

WESTHAVEN COMMUNITY SERVICES DISTRICT

TRINIDAD-WESTHAVEN EMERGENCY INTERTIE PROJECT

FUNDING AGREEMENT BETWEEN
THE STATE OF CALIFORNIA (DEPARTMENT OF WATER RESOURCES) AND
CITY OF TRINIDAD
AGREEMENT NO. 4600014620
URBAN & MULTIBENEFIT DROUGHT RELIEF GRANT

CITY OF TRINIDAD CITY COUNCIL

CHERYL KELLY	MAYOR
STEVE LADWIG	MAYOR PRO-TEM
JACK WEST	COUNCIL MEMBER
KATI BRECKENRIDGE	COUNCIL MEMBER
JACK TUTTLE	COUNCIL MEMBER

WESTHAVEN COMMUNITY SERVICES DISTRICT BOARD

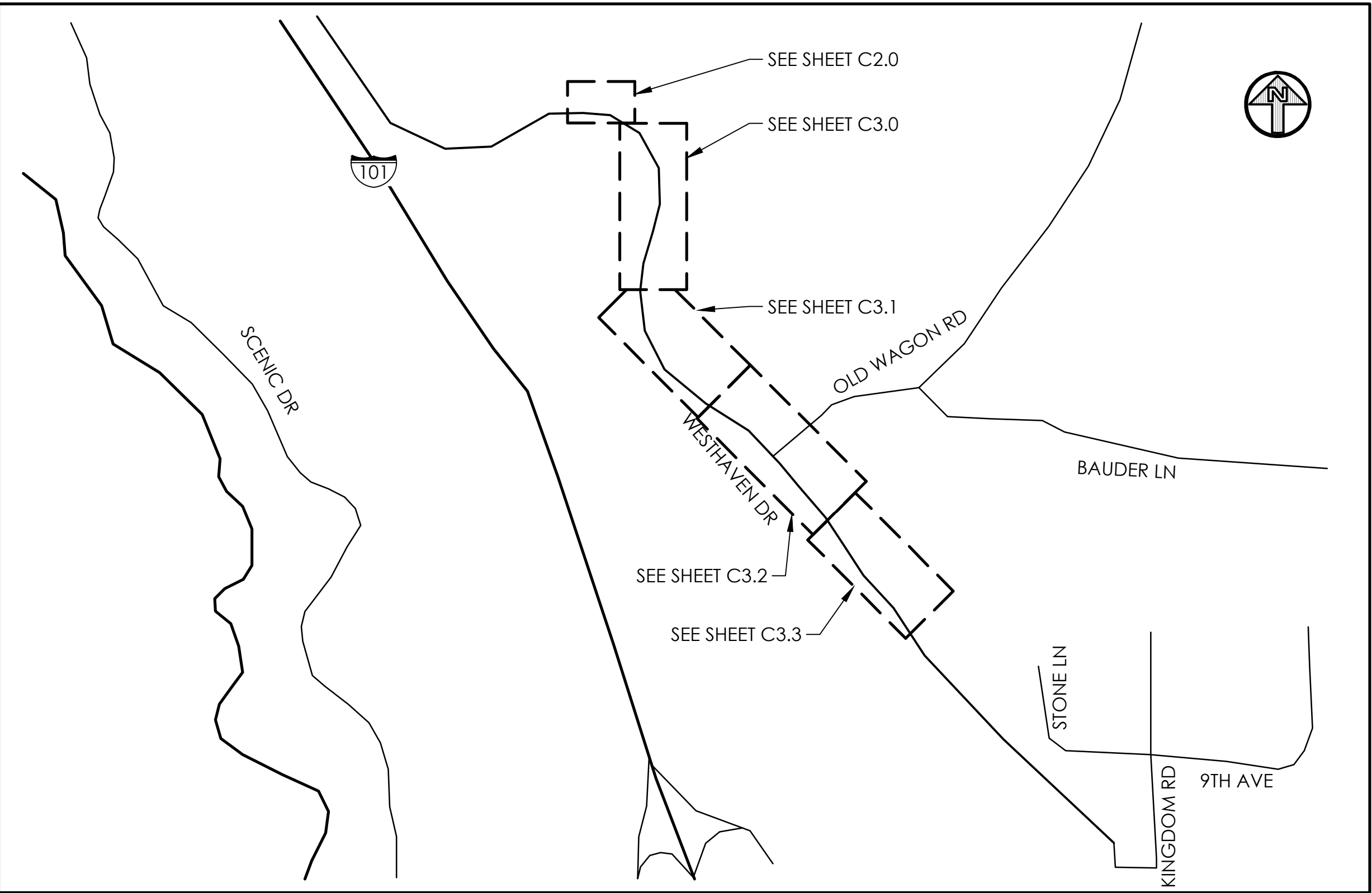
BILL VERICK	PRESIDENT
BARBARA CLINE	VICE PRESIDENT
DAVID HANKIN	FINANCE
RICHARD SWISHER	SAFETY OFFICER
ANTONIO LLANOS	MEMBER

WESTHAVEN COMMUNITY SERVICES DISTRICT STAFF

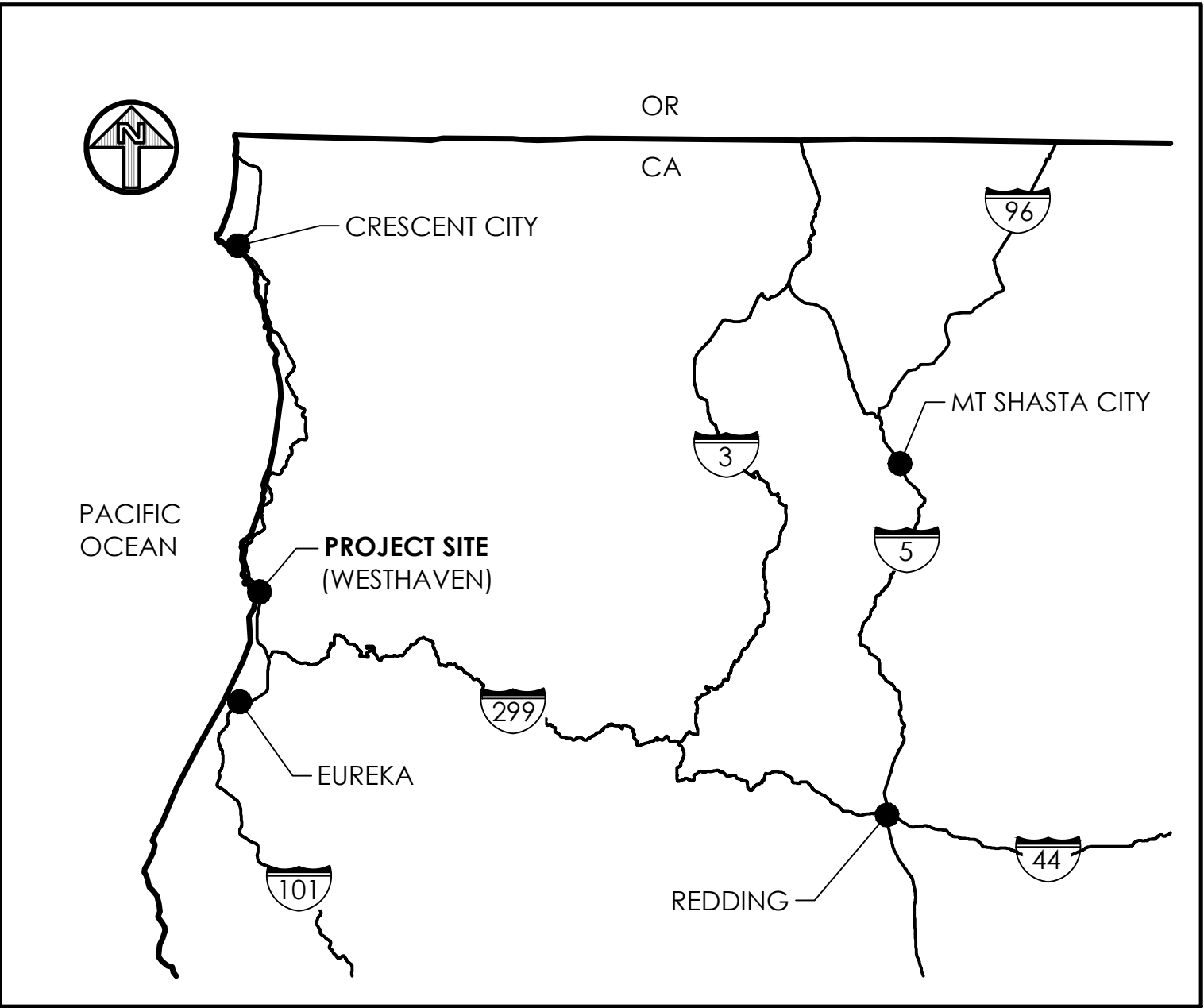
PAUL M. ROSENBLATT	GENERAL MANAGER / CHEIF PLANT OPERATOR T2-34384/D2-42549
KATRINA MARTIN	LEAD OPERATOR T2-44809/D1-55736
MADISON HEWITT	OPERATOR T2-46094/EIT
ROXANNE LEVANG	SECRETARY / BOOKKEEPER

SHEET INDEX		
NO	DESCRIPTION	SHEET NAME
1	G1.0	TITLE
2	G1.1	LEGEND & NOTES
3	G1.2	SITE SURVEY CONTROL
4	C1.0	DETAILS
5	C1.1	DETAILS
6	C1.2	DETAILS
7	C2.0	SITE PLAN
8	C3.0	WESTHAVEN DR STA 3+50 TO STA 12+00
9	C3.1	WESTHAVEN DR STA 12+00 TO STA 18+80
10	C3.2	WESTHAVEN DR STA 18+80 TO STA 26+40
11	C3.3	WESTHAVEN DR STA 26+40 TO STA 32+00
12	M1.0	PITLESS BOOSTER PUMP MECHANICAL
13	M1.1	PITLESS BOOSTER PUMP DETAIL
14	E1.0	ELECTRICAL SYMBOLS AND ABBREVIATIONS
15	E1.1	ONE-LINE DIAGRAM
16	E2.0	ELECTRICAL SITE PLAN
17	E2.1	OFFICE POWER PLAN
18	E2.2	BOOSTER PUMP - ELECTRICAL PLAN
19	E3.0	ELECTRICAL DETAILS
20	I1.0	INSTRUMENTATION SYMBOLS AND ABBREVIATIONS
21	I2.0	BOOSTER PUMP STARTER PANEL CONTROL DIAGRAM

90% DRAFT



VICINITY MAP
NOT TO SCALE

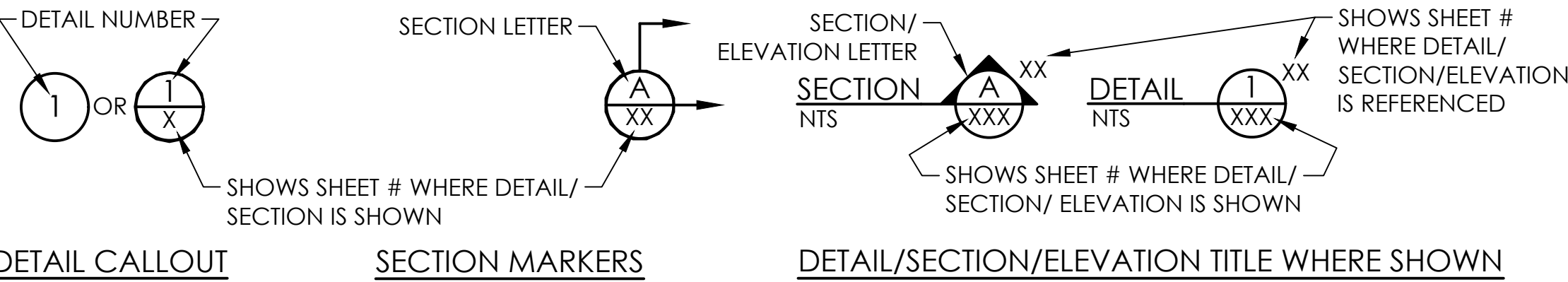


LOCATION MAP
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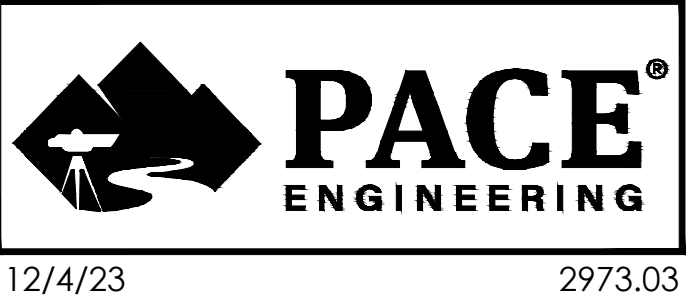
PACE ENGINEERING DESIGN TEAM

TOM WARNOCK	PROJECT MANAGER
JESSICA CHANDLER	PROJECT ENGINEER
BRYAN GENTLES	ELECTRICAL ENGINEER
GREG FAY	STAFF ENGINEER

GENERAL INFORMATION



PRELIMINARY
NOT
FOR
CONSTRUCTION



SHEET
G1.0
PG 1 OF 21

ABBREVIATIONS - WATER/MECHANICAL

@	AT	FD	FRENCH DRAIN OR FLOOR DRAIN
Ø	DIAMETER	FEP	FLUORINATED ETHYLENE-PROPYLENE
ℙ or PL	PLATE OR PROPERTY LINE	FF	FINISHED FLOOR or FAR FACE
AB	ANCHOR BOLT, AGGREGATE BASE	FG	FINISH GRADE
AC	ASBESTOS CEMENT PIPE or ASPHALT CONCRETE	FH	FIRE HYDRANT
ADDN'L	ADDITIONAL	FIN	FINISH
ADH AB	ADHESIVE ANCHOR BOLT	FLEX	FLEXIBLE
AFF	ABOVE FINISH FLOOR	FLG	FLANGE
AGG or AGGR	AGGREGATE	FM	FLOW METER
AGS	ABOVE GROUND SURFACE	FMJA	FLANGE x MJ ADAPTER
APPROX	APPROXIMATELY	FND	FOUNDATION
ARV	AIR RELEASE VALVE	FRP	FIBER REINFORCED POLYETHYLENE
ASTM	AMERICAN SOCIETY FOR TESTING OF MATERIALS	FTG	FOOTING or FITTING
B&S	BELL & SPIGOT	FTGS	FITTINGS
BDRY	BOUNDARY	GA	GAGE
BGS	BELOW GROUND SURFACE	GAL	GALLON
BKFL	BACKFILL	GALV	GALVANIZED
BLDG	BUILDING	GC	GROOVED COUPLING
BLK	BLOCK	GSP	GALVANIZED STEEL PIPE
BLKG	BLOCKING	GV	GATE VALVE
BM	BENCH MARK OR BEAM	HC	HALF COUPLING
BO	BLOW OFF or BLOCK-OUT	HD	HOLDOWN or HOT DIPPED
BOT or BOTT	BOTTOM	HMA	HOT MIX ASPHALT
BUSH	BUSHING	HORIZ	HORIZONTAL
BV	BALL VALVE	HP	HORSE POWER
BVCE	BEGIN VERTICAL CURVE ELEVATION	HT	HEIGHT
BVCS	BEGIN VERTICAL CURVE STATION	HVAC	HEATING, VENTILATION, AND AIR CONDITIONING
C or C/L or C℄	CENTERLINE	I	INSTRUMENTATION
C or COND	CONDUIT	ID	INSIDE DIAMETER
CAV	COMBINATION AIR RELEASE VALVE	IN	INCHES
CHEM	CHEMICAL	INSUL	INSULATION
CI	CAST IRON PIPE	INT	INTERIOR or INTERMEDIATE
CIP	CAST IN PLACE	INV	INVERT
CISP	CAST IRON SOIL PIPE	IRRIG	IRRIGATION
CJ	CONTROL JOINT or CEILING JOIST	JT	JOINT
CL or CLR	CLEAR	L	STEEL ANGLE
CLG	CEILING	LF	LINEAL FOOT
CMP	CORRUGATED METAL PIPE	LG	LIP OF GUTTER
CMU	CONCRETE MASONRY UNIT	M	MECHANICAL
COL	COLUMN	MECH	MECHANICAL
COMB	COMBINATION	MAX	MAXIMUM
COMP	COMPACTED or COMPOSITION SHINGLES	MFR	MANUFACTURER
CONC	CONCRETE	MIN	MINIMUM
CONST	CONSTRUCTION	MISC	MISCELLANEOUS
CONT	CONTINUOUS	MJ	MECHANICAL JOINT
CONTR	CONTRACTOR	MRS	MECHANICAL RUBBER SEAL
CORP	CORPORATION	MTL	METAL
CP	CONTROL PANEL OR CONTROL POINT	(N)	NEW
CTR	CENTER	NB&G	NUTS, BOLTS, & GASKETS
CU	COPPER	NF	NEAR FACE
CV	CHECK VALVE	NIC	NOT IN CONTRACT
CY	CUBIC YARD	No.	NUMBER
D	DRAIN	NPT	NATIONAL PIPE THREAD
DB	DIRECT BURIAL	NTS	NOT TO SCALE
DBL	DOUBLE	O/	OVER
DET	DETAIL	OC	ON CENTER
DIP	DUCTILE IRON PIPE	OD	OUTSIDE DIAMETER
DIA	DIAMETER	OF	OUTSIDE FACE
DIM	DIMENSION	OG	ORIGINAL GROUND
DN	DOWN	OH	OVERHEAD
DWG	DRAWING	OPG or OPNG	OPENING
D/W	DRIVEWAY	OPP	OPPOSITE or OPERATING
E	ELECTRICAL CONDUIT	P&ID or PID	PROCESS INSTRUMENTATION DIAGRAM
(E) or EXIST	EXISTING	PE	PLAIN END
EA	EACH	PER	PERIMETER
EG	EXISTING GRADE	PNL	PANEL
EL or ELEV	ELEVATION	PNT	PAINT
ELEC	ELECTRICAL	#	POUND
ELB	ELBOW	PP	POWER POLE
EMBED	EMBED or EMBEDMENT	PR	PAIR
EN	EDGE NAILING	PREFAB	PREFABRICATED
ENGR	ENGINEER	PROJ	PROJECT
EP	EDGE OF PAVEMENT	PRV	PRESSURE RELIEF VALVE
EQ	EQUAL	PS	PIPE SUPPORT
ER	EDGE OF ROAD	PSI	POUNDS PER SQUARE INCH
ESMT	EASEMENT	PVC	POLYVINYL CHLORIDE PIPE
EVCE	END VERTICAL CURVE ELEVATION	PVI	POINT OF VERTICAL INTERSECTION
EVCS	END VERTICAL CURVE STATION	PW	POTABLE WATER
EW	EACH WAY	R	RADIUS
EXP AB	EXPANSIVE ANCHOR BOLT	RDW OR RDWD	REDWOOD
EXP JT	EXPANSION JOINT(S)	RED	REDUCER
F	FEMALE	REINF	REINFORCEMENT STEEL, REBAR
FC	FLEXIBLE COUPLING	REQ'D	REQUIRED
FCA	FLANGED COUPLING ADAPTOR	REST	RESTRAINED

SYMBOL LEGEND

	AREA DRAIN
	BOLLARD
	CENTERLINE
	CONTROL POINT
	CULVERT
	DRAINAGE DIRECTION ARROW
	ELECTRICAL PANEL / BOX
	FOUND MONUMENT AS NOTED
	(E) FIRE HYDRANT
	(N) FIRE HYDRANT
	GUY ANCHOR
	GRID TICK
	HOSE BIB
	LIGHT POLE
	POLE- JOINT UTILITY
	POLE- POWER
	SIGN
	STORM DRAIN CATCH BASIN
	TREE/SHRUB
	WATER BLOWOFF OR AIR RELEASE VALVE
	WATER METER/BOX
	(E) WATER VALVE
	(N) WATER VALVE
	FIBER OPTIC MARKER

LINE LEGEND

	(E) EP
	(N) EP
	(E) CONC
	(N) CONC
	PROPERTY LINE
	FLOWLINE
	(E) WATER MAIN
	(N) WATER MAIN
	(E) STORM DRAIN
	(N) STORM DRAIN
	(E) GAS LINE
	(N) GAS LINE
	ROW
	OH
	TELEPHONE
	FIBER OPTIC
	CHAIN LINK FENCE

GENERAL NOTES

1.

UNLESS NOTED OTHERWISE (UNO), ALL CONSTRUCTION SHALL CONFORM TO THE PROJECT MANUAL, THE 2021 EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OR "GREEN BOOK", AND CALTRANS STANDARD PLANS AND SPECIFICATIONS 2022 EDITION.
2.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT AT 811 AND ALL UTILITY COMPANIES ONE (1) WEEK BEFORE ANY TRENCHING TO DETERMINE THE LOCATION OF ALL UNDERGROUND FACILITIES WHETHER SHOWN OR NOT SHOWN ON THESE PLANS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL EXISTING FACILITIES FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR SHALL FIELD LOCATE (POTHOLE) ALL UTILITY CROSSINGS A MINIMUM OF THREE (3) DAYS PRIOR TO CONSTRUCTION.
3.

ALL PROPERTY LINES AND UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC IN NATURE.
4.

ALL UTILITY LOCATIONS INCLUDING WATER SERVICE LOCATIONS AND ALIGNMENTS AND DEPTHS, WHERE SHOWN, ARE APPROXIMATE. THE CONTRACTOR SHALL POTHOLE USING NON-DESTRUCTIVE MEANS AND SUBMIT WRITTEN FIELD OBSERVATION DRAWINGS OF THE PROPOSED AND EXISTING PIPE ALIGNMENTS AT LEAST FIVE (5) WORKING DAYS AHEAD OF THE PIPE INSTALLATION CREW. REFER TO THE PROJECT MANUAL.
5.

THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE UNDERSIGNED ENGINEER AND OWNER.
6.

THE CONTRACTOR AGREES THAT THEY 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 AND THAT THIS REQUIREMENT SHALL APPLY CONTINUALLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
7.

THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL SURVEY MONUMENTS. ANY MONUMENTS DISCOVERED ARE TO BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY. ANY SURVEY MONUMENTS DISTURBED OUTSIDE THE IMMEDIATE WORK AREA DURING CONSTRUCTION SHALL BE REPLACED BY THE OWNER'S REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
8.

ALL CONTRACTOR'S REPRESENTATIVES, INCLUDING SUBCONTRACTORS, SHALL HAVE WRITTEN PERMISSION TO ENTER ANY PORTION OF PRIVATE PROPERTY. ALL RESIDENCES SHALL BE GIVEN A MINIMUM OF 24 HOURS, BUT NO MORE THEN 72 HOURS NOTICE, PRIOR TO ENTRY/WORK ON PRIVATE PROPERTY.
9.

CONTRACTOR SHALL SUBMIT COMPLETE AND ACCURATE AS-BUILT DRAWINGS.
10.

SEPARATION OF WATER AND STORM DRAIN FACILITIES SHALL CONFORM TO THE RULES AND REGULATIONS OF THE UNIFORM PLUMBING CODE AND STATE OF CALIFORNIA STATE WATER RESOURCES CONTROL BOARD.
11.

ALL NEW WATER MAIN INSTALLATION SHALL BE OPEN CUT UNLESS ALTERNATIVE METHOD IS APPROVED BY ENGINEER, OR NOTED OTHERWISE.
12.

CONTRACTOR SHALL INSTALL A PROJECT SIGN AT LEAST FOUR FEET TALL BY EIGHT FEET WIDE MADE OF ¾ INCH THICK EXTERIOR GRADE PLYWOOD OR OTHER APPROVED MATERIAL AND SHALL MAINTAIN THE SIGN IN GOOD CONDITION FOR THE DURATION OF THE CONSTRUCTION PERIOD, REFER TO PROJECT MANUAL.
13.

ALL TUNNELING UNDER (E) CONC CURB, GUTTER, OR SIDEWALK SHALL BE BACKFILLED WITH SLURRY BACKFILL OR CONC.
14.

PER THE REQUIREMENTS OF PUBLIC RESOURCES CODE SECTION 4442, CONTRACTOR'S INTERNAL COMBUSTION ENGINES SHALL BE EQUIPPED WITH AN OPERATIONAL SPARK ARRESTOR, OR THE ENGINE MUST BE EQUIPPED FOR THE PREVENTION OF FIRE.
15.

PIPES TO BE ABANDONED SHALL NOT TAKE PLACE UNTIL (N) WATER MAIN AND SERVICES HAVE BEEN FULLY TESTED, APPROVED FOR SERVICE AND CONNECTED.

90% DRAFT

BAR IS ONE INCH ON ORIGINAL DRAWING

0" 1"

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

REVISIONS

NO	DATE	DESCRIPTION



DES	JLC	CKD	TWW	JOB NO.
DRN	GAF	DATE	12/4/23	2973.03

SIGNED

PRELIMINARY
NOT FOR
CONSTRUCTION

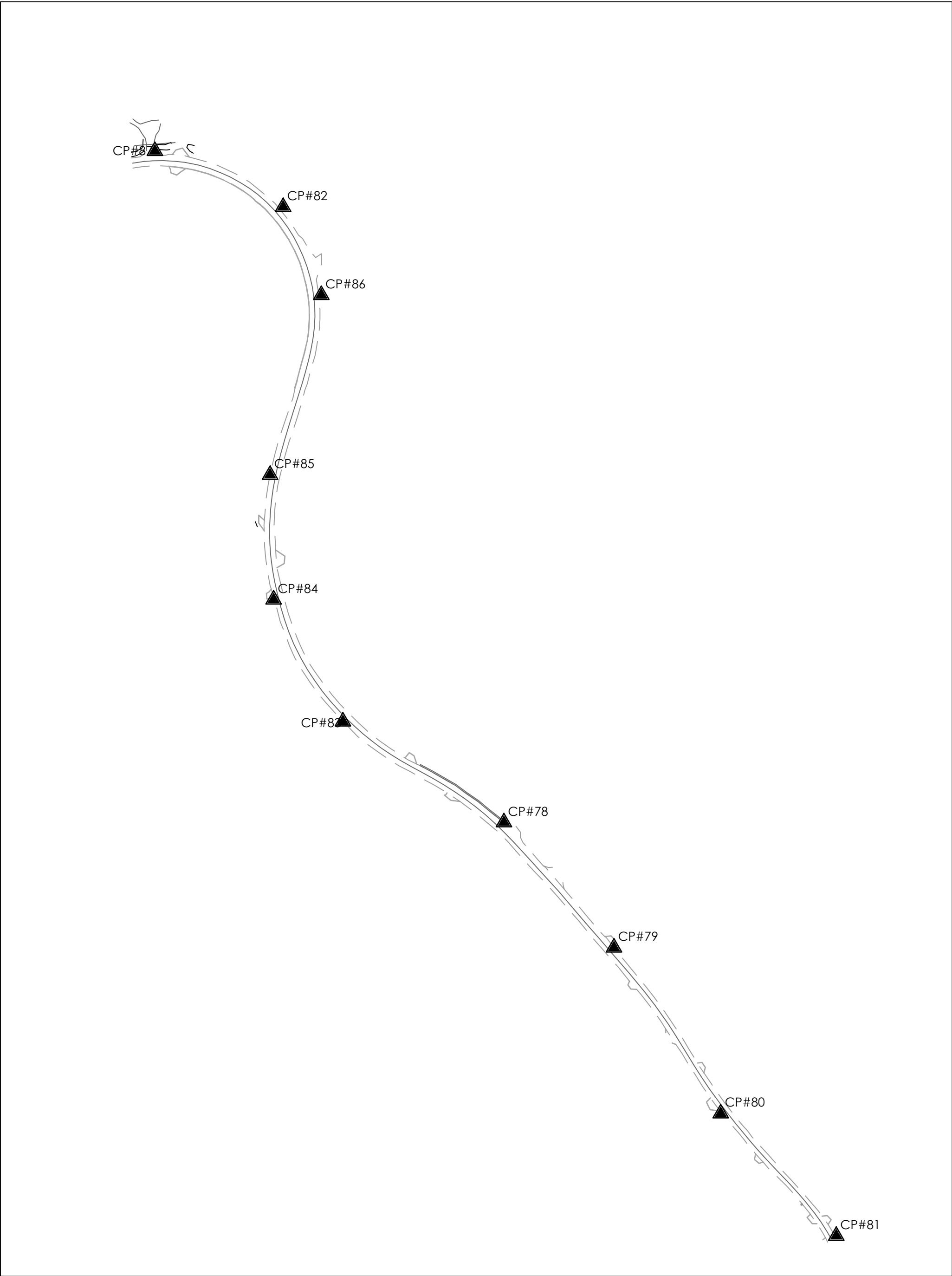
WESTHAVEN COMMUNITY SERVICES DISTRICT
TRINIDAD-WESTHAVEN EMERGENCY INTERTIE PROJECT

LEGEND & NOTES

SHEET

G1.1

PG 2 OF 21



 **SITE CONTROL**
1"=200'

REFER TO SHEETS C2.0 THROUGH C3.3 FOR CONTROL POINT (CP) LOCATIONS.

Point Number	Easting	Northing	Elevation	Raw Description
78	5979103.48	2270382.39	343.60	CP_MAGNAIL
79	5979350.38	2270101.36	345.6000	CP_MAGNAIL
80	5979589.86	2269729.37	331.9400	CP_MAG8
81	5979849.21	2269454.72	341.1000	CP_MAG8
82	5978608.00	2271762.64	202.0200	CP_3B&PC
83	5978742.21	2270608.60	306.5400	CP_MAG8
84	5978586.64	2270882.22	274.8100	CP_MAGNAIL
85	5978578.62	2271161.70	247.2300	CP_MAG&W
86	5978693.60	2271565.39	209.0400	CP_MAGNAIL
87	5978320.21	2271888.35	209.2900	CP_MAGNAIL


- NOTES:
1. A SURVEY WAS CONDUCTED BY PACE ENGINEERING IN JUNE 2023.
 2. COORDINATE VALUES SHOWN HEREON ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83), ZONE 1, (EPOCH 2017.5).
 3. ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), (GEOID 12B)

CONTROL POINT INFORMATION

90% DRAFT

BAR IS ONE INCH ON
ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS
SHEET, ADJUST SCALES
ACCORDINGLY.

REVISIONS		
NO	DATE	DESCRIPTION



PACE
ENGINEERING

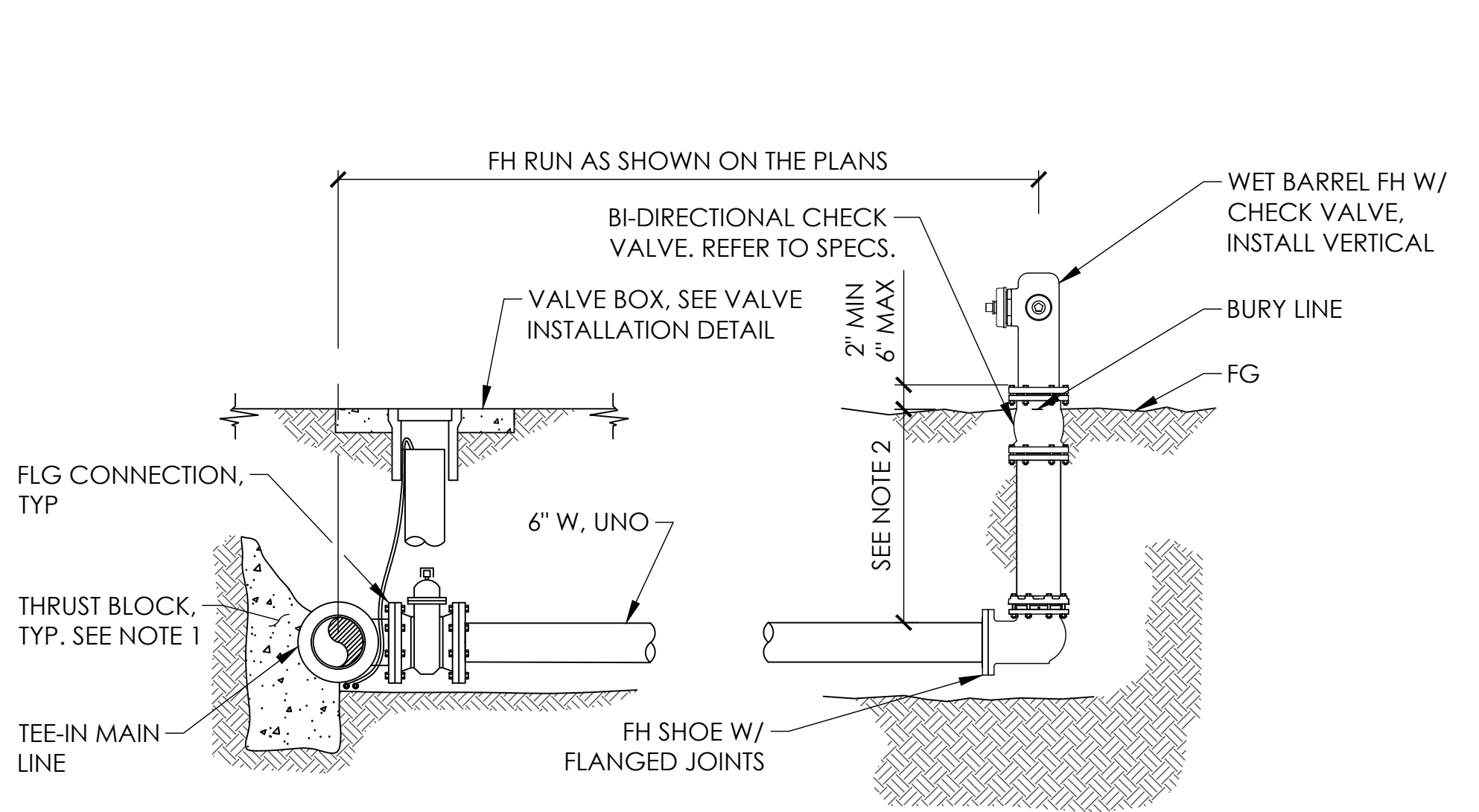
DES <u>JLC</u>	CKD <u>TWW</u>	JOB NO. <u>2973.03</u>
DRN <u>GAF</u>	DATE <u>12/4/23</u>	

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WESTHAVEN COMMUNITY SERVICES DISTRICT
TRINIDAD-WESTHAVEN EMERGENCY INTERTIE PROJECT

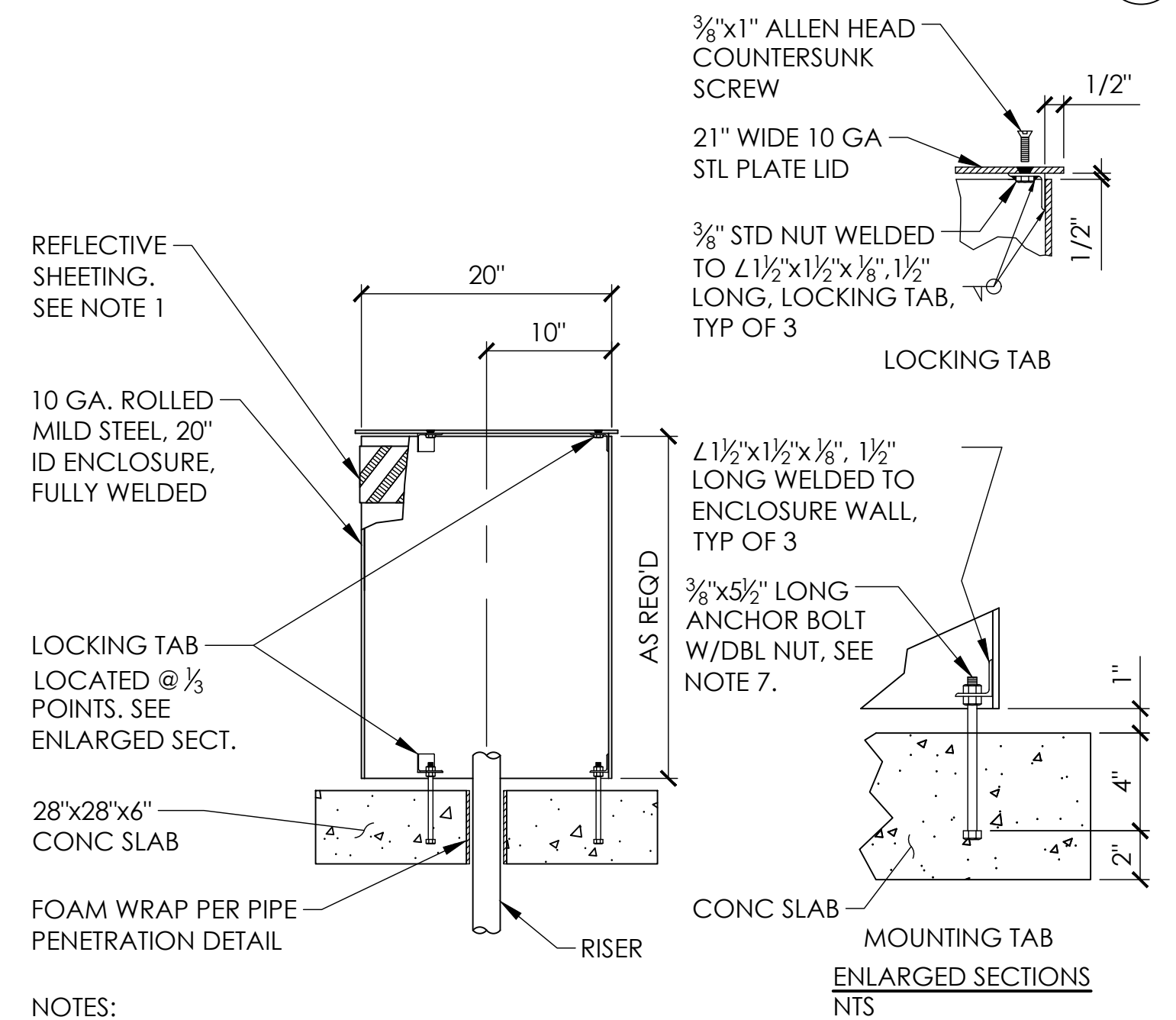
SITE SURVEY CONTROL

SHEET
G1.2
PG 3 OF 21



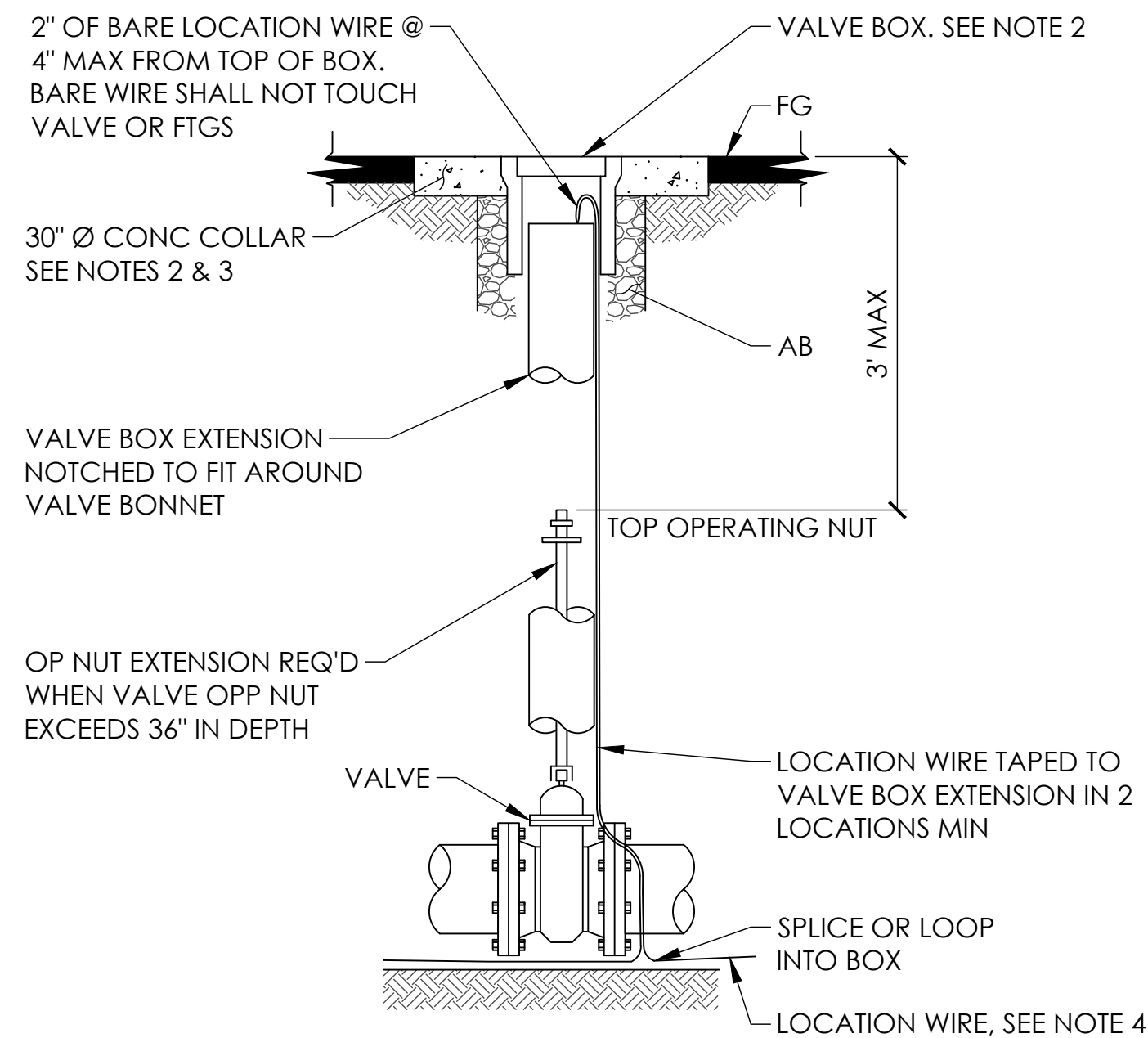
- NOTES:
1. ALL FH RUNS SHALL BE RESTRAINED FROM MAIN, UNO. THRUST BLOCKS SHALL ONLY BE USED IN CONFIGURATIONS THAT DO NOT ALLOW RESTRAINED FITTINGS. REFER TO THRUST BLOCK DETAILS.
 2. FH BURY DEPTHS VARY DEPENDING ON TOPOGRAPHY FEATURES & (E) UTILITIES. CONTRACTOR SHALL DETERMINE BURY DEPTH OF EACH FH PRIOR TO PROCUREMENT. CONTRACTOR SHALL EXCHANGE FH BARRELS W/ NON-CONFORMING DEPTHS TO OBTAIN THE REQ'D BREAKAWAY CLEARANCE AT NO COST TO OWNER.
 3. TWO-WAY BLUE REFLECTOR SHALL BE PLACED 1' OFF C/L OR INLINE WHEN (E) REFLECTORS ARE PRESENT. REFLECTOR SHALL BE LOCATED ON SAME SIDE AS FH, ANCHORED W/ RAPID SET EPOXY & RECESSED AT ELEV ABOVE 500'.
 4. MAINTAIN 3' MIN CLEARANCE ALL AROUND HYDRANT.

TYPICAL WET BARREL FLUSHING HYDRANT INSTALLATION
NTS (1) C1.0



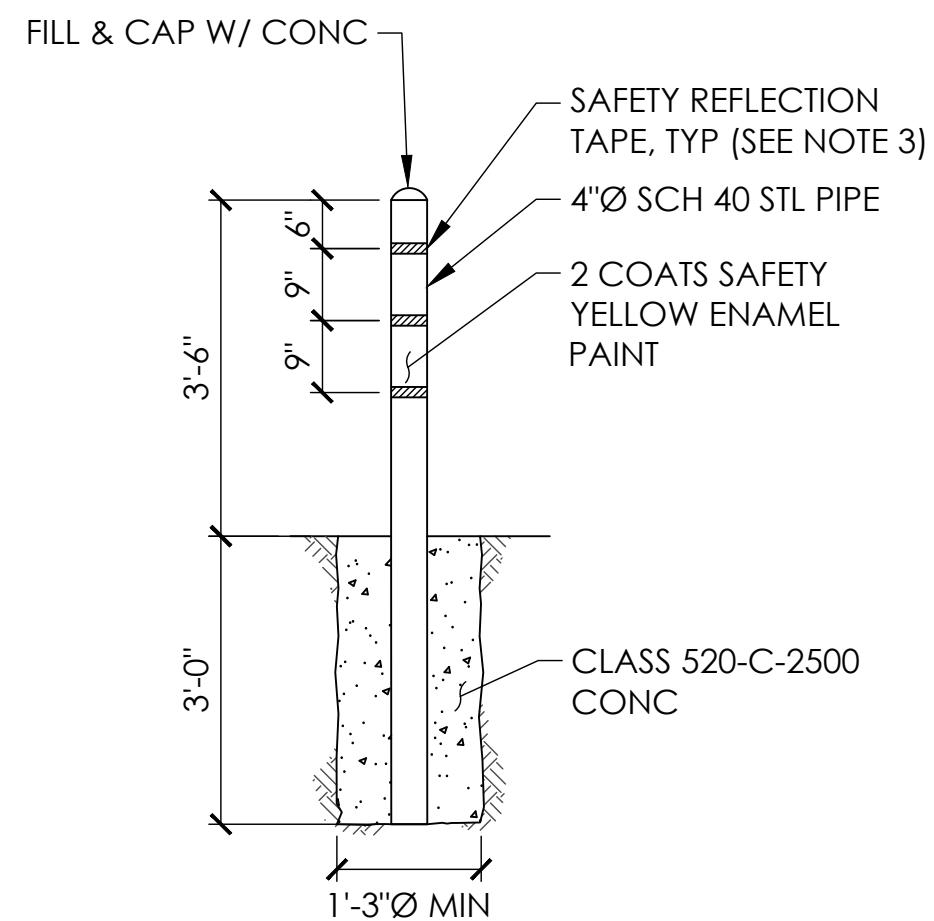
- NOTES:
1. REFLECTIVE SHEETING SHALL BE INSTALLED @ TOP OF EXTERIOR SIDEWALL. WRAP SHEETING 360° AROUND ENCLOSURE.
 2. ALL ABOVE GRADE PIPING SHALL BE INSULATED.
 3. CAV SHALL BE INSULATED WITH A FLEXIBLE INSULATION COVER.
 4. ALL HARDWARE SHALL BE GALVANIZED.
 5. ALL METAL SURFACES NOT GALVANIZED SHALL BE POWDERCOATED OLIVE GREEN.
 6. BOLTS SHALL BE CAST-IN PLACE OR POST INSTALLED IN SIMPSON SET 36 (ICC REPORT 4057) OR HILTI H4-200 (ICC REPORT 3187) ADHESIVE.

ENCLOSURE DETAIL
NTS (4) C1.0



- NOTES:
1. SEE THRUST BLOCK DETAILS FOR VALVES 8 IN & LARGER.
 2. SET VALVE BOX & COLLAR 1/4 IN BELOW GRADE IN PAVED AREAS & 2 IN ABOVE GRADE IN ALL OTHER LOCATIONS.
 3. CONC COLLAR SHALL BE 12 IN THICK WHERE ANY VEHICULAR TRAFFIC IS EXPECTED & 4 IN THICK IN ALL OTHER LOCATIONS.
 4. REFER TO SPEC'S FOR LOCATION OF WIRE.

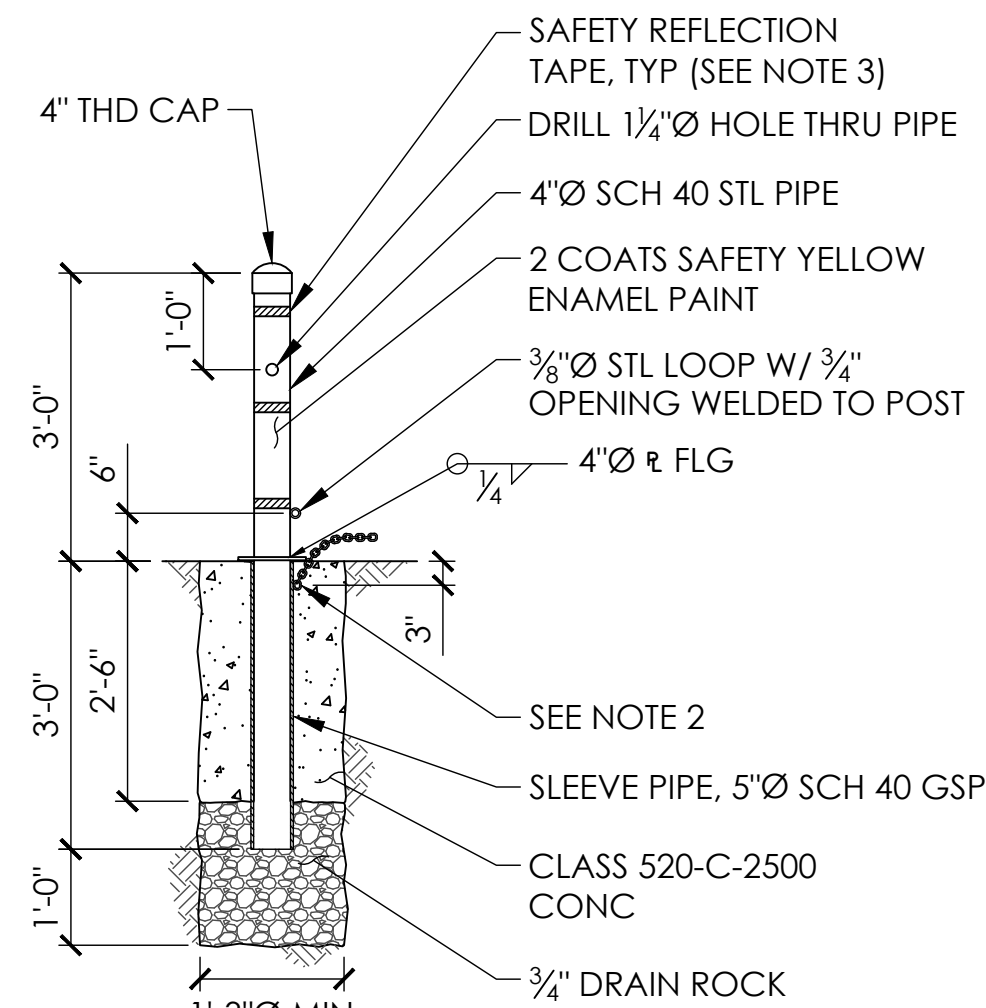
TYPICAL WATER VALVE INSTALLATION
NTS (2) C1.0



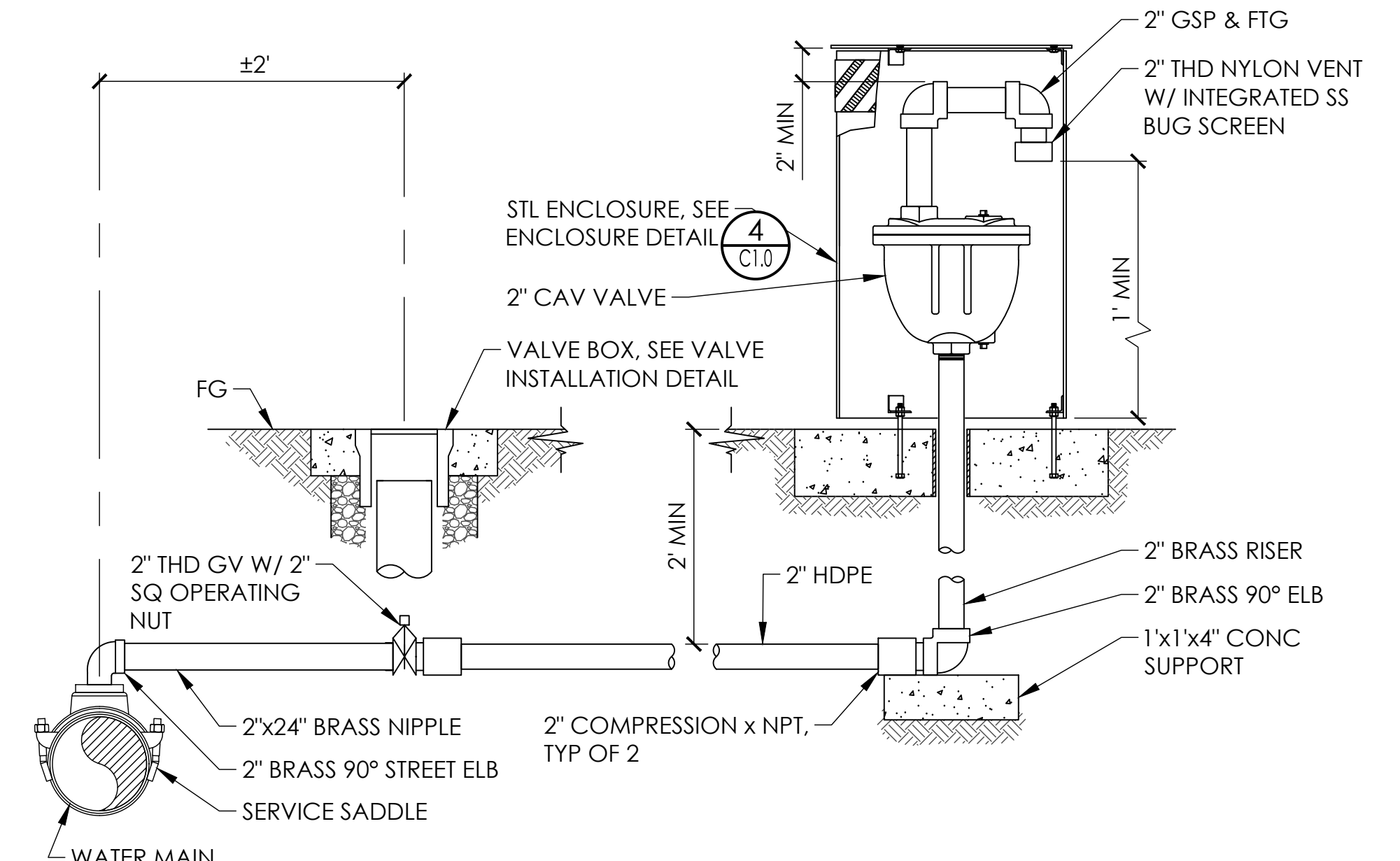
PERMANENT

- NOTES:
1. PERMANENT BOLLARDS SHALL BE INSTALLED, UNO.
 2. HARD-TEMPERED ZINC PLATED STL CHAIN, 12" LENGTH, 3/8" Ø W/ 1/2" OPENING, 3" TO BE PARTIALLY CAST IN CONCRETE & WELDED TO SLEEVE.
 3. 3" WIDE BLUE REFLECTOR TAPE SHALL BE USED FOR FIRE PROTECTION DEVICES. 1" WIDE SAFETY REFLECTION TAPE SHALL BE USED AT ALL OTHER LOCATIONS. TAPE SHALL BE SUITABLE FOR ALL WEATHER, & CHEMICAL & ABRASION RESISTANT.

BOLLARD
NTS (5) C1.0

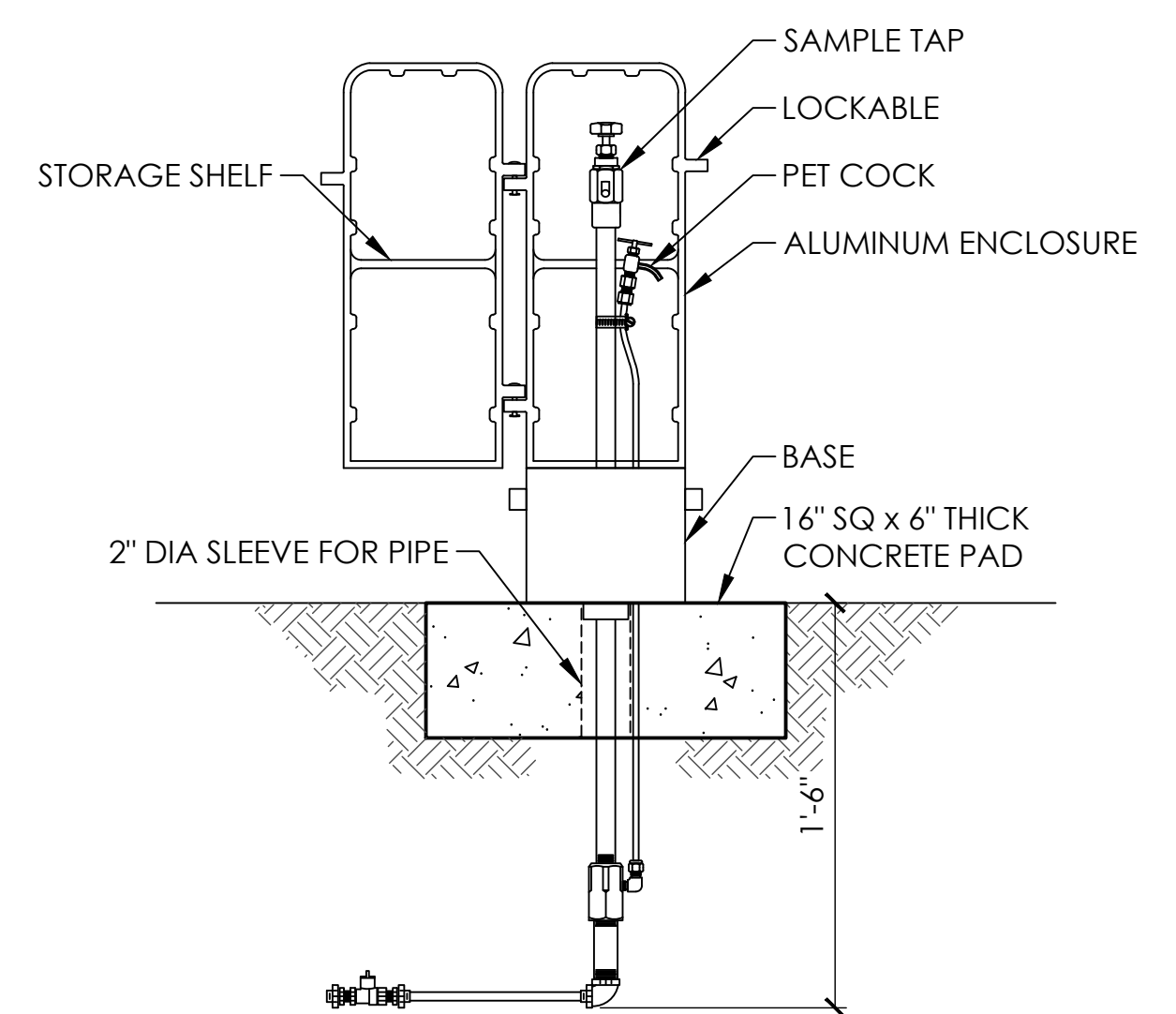


REMOVABLE



- NOTES:
1. PIPELINE FROM SERVICE SADDLE TO AIR VALVE SHALL HAVE A POSITIVE SLOPE.
 2. INSTALL A MINIMUM OF 2 BOLLARDS AROUND EVERY CAV, UNO.

CAV DETAIL
NTS (3) C1.0



- NOTES:
1. FIXED BACTERIOLOGICAL SAMPLING STATIONS ARE REQUIRED BY "CALIFORNIA WATERWORKS STANDARDS, TITLE 22". THE ESTABLISHMENT OF REPRESENTATIVE SAMPLE POINTS IS ESSENTIAL TO ASSURE THAT THE SAMPLING RESULTS FOUND ARE GIVING A TRUE INDICATION OF THE BACTERIOLOGICAL QUALITY OF THE WATER SUPPLIED THROUGHOUT THE DISTRIBUTION SYSTEM.

SAMPLE STATION
NTS (6) C1.0

90% DRAFT

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REVISIONS		
NO	DATE	DESCRIPTION

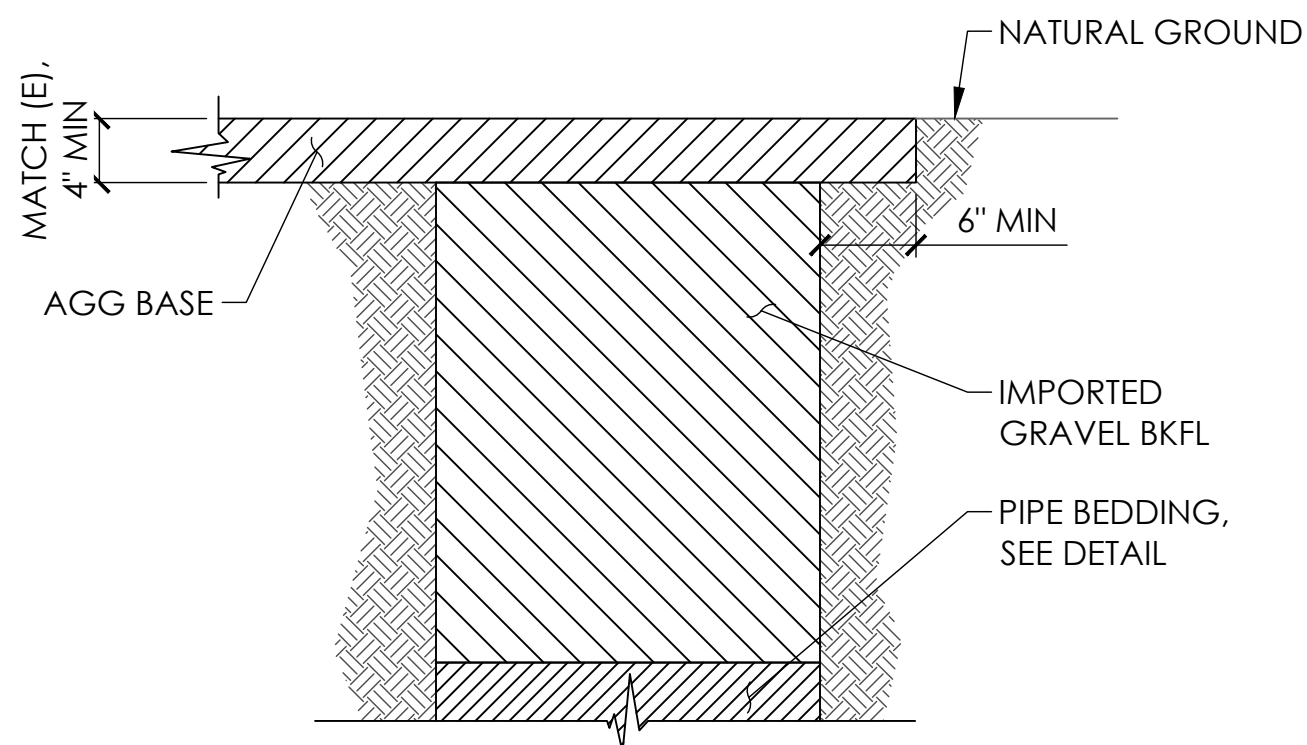
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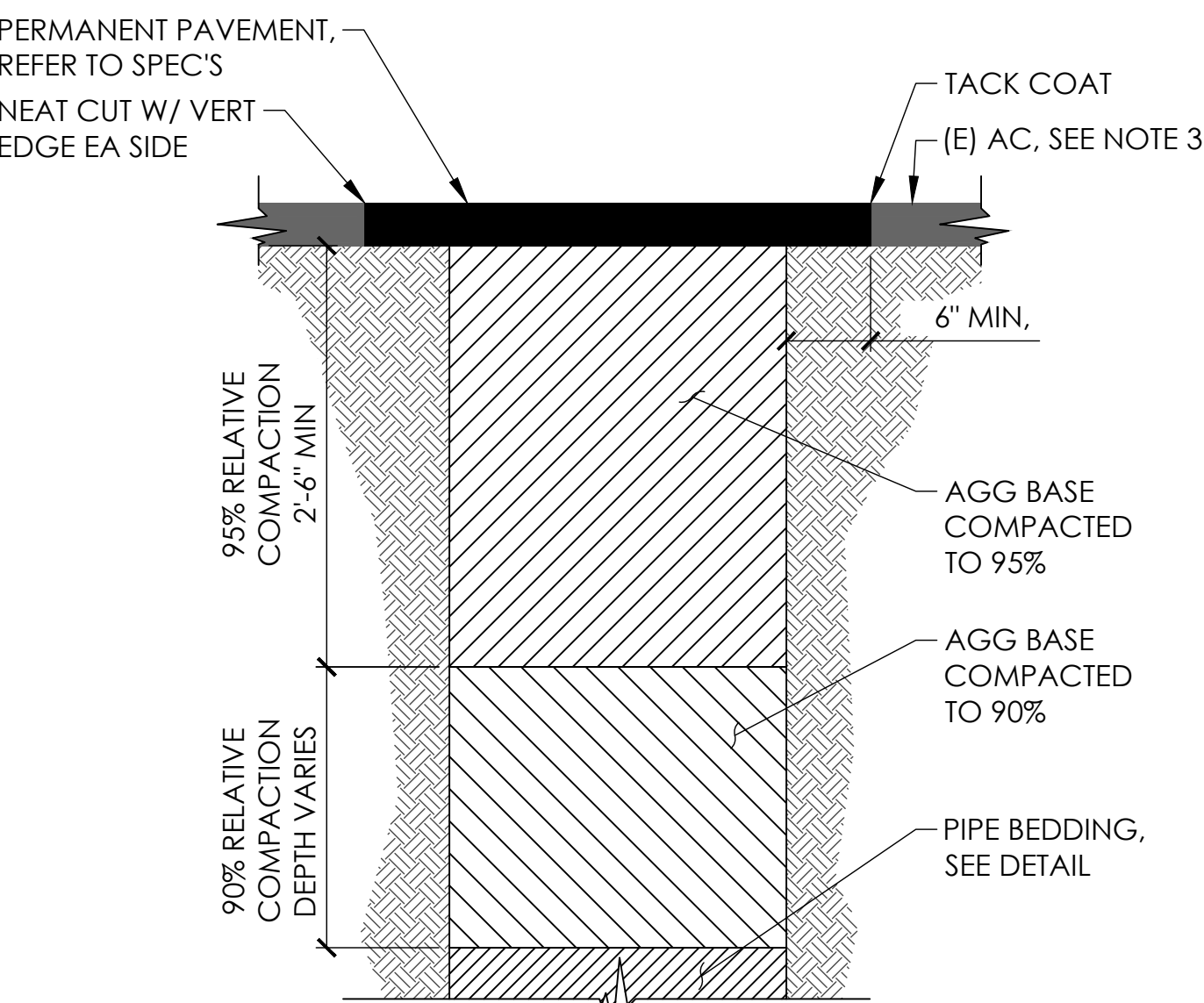
DETAILS

SHEET
C1.0
PG 4 OF 21



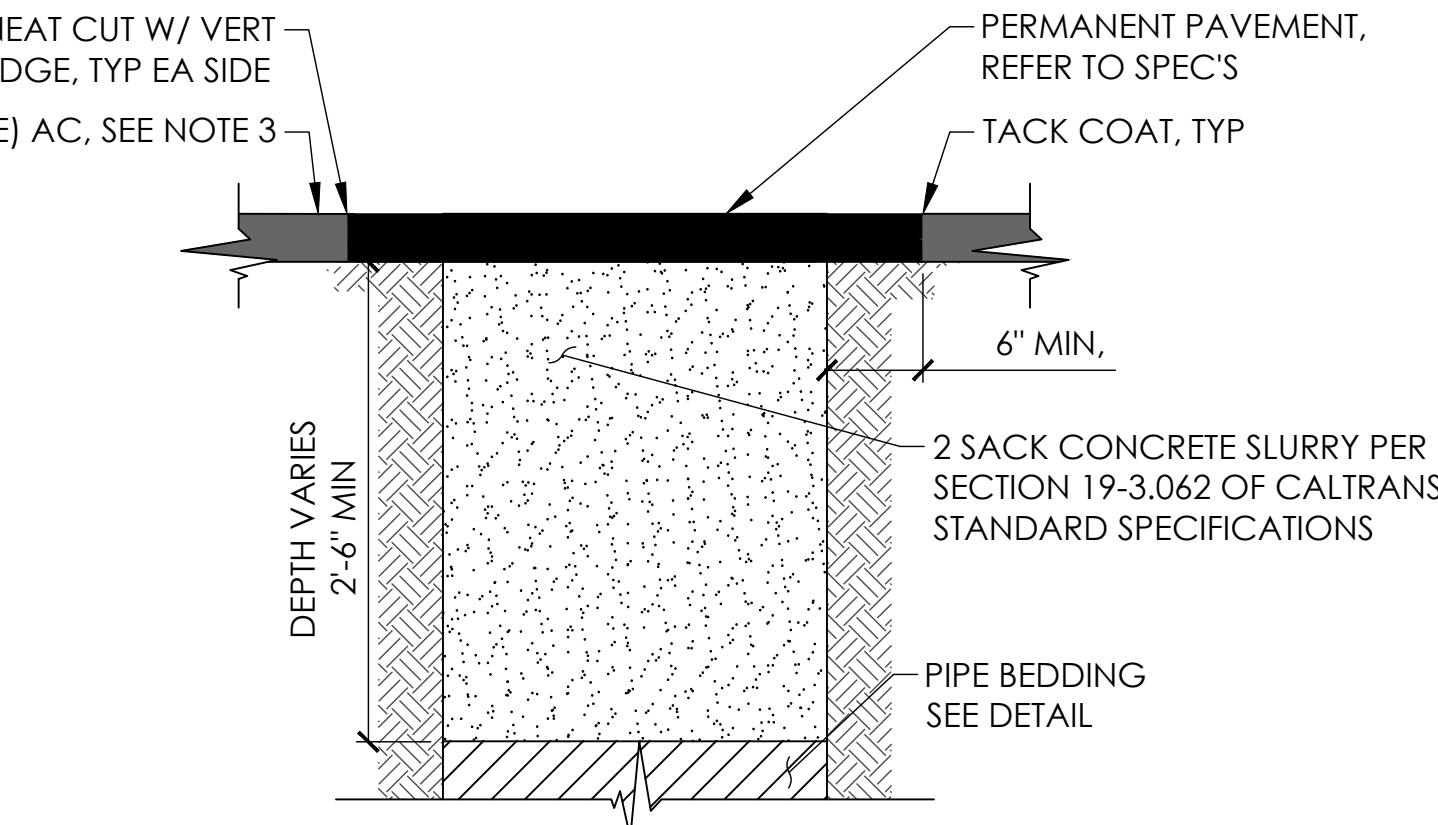
NOTES:
1. CLASS "A1" SHALL BE USED IN GRAVELED SHOULDERS, ALLEYS, UNDER CONC, UNPAVED DRIVEWAYS, & AT OTHER LOCATIONS DESIGNATED BY THE ENGR.

CLASS "A1" BACKFILL DETAIL
NTS 1
C1.1



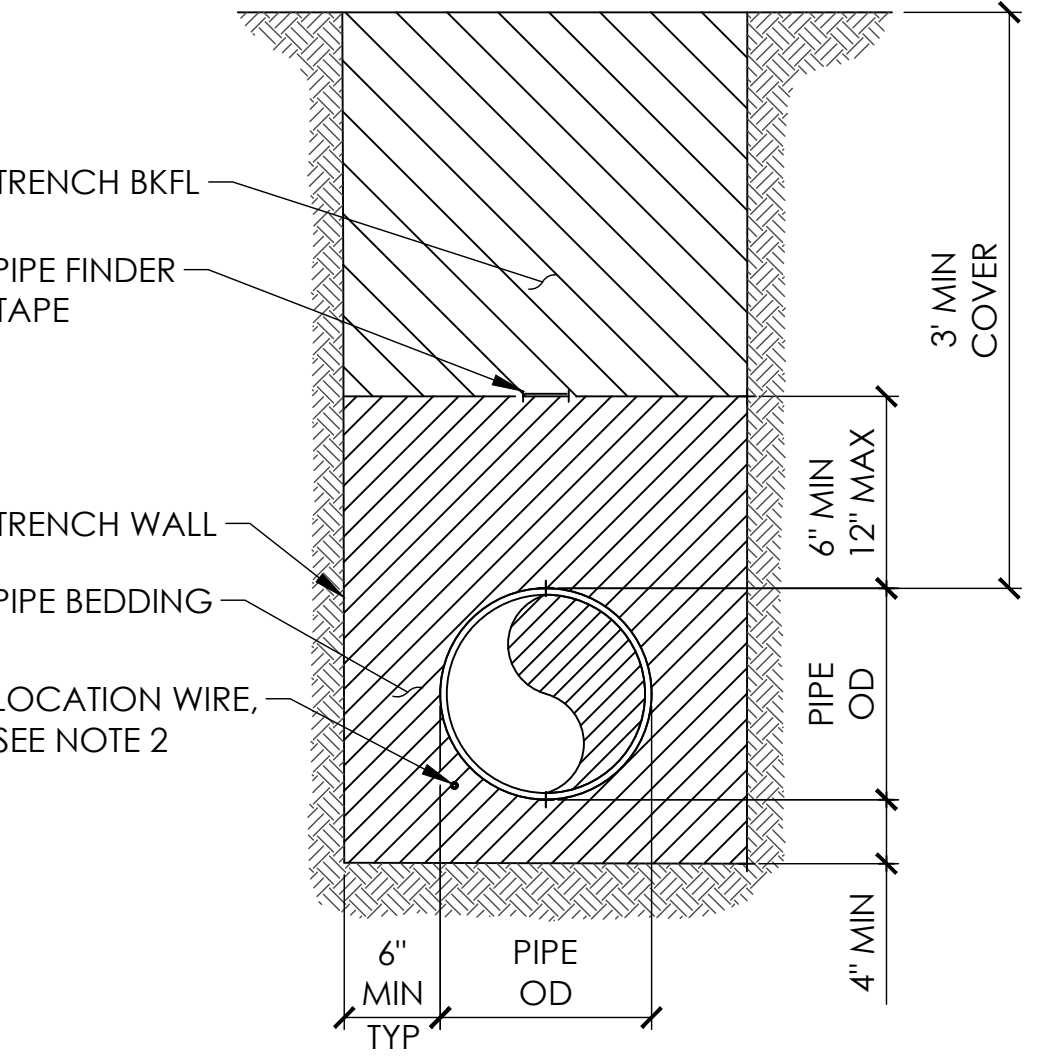
NOTES:
1. THE TRENCH SHALL HAVE AT LEAST 0.25 FEET OF TEMPORARY COLD MIX ASPHALT BEFORE OPENING ROAD TO TRAFFIC.
2. FOR ITEMS NOT SHOWN, SEE ISSUED HUMBOLDT COUNTY ENCROACHMENT PERMIT.
3. ALL MATERIALS SHALL COMPLY WITH CALTRANS STANDARD SPECIFICATIONS, CURRENT EDITION.
4. IF GROUNDWATER IS ENCOUNTERED DURING TRENCH ESCAVATION, ENGINEER AND THE COUNTY DEPARTMENT OF PUBLIC WORKS SHALL BE CONSULTED FOR SITE SPECIFIC CORRECTIVE MEASURES.
5. WHERE REMAINING UNDAMAGED PAVING IS LESS THAN 2 FT WIDE AFTER TRENCHING, REMOVE & REPLACE PAVEMENT TO EDGE OF (E) PAVING AT FULL THICKNESS.
6. TYPE I BKFL SHALL BE USED IN ALL PAVED AREAS, UNO.
7. FOR UNDERMINED OR DAMAGE TO ADJACENT PAVEMENT, REFER TO SPEC'S.

HUMBOLDT COUNTY TYPE I BACKFILL
NTS 2
C1.1



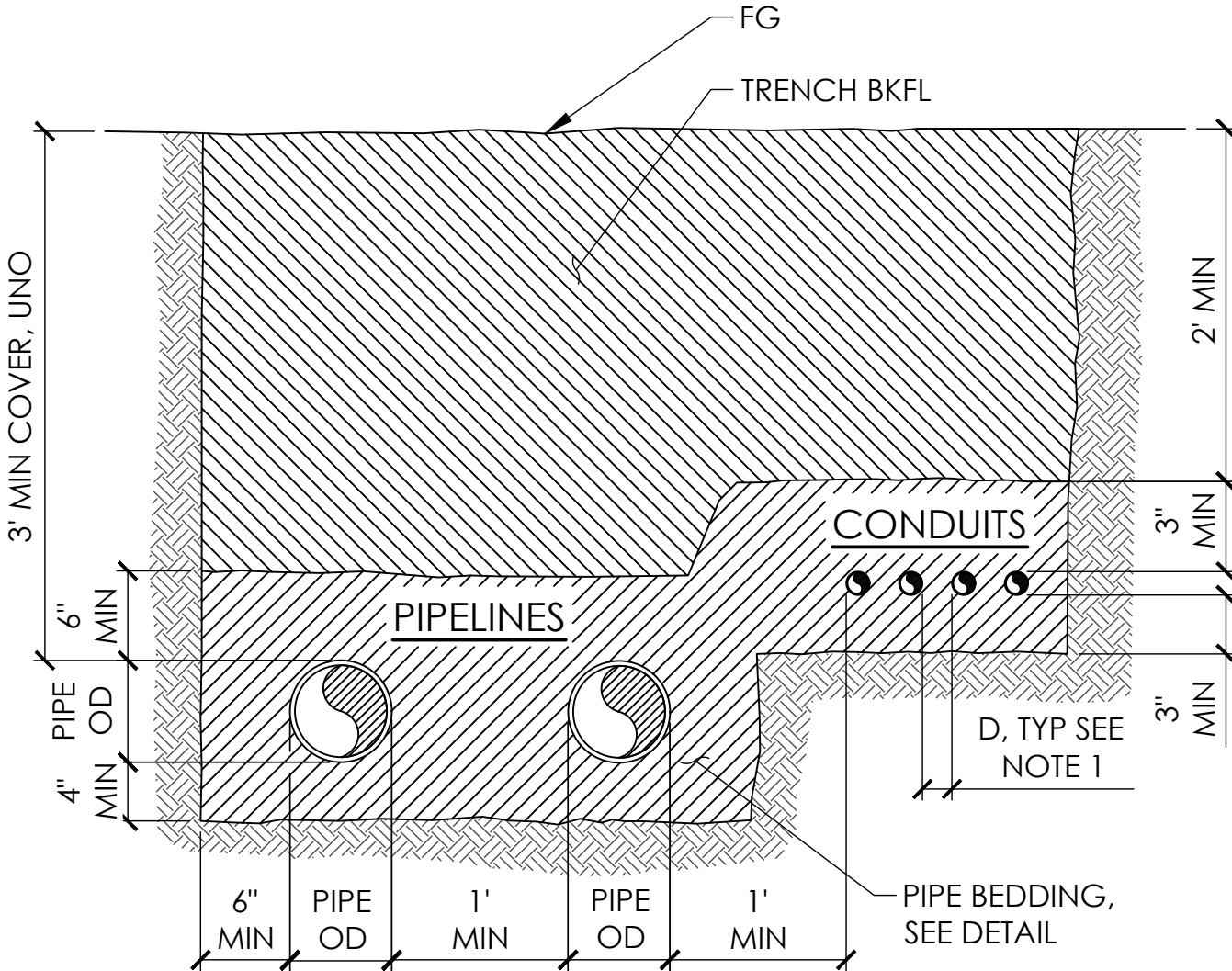
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5. HUMBOLDT COUNTY TYPE II BKFL SHALL BE USED IN MAJOR ROADS WHERE PIPELINE IS PERPENDICULAR TO THE ROAD OR WHERE DESIGNATED ON THE PLAN. TYPE II BKFL MAY BE USED WITH ENGINEER APPROVAL AT OTHER LOCATIONS IN LIEU OF TYPE I BKFL.
6. INSTALL SLURRY MIX BKFL TO SURFACE. AFTER SLURRY MIX HAS SET SCALP OFF AS REQ'D TO INSTALL PERMANENT PAVEMENT.
7. FOR UNDERMINED OR DAMAGE TO ADJACENT PAVEMENT, REFER TO SPECS.

HUMBOLDT COUNTY TYPE II BACKFILL
NTS 3
C1.1



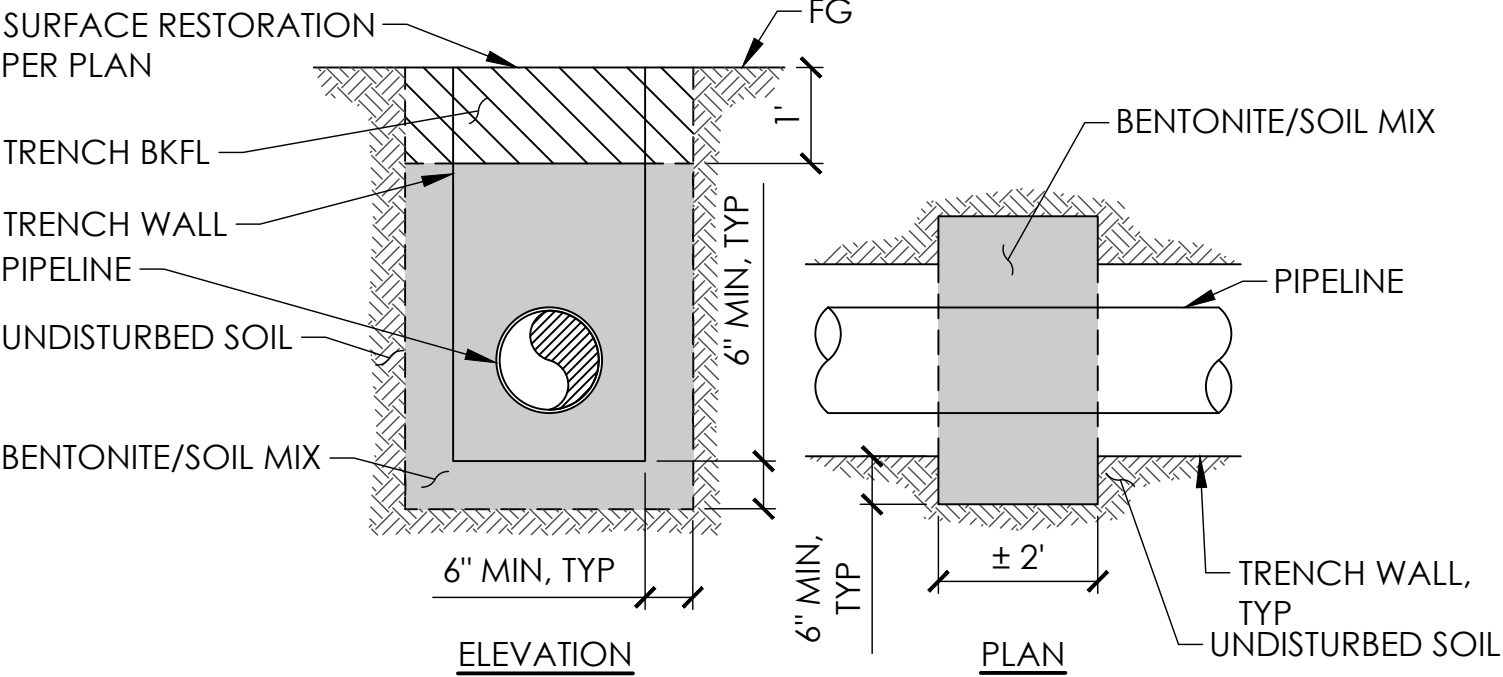
NOTES:
1. FOR 2 PIPES IN COMMON TRENCH, MAINTAIN 12 IN CLEARANCE BETWEEN PIPES & 6 IN MIN BETWEEN PIPES & TRENCH WALL.
2. REFER TO SPEC'S FOR LOCATION OF WIRE. WIRE REQ'D FOR WATER PIPING & PRESSURE SEWERS ONLY. ALL LOCATION WIRE SPLICES SHALL BE PERFORMED W/ WATER PROOF CONNECTORS, REFER TO SPEC'S.

PIPE BEDDING DETAIL
NTS 4
C1.1



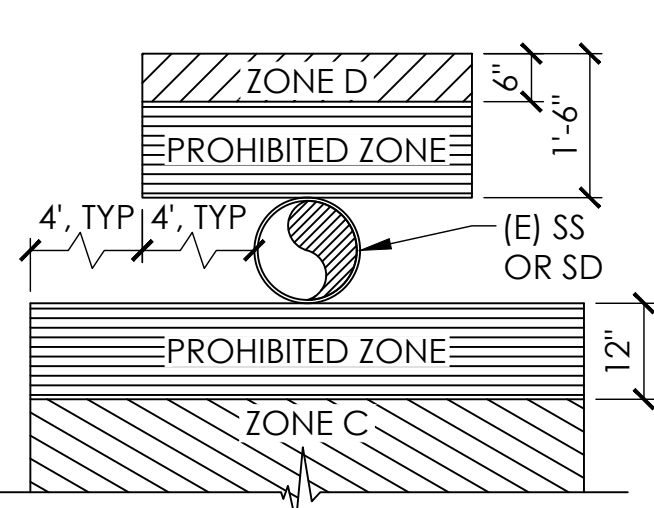
NOTES:
1. D = 3" MIN FOR 2" & LARGER CONDUIT, D = 2" MIN FOR 1 1/2" & SMALLER CONDUIT.

ON SITE MULTIPLE PIPE TRENCH DETAIL
NTS 5
C1.1

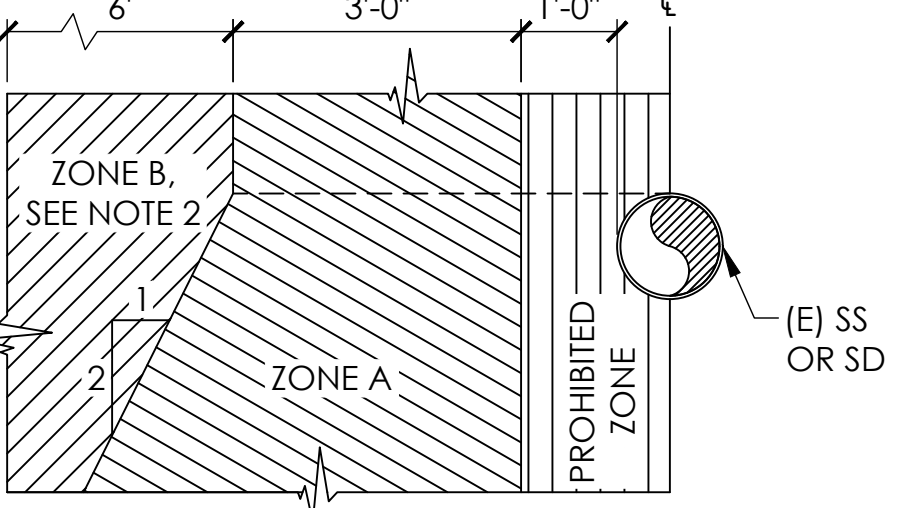


NOTES:
1. INSTALL TRENCH CUTOFFS WHERE SLOPES EXCEED 3%.
2. TRENCH CUTOFFS SHALL BE INSTALLED AT EVERY 4 FEET OF VERTICAL DROP IN ELEVATION ALONG THE SURFACE GRADE OF THE TRENCH, UNO.
3. TRENCH CUTOFFS SHALL BE OF BENTONITE/SOIL MIXTURE. BENTONITE/SOIL MIXTURE SHALL CONSIST OF 8 PERCENT (BY WEIGHT) POWDERED BENTONITE MIXED WITH SELECT NATIVE SOIL PER THE BENTONITE MANUFACTURER'S RECOMMENDATIONS. BENTONITE/SOIL MIXTURE SHALL BE COMPACTED IN PLACE TO 90 PERCENT MINIMUM RELATIVE COMPACTION.
4. TRENCH CUTOFFS SHALL BE INSTALLED IN PIPE BEDDING ZONE IN BOTH TYPE 1 & 2 BACKFILL.

TRENCH CUTOFF DETAIL
NTS 6
C1.1



NEW WATER MAIN PERPENDICULAR TO SEWER OR STORM DRAIN



NEW WATER MAIN PARALLEL TO SEWER OR STORM DRAIN

ZONE	REQUIREMENTS
PROHIBITED	(N) CONSTRUCTION IS PROHIBITED W/IN THIS AREA
A	(N) CONSTRUCTION W/IN THIS AREA SHALL HAVE PRIOR WRITTEN APPROVAL FROM BOTH DDW & THE ENGR
B	(N) CONSTRUCTION W/IN THIS AREA SHALL BE DIP W/ COMPRESSION JTS OR PVC W/ RUBBER RING JTS (ASTM D3034)
C	(N) CONSTRUCTION SHALL BE DIP, DR 14 PVC, OR HDPE (C906-99) & HAVE NO JTS W/IN 8 FT FROM EITHER SIDE OF SEWER MAIN
D	(N) CONSTRUCTION SHALL BE DIP, DR 14 PVC, OR HDPE (C906-99) & HAVE NO JTS W/IN 4 FT FROM EITHER SIDE OF SEWER MAIN

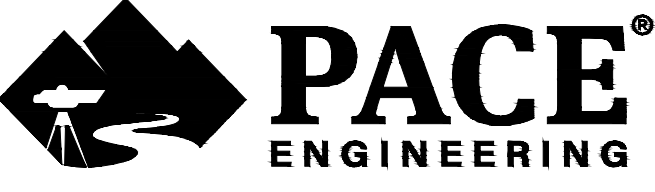
NOTES:
1. CONTRACTOR SHALL REPORT AREAS NOT SHOWN ON PLANS THAT REQUIRE WATER MAIN PLACEMENT W/IN ZONES A, B, C, OR D TO THE ENGR. THESE ZONES REQUIRE STATE WATER RESOURCES CONTROL BOARD, DIVISION OF DRINKING WATER APPROVAL PRIOR TO INSTALLATION.
2. ZONE B REQUIREMENTS DO NOT APPLY WHEN PARALLEL TO (E) STORM DRAIN.

SEPARATION OF WATER MAIN FROM SEWER AND STORM DRAIN PIPELINES
NTS 7
C1.1

90% DRAFT

BAR IS ONE INCH ON ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REVISIONS		
NO	DATE	DESCRIPTION



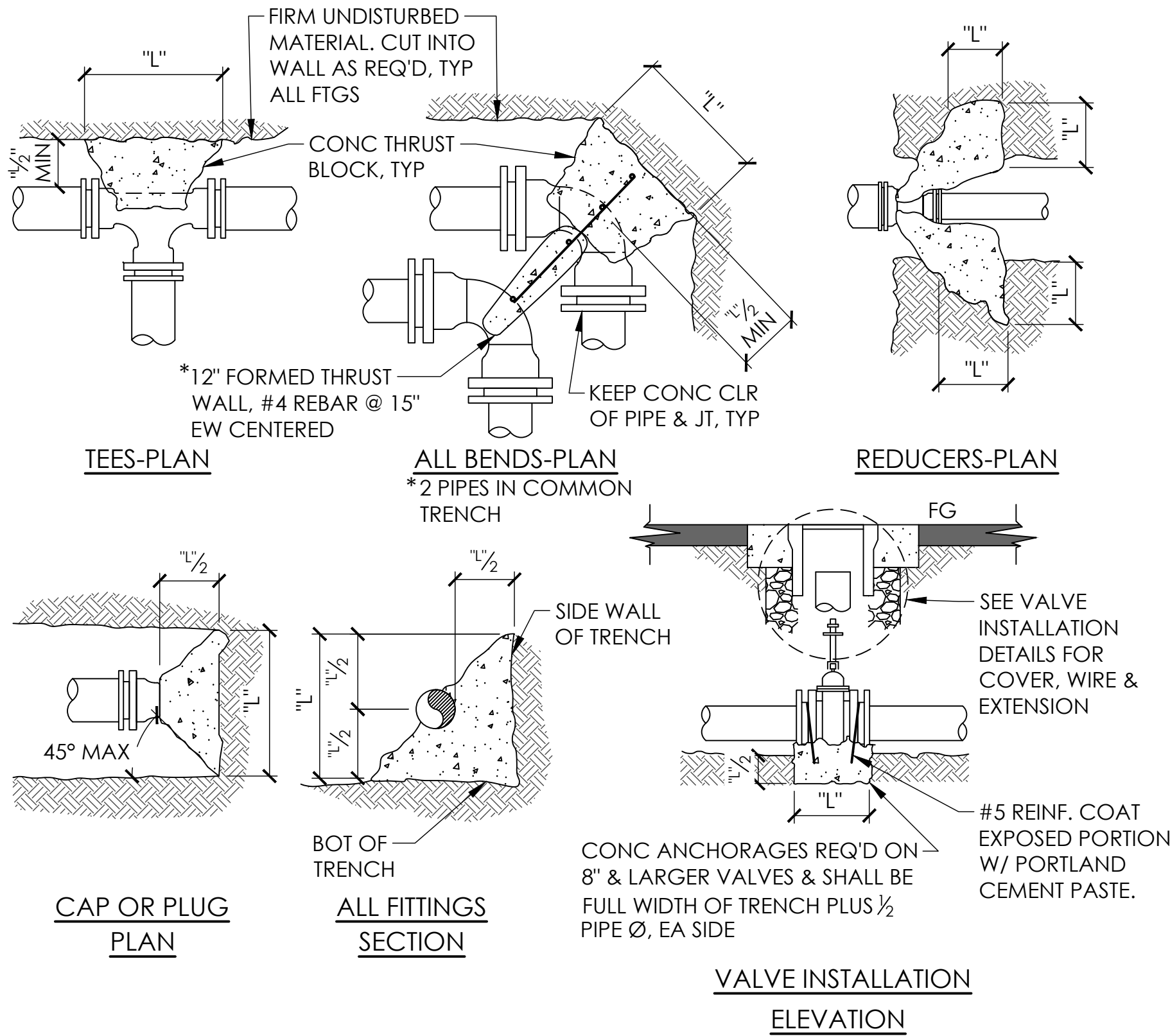
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DRN	GAF	DATE	12/4/23	2973.03

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WESTHAVEN COMMUNITY SERVICES DISTRICT
TRINIDAD-WESTHAVEN EMERGENCY INTERTIE PROJECT

DETAILS

SHEET
C1.1
PG 5 OF 21



- NOTES:
- THRUST BLOCKS SHALL BE PROVIDED @ ALL BURIED PIPE FTGS OF 4 IN Ø OR LARGER, UNO. THRUST BLOCK SIZE IS BASED ON PIPE SIZE, 150 PSI TEST PRESSURE, & SOIL BEARING OF 1200 LB/FT². DIM "L" IN TABLE 1 IS BOTH A VERT & HORIZ DIM, UNO. IF PIPE COVER IS LESS THAN 30 IN, INCREASE HORIZ "L" PROPORTIONALLY (I.E., INCREASED HORIZ "L" = (30"/DEPTH) x "L").
 - USE OF RESTRAINED FTG IN LIEU OF THRUST BLOCK MAY REQUIRE PIPE JTS TO BE RESTRAINED UP & DOWNSTREAM OF FTG. WHERE CONTR PROPOSES TO USE A RESTRAINED FTG IN LIEU OF A THRUST BLOCK, CONTR SHALL COORDINATE W/ ENGINEER TO DETERMINE NUMBER OF PIPE JTS TO BE RESTRAINED.
 - THRUST BLOCKS SHALL BE INSTALLED IN PRESENCE OF OWNER OR THEIR REPRESENTATIVE.

THRUST BLOCK DETAILS
NTS 1
C1.2

TABLE 1 STD THRUST BLOCK MIN DIM "L" IN INCHES							
NOMINAL PIPE Ø INCHES	FTGS						
	TEE, WYE, OR PLUG	90° BEND	45° BEND	22 ½° BEND	11 ¼° BEND	REDUCER (BASED ON LARGEST Ø)	VALVE
4"	18	22	16	11	8	--	--
6"	26	31	23	16	12	--	--
8"	34	41	30	21	15	17	12
10"	42	50	37	26	19	21	12
12"	50	59	44	31	22	25	16
14"	58	68	50	36	26	30	16
16"	66	78	57	41	29	33	18
18"	73	87	64	46	33	37	REQUIRES SPECIAL DESIGN
20"	81	97	71	51	36	41	
24"	97	115	85	61	43	49	

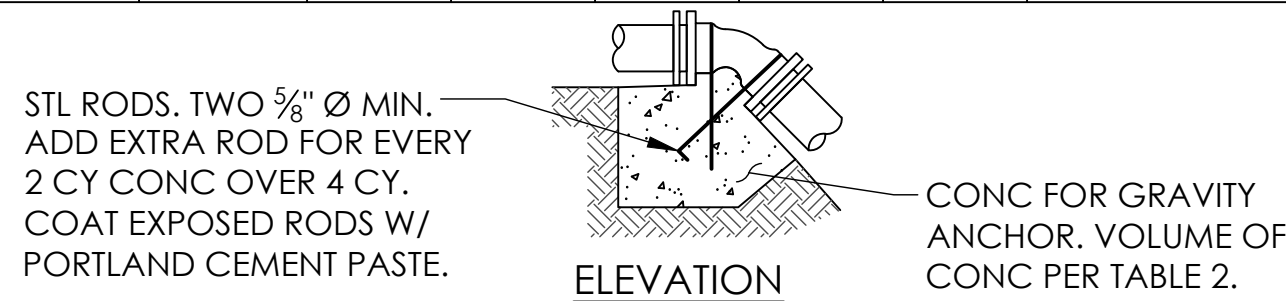
- NOTES:
- INCREASE ALL DIMS IN TABLE 1 BY 10% TO ALLOW FOR INCREASE IN PRESSURE TO 175 PSI.

TABLE 2
VERT FTG THRUST BLOCKS

WHERE VERT BENDS ARE DIRECTED W/ THRUST TOWARD BOT OF THE TRENCH, BENDS SHALL HAVE THRUST BLOCKS PER HORIZ BENDS EXCEPT CONC SHALL BEAR AGAINST TRENCH BOT.

WHERE VERT BENDS ARE DIRECTED W/ THRUST TOWARD TOP OF TRENCH, BENDS SHALL BE INSTALLED PER THE FOLLOWING DETAIL. MIN ROD EMBED SHALL BE 30" FOR 12" & SMALLER PIPE & 36" FOR 14" & LARGER PIPE.

CY CONC FOR VERT FTGS (SEE DETAIL BELOW)							
BEND ANGLE	PIPE Ø						16" & OVER
	4"	6"	8"	10"	12"	14"	
11 ¼°	0.2	0.4	0.7	1.1	1.5	2.0	REQUIRES SPECIAL DESIGN
22 ½°	0.4	0.8	1.4	2.1	3.0	4.0	
45°	0.8	1.6	2.8	4.2	5.9	7.9	
90°	1.4	3.0	5.1	7.7	10.9	14.6	



THRUST BLOCK TABLES
NTS 2
C1.2

TABLE 3		
SIZE	PIPE FITTING	MIN. RESTRAINED PIPE LENGTH (FT)
10"	TEE	6
10"	90° ELB	30
10"	45° ELB	13
10"	11.25° ELB	5
10"x6"	TEE	5
8"	TEE	5
8"	90° ELB	25
8"	45° ELB	11
8"	11.25° ELB	5
8"	CAP	80
8"x6"	TEE	5
8"x4"	TEE	5
6"	TEE	5
6"	90° ELB	19
6"	45° ELB	8
6"	11.25° ELB	5
6"	CAP	60
6"x4"	TEE	5
4"	TEE	5
4"	90° ELB	14
4"	45° ELB	6
4"	11.25° ELB	5
4"	CAP	45

- NOTE:
- TEST PRESSURE = 150 PSI.
 - DEPTH OF BURY = 3 FT.
 - TEE RESTRAINT LENGTH VALUES REFLECT THE LENGTH OF PIPE ALONG THE BRANCH WHERE ALL FITTINGS AND JOINTS SHALL BE RESTRAINED. THE RESTRAINT LENGTH ALONG THE BRANCH WAS CALCULATED ASSUMING 10 LF OF RESTRAINED JOINTS EACH WAY ALONG THE PIPE RUN, UNO. RESTRAINED PIPE LENGTH ALONG THE BRANCH WILL CHANGE AS RESTRAINED LENGTH ALONG THE PIPE RUN CHANGES. CONTRACTOR SHALL SUBMIT CALCULATIONS TO ENGINEER FOR APPROVAL IF RESTRAINED PIPE LENGTH ALONG THE RUN IS GREATER THAN OR LESS THAN 10 LF.

RESTRAINT LENGTH TABLES FOR PIPE JOINTS AND FITTINGS
NTS 3
C1.2

TABLE 4		
SIZE	MINIMUM BEND RADIUS, R (FT)	MAXIMUM END OFFSET, Z (FT)
4"	150	1.3
6"	215	0.9
8"	285	0.6
10"	350	0.5

PVC ALLOWABLE BENDING RADIUS 20' LENGTHS
NTS 4
C1.2

90% DRAFT

BAR IS ONE INCH ON ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

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DRN GAF	DATE 12/4/23	

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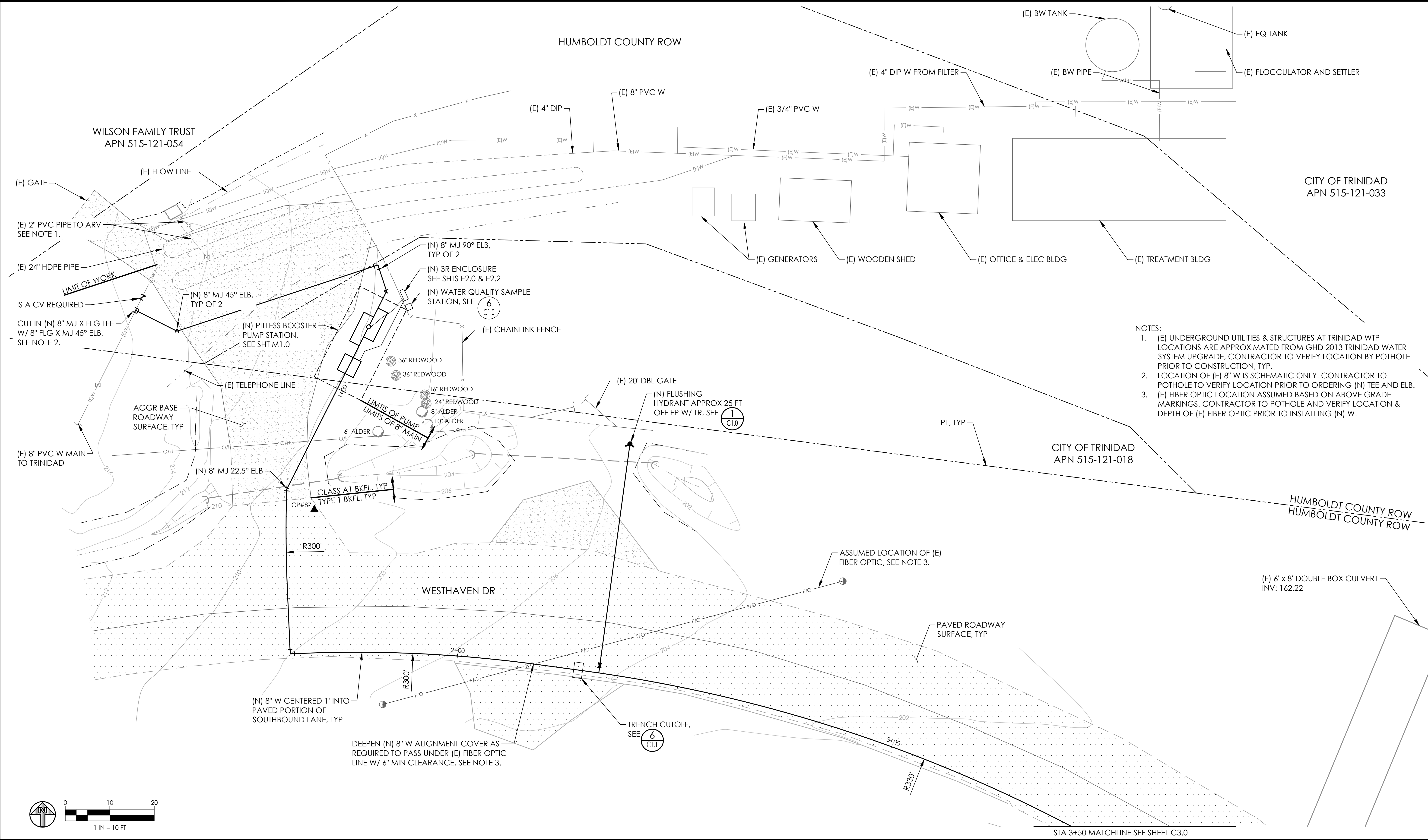
WESTHAVEN COMMUNITY SERVICES DISTRICT
TRINIDAD-WESTHAVEN EMERGENCY INTERTIE PROJECT

DETAILS

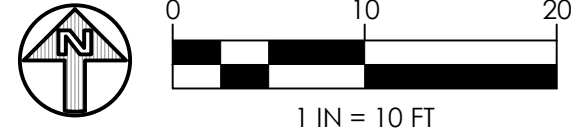
SHEET

C1.2

PG 6 OF 21



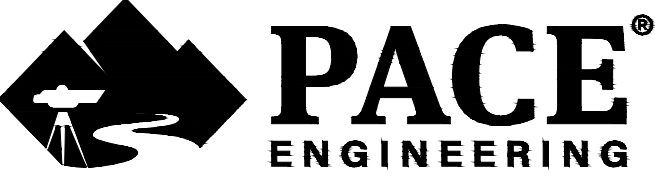
- NOTES:
- (E) UNDERGROUND UTILITIES & STRUCTURES AT TRINIDAD WTP LOCATIONS ARE APPROXIMATED FROM GHD 2013 TRINIDAD WATER SYSTEM UPGRADE. CONTRACTOR TO VERIFY LOCATION BY POTHOLE PRIOR TO CONSTRUCTION, TYP.
 - LOCATION OF (E) 8" W IS SCHEMATIC ONLY. CONTRACTOR TO POTHOLE TO VERIFY LOCATION PRIOR TO ORDERING (N) TEE AND ELB.
 - (E) FIBER OPTIC LOCATION ASSUMED BASED ON ABOVE GRADE MARKINGS. CONTRACTOR TO POTHOLE AND VERIFY LOCATION & DEPTH OF (E) FIBER OPTIC PRIOR TO INSTALLING (N) W.



90% DRAFT

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0' 1"
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REVISIONS		
NO	DATE	DESCRIPTION



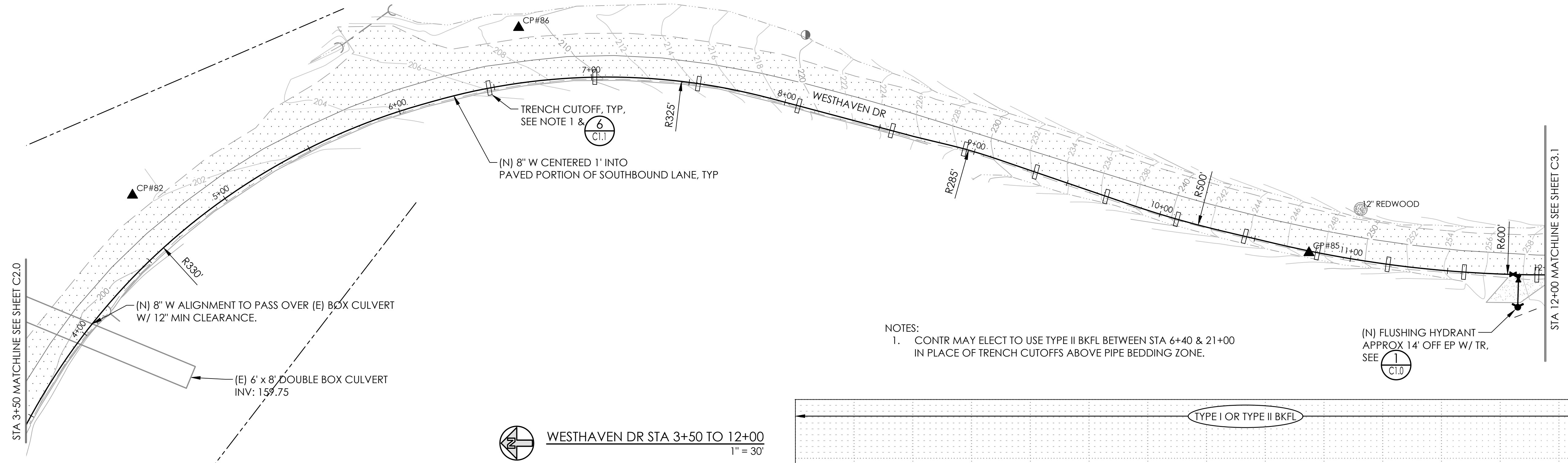
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DRN	GAF	DATE	12/4/23	2973.03

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TRINIDAD-WESTHAVEN EMERGENCY INTERTIE PROJECT

SITE PLAN

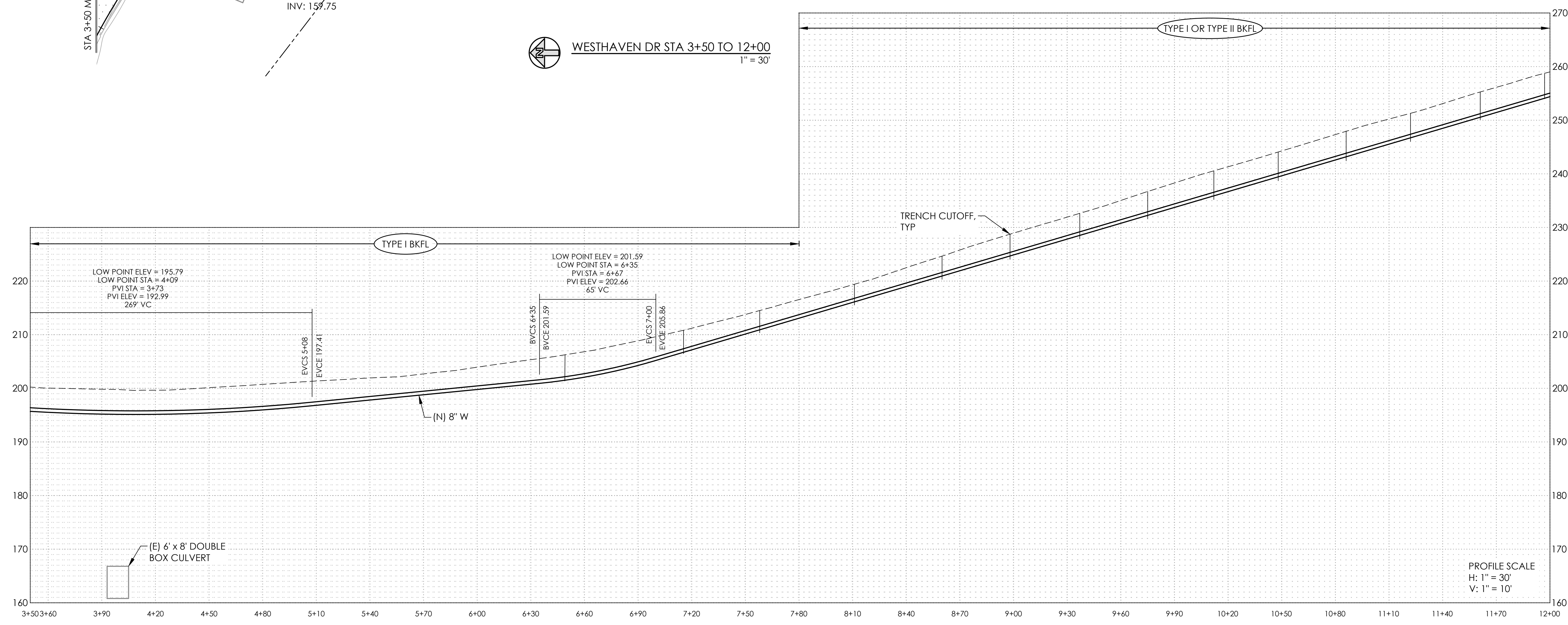
SHEET
C2.0
PG 7 OF 21



- NOTES:
- CONTR MAY ELECT TO USE TYPE II BKFL BETWEEN STA 6+40 & 21+00 IN PLACE OF TRENCH CUTOFFS ABOVE PIPE BEDDING ZONE.

(N) FLUSHING HYDRANT
APPROX 14' OFF EP W/ TR,
SEE
1
C.I.0

WESTHAVEN DR STA 3+50 TO 12+00
1" = 30'



90% DRAFT

BAR IS ONE INCH ON ORIGINAL DRAWING
0' 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

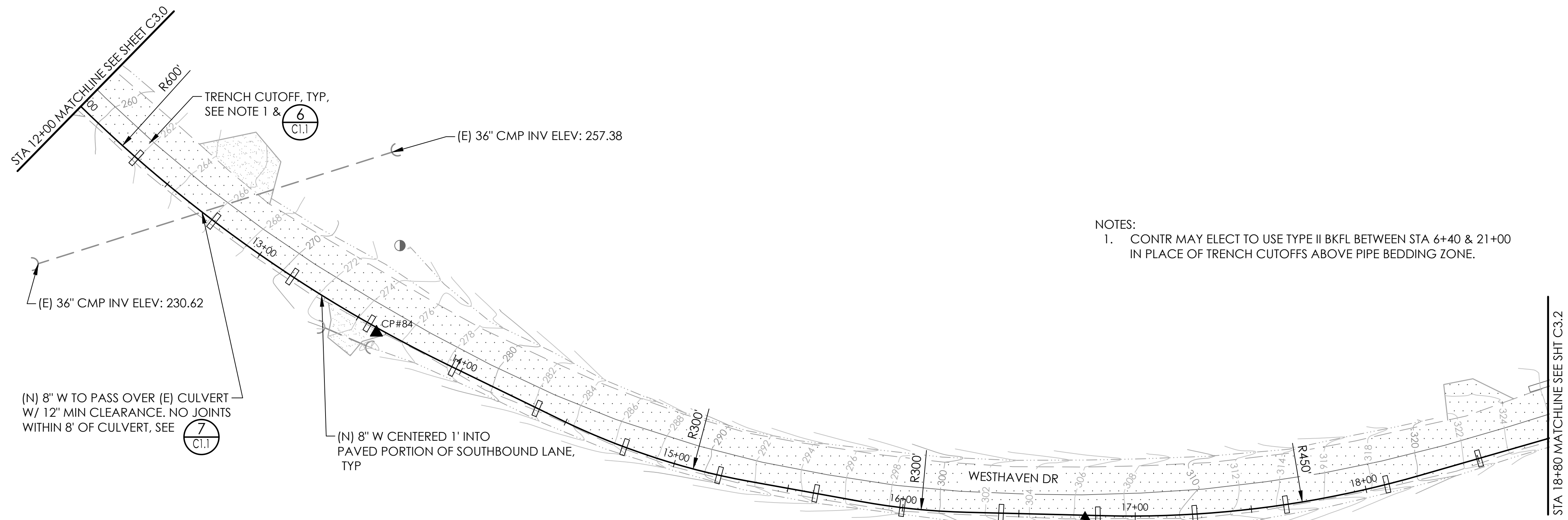
REVISIONS		
NO	DATE	DESCRIPTION

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DRN: GAF	DATE: 12/4/23	

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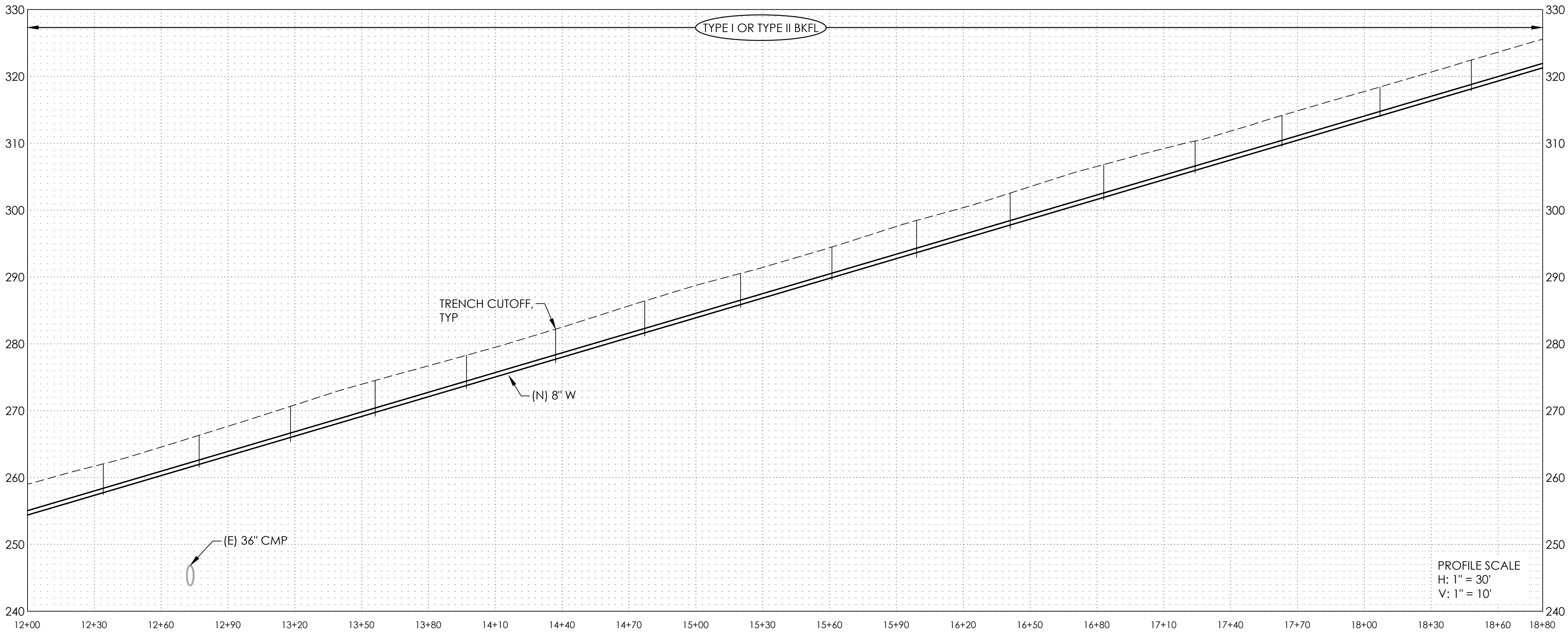
WESTHAVEN COMMUNITY SERVICES DISTRICT
TRINIDAD-WESTHAVEN EMERGENCY INTERTIE PROJECT
WESTHAVEN DR STA 3+50 TO STA 12+00

SHEET
C3.0
PG 8 OF 21



NOTES:
1. CONTR MAY ELECT TO USE TYPE II BKFL BETWEEN STA 6+40 & 21+00
IN PLACE OF TRENCH CUTOFFS ABOVE PIPE BEDDING ZONE.

 WESTHAVEN DR STA 12+00 TO 18+80
1" = 30'

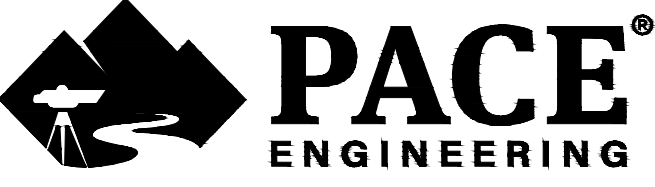


PROFILE SCALE
H: 1" = 30'
V: 1" = 10'

90% DRAFT

BAR IS ONE INCH ON
ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS
SHEET, ADJUST SCALES
ACCORDINGLY.

REVISIONS		
NO	DATE	DESCRIPTION

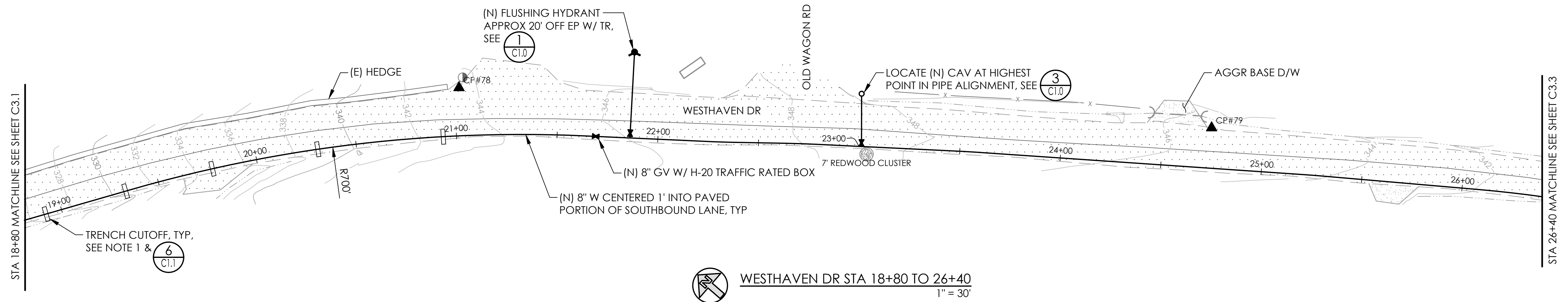


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DRN	GAF	DATE	12/4/23	2973.03

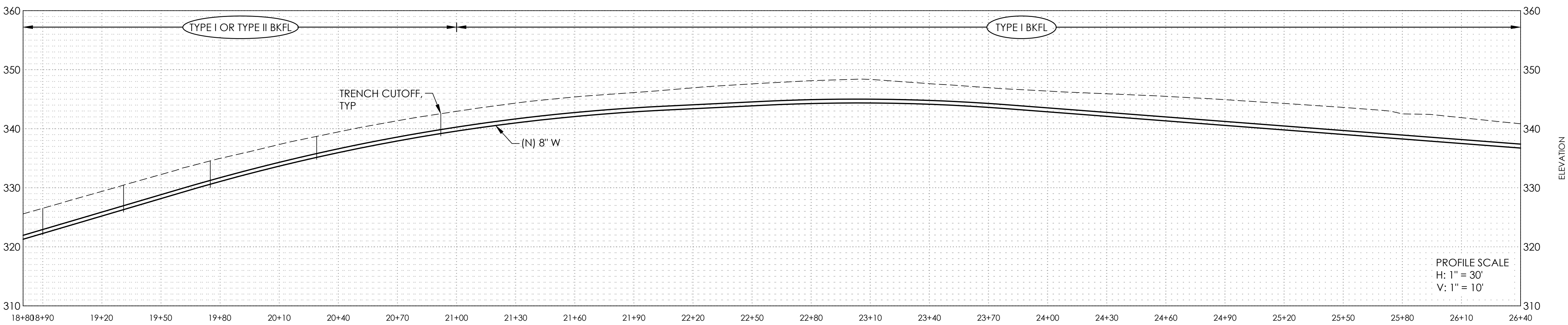
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TRINIDAD-WESTHAVEN EMERGENCY INTERTIE PROJECT
WESTHAVEN DR STA 12+00 TO STA 18+80

SHEET
C3.1
PG 9 OF 21




- NOTES:
- CONTR MAY ELECT TO USE SLURRY BACKFILL BETWEEN STA 6+40 & 21+00 IN PLACE OF TRENCH CUTOFFS ABOVE PIPE BEDDING ZONE.



90% DRAFT

BAR IS ONE INCH ON ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REVISIONS		
NO	DATE	DESCRIPTION



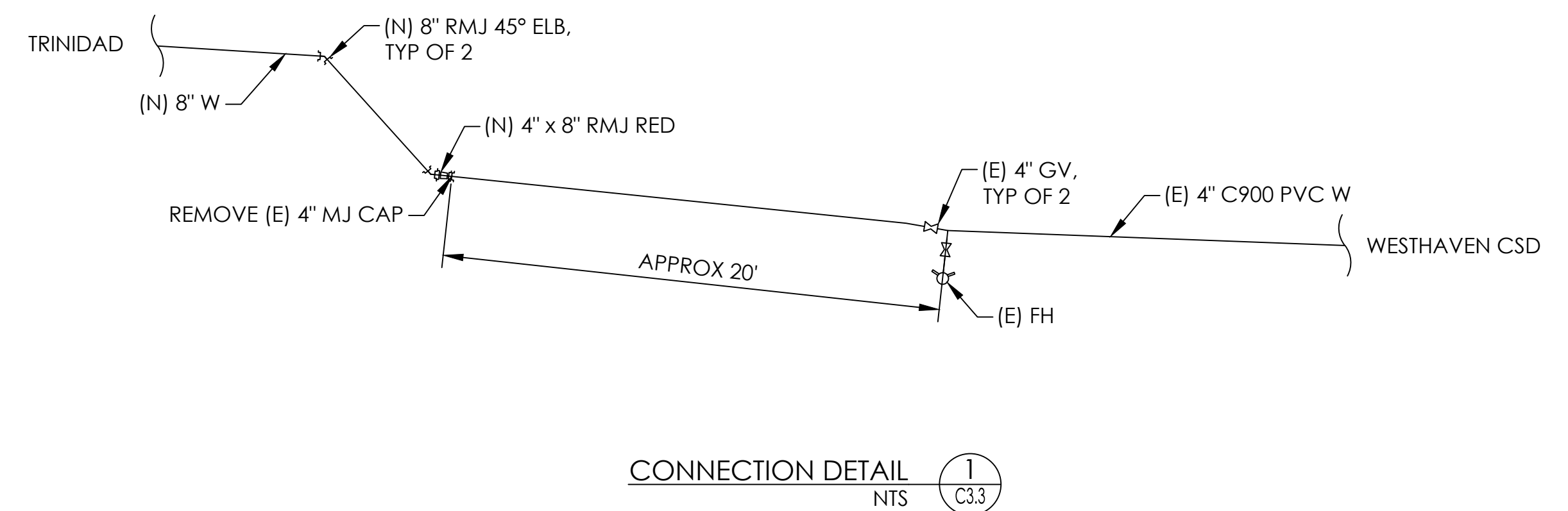
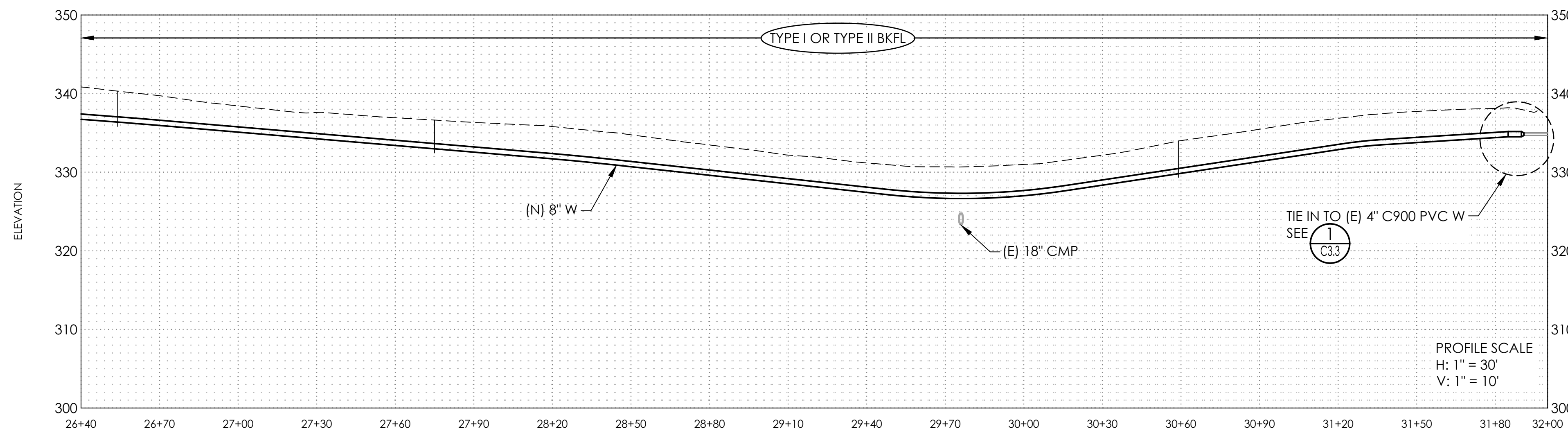
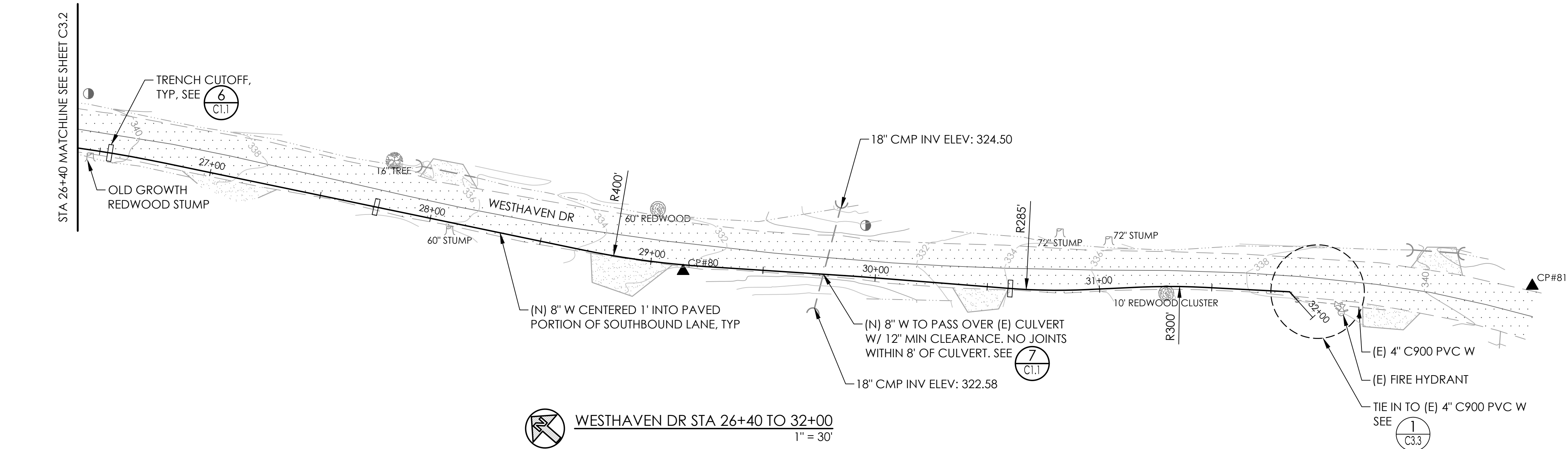
PACE
ENGINEERING

DES: JLG	CKD: TWV	JOB NO. 2973.03
DRN: GAF	DATE: 12/4/23	

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WESTHAVEN COMMUNITY SERVICES DISTRICT
TRINIDAD-WESTHAVEN EMERGENCY INTERTIE PROJECT
WESTHAVEN DR STA 18+80 TO 26+40

SHEET
C3.2
PG 10 OF 21



90% DRAFT

BAR IS ONE INCH ON ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REVISIONS		
NO	DATE	DESCRIPTION

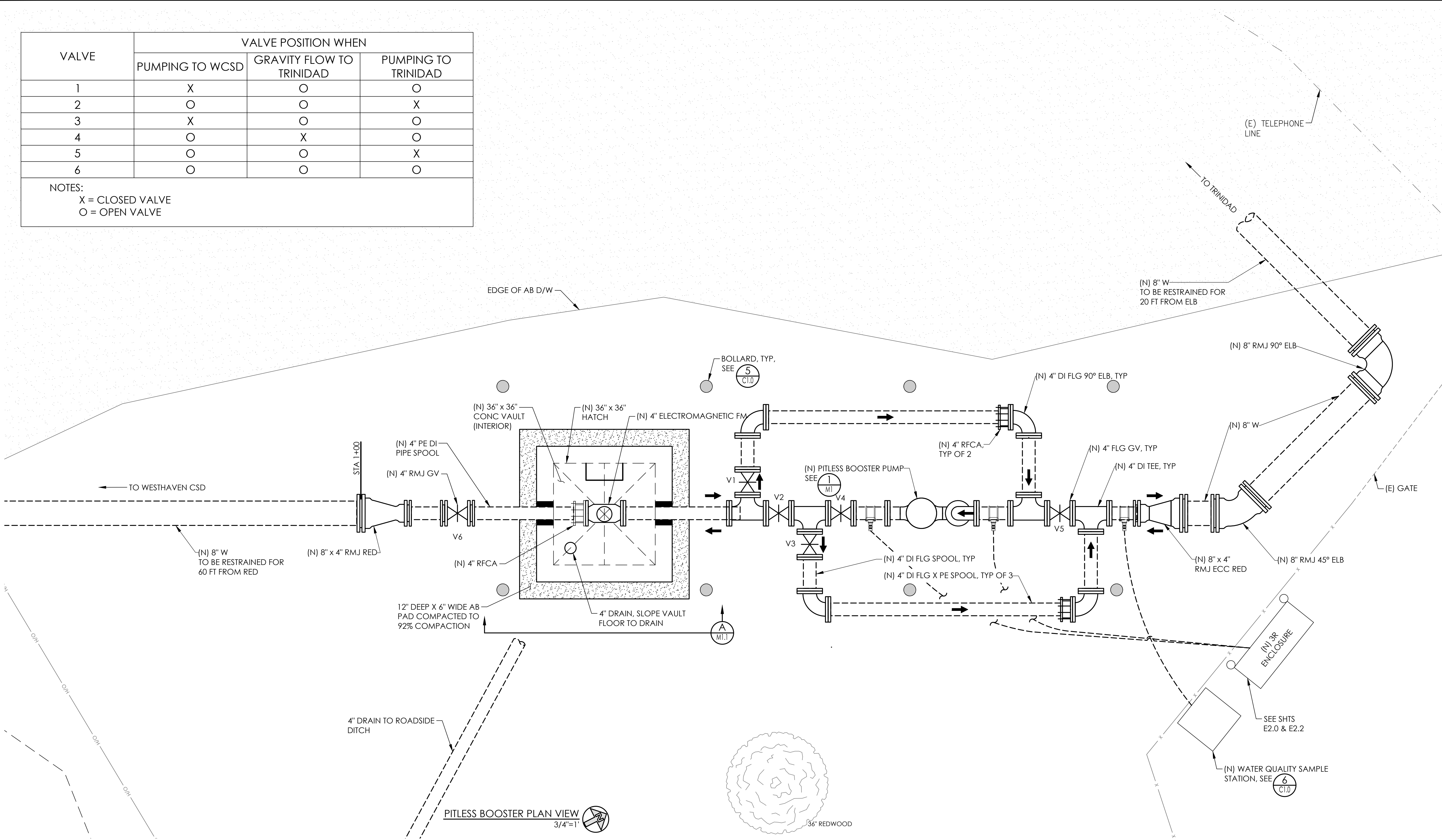
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DRN GAF		DATE 12/4/23	2973.03

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TRINIDAD-WESTHAVEN EMERGENCY INTERTIE PROJECT
WESTHAVEN DR STA 26+40 TO STA 32+00

SHEET
C3.3
PG 11 OF 21

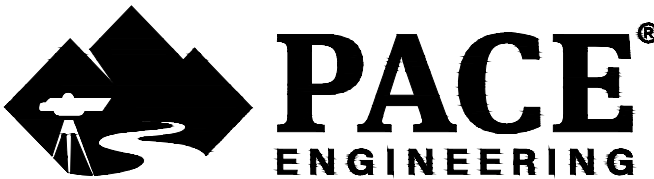
VALVE	VALVE POSITION WHEN		
	PUMPING TO WCSD	GRAVITY FLOW TO TRINIDAD	PUMPING TO TRINIDAD
1	X	O	O
2	O	O	X
3	X	O	O
4	O	X	O
5	O	O	X
6	O	O	O
NOTES: X = CLOSED VALVE O = OPEN VALVE			



90% DRAFT

BAR IS ONE INCH ON ORIGINAL DRAWING
0' 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REVISIONS		
NO	DATE	DESCRIPTION

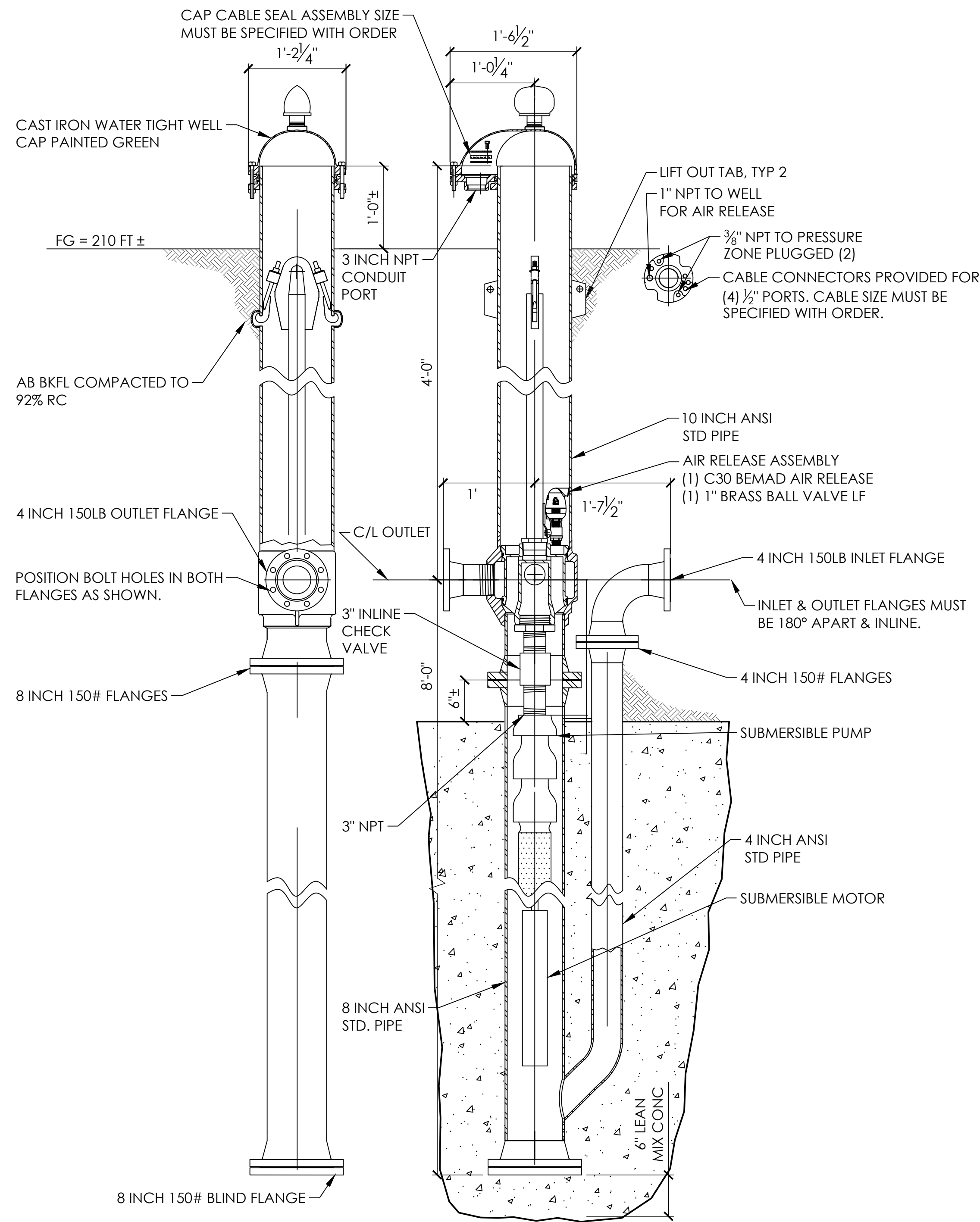


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DRN GAF	DATE 12/4/23	2973.03

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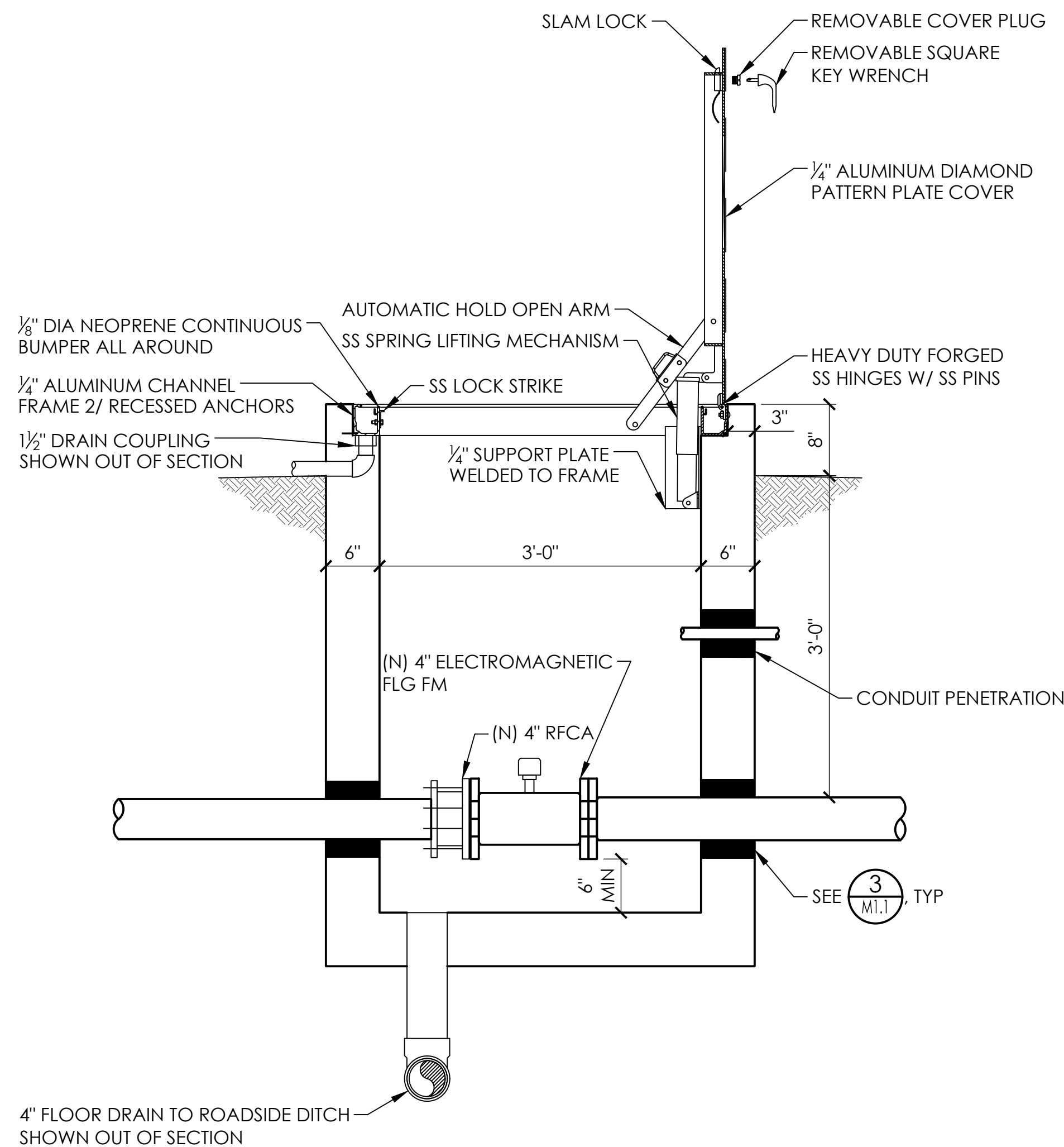
WESTHAVEN COMMUNITY SERVICES DISTRICT
TRINIDAD-WESTHAVEN EMERGENCY INTERTIE PROJECT
PITLESS BOOSTER PUMP MECHANICAL

SHEET
M1.0
PG 12 OF 21

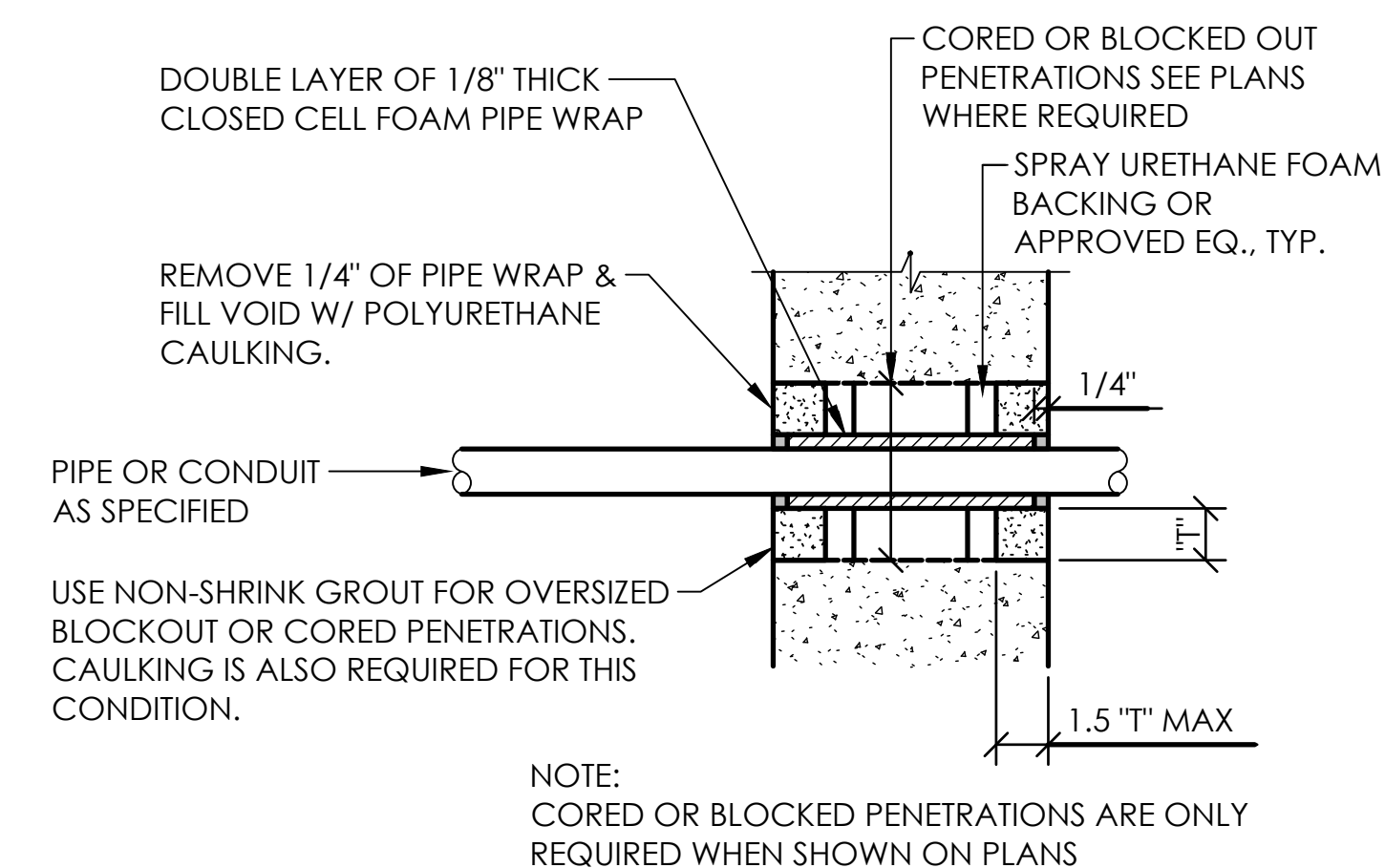


PITLESS BOOSTER
NTS (1) M1.0

- NOTES:
1. FLANGES ARE PER ANSI B16.5
 2. BACKFILL PITLESS BOOSTER STATION WITH LEAN MIX CONCRETE.
 3. CONTRACTOR TO VERIFY DIMENSION.



ELECTROMAGNETIC FLOW METER VAULT
NTS (2) M1.0



PIPES THROUGH CONCRETE
1" = 1'-0" (3) M1.1

90% DRAFT

BAR IS ONE INCH ON ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REVISIONS		
NO	DATE	DESCRIPTION

		DES: JLG DRN: GAF
CKD: TWV DATE: 12/4/23		JOB NO.: 2973.03

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WESTHAVEN COMMUNITY SERVICES DISTRICT
TRINIDAD-WESTHAVEN EMERGENCY INTERTIE PROJECT
PITLESS BOOSTER PUMP DETAIL

SHEET
M1.1
PG 13 OF 21

ELECTRICAL SYMBOLS					
LINE TYPES AND SYMBOLS		CONDUIT EXPOSED			
		CONDUIT CONCEALED or BURIED			
		INDICATES FIRE RATED WALL			
		CONDUIT UP			
		CONDUIT DOWN			
TICK MARKS		HOME RUN-DESTINATION SHOWN			
		TICK MARKS W/BARS INDICATES NUMBER OF #10 CONDUCTORS WITH #10 GROUND			
		TICK MARKS WITHOUT BARS INDICATES NUMBER OF #12 CONDUCTORS WITH #12 GROUND			
DEVICES, BOXES AND TERMINATIONS		"L" INDICATES 0-10V DIMMING CABLE, "5E" INDICATES CAT5E CABLE, "CL" INDICATES 0-10V DIMMING AND COLOR TUNING CABLE.			
		JUNCTION BOX			
		CONNECTION POINT (CONTRACTOR SHALL DETERMINE CONNECTION CONFIGURATION)			
		LOW VOLTAGE DEVICE BOX			
		DUPLEX RECEPTACLE			
		QUADRUPLX RECEPTACLE			
		EMERGENCY RECEPTACLE			
		CONTROLLED SPLIT DUPLEX RECEPTACLE			
		QUADRUPLX RECEPTACLE: (1) CONTROLLED SPLIT DUPLEX RECEPTACLE, (1) DUPLEX RECEPTACLE			
		SINGLE OR THREE PHASE RECEPTACLE, SEE PLAN SHEETS TYPE PER LOCATION			
		FLOOR BOX			
		HAND HOLE			
		PULLBOX			
EQUIPMENT		MAGNETIC STARTER W/ NEMA SIZE INDICATED			
		FUSED DISCONNECT	XXA/XXF XX	60AS/20F WP	60A DISCONNECT / 20A FUSE NEMA 3R
		NON-FUSED DISCONNECT	XX XX	60AS/20F WP	60A DISCONNECT NEMA 3R
		MAJOR ELECTRICAL COMPONENT OR DEVICE NAME OR IDENTIFYING SYMBOL AS SHOWN			
		SURFACE MOUNT PANELBOARD			
		FLUSH MOUNT PANELBOARD			
		EXOTHERMIC WELD, TERMINATION OR SPLICE POINT			
		GROUND ROD			
		GROUNDING ELECTRODE			
		CIRCUIT BREAKER			
ANNOTATION		CURRENT TRANSFORMER, NUMBER INDICATED			
		KEYNOTE			
	(A : B)	INDICATES INTERCONNECTION OF PATHWAYS AND/OR CONDUCTORS, E.G., 4"C-4#500,1#3G (MSB : PNL A) INDICATES CONDUIT AND CONDUCTORS ROUTED FROM THE MAIN SWITCHBOARD TO PANELBOARD A.			
		SPECIFICATION NUMBER REFERENCE TAG. CONFORMANCE TO PROJECT SPECIFICATIONS IS REQUIRED, WHERE TAGS ARE SHOWN ON THE DRAWINGS. IT IS THE ENGINEER'S INTENT TO RAISE ADDITIONAL AWARENESS TO PRODUCTS OR EXECUTION METHODS THAT ARE CRITICAL, ATYPICAL OR NOT EXPRESSLY DETAILED ON THE DRAWINGS.			
NOTE: THIS IS A SUPPLEMENTAL STANDARD ELECTRICAL LEGEND. SOME SYMBOLS MAY APPEAR ON THIS LEGEND AND NOT ON THE PLANS. SEE LIGHTING CONTROL SHEET FOR LIGHTING LEGEND.					

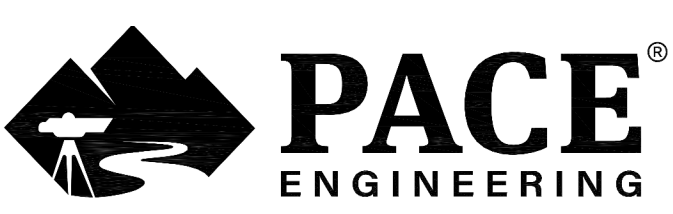
ELECTRICAL ABBREVIATIONS	
A	- AMMETER, AMPERE
AC	- ALTERNATING CURRENT
ACH	- ABOVE COUNTER HEIGHT
AFCI	- ARC FAULT CIRCUIT INTERRUPT
AFF	- ABOVE FINISHED FLOOR OR GRADE
AIC	- AMPS INTERRUPTING CAPACITY
AL	- ALUMINUM
ATS	- AUTOMATIC TRANSFER SWITCH
BGES	- BUILDING GROUND ELECTRODE SYSTEM
BRKR	- BREAKER
BOD	- BOTTOM OF DEVICE
C or COND	- CONDUIT
CAB	- CABINET
CEC	- CALIFORNIA ELECTRIC CODE
CKT	- CIRCUIT
COD	- CENTER OF DEVICE
CR	- CONTROLLED RECEPTACLE
CT	- CURRENT TRANSFORMER
DC	- DIRECT CURRENT
(E) or EXIST	- EXISTING
EEB	- EQUIPMENT EMERGENCY BRANCH
EEOR	- ELECTRICAL ENGINEER OF RECORD
EGC	- EQUIPMENT GROUNDING CONDUCTOR
ENC	- ENCLOSURE
(F)	- FUTURE
G	- EQUIPMENT GROUNDING CONDUCTOR
GEC	- GROUNDING ELECTRODE CONDUCTOR
GFCI	- GROUND FAULT CIRCUIT INTERRUPT
GND	- GROUND
J	- JUNCTION BOX
LCP	- LIGHTING CONTROL PANEL
LTG	- LIGHTING
MBJ	- MAIN BONDING JUMPER
MCB	- MAIN CIRCUIT BREAKER
MFR	- MANUFACTURER
MLO	- MAIN LUG ONLY
MOCp	- MAXIMUM OVERCURRENT PROTECTION
MSB	- MAIN SWITCH BOARD
MTS	- MANUAL TRANSFER SWITCH
NEC	- NATIONAL ELECTRIC CODE
NEMA	- NATIONAL ELECTRIC MANUFACTURER'S ASSOCIATION
N	- NEUTRAL
(N)	- NEW
OFCI	- OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	- OWNER FURNISHED, OWNER INSTALLED
PB	- PULLBOX
PNL	- PANELBOARD
RCPT	- RECEPTACLE
SWBD	- SWITCHBOARD
SBJ	- SYSTEM BONDING JUMPER
SSBJ	- SUPPLY SIDE BONDING JUMPER
SP	- STARTER PANEL
T	- THERMOSTAT OR TELE CONDUIT
TOD	- TOP OF DEVICE
TR	- TAMPER
TYP	- TYPICAL
V	- VOLTmeter, VOLT
W	- WAIT
WW	- WIREWAY
WP	- WEATHERPROOF (NEMA 3R)
XFMR	- TRANSFORMER
NOTE: THIS IS A SUPPLEMENTAL STANDARD LEGEND. SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS LEGEND AND NOT ON THE PLANS	

COMPLY WITH APPLICABLE CODES	
#	CODE
NOTE: USE LATEST EDITION OF LISTED CODES.	
1.	NFPA 30: FLAMMABLE AND COMBUSTIBLE LIQUIDS.
2.	NFPA 37: STATIONARY ENGINES.
3.	NFPA 54: FUEL GAS CODE.
4.	NFPA 58: LIQUEFIED PETROLEUM GAS.
5.	NFPA 72: FIRE ALARM AND SIGNALLING CODE.
6.	NFPA 110: EMERGENCY AND STANDBY POWER.
7.	NFPA 111: STANDBY POWER SYSTEMS.
8.	CALIFORNIA BUILDING CODE.
9.	CALIFORNIA ELECTRIC CODE.
10.	CALIFORNIA ENERGY CODE.
11.	CALIFORNIA FIRE CODE.

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CKD

BGE

JOB NO.

DRN

JMI

DATE

11/16/23

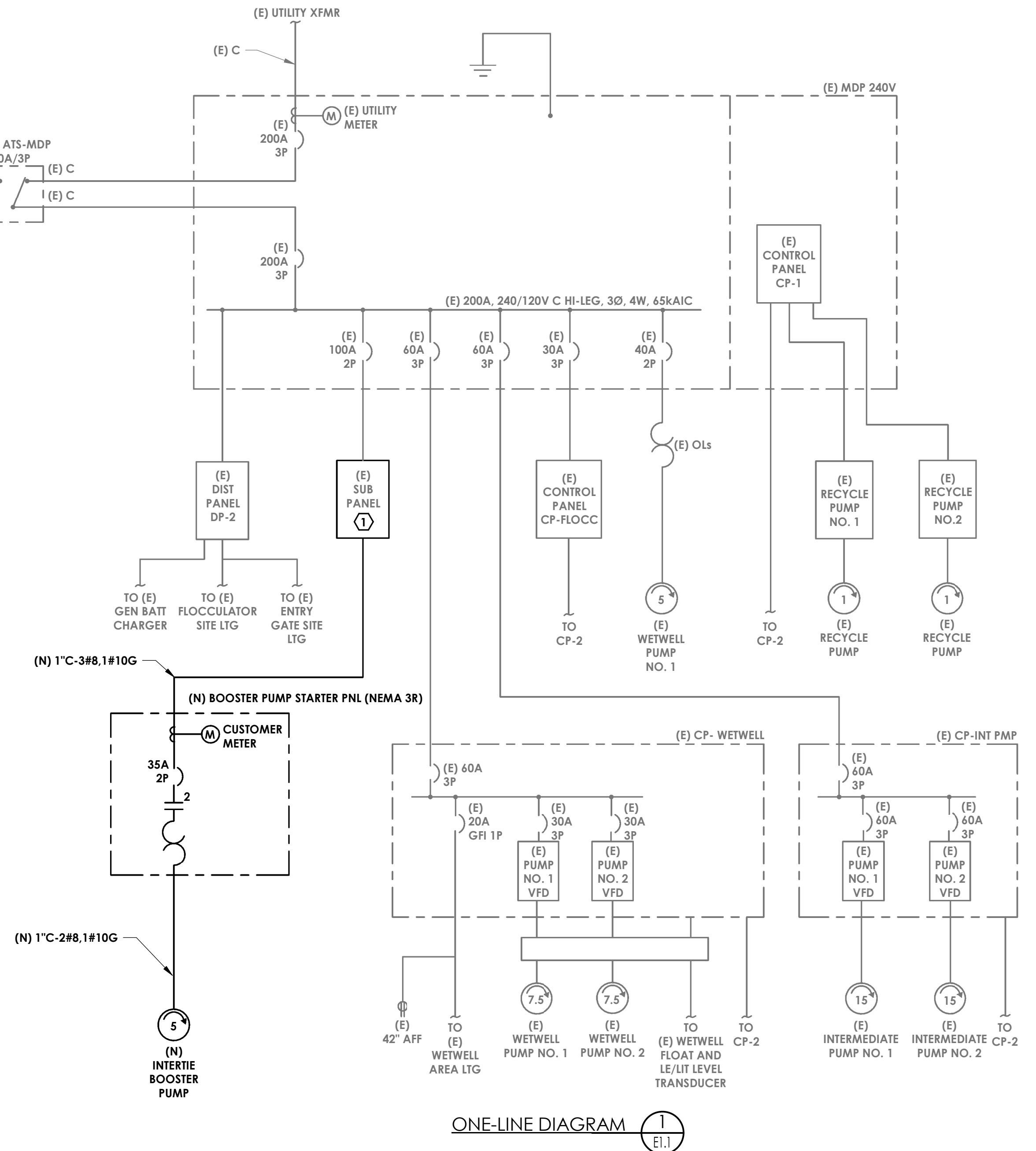
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ELECTRICAL SYMBOLS AND ABBREVIATIONS

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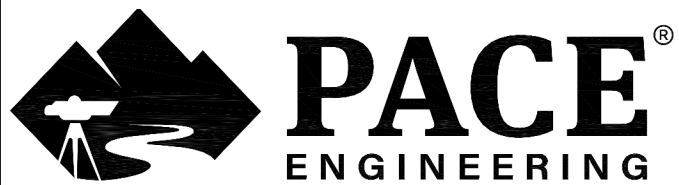
#	NOTE
	<ol style="list-style-type: none"> 1. MODIFY EXISTING PANEL AS INDICATED ON SCHEDULE. 2. PROVIDE AND INSTALL NEW CIRCUIT BREAKER IN EXISTING PANEL SPACES. NEW BREAKER SHALL BE OF THE SAME TYPE AND RATING AS THE EXISTING BREAKERS. RELABEL PANEL SCHEDULE AS SHOWN.



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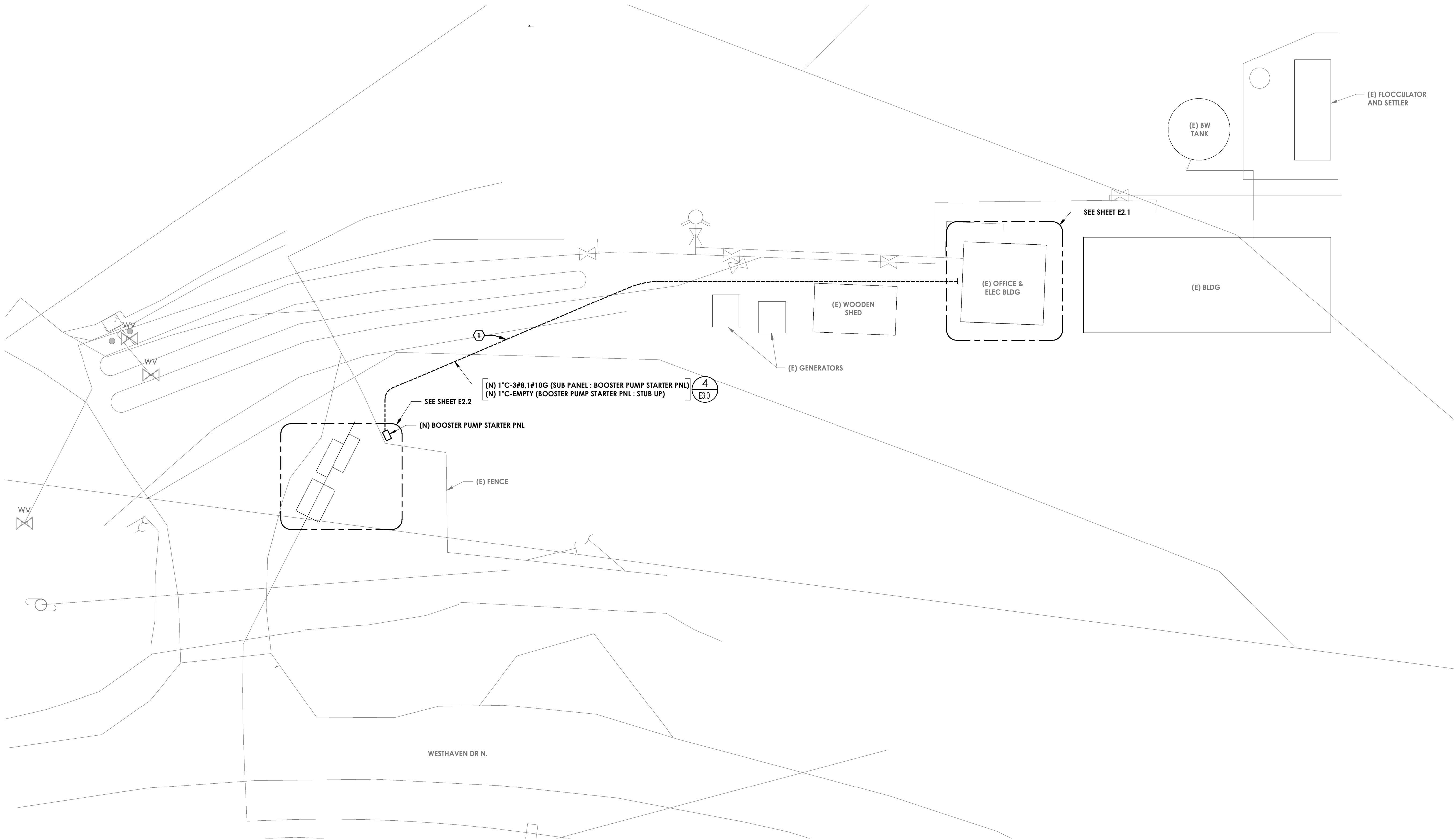
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ONE-LINE DIAGRAM


E1.1
PG 15 OF 21

KEYNOTES	
	NOTE
1. CONTRACTOR SHALL POTHOLE ENTIRE ALIGNMENT TO FIND EXISTING UTILITIES.	

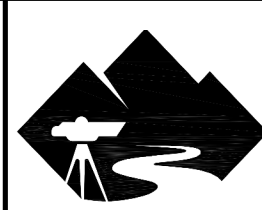


 ELECTRICAL SITE PLAN 
1" = 10'-0"

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PACE
ENGINEERING

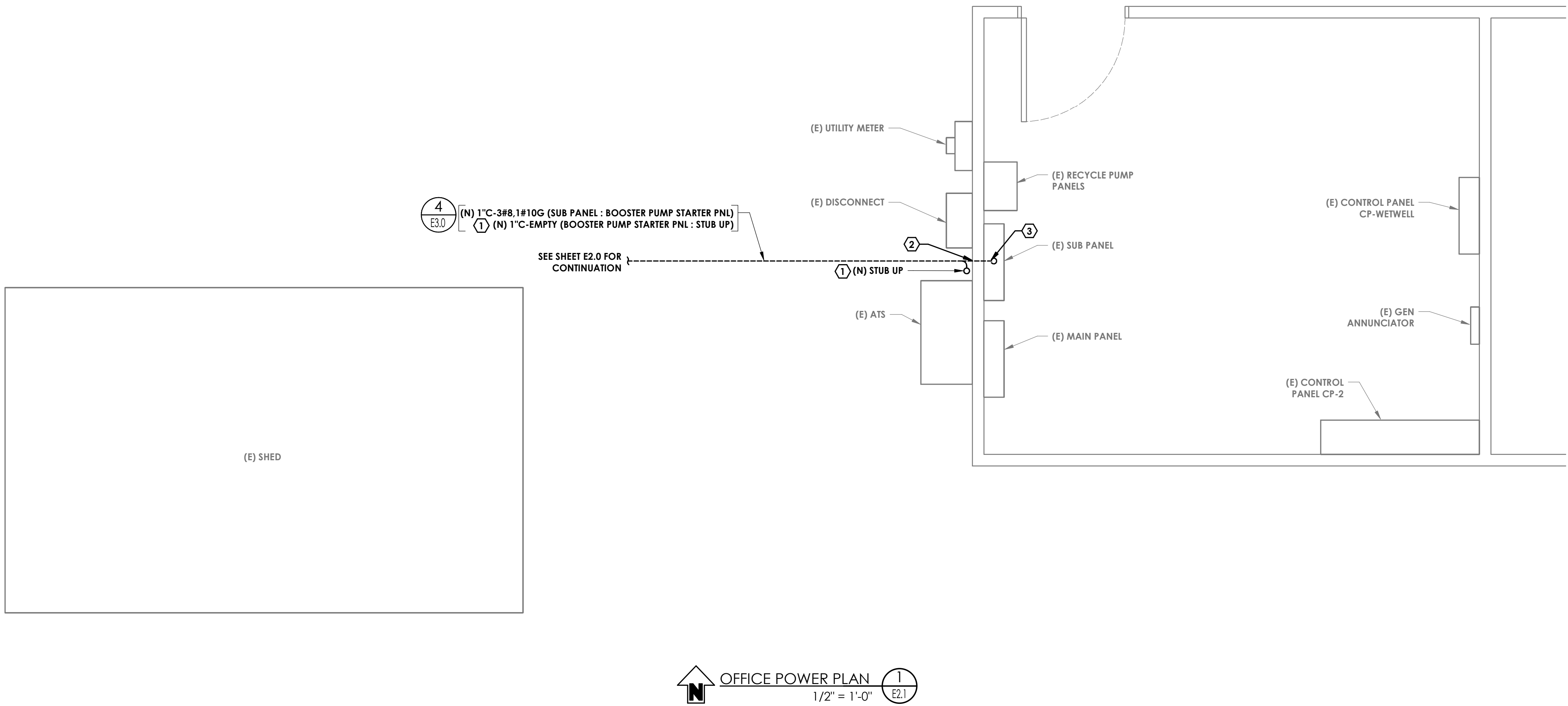
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Trinidad-Westhaven Emergency Intertie Project
ELECTRICAL SITE PLAN

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E2.0
PG 16 OF 21

KEYNOTES	
#	NOTE
1.	STUB CONDUIT 1' - 0" ABOVE GRADE ON THE OUTSIDE OF THE BUILDING IN THE LOCATION SHOWN. PROVIDE AND INSTALL GALVANIZED UNISTRUT AND CONDUIT CLAMP AT A MINIMUM OF ONE LOCATION TO SUPPORT CONDUIT. AFTER INSTALLATION, CAP CONDUIT FOR FUTURE USE.
2.	PROVIDE AND INSTALL CONDUIT/CONDUCTORS FROM SUB PANEL TO THE LOCATION SHOWN ON THE EXTERIOR OF THE BUILDING. PENETRATE WALL AT MAXIMUM 2" AFF. USING AN LB CONDULET. SUPPORT AT A MINIMUM OF TWO LOCATIONS UTILIZING GALVANIZED UNISTRUT AND CONDUIT CLAMPS. PAINT SURROUNDING WALL TO MATCH EXISTING, AND SEAL PENETRATION WITH APPROVED SEALANT OR CAULK.
3.	PROVIDE AND INSTALL APPROVED CONDUIT SEALING BUSHING AT LOCATION SHOWN.



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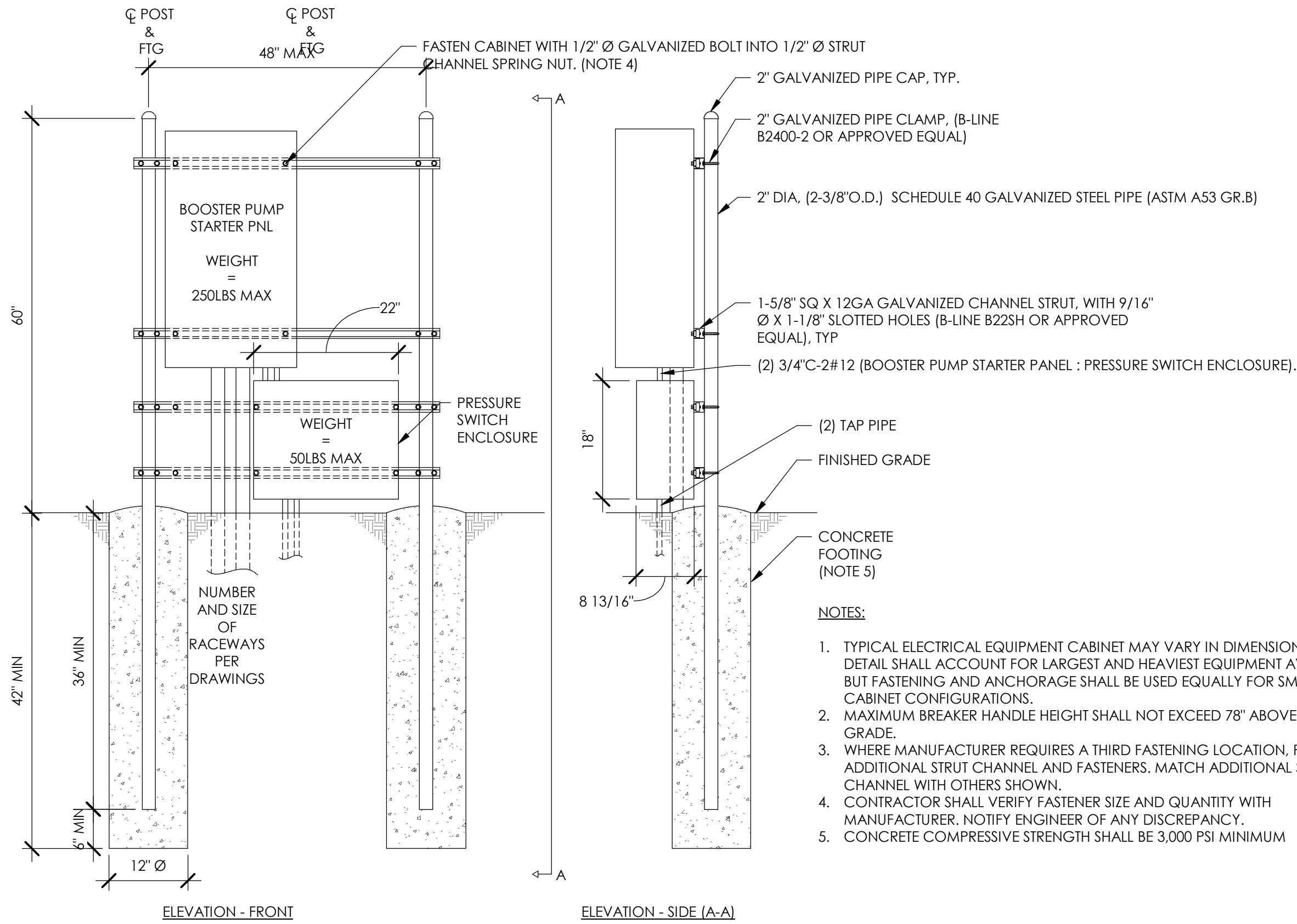
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Trinidad-Westhaven Emergency Intertie Project
OFFICE POWER PLAN

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PG 17 OF 21

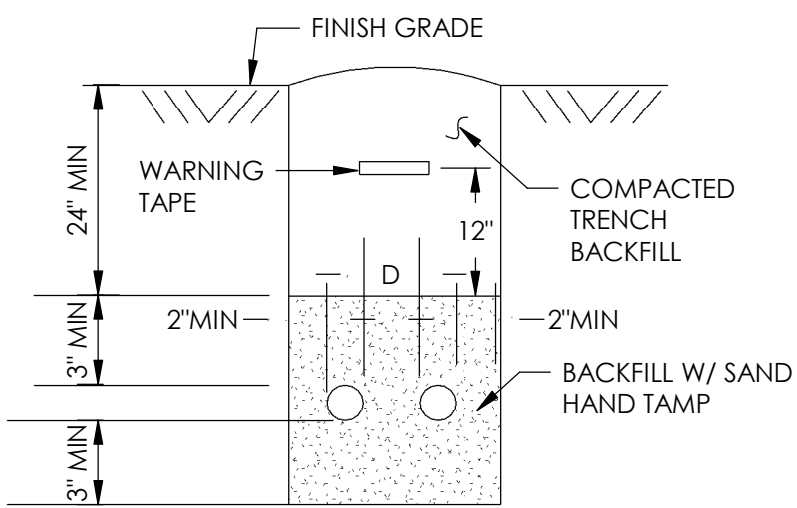


- NOTES:
1. TYPICAL ELECTRICAL EQUIPMENT CABINET MAY VARY IN DIMENSIONS, THIS DETAIL SHALL ACCOUNT FOR LARGEST AND HEAVIEST EQUIPMENT AVAILABLE, BUT FASTENING AND ANCHORAGE SHALL BE USED EQUALLY FOR SMALLER CABINET CONFIGURATIONS.
 2. MAXIMUM BREAKER HANDLE HEIGHT SHALL NOT EXCEED 78" ABOVE FINISHED GRADE.
 3. WHERE MANUFACTURER REQUIRES A THIRD FASTENING LOCATION, PROVIDE ADDITIONAL STRUT CHANNEL AND FASTENERS, MATCH ADDITIONAL STRUT CHANNEL WITH OTHERS SHOWN.
 4. CONTRACTOR SHALL VERIFY FASTENER SIZE AND QUANTITY WITH MANUFACTURER. NOTIFY ENGINEER OF ANY DISCREPANCY.
 5. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3,000 PSI MINIMUM

PANEL MOUNTING ASSEMBLY

NTS

1
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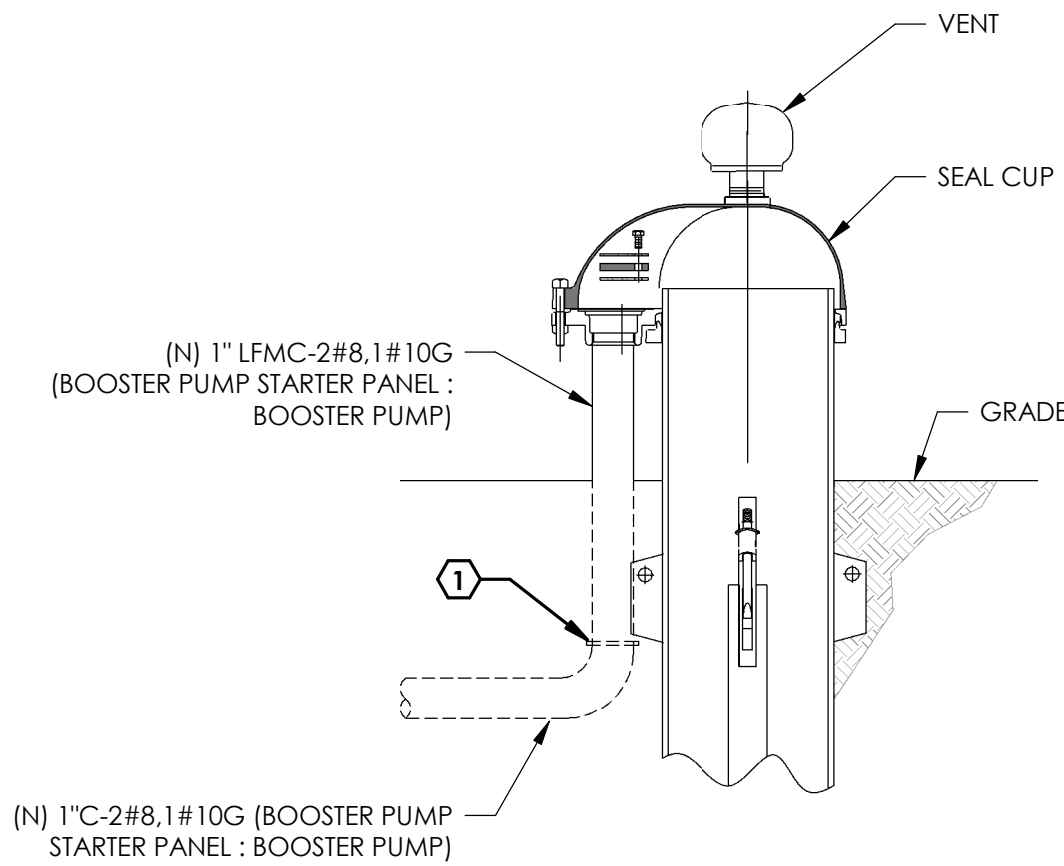


- NOTES:
1. D=3" MIN FOR 2" AND LARGER CONDUIT
 2. D=2" MIN FOR 1 1/2" AND SMALLER CONDUIT
 3. CONDUIT DETAIL FOR LESS THAN 4 RACEWAYS PER TRENCH.
 4. DUCT RUNS WITH 5 OR MORE CONDUITS SHALL EMPLOY DUCT SPACERS.

RACEWAY - UNDERGROUND CONDUIT

NTS

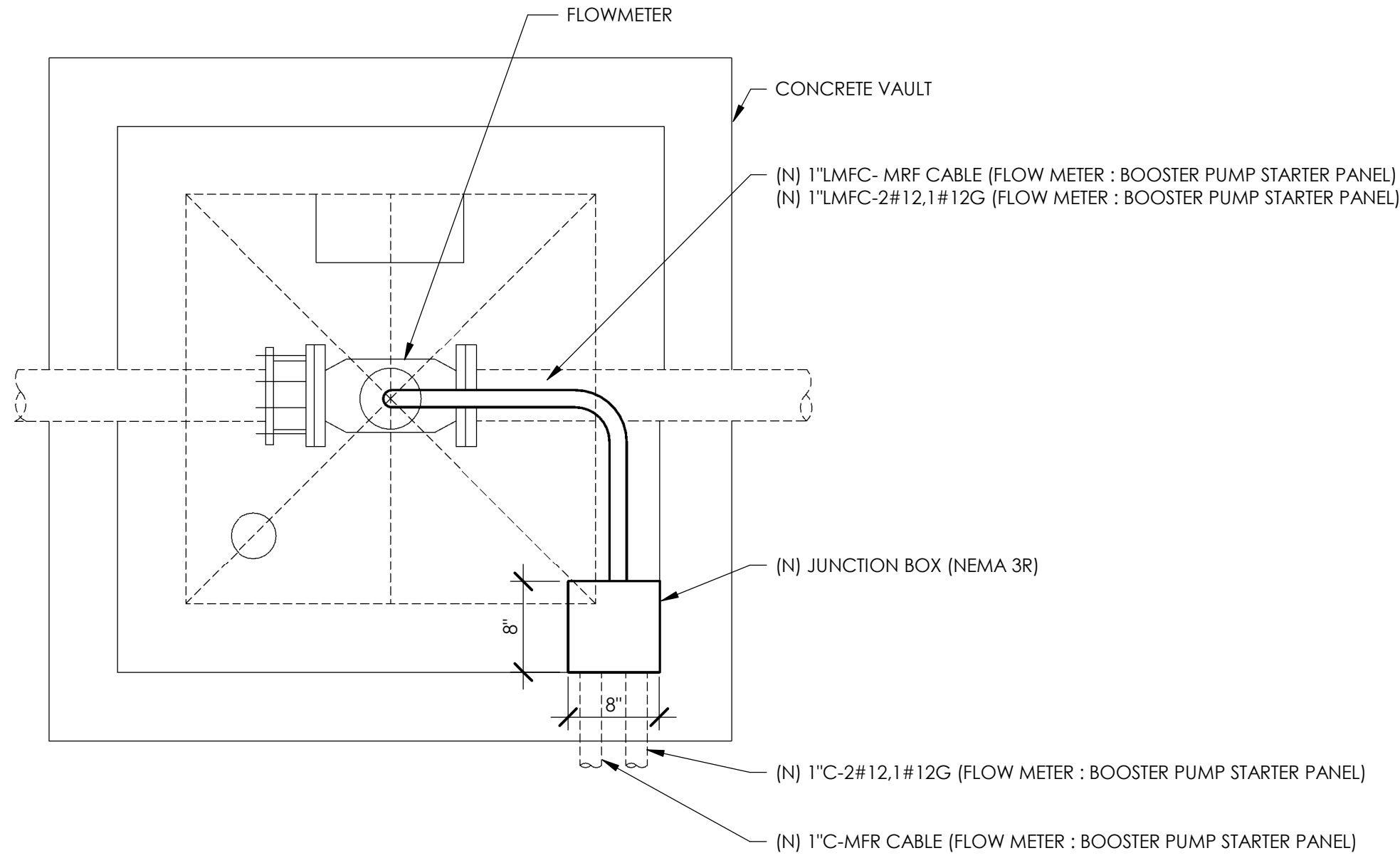
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PITLESS BOOSTER PUMP CONNECTION

NTS

2
E3.0

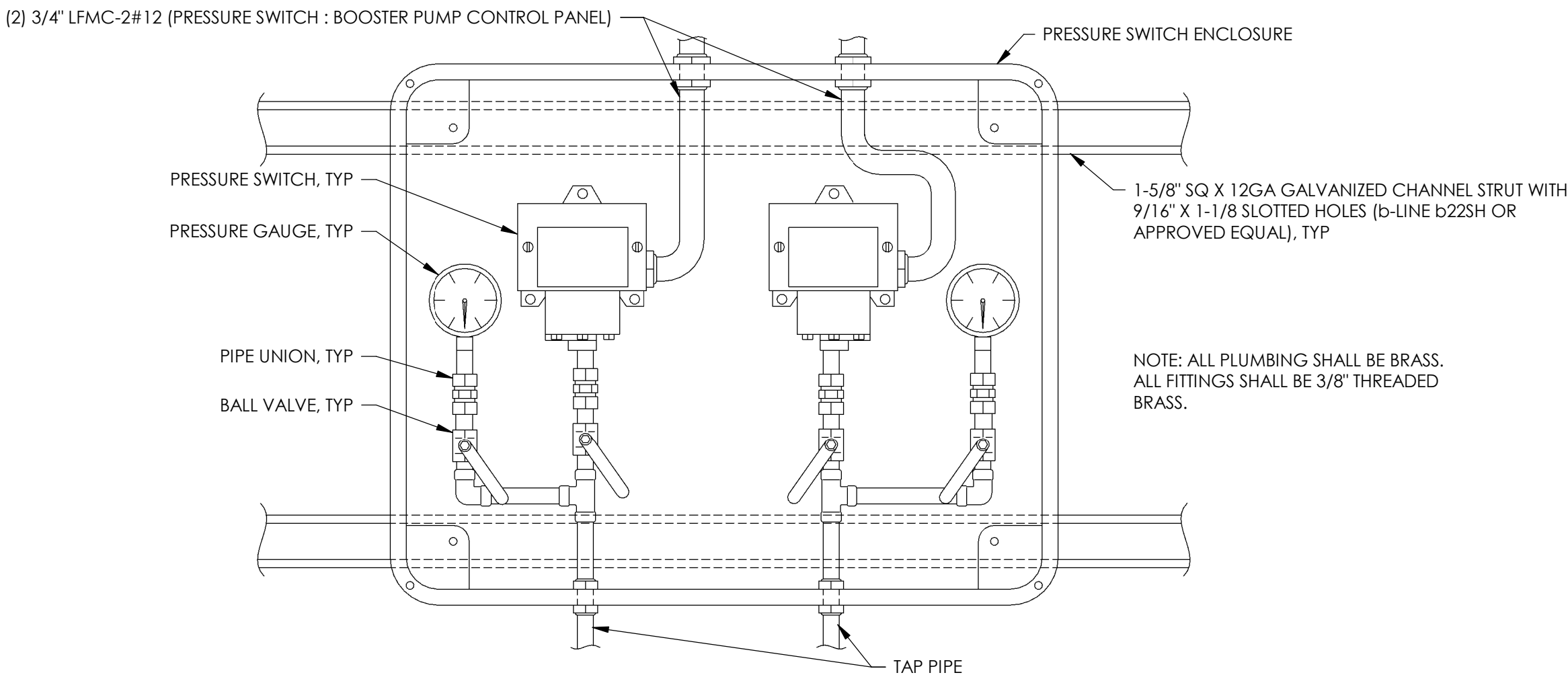


NOTE:
CONDUIT PENETRATION OF VAULT SHALL BE 24" BELOW GRADE.
SEAL PENETRATION WITH APPROVED SEALANT OR CAULK.

CONDUIT VAULT PENETRATION

NTS

3
E3.0



PRESSURE SWITCH MOUNTING

NTS

5
E3.0

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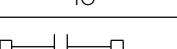
ELECTRICAL DETAILS

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PG 19 OF 21

INSTRUMENTATION SYMBOLS

	CONDUIT EXPOSED
	CONDUIT CONCEALED OR BURIED
	MOTOR, HORSEPOWER INDICATED
	CONVENIENCE RECEPTACLE, DUPLEX UNLESS SPECIFIED OTHERWISE
	NON-FUSED DISCONNECT, SIZE INDICATED 3-POLE UNLESS INDICATED OTHERWISE
	FUSED DISCONNECT, SIZE INDICATED (60/40, 60=SWITCH RATING: 40=FUSE RATING) 3-POLE UNLESS INDICATED OTHERWISE
	STARTER MAGNETIC, NEMA SIZE INDICATED
	COMBINATION MAGNETIC STARTER, NEMA SIZE INDICATED
	CONTACT-NORMALLY OPEN W/ NEMA SIZE INDICATED AS APPLICABLE
	CONTACT-NORMALLY CLOSED W/ NEMA SIZE INDICATED AS APPLICABLE
	TIME DELAY RELAY CONTACT, TIMED TO CLOSE
	TIME DELAY RELAY CONTACT, TIMED TO OPEN
	REMOTE DEVICE
	RELAY COIL: CR=CONTROL RELAY TDR=TIME DELAY RELAY
	OVERLOAD RELAY, E=ELECTRONIC
	MAGNETIC STARTER W/ NEMA SIZE INDICATED
	CIRCUIT BREAKER, MAGNETIC TRIP ONLY, FRAME SIZE SHOWN, 3-POLE UNLESS INDICATED OTHERWISE
	CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3-POLE UNLESS INDICATED OTHERWISE
	SWITCH-CURRENT RATING INDICATED, 3-POLE UNLESS INDICATED OTHERWISE
	LIGHTNING ARRESTOR
	FUSE
	GROUND
	TRANSFORMER, SECONDARY VOLTAGES, PHASE AND RATING INDICATED AS APPLICABLE
	PUSH BUTTON SWITCH, NORMALLY OPEN
	PUSH BUTTON SWITCH, NORMALLY CLOSED
	PUSH-TO-TEST INDICATING LIGHT / LETTER INDICATES COLOR: A-AMBER, B-BLUE, C-CLEAR, G-GREEN, R-RED, W-WHITE
	SELECTOR SWITCH-MAINTAINED CONTACT: X=CLOSED CONTACT POSITION
	MOTOR SPACE HEATER
	FLOW SWITCH OPENS ON INCREASE IN FLOW
	FLOW SWITCH CLOSSES ON INCREASE IN FLOW
	FLOAT SWITCH OPENS ON RISING LEVEL
	FLOAT SWITCH CLOSSES ON RISING LEVEL
	PRESSURE OR VACUUM SWITCH OPENS ON RISING PRESSURE
	PRESSURE OR VACUUM SWITCH CLOSSES ON RISING PRESSURE
	TEMPERATURE SWITCH OPENS ON RISING TEMPERATURE
	TEMPERATURE SWITCH CLOSSES ON RISING TEMPERATURE
	RTU/PLC DISCRETE OUTPUT
	RTU/PLC DISCRETE INPUT
	ELECTRICALLY OPERATED VALVE S-SOLENOID M-MOTORIZED
	ELECTRICALLY OPERATED 3-WAY VALVE S-SOLENOID M-MOTORIZED
	MOTOR
	FLOW TRANSMITTER
	LEVEL TRANSMITTER: RANGE INDICATED

NOTE:
1. THIS IS A SUPPLEMENTAL STANDARD INSTRUMENTATION LEGEND. SOME SYMBOLS MAY APPEAR ON THIS LEGEND AND NOT ON THE PLANS.

INSTRUMENTATION ABBREVIATIONS

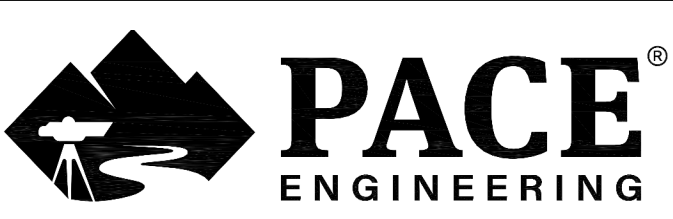
A	- AMMETER, AMPERE
AC	- ALTERNATING CURRENT
AIC	- ANALYZER INDICATING CONTROLLER
AIR	- AIR OR AIR COMPRESSOR
AIT	- ANALYZER INDICATING TRANSMITTER
B	- BLOWER
BFCV/S	- SOLENOID BUTTERFLY CONTROL VALVE
BFV/M	- MOTORIZED BUTTERFLY CONTROL VALVE
BFV/P	- PNEUMATIC BUTTERFLY CONTROL VALVE
BV	- BALL VALVE
BV/M	- MOTORIZED BALL VALVE
BV/S	- SOLENOID BALL VALVE
BW	- BACKWASH
C	- CONTACTOR/CONDUIT
CB	- CIRCUIT BREAKER
CBL	- CABLE
CKT	- CIRCUIT
COMP	- COMPRESSOR
CON	- CONVEYOR
COND	- CONDUIT
CP	- CONTROL PANEL
CPT	- CONTROL PANEL TRANSFORMER
CR	- CONTROL RELAY
DC	- DIRECT CURRENT
DI	- DIGITAL INPUT
DO	- DISSOLVED OXYGEN OR DIGITAL OUTPUT
DPT	- DIFFERENTIAL PRESSURE TRANSMITTER
DS	- DOOR SWITCH
(E) or EXIST	- EXISTING
EF	- EXHAUST FAN
ENC	- ENCLOSURE
ETM	- ELAPSED TIME METER
F or FAN	- FAN
FIT	- FLOW INDICATING TRANSMITTER
FS	- FLOW SWITCH
FU	- FUSE
G	- GROUND
GFI	- GROUND FAULT CIRCUIT INTERRUPT
H	- HEATER OR HEAT TRACE
HS	- HAND SWITCH
L	- LINE POWER
LA	- LIGHTNING ARRESTOR
LS	- LEVEL SWITCH OR LIMIT SWITCH
LIT	- LEVEL INDICATING TRANSMITTER
M	- MOTOR OR FLOW METER ELEMENT
MCC	- MOTOR CONTROL CENTER
MFR	- MANUFACTURER
N	- NEUTRAL
NA	- NON-AUTOMATIC
NEC	- NATIONAL ELECTRIC CODE
NEMA	- NATIONAL ELECTRIC MANUFACTURER'S ASSOCIATION
OIT	- OPERATOR INTERFACE TERMINAL
OL	- OVERLOAD RELAY
P	- PUMP
PB	- PULL BOX
PIT	- PRESSURE INDICATING TRANSMITTER
PLC	- PROGRAMMABLE LOGIC CONTROLLER
PNL	- PANELBOARD
PS	- PRESSURE SWITCH
PV/M	- MOTORIZED PLUG VALVE
QL	- INDICATING LIGHT
RECEPT	- RECEPTACLE
RTU	- REMOTE TELEMETRY UNIT
RW	- RECYCLE WATER
SPD	- SURGE PROTECTION DEVICE
SV	- SOLENOID VALVE
SW	- SWITCH
T	- TELE CONDUIT OR TURBIDIMETER
TDR	- TIME DELAY RELAY
TS	- THERMOSTAT OR TEMPERATURE SWITCH
TT	- TEMPERATURE INDICATING TRANSMITTER
TYP	- TYPICAL
UH	- UNIT HEATER
UIT	- ULTRAVIOLET TRANSMITTANCE TRANSMITTER
UPS	- UNINTERRUPTIBLE POWER SUPPLY
UV	- ULTRAVIOLET
UVT	- ULTRAVIOLET TRANSMITTANCE
V	- VOLTMETER, VOLT
VFD	- VARIABLE FREQUENCY DRIVE
VIT	- VACUUM INDICATING TRANSMITTER
W	- WATT
WIT	- WEIGHT INDICATING TRANSMITTER
WP	- WEATHERPROOF (NEMA 4)
XFMR	- TRANSFORMER
ZS	- ZERO SPEED SWITCH

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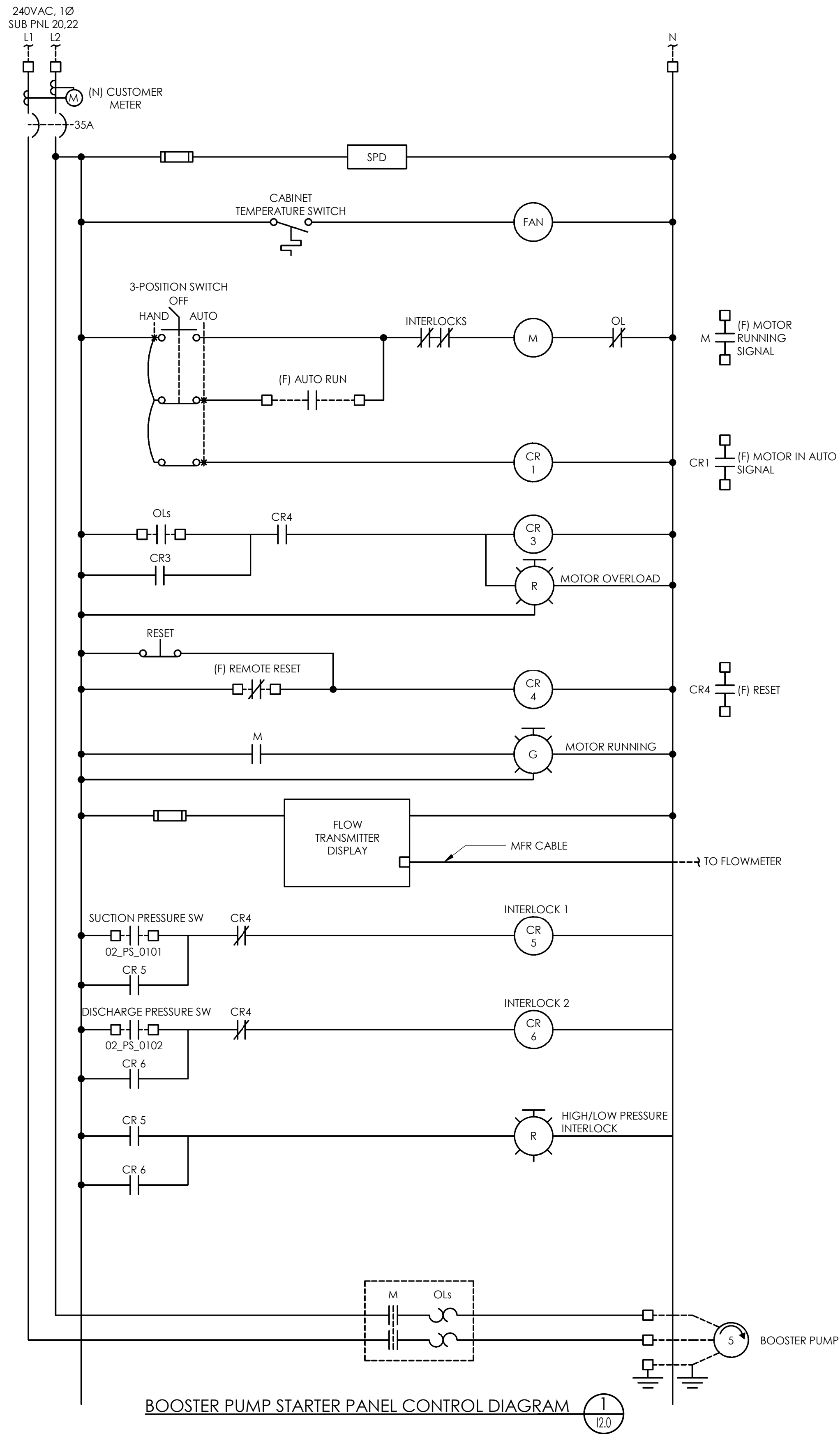
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INSTRUMENTATION SYMBOLS AND ABBREVIATIONS

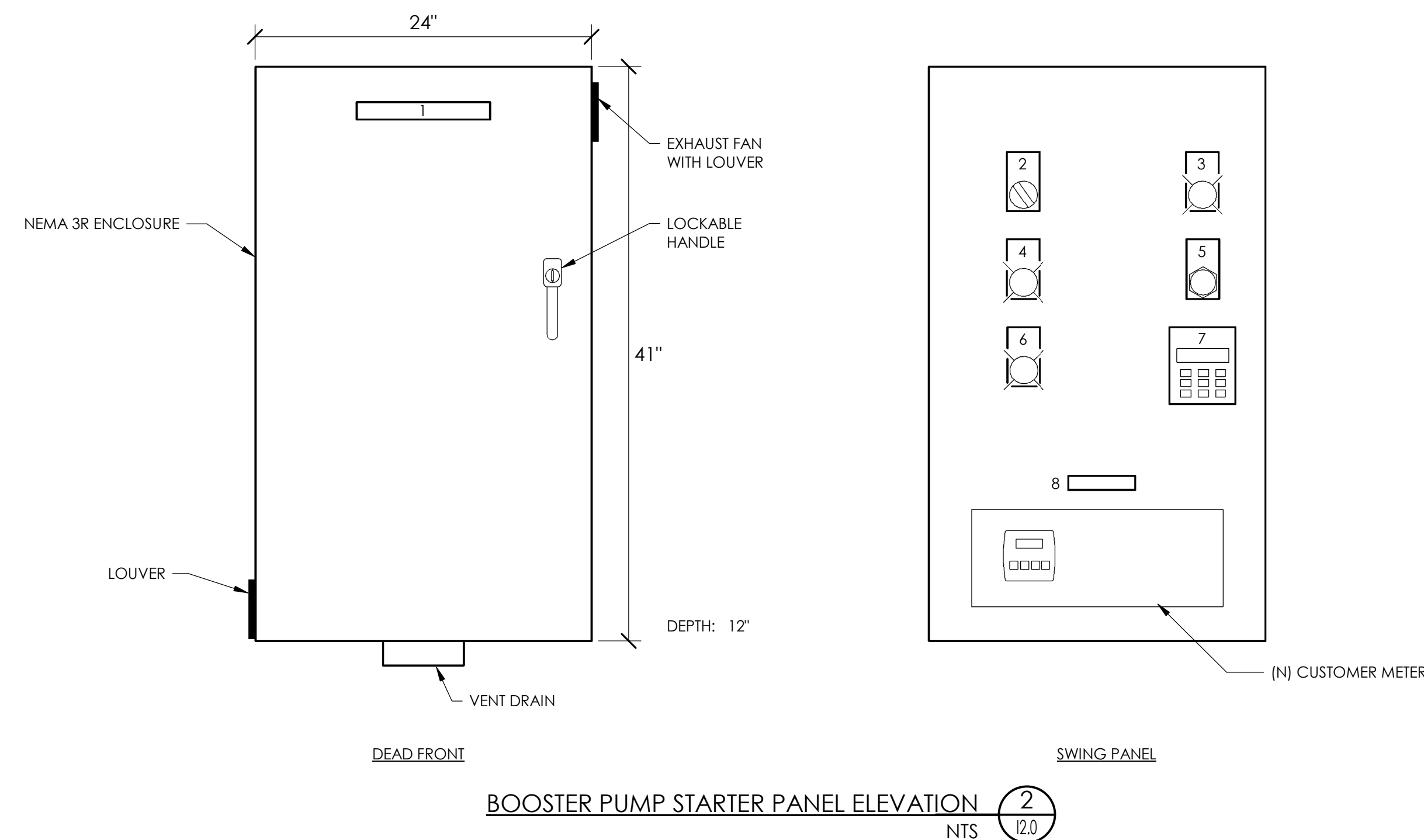
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NAMEPLATE SCHEDULE		
ITEM	DEVICE	NAMEPLATE/INSCRIPTION
1	NAMEPLATE	BOOSTER PUMP STARTER PNL
2	3 POSITION SWITCH	MOTOR CONTROL HAND - OFF - (F) AUTO
3	INDICATOR LIGHT	MOTOR RUNNING
4	INDICATOR LIGHT	MOTOR OVERLOAD
5	PUSH BUTTON	ALARM RESET
6	INDICATOR LIGHT	HIGH/LOW PRESSURE INTERLOCK
7	REMOTE FLOW TRANSMITTER	INTERTIE FLOW
8	ELECTRICAL POWER METER	INTERTIE POWER METER




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BOOSTER PUMP STARTER PANEL CONTROL
DIAGRAM

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