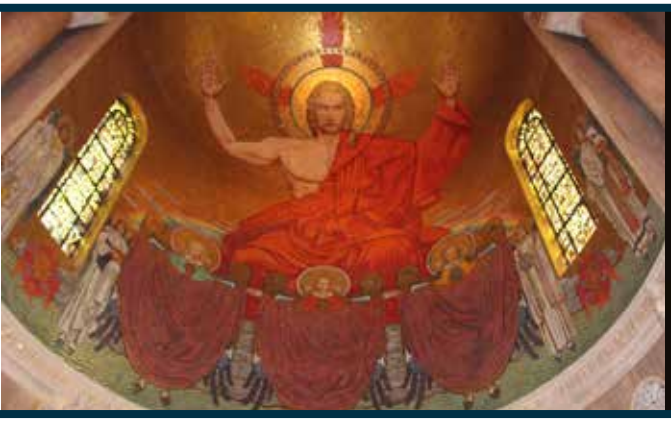
LIFTING WORKERS AND MATERIAL TO THE HEAVENS ALONG WITH PRAYERS

The inaugural Scaffold & Access Industry Association (SAIA) Commercial Collaborative Project of the Year award was presented to Beta Max, Inc. for their ongoing collaboration with Scaffolding Solutions on the Trinity Dome Project, a massive mosaic tile installation at the Basilica of the National Shrine of the Immaculate Conception in Washington, D.C.

By Troy Palmer

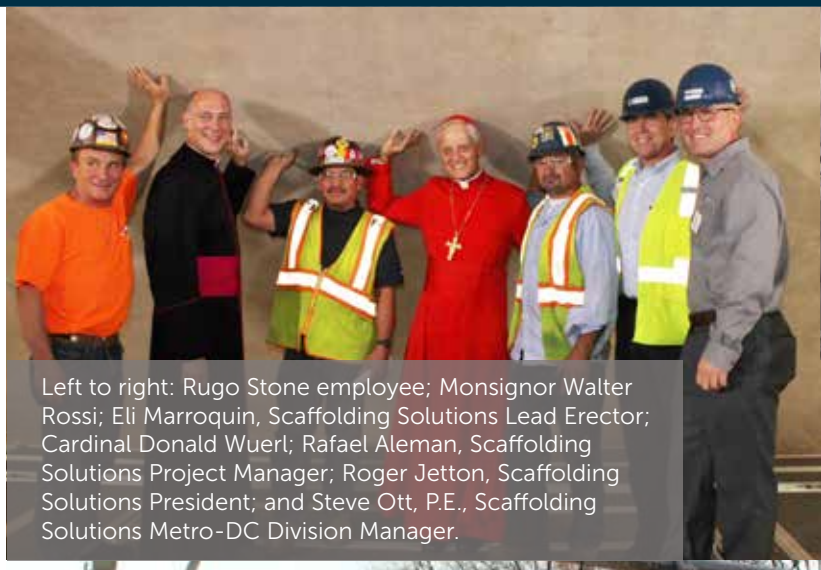


It is not often that a cardinal blesses workers, scaffolding, and equipment with holy water, but that is what happened at the Basilica of the National Shrine of the Immaculate Conception in Washington, D.C. The largest Catholic church in North America and one of the 10 largest churches in the world, the Basilica of the National Shrine is designated both as the national and patronal Catholic Church of the United States.

The Trinity Dome mosaic project is the final phase of the church construction that began more than 100 years ago and is expected to be completed this December. One of the largest mosaic tile installations in the world, the mosaic consists of 14 million pieces – 24 tons – of Venetian glass tiles. This massive project is taking place as high as 16 floors above the pews of the basilica.

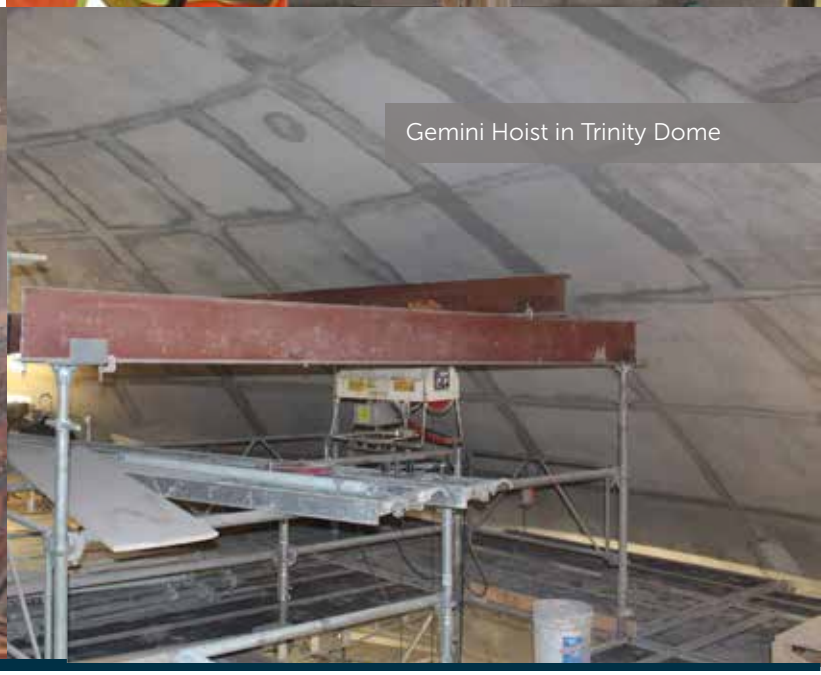
The entire jobsite, including the scaffolding and the personnel hoist, is suspended above the nave and completely sealed off from the rest of the basilica so that the installation does not interfere with normal day-to-day services and operations of the fully open and functioning church. When standing on the ground floor in the basilica, one would never guess that an entire job site is in place up above; there is just a subtle, black-draped area overhead. The creed of "cleanliness is next to Godliness" comes to mind when looking at the polished, beautiful interior of the church, which is a true testament to the care that has been taken to contain the dust and debris from the work going on overhead.

To suspend the job site, the contractor Rugo Stone developed an elevated structural steel platform that is 65 feet high and about 9,400 square feet in area. This steel platform was



Left to right: Rugo Stone employee; Monsignor Walter Rossi; Eli Marroquin, Scaffolding Solutions Lead Erector; Cardinal Donald Wuerl; Rafael Aleman, Scaffolding Solutions Project Manager; Roger Jetton, Scaffolding Solutions President; and Steve Ott, P.E., Scaffolding Solutions Metro-DC Division Manager.

Rugo worker and hoist operator



Gemini Hoist in Trinity Dome

designed to support almost 2 million pounds of live and dead load, including an upper-level Beta Max hoist and an elaborate stick-built scaffold system performed by Scaffolding Solutions.

A personnel hoist, or construction elevator, was installed to move workers and materials up and down from the base of the elevated platform to the upper decks of the scaffolding in the dome. Scaffolding Solutions turned to Beta Max to incorporate a small-footprint, lightweight personnel hoist with a seven-passenger/2,000-pound capacity.

This type of hoist travels on a mast that is typically anchored to the building or structure with anchors and pipes referred to as "wall-ties." In this unique configuration, where the scaffolding was "floating" on the elevated deck in the large domed space above the nave of the church, a steel spine had to be designed, engineered, and embedded in the surrounding scaffolding to accommodate the tie-in anchoring points for the mast of the hoist. Making sure that the steel-spine design would meet the required tie-in forces to safely handle the hoist required significant communication and time in preparing the final plans for the installation. In addition, the hoist and the spine had to be

integrated within a complex scaffolding structure that was designed and built with all-access decks to within 8 inches of a 90-foot diameter dome that was 160 feet above the church nave floor.

When Beta Max was originally contacted by Scaffolding Solutions, it was immediately clear that this project would involve extensive collaboration and coordination between parties. Steve Singleton, sales team member at Beta Max, was involved in the early part of the communication. He said, "I could tell as soon as Scaffolding Solutions started describing the project to me that I would need to get our tech department involved right away to see if this was even going to be possible. The hoist was going to need

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Basilica of the National Shrine of the Immaculate Conception in Washington, D.C.

to be disassembled into three sections, lifted to the platform, and then reassembled in place up in the dome."

Shanon Beekman, who heads Tech Support, Product Design, and Training at Beta Max said, "It took a lot of back and forth dialogue and time spent going over drawings to make sure the hoist was going to fit, had adequate support, and that the tie-ins to the steel spine would work. This sort of project is time-consuming and challenging but also very rewarding. The Scaffolding Solutions team was good to work with, and I am proud of what we were able to accomplish together." •

About the Author

Troy Palmer is director of Sales and Marketing at Beta Max, Inc., based in Palm Bay, Florida. For more about the full line of Beta Max hoists go to www.betamaxhoist.com.

CONGRATULATIONS, PROJECT AWARD RECIPIENTS!

This issue, the *SA Magazine* is pleased to feature two of the inaugural Scaffold & Access Industry Association (SAIA) Project Award recipients: Bee Access Products and Beta Max, Inc. The other award-winning projects will be featured in upcoming issues. Stay tuned!