

APPENDIX G: CONSTRUCTION INSPECTION CHECKLISTS AND CERTIFICATION TEMPLATES

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January 2019



Review of Certifications for Stormwater Management Facilities

Projects that require Civil Engineering Plan submission

Projects that are site plans, use permit, form based code, by-right and any project that disturbs more than 1 acre, are required to submit a Certification Letter Template for Stormwater Management Facilities (page 2) in addition to record drawings, construction inspection checklists, material tickets, and photographs of installation of any stormwater management facility constructed. These submittals should be included in the as-built plan submitted for the project through the online portal:

- <https://archives.arlingtonva.us/planreview>

Review of the submittals will occur as part of the as-built plan review.

Small projects including individual single family home projects

Individual single family homes are required to submit construction inspection checklist, material tickets, and photographs of installation for any stormwater management facility constructed. They are not required to submit a Certification Letter Template for Stormwater Management Facilities or record drawings but must submit a Certification Letter for the stormwater management facilities.

Please submit entire package in one email: certification letter from professional, construction inspection checklists, photos, and material delivery tickets to StormwaterReview@arlingtonva.us. All items should be submitted as a complete package using a file sharing program (i.e., OneDrive, Dropbox) if the total package is greater than 10MB. Submissions in multiple emails may result in a determination of an incomplete package.

Please allow at least 10 business days prior to the desired certificate of occupancy (CO) date for the review of the stormwater management facility certification. It is the customer's responsibility to plan ahead to allow sufficient time for this review process. It is also in the customer's best interest to prepare a complete, thorough, and accurate certification package. Doing so will shorten the review and approval process, as outlined below. Otherwise, more than 10 business days may be needed before approval can occur and the CO issued.

Review of the certification documentation for completeness will occur within two (2) business days of submission. If the documentation is not complete (e.g., missing data on facility dimensions, materials, construction sequence, etc.), the customer will be notified of the deficiencies at that time. Each resubmission will be subject to the up to two (2) business day review period for completeness to ensure fairness to other customers already in the queue with complete documentation submissions.

After documentation is determined to be complete, the package will be reviewed and, if acceptable, approved, or otherwise comments provided within three (3) additional business days.

Therefore, complete submissions with no deficiencies will take up to five (5) business days for review and approval.

Please note that each subsequent submission after review will take up to two (2) additional business days. Again, this is to ensure fairness for all customers in the review process.

Certification Letter Template for Stormwater Management Facilities

Company Name
Address

Date

Stormwater Specialist
Department of Environmental Services
2100 Clarendon Blvd
Suite 705
Arlington, VA 22201

RE: Stormwater Management Facility (SWMF) Certification

[PROJECT NAME]

[PROJECT ADDRESS]

Arlington, VA

[BUILDING PERMIT #], [LDA#], [SWM#], [VPDES CONSTRUCTION GENERAL PERMIT#]

Dear Sir or Madam,

A stormwater management facility **[INSERT TYPE OF FACILITY]** was required as part of the above referenced project dated **[INSERT DATE OF ENGINEER'S STAMP ON APPROVED PLANS]**.

Pursuant to 9VAC25-870-55 and Arlington County Code Chapter 60-8, I hereby certify that to the best of my knowledge and belief the stormwater management facilities shown on these record drawings have been constructed in accordance with the approved plans and specifications.

Name

Signature

Virginia License

Date



"Certify means to state or declare a professional opinion based on sufficient and appropriate onsite inspections, material tests, as-built survey data, and information provided by other professionals and the contractor, conducted during or after construction."

Enclosures:

1. Record drawings
2. Construction Inspection Checklist
3. Material tickets
4. Photographs during installation

Construction Inspection Checklist: Bioretention



Address/ Location: _____	Building Permit #: _____
LDA Permit #: _____	SWM#: _____
Contractor: _____	Telephone: _____
Certifying Professional*: _____	Telephone: _____
Date Started: _____	Final Inspection Date: _____

*Certifying professional must be a licensed Professional Engineer (PE), Landscape Architect (LA), or Land Surveyor (LS).

The following checklist provides a basic outline of the anticipated items for the construction inspection of bioretention facilities. This checklist does not necessarily distinguish between all the design variations and differences in construction between the family of practices. Inspectors should review the plans carefully, and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met. The standard for design of this practice is based on [Virginia Stormwater BMP Clearinghouse](#) and [Arlington County Stormwater Guidance Manual](#).

All items should be checked when completed. **Items labeled “Certification of...” must be crossed off, dated and initialed by certifying inspector.**

PRE-CONSTRUCTION MEETING		DATE
<input type="checkbox"/>	Identify the tentative schedule for construction and verify the requirements and schedule for interim inspections.	
<input type="checkbox"/>	All pervious areas of the contributing drainage areas have been adequately stabilized with a thick layer of vegetation or erosion control measures are still in place and stormwater has been diverted around the area.	
<input type="checkbox"/>	Area of bioretention practice has not been impacted during construction.	
<input type="checkbox"/>	Pre-construction meeting with the contractor designated to install the bioretention practice, County DES inspector, and person completing this checklist has been conducted.	

EXCAVATION		DATE
<input type="checkbox"/>	Area of bioretention excavation is marked and the size and location conforms to plan.	
<input type="checkbox"/>	If the excavation area has been used as a sediment trap: verify that the bottom elevation of the proposed stone reservoir is lower than the bottom elevation of the existing trap.	
<input type="checkbox"/>	For Level 2 bioretention, ensure the bottom of the excavation is scarified prior to placement of stone.	
<input type="checkbox"/>	Subgrade surface is free of rocks and roots, and large voids. Any voids should be refilled with the base aggregate to create a level surface for the placement of aggregates and underdrain (if required).	
<input type="checkbox"/>	No groundwater seepage or standing water is present. Any standing water is dewatered to an acceptable dewatering device.	
<input type="checkbox"/>	Excavation of the bioretention practice has achieved proper grades and the required geometry and elevations without compacting the bottom of the excavation. Constructed dimensions: _____	
<input type="checkbox"/>	Sides of excavation covered with geotextile; no tears, holes, or excessive wrinkles are present.	

	<p>Certification of Excavation Inspection: Inspector certifies the successful completion of the excavation steps listed above.</p> <p>Photos required include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Excavated area prior to installation of stone, including measurements (L x W x D); <input type="checkbox"/> Non-woven geotextile fabric installed on sides of excavated subgrade only. <p>Material delivery ticket include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Geotextile installed on sides 	
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FILTER LAYER, UNDERDRAIN, AND STONE RESERVOIR PLACEMENT	DATE
<input type="checkbox"/> All aggregates conform to specifications as certified by quarry.	
<input type="checkbox"/> Underdrain size and perforations meet the specifications (if applicable).	
<input type="checkbox"/> If the underdrain is directly tied into the public storm sewer system, the connection has been witnessed by DES inspector.	
<input type="checkbox"/> For Level 2 installations: placement of filter layer and initial lift of stone reservoir layer aggregates with underdrain or infiltration sump, spread (not dumped) to avoid aggregate segregation	
<input type="checkbox"/> Placement of underdrain, observation wells, and underdrain fittings are in accordance with the approved plans.	
<input type="checkbox"/> Elevations of underdrain and outlet structure are in accordance with approved plans, or as adjusted to meet field conditions and denoted in Comments section.	
<input type="checkbox"/> Placement of remaining lift of stone reservoir layer as needed to achieve the required reservoir depth.	
<p>Certification of Filter Layer and Underdrain Placement Inspection: Inspector certifies the successful completion of the filter layer and underdrain placement steps listed above. Photos and material delivery tickets for these items are attached.</p> <p>Photos required include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Perforated underdrain pipe (if applicable) with a solid vertical overflow pipe; <input type="checkbox"/> Depth of #57 stone; <input type="checkbox"/> Depth of choker stone (pea gravel or #8); <input type="checkbox"/> Underdrain connection to public storm sewer system (if applicable). <p>Material delivery tickets required include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 57 stone; <input type="checkbox"/> Choker stone (pea gravel or #8). 	

BIORETENTION SOIL MEDIA PLACEMENT	DATE
<input type="checkbox"/> Soil media is certified by supplier or contractor as meeting the project specifications and comes from an approved soil media vendor.	
<input type="checkbox"/> Soil media is placed in 12-inch lifts to the design top elevation of the bioretention area. Elevation has been verified after settlement (2 to 4 days after initial placement).	
<input type="checkbox"/> Side slopes of ponding area are feathered back at the required slope (no steeper than 3H:1V).	
<p>Certification of Soil Media Placement Inspection: Inspector certifies the successful completion of the soil media steps listed above and any necessary photos are attached.</p> <p><input type="checkbox"/> Photo required of a measurement of the soil media installed.</p> <p>Material delivery ticket required from an <u>approved soil media vendor</u>.</p>	

PRETREATMENT AND PLANT INSTALLATION		DATE
<input type="checkbox"/>	Riser, overflow weir, or other outflow structure is set to the proper elevation, receive the proper compaction and are functional.	
<input type="checkbox"/>	Placement of energy dissipaters and pretreatment practices (forebays, gravel diaphragms, etc.) are installed in accordance with the approved plans.	
<input type="checkbox"/>	Appropriate number and spacing of plants are installed in accordance with the approved plans. Microbioretentions use the appropriate number of plants from VA DEQ Table 9.4, bioretentions follow the approved landscape plan.	
<input type="checkbox"/>	Ponding depth verification after plant and mulch placement.	
<input type="checkbox"/>	<p>Certification of Pretreatment and Plant Installation: Inspector certifies the successful completion of any pretreatment measures, plants and mulch as listed above.</p> <p>Photos/Elevations required for this step include:</p> <ul style="list-style-type: none"> ○ Overall photos of showing mulch and plants installed; ○ Location of inflow and appropriate energy dissipation; <ul style="list-style-type: none"> ○ <i>Microbioretention with sheetflow as the inflow: string line measurement showing the swale.</i> ○ <i>Bioretention with sheetflow as the inflow: survey of the swale.</i> ○ Any pretreatment measures required per the approved plans; ○ Distance from the top of the mulch to the top of the overflow (either pipe or berm). <ul style="list-style-type: none"> ○ <i>Microbioretention: string line measurement showing the surface of the microbioretention is level and has the appropriate ponding depth over the entire surface.</i> ○ <i>Bioretention: as-built survey that captures the top of mulch and top of overflow to achieve the proper ponding depth.</i> <p>Material delivery tickets required for this step include:</p> <ul style="list-style-type: none"> ○ Approved plants listing number and species; ○ Shredded hardwood mulch. 	

BIORETENTION TESTING		DATE
<input type="checkbox"/>	A bioretention that uses infiltration to drain (i.e., it has no underdrain) must be tested for infiltration rate upon completion and must function as designed.	

COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)	DATE

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans (or deviations are noted here).

Signature: _____ Date: _____

Certifying Professional's License Number (or Seal): _____

Construction Inspection Checklist: Urban Bioretention – Planter Box



Address/ Location: _____	Building Permit #: _____
LDA Permit #: _____	SWM#: _____
Contractor: _____	Telephone: _____
Certifying Professional*: _____	Telephone: _____
Date Started: _____	Final Inspection Date: _____

*Certifying professional must be a licensed Professional Engineer (PE), Landscape Architect (LA), or Land Surveyor (LS).

The following checklist provides a basic outline of the anticipated items for the construction inspection of urban bioretention facilities. This checklist does not necessarily distinguish between all the design variations. Inspectors should review the plans carefully, and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met. The standard for design of this practice is based on [Virginia Stormwater BMP Clearinghouse](#) and [Arlington County Stormwater Guidance Manual](#).

All items should be crossed off when completed. **Items labeled “Certification of...” must be crossed off, dated and initialed by the certifying inspector.**

PRE-CONSTRUCTION MEETING		DATE
<input type="checkbox"/>	Pre-construction meeting with the contractor designated to install the planter boxes, County DES inspector, and person completing this checklist has been conducted.	
<input type="checkbox"/>	Stormwater has been diverted around the area of the bioretention practice and perimeter erosion control measures to protect the facility during construction have been installed.	

EXCAVATION AND BOX CONSTRUCTION		DATE
<input type="checkbox"/>	Area is marked and the size and location conforms to plan.	
<input type="checkbox"/>	Excavation has achieved proper grades and the required geometry and elevations.	
<input type="checkbox"/>	Box is constructed using the material specified and to the required dimensions as shown on the approved plans. Constructed interior dimensions: _____	
<input type="checkbox"/>	Waterproofing is installed on sides and bottom of interior of the box as specified.	
<input type="checkbox"/>	Certification of Excavation and Box Construction Inspection: Inspector certifies the successful completion of the steps listed above and any necessary photos are attached.	
<input type="checkbox"/>	Photo required of: entire interior (sides and bottom) of planter box waterproofed. Material ticket required of waterproofing membrane if plastic membrane is used (no receipt required for liquid membrane).	

FILTER LAYER, UNDERDRAIN, AND STONE RESERVOIR PLACEMENT		DATE
<input type="checkbox"/>	All aggregates conform to specifications as certified by quarry.	
<input type="checkbox"/>	Underdrain size and perforations meet the specifications (holes should be spaced 6” apart, maximum of 3 rows of holes). Placement of underdrain, observation wells, and underdrain fittings are in accordance with the approved plans.	
<input type="checkbox"/>	Elevations of underdrain and outlet structure are in accordance with approved plans, or as adjusted to meet field conditions and denoted in Comments section below. Any planter boxes that are in series (drain from one to another), requires the submission of invert elevations.	
<input type="checkbox"/>	Placement of remaining lift of stone reservoir layer as needed to achieve the required reservoir depth.	

	<p>Certification of Filter Layer and Underdrain Placement Inspection: Inspector certifies the successful completion of the filter layer and underdrain placement steps listed above. Photos and material delivery tickets for these items are attached.</p> <p>Photos required include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <ul style="list-style-type: none"> o Perforated underdrain pipe with a solid vertical overflow pipe; o Depth of #57 stone; o Depth of choker stone (pea gravel or #8). <p>Material delivery tickets required:</p> <ul style="list-style-type: none"> o #57 stone and choker stone (pea gravel or #8) 	
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BIORETENTION SOIL MEDIA PLACEMENT		DATE
<input type="checkbox"/>	Soil media is certified by supplier or contractor as meeting the project specifications and comes from an approved soil media vendor.	
<input type="checkbox"/>	No filter fabric is to be used between the stone layer and the soil layer. Soil media is placed in 12-inch lifts to the design top elevation of the bioretention area. Elevation has been verified after settlement (2 to 4 days after initial placement).	
<input type="checkbox"/>	<p>Certification of Soil Media Placement Inspection: Inspector certifies the successful completion of the soil media steps listed above. Photos and material delivery tickets for these items are attached.</p> <p>Photo required includes a measurement of the soil media installed.</p> <p>Material delivery ticket required from an <u>approved soil media vendor</u>.</p>	

PRETREATMENT AND PLANT INSTALLATION		DATE
<input type="checkbox"/>	Placement of energy dissipaters and pretreatment practices (splash block/rocks, gutter guards, etc.) are installed in accordance with the approved plans.	
<input type="checkbox"/>	Overflow has atrium grate installed.	
<input type="checkbox"/>	Downspouts are installed in accordance with the approved plans providing the correct drainage area.	
<input type="checkbox"/>	The number and spacing of plants are installed in accordance with the approved plans. If there is no approved landscape plan for the planter boxes, the plants are to be chosen from VA DEQ Stormwater Design Specification No. 9: Table 9.6 Popular Native Plant Materials for Bioretention.	
<input type="checkbox"/>	A 2-3 inch layer of shredded hardwood mulch has been installed.	
<input type="checkbox"/>	<p>Certification of Pretreatment and Plant Installation Inspection: Inspector certifies the successful completion of the pretreatment, energy dissipaters, plants, overflow grates and mulch as listed above. Photos and copies of material delivery tickets are attached.</p> <p>Photos required for this step for each planter include:</p> <ul style="list-style-type: none"> o Overall photo showing the number of plants installed; o Location of downspout/inflow pipe with the appropriate splash block/rocks; o Distance from the top of mulch to the top of the overflow pipe; o Distance from the top of mulch to the top of the planter box. <p>Material delivery tickets required for this step include:</p> <ul style="list-style-type: none"> o Approved plants listing number and species; o Shredded hardwood mulch. 	

DRY WELL OR CONNECTION TO STORM SEWER		DATE
<input type="checkbox"/>	Dry well is constructed to the correct dimensions and proper materials including the proper geotextile, stone, and overflow mechanism (pop-up emitter) per the plan (if applicable).	
<input type="checkbox"/>	Underdrain is directly tied into the public storm sewer system and the connection has been witnessed by DES inspector (if applicable).	

<input type="checkbox"/>	<p>Certification of Dry Well or Connection to Storm Sewer: Inspector certifies the successful completion of the dry well or connection to the storm sewer. Photos and material delivery tickets for these items are attached.</p> <p>Photos required for dry well include:</p> <ul style="list-style-type: none"> ○ Excavated dry well with fabric installed on sides (no fabric on bottom); ○ Dimensions of dry well (L x W x D); ○ Perforated pipe installed inside of dry well; ○ Solid pipe for any pipe located outside of dry well (above gravel to grade); ○ Depth of #57 stone; ○ Fabric installed on top of gravel; ○ Completed dry well with turf cover and pop-up emitter installed. <p>Material Tickets required:</p> <ul style="list-style-type: none"> ○ Geotextile used; ○ #57 stone. 	
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COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)	DATE

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans (or deviations are noted here).

Signature: _____ Date: _____

Certifying Professional's License Number (or Seal): _____

Construction Inspection Checklist: Urban Bioretention –Tree Filter



Address/ Location: _____	Building Permit #: _____
LDA Permit #: _____	SWM#: _____
Contractor: _____	Telephone: _____
Certifying Professional*: _____	Telephone: _____
Date Started: _____	Final Inspection Date: _____

**Certifying professional must be a licensed Professional Engineer (PE), Landscape Architect (LA), or Land Surveyor (LS).*

The following checklist provides a basic outline of the anticipated items for the construction inspection of urban bioretention facilities. This checklist does not necessarily distinguish between all the design variations. Inspectors should review the plans carefully, and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met. The standard for design of this practice is based on [Virginia Stormwater BMP Clearinghouse](#) and [Arlington County Stormwater Guidance Manual](#).

All items should be crossed off when completed. **Items labeled “Certification of...” must be crossed off, dated and initialed by the certifying inspector.**

PRE-CONSTRUCTION MEETING		DATE
<input type="checkbox"/>	Pre-construction meeting with the contractor designated to install the stormwater tree filter, Arlington County DES inspector, urban forester, and the person completing this checklist has been conducted.	

EXCAVATION AND FILTER CONSTRUCTION		DATE
<input type="checkbox"/>	Area is marked and the size and location conforms to plan.	
<input type="checkbox"/>	Excavation has achieved proper grades and the required geometry and elevations.	
<input type="checkbox"/>	Filter is constructed using the material specified and to the required dimensions as shown on the approved plans.	
<input type="checkbox"/>	Impermeable Liner and/or waterproofing, if specified.	
<input type="checkbox"/>	<p>Certification of Excavation and Filter Construction Inspection: Inspector certifies the successful completion of the steps listed above, has surveyed the dimensions and the following items are attached.</p> <p>As-built elevations required:</p> <ul style="list-style-type: none"> o Bottom of the cell; o Curb Cut - top of curb; o Curb Cut - bottom of curb; o Curb Cut - depressed inflow. <p>Photos required include:</p> <ul style="list-style-type: none"> o Excavated Depth o Placement of Impermeable Liner 	

FILTER LAYER, UNDERDRAIN, AND STONE RESERVOIR PLACEMENT		DATE
<input type="checkbox"/>	All aggregates conform to specifications as certified by quarry.	
<input type="checkbox"/>	Underdrain size and perforations meet the specifications. Placement of underdrain, observation wells, and underdrain fittings are in accordance with the approved plans.	
<input type="checkbox"/>	Elevations of underdrain and outlet structure are in accordance with approved plans.	
<input type="checkbox"/>	Placement of remaining lift of stone reservoir layer as needed to achieve the required reservoir depth.	

<input type="checkbox"/>	<p>Certification of Filter Layer and Underdrain Placement Inspection: Inspector certifies the successful completion of the filter layer and underdrain placement steps listed above. Photos, elevations, and material delivery tickets for these items are attached.</p> <p>Photos required include:</p> <ul style="list-style-type: none"> ○ Perforated underdrain pipe with a solid vertical overflow pipe; ○ Depth of #57 stone; ○ Depth of choker stone (pea gravel or #8). <p>As-built elevations required:</p> <ul style="list-style-type: none"> ○ Underdrain invert; ○ Top of #57 stone; ○ Top of choker stone. <p>Material delivery tickets required:</p> <ul style="list-style-type: none"> ○ #57 stone and choker stone (pea gravel or #8) 	
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CONNECTION TO STORM SEWER	DATE
<input type="checkbox"/> Underdrain is tied into the public storm sewer system and the connection has been witnessed by County inspector (if applicable).	
<input type="checkbox"/> Certification of Connection to Storm Sewer: Inspector certifies the successful completion of connection to the storm sewer. As-built elevation required for each connection.	

BIORETENTION SOIL MEDIA PLACEMENT	DATE
<input type="checkbox"/> Soil media is certified by supplier or contractor as meeting the project specifications and comes from an approved soil media vendor.	
<input type="checkbox"/> Soil media is placed in 8-12 inch lifts with no machinery allowed directly on the media during or after construction. The media should be overfilled above the proposed surface elevation, as needed, to allow for natural settling. Lifts may be lightly watered to encourage settling. After the final lift is place, the media should be raked (to level it), saturated and allowed to settle for at least one week prior to installation of plant materials. No filter fabric is to be used between the stone layer and the soil layer.	
<input type="checkbox"/> Certification of Soil Media Placement Inspection: Inspector certifies the successful completion of the soil media steps listed above. Elevation has been verified after settlement. Photos of installation, elevation of top soil media, and material delivery tickets for the soil media are attached.	

PRETREATMENT AND PLANT INSTALLATION	DATE
<input type="checkbox"/> Placement of energy dissipaters and pretreatment practices (splash block/rocks, gutter guards, etc.) are installed in accordance with the approved plans.	
<input type="checkbox"/> Overflow has atrium or beehive grate installed.	
<input type="checkbox"/> Inflows are installed in accordance with the approved plans providing the correct drainage area. Including the placement of energy dissipaters and pretreatment practices (splash block/rocks, gutter guards, etc.) are installed in accordance with the approved plans.	
<input type="checkbox"/> The number and spacing of plants are installed in accordance with the approved plans.	
<input type="checkbox"/> A 2-3 inch layer of shredded hardwood mulch has been installed.	
<input type="checkbox"/> Certification of Pretreatment and Plant Installation Inspection: Inspector certifies the successful completion of the pretreatment, energy dissipaters, plants, overflow grates and mulch as listed above. Photos, elevations, and copies of material delivery tickets are attached. Photos required for this step for each planter include: <ul style="list-style-type: none"> ○ Overall photo showing the number of plants installed; ○ Location of curb cut with the appropriate splash block/rocks. As-built elevations required:	

	<ul style="list-style-type: none"> ○ Riser; and ○ Top of mulch. <p>Material delivery tickets required for this step include:</p> <ul style="list-style-type: none"> ○ Approved plants listing number and species; ○ Shredded hardwood mulch. 	
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COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)	DATE

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans (or deviations are noted here).

Signature: _____ Date: _____

Certifying Professional's License Number (or Seal): _____

See attached plat and as-built with the following information:

- Interior dimensions of cell
- Elevations
 - Cell bottom;
 - Underdrain invert;
 - Invert to storm sewer;
 - Top of #57 stone;
 - Top of choker stone;
 - Top soil media;
 - Riser;
 - Top of mulch;
 - Curb Cut - top of curb;
 - Curb Cut - bottom of curb;
 - Curb Cut - depressed inflow.

Construction Inspection Checklist: Permeable Pavement



Address/ Location: _____	Building Permit #: _____
LDA Permit #: _____	SWM#: _____
Contractor: _____	Telephone: _____
Certifying Professional*: _____	Telephone: _____
Date Started: _____	Final Inspection Date: _____

*Certifying professional must be a licensed Professional Engineer (PE), Landscape Architect (LA), or Land Surveyor (LS).

The following checklist provides a basic outline of the anticipated items for the construction inspection of permeable pavement. This checklist does not necessarily differentiate between the types of pavement materials and the different construction requirements. Inspectors should review the plans carefully, and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met. The standard for design of this practice is based on [Virginia Stormwater BMP Clearinghouse](#) and [Arlington County Stormwater Guidance Manual](#).

All items should be crossed off when completed. **Items labeled “Certification of...” must be crossed off, dated and initialed by the certifying inspector.**

PRE-CONSTRUCTION MEETING		DATE
<input type="checkbox"/>	Walk through site with builder/contractor/subcontractor to review the SWPPP (erosion and sediment control plan, the stormwater management plan, and the Pollution Prevention plan)	
<input type="checkbox"/>	Determine when permeable pavement is built in project construction sequence; before or after building construction and determine measures for protection and surface cleaning.	
<input type="checkbox"/>	Identify the tentative schedule for construction, verify the certification of the installer (ICPI for permeable interlocking pavers or NRMCA for pervious concrete) and requirements and schedule for interim inspections.	
<input type="checkbox"/>	Storage locations for aggregate material have been identified (hard surface or on geotextile).	
<input type="checkbox"/>	Pre-construction meeting with the contractor designated to install the permeable pavement, County DES inspector, and person completing this checklist has been conducted.	

SEDIMENT MANAGEMENT		DATE
<input type="checkbox"/>	Access routes for delivery and construction vehicles identified.	
<input type="checkbox"/>	Vehicle tire/track washing station location/maintenance (if specified in the erosion and sediment control plan/SWPPP).	
<input type="checkbox"/>	Contributing drainage areas are stabilized and are not eroding.	

EXCAVATION		DATE
<input type="checkbox"/>	Excavated area marked with paint and/or stakes.	
<input type="checkbox"/>	Excavation size and location conforms to plan.	
<input type="checkbox"/>	Runoff is diverted around the excavation area to a stabilized conveyance.	
<input type="checkbox"/>	If excavation is used as a sediment trap: verify that the bottom elevation of the proposed stone reservoir is lower than the bottom elevation of the existing trap.	

<input type="checkbox"/>	Subgrade surface is free of rocks and roots, and large voids. Any voids should be refilled with the base aggregate to create a level surface for the placement of aggregates and underdrain (if required).	
<input type="checkbox"/>	For Level 2 permeable pavement, ensure the bottom of the excavation is scarified prior to placement of stone.	
<input type="checkbox"/>	No groundwater seepage or standing water is present. Any standing water is dewatered to an acceptable dewatering device.	
<input type="checkbox"/>	The excavation has achieved the proper elevations and grade (0% slope) as noted on the approved plans.	
<input type="checkbox"/>	<p>Certification of Excavation Inspection: Inspector certifies the successful completion of the excavation steps listed above.</p> <p>Photos required include excavated subgrade prior to covering with fabric and stone, and include measurement from subgrade to reference point (i.e., top of edge restraint, top of apron, top of garage entrance, top of flow barriers and flow barrier excavation cuts, etc.).</p>	

FILTER LAYER, UNDERDRAIN, STONE RESERVOIR, AND BEDDING LAYER PLACEMENT		DATE
<input type="checkbox"/>	All aggregates, including, as required, the filter layer (choker stone & sand or geotextile), the reservoir layer, and bedding layer conform to specifications as certified by quarry.	
<input type="checkbox"/>	Underdrain size and perforations meet the specifications (if applicable).	
<input type="checkbox"/>	Placement of filter layer and initial layer of reservoir layer aggregates (approximately 2 inches) spread (not dumped) to avoid aggregate segregation.	
<input type="checkbox"/>	Placement of underdrain, observation wells, and underdrain fittings in accordance with the approved plans.	
<input type="checkbox"/>	Concrete curbs or plastic/metal edge restraints are installed.	
<input type="checkbox"/>	Sides of excavation covered with geotextile, prior to placing stone reservoir aggregate; no tears or holes, or excessive wrinkles are present.	
<input type="checkbox"/>	Flow barriers are properly installed (if applicable).	
<input type="checkbox"/>	Stone reservoir layer and bedding layer is properly installed.	
<input type="checkbox"/>	<p>Certification of Filter Layer, Underdrain, Stone Reservoir and Bedding Layer Inspection: Inspector certifies the successful completion of the filter layer, underdrain, stone reservoir and bedding layer placement steps listed above. Photos and material delivery tickets for these items are attached.</p> <p>Photos required include:</p> <ul style="list-style-type: none"> o Non-woven geotextile fabric installed on bottom and sides of excavated subgrade; o Perforated observation well prior to installation of stone; o Perforated underdrain (if applicable) and connection to storm sewer or dry well; o Depth of #2 or #3 stone installed (if applicable); o Edge restraints; o Depth of #57 stone installed; o Depth of #8 stone installed. <p>Photos required of flow barrier (if applicable):</p> <ul style="list-style-type: none"> o 12" height of berm; o 12" height of cut for flow barrier; o Impermeable liner; o Distance between flow barriers. <p>Material delivery tickets required include:</p> <ul style="list-style-type: none"> o Choker stone & sand or geotextile installed at subbase; o Geotextile installed along sides; 	

	<ul style="list-style-type: none"> ○ Geotextile used as the impermeable barrier on gravel flow berms (if applicable); ○ #2 or #3 stone (if applicable), #57 stone, #8 stone. 	
PERMEABLE PAVERS OR PERVIOUS CONCRETE INSTALLATION		DATE
<input type="checkbox"/>	Permeable paver surface is installed.	
<input type="checkbox"/>	If pavers are used, the joints are full of #8 or #9 stone.	
<input type="checkbox"/>	<p>Certification of Pavement Installation: Contractor and/or manufacturer certifies that permeable pavement has been placed in accordance with manufacturers specifications (ICPI Tech Spec #18 for interlocking concrete pavers or ACI#522.1-13 for pervious concrete).</p> <p>Photos required include:</p> <ul style="list-style-type: none"> ○ Overall of completed installation; ○ Observation well with proper cap installed. <p>Material delivery tickets required for the pavers or concrete installed.</p>	
<input type="checkbox"/>	The permeable pavement is protected until the remainder of the site is stabilized.	

COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)	DATE

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans (or deviations are noted here).

Signature: _____ Date: _____

Certifying Professional's License Number (or Seal): _____

Installer / Contractor's Certification (Required)

- Permeable Interlocking Pavers:** Attach copy of [ICPI Certification](#)
- Pervious Concrete:** [NRMCA Certification](#)* Number: _____

*NRMCA Certification must be either Installer or Craftsman certification.

Construction Inspection Checklist: Infiltration Trench



Address/ Location: _____	Building Permit #: _____
LDA Permit #: _____	SWM#: _____
Contractor: _____	Telephone: _____
Certifying Professional*: _____	Telephone: _____
Date Started: _____	Final Inspection Date: _____

**Certifying professional must be a licensed Professional Engineer (PE), Landscape Architect (LA), or Land Surveyor (LS).*

The following checklist provides a basic outline of the anticipated items for the construction inspection of infiltration practices. This checklist does not necessarily distinguish between all the design variations and differences in construction between the families of practices. Inspectors should review the plans carefully, and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met. The standard for design of this practice is based on [Virginia Stormwater BMP Clearinghouse](#) and [Arlington County Stormwater Guidance Manual](#).

All items should be crossed off when completed. **Items labeled “Certification of...” must be crossed off, dated and initialed by the certifying inspector.**

PRE-CONSTRUCTION MEETING		DATE
<input type="checkbox"/>	Impervious cover has been constructed/installed and area is free of construction equipment, vehicles, material storage), etc.	
<input type="checkbox"/>	Area of infiltration practice has not been impacted during construction.	
<input type="checkbox"/>	All pervious areas of the contributing drainage areas have been adequately stabilized with a thick layer of vegetation or erosion control measures are still in place and stormwater has been diverted around the area.	
<input type="checkbox"/>	Pre-construction meeting with the contractor designated to install the infiltration practice, County DES inspector, and person completing this checklist has been conducted.	

EXCAVATION		DATE
<input type="checkbox"/>	Excavation of the infiltration practice has achieved proper grades and the required geometry for the subsurface infiltration trench or the surface infiltration basin without compacting the bottom of the excavation. Constructed dimensions: _____	
<input type="checkbox"/>	Placement of filter fabric, as required.	
<input type="checkbox"/>	Bottom of trench has been scarified.	
<input type="checkbox"/>	<p>Certification of Excavation Inspection: Inspector certifies the successful completion of the excavation steps listed above.</p> <p>Photos required include:</p> <ul style="list-style-type: none"> o Excavated area prior to installation of sand/stone, including measurements (L x W x D); o Non-woven geotextile fabric installed on sides of excavated subgrade; o Scarified bottom. <p>Material delivery tickets required include:</p> <ul style="list-style-type: none"> o Geotextile used 	

FILTER LAYER AND UNDERDRAIN PLACEMENT		DATE
<input type="checkbox"/>	All aggregates, including, as required, the filter layer, the stone reservoir layer or infiltration sump conform to specifications as certified by quarry.	
<input type="checkbox"/>	Six-inch filter layer of sand placed on the trench bottom.	
<input type="checkbox"/>	Observation well placed.	
<input type="checkbox"/>	<p>Certification of Filter Layer Inspection: Inspector certifies the successful completion of the steps listed above.</p> <p>Photos required include:</p> <ul style="list-style-type: none"> o Depth of sand; o Observation well. <p>Material delivery tickets required include:</p> <ul style="list-style-type: none"> o Sand. 	

STONE RESERVOIR AGGREGATE PLACEMENT		DATE
<input type="checkbox"/>	Remaining stone aggregate placed (not dumped) in 6-inch lifts.	
<input type="checkbox"/>	Top surface of infiltration practice in accordance with approved plans.	
<input type="checkbox"/>	<p>Certification of Stone Reservoir Layers Inspection: Inspector certifies the successful completion of the steps listed above and any necessary photos are attached.</p> <p>Photos required include:</p> <ul style="list-style-type: none"> o Depth of reservoir layer (typically #1 stone); o Depth of choker stone layer (if applicable); o Fabric installed on top of gravel; o Completed facility with appropriate surface cover. <p>Material delivery tickets required include:</p> <ul style="list-style-type: none"> o Reservoir stone; o Choker stone; o Fabric. 	

INFILTRATION TRENCH TESTING		DATE
<input type="checkbox"/>	Trench must be tested for infiltration rate upon completion and must function as designed.	

COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)		DATE

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans (or deviations are noted here).

Signature: _____ Date: _____

Certifying Professional's License Number (or Seal): _____

Construction Inspection Checklist: Dry Well



Address/
Location: _____
LDA Permit #: _____
Contractor: _____
Date Started: _____

Building
Permit #: _____
SWM#: _____
Telephone: _____
Final Inspection Date: _____

This construction inspection checklist to be used only for dry wells that are not connected to another stormwater management facilities like a planter box.

All items should be checked and dated when completed by the contractor.

PRE-CONSTRUCTION MEETING		DATE
<input type="checkbox"/>	Pre-construction meeting with the contractor designated to install the dry well, County DES inspector, and person completing this checklist has been conducted.	
<input type="checkbox"/>	All pervious areas of the contributing drainage areas have been adequately stabilized with a thick layer of vegetation or erosion control measures are still in place and stormwater has been diverted around the area.	
<input type="checkbox"/>	Area of dry well has not been impacted during construction.	

EXCAVATION		DATE
<input type="checkbox"/>	Excavation of the dry well has achieved proper grades and the required geometry without compacting the bottom of the excavation. Constructed dimensions: _____	
<input type="checkbox"/>	Placement of filter fabric, as required.	
<input type="checkbox"/>	<p><u>Submittals Required:</u></p> <p>Photos:</p> <ul style="list-style-type: none"> o Excavated area prior to installation of stone, including measurements (L x W x D); o Non-woven geotextile fabric installed on sides of excavated subgrade; <p>Material delivery tickets:</p> <ul style="list-style-type: none"> o Geotextile 	

FILTER LAYER AND UNDERDRAIN PLACEMENT		DATE
<input type="checkbox"/>	All aggregates conform to specifications.	
<input type="checkbox"/>	Inflow pipe placed. The pipe is solid until it enters the well, once inside the stone reservoir it is perforated.	
<input type="checkbox"/>	Perforated pipe for observation well connected to inflow pipe.	
<input type="checkbox"/>	<p><u>Submittals Required:</u></p> <p>Photos:</p> <ul style="list-style-type: none"> o Inflow pipe, o Observation well. 	

STONE RESERVOIR AGGREGATE PLACEMENT		DATE
<input type="checkbox"/>	Remaining stone aggregate placed (not dumped) in 6-inch lifts.	
<input type="checkbox"/>	Top surface of dry well in accordance with approved plans.	
<input type="checkbox"/>	<p><u>Submittals Required:</u></p> <p>Photos:</p> <ul style="list-style-type: none"> ○ Depth of stone; ○ Fabric installed on top of gravel; ○ Completed facility with appropriate surface cover and pop-up emitter. <p>Material delivery tickets:</p> <ul style="list-style-type: none"> ○ Stone; ○ Fabric. 	

LOCATION		DATE
<input type="checkbox"/>	<p><u>Submittals Required:</u></p> <ul style="list-style-type: none"> ○ Markup of plat or approved plan with the dry well locations and the downspout that each dry well is connected to 	

COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)		DATE

Construction Inspection Checklist: Dry Swale



Address/ Location: _____	Building Permit #: _____
LDA Permit #: _____	SWM#: _____
Contractor: _____	Telephone: _____
Certifying Professional*: _____	Telephone: _____
Date Started: _____	Final Inspection Date: _____

*Certifying professional must be a licensed Professional Engineer (PE), Landscape Architect (LA), or Land Surveyor (LS).

The following checklist provides a basic outline of the anticipated items for the construction inspection of bioretention facilities. This checklist does not necessarily distinguish between all the design variations and differences in construction between the family of practices. Inspectors should review the plans carefully, and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met. The standard for design of this practice is based on [Virginia Stormwater BMP Clearinghouse](#) and [Arlington County Stormwater Guidance Manual](#).

All items should be checked when completed. **Items labeled “Certification of...” must be crossed off, dated and initialed by certifying inspector.**

PRE-CONSTRUCTION MEETING		DATE
<input type="checkbox"/>	Stormwater has been diverted around the area of the dry swale and perimeter erosion control measures to protect the facility during construction have been installed.	
<input type="checkbox"/>	Impervious cover has been constructed/installed and area is free of construction equipment, vehicles, material storage, etc. and all pervious areas of the contributing drainage areas have been adequately stabilized with a thick layer of vegetation and erosion control measures have been removed.	
<input type="checkbox"/>	Area of dry swale has not been impacted during construction.	
<input type="checkbox"/>	Pre-construction meeting with the contractor designated to install the dry swale practice, County DES inspector, and person completing this checklist has been conducted.	

EXCAVATION		DATE
<input type="checkbox"/>	Compare the dry swale surface and invert design elevations with the actual constructed elevations of the inflow and outlet inverts and adjust design elevations as needed.	
<input type="checkbox"/>	Area of dry swale excavation is marked and the size and location conforms to plan.	
<input type="checkbox"/>	If the excavation area has been used as a sediment trap: verify that the bottom elevation of the proposed stone reservoir is lower than the bottom elevation of the existing trap.	
<input type="checkbox"/>	For Level 2 dry swale, ensure the bottom of the excavation is scarified prior to placement of stone.	
<input type="checkbox"/>	Subgrade surface is free of rocks and roots, and large voids. Any voids should be refilled with the base aggregate to create a level surface for the placement of aggregates and underdrain (if required).	
<input type="checkbox"/>	No groundwater seepage or standing water is present. Any standing water is dewatered to an acceptable dewatering device.	
<input type="checkbox"/>	Excavation of the dry swale practice has achieved proper grades, longitudinal slope, and the required geometry and elevations without compacting the bottom of the excavation. Constructed dimensions: _____	

	<p>Certification of Excavation Inspection: Inspector certifies the successful completion of the excavation steps listed above.</p> <p>Photos required include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Excavated area prior to installation of stone, including measurements (L x W x D); <input type="checkbox"/> Non-woven geotextile fabric installed on sides of excavated subgrade only. <p>Material delivery ticket include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Geotextile installed on sides 	
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FILTER LAYER, UNDERDRAIN, AND STONE RESERVOIR PLACEMENT	DATE
<input type="checkbox"/> All aggregates conform to specifications on approved plan as certified by quarry.	
<input type="checkbox"/> Underdrain size and perforations meet the specifications (if applicable).	
<input type="checkbox"/> If the underdrain is directly tied into the public storm sewer system, the connection has been witnessed by DES inspector.	
<input type="checkbox"/> For Level 2 installations: placement of filter layer and initial lift of stone reservoir layer aggregates with underdrain or infiltration sump, spread (not dumped) to avoid aggregate segregation.	
<input type="checkbox"/> Sides of excavation covered with geotextile, when required, prior to placing stone reservoir aggregate; no tears or holes, or excessive wrinkles are present.	
<input type="checkbox"/> Placement of underdrain, observation wells, and underdrain fittings are in accordance with the approved plans.	
<input type="checkbox"/> Elevations of underdrain and outlet structure are in accordance with approved plans, or as adjusted to meet field conditions and denoted in Comments section.	
<input type="checkbox"/> Placement of remaining lift of stone reservoir layer as needed to achieve the required reservoir depth.	
<p>Certification of Filter Layer and Underdrain Placement Inspection: Inspector certifies the successful completion of the filter layer and underdrain placement steps listed above. Photos and material delivery tickets for these items are attached.</p> <p>Photos required include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Perforated underdrain pipe (if applicable) with a solid vertical overflow pipe; <input type="checkbox"/> Depth of #57 stone; <input type="checkbox"/> Connection to public storm sewer system (if applicable). <p>Material delivery tickets required for all aggregates.</p>	

DRY SWALE SOIL MEDIA PLACEMENT	DATE
<input type="checkbox"/> Soil media is certified by supplier or contractor as meeting the project specifications and comes from an approved soil media vendor.	
<input type="checkbox"/> Soil media is placed in 12-inch lifts to the design top elevation of the bioretention area. Elevation has been verified after settlement (2 to 4 days after initial placement).	
<input type="checkbox"/> Side slopes of ponding area are feathered back at the required slope (no steeper than 3H:1V).	
<input type="checkbox"/> Dry swale length, bottom width, side slopes, and longitudinal slope are in accordance with the approved plans.	
<p>Certification of Soil Media Placement Inspection: Inspector certifies the successful completion of the soil media steps listed above and any necessary photos are attached.</p> <p><input type="checkbox"/> Photo required of a measurement of the soil media installed.</p> <p>Material delivery ticket required from an <u>approved soil media vendor</u>.</p>	

PRETREATMENT, CHECK DAM AND PLANT INSTALLATION		DATE
<input type="checkbox"/>	Placement of energy dissipaters and pretreatment practices (forebays, gravel diaphragms, etc.) are installed in accordance with the approved plans.	
<input type="checkbox"/>	Riser, overflow weir, or other outflow structure is set to the proper elevation and functional; or external bypass structure is built in accordance with the approved plans.	
<input type="checkbox"/>	Appropriate number and spacing of check dams are installed in accordance with the approved plans (verification of energy dissipaters at downstream toe, depth keyed into dry swale flow line, and tied back into dry swale side slopes).	
<input type="checkbox"/>	Apply erosion control matting as required by approved plans or as needed to ensure adequate stabilization.	
<input type="checkbox"/>	Appropriate number and spacing of plants are installed in accordance with the approved plans.	
<input type="checkbox"/>	<p>Certification of Pretreatment, Check Dam and Plant Installation: Inspector certifies the successful completion of any pretreatment measures, plants and mulch as listed above.</p> <p>Photos required for this step include:</p> <ul style="list-style-type: none"> ○ Overall photos of showing mulch and plants installed; ○ Location of inflow and appropriate energy dissipation; ○ Any pretreatment measures required per the approved plans. <p>Material delivery tickets required for this step include:</p> <ul style="list-style-type: none"> ○ Approved plants listing number and species. 	

COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)	DATE

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans (or deviations are noted here).

Signature: _____ Date: _____

Certifying Professional's License Number (or Seal): _____

Construction Inspection Checklist: Rooftop Disconnection



Address/ Location: _____	Building Permit #: _____
LDA Permit #: _____	SWM#: _____
Contractor: _____	Telephone: _____
Certifying Professional*: _____	Telephone: _____
Date Started: _____	Final Inspection Date: _____

*Certifying professional must be a licensed Professional Engineer (PE), Landscape Architect (LA), or Land Surveyor (LS).

The following checklist provides a basic outline of the anticipated items for the construction inspection of rooftop disconnection. This checklist does not necessarily distinguish between all the design variations and differences in construction between designs. Inspectors should review the plans carefully, and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met. The standard for design of this practice is based on [Virginia Stormwater BMP Clearinghouse](#) and [Arlington County Stormwater Guidance Manual](#).

All items should be checked when completed. **Items labeled “Certification of...” must be crossed off, dated and initialed by certifying inspector.**

PRE-CONSTRUCTION MEETING		DATE
<input type="checkbox"/>	Identify the tentative schedule for construction and verify the requirements and schedule for interim inspections and sign-off.	
<input type="checkbox"/>	All pervious areas of the contributing drainage areas have been adequately stabilized.	
<input type="checkbox"/>	Impervious cover has been constructed/installed and area is free of construction equipment, vehicles, material storage, etc.	
<input type="checkbox"/>	Downspouts have been installed and proper drainage away from the building foundation has been provided.	
<input type="checkbox"/>	Erosion and sediment control practices are either in place to protect the area, or if no longer needed, removed.	
<input type="checkbox"/>	Pre-construction meeting with the contractor designated to install the bioretention practice, County DES inspector, and person completing this checklist has been conducted.	

CONSTRUCTION		DATE
<input type="checkbox"/>	Downspout runoff has been temporarily diverted to a stabilized conveyance.	
<input type="checkbox"/>	Topsoil and/or soil amendments are nearby and are certified as meeting the design specifications (copy of material delivery ticket is required).	
<input type="checkbox"/>	Proper grades have been achieved with light equipment to avoid compaction to provide the required geometry of the disconnection practice: length and width, and slope.	
<input type="checkbox"/>	Area has been rototilled to reverse soil compaction resulting from construction traffic (photo required).	
<input type="checkbox"/>	Pretreatment level spreader or energy dissipaters have been installed per the approved plans (photo required).	
<input type="checkbox"/>	Soil amendments, if specified, have been incorporated as specified (thickness of compost material and incorporated to the required depth) (photo required to verify depth).	
<input type="checkbox"/>	Certification of Construction Inspection: Inspector certifies the successful completion of the excavation steps listed above and any necessary photos are attached.	

FINAL STABILIZATION		DATE
<input type="checkbox"/>	Disconnection filter path is completely stabilized with adequate mulch or turf cover per the approved plan. (photo required)	
<input type="checkbox"/>	Downspout is direct to the new conveyance (photo required) .	
<input type="checkbox"/>	Erosion and sediment control practices that are no longer needed, removed.	
<input type="checkbox"/>	Certification of Final Stabilization: Inspector certifies the successful completion of the stabilization steps listed above. Photos for these items are attached.	

COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)	DATE

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans (or deviations are noted here).

Signature: _____ Date: _____

Certifying Professional's License Number (or Seal): _____

Construction Inspection Checklist: Green / Vegetated Roof



Address/ Location: _____	Building Permit #: _____
LDA Permit #: _____	SWM#: _____
Contractor: Certifying Professional*: _____	Telephone: _____ Telephone: _____
Date Started: _____	Final Inspection Date: _____

*Certifying professional must be a licensed Professional Engineer (PE), Landscape Architect (LA), or Land Surveyor (LS).

The following checklist provides a basic outline of the anticipated items for the construction inspection of green/vegetated roofs. An experienced installer should be retained to construct the vegetated roof system. Given the diversity of extensive vegetated roof designs, there is no typical step-by-step construction sequence for proper installation. Inspectors should provide the following information and the timing of inspection verification as needed to document the facility was constructed properly as per the approved plans and VDEQ Design Specification No. 5. The standard for design of this practice is based on the [Virginia Stormwater BMP Clearinghouse](#) and the [Arlington County Stormwater Guidance Manual](#).

All items should be checked when completed. **Items labeled “Certification of...” must be crossed off, dated and initialed by the certifying inspector. For items requiring installation by a “certified” installer, corresponding certifications must be attached.**

DECK CONSTRUCTION		DATE
<input type="checkbox"/>	Roof constructed with proper slope and material?	
<input type="checkbox"/>	Roof dimensions meet required dimension per approved plans? Verify green roof dimensions and surface area (if multiple installations, submit a plat showing locations, and square footage): _____	

WATERPROOFING		DATE
<input type="checkbox"/>	Waterproofing installed properly per manufacturer's specifications?	
<input type="checkbox"/>	Does waterproofing system require installation by an applicator “certified” by the manufacturer? (If yes, a copy of the certification is required)	
<input type="checkbox"/>	Flood test* performed to ensure system is watertight? (Attach flood test report) <i>*Flood test consists of placing at least 2” of water over the membrane for 48 hours to confirm the integrity of the waterproofing system.</i>	

GREEN ROOF COMPONENTS		DATE
Verify the type of vegetated roof system installed: ____ Tray System ____ Built In Place System		
<input type="checkbox"/>	Do the root barrier, insulation, moisture retention layer, filter fabric and drainage layers meet plan specifications? (Attach invoices and manufacturers certifications)	
<input type="checkbox"/>	Does the growing media meet plan specifications? (Attach receipts and photos) Verify depth of growing media installed: _____	
<input type="checkbox"/>	Does the metal curbing and flashing meet plan specifications?	
<input type="checkbox"/>	Are all seams, joints and edges caulked and sealed with approved grade of caulk or sealant?	
<input type="checkbox"/>	Do pedestals, pavers and non-vegetated areas meet plan specifications? Verify location and type: _____	

PLANTINGS / VEGETATION		DATE
Verify the type of vegetated roof system installed: ____ Tray System ____ Built In Place System		
<input type="checkbox"/>	Does the vegetation layer meet plan specifications? (Attach invoices) Verify vegetation source: __ plugs __ seeds __ pre-grown mat __ species mixture __ coverage	
<input type="checkbox"/>	Do the number and type of plants meet the approved planting plan? (Attach photos, if multiple installations submit photo of each location)	

COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)	DATE

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans (or deviations are noted here).

Signature: _____ Date: _____

Certifying Professional's License Number (or Seal): _____

Certification Letter for Rainwater Harvesting

Company Name
Address

Date

Stormwater Specialist
Department of Environmental Services
2100 Clarendon Blvd
Suite 705
Arlington, VA 22201

RE: Stormwater Management Facility (SWMF) As-Built Certification
[PROJECT NAME]
[PROJECT ADDRESS]
Arlington, VA
[BUILDING PERMIT #], [LDA#], [SWM#]

Dear Sir or Madam,

We have inspected the rainwater harvesting system that was constructed as part of the above referenced project and determined that it has been installed in accordance to the County approved plan dated **[INSERT DATE OF ENGINEER'S STAMP ON APPROVED PLANS]**. The approved rainwater harvesting system is comprised of a **[INSERT DESCRIPTION OF STRUCTURE INCLUDING SIZE/DIMENSIONS AND MATERIAL]** that captures stormwater runoff for this project.

Based on the as-built conditions of the site, the rainwater harvesting system captures **[TOTAL AREA OF ROOF DRAINING TO RAINWATER HARVESTING SYSTEM]**, therefore the facility meets the requirements of the Arlington County's Stormwater Ordinance.

For reference, the as-built drawings are attached showing the sizing of the facility. As required, the attached as-built drawings include, but is not limited to, the following information: inner dimensions of the facility (L x W x H); dimensions of any internal chambers (i.e. clearwell); pump specifications; prescreening devices and first flush diverters; sizes and inverts for all orifices, weirs, and inflow/outfall pipes. Therefore, it is our professional opinion that the facility was installed in accordance to the County approved plan and that the facility is functioning as designed.

If you have any questions regarding the above-mentioned facility, please do not hesitate to call me.

Respectfully,



Attachments:

1. As-built drawings

Certification Letter for Proprietary BMP

Company Name
Address

Date

Stormwater Specialist
Department of Environmental Services
2100 Clarendon Blvd
Suite 705
Arlington, VA 22201

RE: Stormwater Management Facility (SWMF) As-Built Certification
[PROJECT NAME]
[PROJECT ADDRESS]
Arlington, VA
[BUILDING PERMIT #], [LDA#], [SWM#]

Dear Sir or Madam,

We have inspected the **[TYPE OF SWMF FACILITY]** facility that was constructed as part of the above referenced project and determined that it has been installed in accordance to the County approved plan dated **[INSERT DATE OF ENGINEER'S STAMP ON APPROVED PLANS]**. The approved **[TYPE OF SWMF FACILITY]** facility is comprised of **[INSERT DESCRIPTION OF STRUCTURE INCLUDING SIZE/DIMENSIONS AND MODEL #]** with **[NUMBER, SIZE AND TYPE OF CARTRIDGES]** that treats stormwater runoff for this project.

Based on the as-built conditions of the site, facility **[X]** treats **[TOTAL AREA TREATED]** of which **[AMOUNT OF IMPERVIOUS AREA TREATED]** is impervious. Facility **[Y]** treats **[TOTAL AREA TREATED]** of which **[AMOUNT OF IMPERVIOUS AREA TREATED]** is impervious, therefore the facility meets the requirements of the Arlington County's Stormwater Ordinance.

For reference, the as-built drawings are attached showing the sizing of the facility along with the activation letter from the manufacturer. As required, the as-built drawings include the inverts for all inflow/outfall pipes connected to the facility. Therefore, it is our professional opinion that the facility was installed in accordance to the County approved plan and that the facility is functioning as designed.

If you have any questions regarding the above-mentioned facility, please do not hesitate to call me.

Respectfully,

Attachments:

1. As-built drawings
2. Activation Letter from manufacturer



Certification Letter for Water Quantity Control (Detention) Facility

Company Name
Address

Date

Stormwater Specialist
Department of Environmental Services
2100 Clarendon Blvd
Suite 705
Arlington, VA 22201

RE: Stormwater Management Facility (SWMF) Certification
[PROJECT NAME]
[PROJECT ADDRESS]
Arlington, VA
[BUILDING PERMIT #], [LDA#], [SWM#]

Dear Sir or Madam,

A stormwater detention facility was required as part of the above referenced project dated **[INSERT DATE OF ENGINEER'S STAMP ON APPROVED PLANS]**. The approved detention facility is comprised of a **[INSERT DESCRIPTION OF STRUCTURE INCLUDING SIZE/DIMENSIONS AND MATERIAL]** that provides stormwater runoff quantity control for this project.

Based on the constructed conditions of the site, facility **[X]** captures and controls **[TOTAL AREA TREATED]** of which **[AMOUNT OF IMPERVIOUS AREA TREATED]** is impervious. Facility **[Y]** captures and controls **[TOTAL AREA TREATED]** of which **[AMOUNT OF IMPERVIOUS AREA TREATED]** is impervious.

For reference, the record drawings are attached showing the sizing of the facility. As required, the attached drawings include, but are not limited to, the following information: inner dimensions of the facility (L x W x H); dimensions of any internal chambers (i.e. clearwell); trash rack details; sizes and inverts for all orifices, weirs, and inflow/outfall pipes.

Pursuant to 9VAC25-870-55 and Arlington County Code Chapter 60-8, I hereby certify that to the best of my knowledge and belief the stormwater management facilities shown on these record drawings have been constructed in accordance with the approved plans and specifications.

Name

Signature

Virginia

License Date



"Certify means to state or declare a professional opinion based on sufficient and appropriate onsite inspections, material tests, as-built survey data, and information provided by other professionals and the contractor, conducted during or after construction."

Enclosure:

1. Record drawings