

1. HDPE AND PVC PIPES TO BE USED FOR WASTEWATER APPLICATIONS ONLY.
2. DUCTILE IRON PIPES MAY BE USED FOR WASTEWATER APPLICATIONS ONLY WITH SPECIFIC APPROVAL BY FCPW.
3. MINIMUM THICKNESS FOR HDPE PIPES SHALL BE DR 17 DUCTILE IRON PIPE SIZE (DIPS).
4. FOR SEWER INSTALLATIONS WITH NO LIVE LOAD AND NOT ALONG STREAMS BANKS, THE STANDARD PIPE SHALL BE C900 DR26 (IPS) PVC OR HDPE DR 17 (DIPS) FOR PIPE SIZES 8-INCH THROUGH 48-INCH WITH MAXIMUM BURY DEPTH OF 20 FEET.
5. FOR SEWER INSTALLATIONS WITH HS20/25 LIVE LOADS, OR WITH BURY DEPTH GREATER THAN 20 FEET AND NOT ALONG STREAM BANKS, THE STANDARD PIPE SHALL BE C900 DR 18 PVC (DIPS) OR HDPE DR 17 (DIPS) FOR PIPE SIZES 8-INCH THROUGH 30-INCH.
6. FOR SEWER INSTALLATIONS WITH NO LIVE LOADS AND LOCATED ALONG STREAM BANKS, THE STANDARD PIPE SHALL BE DR 17 HDPE DUCTILE IRON PIPE SIZE (DIPS) FOR PIPE SIZES 8-INCH THROUGH 48-INCH AND MAXIMUM BURY DEPTH OF 20 FEET.
7. FOR FORCE MAINS, REGARDLESS OF BURY DEPTH, LIVE LOAD REQUIREMENTS AND NOT ALONG RIVER BANKS, THE STANDARD PIPE SHALL BE HDPE DR 11 (DIPS) FOR PIPE SIZES 8-INCH THROUGH 30-INCH.
8. ALL SEWER LINES, WATER LINES, REUSE LINES, AND FORCE MAIN LINES SHALL HAVE 3M™ EMS WARNING TAPE 7900 SERIES BURIED NO MORE THAN 4-FEET BELOW GROUND LEVEL INSTALLED ABOUT THE PIPE OR MINIMUM OF 1-FOOT ABOVE TOP OF PIPE BUT NO MORE THAN 2-FEET. THIS SHALL INCLUDE SEWER LATERALS AND WATER SERVICE LINES. TAPE SHALL BE INSTALLED ABOVE CONDUIT FOR LINES PLACED IN CONDUITS. ALL SEWER LINES, WATER LINES, REUSE LINES, AND FORCE MAIN LINES SHALL HAVE 3M™ EXTENDED RANGE BALL MARKERS 1400 SERIES BURIED NO MORE THAN 4-FEET DEEP OVER ALL LINES AT A MINIMUM OF 1-FOOT ABOVE TOP OF PIPE BUT NO MORE THAN 2-FEET. THESE BALLS SHALL BE INSTALLED AT ALL BENDS 22 ½ DEGREES OR LARGER, REDUCERS, BEGINNING AND ENDING OF CASINGS, END OF LINES, AND AT ALL TEES OR TAPS. STANDARD MARKING TAPE SHALL BE INSTALLED OVER THE TOP OF ALL LINES BURIED MORE THAN 6-FEET DEEP SHALL BE 7900 SERIES WARNING TAPE BURIED 1-FOOT ABOVE TOP OF PIPE IN ADDITION TO THE TAPE AND BALLS INSTALLED NEAR THE SURFACE.
9. ALL FORCE MAINS SHALL BE BUTT WELDED HDPE EXCEPT AT CREEK CROSSINGS AND BORINGS, DIP MAY BE USED ONLY ON AN EXCEPTIONAL BASIS AND APPROVED BY FCPW.
10. CREEK CROSSINGS AND BORINGS SHALL BE RESTRAINED JOINT DIP (SEE DETAIL 118).
11. ALL CONSTRUCTION METHODS AND MATERIALS AND MAJOR GLANDS TO BE USED IN FULTON COUNTY MUST BE MADE OF HDPE AND COMPLY WITH AWWA C906 MATERIAL DESIGNATION CODE PE4710, GLANDS THAT DO NOT MEET THE SPECIFICATIONS WILL NOT BE ACCEPTED.
12. RESTRAINT JOINTS WILL BE USED ON ALL HDPE TEES AND BENDS, THRUST BLOCKING DOES NOT PROVIDE ACCEPTABLE RESTRAINT AND IS PROHIBITED.
13. WATER MAINS TO USE DUCTILE IRON PIPES ONLY.
14. WATER SERVICE LINES TO BE TYPE K COPPER.
15. MARKER BALLS SHALL BE PROGRAMMED WITH THE FOLLOWING INFORMATION BY THE CONTRACTOR: LINE 1: UTILITY CONTRACTOR NAME. LINE 2: PIPE DEPTH. LINE 3: PIPE SIZE. LINE 4: PIPE MATERIAL AND CLASS. LINE 5: FULTON COUNTY. LINE 6: OPTIONAL.
16. MAXDAPTOR SEWER REPAIR UNIVERSAL COUPLINGS ARE REQUIRED FOR JOINING DIFFERENT TYPES OF SANITARY SEWER PIPES
17. ANY MANHOLE CONTAINING ANY APPURTENANCES INSIDE THE MANHOLE SHALL HAVE A MINIMUM DIAMETER OF 60-INCHES FOR MAINTENANCE ACCESS.

18. NOTES:
1. DIAMETRIC DEFLECTIONS ARE CALCULATED WITH THE FOLLOWING FORMULA:

PERCENT DEFLECTION = $k(T_L W_E + W_L + W_S)/(PS + 0.061E')$

WHERE:

PS (PIPE STIFFNESS FACTOR) = $2E/3(DR-1)^3$
DR = DIMENSION RATIO
k = BEDDING CONSTANT
T_L = TIME LAG FACTOR

NOTES:

1. DIAMETRIC DEFLECTIONS ARE CALCULATED WITH THE FOLLOWING FORMULA:

$$\text{PERCENT DEFLECTION} = k(T_L W_E + W_L + W_S) / (PS + 0.061E')$$

WHERE:

PS (PIPE STIFFNESS FACTOR) = $2E/3(DR-1)^3$
DR = DIMENSION RATIO
k = BEDDING CONSTANT
T_L = TIME LAG FACTOR
W_E = EARTH LOAD PRESSURE = $wH/144$
w = WEIGHT OF SOIL
H = HEIGHT OF COVER
W_L = H₂O LIVE LOADS
W_S = SURCHARGE PRESSURE
E = MODULUS OF ELASTICITY OF PIPE MATERIAL
E' = MODULUS OF SOIL REACTION
2. DEFLECTIONS COMPUTED USING A UNIT WEIGHT OF BACKFILL AT 120 LBS / CFT AND ASSUMED NO INTERNAL PRESSURE OR, EXCEPT FOR 5 FEET COVER HEIGHT, LIVE LOADS.
3. PIPE EMBEDMENT USED IN CALCULATIONS IS CLASS 1, 2 OR 4, AS DEFINED IN ASTM D2321 WITH APPROPRIATE COMPACTION TO ACHIEVE AN E'=1000 PSI.

** INCLUDES +1% SAFETY MARGIN.

FULTON COUNTY STANDARD DETAIL 100 INDEX AND GENERAL NOTES		DATE	REVISIONS	DATE	REVISIONS	DGS/DRN/CHKD: MB/EB/ML		FULTON COUNTY PUBLIC WORKS 141 PRYOR ST. ATLANTA, GA. 30303 404-612-7400 FAX: 404-224-0498	DRAWING NO. 100
						APPROVED: TM			
						DATE: 02-18-2026			