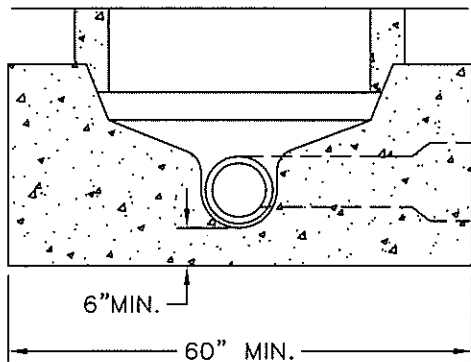
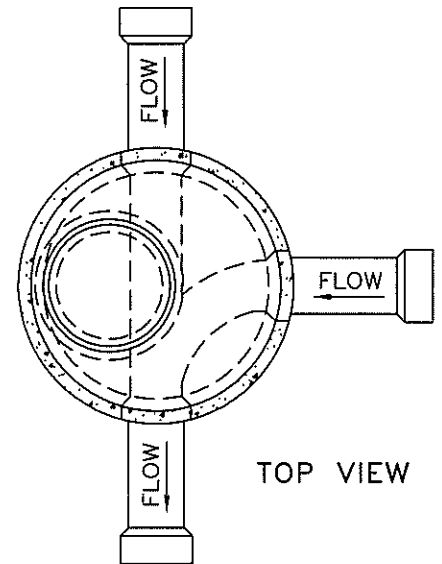


TYPICAL SECTION



SIDE VIEW SECTION

SMALLER MAIN SEWER FLOW CHANNELS ARE TO BE BROUGHT INTO MAIN LINE CHANNELS WITH THE ELEVATION OF PIPE CROWN THE SAME.



TOP VIEW

\* NO WOOD OR PVC SHIMS WILL BE ALLOWED BETWEEN LID RING AND AJUSTING RING OR MANHOLE WITH LADTECH SYSTEM

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			<h1>SANITARY SEWER MANHOLE</h1>	DATE: DEC. 2018
				DWG: C03

**NOTES:**

1. CONTRACTOR SHALL CONTACT AND COORDINATE WITH THE SEWER UTILITY AND ALL OTHER UTILITIES 48 HOURS PRIOR TO CONSTRUCTION.
2. ALL CONSTRUCTION SHALL CONFORM TO SEWER UTILITY'S STANDARDS AND NO BACKFILLING WILL BE ALLOWED UNTIL INSPECTED AND APPROVED.
3. MANHOLE SHALL BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE SECTIONS CONFORMING TO ASTM DESIGNATION C478 WET CAST ONLY.
4. EXCAVATION FOR MANHOLE MUST BE MADE TO A MINIMUM OF 1-FOOT OUTSIDE OF THE MANHOLE WALL TO PROVIDE FOR ADEQUATE WORKSPACE. SPACE OUTSIDE OF THE MANHOLE SHALL BE BACKFILLED WITH ACCEPTABLE MATERIAL IN UNIFORM LAYERS NOT EXCEEDING 12-INCHES IN DEPTH. EACH LAYER SHALL BE THOROUGHLY COMPACTED TO THE DENSITY OF THE EARTH IN THE ADJACENT TRENCH SECTIONS. (MIN. 90% IN EXISTING OR PROPOSED STREET OR ALLEY RIGHTS-OF-WAY).
5. CAST IRON FRAME AND COVER SHALL BE 24-INCH DIAMETER (CLEAR OPENING) AND SHALL BE MANUFACTURED FROM GRAY CAST IRON CONFORMING TO ASTM DESIGNATION: A 48, CLASS 30 AND DESIGNED FOR A MINIMUM HS-20 TRAFFIC LOADING. COVERS AND FRAMES SHALL BE MATCH-MARKED IN PAIRS AND SEATING SURFACES MACHINED SO THAT COVER IS NON-ROCKING. COVERS SHALL HAVE ONE PICK HOLE, AND ONE CENTRALLY LOCATED 1-INCH DIG HOLE. COVERS SHALL HAVE NO "THRU" HOLES.
6. ALL BASES MUST BE PRECAST UNLESS OTHERWISE APPROVED BY THE SEWER UTILITY.
7. CONCRETE FOR CAST-IN-PLACE MANHOLE BASE, IF APPROVED BY THE SEWER UTILITY FOR USE, SHALL CONFORM TO SECTION 202 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
8. SEWER STUBS FOR FUTURE EXTENSION SHALL BE NO MORE THAN 5-FEET IN LENGTH.
9. THE TOP OF INCOMING LATERAL SEWERS SHALL ENTER THE MANHOLE AT AN ELEVATION EQUAL TO THE TOP OF THE MAIN LINE. EXCEPTIONS ONLY BY PRIOR SEWER UTILITY APPROVAL.
10. INVERTS SHALL BE FORMED DIRECTLY IN CONCRETE OF MANHOLE BASE AND SHALL BE SMOOTH AND ACCURATELY SHAPED TO A SEMI-CIRCULAR BOTTOM CONFORMING TO THE INSIDE OF THE ADJACENT SEWER SECTION. MAINTAIN SLOPE OF ADJACENT PIPELINE ACROSS THE MANHOLE BASE.
11. WHERE MANHOLES ARE NOT LOCATED IN STREETS, PLACE TOP OF MANHOLE 8-INCHES ABOVE THE EXISTING GROUND UNLESS OTHERWISE REQUIRED BY THE SEWER UTILITY. INSTALL THE CONCRETE COLLAR FROM A POINT 6-INCHES OUTSIDE THE TOP OF THE COVER FRAME AND EXTEND A MINIMUM OF 12-INCHES BELOW THE SURROUNDING GROUND SURFACE. TAPER THE CONCRETE COLLAR FROM TOP TO BOTTOM AT A 1:1 SLOPE OR FLATTER.
12. PROVIDE 60-INCH MINIMUM DIAMETER MANHOLE FOR PIPES LARGER THAN 15-INCH DIAMETER.
13. COAT EXTERIOR OF MANHOLE WHERE GROUNDWATER CONDITIONS ARE PRESENT AS APPROVED BY SEWER UTILITY.
14. ALL MANHOLES SHALL BE VACUUM TESTED FROM TOP OF CONE PRIOR TO PAVING.
15. POLYMER MANHOLES SHALL BE REQUIRED AT ALL FORCE MAIN OUTLETS. POLYMER MANHOLES SHALL BE INSTALLED DOWNSTREAM OF MANHOLE WHERE FORCE MAIN CONVERTS TO GRAVITY FLOW. ONE POLYMER MANHOLE FOR EVERY 1-INCH DIAMETERSIZE OF THE FORCE MAIN.
16. PIPE INVERT ELEVATIONS SHALL BE A MINIMUM OF 0.1 FEET ABOVE OUTFLOW PIPE ELEVATIONS FOR STRAIGHT FLOW THROUGH OR 0.2 FEET FOR 90 DEGREE BEND FLOW THROUGH.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION: DOUGLAS COUNTY
			<h1 style="margin: 0;">SANITARY SEWER MANHOLE</h1>	DATE: DEC. 2018
				DWG: C03