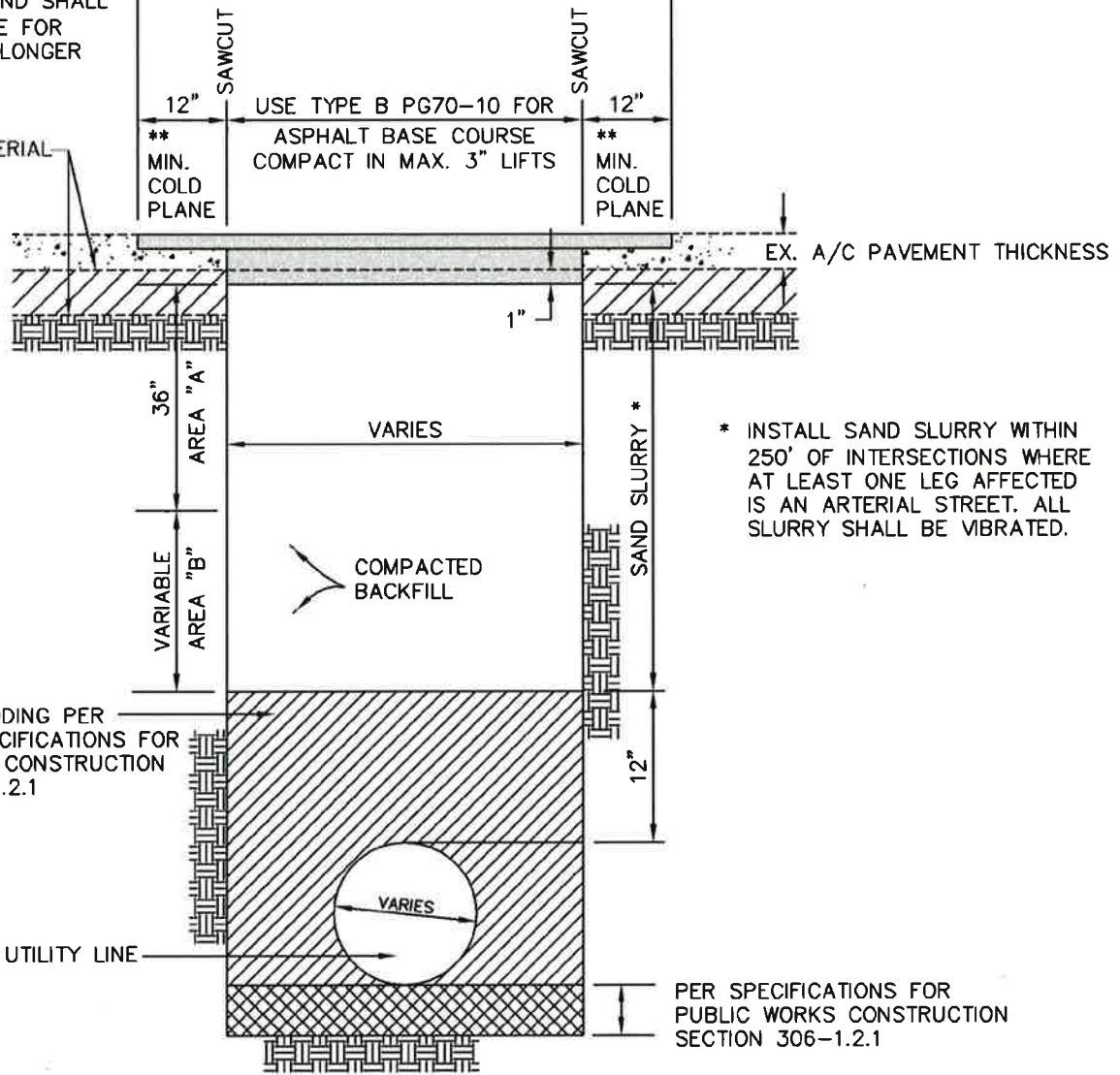


FOR PERMANENT ASPHALT REPAIR,
COLD PLANE 2" MIN. AND CONSTRUCT TYPE B
PG70-10 OR TYPE C2 PG 70-10 ASPHALT
CONCRETE PER SECTION 6.2.5 OF THE
TRENCH AND PAVEMENT RESTORATION POLICY

** THE 2" GRIND SHALL
BE 12' WIDE FOR
TRENCHES LONGER
THAN 300'

EX. BASE MATERIAL



* INSTALL SAND SLURRY WITHIN
250' OF INTERSECTIONS WHERE
AT LEAST ONE LEG AFFECTED
IS AN ARTERIAL STREET. ALL
SLURRY SHALL BE VIBRATED.

PIPE ZONE BEDDING PER
STANDARD SPECIFICATIONS FOR
PUBLIC WORKS CONSTRUCTION
SECTION 306-1.2.1

UTILITY LINE

PER SPECIFICATIONS FOR
PUBLIC WORKS CONSTRUCTION
SECTION 306-1.2.1

AREA "A" BACKFILL SHALL BE 1-1/2 SACK SAND SLURRY OR AGGREGATE BASE. IF
AGGREGATE BASE IS USED IT SHALL BE MECHANICALLY COMPACTED TO 95%
RELATIVE COMPACTION. (SEE "*" NOTE FOR INTERSECTIONS).

AREA "B" BACKFILL NATIVE OR IMPORT MATERIAL WITH SAND EQUIVALENT OF AT LEAST 20.
MECHANICALLY COMPACTED TO 90% RELATIVE COMPACTION. (SEE "*" NOTE FOR
INTERSECTIONS).



REVISION DATE: APR 2014

SUBMITTED:

M. J. Michelle Cortell 4/23/14
CITY ENGINEER DATE

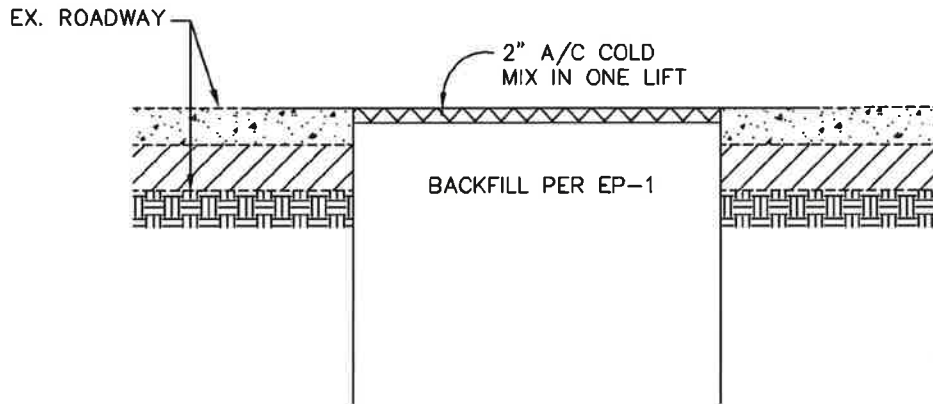
Development Services Department
STANDARD PLAN

APPROVED:

K. Kent C. Neel 4/24/14
DIRECTOR OF PUBLIC WORKS DATE

CONSTRUCTION OF UTILITY
TRENCHES IN EXISTING STREETS
AND ALLEYS


EP-1

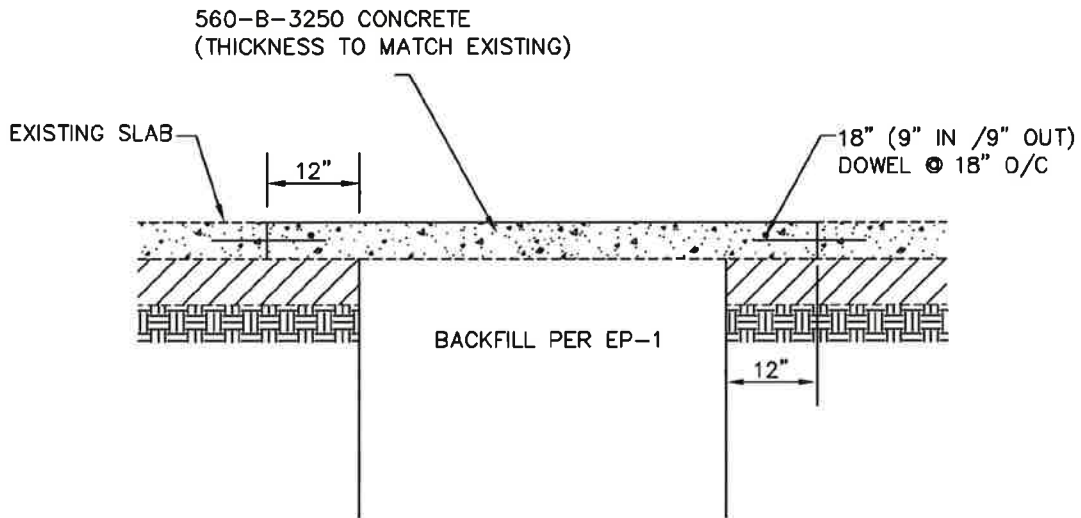


TEMPORARY A/C PAVEMENT SHALL BE PLACED PER SEC. 306-1.5.1 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.



REVISION DATE: APR 2014

SUBMITTED:  CITY ENGINEER		4/23/14 DATE		Development Services Department STANDARD PLAN	
APPROVED:  DIRECTOR OF PUBLIC WORKS		4/24/14 DATE		ASPHALT REPAIR (TEMPORARY)	
				EP-2	



IF THE TRENCH HAS BEEN EXCAVATED CLOSER THAN 12" TO THE SAWED EDGE OF THE STREET, THE CONCRETE SHALL BE RE-SAWED TO PROVIDE 12" OF UNDISTURBED EARTH PRIOR TO PAVING.

IF STREET CROSSING IS IN AN ASPHALT SURFACE, THE CONCRETE SHALL BE COLORED WITH CARBON BLACK.



REVISION DATE: APR 2012

SUBMITTED:

Michelle Cantrell 4/23/14
CITY ENGINEER DATE

Development Services Department

STANDARD PLAN

APPROVED:

Robert C. Neal 4/24/14
DIRECTOR OF PUBLIC WORKS DATE

PERMANENT REPAIR OF EXISTING
STREETS AND ALLEYS

EP-3

A/C PAVEMENT AND BASE
TO BE INSTALLED PER
APPROVED STREET PLANS

SUBGRADE COMPACTED
TO 90% PER APPROVED
STREET PLANS

BASE COMPACTED TO 95%
OF MAXIMUM DRY DENSITY
PER ASTM D-1557 METHOD A

PIPE ZONE BEDDING PER
STANDARD SPECIFICATIONS FOR
PUBLIC WORKS CONSTRUCTION
SECTION 306-1.2.1

COMPACTED
BACKFILL

12"

VARIES
UTILITY
LINE

PER SPECIFICATIONS FOR
PUBLIC WORK CONSTRUCTION
SECTION 306-1.2.1

AREA "A" SUITABLE BACKFILL NATIVE MATERIAL, AS PER STANDARD SPECIFICATIONS FOR
PUBLIC WORKS CONSTRUCTION SECTION 306-1.2.1 TO 90% RELATIVE COMPACTION
OF THE MAXIMUM DRY DENSITY, PER ASTM D-1557, METHOD A



REVISION DATE: APR 2014

SUBMITTED:

Michelle Cantrell 4/23/14
CITY ENGINEER DATE

Development Services Department

STANDARD PLAN

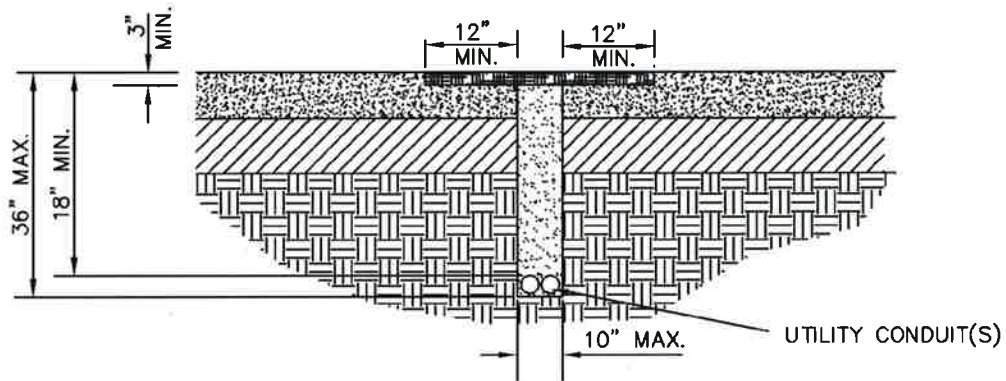
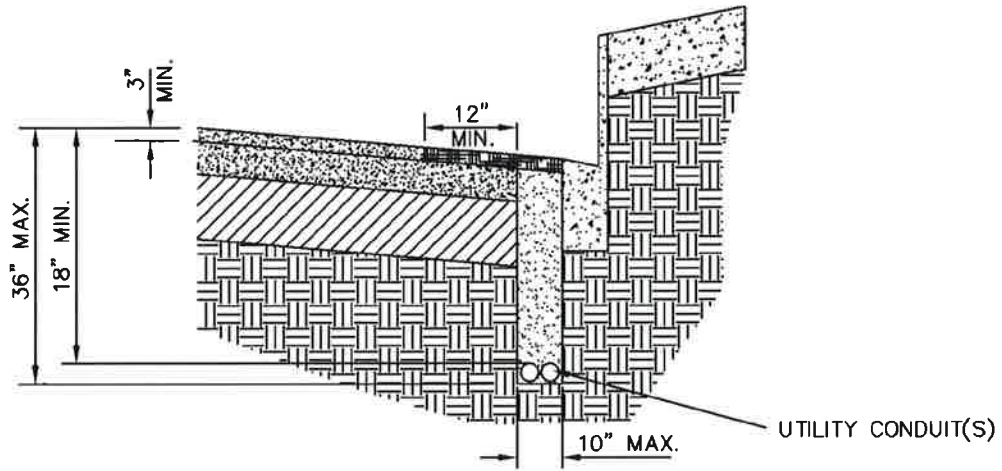
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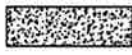
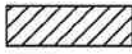

Robert Neal 4/24/14
DIRECTOR OF PUBLIC WORKS DATE

CONSTRUCTION OF UTILITY
TRENCHES PRIOR TO STREET
CONSTRUCTION

EP-4


REMOVE 3" MIN. OF A/C PAVEMENT BY COLD PLANING. PLACE AND COMPACT A/C PAVEMENT (C2-PG70-10) PER THE CITY OF LANCASTER TRENCH AND PAVEMENT RESTORATION POLICY.

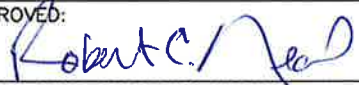


-  NEW A/C PAVEMENT
-  EXISTING A/C PAVEMENT
-  EXISTING CRUSHED AGGREGATE BASE
-  1 1/2 SACK PCC SAND SLURRY



REVISION DATE: APR 2014

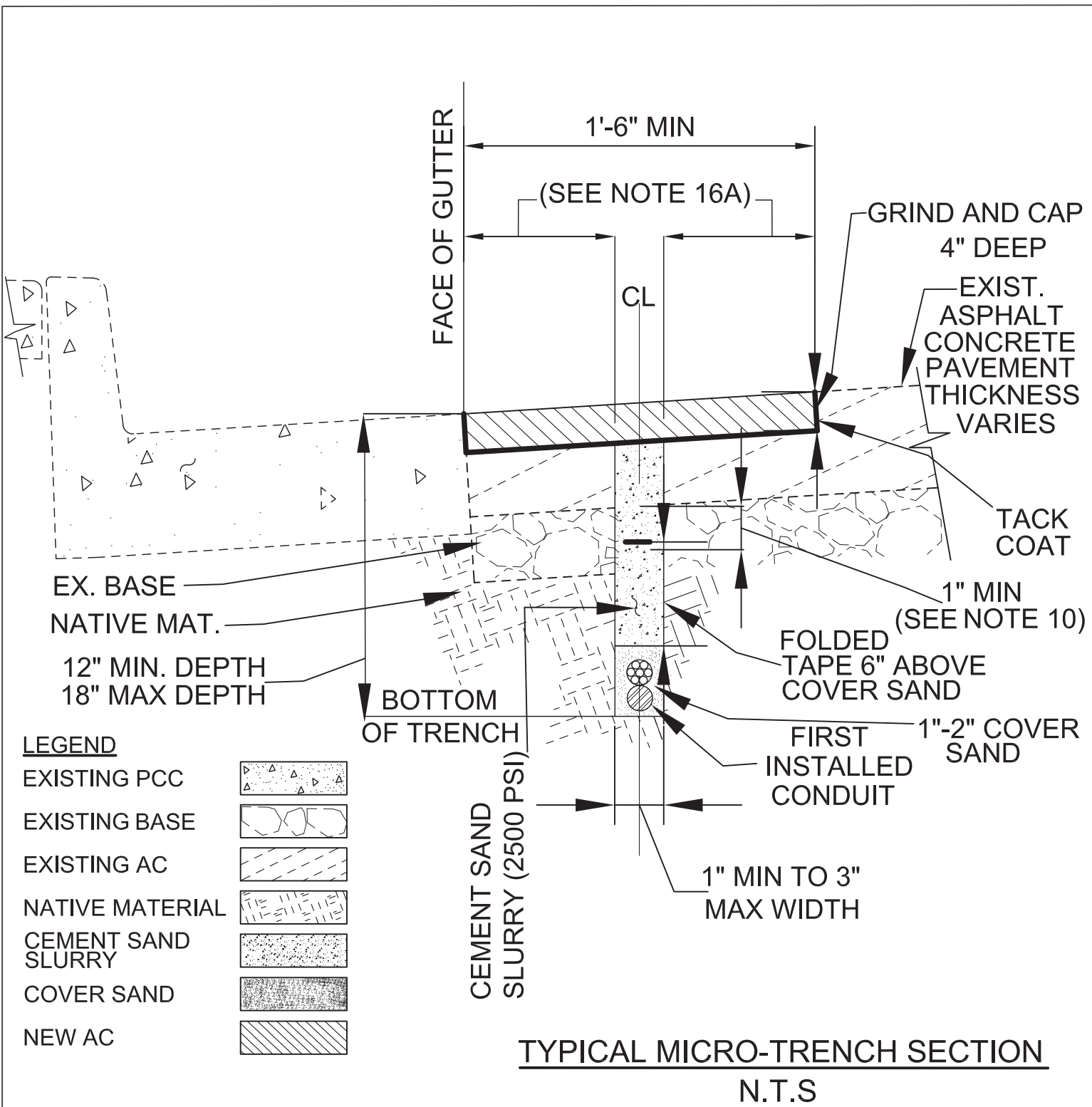
SUBMITTED:
 4/23/14
 CITY ENGINEER DATE

APPROVED:
 4/24/14
 DIRECTOR OF PUBLIC WORKS DATE

Development Services Department
 STANDARD PLAN

PAVEMENT RESTORATION OF
 ROCK-WHEEL TRENCHES IN
 EXISTING STREETS AND ALLEYS

EP-5



SUBMITTED:		CITY OF LANCASTER	
	08/05/21	DEVELOPMENT SERVICES	
CITY ENGINEER	DATE	DEPARTMENT	
APPROVED:		STANDARD PLAN	
	8/6/21	MICROTRENCHING	EP-6
DIRECTOR OF DEVELOPMENT SERVICES	DATE		1/3

CITY OF LANCASTER		
DEVELOPMENT SERVICES		
DEPARTMENT		
STANDARD PLAN		
MICROTRENCHING	EP-6	1/3

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 LANCASTER SPECIFICATIONS.

GENERAL

1. MICRO-TRENCHING SHALL ONLY BE USED TO INSTALL TELECOMMUNICATION CONDUITS.
2. MICRO-TRENCHING THROUGH EXISTING CURB, RAMPS, GUTTER, CROSS GUTTER, BUS PAD, SIDEWALK, FLOATING CURB EXTENSION, BUS STOP BULB OUTS, TRUCK PILLOW, RAISED CROSSWALK, ISLAND, MINI-ROUNDBOUT, ALLEYS, OR SIMILAR ELEMENTS IS NOT PERMITTED.
3. 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, OR TOLL-FREE AT 1-800-422-4133. THE 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 6-INCHES BELOW THE BOTTOM OF THE MICRO-TRENCH, TO DETERMINE THE EXISTING UTILITY ALIGNMENT AND ELEVATION. POTHOLES SHALL BE IMMEDIATELY BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS OR RESTORED AS DIRECTED BY THE ENGINEER.
4. IF EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE INSPECTOR, ENGINEER AND UTILITY OWNER TO PERFORM THE REPAIRS PROMPTLY ACCORDING TO THEIR REQUIREMENTS AND PER ASSOCIATED CITY PERMITS.

NOTES: (CONTINUED)

5. THE FOLLOWING SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL:
 - A. A PLAN SHOWING APPROXIMATE LOCATION OF THE EXCAVATION
 - B. STREET CROSS-SECTIONS SHALL INCLUDE THE FOLLOWING INFORMATION OF THE EXCAVATION:
 - (1) THE CURB AND GUTTER, ASPHALT CONCRETE (AC) ROADWAY APPROXIMATE THICKNESS, BASE, DEPTH AND WIDTH OF MICRO-TRENCH, DEPTH OF TOPMOST CONDUIT, DISTANCES OF MICRO-TRENCH TO FACE OF GUTTER, CURB, CONCRETE PAVEMENT OR STRUCTURE AS APPLICABLE, AND BACKFILL MATERIAL.
 - (2) AC RESTORATION OF THE TRENCH INCLUDING WIDTH AND DEPTH OF GRIND AND CAP, STARTING FROM GUTTER FACE, CURB, SLAB OR STRUCTURE AS APPLICABLE.
 - C. 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 EXISTING CURB AND GUTTER.
 - D. OTHER SITE SPECIFIC ITEMS AS REQUIRED BY THE ENGINEER.

LIMITS OF REMOVALS, TRENCH WIDTH, AND LOCATION

6. THE MICRO-TRENCH SHALL BE CONSTRUCTED WITH CONTINUOUS UNIFORM STRAIGHT AND NEAT EDGES. SPALLS AND POTHOLES WITHIN 12 INCHES OF THE MICRO TRENCH SHALL BE REPAIRED PRIOR TO TRENCHING TO FACILITATE STRAIGHT PAVEMENT CUTS
7. 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. TRENCH LOCATION SHALL BE AT EDGE OF CURB AND GUTTER. NO MICROTRENCHES ALONG MEDIAN CURBS SHALL BE ALLOWED. THE LOCATION OF MICROTRENCH IN RELATION TO THE CURB SHALL NOT DEVIATE ALONG ITS ALIGNMENT UNLESS OTHERWISE APPROVED BY THE CITY.
8. THE MICRO-TRENCH WIDTH SHALL BE A MINIMUM OF 1-INCH AND A MAXIMUM OF 3-INCHES.
9. MICRO-TRENCHING MAY BE PERMITTED UPON THE 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 ENGINEER. HOWEVER MICRO-TRENCHING THROUGH EXISTING CURB, RAMPS, GUTTER, CROSS GUTTER, BUS PAD, SIDEWALK, FLOATING CURB EXTENSION, BUS STOP BULB OUTS, TRUCK PILLOW, RAISED CROSSWALK, ISLAND, MINI-ROUNDBOUT, ALLEYS, OR SIMILAR ELEMENTS IS NOT PERMITTED.



SUBMITTED:	
<i>Stephen M. Smith</i> CITY ENGINEER	08/05/21 DATE
APPROVED:	
<i>Jeff Hogan</i> DIRECTOR OF DEVELOPMENT SERVICES	8/6/21 DATE

CITY OF LANCASTER		
DEVELOPMENT SERVICES		
DEPARTMENT		
STANDARD PLAN		
MICROTRENCHING	EP-6	2/3

10. THE CONDUIT SHALL BE INSTALLED AT A MINIMUM DEPTH OF 10-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 12-INCHES BELOW THE EXISTING AC PAVEMENT SURFACE.
11. 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.

BACKFILL

12. ALL MICRO-TRENCHES SHALL BE COMPLETELY BACKFILLED WITH A CEMENT SAND SLURRY 2500 PSI TO FINISH GRADE BY THE END OF THE WORK DAY.
 - A. INSTALL 1 INCH WIDE (FOLDED) WARNING/ IDENTIFICATION TAPE
 - B. 1"-2" OF SAND COVER SHALL BE PLACED OVER THE CONDUIT AREA

GRIND AND RESURFACE SECTION

13. COMMENCEMENT OF SURFACE PREPARATION SUCH AS GRINDING/CHIPPING FOR ASPHALT CONCRETE PAVING REPLACEMENT WILL OCCUR NO SOONER THAN 48 HOURS AFTER SLURRY BACKFILL OF TRENCH. FIELD CONDITIONS OR MATERIAL USED MAY NECESSITATE A LONGER WAIT AS DETERMINED BY THE INSPECTOR.
14. AS SOON AS BACKFILL HAS CURED, NOT TO EXCEED 30 CALENDAR DAYS, ASPHALT CONCRETE SHALL BE MILLED AND CAPPED AS FOLLOWS:
 - A. EXISTING AC AND SLURRY BACKFILL SHALL BE MILLED DOWN 4-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 BROWNBOOK TABLE 302-5.1 (A).
 - B. TACK COAT ALL EDGES WITH EITHER SS-1H EMULSIFIED ASPHALT OR PG 64-10 PAVING ASPHALT IMMEDIATELY BEFORE THE ADJOINING ASPHALT CONCRETE IS PLACED.
 - C. 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 14.A. ABOVE. PAVEMENT MARKINGS SHALL BE RESTORED IN KIND. WHERE NO BIKE LANE MARKINGS EXIST, CONTRACTOR SHALL CONSULT WITH BOE AND LADOT TO DETERMINE LOCATION OF ANY PLANNED BIKE LANES SO THAT IMPACT OF PAVEMENT SURFACE MAY BE AVOIDED.

NOTES: (CONTINUED)

- D. PAVEMENT SHALL BE LEVEL WITH ADJACENT ROADWAY ELEVATIONS AND SHALL PROVIDE A SMOOTH SURFACE PER GREENBOOK SECTION 302-5 AS AMENDED BY CITY OF LANCASTER SPECIFICATIONS AND SUBJECT TO ACCEPTANCE BY THE INSPECTOR

VAULTS AND SERVICE CONNECTIONS

15. CONNECTION TO SERVICE LATERALS, JUNCTION BOXES, ECT., 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



CITY OF LANCASTER

**DEVELOPMENT SERVICES
DEPARTMENT
STANDARD PLAN**

SUBMITTED:

Stephen M. Smith 08/05/21
CITY ENGINEER DATE

APPROVED:

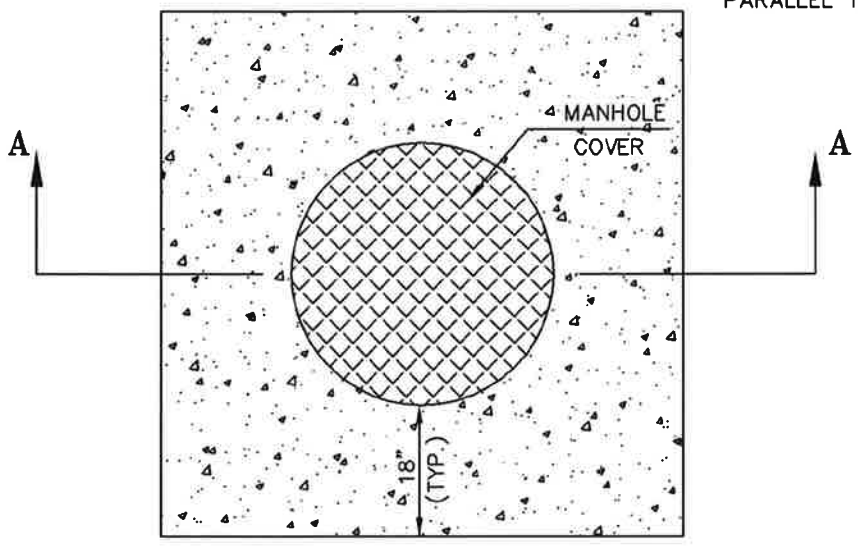
Jeff Hogan 8/6/21
DIRECTOR OF DEVELOPMENT SERVICES DATE

MICROTRENCHING

EP-6

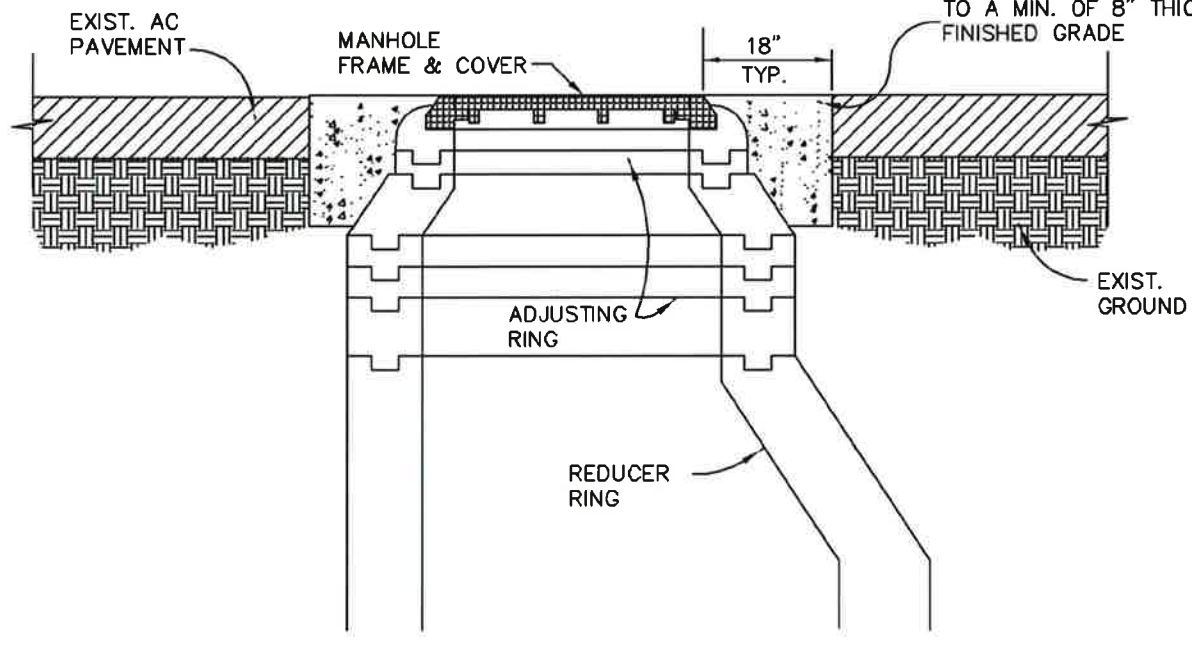
3/3

SAWCUT UNIFORMLY &
PARALLEL TO C.L.



PLAN VIEW

ALL MATERIAL REMOVED TO
RAISE M.H. SHALL BE REPLACED
WITH 560-C-3250 CONCRETE
TO A MIN. OF 8" THICKNESS TO
FINISHED GRADE



SECTION A-A



REVISION DATE: APR 2014

SUBMITTED:
Michelle Pentell 4/23/14
CITY ENGINEER DATE

Development Services Department
STANDARD PLAN

APPROVED:
Robert C. Neal 4/24/14
DIRECTOR OF PUBLIC WORKS DATE

MANHOLE ADJUSTMENT TO
FINISH PAVEMENT GRADE

PW-9