

## PROJECT SOLUTIONS

**Project:** CBC Headquarters

**Application:** Duct Silencers (Centrifugal Fan Systems)

Cost savings were achieved and the design noise criteria were met for the huge\* CBC broadcasting center.

*\*The largest architectural commission ever awarded in Canada which consolidated CBC radio and television studios from 24 different locations.*

### **PROBLEM: Breakin / breakout noise**

Sheet metal ducts penetrating the high sound transmission loss studio walls were a major sound transmission path requiring noise control treatment. To save costs, much return ducting was eliminated. This increased the noise breakout problem.

### **SOLUTION: High transmission loss duct walls**

Silencers with high transmission loss (HTL) walls were installed at the point of penetration. In many cases, where there was no connecting ductwork, elbow silencers with HTL walls were supplied.

### **PROBLEM: Acoustical duct lining**

The original design concept called for most of the ductwork to have internal acoustical duct lining.

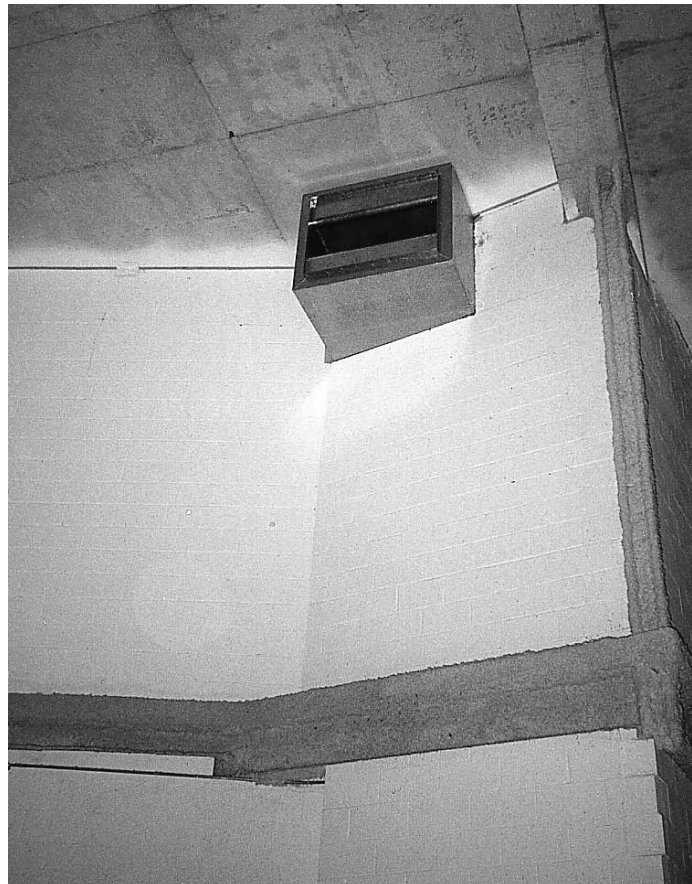
### **SOLUTION: Silencers reduce duct lining costs**

Careful design of the ductwork and silencers adequately controlled generated noise and provided sufficient sound attenuation so that almost all the internal lining was eliminated. The one big exception was the ductwork serving the three large roof top TV studios. However, even there, much of the lining was eliminated.

*(See also PS 13-2)*



*Photo of CBC project during construction. Note the three large roof top studios still exposed (the largest is approx. 70 feet high).*



*Silencer with HTL wall construction penetrates a large studio wall.*