Project Name: Construct a New Residential Rehabilitation Treatment Program (RRTP) Building				MDE No. 15-SF-0279
As-Built Data for M-6 Micro-Bioretention #1:				
*To be completed by certifying engineer				
Type of Facility: Micro-scale Practice				ESD ID: M-6
	Feature	Design		As-built
Filter Bed	Area	802 sf		
	Max. Dimensions	20' X 80'		
	Surface Elevation	25.50		
Overflow Device	Size/Type	48" DRAIN BASIN		
	Grate Type	24" DOME		
	Elevation	26.00		
	Ponding Depth	0.50		
	Coordinates	N: 686791.02		
		E: 1575735.63		
Ponding Volume Provided		458 cf		
Embankment/Weir	Top Elevation	26.00		
Mulch	Thickness	3 in	(0.25 ft)	
	Bottom Elevation	25.25		
SHA BSM Media	Thickness	24 in	(2.00 ft)	
	Bottom Elevation	23.25		
Course Sand	Thickness	4 in	(0.33 ft)	
	Bottom Elevation	22.92		
Pea Gravel	Thickness	4 in	(0.33 ft)	
	Bottom Elevation	22.58		
Underdrain Stone	Thickness above pipe	3 in	(0.25 ft)	
	Bottom Elevation	22.33		
	Type	#57 Stone		
Underdrain Pipe	Size/Type	4" Perf. PVC SDR-35		
	Slope	0%		
	Invert Elevation	22.00		
Recharge Stone	Thickness below pipe	3 in	(0.25 ft)	
	Type	#57 Stone		
	Bottom Elevation	21.75		
Inlet Pipe	Size/Type	15" RCCP		
	Invert Elevation	19.80		
Outlet Pipe	Size/Type	15" RCCP		
	Invert Elevation	19.3		
Observation Well	Cap Top Elevation	25.75		
Geotextile (sides only)		Class PE Type I Non-Woven		
Plantings	See Landscape Plan			

AS–BUILT CERTIFICATION

I hereby certify that the stormwater management facilities (both BMPs and ESD practices) shown on the plans have been constructed in accordance with the plans approved by the Maryland Department of the Environment, except as noted in red on the "AS BUILT" drawings.

Name (Printed) ____________ Signature ____________

Maryland Registration Number (PE or LS) ____________ Date ____________

15–SF–0279

Facilities being certified (list each individually using facility ID number and/or description):

MICRO–BIORETENTION FACILITY #1

"Certify" means to state or declare a professional opinion based on sufficient and appropriate onsite inspections and material tests conducted during construction. At a minimum, regular inspections shall be made and documented with photographs and/or construction logs at the following specified stages of construction:

1. during excavation to subgrade,
2. during placement and backfill of underdrain system,
3. during placement of geotextile and all filter media,
4. during construction of appurtenant conveyance systems such as diversion structures, pre–filters, filters, outlets, and flow distribution structures, and
5. upon completion of final grading and establishment of permanent stabilization.

Project Name: Construct a New Residential Rehabilitation Treatment Program (RRTP) Building				MDE No. 15-SF-0279
As-Built Data for M-6 Micro-Bioretention #2:				
*To be completed by certifying engineer				
Type of Facility: Micro-scale Practice				ESD ID: M-6
	Feature	Design		As-built
Filter Bed	Area	838 sf		
	Max. Dimensions	76' x 43'		
	Surface Elevation	27.80		
Overflow Device	Size/Type	48" DRAIN BASIN		
	Grate Type	24" DOME		
	Elevation	28.80		
	Ponding Depth	1.00		
	Coordinates	N: 686829.03		
		E: 1575783.73		
Ponding Volume Provided		931 cf		
Embankment/Weir	Top Elevation	30.00		
Mulch	Thickness	3 in	(0.25 ft)	
	Bottom Elevation	27.55		
SHA BSM Media	Thickness	24 in	(2.00 ft)	
	Bottom Elevation	25.55		
Course Sand	Thickness	4 in	(0.33 ft)	
	Bottom Elevation	25.22		
Pea Gravel	Thickness	4 in	(0.33 ft)	
	Bottom Elevation	24.88		
Underdrain Stone	Thickness above pipe	3 in	(0.25 ft)	
	Bottom Elevation	24.63		
	Type	#57 Stone		
Underdrain Pipe	Size/Type	4" Perf. PVC SDR-35		
	Slope	0%		
	Invert Elevation	24.30		
Recharge Stone	Thickness below pipe	3 in	(0.25 ft)	
	Type	#57 Stone		
	Bottom Elevation	24.05		
Inlet Pipe	Size/Type	4" PVC		
	Invert Elevation	24.30		
Outlet Pipe	Size/Type	15" RCCP		
	Invert Elevation	23.37		
Observation Well	Cap Top Elevation	28.05		
Geotextile (sides only)		Class PE Type I Non-Woven		
Plantings	See Landscape Plan			

AS–BUILT CERTIFICATION

I hereby certify that the stormwater management facilities (both BMPs and ESD practices) shown on the plans have been constructed in accordance with the plans approved by the Maryland Department of the Environment, except as noted in red on the "AS BUILT" drawings.

Name (Printed) ____________ Signature ____________

Maryland Registration Number (PE or LS) ____________ Date ____________

15–SF–0279

Facilities being certified (list each individually using facility ID number and/or description):

MICRO–BIORETENTION FACILITY #2

"Certify" means to state or declare a professional opinion based on sufficient and appropriate onsite inspections and material tests conducted during construction. At a minimum, regular inspections shall be made and documented with photographs and/or construction logs at the following specified stages of construction:

1. during excavation to subgrade,
2. during placement and backfill of underdrain system,
3. during placement of geotextile and all filter media,
4. during construction of appurtenant conveyance systems such as diversion structures, pre–filters, filters, outlets, and flow distribution structures, and
5. upon completion of final grading and establishment of permanent stabilization.

Project Name: Construct a New Residential Rehabilitation Treatment Program (RRTP) Building				MDE No. 15-SF-0279
As-Built Data for M-6 Micro-Bioretention #3:				
*To be completed by certifying engineer				
Type of Facility: Micro-scale Practice				ESD ID: M-6
	Feature	Design		As-built
Filter Bed	Area	769 sf		
	Max. Dimensions	64' x 38'		
	Surface Elevation	28.5		
Overflow Device	Size/Type	48" DRAIN BASIN		
	Grate Type	24" DOME		
	Elevation	29.00		
	Ponding Depth	0.50		
	Coordinates	N: 686951.63		
		E: 1575833.54		
Ponding Volume Provided		922 cf		
Embankment/Weir	Top Elevation	30.00		
Mulch	Thickness	3 in	(0.25 ft)	
	Bottom Elevation	28.25		
SHA BSM Media	Thickness	24 in	(2.00 ft)	
	Bottom Elevation	26.25		
Course Sand	Thickness	4 in	(0.33 ft)	
	Bottom Elevation	25.92		
Pea Gravel	Thickness	4 in	(0.33 ft)	
	Bottom Elevation	25.58		
Underdrain Stone	Thickness above pipe	3 in	(0.25 ft)	
	Bottom Elevation	25.33		
	Type	#57 Stone		
Underdrain Pipe	Size/Type	4" Perf. PVC SDR-35		
	Slope	0%		
	Invert Elevation	25.00		
Recharge Stone	Thickness below pipe	3 in	(0.25 ft)	
	Type	#57 Stone		
	Bottom Elevation	24.75		
Inlet Pipe	Size/Type	15" RCCP		
	Invert Elevation	24.45		
Outlet Pipe	Size/Type	15" RCCP		
	Invert Elevation	22.25		
Observation Well	Cap Top Elevation	28.75		
Geotextile (sides only)		Class PE Type I Non-Woven		
Plantings	See Landscape Plan			

AS–BUILT CERTIFICATION

I hereby certify that the stormwater management facilities (both BMPs and ESD practices) shown on the plans have been constructed in accordance with the plans approved by the Maryland Department of the Environment, except as noted in red on the "AS BUILT" drawings.

Name (Printed) ____________ Signature ____________

Maryland Registration Number (PE or LS) ____________ Date ____________

15–SF–0279

Facilities being certified (list each individually using facility ID number and/or description):

MICRO–BIORETENTION FACILITY #3

"Certify" means to state or declare a professional opinion based on sufficient and appropriate onsite inspections and material tests conducted during construction. At a minimum, regular inspections shall be made and documented with photographs and/or construction logs at the following specified stages of construction:

1. during excavation to subgrade,
2. during placement and backfill of underdrain system,
3. during placement of geotextile and all filter media,
4. during construction of appurtenant conveyance systems such as diversion structures, pre–filters, filters, outlets, and flow distribution structures, and
5. upon completion of final grading and establishment of permanent stabilization.

Project Name: Construct a New Residential Rehabilitation Treatment Program (RRTP) Building				MDE No. 15-SF-0279
As-Built Data for M-6 Micro-Bioretention #4:				
*To be completed by certifying engineer				
Type of Facility: Micro-scale Practice				ESD ID: M-6
	Feature	Design		As-built
Filter Bed	Area	966 sf		
	Max. Dimensions	60' x 38'		
	Surface Elevation	28.5		
Overflow Device	Size/Type	48" DRAIN BASIN		
	Grate Type	24" DOME		
	Elevation	29.00		
	Ponding Depth	0.50		
	Coordinates	N: 686949.80		
		E: 1575908.85		
Ponding Volume Provided		531 cf		
Embankment/Weir	Top Elevation	31.00		
Mulch	Thickness	3 in	(0.25 ft)	
	Bottom Elevation	28.25		
SHA BSM Media	Thickness	24 in	(2.00 ft)	
	Bottom Elevation	26.25		
Course Sand	Thickness	4 in	(0.33 ft)	
	Bottom Elevation	25.92		
Pea Gravel	Thickness	4 in	(0.33 ft)	
	Bottom Elevation	25.58		
Underdrain Stone	Thickness above pipe	3 in	(0.25 ft)	
	Bottom Elevation	25.33		
	Type	#57 Stone		
Underdrain Pipe	Size/Type	4" Perf. PVC SDR-35		
	Slope	0%		
	Invert Elevation	25.00		
Recharge Stone	Thickness below pipe	3 in	(0.25 ft)	
	Type	#57 Stone		
	Bottom Elevation	24.75		
Inlet Pipe	Size/Type	15" RCCP		
	Invert Elevation	23.30		
Outlet Pipe	Size/Type	15" RCCP		
	Invert Elevation	23.10		
Observation Well	Cap Top Elevation	28.75		
Geotextile (sides only)		Class PE Type I Non-Woven		
Plantings	See Landscape Plan			

AS–BUILT CERTIFICATION

I hereby certify that the stormwater management facilities (both BMPs and ESD practices) shown on the plans have been constructed in accordance with the plans approved by the Maryland Department of the Environment, except as noted in red on the "AS BUILT" drawings.

Name (Printed) ____________ Signature ____________

Maryland Registration Number (PE or LS) ____________ Date ____________

15–SF–0279

Facilities being certified (list each individually using facility ID number and/or description):

MICRO–BIORETENTION FACILITY #4

"Certify" means to state or declare a professional opinion based on sufficient and appropriate onsite inspections and material tests conducted during construction. At a minimum, regular inspections shall be made and documented with photographs and/or construction logs at the following specified stages of construction:

1. during excavation to subgrade,
2. during placement and backfill of underdrain system,
3. during placement of geotextile and all filter media,
4. during construction of appurtenant conveyance systems such as diversion structures, pre–filters, filters, outlets, and flow distribution structures, and
5. upon completion of final grading and establishment of permanent stabilization.

Project Name: Construct a New Residential Rehabilitation Treatment Program (RRTP) Building				MDE No. 15-SF-0279
As-Built Data for M-6 Micro-Bioretention #5:				
*To be completed by certifying engineer				
Type of Facility: Micro-scale Practice				ESD ID: M-6
	Feature	Design		As-built
Filter Bed	Area	721 sf		
	Max. Dimensions	42' X49'		
	Surface Elevation	28.5		
Overflow Device	Size/Type	48" DRAIN BASIN		
	Grate Type	24" DOME		
	Elevation	29.00		
	Ponding Depth	0.50		
	Coordinates	N: 686927.72		
		E: 1576012.26		
Ponding Volume Provided		408 cf		
Embankment/Weir	Top Elevation	31		
Mulch	Thickness	3 in	(0.25 ft)	
	Bottom Elevation	28.25		
SHA BSM Media	Thickness	24 in	(2.00 ft)	
	Bottom Elevation	26.25		
Course Sand	Thickness	4 in	(0.33 ft)	
	Bottom Elevation	25.92		
Pea Gravel	Thickness	4 in	(0.33 ft)	
	Bottom Elevation	25.58		
Underdrain Stone	Thickness above pipe	3 in	(0.25 ft)	
	Bottom Elevation	25.33		
	Type	#57 Stone		
Underdrain Pipe	Size/Type	4" Perf. PVC SDR-35		
	Slope	0%		
	Invert Elevation	25.00		
Recharge Stone	Thickness below pipe	3 in	(0.25 ft)	
	Type	#57 Stone		
	Bottom Elevation	24.75		
Inlet Pipe	Size/Type	15" RCCP		
	Invert Elevation	24.2		
Outlet Pipe	Size/Type	15" RCCP		
	Invert Elevation	24.00		
Observation Well	Cap Top Elevation	28.75		
Geotextile (sides only)		Class PE Type I Non-Woven		
Plantings	See Landscape Plan			

AS–BUILT CERTIFICATION

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Maryland Registration Number (PE or LS) ____________ Date ____________

15–SF–0279

Facilities being certified (list each individually using facility ID number and/or description):

MICRO–BIORETENTION FACILITY #5

"Certify" means to state or declare a professional opinion based on sufficient and appropriate onsite inspections and material tests conducted during construction. At a minimum, regular inspections shall be made and documented with photographs and/or construction logs at the following specified stages of construction:

1. during excavation to subgrade,
2. during placement and backfill of underdrain system,
3. during placement of geotextile and all filter media,
4. during construction of appurtenant conveyance systems such as diversion structures, pre–filters, filters, outlets, and flow distribution structures, and
5. upon completion of final grading and establishment of permanent stabilization.

NOTE:

IT IS THE CONTRACTOR'S RESPONSIBILITY, ON BEHALF OF THE OWNER, TO ENGAGE A LICENSED PROFESSIONAL ENGINEER TO CERTIFY THE STORMWATER MANAGEMENT FACILITY AND TO PREPARE AND SUBMIT AS–BUILT DRAWINGS. "CERTIFY" MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED ON SUFFICIENT AND APPROPRIATE ONSITE OBSERVATIONS AND/OR INSPECTIONS AT CRUCIAL MILESTONES DURING CONSTRUCTION OF THE FACILITY, MATERIAL TESTS CONDUCTED DURING CONSTRUCTION, AND POST–CONSTRUCTION SURVEYING AND VERIFICATION.

CRUCIAL MILESTONES INCLUDE, AT A MINIMUM, REGULAR INSPECTIONS MADE AND DOCUMENTED AT THE FOLLOWING STAGES OF CONSTRUCTION: 1) DURING EXCAVATION TO SUBGRADE, 2) DURING PLACEMENT AND BACKFILL OF UNDERDRAIN SYSTEM, 3) DURING PLACEMENT OF GEOTEXTILES AND ALL FILTER MEDIA, 4) DURING CONSTRUCTION OF APPURTENANT CONVEYANCE SYSTEMS SUCH AS OVERFLOW INLETS, OUTLETS, ETC, AND 5) UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.

APPROVED
NOV 2 0 2015
SEDIMENT & STORMWATER PLAN REVIEW DIVISION

MDE # 15-SF-0279

#	Revision	Date

CONSULTANTS: HOPE FURRER Associates, Inc. · SITE RESOURCES Comprehensive Land Planning & Site Design Services (410) 663-3388 · leeandassociatesinc

SEAL

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 45542, EXPIRATION DATE: 06/10/2016.

ARCHITECTS/ENGINEERS: AE WORKS
6587 Hamilton Avenue
Pittsburgh, Pennsylvania 15206
Ph: 412.287.7333 Fax: 412.287.7334
www.ae-works.com
AE Works Project Number: 12028

Drawing Title	Project Title	Project Number
Stormwater Management Plan Notes	Construct a New Residential Rehabilitation Treatment Program (RRTP) Building	512-531
Approved: Project Director	Location: Perry Point VA Medical Center, Perry Point, MD 21902	Building Number
	Date: 06-11-15 · Checked: JLH/MAS · Drawn: RSW PGP	Drawing Number: SWM 2.02

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231