

# CBC Headquarters

Application: Duct Silencers (Centrifugal Fan Systems)

## ! CHALLENGE

- > Breakin / Breakout Noise
- > Acoustical Duct Lining

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.

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

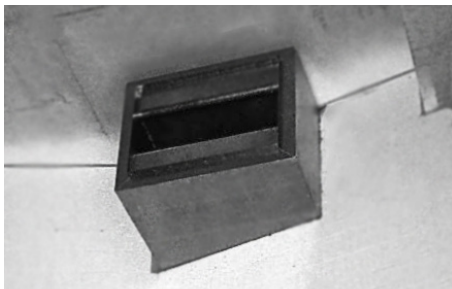
Cost savings were achieved and the design noise criteria were met for the huge\* CBC broadcasting center.

## 🔧 SOLUTION

### HIGH TRANSMISSION LOSS DUCT WALLS AND SILENCERS TO REDUCE DUCT LINING COSTS

Silencers with high transmission loss (HTL) walls were installed at the point of penetration. Where there was no connecting ductwork, elbow silencers with HTL walls were supplied. 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 exception was the ductwork serving the three large roof top TV studios. However, even there, much of the lining was eliminated.

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



Silencer with HTL wall construction

Right: CBC building during construction. Note the 3 large roof top studios still exposed (largest is approx. 70 ft. high.)

