

IRON OR APPROVED RING AND COVER - SEE
MANHOLE RING AND COVER DETAIL (No. WW-4)

PAVEMENT

8" MIN.

1' MIN.
CONCRETE
COLLAR

UNPAVED AREA

PRECAST CONCRETE,
PLASTIC ADJUSTING RINGS
OR APPROVED EQUAL
8" MAXIMUM

24" - 36"

PRECAST CONCRETE MANHOLE SECTIONS
CONFORMING TO ASTM C-478

24" MIN

ECCENTRIC CONE SECTION

12" - 15"

WATERTIGHT JOINT

RELINER INSIDE DROP BOWL
OR APPROVED EQUAL

SANITARY SEWER INLET

EXTERNAL PIPE
COUPLER

PVC DROP PIPE

STAINLESS STEEL STRAPS SECURED TO
STRUCTURE WALL WITH STAINLESS STEEL
FASTENERS AT 4' INTERVALS (MIN. OF 2)

RELINER PLASTIC COMPOSITE
MANHOLE INVERT REPLACEMENTS,
OR APPROVED EQUAL,
CAST INTO EXISTING BASE

RELINER DROP END OR APPROVED EQUAL

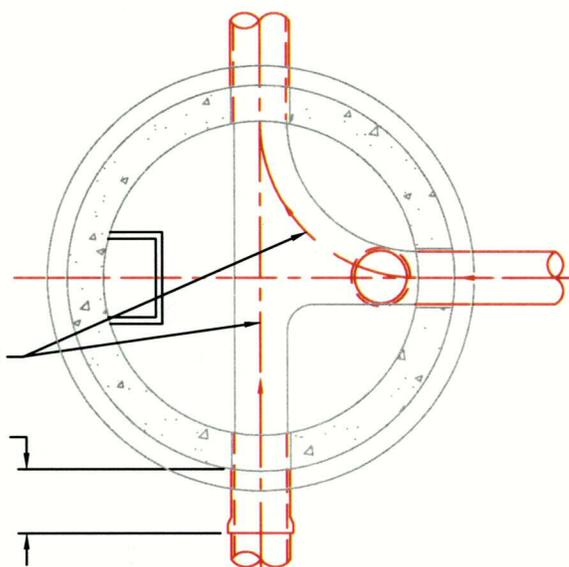
MH DEPTH	A	B
5' TO 15'	3"	8"
OVER 15'	6"	10"

A

B

PRECAST OR CAST IN
PLACE CONCRETE BASE

3000 psi CONCRETE



FLOW LINE

12" TO 18" PIPE STUB OR
FLEXIBLE JOINT CONNECTION
AS DIRECTED BY PUBLIC
WORKS DEPARTMENT

NOTE:

1. NEW ASPHALT SHALL BE $\frac{1}{2}$ " ABOVE
CONCRETE COLLAR AND EXISTING
ASPHALT SHALL BE $\frac{1}{4}$ " ABOVE CONCRETE
COLLAR
2. MANHOLE PLACED IN UNPAVED
AREAS SHALL BE A MIN. $2\frac{1}{2}$ " ABOVE FINAL
GRADE
3. CEMENT GROUT SHALL BE PLACED
BETWEEN ALL RISERS AND MANHOLE
RING



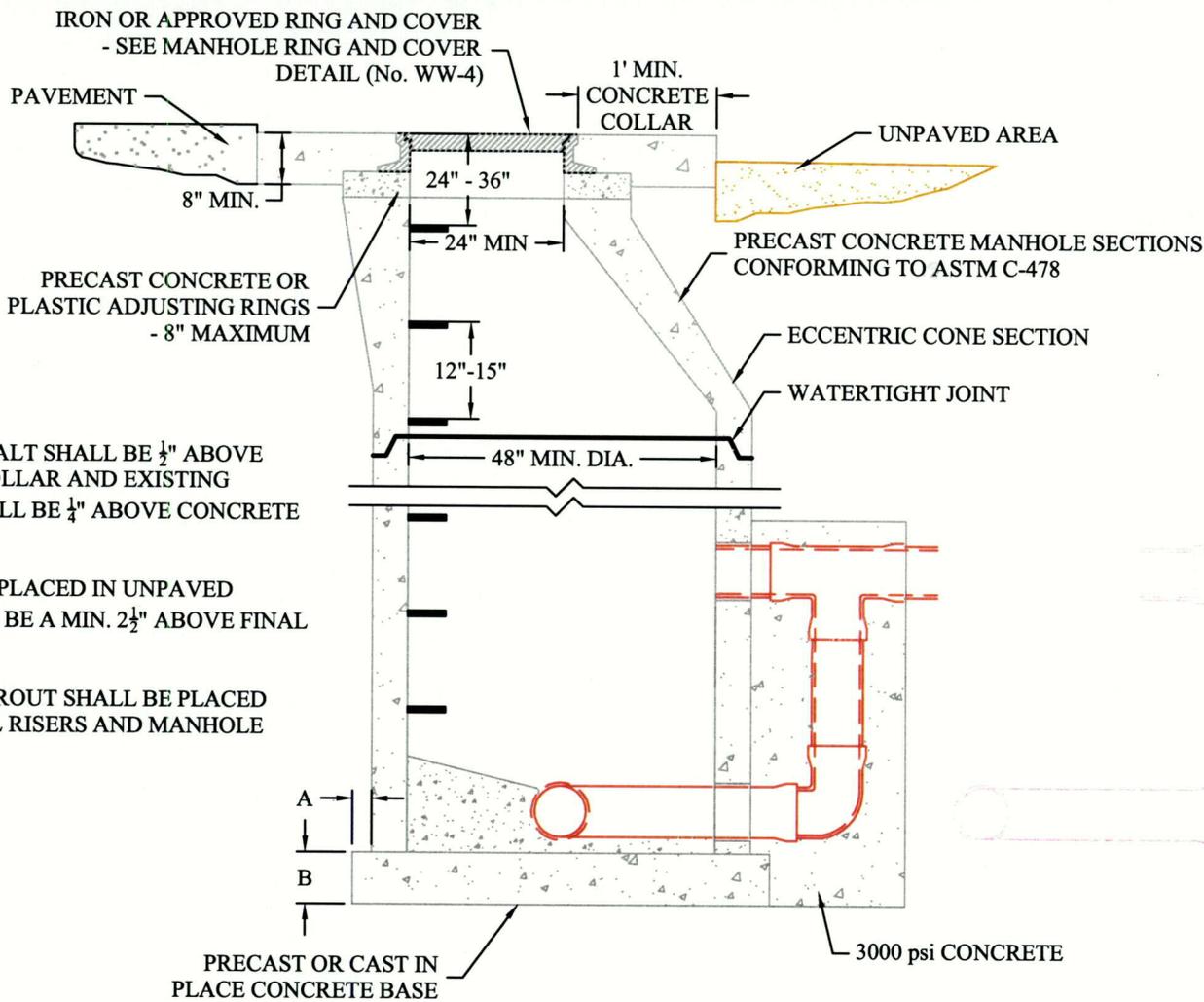
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DROP MANHOLE DETAIL
INSIDE DROP

Scale: N.T.S.

WW-1

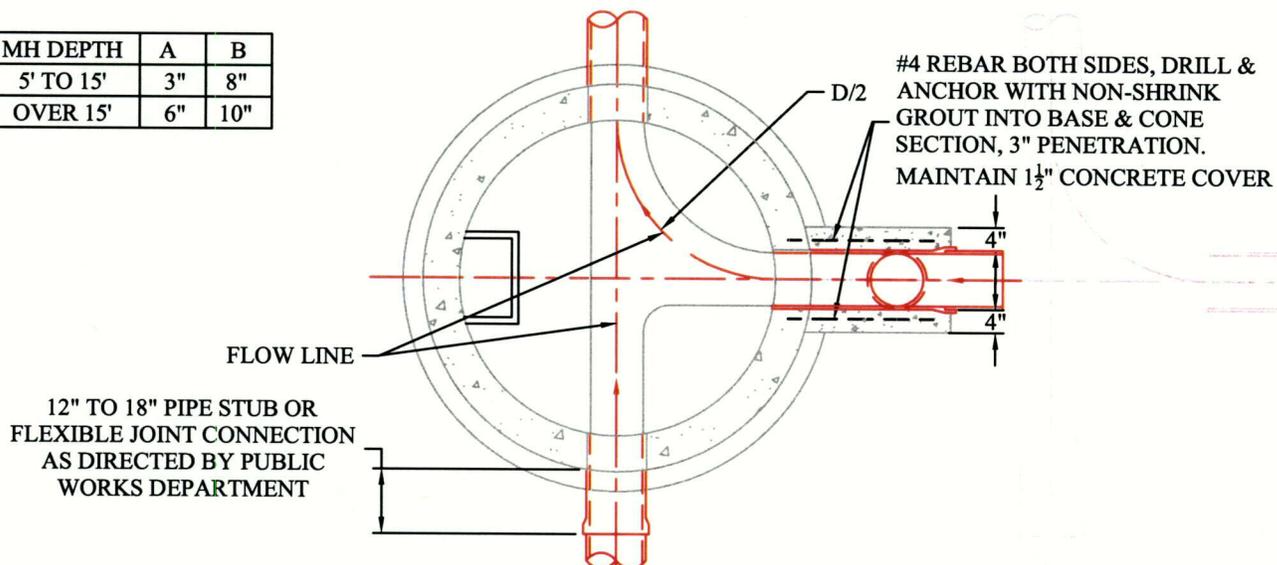
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NOTE:

1. NEW ASPHALT SHALL BE $\frac{1}{2}$ " ABOVE CONCRETE COLLAR AND EXISTING ASPHALT SHALL BE $\frac{1}{4}$ " ABOVE CONCRETE COLLAR
2. MANHOLE PLACED IN UNPAVED AREAS SHALL BE A MIN. $2\frac{1}{2}$ " ABOVE FINAL GRADE
3. CEMENT GROUT SHALL BE PLACED BETWEEN ALL RISERS AND MANHOLE RING

MH DEPTH	A	B
5' TO 15'	3"	8"
OVER 15'	6"	10"



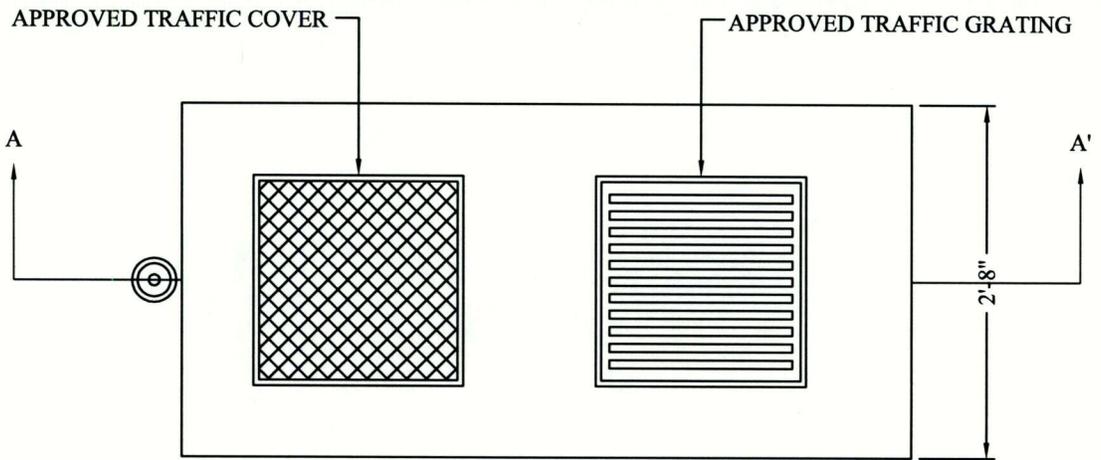
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**DROP MANHOLE DETAIL
OUTSIDE DROP**

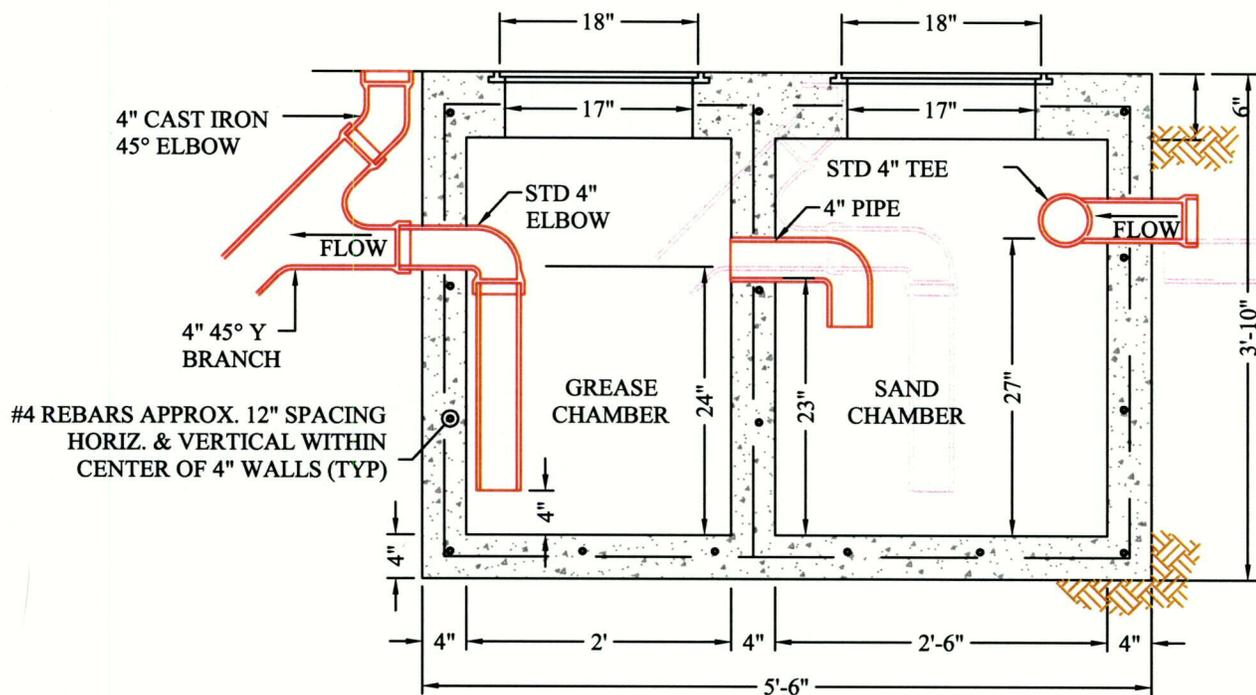
Scale: N.T.S.

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PLAN



SECTION A-A'

NOTES:

1. DIMENSIONS SHOWN ARE MINIMUM. PROPER SIZING TO BE DETERMINED BY CALCULATION, SUBJECT TO APPROVAL OF CITY ENGINEER
2. RESPONSIBILITY FOR CLEANING & MAINTENANCE BELONGS TO THE PROPERTY OWNER
3. AN ALTERNATE GREASE INTERCEPTOR DEVICE OF STANDARD MANUFACTURE MAY BE SUBSTITUTED FOR THAT SHOWN ABOVE, SUBJECT TO APPROVAL OF THE CITY CHIEF BUILDING OFFICIAL

THIS STANDARD APPLIES TO:

1. RESTAURANTS
2. AUTOMOTIVE GARAGES
3. CAR WASHES
4. OTHER, AS DETERMINED BY THE CITY CHIEF BUILDING OFFICIAL



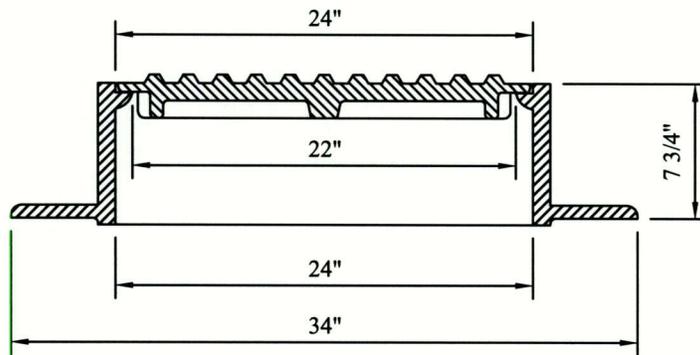
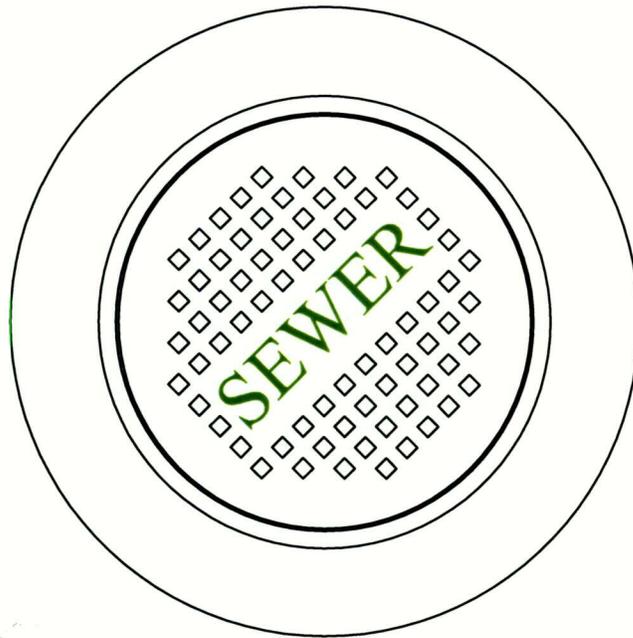
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GREASE AND SAND
INTERCEPTOR DETAIL

Scale: N.T.S.

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NOTES:

1. RING AND COVER SHALL BE IRON (AS MANUFACTURED FOR CURRENT AWWA STANDARD) AND AS APPROVED BY THE PUBLIC WORKS DEPARTMENT
2. COVER SHALL BE NONPERFORATED WITH "SEWER" CAST ON THE TOP OF THE LID FOR SANITARY SEWER MANHOLES
3. COVER SHALL BE BOLTED, WATER RESISTANT IF LOCATED IN 100 YEAR FLOOD PLAIN



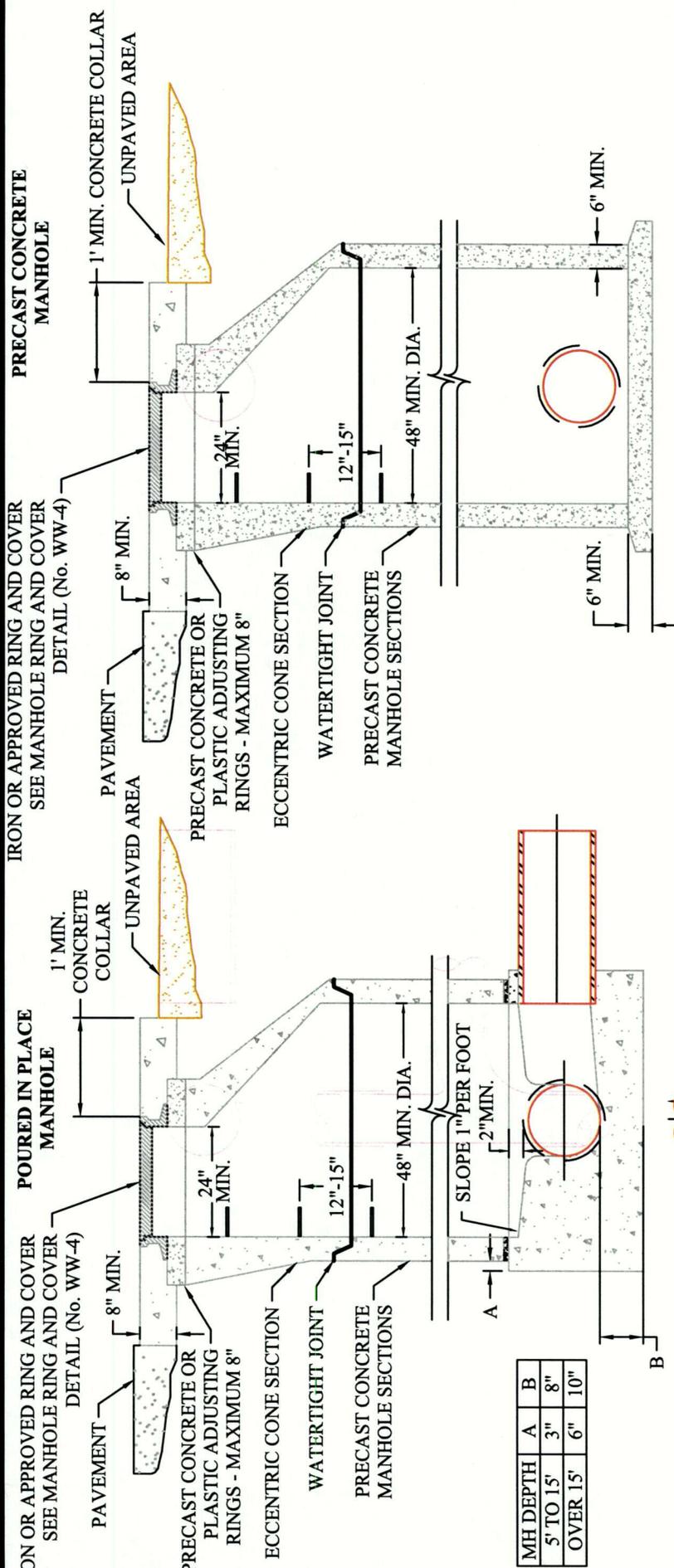
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MANHOLE RING AND
COVER DETAIL
SANITARY SEWER

Scale: N.T.S.

WW-4

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- NOTE:
- 1) NEW ASPHALT SHALL BE $\frac{1}{2}$ " ABOVE CONCRETE COLLAR AND EXISTING ASPHALT SHALL BE $\frac{1}{4}$ " ABOVE CONCRETE COLLAR
 - 2) MANHOLE PLACED IN UNPAVED AREAS SHALL BE A MIN. OF 2 $\frac{1}{2}$ " ABOVE FINAL GRADE. MANHOLE PLACED IN CULTIVATED AREAS SHALL BE A MIN. OF 3' BELOW GRADE WITH 6" BALLARD INDICATING OFFSET DISTANCE AND DIRECTION
 - 3) CEMENT GROUT SHALL BE PLACED BETWEEN ALL RISERS AND MANHOLE RING
 - 4) THE FIRST STEP IN THE MANHOLE SHALL BE BETWEEN 24" & 36" FROM THE TOP OF MANHOLE COVER

MH DEPTH	A	B
5' TO 15'	3"	8"
OVER 15'	6"	10"

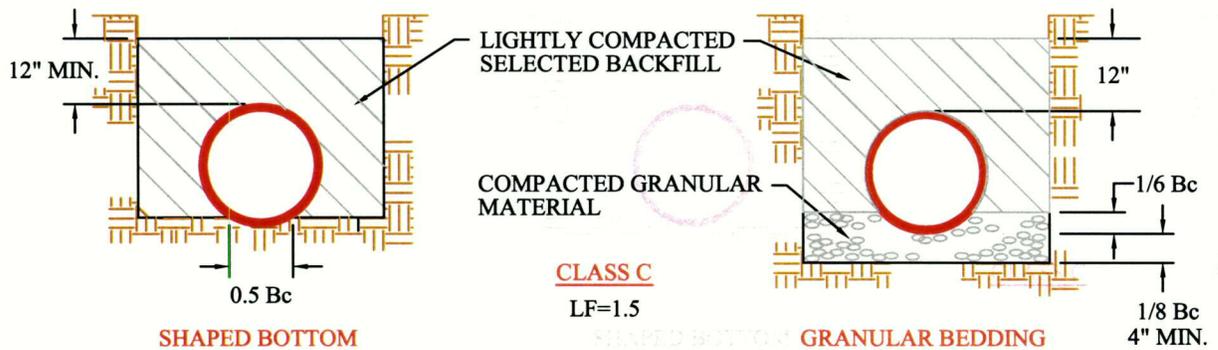
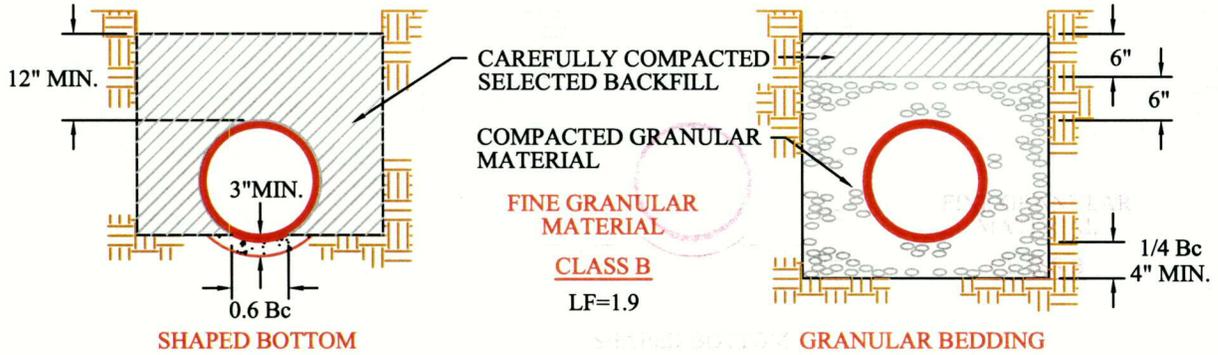
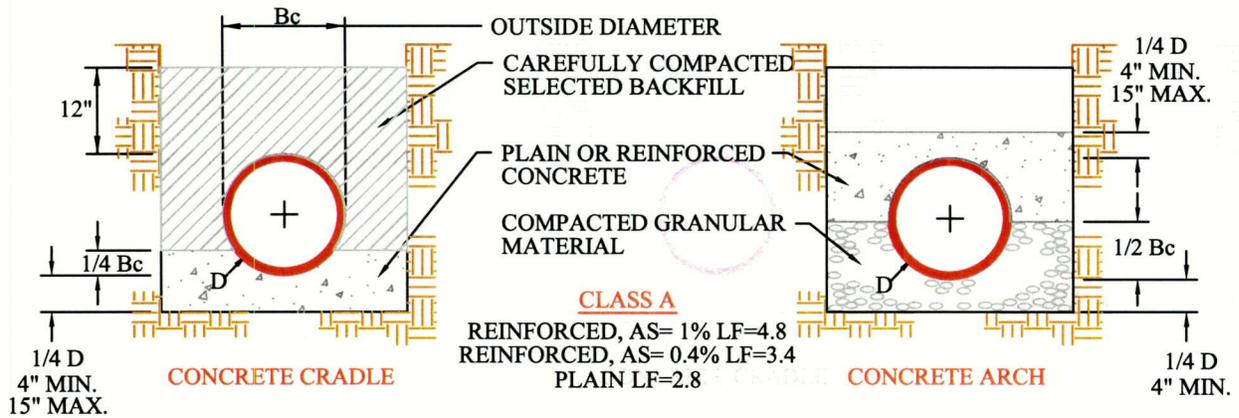
MANHOLE DETAIL



Scale: N.T.S.

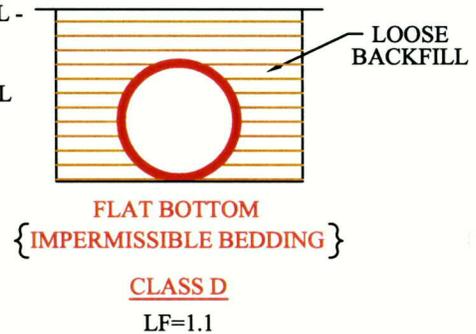
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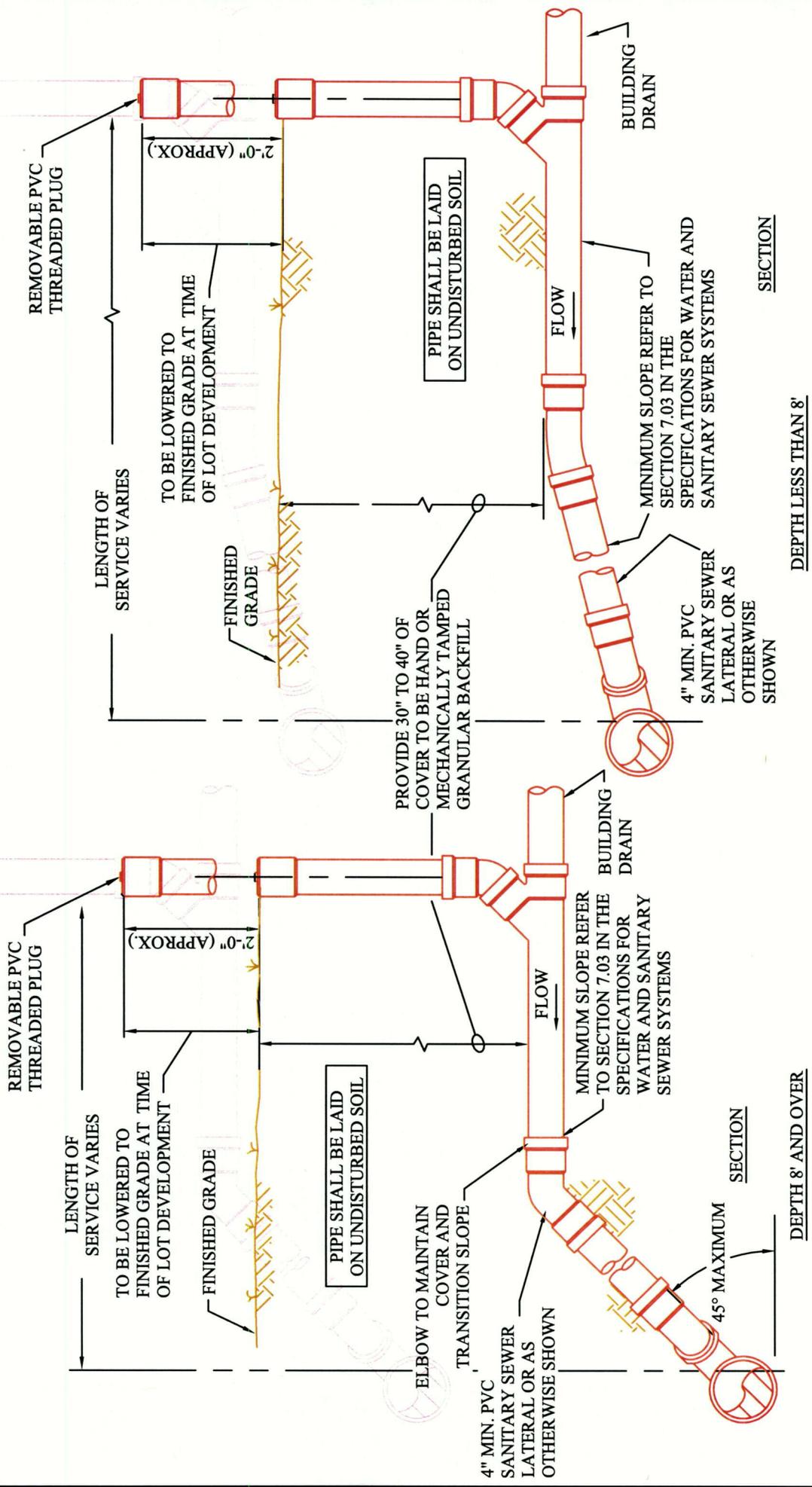
NOTES:

1. MINIMUM DENSITY FOR CAREFULLY COMPACTED SELECT BACKFILL SHALL BE 95% OF MAXIMUM OR AS SPECIFIED FOR THE TRENCH BACKFILL - WHICHEVER IS GREATER
2. MINIMUM DENSITY FOR LIGHTLY COMPACTED SELECT BACKFILL SHALL BE AS SPECIFIED FOR THE TRENCH BACKFILL
3. COMPACT GRANULAR MATERIAL BY SLICING WITH A SHOVEL AROUND PIPE. WHEN BEDDING IS 6" OVER PIPE, COMPACT WITH VIBRATING COMPACTOR
4. PVC SEWER PIPE SHALL BE INSTALLED USING CLASS B GRANULAR BEDDING
5. LF = LOAD FACTOR



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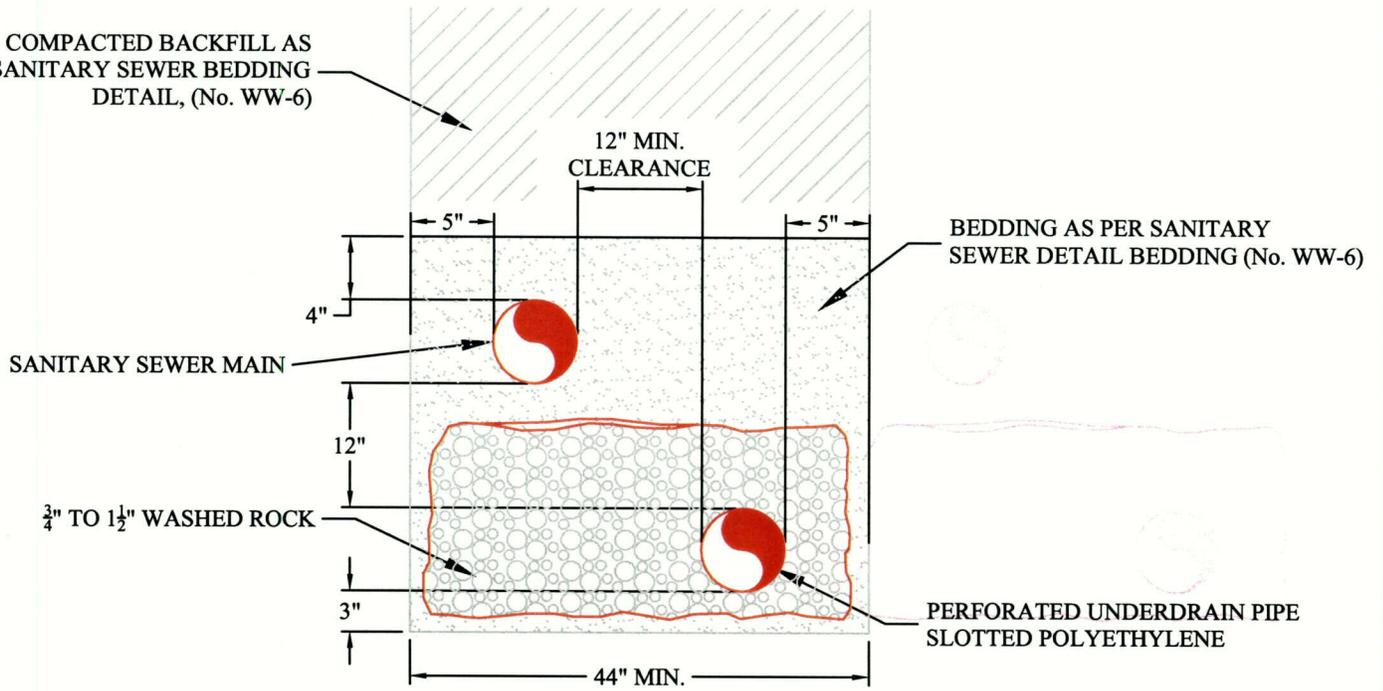
**SANITARY SEWER
 BEDDING DETAIL**



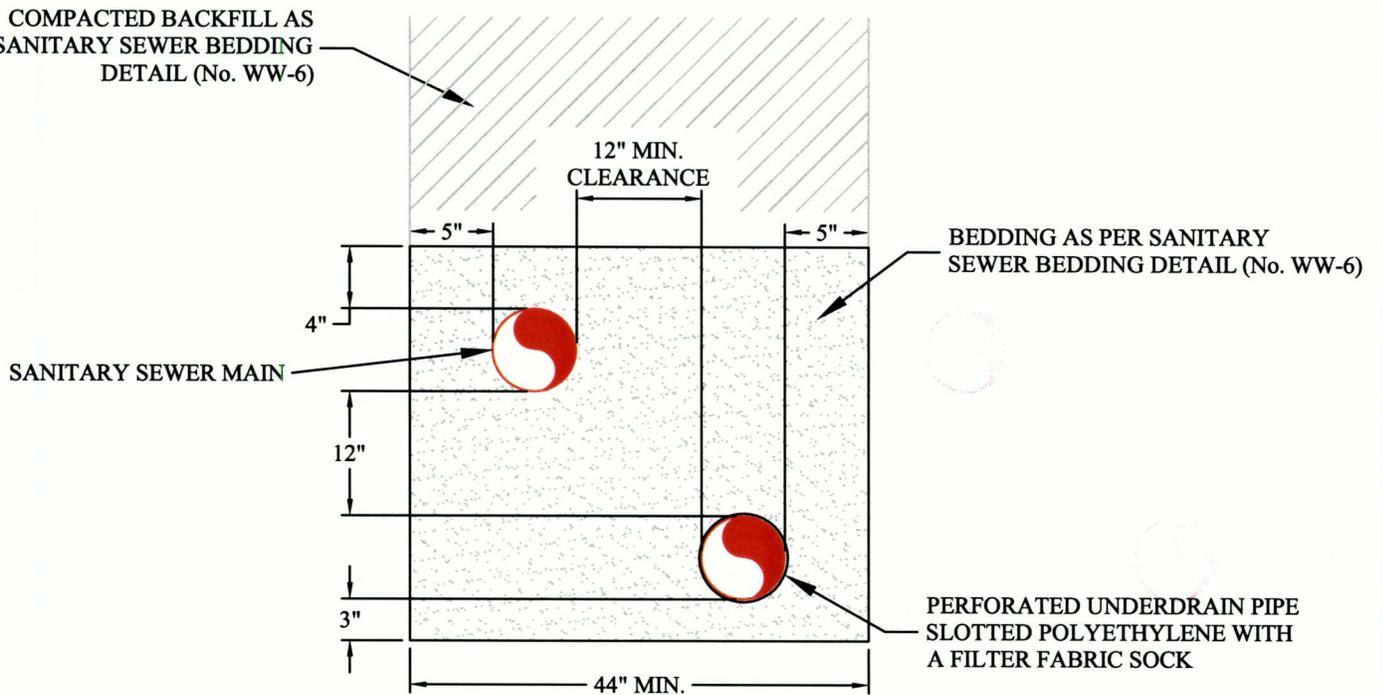
SANITARY SEWER CONNECTION DETAIL



COMPACTED BACKFILL AS PER SANITARY SEWER BEDDING DETAIL, (No. WW-6)



COMPACTED BACKFILL AS PER SANITARY SEWER BEDDING DETAIL (No. WW-6)



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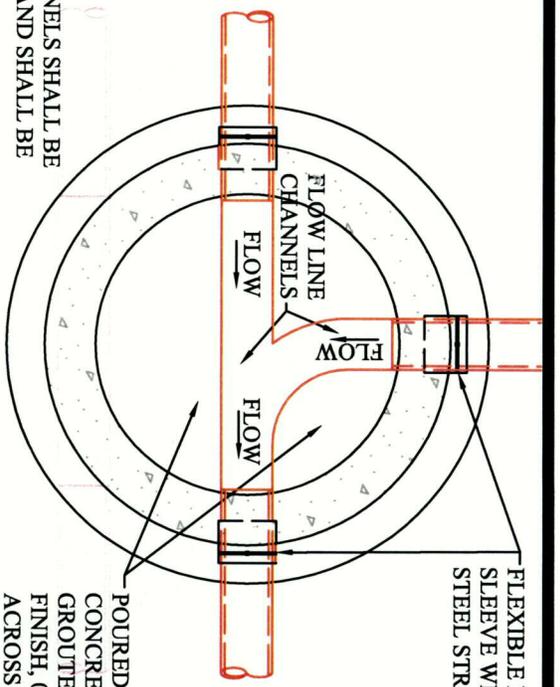
SANITARY SEWER LINE & UNDERDRAIN TRENCH CROSS-SECTION SHOWING HORIZONTAL AND VERTICAL OFFSETS

Scale: N.T.S.

WW-8

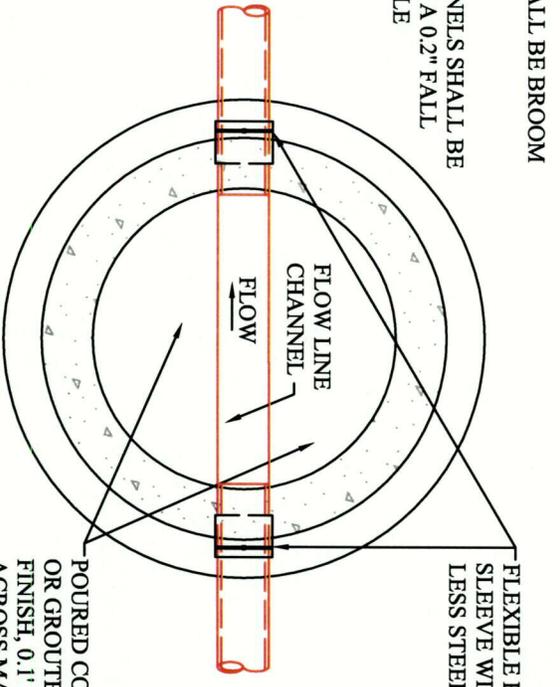
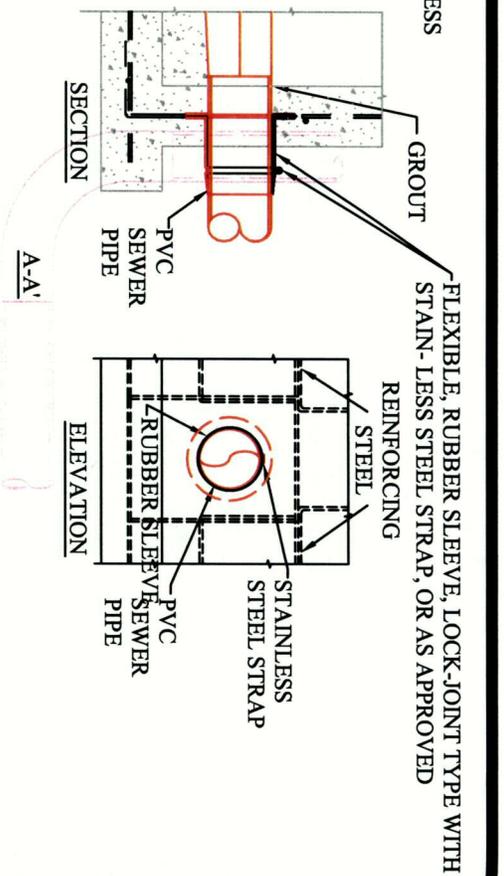
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- NOTES:
1. FLOW LINE CHANNELS SHALL BE POURED CONCRETE AND SHALL BE TRAWL FINISHED
 2. ALL BENCHES SHALL BE BROOM FINISHED
 3. FLOW LINE CHANNELS SHALL BE CONSTRUCTED WITH A 0.2" FALL ACROSS THE MANHOLE



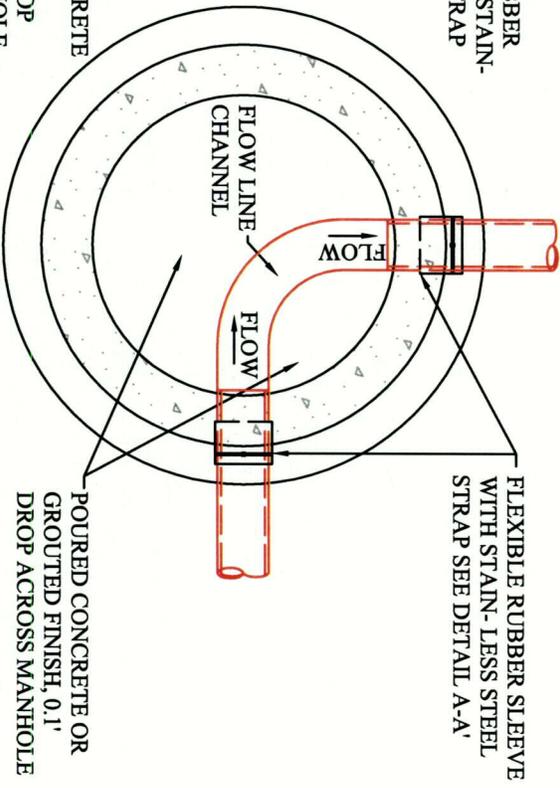
FLEXIBLE RUBBER SLEEVE WITH STAINLESS STEEL STRAP

POURED CONCRETE OR GROUTED FINISH, 0.1' DROP ACROSS MANHOLE



FLEXIBLE RUBBER SLEEVE WITH STAIN-LESS STEEL STRAP

POURED CONCRETE OR GROUTED FINISH, 0.1' DROP ACROSS MANHOLE



FLEXIBLE RUBBER SLEEVE WITH STAIN-LESS STEEL STRAP SEE DETAIL A-A'

POURED CONCRETE OR GROUTED FINISH, 0.1' DROP ACROSS MANHOLE



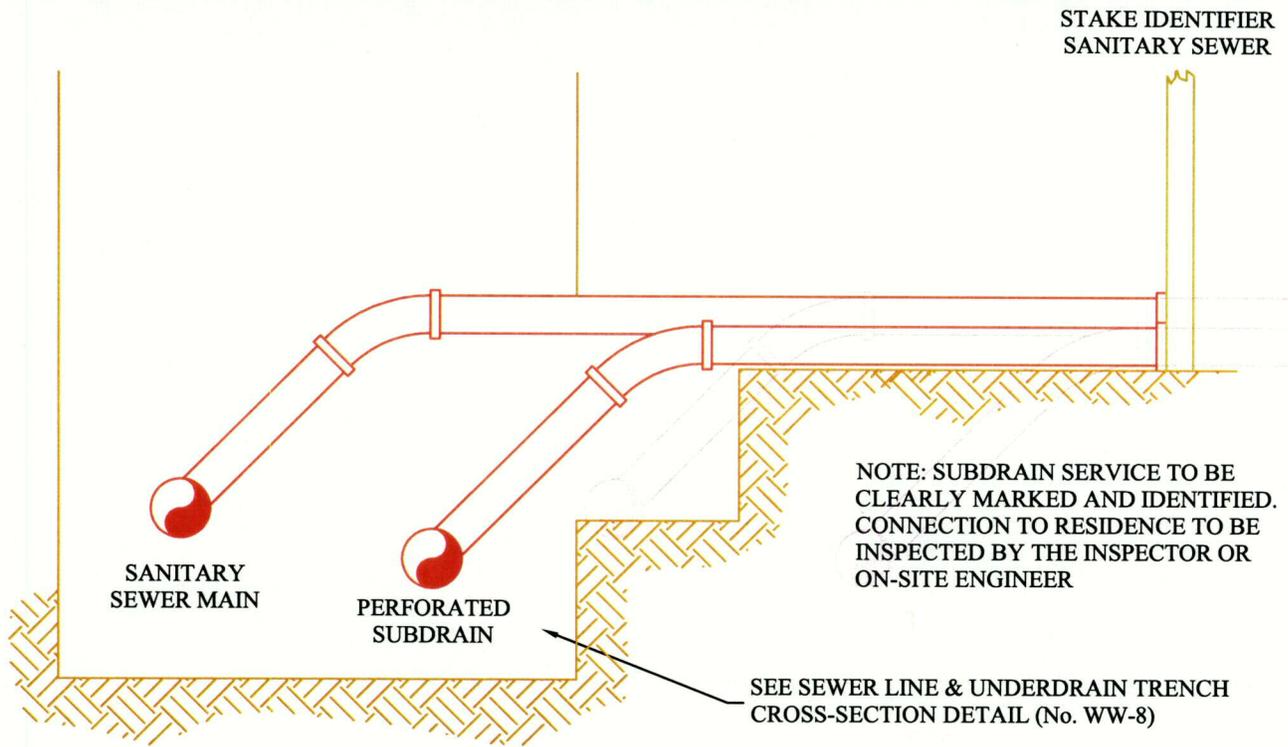
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SANITARY SEWER FLOW LINE CHANNEL DETAIL

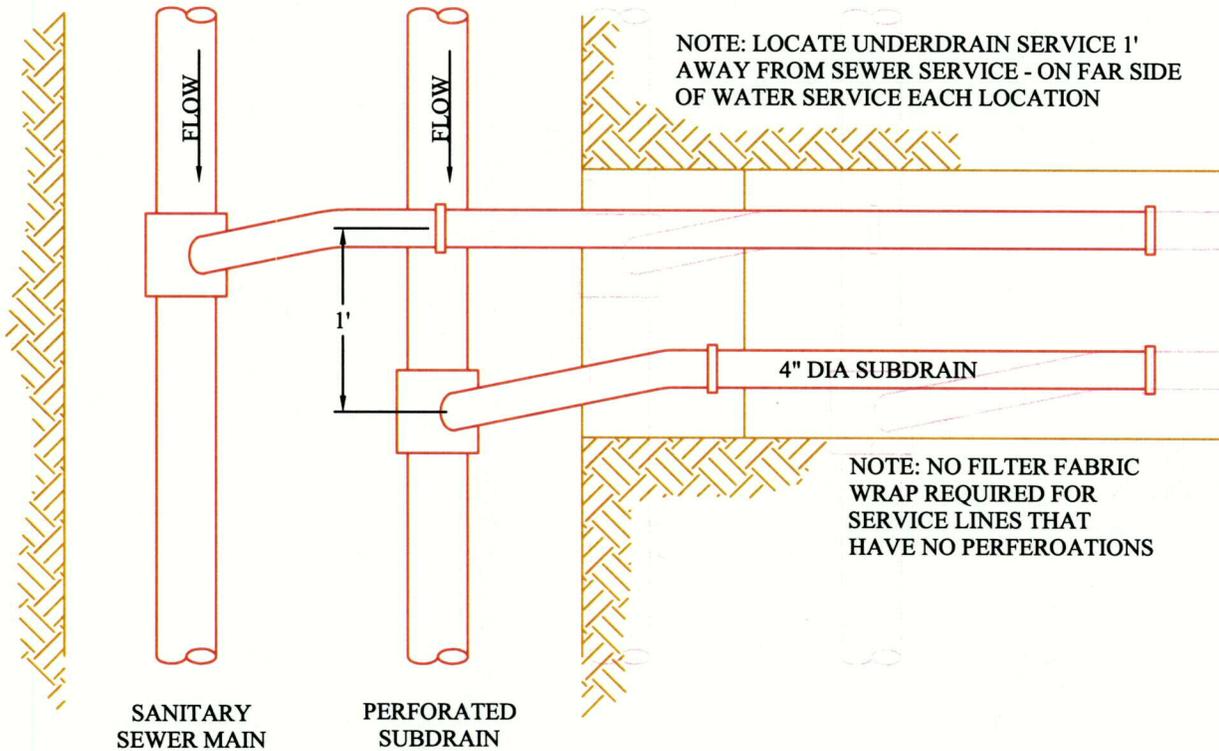
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CROSS-SECTION VIEW



PLAN VIEW



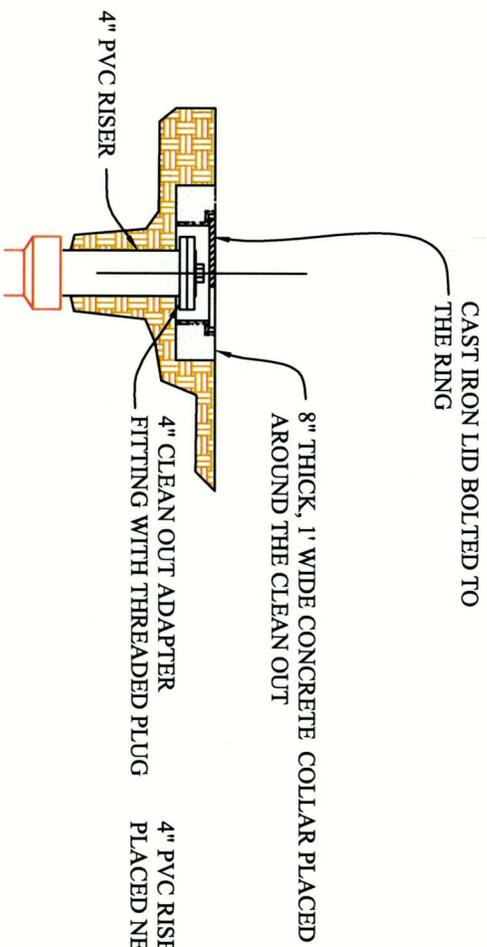
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SERVICE Y
DETAIL

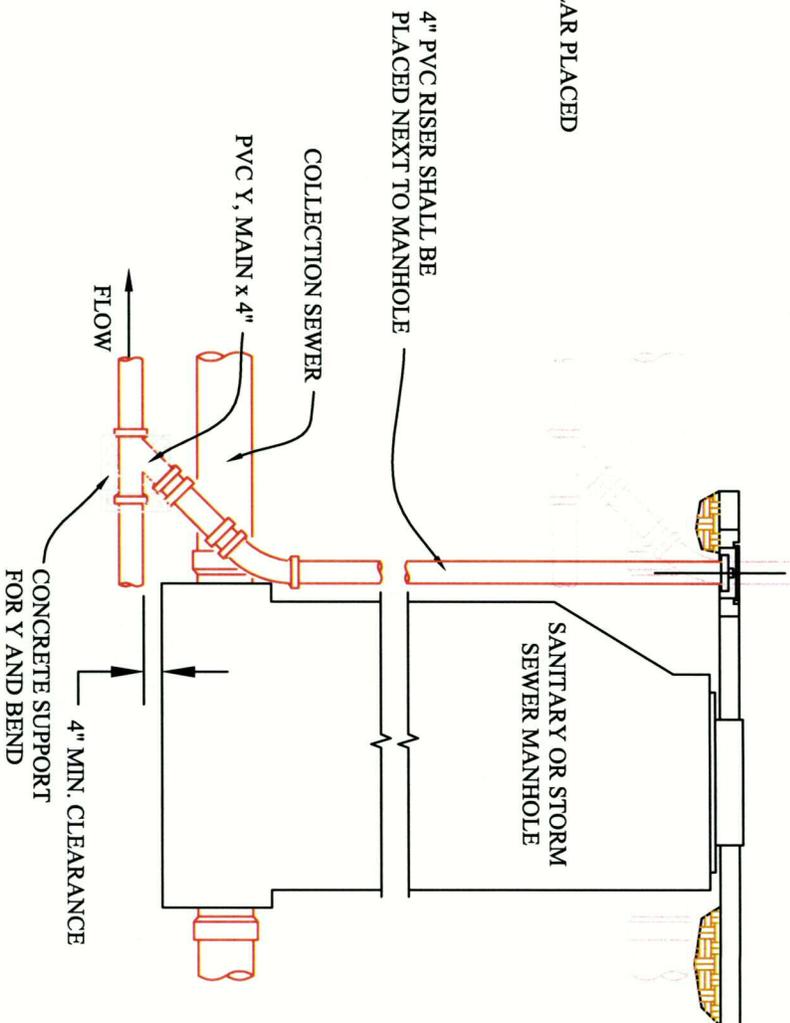
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NOTE:
 UNDERDRAIN CLEAN OUTS SHALL BE LOCATED AT EACH SANITARY SEWER MANHOLE



UNDERDRAIN CLEANOUT
 DETAIL



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Scale: N.T.S.

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