

# A Spotlight on Institutional Excellence

**INSTITUTIONAL EXCELLENCE: PROVEN RESULTS ACROSS HIGH-CONSEQUENCE SECTORS**

**WSSU: K.R. Williams Auditorium**

**Key Challenge:** Massive 45,000 SQ FT structural expansion of a landmark 1970s auditorium. Pennar Americas Engineering solved for complex stage rigging, orchestra pit modifications, and a new three-story glass lobby interface.

- **REDUCED RFI CYCLES:** 20-30%
- **CMaR DELIVERY** Format support
- **INTEGRATED CONNECTION DESIGN** (Tekla Structures high-LOD)

**MUSC: University Hospital**

**Key Challenge:** High-complexity healthcare integration and expansion. Pennar Americas Engineering provided crucial engineering for strict vibration control, heavy-equipment loading supports, and coordinated MEP penetrations.

- **PROACTIVE CLASH DETECTION** (Tekla Structures)
- **CERTIFIED FOR CONSTRUCTION - HEALTHCARE** (PE STAMP)
- **ACCELERATED SCHEDULE** Support via concurrent engineering

Regardless of the sector, our integrated Design → Detailing → PE Stamping model ensures zero-friction field fit-up and schedule certainty.  
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## WSSU Project Spotlight: K.R. Williams Auditorium

### Major Expansion & Structural Modernization

- **The Challenge:** A massive 43,000–45,000 square foot expansion of a landmark 1970s auditorium. Key structural hurdles included an expanded orchestra pit, new stage suspension/rigging systems, and a complex three-story glass lobby addition that required seamless integration with the existing building frame.
- **The Pennar Solution:** We closed the "Responsibility Gap" on the intricate stage and rigging steel. By providing concurrent connection design and PE-stamped calculations for the auditorium's structural upgrades, we eliminated the typical delays found in traditional specialty engineering. Our unified workflow ensured that the steel for the new studio theater and gallery space met the aggressive timelines of the CMaR (Construction Manager at Risk) delivery format, providing 100% fit-up certainty for the complex lobby geometry.

# **Healthcare Project Spotlight: MUSC University Hospital**

## **High-Complexity Structural Integration & Healthcare Expansion**

- **The Challenge:** Healthcare facilities like the Medical University of South Carolina (MUSC) require structural systems that can accommodate massive medical imaging equipment, strict floor vibration criteria for sensitive instruments, and complex MEP (Mechanical, Electrical, and Plumbing) penetrations that often conflict with primary steel.
- **The Pennar Solution:** We utilized high-LOD (Level of Development) 3D modeling to perform proactive clash detection between the structural frame and the dense medical infrastructure. By providing **in-house PE-stamped connection design**, we ensured that every heavy-equipment support and moment connection was engineered to meet stringent seismic and vibration standards before a single beam was fabricated. This eliminated the typical "field-fix" delays that often plague hospital construction, keeping the project on its critical path toward patient readiness.