

DESIGN NOTES

- TUNNEL VAULT DESIGNED IN ACCORDANCE WITH LRFD HL-93 TRAFFIC WHEEL LOADS PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 4TH EDITION WITH CALTRANS 2010 AMMENDMENTS AND THE LOS ANGELES CITY BUREAU OF ENGINEERING STANDARD PLAN S-601-3, OR LATEST EDITION, AND MANUAL PART H USING 5,500 PSI [37.92MPa] COMPRESSIVE STRENGTH CONCRETE AT 28 DAYS AND 60,000 PSI [413.2MPa] YIELD STRENGTH ASTM A-706 STEEL REINFORCEMENT PER CALCS. #33385.
- LIMIT OF COVER OVER ROOF SECTION IS 1'-0" TO 4'-0".
- DESIGN ASSUMES 120 lb/ft³ SOIL DENSITY.
- MINIMUM 1500 LB/FT² SOIL BEARING PRESSURE.
- DESIGN ASSUMES THAT LATERAL SOIL PRESSURE INCLUDES A 80 lb/ft² LIVE LOAD SURCHARGE
- VAULT DESIGNED IN ACCORDANCE WITH LADWP SPEC. 9610 AND SPEC. P178-RS.
- THE DESIGN CALCULATIONS DO NOT INCLUDE ANY LATERAL OR SURCHARGE LOADS THAT ARE PRODUCED BY FOOTINGS OR FOUNDATIONS ADJACENT TO THE STRUCTURE. THIS SUBSTRUCTURE SHALL BE KEPT AT LEAST IN A 1 TO 1 RATIO AWAY FROM ALL FOOTINGS AND FOUNDATIONS, UNLESS THE ENGINEER OF RECORD EXPRESSES THE ACCEPTANCE OF SUCH DESIGN IN WRITING.
- INSTALLATION LIMITS OF THE ROOF SECTION ARE 1'-0" MIN. TO 4'-0" MAX. FROM FINISHED GRADE. NO INSTALLATION SHALL BE ALLOWED IN PROJECT SITE WITH SLOPE EXCEEDING 10% WITHOUT THE APPROVAL OF THE CITY ENGINEER.
- NO SHARP OR ROUGH EDGES ON THE TERMINATORS ENTERING THE VAULT.
- ADDITIONAL SUBMITTAL, PERMIT AND CONSTRUCTION PLAN REVIEW WILL BE REQUIRED FOR EACH PROJECT LOCATION. SUBMIT TO CITY ENGINEER FOR APPROVAL PRIOR TO START OF ANY CONSTRUCTION.
- DESIGN CRITERIA DOES NOT INCLUDE COOPER E-80 RAILROAD LOADS.
- UNLESS APPROVED BY THE CITY ENGINEER, LONG SIDE OF THE VAULT SHALL BE PARALLEL WITH TRAFFIC LANES
- VAULT SHALL BE LOCATED WITHIN THE SAME TRAFFIC LANE. VAULT LOCATION SHALL BE SPECIFIED ON PERMIT DRAWING AND SHALL HAVE APPROVAL OF THE CITY ENGINEER.
- NO INSTALLATION SHALL INTERFERE WITH CURRENT AND FUTURE UTILITY INSTALLATION IN THE AREA.
- APPROVAL FOR PRODUCT IS FOR THE USE IN PUBLIC RIGHT OF WAYS.
- MINIMUM EXCAVATION SIZE: 33'-0" X 11'-0" DEPTH REQ'D.
- FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PRECAST.
- VAULT TO BE PLACED ON A MIN. 6" BASE OF CRUSHER RUN FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION. BASE MATERIAL IN ACCORDANCE WITH SECTION 200-2 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK).
- CONCRETE MIX USED IN POURING THIS PRODUCT SHALL USE FLY ASH AS AN ADMIXTURE.
- FINISH COATING: ALL INTERIOR WALLS AND CEILING SHALL BE PAINTED WHITE.
- ALL PARTS TO BE STENCILED: MFG DATE / JOB NUMBER / PRODUCT ID / WEIGHT.
- EACH CONCRETE SECTION SHALL HAVE CAST-IN ON THE INSIDE "JENSEN", THE YEAR, AND THE DESIGNATION "FA-CN".
- EACH CONCRETE SECTION SHALL BE MARKED ON THE INSIDE & OUTSIDE WITH "JENSEN PRECAST", THE DESIGNATION "DWP/FA-CN", AND THE DATE OF THE POUR.
- ALL INSTALLATIONS SHALL COMPLY WITH ALL OTHER LOCAL GOVERNING CODES AND REGULATION INCLUDING CALIFORNIA PUBLIC UTILITIES COMMISSION REGULATIONS.

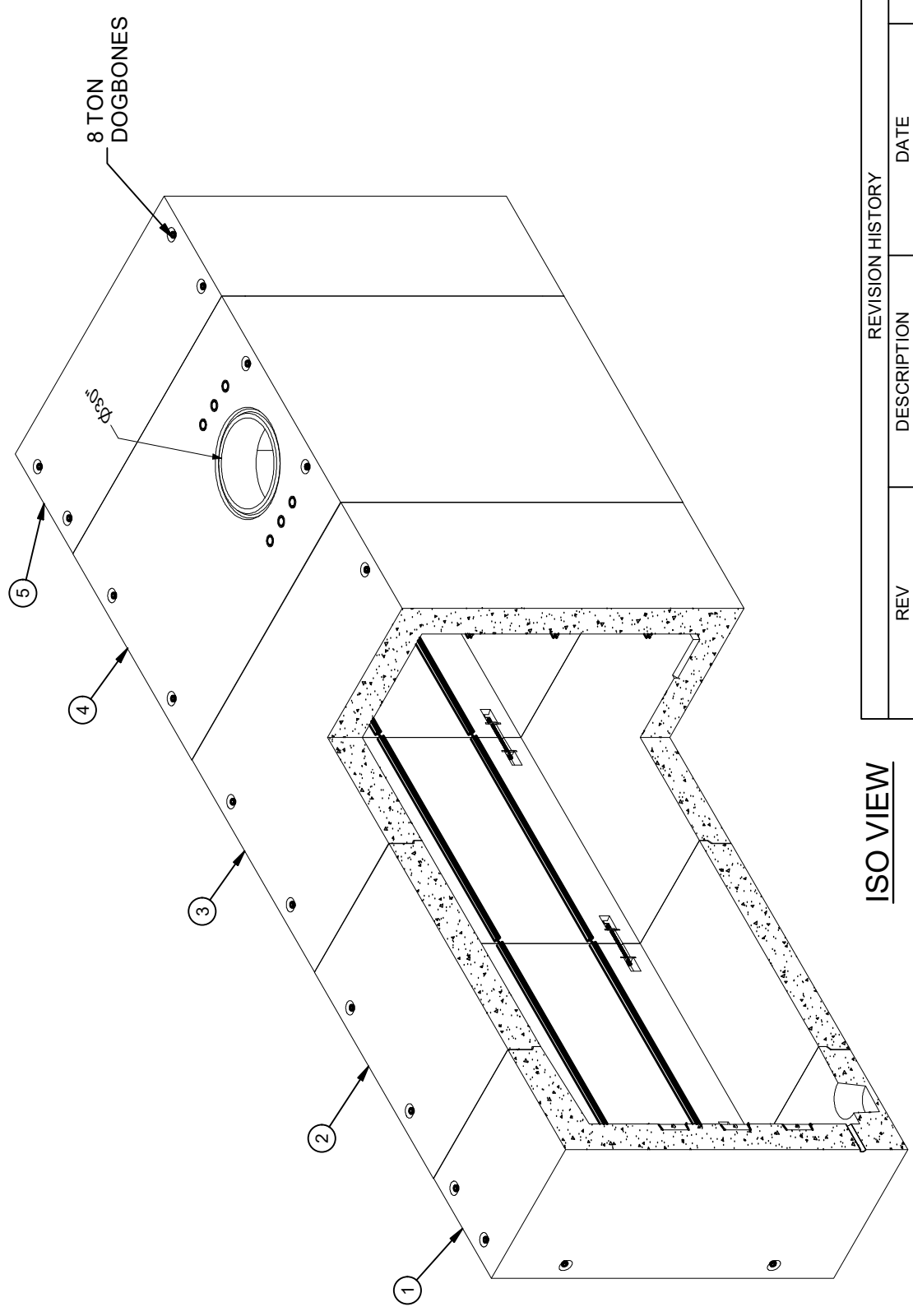
LIFTING NOTES

- FIELD INSTALLATION: PLANT DEMOLING: MINIMUM HANDLING CONCRETE STRENGTH F_c = 5500 PSI RIGGING EQUALIZER REQUIRED TO EQUALIZE LOAD TO 4 LIFTING POINTS WITH A SLING ANGLE BETWEEN 60° AND 90°

BURY DEPTH:	1.0' - 4.0' to Top of Section		
WATER LEVEL:	3.0'	APPROX. WEIGHT:	2146/15.84 Lbs
DESIGN SPEC:	ASTM C857, ACI 318	LOADING SPEC:	A-16 (AASHTO HS20-44)
AGENCY:	LADWP	AGENCY SPEC:	H-248

BILL OF MATERIALS

ITEM	UNIT QTY	QTY	PART NUMBER	DESCRIPTION	MASS (lb)
1	1	1	100013468	Tunnel Vault TV96112 End - Tongue 96Wx112Hx36L LADWP H-248	35074
2	1	1	100013469	Tunnel Vault TV96112 Center 96Wx112Hx96L LADWP H-248	47235
3	1	1	100013472	Tunnel Vault TV96112 Center - Groove 96Wx112Hx96L LADWP H-248	49423
4	1	1	100013466	Tunnel Vault 96W x 112H x 96L TV894-CR96 LADWP H-248	47232
5	1	1	100013467	Tunnel Vault TV96112 End - Tongue 96Wx112Hx36L LADWP H-248	35083
6	1	16	100007113	ROD THREADED COIL YELLOW DIP 3/4 X 18"	2
7	1	32	100007010	HEX COIL NUT 3/4-4.5 ZINC - PLATED	
8	1	32	100008121	WASHER 3X3X.5 W.875 HOLE GALV	1
9	1	12	100005743	LADDER BRACKET 7-1/4IN L-SHAPED WB-7	
10	1	2	100020058	LADDER WALL MOUNT 9FT GALV I-3800K	77
11	1	138	100008101	SCREW BUTT HEAD CAP 1/2-12 2 304SS	
12	1	138	100007135	WASHER FLAT 1/2 REGULAR TYPE A 304SS	
13	1	2	100006065	STRUT SLOTTED C-CHANNEL 1-5/8 X 1-5/8 12GA BOLT-ON GALV 36IN	6
14	1	18	100006070	STRUT SLOTTED C-CHANNEL 1-5/8 X 1-5/8 12GA BOLT-ON GALV 94IN	15
15	1	12	100006064	STRUT SLOTTED C-CHANNEL 1-5/8 X 1-5/8 12GA BOLT-ON GALV 27IN	4
16	5,000 gal	5,000 gal	100006420	COATING PAINT LATEX WHITE	
17	2,000 ul	2,000 ul	100005749	SEALANT JOINT BUTYL RUBBER ASTM C-990 AND M198 CS-102 1IN EQUIV X14.5FT PER BOX 118FT	



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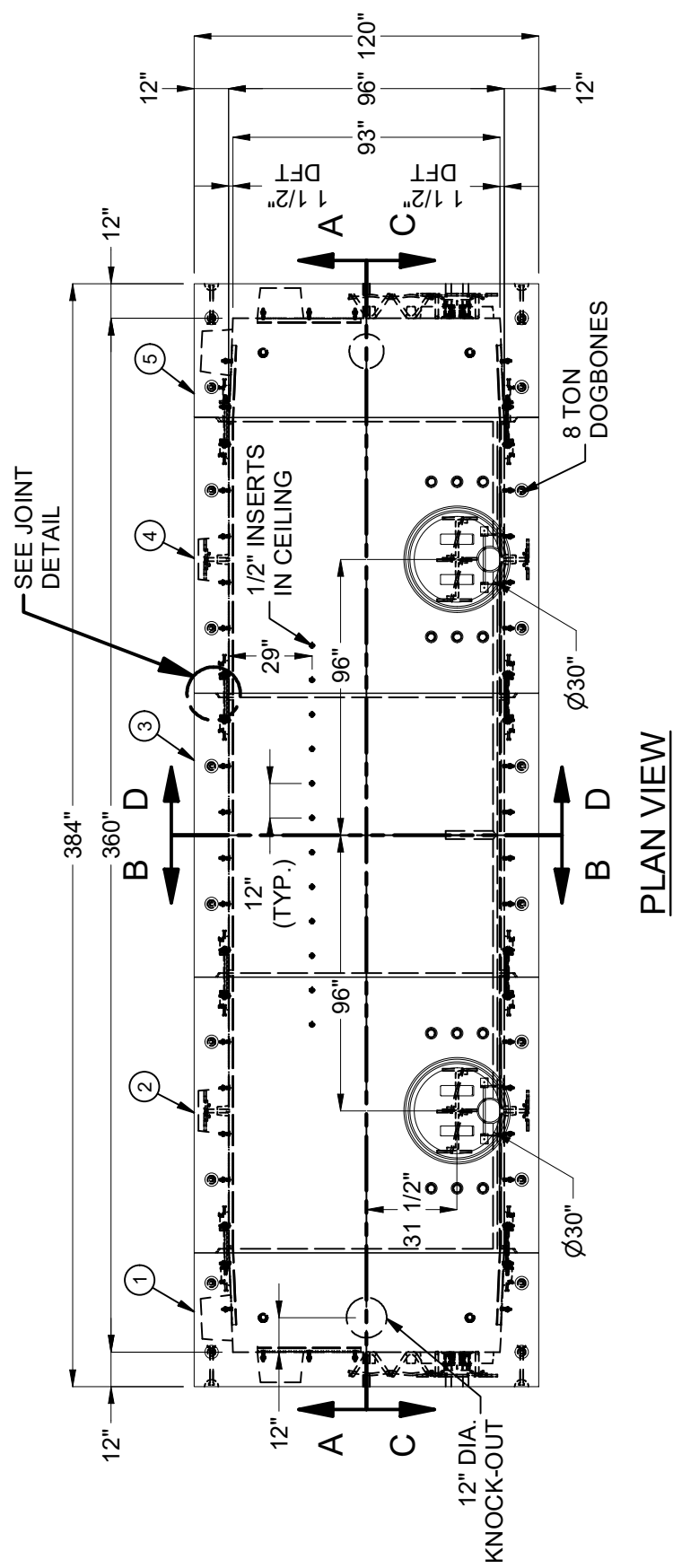
ISO VIEW

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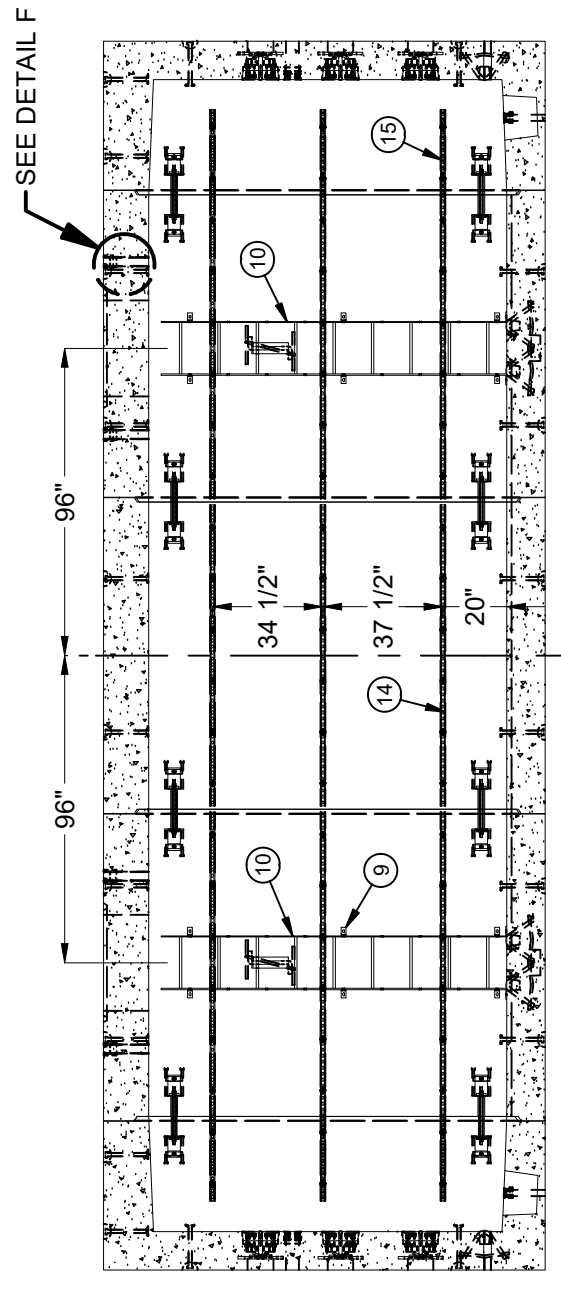
DESCRIPTION:	LAYOUT ASSEMBLY KIT, 8X30X94 TUNNEL LADWP H-248		
PART NUMBER:	100010631	LAYOUT REVIEW	
CREATED:	1/19/2021	DRAWN BY:	D. Mejia
		MODIFIED:	12/21/2023

REVISION HISTORY

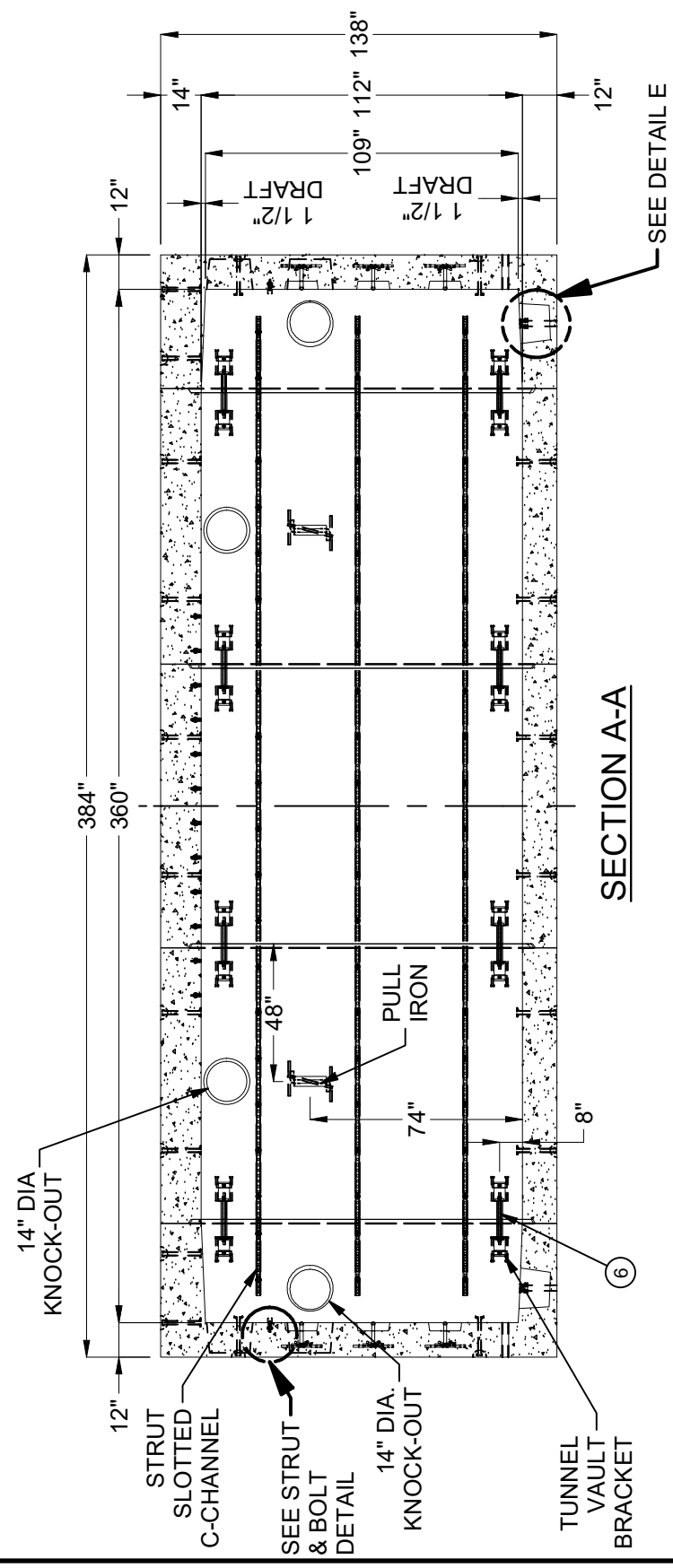
REV	DESCRIPTION	DATE	APPROVED
B-1	ADDED INSERTS	12/21/2023	



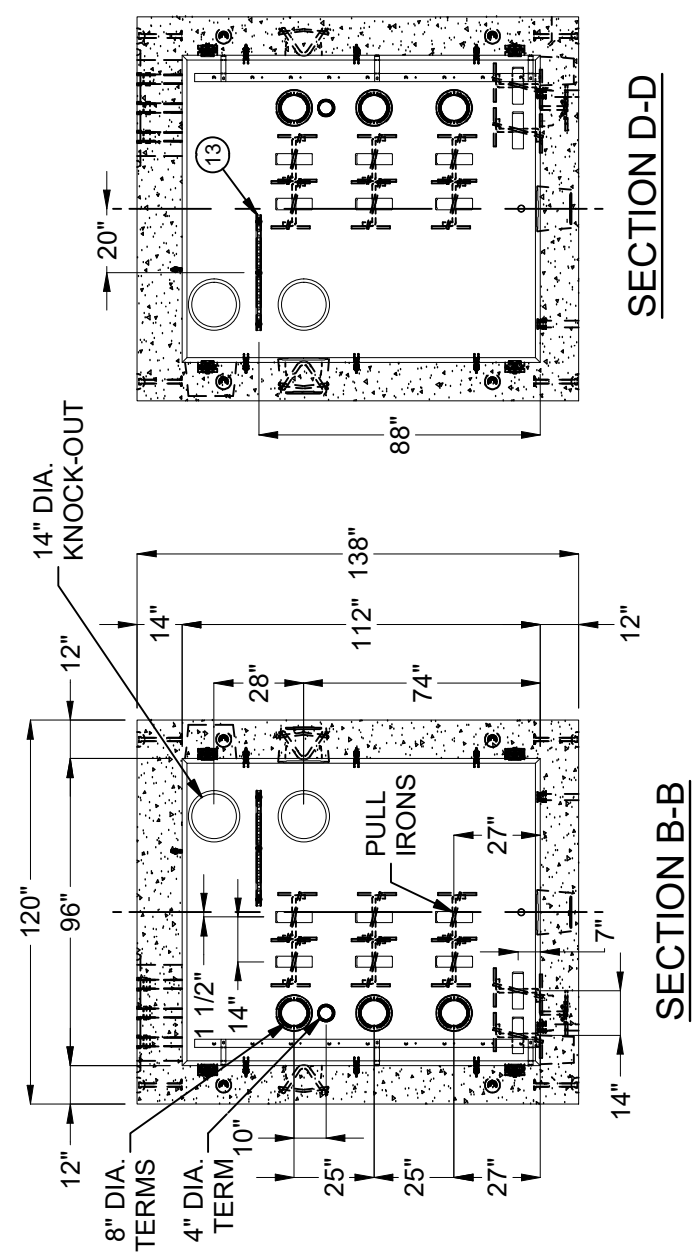
PLAN VIEW



SECTION C-C



SECTION A-A



SECTION B-B

SECTION D-D

BURY DEPTH:	1.0' - 4.0' to Top of Section
WATER LEVEL:	3.0'
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AGENCY:	LADWP
APPROX. WEIGHT:	214615.84 Lbs
LOADING SPEC:	A-16 (AASHTO HS20-44)
AGENCY SPEC:	H-248

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