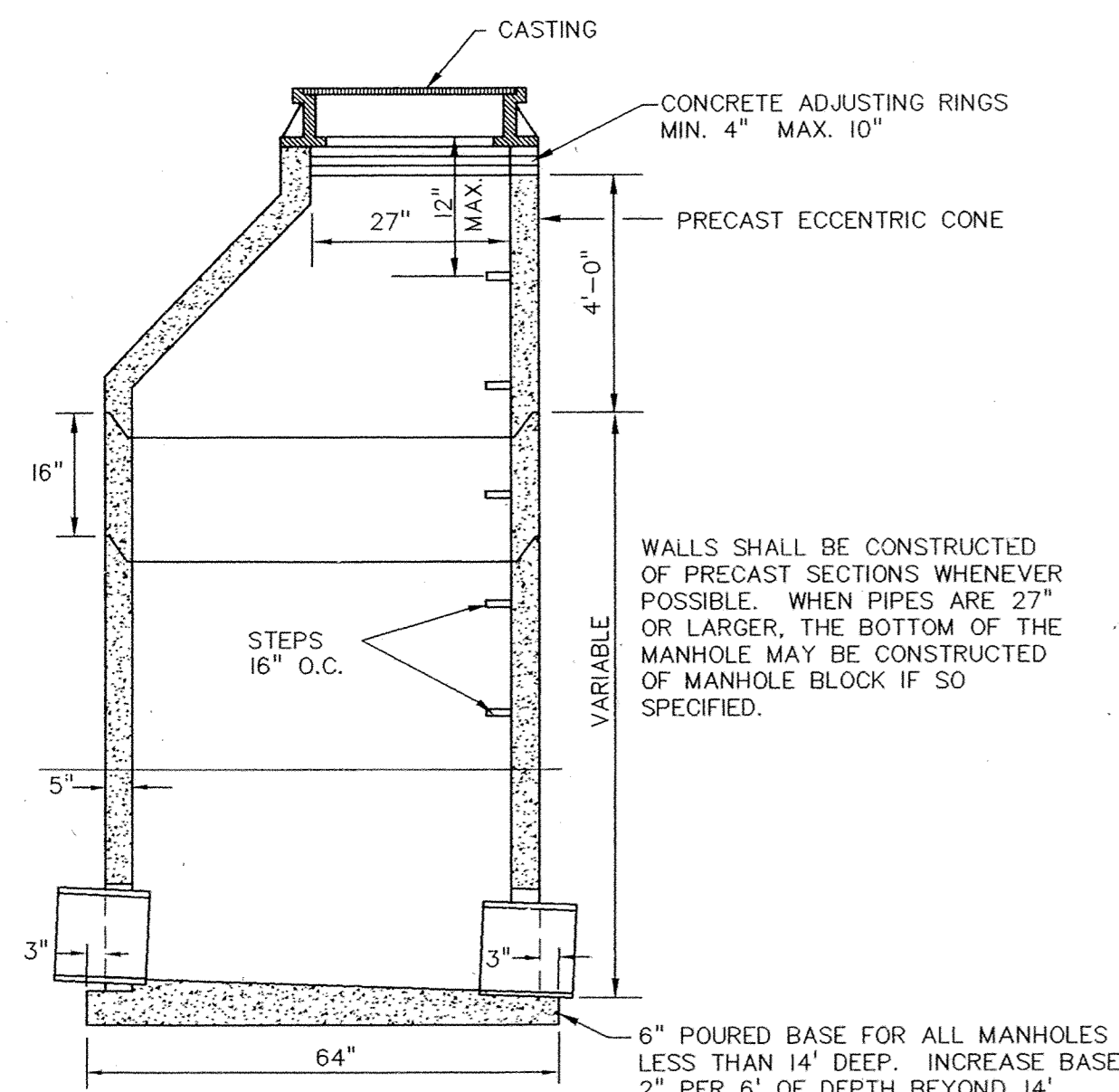
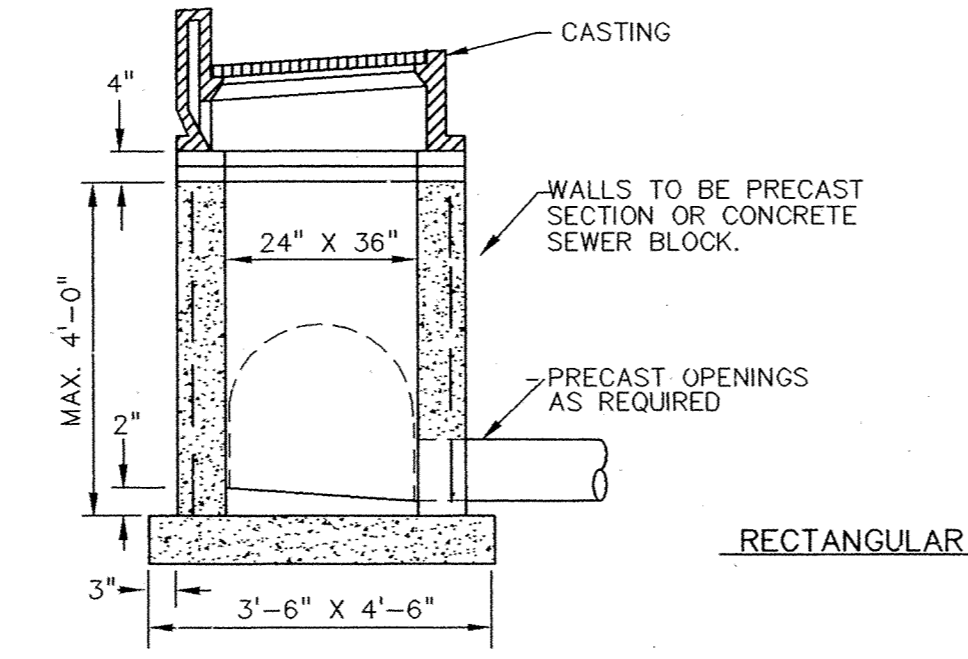


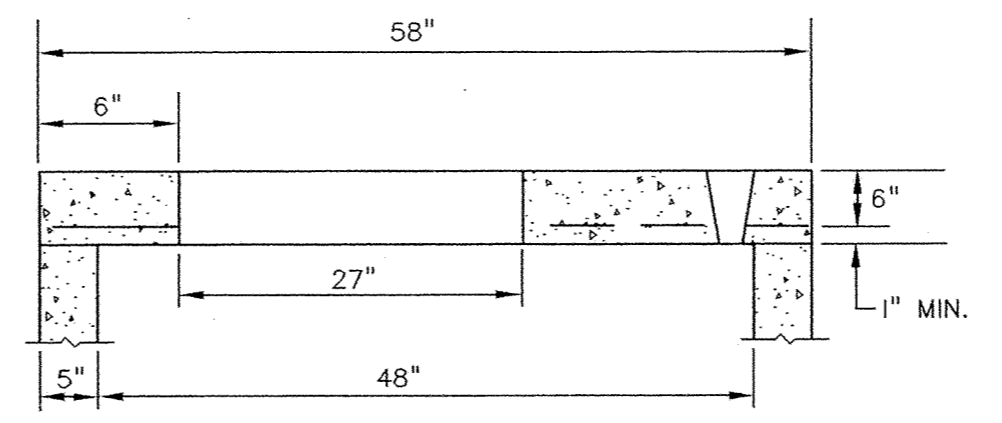
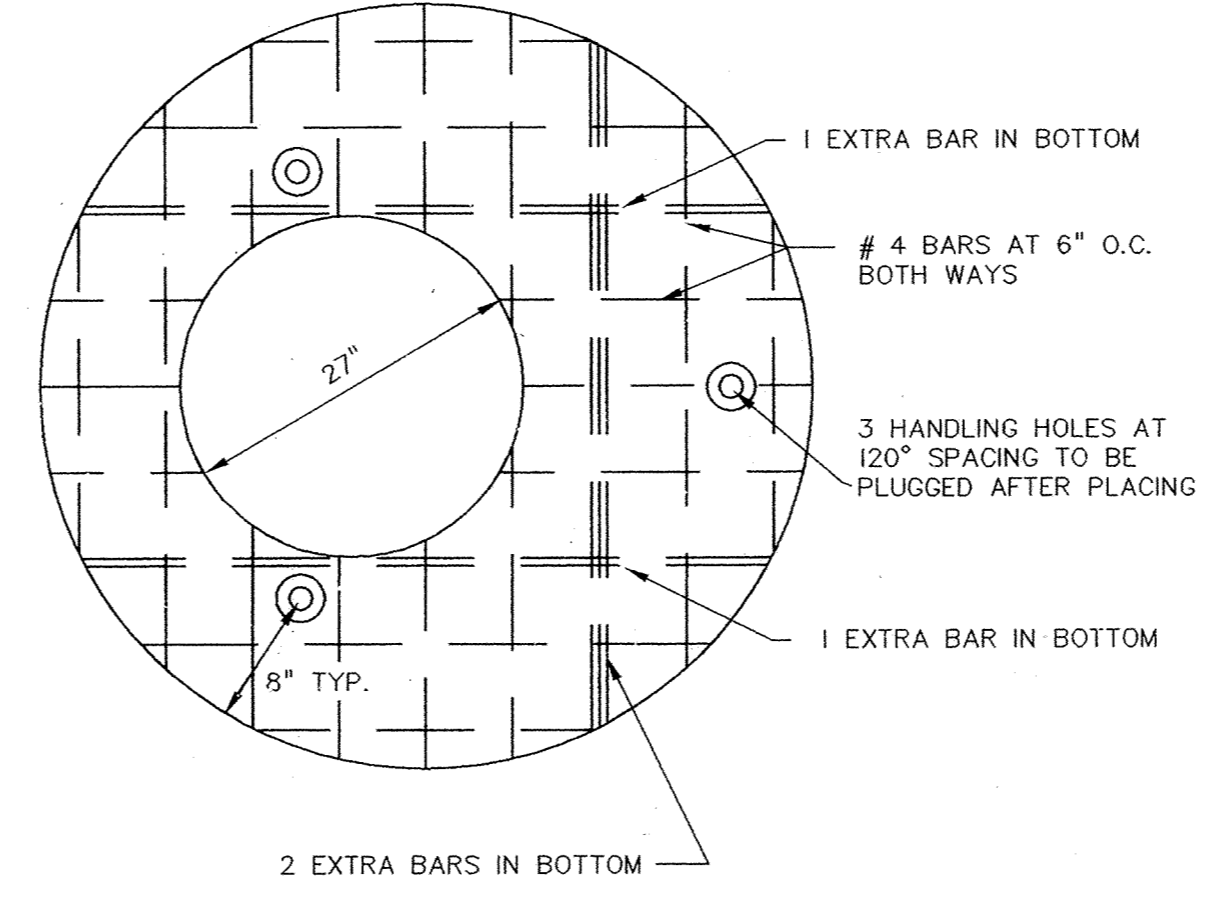
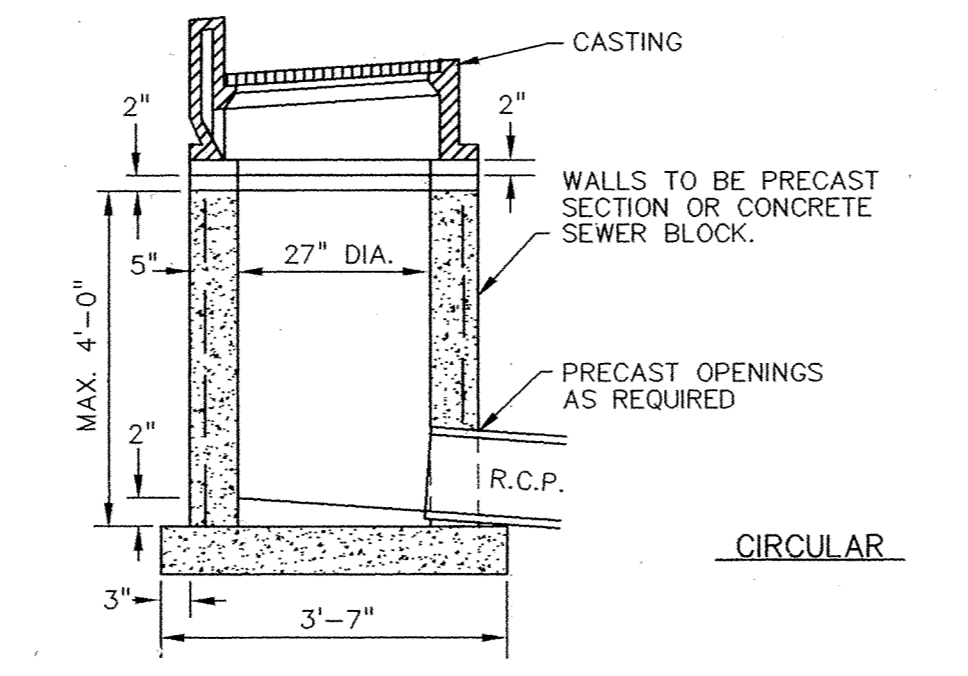
# RECORD DRAWINGS



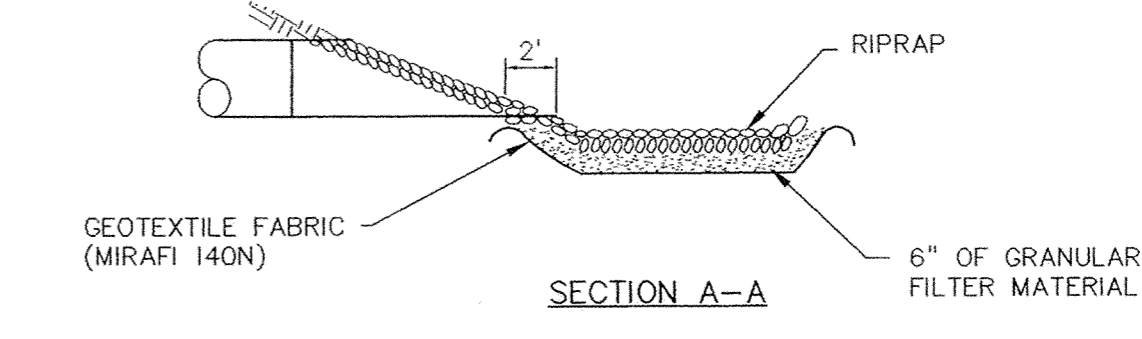
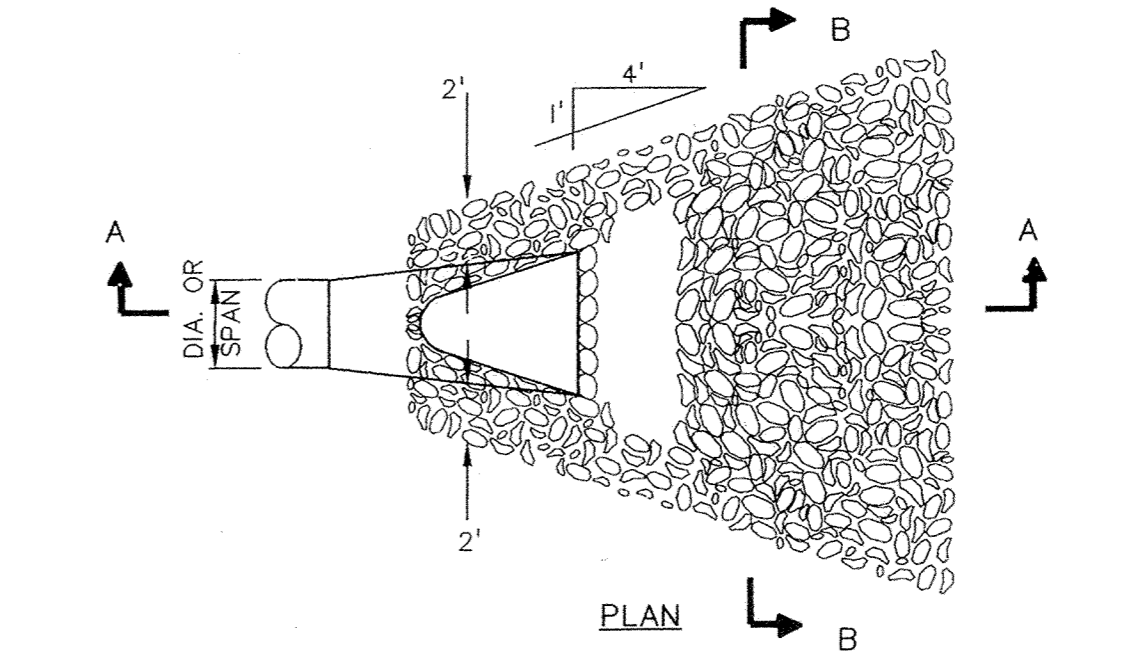
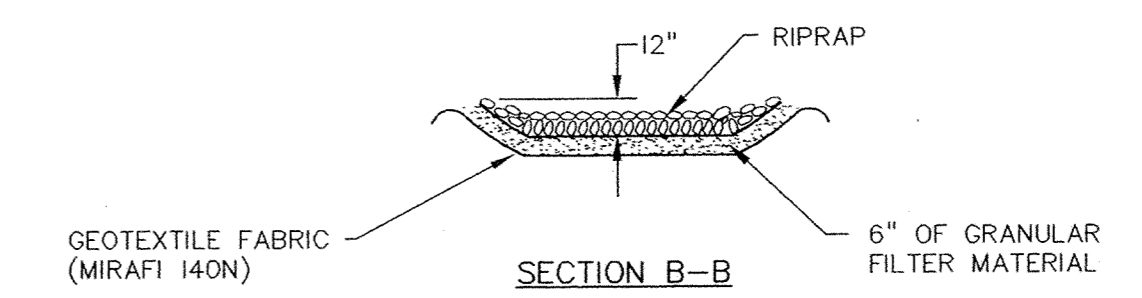
- NOTES:**
1. WHEN MANHOLE DEPTH IS LESS THAN 8' OR CASTING IS RECTANGULAR, A SLAB TOP SHALL BE USED IN PLACE OF THE CONE. THE SLAB SHALL BE SUITABLE FOR AASHTO HS 20 HIGHWAY LOADINGS. THE SLAB SHALL BE ON A MORTAR BED.
  2. MANHOLE INVERT SHALL BE SLOPED TO PROVIDE SMOOTH FLOW FROM INLET TO OUTLET.
  3. MANHOLE JOINTS MAY BE MADE WITH CEMENT MORTAR INSIDE AND OUT.



- NOTE:**
1. CONCRETE ADJUSTING RINGS, MIN. 4" MAX 10" NO MINIMUM WITH FINAL ADJUSTMENT.
  2. CONCRETE BASE SHALL 6" POURED IN PLACE OR 5" PRECAST SLAB.



NOTE: SLAB SHALL BE DESIGNED FOR AASHTO, H. S. 20 LIVE LOADS.

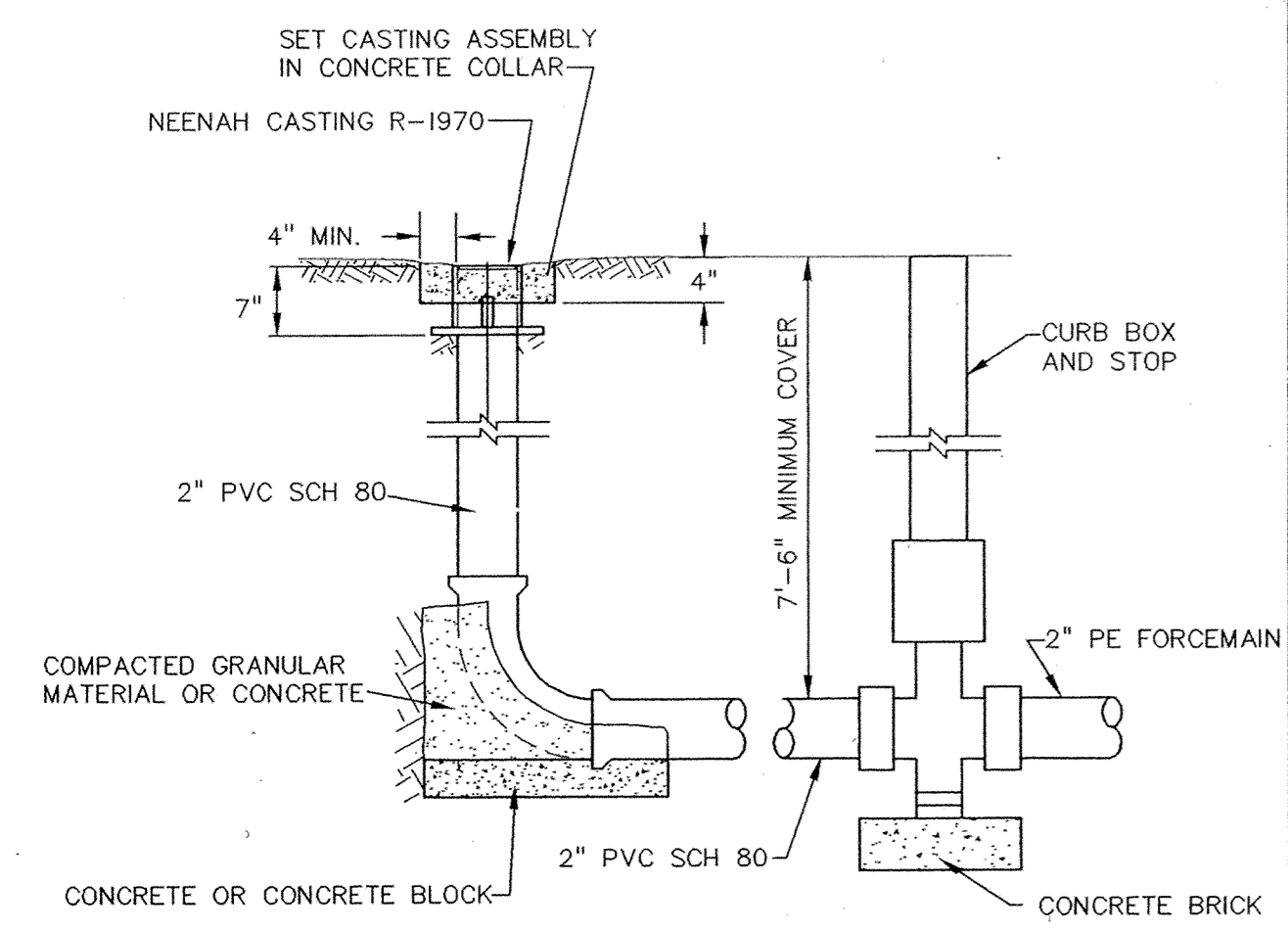


STANDARD STORM SEWER MANHOLE (D-01)

SHALLOW MANHOLE OR CATCH BASIN - STORM SEWER (D-03)

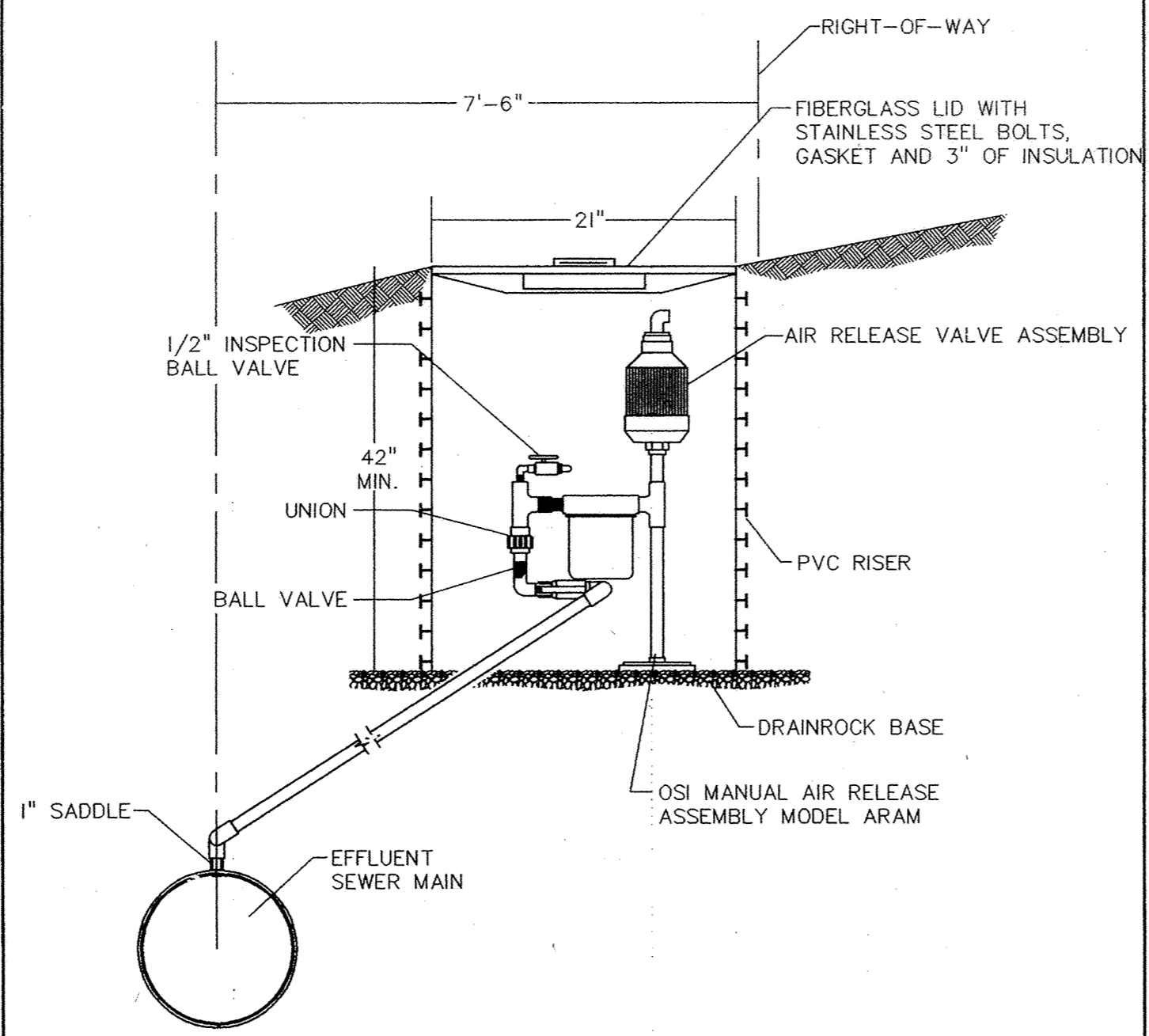
STANDARD CIRCULAR MANHOLE SLAB TOP (D-04)

RANDOM RIPRAP (D-10)

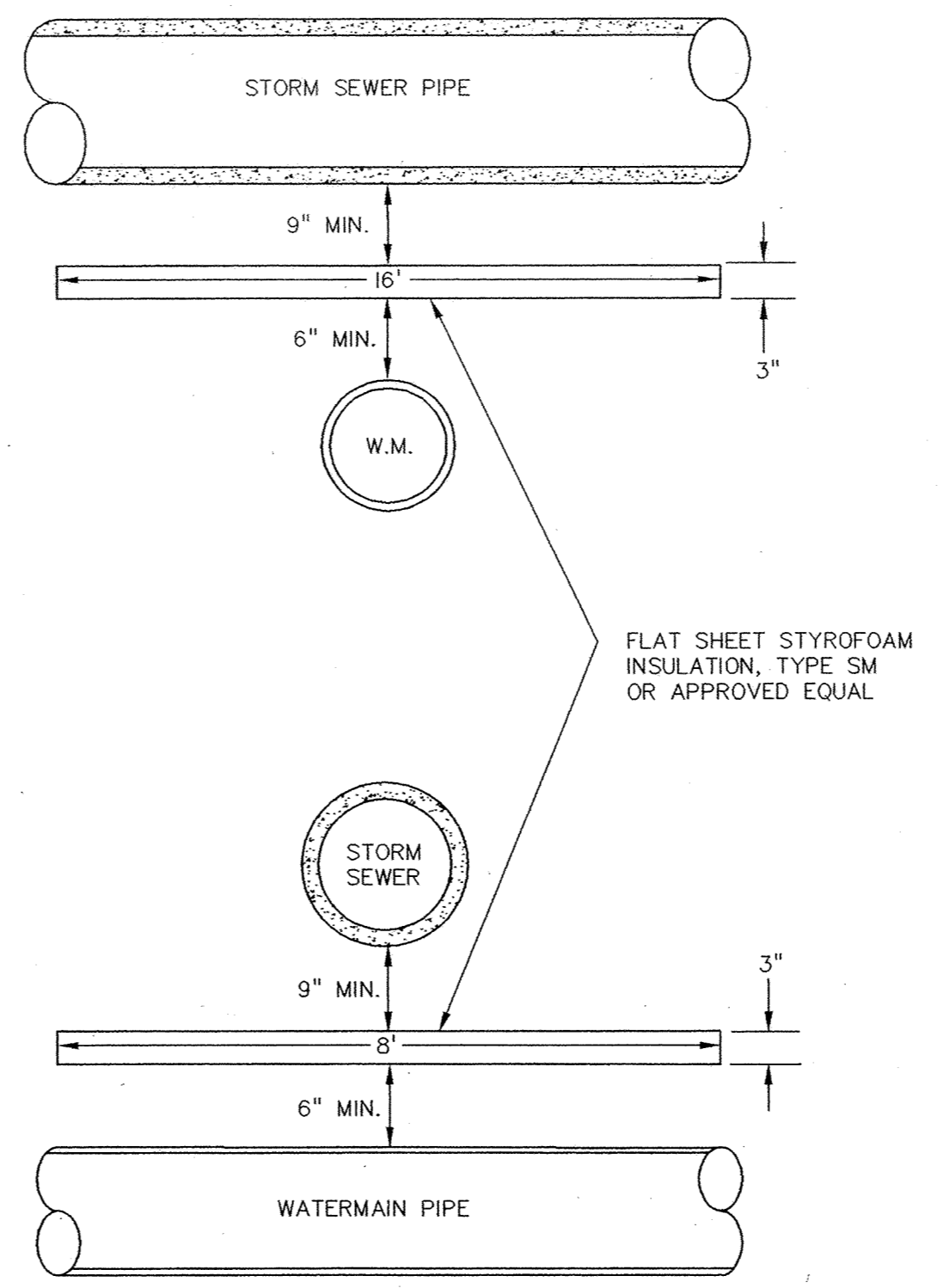


END OF LINE CLEANOUT

CLEANOUTS

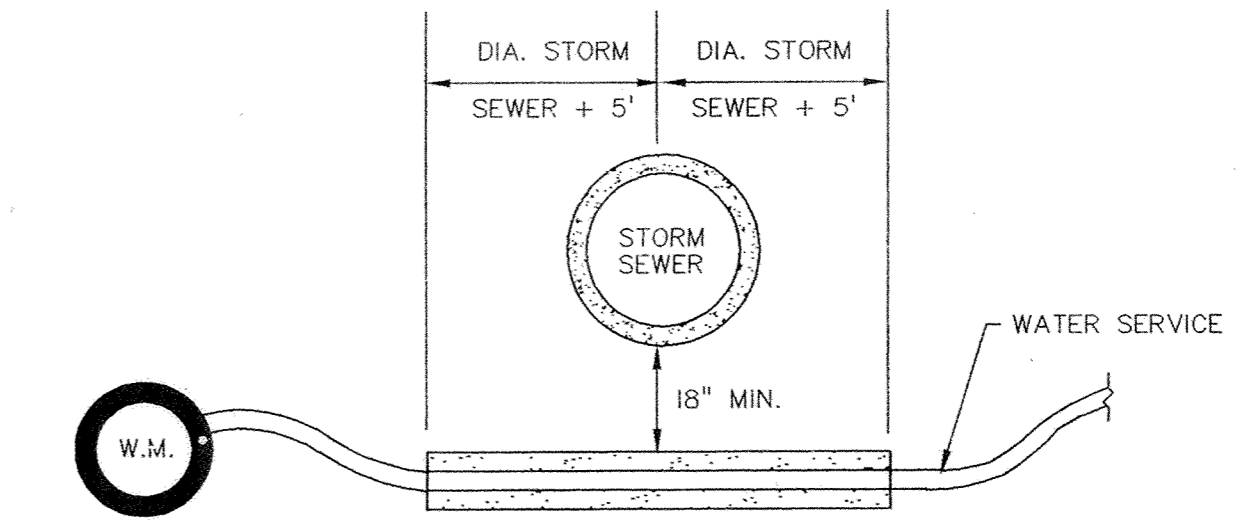


AIR RELEASE ASSEMBLY



TYPICAL WATERMAIN INSULATION

(W-06)



TYPICAL SERVICE INSULATION

(W-07)

**John Oliver & Associates, Inc.**  
 Civil Engineering, Land Surveying, Land Planning  
 580 Dodge Avenue  
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 and Brooklyn Park, Minnesota

**THE RIDGES OF RICE LAKE**  
 ELK RIVER, MN  
**DYNAMICS DESIGN & LAND CO.**

DETAILS

SHEET NO.  
**15** OF **16**