



Safway Delivers Innovative Access at Highmark in Downtown Pittsburgh

Since 1988, the Highmark building's unique pyramidal peak has been a constant presence reigning over downtown Pittsburgh. What else has been a constant in the area for the past 27 years? The sun, wind, rain and snow. While the building's Spanish pink granite exterior panels may be ageless, the caulk between them is not.

Removing the old caulk and adding the new is the easy part. Giving the workers something to stand on up there, however, was an epic engineering challenge. Highmark turned to an access provider known for its engineering skills, specialized equipment and world-class execution: Safway Services. John Norbut, the facilities and project manager for Highmark, knew Safway from a previous job.

The team's first challenge was that nothing could rest on the 70-foot pyramid's granite surface, explained Blake Wilson, Safway's project manager in Pittsburgh. The second challenge was that the lower roof portions, which support scaffolding, were only at the corners of the building, 42 feet apart, and 60 feet below. Between them, below the sides of the pyramid, was a sheer drop of eight stories.

Beyond that was a very practical planning challenge: Access to the roof was via a freight elevator, through a conference area, then up a couple flights of stairs. Nothing longer than 11 feet could be brought to the work site, and all the pieces – 12 semi loads – had to be carried up the last couple floors by hand in exactly the right order.

HAKI® trusses key

The key to the solution – in addition to engineering creativity and the organizational skill of Safway's planning team – was the HAKI® truss system, HAKISPAN 750®. Safway is the primary distributor of HAKI products in North America.

The HAKI system allows the creation of durable spans from modular segments. The segments can be carried and put in place by hand, and go together easily with systematic lacing and bracing. "Our engineers devised a plan to span the 42 feet between corner sections with HAKI trusses," Wilson explained.

They built scaffolding upward from the trusses, then inward to conform to the pyramid. Built this way, the scaffolding never touched the roof, but was close enough to allow workers to re-caulk it.

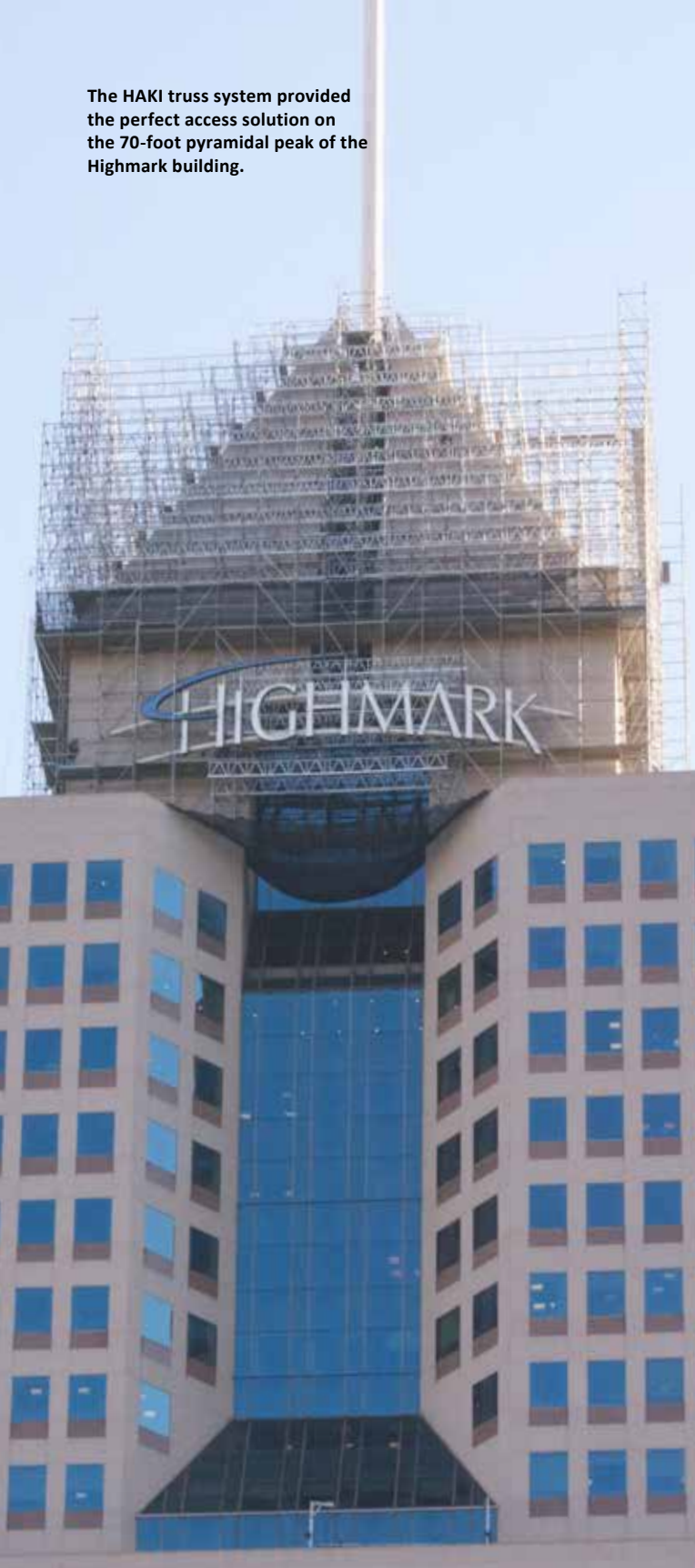
"The smart design and flexibility of the HAKI system makes for a quick learning curve."

Other foundational segments, which were 22 feet long, were cut in half, and Safway had special steel splicing joints fabricated so the two halves could be joined after the parts were brought to the roof.

The complexity of the access challenge was such that the Safway crew outnumbered the caulking crew by

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The HAKI truss system provided the perfect access solution on the 70-foot pyramidal peak of the Highmark building.



more than three to one. Eight Safway crew members were present every day throughout the project to assemble the equipment, and seven were there every night to raise it from street level. It took 37 night shifts to get 700,000 pounds of scaffolding and other equipment to the top of the Steel City's skyline.

"Because of the shape of the building the caulking crew pretty much followed us around as we went up." Wilson said the view from the job site was "amazing" – but not as amazing as the competence of his crew.

Top-notch crew

"The work the guys did was phenomenal. To take drawings from engineering and make that system happen was beautiful." It was especially impressive given that it was this crew's first experience working with Safway's relatively new HAKI system. "The smart design and flexibility of the HAKI system makes for a quick learning curve," Wilson reported.

"This is a very unique building, and Safway did a fabulous job."

The access set-up also included a hoist to bring materials up, with a catwalk going from central scaffolding sections to the hoist. As the job progressed and the scaffolding was built up, the catwalk was dismantled and re-assembled at the next level. Custom safety netting and dropped-object protection panels rounded out Safway's \$1.2 million contribution to the effort.

Highmark's Norbut said, "Blake and his group are really, really good to work with. This is a very unique building, and Safway did a fabulous job."

Even when the schedule was delayed to take new considerations into account, Safway quickly adapted.

Norbut added that much of the work was just outside the windows of the board room and other VIP work spaces, and he received no complaints about noise or other distractions. "It really worked out well," he said.

The incident-free job started in June and was completed in early December of 2015.



Safway Group Holding LLC
N19 W24200 Riverwood Drive
Waukesha, WI 53188
Toll free: (800) 558-4772
Telephone: (262) 523-6500
www.safwaygroup.com

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