SOIL MEDIA BED & GEOTEXTILE FABRIC

SOIL MEDIA TO MEET THE FOLLOWING PERFORMANCE CRITERIA PER ASTM D-422:

TOP LAYER:
PERCENT ORGANIC MATTER (BY WEIGHT) OF 0.5-5.0% PER ASTM D-2974 METHOD C
TEXTURE ANALYSIS (PARTICLE SIZE DISTRIBUTION BY WEIGHT):

* PERCENT SAND 70-90%
* PERCENT CLAY 3-10%
* PERCENT SILT PLUS CLAY ≤ 27%

THE FOLLOWING MIXTURE (% BY VOLUME) SHOULD CREATE AN APPROPRIATE BIOFILTRATION MEDIA, SUBJECT TO THE SPECIFIC CHARACTERISTICS OF THE TOPSOIL, WHICH MAY EXHIBIT CONSIDERABLE VARIABILITY

* 70-80% CONCRETE SAND PER ASTM C33 AND/OR SCREEN DECOMPOSED GRANITE SAND
* 20-30% SCREENED BULK TOPSOIL (CHOCOLATE LOAM IS ACCEPTABLE
* THE INGREDIENTS SHALL BE WELL-MIXED TO CREATE A HOMOGENEOUS MEDIUM

BIOFILTRATION MEDIA MUST BE STORED ON-SITE SEPARATE FROM OTHER MATERIALS AND COVERED TO PREVENT EROSION OF THE MIXTURE BY RAIN AND RUNOFF. THE MEDIA MUST HAVE A PROMINENT TAG AFFIXED THAT READS "BIOFILTRATION MEDIA FOR WATER QUALITY POND".

MIDDLE LAYER:

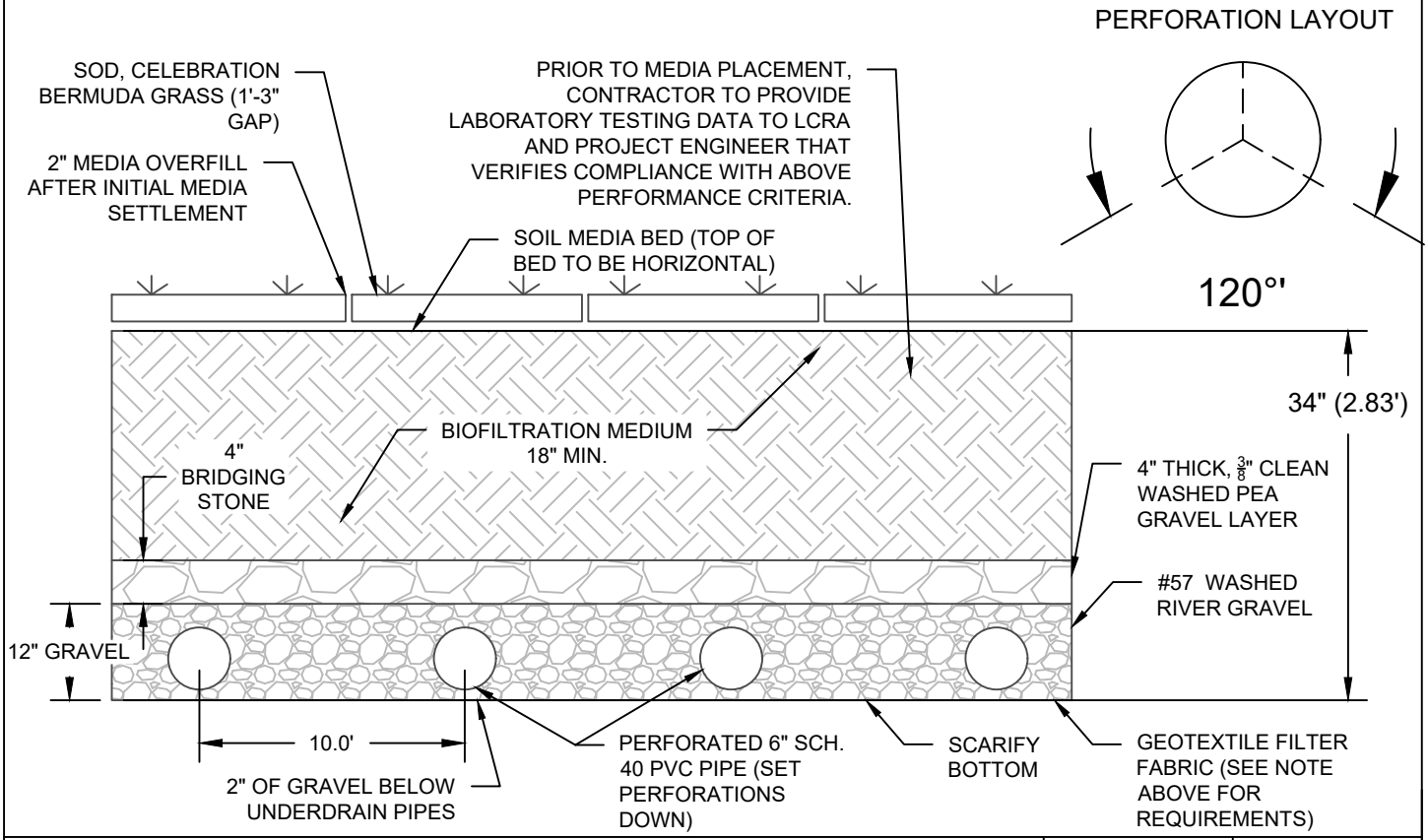
* 4 INCH THICK GRAVEL, $\frac{3}{8}$ INCH CLEAN WASHED PEA GRAVEL LAYER

BOTTOM LAYER:

* CLEAN, WASHED GRAVEL, # 57 LIMESTONE AGGREGATE, 12 INCH THICK

NON - WOVEN GEOTEXTILE FABRIC

PROPERTY	TEST METHOD	UNIT	SPECIFICATION
UNIT WEIGHT		OZ./SQ. YD.	4 (MIN.)
FILTRATION RATE		IN./SEC.	0.08 (MIN.)
GRAB STRENGTH	ASTM D-1682	LB.	400 (MIN.)
PUNCTURE STRENGTH	ASTM D-751(MODIFIED)	LB.	125 (MIN.)
MULLEN BURST STRENGTH	ASTM D-751	PSI.	400 (MIN.)
TENSILE STRENGTH	ASTM D-1682	LB.	200 (MIN.)
EQUIV. OPENING SIZE	US STANDARD SIEVE	NO.	80 (MIN.)



LOWER COLORADO RIVER AUTHORITY

BIOFILTRATION BED MEDIA SECTION

DATE: 08-2023

SHEET: 1 OF 2

BIOFILTRATION MEDIA PLACEMENT NOTES

- SCARIFY THE BOTTOM OF THE BIOFILTRATION AREA TO A DEPTH OF 2 TO 3 INCHES
- PLACE THE NON-WOVEN GEOTEXTILE FABRIC
- PLACE TWO INCHES OF CLEAN WASHED RIVER GRAVEL (#57 STONE)
- PLACE PERFORATED PVC UNDERDRAIN PIPES, PERFORATIONS TURNED DOWN
- PLACE #57 STONE TO A TOTAL DEPTH OF 12 INCHES AS PER DETAIL
- PLACE CLEAN WASHED PEA GRAVEL ON TOP OF #57 STONE, DEPTH ABOVE TOP OF STONE MUST BE A MINIMUM OF 4 INCHES
- PROVIDE MEDIA TESTING DOCUMENTATION TO INSPECTOR AND PROJECT ENGINEER
- CONTACT PROJECT ENGINEER AT LEAST 24-HOURS PRIOR TO MEDIA PLACEMENT FOR ENGINEER APPROVAL AND CERTIFICATION
- CONTACT THE LCRA INSPECTOR PRIOR TO MEDIA PLACEMENT FOR OBSERVATION OF THE PLACEMENT PROCESS
- PLACE THE BIOFILTRATION MEDIA IN 12 INCH LIFTS WITHOUT USING HEAVY OPERATING EQUIPMENT OR COMPACTION. LIFTS SHALL BE LIGHTLY WATERED TO ENCOURAGE SOIL SETTLING
- SKID STEERS CANNOT BE USED ON TOP OF THE MEDIA, TRACK LOADERS CAN BE USED AND TURNS MUST BE MINIMIZED TO REDUCE COMPACTION
- OVERFILL BIOFILTRATION MEDIA WITH A 2 INCH DEPTH TO ACCOUNT FOR SETTLING
- THE FINAL SURFACE MUST BE RAKED FLAT
- PLACE CELEBRATION BERMUDA SOD OR APPROVED EQUAL, SPACING OF 1" TO 3" BETWEEN SOD PIECES
- BACKFILL THE GAPS BETWEEN THE SOD WITH THE BIOFILTRATION MEDIA
- IRRIGATE THE SOD IF NEEDED TO PROMOTE VEGETATION ESTABLISHMENT

BIOFILTRATION MEDIA CERTIFICATION

- THE BIOFILTRATION MEDIA MUST BE CERTIFIED BY THE PROJECT ENGINEER OR THEIR DESIGNEE (E.G. CONTRACTOR, SOIL SUPPLIER, OR APPROPRIATE QUALIFIED ALTERNATIVE INDIVIDUAL) AS MEETING THE REQUIRED PERFORMANCE CRITERIA (BASED ON SUBMITTAL OF DELIVERY TICKETS, TEST RESULTS, ETC.) BEFORE ACCEPTANCE.
- SUPPLIER OF BIOFILTRATION MEDIA MUST HAVE LABORATORY TESTING CONDUCTED AT A MINIMUM OF SIX-MONTHS INTERVALS TO VERIFY PERCENT ORGANIC MATTER AND TEXTURE ANALYSIS. THE MEDIA MUST NOT CONTAIN ANY CONTAMINATED SOILS AND BE FREE OF ANY HOUSEHOLD OR HAZARDOUS WASTE. IT MUST BE FREE OF STONES, TRASH, OTHER UNDESIRABLE MATERIAL, AND SHOULD NOT CONTAIN WEEDS OR WEED SEEDS. NO INFERTILE ALLUVIAL SOILS (E.G. "RED DEATH") MAY BE USED IN THE MIXTURE.
- COMPOST DERIVED FROM ANIMAL OR HUMAN SOURCES AND UNSTABLE FORMS OF ORGANIC MATTER MAY NOT BE INCLUDED IN THE BIOFILTRATION MEDIA. RECOMMENDED SOURCES OF ORGANIC MATTER INCLUDE THAT FOUND NATURALLY IN NATIVE TOPSOIL, HUMUS, COIR FIBER, PEAT, AND MATURE PLANT-DERIVED COMPOSTS WITH AN ESTABLISHED FUNGAL COMPONENT.