



AAS CASE STUDY: ARCHITECTURAL STONE CLADDING, VENEER, AND DESIGN ACCENT FOR SMU CARUTH HALL



PROJECT

Southern Methodist University (SMU)
Caruth Hall

LOCATION

Dallas, Texas

ARCHITECT

Hahnfeld Hoffer Stanford Architects

GENERAL CONTRACTOR

Austin Commercial

MASONRY CONTRACTOR

Dee Brown Masonry

VISION

The Caruth Hall building at Southern Methodist University (SMU) provides a home for the Caruth Institute for Engineering Education, dedicated to innovative math and science programs.

The building serves as a gateway to the school's east quadrangle. It was critical that the building design and construction materials match the other buildings in this part of the campus, which are 75-80 years old.



PROCESS

The **Advanced Architectural Stone (AAS)** team collaborated closely with Hahnfeld Hoffer Stanford Architects to understand the design requirements of this project.

The team obtained stone samples from existing buildings on campus, and came up with the precise mix that would match the new architectural cast stone products with the surrounding historic buildings.

After detailed analysis of engineering requirements, the team decided to use the **dry-cast or vibrant-tamp method** for manufacturing the **architectural cast stone**.

For the stairs and load bearing columns in the front entry and amphitheater, **wet-cast architectural concrete** was used.

The cornices on the eaves were created using **Architectural GFRC (Glass Fiber Reinforced Concrete, also known as light weight concrete)**.

With a custom mix for casting each product, all three seamlessly matched in color and finish. The project took more than a year to complete. The computerized batch plant helped ensure consistency of products over time, taking into account moisture and seasonal variations.

The manufacturing of products was scheduled in line with the construction milestones.

As required, AAS staged and sequenced the delivery of products for simpler construction management at the project site.



ARCHITECTURAL STONE CLADDING

Architectural cast stone and precast concrete were used to accent the building in traditional ways, such as forming large columned porches and entries, in addition to accents at the roof and windows.



AMPHITHEATER

The north side of the structure is designed with an amphitheater.

Originally, the open-air venue was designed with pour-in place concrete. Upon review by the campus design team, architectural cast stone was determined a better material, since it would coordinate with the overall design of the amphitheater. It also provided an upscale look for this part of the campus.

The benches in the amphitheater have a unique style; the large circular cast stone pieces for the benches were created using 3-D modeling and illustrations for analysis, followed by custom molds.

The veneer at the base of the amphitheater is also clad using architectural cast stone.

The flexibility to customize products with high precision and consistency helped designers make a contemporary statement with the design of the amphitheater.



Veneer Design
Base of the Caruth Hall amphitheater has very well designed architectural stone veneer.



Denteel Frieze all around the eaves of the building – ornate design at the top of the building – wall coping.



Precision and consistency of manufactured architectural stone makes highly ornate and detailed design elements feasible even when required stone pieces have to be large and in complex shape.

RESULT

The building was an environmentally conscious design exceeding LEED Gold Standards. The producer met with the school's design team on several occasions to make sure that the architectural stone received all LEED points available.

The school designers appreciate the long life, as well as the design flexibility and beauty of the architectural stone. The Caruth Hall aesthetically blends very well with the nearby historic buildings.

