CASE STUDY



The Home Depot

Fontana, California

he 12-acre site for The Home Depot development in Fontana, California, includes the retailer's facility and 850-space parking lot, with plans for two additional tenants to move into the retail plaza.

To comply with the requirements of the Federal Clean Water Act, which mandates developers to treat stormwater run-off onsite, and with the state's stormwater regulations



that require run-off to be treated to the maximum extent possible, engineers at PENCO Engineering selected a CULTEC underground stormwater management system as the Best Management Practice for the project. They worked together with CULTEC representative Randy Jevas to specify the Recharger[®] V8 chambers, the company's largest model, to detain stormwater on the site.

According to contractor Steve Douglas at S. K. Douglas Construction Commercial Pipeline, the stormwater first goes through a Continuous Deflective Separation (CDS) unit that removes trash, oils and coarse sediments from the parking lot run-off. The run-off then enters the CULTEC system that has the ability to capture, filter and detain 23,000 cubic feet of stormwater, preventing it from flowing into the nearby Santa Ana River.

"We have never worked with a CULTEC system before, but the installation was very simple and easy," said Douglas. "CULTEC was with us in the field and helped us every step of the way. We really

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The Home Depot

liked how all the elements went together just right." The company has installed several other CULTEC systems since its first installation in Fontana, he added.

The CULTEC chambers were installed in a single-layer bed at the back of the site, where a parking lot was later added above the system. The chambers were arranged in 12 rows, with each row containing 20 units. The system included CULTEC'S HVLV V8 chambers — units that are used together with the Recharger V8 chambers to start and end each row and also work as a unique internal manifold for the system. After beginning a row with an HVLV V8 Starter unit (Model S), the Recharger V8 middle units (Model I) are placed into the bed. The chambers' large open-end ribs are overlapped over small ribs of each preceding chamber's end wall, interlocking them together. Each line ends with HVLV V8 End unit (Model E). The chambers are then covered with washed, crushed stone and a layer of filter fabric, which protects the stone backfill from soil intrusion. Finally, the system was backfilled to the required depth of approximately eight feet (site-specific depth requirement — typical minimum depth under pavement is 18") and prepared for asphalt.

In addition to assisting its customers in installation, CULTEC routinely offers help with preliminary calculations and CAD designs as well as converting plans from existing stormwater solutions to its own equivalents. CULTEC systems are recognized as a Best Management Practice, an Environmental Protection Agency (EPA)-compliant method that effectively reduces the quantity and improves the quality of stormwater run-off. A complete stormwater management plan is also available to help engineers and their clients meet Phase II regulations of the EPA's Clean Water Act.





Installed: March 2007 Contractor: S.K. Douglas Construction Commercial Pipeline Lake Elsinore, CA Engineer: PENCO Engineering, Inc. Irvine, CA

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Protected by one or more of the following patents: U.S. Patent No. 5,087,151, U.S. Patent No. 5,419,838, U.S. Patent No. 6,129,482, U.S. Patent No. 6,322,288 B1.
Other U.S. and Foreign patents. Other U.S. patents pending. RECHARGER®, CONTACTOR®, HVLV[™] and STORMFILTER® are trade names of CULTEC, Inc.
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