UNCLASSIFIED
⑦	SOLIDS HANDLING BUILDING	WITHIN 10' OF NEW BIOSOLIDS DRYER	CLASS 2, DIVISION 2



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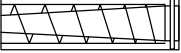
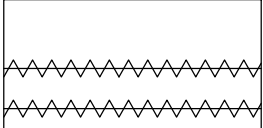
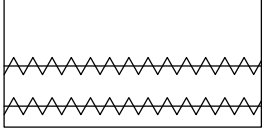
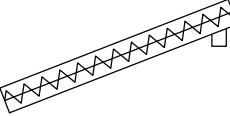
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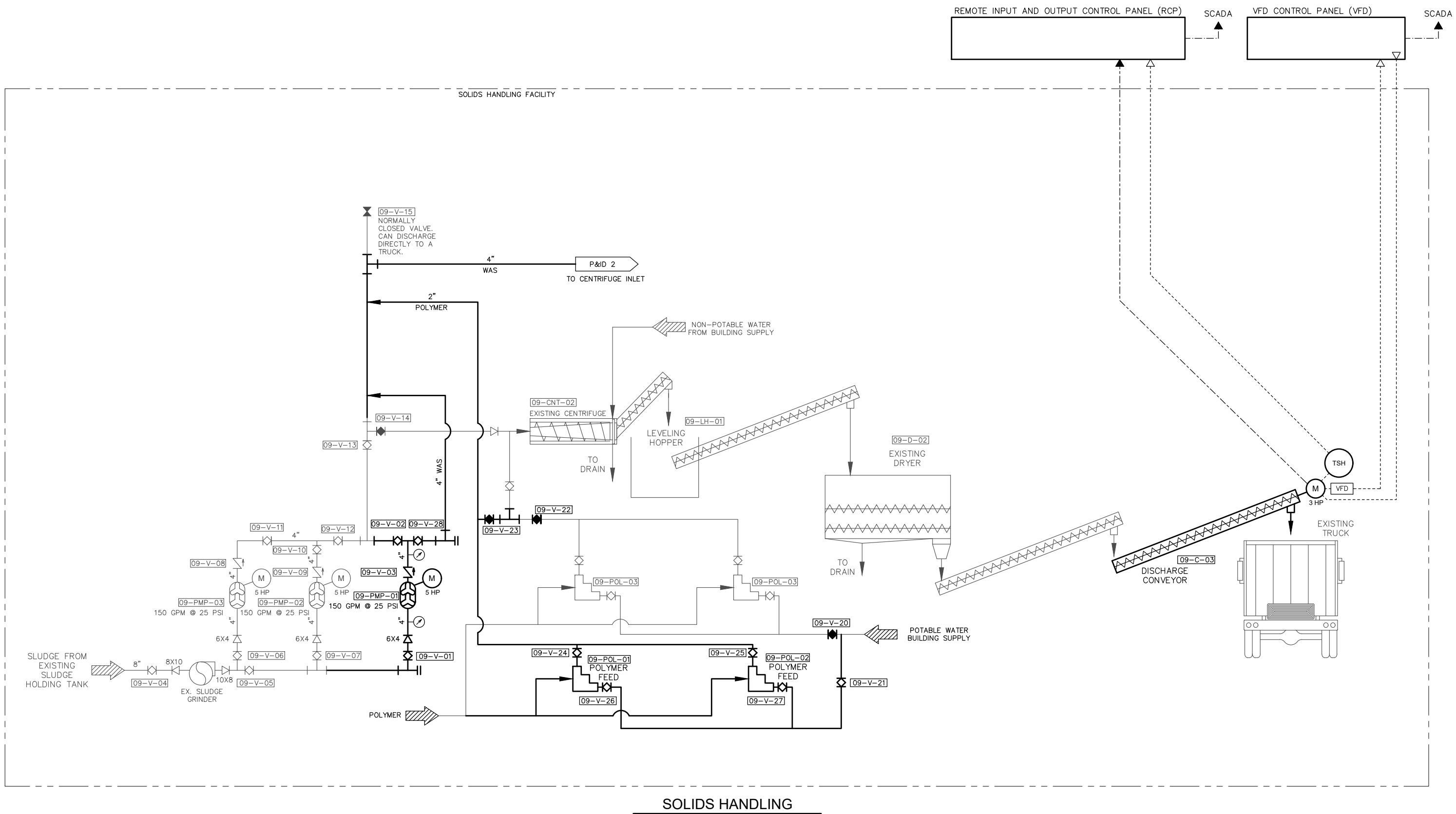
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CITY OF SELAH

PHASE 2 - WASTEWATER TREATMENT PLANT IMPROVEMENTS

ELECTRICAL HAZARDOUS LOCATION CLASSIFICATION

MECHANICAL EQUIPMENT SYMBOLS		PIPE LINE DEVICE SYMBOLS		VALVE & ACTUATOR SYMBOLS		PRIMARY ELEMENT SYMBOLS		FUNCTION IDENTIFICATION																																																																																																																																															
 CENTRIFUGAL PUMP (PCN)  PROGRESSIVE CAVITY PUMP (PPC)  ROTARY LOBE PUMP  GRINDER PUMP  SLUDGE CENTRIFUGE  DEWATERED SLUDGE DRYER  DEWATERED SLUDGE DRYER  CONVEYOR  CHEMICAL PUMP  ODOR CONTROL CHEMISORPTION UNIT  FOUL AIR CONDENSER		 BLIND FLANGE  STRAINER  REDUCER OR INCREASER  EXPANSION JOINT  EQUIPMENT DRAIN VFD VARIABLE FREQUENCY DRIVE  PRESSURE GAUGE		N.C.  N.O.  PLUG VALVE N.C.  N.O.  BALL VALVE N.C.  N.O.  CHECK VALVE  BALL CHECK VALVE  NEEDLE VALVE (VND)  PRESSURE RELIEF VALVE (VRF)  VACUUM RELIEF VALVE  PRESSURE REDUCING VALVE N.C. M N.O. M ELECTRICAL MOTOR OPERATED VALVE N.C.  N.O.  ELECTRICAL MOTOR OPERATED ROTARY AIRLOCK VALVE  ELECTRICAL MOTOR OPERATED ROTARY AIRLOCK VALVE		M MAGNETIC FLOW METER  RADAR LEVEL TRANSMITTER	<table><tr><th colspan="2">FIRST LETTER(S)</th><th colspan="3">SUCCEEDING LETTERS</th></tr><tr><th>MEASURED OR INITIATING VARIABLE</th><th>MODIFIER</th><th>READOUT OR PASSIVE FUNCTION</th><th>OUTPUT FUNCTION</th><th>MODIFIER</th></tr><tr><td>A ANALYSIS</td><td></td><td>ALARM</td><td></td><td></td></tr><tr><td>B BURNER (FLAME)</td><td></td><td></td><td></td><td></td></tr><tr><td>C CONDUCTIVITY</td><td></td><td></td><td>CONTROL</td><td>CLOSED</td></tr><tr><td>D DENSITY</td><td>DIFFERENTIAL</td><td></td><td></td><td></td></tr><tr><td>E POTENTIAL (ELEC)</td><td></td><td>PRIMARY ELEMENT</td><td></td><td></td></tr><tr><td>F FLOW RATE</td><td>RATIO</td><td></td><td></td><td></td></tr><tr><td>G FIRE, SMOKE</td><td></td><td>GLASS</td><td></td><td></td></tr><tr><td>H HAND</td><td></td><td></td><td></td><td>HIGH</td></tr><tr><td>I CURRENT (ELEC)</td><td></td><td>INDICATE</td><td></td><td></td></tr><tr><td>J POWER</td><td>SCAN</td><td></td><td></td><td></td></tr><tr><td>K TIME</td><td>TIME RATE CHANGE</td><td></td><td>CONTROL STATION</td><td></td></tr><tr><td>L LEVEL</td><td></td><td>PILOT LIGHT</td><td></td><td>LOW</td></tr><tr><td>M MOISTURE</td><td>MOMENTARY</td><td></td><td></td><td>MIDDLE</td></tr><tr><td>N EQUIPMENT STATUS</td><td></td><td></td><td></td><td></td></tr><tr><td>O OXYGEN</td><td></td><td>ORIFICE</td><td></td><td>OPEN</td></tr><tr><td>P PRESSURE</td><td></td><td>TEST CONNECTION</td><td></td><td></td></tr><tr><td>Q QUANTITY</td><td>INTEGRATE</td><td></td><td></td><td></td></tr><tr><td>R RADIATION</td><td></td><td>RECORD</td><td></td><td></td></tr><tr><td>S SPEED, FREQUENCY</td><td>SAFETY</td><td></td><td>SWITCH</td><td></td></tr><tr><td>T TEMPERATURE</td><td></td><td></td><td>UNCLASSIFIED</td><td></td></tr><tr><td>U MULTIVARIABLE</td><td></td><td>MULTIFUNCTION</td><td>MULTIFUNCTION</td><td>MULTIFUNCTION</td></tr><tr><td>V VIBRATION</td><td></td><td></td><td>VALVE, DAMPER</td><td></td></tr><tr><td>W WEIGHT, FORCE</td><td></td><td>WELL</td><td></td><td></td></tr><tr><td>X UNCLASSIFIED</td><td></td><td>UNCLASSIFIED</td><td>TRANSMIT</td><td></td></tr><tr><td>Y EVENT, STATUS</td><td></td><td></td><td>RELAY, COMPUTE</td><td></td></tr><tr><td>Z POSITION</td><td></td><td></td><td>MISC. ACTUATOR</td><td></td></tr></table>					FIRST LETTER(S)		SUCCEEDING LETTERS			MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER	A ANALYSIS		ALARM			B BURNER (FLAME)					C CONDUCTIVITY			CONTROL	CLOSED	D DENSITY	DIFFERENTIAL				E POTENTIAL (ELEC)		PRIMARY ELEMENT			F FLOW RATE	RATIO				G FIRE, SMOKE		GLASS			H HAND				HIGH	I CURRENT (ELEC)		INDICATE			J POWER	SCAN				K TIME	TIME RATE CHANGE		CONTROL STATION		L LEVEL		PILOT LIGHT		LOW	M MOISTURE	MOMENTARY			MIDDLE	N EQUIPMENT STATUS					O OXYGEN		ORIFICE		OPEN	P PRESSURE		TEST CONNECTION			Q QUANTITY	INTEGRATE				R RADIATION		RECORD			S SPEED, FREQUENCY	SAFETY		SWITCH		T TEMPERATURE			UNCLASSIFIED		U MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION	V VIBRATION			VALVE, DAMPER		W WEIGHT, FORCE		WELL			X UNCLASSIFIED		UNCLASSIFIED	TRANSMIT		Y EVENT, STATUS			RELAY, COMPUTE		Z POSITION			MISC. ACTUATOR	
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— VFD — VARIABLE FREQUENCY DRIVE HOA — HAND/OFF/AUTO HOL — HAND/OFF/LOW (SPEED) OAC — OPEN/AUTO/CLOSE N.O. — NORMALLY OPEN N.C. — NORMALLY CLOSED OOC — OPEN/OFF/CLOSED MA — MANUAL/AUTO		LINE	DESCRIPTION																																																																																																																																																				
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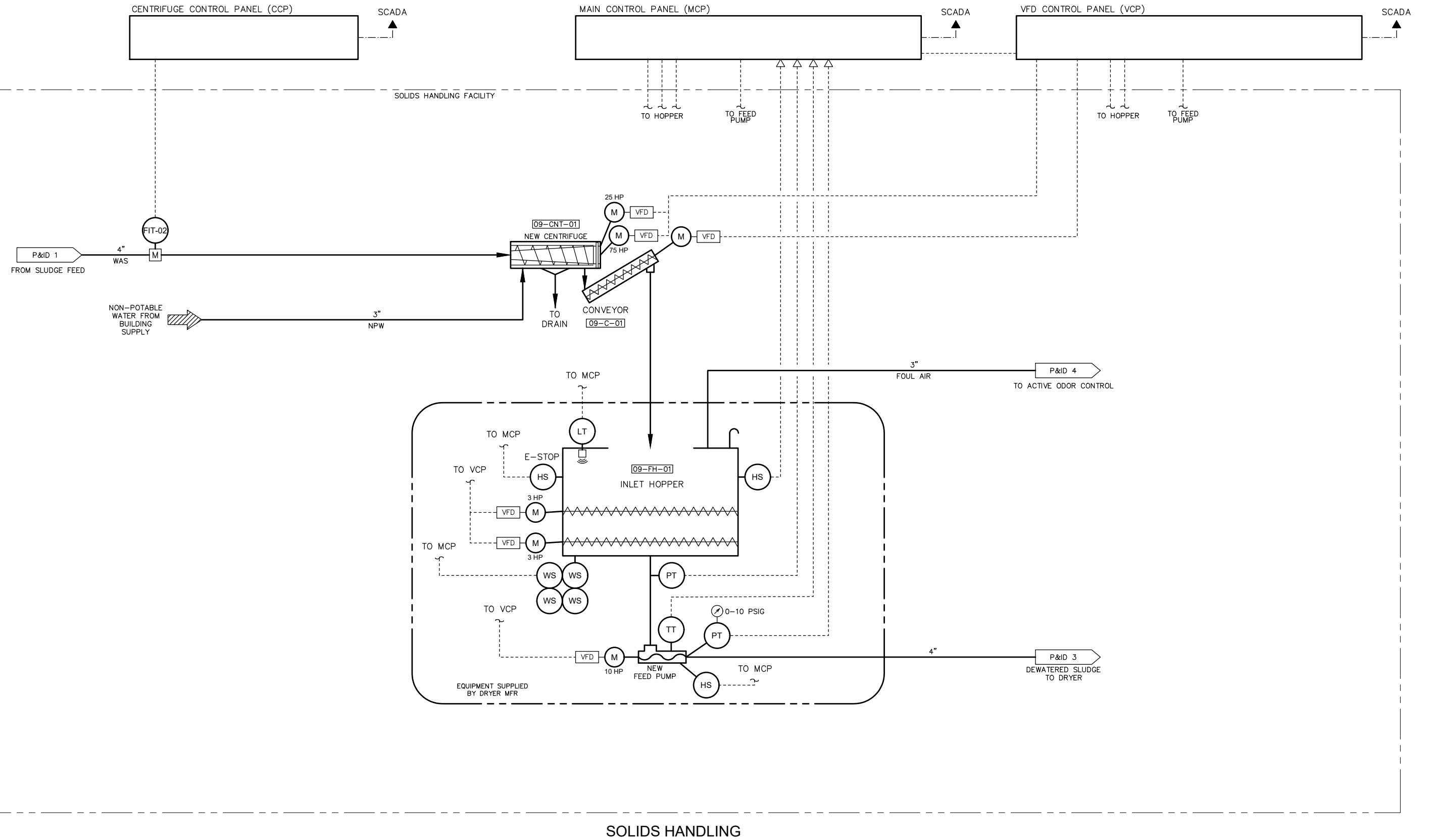
CITY OF SELAH
**PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS**

AREA 9 P&ID 1

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SOLIDS HANDLING



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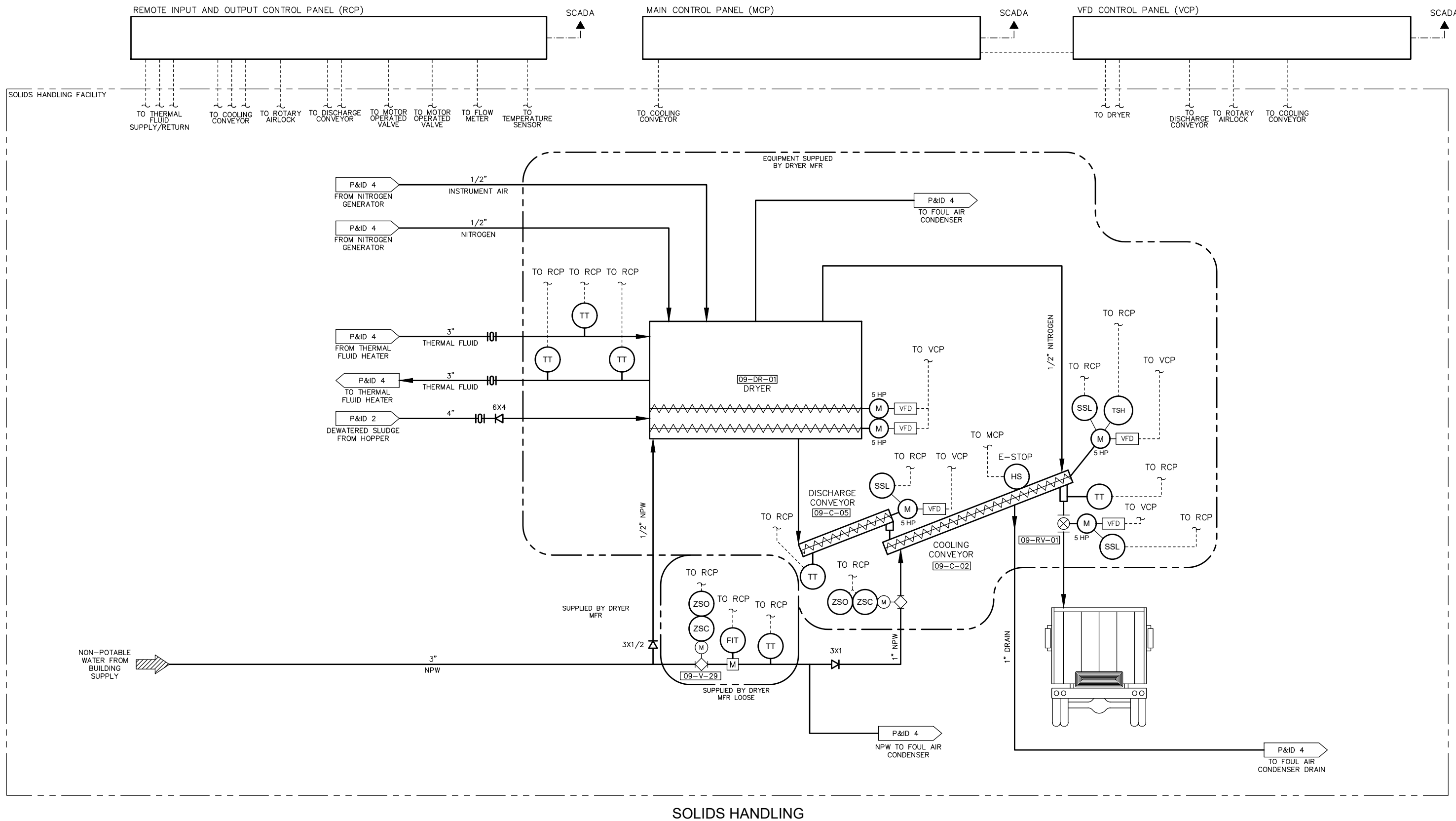
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FILE NAMES: DRAWING: Sheets-G-Phase 1.dwg	
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CITY OF SELAH

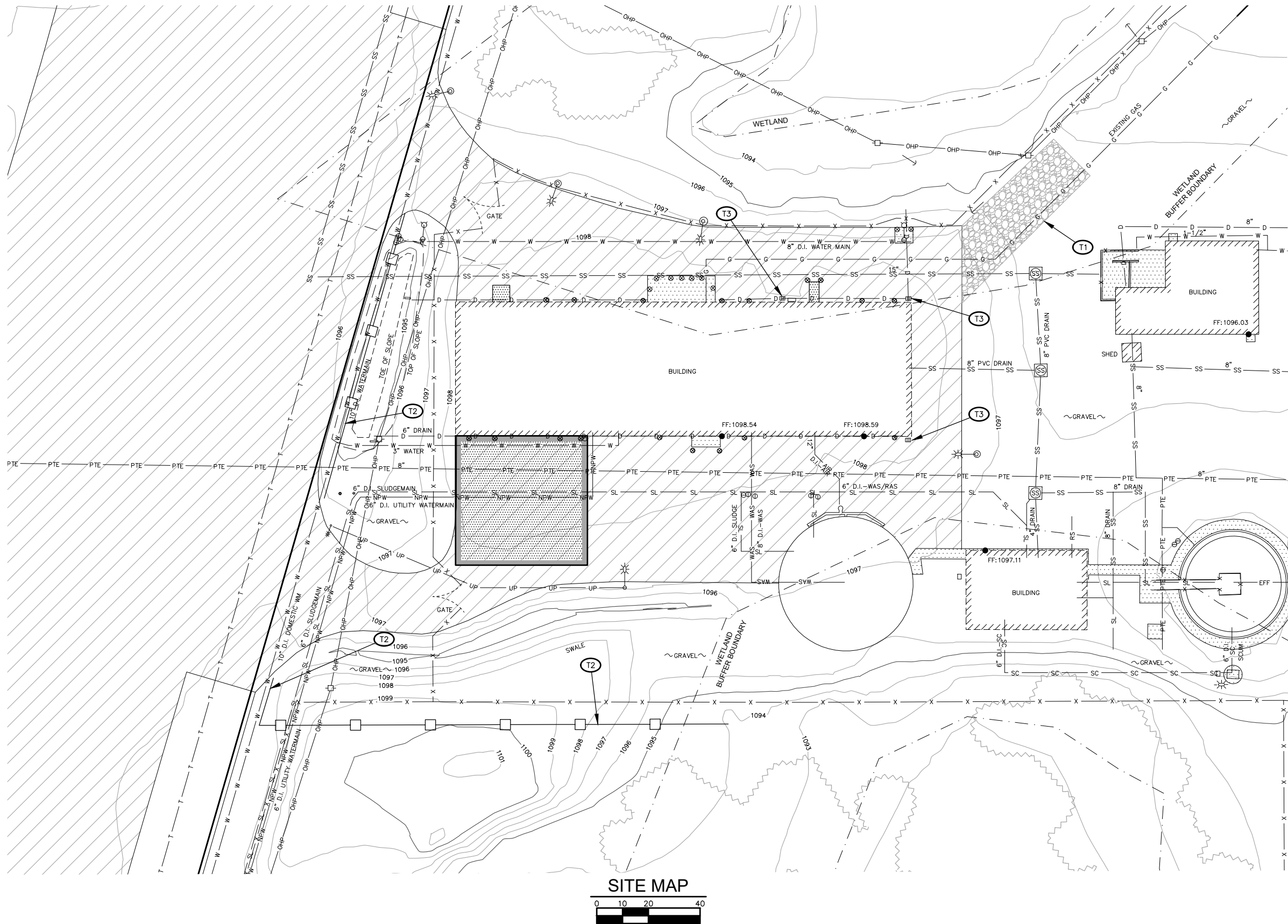
PHASE 2 - WASTEWATER TREATMENT PLANT IMPROVEMENTS

AREA 9 P&ID 3

G-12

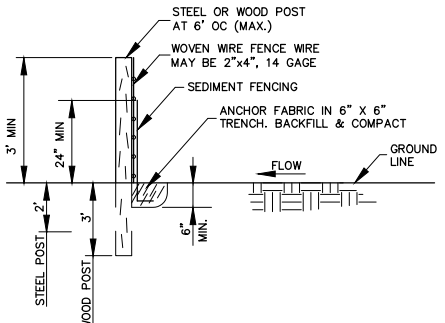
SHEET

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DUST CONTROL BMP:

1. WATER APPLIED TO CONSTRUCTION SITES FOR DUST CONTROL MUST NOT LEAVE THE SITE AS SURFACE RUNOFF.
2. LIMIT DUST GENERATION BY CLEARING ONLY THOSE AREAS WHERE IMMEDIATE ACTIVITY WILL TAKE PLACE, LEAVING THE REMAINING AREAS IN THE ORIGINAL CONDITIONS, IF STABLE. MAINTAIN THE ORIGINAL GROUND COVER AS LONG AS PRACTICAL.
3. PROJECT MUST COMPLY WITH THE LOCAL CLEAN AIR AUTHORITY AND YAKIMA COUNTY REQUIREMENTS.

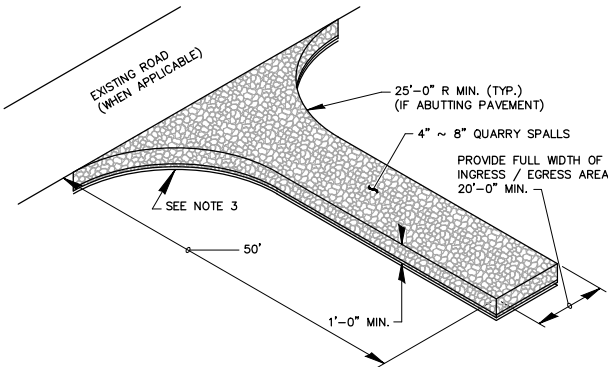


- NOTES
1. INSTALLATION TO BE PER MANUFACTURER'S RECOMMENDATION.
 2. TO BE USED FOR TERMINAL ENDS & PERIMETER SIDES.
 3. THE TWO POST OPTIONS ARE (1) WOOD = 1" X 2" OR 3" MIN. DIA. AND (2) STEEL = 1.33 LBS/FT.MIN.

SEDIMENT BARRIER (SB)
NOT TO SCALE TESC-4.DWG

TESC NOTES:

- T1 CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE. SEE DETAIL THIS SHEET. IF TRACK OUT BECOMES A PROBLEM A WHEEL WASH MAY BE REQUIRED TO BE INSTALLED.
- T2 CONSTRUCT SEDIMENT BARRIER. SEE DETAIL THIS SHEET.
- T3 PROVIDE STORM DRAIN INLET FILTER FABRIC PROTECTION (OR APPROVED EQUAL) ON ALL NEW AND EXISTING CATCH BASINS.



- NOTES
1. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT POINTS OF CONSTRUCTION EGRESS WHERE SEDIMENT MAY BE TRACKED OFF THE CONSTRUCTION SITE.
 2. A STABILIZED CONSTRUCTION ENTRANCE MUST BE CONSTRUCTED TO A MINIMUM LENGTH OF 50 FEET WHERE THE SOILS ARE SANDS OR GRAVEL OR 100 FEET MINIMUM WHERE SOILS ARE CLAYS OR SILT. THESE LENGTHS SHALL BE INCREASED WHERE FIELD CONDITIONS DICTATE.
 3. PLACE CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION AND A MINIMUM OF 0.15" CRUSHED ROCK UNDER THE SPALLS FOR THE LENGTH OF THE ENTRANCE, OR AS DIRECTED BY THE ENGINEER.
 4. ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED UNDER THE ENTRANCE.
 5. WHEN REQUIRED DUE TO CONSTRUCTION, TIRES SHALL BE CLEANED WITH WATER BEFORE LEAVING THE CONSTRUCTION SITE TO AVOID TRANSPORTING SEDIMENT OFF OF THE SITE (ALTERNATE BMP C106, WHEEL WASH).

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



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PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS

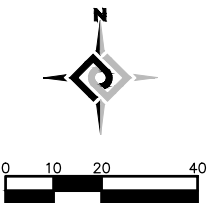
TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

C-1
SHEET
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SHEET
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CONSTRUCTION NOTES:

- (N1) EXISTING SOLIDS HANDLING BUILDING.
- (N2) PROPOSED BUILDING EXTENSION. SEE M9 SHEETS
- (N3) NEW ASPHALT PAVING PER DETAIL 1.2/SHEET GC-2. MATCH EXISTING GRADE WHERE APPLICABLE.
- (N4) BLEND IN NEW CONTOURS TO EXISTING AS SHOWN. MAINTAIN VOLUME OF EXISTING SWALE IN NEW SWALE. SEE DETAIL 3.3/SHEET GC-2.
- (N5) EXISTING SLUDGE HOLDING TANK.
- (N6) RELOCATE EXISTING LIGHT POLE TO LOCATION SHOWN. COORDINATE WITH ELECTRICAL PLANS.
- (N7) SAWCUT ALL ASPHALT MATCHLINES. REMOVE ASPHALT PAVEMENT AND/OR BASE MATERIAL NECESSARY TO CONSTRUCT NEW IMPROVEMENTS.
- (N8) PROTECTIVE BOLLARD, TYP. SEE DETAIL ST-13/SHEET GC-1.
- (N9) NEW BIOSOLIDS STORAGE AND HANDLING AREA. SEE STRUCTURAL PLANS.
- (N10) NEW 6" CONCRETE PAD FOR ODOR CONTROL UNITS. SEE MECHANICAL SHEETS.
- (N11) NEW CONCRETE SLAB AT EXISTING GRADE FOR OUTDOOR AC UNITS. SEE MECHANICAL SHEETS.



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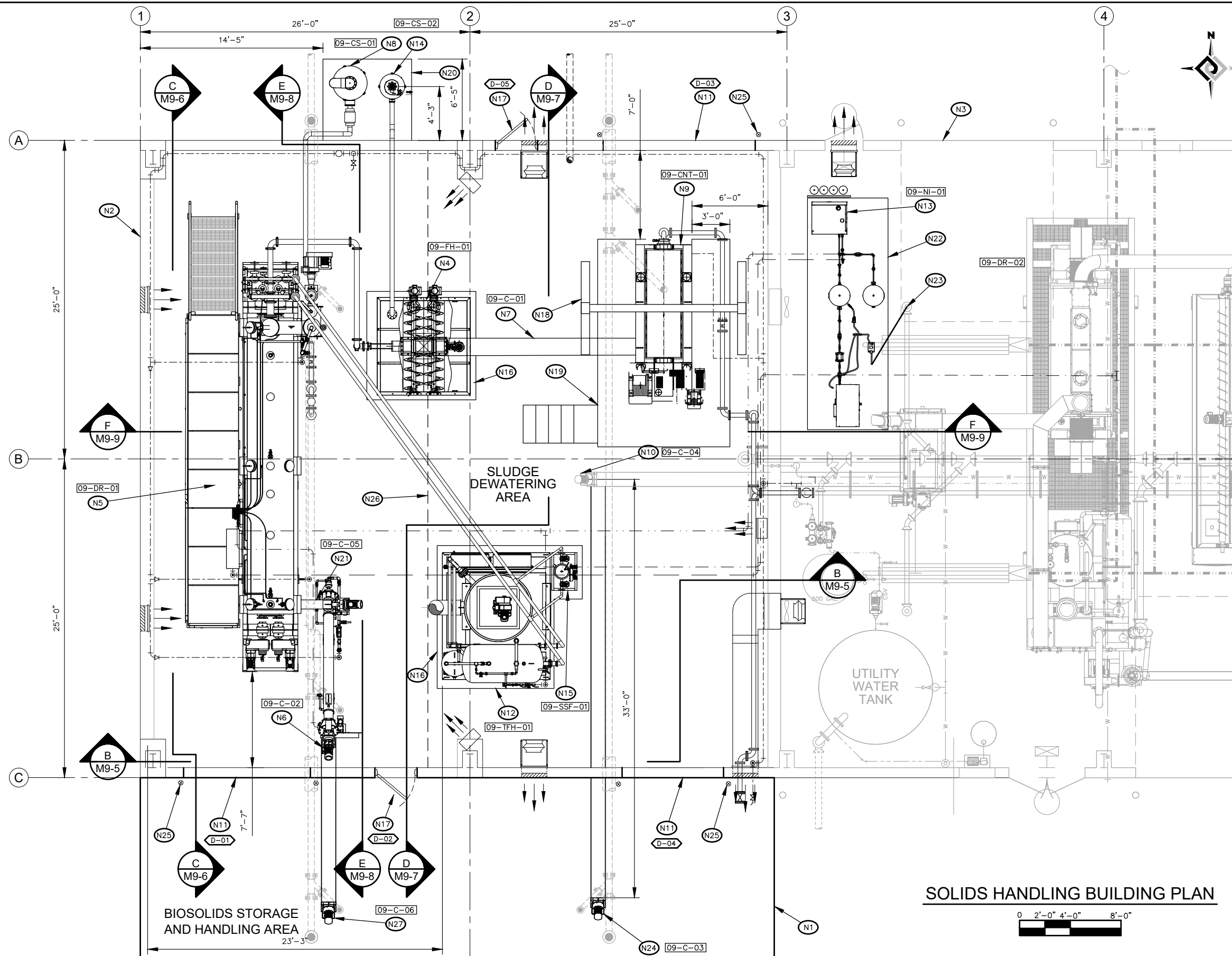
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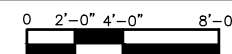
CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS

SOLIDS – GRADING, PAVING, AND DRAINAGE PLAN

C-3
SHEET
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SOLIDS HANDLING BUILDING PLAN



CONSTRUCTION NOTES:

- (N1) NEW BIOSOLIDS STORAGE AND HANDLING AREA. SEE STRUCTURAL PLANS.
- (N2) SEE STRUCTURAL PLANS FOR MODIFICATIONS TO EXISTING SLUDGE LOADING AREA.
- (N3) EXISTING SOLIDS HANDLING BUILDING.
- (N4) NEW DRYER INLET HOPPER AND PUMP.
- (N5) NEW DRYER.
- (N6) NEW COOLING CONVEYOR BY DRYER MANUFACTURER.
- (N7) SLUDGE CONVEYOR BY CENTRIFUGE MANUFACTURER.
- (N8) NEW BCR DS-300 CHEMISORPTION UNIT.
- (N9) NEW DEWATERING CENTRIFUGE.
- (N10) EXISTING CONVEYOR.
- (N11) FACTORY FINISHED ROLL-UP DOOR. SEE SCHEDULE ON SHEET GA-1. SEE SHEETS GA-1 FOR DETAILS.
- (N12) NEW THERMAL FLUID HEATER SKID.
- (N13) NEW NITROGEN GENERATOR SKID. SEE DETAIL ON SHEET M9-7.
- (N14) NEW BCR DS-100 CHEMISORPTION UNIT.
- (N15) NEW SIDE STREAM FILTER.
- (N16) EQUIPMENT PAD. SEE DETAIL 1.1 SHEET GC-1.
- (N17) HOLLOW METAL DOOR AND FRAME SEE SCHEDULE ON SHEET GA-1.
- (N18) 3 TON MOBILE GANTRY STYLE CRANE WITH 13' SPAN AND 12'-6" HOOK HEIGHT.
- (N19) 3' WIDE CENTRIFUGE ACCESS PLATFORM WITH ROLL-UP MAINTENANCE LADDER.
- (N20) CHEMISORPTION UNITS 6" CONCRETE PAD. SEE DETAIL 1.1 SHEET GC-2.
- (N21) DRYER DISCHARGE CONVEYOR.
- (N22) NITROGEN GENERATOR EQUIPMENT PAD. SEE DETAIL 1.1 SHEET GC-1.
- (N23) ATTACH 1/2" HOSE DRAIN TO OIL WATER SEPARATOR PER MANUFACTURER RECOMMENDATIONS. ROUTE TO EXISTING FLOOR DRAIN.
- (N24) NEW HORIZONTAL BIOSOLIDS CONVEYOR BY CENTRIFUGE MANUFACTURER. MOUNT TO RECEIVE DRIED BOISOLIDS FROM EXISTING CONVEYOR AND CONVEY TO NEW BIOSOLIDS STORAGE AND HANDLING AREA. MOUNT AS RECOMMENDED BY MANUFACTURER AND MAXIMIZE DISCHARGE HEIGHT AS AVAILABLE.
- (N25) PROTECTIVE BOLLARD AT EACH ROLL-UP DOOR CORNER, TYP. SEE DETAIL ST-13/SHEET GC-1.
- (N26) CLASS II DIVISION II HAZARDOUS AREA ENVELOPE EXTENDING 10' FROM DRYER.
- (N27) NEW DISCHARGE CONVEYOR BY DRYER MANUFACTURER.



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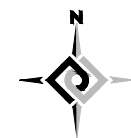
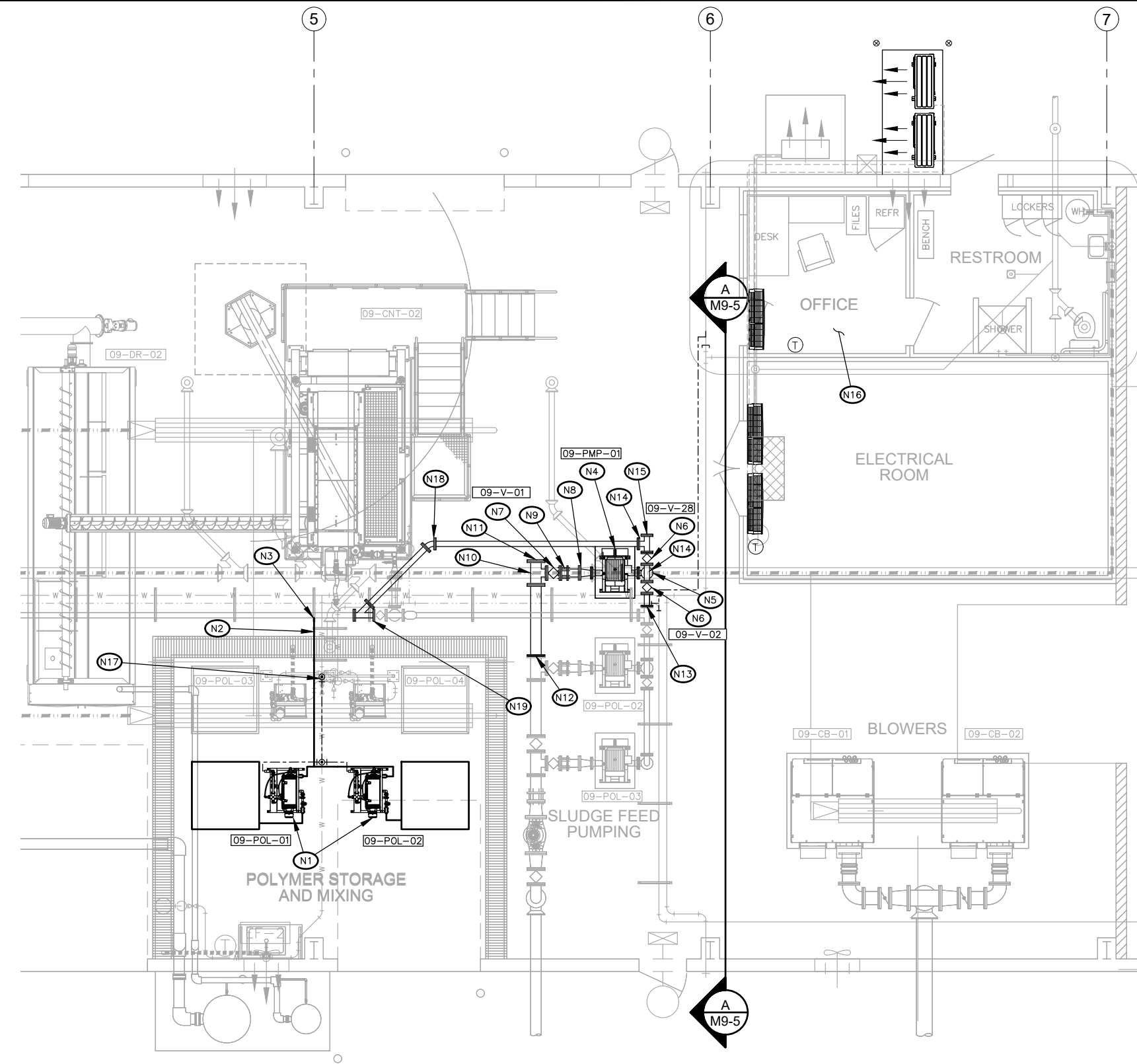
CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS

SOLIDS HANDLING EQUIPMENT PLAN

M9-1

SHEET

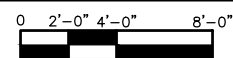
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CONSTRUCTION NOTES:

- (N1) NEW POLYMER FEED SYSTEM.
- (N2) 1" SCH. 80 PVC POLYMER FEED PIPE. REMOVE EXISTING 1" 90° BEND AND INSTALL NEW 1" TEE. EXTEND LINE TO NEW INJECTION PORT.
- (N3) POLYMER INJECTION PORT ON SLUDGE PIPING TO NEW CENTRIFUGE. INSTALL AT LOCATION APPROVED BY THE ENGINEER. SEE DETAIL 1.1 SHEET GP-1.
- (N4) NEW ROTARY LOBE PUMP.
- (N5) NEW 4" DI FLG 90° ELBOW.
- (N6) NEW 4" DI FLG PLUG VALVE.
- (N7) NEW 6" DI FLG PLUG VALVE.
- (N8) NEW 4" X 6" DI FLG REDUCER.
- (N9) NEW 6" DI FLG COUPLING ADAPTER AND 6" DI SPOOL (LENGTH AS REQUIRED).
- (N10) NEW 8" X 6" DI FLG TEE.
- (N11) NEW 8" DI BLIND FLG.
- (N12) REMOVE EXISTING 8" DI BLIND FLG AND INSTALL NEW 8 INCH DI SPOOL (LENGTH AS REQUIRED).
- (N13) REMOVE EXISTING 4" DI BLIND FLG AND INSTALL NEW 4 INCH DI SPOOL (LENGTH AS REQUIRED).
- (N14) 4" DI FLG TEE.
- (N15) 4" DI BLIND FLG.
- (N16) REMOVE FURNISHINGS AND SALVAGE TO OWNER. OFFICE TO BE RE-PURPOSED AS ADDITIONAL ELECTRICAL ROOM. SEE ELECTRICAL SHEETS.
- (N17) FIELD ROUTE 2" PVC TO NEW POLYMER SYSTEM BY INSTALLING A TEE ON EXISTING POLYMER SYSTEM WATER FEED. SEE SHEET M9-11.
- (N18) NEW 4" DI FLG WYE.
- (N19) NEW 4" DI 45° ELBOW.

SOLIDS HANDLING BUILDING PLAN



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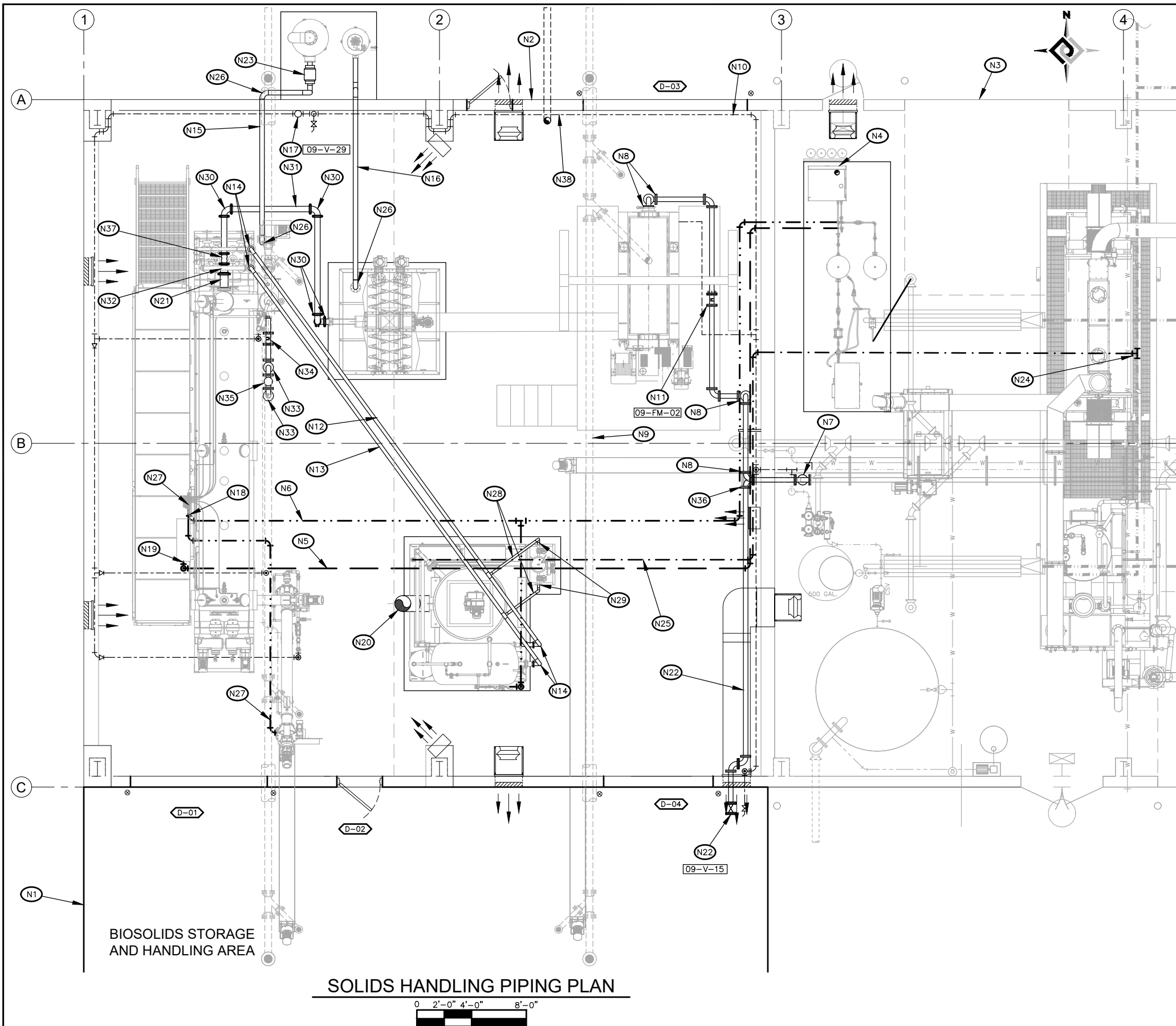
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PLANT IMPROVEMENTS

SOLIDS HANDLING POLYMER & SLUDGE PLAN

M9-2

SHEET

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CONSTRUCTION NOTES:

- (N1) NEW BIOSOLIDS STORAGE AND HANDLING AREA. SEE STRUCTURAL PLANS.
- (N2) SEE STRUCTURAL PLANS FOR MODIFICATIONS TO EXISTING BIOSOLIDS STORAGE AND HANDLING AREA.
- (N3) EXISTING SOLIDS HANDLING BUILDING.
- (N4) 3" PVC SCH 40 VENT PIPE.
- (N5) 1/2" THREADED 304 STAINLESS STEEL SCH 40 PRESSURIZED AIR SUPPLY TO DRYER CONTROL PANEL. CONNECT TO DRYER AND NITROGEN GENERATOR PER MANUFACTURERS RECOMMENDATIONS. PIPING TO BE ROUTED IN FIELD AND SUPPORTED ON WALLS AND OVERHEAD WHERE FEASIBLE. ENSURE ROUTING DOES NOT CONFLICT WITH CRANE OPERATION. ROUTING SHALL BE SUBJECT TO OWNER APPROVAL.
- (N6) 1/2" THREADED 304 STAINLESS STEEL SCH 40 NITROGEN PIPING TO DRYER DISTRIBUTION PANEL AND THERMAL FLUID HEATER. CONNECT TO DRYER, THERMAL FLUID HEATER, AND NITROGEN GENERATOR PER MANUFACTURER RECOMMENDATIONS. PIPING TO BE ROUTED IN FIELD AND SUPPORTED ON WALLS AND OVERHEAD WHERE FEASIBLE. ENSURE ROUTING DOES NOT CONFLICT WITH CRANE OPERATION. ROUTING SHALL BE SUBJECT TO OWNER APPROVAL.
- (N7) REPLACE EXISTING 4" FLG 90° ELBOW WITH NEW 4" DI FLG TEE. EXTEND PIPE WEST THROUGH WALL. SEE STRUCTURAL PLANS FOR WALL PENETRATION DETAIL. SEE SECTION B, SHEET M9-5.
- (N8) 4" DI FLG 90° ELBOW
- (N9) 6" D.I. DRAIN PIPE. SEE M9-4 FOR DRAINAGE PLAN.
- (N10) NEW NON-POTABLE WATER PIPING TO NEW HOSE BIBS. SEE SHEET M9-12.
- (N11) NEW 4" FLG ELECTROMAGNETIC FLOW METER.
- (N12) NEW 3" THREADED SEAMLESS CARBON STEEL SCH 40 HOT OIL THERMAL FLUID SUPPLY PIPE WITH 1" JACKETED PIPE INSULATION.
- (N13) NEW 3" THREADED SEAMLESS CARBON STEEL SCH 40 HOT OIL THERMAL FLUID RETURN PIPE WITH 1" JACKETED PIPE INSULATION.
- (N14) CONNECT THERMAL FLUID SUPPLY AND RETURN PIPES TO DRYER WITH 300# FLANGES AND/OR FITTINGS AS RECOMMENDED BY DRYER MANUFACTURER.
- (N15) 4" CPVC ODOR CONTROL PIPING. CONNECT TO CHEMSORPTION UNIT AND CONDENSER BLOWER AS RECOMMENDED BY MANUFACTURERS.
- (N16) 4" CPVC ODOR CONTROL PIPING. CONNECT TO CHEMSORPTION UNIT AND INLET HOPPER AS RECOMMENDED BY MANUFACTURERS.
- (N17) 3" MOTOR OPERATED VALVE SUPPLIED BY DRYER MANUFACTURER.
- (N18) NEW DRYER NITROGEN PANEL AND COMPRESSED NITROGEN CONNECTION POINT.
- (N19) COMPRESSED AIR CONNECTION POINT TO NEW DRYER REMOTE I/O PANEL.
- (N20) STACK CONNECTION. COORDINATE STACK VENTING THROUGH ROOF WITH STRUCTURAL PLANS.
- (N21) 6" GLASS LINED DUCTILE IRON DEWATERED SLUDGE PIPING. CONNECT TO DRYER AS RECOMMENDED BY MANUFACTURER.
- (N22) ROUTE SLUDGE BYPASS TO NEW BIOSOLIDS STORAGE AND HANDLING AREA, 4" FLANGED D.I., REINSTALL VALVE AT SOUTH WALL.
- (N23) MIST ELIMINATOR.
- (N24) CONNECT TO EXISTING 2" GAS LINE WITH FITTINGS AS NECESSARY. INSTALL NEW 2" GAS LINE. FIELD ROUTE PER OWNER APPROVAL.
- (N25) CONNECT 2" GAS LINE TO THERMAL FLUID HEATER PER MANUFACTURER RECOMMENDATIONS.
- (N26) 4" CPVC 90° ELBOW.
- (N27) 1/2" THREADED 304 STAINLESS STEEL SCH 40 NITROGEN LINE FROM DRYER DISTRIBUTION PANEL TO COOLING CONVEYOR ROTARY AIR-LOCK VALVE.
- (N28) 2" THREADED SEAMLESS 304 CARBON STEEL SCH 40 THERMAL FLUID PIPING WITH 1" INSULATION TO SIDE STREAM FILTER. SUPPLY AND RETURN.
- (N29) 3/4" THREADED SEAMLESS 304 CARBON STEEL SCH 40 THERMAL FLUID PIPING TO SIDE STREAM FILTER. SUPPLY AND RETURN. CONNECT TO FILTER WITH FITTINGS AS RECOMMENDED BY MANUFACTURER.
- (N30) 4" D.I. VICTAULIC GLASS LINED 90° ELBOW.
- (N31) 4" GLASS LINED DUCTILE IRON DEWATERED SLUDGE PIPING.
- (N32) 4" X 6" D.I. VICTAULIC REDUCER.
- (N33) NEW 4" D.I. FLG 90° ELBOW.
- (N34) NEW 4" FLG ELECTROMAGNETIC FLOW METER BY DRYER MANUFACTURER.
- (N35) AIR VAC RELEASE VALVE BY DRYER MANUFACTURER. SEE DETAIL 3.5/SHEET GP-2.
- (N36) REMOVE EXISTING 4" FLANGED GATE VALVE AND INSTALL 4" FLANGED D.I. 90° ELBOW. RELOCATE VALVE TO NEW LOCATION IN TRUCK LOADING BAY.
- (N37) 4" VICTAULIC THERMAL EXPANSION JOINT, SIZE PER DRYER MANUFACTURER RECOMMENDATIONS.
- (N38) NEW 6" WATER SERVICE FOR FIRE SUPPRESSION SYSTEM. COORDINATE LOCATION WITH DESIGN OF FIRE SUPPRESSION SYSTEM.



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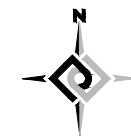
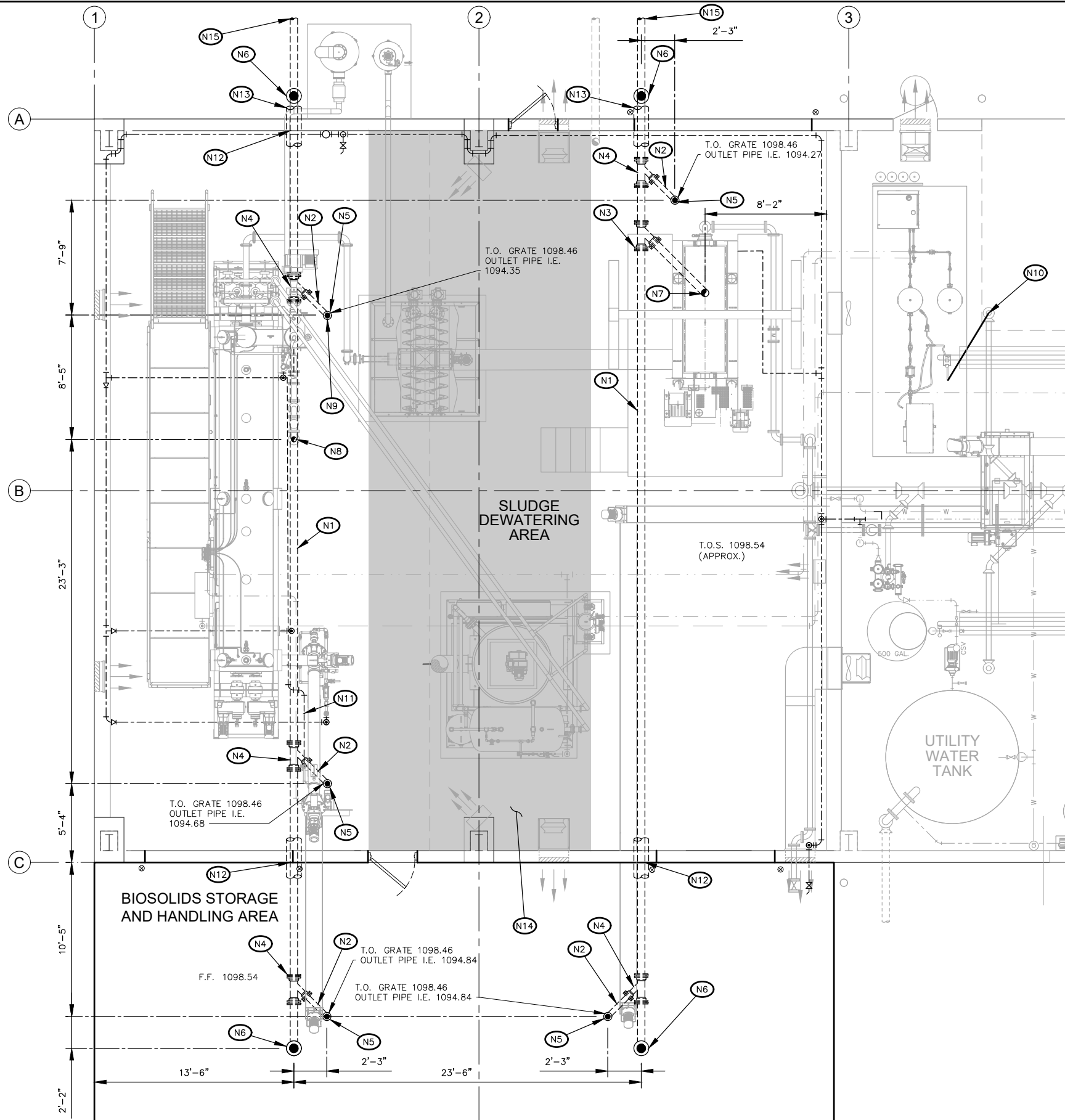
CITY OF SELAH PHASE 2 - WASTEWATER TREATMENT PLANT IMPROVEMENTS

SOLIDS HANDLING PIPING PLAN

M9-3

SHEET

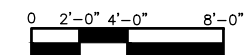
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CONSTRUCTION NOTES:

- (N1) 6" D.I. DRAIN PIPE @ 1/8" PER FOOT, MINIMUM. ROUTE TO EXISTING 15" SEWER LINE. DO NOT CHANGE SLOPE UNTIL OUTSIDE BUILDING STEM WALLS. SEE SHEET C-2 FOR CONNECTION.
- (N2) 4" D.I. DRAIN PIPE @ 1/4" PER FOOT, MINIMUM.
- (N3) 6" D.I. MJ WYE.
- (N4) 6" X 4" D.I. MJ REDUCING WYE.
- (N5) FLOOR DRAIN (ZURN Z-509) WITH P-TRAP. SET FLOOR DRAIN 1" BELOW NOMINAL FLOOR ELEVATION.
- (N6) CLEANOUT, SEE DETAIL 1.4 SHEET GP-2 FOR TYPICAL CONNECTIONS.
- (N7) CONNECT DRAIN PIPE TO CENTRIFUGE DRAIN PER MANUFACTURER RECOMMENDATIONS.
- (N8) CONNECT 4" DRYER SYSTEM DRAIN TO 6" DRAIN PIPE.
- (N9) 1-1/2" BLOWER DRAIN PIPE TO BE ROUTED TO FLOOR DRAIN WITH AIR GAP.
- (N10) ATTACH 1/2" HOSE TO OIL WATER SEPARATOR PER MANUFACTURER RECOMMENDATIONS. ROUTE TO EXISTING FLOOR DRAIN.
- (N11) 3/4" CPVC DRAIN FROM COOLING CONVEYOR TO CONDENSER DRAIN TEE.
- (N12) SLEEVE PIPE UNDER FOOTING AT I.E. 1094.73 WITH 12" STAINLESS STEEL PIPE CASING. SEE DETAIL 3.1 SHEET S9-5.
- (N13) SLEEVE PIPE UNDER FOOTING AT I.E. 1094.21 WITH 12" STAINLESS STEEL PIPE CASING. SEE DETAIL 3.1 SHEET S9-5.
- (N14) DO NOT SAWCUT WITHIN 7.5 FEET LEFT AND RIGHT OF CENTRAL SUPPORT COLUMN FOR STRUCTURAL SAFETY.
- (N15) FOR CONTINUATION SEE SHEET C-2.

SOLIDS HANDLING DRAIN PIPING PLAN



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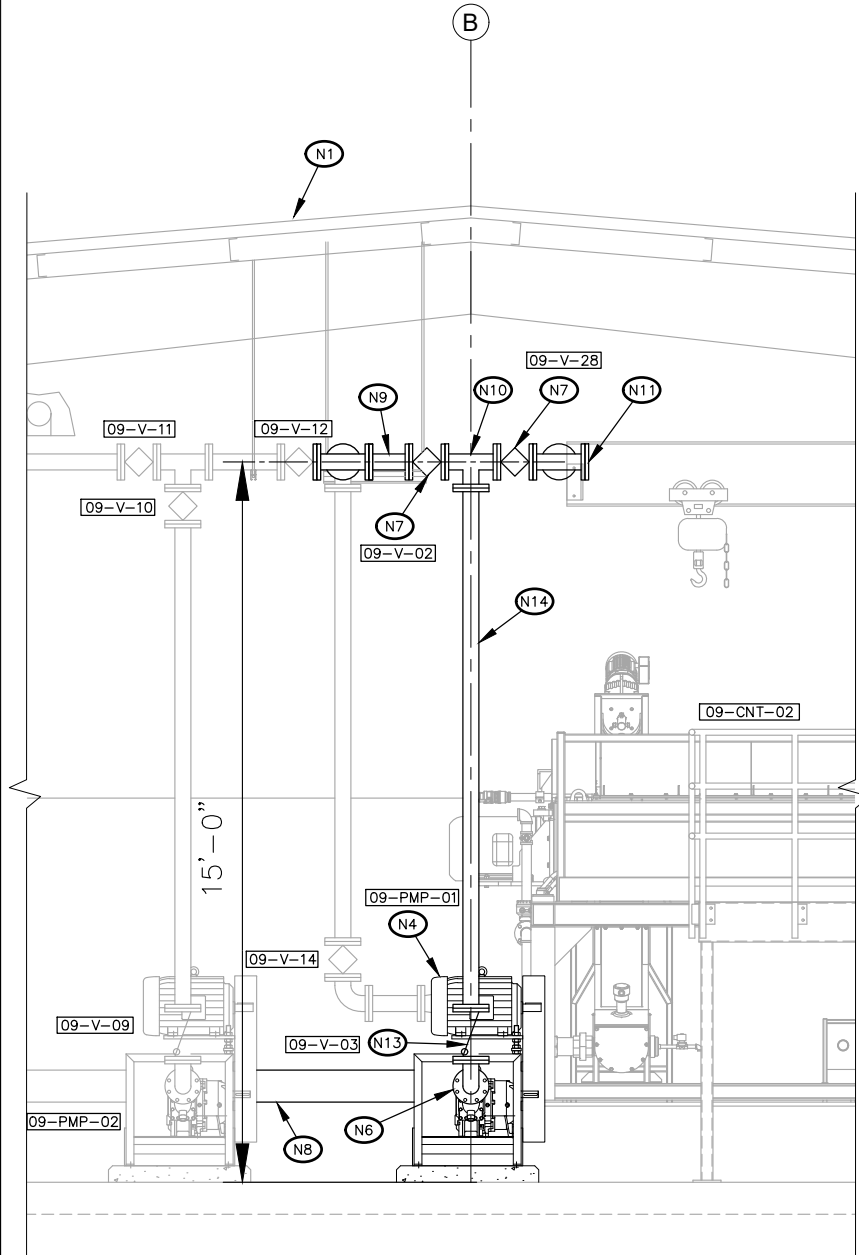
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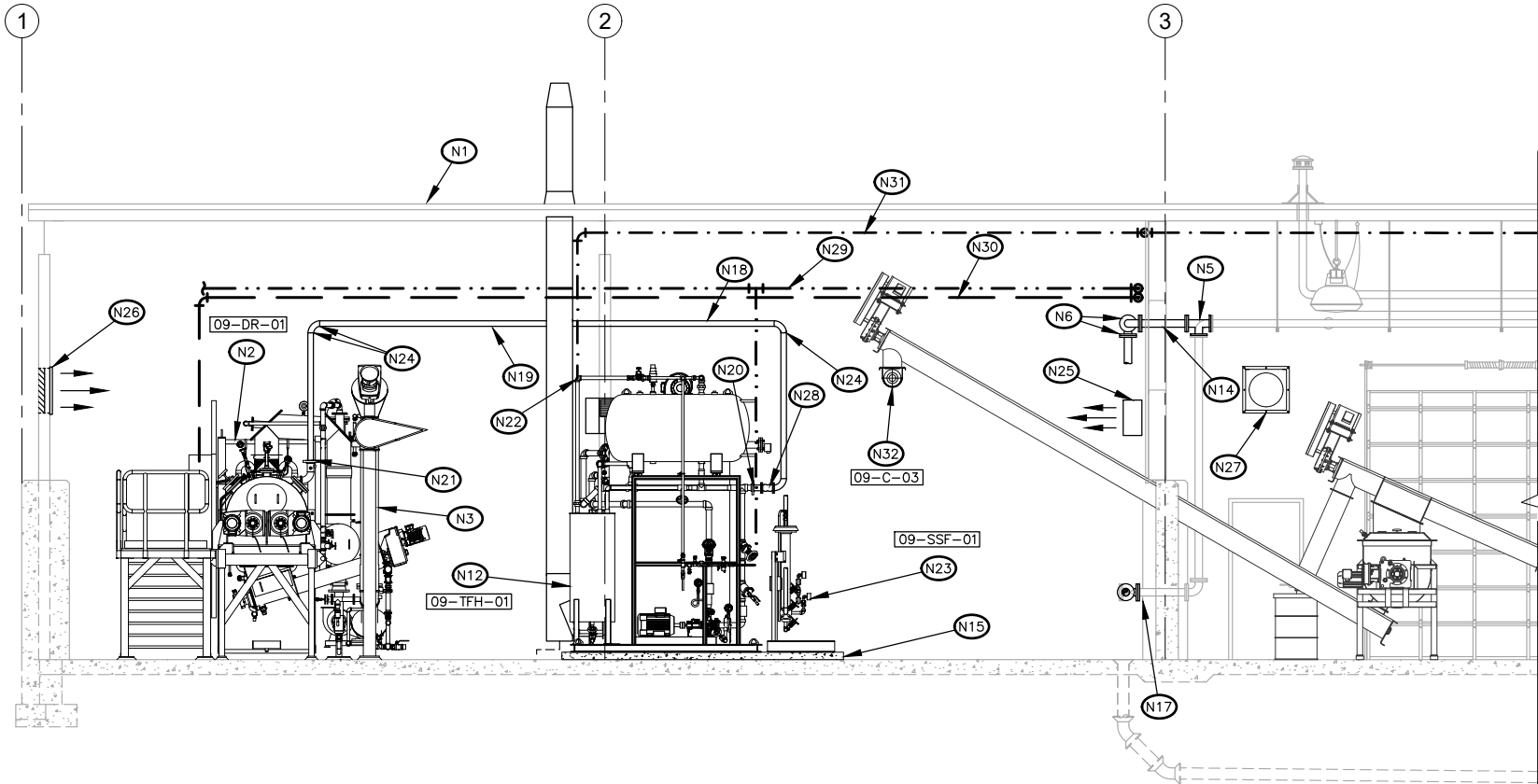
CONSTRUCTION NOTES:

- (N1) EXISTING SOLIDS HANDLING BUILDING.
- (N2) NEW DRYER.
- (N3) NEW COOLING CONVEYOR.
- (N4) NEW ROTARY LOBE PUMP, FITTINGS, AND VALVES. MATCH EXISTING EQUIPMENT PAD THICKNESS.
- (N5) REPLACE EXISTING 4" FLG 90° ELBOW WITH NEW 4" DI FLG TEE. EXTEND PIPE WEST THROUGH WALL.
- (N6) NEW 4" DI FLG 90° ELBOW.
- (N7) NEW 4" DI FLG PLUG VALVE.
- (N8) NEW 8" DI SPOOL.
- (N9) REMOVE EXISTING 4" DI BLIND FLG AND INSTALL NEW 4" DI SPOOL (LENGTH AS REQUIRED).
- (N10) 4" DI FLG TEE.
- (N11) NEW 4" DI BLIND FLG.
- (N12) NEW THERMAL FLUID HEATER SKID.
- (N13) NEW 4" DI FLG CHECK VALVE.
- (N14) NEW 4" DI FLG SLUDGE FEED PIPING.
- (N15) 6" CONCRETE EQUIPMENT PAD, TYPICAL. SEE DETAIL 1.1/SHEET GC-1.
- (N16) REMOVE EXISTING 45° BEND CONNECTING TO EXISTING FLOOR DRAIN. INSTALL NEW 6X4" MJ DI REDUCING WYE. TIE INTO NEW RUNNING TRAP ASSEMBLY. SLOPE AT 1/8" PER FOOT.
- (N17) REMOVE EXISTING BYPASS VALVE. INSTALL 4" 90° DI ELBOW. ROUTE BYPASS PIPING TO NEW TRUCK LOADING BAY.
- (N18) NEW 3" THREADED SEAMLESS CARBON STEEL SCH 40 HOT OIL THERMAL FLUID SUPPLY PIPE WITH 1" JACKETED PIPE INSULATION.
- (N19) NEW 3" THREADED SEAMLESS CARBON STEEL SCH 40 HOT OIL THERMAL FLUID RETURN PIPE WITH 1" JACKETED PIPE INSULATION.
- (N20) CONNECT TO THERMAL FLUID HEATER WITH 3" RETURN AND SUPPLY PIPES WITH FITTINGS AS RECOMMENDED BY MANUFACTURER.
- (N21) CONNECT THERMAL FLUID SUPPLY AND RETURN PIPES TO DRYER WITH 300# FLANGES AND/OR FITTINGS AS RECOMMENDED BY DRYER MANUFACTURER.
- (N22) CONNECT 2" GAS LINE TO THERMAL FLUID HEATER PER MANUFACTURER RECOMMENDATIONS.
- (N23) NEW SIDE STREAM FILTER.
- (N24) NEW 3" THREADED CARBON STEEL 90° ELBOW.
- (N25) NEW UNIT HEATER. SEE SHEET M9-14.
- (N26) NEW SUPPLY LOUVER. SEE SHEET M9-14.
- (N27) RELOCATED EXHAUST FAN. SEE SHEETS M9-13 AND M9-14.
- (N28) 3" THERMAL EXPANSION JOINT. SIZE PER THERMAL FLUID HEATER MANUFACTURER RECOMMENDATIONS.
- (N29) 1/2" THREADED 304 STAINLESS STEEL SCH 40 NITROGEN PIPE TO DRYER. TEE TO THERMAL FLUID HEATER.
- (N30) 1/2" THREADED 304 STAINLESS STEEL SCH 40 COMPRESSED AIR TO DRYER CONTROL PANEL.
- (N31) 2" GAS LINE TO THERMAL FLUID HEATER.
- (N32) NEW HORIZONTAL BIOSOLIDS CONVEYOR BY CENTRIFUGE MANUFACTURER. MOUNT TO RECEIVE DRIED BIOSOLIDS FROM EXISTING CONVEYOR AND CONVEY TO NEW BIOSOLIDS STORAGE AND HANDLING AREA. MOUNT AS RECOMMENDED BY MANUFACTURER AND MAXIMIZE DISCHARGE HEIGHT AS AVAILABLE.



A SLUDGE PUMP SECTION VIEW
M9-1

0 1'-0" 2'-0" 4'-0"



B SOLIDS HANDLING SECTION VIEW
M9-1

0 2'-0" 4'-0" 8'-0"



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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
SOLIDS HANDLING SECTIONS

M9-5
SHEET
21 OF 82

CONSTRUCTION NOTES:

- (N1) EXISTING SOLIDS HANDLING BUILDING.

(N2) NEW DRYER.

(N3) NEW BCR DS-300 CHEMISORPTION UNIT.

(N4) NEW 4" DI FLG 90° ELBOW.

(N5) NEW 4" DI FLG SLUDGE FEED PIPING.

(N6) NEW DUCTING AND EXHAUST LOUVER. SEE SHEET M9-14.

(N7) EXISTING CONVEYOR OPENING.

(N8) NEW 3" THREADED CARBON STEEL 90° ELBOW.

(N9) NEW 3" THREADED CARBON STEEL SCH 40 HOT OIL THERMAL FLUID SUPPLY PIPE WITH 1" JACKETED PIPE INSULATION.

(N10) NEW 3" THREADED CARBON STEEL SCH 40 HOT OIL THERMAL FLUID RETURN PIPE WITH 1" JACKETED PIPE INSULATION.

(N11) CONNECT THERMAL FLUID SUPPLY AND RETURN PIPES TO DRYER WITH 300# FLANGES AND/OR FITTINGS AS RECOMMENDED BY DRYER MANUFACTURER.

(N12) 4" CPVC ODOR CONTROL PIPING. CONNECT TO CHEMSORPTION UNIT AND DRYER AS RECOMMENDED BY MANUFACTURERS.

(N13) 4" CPVC SCH 40 90° ELBOW.

(N14) 6" GLASS LINED DUCTILE IRON DEWATERED SLUDGE PIPING. CONNECT TO EQUIPMENT PER MANUFACTURER RECOMMENDATIONS.

(N15) MIST ELIMINATOR.
- (N16) 4" D.I. VICTAULIC GLASS LINED 90° ELBOW.

(N17) 4" X 6" D.I. VICTAULIC REDUCER.

(N18) 4" D.I. VICTAULIC GLASS LINED SLUDGE PIPE.

(N19) NEW THERMAL FLUID HEATER NOT SHOWN FOR CLARITY.

(N20) 1" SCH 80 PVC NON-POTABLE WATER PIPING TO COOLING CONVEYOR.

(N21) 1/2" SCH 80 PVC PROCESS WATER TO DRYER.

(N22) 1/2" THREADED 304 STAINLESS STEEL SCH 40 PRESSURIZED AIR SUPPLY TO DRYER CONTROL PANEL. CONNECT TO DRYER AND NITROGEN GENERATOR PER MANUFACTURERS RECOMMENDATIONS.

(N23) 1/2" THREADED 304 STAINLESS STEEL SCH 40 NITROGEN PIPING TO DRYER DISTRIBUTION PANEL AND THERMAL FLUID HEATER. CONNECT TO DRYER, THERMAL FLUID HEATER, AND NITROGEN GENERATOR PER MANUFACTURERS RECOMMENDATIONS.

(N24) 2" SCH 80 PVC NON-POTABLE WATER TO FOUL AIR CONDENSOR.

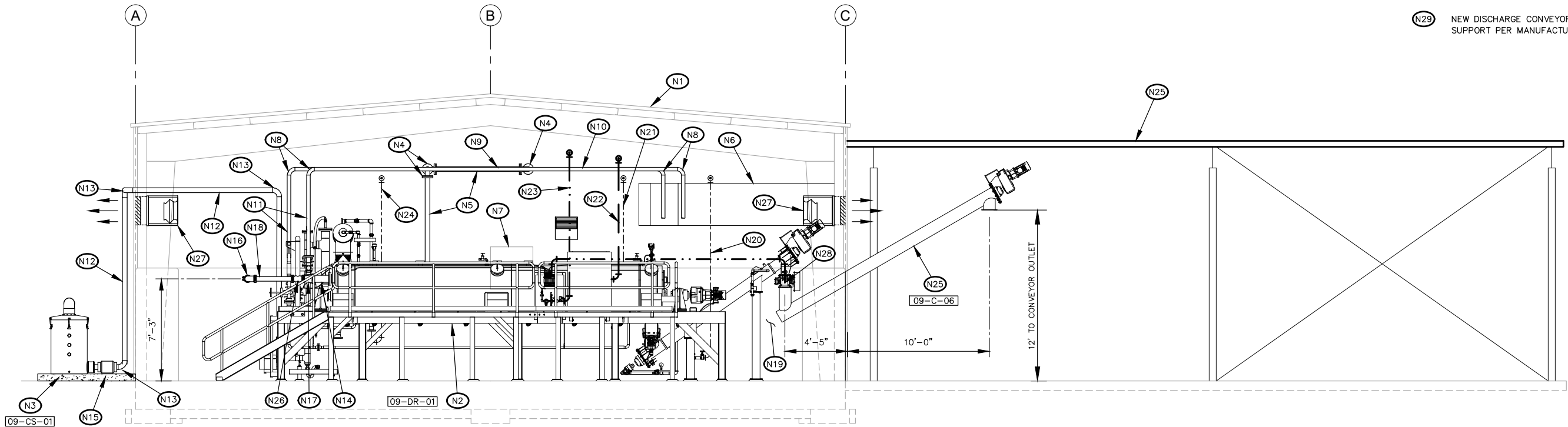
(N25) NEW SLUDGE BIOSOLIDS STORAGE AND HANDLING AREA. SEE STRUCTURAL PLANS.

(N26) 4" VICTAULIC THERMAL EXPANSION JOINT, SIZE PER DRYER MANUFACTURER RECOMMENDATIONS.

(N27) NEW EXHAUST FAN AND LOUVER. SEE SHEET M9-14.

(N28) 1/2" THREADED 304 STAINLESS STEEL SCH 40 NITROGEN PIPING FROM NITROGEN DISTRIBUTION PANEL TO COOLING CONVEYOR ROTARY AIRLOCK VALVE. CONNECT PER MANUFACTURER RECOMMENDATIONS.

(N29) NEW DISCHARGE CONVEYOR BY DRYER MANUFACTURER. SUPPORT PER MANUFACTURER RECOMMENDATIONS.



C DRYER SECTION VIEW
M9-1

0 2'-0" 4'-0" 8'-0"



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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS

SOLIDS HANDLING SECTIONS

M9-6

SHEET

22 OF 82

CONSTRUCTION NOTES:

- N1

EXISTING SOLIDS HANDLING BUILDING.

N2

NEW 4" DI FLG 90° ELBOW.

N3

NEW THERMAL FLUID HEATER SKID.

N4

NEW NITROGEN GENERATOR SYSTEM SKID.

N5

NEW 4" DI FLG SLUDGE FEED PIPING.

N6

6" CONCRETE EQUIPMENT PAD, TYPICAL. SEE DETAIL 1.1/SHEET GC-1.

N7

NEW HVAC DUCTING AND EXHAUST LOUVER. SEE SHEET M9-14.

N8

EXISTING CONVEYOR OPENING.

N9

NEW 1" SCH 80 POTABLE WATER PIPING. SEE SHEET M9-12.

N10

NEW BIOSOLIDS STORAGE AND HANDLING AREA. SEE STRUCTURAL PLANS.

N11

NEW UNIT HEATER. SEE SHEET M9-14.

N12

NEW 4" FLG ELECTROMAGNETIC FLOW METER.

N13

INSTALL CENTRIFUGE SUPPORTS. CONTRACTOR TO VERIFY CLEARANCES FOR CHUTE AND CONVEYOR INSTALLATION. SEE STRUCTURAL SHEETS.

N14

CENTRIFUGE CONCRETE EQUIPMENT PAD. SEE DETAIL 1.1 SHEET GC-1.
- N15

NEW CENTRIFUGE.

N16

1/2" THREADED 304 STAINLESS STEEL SCH 40 NITROGEN PIPING TO DRYER DISTRIBUTION PANEL AND THERMAL FLUID HEATER. CONNECT TO DRYER, THERMAL FLUID HEATER, AND NITROGEN GENERATOR PER MANUFACTURER'S RECOMMENDATIONS.

N17

1/2" THREADED 304 STAINLESS STEEL SCH 40 PRESSURIZED AIR SUPPLY TO DRYER DISTRIBUTION PANEL. CONNECT TO DRYER AND NITROGEN GENERATOR PER MANUFACTURER'S RECOMMENDATIONS.

N18

3" CPVC SCH 40 VENT PIPE. CONNECT TO NITROGEN GENERATOR SKID PER MANUFACTURER REQUIREMENTS. COORDINATE ROOF PENETRATION WITH STRUCTURAL/ELECTRICAL DRAWINGS.

N19

FLUE STACK COLLAR.

N20

10" STAINLESS STEEL FLUE STACK WITH 1" JACKETED INSULATION. COORDINATE SUPPORTS AND ROUTING THROUGH ROOF WITH STRUCTURAL.

N21

CENTRIFUGE ACCESS PLATFORM, 3' WIDE MINIMUM. PROVIDE OPENING FOR ROLLING MAINTENANCE LADDER ACCESS.

N22

LATERAL TEE WITH DRAIN TEE CAP AND 1" THREADED SS PIPE. DRAIN TO FLOOR DRAIN WITH AIR GAP.

N23

1" THREADED 304 SS FLUE CONDENSATE DRAIN PIPING. ROUTE TO FLOOR.
- N24

10" DRAIN PIPE CONNECTED TO DRAINAGE SYSTEM. SEE SHEET M9-4.

N25

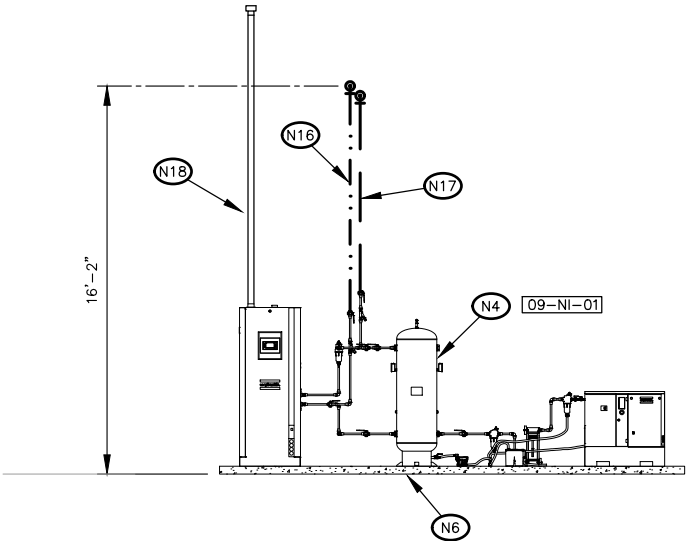
3 TON MOBILE GANTRY STYLE CRANE WITH 13' SPAN.

N26

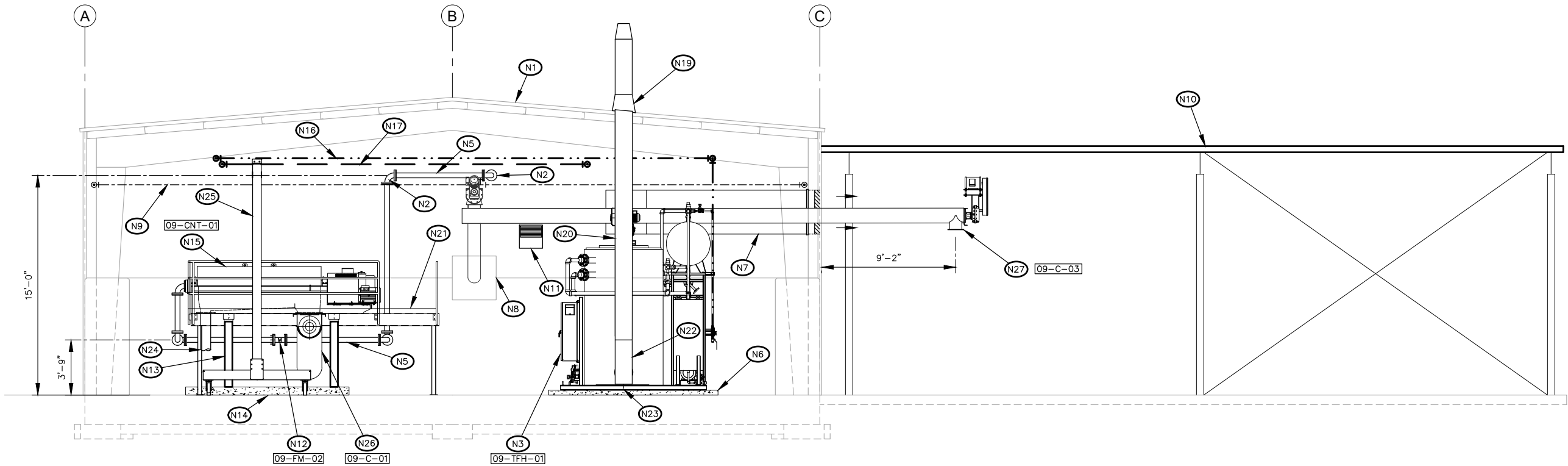
DEWATERED SLUDGE DISCHARGE CONVEYOR TO INLET HOPPER.

N27

NEW HORIZONTAL BIOSOLIDS CONVEYOR BY CENTRIFUGE MANUFACTURER. MOUNT TO RECEIVE DRIED BIOSOLIDS FROM EXISTING CONVEYOR AND CONVEY TO NEW BIOSOLIDS STORAGE AND HANDLING AREA. MOUNT AS RECOMMENDED BY MANUFACTURER AND MAXIMIZE DISCHARGE HEIGHT AS AVAILABLE.



NITROGEN GENERATOR DETAIL



D EQUIPMENT SECTION VIEW
M9-1
0 2'-0" 4'-0" 8'-0"



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PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
SOLIDS HANDLING SECTIONS

M9-7
SHEET
23 OF 82

CONSTRUCTION NOTES:

- N1

EXISTING SOLIDS HANDLING BUILDING.
- N2

NEW 4" D.I. VICTAULIC GLASS LINED 90° ELBOW.
- N3

NEW DRYER.
- N4

NEW COOLING CONVEYOR BY DRYER MANUFACTURER.
- N5

NEW BIOSOLIDS STORAGE AND HANDLING AREA. SEE STRUCTURAL PLANS.
- N6

NEW 3" THREADED CARBON STEEL 90° ELBOW.
- N7

NEW 3" THREADED SEAMLESS CARBON STEEL SCH 40 HOT OIL THERMAL FLUID SUPPLY PIPE WITH 1" JACKETED PIPE INSULATION.
- N8

NEW 3" THREADED SEAMLESS CARBON STEEL SCH 40 HOT OIL THERMAL FLUID RETURN PIPE WITH 1" JACKETED PIPE INSULATION.
- N9

NEW 4" GLASS LINED DUCTILE IRON DEWATERED SLUDGE PIPING.
- N10

4" X 6" D.I. VICTAULIC REDUCER.
- N11

1" SCH 80 PVC NON-POTABLE WATER PIPING TO COOLING CONVEYOR.
- N12

1/2" SCH 80 PVC PROCESS WATER TO DRYER.
- N13

1/2" THREADED 304 STAINLESS STEEL SCH 40 PRESSURIZED AIR SUPPLY TO DRYER DISTRIBUTION PANEL. CONNECTED TO DRYER AND NITROGEN GENERATOR PER MANUFACTURERS RECOMMENDATIONS.
- N14

1/2" THREADED 304 STAINLESS STEEL SCH 40 NITROGEN PIPING TO DRYER DISTRIBUTION PANEL AND THERMAL FLUID HEATER. CONNECT TO DRYER, THERMAL FLUID HEATER, AND NITROGEN GENERATOR PER MANUFACTURERS RECOMMENDATIONS.
- N15

2" SCH 80 PVC NON-POTABLE WATER TO FOUL AIR CONDENSER.
- N16

NEW 4" D.I. FLG 90° ELBOW.
- N17

NEW 4" FLG ELECTROMAGNETIC FLOW METER BY DRYER MANUFACTURER.
- N18

AIR VAC RELEASE VALVE. SEE DETAIL 3.5 SHEET GP-2.
- N19

TEMPERATURE SENSOR ON 4" D.I. BLIND FLG BY DRYER MANUFACTURER.
- N20

FLEX JOINT AT CONDENSER DRAIN OUTLET. 4" FLANGED 304 STAINLESS STEEL 150 PSI WITH MIN. 2.0" COMPRESSION AND 1/2" LATERLA MOVEMENT CAPABILITIES.
- N21

3/4" CPVC DRAIN FROM COOLING CONVEYOR TO CONDENSER DRAIN TEE.
- N22

NEW 4" D.I. FLG TEE.
- N23

CONDENSER BLOWER 1-1/2" THREADED 304 STAINLESS STEEL SCH 40 DRAIN PIPE. ROUTE TO FLOOR DRAIN WITH AIR GAP.
- N24

NEW 6" X 4" D.I. FLG REDUCING 90° ELBOW.
- N25

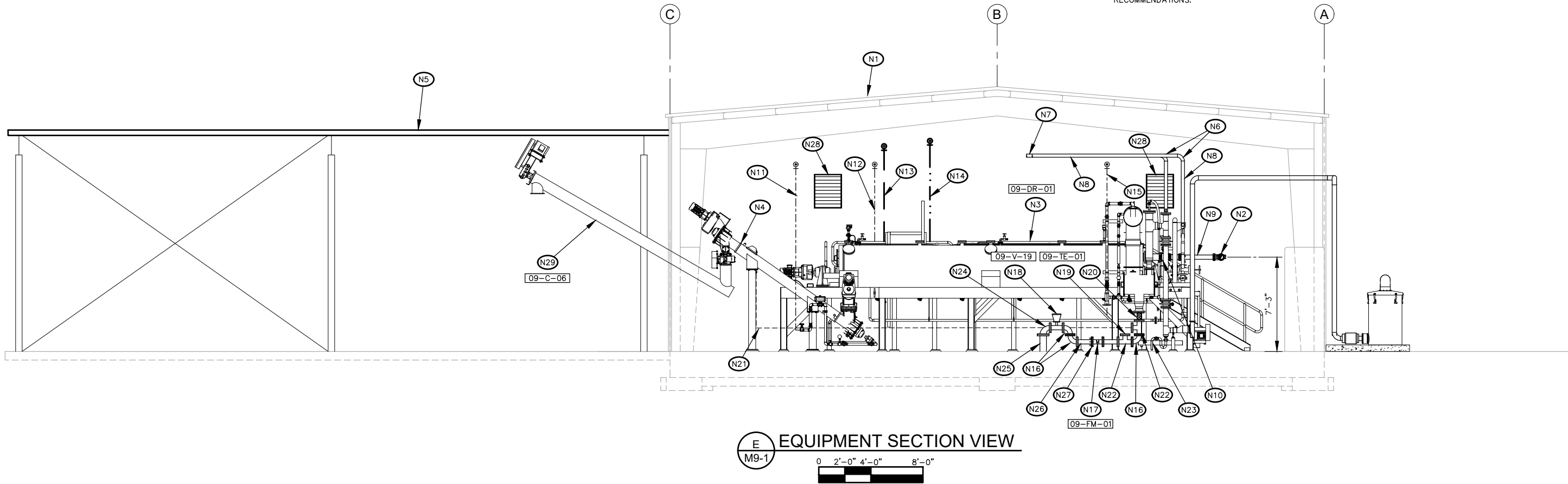
NEW 6" D.I. DRAIN PIPE.
- N26

NEW 4" D.I. FLG X PE SPOOL.
- N27

NEW 4" FLG COUPLING ADAPTER.
- N28

NEW SUPPLY LOUVER. SEE SHEET M9-14.
- N29

NEW DISCHARGE CONVEYOR BY DRYER MANUFACTURER. SUPPORT PER MANUFACTURER RECOMMENDATIONS.



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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
SOLIDS HANDLING SECTIONS

M9-8
SHEET
24 OF 82

CONSTRUCTION NOTES:

- (N1) EXISTING SOLIDS HANDLING BUILDING.

(N2) NEW 4" D.I. FLG 90° ELBOW.

(N3) NEW CENTRIFUGE AND ACCESS PLATFORM WITH STAIRS.

(N4) NEW DRYER INLET HOPPER AND PUMP.

(N5) 4" D.I. SLUDGE FEED PIPING.

(N6) 4" CPVC ODOR CONTROL PIPING.

(N7) 4" CPVC ODOR CONTROL PIPING. CONNECT TO CHEMSORPTION UNIT AND INLET HOPPER AS RECOMMENDED BY MANUFACTURERS.

(N8) 4" CPVC 90° ELBOW.

(N9) 3 TON MOBILE GANTRY STYLE CRANE WITH 13' SPAN AND 12'-6" HOOK HEIGHT.

(N10) 4" D.I. VICTAULIC GLASS LINED 90° ELBOW.

(N11) 4" D.I. GLASS LINED DUCTILE IRON DEWATERED SLUDGE PIPING TO DRYER. DRYER NOT SHOWN FOR CLARITY.

(N12) DEWATERED SLUDGE DISCAHRGE CONVEYOR.

(N13) CENTRIFUGE ACCESS PLATFORM AND STAIRS. MINIMUM 3' WIDE.

(N14) CONNECT TO INLET HOPPER AS RECOMMENDED BY MANUFACTURER.
- (N15) CONNECT TO NEW CENTRIFUGE AS RECOMMENDED BY MANUFACTURER.

(N16) INSTALL CENTRIFUGE SUPPORTS. CONTRACTOR TO VERIFY CLEARANCES FOR CHUTE AND CONVEYOR INSTALLATION. SEE STRUCTURAL SHEETS.

(N17) CONCRETE EQUIPMENT PAD. SEE DETAIL 1.1/SHEET GC-1.

(N18) 10" D.I. DRAIN PIPE CONNECTED TO DRAIN SYSTEM.

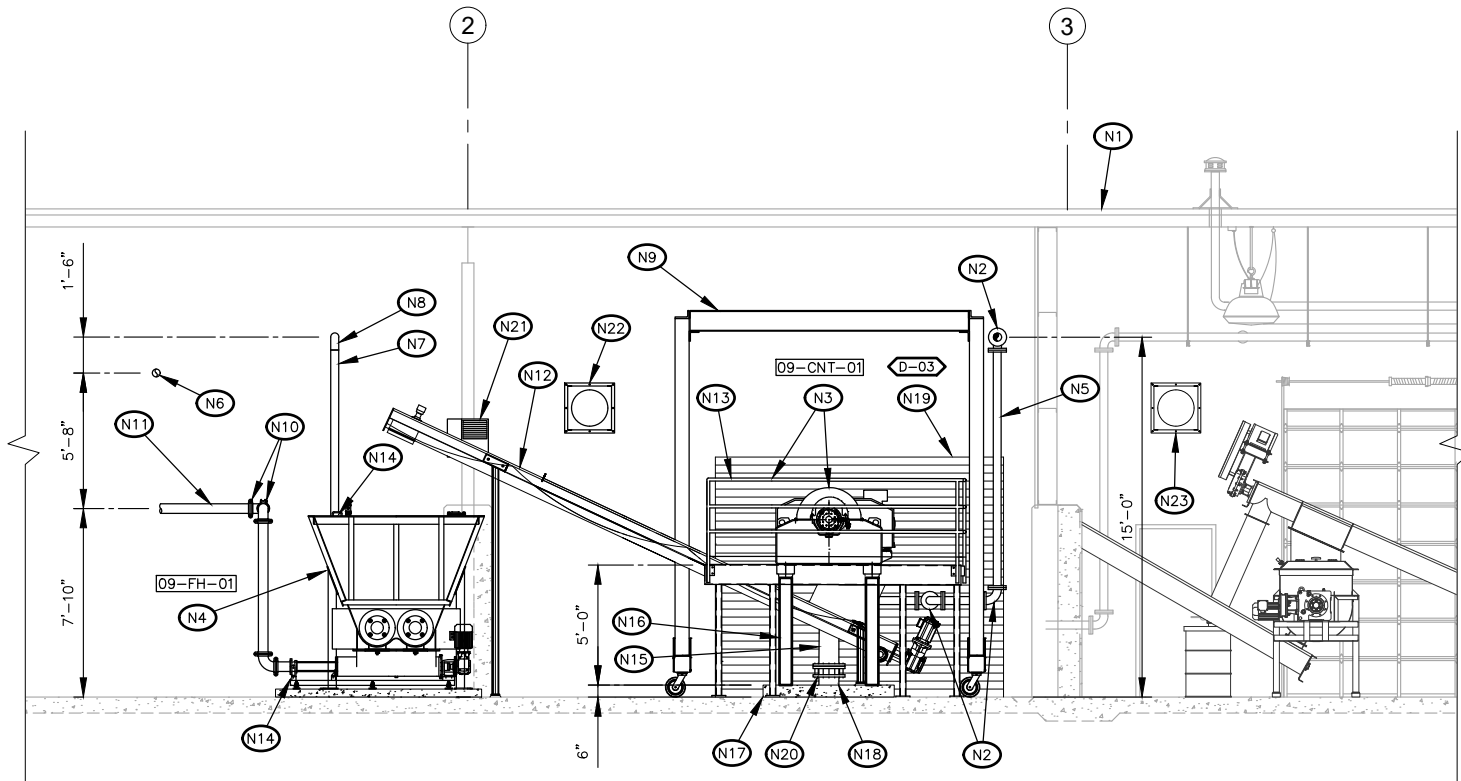
(N19) FACTORY FINISHED ROLL-UP DOOR. SEE SCHEDULE ON SHEET GA-1. SEE SHEETS GA-1 FOR DETAILS.

(N20) 10" FLG COUPLING ADAPTER.

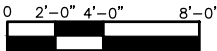
(N21) NEW UNIT HEATER. SEE SHEET M9-14.

(N22) NEW EXHAUST FAN AND LOUVER. SEE SHEET M9-14.

(N23) RELOCATED EXHAUST FAN. SEE SHEETS M9-13 AND M9-14.



F SOLIDS HANDLING SECTION VIEW
M9-1



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PLANT IMPROVEMENTS

SOLIDS HANDLING SECTIONS

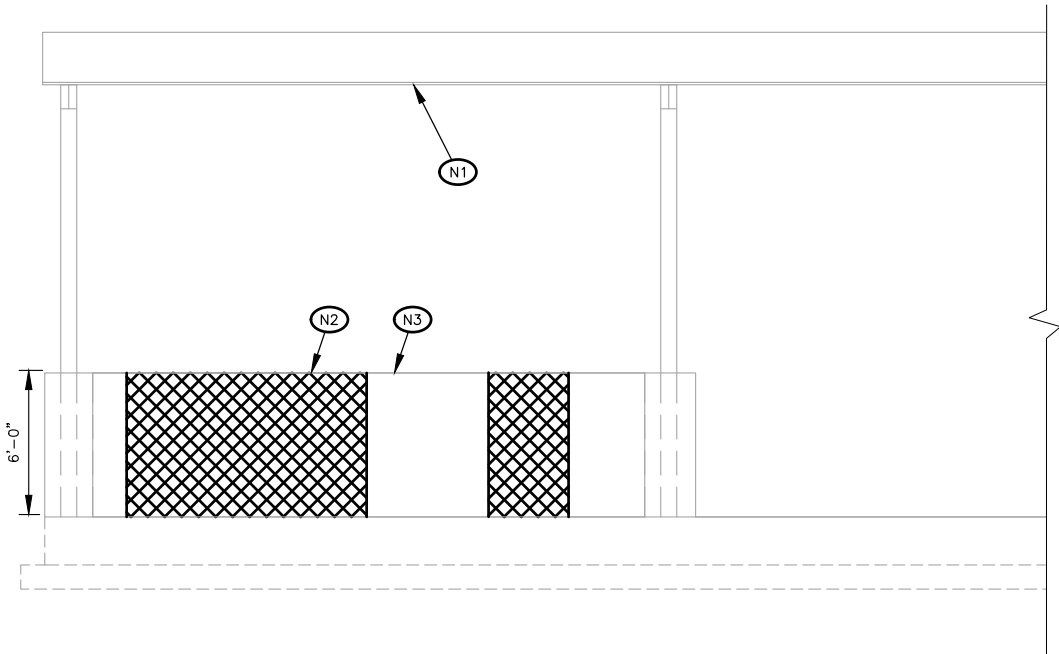
M9-9

SHEET

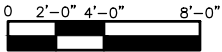
25 OF 82

CONSTRUCTION NOTES:

- N1 EXISTING SOLIDS HANDLING BUILDING.
- N2 DEMO EXISTING CONCRETE WALL BETWEEN SUPPORTS. COORDINATE WITH STRUCTURAL DRAWINGS.
- N3 SAWCUT PUSHWALL AS NEEDED FOR DISCHARGE CONVEYOR CLEARANCE.

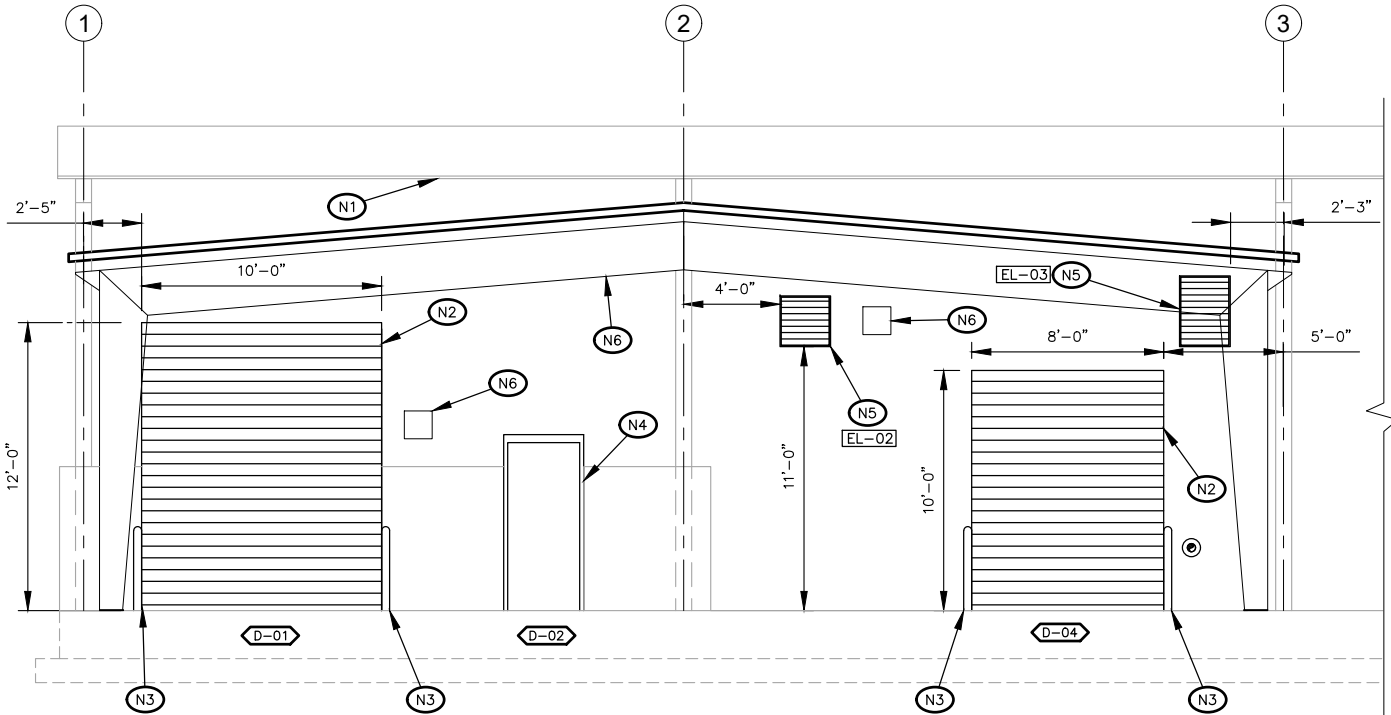


SOUTH ELEVATION DEMOLITION

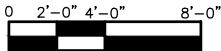


CONSTRUCTION NOTES:

- N1 EXISTING SOLIDS HANDLING BUILDING.
- N2 FACTORY FINISHED ROLL-UP DOOR. SEE SCHEDULE AND DETAILS ON SHEET GA-1.
- N3 PROTECTIVE BOLLARD. SEE DETAIL ST-13/SHEET GC-1.
- N4 HOLLOW METAL DOOR AND FRAME SEE SCHEDULE ON SHEET GA-1.
- N5 NEW EXHAUST LOUVER, SEE SCHEDULE ON SHEET GM-1.
- N6 CONVEYOR OPENING THROUGH WALL. INSTALL INSIDE AND OUTSIDE FLASHING AND SEAL WEATHER TIGHT.
- N8 NEW BIOSOLIDS STORAGE AND HANDLING AREA ROOF. SEE STRUCTURAL SHEETS.



SOUTH ELEVATION BUILDING MODIFICATIONS



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SOLIDS HANDLING ELEVATIONS

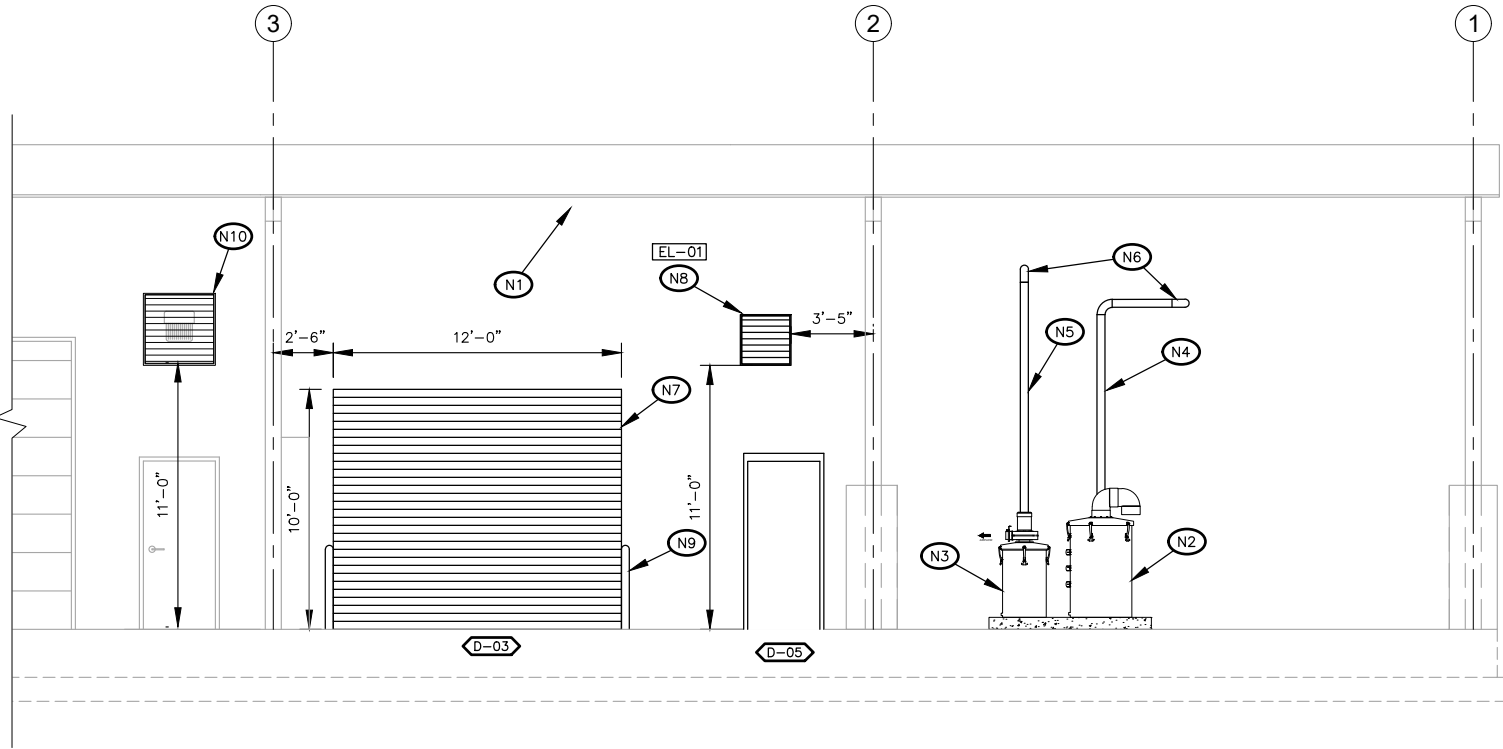
M9-10

SHEET

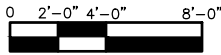
26 OF 82

CONSTRUCTION NOTES:

- (N1) EXISTING SOLIDS HANDLING BUILDING.
- (N2) NEW BCR DS-300 CHEMISORPTION UNIT.
- (N3) NEW BCR DS-100 CHEMISORPTION UNIT.
- (N4) 4" CPVC ODOR CONTROL PIPING. CONNECT TO CHEMSORPTION UNIT AND DRYER AS RECOMMENDED BY MANUFACTURERS.
- (N5) 4" CPVC ODOR CONTROL PIPING. CONNECT TO CHEMSORPTION UNIT AND FEED HOPPER AS RECOMMENDED BY MANUFACTURERS.
- (N6) 4" CPVC 90° ELBOW.
- (N7) FACTORY FINISHED ROLL-UP DOOR. SEE SCHEDULE ON SHEET GA-1. SEE SHEETS GA-1 FOR DETAILS.
- (N8) NEW EXHAUST LOUVER. SEE SCHEDULE ON SHEET GM-1.
- (N9) PROTECTIVE BOLLARD, TYP. SEE DETAIL ST-13/SHEET GC-1.
- (N10) RELOCATED EXHAUST FAN. SEE SHEETS M9-13 AND M9-14. MOVE LIGHT FIXTURE AND CONDUITS AS REQUIRED TO MAINTAIN FUNCTIONALITY OF EXISTING EQUIPMENT

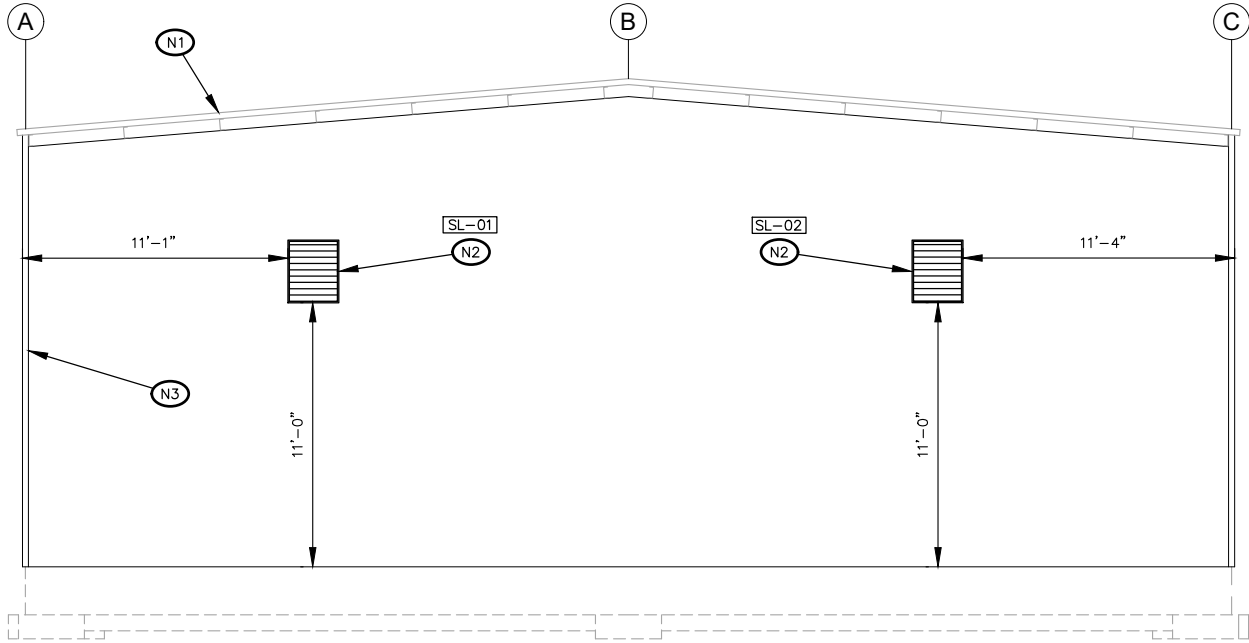


NORTH ELEVATION BUILDING MODIFICATIONS

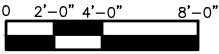


CONSTRUCTION NOTES:

- (N1) EXISTING SOLIDS HANDLING BUILDING.
- (N2) NEW EXHAUST LOUVER. SEE SCHEDULE ON SHEET GM-1.
- (N3) NEW ENCLOSED BIOSOLIDS STORAGE AND HANDLING AREA. SEE STRUCTURAL.

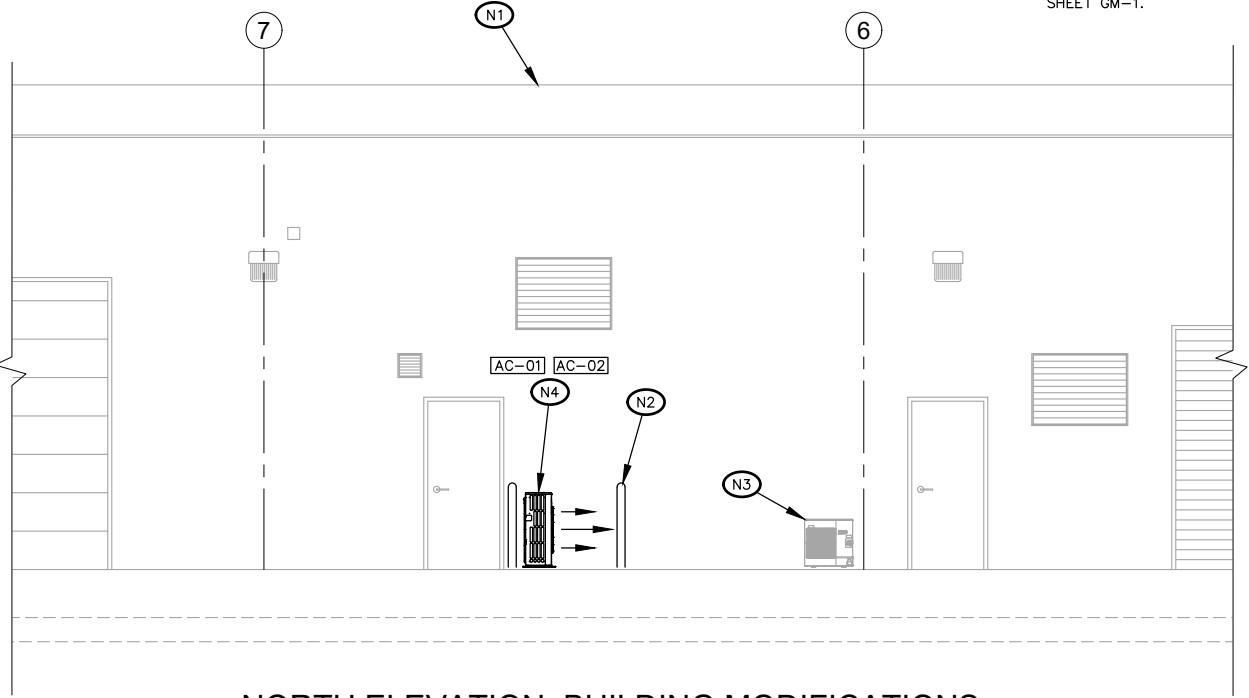


WEST ELEVATION BUILDING MODIFICATIONS

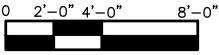


CONSTRUCTION NOTES:

- (N1) EXISTING SOLIDS HANDLING BUILDING.
- (N2) PROTECTIVE BOLLARD, TYP. SEE DETAIL ST-13/SHEET GC-1.
- (N3) EXISTING SPLIT AC OUTDOOR UNIT.
- (N4) 2 NEW SPLIT AC UNITS. SEE SHEET M9-14 FOR LAYOUT. SEE SCHEDULE ON SHEET GM-1.



NORTH ELEVATION BUILDING MODIFICATIONS



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PLANT IMPROVEMENTS
SOLIDS HANDLING ELEVATIONS

M9-11
SHEET
27 OF 82



CONSTRUCTION NOTES:

- (N1) CUT THROUGH EXISTING METAL WALL FOR POTABLE WATER PIPE EXTENSION.

(N2) CONNECT EXISTING 3" NON-POTABLE AND 1" POTABLE WATER LINE WITH FITTINGS AS REQUIRED. CAP EXISTING 1" WATER LINE EAST OF CONNECTION. COORDINATE WITH CITY.

(N3) 1" SCH 80 PVC NON-POTABLE WATER PIPING. PIPING TO BE FIELD ROUTED PER OWNER APPROVAL.

(N4) NEW HOSE BIBB AND HOSE RACK. SEE DETAIL 2.5 SHEET GP-2.

(N5) CONNECT TO EXISTING NON-POTABLE WATER PIPE. REMOVE EXISTING 3" 90° ELBOW AND INSTALL NEW 3" TEE FOR CONTINUATION THROUGH WALL.

(N6) REMOVE EXISTING 90° ELBOW AND INSTALL NEW 2" TEE WITH 2" X 1" REDUCER AND EXTEND 1" SCH 80 PVC PIPE TO LOCATION A.
- (N7) CUT EXISTING PVC PIPE AND INSTALL 1" PVC CAP.

(N8) INSTALL 1" 90° PVC ELBOW AND EXTEND NEW 1" NON-POTABLE WATER PIPE TO LOCATION B.

(N9) 1" SCH 80 PVC NON-POTABLE WATER PIPING TO COOLING CONVEYOR.

(N10) 1/2" SCH 80 PVC NON-POTABLE WATER TO DRYER.

(N11) 2" SCH 80 PVC NON-POTABLE WATER TO FOUL AIR CONDENSOR.

(N12) 3" SCH 80 PVC NON-POTABLE WATER PIPING. PIPING TO BE FIELD ROUTED PER OWNER APPROVAL.

(N13) 1-1/2" SCH 80 PVC NON-POTABLE WATER PIPING. PIPING TO BE FIELD ROUTED PER OWNER APPROVAL.
- (N14) CONNECT TO EXISTING WITH FITTINGS AS NECESSARY.

(N15) CUT EXISTING PVC PIPE AND INSTALL TEE. ROUTE AS NEEDED TO POLYMER EQUIPMENT AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

(N16) NEW 2" BALL VALVE.

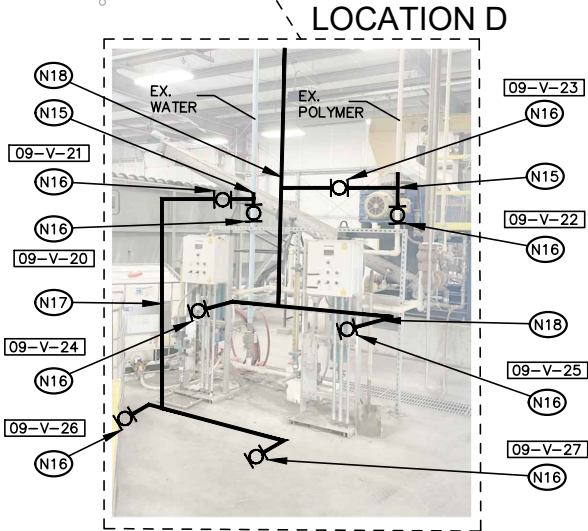
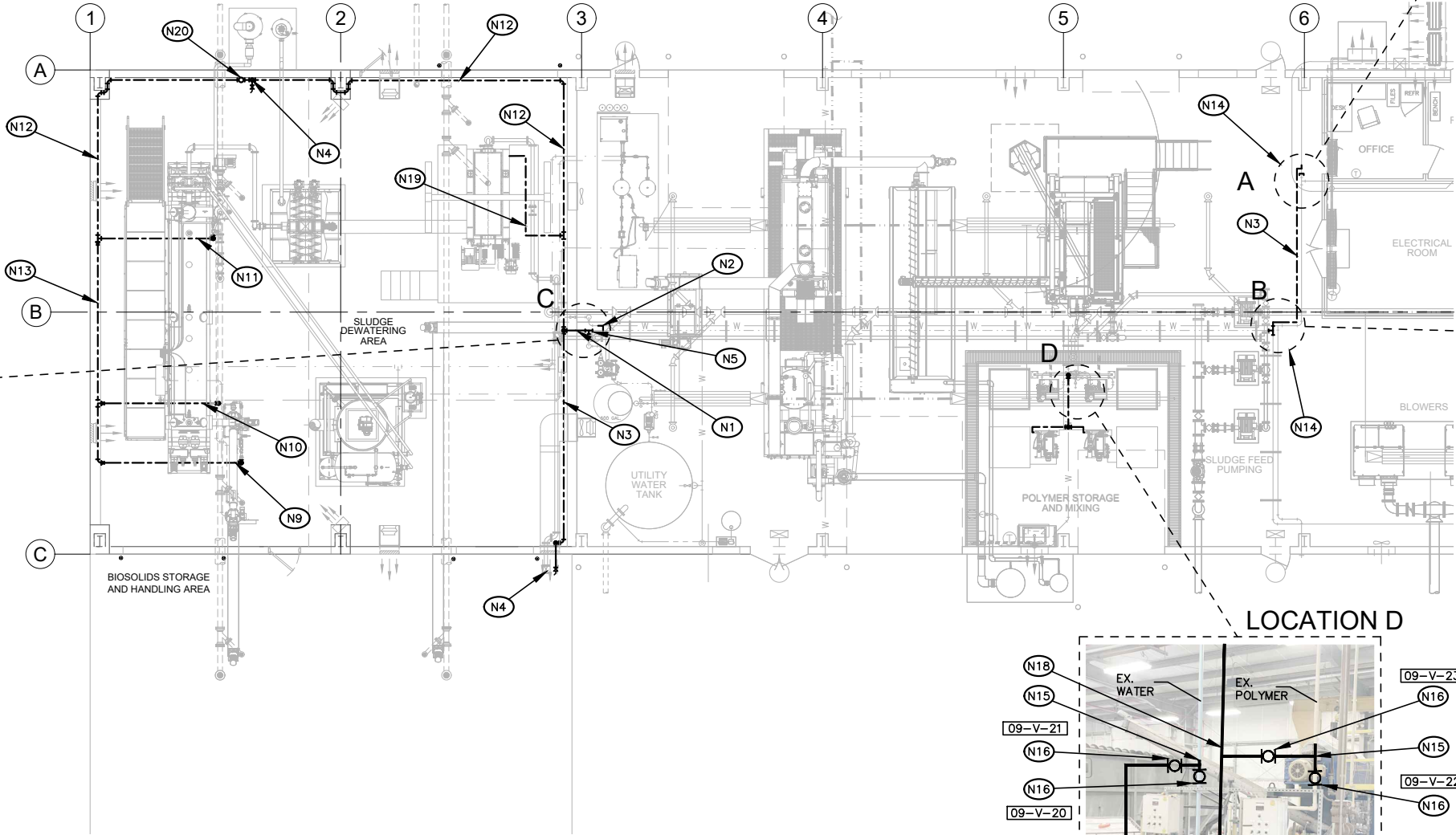
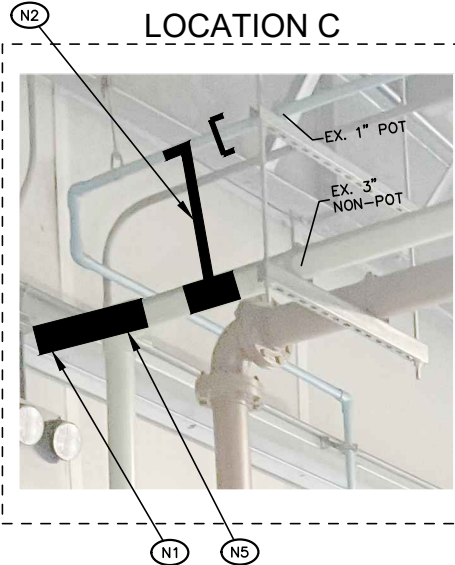
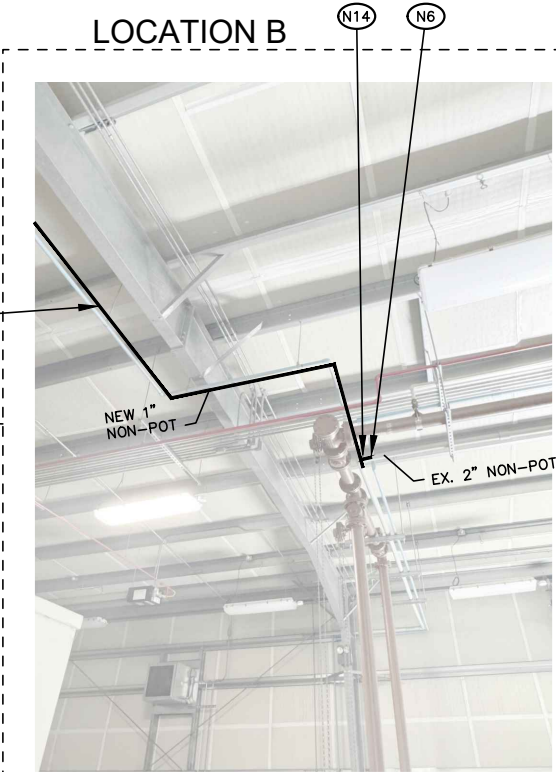
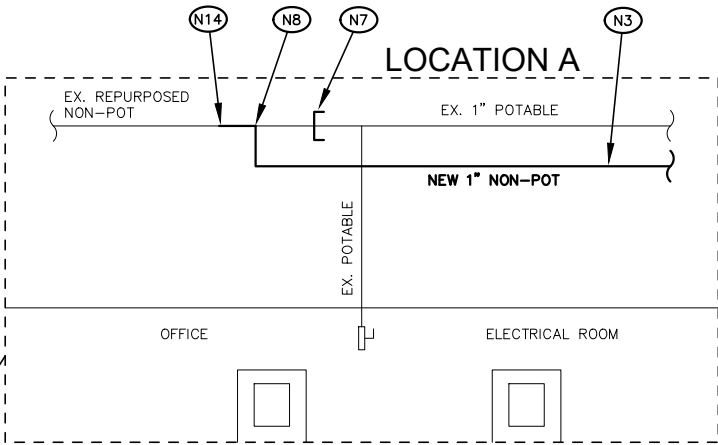
(N17) NEW 2" SCH 80 PVC WATER LINE TO POLYMER FEED SYSTEM.

(N18) NEW 2" SCH 80 PVC POLYMER LINE FROM POLYMER SYSTEM.

(N19) 1" SCH 80 PVC NON-POTABLE WATER TO CENTRIFUGE PER MANUFACTURER RECOMMENDATIONS.

(N20) 3" MOTOR OPERATED VALVE SUPPLIED BY DRYER MANUFACTURER.

(N21) POLYMER INJECTION PORT ON SLUDGE PIPING TO NEW CENTRIFUGE. INSTALL AT LOCATION APPROVED BY THE ENGINEER. SEE DETAIL 1.1 SHEET GP-1.



WATER PIPING PLAN

0 4'-0" 8'-0" 16'-0"



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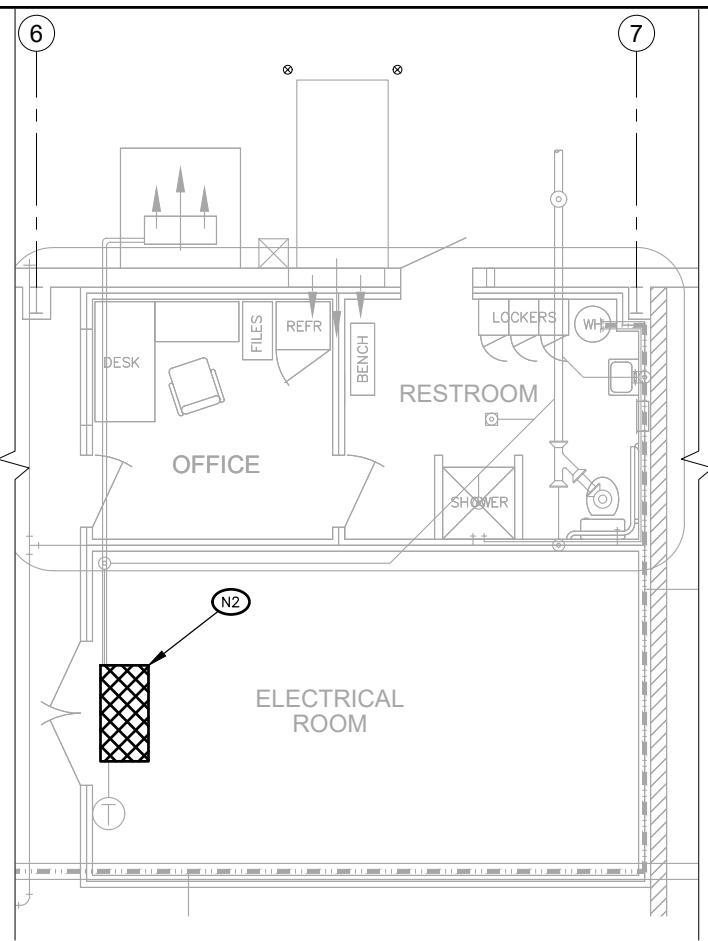
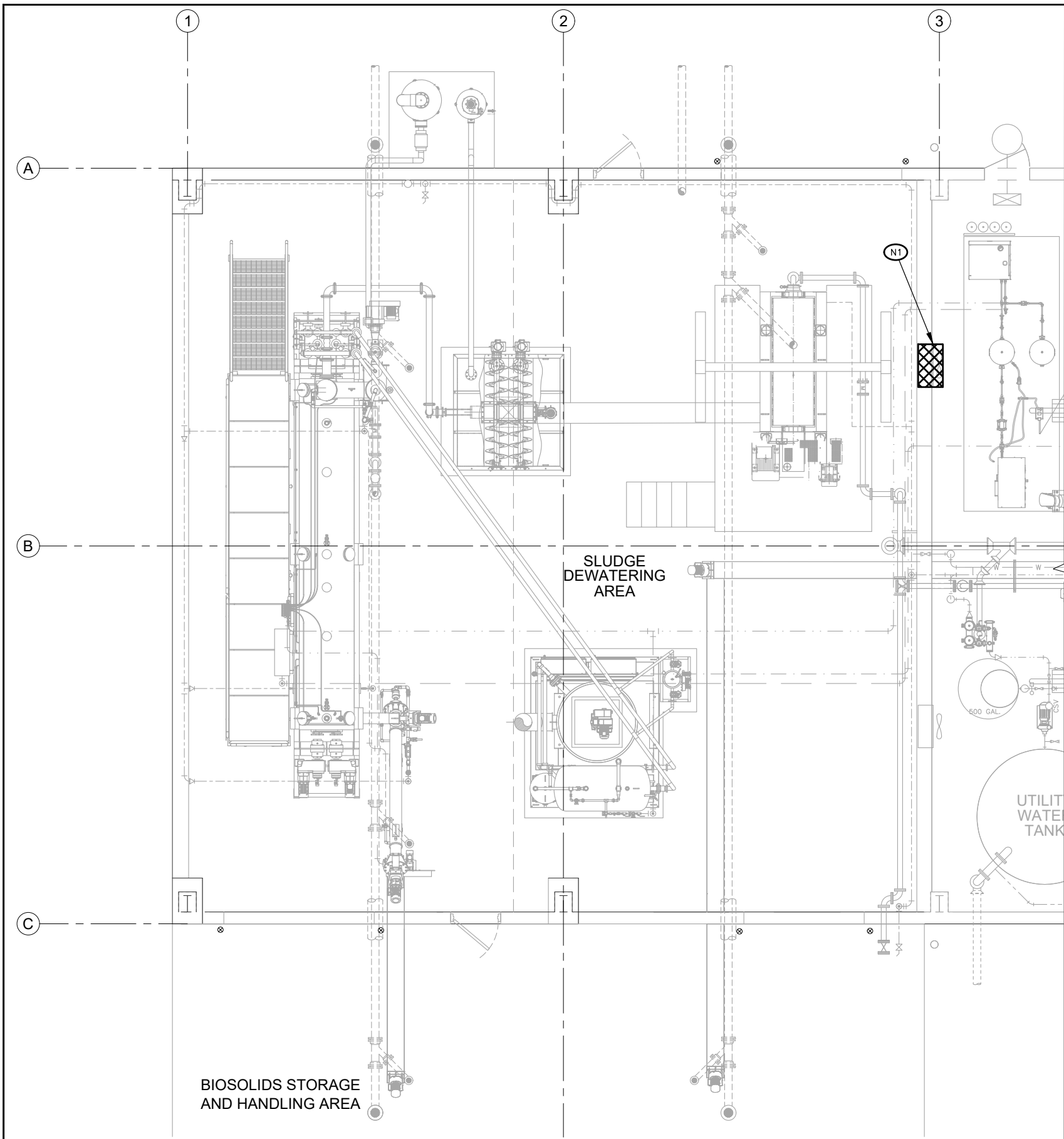


REVISION	DATE

JOB NUMBER: 23166	DATE: 07/07/26
FILE NAMES: DRAWING: Sheets - M9.dwg	
PLAN: 23166.dwg	
DESIGNED BY: ENTERED BY:	RJS DAS

CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
WATER PIPING PLAN

M9-12
SHEET
28 OF 82



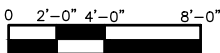
CONSTRUCTION NOTES:

- (N1) REMOVE EXISTING FAN AND LOUVER. RELOCATE PER SHEET M9-13. CLOSE OPENING WITH PLATE AND INSULATION PER STRUCTURAL/MATCH EXISTING.
- (N2) REMOVE EXISTING SPLIT AC INTERIOR UNIT AND RELOCATE TO NEW ELECTRICAL ROOM PER SHEET M9-13.

GENERAL HVAC DEMO NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REROUTING CONDUITS AND PIPING WHICH INTERFERES WITH RELOCATION OF EXHAUST FAN AND LOUVER EF-4.

SOLIDS HANDLING HVAC DEMO PLAN



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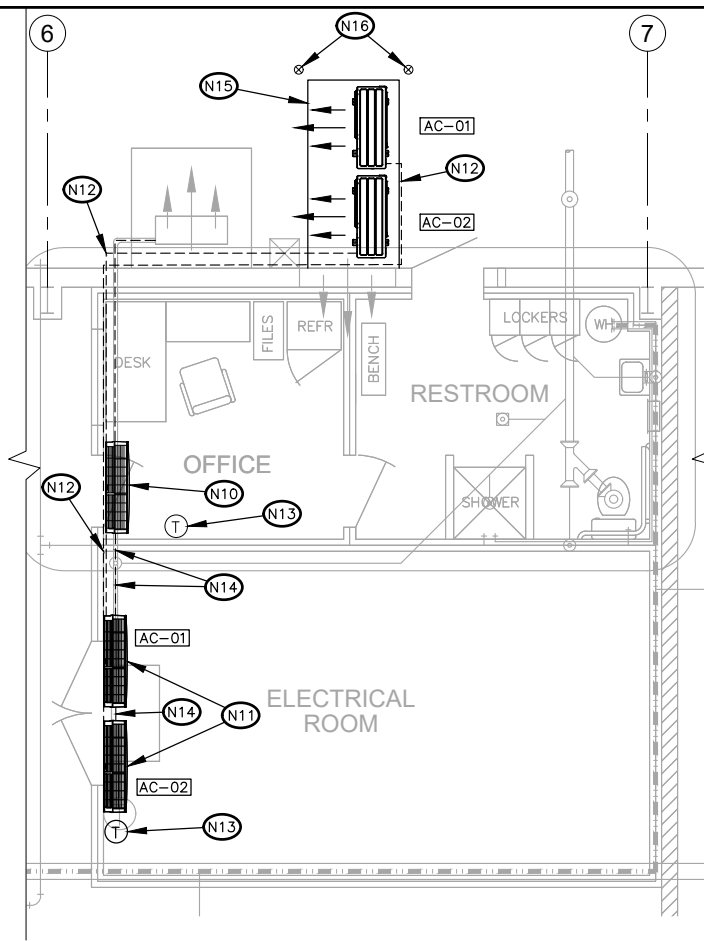
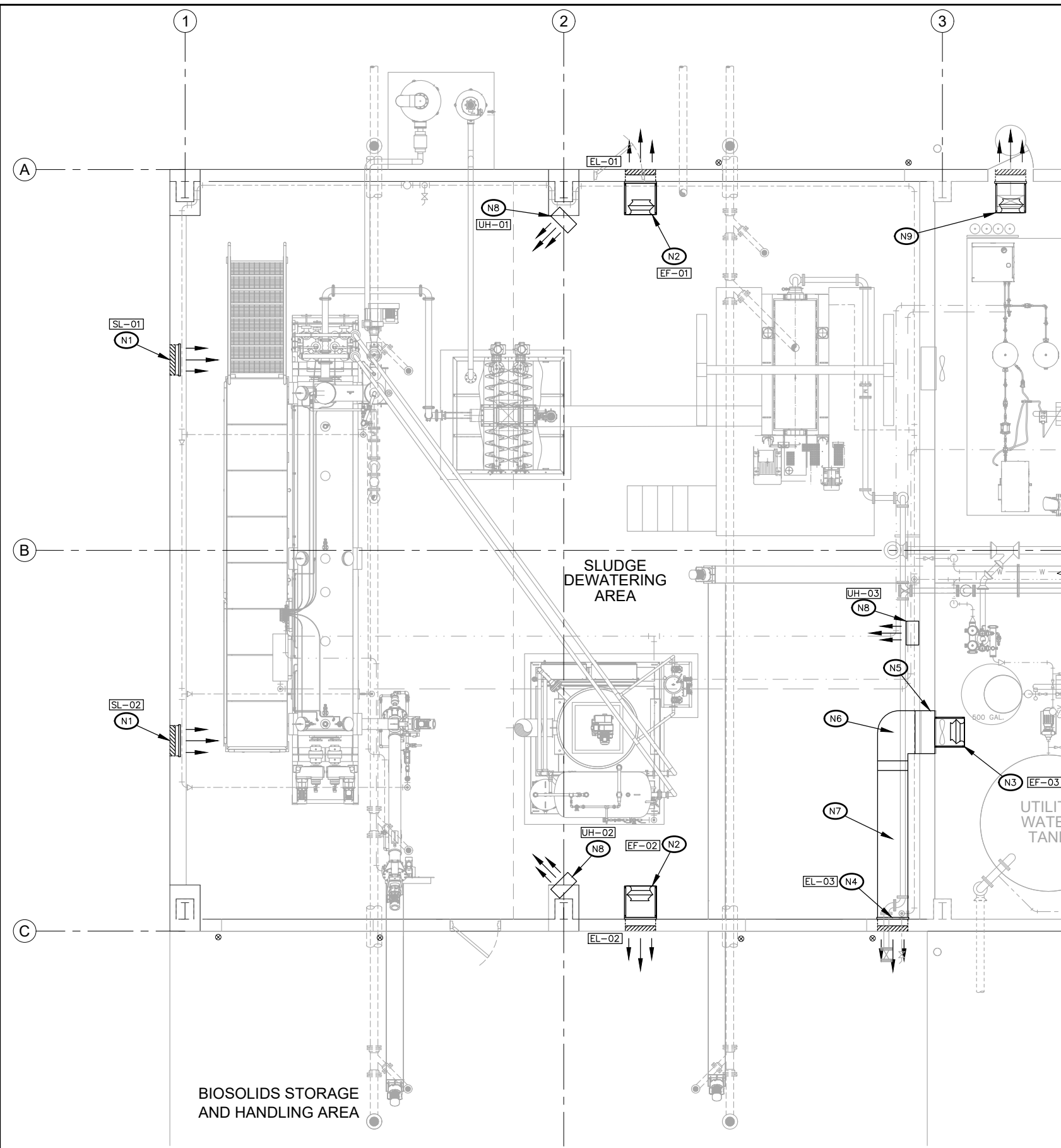
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		FILE NAMES: DRAWING: Sheets - M9.dwg	
		PLAN: 23166.dwg	
		DESIGNED BY: RJS	
		ENTERED BY: DAS	
REVISION	DATE		

CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS

SOLIDS HANDLING HVAC DEMO PLAN

M9-13

SHEET
29 OF **82**



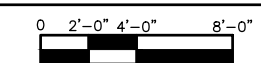
CONSTRUCTION NOTES:

- (N1) NEW SUPPLY LOUVER. SEE SCHEDULE ON SHEET GM-1.
- (N2) NEW EXHAUST FAN AND LOUVER. SEE SCHEDULE ON SHEET GM-1.
- (N3) NEW IN-LINE FAN TO REPLACE EXISTING EXHAUST FAN. SEE SCHEDULE ON SHEET GM-1.
- (N4) NEW EXHAUST LOUVER. SEE SCHEDULE ON SHEET GM-1.
- (N5) 34"X34" DUCTING.
- (N6) 34"X34" TO 24"X34" ELBOW
- (N7) 24"X34" DUCTING.
- (N8) NEW ELECTRIC UNIT HEATER. SEE SCHEDULE ON SHEET GM-1.
- (N9) EXISTING EXHAUST FAN, RELOCATED FROM WEST WALL TO ABOVE DOOR. KEEP SAME ELEVATION. REROUTE CONDUITS TO NEW LOCATION. EXTEND AND REROUTE EXISTING CONDUITS AT NEW FAN LOCATION AS NEEDED. REINFORCE PER STRUCTURAL.
- (N10) EXISTING SPLIT AC UNIT RELOCATED TO NEW ELECTRICAL ROOM. REROUTE PIPING AND CONDUITS AS NEEDED TO ALLOW FUNCTION OF THE UNIT. RELOCATE THERMOSTAT, MOUNT AT 5'-0" ABOVE FINISH FLOOR.
- (N11) NEW SPLIT AC UNITS IN EXISTING ELECTRICAL ROOM. SEE SCHEDULE ON SHEET GM-1.
- (N12) SPLIT AC UNIT CONNECTION LINE. CORE THROUGH WALL TO ELECTRICAL ROOM AND ROUTE ABOVE ELECTRICAL EQUIPMENT. COORDINATE WITH ELECTRICAL.
- (N13) WALL-MOUNTED THERMOSTAT, TYP. MOUNT AT 5'-0" ABOVE FINISHED FLOOR. SEE SCHEDULE NOTE ON GM-1 FOR THERMOSTAT INFORMATION. COORDINATE WITH ELECTRICAL.
- (N14) SPLIT AC UNIT CONDENSATE DRAIN LINE. ROUTE TO EXISTING PVC DRAIN PIPE IN EXSTING ELECTRICAL ROOM.
- (N15) SPLIT AC UNIT CONCRETE PAD. SAW-CUT ASPHALT AND POUR 4" PAD TO GRADE. SEE DETAIL 1.1 SHEET GC-2.
- (N16) PROTECTIVE BOLLARD, TYP. SEE DETAIL ST-13/SHEET GC-1.

GENERAL HVAC NOTES

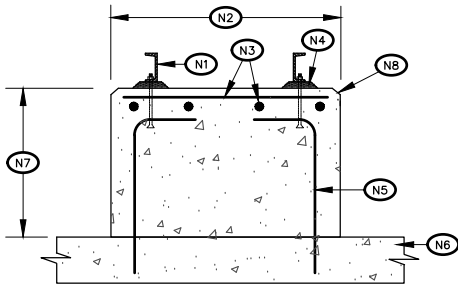
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PROVIDING ALL REQUIRED SUPPORTS NECESSARY FOR PROPER INSTALLATION OF ALL HVAC EQUIPMENT.
2. ALL HVAC EQUIPMENT, ACCESSORIES, AND CONTROLS SHALL BE CLOSELY COORDINATED WITH ELECTRICAL. SEE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.

SOLIDS HANDLING HVAC PLAN

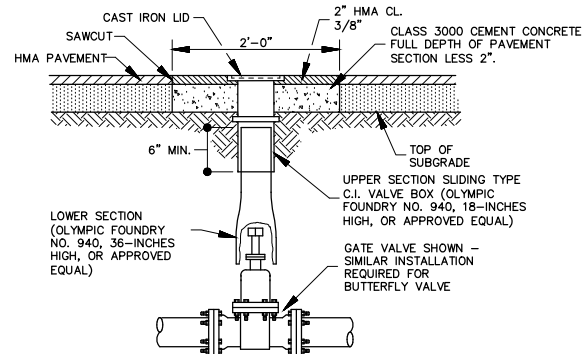


NOTES

- (N1) EQUIPMENT RAIL FOR INFORMATION ONLY. COORDINATE WITH MFGS. APPROVED SHOP DRAWINGS.
- (N2) WIDTH OF EQUIPMENT MOUNTING RAIL +4", EACH SIDE.
- (N3) #5 HORIZONTALS @ 12" O.C., EACH WAY 2" CLR. OF TOP OF CONCRETE.
- (N4) 1" NON-SHRINK LEVELING GROUT UNDER EQUIPMENT RAIL OR AS REQUIRED BY EQUIPMENT MANUFACTURER.
- (N5) #5 DOWELS EPOXY GROUTED INTO SLAB. 2" CLR. FROM CONCRETE FACE. MAX SPACING 2'-0" O.C.
- (N6) CONCRETE FLOOR SLAB. REINFORCING NOT SHOWN.
- (N7) HEIGHT AS REQUIRED PER PIPING AND EQUIPMENT. COORDINATE.
- (N8) 1" CHAMFER, TYPICAL.



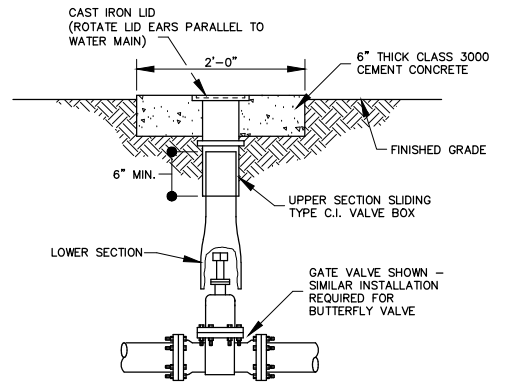
1.1 EQUIPMENT PAD
NOT TO SCALE



NOTE:

PROVIDE EXTENSION PIECE WHERE REQUIRED FOR VALVE BOX. (OLYMPIC FOUNDRY NO. 044, 12-INCHES HIGH, OR APPROVED EQUAL). ROTATE LID EARS PARALLEL TO WATER MAIN.

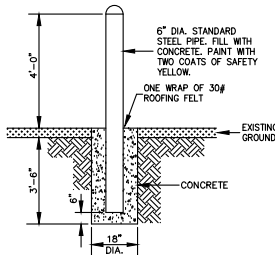
1.4 WATER VALVE BOX - IN PAVEMENT
NOT TO SCALE



NOTE:

PROVIDE EXTENSION PIECE WHERE REQUIRED FOR VALVE BOX. SEE DETAIL 1.4/GC-1 FOR ADDITIONAL NOTES.

1.5 WATER VALVE BOX - NOT IN PAVEMENT
NOT TO SCALE



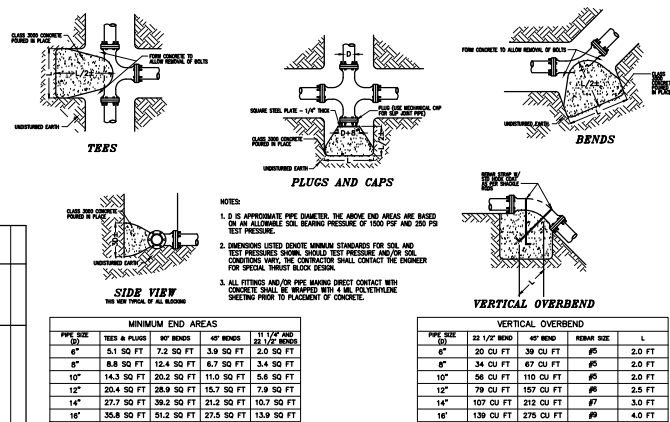
- NOTES:
- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

CITY OF SELAH-STANDARD DETAIL
BOLLARD
ST-13

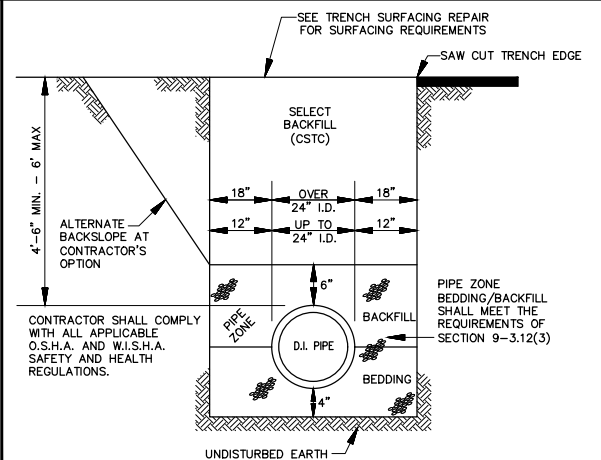
CITY OF SELAH-STANDARD DETAIL

TYPICAL THRUST BLOCKING

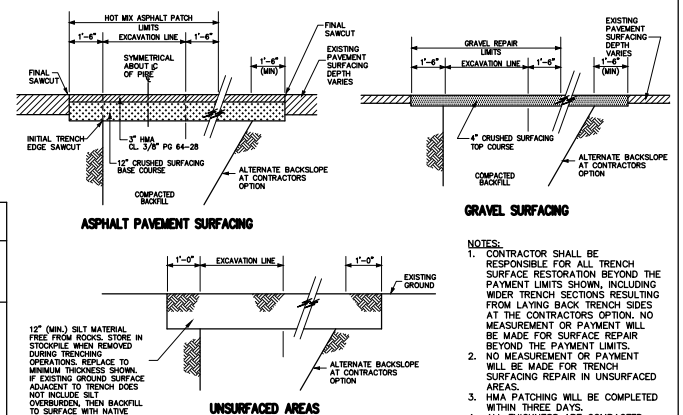
NOT TO SCALE



TYPICAL THRUST BLOCKING
NOT TO SCALE



2.5 TYPICAL WATER MAIN TRENCH
NOT TO SCALE



- NOTES:
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCH SURFACE RESTORATION BEYOND THE PAYMENT LIMITS SHOWN, INCLUDING WIDER TRENCH SECTIONS RESULTING FROM LAYING BACK TRENCH SIDES AT THE CONTRACTOR'S OPTION. NO MEASUREMENT OR PAYMENT WILL BE MADE FOR SURFACE REPAIR BEYOND THE PAYMENT LIMITS.
 - NO MEASUREMENT OR PAYMENT WILL BE MADE FOR TRENCH SURFACING REPAIR IN UNSURFACED AREAS.
 - HMA PATCHING WILL BE COMPLETED WITHIN THREE DAYS.
 - ALL THICKNESS ARE COMPACTED DEPTH.

TRENCH SURFACING REPAIR
NOT TO SCALE



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REVISION

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JOB NUMBER:
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07/07/26

FILE NAMES:
DRAWING: Sheets-Details-
Phase 1.dwg
23166.dwg

DESIGNED BY: RJS

ENTERED BY: DAS

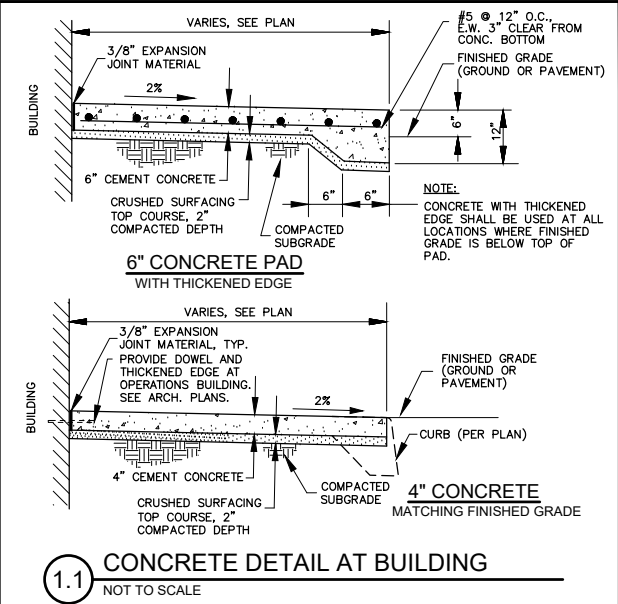
CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS

CIVIL DETAILS

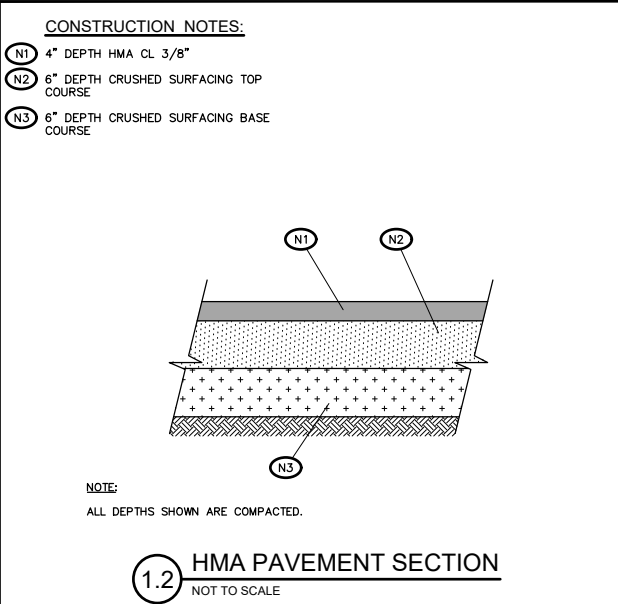
GC-1

SHEET

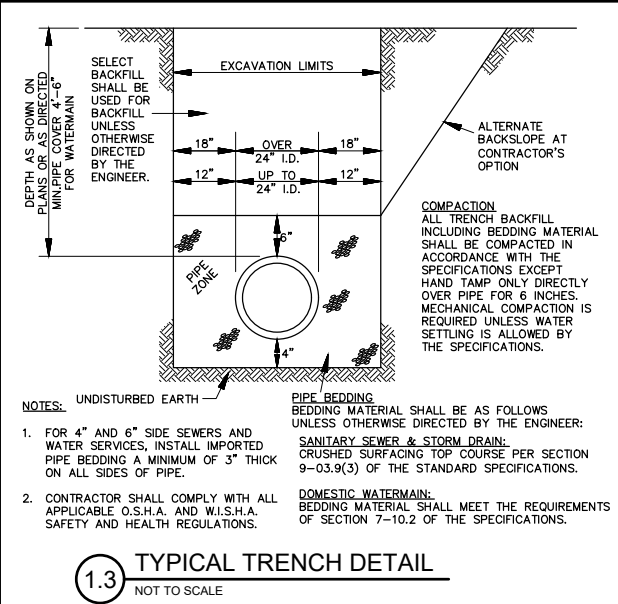
31 OF 82



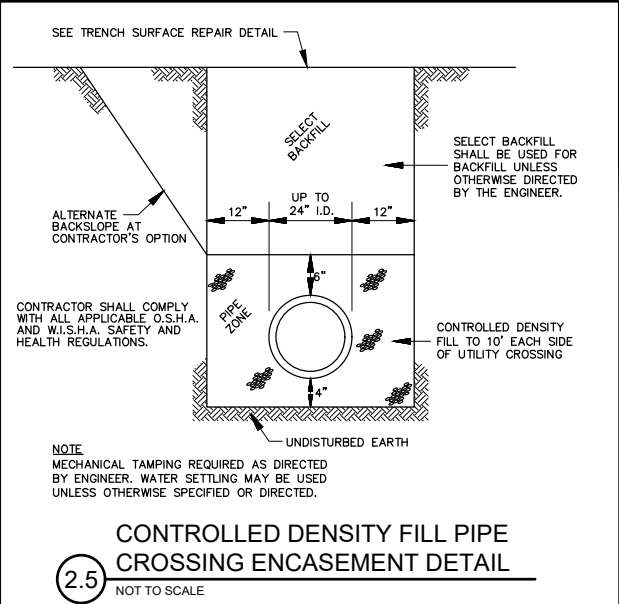
1.1 CONCRETE DETAIL AT BUILDING
NOT TO SCALE



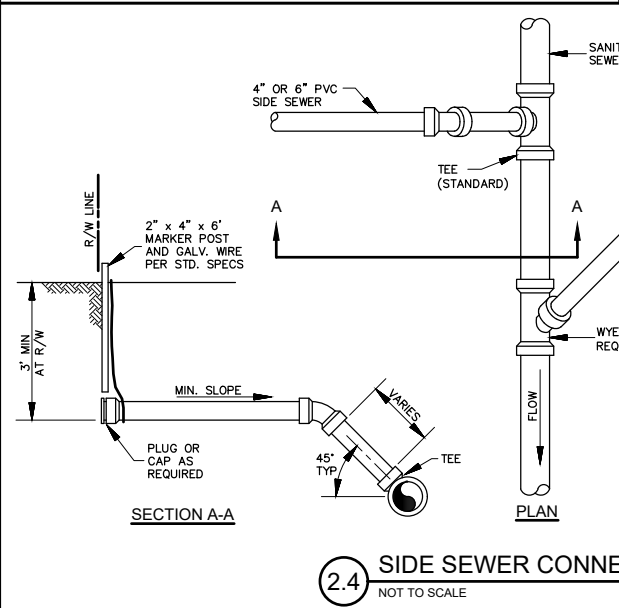
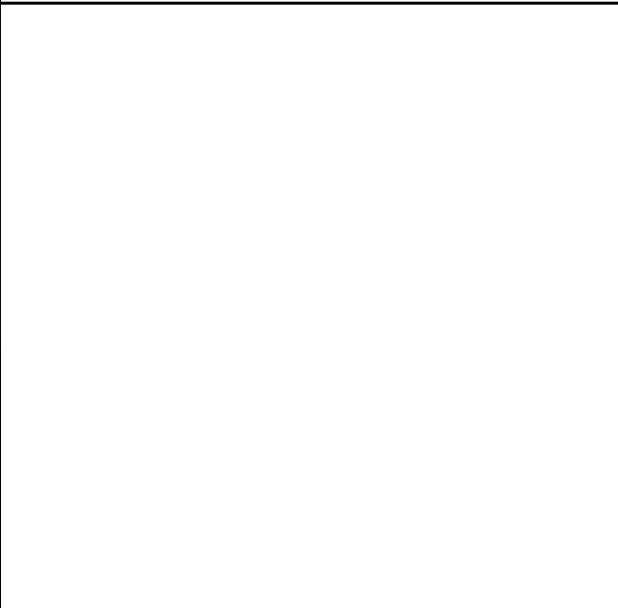
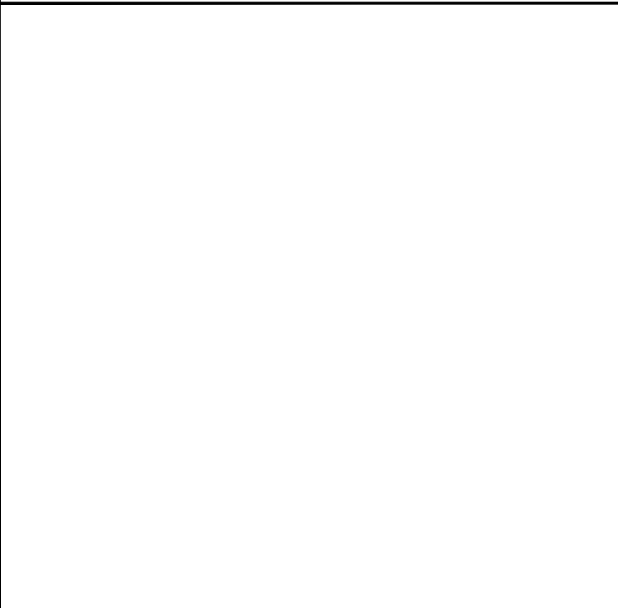
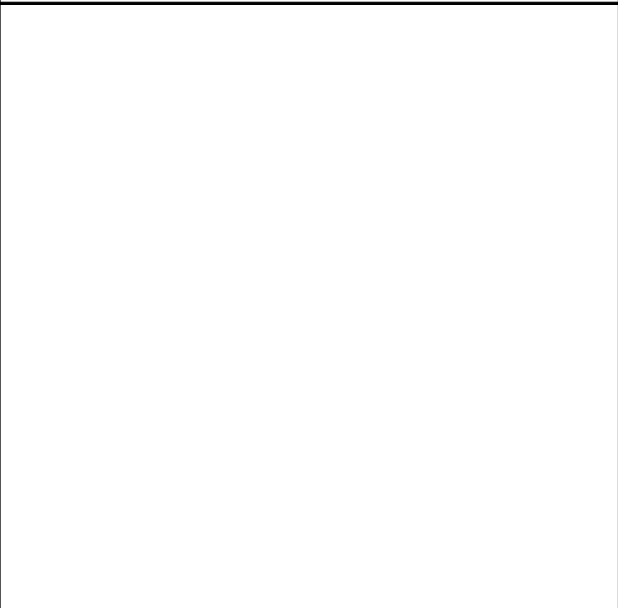
1.2 HMA PAVEMENT SECTION
NOT TO SCALE



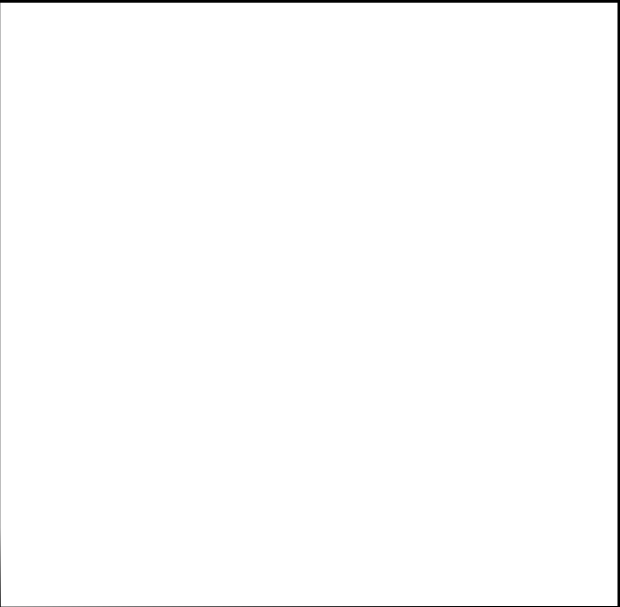
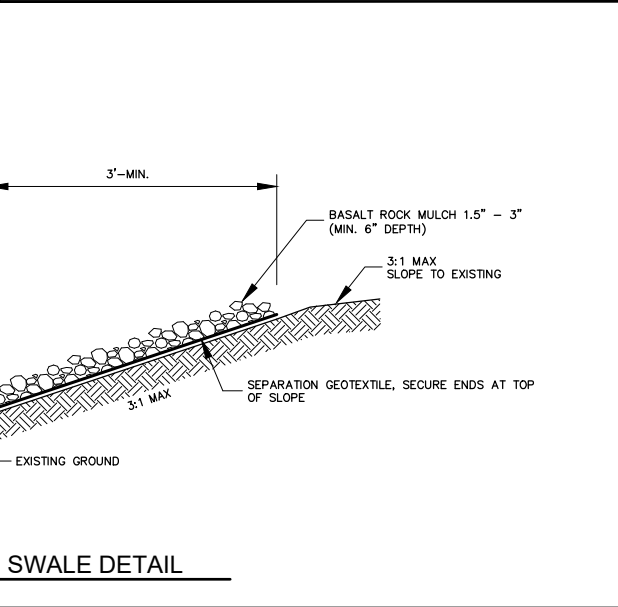
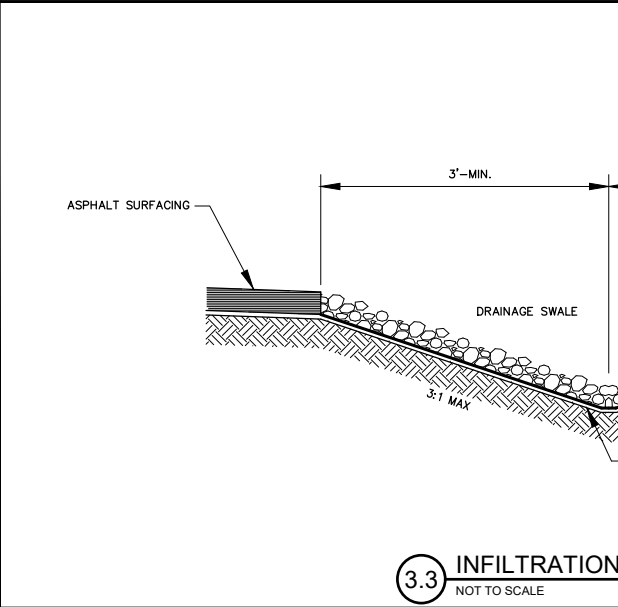
1.3 TYPICAL TRENCH DETAIL
NOT TO SCALE



2.5 CONTROLLED DENSITY FILL PIPE
CROSSING ENCASEMENT DETAIL
NOT TO SCALE



2.4 SIDE SEWER CONNECTIONS
NOT TO SCALE





-

3.1 TRAPEZE PIPE HANGER

- NOTES
- STRUCTURAL STEEL BEAM.
 - CENTER BEAM CLAMP, ANVIL FIGURE 133, TRIPAC FIG. TP-62, OR EQUAL.
 - STRUCTURAL CONCRETE MEMBER.
 - SUPPORT ROD, THREADED EACH END, SIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR PIPE BEING SUPPORTED.
 - SIDE BEAM BRACKET, ANVIL FIG. 202 OR EQUAL.
 - 5/8" ϕ EXPANSION ANCHOR IN CONCRETE.
 - CONCRETE INSERT, TRIPAC FIG. TP-309, OR ANVIL FIG. 282, OR EQUAL.
-
- The image contains two technical drawings of a pipe support system. The top drawing is a side elevation view showing a structural steel beam (N1) with a center beam clamp (N2) and a support rod (N4) passing through it. A side beam bracket (N5) is attached to the rod. The rod is anchored into a concrete member (N3) via a concrete insert (N7). The bottom drawing is a cross-section view showing the beam (N1) with a support rod (N4) passing through it. The rod is anchored into a concrete member (N3) via a concrete insert (N7).

2.2 TYPICAL PIPE HANGER SUPPORT

-

3.2 TYPICAL PIPE HANGER

-

1.3 PARALLEL PIPE SUPPORT

-

2.3 TYPICAL PIPE OFFSET SUPPORT

-
- The diagram shows a cross-section of a wall. On the left, a horizontal dimension line indicates a distance of 2'-0" from the left edge to the wall. The left side of the wall is labeled "DRY SIDE" and the right side is labeled "WET SIDE". The wall is divided into two main sections by a horizontal line. The upper section contains sensor N1. The lower section contains sensor N2. A horizontal line with a break symbol is shown in the middle of the wall, with sensor N3 located just below it on the wet side. Sensor N4 is located on the dry side, and sensor N5 is located on the wet side, both at the bottom of the wall. Sensor N6 is located on the wet side, just above sensor N3. The wall is shown with a hatched pattern on the left and right sides, indicating the dry and wet regions respectively.

- 3.3 PIPE PENETRATION DETAIL (NEW) - TYPE A
NOT TO SCALE

-
- A technical diagram of a vertical riser assembly. At the top is a circular riser head with a yin-yang pattern, secured by two horizontal clamps (N1 and N2) and a central nut/bolt (N3). Below the head is a vertical riser pipe (N4) with a wavy break line indicating it is longer than shown. The pipe is labeled 'A (NOMINAL NPS)' with a dimension line. The pipe is inserted into a base assembly (N5) which is shown in cross-section, embedded in a concrete foundation. A dimension line labeled 'B' indicates the diameter of the base assembly.

1.5 PIPE SUPPORT DETAIL - TYPE 1
NOT TO SCALE

- | PIPE SIZE | A | B |
|-----------|----|---------|
| 4" | 3" | 9" |
| 5" | 3" | 9" |
| 6" | 3" | 9" |
| 8" | 3" | 9" |
| 10" | 3" | 9" |
| 12" | 3" | 9" |
| 14" | 4" | 11" |
| 16" | 4" | 11" |
| 18" | 4" | 11" |
| 20" | 6" | 13-1/2" |
| 24" | 6" | 13-1/2" |
| 26" | 6" | 13-1/2" |
| 30" | 6" | 13-1/2" |
| 32" | 6" | 13-1/2" |
| 36" | 8" | 16" |

-

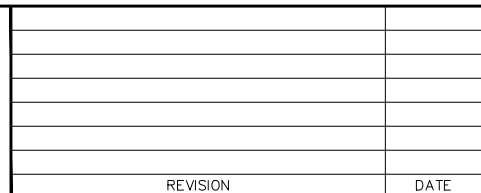
2.5 TYPICAL PIPE BRACKET
NOT TO SCALE

-
- 2'-0"
- N1
- N2
- N3
3. SEE SIZE
4. NO REIN WILL

- 3.4 PIPE PENETRATION DETAIL (NEW) - TYPE B
NOT TO SCALE

-
- The diagram illustrates a cross-section of a two-layered wall assembly. The top layer is a concrete slab, labeled N1, with a thickness of 2'-0". The bottom layer is a brick wall, labeled N2. The wall is divided into a 'DRY SIDE' and a 'WET SIDE'. The wet side is shown with water (H2O) and a layer of insulation (N3) on the exterior. The interior side of the brick wall is labeled N4 and N5. The diagram shows the flow of water vapor through the wall assembly.

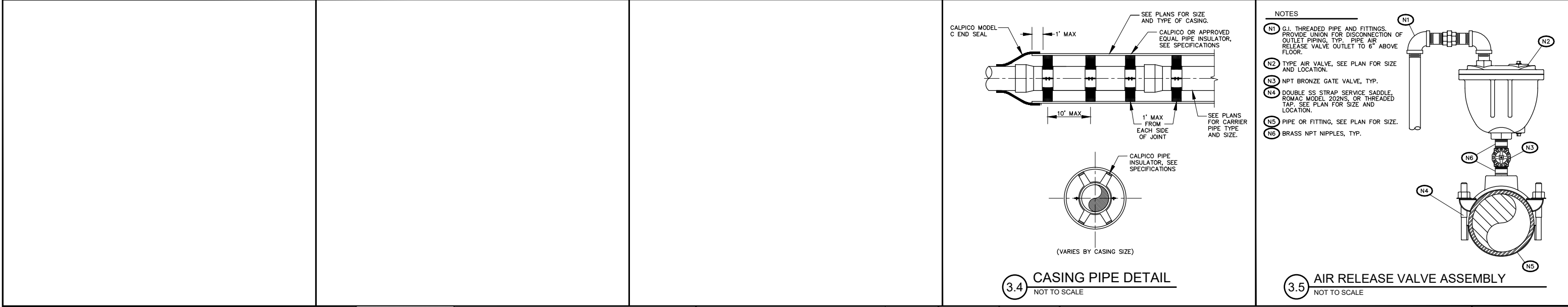
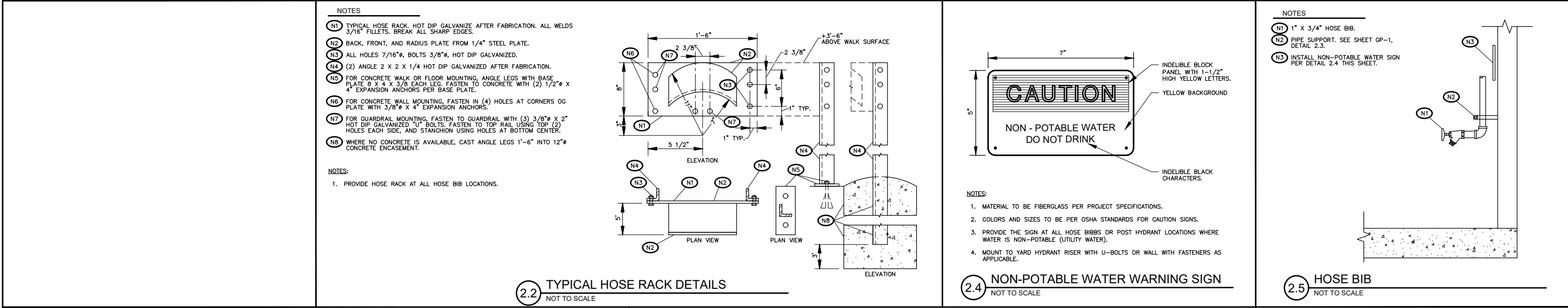
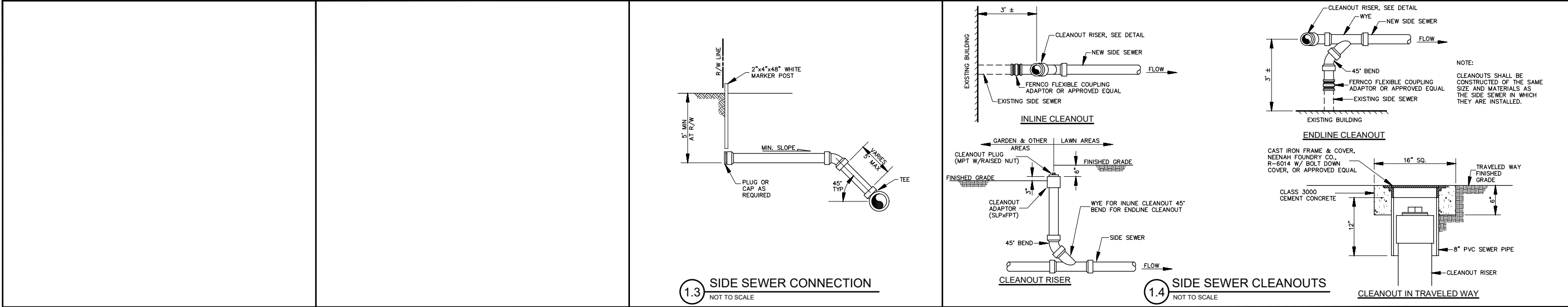
- 3.5 PIPE PENETRATION DETAIL (EXIST.)
NOT TO SCALE



DESIGNED BY:	RA
ENTERED BY:	DA

PIPING DETAILS

33 OF 82

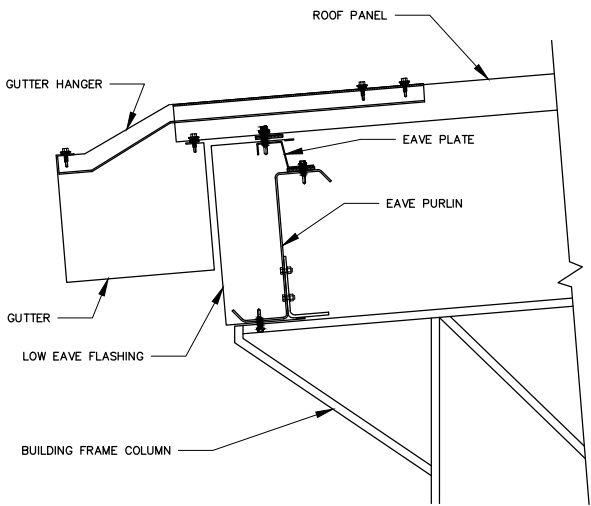


Door Schedule														
Door							Frame		Details					Remarks
Number	Width	Height	Type	Open'g	Mat'l	Finish	Mat'l	Finish	Type	Details Jamb		Head	Thresh	
D-01	10'-0"	12'-0"	B	RU	HM	PT	HM	PT	-	2.2/GA-1 (11-3/4")	2.2/GA-1 (11-3/4")	3.4/GA-1 (11-3/4")	-	-
D-02	3'-0"	7'-0"	A	S	HM	PT	HM	PT	1	2.1/GA-1 (11-3/4")	2.1/GA-1 (11-3/4")	3.3/GA-1 (11-3/4")	-	-
D-03	12'-0"	10'-0"	B	RU	HM	PT	HM	PT	-	2.2/GA-1 (11-3/4")	2.2/GA-1 (11-3/4")	3.4/GA-1 (11-3/4")	-	-
D-04	8'-0"	10'-0"	B	RU	HM	PT	HM	PT	-	2.2/GA-1 (11-3/4")	2.2/GA-1 (11-3/4")	3.4/GA-1 (11-3/4")	-	-
D-05	3'-0"	7'-0"	A	S	HM	PT	HM	PT	1	2.1/GA-1 (11-3/4")	2.1/GA-1 (11-3/4")	3.3/GA-1 (11-3/4")	-	-

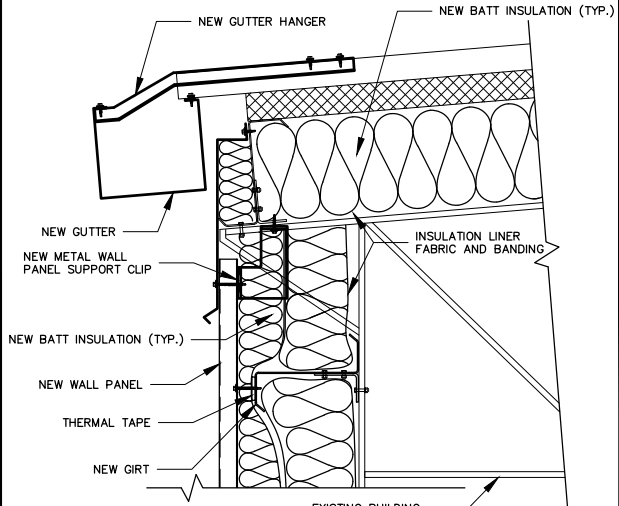
Legend: FF - Factory Finish
HM - Hollow Metal
ISG - Insulated Safety Glass
OH - Overhead
PT - Paint
RU - Roll-up
S - Single
SG - Safety Glass
STL - Steel

NOTE: SCHEDULES ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE FROM THE PLANS, SECTIONS, ISOMETRICS, DETAILS, AND SPECIFICATIONS, THE REQUIRED QUANTITY AND QUALITY OF EQUIPMENT AND MATERIALS TO COMPLETE THE PROJECT.

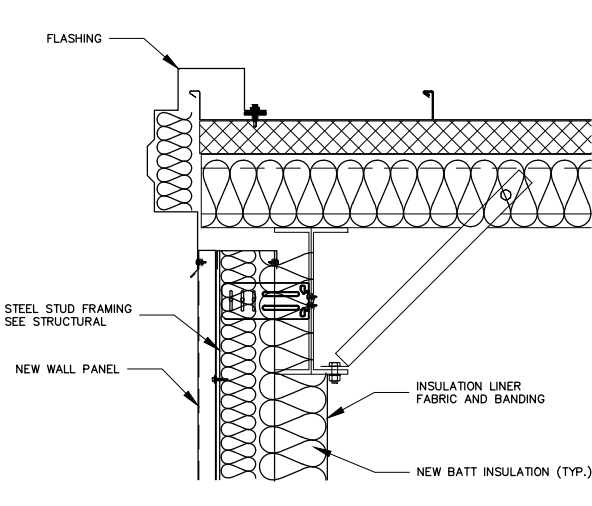
1.1 DOOR AND FRAME SCHEDULE
NOT TO SCALE



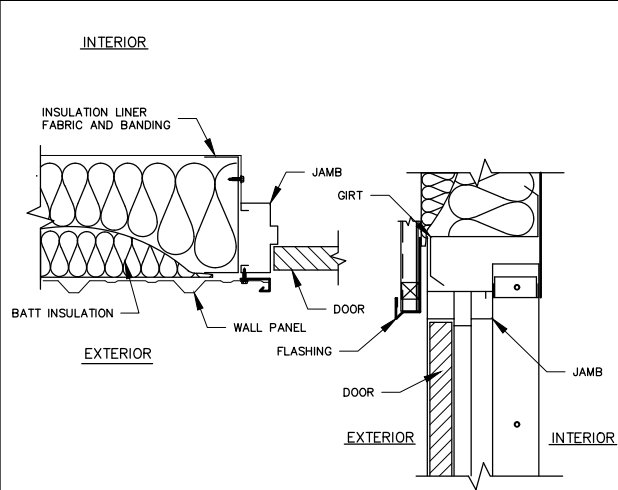
1.2 GUTTER LOW EAVE PURLIN W/O WALL (NEW)
NOT TO SCALE



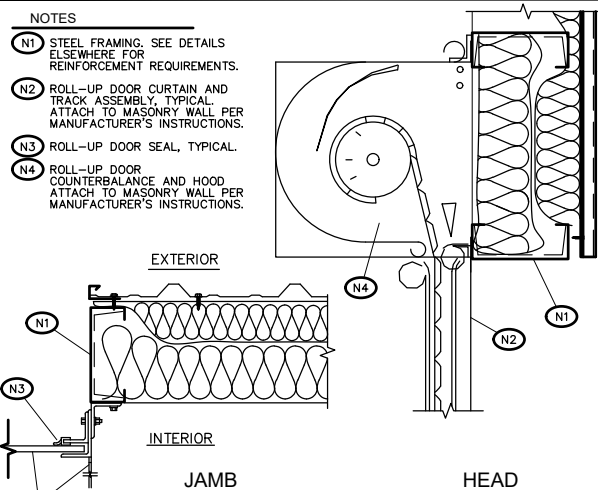
1.3 GUTTER LOW EAVE PURLIN W/ WALL (EXIST.)
NOT TO SCALE



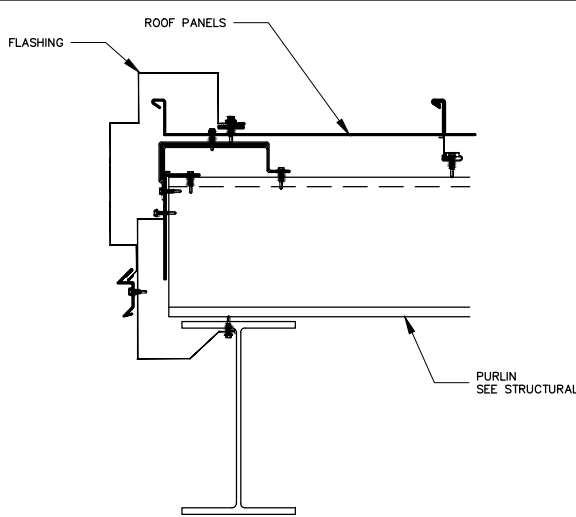
1.4 GABLE END STUD WALL (EXISTING ROOF)
NOT TO SCALE



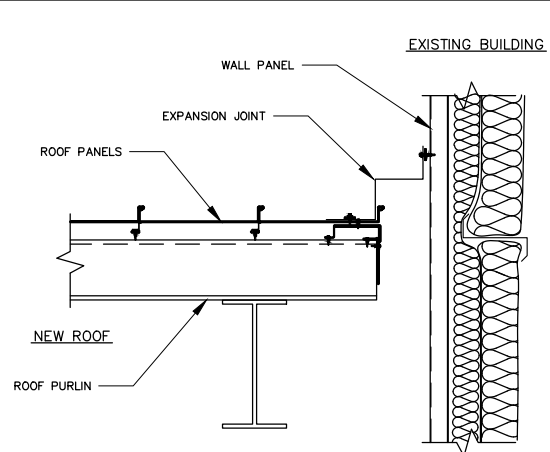
2.1 HOLLOW METAL DOOR HEAD & JAMB (PEMB)
NOT TO SCALE



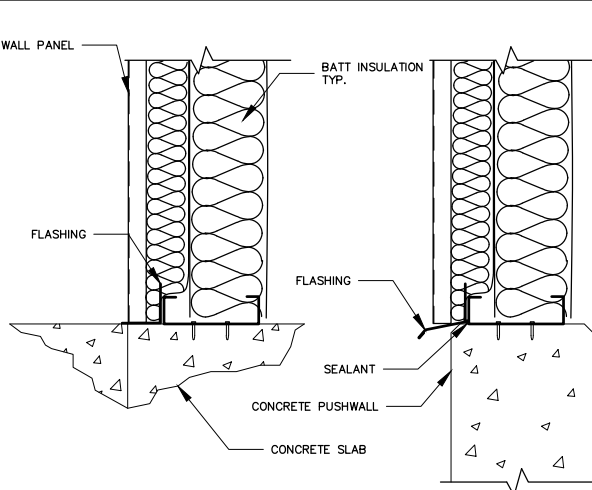
2.2 ROLL-UP DOOR HEAD & JAMB,
PEMB WALLS
NOT TO SCALE



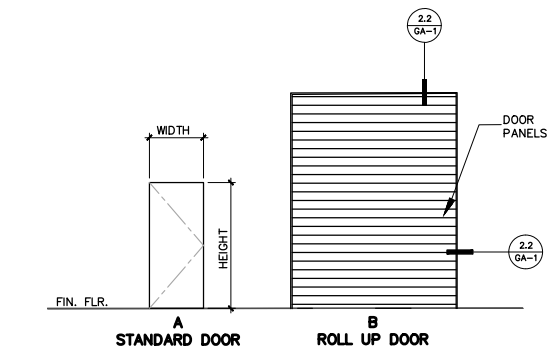
2.3 GABLE END (NEW ROOF)
NOT TO SCALE



2.4 EXPANSION JOINT AT ROOF TO WALL
NOT TO SCALE

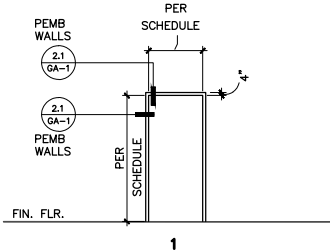


2.5 WALL TO SLAB AND PUSHWALL
NOT TO SCALE

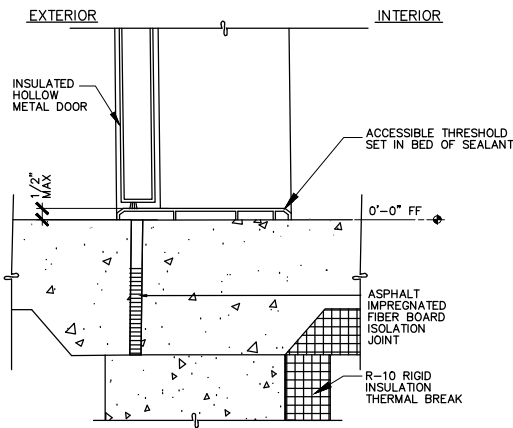


- GENERAL NOTES:
- ALL OUTSIDE EXTERIOR GLAZING BELOW 8'-0" TO BE INSULATED LAMINATED SAFETY GLASS.
 - PROVIDE 3/8" TEMPERED SAFETY GLASS PER IBC SECTION 2406 SAFETY GLAZING AND AS INDICATED.
 - ALL WINDOWS TO HAVE: .37 U-FACTOR .40 SHGC FACTOR.

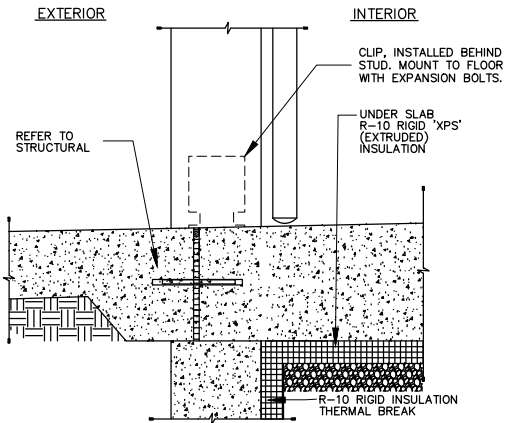
3.1 DOOR TYPES
NOT TO SCALE



3.2 FRAME TYPES
NOT TO SCALE



3.3 HOLLOW METAL DOOR SILL (PEMB)
NOT TO SCALE



3.4 ROLL-UP DOOR SILL
NOT TO SCALE



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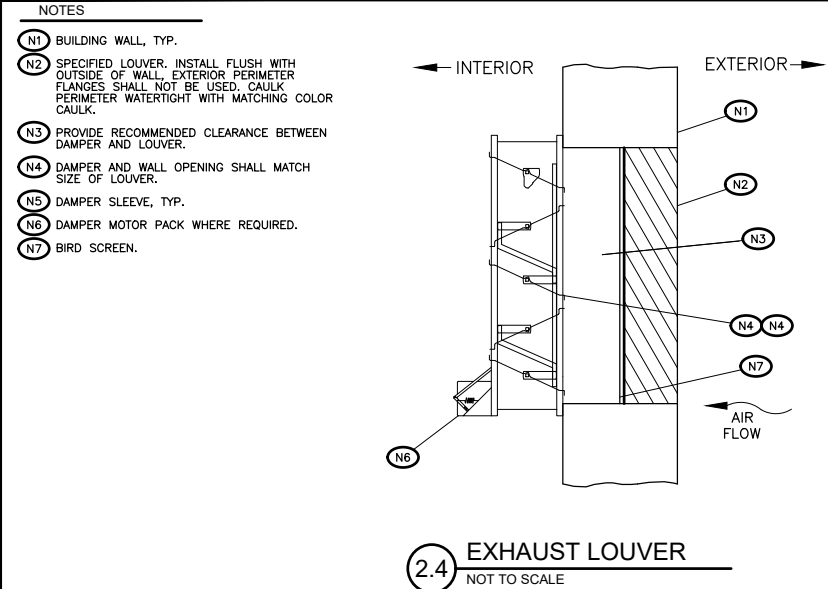
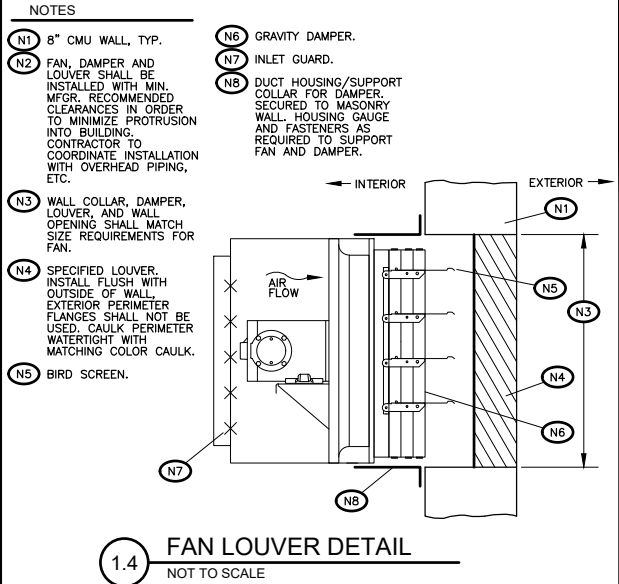
JOB NUMBER:	23166	DATE:	07/07/26
FILE NAMES:			
DRAWING:	Sheets-Details-Phase 1.dwg		
PLAN:	23166.dwg		
DESIGNED BY:	RJS		
ENTERED BY:	DAS		

CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
ARCHITECTURAL DETAILS

GA-1
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HVAC SCHEDULE										
DESIGNATION	MANUFACTURER	MODEL NO.	LOCATION	TYPE	SIZE/ CAPACITY	FAN SPEED	MOTOR SIZE/TYPE	ELECTRICAL V/PH	ACCESSORIES	NOTES
AC-01	MITSUBISHI ELECTRIC	PKA-AK24NL/ PUZ-AH24NL	DEWATERING BUILDING NEW ELECTRICAL ROOM, W WALL	HEAT PUMP	24,000 BtUh	—	—	208/230V, 1P	—	1,2
AC-02	MITSUBISHI ELECTRIC	PKA-AK24NL/ PUZ-AH24NL	DEWATERING BUILDING NEW ELECTRICAL ROOM, W WALL	HEAT PUMP	24,000 BtUh	—	—	208/230V, 1P	—	1,2
SL-01	GREENHECK	ESD-435	SLUDGE DEWATERING AREA, W WALL	SUPPLY LOUVER	24"W X 30"H/ 1,800 CFM	N/A	N/A	N/A	¾" MESH BIRDSCREEN. MODEL VCD-23 DAMPER WITH EXPLOSION PROOF MOTOR AND SLEEVE ASSEMBLY (9" MAX. LENGTH). INTERNAL ACTUATOR MOUNTING.	5
SL-02	GREENHECK	ESD-435	SLUDGE DEWATERING AREA, W WALL	SUPPLY LOUVER	24"W X 30"H/ 1,800 CFM	N/A	N/A	N/A	¾" MESH BIRDSCREEN. MODEL VCD-23 DAMPER WITH EXPLOSION PROOF MOTOR AND SLEEVE ASSEMBLY (9" MAX. LENGTH). INTERNAL ACTUATOR MOUNTING.	5
EL-01	GREENHECK	ESD-435	SLUDGE DEWATERING AREA, N WALL	EXHAUST LOUVER	24"W X 24"H	N/A	N/A	N/A	½" MESH BIRDSCREEN.	4,5
EL-02	GREENHECK	ESD-435	SLUDGE DEWATERING AREA, S WALL	EXHAUST LOUVER	24"W X 24"H	N/A	N/A	N/A	½" MESH BIRDSCREEN.	4,5
EL-03	GREENHECK	ESD-435	SLUDGE DEWATERING AREA, S WALL	EXHAUST LOUVER	24"W X 34"H	N/A	N/A	N/A	½" MESH BIRDSCREEN.	4,5
EF-01	GREENHECK	SE1-14-432-VG	SLUDGE DEWATERING AREA, N WALL	EXHAUST FAN	1,800 CFM @ 0.25 in. WC	1,579 RPM	1/4 HP	115V/1P	MODEL WD-110 GRAVITY DAMPER, GALVANIZED STEEL SHORT WALL HOUSING, SS FASTENERS.	
EF-02	GREENHECK	SE1-14-432-VG	SLUDGE DEWATERING AREA, S WALL	EXHAUST FAN	1,800 CFM @ 0.25 in. WC	1,579 RPM	1/4 HP	115V/1P	MODEL WD-110 GRAVITY DAMPER, GALVANIZED STEEL SHORT WALL HOUSING, SS FASTENERS.	
EF-03	GREENHECK	SQ-15-VG	EXISTING SOLIDS HANDLING, W WALL	IN-LINE FAN	2,700 CFM @ 0.28 in. WC	1,725 RPM	3/4 HP	115V/1P	MODEL WD-320 GRAVITY DAMPER, GALVANIZED STEEL SHORT WALL HOUSING, SS FASTENERS.	
UH-01	KING	KB2003-1-T-B1	SLUDGE DEWATERING AREA, N WALL	ELECTRIC HEAT	11,200 BtUh/ 3.3 kW	N/A	1/50 HP	208V/1P	INTERNAL THERMOSTAT, INTEGRAL POWER DISCONNECT, WALL MOUNTING BRACKET.	3
UH-02	KING	KB2003-1-T-B1	SLUDGE DEWATERING AREA, S WALL	ELECTRIC HEAT	11,200 BtUh/ 3.3 kW	N/A	1/50 HP	208V/1P	INTERNAL THERMOSTAT, INTEGRAL POWER DISCONNECT, WALL MOUNTING BRACKET.	3
UH-03	KING	KB2003-1-T-B1	SLUDGE DEWATERING AREA, E WALL	ELECTRIC HEAT	11,200 BtUh/ 3.3 kW	N/A	1/50 HP	208V/1P	INTERNAL THERMOSTAT, INTEGRAL POWER DISCONNECT, WALL MOUNTING BRACKET.	3
1. INSTALL THERMOSTAT AT LOCATION SHOWN ON THE PLANS. SEE ELECTRICAL DRAWINGS. INSTALLATION TO BE WASHINGTON STATE ENERGY CODE COMPLIANT. 2. THERMOSTAT SHALL CONTROL BOTH A/C UNITS AND PROVIDE AUTOMATIC LEAD/LAG CONTROL AND DUTY ROTATION. INSTALL THERMOSTAT AT LOCATION SHOWN ON PLANS. SEE ELECTRICAL DRAWINGS. 3. MOUNT HEATER AT 10'-0" ABOVE FINISH FLOOR, OR AT MANUFACTURER'S RECOMMENDED HEIGHT. 4. COORDINATE INSTALLATION WITH EXHAUST FAN. SEE DETAILS THIS SHEET. 5. INSTALL AT 11'-0" ABOVE FINISH FLOOR, OR MATCH EXISTING. NOTE: SCHEDULES ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE FROM PLANS, SECTIONS, DETAILS, AND SPECIFICATIONS, THE REQUIRED QUANTITY OF EQUIPMENT AND MATERIALS TO COMPLETE THE PROJECT.										

1.1 HVAC SCHEDULE



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REVISION	DATE

JOB NUMBER: 23166	DATE: 07/07/26
FILE NAMES: DRAWING: Sheets-Details- Phase 1.dwg 23166.dwg	
DESIGNED BY: ENTERED BY:	RJS DAS

CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
ARCHITECTURAL DETAILS

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SHEET
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GENERAL

The General Contractor shall verify all dimensions and site conditions before starting work. The Structural Engineer and HLA (hereafter referred to as "Design Team") shall be notified of any discrepancy. Use details marked "Typical" wherever applicable. Changes, omissions or substitutions are not permitted without written approval of the Design Team. Refer to specifications for further requirements. In the case of conflicts between plans and specifications, the more restrictive requirements shall apply. Any discrepancies on the Contract Documents should be brought to the attention of the Design Team prior to proceeding with the work.

All materials and workmanship shall conform to the 2021 edition of the International Building Code (IBC) and the 2016 edition of "Minimum Design Loads for Buildings and Other Structures" by the American Society of Civil Engineers. Use the latest edition of Referenced Standards as noted in Chapter 35 of the IBC.

The Contract structural drawings represent the finished structure. The Contractor is responsible for the means, methods and sequence of construction. The design, adequacy and safety of erection bracing, shoring, temporary supports, etc., is the sole responsibility of the Contractor, and has not been considered by the Structural Engineer. The Contractor is responsible for the stability of the structure prior to the completion of all shear walls, roof and floor diaphragms and finish materials. The Contractor shall provide the necessary bracing to provide stability to the structure prior to the installation of the permanent lateral force resisting system. Observation visits to the site by the Structural Engineer shall not include inspection of temporary bracing, shoring, etc.

The Contractor shall coordinate the size and locations of all openings in roofs, floors and walls. Openings shall not penetrate any structural elements such as beams, columns, walls, slabs, etc. unless noted on the drawings or approved by the Structural Engineer.

EXISTING CONSTRUCTION

Existing structural dimensions and member sizes are for reference only. The contractor shall field verify all dimensions, member sizes, and existing conditions prior to the commencement of new work and modifications to existing construction. Notify the Design Team of any discrepancies and unsound conditions found.

DEFERRED SUBMITTALS

Items designed by a Specialty Structural Engineer shall be submitted to the Design Team for review and shall bear the seal and signature of an engineer registered in the state having jurisdiction. Submittals shall include calculations, design drawings, product data and shop drawings. Design shall be based on information provided on the drawings for gravity, wind and seismic forces unless noted otherwise.

The Contractor shall coordinate the seismic restraint of mechanical, plumbing and electrical equipment and the associated piping to the structure. Connections to the structure shall conform to SMACNA standards, be detailed on the contract drawings or be designed by an engineer registered in the state having jurisdiction and submitted for Design Team review prior to fabrication.

SHOP DRAWINGS

Shop drawings are to be checked and approved by the General Contractor prior to submitting for Design Team review. General Contractor is responsible for verification and coordination of dimensions and details for each Subcontractor. Quantities and dimensions are not reviewed by the Design Team and therefore must be verified by the General Contractor. No fabrication shall proceed until shop drawings have been approved. Review of the Specialty Structural Engineer's design submittals and shop drawings is for general compliance with design criteria and compatibility with the design of the primary structure and does not relieve the Specialty Structural Engineer of responsibility for that design.

DESIGN LOADS

Building Risk Category ----- III

Snow Loading

Ground Snow Load, P_g ----- 30 PSF
Flat Roof Snow Load, P_f ----- 28 PSF
Minimum Uniform Roof Snow ----- 28 PSF
Snow Exposure Factor, C_e ----- 1.0
Thermal factor, C_t ----- 1.2
Snow Load Importance Factor, I_s ----- 1.1
Roof Design Load Cases:

- 1) P_f + Drifting/Sliding/Unbalanced
2) Minimum Uniform Snow

Floor Loading

Centrifuge Platform Live ----- 40 PSF (300# concentrated)
Biosolids Storage Live Load ----- 250 PSF (16K wheel load)
See plans for special mechanical unit loading.

Additional Roof Loading

Solar Readiness (Collateral Dead Load) --- 5 PSF (Entire roof area, unless noted otherwise)

Wind Loading

Basic Wind Speed (3-second gust)----- 110 MPH
Wind Exposure Category ----- C
Enclosure Classification ----- Partially Open (same wind pressure as Enclosed Building)

Seismic Loading - Equivalent Lateral Force Procedure

Seismic Importance Factor, I_e ----- 1.25
Spectral Response Accelerations ----- S_s = 0.477 S₁ = 0.198
Site Class ----- C
Seismic Design Category ----- C
Site Coefficient F_a ----- 1.3
Site Coefficient F_v ----- 1.5
Spectral Response Coefficients ----- S_{Ds} = 0.413 S_{D1} = 0.198
Basic Seismic Force-Resisting System --- Structural steel systems not specifically detailed for seismic resistance,
Response Modification Factor, R ----- 3.0
Overstrength Factor, Ω_o ----- 3.0
Deflection Amplification Factor C_d ----- 3.0
Seismic Response Coefficient, C_s ----- 0.172 (Ultimate)

FOUNDATION

Based on the geotechnical engineering report # 225-1849, Addendum No. 1 - Micropile Design Criteria by GN Northern, dated April/14/2026, design allowable soil bearing pressure = 800 PSF. Site preparation, grading, backfilling, etc. shall be as recommended by the geotechnical report. There shall be 95% compaction (ASTM D1557 Modified Proctor Density) of all backfill soil under slabs on grade.

MICROPILES

Micropile design and installation shall be provided by an approved Specialty Contractor. See S9-1 for design capacity requirements. Completed micropile assemblies shall be cut off horizontal to provide a uniform bearing surface at the elevations indicated on the drawings. Micropile casings, central reinforcing, centralizers, and grout shall be designed and detailed by the Specialty Contractor in accordance with the geotechnical recommendations, and shall be approved by the Design Team and Geotechnical Engineer prior to mobilization.

CAST-IN-PLACE CONCRETE

Concrete mix proportions in accordance with ACI 301 to meet or exceed the requirements as listed below:

	Minimum 28 Day Compressive Strength	Total Air Content(*) Range	Maximum Aggregate Size	Maximum Water/Cement Ratio
All structural conc, UNO	3000 PSI	0%-3.5%	3/4"	
Interior infill slab on grade	4000 PSI	0%-3.5%	3/4"	.50(**)
Pile Cap/slab on grade	5000 PSI	4.5%-7.0%	3/4"	.45

(*) Total Air is the sum of entrapped air and entrained air if added.

(**) Use a maximum water/cement ratio of 0.45 for interior slabs on grade that could be subject to freeze/thaw cycling while saturated during the construction period.

Maximum Slump: Comply with typical slump ranges specified in the latest edition of ACI 211.1.

Larger slumps may be allowed through the use of a super plasticizer.

Construction to be in accordance with the latest edition of ACI 318, "Part 6: Materials & Durability", "Part 8:

Reinforcement" and "Part 9: Construction".

Location of construction or pour joints for walls, beams, columns, and structural slabs must be approved by the Structural Engineer if different from that shown on plans.

CONCRETE SLABS ON GRADE

The General Contractor shall control and monitor construction procedures and conditions as required to provide a high quality finished slab with minimal cracks, curling, and surface defects. Procedures and conditions under the control of the General Contractor include, but are not limited to: provisions for ambient weather conditions, curing methods selected, rate of placement, joint arrangement and installation, temperature control, subgrade preparation, and reinforcing placement (where indicated).

Placement on Vapor Barrier: Slabs poured directly on vapor barrier are intended to facilitate vapor-emission rates frequently required for floor covering installation. Concrete cure time may be longer than for slabs not in direct contact with vapor barrier; General Contractor to coordinate curing and floor covering installation requirements as required.

Slab Finishes: Concrete slabs on grade shall be provided with finish techniques in accordance with the floor classification table of ACI 302.1R. Intended use for interior slabs shall be categorized as either Class 2, Class 4, or Class 5, unless noted otherwise.

Slab Joints: Except where specifically indicated, joint spacing and arrangement is to be determined by the General Contractor as part of slab installation procedure. A proposed joint layout plan shall be submitted for architect and engineer approval prior to slab pour. In general, apply the following parameters:

Maximum joint spacing, subject to factors above:
Typical, UNO: 36 times slab thickness
Exposed & polished slabs: 24 times slab thickness
Maximum aspect ratio between joints: 1.5 to 1
Avoid creating unjointed re-entrant corners, if possible

CONTROLLED DENSITY FILL

Control Density Fill (CDF) shall be a mixture of Portland cement, fly ash, aggregates, water and admixtures proportioned to provide a non-segregating, self-consolidating, free-flowing and excavatable material which will result in a hardened, dense, non-settling fill.

Portland Cement: ASTM C150

Fly Ash: Class C or F

Aggregates: ASTM C33 with 3/8" maximum size.

Control Density Fill shall be Class B, normal flowability with a 6-8" slump and a maximum compressive strength of 300 psi.

REINFORCING STEEL

Deformed Bars: ASTM A615, Grade 60.

Weldable Deformed Bars: ASTM A706, Grade 60 for #4 and larger.

Securely tie in place with double annealed 16 gauge iron wire or approved clips. Provide chairs, bolsters, etc. to place reinforcement in the proper positions as indicated on the drawings.

Unless noted otherwise on these drawings, provide clear cover at reinforcing bars as follows:

Concrete cast against soil = 3".
Formed concrete against soil = 2".
Walls, columns and beams exposed to weather = 2".
Walls, columns and beams not exposed to weather = 1 1/2".
Slab on grade = 2".

Detailing of concrete reinforcement bars and accessories shall conform to the recommendations of ACI 315

"Details and Detailing of Concrete Reinforcement" and ACI SP-66 "Detailing Manual". Placing of reinforcement shall conform to ACI 315R "Manual of Engineering and Placing Drawings for Reinforced Concrete Structures" and CRSI "Manual of Standard Practice". Reinforcement bars shall not be tack welded, heated, or cut unless specifically detailed on the drawings or as approved by the Structural Engineer. The welding of reinforcing steel, metal inserts and connections in reinforced concrete shall conform to AWS D1.4 "Structural Welding Code - Reinforcing Steel" by AWS/WABO certified welders using E9018 or approved electrodes. Submit mill test report of material properties to determine carbon equivalent and minimum preheat temperatures.

ASTM A706 reinforcement may be substituted for A615 reinforcement.

Submit shop drawings of reinforcing steel for review by the Design Team prior to fabrication.

All wall reinforcement shop drawings shall be shown in elevation.

STRUCTURAL AND MISCELLANEOUS STEEL

Angles (L), Plates and Bars: ASTM A572, Grade 50, F_y = 50 KSI

Wide Flange (W), WT Shapes and Channels (C): ASTM A992, F_y = 50 KSI

Pipe: ASTM A53, Grade B, Type E or S, F_y = 35 KSI minimum.

Square & Rectangular HSS: ASTM A500, Grade C, F_y = 50 KSI

Round HSS: ASTM A500, Grade C, F_y = 50 KSI

Floor Plate: ASTM A786 Commercial Grade

Bar Grating: ASTM A1011 rectangular bearing bars and ASTM A510 round cross bars, provide depth and type as indicated on drawings

Bolts: ASTM A307 machine bolts (MB).

High Strength Bolts: ASTM A325 high strength bolts (HSB), Type 1 with ASTM F436 hardened steel washers and ASTM A563, Grade C (Grade DH for galvanized) heavy hex nuts.

High strength bolts shall be installed to a "snug tight" condition where all plies of the joint are in firm contact for typical beam end connections, column cap plate connections, etc. unless noted otherwise.

Anchor Rods (AR): Headed or threaded rod, ASTM F1554, Grade 36 with A563, Grade A (Grade DH for galvanized) heavy hex nuts and ASTM A572, Grade 50 plate washers.

Deformed bar anchors (DBA): ASTM A1064, F_y = 70 KSI, end welded per manufacturer's recommendations.

Threaded Anchor Stud (TAS): ASTM A29/A108, F_y = 49 KSI, end welded per manufacturer's recommendations.

Welding electrodes or wires: AWS A5.1 or A5.5, E70XX; AWS A5.18, E70S-X; AWS A5.20, E7XT-X.

Non-shrink Grout: "Masterflow 928" as manufactured by BASF Building Systems or approved equal with a minimum compressive strength of 5000 PSI.

Erection and Fabrication: In accordance with AISC 360 "Specification for Structural Steel Buildings", AISC 341 "Seismic Provisions for Structural Steel Buildings", and AISC 303 "Code of Standard Practice for Steel Buildings and Bridges". Welding shall conform to AWS D1.1 "Standard Welding Code - Steel". All welding shall be performed by AWS/WABO Certified Welders whose certification meets "AWS Standards" in an approved fabricator shop or where Special Inspection is provided. All columns and beams to be from unspliced lengths unless noted otherwise on the drawings. All members to have "Standard" size holes unless noted as short-slotted (SSL) or long-slotted (LSL). Enlargement of holes by burning is not permitted. Submit shop drawings showing sizes, dimensions and required connection details for review by the Design Team prior to fabrication.

LIGHTGAGE STRUCTURAL STEEL STUDS AND JOISTS

Studs and track, 18 (43 mils) & 20 (33 mils) gage bridging, and accessories:

F_y = 33 KSI conforming to ASTM A653 SS (Galvanized).

Studs and track, 14 (68 mils) & 16 (54 mils) gage:

F_y = 50 KSI conforming to ASTM A653 SS Class 1 or 3 (Galvanized).

Unpunched joists, 18 gage (43 mils): F_y = 33 KSI conforming to ASTM A653 SS (Galvanized).

Unpunched joists, 12 (97 mils), 14 (68 mils), and 16 (54 mils) gage:

F_y = 50 KSI conforming to ASTM A653 SS Class 1 or 3.

All structural properties computed in accordance with latest edition of AISI S100 "North American Specification for the Design of Cold Formed Steel Structural Members". Designations on the drawings are Steel Stud Manufacturer's Association. Approved equivalent products may be permitted upon written approval of the Design Team. Install members in accordance with industry standards. Unless otherwise noted on these drawings, stud wall track to be of the same material and gage as studs. Provide horizontal bridging at 5'-0" o.c. maximum at non-bearing walls and 3'-4" o.c. maximum at bearing walls. Bearing walls to be erected with stud ends seated against track web top and bottom with a maximum of 1/16" clearance. Submit shop drawings showing stud and joist layout, dimensions, sizes, bridging and required connection details for review by the Design Team.

All welding to be performed by AWS/WABO Certified Welders in accordance with AWS D1.3 "Structural Welding Code - Sheet Steel".

STEEL FINISHES

Hot-Dip Galvanized Finish: HDG finish is only required where specified in the contract documents. All completed fabrications, including fasteners, shall receive a galvanized finish in accordance with ASTM A123. Galvanizing vent holes shall only be placed at locations designated in the contract documents or in other locations approved by the Project Engineer. After completion of galvanizing, re-assemble all fabrications to check for distortion; straighten and re-align as required. Grind and remove galvanizing at field weld locations and repair with hot stick galvanizing rod. Plug all exposed-to-view galvanizing vent holes with aluminum drive-in plugs as manufactured by Steel Supply Co, Inc or approved equal.

ALUMINUM

Structural Aluminum shall be grade 6061-T6 unless noted otherwise.

Construction shall be in compliance with the "Specifications for Aluminum Structures" by the Aluminum Association. Aluminum welding shall be in accordance with AWS D1.2 "Structural Welding Code - Aluminum".

Welding electrodes shall conform to AWS A5.3 or A5.10.

All bolted connections shall have AISI Type 304 stainless steel bolts with washers.

All aluminum in contact with concrete or other metals shall receive an isolation coating in accordance with the specifications.

POST-INSTALLED ANCHORS

All post-installed anchors shall have current ICC ESR Reports indicating code-approved installation requirements. Contractor shall comply with all requirements of the ESR report; including but not limited to base material and adhesive allowable installation temperature ranges, base material strength, and waiting/curing period of anchor and base material prior to loading. For new construction, coordinate rebar layout with post-installed anchor layout such that rebar is not damaged. Use scanning equipment or other means to locate and avoid cutting or damaging reinforcing bars as required; written approval from the Structural Engineer is required prior to cutting or damaging reinforcing bars. Substitution of post-installed anchors for anchor bolts, anchor rods, or rebar dowels is not allowed without written approval of the Structural Engineer. Special Inspection for Contractor-requested substitutions (if approved) shall be provided at no additional cost to the Owner. Adhesive anchors and dowels oriented horizontally, vertically, or upward inclined in concrete and supporting sustained tension loads shall be installed by an ACI/CRSI Certified Installer, or equivalent. Special Inspection is required for all post-installed anchors.

Adhesive Anchors (AA) in Concrete: ASTM F1554, Grade 36 threaded rod unless noted otherwise with Simpson SET-3G or AT-3G adhesive, Hilti "HAS-E" threaded rod or ASTM F1554, Grade 36 threaded rod unless noted otherwise with HIT-HY 200 or HIT-RE 500 V3 adhesive, or approved equal. Concrete to have aged a minimum of 21 days and attained specified 28-day compressive strength prior to installation.

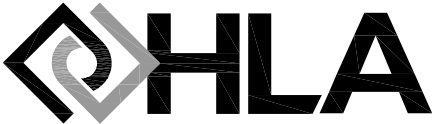
Adhesive Dowels (AD) In Concrete: ASTM A615 deformed bar with Simpson SET-3G or AT-3G adhesive, Hilti HIT-HY 200 or HIT-RE 500-V3 adhesive, or approved equal. Concrete to have aged a minimum of 21 days and attained specified 28-day compressive strength prior to installation.

Screw-In Anchors (SA) in Concrete: Simpson Titen HD, Hilti KWIK HUS-EZ, or approved equal.

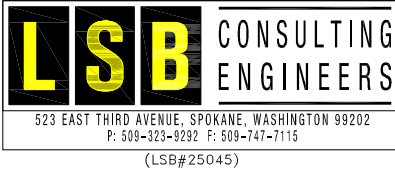
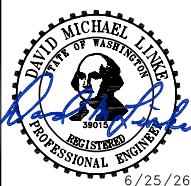
Powder Actuated Fasteners (PAF) into Concrete: Hilti X-U (.157" dia) fasteners with a minimum embedment of ¾" (1" length) into concrete of a minimum 3" thickness. Do not install PAF fasteners until concrete has attained specified 28 day design strength.

Powder Actuated Fasteners (PAF) into Steel:

Hilti X-U 15 (.145" dia) fasteners into steel of a minimum ¾" thickness.



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		JOB NUMBER: 23166	DATE: 06/25/26
		FILE NAMES:	
		DRAWING: PLAN:	
		DESIGNED BY: ENTERED BY:	BTS MAC
REVISION	DATE		

CITY OF SELAH
PHASE 2- WASTEWATER TREATMENT
PLAN IMPROVEMENTS

GENERAL STRUCTURAL NOTES (GSN) (Continued)

PREFABRICATED METAL BUILDING SYSTEMS

Design Requirements:

See Design Loads section of the General Structural Notes.

Design shall be governed solely by the adopted edition of the IBC in the state having jurisdiction.

All design shall be completed by a professional engineer registered in the state having jurisdiction.

Building Configuration: Provide structural members as required by design and consistent with locations and types shown on these drawings. Modifications of building configuration are not permitted except as approved by the Design Team.

Columns: Provide sizes and depths as designated on the drawings. Columns shall be fabricated from hot-rolled AISC sections or welded hot-rolled plates; columns fabricated from cold-rolled sections are not allowed.

Minimum column flange thickness shall be ¾"; minimum column web thickness shall be ¾".

Foundation design assumes that all column base connections are pinned, unless noted otherwise.

Beams: Provide sizes, depths and configurations as designated on the drawings. Beams shall be fabricated from hot-rolled sections or welded hot-rolled plates; beams fabricated from cold-rolled sections are not allowed.

Minimum beam flange thickness shall be ¾"; minimum beam web thickness shall be ¾".

Lateral Bracing: Wall and roof bracing shall be fabricated from smooth steel rods with threaded ends; cable bracing is not allowed.

Deflection Limits

Metal Roofing	L/150 Total Load & L/180 Snow Load
Purlins W/O ceiling	L/120 Total Load & L/180 Snow Load
Purlins W/ nonplaster ceiling	L/180 Total Load & L/240 Snow Load
Purlins W/ plaster ceiling	L/240 Total Load & L/360 Snow Load
Girts W/ flexible finish	L/120 Wind Load
Girts W/ brittle finish	L/240 Wind Load
Roof Rafter Beams & Rigid Frames	L/180 Total Load & L/240 Snow Load
Wind & Seismic Drift - Frames	H/100
Wind & Seismic Drift-Longitudinal	H/100

Manufacturer Qualifications: IAS (International Accreditation Service) Certificate of Accreditation.

Roof curbs for mechanical equipment is to be supplied and installed by the Metal Building Contractor per dimensions supplied by the Mechanical Contractor.

Submittals: Submit design calculations and framing/erection plans for Design Team review prior to fabrication. As a minimum, the submittal shall include foundation reactions, anchor rod placement and sizes, column bearing area requirements, member sizes and spacing, and all connection details.

QUALITY ASSURANCE and SPECIAL INSPECTIONS

A qualified special inspector(s) shall be engaged by the Owner or Owner's representative to conduct continuous and periodic inspections as tabulated on this sheet. Construction activity shall be coordinated with required inspections and testing requirements by the Contractor. Construction deficiencies identified by the special inspection process shall be remedied by the Contractor at no cost to the Owner.

SPECIAL INSPECTION, TESTING AND STRUCTURAL OBSERVATION

GENERAL

The Owner or the Owner's agent shall employ an approved agency to perform inspections and testing during construction in accordance with IBC sections 1704, 1705 and 1707 and the Statement of Special Inspections below. These inspections are in addition to the inspections required per IBC section 110.

Special Inspectors shall be qualified persons with experience in the types of construction being inspected.

Special Inspectors shall provide written documentation of WABO or equivalent certification acceptable to the Agency Having Jurisdiction.

Off-site work and fabrications do not require special inspection if the fabricator is registered and approved to perform such work by the Agency Having Jurisdiction. Approval is based on the fabricator's written procedures and quality control programs.

CONTRACTOR RESPONSIBILITIES

The Contractor shall provide reasonable access to all work requiring special inspection and notify the Inspection Company in sufficient time to schedule such inspections. A copy of all Special Inspection reports shall be maintained at the job site and made available upon request to the Authority Having Jurisdiction and the project Engineer of Record.

STATEMENT OF SPECIAL INSPECTION

Special inspection to be provided per IBC 1705 for materials, systems, components and work performed are as follows:

Freq = Frequency

Req = Required

C = Continuous Special Inspection

P = Periodic Special Inspection

X = Required

Blank = Not Required

SOILS AND FOUNDATION

Provide Special Inspection for the following to determine compliance with the Geotechnical Report and the Construction Documents:

SOILS AND FOUNDATION				
	System or Material	Code Reference	Freq	Req
1.	Verify Footing Bearing Capacity	IBC 1705.6	P	X
2.	Verify Excavations are to proper depth and have reached proper material	IBC 1705.6	P	X
3.	Classification and Testing of Compacted Fill Materials	IBC 1705.6	P	X
4.	Prior to the placement of Compacted Fill, observe subgrade and verify the site has been prepared properly	IBC 1705.6	P	X
5.	Verify use of proper materials, densities and lift thicknesses during placement and compaction of fill	IBC 1705.6	C	X

DRIVEN, HELICAL AND CAST-IN-PLACE PILING				
	System or Material	Code Reference	Freq	Req
1.	Verify pile element materials, sizes and lengths comply with requirements	IBC 1705.7	C	X
2.	Determine capacities of test elements and conduct additional load tests if required	IBC 1705.7	C	X
3.	Observe installation operations and maintain complete and accurate records for each pile	IBC 1705.7, IBC 1705.8 IBC 1705.9	C	X
4.	Driven Piles: Verify placement locations and plumbness, confirm hammer type and size, record number of blows per foot of penetration, determine required penetration to achieve design capacity, record tip and butt elevations and document any pile damage	IBC 1705.7	C	
5.	Cast-in-Place Piles: Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable) and adequate end-bearing strata capacity. Record concrete or grout volumes	IBC 1705.8	C	X
6.	Helical Piles: Record installation equipment used, pile dimensions, tip elevations, final depth and final installation torque	IBC 1705.9	C	

CONCRETE				
	System or Material	Code Reference	Freq	Req
1.	Inspect reinforcing steel including prestressing tendons and verify placement	ACI 318 Chap 20, 25.2, 25.3, 26.6.1-26.6.3, IBC 1908.1	P	X
2.	Cast-in-Place anchors in concrete	ACI 318 26.13.3.3	P	X
3.	Verify use of required mix designs	ACI 318 19, 26.4.3 & 26.4.4 IBC 1904.1, 1904.2 & 1908.1	P	X
4.	Sampling of fresh concrete for strength tests, slump and air content tests and to determine temperature of the concrete	ACI 318 26.5 & 26.12 ASTM C172, C31 & C39 IBC 1908.1	C	X
5.	Inspect concrete and shotcrete placement for proper application techniques	ACI 318 26.5 & 26.13.3.2(a) IBC 1908.1	C	X
6.	Verify maintenance of specified curing temperature and techniques	ACI 318 26.5.3 -26.5.5 IBC 1908.1	P	X
7.	Inspect prestressed concrete for application of prestressing forces & grouting of bonded tendons	ACI 318 26.10 & 26.13.3.2	C	
8.	Inspect erection of precast concrete members	ACI 318 26.9 & 26.13.3.3	P	
9.	Verification of in-situ concrete strength prior to stressing tendons in post-tensioned concrete	ACI 318 26.11.2	P	
10.	Verification of in-situ concrete strength prior to removal of forms and shores from elevated beams and slabs	ACI 318 26.11.2	P	X
11.	Inspect formwork for shape, location and dimensions of the member being formed	ACI 318 26.11.1.2(b)	P	X
12.	Placement of Reinforcing steel & Concrete in Special Moment Frames	ACI 318 18.2.5, 18.2.6, 26.13	C	
13.	Placement of Reinforcing steel & Concrete in Special Shear Walls	ACI 318 18.2.5, 18.2.6, 26.13	C	
14.	Concrete Placement for composite slabs	AISC 341 J9	C	
15.	Stressing of Tendons in Post-tensioned concrete	ACI 318 26.10.2 & 26.13.3.2	C	
16.	Welding Reinforcing Steel			
	a. Verification of Weldability if other than ASTM A706	ACI 318 26.6.4, AWS D1.4	P	X
	b. Inspect single pass fillet welds, maximum 5/16"	ACI 318 26.6.4, AWS D1.4	P	X
	c. Inspect all other welds	ACI 318 26.6.4, AWS D1.4	C	X
17.	Post-Installed Anchors in Hardened Concrete			
	a. Adhesive anchors installed horizontally or upwardly inclined and resisting sustained tension loads	ACI 318 26.13.3.2, ICC Report	C	X
	b. Mechanical anchors and all other adhesive anchors	ACI 318 26.13.1.5, 26.13.1.6, 26.13.2.5 & ICC Report	P	X

STRUCTURAL STEEL				
	System or Material	Code Reference	Freq	Req
1.	Proprietary Moment Resisting Frame Connections	IBC 1705.1.1 & 2204	P	X
2.	Material Verification of Reinforcing Steel for Welding	ACI 318 26.6.1.2 & AWS D1.4	P	X
3.	Fabrication			
a.	Fabrication shop compliance with IBC 1704.2.5 including completeness and adequacy of quality control procedures unless the fabricator meets the approval requirements of IBC1704.2.5.1	AISC 360 Chapter M	P	X
b.	Fabrication of Structural Elements	IBC 1704.2.5, AISC 360 Chapter M	P	X
c.	Material Verification of Structural Steel	IBC 1705.2.1, AISC 360 A3.1a	P	X
d.	Material Verification of Cold Formed Steel Deck	IBC 1705.2.2, SDI QA/QC 2017	P	X
e.	Material Verification of High Strength Bolts, Nuts and Washers	AISC 360 A3.3	P	X
f.	Material Verification of Anchor Rods and Threaded Rods	AISC 360 A3.4	P	X
4.	Welding			
a.	Welding Procedure Specification and Consumables	AISC 360 A3.5 & N.5.4	P	X
b.	Welder Qualifications	AISC 360 N.5.4	P	X
c.	Single Pass Fillet Welds 5/16" and smaller	AISC 360 N.5.4, AWS D1.1 Section 6	P	X
d.	Groove welds including joint preparation, dimensions, backing, etc.	AISC 360 N.5.4	P	X
e.	Multipass Fillet Welds and Single Pass Fillet Welds greater than 5/16", Plug and Slot Welds	AISC 360 N.5.4, AWS D1.1 Section 6	C	X
f.	Complete and Partial Penetration Groove Welds	AISC 360 N.5.4, AWS D1.1 Section 6	C	X
g.	Welding of Stair and Railing Systems	AWS D1.1 Section 6	P	X
5.	High-Strength Bolting			
a.	Pretensioned High Strength Bolts using direct tension indicator washers or twist-off heads	AISC 360 M2.5 & N5.6	P	X
b.	Pretensioned High Strength Bolts using calibrated wrench method or turn-of-nut method without match marking	AISC 360 Table N5.6-2	C	X
6.	Composite Construction			
a.	Installation of Composite Slab Decking	ICC Evaluation Report, SDI QA/QC 2017, IBC 1705.1.1	P	
b.	Welding of Floor and Roof Decking	AWS D1.3	P	
c.	Welding of Reinforcing Steel	ACI 318 26.6.4 & AWS D1.4	P	
d.	Placement & Installation of Headed Studs with automatic timed stud welding machine	AWS D1.1 Section 7, IBC 1705.2	P	
e.	Placement & Installation of Headed Studs with hand welding	AWS D1.1 Section 7, IBC 1705.2	C	

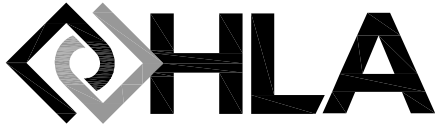
TESTING FOR SEISMIC RESISTANCE			
	System or Material	Code Reference	Req
1.	Structural steel in the seismic force resisting system of buildings and structures assigned to SDC B, C, D, E or F (not required if R=3 system)	IBC 1705.14.1.1	X
2.	Structural steel elements including struts, collectors and chords in the seismic force resisting system of buildings and structures assigned to SDC B, C, D, E or F (not required if R=3 system)	IBC 1705.14.1.2	X
3.	Structural Steel		
a.	Provide MT testing of the column k-area of the web where welding of doubler plates, continuity plates or stiffeners has been performed.	IBC 1705.14.1 AISC 341 Table J6.3	X
b.	Provide UT testing on 100% CJP groove welds in materials 5/16" and greater (For Ordinary Moment Frames, only the demand critical welds need to be tested)	IBC 1705.14.1 AISC 341 J6.2a	X
c.	Provide MT testing on 25% of all beam-to-column CJP groove welds in materials 5/16" and greater (For Ordinary Moment Frames, only the demand critical welds need to be tested)	IBC 1705.14.1 AISC 341 J6.2a	X
d.	Provide UT testing of base metal thicker than 1 ½" loaded in tension in tee and corner joint where the connected material is thicker than ¾"	IBC 1705.14.1 AISC 341 J6.2c	X
e.	Provide MT testing of thermally cut surfaces of beam copes and access holes in welded splices and connection when the flange thickness exceeds 1 ½" for rolled shapes or when the web thickness exceeds 1 ½" for built-up shapes	IBC 1705.14.1 AISC 341 J6.2d	X
f.	Provide MT testing of any weld and adjacent area of the reduced beam section (RBS) cut surface that has been repaired by welding or on the base metal of the RBS cut surface if a sharp notch has been removed by grinding	IBC 1705.14.1 AISC 341 J6.2e	X
g.	Provide MT testing at the end of welds where weld tabs have been removed	IBC 1705.14.1 AISC 341 J6.2f	X
4.	High Strength Bolting		
a.	Document all accepted and rejected connections of the seismic resisting system	IBC 1705.14.1 AISC 341 J7	X

ABBREVIATIONS

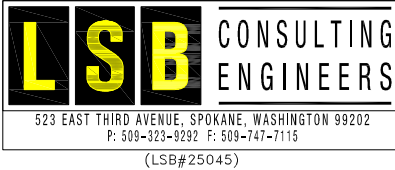
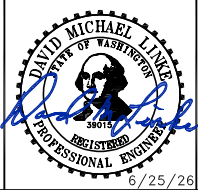
AA	ADHESIVE ANCHOR	L OR L	ANGLE
AB	ANCHOR BOLT	LBS	POUNDS
AD	ADHESIVE DOWEL	LL	LIVE LOAD
ADDL	ADDITIONAL	LLBB	LONG LEGS BACK TO BACK
AFF	ABOVE FINISH FLOOR	LLH	LONG LEG HORIZONTAL
ALT	ALTERNATE	LLV	LONG LEG VERTICAL
&	AND	LNTL	UNTEL
APPROX	APPROXIMATE	LONG	LONGITUDINAL
ARCH	ARCHITECT	LSL	LAMINATED STRAND LUMBER
ARCH-L	ARCHITECTURAL	LVL	LAMINATED VENEER LUMBER
Ø	AT	MAS	MASONRY
BB	BEARING BAR	MAX	MAXIMUM
B.O.	BOTTOM OF	MB	MACHINE BOLT
BOT	BOTTOM	MBS	METAL BUILDING SUPPLIER
BLDG	BUILDING	MECH	MECHANICAL
BLKG	BLOCKING	MEZZ	MEZZANINE
BM	BEAM	MFR	MANUFACTURER
BO	BOTTOM OF	MIN	MINIMUM
BRG	BEARING	MISC	MISCELLANEOUS
BSMT	BASEMENT	ML	MICROLLAM
BTWN	BETWEEN	MO	MASONRY OPENING
		MP	MICROPILE
		MTL	METAL
C	CHANNEL		
CB	CARRIAGE BOLT		
CDP	CONTROLLED DENSITY FILL	# OR NO.	NUMBER
CL OR C	CENTERLINE	NC	NOT IN CONTRACT
CLG	CEILING	NOM	NOMINAL
C-C	CENTER TO CENTER	NS	NEAR SIDE
CF	CUBIC FEET	NTS	NOT TO SCALE
CIP	CAST-IN-PLACE		
CJ	CONTROL JOINT	OC	ON CENTER
CL	CLEAR	OD	OUTSIDE DIAMETER
CMU	CONCRETE MASONRY UNIT	OF	OUTSIDE FACE
CNTRD	CENTERED	O/H	OVER-HEAD
COL	COLUMN	O-O	OUT TO OUT
CONC	CONCRETE	OPNG	OPENING
CONN	CONNECTION	OPP	OPPOSITE
CONSTR	CONSTRUCTION		
CONT	CONTINUOUS	PAF	POWDER ACTUATED FASTENER
CONTR	CONTRACTOR	PC	PRECAST
CTSK	COUNTERSINK	PL OR R	PLATE
CTR	CENTER	PL	POUNDS PER LINEAL FT
CY	CUBIC YARD	PLF	POUNDS PER CUBIC FT
		PLYWD	PLYWOOD
DBA	DEFORMED BAR ANCHOR	PLCS	PLACES
DBL	DOUBLE	PSF	POUNDS PER SQ FT
DEG	DEGREE	PSI	POUNDS PER SQ IN
DIAG	DIAGONAL	PSL	PARALLAM
DIA	DIAMETER	PT	PRESSURE TREATED
DIM	DIMENSION		
DL	DEAD LOAD	RAD	RADIUS
DN	DOWN	(R)	RADIUSED
DP	DEEP	R	RISK
DTL	DETAIL	REINF	REINFORCEMENT
DWG	DRAWING	REF	REFERENCE
DWL	DOWEL	REQD	REQUIRED
		REQMTS	REQUIREMENTS
(E)	EXISTING	REV	REVISION
EA	EACH	RO	ROUGH OPENING
EB	EXPANSION BOLT	RM	ROOM
EF	EACH FACE		
EJ	EXPANSION JOINT	SA	SCREW-IN ANCHOR
ELEV	ELEVATION	SCHED	SCHEDULE
EMBED	EMBEDMENT	SQ	SQUARE FEET
ENG	ENGINEER	SP	SPLIT
ENGR	ENGINEER	SHGT	SHEET
EQ	EQUAL	SLTG	SLATHING
EW	EACH WAY	SIM	SIMILAR
EXP	EXPANSION	SPCS	SPACES
EXIST	EXISTING	SPECS	SPECIFICATIONS
EXTR	EXTERIOR	SQ	SQUARE
		SSL	SHORT SLOTTED
FD	FLOOR DRAIN	SJ	SLAB JOINT
FDN	FOUNDATION FIN FINISH	SS	STAINLESS STEEL
FLR	FLOOR FIN FINISH	STD	STANDARD
FR	FACE OF	STIFF	STIFFENER
FOC	FACE OF CONCRETE	STRGD	STAGGERED
FRG	FRAMING	STL	STEEL
FS	FAR SIDE	STRUC	STRUCTURAL
FT	FEET	SYM	SYMMETRICAL
FTG	FOOTING		
GA	GAGE	TAS	THREADED ANCHOR STUD
GALV	GALVANIZE	TRENCH	TRENCH DRAIN
GR	GRADE	T & B	TOP & BOTTOM
		THK	THICK
H	HORIZONTAL	THRD	THREADED
HAS	HEADED ANCHOR STUD	TN	TOE NAIL
HDR	HEADER	T.O.	TOP OF
HORIZ	HORIZONTAL	TRANS	TRANSVERSE
HSB	HIGH STRENGTH BOLT	TS	TUBE STEEL
HSS	HOLLOW STRUCTURAL SECTION	TYP	TYPICAL
HT	HEIGHT	UA	UNDERCUT ANCHOR
HWH	HEX WASHER HEAD	UNO	UNLESS NOTED OTHERWISE
		V	VERTICAL
ID	INSIDE DIAMETER	(V)	VERIFY
I.F.	INSIDE FACE	VERT	VERTICAL
IN	INCHES		
INTR	INTERIOR	W/	WITH
		W/O	WITHOUT
JST	JOIST	WOOD	WOOD
JT	JOINT	WF	WIDE FLANGE
JB	JOIST BEARING	WP	WORK POINT
		WS	WATERSTOP
K	KIP	WT	STRUCTURAL TEE SECTION
KSF	KIPS PER SQUARE FOOT	WWF	WEIGHT
		x	WELDED WIRE FABRIC
			TIMES OR BY

3.1 GENERAL STRUCTURAL NOTES & QUALITY ASSURANCE AND SPECIAL INSPECTION

3.4 ABBREVIATIONS



2803 River Road
Yakima, WA 98902
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		JOB NUMBER: 23166	DATE: 06/25/26
		FILE NAMES:	
		DRAWING:	
		PLAN:	
		DESIGNED BY:	BTS
		ENTERED BY:	MAC
REVISION	DATE		

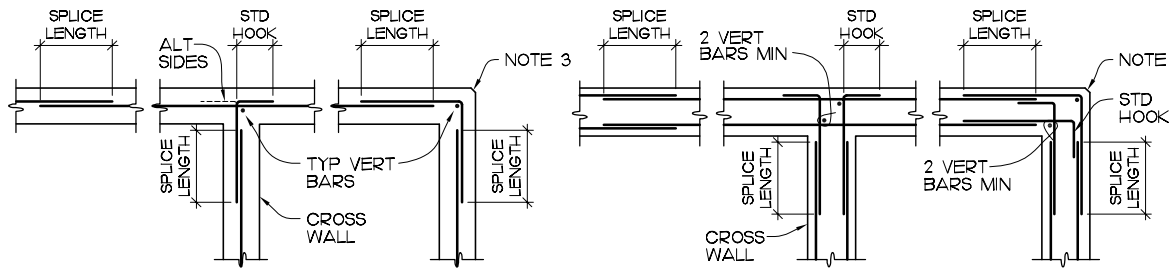
CITY OF SELAH
PHASE 2- WASTEWATER TREATMENT
PLAN IMPROVEMENTS

GSN, Q/A, SPECIAL INSPECTION, & ABBREVIATIONS

GS-2

SHEET

38 OF 81



PLAN - SINGLE CURTAIN

PLAN - DOUBLE CURTAIN

- NOTES:
- CORNER BARS SHALL MATCH SIZE & SPACING OF HORIZONTAL REINFORCEMENT, UNO. CORNER BARS AT INTERSECTING WALLS SHALL MATCH HORIZONTAL REINFORCEMENT OF CROSS WALL.
 - SPLICE LENGTH SHALL BE PER TYPICAL LAP-SPLICE SCHEDULE FOR TENSION REINFORCEMENT.
 - PROVIDE 3/4" CHAMFER AT OUTSIDE WALL CORNERS NOT IN CONTACT WITH SOIL.

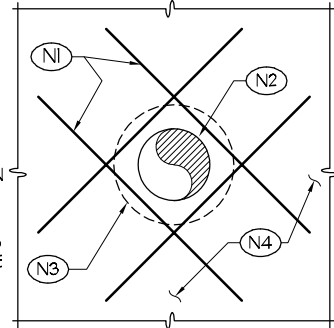
1.1 TYPICAL CONCRETE WALL REINFORCING @ INTERSECTION, CORNER, & BAR SPLICE

NTS

NOTES (FOR THIS DETAIL)

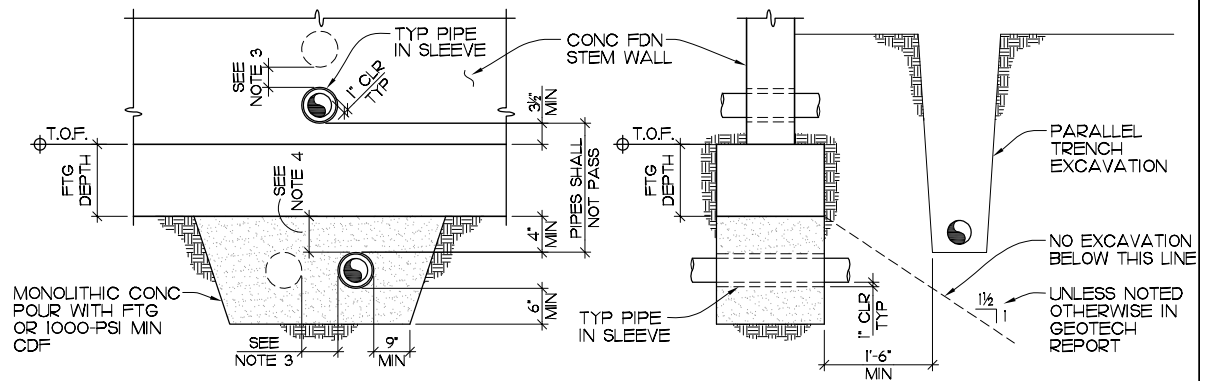
- (N1) #5x4'-0" BARS @ 45°, (4) BARS EACH FACE. SEE GENERAL STRUCTURAL NOTES FOR REQUIRED COVER OF STEEL FROM FACE OF CONCRETE WALL.
- (N2) PIPE PENETRATING CONCRETE WALL OR FLOOR.
- (N3) PIPE SEEP RING OR SLEEVE. SEE DETAIL ELSEWHERE.
- (N4) CONCRETE WALL OR FLOOR.

NOTE: SEEP RINGS NOT REQ'D AT PIPES PENETRATING CONCRETE SLAB ON GRADE, WRAP PIPES W/ EXPANSION JOINT MATERIAL PRIOR TO POURING CONCRETE & CAULK JOINTS AFTER CURING.



1.3 TYPICAL REINFORCEMENT AT PIPE PENETRATION

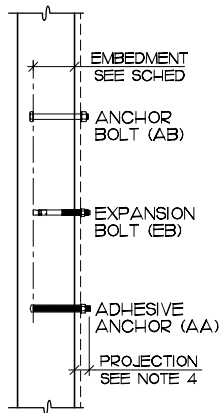
NTS



- NOTES:
- NO PIPES, CONDUIT, ETC. SHALL PASS THROUGH OR UNDER COLUMN PAD FOOTINGS.
 - FOR PIPES, CONDUIT, ETC. PASSING WITHIN THE FOOTING THICKNESS, STEP FOOTING DOWN AS REQ'D TO PASS THRU STEM WALL.
 - VERT & HORIZ SPACING BETWEEN ADJACENT PIPES SHALL BE 1/2 LARGEST SLEEVE DIAMETER, BUT NOT LESS THAN 6".
 - FOR PIPES MORE THAN 3'-0" BELOW FOOTING, COMPACT BACKFILL OVER PIPE TO MINIMUM 90% AND OMIT THICKENED CONC SECTION.

1.4 TYPICAL PIPE AND/OR CONDUIT CLEARANCES AT ALL FOUNDATIONS (INTERIOR & EXTERIOR)

NTS



MINIMUM BOLT EMBEDMENT SCHEDULE			
BOLT SIZE	MIN AB EMBED	MIN EB EMBED	MIN AA EMBED
3/8"	3"	2 1/2"	3 1/2"
1/2"	4"	3"	4 1/2"
5/8"	4 1/2"	4"	5"
3/4"	5"	5"	6 5/8"
7/8"	6"	6"	6 3/4"
1"	7"	6"	8 1/4"

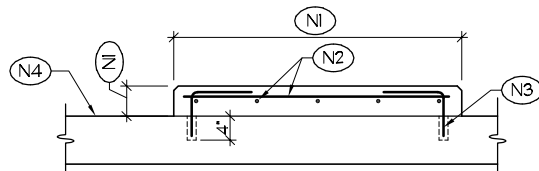
- NOTES:
- PROVIDE MIN 12" DIA SPACING BETWEEN BOLTS AND MIN 6" DIA EDGE DISTANCE, UNO.
 - AA'S REQUIRE SPECIAL INSPECTION EMBEDMENTS SHOWN ARE A MINIMUM VALUE, SPECIFIC DETAILS MAY REQUIRE GREATER EMBEDMENTS.
 - CONTRACTOR SHALL DETERMINE REQ'D THREAD PROJECTION SUITABLE FOR THE THICKNESS OF MATERIAL BEING FASTENED.

2.1 TYPICAL MIN BOLT EMBEDMENT @ CONCRETE WALL

NTS

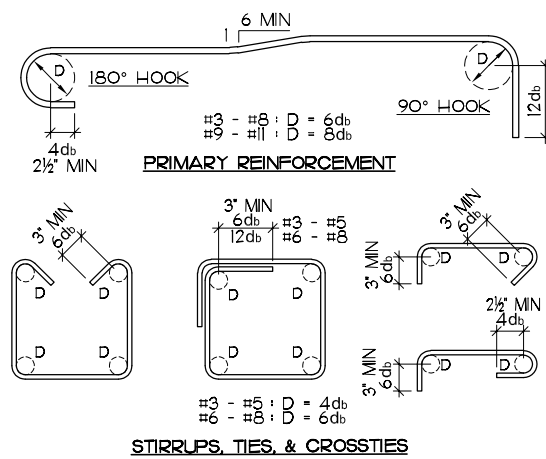
NOTES (FOR THIS DETAIL)

- (N1) VERIFY REQ'D LENGTH, WIDTH, & HEIGHT W/ MFRS APPROVED SHOP DWGS.
- (N2) #4 @ 12" OC MAX EACH WAY W/ 2" MIN CLEARANCE.
- (N3) #4 ADHESIVE DOWELS @ 18" OC MAX ALL SIDES TO SLAB W/ STD HOOK, PROVIDE 2" MINIMUM CLEARANCE.
- (N4) SLAB ON GRADE, SEE PLAN FOR THICKNESS & REINFORCEMENT.



2.2 TYPICAL HOUSEKEEPING PAD (6" MAX THICKNESS)

NTS



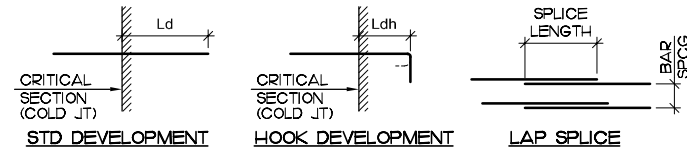
STIRRUPS, TIES, & CROSS-TIES

db = BAR DIAMETER
D = INSIDE BEND DIAMETER (INCLUDING SPRINGBACK)

2.3 TYPICAL REBAR BENDING DETAILS

NTS

BAR SIZE	fc = 4500 PSI		fc = 5000 PSI		HOOKED BARS (Ldh)	
	REGULAR BARS	TOP BARS	REGULAR BARS	TOP BARS	4000 PSI	5000 PSI
#3	Ld SPlice	15" 19"	19" 24"	13" 17"	7"	7"
#4	Ld SPlice	19" 25"	25" 32"	17" 22"	10"	9"
#5	Ld SPlice	24" 31"	31" 40"	22" 28"	12"	11"
#6	Ld SPlice	29" 37"	37" 46"	26" 33"	15"	13"
#7	Ld SPlice	42" 54"	54" 67"	37" 49"	17"	15"
#8	Ld SPlice	48" 62"	62" 80"	43" 55"	19"	17"



2.4 TYPICAL DEVELOPMENT AND LAP-SPLICE LENGTHS FOR TENSION REINFORCEMENT IN CONCRETE, UNO

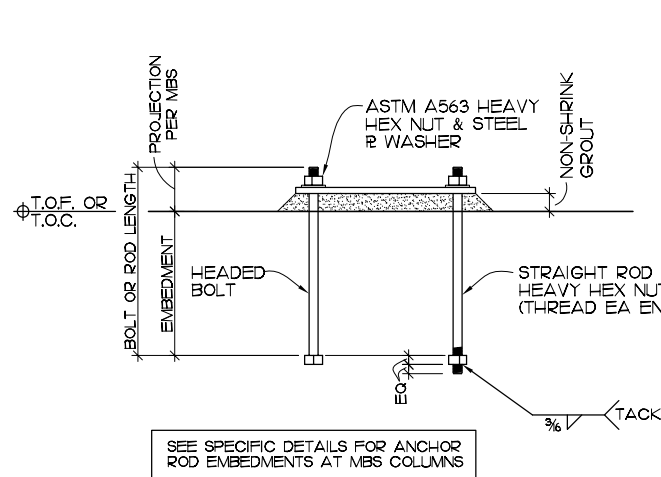
NTS

LEGEND

- ⊕ T.O.S. — TOP OF SLAB ELEVATION
- ⊕ T.O.C. — TOP OF CONC ELEVATION
- ⊕ T.O.F. — TOP OF FOOTING ELEVATION
- ⊕ T.O.B. — TOP OF BEAM ELEVATION
- ⊕ T.O.GR — TOP OF GRATING ELEVATION
- ▨ STEPPED SLAB
- S J SLAB CONTROL JOINT
- UNO UNLESS NOTED OTHERWISE
- ⊙ PIPE PENETRATION, SEE 1.3/GS-3 & 1.4/GS-3
- ⊕ ELEVATION LETTER
- ⊕ SHEET NUMBER
- ⊕ SECTION NUMBER
- ⊕ DETAIL SECTION
- ⊕ SHEET NUMBER
- ⊕ SECTION NUMBER
- ⊕ BUILDING SECTION
- ⊕ SHEET NUMBER
- ⊕ DETAIL NUMBER
- ⊕ DETAIL
- ⊕ SHEET NUMBER

3.1 LEGEND

NTS

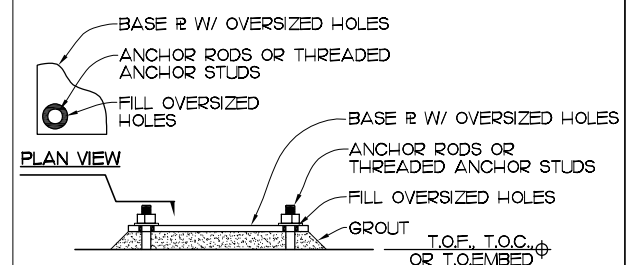


3.3 TYPICAL ANCHOR ROD (AR) REQUIREMENTS

NTS

BOLT/ROD SIZE	BASE R HOLE SIZE	MINIMUM WASHER
1/2"	1"	R3/4 x 1 1/2"
5/8"	1 1/8"	R3/4 x 1 3/4"
3/4"	1 1/4"	R3/4 x 2"
7/8"	1 1/2"	R3/4 x 2 1/2"
1"	1 3/4"	R3/4 x 3"
1 1/4"	2 1/8"	R3/4 x 3 1/2"

- NOTES:
- HEADED BOLTS AND STRAIGHT RODS SHALL BE ASTM F1554 (GRADE 55, UNO). ASTM A307 HEADED BOLTS SHALL NOT BE USED.
 - HEADED BOLTS OR STRAIGHT RODS CAN BE USED INTERCHANGEABLY AT THE CONTRACTOR'S OPTION.
 - PLATE WASHERS SHALL BE ASTM A572, GRADE 50 W/ HOLES THAT ARE 1/8" LARGER THAN BOLT/ROD DIAMETER.
 - SQUARE OR CIRCULAR WASHERS MEETING THE SIZE SHOWN ARE ACCEPTABLE.
 - GALVANIZE AT EXPOSED EXTERIOR CONDITIONS.



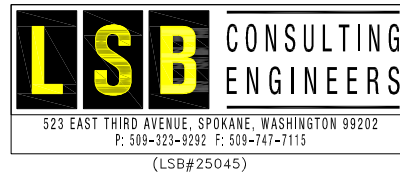
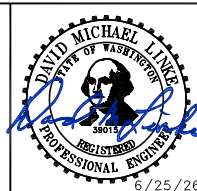
- NOTES:
- FILLING OF OVERSIZED HOLES IN BASE PLATES IS REQ'D AT ALL BRACE FRAME COLUMNS, MAIN BUILDING COLUMNS, ALL PORTAL FRAME COLUMNS, ALL COLUMNS SUPPORTING CRANES, AND WHERE NOTED IN SPECIFIC DETAILS.
 - OVERSIZED HOLES TO BE FILLED WITH SELF LEVELING, NON-SHRINK, FLOWABLE GROUT PRIOR TO FINAL TIGHTENING OF NUTS (AFTER ALL COLUMN BASE LEVELING HAS OCCURRED).
 - SPECIAL INSPECTION REQUIRED.

3.5 TYPICAL BASE R OVERSIZED HOLE FILLING

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CITY OF SELAH
PHASE 2- WASTEWATER TREATMENT
PLAN IMPROVEMENTS

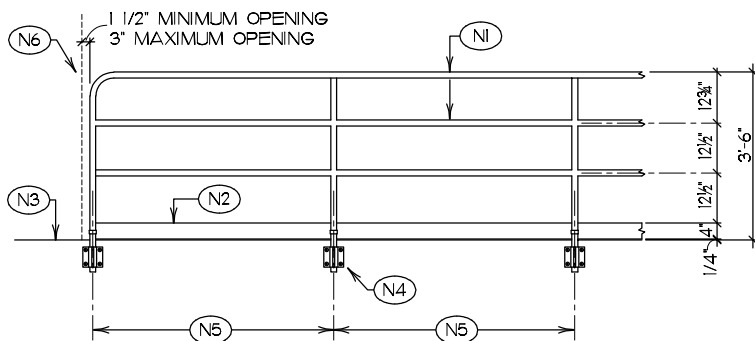
LEGEND & TYPICAL STRUCTURAL DETAILS

GS-3

SHEET
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NOTES (FOR THIS ELEVATION)

- (N1) GUARDRAIL FROM 1 1/2" ALUMINUM TUBING
- (N2) 4" KICK PLATE, EXTRUDED STIFFENED SHAPE OR REINFORCED TO MAINTAIN STRAIGHT LINE
- (N3) FINISHED FLOOR OR WALKING SURFACE
- (N4) MOUNTING BRACKET, SEE DETAIL THIS SHEET
- (N5) MAXIMUM SPACING 5'-0" BETWEEN VERTICAL SUPPORTS
- (N6) EDGE OF WALL, RAIL OR EQUIPMENT



GUARDRAIL NOTES

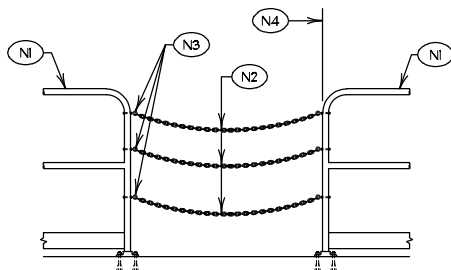
1. ALL HANDRAILS, GUARDRAILS, AND POSTS ARE TO BE ALUMINUM.
2. GUARDRAILS REQUIRED BY THE INTERNATIONAL BUILDING CODE, OR BY OCCUPATIONAL SAFETY AND HEALTH CODES ARE TO BE PROVIDED AND INSTALLED, WHETHER SHOWN ON THE DRAWINGS OR NOT.
3. PROVIDE SLIP JOINTS IN RAILINGS AT INTERVALS NOT TO EXCEED 50 FEET.
4. BENDS AND CORNERS IN RAILINGS ARE TO BE BENT ON A CURVE, NOT MITERED.
5. RAILS ARE TO BE FREE FROM SHARP CORNERS AND BURRS. GRIND ALL WELDS SMOOTH. RIVETS SHALL NOT HAVE ANY PROTRUDING SHARP EDGES.

1.1 TYPICAL GUARDRAIL ELEVATION AND NOTES

1/4" = 1'-0"

NOTES (FOR THIS DETAIL)

- (N1) GUARDRAIL. SEE DETAILS THIS SHEET
- (N2) SAFETY CHAIN WITH SNAPS ON EACH END. (3) REQUIRED PER OPENING
- (N3) 1/4" GALVANIZED EYEBOLT, TYPICAL EACH END OF EACH CHAIN
- (N4) ATTACH TO WALL WHERE CONDITIONS WARRANT



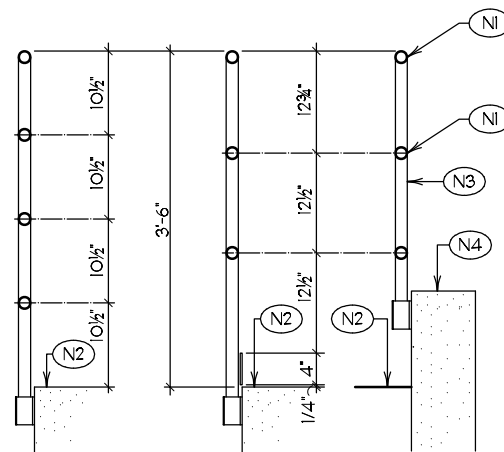
2.1 TYPICAL SAFETY CHAIN

1/2" = 1'-0"

NOTES (FOR THIS DETAIL)

- (N1) PIPE RAILINGS
- (N2) WALKING SURFACE
- (N3) POST UPRIGHTS, SEE OTHER DETAILS FOR MAXIMUM SPACING
- (N4) TOP OF CONCRETE WALL AT TANK OR OTHER CHANGE OF ELEVATION OF 30" OR MORE

USE PROFILE A WHERE NO OSHA TOEBOARD IS REQUIRED. USE PROFILE TYPE B UNLESS NOTED OTHERWISE. USE PROFILE TYPE C WHERE THE CONCRETE WALL FORMS THE "TOEBOARD", AND THE WALKING SURFACE IS LOWER THAN THE TOP OF THE WALL OF THE TANK OR OTHER CHANGE IN ELEVATION.

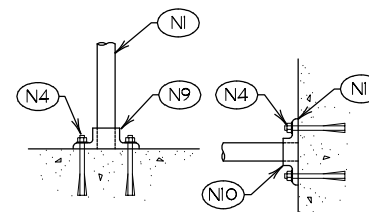


2.3 TYPICAL GUARDRAIL PROFILES

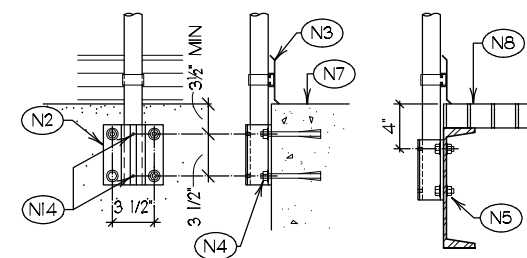
1/2" = 1'-0"

NOTES (FOR THIS DETAIL)

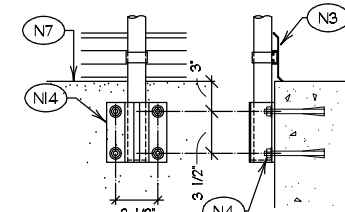
- (N1) 1 1/2" ALUMINUM PIPE RAIL, TYP
- (N2) SIDE MOUNT FLANGE
- (N3) TOE BOARD WITH CLAMPING ASSEMBLY
- (N4) CONCRETE: 3/8" x 5" SCREW-IN OR ADHESIVE ANCHORS (AA)
- (N5) METAL: 3/8" MACHINE BOLTS
- (N6) CHANNEL STAIR STRINGER
- (N7) TOP FLANGE OF STEEL CHANNEL OR TOP OF CONCRETE
- (N8) TOP OF GRATING
- (N9) HEAVY DUTY FLOOR FLANGE
- (N10) WALL END FITTING
- (N11) MANUFACTURED WALL BRACKET
- (N12) STAIR STRINGER BASE
- (N13) SET SCREW, TYPICAL



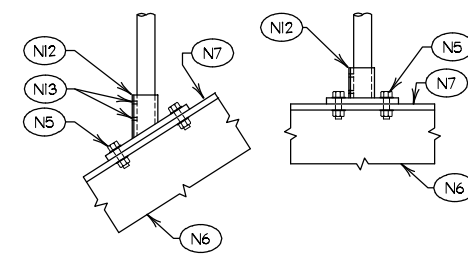
FLOOR FLANGE WALL FLANGE
FLANGED CONNECTIONS



SIDE MOUNT BRACKETS



REMOVABLE RAIL SOCKET

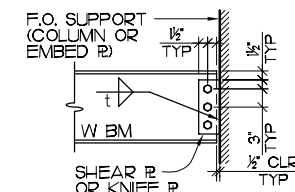


TOP FLANGE BRACKETS

2.4 TYPICAL ALUMINUM HANDRAIL & GUARDRAIL SUPPORT CONNECTIONS

1/2" = 1'-0"

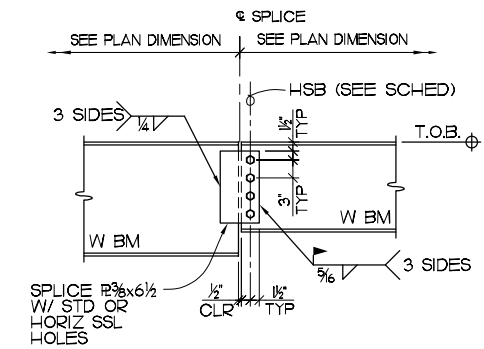
BM SIZE	TYP NO OF BOLTS	SHEAR P / KNIFE P THICKNESS	CAPACITY	STIFF P THICKNESS	WELD SIZE (t)
W8, W10	2	1/4" **	16.3 K	1/4"	3/8" **
W12, W14	3	1/4" **	25.6 K	1/4"	3/8" **
W16	4	3/8"	42.1 K	3/8"	1/4"
W18	5	3/8"	54.5 K	3/8"	1/4"
W21, W24	6	3/8"	66.8 K	1/2"	1/4"
W27	7	3/8"	78.8 K	1/2"	1/4"
W30	8	3/8"	90.9 K	5/8"	1/4"
W33	9	3/8"	103.0 K	5/8"	1/4"



BOLT EDGE DISTANCE & SPACING (TYP, UNO)

3.4 TYPICAL BOLTED STEEL CONNECTION SCHEDULE

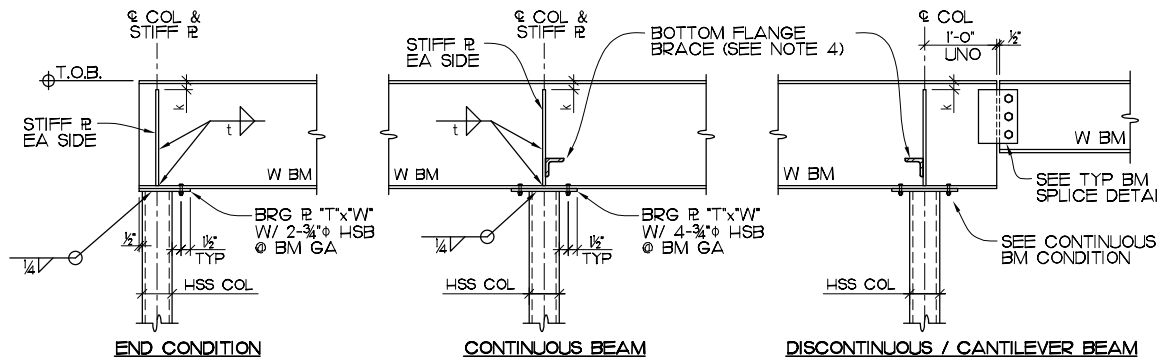
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- NOTES:
1. USE NUMBER OF BOLTS FOR SMALLER BEAM PER TYPICAL BOLTED STEEL CONNECTION SCHEDULE.

3.1 TYPICAL BEAM SPLICE

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- NOTES:
1. BRG P THICKNESS, "T" = SEE SCHEDULE @ RIGHT.
 2. BRG P WIDTH, "W" = GREATER OF (BEAM GAGE + 2 1/2") OR (COLUMN WIDTH + 1/2").
 3. SEE TYPICAL BOLTED STEEL CONNECTION SCHEDULE FOR STIFF PLATE THICKNESS AND WELD SIZE "t".
 4. AT CONTINUOUS AND CANTILEVERED BEAMS, PROVIDE BR-2 OR BR-3 BRACE (PER TYP DETAIL) UP TO DECK ON EITHER SIDE. NOT REQUIRED WHERE CANTILEVER DISTANCE IS LESS THAN 2x BEAM DEPTH.

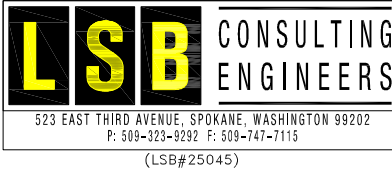
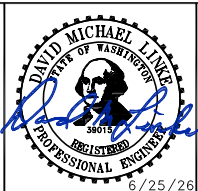
BEAM SIZE	BRG PLATE THICKNESS
≤ W16	1/2"
≤ W24	5/8"
≤ W33	3/4"
> W33	7/8"

3.2 TYPICAL W BEAM BEARING ON HSS COLUMN

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CITY OF SELAH
PHASE 2- WASTEWATER TREATMENT
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TYPICAL STRUCTURAL DETAILS

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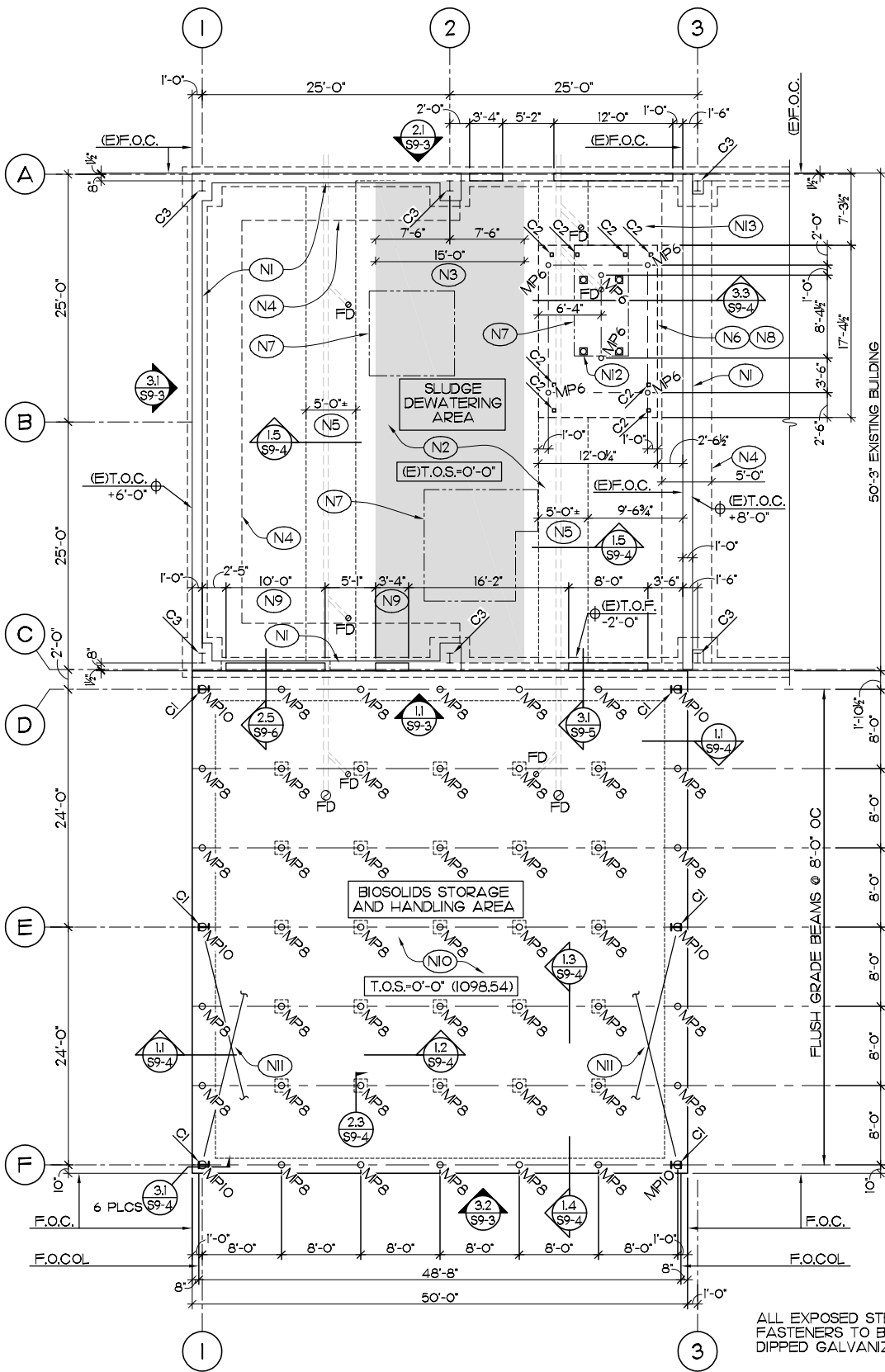
FLOOR/FOUNDATION PLAN NOTES

GENERAL

- 1. SEE GS-SERIES SHEETS FOR GENERAL STRUCTURAL NOTES, ABBREVIATIONS, LEGEND, & TYPICAL DETAILS.
- 2. COORDINATE & VERIFY ALL DIMENSIONS WITH ARCHL & PROCESS DRAWINGS.
- 3. ALL DIMENSION LINES ARE @ COLUMN, FACE OF STUD, OR FACE OF CONCRETE, UNO.
- 4. PROVIDE 3/4" CHAMFER AT ALL EXPOSED CONCRETE CORNERS.
- 5. SEE CIVIL DRAWINGS FOR EXTERIOR WALKS, CURBS, STAIRS, RAMPS, ETC.
- 6. REFER TO ALL CIVIL, ELECTRICAL & MECHANICAL PLANS FOR PROPER COORDINATION WITH ALL OTHER TRADES.
- 7. SEE GEOTECHNICAL EVALUATION REPORT FOR FOUNDATION BEARING REQUIREMENTS AND MICROPILE INFORMATION.
- 8. CONTACT ENGINEER IF EXISTING CONDITIONS DIFFER FROM THOSE SHOWN IN PLANS AND DETAILS.

PRE-ENGINEERED METAL BUILDINGS (PEMB)

- 9. UNLESS NOTED OTHERWISE, FOUNDATION DESIGN FOR THE METAL BUILDING IS BASED ON PRELIMINARY FRAME/COLUMN REACTIONS, AND PRELIMINARY BOLT LOCATIONS. THE METAL BUILDING MFR MUST SUBMIT ALL FINAL REACTIONS TO THE STRUCTURAL ENGINEER PRIOR TO SUBMISSION OF FOOTING REINFORCEMENT SHOP DRAWINGS FOR REVIEW AND POSSIBLE REVISIONS TO THE FOUNDATION DESIGN. ANCHOR BOLT QUANTITY, SIZE, AND PLACEMENT MUST BE COORDINATED WITH THE ANCHOR BOLT SETTING PLAN PROVIDED BY THE METAL BUILDING MFR.
- 10. REFER TO THE GENERAL STRUCTURAL NOTES FOR THE PROVISIONS REGARDING PRE-ENGINEERED METAL BUILDING (PEMB) AND FOUNDATIONS SUPPORTING THAT SYSTEM.
- 11. CONTRACTOR TO VERIFY ALL MBS DIMENSIONS W/ SUPPLIER PRIOR TO FOUNDATION CONSTRUCTION. REPORT ALL DISCREPANCIES TO THE STRUCTURAL ENGINEER.



- NOTES (FOR THIS PLAN)
- (N1) EXISTING 12" CONC PUSH WALL
 - (N2) EXISTING 8" CONC SLAB ON GRADE
 - (N3) EXISTING CONC SLAB TO REMAIN UNDISTURBED
 - (N4) EXISTING 12" THICKENED CONC SLAB @ EXISTING 12" CONC PUSH WALLS
 - (N5) DEMO EXISTING CONC SLAB @ NEW PIPING, PROVIDE TRENCH BOXES AS REQ'D TO AVOID UNDERMINING EXISTING SLAB
 - (N6) CENTRIFUGE PILE CAP, SEE DETAILS FOR REINFORCEMENT
 - (N7) HOUSEKEEPING PAD, SEE 2.2/GS-3
 - (N8) DEMO EXISTING CONC SLAB @ NEW CENTRIFUGE PILE CAP
 - (N9) DEMO EXISTING 12" CONC PUSH WALL AS REQ'D @ NEW OPENINGS
 - (N10) 18" PILE CAP/STRUCTURAL CONC SLAB ON GRADE (NO SLAB JOINTS), SEE DETAILS FOR REINFORCEMENT, OVER 12" TO 18" MIN FREE-DRAINING COMPACTED BASE COURSE OVER MIRAFI 600X GEOTEXTILE FABRIC, OVER COMPACTED SUBGRADE - SEE GEOTECHNICAL REPORT FOR MORE INFORMATION
 - (N11) ROD X-BRACING PER MBS
 - (N12) CENTRIFUGE COLUMN, 4 PLCS
 - (N13) SEE 3.1/S9-2 CENTRIFUGE ACCESS PLATFORM FRAMING PLAN FOR COLUMN LOCATIONS

COLUMN SCHEDULE

C1	FRAME COLUMN PER MBS
C2	HSS4x4x3/8
C3	EXISTING FRAME COLUMN

MICROPILE SCHEDULE

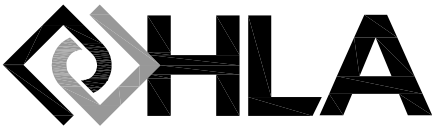
TAG	φ	MINIMUM ALLOWABLE CAPACITY	
		AXIAL(*)	LATERAL(**)
MP6	6"	31 KIPS	2 KIPS
MP8	8"	40 KIPS	3 KIPS
MP10	10"	51 KIPS	7 KIPS

(*) MINIMUM UNFACTORED AXIAL LOAD BEARING CAPACITY WITH NEGLIGIBLE VERTICAL SETTLEMENT
(**) LATERAL CAPACITY AT LESS THAN 1/2" DEFLECTION

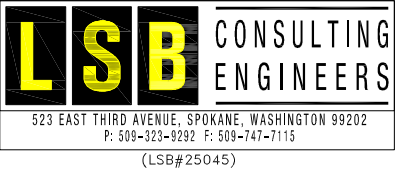
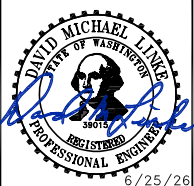


3.1 SOLIDS HANDLING BLDG FLOOR/FOUNDATION PLAN

1/8" = 1'-0"



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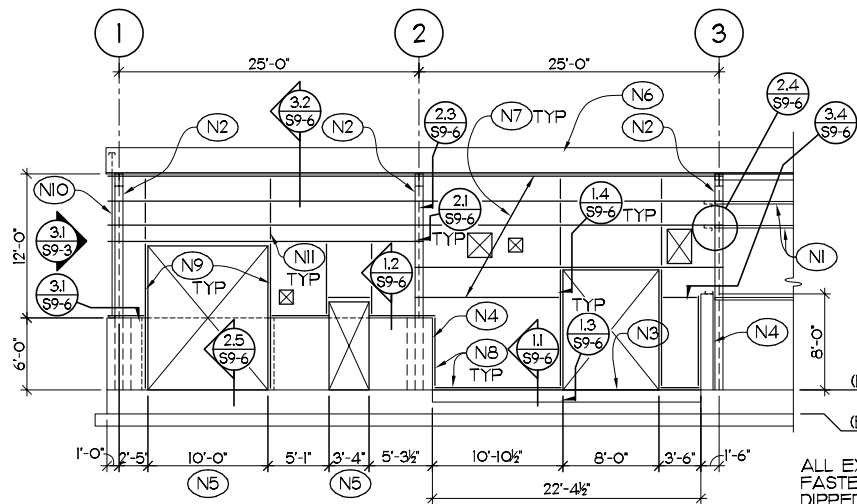
CITY OF SELAH
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PLAN IMPROVEMENTS

SOLIDS HANDLING BUILDING FLOOR/FOUNDATION PLAN

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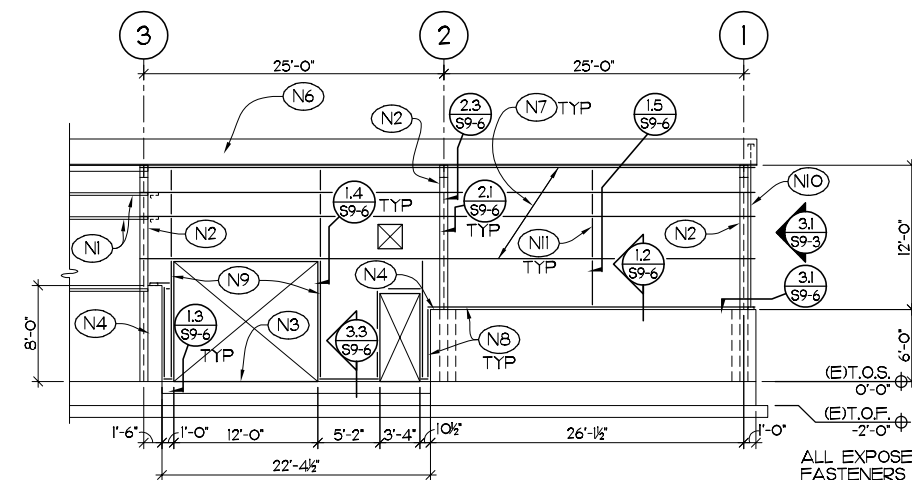


- NOTES (FOR THIS ELEVATION)**
- (N1) EXISTING WALL GIRTS
 - (N2) EXISTING FRAME COLUMN
 - (N3) EXISTING CONC SLAB
 - (N4) EXISTING 12" CONC PUSH WALL
 - (N5) DEMO EXISTING 12" CONC PUSH WALL AS REQ'D @ NEW OPENINGS
 - (N6) EXISTING ROOF
 - (N7) BIDDER-DESIGNED 8" ZEE BYPASS GIRTS PER MBS, LAP W/ EXISTING GIRTS WHERE POSSIBLE
 - (N8) BIDDER-DESIGNED 8" CEE BASE CHANNEL PER MBS
 - (N9) BIDDER-DESIGNED 8" CEE JAMB PER MBS
 - (N10) 6" STL STUD WALL BEYOND
 - (N11) BIDDER-DESIGNED 8" CEE BLOCKING PER MBS

ALL EXPOSED STEEL & FASTENERS TO BE HOT DIPPED GALVANIZED
CONTRACTOR TO VERIFY/COORDINATE ALL DIMENSIONS
COORDINATE ALL DOOR ROUGH OPENINGS W/ DOOR MANUFACTURER

1/8" = 1'-0"

1.1 GRID C STRUCTURAL ELEVATION LOOKING NORTH

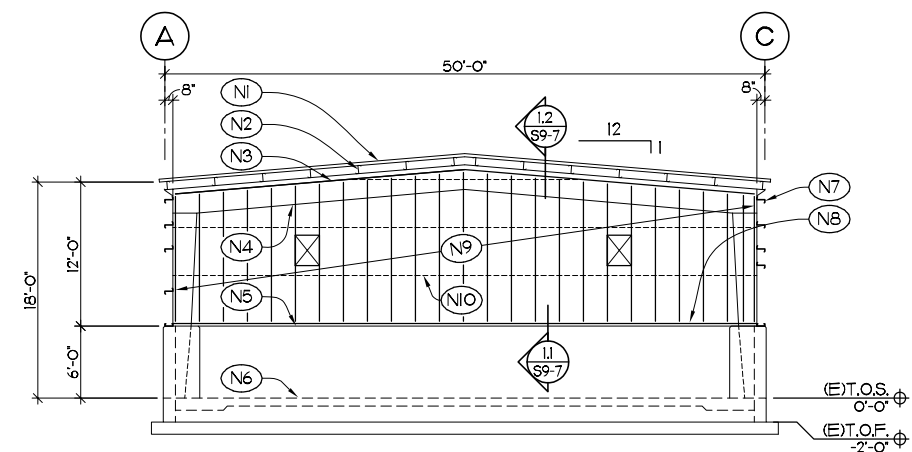


- NOTES (FOR THIS ELEVATION)**
- (N1) EXISTING WALL GIRTS
 - (N2) EXISTING FRAME COLUMN
 - (N3) EXISTING CONC SLAB
 - (N4) EXISTING 12" CONC PUSH WALL
 - (N5) NOT USED
 - (N6) EXISTING ROOF
 - (N7) BIDDER-DESIGNED 8" ZEE BYPASS GIRTS PER MBS, LAP W/ EXISTING GIRTS WHERE POSSIBLE
 - (N8) BIDDER-DESIGNED 8" CEE BASE CHANNEL PER MBS
 - (N9) BIDDER-DESIGNED 8" CEE JAMB PER MBS
 - (N10) 6" STL STUD WALL BEYOND
 - (N11) BIDDER-DESIGNED 8" CEE BLOCKING PER MBS

ALL EXPOSED STEEL & FASTENERS TO BE HOT DIPPED GALVANIZED
CONTRACTOR TO VERIFY/COORDINATE ALL DIMENSIONS
COORDINATE ALL DOOR ROUGH OPENINGS W/ DOOR MANUFACTURER

1/8" = 1'-0"

2.1 GRID A STRUCTURAL ELEVATION LOOKING SOUTH

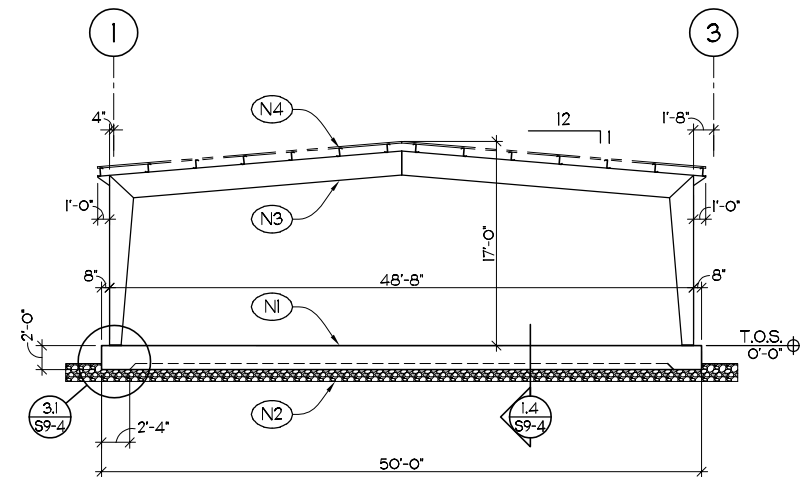


- NOTES (FOR THIS ELEVATION)**
- (N1) EXISTING ROOF
 - (N2) EXISTING ROOF PURLINS
 - (N3) 6" TOP TRACK
 - (N4) EXISTING BUILDING FRAME BEYOND
 - (N5) EXISTING 12" CONC PUSH WALL
 - (N6) EXISTING CONC SLAB BEYOND
 - (N7) 8" ZEE GIRTS, LAP W/ EXISTING GIRTS WHERE POSSIBLE, SEE OTHER ELEVATIONS
 - (N8) 600T200-43 6" BASE TRACK
 - (N9) 600S162-43 6" STL STUDS @ 24" OC
 - (N10) 600S162-43 BLOCKING @ 48" OC, SEE 1.3/S9-7

ALL EXPOSED STEEL & FASTENERS TO BE HOT DIPPED GALVANIZED
CONTRACTOR TO VERIFY/COORDINATE ALL DIMENSIONS

1/8" = 1'-0"

3.1 GRID I STRUCTURAL ELEVATION LOOKING EAST



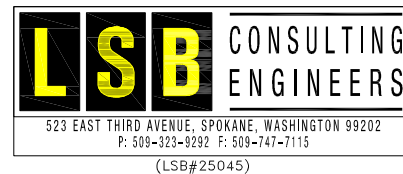
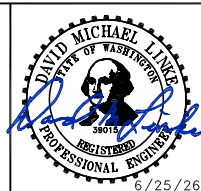
- NOTES (FOR THIS ELEVATION)**
- (N1) 18" PILE CAP/STRUCTURAL CONC SLAB ON GRADE (NO SLAB JOINTS), SEE DETAILS FOR REINFORCEMENT
 - (N2) 12" TO 18" MIN FREE-DRAINING COMPACTED BASE COURSE, OVER MIRAFI 600X GEOTEXTILE FABRIC, OVER COMPACTED SUBGRADE - SEE GEOTECHNICAL REPORT FOR MORE INFORMATION
 - (N3) BIDDER-DESIGNED BUILDING FRAME PER MBS
 - (N4) BIDDER-DESIGNED ROOF PURLINS PER MBS

3.2 GRID F STRUCTURAL ELEVATION LOOKING NORTH

1/8" = 1'-0"



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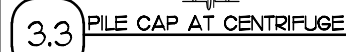
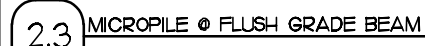
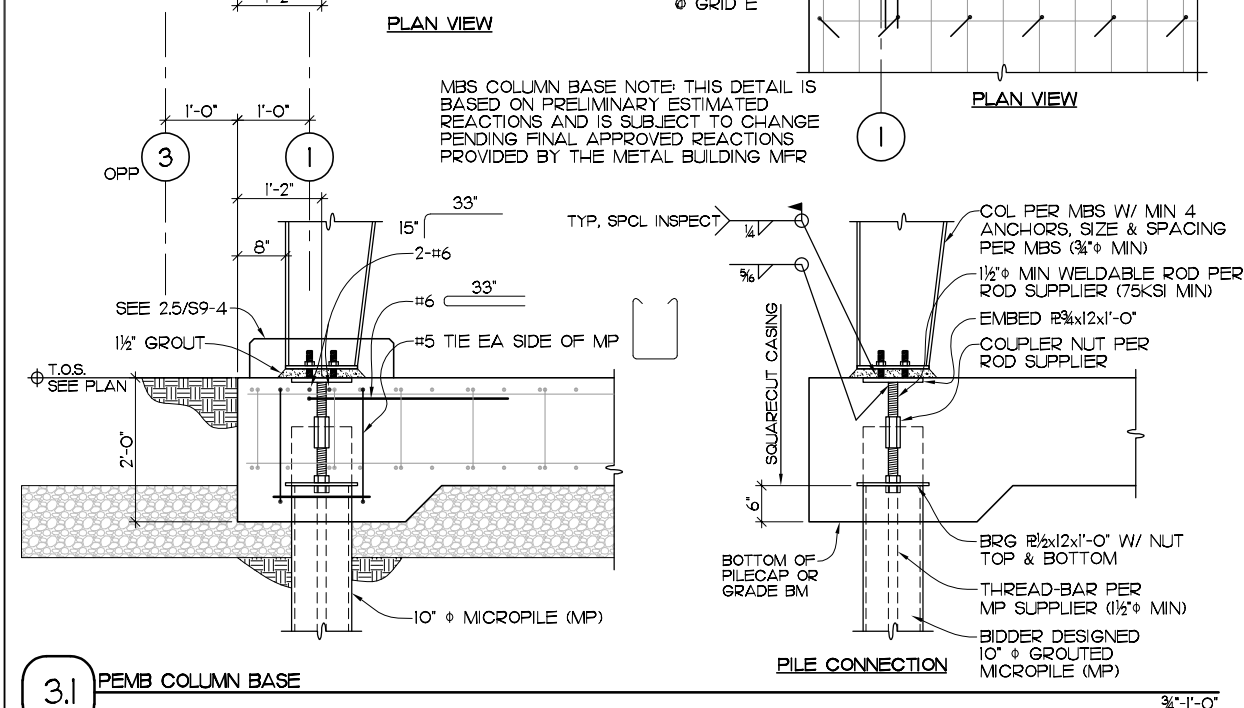


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PLAN IMPROVEMENTS
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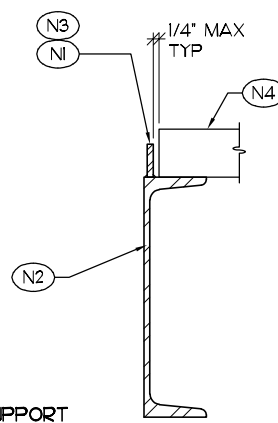
S9-3

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NOTES (FOR THIS DETAIL)

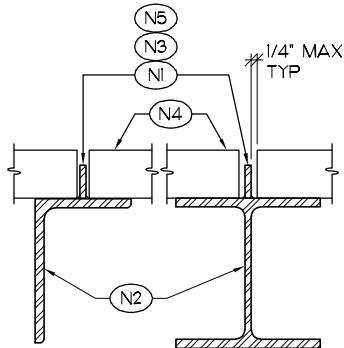
- (N1) GRATING RETENTION FLATBAR 1/4" x 1 1/2" CONTINUOUS. WELD TO CHANNEL WITH FILLETS EACH SIDE. 1/8" x 2" @ 12" PITCH, STAGGERED.
- (N2) CHANNEL SUPPORT MEMBER, SEE PLAN FOR SIZE.
- (N3) WELD FLATBARS AT CORNER WHERE THEY MEET, GRIND OUTSIDE FACE SMOOTH.
- (N4) GRATING, SEE PLAN & SCHEDULE.



1.1 TYPICAL GRATING SUPPORT

NOTES (FOR THIS DETAIL)

- (N1) GRATING RETENTION FLATBAR 1/4" x 1 1/2" CONTINUOUS. WELD TO GRATING SUPPORT MEMBER WITH FILLETS EACH SIDE. 1/8" x 2" @ 12" PITCH, STAGGERED.
- (N2) GRATING SUPPORT MEMBER, SEE PLAN FOR SIZE.
- (N3) WELD FLATBARS AT CORNER WHERE THEY MEET, GRIND OUTSIDE FACE SMOOTH.
- (N4) GRATING, SEE PLAN & SCHEDULE.
- (N5) CENTER FLATBAR ON TOP FLANGE OF SUPPORT MEMBER.



1.2 TYPICAL GRATING SUPPORT

GRATING SCHEDULE							
Type	Material	Top Surface	Bar Depth	Bar Width	Bar Spacing		Max Span
					Bearing	Cross	
FA	FRP	quartz grit	2"	1/4"	2" oc	2" oc	4'-0"
Remarks: See specifications 06 74 13							
AA	ALUM	plain	1 1/2"	3/16"	1 3/16" oc	4" oc	4'-0"
GA	Galv Steel	plain	1 1/2"	3/16"	1 3/16" oc	4" oc	4'-0"
GB	Galv Steel	plain	1 1/4"	3/16"	1 3/16" oc	4" oc	4'-0"
Remarks: See specifications 05 53 00							

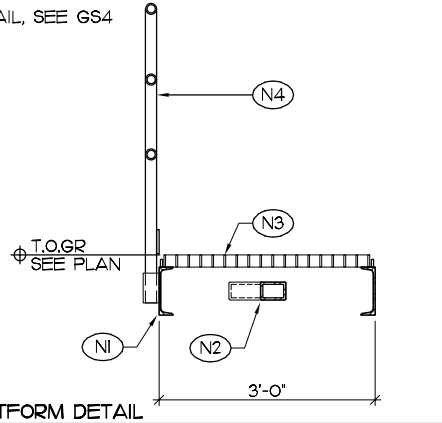
GRATING NOTES

1. ALUMINUM GRATINGS ARE TO BE Banded AROUND ALL OPENINGS
2. GRATINGS ARE TO BE DESIGNED TO SUPPORT A MINIMUM LIVE LOAD OF 100 PSF OR A CONCENTRATED LOAD OF 300 POUNDS AT ANY POINT
3. DEFLECTIONS SHALL BE LIMITED AS SHOWN IN THE SPECIFICATIONS
4. GRATINGS OVER WEIRS OR GATES ARE TO BE MADE SO THAT THEY MAY BE EASILY REMOVED BY ONE PERSON
5. REMOVABLE SECTIONS ARE TO BE AT LEAST 8" WIDE, OR AS WIDE AS NECESSARY FOR EASY ACCESS TO THE GATE OR WEIR
6. GRATINGS ARE TO BE FASTENED DOWN TO SUPPORTS BY BENT CLIP-TYPE FASTENERS STUd WELDED TO SUPPORTS OR SELF-DRILLING SCREWS
7. MAXIMUM SPANS SHOWN ARE FOR FOOT TRAFFIC ONLY
8. FRP GRATING COLOR TO BE "SLATE GRAY" OR APPROVED EQUAL

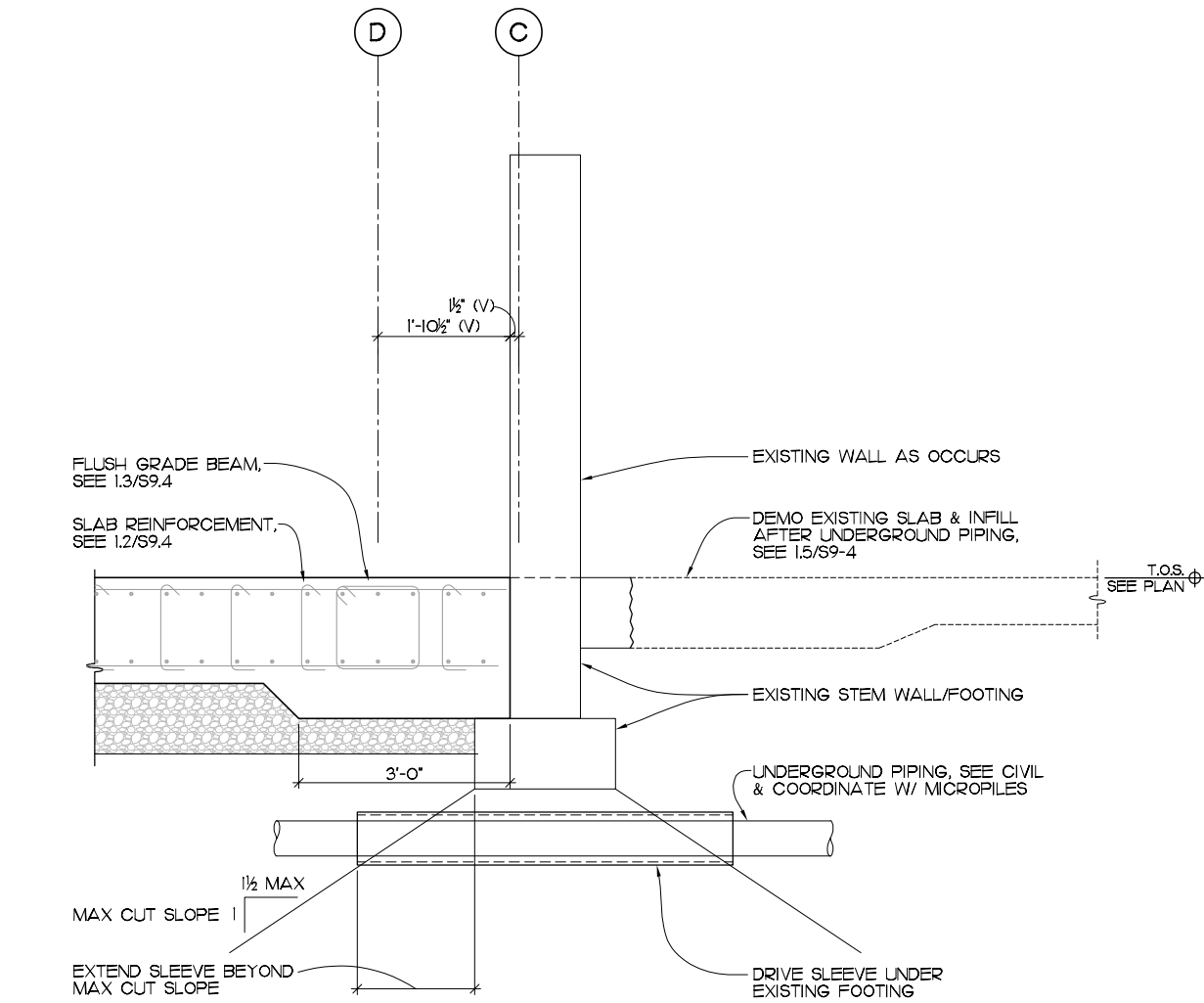
1.3 GRATING SCHEDULE & NOTES

NOTES (FOR THIS DETAIL)

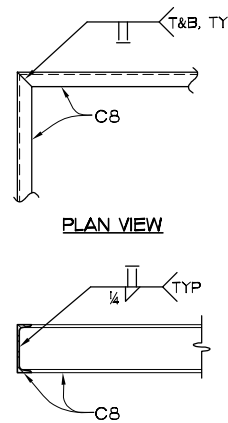
- (N1) C8
- (N2) HSS3x3 BRACING
- (N3) 2" FRP GRATING
- (N4) GUARDRAIL, SEE GS4



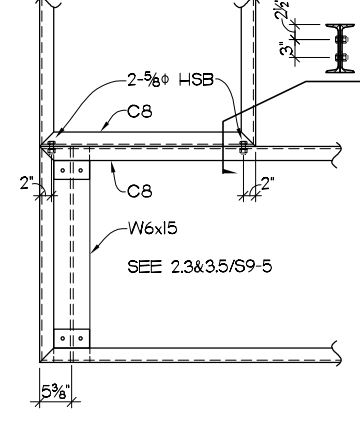
1.5 PLATFORM DETAIL



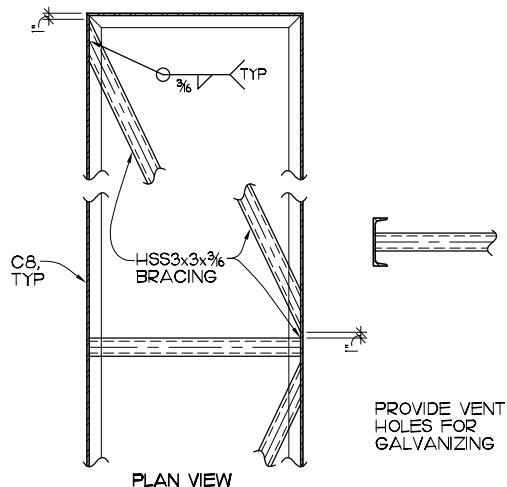
3.1 NEW SLAB @ EXISTING BUILDING



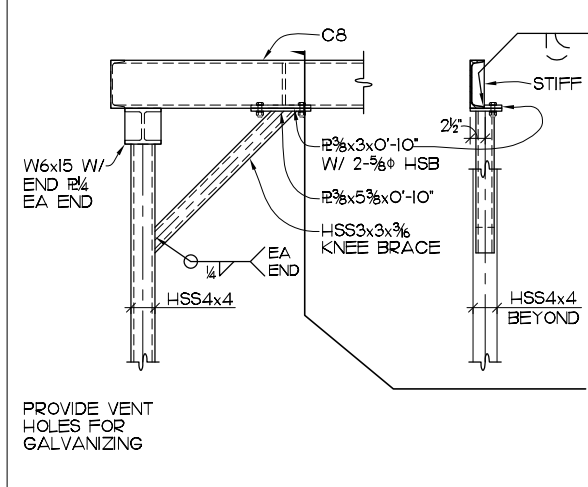
2.3 PLATFORM DETAIL - TYP C8 TO C8 WELDS



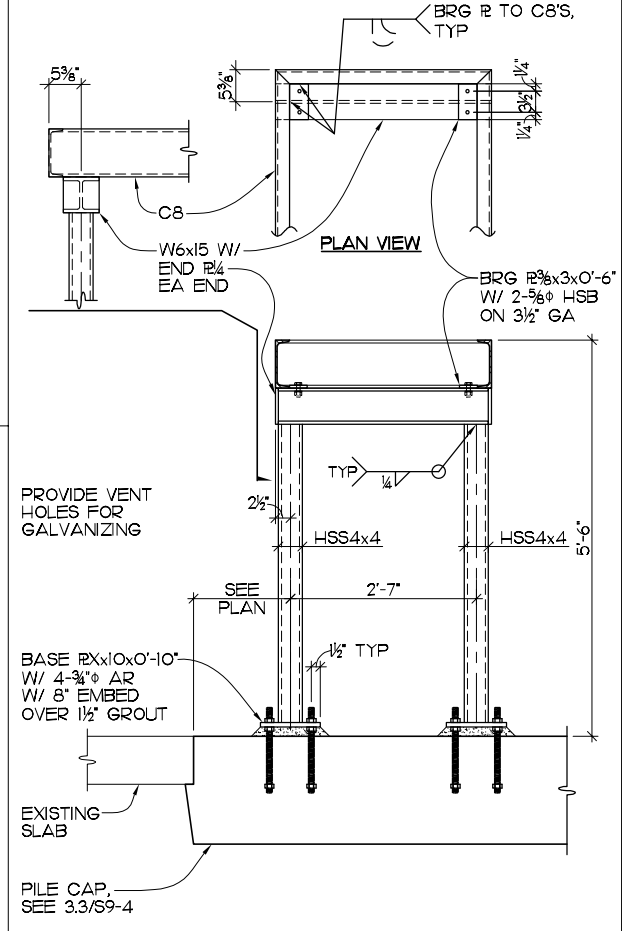
2.4 PLATFORM DETAIL



3.3 PLATFORM DETAIL - TYP BRACING



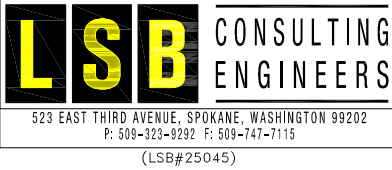
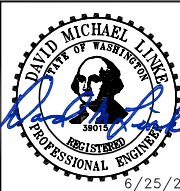
3.4 PLATFORM DETAIL



3.5 PLATFORM DETAIL



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JOB NUMBER: 23166

DATE: 06/25/26

FILE NAMES:

DRAWING: PLAN:

DESIGNED BY: ENTERED BY:

BTS MAC

CITY OF SELAH

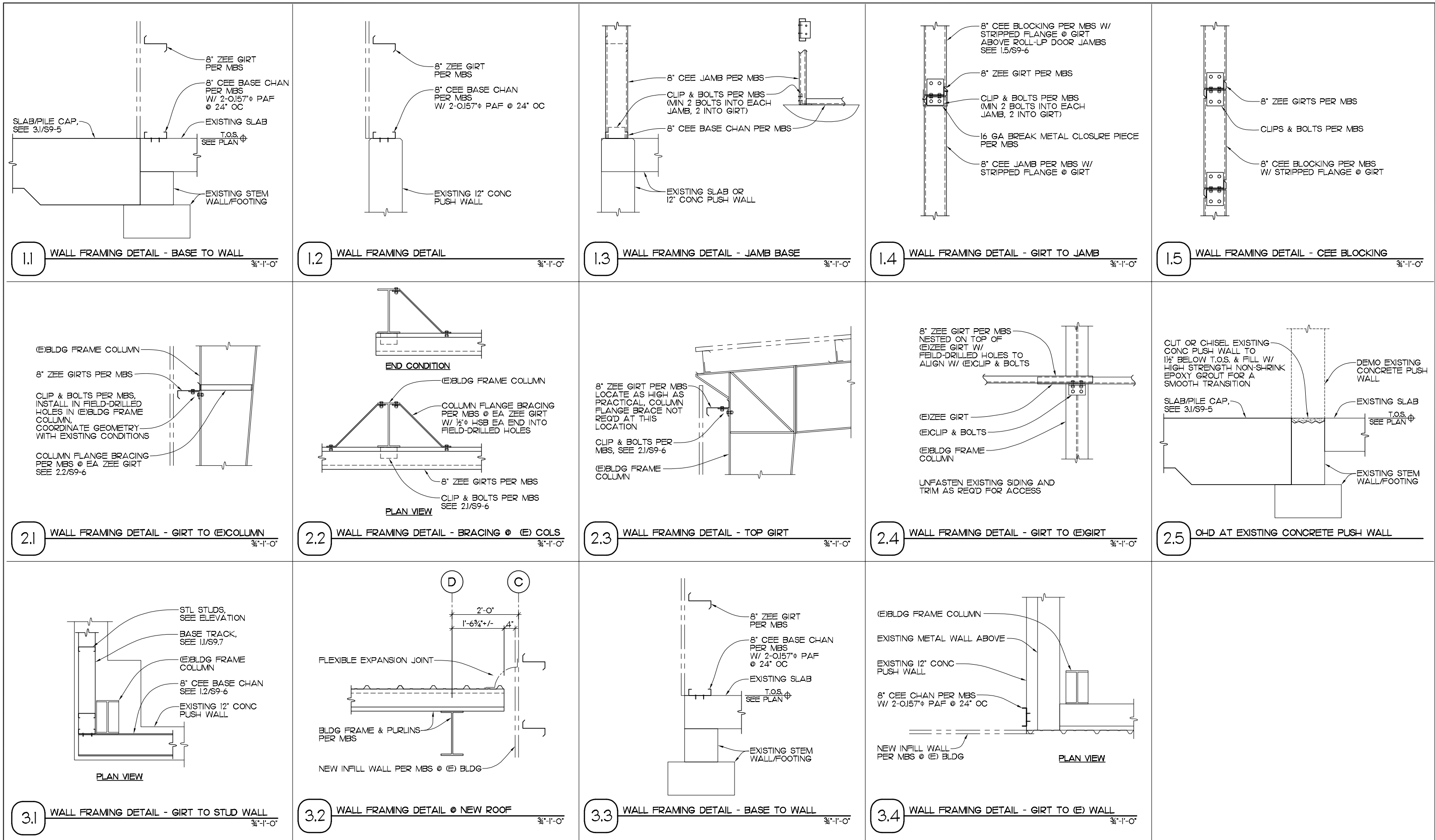
PHASE 2- WASTEWATER TREATMENT

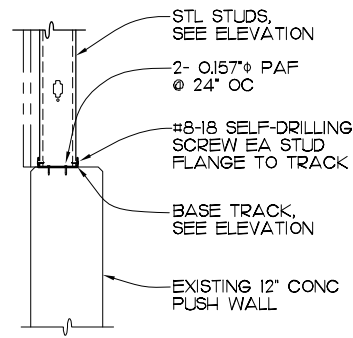
PLAN IMPROVEMENTS

STRUCTURAL DETAILS

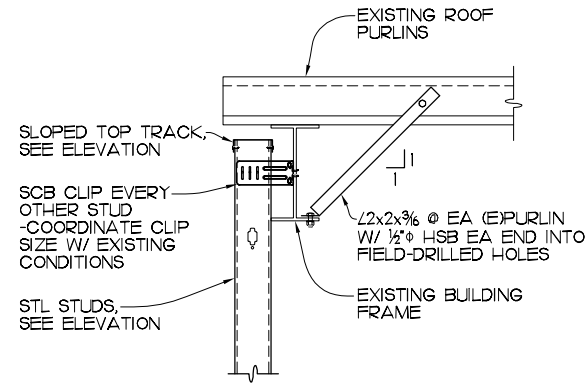
S9-5

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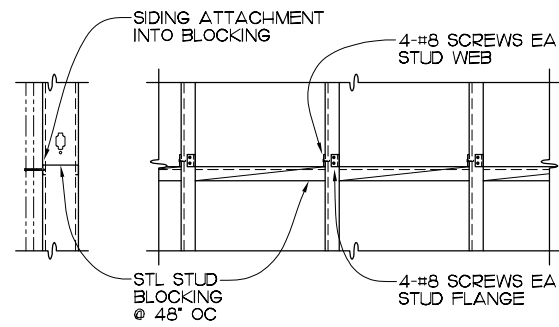




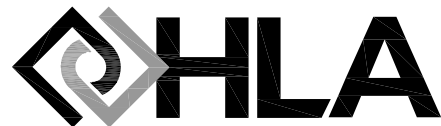
1.1 WALL FRAMING DETAIL - CF BASE TRACK
3/4"-1'-0"



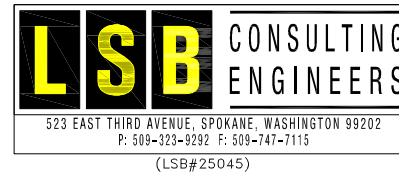
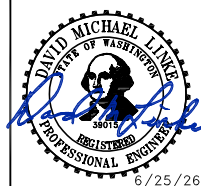
1.2 WALL FRAMING DETAIL - CF TOP CONNECTION
3/4"-1'-0"



1.3 WALL FRAMING DETAIL - CF BLOCKING
3/4"-1'-0"



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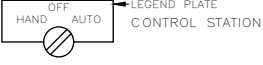
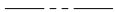
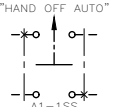
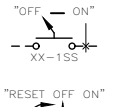
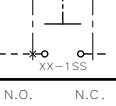
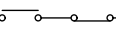
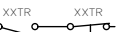
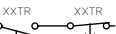
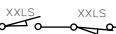
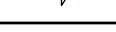
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		DESIGNED BY:	BTS
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CITY OF SELAH
PHASE 2- WASTEWATER TREATMENT
PLAN IMPROVEMENTS

STRUCTURAL DETAILS

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PANEL ELEVATION DRAWINGS SYMBOL SCHEDULE	GENERAL ELECTRICAL ACRONYMS AND ABBREVIATIONS	ELEMENTARY WIRING DIAGRAMS SYMBOL SCHEDULE	ONE LINE DIAGRAMS SYMBOL SCHEDULE	ELECTRICAL PLAN DRAWINGS SYMBOL SCHEDULE
LEGEND PLATE PUSH BUTTON LEGEND PLATE INDICATOR LIGHT LEGEND PLATE CONTROL STATION LEGEND PLATE POTENTIOMETER INDICATOR (ANALOG) INDICATOR (DIGITAL) ENGRAVED NAMEPLATE DESIGNATIONS 1,2,3,ETC. ARE THE ITEMS IN NAMEPLATE SCHEDULE SPEAKER/VISUAL ALARM VISUAL ONLY ALARM – WALL MOUNTED AUDIBLE/VISUAL CEILING MOUNTED ALARM MANUAL PULL STATION WALL MOUNTED SMOKE DETECTOR FIXED TEMPERATURE HEAT DETECTOR	A AMPERE AC ALTERNATING CURRENT AFC AVAILABLE FAULT CURRENT AFF ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE AI ANALOG INPUT AL ALUMINUM ATS AUTOMATIC TRANSFER SWITCH AWG AMERICAN WIRE GAUGE BKR BREAKER C CONDUIT CP CONTROL PANEL CPT CONTROL POWER TRANSFORMER CR CONTROL RELAY CT CURRENT TRANSFORMER CU COPPER DC DIRECT CURRENT EMT ELECTRICAL METALLIC TUBING ENCL ENCLOSURE ENT ELECTRICAL NONMETALLIC TUBING EWD ELEMENTARY WIRING DIAGRAM EXIST EXISTING FMC FLEXIBLE METAL CONDUIT FU FUSE FVNR FULL VOLTAGE NON REVERSING G GROUNDING CONDUCTOR GFP GROUND FAULT PROTECTOR GND GROUND HP HORSEPOWER IC INTERRUPTING CAPACITY ISR INTRINSICALLY SAFE RELAY KA KILO AMPERES KAIC KILO AMPERES INTERRUPTING CAPACITY KCMIL THOUSAND CIRCULAR MILLS KV KILOVOLT KVA KILOVOLT-AMPERE KW KILOWATT KWH KILOWATT-HOUR LFMC LIQUIDTIGHT FLEXIBLE METAL CONDUIT LNR LINE REACTOR LPU LINE PROTECTION UNIT LT LIGHT M MAGNETIC CONTACTOR mA MILLIAMPERES MCP MOTOR CURRENT PROTECTOR – MAGNETIC ONLY CIRCUIT BREAKER MLO MAIN LUGS ONLY MTS MANUAL TRANSFER SWITCH mV MILLIVOLT MW MEGAWATT N NEUTRAL CONDUCTOR NAC NOTIFICATION APPLIANCE CIRCUIT NEC NATIONAL ELECTRICAL CODE NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION. NESC NATIONAL ELECTRICAL SAFETY CODE OCP OVERCURRENT PROTECTOR ODP OPEN DRIP PROOF OI OPERATOR INTERFACE OL OVERLOAD P POLE PF POWER FACTOR PH PHASE PLC PROGRAMMABLE LOGIC CONTROLLER POT POTENTIOMETER PRMC PVC COATED RIGID METALLIC (STEEL) CONDUIT PS POWER SUPPLY PV PHOTOVOLTAIC PVC POLYVINYL CHLORIDE RMC RIGID METAL (STEEL) CONDUIT RNC RIGID NON-METALLIC CONDUIT RPM REVOLUTIONS PER MINUTE RS485 SERIAL RS485 CABLE RTRC REINFORCED THERMOSETTING RESIN CONDUIT SC5 SHIELDED CAT 5e CABLE SEC SECOND SHL'D SHIELDED SPD SURGE PROTECTIVE DEVICE SS SELECTOR SWITCH STP SHIELDED TWISTED PAIR SUSE SUITABLE FOR USE AS SERVICE ENTRANCE TB TERMINAL BLOCK TR TIMING RELAY UC5 UPS UNINTERRUPTIBLE POWER SUPPLY UTP UNSHIELDED TWISTED PAIR V VOLT VA VOLT AMPERE VAC VOLTS ALTERNATING CURRENT VFD VARIABLE FREQUENCY DRIVE VR VOLTAGE MONITORING RELAY W WATT WH WATT HOUR WP WEATHER PROOF XFMR POWER TRANSFORMER	SYMBOL DESCRIPTION PANEL OR DEVICE WIRING SYMBOL DESCRIPTION FIELD WIRING SYMBOL DESCRIPTION EQUIPMENT/DEVICE ENCLOSURE SYMBOL DESCRIPTION WIRING CONNECTED SYMBOL DESCRIPTION WIRING NOT CONNECTED SYMBOL DESCRIPTION DEVICE OR EQUIPMENT TERMINAL SYMBOL DESCRIPTION CONTROL PANEL TERMINAL SYMBOL DESCRIPTION MOTOR CONTROLLER TERMINAL SYMBOL DESCRIPTION TRANSFORMER WINDING SYMBOL DESCRIPTION FUSE SYMBOL DESCRIPTION GROUND SYMBOL DESCRIPTION ARC SUPPRESSOR (METAL OXIDE VARISTOR) SYMBOL DESCRIPTION DIODE "HAND OFF AUTO" SELECTOR SWITCH (1SS,2SS,ETC.) "X" = CLOSED IN THIS POSITION "OFF – ON" OFF-ON SELECTOR SWITCH (1SS,2SS,ETC.) "X" = CLOSED IN THIS POSITION ARROW POSITION DENOTES OPEN/CLOSED STATUS (SHOWN IN "OPEN" POSITION) "RESET OFF ON" SELECTOR SWITCH (1SS,2SS,ETC.) "X" = CLOSED IN THIS POSITION ↶ = SPRING RETURN (FROM "RESET" TO "OFF" POSITION AS SHOWN) N.O. N.C. SINGLE BREAK CONTACTS DOUBLE BREAK CONTACTS (CONTACT BLOCKS) N.O. N.C. INSTANTANEOUS CONTACT OF RELAY (1CR, 2CR, ETC.) TIMED DELAY CONTACT OF RELAY (DELAY ON ENERGIZATION-ON DELAY) (1TR, 2TR, ETC.) TIMED DELAY CONTACT OF RELAY (DELAY ON DE-ENERGIZATION-OFF DELAY) (1TR, 2TR, ETC.) OVERLOAD RELAY (1OL, 2OL, ETC.) N.O. N.C. PRESSURE SWITCH (1PS, 2PS, ETC.) TEMPERATURE ACTUATED SWITCH (THERMOSTAT) (1TAS, 2TAS, ETC.) FREE LIMIT SWITCHES (1LS, 2LS, ETC.) HELD ABBREVIATIONS N.O. = NORMALLY OPEN N.C. = NORMALLY CLOSED MAGNETIC COILS CONTROL RELAY (1CR, 2CR, ETC.) TIMED DELAY RELAY (1CR, 2CR, ETC.) MAGNETIC CONTACTOR (1CON, 2CON, ETC.) SOLENOID (1SV, 2SV, ETC.) (FOR VALVE UNLESS OTHERWISE NOTED) PILOT LIGHTS LED TYPE (1LT, 2LT, ETC.) LED "PUSH-TO-TEST" (CONNECT TEST CIRCUIT TO LINE) (1LT, 2LT, ETC.) LENS COLOR CODE A = AMBER G = GREEN R = RED W = WHITE Y = YELLOW	SYMBOL DESCRIPTION DEVICE OR EQUIPMENT TERMINAL SYMBOL DESCRIPTION WIRING CONNECTED SYMBOL DESCRIPTION BUS SYMBOL DESCRIPTION WIRING SYMBOL DESCRIPTION EQUIPMENT/DEVICE ENCLOSURE SYMBOL DESCRIPTION PLUG-IN CONNECTION SYMBOL DESCRIPTION NON-AUTOMATIC BREAKER SYMBOL DESCRIPTION THERMAL MAGNETIC CIRCUIT BREAKER SYMBOL DESCRIPTION MAGNETIC ONLY CIRCUIT BREAKER (MOTOR CIRCUIT PROTECTOR) SYMBOL DESCRIPTION SWITCH SYMBOL DESCRIPTION CONTACTOR SYMBOL DESCRIPTION THERMAL OVERLOAD SYMBOL DESCRIPTION FUSE SYMBOL DESCRIPTION POWER TRANSFORMER SYMBOL DESCRIPTION CONTROL POWER TRANSFORMER SYMBOL DESCRIPTION CURRENT TRANSFORMER SYMBOL DESCRIPTION GROUND CONNECTION SYMBOL DESCRIPTION TRANSFER SWITCH SYMBOL DESCRIPTION WATTHOUR METER (REVENUE METERING) SYMBOL DESCRIPTION VOLTAGE RELAY SYMBOL DESCRIPTION GENERATOR SYMBOL DESCRIPTION TAP BLOCK SYMBOL DESCRIPTION SOLID NEUTRAL SYMBOL DESCRIPTION MOTOR SYMBOL DESCRIPTION LIMIT SWITCH SYMBOL DESCRIPTION FLOAT SWITCH SYMBOL DESCRIPTION PRESSURE SWITCH SYMBOL DESCRIPTION THERMOSTAT/TEMPERATURE SWITCH SYMBOL DESCRIPTION SOLENOID VALVE SYMBOL DESCRIPTION CONTROL STATION/PUSHBUTTON/ SPEED POTENTIOMETER SYMBOL DESCRIPTION LOAD BREAK FUSE HOLDER AND FUSE SYMBOL DESCRIPTION SAFETY DISCONNECT (NEMA 4X ENCLOSURE UNLESS OTHERWISE NOTED) SYMBOL DESCRIPTION AUXILIARY CONTACT NON-SWITCHED CONDUCTOR	SYMBOL DESCRIPTION POWER DISTRIBUTION AND CONTROL DISTRIBUTION/CONTROL EQUIPMENT – FLOOR MOUNTED SYMBOL DESCRIPTION DISTRIBUTION/CONTROL EQUIPMENT – WALL MOUNTED SYMBOL DESCRIPTION PANELBOARD – WALL MOUNTED SYMBOL DESCRIPTION SWITCH (SAFETY OR DISCONNECT) SYMBOL DESCRIPTION MOTOR STARTER WITH SWITCH OR BREAKER (COMBINATION MAGNETIC STARTER) DESIGNATIONS A,B,C,ETC. ARE FIXTURE TYPE, REFER TO LIGHTING FIXTURE SCHEDULE 1,2,3,ETC. ARE CIRCUIT NUMBERS OF PANELBOARD TO WHICH FIXTURE IS TO BE CONNECTED, REFER TO CIRCUIT SCHEDULE a,b,c,ETC. ARE SWITCHING CONTROL REFERENCE R = RECESSED LIGHTING FIXTURES ROUND FIXTURE CEILING MOUNTED (RECESSED, SURFACE, OR PENDANT) FIXTURE WALL MOUNTED (RECESSED, SURFACE OR ARM) LED LINEAR FIXTURE CEILING MOUNTED (RECESSED, SURFACE OR PENDANT) INDICATES DIRECTION EXIT LIGHT FIXTURE SWITCHING SINGLE POLE SWITCH – WALL MOUNTED DESIGNATIONS E EXISTING SWITCH M MOTOR RATED SWITCH 3 THREE WAY SWITCH P SWITCH W/ PILOT LIGHT 4 FOUR WAY SWITCH T TIME SWITCH K KEY OPERATED SWITCH a LOWER CASE = SWITCH LEG ANY COMBINATION OF THE ABOVE DESIGNATIONS MAY BE SHOWN ON PLANS RECEPTACLE OUTLETS DUPLEX RECEPTACLE OUTLET – WALL MOUNTED (NEMA 5-15R UNLESS OTHERWISE SPECIFIED) QUADRUPLEX RECEPTACLE OUTLET – WALL MOUNTED (NEMA 5-15R UNLESS OTHERWISE SPECIFIED) SPECIAL PURPOSE RECEPTACLE OUTLET SPECIAL PURPOSE RECEPTACLE OUTLET WALL MOUNTED DESIGNATIONS 1,2,3,ETC. ARE CIRCUIT NUMBERS OF PANELBOARD TO WHICH OUTLET IS TO BE CONNECTED, REFER TO CIRCUIT SCHEDULE H = HORIZONTAL WP = WEATHERPROOF GFCI = GROUND FAULT CIRCUIT INTERRUPTER USB = USB CHARGER SPECIAL PURPOSE CONNECTIONS SPECIAL PURPOSE EQUIPMENT CONNECTION SPECIAL PURPOSE EQUIPMENT CONNECTION – WALL MOUNTED MECHANICALLY ACTUATED SWITCHES FLOAT SWITCH LEVEL TRANSDUCER PRESSURE SWITCH PHOTO ELECTRIC SWITCH (PHOTOCELL) – WALL MOUNTED LIMIT SWITCH GENERAL WIRING SYMBOLS JUNCTION BOX JUNCTION BOX – WALL MOUNTED WIRING RUN EXPOSED ON BUILDING OR STRUCTURE UNLESS OTHERWISE NOTED ON DRAWINGS WIRING RUN CONCEALED UNDER SLAB OR BELOW GRADE UNLESS OTHERWISE NOTED ON DRAWINGS INDICATES WIRE SIZE IF OTHER THAN #12AWG LINE OR PHASE CONDUCTOR NEUTRAL CONDUCTOR GROUNDING CONDUCTOR ARROWHEAD INDICATES HOMERUN TO EQUIPMENT/DEVICE NOTED AT END OF ARROWHEAD, NUMBER (WHERE NOTED) INDICATES CIRCUIT WITHIN EQUIPMENT/DEVICE NOTED. CONDUIT TURN UP CONDUIT TURN DOWN



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* SCALE NOTED ON DRAWINGS IS FOR FULL SIZE PRINT (22"x34").

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FILE NAMES: DRAWING: 23166E0-01	
DESIGNED BY: ENTERED BY:	CJD BRB

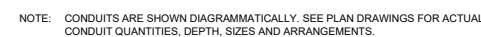
CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS

ELECTRICAL SYMBOL SCHEDULE

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The image contains two technical drawings of a conduit installation, labeled 'FRONT VIEW' and 'RIGHT SIDE VIEW'.

FRONT VIEW: This cross-sectional diagram shows the layers of the installation from top to bottom: a 'CONCRETE SLAB' at the top, followed by 'COMPACTED TOP COURSE (NOTE 2)', 'COMPACTED BACKFILL (NOTE 2)', '3" SAND BEDDING MATERIAL', and 'ELECTRICAL CONDUIT' (represented by two circles). Below the conduit is another layer of '3" SAND BEDDING MATERIAL'.

RIGHT SIDE VIEW: This side-view diagram shows the 'ELECTRICAL CONDUIT' running horizontally and then turning 90 degrees vertically. The horizontal section is labeled 'CONDUIT TO EQUIPMENT'. The vertical section is labeled 'PVC COATED RIGID METAL CONDUIT'. The bend is labeled 'PVC COATED RIGID METAL CONDUIT ELBOW'. A '3" MINIMUM' clearance is indicated between the top of the conduit and the bottom of the concrete slab. The layers shown are 'CONCRETE SLAB', 'COMPACTED TOP COURSE (NOTE 2)', 'COMPACTED BACKFILL (NOTE 2)', and '3" SAND BEDDING MATERIAL'. A 'NOTE 1' points to the bedding material directly under the horizontal section of the conduit.

1. TOP-OF-CONDUIT BURAL DEPTH TO THE BOTTOM OF CONCRETE SLAB SHALL BE AT LEAST TWELVE INCHES BUT MAY BE ADJUSTED TO BE DEEPER DEPENDING ON THE RADIUS OF THE ELBOW. IT IS ACCEPTABLE TO INSTALL THE STRAIGHT (VERTICAL) PORTION OF THE ELBOW THROUGH THE CONCRETE SLAB, BUT IT IS NOT ACCEPTABLE TO INSTALL THE CURVED PORTION OF THE ELBOW IN THE CONCRETE SLAB.
2. PROVIDE COMPACTED BACKFILL AND TOP COURSE PER STRUCTURAL REQUIREMENTS.
3. CONDUITS CROSSING FOOTINGS OR STEMMALLS SHALL ROUTE UNDER INTERIOR AND EXTERIOR BUILDING FOOTINGS. IT IS NOT ACCEPTABLE TO ROUTE CONDUITS THROUGH FOOTING OR STEMMALLS OR ROUTE IN SLAB. INCREASE TRENCH DEPTH IN THESE AREAS AS REQUIRED TO PASS UNDER FOOTINGS AND STEMMALLS.

1" FROM ENCLOSURE FACE

ENCLOSURE

3/4" CHAMFER

2 INCHES MAXIMUM

3 1/2"

CONCRETE BASE PER STRUCTURAL DRAWINGS

STRUCTURAL FLOOR

4" MIN.

NUT

LOCK WASHER

BITUMASTIC PROTECTIVE COATING COMPOUND (COAL TAR EPOXY)

DRILL AND EPOXY 1/2" STAINLESS STEEL THREADED ANCHOR ROD INTO CONCRETE STRUCTURAL FLOOR. VERIFY ANCHORAGE AND LOCATIONS PER ENCLOSURE MANUFACTURER'S REQUIREMENTS.

LEFT SIDE VIEW

MOUNTING HEIGHT VARIES
(SEE PLAN DRAWING DETAILS FOR MOUNTING HEIGHT REQUIREMENTS)

CUT TUBE ON ANGLE AND CAP WITH 1/4" ANODIZED ALUMINUM PLATE WITH FULLY WELDED SEAM

2 1/2" SQUARE x 1/4" ANODIZED ALUMINUM TUBE. PROVIDE QUANTITY OF VERTICAL SUPPORTS AS SHOWN ON INDIVIDUAL EQUIPMENT DETAILS

3/8"x4" STAINLESS STEEL EPOXY ANCHOR ROD WITH 3" MINIMUM EMBED. PROVIDE STAINLESS STEEL NUT WITH JAM OR CAP NUT ON END OF EACH ANCHOR ROD. TRIM AND GRIND ROD END FLUSH WITH JAM NUT OR PROVIDE CAP NUT ON THREADED END TIGHT AGAINST SET NUT. (TYPICAL OF 4 PER EACH VERTICAL SUPPORT)

(SUPPORTING STRUCTURE NOT SHOWN)

TOP VIEW

1/4" THICK ANODIZED ALUMINUM PLATE SIZED FOR EQUIPMENT AND WELDED TO ANODIZED ALUMINUM TUBE.

FRONT VIEW

1/8" WEEP HOLE AT BOTTOM OF TUBE

1/4" ANODIZED ALUMINUM PLATE WELDED TO ANODIZED ALUMINUM TUBE SET PLATE IN BED OF BITUMASTIC.

1" THICK GROUT PAD

The diagram shows the front panel of a VFD with three main controls:

- MOTOR TEMPERATURE SWITCH DISCONNECT:** A 2-position selector switch with positions labeled "OFF" and "ON".
- MOTOR CONTROL:** A 3-position selector switch with positions labeled "OFF", "ON", and "REMOTE".
- MOTOR CONTROL:** A potentiometer with a central knob and a scale around the perimeter, labeled "MANUAL SPEED".

Labels and callouts on the right side of the diagram:

- NAMEPLATE (TYPICAL OF 3)
- 2 POSITION SELECTOR SWITCH
- 3 POSITION SELECTOR SWITCH
- VFD SPEED REFERENCE POTENTIOMETER

LEFT SIDE VIEW

FRONT VIEW

TOP VIEW

POWER CONDUIT TO MOTOR

POWER CONDUIT FROM MCC

DISCONNECT SWITCH

NAMEPLATE ENGRAVED WITH I.D. OF MOTOR

SEE DETAIL 5/E-2 FOR CONTROL STATION/ DISCONNECT BACKPLATE MOUNTING

3'-4" (MINIMUM)

(FLOOR NOT SHOWN)

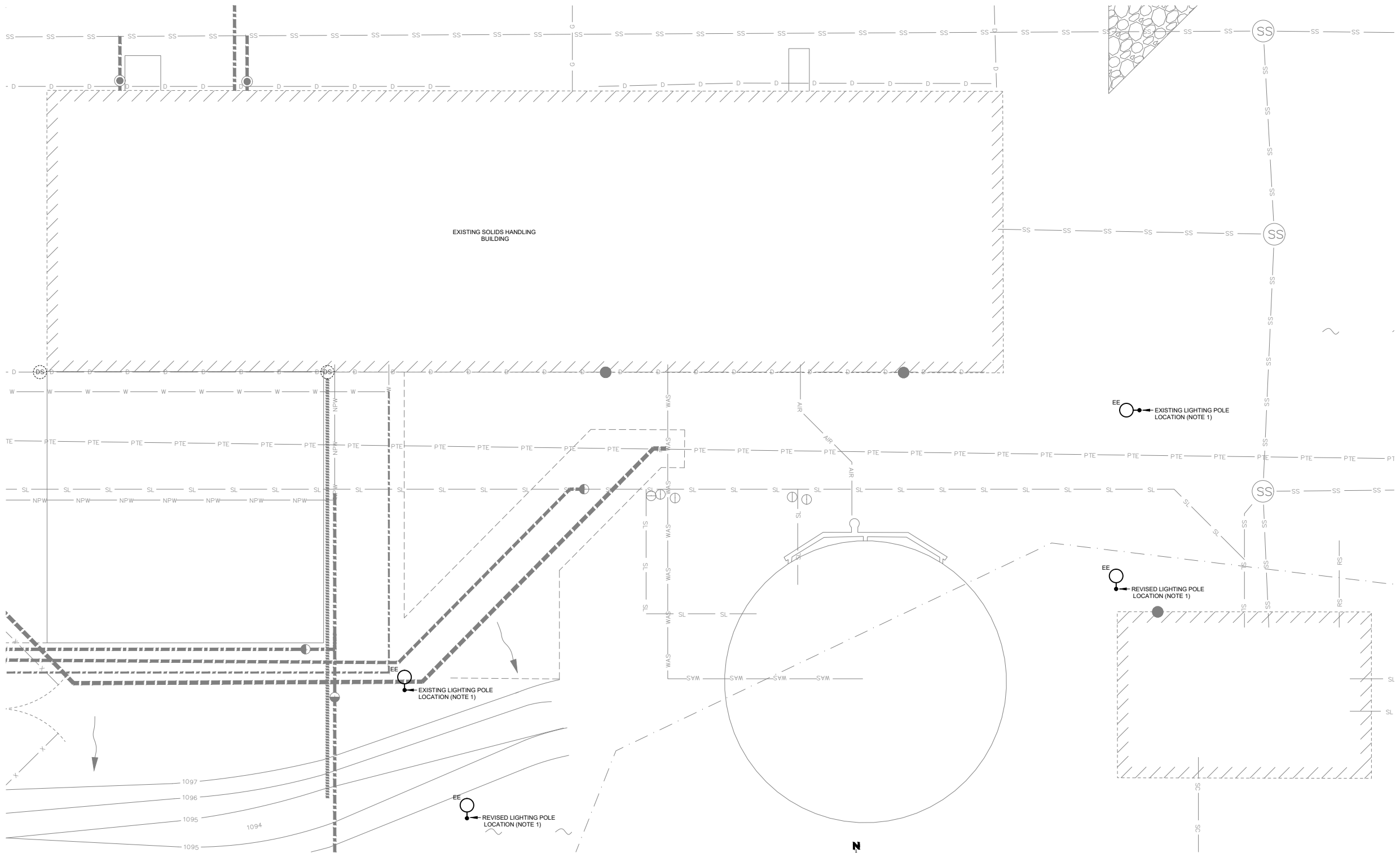


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		23166	07-07-26
		FILE NAMES:	
		DRAWING:	23166E0-02
		DESIGNED BY:	CJL
REVISION	DATE	ENTERED BY:	BRE

ELECTRICAL DETAILS

SHEET

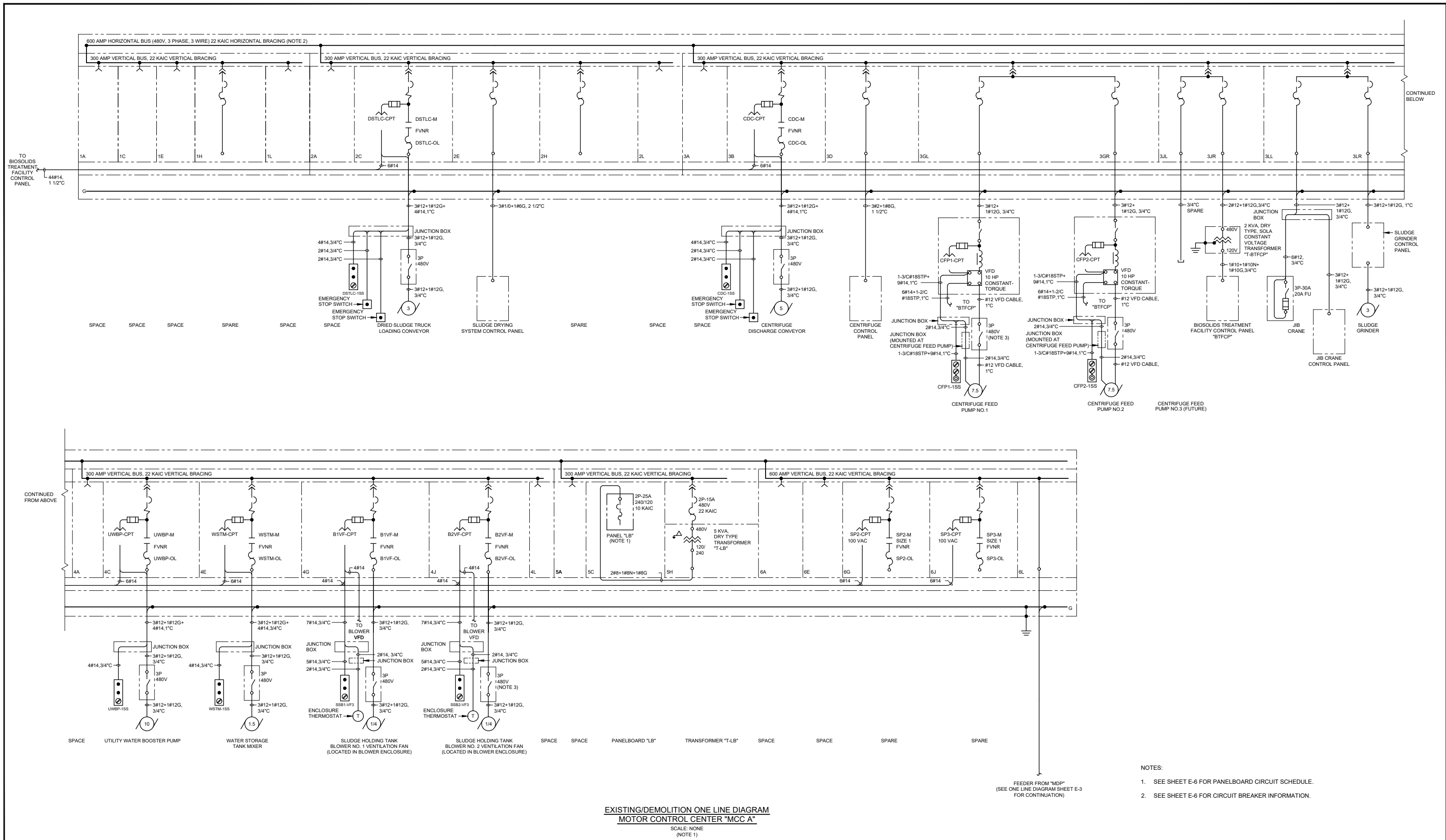
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ELECTICAL SITE PLAN
BIOSOLIDS TREATMENT FACILITY

0 5'-0" 10'-0" 20'-0"

- NOTES:
1. RELOCATE EXISTING LIGHTING FIXTURE AND ASSOCIATED POLE. PROVIDE NEW POLE BASE PER DETAIL 7/E-2. INTERCEPT EXISTING CIRCUIT AND EXTEND AND CONNECT TO RELOCATED POLE.
 2. PROVIDE NEW TYPE I JUNCTION BOX AT LOCATION WHERE EXISTING POLE IS LOCATED IN ORDER TO EXTEND EXISTING CIRCUIT. SEE DETAIL 8/E-2.



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DESIGNED BY:	ENTERED BY:	CJD BRB	

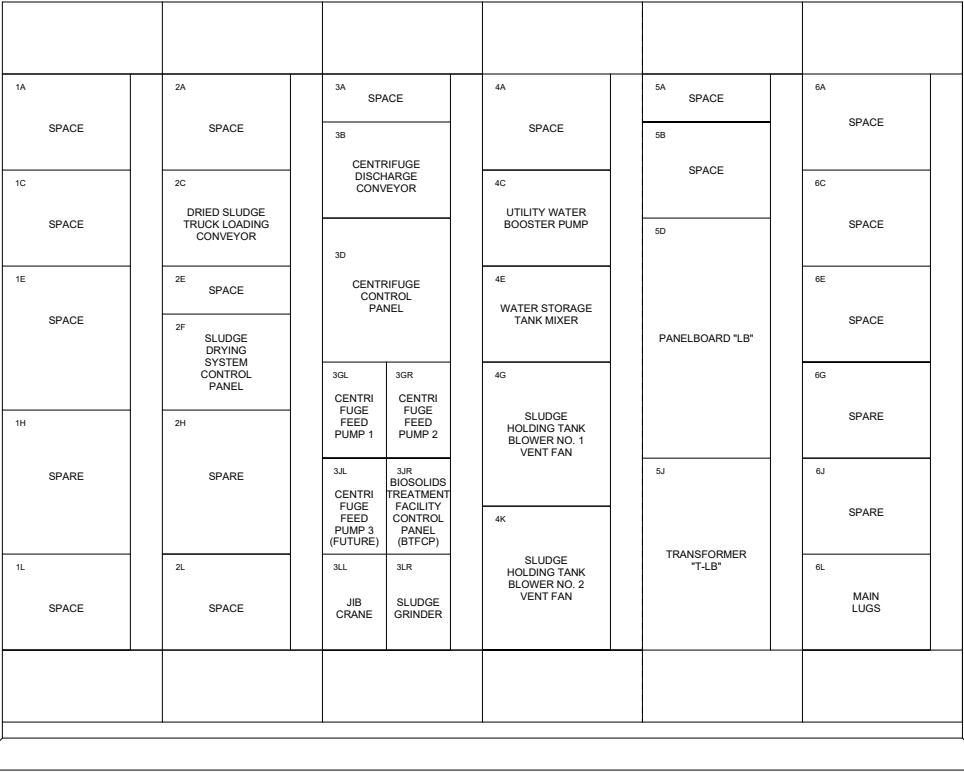
CITY OF SELAH PHASE 2 - WASTEWATER TREATMENT PLANT IMPROVEMENTS

EXISTING ONE LINE DIAGRAM "MCC A"

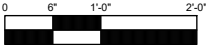
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EXISTING/DEMOLITION ELEVATION
MOTOR CONTROL CENTER "MCC A"
SCALE: 1"=1'-0"



PANELBOARD
CIRCUIT SCHEDULE
PANEL LB
SECTION 1 OF 1

CKT. #	LOAD DESCRIPTION	BREAKER TYPE	POLE #	POLE #	BREAKER TYPE	LOAD DESCRIPTION	CKT. #
1	POLYMER FEED SYSTEM NO.1 CONTROL PANEL	1P-20A	1	2	1P-20A	UTILITY WATER FLOWMETER	2
3	POLYMER FEED SYSTEM NO.2 CONTROL PANEL	1P-20A	3	4	1P-20A	SPARE	4
5	HYPOCHLORITE FEED PUMP RECEPTACLE	1P-20A	5	6	1P-20A	SPARE	6
7	UTILITY WATER FILTER RECEPTACLE	1P-20A	7	8	1P-20A	SPARE	8
9	SPARE	1P-20A	9	10	1P-20A	SPARE	10
11	SPARE	1P-20A	11	12	1P-20A	SPARE	12

EXISTING MCC SCHEDULE (NOTES 1&2)					MCC UNIT INFORMATION			FIELD DEVICE INFORMATION			LOAD	
MCC	SEC	UNIT	HT.		TYPE	OCF	RATED HP/AMPS	DISC	ENCL	CS	ACTUAL HP	
A	1	A	12	SPACE								
		C	12	SPACE								
		E	18	SPACE								
		H	18	SPARE	BRKR	CB	100A					
		L	12	SPACE								
	2	A	12	SPACE								
		C	12	DRIED SLUDGE TRUCK LOADING CONVEYOR	FVNR	MCP	3 HP	30A	4X	1-3S, 2-PB	3 HP	
		E	6	SPACE								
		F	12	SLUDGE DRYING SYSTEM CONTROL PANEL	BRKR	CB	150A					
		H	18	SPARE	BRKR	CB	150A					
	3	A	12	SPACE								
		B	12	CENTRIFUGE DISCHARGE CONVEYOR	FVNR	MCP	5 HP	30A	4X	1-3S, 2-PB	3 HP	
		D	18	CENTRIFUGE CONTROL PANEL	BRKR	CB	100A					
		GL	12	CENTRIFUGE FEED PUMP NO. 1	BRKR	CB	30A	30A	4X	1-POT, 1-2S, 1-3S	7.5 HP	
		GR	12	CENTRIFUGE FEED PUMP NO. 2	BRKR	CB	30A	30A	4X	1-POT, 1-2S, 1-3S	7.5 HP	
	4	JL	12	CENTRIFUGE FEED PUMP NO. 3 (FUTURE)	BRKR	CB	30A					7.5 HP
		JR		BIOSOLIDS TREATMENT FACILITY CONTROL PANEL (BTFCP)	BRKR	CB	15A					
		ILL	12	JIB CRANE	BRKR	CB	20A	30A				2 HP
		LR		SLUDGE GRINDER	BRKR	CB	20A					
	5	A	12	SPACE								
		C	12	UTILITY WATER BOOSTER PUMP	FVNR	MCP	10 HP	30A	4X	1-3S, 2-PB	10 HP	
		E	12	WATER STORAGE TANK MIXER	FVNR	MCP	1.5 HP	30A	4X	1-3S, 2-PB	1/2 HP	
		G	18	SLUDGE HOLDING TANK BLOWER NO. 1 VENTILATION FAN	FVNR	MCP	1/2 HP	30A	4X	1-3S, 2-PB	1/4 HP	
		J	18	SLUDGE HOLDING TANK BLOWER NO. 2 VENTILATION FAN	FVNR	MCP	1/2 HP	30A	4X	1-3S, 2-PB	1/4 HP	
	6	A	6	SPACE								
		B	12	SPACE								
		D	30	PANELBOARD "LB"	BRKR	CB	30A					
		H	24	TRANSFORMER "T-LB" & PRIMARY BREAKER	BRKR	CB	15A					
	7	A	12	SPACE								
		C	12	SPACE								
E		12	SPACE									
G		12	SPACE	FVNR	MCP	5HP						
J		12	SPACE	FVNR	MCP	2 HP						
8	L	12	MAIN LUGS	MLO		400A						

- NOTES:
1. NOTE THE FOLLOWING INFORMATION REGARDING THE MCC SCHEDULE:
- BRKR: THERMAL MAGNETIC FEEDER CIRCUIT BREAKER
 - FVNR: FULL VOLTAGE NON-REVERSING STARTER
 - CPT: CONTROL POWER TRANSFORMER
 - MLO: MAIN LUGS ONLY
 - OCF: OVERCURRENT PROTECTOR
 - MCP: MOTOR CURRENT PROTECTOR - MAGNETIC ONLY CIRCUIT BREAKER
 - CB: CIRCUIT BREAKER (MOLDED CASE)
 - DISC: SAFETY DISCONNECT AMPERE RATING AND NUMBER OF AUXILIARY POLES
 - ENCL: NEMA ENCLOSURES TYPES FOR THE SAFETY DISCONNECT AND THE CONTROL STATION
 - CS: CONTROL STATION
 - #-2S: 2 POSITION SELECTOR SWITCH IN CONTROL STATION (QUANTITY NOTED BY #)
 - #-3S: 3 POSITION SELECTOR SWITCH IN CONTROL STATION (QUANTITY NOTED BY #)
 - #-POT: POTENTIOMETER IN CONTROL STATION (QUANTITY NOTED BY #)
 - #-PB: MOMENTARY PUSHBUTTON IN CONTROL STATION (QUANTITY NOTED BY #)



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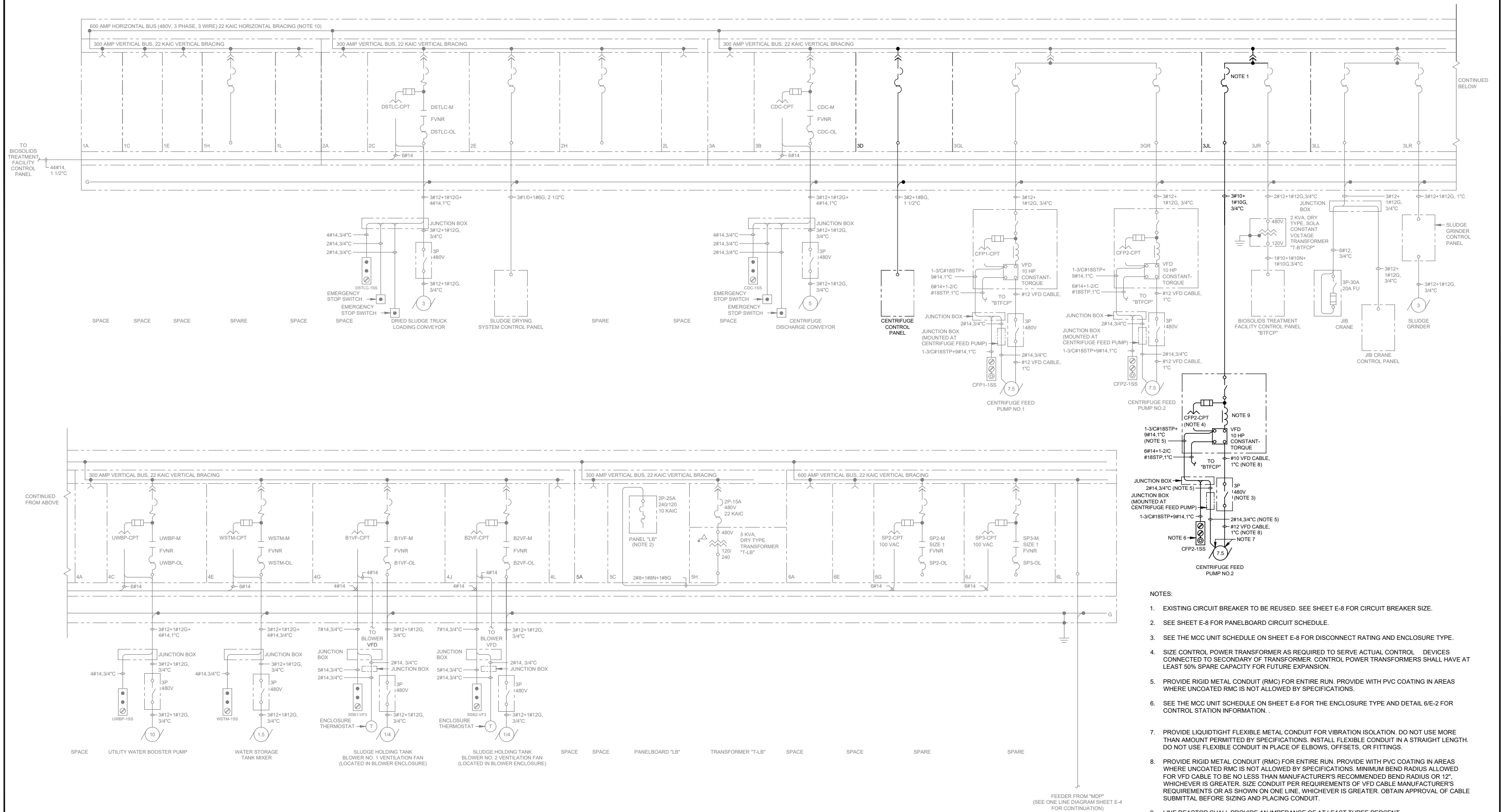


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CITY OF SELAH PHASE 2 - WASTEWATER TREATMENT PLANT IMPROVEMENTS	
EXISTING MOTOR CONTROL CENTER "MCC A"	

E-6
SHEET
54 OF 82



MODIFIED ONE LINE DIAGRAM
MOTOR CONTROL CENTER "MCC A"
SCALE: NONE

- NOTES:
- EXISTING CIRCUIT BREAKER TO BE REUSED. SEE SHEET E-8 FOR CIRCUIT BREAKER SIZE.
 - SEE SHEET E-8 FOR PANELBOARD CIRCUIT SCHEDULE.
 - SEE THE MCC UNIT SCHEDULE ON SHEET E-8 FOR DISCONNECT RATING AND ENCLOSURE TYPE.
 - SIZE CONTROL POWER TRANSFORMER AS REQUIRED TO SERVE ACTUAL CONTROL DEVICES CONNECTED TO SECONDARY OF TRANSFORMER. CONTROL POWER TRANSFORMERS SHALL HAVE AT LEAST 50% SPARE CAPACITY FOR FUTURE EXPANSION.
 - PROVIDE RIGID METAL CONDUIT (RMC) FOR ENTIRE RUN. PROVIDE WITH PVC COATING IN AREAS WHERE UNCOATED RMC IS NOT ALLOWED BY SPECIFICATIONS.
 - SEE THE MCC UNIT SCHEDULE ON SHEET E-8 FOR THE ENCLOSURE TYPE AND DETAIL 6/E-2 FOR CONTROL STATION INFORMATION.
 - PROVIDE LIQUIDTIGHT FLEXIBLE METAL CONDUIT FOR VIBRATION ISOLATION. DO NOT USE MORE THAN AMOUNT PERMITTED BY SPECIFICATIONS. INSTALL FLEXIBLE CONDUIT IN A STRAIGHT LENGTH. DO NOT USE FLEXIBLE CONDUIT IN PLACE OF ELBOWS, OFFSETS, OR FITTINGS.
 - PROVIDE RIGID METAL CONDUIT (RMC) FOR ENTIRE RUN. PROVIDE WITH PVC COATING IN AREAS WHERE UNCOATED RMC IS NOT ALLOWED BY SPECIFICATIONS. MINIMUM BEND RADIUS ALLOWED FOR VFD CABLE TO BE NO LESS THAN MANUFACTURER'S RECOMMENDED BEND RADIUS OR 12", WHICHEVER IS GREATER. SIZE CONDUIT PER REQUIREMENTS OF VFD CABLE MANUFACTURER'S REQUIREMENTS OR AS SHOWN ON ONE LINE, WHICHEVER IS GREATER. OBTAIN APPROVAL OF CABLE SUBMITTAL BEFORE SIZING AND PLACING CONDUIT.
 - LINE REACTOR SHALL PROVIDE AN IMPEDANCE OF AT LEAST THREE PERCENT.
 - SEE SHEET E-8 FOR CIRCUIT BREAKER INFORMATION.



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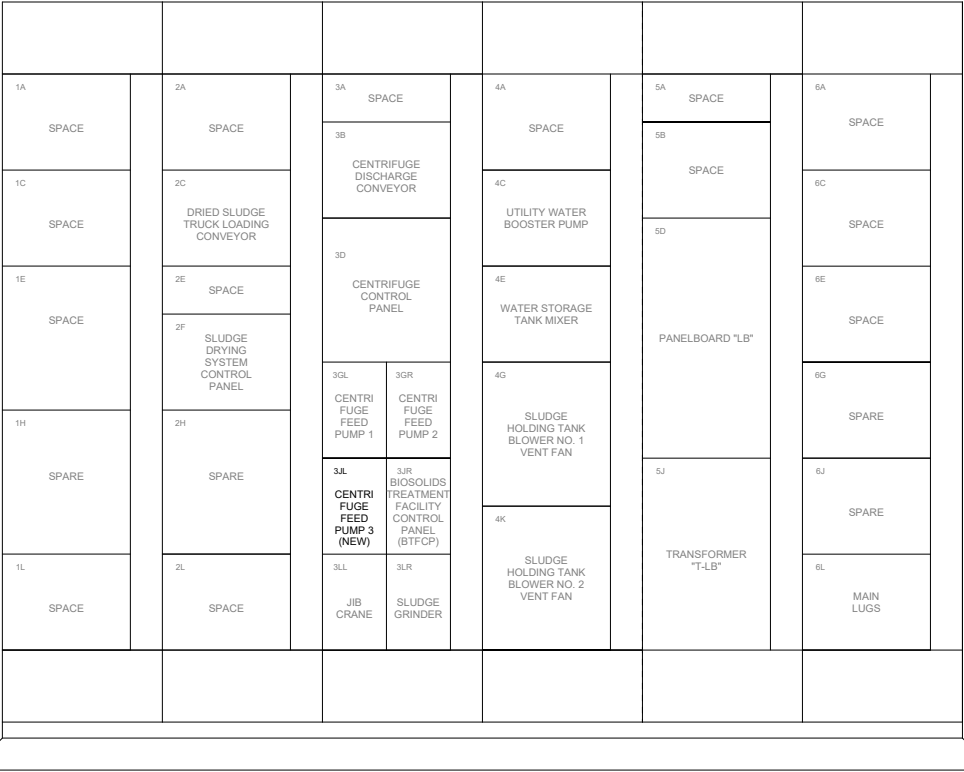
CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS

MODIFIED ONE LINE DIAGRAM "MCC A"

E-7

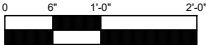
SHEET

55 OF 82



EXISTING/DEMOLITION ELEVATION
MOTOR CONTROL CENTER "MCC A"

SCALE: 1"=1'-0"



PANELBOARD
CIRCUIT SCHEDULE
PANEL LB SECTION 1 OF 1

CKT. #	LOAD DESCRIPTION	BREAKER TYPE	POLE #	POLE #	BREAKER TYPE	LOAD DESCRIPTION	CKT. #
1	POLYMER FEED SYSTEM NO.1 CONTROL PANEL	1P-20A	1	2	1P-20A	UTILITY WATER FLOWMETER	2
3	POLYMER FEED SYSTEM NO.2 CONTROL PANEL	1P-20A	3	4	1P-20A	SPARE	4
5	HYPOCHLORITE FEED PUMP RECEPTACLE	1P-20A	5	6	1P-20A	SPARE	6
7	UTILITY WATER FILTER RECEPTACLE	1P-20A	7	8	1P-20A	SPARE	8
9	SPARE	1P-20A	9	10	1P-20A	SPARE	10
11	SPARE	1P-20A	11	12	1P-20A	SPARE	12

MODIFIED MCC SCHEDULE (NOTE1)										FIELD DEVICE INFORMATION						LOAD	
MCC UNIT INFORMATION										TYPE	OCF	RATED HP/AMPS	DISC	ENCL	CS	ACTUAL HP	
MCC A	SEC 1	UNIT A	HT. 12	SPACE													
		C	12	SPACE													
		E	18	SPACE													
		H	18	SPARE		BRKR	CB	100A									
		L	12	SPACE													
	2	A	12	SPACE													
		C	12	DRIED SLUDGE TRUCK LOADING CONVEYOR		FVNR	MCP	3 HP	30A	4X		1-3S, 2-PB		3 HP			
		E	6	SPACE													
		F	12	SLUDGE DRYING SYSTEM CONTROL PANEL		BRKR	CB	150A									
		H	18	SPARE		BRKR	CB	150A									
	3	L	12	SPACE													
		A	6	SPACE													
		B	12	CENTRIFUGE DISCHARGE CONVEYOR		FVNR	MCP	5 HP	30A	4X		1-3S, 2-PB		3 HP			
		D	18	CENTRIFUGE CONTROL PANEL		BRKR	CB	100A									
		GL	12	CENTRIFUGE FEED PUMP NO. 1		BRKR	CB	30A	30A	4X		1-POT, 1-2S, 1-3S		7.5 HP			
	4	GR	12	CENTRIFUGE FEED PUMP NO. 2		BRKR	CB	30A	30A	4X		1-POT, 1-2S, 1-3S		7.5 HP			
		JL	12	CENTRIFUGE FEED PUMP NO. 3 (NEW) (NOTES 2&3)		BRKR	CB	30A	30A	4X		1-POT, 1-2S, 1-3S		7.5 HP			
		JR		BIOSOLIDS TREATMENT FACILITY CONTROL PANEL (BTFCP)		BRKR	CB	15A									
		LL	12	JIB CRANE		BRKR	CB	20A	30A					2 HP			
		LR		SLUDGE GRINDER		BRKR	CB	20A									
	5	A	12	SPACE													
		C	12	UTILITY WATER BOOSTER PUMP		FVNR	MCP	10 HP	30A	4X		1-3S, 2-PB		10 HP			
		E	12	WATER STORAGE TANK MIXER		FVNR	MCP	1.5 HP	30A	4X		1-3S, 2-PB		1/2 HP			
		G	18	SLUDGE HOLDING TANK BLOWER NO. 1 VENTILATION FAN		FVNR	MCP	1/2 HP	30A	4X		1-3S, 2-PB		1/4 HP			
		J	18	SLUDGE HOLDING TANK BLOWER NO. 2 VENTILATION FAN		FVNR	MCP	1/2 HP	30A	4X		1-3S, 2-PB		1/4 HP			
	6	A	6	SPACE													
		B	12	SPACE													
		D	30	PANELBOARD "LB"		BRKR	CB	30A									
		H	24	TRANSFORMER "T-LB" & PRIMARY BREAKER		BRKR	CB	15A									
		A	12	SPACE													
	7	C	12	SPACE													
		E	12	SPACE													
		G	12	SPACE		FVNR	MCP	5HP									
		J	12	SPACE		FVNR	MCP	2 HP									
		L	12	MAIN LUGS		MLO		400A									

NOTES:

1. NOTE THE FOLLOWING INFORMATION REGARDING THE MCC SCHEDULE:
BRKR: THERMAL MAGNETIC FEEDER CIRCUIT BREAKER
FVNR: FULL VOLTAGE NON-REVERSING STARTER
CPT: CONTROL POWER TRANSFORMER
MLO: MAIN LUGS ONLY
OCP: OVERCURRENT PROTECTOR
MCP: MOTOR CURRENT PROTECTOR - MAGNETIC ONLY CIRCUIT BREAKER
CB: CIRCUIT BREAKER (MOLDED CASE)
DISC: SAFETY DISCONNECT AMPERE RATING AND NUMBER OF AUXILIARY POLES
ENCL: NEMA ENCLOSURES TYPES FOR THE SAFETY DISCONNECT AND THE CONTROL STATION
CS: CONTROL STATION
#-2S: 2 POSITION SELECTOR SWITCH IN CONTROL STATION (QUANTITY NOTED BY #)
#-3S: 3 POSITION SELECTOR SWITCH IN CONTROL STATION (QUANTITY NOTED BY #)
#-POT: POTENTIOMETER IN CONTROL STATION (QUANTITY NOTED BY #)
#-PB: MOMENTARY PUSHBUTTON IN CONTROL STATION (QUANTITY NOTED BY #)
2. CONNECT NEW CENTRIFUGE FEED PUMP NO. 3 TO EXISTING CIRCUIT BREAKER.
3. SEE DETAIL 6/E-2 FOR CONTROL STATION INFORMATION. .



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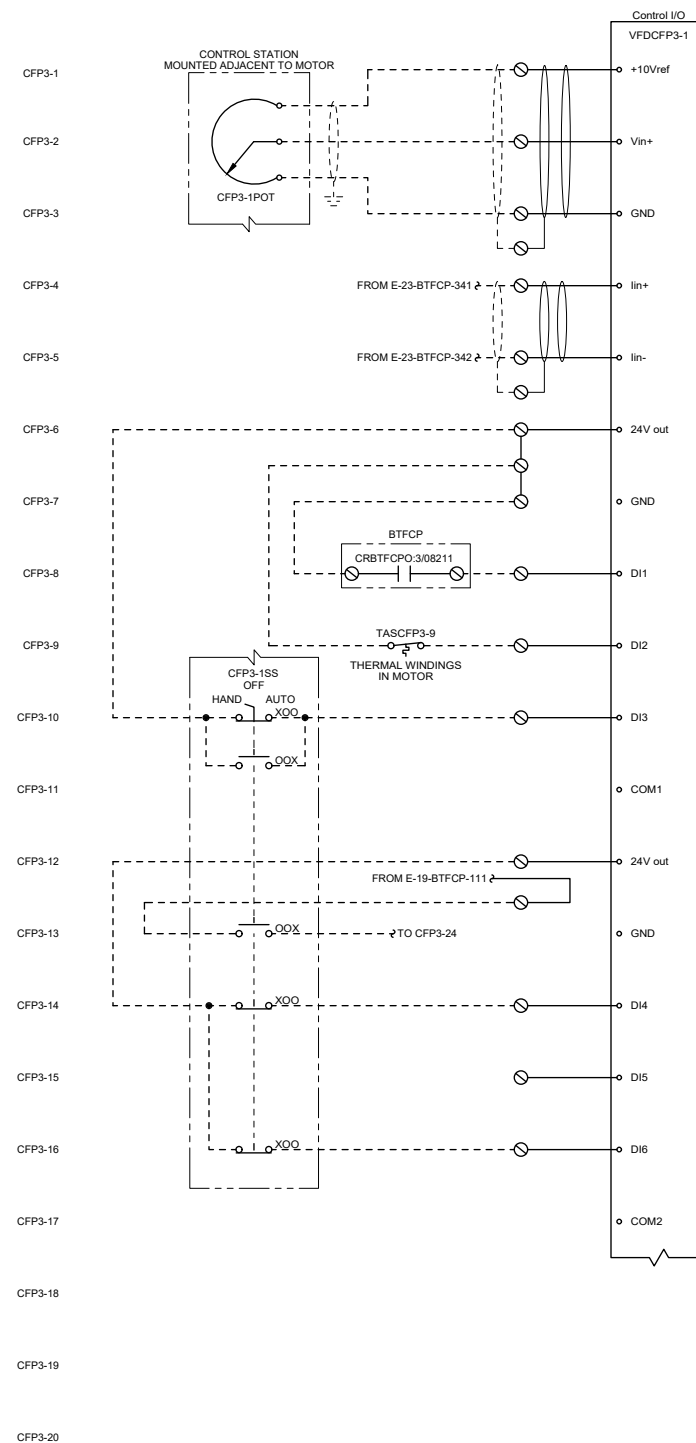
CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS

MODIFIED MOTOR CONTROL CENTER "MCC A"

E-8

SHEET

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LOCAL
SPEED SETPOINT

PLC
SPEED SETPOINT

PLC
CALL TO RUN

MOTOR WINDINGS
THERMAL DETECTOR

VFD
ENABLE

ANALOG
SOURCE SELECT

LOCAL
CALL TO RUN

CFP3-21

CFP3-22

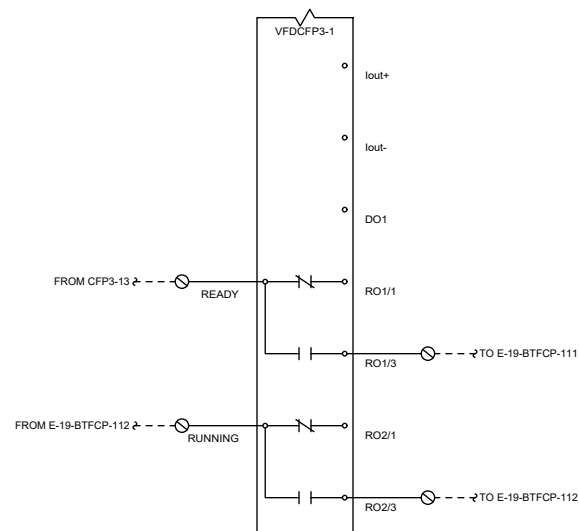
CFP3-23

CFP3-24

CFP3-25

CFP3-26

CFP3-27



CENTRIFUGE FEED PUMP
NO.1 VFD

CENTRIFUGE FEED PUMP
NO.1 VFD

E.W.D. 1/E-9
CENTRIFUGE FEED PUMP NO.3 VFD



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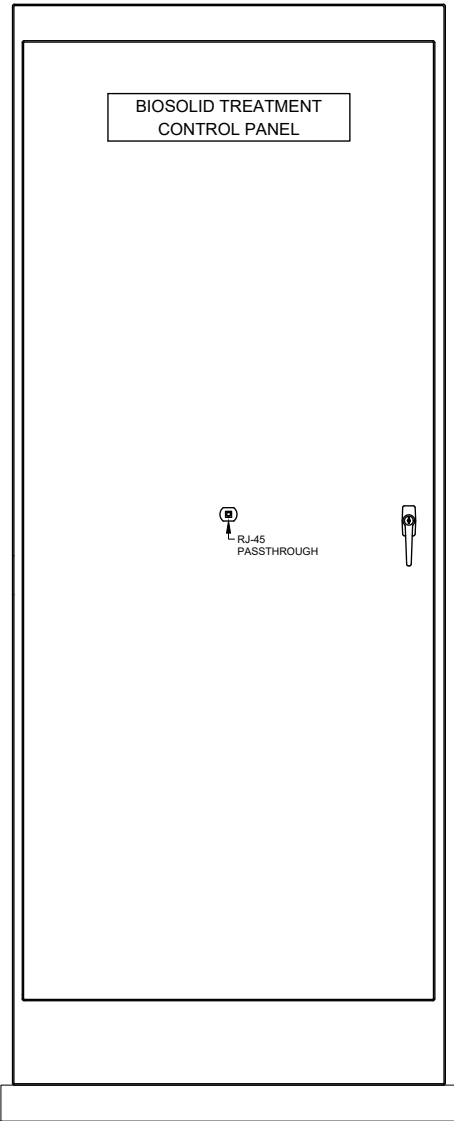
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PLANT IMPROVEMENTS

ELEMENTARY WIRING DIAGRAMS

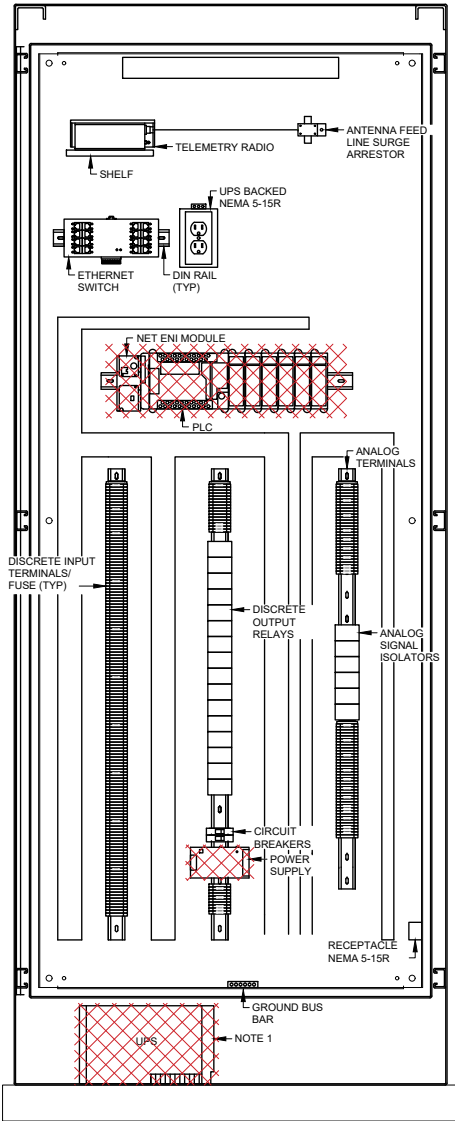
E-9

SHEET

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EXTERIOR ELEVATION



INTERIOR ELEVATION

DETAIL 1/E-10
SCALE: 1 1/2" = 1'-0"

- NOTES:
1. PROVIDE RECPTACLE COVERS FOR ALL UNUSED UPS BACKED RECEPTACLES



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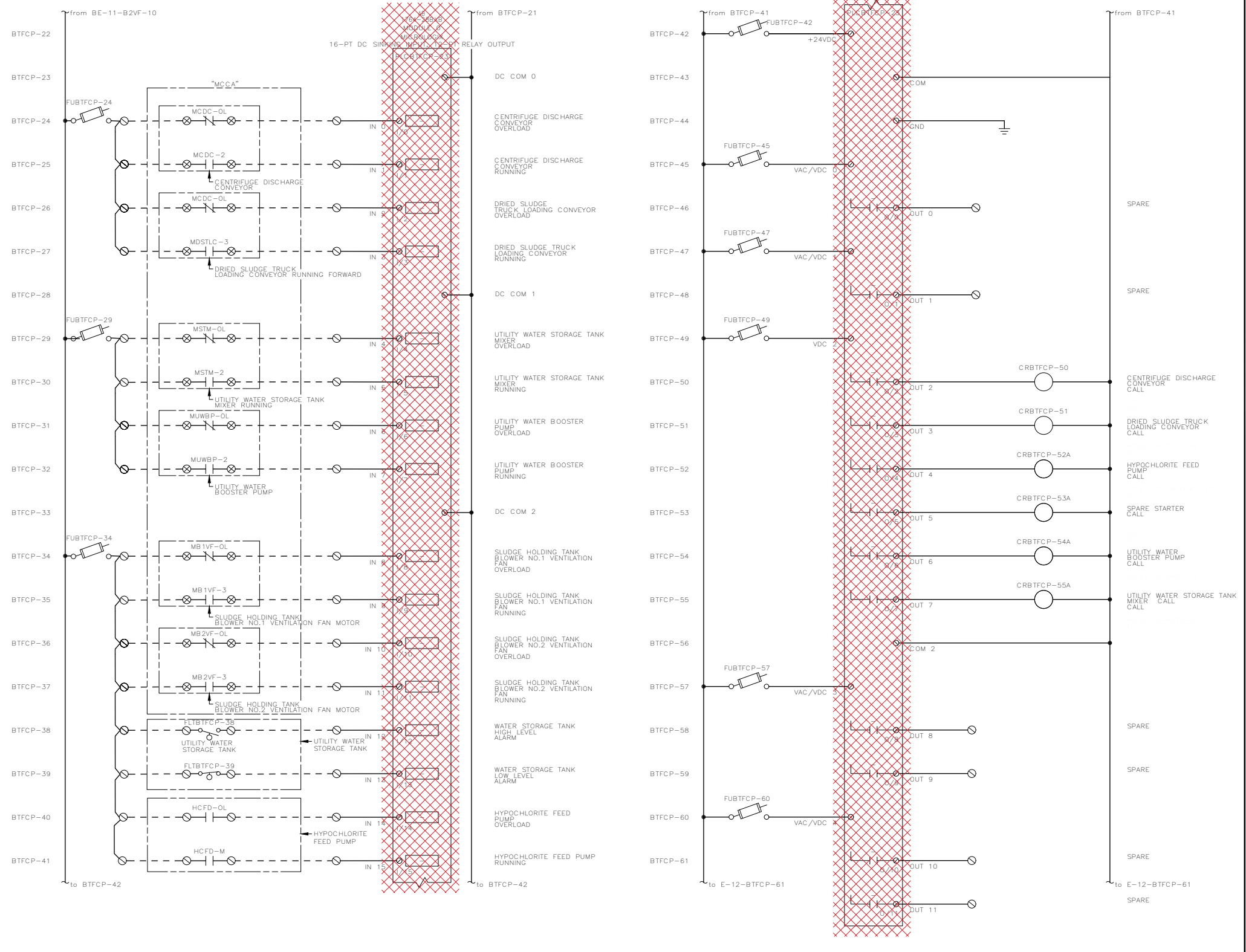
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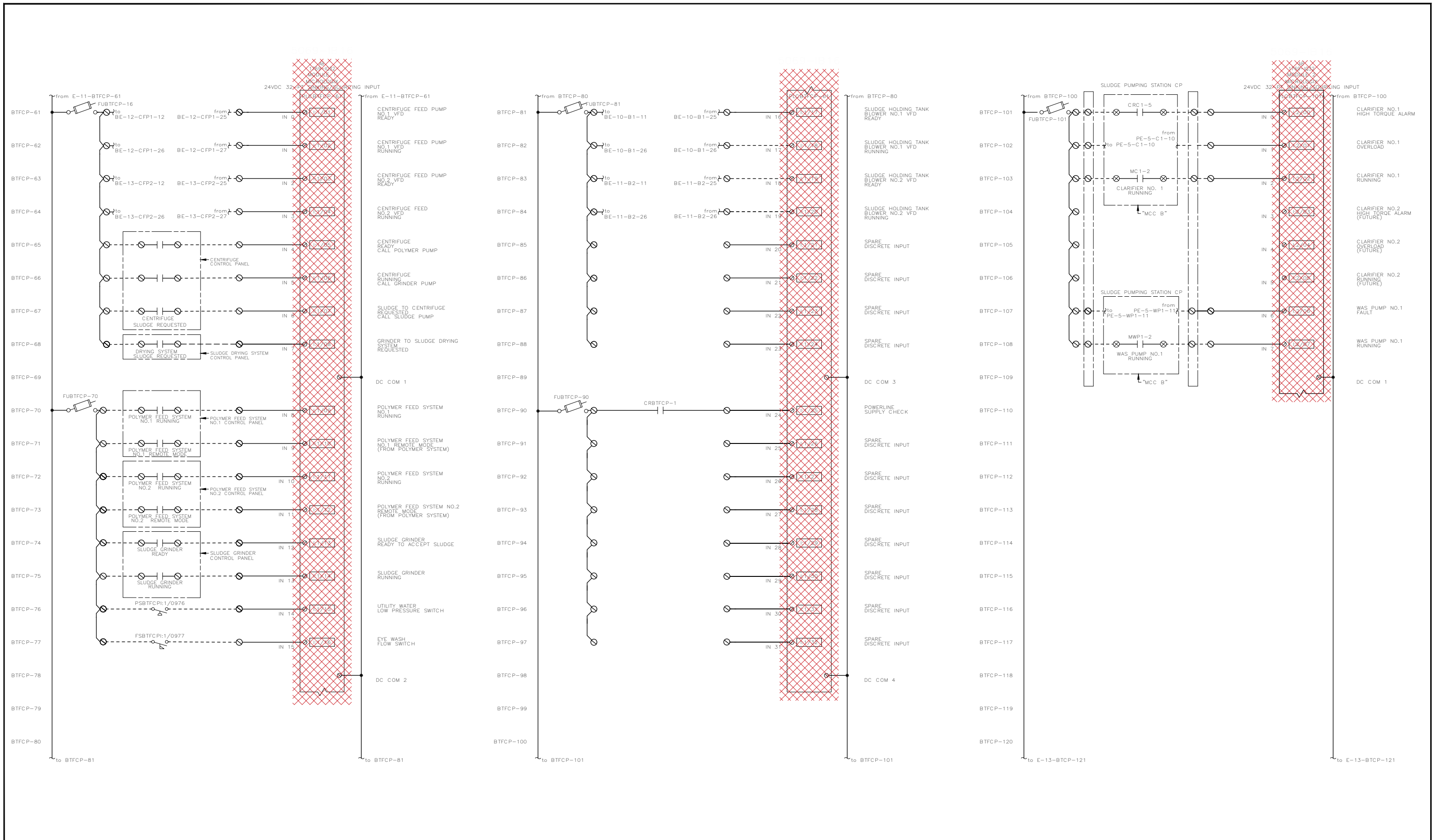
CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
EXISTING/DEMOLITION ELEVATIONS
BIOSOLIDS TREATMENT CONTROL PANEL

E-10

SHEET

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REVISION	DATE		

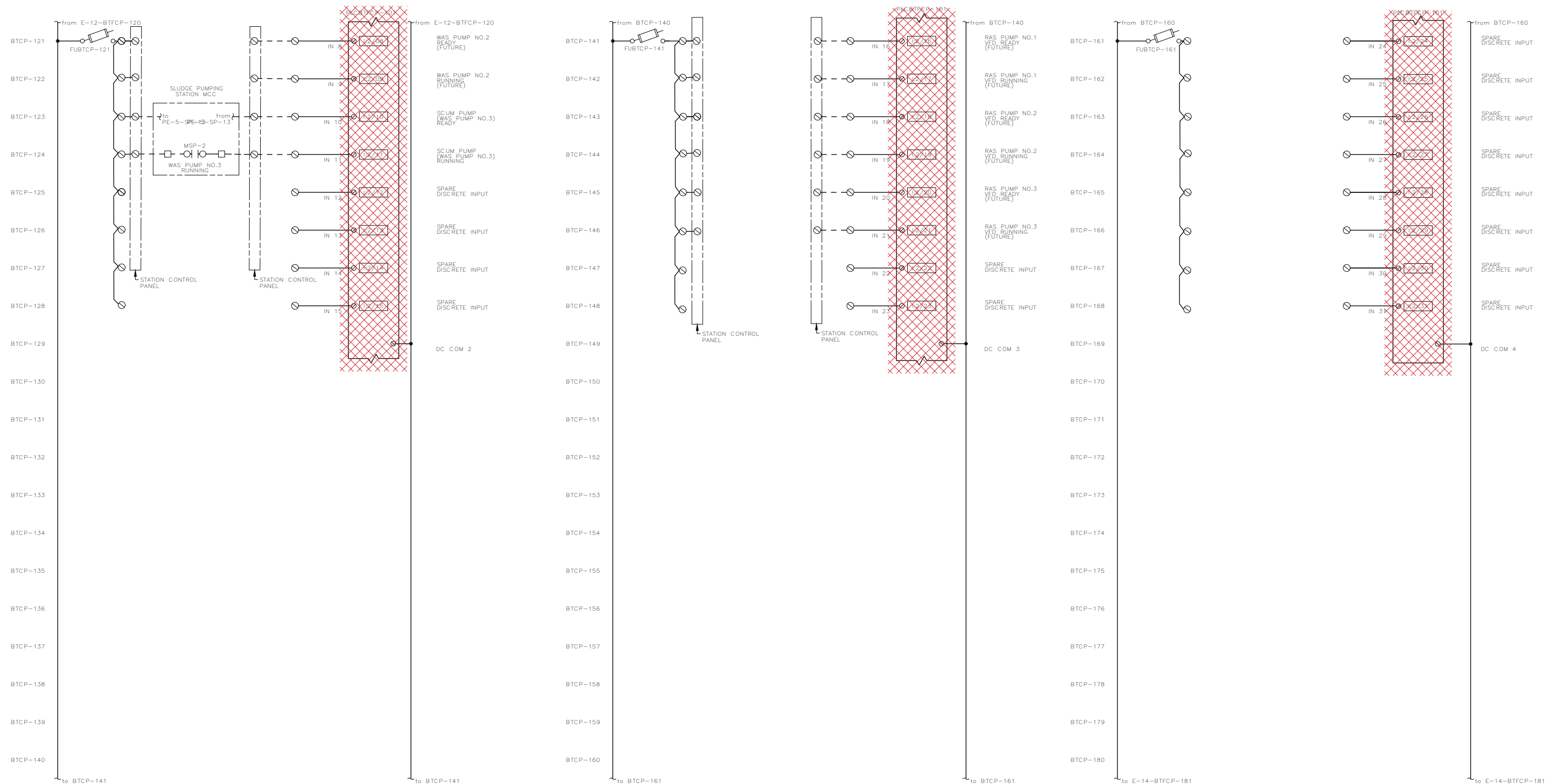
CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
EXISTING/DEMOLITION EWD
BIOSOLIDS TREATMENT CONTROL PANEL

E-12

SHEET

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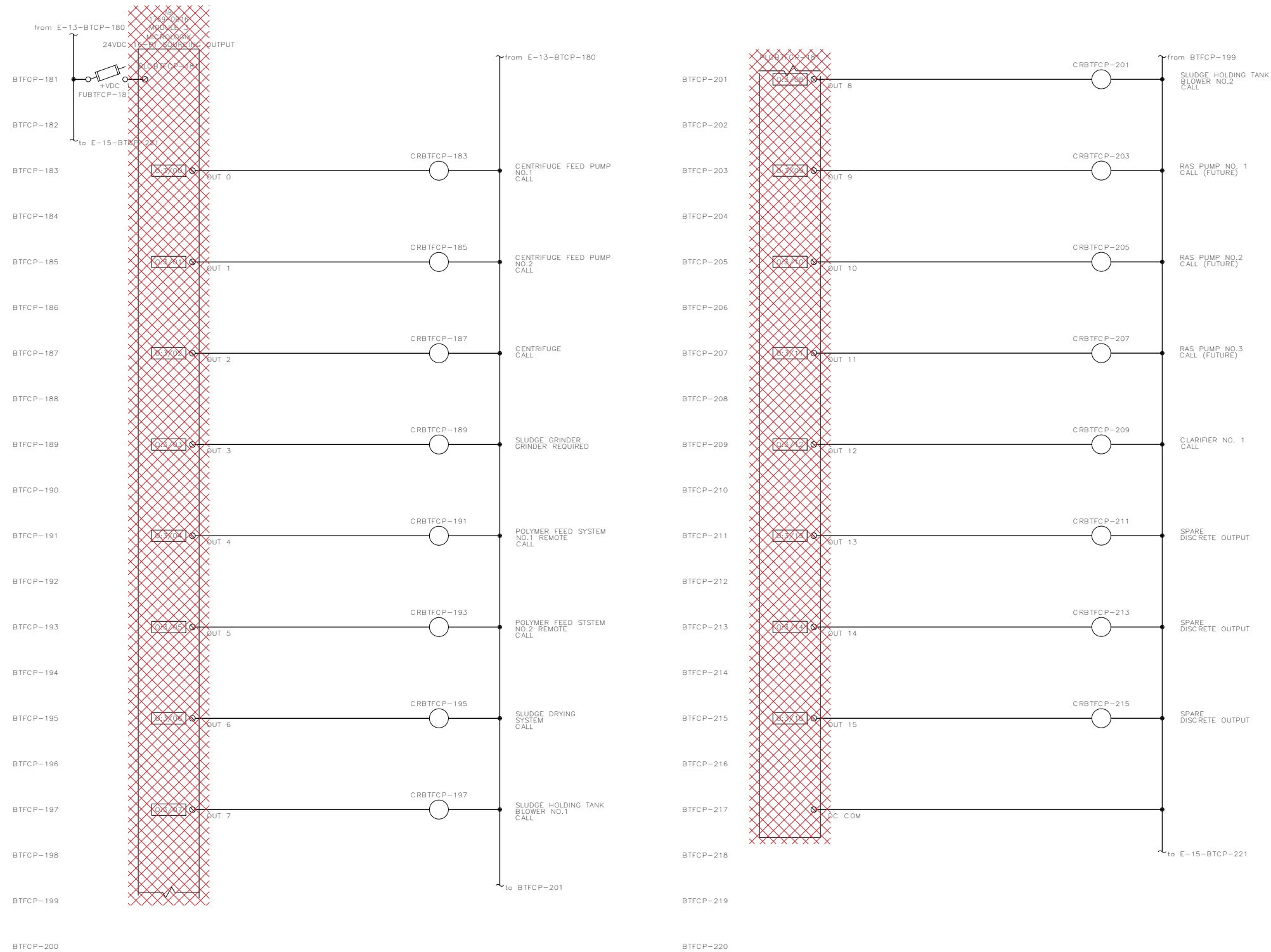
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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
EXISTING/DEMOLITION EWD
BIOSOLIDS TREATMENT CONTROL PANEL

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SHEET

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REVISION	DATE		

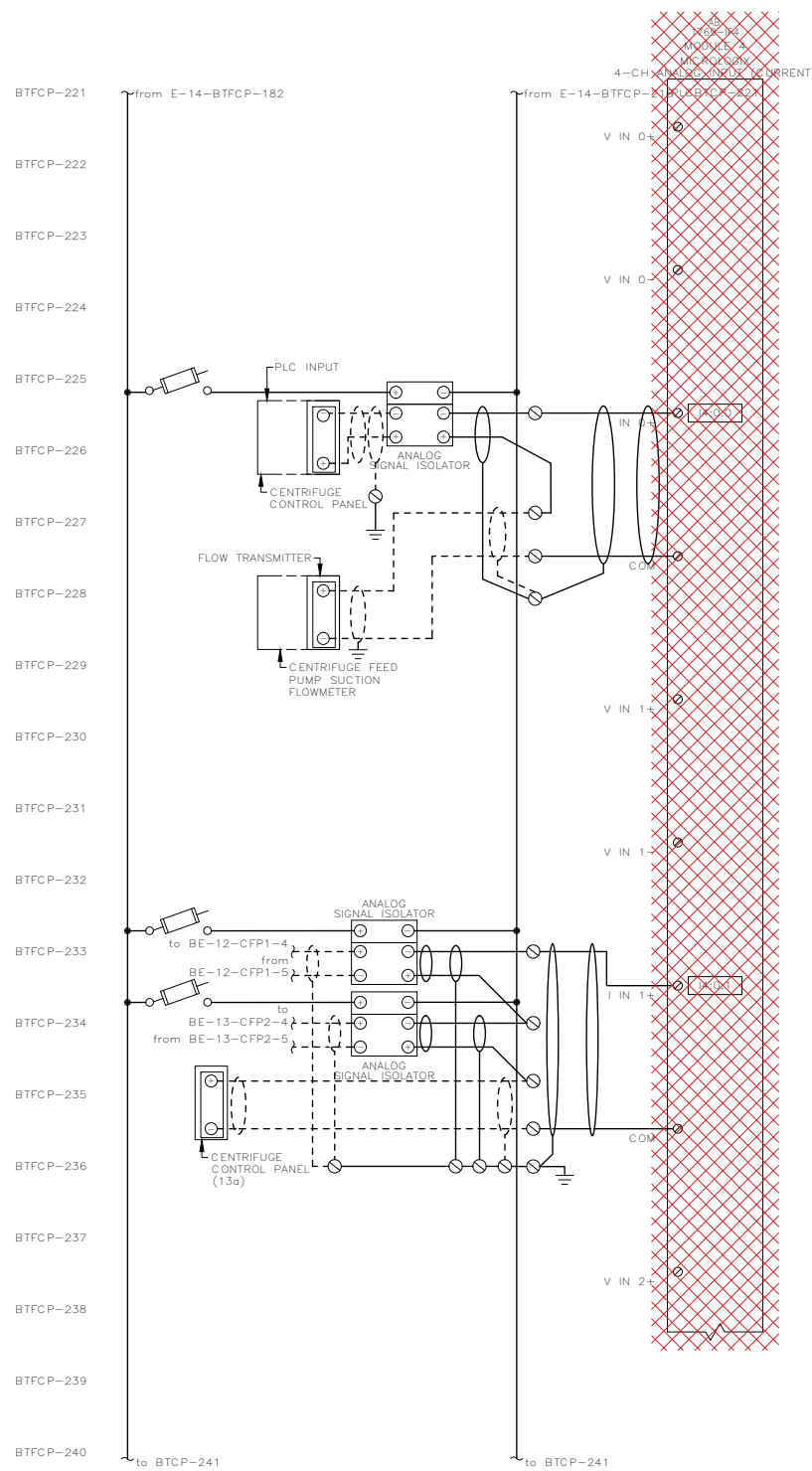
CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
EXISTING/DEMOLITION EWD
BIOSOLIDS TREATMENT CONTROL PANEL

E-14

SHEET

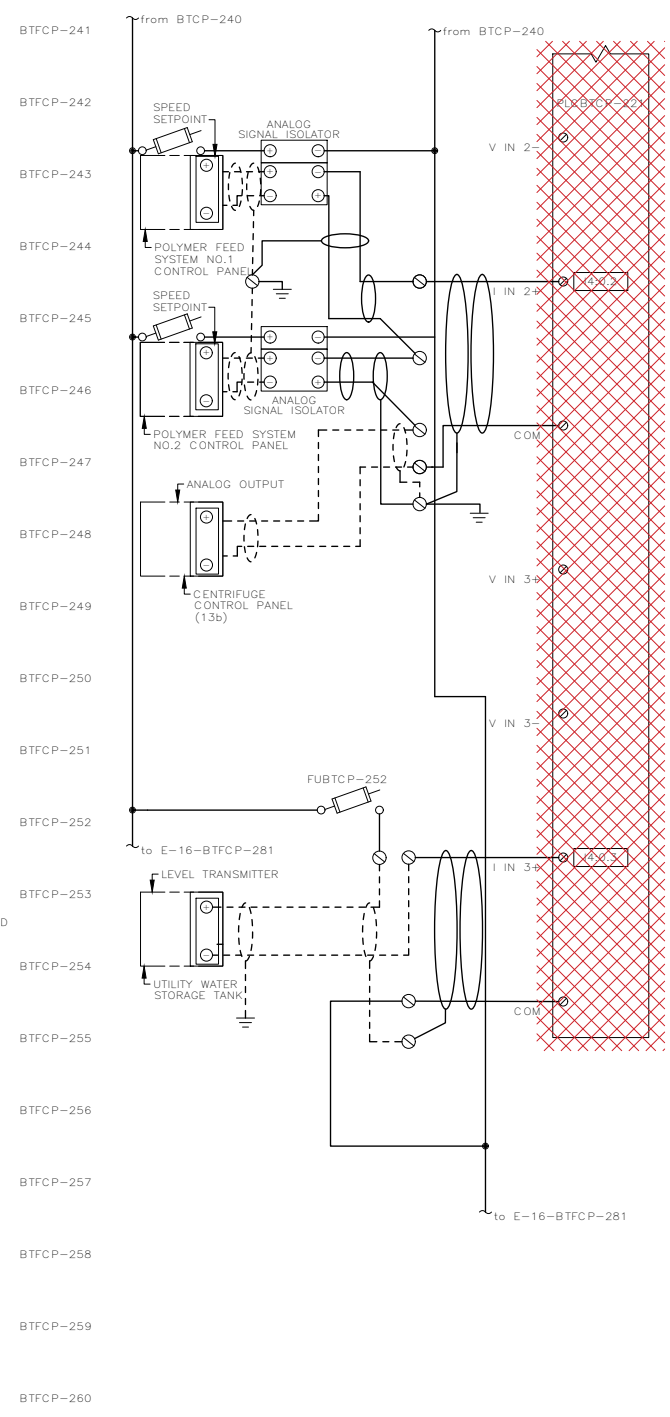
62 OF 82

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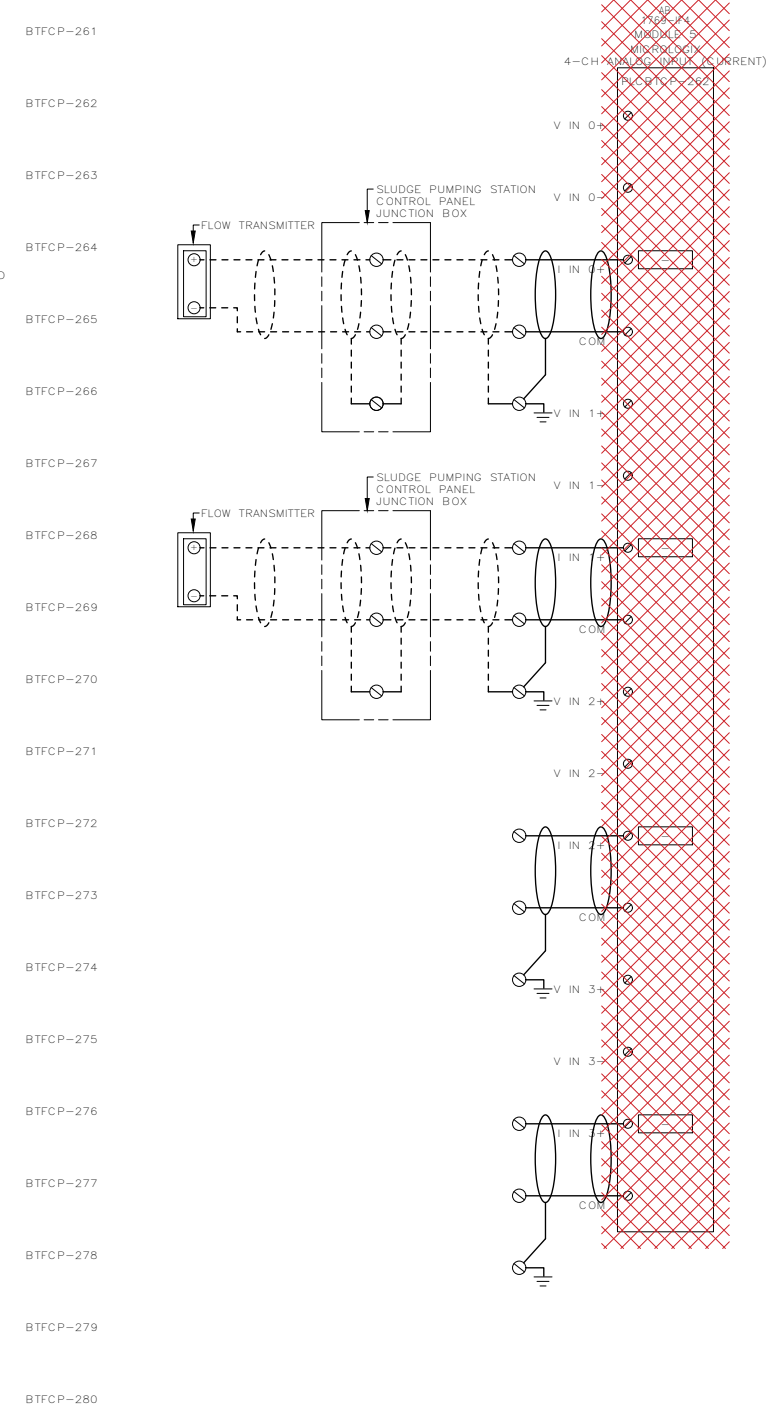
CENTRIFUGE SLUDGE FLOW

CENTRIFUGE FEED PUMP SPEED SET POINT



POLYMER MIXING SYSTEM SPEED SET POINT

ULTRASONIC LEVEL SENSOR

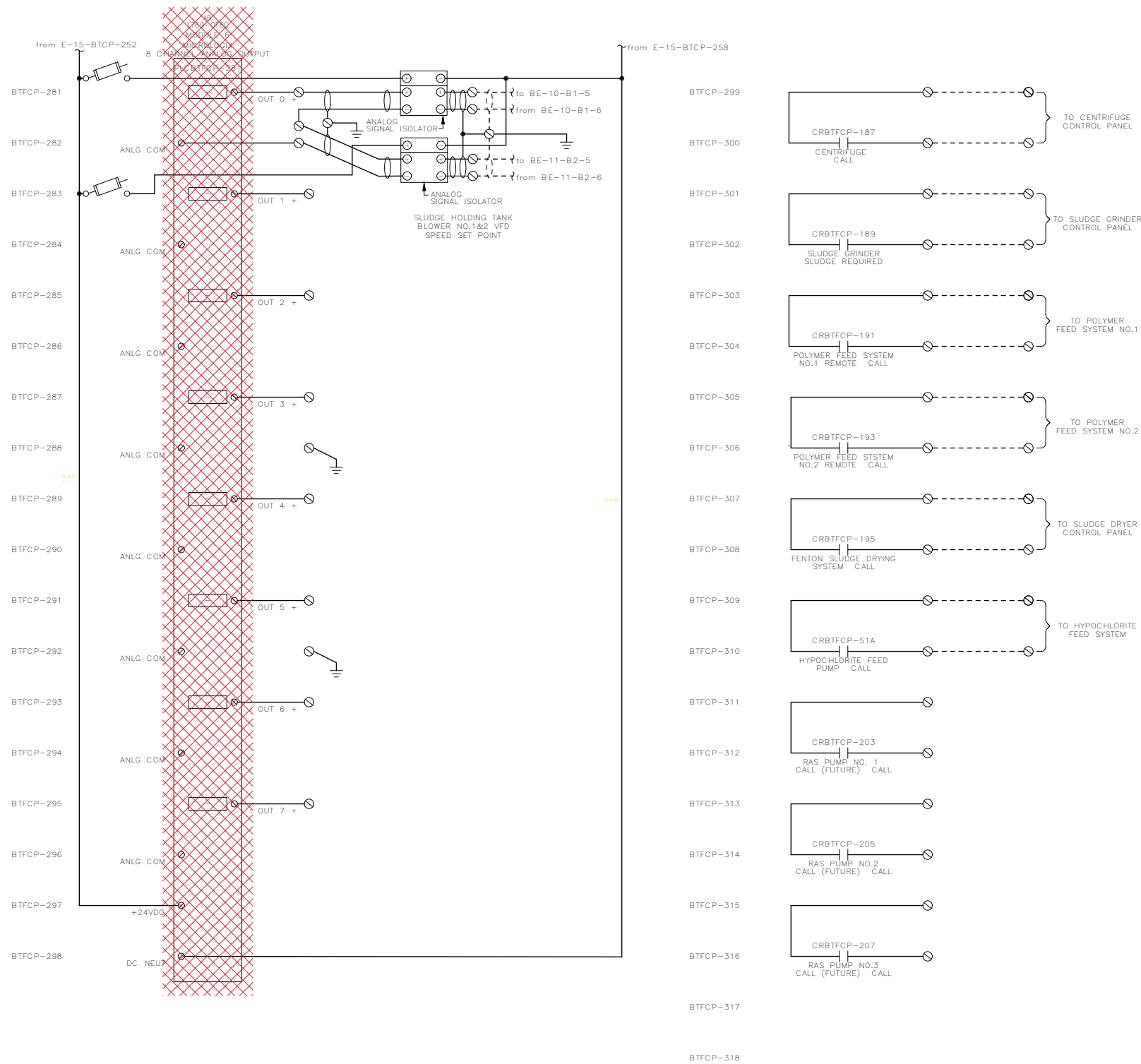


WAS FLOW

SCUM FLOW

ANALOG INPUT

ANALOG INPUT



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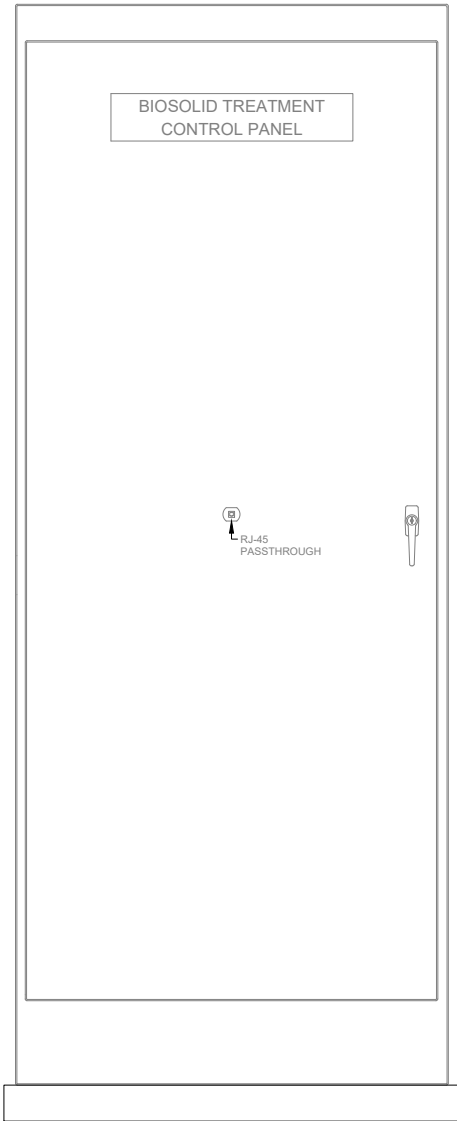
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PLANT IMPROVEMENTS
EXISTING/DEMOLITION EWD
BIOSOLIDS TREATMENT CONTROL PANEL

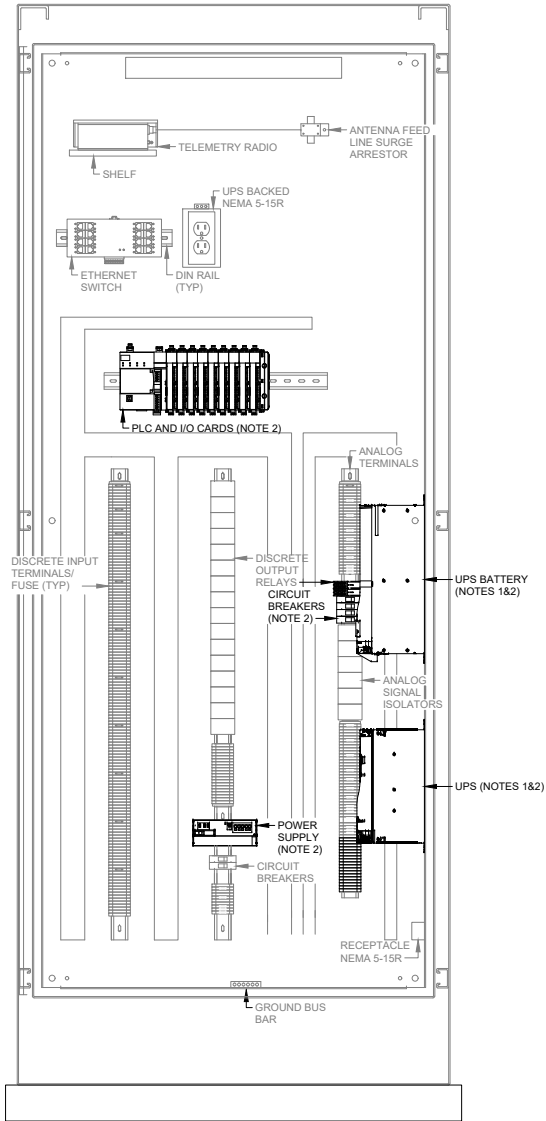
E-16

SHEET

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EXTERIOR ELEVATION



INTERIOR ELEVATION

DETAIL 1/E-17
SCALE: 1 1/2"=1'-0"

- NOTES:
1. ADD DIN-RAIL AND MOUNT TO SIDE OF ENCLOSURE.
 2. SEE EWDs SHEET E-18 THROUGH E-23 FOR ADDITIONAL INFORMATION.



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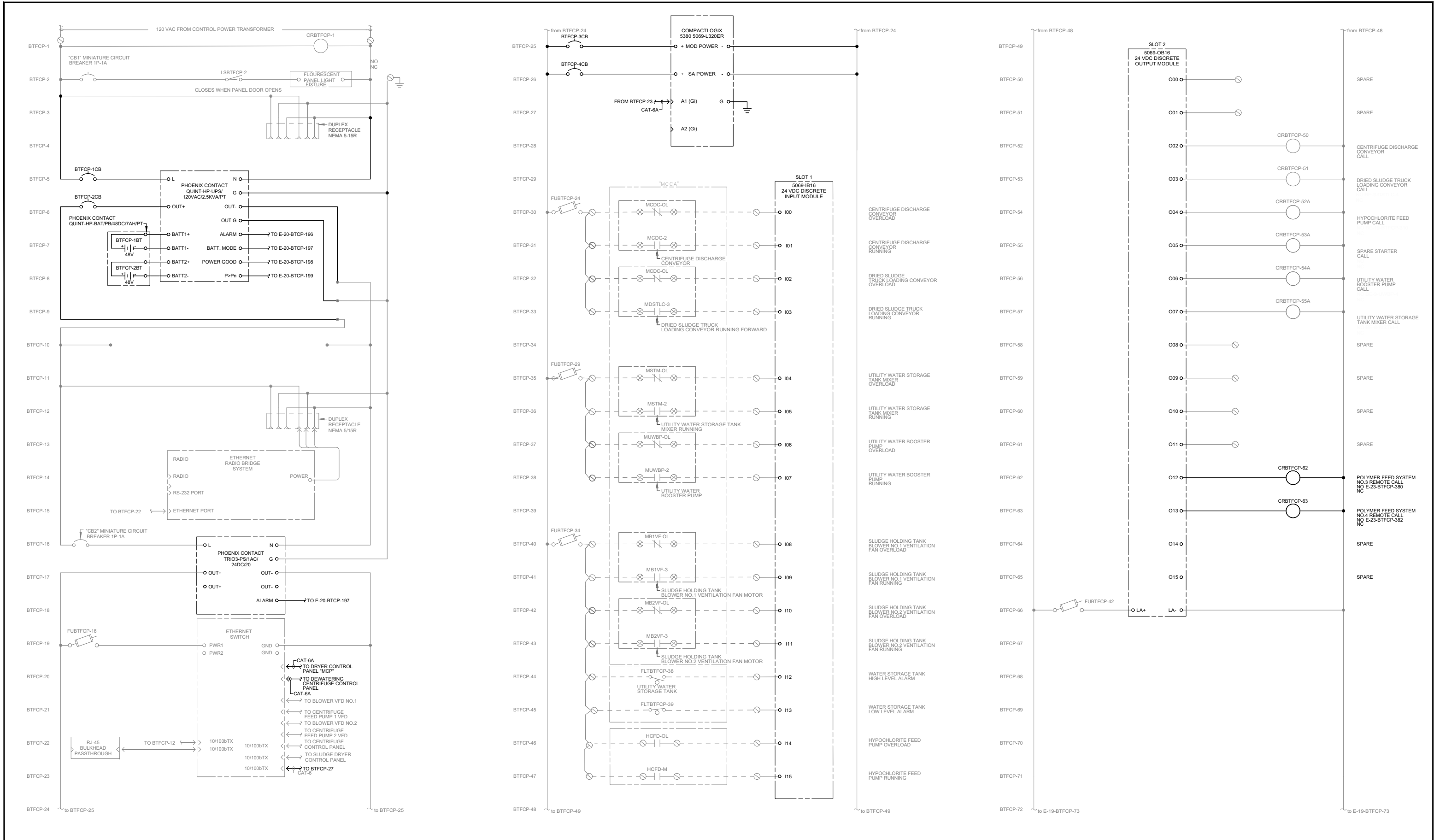
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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
MODIFIED ELEVATIONS
BIOSOLIDS TREATMENT CONTROL PANEL

E-17

SHEET

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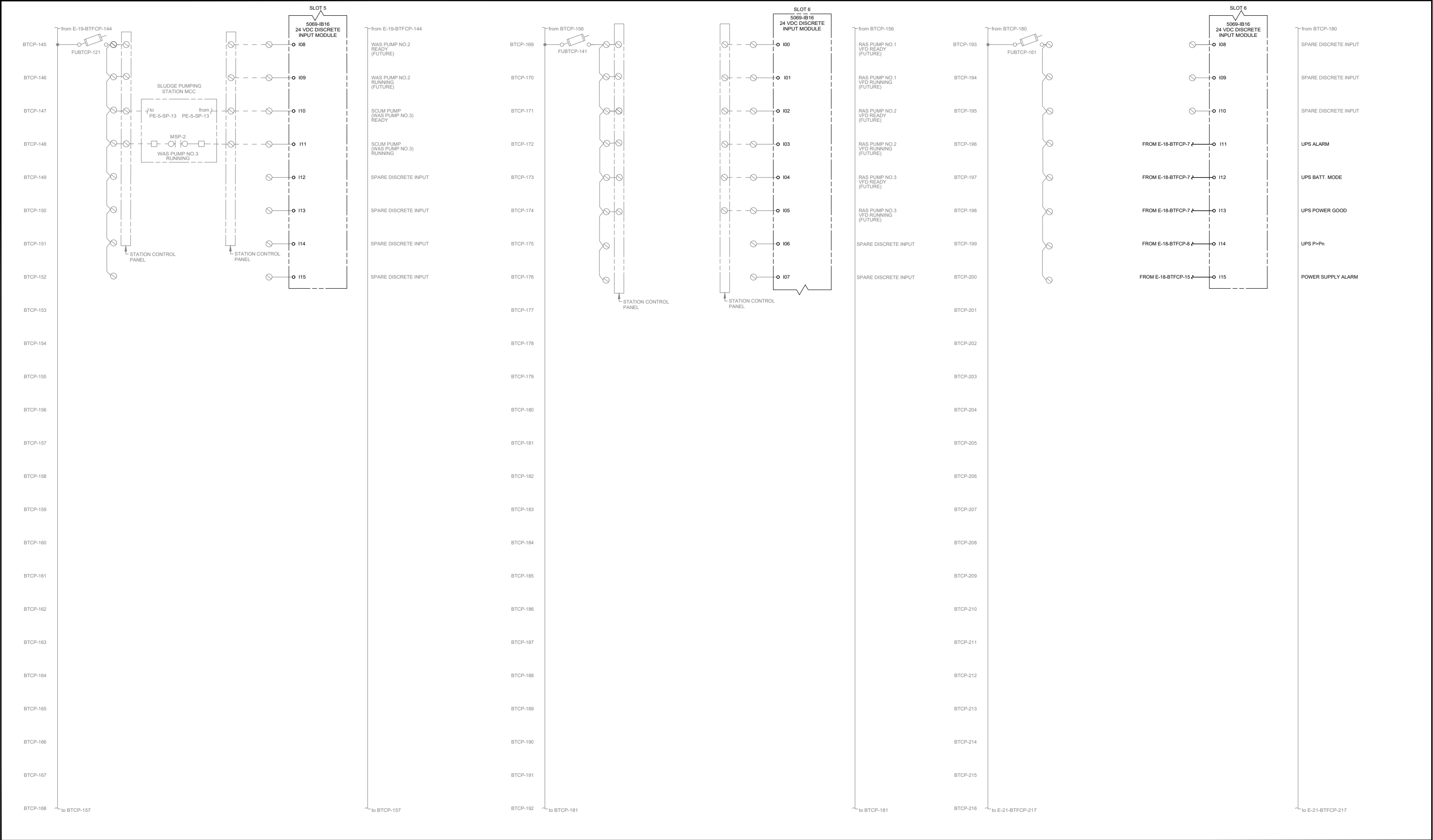
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PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
MODIFIED EWD
BIOSOLIDS TREATMENT CONTROL PANEL

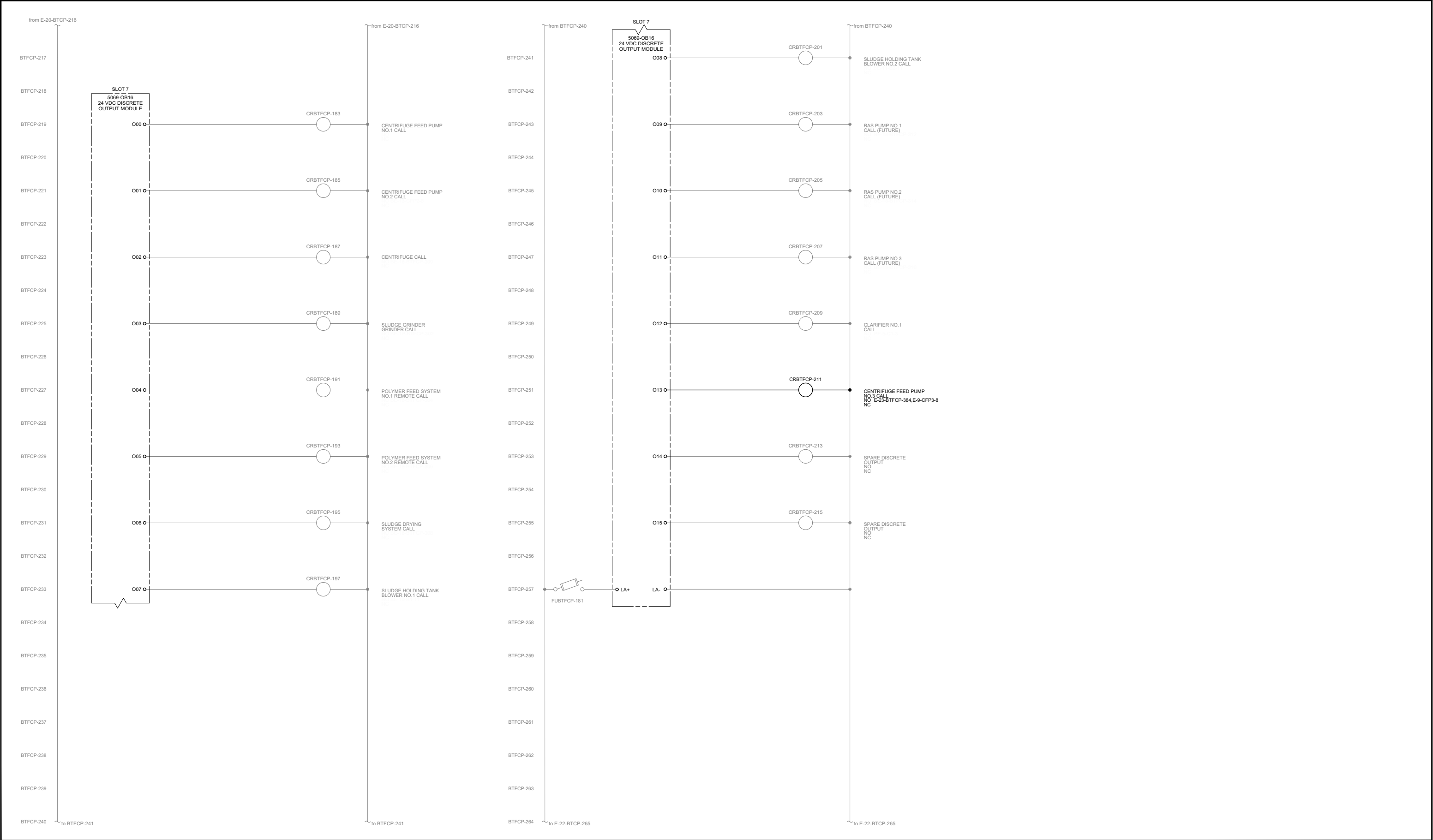
E-18

SHEET

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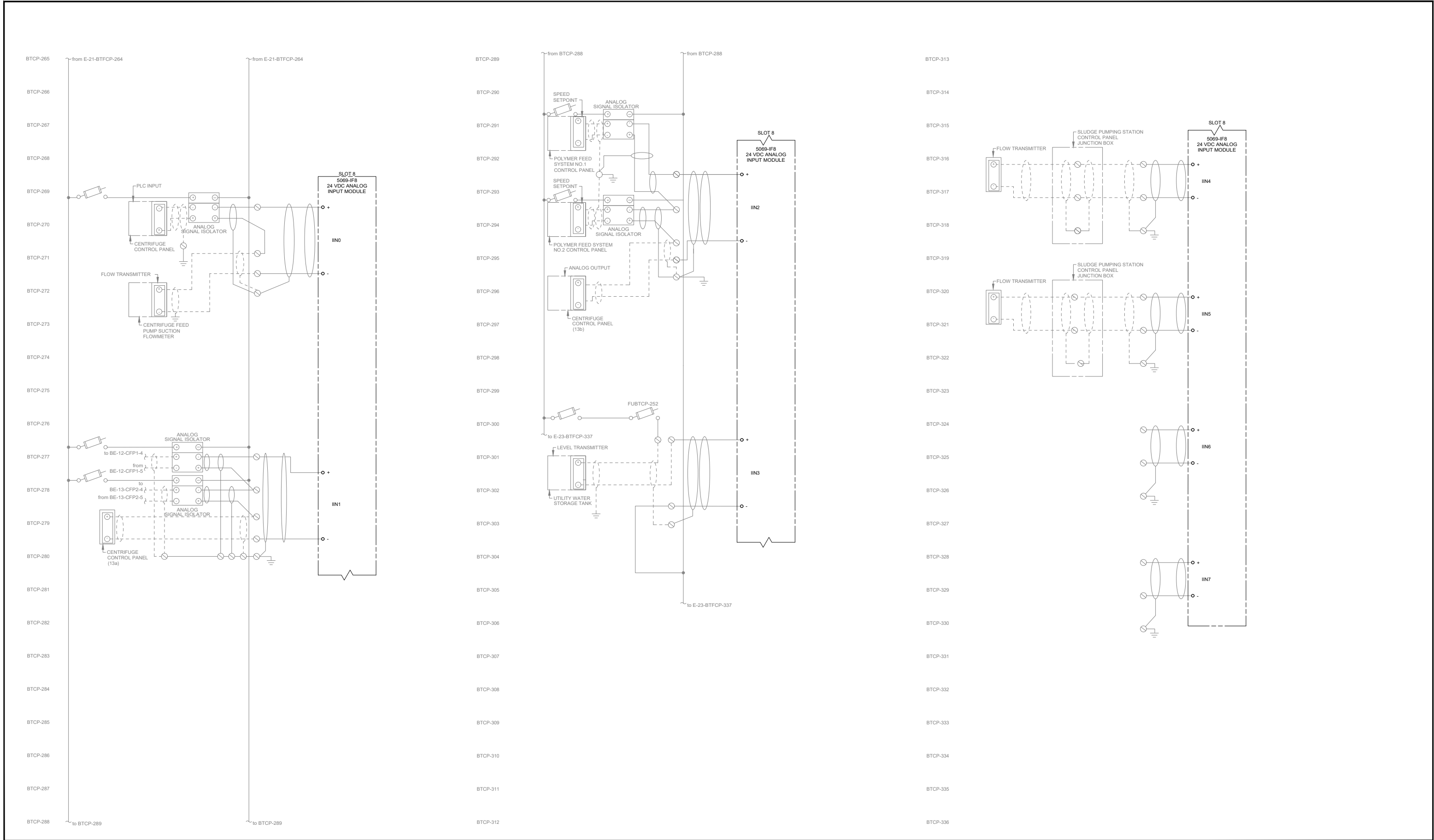
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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
MODIFIED EWD
BIOSOLIDS TREATMENT CONTROL PANEL

E-21

SHEET

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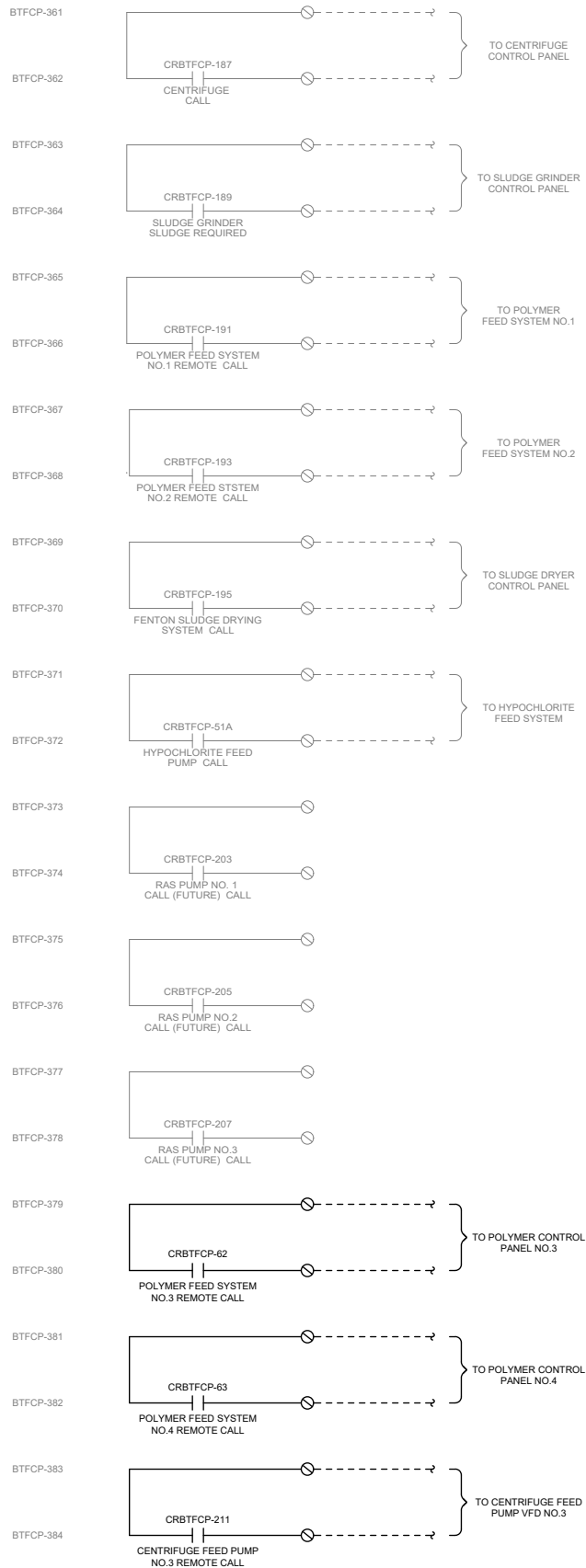
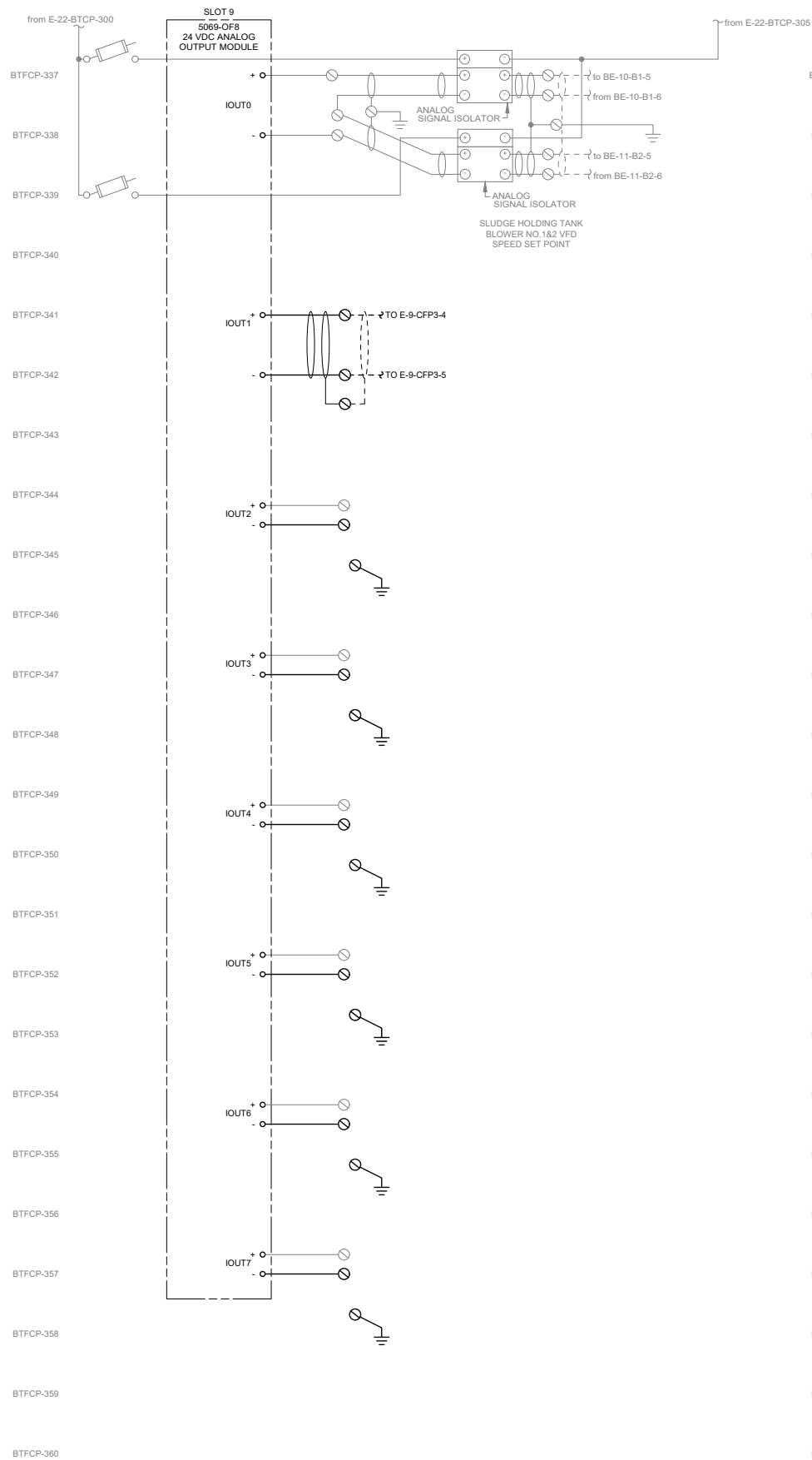
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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
MODIFIED EWD
BIOSOLIDS TREATMENT CONTROL PANEL

E-22

SHEET

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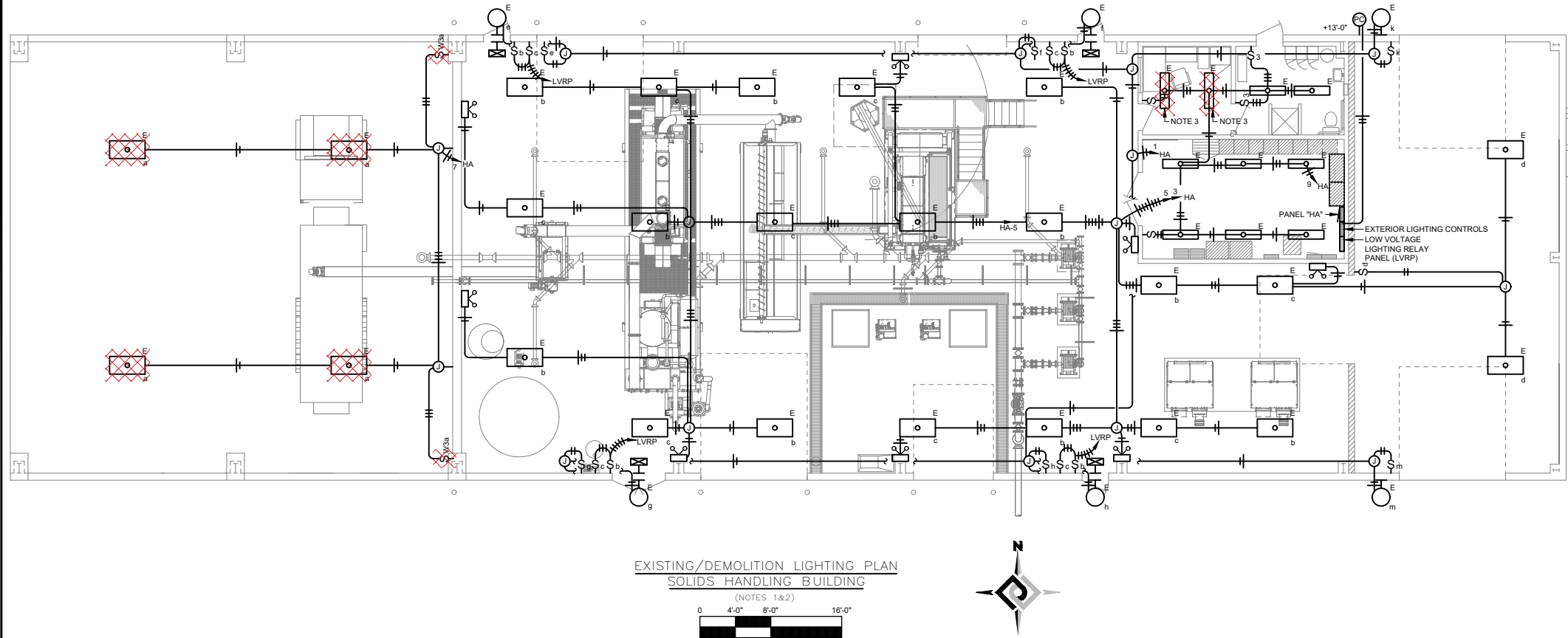
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		DESIGNED BY: CJD	ENTERED BY: BRB
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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
MODIFIED EWD
BIOSOLIDS TREATMENT CONTROL PANEL

E-23

SHEET

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NOTES:

1. DEMOLISH EXISTING ELECTRICAL DEVICES SHOWN CROSS HATCHED ON THIS PLAN UNLESS OTHERWISE NOTED. REMOVE CONDUIT FITTINGS, HANGERS, CONDUCTORS, DEVICE/JUNCTION BOXES, AND OTHER SIMILAR ITEMS ASSOCIATED WITH ITEM NOTED, BACK TO THE EXISTING HOMERUN CONDUIT UNLESS OTHERWISE NOTED. DEMOLISH CONDUCTORS BACK TO SERVING PANELBOARD AND PRESERVE EXISTING HOMERUN CONDUIT FOR USE WITH NEW LIGHTING FIXTURES.
2. EXISTING DEVICES SHOWN ARE TO REMAIN UNLESS OTHERWISE NOTED. PRESERVE AND PROTECT DURING THE COURSE OF CONSTRUCTION. EXISTING DEVICES AND CIRCUITS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER.
3. EXISTING FIXTURE TO BE REPLACED WITH NEW LIGHTING FIXTURE. PRESERVE EXISTING CIRCUITS FOR CONNECTION TO NEW LIGHTING FIXTURE.



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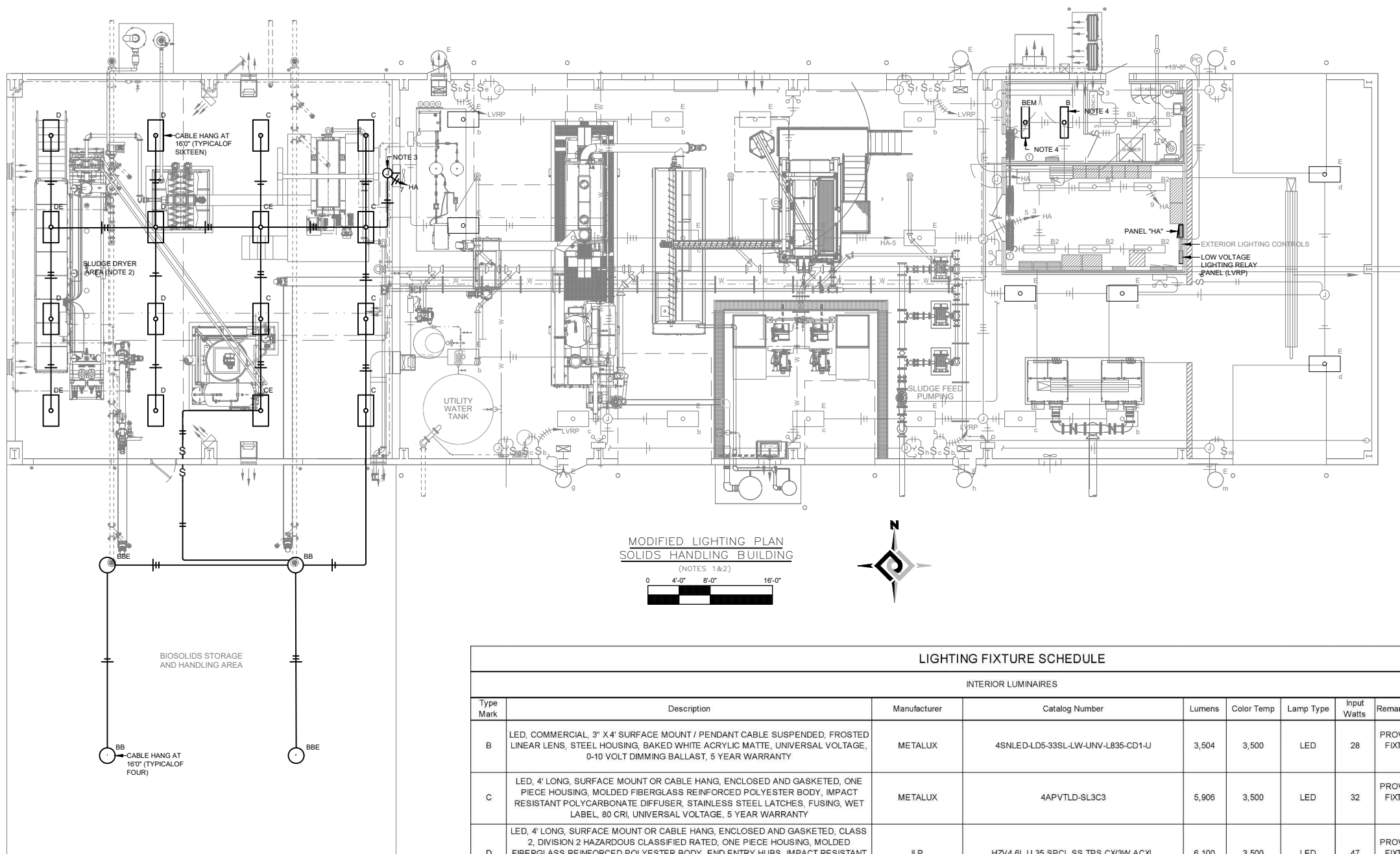
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REVISION	DATE		

CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
SOLIDS HANDLING
EXISTING/DEMOLITION LIGHTING PLAN

E9-1

SHEET

72 OF 82



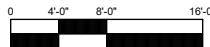
GENERAL NOTES:

- A. PROVIDE ADDITIONAL STRUCTURAL SUPPORTS AS REQUIRED TO INSTALL DEVICES AND CONDUIT ON METAL FRAME BUILDING AS WELL AS TO ROUTE CONDUIT FROM EQUIPMENT LOCATIONS TO THE CEILING.

NOTES:

- COORDINATE LOCATION OF LIGHTING FIXTURES WITH HVAC EQUIPMENT AND PROCESS EQUIPMENT AND PIPING PRIOR TO INSTALLATION. SEE "M" SERIES OF DRAWINGS FOR ADDITIONAL INFORMATION.
- WIRING METHODS, MATERIALS AND EQUIPMENT, WITHIN 10 FEET OF SLUDGE DRYER SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE FOR HAZARDOUS (CLASSIFIED) LOCATIONS. REFER TO THE HAZARDOUS AREA CLASSIFICATIONS LETTER IN THE SPECIFICATIONS APPENDIX FOR FURTHER INFORMATION.
- REUSE EXISTING HOMERUN CONDUIT TO SERVE NEW LIGHTING EQUIPMENT. PROVIDE NEW CONDUCTORS FOR ENTIRE LENGTH OF RUN BACK TO SERVING PANELBOARD.
- CONNECT NEW LIGHTING FIXTURE TO EXISTING CIRCUIT. PROVIDE ADDITIONAL UNSWITCHED CONDUCTOR FOR FIXTURE WITH EMERGENCY BALLAST.

MODIFIED LIGHTING PLAN
SOLIDS HANDLING BUILDING
(NOTES 1 & 2)



LIGHTING FIXTURE SCHEDULE

INTERIOR LUMINAIRES								
Type Mark	Description	Manufacturer	Catalog Number	Lumens	Color Temp	Lamp Type	Input Watts	Remarks
B	LED, COMMERCIAL, 3" X 4' SURFACE MOUNT / PENDANT CABLE SUSPENDED, FROSTED LINEAR LENS, STEEL HOUSING, BAKED WHITE ACRYLIC MATTE, UNIVERSAL VOLTAGE, 0-10 VOLT DIMMING BALLAST, 5 YEAR WARRANTY	METALUX	4SNLED-LD5-33SL-LW-UNV-L835-CD1-U	3,504	3,500	LED	28	PROVIDE EMERGENCY BALLAST WHERE FIXTURE IS NOTED ON PLANS WITH AN "EM" DESIGNATION
C	LED, 4' LONG, SURFACE MOUNT OR CABLE HANG, ENCLOSED AND GASKETED, ONE PIECE HOUSING, MOLDED FIBERGLASS REINFORCED POLYESTER BODY, IMPACT RESISTANT POLYCARBONATE DIFFUSER, STAINLESS STEEL LATCHES, FUSING, WET LABEL, 80 CRI, UNIVERSAL VOLTAGE, 5 YEAR WARRANTY	METALUX	4APVTL-D-SL3C3	5,906	3,500	LED	32	PROVIDE EMERGENCY BALLAST WHERE FIXTURE IS NOTED ON PLANS WITH AN "EM" DESIGNATION
D	LED, 4' LONG, SURFACE MOUNT OR CABLE HANG, ENCLOSED AND GASKETED, CLASS 2, DIVISION 2 HAZARDOUS CLASSIFIED RATED, ONE PIECE HOUSING, MOLDED FIBERGLASS REINFORCED POLYESTER BODY, END ENTRY HUBS, IMPACT RESISTANT POLYCARBONATE DIFFUSER, STAINLESS STEEL LATCHES, FUSING, WET LABEL, 80 CRI, UNIVERSAL VOLTAGE, 5 YEAR WARRANTY	ILP	HZV4 6L U 35 SPCL SS TPS CX3W ACXL	6,100	3,500	LED	47	PROVIDE EMERGENCY BALLAST WHERE FIXTURE IS NOTED ON PLANS WITH AN "EM" DESIGNATION
E	EXISTING LIGHTING FIXTURE							
EXTERIOR LUMINAIRES								
BB	LED, PENDANT MOUNT, LOW BAY, 12" ROUND, WIDE DISTRIBUTION, ALUMINUM HOUSING, WET LABEL, WHITE POLYESTER POWDERCOAT FINISH, PROVIDE PENDANT LENGTH AS NECESSARY TO MOUNT AT HEIGHT INDICATED, UNIVERSAL VOLTAGE, 5 YEAR WARRANTY	METALUX	UHBS2-1218-MV-L8C5-U	18,607	4,000	LED	119	PROVIDE EMERGENCY BALLAST WHERE FIXTURE IS NOTED ON PLANS WITH AN "EM" DESIGNATION
E	EXISTING LIGHTING FIXTURE							



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FILE NAMES:
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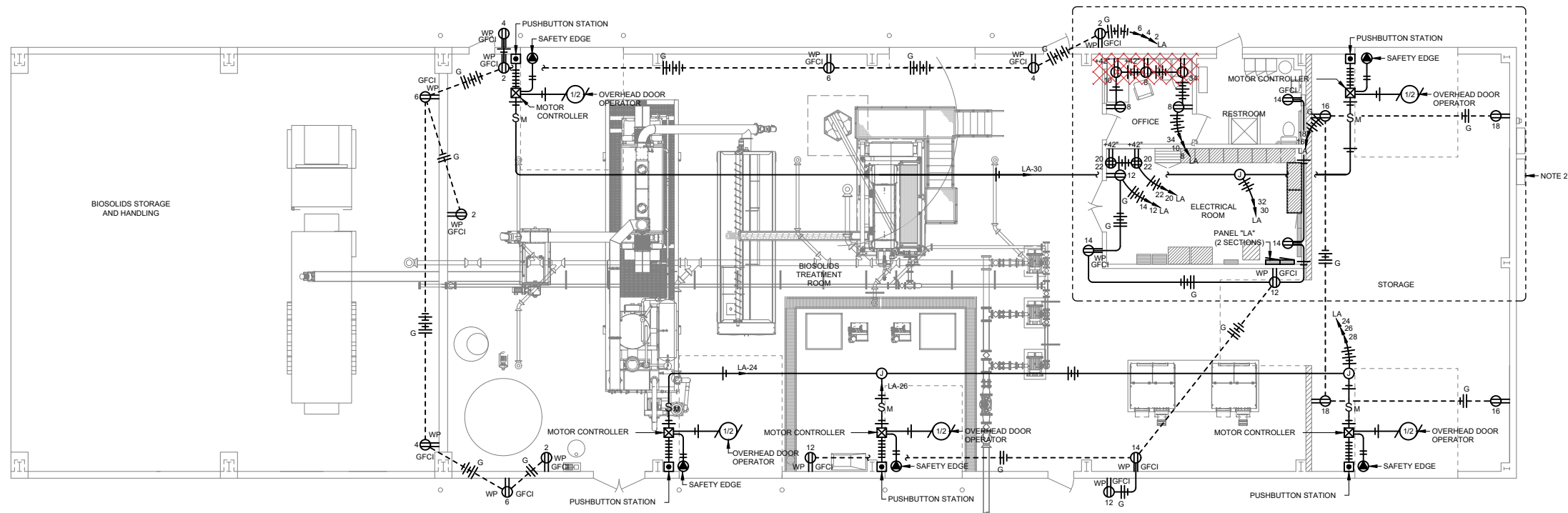
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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
SOLIDS HANDLING
MODIFIED LIGHTING PLAN

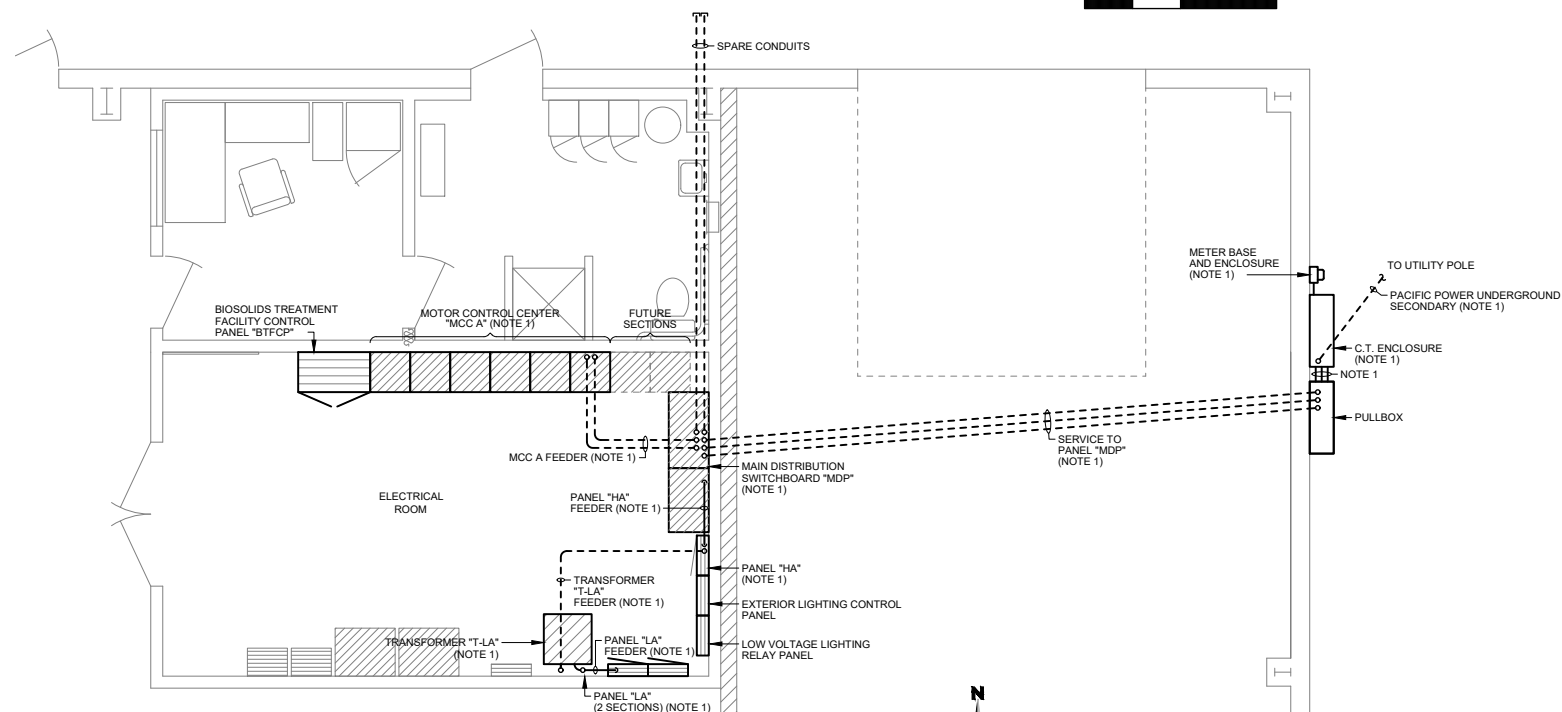
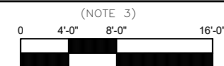
E9-2

SHEET

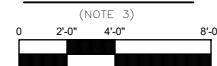
73 OF 82



EXISTING/DEMOLITION POWER PLAN
SOLIDS HANDLING BUILDING



EXISTING/DEMOLITION PARTIAL POWER PLAN
ELECTRICAL ROOM



NOTES:

1. SEE EXISTING/DEMOLITION ONE LINE DIAGRAM SHEET E-3 FOR CIRCUIT AND EQUIPMENT INFORMATION.
2. SEE PARTIAL POWER PLAN THIS SHEET FOR FURTHER INFORMATION.
3. DEMOLISH EXISTING ELECTRICAL DEVICES SHOWN CROSS HATCHED ON THIS PLAN UNLESS OTHERWISE NOTED. REMOVE CONDUIT FITTINGS, HANGERS, CONDUCTORS, DEVICE/JUNCTION BOXES, AND OTHER SIMILAR ITEMS ASSOCIATED WITH ITEM NOTED, BACK TO THE NEXT DEVICE ON THE CIRCUIT OR BACK TO THE SERVING PANELBOARD. WHERE DEVICES TO BE REMOVED ARE IN THE MIDDLE OF THE CIRCUIT, EXTEND EXISTING CIRCUIT AS REQUIRED TO CONNECT TO EXISTING DEVICES SO THAT THEY REMAIN IN OPERATION.



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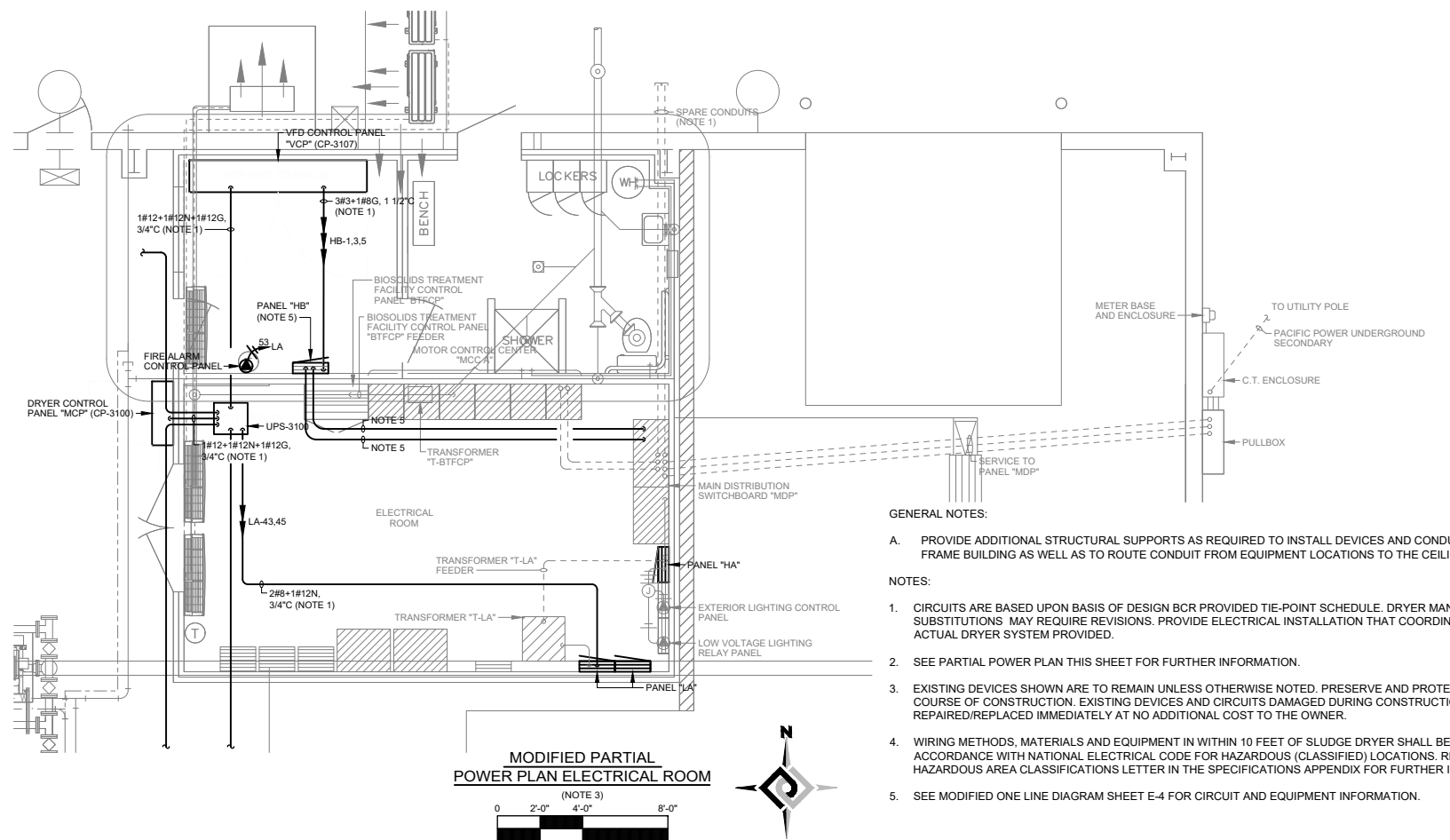
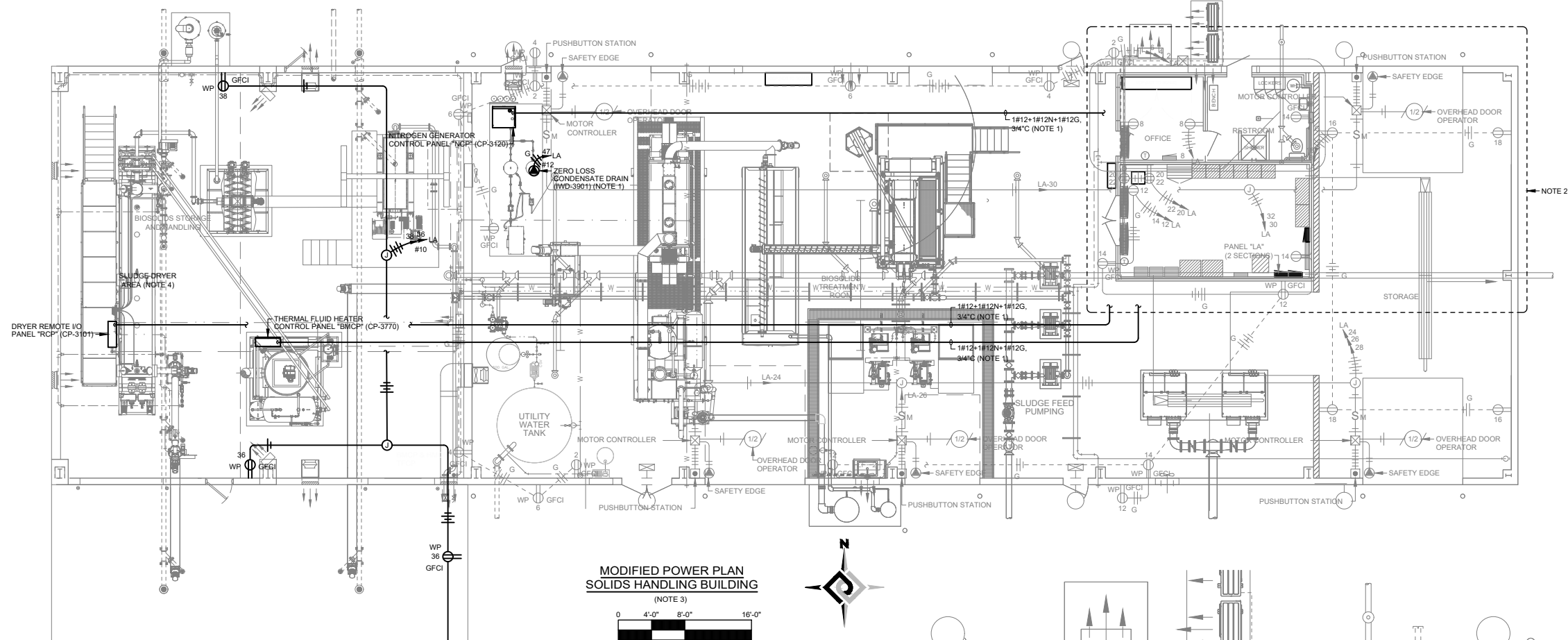
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		FILE NAMES: DRAWING: 23166E9-03	
		DESIGNED BY: CJD	ENTERED BY: BRB
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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
SOLIDS HANDLING
EXISTING POWER PLANS

E9-3

SHEET

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- GENERAL NOTES:**
- PROVIDE ADDITIONAL STRUCTURAL SUPPORTS AS REQUIRED TO INSTALL DEVICES AND CONDUIT ON METAL FRAME BUILDING AS WELL AS TO ROUTE CONDUIT FROM EQUIPMENT LOCATIONS TO THE CEILING.
- NOTES:**
- CIRCUITS ARE BASED UPON BASIS OF DESIGN BCR PROVIDED TIE-POINT SCHEDULE. DRYER MANUFACTURER SUBSTITUTIONS MAY REQUIRE REVISIONS. PROVIDE ELECTRICAL INSTALLATION THAT COORDINATES WITH ACTUAL DRYER SYSTEM PROVIDED.
 - SEE PARTIAL POWER PLAN THIS SHEET FOR FURTHER INFORMATION.
 - EXISTING DEVICES SHOWN ARE TO REMAIN UNLESS OTHERWISE NOTED. PRESERVE AND PROTECT DURING THE COURSE OF CONSTRUCTION. EXISTING DEVICES AND CIRCUITS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER.
 - WIRING METHODS, MATERIALS AND EQUIPMENT IN WITHIN 10 FEET OF SLUDGE DRYER SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE FOR HAZARDOUS (CLASSIFIED) LOCATIONS. REFER TO THE HAZARDOUS AREA CLASSIFICATIONS LETTER IN THE SPECIFICATIONS APPENDIX FOR FURTHER INFORMATION.
 - SEE MODIFIED ONE LINE DIAGRAM SHEET E-4 FOR CIRCUIT AND EQUIPMENT INFORMATION.



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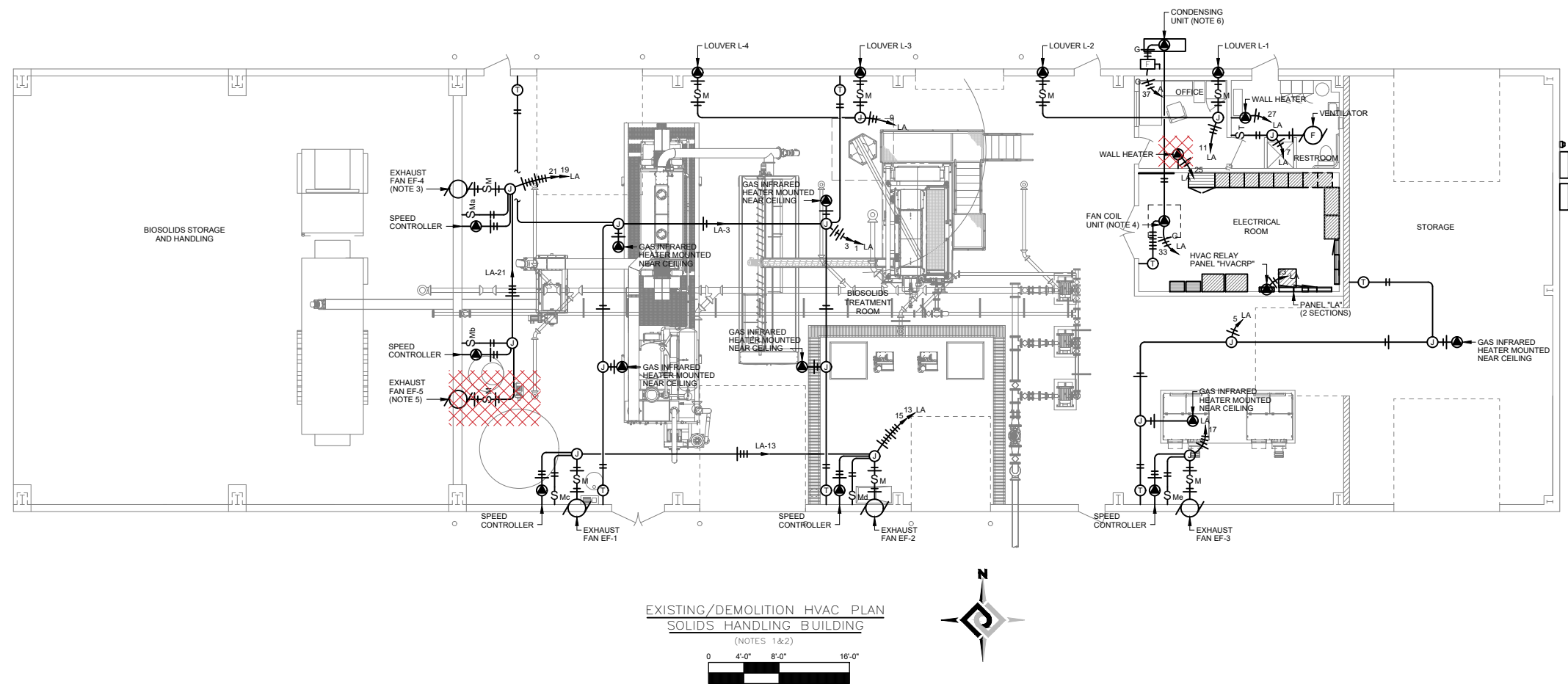
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		DESIGNED BY: ENTERED BY:	CJD BRB

CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
SOLIDS HANDLING
MODIFIED POWER PLANS

E9-4

SHEET

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- NOTES:
1. EXISTING DEVICES SHOWN ARE TO REMAIN UNLESS OTHERWISE NOTED. PRESERVE AND PROTECT DURING THE COURSE OF CONSTRUCTION. EXISTING DEVICES AND CIRCUITS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER.
 2. DEMOLISH EXISTING ELECTRICAL DEVICES SHOWN CROSS HATCHED ON THIS PLAN UNLESS OTHERWISE NOTED. REMOVE SWITCHES, CONDUIT FITTINGS, HANGERS, CONDUCTORS, DEVICE/JUNCTION BOXES, AND OTHER SIMILAR ITEMS ASSOCIATED WITH ITEM NOTED, BACK TO THE NEXT DEVICE ON THE CIRCUIT OR BACK TO THE SERVING PANELBOARD.
 3. EXISTING EXHAUST FAN TO BE RELOCATED. SEE SHEET E9-6 FOR REVISED LOCATION AND CIRCUIT MODIFICATIONS.
 4. EXISTING SPLIT SYSTEM INTERIOR UNIT TO BE RELOCATED. SEE SHEET E9-6 FOR REVISED LOCATION AND CIRCUIT MODIFICATIONS.
 5. EXISTING EXHAUST FAN TO BE DEMOLISHED AND REPLACED WITH NEW EXHAUST FAN. SEE SHEET E9-6 FOR ADDITIONAL INFORMATION.
 6. EXISTING SPLIT SYSTEM OUTDOOR UNIT TO REMAIN AND BE REPURPOSED TO SERVE THE NEW ELECTRICAL ROOM.



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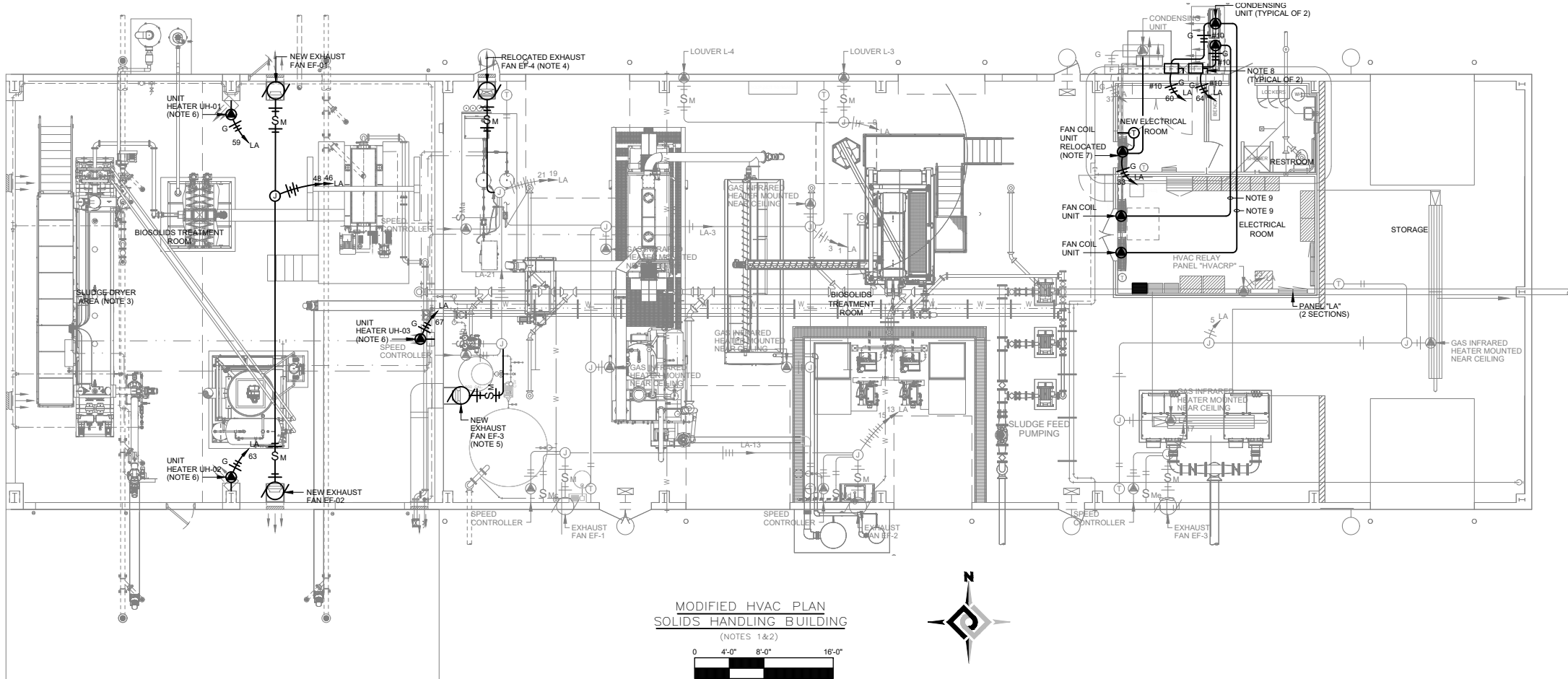


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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
SOLIDS HANDLING
EXISTING/DEMOLITION HVAC PLAN

E9-5
SHEET
76 OF 82

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- GENERAL NOTES:
- A. PROVIDE ADDITIONAL STRUCTURAL SUPPORTS AS REQUIRED TO INSTALL DEVICES AND CONDUIT ON METAL FRAME BUILDING AS WELL AS TO ROUTE CONDUIT FROM EQUIPMENT LOCATIONS TO THE CEILING.
- NOTES:
- COORDINATE EXACT LOCATION OF HVAC EQUIPMENT WITH MECHANICAL SHOP DRAWINGS AND EQUIPMENT INSTALLER PRIOR TO DEVICE ROUGH IN.
 - EXISTING DEVICES SHOWN ARE TO REMAIN UNLESS OTHERWISE NOTED. PRESERVE AND PROTECT DURING THE COURSE OF CONSTRUCTION. EXISTING DEVICES AND CIRCUITS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER.
 - WIRING METHODS, MATERIALS AND EQUIPMENT WITHIN 10 FEET OF SLUDGE DRYER SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE FOR HAZARDOUS (CLASSIFIED) LOCATIONS. REFER TO THE HAZARDOUS AREA CLASSIFICATIONS LETTER IN THE SPECIFICATIONS APPENDIX FOR FURTHER INFORMATION.
 - EXISTING EXHAUST FAN TO BE RELOCATED. INTERCEPT AND EXTEND EXISTING CIRCUIT AND CONNECT TO FAN AT NEW LOCATION.
 - EXTEND EXISTING CIRCUIT AND CONNECT TO NEW EXHAUST FAN EF-3.
 - UNIT FURNISHED WITH INTEGRAL DISCONNECT.
 - EXISTING INTERIOR FAN COIL UNIT AND THERMOSTAT TO BE RELOCATED. INTERCEPT EXISTING CIRCUITS AND REROUTE TO EXISTING OUTDOOR UNIT AND THERMOSTAT. INTERCEPT AND CONNECT TO EXISTING HOMERUN CONDUIT.
 - PROVIDE 2P-30A, NEMA 3R, HEAVY DUTY FUSED DISCONNECT. SIZE FUSES PER HVAC EQUIPMENT MANUFACTURER'S RECOMMENDATIONS FOR ACTUAL HVAC EQUIPMENT PROVIDED ON SITE.
 - PROVIDE MANUFACTURER'S RECOMMENDED CONDUCTORS IN 3/4" MINIMUM CONDUIT FROM INDOOR TO OUTDOOR UNIT.



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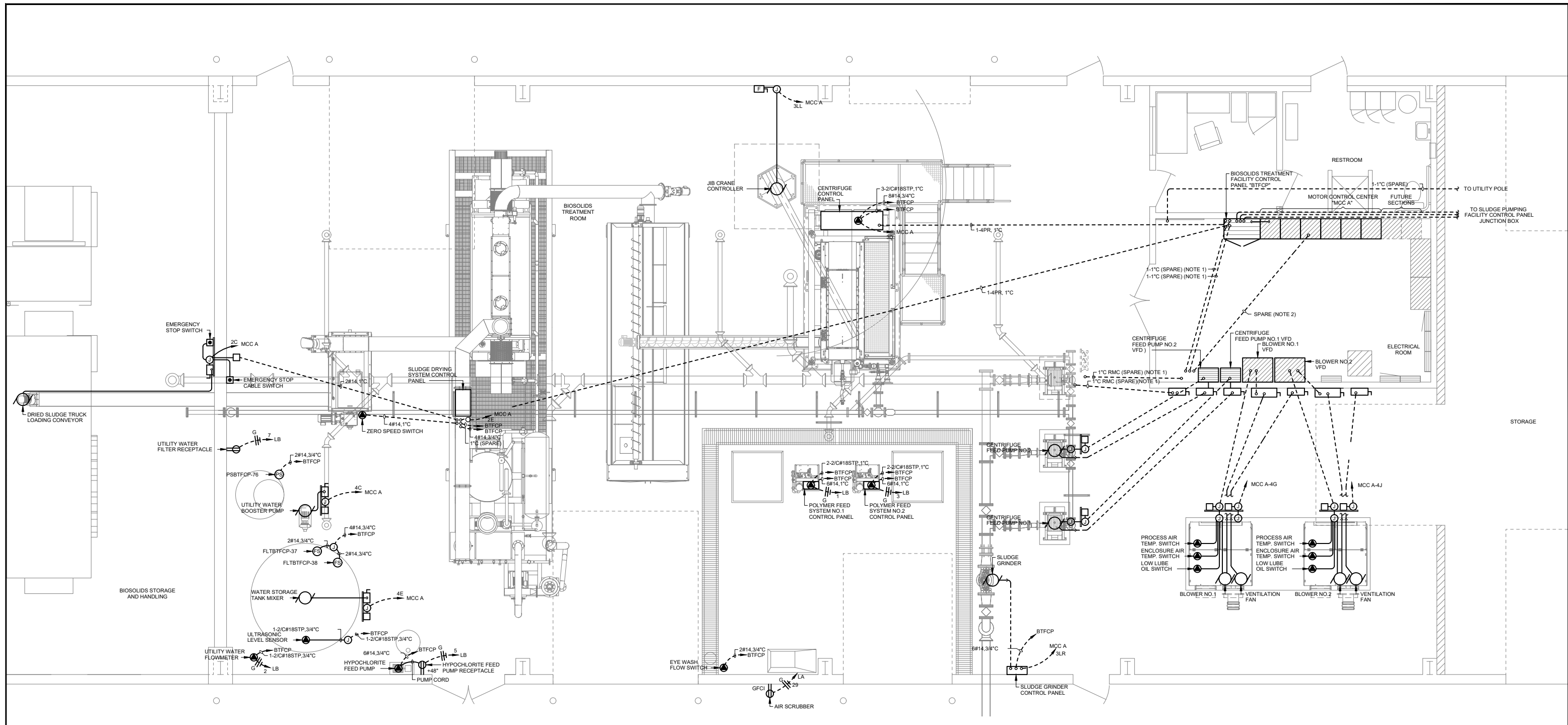
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PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
SOLIDS HANDLING
MODIFIED HVAC PLAN

E9-6

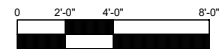
SHEET

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EXISTING/DEMOLITION PROCESS POWER, CONTROL,
AND INSTRUMENTATION PLAN
SOLIDS HANDLING BUILDING

(NOTE 3)



NOTES:

1. USE EXISTING SPARE CONDUIT TO SERVE NEW EQUIPMENT. SEE SHEET E9-8 FOR FURTHER INFORMATION.
2. SEE MOTOR CONTROL CENTER ONE LINE DIAGRAM SHEET E-5 FOR CIRCUIT AND EQUIPMENT INFORMATION.
3. EXISTING DEVICES SHOWN ARE TO REMAIN UNLESS OTHERWISE NOTED. PRESERVE AND PROTECT DURING THE COURSE OF CONSTRUCTION. EXISTING DEVICES AND CIRCUITS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER.



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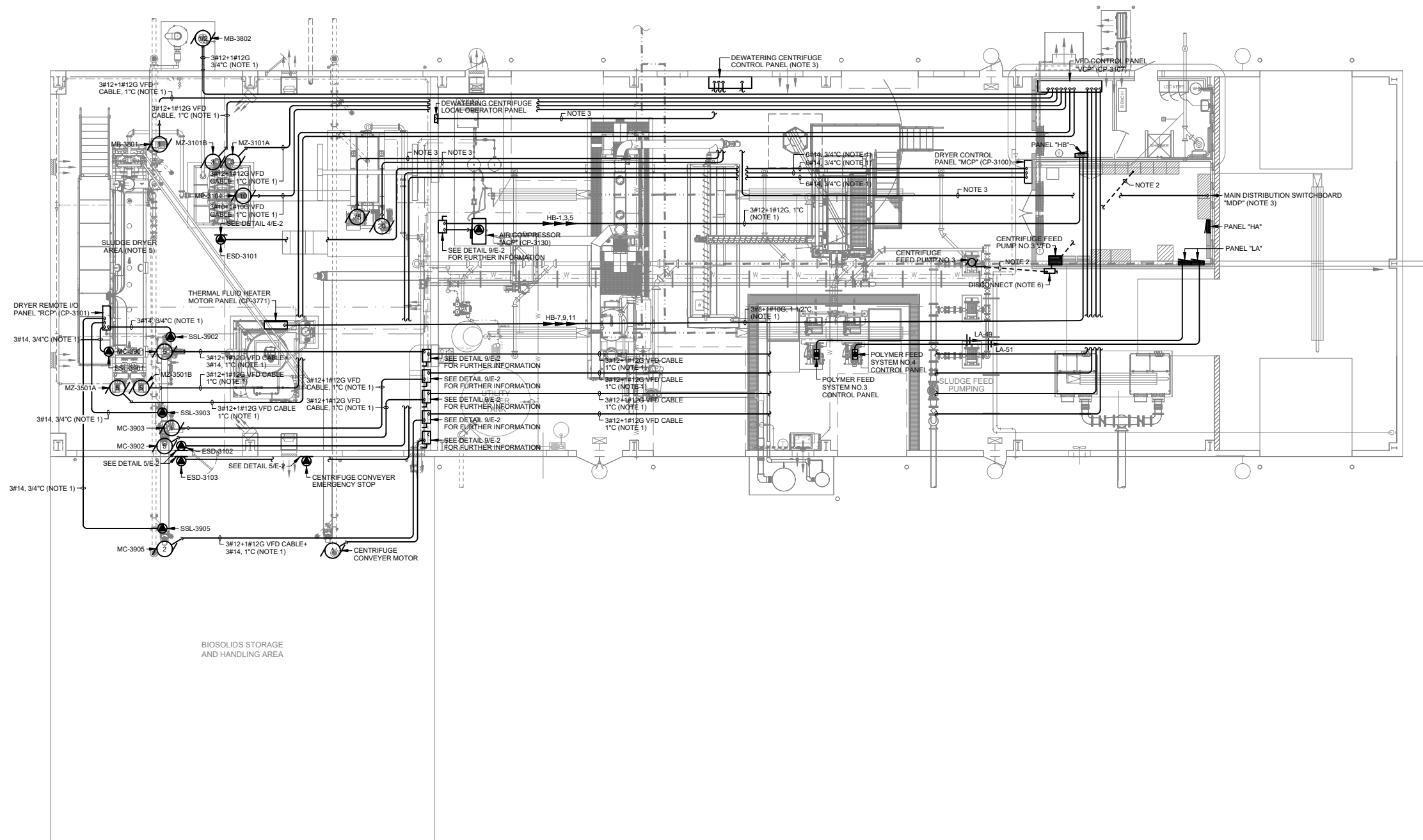
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CITY OF SELAH

PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS

SOLIDS HANDLING
EXISTING PROCESS POWER AND INST PLAN



- GENERAL NOTES:
- A. PROVIDE ADDITIONAL STRUCTURAL SUPPORTS AS REQUIRED TO INSTALL DEVICES AND CONDUIT ON METAL FRAME BUILDING AS WELL AS TO ROUTE CONDUIT FROM EQUIPMENT LOCATIONS TO THE CEILING.
- NOTES:
1. CIRCUITS ARE BASED UPON BASIS OF DESIGN BCR PROVIDED TIE-POINT SCHEDULE. DRYER MANUFACTURER SUBSTITUTIONS MAY REQUIRE REVISIONS. PROVIDE ELECTRICAL INSTALLATION THAT COORDINATES WITH ACTUAL DRYER SYSTEM PROVIDED.
2. SEE MOTOR CONTROL CENTER ONE LINE DIAGRAM SHEET E-7 FOR CIRCUIT AND EQUIPMENT INFORMATION.
3. SEE MODIFIED ONE LINE DIAGRAM SHEET E-4 FOR CIRCUIT AND EQUIPMENT INFORMATION.
4. EXISTING DEVICES AS SHOWN ON EXISTING PLANS ARE TO REMAIN UNLESS OTHERWISE NOTED. PRESERVE AND PROTECT DURING THE COURSE OF CONSTRUCTION. EXISTING DEVICES AND CIRCUITS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER.
5. WIRING METHODS, MATERIALS AND EQUIPMENT IN WITHIN 10 FEET OF SLUDGE DRYER SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE FOR HAZARDOUS (CLASSIFIED) LOCATIONS. REFER TO THE HAZARDOUS AREA CLASSIFICATIONS LETTER IN THE SPECIFICATIONS APPENDIX FOR FURTHER INFORMATION.
6. MOUNT ON WALL. PROVIDE ADDITIONAL FRAMING TO SUPPORT EQUIPMENT.

MODIFIED PROCESS POWER PLAN
SOLIDS HANDLING BUILDING
(NOTE 4)

0 4' 8' 16'



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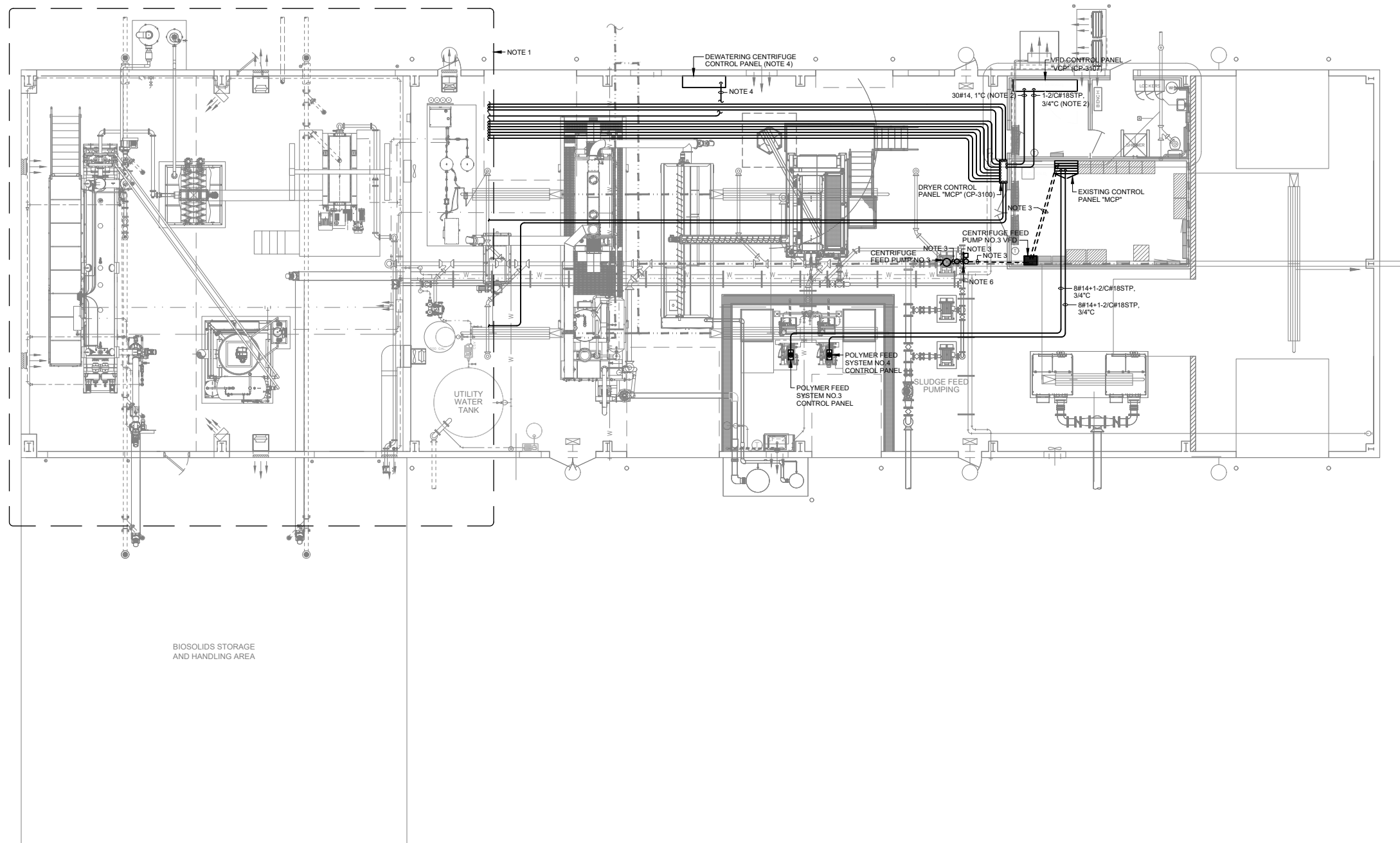
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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
SOLIDS HANDLING
MODIFIED PROCESS POWER PLAN

E9-8

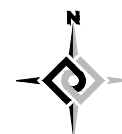
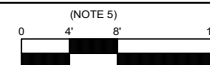
SHEET

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BIOSOLIDS STORAGE
AND HANDLING AREA

MODIFIED PROCESS INSTRUMENTATION PLAN
SOLIDS HANDLING BUILDING



GENERAL NOTES:

- A. PROVIDE ADDITIONAL STRUCTURAL SUPPORTS AS REQUIRED TO INSTALL DEVICES AND CONDUIT ON METAL FRAME BUILDING AS WELL AS TO ROUTE CONDUIT FROM EQUIPMENT LOCATIONS TO THE CEILING.

NOTES:

1. SEE PARTIAL PROCESS INSTRUMENTATION PLAN SHEET E9-10 FOR FURTHER INFORMATION.
2. CIRCUITS ARE BASED UPON BASIS OF DESIGN BCR PROVIDED TIE-POINT SCHEDULE. DRYER MANUFACTURER SUBSTITUTIONS MAY REQUIRE REVISIONS. PROVIDE ELECTRICAL INSTALLATION THAT COORDINATES WITH ACTUAL DRYER SYSTEM PROVIDED.
3. SEE MOTOR CONTROL CENTER ONE LINE DIAGRAM SHEET E-7 FOR CIRCUIT AND EQUIPMENT INFORMATION.
4. SEE MODIFIED ONE LINE DIAGRAM SHEET E-4 FOR CIRCUIT AND EQUIPMENT INFORMATION.
5. EXISTING DEVICES AS SHOWN ON EXISTING PLANS ARE TO REMAIN UNLESS OTHERWISE NOTED. PRESERVE AND PROTECT DURING THE COURSE OF CONSTRUCTION. EXISTING DEVICES AND CIRCUITS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER.
6. SEE DETAIL 4/E-2 FOR EQUIPMENT MOUNTING REQUIREMENTS ON BACKBOARD.



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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
SOLIDS HANDLING
MODIFIED PROCESS INSTRUMENTATION PLAN

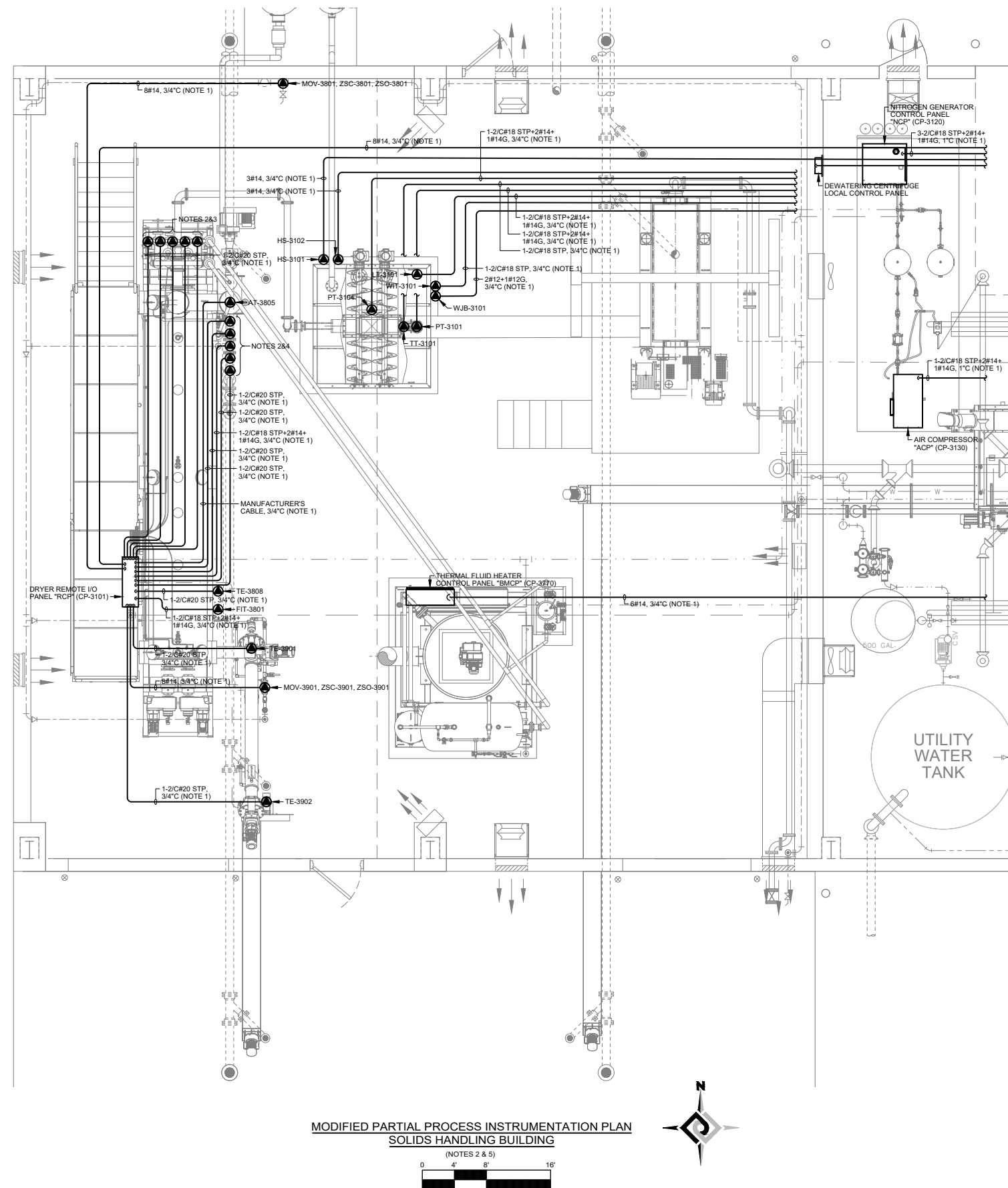
E9-9

SHEET

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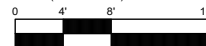
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MODIFIED PARTIAL PROCESS INSTRUMENTATION PLAN
SOLIDS HANDLING BUILDING

(NOTES 2 & 5)



GENERAL NOTES:

- PROVIDE ADDITIONAL STRUCTURAL SUPPORTS AS REQUIRED TO INSTALL DEVICES AND CONDUIT ON METAL FRAME BUILDING AS WELL AS TO ROUTE CONDUIT FROM EQUIPMENT LOCATIONS TO THE CEILING.

NOTES:

- CIRCUITS ARE BASED UPON BASIS OF DESIGN BCR PROVIDED TIE-POINT SCHEDULE. DRYER MANUFACTURER SUBSTITUTIONS MAY REQUIRE REVISIONS. PROVIDE ELECTRICAL INSTALLATION THAT COORDINATES WITH ACTUAL DRYER SYSTEM PROVIDED.
- VERIFY EXACT LOCATION OF INSTRUMENTS AND EQUIPMENT WITH VENDOR.
- HOUSING FOR TE-3516, TE-3517, TE-3518, TE-3519, AND TE-3520. CONTRACTOR TO REINSTALL AFTER MATCH MARK, KNOCKDOWN FROM FACTORY.
- HOUSING FOR TE-3801, TE-3802, TE-3804, TE-3805, AND FIT-3802.
- EXISTING DEVICES AS SHOWN ON EXISTING PLANS ARE TO REMAIN UNLESS OTHERWISE NOTED. PRESERVE AND PROTECT DURING THE COURSE OF CONSTRUCTION. EXISTING DEVICES AND CIRCUITS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER.



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23166

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FILE NAMES:
DRAWING: 23166E9-10

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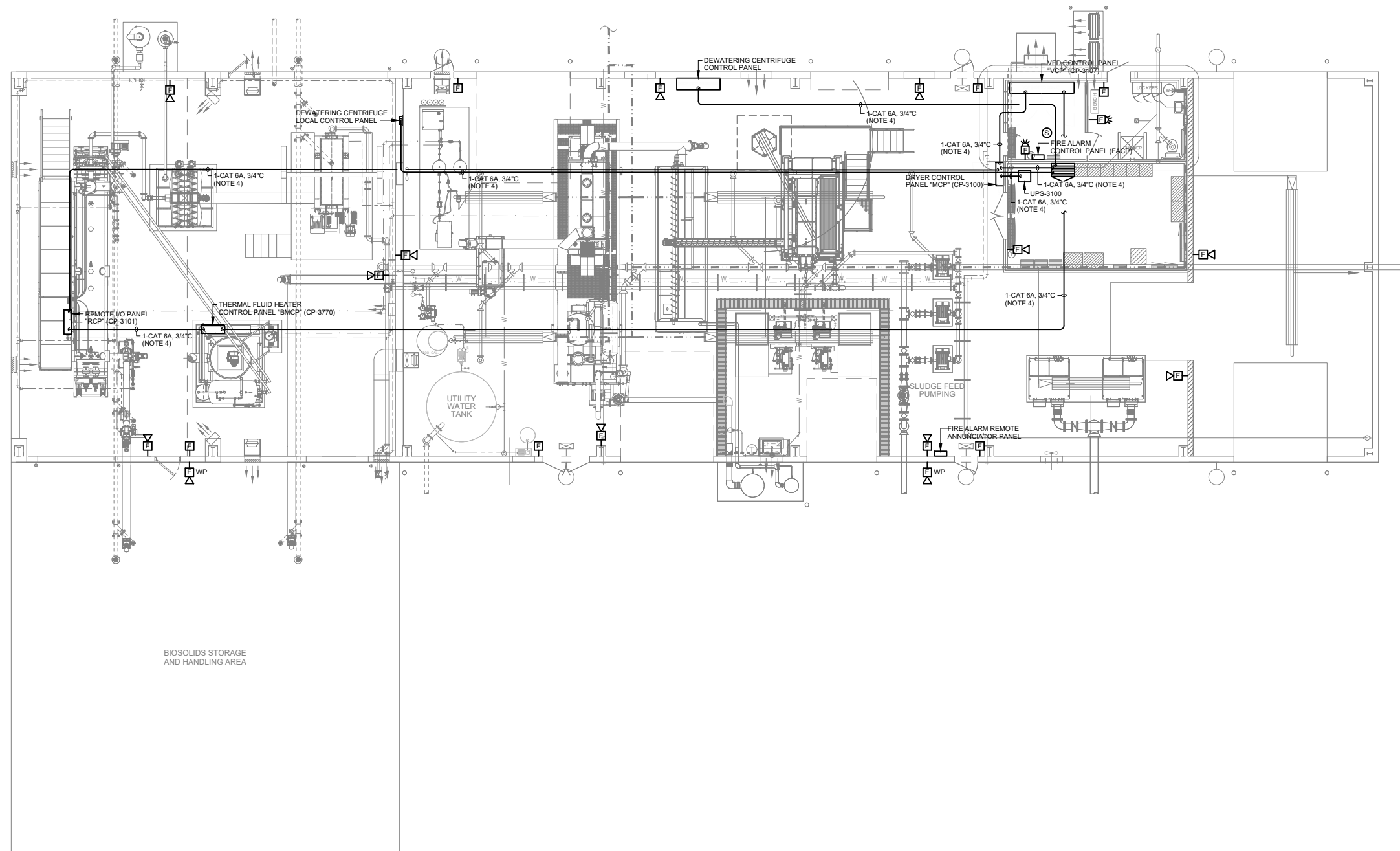
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CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS
SOLIDS HANDLING
MODIFIED PARTIAL PROCESS INST PLAN

E9-10

SHEET

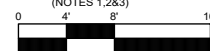
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BIOSOLIDS STORAGE
AND HANDLING AREA

MODIFIED SIGNAL AND
COMMUNICATIONS PLAN
SOLIDS HANDLING BUILDING

(NOTES 1,2&3)



GENERAL NOTES:

- A. PROVIDE ADDITIONAL STRUCTURAL SUPPORTS AS REQUIRED TO INSTALL DEVICES AND CONDUIT ON METAL FRAME BUILDING AS WELL AS TO ROUTE CONDUIT FROM EQUIPMENT LOCATIONS TO THE CEILING.

NOTES:

1. FOR FIRE ALARM SYSTEM, PROVIDE SURFACE MOUNTED DEVICE BOX FOR EACH DEVICE MOUNTED ON WALLS AND OPEN CEILINGS, AND CUT IN BOX FOR DEVICES MOUNTED IN HARD LID CEILINGS. SIZE DEVICE BOX PER FIRE ALARM MANUFACTURER'S REQUIREMENTS. INSTALL 1/2" RMC CONDUIT FROM DEVICE BOX LOCATED ON WALLS TO CEILING SPACE. FROM THAT POINT, ROUTE CABLES FOR DEVICES LOCATED IN WALLS OR CEILINGS IN 3/4" RMC CONDUIT BACK TO FIRE ALARM CONTROL PANEL. WHERE DEVICES ARE INSTALLED IN ROOMS WITH HARD LID CEILINGS, ROUTE CONDUITS TO NEAREST ACCESSIBLE CEILING SPACE AND CONNECT TO CONDUIT SYSTEM. SIZE CONDUITS IN CEILINGS PER REQUIREMENTS FOR FIRE ALARM CABLES (3/4" CONDUIT MINIMUM). IT IS NOT PERMISSIBLE TO INSTALL FIRE ALARM SYSTEM USING D-RINGS OR J-HOOKS OR TO ROUTE CABLES IN OPEN AIR.
2. EXISTING DEVICES AS SHOWN ON EXISTING PLANS ARE TO REMAIN UNLESS OTHERWISE NOTED. PRESERVE AND PROTECT DURING THE COURSE OF CONSTRUCTION. EXISTING DEVICES AND CIRCUITS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER.
3. PROVIDE ADDITIONAL STRUCTURAL SUPPORTS AS REQUIRED TO INSTALL DEVICES AND CONDUIT ON METAL FRAME BUILDING. SEE "M" SERIES OF DRAWINGS FOR ADDITIONAL INFORMATION.
4. CIRCUITS ARE BASED UPON BASIS OF DESIGN BCR PROVIDED TIE-POINT SCHEDULE. DRYER MANUFACTURER SUBSTITUTIONS MAY REQUIRE REVISIONS. PROVIDE ELECTRICAL INSTALLATION THAT COORDINATES WITH ACTUAL DRYER SYSTEM PROVIDED.



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* SCALE NOTED ON DRAWINGS IS FOR FULL SIZE PRINT (22"x34").

JOB NUMBER:
23166

DATE:
07-07-26

FILE NAMES:
DRAWING: 23166E9-11

DESIGNED BY: CJD
ENTERED BY: BRB

CITY OF SELAH
PHASE 2 - WASTEWATER TREATMENT
PLANT IMPROVEMENTS

SOLIDS HANDLING
MODIFIED SIGNAL AND COMMUNICATIONS PLAN

E9-11

SHEET

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