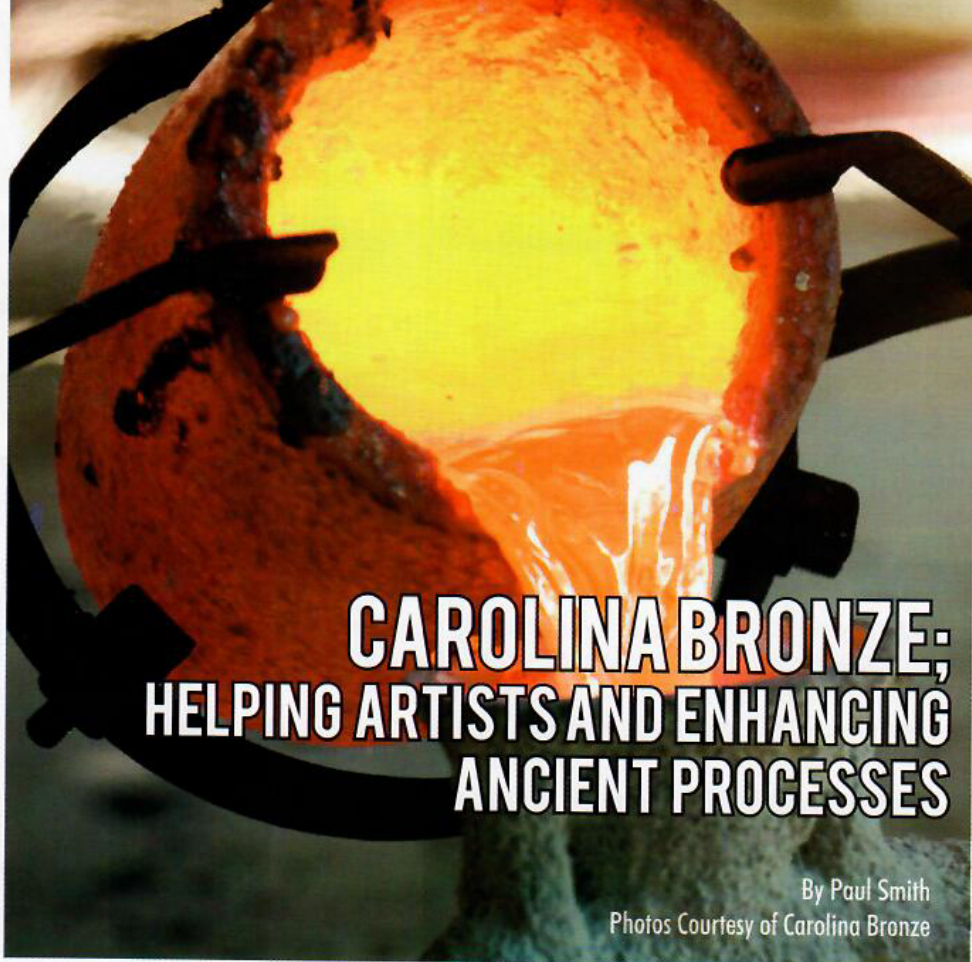


A short drive off of Exit 61 on US 73/74 lies Carolina Bronze Sculpture. Opened in 1990, Carolina Bronze currently works with both artists and commissioners to create bronze sculptures ranging in size from shelf decorations to larger than life portraits and memorials. Owner and President Ed Walker, along with General Manager, Jim White and fifteen other employees, are using modern technology to make a six thousand year old process easier.

Bringing New Life to an Ancient Process

Traditionally, casting a statue of bronze involved first creating a full-size model of the sculpture of clay. A mold is made from that model using rubber. Another model is then made from this using resin wax, which is covered in a ceramic mold. The ceramic is heated in a kiln, where the resin melts or burns off. Bronze is finally poured into the ceramic mold, which is broken off and the bronze is polished, producing a finished sculpture.

When Carolina Bronze first opened in 1990, this was their process. At that time, Ed was only able produce molds and copies of sculptures at their original size. On occasions where Walker was not the designer of the sculpture, the artist would bring in a full size model in clay or another less expensive material and present it to the staff at Carolina Bronze, who would use this process and return the finished sculpture to the sculptor, or install it where it was to be displayed. Working only in full sizes could be a challenge



the mold is cut to within a millimeter accuracy. This allows Ed and his crew to make a sculpture that is exactly to the artist's design. In addition to this, technology has made producing bronze sculptures faster.

"There is a trickle-down from government research," Ed says.

The Kiln they use to set the ceramic molds takes one hour to heat to the proper temperature, where it would have taken a full day to do so before. This is thanks in part to a super-insulation originally designed to be used as heat shields for space shuttles. The technology they use to melt down the bronze was originally designed to make turbine blades. Additionally, improved technology has brought Carolina Bronze more business. One of their recent

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Now, however, artists can bring in scaled down, easily transportable rough models, which are scanned using highly sensitive and accurate software and enlarged. Here they might make a resin model at half of full size and invite the artist back to add finer detail. The mid-size model is then rescanned and recast into the full size.

Technology is making Ed's job easier and more efficient. The scans of the sculptures are analyzed and transformed into a 3D model, which is sent to a computerized router, where



CAROLINA BRONZE; HELPING ARTISTS AND ENHANCING ANCIENT PROCESSES

By Paul Smith
Photos Courtesy of Carolina Bronze

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Ed Walker is always keeping an eye out for ways to streamline the process and reduce waste. "The more we recycle, the better." When the resin models are melted out of the ceramic molds, around twenty five percent of the wax is burned off, but the rest is collected and saved for future models. In the near future, a sandblasting chamber will be installed that will collect the sand to be reused. It will

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also include a way to filter the air and keep those operating the machine safe. "My main interest is taking care of my valued employees," Ed says.

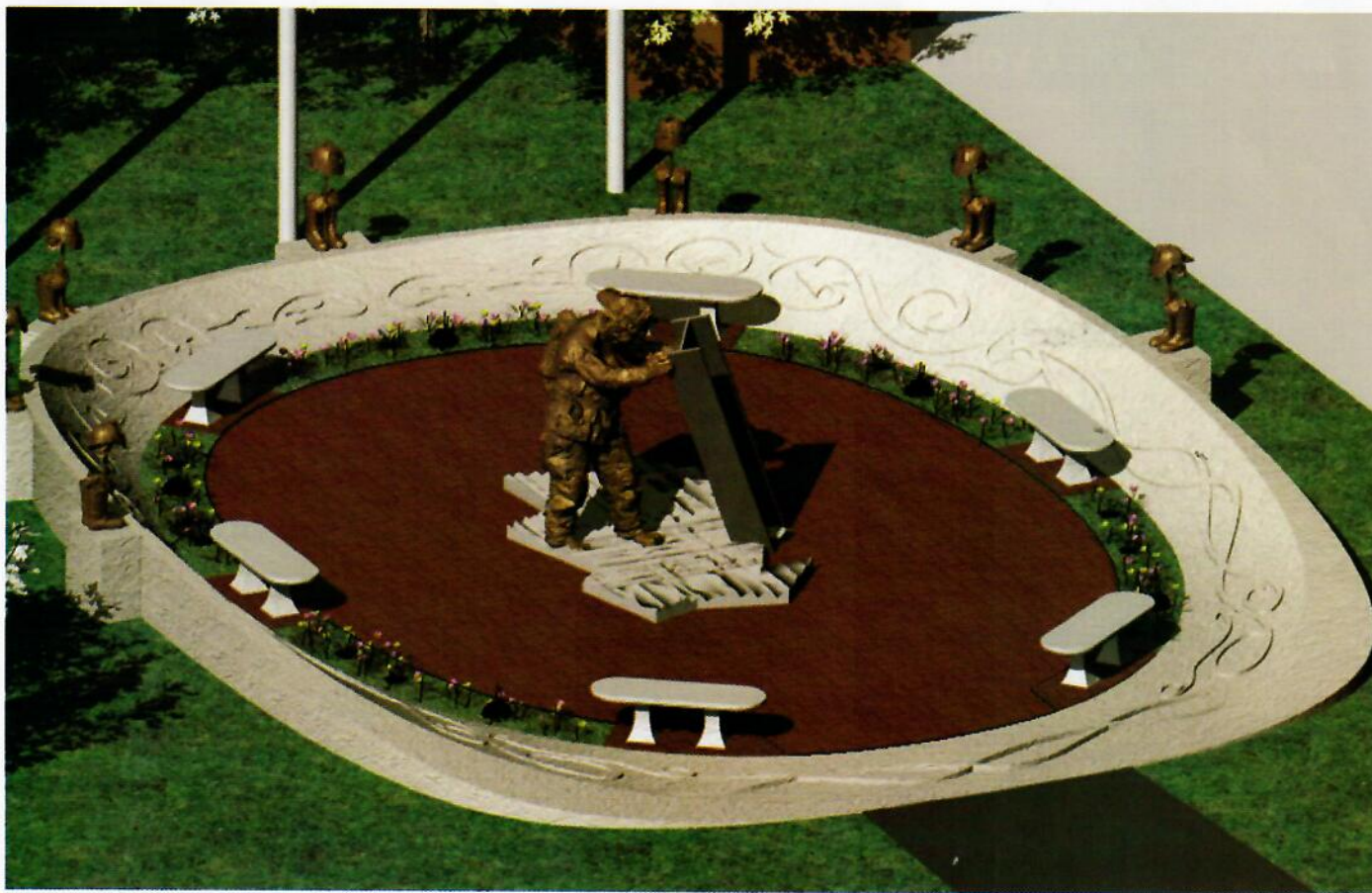
The Heart of Carolina Bronze

There is always something happening at Carolina Bronze. Ed Walker says, "It requires a creative person to do this kind of job because there's nothing routine about it." For one employee, most of the day consists of "jumping from one job to another." They may help pour a casting, then move to a different part of the shop to remove the resin model from a rubber cast, then help weld together different sections of a finished bronze sculpture, all before lunch. Because most of the process involves waiting for models and casts to cool or heat up, Carolina Bronze can work on up to twenty five projects at a time. In the last year, they churned out eight to ten tons of finished casting in the last year. "The people who need to do the same thing over and over again all day don't usually last long here." But those

who stay, love it. Ed believes himself to be a very fortunate person in that he considers his work fun. The vast majority of the work they do is art. "What's really satisfying is that it's made to last." Bronze sculptures are virtually indestructible and can survive through what most other art would not. Ed remembers that a building containing one of his works burned down, and the sculpture inside still stood, needing only minimal scratch repairs.

"I've always been a kind of do it yourself type of person" Walker says. His favorite pieces are those he designs himself. Among these is the Wilmington Firefighter Memorial which features a life sized firefighter propping up an I-beam that was found among the rubble of the World Trade Center, along with individual memorials to the seven Wilmington firefighters who have lost their lives since the inception of the Department.

Ed began his commissioned bronze work in New Orleans,



where former students of his were looking to find a place to cast their sculptures. In 1990, he moved the operation to Seagrove in part so that his kids could be closer to their grandparents, and he established an impressive resume in the years that followed. Along with the Wilmington Firefighter Memorial, Carolina Bronze has designed a portrait of Nathanael Greene by Jim Barnhill, which is a prominent feature in Greensboro. They also cast a bas-relief of a painting for the Saratoga Museum in NY, a sculpture

dedicating the Asheboro sit-ins, a portrait statue of Ronald Reagan which sits in the White House Rotunda, and a series of small mice for a discovery trail in Graham.

Ed believes that each person has traits which make them unique, and tries to capture the subject's personality through sculpture. "You can't make a portrait of me standing like this [straight and rigid]. No, I slouch a bit." For more information on Carolina Bronze Sculpture, Inc, visit their website at www.carolinabronze.com.