

1. WATER LINES SHALL NOT BE PLACED WITHIN 10 HORIZONTAL FEET OF EXISTING OR PROPOSED SANITARY DRAIN LINES AND/OR SEPTIC TANKS.
2. ALL VALVES, BONDS, TEES, PLUGS, & CAPS SHALL BE RESTRAINED WITH MECHANICAL RESTRAINING DEVICES IN ACCORDANCE WITH THE SPECIFICATIONS AND DETAILS. CONCRETE ANCHORS IN LIEU OF MECHANICAL RESTRAINTS, IF APPROVED BY OWNER, SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND DETAILS.
3. WHEN LOCATED IN A VDOT RIGHT-OF-WAY, VALVE BOXES SHALL BE BURIED 2' BELOW GRADE WHEN IN THE SHOULDER AND FLUSH WITH PAVEMENT, IF LOCATED IN THE PAVEMENT. FIRE HYDRANTS SHALL BE LOCATED BEHIND THE DITCH LINE AND WATER MAINS SHALL BE CONSTRUCTED IN THE LOCATIONS SHOWN ON THE PLANS.
4. ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 36". WATER LINES SHALL BE LAID DEEPER WHERE SHOWN ON THE PROFILES, OR WHERE NECESSARY TO ACCOMMODATE THE BURY DEPTH OF VALVES, WATER VALVE VAULTS, AND FIRE HYDRANTS.
5. ALL DISTRIBUTION LINES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE WESTERN VIRGINIA WATER AUTHORITY STANDARDS.
6. COMBINATION AIR RELEASE VALVES SHOWN ON PLANS SHALL BE FIELD LOCATED AT THE HIGH POINT IN THE WATER MAIN.
7. NO BLOW OFF VALVE, AIR RELEASE VALVE, VACUUM BREAKER, OR OTHER FLUSHING DEVICE SHALL BE DIRECTLY CONNECTED TO ANY SANITARY SEWER OR STORM DRAIN SEWER.
8. THE CONTRACTOR SHALL CONTINUOUSLY KEEP UP TO DATE WITH PROPERTY RESTORATION, SEEDING, AND COMPACTION TESTING.
9. ALL PROPOSED WATER SERVICE LINES SHALL BE 1" UNLESS OTHERWISE NOTED.
10. ALL EXISTING UTILITIES MAY NOT BE SHOWN IN THE EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH THE VDH WATERWORKS REGULATIONS WHERE LINES CROSS SANITARY SEWERS.
11. ALL TRENCHES IN EXISTING OR FUTURE VDOT RIGHTS-OF-WAY SHALL BE COMPACTED ACCORDING TO VDOT STANDARDS.
12. ALL WATER PIPE SHALL BE MATERIAL AS SPECIFIED IN THE WWWA SPECIFICATIONS.
13. A CONTINUOUS UNIFORM BEDDING SHALL BE PROVIDED IN THE TRENCH FOR ALL PIPE. STONES AND ROCKS FOUND IN THE TRENCH SHALL BE REMOVED FOR A DEPTH OF AT LEAST 6" BELOW THE BOTTOM OF THE PIPE AND TAMPED SELECTED FILL BEDDING PROVIDED. AFTER THE PIPE HAS BEEN PLACED IN THE TRENCH, THE TRENCH SHALL BE BACKFILLED WITH SELECTED MATERIAL, THOROUGHLY COMPACTED TO 95% UNDER PAVEMENT, OF THE STANDARD PROCTOR (ASTM D 698) USING CARE NOT TO DAMAGE THE PIPE.
14. ALL EXISTING WATER SERVICES SHALL BE REPLACED WITH NEW SERVICES. ALL WATER SERVICES SHALL BE BORED UNLESS OTHERWISE NOTED. ALL WATER METERS SHALL BE INSTALLED BY THE WESTERN VIRGINIA WATER AUTHORITY. ALL WET AND TAPS MADE TO THE EXISTING SYSTEM SHALL BE MADE BY THE WESTERN VIRGINIA WATER AUTHORITY.
15. THE CONTRACTOR SHALL PROVIDE A LICENSED GEOTECHNICAL ENGINEER TO INSPECT BACKFILL MATERIAL AND PROVIDE COMPACTIONS TESTS AS REQUIRED BY THE VDOT LAND USE PERMIT, IF APPLICABLE.
16. OPEN-CUTS SHALL BE USED TO CONSTRUCT WATER LINES ACROSS EXISTING ROADS UNLESS OTHERWISE NOTED ON THE PLANS. ALL OPEN-CUTS SHALL BE PATCHED AS PER WWWA DETAIL G-12 AND THE AREA SHALL BE MILLED AND OVERLAYED WITH A SURFACE MIX TO BLEND THE NEW AND EXISTING ASPHALT.
17. EXISTING WATER SERVICE CROSSINGS MAY NOT BE SHOWN IN PROFILE FOR CLARITY. CONTRACTOR SHALL INSTALL WATER LINES AROUND EXISTING WATER SERVICES.

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE WESTERN VIRGINIA REGIONAL DESIGN AND CONSTRUCTION STANDARDS AVAILABLE AT WWW.WESTERNVIRGINIA.ORG OR BY CONTACTING THE AUTHORITY AT 540-853-5700. THE PROJECT SHALL ALSO COMPLY WITH THE GOVERNING JURISDICTION'S STANDARDS AND OTHER AGENCY STANDARDS (E.G., VDOT, DEC, DCR, VDH, ETC.) WHERE APPLICABLE.
2. THE AUTHORITY WILL INSTALL ALL NEW WATER METERS AND REMOVE ALL EXISTING WATER METERS. THE CONTRACTOR SHALL INSTALL COMPLETE NEW WATER SERVICES INCLUDING THE METER SETTER AND BOX. FOLLOWING METER REPLACEMENTS BY THE AUTHORITY, THE CONTRACTOR SHALL DEMOLISH THE EXISTING WATER METER SETTER AND BOX. THE CONTRACTOR SHALL COORDINATE EXISTING METER REMOVAL AND NEW METER INSTALLATION DIRECTLY WITH THE AUTHORITY. THE CONTRACTOR SHALL PROVIDE AT LEAST 3 BUSINESS DAYS ADVANCE NOTICE TO THE AUTHORITY PRIOR TO NEEDING METER INSTALLATIONS. THE CONTRACTOR SHALL SEQUENCE CONSTRUCTION ACTIVITY TO PROVIDE A SERIES OF AT LEAST 10 SERVICES THAT ARE READY TO RECEIVE NEW METERS BEFORE CONTACTING THE AUTHORITY FOR WATER METER REPLACEMENT.
3. ALL CONNECTIONS TO EXISTING WATERLINES (USING WET TAPS) SHALL BE PERFORMED BY THE AUTHORITY. THE CONTRACTOR SHALL PROVIDE FULL STAINLESS STEEL TAPPING SLEEVE(S) AND VALVE(S). THE CONTRACTOR SHALL EXCAVATE TO THE EXISTING WATERLINE, SHORE THE TRENCH PER OSHA REQUIREMENTS, CLEAN THE EXISTING WATERLINE, AND INSTALL THE TAPPING SLEEVE AND VALVE PRIOR TO THE AUTHORITY PERFORMING THE TAP. THE CONTRACTOR SHALL NOTIFY THE AUTHORITY'S UTILITY LINE SERVICES DIVISION AT 540-853-2792 AT LEAST 72 HOURS PRIOR TO REQUIREING THE CONNECTION. CONNECTION TO EXISTING WATERLINES PERFORMED BY CUT-INS SHALL BE PERFORMED BY THE CONTRACTOR AFTER CAREFUL COORDINATION WITH WVWA. WVWA SHALL OPERATE ALL VALVES ASSOCIATED WITH THE SHUTDOWN.
4. ALL CONNECTIONS TO EXISTING SANITARY SEWERLINES SHALL BE PERFORMED BY THE AUTHORITY. THE CONTRACTOR SHALL EXCAVATE TO THE EXISTING SEWERLINE, SHORE THE TRENCH PER OSHA REQUIREMENTS, AND CLEAN THE EXISTING SEWERLINE PRIOR TO THE AUTHORITY PERFORMING THE TAP. THE CONTRACTOR SHALL NOTIFY THE AUTHORITY'S UTILITY LINE SERVICES DIVISION AT 540-853-2792 AT LEAST 72 HOURS PRIOR TO REQUIREING THE CONNECTION.
5. IF APPLICABLE, THE CONTRACTOR SHALL PERFORM ALL MANHOLE CONNECTIONS. THE CORING AND BOOT INSTALLATION SHALL BE INSPECTED AND APPROVED BY AN AUTHORITY CONSTRUCTION INSPECTOR PRIOR TO ACTIVATING SENIOR SERVICE. THE CONTRACTOR SHALL CONTACT THE AUTHORITY'S CONSTRUCTION INSPECTOR RESPONSIBLE FOR THE PROJECT AT LEAST 1 DAY PRIOR TO INITIATING THE MANHOLE CONSTRUCTION.
6. PRIOR TO CONSTRUCTION IN THE RIGHT-OF-WAY, ALL APPLICABLE PERMIT(S) FROM THE GOVERNING JURISDICTION AND/OR AGENCY MUST BE OBTAINED AND A COPY KEPT ON THE PROJECT SITE.
7. FOR PROJECTS REQUIRING TRAFFIC CONTROL IN THE CITY OF ROANOKE, NOTIFY MANAGER OF TRANSPORTATION, MARK JAMISON, AT 540-853-5471 AT LEAST 2 WEEKS IN ADVANCE OF REQUIRING TRAFFIC CONTROL. FOR A LANE CLOSURE PERMIT IN THE CITY OF ROANOKE, CONTACT THE TRAFFIC ENGINEER, HONG LIU, AT 540-853-2688. IN ROANOKE OR FRANKLIN COUNTIES, TRAFFIC CONTROL REQUIREMENTS SHALL BE DETERMINED ONCE VDOT LAND USE PERMIT HAS BEEN ISSUED. PLEASE CONTACT THE LOCAL VDOT OFFICE. TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE MOST RECENT MUTCD MANUAL AND THE VDOT WORK AREA UNLESS OTHERWISE SPECIFIED.
8. THE CONTRACTOR SHALL NOTIFY THE AUTHORITY'S ENGINEERING COORDINATOR, MARK SINIK, AT 540-537-3460 AT LEAST 3 DAYS PRIOR TO CONSTRUCTION.
9. A PRE-CONSTRUCTION CONFERENCE SHALL BE SCHEDULED AT LEAST 1 DAY PRIOR TO ANY CONSTRUCTION.
10. THE CONTRACTOR SHALL HAVE A VALID MISS UTILITY TICKET PRIOR TO EXCAVATION. CONTACT MISS UTILITY AT 1-800-552-7001.
11. ALL EXISTING UTILITIES MAY NOT BE SHOWN OR MAY NOT BE SHOWN IN THEIR EXACT LOCATION. CONTRACTOR SHALL LOCATE ALL UTILITIES AND DETERMINE ALL INVERT ELEVATIONS PRIOR TO CONSTRUCTION TO ALLOW FOR ADJUSTMENTS DUE TO CONFLICTS WITH OTHER UTILITIES. THE CONTRACTOR SHALL COMPLY WITH THE VIRGINIA STATE WATER WORKS REGULATIONS, SECTION 12VAC5-580-1150, AND THE VIRGINIA STATE SEWAGE COLLECTION AND TREATMENT REGULATIONS WHERE LINES CROSS SANITARY SEWERS.
12. AN APPROVED SET OF PLANS AND PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
13. CONSTRUCTION DEBRIS SHALL BE CONTAINERIZED IN ACCORDANCE WITH THE VIRGINIA LITTER CONTROL ACT.

14. PRIOR TO COMMENCING WORK, THE CONTRACTOR'S CERTIFIED RESPONSIBLE LAND DISTURBER SHALL OBTAIN AN EROSION AND SEDIMENT CONTROL PERMIT FOR THE PROJECT FROM THE LOCAL GOVERNING JURISDICTION AND DEQ (IF REQUIRED). ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND SHALL BE INSTALLED PRIOR TO CONSTRUCTION.
15. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING ALL VEHICLES AND EQUIPMENT PRIOR TO ENTERING PUBLIC STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE STREETS ARE KEPT IN A CLEAN, MUD- AND DUST-FREE CONDITION AT ALL TIMES.
16. FIELD CHANGES SHALL BE APPROVED BY THE AUTHORITY'S ENGINEERING DIVISION PRIOR TO COMMENCEMENT OF CHANGES.
17. THE CONTRACTOR SHALL MAKE PROVISIONS TO PROVIDE ACCESS TO ALL PROPERTIES DURING CONSTRUCTION AND SHALL MAINTAIN SAFE ACCESSIBILITY TO FIRE HYDRANTS AT ALL TIMES.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND UNCOVERING ALL MANHOLES AFTER PAVING. MANHOLE RIMS SHALL BE INSTALLED TO GRADE AND FLUSH WITH THE FINAL PAVEMENT.
19. UNPREPARED ROADWAYS OPENED TO TRAFFIC SHALL HAVE, AT A MINIMUM, COMPACTED AGGREGATE MATERIAL VDOT 21A OR 21B FLUSH WITH THE ADJACENT ROADWAY SURFACE AND SHALL BE INSPECTED AND REPAIRED ON A DAILY BASIS. SOME AREAS WILL REQUIRE A TEMPORARY PATCH UNTIL FINAL PAVING CAN BE COMPLETED.
20. THE CONTRACTOR SHALL NOT EXCAVATE MORE TRENCH LENGTH THAN CAN BE RESTORED WITHIN THE SAME WORK DAY. ALL TRENCHES SHALL BE BACKFILLED OR PLATED AT THE END OF EACH WORK DAY OR WHEN THE CONTRACTOR IS NOT ON SITE.
21. THE CONTRACTOR SHALL SUPPLY THE AUTHORITY WITH CORRECT AS-BUILT PLANS (IN THE FORM OF NEAT, RED-LINE MARKUPS) BEFORE SUBSTANTIAL COMPLETION WILL BE GRANTED.
22. THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICE TO ALL EXISTING CUSTOMERS THROUGHOUT CONSTRUCTION. THIS MAY REQUIRE TEMPORARY CONNECTIONS AND/OR RELOCATION OF EXISTING SERVICE LINES AND METERS.
23. EXISTING IMPROVEMENTS THAT ARE REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN THE SAME OR BETTER CONDITION, AT THE EXPENSE OF THE CONTRACTOR.
24. IN AREAS WHERE IT IS NECESSARY TO BENCH SLOPES TO INSTALL UTILITY LINES, FINAL SLOPES SHALL BE RESTORED TO THE ORIGINAL SLOPE OR TO THE SLOPE NECESSARY TO SUCCESSFULLY STABILIZE THE SLOPE.
25. CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY ON THIS SITE. CONTRACTOR SHALL INSTALL ANY BARRIERS, TEMPORARY FENCING, FLASHERS, LIGHTING, OR ANY OTHER MEANS NECESSARY TO PROTECT UNAUTHORIZED PERSONNEL FROM HAZARDOUS AREAS.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING SURROUNDING STRUCTURE. CONTRACTOR SHALL PROVIDE SHORING, OR OTHER MEANS NECESSARY TO PROTECT ADJACENT BUILDINGS AND PROPERTY.
27. EXISTING MAILBOXES MAY NOT BE SHOWN ON PLANS.
28. ALL EXISTING ROADSIDE DITCHES IMPACTED BY THE PROPOSED CONSTRUCTION SHALL BE FINE GRADED TO DRAIN AND PERMANENTLY SEEDED AS SOON AS POSSIBLE.
29. ANY REQUIRED PAVEMENT DISURBANCE MUST MEET OR EXCEED THE EXISTING PAVEMENT SECTION.
30. BACKFILL MATERIAL AND COMPACTION WITHIN VDOT RIGHTS-OF-WAY MUST MEET OR EXCEED ALL REQUIREMENTS FOUND IN THE CURRENT EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.

1. CONTRACTOR SHALL REMOVE ALL OBSTRUCTIONS, INDICATED ON THE PLANS OR NOT, NECESSARY TO ACCOMPLISH THE WORK.
2. CARE SHALL BE TAKEN TO PROTECT EXISTING VEGETATION, TREES, RETAINING WALLS, AND OTHER IMPROVEMENTS NOT REQUIRED TO BE REMOVED FOR CONSTRUCTION.
3. CONTRACTOR SHALL REPLACE AND REPAIR ALL LAWNS, TERRACES, FENCES, SIDEWALKS, CURBS, CROSS WALKS, GUTTERS, DRIVEWAYS, OR PAVEMENTS, AND REPAIR AND MAKE GOOD ALL OTHER DAMAGE TO WHAT REMAINS DURING CONSTRUCTION WORK.
4. CONTRACTOR SHALL REPLACE AND REPAIR AFFECTED CONSTRUCTION AREAS WITH MATERIALS CONSISTENT WITH EXISTING CONDITIONS.
5. CONTRACTOR SHALL BECOME FAMILIAR WITH PROJECT AREA TO INCLUDE REPAIR AND REPLACEMENT COSTS IN BID.

1. PROVIDE TEMPORARY FENCE AROUND DRIP LINE OF INDIVIDUAL TREES OR DRIP LINE OF GROUPS OF TREES TO REMAIN.
2. DO NOT STORE CONSTRUCTION MATERIALS, DEBRIS, OR EXCAVATED MATERIAL WITHIN DRIPLINE OF TREES TO REMAIN.
3. DO NOT PERMIT VEHICLES, EQUIPMENT, OR FOOT TRAFFIC WITHIN DRIPLINE OF TREES TO REMAIN.
4. WHERE EXCAVATION FOR NEW CONSTRUCTION IS REQUIRED WITHIN DRIPLINE OF TREES TO REMAIN, HAND CLEAR AND EXCAVATE TO MINIMIZE DAMAGE TO ROOT SYSTEMS OR REQUEST A FIELD REVIEW WITH THE ENGINEER FOR APPROVAL OF AN ALTERNATE ROUTE.

1. PROPOSED WATERLINE AND LATERAL ALIGNMENTS ARE BASED ON AVAILABLE INFORMATION AND INDICATE THE GENERAL LOCATION AND ARRANGEMENT OF UNDERGROUND WATERLINE PIPING. INSTALL PIPING AS INDICATED, TO EXTENT PRACTICAL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE ALL LATERALS, EXISTING UTILITIES, ETC.
2. EXISTING CONDITIONS MAY NECESSITATE SLIGHT ADJUSTMENTS IN THE ALIGNMENT AND GRADE. FIELD ADJUSTMENTS MAY NOT BE MADE THAT REDUCE THE CAPACITY OR SERVICEABILITY WITHOUT APPROVAL FROM ENGINEER. ALL FIELD ADJUSTMENTS SHALL BE APPROVED BY THE WESTERN VIRGINIA WATER AUTHORITY.
3. FIELD ADJUSTMENTS SHALL BE MADE WHEN A LESS DISRUPTIVE CONSTRUCTION ACTIVITY AND DISTURBANCE TO PRIVATE PROPERTY WILL NOT RESULT IN AN INCREASE IN CONTRACT PRICE OR DELAY TO THE SCHEDULE.
4. FIELD ADJUSTMENTS RESULTING IN A CHANGE IN SCHEDULE OR CONTRACT PRICE SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. NO CHANGES IN CONTRACT SCHEDULE OR PRICE WILL BE MADE FOR FIELD ADJUSTMENTS MADE WITHOUT ENGINEER'S APPROVAL.
5. NO FIELD ADJUSTMENT SHALL BE MADE WITHOUT APPROVAL OF THE CONSULTING ENGINEER AND WESTERN VIRGINIA WATER AUTHORITY.
6. ANY NEW ALIGNMENTS, CHANGES IN GRADES, ALTERNATIVE PIPE SIZES OR MANHOLES WILL REQUIRE A NEW SET OF PLANS STAMPED BY THE CONSULTING ENGINEER. AUTHORITY ENGINEERS WILL REVIEW PLANS WITHIN ONE DAY OF SUBMITTAL. PLAN SHEETS CAN BE 8.5X11 IF THE INFORMATION IS LEGIBLE.

1. ALL EXISTING UTILITIES MAY NOT BE SHOWN OR MAY NOT BE IN THE EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH STATE WATER WORKS REGULATIONS WHERE LINES CROSS.
2. CONTRACTOR SHALL CONSTRUCT CROSSING SUCH THAT EXISTING UTILITIES REMAIN FUNCTIONAL. CARE SHALL BE TAKEN TO PREVENT DISRUPTIONS TO EXISTING UTILITIES OR UNDERMINING OF SUPPORTING SOILS OR STRUCTURES.
3. CONTRACTOR SHALL EXERCISE CARE IN DETERMINING THE LOCATION OF ANY UNDERGROUND UTILITY TO AVOID DAMAGING OR DISRUPTING UTILITY SERVICE. IF CONTRACTOR INADVERTENTLY DAMAGES ANY UTILITY LINE OR CABLE, HE SHALL BE RESPONSIBLE FOR IMMEDIATELY CONTACTING THE AFFECTED UTILITY COMPANY FOR REPAIR, OR HAVE REPAIRED, THE DAMAGE AT HIS EXPENSE.
4. FOR UTILITIES THAT CANNOT BE DISTURBED OR TEMPORARILY REMOVED, CONSTRUCTION SHALL BE ACHIEVED BY TUNNELING, BORE & JACKING, OR A COMBINATION OF BOTH.
5. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ANY AFFECTED UTILITY COMPANY FOR COORDINATION OF RELOCATIONS OR TEMPORARY SHORING OF UTILITY.
6. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. UTILITIES MAY EXIST WITHIN THE CONSTRUCTION AREA OF THESE PLANS THAT ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH OF ALL

1. **During construction, contractor shall limit disruption to residential access driveways, coordinate construction activities that may affect driveways with the property owner, and provide owner with access by end of work day or as soon as possible during all phases of construction.**
2. **All water fixtures (meters, valves, etc.) installed between edge of pavement and ditch lines shall be installed flush with existing grade. Fixtures installed beyond ditches shall be installed to minimize disruption during maintenance of roadway.**
3. **Soils for this site are unclassified. It shall be the contractor's responsibility to hire geotechnical engineer to classify soils, if needed.**

1. EXISTING WATERLINES SHALL BE ABANDONED IN-PLACE, INCLUDING ALL VALVES AND RELATED APPURTENANCES, IN ACCORDANCE WITH THE WYMA STANDARDS. ABANDONMENT OF WATERLINES AND/OR APPURTENANCES SHALL BE COORDINATED AND APPROVED BY THE WYMA.
2. AS PORTIONS OF THE EXISTING WATERLINE ARE ABANDONED, ASSOCIATED VALVE VAULTS ARE TO BE ABANDONED IN PLACE BY REMOVING THE FRAME & COVER AND FILLING VAULT WITH COMPACTED 21A STONE. DIRECT CONTACT WITH THE EXISTING WATERLINE SHALL NOT BE ALLOWED.
3. WYMA TO VISUALLY INSPECT EACH ABANDONED VAULT AFTER VAULT MANHOLE IS FILLED WITH STONE AND BEFORE BACKFILL MATERIAL IS PLACED OVER VAULT.
4. ALL EXISTING SURFACE APPURTENANCES (VALVE BOXES, MANHOLE FRAMES & COVERS, METER BOXES, FIRE HYDRANTS, ETC.) FOR ABANDONED UTILITIES SHALL BE REMOVED SO THAT NO EVIDENCE EXISTS AT THE SURFACE.

ADOPTED FROM TABLE 6-1 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK)

VS-1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VACASO-30 EROSION AND SEDIMENT CONTROL REGULATIONS.

VS-2. UNLESS OTHERWISE NOTED HEREON OR STIPULATED BY THE LAND DISTURBING PERMIT, THE PLAN SUPPORTING UTILITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRECONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

3-3. UNLESS OTHERWISE NOTED IN THE E&S NARRATIVE, PERIMETER CONTROLS AND SEDIMENT TRAPS SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AN SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

3-4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

3-5. IF OFF-SITE FILL OR BORROW AREAS ARE TO BE USED, THE LOCATION OF THE OFF-SITE FILL OR BORROW AREAS WILL BE PROVIDED TO THE EROSION AND SEDIMENT CONTROL ADMINISTRATOR ALONG WITH EVIDENCE OF AN ACTIVE LAND-DISTURBANCE PERMIT FOR THE OFF-SITE FILL OR BORROW AREAS. IF THE OFF-SITE FILL OR BORROW AREAS ARE NOT CURRENTLY PERMITTED FOR LAND-DISTURBING ACTIVITIES, AN EROSION AND SEDIMENT CONTROL PLAN FOR THE FILL/BORROW SITES SHALL BE SUBMITTED AND APPROVED PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITIES ON SITES.

3-6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

3-7. 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.

3-8. DURING Dewatering OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT, ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

3-9. THE EROSION AND SEDIMENT CONTROL (E&S) MEASURES SHOWN ON THESE STREETS ARE TO BE CONSTRUCTED DURING THE SITE GRADING AND CONSTRUCTION. REFER TO THE FOLLOWING SHEETS FOR EROSION AND SEDIMENT CONTROL NARRATIVE, SEQUENCE OF WORK, DETAILS, AND DESIGN DATA.

3-10. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND EMBANKMENTS IMMEDIATELY AFTER INSTALLATION.

3-11. DURING CONSTRUCTION OF THE PROJECT, ON-SITE SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON THE SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE. REFER TO ES-5 FOR ADDITIONAL REQUIREMENTS.

3-12. PERMANENT OR TEMPORARY STABILIZATION MEASURES SHALL BE APPLIED TO DENUDED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.

3-13. TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION MEASURES SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

3-14. PERMANENT SEEDING APPLIED TO ALL MECHANICALLY STABILIZED SLOPES AND SLOPES STEEPER THAN 3:1 AND SHALL MEET THE FOLLOWING SEED MIXTURE:

POUNDS PER ACRE	SEED TYPE
108	KENTUCKY 31
2	RED TOP
20	SEASONAL NURSE CROP (ANNUAL RYE, FOXTAIL MILLET, & WINTER RYE MIX)

S-16. ALL AREAS DISTURBED BY THE WORK OF THIS PROJECT SHALL BE STABILIZED BY EITHER THE CONSTRUCTION OF A PERMANENT SURFACE SUCH AS CURB, PAVEMENT, OR CONCRETE SIDEWALK, OR STABILIZED BY MEANS OF PERMANENT SEEDING OR ANOTHER APPROVED STABILIZATION METHOD.

S-17. FOLLOWING THE COMPLETION OF DEVELOPMENT CONSTRUCTION (GRADING, CONSTRUCTION OF STABILIZATION, EROSION CONTROL, ETC.) AREAS, THE CONTRACTOR SHALL NO LONGER OCCURRING ON THE PROJECT SITE OR AT ITS BOUNDARIES, CONFIRMATION THAT DRAINAGE FLOWS ARE FUNCTIONING ACCORDING TO DESIGN, AND APPROVAL HAS BEEN GRANTED BY THE EROSION AND SEDIMENT CONTROL INSPECTOR. THE CONTRACTOR MAY THEN BEGIN TO REMOVE THE TEMPORARY EROSION CONTROL MEASURES. WHEN REMOVED, THE REMOVED MATERIALS SHALL BE USED IN AN APPROPRIATE MANNER. IF DEWATERING IS REQUIRED, WATER SHALL BE PUMPED TO AN APPROVED FILTERING DEVICE.

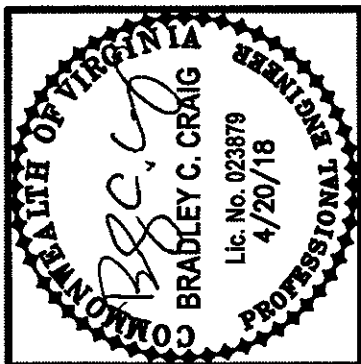
BM-1  
CHISELED SQUARE ON S.E. CORNER OF DROP INLET.  
ELEV. = 1051.37'

BM-2  
CHISELED SQUARE ON THE S.W. CORNER OF CONC. PAD  
FOR TRAFFIC CONTROL CABINET.  
ELEV. = 1069.42'

PT #1	36.203233.4412	E: 11052758.5342	ELEV: 1023.189
	BEARING: N 2° 36' 45"W	DIST: 589.57	
PT #2	36.32622.4025	E: 11052731.6614	ELEV: 1042.524
	BEARING: N 12° 08' 56"E	DIST: 151.51'	
PT #3	36.322770.5176	E: 11052763.5468	ELEV: 1048.554
	BEARING: N 47° 17' 09"E	DIST: 262.89'	
PT #4	36.32948.8478	E: 11052956.7058	ELEV: 1039.568
	BEARING: S 53° 27' 56"E	DIST: 307.33'	
PT #5	36.32762.0450	E: 11053200.7551	ELEV: 1052.924
	BEARING: S 54° 02' 30"E	DIST: 151.51'	
PT #6	36.32571.4242	E: 11053483.4996	ELEV: 1058.363
	BEARING: N 36° 27' 51"E	DIST: 210.93'	
PT #7	36.32741.0769	E: 11053388.8050	ELEV: 1058.125
	BEARING: S 41° 20' 24"E	DIST: 187.48'	
PT #8	36.32600.3136	E: 11053712.6964	ELEV: 1058.061
	BEARING: S 23° 26' 30"E	DIST: 277.94'	
PT #9	36.32345.3044	E: 11053823.2685	ELEV: 1062.530
	BEARING: S 43° 47' 11"E	DIST: 297.12'	
PT #10	36.32130.8070	E: 11054028.8672	ELEV: 1065.098

1. THIS LOCATION SURVEY OF NEW YORK AVENUE, CITY OF ROANOKE, VA, WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF TIMOTHY W. CALDWELL, L.S. FROM AN ACTUAL GROUND SURVEY MADE UNDER MY DIRECT SUPERVISION; THAT THIS MAP AND ANY ORIGINAL DATA WAS OBTAINED ON NOVEMBER 14 THRU 30, 2017, THAT THIS PLAT, MAP, OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
2. PROPERTY INFORMATION IS BASED ON MAP OF MILLA HEIGHTS, M.B. 1 PG. 151 AND
3. EVIDENCE OF EASEMENTS, ENCUMBRANCES, AND
4. HORIZONTAL AND VERTICAL CONTROL WAS ESTABLISHED USING ROANOKE CITY CONTROL MONUMENTS.
5. CONTOURS AS SHOWN HEREON ARE AT 1-FOOT INTERVALS
6. UNDERGROUND UTILITIES LOCATION BASE ON DESIGNATION BY MISS UTILITY TICKET NO.'S.

Sanitary Sewer Manhole		Storm Drainage Data	
S1	Sanitary Sewer Manhole Top of Rim = 1014.43' 8" Flow = 1009.63' (From WVWA GIS)	S14	Sanitary Sewer Manhole Top of Rim = 1058.80' Flow = 1051.12'
S2	Sanitary Sewer Manhole Top of Rim = 1014.04' 8" Flow = 1009.64' (From WVWA GIS)	S15	Sanitary Sewer Manhole Top of Rim = 1059.23' Flow = 1052.15'
S3	Sanitary Sewer Manhole Top of Rim = 1014.75' Inv. In 8" Cast = 1011.80' Inv. Out 8" Cast = 1010.73'	S16	Sanitary Sewer Manhole Top of Rim = 1044.46' Inv. In = 1039.56' Flow = 1035.76'
S4	Sanitary Sewer Manhole Top of Rim = 1022.73' Inv. In 8" Cast = 1019.95' Inv. Out 8" Cast = 1019.75'	S17	Sanitary Sewer Manhole Top of Rim = 1055.52' Inv. In = 1051.61' Inv. In = 1049.25' Inv. Out = 1049.08'
S5	Sanitary Sewer Manhole Top of Rim = 1027.78' Inv. Laterd = 1022.22' Inv. In 8" Cast = 1022.04' Inv. Out 8" Cast = 1022.01'	S18	Sanitary Sewer Manhole Top of Rim = 1060.84' Inv. In = 1057.26' Inv. Out = 1057.02'
S6	Sanitary Sewer Manhole Top of Rim = 1032.85' Inv. In. 8" Cast = 1027.40' (From Alley) Inv. In 8" Cast = 1027.35' Inv. Out 8" Cast = 1027.11'	<u>Storm Drainage Data:</u>	
S7	Sanitary Sewer Manhole Top of Rim = 1035.56' Inv. In 8" Cast = 1029.56' Inv. Out 8" Cast = 1029.31'	D1	Drop Inlet Top of Rim = 1041.11'
S8	Sanitary Sewer Manhole Top of Rim = 1044.62' Inv. In 8" Cast = 1040.17' (From S9) Inv. In 8" Cast = 1039.13' (From S10) Inv. Out 8" Cast = 1038.71'	D2	Drop Inlet Top of Rim = 1039.82' Inv. = 1037.02'
S9	Sanitary Sewer Manhole Top of Rim = 1047.70' 8" Flow = 1044.49'	D3	Drop Inlet Top of Rim = 1040.68' Inv. = 1037.06'
S10	Sanitary Sewer Manhole Top of Rim = 1050.02' 8" Flow = 1046.34'	<u>Water System Data:</u>	
S11	Sanitary Sewer Manhole Top of Rim = 1040.11' Inv. In = 1034.42' Inv. Out = 103.20'	W1	Water Manhole Top of Rim = 1014.37'
S12	Sanitary Sewer Manhole Top of Rim = 1039.82' Inv. In (New York Ave.) = 1035.21' Inv. In = 1035.05' Inv. Out = 1034.92'	W2	Water Manhole Top of Rim = 1044.98' Top of Valve = 1043.01'
S13	Sanitary Sewer Manhole Top of Rim = 1054.85' Inv. In = 1046.86' Inv. In (Church) = 1046.80' Inv. Out = 1046.40'	W3	Water Manhole Top of Rim = 1045.50' Top of Valve = 1042.53'
		W4	Water Manhole Top of Rim = 1040.45' Top of Valve = 1037.72'
		W5	Water Manhole Top of Rim = 1040.86' Top of Valve = 1038.98'
		W6	Water Manhole Top of Rim = 1062.33' Top of Valve = 1061.09'

[illegible]

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NEW YORK AVENUE  
WATERLINE REPLACEMENT  
WATERLINE GENERAL NOTES AND  
SURVEY DATA  
WESTERN VIRGINIA WATER AUTHORITY

Vertical Scale:

Horizontal Scale:

Commission Number:  
3814

Sheet No.:

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