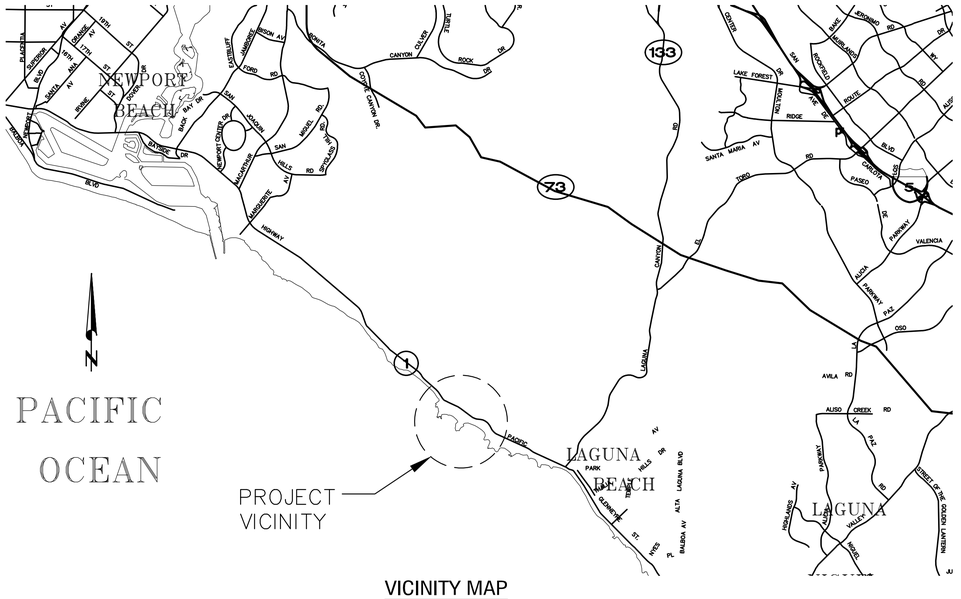
IN THE CITY OF LAGUNA BEACH, COUNTY OF ORANGE, STATE OF CALIFORNIA

CONSTRUCTION PLANS

FOR

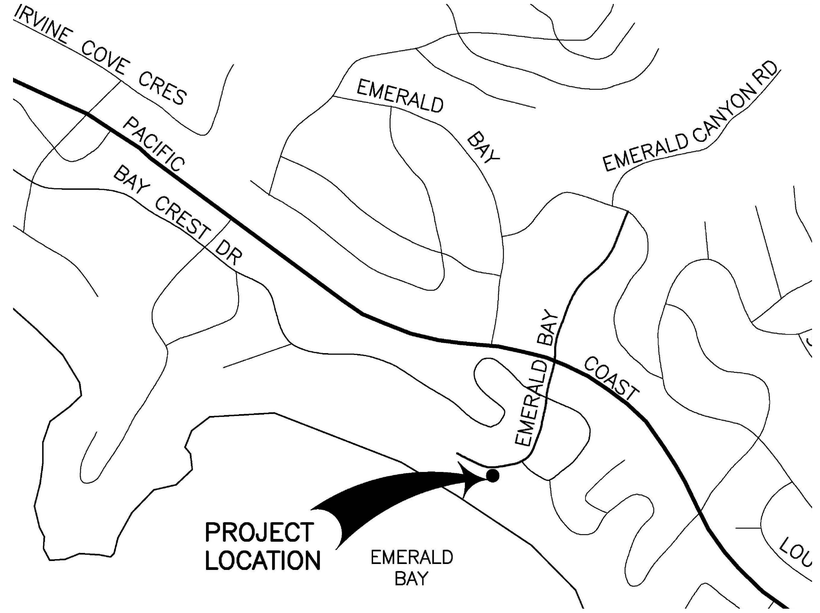
EMERALD BAY SERVICE DISTRICT SEWER LIFT STATION #3

IMPROVEMENT PLANS



VICINITY MAP

NOT TO SCALE



LOCATION MAP

NOT TO SCALE

OWNER

EMERALD BAY SERVICE DISTRICT
600 EMERALD BAY
LAGUNA BEACH, CA 92651
PH: (949)94-8572

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
OR
1-800-422-4133

ENGINEER'S NOTICE TO CONTRACTOR

THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND OR OVERHEAD UTILITIES OR STRUCTURES SHOWN ON THESE PLANS ARE APPROXIMATE. THE ENGINEER ASSUMES NO LIABILITY AS TO THE EXACT LOCATION OF SAID LINES NOT FOR UTILITIES OR IRRIGATION LINES WHOSE LOCATION ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY AND IRRIGATION COMPANIES PRIOR TO WORK AND ACCURATELY IDENTIFY THESE LOCATIONS, WHETHER OR NOT SHOWN HEREON. AND IS RESPONSIBLE FOR ANY DAMAGE OR PROTECTION OF THESE LINES. PHASED UTILITY RELOCATIONS MAY BE NECESSARY AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR CLOSELY COORDINATE HIS ACTIVITIES WITH THOSE OF ALL UTILITY COMPANIES. THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (U.S.A.) PHONE 1-800-227-2600 TOW (2) WORKING DAYS PRIOR TO DIGGING. NO CONSTRUCTION PERMIT ISSUED BY PUBLIC WORKS DEPARTMENT BE VALID INVOLVING UNDERGROUND FACILITIES UNLESS THE APPLICANT HAS AN INQUIRY IDENTIFICATION NUMBER ISSUED BY U.S.A.

THE ESTIMATED QUANTITY FOR EACH SPECIFIC ITEM OF THE WORK DESIGNATED ON THE PLANS SHALL BE CONSIDERED AS APPROXIMATE ONLY AND NO GUARANTEE IS MADE THAT THE QUANTITIES WHICH CAN ONLY BE DETERMINED BY COMPUTATIONS, BASED ON THE DETAILS AND DIMENSIONS SHOWN ON THE PLANS, WILL EQUAL THE ESTIMATED QUANTITIES. THE ESTIMATE OF QUANTITIES IS PROVIDED BY THE ENGINEER ONLY FOR THE CONVENIENCE OF THE OWNER, THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION AND BE RESPONSIBLE FOR HIS OWN CONSTRUCTION QUANTITIES BEFORE SUBMITTING A BID. ANY ITEM OF WORK, OR PORTION THEREOF, REQUIRED BY THESE PLANS WHICH IS NOT SPECIFICALLY LISTED IN THE ESTIMATE OF QUANTITIES SHALL BE CONSIDERED AS INCLUDED IN THE OTHER ITEMS OF WORK.

THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND SHALL REPORT ALL DISCREPANCIES TO THE OWNER PRIOR TO THE COMMENCEMENT OF WORK.

ABBREVIATIONS

SEE SHEET 2 FOR ABBREVIATIONS LIST

GENERAL NOTES:

1. TRAFFIC CONTROL PLAN SHALL BE PER THE W.A.T.C.H MANUAL IF REQUIRED.
2. CONTRACTOR SHALL USE HIS/HER OWN MEANS AND METHODS TO PROTECT EXISTING UTILITIES SHOWN ON THE CONTRACT DRAWINGS DURING CONSTRUCTION ACTIVITIES IN THIS PROJECT. FOR BIDDING PURPOSES A LUMP SUM UNIT BID PRICE SHALL BE USED.
3. SEE SHEET 2 FOR CONTINUATION OF GENERAL NOTES.

LEGEND

W	NEW WATER LINE
SS	NEW SEWER CENTER LINE
SSFM	NEW SEWER FORCE MAIN
E	PROPOSED ELECTRICAL
	STREET R/W
	PROPERTY LINE
	PIPE CENTERLINE

SHEET INDEX

REVISIONS			
MARK		APPR	DATE

SEAL – ENGINEER

REGISTERED PROFESSIONAL ENGINEER STEVEN R. ANDREWS RCE 31259 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

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26501 RANCHO PARKWAY SOUTH, SUITE 204
LAKE FOREST, CA 92630
(949) 215-5050

SAE ENGINEERING

SCALE:

DATE: 05/10/23

DRAWN BY: CR

DESIGNED BY: PH

CHECKED BY: SA

PREPARED FOR: EMERALD BAY SERVICE DISTRICT

APPROVED BY:

JOHN MARCONI - PRESIDENT
EBSD BOARD OF DIRECTORS

DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

TITLE SHEET

SHEET 1 OF 14

NOT FOR CONSTRUCTION 05-11-23

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Last Edit: 05.17.2023 11:08:59 AM By: Cramirez

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Plot Date: 05.19.2023 10:12:42 AM By: cramirez

EBSD SEWER LIFT STATION NO. 3

GENERAL SEWER NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS, THE CITY OF LAGUNA BEACH PUBLIC WORKS DEPARTMENT STANDARD DRAWINGS, STANDARD SPECIAL PROVISIONS AND THE LATEST EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, WITH SUPPLEMENTS (GREENBOOK). ANY VARIATION FROM, OR EXCEPTION TO, THE STANDARDS OR THESE NOTES SHALL BE APPROVED BY THE CITY ENGINEER.

2. NO WORK SHALL BE UNDERTAKEN WITHOUT OBTAINING NECESSARY PERMITS FROM THE CITY LAGUNA BEACH. THE SITE SUPERINTENDENT OR FOREMAN SHALL NOTIFY THE ENGINEERING INSPECTOR AT LEAST 48 HOURS IN ADVANCE OF ANY INSPECTION REQUIRED.

3. HOURS OF OPERATION SHALL BE FROM 7:00 AM TO 5:00 PM, MONDAY THROUGH FRIDAY. NO WORK SHALL BE CONDUCTED ON WEEKENDS OR HOLIDAYS. OTHER HOURS SHALL REQUIRE WRITTEN AUTHORIZATION FROM THE CITY ENGINEER OR CITY BUILDING OFFICIAL.

4. STATE LAW SB 3019 REQUIRES THE CONTRACTOR TO OBTAIN AN IDENTIFICATION NUMBER FROM UNDERGROUND SERVICE ALERT PRIOR TO THE ISSUANCE OF A CITY ENCROACHMENT PERMIT. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERTS TWO FULL WORKING DAYS (48 HOURS MINIMUM) IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES, INCLUDING PAVEMENT REMOVAL, EXCAVATION AND AC OVERLAY, WHICH COULD AFFECT ANY UNDERGROUND UTILITY.

5. ANY CONTRACTOR PERFORMING WORK ON THIS PROJECT SHALL FAMILIARIZE HIMSELF WITH THE SITE AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY OR INDIRECTLY FROM HIS OPERATIONS, WHETHER OR NOT SUCH FACILITIES ARE SHOWN ON THE PLANS.

6. PRIOR TO ANY CONSTRUCTION WORK, WHICH COULD DAMAGE OR CONFLICT WITH UNDERGROUND STRUCTURES OR UTILITIES, THE CONTRACTOR SHALL EXCAVATE INSPECTION HOLES TO DETERMINE THE LOCATION AND DEPTH OF SAID STRUCTURES AND UTILITIES IN THE VICINITY OF, OR WHICH MAY BE AFFECTED BY, THE PROPOSED IMPROVEMENT WORK.

7. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL EXPOSE AND VERIFY THE LOCATION AND ELEVATION OF ANY EXISTING PIPELINE WHICH IS TO BE JOINED.

8. IF EXISTING UTILITIES OR OTHER FACILITIES CONFLICT WITH THE PROPOSED IMPROVEMENTS, WORK SHALL STOP AND THE ENGINEER BE NOTIFIED IMMEDIATELY.

9. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY PUBLIC IMPROVEMENTS DAMAGED AS A RESULT OF CONSTRUCTION AS REQUIRED BY THE EBSD INSPECTOR.

10. THE CONTRACTOR SHALL MAINTAIN DUST CONTROL AT ALL TIMES.

11. "AS-BUILT" RECORD DWAWINGS SHALL BE FURNISHED TO THE EMERALD BAY SERVICE DISTRICT (EBSD) UPON COMPLETION OF THE PROJECT. RECORD DRAWING SHALL INDICATE CONSTRUCTED LOCATION OF ALL SEWER LATERALS, STUBS FOR FUTURE CONNECTION AND MANHOLE LOCATIONS.

12. APPROVAL OF THESE PLANS BY EBSD OR ITS AGENTS SHALL NOT RELIEVE THE CONTRACTOR OR THE APPLICANT OF THE RESPONSIBILITY FOR CORRECTION OF ERRORS OR OMISSIONS DISCOVERED DURING CONSTRUCTION. UPON REQUEST, THE APPROPRIATE PLAN REVISIONS SHALL BE PROMPTLY SUBMITTED TO THE CITY ENGINEER FOR REVIEW AND APPROVAL.

13. ESTIMATE OF QUANTITIES IS PROVIDED BY THE ENGINEER ONLY FOR THE CONVENIENCE OF THE OWNER. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF CONSTRUCTION QUANTITIES BEFORE SUBMITTING A BID. ANY ITEM OF WORK REQUIRED BY THESE PLANS WHICH IS NOT SPECIFICALLY LISTED IN THE ESTIMATE OF QUANTITIES SHALL BE CONSIDERED AS INCLUDED IN THE OTHER ITEMS OF WORK.

14. NUTS AND BOLTS WITHIN WET WELL SHALL BE 316 STAINLESS STEEL.

15. THRUST BLOCKS WHERE CALLED OUT ON PLANS OR REQUIRED AND WHERE NOT SHOWN SHALL BE PER GREENBOOK.

16. SANITARY SEWER LINES SHALL BE POLYVINYL CHLORIDE (PVC) SEWER PIPE SDR 26 PSM TYPE, UNLESS CALLED OUT ON PLANS INCLUDING FITTINGS, ASTM C-700, CLASS D OR AS APPROVED BY EBSD.

17. FOR SEWER MAINS, COVER, FROM THE TOP OF THE SEWER TO THE FINISHED SURFACE, SHALL BE A MINIMUM OF 5 FEET AND 18 FEET DEPTH MAXIMUM.

18. SEWER AND WATER LINES SHOULD BE SEPARATED AS FAR AS REASONABLE IN BOTH THE HORIZONTAL AND VERTICAL DIRECTIONS WITH SEWERS ALWAYS LOWER THAN WATER LINES. THE MINIMUM HORIZONTAL SEPARATION SHALL BE 10 FEET. FOR PERPENDICULAR CONSTRUCTION, WATER LINES SHALL BE 3 FEET ABOVE SANITARY SEWERS AND SHALL CROSS AT A 90° ANGLE. A LENGTH OF SEWER PIPE SHOULD BE CENTERED AT THE CROSSING SO THAT SEWER JOINTS ARE AT THE MAXIMUM DISTANCE FROM WATER LINE. WHERE THIS CRITERIA IS NOT POSSIBLE, MORE RIGID CONSTRUCTION REQUIREMENTS SPECIFIED IN STANDARD DRAWING 400A AND 400B SHALL BE MET.

19. THE CONTRACTOR SHALL KEEP A RECORD OF THE LOCATION OF WYES, TEES AND SEWER LATERAL STUBS. SUCH RECORDS SHALL BECOME PROPERTY OF EBSD UPON COMPLETION OF THE CONTRACT.

20. NO TRENCH BACKFILL SHALL TAKE PLACE PRIOR TO APPROVAL FROM THE EBSD INSPECTOR.

21. TRENCH COMPACTION SHALL BE IN ACCORDANCE WITH THESE SPECIFICATIONS AND STANDARD DRAWING 109. MANHOLE FRAMES AND COVERS SHALL BE TEMPORARILY SET 4 INCHES BELOW THE FINISH GRADE UNLESS NOTED OTHERWISE.

22. NO SEWAGE OR WATER FROM TESTING AND FLUSHING OPERATIONS SHALL BE DISCHARGED INTO THE EXISTING SEWER SYSTEM UNLESS AUTHORIZED BY THE EBSD INSPECTOR.

23. STRAIGHT PIPE ON CURVES, IN ACCORDANCE WITH SECTION 306-1.2.3D OF THE STANDARD SPECIFICATION FOR PUBLIC WORKS MAY BE USED WHERE APPROVED BY THE ENGINEER. INSPECTION OF CURVED SECTIONS OF SEWER LINES SHALL BE MADE BY THE CONTRACTOR USING TELEVISION CAMERAS DESIGNED FOR THAT PURPOSE. VIDEO RECORDINGS SHALL BE MADE OF THE SECTIONS DESIGNATED BY THE ENGINEER FROM MANHOLE TO MANHOLE TO CLEAN OUT AND WHERE INDICATED ON THE PLANS. RECORDINGS SHALL BECOME PROPERTY OF EBSD AND PROVIDED ON A DVD OR MEMORY THUMB DRIVE.

24. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE CLASS 53, CML AND EPOXY COATED AT FACTORY WITH A HI BUILD EPOXYLINE (TNEMEC N-69) UNLESS OTHERWISE NOTED ON THE PLANS. ALL UNDERGROUND DUCTLIE IRON PIPE SHALL BE WRAPPED WITH A V-BIO ENHANCED POLYETHYLENE ENCASEMENT INCLUDING A DETECTABLE MARKING TAPE.

25. TRENCH PAVEMENT RESTORATION SHATLL BE PER CITY OF LAGUNA BEACH PUBLIC WORKS DEPARTMENT STANDARD PLAN 114. TRENCHING AND BEDDING SHALL BE PER XXXXXXXX1.

ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AHD	AHEAD
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPD.	APPROVED
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
ASSY.	ASSEMBLY
AVE	AVENUE
A/V	AIR AND VACUUM
AWWA	AMERICAN WATER WORKS ASSOCIATION
BCR	BOLT CIRCLE RADIUS
BOT	BOTTOM
BV	BUTTERFLY VALVE
CATV	CABLE TELEVISION
C/C	CENTER TO CENTER
CF	CURB FACE
CJ	CONSTRUCTION JOINT
CL	CLASS
℄ / C/L	CENTER LINE
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CMC	CEMENT MORTAR COATED
CML	CEMENT MORTAR LINED
CML&C	CEMENT MORTAR LINED AND COATED
CO	CLEAN OUT
CONC.	CONCRETE
CONT.	CONTINUOUS
CPLG.	COUPLING
DET.	DETAIL
DIA	DIAMETER
DIP/DI	DUCTILE IRON PIPE
DR.	DRIVE
E	EAST
EA	EACH
EF	EACH FACE
EL./ELEV.	ELEVATION
ELEC.	ELECTRIC
EP	EDGE OF PAVEMENT
EQ	EQUAL
ETC.	ETCETERA
EW	EACH WAY
EX./EXIST.	EXISTING
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FLG'D	FLANGED
FM	FORCE MAIN
FS	FINISHED SURFACE
GA	GAUGE
GB	GRADE BREAK
GEN	GENERAL
HDPE	HIGH DENSITY POLYETHYLENE
(H)/HORIZ.	HORIZONTAL
HWL	HIGH WATER LEVEL
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INT.	INTERSECTION
INV.	INVERT
I/O	INLET/OUTLET
IW	IRRIGATION WATER
JT	JOINT
LF/L.F.	LINEAL FEET
LT.	LEFT
MAT	MAT FOUNDATION
MAX.	MAXIMUM
MG	MILLION GALLONS
MH	MANHOLE
MIN.	MINIMUM
N	NORTH/NEW
NE	NORTHEAST
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
OC/O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OG	ORIGINAL GROUND
PEM	POLYETHYLENE MEDIUM DENSITY MATERIAL
P.O.C.	POINT OF CONNECTION
PR/PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REQ'D	REQUIRED
REQMTS	REQUIREMENTS
RGS	RIGID GALVANIZED STEEL
RP	REDUCE PRESSURE
RT.	RIGHT
R/W	RIGHT-OF-WAY
S	SLOPE/SOUTH
SCH	SCHEDULE
SEW / SS	SEWER
SFTD	SLOPE FLOOR TO DRAIN
SHT	SHEET
S.S / S/S	STAINLESS STEEL
S.P.	STEEL PIPE
SPECS	SPECIFICATIONS
ST.	STREET
STA	STATION
STD.	STANDARD
STL.	STEEL
T	TELEPHONE
t	THICKNESS
T&B	TOP AND BOTTOM
THK	THICK
TYP.	TYPICAL
UBC	UNIFORM BUILDING CODE
U.N.O.	UNLESS NOTED OTHERWISE
(V)/VERT.	VERTICAL
VCP	VITRIFIED CLAY PIPE
W	WATER/WEST
WL	WATER LEVEL
WM	WATER METER
W.S.P.	WELDED STEEL PIPE
WV	WATER VALVE
W.W.F.	WELDED WIRE FABRIC
W/O	WEST OF
W/	WITH

CONSTRUCTION NOTES AND ESTIMATED QUANTITIES

		UNIT	QTY
1	INSTALL OWNER FURNISHED PREPACKGED OLDCASTLE SEWAGE LIFT STATION ASSEMBLY ONELIFT MODEL RC611x1310 INCLUDING ALL PIPING, VALVES, AND ACCESS HATCHES PER SPECIFICATIONS.	LS	1
2	FURNISH AND INSTALL 6" CML AND EPOXY COATED DI PIPE CLASS 53.	LF	10
3	FURNISH AND INSTALL 8" PVC SDR 26 SEWER PIPE TYPE PSM AS MANUFACTURED BY JM EAGLE.	LF	7
4	FURNISH AND INSTALL 8" MAXADAPTER SEWER COUPLING.	EA	1
5	CUT AND DISPOSE OF INTERFERRING PORTION OF EXISTING 6" SEWER FORCE MAIN FOR INSTALLATION OF 6" DI 45° BEND.	LF	14
6	FILL VOIDS WITH A 2-SACK CEMENT SLURRY BACKFILL AS REQUIRED.	CY	37
7	FURNISH AND INSTALL 6" CML AND EPOXY COATED DI 45° BEND CLASS 53 (FLG'D).	EA	1
8	FURNISH AND INSTALL 6"X 6"X 4" CML AND EPOXY COATED 45° WYE (FLG'D)	EA	1
9	FURNISH AND INSTALL RESTRAINED FLANGE COUPLING ADAPTER PER EBBA IRON.	EA	1
10	FURNISH AND INSTALL 6" BLIND FLANGE AT END OF BYPASS OPERATIONS.	EA	1
11	FURNISH AND INSTALL 8" THICK CONCRETE EQUIPMENT PAD FOR SCE SERVICE PEDESTAL, ATS AND PUMP CONTROL ENCLOSURE PER DETAIL 1/6	LS	1
12	PROTECT IN PLACE EXISTING STRUCTURES OR UTILITIES AS REQUIRED.	LS	1
13	REPLACE EXISTING LANDSCAPING WITH INKIND AS REQUIRED.	LS	1
14	REPLACE EXISTING CONCRETE SIDEWALK WITH INKIND PER SSPWC STANDARDS.	SF	78
15	FURNISH AND INSTALL 6'x12'x7' PRECAST VERTICAL SECTION VAULT PER SCE UGS VA 400 AND ELECTRICAL DRAWINGS.	LS	1
16	CORE DRILL EXISTING SEWER MANHOLE AND CONNECT TEMPORARY BYPASS PIPING. PLUG HOLE AT COMPLETION OF BYPASS OPERATIONS WITH WATERTIGHT BRICK AND MORTAR.	LS	1
17	FURNISH AND INSTALL TEMPORARY RENTAL ELECTRIC SEWAGE PUMP ASSEMBLY INCLUDING ALL PIPING, VALVES, FITTINGS AND SOUND ATTENUATION AS REQUIRED PER SPECIFICATIONS.	LS	1
18	FURNISH AND INSTALL TEMPORARY SECURITY CHAIN LINK FENCE AND ACCESS GATE ASSEMBLY.	LF	62
19	FURNISH AND INSTALL TEMPORARY 4" CML AND EPOXY COATED DI 90° BEND CLASS 53 (FLG'D)	EA	4
20	FURNISH AND INSTALL TEMPORARY 6" BLIND FLANGE.	EA	1
21	FURNISH AND INSTALL TEMPORARY 8" PLUG.	EA	1
22	FURNISH AND INSTALL CLAMP ON SITRANS FS220 ULTRASONIC FLOWMETER INCLUDING FST020 TRASNMITTER AND ALL APPURTENANCES AS REQUIRED AS MANUFACTURED BY SIEMENS OR EQUAL.	LS	1
23	INSTALL OWNER FURNISHED 825 GPM, 77 FT TDH ESSCO SUBMERSIBLE VORTEX PUMP MODEL 4X12TF AND 40HP MOTOR INCLUDING BASE ELBOW, GUIDE RAIL ASSEMBLY AND CONTROL PANEL.	EA	2
24	REMOVE AND DISPOSE OF EXISTING LIFT STATION PER DEMOLITION PLAN.	LS	1
25	FURNISH AND INSTALL 6" ALPHA RESTRAINED JOINT COUPLING PER ROMAC INDUSTRIES INC. OR EQUAL.	EA	1
26	FURNISH AND INSTALL 10" DIAMETER AIR VENT PER DETAIL 3/6	EA	2
27	FURNISH AND INSTALL 4" THICK CONCRETE SIDEWALK PER CITY OF LAGUNA BEACH PUBLIC WORKS DEPARTMENT STANDARD PLAN 107.	SF	19

NOTES:

1. QUANTITIES SHOWN ABOVE SHALL NOT BE USED FOR BIDDING PURPOSES, CONTRACTOR SHALL ESTABLISH HIS OWN QUANTITIES FOR BIDDING.

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REVISIONS			
MARK		APPR	DATE

SEAL – ENGINEER

REGISTERED PROFESSIONAL ENGINEER STEVEN R. ANDREWS RCE 31259 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

STEVEN ANDREWS ENGINEERING
26501 RANCHO PARKWAY SOUTH, SUITE 204
LAKE FOREST, CA 92630
(949) 215-5050

SCALE:

DATE: 05/10/23
DRAWN BY: CR
DESIGNED BY: PH
CHECKED BY: SA

PREPARED FOR:

EMERALD BAY SERVICE DISTRICT

APPROVED BY:

JOHN MARCONI - PRESIDENT
EBSD BOARD OF DIRECTORS

DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

GENERAL NOTES AND ABBREVIATIONS

SHEET 2 OF 14

NOT FOR CONSTRUCTION 05-11-23

EBSD SEWER LIFT STATION NO. 3

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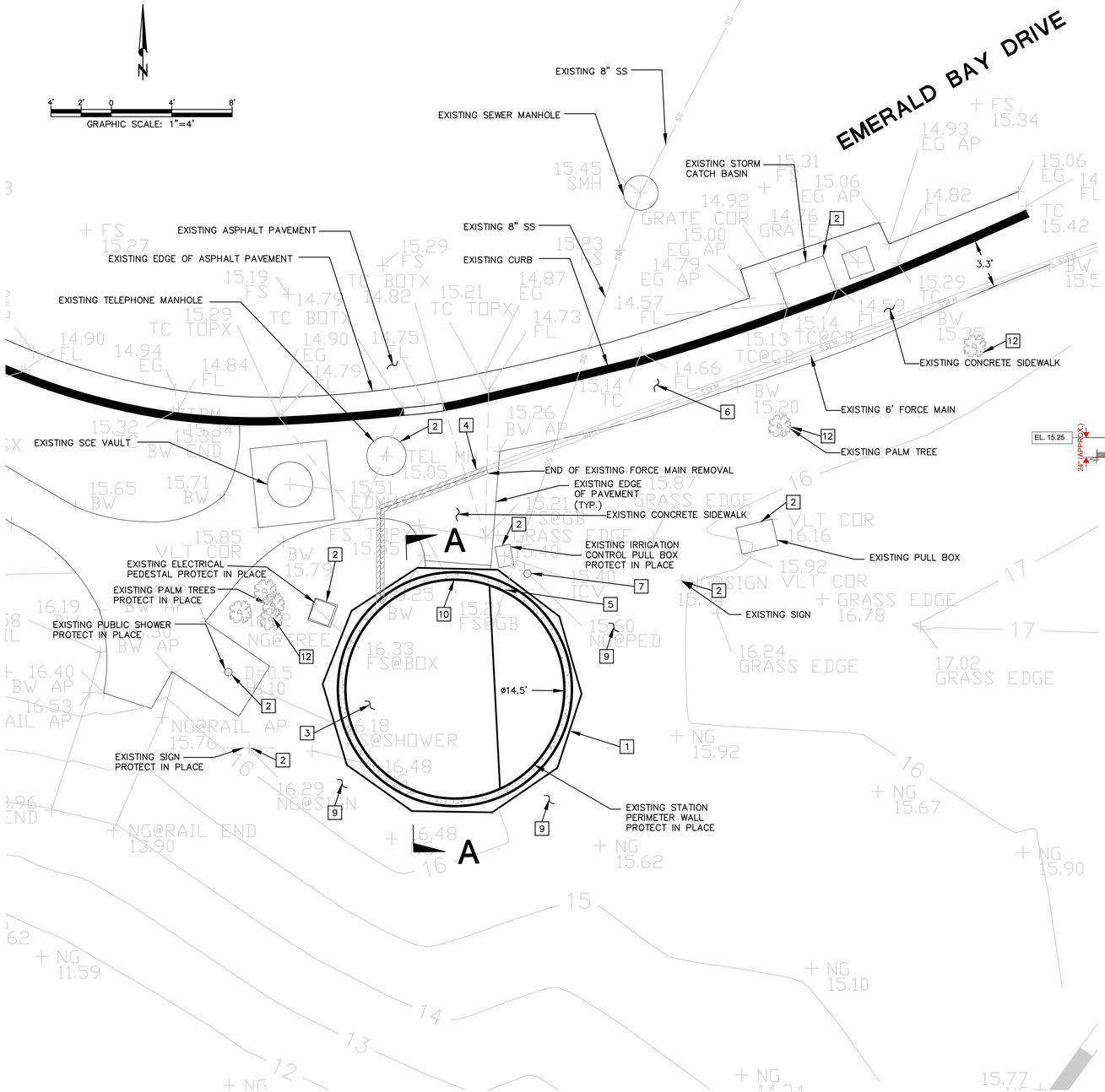
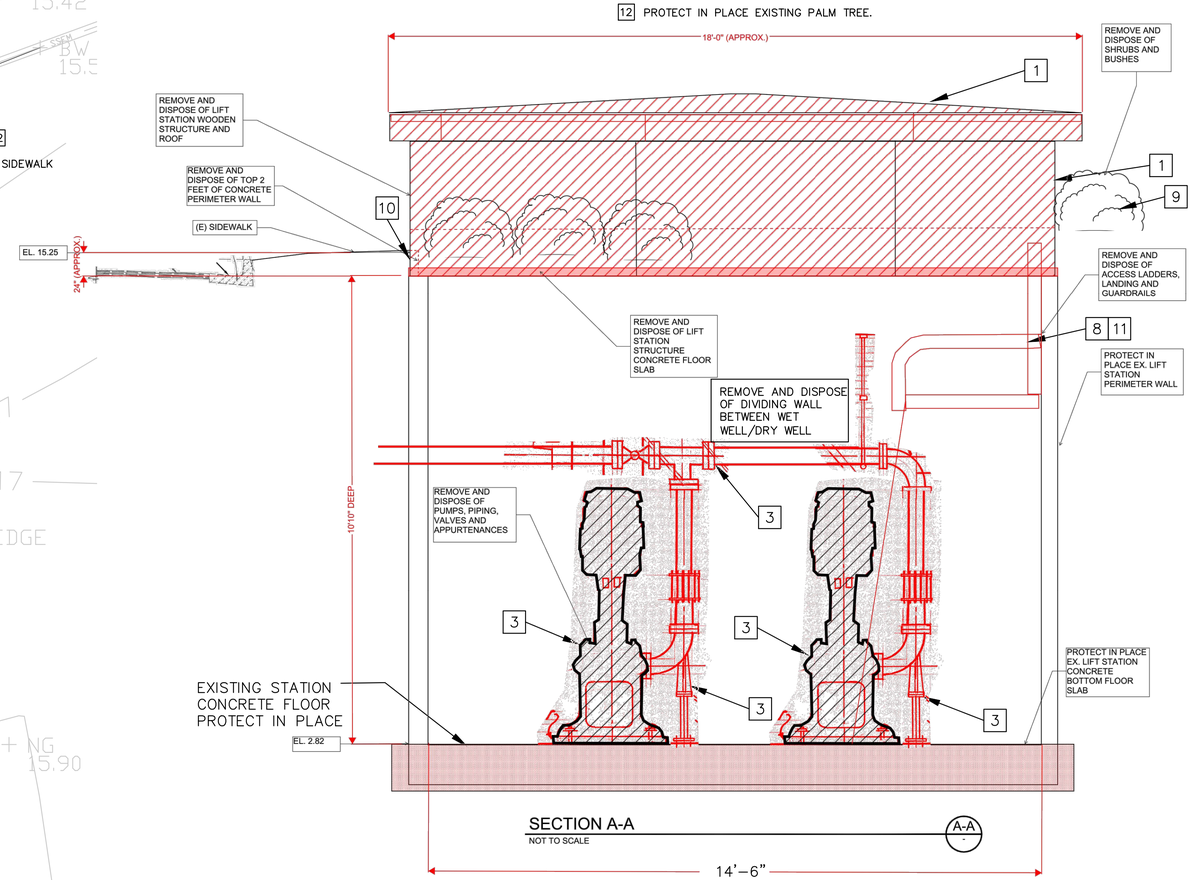


DEMOLITION NOTES

1. REMOVE AND DISPOSE OF EXISTING LIFT STATION WOODEN STRUCTURE, ROOF AND CONCRETE FLOOR SLAB.
2. RELOCATE EXISTING UTILITY OR STRUCTURE.
3. REMOVE AND DISPOSE OF EXISTING PUMPS, PIPING, VALVES , PUMP CONTROL PANEL, ALL ELECTRICAL AND APPURTENANCES INSIDE DRY/WET WELL.
4. REMOVE AND DISPOSE OF EXISTING 6" SEWER FORCE MAIN APPROXIMATELY 28 LF.
5. REMOVE AND DISPOSE OF EXISTING 8" GRAVITY SEWER MAIN AS REQUIRED.
6. REMOVE EXISTING CONCRETE SIDEWALK AS REQUIRED FOR FORCE MAIN CONNECTION.
7. REMOVE AND REPLACE IN KIND EXISTING SIGN AND TRASH BAG ENCLOSURE.
8. REMOVE AND DISPOSE OF EXISTING ACCESS LADDER, LANDING AND GUARDRAILS.
9. REMOVE AND REPLACE IN KIND EXISTING SHRUBS AROUND PERIMETER OF STRUCTURE.
10. REMOVE AND DISPOSE OF TOP 2 FEET OF PERIMETER WALL INCLUDING STAIRS INTO STATION.
11. REMOVE AND DISPOSE OF SCE METER AND ALL ELECTRICAL EQUIPMENT INSIDE STRUCTURE.
12. PROTECT IN PLACE EXISTING PALM TREE.



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REVISIONS			
MARK		APPR	DATE

SEAL – ENGINEER

REGISTERED PROFESSIONAL ENGINEER — STEVEN R. ANDREWS — RCE 31259 — CIVIL — STATE OF CALIFORNIA

PLANS PREPARED BY:

STEVEN ANDREWS ENGINEERING
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(949) 215-5050

SA ENGINEERING

SCALE:	
DATE:	05/10/23
DRAWN BY:	CR
DESIGNED BY:	PH
CHECKED BY:	SA

PREPARED FOR:

EMERALD BAY SERVICE DISTRICT

APPROVED BY:

JOHN MARCONI - PRESIDENT
EBSD BOARD OF DIRECTORS

DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

EXISTING SITE PLAN AND SITE DEMOLITION PLAN

SHEET 3 OF 14

EBSD SEWER LIFT STATION NO. 3

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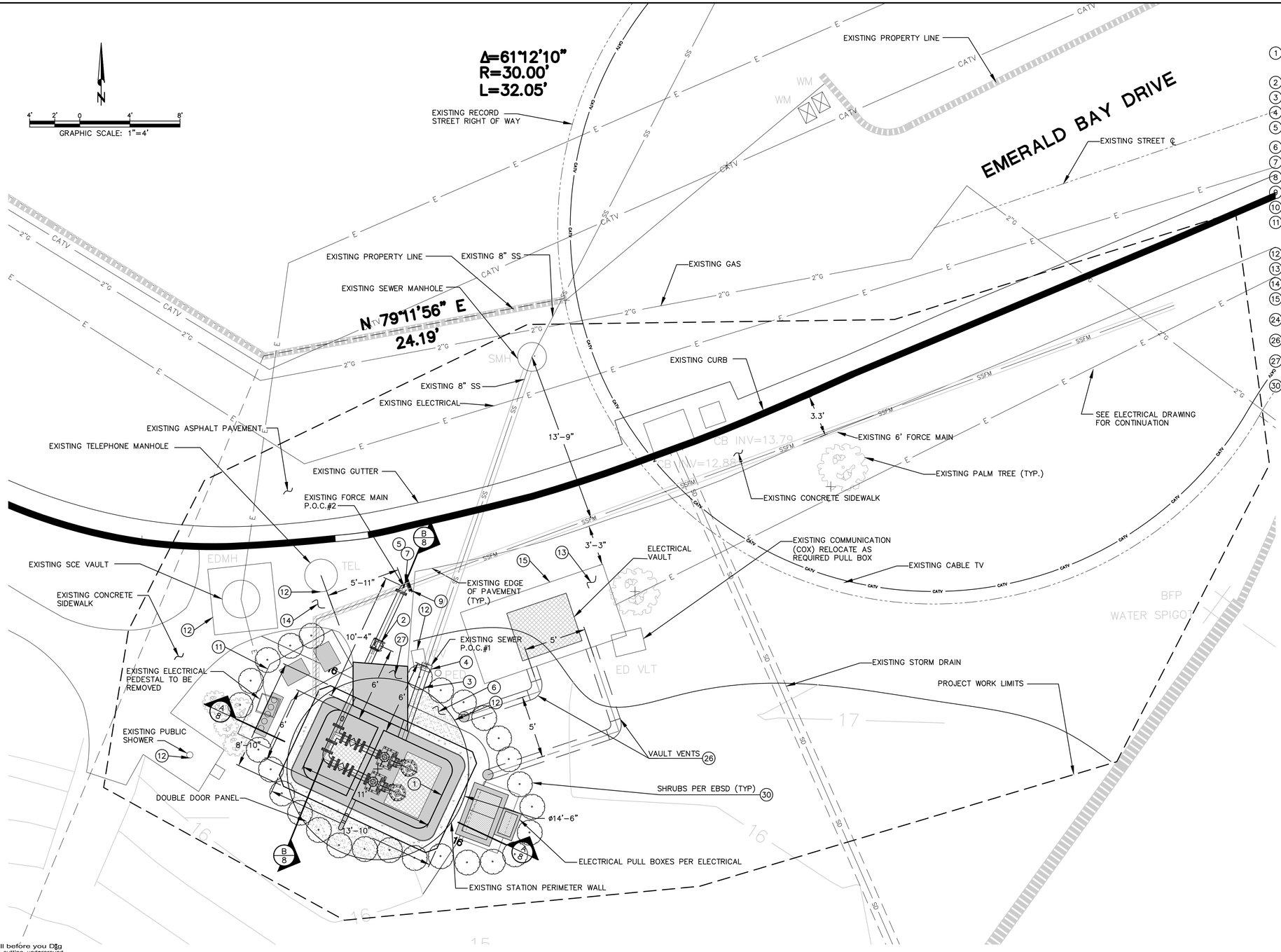

CONSTRUCTION NOTES

1. INSTALL OWNER FURNISHED PREPACKGED OLDCASTLE SEWAGE LIFT STATION ASSEMBLY ONELIFT MODEL RC611x1310 INCLUDING ALL PIPING, VALVES, AND ACCESS HATCHES PER SPECIFICATIONS.
2. FURNISH AND INSTALL 6" CML AND EPOXY COATED DI PIPE CLASS 53.
3. FURNISH AND INSTALL 8" PVC SDR 26 SEWER PIPE TYPE PSM AS MANUFACTURED BY JM EAGLE.
4. FURNISH AND INSTALL 8" MAXADAPTER SEWER COUPLING.
5. CUT AND DISPOSE OF INTERFERRING PORTION OF EXISTING 6" SEWER FORCE MAIN FOR INSTALLATION OF 6" DI 45° BEND.
6. FILL VOIDS WITH A 2-SACK CEMENT SLURRY BACKFILL AS REQUIRED.
7. FURNISH AND INSTALL 6" CML AND EPOXY COATED DI 45° BEND CLASS 53 (FLG'D).
8. FURNISH AND INSTALL 6"X 6"X 4" CML AND EPOXY COATED 45° WYE (FLG'D)
9. FURNISH AND INSTALL RESTRAINED FLANGE COUPLING ADAPTER PER EBBA IRON.
10. FURNISH AND INSTALL 6" BLIND FLANGE AT END OF BYPASS OPERATIONS.
11. FURNISH AND INSTALL 8" THICK CONCRETE EQUIPMENT PAD FOR SCE SERVICE PEDESTAL, ATS AND PUMP CONTROL ENCLOSURE PER DETAIL 1/6
12. PROTECT IN PLACE EXISTING STRUCTURES OR UTILITIES AS REQUIRED.
13. REPLACE EXISTING LANDSCAPING WITH INKIND AS REQUIRED.
14. REPLACE EXISTING CONCRETE SIDEWALK WITH INKIND PER SSPWC STANDARDS.
15. FURNISH AND INSTALL 6'x12'x7' PRECAST VERTICAL SECTION VAULT PER SCE UGS VA 400 AND ELECTRICAL DRAWINGS.
24. REMOVE AND DISPOSE OF EXISTING LIFT STATION PER DEMOLITION PLAN.
26. FURNISH AND INSTALL 10" DIAMETER AIR VENT PER DETAIL 3/6
27. FURNISH AND INSTALL 4" THICK CONCRETE SIDEWALK PER CITY OF LAGUNA BEACH PUBLIC WORKS DEPARTMENT STANDARD PLAN 107.
30. 4' TALL SHRUBS TO BE PROVIDED AND INSTALLED BY EBSD STAFF.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-422-4133

REVISIONS			
MARK		APPR	DATE

SEAL – ENGINEER

REGISTERED PROFESSIONAL ENGINEER STEVEN R. ANDREWS RCE 31259 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

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(949) 215-5050

SA ENGINEERING

SCALE:	
DATE:	05/10/23
DRAWN BY:	CR
DESIGNED BY:	PH
CHECKED BY:	SA

PREPARED FOR: EMERALD BAY SERVICE DISTRICT

APPROVED BY:

JOHN MARCONI - PRESIDENT
EBSD BOARD OF DIRECTORS

DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

SITE PLAN

SHEET 4 OF 14

NOT FOR CONSTRUCTION 05-11-23

EBSD SEWER LIFT STATION NO. 3

DWG Name: M:\Emerald Bay Service District\Sewer Lift Station\CAD\Sheets\Sheet 04 Site Plan.dwg Plotted by: cramirez on May 19, 2023 - 10:18:17

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Last Edit: 05.12.2023 11:09:04 AM By: Cramirez

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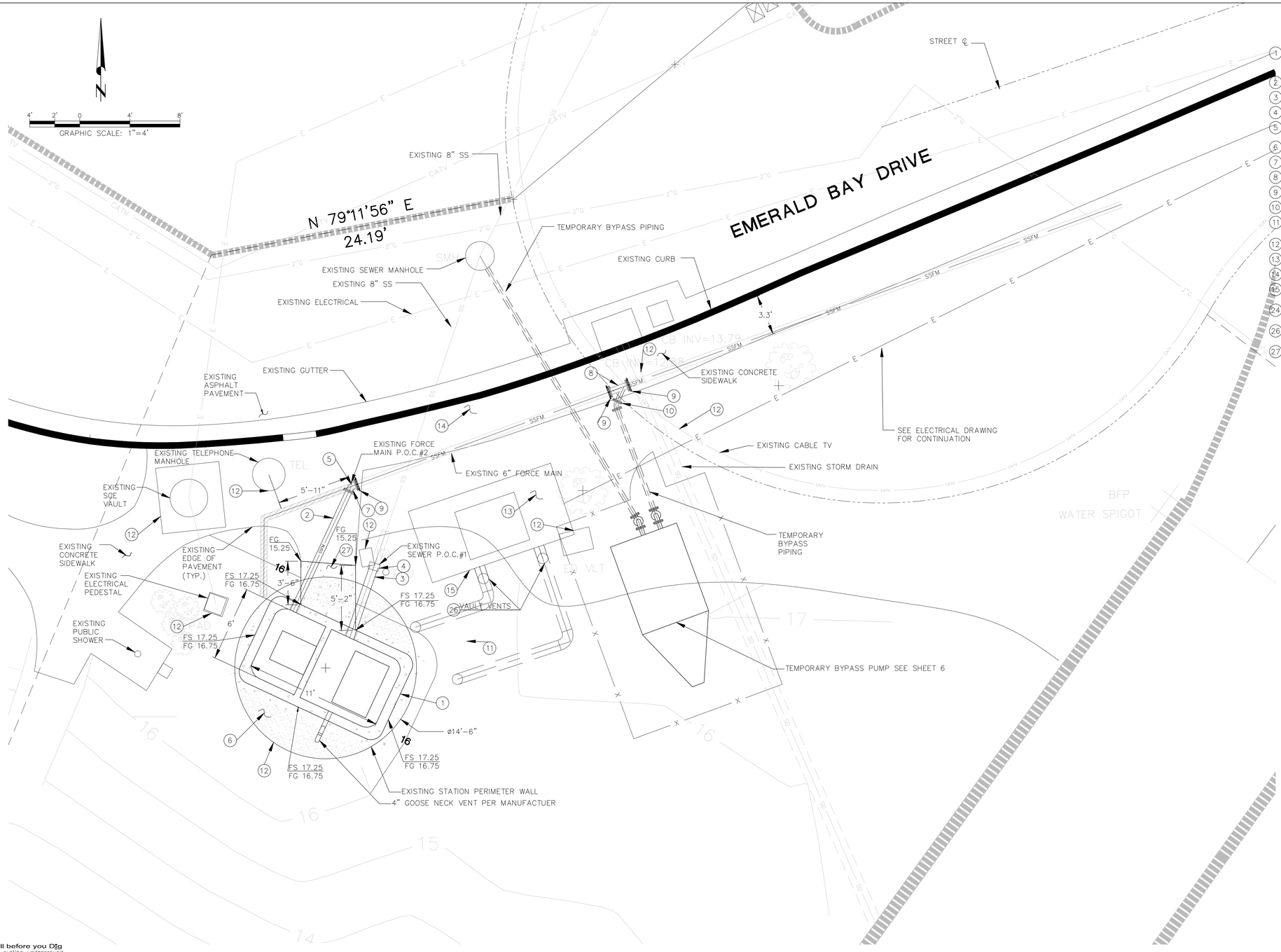

CONSTRUCTION NOTES

1. INSTALL OWNER FURNISHED PREPACKGED OLDCASTLE SEWAGE LIFT STATION ASSEMBLY ONELIFT MODEL RC611x1310 INCLUDING ALL PIPING, VALVES, AND ACCESS HATCHES PER SPECIFICATIONS.
2. FURNISH AND INSTALL 6" CML AND EPOXY COATED DI PIPE CLASS 53.
3. FURNISH AND INSTALL 8" PVC SDR 26 SEWER PIPE TYPE PSM AS MANUFACTURED BY JM EAGLE.
4. FURNISH AND INSTALL 8" MAXADAPTER SEWER COUPLING.
5. CUT AND DISPOSE OF INTERFERRING PORTION OF EXISTING 6" SEWER FORCE MAIN FOR INSTALLATION OF 6" DI 45° BEND.
6. FILL VOIDS WITH A 2-SACK CEMENT SLURRY BACKFILL AS REQUIRED.
7. FURNISH AND INSTALL 6" CML AND EPOXY COATED DI 45° BEND CLASS 53 (FLG'D).
8. FURNISH AND INSTALL 6"X 6"X 4" CML AND EPOXY COATED 45° WYE (FLG'D)
9. FURNISH AND INSTALL RESTRAINED FLANGE COUPLING ADAPTER PER EBBA IRON.
10. FURNISH AND INSTALL 6" BLIND FLANGE AT END OF BYPASS OPERATIONS.
11. FURNISH AND INSTALL 8" THICK CONCRETE EQUIPMENT PAD FOR SCE SERVICE PEDESTAL, ATS AND PUMP CONTROL ENCLOSURE PER DETAIL 1/6
12. PROTECT IN PLACE EXISTING STRUCTURES OR UTILITIES AS REQUIRED.
13. REPLACE EXISTING LANDSCAPING WITH INKIND AS REQUIRED.
14. REPLACE EXISTING CONCRETE SIDEWALK WITH INKIND PER SSPWC STANDARDS.
15. FURNISH AND INSTALL 6'x12'x7' PRECAST VERTICAL SECTION VAULT PER SCE UGS VA 400 AND ELECTRICAL DRAWINGS.
24. REMOVE AND DISPOSE OF EXISTING LIFT STATION PER DEMOLITION PLAN.
26. FURNISH AND INSTALL 10" DIAMETER AIR VENT PER DETAIL 3/6
27. FURNISH AND INSTALL 4" THICK CONCRETE SIDEWALK PER CITY OF LAGUNA BEACH PUBLIC WORKS DEPARTMENT STANDARD PLAN 107.

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REVISIONS			
MARK		APPR	DATE

SEAL – ENGINEER

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SCALE:	
DATE:	05/10/23
DRAWN BY:	CR
DESIGNED BY:	PH
CHECKED BY:	SA

PREPARED FOR: EMERALD BAY SERVICE DISTRICT

APPROVED BY:
JOHN MARCONI - PRESIDENT
EBSD BOARD OF DIRECTORS
DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

CIVIL SITE PLAN

SHEET 5 OF 14

NOT FOR CONSTRUCTION 05-11-23

EBSD SEWER LIFT STATION NO. 3

DWG Name: M:\Emerald Bay Service District\Sewer Lift Station\CAD\Sheets\Sheet 05 Civil Site Plan.dwg Plotted by: cramirez on May 19, 2023 – 10:27:28

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Last Edit: 05.12.2023 05:43:36 PM By: Cramirez

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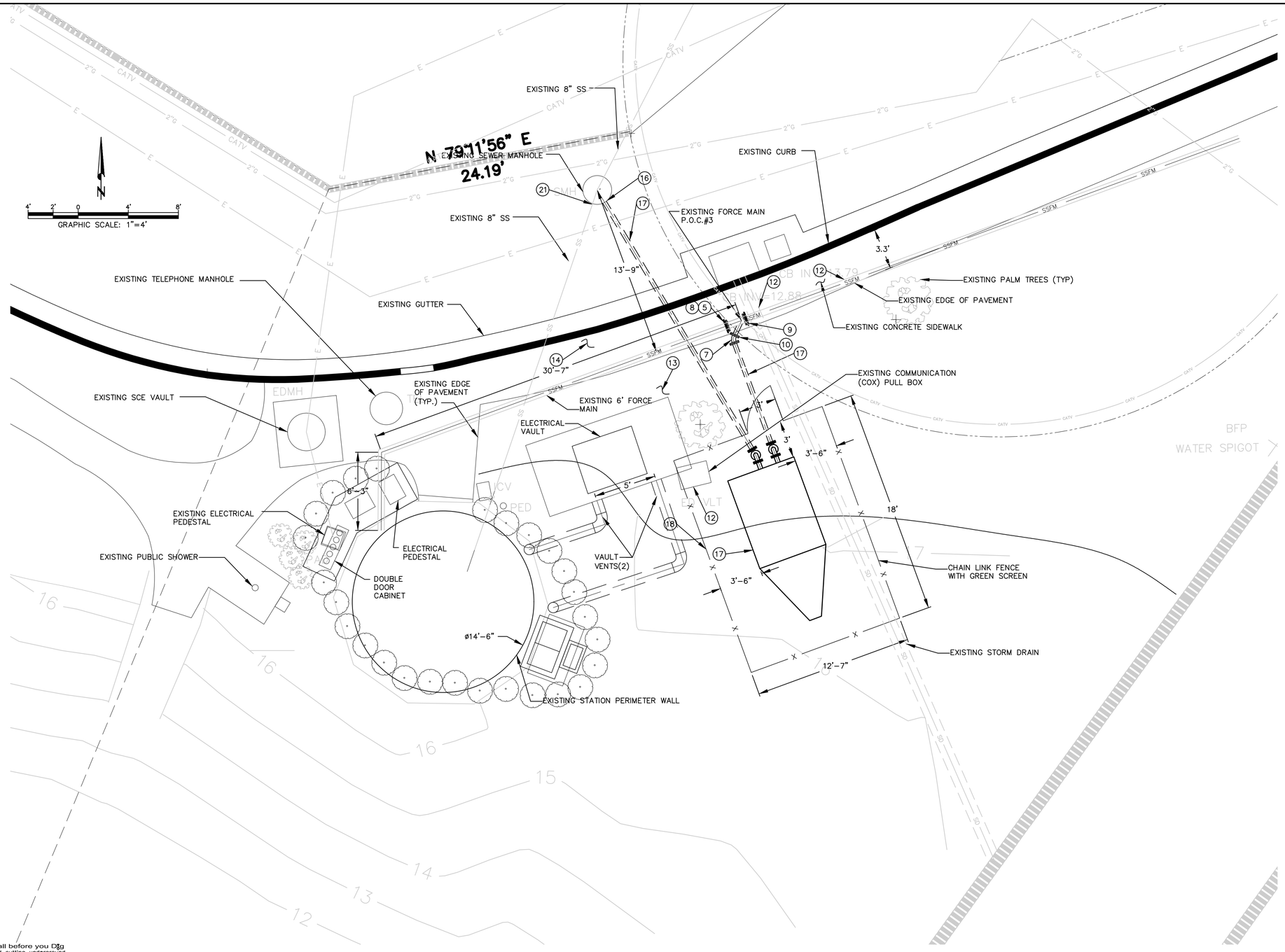

CONSTRUCTION NOTES

(7) FURNISH AND INSTALL 6" CML AND EPOXY COATED DI 45° BEND CLASS 53 (FLG'D).

(8) FURNISH AND INSTALL 6"X 6"X 4" CML AND EPOXY COATED 45° WYE (FLG'D)

(9) FURNISH AND INSTALL RESTRAINED FLANGE COUPLING ADAPTER PER EBBA IRON.

(12) PROTECT IN PLACE EXISTING STRUCTURES OR UTILITIES AS REQUIRED.

(13) REPLACE EXISTING LANDSCAPING WITH INKIND AS REQUIRED.

(14) REPLACE EXISTING CONCRETE SIDEWALK WITH INKIND PER SSPWC STANDARDS.

(16) CORE DRILL EXISTING SEWER MANHOLE AND CONNECT TEMPORARY BYPASS PIPING. PLUG HOLE AT COMPLETION OF BYPASS OPERATIONS WITH WATERTIGHT BRICK AND MORTAR.

(17) FURNISH AND INSTALL TEMPORARY RENTAL ELECTRIC SEWAGE PUMP ASSEMBLY INCLUDING ALL PIPING, VALVES, FITTINGS AND SOUND ATTENUATION AS REQUIRED PER SPECIFICATIONS.

(16) CORE DRILL EXISTING SEWER MANHOLE AND CONNECT TEMPORARY BYPASS PIPING. PLUG HOLE AT COMPLETION OF BYPASS OPERATIONS WITH WATERTIGHT BRICK AND MORTAR.

(18) FURNISH AND INSTALL TEMPORARY SECURITY CHAIN LINK FENCE AND ACCESS GATE ASSEMBLY.

(20) FURNISH AND INSTALL TEMPORARY 6" BLIND FLANGE.

(21) FURNISH AND INSTALL TEMPORARY 8" PLUG.

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OR
1-800-422-4133

REVISIONS			
MARK		APPR	DATE

SEAL – ENGINEER

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SAE ENGINEERING

SCALE:	
DATE:	05/10/23
DRAWN BY:	CR
DESIGNED BY:	PH
CHECKED BY:	SA

PREPARED FOR:

EMERALD BAY SERVICE DISTRICT

APPROVED BY:

JOHN MARCONI - PRESIDENT
EBSD BOARD OF DIRECTORS

DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

TEMPORARY BYPASS PUMPING PLAN

SHEET 6 OF 14

NOT FOR CONSTRUCTION 05-11-23

EBSD SEWER LIFT STATION NO. 3

DWG Name: M:\Emerald Bay Service District\Sewer Lift Station\CAD\Sheets\Sheet 06 Temp bypass Plan.dwg Plotted by: cramirez on May 19, 2023 - 10:26.33

Proj. Data: M:\Emerald Bay Service District\Sewer Lift Station\CAD\Sheets
Created: 05.12.2023 12:22:27 PM Author: ----
Last Edit: 05.17.2023 12:22:27 PM By: Cramirez

File: Sheet 06 Temp bypass Plan.dwg
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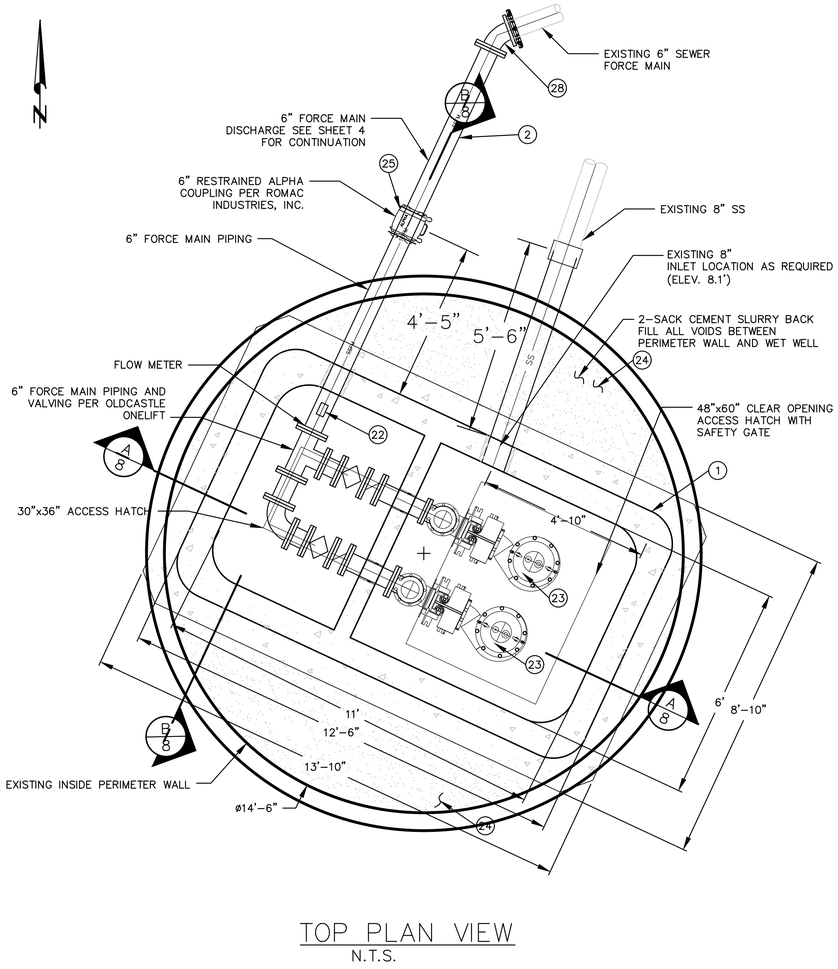
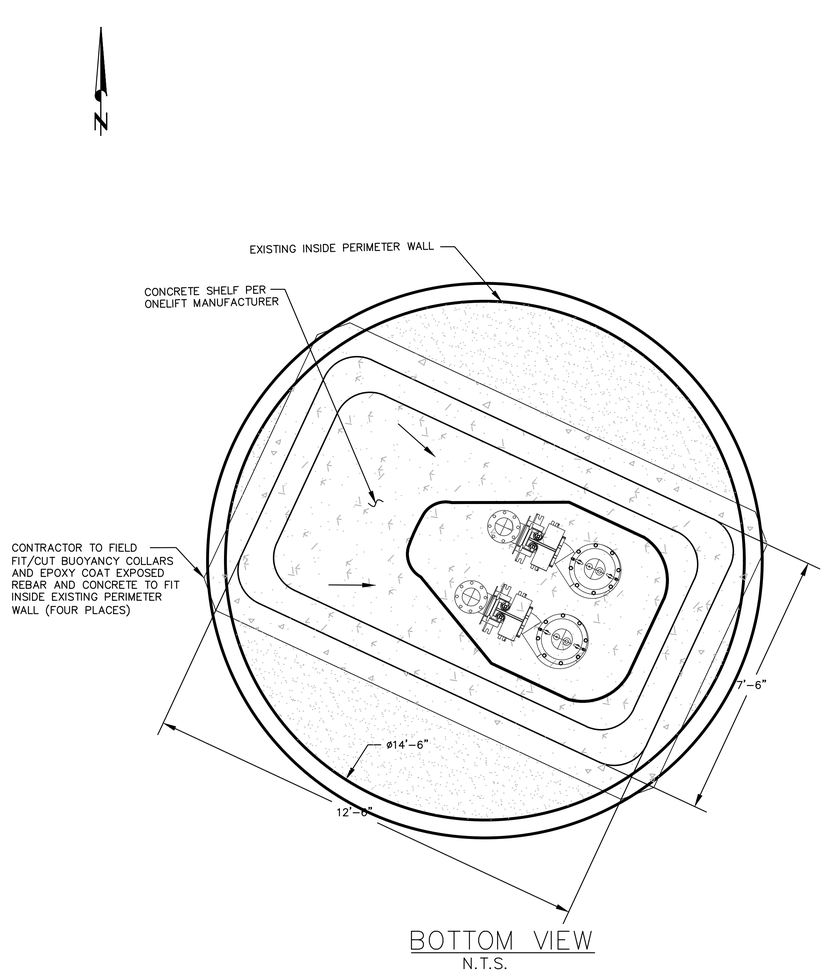


TOP PLAN VIEW
N.T.S.



BOTTOM VIEW
N.T.S.

CONSTRUCTION NOTES

1. INSTALL OWNER FURNISHED PREPACKGED OLDCASTLE SEWAGE LIFT STATION ASSEMBLY ONELIFT MODEL RC611x1310 INCLUDING ALL PIPING, VALVES, AND ACCESS HATCHES PER SPECIFICATIONS.
2. FURNISH AND INSTALL 6" CML AND EPOXY COATED DI PIPE CLASS 53.
22. FURNISH AND INSTALL CLAMP ON SITRANS FS220 ULTRASONIC FLOWMETER INCLUDING FST020 TRASNMITTER AND ALL APPURTENANCES AS REQUIRED AS MANUFACTURED BY SIEMENS OR EQUAL.
23. INSTALL OWNER FURNISHED 825 GPM, 77 FT TDH ESSCO SUBMERSIBLE VORTEX PUMP MODEL 4X12TF AND 40HP MOTOR INCLUDING BASE ELBOW, GUIDE RAIL ASSEMBLY AND CONTROL PANEL.
24. REMOVE AND DISPOSE OF EXISTING LIFT STATION PER DEMOLITION PLAN.
25. FURNISH AND INSTALL 6" ALPHA RESTRAINED JOINT COUPLING PER ROMAC INDUSTRIES INC. OR EQUAL.
28. CUT AND DISPOSE OF INTERFERRING PORTION OF EXISTING 6" SEWER FORCE MAIN FOR INSTALLATION OF 6" DI 45° BEND.

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REVISIONS			
MARK		APPR	DATE

SEAL – ENGINEER

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. ANDREWS
RCE 31259
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LAKE FOREST, CA 92630
(949) 215-5050

SA ENGINEERING

SCALE:	
DATE:	05/10/23
DRAWN BY:	CR
DESIGNED BY:	PH
CHECKED BY:	SA

PREPARED FOR:

EMERALD BAY SERVICE DISTRICT

APPROVED BY:

JOHN MARCONI - PRESIDENT
EBSD BOARD OF DIRECTORS

DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

MECHANICAL PLAN VIEW AND BOTTOM VIEW

SHEET 7 OF 14

NOT FOR CONSTRUCTION 05-11-23

Proj. Data: M:\Emerald Bay Service District\Sewer Lift Station\CAD\Sheets
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Last Edit: 05.12.2023 11:10:25 AM By: Cramirez
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Plot Date: 05.19.2023 10:23:57 AM By: cramirez

EBSD SEWER LIFT STATION NO. 3

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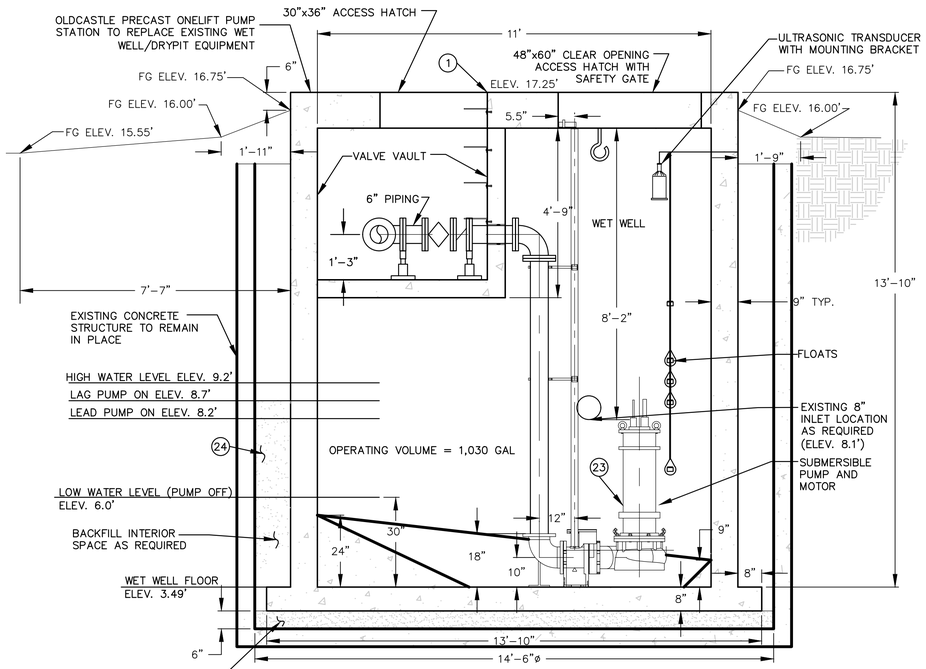
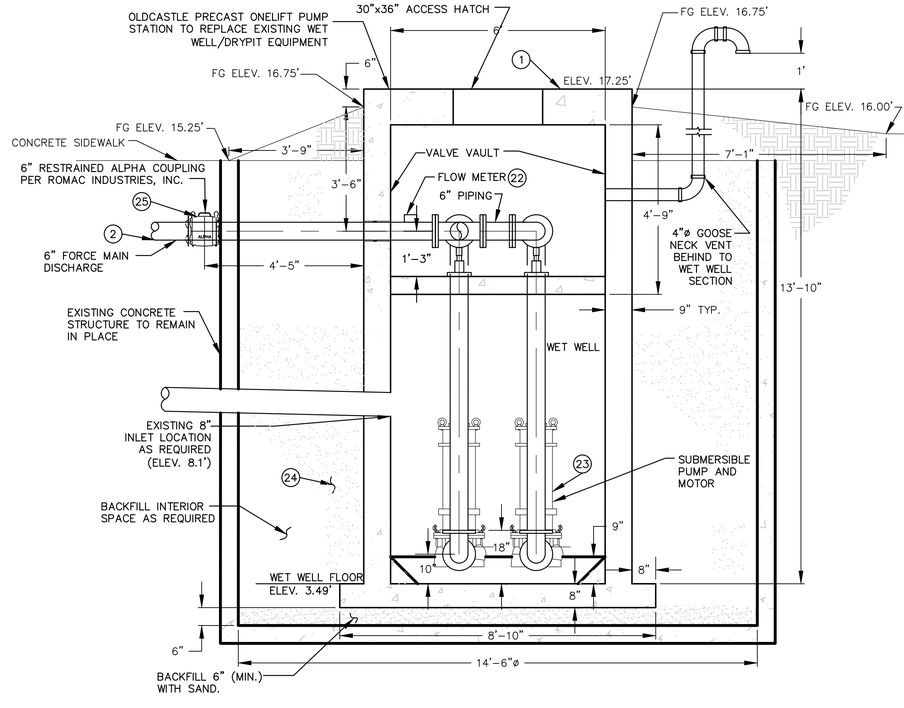


ELEVATION VIEW A–A
N.T.S.



ELEVATION VIEW B–B
N.T.S.

CONSTRUCTION NOTES

1. INSTALL OWNER FURNISHED PREPACKGED OLDCASTLE SEWAGE LIFT STATION ASSEMBLY ONELIFT MODEL RC611x1310 INCLUDING ALL PIPING, VALVES, AND ACCESS HATCHES PER SPECIFICATIONS.
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23. INSTALL OWNER FURNISHED 825 GPM, 77 FT TDH ESSCO SUBMERSIBLE VORTEX PUMP MODEL 4X12TF AND 40HP MOTOR INCLUDING BASE ELBOW, GUIDE RAIL ASSEMBLY AND CONTROL PANEL.
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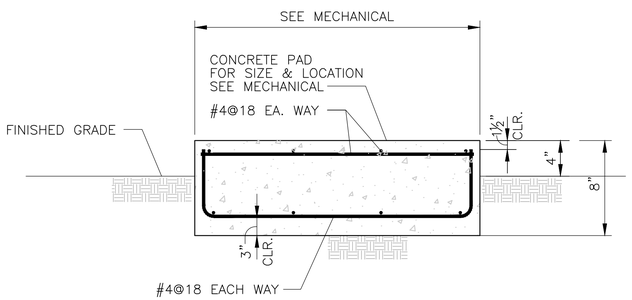
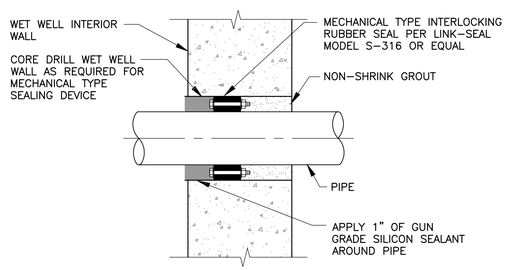
28. CUT AND DISPOSE OF INTERFERRING PORTION OF EXISTING 6" SEWER FORCE MAIN FOR INSTALLATION OF 6" DI 45° BEND.



EQUIPMENT CONCRETE PAD DETAIL 1/–
SCALE: N.T.S.



PIPE PENETRATION DETAIL 2/–
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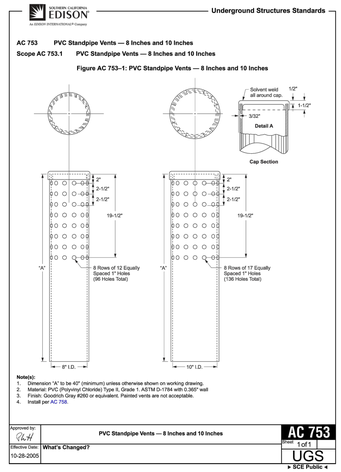

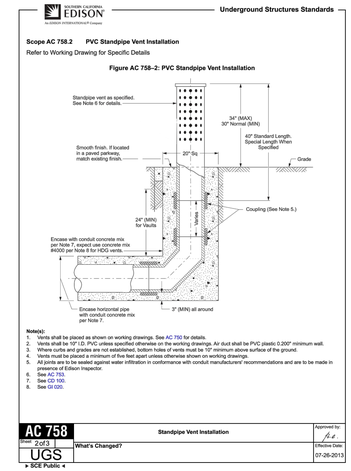

VAULT AIR VENT DETAIL 3/–
SCALE: N.T.S.

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REVISIONS			
MARK		APPR	DATE

SEAL – ENGINEER
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SCALE:	
DATE:	05/10/23
DRAWN BY:	CR
DESIGNED BY:	PH
CHECKED BY:	SA

PREPARED FOR:
EMERALD BAY SERVICE DISTRICT

APPROVED BY:

JOHN MARCONI - PRESIDENT
EBSD BOARD OF DIRECTORS

DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

MECHANICAL PLAN VIEW, SECTION VIEW AND DETAILS

SHEET 8 OF 14

NOT FOR CONSTRUCTION 05-11-23

EBSD SEWER LIFT STATION NO. 3

DWG Name: M:\Emerald Bay Service District\Sewer Lift Station\CAD\Sheets\Sheet 08 Section View.dwg Plotted by: cramirez on May 19, 2023 – 11:42:49

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Last Edit: 05.12.2023 05:43:46 PM By: Cramirez

File: Sheet 08 Section View.dwg
Plot Scale: 0.143531 Dwg Scale: ----
Plot Date: 05.19.2023 11:42:49 AM By: cramirez

SYMBOL LIST

SYMBOL	DESCRIPTION
7	POLE MTD LIGHTING FIXTURE, "7" DENOTES CIRCUIT NUMBER.
S 3aKT	SINGLE POLE TOGGLE SWITCH, +48" AFF, UON SUBSCRIPTS INDICATE THE FOLLOWING: a – OUTLETS CONTROLLED 3 – THREE WAY 4 – FOUR WAY K – KEYED P – PILOT LIGHT PH – PHOTO CELL M – MOTOR RATED TOGGLE SWITCH T – TIME SWITCH
	DUPLEX CONVENIENCE OUTLET 20A, 120VOLT, +18" AFF UON
	SINGLE OUTLET TWIST–LOC, 20A, 120V
J	JUNCTION BOX
T	LINE VOLTAGE THERMOSTAT
T	TRANSFORMER (SYMBOL FOR PLAN DWG)
	CONDUIT SEAL
"0"	MAGNETIC MOTOR STARTER, NEMA SIZE "0", UON
"1" REV	MAGNETIC MOTOR STARTER, REVERSING TYPE, NEMA SIZE "1", UON
"1" 15A	COMBINATION MAGNETIC MOTOR STARTER, NEMA SIZE "1" UON AND 15A DISCONNECT SWITCH 3P, UON
30A	DISCONNECT SWITCH, 30A NON–FUSED, 3P, UON
50AF 60A	DISCONNECT SWITCH, 60A WITH 50A FUSE, 3P, UON
a	'a' INDICATES AN AUXILIARY CONTACT OF A BREAKER OR STARTER COIL. CONTACT ALWAYS OPEN WHEN MAIN CONTACTS ARE OPEN.
M	MOTOR STARTER COIL, OR CONTROL COIL AS NOTED
AS	AMMETER SWITCH, VS=VOLTMETER SWITCH
2	POTENTIAL TRANSFORMER, 2 REQD OR AS NOTED
100/5 2	CURRENT TRANSFORMER, 2 REQD OR AS NOTED WITH 100/5 RATIO
20	MOTOR, NUMBER IS HP RATING, UON
M	MOTOR (SYMBOL FOR PLAN DWG)
	GROUND ROD IN GROUND WELL, (REFER TO SPECIFICATION FOR SIZE).
A 100	FIXTURE TYPE "A", 100 WATTS EACH, TYPICAL IN ROOM OR AREA, UON
G	GROUNDING CONDUIT, CONDUCTOR AND GROUND ROD (COPPER–CLAD STAINLESS STEEL 5/8" DIAMETER X 10' LONG), UON
E	CONDUIT STUB WITH CAP AND A SUITABLE PULL WIRE FOR FUTURE USE
T	TELEPHONE CONDUIT, 3/4" CONDUIT ONLY OR AS NOTED
1	CONDUIT AND CONDUCTOR CALLOUT. REFER TO CONDUIT SCHEDULE ON PLANS
(2) 2 1/2" 3#4/0 1#3G	CONDUIT AND CONDUCTOR AS INDICATED, TWO CONDUITS OF SIZE TWO AND ONE HALF INCHES DIAMETER, EACH WITH THREE #4/0 AWG AND ONE #3 AWG GROUNDING CONDUCTORS. CONDUCTORS SHALL BE THHN/THWN COPPER.
A	METER, A=AMMETER, HZ=HERTZ, V=VOLTMETER, W=WATT, WH=WATTHOUR
	PLAN DIAGRAM FOR CONDUIT ENTRANCE TO CABINET OR DEVICE, ROUTE AND INSTALL TO SUIT FIELD CONDITIONS
	THERMAL ELEMENT
200AF 150AT	CIRCUIT BREAKER, MOLDED CASE, 150 AMP TRIP, 200 AMP FRAME, OR AS NOTED. 3 POLE, UON. (120V CB'S ARE 1 POLE, UON)
70AF 100A	FUSED DISCONNECT SWITCH, 100 AMP WITH 3–70 AMP FUSES OR AS NOTED. 3 POLE, UON. (120V SW'S ARE 1 POLE, UON)
	CONDUIT TURNING UP OR TOWARDS VIEWER
	CONDUIT TURNING DOWN OR AWAY FROM VIEWER
	3/4"C, 2#12, 1#12 GND UON, EXPOSED
	CONDUIT RUN CONCEALED IN CEILING, WALL OR UNDERGROUND

CONDUIT TYPES TO BE AS FOLLOWS:

A. CONCEALED IN WALLS OF CEILING: FLEXIBLE METAL CONDUIT (FMC), ELECTRICAL METALLIC CONDUIT (EMT)
B. EXPOSED AND SUBJECT TO PHYSICAL DAMAGE: GALVANIZED RIDGID CONDUIT (GRC).
C. EXPOSED AND NOT SUBJECT TO PHYSICAL DAMAGE: EMT
D. EXTERIOR AND NOT SUBJECT TO PHYSICAL DAMAGE: EMT WITH COMPRESSION FITTINGS.
E. EXTERIOR AND SUBJECT TO PHYSICAL DAMAGE: GRC
F. BELOW GRADE: PVC SCH 40 OR PVC COATED GRC.
G. THROUGH SLAB PENETRATIONS: PVC COATED GRC.

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SYMBOL	DESCRIPTION
M	UTILITY METERING WITH CURRENT AND POTENTIAL TRANSFORMERS AS REQUIRED
	OPEN SWITCH WITH TIME DELAY CLOSING (TDOE=TIME DELAY ON ENERGIZATION)
	CLOSED SWITCH WITH TIME DELAY OPENING (TDOD=TIME DELAY ON DE–ENERGIZATION)
30A	COMBINATION STARTER WITH MOTOR CIRCUIT PROTECTOR. 30AMP MCP, NEMA SIZE 1 MOTOR STARTER & OVERLOAD HEATERS.
30 KVA 480–120/208	TRANSFORMER WITH SECONDARY GROUND, 30KVA, OPERATING VOLTAGE (PRIMARY–SECONDARY)
1	REFERENCE NOTE
A / 18	REFERS TO SECTION "A" ON SHEET "18", UON
2 / 18	REFERS TO DETAIL "2" ON SHEET "18", UON
R	LIGHTING CONTROL RELAY
MS	MOTION SENSOR
	TERMINAL & CONNECTION TO PLC
	SECURITY CAMERA MOUNTED ON LIGHT POLE
	SECURITY CAMERA

GENERAL INSTRUMENTATION AND CONTROL FUNCTION SYMBOLS

XXX OR XXXXX — EQUIPMENT/FIELD MOUNTED. SHOWN FOR DEVICE XXX OR XXXXX, TYPICAL.

INSTRUMENTS SHARING A COMMON HOUSING, EQUIPMENT/FIELD MOUNTED.

XXX — PANEL MOUNTED, OPERATOR ACCESSIBLE. MOUNTED IN CP–1, UON. PANEL XXX SHOWN.

PANEL MOUNTED, OPERATOR INACCESSIBLE.

XXX / XXX — INSTRUMENTS SHARING COMMON HOUSING, PANEL MOUNTED IN LCP, UON, PANEL XXX SHOWN

PLC SHARED DISPLAY/CONTROL FUNCTIONS

DI — PLC INPUT/OUTPUT POINT, DISCRETE INPUT SHOWN

PNEUMATIC SIGNAL

ELECTRICAL SIGNAL

COMMUNICATION OR LOGIC SIGNAL

MICROPROCESSOR BASED LOCAL OPERATOR INTERFACE (HMI)

MICROPROCESSOR BASED REMOTE (SCADA) OPERATOR INTERFACE (HMI)

ISA – S5.1 TABLE 1
IDENTIFICATION LETTERS

FIRST LETTER(S)			SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION				
C	CONDUCTIVITY		CLOSE	CONTROL	CLOSED
D	DENSITY	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G	GAUGE		GLASS, VIEWING DEVICE		
H	HAND (MANUAL)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHED.	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	MOISTURE	MOMENTARY			MIDDLE
N	INTRUSION				NORMAL
O	TORQUE		OPEN		OPENED
P	PRESSURE, VACUUM		POINT CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD OR PRINT		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION			VALVE, LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION	Z AXIS		DRIVER, ACTUATOR, FINAL CONTROL ELEMENT	

REFERENCE ISA–S5.1 SECTION 5.1 AND TABLE 2 FOR EXPLANATION AND TYPICAL LETTER COMBINATIONS

ABBREVIATIONS

A	AMPERE, AUTO, AUTOMATIC
AFF	ABOVE FINISHED FLOOR
AFS	ABOVE FINISHED SURFACE
AI	ANALOG INPUT TO PLC
AIC	AMPERE INTERRUPTING CAPACITY
ANN	ANNUNCIATOR
AO	ANALOG OUTPUT FROM PLC
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GUAGE
BLDG	BUILDING
BRKR	BREAKER
C	CONDUIT
CAB	CABINET
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
CNTRL	CONTROL
CO	CONDUIT ONLY
CPT	CONTROL POWER TRANSFORMER, 120 V SECONDARY, UON
CPU	CENTRAL PROCESSING UNIT
CM	COMMUNICATION MODULE
DC	DIRECT CURRENT
DI	DISCRETE INPUT TO PLC
DISC	DISCONNECT
DO	DISCRETE OUTPUT FROM PLC
D/P	DIFFERENTIAL PRESSURE
DPDT	DOUBLE–POLE, DOUBLE–THROW
DPM	DIGITAL PANEL METER
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF–X	EXHAUST FAN NO.X
ELECT.	ELECTRICAL
EMI	ELECTROMAGNETIC INTERFERENCE
EQUIP	EQUIPMENT
EX	EXISTING
F	FUSE
FA	FLOW ALARM
FIT	FLOW INDICATOR/TRANSMITTER
FM	FACTORY MUTUAL
FS	FLOW SWITCH OR FLOAT SWITCH
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND OR G	GROUND
HOA	HAND–OFF–AUTOMATIC
HP	HORSEPOWER
HT	HEIGHT
HS	HAND SWITCH
I/O	INPUT/OUTPUT
IC	INSTRUMENTATION CONTRACTOR
J,JB	JUNCTION BOX
JS	POWER SWITCH
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT–AMPERE
KW	KILOWATT
K	THOUSAND
LAH	LEVEL ALARM, HIGH
LAL	LEVEL ALARM, LOW
LCL	LONG CONTINUOUS LOAD
LCP	LOCAL CONTROL PANEL
LM	LARGEST MOTOR
LOS	LOCKOUT STOP
LSH	LEVEL SWITCH, HIGH
LSL	LEVEL SWITCH, LOW
LT	LEVEL TRANSMITTER
LTG	LIGHTING
LV	LOW VOLTAGE
LVL	LEVEL
MA	MANUAL OR MILLIAMPERE
MAX	MAXIMUM
MFR	MANUFACTURER
MH	MANHOLE, MOUNTING HEIGHT
MIN	MINIMUM
MOV	MOTOR OPERATED VALVE
MTD	MOUNTED
MTG	MOUNTING
NA	INTRUSION ALARM
N/C OR NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N/O OR NO	NORMALLY OPEN
NO. OR #	NUMBER
NS	INTRUSION SWITCH
NTS	NOT TO SCALE
OC	ON CENTER
P	POLE
PAH	PRESSURE ALARM, HIGH
PAL	PRESSURE ALARM, LOW
P&ID	PROCESS AND INSTRUMENTATION DIAGRAM
PB	PULL BOX
PC	PHOTO CELL
PFA	POWER FAILURE ALARM
PH	PHASE
PID	PROPORTIONAL, INTEGRAL, AND DERIVATIVE (TUNING)
PLC	PROGRAMMABLE LOGIC CONTROLLER
P/L	PROPERTY LINE
PNL	PANEL
PSH	PRESSURE SWITCH, HIGH
PSL	PRESSURE SWITCH, LOW
PT	PRESSURE TRANSMITTER
PTT	PUSH–TO–TEST
PVC	POLYVINYL CHLORIDE
ø	PHASE
REQD	REQUIRED
REQMT	REQUIREMENT
RTU	REMOTE TERMINAL UNIT
SCCR	SHORT–CIRCUIT CURRENT RATING
SHT	SHEET
SPDT	SINGLE–POLE, DOUBLE–THROW
SPEC	SPECIFICATION
SPST	SINGLE–POLE, SINGLE–THROW
S/N	SOLID NEUTRAL
S/S	START–STOP
SW	SWITCH
TB	TERMINAL BLOCK, OR TERMINAL BOX
TC, T/C	TIME CLOCK
TD	TIME DELAY
TERM	TERMINAL
TYP	TYPICAL
TSP	TWISTED SHIELDED PAIR, #16 AWG
TST	TWISTED SHIELDED TRIAD, #16 AWG
UL	UNDERWRITER'S LABORATORY
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTABLE POWER SUPPLY
UG	UNDERGROUND
UGPS	UNDERGROUND PULL SECTION
V	VOLTAGE
VA	VOLT–AMPERES
VFD	VARIABLE FREQUENCY DRIVE
XFMR	TRANSFORMER
XTMR	TRANSMITTER
W	WATT
WH	WATTHOUR
WP	WEATHERPROOF
WR	WEATHER–RESISTANT
WT	WATER TIGHT
Z	IMPEDANCE
ZS	LIMIT SWITCH
3W	THREE–WIRE
4W	FOUR–WIRE

NOTES

NOT ALL SYMBOLS AND ABBREVIATIONS MAY APPEAR ON THE ACCOMPANYING CONTRACT PLANS OR ELSEWHERE IN THE CONTRACT DOCUMENT FOR THIS PROJECT.

REVISIONS

MARK		APPR	DATE

SEAL – ENGINEER

REGISTERED PROFESSIONAL ENGINEER — STEVEN R. ANDREWS — RCE 31259 — CIVIL — STATE OF CALIFORNIA

PLANS PREPARED BY:

STEVEN ANDREWS ENGINEERING
26501 RANCHO PARKWAY SOUTH, SUITE 204
LAKE FOREST, CA 92630
(949) 215–5050

SAE ENGINEERING

SCALE:

DATE: 05/16/23
DRAWN BY: CR
DESIGNED BY: PH
CHECKED BY: SA

PREPARED FOR:

EMERALD BAY est. 1961

EMERALD BAY SERVICE DISTRICT

APPROVED BY:

JOHN MARCONI - PRESIDENT
EBSD BOARD OF DIRECTORS

DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

ELECTRICAL SYMBOLS LIST, ABBREVIATIONS

SHEET 7 OF 14

EBSD SEWER LIFT STATION NO. 3

COASTAL COMMISSION SUBMITTAL - NOT FOR CONSTRUCTION 05-15-23

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SERVICE LOAD CALCULATIONS

SERVICE LOAD CALCULATIONS	KVA	AMPS @ 480V
40HP BOOSTER PUMP P-1	41	52
40HP BOOSTER PUMP P-2	41	52
500VA CONTROL XFMR	0.5	1
25% LML	10	13
TOTAL	94	118

GENERAL NOTES:

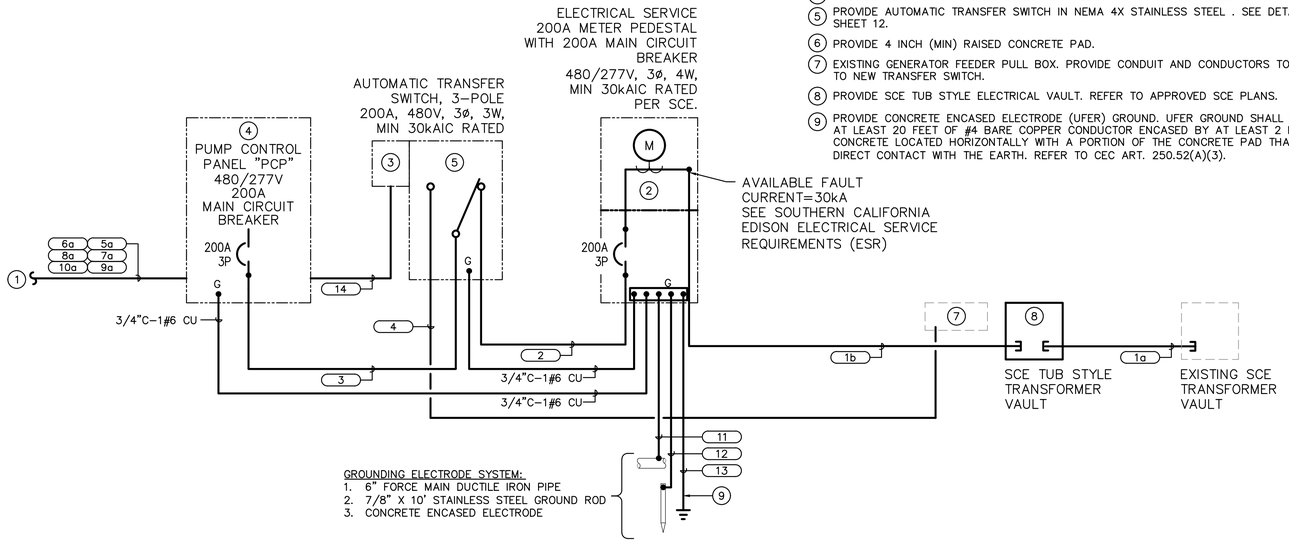
1. ALL EQUIPMENT SHOWN ON THE SINGLE LINE DIAGRAM IS NEW UNLESS OTHERWISE NOTED.
2. ALL CIRCUIT BREAKERS SHALL BE FULLY RATED.
3. OBTAIN APPROVAL FROM SOUTHERN CALIFORNIA EDISON OF THE TUB STYLE TRANSFORMER VAULT, UTILITY METER AND MAIN CIRCUIT BREAKER AND SUBMIT A COPY OF APPROVAL TO THE ENGINEER PRIOR TO PURCHASE OF EQUIPMENT.

CONSTRUCTION NOTES

1. PROVIDED CONDUIT, CONDUCTORS AND FINAL CONNECTIONS TO PREPACKAGED OLDCASTLE SEWAGE LIFT STATION ASSEMBLY. SEE SHEET 6.
2. PROVIDE NEMA 4X STAINLESS STEEL SCE METER PEDESTAL. SEE DETAIL 10 ON SHEET 12.
3. PROVIDE FLOWMETER TRANSMITTER IN NEMA 4X ENCLOSURE. SEE DETAIL 13 ON SHEET 12.
4. PROVIDE NEMA 4X STAINLESS STEEL PUMP CONTROL PANEL. SEE SHEET 9.
5. PROVIDE AUTOMATIC TRANSFER SWITCH IN NEMA 4X STAINLESS STEEL . SEE DETAIL 11 ON SHEET 12.
6. PROVIDE 4 INCH (MIN) RAISED CONCRETE PAD.
7. EXISTING GENERATOR FEEDER PULL BOX. PROVIDE CONDUIT AND CONDUCTORS TO PULL BOX TO NEW TRANSFER SWITCH.
8. PROVIDE SCE TUB STYLE ELECTRICAL VAULT. REFER TO APPROVED SCE PLANS.
9. PROVIDE CONCRETE ENCASED ELECTRODE (UFER) GROUND. UFER GROUND SHALL CONSIST OF AT LEAST 20 FEET OF #4 BARE COPPER CONDUCTOR ENCASED BY AT LEAST 2 INCHES OF CONCRETE LOCATED HORIZONTALLY WITH A PORTION OF THE CONCRETE PAD THAT IS IN DIRECT CONTACT WITH THE EARTH. REFER TO CEC ART. 250.52(A)(3).

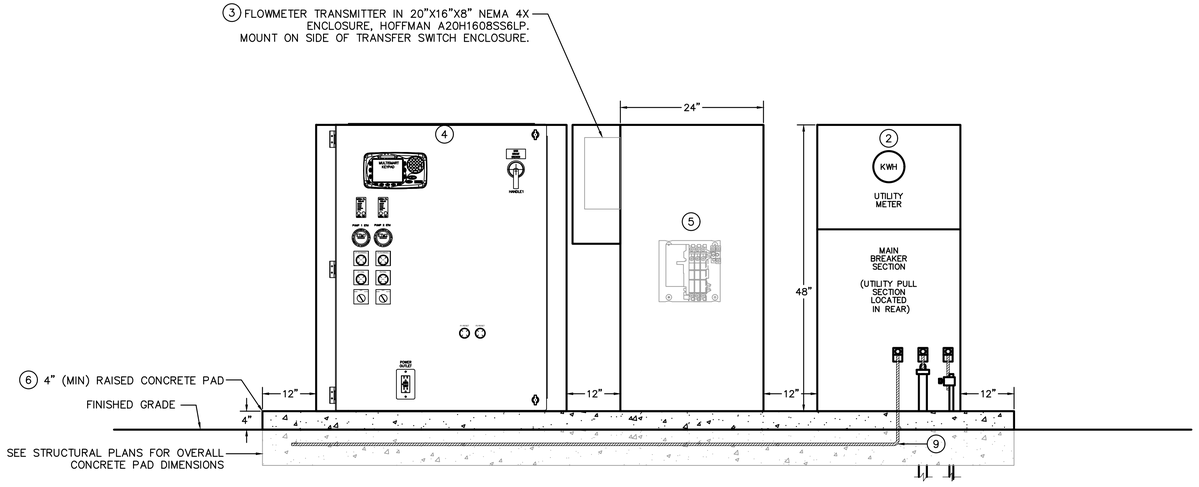
CONDUIT AND CONDUCTOR SCHEDULE						
CONDUIT NO.	CONDUIT QTY.	CONDUIT SIZE (IN)	CONDUIT FILL	FROM	TO	REMARKS
1a	2	5	PULL STRING	EXISTING UTILITY VAULT	LIFT STATION UTILITY VAULT	PER APPROVED SCE PLANS
1b	2	4	PULL STRING	LIFT STATION UTILITY VAULT	200A METER PEDESTAL	PER APPROVED SCE PLANS
2	1	2	4#3/0 & 1#6G	200A METER PEDESTAL	AUTOMATIC TRANSFER SWITCH	PER APPROVED SCE PLANS
3	1	2	4#3/0 & 1#6G	AUTOMATIC TRANSFER SWITCH	PUMP CONTROL PANEL 'PCP'	
4	1	2	4#3/0 & 1#6G	AUTOMATIC TRANSFER SWITCH	EXISTING GENERATOR FEEDER PULL BOX	
5a	1	1 1/4	3#4 & 1#8G & 2#12	PUMP CONTROL PANEL 'PCP'	EXPLOSION-PROOF J-BOX IN N48 PULL BOX	SEWER LIFT PUMP #1
5b	1	1 1/4	3#4 & 1#8G & 2#12	EXPLOSION-PROOF J-BOX IN N48 PULL BOX	SEWER LIFT PUMP #1	SEWER LIFT PUMP #1
6a	1	1 1/4	3#4 & 1#8G & 2#12	PUMP CONTROL PANEL 'PCP'	EXPLOSION-PROOF J-BOX IN N48 PULL BOX	SEWER LIFT PUMP #2
6b	1	1 1/4	3#4 & 1#8G & 2#12	EXPLOSION-PROOF J-BOX IN N48 PULL BOX	SEWER LIFT PUMP #2	SEWER LIFT PUMP #2
7a	1	2	8#12 & 1#12G	PUMP CONTROL PANEL 'PCP'	EXPLOSION-PROOF J-BOX IN N48 PULL BOX	FLOAT SWITCHES
7b	1	2	8#12 & 1#12G	EXPLOSION-PROOF J-BOX IN N48 PULL BOX	LIFT STATION WET WELL	FLOAT SWITCHES
8a	1	2	FACTORY CABLE	PUMP CONTROL PANEL 'PCP'	EXPLOSION-PROOF J-BOX IN N48 PULL BOX	LEVEL TRANSDUCER
8b	1	2	FACTORY CABLE	EXPLOSION-PROOF J-BOX IN N48 PULL BOX	LIFT STATION WET WELL	LEVEL TRANSDUCER
9a	1	1	2#12 & 1#12G	PUMP CONTROL PANEL 'PCP'	EXPLOSION-PROOF J-BOX IN N30 PULL BOX	BACKUP FLOAT SWITCH
9b	1	1	2#12 & 1#12G	EXPLOSION-PROOF J-BOX IN N30 PULL BOX	LIFT STATION WET WELL	BACKUP FLOAT SWITCH
10a	1	1	FACTORY CABLE	FLOW METER ENCLOSURE ON TRANSFER SW	EXPLOSION-PROOF J-BOX IN N30 PULL BOX	FLOW METER
10b	1	1	FACTORY CABLE	EXPLOSION-PROOF J-BOX IN N30 PULL BOX	VALVE VAULT	FLOW METER
11	1	3/4	1#6G	GROUND BUS IN METER PEDESTAL	6" FORCE MAIN DUCTILE IRON PIPE	
12	1	3/4	1#4G	GROUND BUS IN METER PEDESTAL	GROUND ROD	
13	1	3/4	1#6G	GROUND BUS IN METER PEDESTAL	CONCRETE ENCASED ELECTRODE	
14	1	3/4	2#12 & 1#12G	PUMP CONTROL PANEL 'PCP'	FLOW METER	120 VAC TO FLOWMETER TRANSMITTER

CONDUIT AND CONDUCTOR SCHEDULE



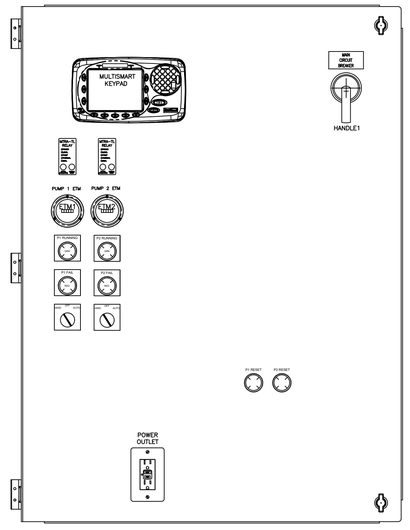
SINGLE LINE DIAGRAM

NO SCALE

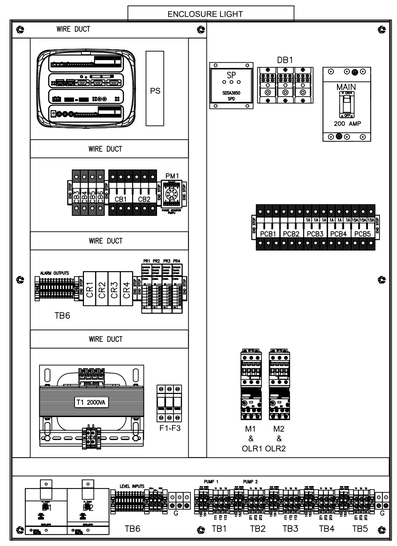


ELEVATION: ELECTRICAL SERVICE UTILITY METER PEDESTAL

NOT TO SCALE



PUMP CONTROL PANEL FRONT VIEW SWING PANEL



PUMP CONTROL PANEL FRONT VIEW

PUMP CONTROL PANEL LAYOUT

(FURNISHED BY PUMP SUPPLIER, INSTALLED BY CONTRACTOR)

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-422-4133

REVISIONS			
MARK		APPR	DATE

SEAL – ENGINEER

REGISTERED PROFESSIONAL ENGINEER STEVEN R. ANDREWS RCE 31259 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:
STEVEN ANDREWS ENGINEERING
26501 RANCHO PARKWAY SOUTH, SUITE 204
LAKE FOREST, CA 92630
(949) 215-5050
SA ENGINEERING

SCALE:	
DATE:	05/16/23
DRAWN BY:	CR
DESIGNED BY:	PH
CHECKED BY:	SA

PREPARED FOR: EMERALD BAY est. 1961

EMERALD BAY SERVICE DISTRICT
APPROVED BY:
JOHN MARCONI - PRESIDENT
EBSD BOARD OF DIRECTORS
DATE

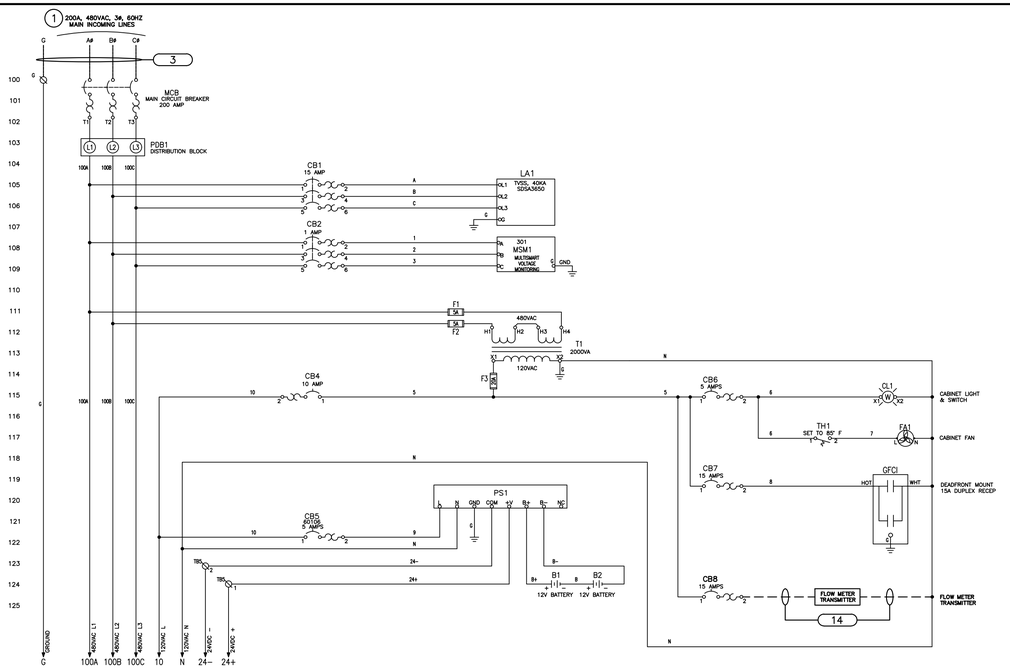
EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

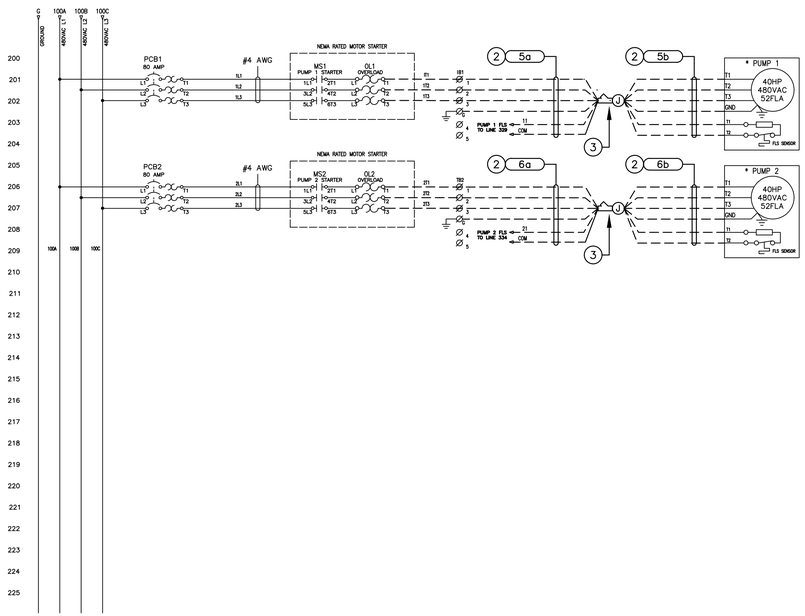
SINGLE LINE DIAGRAM AND ELECTRICAL EQUIPMENT ELEVATIONS

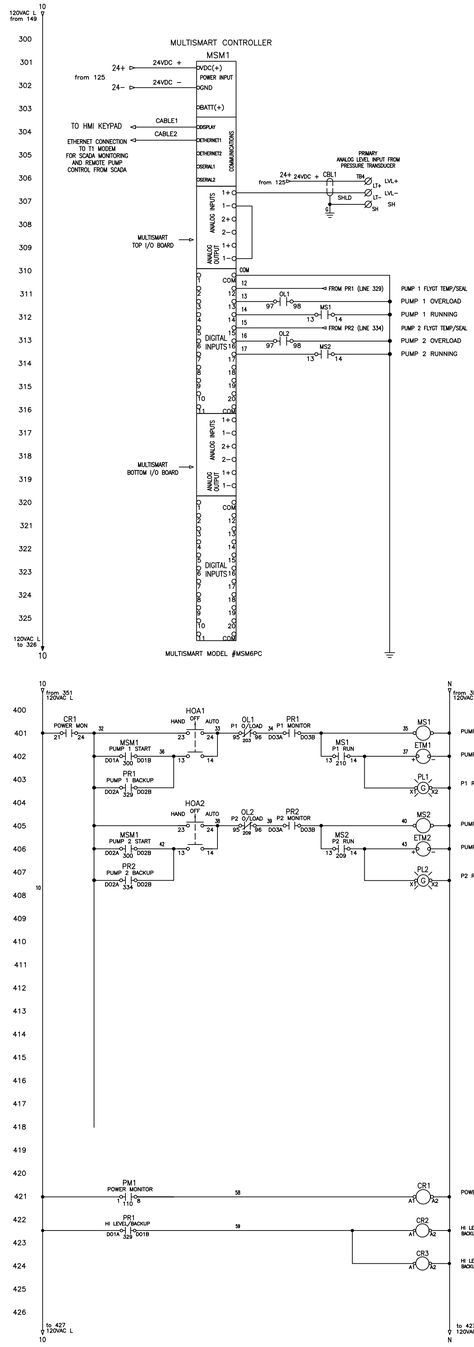
SHEET 8 OF 14

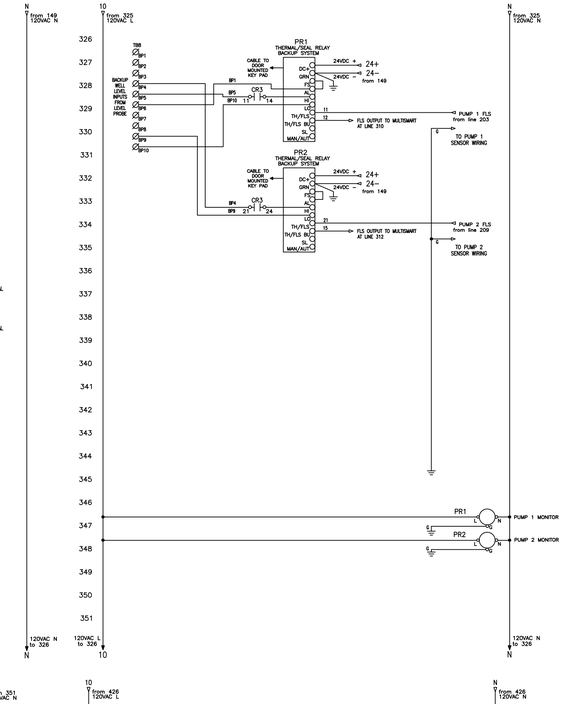
COASTAL COMMISSION SUBMITTAL - NOT FOR CONSTRUCTION 05-15-23

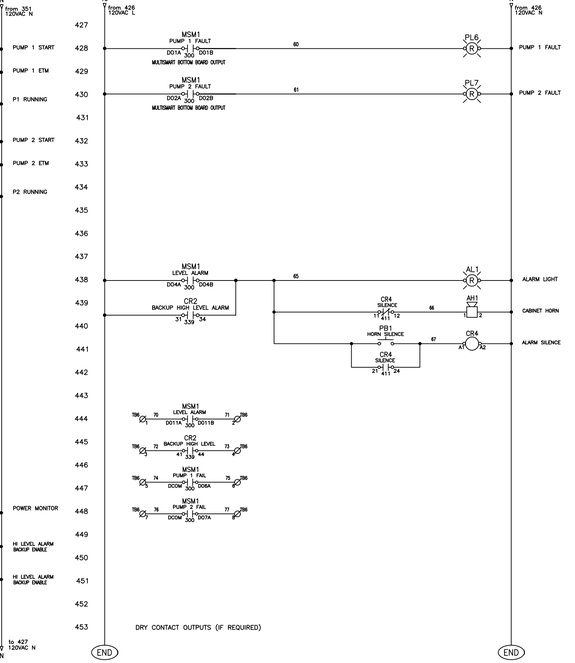
EBSD SEWER LIFT STATION NO. 3











CONSTRUCTION NOTES

1. PROVIDE INCOMING 480V POWER CONDUIT, CONDUCTORS, AND FINAL CONNECTIONS TO PUMP CONTROL PANEL. REFER TO SHEET 8 FOR CONDUIT AND CONDUCTOR SCHEDULE.
2. PROVIDE 480V POWER CONDUIT, CONDUCTORS, AND FINAL CONNECTIONS FROM CONTROL PANEL TO SUBMERSIBLE PUMPS . REFER TO SHEET 8 FOR CONDUIT AND CONDUCTOR SCHEDULE.
3. PROVIDE EXPLOSION-PROOF J-BOX AND CONDUIT SEALS. SEE DETAIL 15 ON SHEET 13.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-422-4133

PUMP CONTROL PANEL FURNISHED BY PUMP VENDOR AND INSTALLED BY CONTRACTOR. SCHEMATIC DIAGRAM IS SHOWN FOR REFERENCE ONLY.

REVISIONS			
MARK		APPR	DATE

SEAL – ENGINEER: REGISTERED PROFESSIONAL ENGINEER · STEVEN R. ANDREWS · RCE 31259 · CIVIL · STATE OF CALIFORNIA

PLANS PREPARED BY:
STEVEN ANDREWS ENGINEERING
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(949) 215-5050
SA ENGINEERING

SCALE:	
DATE:	05/16/23
DRAWN BY:	CR
DESIGNED BY:	PH
CHECKED BY:	SA

PREPARED FOR: EMERALD BAY est. 1961

EMERALD BAY SERVICE DISTRICT
APPROVED BY:
JOHN MARCONI - PRESIDENT, EBSD BOARD OF DIRECTORS — DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

SCHEMATIC DIAGRAMS

SHEET 9 OF 14

COASTAL COMMISSION SUBMITTAL - NOT FOR CONSTRUCTION 05-15-23

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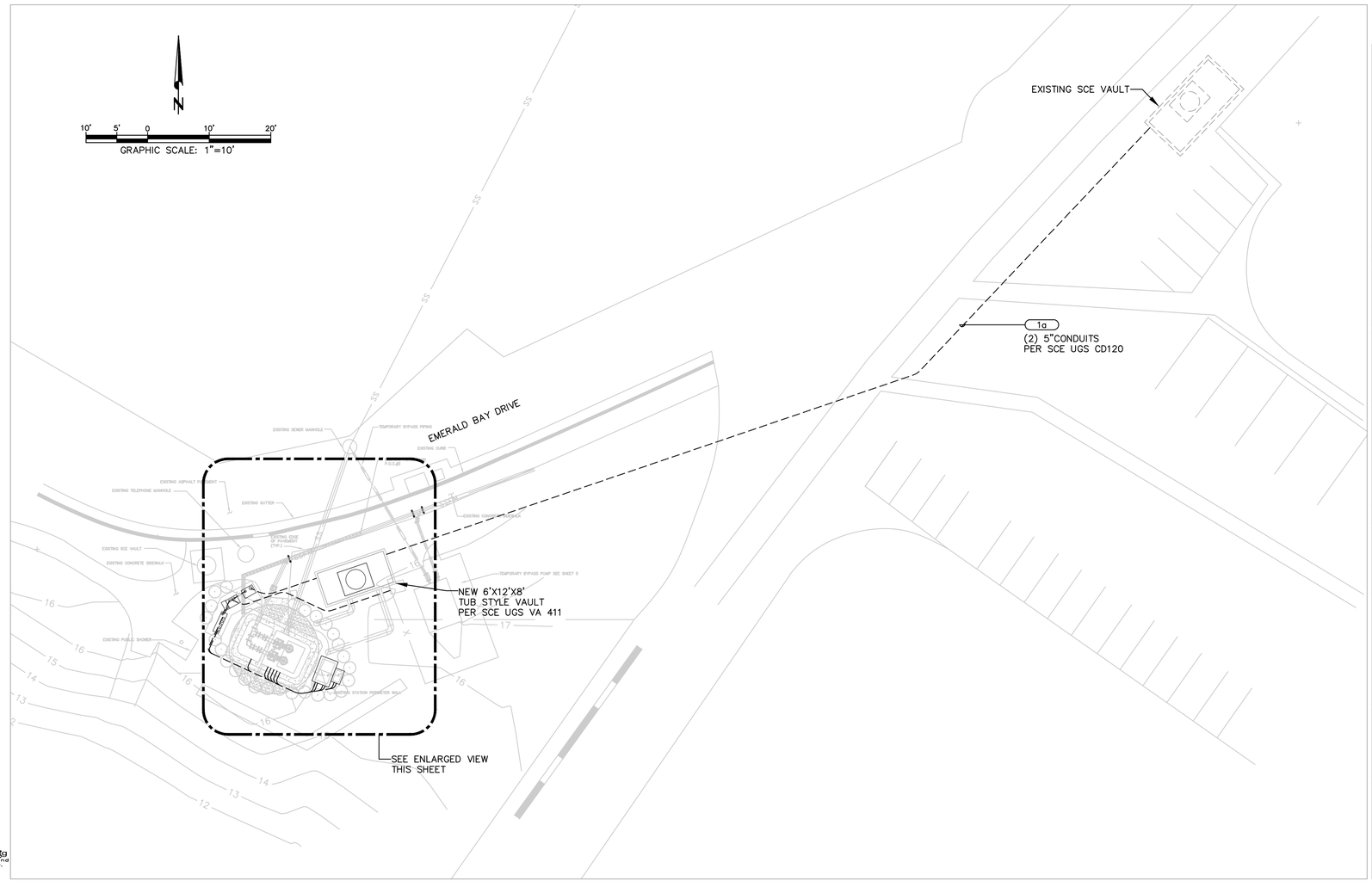
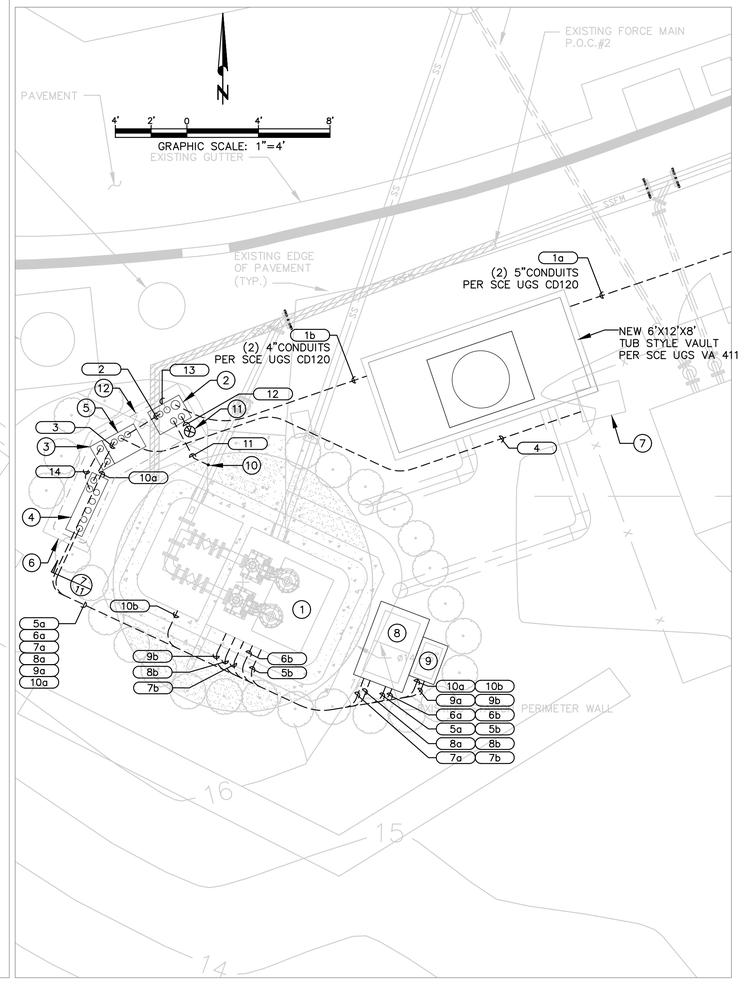
EBSD SEWER LIFT STATION NO. 3

CONSTRUCTION NOTES

1. PREPACKAGED OLDCASTLE SEWAGE LIFT STATION ASSEMBLY. SEE SHEET 6.
2. PROVIDE NEMA 4X STAINLESS STEEL SCE METER PEDESTAL. SEE SHEET 8 AND DETAIL 10 ON SHEET 12.
3. PROVIDE FLOWMETER TRANSMITTER IN 20"X16"X8" NEMA 4X ENCLOSURE, HOFFMAN A20H1608SS6LP. SEE DETAIL 13 ON SHEET 12.
4. PROVIDE NEMA 4X STAINLESS STEEL PUMP CONTROL PANEL. SEE SHEETS 8 AND 9.
5. PROVIDE AUTOMATIC TRANSFER SWITCH IN NEMA 4X STAINLESS STEEL ENCLOSURE. SEE SHEET 8 AND DETAIL 11 ON SHEET 12.
6. PROVIDE RAISED CONCRETE PAD. SEE SHEET 8.
7. EXISTING GENERATOR FEEDER PULL BOX. PROVIDE CONDUIT AND CONDUCTORS TO PULL BOX TO NEW TRANSFER SWITCH. REFER TO SINGLE LINE DIAGRAM ON SHEET 8.
8. PROVIDE OLDCASTLE N48 CONCRETE PULL BOX WITH GALVANIZED DIAMOND PLATE DOORS. SEE DETAILS 15,16&17 ON SHEET 13.
9. PROVIDE OLDCASTLE N30 CONCRETE PULL BOX WITH GALVANIZED DIAMOND PLATE DOORS. SEE DETAILS 15,16&17 ON SHEET 13.
10. PROVIDE GROUND CONNECTION TO METAL UNDERGROUND FORCEMAIN PIPE.
11. PROVIDE 7/8"X10' STAINLESS STEEL GROUND ROD.
12. PROVIDE UFER GROUND. SEE NOTE ON 9 ON SHEET 8.



ELECTRICAL SITE PLAN
SCALE: 1"=10'-0"



ENLARGED ELECTRICAL SITE PLAN
SCALE: 1"=4'-0"
NOTE: REFER TO SHEET 8 FOR CONDUIT AND CONDUCTOR SCHEDULE.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
or
1-800-422-4133

REVISIONS			
MARK		APPR	DATE

SEAL – ENGINEER
REGISTERED PROFESSIONAL ENGINEER
STEVEN R. ANDREWS
RCE 31259
CIVIL
STATE OF CALIFORNIA

PLANS PREPARED BY:
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SE ENGINEERING

SCALE:	
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PREPARED FOR:
EMERALD BAY est. 1961

EMERALD BAY SERVICE DISTRICT
APPROVED BY:
JOHN MARCONI - PRESIDENT
EBSD BOARD OF DIRECTORS
DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

ELECTRICAL SITE PLAN

SHEET 10 OF 14

EBSD SEWER LIFT STATION NO. 3

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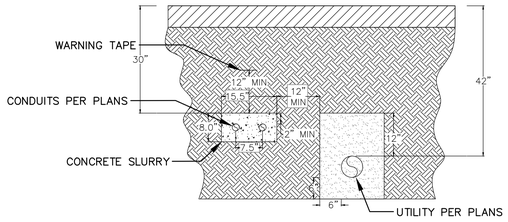

CONDUITS PARALLEL TO UTILITY (1)
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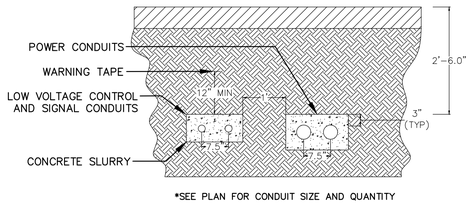

DUCT BANK CROSS SECTION (2)
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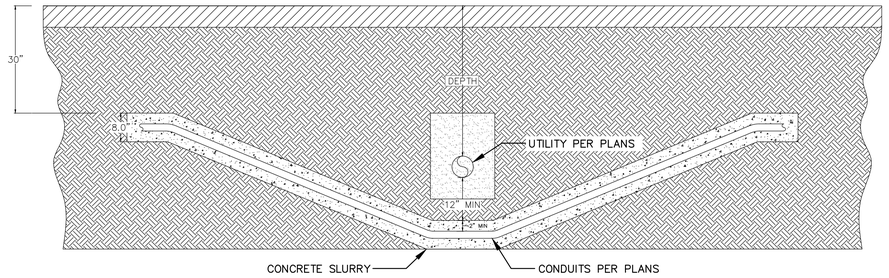

CONDUITS CROSSING UNDER UTILITY (3)
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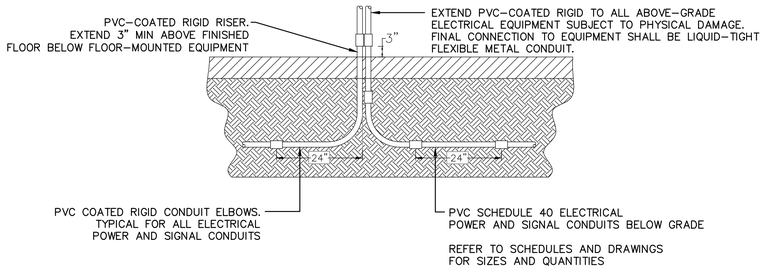

PVC COATED RIGID CONDUIT RISER (4)
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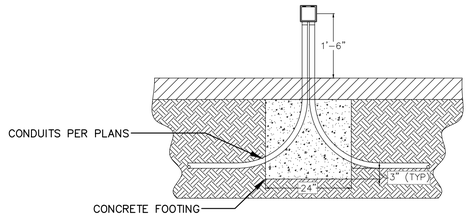
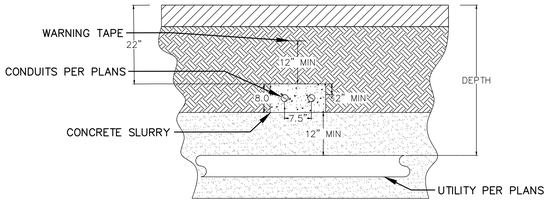
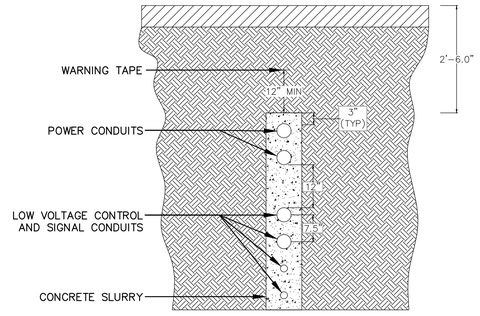


PVC COATED RIGID CONDUIT RISER AT DEVICE BOX (5)
NO SCALE

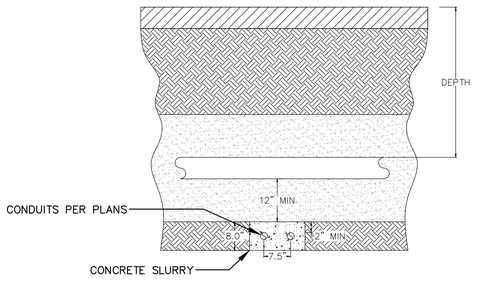


CONDUITS CROSSING OVER UTILITY (6)
NO SCALE

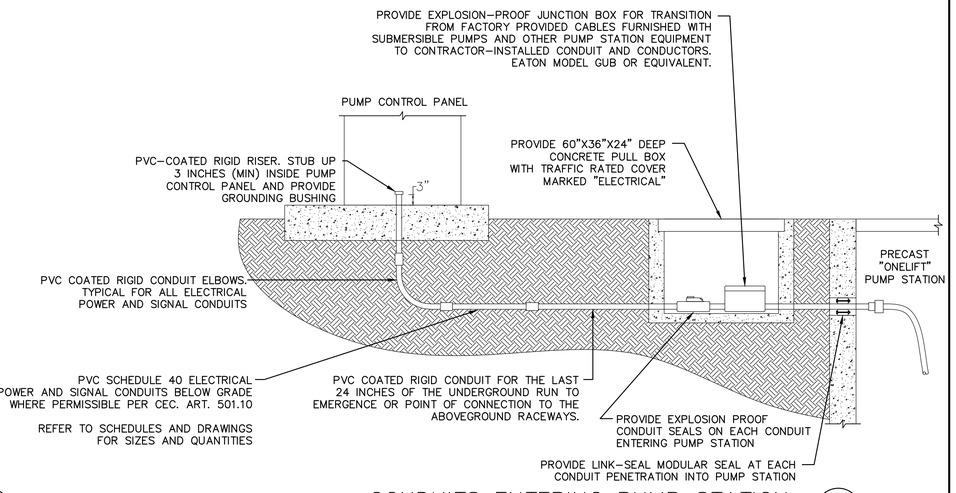


*SEE PLAN FOR CONDUIT SIZE AND QUANTITY. IT IS PERMISSIBLE TO REDUCE SEPARATION DISTANCE BETWEEN POWER CONDUITS AND CONTROL AND SIGNAL CONDUITS WHEN TRANSITIONING TO RISERS AND AT EQUIPMENT TERMINATIONS.

CONDUITS IN VERTICAL ALIGNMENT (7)
NO SCALE



CONDUITS CROSSING UNDER UTILITY (8)
NO SCALE



CONDUITS ENTERING PUMP STATION (9)
NO SCALE

NOTE: THIS DETAIL IS DIAGRAMMATIC ONLY. REFER TO SITE PLAN FOR ACTUAL ARRANGEMENT OF ITEMS SHOWN.

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REVISIONS			
MARK		APPR	DATE

SEAL – ENGINEER

REGISTERED PROFESSIONAL ENGINEER
STEVEN R. ANDREWS
RCE 31259
CIVIL
STATE OF CALIFORNIA

PLANS PREPARED BY:

STEVEN ANDREWS ENGINEERING
26501 RANCHO PARKWAY SOUTH, SUITE 204
LAKE FOREST, CA 92630
(949) 215-5050

SA ENGINEERING

SCALE:

DATE: 05/16/23
DRAWN BY: CR
DESIGNED BY: PH
CHECKED BY: SA

PREPARED FOR:

EMERALD BAY est. 1961

EMERALD BAY SERVICE DISTRICT

APPROVED BY:

JOHN MARCONI - PRESIDENT
EBSD BOARD OF DIRECTORS

DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

ELECTRICAL DETAILS

SHEET 11 OF 14

COASTAL COMMISSION SUBMITTAL - NOT FOR CONSTRUCTION 05-15-23

Proj. Data: G:\My Drive\D drive\Engineering\SA\Engineering\EBSD Sewer Lift Station\CAD
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File: EBSD Electrical Sheets.dwg
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Plot Date: 05.15.2023 8:42:37 PM By: Test

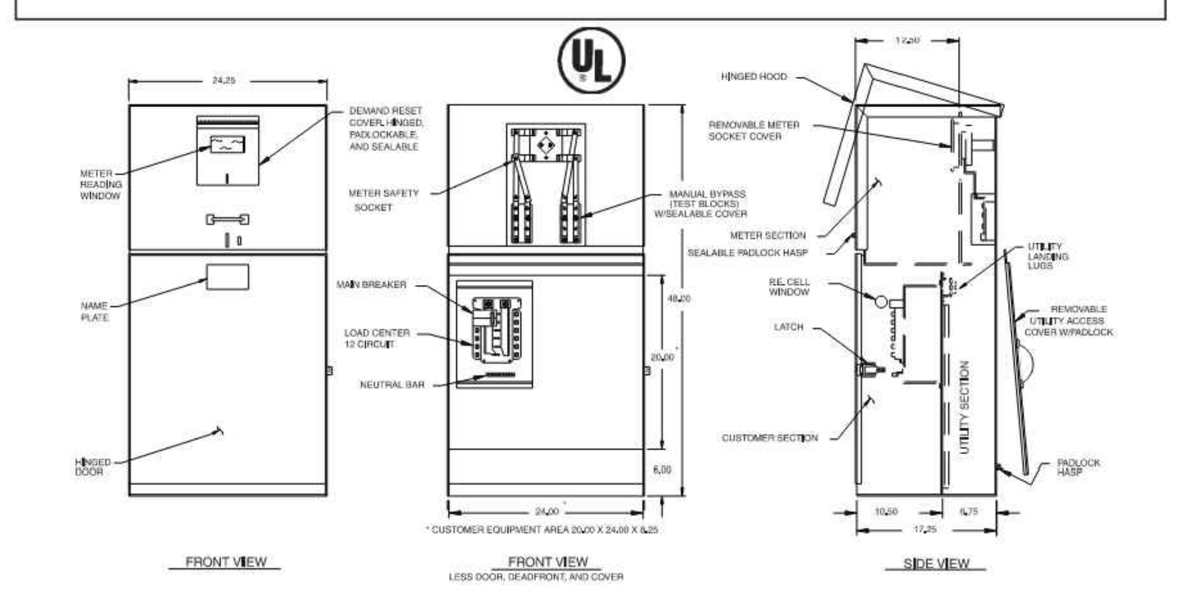
EBSD SEWER LIFT STATION NO. 3

DWG Name: C:\Users\Test\AppData\Local\Temp\AcPublish_4492\EBSD Electrical Sheets.dwg Plotted by: Test on May 15, 2023 - 20:42:37

MYERS Power Products, Inc.

MEUG24-S
(formerly MEUGLD-S)
Caltrans Type III-BF

Designed to supply metered power to remote locations.
Typical applications included parking lot lighting, pump stations, and street lighting.



STANDARD FEATURES

- Standard voltage 120/240V 1ø 3W.
- Meter Socket: 4 jaw, 100 amps or 200 amps.
- Meter socket with test blocks.
- 12 circuit copper bussed interior.
- Main Breaker: 100 amp or 200 amp, 10k AIC.
- Utility Landing Lugs: 200 amps, 250 kcmil.
- Utility test section.
- Vandal-resistant hinged door and dead front.
- Light green powder coat finish in accordance with ASTM B-117. Custom colors available.

OPTIONAL FEATURES

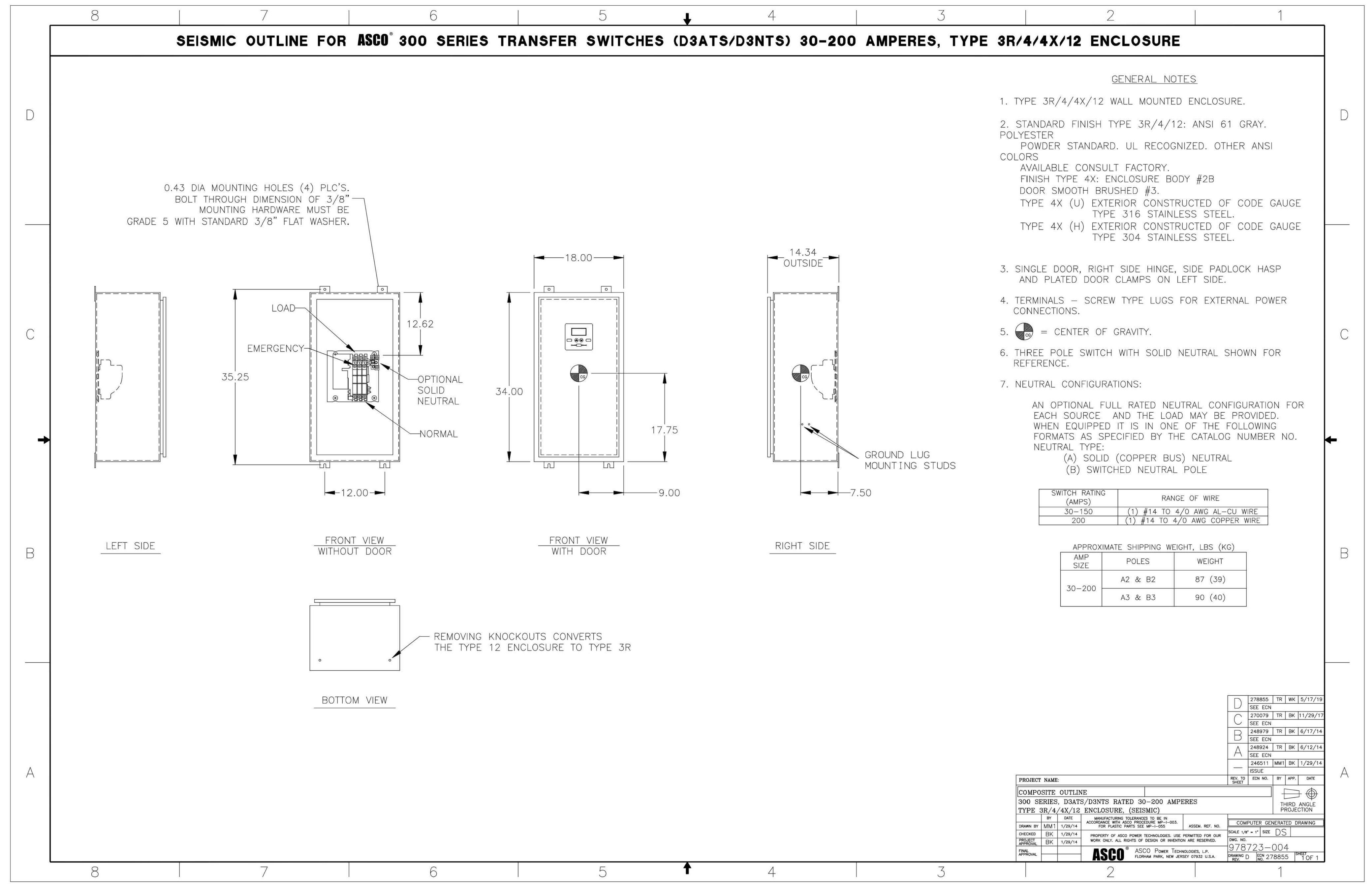
- Maximum voltage 480Y/277V 3ø 4W (may effect optional equipment).
- 12 circuit interior may be increased to 30 circuit.
- Higher AIC available upon request.
- P.E. cell, test switch, lighting relay may be added to standard.
- Some equipment modifications available. Consult your factory representative.
- Meter Sockets: 5 or 7 jaw, 100 amps or 200 amps.
- Uni-body construction available in steel, stainless steel, and aluminum.
- Pad Mounting Base available for concrete foundation. Order separately - MEUG24-BASE.
- Anchor Bolts. Order separately - 714548 (quantity 4).

SPECIFICATIONS

- 12-gauge corrosion-resistant zinc-coated steel construction. Hood and covers 14-gauge.
- Rainproof Type 3R enclosure.
- Complies with Caltrans specification ES-2E.
- Meets EUSERC 308 requirements.
- All factory wiring is 600 volt rated copper.
- Acceptable circuit breakers are GE, ITE, Crouse-Hinds/Murray, Cutler-Hammer.
- Suitable for use without main when no more than six service disconnects are installed and used in accordance with article 384 of the NEC.
- Listed by Underwriters Laboratories, Inc.

10/19/04

UTILITY METER PEDESTAL (10)
NO SCALE



AUTOMATIC TRANSFER SWITCH (11)
NO SCALE

EDISON

13.0 Short-Circuit Current

Where state and/or local building inspection agencies require that customers install service equipment with overcurrent protective devices with a short-circuit rating equal to or not less than the available short-circuit current at its supply terminal, the customer should obtain from SCE, the Company's contribution to short-circuit currents at the customer's service entrance.

The Company's contribution to short-circuit currents, at the customer's service entrance, will be as follows for the applicable type of service to be rendered.

13.1 10000 A and Below (100–400 Maximum Amperes Self-Contained Type Meter Panels)

The Company's contribution to the available short-circuit current at the service entrance will not exceed 10000 A for single-family dwellings, duplexes, or individually metered mobile homes that use self-contained type Company meters.

Temporary service, when served from a single-phase 120/240 V transformer, will not exceed 10000 A. Self-contained 300/400 A (Class 320) type meter panels are not acceptable for temporary service.

13.2 Greater than 10000 A—Multi-Family Residential (Three or More Grouped Meters), Commercial, and Industrial

Table 1–5: Short-Circuit Current

Phase	Serving Voltage	Service Entrance Ampacities	Utilities Contribution to Fault Current will Not Exceed
Single	120/240	600 or less	42,000
Three	120/208 or 240	800 or less	42,000
Three	480	1200 or less	30,000

13.3 Exceptional Cases

When the application of the above fault current limitation appears too restrictive for new installations, the customer may request the utility to provide the available fault currents for a specific case and location.

All new installations with service voltage or service entrance ampacities larger than those stated above will be handled as individual cases, and the Company will provide the available fault duty for each installation.

14.0 Electric and Magnetic Fields

Electric and magnetic fields are also known as "electromagnetic fields" or "EMF." Electric and magnetic fields are a natural result of electricity. Whenever an electric charge or current is present, either natural or man-made, electric and magnetic fields occur. Electric power distribution facilities generate both electric and magnetic fields.

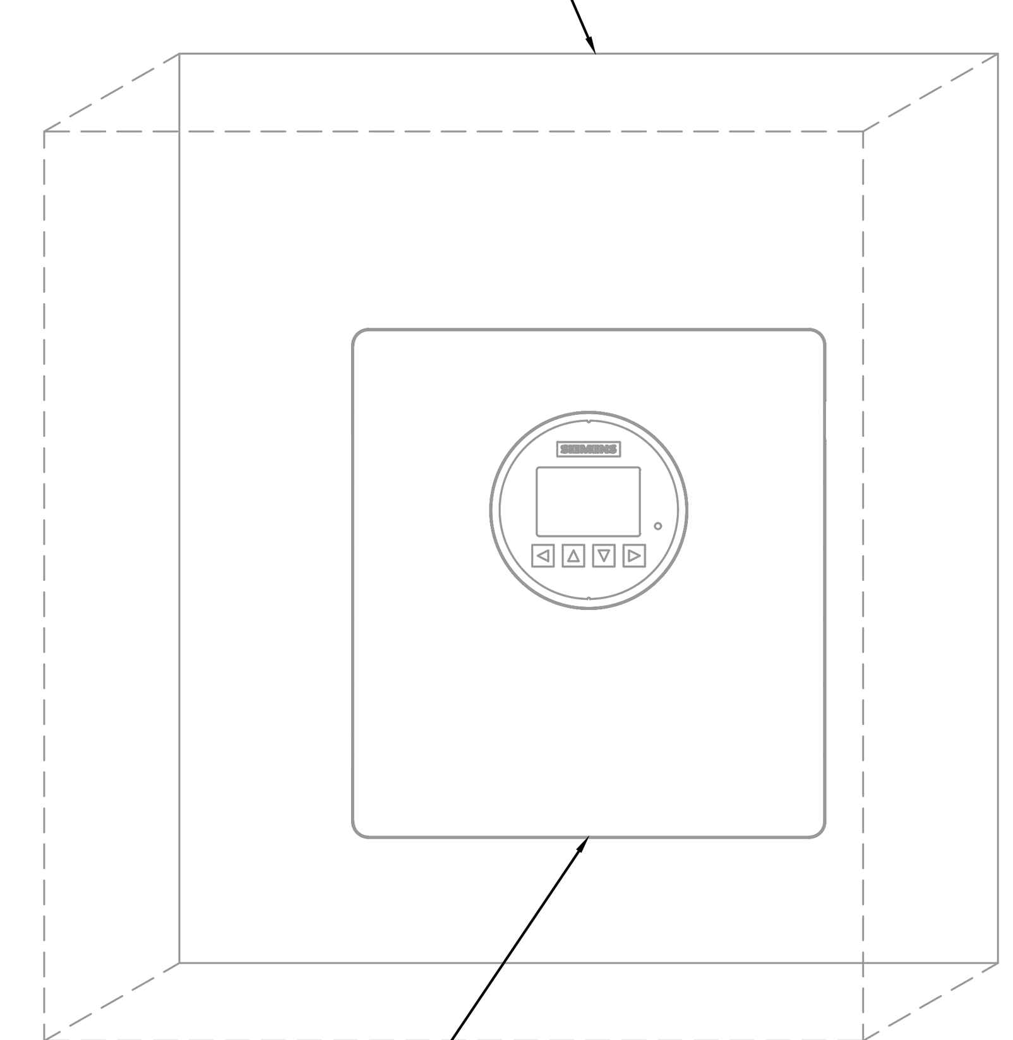
14.1 Electric Fields

Electric fields result when voltage is present. The strength "E" of electric fields is represented by "volts per meter." As the distance increases from the source, the electric field strength decreases rapidly.

EFFECTIVE DATE 4-26-2019	General Information	ESR–1
APPROVED	Electrical Service Requirements ►SCE Public◄	PAGE 1–27

SCE SHORT–CIRCUIT CURRENT (12)
NO SCALE

INSTALL FLOWMETER TRANSMITTER IN 20"X16"X8" NEMA 4X ENCLOSURE, HOFFMAN A20H1608SS6LP.



FLOWMETER TRANSMITTER

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Flow Measurement
SITRANS F S Clamp-on
Flowmeter SITRANS FS230

Overview

SITRANS F S clamp-on ultrasonic flowmeters provide highly accurate measurement while minimizing installation time and maintenance expense.

Benefits

- Easy installation; no need to cut pipe or stop flow
- Minimal maintenance; external sensors do not require periodic cleaning
- No moving parts to foul or wear
- No pressure drop or energy loss
- Wide turn-down ratio
- Choice of single and dual path versions to suit your operating conditions and requirements.

System performance

Approvals	• ATEX Zone 2 • IECEx Zone 2 • FM/c Class I Div. 2
Accuracy	± 0.5 ... 1 % for velocities above 0.3 m/s and >10 diameters straight run
Repeatability	± 0.25 % (based on ISO 11631)
Pipe size range	12.7 ... 10 m (0.5 ... 394")
Wall Thickness Range	0.64 ... 76.2 mm (0.025 ... 3.0")
Pipe material	Any sonically conductive material (steel, plastic, aluminum, glass, cement, ductile iron, copper)

Applications

SITRANS FS230 standard functions are suitable for a wide variety of liquid applications, including the following:

- Water industry
  - Raw water
  - Potable water
  - Chemicals
- Wastewater industry
  - Raw sewage
  - Effluent
  - Sludges
  - Mixed liquor
  - Chemicals
- HVAC industry
  - Condensers
  - Hot and cold water systems
- Power industry
  - Nuclear
  - Fossil
  - Hydroelectric
- Processing industry
  - Process control
  - Batching
  - Rate indication
  - Volumetric and mass measurement

SITRANS FS230 hydrocarbon functions are ideal for applications carrying crude oil, refined petroleum or liquefied gas.

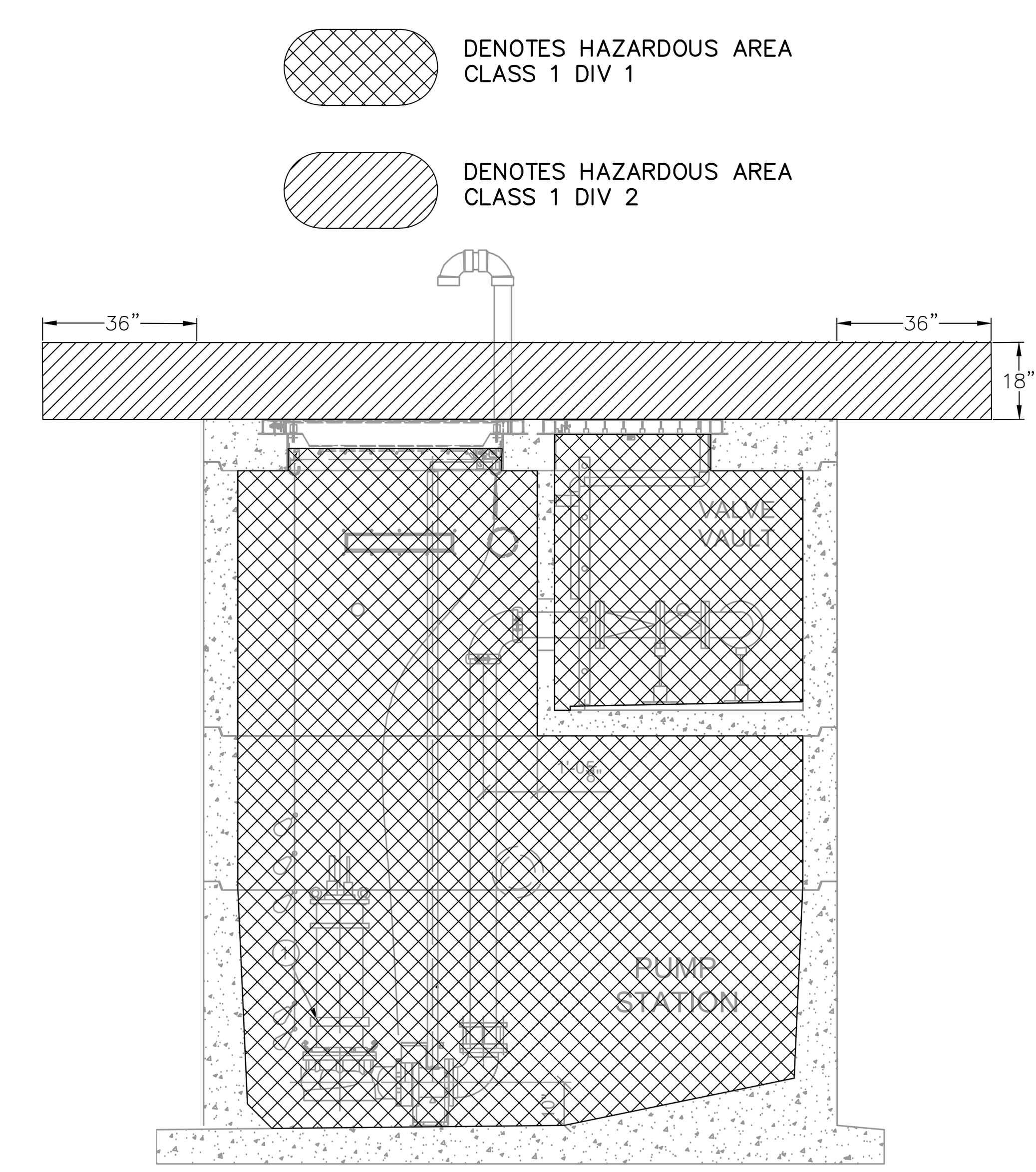
Standard volume (high end system)

- Standard (net) volume flow measurement
- Suitable for use in leak detection systems
- Mass flow output measurement
- Chemical and petrochemical processing
- Precise identification of interfaces on multi-liquid pipelines
- Product identification
- Standard density indication
- Applications with multiple liquids having a wide viscosity range
- Automatic gross volume compensation due to viscosity

3

Siemens FI 01 · News January 2017 1

FLOW METER TRANSMITTER (13)
NO SCALE



AREA CLASSIFICATION (14)
NO SCALE

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REGISTERED PROFESSIONAL ENGINEER STEVEN R. ANDREWS RCE 31259 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:
STEVEN ANDREWS ENGINEERING
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DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

ELECTRICAL DETAILS

SHEET 12 OF 14

EBSD SEWER LIFT STATION NO. 3

COASTAL COMMISSION SUBMITTAL - NOT FOR CONSTRUCTION 05-15-23

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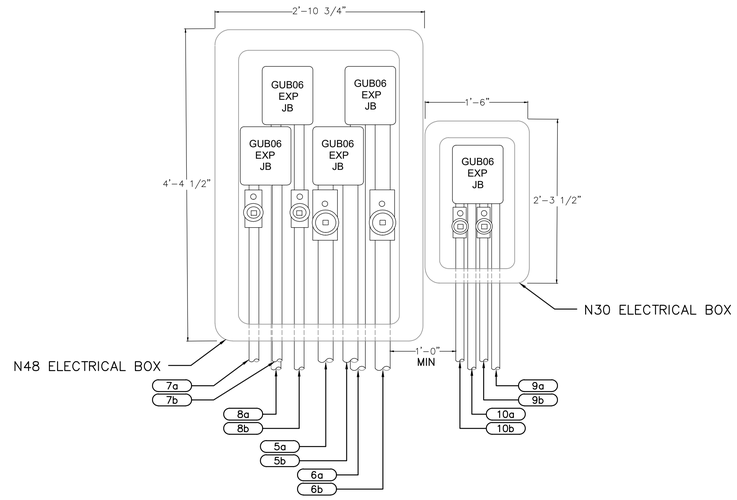
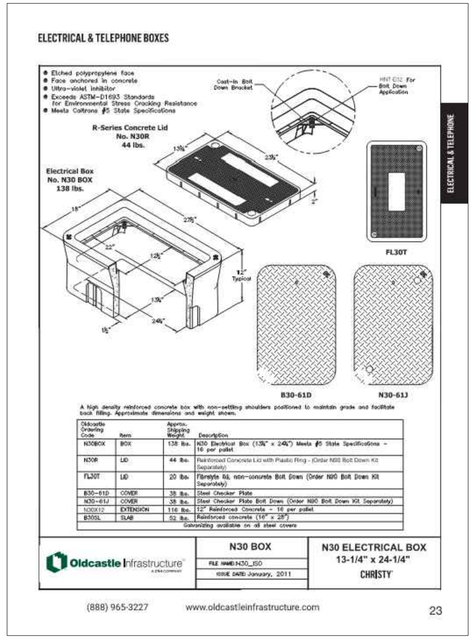
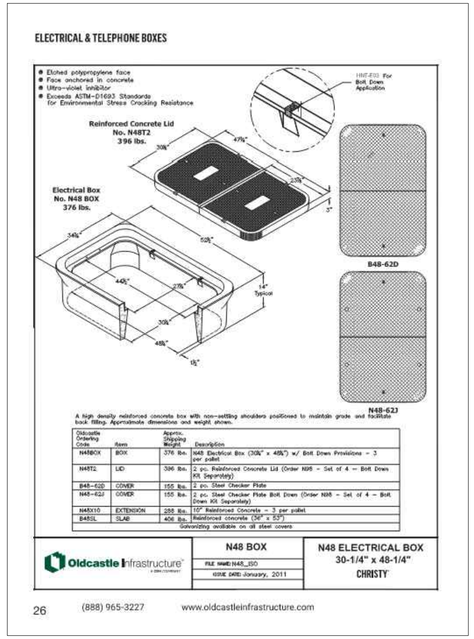


IN GRADE CONCRETE PULL BOX LAYOUT

NO SCALE

15





IN GRADE PULL BOX CUT SHEETS

NO SCALE

16

1E

GUE and GUB junction boxes

Cl. I, Div. 1 & 2, Groups B, C, D
Cl. II, Div. 1, Groups E, F, G
Cl. II, Div. 2, Groups F, G
Cl. III
NEMA 4❍, 7BCD, 9EFG
Ex d IIC T6, IP66❍
Ex d IIC, IP66, ATEX certified

Explosionproof
Dust-ignitionproof
Raintight
Wet locations
Watertight

1E

Applications:

GUE and GUB junction boxes are used in threaded rigid conduit systems in hazardous areas:

- To function as a splice box, pull box or equipment and device enclosure
- To house wiring
- Indoors and outdoors

Features:

- Threaded construction throughout permits use in hazardous areas
- Bodies have thick walls so they can be factory or field drilled and tapped to meet NEC/CEC requirements for Class I hazardous areas
- Covers are provided with a neoprene o-ring gasket to meet NEMA/EEMAC 4 requirements for a watertight seal❍
- Internal grounding lug provides a means to ground enclosed equipment
- Boxes are machined for field installed mounting plates
- GUB boxes are ATEX certified when ordered with suffix 'SA ATEX' (not available with GU and GUE)

Certifications and compliances:

NEC/CEC:

- Class I, Divisions 1 & 2, Groups B, C, D
- Class II, Division 1, Groups E, F, G
- Class II, Division 2, Groups F, G
- Class III

UL standard:

- UL1203

CSA standard:

- C22.2 No. 30

ATEX:

- Ex d IIC, IP66❍ ATEX Certificate: PTB 01 ATEX 1019 U
- Ex d IIC, IP66, ATEX certified

Standard materials:

- Bodies – Feraloy iron alloy
- Covers – copper-free aluminum

Standard finishes:

- Feraloy iron alloy – GU, GUE, GUB01 and GUB02 – electrogalvanized and aluminum acrylic paint; all other boxes – zinc chromate primer and aluminum acrylic paint
- Copper-free aluminum – natural

Junction boxes without hubs❍

GU
4⅞" × 4⅞" × 4⅛"
3¾" cover opening

GUE
9¼" × 9¼" × 5⅛"
3⅜" cover opening

GUB01
6⅞" × 7" × 5⅛"
5⅛" cover opening

GUB02
8" × 10" × 5⅛"
7" cover opening

GUB06
8⅛" × 10" × 6⅛"
7" cover opening

GUB03
11" × 12" × 8⅜"
9⅛" cover opening

GUB01110❍
14" × 18" × 13⅛"
12⅞" cover opening

GUB15151
19" × 21" × 10⅝"
10⅛" cover opening

GUB04
11" × 12" × 8⅜"
9⅛" cover opening

GUB08
8⅛" × 10" × 6⅞"
7" cover opening

Options:

Description	Suffix
Copper-free aluminum bodies and covers – *GUB01, GUB02, GUB03 and GUB06 only*	SA
ATEX certified – *GUB01 SA, GUB02 SA, GUB03 SA and GUB06 SA only*	SA ATEX❍
Factory installed mounting plate for relays, terminal blocks, electrical devices, etc.	MP
Factory installed terminal blocks	Contact factory

Ordering information:

Junction boxes listed can be furnished with drilled and tapped conduit openings, subject to the limitations of maximum opening, number and spacing shown in Tables 1, 2 and 4.

To order:

Step 1
Select the box required from photos at left and dimensional drawings on next page.

Step 2
Select standard conduit arrangement from Table 1.

Step 3
Determine maximum size conduit opening required from Table 2 (consider conduit opening spacing from Table 4).

Step 4
Select appropriate symbol for required drilled and tapped holes from Table 3.

Example:

Step 1 – box required: GUB06

Step 2 – arrangement: 108

Step 3 – openings – 1.67" at 'a' and 'c', 1" at 'b' and 'd'

Step 4 – symbols are substituted and written in **clockwise order starting with location 'a'.**

For this example:

FCFC complete catalog number is made up of three parts: Part 1 – box number; Part 2 – arrangement number; Part 3 – symbols for conduit openings. For this example: GUB06-108-FCFC. When no opening is required at a particular location, use symbol '0' (zero).

If none of the standard arrangements meet requirements, send a sketch showing junction box number with size and location of each opening desired.

❍NEMA 4 not available on GUB01110 and GUB15151.
❍Order suffix 'SA ATEX'. GUB01110 and GUB15151 are rated IP66.
❍GUB01110 listed for Class I, Division 1, Groups C, D only in Canada (CSA).
❍Dimensions provided are external.
❍Please consult Modified Products for conduit entry arrangement options.
For conduit liner ordering information, see Section 6E.

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EATON CROUSE-HINDS SERIES

5F

EYSX expanded fill sealing fittings

Cl. I, Div. 1 & 2, Groups A, B, C, D❍
Cl. II, Div. 1 & 2, Groups E, F, G
Cl. III❍

Explosionproof
Dust-ignitionproof

5F

Applications:

EYSX expanded fill sealing fittings:

- Restrict the passage of gases, vapors or flames from one portion of the electrical installation to another at atmospheric pressure and normal ambient temperatures
- Limit explosions to the sealed off enclosure
- Limit pre-compression or "pressure piling" in conduit systems
- Provide 40% wire fill capacity to allow uninterrupted runs in a conduit system

Sealing fittings are required:

- At each entrance to an enclosure housing an arcing or sparking device when used in Class I, Division 1 and 2 hazardous locations, to be located as close as practicable and, in no case, more than 18" from such enclosures
- At each entrance of 2" size or larger to an enclosure or fitting housing terminals, splices or taps when used in Class I, Division 1 hazardous locations, to be located as close as practicable and, in no case, more than 18" from such enclosures
- In conduit systems when leaving Class I, Division 1 or 2 hazardous locations
- In cable systems when the cables either do not have a gas/vaportight continuous sheath or are capable of transmitting gases or vapors through the cable core when those cables leave the Class I, Division 1 or 2 hazardous locations

Features:

EYSX expanded fill sealing fittings provide:

- A 40% wire fill capacity for expanded fill sealing
- Large openings with threaded closures to provide easy access to conduit hubs for making dams
- Integral bushings in conduit hubs to protect conductor insulation from damage
- Taper tapped hubs to ensure ground continuity
- Minimum turning radius

EYSX expanded fill sealing fittings are available for installation in both horizontal or vertical positions.

Sealing fittings are approved for use in hazardous locations only when Chico X fiber and Chico X sealing compound or Wico SpeedSeal are used to make the seal.
❍See Certifications and compliances section for classification of each product.
❍Metallic.
❍With plug cover removed.

Certifications and compliances:

NEC/CEC:

EYSX11 – EYSX61
• Class I, Divisions 1 & 2, Groups A, B, C, D
• Class II, Divisions 1 & 2, Groups E, F, G
• Class III
EYSX1 SA – EYSX8 SA
• Class I, Divisions 1 & 2, Groups C, D
• Class II, Divisions 1 & 2, Groups E, F, G

UL standard:

- UL1203

CSA standard:

- C22.2 No. 30

Standard materials:

- Bodies – Feraloy iron alloy and/or ductile iron or copper-free aluminum (with suffix SA)
- Closures – Feraloy iron alloy and/or steel or copper-free aluminum (with suffix SA)

Standard finishes:

- Feraloy iron alloy and ductile iron – electrogalvanized and aluminum acrylic paint
- Steel – electrogalvanized
- Copper-free aluminum – natural

Options:

Description	Suffix
Copper-free aluminum bodies and enclosures	SA

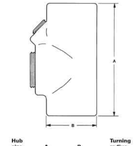
Ordering information:

For sealing in vertical or horizontal positions

Hub size	Cat. # Female hub	Internal volume in cubic inches: Vertical	Horizontal
½"	EYSX11❍	2	2
¾"	EYSX1 SA	2	2
¾"	EYSX21❍	3	3½
1"	EYSX2 SA	3	3½
1"	EYSX31	6	6
1"	EYSX3 SA	6	6
1¼"	EYSX41	19	22½
1½"	EYSX51	19	22½
1½"	EYSX5 SA	19	22½
2"	EYSX61	56	64½
2"	EYSX6 SA	56	64½
2½"	EYSX71	72	82
2½"	EYSX7 SA	72	82
3"	EYSX81	95	110
3"	EYSX8 SA	95	110
3½"	EYSX91❍	200	222
4"	EYSX10❍	200	222

Vertical or horizontal female

Dimensions (in inches):



Hub size	A	B	Turning radius
½"	3¼	1¾	1¾
¾"	4¼	1½	1⅞
1"	5⅛	2¼	1¹⅞
1¼"	6⅛	3	2⅜
1½"	6⅛	3	2⅜
2"	8⅛	4⅛	3⅛
2½"	9¼	4⅝	3¼❍
3"	9⅛	5⅛	3¾❍
3½"	11¼	6⅛	4¼❍
4"	11¼	6⅛	4¼❍

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EXPLOSIONPROOF J–BOX AND CONDUIT SEAL CUTSHEETS

NO SCALE

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RCE 31259
CIVIL
STATE OF CALIFORNIA

PLANS PREPARED BY:

STEVEN ANDREWS ENGINEERING
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LAKE FOREST, CA 92630
(949) 215-5050

SAE ENGINEERING

SCALE:	
DATE:	05/16/23
DRAWN BY:	CR
DESIGNED BY:	PH
CHECKED BY:	SA

PREPARED FOR:

EMERALD BAY est. 1961

EMERALD BAY SERVICE DISTRICT

APPROVED BY:

JOHN MARCONI - PRESIDENT
EBSD BOARD OF DIRECTORS

DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

ELECTRICAL DETAILS

SHEET 13 OF 14

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Last Edit: 05.15.2023 08:41:25 PM By: Test

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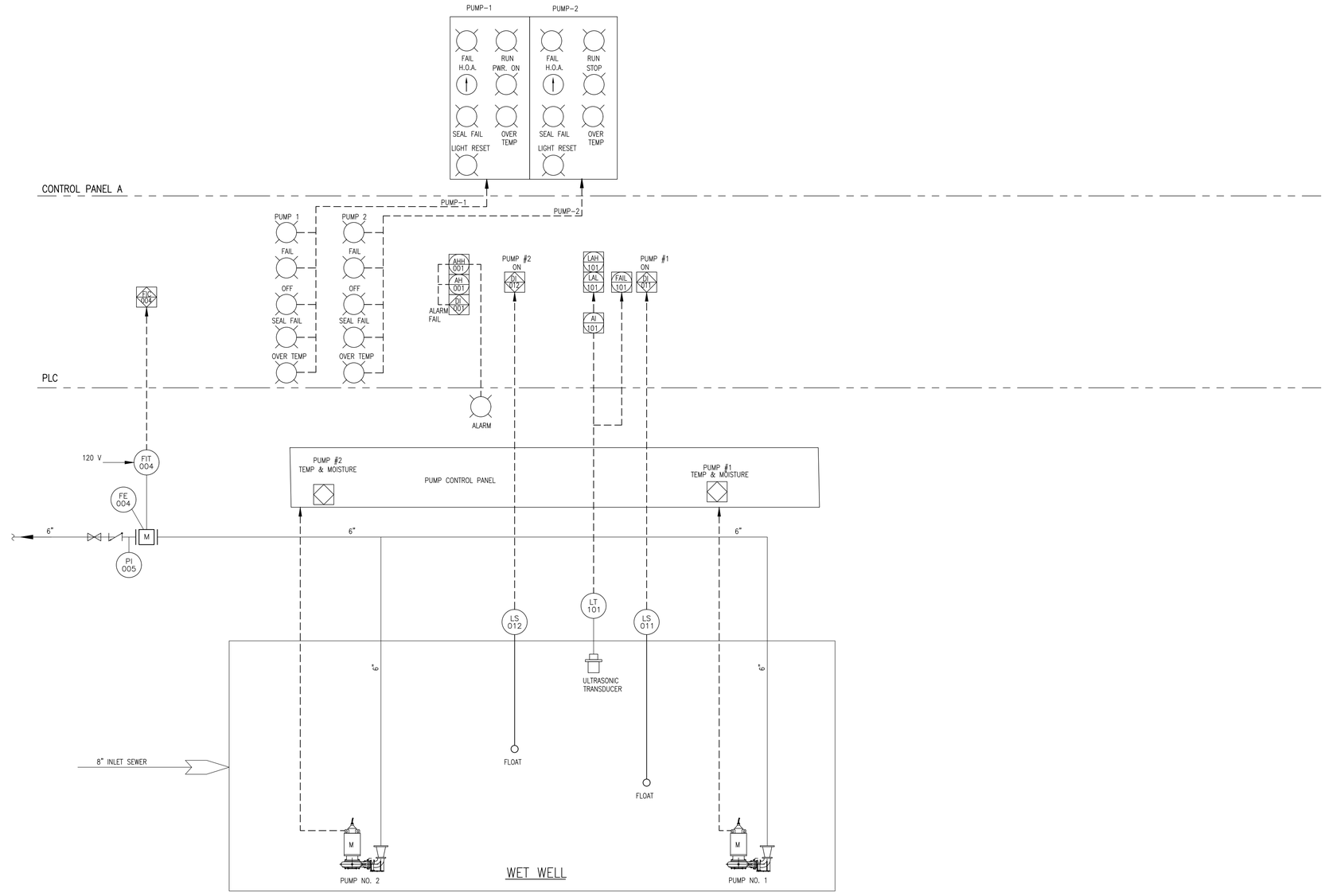
EBSD SEWER LIFT STATION NO. 3



LEGEND

- GATE VALVE OR AS NOTED
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- SOLENOID OPERATED
- ELECTRICAL SIGNAL
- SOFTWARE OR DATA LINK

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PLANS PREPARED BY:

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SCALE:	
DATE:	05/10/23
DRAWN BY:	CR
DESIGNED BY:	PH
CHECKED BY:	SA

PREPARED FOR: EMERALD BAY SERVICE DISTRICT

APPROVED BY:

JOHN MARCONI - PRESIDENT
EBSD BOARD OF DIRECTORS

DATE

EMERALD BAY SERVICE DISTRICT
SEWER LIFT STATION NO. 3 IMPROVEMENT PLANS

PIPING AND INTRUMENTATION DIAGRAM (P&ID)

SHEET 14 OF 14

NOT FOR CONSTRUCTION 05-11-23

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EBSD SEWER LIFT STATION NO. 3

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