


- NOTES:
1. MANHOLE RISERS AND CONE SECTIONS SHALL CONFORM TO ASTM-478, LATEST REVISION.
 2. TRANSITION RINGS SHALL HAVE A MINIMUM CLEARANCE OF 2'-0" ABOVE THE EFFLUENT INVERT ELEVATION.
 3. FLEXIBLE WATERTIGHT SYNTHETIC RUBBER SLEEVES, WITH STAINLESS STEEL CLAMP, DRAW BOLT AND NUT; OR CAST-IN SLEEVE; OR "A" LOCK CONNECTION SHALL BE FURNISHED FOR EACH NEW PIPE TO CORED MANHOLE CONNECTION.
 4. MAXIMUM HEIGHT OF GRADE ADJUSTMENT RINGS SHALL NOT EXCEED 12".
 5. ALL MANHOLE COMPONENTS SHALL BE H-20 TRAFFIC LOAD RATED.
 6. MANHOLE RIMS MUST BE 2' ABOVE FINISHED GRADE IN OUTFALL CONDITIONS AND IN 100-YEAR FLOOD AREAS.
 7. MANHOLES SHALL NOT BE LOCATED WITHIN ANY FEATURE CONVEYING OR POOLING STORMWATER.
 8. SANITARY SEWER LINES ENTERING AND EXITING A MANHOLE SEPARATED BY AN ANGLE OF 225°--270° OR 90°--135°, THE INVERT-IN AND INVERT-OUT ELEVATIONS SHALL HAVE A VERTICAL SEPARATION OF AT LEAST FIVE-TENTHS OF ONE FOOT.
 9. 5' DIAMETER INSIDE DROP MANHOLES SHALL BE PROVIDED WHERE INVERT SEPARATIONS EQUAL 2' OR GREATER FOR 12" DIAMETER PIPES OR SMALLER. IF THREE 12" DIAMETER OR SMALLER PIPE DROPS ARE NEEDED AT A MANHOLE, A 6' INSIDE DROP MANHOLE SHALL BE PROVIDED. IF THE INVERT SEPARATION IS 2' OR GREATER AND A PIPE DIAMETER LARGER THAN 12", AN OUTSIDE DROP MANHOLE SHALL BE PROVIDED. (SEE DROP MANHOLE DETAIL.)
 10. AT LEAST 6" OF COMPACTED WASHED STONE SHALL BE PROVIDED UNDER CONCRETE BASE.
 11. THE STANDARD CAST-IN PLACE MANHOLE KEY FORM IS TO BE INSTALLED ON CENTER TO THE EXISTING SEWER MAIN ON THE UNCURED CONCRETE BASE.
 12. AFTER THE CONCRETE HAS SET IN THE FORM AND CURED TO 28 DAY STRENGTH, THE FORM IS TO BE REMOVED AND THE GASKET AND RISER CAN BE PLACED IN ACCORDANCE WITH WSACC TECHNICAL SPECIFICATIONS.
 13. INSIDE THE MANHOLE, FORM TROUGH WITH GROUT, FINISH INVERTS & WATER PROOF ALL COLD JOINTS AND AROUND ALL PIPES.

PIPE DIAMETER (INCHES)	MANHOLE DIAMETER (FEET)
8 TO 16	4
18 TO 36	5
39 TO 54	6
54 AND LARGER	8



NORTH CAROLINA

CITY OF CONCORD
STANDARD DETAIL
DOGHOUSE CONCRETE
MANHOLE

No.	Date	By	REVISION			
Drawn By:	Checked By:	Approved By:	Date	Sht	of	
SVM/BCC	SVM	MSH	08/21	1	1	