

PROJECT PROFILE: CHURCH SANCTUARY

PROJECT: ST. THOMAS CATHOLIC CHURCH
Billings, MT



One of the main goals of this Sanctuary remodel was to improve its acoustical characteristics. The existing Sanctuary had old exposed spray-on insulation on the ceiling that created an “acoustically dead” space, and the musical portions of Mass were not lively or engaging.

BSA's SERVICES AND SOLUTIONS:

Room Acoustics

- Developed a computer model to predict the reverberation time of the existing space.
- Determined a reverberation time goal for the remodeled Sanctuary to match the Church's expectations.
- Used the model to assess how various finishes would increase the reverberation time without exceeding the design goal.
- Evaluated the effect of changing flooring materials from carpet to tile.
- Calculated the effect of covering the ceiling with gypsum board panels or wood slats and determined the appropriate spacing between the material.
- Worked closely with the architect to ensure the acoustical treatments matched the aesthetics of the space.

BSA's room acoustics design:

- Increased the reverberation time to enhance the musical portions of Mass.
- Provided an appropriate acoustical balance between the spoken word and musical portions of Mass.

Completed in late 2005, the remodel is a resounding success. The music director and the Church are delighted with the improved acoustical characteristics of the Sanctuary.

