

Residential Driveway Adds Rainwater Filtration

Homeowners in Indiana researched types of material to use for their driveway. They had homeowner association and regulatory considerations for the porosity of the paving material, and for the amount of credit received in storm water permitting, the selection was somewhat limiting and generally was based on cost and aesthetics.

The homeowners wanted to use concrete due to the lower cost versus asphalt for the size of their driveway, but integrating green infrastructure elements into the design to store, infiltrate and evapotranspire storm water was an incentive for their new home.

As an alternative to other permeable, pervious surface options, the d-Rain Joint exterior linear drain filter expansion joint was used with a standard pour-in-place driveway. Developed to satisfy permeable, pervious driveway requirements, the devices provide storm water infiltration through an impervious surface.

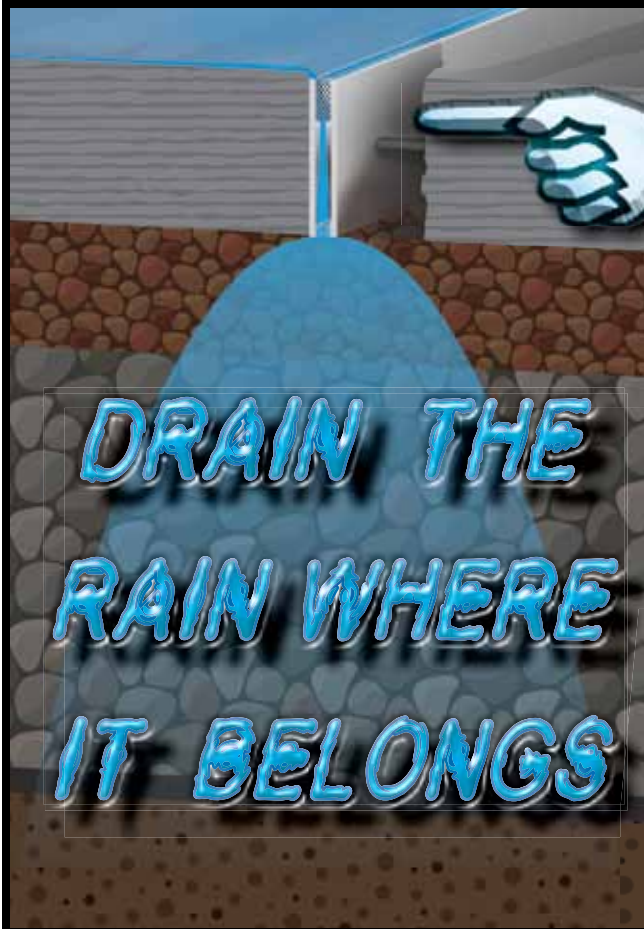
After the geotextile was laid, a 12-in. drainage aggregate (1- to 1.5-in.-sized gravel) bed with a 4-in. layer of pea gravel (3/8-in. aggregate) was installed. This functions like a sand filter by forcing rainwater to pass through different aggregate

sizes. The aggregate forms a reservoir below the pavement for retention and enhances infiltration capacity. It is crucial for underlying soils to have an infiltration capacity of less than 0.5 in. per hour for the pavement to function properly.

Installed in place of a construction joint between the concrete slabs in the driveway, the ADA-compliant d-Rain Joint drainage channel system is less than 1 in. wide and was virtually undetectable after the driveway set. The system offers a flow rate of more than 2 gal per minute per linear foot.



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Introducing

d-Rain Joint™

Developed for permeable, pervious requirements, the d-Rain Joint™ device provides stormwater infiltration through an impervious surface.

Whether, a residential driveway, parking lot, or public space, the simple, permeable d-Rain Joint™ is an effective, low-maintenance, low-cost option to create drainage infrastructure anywhere.

Simple, Low Cost, Robust



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