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STATEMENT OF COMPLIANCE WITH VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS – 9VAC25–840–40 – MINIMUM STANDARDS:

THE LAND-DISTURBING ACTIVITIES OF THIS PROJECT MUST COMPLY WITH THE 19 "MINIMUM STANDARDS" (MS) SPECIFIED IN SECTION 4VAC60–30–40 OF THE REGULATIONS (VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS) THAT ARE APPLICABLE TO THE PROJECT. THIS SECTION PROVIDES A RECITATION OF THE FULL TEXT OF THE 19 MINIMUM STANDARDS AND FOLLOWS WITH A "METHOD OF COMPLIANCE" WITH EACH MINIMUM STANDARD. THESE EROSION AND SEDIMENT CONTROL PLANS WERE PREPARED IN A MANNER TO ENSURE COMPLIANCE WITH THE MINIMUM STANDARDS.

THE CONTRACTOR AND THE CERTIFIED RESPONSIBLE LAND DISTURBER (RLD) SHALL PERFORM THE WORK OF THE PROJECT IN THE MANNER STATED AND IN A MANNER AND SEQUENCE SUCH THAT THE INTENT AND REQUIREMENTS OF THE MINIMUM STANDARDS ARE MET. REFER TO THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR ADDITIONAL INFORMATION.

MS–1: Permanent or temporary soil stabilization shall be applied to denuded areas within seven (7) days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven (7) days to denuded areas that may not be at final grade but will remain dormant for longer than fourteen (14) days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.

METHOD OF COMPLIANCE – PERMANENT SEEDING (PS) AND TEMPORARY SEEDING (TS) MEASURES ARE SHOWN AND SPECIFIED ON THE EROSION AND SEDIMENT CONTROL PLANS AND DETAILS. CONTRACTOR SHALL REFER TO SHEETS C7.1 AND C7.2 AS WELL AS THE E&SC NARRATIVE AND DETAILS FOR SEEDING REQUIREMENTS AND SCHEDULES.

MS–2: During construction of the project, soil stock piles 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.

METHOD OF COMPLIANCE – IT IS ANTICIPATED THAT TOPSOIL, EXCESS EXCAVATION MATERIAL, AND/OR UN-SUITABLE MATERIAL MAY BE FOUND ON THE PROJECT SITE AND WILL NEED TO BE STOCKPILED AND/OR REMOVED FROM THE PROJECT SITE. THE LOCATION OF A TOPSOIL STOCKPILE IS SHOWN ON SHEET C7.1 ALONG WITH THE REQUIRED PROTECTION AND STABILIZATION MEASURES. IF TOPSOIL, EXCESS EXCAVATION, OR UN-SUITABLE MATERIAL IS REMOVED FROM THE SITE, IT SHALL BE DISPOSED OF IN A LEGAL MANNER AND AT A SITE THAT IS DULY PERMITTED FOR LAND DISTURBANCE ACTIVITIES.

MS–3: 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.

METHOD OF COMPLIANCE – PERMANENT SEEDING (PS), ALONG WITH TOPSOILING (TO), AND MULCHING (MU) MEASURES ARE SHOWN AND SPECIFIED ON THE E&SC PLAN (SHEET C7.01 AND C7.02) AND DETAIL SHEETS AS WELL AS THE NARRATIVE AND SEQUENCE OF WORK.

MS–4: Sediment basins and sediment traps, 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.

METHOD OF COMPLIANCE – THE PERIMETER SEDIMENT TRAPPING MEASURES ARE SHOWN ON THE E&SC PLAN SHEET AND ARE SPECIFIED TO BE INSTALLED PRIOR TO MAJOR LAND DISTURBANCE ACTIVITIES. REFER TO THE GENERAL NOTES, NARRATIVE, AND SEQUENCE OF WORK FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

MS–5: Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.

METHOD OF COMPLIANCE – WHERE EARTHEN PERIMETER SEDIMENT TRAPPING MEASURES ARE SHOWN ON THE E&SC PLAN SHEET, THEY ARE SPECIFIED TO BE STABILIZED IMMEDIATELY UPON INSTALLATION. REFER TO THE GENERAL NOTES, NARRATIVE, AND SEQUENCE OF WORK FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

MS–6: 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 25–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.

METHOD OF COMPLIANCE – NOT APPLICABLE. NO SEDIMENT TRAP (ST) IS PROPOSED.

MS–7: 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.

METHOD OF COMPLIANCE: THE NARRATIVE AND WORK SEQUENCE REQUIRES THAT EXISTING DENUDEO OR NEWLY CONSTRUCTED CRITICAL CUT/FILL SLOPES (GREATER THAN 6 FEET IN HEIGHT) ARE TO BE STABILIZED IMMEDIATELY UPON COMPLETION OF GRADING AND ARE TO BE DRESSED WITH SOIL STABILIZATION BLANKETS AND MATTING. REFER TO GENERAL WORK SEQUENCE ON SHEETS C7.1 AND C7.2 AS WELL AS THE NARRATIVE ON SHEET C7.3.

MS–8: Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.

METHOD OF COMPLIANCE – TOP OF SLOPE DIVERSIONS (DV/DD) ARE SPECIFIED WHERE THIS CONDITION MAY APPLY. REFER TO PLAN SHEET C7.1 AND C7.2.

MS–9: Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.

METHOD OF COMPLIANCE – BASED ON A REVIEW OF AVAILABLE SUBSURFACE INVESTIGATION REPORTS, PUBLIC DATA, AND KNOWLEDGE OF THE GROUNDWATER CONDITIONS AT THE SITE, THIS CONDITION IS NOT ANTICIPATED DURING THIS PROJECT. IF ENCOUNTERED DURING CONSTRUCTION IT WILL BE ADDRESSED WITH PLAN REVISION.

MS–10: 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.

METHOD OF COMPLIANCE – INLET PROTECTION (IP) DEVICES ARE SPECIFIED AND SHOWN ON THE E&SC PLAN SHEETS AND IN THE NARRATIVE. THE GENERAL WORK SEQUENCE SPECIFIES THE TIMING FOR INSTALLATION OF THESE MEASURES.

MS–11: 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.

METHOD OF COMPLIANCE – NOT APPLICABLE. THE NEW STORMWATER CONVEYANCE SYSTEM(S) DISCHARGES DIRECTLY IN TO THE EXISTING STORM DRAINAGE SYSTEM. NO NEW OUTLET PROTECTION MEASURES ARE REQUIRED.

MS–12: 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.

METHOD OF COMPLIANCE – NOT APPLICABLE. NO WORK IS PROPOSED IN A LIVE WATERCOURSE.

MS–13: 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.

METHOD OF COMPLIANCE – NOT APPLICABLE. WORK DOES NOT INVOLVE THE CROSSING OF A LIVE WATERCOURSE.

MS–14: All applicable federal, state and local requirements pertaining to working in or crossing live watercourses shall be met.

METHOD OF COMPLIANCE – NOT APPLICABLE. WORK DOES NOT INVOLVE WORKING IN OR CROSSING OF A LIVE WATERCOURSE.

MS–15: The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.

METHOD OF COMPLIANCE – NOT APPLICABLE. WORK DOES NOT INVOLVE WORKING IN OR CROSSING OF A LIVE WATERCOURSE.

MS–16: 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 this chapter.

f. Applicable safety requirements shall be complied with.

METHOD OF COMPLIANCE – SPECIFIC REQUIREMENTS TO ADDRESS THIS MINIMUM STANDARD ARE INCORPORATED INTO AND IDENTIFIED IN THE SEQUENCE OF WORK AND THE E&SC NARRATIVE.

MS–17: 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 paved 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.

METHOD OF COMPLIANCE – ALL CONSTRUCTION VEHICLES SHALL ENTER AND LEAVE THE SITE AT THE SPECIFIED LOCATION. SHEET C7.1 AND C7.2 INDICATE THE LOCATION OF THE CONSTRUCTION ENTRANCE(S) AND THE SEQUENCE OF INSTALLATION. SHEET C7.2 SHOWS THE LOCATION OF CONSTRUCTION ROAD STABILIZATION MEASURES WHICH WILL COMPLEMENT THE EFFECTIVENESS OF THE CONSTRUCTION ENTRANCE.

MS–18: 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 VESCP 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.

METHOD OF COMPLIANCE – REFER TO NARRATIVE AND WORK SEQUENCE ON THE E&SC PLAN SHEETS AND THE GENERAL NOTES FOR STATED REQUIREMENTS REGARDING THE PROVISIONS OF REMOVAL OF E&SC MEASURES.

MS–19: Properties and waterways 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 a pipe or pipe system, downstream stability analyses at the outfall of the pipe or pipe system shall be performed.

b. Adequacy of all channels and pipes shall be verified in the following manner:

(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

(2) (a) Natural channels shall be analyzed by the use of a two–year storm to verify that stormwater will not overlap 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 overlap 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.

c. If existing natural receiving channels or previously constructed man–made channels or pipes are not adequate, the applicant shall:

(1) Improve the channels to a condition where a ten–year storm will not overlap the banks and a two–year storm will not cause erosion to the channel, the bed, or the banks; or

(2) Improve the pipe or pipe system to a condition where the ten–year storm is contained within the appurtenances;

(3) Develop a site design that will not cause the pre–development peak runoff rate from a two–year storm to increase when runoff outfalls into a natural channel or will not cause the pre–development peak runoff rate from a ten–year storm to increase when runoff outfalls into a man–made channel; or

(4) Provide a combination of channel improvement, stormwater detention or other measures which is satisfactory to the VESCP 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.

f. If the applicant chooses an option that includes stormwater detention, he shall obtain approval from the VESCP 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.

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.

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.

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 (i) detain the water quality volume and to release it over 48 hours; (ii) detain and release over a 24–hour period the expected rainfall resulting from the one year, 24–hour storm; and (iii) 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 § 62.1–44.15:54 or 62.1–44.15:65 of the Act.

m. For plans approved on and after July 1, 2014, the flow rate capacity and velocity requirements of §62.1–44.15:52 A of the Act and this subsection shall be satisfied by compliance with water quantity requirements in the Stormwater Management Act (§62.1–44.15:24 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) Regulations.

n. Compliance with the water quantity minimum standards set out in 9VAC25–870–66 of the

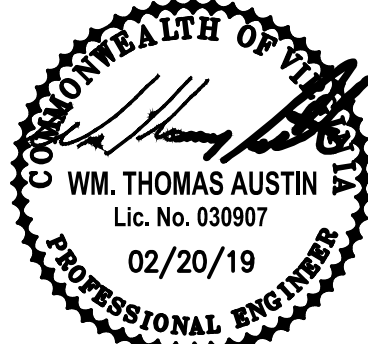
Virginia Stormwater Management Program (VSMP) Regulations shall be deemed to satisfy the requirements of subdivision 19 of this subsection.

METHOD OF COMPLIANCE: THIS PROJECT SATISFIES THE REQUIREMENTS OF MS–19 BY DEMONSTRATING COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25–870–66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATIONS. THE PROJECT SPECIFICALLY COMPLIES WITH THE REQUIREMENTS OF 9VAC25–870–66 B.3. (CHANNEL PROTECTION) AND 9VAC25–870–66 C.1 (FLOOD PROTECTION). BOTH CONDITIONS ARE MET TO THE "LIMIT OF ANALYSIS" POINT. REFER TO THE STORMWATER POLLUTION PREVENTION PLAN AND STORMWATER MANAGEMENT PLAN AND COMPUTATION FOR ADDITIONAL INFORMATION.

END OF STATEMENT OF COMPLIANCE WITH VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS – 9VAC25–840–40 – MINIMUM STANDARDS

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GENERAL NOTES



PROJECT TITLE

**ROANOKE FIRE-EMS
STATION #7**

BID SET

SFCS Architecture
Engineering
Planning
Interiors
SFCS Inc. • 305 South Jefferson Street
Roanoke, Virginia 24011.2003
540.344.6664 • Fax 540.343.6925
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PROJECT DESIGNER	:	
PROJECT ARCHITECT	:	
PROJECT ENGINEER	:	WTA
DRAWN BY	:	ARB
CHECKED BY	:	WTA
APPROVED BY	:	WTA
NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

**EROSION & SEDIMENT
CONTROL STATEMENT OF
COMPLIANCE (MS-19)**

COMM. NO. 17503.00	DATE FEBRUARY 20, 2019
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DRAWING	SHEET
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C7.4

OF

CITY PLAN NO.: CP19–0003

City of Roanoke
Planning, Building, & Development
COMPREHENSIVE DEVELOPMENT PLAN
APPROVED
by Ken Richardson
07/08/2019