



# Eamily Tree Still Growing

This firm's a 'Major' player in the Denver area

By Rachel Wenger

hree Jacks and a Bob: That's what family and friends always called the Major men in Wheat Ridge, Colo. Soon enough, it may actually be four Jacks and a Bob. OK, to explain: Jack E. Major Sr. created Major Heating with wife, Bernice, and son Jack E. Major Jr. The year was 1970. Times were tough and money wasn't growing on trees, but Grandpa Jack founded the firm fortified by well-entrenched ethics

Jack Junior married Marianne, and not long after came Jack #3 - Jack C. Major. Three years after Jack C. came Bob. Jack and Bob were baptized into the trade at an early age; it's rumored that the diapered lads ran around the shop with a bottle in one hand and a wrench in the other.

So, it was no surprise when Jack C. came home from the hospital in 2005 with tears of pride only to announce, "It's a boy! His name is Jack." Jack #4 has already taken a shine to mechanical things, riding shotgun with his dad whenever he can.

#### A lifetime of satisfaction

and genuine care for the customer.

Grandpa Jack strove to provide a service that would keep custom-

ers satisfied for the lifespan of their system. Well, four generations and forty-some years later, the dreams for his company are still being fulfilled.

Need proof? Major Heating's very first customer, the Fairmont Mortuary, is still on the client list. For that first experience, the mortuary was in need of a complete boiler replacement, and they chose to call Grandpa Jack.

Unfortunately, having just opened the shop weeks earlier, they didn't have the funds to buy the equipment. So the mortuary bought the Laars boilers for Major to install and Grandpa Jack was paid for his time.

In 2000, Major sprouted another limb to support the steadily growing family tree. Jack junior and son Bob acquired a strong interest in geothermal technology, so Bob got his International Ground Source Heat Pump Association ground source heat pump accreditation, and started Major Geothermal.

Now, with 50 employees between the two branches, Major takes jobs located anywhere between California and Maine. They've even done ground loop designs for the Essex Fire station in the UK and geothermal designs for a Korean Air Force base.



Billy Burnett begins a ClimateMaster geothermal startup at the Suman building. Major Heating photo.

# **Hydronics**

Major crews recently solved hot water woes for two subsidized housing units. "The old boilers had failed. Managers of the facility were told that the manufacturer's replacement in that size wouldn't be available for eight to 10 weeks," declared Bob Major, vice president. "Can you imagine that?"

Major was called, assessed the problem and specified a 1,000 MBH Laars Pennant boiler to heat the first facility's domestic hot water. Thanks to the help of Denver-based stocking rep firm, TM Sales, Major was able to acquire the Pennant the very next day. At the other building, a large Pennant system was chosen to provide space heating and domestic water heat.

### Geo-to-radiant, too

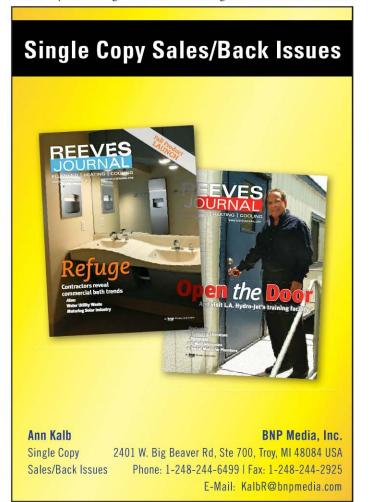
Major stays busy 24/7 with both residential and commercial work. Recently, they were called out to the Holy Cross Church, just five minutes from the shop. The church, built in the 50s, was in dire need of an HVAC makeover. The church's old system coughed up dust at an alarming rate.

"It was an energy hog, and there were severe indoor air quality issues," said Jack C. Major, vice president. "There was no air conditioning, no ventilation and no fresh air. All they had was the original radiant floor system – and it wasn't doing them a bit of good."

The existing radiant heat system at Holy Cross, dating back to the 1950s, was a throwback to the early, ugly black iron pipe days of in-floor radiant heat. Suffice it to say: the floors were leaking.

Jack C. decided a geothermal retrofit would be in the church's best interest. Ultimately, he specified 100-tons of ClimateMaster Tranquility 27 equipment in addition to complementary commercial heat pumps. Twenty-eight 400-foot vertical boreholes were drilled, making the parking lot into energy-rich Swiss cheese.

After the boreholes were grouted and filled, a new parking lot was paved over them. Annual savings at the church have shown to be \$10,000 a year. Savings would be much higher if not for the fact that



the facility now avails air conditioning - comfort control that was not previously available.

Twenty minutes from Holy Cross is the Archdiocese of Denver. The seminary sits on a remote 55-acre parcel. The facility had a hot water outage just before Christmas one year a decade ago. The HVAC company of record was too busy to show up. Having heard of Major's reputation, Archdiocese managers called. That led to the exorcism of an old boiler and water heater.

Major rescued the day and Christmas activity at the facility that year with the installation of a new boiler and a 120-gal-

lon Bradford White water heater that maintains hot water supply for four kitchenettes and all of the bathrooms in the 20,000 square foot main building. From that day on, a decade ago, Major was tapped for all maintenance and upkeep of mechanical systems at the Archdiocese.

Another recent job in Golden, Colo., is the Suman Building. The 10,000 square foot insulated concrete form structure is split in two. Half of it serves as an electrical equipment warehouse; the other is occupied by an accounting firm.

Majors' involvement included the installation of 25 tons of ClimateMaster



Bob Major (left) and Jack C. Major at a subsidized housing building where they installed a Laars Pennant volume water heater to solve the building's domestic hot water and water heating woes. Major Heating photo

Tranquility 27 equipment and photovoltaic arrays. Their achieved goal was to hit net zero energy use.

# Major's recipe for success

Major's shop is in the center of Jefferson County, just three blocks from Denver. The Jefferson County Fire Service is a federation of the 17 independent fire protection districts. Several of Major's employees are volunteer firefighters so it's no surprise Major has contracts with the fire departments for routine maintenance work.

The Arvada fire station has relied on Major for maintenance and service since 1995. In Colorado, the fire department codes require stations to have a backup generator to ensure that their heat can be maintained during winter months. Most fire stations in the area have generators in addition to the mandatory backup that's used for air conditioning and heat, but the Arvada station wanted to be greener.

With efficiency as their number one priority, geothermal technology immediately came to mind. Major got the nod to provide geothermal systems for Arvada's main facility. Major's approach: a vertically-drilled, 14-ton system with ten 300-foot boreholes and three ClimateMaster Tranquility 27 geothermal split systems for ultra-efficient heating and cooling.

Three thousand linear feet of PEX tubing provides radiant heat for the fire truck bays, served by a mod-con boiler. Three Taco 0012

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pumps, five 007 pumps and a Taco 1919 ground loop pump circulate system fluids.

Now, Arvada can use their new system to efficiently heat the three zones, and when the need for a backup generator arises, they fire up a small, low amperage boiler instead of a massive generator like many other fire stations.

# Attentive to technology

To guarantee precise estimations for new construction and equipment replacements, Major Geothermal loads it's reps' iPads up with Wrightsoft, a software program designed for HVAC design, specification and sales software.

"There was no air conditioning, no ventilation and no fresh air. All they had was the original radiant floor system – and it wasn't doing them a bit of good."

—Jack C. Major

"We always use it when developing our quotes. It makes them quick and efficient. The Right Mobile Consultant is so easy to use on our iPads," said Bob Major. They've found that trust is earned when customers see heat load calculations performed with software that's thorough: "We like it when customers see it in action," added Micah McKinnies, project manager and estimator.

Bob Major explained not all of Major's jobs are commercial. Forty percent of the company's work is residential. Typically, it installs the same brands on residential jobs as it does on commercial work.

Major has been family owned and operated for more than 40 years. Their versatility is a strength. Major offers engineering, sys-

tem control design and installation, refrigeration, chiller systems and contract services.

"Today, we're a one stop shop. Everyone here has extensive training. We have many certifications and licenses and decades of experience," said Jack C. Major.

"We try to look at things differently," Bob said. "We're planted deeply in this community and know that our present success is tied to our past, and especially to the future. Thinking ahead, and what it takes to retain today's customers tomorrow, is both the foundation and the future." **RI** 

Rachel Wenger is a writer and account manager at Common Ground, a trade communications firm based in Manheim, PA that specializes in the hydronics, radiant heat, plumbing and mechanical and HVAC industries.



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