

PROJECT NOTES:

WATER NOTES:

WN-1. WATER LINES SHALL NOT BE PLACED WITHIN 20 HORIZONTAL FEET OF EXISTING OR PROPOSED SANITARY DRAIN FIELDS AND/OR SEPTIC TANKS.

WN-2. ALL VALVES, BENDS, 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 SPECIFICATIONS AND DETAILS.

WN-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.

WN-4. ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES. WATER LINES SHALL BE LAID DEEPER WHERE SHOWN ON THE PROFILES, OR WHERE NECESSARY TO ACCOMMODATE THE BURY DEPTH OF VALVES AND VALVE VAULTS.

WN-5. ALL DISTRIBUTION LINES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE WESTERN VIRGINIA WATER AUTHORITY STANDARDS.

WN-6. COMBINATION AIR RELEASE VALVES SHOWN ON PLANS SHALL BE FIELD LOCATED AT THE HIGH POINT IN THE WATER MAIN.

WN-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.

WN-8. THE CONTRACTOR SHALL CONTINUOUSLY KEEP UP TO DATE WITH PROPERTY RESTORATION, SEEDING AND COMPACTION TESTING.

WN-9. ALL PROPOSED WATER SERVICE LINES SHALL BE 1" UNLESS OTHERWISE NOTED.

WN-10. ALL EXISTING UTILITIES MAY NOT BE SHOWN IN THE EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH THE STATE WATER WORKS REGULATIONS WHERE LINES CROSS.

WN-11. ALL TRENCHES IN EXISTING OR FUTURE VDOT RIGHTS-OF-WAY SHALL BE COMPACTED ACCORDING TO VDOT STANDARDS.

WN-12. ALL WATER PIPE SHALL BE MATERIAL AS SPECIFIED IN THE WWA SPECIFICATIONS.

WN-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 SIX (6) INCHES 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.

WN-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 DRY TAPS MADE TO THE EXISTING SYSTEM SHALL BE MADE BY THE WESTERN VIRGINIA WATER AUTHORITY.

WN-15. THE CONTRACTOR SHALL PROVIDE A LICENSED GEOTECHNICAL ENGINEER TO INSPECT BACKFILL MATERIAL AND PROVIDE COMPACTION TESTS AS REQUIRED BY THE VDOT LAND USE PERMIT.

WN-16. OPEN-CUTS SHALL BE USED TO CONSTRUCT WATERMAINS ACROSS EXISTING ROADS UNLESS OTHERWISE NOTED ON THE PLANS. ALL OPEN-CUTS SHALL BE PATCHED AS PER WWA DETAIL C-12 AND THE AREA SHALL BE MILLED AND OVERLAYED WITH A SURFACE MIX TO BLEND THE NEW AND EXISTING ASPHALT.

WN-17. EXISTING WATER SERVICE CROSSINGS ARE NOT SHOWN IN PROFILE FOR CLARITY. CONTRACTOR SHALL INSTALL WATERLINE AROUND EXISTING WATER SERVICES.

GENERAL NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE WESTERN VIRGINIA REGIONAL DESIGN AND CONSTRUCTION STANDARDS AVAILABLE AT WWW.WESTERNWATER.ORG OR BY CONTACTING THE AUTHORITY AT 540-553-5700. THE PROJECT SHALL ALSO COMPLY WITH THE GOVERNING JURISDICTION'S STANDARDS AND OTHER AGENCY STANDARDS (E.G., VDOT, DEQ, 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 REPLACEMENT 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 THREE (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 TEN (10) SERVICES THAT ARE READY TO RECEIVE NEW METERS BEFORE CONTACTING THE AUTHORITY FOR WATER METER REPLACEMENT.

3. ALL CONNECTIONS TO EXISTING WATERLINES 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 SEVENTY-TWO (72) HOURS PRIOR TO REQUIRING THE CONNECTION.

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 SEVENTY-TWO (72) HOURS PRIOR TO REQUIRING THE CONNECTION.

5. 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 SEWER SERVICE. THE CONTRACTOR SHALL CONTACT THE AUTHORITY'S CONSTRUCTION INSPECTOR RESPONSIBLE FOR THE PROJECT AT LEAST ONE (1) DAY PRIOR TO INITIATING THE MANHOLE CONNECTION.

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 LEAST TWO WEEKS IN ADVANCE OF REQUIRING TRAFFIC CONTROL. FOR A LANE CLOSURE PERMIT IN THE CITY OF ROANOKE, CONTACT THE TRAFFIC ENGINEER, HONG LIU, AT 540-853-2686. IN ROANOKE OR FRANKLIN COUNTIES, TRAFFIC CONTROL REQUIREMENTS SHALL BE DETERMINED ONCE THE 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 PROTECTION MANUAL UNLESS OTHERWISE SPECIFIED.

8. THE CONTRACTOR SHALL NOTIFY THE AUTHORITY'S ENGINEERING COORDINATOR, MARK SINK, AT 540-537-3480 AT LEAST THREE (3) DAYS PRIOR TO CONSTRUCTION.

9. A PRE-CONSTRUCTION CONFERENCE SHALL BE SCHEDULED AT LEAST ONE (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 INVERTS 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 12VAC5-590-1150, AND THE VIRGINIA STATE SEWAGE COLLECTION AND TREATMENT REGULATIONS WHERE LINES CROSS.

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 SUCH CONSTRUCTION.

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. UNREPAIRED 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 BEFORE SUBSTANTIAL COMPLETION WILL BE GRANTED.

22. 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 STRUCTURES. CONTRACTOR SHALL PROVIDE SHORING, OR OTHER MEANS NECESSARY TO PROTECT ADJACENT BUILDINGS AND PROPERTY.

27. EXISTING MAILBOXES NOT SHOWN FOR CLARITY.

28. ALL EXISTING ROADSIDE DITCHES IMPACTED BY THE PROPOSED CONSTRUCTION SHALL BE FINE GRADED TO DRAIN AND PERMANENTLY SEEDDED AS SOON AS POSSIBLE.

29. ANY REQUIRED PAVEMENT DISTURBANCE 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.

DEMOLITION NOTES:

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 THAT MAY OCCUR 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.

TREE PROTECTION NOTES:

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.

FIELD ADJUSTMENT NOTES:

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. NONE 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.

ADJACENT UTILITIES NOTES:

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 UTILITIES BEFORE COMMENCING WORK, AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE SUCH UTILITIES. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THESE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE CONTINUANCE OF SERVICE. CALL MISS UTILITIES AT 1-800-552-7001 (TOLL FREE) 48 HOURS BEFORE DIGGING.

GENERAL CONSTRUCTION NOTES:

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 TIMES 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.

ABANDONMENT NOTES:

1. EXISTING WATERLINES SHALL BE ABANDONED IN-PLACE, INCLUDING ALL VALVES AND RELATED APPURTENANCES, IN ACCORDANCE WITH THE WWA STANDARDS. ABANDONMENT OF WATERLINES AND/OR APPURTENANCES SHALL BE COORDINATED AND APPROVED BY THE WWA.

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. PROJECT INSPECTOR WILL NOTIFY CONTRACTOR WHEN VAULTS CAN BE ABANDONED.

3. WWA TO VISUALLY INSPECT EACH ABANDONED VAULT AFTER VAULT IS FILLED WITH STONE AND BEFORE BACKFILL MATERIAL IS PLACED OVER VAULT.

EROSION CONTROL NOTES:

ES-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 SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS.

ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

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

ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

ES-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.

ES-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.

ES-8: DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9: 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.

ES-10: ALL EROSION CONTROL MEASURES SHALL CONFORM TO THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

ES-11: CONTRACTOR SHALL CONTACT THE WESTERN VIRGINIA WATER AUTHORITY PRIOR TO START OF WORK TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE AND AGAIN 48 HOURS PRIOR TO COMMENCING WORK.

ES-12: CONTRACTOR SHALL INSTALL ADEQUATE EROSION CONTROL MEASURES DURING CONSTRUCTION TO PREVENT SILT-LADEN RUNOFF FROM LEAVING THE SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES. ALL STREETS SHALL BE KEPT FREE FROM SILT, SEDIMENT, AND DEBRIS DURING CONSTRUCTION.

ES-13: TREES IDENTIFIED ON THE PLANS ARE APPROXIMATE AND SHOULD NOT BE USED AS EXACT REFERENCES.

ES-14: GENERALLY, TREES SHOWN ON THIS PLAN ARE INTENDED TO REMAIN UNDISTURBED AS PART OF THIS PROJECT.

ES-15: PERMANENT OR TEMPORARY SOIL STABILIZATION MUST BE APPLIED TO DENUDED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE NOT OTHERWISE PERMANENTLY STABILIZED. SOIL STABILIZATION MUST ALSO BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS WHICH MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR MORE THAN 30 DAYS. SEE EROSION CONTROL NARRATIVE AND SPECIFICATIONS FOR ADDITIONAL EROSION CONTROL REQUIREMENTS AND SPECIFICATIONS.

ES-16: IN LOCATIONS WHERE UNDERGROUND UTILITIES ARE TO BE INSTALLED IN FORESTED AREAS, THE CONTRACTOR SHALL VERIFY ANY TREES TO BE REMOVED WITH THE OWNER.

ES-17: IN WETLAND AREAS, THE CONTRACTOR SHALL COMPLY WITH REGULATIONS SET FORTH BY ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT NUMBER 12 - UTILITY LINE ACTIVITIES. SPECIFICALLY THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING: A. ANY EXPOSED STREAM BANKS SHALL BE STABILIZED IMMEDIATELY UPON COMPLETION OF THE UTILITY LINE CROSSING OF EACH WATERBODY. B. ACCESS ROADS USED SOLELY FOR CONSTRUCTION OF THE UTILITY SHALL BE REMOVED UPON COMPLETION OF THE WORK AND THE AREA RESTORED TO PRECONSTRUCTION GRADE, ELEVATIONS AND WETLAND CONDITIONS. C. APPROPRIATE SOIL EROSION AND SEDIMENT CONTROLS SHALL BE USED AND MAINTAINED IN EFFECTIVE OPERATING CONDITION DURING CONSTRUCTION AND ALL EXPOSED SOIL AND OTHER FILLS, AS WELL AS ANY WORK BELOW THE ORDINARY HIGH WATER MARK OR HIGH TIDE LINE, SHALL BE PERMANENTLY STABILIZED AT THE EARLIEST PRACTICABLE DATE. D. CULVERTS PLACED IN STREAMS SHALL BE INSTALLED TO MAINTAIN LOW FLOW CONDITIONS. E. HEAVY EQUIPMENT WORKING IN WETLANDS SHALL BE PLACED ON MATS OR OTHER MEASURES SHALL BE TAKEN TO MINIMIZE SOIL DISTURBANCE. F. ANY TEMPORARY FILLS SHALL BE REMOVED IN THEIR ENTIRETY AND THE AFFECTED AREAS RETURNED TO THEIR PREEXISTING ELEVATION.

ES-18: ALL UNPAVED AND UNGRAVELLED AREAS DISTURBED BY CONSTRUCTION SHALL BE SEEDDED.

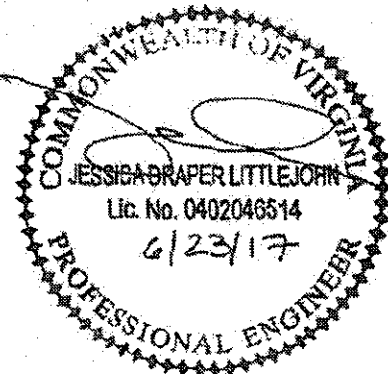
ES-19: IF AT ANY POINT DURING THE PROJECT SILT-LADEN RUNOFF MIGRATES TOWARD THE EXISTING STREAMS THE CONTRACTOR SHALL INSTALL SILT FENCE BETWEEN THE WATER LINE WORK AREA AND THE EXISTING STREAMS. EXCAVATED MATERIAL FROM THE TRENCH SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

ES-20: OUTSIDE THE LIMITS OF THE PUBLIC RIGHT-OF-WAY, CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING CONSTRUCTION MATERIAL STAGING AREAS LOCATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCING AND OBTAINING APPROVAL OF AN EROSION AND SEDIMENT CONTROL PLAN FOR THE STAGING AREAS FROM ROANOKE CITY.

ES-21: EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF SITE PROPERTY.

ES-22: CONTRACTOR TO REMOVE ALL SEDIMENT DEPOSITS FROM THE EXISTING STORM DRAINAGE SYSTEMS, DITCHES, CULVERTS, AND CONVEYANCE CHANNELS AFTER EACH STORM EVENT AND AT THE COMPLETION OF THE PROJECT.

ES-23: CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING A SUITABLE STAGING AREA FOR THE PROJECT. CONTRACTOR TO PROVIDE AN APPROVED EROSION AND SEDIMENT CONTROL PLAN TO THE CITY OF ROANOKE ONCE A SITE LOCATED. STAGING AREA SHALL BE COORDINATED AND APPROVED BY THE CITY OF ROANOKE BEFORE THE PRECONSTRUCTION MEETING.



ANDERSON & ASSOCIATES, INC.
Professional Design Services
www.andassoc.com

100 Ardmore St.
Blacksburg, Va. 24060
540-552-6592

DATE : 01 JUN 16
DESIGNED : BJM
DRAWN : BJM
CHECKED : DAJ
QA/QC : RSB

REV. #

COMMENTS

DATE

ELM AVENUE WATER MAIN REPLACEMENT - PHASE 2

WESTERN VIRGINIA WATER AUTHORITY

PROJECT NOTES 1

DOCUMENT NO.

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