

**CHECKLIST FOR EROSION AND SEDIMENT CONTROL  
PLANS & NARRATIVE**

The Erosion and Sediment Control (ESC) Plan consists of the Narrative (including any supporting calculations) and the Plan Sheets, as noted below.

**GENERAL**

\_\_\_\_\_ Complete set of plans – Include all sheets pertaining to the site grading, stormwater and any activities impacting erosion and sediment control and drainage:

- Existing conditions
- Site grading
- Erosion and sediment control
- Storm drain systems
- Stormwater management facilities
- Utility layout
- Demolition
- Landscaping
- On-site and off-site borrow and disposal areas that do not have a separate approved ESC Plan

\_\_\_\_\_ Completed Checklists - Include a completed *Checklist for Erosion and Sediment Control Plans & Narrative* and a completed *Minimum Standard Checklist for Erosion and Sediment Control Plans* with the narrative.

\_\_\_\_\_ Professional's seal - The designer's original seal, signature, and date are required on the cover sheet of each narrative and each set of plan sheets. A facsimile of the designer's seal, signature, and date is acceptable for subsequent plan sheets.

\_\_\_\_\_ Certified Responsible Land Disturber (RLD) - A certified RLD must be called out on the plan. If the RLD is not known at the time of plan submittal, the RLD may be the engineer of record for purposes of plan approval only. A certified RLD is required during all stages of construction, from initial land disturbance through final stabilization. The name of the project RLD must be provided before any land disturbance may begin. The plan-approving authority must be notified if the certified RLD changes during the course of the project.

\_\_\_\_\_ Variances – Variances requested at the time of plan submission are governed by Section 9VAC25-840-50 of the Virginia Erosion and Sediment Control Regulations.

\_\_\_\_\_ Number of plan sets - Two sets of ESC Plans are required.

**PROJECT NAME:** \_\_\_\_\_

**PROJECT NO.:** \_\_\_\_\_

**PLANS DATED:** \_\_\_\_\_

**NARRATIVE DATED:** \_\_\_\_\_

**NARRATIVE**

\_\_\_\_\_ Project description - Briefly describe the nature and purpose of the land-disturbing activity. Provide the area (acres) to be disturbed. Identify the owner of the development.

\_\_\_\_\_ Existing site conditions - A description of the existing topography (% slopes), vegetation, and drainage. Include on-site and off-site receiving channels.

\_\_\_\_\_ Adjacent areas - A description of neighboring areas such as public waters, residential areas, roads, etc., which might be affected by the land disturbance.

\_\_\_\_\_ Off-site areas - Describe any off-site land-disturbing activities that will occur (including borrow sites, disposal areas, easements, etc.). Identify the owner of the off-site area and the locality responsible for plan review. Include a statement that any such off-site land-disturbing activities must have an approved ESC Plan prior to any material leaving or entering the site.

\_\_\_\_\_ Soils - Provide a description of the soils on the site giving such information as soil name, mapping unit, erodibility, permeability, depth, texture, and soil structure. Show the site location on the Soil Survey, if it is available. Include a plan showing the boundaries of each soil type on the development site.

\_\_\_\_\_ Critical areas - A description of areas on the site which have potentially serious erosion problems or that are sensitive to sediment impacts (e.g., steep slopes, watercourses, wet weather underground springs, etc.).

\_\_\_\_\_ Erosion and sediment control measures - A description of the structural and vegetative methods that will be used to control erosion and sedimentation on the site. Controls should satisfy applicable minimum standards and specifications in Chapter 3 of the *Virginia Erosion and Sediment Control Regulations (VESCH)*, latest edition. Provide the definition and applicable purpose from the VESCH for each method used.

\_\_\_\_\_ Management strategies / Sequence of construction - Address management strategies, the sequence of construction, and any phasing of installation of ESC measures.

\_\_\_\_\_ Permanent stabilization - A brief description, including specifications, of how the site will be stabilized after construction is completed. Include Table 3.32-C from Chapter 3 of the VESCH.

\_\_\_\_\_ Mulching – All areas receiving either temporary or permanent stabilization shall be mulched. Include Table 3.35-A from Chapter 3 of the VESCH.

\_\_\_\_\_ Maintenance of ESC measures - A schedule of regular inspections, maintenance and

**PROJECT NAME:** \_\_\_\_\_

**PROJECT NO.:** \_\_\_\_\_

**PLANS DATED:** \_\_\_\_\_

**NARRATIVE DATED:** \_\_\_\_\_

repair of erosion and sediment control structures should be set forth.

\_\_\_\_\_ Calculations for temporary erosion and sediment control measures - For each temporary ESC measure, provide the calculations required by the VESCH.

\_\_\_\_\_ Stormwater management considerations - Will the development of the site cause an increase in peak runoff rates? Will the increase in runoff cause flooding or channel degradation downstream? Describe the strategy to control stormwater runoff.

\_\_\_\_\_ Calculations for stormwater management - Provide calculations for pre- and post-development runoff and the design of each permanent stormwater management facility.

\_\_\_\_\_ Calculations for permanent stormwater conveyances - For each permanent stormwater conveyance or structure, provide the following runoff and capacity calculations, as applicable:

- Drainage area map with time of concentration ( $T_C$ ) path shown
- $T_C$  calculation/nomograph
- IDF curve
- Composite runoff coefficient or RCN calculation
- Peak runoff calculations
- Stormwater conveyance channel and/or pipe capacity calculations
- Hydraulic Grade Line for all piped systems
- Culvert calculations
- Drop inlet grate backwater calculations
- Curb inlet length calculations

\_\_\_\_\_ Adequate channels - Provide calculations for adequate channels, both on-site and off-site, including outlets from stormwater management facilities.

\_\_\_\_\_ Specifications for erosion and sediment control measures - For each erosion and sediment control measure employed in the plan, include at the minimum the following sections from the standard and specification in the VESCH: Construction Specifications and Maintenance. Include any approved variances or revisions to the standards and specifications.

\_\_\_\_\_ Specifications for stormwater and stormwater management structures - Provide specifications for stormwater and stormwater management structures, i.e., pipe materials, pipe bedding, stormwater structures.

\_\_\_\_\_ Page numbers – Number the pages of the narrative and calculations.

**SITE PLAN**

**PROJECT NAME:** \_\_\_\_\_

**PROJECT NO.:** \_\_\_\_\_

**PLANS DATED:** \_\_\_\_\_

**NARRATIVE DATED:** \_\_\_\_\_

- \_\_\_\_\_ Vicinity map - A small map locating the site in relation to the surrounding area. Include any landmarks that might assist in locating the site.
- \_\_\_\_\_ Indicate north - The direction of north in relation to the site.
- \_\_\_\_\_ Erosion and sediment control notes - At a minimum, include the erosion and sediment control notes found in Table 6-1 on page VI-15 of the 1992 *Virginia Erosion and Sediment Control Handbook* (VESCH). Note that the Virginia Erosion and Sediment Control Regulations are found in section "4VAC50-30" of the Code of Virginia.
- \_\_\_\_\_ Reference to the Erosion and Sediment Control Narrative - Include a reference to the Narrative (Title and Date) in the Erosion and Sediment Control Notes, e.g., "This Plan shall be used in conjunction with..."
- \_\_\_\_\_ Legend - Provide a complete listing of all ESC measures used, including the VESCH uniform code symbol and the standard and specification number. Include any other items necessary to identify pertinent features of the plan.
- \_\_\_\_\_ Property lines and easements - Show all property and easement lines. For each adjacent property, list the deed book and page number and the property owner's name and address.
- \_\_\_\_\_ Limits of clearing and grading – Delineate all areas that are to be cleared and graded.
- \_\_\_\_\_ Protection of areas not being cleared – Fencing or other measures to protect areas that are not to be disturbed on the site.
- \_\_\_\_\_ Critical areas – Note all critical areas on the plans.
- \_\_\_\_\_ Existing contours - The existing contours of the site. One-foot or two-foot contours are acceptable.
- \_\_\_\_\_ Final contours - Changes to the existing contours, including final drainage patterns.
- \_\_\_\_\_ Existing vegetation - The existing tree lines, grassed areas, or unique vegetation.
- \_\_\_\_\_ Site development - All improvements such as buildings, parking lots, access roads, utility construction, etc. Show all physical items that could affect or be affected by erosion, sediment and drainage.
- \_\_\_\_\_ Location of practices - The locations of erosion and sediment control and stormwater management practices used on the site. Use the standard symbols and abbreviations in Chapter 3 of the VESCH.

**PROJECT NAME:** \_\_\_\_\_

**PROJECT NO.:** \_\_\_\_\_

**PLANS DATED:** \_\_\_\_\_

**NARRATIVE DATED:** \_\_\_\_\_

\_\_\_\_\_ Off-site areas - Identify any off-site land-disturbing activities (e.g., borrow sites, waste areas, etc.). Show location of erosion controls. (Is there sufficient information to assure adequate protection and stabilization?)

\_\_\_\_\_ Detail drawings - Any structural practices used that are not found in the VESCH or approved annual agency specifications should be explained and illustrated with detail drawings.

\_\_\_\_\_ Maintenance – A schedule of regular inspections and repair of temporary erosion and sediment control structures and a schedule for the long-term maintenance of permanent stormwater management facilities should be set forth.

\_\_\_\_\_ Direction of Flow for Conveyances - Indicate the direction of flow for all conveyances (pipes, open channels).

\_\_\_\_\_ Existing drainage patterns - The dividing lines and the direction of flow for each of the different drainage areas. Include the size (acreage) of each drainage area.

\_\_\_\_\_ Storm Drain Profiles - Provide profiles of all storm drains, except for roof drains.

\_\_\_\_\_ Pipe Materials and Dimensions - If not called out on the profiles, the pipe materials and dimensions need to be in the specifications in the narrative.

\_\_\_\_\_ Adequate Channels - Adequate channel locations should be provided both on-site and off-site.

\_\_\_\_\_ Finished Floor of Buildings - Note the FFE of all buildings on site, including basements.

\_\_\_\_\_ Wire Support for Silt Fence - For large or critical disturbed areas, consider wire support for silt fence.

**PROJECT NAME:** \_\_\_\_\_

**PROJECT NO.:** \_\_\_\_\_

**PLANS DATED:** \_\_\_\_\_

**NARRATIVE DATED:** \_\_\_\_\_