



**School District's DIY Policy
& Fabric Duct Cuts K-6's A/C
Retrofit Costs by \$100,000.**



**Aesthetics, quick installation,
labor savings all give fabric duct
edge over metal ductwork for
California's Orange Unified S.D.**

ORANGE, CA—When 54-year-old Palmyra Elementary School was scheduled for a 16-classroom air conditioning retrofit, the maintenance department had to decide between hiring an outside contractor at approximately \$175,000 or doing the project in-house at less than half the cost.

With experienced HVAC technicians like Andrew Durrett and Richard Clayton, Steve Harlin, maintenance

supervisor, chose to retrofit in-house thus saving the Orange Unified School District and local taxpayers tens of thousands of dollars.

Using fabric duct manufactured by DuctSox, Dubuque, Iowa, enabled Durrett and Clayton to not only do the entire project themselves, but also helped the duo finish the entire retrofit in one summer school break. Plus, the linear vents of fabric duct distribute a

draft less, gentle air flow evenly to all parts of each classroom versus the high velocity drafts created by metal duct/register systems. "I think what's most noticeable about our new air conditioning is that that no temperature extremes can be felt regardless of where you sit in relationship to the mechanical closet (in each classroom) or the ductwork," said Connie Smith, principal, Palmyra Elementary School.

Originally the district had considered drop ceiling installations to conceal metal ductwork that would have to be fabricated and installed. Estimates were at least a week's worth of labor for two men. A less expensive system was exposed spiral metal duct.

Durrett suggested fabric duct could save thousands of dollars in labor after seeing other installations and demonstrations at trade shows. "Aesthetically the fabric duct, which we ordered in a beige color to subliminally blend in with the classrooms' beige ceilings, looks a lot better than spiral duct with registers," said Durrett. "Plus, metal duct would have required painting, which would have padded the project's cost."

Durrett and Clayton installed new furnaces with cooling coils and ran refrigerant lines to outdoor condensers. The partitioned area received two 90,000-Btu/4-ton units. Eight of the 12 classrooms received 90,000-Btu/4-ton units and the four remaining rooms received 70,000Btu/3-ton units.

Fabric duct saved the project thousands of dollars in reduced installation labor. Because fabric duct is 90 percent lighter and generally quicker to install than metal duct, Durrett was able to run the H-track or flush mount suspension system and install the duct, by himself in only three hours per room. Metal duct would have required two men, an estimated 24 to 30 man-hours per room and stretched the project well into the school year.



Each classroom has either one duct run down the middle with DuctSox's linear Sonic Vent diffuser at 3 o'clock and 9 o'clock, or an "L" shaped supply that runs along the windows and one wall with a similar diffuser pattern.

While Orange Unified's district-wide long-term classroom air conditioning retrofit effort is 60-percent complete, Durrett expects future retrofits to include fabric ductwork for its cost-savings, aesthetics, and superior air distribution.

Special thanks go to Toro Aire, DuctSox representative,

San Diego, CA, for their time and commitment on this project, making it a great success. ■



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