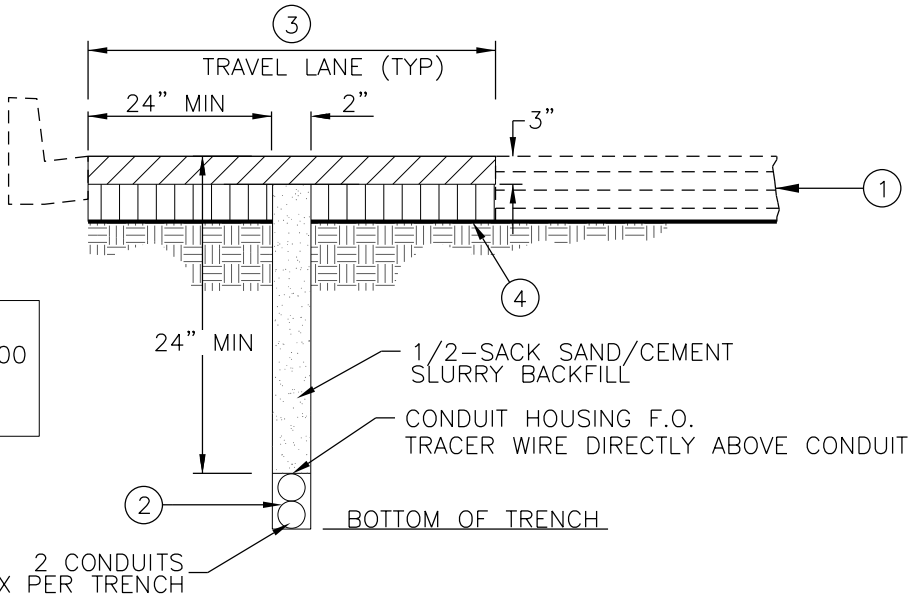
ASPHALT CONCRETE (AC) SECTION



ASPHALT CONCRETE:
FINISH COURSE: III-C3-AR-4000 OR PG 64-10 (NO RAP)

TYPICAL MICROTRENCHING SECTION

NOTES

(1) FIRST CHECK CITY STANDARD 1151 TO SEE IF STREET IS UNDER MORATORIUM AND FOLLOW ALL PERTINENT REQUIREMENTS.

(2) CONDUIT SHALL BE SECURED IN PLACE TO PREVENT RISING FROM THE TRENCH BOTTOM AND TOUCHING THE TRENCH WALL. ANCHORS SHALL BE SET OF A MAX 10' SPACING.

(3) A. GRIND A DEPTH OF 3" FOR FULL WIDTH OF ANY TRAVEL LANE IMPACTED BY THE TRENCH, AND EXTEND 5' BEYOND THE ENDS OF THE TRENCH. IF ANY TRAVEL LANE IMPACTED BY THE TRENCH IS ADJACENT TO EITHER A BIKE LANE OR A PARKING LANE, THE PAVEMENT SHALL BE GROUND 3" AND RESURFACED WITH 3" OF AC TO THE EDGE OF THE GUTTER (SEE COSA STD 1101)

B. FOR TRANSVERSE (PERPENDICULAR) TRENCHES, GRINDING AND RESURFACING WITH 3" OF AC SHALL EXTEND 25' BEYOND LIMITS OF EACH SIDE OF THE TRENCH (SEE COSA STD 1151, SHEET 1).

(4) SEE CITY STANDARD 1150 FOR FULL DEPTH PORTION OF RESTORATION.

GENERAL NOTES

1. NO RECLAIMED ASPHALT PAVEMENT (RAP) IN FINISHED AC FINISH COURSE.
2. THE CITY SHALL REQUIRE FULL DEPTH AC REMOVAL AND REPLACEMENT IF, IN THE OPINION OF THE ENGINEER, GRINDING AND RESURFACING IS INFEASIBLE DUE TO FIELD CONDITIONS.
3. CONTRACTOR SHALL PROVIDE COMPACTION TEST RESULTS CERTIFIED BY A GEOTECHINCAL ENGINEER.

MICROTRENCHING NOTES

1. MICROTRENCHING SHALL ONLY BE USED TO INSTALL FIBER TELECOMMUNICATION CONDUITS.
2. MICROTRENCHING WILL NOT BE ALLOWED IN CONCRETE PAVED STREETS, SIDEWALKS, PARKWAYS, CURBS AND GUTTERS.
3. IF EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE INSPECTOR, ENGINEER, UTILITY OWNER, AND PERFORM THE REPAIRS, AT THE CONTRACTOR'S EXPENSE, PROMPTLY ACCORDING TO THE UTILITY OWNER'S REQUIREMENTS AND PER ASSOCIATED CITY PERMITS.

APPROVED: DATE: 08/23/23

CITY ENGINEER

CITY OF SANTA ANA

PUBLIC WORKS AGENCY

DATE:		REVISION:
08/23	J.G.	REVISED GRIND DEPTH

MICROTRENCH DETAIL

TRENCH REPLACEMENT
MICROTRENCHING FOR FIBER ONLY

STD. PLAN NUMBER 1152

MICROTRENCHING NOTES CONTINUED

1. THE CONTRACTOR SHALL IDENTIFY ALL EXISTING UTILITIES, INCLUDING SERVICE CONNECTIONS IN THE FIELD. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (U.S.A.) AT LEAST 48 HOURS PRIOR TO START OF WORK AT 8-1-1.CONTRACTOR SHALL 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. THE CONTRACTOR SHALL POTHOLE ALL CROSSING UTILITIES AND PARALLEL UTILITIES WITHIN 18-INCHES OF THE PROPOSED ALIGNMENT TO A DEPTH OF 12-INCHES BELOW THE BOTTOM OF THE MICROTRENCH, TO DETERMINE THE EXISTING UTILITY ALIGNMENT AND ELEVATION. POTHOLES SHALL BE IMMEDIATELY BACKFILLED AND COMPACTED IN ACCORDANCE WITH CITY OF SANTA ANA STANDARD PLANS NO. 1150 AND 1151 OR RESTORED AS DIRECTED BY THE CITY ENGINEER.

2. THE FOLLOWING ITEMS SHALL BE USED BY THE CONTRACTOR:
   - A: MICROTRENCHER CAPABLE OF MEETING TARGET DEPTH AND WIDTH IN A SINGLE PASS WITH AN INTEGRAL HOOD AND ASSOCIATED VACUUM SYSTEM.
   - B: CUTTING WHEEL SHALL BE SUCH THAT IT MINIMIZES DAMAGE TO THE ADJACENT AC SURFACE.
   - C: MOBILE CONCRETE/SLURRY PLACEMENT WITH AN ON-BOARD VIBRATOR AND NARROW THROUGH TO MATCH MICRO-TRENCH WIDTH.
   - D: MOBILE GROUND PENETRATING RADAR SYSTEM THAT IS CAPABLE OF LOCATING BOTH METALLIC AND NON-METALLIC PIPES AND CABLES TO A DEPTH OF 36-INCHES.

LIMITS OF REMOVALS, TRENCH WIDTH, AND LOCATION

3. THE MICROTRENCH SHALL BE CONSTRUCTED WITH CONTINUOUS UNIFORM STRAIGHT AND NEAT EDGES.
4. MICROTRENCH 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.
5. THE EDGE OF THE MICROTRENCH SHALL BE A MINIMUM OF 24-INCHES FROM THE EXISTING FACE OF THE GUTTER, EXISTING CONCRETE STRUCTURE, OR CURB IF GUTTER IS NOT PRESENT.
6. THE MICROTRENCH WIDTH SHALL BE A MINIMUM OF 1-INCH AND A MAXIMUM OF 2-INCHES.
7. MICROTRENCHING IS NOT ALLOWED THROUGH EXISTING CURB, GUTTER, CROSS GUTTER, BUS PAD, SIDEWALK, FLOATING CURB EXTENSION, BUS PADS, COLORED CROSSWALK, MEDIAN ISLANDS, OR SIMILAR ELEMENTS IS NOT PERMITTED.
8. THE CONDUIT SHALL BE INSTALLED TO HAVE AT A MINIMUM DEPTH OF 24-INCHES BELOW THE EXISTING AC PAVEMENT SURFACE OF COVER. THE CONDUIT(S) SHALL START BELOW THE MINIMUM 24-INCHES OF COVER.
9. UP TO TWO (2) VERTICALLY STACKED CONDUITS CAN BE PLACED WITHIN A MICRO-TRENCH.
10. ANCHORS/SPACERS SHALL BE PLACED AT A MAXIMUM OF 10-FEET APART ALONG THE ALIGNMENT.
11. A COATED COPPER STEEL TRACER WIRE OF #12-GAGE (OR LARGER) SHALL BE INSTALLED ABOVE THE CONDUITS AND CONNECTED TO GROUNDING RODS PER NESC GUIDELINES.

BACKFILL

12. ALL MICROTRENCHES SHALL BE COMPLETELY BACKFILLED WITH A 1/2-SACK CEMENT/SAND SLURRY TO FINISH GRADE BY THE END OF THE WORK DAY.

VAULTS AND SERVICE CONNECTIONS

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

APPROVED: DATE: 08/23/23

CITY ENGINEER

CITY OF SANTA ANA

PUBLIC WORKS AGENCY

DATE:		REVISION:
08/23	J.G.	REVISED GRIND DEPTH

MICROTRENCH DETAIL

TRENCH REPLACEMENT
MICROTRENCHING FOR FIBER ONLY

STD. PLAN NUMBER 1152