

ROOFTOP COOLING TOWERS REPLACED AT RICHMOND CITY HALL



Project Details



Waco, Inc. replaces numerous cooling towers each year. The vast majority are basic projects that require moderate oversight and teamwork. When the project involves two cooling towers on top of a 19 story active downtown building – the coordination and expertise level increases substantially. Richmond City Hall is home to administrative and service offices of the City of Richmond, Virginia. It has over 78,000 sf of building space. The air conditioning system has two evaporative cooling towers. Each cooling tower sits upon a massive structural steel framework. Over the past twenty years, the cooling towers and steel framework had deteriorated so badly they needed to be replaced.

Waco's job was to disconnect the piping and electrical systems, then dismantle, remove and dispose of the steel frame and aging cooling tower. A new steel frame had to be fabricated and installed. The new cooling towers would be mounted to the frames using isolators to keep vibrations down. The pipe connections had to be

welded in place and updates to the electrical control system had to be installed. All tasks for each unit had to be performed within a 60 hour window. Included in that short time frame was the erection and dismantling of the 550 ton crane which would be built on site prior to setting the steel and the cooling tower. Two cranes would actually be required; one 120 ton crane to remove materials from the flatbed trucks and another to make the critical 280 foot lift to the roof. All of the fabricated galvanized structural steel would have to be precisely measured and staged, as there would be no time for any modifications to it, once the streets were blocked off and the operation began. Several crews of professional craftsman working around the clock on shifts would be required to meet the tight time frame. All pipe fabrication would be done in Waco's facility prior to lifting into place. Only a minimal amount of work could be done on the existing units prior to the start of the project, as they would be functioning up to the time of replacement.

The most critical part of the project was planning each step and then coordinating with each team member and subcontractor. Once everyone understood each task to be completed, the manpower required and the time frame demanded, then the project's success could be assured.

Because of the heavy critical lifts in a crowded downtown space, and the working conditions at night, Safety was a major factor to be considered. Waco's safety director was involved from the process from beginning to end, and made certain that the proper amount of time, equipment and supervision was planned before any activity began.

Project Facts:

- Project Manager: Gary Drake
- Superintendent: Charlie Branscomb
- Engineer: Jason Devine - Dewberry
- City of Richmond Project Manager: Lacy Salomone
- Contract Amount : 1.1 MM
- Completion: Unit 1- May 2018, Unit 2 – October 2018

Our key subcontractors were:

- Mid-Atlantic Steel Erection – Crane Services and Steel erection
- Lowman Electrical – electrical
- Siemens – Instrumentation and control system

Waco utilized many of our own craftsman to set the steel, rig the equipment, and connect all the piping, fittings, valves and gauges.



Corporate Office:

5450 Lewis Road
Sandston, VA 23150
(804) 222-8440

Other Locations:

38592 Brett Way, Suite 7
Mechanicsville, MD 20659
Phone: (301) 290-1333
Toll Free: (888) 742-7219

844 Cottontail Trail
Mt. Crawford, VA 22841
Phone: (540) 434-7390

1326 Cavalier Blvd.
Chesapeake, VA 23323
Phone: (757) 558-3100

11839-A Canon Blvd.
Newport News, VA 23606
Phone: (757) 873-2205

172-8 Imboden Dr
Winchester, VA 22603
Phone: (540) 535-7250

1520 West Main Street
Radford, Virginia 24141
Phone: (540) 633-6311

208 Martin Luther King Jr Dr.
Bladenboro, NC 28320
Phone: (910) 648-5468

710 West Locust Street
Covington, VA 24426
Phone: (540) 962-5161



www.wacoinc.net