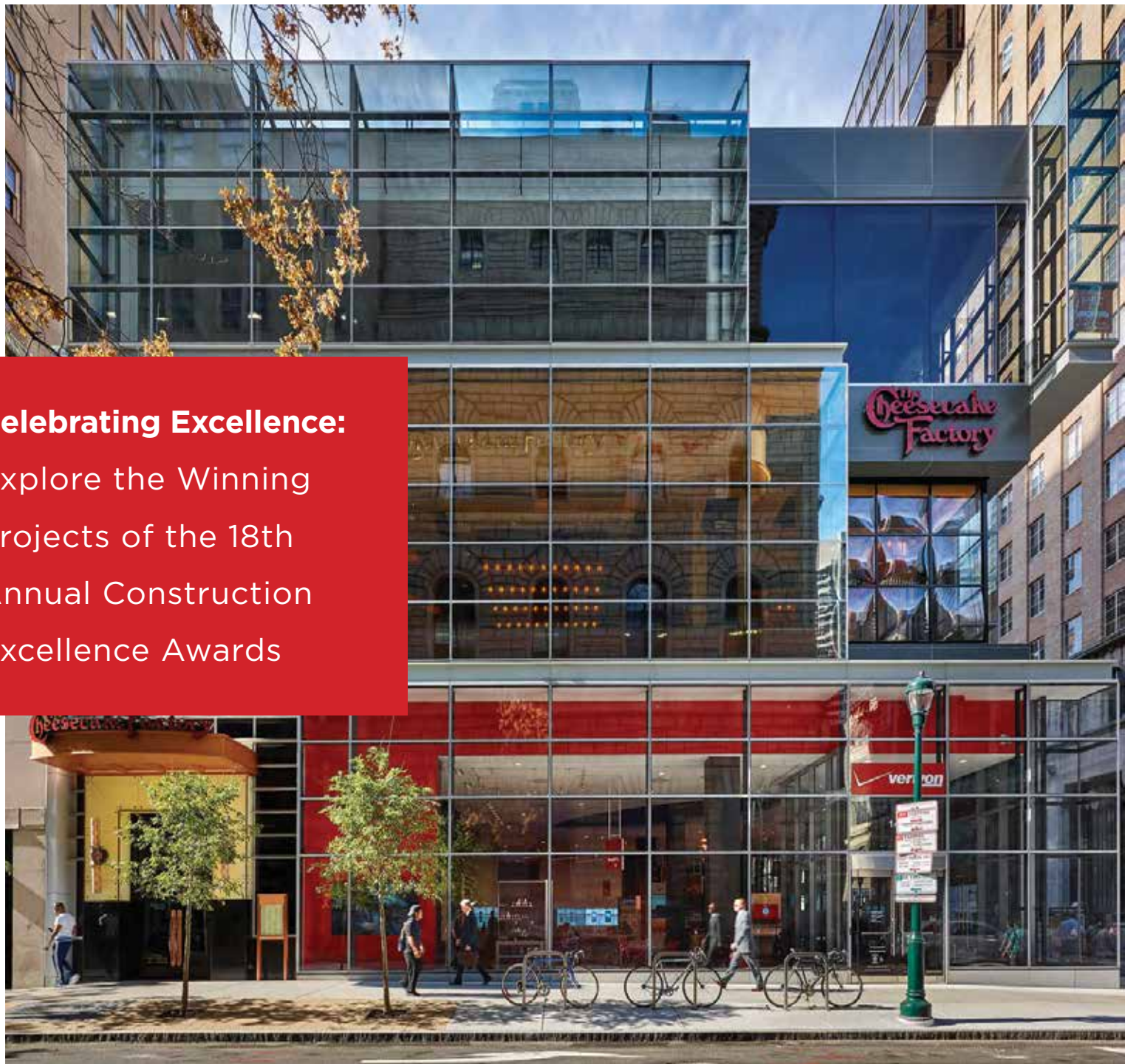
CONSTRUCTION TODAY

PUBLISHED BY THE GENERAL BUILDING CONTRACTORS ASSOCIATION

ISSUE 1 | 2016



Celebrating Excellence:

Explore the Winning Projects of the 18th Annual Construction Excellence Awards

LIKE A THIEF IN THE NIGHT

by Erik Highland, Marketing Director,
Superior Scaffolding

Look, let's be honest here. We, in the scaffold industry, understand we don't get the glamorous recognition that the other trades do. Sure, we can win engineering awards for crafty and functional designs but once the scaffold comes down, what's left? That's right, that stunningly beautiful architectural thing of splendor - the building itself. It's what makes people's hearts swoon and heads spin even hundreds of years later. You'll forever remember the structure but not the steel workers or masonry guys or painters or engineers or scaffolders who had to painstakingly rebuild and re-point and repaint that original edifice so you could ogle at it.

Amtrak 30th Street Station

But what do all of these trades have in common? Yep, scaffolding.

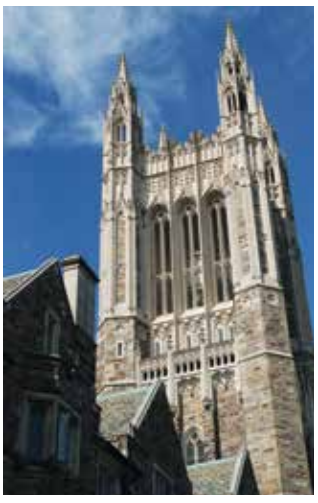
Because they all had to get "up air", as they say in Philly. And at Superior Scaffold, we get them there. We really are the John Stockton (15,806 ast) of the construction industry, assisting everyone but not getting any of the credit. And when the job is done we slip back into

the woodwork only to be brought out again for a very functional workplace necessity. Don't get me wrong, there is something inherently beautiful about a well executed scaffolding job — something symmetrically enthralling like it's part of the universal matrix.

Independence Hall

But realistically, if we've done our job correctly, especially with an historic building then you will never know we were there. They, in particular, call for a cat burglar's skill to never really be noticed but to get the job done. It really does take skill to erect hundreds of thousands of pounds of steel and aluminum without leaving a trace. And that's just what our guys are trained to do. We call them the "white glove" jobs and everyone from the engineer, the estimator, to the scaffolders knows not to leave a trace.

But how do you do that on these buildings, some of which are 200 years old? More goes into that woven tapestry of steel and aluminum than you will ever know. We treat historic buildings much differently. Yes, there are certain rules and regulations on some jobs that dictate how we handle the scaffold, approach the grounds, erect and dismantle, but mainly it's just that most of these structures are old and very delicate and the utmost care needs to be taken to keep them in their original condition. Each job is different and has its own unique set of challenges. On some jobs we have to work with the Preservation Alliance, National Parks Service and even Universities who may dictate the rules for erecting scaffolding.



Princeton University

(For this article we are going to talk about the exteriors — we have done many interiors as well)

Let's take a look at what's different when we approach working on an historic building. Probably the biggest difference is how we support the scaffold around the building. The scaffolding material is basically the same but because of the condition of these historic buildings we can't tie into them like we could a modern structure. And that's where the Preservation Alliance or historical society will dictate the rules for the job.

On most modern jobs we use a push/pull tie in to the building or what they call a drop in anchor. It's a clamp that goes into the masonry or mortar that then gets attached to a spreader and then to the scaffolding to pull it in to the building (essentially holding it in place). This is great if you are going to replace or cover the spots where the anchor holes leave behind.

But with historic jobs we might only be able to anchor to certain points on the structure like a mortar joint. You don't want to damage 100 year old stones or mortar that can't be replaced. But more times than not we are unable to tie the scaffold to the masonry. So what do we do then? This is where you probably haven't even given it a second thought – but we have. We work with our architect and look for alternatives that will give our scaffold the stability we need while not jeopardizing the structure.

Smith Memorial Playhouse

Push ties are a popular alternative to pull ties. Instead of actually anchoring to the building they are points on the scaffold that jut out and essentially push into the structure using foam or wood for stability and protection.

As you can see from the photos the scaffolding basically leans into the building with a piece of foam, wood, cribbing, or dunnage that acts like a cushion or footie or big toe (if you like) to protect the stone work, tile, or masonry. Then we brace it diagonally for stability. The engineers make sure everything meets OSHA standards and can withstand the loads and elements put upon it.

Brown Hall at
Princeton University

Here you can see where we will use extra protection on a roof top with foam then wood, and then more foam on the bottoms of the footers for added security, especially when weight has to be supported on the structure itself.

If the architect says no ties at all then it's back to the drawing board and how to get creative. It's an interesting dance we play with the Historical Societies or Parks Department who own and regulate the buildings we work on. For us, the contractors (be it masonry, painting, renovation, etc) are told by the (EOR) engineer of record what to use and what not to use — also what brick, what mortar, what mixtures, etc to get it right. The engineer makes the call and then the GC passes that information down the line and onto us and we design accordingly working with each agency.

Independence Hall

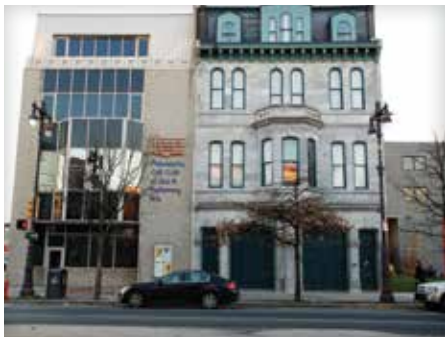
Take the work we did at Independence Hall. Not only could we not tie into the building but we had to erect the scaffolding in such a way as not to disturb the 200 year old delicate urns that sat on the outside of the building up on the 7th floor. That meant that our engineer had to literally stop one giant building block type scaffolding project and skip an entire floor while then putting 3 more floors of scaffolding on top of that – all while NOT tying into the building, quite a challenge. But you can see from the photos that the urns were left untouched and the scaffold was erected according the guidelines set down from the National Parks Service. And in the end, what do you remember — the building itself, of course.

We have had to use a strap or cable around a building or steeple and attach a winch or come-along to tighten it up. It's whatever the owner and/or historical society that governs the property requests. Take a look at the guy wires we had to use to secure the Virgin Mary statue on top of Our Lady of Lourdes Medical Center in Camden, New Jersey after an earthquake. Not the traditional solution but it worked.

Our Lady of Lourdes Medical Center

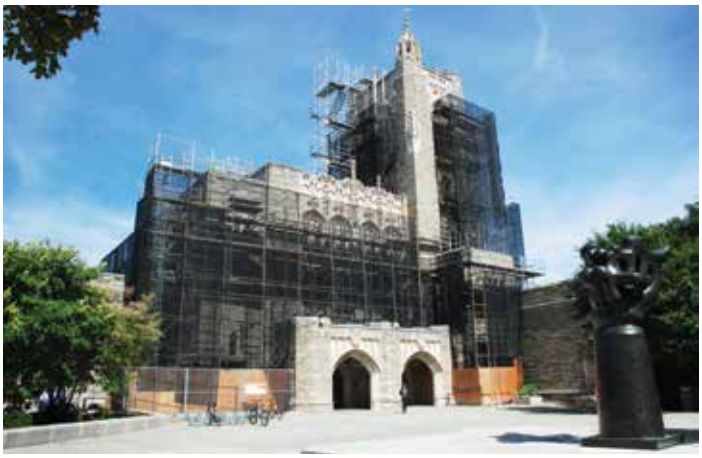
Another creative solution is to use a window to tie in to. How you ask? Well, we put a post shore in an open window with jacks on the top and bottom and basically create a vertical support beam for our scaffolders to tie on to. We run tube and clamp out to a spreader and then to the scaffolding to draw it tight to the building. The down side is that the window has to have protection added from the elements but sometimes it's the only way it can be done.

Here's an example where we used the existing post shores to tie into. They were shoring up the opening at the front of the Philadelphia Clef Club and we need a place to attach the scaffolding. Our engineers met with the EOR and they did the calculations for the height and weight and came up with a creative way to solve the problem.



Philadelphia Clef Club of Jazz and Performing Arts

And again, our scaffolding is very attractive but in the end it's the final result that you see and remember everyday — the building itself. They did a great job renovating the exterior of this building.



Princeton Firestone Library

So besides being extra careful on the grounds moving equipment in and out to the job sites, adding extra protection on the structures and our scaffold, delicately working while erecting and dismantling, and following any regulations by the Preservation Alliance, National Parks Service and even Universities these are just a few of the things we do when working with historic buildings.

So the next time you see a historic building encased in scaffolding, you will have a better idea of what was involved. Just know that if we did our job correctly the other trades will get all of the credit for how incredible the refurbished structure looks.

And then, just like that — we are gone... ■