Trench Drain Application for the University of Cincinnati (UC)

Job

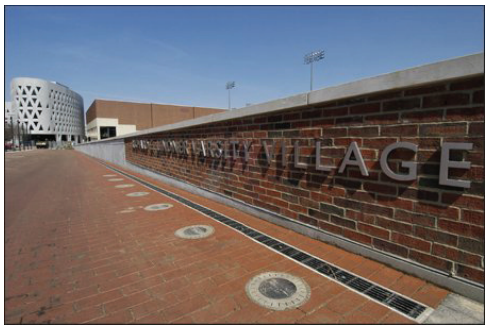
The UC Trabert-Talbert Tennis Center, which opened in April 2006, consists of a six-court tennis complex with a central grandstand and was constructed over a 150-car underground parking garage. The complex sits at the entrance to the Richard Lindner Center as part of Varsity Village - a $80.3 million enhancement of UC's athletics complex which included an eight-story athletics center, a relocated baseball stadium, a tennis center and a renovated track and soccer venue.

Problem

The location of the tennis courts above the parking garage and adjacent to medical office training rooms prompted the need for a trench drain that would work in an above-grade application. This required a trench drain with flashing to prevent any water leaks into the structure below. Additionally, the job featured an extensive, on-grade, paved pathway leading to the new athletic center which required a non flashing trench drain. The two trench drain systems needed to be connected in a smooth, seamless transition.

Solution

A leading engineer and Jay R. Smith Mfg. Co. specifier, Heapy Engineering, Dayton, OH was the firm providing the engineering design. The Project Engineer on the job was looking for viable product options for the university. The engineer was very familiar with the Smith trench drains from previous specifications and had a long time relationship with Midwest Spec. LLC, the local Jay R. Smith Mfg. Co. representative. In looking for a suitable trench drain for the job, the engineer's timing was perfect as Jay R. Smith Mfg. Co. was just starting to promote its new membrane drain, fig. no. 9837 to the trade. Upon submission of a sample which met with the engineer's approval, the new product was specified for the job.



The engineer liked the membrane drain features and the fact that it allowed for integration with the other Smith trench drain on the job, the Channel Slope® Extra Heavy Duty Polymer Concrete System, fig. no. 9816. The design created by Heapy Engineering, required the installing contractor and MCAA member, Queen City Mechanicals, Inc., to install approximately six hundred lineal feet of Jay R. Smith's trench drain systems.

The complex portion of the project was the installation of the 225 feet of trench drain along a curved brick-paver walkway. The membrane drain was contained within this installation. After the trench drain layout was released for production, it was discovered that the trench drain could not exceed 6" in depth due to the post tension slab tendons that would be required to be poured below the trench drain. This required a re-design of the trench drain system layout by Jay R. Smith Mfg. Co. Since the original design required re-working prior to production, the slab was 'boxed out' by the General Contractor so as not to delay the concrete pour. Queen City Mechanicals installed the two trench drain systems with the use of the Rante Arrow installation devices following the placement of the post tension slab.

Results

As the job was on an aggressive schedule, Queen City Mechanicals, was pleasantly surprised to hear that Jay R. Smith Mfg. Co. could deliver the entire trench drain system required for the entire job in two weeks – ensuring no delays and no disruptions to the construction schedule.

The engineer reported that he was pleased to work with Midwest Spec. LLC, one of the best representatives in the area, providing excellent service and follow up on the job requirements.

Queen City Mechanicals reported the diligent efforts provided by all members of the construction and design team, even during the adversity encountered, yielded a quality product that the University of Cincinnati can utilize for many years.