

CHANGE ORDER NO.: 1

Owner:	City of San Luis	Owner's Project No.:	2025-050
Engineer:	PACE	Engineer's Project No.:	B777
Contractor:	Filanc	Contractor's Project No.:	
Project:	West WWTP 3.0 MGD MBR Upgrades		
Contract Name:	West WWTP 3.0 MGD MBR Upgrades		
Date Issued:	June 24, 2026	Effective Date of Change Order:	June 24, 2026

The Contract is modified as follows upon execution of this Change Order:

Description:

Scope reduction and schedule extension per PCO 001

Attachments:

PCO 001

Change in Contract Price	Change in Contract Times
Original Contract Price: \$ <u>41,163,578.00</u>	Original Contract Times: Substantial Completion: <u>488</u> Ready for final payment: <u>533</u>
Decrease from previously approved Change Orders No. 0 to No. 0: \$ <u>0.00</u>	Increase from previously approved Change Orders No.0 to No 0: Substantial Completion: <u>0</u> Ready for final payment: <u>0</u>
Contract Price prior to this Change Order: \$ <u>41,163,578.00</u>	Contract Times prior to this Change Order: Substantial Completion: <u>488</u> Ready for final payment: <u>533</u>
Decrease this Change Order: \$ <u>4,292,201.00</u>	Increase this Change Order: Substantial Completion: <u>83</u> Ready for final payment: <u>83</u>
Contract Price incorporating this Change Order: \$ <u>36,871,377.00</u>	Contract Times with all approved Change Orders: Substantial Completion: <u>571</u> Ready for final payment: <u>616</u>

Recommended by Engineer (if required)

Accepted by Contractor

By: _____

Title: _____

Date: _____

Authorized by Owner

Approved by Funding Agency (if applicable)

By: _____

Title: _____

Date: _____



Potential Scope Adjustment Options

Filanc
21617 N 3rd Ave
Phoenix, Arizona 85027
Phone: (602) 544-3600

Project: WEST WWTP 3.0 MGD MBR UPGRADES
101 Cesar Chavez Blvd
San Luis, AZ 85349

CHANGE ORDER REQUEST

TO:	City of San Luis 1090 East Union Street San Luis, Arizona 85349	FROM:	Filanc 740 North Andreasen Drive Escondido California, 92029
PCO NUMBER/REVISION:	001 / 0	PROJECT:	WEST WWTP 3.0 MGD MBR UPGRADES
REQUEST RECEIVED FROM:	Eulogio Vera – City of San Luis	CREATED BY:	Klete Rogers - Filanc
STATUS:	In Review	REFERANCE:	
		TOTAL AMOUNT:	(\$4,292,201)

Below is our proposal to complete the following changes to our contract work:

CHANGE ORDER TITLE: Potential Scope Adjustment Options

CHANGE REASON: Owner / Engineer Request

CHANGE ORDER DESCRIPTION: *(The Contract Is Changed As Follows)*

This Change Order Request contains proposed scope and sequencing adjustments for the WEST WWTP 3.0 MGD MBR Upgrades project, developed in response to Owner and Engineer direction. The revisions include targeted reductions to electrical, civil/demolition, structural, process/equipment, and project controls scope, along with resequencing intended to maintain plant operations and improve overall project efficiency. The following items are provided below for the City's review and consideration.

Electrical Scope Revisions (\$1,007,711)

The electrical scope shall be revised as follows:

- Remove rebar for conduit encasement per Details A-W, Plan Sheets E11.5, E11.20 through E11.24. No rebar shall be provided in any duct bank encasement as a result.
- Remove electrical work associated with the MBR overhead crane, including but not limited to conduit, wire, breakers, disconnects, and control instrumentation.
- Electrical scope shall be re-sequenced in conjunction with the changes made in the Process / Equipment and Sequencing Revisions.

See Attachment A for clarification and indication of electrical changes for the overhead crane.

Civil / Demolition Scope Revisions (\$150,000)

The civil and demolition scopes shall be revised as follows:

- Remove from scope: Install 3" DG over compacted native per specifications on the road leading to the sludge beds (see Sheet C3.0, Note 8)
- Remove from scope: Contractor to demo all structures above concrete pads for abandoned DAF unit (See Attached D1.1)
- Remove from scope: Demo existing sludge pumps. Remove all above grade equipment, piping, and appurtenances of the Existing Sludge Pump. (See Attached D1.1)
- Remove from scope: Demo old odor control system (West unit). Remove all above grade structures, equipment, piping, and appurtenances. (See Attached D1.1)
- City shall provide total sufficient fill import to within 300 feet of the site entrance. City will coordinate with contractor on scheduling of fill.

See Attachment A for clarification and indication of civil and demo scope changes. Any specification requirements pertinent to the scope changes above shall be amended shall also be amended accordingly.

Structural Scope Revisions (\$831,326)

The structural scope shall be revised as follows:

- Remove from scope: MBR FRP covers over the MBR basins shown on Sheet M2.0, Note 2.
- Remove from scope: MBR overhead crane structure shown on Sheet M2.3 (Note 1) and S2.2. Footing shall be provided as detailed in the structural plans for future overhead crane.
- Remove from scope: MBR overhead crane shown on Sheet M2.0 M2.3, M2.4
- Provide additional handrail in lieu of FRP covers at the MBR basins. Handrail to match other new handrailing provided in other areas as specified in project specifications and Sheet W11.0 Detail D.
- Remove from scope: Structural submittal requirements associated with the deleted structural scope items above.

See Attachment A for clarification and indication of structural scope changes. Any specification requirements pertinent to the scope changes above shall be amended shall also be amended accordingly.

Potential Scope Adjustment Options

Process / Equipment and Sequencing Revisions (\$776,000)

The original sequence required the intensification process to be completed and operational prior to removing SBR 1, 2, and 3 from service, which would require intensifying for the entire duration of the project. Filanc has resequenced the work to reduce the intensification duration from 24 months to 12 months. This approach allows the project to begin with work at the headworks and Basins 1 and 2 while Basins 3 and 4 remain in service. Filanc will then complete the intensification installation and commissioning sequence in a manner that maintains operations and supports an overall reduction in project duration.

The detailed steps of the sequencing are as follows:

- 1) Headworks will be relocated and brought online
- 2) Basins 1 and 2 will be isolated and Basins 3 and 4 will continue to operate
- 3) Filanc will complete the work in Basins 1 and 2, the new headworks, and as much of the MLSS channel as possible.
- 4) Concurrently we will make all necessary modifications, install, and startup the intensification unit To be operational prior to beginning work in basin 3
- 5) Once intensification is complete Filanc will complete work in basin 3 and begin the commissioning process of the headworks, basins 1, 2, and 3, MLSS Channel, and all other support systems making the MBR operationally complete.
- 6) Upon completion of MBR commissioning Filanc will remove intensification system and complete the modifications of Basin 4 to an Equalization Basin. Completing the project.

The resequencing work reduces the intensifier duration to 12 months in duration. The monthly rental of the intensification equipment is \$48,000 per month for a total of \$576,000. The remaining balance of \$200,000 is a reduction in the overall schedule because of the resequencing. Any changes that require the equipment rental duration to be changed will be addressed through the change order process in accordance with the contract documents.

Project Controls Revisions Calculated Below

The project contingency has been reduced to reflect the current maturity of the project and the reduced level of remaining risk. The design is now substantially complete, and the major construction considerations, sequencing concerns, and constructability issues have been reviewed and addressed. In addition, a significant portion of the major equipment has already been purchased or committed, which further reduces exposure to future pricing volatility, procurement uncertainty, and scope development risk. Based on these factors, we suggest the remaining contingency be adjusted to 2.5%, a level more appropriate for the current stage of the project. The original contract scope total was \$39,203,408 with a 5% contingency of \$1,960,170 for a total bid price of \$41,163,578. The new contract scope total is \$35,972,075 making the 2.5% contingency \$899,302 for a total contingency reduction of (\$1,060,868).

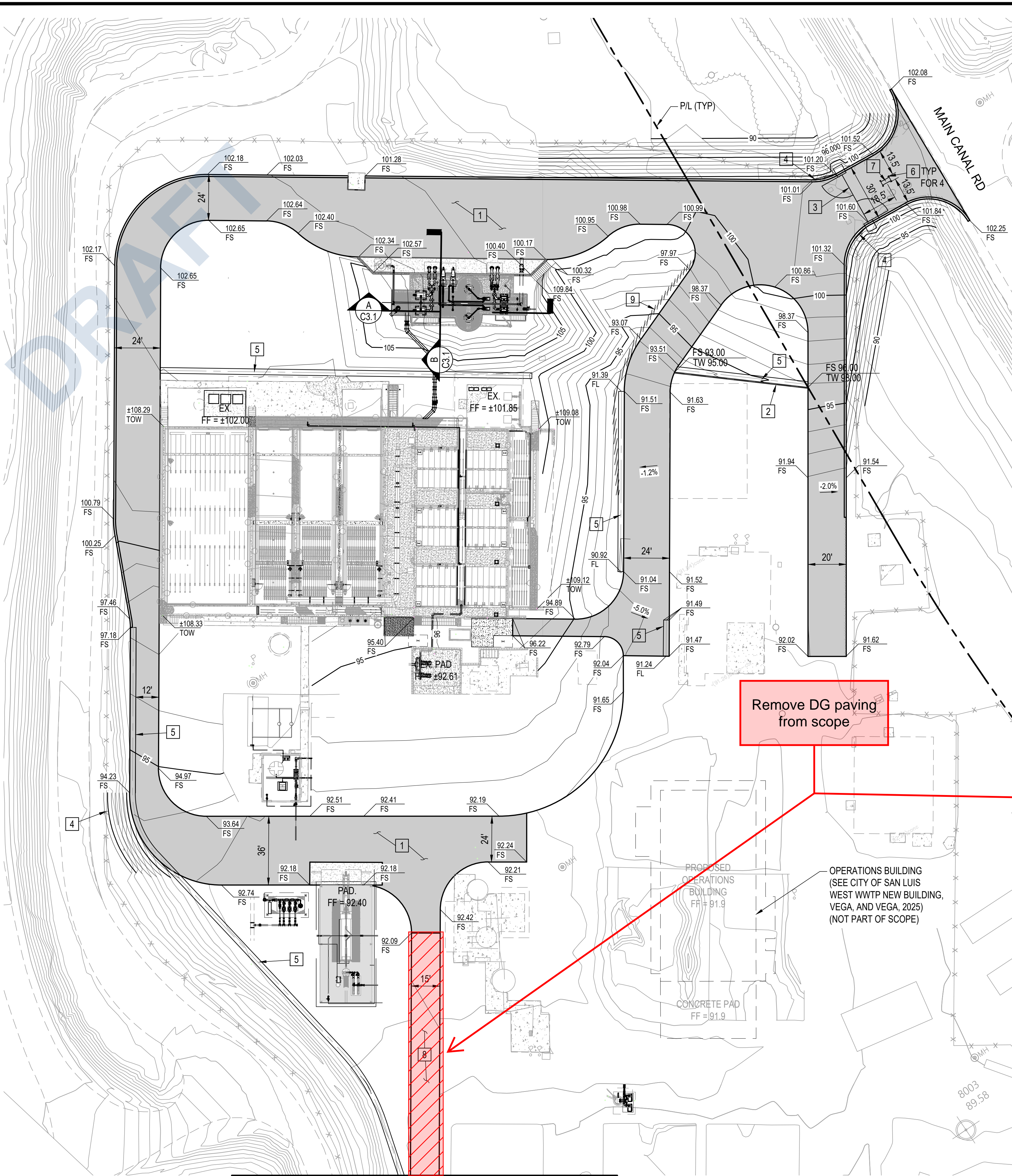
Summary and Total

Subtotal of Scope Changes	(\$2,765,037)
Contractor Markup 10%	(\$276,504)
Sales Tax 6.24%	(\$189,792)
TOTAL SCOPE CHANGES	(\$3,231,333)
Contingency Reduction to 2.5% of Revised Contact Value	(\$1,060,868)
TOTAL DEDUCTION	(\$4,292,201)
CURRENT CONTRACT VALUE	\$41,163,578
REVISED CONTRACT VALUE	\$36,871,377

Clarifications and Conditions

This Change Order is based on the following clarifications:

- The deductive pricing is based on acceptance of the above scope revisions as a complete package. Partial acceptance may require repricing.
- Deleted work is excluded from the Contract Documents after execution of this Change Order. Any future requirement to restore, redesign, reinstall, or otherwise perform deleted work shall be treated as a separate change.
- City-provided fill import shall be suitable, available, and delivered to within 300 feet of the site entrance in a manner that does not delay Contractor's work.
- Final implementation of the scope revisions is subject to approval by the City and the design professional, including any required drawing, specification, permit, or regulatory revisions.
- Except as expressly modified by this Change Order, all other terms and conditions of the Contract remain unchanged.
- Process Equipment resequencing is subject to Engineer and owner approval as outlined above. Any additional rental of intensification system and associated costs, due to no fault of the contractor are subject to change order



CONSTRUCTION NOTES:

- 1 INSTALL 3" ASPHALT OVER 8" AGGREGATE BASE COARSE PER GEOTECHNICAL REPORT WITH TYPE A THICKENED EDGE PER PER DETAIL: C
C6.0
- 2 INSTALL CONCRETE RETAINING WALL PER STRUCTURAL PLANS.
- 3 INSTALL ACCESS GATE PER DETAIL: D
C6.3
- 4 RELOCATE AND INSTALL NEW CHAIN LINK FENCE WHERE REQUIRED PER DETAIL F
C6.0 MATCH EXISTING.
- 5 INSTALL 3' CONCRETE SWALE PER DETAIL: F
C6.2
- 6 INSTALL PROTECTIVE BOLLARD PER DETAIL: D
C6.2
- 7 INSTALL GATE CARD READER PER CITY SPECIFICATION.
- 8 ~~INSTALL 3' DG OVER COMPACTED NATIVE PER SPECIFICATIONS~~
- 9 REMOVE EXISTING RETAINING WALL.

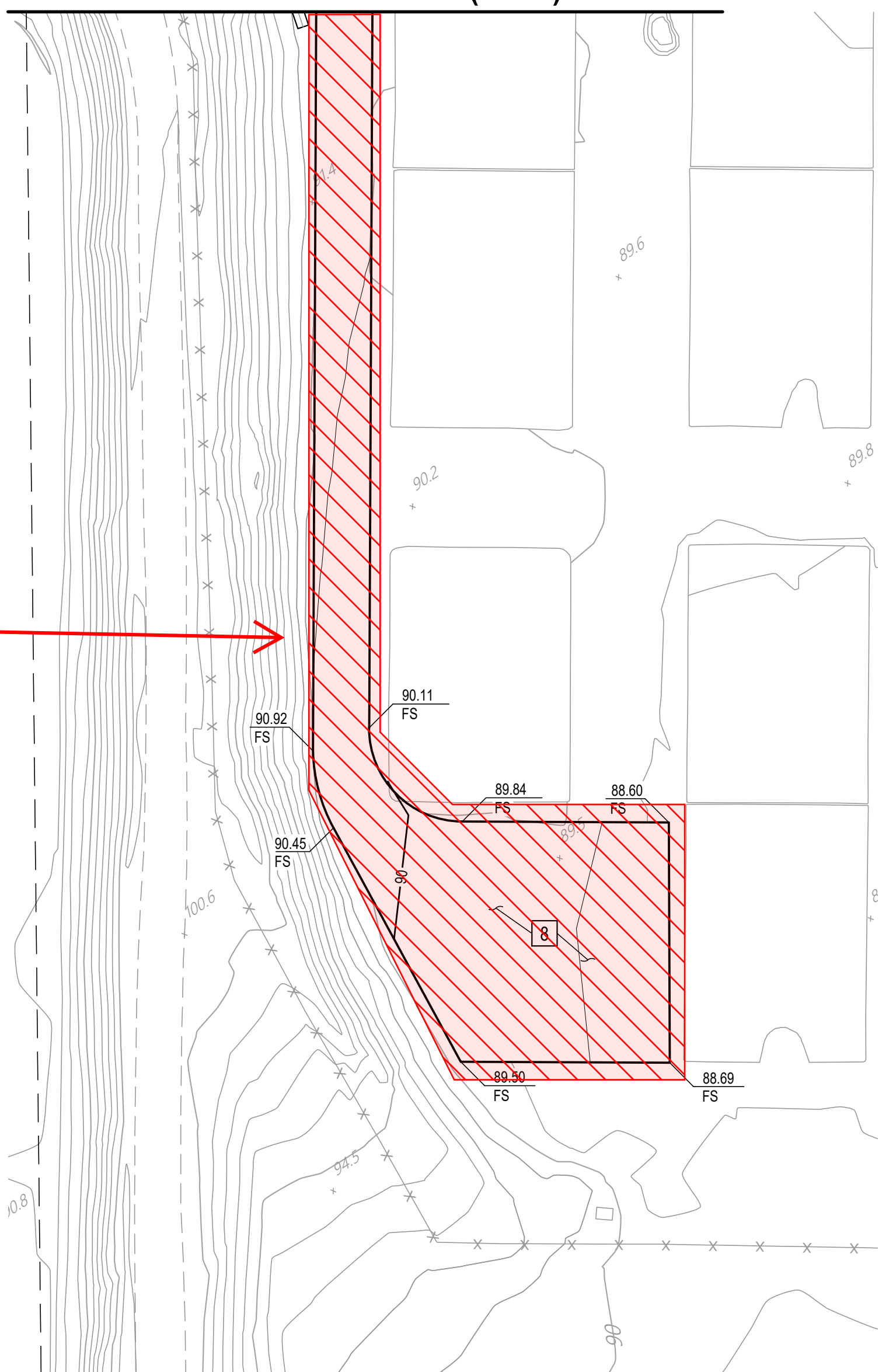
EARTHWORK ESTIMATE

CUT	773	Cu. Yd.
FILL	7,180	Cu. Yd.
NET	6,407	Cu. Yd. <FILL> ADJUSTED FOR 20% SHRINKAGE

CONTRACTOR SHALL VERIFY EARTHWORK QUANTITIES
ESTIMATED FILL INCLUDES FILL FOR PROPOSED OPERATIONS BUILDING

Owner to provide suitable fill within 300ft of site entrance

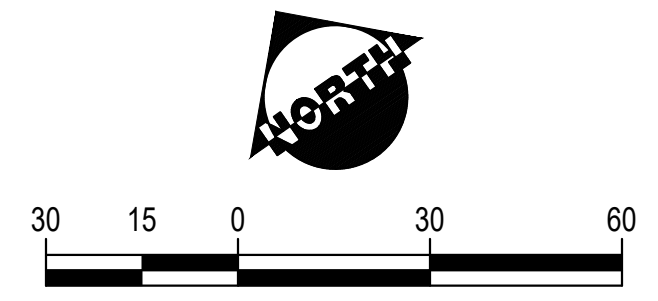
SEE CONTINUATION (LEFT)



SEE CONTINUATION (RIGHT)

PROPOSED GRADING PLAN

SCALE: 1" = 30'



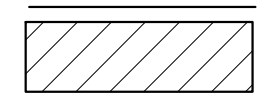
PREPARED BY DIJONG DO R.C.E. NO. #40050 EXP. DATE	PROJECT ENGINEER DIJONG DO SCALE DRAWN W.W. MSA DESIGNED NT, NE CHECKED DD	TITLE GRADING PLAN	JOB CITY OF SAN LUIS WEST WWTP 3.0 MGD MBR UPGRADES	SAN LUIS AZ.	REVISIONS NO. BY DATE
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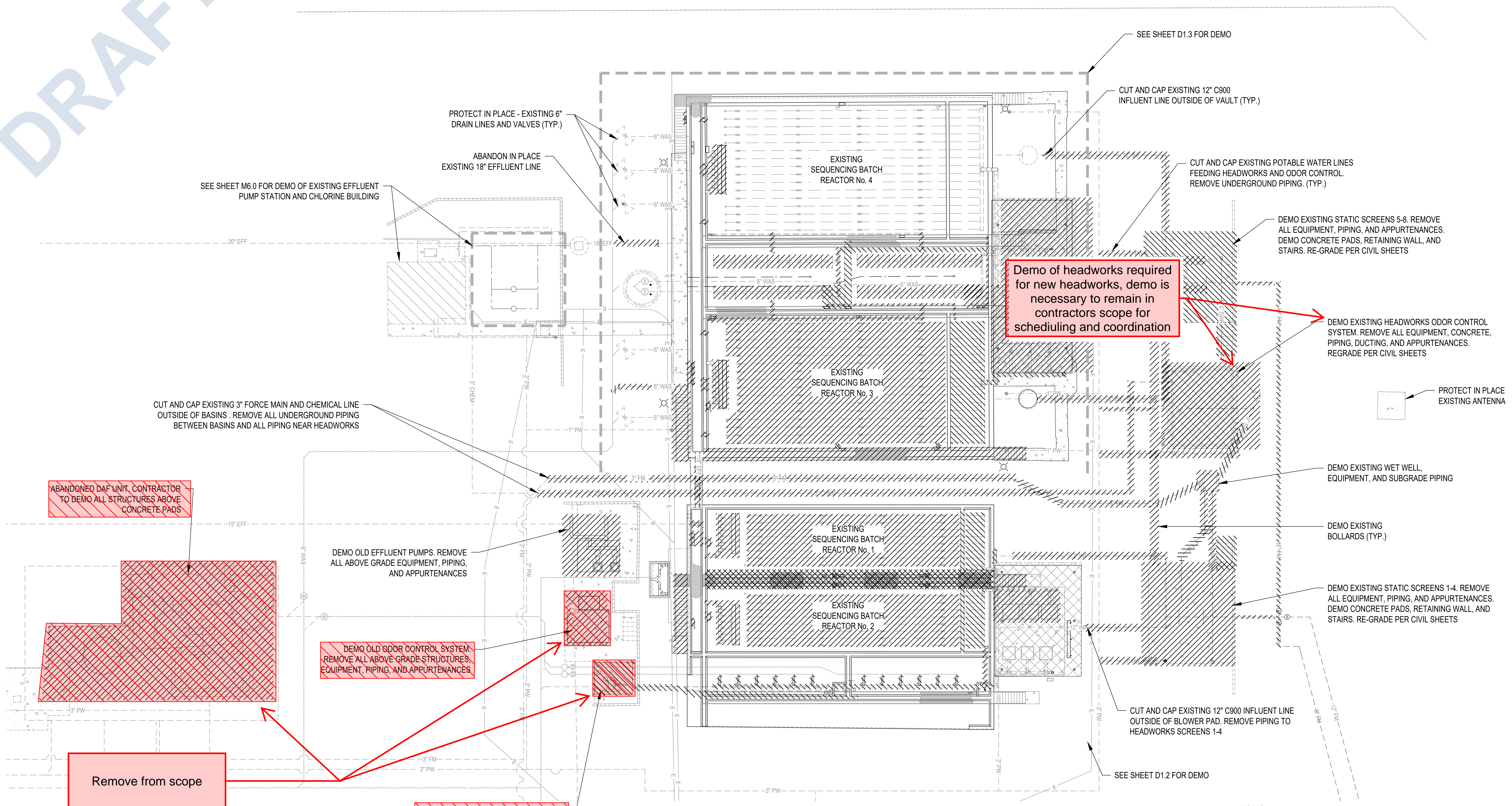
SHEET	C3.0
13 OF 209 SHEETS	
JOB NO. B777	

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LEGEND:
 DEMO

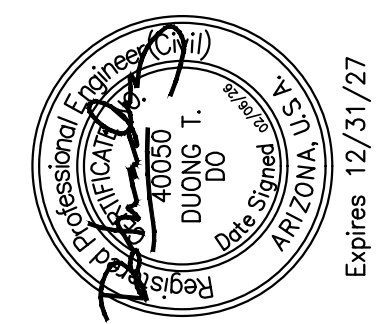



Demo of headworks required for new headworks, demo is necessary to remain in contractor's scope for scheduling and coordination

Remove from scope

DEMO SITE PLAN
 SCALE: 1/16" = 1'-0"

- NOTES:**
1. DEMO PLANS SHOWN ARE SUGGESTED FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE DEMO PLAN FOR APPROVAL BY CITY PRIOR TO CONSTRUCTION.
 2. ALL EQUIPMENT AND MATERIAL DEMO'D WILL BE OFFERED TO THE CITY FOR FIRST REFUSAL PRIOR TO CONTRACTOR'S DISPOSAL.

		NO. BY DATE REVISIONS DATE APP.
PREPARED BY DUONG DO PROJECT ENGINEER #40050 EXP. DATE	SCALE DRAWN W.W. MSA DESIGNED NT, NE CHECKED DD	DATE FEB 2026
DEMOLITION PLAN		
CITY OF SAN LUIS WEST WWTP 3.0 MGD MBR UPGRADES		
SAN LUIS		AZ.
		
8723 E. VIA DE COMMERICO, SUITE A-204 SCOTTSDALE, CA 85268 P: (480) 991-3595 www.pacewater.com		
SHEET D1.1 22 OF 209 SHEETS		
JOB NO. B777		

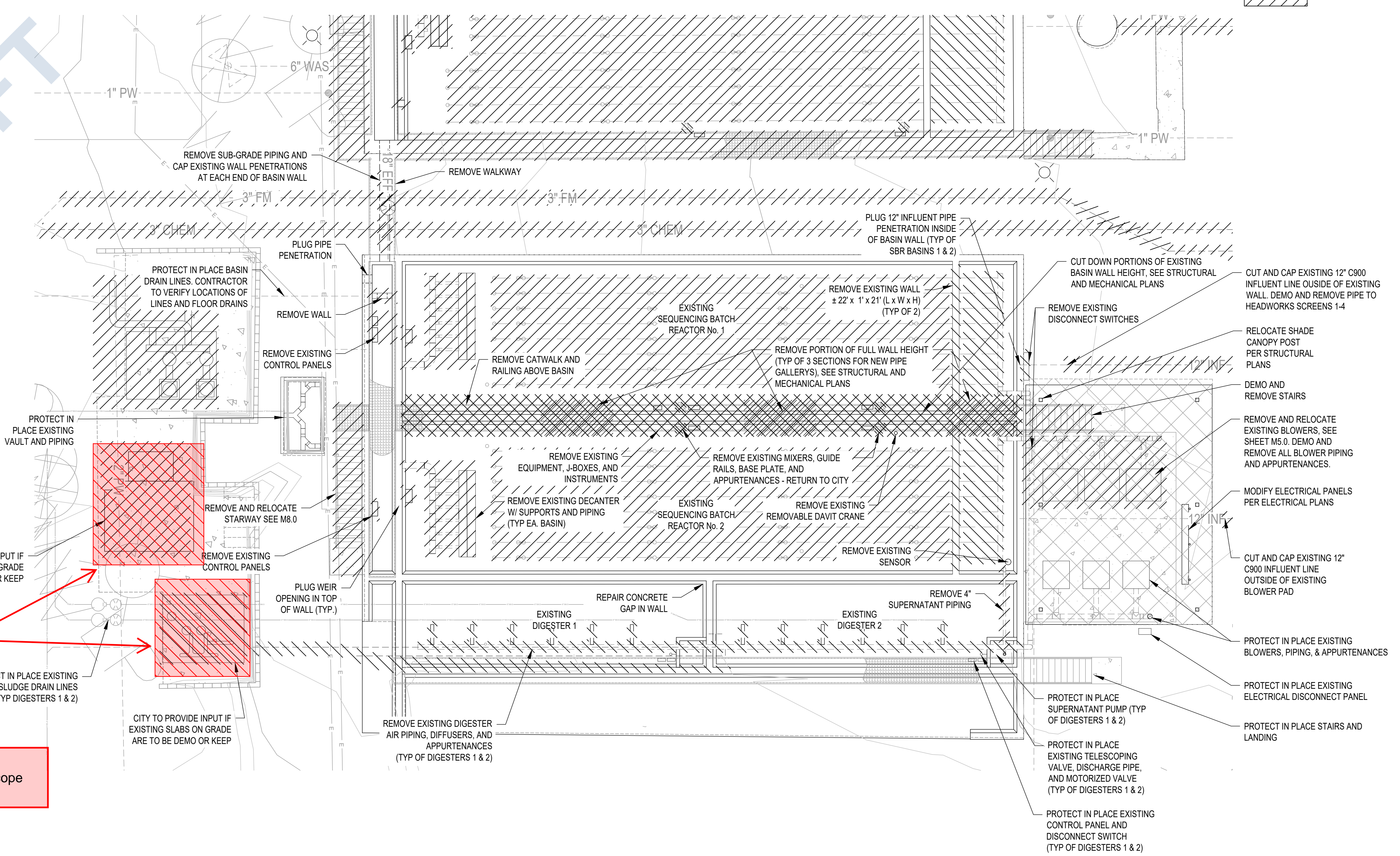
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FINAL PLANS ISSUED FOR BID

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DRAFT

Remove from scope



LEGEND:
 DEMO

- NOTES:**
1. DEMO PLAN SHOWN ARE SUGGESTED FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE DEMO PLAN FOR APPROVAL BY CITY PRIOR TO CONSTRUCTION.
 2. ALL EQUIPMENT AND MATERIAL DEMO'D WILL BE OFFERED TO THE CITY FOR FIRST REFUSAL PRIOR TO CONTRACTOR'S DISPOSAL.

EXISTING SBR & DIGESTER BASINS
 SCALE: 1/8" = 1'-0"

	PREPARED BY DUONG DO PROJECT ENGINEER #40050 EXP. DATE:	SCALE DRAWN BY: W.W. MSA DESIGNED BY: NT, NE CHECKED BY: DD	DATE FEB 2026	REVISIONS NO. BY DATE	DATE APP.
	THESE DRAWINGS ARE THE PROPERTY OF P.A.C.E. AND SHALL NOT BE REPRODUCED IN ANY MANNER NOR BE USED FOR CONSTRUCTION UNLESS STAMPED "ISSUED FOR CONSTRUCTION".				
EXISTING SBR BASIN 1 & 2					
CITY OF SAN LUIS WEST WWTP 3.0 MGD MBR UPGRADES	SAN LUIS, AZ.				JOB NO. B777
8723 E. VIA DE COMMERICO, SUITE A-204 SCOTTSDALE, CA 85258 P: (480) 991-3595 www.pacewater.com					
SHEET D1.2 23 OF 209 SHEETS					

FINAL PLANS ISSUED FOR BID

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SUGGESTED SEQUENCE OF CONSTRUCTION FOR MAIN WWTP CONVERSION

- STAGE 1:**
- COMPLETE INTENSIFICATION PROCESS IN SBR 4 (SEE D1.0)
 - OPERATE EFFLUENT DISCHARGE AND EFFLUENT PUMP STATION AS IS
 - ALL WASTE ACTIVATED SLUDGE WILL BE WASTED TO SLUDGE DRYING BEDS
- STAGE 2:**
- REDUCE FLOW TO 1 MGD BY DIVERTING EXCESS FLOW TO EAST WWTP
 - PROVIDE TEMPORARY PIPING FROM PLANT DRAIN PUMP STATION TO SCREENS 5-8
 - INSTALL TEMPORARY CATCH BASIN AND SUMP PUMP AT SCREENS 5-8 WITH DRAIN LINE FROM EXISTING SCREEN
- STAGE 3:**
- DIVERT ALL FLOW TO SCREENS 5-8 AND ONLY OPERATE SBR 4 (WITH INTENSIFICATION)
- STAGE 4: DEMO AND/OR REMOVE THE FOLLOWING:**
- SCREENS 1-4
 - SBRs 1 AND 2
 - SBRs 1 AND 2 AERATION BLOWERS
 - DIGESTERS 1 AND 2
 - SLUDGE PUMPS, ODOR CONTROL, AND OLD EFFLUENT PUMPS
 - EASTERN WALKWAY AND HANDRAIL ON SBR 3
 - DEMO SBRs 3 AND 4 AERATION BLOWER CANOPY
 - CLEAN OUT SBR3 AND DIGESTERS 3 & 4 BUT KEEP AS EMERGENCY STORAGE WITH TEMPORARY TRANSFER PUMPS UNTIL STAGE 7
- STAGE 5:**
- MOVE SBRs 1 AND 2 AERATION BLOWER AND INSTALLED AT FEB BASIN LOCATION PER PLAN
 - CONNECT NEW FEB BLOWER TO SBR 4 AIR MANIFOLD
 - DEMO SBR AND DIGESTER PROCESS BLOWERS
- STAGE 6: CONSTRUCT AND INSTALL ALL STRUCTURAL, MECHANICAL, ELECTRICAL IN THE FOLLOWING PROCESS AREAS PER PLAN:**
- MBR PROCESS
 - MBR BASINS
 - BLOWER PIPE GALLERIES
 - DIGESTERS 1 AND 2
 - NEW HEADWORKS AND HW ODOR CONTROL
 - NON-POTABLE WATER PUMP STATION
 - SLUDGE DEWATERING
 - FEB PUMPS
 - YARD PIPING

Revised per CO1 Details

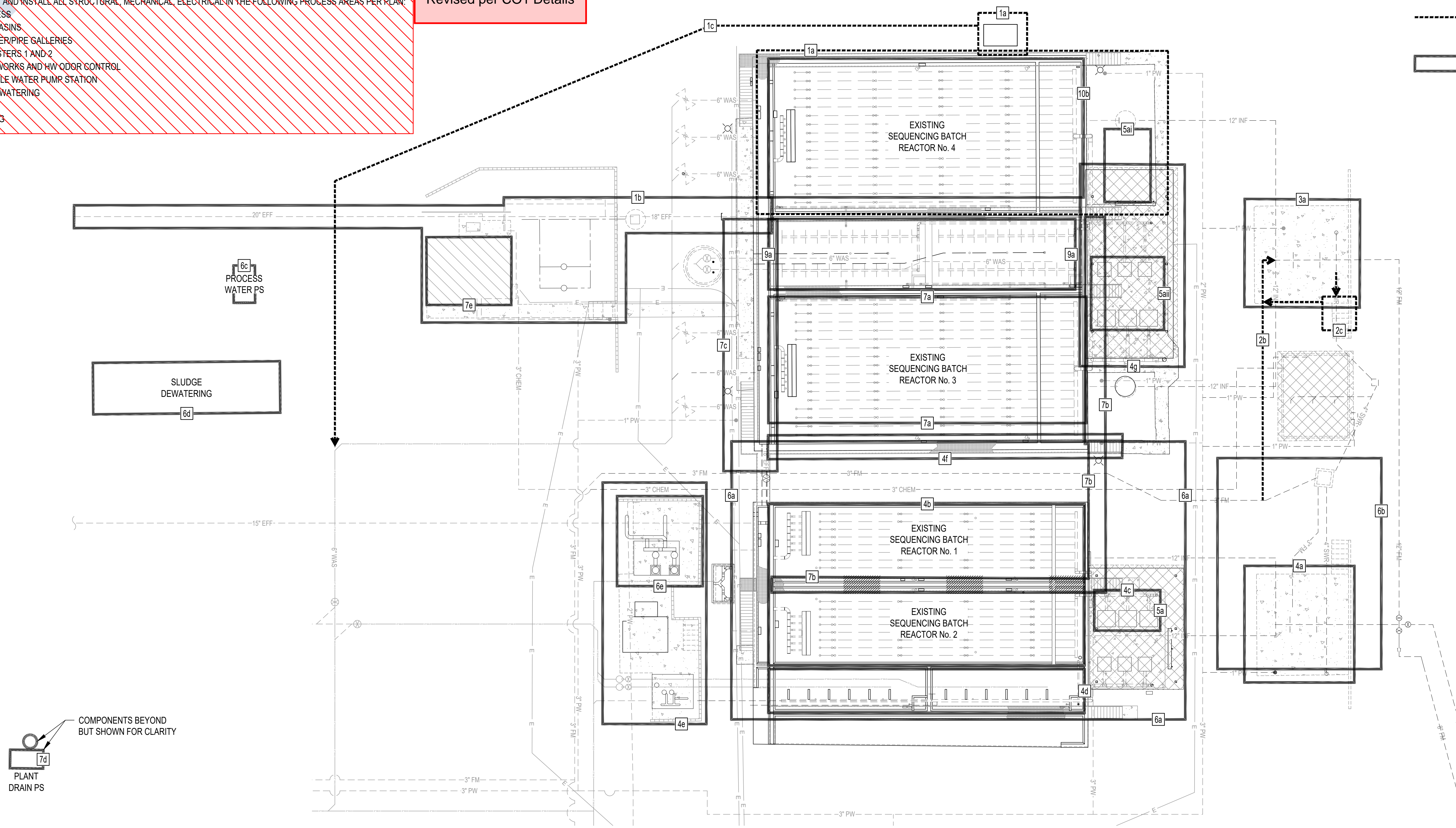
- STAGE 7:**
- IMPROVEMENTS TO SBR 3 FOR CONVERSION TO PROCESS TRAINS 1 AND 2
 - CONSTRUCT MLSS CHANNEL
 - CONSTRUCT AND INSTALL FEED FORWARD CHANNEL AND EQUIPMENT
 - PLANT DRAIN PUMP STATION (DIVERT TEMPORARY WAS FROM INTENSIFICATION TO SLUDGE DEWATERING UNIT)
 - IMPROVE CHEMICAL BUILDING AND CIP PIPING
 - KEEP DIGESTERS 3 & 4 AS EMERGENCY STORAGE UNTIL STAGE 9
- STAGE 8: START UP MBR PROCESS**
- SEEDING PROCESS TRAINS 1 AND 2
 - DIVERT PARTIAL INFLUENT FLOW TO NEW HEADWORKS AND PROCESS TRAINS 1 AND 2
 - USE INTENSIFICATION WAS TO SEED PROCESS
 - SEED MUST BE TEMPORARY PIPE TO NEW HEADWORKS SCREEN TO ENSURE SEED IS CLEAN FROM TRASH
 - START MBR PROCESS - AS PROCESS MATURES, DIVERT MORE FLOW TO MBR PROCESS
- STAGE 9:**
- IMPROVEMENTS TO DIGESTERS 3 AND 4
 - REUSE DISTRIBUTION PIPE
- STAGE 10:**
- REMOVE INTENSIFICATION PROCESS EQUIPMENT ONCE MBR PROCESS IS FULLY OPERATIONAL
 - CONVERT SBR 4 TO FEB BASIN
 - COMPLETE ALL REMAIN SCOPE INCLUDING ALL SITE WORK, DEMO, AND ALL UPGRADES REQUIRED BY THE CONTRACT DOCUMENTS

SUGGESTED ELECTRICAL SEQUENCE OF CONSTRUCTION

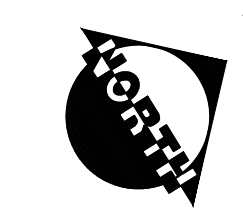
- INSTALL TEMPORARY INTENSIFICATION PACKAGED PLANT SKID, ROUTE TEMPORARY 300W MULTICONDUCTOR CABLE PROTECTED IN HEAVY DUTY CABLE PROTECTOR (POWER RAMP) FROM MCC-N1 TO POWER SKID-MTD, MOTOR CONTROL PANEL. ALTERNATIVELY, USE A SPARE CONDUIT TO TEMPORARILY ROUTE THE FEEDER CABLE AND REMOVE THE CABLE ONCE THE INTENSIFICATION IS COMPLETED.
- INSTALL FIELD PULLBOXES, DUCT BANKS, CONDUITS, CONDUCTORS, AND ALL FIELD PANELS/EQUIPMENT
- INSTALL NEW MCC-1, ACTIVE HARMONIC FILTER, XEMR-EA, PANEL-EA, MBR-PLC, PANEL, AND MAIN PLC PANEL INSIDE THE EXISTING ELECTRICAL ROOM.
- REPLACE PANEL-H1
- INSTALL AND COMMISSION NEW SERVICE ENTRANCE SECTION.
- DECOMMISSION AND REMOVE EXISTING STANDBY GENERATOR 1
- RELOCATE EXISTING STANDBY GENERATOR, INSTALL TEMPORARY POWER CABLES FROM THE STANDBY GENERATOR 2 TO THE EXISTING ATSS/MTSS
- INSTALL THE AUTOMATIC TRANSFER SWITCH AND MAIN SWITCHGEAR.
- INSTALL AND COMMISSION (2) NEW 500 KW STANDBY GENERATORS SOUTHWEST OF ELECTRICAL ROOM.
- DECOMMISSION AND REMOVE EXISTING STANDBY GENERATOR 2
- RE-ROUTE FEEDER POWER FOR PANEL H1 FROM MCC-E2 TO MCC-1
- REPLACE EXISTING AG UNITS AT ELECTRICAL ROOM, POWER NEW AG UNITS FROM PANEL-EA
- DECOMMISSION AND REMOVE EXISTING MCC-E2 ONCE EXISTING LOADS HAVE BEEN DECOMMISSIONED AND RETURN TO CITY.
- INSTALL NEW MCC-2
- COMMISSION ALL NEW LOADS ON MCC-1 AND MCC-2
- DECOMMISSION AND REMOVE MCC-E1 AND MCC-N1
- REMOVE EXISTING SERVICE ENTRANCE SECTION, ATSS #1/2, MTS #1/2, AND CONTROL PANELS INSIDE ELECTRICAL ROOM AND RETURN TO CITY

LEGEND:

- TEMPORARY PROCESS OR EQUIPMENT
- ▭ CONSTRUCTION PROCESS AREA



SEQUENCE SITE PLAN
SCALE: 1/16" = 1'-0"



PREPARED BY DJONG DO PROJECT ENGINEER #40050 EXP. DATE	SCALE DRAWN BY WWW, MSA DESIGNED BY NT, NE CHECKED BY DD	DATE FEB 2026	REVISIONS NO. BY DATE	APP
				DATE
TITLE SUGGESTED SEQUENCE OF CONSTRUCTION			REVISIONS NO. BY DATE	
JOB CITY OF SAN LUIS WEST WWTP 3.0 MGD MBR UPGRADES			REVISIONS NO. BY DATE	
SAN LUIS AZ.			REVISIONS NO. BY DATE	
PACE Advanced Water Engineering 8723 E. VIA DE COMMERICO, SUITE A-204 SCOTTSDALE, CA 85258 P: (480) 991-3595 www.pacewater.com			REVISIONS NO. BY DATE	
SHEET D1.4 25 OF 209 SHEETS			REVISIONS NO. BY DATE	
JOB NO. B777			REVISIONS NO. BY DATE	

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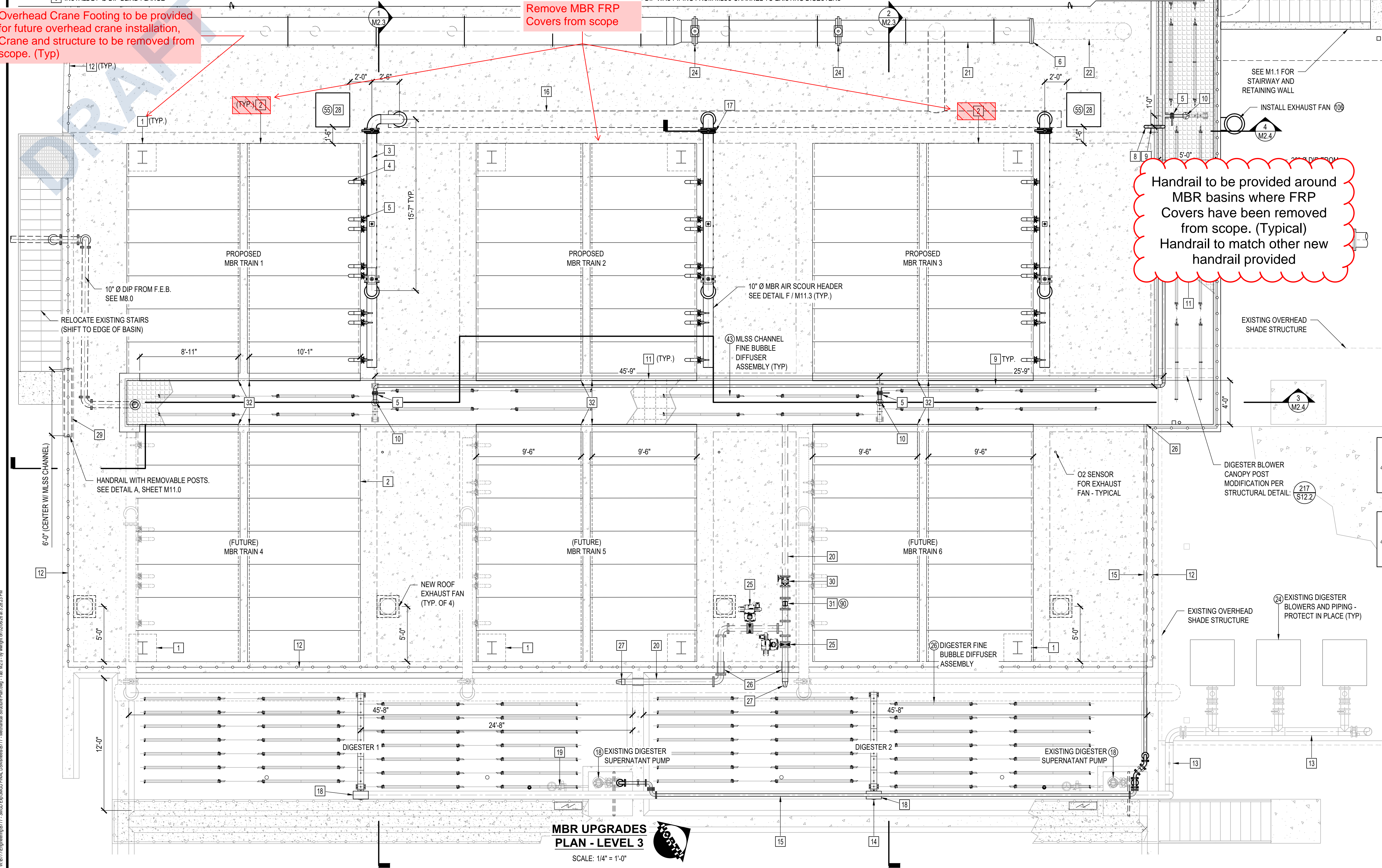
CONSTRUCTION NOTES:

- 1 OVERHEAD CRANE FOOTING, SEE STRUCTURAL PLANS
- 2 INSTALL MBR FRP COVER (3'-0" WIDTH MAX), SEE SPECIFICATIONS
- 3 INSTALL 10" Ø SCH 10 STEEL MBR SCOUR AIR PIPE
- 4 INSTALL 3" Ø 304 SS MBR SCOUR AIR PIPE
- 5 INSTALL 3" LUG STYLE BUTTERFLY VALVE, SEE DETAIL (PROVIDED BY MBR VENDOR)
- 6 INSTALL 24" Ø DIP BLIND FLANGE
- 7 FUTURE MBR SCOUR AIR PIPE (SHOWN FOR REFERENCE)
- 8 INSTALL 3" Ø SCH 10 STEEL AIR PIPE AND FITTINGS FROM REGENERATIVE BLOWERS BELOW
- 9 INSTALL 3" Ø SCH 10 SS AIR PIPE
- 10 INSTALL 3" Ø 304 SS DIP AIR PIPE (PROCURED THROUGH DIFFUSER VENDOR)
- 11 INSTALL 2-1/2" THICK ALUMINUM OPEN GRATING (3FT WIDE PANELS) SEE SPECS
- 12 INSTALL NEW HANDRAIL WITH KICK PLATE PER DETAIL D / M11.0 (TYP.)
- 13 EXISTING 8" Ø STEEL DIGESTER AIR PIPE
- 14 INSTALL 6" Ø 304 SS DROP AIR PIPE WITH ISOLATION BFV
- 15 REPLACE EXISTING PVC SUPERNATANT PIPE WITH 3" Ø DIP
- 16 INSTALL 18" Ø SCH 10 STEEL MBR SCOUR AIR PIPE AND FITTINGS
- 17 INSTALL 10" BUTTERFLY VALVE
- 18 INSTALL 8" SCH. 10 STEEL WELDED TEE WITH 6" Ø BRANCH FLANGE ON EXISTING BLOWER PIPING
- 19 EXISTING TELESCOPING VALVE AND MOTORIZED VALVE (P.I.P.)
- 20 INSTALL 1" Ø DIP WAS PIPING FROM MLSS CHANNEL TO EXISTING DIGESTERS
- 21 INSTALL 24" Ø SCH. 10 COATED STEEL AIR PIPE AND FITTINGS
- 22 FUTURE 18" AIR PIPING LAYOUT - FOR FUTURE EXPANSION
- 23 INSTALL 3" LUGGED BUTTERFLY VALVE
- 24 INSTALL ELECTRICALLY ACTUATED 24" BUTTERFLY VALVE (LUGGED)
- 25 INSTALL 6" FLANGED MOTORIZED PLUG VALVE (PROVIDED BY MBR VENDOR)
- 26 CORED HOLE FOR PIPE PENETRATION, SIZE PER PLAN, SEE DETAIL
- 27 INSTALL 6" DUCK BILL CHECK VALVE
- 28 CONTRACTOR TO INSTALL EVAP COOLER WITH CURB, VERIFY DISCHARGE OPENING TO BLOWER ROOM BELOW. CONNECT POTABLE WATER LINE WITH ISOLATION VALVE.
- 29 INSTALL PORTION OF REMOVABLE POST GUARD RAIL FOR MBR PASS THROUGH
- 30 INSTALL 6" PLUG VALVE (FLANGED)
- 31 INSTALL 6" MAG FLOW METER (PROVIDED BY MBR VENDOR)
- 32 INSTALL SS WEIR PLATE PER DETAIL A / M11.3 (TYP. OF 12)

Overhead Crane Footing to be provided for future overhead crane installation, Crane and structure to be removed from scope. (Typ)

Remove MBR FRP Covers from scope

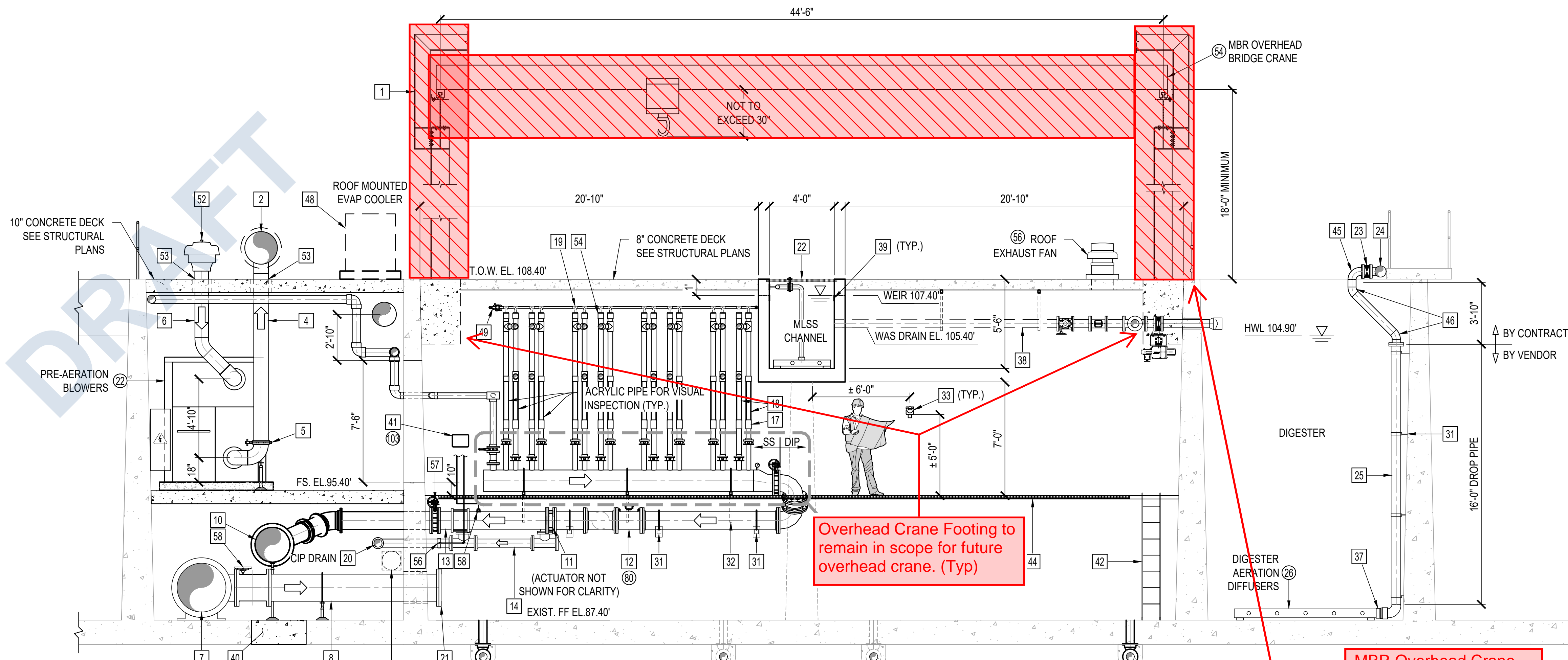
Handrail to be provided around MBR basins where FRP Covers have been removed from scope. (Typical) Handrail to match other new handrail provided



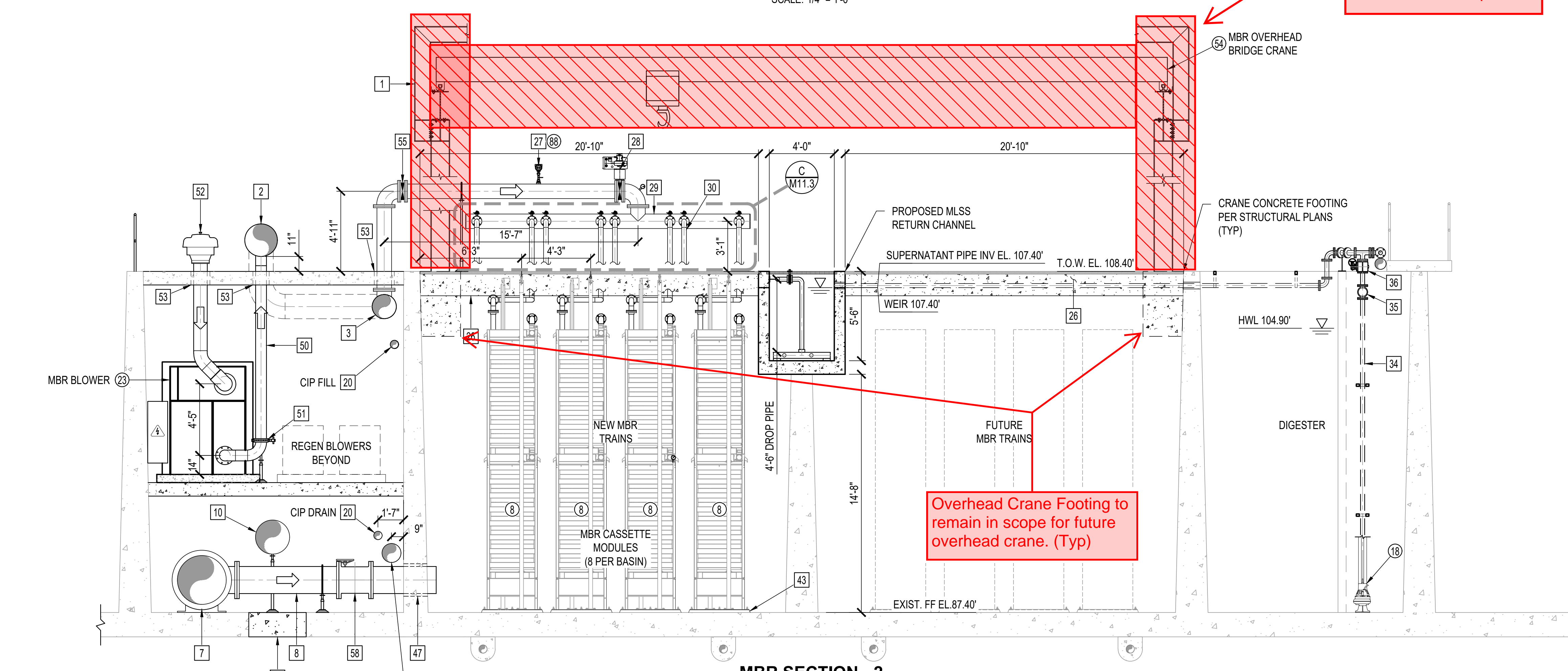
W:\B77\Engineering\B777 - MGD Exp\MGD FINAL DSN\sheet\B777 - Mechanical Structure Plan.dwg - T: 12/20/26 at 3:28:23 PM

**MBR UPGRADES
PLAN - LEVEL 3**
SCALE: 1/4" = 1'-0"

PREPARED BY DUONG DO R.C.E. NO. 440050 EXP. DATE	PROJECT ENGINEER DUONG DO R.C.E. NO. 440050 EXP. DATE	SCALE DRAWN WWW.MSA DESIGNED NT, NE CHECKED DD	DATE FEB 2026	DATE 12/31/27	REVISIONS NO. BY DATE	DATE APP	APP
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MBR UPGRADES PLAN - LEVEL 3							
CITY OF SAN LUIS WEST WWTP 3.0 MGD MBR UPGRADES							
SAN LUIS, AZ.							
8723 E. VIA DE COMMERICO, SUITE A-204 SCOTTSDALE, CA 95268 P: (480) 991-3595 www.pacewater.com							
FINAL PLANS ISSUED FOR BID							
SHEET M2.0 34 OF 209 SHEETS JOB NO. B777							



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



MBR SECTION - 2
SCALE: 1/4" = 1'-0"

CONSTRUCTION NOTES:

- 1 CONSTRUCT OVERHEAD CRANE BEAM AND SUPPORT COLUMN PER STRUCTURAL PLANS
- 2 INSTALL 24" Ø SCH. 10 STEEL AIR PIPE AND FITTINGS
- 3 INSTALL 18" Ø SCH. 10 STEEL AIR PIPE AND FITTINGS
- 4 INSTALL 10" Ø SCH 10 STEEL PRE-AIR BLOWER DISCHARGE PIPE
- 5 INSTALL 10" BUTTERFLY VALVE LUGGED CONNECTION
- 6 INSTALL 10" Ø SCH. 10 STEEL AIR PIPE AND FITTINGS
- 7 INSTALL 36" x 20" DIP TEE
- 8 INSTALL 20" Ø D.I. PIPE AND FITTINGS FOR MBR FEED
- 9 INSTALL PRESSURE TRANSMITTER PER DETAIL: (B M11.1) (PROVIDED BY MBR VENDOR)
- 10 INSTALL 24" Ø DIP MBR PERMEATE/EFFLUENT PIPE AND FITTINGS W/ MECH. RESTRAINTS (TYP.)
- 11 INSTALL 12" BUTTERFLY VALVE WITH ELECTRIC ACTUATOR (PROVIDED BY MBR VENDOR)
- 12 INSTALL 12" MAG FLOW METER (PROVIDED BY MBR VENDOR)
- 13 INSTALL 12" Ø DIP MBR PERMEATE PIPE AND FITTINGS
- 14 INSTALL 6" Ø DIP CIP DRAIN PIPE AND FITTINGS (TYP)
- 15 INSTALL 16" Ø 304 SS PERMEATE PIPE MANIFOLD AND ALL REQUIRED FITTINGS AND APPURTENANCES (TYP.) SEE DETAIL: (B M11.3)
- 16 INSTALL 12" LUG STYLE BUTTERFLY VALVE
- 17 INSTALL 3" TRANSITION COUPLING PVC TO ACRYLIC PIPE
- 18 INSTALL 3" Ø MBR PERMEATE LINE MINIMUM OF 2.5 FT. BELOW THE OUTLET TO BE CLEAR ACRYLIC PVC PIPING
- 19 INSTALL 1" Ø SCH. 80 PVC TEE
- 20 INSTALL 6" Ø C900 PVC FOR CIP PIPE AND FITTINGS
- 21 INSTALL 20" WITH SPOOL AND BLIND FLANGE
- 22 FRP OPEN GRATING ABOVE MLSS CHANNEL, SEE SPECIFICATIONS
- 23 INSTALL 6" BUTTERFLY VALVE (FLGD)
- 24 INSTALL 8" SCH. 10 STEEL WELDED TEE W/ 6" BRANCH FLANGE ON EX. BLOWER PIPING
- 25 INSTALL 8" Ø 304 SS DROP PIPE AND FITTINGS (PROCURED THROUGH DIFFUSER VENDOR)
- 26 CONCRETE BEAM FOR MBR GUIDE RAIL SUPPORT
- 27 INSTALL PROCESS AIR FLOW METER (PROVIDED BY MBR VENDOR)
- 28 INSTALL 10" MODULATING BUTTERFLY VALVE (PROVIDED BY MBR VENDOR)
- 29 INSTALL 10" Ø SCH. 10 STEEL MBR AIR SCOUR HEADER AND PIPING, SEE DETAIL: (C M11.3)
- 30 INSTALL 3" Ø 304 SS STEEL AIR DROP PIPE WITH ISOLATION BF VALVE
- 31 INSTALL PIPE SUPPORT (MIN. SPACING AS REQUIRED) PER DETAIL: (S13 M10.4) (S5 M10.4)
- 32 INSTALL KNEE BRACE PIPE SUPPORT (MIN. SPACING AS REQUIRED) PER DETAIL: (A M11.5)
- 33 INSTALL OXYGEN SENSOR ATI TOXIC GAS SENSOR, MODEL D-12-F-G OR APPROVED EQUAL
- 34 INSTALL 3" DIP PIPE AND FITTINGS (TYP.) FOR DIGESTER SUPERNATANT LINE
- 35 INSTALL 3" SWING CHECK VALVE (FLGD)
- 36 INSTALL 3" PLUG VALVE (FLGD)
- 37 INSTALL TRANSITION FLANGE FROM STAINLESS STEEL TO SCH 80 PVC
- 38 INSTALL 6" DIP WAS PIPING FROM MLSS CHANNEL TO EXISTING DIGESTERS
- 39 INSTALL WEIR PLATES PER DETAIL: (A M11.3)
- 40 NEW CONCRETE FOOTING TIED INTO EXISTING STRUCTURES
- 41 INSTALL TURBIDITY METER AND CONTROLLER TYPICAL PER DETAIL: 36"H ABOVE GRATING (PROVIDED BY MBR VENDOR)
- 42 INSTALL METAL LADDER TO ACCESS LEVEL BELOW
- 43 INSTALL 2" GROUT LAYER UNDER MBR EQUIPMENT
- 44 INSTALL 2-1/2" THICK ALUMINUM OPEN GRATING (3FT WIDTH MAX PANELS)
- 45 INSTALL 6" 304 SS 90° ELBOW (FLANGED AT VALVE CONNECTION)
- 46 INSTALL 6" 304 SS 45° ELBOW (FLANGED AT DROP PIPE CONNECTION)
- 47 INSTALL 20" DIP SPOOL (FLG x PE)
- 48 INSTALL EVAP COOLER PER SPECS, SEE ALSO ELECTRICAL PLANS
- 49 INSTALL 1" PERMEATE VENT WITH 1" SS BALL VALVE W/ ELECTRIC ACTUATOR (PROVIDED BY MBR VENDOR)
- 50 INSTALL 8" Ø SCH. 10 STEEL MBR BLOWER DISCHARGE PIPE
- 51 INSTALL 8" BUTTERFLY VALVE LUGGED CONNECTION
- 52 INSTALL OUTSIDE AIR INTAKE FILTER (PROVIDED BY BLOWER VENDOR) (TYP OF 5)
- 53 INSTALL PIPE PENETRATION SEAL (WET), SIZE PER PLAN, PER DETAIL: (A M11.1)
- 54 INSTALL TRANSITION BUSHING FROM 3" TO 1"
- 55 INSTALL 10" BUTTERFLY VALVE. (LUGGED)
- 56 INSTALL 1/2" PIPE TAP PER DETAIL: (M11.1) CONNECT 1/2" PVC SCH 40 PVC DRAIN PIPE FROM TURBIDITY METER PER DETAIL: (A M11.5)
- 57 INSTALL 12" BUTTERFLY VALVE. (FLGD)
- 58 INSTALL 20" PLUG VALVE WITH WORM GEAR AND HANDWHEEL ACTUATOR

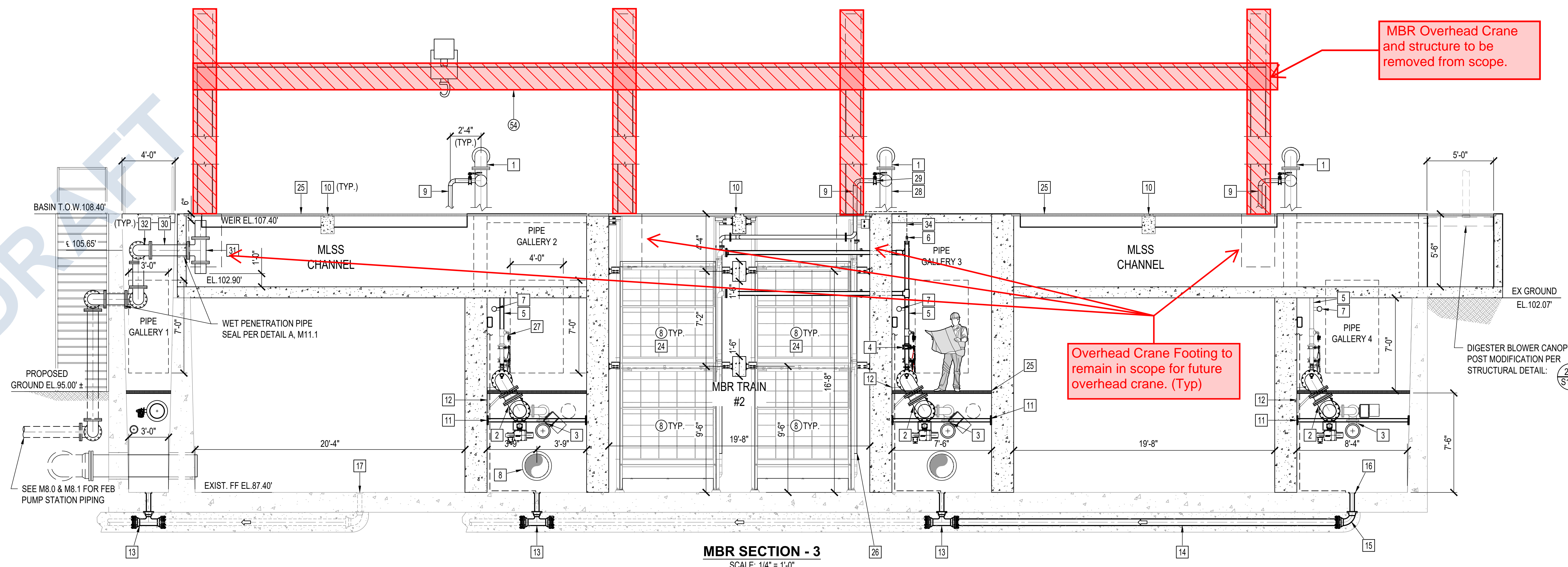
MBR SECTIONS 1	CITY OF SAN LUIS WEST WWTP 3.0 MGD MBR UPGRADES		SAN LUIS	AZ.	FINAL PLANS ISSUED FOR BID			DATE APP.
TITLE	JOB		SHEET	M2.3	37 OF 209 SHEETS			DATE
PREPARED BY DUONG DO	PROJECT ENGINEER R.C.E. NO. 440050	SCALE 1/4" = 1'-0"	DRAWN W.W. MSA	DESIGNED N.T. NE	CHECKED J.D.	DATE FEB 2026	Express 12/31/27	REVISIONS
								DATE
								APP.

W:\B777\Engineering\B777 - MGD Exp\MGD FINAL DSN\mbr\B777 - M2.3 - MBR Sections.dwg - Tab: M2.3 - by: wright on 02/06/26 at 4:18:26 PM

DRAFT

MBR Overhead Crane and structure to be removed from scope.

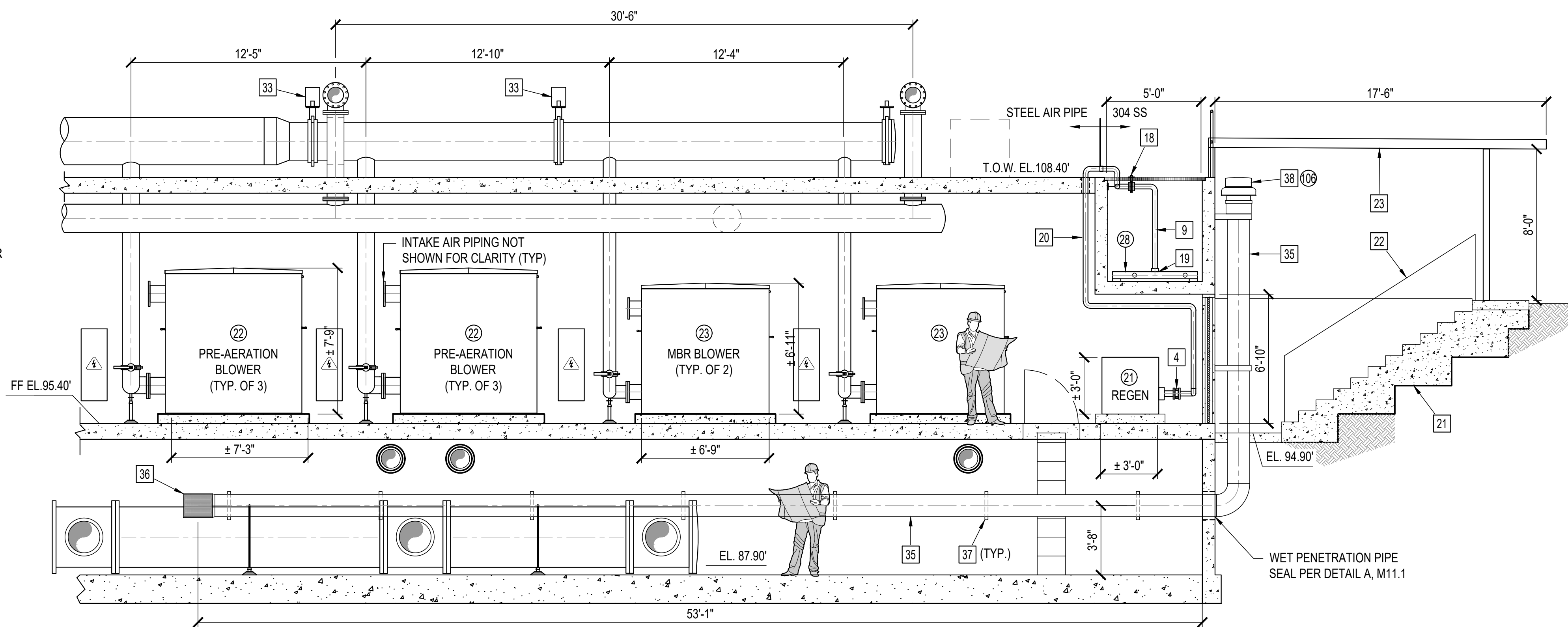
Overhead Crane Footing to remain in scope for future overhead crane. (Typ)



MBR SECTION - 3
SCALE: 1/4" = 1'-0"

CONSTRUCTION NOTES:

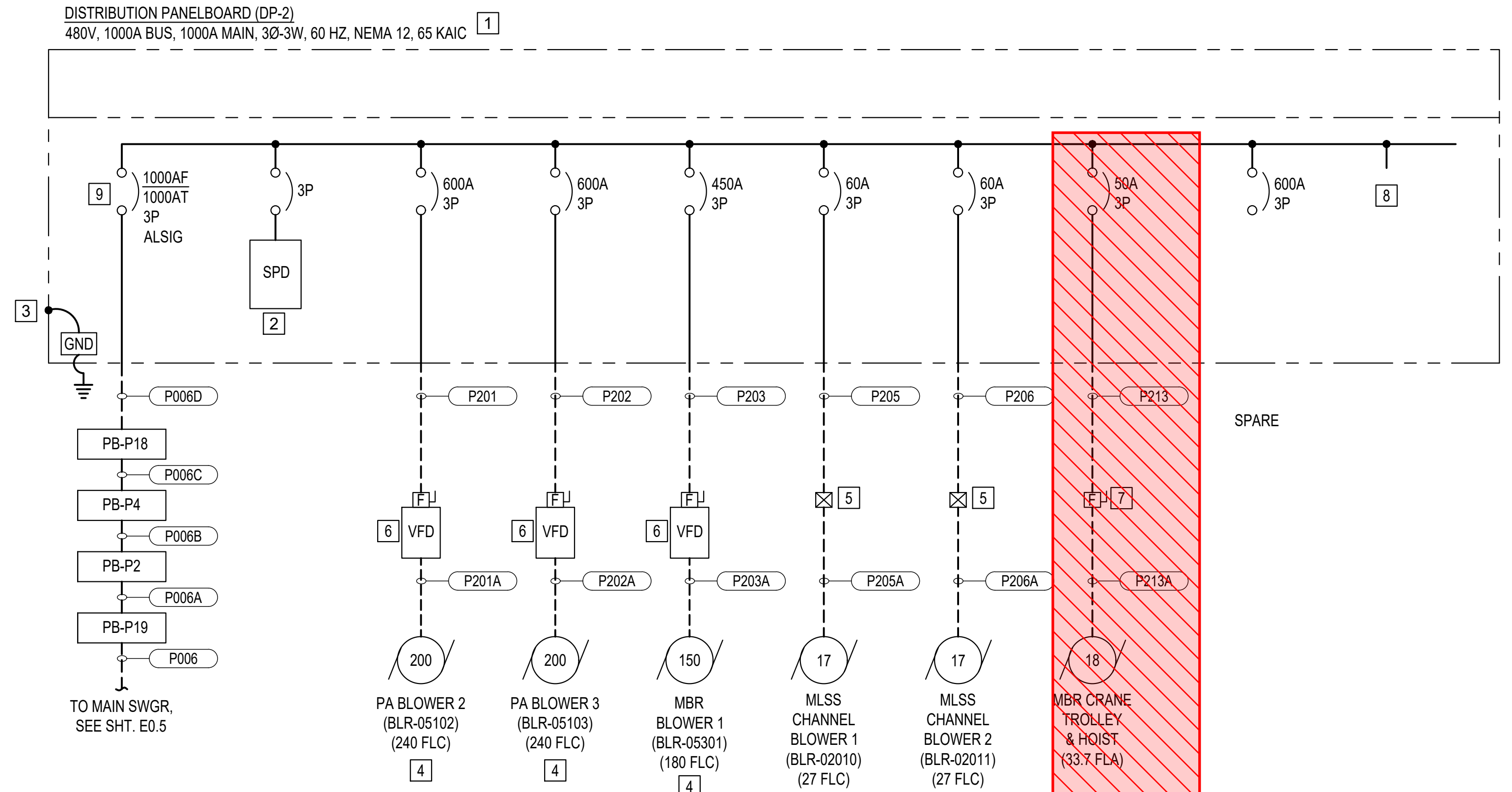
- 1 INSTALL 10" Ø SCH 10 STEEL AIR PIPE AND FITTING
- 2 INSTALL 12" Ø DIP MBR PERMEATE PIPE AND FITTINGS
- 3 INSTALL 6" Ø DIP CIP DRAIN PIPE AND FITTINGS
- 4 INSTALL 3" LUG STYLE BUTTERFLY VALVE
- 5 INSTALL 3" Ø MBR PERMEATE LINE MINIMUM OF 2.5 FT. BELOW THE OUTLET TO BE CLEAR ACRYLIC PVC PIPING
- 6 INSTALL 1" PERMEATE VENT WITH 1" SS BALL VALVE W/ ELECTRIC ACTUATOR (PROVIDED BY MBR VENDOR)
- 7 INSTALL 3" Ø SCH. 80 PVC CIP PIPE AND FITTINGS
- 8 INSTALL 20" BLIND FLANGE FOR FUTURE MBR EXPANSION
- 9 INSTALL 3" Ø 304 SS AIR DROP PIPE (PROVIDED BY AERATION VENDOR)
- 10 CONCRETE BEAM FOR MBR GUIDE RAIL SUPPORT, SEE STRUCTURAL PLANS
- 11 INSTALL PIPE SUPPORT (MIN. SPACING AS REQUIRED) PER DETAIL: S4 M11.4
- 12 INSTALL KNEE BRACE PIPE SUPPORT (MIN. SPACING AS REQUIRED) PER DETAIL: S5 M11.4
- 13 INSTALL 6" x 4" REDUCING TEE TIE-IN TO EXISTING CONCRETE ENCASED FLOOR DRAIN LINE
- 14 SAW CUT AND EXTEND EXISTING 6" FLOOR DRAIN LINE TO CENTER OF PIPE GALLERY 4
- 15 INSTALL 6" x 4" REDUCING ELBOW MJ CONNECTION
- 16 INSTALL 4" FLOOR DRAIN CONCRETE ENCASED
- 17 CAP AND ABANDON EXISTING FLOOR DRAIN
- 18 INSTALL 3" SS BUTTERFLY VALVE
- 19 INSTALL MLSS AERATION MANIFOLD (PROVIDED BY AERATION VENDOR)
- 20 INSTALL 3" Ø SCH 10 STEEL AIR PIPE FROM REGENERATIVE BLOWERS
- 21 INSTALL STEPPED FOOTING RETAINING WALL PER STRUCTURAL DETAILS
- 22 INSTALL HAND RAIL PER DETAIL: B M11.3
- 23 INSTALL SHADE STRUCTURE AND ROOF OVERHANG PER STRUCTURAL DETAIL
- 24 CONTRACTOR TO INSTALL MBR MODULES WITH SUPPORT, GUIDES, AND APPURTENANCES PER MBR VENDOR'S REQUIREMENTS. SEE DETAIL ON M12.0 FOR EQUIPMENT DIMENSIONS
- 25 INSTALL 2-1/2" THICK ALUMINUM OPEN GRATING (3 FT WIDE MAX.) SEE SPECIFICATIONS
- 26 POINT OF CONNECTION OF MBR AIR SCOUR LINE
- 27 1/2" SAMPLING PORT WITH BALL VALVE AND FITTINGS ON 3" Ø PERMEATE LATERAL PIPE
- 28 INSTALL 10" Ø MBR AIR SCOUR MANIFOLD PER DETAIL: F M11.3
- 29 INSTALL 3" LUG STYLE BUTTERFLY VALVE
- 30 INSTALL 10" Ø DIP SPOOL
- 31 INSTALL 10" D.I. TEE
- 32 INSTALL 10" D.I. 90° ELBOW
- 33 INSTALL 24" LUGGED BUTTERFLY VALVE W/ ELECTRIC ACTUATOR
- 34 INSTALL 1" PVC DRAIN LINE TO MBR BASIN
- 35 INSTALL 14" Ø STEEL EXHAUST DUCTING (18 GAUGE MIN.)
- 36 INSTALL RECTANGULAR DUCT MOUNTED GRILL
- 37 INSTALL PIPE SUPPORT (MIN. SPACING AS REQUIRED) PER DETAIL: S6 M11.4
- 38 INSTALL EXHAUST FAN WITH TRANSITION BASE FOR PIPE CONNECTION



BLOWER ROOM SECTION - 4
SCALE: 1/4" = 1'-0"

	PREPARED BY: DUONG DO PROJECT ENGINEER #40050 EXP. DATE:		SCALE: W/W, MSA DESIGNED: W/W, MSA CHECKED: NT, NE DATE: FEB 2026		REVISIONS NO. BY DATE		DATE APP.
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MBR SECTIONS 2							
CITY OF SAN LUIS WEST WWTP 3.0 MGD MBR UPGRADES							
SAN LUIS, AZ.							
8723 E. VIA DE COMMERICO, SUITE A-204 SCOTTSDALE, CA 95268 P: (480) 991-3595 www.pacewater.com							
FINAL PLANS ISSUED FOR BID							
SHEET M2.4 38 OF 209 SHEETS JOB NO. B777							

DRAFT



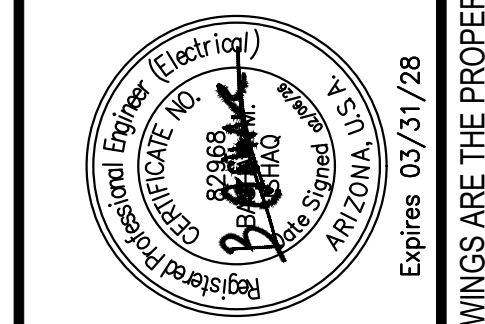
CONSTRUCTION NOTES:

- 1 DISTRIBUTION PANELBOARD (DP-2), 480V, 1000A BUS, 1000A MAIN, 3Ø-3W, 60 HZ, NEMA 12, 65 KAIC, PAD-MTD.
- 2 SURGE PROTECTION DEVICE, INTEGRAL WITH DP. CIRCUIT PROTECTION DEVICE TO BE 200 KA/PH MINIMUM.
- 3 GROUND AND BOND EQUIPMENT TO GROUND SYSTEM PER GROUNDING PLAN AND MANUFACTURER REQUIREMENTS.
- 4 PROVIDE LOCKABLE E-STOP LOCALLY AT BLOWERS.
- 5 COMBINATION FVNR MOTOR STARTER, WITH H-O-A SELECTOR SWITCH, NEMA 12, MFR: EATON, TYPE FREEDOM FULL VOLTAGE CONTROLS (OR EQUAL).
- 6 VARIABLE FREQUENCY DRIVE WITH FUSED DISCONNECT SWITCH, 480V, 3PH, NEMA 12, WALL-MTD., MFR: DANFOSS, PN: FC202 AQUA DRIVE (OR APPROVED EQUAL).
- 7 FUSED DISCONNECT SWITCH, 60A, 35A FUSES, NEMA 4X, EATON OR EQUAL.
- 8 PROVISION FOR FUTURE CIRCUIT BREAKERS (TYP 2).
- 9 CIRCUIT BREAKER EQUIPPED WITH ENERGY REDUCING MAIN SWITCH WITH LOCAL STATUS INDICATORS PER NEC 240.87(B)(3).

NOTES:

1. CONTRACTOR SHALL LABEL EQUIPMENT FOR ARC-FLASH HAZARD WARNINGS IN ACCORDANCE WITH NEC 110.16(A).
2. CONTRACTOR SHALL LABEL SERVICE ENTRANCE EQUIPMENT WITH AVAILABLE FAULT CURRENT IN ACCORDANCE WITH NEC 110.16 (B) AND 110.24 (A) (B).
3. GROUND AND BOND ALL ENCLOSURES PER GROUNDING PLANS AND MANUFACTURER/ CODE REQUIREMENTS.
4. NOT ALL EQUIPMENT AND WIRING IS SHOWN ON THIS DIAGRAM. REFERENCE DRAWINGS IN THE ELECTRICAL SET AND ENTIRE PROJECT TO COMPLETELY UNDERSTAND THE ELECTRICAL SCOPE OF WORK.
5. DRAWINGS ARE DIAGRAMMATIC AND DO NOT REFLECT ACTUAL ROUTING. CONTRACTOR SHALL INSTALL PULLPOINTS WHERE REQUIRED FOR PULLING TENSION AND MAINTAINING LESS THEN (4) 90 DEGREE BENDS.
6. CONTRACTOR SHALL PERFORM SAFE WORK IN ACCORDANCE WITH NFPA 70E STANDARDS.
7. WHEN REQUIRED CONTRACTOR SHALL PROVIDE STRUCTURAL DESIGN CALCULATIONS FOR MOUNTING AND ANCHORING OF FABRICATED ASSEMBLIES AND SUPPORT STRUCTURES, SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER (CIVIL/STRUCTURAL) CURRENTLY LICENSED IN THE SAME STATE AS THE FINAL INSTALLATION. CALCULATIONS SHALL INCLUDE SEISMIC CONSIDERATIONS FOR THE LOCATION OF INSTALLATION.
8. VFD'S SHALL MEET ALL REQUIREMENTS OF IEEE 519 WITH USE OF EQUIPMENT. SEE SPECIFICATIONS FOR FURTHER INFORMATION.

NO.	BY	DATE	REVISIONS	DATE	APP.



PREPARED BY BASHAR ISHAQ PROJECT ENGINEER E24500	SCALE NC	DATE FEB 2026
EXP. DATE	DESIGNED NC, BJ	CHECKED BJ

TITLE
SINGLE LINE DIAGRAM 5 - PROPOSED

JOB
CITY OF SAN LUIS WEST WWTP
3.0 MGD MBR UPGRADES
SAN LUIS
AZ.

8723 E. VIA DE COMMERICO, SUITE A-204 | SCOTTSDALE, CA 85258
P: (480) 991-3595 | www.pacewater.com

SHEET
E0.9
95 OF 209 SHEETS

JOB NO. B777

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FINAL PLANS ISSUED FOR BID

SERVICE SITE LOAD SUMMARY (MAIN BREAKER 3000A @ 480V)				
LOAD DESCRIPTION	HP	ACTIVE (A)	REDUNANT (A)	GENERATOR (A)
MCC-1	521	797.3	168	645
MCC-2	208	285.7	0	17.7
DP-1	377	488.1	27	308.1
DP-2	602	480.7	267	300.7
SUBTOTAL	1708	2051.8	462	1271.5
25% LARGEST MOTOR LOAD	-	60	-	-
GRAND TOTAL (AMPS)	-	2111.8	-	1271.5
% CAPACITY	-	70.4%	-	84.6%

MCC-1 LOAD SUMMARY (MAIN BREAKER 1600A @ 480V)				
LOAD DESCRIPTION	HP	ACTIVE (A)	REDUNANT (A)	GENERATOR (A)
FLOW EQUALIZATION PUMP 1 (PMP-01601)	27	40	-	40
INTERNAL RECYCLE PUMP 1 (PMP-02101)	4	6.7	-	-
INTERNAL RECYCLE PUMP 2 (PMP-02201)	4	6.7	-	6.7
FEED FORWARD PUMP 1 (PMP-02404)	26	40	-	-
FEED FORWARD PUMP 2 (PMP-02403)	26	-	40	-
SLUDGE DEWATERING FEED PUMP 1 (PMP-07001)	15	21	-	21
SLUDGE DEWATERING FEED PUMP 2 (PMP-07002)	15	-	21	-
FLOC. TANK MIXER (M-07111)	1.5	3	-	3
SCREW PRESS (M-07112)	5	7.6	-	7.6
CONVEYOR DRIVE (M-07113)	5	7.6	-	7.6
PLANT PROC. WTR BOOST. PUMP 1 (PMP-04301A)	20	27	-	27
PLANT PROC. WTR BOOST. PUMP 2 (PMP-04301B)	20	27	-	27
PLANT PROC. WTR BOOST. PUMP 3 (PMP-04301C)	20	27	-	27
PLANT DRAIN PUMP 1 (PMP-07202)	7.5	11	-	11
PLANT DRAIN PUMP 2 (PMP-07203)	7.5	-	11	-
ANOXIC MIXER 1 (MXR-02110)	6	11	-	11
ANOXIC MIXER 2 (MXR-02210)	6	11	-	11
45 KVA XFMR-EA	-	54.1	-	54.1
15 KVA MPZ-DW	-	18	-	18
1 FEQ BLOWER 1 (2011B)	75	96	-	-
1 FEQ BLOWER 3 (2003B)	75	-	96	-
EXISTING DIGESTER BLOWER 1 (2008B)	50	65	-	65
EXISTING DIGESTER BLOWER 2 (2009B)	50	65	-	65
EXISTING LOWER DRYING BED PUMP STATION	2	3.4	-	3.4
EXISTING DIGESTER SUPERNATANT PUMP 1	3	4.8	-	-
EXISTING DIGESTER SUPERNATANT PUMP 2	3	4.8	-	-
EFFLUENT PUMP 1 (5001P)	20	27	-	27
PANEL-H1	-	172	-	172
EXISTING MIXER 4A (3003-MX)	7.5	11	-	11
EXISTING MIXER 4B (3004-MX)	7.5	11	-	11
EXISTING SLUDGE PUMP 4 (3008-SP)	5	7.6	-	7.6
EXISTING WELL PUMP (9004P)	7.5	11	-	11
SUBTOTAL	521	797.3	168	645
25% LARGEST MOTOR LOAD	-	24	-	-
GRAND TOTAL (AMPS)	-	821.3	-	-
% CAPACITY	-	51.3%	-	-

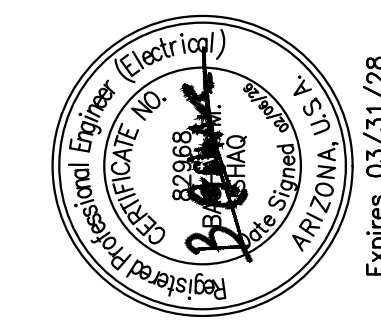
MCC-2 LOAD SUMMARY (MAIN BREAKER 600A @ 480V)				
LOAD DESCRIPTION	HP	ACTIVE (A)	REDUNANT (A)	GENERATOR (A)
FLOW EQUALIZATION PUMP 2 (PMP-01602)	27	40	-	-
INTERNAL RECYCLE PUMP 3 (PMP-02301)	4	6.7	-	6.7
FEED FORWARD PUMP 3 (PMP-02402)	26	40	-	-
ANOXIC MIXER 3 (MXR-02310)	6	11	-	11
1 FEQ BLOWER 2 (2012B)	75	96	-	-
EXISTING DIGESTER BLOWER 6 (2006B)	50	65	-	-
EFFLUENT PUMP 2 (5002P)	20	27	-	-
SUBTOTAL	208	285.7	0	17.7
25% LARGEST MOTOR LOAD	-	24	-	-
GRAND TOTAL (AMPS)	-	309.7	-	-
% CAPACITY	-	51.6%	-	-

DP-1 LOAD SUMMARY (MAIN BREAKER 1000A @ 480V)				
LOAD DESCRIPTION	HP	ACTIVE (A)	REDUNANT (A)	GENERATOR (A)
HEADWORKS CTRL PNL (HWCP-1)	12.25	27	-	27
HEADWORKS CTRL PNL (HWCP-2)	12.25	-	27	-
HEADWORKS ODOR CTRL UNIT (M-08001)	1.5	3	-	3
PA BLOWER 1 (BLR-05101)	200	240	-	240
MBR BLOWER 2 (BLR-05302)	150	180	-	-
30 KVA XFMR-EB	-	36	-	36
VALVE ACTUATOR (XV-01523)	1	2.1	-	2.1
SUBTOTAL	377	488.1	27	308.1
25% LARGEST MOTOR LOAD	-	60	-	-
GRAND TOTAL (AMPS)	-	548.1	-	-
% CAPACITY	-	54.8%	-	-

DP-2 LOAD SUMMARY (MAIN BREAKER 1000A @ 480V)				
LOAD DESCRIPTION	HP	ACTIVE (A)	REDUNANT (A)	GENERATOR (A)
PA BLOWER 2 (BLR-05102)	200	240	-	240
PA BLOWER 3 (BLR-05103)	200	-	240	-
MBR BLOWER 1 (BLR-05301)	150	180	-	-
MLSS CHANNEL BLOWER 1 (BLR-02010)	17	27	-	27
MLSS CHANNEL BLOWER 2 (BLR-02011)	17	-	27	-
MBR CRANE TROLLEY & HOIST	18	33.7	-	33.7
SUBTOTAL	602	480.7	267	300.7
25% LARGEST MOTOR LOAD	-	60	-	-
GRAND TOTAL (AMPS)	-	540.7	-	-
% CAPACITY	-	54.1%	-	-

CONSTRUCTION NOTES:

- 1 EXISTING AERATION BLOWERS TO BE RELOCATED AND NAME CHANGED TO "FEQ" BLOWERS.



PREPARED BY: BASHAR ISHAQ
 PROJECT ENGINEER: E24500
 R.C.E. NO.: --
 EXP. DATE: --
 DRAWN: NC
 SCALE: --
 DESIGNED: NC, BJ
 CHECKED: BI
 DATE: FEB 2020
 EXPIRES: 03/31/28

LOAD SUMMARIES

JOB: CITY OF SAN LUIS WEST WWTP
 3.0 MGD MBR UPGRADES
 SAN LUIS, AZ.



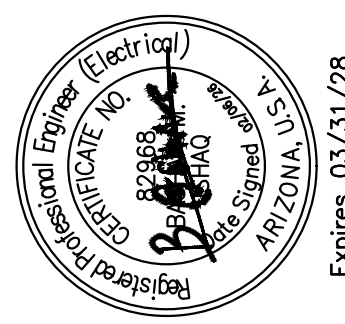

SHEET: **E0.13**
 99 OF 209 SHEETS
 JOB NO.: B777

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FINAL PLANS ISSUED FOR BID

DRAFT

POWER CONDUIT WIRE SCHEDULE						
CONDUIT		WIRE		FROM	TO	REMARKS
NO.	SIZE	POWER	GROUND			
P213	1"	3 - #8	1 - #8	DISTRIBUTION PANELBOARD (DP-2)	DISC SW - MBR CRANE TROLLEY & HOIST	
P213A	1"	3 - #8	1 - #8	DISC SW - MBR CRANE TROLLEY & HOIST	MBR CRANE TROLLEY & HOIST	
P230	1"	6 - #12	3 - #12	PANEL-EB (CKTS. 3, 9, 27)	JB-P230	
P230A	3/4"	2 - #12	1 - #12	JB-P230	XV-04024	
P230B	3/4"	2 - #12	1 - #12	JB-P230	XV-04027	
P230C	3/4"	2 - #12	1 - #12	JB-P230	XV-03028	
P231	1"	6 - #12	3 - #12	PANEL-EB (CKTS. 5, 11, 29)	JB-P231	
P231A	3/4"	2 - #12	1 - #12	JB-P231	XV-04025	
P231B	3/4"	2 - #12	1 - #12	JB-P231	XV-04028	
P231C	3/4"	2 - #12	1 - #12	JB-P231	XV-03128	
P232	1"	6 - #12	3 - #12	PANEL-EB (CKTS. 7, 13, 31)	JB-P232	
P232A	3/4"	2 - #12	1 - #12	JB-P232	XV-04026	
P232B	3/4"	2 - #12	1 - #12	JB-P232	XV-04029	
P232C	3/4"	2 - #12	1 - #12	JB-P232	XV-03228	
P233	3/4"	2 - #12	1 - #12	PANEL-EB (CKT. 15)	XV-05420	
P234	3/4"	2 - #12	1 - #12	PANEL-EB (CKT. 17)	XV-05421	
P235	3/4"	2 - #12	1 - #12	PANEL-EB (CKT. 19)	XV-05422	
P236	3/4"	2 - #12	1 - #12	LIGHTING CONTROL PANEL (LCP-A)	BLR BLDG OUTDOOR WALL PACK LIGHTS	
P237	3/4"	2 - #12	1 - #10	PANEL-EB (CKT. 1)	MAIN RIO PANEL	
P238	3/4"	2 - #12	1 - #10	PANEL-EB (CKT. 2)	MBR RIO PANEL	
P239	3/4"	2 - #12	1 - #12	PANEL-EB (CKT. 4)	MOTOR STARTER - EXH FAN 1	
P239A	3/4"	2 - #12	1 - #12	MOTOR STARTER - EXH FAN 1	EXH FAN 1 (M-04110)	
P240	3/4"	2 - #12	1 - #12	PANEL-EB (CKT. 52)	MOTOR STARTER - EXH FAN 2	
P240A	3/4"	2 - #12	1 - #12	MOTOR STARTER - EXH FAN 2	EXH FAN 2 (M-04111)	
P241	3/4"	2 - #12	1 - #12	PANEL-EB (CKT. 8)	MOTOR STARTER - EXH FAN 3	
P241A	3/4"	2 - #12	1 - #12	MOTOR STARTER - EXH FAN 3	EXH FAN 3 (M-04112)	
P242	3/4"	2 - #12	1 - #12	PANEL-EB (CKT. 10)	MOTOR STARTER - EXH FAN 4	
P242A	3/4"	2 - #12	1 - #12	MOTOR STARTER - EXH FAN 4	EXH FAN 4 (M-04113)	
P243	1"	2 - #8	1 - #8	PANEL-EB (CKT. 12)	MOTOR STARTER - EVAP COOLER 1	
P243A	1"	2 - #8	1 - #8	MOTOR STARTER - EVAP COOLER 1	EVAP COOLER 1 (EC-1)	
P243B	1"	2 - #8	1 - #8	PANEL-EB (CKT. 16)	MOTOR STARTER - EVAP COOLER 2	
P243C	1"	2 - #8	1 - #8	MOTOR STARTER - EVAP COOLER 2	EVAP COOLER 2 (EC-2)	
P244	3/4"	2 - #10	1 - #10	PANEL-EB (CKT. 18)	BLOWER RM LIGHT SWITCH	
P245	3/4"	2 - #12	1 - #12	PANEL-EB (CKT. 20)	PIPE GALLERY 1 LIGHT SWITCH	
P246	3/4"	2 - #12	1 - #12	PANEL-EB (CKT. 22)	PIPE GALLERY 2 LIGHT SWITCH	
P247	3/4"	2 - #12	1 - #12	PANEL-EB (CKT. 24)	PIPE GALLERY 3 LIGHT SWITCH	
P248	3/4"	2 - #12	1 - #12	PANEL-EB (CKT. 26)	PIPE GALLERY 4 LIGHT SWITCH	
P249	3/4"	2 - #12	1 - #10	PANEL-EB (CKT. 28)	BLOWER RM RECEPTACLES	
P250	3/4"	2 - #12	1 - #10	PANEL-EB (CKT. 30)	PIPE GALLERY 1 RECEPTACLES	

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	PREPARED BY BASHAR ISHAQ PROJECT ENGINEER R.C.E. NO. E24500 EXP. DATE	DRAWN NC DESIGNED NC, BJ CHECKED BJ	SCALE DATE FEB 2026	NO. BY DATE APP.	
POWER CABLE & CONDUIT SCHEDULE 4					
CITY OF SAN LUIS WEST WWTP 3.0 MGD MBR UPGRADES					
SAN LUIS AZ.					
 8723 E. VIA DE COMMERICO, SUITE A-204 SCOTTSDALE, CA 85258 P: (480) 991-3595 www.pacewater.com					
SHEET E0.23 105 OF 209 SHEETS					
JOB NO. B777					

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FINAL PLANS ISSUED FOR BID

