

# Sheet Flow to Afforested Filter Strip Construction Checklist

*This checklist has been developed for BMPs designed in accordance with the Delaware Sediment and Stormwater Program's Post Construction Stormwater BMP Standards and Specifications. Submit interim versions of this construction checklist to the approval agency weekly with the Certified Construction Reviewer report. Submit the final completed checklist with the PCVD.*

## **PROJECT INFORMATION**

Project Name/BMP Name: \_\_\_\_\_

Project Approval Number: \_\_\_\_\_ NOI number: \_\_\_\_\_

Location: \_\_\_\_\_

Contractor: \_\_\_\_\_

Construction Reviewer: \_\_\_\_\_

Supervising P.E.: \_\_\_\_\_

For each checklist item, enter in the blank the date (MM/DD/YY) the item is completed and verified by the construction reviewer. If an item is not applicable, enter "N/A" in the blank for that checklist item.

### **I. Pre-Construction**

A. \_\_\_\_\_ Afforested filter strip field meeting with responsible person and person completing construction checklist.

B. \_\_\_\_\_ Extents of afforested filter strip (to include gravel diaphragm/engineered level spreader area) delineated and access by equipment with tracked vehicles for the construction of the filter strip to prevent compaction of existing soils.

C. \_\_\_\_\_ Equipment on the site large enough to excavate afforested filter strip from the sides of the facility.

D. \_\_\_\_\_ Pervious areas draining to the afforested filter strip stabilized in accordance with the approved plans.

E. \_\_\_\_\_ Pipe and appurtenances on-site and dimensions and properties checked and confirmed to be in accordance with the approved plan.

i. \_\_\_\_\_ Permeable berm discharge pipe

ii. \_\_\_\_\_ Other; list: \_\_\_\_\_

F. \_\_\_\_\_ Materials on-site and dimensions and properties checked and confirmed to be in accordance with the approved plan. ***Submit materials invoice or delivery tickets to approval agency as part of PCVD for the following items:***

i. \_\_\_\_\_ Clean, washed gravel for gravel diaphragm

ii. \_\_\_\_\_ Clean, washed gravel for level spreader

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Construction Reviewer: \_\_\_\_\_

- iii. \_\_\_\_\_ Clean, washed gravel for permeable berm
- iv. \_\_\_\_\_ Geotextile fabric (Flow rate > 110 gal/min/sf)
- v. \_\_\_\_\_ Soil amendments
- vi. \_\_\_\_\_ Engineered level spreader
- vii. \_\_\_\_\_ Permeable berm soil (40% excavated soil, 40% sand, 20% pea gravel)
- viii. \_\_\_\_\_ Other; list: \_\_\_\_\_

## II. Excavation and Grading

- A. \_\_\_\_\_ Existing topsoil stripped and stockpiled for later use.
- B. \_\_\_\_\_ Excavation for gravel diaphragm/level spreader to dimensions, bottom elevation, and at location as per the approved plan.
- C. \_\_\_\_\_ Gravel diaphragm/level spreader excavated from the sides to not compact the existing soil.
- D. \_\_\_\_\_ Afforested filter strip graded, as per the approved plan.
- E. \_\_\_\_\_ Permeable berm constructed to design elevation and width.
- F. \_\_\_\_\_ Groundwater not encountered during excavation. (Note: If groundwater is encountered during the excavation process, construction of the facility must cease, and the designer notified that a plan modification is necessary)

## III. Structural Components

- A. \_\_\_\_\_ Filter fabric placed between the gravel and underlying soil for gravel diaphragm.
- B. \_\_\_\_\_ Gravel placed with the depth in accordance with the approved plan.
- C. \_\_\_\_\_ Impervious sheet flow to gravel diaphragm has a drop of at least 3”.
- D. \_\_\_\_\_ Engineered level spreader lip installed with an anchored footer in accordance with the approved plan.
- E. \_\_\_\_\_ Engineered level spreader constructed so the ends tie back into the slope.
- F. \_\_\_\_\_ Gravel placed with the depth in permeable berm in accordance with approved plan.
- G. \_\_\_\_\_ Permeable berm outlets constructed with the material, dimensions, location, and elevation in accordance with approved plan.
- H. \_\_\_\_\_ Photo documentation of construction of structural components taken. **Submit photo documentation to approval agency as part of PCVD.** (Photo #: \_\_\_\_\_ )

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Construction Reviewer: \_\_\_\_\_

**IV. Vegetative Stabilization**

A. \_\_\_\_\_ Vegetated areas have completed the following items. ***Submit soil test report, lime, fertilizer, compost, planting and seed tickets to approval agency as part of PCVD.***

- i. \_\_\_\_\_ Soil testing.
- ii. \_\_\_\_\_ Application of topsoil to a minimum depth of 4 inches.
- iii. \_\_\_\_\_ Application of soil amendments including compost, lime and fertilizer in accordance with the recommendations of the soil test or the approved plan.
- iv. \_\_\_\_\_ Application of seed to the soil surface using approved methods.
- v. \_\_\_\_\_ Areas to be planted completed in accordance with the approved plans
- vi. \_\_\_\_\_ Mulch applied in accordance with the approved plan.
- vii. \_\_\_\_\_ Invasive species removed.

B. \_\_\_\_\_ Afforested areas planted in accordance with the afforestation requirements (complete Afforestation Construction Checklist)

C. \_\_\_\_\_ Photo documentation of landscaping components taken. ***Submit photo documentation to approval agency as part of PCVD.*** (Photo #: \_\_\_\_\_ )

**V. Erosion and Sediment Control**

A. \_\_\_\_\_ Sediment prevented from entering afforested filter strip by keeping using perimeter controls as specified on the approved plan.

B. \_\_\_\_\_ Sediment controls removed once drainage area meets final stabilization standard and before the construction of the gravel diaphragm or level spreader.

**VI. Maintenance Access**

A. \_\_\_\_\_ Maintenance access in accordance with the approved plans.

**VII. Post Construction Verification**

Owner shall submit post construction verification documents to demonstrate that the afforested filter strip practice has been constructed within allowable tolerances in accordance with the Approved Sediment and Stormwater Management Plan and accepted by the approving agency.

A. \_\_\_\_\_ Constructed afforested filter strip slope confirmed no greater than 2% steeper than the design slope once ESC controls are removed.

B. \_\_\_\_\_ Constructed afforested filter strip length confirmed equal to or greater than 90% of the design length once ESC controls are removed.

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C. \_\_\_\_\_ Constructed afforested filter strip width confirmed equal to or greater than 90% of the design width once ESC controls are removed.

D. \_\_\_\_\_ Constructed elevation of all structures confirmed to be within 0.15 foot of the design elevation for:

- i. \_\_\_\_\_ Gravel diaphragm
- ii. \_\_\_\_\_ Engineered level spreader
- iii. \_\_\_\_\_ Permeable berm
- iv. \_\_\_\_\_ Permeable berm discharge pipe
- v. \_\_\_\_\_ Other; list: \_\_\_\_\_

**VIII. BMP Acceptance**

A. \_\_\_\_\_ Final BMP construction review complete.

B. \_\_\_\_\_ All BMP punch list items addressed.

C. \_\_\_\_\_ Afforested filter strip is online (stabilized drainage area is entering afforested filter strip)

D. \_\_\_\_\_ As-built survey.

E. \_\_\_\_\_ PCVD submitted to approval agency for review and approval. Submit the following pieces of PCVD documentation to the approval agency:

- Materials invoice or delivery tickets
- Photo documentation
- Soil test report
- Compost lime, fertilizer, and seed tickets
- As-built survey
- Final, completed BMP Construction Checklist