

≡ CASE STUDY ≡

WHEN NEW DUCTWORK WASN'T IN THE BUDGET OR TIME SCHEDULE

AEROSEAL RESCUES ARIZONA MIDDLE SCHOOL RENOVATION

Deteriorating Ductwork Gets New Life Through Aerosealing

During the floor-to-ceiling renovation of the Gallego Intermediate School, contractors removed the existing ceiling tiles to find ductwork that was in such bad shape, replacing the entire duct system seemed to be the only option. The building's HVAC included 34 individual units, each with its own supply and return ducts, all made of duct board that was literally falling apart at the seams. Some of the ducts were in such disrepair that they made leakage testing impossible.

Unfortunately, the Tucson, Arizona-area school district couldn't afford either the additional expense or time necessary to replace the existing duct system. Beyond the estimated \$200,000 dollars it would have cost for the work, the school was set to open in three months and replacing the ductwork would have taken twice that time.

In Brief

Building: Gallego Middle School, Sunnyside SD.

Location: Tucson, Arizona

Consulting Contractor: Kelly Wright & Associates

Aeroseal: GreenSeal / Div. of Excel Mechanical

Goal: Repair existing ductwork within time and budget

Before / After Aeroseal: 49k CFM of leakage vs 8k CFM

Results: Two weeks to attain 5% leakage rate at ¼ cost of replacement.



Faced with this project-halting dilemma, a consulting engineer on the project suggested they look at aeroseal, a new duct sealing technology he had seen demoed at a recent industry seminar. The aeroseal experts at GreenSeal were called in to share information about the new technology and in just a matter of days, they began the work.

Given the poor condition of much of the existing ductwork, the GreenSeal crew began re-connecting and repairing the most dilapidated portions using tape and mastic. Even after this work, testing showed a total system leakage rate of about 49,000 CFM. Then the aerosealing began.

It took GreenSeal less than two weeks to aeroseal all 34 duct systems – both supply and return. The final results showed total leakage down to 8,000 CFM – an 85% reduction and well below the 5% leakage rate they were targeting. The total cost for aerosealing was a fraction of the estimate for duct replacement and best of all, the school opened on time.

“I think a lot of schools in the district could benefit from this technology. The Aeroseal team was able to work in coordination with all the other contractors on the job, ensuring that we maintained our extremely tight schedule. They also assisted us in securing a rebate from the local utility company that helped us stay within budget. In the end, this was an ideal solution to a potentially derailing problem. I look forward to assessing energy savings over the next year or two. In the meantime, we have heard nothing but positive feedback regarding the comfort of those using the new school building.”

Tom Hubbard
Bond Project Manager, Sunnyside School District

“When contractors removed the ceiling tiles, they saw that the existing ductwork was in really bad shape. They wanted to replace all of the ductwork but it was simply out of the budget – and that’s when one of our engineering consultants suggested we look into using aeroseal as an alternative. It proved to be much less expensive than replacing the ductwork and it took only a matter of days to complete the job so the school was able to open as scheduled.”

Cindy Bova
Energy Project Manager, Sunnyside School District



Aeroseal – The Technology

- Developed at Lawrence Berkeley National Laboratory in 1994.
- Research for aeroseal technology was partially funded by the U.S. Department of Energy.
- Aeroseal is the only duct sealant technology that is applied from the inside of the duct system. It is delivered as a non-toxic aerosol mist that seeks out and plugs leaks.
- Aeroseal has proven to be 95% effective at sealing air duct leaks.

For more information on this sealing project or about Aeroseal in general, contact Aeroseal at (937) 428-9300. You can also visit the Aeroseal website at www.aeroseal.com.