

PROJECT SPOTLIGHT



OWNER

Furman Company

STRUCTURE TYPE

Composite steel and castellated beams.

CHALLENGES

- Designing a facility on a new campus with three active construction sites in close proximity
- Stringent vibration requirements
- Steel erection began before the building's design was complete.

SIZE

120,000 sf – sited on a 250-acre campus.

CONSTRUCTION AMOUNT

\$10 million

ARCHITECT

Pazdan Smith Group

CONTRACTOR

Harper Corporation

COMPLETION YEAR

2006

Clemson University International Center for Automotive Research (CU-ICAR) – Timken Technology Center Greenville, SC

Britt, Peters and Associates provided structural and civil design services for this state-of-the-art research and development facility for The Timken Company at Clemson University's International Center for Automotive Research (CU-ICAR), strategically located in Greenville on a prominent 250-acre campus highly visible from I-85. A unique and powerful partnership between Clemson University, the State of South Carolina and private industry, CU-ICAR is designed to put South Carolina – and Clemson University – at the epicenter of the global automotive and motorsports industries.

The Timken Company was among the earliest companies to tap into CU-ICAR's potential, taking occupancy of the new Timken Technology Center in 2006. Timken leadership sees its new facility as an important step toward developing more highly differentiated products for its customers. Here the Ohio-based automotive industry giant employs more than 150 engineers and technicians focused on developing innovative powertrain and friction management solutions in close collaboration with Clemson University's Carroll A. Campbell Jr. Graduate Engineering Center, the academic anchor of the CU-ICAR campus, also inaugurated in 2006.

Timken's 120,000-square-foot facility includes state-of-the-art engine, metrology and prototype labs on the ground floor and office space above. Environmentally friendly, the Timken Technology Center was designed to achieve LEED® Silver Certification by meeting stringent criteria established by the U.S. Green Building Council through its Leadership in Energy and Environmental Design (LEED) Green Building Rating System.™ Unique design features of the glass-skinned facility include an exposed structure with castellated beams, and an attractive courtyard within the building. The building was designed with enough flexibility to add two more levels of office space – for a total of four stories – at a future phase.

The Timken Technology Center is part of CU-ICAR's Technology Neighborhood I, home to



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continued

PROJECT
SPOTLIGHT
CONTINUED

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other well-known companies such as BMW, IBM, Michelin North America, Microsoft and the Richard Petty Driving Experience. With the majority of Technology Neighborhood 1 under construction – and three active construction sites in close proximity – the Britt Peters project team faced an array of logistical challenges. Facilitated by weekly planning meetings, these issues were resolved through efficient scheduling and site planning for deliveries and construction activities. Stringent vibration requirements posed yet another challenge. One way the team addressed this important aspect was by testing the constructed floor to ensure that design and construction adhered to the requirements. Perhaps the most challenging situation for Britt Peters was that steel erection began before the building's design was complete.

Planned future developments at CU-ICAR are underway, all taking place in a compelling mixed-use physical environment where stunning architecture and urban settings are threaded through beautiful natural landscapes – ultimately creating an inspiring place to learn, work, live and play. With aspirations to be the premier automotive and motorsports research and educational center in the world, CU-ICAR is expected to be a major catalyst for future industrial growth in the Upstate region of South Carolina.



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