Chapter 19 Infiltration Facility Design

19.1 Overview

Infiltration facility design includes the design of ponds, trenches and other BMP's designed to encourage infiltration of stormwater back into the ground. Geotechnical design of infiltration facilities includes assessment of the groundwater regime, soil stratigraphy, and hydraulic conductivity of the soil as it affects the hydraulic functioning of the infiltration facility, and the geotechnical stability of the facility (e.g., slope stability, affect of infiltration on stability of adjacent structures and slopes, and design of fills that must retain water for both slope stability and piping failure).

19.2 Geotechnical Investigation and Design for Infiltration Facilities

For infiltration investigation and design, the detailed requirements for the geotechnical site investigation, soil properties needed, groundwater characterization requirements, and design requirements are provided in the WSDOT Highway Runoff Manual (2004), Section 4-5. For geotechnical stability, the site investigation and design requirements provided in Chapters 2, 7, 9, and 10 are applicable.

19.3 References

Highway Runoff Manual M 31-16, 2004