

**T-TRENCH AND RESTORATION DETAIL
ASPHALT CONCRETE STREETS**



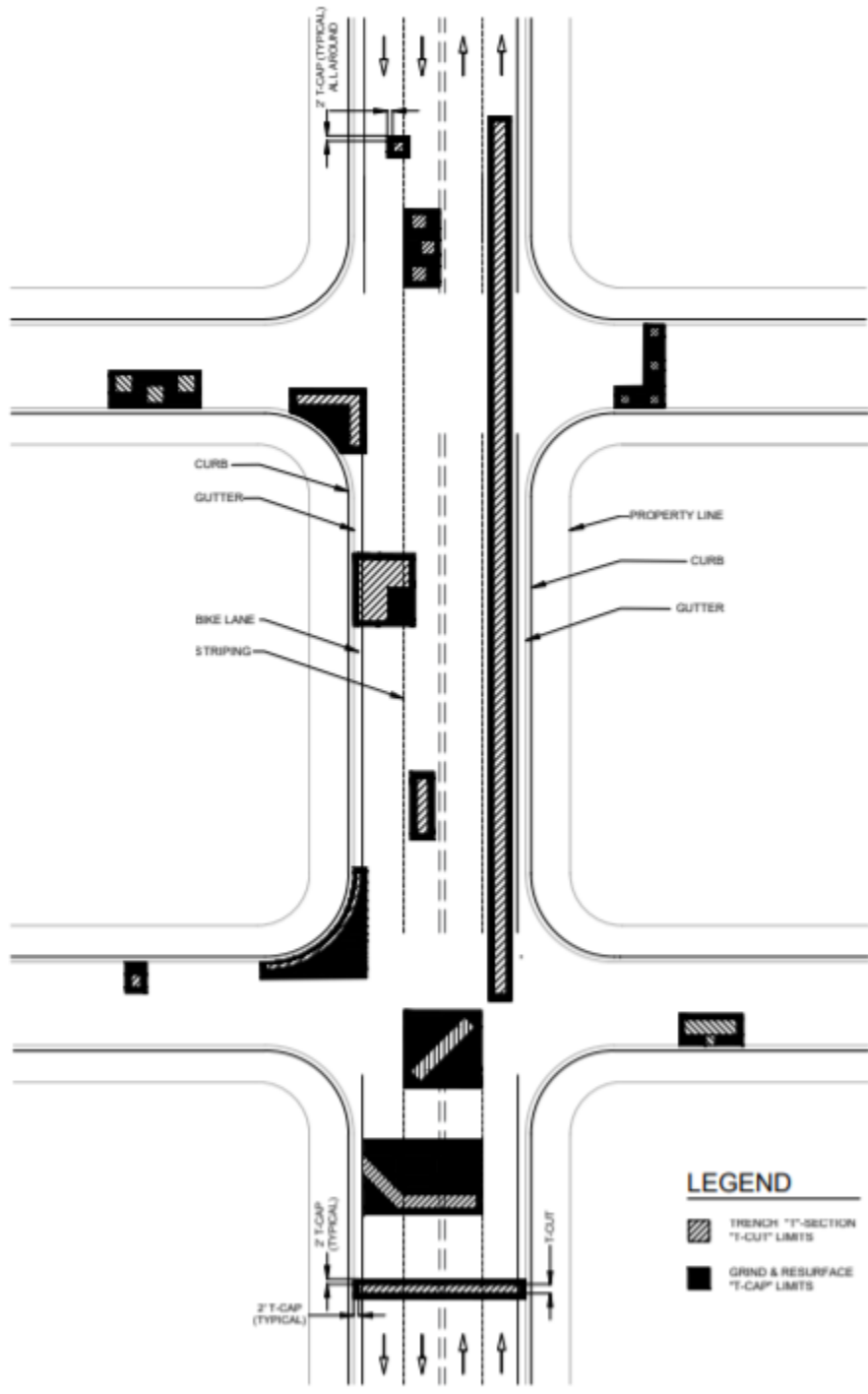


FIGURE 1
EXAMPLES OF GRIND AND RESURFACE "T-CAP" LIMITS

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

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 306.1.2.1. SOFT, SPONGY, UNSTABLE, UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED.
7. TRENCH BEDDING SHALL CONFORM TO GREENBOOK REQUIREMENTS AND OTHER APPLICABLE STANDARDS.

TRENCH BACKFILL:

8. ALL TRENCHES SHALL BE BACKFILLED WITH CMB, OR CAB, COMPACTED TO 90% RELATIVE DENSITY, OR AN APPROVED SLURRY MIX. NATIVE SOIL MAY ONLY BE USED WITH CITY ENGINEER'S APPROVAL.
9. TRENCH BACKFILL SLURRY MATERIAL SHALL BE PROPERLY CONSOLIDATED. SLURRY MATERIAL FOR TRENCHES DEEPER THAN 5 FEET AND/OR NARROWER THAN 12 INCHES MUST 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 "T" SECTION ("T-CUT"):

12. AFTER THE TRENCH HAS BEEN BACKFILLED, THE EXISTING PAVEMENT SHALL BE REMOVED TO A LINE AT LEAST 12-INCHES BACK OF THE FIRM BANKS OF THE TRENCH AND THIS AREA ADJACENT TO THE TRENCH SHALL BE COMPACTED TO 95% RELATIVE DENSITY ("T-CUT"). EXISTING CMB OR CAB BASE MATERIAL IN THIS AREA DOES NOT NEED TO BE REMOVED. "T-CUT" IS NOT REQUIRED IF PROPER SLURRY 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 OPENING FOR PROPER COMPACTION OF THE BASE MATERIAL.

NOTES (CONTINUED)

PAVEMENT SECTION:

13. NEW BASE MATERIAL OF CMB, OR CAB, SHALL MATCH THE EXISTING BASE THICKNESS, OR 4-INCHES, WHICHEVER IS GREATER. COMPACT TO 95% RELATIVE DENSITY.
14. BASE PAVING FOR PERMANENT RESURFACING MUST BE COMPLETED WITHIN 3 WEEKS OF BACKFILLING, (UNLESS SPECIFIED OTHERWISE ON PERMIT OR PLANS).
15. NEW ASPHALT CONCRETE SECTION SHALL MATCH EXISTING PAVEMENT THICKNESS, OR 6 INCHES, WHICHEVER IS GREATER.
16. ASPHALT CONCRETE PAVING WILL OCCUR NO SOONER THAN 42 HOURS AFTER SLURRY BACKFILL OF TRENCH.

GRIND AND RESURFACE ("T-CAP"):

WITHIN 10 CALENDAR DAYS AFTER TRENCH BACKFILLING, ASPHALT CONCRETE SHALL BE COLD MILLED AND RESURFACED AS FOLLOWS:

17. 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.
18. WHERE POSSIBLE, "T-CAP" LIMITS SHALL BE FROM FIGURE 1, "EXAMPLES OF GRIND AND RESURFACE "T-CAP" LIMITS". "T-CAP" IS NOT REQUIRED FOR SERVICE CONNECTIONS IN STREETS OVER 25 YEARS OLD THAT DO NOT IMPACT BIKE LANES.
19. "T-CAP" LIMITS SHALL EXTEND AT LEAST 2 FEET BEYOND THE TRENCH "T-CUT" LIMITS. MINIMUM "T-CAP" DIMENSIONS SHALL BE 5 FEET x 5 FEET.
20. FOR MULTIPLE EXCAVATIONS WITHIN 5 FEET OF EACH OTHER, THE "T-CAP" LIMITS SHALL ENCOMPASS ALL THE EXCAVATIONS WITHIN ONE RECTANGULAR AREA.
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 302-5.6.2 AND SUBJECT TO ACCEPTANCE BY THE CITY PUBLIC WORKS INSPECTOR.
24. POT HOLES/CORE HOLES SHALL BE FILLED PER GREENBOOK STANDARDS, AND "T-CAP" LIMITS SHALL EXTEND 1-FOOT BEYOND POT/CORE HOLES.

TRENCH IDENTIFICATION:

25. EACH TRENCH 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.