

SEWER SYSTEM MATERIAL SPECIFICATION

COLLECTION MAINS:

1. SEWER MAINS SHALL BE SDR35 PVC SEWER PIPE AND SHALL BE INSTALLED IN ACCORDANCE WITH MAG SPECIFICATIONS, PIPE SHALL MEET ASTM D-3034, AND ASTM F-679 STD.

SEWER SERVICE:

1. SEWER SERVICE LINES SHALL BE SDR35 PVC SEWER PIPE AND SHALL BE INSTALLED IN ACCORDANCE WITH MAG SPECIFICATIONS PIPE MATERIAL SHALL MEET ASTM D-3034 STD.

MANHOLES:

1. MANHOLES SHALL BE INSTALLED IN ACCORDANCE WITH MAG SPECIFICATIONS, EXCEPT THAT NO STEPS SHALL BE INSTALLED IN ANY MANHOLES.
 - STANDARD CONCRETE MANHOLE: SEWER MAIN 8" - 10"
 - ARMOROCK POLYMER CONCRETE MANHOLE OR APPROVED EQUIVALENT: 12" AND LARGER
 - PIPES OVER 30" MUST BE APPROVED BY THE CITY

MANHOLE COVER:

1. MANHOLE COVERS FOR SEWER LINES 10" AND SMALLER SHALL HAVE A 24" FRAME AND COVER, SEWER LINES 12" AND GREATER SHALL HAVE A 30" FRAME AND COVER. LIDS AND FRAMES SHALL BE PURCHASED THROUGH BULLHEAD CITY.
2. POLYMER MANHOLES WILL REQUIRE CORROSION RESISTANT GRADE RINGS
3. COMPOSITE LIDS AND FRAMES SHALL BE PURCHASED THROUGH BULLHEAD CITY.

ALL OTHER ITEMS:

1. IN ACCORDANCE WITH MAG STD.

FORCE MAINS:

1. PVC PRESSURE PIPE MANUFACTURED IN ACCORDANCE WITH AWWA C900 OR C905 OR US PIPE PROTECTO 401 LINED DUCTILE IRON PIPE AND FITTINGS MIN. PRESSURE CLASS 150. ALL DUCTILE IRON PIPE SHALL BE POLYETHYLENE WRAPPED FOR THE ENTIRE LENGTH IN ACCORDANCE WITH MAG SEC. 610.6. ALL CUT ENDS MUST BE RECOATED PER MANUFACTURERS SPECIFICATIONS.
2. ALL VALVES ON FORCE MAINS SHALL BE PLUG VALVES.
3. AIR/VACUUM RELEASE VALVES ARE REQUIRED AT ALL HIGHPOINTS AND AT VERTICAL REALIGNMENTS OF THE SEWER FORCE MAIN.

LOCATION MARKERS:

1. SEE THE CITY STD. DET. 350-1. LOCATING BALLS MANUFACTURED BY OMNI, 3M OR APPROVED EQUAL SHALL BE PLACED AT PROPERTY LINE ABOVE SEWER SERVICES AT DEPTHS NO GREATER THAN 4'.

MARKING TAPE:

1. SEE THE CITY'S STD. DET. 350-1. DETECTABLE MARKING TAPE MUST BE USED FOR ALL SEWER LINES AND SERVICES.

MARKING POSTS:

1. CARSONITE MARKING POSTS ARE REQUIRED FOR ALL SEWER MANHOLES, MAINS, AND FORCE MAINS OUTSIDE OF ROW AND OUTSIDE OF PAVED AREAS AND ARE REQUIRED FOR ALL FORCE MAINS.

ALL OTHER ITEMS:

1. DIP WILL NOT BE ALLOWED IN GRAVITY SEWER MAINS.
2. IN ACCORDANCE WITH MAG SPECIFICATIONS
3. WHERE CITY STANDARDS ARE SPECIFIED, THOSE STANDARDS SUPERSEDE MAG STANDARDS REGARDLESS OF PROJECT LOCATION.
4. ALL DIP SECTIONS SHALL BE CONSTRUCTED OF RESTRAINED DUCTILE IRON PIPE (DIP) PER THE CITY'S STD. DET. 370-1. ALL DIP SECTIONS SHALL BE PROTECTO 401 LINED DUCTILE IRON PIPE, JOINT RESTRAINED DIP WITH POLYETHYLENE WRAP FOR THE ENTIRE LENGTH PER MAG SEC. 610.6. JOINT RESTRAINED LENGTHS WILL FOLLOW MAG STD. DET. 303-1 AND 303-2. ANCHOR BLOCKS/THRUST BLOCKS MUST BE INSTALLED FOR VERTICAL BENDS PER MAG STD. DET. 381. AIR/VACUUM RELEASE VALVES ARE REQUIRED AT ALL HIGHPOINTS AND AT VERTICAL REALIGNMENTS OF THE FORCE MAIN.
5. LOCATING BALLS SHALL BE PLACED EVERY 500 FEET AND ABOVE EVERY BEND ON ALL FORCE MAINS.
6. THE CONTRACTOR IS REQUIRED TO UNIFORM SLOPE TEST ALL SEWER LINES BY VIDEO AND VACUUM TEST ALL MANHOLES IN ACCORDANCE WITH AAC R18-9-E301. DEFLECTION TESTING SHALL BE PERFORMED PER MAG SEC. 615.11. TESTING DOCUMENTATION AND FLASH DRIVES SHALL BE SUBMITTED TO THE CITY INSPECTOR FOR APPROVAL PRIOR TO ACCEPTANCE. ALL REQUIRED REPAIRS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE COORDINATED WITH THE CITY INSPECTORS.
7. SEWER TESTING: ALL SEWER MAINS AND LATERALS SHALL BE PRESSURE TESTED AND ALL MAINS VIDEO TESTED. ALL SEWER MAINS SHALL ALSO BE MANDRILL TESTED ACCORDING TO MAG STD. 611.4C. THE MAXIMUM ALLOWABLE SEWER LINE SAG IS 0.5 INCHES.
8. WHEN USING MECHANICAL PLUGS TO TEST SEWER MAINS/MANHOLES CONTRACTOR MUST FOLLOW THE CITY STD. DET. 420.

Date:
November 2022



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SEWER SYSTEM MATERIAL SPECIFICATION

Detail No.
100-4