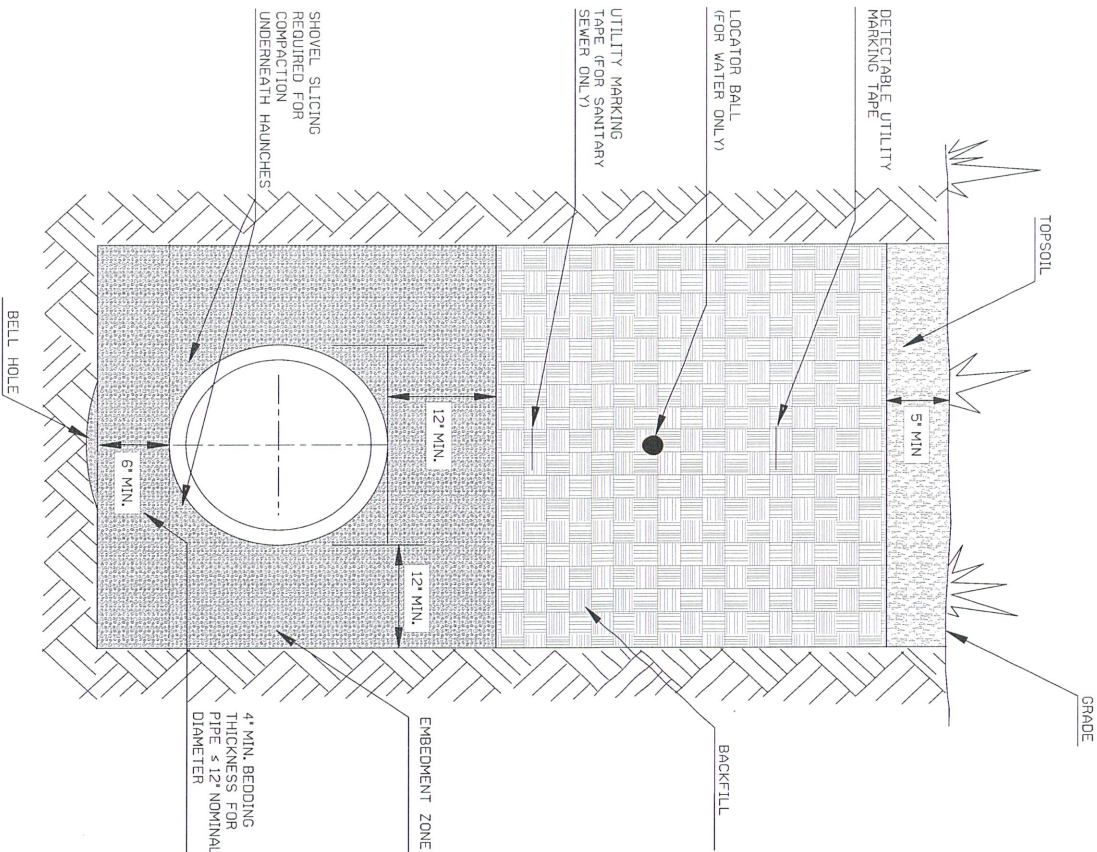




| PIPE SIZE<br>(NOM. DIA.) | STANDARD<br>TRENCH WIDTH |
|--------------------------|--------------------------|
| < 24"                    | OD + 2'-0"               |
| ≥ 24" , < 48"            | OD + 3'-0"               |
| ≥ 48"                    | OD + 4'-0"               |

NOTE: THE STANDARD TRENCH WIDTHS IN THIS TABLE SHALL BE USED TO ESTIMATE EXCAVATION AND BACKFILL QUANTITIES.

### GENERAL NOTES:

1. RIGID PIPE INCLUDES:
  - A. PRESTRESSED CONCRETE CYLINDER PIPE (PCCP) - ANSI/AWWAC301/C304
  - B. REINFORCED CONCRETE PIPE (RCP) - ASTM C76
  - C. VITRIFIED CLAY PIPE (VCP) - ASTM C700
2. EMBEDMENT ZONE MATERIAL SHALL BE COMPACTED SAND OR OTHER BEDDING MATERIAL APPROVED BY ENGINEER, PLACED IN 12-INCH MAX LOOSE LIFTS AND FREE FROM ORGANIC MATTER, TRASH, AND OTHER DELETERIOUS MATERIALS. SHOVEL SLICING IS REQUIRED FOR COMPACTION UNDERNEATH PIPE HAUNCHES.
3. BACKFILL SHALL BE SUITABLE NATIVE MATERIAL OR IMPORTED MATERIAL APPROVED BY ENGINEER, PLACED IN 12-INCH MAX LOOSE LIFTS COMPACTED TO 90% STANDARD PROCTOR DENSITY AS DETERMINED BY ASTM D698 AND AASHTO T99, AND FREE FROM ORGANIC MATTER, TRASH, AND OTHER DELETERIOUS MATERIALS. ROCKS LARGER THAN 3 INCHES SHALL NOT BE ALLOWED WITHIN 15 INCHES BELOW FINISHED GRADE OR WITHIN 18 INCHES ABOVE THE PIPE CROWN.
4. TOPSOIL TO BE SEGREGATED AND RESTORED TO A 5-INCH MINIMUM PLATE-COMPACTED DEPTH AND FREE OF BRUSH, ROCK, SHALE, AND OTHER DELETERIOUS MATERIALS.
5. SOD TO BE CUT IN AND LEVEL WITH SURROUNDING GRADE.
6. UPPER DETECTABLE UTILITY MARKER TAPE TO BE INSTALLED AT A MAXIMUM 10-INCH DEPTH BELOW GRADE AND IMPRINTED WITH "CAUTION - (SEWER/ WATER) PIPE BELOW". MARKER TAPE COLOR TO BE BLUE FOR WATER, AND GREEN FOR SANITARY SEWER OR STORM SEWER.
7. FOR WATER LINES ONLY: LOCATOR BALLS TO BE INSTALLED PER CITY OF TULSA STANDARD NO. 322.
8. FOR SANITARY SEWER ONLY: LOWER UTILITY MARKING TAPE TO BE INSTALLED 12 INCHES MINIMUM TO 18 INCHES MAXIMUM ABOVE THE CROWN OF PIPE.
9. FOR INSTALLATIONS UNDER PAVEMENT, SEE CITY OF TULSA STANDARD NO. 713.
10. WHERE A WATER TABLE GRADE IS REQUIRED TO PREVENT SOIL MIGRATION AND/OR STABILIZE PIPE FOUNDATION, SEE CITY OF TULSA STANDARD NO. 367.
11. SAND SHALL BE COMPACTED TO AT LEAST 90% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 AND AASHTO T99.
12. WHEN SPECIFIED, ODOT TYPE 'A' AGGREGATE BASE SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY AS DETERMINED BY ASTM D698 AND AASHTO T99.
13. WHEN USED, CLEAN CRUSHED STONE SHALL BE COMPACTED TO 80% RELATIVE DENSITY AS DETERMINED BY ASTM D4253 AND ASTM D4254.

TRENCH & BEDDING DETAIL  
(NON-PAVED AREAS)-RIGID PIPE

CITY OF TULSA

DRAWN BY: D.J.N.

CHECKED BY: *tyr*

DATE: AUGUST 2025

APPROVED

*[Signature]*

NOT TO SCALE

STANDARD NO. 304