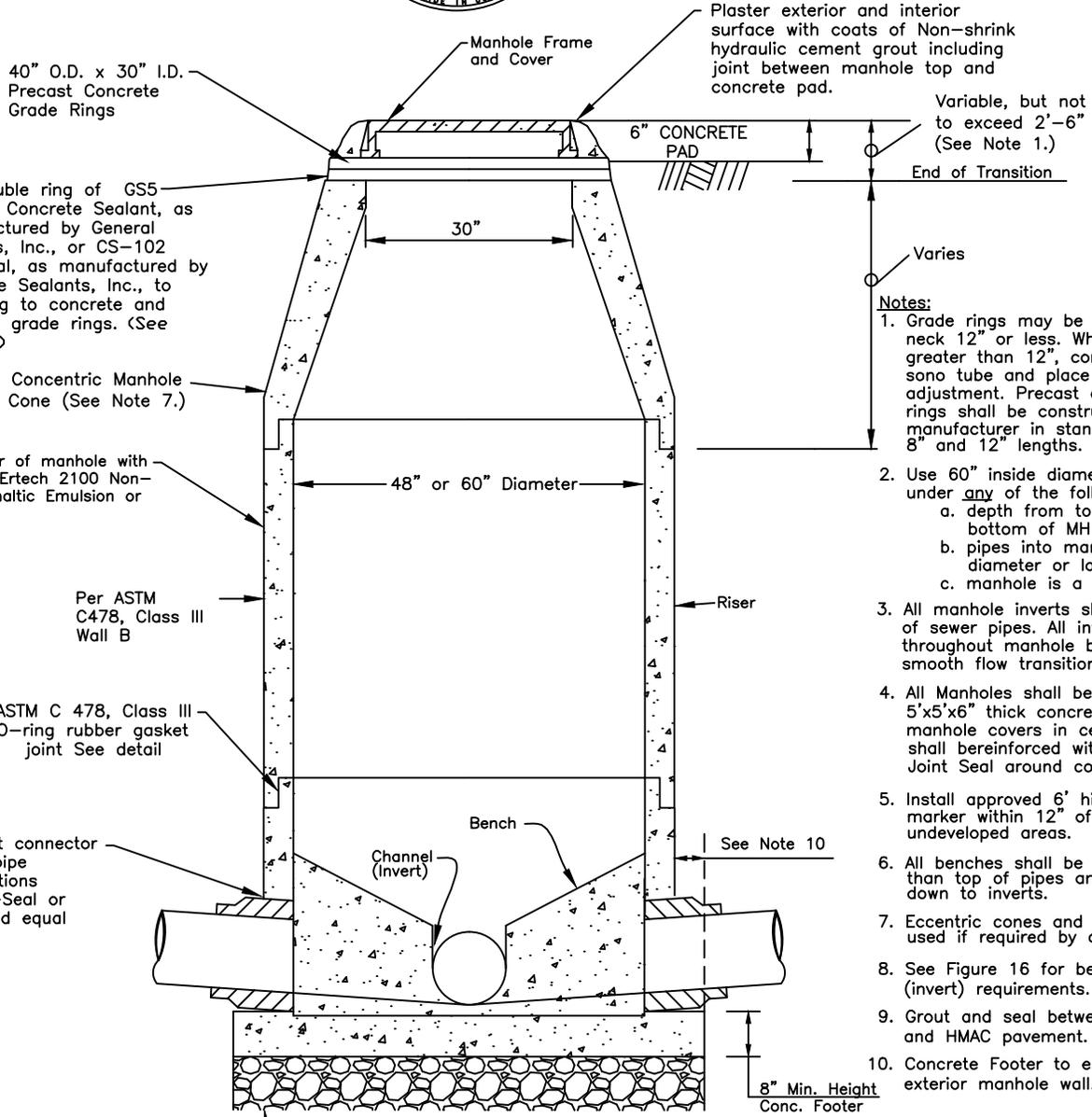




32" Ductile Iron Manhole Frame and Cover. Match top of cover with pavement or set cover up to 1/4" (max.) above finished grade in residential area. See figures 20 and 21 for manhole frame and cover details.

Manholes constructed within 100 year flood plain shall have watertight ring and lid.



Use double ring of GS5 Precast Concrete Sealant, as manufactured by General Sealants, Inc., or CS-102 Con Seal, as manufactured by Concrete Sealants, Inc., to seal ring to concrete and between grade rings. (See Note 1.)

Coat exterior of manhole with 2 coats of Ertech 2100 Non-Fibered Asphaltic Emulsion or equal.

Per ASTM C478, Class III Wall B

ASTM C 478, Class III O-ring rubber gasket joint See detail

Resilient connector at all pipe penetrations Kor-N-Seal or approved equal

Plaster exterior and interior surface with coats of Non-shrink hydraulic cement grout including joint between manhole top and concrete pad.

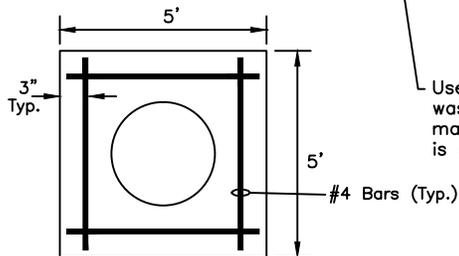
Variable, but not to exceed 2'-6" (See Note 1.)

End of Transition

Varies

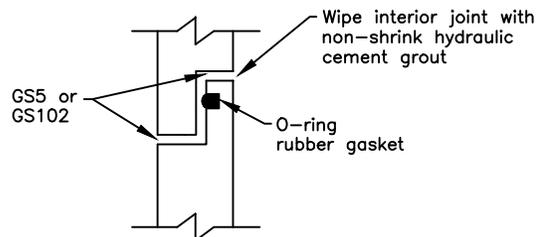
**Notes:**

1. Grade rings may be used to adjust neck 12" or less. When adjustment is greater than 12", contractor shall use sono tube and place concrete for neck adjustment. Precast concrete grade rings shall be constructed by manufacturer in standard 2", 3", 6", 8" and 12" lengths.
2. Use 60" inside diameter manholes under any of the following:
  - a. depth from top of cover to bottom of MH is 10' or greater
  - b. pipes into manhole are 15" diameter or larger
  - c. manhole is a drop manhole
3. All manhole inverts shall be full depth of sewer pipes. All inverts shall extend throughout manhole bottom and provide smooth flow transitions.
4. All Manholes shall be installed with 5"x5"x6" thick concrete pad with manhole covers in center of pad. Pads shall be reinforced with four # 4 rebars. Joint Seal around concrete pads.
5. Install approved 6' high fiberglass MH marker within 12" of pad in undeveloped areas.
6. All benches shall be slightly higher than top of pipes and slope gently down to inverts.
7. Eccentric cones and flat tops may be used if required by owner.
8. See Figure 16 for bench and channel (invert) requirements.
9. Grout and seal between concrete pad and HMA pavement.
10. Concrete Footer to extend 6" from exterior manhole wall.



**MANHOLE PAD (6" thick)  
PLAN**

Use 6" min. layer of washed rock beneath manhole where ground water is encountered.



**JOINT DETAIL**

**FIGURE 17  
PRECAST CONCRETE  
SANITARY SEWER MANHOLE  
ARLINGTON WATER UTILITIES**