

# HIGHER STAKES

## Safe rigging for arenas.

By Patrick Finn

In June 2016, a tower-hung speaker weighing 150 pounds fell off a 98-foot-high light standard at Tim Hortons Field in Hamilton, Ontario. Fortunately, no event was scheduled in the outdoor stadium at the time; a maintenance crew was out of harm's way.

Such an accident highlights the potential danger posed by anything suspended overhead in arenas or stadiums, including speakers or scoreboards. With in-house A/V systems becoming larger, heavier and more complicated, ensuring their safe installation is a greater challenge. Improved rigging practices would be a proactive, beneficial step.

### Raising Expectations

"Touring productions are raising consumers' expectations of entertainment systems in arenas and stadiums," says Kevin Day, associate principal at WJHW in Dallas, Texas. WJHW designs A/V, acoustical, and technical systems; Day has worked on such projects for 18 years.

Today he says these venues want concert-quality technology with the flexibility to adjust sound and video for different seating conditions, like a half house. "We're expected to advance the art by providing something comparable to touring shows."

Day helped design the A/V systems for the new U.S. Bank Stadium in Minneapolis that opened in 2016. It includes approximately 60 speaker locations and 25,000 square feet of 13HD LED displays. The main scoreboard is 8,100 square feet.

An A/V project of this size and complexity often involves numerous contractors and sub-contractors, with the scoreboard, video, and sound each rigged by a different company. Despite rigging's importance, it rarely gets much attention – until something goes wrong.

### Not an Afterthought

"Rigging is frequently just an afterthought, considered only a means to an end," says Dave Piccola, director of venue installations with Mountain Productions in Wilkes-Barre, PA. "Price is often a greater consideration than safety when deciding who will rig this equipment."

He believes that anything hung or mounted inside a venue should first require a set of drawings – reviewed and stamped by an engineer – that indicate how those elements should be properly hung.

Mountain Productions' Director of Engineering, Paul Serkosky, P.E., leads a team of engineers and CAD operators that take the time necessary to ensure safe drawings and stamped prints. Mountain also encourages all companies to consult with outside engineering firms to review any work. This step is extremely beneficial as it adds another level of security and quality assurance during the design process.

Before an owner or arena management company hires out any rigging work, Piccola recommends they ask if they're really getting the safest installation for their dollar. "Decision-makers should ensure that the company selected has the experience, credentials and engineering to back up their work," he explains.

Piccola sees some venues acting more proactively on this topic than others. "Without an industry mandate, it's being driven by the desire for greater safety," he notes. "It takes time." The safety push is more prevalent in larger cities; Piccola credits this in part to advocacy efforts by the International Alliance of Theatrical Stage Employees (IATSE), the stagehands' union.

### Theatrical Roots

The advocacy of IATSE is no surprise; the theatre industry has long been aware of the safety risks inherent with overhead elements like moving scenery, curtains and lights. Safety-focused industry training includes the Entertainment Technician Certification Program (ETCP) administered by the Entertainment Services and Technology Association. Today, ETCP rigging certification is available for both theatres and arenas, with unique training and exams specific to each facility.

Although the terminology is often different, the two types of rigging share many similarities, including load calculations and equipment. In traditional theatre projects, separating the rigging specification from the other equipment is standard practice. That idea has not yet been fully adopted in arena or stadium projects, but the trend is gathering momentum.

### Separate Specs

Day says WJHW is pushing for a more coordinated, professional bid process that calls out rigging separately. As installed A/V systems in arenas become larger and more complicated, the specification process must keep pace.

"The rigging spec needs to be outside the umbrella of an A/V contract," he explains. "Including the rigging in the A/V spec makes the A/V contractor responsible for things they often don't fully understand."

His firm sees a wide range of bid pricing between, for example, local general laborers, crane-operating companies, and production companies with ETCP-certified riggers. "It's not an apples-to-apples comparison," Day says. "The certified riggers usually cost more because they understand what they are getting into."

Specifying the rigging separately is an evolution WJHW is making, reflected in their current projects. "Our clients expect us to show them what's typical," concludes Day. "And typical is shifting."

### Singular Control

Just as some arenas are beginning to follow the same specifying practice used for theatre rigging, automated control technology developed first for theatres offers potential benefits when adapted for these larger venues.

A single automated system can operate the arena speakers, scoreboard, and upper-bowl curtains, instead of requiring individual controls for each. Separate controls increase the likelihood of mistakes or accidents. The automated system includes built-in safeguards to ensure systems cannot interfere with each other.

Along with improved safety, an integrated control system reduces labor costs because the facility's operating staff is empowered to operate these systems easily, quickly and safely, with fewer outside crews required.

For arenas and stadiums, as with any venue, providing safe entertainment is a fundamental, essential goal. Choosing proven rigging practices that promote safety is a key place to start. **FM**

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