



**O'HARE NOISE  
COMPATIBILITY  
COMMISSION**

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**FOR IMMEDIATE RELEASE:**

## **New Arlington Heights Energy, Sound Control Ordinance Incorporates O'Hare Noise Compatibility Model**

Des Plaines, Ill., Dec. 1, 2008—Arlington Heights trustees approved a new ordinance Nov. 17 that will require the use of energy efficient materials in new construction, remodeling and repairs to reduce exterior sound and mitigate noise. The code's purpose is to "promote good health, safety and general welfare of the users of all buildings" and will apply to exterior and interior environments of one- and two-family dwellings as well as commercial and multi-family dwelling structures in the village.

The ordinance is patterned after a Model Sound Insulation Ordinance created by the O'Hare Noise Compatibility Commission (ONCC), a 12-year-old non-governmental agency whose 43 community, county and school district members partner with O'Hare International Airport, the airline industry, the Federal Aviation Association (FAA) and others to reduce aircraft noise within the O'Hare region.

Arlington Heights originally introduced a code of noise mitigation standards for construction in January 2007, but replaced that code with the current ordinance to include energy efficiencies. The Energy Efficiency and Sound Control Measures code will go into effect in February 2009.

In conjunction with the O'Hare Modernization Program's construction of new east/west runways and plans for a western entrance to the airport, ONCC is continuing its awareness campaign that urges communities to use its Model Sound Insulation Ordinance as a template for new and renovation construction, explained ONCC Executive Director Brian Gilligan. "ONCC strives to ensure that people who live within the airport region get relief from intrusive exterior sounds and noise," he said.

(more)

Arlington Heights adopts energy, sound mitigation code/add 1

The Arlington Heights plan calls for higher R-values for insulation, thicker exterior sheathing, thicker drywall for interior walls, and a requirement that windows and doors carry the U.S. Department of Energy's Energy Star rating.

"Sound insulation can be a costly investment," said ONCC member Joseph Annunzio of Niles, Ill., who chaired the ad hoc committee for the ONCC model noise ordinance. "By using our model as a guide and refining the elements for energy efficiencies, exterior sound mitigation can be achieved for only a slight increase in construction costs."

Arlington Heights Mayor Arlene J. Mulder, who also serves as ONCC chairperson, estimates the village ordinance may increase construction costs one percent, or anywhere from \$3,800 to \$10,000 per dwelling. She projects that within a year or so, savings on energy bills will replace that outlay.

"Arlington Heights is ahead of the curve with its new ordinance. They took a proactive approach to improve the quality of life for their residents. Now it's time for us to reach out to other member communities to take the similar action," Annunzio stressed. The ordinance is posted on the Arlington Heights website at [www.vah.com](http://www.vah.com).

ONCC oversees the O'Hare Residential and School Sound Insulation Programs operated by the City of Chicago's Department of Aviation. The FAA designates single and multi-unit dwellings and schools as eligible for sound proofing based on the sound contours of the airport. New construction, home additions and renovations are not included in the sound proofing program.

The mission of ONCC is to develop meaningful methods of reducing the impact of aircraft noise on surrounding neighborhoods through home and school sound insulation, and to reduce, wherever possible, aircraft noise at its source. For more information, contact Brian Gilligan, 773-686-3198, or visit [www.oharenoise.org](http://www.oharenoise.org).

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ONCC members represent the following communities: Arlington Heights, Bartlett, Bellwood, Chicago, Des Plaines, Elmwood Park, Franklin Park, Harwood Heights, Hoffman Estates, Itasca, Maywood, Melrose Park, Mount Prospect, Niles, Norridge, Northlake, Oak Park, Palatine, Park Ridge, River Forest, River Grove, Rolling Meadows, Rosemont, Schaumburg, Schiller Park, Stone Park, Wood Dale and Cook County. Members represent the following school districts: 59; 63; 80; 81; 84; 84.5; 85.5; 86; 87; 88; 89; 214; 234; 299; and 401.

**AN ORDINANCE AMENDING CHAPTER 23 OF THE  
ARLINGTON HEIGHTS MUNICIPAL CODE**

**BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF  
THE VILLAGE OF ARLINGTON HEIGHTS:**

SECTION ONE: That Chapter 23, Building Regulations, of the Arlington Heights Municipal Code, be and it is hereby amended as follows:

a. That Section 23-302, Modifications by Amendment and Deletion of Various Sections of the International Residential Code/2000, be and is hereby amended by deleting Table 1102.1 in its entirety and substituting in lieu thereof as follows:

<b>Table N1102.1</b>	<b>Amend to read as follows:</b>										
	Table N1102.1 Simplified Prescriptive Building Envelope Thermal Component Criteria Minimum Required Thermal Performance (U-Factor and R-Value)										
	Minimum Insulation R-Value [(hr.ft <sup>2</sup> .°F)/Btu]										
	HDD	Maximum Glazing U-Factor [Btu/hr.ft <sup>2</sup> .°F]	Flat Ceilings	Cathedral Ceilings	2x4 Walls	2x6 Walls	Other Walls	Floor Over Unheated Interior Spaces or Unfinished Basements	Finished Basement Walls	Slab Perimeter R-Value and Depth	Crawl Space Walls
	6,500 to 6,999	0.35 and shall carry the US Department of Energy's Energy Star Rating	R-49 batt or Blown	R-38 cathedral batts	R-15	R-21	R-15	R-30	R-15	R-11 and 4 feet	R-30

b. That Article XIV, Sound Insulation Code, be and is hereby deleted in its entirety and substituted with the following:

**Article XIV Energy Efficiency and Sound Control Measures**

**Section 23-1401 Scope.** These provisions shall be in addition to and not limited by the provisions of any municipal, state or federal legislation that impacts building envelopes and interior spaces in the Village of Arlington Heights.

**Section 23-1402 Purpose.** The purpose of these provisions is to promote good health, safety and general welfare of the users of all buildings. These measures are intended to reduce the transmission of sound and provide for the energy efficiency of the various building assemblies.

**Section 23-1403 Applicability.** These provisions shall apply to all structures intended for human occupancy in accordance with the following:

a. Construction Related Work. New construction, additions, alterations, changes of use and conversions;

- b. Repairs in Existing Buildings and Structures. Sound insulation measures shall be required only for those portions of components under repair;
- c. Replacement of Components in Existing Buildings and Structures. Replacements of components in the building's exterior envelope shall meet or exceed these requirements as applicable;

**Section 23-1404 Requirements Governing Exterior Building Envelopes for One-and-Two Family Dwellings.** In addition to the technical provisions of Section 23-302 (Modifications by Amendment and Deletion of Various Sections of the International Residential Code/2000) governing all residential one-and-two-family dwelling buildings and structures, the following provisions shall apply to all exterior building envelopes in the Village of Arlington Heights:

- a. Wood or Steel Framed Exterior Walls. Exterior sheathing shall be a minimum ½ inch thick Plywood or Oriented-Strand-Board (OSB) or other approved materials on the entire face of all exterior walls.
- b. Roofs. Roof sheathing shall be a minimum 5/8 inch thick Plywood or Oriented-Strand-Board (OSB) or other approved materials on the entire roof surface.
- c. Exterior Windows. Exterior windows shall be a minimum of insulated glass with low E coating and shall carry the US Department of Energy's Energy Star Rating.
- d. Doors. Exterior doors shall carry the US Department of Energy's Energy Star Rating, and shall meet or exceed the following:
  - 1. Doors shall be either solid core wood, insulated fiberglass, insulated steel or an approved alternative. This provision shall apply to service doors, front doors, back doors and doors between the garage and house;
  - 2. Weather stripping shall be provided for door-side treatments and door-bottom treatments to reduce air infiltration to not more than 0.5 cubic feet per minute per square foot;
  - 3. Glazing in doors, sidelights and transoms shall be of a minimum insulated glass conforming to Table N1102.1 of Section 23-302 or an approved alternative.
- e. Interior Finishes. All interior surfaces where gypsum board is used shall be 5/8 inch thick and shall be taped and finished to at least a 'level one' in unoccupied spaces and 'level three' in occupied spaces, as specified by the US Gypsum Association document GA-214-96. All other interior surfaces, including floors and ceilings, shall be sealed and finished to minimize the transmission of sound.
- f. Penetrations and Other Openings in Exterior Walls. Openings other than fenestrations shall be sealed and taped in such a manner as to prevent air-infiltration, sound infiltration and other infiltrations from entering into the interior building environment. The sealing of all penetrations and openings shall not leave the building in any hazardous condition. For purposes of this Code, hazardous conditions shall include but not be limited to molds,

deterioration of building surfaces, safety hazard(s) or explosions from improper or excessive tightness in the building's exterior envelope. No more than 0.3 cubic feet per minute per square foot of air infiltration shall be permitted for cracks and leaks; cracks and leaks shall not exceed  $\frac{1}{16}$  inches in width and 1 inch in continuous length.

- g. Floors Above Unconditioned or Exterior Space. Insulation for floors above unconditioned or exterior space shall be R-30.

**Section 23-1405 Sound Transmission Control in Interior Environment of One-and-Two-Family Dwellings and Structures.** This Section shall apply to walls, partitions and floor/ceiling assemblies separating attached dwelling units including those separating adjacent townhouse units and those housing noise generating equipment and materials.

- a. Air-borne Sound/Noise. Air-borne sound insulation for walls, partitions and floor/ceiling assemblies shall meet a Sound Transmission Class (STC) rating of not less than 55 when tested in accordance with ASTM E 90. Penetrations or openings in construction assemblies for piping; electrical devices; recessed cabinets; bathtubs; soffits; or heating, ventilating or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain the required ratings. Dwelling units entrance doors, which share a common space, shall be tight-fitting to the frame and sill.
- b. Structural Borne Sound/Noise. Floor/ceiling assemblies between dwelling units or between a dwelling unit and a public or service area within the structure shall have an impact insulation class (IIC) rating of not less than 55 when tested in accordance with ASTM E 492.
- c. Referenced Standards.
  - 1. ASTM E 90-04 Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
  - 2. ASTM E 492-04 (1996)e Specification for Laboratory Measurement of Impact sound Transmission through Floor-ceiling Assemblies Using the Tapping Machine.

**Section 23-1406 Requirements Governing Exterior Building Envelopes for Structures other than One and Two-Family Dwellings.** In addition to the technical provisions of Section 23-405 governing all buildings and structures, the following provisions shall apply to all exterior building envelopes of commercial and multi-family dwelling structures in the Village of Arlington Heights:

- a. Interior Finishes. All interior surfaces where gypsum board is used shall be  $\frac{5}{8}$  inch thick and shall be taped and finished to at least a 'level one' in unoccupied spaces and 'level three' in occupied spaces, as specified by the US Gypsum Association document GA-214-96. All other interior surfaces, including floors and ceilings, shall be sealed and finished to minimize the transmission of sound.
- b. Windows/Glazing. Where glazing units are provided for exterior walls, at a minimum, every exterior window shall be sealed at the wall-window interface and shall be glazed

with insulating glazing consisting of no less than ¼ inch thick glass, ½ inch airspace and ¼ inch thick glass, or every window shall have a minimum STC rating of 32. In either case, windows shall have low E coating on surface #2 (on inside of the outside pane).

- c. Roof Insulation. At a minimum, roof insulation shall be R-30.
- d. Floors Above Unconditioned or Exterior Space. Insulation for floors above unconditioned or exterior space shall be R-30.
- e. Penetrations and Other Openings in Exterior Walls and Floors. Openings other than fenestrations shall be sealed and taped in such a manner as to prevent air-infiltration, sound infiltration and other infiltrations from entering into the interior building environment. The sealing of all penetrations and openings shall not leave the building in any hazardous condition. For purposes of this Code, hazardous conditions shall include but not be limited to molds, deterioration of building surfaces, safety hazard(s) or explosions from improper or excessive tightness in the building's exterior envelope. No more than 0.3 cubic feet per minute per square foot of air infiltration shall be permitted for cracks and leaks; cracks and leaks shall not exceed 1/16 inches in width and 1 inch in continuous length.

**Section 23-1407 Sound Transmission Control in Interior Environment of Structures Other than One-and-Two-Family Dwellings.** This Section shall apply to common interior walls, partitions and floor/ceiling assemblies between dwelling units; and between dwelling units and tenant spaces.

- a. Air-borne Sound/Noise. Walls, partitions and floor/ceiling assemblies shall have a sound transmission class (STC) of not less than 55 for air-borne noise when tested in accordance with ASTM E 90. Penetrations or openings in construction assemblies for piping; electrical devices; recessed cabinets; bathtubs; soffits; or heating, ventilating or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain the required ratings.
- b. Structural Borne Sound/Noise. Floor/ceiling assemblies shall have an impact insulation class (IIC) rating of not less than 55 when tested in accordance with ASTM E 492.
- c. Referenced Standards.
  - 1. ASTM E 90-04 Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
  - 2. ASTM E 492-04 Test Method for Laboratory Measurement of Impact Sound Transmission through Floor-ceiling Assemblies Using the Tapping Machine.

SECTION TWO: The provisions of this Ordinance are severable, and the invalidity of any phrase, clause or part of this Ordinance shall not affect the validity or effectiveness of the remainder of this Ordinance.

SECTION THREE: All ordinances or parts of ordinances in conflict with the provisions of this Ordinance are hereby repealed.

SECTION FOUR: This Ordinance shall be in full force and effect after its passage and approval and publication in pamphlet form, in the manner provided by law for all initial submittals submitted on or after February 1, 2009.

AYES:

NAYS:

PASSED AND APPROVED this 17th day of November, 2008.

ATTEST:

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Village President

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Village Clerk