

ATTENTION: These documents are provided for informational purposes. They provide standard configurations, general requirements, and guidelines for trenching and standard customer interconnections for APS customers. These documents do not address every possible situation. It is the responsibility of the customer to ensure that the documents provided here are the most current version. APS reserves the rights to require modifications based on site specific or system conditions.

 ARIZONA PUBLIC SERVICE COMPANY T&D CONSTRUCTION STANDARDS					SUBSTRUCTURES TRAFFIC BEARING PULLBOX REINFORCED CONCRETE 1/0 AL PRIMARY	COVER
BY	LDR.	MGR.	DATE	REV.		8722
MLM	M. CAM	M. W. ADA	06/2022	2		THRU 8724

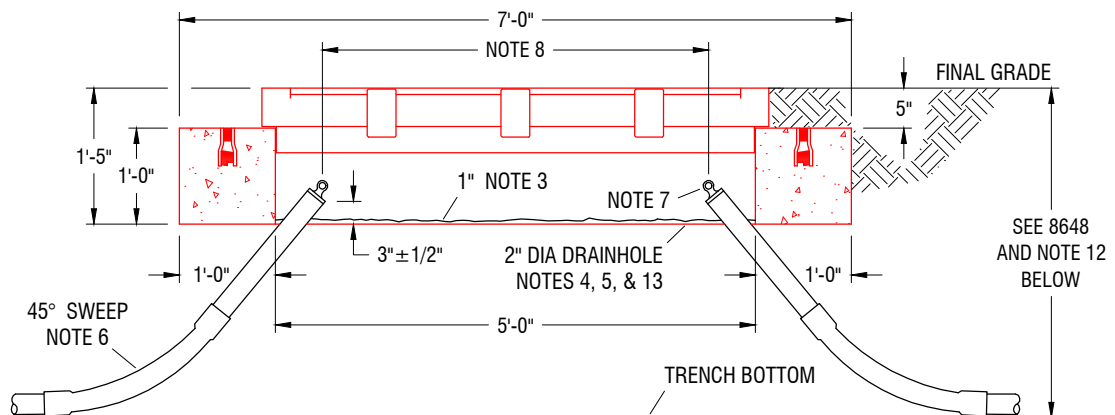
SPLICING MATERIAL ONLY

1 = ONE SPLICE
2 = TWO SPLICE
3 = THREE SPLICE
X = WITHOUT SPLICES

8724.A

IF APPLICABLE
- **G** = APS GROUT PROVIDED

1 = ONE SPLICE
2 = TWO SPLICE
3 = THREE SPLICE
X = WITHOUT SPLICES

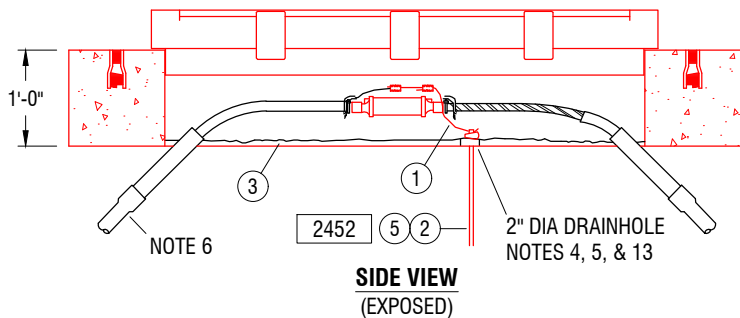


NOTES:

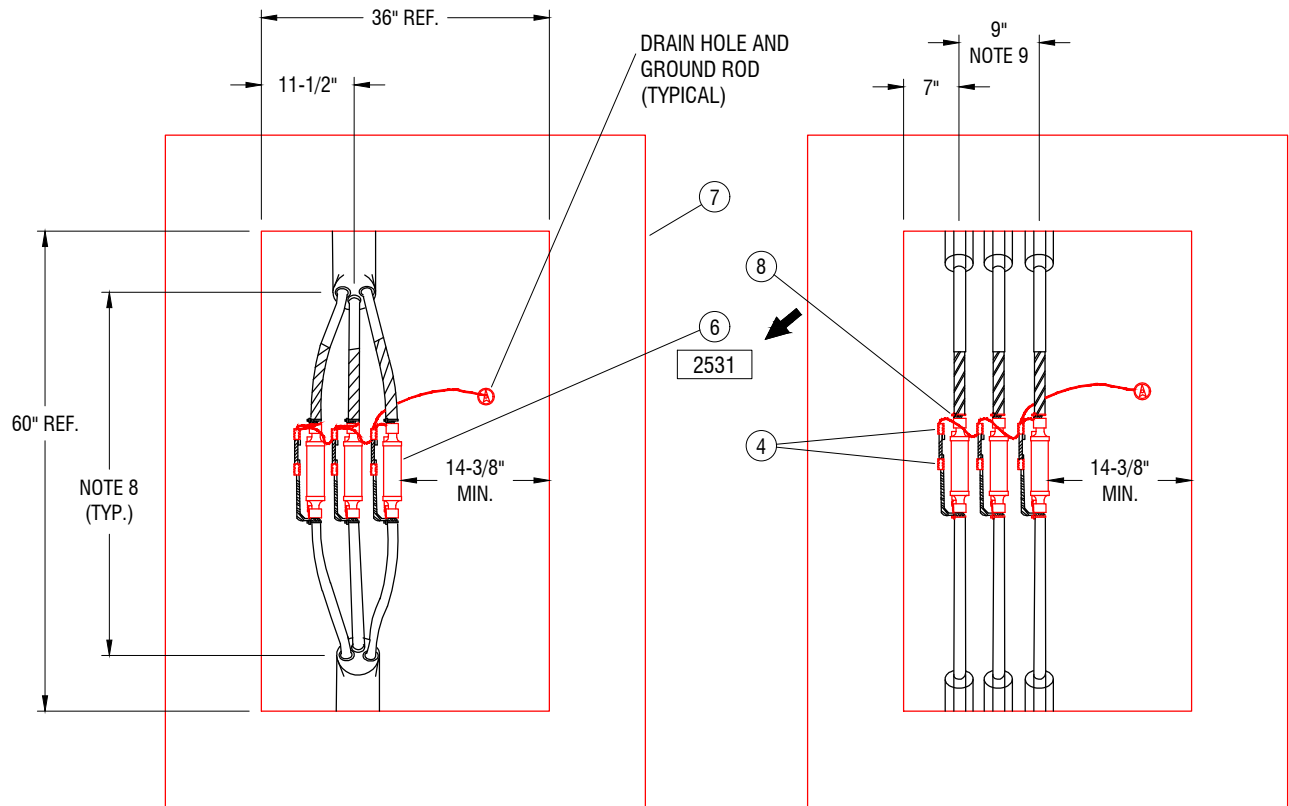
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|----|---|-----|--|
| 1. | REQUIRED EXCAVATION SIZE FOR THE NEW PULLBOX IS 72 IN. X 96 IN. X 20 IN. COMPLETE EXCAVATION PRIOR TO DELIVERY OF THE TRAFFIC BEARING PULLBOX. SUPPLIER WILL SET PULLBOX IN THE EXCAVATION AT TIME OF DELIVERY. FOR SCHEDULING DELIVERY CONTACT THE PRECAST SUPPLIER FIVE WORKING DAYS AHEAD. | 9. | MINIMUM SEPARATION BETWEEN CENTER LINES OF THE CONDUITS IS 3 INCHES. |
| 2. | ADJUST SPECIFIED PULLBOX FRAME AND LID TO MATCH EXISTING OR PROPOSED GRADE. | 10. | CONDUIT FOR PRIMARY OR FEEDERS INSTALLED LOWER THAN A 36-INCH DEPTH SHALL BE PARTIALLY ENCASED WITH A MINIMUM 4-INCH CONCRETE CAP ON TOP AND 2-INCHES ON THE SIDES. PARTIAL CONCRETE ENCASEMENT SHALL INCLUDE TOP AND SIDES OF CONDUIT, BUT NOT THE BOTTOM (SEE 8601). |
| 3. | USE PRE-MIX, APN 71301280, TO GROUT THE BOTTOM OF THE PULLBOX. | 11. | GAPS CREATED BY THE CONDUIT HOLES SHALL BE GROUTED TO PREVENT RODENT PENETRATION. THIS REQUIREMENT SHALL NOT RESULT IN A REDUCTION OF THE VERTICAL SPACE INSIDE THE PULLBOX. |
| 4. | A 2-INCH MINIMUM DIAMETER DRAIN HOLE, INSTALLED IN THE AREA OF LOWEST ELEVATION, IS REQUIRED TO ENSURE PROPER DRAINAGE. | 12. | ADDITIONAL TRENCH DEPTH IS USUALLY REQUIRED AT ALL EQUIPMENT LOCATIONS. SEE 8648 FOR THE MINIMUM TRENCH DEPTHS AND THE DEGREE OF SLOPE ALLOWED AS THE TRENCH DEPTH CHANGES. |
| 5. | WHERE A GROUND ROD IS UTILIZED, IT SHALL BE DRIVEN THROUGH THE DRAIN HOLE TO PREVENT RODENT PENETRATION. | 13. | THE PARTY RESPONSIBLE FOR THE INSTALLATION OF THE CONDUIT SYSTEM SHALL BE RESPONSIBLE FOR INSTALLATION OF THE GROUND ROD OR AN APPROVED ALTERNATE. |
| 6. | ONLY FORTY-FIVE DEGREE CONDUIT SWEEPS ARE ACCEPTABLE | 14. | COMPACTION BENEATH AND AROUND PULLBOX SHALL BE A MINIMUM OF 90 PERCENT OF THE MAXIMUM DENSITY AS DEFINED IN 8601. |
| 7. | CONDUIT SHALL BE SEALED CAPPED OR PLUGGED PER 8601 SECTION 18.0 AND 8881. | | |
| 8. | PROPER CONDUIT SEPARATION IS CRITICAL FOR CABLE TRAINING AND SPLICING. THE SPACING SHALL BE AS FOLLOWS:
36 INCHES WHEN 45 DEGREE SWEEPS ARE SPECIFIED. | | |

NOTES (CONTINUED):

15. IF THE FINAL GRADE IS CONCRETE, BACKFILL WITH 5000 PSI CONCRETE TO FINAL GRADE AND FINISH SURFACE OF CONCRETE. IF FINAL GRADE IS NEITHER CONCRETE NOR ASPHALT, INSTALL FORMS 12 IN. FROM FRAME SIDE SURFACE, BACKFILL WITH 5000 PSI CONCRETE AND FINISH SURFACE OF CONCRETE. INSTALL PULLBOX TO WITHIN 1/8 IN. OF FINAL GRADE, UNLESS OTHERWISE SPECIFIED. A DEPRESSION IS PREFERABLE TO A PROJECTION ABOVE FINAL GRADE.
16. TOTAL WEIGHT:
BOX WITH COVER = 3,655 LBS.
17. IF PULLBOX IS BEING INSTALLED ON ASPHALT, THIS BACKFILL METHOD CAN BE USED: BACKFILL WITH 5000 PSI CONCRETE TO 3-INCH BELOW FINAL GRADE THEN COMPLETE BACKFILLING WITH ASPHALT UP TO FINAL GRADE.
18. FOR FINAL INSTALLATION OF STEEL COVERS, REPLACE MANUFACTURER SUPPLIED STEP WASHERS WITH A SINGLE COIL, HELICAL, SPLIT, GALVANIZED LOCK WASHER, APN# 33007142. THE GALVANIZED SQUARE LOCKNUT HAS AN ADJUSTABLE NYLON INSERT. MAKE SURE THIS LOCKNUT IS ADJUSTED. TURN THE INSERT INTO THE NUT UNTIL THE TIP OF THE INSERT IS FLUSH WITH THE THREADS ON THE INSIDE OF THE NUT. ALSO, CLEAN THREADS ON ALL NUTS AND BOLTS PER MANUFACTURER'S (LOCTITE) RECOMMENDATIONS AND APPLY "LOCTITE" #271 LIQUID APN 85413420 THREADLOCKER TO BOLT THREADS. TORQUE BOLTS TO 50 FT-LBS.
19. THE EXACT LOCATION AND ORIENTATION OF THE PULL BOX SHALL BE SPECIFIED ON THE WORK ORDER CONSTRUCTION DRAWINGS. PULLBOX SHALL BE POSITIONED OUTSIDE DRAINAGE AREAS WHERE PRACTICAL.
20. THIS PULLBOX WILL ACCOMMODATE A MAXIMUM OF THREE PHASES/SPLICES
21. HIGH AND LOW-VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME PULL BOX.
22. SEE 8601 FOR TRENCH BACKFILL AND COMPACTION REQUIREMENTS.
23. SEE 6210 FOR MINIMUM BENDING RADIUS FOR PRIMARY CABLE.
24. SEE 2449-2453 & 2458-2460 FOR ALTERNATE GROUNDING METHODS.



CODE	8722	8724	MATERIAL LIST	
ITEM	QTY	QTY	DESCRIPTION	APN
1	VAR	VAR	CABLE, #2/7 STRD CU BARE	31001415
2	1	1	CLAMP GROUND ROD 5/8"	33002580
3	-	VAR	CONCRETE PRE-MIX 30#	71301280
4	VAR	VAR	CONN CU "H" 2-1/0 2-1/0	33101345
5	-	1	ROD COPPERCLAD GRD 5/8" X 8"	33004805
6	VAR	VAR	SPLICE 1/0, 4/0 - SEE 2531	
7	-	1	1/0 SPLICE BOX HS20 RATED	00147495
8	VAR	VAR	TIE CABLE MAX 2 IN OD	00103864



TOP VIEW - EXAMPLE A
3-#1/0 AL IN A SINGLE 4 IN. CONDUIT

TOP VIEW - EXAMPLE B
3-#1/0 AL IN SEPARATE 2 IN. CONDUITS



ARIZONA PUBLIC SERVICE COMPANY
T&D CONSTRUCTION STANDARDS

BY	LDR.	MGR.	DATE	REV.
MLM	M. CAMPA	M. W. ADAMS	06/2022	2

SUBSTRUCTURES
TRAFFIC BEARING PULLBOX
REINFORCED CONCRETE
1/0 AL PRIMARY

SH 3 OF 3

8722
THRU
8724