



Noise Control
Case Study Library



The Science of Comfort™

Project: Mixed Use Luxury Building in NYC

Location: **New York, NY**

Project Type: **Mixed Use**

Square Footage: **14,564 ft²**

Architect: **Spector Group**

MEP Engineer: **Robert Derector Associates**

Structural: **Dubinsky Consulting Engineers**

Acoustical Consultant: **Cerami & Associates**

Owner's Representative: **Interni, LLC**

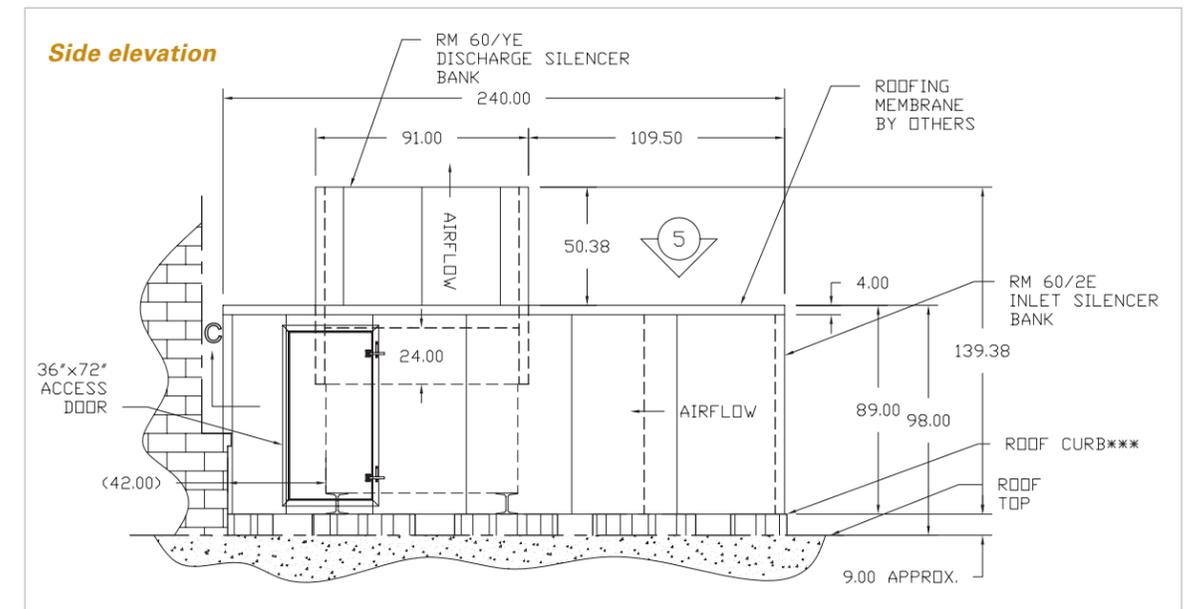
The Challenge: New York City is filled with mixed use developments that balance utility and comfort including this 34-story luxury building. The majority of the building houses residential space and the ground floor is filled with commercial tenants. A new commercial tenant replaced the aging rooftop cooling tower with a higher output dry cooler, which resulted in increased exterior noise levels that threatened to impact surrounding residential tenants. The project location provided several challenges including limited access, existing roof curb utilization, building load constraints, and surrounding rooftop equipment that could not be disturbed.

The Solution: The acoustical consultant performed a site survey of the existing installation and provided a report outlining noise findings and recommendations.

Based on the report, Price worked with the design team to create and build a custom acoustic enclosure consisting of 4" thick acoustic panels and intake and discharge silencer banks.

All nearby surrounding rooftop equipment was enclosed with the acoustic panels or carefully built around to ensure sufficient clearance and access. The team also included structural support for the discharge silencer banks and roof panels and an access door was installed to satisfy maintenance requirements.

Once construction was complete, the project team measured resulting dry cooler noise levels to confirm they were at or below the requirements outlined in the design specifications. Price's complete noise control line allowed the design team to tackle multiple project hurdles and reduce noise levels while minimizing the impact on dry cooler performance.



Project: Mercy Hospital Joplin

Location: Joplin, MO

Project Type: Medical

Project Size: 875,000 ft²

Project Cost: \$345 million

Architect: HKS Architects Inc.

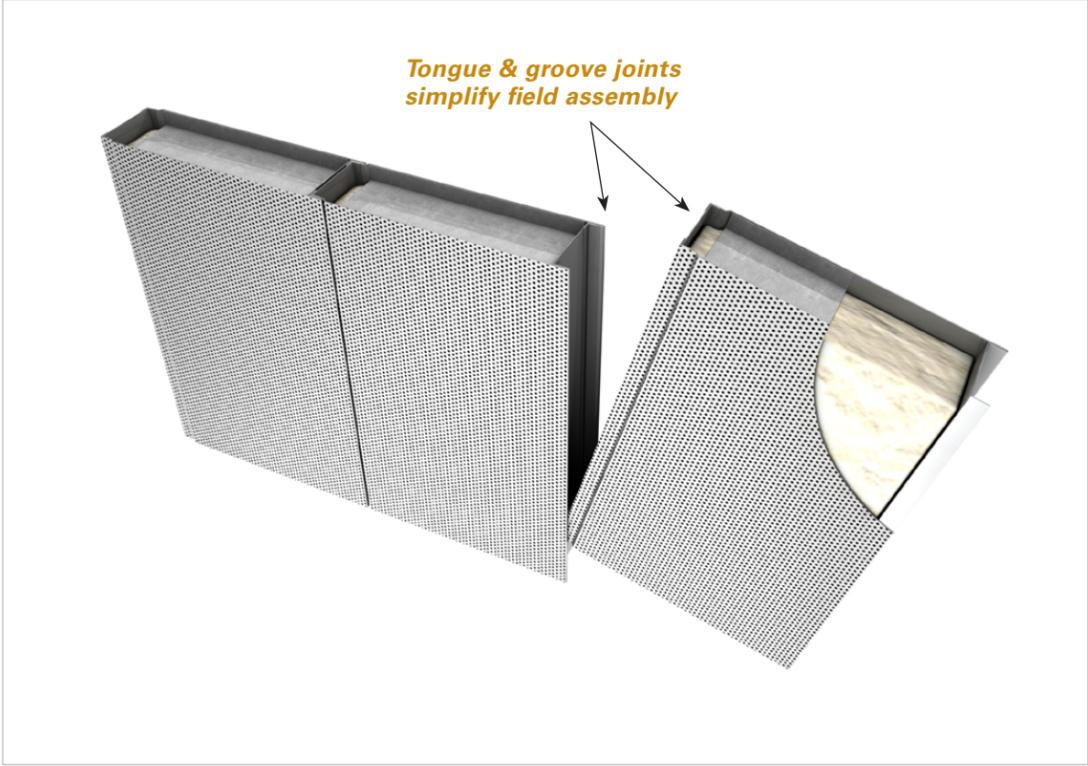
MEP Engineer: Heideman & Associates

Contractor: U.S. Engineering Company

Price Representative: Jorban-Riscoe Associates

The Challenge: Mercy Hospital Joplin was built at a record pace, in order to replace St. John's Regional Medical Center that was destroyed in a 2011 EF-5 tornado. The hospital's destruction forced existing patients and wounded victims of the disaster to be treated from a temporary field hospital. The design team hired to rebuild the hospital had to reconstruct the entire hospital very quickly, and started by laying the foundation before the design was finalized. To prevent future destruction from strong storms and tornados, the team incorporated innovative storm-proof material and building techniques.

The Solution: Price worked with the engineer and contractor throughout the design process to determine the most cost effective solution for handling the hospital's outside air ventilation requirements. Ultimately, Price supplied over 13,000 square feet of acoustic panels to construct intake and discharge air plenums. These acoustic panel plenums allow mechanical equipment to function at higher efficiencies while minimizing noise transmission to surrounding occupied space. Price conducted site visits during the design and construction stages and delivered acoustic panels in phases to satisfy key project milestones.



Project: **Morris, Manning & Martin, LLP**

Location: **Atlanta, GA**

Project Type: **Office**

Project Size: **132,000 ft²**

Architect: **Gensler**

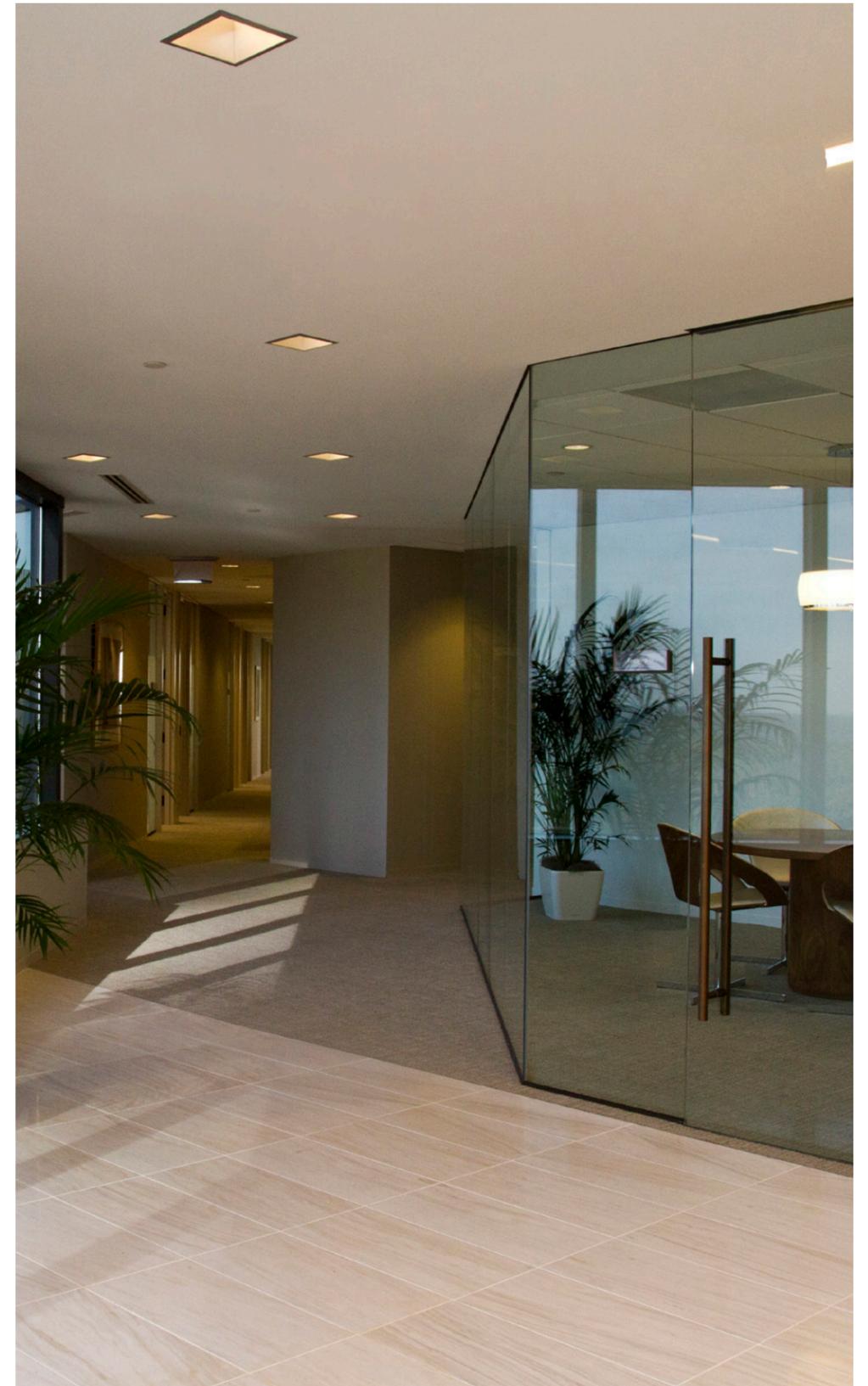
MEP Engineer: **Gray & Postell, Inc.**

Mechanical Contractor: **Maxair Mechanical Inc.**

Price Representative: **Tom Barrow Company**

The Challenge: While refreshing their office in the iconic Atlanta Financial Center building, Morris, Manning & Martin, LLP also wanted to ensure that their workplace provided a very high level of speech privacy and occupant comfort. Noise transfer between occupied spaces (typically referred to as “cross talk”) is often limited by using field fabricated lined elbows on top of non-ducted return grilles. These lined elbows (often called “sound boots”) present several challenges. The boots are large and cumbersome, require additional labor for attaching to the deck above, do not fit within tight or shallow ceiling plenums, and do not have performance data.

The Solution: Price provided an engineered solution for low-profile return air requirements: the Thin Line Return Dissipater (TLRD) silencer. This air transfer silencer addressed speech privacy concerns, labor and coordination challenges, and provided a flexible solution. Labor savings were immediately realized when transporting TLRDs in the building; the customer could only load three to four sound boots in an elevator at a time but with TLRDs they were able to load over 10 at a time. Price also worked with the design team and Maxair Mechanical Inc. by mounting TLRDs on the back of the return grilles in the factory, further reducing labor time. Another key benefit of the TLRD is its reduced height, which allows architects to design higher ceilings. Sound boots are often 24-36” tall while the standard TLRD is only 4” thick. Ultimately, Price provided over 350 TLRDs to help the design team create a luxuriously quiet and confidential office for Morris, Manning & Martin, LLP.



Project: SLC Public Safety Building

Location: Salt Lake City, UT

Project Type: Government & Public

Project Size: 335,000 ft²

Project Cost: \$125 million

Architect: GSBS Architects

MEP Engineer: Colvin Engineering Associates

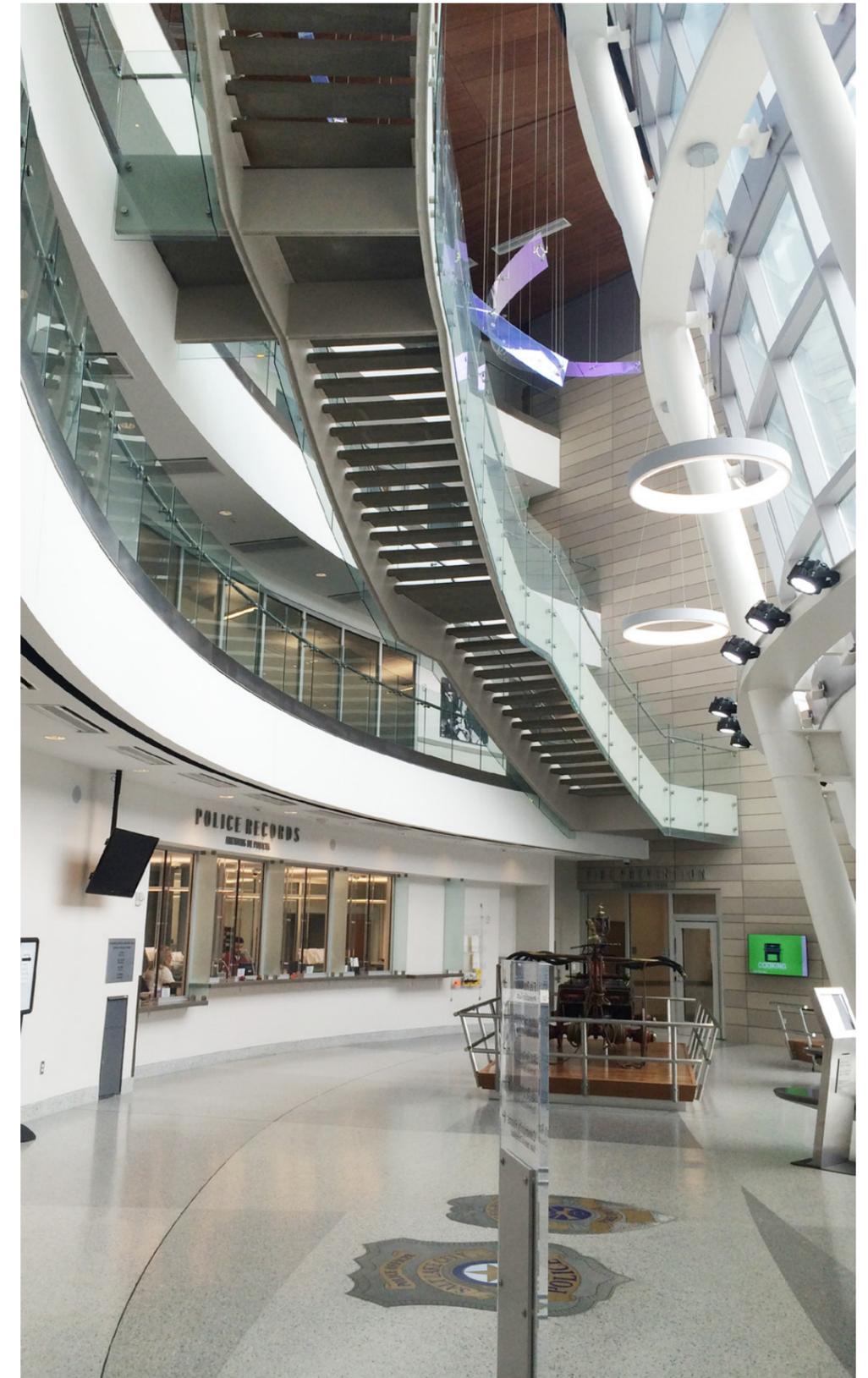
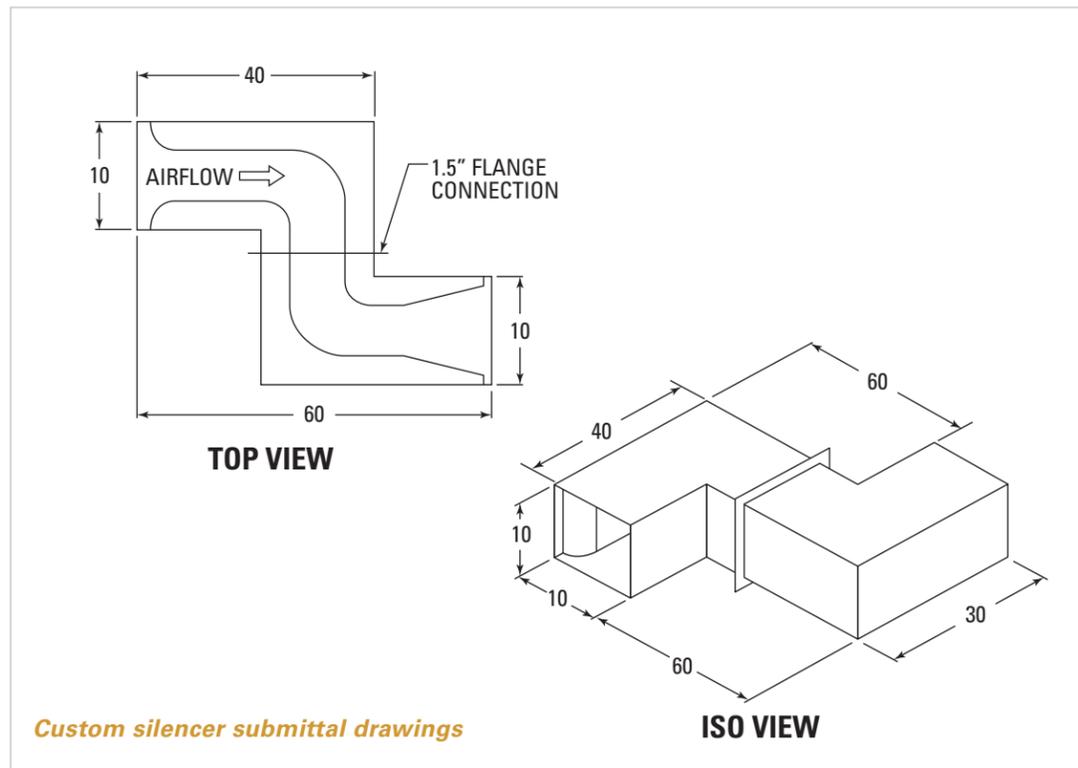
Contractor: Okland Construction

Owner's Representative: MOCA Systems, Inc.

Price Representative: Midgley-Huber, Inc.

The Challenge: Public buildings that house emergency services must be maintained during and after destructive events including earthquakes, storms, and terrorist acts. It is in these times of need when the grid is offline that emergency services are most important. During the terrorist attacks on September 11, 2001 for example, the New York City Office of Emergency Management had to abandon its offices at 7 World Trade Center due to risk of collapse. This challenge ultimately drove the design for the new Salt Lake City Public Safety Building. At the same time, the confidential and highly critical nature of conversations in the building required a quiet and properly isolated workspace.

The Solution: The Salt Lake City Public Safety Building is a 335,000 ft² building that houses the Salt Lake City Police, Fire, and Emergency Operations Departments. The building was designed to not only withstand a 7.5 magnitude earthquake that is possible in the region but allow full operations to continue afterwards. This impressive building also achieved the Mayor of Salt Lake City's goal of becoming the first 24-hour operating net zero energy building in the USA, as well as achieving LEED Platinum certification. In order to provide quiet and confidential spaces, silencers were placed near noise sources including air handling units and fan coils. Price provided various custom silencers when standard silencers would not work. Heavier gauge casings (16ga and 10ga) were also used for select silencers to reduce possible breakout noise that could impact nearby occupied space. Ultimately the design team provided a confidential and comfortable work environment that is equally resilient during and after catastrophic events when emergency services are most needed.



Project: Polsinelli PC Headquarters

Location: **Kansas City, MO**

Project Type: **Office - Headquarters**

Project Size: **235,000 ft²**

Architect: **360 Architecture**

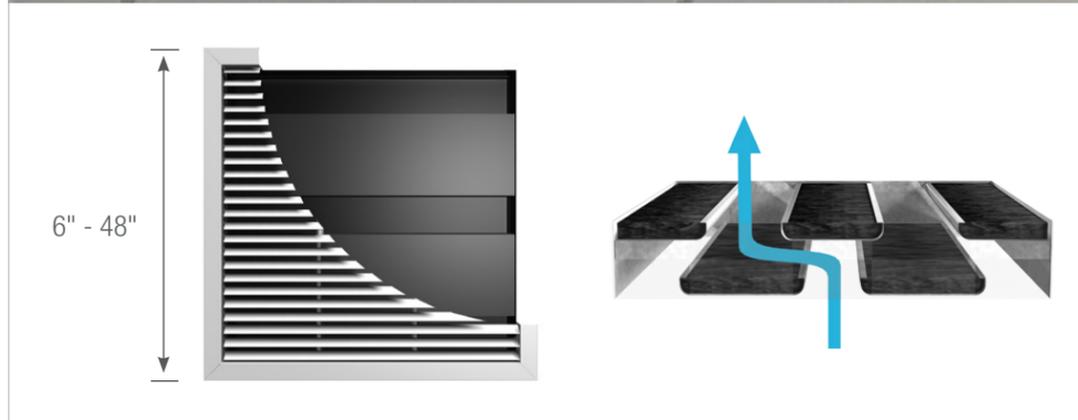
Engineer: **Lankford | Fendler + associates
Consulting Engineers, Inc.**

Contractor: **JE Dunn Construction**

Price Representative: **Jorban-Riscoe
Associates, Inc.**

The Challenge: Polsinelli's new headquarters needed to provide transparency and confidentiality. Transparency was achieved in part by using glass panels and walls and a wide central staircase connecting the 9 story office. This design helped maximize operational efficiency and provide flexible room configurations, but in combination with common return air plenums and open layouts created speech privacy concerns. The law firm's intelligibility requirements and confidential nature of conversations throughout the office required quiet and properly isolated workspaces.

The Solution: Speech privacy between non-similar workspace was achieved by using over 400 Price Thin Line Return Dissipater (TLRD) silencers to reduce noise flanking through the common ceiling return plenum. TLRDs are laboratory tested and effectively reduce noise while having a minimal impact on airflow through the return grille. TLRDs are also not visible through return air grilles and the slim 4" depth fits easily into shallower ceiling plenums, giving architects added location flexibility and freedom to design higher ceilings. In this project, TLRDs were shipped pre-assembled with return grilles to provide a seamless engineered solution that also minimized installation labor and visibility into the return plenum from the occupied space.



pricenoisecontrol.com

UNITED STATES

2975 Shawnee Ridge Court
Suwanee, Georgia USA 30024

PH: 770.623.8050 FAX: 770.623.6404

CANADA

638 Raleigh Street
Winnipeg, Manitoba Canada R2K 3Z9

PH: 204.669.4220 FAX: 204.663.2715

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