**ANSI/ASA S12.60-2010**

**Acoustical Performance Criteria, Design**

**Requirements, and Guidelines for Schools, Part 1: Permanent Schools**

<http://asastore.aip.org/>
<http://acousticalsociety.org/>
<http://www.access-board.gov/acoustic/index.htm>

**Excerpts Related to Doors:**

**5.4.1.2** In addition to the requirement of 5.2.1.1 to reduce the one-hour average interior A-weighted sound levels below 35 dB and the corresponding one-hour average C-weighted sound levels to less than 55 dB, all newly constructed core learning spaces shall be designed to conform to a minimum Outdoor-Indoor Transmission Class (OITC) shown in Table 3. Where a wall contains windows, doors, or penetrations for ventilation, the composite structure, including the window, doors, or penetrations, shall conform to the OITC requirement.

**5.4.1.3** When there is an exterior walkway within 3 m (10 ft) or a playground within 9 to 15 m (30 to 50 ft) of the exterior wall of a core learning space, the basic wall shall have an STC rating of at least 45 and **exterior doors shall have an STC rating of at least 30**. If there are windows in such a wall within 3 m (10 ft) of an exterior walkway or within 9 to 15 m (30 to 50 ft) of a playground, the composite STC rating of the wall including the windows and doors shall be at least STC 40. If a playground is closer than 9 m (30 ft) to the wall of a core learning space, the composite STC rating of the exterior wall shall have a rating of at least STC 50, except that this requirement shall not apply where the playground is dedicated for use only by the adjacent learning space and will therefore not be active while learning activities are occurring in the core learning space.



**5.4.2.3** For walls containing doors between a core learning space and corridors or stairwells, the minimum STC ratings of Table 4 apply to the wall exclusive of the door. For walls containing doors between a core learning space and offices, conference rooms, or toilets that open only to the one core learning space, the minimum STC ratings of Table 4 apply to the wall exclusive of the door. In all other cases, the STC rating applies to the composite construction including the effects of doors, windows, penetrations, etc.

**5.4.2.4 Interior door assemblies and up to 1 m2 (10 ft2) of window glazing area immediately adjacent to the door opening into core learning spaces from corridors, stairways, offices, or conference rooms shall achieve a STC rating of 30 or greater in their operable condition.** **The STC rating for interior entry doors into music rooms from corridors or staircase areas shall be at least 40 if such doors are within 9 m (30 ft) of a door to a core learning space. A vestibule entry composed of two sets of doors with STC ratings of 30 or greater shall be considered to conform to the STC 40 requirement.**



**Commentary-5.4.2.3.** Composite assemblies are walls, floor-ceiling and roof-ceiling constructions composed of more than one element (for example, a wall with a door, window, or penetrations by HVAC ducts or other services). This standard requires that walls between core learning spaces conform to the composite STC requirement, which means that any door in such a wall will need to be acoustically rated. See 5.4.2.3 for special requirements for doors in corridor, office or conference room walls that are not required to conform to the STC requirements for composite walls including the doors. Walls and floor-ceiling assemblies may not maintain their design STC rating if penetrations or openings for piping; electrical devices; recessed cabinets; soffits; or heating, ventilating or exhaust ducts are unsealed.

**Commentary-5.4.2.4.** The intent of the STC 30 requirement is to require solid core wood doors or heavy-duty steel doors with good seals. The location of classroom entry doors across a corridor should be staggered to minimize sound transmission between these classrooms. Provisions should be made to ensure that the perimeter seals of sound-rated doors are well maintained. Seals for entrance doors should be inspected and adjusted, as necessary, every six months. Gaskets of door seals should never be painted.