

Big Sky Acoustics, LLC

PROJECT PROFILE: CHURCH SANCTUARY



PROJECT: VAN ORSDEL UNITED METHODIST
Havre, Montana

The acoustical characteristics of the Sanctuary posed a challenge to the church; the music sounded good, but the congregation had difficulty understanding spoken words. Big Sky Acoustics was hired to analyze the acoustical characteristics of the space, and to design modifications that would improve speech intelligibility in the Sanctuary.

BSA's SERVICES AND SOLUTIONS:

- Acoustical challenges included: 1) the space was designed to enhance the pipe organ; 2) music and congregational responses were lively; and 3) speech sounded garbled and was hard to understand.
- BSA visited the church, measured the reverberation time, and evaluated the musical and spoken word characteristics of the Sanctuary.
- Determined that the long reverberation time and the loud speaker orientation and coverage were affecting the speech intelligibility.
- Used a computer model to verify the acoustical characteristics of the Sanctuary.
- Analyzed and predicted how various acoustical treatments, applied to the rear glass wall, could stabilize the reverberation time. Provided three cost effective options for sound absorbing treatment and suggested modifications for the sound system.
- Summarized the study in a clear and concise report, so that the Church could appropriately and cost-effectively evaluate how to improve the speech intelligibility in the Sanctuary, as well as continue to enhance the musical portions of the services.

