2009 Design & Manufacturing Excellence Awards Winners
Design Excellence
Residential

Private Residence
Flower Mound, Texas

Cast Stone Manufacturer:
Fritchman and Associates

Architect:
Firmitas Residential Design Services
Private Residence – Fritchman & Associates

Design Excellence – Residential

A new residence in Flower Mound, Texas

What is the scope of the project?
A new residence in Flower Mound, Texas

Design & Manufacturing Excellence Award Winners
What is the role of Cast Stone?
The use of cast Stone for this project was to create a design with an elegant and refined classic style. Design features Doric columns, veneer panels, dental mold, radius towers, balustrade and classic chimney tops.
How was cast stone critical to the success of this project?

The use of Cast Stone was instrumental in achieving the look and durability that the home owner wanted. One of the many prominent features of the house was the entry with its columns and elliptical arch. Cast Stone helped this house take its place in being one of Texas’s fine examples of architecture.
Design Excellence
Residential

Pennsylvania Residence

Cast Stone Manufacturer: Sun Precast Company

Architect: Stephen J. Lindenmuth
Pennsylvania Residence – Sun Precast

Design Excellence – Residential

What is the scope of the project?
This newly constructed expansive private Pennsylvania residence incorporated a large amount of Cast Stone, which included a custom designed ornate door entry, window surrounds, watertable, clad columns, roof coping, and site wall coping.
Pennsylvania Residence – Sun Precast

Design Excellence – Residential

What is the role of Cast Stone?

The role of cast stone was to accentuate the architecture of the 18th century inspired English manor and compliment the natural stone facade.
Design & Manufacturing Excellence Award Winners

Pennsylvania Residence – Sun Precast

How was cast stone critical to the success of this project?
The use of Cast Stone allowed creativity and flexibility in the artistic design by the homeowners, which would have been otherwise cost prohibitive in natural materials.
Design Excellence
Commercial

TCF Bank Stadium
Minneapolis, Minnesota

Cast Stone Manufacturer:
American Artstone

Architect:
HOK Sport, Inc.

Design & Manufacturing Excellence Award Winners
The TCF Bank Stadium is new for the University of Minnesota Gophers. The facility is a traditional horseshoe-style college stadium that retains many of the design elements of Minnesota’s Memorial Stadium. We provided base panels around the entire memorial wall, 87 county signs representing the counties in Minnesota, 37 small 28-foot arches, 3 medium 40-foot entrance arches, 2 large 50-foot stadium end arches, stadia end panels which cover the stairways, and a plaza Veteran’s Tribute and sign for the Tribal Nations Tribute, a total of 850 pieces.

What is the scope of the project?
TCF Bank Stadium – American Artstone

Design Excellence – Commercial

What is the role of Cast Stone?

Cast Stone was used to accentuate the key features of the stadium including the county signs, arches and stairways. The contrast of the near white Cast Stone against the red brick causes the Cast Stone to really stand out and highlights the versatility of the product. The beautiful county signs and huge arched entrance ways are what visitors and students will remember most about this new state of the art stadium.
How was Cast Stone critical to the success of the project?

Cast Stone was critical to the successful replication of portions of the original Memorial Stadium that was so important for incorporating the old with the new.
Design Excellence
Commercial

Co-Cathedral of Sacred Heart
Houston, Texas

Cast Stone Manufacturer:
Siteworks, Inc.

Architect:
Chris Patrash / Zigler
Cooper Architects
Co-Cathedral of Sacred Heart – Siteworks

Design Excellence – Commercial

What is the scope of the project?

The Cathedral is truly a building for the ages. The copper dome, with its gold cross and the 140-foot bell tower, has dramatically changed the Houston Skyline. This new magnificent structure is not only beautifully designed with extensive use of both natural and man-made stone materials, stained glass and amazing carved statues, but it is also designed and painstakingly constructed to last for hundreds of years.
Co-Cathedral of Sacred Heart – Siteworks

Design Excellence – Commercial

What is the role of Cast Stone?

Cast Stone is used on the interior arches, jambs and soffits. The Cast Stone integrates seamlessly with the natural stone material and demonstrates the harmony between man’s creation and the creations of nature.
Cast Stone was selected for its ability to be reinforced and mechanically attached, for its reduced cost compared to natural stone, and for its ability to seamlessly blend with the many other types of stone used in this very ornate project.

How was Cast Stone critical to the success of the project?

Cast Stone was selected for its ability to be reinforced and mechanically attached, for its reduced cost compared to natural stone, and for its ability to seamlessly blend with the many other types of stone used in this very ornate project.
Design Excellence

Restoration

Robertson County Courthouse
Springfield, Tennessee

Cast Stone Manufacturer:
ACCI-TannerStone

Architect:
Courthouse A & E Joint Venture – Robert Stacker
Robertson Courthouse – ACCI-TannerStone

Design Excellence – Restoration

What is the scope of the project?
Renovation and Restoration
Robertson Courthouse – ACCI-TannerStone

Design Excellence – Restoration

Cast Stone was specified to replicate the detailed work present in the original building.

What is the role of Cast Stone?

Cast Stone was specified to replicate the detailed work present in the original building.
How was Cast Stone critical to the success of the project?

Cast Stone was needed to maintain the building on the National Register of Historic Places.
Design Excellence

Restoration

Naples Central School District
Naples, New York

Cast Stone Manufacturer:
Sun Precast Company

Architect:
Hunt Architects
What is the scope of the project?
This restoration project is an 18-foot tower at the top of Naples Central School District building, was erected in the 1930’s, and remains today a focal point of the town of Naples. The scope includes the complete replacement of the existing Cast Stone tower structure as well as the 4’ tall urns.
What is the role of Cast Stone?

The role of Cast Stone was to replicate the entire original exposed aggregate Cast Stone structure, while maintaining the historical integrity of the intricate architectural details.
Naples Central School – Sun Precast

Design Excellence – Restoration

How was Cast Stone critical to the success of the project?

The replacement Cast Stone is an identical replication of the original tower, but to improve long-term durability of the structure, the new Cast Stone was designed thinner than the original stone, which reduced the load bearing on the building.
Design Excellence

Hardscape

Longwood Children’s Garden
Kennett Square, Pennsylvania

Cast Stone Manufacturer:
Sun Precast Company

Architect:
Bernardon Haber Holloway
What is the scope of the project?

Longwood Children’s garden is an existing glass enclosed building that was converted to a fantasy garden for children. The scope includes radius panels, ornate panels, coping, cornice, surrounds, piers, caps, and other trim items.
What is the role of Cast Stone?
The role of Cast Stone was to create thematic structures, which blend with various other building materials and landscaping elements to complete the wonderland experience.

Design & Manufacturing Excellence Award Winners
How was Cast Stone critical to the success of the project?
Cast Stone provided the architect with unlimited design creativity, which may have otherwise been cost prohibitive, or unavailable, with other natural materials.
Design Excellence

Hardscape

McKenney Residence
Goochland, Virginia

Cast Stone Manufacturer:
Stafford Stone Works

Architect:
William H. Spell, LLC
What is the scope of the project?
The McKenney is a single family residence located in an upscale golf course community in Goochland County, Virginia. The home is situated overlooking a beautiful lake giving the neighborhood a rural quiet atmosphere. The project consisted of stair treads and risers and a custom balustrade to accommodate the lake front view.
The balustrade was purposely designed to be shorter so it would not block the view of the lake. The balustrade was approved by the county at this height as it was a boundary fence.

What is the role of Cast Stone?

The balustrade was purposely designed to be shorter so it would not block the view of the lake. The balustrade was approved by the county at this height as it was a boundary fence.
How was cast stone critical to the success of this project?

The Cast Stone was critical to the project because it took an ordinary home design and customized it to highlight the unique angles and shapes of the windows and doors and transformed the back landscape from a lakefront property to a Mediterranean playground.
Architect’s Choice

Co-Cathedral of Sacred Heart
Houston, Texas

Cast Stone Manufacturer:
Siteworks, Inc.

Architect:
Chris Patrash / Zigler
Cooper Architects
Co-Cathedral of Sacred Heart – Siteworks

What is the scope of the project?

The Cathedral is truly a building for the ages. The copper dome, with its gold cross and the 140-foot bell tower, has dramatically changed the Houston Skyline. This new magnificent structure is not only beautifully designed with extensive use of both natural and man-made stone materials, stained glass and amazing carved statues, but it is also designed and painstakingly constructed to last for hundreds of years.
What is the role of Cast Stone?

Cast Stone is used on the interior arches, jambs and soffits. The Cast Stone integrates seamlessly with the natural stone material and demonstrates the harmony between man’s creation and the creations of nature.
Co-Cathedral of Sacred Heart – Siteworks

How was Cast Stone critical to the success of the project?

Cast Stone was selected for its ability to be reinforced and mechanically attached, for its reduced cost compared to natural stone, and for its ability to seamlessly blend with the many other types of stone used in this very ornate project.
Manufacturing Excellence

St. Anthony Regional Hospital
Carroll, Iowa

Cast Stone Manufacturer:
American Artstone

Architect:
Horty Elving & Associates Inc.
What is the scope of the project?

The St. Anthony Regional Hospital Surgery Center & Ramp was a new building to the existing Hospital Campus. It replaces St. Anthony’s 35-year-old surgery facilities and existing technology to accommodate for growth. A 30-foot tall relief of St. Anthony graces the side of the building, sitting high on a hilltop overlooking the city of Carroll, IA.
Producing the oversized relief of St. Anthony created special challenges for our artist as well as production crews. From a photograph, our artist created a 1/16th scale model, then a ¼ scale model, and finally a full scale which was rough cut out of foam first and then refined with clay. From the full scale model, our production crews created four separate rubber molds (due to size and weight), backed in concrete. In addition, the split stone around St. Anthony had to be specially molded to the unique shape of the St. Anthony figure.

What special molding or casting techniques were necessary to illustrate the Architect’s concept on the project?
St. Anthony Regional Hospital – American Artstone  

Manufacturing Excellence

Degree of Difficulty
Because of the comprehensiveness of the Cast Stone features of this project, it took 18 months to complete from shop drawings to the last delivery. The relief of St. Anthony holding baby Jesus is 31 feet 10 inches high and 10 feet 6 inches wide. The relief alone used 48,000 lbs of blended Cast Stone concrete, 2,600 lbs of molding clay, 1,600 lbs of spray urethane rubber, 292 hours for the artist, and 1,072 hours for mold fabrication, metal fabrication, casting and final finishing. Because of the two-color blend used throughout the project it was a special challenge to not create mottled faces on St. Anthony or baby Jesus thereby requiring a one-color first pour for the faces, followed shortly with the two-color to finish filling the mold. In addition to the relief, the project included 665 pieces of split face and smooth veneers and 36 medallions.
St. Anthony Regional Hospital – American Artstone

The hospital wanted St. Anthony to look as if it was carved on the side of the building. With that in mind, the color had to blend just right and the relief had to be magnificent enough to be seen from near and far.

Were there unique project requirements that presented particular challenges and how were they met?

The hospital wanted St. Anthony to look as if it was carved on the side of the building. With that in mind, the color had to blend just right and the relief had to be magnificent enough to be seen from near and far.
Manufacturing Excellence

TCF Bank Stadium
Minneapolis, Minnesota

Cast Stone Manufacturer:
American Artstone

Architect:
HOK Sport, Inc.
The TCF Bank Stadium is a brand new stadium for the University of Minnesota Gophers, bringing Gopher football back to campus after being played off campus for 15 years. The facility is a traditional horseshoe-style college stadium that retains many of the design elements of Minnesota’s Memorial Stadium. Owner and architects needed to combine the look of old with the new. Base panels around the entire memorial wall, 87 county signs representing the counties in Minnesota, 37 small 28-foot arches, 3 medium 40-foot entrance arches, 2 large 50-foot stadium end arches, trapezoid panels covering 5 different stairways, as well as a Veteran’s Tribute Memorial and Shakopee Mdewakanton Sioux Community Tribal Nations sign in the plaza area, a total of 850 pieces and weighing in at almost 3 million pounds.

What is the scope of the project?
What special molding or casting techniques were necessary to illustrate the Architect’s concept on the project?

The elliptical shape of the entire stadium created several unique molding challenges. All of the memorial wall base panels and the eighty-seven 5’ x 16’ county signs were radiused. The small, medium and large arches were compound radiused, and the medium and large arches were all double sided. In order to ensure a perfect fit, our mold making artisans temporarily bridged two large beds together and built the entire upper portion of the arches and then segmented it into several pieces. All molds were done in wood by veteran craftsman and in some cases took up to four weeks to build one mold. Our metal fabrication crew was also challenged with creating huge very complicated compound radiused stirrups in many unique shapes. Because of the sheer size and scope of this project, there was no margin for error - it had to be done right the first time, every time.
Degree of Difficulty

The sheer size and weight of the pieces, up to 22,000 lbs, created connection, wind load and support issues that had not originally been anticipated. It became necessary to add huge steel tubes to reinforce the structural shell and provide sufficient back up structure to attach the medium and large arches and the county signs at the curtain wall too. In addition, numerous huge steel plates were embedded in our pieces to weld on to in the field. The installation crew faced challenges as well which we assisted in dealing with. For example, the medium arches had to be installed underneath an overhanging canopy, thus making very few options for lifting and setting the heavy pieces and holding them in place while the back side was being welded. Creating eighty-seven unique correctly spelled and properly placed letters on a radiused sign was sometimes a challenge as well.
Were there unique project requirements that presented particular challenges and how were they met?

Due to the enormous size of this project, a drawing and casting certain elements many months in advance of anticipated deliveries. Other times elements required us to wait for field measurements and then draw, engineer, get approval, create molds and produce pieces in a very compressed time frame. The many construction crews from all the different trades were constantly overlapping each other and having to adjust work areas on site, thereby causing constant shifting and changing of priority lists. In some cases we had to tear up molds we knew we needed again, and now would have to rebuild, just to free up bed space for the newest priority, which could change again tomorrow. Through this all, we never missed a delivery request. The university and architects’ desire to create the look of “old” out of something new was successfully accomplished with the use of timeless cast stone.

Design & Manufacturing Excellence Award Winners
Congratulations
To All of Our Winners!

Design & Manufacturing Excellence Award Winners