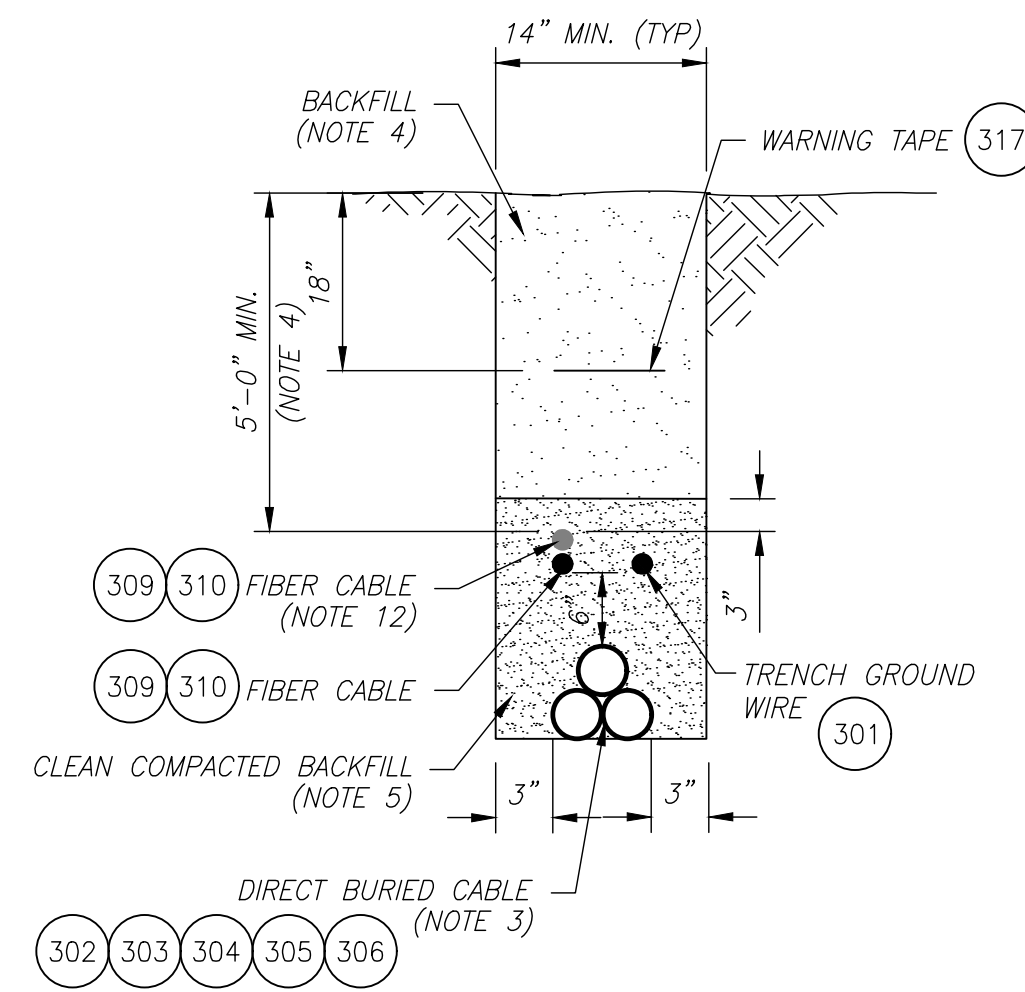
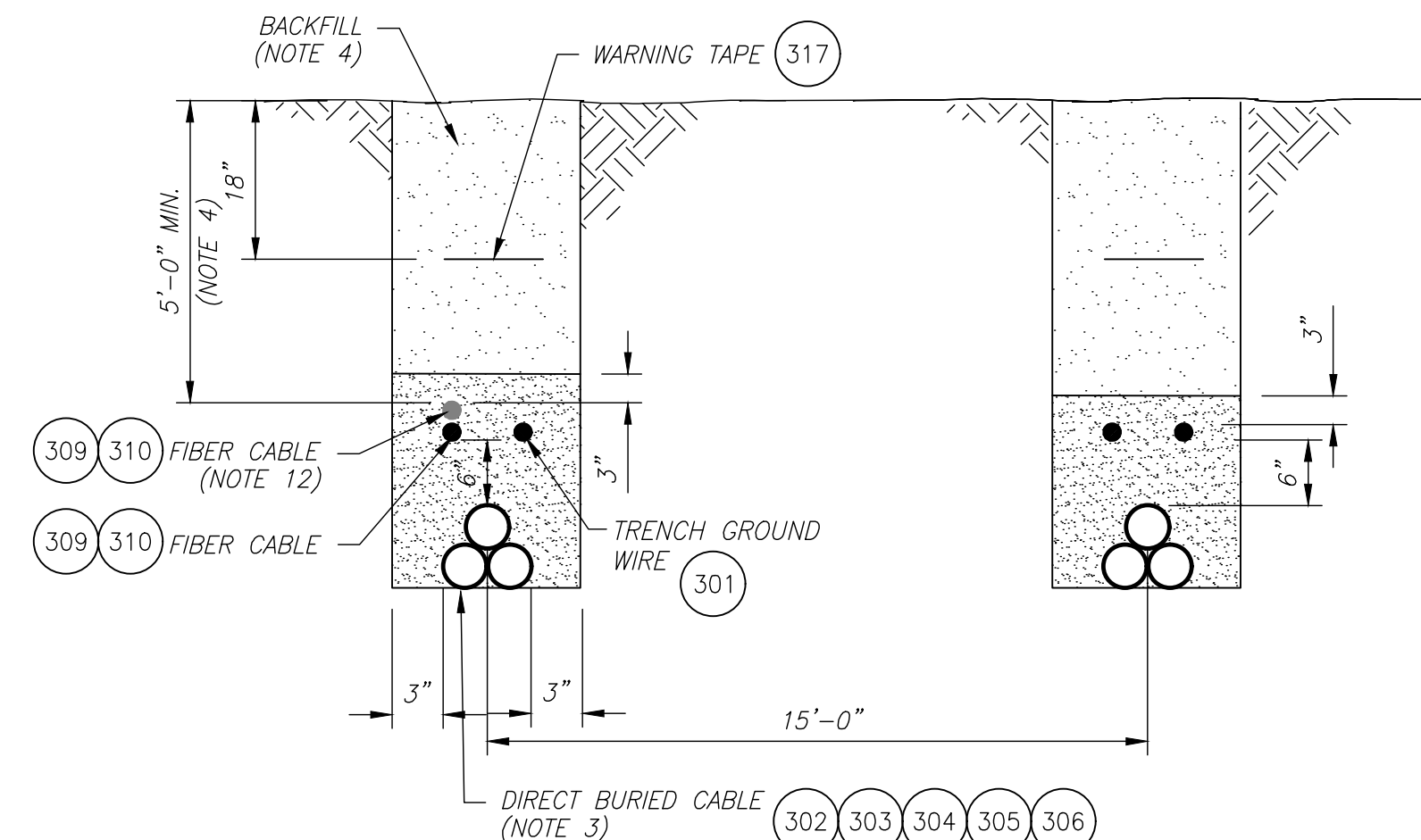


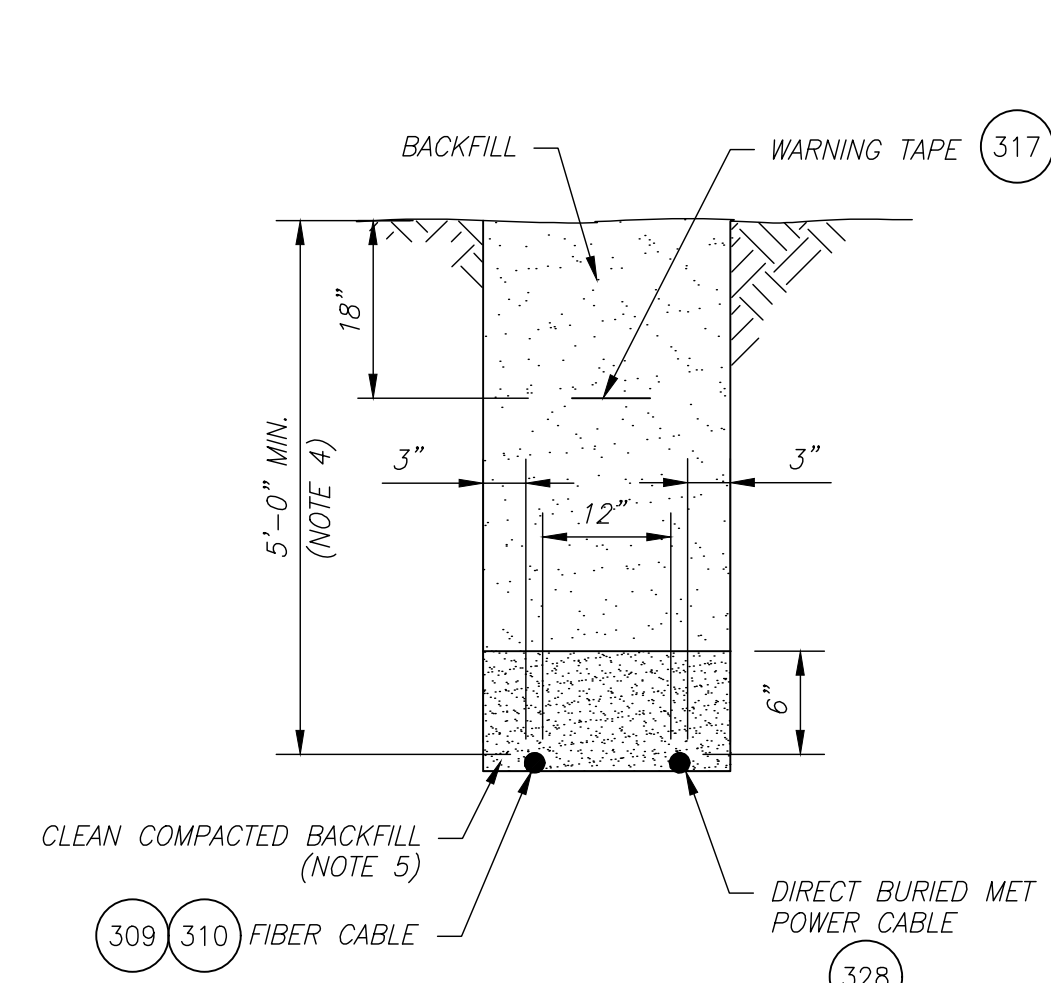
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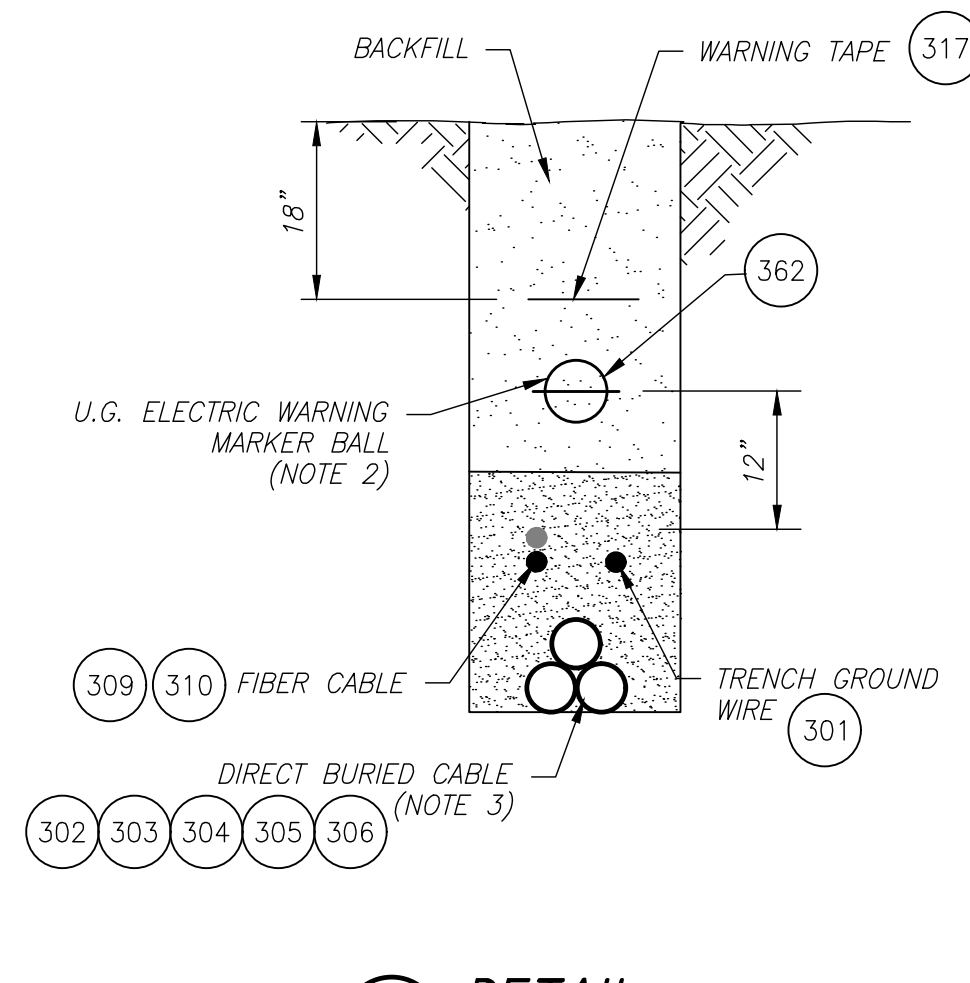
**T501 DETAIL**  
 TYP SINGLE CIRCUIT TRENCH (DIRECT BURIED TRIANGULAR CONFIGURATION)  
 34.5 KV COLLECTION  
 SCALE: N.T.S.



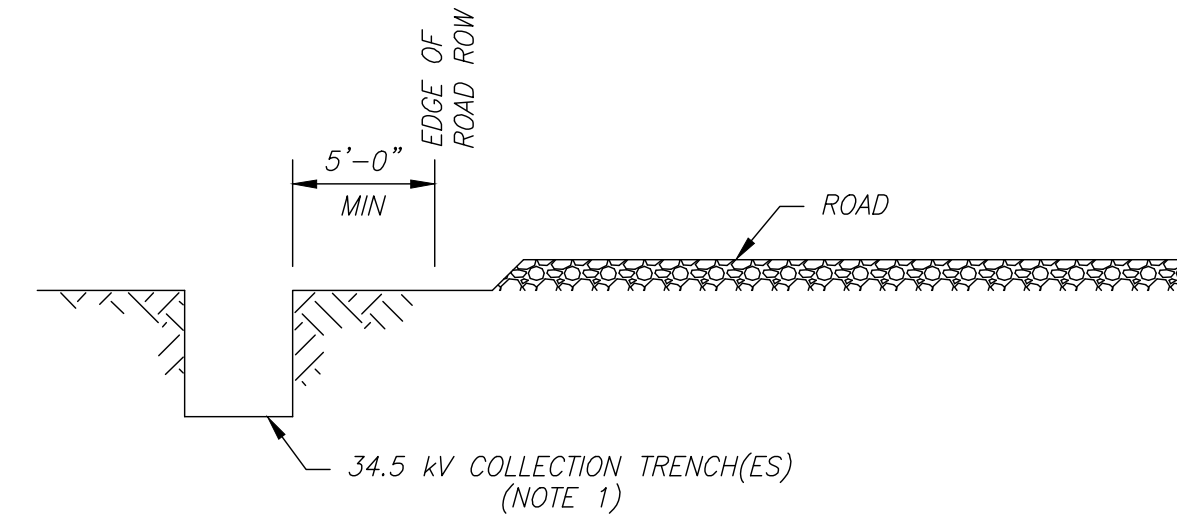
**T502 DETAIL**  
 TYP MULTIPLE CIRCUIT TRENCHES (DIRECT BURIED TRIANGULAR CONFIGURATION, 2-6 CIRCUITS)  
 34.5 KV COLLECTION  
 SCALE: N.T.S.



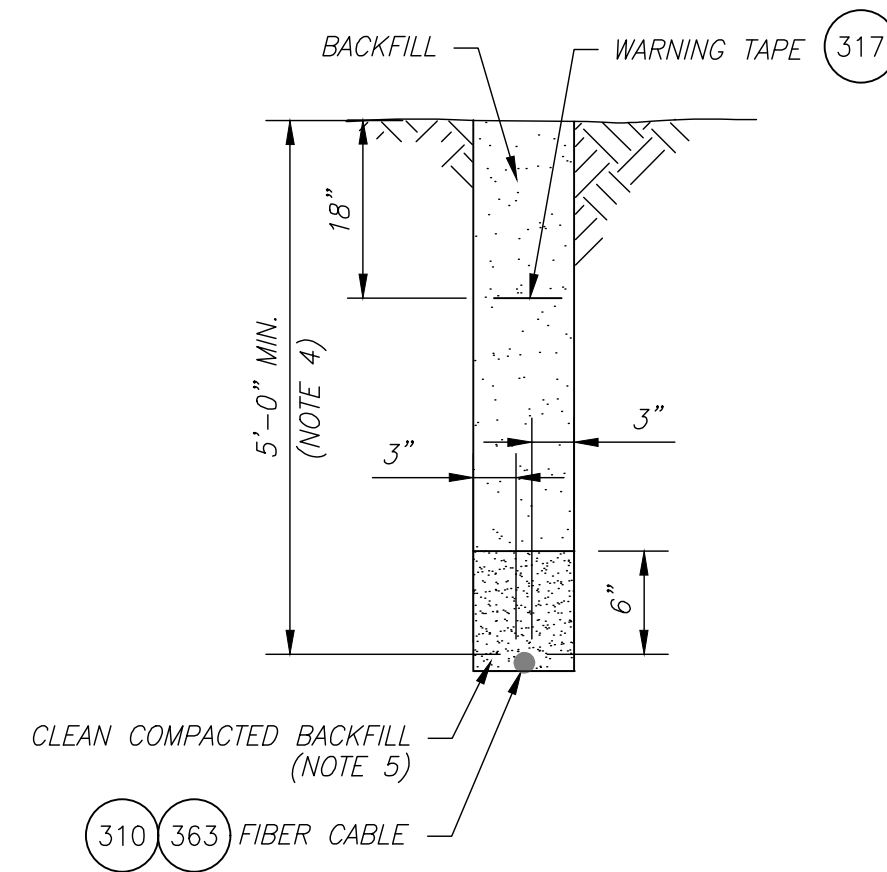
**T504 DETAIL**  
 TYP MET TOWER TRENCH  
 SCALE: N.T.S.



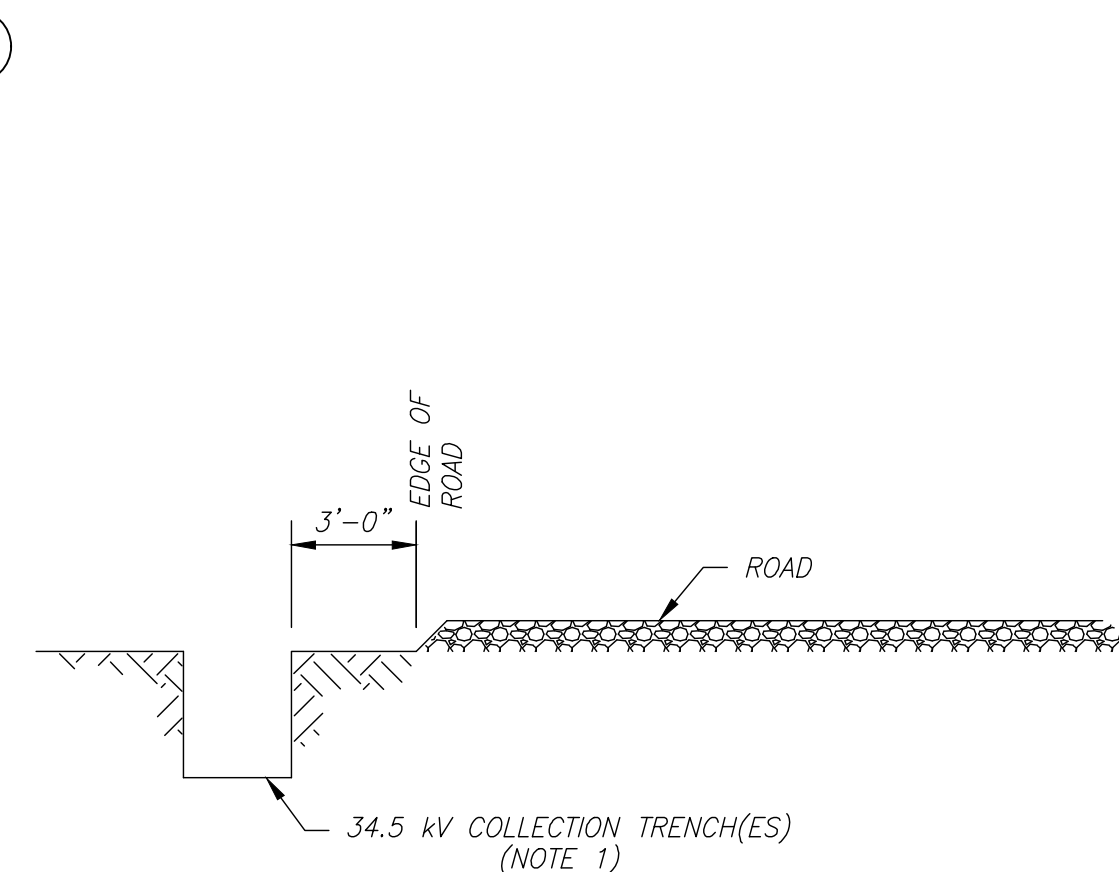
**T505 DETAIL**  
 TYP MARKER BALL INSTALLATION  
 34.5 KV COLLECTION  
 SCALE: N.T.S.



**T506 DETAIL**  
 TYP TRENCH ARRANGEMENT ALONG EXISTING ROAD R.O.W.  
 34.5 KV COLLECTION  
 SCALE: N.T.S.



**T514 DETAIL**  
 TYP FIBER ONLY TRENCH  
 SCALE: N.T.S.



**T515 DETAIL**  
 TYP TRENCH ARRANGEMENT ALONG NEW ACCESS ROAD  
 34.5 KV COLLECTION  
 SCALE: N.T.S.

TRENCH BILL OF MATERIAL				
ITEM	QTY	UNIT	DESCRIPTION	MANUFACTURERS C/N
301	AS REQ'D	FT	TRENCH GROUND: 7#7 COPPER CLAD STEEL, 40% CONDUCTIVITY	ANY
302	AS REQ'D	FT	1250 KCML STR AL, 345 MIL 35 KV 100% TRXLPE, 1/6 CU CN, XLPE JKT	GENERAL CABLE
303	AS REQ'D	FT	1000 KCML STR AL, 345 MIL 35 KV 100% TRXLPE, 1/6 CU CN, XLPE JKT	GENERAL CABLE
304	AS REQ'D	FT	500 KCML STR AL, 345 MIL 35 KV 100% TRXLPE, 1/6 CU CN, XLPE JKT	GENERAL CABLE
305	AS REQ'D	FT	4/0 AWG STR AL, 345 MIL 35 KV 100% TRXLPE, 1/3 CU CN, XLPE JKT	GENERAL CABLE
306	AS REQ'D	FT	1/0 AWG STR AL, 345 MIL 35 KV 100% TRXLPE, 1/3 CU CN, XLPE JKT	GENERAL CABLE
307	AS REQ'D	FT	WIRE, 3-1C #6 CU, 600 V	ANY
309	AS REQ'D	FT	FIBER OPTIC CABLE, LOOSE TUBE, 12 STRAND, SINGLE MODE (9/125)	SEE SPECIFICATION
310	AS REQ'D	FT	FIBER OPTIC HDPE INNERDUCT, 1-1/4" DIAMETER, OUTDOOR, ORANGE	SEE SPECIFICATION
317	AS REQ'D	FT	TAPE, "CAUTION BURIED ELECTRIC LINE BELOW" (3" X 1000 FT, 4 MIL, PLASTIC)	SETON 47586
362	AS REQ'D	EA	MARKER BALL, UG ELECTRIC WARNING	3M 1402-XR

**NOTES**

- TRENCH SHALL NOT BE INSTALLED ALONG DITCH-LINES.
- INSTALL CABLE ROUTE MARKER BALLS IN INTERVALS OF NOT MORE THAN 500 FEET, AT ALL ROAD CROSSINGS, AND AT ALL CHANGES IN DIRECTION. AVOID INSTALLING CABLE ROUTE MARKERS IN MIDDLE OF FARM LAND. PLACE CABLE ROUTE MARKERS NEAR FENCE LINES AND PROPERTY LINES. GPS LOCATIONS SHALL BE VERIFIED AND RECORDED AT THE TIME OF INSTALLATION.
- POWER CABLE SHALL BE BUNDLED IN TREFOIL CONFIGURATION ALONG THE ENTIRE LENGTH OF CIRCUIT. TREFOIL CONFIGURATION AND TRENCH DEPTH WILL BE INSPECTED BY OWNER.
- TRENCH WIDTH AS REQUIRED. CABLE DEPTH MUST HAVE A MINIMUM OF 5 FEET OF TOP COVER PER AGRICULTURAL IMPACT MITIGATION AGREEMENT, SECTION 4.
- NATIVE BACKFILL COMPACTED TO MINIMUM 85% STANDARD PROCTOR DENSITY. BACKFILL 6" ABOVE CABLE AND 3" IN ALL OTHER DIRECTIONS SHALL BE CLEAR OF ANY ROCKS OR LARGE OBJECTS. IF ROCKS ARE FOUND 3/4" OR GREATER IN SIZE, OVER-EXCAVATE 3" BELOW CABLE AND USE BACKFILL SCREENED TO 3/8" MINUS.
- TRENCHING OF CABLE IN SOIL CONTAINING ROCK OR OTHER SOLID MATERIAL BE DONE IN SUCH A MANNER THAT THE SOLID MATERIAL SHALL NOT DAMAGE THE CABLE. EITHER DURING THE TRENCHING OPERATION, BACKFILL OR AFTERWARD. SEE SPECIFICATION FOR DETAILS.
- PROPER CARE SHALL BE TAKEN TO PROTECT THE CABLES FROM DAMAGE DUE TO DEBRIS IN THE TRENCH. INSPECT THE SOIL PILE AND BOTTOM OF TRENCH FOR ROCK AND DEBRIS AND REMOVE ANY LARGE/SHARP ROCKS AND/OR LARGE/SHARP DEBRIS THAT MAY CAUSE DAMAGE TO CABLE.
- THE DESIGN OF THE CABLE TRENCHING EQUIPMENT AND THE TRENCHING IN OPERATION SHOULD BE SUCH THAT THE CABLE SHALL NOT BE DAMAGED BY BENDING SIDEWALL PRESSURE, OR EXCESSIVE CABLE TENSION.
- ANY DRAIN TILE DAMAGED, DISTURBED, BROKEN OR CUT BY THE TRENCHING OPERATION SHALL BE REPAIRED AND LOCATED BY GPS.
- STRIP, STOCKPILE AND REPLACE TOPSOIL IF REQUIRED BY LANDOWNER. DO NOT MIX TOPSOIL WITH SUB SOIL.
- NO UNDERGROUND SPLICES ARE ALLOWED BEYOND WHAT IS SHOWN IN THE DESIGN WITHOUT OWNERS WRITTEN APPROVAL PRIOR TO SPLICING.
- WHERE REQUIRED, INSTALL SECOND FIBER WITH NO INTENTIONAL SEPARATION FROM PRIMARY FIBER.



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REV	DESCRIPTION	ENG	DWN	CHK	DATE	ENG: S. PERRIE
A	CONCEPTUAL DESIGN	SGP	KKM	SGP	05/12/20	DWN: K. MEYER
						CHK: S. PERRIE
						APP: S. PERRIE
						DATE:

PANTHER GROVE WIND, LLC

**TRENCH DETAILS**

SCALE:	PROJECT NUMBER	DRAWING	REV
NONE	20001564	3201	A

AS PLOTTED ON ARCH-D PAPER FORMAT, PLOT SCALE=1:1