

CASE STUDY

YWCA CENTRAL CAROLINAS

72% Reduction in HVAC Maintenance & Repair Costs:

How YWCA Broke the
Relentless Repair Cycle





ABOUT YWCA CENTRAL CAROLINAS

eliminating racism
empowering women

ywca

Central Carolinas

YWCA Central Carolinas is a non-profit organization that has been a part of Greater Charlotte's history since 1902. Today, the organization serves over 60 single women and 10 families through its Transitional Housing Program; over 300 students through after-school literacy programs; hundreds of members through fitness facilities; and offers racial justice programs to the community.



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Aging equipment causes havoc and stress

THE YWCA CENTRAL CAROLINAS— LOCATED IN A 70,000 SQUARE foot building built in 1965 — was struggling with disruptive HVAC problems almost every day.

Workout rooms would get so hot that members couldn't use the space. The pool had to be shut down when the water temperature rose to a point that made it unsafe for swimming. Most staff members kept space heaters and fans by their desks at all times. Often, they used both in the same day because it was impossible to control the temperature in the building.

“The constant struggles with the HVAC system had an incredibly negative impact on our ability to deliver on our mission,” said Rachel Damone, YMCA Facilities Manager who supports the YWCA as part of a partnership between the two organizations. “The YWCA is so much more than a fitness facility. We also offer youth learning programs and provide temporary housing for women and their children. That means the building is in use 24-hours a day, and different rooms have very different purposes. Drastic temperature swings are just not acceptable.”



YWCA POOL
The pool had to be shut down if the water temperature rose to a point which made it unsafe for swimming.

A relentless repair cycle is finally broken

THERMAL CONDITIONING FIRST STARTED SERVING THE YWCA facility in late 2014 when technicians responded to an emergency service call to restore heat. After that, Thermal became the primary service provider for repair calls.

“One year, we had a whopping 41 service calls!” said Chuck Mobley, President of Thermal Conditioning. “That’s almost one a week. We knew we had to stop the perpetual break/fix cycle and find a long-term solution to the underlying problems.”

According to Chuck, “Most vendors in our industry respond to service calls and fix the immediate problem without looking at the bigger picture. We take a different approach. We collect and track equipment failure data on HVAC assets across all the facilities we serve. That means we track data at the individual facility level, and at the aggregate level across all our clients. Our data covers a wide variety of environments and millions of square feet across North and South Carolina. This gives us the ability to see patterns that other vendors just can’t see.”

“Thermal Conditioning’s recommendations are always based on real data that addresses our underlying problems. Other vendors have presented us solutions that were just temporary fixes. Thermal is different. Picking Thermal as our partner is one of the easiest decisions we’ve ever made.”

RACHEL DAMONE

Facilities Manager, YMCA

A multi-year plan for long-term solutions

IN 2015, THERMAL CONDITIONING HELPED THE YWCA CRAFT A PLAN to modernize its facility, reduce maintenance expenses, and amortize major capital expenditures over a 5-year period.

Part of the plan included upgrading the building's HVAC controls from an outdated pneumatic system to a modern, digital system.

"I was very impressed with the way Thermal approached and presented their proposal for our controls project," Camilla Robinson said. "Since they were our current maintenance provider, we wondered if they would take the easy way out. They didn't. Instead, they did their homework, brought the data to show the real source of the problem, the cost to fix it, and the ROI we could expect."

"With Thermal Conditioning as our partner, I've been able to confidently communicate with our board of directors about the budget for big-ticket projects like replacing our controls," said Camilla Robinson. "What's more, Thermal helps us put those costs in perspective to show how specific investments will actually save us money in the long run."



MULTI-YEAR PLAN

Thermal Conditioning helped craft a plan to modernize YWCA's HVAC system, reduce maintenance expenses, and amortize major capital expenditures over 5 years.

Modernizing HVAC controls pays off

THE DIGITAL CONTROLS PROJECT WAS A MAJOR INVESTMENT,” said Rachel Damone, the YMCA Facilities Manager who supports YWCA Central Carolinas. “But it gave us so much more power to manage the temperature zones and control maintenance costs. The new system provides advanced diagnostic assessments that give Thermal the visibility they need to implement preventative measures to keep our facility running efficiently.”

Even though the controls project was completed in phases over six months, the benefits were immediately noticeable.

For the first time, facilities staff could set different areas of the building to different temperatures, to meet the needs of each space appropriately. During seasonal transition months, the staff was able to use the air conditioner and the heat in the same day, alleviating uncomfortable temperatures throughout the facility.

“Since the controls project was completed earlier this year, we’re on track to cut our maintenance and repair costs by 72%,” Rachel Damone explained.

“I think it’s safe to say, we’re thrilled with the outcome,” added Camilla Robinson. “Seeing the costs savings was certainly a relief. But, we also feel like we were finally moving in the right overall direction. We fundraise two-thirds of our budget every year. When we were spending so much on maintenance and service calls, it made us wonder how much more we could do for our mission if we didn’t have to earmark as much money for repairs.”

A model for other YWCAs

CAMILLA ROBINSON, YWCA'S CHIEF FINANCIAL OFFICER, reflected that it's interesting to see how other YWCAs across the state and country still struggle with issues that YWCA Central Carolinas has now solved.

"We participate in a statewide initiative with five other YWCA locations across North Carolina. During one of our recent sessions, the topic of facilities came up," Robinson said. "Many of the other associations are in older buildings with failing equipment that cause expensive repairs. I call it the saga of deferred maintenance!"

Robinson added, "It was so interesting to sit in that session and listen to other organizations describe the same challenges we used to have. But the difference is that we're already on a path to a long-term solution thanks to Thermal!"

Rachel Damone echoed the sentiment, "Thermal Conditioning has been a true partner to the YWCA and we look forward to working with them for years to come."

YWCA'S HVAC OPERATIONAL COST SAVINGS

The numbers below show actual HVAC maintenance and repair costs incurred by YWCA Central Carolinas. The first half of 2018 reflects dramatically lower maintenance expenses after new digital controls were installed.

Jan. - Dec. 2016 \$18,839.52

Jan. - Jul. 2018 \$2,663.53

“Before Thermal installed our new controls system, the fall and winter were especially challenging. We have women and children living here, so we run the heat on cold nights. But as the day warmed up our office area would become sweltering by noon. That created an uncomfortable work environment and made our fitness areas so hot that members didn’t want to use them.”

CAMILLA ROBINSON

Chief Financial Officer, YWCA Central Carolinas

TIMELINE & HIGHLIGHTS

NOVEMBER 2014

Thermal Conditioning first responded to an emergency service call late one Friday night when the YWCA tenant areas had no heat. Thermal’s team worked through the night to restore heat. After that, the YWCA hired Thermal Conditioning to provide HVAC services for the facility.

SEPTEMBER 2017

After several components of the 5-year facility plan were in place, the focus shifted to the outdated HVAC control system.

The YWCA’s management team held meetings and evaluated recommendations from three different controls contractors, including Thermal Conditioning.

Thermal was able to show that the outdated pneumatic system was responsible for a disproportionate amount of the problems and expenses.

Thermal’s proposed solution was built on a phased approach that delivered benefits immediately, and throughout the project.

OCTOBER 2015

At the request of YWCA management, Thermal Conditioning created a proactive 5-year plan for mechanical equipment upgrades and replacements. The plan had three goals:

1. Deliver noticeable improvements in system reliability and performance as soon as possible
2. Spread large capital expenditures over a multi-year timeframe
3. Significantly lower average annual costs for emergency service calls and repairs

NOVEMBER 2017

First phase of controls project began.

APRIL 2018

Final phase of controls project was completed.

Recognizing outstanding partners

"I HAVE TO PUT A SERIOUS SPOTLIGHT ON SCOTT, CAMILLA, AND Rachel," said Chuck Mobley, President of Thermal Conditioning. "As the owner of a company that has been in business for over 20 years, I've never had the pleasure of working with individuals that have as outstanding leadership, organization and communication skills as this team at the YWCA."

Scott Keruger, Vice President of Facility Development at YMCA of Greater Charlotte was a key part of forging the partnership between the two organizations. "It was Scott's initiative and desire to create a more sustainable way to support his partner's mission that enabled us to craft a long-term plan for the YWCA that would be impactful for not only the facility, but for the organization's ability to serve their community as well. YWCA leadership's ability to see both the big picture and the gap of where needs weren't being met or prioritized gave them the confidence and drive to push for this crucial plan and relationship with our company. Thanks to her extensive facilities management experience, Rachel was key in communicating the needs of the building and helping with the 'boots on the ground' efforts that went into the series of projects which is now an ongoing relationship."

"Scott, Camilla, and Rachel's ability to effectively communicate the proposed plan to their organization was successful due to how well-crafted and impactful the predicted outcome would be for the facility, the organization's mission, and their community as a whole."

"Working with people as passionate about their jobs as I am about mine is such a treat. The folks at the YWCA and their partners at the YMCA have yet again proven that mission-driven people will push to take their organizations or companies to the next level." ■

Learn more

At Thermal Conditioning, we help companies like yours every day. Through close relationships and trust, we help our customers achieve the HVAC solution they need today – and we help them prepare for the future.

Chuck Mobley

PRESIDENT OF THERMAL CONDITIONING

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