T-TRENCH AND RESTORATION DETAIL
ASPHALT CONCRETE STREETS

NOTES:
(1 TO 5)
(6)
(7)
(8 TO 11)
(12 TO 15)
(16 TO 25)

EXISTING PAVEMENT
EXISTING BASE MATERIAL
NATIVE SOIL

NEW ASPHALT CONCRETE PAVEMENT
TACK COAT
PIPE / CONDUIT ZONE

NEW ASPHALT CONCRETE PAVEMENT (BASE PAVING)
NEW BASE MATERIAL (COMPACT PRIOR TO RESURFACING)
EXISTING OR NEW BASE MATERIAL
BACKFILL
BEDDING
UTILITY PIPE/CONDUIT
SUBGRADE

NOTES:
(12)
(13 TO 15)
(7)
(5)
(6)

TRENCH SECTION
("T-CUT" LIMIT)

TRENCH WIDTH
EQUAL
EQUAL

TRENCH SECTION
("T-CAP" LIMIT)

GRIND & RESURFACE SECTION
("T-CAP" LIMIT)
FIGURE 1
EXAMPLES OF GRIND AND RESURFACE "T-CAP" LIMITS

LEGEND
- TRENCH "T"-SECTION "T-CUT" LIMITS
- GRIND & RESURFACE "T-CAP" LIMITS
- CURB AND GUTTER

NOT TO SCALE
NOTES:

ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC) "GREENBOOK" ADOPTED BY THE BOARD OF PUBLIC WORKS AS AMENDED BY THE LATEST CORRESPONDING CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS "BROWNBOOK".

LIMITS OF REMOVALS, TRENCH WIDTH:

1. ALL PAVEMENT REMOVED SHALL HAVE STRAIGHT EDGES. CUTS SHALL BE MADE TO A MINIMUM DEPTH OF ONE AND A HALF (1-1/2) INCHES. ALL CUTS SHALL BE NEAT, STRAIGHT, VERTICAL CUTS WITH NO BROKEN EDGES.
2. ALL LONGITUDINAL PAVEMENT CUTS SHALL BE UNINTERRUPTED APPROXIMATELY PARALLEL TO THE TRENCH (MAX. 1:6 LONGITUDINAL VARIANCE).
3. IF A SAW CUT IN PAVEMENT FALLS WITHIN 1 FOOT OF AN EXISTING CURB, GUTTER, OR EDGE OF PAVEMENT, THE ADDITIONAL PAVEMENT SHALL BE REMOVED AND RECONSTRUCTED.
4. WHEN SAW CUTTING PAVEMENT, THE MAXIMUM OVERRUN ALLOWED FOR ANY SAW CUT BEYOND THE BOUNDARY REMOVAL LIMITS OF EXISTING PAVEMENT SHALL BE 2 INCHES.
5. TRENCH WIDTH SHALL BE MINIMUM 24 INCHES, UNLESS SLURRY BACKFILL AND BEDDING IS USED, IN WHICH CASE MINIMUM SHALL BE 4 INCHES. MINIMUM 3 INCH SEPARATION SHALL BE MAINTAINED BETWEEN ALL CONDUITS, PIPES, AND TRENCH WALLS. IF SLURRY BEDDING MATERIAL IS USED, 1 INCH IS ACCEPTABLE IN A SINGLE LAYER INSTALLATION, OTHERWISE 2 INCH SEPARATION IS REQUIRED. UNDERCUTTING TRENCH WALLS TO ACQUIRE CLEARANCES IS NOT PERMITTED.

BEDDING:

6. BEDDING MATERIAL SHALL BE PLACED ON FIRM AND UNYIELDING SUBGRADE PER GREENBOOK SECTION 306. SOFT, SPONGY, UNSTABLE, UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED.
7. BEDDING SHALL CONFORM TO GREENBOOK REQUIREMENTS AND OTHER APPLICABLE STANDARDS.

BACKFILL:

8. EXCAVATIONS SHALL BE BACKFILLED WITH AN APPROVED SLURRY MIX, CLSM, CMB, OR CAB. NATIVE SOIL MAY ONLY BE USED WITH CITY ENGINEER'S APPROVAL. CMB, CAB, SOIL SHALL BE COMPACTED TO 90% RELATIVE DENSITY. CMB, CAB SHALL BE WELL GRADED AND HANDLED IN A MANNER TO PREVENT SEGREGATION BY PARTICLE SIZE. SOIL TESTING MAY BE REQUIRED TO BE PROVIDED TO THE FIELD INSPECTOR ON A CASE-BY-CASE BASIS.
9. BACKFILL SLURRY MATERIAL SHALL BE PROPERLY CONSOLIDATED. SLURRY MATERIAL FOR TRENCHES DEEPER THAN 5 FEET AND/OR NARROWER THAN 12 INCHES SHALL BE CONSOLIDATED WITH VIBRATION.
10. BACKFILL MATERIAL SHALL BE MADE SMOOTH AND LEVEL BEFORE PLACING BASE AND PAVEMENT.
11. JETTING IS NOT AN APPROVED DENSIFICATION METHOD.

TRENCH SECTION:

12. AFTER THE EXCAVATION HAS BEEN BACKFILLED, THE EXISTING PAVEMENT SHALL BE REMOVED TO A LINE AT LEAST 12-INCHES BACK OF THE FIRM BANKS OF THE TRENCH ("T-CUT"). EXISTING CMB OR CAB BASE MATERIAL IN THIS AREA SHALL BE COMPACTED TO 95% RELATIVE DENSITY AND NEW BASE MATERIALS SHALL BE PROVIDED TO MATCH THE SURROUNDING BASE THICKNESS AS NECESSARY. WHERE NO BASE MATERIAL EXISTS IN THIS AREA, THE NEW BASE MATERIAL SHALL EXTEND BEYOND THE TRENCH WIDTH TO COVER THE ENTIRE TRENCH "T-CUT" AREA.
13. NEW BASE MATERIAL OF CMB, OR CAB, SHALL MATCH THE EXISTING BASE THICKNESS, OR 4-INCHES, WHICHEVER IS GREATER AND SHALL BE COMPACTED TO 95% RELATIVE DENSITY. THIS REQUIREMENT SHALL ALSO APPLY OVER SLURRY BACKFILLS UNLESS OTHERWISE APPROVED BY THE ENGINEER. "T-CUT" IS NOT REQUIRED IF AN APPROVED SLURRY MIX BACKFILL IS USED, UNLESS UNDERMINING OF ADJACENT PAVEMENT IS PRESENT. IF SLURRY TRENCH WIDTH IS LESS THAN 12 INCHES, EXISTING PAVEMENT SHALL BE REMOVED TO PROVIDE AT LEAST A 12 INCH WIDE TRENCH SECTION FOR PROPER COMPACTION OF THE BASE MATERIAL.

14. NEW ASPHALT CONCRETE SECTION SHALL MATCH EXISTING PAVEMENT THICKNESS, OR 6 INCHES, WHICHEVER IS GREATER.

15. ASPHALT CONCRETE PAVING WILL OCCUR NO SOONER THAN 42 HOURS AFTER SLURRY BACKFILL OF TRENCH.

GRIND AND RESURFACE SECTION:

WITHIN 30 CALENDAR DAYS AFTER BACKFILLING, ASPHALT CONCRETE SHALL BE COLD MILLED AND RESURFACED AS FOLLOWS:

16. EXISTING ASPHALT CONCRETE SHALL BE GROUND DOWN ONE AND ONE HALF (1-1/2) INCHES, OR ONE HALF THE EXISTING PAVEMENT THICKNESS, WHICHEVER IS LESS, TO THE "T-CAP" LIMITS.

17. WHERE POSSIBLE, "T-CAP" LIMITS SHALL BE FROM FIGURE 1, "EXAMPLES OF GRIND AND RESURFACE "T-CAP" LIMITS". "T-CAP" IS NOT REQUIRED IN STREETS THAT HAVE NOT BEEN RESURFACED WITHIN THE PAST 8 YEARS AND DO NOT IMPACT BIKE LANES.


19. "T-CUT" AND CORRESPONDING "T-CAP" (AS APPLICABLE) IS REQUIRED FOR ALL EXCAVATIONS WITH A SURFACE AREA OF 3 SQ. FT OR GREATER.


21. IMPACTED BIKE LANES - "T-CAP" LIMITS SHALL FULLY ENCOMPASS ANY BIKE LANE IMPACTED BY THE TRENCH, AND SHALL HAVE A LENGTH THAT EXTENDS AT LEAST 2 FEET BEYOND THE ASPHALT REMOVAL LIMITS IN THE DIRECTION OF BIKE TRAFFIC.

22. WHEN THE "T-CAP" LIMIT IS WITHIN 2 FEET OR LESS FROM A CURB OR GUTTER, THE "T-CAP" LIMIT SHALL EXTEND TO THE CURB OR GUTTER.

23. PAVEMENT SHALL BE LEVEL WITH ADJACENT ROADWAY ELEVATIONS AND SHALL PROVIDE A SMOOTH SURFACE PER GREENBOOK SECTION 302-5 AND SUBJECT TO ACCEPTANCE BY THE CITY PUBLIC WORKS INSPECTOR.

24. "T-CAP" AND PERMANENT BASE PAVING MAY BE PERFORMED ON THE SAME DAY WHEN FEASIBLE.

IDENTIFICATION:

25. EACH RESURFACING SHALL BE IDENTIFIED WITH A METAL IDENTIFICATION TAG IDENTIFYING THE OWNER, AND YEAR OF CONSTRUCTION. IF THE RESURFACING IS MORE THAN 50 FEET IN LENGTH, PLACE THE TAG NEAR EACH END OF THE RESURFACING AND AT INTERVALS NOT TO EXCEED 50 FEET.