

SISTERS CHAPEL

Spelman College
Atlanta, GA



PROJECT DESCRIPTION

Sisters Chapel recently underwent a multimillion dollar renovation to update the acoustics, add bathrooms, and provide accessibility for the 1927 building. One goal of the project was to improve the acoustics for organ music and ensemble singing to “liven up” the space, while maintaining a high degree of speech intelligibility for worship services and convocations.

Acentech created a computerized acoustics model of the Chapel to predict the effect of ceiling reflections. Our final acoustical design called for pew cushions, absorptive material on the rear wall and on the face of the balcony (to eliminate echo from these locations), and a redesigned ceiling. The new ceiling has the same barrel vault profile as the old, but features absorptive material along both sides of the arc where the center of curvature is most pronounced. The sidewalls and center portion of the ceiling are hard and sound-reflective. As a result, the occupied reverberation time is increased — which improves the ambiance for organ music and ensemble singing — without reintroducing the sound focusing problem. To maintain high speech intelligibility from the lectern, we designed a highly directional loudspeaker system for the Chapel that covers seating on the main level and the balcony. In addition, we worked with the project mechanical engineers to design a quiet ventilation system to meet project background noise goals.

Sisters Chapel earned the coveted Excellence in Restoration Award from The Georgia Trust in 2006.

Acentech

CONSULTING SERVICES

- Architectural acoustics
- Acoustical treatment recommendations
- Mechanical system noise and vibration control
- Sound system design
- Acoustics modeling

REFERENCE

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