

CASE STUDY

BJ's Wholesale Club Brookfield, Connecticut

Storage Provided:	65,776 cu. ft.
Area:	28,855 SF
Models:	Recharger® 280HD
Number of Units:	893
Installed:	October 2012
Project Engineer:	RJ O'Connell & Associates, Inc Stoneham, Massachusetts
Contractor:	Cherry Hill Construction North Branford, Connecticut



BJ's Wholesale Club, a leading operator of warehouse clubs in the eastern United States, provides its members with high-quality, brand-name food and general merchandise. Headquartered in Westborough, Mass., the commercial retail facility currently operates 196 stores in 15 eastern states, and serves its members online via www.bjs.com.

In early 2012, ground was broken for a new 125,000-sq.-ft. BJ's Wholesale Club located adjacent to the Kohl's shopping plaza in Brookfield, Conn. Engineers from RJ O'Connell & Associates, Inc. (www.rjoconnell.com) and contractors from Cherry Hill Construction (www.cherryhillinc.com) designed a stormwater system to provide the site with retention and infiltration capabilities to prevent flooding to the surrounding areas.

The engineers faced a number stormwater management challenges. A high groundwater level at the 28.8-acre site, a minimum of three feet deep at the infiltration fields, was a major challenge because the site was positioned near wetlands, causing it to be easily saturated with water. Additionally, the new facility was in close proximity to a brook and a floodway, a channel for an overflow of water caused by flooding. The engineers also had to be mindful of existing nearby structures when planning for stormwater solutions, as they would remain onsite and the existing drainage patterns had to be maintained. Finally, the site was located within an aquifer protection district. This required that major public water supply wells in sand and gravel aquifers were protected to ensure a plentiful supply of public drinking water for present and future generations.

After consideration of multiple stormwater solutions, all of the challenges were successfully solved with CULTEC, Inc.'s low profile Recharger® 280HD stormwater system. This chamber was considered the best fit for the site, as its height effectively accommodated the high water table.

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BJ's Wholesale Club Brookfield, Connecticut *(continued)*

The engineers selected these chambers to capture the runoff onsite and release it in a controlled manner as well as allow for some infiltration into the ground. Each unit is 47 inches wide, 26.5 inches high and offers a bare chamber capacity of 6.08 cubic feet per linear foot of storage capacity. It is designed to retain water until the soil is no longer saturated and suitable for infiltration back into the ground.

The installed system consists of 893 chambers positioned in three fields that provide a total storage volume of 65,776 cubic feet and occupies a total area of 28,855 square feet. Since existing structures would remain onsite, the system needed to be flexible enough to fit. Dividing the system into three fields solved this issue.

“CULTEC provided a great product for the site which came with so many challenges,” said Jamie Anderson, Engineer with RJ O’Connell & Associates, Inc. “The Recharger 280HD chamber allowed us to provide primary and secondary stormwater treatment and reduce the peak rate of runoff discharging from the site, all while maintaining the existing drainage patterns.”

Though other stormwater products were considered, CULTEC’s system was the final solution for the project, in part because of its ease of installation and CULTEC’s headquarters’ close proximity to the project.

“The system went together very easily from start to finish,” confirmed Robert Sachs, Owner of Cherry Hill Construction. “We have used CULTEC products on projects in the past, and have always been impressed with how smoothly the system is installed.”

The BJ’s Wholesale Club is projected to open in late 2012.



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