

**CITY OF NORFOLK DEPARTMENT OF UTILITIES**  
**DESIGN AND CONSTRUCTION STANDARDS**  
**Appendix E2 – General Notes for Construction Documents**  
Water and Sewer Notes for Public Sector Development

**GENERAL**

1. THE CONTRACTOR IS ENCOURAGED TO VISIT THE SITE PRIOR TO SUBMITTING BID.
2. ELEVATIONS ARE BASED ON NAVD-88 (92 ADJUSTED) (NORTH AMERICAN VERTICAL DATUM).
3. EXISTING UTILITIES SHOWN ARE BASED ON AVAILABLE RECORDS AND FIELD SURVEYS AND IS NOT GUARANTEED TO BE EXACT OR COMPLETE. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES IN ADVANCE OF CONSTRUCTION.
4. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL HOUSE SERVICE LINES (WATER AND SEWER). CONTRACTOR SHALL NOT DEPEND ON CITY FORCES TO LOCATE SERVICE LINES WHEN IT IS REQUIRED TO RELOCATE WATER METERS AND SHALL BE RESPONSIBLE FOR ALL TIE-INS OF HOUSE LINES TO NEW METERS.
5. STATE LAW MANDATES THE NOTIFICATION OF UTILITY OWNERS 48 HOURS IN ADVANCE OF EXCAVATION. FOR LOCATION OF UTILITIES, CALL "MISS UTILITY" AT 1-800-552-7001 FOR WATER & SEWER, H.R.S.D., VERIZON, DOMINION ENERGY, VIRGINIA NATURAL GAS, TRAFFIC CONTROLS, STORM DRAIN AND COX COMMUNICATIONS.
6. ALL MISS UTILITY MARKINGS IN THE RIGHT-OF-WAY ARE REQUIRED TO BE ERADICATED AT THE COMPLETION OF THE PROJECT.
7. THE CONTRACTOR SHALL BE REQUIRED AND AGREES TO COMPLY WITH ALL THE PROVISIONS OF THE "VIRGINIA UNDERGROUND UTILITY DAMAGE PREVENTION ACT" (SECTION 56-265.14 ET SEQ., CODE OF VIRGINIA, 1950, AS AMENDED) AND HEREBY AGREES TO HOLD THE CITY OF NORFOLK HARMLESS AGAINST ANY LOSS, DAMAGES, OR CLAIMS OF ANY NATURE WHATSOEVER ARISING OUT OF THE CONTRACTOR'S FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ACT.
8. CONTRACTOR SHALL CONFORM TO THE "OVERHEAD HIGH VOLTAGE ACT" AND SHALL CONTACT THE NECESSARY AUTHORITIES PRIOR TO START OF CONSTRUCTION AND HEREBY AGREES TO HOLD THE CITY OF NORFOLK HARMLESS AGAINST ANY LOSS, DAMAGES, OR CLAIMS OF ANY NATURE WHATSOEVER ARISING OUT OF THE CONTRACTOR'S FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ACT.

9. CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE, ANY DAMAGE DONE TO THE UTILITIES SHALL BE IMMEDIATELY REPAIRED AT CONTRACTOR'S EXPENSE.
10. THE CONTRACTOR SHALL NOTE THAT THERE MAY BE OTHER CONSTRUCTION IN THIS AREA. THE CONTRACTOR SHALL COOPERATE WITH THE CITY AND ANY OTHER CONTRACTORS OR UTILITY OWNERS TO PREVENT DELAYS TO EITHER PROJECT. IF THE CONTRACTOR NEEDS TO PERFORM WORK OUT OF SEQUENCE OR ADJUST HIS SCHEDULE TO ACCOMMODATE OTHER WORK IN THE PROJECT AREA, IT SHALL NOT BE THE BASIS OF A CLAIM FOR DELAY AGAINST THE CITY.
11. CONTACT THE FOLLOWING CITY OF NORFOLK DEPARTMENTS AND DIVISIONS 48 HOURS IN ADVANCE OF WORK IN THE CITY RIGHT OF WAY
  - a. DEPARTMENT OF PARKS & RECREATION  
URBAN FORESTRY DIVISION 757-823-4291
  - b. DEPARTMENT OF PUBLIC WORKS  
RIGHT OF WAY MANAGEMENT DIVISION 757-664-7300  
STORM WATER DIVISION 757-823-4000
  - c. DEPARTMENT OF UTILITIES  
ENGINEERING & TECHNOLOGY DIVISION  
CHIEF OF CONSTRUCTION OPERATIONS 757-664-6565
12. CONTRACTOR SHALL COORDINATE INSTALLATION OF NEW WATER AND SEWER CONNECTIONS WITH THE ABANDONMENT OF EXISTING WATER AND SEWER MAINS. WATER AND SEWER SERVICE SHALL BE MAINTAINED AT ALL TIMES.
13. ANY TIE-INS TO EXISTING LINES THAT WILL RESULT IN INTERRUPTION OF SERVICE TO ANY CUSTOMER MUST BE COORDINATED WITH THE CITY OF NORFOLK AS TO ACCEPTABLE TIME AND DURATION OF INTERRUPTION. SCHEDULED INTERRUPTIONS OF SERVICE (TIE-INS, ABANDONMENTS ETC.) REQUIRE 3 DAYS' ADVANCE NOTICE FOR A TRIAL SHUTDOWN. AN ADDITIONAL 3 DAYS' ADVANCE NOTICE WILL BE REQUIRED FOR THE ACTUAL SHUTDOWN IF THE TRIAL SHUTDOWN IS SUCCESSFUL.
14. THE CONTRACTOR SHALL VERIFY TYPE OF MATERIAL, OUTSIDE DIAMETER AND LOCATION OF ALL PIPES BEING CONNECTED TO, TO ENSURE PROPER FITTINGS ARE AVAILABLE AND TO MINIMIZE OUT OF SERVICE TIME FOR CONNECTIONS. ALL NECESSARY FITTINGS NEEDED TO MAKE CONNECTIONS SHALL BE CHECKED BY THE CITY'S INSPECTOR PRIOR TO ANY CONNECTION WORK.
15. THE CITY RESERVES THE RIGHT TO AFFECT ANY REQUIRED REPAIRS, AND WARRANT FOR THE COLLECTION FOR ALL ASSOCIATED COSTS, WHERE NECESSITATED BY EMERGENCY CONDITIONS.

16. CONTRACTOR SHALL HAVE A SET OF PROJECT PLANS AND SPECIFICATIONS ON SITE AT ALL TIMES. IN ADDITION, THE CONTRACTOR SHALL HAVE IN HIS POSSESSION THE VALID EDITION OF THE HRPDC SPECIFICATIONS.
17. THE CITY RESERVES THE RIGHT TO STOP WORK ON THE PROJECT IF THE SITE IS NOT BEING KEPT CLEAN AND PROPERLY MAINTAINED.
18. AN UP TO DATE AS BUILT AND PROGRESS SCHEDULE SHALL ACCOMPANY THE CONTRACTOR'S MONTHLY APPLICATION FOR PAYMENT. IF THESE ITEMS ARE NOT INCLUDED WITH THE INVOICE, THE INVOICE SHALL BE IMMEDIATELY RETURNED TO THE CONTRACTOR.
19. CONTRACTOR'S MONTHLY INVOICES SHALL BE REVIEWED BY THE CITY'S INSPECTOR AND CONTRACTOR'S SUPERINTENDENT PRIOR TO SUBMISSION.
20. TIME-ONLY EQUIPMENT WHICH IS BEING USED ON A DAILY BASIS CAN BE INCLUDED ON THE CONTRACTOR'S CLAIM FOR DELAY.

#### **DEPARTMENT OF UTILITIES**

21. ALL MATERIALS PURCHASED FOR THIS PROJECT SHALL BE NEW AND HAVE BEEN MANUFACTURED WITHIN THE LAST TWO YEARS OF THE DATE WHEN THE CONTRACT WAS EXECUTED.
22. SUBMITTALS ON MATERIALS FOR THIS PROJECT SHALL BE APPROVED BY THE CITY PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR TO USE APPROVED PRODUCTS LIST WHERE POSSIBLE.
23. ALL NIPPLE PIECES BETWEEN WATER MAIN AND FORCE MAIN FITTINGS AND VALVES SHALL BE CLASS 52 DUCTILE IRON.
24. ALL PRODUCTS USED IN THE CONSTRUCTION AND MAINTENANCE OF THE WATER SYSTEM SHALL MEET THE DEFINITION OF "LEAD-FREE" AS DESCRIBED IN THE REDUCTION OF LEAD IN DRINKING WATER ACT OF 2011.
25. ALL TEES, BENDS, PLUGS AND VALVES SHALL BE PROVIDED WITH MECHANICAL THRUST RESTRAINT AND RESTRAINED TO PROPER LENGTH. PLUGS INSTALLED ON ACTIVE WATER MAINS SHALL BE RESTRAINED. ENDS OF EXISTING LINES TO BE ABANDONED SHALL BE CAPPED WATER-TIGHT.
26. MECHANICAL THRUST RESTRAINT SHALL BE USED ON ALL BENDS AND FITTINGS WHEN WATER MAINS ARE OFF-SET. WATER MAINS MAY BE ROLLED UNDER STORM DRAINS WITHOUT FITTINGS WHEN THE VERTICAL GRADE CHANGE IS 2 FEET OR LESS.

27. NO PIPE FOLD-IN LININGS SHALL BE USED ON WATER MAINS OR SEWER FORCE MAINS. SLEEVES WILL BE USED.
28. WHERE WATER MAINS PASS OVER SEWER MAINS, THEY MUST BE 18 INCHES ABOVE, OR THE SEWER MUST BE A 20 FOOT SECTION OF AWWA APPROVED PRESSURE PIPE. WHERE WATER LINES PASS BELOW SEWER, 18 INCHES OF CLEARANCE IS REQUIRED AND SEWER MUST BE CONSTRUCTED OF AWWA APPROVED PRESSURE PIPE (18-FOOT-LONG PIECE MINIMUM) CENTERED ON WATER MAIN PIPE SECTION.
29. NEOPRENE PADS SHALL BE USED BETWEEN PROPOSED MAIN AND EXISTING UTILITIES AT CROSSINGS WHERE THE VERTICAL CLEARANCE IS LESS THAN 6 INCHES.
30. ALL SANITARY SEWER DUCTILE IRON PIPE SHALL BE LINED WITH PROTECTO 401 OR APPROVED EQUAL.
31. FLOWABLE FILL IS NOT APPROVED FOR USE IN THE CITY OF NORFOLK FOR BACKFILL WITHOUT PRIOR APPROVAL. THE SELECT MATERIAL AND NO. 21A STONE WILL BE IN ACCORDANCE WITH THE 2002 VDOT ROAD AND BRIDGE SPECIFICATIONS. FOR BACKFILL AROUND THE PIPE USE SELECT MATERIAL (SECTION 207) - TYPE I AND 20 CBR COMPACTION. FOR THE SUBBASE MATERIAL USE 6 INCH MIN. VDOT NO. 21A STONE IN ACCORDANCE WITH SECTION 208.
32. CONTRACTOR TO USE VERTICAL TIGHT SHEETING FOR CUTS FIVE FEET OR DEEPER, UNLESS PERMISSION TO DO OTHERWISE IS GRANTED BY THE ENGINEER. SHEETING SHALL ALSO BE USED FOR CUTS BEHIND CURBS OR SIDEWALKS, AND BESIDE ROADWAYS FOR CUTS FIVE FEET OR LESS, AS REQUIRED BY THE ENGINEER. SHEETING SHALL BE USED TO PROTECT EXISTING UTILITIES OR OTHER STRUCTURES SUCH AS DRAINS, PIERS, POWER AND TELEPHONE POLES, ETC. SHEETING, WHEN USED WILL BE DRIVEN 15 INCHES OR MORE BELOW PIPE INVERT, AND TOP OF SHEETING CAN NOT BE LESS THAN EXISTING GROUND ELEVATIONS, UNLESS OTHERWISE APPROVED BY THE ENGINEER. SHEETING WILL BE CUT OFF AND LEFT IN PLACE AS THE ENGINEER MAY DIRECT. PAYMENT FOR SHEETING LEFT IN PLACE WILL BE PAID ON A UNIT BASIS OF 1,000 BOARD FEET MEASUREMENT, TO BE CHECKED BY CONTRACTOR AND VERIFIED BY THE ENGINEER. ANY QUANTITY LESS THAN THE UNIT PRICE WILL BE PAID FOR AT THE CLOSEST FULL 100 BOARD FOOT MEASUREMENT.
33. IF ABANDONED WATER MAIN IS IN CONFLICT WITH NEW SEWER LATERAL, THE ABANDONED MAIN IS TO BE CUT AND PLUGGED AT NO ADDITIONAL COST TO THE CITY.
34. THE TAPPING MACHINE USED FOR TAPPING SLEEVES AND VALVES SHALL BE DISINFECTED PRIOR TO USE ON WATER MAINS.

35. SEWER LATERALS SHALL BE EXTENDED TO PROPERTY LINES BY CONTRACTOR WHERE DIRECTED BY THE ENGINEER. NEW PROPERTY LINE CLEANOUTS SHALL BE INSTALLED.
36. PRIVATE SERVICE LATERALS BEING REPLACED FROM THE PROPERTY LINE CLEANOUT TO THE BUILDING SHALL COMPLY WITH THE PLUMBING CODE AND BE INSTALLED BY A LICENSED PLUMBING CONTRACTOR APPROVED BY THE CITY.
37. EXISTING SANITARY SEWER LATERAL LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE ONLY AND ARE NOT GUARANTEED. WHERE LATERAL REPLACEMENTS ARE SHOWN OR REQUIRED BY THE ENGINEER SHALL BE 4-INCH SDR 26 FROM THE SANITARY SEWER MAIN TO THE PROPERTY LINE CLEANOUT FOR SINGLE FAMILY OR DUPLEX DWELLINGS AND 4- OR 6-INCH SDR 26 FOR COMMERCIAL AND MULTIPLE DWELLING UNITS TO BE INSTALLED BY THE CONTRACTOR. IF MAIN IS OTHER THAN SDR 26 PIPE, LATERAL PIPE SHALL MATCH TYPE OF PIPE USED FOR MAIN. 6-INCH LATERALS REQUIRE SQUARE CLEAN OUT BOXES AT THE PROPERTY LINE.
38. WHEN AN ABANDONED WATER MAIN UNDER THIS CONTRACT HAS ACTIVE SERVICE LINES, THEN THESE SHALL BE COMPLETELY REPLACED FROM THE METER TO THE NEW WATER MAIN AND SHALL INCLUDE TAPPING SADDLE (4 INCH PVC ONLY), CORPORATION STOP, COPPER TUBING AND METER STOP. IN ADDITION, EMPTY METER BOXES IN FRONT OF BUILDABLE LOTS SHALL BE PROVIDED WITH SERVICE REPLACEMENT. WATER SERVICES TO BE BORED UNLESS DIRECTED BY THE ENGINEER.
39. ALL EXISTING RESIDENTIAL WATER METERS ARE ASSUMED TO BE 5/8 INCHES UNLESS OTHERWISE NOTED. CONTRACTOR TO VERIFY METER SIZES BEFORE DISCONNECTING. ALL SERVICE LINE AND METERS NOTED FOR REPLACEMENT SHALL BE REPLACED WITH SAME AS EXISTING SIZE.
40. CONTRACTOR TO NOTIFY THE UTILITIES' CONSTRUCTION INSPECTOR ON FIRST IDENTIFICATION OF CONFLICT WITH STORMWATER INFRASTRUCTURE.
41. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GRADING AND LANDSCAPING AROUND SANITARY SEWER CLEANOUTS WHEN SERVICES ARE INSTALLED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GRADING AND LANDSCAPING AROUND METER BOXES WHEN SERVICES ARE INSTALLED.
42. DIRECT ALL REQUESTS FOR FIELD CONSTRUCTION INSPECTIONS AND INFORMATION TO THE CHIEF OF CONSTRUCTION OPERATIONS AT 757-664-6565
43. A CONSTRUCTION SCHEDULE SHALL BE SUBMITTED TO THE CHIEF OF CONSTRUCTION OPERATIONS, PRIOR TO THE SCHEDULING OF THE PRE-CONSTRUCTION CONFERENCE.

44. AS-BUILTS OF ANY IMPROVEMENT OR DEMOLITION RELATED TO WATER AND SEWER SYSTEMS ARE REQUIRED TO BE SUBMITTED TO THE UTILITY DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY. FAILURE TO PROVIDE THE NECESSARY AS-BUILT INFORMATION WILL RESULT IN DELAYS. AS-BUILTS MUST BE PREPARED AND SEALED BY A LICENSED LAND SURVEYOR, SHOWING THE AS-BUILT LOCATION AND ELEVATIONS COMPARED TO THE PROPOSED, INCLUDING ANY ABANDONED OR REMOVED INFRASTRUCTURE.

## **DEPARTMENT OF PLANNING**

45. WETLANDS MAY BE PRESENT WITHIN THE BOUNDARY OF THE DEVELOPMENT. THE CONTRACTOR MUST COMPLY WITH THE EXACT LIMITS OF CONSTRUCTION. PERMITS MAY BE REQUIRED FROM FEDERAL, STATE, AND LOCAL AGENCIES.

46. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL AND TREE PROTECTION PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) AND THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS (4VAC50-30 ET SEQ), CHAPTER 30 AND APPENDIX E (TREE PLANTING, PRESERVATION AND REPLACEMENT).

47. THE CONTRACTOR SHALL EXERCISE EVERY REASONABLE PRECAUTION, INCLUDING THE APPLICATION OF TEMPORARY AND/OR PERMANENT MEASURES DEEMED NECESSARY BEFORE, DURING, AND AFTER CONSTRUCTION TO CONTROL EROSION AND PREVENT OR MINIMIZE SEDIMENT RUNOFF AND PROTECT TREES AND VEGETATION. THE CITY RESERVES THE RIGHT TO REQUIRE OTHER MEASURES NOT SPECIFICALLY DESCRIBED HEREIN TO CORRECT ANY EROSION, SILTATION OR TREE PROTECTION CONDITION.

48. ALL EROSION AND SEDIMENT CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED WITH THE FIRST STAGE OF CONSTRUCTION AND WILL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THEIR REMOVAL IS DIRECTED BY THE CITY. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED. THE MEASURES SHOWN ON THE PLAN ARE THE MINIMUM NECESSARY. THE ADDITION, DELETION OR MODIFICATION OF EROSION AND SEDIMENT CONTROL AND TREE PROTECTION MEASURES WILL BE AT THE DIRECTION OF THE CITY.

## **DEPARTMENT OF PUBLIC WORKS**

49. ALL WORK WITHIN THE RIGHT OF WAY SHALL COMPLY WITH THE CITY OF NORFOLK, DEPARTMENT OF PUBLIC WORKS, RIGHT OF WAY MANAGEMENT

DIVISION'S *RIGHT OF WAY EXCAVATION & RESTORATION MANUAL*. (ORDINANCE NO. 40,778), THE DOCUMENT MAY BE DOWNLOADED AT <http://www.norfolk.gov/publicworks/row>

50. RIGHT OF WAY EXCAVATION PERMITS ARE REQUIRED TO PERFORM SEWER AND WATER MAIN INSTALLATION AND ALL APPURTEANCES. PLEASE CONTACT THE RIGHT OF WAY MANAGEMENT DIVISION AT 757-664-4671
51. ALL TEMPORARY BULK WASTE CONTAINERS PLACED WITHIN THE RIGHT OF WAY REQUIRE A PERMIT FROM THE RIGHT OF WAY MANAGEMENT DIVISION 757-664-4671 [www.norfolk.gov/publicworks/row](http://www.norfolk.gov/publicworks/row).
52. NO LANE CLOSURES AND/OR WORK IN THE RIGHT OF WAY, INCLUDING GRADING, SIDEWALK CURB AND GUTTER, AND DRIVEWAY APRON INSTALLATION WILL BE ALLOWED WITHOUT A PERMIT FROM THE RIGHT OF WAY MANAGEMENT DIVISION. ALL TRAFFIC CONTROL SHALL COMPLY WITH THE CURRENT EDITION OF THE *MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES* (MUTCD), THE *VIRGINIA WORK AREA PROTECTION MANUAL* AND THE CITY OF NORFOLK, DEPARTMENT OF PUBLIC WORKS, RIGHT OF WAY MANAGEMENT DIVISION'S *RIGHT OF WAY EXCAVATION & RESTORATION MANUAL*. ADDITIONAL CHARGES APPLY IF OFF-DUTY OFFICERS ARE REQUIRED. CONTACT THE RIGHT OF WAY MANAGEMENT DIVISION FOR A LIST OF PERMIT FEES.
53. THE CONTRACTOR WILL BE REQUIRED TO POST CASH, A CHECK, OR A SURETY BOND OR A LETTER OF CREDIT TO EXCAVATE IN THE RIGHT OF WAY.
54. WHEN THE CONTRACTOR WORK REQUIRES THE SAWCUTTING AND/OR PARTIAL DEMOLITION AND/OR REMOVAL OF ANY SECTION OF AN EXISTING APRON OR SIDEWALK. THE CONTRACTOR WILL BE REQUIRED TO REMOVE SAID EXISTING APRON OR SIDEWALK AND REPLACE IT WITH A NEW MONOLITHIC APRON OR SIDEWALK DAILY. SIDEWALK SHALL BE REMOVED TO THE NEAREST JOINT. ALL CONCRETE IS TO BE SAW CUT. NO PATCHING WILL BE ALLOWED. COMMERCIAL APRONS SHALL BE REPLACED WITH AN APPROVED COMMERCIAL APRON. RESIDENTIAL APRON SHALL BE REPLACED WITH AN APPROVED RESIDENTIAL APRON(HS-207). SIDEWALKS SHALL BE REPLACED WITH AN APPROVED SIDEWALK DETAIL. CONTACT THE RIGHT-OF-WAY MANAGEMENT DIVISION FOR APPROVAL 757-664-4671.
55. WHEN A NEW APRON AND/OR SIDEWALK IS INSTALLED, ALL NEW OR EXISTING UTILITY STRUCTURES SHALL BE INSTALLED AND/OR RELOCATED OUTSIDE THE AREA OF THE NEW APRON AND/OR SIDEWALK. A PERMIT AND INSPECTION ARE REQUIRED.
56. AS PART OF THE CONTRACTOR'S PERMIT APPLICATION TO WORK IN THE RIGHT-OF-WAY, THE CONTRACTOR MUST SUBMIT A MAP IDENTIFYING THE PROJECTS

STORAGE AND LAY DOWN AREA. THE CITY DOES NOT ALLOW STORAGE, STAGING OR LAY DOWN AREAS WITHIN THE RIGHT OF WAY. CONTRACTORS ARE ENCOURAGED TO MAKE ARRANGEMENTS TO STORE MATERIALS AND LAY DOWN ON PRIVATE PROPERTY OR THEY MUST BE STORED WITHIN CONSTRUCTION SITE.

57. PRIOR TO THE SCHEDULING OF A PRE-CONSTRUCTION CONFERENCE, THE CONTRACTOR SHALL SUBMIT A PRELIMINARY DETAILED MAINTENANCE OF TRAFFIC (MOT) PLAN WITH THE CONTRACTOR'S PERMIT APPLICATION TO WORK IN THE RIGHT-OF-WAY FOR REVIEW BY THE DIVISION OF TRAFFIC ENGINEERING, DEPARTMENT OF PUBLIC WORKS. THE MOT AS WELL AS ALL TRAFFIC CONTROL DEVICES UTILIZED ON THE PROJECT MUST COMPLY WITH THE "FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) FOR STREETS AND HIGHWAYS. FOLLOWING APPROVAL OF THE PLAN, A REPRODUCIBLE DRAWING SHALL BE SUBMITTED TO THE FIELD ENGINEERING OFFICE FOR USE AND DISTRIBUTION.
  - a. THE MOT SHALL BE A DRAWING OR AERIAL PHOTO WITH SITE SPECIFIC DETAILS. THESE SHALL INCLUDE BUT ARE NOT LIMITED TO: TRAFFIC SIGNS, DIRECTIONAL SIGNS, DESTINATION SIGNAGE, CHANNELIZING DEVICES, WATER-FILLED BARRIERS, PORTABLE MESSAGE BOARDS WITH MESSAGES TO BE DISPLAYED AND TIMES AND DURATIONS OF DISPLAYED MESSAGES.
  - b. THE MOT SHALL DISPLAY THE EXACT LOCATION OF ALL SIGNS AND/OR DEVICES INCLUDING SPACING FOR EACH SIGN AND/OR DEVICE, SPACING BEING APPROPRIATE FOR THE WORK ZONE LOCATION AND POSTED SPEED LIMITS.
  - c. ALL MOT PLANS SHALL CONFORM TO THE CURRENT ISSUE OF "THE VIRGINIA WORK AREA PROTECTION MANUAL" COPIES OR REPRODUCTIONS OF THE MOT THAT ARE INCLUDED WITH THE PROJECT DRAWINGS AND SPECIFICATIONS WILL NOT BE ACCEPTED WITH THE CONTRACTOR'S PERMIT APPLICATION. CONTRACTORS SHOULD CONSIDER THESE ITEMS WHEN BIDDING PROJECTS FOR CONSTRUCTION.
58. THERE MAY BE A C.B.D. TRAFFIC CONTROL SYSTEM IN THIS AREA. FOR PROTECTION OF THIS SYSTEM, PHONE THE PUBLIC WORKS DEPARTMENT BEFORE STARTING WORK AT 757-664-7300
59. BEFORE WORK COMMENCES WHERE ANY LOOP DETECTOR IS BURIED IN THE ROADWAY, PLEASE CONTACT CITY TRANSPORTATION ENGINEER 757-664-7300 FOR LOOP DETECTOR DETAILS AND SPECIFICATIONS. IF LOOP DETECTORS ARE DAMAGED DURING CONSTRUCTION THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRS AND RESTORATION OF THE LOOP DETECTORS AND ANY TRAFFIC CONTROL DEVICES.
60. THE CONTRACTOR SHALL PROVIDE TEMPORARY DRIVEWAY AND PARKING ACCESS FOR ALL ADJACENT PROPERTY OWNERS DURING PERIODS WHEN CONSTRUCTION IN

THE AREA IS NOT IN PROGRESS. THE CONTRACTOR SHALL OBTAIN DRIVEWAY PERMITS FROM THE DEPARTMENT OF PUBLIC WORKS, TRAFFIC ENGINEERING, FOR ALL REQUIRED DRIVEWAY WORK.

61. ALL AREAS DISTURBED BY CONSTRUCTION OR MOBILIZATION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, UNLESS SPECIFIED OTHERWISE. TEMPORARY PAVEMENT CUTS SHALL BE MAINTAINED WITH 6 INCHES OF VDOT NO. 21A STONE OR RECYCLED ASPHALT PAVEMENT (RAP). THE CITY WILL ALLOW THE USE OF CRUSHED CONCRETE IN LIEU OF VDOT NO. 21A OR RAP ON A CASE-BY-CASE BASIS. A GRADATION REPORT IS TO BE PROVIDED AS WELL AS A PROPOSAL FOR REDUCTION IN COST TO THE CITY. FOLLOWING CITY APPROVAL, THE CONTRACTOR CAN MOVE FORWARD WITH THE USE OF CRUSHED CONCRETE. IN THE EVENT THE CITY FINDS MATERIALS IN THE CRUSHED CONCRETE THAT DO NOT COMPLY WITH THE GRADATION REPORT, THE CITY RESERVES THE RIGHT TO REQUIRE NO. 21A FOR THE REMAINDER OF THE PROJECT. ALL MATERIALS DESIGNATED AS TEMPORARY SHALL BE COMPACTED AND WATERED DAILY TO CONTROL DUST.
62. THE CONTRACTOR SHALL CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE PAVEMENT PHASING PLAN. REFERENCE: PAVEMENT RESTORATION DRAWING SHEET.
63. ALL ROADWAY CUTS SHALL BE BACKFILLED ONLY WITH SUITABLE SUBBASE MATERIAL, AND MECHANICALLY TAMPED IN NO MORE THAN 6-INCH LIFTS. BACKFILL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH SECTION 308 OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS, LATEST EDITION. THE CITY MAY, AT ANY TIME, REQUIRE TESTING TO ENSURE COMPLIANCE WITH THE SPECIFICATIONS OF THIS CONTRACT. ALL TESTS WILL BE CONDUCTED BY A RECOGNIZED TESTING LABORATORY SELECTED BY THE CITY, QUALIFIED IN THE FIELD OF THE MATERIALS TO BE TESTED. ALL TESTS WILL BE CONDUCTED IN ACCORDANCE WITH VDOT'S "MANUAL FOR VIRGINIA TEST METHODS" (CURRENT EDITION AS REVISED). PAYMENT FOR ALL TESTS WILL BE IN ACCORDANCE WITH THE FOLLOWING:
  - a. THE COST OF ALL TESTS FAILING TO MEET THE MINIMUM REQUIREMENTS WILL BE BORNE BY THE CONTRACTOR.
  - b. THE COST OF ALL TESTS THAT EITHER MEET OR EXCEED THE MINIMUM REQUIREMENTS SHALL BE BORNE BY THE CITY.
64. ARTERIAL STREETS - AVERAGE DAILY TRAFFIC OVER 15,000 VEHICLES PER DAY. STREETS ARE THOSE IN THE CITY DESIGNATED AS "MAJOR THOROUGHFARES." BEING ESSENTIAL TO THE SAFE MOVEMENT OF THE MAJORITY OF CITIZENS, THESE STREETS REQUIRE STRICTER REGULATIONS TO MAINTAIN THE ORDERLY AND SAFE FLOW OF TRAFFIC. THEREFORE, NO WORK WILL BE PERFORMED ON ARTERIAL STREETS DURING THE PEAK TRAFFIC HOURS OF 6:00 A.M. TO 9:00 A.M. AND 3:30 P.M.

TO 6:00 P.M. (MONDAY THROUGH FRIDAY ONLY), EXCEPT EMERGENCY WORK TO RESTORE SERVICES. LANE CLOSURES WILL BE RESTRICTED TO THE WORKING LANE ONLY AND TWO-WAY TRAFFIC WILL BE MAINTAINED AT ALL TIMES, UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS OR THEIR DESIGNEE.

65. ARTERIALS SHALL BE OPENED TO TRAFFIC EACH NIGHT WITH ALL OPENINGS COVERED BY A ROAD PLATE OR A TEMPORARY ASPHALT PATCH BEFORE LEAVING THE SITE. THE PERMANENT ASPHALT PATCH SHALL BE PLACED THE SAME DAY THE WORK IS COMPLETED FOR MINOR PROJECTS AND WITHIN FIFTEEN CALENDAR DAYS OF COMPLETION FOR MAJOR PROJECTS, UNLESS OTHERWISE DIRECTED. WHEN NOTIFIED BY THE CITY OF AN UNSAFE OPENING, THE RESPONSIBLE PARTY SHALL RESPOND AND REPAIR SAID PATCH WITHIN FOUR HOURS.
66. COLLECTOR STREETS - AVERAGE DAILY TRAFFIC FROM 5,000 TO 15,000 VEHICLES PER DAY: THESE ARE ALL STREETS WHICH CONNECT RESIDENTIAL STREETS TO ARTERIALS (60-FOOT TO 80-FOOT RIGHTS-OF-WAY), WITH TWO LANES OF ALTERNATING TRAFFIC WITH PARKING ON BOTH SIDES OR FOUR LANES OF ALTERNATING TRAFFIC. THEREFORE, NO WORK WILL BE PERFORMED ON COLLECTOR STREETS DURING THE PEAK TRAFFIC HOURS, 6:00 A.M. TO 9:00 A.M. AND 3:30 P.M. TO 6:00 P.M. (MONDAY THROUGH FRIDAY ONLY), EXCEPT EMERGENCY WORK TO RESTORE SERVICES. MAIN SUBDIVISION COLLECTORS ARE ESPECIALLY CRITICAL. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS OR THEIR DESIGNEE.
67. ALL UTILITY CUTS IN COLLECTOR STREETS SHALL BE FILLED EACH NIGHT AND COVERED BY A TEMPORARY ASPHALT PATCH IF COMPLETED TOO LATE FOR A PERMANENT ASPHALT REPAIR. THE REPAIR SHALL RECEIVE A PERMANENT ASPHALT PATCH AS SOON AS POSSIBLE BUT NO LATER THAN FIVE CALENDAR DAYS AFTER WORK COMPLETION FOR MINOR PROJECTS, AND WITHIN FIFTEEN CALENDAR DAYS FOR MAJOR PROJECTS, UNLESS OTHERWISE DIRECTED. WHEN NOTIFIED BY THE CITY OF AN UNSAFE OPENING, THE RESPONSIBLE UTILITY CONTRACTOR SHALL RESPOND AND REPAIR SAID PATCH WITHIN FOUR HOURS.
68. RESIDENTIAL STREETS - AVERAGE DAILY TRAFFIC UNDER 5,000 VEHICLES PER DAY: THESE ARE THOSE STREETS AND CUL-DE-SACS WHICH PROVIDE DIRECT ACCESS TO ADJACENT PROPERTY OR INDIVIDUAL HOMES, NORMALLY TWO ALTERNATING LANES IN A 50-FOOT RIGHT-OF-WAY. CONSTRUCTION HOURS SHALL BE LIMITED TO 7:30 A.M. TO 4:30 P.M. TO BE SENSITIVE TO NOISE IMPACTS ON SURROUNDING PROPERTIES (EMERGENCY WORK TO RESTORE SERVICES EXCLUDED). AT LEAST A SINGLE LANE SHALL BE PROVIDED FOR TWO-WAY TRAFFIC WITH A FLAGMAN AVAILABLE FOR CONTROL, UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS OR THEIR DESIGNEE.

69. EXCAVATIONS IN RESIDENTIAL STREETS SHALL BE PROTECTED EACH NIGHT; ALL UTILITY CUTS SHALL BE MAINTAINED DAILY WITH 21A STONE, CRUSHED CONCRETE, CRUSHED ASPHALT, COLD MIX, OR PLANT MIX ASPHALT. THE PERMANENT ASPHALT REPAIR SHALL BE MADE AS SOON AS POSSIBLE BUT NO LATER THAN FIVE DAYS AFTER WORK COMPLETION FOR MINOR PROJECTS AND WITHIN THIRTY CALENDAR DAYS FOR MAJOR PROJECTS. WHEN NOTIFIED BY THE CITY OF AN UNSAFE OPENING, THE RESPONSIBLE PARTY SHALL RESPOND AND REPAIR SAID PATCH WITHIN FOUR HOURS.

**DEPARTMENT OF PARKS AND RECREATION, URBAN FORESTRY DIVISION**

70. THE CONTRACTOR WILL OBTAIN ALL NECESSARY TREE PERMITS. THE CONTRACTOR SHALL CONFORM TO ALL REQUIREMENTS OF THE "CITY OF NORFOLK TREE ORDINANCE."

71. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING DISTURBED AREAS TO THEIR ORIGINAL CONDITION. ALL WORK ON PRIVATE PROPERTY MUST BE COORDINATED WITH PARKS & URBAN FORESTRY PRIOR TO CONSTRUCTION. TRENCHES FOR PRIVATE PROPERTY SEWERS WILL NOT BE ALLOWED TO BE LEFT OPEN OVERNIGHT. NO EXCEPTIONS.

72. ONCE ALL EXISTING AND ACTIVE SEWER AND WATER CONNECTIONS HAVE BEEN LOCATED, THE CONTRACTOR MUST TOUR THE JOB SITE WITH THE ENGINEER, LICENSED PLUMBING CONTRACTOR, AND CITY FORESTER TO DETERMINE THE LOCATION AND RELOCATION OF EXISTING SEWER TAPS, LATERAL ALIGNMENTS, METER RELOCATIONS, HAND DIG ZONES, AND EQUIPMENT CLEARANCE PRUNING REQUIREMENTS. WHERE IN THE SOLE OPINION OF THE CITY FORESTER, EXCAVATION WITH A TRENCHER, BACKHOE OR OTHER MECHANICAL EQUIPMENT WITHIN THE CRITICAL ROOT ZONE WOULD LIKELY RESULT IN EXCESSIVE ROOT DAMAGE, HAND DIGGING WILL BE REQUIRED. WHERE FEASIBLE, NEW SERVICES WILL BE PLACED IN A LOCATION WHICH WILL LEAST IMPACT TREE ROOTS AND FACILITATE UTILIY INSTALLATION. THERE SHALL BE NO SANITARY OR WATER SERVICE REPLACEMENTS OR TAP CONNECTIONS PERFORMED AT ANY LOCATION WHERE SERVICE/TAP LOCATIONS HAVE NOT BEEN JOINTLY REVIEWED BY THE ENGINEER, CONTRACTOR, LICENSED PLUMBING CONTRACTOR, AND CITY FORESTER. AND APPROVED BY THE ENGINEER. HAND DIGGING WILL BE PERFORMED AT NO ADDITIONAL COST TO THE CITY.

73. ALL AREAS DESIGNATED BY THE CITY FORESTER FOR HAND DIGGING REQUIRE INSPECTION BY PARKS & URBAN FORESTRY PRIOR TO BACKFILLING. TO ASSESS THE EXTENT OF ROOT LOSS OR DAMAGE. THE CITY FORESTER MAY ALSO REQUIRE INSPECTION IN CERTAIN AREAS APPROVED FOR EXCAVATION WITH MECHANICAL EQUIPMENT. THE CONTRACTOR MUST PROVIDE PARKS & URBAN FORESTRY A MINIMUM 24-HOURS NOTICE OF ALL PLANNED EXCAVATIONS REQUIRING INSPECTION. ARRANGEMENTS FOR OPEN TRENCH INSPECTION CAN BE MADE BY

CALLING THE CITY FORESTER, AT 757-823-4023. SHOULD THE CONTRACTOR BACKFILL ANY OF THESE LOCATIONS PRIOR TO THE CITY FORESTER'S INSPECTION, HE MAY REQUIRE REMOVAL OF THE PLACED BACKFILL MAY BE REQUIRED AT NO ADDITIONAL COST TO THE CITY.