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LOW IMPACT DEVELOPMENT STORMWATER MANAGEMENT STANDARD DETAILS

DRYWELL STORMWATER BMP

(sloped sided, no on-street parking, sidewalk, underdrain, control vault outside of BMP)

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SPECIFICATIONS

1. 12" DEEP OPEN GRADED WASHED STONE (TYPICALLY 3/4" TO 1-1/2" (ASTM #4 STONE) OR 1" TO 2" (ASTM #3 STONE).
2. BRIDGING LAYER(S) PER LIDI BIORETENTION TECHNICAL SPECIFICATIONS (BTS). DO NOT USE FILTER FABRIC BETWEEN BSM AND AGGREGATE. DO NOT USE FILTER FABRIC BETWEEN BIOFILTER SOIL MATERIAL (BSM) AND AGGREGATE.
3. 30 ML LINER MAY BE REQUIRED TO AVOID LATERAL INFILTRATION BELOW STREET; SUBJECT TO GEOTECHNICAL RECOMMENDATIONS.
4. MAINTAIN 6" MINIMUM BENCH OF NATIVE SOIL FOR SUPPORT OF ADJACENT SIDEWALK/ROAD (TYPICAL).
5. CURB AND GUTTER DETAIL 110.
6. CURB INLET DETAIL 120, GUTTER INLET ELEV (GIE). LOCATE ENERGY DISSIPATION COBBLE PADS AS SPECIFIED IN INLET DETAILS.
7. OVERFLOW STRUCTURE REQUIRED FOR IN-LINE SYSTEMS WITHOUT OVERFLOW BYPASS, DETAIL 140.
8. MAINTENANCE PIPES - 4" MIN. DIA. VERTICAL PVC PIPES CONNECTED TO UNDERDRAIN. PLACED AT START AND 3 FEET BEFORE END OF UNDERDRAIN. REQUIRES DIRECTIONAL SWEEP BEND. THREADED AND CAPPED
9. VEGETATION - PLANT SELECTION AND MULCH (OPTIONAL) PER BIORETENTION TECHNICAL SPECIFICATIONS.
10. 4" MIN. EXPOSED WALL HEIGHT
11. SIDEWALK DRAINAGE NOTCH 1" LOWER THAN SIDEWALK, SLOPED TO FACILITY
12. SEE PLANS FOR SIDEWALK RESTORATION
13. DEEP CURB DETAIL
14. BIORETENTION SOIL MEDIA (BSM). SPECIFICATION PER BIORETENTION TECHNICAL SPECIFICATIONS (BTS). SPECIFICATION SHOULD AVOID COMPOST OR OTHER MATERIAL KNOWN TO LEACH NUTRIENTS.
15. UNDERDRAIN, MIN. 4" DIA. PVC SDR 35 PERFORATED PIPE OR LARGER AS NEEDED TO CONVEY PEAK TREATED FLOWRATE WITH MINIMAL HEAD LOSS, SEE CONSTRUCTION NOTES.
16. 8" INLET PIPE OR OTHER.
17. LOW FLOW ORIFICE. (SEE DESIGN NOTE 11).
18. STABILIZED BACKFILL - TWO-SACK SLURRY MIX.
19. SIDEWALK PER MUNICIPAL STANDARDS.
20. COMPACTED BASE MATERIAL.
21. ACCESS HATCH WITH SHUT OF VALVE SWITCH. CONNECTED TO SHUT OF VALVE IN INLET PIPE.
22. MAINTENANCE HOLE COS TYPE 204-204 MH A OR B. 3/4" I.D. MIN OBSERVATION PORT.
23. MANHOLE CONE - MODIFIED FLAT BOTTOM.
24. EXISTING SOILS. (SEE CONSTRUCTION NOTE 4, 8).
25. COMPACTED BACKFILL
26. PRE-CAST OR INSITU CAST CONTROL VAULT (SEE DESIGN NOTE 8)
27. ROCK - WASHED, SIZED BETWEEN 3/8" AND 1-1/2"
28. PERFORATED BASE OF CONTROL VAULT
29. DRILLED SHAFT WITH 6" WELDED STEEL OR THREADED PVC CASING (SEE DESIGN NOTE 13 & CONSTRUCTION NOTE 7,8)
30. 6 - 8" O.D. WELDED WIRE STAINLESS STEEL WELL SCREEN OR THREADED PVC SLOTTED SCREEN. SCREEN LENGTH + LENGTH + SLOT WIDTH TO BE DETERMINED IN ACCORDANCE WITH LOCAL CONSTRAINTS .I.E. DISTANCE BETWEEN CLAY LAYER AND MIN. 10FT ABOVE SEASONAL HIGH GROUNDWATER LEVEL
31. PVC STORMDRAIN CONNECTOR PIPE. SAME DIAMETER AS INFLOW PIPE TO CONTROL VAULT.

DESIGN NOTES

1. ADDITIONAL DESIGN GUIDANCE FOR BIOFILTRATION SYSTEM PROVIDED IN LIDI BIORETENTION TECHNICAL SPECIFICATIONS (BTS) DOCUMENT.
2. BOTTOM WIDTH - PROVIDE 2 FT MINIMUM FLAT BREGENALL
3. OTTOM WITH A MAX 3:1 SLOPE FOR SURFACE FINISHING WITHIN BIOFILTRATION SYSTEM
4. IF CALTRANS CLASS 2 PERMEABLE IS NOT AVAILABLE, SUBSTITUTE CLASS 3 PERMEABLE WITH AN OVERLYING 3" DEEP LAYER OF 3/4" (NO. 4) OPEN-GRADED AGGREGATE.
5. PROVIDE SPOT ELEVATIONS AT INLETS ON CIVIL PLANS (FE, OE, GIE, SIE). SEE DETAIL 120.
6. EDGE CONDITION WILL VARY FOR NEW AND RETROFIT PROJECTS. CURB, WALL, AND SIDEWALK DETAILS MAY BE MODIFIED FOR PROJECT BY CIVIL AND GEOTECHNICAL ENGINEERS.
7. PROVIDE MONITORING WELL IN EACH FACILITY, PER BIORETENTION TECHNICAL SPECIFICATIONS.
8. LONGITUDINAL SLOPE 6% WITH CHECK DAMS.
9. IF CHECK DAMS ARE NEEDED, SEE CONCRETE CHECK DAM DETAIL 121.
10. VARIATIONS IN DRY WELL DESIGN SHOULD BE MADE TO ACCOMMODATE STORAGE VOLUME DESIGN AND TO SUIT LOCAL CONDITIONS AND CONSTRAINTS.
11. IN AREAS WITHOUT A STORMDRAIN, THE SYSTEM SHOULD ONLY BE CONSTRUCTED WHERE THE MAINTENANCE HOLE SURFACE INVERT IS ABOVE THE BIOFILTER OVERFLOW ELEVATION.
12. ALTERNATIVE VAULT LOCATIONS POSSIBLE INCLUDING WITHIN THE BIOFILTER FOOTPRINT.
13. VALVE CAN BE MOVED TO THE BIOFILTER IF DESIRED. REQUIRES STRUCTURAL SUPPORT.
14. ALTERNATIVE PRODUCTS SUCH AS VENDOR-SUPPLIED DRY WELL PRODUCTS MAY BE USED AS A SUBSTITUTE PROVIDED THAT THE ALTERNATIVE PRODUCT IS EQUAL.

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