

GENERAL SITE NOTES:

1. THIS SITE DOES LIE WITHIN F.E.M.A. DESIGNATED FLOOD ZONES X, X SHADED AN AE. MAP NUMBER 51161C0028D, DATED OCTOBER 15, 1993
2. TOPOGRAPHIC INFORMATION BY GREEN FOREST SURVEYORS, DATED AUGUST, 2006.
3. ARCHITECT OF RECORD: RODRIGUEZ, RIPLEY, MADDEX AND MOTLEY. REFER TO ARCHITECTURAL PLANS FOR BUILDING CONSTRUCTION AND UTILITY CONNECTIONS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS. A STREET OPENING PERMIT WILL BE REQUIRED BEFORE PLACEMENT OF THE CONSTRUCTION ENTRANCE.
5. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION TO ELIMINATE THE POSSIBILITY OF ANY DISTURBANCE OR DAMAGE TO PUBLIC OR PRIVATELY OWNED UTILITIES, STRUCTURES, OTHER FACILITIES OR OBSTRUCTION RESULTING FROM HIS ACTIVITIES. TO THIS END, CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, TAKE ALL MEASURES NECESSARY TO PROVIDE, AND SHALL BE SOLELY RESPONSIBLE FOR, TEMPORARY SUPPORT AND SHORING, ADEQUATE PROTECTION, AND MAINTENANCE OF CONTINUOUS OPERATION OF ALL UNDER AND ABOVE GROUND UTILITY SERVICES. THE CONTRACTOR SHALL CALL MISS UTILITY AT 1- 800- 552-7001 48 HOURS PRIOR TO DIGGING. ALL UTILITY TIE-INS ARE TO BE COORDINATED WITH THE APPROPRIATE PUBLIC OR PRIVATE UTILITY AUTHORITY BEFORE COMMENCING WORK ON EXISTING UTILITIES. THE CONTRACTOR SHALL SUPPLY ALL UTILITY COMPANIES WITH APPROVED PLAN COPIES FOR COORDINATION OF EXTENSION AND TIE-IN EFFECTS.
6. SITE CONDITIONS MAY NECESSITATE SLIGHT DEVIATIONS IN ALIGNMENT, GRADE, AND/OR LOCATION OF NEW FACILITIES FROM THE PLAN ALIGNMENT. THE CONTRACTOR SHALL CONSTRUCT THE NEW FACILITIES TO SUCH DEVIATIONS AS DIRECTED BY THE ENGINEER WITHOUT ADDITIONAL COST OR FINE TO THE OWNER. SHOULD PLAN DEVIATIONS BE REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO UNDERTAKING ANY REVISION.
7. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE CURRENT BOCA AND/OR STATE AND LOCAL BUILDING CODES AS WELL AS THE CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE WESTERN VIRGINIA WATER AUTHORITY AND ROANOKE CITY.
8. THE CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION AREA IN A SAFE AND ACCEPTABLE MANNER AND SHALL BE RESPONSIBLE FOR REMEDIATING ANY DAMAGES RESULTING FROM HIS FAILURE TO DO SO.
9. THE CONTRACTOR SHALL MAINTAIN LIMITS OF CONSTRUCTION WITHIN THE PROPERTY BOUNDARIES OR EASEMENTS OR LIMITS OF DISTURBANCE AS INDICATED.
10. AN APPROVED SET OF PLANS SHALL BE KEPT ON THE SITE AT ALL TIMES.
11. ALL CONSTRUCTION DEBRIS SHALL BE CONTAINERIZED IN CONFORMANCE WITH THE VIRGINIA LITTER CONTROL ACT AND DISPOSED OF IN A MANNER AND LOCATION ACCEPTABLE TO THE GOVERNING JURISDICTION. AT LEAST ONE TRASH RECEPTACLE SHALL BE ONSITE DURING CONSTRUCTION.
12. TEMPORARY TOILETS SHALL BE PROVIDED ONSITE AT A RATIO OF ONE TOILET PER 30 WORKERS DURING THE CONSTRUCTION PERIOD.
13. GRADE STAKES SHALL BE SET FOR ROADWAY, CURB & GUTTER, CULVERTS, AND STORM SEWER. ALL CONSTRUCTION STAKING SHALL BE PERFORMED BY ENGINEERING CONCEPTS, INC. - CONTRACTOR COST.
14. THIS LOT IS SERVED BY WESTERN VIRGINIA WATER AUTHORITY SEWER AND WATER SYSTEMS.
15. SEE THE ARCHITECTURAL PLANS FOR UTILITY LOCATIONS ENTERING THE BUILDING AND DOWNSPOUT LOCATIONS.
16. CONTRACTOR SHALL HAVE BENCHMARKS SET ONSITE BY A LICENSED LAND SURVEYOR PRIOR TO CONSTRUCTION. ENGINEERING CONCEPTS, INC. WILL PERFORM ALL CONSTRUCTION STAKING. CONTACT SAM BIKKERS, L.S., AT 640 473.1233. 72 HOURS ADVANCE NOTICE TO SCHEDULE.
17. THE CONTRACTOR SHALL COORDINATE ALL UTILITY RELOCATION'S WITH THE APPROPRIATE UTILITY COMPANIES. THE CONTRACTOR SHALL COORDINATE UTILITY POLE RELOCATION'S AND REMOVALS WITH APPROPRIATE COMPANIES.
18. A SEPARATE PERMIT IS REQUIRED FOR ANY SIGNS. CONTRACTOR SHALL COORDINATE ALL SIGN LOCATIONS WITH THE OWNER/ARCHITECT AND ROANOKE CITY.
19. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL, GAS, TELEPHONE, CABLE, AND FIBER OPTIC INSTALLATIONS AND RELOCATIONS WITH THE APPROPRIATE UTILITY COMPANY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING AND INSTALLING ALL REQUIRED CONDUIT. WHERE UTILITIES DROP TO UNDERGROUND, PROVIDE CONDUIT RUNS THE ENTIRE LENGTH OF ROUTE TO BUILDING CONNECTION POINT.
20. THE EXISTING UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE RECORD 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/HER 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 UTILITY AT 1-800-552-7001 (TOLL FREE) 48 HOURS BEFORE DIGGING.
21. PAVEMENT RADII ARE 5.0' UNLESS NOTED OTHERWISE. DIMENSIONS ARE FROM FACE OF CURB OR EDGE OF PAVEMENT.
22. A CERTIFIED RESPONSIBLE LAND DISTURBER MUST BE NAMED BY THE CONTRACTOR PRIOR TO THE PRE-CONSTRUCTION MEETING AND ISSUANCE OF A LAND DISTURBING PERMIT. ROANOKE CITY WILL REQUIRE THAT THIS PERSON ATTEND THE PRE-CONSTRUCTION MEETING WITH A COPY OF THE RLD CERTIFICATE. THE LAND DISTURBANCE PERMIT AND A COPY OF THE STAMPED/SIGNED APPROVED PLANS WILL BE ISSUED AT THE PRE CONSTRUCTION MEETING. BOTH OF THESE DOCUMENTS ARE REQUIRED BEFORE CONSTRUCTION CAN BEGIN AND ARE TO BE ON SITE AT ALL TIMES. CONTACT ADRIAN GILBERT AT 853-2733, TO SCHEDULE THE MEETING. THE RLD AND GENERAL CONTRACTOR WILL NEED TO ATTEND THE PRE CONSTRUCTION MEETING
23. ROOFTOP AND GROUND MECHANICAL EQUIPMENT SHALL BE SCREENED.
24. LIGHTS ON BUILDINGS AND FREE STANDING FIXTURES TO BE FILLED WITH DIFFUSERS TO LIMIT INTENSITY AT PROPERTY LINES TO A MAXIMUM OF 0.5 FOOT-CANDLES OR PER ROANOKE CITY STANDARDS.
25. NO CONSTRUCTION / FIELD CHANGES WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER AND ROANOKE CITY WILL BE ALLOWED. ANY NEW ALIGNMENTS, CHANGES IN GRADES, ALTERNATIVE PIPE SIZES OR MANHOLES AND CHANGES IN EROSION AND SEDIMENT CONTROL MEASURES WILL REQUIRE A NEW SET OF PLANS STAMPED BY THE CONSULTING ENGINEER. PLANS SUBMITTED TO ROANOKE CITY FOR REVIEW CAN BE 8.5" x 11" SHEET SIZE IF INFORMATION IS LEGIBLE.
26. THE DEPARTMENT OF CONSERVATION AND RECREATION (DCR) REQUIRES ANY LAND DISTURBANCE OF 1 ACRE OR GREATER TO OBTAIN PERMITS THROUGH THEIR OFFICE. CONTRACTOR SHALL CONTACT LEE HILL AT DCR TO DETERMINE PROPER PERMITTING AT (804)786-3998. THIS PERMIT MUST BE APPLIED FOR TWO (2) DAYS PRIOR TO ANY LAND DISTURBANCE ON THE PROPERTY. A COPY OF THE APPLICATION, CHECK AND THE STORMWATER POLLUTION PREVENTION PLAN MUST BE SUBMITTED TO ROANOKE CITY.
27. A PERMIT MUST BE OBTAINED FOR ALL RETAINING WALLS. CONTRACTOR TO PROVIDE ENGINEERED PLANS FOR REVIEW PRIOR TO CONSTRUCTION.

GENERAL SITE NOTES CONTINUED:

28. ALL CONSTRUCTION IN CITY OF ROANOKE RIGHTS OF WAYS WILL BE PERFORMED PER THE CITY OF ROANOKE RIGHT OF WAY EXCAVATION AND RESTORATION STANDARDS.
29. FIRE DEPARTMENT CONTACT RONNIE CAMPBELL, ASST. FIRE MARSHAL 540.853.6544.
30. ADDITIONAL FIRE LANES MAY BE REQUIRED IN THE FUTURE AROUND BOTH SIDES OF THE ENTRANCE IF PARKING IN THESE AREAS BECOMES A PROBLEM.
31. ALL UTILITY SERVICE LATERALS, INCLUDING ELECTRIC WILL BE INSTALLED UNDERGROUND.
32. THE RIPARIAN BUFFER BOUNDARIES SHALL BE CLEARLY MARKED ON-SITE PRIOR TO ANY LAND DISTURBANCE AND SHALL REMAIN MARKED UNTIL ALL LAND DISTURBING ACTIVITY HAS BEEN COMPLETED.
33. CONTRACTOR TO PROVIDE THE CITY OF ROANOKE WITH A MAINTENANCE OF TRAFFIC PLAN FOR WORK ALONG HOLLINS ROAD AND IN THE RIGHT OF WAY PRIOR TO BEGINNING CONSTRUCTION.

SANITARY SEWER NOTES

1. ALL SANITARY SEWER PIPE AND FITTINGS SHALL BE POLYVINYL CHLORIDE (PVC), SDR 35, AND SHALL CONFORM WITH WESTERN VIRGINIA WATER AUTHORITY REGULATIONS AND SPECIFICATIONS.
2. THE SANITARY SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS AND THESE SPECIFICATIONS. THE PIPE SHALL BE LAID IN TRUE STRAIGHT LINES WITH THE BALL ENDS UPSTREAM AND WITH THE INVERT OF THE PIPE BEING THE TRUE ELEVATION AND GRADE OF THE SYSTEM. THE PIPE SHALL BE VISUALLY INSPECTED FOR DEFECTS BEFORE LOWERING THE PIPE IN THE TRENCH. FIELD CUTTING OF THE PIPE SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER, SO AS TO LEAVE A SMOOTH END AT RIGHT ANGLES TO THE AXIS OF THE PIPE.
3. TRENCHES SHALL BE EXCAVATED IN STRAIGHT LINES AND SHALL BE OF SUFFICIENT WIDTH TO PERMIT THE PROPER INSTALLATION OF BRACING, SHORING OR SHEETING. TRENCH WIDTH SHALL NOT EXCEED MANUFACTURER'S RECOMMENDATION. THE BOTTOM OF THE PIPE TRENCH SHALL BE EXCAVATED TO A MINIMUM OVER DEPTH OF FOUR (4) INCHES BELOW THE BOTTOM OF THE PIPE, TO PROVIDE FOR THE COMPACTED BEDDING MATERIAL.
4. BEDDING MATERIAL SHALL BE COARSE AGGREGATE SIZE NUMBER 57 AND SHALL CONFORM WITH VDOT SECTION 203 AND/OR ASTM C33. BEDDING MATERIAL SHALL BE PLACED AND COMPACTED IN FOUR (4) INCHES BELOW THE PIPE AND AS A MINIMUM UP TO THE SPRINGLINE OF THE PIPE. CARE SHALL BE TAKEN TO ENSURE THE BEDDING MATERIAL FULLY SUPPORTS THE SIDE AND BOTTOM OF THE PIPE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
5. BACK FILL MATERIAL SHALL BE EITHER APPROVED EXCAVATED MATERIAL OR APPROVED SUITABLE MATERIAL FROM OTHER SOURCES THAT IS FREE OF ORGANIC MATERIAL, LOAM, DEBRIS, OR MINIMUM ONE (1) FOOT ABOVE THE TOP OF PIPE SHALL BE FREE OF STONES LARGER THAN TWO (2) INCHES AND SHALL BE PLACED IN SIX (6) INCH LAYERS AND COMPACTED WITH HAND TAMPERS. BACK FILL FROM THIS POINT TO TOP OF TRENCH SHALL BE FREE OF STONES LARGER THAN FOUR (4) INCHES AND SHALL BE PLACED IN LAYERS NOT TO EXCEED EIGHT (8) INCHES AND COMPACTED WITH MECHANICAL TAMPERS. BACK FILL BELOW UNPAVED AREAS SHALL BE COMPACTED TO 90%. BACK FILL BELOW PAVED AREAS SHALL BE COMPACTED TO 95%. BACK FILL COMPACTION TESTING SHALL BE IN ACCORDANCE WITH ASTM D-698.
6. TESTING FOR WATER TIGHTNESS SHALL BE MADE UTILIZING A LOW PRESSURE AIR TEST. THE TESTING EQUIPMENT, PROCEDURE AND RESULTS WILL ALL BE SUBJECT TO THE APPROVAL OF THE WVWA UTILITY ENGINEER. THE AIR TEST SHALL BE IN ACCORDANCE WITH ASTM C-828, CURRENT REVISION. THE CONTRACTOR SHALL DEFLECTION TEST THE ENTIRE LENGTH OF PIPE BY MEANS OF A GO-NO-GO MANDREL TO ASSURE THAT A 5.0% DEFLECTION HAS NOT BEEN EXCEEDED. MANDREL SHALL BE SIZED AT 5% LESS THAN ASTM DIMENSION FOR THE SEWER.
7. A MINIMUM COVER OF THREE (3) FEET IS REQUIRED OVER PROPOSED LINES. A MINIMUM VERTICAL SEPARATION OF 18" IS REQUIRED BETWEEN ALL UTILITIES.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND UNCOVERING ALL MANHOLES AFTER GRADING AND PAVING. MANHOLE TOPS SHALL BE ADJUSTED TO FINISH GRADE ELEVATION IF NECESSARY
9. VERIFY LOCATION, SIZE AND ELEVATION FOR ALL UTILITIES IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY IF LOCATION, SIZE OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON PLAN, IF THERE APPEARS TO BE A CONFLICT, OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON PLAN. ALL EXISTING UTILITIES MAY NOT BE SHOWN OR MAY NOT BE SHOWN IN THE EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH STATE WATER WORKS REGULATIONS, SECTION 12.05.03, WHERE LINES CROSS.
10. BUILDING CONNECTIONS ARE TO BE MADE WITH 6" PIPE INSTALLED AT A MINIMUM GRADE OF 1/4 INCH TO 1 FOOT.
11. LINES SHALL BE STAKED PRIOR TO CONSTRUCTION.
12. THE WVWA UTILITY INSPECTOR MUST OBSERVE AND APPROVE ALL TAPS INTO THE MANHOLE BY CONTRACTORS.
13. ALL SEWER FACILITIES ARE TO BE INSTALLED ACCORDING TO THE WESTERN VIRGINIA WATER AUTHORITY DESIGN AND CONSTRUCTION STANDARDS.
14. 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 .
15. COORDINATE BUILDING CONNECTION LOCATIONS WITH PLUMBING PLANS.
16. ALL EXISTING SANITARY SEWER SERVICES ARE TO BE ABANDONED AND CAPPED AND INSPECTED BY THE AUTHORITY INSPECTOR.

GRADING NOTES

1. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY LAND DISTURBING PERMITS, INCLUDING VSMF AND SWPPP FROM DCR PRIOR TO CONSTRUCTION.
2. PRIOR TO BEGINNING EARTHWORK OPERATIONS, THE OWNER SHALL EMPLOY A QUALIFIED, PROFESSIONAL GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF VIRGINIA. AS A RESULT OF ONSITE TESTING, THE GEOTECHNICAL ENGINEER SHALL MAKE RECOMMENDATIONS REGARDING THE ONSITE PLACEMENT OF FILL MATERIAL AND PROPER COMPACTION METHODS. NO WARRANTIES ARE MADE BY THE OWNER OR ENGINEER FOR ANY SUBSURFACE CONDITIONS ON THE PROPERTY.
3. FILL SHALL BE PLACED ONLY ON FIRM SUBGRADES APPROVED BY THE SOILS ENGINEER. SUBGRADES SHALL BE SCARIFIED TO A DEPTH OF 4 INCHES PRIOR TO FILL PLACEMENT TO ASSURE BONDING BETWEEN THE TWO SOILS. ALL FILL AREAS SHALL BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% DRY DENSITY (ASTM D698), UNLESS NOTED OTHERWISE. THE COMPACTION SHALL BE ACCOMPLISHED BY PLACING FILL IN 6 TO 8 INCH LIFTS AND MECHANICALLY COMPACTING EACH LIFT TO THE REQUIRED DENSITY. THE SOILS ENGINEER SHALL PERFORM FIELD DENSITY TEST ON EACH LIFT OR AS NECESSARY TO ASCERTAIN THAT ADEQUATE COMPACTION HAS BEEN ACHIEVED. CALIFORNIA BEARING RATIO TESTS SHALL BE PERFORMED IN MATERIAL PROPOSED FOR USE BENEATH PAVEMENT WHETHER CUT OR FILL. FILL ON SLOPES SHALL BE BENCHES AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
4. CLEAR SITE WITHIN LIMITS OF GRADING WORK. DO NOT DISTURB AREAS OUTSIDE OF GRADING LIMITS OR PROPERTY BOUNDARY.
5. REMOVE TREES, SHRUBS, GRASS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS AS REQUIRED TO PERMIT INSTALLATION OF NEW CONSTRUCTION. ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF IN A MANNER AND LOCATION ACCEPTABLE TO THE GOVERNING AUTHORITY. REMOVE TREES AND OTHER VEGETATION, INCLUDING STUMPS AND ROOTS, COMPLETELY IN AREAS REQUIRED FOR SUBSEQUENT SEEDING.
6. BARRICADE OPEN EXCAVATIONS OCCURRING AS PART OF THIS WORK AND OPERATE WARNING LIGHTS AS RECOMMENDED BY AUTHORITIES HAVING JURISDICTION.
7. EXCAVATION FOR STRUCTURES:
A. CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN WITHIN A TOLERANCE OF PLUS OR MINUS 0.10 FOOT.
B. PROVIDE TRUE AND STRAIGHT FOOTING EXCAVATIONS WITH UNIFORM LEVEL BOTTOMS OF THE WIDTH INDICATED TO ENSURE PROPER PLACEMENT AND COVER OF ALL REINFORCEMENT.
C. REMOVE ALL LOOSE MATERIALS FROM THE EXCAVATION PRIOR TO PLACEMENT OF CONCRETE.
D. PROVIDE A MINIMUM OF 2'-0" FROM THE FINISHED GRADE TO TOP OF ALL EXTERIOR WALL FOOTINGS.
E. FOOTINGS WHICH SUPPORT CONCRETE MASONRY UNITS MAY BE STEPPED PROVIDED THE VERTICAL STEP DOES NOT EXCEED ONE HALF OF THE HORIZONTAL DISTANCE BETWEEN STEPS AND HORIZONTAL DISTANCE BETWEEN STEPS IS NOT LESS THAN TWO FEET.
F. IF ROCK IS ENCOUNTERED IN A FOOTING EXCAVATION, UNDERCUT IT A MINIMUM OF 12" BELOW THE BOTTOM OF THE FOOTINGS AND FILL THE RESULTING OVER-EXCAVATION WITH CONTROLLED FILL. CONFIRM EXCAVATIONS WITH GEOTECHNICAL ENGINEER.
8. CUT SURFACE UNDER PAVEMENTS TO COMPLY WITH CROSS SECTIONS, ELEVATIONS, AND GRADES AS INDICATED. GRADES SHOWN ARE FINISHED GRADES.
9. EXCAVATE TRENCHES TO UNIFORM WIDTH CONFORMING TO VDOT STANDARD PB-1 FOR STORM DRAINAGE PIPING AND UB-1 FOR SANITARY SEWER AND WATER. BACK FILL TRENCHES WITH CONTROLLED FILL.
10. PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM FLOWING INTO EXCAVATIONS AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS. CONVEY WATER REMOVED FROM EXCAVATIONS AND RAIN WATER TO COLLECTING OR RUNOFF AREAS. ESTABLISH AND MAINTAIN TEMPORARY DRAINAGE DITCHES AND OTHER DIVERSIONS OUTSIDE EXCAVATION LIMITS FOR EACH STRUCTURE. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DITCHES. DEWATERING OPERATIONS SHALL OUTFALL TO AN ACCEPTABLE SEDIMENT-TRAPPING DEVICE AT ALL TIMES.
11. PROTECT EXCAVATED BOTTOMS OF ALL FOOTINGS AND TRENCHES AGAINST FREEZING WHEN ATMOSPHERIC TEMPERATURE IS LESS THAN 35 F (1 C).
12. BACK FILLING:
A. COMPACT THE BACK FILL AROUND THE OUTSIDE OF BUILDING TO A MINIMUM OF 85% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D 698 STANDARD PROCTOR. DO NOT ALLOW HEAVY COMPACTION EQUIPMENT SUCH AS ROLLERS, ETC., CLOSER TO ANY FOOTING THAN THE HORIZONTAL DISTANCE SUBTENDED BY A 45 ANGLE WITH THE TOP EDGE OF THE FOOTINGS AND THE SURFACE OF THE GROUND.
B. BACK FILL BEHIND WALLS AFTER PERMANENT CONSTRUCTION WHEN BRACES ARE IN PLACE OR TEMPORARY BRACING FOR THE WALL IS PROPERLY INSTALLED, AND AFTER ACCEPTANCE OF CONSTRUCTION BELOW FINISH GRADE INCLUDING DAMP-PROOFING, REMOVAL OF CONCRETE FORMWORK, AND REMOVAL OF TRASH AND DEBRIS.
13. UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING INCLUDING ADJACENT TRANSITION AREAS. SMOOTH FINISHED SURFACES WITHIN SPECIFIED TOLERANCES, COMPACT WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS AND EXISTING GRADES. GRADE AREAS ADJACENT TO BUILDING LINES TO DRAIN AWAY FROM STRUCTURES TO PREVENT POUDING.
14. FINISH LAWN AREAS TO WITHIN ONE INCH ABOVE OR BELOW REQUIRED SUBGRADE ELEVATIONS. SHAPE SURFACE UNDER WALKS AND PAVEMENTS TO LINE, GRADE, AND CROSS SECTION, WITH NOT MORE THAN 1/2" ABOVE OR BELOW REQUIRED SUBGRADE ELEVATION.
15. GRADE SURFACE UNDER BUILDING SLABS SMOOTH AND EVEN, FREE OF VOIDS. PROVIDE FINAL GRADES WITHIN 1/2" OF THOSE INDICATED WHEN TESTED WITH A 10' STRAIGHT EDGE.
16. PROTECT GRADED AREAS FROM TRAFFIC AND EROSION. REPAIR AREAS WHICH HAVE SETTLED, ERODED, OR BECOME DAMAGED DUE TO CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO OWNER.
17. UNDER FOUNDATIONS, SIDEWALKS, AND PAVEMENTS COMPACT EACH LAYER TO 95% MAXIMUM DRY DENSITY ASTM D698 (STANDARD PROCTOR).
18. UNDER LAWN OR UNPAVED AREAS, COMPACT SUBGRADE AND EACH LAYER TO 85% MAXIMUM DRY DENSITY ASTM D698 (STANDARD PROCTOR).
19. SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE CAPPED AND PIPED TO THE NEAREST STORM SEWER SYSTEM OR NATURAL WATERCOURSE. THE PIPE SHALL BE A MINIMUM OF 6" DIAMETER AND CONFORM TO V.D.O.T. STANDARD SB-1.
20. EXCESS SOIL, ROCK, DEBRIS AND WASTE MATERIAL SHALL BE HAULED OFF THE OWNERS PROPERTY. HAUL OFF DISPOSAL SITE MAY REQUIRE A SEPARATE EROSION AND SEDIMENT CONTROL PLAN BY THE CITY.
21. EXCAVATION IS UNCLASSIFIED-REFER TO SPECIFICATIONS FOR EXCAVATION.
22. 3" MINIMUM TOPSOIL LAYER SHALL BE PLACED OVER ALL LAWN AREAS. CONTOURS SHOWN REFLECT FINISHED GRADE ELEVATIONS.
23. ALL ONSITE CONSTRUCTION STAKING SHALL BE PERFORMED BY ENGINEERING CONCEPTS, INC. - CONTRACTOR COST.

WATER NOTES

1. A MINIMUM COVER OF THREE (3) FEET IS REQUIRED OVER PROPOSED LINES. A MINIMUM VERTICAL SEPARATION OF 18" BETWEEN ALL UTILITIES, AS REQUIRED.
2. VERIFY LOCATION, SIZE AND ELEVATION FOR ALL UTILITIES IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY IF LOCATION, SIZE OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON PLAN, IF THERE APPEARS TO BE A CONFLICT, OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON PLAN.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND UNCOVERING VALVE VALVES AFTER PAVING AND GRADING AND ADJUSTMENT FOR FINISH GRADE ELEVATION IF NECESSARY.
4. ALL EXISTING UTILITIES MAY NOT BE SHOWN IN THE EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH THE WESTERN VIRGINIA WATER AUTHORITY REGULATIONS WHERE LINES CROSS
5. ALL TRENCHES IN EXISTING OR FUTURE HIGHWAY RIGHTS-OF-WAY SHALL BE COMPACTED ACCORDING TO THE WESTERN VIRGINIA WATER AUTHORITY AND ROANOKE CITY STANDARDS.
6. LINES SHALL BE STAKED PRIOR TO CONSTRUCTION.
7. ALL WATER MAINS SHALL BE PROPERLY RESTRAINED WITH PROPER THRUST BLOCKING OR APPROVED ALTERNATIVE.
8. ALL WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AWWA STANDARDS. COORDINATE INSPECTIONS FOR TESTING WITH GOVERNING JURISDICTION.
9. 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
10. A CONTINUOUS AND 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 BACK FILLED WITH SELECTED MATERIAL, THOROUGHLY COMPACTED TO 90%, 95% UNDER PAVEMENT OR CONCRETE SLAB, OF THE STANDARD PROCTOR (ASTM D-698) USING CARE NOT TO DAMAGE THE PIPE.
11. ALL WATER FACILITIES ARE TO BE INSTALLED ACCORDING TO THE WESTERN VIRGINIA WATER AUTHORITY DESIGN AND CONSTRUCTION STANDARDS.
12. COMMERCIAL WATER VAULTS ARE ORDERED AND INSTALLED BY THE CONTRACTOR. THE WESTERN VIRGINIA WATER AUTHORITY WILL DETERMINE THE REQUIRED VAULT SIZE. CONTACT DAVID BARNHART AT THE WVWA ENGINEERING DIVISION.
13. MINIMUM WATER METER SIZE IS 3". MAXIMUM PROBABLE FLOW 280 GPM. METER AND FLOW ARE SIZED FOR BUILD OUT CONDITIONS (ALL FUTURE SHOWN), MAXIMUM FLOW PHASE I IS 115 GPM.
14. TAPS TO THE EXISTING MAIN SHALL BE PERFORMED BY THE WESTERN VIRGINIA WATER AUTHORITY.
15. COORDINATE BUILDING CONNECTION LOCATIONS WITH PLUMBING PLANS.
16. ALL EXISTING WATER SERVICES ARE TO BE ABANDONED AT THE MAIN AND INSPECTED BY THE AUTHORITY INSPECTOR.
17. CONTACT THE CITY BUILDING INSPECTION DEPARTMENT 853-1891 FOR CONDUIT PLACEMENT FOR SUPPRESSION VALVE SUPERVISION.

City Construction Notes to be Included on Plans

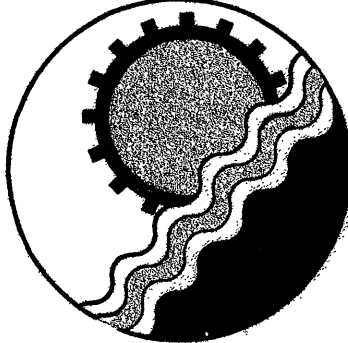
Notice: All Landowners, Developers and Contractors

FAILURE TO COMPLY WITH THE CONSTRUCTION PROCEDURE REQUIREMENTS LISTED BELOW MAY RESULT IN THE COSTLY REMOVAL OF STRUCTURES, TIME DELAYS OR THE ISSUANCE OF A STOP WORK ORDER.

Construction Procedure Requirements

- Right-of-Way Excavation Permit** - Prior to the commencement of any digging, alteration or construction within the public right-of-way (streets, alleys, public easements), a right-of-way excavation permit shall be applied for and obtained by the contractor from the City of Roanoke.
- Land Disturbance Permit** – An approved erosion and sediment control plan for any borrow/fill sites associated with the project must be submitted prior to the issuance of a land disturbance permit.
- Plans and Permits** - A copy of the plans as approved by the City (signed by the proper City officials) and all permits issued by the City shall be available at the construction site at all times of ongoing construction.
- Location of Utilities** - The contractor shall verify the location of all existing utilities prior to the commencement of any construction.
- Construction Entrance** - The contractor shall install an adequate construction entrance for all construction related egress from the site. Size and composition of construction entrance shall be as shown on the plans.
- Streets to Remain Clean** - It shall be the responsibility of the contractor to insure that the public street adjacent to the construction entrance remains free of mud, dirt, dust, and/or any type of construction materials or litter at all times.
- Barricades/Ditches** - The contractor shall maintain the integrity of all excavated ditches and shall furnish and ensure that all barricades proper and necessary for the safety of the public are in place.
- Sewer and Pavement Replacement** - Construction of sanitary sewers and the replacement of pavement shall be in accordance with approved standards and specifications of the City of Roanoke and the Western Virginia Water Authority
- Approved Plans/Construction Changes** - Any change or variation from construction design as shown on the officially approved plans shall be approved by the erosion and sediment control agent prior to said changes or variation in construction being made.
- Final Acceptance/City** - The owner or developer shall furnish the City of Roanoke's Planning Building and Development Department with a final correct set of as-built plans prior to final acceptance by the City.

Note: The above City construction notes should be shown on the front or cover sheet of the development or construction plan.



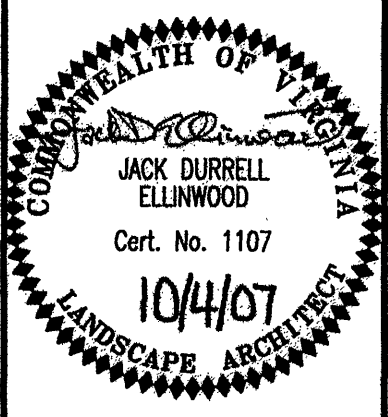
ENGINEERING CONCEPTS, INC.
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	city 09.26.07
	city 08.30.07
	city 06.04.07
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revisions	

date	May 30, 2007
project	08/7020
designed	JDE
drawn	DRB
checked	JDE

**RODRIGUEZ
RIPLEY
MADDEX
MOTLEY**

ARCHITECTS



project	BRBH - HOLLINS ROAD PROJECT
drawing	NOTES

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