

Stormceptor units used in an LID application to pretreat Rain Gardens and Infiltration Cells

Project: Arbors at Rock Creek

Location: Maple Valley, Washington

Owner: Centex Homes

Engineer:
Barghausen Consulting Engineers, Inc.

Contractor: Riverton Contractors Inc.

Approving Agency: City of Maple Valley

Product: Stormceptor® STC 450i



A short drive from downtown Seattle, a forested area near Mount Rainer was developed for a new Centex home subdivision, The Arbors at Rock Creek. The residential site needed a solution to protect the sensitive habitat and groundwater within the Rock Creek Natural Area. Stormceptor inlet units were selected to accept road runoff and pretreat a number of rain gardens and gravel infiltration beds throughout the community.

Capture and retention of fine particles, sediment bound pollutants and hydrocarbons for the pretreatment of stormwater runoff was an ideal fit for incorporating Stormceptor. Removal of the urban pollutant load from the surrounding roadways prior to water entering the rain gardens offered a primary single point of maintenance. This provided the functionality and aesthetic appeal of the Low Impact Development (LID) application.



For this LID/treatment train approach, Stormceptor was designed to capture and retain total suspended solids (TSS) and hydrocarbons prior to discharge into the rain gardens.

Selection of Stormceptor eliminated the need for additional drainage infrastructure and provided the necessary pretreatment for each of the rain gardens and infiltration beds, extending the life of the treatment systems, positively impacting the life-cycle cost. Stormceptor offers lower overall maintenance cost, being easily inspected and maintained from grade at a single point. If gone untreated, hydrocarbons, fine sediment and small debris could easily clog the downstream surface filtration systems, not allowing them to function as designed.

The Stormceptor STC 450i's key design flexibility features and low inlet to outlet drop made this unit ideal for pretreating gardens and infiltration cells. At this site, surface runoff can enter units from both surface inlet grates or from piped flow from other inlet structures. Stormceptor reduces infrastructure cost by serving as a bend and junction structure, in addition to providing treatment.