



STORMWATER MANAGEMENT CONCEPT REVIEW CHECKLIST

August 2020

CITY OF ROCKVILLE

DEPARTMENT OF PUBLIC WORKS (DPW)

111 Maryland Avenue

Rockville, Maryland 20850

240-314-8500

www.rockvillemd.gov

Type of Concept (Check one): Pre-Application Development Combined

Project Information:

Project Name: _____

Legal Description: Subdivision: _____ Lot(s) and Block(s): _____ Parcel(s): _____

Property Address: _____

Tax Acct. ID(s): _____

Engineering Firm: _____

Contact Person: _____

Phone Number: _____

Email Address: _____

Type of Plan submitted to PDS (Check one): PAM for PJT PAM for SPX PAM for STP

PDS Case No: _____ PJT SPX STP

DPW SMC Permit No. _____ (assigned by DPW)

DPW PWK Permit No. _____ (assigned by DPW)

DPW SMP Permit No. _____ (assigned by DPW)

DPW SCP Permit No. _____ (assigned by DPW)

How to Use this Checklist:

This checklist has been developed to provide the engineer with guidance in preparing and submitting Stormwater Management Concept Plans. All items in this checklist must be addressed. The engineer must complete each item in the checklist prior to submittal and indicate the status by completing the left hand column entitled "Initial Submission." Use the legend below to complete this column. Any items that are marked INC (incomplete) must be explained. The engineer must sign this checklist indicating that it has been completed in accordance with this guidance and the Submission Acceptance Policy below. Some checklist items included an *. In these cases, the Engineer is only required to provide a level of detail commensurate with the level of detail required for the related CPDS stage. For instance a SWM Concept submitted with a PAM Plan for a Site Plan may have less detail than a SWM Concept submitted with a Site Plan.

Legend: = Complete or Provided, N/A = Not Applicable, INC = Incomplete (provide explanation)

Submission Acceptance Policy:

Correctly filling out this checklist will assist in the acceptance, review and approval process. All of the items in SECTION A - APPLICATION SECTION must be provided with the initial submission for the City to accept the package and forward it to the Reviewer. Incomplete submissions may be rejected. Once forwarded to the Reviewer, the Reviewer will have one week to review the package for the items listed in SECTION B - SUBMISSION REQUIREMENTS. Failure to include the required items or to explain items not included may result in the rejection of the submission without review.

Name of Firm

Date

Signature of Responsible Person

Responsible Person's Name

Title

STORMWATER MANAGEMENT CONCEPT REVIEW CHECKLIST - PAGE 2

Initial Submission	Rockville's Review			
	1st	2nd	3rd	
A) APPLICATION SECTION (Submissions shall be made using the City's Virtual Permit Application portal available at www.rockvillemd.gov)				
1 _____	Completed and signed Stormwater Management Concept (SMC) Application	_____	_____	_____
2 _____	Stormwater Management Concept Review Fee (Check made out to City of Rockville). Refer to Public Works Development Fee Schedule - available at: www.rockvillemd.gov/286/Streets-Driveway-Right-of-Way	_____	_____	_____
3 _____	One digital (PDF) copy of the proposed plans. Plans must be on 24" x 36" sheets and must utilize the standard City base sheet. Vector-Based PDF files are required for all plans, calculations, reports and other supporting documentation. It is recommended that drawings created in AutoCAD are converted to Vector-Based PDF by using the Autodesk Vector Graphic Converter "DWG to PDF.pc3 plotter driver."	_____	_____	_____
B) SUBMISSION REQUIREMENTS				
1 _____	Transmittal explaining purpose of the submission including explanation of any unusual circumstances	_____	_____	_____
2 _____	One digital (PDF) copy of the approved NRI/FSD. (An unapproved copy can be submitted however a copy of the approved NRI/FSD must be provided prior to the approval of the SWM Concept)	_____	_____	_____
3 _____	One digital (PDF) copy of the Plan submitted to PDS associated with this Concept (PAM, PJT, STP, etc.)	_____	_____	_____
4 _____	One digital (PDF) copy of the SWM Concept Plan (see Section C below)	_____	_____	_____
5 _____	One digital (PDF) copy of the Forestry - SWM Overlay Plan (see Section D below)	_____	_____	_____
6 _____	One digital (PDF) copy of the Preliminary Erosion and Sediment Control Plan (see Section E below) - Only required for Development SWM Concept application	_____	_____	_____
7 _____	One digital (PDF) copy of the On-Site Drainage Area Map (see Section F below)	_____	_____	_____
8 _____	One digital (PDF) copy of the Off-Site Drainage Area/Safe Conveyance Map (See Section G below)	_____	_____	_____
9 _____	Adjacent and Downstream Notification List (See Section G below)	_____	_____	_____
10 _____	One digital (PDF) copy of the SWM Concept Report (see Section H below)	_____	_____	_____
11 _____	One digital (PDF) copy of the Geotechnical Report (see Section I below)	_____	_____	_____
12 _____	State of MD Professional Engineer certification on the first sheet of the plan set	_____	_____	_____
13 _____	AutoCAD file of all public improvements, suitable for use in ESRI ArcMap. Required upon City's request prior to as-built approval	_____	_____	_____
C) SWM CONCEPT PLAN				
1 _____	Scale 1" = 30' or larger with Legend, North arrow and Datum (NAD 83/91, NGVD 88) unless otherwise approved. Provide two benchmarks with location, elevation and description. Provide two graticular tick marks per plan view sheet for georeferencing	_____	_____	_____
2 _____	Vicinity Map (1" = 2000') with site outlined/labeled in upper right hand corner	_____	_____	_____
3 _____	Name, address, telephone number and email of firm or individual that prepared the plan	_____	_____	_____
4 _____	Name, address, telephone number and email of Owner/Applicant on first sheet	_____	_____	_____
5 _____	Title block containing project name, plan description, property's legal description (subdivision, lots, parcels and blocks), election district, etc.	_____	_____	_____
6 _____	Number sheets consecutively and provide match lines if needed. If plan set contains more than two plan view sheets provide a composite sheet with drainage divides and stormwater facilities shown	_____	_____	_____
7 _____	All existing and proposed easements shown and labeled with limits, use and Liber/Folio or plat and plat book. Include P.U.E.s	_____	_____	_____

STORMWATER MANAGEMENT CONCEPT REVIEW CHECKLIST - PAGE 3

Initial Submission	Rockville's Review		
	1st	2nd	3rd
C) SWM CONCEPT PLAN (continued)			
8 _____	_____	_____	_____
Field verified existing topography and features and improvements including roads (label public or private), buildings, parking, sidewalks, outbuildings, sheds, utilities, SWM measures, etc.* The information is to be in the datum as noted in 2) above unless otherwise approved.			
9 _____	_____	_____	_____
Location of all existing underground and overhead utilities*			
10 _____	_____	_____	_____
Location of the following environmental features as depicted on the NRI/FSD: Significant trees, street trees, ephemeral, perennial and intermittent streams, with associated stream valley buffers, 100-YR floodplain with 25 foot building restriction line, wetlands buffers, park buffers, soils, hydric soils, seeps, springs and steep slopes			
11 _____	_____	_____	_____
Proposed improvements including roads, buildings, parking, sidewalks, etc.*			
12 _____	_____	_____	_____
Proposed utilities including water, sewer, storm drain and appurtenances*			
13 _____	_____	_____	_____
Proposed grading and spot elevations to support drainage areas to each SWM measure and conveyance of runoff within and away from the site*			
14 _____	_____	_____	_____
Type, location, identifying label (i.e. SWM -1) and size (if applicable) of each SWM measure proposed to be part of the Stormwater Management System*			
15 _____	_____	_____	_____
Drainage areas to each SWM measure delineated and drainage areas labeled in acres. The information for the labeled areas must match the SWM System Summary Table and the information provided in the SWM Concept Report			
16 _____	_____	_____	_____
Proposed limits of disturbance*			
17 _____	_____	_____	_____
Location and dimensions of all proposed easements (including P.U.E.'s)*			
18 _____	_____	_____	_____
Location and dimensions of proposed SWM easements where required by Chapter 19*			
19 _____	_____	_____	_____
Proposed maintenance and inspection access routes to SWM measures from public rights-of-way*			
20 _____	_____	_____	_____
Sufficient information to support the vertical aspects of the SWM System. This may include existing and proposed inverts at critical locations and/or schematic profiles based on field verified information utilizing the datum			
21 _____	_____	_____	_____
SWM System Summary Table - The table should be organized by drainage area, study point, and/or SWM measure, as applicable. At a minimum the drainage area (ac), the impervious area (ac), the type of measure, the target, required and provided ESDv, PE, WQv, Rev, Cpv, and Qp10 as applicable shall be included in the table. A comments column can be added if it assists in explaining what is being proposed. SWM System Summary Table shall be located on cover sheet			
22 _____	_____	_____	_____
Seal, signature, license number of qualified preparer on all sheets			
23 _____	_____	_____	_____
Add note to all sheets: This Plan Is For Stormwater Management Only			
D) FORESTRY - SWM OVERLAY (This plan will assist City staff in assessing the level of Environmental Site Design (ESD) proposed including the application of planning techniques, applicable SWM measures and preservation of environmental features)			
1 _____	_____	_____	_____
The Forestry - SWM Overlay Plan must also be submitted to the City Forester at the time of submission of any SWM Concept to DPW or of any Forest Conservation Plan to Forestry, whichever occurs first			
2 _____	_____	_____	_____
Items as listed in Section C, item 10 above			
3 _____	_____	_____	_____
The SWM System Summary Table as detailed in Section C, item 21 above. However, the Forestry - SWM Overlay Plan DOES NOT need to include the Tree Summary Table, non-native and invasive information, and SWM measure access for maintenance. The Summary Table shall be placed on the plan			
4 _____	_____	_____	_____
Preliminary delineation of existing forest, forest to be cleared, forest to be saved, and reforestation areas*			
5 _____	_____	_____	_____
Preliminary Forest Conservation Worksheet (This can be a separate piece of paper and does not need to be on the plan)			

STORMWATER MANAGEMENT CONCEPT REVIEW CHECKLIST - PAGE 4

Initial Submission	Rockville's Review		
	1st	2nd	3rd
E) PRELIMINARY EROSION AND SEDIMENT CONTROL PLAN (This plan is only required to be provided with Development SWM Concept submissions. This plan can be conceptual and will not be the plan that will be reviewed and approved by DPW for permitting or construction)			
1 _____	Preliminary Erosion and Sediment Control Plan containing:		
	Existing environmental features as shown on the NRI/FSD	_____	_____
	Proposed project improvements (including buildings, roads, parking, sidewalks,	_____	_____
	Existing and proposed SWM measures	_____	_____
	Existing topography and proposed grading at minimum 2' contour interval with	_____	_____
	spot elevations to support proposed drainage patterns	_____	_____
	Preliminary sequence of construction. Include phasing if applicable	_____	_____
	Proposed stabilization techniques*	_____	_____
F) ONSITE DRAINAGE AREA MAP			
1 _____	Soil delineation from USDA soil surveys, include identification of unsuitable soils as applicable	_____	_____
2 _____	Location of borings and/or infiltrations tests (for ESD practices, infiltration, bioretention, etc.) Information, including the boring number or designation (i.e. boring I-1) must match the Geotechnical Report (Section I below)	_____	_____
3 _____	Pre- and post-development time of concentration flow paths with lengths and type of flow labeled and matching information in the SWM Concept Report*	_____	_____
4 _____	Pre- and post-development drainage area boundaries to each measure. Include off-site areas draining into the property if applicable. SWM for off-site areas must be provided when required by Ordinance or State Law	_____	_____
G) OFF-SITE DRAINAGE AREA / SAFE CONVEYANCE MAP AND NOTIFICATION REQUIREMENTS			
1 _____	Scale of map and topography shall be of sufficient level of detail to support the Engineer's analysis. Minimum scale shall be 1" = 200'. Minimum existing topography shall be 5 foot contours	_____	_____
2 _____	Upstream Areas and Conveyance - The map must illustrate upstream areas draining into the site including areas (ac), and drainage divides and must include information regarding the upstream conveyance system(s) i.e. overland flow, schematic pipe locations and sizes, existing channels and other drainage ways. This information must be of sufficient detail to illustrate the off-site areas that drain to the site and how the conveyance occurs	_____	_____
3 _____	Downstream Conveyance - The map must illustrate how runoff will leave the site, including information regarding the downstream conveyance system(s), such as schematic pipe location and sizes, existing channels and other drainage ways. The limits of the downstream conveyance must be shown to the nearest stream or pond outfall or to a distance of 500 feet of conveyance whichever occurs first	_____	_____
4 _____	Downstream Safe Conveyance Study - This study will only be required at Development SWM Concept stage unless otherwise directed by DPW. The limits of the study will be established by DPW at the Pre-Application SWM Concept stage. An analysis of potential downstream impacts/effects of the project on the receiving drainage system or watercourse	_____	_____
5 _____	Provide the list of adjacent and downstream owners to be notified in accordance with Chapter 19 and DPW SWM regulations. DPW may require evidence of the notification after submission of a SWM Concept	_____	_____

STORMWATER MANAGEMENT CONCEPT REVIEW CHECKLIST - PAGE 5

Initial Submission	Rockville's Review			
	1st	2nd	3rd	
H) SWM CONCEPT REPORT				
1 _____	An 8 1/2" x 11" or 11" x 17" version of the final SWM Concept Plan will be required prior to approval. This will be attached to the SWM Concept approval letter when issued	_____	_____	_____
2 _____	One copy of each previously issued SWM Concept Approval Letter	_____	_____	_____
3 _____	A narrative to include the following sections:	_____	_____	_____
4 _____	An <u>Overview Section</u> which includes important information about the project including the size of the property (ac), existing features found on the site, zoning, proposed development, impervious area proposed to be created (ac), a statement about whether the site qualifies as a "redevelopment" according to Chapter 19 with sufficient information to support the findings, the soil found on the site, the watershed the site is located in and the location of any upstream or down stream ponds that may pose a dam breach hazard	_____	_____	_____
5 _____	A <u>Proposed SWM Section</u> explaining how stormwater measures, consistent with the City's SWM requirements and the MDE Manual, will be provided for the project.* This section must include the following information:	_____	_____	_____
6 _____	A narrative that supports the Concept and the use of SWM as prioritized in Section 19-51 of Chapter 19 and explains:	_____	_____	_____
7 _____	. How the Concept incorporates the protection and enhancement of natural resources	_____	_____	_____
8 _____	. How efforts that have been made to maintain the existing drainage patterns and drainage areas	_____	_____	_____
9 _____	. The ESD techniques, for instance better site planning, minimization of impervious surfaces, slowing down of runoff, and the use of nonstructural and approved innovative technologies that have been contemplated and why they have been selected. An explanation of which measures were contemplated and rejected and why should also be provided (can be a narrative, table, etc.). This information will assist in DPW's determination of whether the concept incorporates ESDs to the Maximum Extent Practicable (MEP)	_____	_____	_____
10 _____	. How infiltration areas have been protected from compaction and sediment	_____	_____	_____
11 _____	. Integration of erosion and sediment controls into the stormwater system/strategy	_____	_____	_____
12 _____	<u>Computation Section</u> - All computations as required to support the use of ESDs to the MEP, structural measures and/or alternatives (such as a monetary contribution in lieu of on-site managed) must be included in the report.* Supporting computations shall utilize TR-55 and the MDE Manual, including Chapter 5, as applicable and as may be supplemented by future documents	_____	_____	_____
13 _____	The SWM System Summary Tables as described in Section C above	_____	_____	_____
14 _____	If requesting use of SWM alternatives, the report shall include descriptions of the proposed alternatives and written justification for the alternative that addresses the requirement of the Stormwater Management Regulations. Describe and document all site constraints that restrict providing full SWM controls	_____	_____	_____
15 _____	If proposing a SWM monetary contribution, a plan indicating sub-drainage area affected and a table listing the impervious acreage for each area and what type of alternative is proposed (i.e., contribution for components of WQv, Cpv and/or Qp10)* Monetary Contribution requests for right-of-way areas must be broken out and reported separately from request for on-site areas	_____	_____	_____
16 _____	Preliminary sizing calculations for stormwater treatment practices including contributing drainage area, storage, and outlet configuration*	_____	_____	_____
17 _____	Seal, signature, and license number of a Maryland Professional Engineer on the cover of the report	_____	_____	_____

Initial Submission		Rockville's Review		
		1st	2nd	3rd

I) GEOTECHNICAL REPORT

- | | | | | |
|---------|--|-------|-------|-------|
| 1 _____ | Geotechnical report for the site signed, sealed and certified by the preparing engineering who must be registered in the state of Maryland. The testing must be performed at all locations where infiltration is feasible and shall generally be performed in a grid pattern with a minimum of five infiltration tests per acre according to MDE procedures. Any borings within the Critical Root Zone (CRZ) as defined by the Environmental Guidelines or the City Forester shall be completed with a hand auger only so as not to disturb the tree and root system. Infiltration tests must also be performed at the actual location of any proposed facilities if the grid layout does not already have a test within 20 feet of the proposed facility however, these tests (at the proposed facility locations) are only required with Development SWM Concepts. Infiltration testing is not required to be performed in areas where development is prohibited, such as stream valley buffers, wetlands, forest to be protected, etc. Infiltration testing is also not required in soil type D if the Geotechnical Engineer verifies the soil type through on-site investigation | _____ | _____ | _____ |
| 2 _____ | At a minimum the report must include a map with the boring locations and designations that match the SWM Concept Plan, the boring logs, infiltration rates and the seasonal high water level determinations. The report must also address the feasibility of infiltration measures and make recommendations as appropriate | _____ | _____ | _____ |

COMMENTS:
