Permeable Paver Design Review Check List

Applicant: ________________________________ Date: ____________________

Submitted By: ________________________________ Project Location: ____________________

1) Drainage Area (DA) shedding to Permeable Pavement (including permeable pavement area)
   SF _______ and Ac _______ (attach map of DA with arrows showing how water flows to the pavers)

2) Percent of DA shedding to the Permeable Pavement that is Impervious ________%

3) WQv _________ CF (show calculations below or attach)
   \[ WQv = (Rv) \times (P) \times (DA) \times 43,560 \text{ SF/ac} \times (1 \text{ ft/12in}) \] (See Iowa SW Mgt Manual)

4) Ratio of drainage area shedding to the Permeable Pavement to surface of Permeable Pavement area
   ______________________ : ______________________
   Drainage Area (Sq Ft) Surface of Permeable Pavement (Sq Ft)

5) Surface Area of Permeable Pavement _________ SF (show calculations for minimum area needed App)
   \[ App (sq \text{ ft}) = \frac{Q (cfs) \times 3600 \text{ sec/hr} \times 12 \text{ in/ft}}{10 \text{ in/hr}} \]

6) Minimum depth of rock storage area _________ Ft (show calculations below or attach)
   \[ \text{Minimum Depth} = \frac{WQv (cu \text{ ft}) \text{or design volume}}{App \times 0.35} \]

7) Pore space storage of rock base: _________ CF
   (Length _____ ft x Width _____ ft x Depth _____ ft of rock base x 35%)

8) Describe the type of pavement (type of paver, manufacturer, etc.):

9) Discuss soils investigation findings (i.e. texture, degree of compaction, percolation potentials, depth to
   water table, contamination etc.): ________________________________________________________________

10) Describe the aggregate used (depth of layer / quantities / size / AASHTO or ASTM No. classification);
    a. ________________________________
    b. ________________________________
    c. ________________________________
11) Provide calculations of aggregate quantities or attach a copy of the calculations:

____________________________________________________________________________________

____________________________________________________________________________________

12) If permeable pavement is less than 10 ft from a foundation describe water proofing methods:

____________________________________________________________________________________

____________________________________________________________________________________

13) What is the maximum slope of the finished surface of the permeable pavement: ___________%

14) Is the bottom of the rock base greater than 1.0% slope? _______ If yes, describe how the slope at the bottom of the rock base will be modified to maximize storage (i.e. fabric checks, earth berms, etc. - if fabric checks are used, describe the material and flow through rate)

(Show calculations below or attach for volume of water stored)

\[ V = 50 \times \rho \times W \times \frac{D^2}{S_o} \]

\( V = \text{Volume of water stored uphill of a baffle on a sloped surface (ft}^3) \)

\( \rho = \text{porosity of aggregate (assume 0.35)} \)

\( W = \text{width of the aggregate perpendicular to the slope (ft)} \)

\( D = \text{height of the baffle (ft)} \)

\( S_o = \text{slope of the excavated bottom of the aggregate chamber (%)} \) (10% is "10", not "0.10")

15) Size of perforated drain tile: __________________________________________________________

16) Depth of tile from surface of the pavement: ______________________________________________

17) How many inches is the tile above the bottom of the rock base: ____________________________

18) Describe the outlet for the perforated drain tile: __________________________________________

19) Describe overflow (i.e. what provisions are provided should the system plug – where would water flow, how would it be conveyed): __________________________________________
20) Describe Erosion and Sediment Control measures used to protect permeable pavement if active construction will be taking place in the drainage area after installation:

____________________________________________________________________________________

____________________________________________________________________________________

21) Please attach a map of the drainage area

22) Please attach a plan view, profile and cross sectional drawing

FOR REVIEWERS USE ONLY

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

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

Comments: __________________________________________________________________________

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____________________________________________________________________________________

Name of Reviewer: __________________________________________ Date: _____________________

Signature: __________________________________________________________________________