

[ Between us, ideas become reality. ]®

## case study

PROJECT: . . .Orthopedic Clinic  
LOCATION: . . .Palos Hills, IL  
ARCHITECT: . . .Marshall Erdman &  
Associates, Madison, WI  
PRODUCT: . . .Cirrus® High CAC ceiling

### The Challenge:

Marshall Erdman & Associates specializes in healthcare facility planning, design and construction. Even before HIPAA became law, the firm had always prided itself on protecting patient privacy by reducing sound intrusion between rooms.

One of the methods the firm used is a combination of a suspended acoustical ceiling and rigid fiberglass insulation boards installed vertically as a plenum barrier between the top of a wall and the deck above.

In the standard design, the panels in the acoustical ceiling have a Noise Reduction Coefficient (NRC) of 0.50, meaning they absorb 50% of the sound that strikes them, and a Ceiling Attenuation Class (CAC) of 33. The CAC indicates the ability of a ceiling to block sound transmission between adjacent closed spaces that share a common plenum.

To improve patient privacy, the firm was looking for new ways to reduce sound intrusion levels between patient spaces even further while reducing construction costs.

### The Solution:

As part of the design of the Palos Hills, Illinois, Orthopedic Clinic, the firm decided to forego traditional design and explore a new approach that eliminates the fiberglass plenum barrier and uses a new Cirrus® ceiling panel from Armstrong that features improved performance at an NRC of 0.70 and CAC of 40.

"Installing the rigid insulation is extremely labor intensive," states Marshall Erdman Project Manager, Frank Feit. "This method will provide the privacy level required, while saving significant time and money for us and our clients."

And, research shows it will work. Acoustical studies indicate that a confidential level of Speech Privacy is more likely to be achieved in more circumstances than for the previous design standard. Moreover, based on RS Means Data, the installed cost of a CAC 40 ceiling with no plenum treatment compared to a traditional ceiling with fiberglass board plenum treatment is at least 40% lower, based on the number of plenum walls removed.

