

Updated 2/11/2011

**Checklist for Joint Agency Review
Stormwater Management / Erosion and Sediment Control**

Project Name: _____
 Tax Map: _____ Parcel: _____ Acreage: _____ Plat: _____ ADC Map & Grid _____
 Engineering Firm: _____ Phone Number: _____
 Contact Person: _____ Email: _____
 Address: _____
 Owners Name: _____ Contract Purchaser's Name: _____

The following list of items are the minimum requirements for submittal, review, and approval of the Concept, Preliminary, and Final Stormwater Management / Erosion and Sediment Control Plans. Plans not meeting these requirements will be deemed incomplete and returned to the engineer. Please complete and submit the checklist with the plan submittal. **ALL PLAN SUBMITTALS MUST BE FOLDED, SIGNED, SEALED** and submitted to each agency **SEPARATELY**. An appropriate plan scale must be selected that is legible and easily interpreted. If the engineer determines that some of the minimum requirements are not applicable to the project, justification must be provided in the narrative. All agencies must issue approval letters prior to submitting plans for signature and approval.

Concept Plan, Preliminary Plan, & Final Plan – Application Requirements

1st Review

- Completed Application & Checklist for each Department
- Applicable Fees Due for each Department
- One (1) copy of folded plans (max size 24x36") for each Department
- One (1) copy of the geotechnical report signed and sealed (if required) (Department of Public Works only)
- One (1) copy of the Stormwater Management Computations (Department of Public Works and Soil conservation District)
- One (1) copy of the soils report (Department of Public Works and Soil Conservation District only)
- A narrative that supports the design and describes how Environmental Site Design (ESD) will be implemented to the Maximum Extent Possible (MEP) (Department of Public Works and Soil Conservation District only)
- One (1) copy of the Erosion and Sediment Control Design Computations (Soil Conservation District only)
- Preliminary and Final Forest Conservation Plan

Subsequent Review(s)

- Completed Application & Checklist for each Department
- Applicable Fees due for each Department
- One (1) copy of redline mark up plans for each Department
 - One (1) copy of revised, folded plans for each (max. size 24x36") (signed and sealed)
- One (1) copy of marked up Stormwater Management Computations (Department of Public Works only)
- One (1) copy of revised Stormwater Management Computations (signed and sealed) (Department of Public only)
- One (1) copy of the soils report (Department of Public Works Soil Conservation District only)
- One (1) copy of the geotechnical report signed and sealed (if required) (Department of Public Works only)
- One (1) copy of the revised Erosion and Sediment Control Design Computations (Soil Conservation District only)
- Preliminary and Final Forest Conservation Plan (Planning and Zoning only)

(Planning and Zoning only)

Concept Plan – Minimum Plan Requirements

Concept SWM/E&S Title Sheet (C-ESD-1)**CONCEPT PLAN INFORMATION**

- | | |
|--|--|
| <input type="checkbox"/> Vicinity Map (Site Location, North Arrow) | <input type="checkbox"/> Owner Information (Name, Address, Phone Number) |
| <input type="checkbox"/> Tax Map, ADC Map and Grid | <input type="checkbox"/> Developer Information (Name, Address, Phone Number) |
| <input type="checkbox"/> Chesapeake Bay Critical Area Designation | <input type="checkbox"/> Engineer Information (Name, Address, Phone Number) |
| <input type="checkbox"/> 100-year Flood Plain Designation | <input type="checkbox"/> Legend |
| <input type="checkbox"/> Site Analysis | <input type="checkbox"/> Sheet Index |
| <input type="checkbox"/> Total Site Area | |
| <input type="checkbox"/> Total Area to be Disturbed | |
| <input type="checkbox"/> Total Area to be Vegetatively Stabilized | |
| <input type="checkbox"/> Total Area to Become Impervious | |
| <input type="checkbox"/> Estimated Cut Volume | |
| <input type="checkbox"/> Estimated Fill Volume | |

CONCEPT PLAN SIGNATURE/CERTIFICATION BLOCKS

- CSCD and Concept signature blocks (each a min. size of 2" x 4")
- Engineer Concept Design Certification
- DPW Approval signature block
- Health Department signature blocks
- Planning and Zoning signature blocks
- Owner/Developer Certification
- Professional Certification w/license # and expiration date

Note: A Title Sheet is not required for Concept Plan review and approval. However, all information specified above must be shown on the first sheet.

Concept Existing Conditions Plan (1:100 scale minimum)

- Label Existing Topographic Contours (2'-5' contours)
- Soil Group Delineated and labeled (2009 USDA soils)
- Soils Table
 - Hydrologic Groups
 - HES Determinations
 - Map Unit
- Show Existing TC Flow Paths
- Slopes from 15% to 25% delineated
- Slopes greater than 25% delineated
- Drainage Areas in acres and properly labeled
- Delineate all drainage areas with all existing points of discharge
- Existing natural features
 - Wetlands
 - Streams
 - Forested Areas Stand Delineation Plan (See Planning and Zoning for checklist)
 - Sensitive Features
 - Soil Boundaries
 - 100-year Flood Plain
 - Critical Area Limits and Designation (Concept Forest Conservation Plan. See Planning and Zoning for checklist)
- Existing Drainage Patterns
- North Arrow

Concept Initial Conditions Plan (If Applicable) 1:100 scale minimum

- Label Existing Topographic Contours (2-5' contours)
- Label Proposed Topographic Contours (2-5' contours)
- Soil Group Delineated and Labeled (2009 USDA Soils)
- Soils Table
 - Hydrologic Group
 - HES Determinations
 - Map Unit
- Proposed TC Flow Paths
- Slopes from 15% to 25% delineated
- Proposed Drainage Areas Delineated, labeled with all proposed points of discharge
- Existing Natural Features
 - Wetlands
 - Streams
 - Forested Areas to be protected (Forest Retention Areas)
 - Sensitive Features
 - Soil Boundaries
 - 100-year Flood Plain
 - Critical Area Limits and Designation
- Proposed Drainage Patterns
- North Arrow
- Show all Sediment Control Structures
- Drainage area to sediment controls delineated in acres and properly labeled

Concept Proposed Conditions Plan (1:100 scale minimum)

- Label Proposed Topographic Contours (2-5' contours)
- Soil Group Delineated and Labeled (2009 USDA Soils)
- Soils Table
 - Hydrologic Group
 - HES Determinations
 - Map Unit
- Proposed TC Flow Paths
- Slopes from 15% to 25% delineated
- Slopes greater than 25% delineated
- Proposed Drainage Areas Delineated, labeled with all proposed points of discharge
- Existing Natural Features
 - Wetlands
 - Streams
 - Forested Areas to be protected (Forest Retention Areas)
 - Sensitive Features
 - Soil boundaries
 - 100-year Flood Plain
 - Critical Area Limits and Delineations
- Proposed Drainage Patterns
- Proposed impervious area (buildings, roads, parking lots, driveways, etc.)
- Location of all Sediment Control Structural Practices
- Location of all proposed ESD practices with necessary protection practices
- Limits of Disturbance
- Existing and Proposed Sewage Areas and wells
- North Arrow

Concept Stormwater Management Computation Requirements

- Conceptual calculations to determine Stormwater Management requirements and the selection of Environmental Site Design practices.
- Conceptual calculations to determine Erosion and Sediment Control requirements and the selection of Environmental Site Design practices.
- Soils Report with limitations.
- Preliminary Geotechnical Report it will be the responsibility of the design engineer to determine the level of detail required within the geotechnical report to provide a feasible conceptual design and should provide details of the future study.

Preliminary Plan – Minimum Plan Requirements

Preliminary SWM/E&S Title Sheet (P-ESD-1)

PRELIMINARY PLAN INFORMATION

- All information required on the Concept SWM/E&S Plan
- Unified Sizing Criteria Chart
- Overall Sequence of Construction

PRELIMINARY PLAN SIGNATURE/CERTIFICATION BLOCKS

- CSCD and Preliminary signature blocks (each a min. size of 2" x 3")
- Engineer Preliminary Design Certification
- DPW Approval signature block
- Health Department signature blocks
- Planning and Zoning signature blocks
- Owner/Developer Certification
- Professional Certification w/license # and expiration date

Preliminary SWM/E&S Plan Sheet(s) (P-ESD-2 to P-ESD-?)

PRELIMINARY EXISTING CONDITIONS DRAINAGE AREA PLAN (1:50 scale min.)

- | | |
|--|--|
| <input type="checkbox"/> Labeled Topographic contours (1-2' contours) | <input type="checkbox"/> Drainage area in acres and properly labeled |
| <input type="checkbox"/> Hydrologic Soil Group Delineation | <input type="checkbox"/> Delineate all drainage areas with all proposed points of discharge |
| <input type="checkbox"/> Label TC paths, providing length, slope and time of concentration | <input type="checkbox"/> Show all sediment control structures |
| | <input type="checkbox"/> Drainage area to sediment controls delineated in areas and properly labeled |

PRELIMINARY INTERMEDIATE CONDITIONS DRAINAGE AREA PLAN (if applicable – 1:50 scale min.)

- | | |
|---|--|
| <input type="checkbox"/> Labeled Topographic Contours (1-2' contours) | <input type="checkbox"/> Drainage area in acres and properly labeled |
| <input type="checkbox"/> Hydrologic Soil Group Delineation | <input type="checkbox"/> Delineate all drainage areas with all proposed points of discharge |
| <input type="checkbox"/> Label TC paths, providing length, slope and time of concentration | <input type="checkbox"/> Show all sediment control structures |
| <input type="checkbox"/> Slopes from 15% to 25% delineated | <input type="checkbox"/> Drainage Area to sediment controls delineated in acres and properly labeled |
| <input type="checkbox"/> Show all environmental site design practices and quantity control structures | |
| <input type="checkbox"/> Slopes greater than 25% | |

PRELIMINARY PROPOSED CONDITIONS DRAINAGE AREA PLAN (1:50 scale min.)

- | | |
|---|--|
| <input type="checkbox"/> Labeled Topographic Contours (1-2' contours) | <input type="checkbox"/> Drainage Area in acres and properly labeled |
| <input type="checkbox"/> Hydrologic Soil Group Delineation | <input type="checkbox"/> Delineate all drainage areas with all proposed points of discharge |
| <input type="checkbox"/> Label TC paths, providing length, slope and time of concentration | <input type="checkbox"/> Show all sediment control structures |
| <input type="checkbox"/> Slopes from 15% to 25% delineated | <input type="checkbox"/> Drainage Area to sediment controls delineated in acres and properly labeled |
| <input type="checkbox"/> Show all environmental site design practices and quantity control structures | |

- Slopes greater than 25%

PROJECT PRELIMINARY PLAN (1:50 scale min.)

- All information shown on the approved Concept SWM/E&S plan
- Sequence of Construction explaining the Utility/Access Construction and the Single Lot Construction/Disturbances w/ time estimates)
 - Utility/Access Development Sequence of Construction*
 - Single Lot Development Sequence of Construction*
- Exact impervious area locations
- Proposed contours at 1-2' intervals
- Detailed location of all Environmental Site Design practices
- Location of all borings
- All required easements
- Locations of existing wells and septic that are 100' from any property line
- Proposed wells, septic reserve areas, tanks, pump tanks, and percolation holes
- North Arrow
- Structural Practices (if proposed)
 - existing and final contours (1-2' intervals)*
 - location of riser structure*
 - downstream property owners, property lines*
 - emergency spillway and outlet channel*
 - easements*
 - access ramp (max. slope 5%)*
 - sediment control elevations (if applicable)*
- Existing contours at 1-2' intervals
- Proposed stormwater conveyance systems
 - ditches*
 - storm drain inlets and pipe*
- Property lines and names of adjacent property owners
- Location of the proposed limit of disturbance
 - forested areas to be protected*
 - infiltration areas to be protected*
- Show proposed location of all water mains, sewer mains and septic structures
 - location of all borings (embankment, structure, center of facility)*
 - outflow pipes, outlet protections, outfall channels*
 - low flow orifices/pipes*
 - embankment stationing*
 - fences and gate locations*
 - infiltration trench dimensions*
 - sediment control structures (if applicable)*
- Exact locations of all sediment controls
- Chesapeake Bay Critical Areas delineated
- Stockpile locations delineated (15' max.)
- Topography to a defined outfall channel
- 100-yr Floodplain delineated
- Q10 and V10 at the outfall of all swales, ditches, and culverts
- Construction Staging Area(s) Delineated
- Existing and proposed tree lines

PRELIMINARY LOT GRADING PLAN (1:50 scale min.)

- Existing and proposed contours (1-2' contours)
- Driveway slope
- Drainage flow arrows
- Septic reserve areas
- House and driveway location
- Finished floor elevation
- Utility locations/well locations

PRELIMINARY ADDITIONAL NOTES AND DETAILS

- Detailed sequence of construction for each nonstructural/structural bmp
- Best Management Practices cross section
 - existing and proposed contours*
 - filter fabric specifications*
 - bypass structure*
 - water surface elevations*
 - soil or stone specifications*
 - monitoring wells*
 - horizontal and vertical dimensions*
- Water Quality Swales
 - cross section*
 - ground cover specifications*
- Ponds and Underground Retention Structures
 - cross sections of dam and proposed grade*
 - Existing and proposed grade*
 - Top of unsettled embankment*
 - Cut off trench*
 - Riser structure elevations and dimensions*
 - Pipe elevation, size material, length and slope*
 - Anti-seep collars or sand diaphragm*
 - Storm elevations*
 - Structural/material specifications*
 - Top of settled embankment*
 - Impervious core trench*
 - Wier and orifice elevation*
 - Top of structure*
 - Trash rack*
 - Phreatic line*

- Trash rack details
 - Emergency spillway profile
 - Q100 & V100*
 - Slope*
 - Location of emergency spillway*
 - Bottom of pond*
 - Stationing*
 - Profile along centerline of dam
 - Sediment basin and trap criteria
 - Inflow Protection*
 - Baffle Locations**
 - Baffle elevations provided*
 - Baffles designed of CDX plywood*
 - Boring logs
 - MD 378 Statement of determination
 - Erosion and Sediment control Notes and Details
 - Vegetative Stabilization Methods and Materials Notes (AJ w/fig 4 & 5)*
 - Permanent and Temporary Seeding Summaries w/2 mixes for each*
 - Standard Sediment control Notes (25 standard notes)*
 - Details and specifications for each sediment control measure utilized*
 - Pipe bedding*
 - Emergency Spillway*
 - riser structures details and dimensions
 - Cross section of emergency spillway*
 - Top of dam (settled and unsettled)*
 - Existing and proposed grade*
 - Core trench*
 - Barrel/weir location*
 - Outflow Protection*
 - Flowlines through the basin**
 - All information contained on sheet C-10-8**
 - 3/4" stone covering the dewatering device**
- *Information for sediment basin only**
- MD 378 construction specifications/construction
 - Stormwater management data table/basin summary chart

PRELIMINARY STORMWATER MANAGEMENT/E&S COMPUTATIONS

- Table of Contents
- A narrative that supports the site development design, describes how environmental site design will be used to meet the minimum control requirements to the maximum extent practicable and justifies any proposed structural stormwater management measures. The narrative must incorporate a list of all comments, pertaining to ESD, received from all of the reviewing agencies/departments and how each comment was addressed.
- Stormwater management volume computations to confirm the selection of the environmental site design and structural practices
- Geotechnical investigation including soils map, borings, site specific recommendations, and any additional information necessary to justify the proposed design
- Ground water recharge, water quality and channel protection volume calculations
- Basin Computation/Underground Facilities
 - Orifice and weir computations*
 - Elevation, discharge, and storage table*
 - Outlet protection computations*
 - Height of embankment computations*
 - Dam safety routing*
 - MD-14 summary sheet for ponds and basins*
 - Stage/storage curve and table*
 - Routing for 1, 2, 10 and 100 year storms*
 - Stability and seepage computations for weir structure*
 - Anti-seep collar/sand diaphragm computations*
 - Notice of construction completion form*
 - Unified sizing criteria chart*
- Sediment Trap Computations

Minimum Plan Requirements (Final Plan)

Final SWM/E&S Title Sheet (F-ESD-1)

FINAL PLAN INFORMATION

- All information required by the Preliminary SWM/E&S Plan

FINAL PLAN SIGNATURE/CERTIFICATION BLOCKS

- CSCD and Final signature blocks (each a min. size of 2" x 3")
- Engineer Final Design Certification
- DPW Approval signature block
- Health Department signature blocks

- Planning and Zoning signature blocks
 - Owner/Developer Certification
 - Professional Certification w/license # and expiration date
 - AsBuilt Certification
 - Geotechnical Certification
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Final SWM/E&S Plan Sheet(s) (F-ESD-2 to F-ESD-?)

FINAL EXISTING CONDITIONS DRAINAGE AREA PLAN (1:50 scale maximum)

- All information shown on the Preliminary Existing Conditions Drainage Area Plan

FINAL INTERMEDIATE CODITIONS DRAINAGE AREA PLAN (if applicable – 1:50 scale maximum)

- All information shown on the Preliminary Intermediate Conditions Drainage Area Plan

FINAL PROPOSED CONSITIONS DRAINAGE AREA PLAN (1:50 scale maximum)

- All information shown on the Preliminary Proposed Conditions Drainage Area Plan
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PROJECT FINAL PLAN (1:50 scale maximum)

- All information shown on the approved Preliminary SWM/E&S plan

FINAL LOT GRADING PLAN (1:50 scale maximum)

- All information shown on the Preliminary Lot Grading Plan

FINAL LANDSCAPE PLAN (1:50 scale maximum)

- Existing and proposed contours (1' – 2' contours)
- Planting plan/layout
- Label all appropriate water surface elevations
- Planting schedule
- Maintenance plan
- Planting details
- Tree staking detail

FINAL ADDITIONAL NOTES AND DETAILS

- All information shown on the Preliminary Additional Notes and Details

FINAL STORMWATER MANAGEMENT/E&S COMPUTATIONS

- All information from the Preliminary Stormwater Management/E&S Computations