

**CITY OF NORFOLK DEPARTMENT OF UTILITIES**  
**DESIGN AND CONSTRUCTION STANDARDS**  
**Appendix E1 – General Notes for Construction Documents**  
Water and Sewer Utility Notes for Private Sector Development

Please add these General Utility notes to your plans.

**WATER AND SEWER UTILITY NOTES**

1. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION OR EXCAVATION. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OF ALL DAMAGED UTILITIES AT HIS SOLE EXPENSE.
2. ALL WATER AND SANITARY SEWER WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE VIRGINIA DEPARTMENT OF HEALTH *WATERWORKS REGULATIONS*, THE VIRGINIA *SEWAGE COLLECTION AND TREATMENT REGULATIONS*, THE HAMPTON ROADS PLANNING DISTRICT COMMISSION (HRPDC) *REGIONAL CONSTRUCTION STANDARDS*, THE CITY OF NORFOLK MODIFICATIONS TO THE HRPDC STANDARDS, AND THE CITY OF NORFOLK DEPARTMENT OF UTILITIES *DESIGN AND CONSTRUCTION STANDARDS*. APPROVED SUBMITTALS ARE REQUIRED BEFORE ANY UTILITY WORK CAN BEGIN.
3. THE CONTRACTOR SHALL CONTACT UTILITIES FIELD ENGINEERING OFFICE AT 757-823-1001 AT LEAST FIVE BUSINESS DAYS TO SCHEDULE A PRECONSTRUCTION CONFERENCE PRIOR TO INITIATING ANY UTILITY WORK. SHOP DRAWINGS OF ALL PROPOSED MATERIALS SHALL BE SUBMITTED AND APPROVED PRIOR TO INITIATING ANY UTILITY WORK.
4. ANY UTILITY WORK THAT WILL RESULT IN INTERRUPTION OF SERVICE TO ANY CUSTOMER SHALL BE COORDINATED WITH THE CITY AT LEAST THREE BUSINESS DAYS IN ADVANCE TO DETERMINE AN ACCEPTABLE COMMENCEMENT DATE AND DURATION. ALL INTERRUPTIONS OF SERVICE SHOULD BE AVOIDED WHEN POSSIBLE.
5. THE CONTRACTOR SHALL COLLECT AS BUILT INFORMATION UNDER THE SUPERVISION OF THE UTILITIES INSPECTOR AND SUBMIT THE AS BUILT INFORMATION TO THE UTILITIES INSPECTOR AS PART OF SATISFACTORY COMPLETION.
6. ALL TEES, BENDS, PLUGS, AND VALVES SHALL BE PROVIDED AND CONSTRUCTED WITH MECHANICAL THRUST RESTRAINT AND RESTRAINED TO PROPER LENGTH. ENDS OF EXISTING LINES TO BE ABANDONED SHALL BE CAPPED WATER-TIGHT.

## 7. KEY PIPING REQUIREMENTS

	Water Distribution Mains	Water Transmission Mains	Gravity Sewers
Min. Cover	24 inches @ ditch invert 36 inches elsewhere	16" to 22" - 36 inches 24" to 60" - 42 inches	36 inches
Min. Vertical Clearance	18 inches	18 inches	18 inches
Min. Horizontal Clearance	10 feet from structures 5 feet from gutter pan 10 feet from parallel pipes	20 feet from structures 10 feet from gutter pan	10 feet
Pipe Diameter Sizes	8 to 12 inches	14 inches or larger	8 inches or larger
Pipe Material	PVC, HDPE, or DI	PVC, HDPE, or DI	PVC or DI

## 8. RIGHT-OF-WAY WATER INSTALLATIONS

- a. ALL CONNECTIONS, PIPING, SERVICE LINES, VALVES, VALVE BOXES, METER BOXES, AND FIRE HYDRANTS SHALL BE CONSTRUCTED BY THE CONTRACTOR FOR INSPECTION AND ACCEPTANCE BY THE DEPARTMENT OF UTILITIES.
- b. UTILITIES CREWS WILL INSTALL ALL METERS AND DETECTOR CHECKS WITHIN 90 DAYS AFTER PAYMENT OF FEES BY THE DEVELOPER.

## 9. DOMESTIC CONNECTIONS 4-INCHES OR GREATER AND ALL FIRE SERVICE LINE CONNECTIONS SHALL BE A MINIMUM OF 5 FEET AWAY FROM ANY PIPE JOINTS.

## 10. SANITARY SEWER MANHOLE SECTIONS SHALL HAVE "RAM NECK" SEALANT STRIP OR EQUIVALENT IN THE JOINTS.

## 11. ALL MANHOLE CASTINGS IN PAVED AREAS SHALL BE ADJUSTABLE TYPE. SURFACE FEATURES SUCH AS MANHOLE COVERS, VALVE BOX COVERS, METER BOX COVERS, SEWER CLEAN-OUTS, AND VENTS SHALL BE RE-ESTABLISHED TO FINISH GRADE.

## 12. PARALLEL ELECTRONIC CABLING SHALL NOT BE INSTALLED WITHIN 4 FEET OF EDGE OF RAW WATER AND FINISHED WATER TRANSMISSION MAINS.

## 13. ALL SANITARY SEWER MANHOLES SHALL BE A MINIMUM OF 48 INCHES IN DIAMETER AND THOSE DEEPER THAN 12 FEET SHALL BE A MINIMUM OF 60 INCHES IN DIAMETER STARTING AT A POINT 6 FEET BELOW THE RIM.

## 14. EXISTING FIRE HYDRANTS LOCATED WITHIN A PROJECT CONSTRUCTION AREA SHALL BE VISIBLE AND ACCESSIBLE AT ALLTIMES.

## 15. AT LEAST 95% STANDARD PROCTOR COMPACTION SHALL BE ACHIEVED FOR THE BACKFILL OF OPEN CUTS OF WATER AND SEWER MAIN TRENCHES.

16. IN THE VICINITY OF EXISTING RAW WATER MAINS:
  - a. HAND DIG WHEN INSTALLING CROSSING UTILITIES.
  - b. EXERCISE EXTREME CARE WHILE DEMOLISHING EXISTING STREET PAVEMENT.
  - c. DO NOT STORE ANY MATERIAL WITHIN 15 FEET.
17. SPLICING WATER SERVICE LINES IS PROHIBITED. WATER SERVICE WORK SHALL BE PERFORMED IN THE PRESENCE OF UTILITIES INSPECTOR.
18. WATER SERVICE LINES REMOVED FOR CONSTRUCTION OF SANITARY SEWERS, STORMWATER DRAINAGE PIPEWORK OR GAS MAINS SHALL BE REPLACED ENTIRELY FROM THE CORPORATION STOP TO THE METER STOP.