R. BAKER & Son

OUTRIGGER

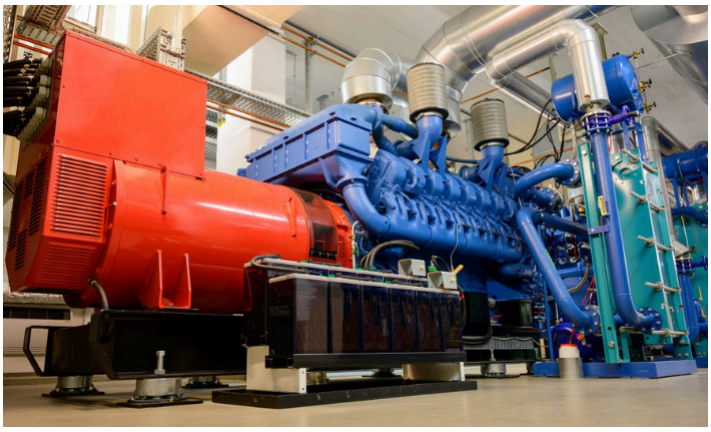
Rigging, Dismantling & Demolition News from R. BAKER & SON

www.rbaker.com

May 2026 | Volume 19 Issue 2

Data Center Electrical Mechanical Rigging and Assembly

Data centers are unlike almost any other type of facility. They're extraordinarily dense with electrical and mechanical infrastructure, housing switches, servers, and UPS systems across dozens or even hundreds of IT racks, all generating tremendous amounts of heat. Managing that heat demands serious power and purpose-built cooling solutions, from CRAC and CRAH units to water-cooled chillers, cooling towers, and chiller heat pumps systems R. Baker & Son knows inside and out. On the electrical side, these facilities rely on medium-voltage transformers, double-ended substations, large battery UPS systems, and automatic transfer switches, along with multiple generators with paralleling gear, prefabricated equipment enclosures, exhaust scrubbers, and more.



Large generator with paralleling gear

Large custom data center AHU

Receiving, rigging, and assembling MEP systems of this scale requires hands-on expertise and precise coordination, exactly what R. Baker & Son can help coordinate. Data center projects run on aggressive, fast-track schedules, yet major mechanical and electrical equipment carry long lead times. By the time MEP equipment arrives on site, piping and electrical lines have been coordinated and installed. Delivering, setting, and assembling large air handlers, cooling tower cells, generators, double-ended substations, paralleling gear, and exhaust systems demands exact positioning guided by BIM. Connecting, bolting, and fastening equipment, including all shipped-loose hardware, is critical to completing a fully functional system and giving electrical and mechanical contractors the access they need to finish their tie-ins. The sequence of delivery and assembly is never improvised; it's determined well in advance by a detailed startup and commissioning schedule.

Because lead times are long and project schedules leave little room for delay, major equipment is often ordered early and stored offsite until it's needed. This gives clients a secure buffer, whether they lack on-site storage or need a climate-controlled environment to protect sensitive indoor electrical gear.

We also regularly partner with quality vendors to assemble their complex equipment on-site. Having experienced electrical and mechanical crews, paired with the right rigging equipment and hand tools, makes a measurable difference in getting the work done safely and efficiently. On select projects, we've even delivered and set IT racks and control panels for system integrators when timing required it.

The Sky Boys: The Men and The Derricks of the Empire State Building

Derrick man guiding steel 1930

Derrick machines with Sky Boy operators

On March 17, 1930, the foundation of what would become the world's tallest building broke ground in Midtown Manhattan. One year and 45 days later, it was done — 410 days from first steel to final rivet, completed twelve days ahead of schedule. That wasn't luck. It was logistics, machines, and men who knew exactly what they were doing.

The steel frame rose at a rate of four and a half stories per week, more than a story a day, a pace no comparable building has matched before or since. Behind that pace was a supply chain as finely tuned as the ironwork itself. Sixty thousand tons of steel were manufactured in Pittsburgh and transported immediately to New York by train, barge, and truck. Each beam arrived on-site already marked with its position in the framework and the number of the derrick assigned to hoist it.

Those derricks were the backbone of the operation. A series of relay and erection derricks, placed on platforms built near the building, lifted steel from the trucks below and installed beams at their designated locations. Steel beams rolled out of the Pennsylvania foundry and, in roughly 80 hours, were swung into place on the tower's rising frame. It was just-in-time delivery long before the term existed, because there was no room on-site to store anything.

But machines alone don't build a skyline. The workforce peaked at 3,500 men across 60 different trades, in one single day there were 3,439 workers on site. They were called the Sky Boys, and the name fit. The gravity-defying ironworkers balanced on narrow beams and hung from derrick lines hundreds, sometimes thousands, of feet above the streets below. They used minimal harnesses, sometimes none. Safety standards were far laxer than today, nearly nonexistent by modern measures.

At R. Baker & Son, we take pride in our legacy of contributing to numerous iconic NYC landmark properties since 1935. The Empire State Building is a monument to American industry. But it's equally a monument to the men who showed up, climbed the iron, and got it done.

Quality Award Winner

Congratulations to **Jim Macaluso**, this quarter's recipient of the R. Baker & Son Quality Award. This program was established to recognize individuals for their outstanding achievements in safety, project execution, and customer satisfaction, and for their continuing dedication to R. Baker & Son's growth and success.

Thank You, Jim Macaluso for a job well done!

Managing Long Lead Times: A Smarter Approach to Equipment Storage

For the better part of the last five years, nearly every major construction and renovation project has had to contend with long lead times on critical equipment purchases. Electrical transformers, substations, and switchgear have been among the most affected, but the challenge extends well beyond electrical systems. Lyophilizers, low-temperature chillers, isolators, centrifuges, packaging equipment, and a range of other process machinery all fall into the same category. Because fabrication and delivery can take two years or more, procurement decisions that once happened mid-project now have to be made at the very start.

Lead times have improved slightly, but not enough to change the fundamental reality for large-scale projects. In some cases, clients have had to source reconditioned or refurbished transformers and switchgear just to keep a project on schedule, running temporary equipment until permanent units could be delivered.

R. Baker & Son has responded to this shift with warehouse and trucking services built specifically around long lead equipment management. For many project teams, we've become an essential off-site link in the construction chain. That means carefully coordinating the receipt and storage of mission-critical equipment, assigning each piece to a designated area, photographing and cataloging everything upon arrival, and maintaining clear access for client inspections. Engineers regularly visit our facility to inventory equipment and verify its condition, sometimes conducting electrical and other testing to confirm a unit is ready for delivery. When it's time to ship, every piece goes out clearly numbered and sequenced in installation order, so there's no guesswork on the receiving end. In some cases our riggers and millwrights will assemble skids directly in our warehouse or yard, allowing on-site crews to focus on setting equipment in place.

With millions of dollars tied up in long lead items and hard deadlines on the line, clients need more than storage space. They need a company with the experience, the systems, and the track record to handle the most critical pieces of their project. Provide Baker with your next challenge.

Better Shoes, Fewer Injuries: What Proper Footwear Does for Your Workforce

When it comes to workplace safety, footwear often takes a back seat to hard hats, gloves, and eye protection. But it shouldn't. For workers who spend their shifts on their feet, the shoes on the floor are every bit as important as any other piece of PPE. On a construction site, the risks are hard to ignore. Uneven terrain, falling objects, heavy equipment, and wet or slippery surfaces all put workers' feet in the line of fire every single day. The wrong footwear isn't just uncomfortable, it's a liability.

Good work boots do more than protect the foot. Proper arch support, cushioning, and traction reduce fatigue, improve posture, and take strain off knees, hips, and the lower back. For tradesmen logging long shifts on concrete, scaffolding, or rough ground, that cumulative impact adds up fast. Conditions like plantar fasciitis and joint deterioration don't appear overnight, but they often trace back to years of inadequate support. Workers who are comfortable move more freely, stay more alert, and make fewer mistakes. Investing in proper footwear isn't an overhead expense. It's a signal that workers' well-being matters, and it backs up a safety culture with something tangible.