**Team**

**Owner:** University of Texas System

**Architect of Record:** Overland Partners

**Structural Engineer of Record:** Datum Gojer Engineers

**Mechanical Engineer:** HMG & Associates

**Civil Engineer:** Davcar Engineering Services / Urban Design Group

**Construction Manager:** SpawGlass

**Reinforcing Bar Fabricator:** D’Ambra

**Total Project Cost:** $69 million

**Total Project Size:** 213,000 sq ft

**Award:** 2013 CRSI Award Winner – Educational Facility Category

---

**STRUCTURAL FRAMING SYSTEM**

The College of Liberal Arts is a tremendous example of the power of teamwork leading to extraordinary results. Through a highly collaborative process, the design and construction team made decisions together to produce an extremely efficient, effective, adaptable building design.

The project’s architect Overland Partners set a high bar for the team to deliver this project with the most efficient building possible. From the beginning, their leadership led to a highly collaborative process. Knowing that repetition and modularity were the best ways to maximize the efficiency of the building, Datum Gojer Engineers, set out at the beginning of the design process to conceive a very regular, repetitive structural system. Collectively we pushed for this idea at the earliest design charette meeting with the team, and the idea caught on. A 10'-8" module was conceived for the building, using a mix of 32' and 42'-8" bays. From there, we performed a formal structural system selection study to ensure that we would use the most efficient structural system for this project given the time, location, and market conditions.

Based on this study, the cast-in-place reinforced concrete system proved to be the least expensive system by itself. In addition, the reinforced concrete system had lower costs for miscellaneous metals, and no premium for lateral stability. It also required a shallower floor-to-floor height, resulting in significant savings by eliminating 6’ of skin from the height of the building, along with associated long-term energy savings. All of this, combined with its inherent durability and superior vibration performance characteristics, made reinforced concrete construction an obvious choice for this project.

By stretching the bays a little bit for the 32’ and 42'-8” spans, and cantilevering the perimeter bays 12’, we eliminated as many as 20 columns and piers from the building design, saving time and labor in the project. In addition, space planning around the perimeter of the building was made more efficient by eliminating the perimeter columns. At the ground floor the building enclosure was held back from the cantilever, which had the added benefit of allowing the upper floors’ cantilevered perimeter to provide shaded walkways adjacent to the building.

**REASONS FOR CHOOSING REINFORCED CONCRETE**

- Use of reinforced cast-in-place construction for economy, flexibility, speed of construction, and longevity.
- Flush bottom framing construction for maximum economy of forming.
- Highly modular framing layout conducive to re-use of forms for maximum economy of framing.
- Cantilevered end bays around all four sides of the building to avoid inefficient end spans, and to open views around the perimeter. This reduced the number of piers and columns by as many as 20.
- Exposed reinforced cast-in-place concrete cantilevered switchback stairs for beauty and functionality in unifying all floors throughout the height of the building.