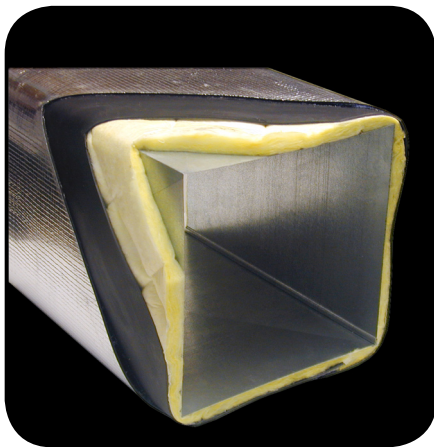




# SOUND SOLUTIONS!

Case History No. 7

## SOUND SEAL'S ACOUSTICAL LAGGING QUIETS AIRPORT HVAC SYSTEM



Sound Seal's "B-10 LAG/QFA-3" is a multi-layered acoustic lagging wrapped around the exterior of noisy duct work.

"Flight 6836 to Fairbanks Alaska now boarding at gate T2"; "Wheelchair needed at gate C17 for passenger assistance"; the personal address (PA) systems at airports convey critical information all the time. Hearing the announcements clearly is vital. Airports must go to great lengths to ensure good communication. Clearly marked gates, informational signs, arrival and departure boards and easily understood verbal communication help airports run as smoothly as possible. The hard reverberant surfaces that are prevalent in airports, which bounce noises around creating an echo, make verbal communication extremely difficult. Therefore airport authorities require that all background noise be at an absolute minimum, including noise from the HVAC system.

Phoenix's Sky Harbor airport is no different. It has grown from a regional airport to the fifth busiest airport in the world. That growth has spurred major construction including the addition of Terminal 4, which houses eight concourses in approximately

185,000 square feet. This additional space allowed airlines to expand their operations as necessary while offering restaurants, shops and ATM's among other travel necessities. The 33.5 million passengers that use Sky Harbor international airport every year rely on clear communication to help them navigate throughout this enormous space. In addition to knowing where they need to go, the 192,000 passengers and guests that pass through Sky Harbor's doors every day must be kept comfortable. Keeping all those people cool in Phoenix's hot climate requires a lot of HVAC systems and even more duct work potentially creating a huge amount of background noise. Therefore, the city of Phoenix set specific noise criteria for the HVAC units, and the associated duct work that runs throughout the terminals. To meet these requirements the architect called upon Sound Seal for recommendations to quiet noise radiating through the walls of the ducts.



### Acoustical Performance: Sound Transmission Loss *(decibel reduction per frequency)*

Product	OCTAVE BAND FREQUENCIES (Hz)						
	125	250	500	1000	2000	4000	STC
B-10 Lag	15	16	21	26	33	38	26
B-10 Lag/ QFA-3	18	18	23	30	39	46	29
B-10 Lag/ QFA-9	19	20	23	33	44	53	30

Per ASTM E-9

Sound Seal's applications engineers recommended their Barricade B-10 LAG/QFA-3 Acoustical Pipe and Duct Lagging material. This acoustical composite consists of a one pound psf foil-faced noise barrier bonded to a one inch thick quilted fiberglass sound absorber. Along with the other products in Sound Seal's lag product family, the B-10 LAG/QFA-3 is specifically designed for wrapping the exterior of pipes and ducts. The durable, reinforced foil facing allows for easy, time saving installation of the product by utilizing a matching lag tape to seal horizontal and vertical seams. The fiberglass absorber/decoupler allows the flexible noise barrier to achieve optimum sound attenuation. It also adds significant thermal insulation.

After working with the local Sound Seal representative in the area, Arizona Tekoustics, and seeing how well Sound Seal's product had worked previously to help

reduce the noise in Terminal 3, the decision to specify their product again was an easy one. According to Mike Gibbs, owner of AIM Royal Insulation, the local insulation contractor who installed the product, Sound Seal's lagging product was "as easy to install as any product of that type." And he should know since he's used it on plenty of other projects including the Mayo Hospital, Armor Meats and Greyhound Bus in Scottsdale Arizona.

For help in solving your noise control problem or for more information on acoustical pipe or duct lagging call us at 1-800-569-1294 or visit us at [www.pipelandduct.com](http://www.pipelandduct.com)

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