

PROFESSIONAL ALLIANCE SPOTLIGHT

Clayton Acoustics Group

Clayton Acoustics Group
2 Wykagyl Road
Carmel, NY 10512
Office: (845) 225-7515
www.ClaytonAcoustics.com

Sacred places serve many functions, but sometimes not enough thought is given to the different acoustical needs within them. Music needs certain reverberation in order to capture its fullness. Speech needs to be intelligible and carry throughout the room. At times, addressing one need impacts the other. Just what is a diligent property committee to do?

According to Dan Clayton, founder of Clayton Acoustics Group, careful consideration of your building's unique features and the requirements for your congregation's worship can reconcile these varying uses.

Clayton calls it the "seesaw effect." He explains, "In many worship spaces, especially those with lively acoustics and reverberation, traditional worship music and speech exist on opposite ends of a seesaw, with the congregation at the middle. As the building becomes more lively and reverberant, the seesaw lifts up the end with choral, piano and organ music, while the speech end is lowered down; traditional music is enhanced at the expense of speech. Tip the seesaw the other way and speech is enhanced while organ music and singing suffer."

Founded in 1992, Clayton Acoustics Group (CAG) is an acoustics and sound system consulting firm, specializing in projects for houses of worship. CAG's work for churches and synagogues focuses on liturgical room acoustics, pipe organ and choral acoustics, mechanical system noise and vibration control, sound isolation, and high quality speech- and vocal- reinforcement sound system design for reverberant environments.

Clayton believes that a worship space can be designed for excellence in both speech and music, enhancing the participatory bond between clergy, musicians, and congregation. Working with a diverse range of faith traditions, CAG strives to preserve the good qualities of natural acoustics in existing buildings, while carefully improving the others.

Often, a congregation's members will address one concern, leaving later generations to deal with unintended residual effects. Recently, Clayton completed an acoustic assessment of All Saints Episcopal Church, in Worcester, MA. "There were three bays toward the rear of the nave's ceiling that in 1936 were covered with a man-made sound-absorbing material which was intended to enhance speech intelligibility in an era before effective

sound amplification systems were readily available. The addition of this sound-absorption layer, however, resulted in significant loss of reverberance and acoustical responsiveness." CAG used historical records, digital flash photographs, acoustical measurements, and computer calculations to analyze and compare present versus previous church acoustics. CAG recommended a range of design solutions and renovation/restoration options for the congregation's long-term plans, many of which were implemented by the church's design team.

Clayton Acoustics Group has experience working with a diverse range of faith traditions. The firm was on the renovation design team for the Roman Catholic Cathedral of St. John the Baptist, in Savannah, GA, which won



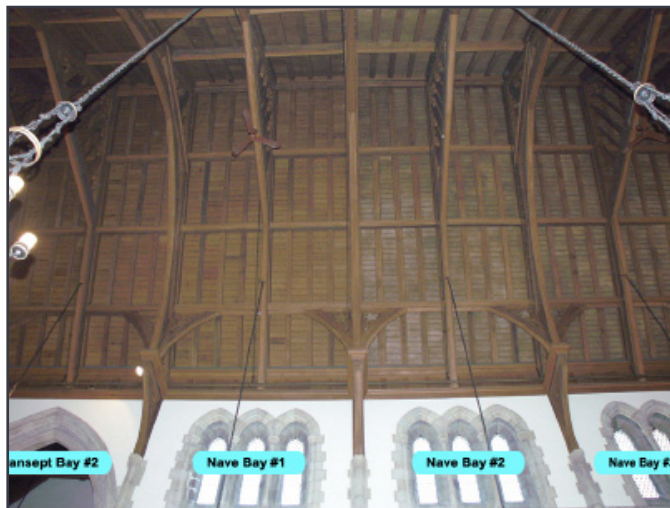
Photo credit: Clayton Acoustics Group

All Saints Episcopal Church, in Worcester, MA, where Clayton Acoustics Group recently completed an acoustics assessment.

PROFESSIONAL ALLIANCE SPOTLIGHT (cont.)

a 2003 Faith & Form Religious Architecture Honor Award. CAG's work for St. Paul's Episcopal Church, Rock Creek Parish, in Washington, D.C., was featured in the April 2005 issue of *The American Organist*. Also, as one of the few consulting firms nationwide with experience designing Shabbat sound-amplification systems suitable for use in Orthodox synagogues on the Sabbath and High Holy Days, CAG has worked for four prominent New York congregations.

With proper assessment of your space and needs, Clayton says, "Speech intelligibility (can be) enhanced without compromising the beauty of music." Also, CAG ensures that neither the visual nor aural beauty of a worship space is compromised. "In other words," he adds, "you can have it all!"



Top: The ceiling of All Saints Episcopal Church in Worcester, MA, where Clayton Acoustics Group performed an acoustic assessment and determined that a man-made sound-absorbing material applied in 1936 was actually hindering the acoustical responsiveness. Bottom: Detail of two ceiling bays, showing the sound-reflective wood planking (Nave Bay #1) and the sound-absorbing material (Nave Bay #2). Photo credit: Clayton Acoustics Group

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