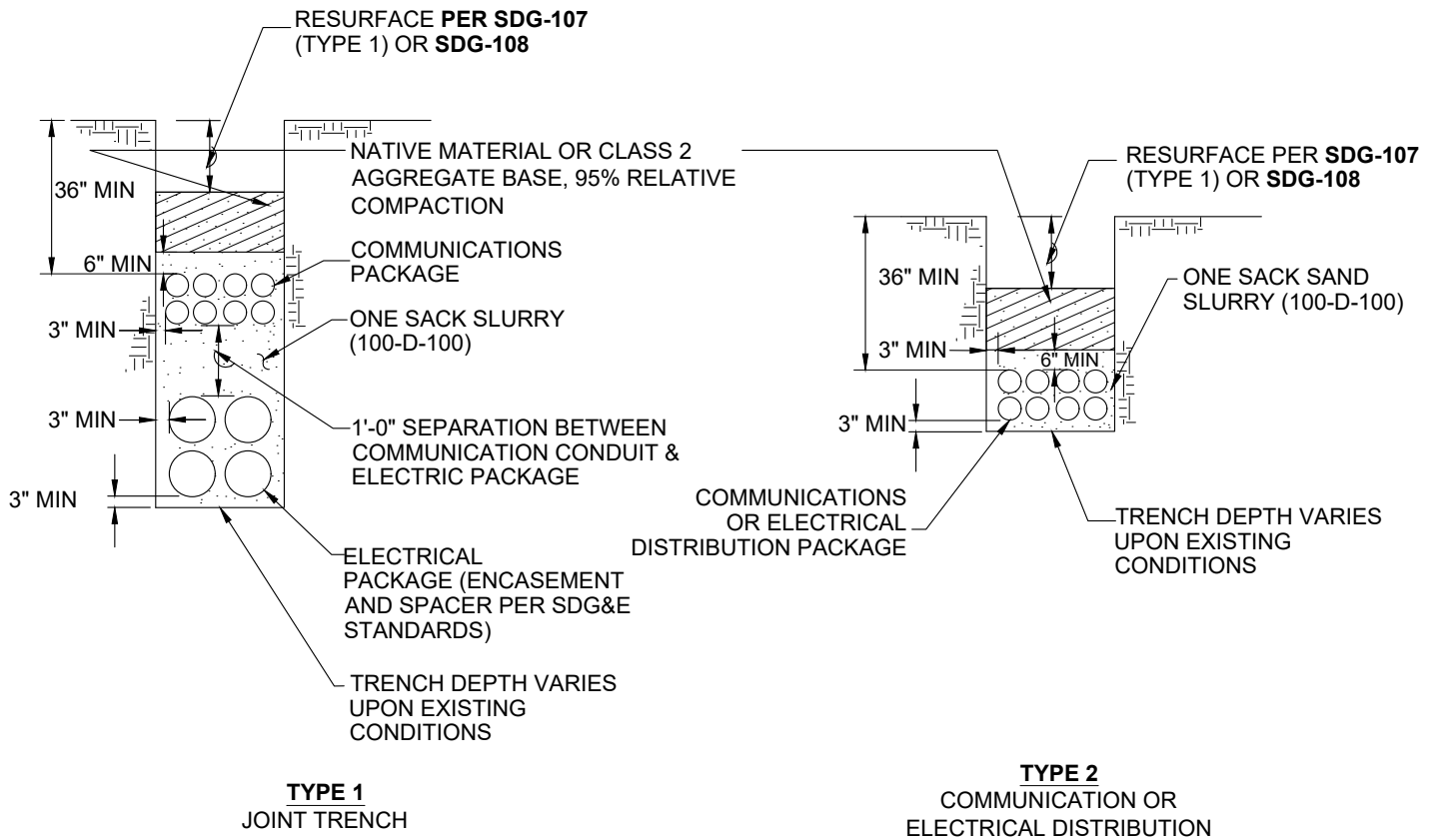




GENERAL NOTES:

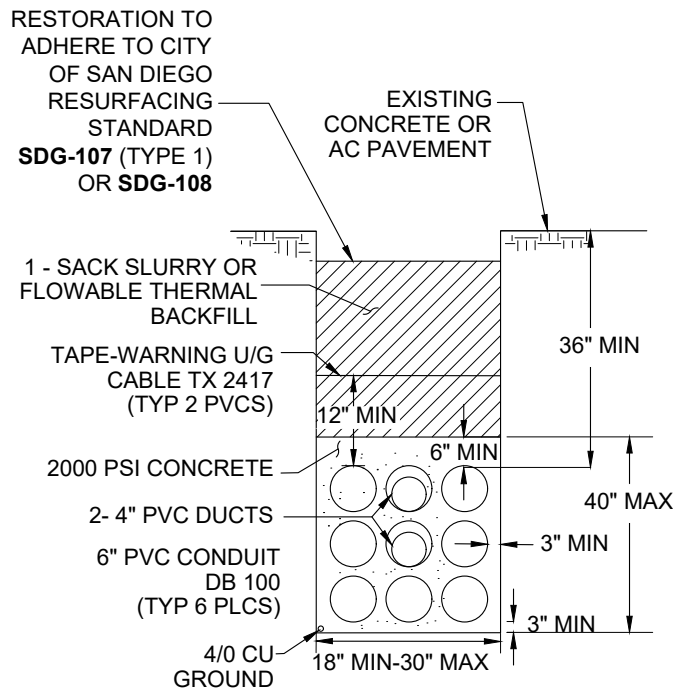
1. FOR TRENCHES GREATER THAN 6" AND LESS THAN 7'-0" IN WIDTH
2. ANY CITY UTILITY CROSSING THE TRENCH SHALL NOT BE ENCASED IN SLURRY OR FTB PER TYPE 3A OR 3B, IF ENCOUNTERED IT SHALL BE SLEEVED WITH PVC.

TYPES 1 & 2:

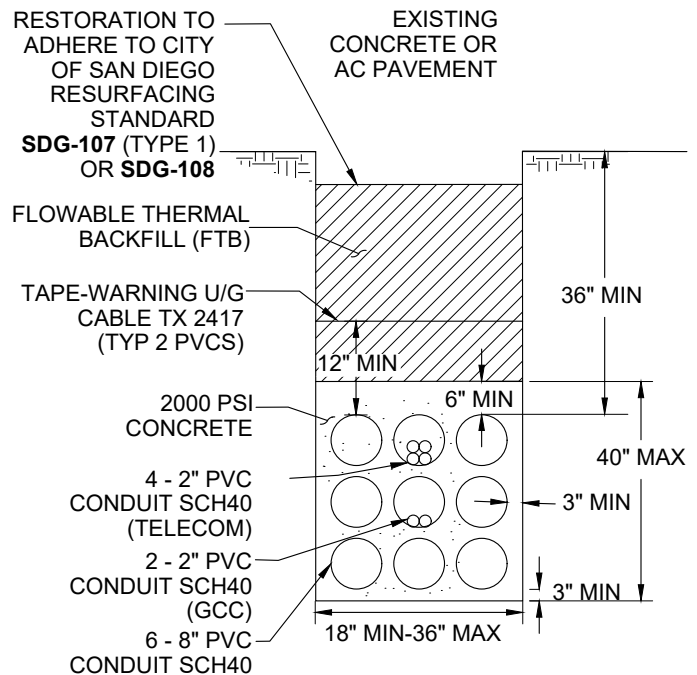
1. WARNING TAPE SHALL BE INSTALLED ABOVE THE CONDUITS **PER SDM-105**.
2. ONE SACK CEMENT SLURRY BACKFILL SHALL BE THOROUGHLY CONSOLIDATED, HAVE A MAXIMUM SLUMP OF 4 INCHES. SLURRY COMBINED GRADING SHALL MEET REQUIREMENTS OF 201-1.3.2 GRADING D (100-D-100).
3. BALL DROP TEST PER ASTM D 6024 SHALL BE PERFORMED ON SLURRY AND SHALL ACHIEVE A MAXIMUM INDENTATION DIAMETER OF 3 INCHES PRIOR TO PLACEMENT OF ASPHALT CONCRETE. SLURRY PLACED IN NARROW TRENCHES WHERE BALL DROP TEST CANNOT BE PERFORMED SHALL BE CURED A MINIMUM OF 48 HOURS PRIOR TO PLACEMENT OF ASPHALT CONCRETE.

SHEET 1 OF 2

REVISION	BY	APPROVED	DATE	CITY OF SAN DIEGO – STANDARD DRAWING	RECOMMENDED BY THE CITY OF SAN DIEGO STANDARDS COMMITTEE
ORIGINAL	BB	J. NAGELVOORT	07/15		
REDRAFTED	CD	J. NAGELVOORT	09/18	BACKFILL FOR DRY UTILITY TYPES 1 & 2	<i>Alaine James 7/1/2026</i> COORDINATOR R.C.E. 81047 DATE
UPDATED	NR	J. NAGELVOORT	01/19		
UPDATED	RC	R. AMEN	07/26		
				DRAWING NUMBER	SDG-119



TYPE 3A (69KV / 138KV TRANSMISSION LINES)



TYPE 3B (230KV TRANSMISSION LINES)

TYPES 3A & 3B (HIGH VOLTAGE TRANSMISSION LINES);

1. CONCRETE ENCASEMENT
 - A. FINE AND COARSE AGGREGATE SHALL COMPLY WITH THE REQUIREMENTS OF ASTM C33. FLY ASH CONFORMING TO ASTM C618 TYPE C OR F MAY BE USED BUT IT IS NOT MANDATORY.
 - B. THE CONCRETE MIX SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF APPROXIMATELY 2,000 PSI BUT SHALL NOT EXCEED 3,000 PSI.
 - C. SLUMP SHALL BE AS REQUIRED TO ADEQUATELY FLOW THROUGH AND AROUND THE CONDUIT PACKAGE TO PROVIDE A VOID-FREE HOMOGENEOUS ENCASEMENT. SLUMP SHALL BE IN THE 6" TO 10" RANGE.
2. FLUIDIZED THERMAL BACKFILL (FTB)
 - A. FTB SHALL HAVE A THERMAL RESISTIVITY OF NOT MORE THAT 50°C-CM/W AT CRITICAL MOISTURE CONTENT (4%).
 - B. SLUMP SHALL BE MAX 4" TO PROVIDE SELF-CONSOLIDATING PLACEMENT.
 - C. THE SLURRY MIX SHALL HAVE A COMPRESSIVE STRENGTH OF NOT LESS THAN 200 PSI.
 - D. MIX SHALL HAVE APPROXIMATELY EQUAL AMOUNTS OF FINE AND COARSE AGGREGATE, WITH 3/8" AS THE MAX. SIZE OF COARSE AGGREGATE.
3. THE SLURRY MIX USED TO BACKFILL ABOVE THE CONCRETE ENCASEMENT SHALL BE AS FOLLOWS (INGREDIENTS PER CUBIC YARD):
 - A. SAND - 3,000 LBS MAX.
 - B. CEMENT - 1 SACKS (94 LBS).
 - C. HAVE A MAXIMUM SLUMP OF 4 INCHES AS REQUIRED TO PROVIDE A SELF-CONSOLIDATING PLACEMENT.
 - D. THE SLURRY MIX SHALL HAVE A COMPRESSIVE STRENGTHS RANGE OF 200-400 PSI.

SHEET 2 OF 2

REVISION	BY	APPROVED	DATE	CITY OF SAN DIEGO – STANDARD DRAWING	RECOMMENDED BY THE CITY OF SAN DIEGO STANDARDS COMMITTEE
ORIGINAL	BB	J. NAGELVOORT	07/15		
REDRAFTED	CD	J. NAGELVOORT	09/18	BACKFILL FOR DRY UTILITY TYPES 3A & 3B	<i>Alaine James 7/11/2026</i> COORDINATOR R.C.E. 81047 DATE
UPDATED	NR	J. NAGELVOORT	01/19		
UPDATED	RC	R. AMEN	07/26		
				DRAWING NUMBER	SDG-119