

Old World Styles + New Technology = Classic Comfort

Pro-Tech Air Conditioning and Heating, based in Santa Fe, NM, is transforming many of the charming Santa Fe style homes into more energy efficient ones.

by Rachel Wenger

Santa Fe, NM is known for its laid-back quality of life and an architectural style that mimics the suede sandstone bluffs that embrace the village. And, oh, the sweetly wafting smells of piñon pine in fireplaces!

Early homes and buildings, some dating back hundreds of years when Comanches freely roamed the territory, were constructed of adobe brick. It's a good choice because the hard-pressed clay - stacked in thick layers - were a great insulator from the merciless sunshine and razor-sharp arrowheads.

Today, new homes are built to blend in with the old. Though sun-baked bricks are rarely used anymore, rough, hand-worked concrete is. Walls are often sculpted organically, a nostalgic throw-back to earlier years.

And though early homes were built for maximum protection from the sun, evaporative coolers were the only means of "modern" interior cooling for decades.

In town, most homes lack ductwork because of the difficulty of concealing interior runs. Ductless mini-splits, on the other hand, especially now with 26 and 27 SEER ratings, have made a big impact in upscale villages like Santa Fe where concern for the environment rates high.

Pro-Tech Air Conditioning and Heating, based in Santa Fe, NM, is transforming many of the charming Santa Fe style homes into more energy efficient ones. The team works within a 60-mile radius of Santa Fe, and completes an average of 150 ductless add-on and replacement jobs a year. Pro-Tech AC&H sees to it that home and business owners can experience ideal indoor comfort conditioning, yet with great energy efficiency.

Pro-Tech is a full-service HVAC installation and service

firm that welcomes new installation and retrofit work, installs duct work and water heater replacements.

Matt Madrid, primary owner at Pro-Tech, assembled a team of eight professionals in 2008 when he branched off on his own after having been in the trade for 18 years. Among his experienced employees is Matt's brother Patrick, the office manager, and father James, an installer.

Old Home Gets HVAC Facelift

As a crisp morning began last November during *Contracting Business.com's* visit with them, an installation crew was loading up trucks for a job in downtown Santa Fe. They soon arrived at a small but very comfortable home built in the

mid-forties - a now-modernized Pueblo-style home with loads of character and charm located just 10 miles from the Pro-Tech shop.

The elderly homeowner had been searching for a secondary heating source but was chiefly interested in a refrigerant-based cooling system. Madrid, chosen for the job, decided on a Fujitsu tri-zone, 18 SEER ductless heat pump system. They'd chan-

nel the R410a lines through an outside wall to a Fujitsu condensing unit centrally located for the three evaporator units. The install required Matt, James, and installer Miguel Mazes to bore through thick, red brick-and-stucco walls. Two-inch holes were made, easing the overall installation.

"A big percentage of our work involves Fujitsu mini-splits. They're incredibly efficient, easily installed and extremely reliable," Madrid said.

At the home, Fujitsu air handlers one and two were installed in separate bedrooms, while the third, larger unit, was placed in the home's Pueblo-style living room with exposed



Discussing a project are (from left) James Madrid, installer/service tech, Patrick Madrid, office manager, and Matt Madrid, primary owner of Pro-Tech.

stucco surfaces. Squatting directly below the air handler is an old, kiva fireplace, adding nicely to the home's Southwestern ambience. All three units are located along the same exterior wall, simplifying refrigerant line supply and return runs.

In Santa Fe, the Southwest is Mecca

for swamp coolers - a device that cools air through the evaporation of water. But as global temperatures are warming, the high population of the Southwest is now turning toward more traditional, reliable HVAC technology to stay cool.

Most homes in the surrounding



Matt Madrid flares the refrigeration lines to install on the condenser (front), while Miguel routes the refrigeration lines through two-inch hole at the home in downtown Santa Fe.

Santa Fe area have flat roofs without attics, providing no place to run ductwork. "In these cases, I'll recommend Fujitsu wall mount systems - they're high performing, environmentally friendly and they won't break your wallet," Madrid explained.

Condo Cooling, Too

Ten miles away in the Avenida Las Americas condominium complex, a two-bedroom apartment beckoned the attention of the Pro-Tech crew for an energy and comfort retrofit. The condo, divided into two living spaces - the upstairs occupied by the owner, and the downstairs rented out - previously had no cooling and no place to run duct work. A single boiler provided heat for both living spaces.

Because of this, the owner was also in search of a better way to control heat upstairs in the winter months; he also wanted cooling. Pro-Tech, using Wrightsoft's Right-Suite Universal solution to calculate the heat load, led the decision to install a new Fujitsu 36,000 BTUH multi-zone heat pump with a single compressor serving three air handlers.

"We use Wrightsoft to evaluate all of our jobs. Their technology provides quick, accurate assessments of jobsite heating and cooling needs. Use of the software is intuitive and thorough," said Madrid.

"The owner has hired us for years to do the routine maintenance work here at the condo/apartment. Later that day,

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HVAC MODERNIZATION



Miguel Mazes reviews operation of Fujitsu system with the homeowner.

we also re-piped the two-unit hydronic system to improve zoneability and comfort. In the process, we installed several Taco 007 pumps — the components of choice for many of our hydronic heating jobs. We've been installing Taco for a long time and have learned that their circulators and hydronic components are the best available for the work we do."


On the Road in Los Alamos

Driving northwest through the Land of Enchantment, additional Pro-Tech workers found themselves at a job in a second-story condominium in Los Alamos. The owner, who travels frequently, was concerned about his cranky old water heater back home, and the possibility of leakage.

The existing water heater, only a few years old, began to weep a rusty sludge. Fortunately, the owner had heard a few horror stories. He knew to avoid the risk of flooding his home and also the condo unit below.

With an eager farewell and a weight off his shoulders, the homeowner was glad to see the old water heater disappear into the back of a Pro-Tech pickup truck. Pro-Tech technicians promptly installed a new, 80-gallon Bradford-White water heater with factory-installed safety valve. The homeowner's travels will now be less worrisome and more relaxing.

"In our experience, Bradford-White water heaters are the most reliable units available," Madrid added. "We recommend them to anyone in need of a water heater install."

"HVAC, hydronics, and hot water heating paired with state-of-the-art heat load calculations — we try to be versatile and to stay abreast of the latest developments in the field," concluded Madrid. As technology changes, we'll adapt. People in the region have been doing that well for hundreds of years." 

Rachel Wenger is an account manager and writer for Common Ground, a trade communications firm based in Manheim, PA that specializes in the hydronics, radiant heat, plumbing and mechanical and HVAC industries, serving national and international business-to-business manufacturers and trade associations. She can be reached at 717/664-0535.

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