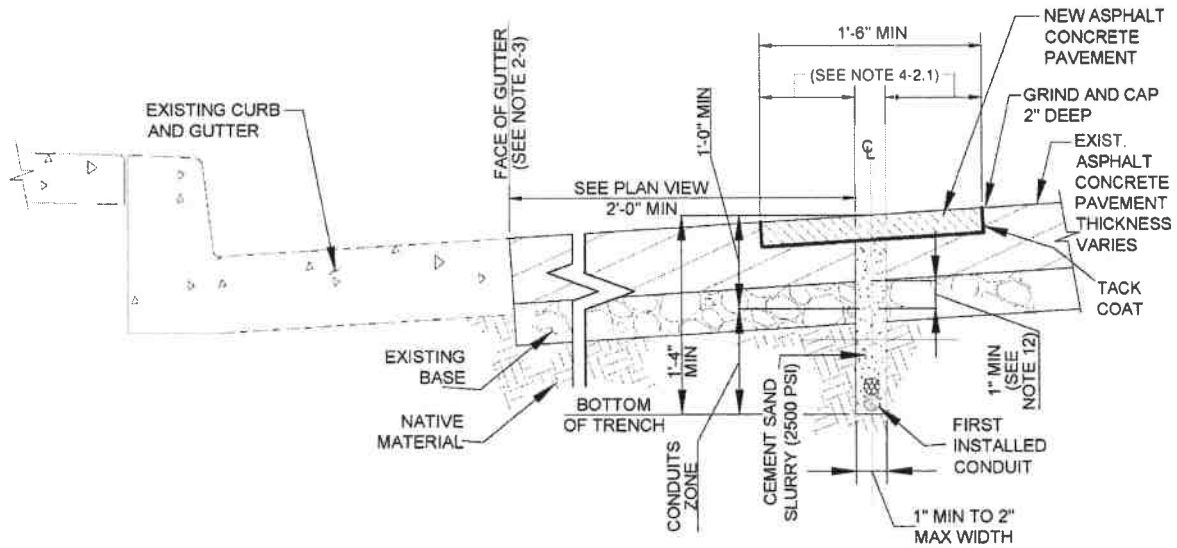




**CITY OF SANTA CLARITA  
ENGINEERING SERVICES DIVISION**

**MICROTRENCHING STANDARDS AND REQUIREMENTS**



**TYPICAL MICRO-TRENCH SECTION**  
(INTEGRAL CURB AND GUTTER SHOWN)

**NOTES:**

ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC) "GREENBOOK" (GREENBOOK) ADOPTED BY THE DEPARTMENT OF PUBLIC WORKS – CITY OF SANTA CLARITA (CITY)

**1 - GENERAL**

1. MICROTRENCHING SHALL ONLY BE USED TO INSTALL TELECOMMUNICATION CONDUITS.
2. MICROTRENCHING SHALL NOT BE ALLOWED IN CONCRETE PAVED STREETS, NOR SIDEWALKS, PARKWAYS, CURBS AND GUTTERS.
3. THE CONTRACTOR SHALL:
  - 3.1 IDENTIFY ALL EXISTING UTILITIES, INCLUDING SERVICE CONNECTIONS IN THE FIELD.
  - 3.2 CONTACT UNDERGROUND SERVICE ALERT (U.S.A.) AT LEAST 48 HOURS PRIOR TO THE START OF WORK AT 8-1-1, OR TOLL-FREE AT 1-800-422-4133.
  - 3.3 FURTHER SUPPLEMENT THE FINDINGS OF U.S.A. TO DETERMINE THE EXACT LOCATIONS AND DEPTHS OF ALL UTILITIES BY USING A MOBILE GROUND PENETRATING RADAR SYSTEM.

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- 3.4 POTHOLE ALL CROSSING UTILITIES AND PARALLEL UTILITIES WITHIN 18 INCHES OF THE PROPOSED ALIGNMENT TO A DEPTH OF 6 INCHES BELOW THE BOTTOM OF THE MICRO-TRENCH, TO DETERMINE THE EXISTING UTILITY ALIGNMENT AND ELEVATION.
- 3.5 POTHOLES SHALL BE IMMEDIATELY BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE GREENBOOK SPECIFICATIONS OR RESTORED AS DIRECTED BY THE CITY ENGINEER.
4. IF EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY'S PUBLIC WORKS' INSPECTOR, CITY ENGINEER, AND UTILITY OWNER TO PERFORM THE REPAIRS PROMPTLY ACCORDING TO THEIR REQUIREMENTS AND PER ASSOCIATED CITY PERMITS.
5. THE FOLLOWING ITEMS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE CITY ENGINEER FOR APPROVAL:
- 5.1 PROVIDE A DETAILED SITE PLAN WHICH SHALL INCLUDE THE DISTANCES OF THE MICRO-TRENCH AND EDGES OF GRIND AND CAP TO FACE OF GUTTER, CURB, CONCRETE PAVEMENT, OR STRUCTURE AS APPLICABLE.
- 5.2 A TYPICAL MICRO-TRENCH DETAIL THAT INCLUDES THE FOLLOWING INFORMATION:
- a) THE MAXIMUM ASPHALT CONCRETE (AC) ROADWAY THICKNESS, BASE, DEPTH, AND WIDTH OF MICRO-TRENCH, DEPTH OF TOPMOST CONDUIT, AND BACKFILL MATERIAL.
  - b) AC REINSTATEMENT INCLUDING WIDTH AND DEPTH OF GRIND AND CAP.
- 5.3 DETAIL SHOWING CONDUIT FROM MAIN MICRO-TRENCH ALIGNMENT TO LATERAL SURFACE CONNECTIONS INCLUDING TO ANY JUNCTION/PULL BOX. INCLUDE SPECIFIC INFORMATION OF DEPTH, SIZE, AND METHOD OF EXCAVATION BELOW THE EXISTING CURB AND GUTTER.
- 5.4 CUT SHEETS OF THE PROPOSED EQUIPMENT PARTICULARLY SUITABLE FOR MICROTRENCHING, INCLUDING:
- a) MICRO-TRENCHER CAPABLE OF MEETING TARGET DEPTH AND WIDTH IN A SINGLE PASS WITH AN INTEGRAL HOOD AND ASSOCIATED VACUUM SYSTEM. SELECTION OF CUTTING WHEEL SHALL BE SUCH THAT IT MINIMIZES DAMAGE TO THE ADJACENT AC SURFACE.
  - b) MOBILE CONCRETE/SLURRY PLACEMENT WITH AN ON-BOARD VIBRATOR AND NARROW TROUGH TO MATCH MICRO-TRENCH WIDTH.
  - c) MOBILE GROUND PENETRATING RADAR SYSTEM THAT IS CAPABLE OF LOCATING BOTH METALLIC AND NON-METALLIC PIPES AND CABLES TO A DEPTH OF 24 INCHES.
- 5.5 OTHER SITE-SPECIFIC ITEMS AS REQUIRED BY THE CITY ENGINEER.
6. MINOR DEVIATIONS FROM THIS MICROTRENCHING DETAIL MAY BE PERMITTED AT THE SOLE DISCRETION OF THE CITY ENGINEER, PROVIDED:
- a) THE DEVIATION WILL NOT MATERIALLY REDUCE THE DURABILITY, STRUCTURAL INTEGRITY, OR SAFETY OF THE PAVEMENT.
  - b) THE DEVIATION IS CONSISTENT WITH THE OVERALL INTENT OF THE ADOPTED STANDARDS;
  - c) ADEQUATE DOCUMENTATION IS PROVIDED DEMONSTRATING HOW THE PROPOSED ALTERNATE MEETS PERFORMANCE REQUIREMENTS.
7. WHERE A ROADWAY CONTAINS AN EXISTING MICROTRENCH, THE PERMITTEE/APPLICANT SHALL APPLY A SEAL COAT OVER THE FULL WIDTH OF THE AFFECTED STREET SEGMENT (INTERSECTION TO INTERSECTION), OR AT THE SOLE DISCRETION OF THE CITY ENGINEER OR HIS DESIGNEE WHERE NEW MICROTRENCHING IS PROPOSED, IN ACCORDANCE WITH THE GREENBOOK STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2024 EDITION, SECTION 203-9. RE-STRIPING OR PAVEMENT MARKINGS RESTORATION SHALL BE PROVIDED WHERE APPLICABLE FOLLOWING COMPLETION OF THE SEAL COAT WORK.

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8. WET SAND SHALL BE USED AS BACKFILL MATERIAL FOR ALL CROSS MICROTRENCHING INSTALLATIONS TO FACILITATE PROPER COMPACTION AND MINIMIZE SETTLEMENT.
9. FOR CROSS MICROTRENCHING WITHIN OLDER OR DETERIORATED PAVEMENT SECTIONS WHERE SIGNS OF PAVEMENT DISTRESS OCCUR FOLLOWING INSTALLATION, INCLUDING BUT NOT LIMITED TO CAVING, SETTLEMENT, OR NEW CRACKING, THE PERMITTEE SHALL MILL AND REPAVE THE FULL LENGTH OF THE MICROTRENCH IN ACCORDANCE WITH CITY OF SANTA CLARITA STANDARD DRAWING NO. 1 (TRENCH DETAIL), TO A MINIMUM WIDTH OF THIRTY-SIX (36) INCHES, OR AS OTHERWISE DIRECTED BY THE CITY PUBLIC WORKS INSPECTOR.
10. NO STREET CONTAINING TWO (2) EXISTING PERMITS FOR MICRO-TRENCHES SHALL BE PERMITTED TO ACCOMMODATE A THIRD MICROTRENCH PERMIT.
11. AT THE DISCRETION OF THE CITY ENGINEER, THE MICRO-TRENCH MAY BE INSTALLED ADJACENT TO THE GUTTER, IN WHICH CASE MAXWELL CAPPING MATERIAL MAY BE USED FOR SURFACE RESTORATION. HOWEVER, MAXWELL CAPPING MATERIAL IS NOT PERMITTED FOR THE STANDARD OFFSET INSTALLATION BECAUSE THE TRENCH WILL BE LOCATED WITHIN THE VEHICLE WHEEL PATH, WHICH MAY LEAD TO SETTLEMENT, CRACKING, AND PREMATURE PAVEMENT FAILURE. IN THESE CASES, THE STANDARD GRIND-AND-OVERLAY REQUIREMENTS IN SECTION 4 OF THIS DETAIL SHALL APPLY.

**2 - LIMITS OF REMOVALS, TRENCH WIDTH, AND LOCATION**

1. THE MICRO-TRENCH SHALL BE CONSTRUCTED WITH CONTINUOUS UNIFORM STRAIGHT AND NEAT EDGES.
2. MICRO-TRENCH ALIGNMENTS SHALL CONSIST OF RUNS PARALLEL TO THE CENTERLINE OF THE STREET. STREET CROSSING MAY BE DONE PROVIDED THE ALIGNMENT IS PERPENDICULAR TO THE STREET CENTERLINE TO THE EXTENT POSSIBLE.
3. THE EDGE OF THE MICRO-TRENCH SHALL BE A MINIMUM OF 24-INCHES FROM THE EXISTING FACE OF THE GUTTER, EXSITING MICRO-TRENCH, EXISTING CONCRETE STRUCTURE, OR CURB IF GUTTER IS NOT PRESENT.
4. THE MICRO-TRENCH WIDTH SHALL BE A MINIMUM OF 1-INCH AND A MAXIMUM OF 2-INCHES.
5. MICROTRENCHING MAY BE PERMITTED UPON THE CITY ENGINEER'S DISCRETION ON SPECIAL PAVEMENTS SUCH AS DECORATIVE ASPHALT PAVING, AND THROUGH EXISTING IMPROVEMENTS SUCH AS PERPENDICULAR TO SPEED BUMPS. SPECIAL PAVEMENTS AND EXISTING IMPROVEMENTS SHALL BE RESTORED IN KIND AS APPROVED BY THE CITY ENGINEER.

**\* IMPORTANT\***

**MICROTRENCHING THROUGH EXISTING CURB, GUTTER, CROSS GUTTER, BUS PAD, SIDEWALK, FLOATING CURB EXTENSION, BUS BULB, TRUCK PILLOW, RAISED CROSSWALK, ISLAND, MINI-ROUNDBOUT, OR SIMILAR ELEMENTS ARE NOT PERMITTED.**

6. UP TO TWO (2) VERTICALLY STACKED CONDUITS CAN BE PLACED WITHIN A MICRO-TRENCH.
7. THE CONDUIT SHALL BE INSTALLED AT A MINIMUM DEPTH OF 12 INCHES BELOW THE EXISTING AC PAVEMENT SURFACE, AT LEAST 1 INCH BELOW THE BOTTOM OF THE AC PAVEMENT, AND THE BOTTOM OF THE MICRO-TRENCH SHALL BE AT A MINIMUM DEPTH OF 16 INCHES BELOW THE EXISTING AC PAVEMENT SURFACE.
8. ANCHORS/SPACERS SHALL BE PLACED AT A MAXIMUM OF 10 FEET APART ALONG THE ALIGNMENT TO ENSURE THE CONDUIT DOES NOT RISE FROM THE BOTTOM OF THE MICRO-TRENCH AND DOES NOT TOUCH THE WALLS OF THE MICRO-TRENCH DURING INSTALLATION.

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**3 - BACKFILL**

- 1. ALL MICRO-TRENCHES SHALL BE COMPLETELY BACKFILLED WITH A CEMENT SAND SLURRY 2500 PSI TO FINISH GRADE BY THE END OF THE WORK DAY.

**4 - GRIND AND RESURFACE SECTION**

- 1. COMMENCEMENT OF SURFACE PREPARATION SUCH AS GRINDING/CHIPPING FOR ASPHALT CONCRETE PAVING REPLACEMENT WILL OCCUR NO SOONER THAN 48 HOURS AFTER SLURRY BACKFILL OF THE TRENCH. FIELD CONDITIONS OR MATERIAL USED MAY NECESSITATE A LONGER WAIT AS DETERMINED BY THE CITY'S PUBLIC WORKS INSPECTOR.
- 2. AS SOON AS BACKFILL HAS CURED, NOT TO EXCEED 30 CALENDAR DAYS, ASPHALT CONCRETE SHALL BE GROUND AND CAPPED AS FOLLOWS:
  - 2.1 EXISTING AC AND SLURRY BACKFILL SHALL BE GROUND DOWN 2 INCHES, FOR A WIDTH OF 18 INCHES BUT NO LESS THAN 6 INCHES FROM BOTH EDGES OF THE MICRO-TRENCH AND RESURFACED WITH CLASS C2 ASPHALT AND BINDER GRADE PER GREENBOOK. WHEN THE CAP LIMIT IS WITHIN 2-FEET OR LESS FROM THE GUTTER FACE, CURB, SLAB, OR STRUCTURE, THE CAP LIMIT SHALL EXTEND TO THAT ITEM.
  - 2.2 TACKCOAT ALL EDGES WITH EITHER SS-1H EMULSIFIED ASPHALT OR PG 64-10 PAVING ASPHALT IMMEDIATELY BEFORE THE ADJOINING ASPHALT CONCRETE IS PLACED.
  - 2.3 WHERE ANGULAR CROSSING OR ANY LENGTH-WISE CUTS OF A BIKE LANE OCCUR BY MICROTRENCHING, THE CAPPING LIMITS SHALL EXTEND THE FULL WIDTH OF THE BIKE LANE. PERPENDICULAR CROSSINGS MAY RECEIVE TYPICAL CAPPING WIDTH PER NOTE 4-2.1 ABOVE. PAVEMENT MARKINGS SHALL BE RESTORED IN KIND. WHERE NO BIKE LANE MARKINGS EXIST, THE CONTRACTOR SHALL CONSULT WITH THE CITY'S ENGINEERING SERVICES AND TRAFFIC AND TRANSPORTATION PLANNING DIVISIONS TO DETERMINE THE LOCATION OF ANY PLANNED BIKE LANES SO THAT THE IMPACT OF THE PAVEMENT SURFACE MAY BE AVOIDED.
  - 2.4 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'S PUBLIC WORKS INSPECTOR.

**5 - VAULTS AND SERVICE CONNECTION**

- 1. CONNECTION TO SERVICE LATERALS, JUNCTION BOXES, ETC., SHALL BE DONE SUCH THAT CURB AND GUTTER ARE NOT DISTURBED, SETTLED, OR DAMAGED. REMOVAL LIMITS OF SIDEWALK SHALL FOLLOW APPLICABLE STANDARDS AND REQUIREMENTS AS APPROVED BY THE CITY ENGINEER.
- 2. THE USE OF HYDRO-JETTING IS NOT PERMITTED. TRENCHLESS METHODS SHALL NOT CREATE A VOID TWO TIMES GREATER THAN A CONDUIT. VOID SHALL BE COMPACTED AND BACKFILLED WITH APPROVED CONTROLLED LOW-STRENGTH MATERIAL.

**6 - IDENTIFICATION**

- 1. EACH MICRO-TRENCH SHALL BE IDENTIFIED WITH A METAL IDENTIFICATION TAG LISTING THE OWNER, AND YEAR OF CONSTRUCTION, AND INCLUDE THE WORDS "NOT A SURVEY POINT". IF THE WORK IS MORE THAN 50 FEET IN LENGTH, PLACE THE TAG NEAR EACH END OF THE MICRO-TRENCH AND AT INTERVALS NOT TO EXCEED 50 FEET.

 6-1-26  
DIRECTOR OF PUBLIC WORKS      DATE

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