

Madison Square Garden Renovation

Providing Access at the World's Most Famous Arena

› When you're providing access for the renovation of one of the world's most famous arenas, everything you do is on display. "Madison Square Garden takes up most of two city blocks in midtown Manhattan," explained BrandSafway Services Project Manager Chauncey Collins. "It's in the heart of New York City."

Host to top-name concert and family events, and home to the New York Knicks, the New York Rangers and the New York Liberty, Madison Square Garden hosts approximately 320 events a year and is the third busiest music arena in the world. Seating is arranged in six ascending levels, and the arena features 20,976 square feet of floor space.

Extensive transformation planned

The extensive renovation of Madison Square Garden, which took place over a four-year period, included everything from updating all mechanical systems to structural upgrades and aesthetic improvements.

"This was a comprehensive, top-to-bottom transformation, which enhanced the arena experience for customers, athletes, entertainers, fans and partners," said a spokesperson for Madison Square Garden. "When ›

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the project was completed and ready for the 2013-14 season, the arena had wider concourses with views of the city, first-class food and entertainment amenities, improved sightlines, more comfortable seating, a dynamic scoreboard, sound and LED video systems in HD, new suites, clubs, hospitality areas, fan decks, two one-of-a-kind bridges and the new Chase Square entrance featuring interactive zones, retail locations and a broadcast studio.”

Most of the work took place during a series of ‘dark’ summers, when the facility was closed down. “The lower portion of the entire arena bowl was renovated during one summer,” explained Collins. “We also provided access, so work could be done on the west side of the building. The following summer we shifted our focus to the south and north upper levels. In 2013, the two bridges were added, running east to west on both the north and south sides of the arena on the tenth level. The mechanical and

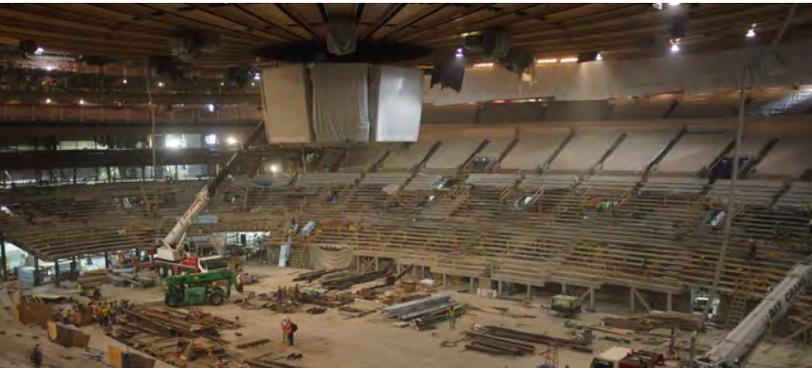
dock at Penn Station, while at the same time the contractor had to access the ceiling.”

The QuikDeck® Suspended Access System provided the perfect solution. “We built a 15,000 square foot platform that was in use for over a year and a half,” said Grumberg. “Amtrak had full use of the loading dock below the platform, while the contractor did whatever he needed to do above the activity.”

QuikDeck provided another critical access solution within the arena itself. “We built a double-tiered platform west of the arena, so demolition could take place on levels nine and ten,” said Grumberg, “while work continued at the floor and lower seating levels. This platform was expanded and used throughout the following two summers.”

Size and scale

Many facets of the project were challenging due to the size and scale of the facility and the



The lower portion of the entire arena bowl was renovated during one summer. 



QuikDeck delivered a safe, smooth work surface. 

structural upgrades and additions were handled throughout the project. Turner Construction Company, the contractor in charge of the renovation, completed the project by the end of the summer in 2013.”

Creativity and engineering

Very few access solutions for the project were “off the shelf,” which required more than the usual amount of creativity and engineering. “I think this is one of the most important aspects we brought to the table — an ability to think outside the box, solve problems and come up with unique solutions,” said Collins.

Case in point: Penn Station. “Madison Square Garden sits on top of Penn Station, a major New York transportation hub,” explained BrandSafway Engineering Manager Mathieu Grumberg. “Amtrak needed to continue using the loading

renovation. “We built two large structural steel loading platforms, 50 feet by 30 feet, which could hold 250 pounds per square foot or 375,000 pounds total,” said Collins. “These were installed 80 feet off the ground so we could transport truckloads of material, structural steel, equipment and precast concrete to the seventh floor.”

Another major part of the project was the building of a 1-foot-thick timber floor mat. “We needed to protect the concrete slab at the base of the arena,” explained Collins. “A grid of pipes, filled with a brine, runs throughout the slab, and is used to make ice for the New York Rangers’ games. If something were dropped on this concrete slab during the renovation, it could have cracked, creating major, expensive problems.”

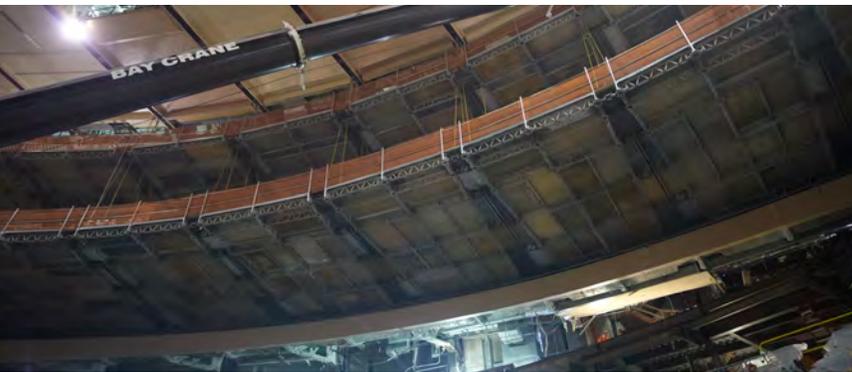
The solution was to install a thick protective mat over the concrete. “We used 30 truckloads of

timber and basically built a hardwood floor over the entire slab — 22,000 square feet total — in less than 40 hours,” said Collins.

Other aspects of the project included building extensive sidewalk bridging around two city blocks, bringing in two dual car construction hoists and engineering temporary egress solutions. “We built a 120-foot-high structural steel stair tower last year,” said Collins. “It was set up outside of one escalator tower as an emergency exit for the public. The permanent exit stairs had been ripped out at that point in the construction, and we needed to come up with a temporary solution until the permanent egress requirements were met.”

Professional labor

BrandSafway’s labor on the project increased to as many as 30 people during peak periods. “General Foreman Cristian Matei was instrumental in executing everything we have



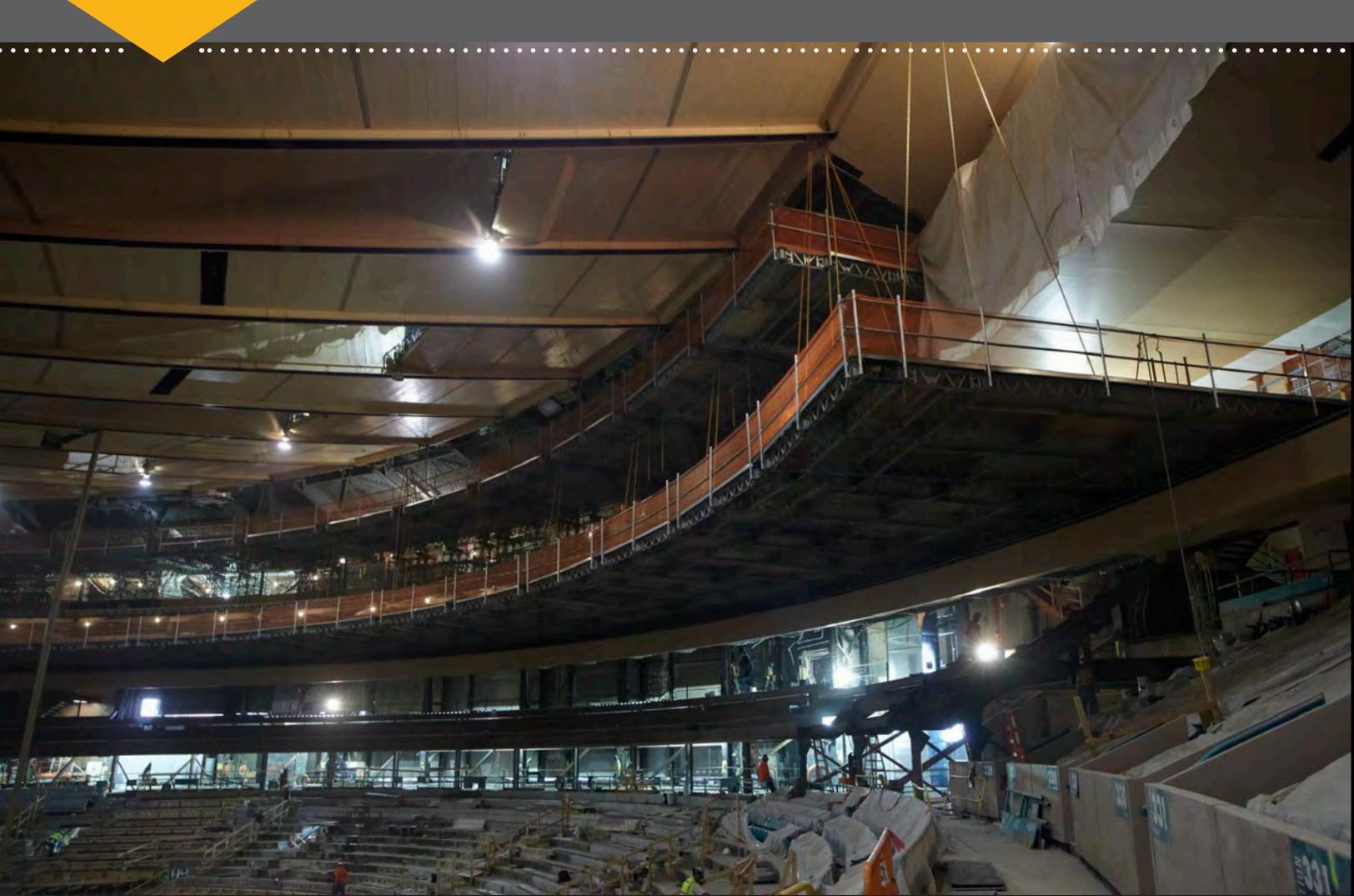
Two large structural steel loading platforms could hold 250 pounds per square foot. >

accomplished on this project,” said Collins. “As the general foreman, he led the group of foremen who were supervising the crews, Local 1536 carpenters — some of the most professional, safe and capable scaffold builders I have ever seen.”

By the time it was completed in 2013, the total project cost was in excess of \$18 million. “The entire process was a team effort,” said Branch Manager Jamie Kelly. “From bidding through project management, this required input from numerous BrandSafway resources. We were awarded the job in large part because we are one of the few companies that can take on a project of this magnitude, which included very complex, custom access needs running parallel with an extremely demanding schedule, as the venue remained open for the majority of the year. Our ability to provide a turnkey >

Renovations included wider concourses, first-class food/entertainment amenities, improved seating, new suites, two bridges and a new entrance. >





› solution including extensive engineering and a complete and diverse product line, from personnel/material hoists to BrandSafway SkyTower, QuikDeck and custom public access stair solutions, was critical.”

Kelly continued, “Our crew and field management team were critical to our success. Being awarded the project is one thing; living up to our commitment is another. Having complete confidence in Project Manager Chauncey Collins and General Foreman Cristian Matei, who made everything happen, was extremely important.”

As the project continued through 2013, BrandSafway worked closely with Turner

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Construction Company to provide access throughout the facility. “We are always looking for ways to improve our efficiency and performance, while maintaining safety,” concluded Collins. “This was an extensive project and a great opportunity for us to showcase our work.”

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