PERMEABLE PAVEMENT SCM DESIGN CHECKLIST

Stormwater Management Division
c/o Development Services Department
One Exchange Plaza, 4th Floor
Raleigh, NC 27601
Telephone (919) 996-3773

I. PROJECT INFORMATION

Project Name: _____ Phase: _____
Project Address: _____ Disturbed Area (sf): _____
PIN: _____ Case #: _____ Submittal Date: _____
Previous Permit numbers (if applicable): _____
Zoning District: _____
Legal Name of Owner: _____
Owner Contact: _____ Phone: _____
Owner Address: _____
Design Contact Person: _____ Phone: _____
Design Contact Email: _____
The regulatory drainage basin in which the site is located: _____
The water supply watershed in which the site is located: _____

Function of Facility [check all that apply]:		
☐	Nutrient (Total Nitrogen) Reduction	
☐	Green Stormwater Infrastructure	
☐	TSS Reduction	
☐	Peak Flow Rate Attenuation	
	☐	1-Year event
	☐	10-Year event
	☐	100-Year event
	☐	Other [_____]
☐	Other [_____]	

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II. SUBMITTAL REQUIREMENTS - See COR Stormwater Management Design Manual Chapter 5 for additional guidance. This completed checklist shall be submitted to the City of Raleigh with any proposed Permeable Pavement. All files shall also be submitted electronically via CD or flash drive.

Routed flows and water surface elevations (WSE) at SCM (as applicable):			
Storm Event	Inflow	Outflow	WSE
1-Year			
10-Year			
100-Year			
____-Year			
Peak flow rates at immediate point of analysis to which the SCM drains:			
Condition	1-year	10-year	_____-year
Pre-development			
Post-development			

	General Design Criteria
☐	**Sizing:** The design volume of the SCM accounts for the runoff at full build-out from all surfaces draining to it (calculations provided in Stormwater Development Analysis).
	☐ Design Storm Volume: cf
☐	**Clean Out After Construction:** SCM impacted by sedimentation and erosion control during the construction phase shall be cleaned out and converted to its approved design state.
☐	**Maintenance Access:** SCM has been provided with adequate access per City standards.
☐	**Easements (except for SCMs located on single family residential lots):** Includes maintenance access, entire SCM footprint, and an additional 10 ft or more around the SCM.
☐	**Single Family Residential Lots:** Plats for residential lots that contain an SCM shall include the location of SCM, typical detail of SCM, and note that the SCM on the property is required to meet stormwater regulations and that the property owner may be subject to enforcement actions if the SCM is removed, relocated, or altered without prior approval.
☐	**Operation and Maintenance (O&M) Agreement.**
☐	**Operation and Maintenance (O&M) Plan.**
	☐ *Operation and Maintenance (O&M) Manual Submittal Checklist.*

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☐	**Erosion Protection:** The SCM inlets and outlet have been designed to protect areas downstream of the discharge points from erosion resulting from peak flows for the 10-year storm event.

Specific Permeable Pavement Criteria		
☐	**Soil Investigation:** Site-specific soil investigation has been performed to establish hydraulic properties and characteristics within the proposed footprint and elevation of the permeable pavement system.	
	☐	Permeable pavement has not been installed in areas where toxic pollutants are stored or handled.
	☐	The soil subgrade surface has a slope of less than or equal to 2%.
	☐	The soil subgrade surface will be graded when there is no precipitation and soils are dry.
	☐	An in-situ infiltration permeability test will be conducted and certified on the pavement after site stabilization.
☐	**Seasonal High Water Table Requirements:** The minimum separation between the lowest point of the subgrade surface and the Seasonal High Water Table (SHWT) is 2 feet for infiltrating systems (unless exempt per hydrogeologic evaluation) and 1 foot for detention pavement systems.	
	☐	SHWT Separation: ft
☐	**Stone Base:** Washed aggregate base materials have been specified.	
☐	**Pavement Surface:** The proposed pavement surface has a demonstrated infiltration rate of at least 50 inches per hour (using a head less than or equal to 4 inches).	
	☐	Proposed Pavement surface:
	☐	A North Carolina licensed design professional with appropriate expertise in pavement design has been involved to ensure the pavement meets its hydrologic and structural goals.
☐	**Adjacent Runoff:** Runoff to the permeable pavement has been determined to meet all applicable criteria and considerations.	
	☐	The ratio of additional built-upon area draining to permeable pavement is no more than 1:1. *Note: Screened rooftop runoff is not subject to the 1:1 loading limitation.*
	☐	Runoff from adjacent pervious areas have been prevented from reaching the permeable pavement areas (except for incidental runoff from stable areas).
	☐	Permeable pavement will be protected from sediment deposition until site is complete and stabilized.
☐	**Drawdown Time:** The design volume draws down to the bottom of the subgrade surface within 24 hours.	
	☐	Drawdown Time: hr

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☐	**Observation Wells:** The permeable pavement system has been equipped with at least 1 capped observation well, at the low point in the system. If the system is terraced, there is at least 1 observation well per terrace.
☐	**Geotextiles:** Permeable geotextiles have been used to line the sides of the aggregate base to prevent migration of adjacent soils and a reduction in permeability/storage capacity.
☐	**Edge Restraints (as applicable):** Edge restraints have been provided around the perimeter of permeable interlocking concrete pacers and grid pavers.
☐	**Geogrids (as applicable):** Geogrids have been used at the top of the soil subgrade for additional structural support (especially in weak, saturated soils).
☐	**Geomembranes (as applicable):** Geomembranes have been used to provide a barrier on the sides and bottom of the aggregate base to prevent infiltration into the subgrade *for detention system designs.*

The SCM Plan Submittal shall also include the following elements:	
☐	A plan view of the SCM, with grading and appropriate critical spot shots, has been provided.
☐	A profile (showing all relevant component elevations and WSEs) through the riser, dam, and outlet structure/outfall has been provided.
☐	Details of other required SCM elements have been provided.
☐	All supporting design calculations (including all applicable site design calculations and drainage area exhibits) have been provided.

III. PROFESSIONAL CERTIFICATION

Name: _____

Contact Email: _____

Contact Phone Number: _____

Professional Seal: