

Appendix E: GESC Plan and Report Checklist

This checklist must be filled out and included in the Appendix of the GESC Report

Yes	No	N/A	GESC Requirements
I. GESC REPORT			
			A. COVER PAGE
			1. Project name and complete address
			2. Contact information of the applicant
			3. Contact information of the Professional Engineer preparing (or supervising the preparation of) the GESC Documents
			B. SIGNATURE PAGE
			1. The following note (above Certification Statements)
			<p>“This <i>Grading, Erosion and Sediment Control (GESC)</i> document has been placed in the project file for this project and appears to fulfill the latest version of the <i>Grading, Erosion and Sediment Control Manual</i>. Additional grading, erosion and sediment Control Measures may be required of the owner or his/her agents, due to unforeseen erosion problems or if the submitted plan does not function as intended. The requirements of this GESC document shall run with the land and be the obligation of the land owner, or his/her designated representative(s) until such time as the plan is properly completed, modified or voided.”</p>
			2. Landowner Certification Statement (For landowner/ authorized agent acknowledging the review and acceptance of responsibility)
			<p>“I hereby certify that the Grading, Erosion, and Sediment Control Measures for (Name of Subdivision/Development/address) shall be constructed according to the design presented in this document. I understand that additional erosion control, sediment control and water quality enhancing measures may be required of the owner and his or her agents due to unforeseen pollutant discharges or if the submitted plan does not function as intended. The requirements of the plan shall be the obligation of the land owner and/or his successors or heirs; until such time as the plan is properly completed, modified or voided.”</p> <p>Owner or Authorized Agent _____ Authorized Signature _____</p>
			3. Professional Engineer Certification Statement (for the professional engineer acknowledging responsibility for the preparation of the GESC documents)
			<p>“I hereby attest that this Grading, Erosion, and Sediment Control (GESC) document for (name of subdivision/development) has been prepared by me or under my direct supervision, and to the best of my knowledge and ability has been prepared in accordance with the latest version of the GESC Manual. The signature and stamp affixed hereon certifies that this GESC document was prepared in accordance with the required regulations and criteria; however, the stamp and signature does not certify or guarantee future performance of the execution of the plan by the contractor. The contractor is responsible for executing the</p>

Yes	No	N/A	GESC Requirements
			<p>construction work according to the information set forth in the plan and in accordance with all applicable requirements.”</p> <p>Registered Professional Engineer _____ State of Colorado No. _____ Affix Seal w/date</p>
			C. GESC REPORT
			1. Project Description
			a. Describe the nature and purpose of the land disturbing activity
			b. Total area of the site
			c. Total area of disturbance
			d. Project location – including township, range, section and quarter-section (or the latitude and longitude of the approximate center of the project)
			e. Vicinity Map
			2. Existing Site Conditions
			a. Description of the existing topography, vegetation and drainage (Pictures of the existing vegetation are encouraged)
			b. Description of any wetlands on the site
			c. Description of any other unique features of the property.
			3. Adjacent Areas - Description of neighboring areas such as streams, lakes, Floodplain, residential areas, roads, etc., which might be affected by the land disturbance.
			4. Soils - A brief description of the soils on the site including information on soil type and names, mapping unit, erodibility, permeability, hydrologic soil group, depth, texture, and soil structure. This information may be obtained from the soil report for the site or the applicable Soil Survey prepared by the Natural Resources Conservation Service (NRCS). Include relevant portions of soil report or NRCS Soil Survey in an appendix.
			5. Area and Volumes
			a. An estimate of the quantity (in cubic yards) of excavation and fill involved (attempting to achieve an earthwork balance)
			b. Haul road information
			c. Surface area (in acres) of the proposed disturbance
			6. Control Measures – A summary of the Control Measures selected, designed, installed, implemented and maintained on site, including the timing of installation and removal.
			a. All sediment and erosion Control Measures as shown on GESC Plans.
			b. Land disturbance and storage of soils
			c. Vehicle Tracking
			d. Loading and unloading operations

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			e. Outdoor storage or construction site materials, building materials, fertilizers, and chemicals
			f. Bulk storage of materials
			g. Vehicle and equipment maintenance and fueling
			h. Significant dust or particulate generating processes
			i. Routine maintenance activities involving fertilizers, pesticides, detergents, fuels, solvents and oils
			j. Concrete truck chute and associated fixtures and equipment washing
			k. Dedicated asphalt and concrete batch plants
			l. Other areas or operations where spills can occur
			m. Other non-stormwater discharges including construction dewatering not covered under the Construction Dewatering Discharges General Permit and wash water that may contribute pollutants to the MS4
			7. Permanent Stabilization - A brief description, including applicable specifications, of how the site will be stabilized after construction is complete
			8. Stormwater Management Considerations - Explain how stormwater runoff from and through the site will be handled during construction
			9. Maintenance - Any special maintenance requirements over and above what is identified in the Standard Notes and Details.
			10. Calculations – include in an appendix
			a. Sediment Basin Design Calculations
			b. Diversion Ditch Calculations
			c. Erosion Control Blanket/Matting selection
			D. ENGINEERS COST ESTIMATE
			A GESC Engineer's Cost Estimate, for Initial/Interim and Final GESC stages, including anticipated maintenance during the construction phase, shall be submitted in the GESC Report. Units shall be consistent between cost estimate and plans. <u>Unit costs used to develop probable erosion and sediment control costs shall be those shown in the spreadsheet and shall not be modified.</u>
			E. GESC PLAN AND REPORT CHECKLIST
			A copy of this GESC Plan and Report Checklist must be completely filled out, signed by the designer, and submitted with the GESC Report.

Yes	No	N/A	GESC Requirements
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II. GESC PLANS (shall be a stand-alone document and not included in the Construction Drawings)

			A. GESC PLAN COVER SHEET
			1. Name of Project/Site Name
			2. Project Address
			3. Owner Contact Information (Name, Company, Address, Phone)
			4. Engineer Contact Information (Name, Company, Address, Phone)
			5. Plan Sheet Index
			6. Case Number(s) in the lower left-hand corner
			<p>7. The following note: <i>"This Grading, Erosion and Sediment Control (GESC) document has been placed in the project file for this project and appears to fulfill the latest version of the Grading, Erosion and Sediment Control Manual. Additional grading, erosion and sediment Control Measures may be required of the owner or his/her agents, due to unforeseen erosion problems or if the submitted plan does not function as intended. The requirements of this GESC document shall run with the land and be the obligation of the land owner, or his/her designated representative(s) until such time as the plan is properly completed, modified or voided."</i></p>
			<p>8. GESC Drawing Design Engineer's signature block with name, date, and Professional Engineer registration number. Signature block shall include the following certification statement: <i>"I hereby attest that this Grading, Erosion, and Sediment Control (GESC) document for (name of subdivision/development) has been prepared by me or under my direct supervision, and to the best of my knowledge and ability has been prepared in accordance with the latest version of the GESC Manual. The signature and stamp affixed hereon certifies that this GESC document was prepared in accordance with the required regulations and criteria; however, the stamp and signature does not certify or guarantee future performance of the execution of the plan by the Contractor. The Contractor is responsible for executing the construction work according to the information set forth in the plan and in accordance with all applicable requirements."</i> Registered Professional Engineer _____ State of Colorado No. _____ Affix Seal w/date</p>
			<p>9. Landowner/authorized agent acknowledging GESC review and the acceptance of GESC responsibility. Signature block shall include the following certification statement: <i>"I hereby certify that the Grading, Erosion, and Sediment Control Measures for (Name of Subdivision/Development) shall be constructed according to the design presented in this document. I understand that additional</i></p>

Yes	No	N/A	GESC Requirements
			<p>erosion control, sediment control and water quality enhancing measures may be required of the owner and his or her agents due to unforeseen pollutant discharges or if the submitted plan does not function as intended. The requirements of the plan shall be the obligation of the land owner and/or his successors or heirs; until such time as the plan is properly completed, modified or voided.”</p> <p>Owner or Authorized Agent _____ Authorized Signature _____ Date _____</p>
			10. Approval Block (see Appendix G) 4.5” x 5.5”
			11. General Location Map at a Scale of 1-inch to 1000-feet to 8000-feet indicating:
			a. General vicinity of the site location
			b. Major roadway names and drainageways
			c. North arrow and scale
			B. GESC DRAWING INDEX SHEET
			For projects that require multiple plan-view sheets to adequately show the project area (based on the specified scale ranges), a single plan-view sheet shall be provided at a scale appropriate to show the entire site on one sheet. Areas of coverage of the multiple blow-up sheets are to be indicated as rectangles on the index sheet.
			C. INITIAL GESC DRAWING
			This plan sheet shall provide grading, erosion and sediment Control Measures for the initial clearing, grubbing and preparation of a project. At a minimum, it shall contain:
			1. Property lines, adjacent roads and drainageways
			2. Existing and proposed easements
			3. Existing topography at 1- or 2-foot contour intervals, extending a minimum of 100 feet beyond the property line or the limits of construction if the project goes beyond property lines
			4. Labeled location of any existing structures or hydrologic features within the mapping boundary
			5. Flow arrows
			6. Labeled floodplain delineation including Control Measures to delineate and protect floodplain (e.g. construction fence, construction markers, wire-backed silt fence)
			7. North arrow and scale
			8. Approval Block (see Appendix G) 4.5” x 2”
			9. Limits of construction encompassing all areas of work access points, storage and staging areas, borrow areas, stockpiles, construction trailer, and utility tie-in location in on-site and off-site locations.
			10. Stream corridors and other resource areas to be preserved and all other areas outside the limits of construction shall be lightly shaded to clearly show area not to be disturbed

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			11. Location of stockpiles, including topsoil, imported aggregates, and excess material
			12. Location of storage and staging areas for equipment, equipment maintenance, fuel, lubricant, chemical (and other materials) and waste storage
			13. Location of borrow or disposal areas
			14. Location of temporary roads, including haul roads
			15. Location, map symbol, and letter callouts of all initial erosion and sediment Control Measures
			16. Location, map symbol, and letter callouts of Vehicle Tracking Control(s) (VTC)
			17. Location, map symbol, and letter callouts of Concrete Washout Area(s) (CWA)
			18. Location, map symbol, and letter callouts of dedicated asphalt and concrete batch plants.
			19. Locations of other areas or operations where spills can occur – Refer to Chapter 10.
			20. Location, map symbol, and letter callouts for any anticipated Dewatering (DW) activities. Note: Dewatering of groundwater is covered by State permits. The Permittee is responsible for obtaining and complying with State-issued permits
			21. Information to be specified for each Control Measure, such as type and dimensions as called for in Chapter 11 of the GESC Manual.
			22. The following notes:
			a. Appropriate Control Measures must be implemented prior to the start of land disturbance activity, must control potential pollutants during each phase of construction, and must be continued through final stabilization. Appropriate structural and non-structural Control Measures must be maintained in operational condition.
			b. See Standard Notes and Details (Sheet 1) for legend of Control Measures names and symbols.
			c. Any Control Measures shown that require grading, (e.g. sediment basins, sediment traps, concrete washout areas, etc.), shall not be placed until after the pre-construction meeting and issuance of the GESC permit, but must be fully functional prior to any large-scale grading. The initial plan illustrates existing conditions. No proposed infrastructure is shown.
			D. INTERIM GESC DRAWING
This plan sheet shows Control Measures to control grading, erosion and sediment during the initial over lot grading, site construction and site re-vegetation process. The Interim GESC Plan shall show all the information included on the Initial GESC Plan, as noted below. At a minimum, it shall contain the following information:			

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			1. Existing topography and location of all existing erosion and sediment Control Measures on site, as shown on the Initial GESC Plan shall be screened/shaded back.
			2. Dimension and quantity information for Initial stage Control Measures shall not be shown.
			3. Items from the Initial GESC Plan (except #20 and #21).
			4. Proposed topography at 1- or 2-foot contour intervals, showing elevations, dimensions, locations, and slope of all proposed grading with flow arrows.
			5. Outlines of cut and fill areas. Summary of cut and fill volumes. If export occurs, note location where export will likely be transported to. Separate cut/fill sheet is permissible.
			6. Location of all interim erosion and sediment Control Measures designed in conjunction with the proposed site topography and implementing the Control Measures installed in the Initial GESC Plan.
			7. Locations of all improvements, drainage features and facilities, and other permanent features to be constructed in connection with, or as a part of, the proposed work, per approved plat or land use plan.
			8. The following notes:
			a. Appropriate Control Measures must be implemented prior to the start of land disturbance activity, must control potential pollutants during each phase of construction, and must be continued through final stabilization. Appropriate structural and non-structural Control Measures must be maintained in operational condition.
			b. See Standard Notes and Details (Sheet 1) for legend of names and symbols.
			c. Screened/shaded back Control Measures were installed in the Initial stage and shall be left in place in the Interim stage unless otherwise noted.
			d. Control Measures, including seeding and mulching of disturbed areas, must be completed within 14 days, if the area will remain undisturbed for a period greater than 30 days.
			e. All proposed slopes on this plan have a maximum slope of 3:1. Any slopes between 3:1 and 4:1 will require the use of erosion control blankets or flexible growth medium, as approved by the GESC Inspector.
			f. See Construction Plans for details of permanent drainage facilities such as detention facilities, water quality facilities, culverts, storm drains, and inlet and outlet protection.
			g. If site runoff enters the post-construction permanent Control Measure(s), sediment contamination of the materials may result in the post-construction permanent Control Measures(s) having to be reconstructed in its entirety. (Where applicable) Removal of sediment basin on site shall only occur after <u>all</u> areas tributary to

Yes	No	N/A	GESC Requirements
			the sediment basin have been stabilized. Removal must be approved by the GESC Inspector.
			E. FINAL GESC DRAWING
This plan sheet shows controls for final completion of the site. The Final GESC Plan shall include all information shown on the Initial and Interim Plans, as noted below. At a minimum, this plan sheet shall contain the following information:			
			1. Existing topography in areas of proposed contours need not be shown.
			2. Existing Initial and Interim Control Measures shall be shown, (screened/shaded back) . Dimension and quantity information shall not be shown for Initial and Interim Control Measures except for Control Measures to remain during final stabilization.
			3. Directional flow arrows on all drainage features.
			4. Items from the Interim GESC Plan (except #5 and #8).
			5. Label all Initial or Interim Control Measures (e.g. SSA, VTC, DW, etc.) that are to be removed and any resulting disturbed areas to be stabilized.
			6. Location of all Final erosion and sediment Control Measures (including seeding and mulching of any areas not stabilized in the Interim Plan), permanent landscaping, and any Control Measures necessary to minimize the movement of sediment off site until permanent vegetation can be established.
			7. Show and label areas of sod and permanent landscaping classifications per approved land use plan.
			8. The following notes:
			a. Appropriate Control Measures must be implemented prior to the start of land disturbance activity, must control potential pollutants during each phase of construction, and must be continued through final stabilization. Appropriate structural and non-structural Control Measures must be maintained in operational condition.
			b. See Standard Notes and Details (Sheet 1) for legend of names and symbols.
			c. Screened/shaded back Control Measures were installed in the Initial or Interim stage and, unless otherwise indicated, shall be left in place until approved by the GESC Inspector.
			d. All Interim Control Measures, including seeding and mulching or disturbed areas, must be completed within 14 days if the areas will remain undisturbed for a period greater than 30 days.
			e. All proposed slopes on this plan have a maximum slope of 3:1. Any slopes between 3:1 and 4:1 will require the use of erosion control blankets or flexible growth medium, as approved by the GESC Inspector
			f. See Construction Plans for details of permanent drainage facilities such as detention facilities, water quality facilities, culverts, storm drains, and inlet and outlet protection.

Yes	No	N/A	GESC Requirements
			g. Acceptance of the post-construction permanent Control Measures will not occur until all tributary areas to the permanent Control Measures are final stabilized.
			F. GESC PLAN - STANDARD NOTES AND DETAILS
A copy of the GESC Plan - Standard Notes and Details (included in Appendix F) shall be bound into each set of GESC Plans.			

Signature of Design Engineer