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## Focus on: *Environmental law & Issues*

### Building environment considered important tenant issue

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Tenants now consider the environment provided inside the building to be nearly as important as its location. Such factors as air quality, temperature, illumination and acoustics have been taken on a new found prominence.

Governments and professional organizations have responded to this new awareness with both legislation and more restrictive building and operating standards. For example, the American Society for Heating and Air Conditioning Engineers (ASHRAE) has published a new ventilation standard to maintain acceptable indoor air quality. In some cases, this new standard may require up to eight times the amount of outside air being provided to offices than was required by the previous standard.

During the energy conscious 1980's, researchers discovered an epidemic of discomfort and discontent among building occupants. Common symptoms included eye, nose and throat irritation, headache and fatigue accompanied by complaints of stale, stuffy air, unpleasant

odors and temperature fluctuations. The World Health Organization has identified this problem plaguing modern office building occupants as sick building syndrome (SBS) and the cause as poor indoor environmental quality.

U.S. researchers have estimated that the national cost of lost productivity due to poor SBS caused by poor indoor environmental quality in the commercial office sector is in the order of \$10 billion per year. A further \$10 billion per year may be lost due to increased absenteeism among office workers. SBS is not restricted to the office. In the retail sector, loss of revenue due to discomfort of clients because of poor environmental quality ranges from up to \$10 billion annually.

Researchers estimate that poor air quality alone in the commercial building sector could cost as much as \$30 billion annually.

As a result, tenants of commercial buildings are demanding improved ventilation and indoor environmental quality. The results of a number of recent surveys have quantified the importance of environmental comfort, particularly air quality and lighting, to tenants, owners and designers of commercial buildings.

Possibly the most extensive survey is the

Steelcase Worldwide Office Environment Index developed in conjunction with the Institute of Building Designers and the International Facilities Management Association and conducted by Louis Harris and Associates.

The study reports opinions of office workers, top executives, facilities managers, and contract design professionals in 15 countries including the United States, Canada, Japan and member countries of the European Economic Community.

The results show 84% of office workers feel that buildings must provide comfortable heating, ventilation and air conditioning. Office workers at 46% feel that poor indoor air quality is a serious hazard. Building managers and designers agree with building occupants. Managers at 87% and 85% of designers feel that comfort must be provided in commercial buildings.

There is a consensus among building occupants demanding healthy, comfortable indoor environments. Further, building managers and designers agree that this demand must be met.

Are building tenants willing to pay extra for higher quality environments?

A number of recent new building pro-

jects in Canada and the United States have shown tenants are willing to pay a premium for conditions that exceed minimum standards for both ventilation and environmental quality.

For example, tenants are requesting twice the minimum outside air supply specified in available ventilation standards, opening windows, daylighting and selection of construction and furnishing materials that are low in formaldehyde and volatile organic compounds.

It is also becoming common practice for potential tenants to evaluate the ventilation and air conditioning systems, to determine if comfortable conditions can be maintained. These requirements are then written into the lease documents and may require the tenant to pay for increased operating costs and capital costs for improvements to the building systems.

Tenants are no longer reluctant to retain lawyers and consultants to ensure that owners comply with their demands for comfortable healthy indoor air quality. Such litigation will have a profound impact not only on the liability of owners but also of architects and engineers.