REFERENCE STANDARD RS 12
LIGHT, HEAT, VENTILATION AND NOISE CONTROL

* LIST OF REFERENCED NATIONAL STANDARDS

ASHRAE Handbook HVAC Systems and Application................................................................. 1987
ASTM E413 Standard Classification for Determination of Sound Transmission Class.................... 1987
NCMA-TEK 69.A New Data on Sound Reduction with Concrete Masonry Walls.......................... 1978
ASHRAE Handbook Fundamentals.......................................................................................... 1985
ANSI S 1.4 Specification for Sound Level Meters and Supplement ANSI A1.4a-1985................. 1983
ANSI S 12.30 Guidelines for the Use of Sound Power Standards and for the Preparation of Noise Test Codes.......................................................................................... 1990
ANSI S 12.31 Precision Method for the Determination of Sound Power Levels of Broadband Noise Sources in Reverberation Rooms.......................................................... 1990
ANSI S 12.32 Precision Method for the Determination of Sound Power Levels of Discrete Frequency and Narrow Band Noise Sources in Reverberation Rooms........................................... 1990
ANSI S 1.13 Methods for the Measurement of Sound Pressure Levels (R 1986)..................... 1971
ANSI S 1.6 Preferred Frequencies and Band Numbers for Acoustical Measurements (R 1990)....... 1984
ANSI S 1.11 Specification for Octave-Band and Fractional-Octave-Band Analog and Digital Filters ..1986
Opinion 76-16 Proceeding on Motion of the Commissioner as to Insulation Standards, PSC Case No. 26913 August 13, 1976.......................................................... 1976

**243-90 BCR; 261-86 BCR; 290-84 BCR

** REFERENCE STANDARD RS 12-1 HEATING
1. HEATING CAPACITY - The heating capacity required in each room or space shall be calculated in accordance with the principles set forth in ASHRAE Handbook-1987 HVAC Systems and Applications.

The calculations of heating capacity shall consider the areas and transmission coefficients of all surfaces exposed to outdoor temperatures or to unheated areas, and shall include allowance for air infiltration and wind velocity. In spaces with high ceilings, an allowance shall be made for the effect of stratification so that the prescribed temperature will be maintained at a level 5 feet above the floor.

**243-90 BCR; 253-82 BCR

*** REFERENCE STANDARD RS 12-2 SOUND TRANSMISSION CLASS RATINGS
TEST PROCEDURES FOR STC RATINGS-The STC rating of a construction assembly shall be obtained from one of the following methods:
(a) Laboratory test:

ASTM E 413 - 1987 Standard Classification for Determination of Sound Transmission Class.

(b) Field Test:


STC TEST DATA - Certified laboratory test data obtained by acceptable laboratories in accordance with ANSI/ASTM E 90 AND ASTM E 413 may be used in obtaining STC ratings.

The following national standards may be accepted for sound transmission class-ratings only:
NCMA-TEK 69.A - 1978 New Data on Sound Reduction with Concrete Masonry Walls.

**243-90 BCR; 261-86 BCR; 290-84 BCR; 253-82 BCR
**REFERENCE STANDARD RS 12-3**  
**IMPACT NOISE RATINGS**  
**TEST METHOD FOR INR** - The INR of a floor-ceiling construction assembly shall be obtained from the following:  
**TEST DATA FOR INR RATINGS** - Certified laboratory test data obtained by acceptable laboratories in accordance with ANSI/ASTM E 492 may be used for INR RATING.  
**243-90 BCR; 261-86 BCR; 253-82 BCR**

**REFERENCE STANDARD RS 12-4**  
**NOISE CRITERION (NC) LEVELS**  
NC levels shall be as shown in ASHRAE 1989 Handbook-Fundamentals.  
**243-90 BCR; 253-82 BCR**

**REFERENCE STANDARD RS 12-5**  
**TEST PROCEDURES FOR SOUND POWER LEVEL**  
The sound power levels of exterior mechanical equipment and of fan coil units, grills, registers, diffusers and induction units shall be measured in accordance with the following:  
**243-90 BCR; 253-82 BCR**

**REFERENCE STANDARD RS 12-6**  
**243-90 BCR; 261-86 BCR; 290-84 BCR**

**REFERENCE STANDARD RS 12-7**  
ANSI S 12.30 - 1990 Guidelines for the Use of Sound Power Standards and for the Preparation of Noise Test Codes.  
ANSI S 12.30† - 1990 Precision Method for the Determination of Sound Power Levels of Broadband Noise Sources in Reverberation Rooms.  
ANSI S 12.32-1990 Precision Method for the Determination of Sound Power Levels of Discrete Frequency and Narrow Bank Noise Sources in Reverberation Rooms.  
**243-90 BCR; 253-82 BCR**  
†As enacted; but “12.31” probably intended.  
***As enacted but “(R 1976)” probably intended.***