

#### SITE UTILITY KEY NOTES 🖘

- I. SANITARY OVER STORM. MAINTAIN 18" MINIMUM CLEARANCE.
- X2. WATER OVER STORM. MAINTAIN 18" MINIMUM CLEARANCE. X3. BOLLARD. 2 TOTAL AT FDC. SEE DETAIL, SHEET SP2.1. AVOID EXISTING AND PROPOSED UNDERGROUND UTILITIES DURING INSTALLATION.
- T1. UNDERGROUND TELEPHONE/DSL LINES. COORDINATE WITH SERVICE PROVIDER
- FOR ROUTING AND CONNECTION POINT. SEE SHEETS E1.1 AND E4.3.
- E1. PREFERRED LOCATION OF PAD MOUNTED ELECTRIC TRANSFORMER. SEE
- E2. SCHEMATIC ROUTING OF UNDERGROUND PRIMARY AND SECONDARY ELECTRIC LINES. SEE SHEET E1.1.
- E3. CONTRACTOR SHALL PROVIDE CONDUITS AND WIRING FOR POWER AND CONTROL OF PROPOSED SITE SIGNAGE AND SITE LIGHTING INCLUDING
- LANDSCAPE LIGHTING. SEE SHEETS E1.1 AND E4.1. CONDUIT(S) AND WIRING FOR ELECTRONIC MONITORING OF TAMPER SWITCHES ON POST INDICATOR VALVE AND FIRE WATER BACKFLOW PREVENTOR. CONNECT TO THE BUILDING FIRE ALARM SYSTEM. COORDINATE WITH THE FIRE SPRINKLER CONTRACTOR, ELECTRICAL
- E5. CONTRACTOR TO SAWCUT AND REPLACE PAVEMENT WHERE NECESSARY TO INSTALL UNDERGROUND PRIMARY. CONTRACTOR TO MINIMIZE DAMAGE TO EXISTING RED ROBIN CURB AND SHALL SAWCUT AND REPLACE EXISTING RED ROBIN CURBING WHERE NECESSARY TO INSTALL UNDERGROUND PRIMARY. CONTRACTOR TO COORDINATE WITH SERVICE PROVIDER BEFORE BEGINNING
- WORK. CONTRACTOR SHALL COORDINATE TIMING AS TO MINIMIZE ANY CLOSURE OF EXISTING PARKING LOT OPERATIONS.

G1. PREFERRED LOCATION OF NATURAL GAS METER. SEE SHEETS P1.1 AND P2.3 FOR EXACT LOCATION AND LOADING REQUIREMENTS. 32. SCHEMATIC ROUTING OF NATURAL GAS SERVICE LINE. ALL WORK AND

W1. CONNECT 6" DIP WATER SERVICE TO EXISTING 12" WATERMAIN VIA 12"x6" TAPPING SLEEVE AND VALVE PER CITY STANDARDS, SEE DETAIL SHEET C7.1. CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING ALL COMPONENTS OF THE WATER SERVICE BETWEEN THE MAIN AND THE BUILDING UNLESS NOTED OTHERWISE. PRIOR TO THE START OF CONSTRUCTION, CALL THE AUTHORITY INSPECTOR AT 540-537-3243. THE WET TAP WILL BE MADE BY THE AUTHORITY FOLLOWING PAYMENT AND SCHEDULING. CONTRACTOR TO DEMOLISH AND REPAIR EXISTING PAVEMENT AS NEEDED. CONTRACTOR SHALL COORDINATE TIMING OF TAP TO MINIMIZE ANY NECESSARY CLOSURES OF EXISTING MACY'S DRIVE AISLE.

W3. WATER VAULT PER WESTERN VIRGINIA WATER AUTHORITY STANDARDS AND SPECIFICATIONS. COORDINATE WITH WESTERN VIRGINIA WATER AUTHORITY VAULT TO BE AT OWNER/DEVELOPER'S EXPENSE. VAULT MANUFACTURER TO PROVIDE VAULT AND VAULT COMPONENTS. VAULT MANUFACTURER TO DELIVER AND SET IN CONTRACTOR PROVIDED EXCAVATION WITH 12" OF GRAVEL BASE. SEE DETAIL, SHEET C7.1.

- W4. 6" WILKINS MODEL SINGLE CHECK VALVE FIRE BACKFLOW PREVENTER WITH ONE OS&Y VALVE ON PRIVATE SIDE OF THE CHECK VALVE. CONTRACTOR TO VERIFY SIZING WITH FIRE SPRINKLER ENGINEER PRIOR TO ANY CONSTRUCTION AND COORDINATE WITH WESTERN VIRGINIA WATER AUTHORITY. VALVE SHALL BE EQUIPPED WITH TAMPER SWITCH CONNECTED TO THE BUILDING FIRE ALARM SYSTEM. COORDINATE WITH THE FIRE SPRINKLER CONTRACTOR, ELECTRICAL CONTRACTOR, AND ALARM SYSTEM CONTRACTOR AS NECESSARY. SEE SHEET E1.1. SEE NOTE W3 FOR CONTRACTOR REPONSIBILITIES.
- 1 1/2" DOMESTIC WATER METER. CONTRACTOR SHALL COORDINATE WITH WESTERN VIRGINIA WATER AUTHORITY. WESTERN VIRGINIA WATER
- W6. PRIVATELY MAINTAINED 1" IRRIGATION WATER METER. CONTRACTOR SHALL COORDINATE WITH IRRIGATION CONTRACTOR AND WESTERN VIRGINIA WATER AUTHORITY. WESTERN VIRGINIA WATER AUTHORITY TO PROVIDE METER. W7. PRIVATE 6" POST INDICATOR VALVE. VALVE SHALL BE EQUIPPED WITH TAMPER SWITCH CONNECTED TO THE BUILDING FIRE ALARM SYSTEM. COORDINATE WITH THE FIRE SPRINKLER CONTRACTOR, ELECTRICAL CONTRACTOR, AND ALARM SYSTEM CONTRACTOR AS NECESSARY. SEE SHEET
- W8. PRIVATE FIRE DEPARTMENT CONNECTION (FDC) WITH LOCKING CAPS BY KNOX. MUST BE FULLY VISIBLE AND RECOGNIZABLE. CONTRACTOR SHALL COORDINATE WITH FIRE DEPARTMENT. SIZE, TYPE, INSTALLATION, AND SIGNAGE SHALL BE PER FIRE DEPARTMENT STANDARDS, NFPA 13 AND NFPA 24. SEE FIRE DEPARTMENT NOTES THIS SHEET.
- W9. PRIVATELY MAINTAINED 1" IRRIGATION WATER CONNECTION TO PRIVATE 2 DOMESTIC WATER LINE. ALL WORK AND MATERIALS BY CONTRACTOR. W10. PRIVATE 2" COPPER DOMESTIC WATER SERVICE LINE. THE DOMESTIC LINE IS ONLY MAINTAINED BY WVWA IN THE METER BOX. ANY WATER SERVICE OUTSIDE OF THE FIRE VAULT IS PRIVATE AND NOT REGULATED BY THE WESTERN VIRGINIA WATER AUTHORITY. CONTRACTOR SHALL COORDINATE
- W11. PRIVATE 6" RESTRAINED JOINT D.I.P. FIRE LINE. PRIVATE DCVA BACKFLOW PREVENTOR TO BE LOCATED INSIDE MECHANICAL ROOM. ANY WATER SERVICE OUTSIDE OF THE FIRE VAULT IS PRIVATE AND NOT REGULATED BY THE WESTERN VIRGINIA WATER AUTHORITY.CONTRACTOR TO VERIFY SIZING WITH FIRE SPRINKLER ENGINEER PRIOR TO ANY CONSTRUCTION AND COORDINATE WITH WESTERN VIRGINIA WATER
- W13. PROPOSED WESTERN VIRGINIA WATER AUTHORITY PUBLIC WATER EASEMENT. 20' EASEMENT CENTERED ON SERVICE LINE UP TO VAULT AND SHALL EXTEND 5' BEYOND VAULT. COORDINATE WITH WESTERN VIRGINIA WATER
- W15. PRIVATE FIRE WATER SERVICE BUILDING CONNECTION POINT. PRIVATE DCVA BACKFLOW PREVENTOR TO BE LOCATED INSIDE MECHANICAL ROOM. SEE SHEET P2.2 AND FIRE SPRINKLER PLANS FOR EXACT LOCATIONS AND
- REDUCED PRESSURE BACKFLOW PREVENTER LOCATED INSIDE MECHANICAL ROOM. SEE SHEETS P2.2 AND P5.1 FOR EXACT LOCATIONS AND DETAILS. W17. PRIVATELY MAINTAINED 1" IRRIGATION BACKFLOW PREVENTOR, INSTALLED ABOVE GROUND IN INSULATED ENCLOSURE. NO HEAT REQUIRED. BACKFLOW TO BE REDUCED PRESSURE ZONE TYPE, WILKINS MODEL 375. NO SUBSTITUTIONS ARE ALLOWED UNLESS THIS MODEL DOES NOT MEET CITY STANDARDS. UPSIZE PIPING TO 1-1/2" AFTER BACKFLOW. PLUG AND MARK TERMINUS FOR EXTENSION BY IRRIGATION CONTRACTOR. W18. 2" DOMESTIC WATER CONNECTION TO 6" FIRE WATER LINE IN VAULT. CONNECTION TO BE REVIEWED AND APPROVED BY PROJECT MANAGER. CONTRACTOR SHALL COORDINATE WITH WESTERN VIRGINIA WATER
- W19. PRIVATE 4" RESTRAINED JOINT D.I.P. REMOTE FIRE DEPARTMENT
- W20. PRIVATE FDC SERVICE BUILDING CONNECTION POINT. SEE SHEET P2.2 AND FIRE SPRINKLER PLANS FOR EXACT LOCATIONS AND DETAILS.
- APPROXIMATE LOCATION OF EXISTING SANITARY SEWER MANHOLE. CONTRACTOR TO VERIFY LOCATION AND EXISTING INVERT ELEVATIONS BEFORE BEGINNING WORK. CONNECT TO EXISTING SANITARY SEWER MANHOLE AT ELEVATION 6 INCHES ABOVE THE EXISTING IE OUT. IF EXISTING CONDITIONS CREATE A CONFLICT WITH THE PLANS,
- CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY. PRIVATE 6" PVC SANITARY SEWER LATERAL. SLOPE AS SHOWN BY
- INVERTS. MAINTAIN 1.0% MINIMUM. SANITARY SEWER CLEANOUT. INVERT AS SHOWN. TOP SHALL MATCH PROPOSED GRADING. LOCATE IN LANDSCAPE AREAS WHERE POSSIBLE. PROVIDE PROTECTIVE CASTING WHERE INSTALLED IN PAVEMENT. SEE DETAIL, SHEET C7.1. DCO INDICATES DOUBLE CLEANOUT, ONE IN EACH
- . 1500 GALLON GREASE INTERCEPTOR WITH WATER TIGHT FRAME AND COVER. SEE SHEETS P1.1 AND P1.2 FOR SPECIFICATION AND SIZING CALCULATIONS. SEE SHEET P5.1 FOR DETAIL. VERIFY SIZE WITH P SHEETS PRIOR TO ORDERING. GREASE INTERCEPTOR SHALL BE INSPECTED AND APPROVED BY WESTERN VIRGINIA WATER AUTHORITY PRIOR TO SITE RECEIVING WATER SERVICE CONNECTION. FORTY-EIGHT HOURS PRIOR TO INSTALLATION, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO CASSIE ALTICE (601 S. JEFFERSON ST, SUITE 300, ROANOKE, VA 24011) AND CALL 540-537-3243 TO SCHEDULE GREASE INTERCEPTOR INSPECTION. THE INSPECTION SHALL OCCUR PRIOR TO THE CONTRACTOR COVERING THE GREASE INTERCEPTOR. NOTIFY THE ENGINEER
- IMMEDIATELY IF PLANS CONFLICT. . VENT PIPING FROM GREASE INTERCEPTOR. SEE SHEETS P2.1 AND P5.1 S7. SANITARY SEWER BUILDING CONNECTION POINTS. SEE SHEETS P2.1 AND
- P2.4 FOR EXACT LOCATIONS. S8. DUMPSTER DRAIN IN COVERED SERVICE AREA. SEE SHEET C4.1 FOR RIM ELEVATION. SEE SHEETS P1.1, P2.1, AND P2.4 FOR DRAIN
- S9. INSTALL SAMPLING SANITARY SEWER MANHOLE PER WESTERN VIRGINIA WATER AUTHORITY DETAIL, SEE DETAIL SHEET C7.1.

ALL NEW UTILITY SERVICE LINES/LATERALS, INCLUDING ELECTRIC SHALL

# **EROSION CONTROL NOTE:**

ALL WORK SHALL BE IN ACCORDANCE WITH VIRGINIA EROSION & SEDIMENT CONTROL MINIMUM STANDARDS NOTE 16. SEE SHEET C2.6.

#### MAP NOTE:

- ALL EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A LAND SURVEY PREPARED BY: CHRISTOPHER CONSULTANTS LTD.
- TRANSFER OF SITE BENCHMARK(S) IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND SHALL ONLY BE COMPLETED BY A SURVEYOR LICENSED/REGISTERED IN THE STATE IN WHICH THE PROJECT IS
- THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING BENCHMARK PRIOR TO ANY CONSTRUCTION AND SHALL REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER. FIELD VERIFICATION CAN BE ACCOMPLISHED BY CHECKING A MINIMUM OF TWO FIXED OBJECTS DISPLAYED ON THE SURVEY (i.e. MANHOLE RIM, STORM GRATE, PIPE INVERTS, ETC.).

## SITE UTILITY NOTES:

APPROVED BY THE ENGINEER.

LOCAL & STATE FIRE JURISDICTION.

I.E., HYDRANTS, VALVES, TEES, ETC.

- SEE GENERAL NOTES, SHEET C1.1. SEE SPECIFICATIONS ON CS SHEETS. SEE UTILITY CONTACTS, THIS SHEET.
- 2. IN THE EVENT THESE NOTES CONFLICT WITH THE REQUIREMENTS OF THE LOCAL UTILITY AUTHORITY, THE LOCAL UTILITY'S REQUIREMENTS SHALL
- CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES (LOCATION

AND INVERT) PRIOR TO ANY SITE CONSTRUCTION OR DEMOLITION. THIS

SERVICE LINES FOR THE FOLLOWING: POTABLE WATER LINES, SANITARY SEWER LINES, ELECTRIC LINES (OVERHEAD AND UNDERGROUND), GAS LINES, TELEPHONE LINES, CABLE

SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, BOTH MAIN AND

- TELEVISION LINES, STORMWATER CONVEYANCE LINES LOCATIONS AND TOP ELEVATIONS OF STRUCTURES WILL BE ADJUSTED IN THE FIELD BY THE CONTRACTOR WHERE NECESSARY AND SHALL BE
- CONSTRUCTION OF THE SANITARY SEWER SYSTEM AND CONNECTION TO THE EXISTING SEWER SYSTEM SHALL MEET THE REQUIREMENTS/SPECIFICATIONS AND SHALL BE INSTALLED UNDER THE DIRECTION OF THE LOCAL UTILITY
- SANITARY SEWER LINES NOT HAVING 36" OF COVER SHALL BE DUCTILE IRON PIPE, LOCAL UTILITY APPROVED ADAPTERS SHALL BE CONSTRUCTED
- CONTRACTOR SHALL CONFIRM LOCATION AND INVERT ELEVATION OF SEWER TIE-IN POINT PRIOR TO ANY SITE OR BUILDING CONSTRUCTION.
- ROOF DRAINS, FOUNDATION DRAINS OR OTHER STORM WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
- CONSTRUCTION OF THE WATER SYSTEM AND CONNECTION TO THE EXISTING WATER SYSTEM SHALL MEET THE REQUIREMENTS OF AND SHALL BE
- INSTALLED UNDER THE DIRECTION OF THE LOCAL UTILITY AUTHORITY. MATERIALS, INSTALLATION AND TESTING OF THE PRIVATE FIRE SERVICE MAINS AND APPURTENANCES SHALL BE IN ACCORDANCE WITH NFPA 24 AND THE REQUIREMENTS OF THE LOCAL & STATE UTILITY AUTHORITY AND THE
- 11. ALL WATER PIPE JOINTS AND FITTINGS SHALL BE RESTRAINED, ALL MECHANICAL JOINTS ARE TO BE RESTRAINED USING "MEGALUG" OR "FORD"
- 12. ALL WATER LINES SHALL BE BELOW THE FROST LINE OR HAVE 36" (MIN) COVER FROM FINISHED GRADE, WHICHEVER IS THE GREATER DEPTH. FIRE SERVICE LINES SHALL ALSO MEET THE COVER REQUIREMENTS INDICATED IN NFPA-24. (42" MIN.)
- 13. WATER METERS, BOXES, VAULTS AND BACKFLOW PREVENTORS SHALL MEET ALL REQUIREMENTS OF THE THE LOCAL UTILITY AUTHORITY. CONTRACTOR SHALL CONFIRM ALL ITEMS AGAINST CURRENT LIST OF APPROVED DEVICES PRIOR TO ORDERING.
- 14. WATER WORK SHALL NOT BEGIN UNTIL AREAS OF WATERLINE CONSTRUCTION ARE ROUGH GRADED (WITHIN 1 FOOT OF FINISHED GRADE) AND FILL AREAS ARE COMPLETED AND COMPACTED.
- 15. CHLORINATED DISINFECTION WATER SHALL NOT BE DISCHARGED DIRECTLY INTO A STORM DRAINAGE SYSTEM OR SURFACE WATERS WITHOUT THE PRIOR USE OF APPROPRIATE DE-CHLORINATION METHODS.
- A MINIMUM OF 5 FEET HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN UTILITY CONDUIT CROSSOVER AND WATERLINE APPURTENANCES,
- . WATER LINES CROSSING ANY AND ALL SEWERS SHALL HAVE A MINIMUM VERTICAL SEPARATION OF 18" BETWEEN THE OUTSIDE OF THE WATER MAIN PIPE AND THE SEWER PIPE. ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING SUCH THAT BOTH JOINTS WILL BE EQUIDISTANT AND AS FAR FROM THE SEWER AS POSSIBLE. IF WATER CROSSES BELOW SANITARY SEWERS, THE SEWER MUST BE WATER MAIN MATERIAL FOR THAT SPAN.
- 8. SITE CONTRACTOR IS RESPONSIBLE FOR MAKING TIE-IN TO WATER AND SANITARY SEWER CONNECTIONS AT BUILDING. ALL BUILDING UTILITY CONNECTION POINTS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM ALL BUILDING CONNECTION POINT LOCATIONS WITH APPROVED ARCHITECTURAL AND MECHANICAL PLANS.
- . THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PUMPING, HYDRANTS, FIRE DEPARTMENT CONNECTION POINTS, OR OTHER WATER USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND ANY REQUIRED BACKFLOW PREVENTOR.
- . CONTRACTOR SHALL COORDINATE THE RELOCATION OF ANY EXISTING POWER/TELEPHONE POLES OR LINES WITH THE LOCAL UTILITY COMPANY AND NOTIFY THE CORRESPONDING PROPERTY OWNER PRIOR TO COMMENCEMENT OF ANY WORK INCLUDING STATE DOT ENCROACHMENT PERMITS WHERE APPLICABLE.
- . CONTRACTOR SHALL INSTALL ALL IRRIGATION SLEEVES PRIOR TO PARKING LOT BASE COURSE INSTALLATION. SLEEVES SHALL BE 4" SCHEDULE 40 PVC AND EXTEND A MINIMUM OF 12" BEYOND BACK OF CURB OR SIDEWALK. PIPE ENDS SHALL BE CAPPED USING PVC PLUGS AND MARKED USING PVC OR WOOD POSTS. COORDINATE WITH IRRIGATION CONTRACTOR FOR FINAL LOCATION OF SLEEVES.

## CITY FIRE DEPARTMENT NOTES

- FIRE DEPARTMENT CONNECTIONS SHALL BE ON THE STREET SIDE OFF BUILDINGS, FULLY VISIBLE AND RECOGNIZABLE. STATEWIDE FIRE PREVENTION CODE 912.2.1.
- KEY BOX REQUIRED. STATEWIDE FIRE PREVENTION CODE 506.1. ROANOKE FIRE-EMS USES KNOXBOX AS APPROVED KEY BOX SYSTEM. OBTAIN INFO AT WWW.KNOXBOX.COM.
- LOCKING FDC CAPS REQUIRED PER STATEWIDE FIRE PREVENTION CODE 912.3.1. ROANOKE FIRE-EMS USES KNOXBOX AS APPROVED LOCKING SYSTEM. OBTAIN INFO AT WWW.KNOXBOX.COM.
- FIRE ALARM SYSTEM REQUIRED TO BE REGISTERED WITH ROANOKE FIRE-EMS PER CITY ORDINANCE

# UTILITY CONTACTS

WATER/SANITARY FIRE DEPARTMENT ESTERN VIRGINIA WATER AUTHORITY CITY OF ROANOKE 601 JEFFERSON STREET 713 3RD ST SW ROANOKE, VA 24011 ROANOKE, VA 24016 CONTACT: AARON SHEARER CONTACT: DANIEL RAKES PHONE: 540-853-1588 540-853-2795

#### NATURAL GAS STORM CITY OF ROANOKE ROANOKE GAS 215 CHURCH AVE, SW

EMAIL: Aaron. Shearer@WesternVaWater.org EMAIL:

888-710-4237 ext 307-4289

APPALACHIAN POWER (AEP)

CONTACT: TODD CLARK

EMAIL:

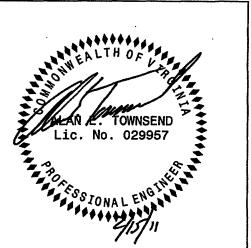
ROANOKE, VA 24011 CONTACT: DANIELLE BISHOP CONTACT: BRETT BENNETT PHONE: 540-853-1325 PHONE: 540-793-5104 EMAIL: Danielle.Bishop@RoanokeVa.gov EMAIL: brett\_bennett@roanokegas.com

#### ELECTRIC TELEPHONE/DSL

800-483-4000



Hussey, Gay, Bell & DeYoung, Inc. Consulting Engineers 474 WANDO PARK BOULEVARD, SUITE 201 MOUNT PLEASANT, SC 29464 PH: 843.849.7500 FAX: 843.849.7502 www.HGBD.com HGBD PROJECT # 410131316







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REVISION INFORMATION

02/07/11 City Comments 02/07/11

Owner/Plan Changes

Restaurant #:

LONGHORN LH7.5-L

VALLEY VIEW MALL VALLEY VIEW BLVD NW

ROANOKE, VA

Drawing

SITE UTILITY PLAN