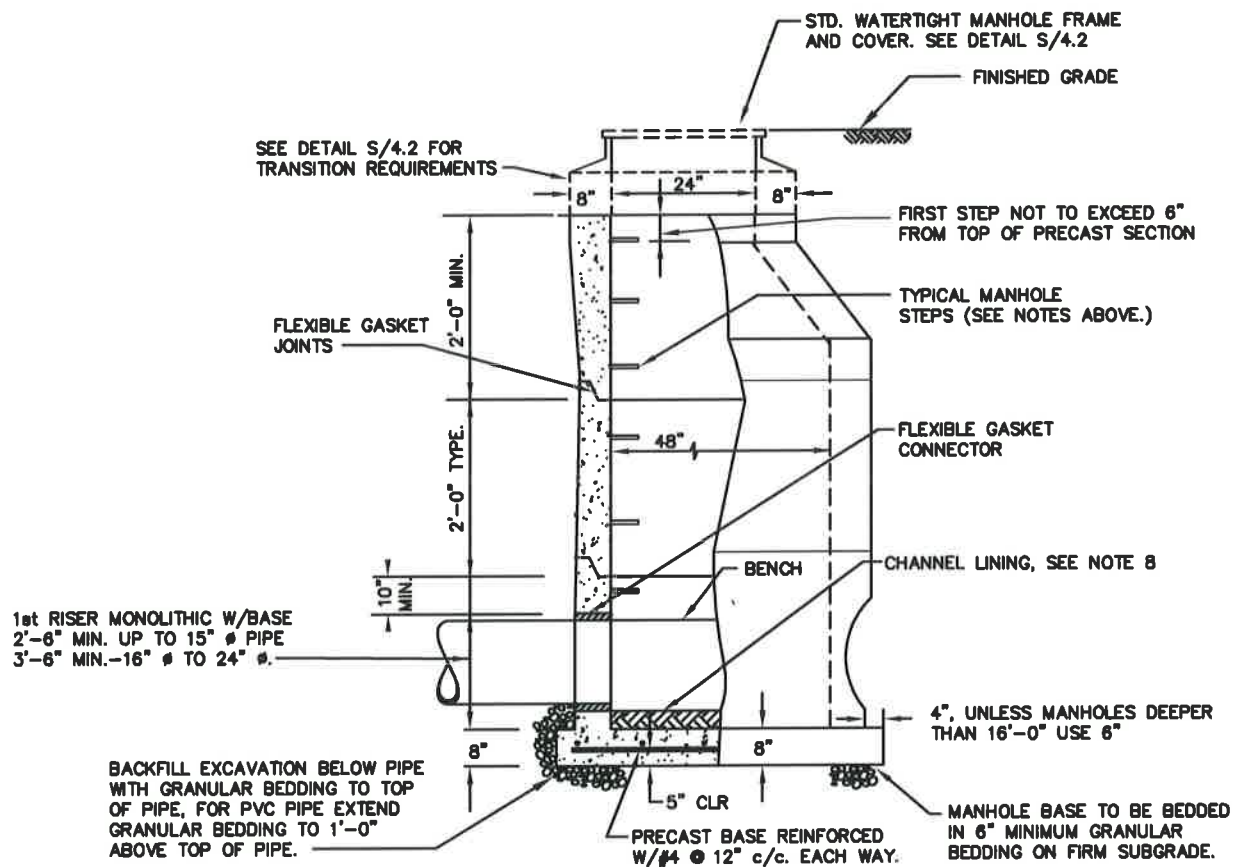


## NOTES: TYPICAL MANHOLE STEPS

- MANHOLE STEPS SHALL BE MINIMUM 12" WIDE AND SPACED 12" WITH  $\pm 1"$  TOLERANCE, CENTER TO CENTER, IN VERTICAL ALIGNMENT AND ALIGNED WITH BENCH.
- EMBED STEPS MINIMUM 3" WITH A MINIMUM PROJECTION OF 5".
- INSTALL BOTTOM STEP MINIMUM 5" AND MAXIMUM 16-1/2" ABOVE BENCH.

## NOTES: MANHOLES

- PROVIDE LIFTING HOLES OR DEVICES FOR ALL PRECAST SECTIONS. HOLES COMPLETELY THRU WALLS SHALL BE PLUGGED W/NEOPRENE OR RUBBER PLUG INSERTS, MORTARED FLUSH ON EACH SIDE OF WALL WITH NON-SHRINK GROUT. HOLES NOT COMPLETELY THRU WALL SHALL BE FILLED FLUSH WITH WALL WITH NON-SHRINK GROUT.
- MAXIMUM DEPTH OF 4'-0" DIA. MANHOLE IS LESS THAN 20'-0" IF GREATER PROVIDE 5'-0" MANHOLE WITH ALUMINUM LADDER WITH FALL PREVENTION SYSTEM, SEE DETAIL S/1.4.
- PROVIDE FLEXIBLE GASKET CONNECTOR BETWEEN PIPE AND MANHOLE.
- MINIMUM HEIGHT OF RISERS SHALL BE 1'-0". NO MORE THAN ONE 1'-0" RISER IS PERMITTED ON EACH MANHOLE.
- WHEN MANHOLE DEPTH IS 16'-0" AND GREATER, SEE DETAIL S/3.02 FOR PIPE TO MANHOLE CONNECTION.
- WHEN PIPE GRADE IS 10% OR GREATER, SEE DETAIL S/3.03 FOR PIPE TO MANHOLE CONNECTION.
- SEE DETAIL S/3.7 FOR 15" AND LARGER SEWER PIPE TO MANHOLE CONNECTION.
- CHANNEL LINING MINIMUM 4" FOR BRICK CHANNELS AND MINIMUM 2" FOR PRECAST CONCRETE CHANNELS.
- MINIMUM SPACING BETWEEN O.D. OF ADJACENT PIPE SHALL BE 9". SEE DETAILS S/6.4. WHEN PIPE DIAMETER OF SMALLER ADJACENT PIPE IS 12" OR GREATER CONTACT MANHOLE MANUFACTURER.



WASHINGTON  
SUBURBAN  
SANITARY  
COMMISSION

APPROVED:

*[Signature]*  
Chief Engineer

STANDARD DETAIL

48-INCH DIAMETER PRECAST  
CONCRETE MANHOLE

S  
1.0