Jay R. Smith Crafts Speedy Solution for J.W. McClenahan’s Drainage Dilemma

Faced with new, more stringent building requirements mid-project, J.W. McClenahan Co. got a boost from the engineers at Jay R. Smith Mfg. Co., who rapidly designed new trench drains and had them verified by a third party to satisfy city inspectors—all in just four months.

McClenahan is the design/build plumbing contractor on the Transbay Block 8 mixed-use development project, located just two blocks from the Transbay Transit Center in San Francisco, CA. While San Francisco’s building code stipulates placement of a trench drain that can accommodate a 100-gallons-per-minute (gpm) flow of the automatic fire sprinklers in remote areas outside the fire service access elevator lobbies, the city has become more stringent in evaluating drains. McClenahan learned that city building inspectors and the fire marshal were now requiring full documentation for the drains at Transbay Block 8. (Elevator lobby trench drains prevent water from infiltrating the shaft enclosure and keep the elevator lobby area free of water to allow firefighters to do their jobs safely.)

Smith had a standard drain available that met the requirements, but the architects for Block 8 specified lengths that were not yet available anywhere. Rick Kelly, a superintendent at McClenahan, said that one of the problems was that the architects had included different-size door openings into the elevator lobbies.

The other issue encountered was the depth of the trench drain due to structural restraints. McClenahan wanted to put the outlets at the ends of the drain instead of the center, which would affect the flow rate.

McClenahan had two choices. Go back to the architects and have them revise the design to specify the lengths and depths available or find a manufacturer who could come up with a solution that satisfied the design and met the code at the lengths required. McClenahan approached Smith, where engineers got to work right away to design drains that would accommodate the lengths required and the 1 3/4” drain for the shallow application.

Smith engineers created and tested lengths from 42” to 123” with outlets in three different positions to ensure water would not overflow the threshold drain and spill into

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Erickson’s Aircrane Cuts the Hill Group’s Installation Time Down to Hours

In the summer of 2016, Hill Mechanical Group called on Erickson Inc. to lift and place cooling towers and chillers by air into a building in crowded downtown Chicago, accomplishing the goal in hours compared with weeks needed for other methods. The project was located at East Randolph Street in a crowded landscape with multi-level streets and nearby residential buildings, so land crane equipment was not an option. Using Erickson’s precision capabilities, aerial crane operators placed chiller equipment through a hole in the roof, with inches to spare, and then set it 15’ below the roof level.

Erickson’s signature Aircrane is a giant in the world of helicopters, with a rated lift capacity of up to 25,000 lb. It features a unique glass-enclosed aft-facing pilot station that allows the crew member to precisely lift and place large, oversized, or heavy objects. The heaviest section for this move weighed 19,000 lb. By taking advantage of the Aircrane’s lift capacity, the Hill Group saved time because fewer pieces had to be assembled on the roof.

Five aerial lifts were completed in 1.3 hours of flight time, saving the Hill Group several weeks of time compared with other move methods. Hill Mechanical Group had previously worked with Erickson on other projects, and they knew airlifting was the only option for completing this project in a safe, efficient, and cost-effective manner.

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the elevator lobby and hoistway. To meet the San Francisco Fire Department’s requirements, the drains were promptly sent out for third-party testing and verification. The whole process, including the much-needed third-party certification, took less than four months. With that certification in hand, McClanahan had proof of the efficacy of the drains that the city inspectors and fire marshal needed.

While McClanahan’s main concern was that the drains met the required flow rate, the architects were also concerned with the aesthetics. Fortunately, the Smith low-profile threshold drains lived up to those demands as well. The drains use 1/4” grate spacing, which complies with ADA requirements, and they are heel-proof to help prevent falls and injuries.

McClenahan’s Kelly confirmed that Smith was the right choice for the job. “We received the [stainless steel threshold drains] on time, and they are easy to work with,” he said.

Transbay Block 8 includes a 56-story residential tower will have 118 condominiums, 279 luxury apartments, and 70 below-market-rate apartments. The ground floor will feature 17,000 square feet of retail space set around an open public paseo. The project is scheduled to be completed in March of 2020.

For more information, visit www.jrsimth.com.