Sound Control Manual − Sound Construction
Sound Attenuation

The objective of sound−conditioning construction is to creat a haven for the occupant, shielded from annoyance and distractions. With such and environment, individuals show increased productivity, tenants complain less, turnovers and vacancies are reduced, and property values rise. Usually, the objective can be met by attention to details and careful workmanship without drastically increasing the cost of the structure. In other cases, sound control materials must be added to obtain the desired level of performance; but in either case, the owner is rewarded for the slight increase in cost with improved sound privacy.

Sound enters a room in many ways; the most familiar route is through an open windowl but almost everyone is also aware that sound comes through walls and ceilings. Not so well known is the fact that sound enters through electical outlets, perimeter cracks, air ducts, and plumbing. Thus, some slightly unfamiliar reasoning must be applied to sound attenuation.

The control of intruding sound ideally begins with the initial building concept and continues to be a consideration through the life of the building. Total sound conditioning affects site selection, building orientation on the site, room orientation within the building, design, detailing, specification, construction, and finally, inspection. If sound conditioning is neglected at any of these stages, the environment will likely suffer some loss of sound performance. But, predictable sound attenuation can be achieved by careful attention to detail during all phases of planning and construction.