

## STATE BUILDING CODE INTERPRETATION NO. I-6-02

February 11, 2002

The following is offered in response to your letter to me dated February 4, 2002 in which you request a formal interpretation of section 316.1 of the 1995 CABO One and Two Family Dwelling Code portion of the 1999 State Building Code.

Question: Regarding required smoke detectors, does each individual detector have to sound an audible alarm or would a siren or horn on each level of the dwelling unit attain compliance with the requirements of section 316.1 of the 1995 CABO One and Two Family Dwelling Code portion of the 1999 State Building Code?

Answer: It is the intent of the code that the alarm be audible in all sleeping areas. This can be accomplished by utilizing smoke detectors with an integral alarm device or by positioning alarm sounding devices that are independent from the detector in such a manner that the alarm from such device is audible in all sleeping areas. Although the CABO Code does not specify a sound level or define the phrase "audible in all sleeping areas", it is the intent that the sound of the alarm, however produced, be loud enough above ambient noise levels in the sleeping area to awaken occupants upon initiation. Connecticut General Statutes provide us with a path to the applicable standard.

Subsection (b) of section 29-292 of the Connecticut General Statutes requires that no certificate of occupancy be issued for any new building designed for occupancy by one or more families unless the local fire marshal or building official has certified that said building is equipped with smoke detection and warning equipment complying with the Fire Safety Code. The 1999 edition of NFPA 72, which is referenced by the 1999 Fire Safety Code, provides a standard of audible characteristics. It states, "Where audible appliances are installed to provide signals for sleeping areas, they shall have a sound level of at least 15 dBA above the average ambient sound level or 5 dBA above the maximum sound level having a duration of at least 60 seconds or a sound level of at least 70 dBA, whichever is greater, measured at the pillow level in the occupiable area. If any barrier, such as a door, curtain, or retractable partition, is located between the notification appliance and the pillow, the sound pressure level shall be measured with the barrier placed between the appliance and the pillow." Since this standard is applicable to one- and two-family dwellings constructed under the CABO Code as well as all other residential buildings, it is the applicable standard to apply.