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RESOLUTION NO. 78-187

A RESOLUTION AMENDING THE AIRPORT INFLUENCE AREA RESOLUTION 78-96.

WHEREAS, the Board of County Commissioners adopted the Airport Influence Area Resolution 78-96; and,

WHEREAS, certain amendments have been proposed which address the concerns of property owners in the airport area while maintaining the objectives of the Resolution; and,

WHEREAS, Section 4.06 of Resolution 78-96 provides for the amending of its provisions; and,

WHEREAS, a public hearing was held on December 6, 1978, to review and receive public comment on these amendments.

NOW, THEREFORE, BE IT RESOLVED, that Section 2.068.2. of Resolution 78-96 is hereby amended by additions (Pages II-6 to II-10) attached herewith.

PASSED AND ADOPTED THIS 6th DAY OF DECEMBER, 1978.

SIGNED 12/18/78

BOARD OF COUNTY COMMISSIONERS
Missoula County, Montana

Ludvig G. Browman, Chairman

ATTEST:

Wilfred V. Thibodeau, Commissioner

Clerk and Recorder

Jim Waltermire, Commissioner

6. Single-Family Dwellings are permitted uses where current county zoning allows such uses. These dwellings must conform to the following standards:
   A. The structure shall have a graduated Noise Level Reduction standard (NLR) of 25 decibels of a standard noise source from the exterior to the interior of the structure.

      1 Compliance

      Compliance with the following standards shall be deemed to meet the requirements in which an NLR 25 is specified.

      2 General

      a. Brick veneer, masonry blocks or stucco exterior walls shall be constructed airtight. All joints shall be grouted or caulked airtight.

      b. At the penetration of exterior walls by pipes, ducts, or conduits the space between the wall and pipes, ducts or conduits shall be caulked or filled with mortar.

      c. Window and/or through-the-wall ventilation units shall not be used.

      d. Through-the-wall/door mail boxes shall not be used.

      3 Exterior Walls

      a. Exterior walls other than as described in this section shall have a laboratory sound transmission class rating of at least STC-39.

      b. Masonry walls having a surface weight of at least 25 pounds per square foot do not require a furred (stud) interior wall. At least one surface of concrete block walls shall be plastered or painted with heavy "bridging" paint.

      c. Stud walls shall be at least 4" in nominal depth and shall be finished on the outside with siding-on-sheathing, stucco or brick veneer.

         (1) Interior surface of the exterior walls shall be of gypsum board or plaster at least 1/2" thick, installed on the studs.

         (2) Continuous composition board, plywood or gypsum board sheathing at least 1/2" thick shall cover the exterior side of the wall studs behind wood, or metal siding. Asphaltic or wood shake shingles are acceptable in lieu of siding.

         (3) Sheathing panels shall be butted tightly and covered on the exterior with overlapping building paper. The top and bottom edges of the sheathing shall be sealed.

(4) Insulation material at least 2" thick shall be installed continuously throughout the cavity space behind the exterior sheathing and between wall studs. Insulation shall have a minimum R-11 value.

4 Windows

a. Windows other than as described in this section shall have a laboratory sound transmission class rating of at least STC-28.

b. Glass shall be at least 3/16" thick or of the twin pane insulated type.

c. All operable windows shall be weather stripped and airtight when closed so as to conform to an air infiltration test not to exceed 0.5 cubic foot per minute per foot of crack length in accordance with ASTM E-283-65-T

d. Glass of fixed sash windows shall be sealed in an airtight manner with a non-hardening sealant, or a soft elastomer gasket or glazing tape.

e. The perimeter of window frames shall be sealed airtight to the exterior wall construction with a sealant conforming to one of the following Federal Specifications: TT-S-00227, TT-S-00230, or TT-S-00153.

f. The total area of glass in both windows and doors in sleeping spaces shall not exceed 20% of the floor area.

5 Doors

a. Doors, other than as described in this section shall have a laboratory sound transmission class rating of at least STC-28.

b. All exterior side-hinged doors shall be solid-core wood or insulated hollow metal at least 1-3/4" thick and shall be fully weather stripped.

c. Exterior sliding doors shall be weather stripped with an efficient airtight gasket system with performance as specified in Section 1-4C. The glass in the sliding doors shall be at least 3/16" thick

d. Glass in doors shall be sealed in an airtight non-hardening sealant, or in a soft elastomer gasket or glazing tape.

e. The perimeter of door frames shall be sealed airtight to the exterior wall construction as described in Section 1-4E.

6 Roofs

a. Combined roof and ceiling construction other than described in this section and Section 1-7 shall have a laboratory sound transmission class rating of at least STC-39.

b. With an attic or rafter space at least 6" deep, and with a ceiling below, the roof shall consist of closely butted 1/2" plywood or roofing plank topped by roofing as required.

c. Window or dome skylights shall have a laboratory sound transmission class rating of at least STC-28.

7 Ceilings

a. Gypsum board or plaster ceilings at least 1/2" thick shall be provided where required by Paragraph 1-68 above. Ceilings shall be substantially airtight, with a miminum number of penetrations.

8 Floors

Openings to any crawl spaces below the floor of the lowest occupied rooms shall not exceed 2% of the floor area of the occupied rooms.

9 Ventilation

a. A mechanical ventilation system shall be installed that will provide the minimum air circulation and fresh air supply requirements for various cases uses in occupied rooms without the need to open any windows, doors, or other openings to the exterior.

b. Gravity vent openings in attic shall not exceed code minimum in number and size.

c. If a fan is used for forced ventilation, the attic inlet and discharge openings shall be fitted with sheet metal transfer ducts of at least 20 gauge steel, which shall be lined with 1" thick coated glass fiber, and shall be at least 5 ft. long with one 90 degree bend.

d. All vent ducts connecting the interior space to the outdoors, excepting domestic range exhaust ducts, shall contain at least a 5 ft. length of internal sound absorbing duct lining. Each duct shall be provided with a bend in the duct such that there is no direct line of sight through the duct from the venting cross section to the room-opening cross section.

e. Duct lining shall be coated glass fiber duct liner at least 1" thick.

f. Domestic range exhaust ducts connecting the interior space to the outdoors shall contain a baffle plate across the exterior termination which allows proper ventilation. The dimensions of the baffle plate should extend at least one diameter beyond the line of sight into the vent duct. The baffle plate shall be of the same material and thickness as the vent duct material.

g. Fireplaces shall be provided with well-fitted dampers.

Verification of Building Noise Level Reduction

Whenever it appears that variations from sound-isolation features in the approved plan were employed in the building construction, the Building Inspector may deny the Certificate of Occupancy or, prior to issuing the Certificate of Occupancy, require at the expense of the owner, field tests by a Qualified Acoustical Consultant to verify the noise level reduction (NLR)of the building. The report of verification shall be filed with the Building Inspector and include a description of the verification method, measurement instrumentation and the results of the noise level reduction-measurements.

The noise level reduction requirements of Chapter IV should be satisfied for each occupied room. For the purposes of verification, it would suffice to test only in those occupied rooms in which exterior noise is most likely to penetrate.

Verification Test Procedure

For the purpose of verifying compliance with the noise level reduction requirements in a completed building, aircraft noise prevailing outside the building may be used as the sound source.

Using the noise signal generated by an individual aircraft operation (flyover event), outside and inside noise levels should be measured simultaneously. The difference between the maximum noise levels measured outside and inside the room for the flyover event should be taken as the measured NLR for the flyover event, provided that the maximum inside noise level exceeds by at least seven decibels the background noise level in the absence of the flyover.

The NLR shall be determined for at least four flyover events for each room tested. The resulting NLR value assigned to the room should be the arithmetic average of the individual flyover event NLR values.

For occupied rooms, the inside noise level should be measured with a single microphone four feet above the floor near the center of the room.

The outside noise level should be measured at an unobstructed location approximately five feet above the level of the floor of the room under the test and eight feet outside the exterior wall most directly exposed to the aircraft noise source, near the center of the wall.

For structures in which several rooms are to be evaluated, the tests need be conducted only for those rooms whose exterior walls are most directly exposed to the noise source. If noise level reduction requirements are met for these rooms, the tests need not be repeated for rooms of similar construction which are not as directly exposed to the flyover event.

It will usually be sufficient to conduct tests in two rooms. One of the rooms to be tested should be the bedroom most directly exposed to aircraft noise. The other room to be tested should be either the living room, dining room or family room, whichever is most directly exposed to the aircraft noise source.

When the noise level reduction is measured in an unfurnished room or a room furnished less than normally, the adjusted noise level reduction should be computed by adding ten times the logarithm to the base ten of the ratio of the floor area of the room to the sound absorption in the unfurnished room, but in any event, such correction should not exceed two decibels. The adjusted noise level reduction value should be used in determining compliance with the NLR requirements. If the noise level reduction is measured in a furnished room, no adjustment in the noise level reduction shall be made.

The noise levels measured outside and inside the room under test may be observed directly by simultaneously reading the maximum noise levels on two sound level meters. Alternatively, the outside and inside flyover event noise signals shall be recorded on magnetic tape with noise level reduction determined by analysis of the recorded signals. In either case, the two measuring systems used for outside and inside noise measurements must each satisfy the requirements for a Type 2 sound level meter according to ANSI S1.13-1971 (or latest revisions thereof). Further, the two systems are to be calibrated prior to and following the flyover events so that they indicate the same sound level, within one decibel, for the same noise, using suitable calibration procedures as specified by the sound level meter manufacturer.

To Be Attached to Permit:

Warning and Disclaimer of Liability

I understand that I am building or proposing to build within the Airport Influence Area and that I may experience noise or vibration caused by normal or anticipated normal airport operation. Such damage caused me, if there be any, shall not be attributable to Missoula County and I hereby waive any claims or causes of action against Missoula County for such damage.

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I received and filed this instrument for record on the 2 day of Mar 19 79 at 2:15 o'clock P M. and it is recorded in Vol 135 of Misc Records of the County of Missoula, State of Montana, on pages 479 Fee 20 fee
Paid ___ Return to ___
Address ___
Witness my hand and Seal, County Recorder
By Donna Cote Deputy