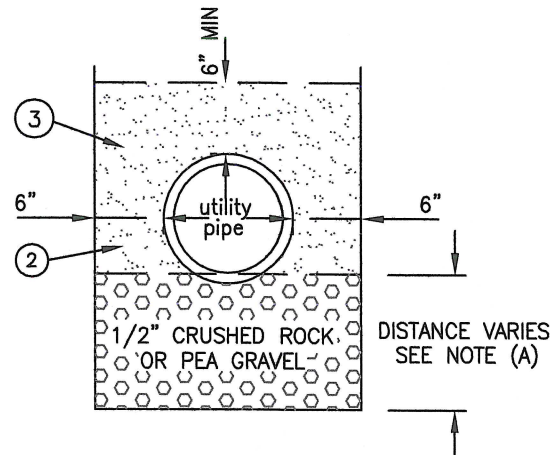
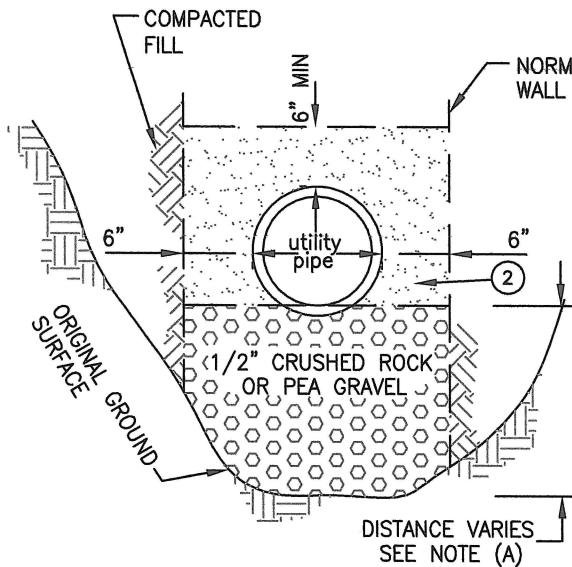


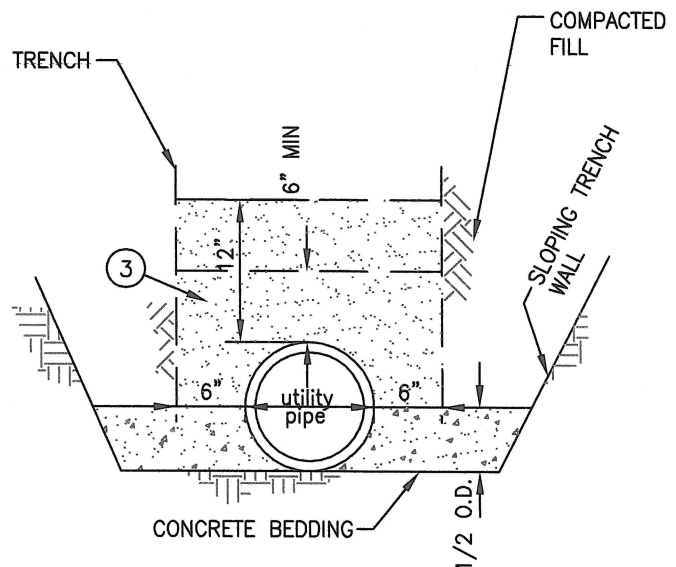
**CASE 'A': NORMAL TRENCH**  
NTS



**CASE 'B': WET / SPONGY GROUND**  
NTS



**CASE 'C': FILLED GROUND**  
NTS



**CASE 'D': BOTTOM OF TRENCH  
EXCEEDS NORMAL TRENCH WIDTH**  
NTS

**NOTES:**

- (A) DISTANCE WILL VARY BASED UPON FIELD CONDITIONS, AND SOILS REPORT RECOMMENDATIONS.
- (B) PIPE EMBEDMENT SHALL CONFORM TO THE PRACTICE RECOMMENDED FOR CLASS III MATERIAL (SAND) IN ASTM D 2321 "UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS".
- (1) SAND BEDDING, HAND PLACED AND COMPACTED TO MIN. 90% RELATIVE COMPACTION, 4" MIN. TO 6" MAX.
- (2) HAUNCHING; HAND PLACED AND COMPACTED TO MIN. 90% RELATIVE COMPACTION TO SPRING LINE OF PIPE.
- (3) INITIAL BACKFILL, INSTALL AND COMPACT TO A MINIMUM OF 6" ABOVE PIPE CROWN (12" MIN. FOR NATIVE).



**City of Morgan Hill**  
Public Works Department

*Jim Ashcraft*  
CITY ENGINEER

4/1/96

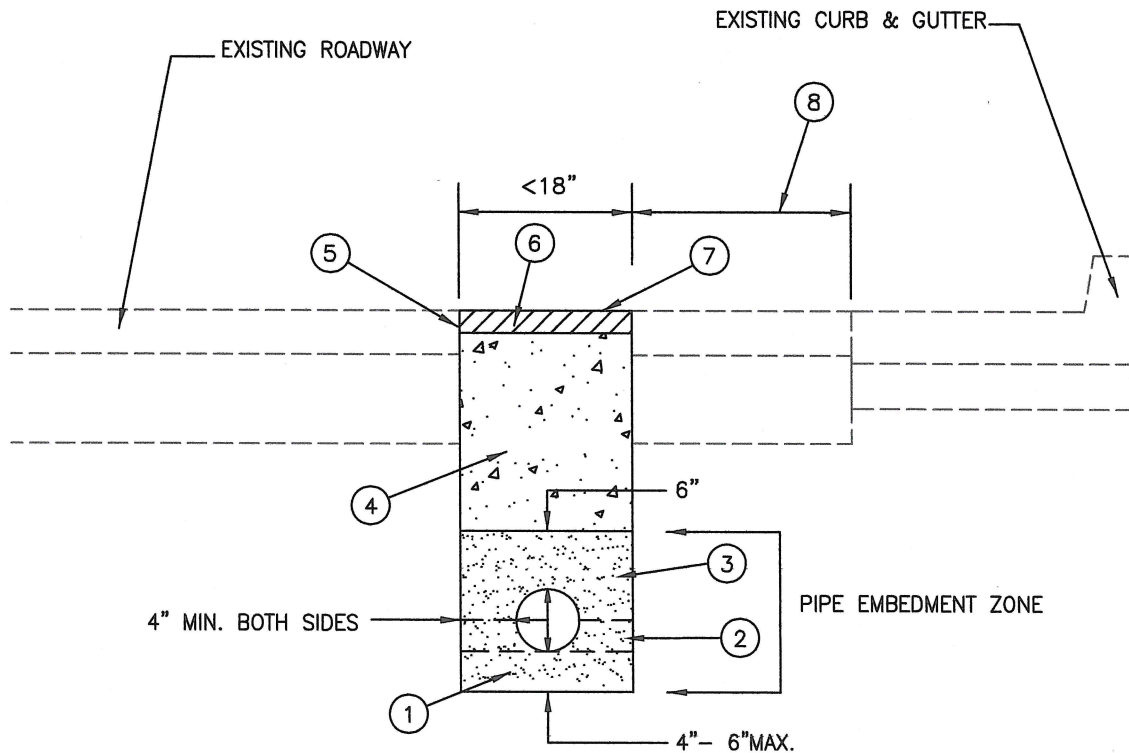
DATE

REVISED

**TRENCH BEDDING**

DRAWING  
NO.

U-1



#### NOTES:

- A. PIPE EMBEDMENT SHALL CONFORM TO THE PRACTICE RECOMMENDED FOR CLASS III MATERIAL (SAND) IN ASTM D 2321 "UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS".
- (1). SAND BEDDING, HAND PLACED AND COMPACTED TO 90% RELATIVE COMPACTION, 4" MIN. TO 6" MAX.
- (2). HAUNCHING, HAND PLACED AND COMPACTED TO 90% RELATIVE COMPACTION TO SPRING LINE OF PIPE.
- (3). INITIAL BACKFILL, INSTALL AND COMPACT TO A MINIMUM OF 6" ABOVE PIPE CROWN.
- (4). 1.5 SACK CEMENT SLURRY BACK FILL. CEMENT SLURRY BACKFILL TO BE CURED PER MANUFACTURERS REQUIREMENTS PRIOR TO PAVING.
- (5). SAW CUT EXISTING PAVEMENT, ALL VERTICAL EDGES SHALL BE TACKED PRIOR TO PAVING.
- (6). 1 1/2" AC (1/2" TYPE B).
- (7). SURFACE SHALL BE FOG SEALED AFTER PAVING. EXISTING ROADWAY SURFACE SHALL BE REPLACED IN KIND (OIL & SCREENED, SLURRY SEAL, ETC.)
- (8). IF DISTANCE IS LESS THAN 3 FEET, PAVEMENT RESTORATION SHALL EXTEND TO LIP OF GUTTER.



**City of Morgan Hill**  
Public Works Department

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CITY ENGINEER

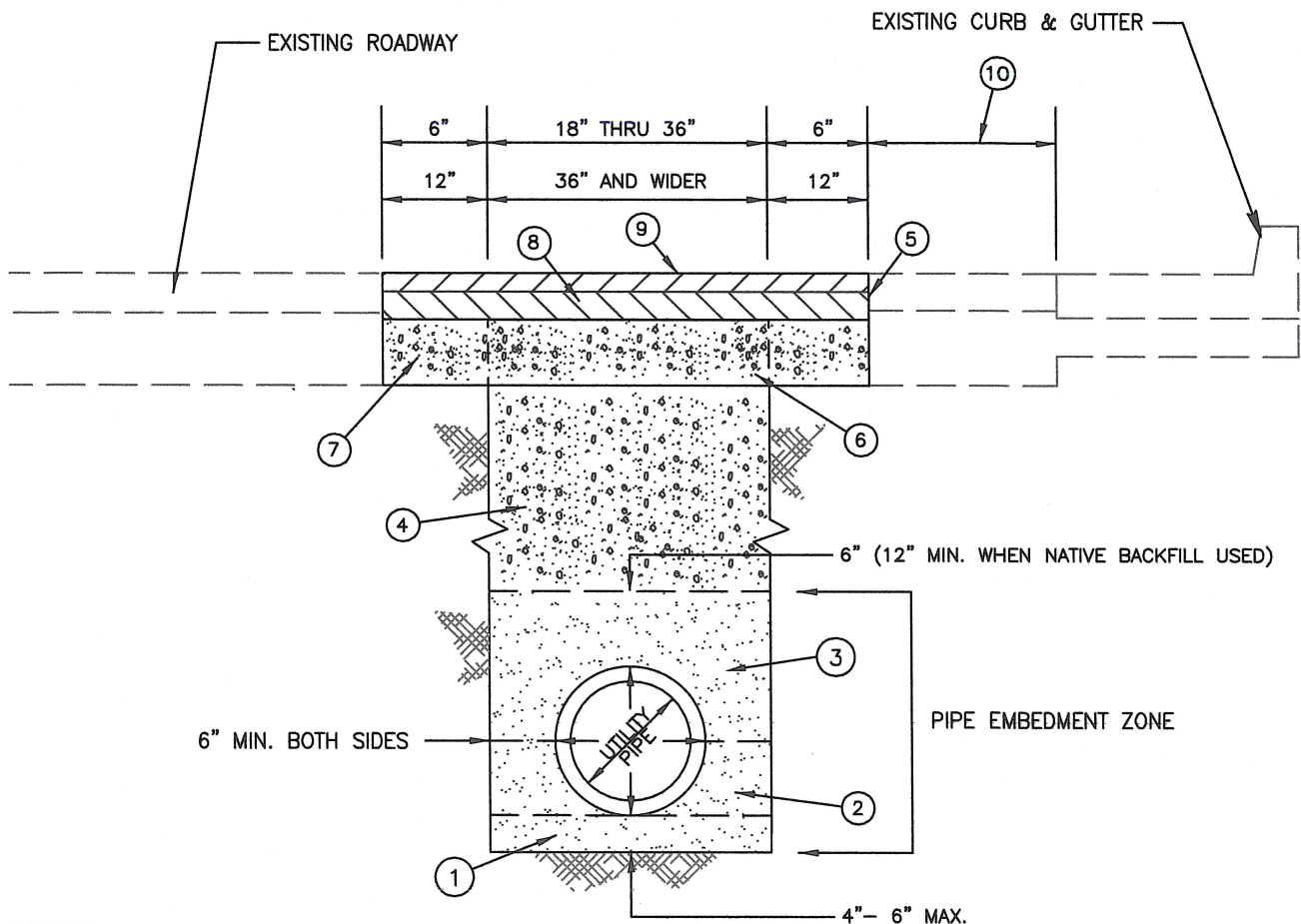
4/1/96  
DATE

3/15/07  
REVISED

**TRENCH RESTORATION/BACKFILL  
FOR  
TRENCH WIDTHS LESS THAN 18"**

DRAWING  
NO.

U-2



#### NOTES:

- A. PIPE EMBEDMENT SHALL CONFORM TO THE PRACTICE RECOMMENDED FOR CLASS III MATERIAL (SAND) IN ASTM D 2321 "UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS".
- ①. SAND BEDDING, HAND PLACED AND COMPACTED TO MIN. 90% RELATIVE COMPACTION, 4" MIN. TO 6" MAX.
- ②. HAUNCHING; HAND PLACED AND COMPACTED SAND TO MIN. 90% RELATIVE COMPACTION TO SPRING LINE OF PIPE.
- ③. INITIAL SAND BACKFILL, INSTALL AND COMPACT TO A MINIMUM OF 6" ABOVE PIPE CROWN (12" MIN. FOR NATIVE).
- ④. 100% CLASS 2 AGGREGATE BASE ROCK BACKFILL COMPACTED IN LIFTS TO 95% RELATIVE COMPACTION. FLOODING OR JETTING SHALL ONLY BE ALLOWED UPON CITY ENGINEER APPROVAL. NATIVE BACKFILL MAY BE USED DURING THE CONSTRUCTION OF NEW STREETS ONLY AND SHALL BE USED ONLY UPON APPROVAL OF THE CITY ENGINEER AND UPON THE RECOMMENDATION OF A QUALIFIED SOILS ENGINEER/SOILS REPORT.
- ⑤. SAW CUT EXISTING PAVEMENT, ALL VERTICAL EDGES SHALL BE TACKED PRIOR TO PAVING.
- ⑥. 8" (MIN) CLASS 2 AGGREGATE BASE ROCK, COMPACTED TO 95% RELATIVE COMPACTION.
- ⑦. AT THE DISCRETION OF THE PROJECT INSPECTOR, THE EXISTING BASE ROCK MAY REMAIN FOR THIS TRENCH WIDTH PROVIDED THAT THE BASE ROCK IS COMPACTED AND IS NOT CONTAMINATED.
- ⑧. MATCH EXIST. AC SECTION OR 6" MIN. IN 2 LIFTS. BASE COURSE TO BE 3/4" TYPE B AC, AND SURFACE COURSE TO BE 1/2" TYPE B AC.
- ⑨. SURFACE SHALL BE FOG SEALED AFTER PAVING. EXISTING ROADWAY SURFACE SHALL BE REPLACED IN KIND.
- ⑩. IF DISTANCE IS LESS THAN 3 FEET, PAVEMENT RESTORATION SHALL EXTEND TO LIP OF GUTTER.



**City of Morgan Hill**  
Public Works Department

*Jim Ashcraft*  
CITY ENGINEER

4/1/96  
DATE

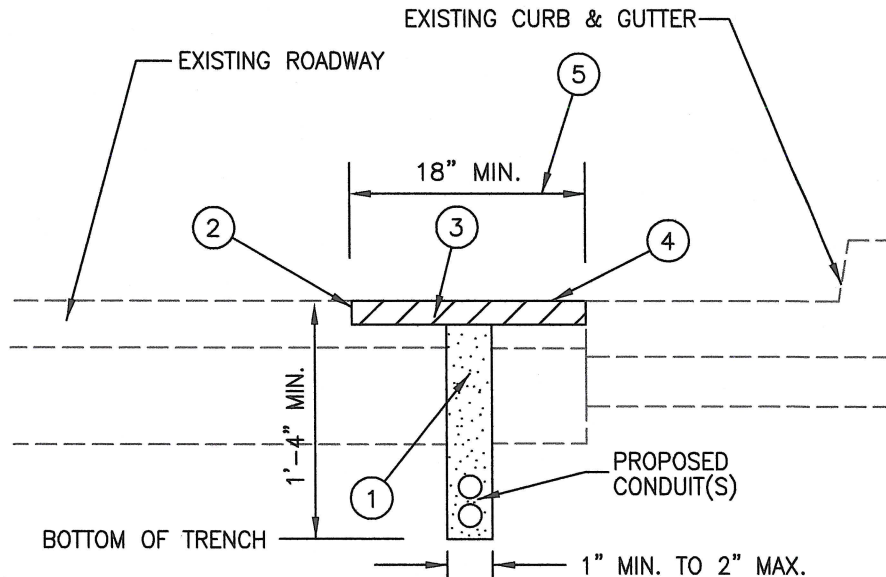
3/15/07  
REVISED

## TRENCH RESTORATION/BACKFILL FOR TRENCH WIDTHS GREATER THAN 18"

DRAWING  
NO.

U-3





#### GENERAL NOTES:

- A. MICRO-TRENCHING SHALL ONLY BE USED TO INSTALL TELECOMMUNICATIONS CONDUITS.
- B. MICRO-TRENCHING SHALL NOT BE ALLOWED IN CONCRETE CURBS, SIDEWALKS OR VALLEY GUTTERS.
- C. THE MICRO-TRENCH SHALL BE CONSTRUCTED WITH CONTINUOUS UNIFORM STRAIGHT AND NEAT EDGES.
- D. MICRO-TRENCHING ALIGNMENTS SHALL CONSIST OF RUNS PARALLEL TO THE CENTERLINE OF THE STREET. STREET CROSSINGS MAY BE DONE PROVIDED THE ALIGNMENT IS PERPENDICULAR TO THE STREET CENTERLINE TO THE EXTENT POSSIBLE.
- E. THE MICRO-TRENCH SHALL BE A MINIMUM OF 1" WIDE AND A MAXIMUM OF 2" WIDE. UP TO TWO(2) VERTICALLY STACKED CONDUITS CAN BE PLACED WITHIN A MICRO-TRENCH.
- F. THE BOTTOM OF THE MICRO-TRENCH SHALL BE A MINIMUM DEPTH OF 16-INCHES BELOW THE EXISTING PAVEMENT SURFACE.
- G. ALL MICRO-TRENCHES SHALL BE COMPLETELY BACKFILLED WITH 1.5 SACK CEMENT SLURRY BY THE END OF THE WORK DAY.
- H. COMMENCEMENT OF GRINDING AND PREPARATION FOR ASPHALT CONCRETE PAVING REPLACEMENT SHALL 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.

#### DETAIL NOTES:

- ①. 1.5 SACK CEMENT SLURRY BACK FILL. CEMENT SLURRY BACKFILL TO BE CURED PER MANUFACTURERS REQUIREMENTS PRIOR TO PAVING.
- ②. GRIND AND CAP 18" MINIMUM, ALL VERTICAL EDGES SHALL BE TACKED PRIOR TO PAVING.
- ③. 4" AC MINIMUM (1/2" TYPE A).
- ④. EXISTING ROADWAY SURFACE SHALL BE REPLACED IN KIND (OIL& SCREENED, SLURRY SEAL, ETC.).
- ⑤. MICRO-TRENCHING SHALL BE PLACED WITHIN 3 FEET OF LIP OF GUTTER UNLESS AN EXCEPTION IS GRANTED BY THE CITY ENGINEER, DUE TO A CONFLICT WITH OTHER UTILITIES.



**City of Morgan Hill**  
Public Services Department

*S. C.*  
CITY ENGINEER

9/9/2020  
DATE

REVISED

## MICROTRENCHING FOR TELECOMMUNICATION CONDUITS ONLY

DRAWING  
NO.

U-4