	3.5 Permeable Pavement System	Sheet #	Yes/No	Comments
General				
1	Does the plan identify the type of permeable pavement is used? ☐ Porous asphalt ☐ Pervious concrete ☐ Permeable pavers ☐ Other DOEE-approved surface material such as porous rubber, plastic grid pavers, and synthetic turf systems [3.5 Permeable Pavement, page 82]			
2	Does the plan identify the practice as a standard or enhanced design configuration? ☐ Standard Designs- practice with a standard underdrain design and no infiltration sump or water quality filter layer. ☐ Enhanced Designs- practice with underdrains that contain a water quality filter layer and an infiltration sump beneath the underdrain sized to drain the design storm in 48 hours or practices with no underdrains that can infiltrate the design storm volume in 48 hours. [3.5 Permeable Pavement, page 82]			
Feasibility				
3	Is the contributing drainage area, not including the permeable pavement, less than five times the surface area of the permeable pavement? [3.5.1 Permeable Pavement Feasibility Criteria- CDA, page 84]			
4	Is the permeable pavement slope less than 5%? [3.5.1 Permeable Pavement Feasibility Criteria- Pavement Surface Slope, page 84]			
5	Is the groundwater table and/or bedrock layer at least 2 feet from the bottom of the practice? A geotechnical report demonstrating this information must be provided. [3.5.1 Permeable Pavement Feasibility Criteria- Min. Depth to Water Table, page 84]			
6	Is there a minimum setback of 10 feet from a structure and waterproofing protection for foundation and basement? If setback not achieved, is an impermeable liner used along the sides of the practice? [3.5.1 Permeable Pavement Feasibility Criteria- Setbacks, page 84]			
7	Is an impermeable waterproof membrane installed at the interface between the permeable pavement and traditional pavement?			

	[3.5.1 Permeable Pavement Feasibility Criteria- Setbacks, page 84]			
8	Does the drainage area contain high loading, such as turf or landscaping? If so, does the site contain pretreatment measures? What pretreatment mechanism is being used? [3.5.1 Permeable Pavement Feasibility Criteria- High Loading Situations, page 85]			
Soils (for Enhanced Designs only)				
9	Has the designer verified the soil permeability by completing the geotechnical requirements outlined in Appendix P? [3.5.1 Permeable Pavement Feasibility Criteria- Soils, page 83]			
Utilities				
10	Have all comments from DC Water and DDOT (for the PROW) regarding the proposed practice been resolved? Stormwater BMPs must comply with the DDOT Design and Engineering Manual if practices are in the PROW as well as the DC Water Green Infrastructure Utility Protection Guidelines. [3.5.1 Permeable Pavement Feasibility Criteria- Proximity to Utilities, page 84]			
Design				
11	Are all orifice sizes at least 1-inch in diameter? [3.5.4 Permeable Pavement Design Criteria- Rapid Drawdown, page 87]			
12	Is the reservoir sized for the design storm event? Confirm with the design engineer the practice is designed for the maximum expected traffic loading. [3.5.4 Permeable Pavement Design Criteria- Reservoir Layer, page 87]			
13	Are there multiple underdrains for permeable pavement systems wider than 40 feet? Is each of these underdrains located 20 feet or less from the next pipe or edge of pavement? [3.5.4 Permeable Pavement Design Criteria- Underdrains, page 88]			
14	Is the underdrain encased in a layer of No. 57 or No. 2 stone with a minimum 2-inch cover over the top and maximum 2-inch depth underneath on the bottom? [3.5.4 Permeable Pavement Design Criteria- Underdrains, page 88]			
15	Does the permeable pavement system include 4- to 6-inch diameter PVC observation wells (or cleanout) with no perforation within 1 foot of the surface? If it has an underdrain, is the observation well (or cleanout) tied to it? [3.5.4 Permeable Pavement Design Criteria- Observation Wells, page 88]			
16	Are the underdrain, cleanout, observation, and overflow clearly marked on the plans? [3.5.2 Permeable Pavement Conveyance Criteria and 3.5.4 Permeable Pavement Design Criteria, pages 85 and 88]			

17	If the system contains an infiltration sump (required for Enhanced Design with an underdrain), does it meet the following requirements? ☐ Sized so the design storm can infiltrate into sub-soils in 48 hours ☐ Installed below the underdrain or upturned elbow invert ☐ The bottom of the sump is at least 2 feet above the seasonal high groundwater table [3.5.4 Permeable Pavement Design Criteria- Infiltration Sump, page 88]			
18	If included on the sides of the permeable pavement system, does the geotextile fabric, meet the following requirements? ☐ Comply with AASHTO M-288 Class 2 ☐ Permeability at least 10 times higher than the soil subgrade permeability ☐ Not placed horizontally between any layers of the practice, as this often becomes an interface for clogging [3.5.4 Permeable Pavement Design Criteria- Geotextile, page 89]			
19	If the system utilizes an impermeable liner, does it meet the following requirements? ☐ Use a PVC geomembrane liner or equivalent of an appropriate thickness ☐ Field seams sealed with a minimum 6-inch overlap of material at all seams [3.5.4 Permeable Pavement Design Criteria- Impermeable Liner, page 89]			
20	Do the bedding and reservoir layer materials meet the specifications outlined in Table 3-12 for washed clean stone free of fines (no more than 2% passing the No.200 sieve)? [3.5.4 Permeable Pavement Design Criteria- Material Specifications, page 90]			
21	Does the design meet the minimum depth requirement per Equation 3.2 Reservoir Layer Minimum Depth? [3.5.4 Permeable Pavement Design Criteria- Hydraulic Design, page 91]			
22	Will the permeable pavement drain in 36 to 48 hours? ☐ For infiltration design without underdrains or with infiltration sumps, is Equation 3.3 Drawdown Time used to determine if the system will drain between 36-48 hours? ☐ For infiltration design with underdrains, does the plan contain hydrologic routing or modeling calculations to show how the system will drain? The volume below the underdrain should drain within 48 hours. ☐ For designs with underdrains, if the permeable pavement drains in less than 36			

	hours, does the system include an orifice flow control in the underdrain to ensure the reservoir layer drains slowly? [3.5.4 Permeable Pavement Design Criteria- Hydraulic Design, page 92]			
23	Is the total storage volume of the practice determined using Equation 3.4 Permeable Pavement Storage volume? If it is a standard design, Ksat not necessary. [3.5.4 Permeable Pavement Design Criteria- Hydraulic Design, page 93]			
24	If pervious area is included in the CDA to the practice (or if the spread of trees overlaps above the practice), are these areas designed to minimize the risk of sediment, mulch, grass clippings, leaves, and other plant matter clogging the permeable pavement? [3.5.5 Permeable Pavement Landscaping Criteria, page 94]			
25	If permeable interlocking concrete pavers are used, are edge restraints shown on the plan? Do the edge restraints meet the following requirements? ☐ Minimum 6 inches wide and 18 inches deep ☐ Composed of Class A3 concrete [3.5.6 Permeable Pavement Construction Sequence Criteria- Permeable Interlocking Concrete Pavers Installation, page 98]			
26	If permeable interlocking concrete pavers are used, are the paver joint openings shown filled with ASTM D448 No. 8 stone (or No. 8P or No. 9 stone to fill narrower joints)? [3.5.6 Permeable Pavement Construction Sequence Criteria- Permeable Interlocking Concrete Pavers, page 98]			
Construction				
27	Are permeable pavement areas clearly marked on the grading and construction plans and fully protected from sediment intrusion by silt fence or construction fencing? [3.5.6 Permeable Pavement Construction Sequence- Soil Erosion and Sediment Controls, page 94]			
28	Are all permeable pavement areas intended for infiltration located outside of the Limits of Disturbance during construction to prevent soil compaction? If not, does the design meet one of the following criteria? ☐ The in-situ soils are not disturbed any deeper than 2 feet above final design excavation of the bottom of the aggregate reservoir course. The impacted area is excavated and tilled to a depth of 12-inches below the bottom of the reservoir layer. ☐ The excavation cannot be restricted above 2 feet. Infiltration tests are performed prior to the installation of the permeable pavement to ensure the infiltration rate			

	is still present. If there is a loss in infiltration rate, deep tilling practices will be utilized to restore the rate. [3.5.6 Permeable Pavement Construction Sequence Criteria- Soil Erosion and Sediment Controls, page 94]			
29	Is any site intended to be used as a permeable pavement area also shown as a temporary sediment trap or basin? If so, does the site meet one of the following? ☐ The in-situ soils are not disturbed any deeper than 1 foot above final design excavation of the bottom of the aggregate reservoir course. Then remediation can be achieved with proper removal of trapped sediments and deep tilling practices. ☐ The excavation cannot be restricted above 1 foot. The sediment trap or basin is lined with an impermeable liner to protect in-situ soils. [3.5.6 Permeable Pavement Construction Sequence Criteria- Soil Erosion and Sediment Controls, page 94]			
30	If the permeable pavement area is also shown as a temporary sediment trap or basin, does the plan include the following construction notes? ☐ All sediment deposits in the excavated area must be carefully removed prior to installing the permeable pavement sub-base, base, and surface materials ☐ Procedures for converting the temporary sediment control practice to permeable pavement, including dewatering, cleanout, and stabilization [3.5.6 Permeable Pavement Construction Sequence Criteria- Soil Erosion and Sediment Controls, page 94]			
31	Does the plan contain the Permeable Pavement Construction and Maintenance Inspection Checklists (Appendix L Construction Inspection Checklists and Appendix M Maintenance Inspection Checklists) or incorporate the checklists by reference? [Appendix L and Appendix M]			
Maintenance				
32	Does the SWMP include a maintenance schedule similar to Table 3.13 Typical Maintenance Tasks for Permeable Pavement Practices in the Stormwater Management Guidebook? [3.5.7 Permeable Pavement Maintenance Criteria, page 100]			
33	Does the maintenance plan include a statement that the following tasks must be avoided: ☐ Sanding ☐ Re-sealing			

	☐ Re-surfacing ☐ Power washing ☐ Storage of snow piles containing sand ☐ Storage of mulch or soil materials ☐ Construction staging on unprotected pavement [3.5.7 Permeable Pavement Maintenance Criteria, page 99]			
34	Does the maintenance plan consider the following seasonal maintenance items: ☐ Large snow storage piles should be located in adjacent grassy areas so that sediment and pollutants in snowmelt are partially treated before the reach the permeable pavement. ☐ Sand or cinders should never be applied for winter traction over permeable pavement or areas of standard pavement that drain toward permeable pavement, since they will clog the system. ☐ When plowing plastic reinforced grid pavements, snow plow blades should be lifted ½ inch to 1 inch above the pavement surface to prevent damage to the paving blocks or turf. Porous asphalt, pervious concrete, and some permeable pavers can be plowed similarly to traditional pavements, using similar equipment and settings. ☐ Chloride products should be used judiciously to deice above permeable pavement designed for infiltration, since the salt will be transmitted through the pavement. Salt can be applied, but environmentally sensitive deicers are recommended. [3.5.7 Permeable Pavement Maintenance Criteria- Seasonal Maintenance Considerations, page 100]			
35	Is the permeable pavement included in the Declaration of Covenant? ☐ Is the location and extent of the permeable pavement a part of Exhibit B Site Plan? ☐ Is the maintenance of the permeable pavement a part of Exhibit C Maintenance Plan? [3.5.7 Permeable Pavement Maintenance Criteria- Declaration of Covenants, page 101]			