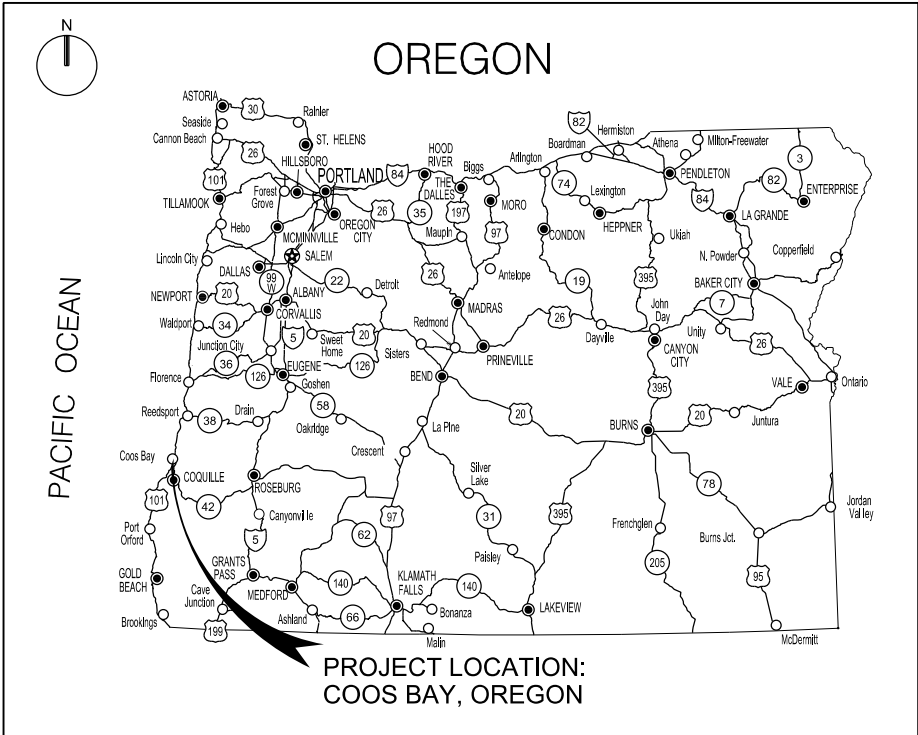
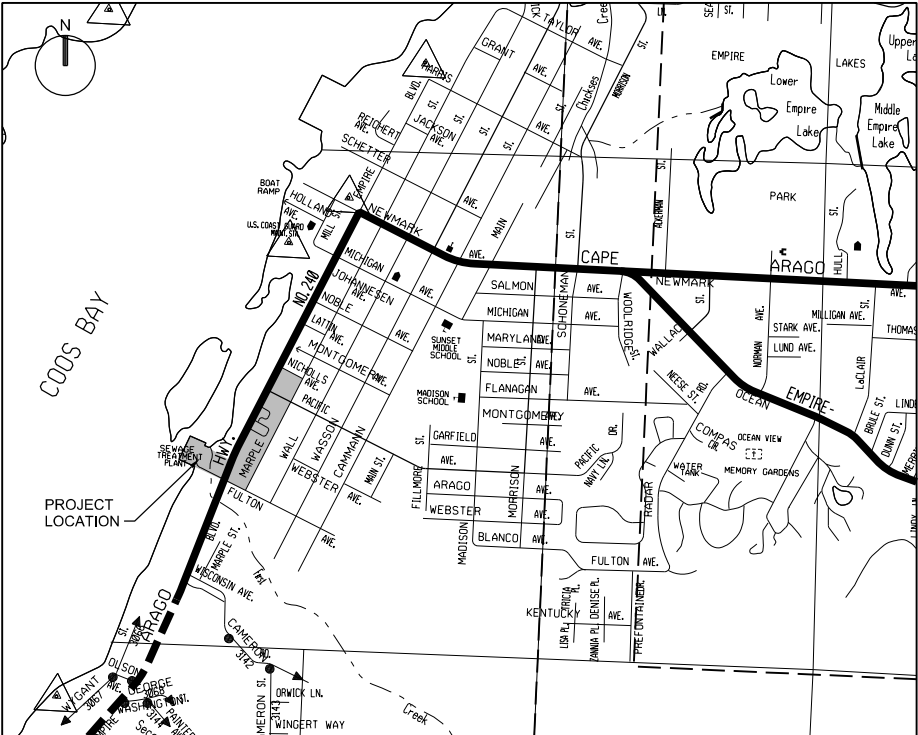


CITY OF COOS BAY
WASTEWATER TREATMENT PLANT 2
EXPANSION AND UPGRADE
DRAFT - PRELIMINARY DESIGN
VOLUME 2

AUGUST 2013



LOCATION MAP
NTS



VICINITY MAP
NTS

SHEET NO.	DRAWING NO.	DRAWING TITLE
001 - GENERAL		
1	01-G-0001	LOCATION AND VICINTY MAPS AND DRAWING LIST
2	01-G-0004	MECHANICAL LEGEND
3	01-G-0005	ELECTRICAL LEGEND - 1
4	01-G-0006	ELECTRICAL LEGEND - 2
5	01-G-0007	DESIGN DATA SUMMARY
6	01-G-0008	PROCESS FLOW DIAGRAM
7	01-G-0009	HYDRAULIC PROFILE
006 - SITE		
8	06-C-2000	OVERAL SITE PLAN
9	06-C-2001	SITE PLAN AND YARD PIPING PLAN
9A	06-C-2002	SITE PLAN AND YARD PIPING PLAN - WEST SIDE
9B	06-C-2003	GRADING PLAN
10	06-E-2000	ELECTRICAL OVERALL SITE PLAN
010 - INFLUENT PUMP STATION		
11	10-M-2000	MECHANICAL PLAN
12	10-M-3000	MECHANICAL SECTIONS
020 - HEADWORKS		
13	20-A-3000	ARCHITECTURAL ELEVATIONS
14	20-M-2000	MECHANICAL PLANS
15	20-M-3000	MECHANICAL SECTIONS
16	20-M-3001	MECHANICAL SECTIONS
030 - SEQUENCING BATCH REACTORS		
17	30-A-3000	ARCHITECTURAL ELEVATION
18	30-M-2000	MECHANICAL GROUND LEVEL PLAN
19	30-M-2001	MECHANICAL UPPER LEVEL PLAN
20	30-M-3000	MECHANICAL SECTIONS
040 - ULTRAVIOLET DISINFECTION		
21	40-M-2000	MECHANICAL PLAN AND SECTION
22	40-M-3000	MECHANICAL SECTIONS
060 - CONTROL BUILDING		
23	60-A-2000	ARCHITECTURAL FLOOR PLAN
24	60-A-3000	ARCHITECTURAL ELEVATIONS
070 - ODOR CONTROL		
25	70-H-2000	HVAC PLAN AND SECTION
090 - ELECTRICAL		
26	90-E-6000	OVERALL ONE LINE DIAGRAM
27	90-E-6001	OVERALL ONE LINE DIAGRAM

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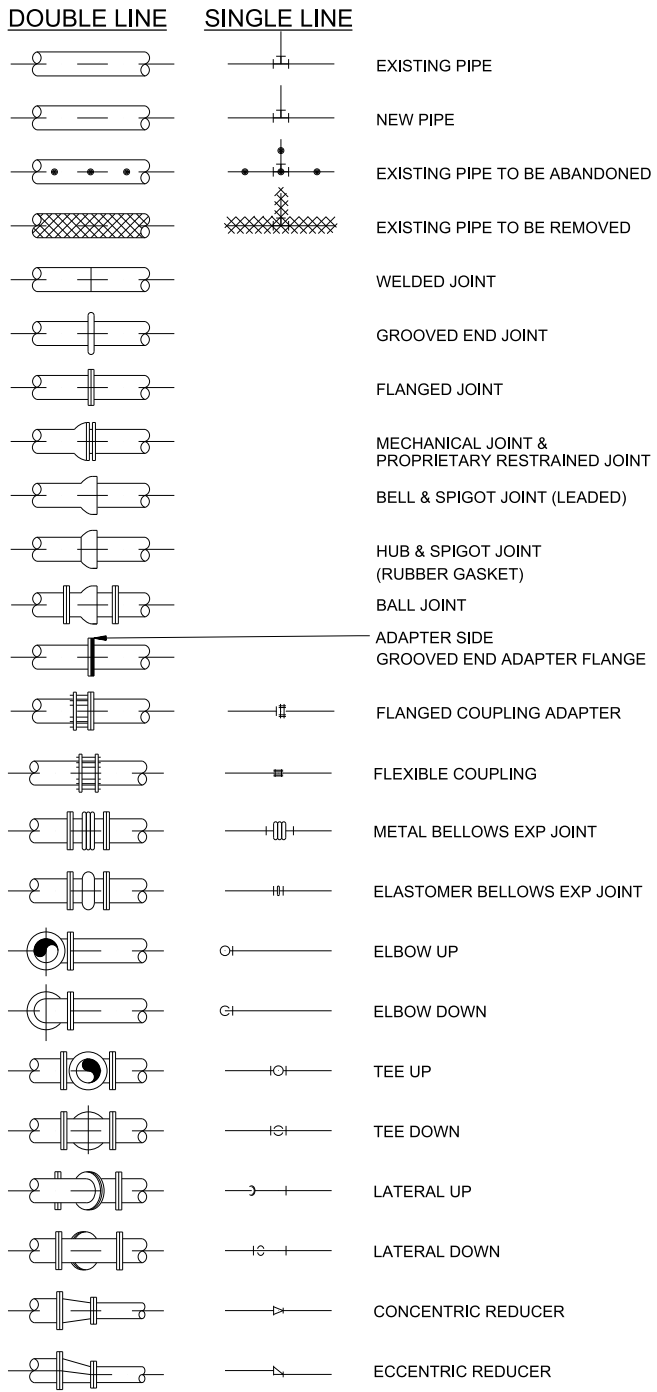
CITY OF COOS BAY WWT 2 EXPANSION & UPGRADE
GENERAL
LOCATION AND VICINTY MAP
AND DRAWING LIST

SHEET
01-G-0001
SEQ
DATE
08/2013
PROJ. NO.
469556

PRE-DESIGN

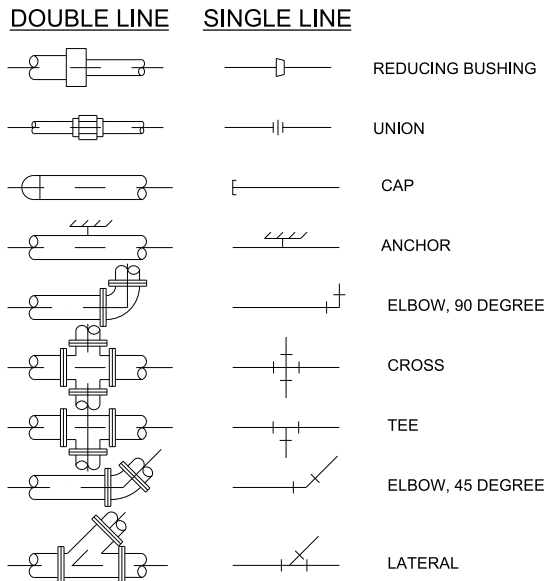
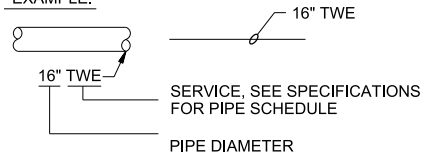
PRELIMINARY

PIPE AND FITTING SYMBOLS



PIPING DESIGNATION

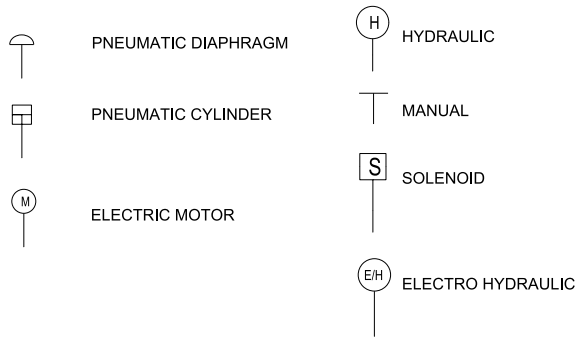
EXAMPLE:



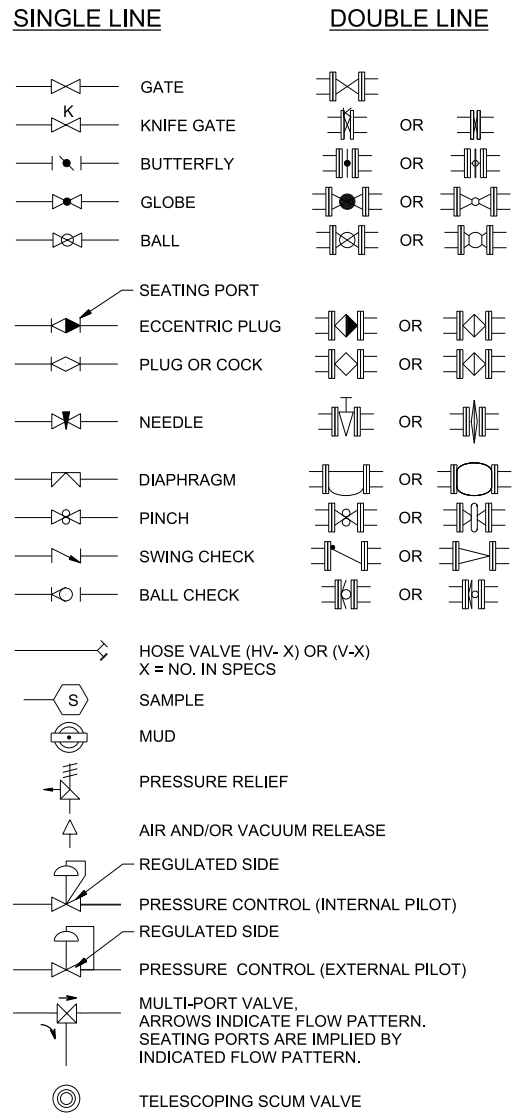
NOTES:

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

ACTUATOR SYMBOLS

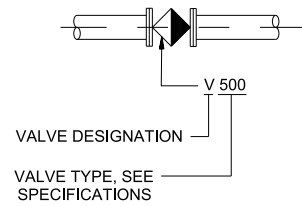


VALVE SYMBOLS

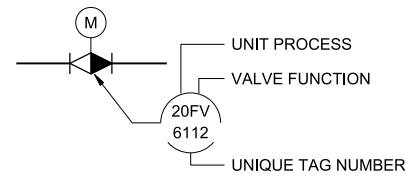


VALVE DESIGNATIONS

MANUAL VALVES AND CHECK VALVES



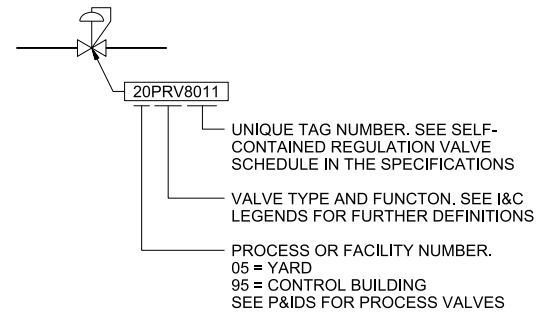
CONTROL VALVES



NOTE:

SEE I&C LEGENDS FOR FURTHER DEFINITIONS AND ACTUATOR TYPES.

SELF-CONTAINED REGULATING VALVES



MECHANICAL LEGEND AND NOTES

GENERIC PIPING NOTES

1. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.
2. SIZE OF FITTINGS SHOWN ON DRAWINGS 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.
3. LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. CONTRACTOR SHALL DESIGN SUPPORTS AS SPECIFIED.
4. ALL JOINTS SHALL BE WATERTIGHT. WALL PIPES SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL.
5. ALL FLEXIBLE CONNECTORS AND COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.
6. SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE DRAWINGS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.
7. ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED, OR SCREWED PIPING, SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED.
8. NUMBER AND LOCATION OF UNIONS SHOWN ON DRAWINGS IS ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
9. WHERE A GROOVED END COUPLING IS SHOWN, IT SHALL BE THE RIGID JOINT TYPE, UNLESS OTHERWISE SPECIFIED. WHERE A FLANGED COUPLING ADAPTER IS SHOWN, A STANDARD FLANGE SHALL BE JOINED TO THE COUPLING ADAPTER.

PRELIMINARY

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
POWER SYSTEM PLAN-1		POWER SYSTEM PLAN-2		FIRE ALARM SYSTEM PLAN AND RISER		SOUND SYSTEM PLAN AND RISER	
	CONNECTION POINT TO EQUIPMENT SPECIFIED. RACEWAY, CONDUCTOR,TERMINATION AND CONNECTION IN THIS DIVISION.		BREAKER, SEPARATELY MOUNTED, CURRENT RATING INDICATED (100/40, 100 = FRAME SIZE; 40 = TRIP RATING) 3 POLE		FIRE ALARM STATION, MANUAL		SPEAKER, CONE TYPE, RECESSED IN CEILING, SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPE
	MAJOR ELECTRICAL COMPONENT OR DEVICE - NAME OR IDENTIFYING SYMBOL AS SHOWN.		CONTACTOR, MAGNETIC, NEMA SIZE INDICATED		FIRE ALARM SYSTEM, AUTOMATIC SMOKE DETECTOR		SPEAKER, CONE TYPE, WALL MOUNTED
	PANELBOARD - SURFACE MOUNTED		LIGHTING CONTACTOR, CURRENT RATING INDICATED		FIRE ALARM SYSTEM, AUTOMATIC, HEAT DETECTOR		SPEAKER, CONE TYPE, SURFACE MOUNTED
	PANELBOARD LETTER OR NUMBER FACILITY NUMBER LP - LOW VOLTAGE PANEL DP - DISTRIBUTION PANEL		STARTER, MAGNETIC NEMA SIZE INDICATED		FIRE ALARM BELL		VOLUME CONTROL, WALL MOUNT 5'-0" AFF
	PANELBOARD - FLUSH MOUNTED		CONVENIENCE RECEPTACLE - DUPLEX UNLESS NOTED OTHERWISE WP - WEATHERPROOF C - CLOCK HANGER TL - TWIST LOCK CRE - CORROSION RESISTANT GFCI - GROUND FAULT CIRCUIT INTERRUPTER SUBSCRIPT NUMBER AT RECEPTACLE INDICATES CIRCUIT		FIRE ALARM HORN		INTERIOR PAGING TRUMPET SOUND REPRODUCER WITH REMOTE AMPLIFIER, SURFACE MOUNTED
	TERMINAL JUNCTION BOX		240V RECEPTACLE		FIRE ALARM HORN/STROBE LIGHT		MICROPHONE OUTLET
	MOTOR, SQUIRREL CAGE INDUCTION		CONVENIENCE RECEPTACLE - QUADRUPLX		FIRE ALARM STROBE LIGHT		SOUND SYSTEM RACEWAY
	GENERATOR, VOLTAGE AND SIZE AS INDICATED.		MULTI OUTLET ASSEMBLY		AIR DUCT DETECTOR		COMMUNICATION STATION
	HOME RUN - DESTINATION SHOWN		DUPLEX CONVENIENCE RECEPTACLE - FLUSH IN FLOOR		FIRE SPRINKLER FLOW SWITCH	SECURITY SYSTEM PLAN AND RISER	
	EXPOSED CONDUIT AND CONDUCTORS*		CONVENIENCE RECEPTACLE, PEDESTAL, DUPLEX SINGLE FACE UNLESS INDICATED OTHERWISE		FIRE SPRINKLER TAMPER SWITCH		CARD KEY ACCESS
	CONCEALED CONDUIT AND CONDUCTORS*		RECEPTACLE, SPECIAL PURPOSE-NEMA CONFIGURATION AND AMPERAGE INDICATED		DOOR HOLDER		CONTROL STATION
NOTE: ALL UNMARKED CONDUIT RUNS CONSIST OF TWO NO. 12, ONE NO. 12 GROUND CONDUCTORS IN 3/4" CONDUIT. RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF NO. 12 CONDUCTORS. CROSSHATCH WITH SUBSCRIPT "G" INDICATES GREEN GROUND WIRE.			THERMOSTAT	TELEPHONE SYSTEM PLAN AND RISER			DOOR SWITCH
	CROSSHATCHES WITH BAR INDICATE NO.10 CONDUCTOR. SIZE CONDUIT ACCORDING TO SPECIFICATIONS AND APPLICABLE CODE.		UTILITY REVENUE METERING FACILITY		TELEPHONE TERMINAL CABINET		EGRESS PUSHBUTTON
	CONDUIT AND CONDUCTOR CALLOUT, SEE LEGEND.		ELECTRIC UNIT HEATER		TELEPHONE RECEPTACLE FLOOR BOX		ELECTRONIC LOCK M = MAGENITIC S = STRIKE
	CONDUIT DOWN		ELECTRIC AIR CONDITIONER (SELF CONTAINED UNIT)		TELEPHONE RECEPTACLE		INTERCOM
	OVERHEAD LINE		UTILITY POLE		TELEPHONE SYSTEM RACEWAY		MONITOR
	CONDUIT UP	LIGHTING SYSTEM PLAN		COMPUTER SYSTEM (DATA) PLAN AND RISER			MOTION SENSOR
	CONDUIT, STUBBED AND CAPPED		LUMINAIRE, SEE SCHEDULE		COMPUTER NETWORK CONNECTION		VIDEO CAMERA PTZ = PAN/TILT/ZOOM F = FIXED
	CONDUIT TERMINATION AT CABLE TRAY		LUMINAIRE WITH INTERNAL BATTERY BACKUP, SEE SCHEDULE		COMPUTER NETWORK CONNECTION, FLUSH IN FLOOR	GROUND SYSTEM PLAN	
	EXISTING CONDUIT/ DUCT BANK		STRIP LUMINAIRE, SEE SCHEDULE		DATA SYSTEM RACEWAY		GROUND ROD
	BUS DUCT - SEE SPECIFICATIONS		LUMINAIRE AND POLE, SEE SCHEDULE	COMBINED TELEPHONE/COMPUTER SYSTEM PLAN AND RISER			GROUND ROD IN TEST WELL
	CONCRETE ENCASED CONDUIT		WALL MOUNTED LUMINAIRE, SEE SCHEDULE		COMBINATION TELEPHONE/DATA RECEPTACLE, WALL MOUNTED, NUMBER OF PORTS INDICATED		GROUNDING CONDUCTOR, SIZE AS INDICATED
	DIRECT BURIED CONDUIT		FLOOD LIGHTS - AIM IN THE DIRECTION SHOWN		COMBINATION TELEPHONE/DATA RECEPTACLE, FLOOR BOX, NUMBER OF PORTS INDICATED		PIGTAIL FOR CONNECTION TO EQUIPMENT CABINET OR FRAME
	FIBER OPTIC CONDUIT		STANDBY LIGHTING UNIT, SURFACE MOUNTED, SEE SCHEDULE	CLOSED CIRCUIT/TELEVISION CABLE PLAN AND RISER			EQUIPMENT GROUND BUS
	CONCRETE ENCASED DUCT BANK WHERE XXXX IS THE DUCT BANK NAME. SEE CIRCUIT AND RACEWAY CODING DEFINITION		EXIT LIGHTS - FILLED SECTION INDICATES LIGHTED FACE, ARROW INDICATES EGRESS DIRECTIONAL INDICATORS, XX = FIXTURE NUMBER, SEE SCHEDULE		COMBINATION CLOSED CIRCUIT TELEVISION RECEPTACLE (CCTV) AND DUPLEX CONVENIENCE RECEPTACLE IN TWO GANG BOX WITH BARRIER, 12" DOWN FROM CEILING		EQUIPMENT NEUTRAL BUS
	CONCEALED CONDUIT ROUTING AREA		SMALL LETTER SUBSCRIPT AT SWITCH AND LUMINAIRE INDICATES SWITCHING. SUBSCRIPT NUMBER AT LUMINAIRE INDICATES CIRCUIT		COMBINATION TELEVISION CABLE RECEPTACLE (TV) AND DUPLEX CONVENIENCE RECEPTACLE IN TWO GANG BOX WITH BARRIER, 12" DOWN FROM CEILING	PRELIMINARY	
	CONDUIT ROUTING AREA		WALL SWITCH: 2- DOUBLE POLE P- PILOT LIGHT 3- THREE WAY K- KEY OPERATED 4- FOUR WAY D- DIMMER WP- WEATHERPROOF CRE- CORROSION RESISTANT EX- EXPLOSIONPROOF L- MOMENTARY 3-WAY M- MOTOR RATED MS- MANUAL STARTER WITH OVERLOADS		CLOSED CIRCUIT TELEVISION RECEPTACLE, FLOOR BOX		
	CABLE TRAY		OCCUPANCY SENSOR		TELEVISION CABLE RECEPTACLE, FLOOR BOX		
	TRANSFORMER		LIGHTING CONTACTOR				
	GENERAL CONTROL OR WIRING DEVICE. LETTER SYMBOLS OR ABBREVIATIONS INDICATE TYPE OF DEVICE		MOTION DETECTOR				
	CONTROL STATION, SEE CONTROL DIAGRAMS FOR CONTROL DEVICE(S) REQUIRED.		PHOTOCELL				
	NONFUSED DISCONNECT SWITCH, CURRENT RATING INDICATED, 3 POLE						
	FUSED DISCONNECT SWITCH, CURRENT RATING INDICATED (60/40, 60=SWITCH RATING / 40=FUSE RATING) 3 POLE						
	COMBINATION CIRCUIT BREAKER AND MAGNETIC STARTER, NEMA SIZE INDICATED						
	MANHOLE						

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CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE
GENERAL

ELECTRICAL LEGEND 2

SHEET
01-G-0006

SEQ

DATE 08/2013

PROJ. NO. 469556

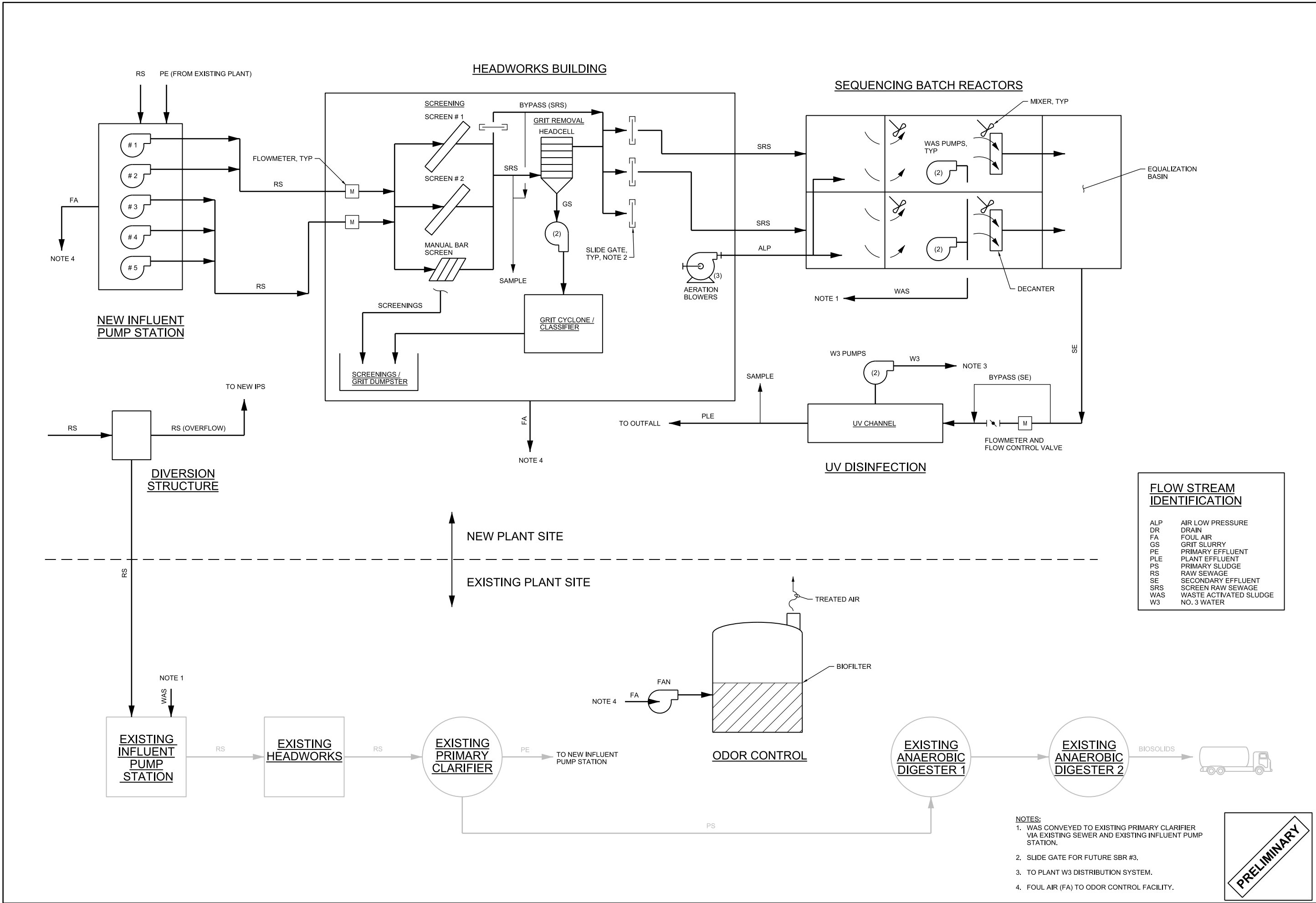
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DESIGN DATA SUMMARY

INFLUENT FLOWS AND LOADS			DESIGN VALUES		LIQUID UNIT PROCESS CRITERIA		DESIGN VALUES		LIQUID UNIT PROCESS CRITERIA		DESIGN VALUES		LIQUID UNIT PROCESS CRITERIA		DESIGN VALUES	
YEAR			2010	2037	INFLUENT PUMP STATION				GRIT REMOVAL				AERATION BLOWERS			
FLOWS, MGD					LOW FLOW PUMPS				UNITS		1		UNITS			3 (2 DUTY, 1 STANDBY)
AVERAGE DAILY			1.06	1.24	UNITS		2		TYPE		EUTEK HEADCELL		TYPE			POSITIVE DISPLACEMENT
AVERAGE DRY WEATHER			0.84	0.99	TYPE		SUBMERSIBLE, SOLIDS HANDLING		CAPACITY/UNIT, MGD		8.2		CAPACITY/UNIT, SCFM			1,300
AVERAGE WET WEATHER			1.28	1.50	CAPACITY/UNIT, GPM		715		GRIT PUMPS				OPERATING PRESSURE, PSI			12
MAXIMUM MONTH DRY WEATHER			1.29	1.51	OPERATING HEAD, FT		56		UNITS		2		MOTOR (EACH), HP			100
MAXIMUM MONTH WET WEATHER			1.79	2.09	MOTOR (EACH), HP		17 (460 V, 3 PHASE)		TYPE		TORQUE-FLOW MODEL C		SBR DECANter			
PEAK WEEK FLOW			3.05	3.57	DRIVE		ADJUSTABLE		CAPACITY/UNIT, GPM		250		UNITS			2
PEAK DAILY AVERAGE FLOW			5.39	6.31	HIGH FLOW PUMPS				OPERATING HEAD, FT		28		TYPE			MOTORIZED
PEAK INSTANTANEOUS FLOW			7.00	8.20	UNITS		3		MOTOR (EACH), HP		7.5		MOTOR (EACH), HP			3/4
5-DAY BOD LOADINGS, LBS/DAY					TYPE		SUBMERSIBLE, SOLIDS HANDLING		DRIVE		CONSTANT		FLOW EQUALIZATION BASIN			
AVERAGE ANNUAL			1,993	2,334	CAPACITY/UNIT, GPM		2,420		GRIT WASHING/DEWATERING				UNITS			1
SUMMER AVERAGE			1,993	2,334	OPERATING HEAD, FT		53		UNITS		1		TOTAL VOLUME, GAL			377,000
WINTER AVERAGE			1,993	2,334	MOTOR (EACH), HP		45 (460 V, 3 PHASE)		TYPE		TEACUP AND GRIT SNAIL		WORKING VOLUME, GAL			215,000
MAXIMUM MONTH			2,830	3,314	DRIVE		ADJUSTABLE		MOTOR (EACH), HP		1/3		LENGTH X WIDTH, FT			100 X 36
MAXIMUM DAY			3,900	4,567	MISCELLANEOUS				DRIVE		CONSTANT		BOTTOM WATER LEVEL			6
TSS LOADINGS, LBS/DAY					LEVEL CONTROL TYPE		PRESSURE SWITCH		SEQUENCING BATCH REACTORS (SBR)				TOP WATER LEVEL			14
AVERAGE ANNUAL			2,499	2,926	OVERFLOW POINT		MANHOLE ALONG EMPIRE BLVD		UNITS		2		ULTRAVIOLET DISINFECTION			
SUMMER AVERAGE			2,496	2,923	OVERFLOW DISCHARGE		OVERLAND FLOW TO DRAINAGE		VOLUME (EACH), GAL		1,140,000		TYPE			LPHO
WINTER AVERAGE			2,501	2,929			DITCH FLOWING TO COOS BAY		NOMINAL LENGTH X WIDTH X HEIGHT (EACH), FT		145 X 50 X 23		CHANNELS			1
MAXIMUM MONTH			3,960	4,638			AVERAGE TIME TO OVERFLOW	23.5 MINUTES	BOTTOM WATER LEVEL, FT		15		NO. OF BANKS			3
MAXIMUM DAY			5,800	6,792	AUXILIARY POWER TYPE		PERMANENT STANDBY GENERATOR		TOP WATER LEVEL, FT		21		MINIMUM DOSE			30 MILLIJOULES/SQUARE CENTIMETER
TOTAL KJEDAHL NITROGEN-N LOADINGS, LBS/DAY					LOCATION OF AUXILIARY POWER		WWTP2		PRE-REACT ZONE VOLUME (EACH), GAL		173,000		UV TRANSMITTANCE			55%
AVERAGE ANNUAL			277	324	TRANSFER SWITCH		AUTOMATIC		MAIN ZONE VOLUME (EACH, GAL		967,000		EFFLUENT FECAL COLIFORM			14
SUMMER AVERAGE			276	323	ALARM TELEMETRY TYPE		AUTODIALER		DESIGN SRT, DAYS		10		(MONTHLY MEDIAN PER 100 ML)			
WINTER AVERAGE			277	325	EPA RELIABILITY CLASS		I		MINIMUM DESIGN TEMPERATURE, CELSIUS		13		ENTEROCOCCUS			35
MAXIMUM MONTH			360	421	FIRM CAPACITY		6,270 GPM		CYCLE TIME, HRS		2-4		(MONTHLY GEOMETRIC MEAN PER 100 ML)			
MAXIMUM DAY			427	500	FORCEMAIN				CYCLE DURATION (% OF TOTAL)				W3 PUMP STATION			
AVERAGE ANNUAL			208	243	LENGTH, SIZE (LOW FLOW PUMPS)		65 FEET, 8 INCH		REACT PHASE		50%		UNITS			2
SUMMER AVERAGE			207	242	LENGTH, SIZE (HIGH FLOW PUMPS)		60 FEET, 16 INCH		SETTLE PHASE		25%		TYPE			VERTICAL TURBINE
WINTER AVERAGE			208	244	PROFILE		ASCENDING		DECANT PHASE		25%		CAPACITY (EACH), GPM			200
MAXIMUM MONTH			270	316	DISCHARGE POINT		WWTP2 HEADWORKS		DIFFUSER TYPE		FINE BUBBLE		MOTOR (EACH), HP			20
MAXIMUM DAY			320	375	MATERIAL		DUCTILE IRON		ANOXIC PHASE MIXERS				DRIVE			ADJUSTABLE
EFFLUENT REQUIREMENTS					AIR/VACUUM RELEASE VALVES		5 AT PUMP STATION		UNITS		4 (2 PER SBR)		SOLIDS UNIT PROCESS CRITERIA			
WET WEATHER					SULFIDE CONTROL SYSTEM		NONE		TYPE		SUBMERSIBLE		WAS PUMPING			
5-DAY BOD			20 MG/L (MONTHLY)		MECHANICAL SCREENS				MOTOR (EACH), HP		7		UNITS			2 PER SBR (ONE DUTY, ONE STANDBY)
			30 MG/L (WEEKLY)		UNITS		2		DRIVE		CONSTANT		TYPE			SUBMERSIBLE
			340 LBS/DAY (MONTHLY)		TYPE		PERFORATED PLATE						CAPACITY (EACH), GPM			250
			510 LBS/DAY (WEEKLY)		CAPACITY/UNIT, MGD		6.15						MOTOR (EACH), HP			3
			670 LBS/DAY (DAILY)		OPENING SIZE, MM		6						DRIVE			ADJUSTABLE
TSS, MG/L			20 MG/L (MONTHLY)		MOTOR (EACH), HP		0.5 (MAIN) + 0.5 (BRUSH)									
			30 MG/L (WEEKLY)		DRIVE		MAIN - CONSTANT									
			340 LBS/DAY (MONTHLY)		<td>BRUSH - CONSTANT</td> <th></th> <th colspan="2"></th> <th></th> <th></th> <th colspan="2"></th> <th></th> <td></td>		BRUSH - CONSTANT									
			510 LBS/DAY (WEEKLY)		MANUAL BAR SCREEN											
			670 LBS/DAY (DAILY)		UNITS		1									
AMMONIA-N, MG/L			20 MG/L (MONTHLY)		OPENING SIZE, IN		3/8									
			30 MG/L (WEEKLY)		SCREENINGS WASHER/COMPACTOR											
					UNITS		2									
					CAPACITY/UNIT, CF/HR		TBD									
					MOTOR (EACH), HP		2									
					DRIVE		CONSTANT									
					SCREENINGS CONVEYORS											
					UNITS		2 (TRANSFER AND DISCHARGE)									
					TYPE		SHAFTLESS									
					CAPACITY/UNIT, CF/HR		TBD									
					MOTOR (EACH), HP		10 (TRANSFER), 5 (DISCHARGE)									
					DRIVE		CONSTANT									



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BY	REVISION	DATE	NO.

CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE
GENERAL

DSGN JKR
DR ERB
CHK CHK
APVD CWM

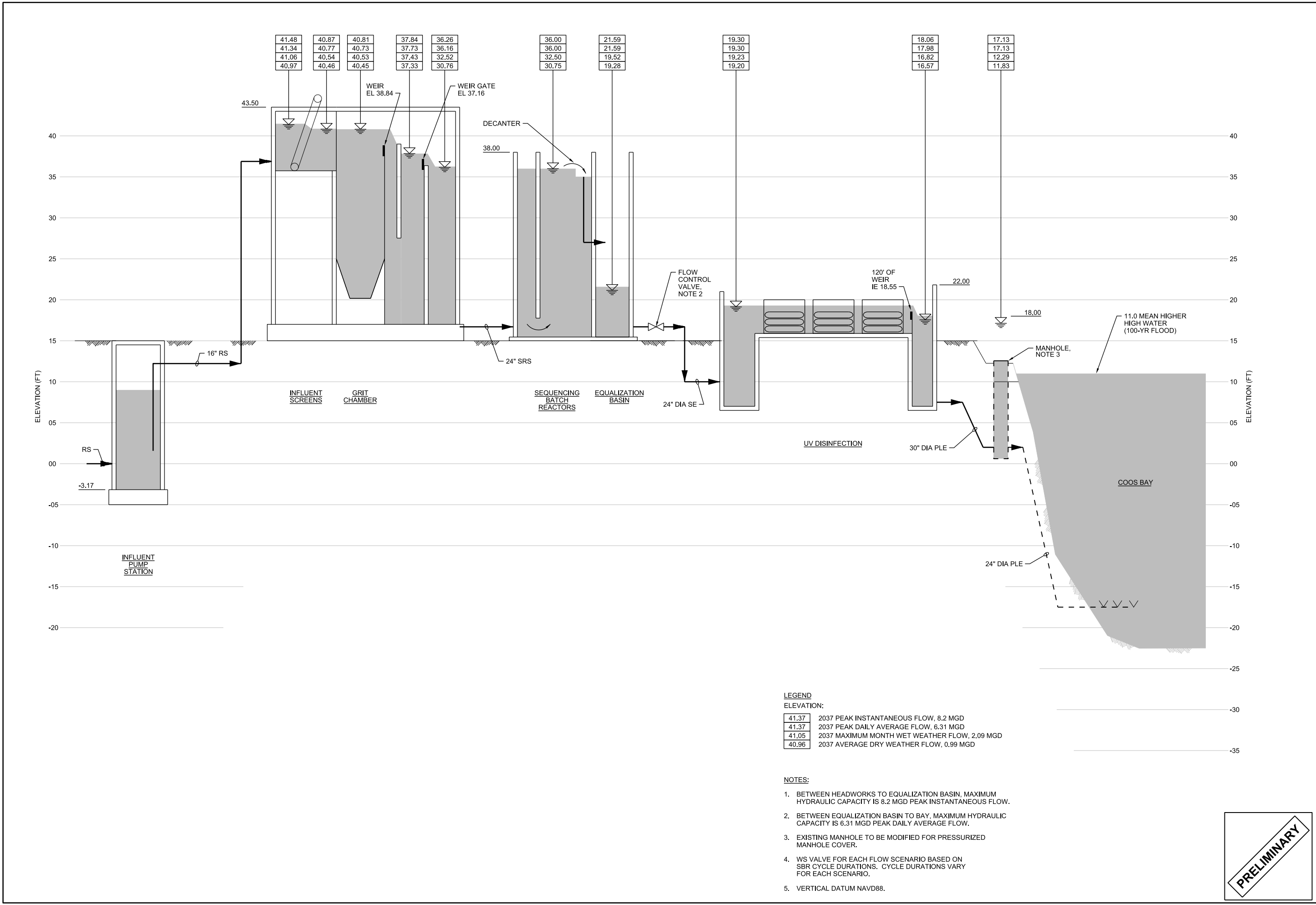
PROCESS FLOW DIAGRAM

PRELIMINARY

NOTES:
1. WAS CONVEYED TO EXISTING PRIMARY CLARIFIER VIA EXISTING SEWER AND EXISTING INFLUENT PUMP STATION.
2. SLIDE GATE FOR FUTURE SBR #3.
3. TO PLANT W3 DISTRIBUTION SYSTEM.
4. FOUL AIR (FA) TO ODOR CONTROL FACILITY.

SHEET	01-G-0008
SEQ	
DATE	08/2013
PROJ. NO.	469556

PRE-DESIGN



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DR	KLM				
CHK					
APVD	CWM				

CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE
GENERAL

HYDRAULIC PROFILE

SHEET
01-G-0009
SEQ
DATE 08/2013
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469556

PRE-DESIGN

MARPLE ST.

PROPERTY LINE

FENCE LINE

FULTON AVE.

(N) SIDEWALK

OFFICE/LAB

HEADWORKS

AC PAVEMENT

RAIN GARDEN

(N) SIGN

EMPIRE BLVD.

TRANSFORMER

FUTURE SIDEWALK AND ROADWAY
REALIGNMENT/RECONSTRUCTION BY
ODOT

PROPERTY LINE

FUTURE SIDEWALK AND ROADWAY
REALIGNMENT/RECONSTRUCTION
BY ODOT

PLAN
1"=20'



PRELIMINARY

VERIFY SCALES
B&S IS ONE INCH ON
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SCALES ACCORDINGLY

CH2MHILL
SAW
CONSULTING ENGINEERS
& GEOLOGISTS, INC.

NO.	DATE	REVISION	BY

CITY OF COOS BAY WWP 2 EXPANSION & UPGRADE
CIVIL
OVERALL SITE PLAN

SHEET	06-C-2000
SEQ	
DATE	08/2013
PROJ. NO.	469556

PRE-DESIGN

MARPLE ST.

FULTON AVE.

EMPIRE BLVD.

FUTURE EQUALIZATION BASIN

FUTURE BASIN

EQUALIZATION BASIN

SBR SYSTEM

GENERATOR

HEADWORKS

OFFICE/LAB

SHOP

ELECTRICAL BUILDING

GARAGE

INFLUENT PUMP
STATION YARD PIPING

(N) 4" PLE

(N) 30" SEWER INFLUENT

(E) SEWER

(N) 30" GRAVITY SEWER

(N) 8" FORCEMAIN
(N) 16" FORCEMAIN
(N) 16" HDPE FA TO (E) WWTP2
(N) 12" HDPE FA TO (E) WWTP2
(N) 18" HDPE FA TO (E) WWTP2
(N) 4" WAS

(N) 6" STORM DRAIN

12" STORM DRAIN

CATCH BASIN
SEE NOTE 2

(N) 30" HDPE PLE TO
OUTFALL

(N) MANHOLE (TYP)

(E) STORM

(E) SEWER

(E) WATER

(E) MANHOLE

SEE NOTE 1

(E) SEWER

(N) 24" PE
FROM (E) WWTP2

NOTES:

1. SOUTH END OF (N) 30" GRAVITY SEWER TO BE PLUGGED AT MANHOLE WHILE ALL INFLUENT IS BEING DIRECTED TO (E) WWTP2 FOR INTERIM BIOSOLIDS SOLUTION.
2. ALL STORMWATER TO BE DIRECTED TO WET WELL.

PLAN
1"=20'



PRELIMINARY

VERIFY SCALES
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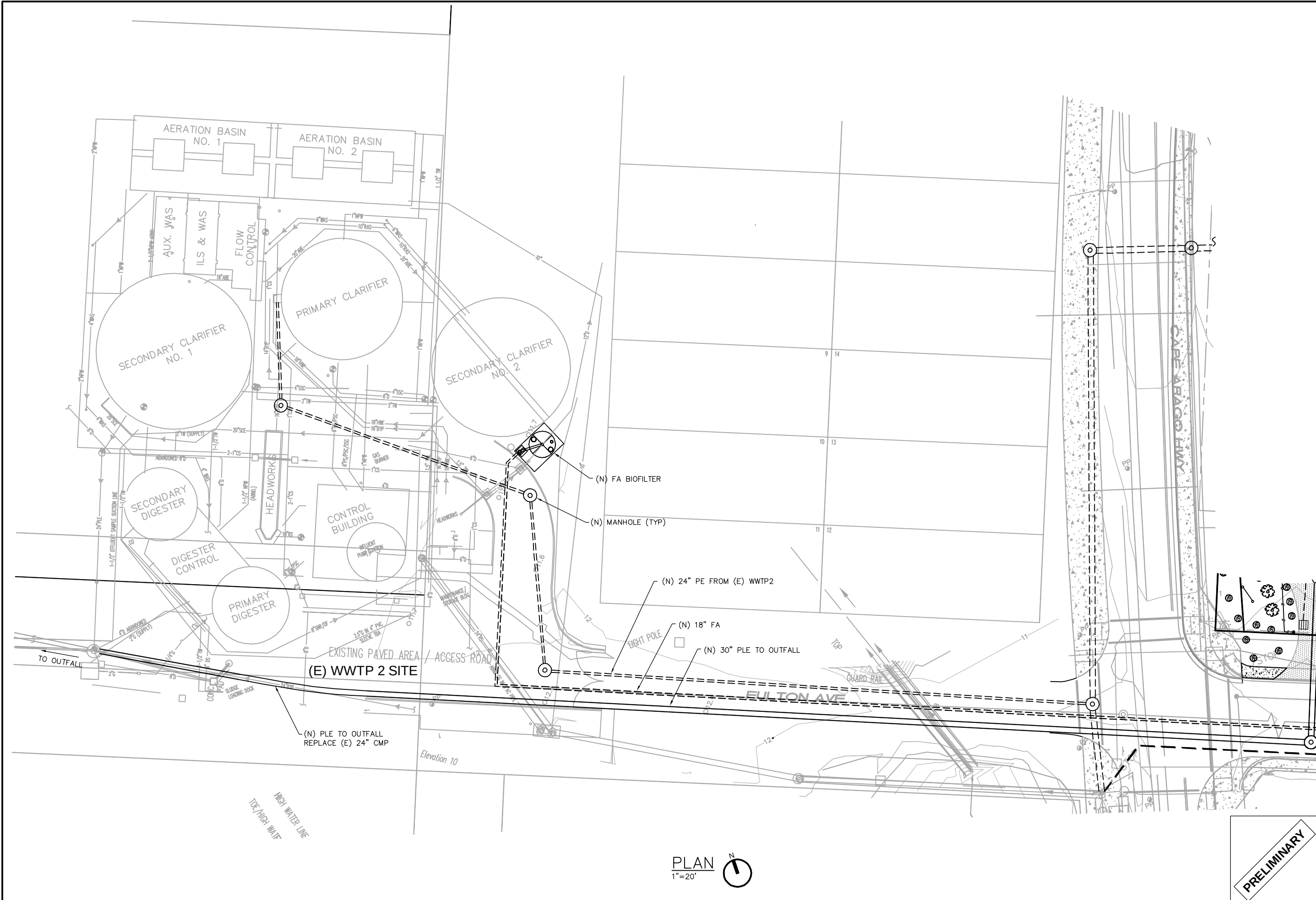
NO.	DATE	REVISION	BY
-----	------	----------	----

APVD	CHK	FMK	DSGN	JMD
------	-----	-----	------	-----

CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE
CIVIL
SITE PLAN AND
YARD PIPING PLAN

SHEET	06-C-2001
SEQ	
DATE	08/2013
PROJ. NO.	469556

PRE-DESIGN



PLAN
1"=20'



PRELIMINARY

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& GEOLOGISTS, INC.

VERIFY SCALES	DR	CHK	APVD	NO.	DATE	REVISION	BY
BAR IS ONE INCH ON ORIGINAL DRAWING	JMD	FMK	RFS				
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY							

CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE

CIVIL

SITE PLAN AND YARD PIPING

WEST SITE

SHEET	06-C-2002
SEQ	
DATE	08/2013
PROJ. NO.	469556

PRE-DESIGN

MARPLE ST.

FULTON AVE.

EMPIRE BLVD.

- LEGEND
- FLOW DIRECTION
 - 15' EXISTING CONTOUR ELEVATION
 - 15' PROPOSED CONTOUR ELEVATION

- NOTES:
1. ALL PAVEMENT EDGES TO BE CURBED.
 2. ALL STORMWATER TO BE DIRECTED TO WET WELL.

PLAN
1"=20'



PROPERTY LINE

FUTURE
EQUALIZATION BASIN

FUTURE BASIN

EQUALIZATION BASIN

SPR SYSTEM

HEADWORKS

TRENCH DRAIN

SLAB ON GRADE

SLAB ON GRADE

TRENCH DRAIN

INFLUENT PUMP
STATION

GENERATOR

SHOP

GARAGE

ELECTRICAL ROOM

OFFICE/LAB

FF-16.5'

CATCH BASIN
SEE NOTE 2

WETLAND
FOOT CREEK DRAINAGE

PRELIMINARY

VERIFY SCALES
B/S IS ONE INCH ON
ORIGINAL DRAWING
0 1" 1"
IF NOT ONE INCH ON
THIS SHEET ADJUST
SCALES ACCORDINGLY

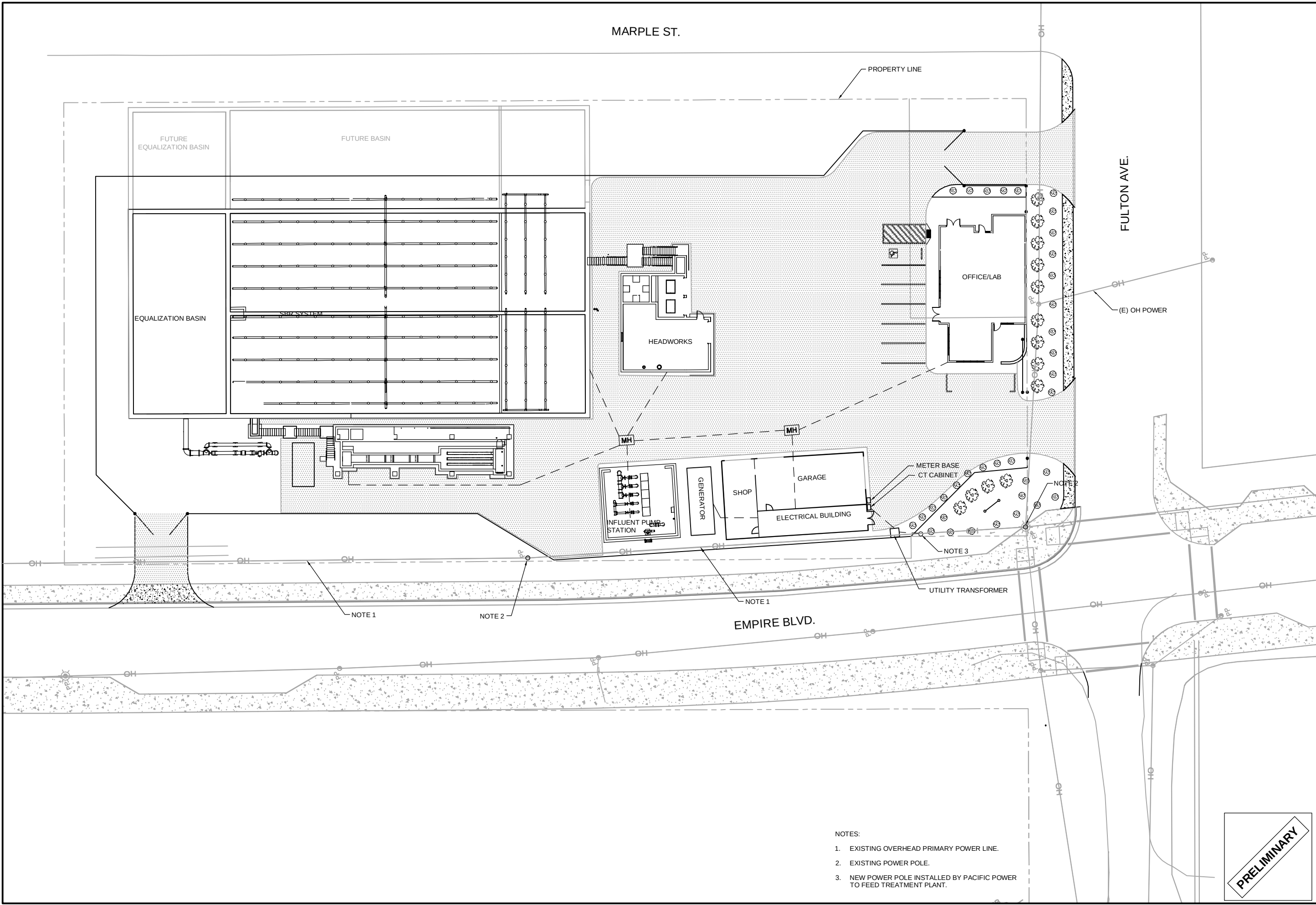
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CONSULTING ENGINEERS
& GEOLOGISTS, INC.

NO.	DATE	REVISION	BY

APVD	CHK	FMK	DR	DSGN	JMD

CITY OF COOS BAY WTP 2 EXPANSION & UPGRADE
CIVIL
GRADING PLAN
SHEET
06-C-2003
SEQ
DATE 08/2013
PROJ. NO.
469556

PRE-DESIGN



NOTES:

1. EXISTING OVERHEAD PRIMARY POWER LINE.
2. EXISTING POWER POLE.
3. NEW POWER POLE INSTALLED BY PACIFIC POWER TO FEED TREATMENT PLANT.

PRELIMINARY

CITY OF COOS BAY WWP 2 EXPANSION & UPGRADE		DSGN	BMP	NO.		DATE	REVISION	BY
SITE ELECTRICAL		DR	JG	CHK	APVD			
SHEET 06-E-2000								
SEQ								
DATE 08/2013								
PROJ. NO. 469556								

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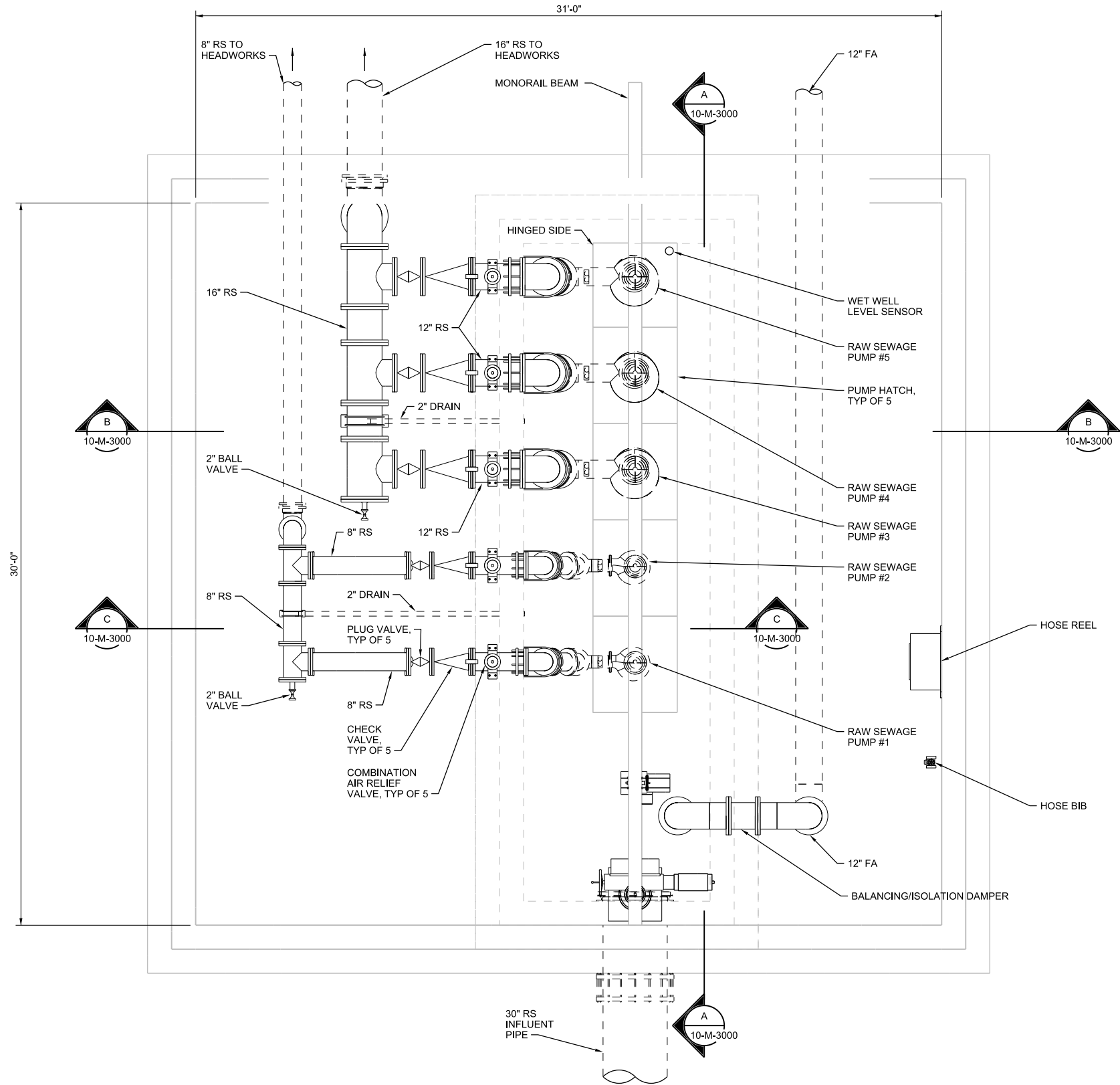
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0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

PRE-DESIGN



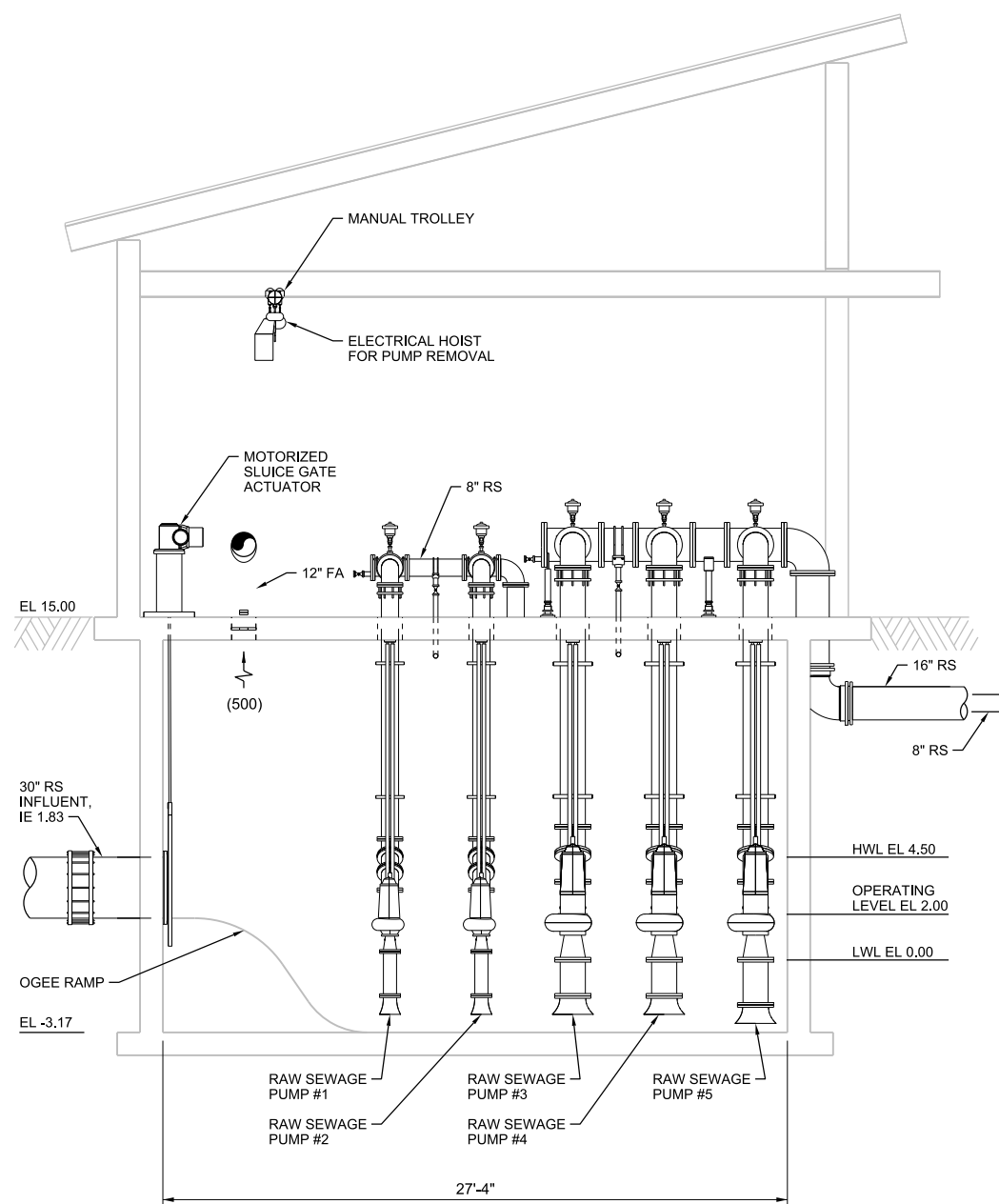
GROUND FLOOR PLAN
3/8"=1'-0"



PRELIMINARY

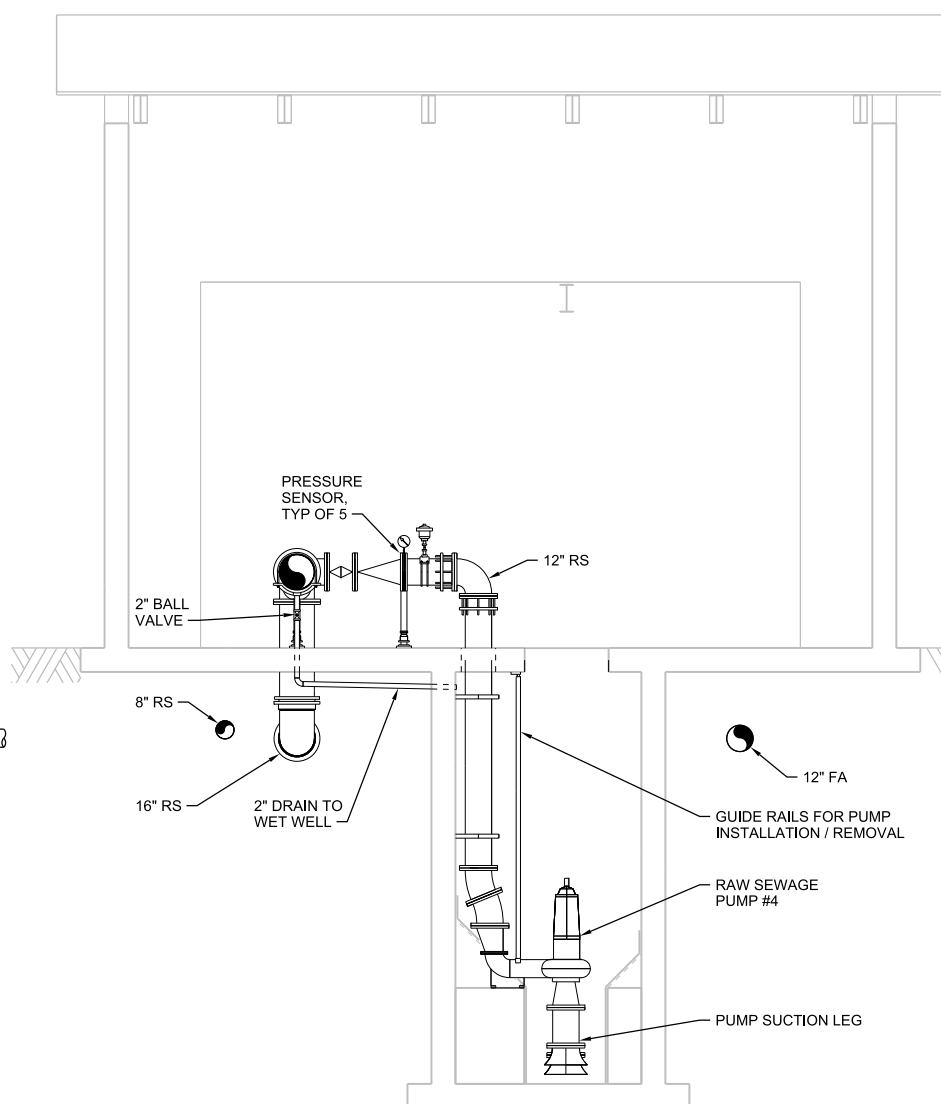
VERIFY SCALES 8 1/2" IS ONE INCH ON ORIGINAL DRAWING 0 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY		CH2MHILL SAV CONSULTING ENGINEERS & GEOLOGISTS, INC.		BY	REVISION	DATE	NO.	DSGN MD DR KLM CHK APVD CWM	CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE INFLUENT PUMP STATION MECHANICAL PLAN	SHEET 10-M-2000 SEQ DATE 08/2013 PROJ. NO. 469556
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PRE-DESIGN



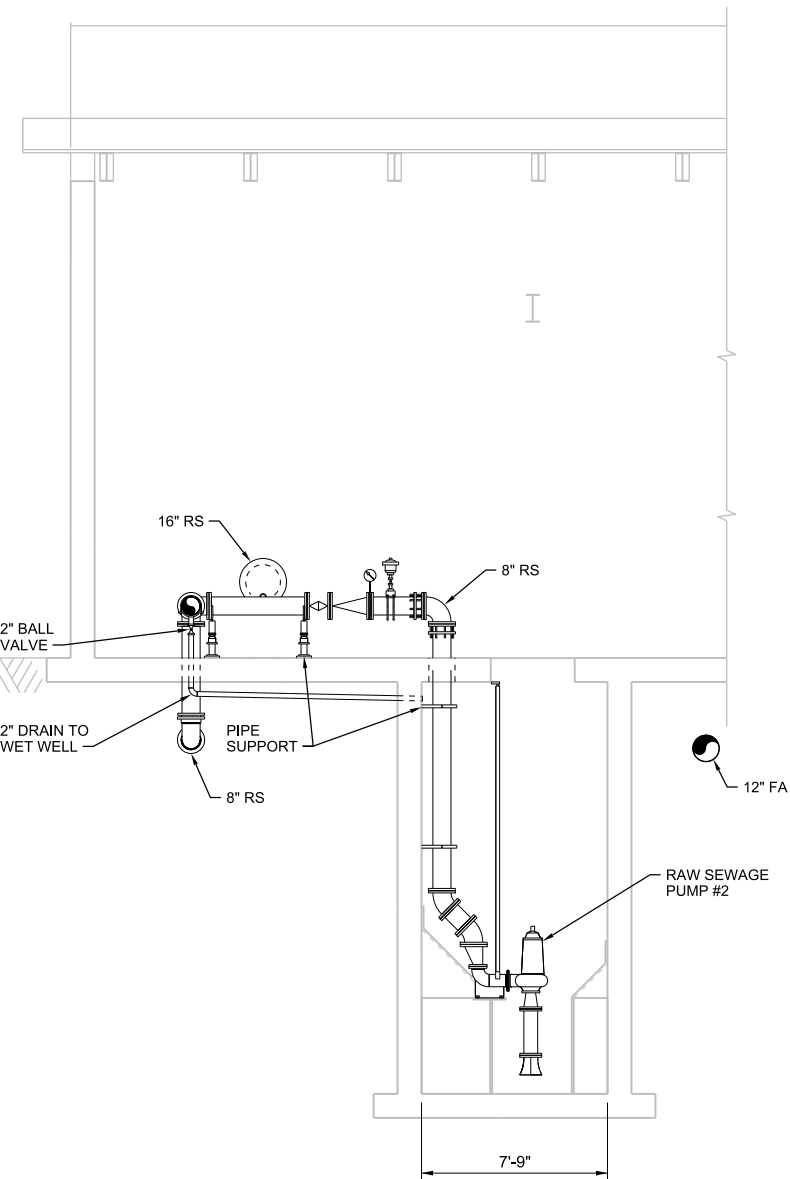
A SECTION
1/4"=1'-0"
10-M-2000

10-M-2000



B SECTION
1/4"=1'-0"
10-M-2000

10-M-2000



SECTION
1/4"=1'-0"
10-M-2000

10-M-2000

PRELIMINARY

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 ■ 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

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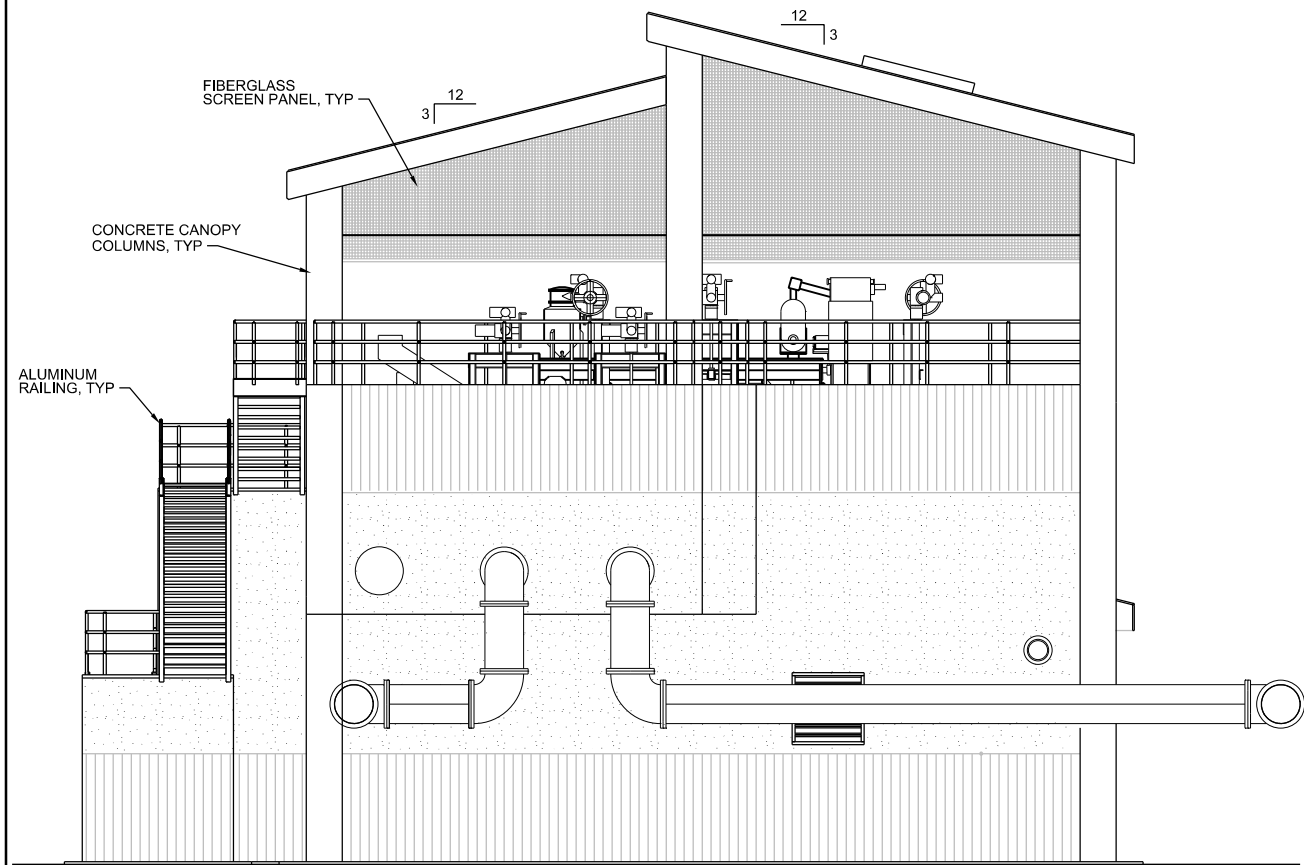
NO	DATE	REVISION	BY

DSGN	MD
DR	KLM
CHK	
APVD	CWM

CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE
INFLUENT PUMP STATION
MECHANICAL
SECTIONS

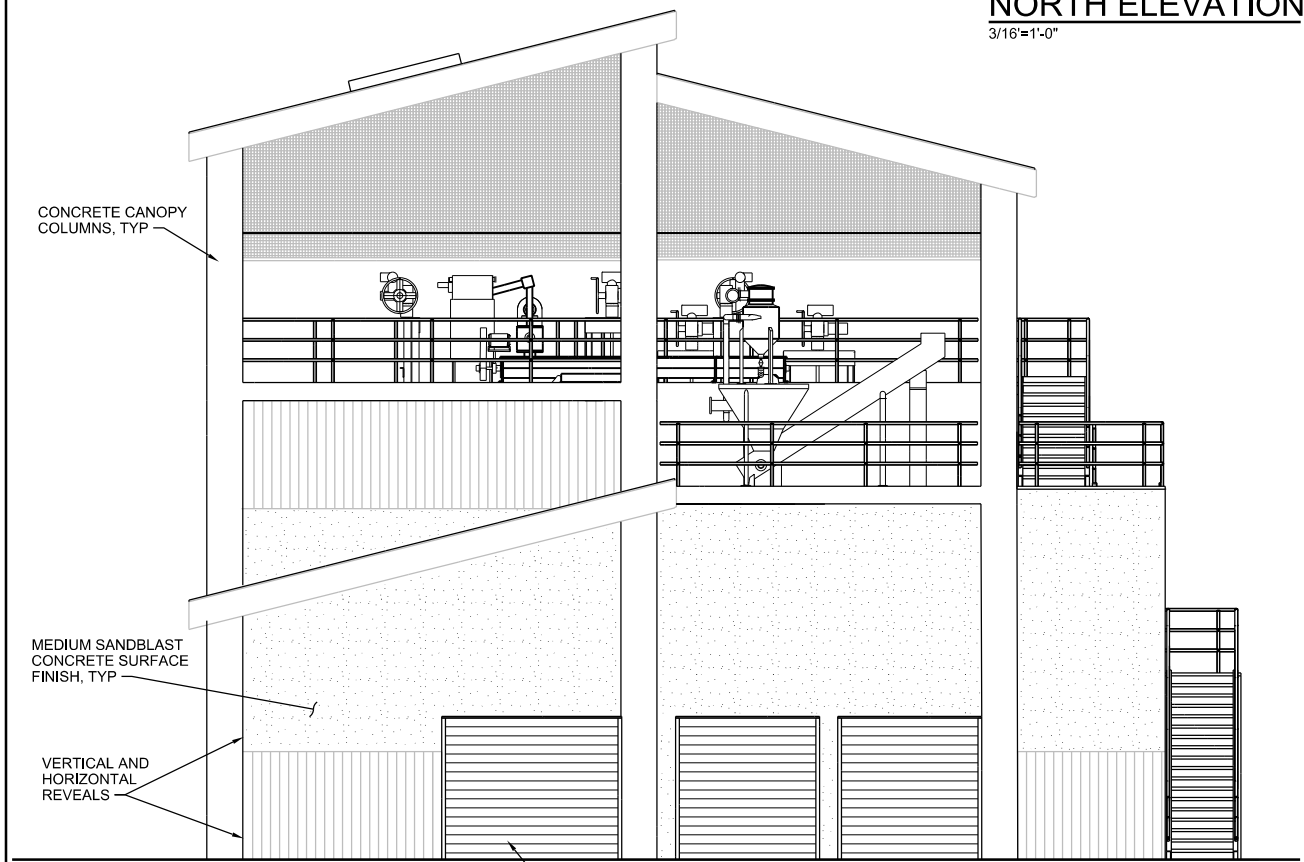
SHEET	10-M-3000
SEQ	
DATE	08/2013
PROJ. NO.	469556

PRE-DESIGN



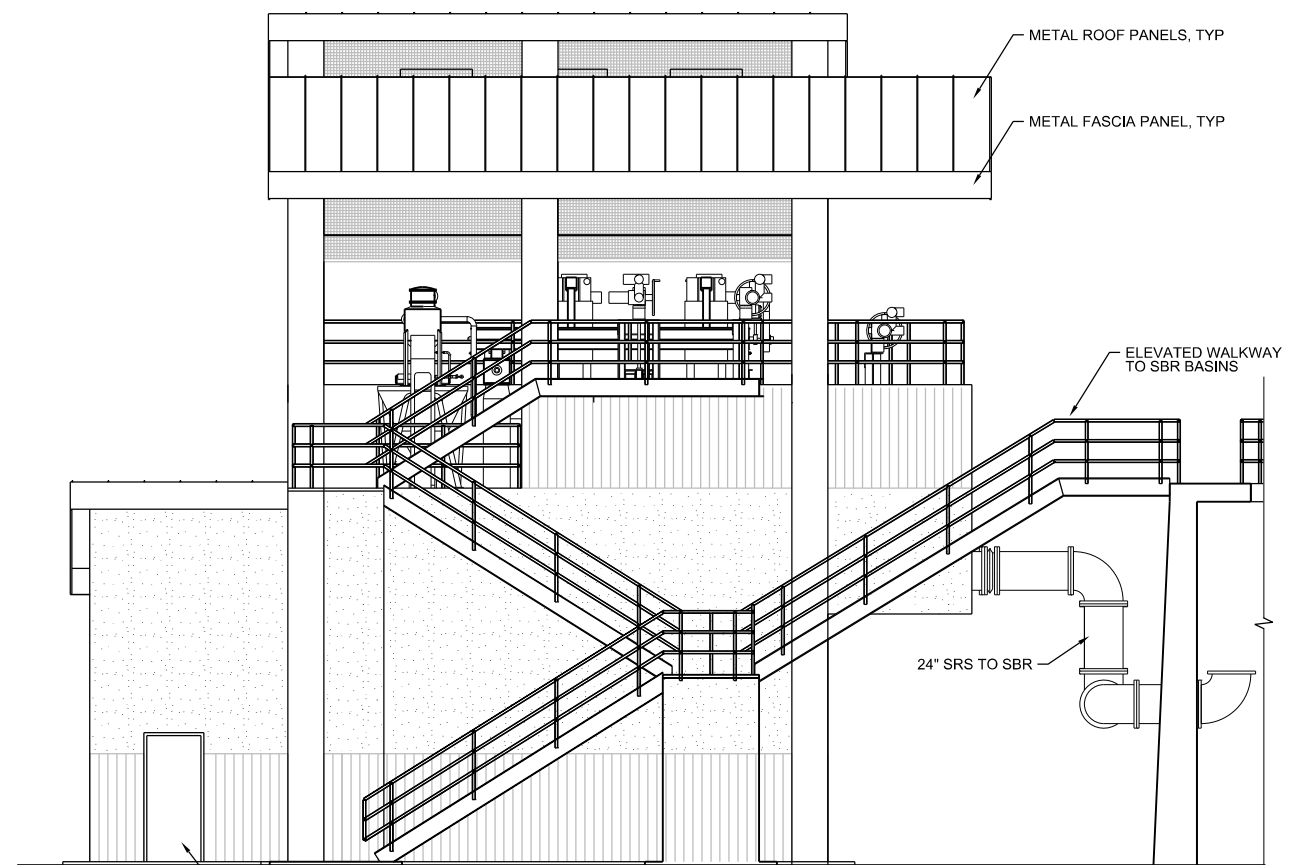
NORTH ELEVATION

3/16"=1'-0"



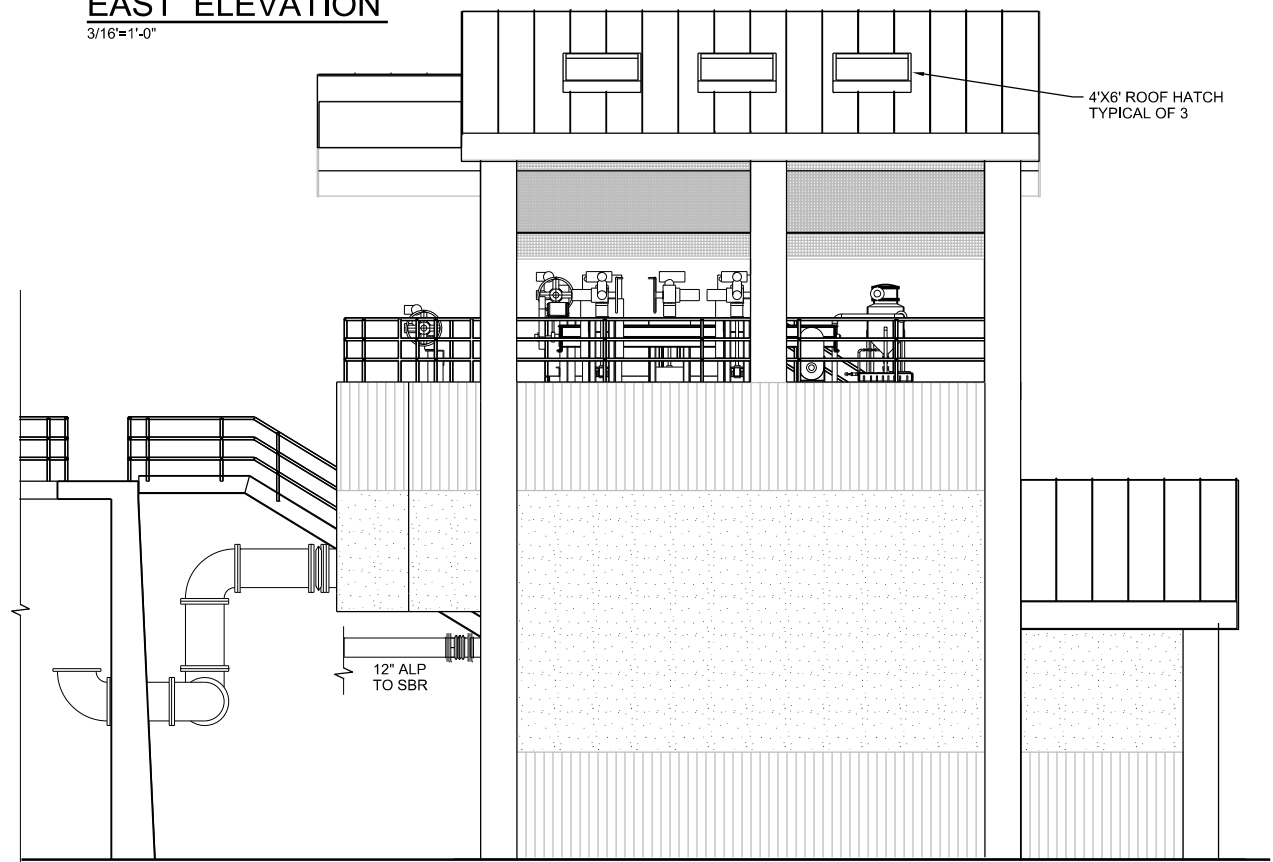
SOUTH ELEVATION

3/16"=1'-0"



EAST ELEVATION

3/16"=1'-0"



WEST ELEVATION

3/16"=1'-0"

PRELIMINARY

VERIFY SCALES
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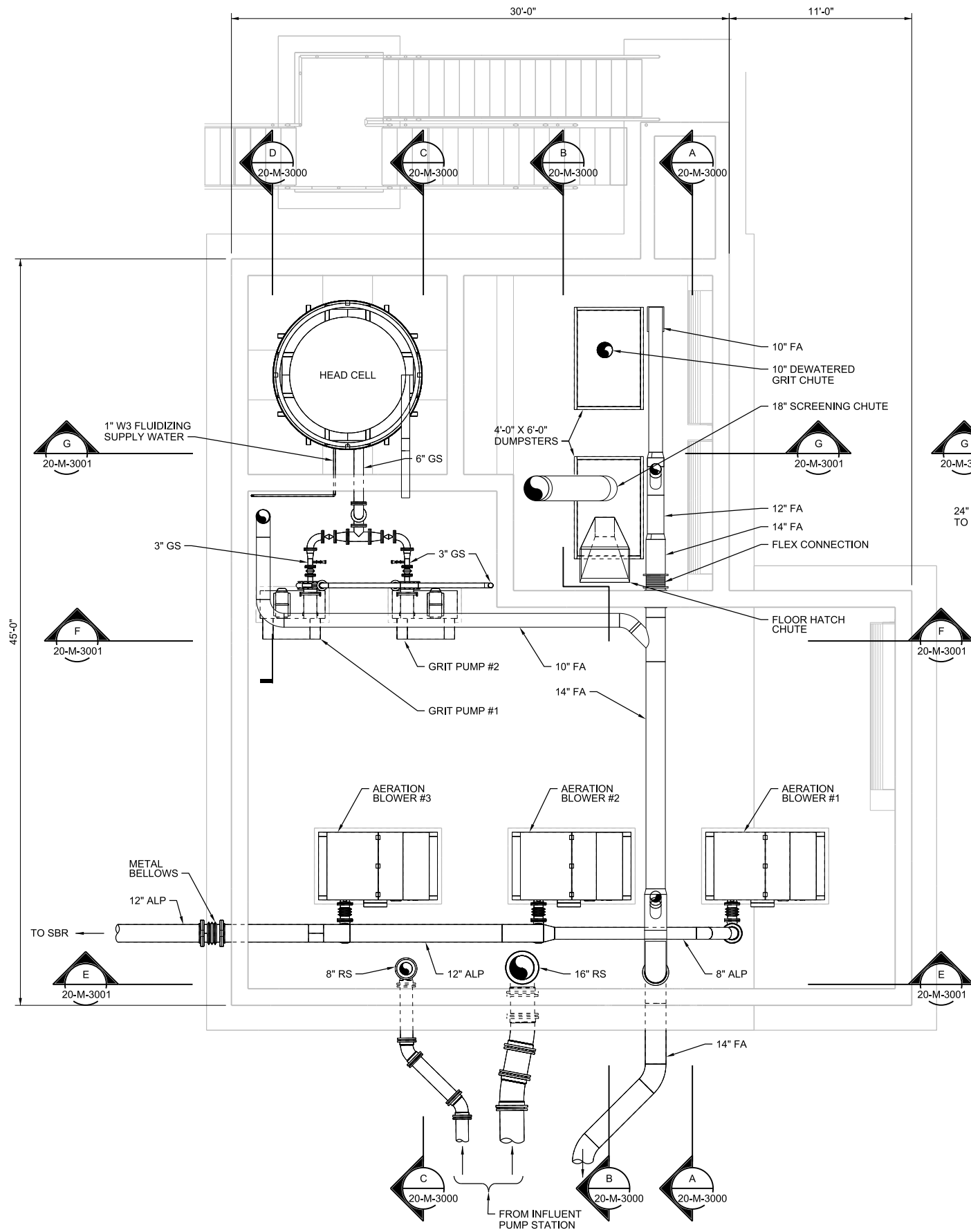
APVD	CWM	CHK	WBL	RPT	DSGN

CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE
HEADWORKS
ARCHITECTURAL
ELEVATIONS

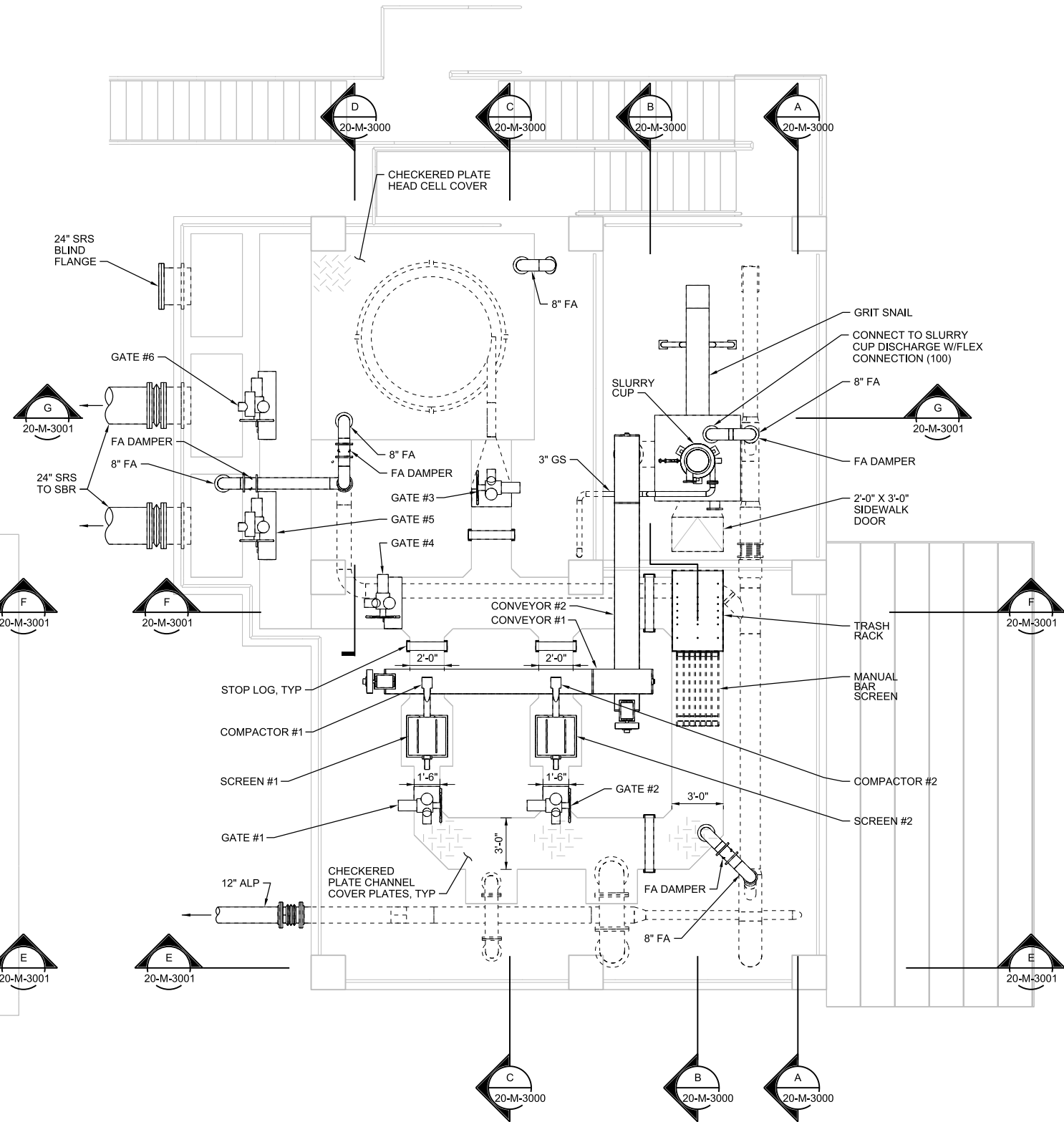
SHEET	20-A-3000
SEQ	
DATE	08/2013
PROJ. NO.	469556

PRE-DESIGN

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GROUND LEVEL PLAN
1/4"=1'-0"



UPPER LEVEL PLAN
1/4"=1'-0"



PRELIMINARY

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ORIGINAL DRAWING
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THIS SHEET, ADJUST
SCALES ACCORDINGLY

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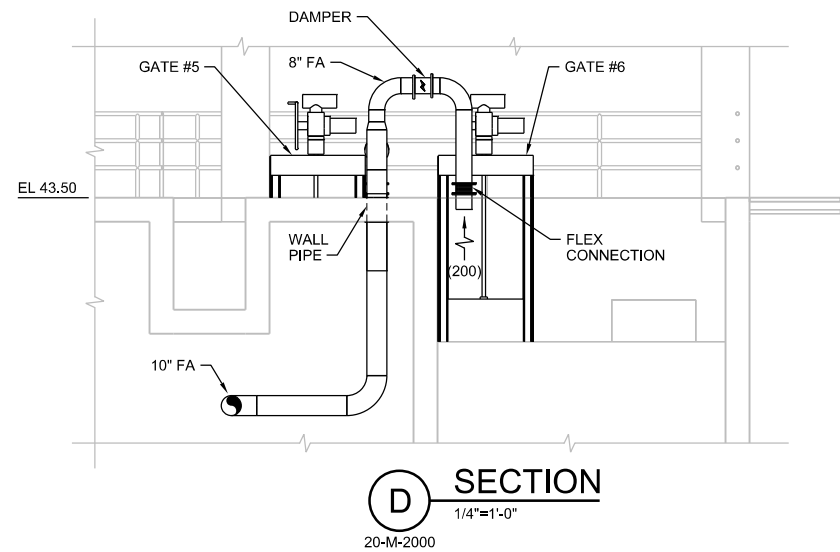
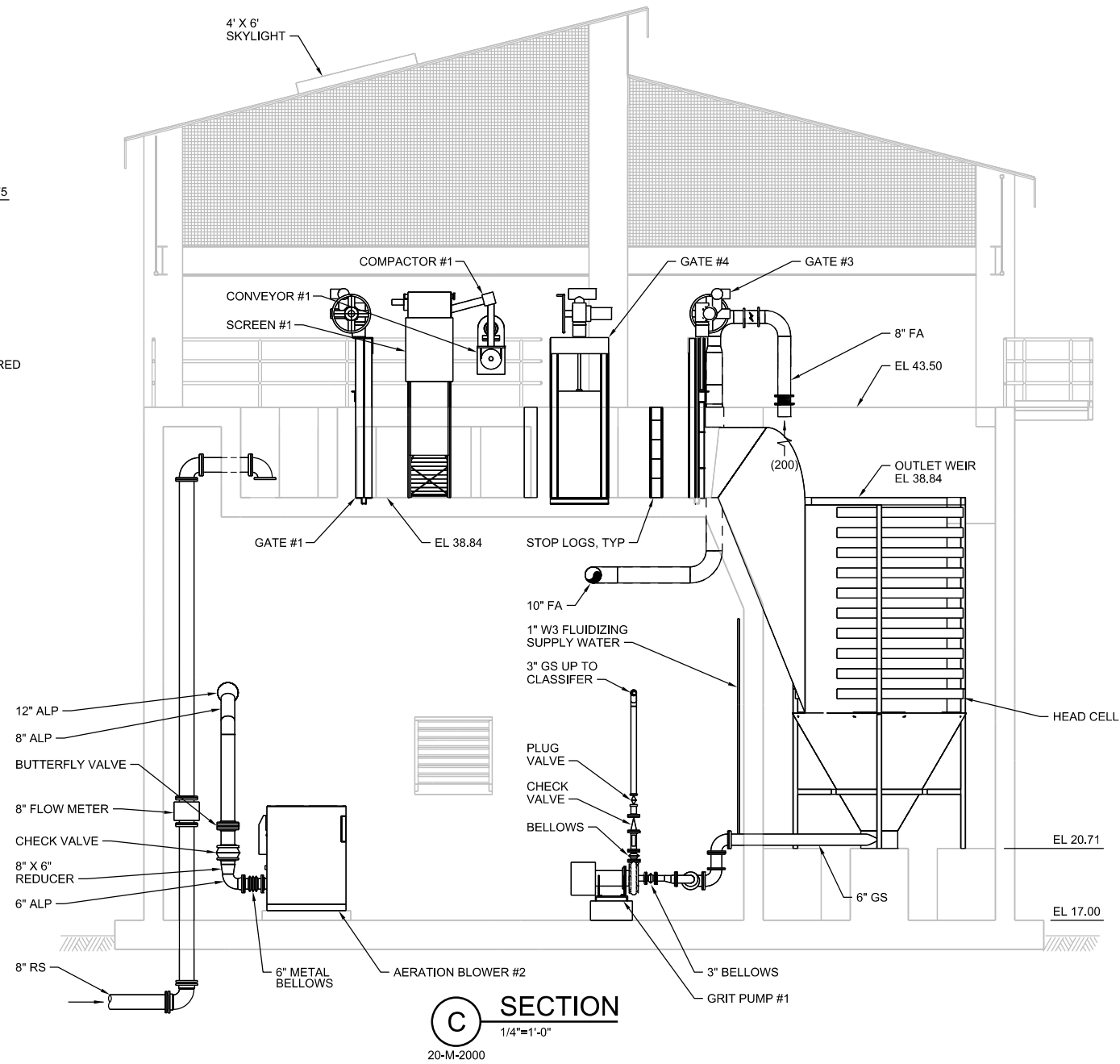
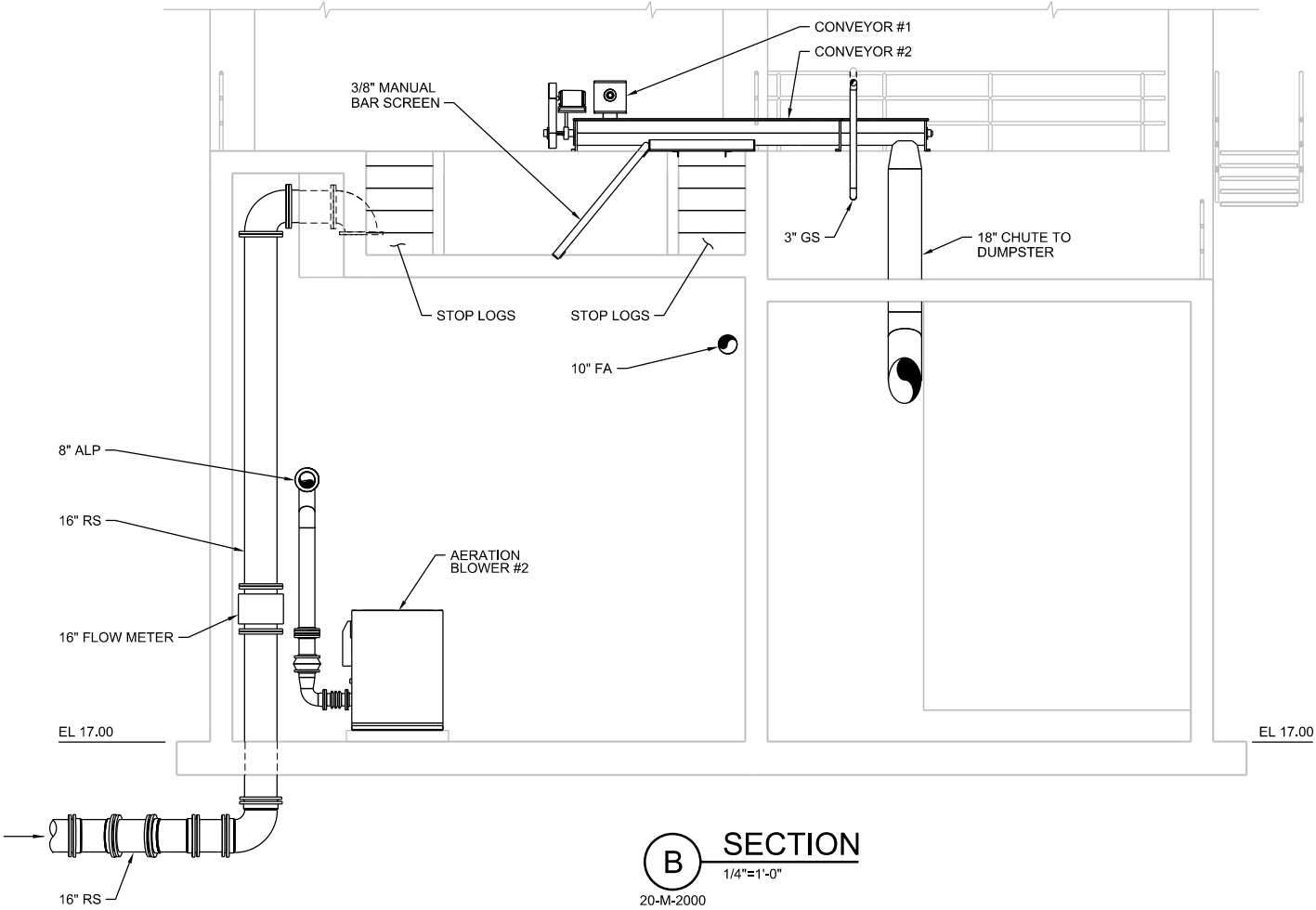
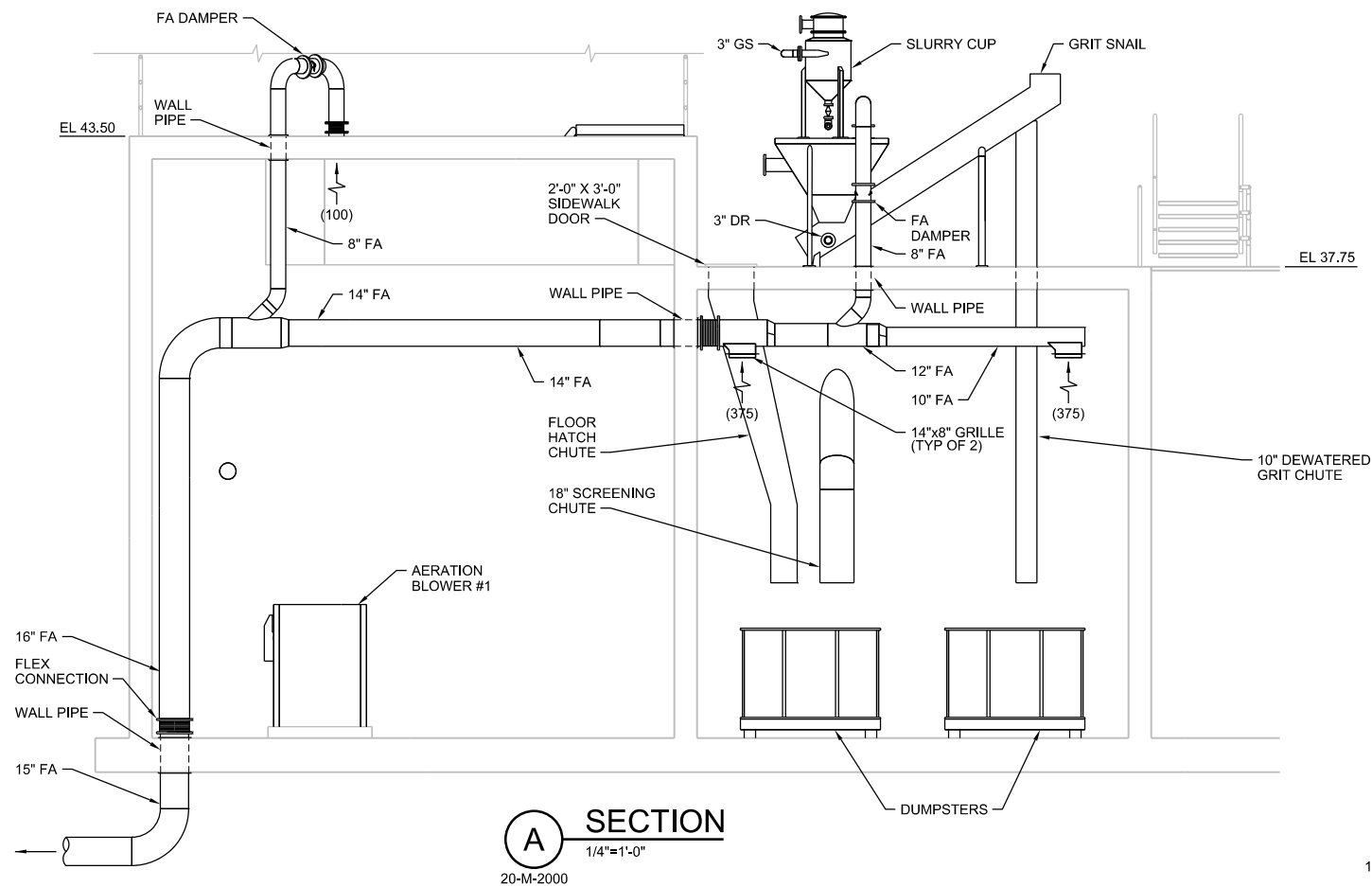
NO.	DATE	REVISION	BY

APVD	CWM	CHK	KLM	DR	M/JKR

CITY OF COOS BAY WWT 2 EXPANSION & UPGRADE	MECHANICAL PLANS
SHEET	20-M-2000
SEQ	
DATE	08/2013
PROJ. NO.	469556

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NO.	DATE	REVISION	BY

DSGN: M/JKR
DR: KLM
CHK: CHK
APVD: CWM

CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE
HEADWORKS
MECHANICAL
SECTIONS

SHEET
20-M-3000

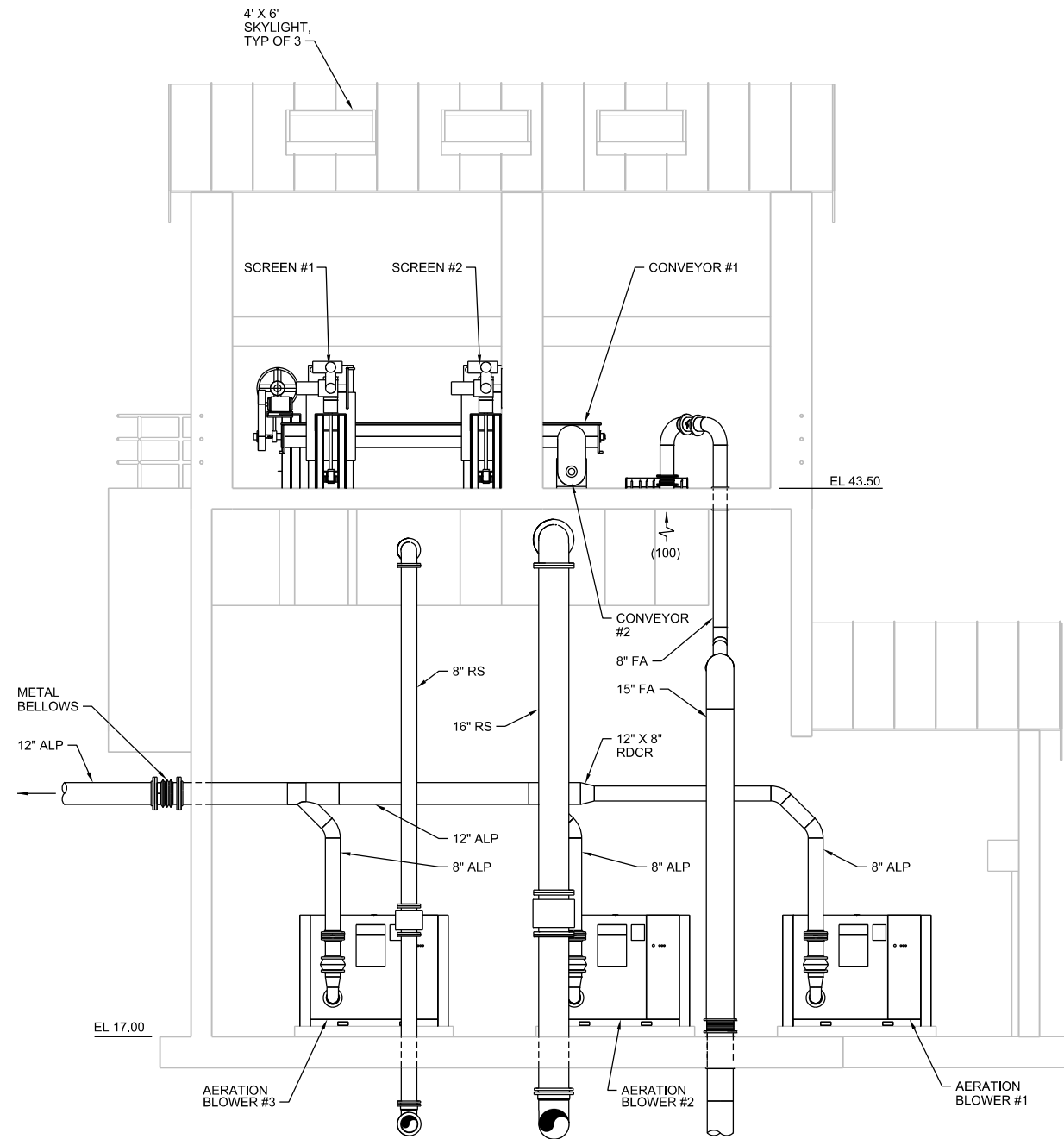
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DATE
08/2013

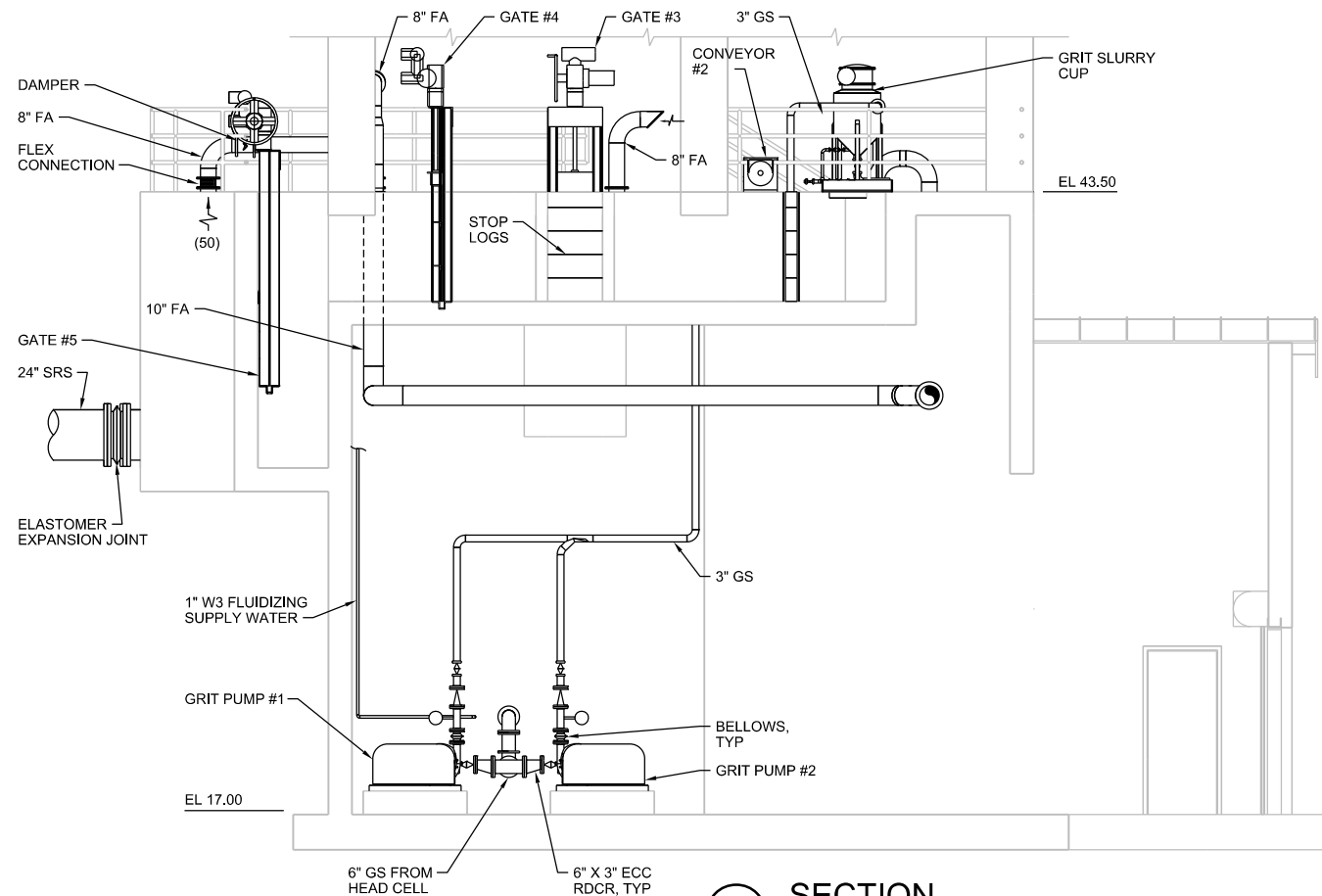
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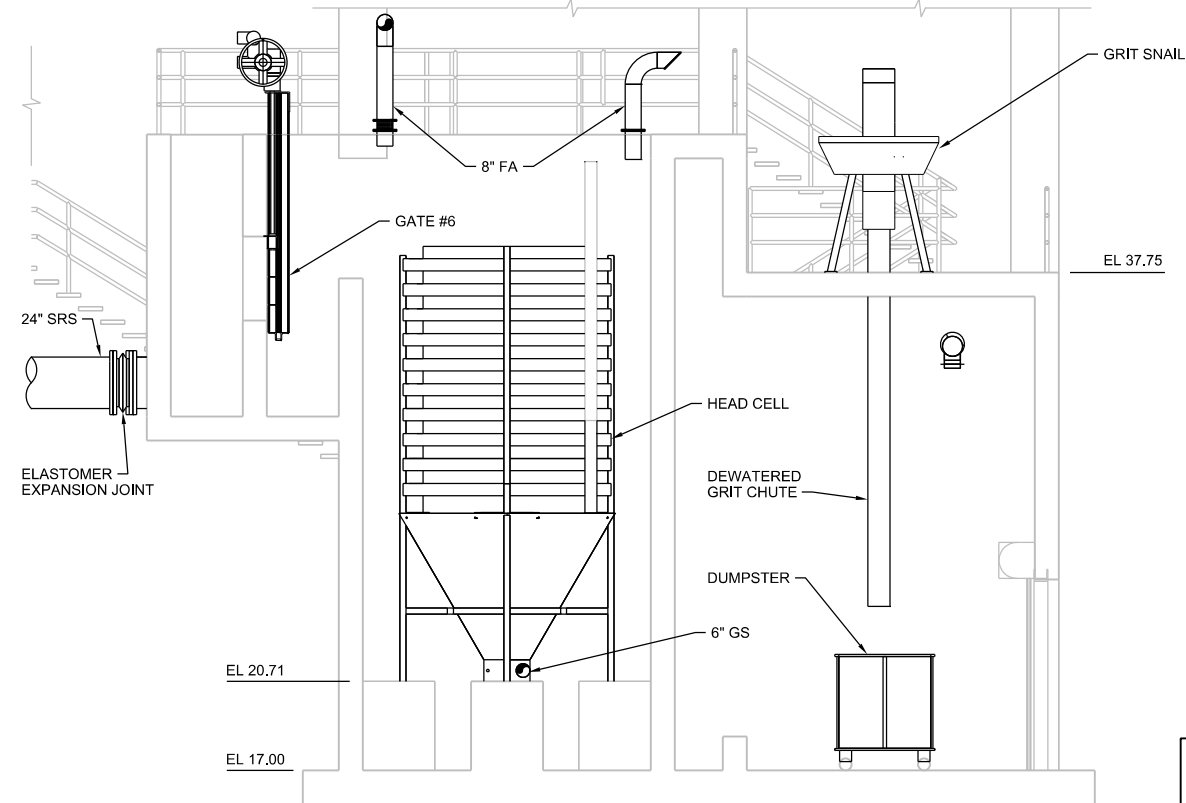
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E SECTION
1/4"=1'-0"
20-M-2000



F SECTION
1/4"=1'-0"
20-M-2000



G SECTION
1/4"=1'-0"
20-M-2000

PRELIMINARY

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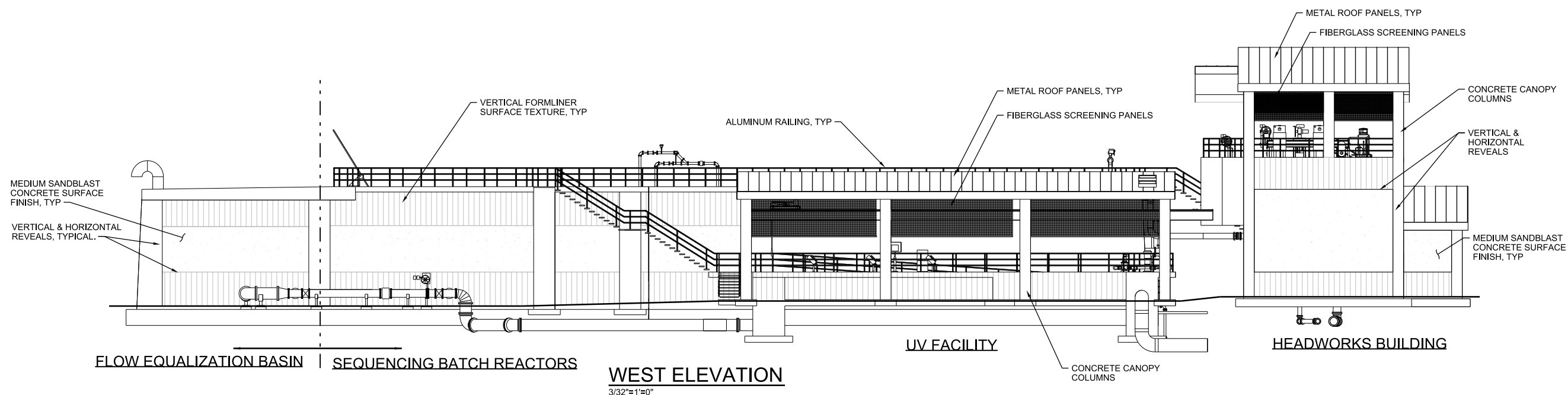
NO.	DATE	REVISION	BY

CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE
HEADWORKS
MECHANICAL
SECTIONS

DSGN M/JKR
DR KLM
CHK
APVD CWM

SHEET
20-M-3001
SEQ
DATE 08/2013
PROJ. NO. 469556

PRE-DESIGN



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	BY
	REVISION
	DATE
	NO.

DSGN	RPT
DR	WBL
CHK	APVD
CWM	

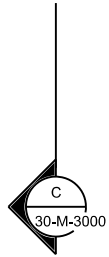
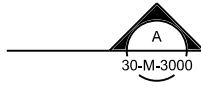
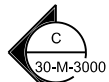
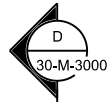
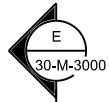
CITY OF COOS BAY WWP 2 EXPANSION & UPGRADE
SEQUENCING BATCH REACTORS
ARCHITECTURAL
WEST ELEVATION

SHEET	30-A-3000
SEQ	
DATE	08/2013
PROJ. NO.	469556

PRELIMINARY

PRE-DESIGN

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FUTURE
EQUALIZATION
BASIN

EQUALIZATION
BASIN

FUTURE SBR (MAIN ZONE AND PRE-REACT ZONE)

PIPE SUPPORT, TYP

16" BYPASS SE

24" SE

16" GATE VALVE,
TYP OF 4

24" X 16"
REDUCER

MAGMETER

24" SE

ULTRAVIOLET
DISINFECTION
FACILITY, SEE
40-M-2000

LOWER LEVEL PLAN

1/8"=1'-0"

8" ALP, TYP
OF MAIN
ZONES

MAIN ZONE 2

6" ALP, TYP
OF PRE-REACT
ZONES

PRE-REACT
ZONE 2

6" PLUG
VALVE, TYP

SBR 2

WAS PUMP,
TYP

MAIN ZONE 1

DIFFUSER, TYP

MIXER, TYP

PRE-REACT
ZONE 1

4" WAS

SBR 1

6" DR

PRELIMINARY

VERIFY SCALES
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0 1"
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SCALES ACCORDINGLY

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NO.	DATE	REVISION	BY

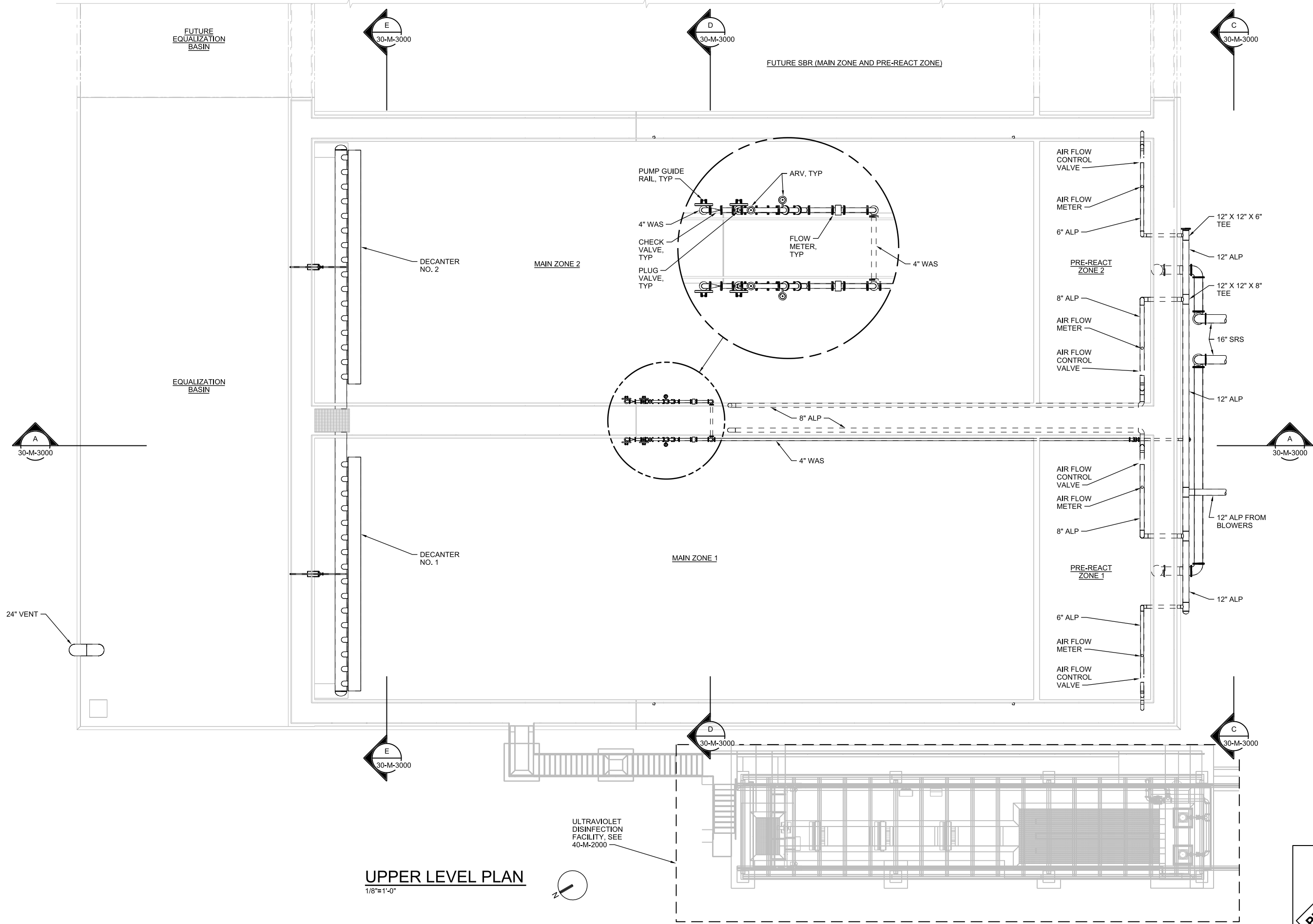
DR	CHK	APVD	CWM

CITY OF COOS BAY WWT 2 EXPANSION & UPGRADE
SEQUENCING BATCH REACTORS
MECHANICAL
GROUND LEVEL PLAN

SHEET	30-M-2000
SEQ	
DATE	08/2013
PROJ. NO.	469556

PRE-DESIGN

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CONSULTING ENGINEERS
& GEOLOGISTS, INC.

NO.	DATE	REVISION	BY

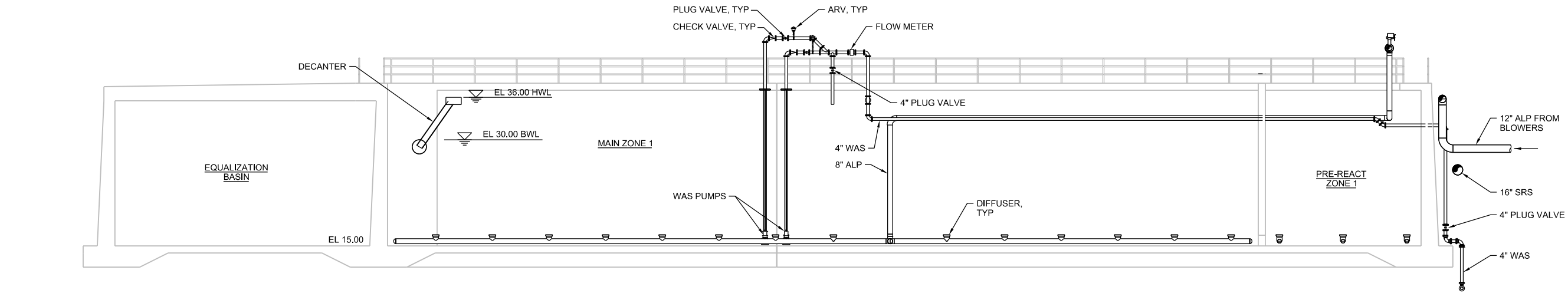
DSGN	JKR
DR	KLM
CHK	CHK
APVD	CWM

CITY OF COOS BAY WWT 2 EXPANSION & UPGRADE
SEQUENCING BATCH REACTORS
MECHANICAL
UPPER LEVEL PLAN

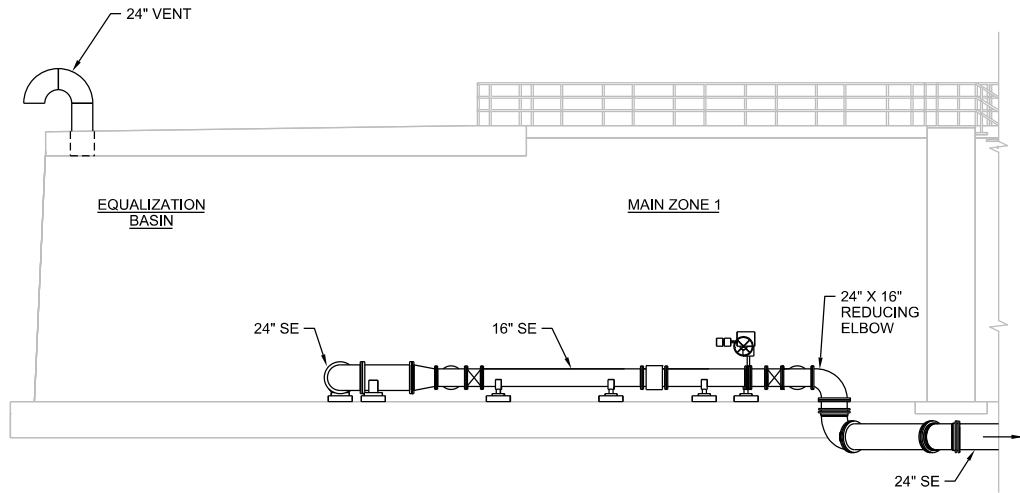
SHEET	30-M-2001
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DATE	08/2013
PROJ. NO.	469556

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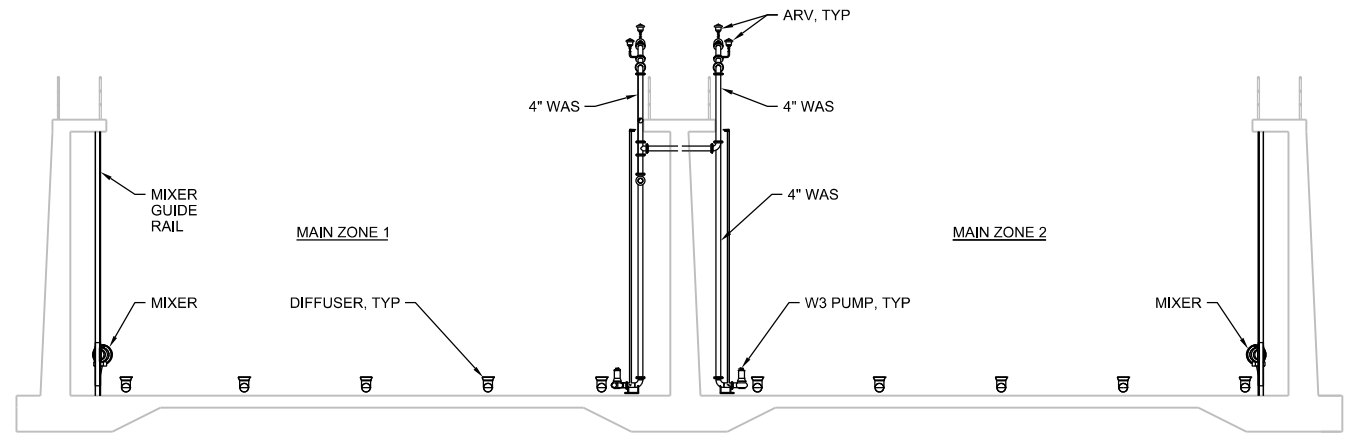
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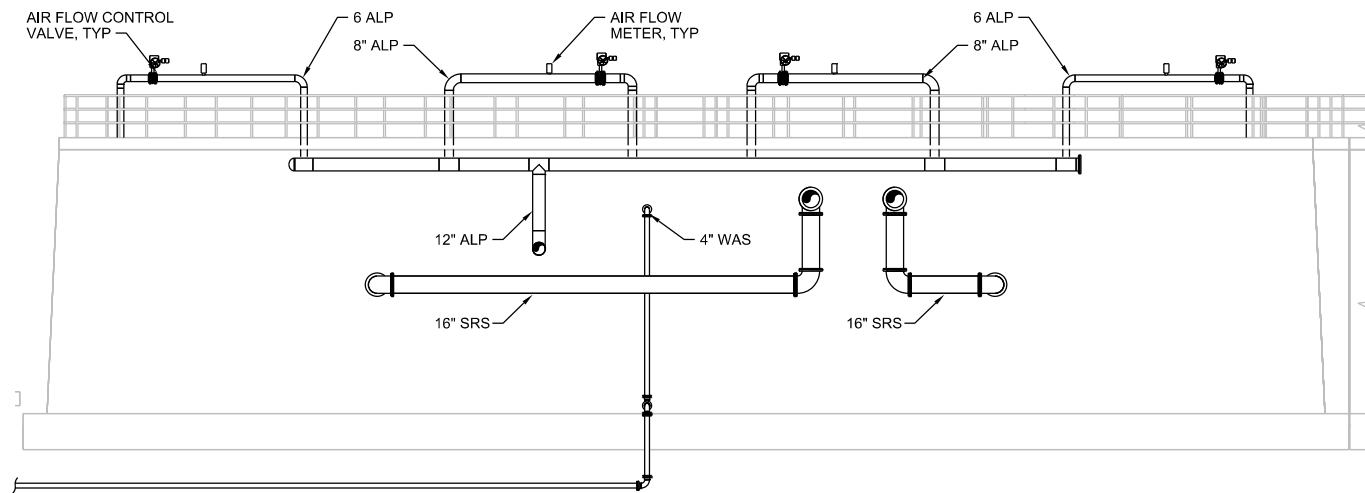
SECTION
 1/8"=1'-0"
 30-M-2000
 30-M-2001



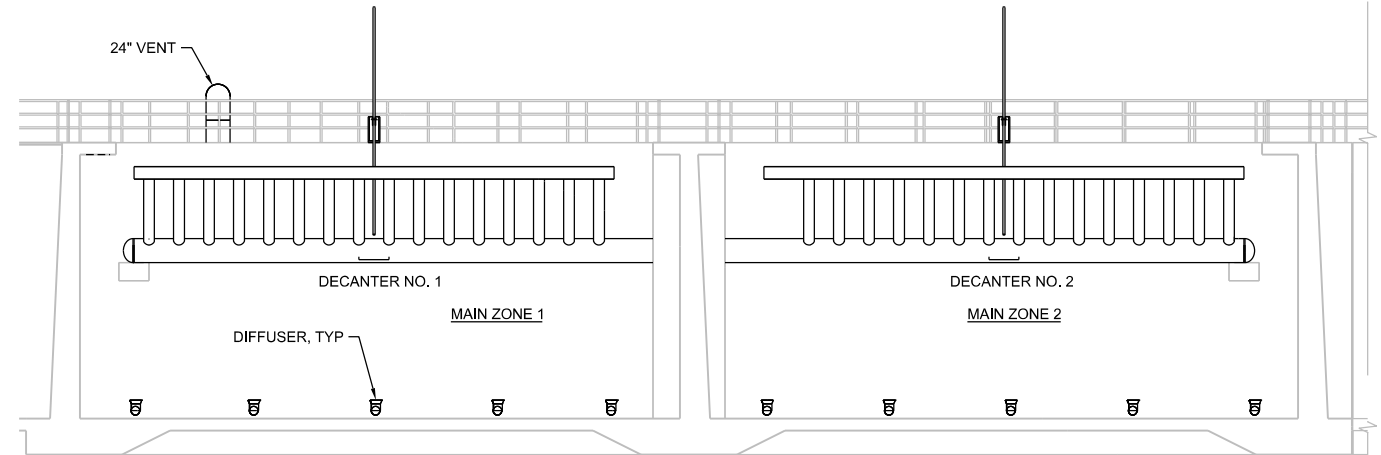
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 1/8"=1'-0"
 30-M-2000



SECTION
 1/8"=1'-0"
 30-M-2000
 30-M-2001



SECTION
 1/8"=1'-0"
 30-M-2000
 30-M-2001

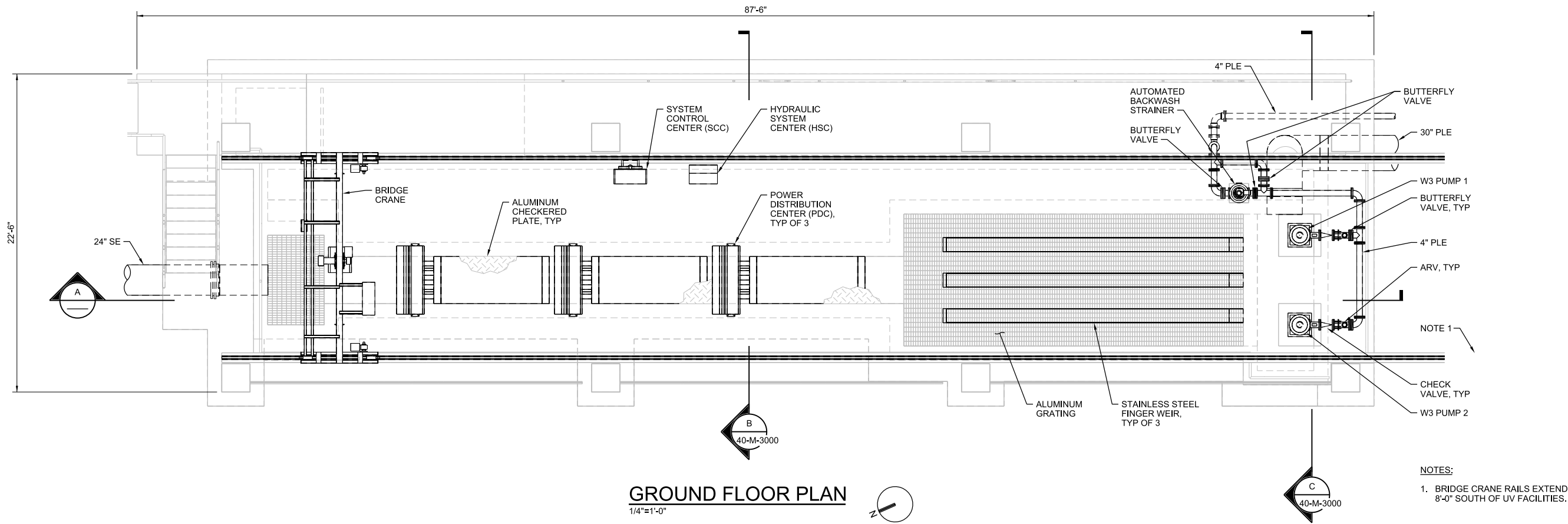


SECTION
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 30-M-2000
 30-M-2001

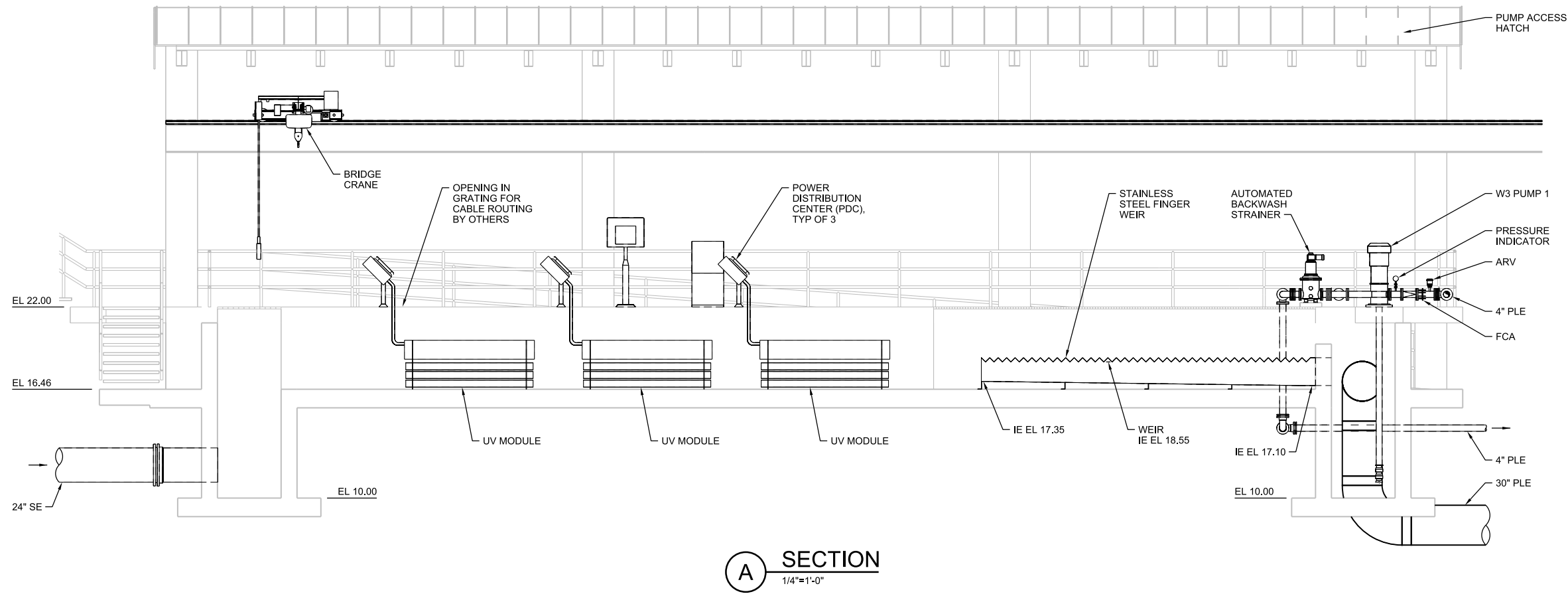
PRELIMINARY

CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE SEQUENCING BATCH REACTORS MECHANICAL SECTIONS										CH2MHILL® CONSULTING ENGINEERS & GEOLOGISTS, INC.		VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY			
SHEET 30-M-3000		SEQ		DATE 08/2013		PROJ. NO. 469556		DSGN JKR							
								DR KLM							
								CHK							
								APVD CWM		NO.		DATE		REVISION	
												BY			

SAVED: 7/1/2013 9:56 AM PHAMLIN, PLOTTED: ---- HAMLIN, PRISCILLA/CVO
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- NOTES:
1. BRIDGE CRANE RAILS EXTEND 8'-0" SOUTH OF UV FACILITIES.



PRELIMINARY

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

CH2MHILL
CONSULTING ENGINEERS & GEOLOGISTS, INC.

NO.	DATE	REVISION	BY

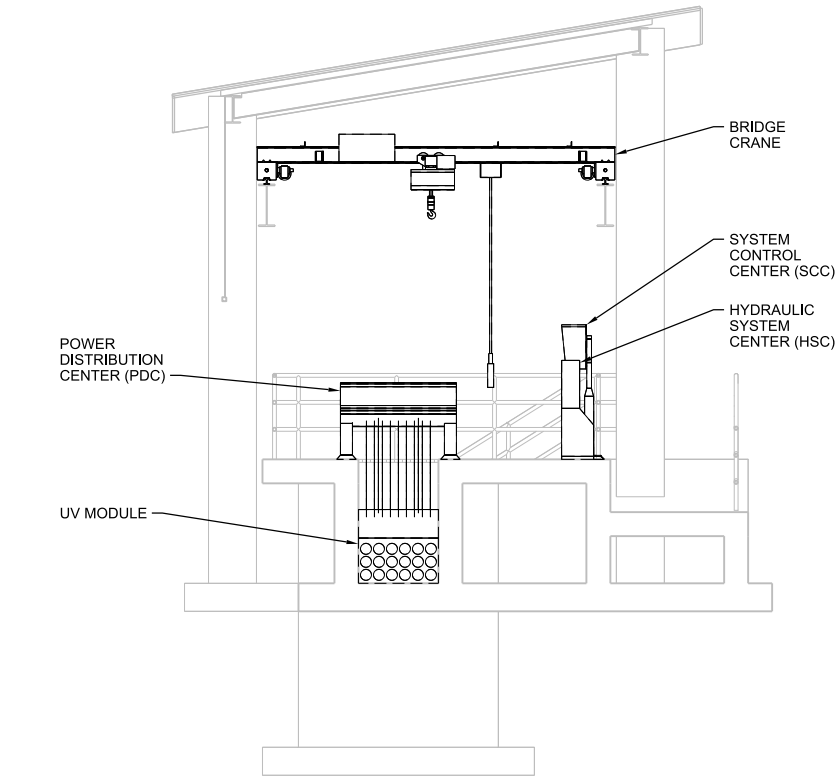
DSGN	AGC
DR	KLM
CHK	
APVD	CWM

CITY OF COOS BAY WWP 2 EXPANSION & UPGRADE
ULTRAVIOLET DISINFECTION
MECHANICAL
PLAN AND SECTION

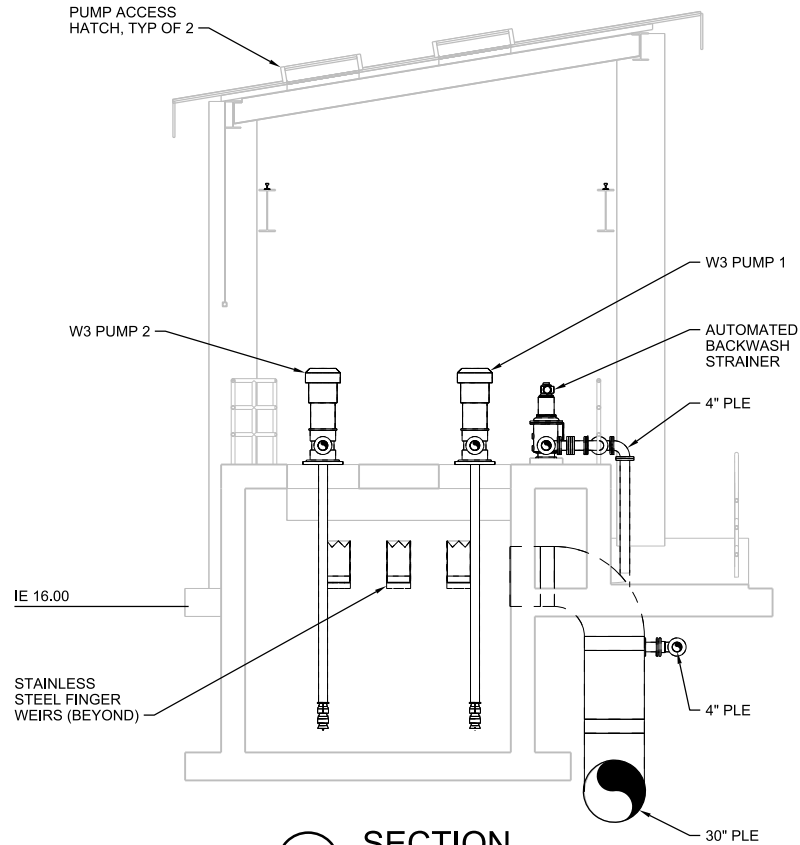
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SEQ
DATE 08/2013
PROJ. NO.
469556

PRE-DESIGN

SAVED: 7/1/2013 9:56 AM PHAMLIN, PLOTTED: ----- HAMLIN, PRISCILLA/CVO
C:\pw_workdir\ch2mhill\wb9\phamlin\0256967\Border_469556.dwg



B SECTION
1/4"=1'-0"
040-M-2000

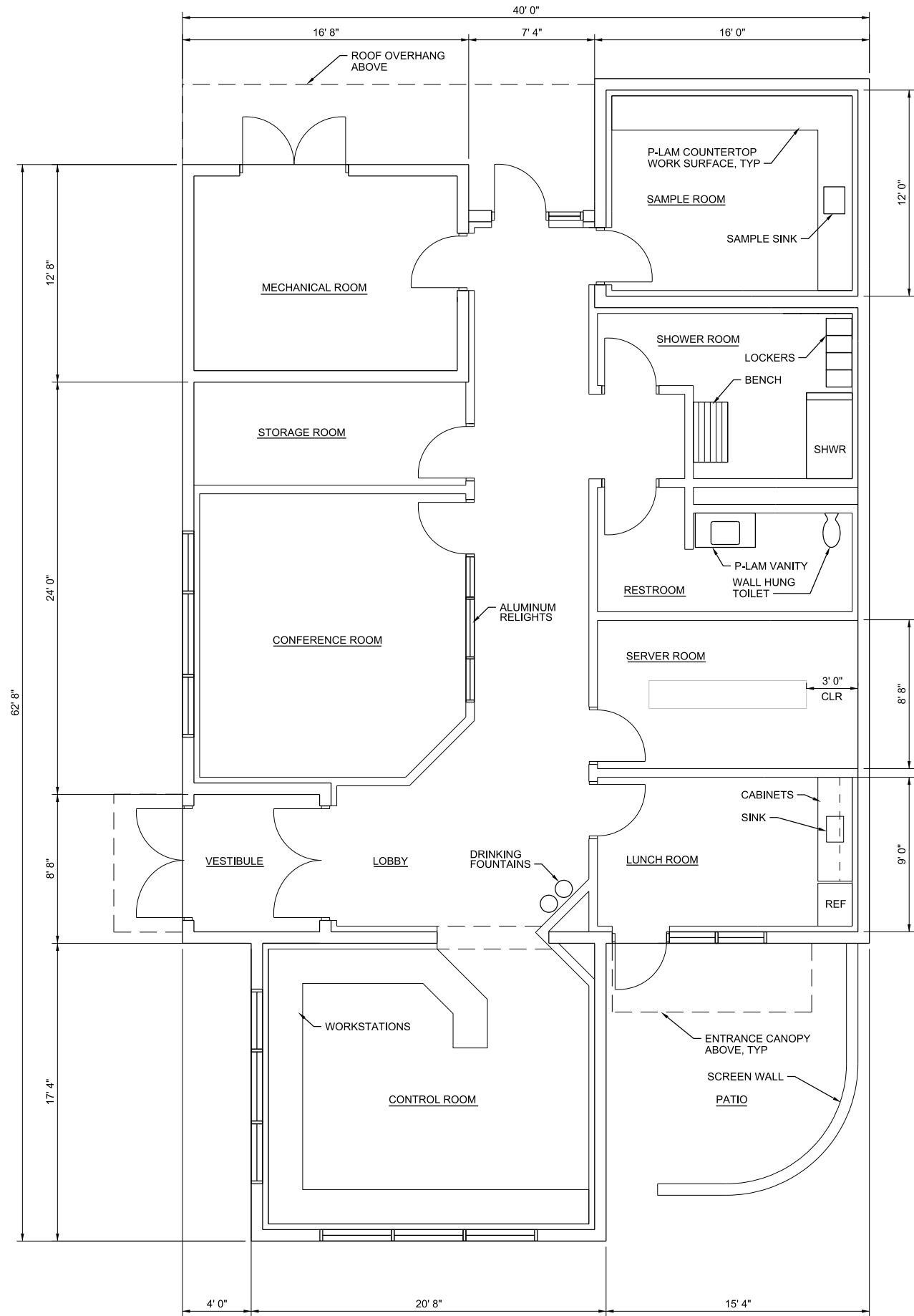


C SECTION
1/4"=1'-0"
040-M-2000

PRELIMINARY

VERIFY SCALES		B&B IS ONE INCH ON ORIGINAL DRAWING		0 1"		IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	
CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE		ULTRAVIOLET DISINFECTION		MECHANICAL		SECTIONS	
SHEET		40-M-3000		SEQ			
DATE		08/2013		PROJ. NO.		469556	
DESIGN		AGC		DR		KLM	
APVD		CHK		APVD		CWM	
NO.		DATE		REVISION		BY	
CH2MHILL		CONSULTING ENGINEERS & GEOLOGISTS, INC.					

PRE-DESIGN



FLOOR PLAN
1/4"=1'-0"



PRELIMINARY

VERIFY SCALES
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0 1"
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THIS SHEET, ADJUST
SCALES ACCORDINGLY

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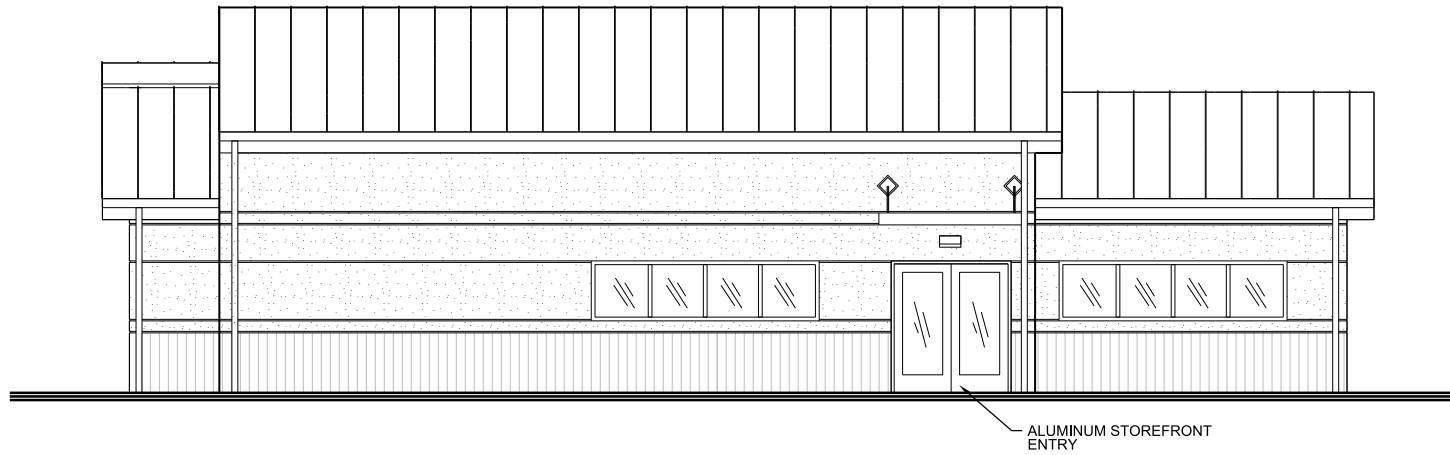
NO.	DATE	REVISION	BY

DSGN	RPT	WBL	CHK	APVD	CWM

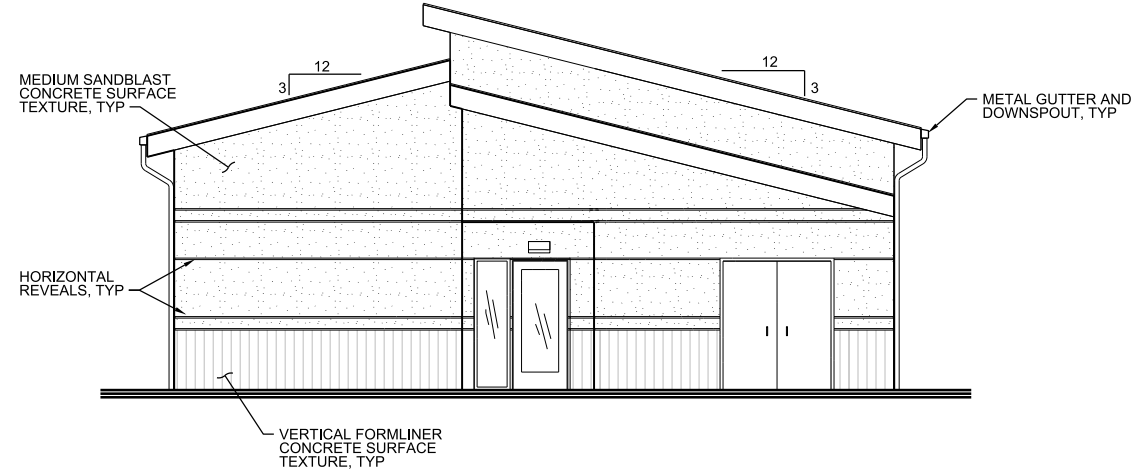
CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE
CONTROL BUILDING
ARCHITECTURAL
FLOOR PLAN

SHEET	60-A-2000
SEQ	
DATE	08/2013
PROJ. NO.	469556

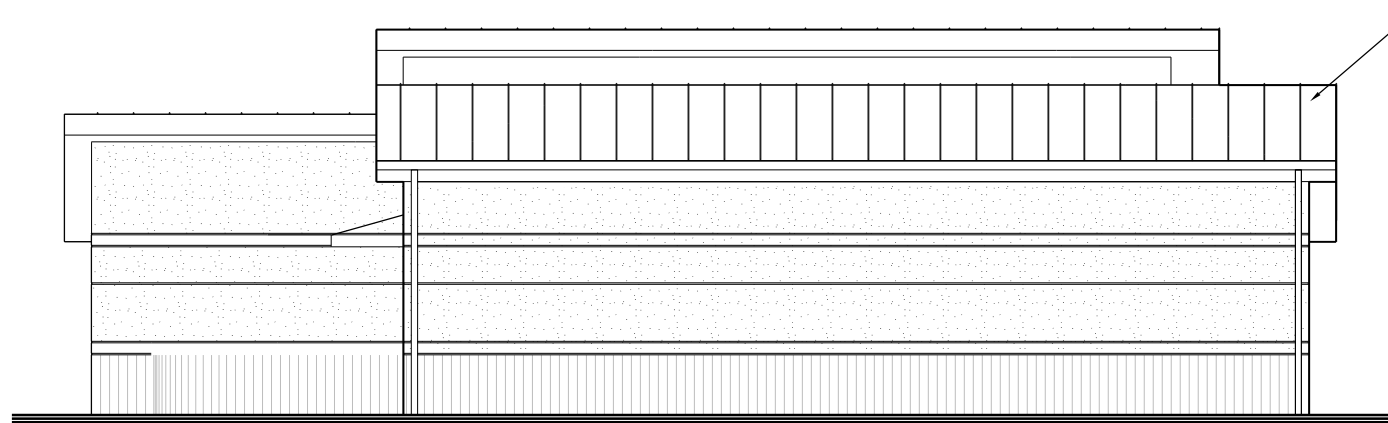
PRE-DESIGN



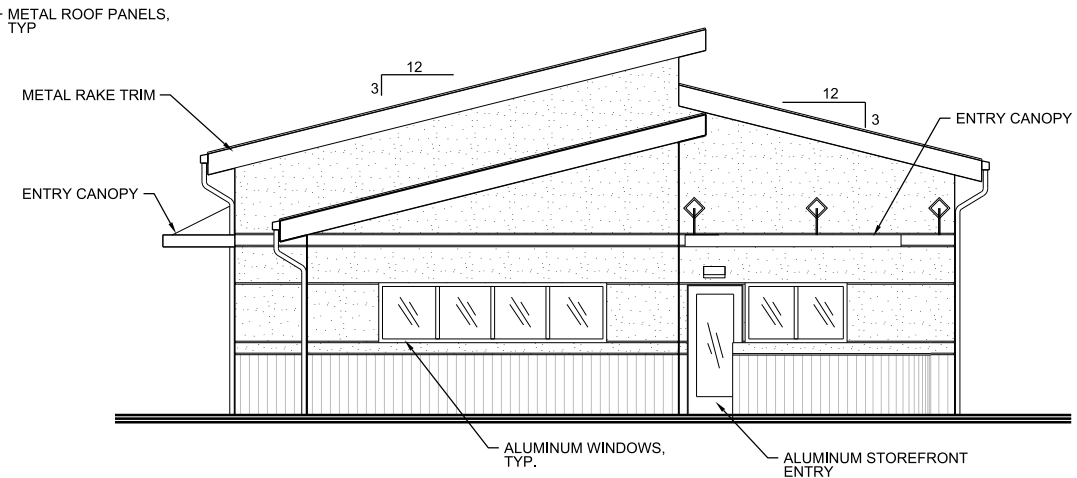
NORTH ELEVATION
3/16"=1'-0"



EAST ELEVATION
3/16"=1'-0"



SOUTH ELEVATION
3/16"=1'-0"



WEST ELEVATION
3/16"=1'-0"

PRELIMINARY

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0 1"
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& GEOLOGISTS, INC.

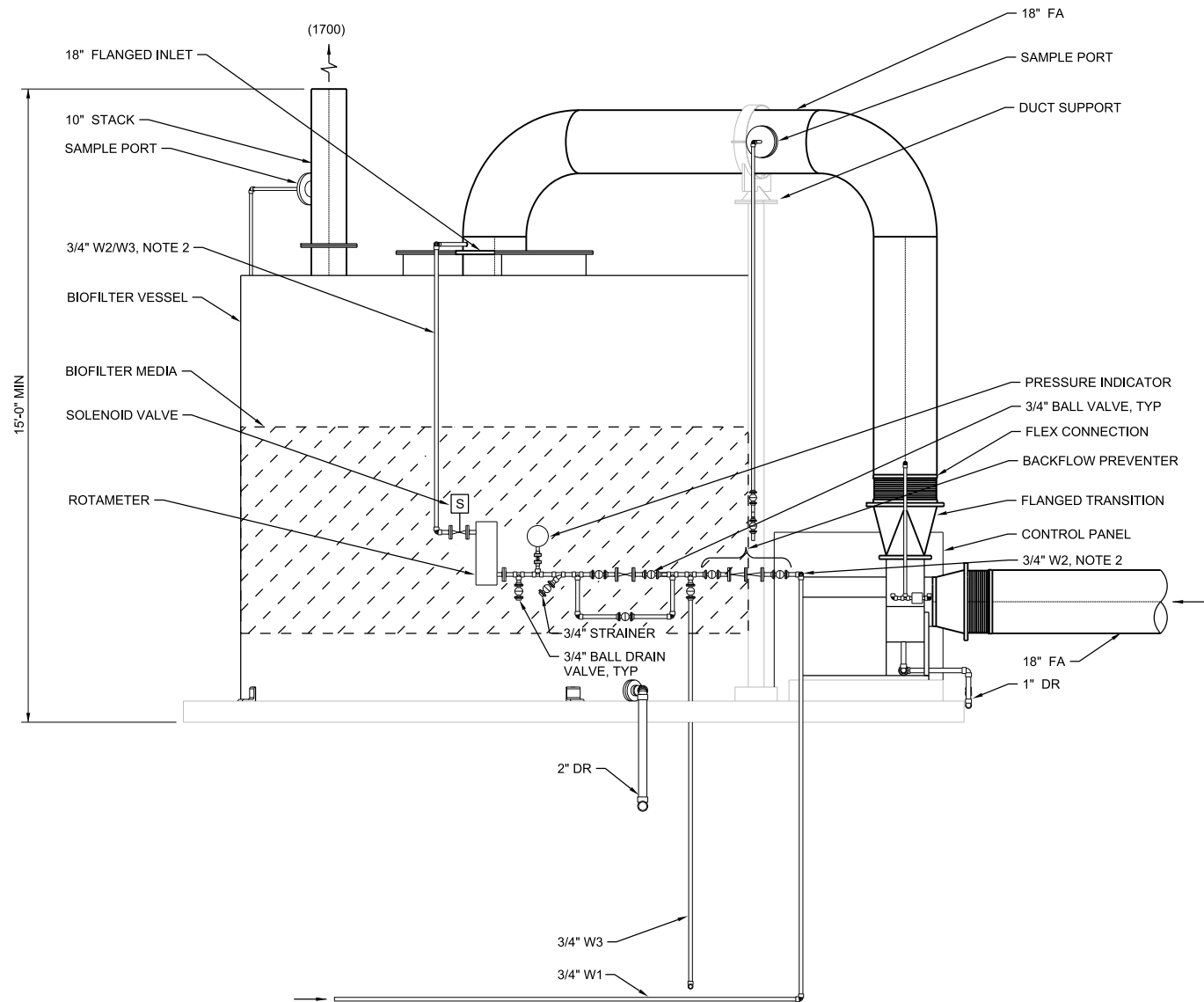
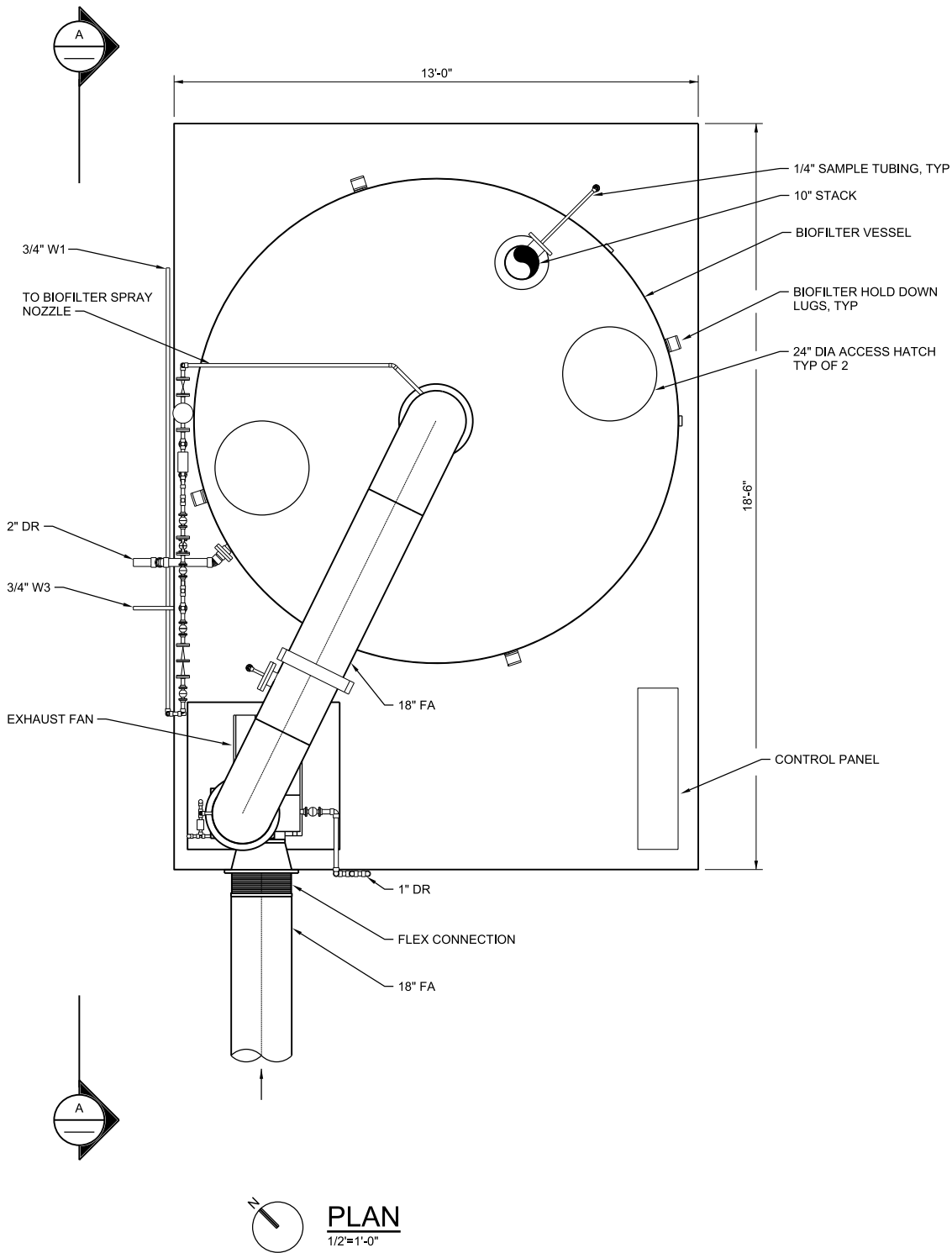
NO.	DATE	REVISION	BY

APVD	CWM	CHK	WBL	RPT	DSGN

CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE
CONTROL BUILDING
ARCHITECTURAL
ELEVATIONS

SHEET	60-A-3000
SEQ	
DATE	08/2013
PROJ. NO.	469556

PRE-DESIGN



NOTES:

- 3/4" PRESSURE REDUCING VALVE, 60 PSI TO 45 PSI.
- ALL EXPOSED W1, W2 AND W3 PIPING SHALL BE HEAT-TRACED AND INSULATED.

PRELIMINARY

VERIFY SCALES

BAS IS ONE INCH ON ORIGINAL DRAWING

0 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

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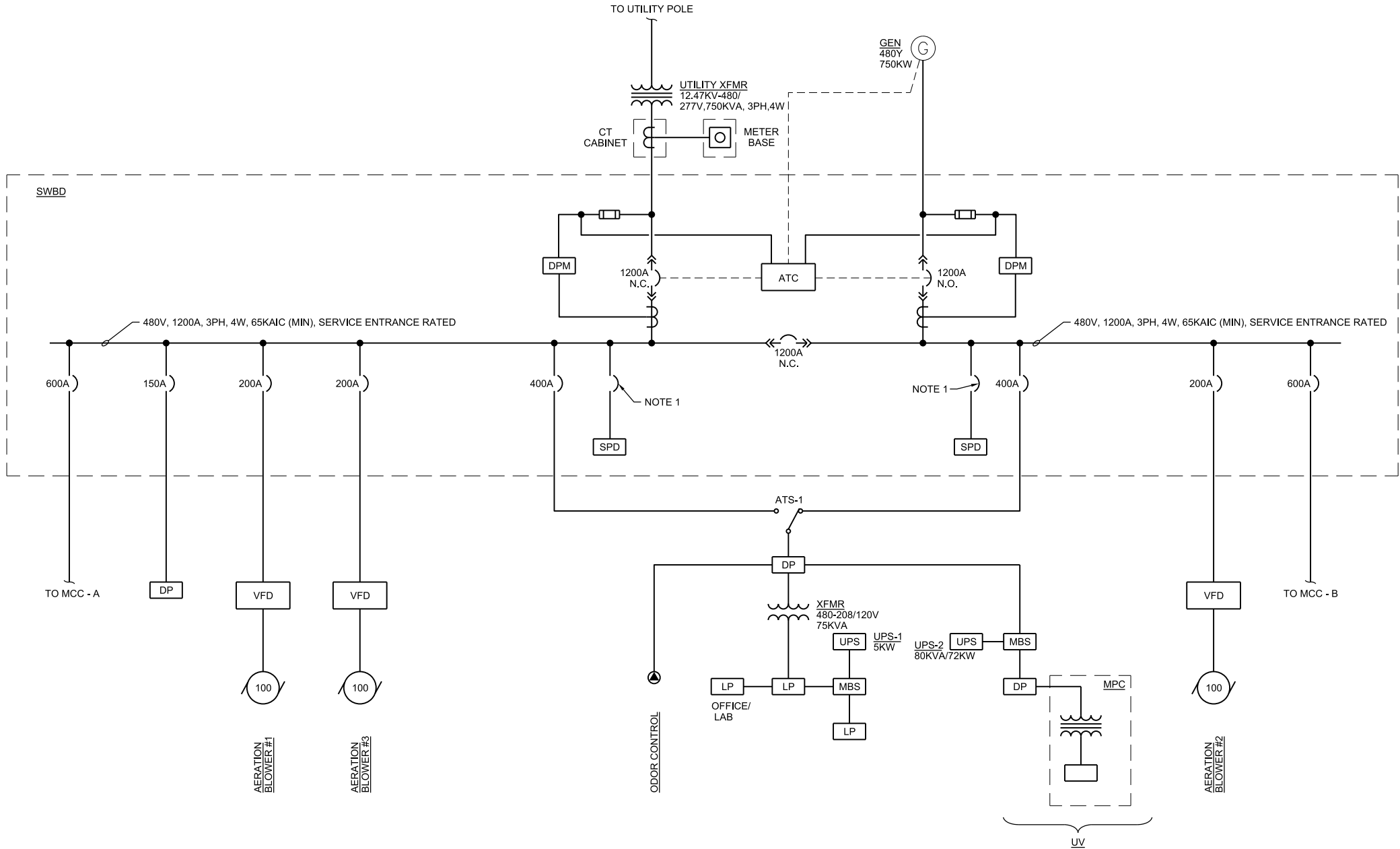
SAW

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70-H-2000_469556.dgn

CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE		DSGN	AMD	SHEET	
ODOR CONTROL HVAC		DR	SLH	70-H-2000	
PLAN AND SECTION		CHK	APVD	DATE	SEQ
NO.	DATE	REVISION	BY		
469556	08/2013				
PROJ. NO.					

PRE-DESIGN



NOTES:
1. BREAKER SIZED BY MANUFACTURER.

PRELIMINARY

CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE		DSGN	BMP	NO.		DATE	REVISION	BY
ELECTRICAL DISCIPLINE		DR	JG					
ONE-LINE DIAGRAM		CHK						
		APVD	CWM					
SHEET		90-E-6000						
SEQ								
DATE		08/2013						
PROJ. NO.		469556						

VERIFY SCALES

BMP IS ONE INCH ON ORIGINAL DRAWING

0 1"

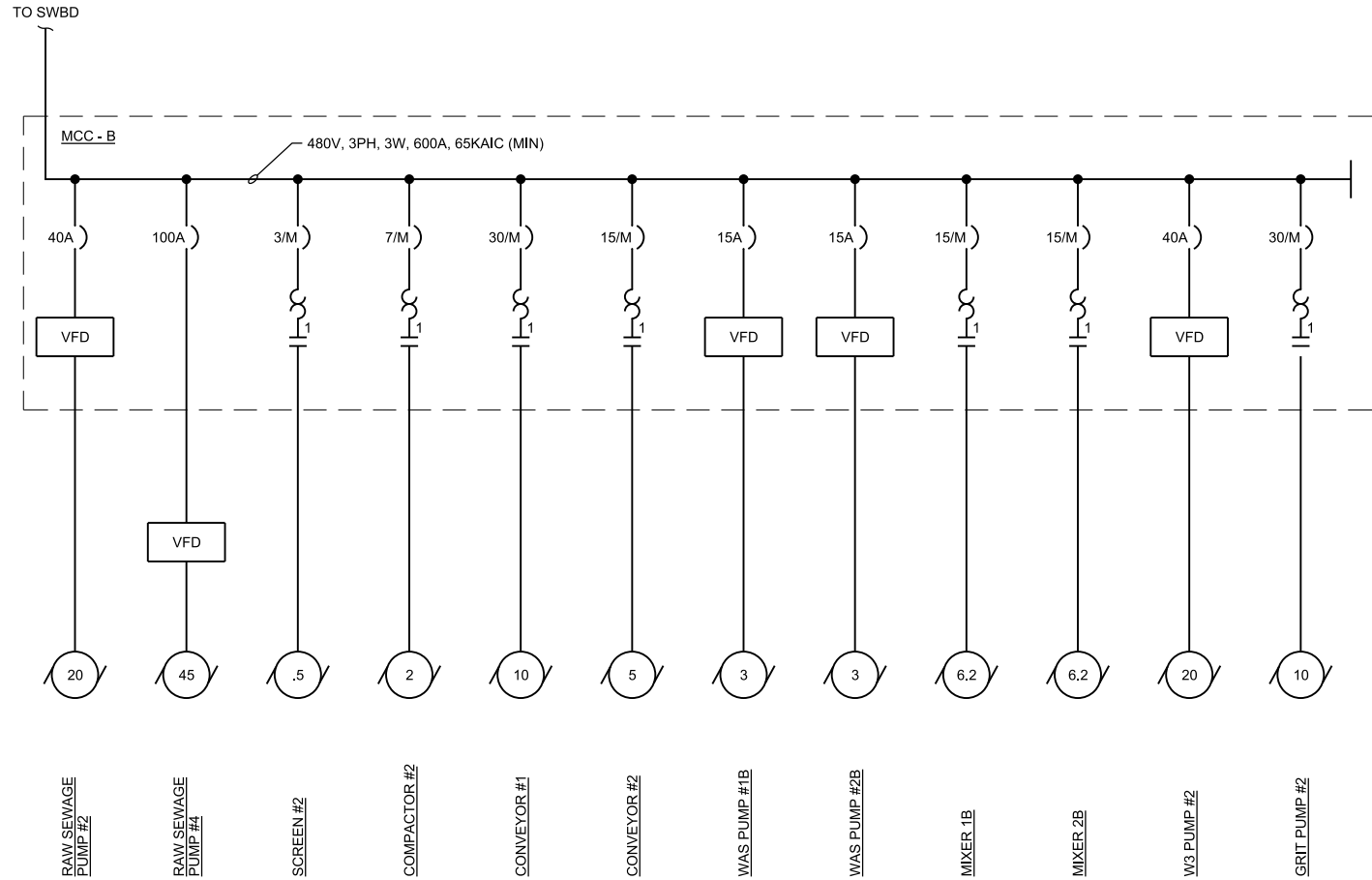
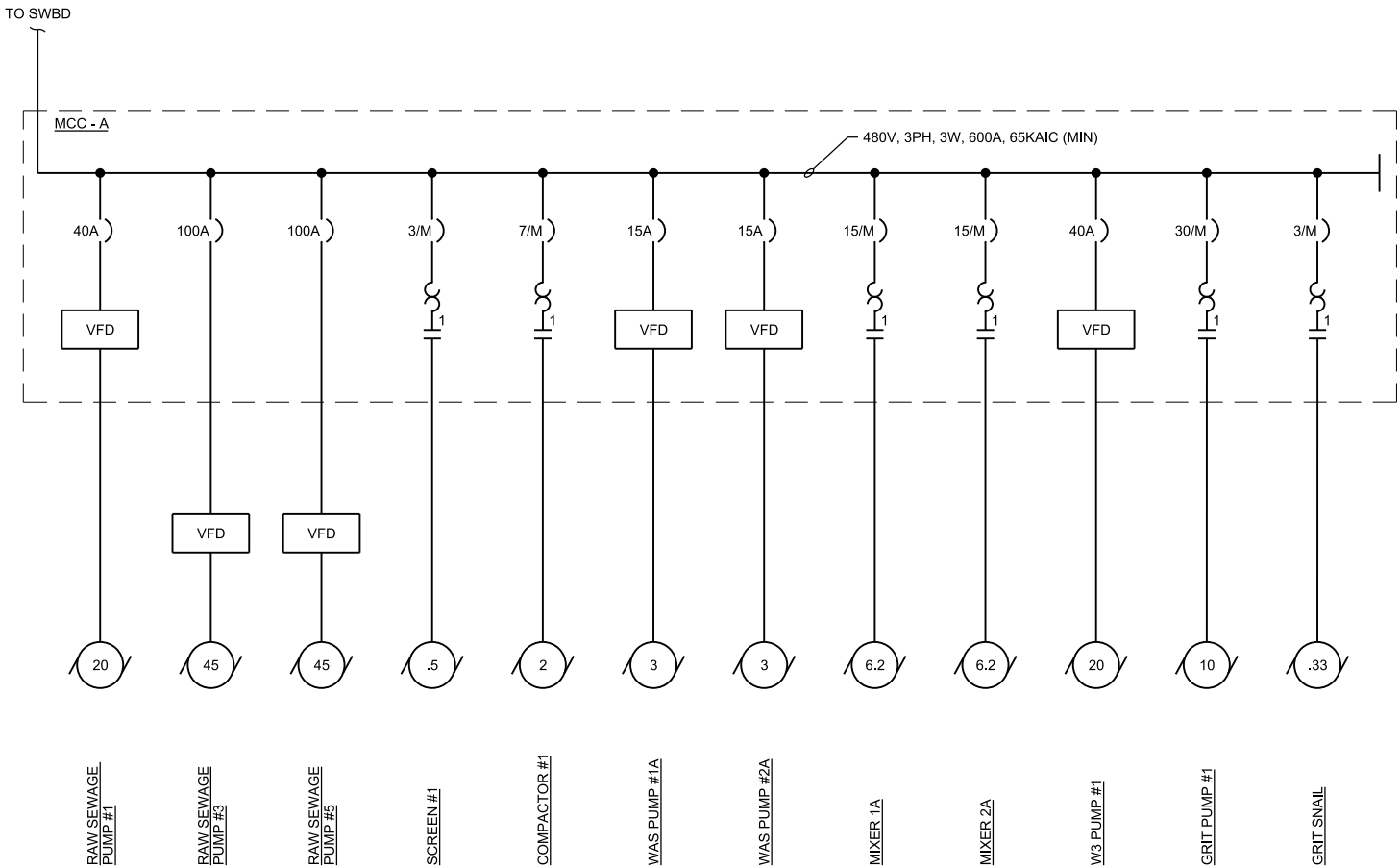
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

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PRE-DESIGN



PRELIMINARY

CITY OF COOS BAY WWTP 2 EXPANSION & UPGRADE				DESIGN		NO.		DATE		REVISION		BY	
ELECTRICAL				DR	BMP	JG	CHK	APVD	CWM	ONE-LINE DIAGRAM			
SHEET				90-E-6001		SEQ		DATE		08/2013		PROJ. NO.	
										469556			
VERIFY SCALES				B&S IS ONE INCH ON ORIGINAL DRAWING		O		IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY		1"			
CH2MHILL®				STM		CONSULTING ENGINEERS & GEOLOGISTS, INC.							