Bioretention Cell Design Review Checklist

CITY OF WAUKEE

October 2017

Applicant: _____ Date: _____

Submitted By: _____ Project Location: _____

1) Drainage Area _____SF and _____Ac
2) How much of the DA is Impervious Surface _____% and _____SF
3) Water Quality Volume (WQv) _____CF (show calculations below or attach a copy)
   WQv = (P) x (Rv) x (DA) x 43,560 SF/ac x (1 ft/12in) (See Iowa SW Mgt Manual Bioretention Chapter)

4) Surface Area of Biocell _____SF (show calculations below or attach a copy)
   Af= WQv x df/ {K x (hf + df) x tf} (See Iowa SW Mgt Manual Bioretention Chapter)

5) Ponding Depth _____ inches
6) Proposed dimensions: _____ft L x _____ ft W = _____SF of surface area.
7) Discuss soils investigation findings (i.e. texture, degree of compaction, percolation potentials, depth to water table, contamination, etc) _____
   _____
   _____
8) Describe any pretreatment techniques provided (what practice(s) were used, how were things sized, etc) _____
   _____
9) Describe the biocell soil media. (Soil blend specified in the Iowa Stormwater Management Manual is 75-90% washed concrete sand, 0-25% topsoil, 0-10% organic material):
   a. Sand _____%
   b. Topsoil _____%
   c. Organic material _____%
10) Quantities (please attach a copy of materials calculations): 75% - 90% sand, 0-25% topsoil, 0-10% organic material)
   a. Sand _____ tons;
   b. Topsoil _____ tons or CY
   c. Compost _____ tons or CY
   d. 3/8" chip _____ tons
   e. Shredded hardwood mulch _____CF or _____CY
11) Depth of Rock Chamber _____inches
12) Quantity and Type of Rock _____tons of _____
13) Quantity and Type of choker material _____tons of _____

14) Size of perforated drain tile _____inch
15) Does tile comply with the design guidance is Step 10 of the design procedure in the Bioretention Chapter of ISWMM _____Yes _____No
16) Separation distance from nearest foundation _____. If less than 10 ft describe water proofing methods_____

_____

17) Describe any pretreatment techniques provided (what practice(s) were used, how were things sized)

_____

_____

18) Describe outlet for the perforated drain tile _____

_____

_____

_____

19) Describe overflow (i.e. stand pipe, swale, emergency spillway / berm notch, etc.)

_____

_____

_____

20) Spacing of plants _____
21) Size of plants _____
22) Quantity of plants _____(Please attach a plant list and planting plan)
23) If supplemental seeding was done in the biocell describe type and quantity of seed used and the rate that was applied (i.e lbs/ac or per 1,000 SF

_____

_____

24) Please describe the Erosion and Sediment Control measures employed if the drainage area is not stabilized or the biocell is not planted and stabilized immediately:

_____

_____

25) Please attach a map of the drainage area.
26) Please attach a plan view, profile and cross sectional drawing

FOR REVIEWERS USE ONLY

☐ This design appears to comply with the standards in the Iowa Stormwater Management Manual.

☐ This design does not appear to comply with the standards in the Iowa Stormwater Management Manual.

Comments: _____

_____

_____

Name_____ Date: _____

Signature: _____