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## Amtrak's Historic 30th Street Station Gets a Facelift



Superior Scaffold is proud to be providing scaffolding support for Amtrak's renovation of their 30th St. Station in downtown Philadelphia. The historic building that opened in 1933 will get a much needed facelift. It's an incredible looking structure and can you just imagine what it's going to be like when it's finished?

Amtrak wants to make the neoclassical 30th Street Station a more welcoming gateway to West Philadelphia and Center City. The 30th Street Station handles 120 Amtrak trains, 960 SEPTA trains, and 26 NJ Transit trains each weekday. More than four million Amtrak passengers went through the station last year.

Amtrak wanted an overhead protection system in place for their 10 year-long remodel. Not only did it have to last 10 years in the elements but it had to support the scaffold necessary to do the renovation work. And it needed to be built on top of an intricate framework of Jersey barriers that would help protect pedestrians as well as distribute the weight load over the mostly

hollow train station. It was a much more complicated project than it seems.

Superior's first order of business was to erect canopies and sidewalk protection around the entire building—and that's a good sized building. The station is a hustling, bustling metropolis all of its own with cars, buses, and lots of people all the time. Not only did the canopy have to protect customers but it had to withstand the elements and traffic for 10 years and be able to handle multiple phases of renovation.

The first challenge was what material would last 10 years in the harsh elements of Philadelphia. Amtrak originally proposed an aluminum bridge column design but we decided on a system scaffold for quick installation and to hold down the cost. Amtrak's engineer required galvanized steel beams. But since galvanized steel scaffolding isn't something that you see everyday we had to have it built to spec. We worked with the Custom Iron Shop in Wilmington, DE to provide us with all of the galvanized steel beams and corrugated metal panels. The



overhead protection would also have to be able to handle the additional weight of scaffolding once the exterior façade renovation started so it was all designed with a 300psf rating.

The second challenge was the Jersey barriers Amtrak wanted all the way around the building—for two purposes. One, they would help protect the scaffold from the sheer amount of auto and pedestrian traffic that travels through the station each day. And two, much of 30th Street Station is hollow underneath so barriers would help distribute the weight load. The barriers could only be delivered 9 at a time per truck and we had 177 total. They had to be cut and sized ahead of time and then shipped in. What we have now is an intricate series of walkways and passages for patrons to safely travel through while the renovations take place overhead.

Amtrak also had a requirement for us to band all of the roofing material down every 2 to 3 feet to prevent uplift. But we couldn't use standard banding material (it wouldn't last) so we had to have it galvanized—and installed around the entire structure.

We also had to design a special tie-down/clamp to anchor the jacks to the Jersey barriers. Superior came up with a solution that utilized custom clamps built by Lahyer Scaffold.

The newly renovated concrete in the west portico (recently remodeled by Shoemaker Construction) required special attention when placing the Jersey barriers. We had to use a system of plywood and rubber mats beneath the barriers to protect the new cement beneath.

Amtrak wanted to span the Porticos with a smaller version but we noticed that it would have blocked the access doors and the standpipes for the fire department. We proposed a larger version with a longer span using special steel beams and double towers on each side to support the load (330 psf rating) the height from the street level to the bottom of the steel deck was 16' clear, and they spanned 25'-6". (The height was to accommodate all of the trucks and buses.)

Amtrak also originally wanted a wood and rubber roof on top of the overhead protection but we suggested corrugated metal panels that would last longer and help channel the water from the roof. Over time the moisture would penetrate the wood and rubber and start to rot so this was a more cost effective solution.

Amtrak required a specific high quality paint and color for the wood panels that act as a 4 foot parapet wall. This would be the only part that wouldn't last 10 years in the elements—and both parties realized that every few years they would have to be updated.

One of our biggest challenges was working at night to mitigate interference from pedestrian and auto traffic. But Amtrak foreman, Harold Mulleavey and his team did an incredible job interacting with the Superior team of Nick Lazer and Kenny Foreman. They were given very tight deadlines and achieved them all without incident. The logistics of getting all of the equipment and crews in each night was a giant challenge for the team.

In the end, the scaffold is rock solid (has already withstood one UPS truck) and looks fantastic. Passengers by the thousands safely travel in and out of the 30th Street station all protected by our overhead canopy. Cars, busses and trucks are able to make their appointed rounds without being rerouted. And because of the unique galvanized steel this is one scaffold that will surely stand the test of time.

These were all pretty non-standard issues for an overhead protection system. **CT**

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