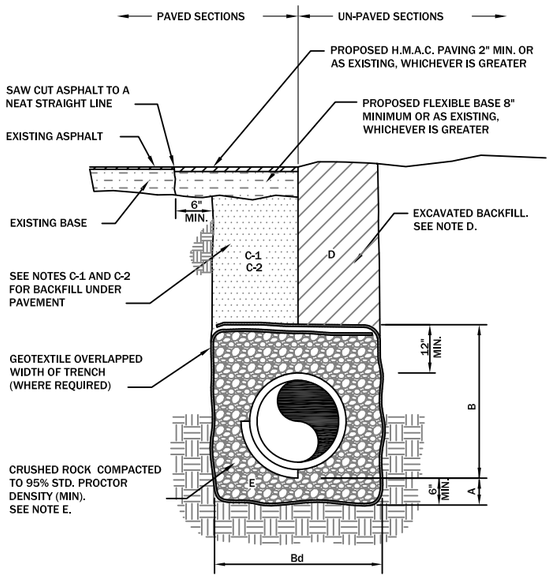


TYPICAL BEDDING DETAIL

GENERAL NOTES:

A. CRUSHED ROCK BEDDING PLACED, HAND LEVELED, AND COMPACTED BEFORE PIPE IS LAID, UP TO BOTTOM OF PIPE (MIN. THICKNESS = 6").

B. CRUSHED ROCK BACKFILL PLACED AND COMPACTED AFTER PIPE IS LAID, FROM BOTTOM OF PIPE TO 12" ABOVE THE TOP OF PIPE. WORK IN UNDER PIPE HAUNCHES AND COMPACT BY HAND TO SPRING LINE. USE VIBRATORY-TYPE COMPACTORS FOR LIFTS ABOVE THE SPRING LINE. MAXIMUM 6" LIFTS.

Bd. MINIMUM TRENCH WIDTH: PIPE O.D. + 16" (FOR 16" PIPE AND SMALLER)
PIPE O.D. X 1.25 + 12" (FOR 18" PIPE AND LARGER)

C-1. (CITY STREETS, PARKING AREA, AND DRIVEWAYS) SELECT EXCAVATED BACKFILL MECHANICALLY COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 8" MAX. LIFTS.

C-2 (STATE MAINTAINED ROADWAY) SAND/CEMENT STABILIZED BACKFILL WITH 7% PORTLAND CEMENT COMPACTED TO 95% STANDARD PROCTOR DENSITY.

D. EXCAVATED EARTH BACKFILL MECHANICALLY COMPACTED IN 12" MAX. LIFTS. MINIMUM STANDARD PROCTOR DENSITY: 90% OUTSIDE RIGHT OF WAY
95% INSIDE RIGHT OF WAY

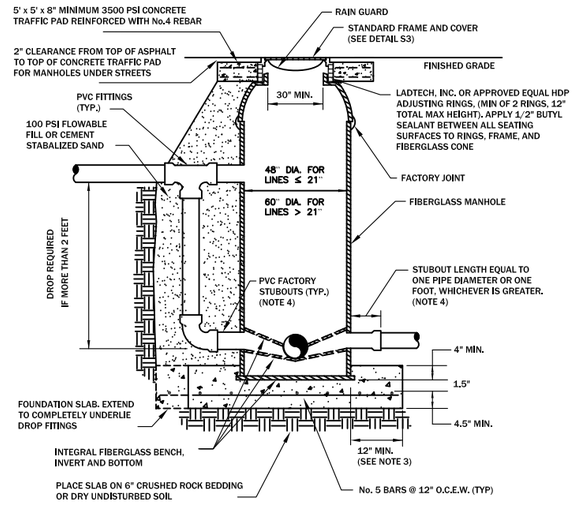
E. EMBEDMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D 2321. EMBEDMENT MATERIAL SHALL BE CLASS 1A (CRUSHED ROCK) MAXIMUM ¾" SIZE FOR PIPE SIZE ≤ 15". GREATER THAN 90% OF CRUSHED ROCK SHALL HAVE AT LEAST THREE BROKEN FACES. NO MORE THAN 2% UNBROKEN FRACTION ALLOWED.

IN SATURATED SOILS WITH FINES OR UNSTABLE SOILS, EMBEDMENT ZONE SHALL BE WRAPPED WITH GEOTEXTILE.

WHERE THIS STANDARD CONFLICTS WITH THE RECOMMENDATION OF ANY GEOTECHNICAL REPORT, OBTAIN WRITTEN CLARIFICATION FROM THE UTILITY ENGINEER PRIOR TO CONSTRUCTION.

FOUNDATION PREPARATION USING COBBLES, GRAVEL, CEMENT STABILIZATION, OR OTHER METHODS AS APPROVED BY THE ENGINEER SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.

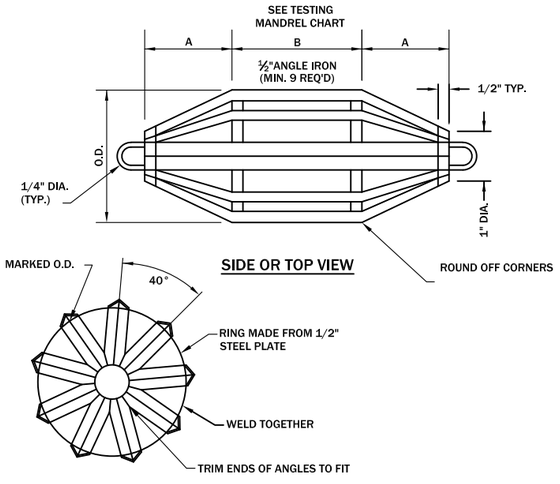
BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, AND COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 6" MAXIMUM LIFTS. STRUCTURE BACKFILL MATERIAL SHALL BE SAND.



NOTES:

1. INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. BACKFILL SHALL BE SAND COMPACTED TO 95% STANDARD PROCTOR OR CLSM FLOWABLE FILL UP TO THE BOTTOM OF THE CONCRETE TRAFFIC PAD.
3. BASE SLAB SHALL BE 4 FT. LARGER THAN MANHOLE DIAMETER WHERE SOIL BEARING CAPACITY < 2000 PSF, WATER TABLE < 5 FT., OR DEPTH > 20 FT. SLAB SHALL BE DESIGNED TO PREVENT FLOTATION OF MANHOLE.
4. OUTLET STUBOUT SHALL BE SPIGOT END. INLET STUBOUTS SHALL BE BELL END EXCEPT FOR DROP CONNECTIONS.

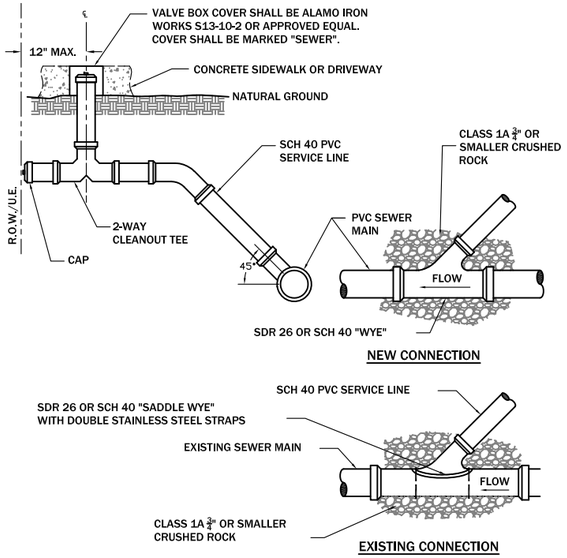
TYPICAL FIBERGLASS MANHOLE



TESTING MANDREL CHART

SIZE	A	B	MANDREL O.D. PSM SDR-26	RING O.D. PSM SDR-26
6	4.0"	4.5"	5.50	4.79
8	5.5"	6.0"	7.37	6.66
10	7.0"	7.5"	9.21	8.50
12	8.0"	9.0"	10.96	10.25
15	10.0"	11.0"	13.42	12.71
18	12.0"	13.5"		
21	14.0"	16.0"		
24	16.0"	18.0"		
27	18.0"	20.0"		

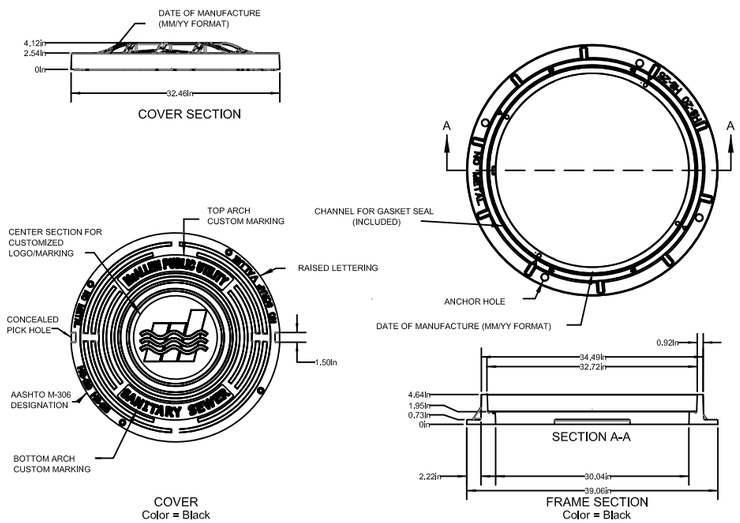
GO NO-GO DEFLECTION TESTING MANDREL DETAIL



NOTES

1. INDIVIDUAL SERVICE LATERALS TO BE PROVIDED TO EACH LOT.
2. SINGLE FAMILY SERVICE SHALL BE 4" MIN. FOR MULTI-FAMILY, COMMERCIAL, AND INDUSTRIAL, SERVICE SHALL BE 6" OR GREATER AS REQUIRED.
3. SANITARY SERVICES INTO MANHOLES ARE NOT PERMITTED.
4. INSTALL CAST IRON VALVE BOX OVER CLEAN-OUTS LOCATED IN SIDEWALKS AND DRIVEWAYS WITH VALVE COVER MARKED "SEWER".
5. MAXIMUM CLEAN-OUT HEIGHT SHALL BE 6" FROM NATURAL GROUND.
6. TOP OF CAST IRON BOX SHALL BE FLUSH WITH TOP OF CONCRETE.

STANDARD SERVICE CONNECTION



COMPOSITE MANHOLE RING AND COVER DETAIL

FILE NAME:
DATE: FEB 2023
SURVEYED BY:
DESIGNED BY: XXXX
DRAWN BY: XXXX
CHECKED BY:
PROJECT NO:

TITLE: XXXXXX SEWER STANDARD DETAILS

McALLEN PUBLIC UTILITY

SCALE:
REVISIONS:

SHEET NO.: X