MOWERY ENVIRONMENTAL, LLC
At the Intersection of Business and the Environment

JD Mushrooms, Inc.
[232 Ellicott Road, Avondale, PA 19311]

Biofilter Project

DESCRIPTION & PURPOSE:

- Install a 1,000 cubic foot biofilter at the outlet of the grassed waterway downslope of the raw material storage areas, settling basin, and wastewater tank. The purpose of the biofilter is to reduce the concentration of nitrogen, phosphorus, heavy metals, and other toxins present in the agricultural runoff through absorption and adsorption. The biofilter will use a carbon source (i.e. biochar or Ecochar™) to reduce these contaminates and improve the quality of the runoff water prior to it reaching the stream.

COST ESTIMATE:

- Construction
  - Biofilter (Including forebay, Ecochar™, fabric, plantings, perforated pipe, overflow drain, PVC pipe, rock apron, seed/mulch, excavation, and labor)
    - $32,500.00
- Technical Assistance
  - Site Survey, Design/Engineering, Quality Assurance, Project Management
    - $7,500.00
- SUM TOTAL
  - $40,000.00

PERFORMANCE:

- ~15 yr lifespan
- Ecochar media shall remove heavy metals and other toxins
- Ecochar media shall be capable of removing > 90% of total N and total P
- Ecochar shall support microbial/soil health

CONSTRUCTION TIMELINE:

- Completed by April 30, 2022

CONCEPT PLAN:

- See Attached…

DESIGN DETAIL:

- See Attached…

Sincerely,

Adam Mowery
Managing Member
Mowery Environmental, LLC
adam@moweryenvironmental.com
(717) 648-6109

Client: JD Mushrooms, Inc.
Project Location: 232 Ellicott Road
Avondale, PA 19311

Biofilter Project

Planner: Adam Mowery
Company: Mowery Environmental, LLC
Date: 08/17/2022

ECOCHAR M BIOFILTER PERFORMANCE

Ecochar Environmental Solutions Bioreactor
for Green Infrastrucure (GI)
Stormwater Treatment

SPECIFICATION: HIGH PERFORMANCE MEDIA

- ECOCHAR MEDIA SHALL REMOVE HEAVY METAL AND OTHER TOXICS.
- ECOCHAR MEDIA SHALL BE CAPABLE OF REMOVING >90% OF TOTAL N AND TOTAL P.
- ECOCHAR SHALL SUPPORT MICROBIAL/SOIL HEALTH.

HIGH PERFORMANCE STRUCTURAL UNDERDRAIN

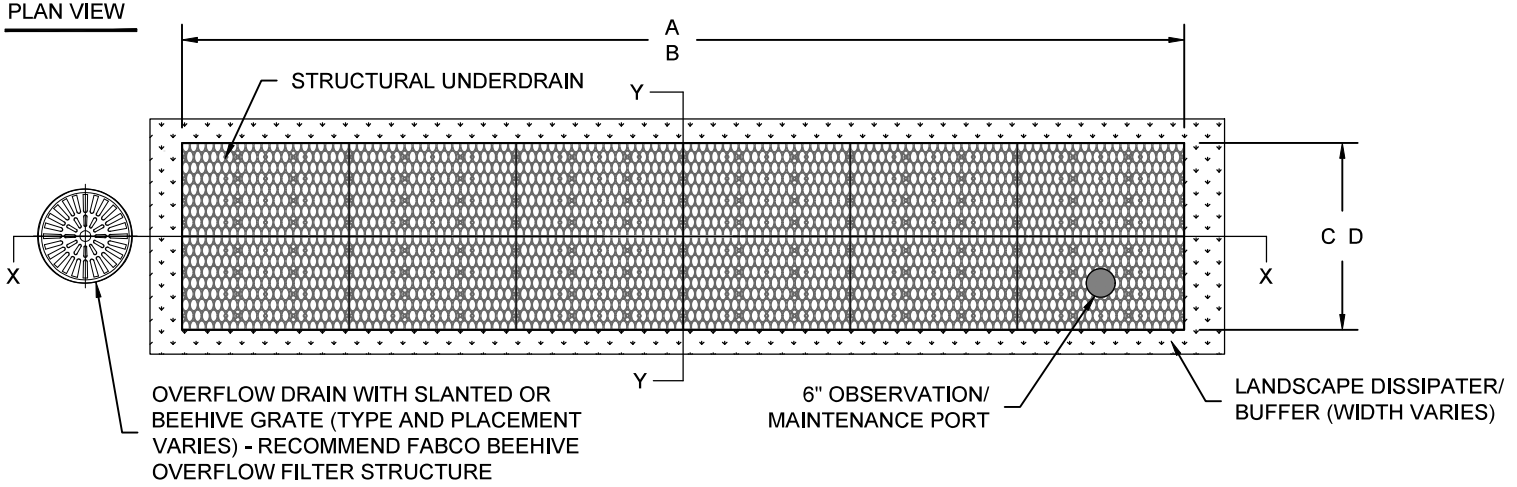
- MUST MEET HS-20 LOADING REQUIREMENTS.
- MUST BE MODULAR IN NATURE AND ASSEMBLED ON SITE.
- MUST HAVE MINIMUM 90% INTERIOR VOID SPACE.

PLANT COMPONENT

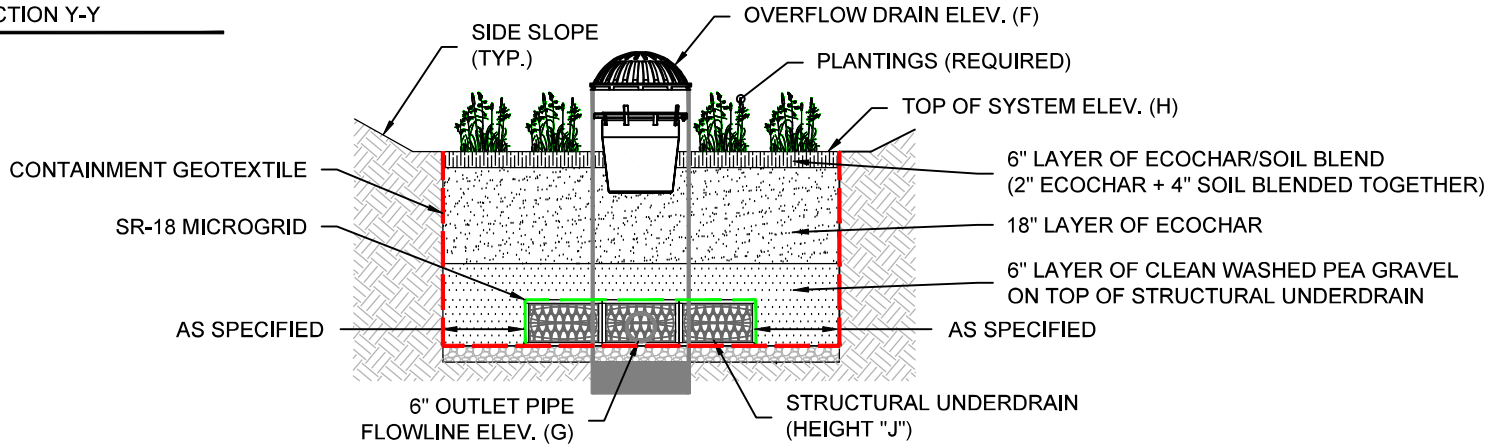
- SUPPLIER SHALL PROVIDE LIST OF ACCEPTABLE PLANTS
- IF PLANTS ARE NOT INCLUDED IN THE LANDSCAPE CONTRACT/PLANS, SITE CONTRACTOR SHALL PROVIDE PLANTS.
- PLANTS SHALL BE INSTALLED AT THE TIME THE SYSTEM IS COMMISSIONED FOR USE. PLANTING OUTSIDE THIS TIME REQUIRES APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT OF RECORD.

ECOCHAR BIOFILTER CONSTRUCTION GUIDE		
A	SYSTEM LENGTH	
B	# UNDERDRAIN LONG	
C	SYSTEM WIDTH	
D	# UNDERDRAIN WIDE	
E	WATER QUALITY VOLUME	
F	OVERFLOW ELEVATION	
G	OVERFLOW FLOWLINE	
H	TOP OF SYSTEM	
I	TOP OF GABION (OPTIONAL)	
J	UNDERDRAIN HEIGHT	

PLAN VIEW



SECTION Y-Y



ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

TO FIND A VALUE ADDED RESELLER IN YOUR AREA VISIT WWW.CONVERGENTWATER.COM OR CONTACT CONVERGENT WATER TECHNOLOGIES AT 1.800.777.5428

ECOCHAR® M BIOFILTER CONSTRUCTION GUIDE

ECOCHAR BIOFILTER - NATURE-BASED, CLIMATE-FRIENDLY GREEN STORMWATER INFRASTRUCTURE (GSI) MEDIA

DATE
5/2/22