

SAINT BRIGID CATHOLIC CHURCH

ALPHARETTA, GEORGIA

ACOUSTICAL CONSULTANT:	Lee Sound Design, Inc.
ARCHITECT:	CDH Partners, Inc.
OWNER:	Roman Catholic ArchDiocese of Atlanta
ORGAN CONSULTANT:	Keith Shafer
ORGAN:	Casavant Frères
SOUND AND AV CONSULTANT:	Muzak Atlanta and Lee Sound Design, Inc.
CONSTRUCTION COST:	15 Million USD
COMPLETION DATE:	2003

Saint Brigid lived in Ireland in the 5th century; a holy woman, granted by the grace of God, great gifts of spiritual leadership, devotion in prayer, patience and compassion. Brigid is probably the best known Irish saint since Saint Patrick - the patron saint of Ireland.

Acoustical and sound system design was performed for the 1000 seat Sanctuary, 750 seat Parish Hall and 150 seat Chapel. Emphasis was placed on organ acoustics and speech intelligibility as a priority. Acoustical elements were integrated into the architecture in an unobtrusive manner. Multiple layers of gypsum board were employed to support organ acoustics. A study of the diaphragmatic characteristics of the stain glass windows was performed. Reverberation measurements were taken before and after the windows were installed over the exterior glass. Fortunately, they showed little influence. A splayed sectional balcony face added to the low frequency diffusion. Many irregular shapes and varying depths were incorporated into window and door trim. Diffusive wall elements included false columns and full statues at the Stations of the Cross.

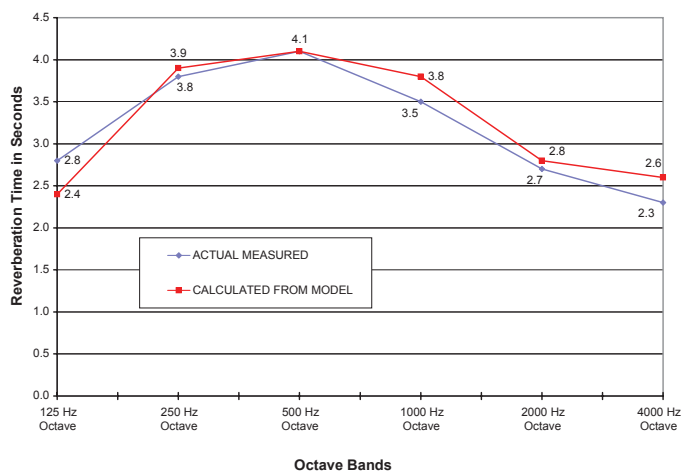
The loudspeaker system consisted of 20 highly directive mid-high frequency loudspeaker modules in an overhead semi-distributed angled arrangement. All speech reinforcement loudspeakers are located within 22 feet of the listeners to increase the Direct-to-Reverberant energy and speech intelligibility. They are recessed into the false ceiling beams and hidden from sight. The large antiphonal choir needs no sound reinforcement support for full projection into the Nave. But a small music playback loudspeaker system is installed and aimed from the rear to provide some sound reinforcement for the smaller choirs, children's choir and even a Praise Band.

Since 1879, Casavant has installed over 3,800 instruments all over the world. This one, Opus 3832, is the fifteenth Casavant installation in the state of Georgia since the first arrived in Statesboro more than forty years ago. It contains 2,153 pipes, in 37 ranks, playable with 30 stops over two manuals and pedalboard.

CRITICAL DATA

Sanctuary/Nave Effective Surface Area:	85,000 square feet
Sanctuary/Nave Volume:	305,000 cubic feet
Seating Capacity:	1000 Seats
Volume Per Seat:	305 cubic feet
Organ Cost:	580,000 USD
Measured Speech Intelligibility (Unoccupied)	11% to 15% ALCons 0.50 to 0.45 STI
Measured Noise Level:	NC-30

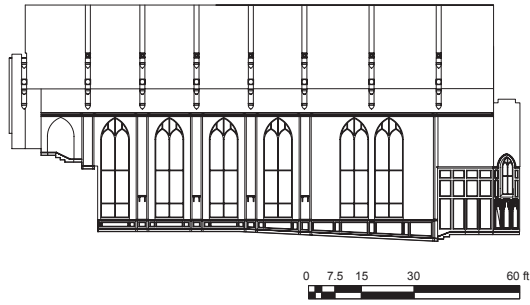
REVERBERATION TIMES - UNOCCUPIED



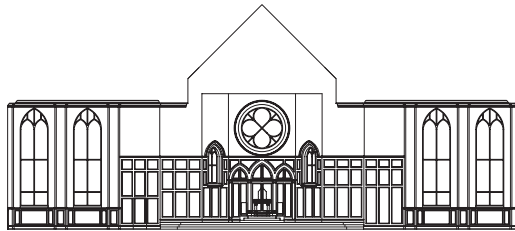
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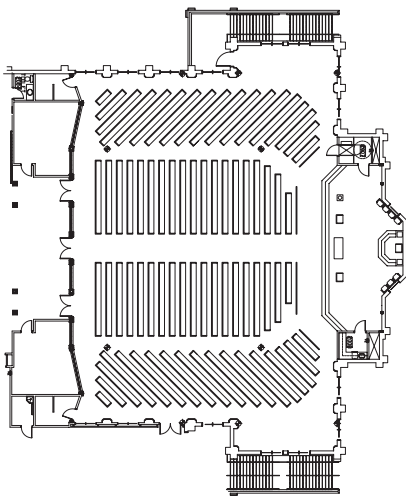
LEE SOUND DESIGN



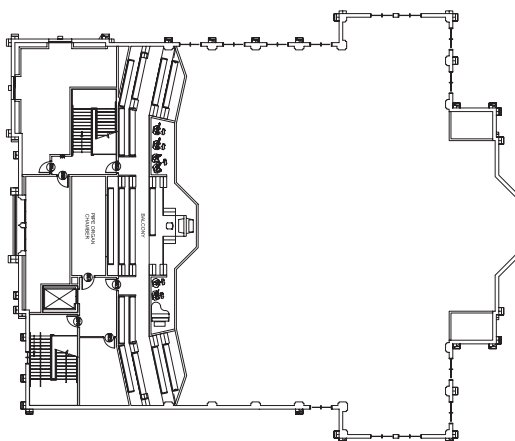
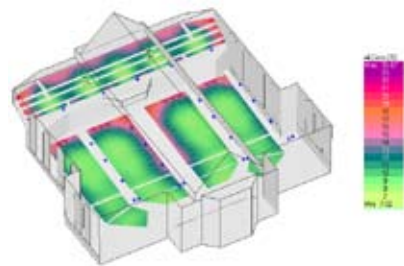
LONGITUDINAL SECTION



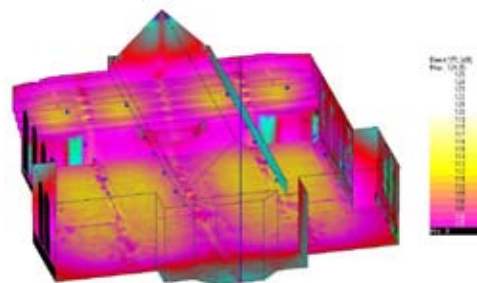
LATERAL SECTION



MAIN FLOOR PLAN



BALCONY FLOOR PLAN



COMPUTER MODELS