

Medical Facility Has Right Rx For Stormwater Treatment

PROJECT:
Aurora Medical Center, Summit, Wis.

FIRM:
R.A. Smith National, Brookfield, Wis.

Pabst Farms in Oconomowoc, Wis., is a 1,500-acre multiuse, 15-year development project for which R.A. Smith National has provided a series of site engineering and stormwater solutions, including those for the new Aurora Medical Center. The center, which opened this past March, is an 800,000-square-foot medical facility on 53 acres that anchors a planned 100-acre future Health and Wellness campus.

To help the project owner build a medical facility that would better serve patients' needs, R.A. Smith National provided sitework engineering and surveying for the site, which included site planning, grading, sanitary and storm sewers, the stormwater management plan, improvements to adjacent county and state roads, the design of a new

town road and construction engineering services. "The site had to conform to an overall stormwater management plan created for the entire Pabst Farms development in 2000 by a committee of local and state officials, the developer and other stakeholders," says Paul McIlheran, associate and senior project engineer, who led the site and stormwater design effort.

Like most sites in the development, the area upon which the center was built released virtually no stormwater due to its flat topography and permeable soils, so R.A. Smith National's design was required to treat and infiltrate site stormwater runoff up to and including a 100-year rain event, in compliance with stormwater utility district goals and requirements. "Having to infiltrate such an event is unusual in Wisconsin, but possible on this site because the type of soil allows water to infiltrate quickly," explains McIlheran.

Based on the topography and the requirement that the center have multiple entrances with distributed parking and a ring road, McIlheran designed a series of three sets



R.A. Smith National provided stormwater planning for the 800-square-foot Aurora Medical Center in Summit, Wis.

of stormwater quality ponds and infiltration basins distributed around the site. The ponds are designed to remove 80 percent of total suspended solids (TSS) from stormwater runoff on an average annual basis before release to the infiltration basins to help protect groundwater and extend the life of the basins.

Another challenge was protecting the infiltration basins from excess runoff, while the deep-rooted plants matured to the point where they could absorb the water. "A typical project would bypass stormwater around the basin until the plants mature, but with this topography, there is nowhere else to route the water," McIlheran says. So, only 40 percent of the basin was planted, allowing the remaining native



Paul McIlheran

granular soil to absorb runoff. "That solution typically is not attractive, but with all the blooming native plants placed in the middle of the basin, the result is a beautiful focal point that permits the basin to do its job while the plants mature," McIlheran says.