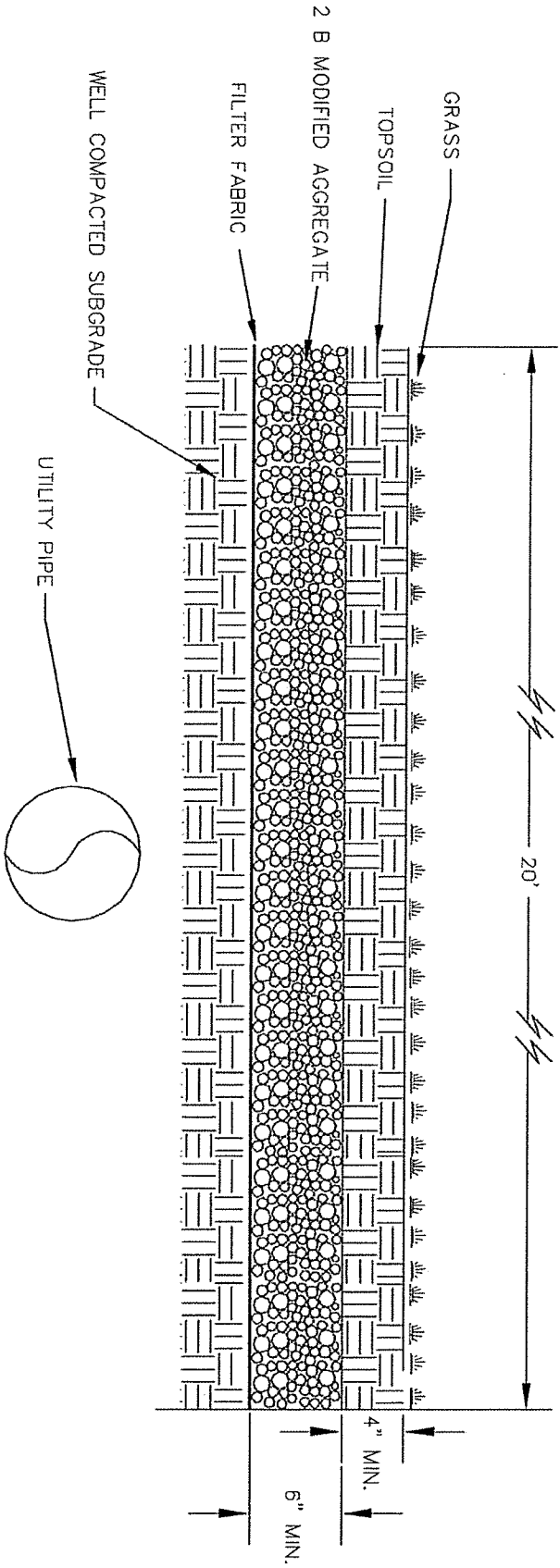


**BOROUGH OF CONSHOHOCKEN AUTHORITY**

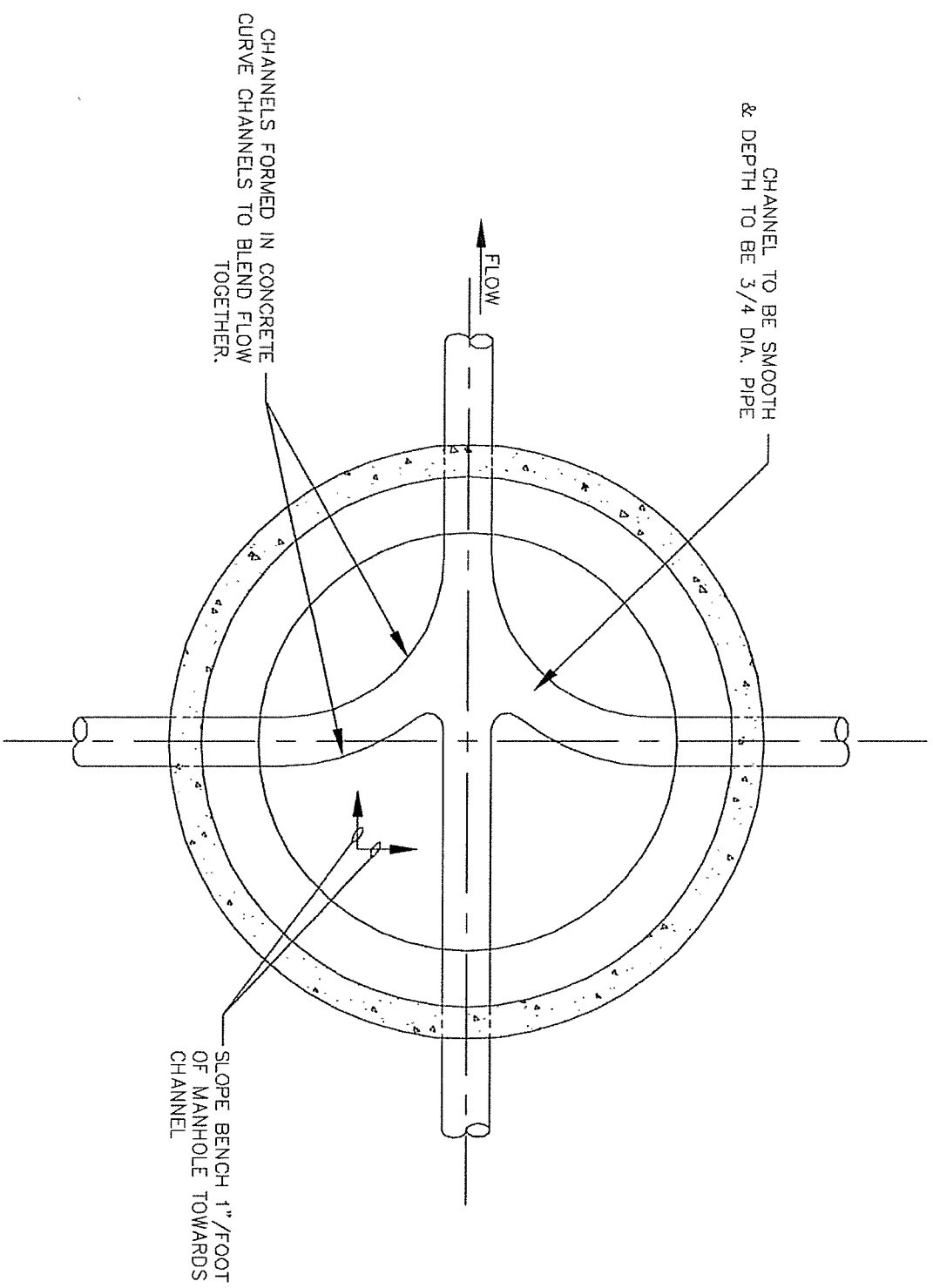
**APPENDIX 6**

**CONSTRUCTION NOTES AND DETAILS**



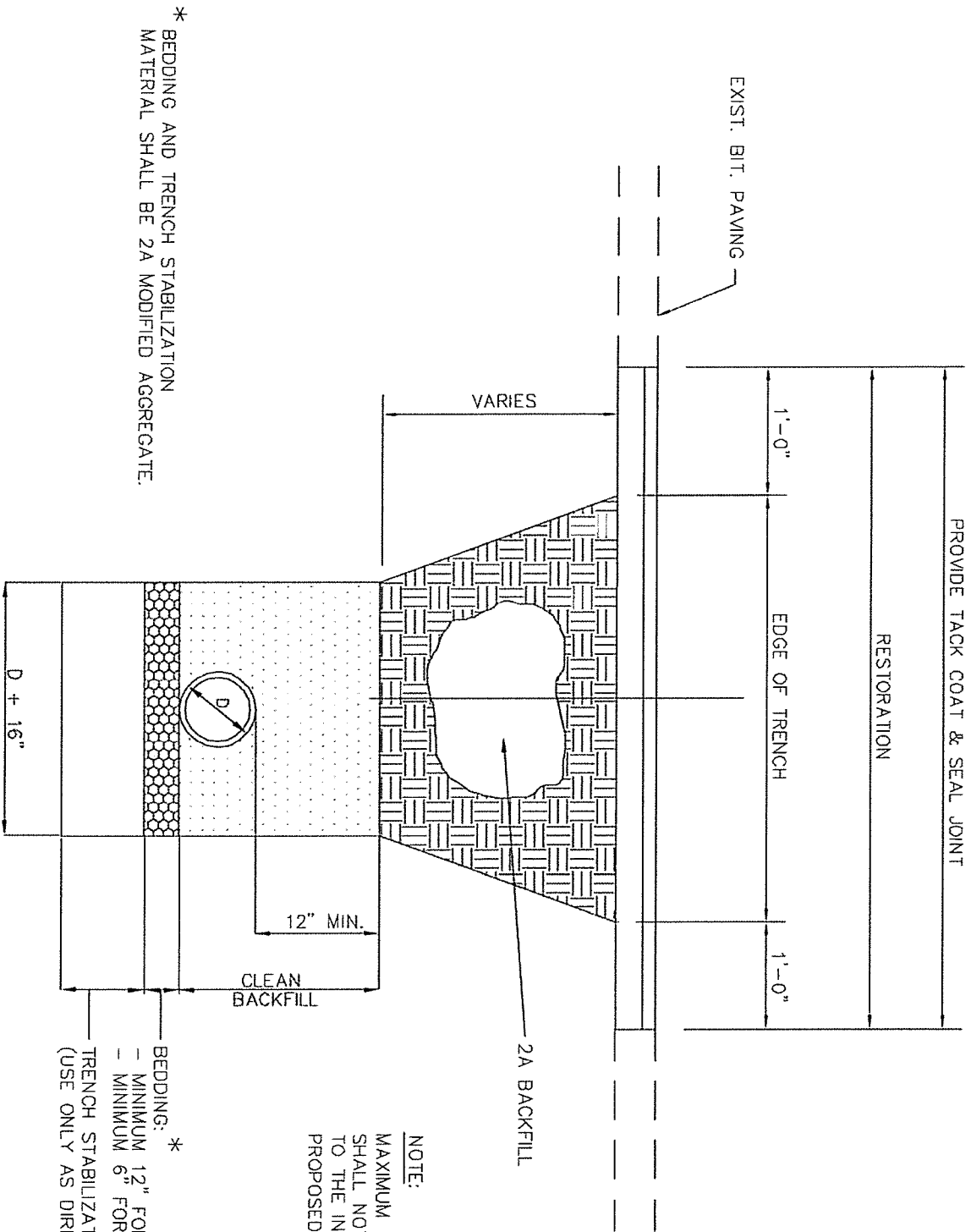
NOTE:  
 EASEMENT WIDTH REQUIREMENT  
 MAY VARY BASED ON SEWER  
 BURY DEPTH.

**EASEMENT DETAIL**  
 NOT TO SCALE



**PLAN-MANHOLE INVERT**

NOT TO SCALE



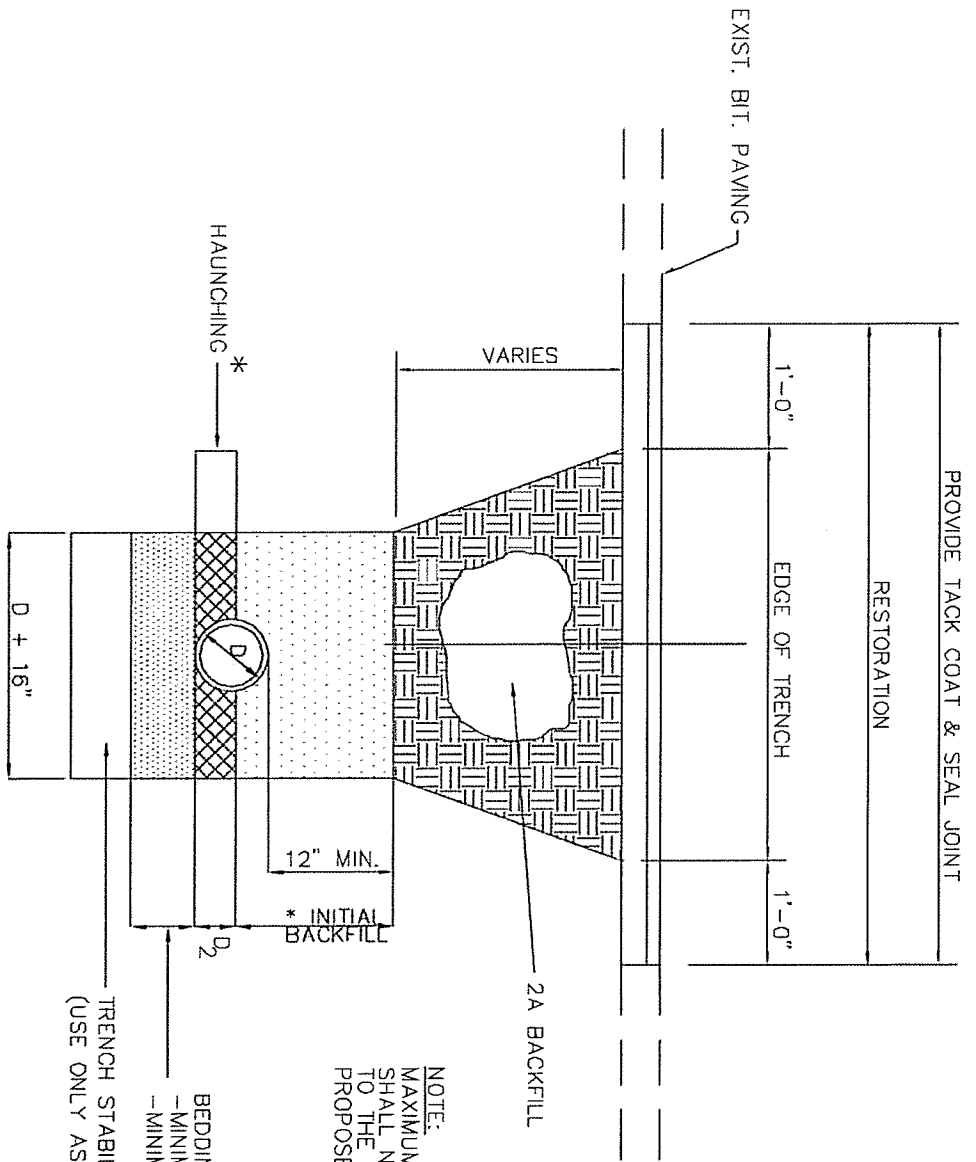
\* BEDDING AND TRENCH STABILIZATION MATERIAL SHALL BE 2A MODIFIED AGGREGATE.

NOTE:  
 MAXIMUM WIDTH OF TRENCH SHALL NOT EXCEED THE DEPTH TO THE INVERT OF THE PROPOSED PIPELINE

BEDDING: \*  
 - MINIMUM 12" FOR REPLACEMENT PIPE  
 - MINIMUM 6" FOR NEW INSTALLATIONS  
 \*  
 TRENCH STABILIZATION  
 (USE ONLY AS DIRECTED BY ENGINEER)

# ROADWAY TRENCH DETAIL FOR D.I. PIPE

NOT TO SCALE



NOTE:  
 MAXIMUM WIDTH OF TRENCH SHALL NOT EXCEED THE DEPTH TO THE INVERT OF THE PROPOSED PIPELINE

\* INITIAL BACKFILL SHALL BE 2B MODIFIED AGGREGATE. HAUNCHING, BEDDING AND TRENCH STABILIZATION MATERIAL SHALL BE 2A MODIFIED AGGREGATE .

# ROADWAY TRENCH DETAIL FOR P.V.C. PIPE

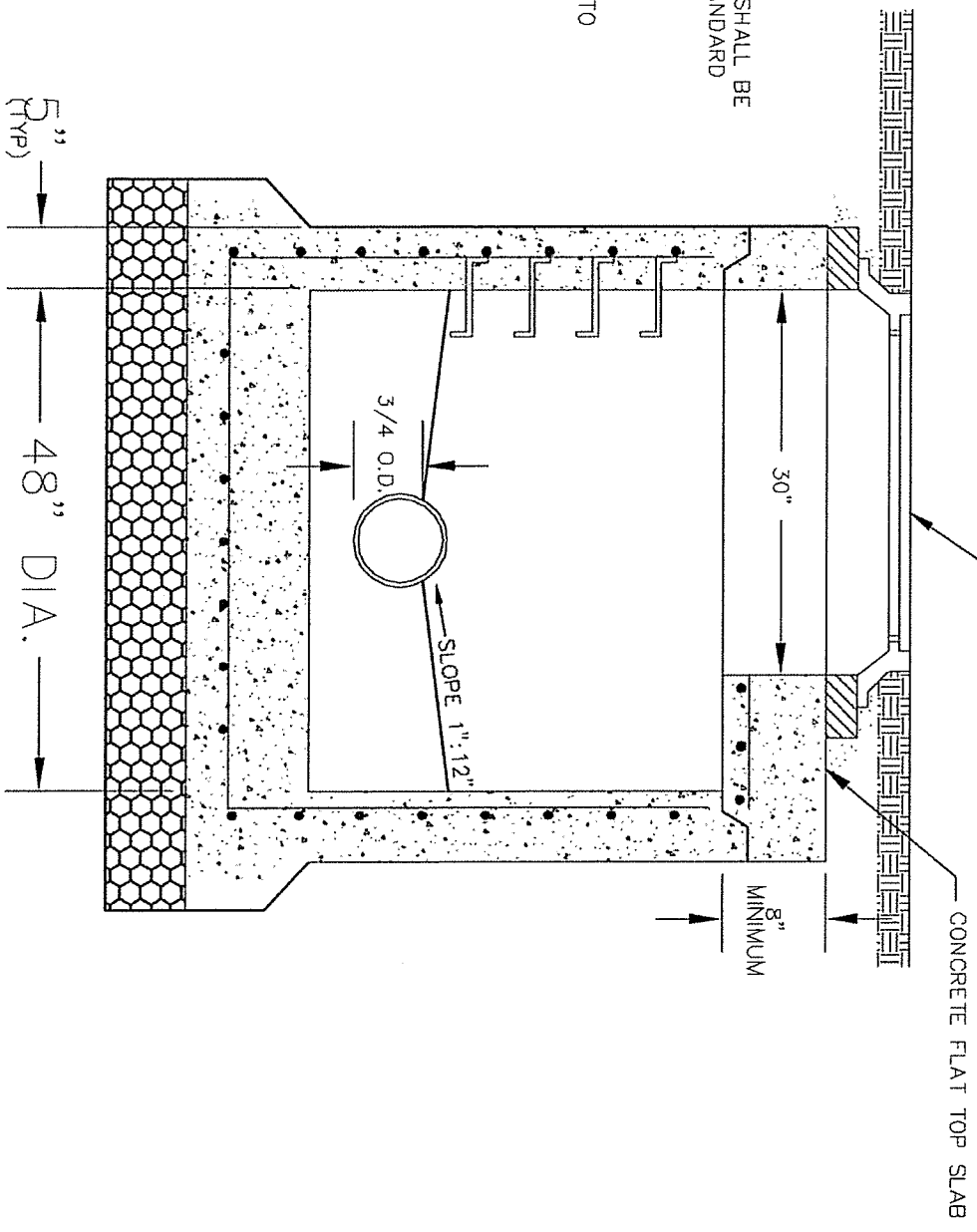
NOT TO SCALE

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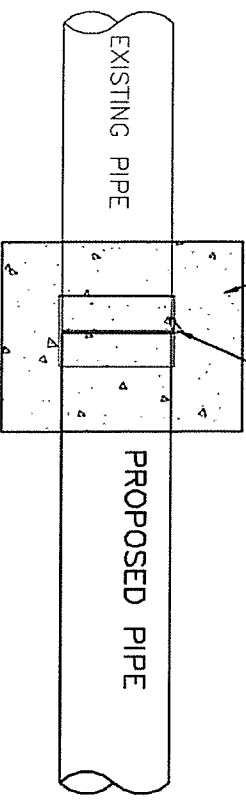
MANHOLE FRAME EJ 1322Z (PRODUCT NO. 00132212)  
MANHOLE COVER EJ 1480AGS (PRODUCT NO. 00148122)  
WITH LETTERS "SANITARY SEWER"

- NOTES:**
1. MANHOLE CONSTRUCTION SHALL BE IN ACCORDANCE WITH STANDARD 4'-0" DIAMETER PRECAST MANHOLE DETAIL.
  2. TOP SLAB REINFORCING SHALL BE DESIGNED BY PRECAST MANUFACTURER TO WITHSTAND AASHTO H-20 LIVE LOAD



**PRECAST SHALLOW  
MANHOLE DETAIL**  
NOT TO SCALE

6" CONCRETE ENCASUREMENT  
AROUND ALL SIDES

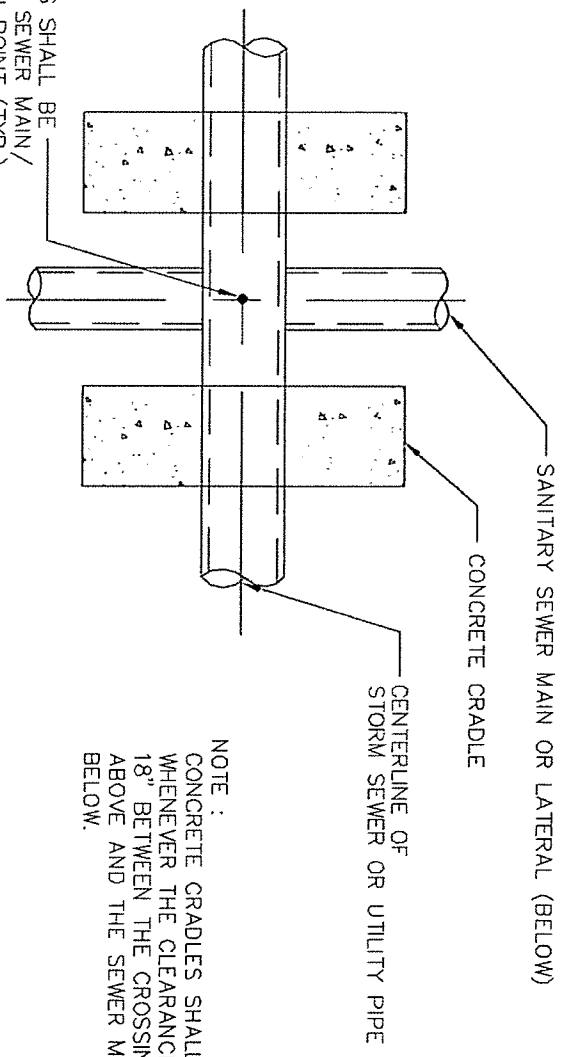


FERNCO COUPLING W/S.S. SHEAR  
BAND TO TRANSITION FROM  
EXISTING PIPE TO PROPOSED  
PVC PIPE

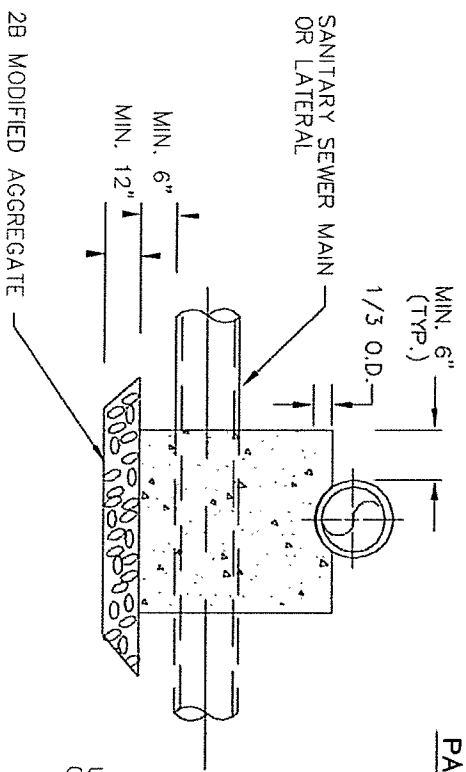
# LATERAL CONNECTION DETAIL

N.T.S.

NO PIPE JOINTS/PIPE BELLS SHALL BE LOCATED AT THE SANITARY SEWER MAIN/STORM SEWER INTERSECTION POINT (TYP.)

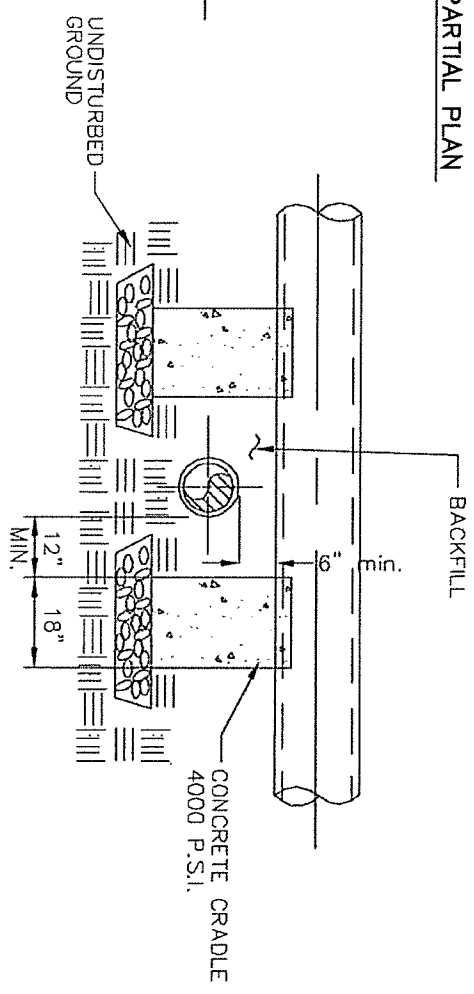


NOTE :  
CONCRETE CRADLES SHALL BE PROVIDED WHENEVER THE CLEARANCE IS LESS THAN 18" BETWEEN THE CROSSING PIPE/UTILITY ABOVE AND THE SEWER MAIN/LATERAL BELOW.



SECTION

PARTIAL PLAN

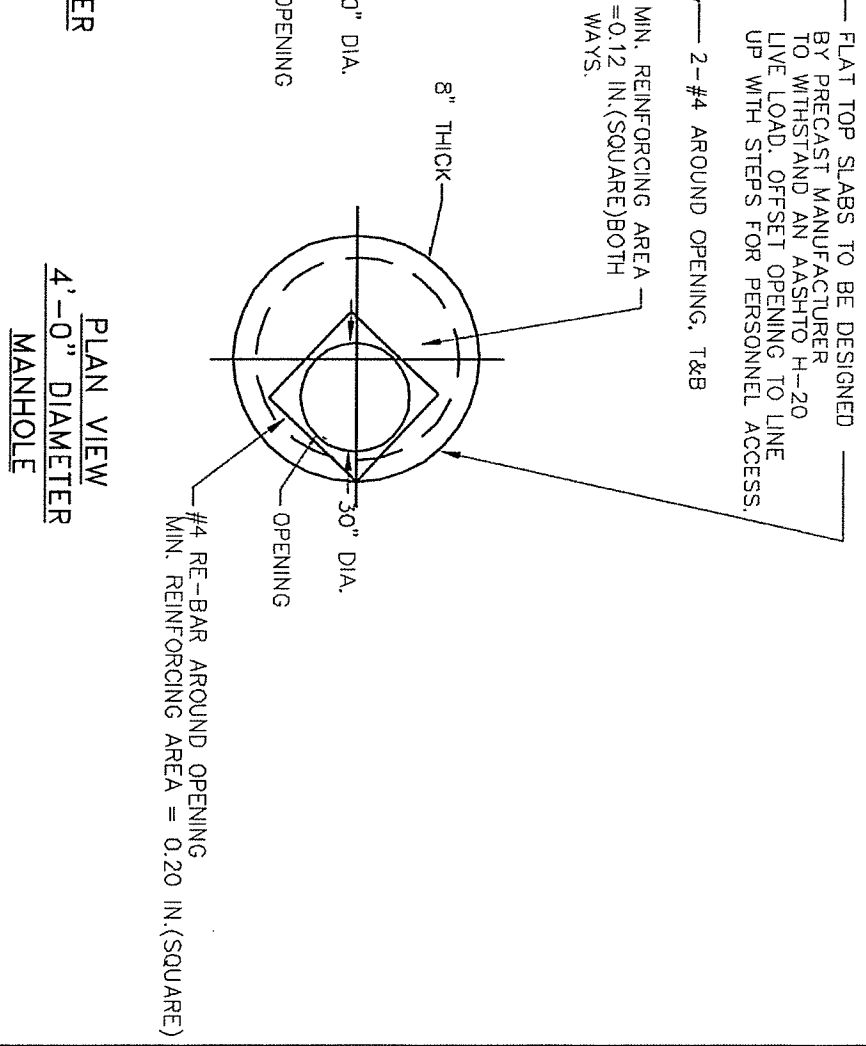
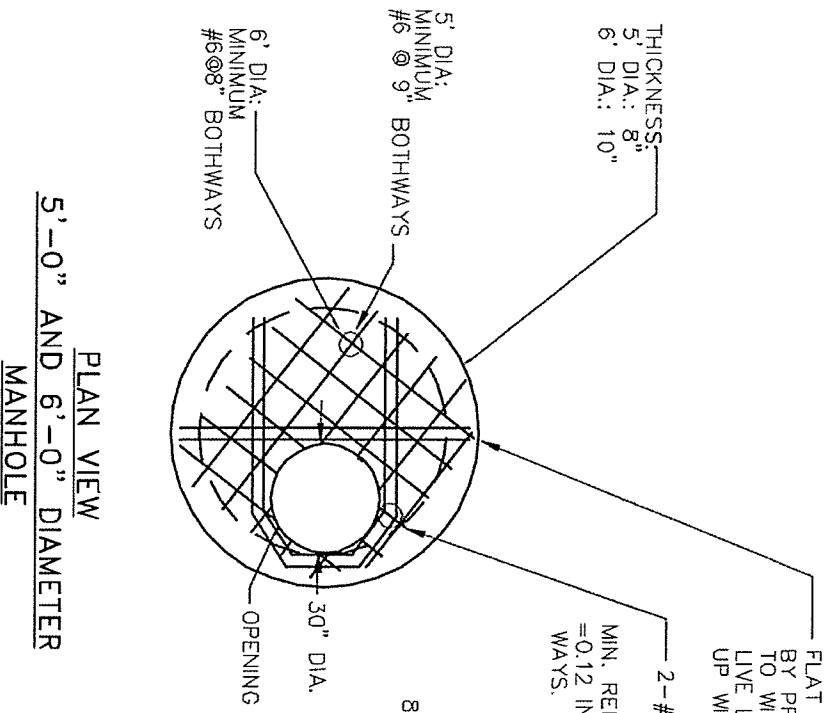


SIDE VIEW

# CONCRETE CRADLE DETAIL

NOT TO SCALE

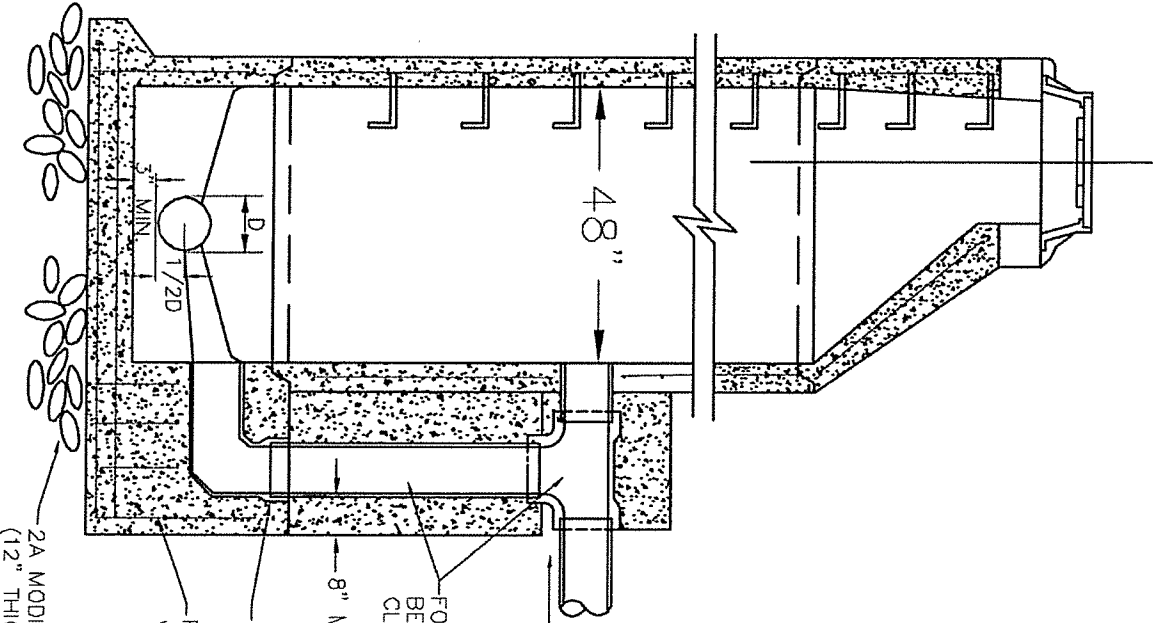




# MANHOLE FLAT TOP SLAB DETAIL

NOT TO SCALE

PRECAST MANUFACTURER SHALL PROVIDE  
STRUCTURAL DESIGN CALCULATIONS SIGNED AND  
SEALED BY A P.A. PROFESSIONAL ENGINEER  
VERIFYING TOP SLABS HAVE BEEN DESIGNED TO  
WITHSTAND LOAD LISTED.



NOTE :  
 MANHOLE CONSTRUCTION SHALL BE IN ACCORDANCE WITH STANDARD 4'-0" DIAMETER PRECAST MANHOLE DETAIL

STONE BEDDING FOR PIPE. MAINTAIN UPSTREAM TEE JOINT FREE OF CONCRETE

FOR PVC MAINS: P.V.C. SDR 35 PIPE AND FITTINGS SHALL BE USED IN PRECAST DROP CONNECTIONS (TYP.) CLASS 52 DIP TO BE USED IN ALL OTHER CASES.

8" MIN. CONCRETE COLLAR(TO BE CONSTRUCTED IN FIELD)

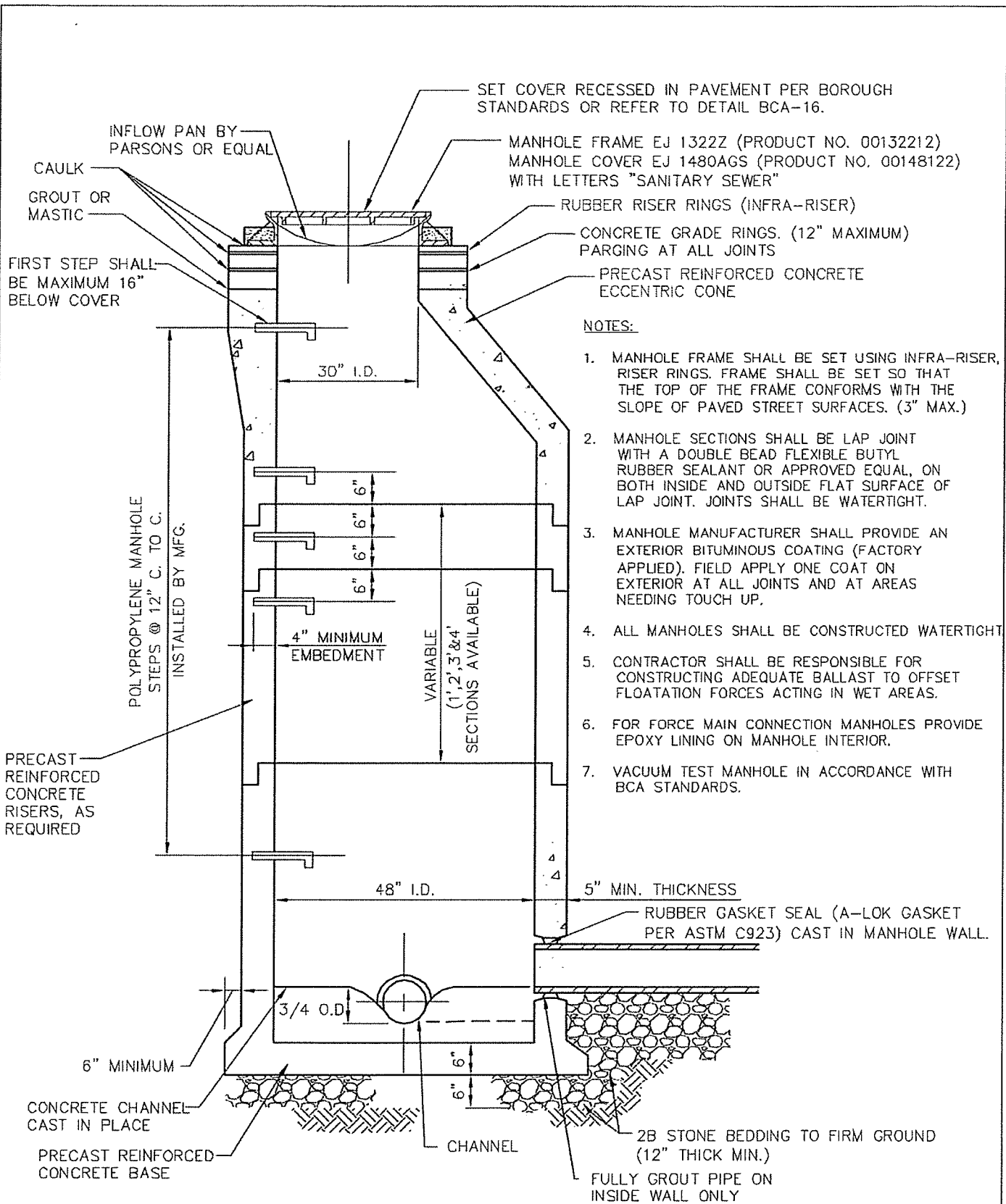
8" SOCKET TO ACCEPT RISER PIPE

REINFORCING AREA 0.12 IN/VERT. FT. JOINED TO BASE

2A MODIFIED AGGREGATE BASE TO FIRM GROUND (12" THICK MINIMUM)

# STANDARD PRECAST OUTSIDE DROP MANHOLE

NOT TO SCALE



- NOTES:**
1. MANHOLE FRAME SHALL BE SET USING INFRA-RISER, RISER RINGS. FRAME SHALL BE SET SO THAT THE TOP OF THE FRAME CONFORMS WITH THE SLOPE OF PAVED STREET SURFACES. (3" MAX.)
  2. MANHOLE SECTIONS SHALL BE LAP JOINT WITH A DOUBLE BEAD FLEXIBLE BUTYL RUBBER SEALANT OR APPROVED EQUAL, ON BOTH INSIDE AND OUTSIDE FLAT SURFACE OF LAP JOINT. JOINTS SHALL BE WATERTIGHT.
  3. MANHOLE MANUFACTURER SHALL PROVIDE AN EXTERIOR BITUMINOUS COATING (FACTORY APPLIED). FIELD APPLY ONE COAT ON EXTERIOR AT ALL JOINTS AND AT AREAS NEEDING TOUCH UP.
  4. ALL MANHOLES SHALL BE CONSTRUCTED WATERTIGHT
  5. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING ADEQUATE BALLAST TO OFFSET FLOATION FORCES ACTING IN WET AREAS.
  6. FOR FORCE MAIN CONNECTION MANHOLES PROVIDE EPOXY LINING ON MANHOLE INTERIOR.
  7. VACUUM TEST MANHOLE IN ACCORDANCE WITH BCA STANDARDS.

**STANDARD PRECAST MANHOLE SECTION DETAIL**  
(FOR PIPES 24" DIA. OR LESS)  
NO SCALE

AUTHORITY JURISDICTION AND O&M RESPONSIBILITY

PLUMBING INSPECTOR JURISDICTION / PROPERTY OWNER O&M RESPONSIBILITY

LATERAL PIPING SECTION

BUILDING SEWER PIPING SECTION

END OF WYE / SADDLE FITTING

R.O.W. LINE OR CURB LINE

CONCRETE CURB

SIDEWALK

FINISHED GRADE

CLEANOUT RISER

2' OUTSIDE STRUCTURE BEING SERVICED

WHERE NECESSARY, FERRICO OR EQUAL ELASTOMERIC PVC COUPLING, FOR ALL REDUCING TYPE COUPLINGS EXTEND SMALLER DIAMETER PIPING 2" PAST COUPLING AND PROVIDE ECCENTRIC TYPE COUPLING WITH STAINLESS STEEL SHEAR RINGS

45° BEND (S) ONE OR TWO BENDS DEPENDING ON MAIN DEPTH

PROVIDE CONCRETE ENCASUREMENT AROUND SADDLE CONNECTION WITH 6" MIN. THICKNESS

SANITARY SEWER MAIN WYE CONNECTION (FOR EXISTING MAIN CONNECTION PROVIDE RUBBER GASKETED CAST IRON TEE SADDLE WITH TYPE 304 STAINLESS STEEL STRAP(S), BOLTS NUTS AND WASHERS), ROMAC OR SEWER SADDLE, OR EQUAL.

45° (CONNECTING ANGLE REQUIRES MINIMUM 5'-6" DEPTH TO MAIN INVERT)

MINIMUM 3'-0" COVER

4" FRESHAIR VENT. WHEN SIDEWALK IS AGAINST CURB PROVIDE IMMEDIATELY BEHIND SIDEWALK

TRAP IF AND WHERE DIRECTED BY PLUMBING INSPECTOR

COMPACTED PIPE BEDDING/BACKFILL MATERIAL SHALL BE SAME AS SEWER MAIN

TWO WAY CLEANOUT MAXIMUM 50' O.C. LOCATIONS TO BE APPROVED BY PLUMBING INSPECTOR

SOIL TEST CODE

PVC (SDR-35 OR SCH 40) OR SERVICE WEIGHT CAST IRON SOIL PIPE, IF PVC SDR-35 MINIMUM DIAMETER SHALL BE 4"

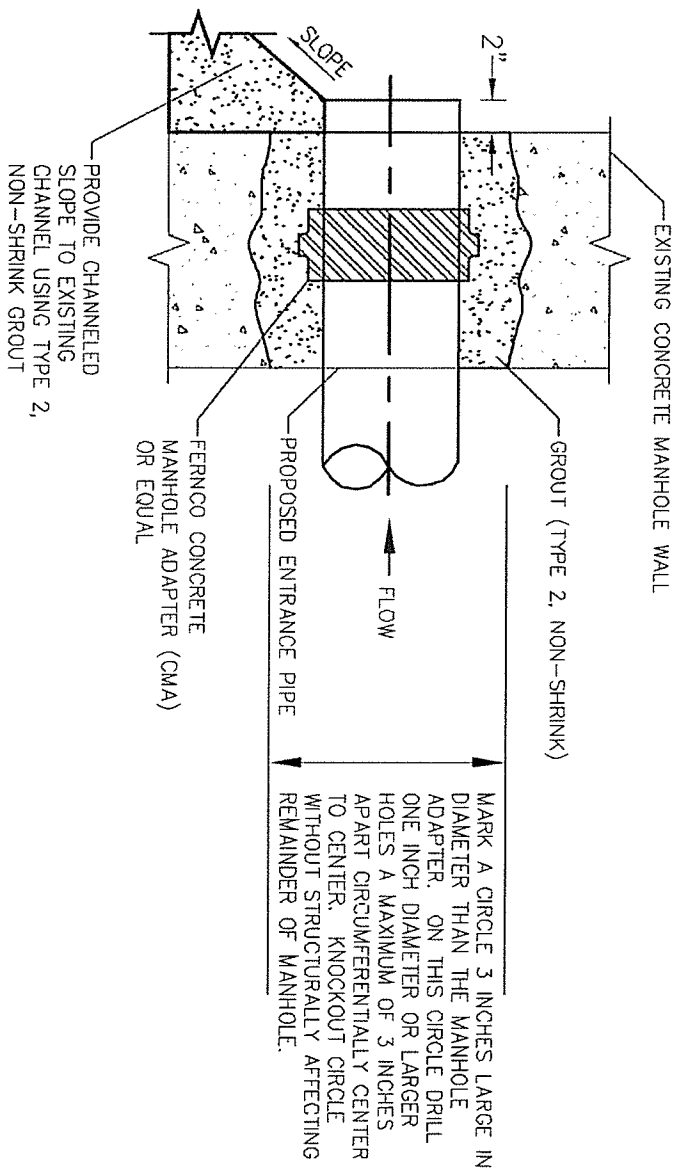
SCH 40 PVC OR SDR-35 MINIMUM 4" DIAMETER (DIAMETER DEPENDENT ON TOTAL NUMBER OF FIXTURE UNITS)

- NOTES:**
1. DETAIL SUBJECT TO CHANGE BY PLUMBING INSPECTOR DIRECTION/CODE REQUIREMENTS
  2. AUTHORITY CONNECTION FEES MUST BE PAID IN FULL BEFORE PHYSICAL CONNECTION IS PERMITTED.

# SEWER MAIN CONNECTION DETAIL

N.T.S.



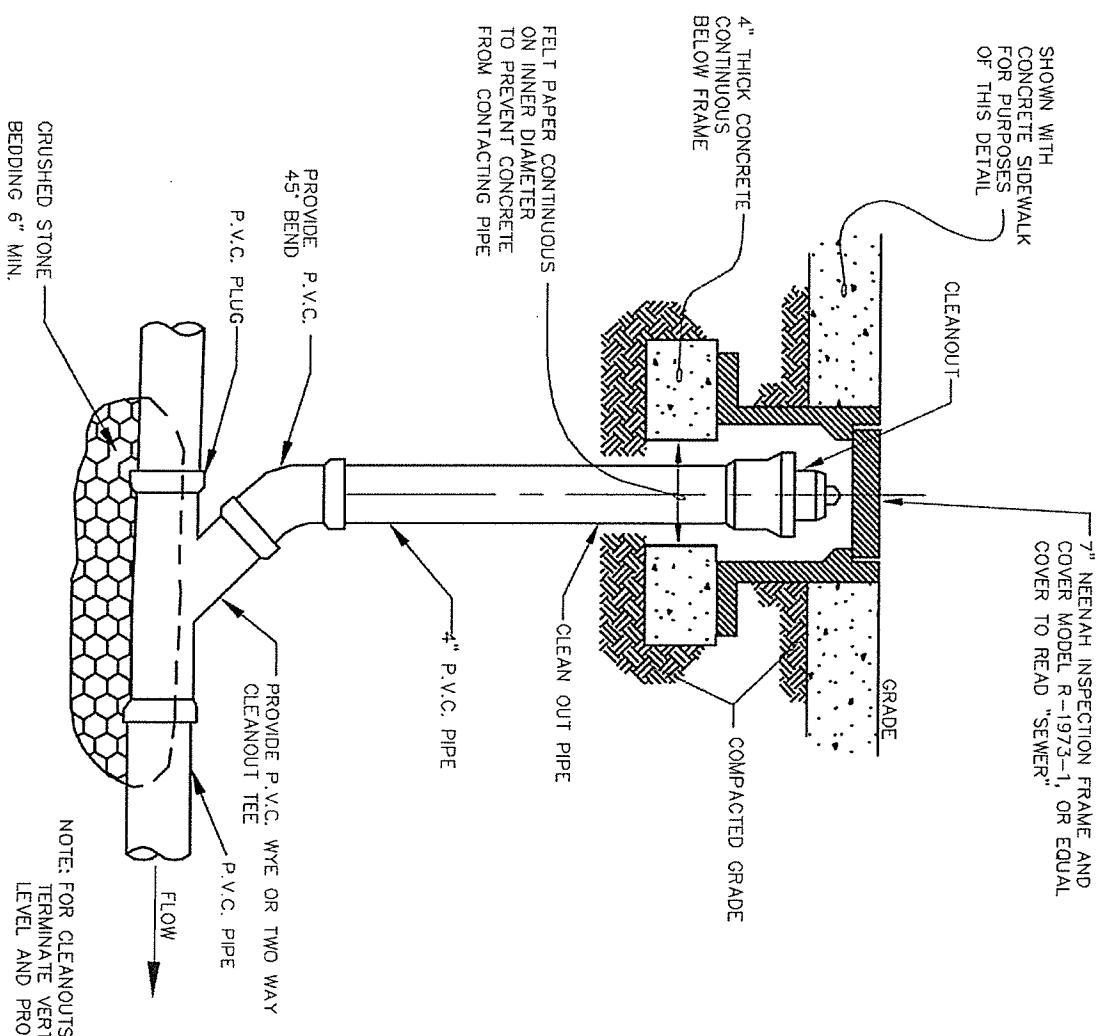


## CONNECTION TO EXISTING MANHOLE DETAIL

NOT TO SCALE

**NOTES:**

1. DO NOT INSTALL IN TEMPERATURES BELOW 35°F.
2. MANHOLE SHALL NOT BE BACKFILLED AND SHALL BE KEPT DRY UNTIL GROUT CURE PERIOD HAS BEEN ACHIEVED.



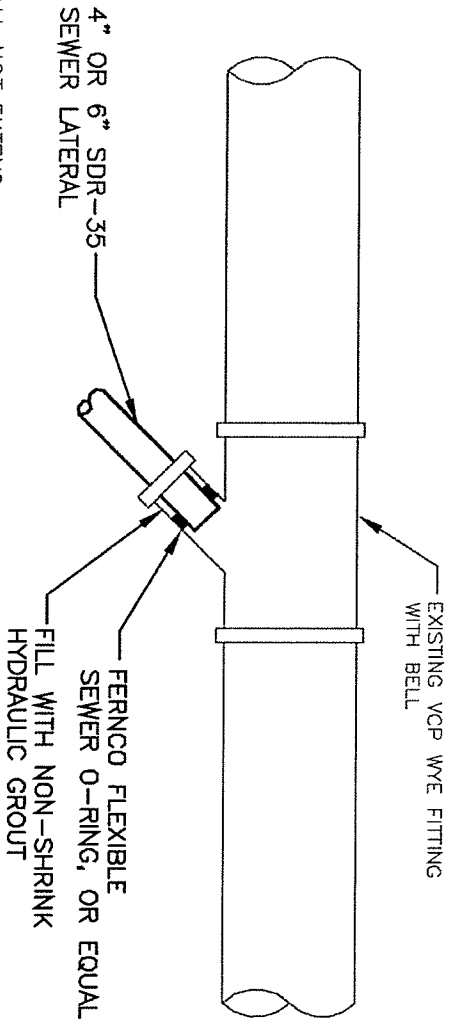
**SANITARY LATERAL CLEANOUT DETAIL -  
IN SIDEWALK/PAVEMENT**

NOTE: FOR CLEANOUTS IN GRASSED AREAS, TERMINATE VERTICAL PIPE AT GRADE LEVEL AND PROVIDE THREADED CAP.

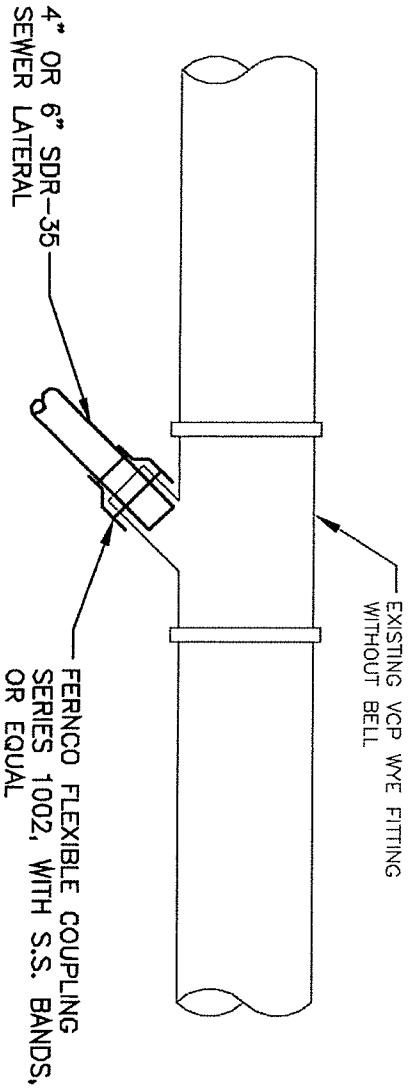
N.T.S.

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(BCA-14)

NOTE :  
LATERAL PIPING SHALL NOT EXTEND  
INTO SEWER MAIN.



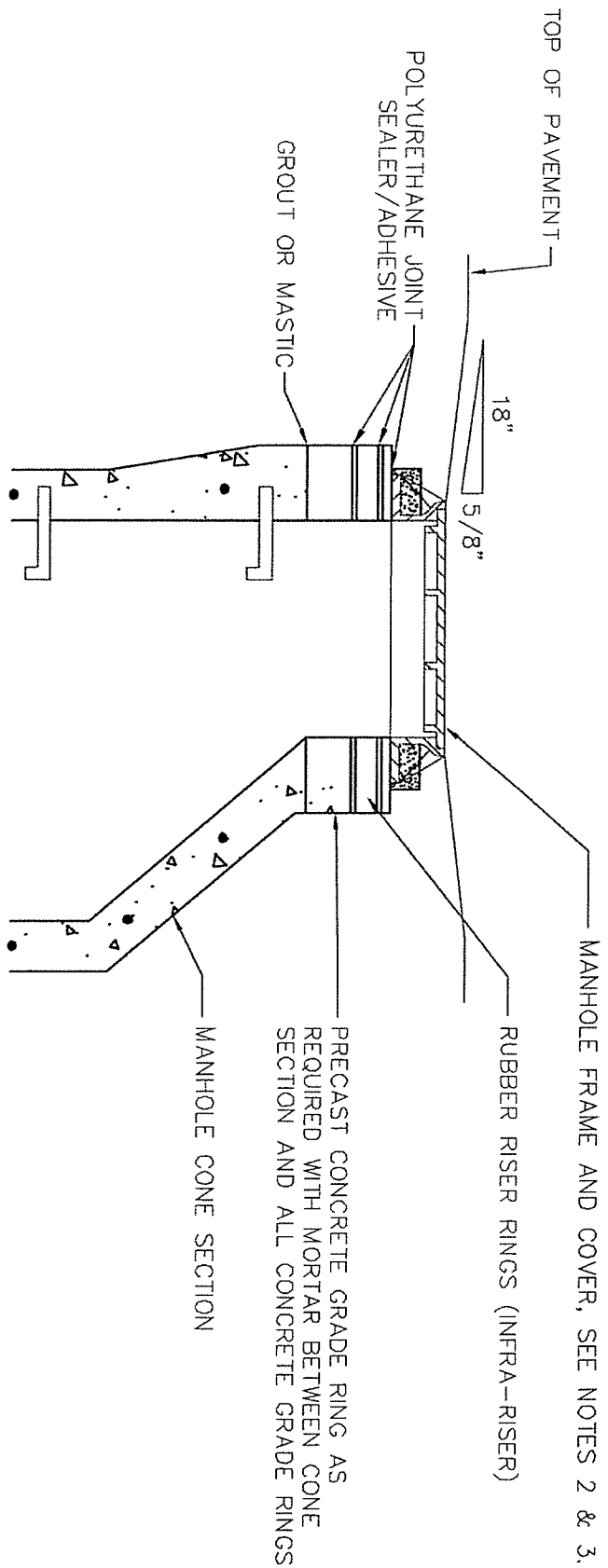
NOTE :  
LATERAL PIPING SHALL NOT EXTEND  
INTO SEWER MAIN.



# CONNECTION TO EXISTING WYE FITTING ON SEWER MAIN DETAIL

N.T.S.

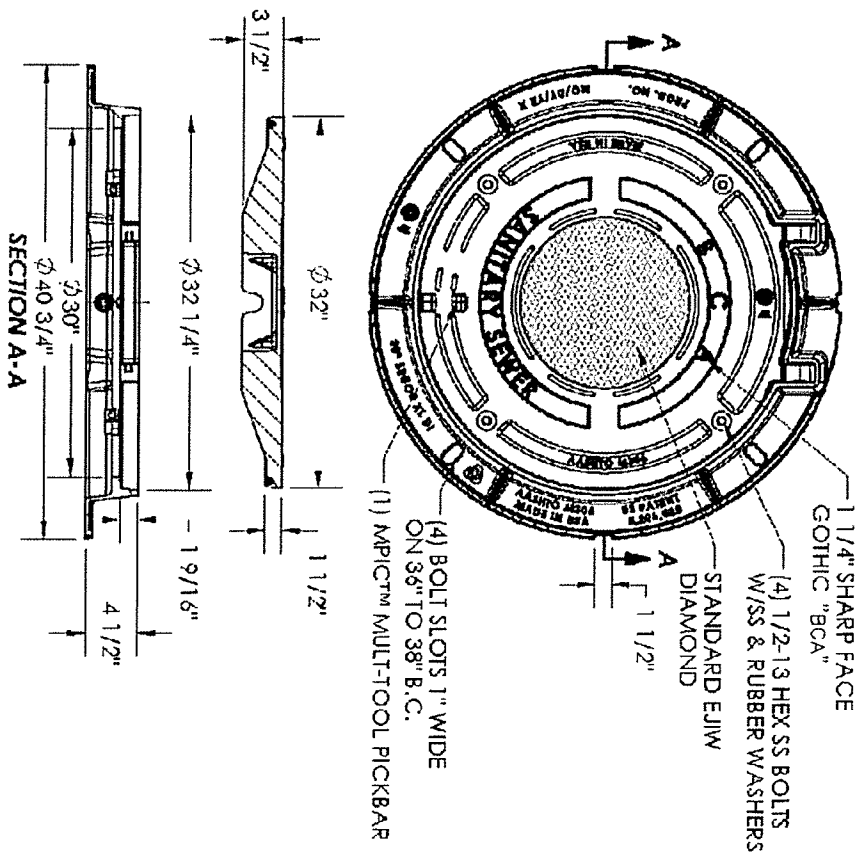




- NOTES:**
1. MANHOLE ADJUSTMENT BY RUBBER RISER RINGS IS 6".
  2. FOR NEW OR EXISTING MANHOLES WITH 30" CLEAR OPENINGS USE EJ FRAME 1322Z (PRODUCT NO. 00132212) AND EJ COVER 1480AGS (PRODUCT NO. 00148122) WITH LETTERS "SANITARY SEWER".
  3. FOR EXISTING MANHOLES WITH 24" CLEAR OPENINGS USE EJ FRAME 1045 (PRODUCT NO. 00104511) AND EJ COVER 1040AGS (PRODUCT NO. 00104033) WITH LETTERS "SANITARY SEWER".
  4. WHERE WATERTIGHT FRAME AND COVERS ARE REQUIRED, SEE AUTHORITY ENGINEER.
  5. CONTRACTOR SHALL PARGE INSIDE AND EXTERIOR CHIMNEY SECTIONS.

MANHOLE GRADE ADJUSTMENT AND/OR  
FRAME AND COVER REPLACEMENT

NO SCALE



**NOTES:**

FRAME AND COVER SHALL BE E.J. ERGO XL ASSEMBLY  
 (PRODUCT NO. 41421003L01)

**WATERTIGHT MANHOLE  
 FRAME COVER DETAIL**

NO SCALE

# CB SEWER SADDLE

A ROMAC<sup>™</sup>  
ORIGINAL

Patent#: 4494780

## CB Sewer Saddle Design Advantages

- **Simple Installation**

The CB sewer saddle can be installed simply by using a socket wrench or open-end wrench.

- **Flexibility**

Able to conform to pipes of different diameters, the gasket also allows considerable deflection due to earth movement. The gasket's large sealing surface and wide band strongly resist displacement.

- **Superior Strap**

The 304 stainless steel band accommodates a wide range of pipe sizes. The stainless welds are fully passivated (chemically treated after welding to produce a highly corrosion resistant coating). The wide strap distributes the clamping force across the 3 1/2" width.

- **Inventory Reduction**

The CB sewer saddle fits a wide range of pipe diameters.

- **Reliability**

Continuous rubber connection between rim and branch eliminates potential leak spots. Saddles have been tested to pressures well in excess of typical service test requirements.

**NOTE:** A pipe stop capable of withstanding 1,000 pounds of thrust is molded into the CB saddle gasket. Care must be taken during system design and installation to assure that this thrust limit is not exceeded.

**ROMAC**  
INDUSTRIES, INC.   
MADE IN THE U.S.A.

