

S:\WVA\WYNDALE AVE WATER MAIN\21 CAD\DWG\21.05 WORKING DWGS\0517001-0301 - 2019/02/07 11:19 AM HEBBE, DAVID

WESTERN VIRGINIA WATER AUTHORITY
GENERAL NOTES:

- ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE WESTERN VIRGINIA REGIONAL DESIGN AND CONSTRUCTION STANDARDS AVAILABLE AT WWW.WESTERNVIAWATER.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, DEQ, DCR, VDH, ETC.) WHERE APPLICABLE.
- THE AUTHORITY WILL INSTALL ALL NEW WATER METERS AND REMOVE/RE-INSTALL 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.
- 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.
- 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.
- 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.
- 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.
- FOR PROJECTS REQUIRING TRAFFIC CONTROL IN THE CITY OF ROANOKE, NOTIFY MANAGER OF TRANSPORTATION, MARK JAMISON, AT 540-853-5471 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-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.
- THE CONTRACTOR SHALL NOTIFY THE AUTHORITY'S ENGINEERING COORDINATOR, MARK SINK, AT 540-537-3460 AT LEAST THREE (3) DAYS PRIOR TO CONSTRUCTION.
- A PRE-CONSTRUCTION CONFERENCE SHALL BE SCHEDULED AT LEAST ONE (1) DAY PRIOR TO ANY CONSTRUCTION.
- THE CONTRACTOR SHALL HAVE A VALID MISS UTILITY TICKET PRIOR TO EXCAVATION. CONTACT MISS UTILITY AT 1-800-552-7001.
- 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.
- AN APPROVED SET OF PLANS AND PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
- CONSTRUCTION DEBRIS SHALL BE CONTAINERIZED IN ACCORDANCE WITH THE VIRGINIA LITTER CONTROL ACT.
- 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.
- 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.
- FIELD CHANGES SHALL BE APPROVED BY THE AUTHORITY'S ENGINEERING DIVISION PRIOR TO SUCH CONSTRUCTION.
- THE CONTRACTOR SHALL MAKE PROVISIONS TO PROVIDE ACCESS TO ALL PROPERTIES DURING CONSTRUCTION AND SHALL MAINTAIN SAFE ACCESSIBILITY TO FIRE HYDRANTS AT ALL TIMES.
- 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.
- 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.
- 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.
- THE CONTRACTOR SHALL SUPPLY THE AUTHORITY WITH CORRECT AS-BUILT PLANS BEFORE SUBSTANTIAL COMPLETION WILL BE GRANTED.

ENGINEER'S GENERAL NOTES:

- A DISTINCTION BETWEEN NEW AND EXISTING MATERIALS, EQUIPMENT AND STRUCTURES HAS BEEN MADE ON THE DRAWINGS BY LINE WEIGHT AND/OR DENSITY. HEAVY REPRESENTS NEW. LIGHT AND/OR SCREENED REPRESENTS EXISTING.
- THE CONTRACTOR IS RESPONSIBLE TO MAKE ALL MEASUREMENTS NECESSARY TO LOCATE, FABRICATE, ERECT, CONSTRUCT AND OTHERWISE INSTALL ALL NEW WORK IN LOCATIONS SHOWN AND RELOCATE AND REWORK EXISTING WORK ALL TO THE ARRANGEMENTS, GUIDANCE AND INSTRUCTIONS SHOWN AND REQUIRED FOR A COMPLETE TROUBLE-FREE OPERATING INSTALLATION.
- LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING PIPING, EQUIPMENT, STRUCTURES AND OTHER EXISTING WORK ARE BASED ON INFORMATION FURNISHED BY VARIOUS SOURCES, INCLUDING EXISTING RECORD DRAWINGS AND CONTRACT DOCUMENTS, AND IN SOME INSTANCES FIELD MEASUREMENTS. LOCATIONS, ELEVATIONS AND DIMENSIONS OF NEW WORK CONNECTING OR ADJACENT TO OR INTERFACING WITH EXISTING WORK HAVE BEEN DEVELOPED AND ARRANGED BASED ON THE FOREGOING INFORMATION AND FIELD MEASUREMENTS. THE CONTRACTOR IS RESPONSIBLE TO FIELD CHECK AND MEASURE LOCATIONS, ELEVATIONS AND DIMENSIONS AND TO FIT AND OTHERWISE INSTALL THE NEW WORK TO ACTUAL EXISTING LOCATIONS, ELEVATIONS AND DIMENSIONS FOR A COMPLETE AND TROUBLE-FREE OPERATING FACILITY.
- THE EXISTING GRADE ELEVATIONS SHOWN ARE APPROXIMATE, WHERE ACTUAL ELEVATIONS AND LOCATIONS ARE NECESSARY FOR THE WORK, THE CONTRACTOR IS RESPONSIBLE TO FIELD MEASURE AND CHECK EXISTING GRADE ELEVATIONS.
- ALL WORK AND COSTS ASSOCIATED WITH COMPLIANCE WITH THESE GENERAL NOTES SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS CONTRACT ITEMS AND NO SEPARATE PAYMENT WILL BE MADE THEREFOR.
- EXISTING CONSTRUCTION SHALL BE REMOVED TO THE EXTENT SHOWN AND SPECIFIED AND AS NEEDED TO BE COMPATIBLE AND ACCOMMODATE NEW WORK OR REPLACEMENT WORK.
- WHEREVER ANY ABANDONED CONDUITS OR PIPES ARE CUT OR BROKEN DURING CONSTRUCTION THEY SHALL BE FILLED WITH GROUT OR CLASS D CONCRETE AND SUITABLE BULKHEADS, AS DETERMINED BY THE ENGINEER. GROUT, CONCRETE AND BULKHEADS SHALL BE INSTALLED SO THAT NO MOVEMENT OR LOSS OF GROUND OR BACKFILL MATERIAL SHALL OCCUR.
- DIMENSIONS NOTED BY A DOUBLE ASTERISK (**) SHALL BE CHECKED BY THE CONTRACTOR BY ACTUAL FIELD MEASUREMENTS AND DIMENSIONS AND CONSTRUCTION ADJUSTED TO FIT NEW CONSTRUCTION TO ACTUAL LOCATIONS OF EXISTING CONSTRUCTION AS SHOWN AND REQUIRED.
- IF THERE IS DISAGREEMENT IN WORK SHOWN OR SPECIFIED SUCH DISAGREEMENT SHALL BE RESOLVED BY APPLYING THE PRECEDENCE IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE MINIMUM WORK NEEDED TO SATISFY FUNCTIONAL, CONTROL AND INTERFACING REQUIREMENTS AND PROVIDE A TROUBLE-FREE OPERATING INSTALLATION UNDER THE PRECEDENCE.
- ALL REFERENCED DETAILS REFER TO WESTERN VIRGINIA WATER AUTHORITY'S STANDARD DETAILS.

SURVEYOR'S GENERAL NOTES:

- Source of Meridian/Virginia State Plane, South Zone (NAD 83) based upon: previous GPS static sessions.
- Vertical datum: (NAVD 88) based upon: previous GPS static control.
- This survey was prepared without the benefit of a title commitment or title report and all easements and encumbrances that might be disclosed in a title search may not be shown.
- Utilities shown are based upon:
____ SUE Quality Level D, ASCE 38-02 - compiled records only
____ SUE Quality Level C, ASCE 38-02 - visible evidence in conjunction with compiled records.
____ SUE Quality Level B, ASCE 38-02 - field designation of underground utilities performed by Miss Utility, Ticket # A800300574 and visible evidence in conjunction with compiled records.
____ SUE Quality Level A, ASCE 38-02 - test pits at locations shown hereon performed by (DAA; Other) in conjunction with field designation of underground utilities performed by (DAA; Miss Utility, Ticket # _____; Other), visible evidence and compiled records.
____ No SUE was performed or requested for this survey. Utilities shown hereon are based on field observation only.
- This topographic survey along Wyndale Ave, and Buckingham Lane was completed under the direct and responsible charge of Loren W. Knighting from an actual Ground survey made under my supervision; that the imagery and/or original data was obtained on the weeks of Dec. 04 and 11, 2017; and that this plot and/or map meets minimum accuracy standards unless otherwise noted.
- Contour interval: 1'.
- This survey was prepared for Western Virginia Water Authority. Draper Aden Associates assumes no liability for reuse or modification of this document.
- Property lines shown hereon are compiled from record information and field ties.
- Draper Aden Associates provides benchmarks for the construction of the improvements shown on these plans. All other existing elevations are for reference to existing conditions only. Do not use spot elevations, finish floor elevations, elevations on manholes, elevations on survey nails, survey hubs, control points (horizontal points provided) or any other points for construction other than the provided benchmarks. Failure to utilize and verify the provided benchmarks could result in damages and additional cost that are the contractor's responsibility.

SANITARY SEWER
STRUCTURE TABLE

ID	DETAILS
MH-A	RIM = 1142.12 (N) 8" INV IN = 1132.89 8" INV OUT = 1131.87
MH-B	RIM = 1157.26 (W) 8" INV IN = 1137.78 8" INV OUT = 1134.87
MH-C	RIM = 1192.06 (W) 8" INV IN = 1185.60 8" INV OUT = 1140.92
MH-D	RIM = 1199.22 (N) 8" INV IN = 1187.27 8" INV OUT = 1186.87
MH-E	RIM = 1205.30 (W) 6" INV IN = 1198.19 8" INV OUT = 1190.90
MH-F	RIM = 1086.69 (SW) 8" INV IN = 1092.72 (N) 8" INV IN = 1089.07 8" INV OUT = 1085.97
MH-G	RIM = 1093.33 (W) 8" INV IN = 1100.25 (N) 8" INV IN = 1102.53 8" INV OUT = 1092.62
MH-H	RIM = 1125.68 (NW) 8" INV IN = 1118.98 8" INV OUT = 1102.43
MH-I	RIM = 1074.50 (N) 8" INV IN = 1083.68 (E) 6" INV IN = 1080.28 (W) 8" INV IN = 1076.68 (NW) 8" INV IN = 1084.64 8" INV OUT = 1073.78
MH-J	RIM = 1112.47 (NE) 6" INV IN = 1099.37 (NW) 6" INV IN = 1098.78 8" INV OUT = 1084.54
MH-K	RIM = 1065.20 (N) 8" INV IN = 1065.60 8" INV OUT = 1064.49
MH-L	RIM = 1102.49 (SW) 8" INV IN = 1077.69 (N) 8" INV IN = 1081.22 (NW) 6" INV IN = 1083.38 (NE) 6" INV IN = 1082.78 8" INV OUT = 1067.49
MH-M	RIM = 1103.04 (W) 8" INV IN = 1090.75 8" INV OUT = 1081.12
MH-N	RIM = 1111.87 (NW) 6" INV IN = 1093.89 (SW) 6" INV IN = 1093.29 8" INV OUT = 1092.18
MH-O	RIM = 1104.28 (NW) 8" INV IN = 1090.78 (NE) 6" INV IN = 1090.18 8" INV OUT = 1082.68
MH-P	RIM = 1109.82 (N) 8" INV IN = 1078.31 8" INV OUT = 1093.30
MH-Q	RIM = 1081.90 (NW) 8" INV IN = 1088.18 (W) 4" INV IN = 1084.78 (NE) 4" INV IN = 1081.38 8" INV OUT = 1081.18
MH-R	RIM = 1109.14 (W) 8" INV IN = 1091.63 8" INV OUT = 1085.82

STORM SEWER
STRUCTURE TABLE

ID	DETAILS
ST-1	RIM = 1203.91 15" INV OUT = 1192.90
ST-2	RIM = 1105.51 (N) 24" INV IN = 1098.43 30" INV OUT = 1098.28
ST-3	RIM = 1105.37 (NW) 24" INV IN = 1098.87 24" INV OUT = 1098.45
ST-4	RIM = 1110.45 (N) 24" INV IN = 1104.17 24" INV OUT = 1104.03
ST-5	RIM = 1101.83 (N) 18" INV IN = 1095.25 18" INV OUT = 1094.77
ST-6	RIM = 1101.94 18" INV OUT = 1097.47
ST-7	RIM = 1101.03 15" INV OUT = 1094.91
ST-8	RIM = 1100.98 (E) 15" INV IN = 1095.33 15" INV OUT = 1095.31
ST-9	RIM = 1100.94 15" INV OUT = 1095.44

BENCHMARKS

POINT NO.	DESCRIPTION	ELEVATION
BM1	IRON ROD WITH CAP	1215.78
BM2	IRON ROD WITH CAP	1197.08
BM3	IRON ROD WITH CAP	1127.02
BM4	IRON ROD WITH CAP	1108.52
BM5	IRON ROD WITH CAP	1102.10
BM6	IRON ROD WITH CAP	1197.01



GREELEY and HANSEN

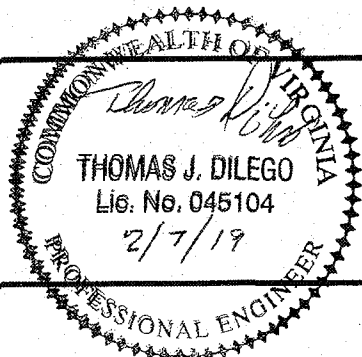
9020 STONY POINT PARKWAY, SUITE 475
RICHMOND, VIRGINIA 23235

DESIGNED TJD

DRAWN DRH

CHECKED RJC

APPROVED



NO.

DATE

APPD

REVISION

SCALE

NO SCALE

WESTERN VIRGINIA WATER AUTHORITY

WYNDALE AVENUE WATER MAIN REPLACEMENT

GENERAL

GENERAL NOTES, BENCHMARK TABLE, STRUCTURE TABLES,
LEGEND, AND ABBREVIATIONS

PROJECT NO.: 05170.01

DWG **G1**

SHEET 2 OF 13

DATE FEBRUARY 2019 REV 0