

WATER NOTES:

1. ALL 1" WATER SERVICE PIPE SHALL BE POLYETHYLENE TUBING, ENDOPURE BY ENDOT INDUSTRIES OR EQUAL, AND IN ACCORDANCE WITH WVWA STANDARDS.

SEWER NOTES:

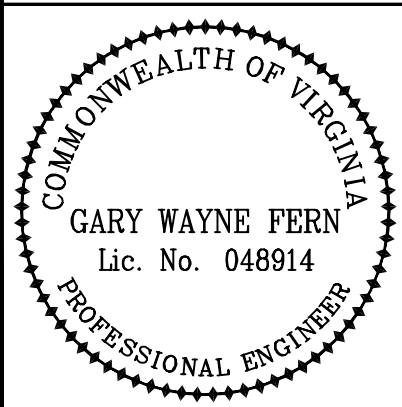
1. ALL NEWLY INSTALLED SANITARY SEWERS SHALL BE INSPECTED BY THE CONTRACTOR BY CCTV INSPECTION. INSPECTION SHALL BE PERFORMED PRIOR TO SUBSTANTIAL COMPLETION AND PRIOR TO PLACING THE NEW SANITARY SEWER INTO SERVICE. CCTV INSPECTION SHALL BE PERFORMED AND SUBMITTED IN ACCORDANCE WITH WVWA STANDARDS, SECTION CS-4 SANITARY SEWER CLOSED CIRCUIT TELEVISION (CCTV) INSPECTION.
2. EXISTING SANITARY SEWER, FROM MANHOLE S21 TO MANHOLE S20 (MH E), SHALL BE INSPECTED BY THE CONTRACTOR BY CCTV INSPECTION. INSPECTION SHALL BE PERFORMED AFTER ALL PROPOSED EXCAVATION, GRADING AND DRAINAGE WORK IS COMPLETE AND PRIOR TO SUBSTANTIAL COMPLETION. THE CONTRACTOR'S VIDEO WILL BE COMPARED TO THE WVWA'S VIDEO ON FILE DATED 11/06/2015. ANY DAMAGE TO THE EXISTING SANITARY SEWER NOTED IN THE CONTRACTOR'S POST-CONSTRUCTION VIDEO SHALL BE REPAIRED BY THE CONTRACTOR. THE CONTRACTOR MAY, AT THEIR OWN EXPENSE, PERFORM AN ADDITIONAL PRE-CONSTRUCTION VIDEO TO BE COMPARED TO THE POST-CONSTRUCTION VIDEO. ALL CCTV INSPECTIONS SHALL BE PERFORMED AND SUBMITTED IN ACCORDANCE WITH WVWA STANDARDS, SECTION CS-4 SANITARY SEWER CLOSED CIRCUIT TELEVISION (CCTV) INSPECTION.
3. BYPASS PUMPING SHALL BE PERFORMED IN ACCORDANCE WITH THE WVWA STANDARDS AND THE MAINTENANCE OF TRAFFIC PLANS FOR THIS PROJECT. IN ADDITION, WHEN PUMPING IS NECESSARY INTO OR OUT OF A MANHOLE LOCATED WITHIN THE TRAVELWAY, THE BYPASS HOSE SHALL BE PLACED BELOW THE STREET SURFACE AND TEMPORARILY INSTALLED INTO THE SIDE OF THE MANHOLE BY CORING THE MANHOLE. THE STREET SURFACE SHALL BE RESTORED WITH TEMPORARY PAVEMENT FOR THE DURATION OF THE BYPASS PUMPING. UPON COMPLETION OF THE BYPASS PUMPING, THE MANHOLE SHALL BE REPAIRED BY FILLING THE CORED HOLE WITH HYDRAULIC CEMENT EQUAL TO SIKAGROUT 212, AND THE ROAD BASE AND SURFACE REPAIRED IN ACCORDANCE WITH DETAIL G-12. ALL PAVEMENT REMOVAL AND REPLACEMENT NECESSARY FOR BYPASS PUMPING SHALL BE INCIDENTAL TO SANITARY COLLECTION SEWER.

BROADBAND (FO) AND ELECTRIC (UGE) NOTES:

1. A 2 INCH DIAMETER BROADBAND CONDUIT SHALL BE INSTALLED FOR FUTURE INSTALLATION OF A FIBER OPTIC CABLE.
- 1.1. BROADBAND CONDUIT SHALL BE SMOOTH WALL SDR-11 HDPE WITH 18 GAUGE LOCATING WIRE PROVIDED INTEGRAL WITH THE CONDUIT, EQUAL TO PINPOINT BY A.D. TECHNOLOGIES.
- 1.2. SPLICES BETWEEN SEGMENTS OF BROADBAND CONDUIT AND PINPOINT WIRE SHALL BE MADE WITH SPLICE KITS PROVIDED BY THE MANUFACTURER. THE MINIMUM BEND RADIUS FOR CONDUIT SHALL BE 24 INCHES.
- 1.3. BROADBAND CONDUIT SHALL BE PROVIDED WITH PRELOADED PULL TAPE.
- 1.5. BROADBAND CONDUIT SHALL BE INSTALLED WITH A MINIMUM OF 3 FEET OF COVER.
2. BROADBAND PULL BOXES SHALL BE PROVIDED AS SHOWN ON THE PLANS.
- 2.1. BOXES SHALL BE FIBER-REINFORCED POLYMER WITH FLARED WALLS EQUAL TO QUAZITE FRP ENCLOSURES BY HUBBELL.
- 2.2. DEPTH OF BOXES SHALL BE 24 INCHES.
- 2.3. BOXES SHALL BE TIER 15 LOAD RATED.
3. A 2 INCH DIAMETER ELECTRIC CONDUIT SHALL BE INSTALLED FOR FUTURE INSTALLATION OF AN ELECTRIC CABLE.
- 3.1. ELECTRIC CONDUIT SHALL BE LIQUIDTIGHT PVC AND LISTED FOR DIRECT BURIAL AND FOR STREET LIGHTING APPLICATIONS.
- 3.2. ELECTRIC CONDUIT SHALL BE INSTALLED WITH A MINIMUM OF 3 FEET OF COVER.
- 3.3. THE MINIMUM BEND RADIUS FOR CONDUIT SHALL BE 24 INCHES.
- 3.4. ELECTRIC CONDUIT SHALL BE PROVIDED WITH PRELOADED PULL TAPE.

OTHER UTILITY NOTES:

1. UTILITY CONTACTS:
- ROANOKE GAS COMPANY
CONTACT: LARRY NICHOLS
PHONE: 540-793-4496
E-MAIL: LARRY_NICHOLS@ROANOKEGAS.COM
- VERIZON
CONTACT: ALLEN ASBURY
PHONE: 540-265-7574
E-MAIL: ROSCOE.A.ASBURY.JR@VERIZON.COM
- AEP
CONTACT: KEITH FREEMAN
PHONE: 540-427-3643
E-MAIL: KAFREEMAN@AEP.COM
- LUMOS
CONTACT: MARK MUNSEY
PHONE: 540-293-0120
E-MAIL: MUNSEYRM@LUMOSNET.COM
- COX
CONTACT: GREG SMITH
PHONE: 540-293-2662
E-MAIL: GREGORY.SMITH2@COX.COM
- LEVEL 3
CONTACT: GARY KOZLOWSKI AND DAVID STRAWSNYDER
PHONE: 336-317-1954 804-489-0789
E-MAIL: VVK@NORTHSTATE.NET DAVID.STRAWSNYDER@LEVEL3.COM
2. CONTRACTOR SHALL COORDINATE WORK ON THE PROJECT WITH ALL UTILITY OWNERS AS NEEDED TO AVOID CONFLICTS AND TO MAINTAIN THE PROJECT SCHEDULE. CONTRACTOR SHALL NOTIFY APPLICABLE UTILITY OWNERS WHEN WORKING NEAR EXISTING UTILITES AND WHEN UTILITY ADJUSTMENTS AND/OR RELOCATIONS ARE NEEDED. SOME UTILITY RELOCATIONS HAVE BEEN COMPLETED PRIOR TO AWARD OF THE PROJECT. SOME UTILITES WILL BE RELOCATED DURING THE PROJECT BY THE UTILITY OWNER AND UPON NOTIFICATION BY AND COORDINATED WITH THE CONTRACTOR.
3. ROANOKE GAS COMPANY (RGC) IS TO RELOCATE GAS MAINS AS NECESSARY TO ACCOMMODATE THE PROJECT. COORDINATION FOR SCOPE AND SCHEDULE OF NEEDED GAS MAIN RELOCATIONS SHALL BE PERFORMED IN THE PRECONSTRUCTION MEETING. THE CONTRACTOR SHALL COORDINATE THEIR WORK WITH RGC'S RELOCATION WORK AS NEEDED.
4. APPENDIX D INCLUDES PROPOSED UTILITY RELOCATION PLANS, INCLUDING NARRATIVES, SHOWING EACH UTILITY'S INTENDED RELOCATION, REMOVAL AND/OR INSTALLATION OF UTILITIES. THESE PLANS HAVE BEEN PREPARED BY UTILITY COMPANIES AND ARE INCLUDED FOR THE CONTRACTOR'S USE IN COORDINATING UTILITIES WITH CONSTRUCTION OF THE PROJECT. THE PLANS SHOW WORK THAT IS AN ADDITION TO, OR A CLARIFICATION OF, THE UTILITY RELOCATIONS BY OTHERS SHOWN ON SHEETS 10(3) THROUGH 10(7-1). THE UTILITY PLANS BY UTILITY COMPANIES ARE NOT FINAL AND MAY NOT REPRESENT ALL UTILITY RELOCATIONS THAT ARE NECESSARY TO AVOID CONFLICTS WITH THE PROJECT.



Whitman Requardt & Associates
Blacksburg, Virginia
UTILITY ENGINEER



COUNTY OF ROANOKE
5204 BERNARD DRIVE
ROANOKE, VA 24018

VDOT PROJECT NUMBERS:
0115-080-R95, P101, C501 &
EN12-080-823, P101, R201, C501

VDOT UPC NUMBERS: 98220 & 103607

PLANTATION ROAD, BICYCLE, PEDESTRIAN, AND
STREETSCAPE IMPROVEMENTS PROJECT

Rev	Date	Description

Drawing
UTILITY NOTES

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10(1A)