

J:\15142\Civil\15-063 - Standard\Sheets\15-063 - GENERAL NOTES.dwg, Plotted By: tlivick, Plotter: Dec 09, 2016 - 12:12pm

GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES GOVERNED BY O.S.H.A., FEDERAL, STATE, AND LOCAL JURISDICTIONS.
2. THE EXACT LOCATION OF UNDERGROUND UTILITIES IS UNKNOWN AND THE CONTRACTOR SHALL HAND EXCAVATE TO FIELD VERIFY THE HORIZONTAL AND VERTICAL ALIGNMENT OF ALL UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY MISS UTILITY (1-800-552-7001) 72 HOURS PRIOR TO BEGINNING GRADING OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY UTILITIES DAMAGED DURING CONSTRUCTION.
3. PLAN APPROVAL BY LOCALITY DOES NOT GUARANTEE PLAN OR PERMIT APPROVAL BY ANY OTHER REGULATORY AGENCY.
4. AN APPROVED SET OF SOIL AND EROSION PLANS WITH THE SOIL AND EROSION NARRATIVE AND ALL LAND DISTURBING PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE THE NAME AND RESPONSIBLE LAND DISTURBER CERTIFICATE NUMBER OF THE INDIVIDUAL RESPONSIBLE FOR LAND DISTURBING ACTIVITIES AT THE SITE. THE RESPONSIBLE LAND DISTURBER SHALL ATTEND ALL PRE-CONSTRUCTION, SOIL AND EROSION REVIEW, OR CONSTRUCTION CLOSEOUT MEETINGS.
5. ALL WORK SHALL BE SUBJECT TO INSPECTION BY LOCALITY OR OTHER AUTHORIZED INSPECTORS.
6. ANY CONSTRUCTION WITHIN THE STATE RIGHT OF WAY SHALL BE IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS. ALL REQUIRED TRAFFIC CONTROL DEVICES FOR WORK WITHIN THE STATE RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE UNIFORM TRAFFIC CONTROL DEVICES MANUAL.
7. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AND REGULATIONS. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE MOST CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF LOCALITY, THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ), THE MOST CURRENT ROAD AND BRIDGE STANDARDS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT), OR MANUFACTURER'S RECOMMENDATIONS AND INDUSTRIAL/ASSOCIATION STANDARDS SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
8. EXCEPT AS SHOWN ON THE PLANS, ALL MATERIALS ARE NEW AND SHALL BE PROVIDED BY THE CONTRACTOR UNLESS OTHERWISE NOTED. ALL STORM DRAIN PIPE AND ASSOCIATED APPURTENANCES SHALL MEET THE NOMINAL INSIDE DIAMETER AND TYPE AS SPECIFIED IN THE PLAN SHEET DETAILS UNLESS OTHERWISE APPROVED BY THE ENGINEER. ALL DRAINAGE STRUCTURES LOCATED UNDER FUTURE ROAD OR DRIVEWAYS SHALL MEET HEAVY DUTY TRAFFIC (HS20) LOADING REQUIREMENTS.
9. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE OWNER OF ANY DISCREPANCIES FOUND DURING BIDDING. DURING THE COURSE OF CONSTRUCTION, IF THE CONTRACTOR UNCOVERS ANY CODE VIOLATION KNOWN TO HIM OR ANY DISCREPANCY WITH THE DESIGN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
10. THE OWNER (AND/OR CONTRACTOR IF ASSIGNED) IS RESPONSIBLE FOR OBTAINING ALL COUNTY AND STATE PERMITS PRIOR TO CONSTRUCTION.
11. UNLESS OTHERWISE SPECIFIED, ALL DEMOLISHED OR SALVAGED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF ACCORDING TO ALL APPLICABLE FEDERAL, STATE, AND COUNTY CODES, INCLUDING LOCALITY REGULATIONS.
12. SUBSURFACE EXPLORATION HAS NOT BEEN PERFORMED, CONTRACTOR SHOULD VISIT THE SITE TO BECOME FAMILIAR WITH THE GENERAL, LOCAL, AND SITE SPECIFIC CONDITIONS THAT MAY AFFECT COST, PROGRESS, PERFORMANCE, AND FURNISHING OF THE WORK.
13. THE LANDOWNER IS RESPONSIBLE FOR THE PROPER MAINTENANCE OF ANY ON SITE STORM WATER MANAGEMENT FACILITIES ACCORDING TO STATE AND LOCAL REGULATIONS TO INSURE CONTINUED OPERATION AND ADEQUATE STORM WATER MANAGEMENT.
14. TOPOGRAPHIC INFORMATION COMPILED FROM FIELD TOPOGRAPHIC MAPPING PERFORMED BY PARKER DESIGN GROUP DATED SEPTEMBER 16 - OCTOBER 22, 2014. HORIZONTAL DATUM: NAD83 VA STATE PLANE - SOUTH ZONE VERTICAL DATUM: NAVD 88
15. OWNER SHALL PROVIDE GEOTECHNICAL ENGINEER SERVICES TO VERIFY THAT CUT AND FILL OPERATIONS ARE IN CONFORMANCE WITH SPECIFICATIONS.
16. PROPERTY LOCATED IN FEMA FLOOD HAZARD ZONE X. SEE COMMUNITY PANEL # 5116100162G, DATED SEPTEMBER 28, 2007.

SOIL AND EROSION GENERAL 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 VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS.
- ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD WITH THE PLAN APPROVING AUTHORITY AND ALL APPLICABLE ENTITIES. IT SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER TO SCHEDULE THIS CONFERENCE.
- 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 THE INSTALLATION OF ANY ADDITIONAL SOIL AND EROSION 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.

EROSION AND SEDIMENT CONTROL MINIMUM STANDARDS

NOTE:
✓ CHECKMARK INDICATES ITEM IS APPLICABLE TO PROJECT.
N/A NOT APPLICABLE.

- MS-1 STABILIZATION OF DENUDED AREAS
✓ PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
- MS-2 STABILIZATION OF SOIL STOCKPILES
✓ DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
- MS-3 PERMANENT VEGETATION
✓ A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT, IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.
- MS-4 TIMING AND STABILIZATION OF SEDIMENT TRAPPING MEASURES
✓ SEDIMENT BASINS AND PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
- MS-5 STABILIZATION OF EARTHEN STRUCTURES
✓ STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
- MS-6 SEDIMENT BASINS
N/A SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
A. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.
B. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A TWENTY-FIVE YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.
- MS-7 CUT AND FILL SLOPES
✓ CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.
- MS-8 CONCENTRATED RUNOFF FLOW DOWN CUT OR FILL SLOPES
✓ CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
- MS-9 WATER SEEPS FROM A SLOPE FACE
✓ WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
- MS-10 STORM SEWER INLET PROTECTION
✓ ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
- MS-11 STABILIZATION OF OUTLETS
N/A BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
- MS-12 WORK IN LIVE WATERCOURSES
N/A WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
- MS-13 CROSSING A LIVE WATERCOURSE
N/A WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.
- MS-14 APPLICABLE REGULATIONS
N/A ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.
- MS-15 STABILIZATION OF BED AND BANKS
N/A THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.
- MS-16 UTILITY CONSTRUCTION
✓ UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
C. 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.
D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
F. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- MS-17 CONSTRUCTION ACCESS ROUTES
✓ WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVING SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.
- MS-18 TEMPORARY EROSION & SEDIMENT CONTROL MEASURE REMOVAL
✓ ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
- MS-19 PROTECTION OF DOWNSTREAM PROPERTIES AND WATERWAYS
✓ PROPERTIES DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS:
A. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO

- N/A B. A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
- B.1. THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR
- B.2. (A) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS;
(B) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND
(C) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM
- N/A C. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:
- C.1. IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO CHANNEL THE BED OR BANKS; OR
- C.2. IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;
- C.3. DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWOYEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PREDEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MANMADE CHANNEL; OR
- C.4. PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESOP AUTHORITY TO PREVENT DOWNSTREAM EROSION.
- ✓ D. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.
- ✓ E. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT.
- N/A F. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESOP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.
- N/A G. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.
- ✓ H. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.
- N/A I. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.
- ✓ J. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.
- ✓ K. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.
- N/A L. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO
- L.1. DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS;
L.2. DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24- HOUR STORM; AND
L.3. REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO § 10.1-562 OR 10.1-570 OF THE ACT.
- ✓ M. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 10.1-561 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (§ 10.1-603.2 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 9VAC25-870-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT REGULATIONS.
- ✓ N. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-870-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT REGULATIONS SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF MINIMUM STANDARD 19.

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

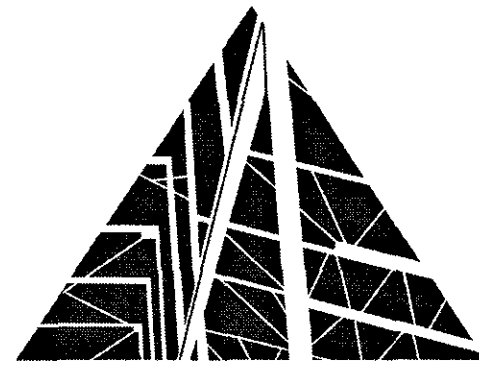
1. **Right-of-Way Excavation Permit** - Prior to the commencement of any digging, alteration or construction within the public right-of-way (streets, alleys, public easements), a right-of-way excavation permit shall be applied for and obtained by the contractor from the City of Roanoke.
2. **Land Disturbance 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.
3. **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.
4. **Location of Utilities** - The contractor shall verify the location of all existing utilities prior to the commencement of any construction.
5. **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.
6. **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.
7. **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.
8. **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
9. **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.
10. **Final Acceptance/City** - The owner or developer shall furnish the City of Roanoke's Planning Building and Development Department with a field surveyed final correct set of as-built plans of the newly constructed storm drain and/or stormwater management facilities prior to final acceptance and issuance of a certificate of occupancy by the City. As-built plans shall be provided in the State Plane Virginia South Coordinate System, NAD 1983, FIPS 4502 Feet, US Survey Feet, Datum NA 83, in the form of 1 paper copy and 1 digital AUTOCAD file.

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

07/10

KEY PLAN

GENERAL NOTES



10 CHURCH AVE SE, PLAZA SUITE 1 ROANOKE, VIRGINIA 24011 540.342.8001

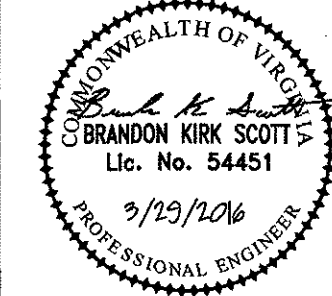
1920 VALLEY VIEW BLVD NW

COMMERCIAL BUILDING
UPGRADE

ROANOKE, VIRGINIA

STATE PROJECT NO. N/A

SPECTRUM DESIGN PROJECT NO.



DATE 9/29/2016
DESIGN ARCHITECT
PROJECT ARCHITECT
PROJECT ENGINEER
CHECKED BY
DRAWN BY
REVISIONS
NUMBER
DATE

SHEET TITLE

GENERAL NOTES

C001