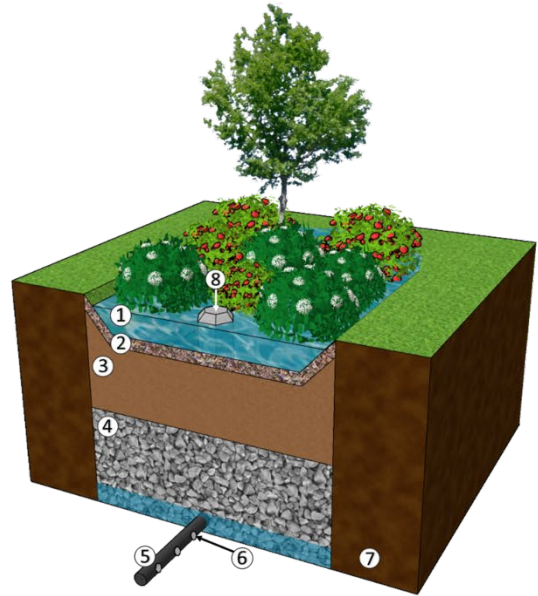




## Bioretention

Bioretention areas filter, detain and infiltrate stormwater runoff. The LID is designed with an engineered soil layer to store and treat runoff, a storage layer to detain larger volumes and then infiltrate to surrounding native soil. Bioretention areas are designed with an overflow, an outflow, optional subdrain and a native soil infiltration rate.

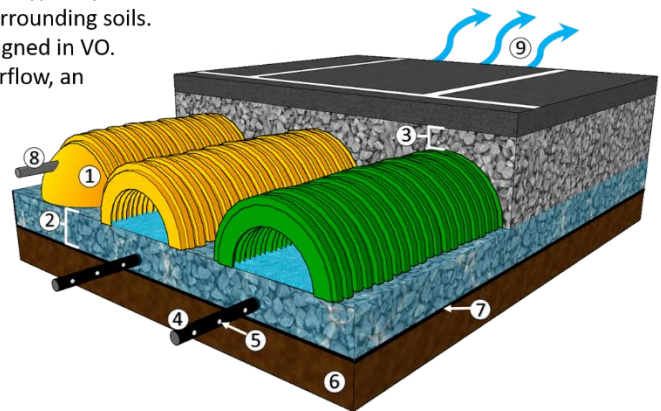


- |                         |                |
|-------------------------|----------------|
| ① Surface Ponding Area  | ⑤ Underdrain   |
| ② Mulch Layer           | ⑥ Perforations |
| ③ Engineered Soil Layer | ⑦ Native Soil  |
| ④ Storage Layer         | ⑧ Overflow     |



## Underground Storage Chambers

Underground storage chambers have large void spaces and typically have open bottoms allowing the system to infiltrate into the surrounding soils. Currently ADS Storm Tech Chambers (all sizes) can be designed in VO. Underground storage chambers are designed with an overflow, an outflow and an optional subdrain feature.



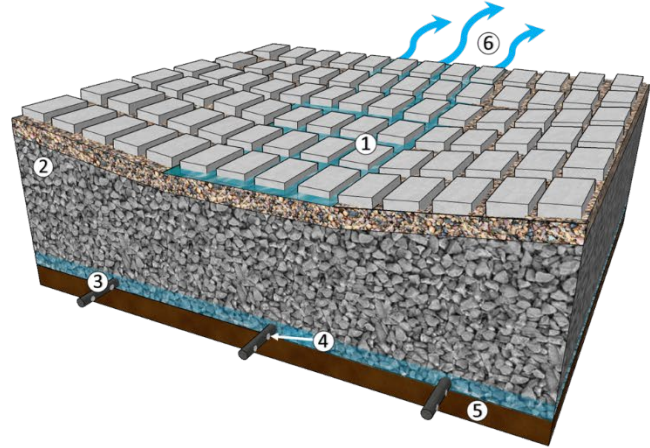
- |                                 |                |
|---------------------------------|----------------|
| ① Chamber Type                  | ⑤ Perforations |
| ② Depth of Stone Below Chambers | ⑥ Native Soil  |
| ③ Depth of Stone above Chambers | ⑦ Bottom Area  |
| ④ Underdrain                    | ⑧ Outflow      |
|                                 | ⑨ Overflow     |



## Permeable Pavement

Permeable pavement allows stormwater to drain through the surface layer into a stone reservoir where water can be stored then infiltrated into surrounding soils. Permeable pavement is designed with an overflow and an optional subdrain feature.

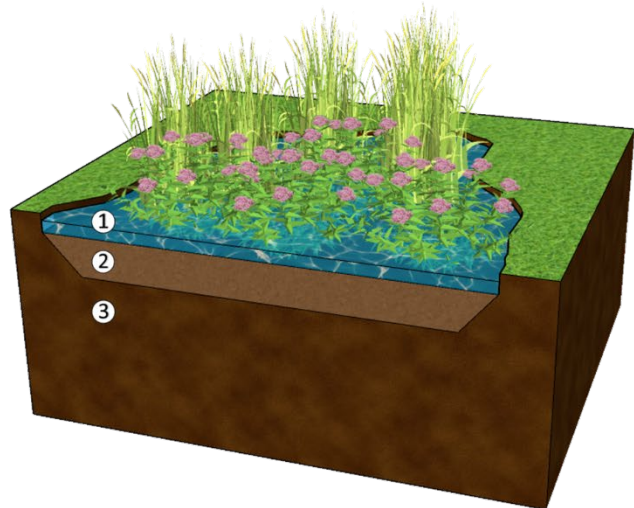
- ① Surface Ponding Area
- ② Storage Layer
- ③ Underdrain
- ④ Perforation
- ⑤ Native Soil
- ⑥ Overflow



## Rain Garden

Rain gardens generally function as a stormwater filter and infiltration practice and can be used to temporarily store, treat and infiltrate runoff. The LID is designed with an engineered soil layer to store and treat runoff which then infiltrates to surrounding native soil. Rain gardens are designed with an overflow and a native soil infiltration rate.

- ① Surface Ponding Area
- ② Engineered Soil Layer
- ③ Native Soil

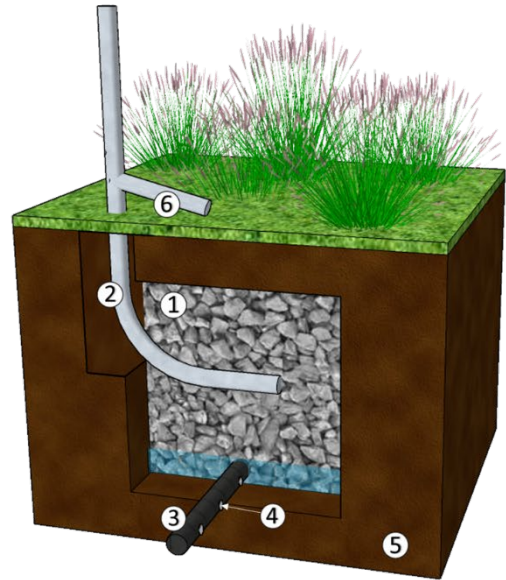




## Soakaway Pit

Soakaway pits are excavations in the ground filled with clean granular stone or other void forming material that receives “clean” runoff designed to infiltrate into the native soil. Soakaway pits are designed with an overflow and an optional subdrain feature.

- |                 |               |
|-----------------|---------------|
| ① Storage Layer | ④ Perforation |
| ② Inflow Pipe   | ⑤ Native Soil |
| ③ Underdrain    | ⑥ Overflow    |



## Enhanced Grassed Swale

Enhanced grassed swales are vegetated open channels designed to convey, treat and store stormwater runoff. Enhanced swales will calculate the volume of surface ponding and infiltration throughout the swale. Enhanced swales are designed with an overflow, an outflow and a native soil infiltration rate.

- |                        |                 |
|------------------------|-----------------|
| ① Max Depth            | ④ Storage Layer |
| ② Side Slope           | ⑤ Underdrain    |
| ③ Surface Ponding Area | ⑥ Perforations  |

