RESIDENTIAL
SOUND INSULATION GUIDE

November 2025, Version 1.0

MKE
MILWAUKEE
Mitchell International Airport

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Introduction

Milwaukee Mitchell International Airport (MKE) is committed to reducing the effects and exposure of aircraft noise whenever possible. This includes providing homeowners with information about sound-insulating your home.

The Airport conducted an Airport Noise Management Program (NMP) that provided noise insulation treatments to over 2,000 homes within the City of Milwaukee, City of St. Francis, City of Oak Creek and City of Cudahy. This program completed its work in 2015. The warranty period for the construction and products was typically between one and five years; therefore, homeowners are now responsible for ongoing maintenance and replacing products.

This guide is intended to provide examples on how to sound insulate your home whether or not you participated in the NMP. Incorporating improvements or replacing aged or worn components can help reduce aircraft noise in your home, however, no home can be completely soundproofed.

Should you have additional questions beyond the information contained in this booklet, please contact noise@mitchellairport.com or call 414-769-1768.

Basics of Residential Sound Insulation

Noise Management Program

The NMP at MKE was funded through Federal Aviation Administration (FAA) grants and matching airport funds. No local taxes were used to fund the NMP. Eligibility was based on the annual average noise contours, called Day/Night Noise Level (DNL), in the 14 CFR Part 150 Study Update conducted in 2004. The 65 DNL noise contour is used as the eligibility boundary and can be seen below in Figure 1. This is the most recent DNL noise contour for sound insulation eligibility on record for MKE. Since 2004, aircraft have continually become quieter. Older, louder jet aircraft have been retired from fleets and replaced by quieter, more efficient aircraft. DNL noise contours prepared for the MKE Master Plan in 2022 show that the 65 DNL is markedly smaller than in 2004 due to quieter aircraft being used by commercial and private operators and a reduction in the overall number of operations by approximately 47%.

The NMP had three project objectives: to provide eligible homeowners with relief from airport noise, provide cost-effective acoustical treatment for each type of home, and comply with FAA guidelines for noise insulation programs.

The goals of the program were to reduce the interior DNL to a maximum of 45 dB, improve noise reduction provided by the building façade by at least 5 dB. These goals were measured throughout the program and they are the basis for the product recommendations in this guide.

The following table is a summary of the architectural treatments provided, as needed, to each eligible home to meet the project objectives. Each of these architectural treatments is summarized in this guide with recommendations on installation to provide noise relief. Following the recommendations in this guide does not guarantee the same noise reductions achieved in the NMP; individual home results will vary.

Building Element	Description
Vinyl Windows	STC* 40 four-track windows
Wood Windows	STC 28 wood windows with dual pane glazing in conjunction with exterior STC 30 storm windows
Decorative Windows	Secondary glazing or storm window incorporating ¼" laminated glass
Entry Door	STC 30 storm door with sold core fiberglass prime door
Sliding Glass Door	New vinyl STC 38 sliding glass door
Skylight	Evaluated on a case-by-base basis, may include the addition of secondary laminated glazing and acoustical seals
Attic Insulation	Add, as required, blown-in cellulose to a depth of 14-inches
Wall Insulation	Add cellulose insulation at un-insulated exterior walls
Fireplace	Addition of damper if existing is missing or non-operable
Pet Doors	Addition of latching door at interior or pet door is removed and filled in
Mail Slots	Addition of latching door at interior or mail slot is filled in and surface-mount units is installed on adjacent walls
Attic Vents	Addition of acoustic baffle

Source: Replicated from the NMP Final Program Report, Exhibit 2 – Summary of Architectural Treatments, CSDA Design Group, 2016

** Sound Transmission Class (STC) describes the noise reduction characteristics of a building element.*

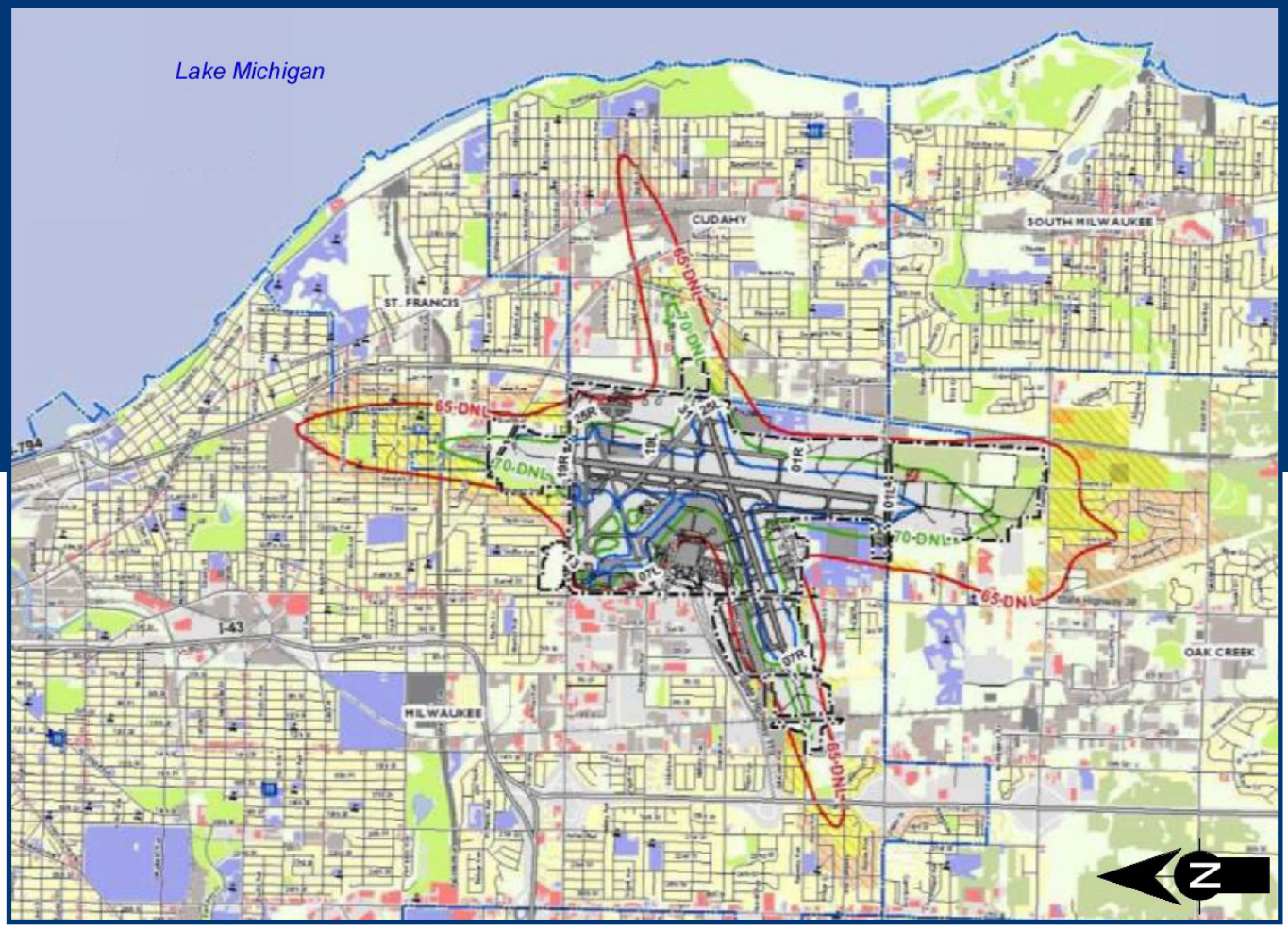


Figure 1 – CFR 14 Part 150 Noise Exposure Map, 65 DNL

Residential Sound Insulation Components

Sound insulating a home is focused on the points where noise enters a home; noise will travel through the path of least resistance, such as cracks and openings that also let in air. Noise from outdoor sources can also enter through other building elements such as windows, walls, air vents and the roof as shown in Figure 2. Noise can enter a home and affect your indoor areas through openings and cracks in the building, weak windows and doors, uninsulated walls and roofs, and echos off of hard surfaces. By replacing these building elements, it will help seal or reduce the cracks and openings through which noise travels.

Information here is intended to be a general guideline to procure and install acoustic components in your home, ranging from basic items such as weather stripping to windows and doors. As such, it is up to the homeowner to chose which items to install, who will perform the installation and, in all cases, to refer to the manufacturer's recommendations for each product. All labor and installation should comply with current local building codes and manufacturers' recommendations. Once products are installed, proper maintenance and care of installed products are important factors that can impact effectiveness and durability. The sound insulation improvements may vary based upon the age and construction of the home. The most common treatments to reduce interior noise levels in homes include door and window replacement, weatherstripping, increasing attic insulation and improving air ventilation or air-conditioning systems.

It may be beneficial to contact the local energy provider, We Energies, and request an energy assessment of your home. Areas of the home that let in air are typically the same areas that noise can penetrate. By conducting an energy audit, you may be able to identify areas that are the primary cause of noise infiltration and energy loss. There are also online resources on the We Energies website.

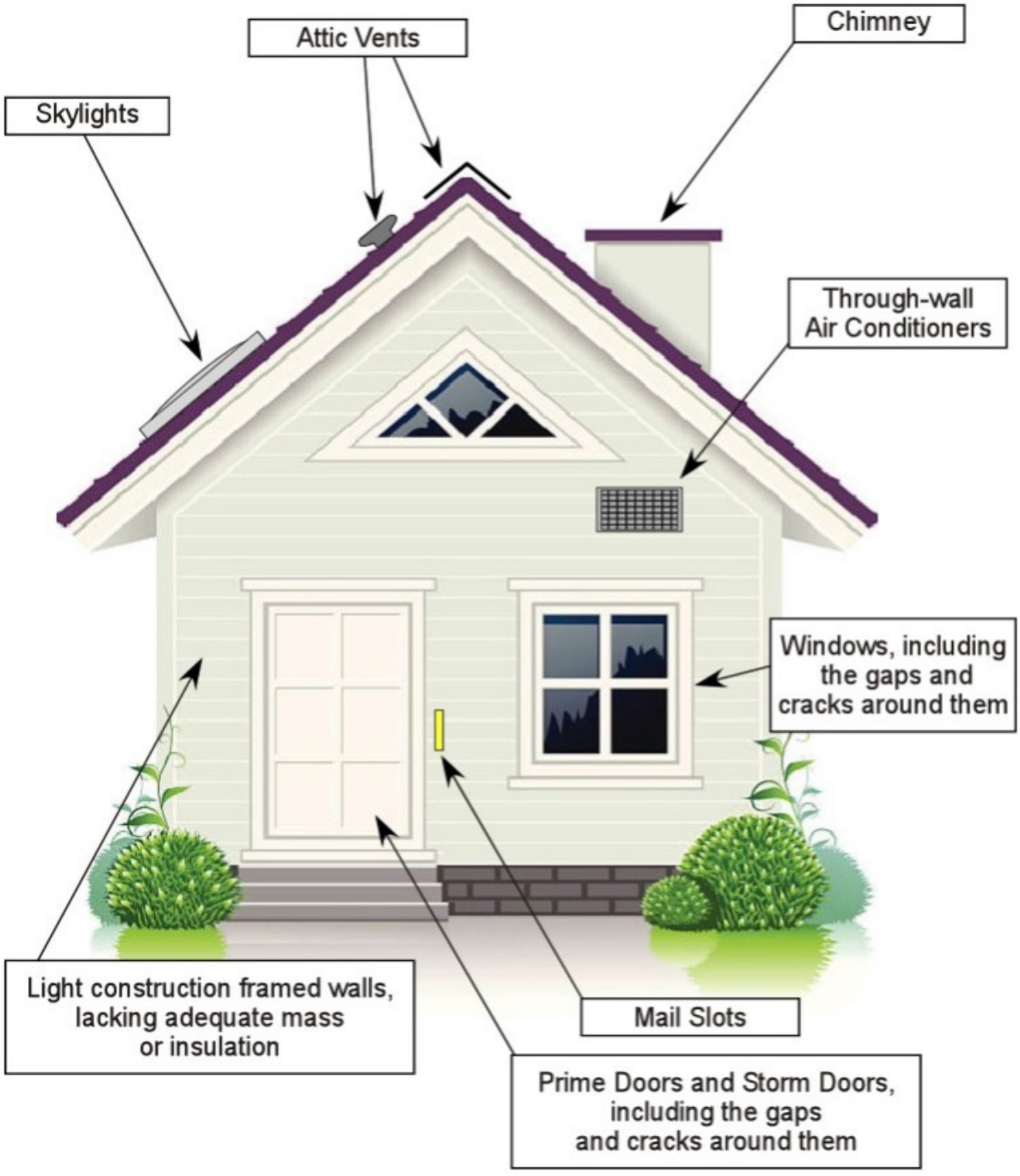


Figure 2 – Typical Noise Entry Paths

WINDOW SECTION SUMMARY:

- Sound Transmission Class (STC) 40 windows is the current industry standard rating for sound insulation programs
- STC 28 – 32 can provide noise reduction at a lower cost than STC 40
- Thermal windows should have wood or metal frames to allow for secondary storm windows
- Window installers should be familiar with methods to ensure that windows will provide the anticipated sound attenuation

Windows

Window Installation Tips:

- Ensure all voids around the window are filled in with insulation or wood blocking.
- Apply clear silicone caulk around the exterior window seal can help reduce voids and areas where noise can enter.
- Conduct maintenance of the caulking around acoustically rated window to reduce damage and water infiltration thus maintaining effectiveness.

Windows that have deteriorated are often the primary source of noise infiltration into the home. Evidence that replacement windows should be considered would include rattling of the present windows during aircraft events, and/or glass hazing inside the window assembly. If the cost of new windows is prohibitive, then adding storm windows and/or improving the seals around the existing windows can reduce some noise transmission for less cost.

Replacement Windows

Replacement windows should have a Sound Transmission Class (STC) of at least 40 for vinyl and an STC of at least 28 for wood. STC ratings are a way of describing a material's noise reduction characteristics. Higher STC ratings indicate more noise reduction. Confirm that any chosen replacement windows meet or exceed STC 40 for vinyl or STC 28 for wood, which is the standard used in noise management programs. A more economical option is to use thermal pane windows with STC ratings from 28 to 32. These would be expected to provide some relief from aircraft noise at a lower price point.

Increasing glass thickness or using laminated glass are two common methods of improving a window's noise reduction.

If you decide to purchase thermal pane windows and would like to add a secondary storm window as well, the thermal pane windows you buy should have wood or metal frames, and you should provide a minimum 2-inch airspace between the storm window glass and the prime window glass. Windows with wood or metal frames tend to allow for the installation of a secondary storm window more easily than vinyl windows. Also, be sure to check with your prime and storm window manufacturers concerning compatibility in order to avoid damaging either product or voiding any warranties.

For any chosen products, proper installation methods help to ensure that the maximum benefit is achieved. To obtain the maximum acoustic benefit, the voids around the windows (including counterweight pockets) should be filled with insulation and wood blocking, and the perimeter of the windows should be thoroughly caulked. As these installation techniques are not typically included in a standard window installation, it may be advisable to use an installer with experience installing acoustic windows. Proper installation of the new windows will enable them to perform to their full potential and provide the greatest noise reduction.

Storm Windows

If your existing windows are in good condition, adding new storm windows may be a more cost-effective option than replacing each window. In fact, depending on the existing windows, adding a new storm window over them can offer the same noise-reducing properties as a new dual-pane replacement window. Storm windows are usually constructed with 3/16" or 1/4" glass, and they should have an acoustical rating of at least STC 30.

Maintenance and Repair of Existing Windows

Windows that have aged can be a source of air and noise infiltration. Maintenance and repair of existing windows can improve their performance. Here are common maintenance/repair items:

- Replace any glass that is cracked or broken.
- Apply new glazing compound around the perimeter of the new glass to secure the glass to the frame.
- Apply clear silicone caulk around the window frame.
- Replace damaged or missing weatherstripping which will prevent air and noise from leaking in around the window.

Skylights

Skylights can be a significant source of noise since they are very similar to a window with glass and a frame. Replacement skylight units with high acoustic ratings are available; however, the addition of a storm window to the interior of the existing skylight can offer additional noise reduction. This method avoids working on the exterior of the home, which could cause the roof to leak if improperly installed.

Doors

DOOR SECTION SUMMARY:

- There are two types of doors, prime (entry) and storm (exterior) doors
- Weatherstripping, also called seals, should be replaced if they're deteriorating as this will help reduce noise for a low cost
- The entry door should be a solid core door made of wood or solid core fiberglass
- Doors should have an STC rating of 28 to 30

Door Installation Tips:

- Use pre-hung door assemblies.
- Ensure all areas around door assembly are filled in with wood blocking and insulation.

Broadly speaking, there are two kinds of doors - prime doors and storm doors. Prime doors are the principal seal between the interior of your home and the exterior elements, also called entry doors. Storm doors are secondary doors, generally thinner and constructed with aluminum and glass, that protect your prime doors from weather and provide a secondary seal from the outdoor elements. Over time, the weatherstripping around the entry and storm doors can deteriorate, creating paths for air and noise to enter your home. Replacing your existing doors with a new pre-hung prime and storm door assembly will provide the greatest noise reduction; however, several other modifications are presented below, and any of these will help reduce aircraft noise levels in the home.

Replacing Prime Doors

Prime doors that are pre-hung wood solid-core doors are likely to offer the most acoustic reduction. A pre-hung door consists of the door frame and door in one unit. A pre-hung door and storm door unit will align better, offering a tighter seal. The installation should include removal of the existing door and frame, filling all voids around the door with wood blocking and insulation, and installing the new pre-hung unit. Weatherstripping should be applied around the top and side frames, and a sweep should be installed on the bottom of the door.

The most important elements determining the noise-reduction of a pre-hung prime door are the weatherstripping and the mass of the door slab. A solid-core door slab, pre-hung tightly into a new frame with weatherstripping will provide the greatest amount of noise reduction. When checking the seals, make sure there is good contact between the weatherstripping on the door frame and the door slab. Make sure the sweep is made of a durable material and that it makes solid contact with the threshold. The threshold may need to be adjusted in order for the sweep to seal properly. Check to make sure that there is no light infiltration along any of the perimeter seals.

Prime door/storm door units with high acoustic ratings are available. However, they can be very expensive. Installing a prime and storm door combination with roughly an STC 28 prime and STC 30 storm can achieve similar acoustic results.

Metal prime doors are generally not recommended as they are commonly constructed of a thin outer layer of metal filled with cork or foam and may not have sufficient mass to provide the desired noise reduction.

Replacing Storm Doors

The noise reduction of a storm door is dependent on the door's weatherstripping and mass. When selecting a storm door, it should be made with a solid-core design that has a glass thickness of at least 3/16" and weatherstripping that seals the entire boundary of the door. The storm door should have no light visible around the perimeter of the door when closed. Self-storing glazing units are available that can easily be opened or closed. This type of door includes an openable glass panel that retracts into the door when ventilation is desired. Noise reduction will only be realized when the storm door panel is closed.

Weatherstripping Existing Doors

Over time, the weatherstripping around the doors can deteriorate, allowing noise to enter the home. Replacement weatherstripping is readily available at any hardware or home improvement store. The weatherstripping should compress at least 3/8" when the door closes against it. To check existing weatherstripping, close the door from the inside and carefully inspect the entire perimeter of the door where it meets the frame and sill. There should be no light visible. If there is, the weatherstripping must be replaced so that no light is visible. Regular maintenance of the weatherstripping will help retain its effectiveness.

Door Installation and Maintenance

To maintain the desired noise reduction, routine door maintenance is important. As often as needed, cracks in doors should be filled, sanded and covered with paint or an exterior-grade stain sealer. When installing new prime doors, make sure there are no gaps greater than 1/2" between the door frame and the existing wall framing (rough opening). Gaps less than 1/2" wide should be filled. A method that provides good insulation and sound attenuation includes using fiberglass wrap insulation and polyethylene foam backing rod and caulking. All of these materials should be available at a local hardware store. Acoustic sealants can be used to for additional soundproofing of cracks in areas where a wall meets the floor or ceiling.

Sidelights

Sidelights are decorative wood or glass panels installed on the sides of an entry door. Many manufacturers of prime doors also offer replacement sidelights. However, most sidelights do not come equipped with interior or exterior storm panels. Therefore, whether you replace your sidelights or keep the existing ones, it's advisable to install an additional storm unit.

Some manufacturers of acoustic storm doors provide matching pre-fabricated storm units designed specifically for the sidelights. However, if you are unable to find a suitable option, a storm unit can be created by installing a minimum 3/16" thick tempered or laminated glass panel within a wooden frame, approximately 2 inches away from the existing sidelight. If you decide to construct your own storm unit, mount it on the interior

side of the existing sidelight. If purchasing a pre-fabricated unit, be sure to follow the manufacturer's installation guidelines for the location.

Sliding Glass Doors

Sliding glass doors provide access and light for rooms, and they are made of wood or vinyl. Replacing a sliding glass door for acoustic reduction should have an STC rating of at least 38 for vinyl and 30 for wood. Weatherstripping should be continuous double polypropylene pile, neoprene or vinyl.

WALL SECTION SUMMARY:

- Provide insulation between decorative paneling and the studs
- Additional noise reduction can be achieved using additional drywall installed on the interior walls

Wall Modifications

Wall Modification Installation Tips:

- Fiberglass insulation should be R-13 or 3- ½" thick fiberglass.
- Cellulose insulation should be 3.5 pounds per cubic foot.
- Additional drywall should be 1/2" to 5/8" thick.

Frame-type constructions can benefit from wall modifications to increase the mass of the exterior walls, which will increase the noise reduction of the walls. Below are several wall modifications that can be employed, depending on your existing interior wall material and how much additional noise reduction you are seeking. The two standard types of insulation used in homes are fiberglass and cellulose. Fiberglass is composed of recycled glass, limestone and soda ash. Cellulose is a mix of recycled paper and additives such as fire retardants and borate minerals. The airport's NMP utilized blown cellulose insulation; however, in climates such as Wisconsin, either insulation can be used to absorb noise, heat and cold. For each application, the higher the R value, the greater the insulation effectiveness against heat and cold. R-value is a measure of how well insulation resists heat traveling through it.

Homes constructed with brick or stone facades provide more noise reduction than those constructed with siding, such as aluminum, wood or transite. Improvements in noise levels can be limited by the wall construction.

Homes with thin decorative paneling but no drywall base

To enhance the acoustic performance of exterior walls with thin decorative paneling directly affixed to the wall studs without any drywall behind them, modifications are necessary. Remove the paneling and install batt insulation (R-13 or 3-1/2" thick fiberglass) in the cavities, with a vapor barrier placed on the room side of the wall. Next, attach a layer of 5/8" thick gypsum board vertically to the studs, and secure the joints with reinforcing tape and joint compound. All corners and edges should be properly taped. Then reinstall the paneling, or sand and paint the walls as preferred.

For cellulose installation, the product is blown into the walls through holes. Installation of cellulose insulation should comply with the Cellulose Insulation Manufacturers Association's "Special Report - Standard Practice for Installing Cellulose Insulation."

Additional noise reduction for interior walls

If there is currently a layer of drywall or plaster present, the wall's capacity for noise reduction can be increased by adding a second layer of 1/2" or 5/8" thick gypsum board to increase the wall's mass. The second layer should be secured to the existing drywall using construction adhesive and screws long enough to anchor both layers to the studs. Offset the second layer by at least one stud cavity in all directions from the first layer to prevent overlapping joints. Tape the joints of the second layer with paper reinforcing tape and joint compound. All corners and edges should be properly taped.

The use of proprietary gypsum panels (e.g., QuietRock) can further increase the noise reduction of the walls. QuietRock panels are available from Pabco. See the end of this document for more information.

CEILING SECTION SUMMARY:

- Tiles should have a Ceiling Attenuation Class (CAC) of at least 40
- Tiles should have a Noise Reduction Coefficient (NRC) of at least .70
- Attic vents can be added for additional ventilation

Ceiling Modifications

Ceiling Modification Installation Tips:

- Install additional attic insulation of at least R49. The local municipality should be consulted to ensure meeting applicable building codes.
- Consult a qualified contractor to determine the type of attic baffle that will ensure proper airflow and ensure adequate ventilation is maintained.

Ceiling modifications are intended for the top floor of a home that has an existing drywall ceiling with suspended tile. These treatments can provide additional noise reduction from exterior noise sources such as aircraft overflights.

Modifications to Ceilings with Suspended Tile

Suspended ceiling tiles are effective at absorbing reflected sounds within a room, but they are relatively thin and do not effectively block exterior noise from infiltrating your home. Even the highest quality suspended ceiling tile systems cannot provide the same level of noise reduction as 5/8” gypsum wallboard. If you choose to install a new suspended ceiling tile system, select tiles with a Ceiling Attenuation Class (CAC) of at least 40 and a Noise Reduction Coefficient (NRC) of no less than .70. Both CAC and NRC are indicators of the acoustic performance of the tile system. If there is an attic above the suspended ceiling, it is important to ensure that the attic is adequately insulated and ventilated.

If there is no attic above the suspended ceiling, remove the suspended tiles and install a 5/8” gypsum board ceiling instead. Install batt insulation in the rafter cavities, with a vapor barrier on the room side of the ceiling. Be sure to include vent channels to promote airflow between the insulation and the roof deck. Use paper reinforcing tape and joint compound to seal the joints. All corners and edges should be properly taped. If you use suspended ceiling tiles as the finish material, it is recommended to install at least one layer of 5/8” gypsum board above them.

Modifications to Existing Gypsum Board Ceilings

If the top floor of your home has a single layer of finished drywall and you’d like to enhance the noise reduction, add a second layer of 1/2” or 5/8” drywall. It’s crucial to choose screws that are long enough to secure both drywall layers to the ceiling joists. After installation, tape all joints using reinforcing tape and joint compound, ensuring that all corners and edges are properly taped. If there is an attic located above the room, it is advisable to install at least R49 insulation in that space. Consult local building codes regarding vapor retarder and ventilation requirements.

Ventilation Systems

A key part of installation and maintenance of ventilation systems is to ensure fresh air induction for air quality and humidity control. A properly functioning system will allow windows and doors to be closed while still maintaining proper air quality and air flow to the home. A licensed HVAC contractor should be consulted to determine the best system for your home.

Attic Vents

Attic vents allow the circulation of air into and out of the attic. These vents are essential for preventing moisture buildup, which can lead to mold growth and deterioration of structural framing. However, they also provide a path for noise to enter the home.

To increase noise reduction while maintaining adequate ventilation, you can install a partial enclosure around the vent known as a baffle box or baffle roof vent (see the examples in Figure 3). Similar to a car's exhaust muffler, baffles deflect and absorb some of the incoming noise. Due to the critical role of proper attic ventilation, consult a professional mechanical contractor, architect, or building code inspector before installing baffles or altering your home's ventilation system. Local building codes specify minimum vent area requirements for attics, which should be adhered to.

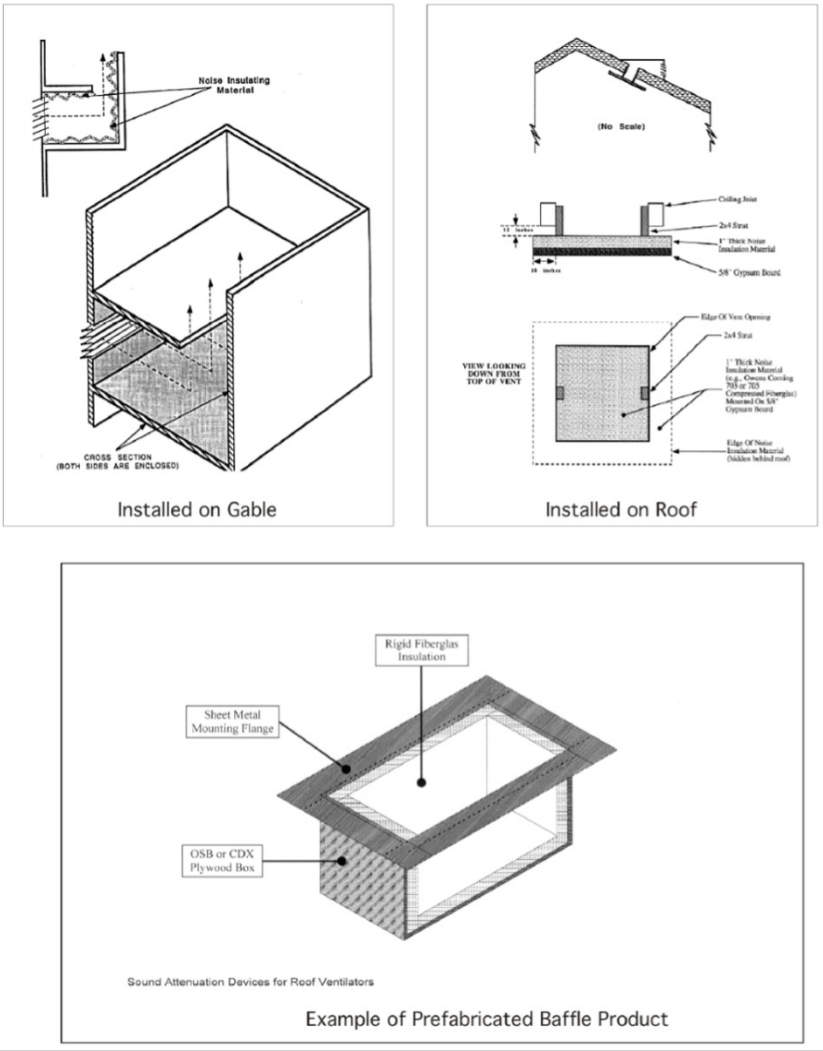


Figure 3 – Attic Vent Baffle Examples

Kitchen Exhaust Vents

The two main types of kitchen exhaust fans are, through-wall exhaust and ducted exhaust hoods. Each type of exhaust fan requires the following sound insulating modifications:

- **Through-Wall Exhaust:**
  Begin by removing the exhaust fan, insulating the wall, and patching the interior drywall. For the exterior, patch the opening by installing plywood and covering it with material that matches the existing exterior finish. If an alternative source of ventilation is needed, consider installing a ducted exhaust hood as outlined in the next bullet point.

- **Ducted Exhaust Hoods:**
  All ducted exhaust systems should terminate at an exterior location. Modifications are only necessary if the ductwork leading to the exterior is primarily straight and free of elbows. An elbow refers to a transitional section used to change the direction of airflow in the ductwork. To minimize sound transmission, modify the ductwork by incorporating an offset that prevents a direct line of sight from one end to the other. Avoid creating extreme offsets (greater than a 90-degree turn), as these can trap grease in the duct and pose a fire hazard.

Central Air Conditioning

Installing central air conditioning can help reduce exterior noise by allowing windows and doors to be closed during warm summer months. Central air conditioner units have a condenser that generates noise. When selecting an exterior condensing unit, select the quietest unit you can find within your budget, and locate it strategically away from areas of the home such as bedrooms when possible.

Installing central air conditioning in a home that has not previously had central air will require extensive duct work to be installed in the home to move the air from the unit throughout the home. The retrofit deign should consider the use of products and ductwork that provide effective noise reduction. This is a considerable cost and should be done by a licensed contractor specializing in retrofitting homes with central air conditioning systems.

Through-Wall Heaters and Air Conditioners

Small, independent air conditioning units are often found in room additions because they were less expensive than extending existing ductwork and upgrading the home's HVAC (heating, ventilation and air conditioning) system. However, these items require vents through the exterior wall, which allows air and noise a direct route into your home. The preferred treatment would be to remove these devices, fill the wall cavity with insulation and patch the exterior and interior to match existing materials. The HVAC system should then be designed to serve the entire home. This may be an option when it comes time to replace the current furnace or air conditioning condenser. There are also ductless air conditioning and combination heating/air conditioning units that require a far smaller penetration through the exterior wall. Installation of these units would also require patching the wall as stated above.

Return Air

Homes equipped with central air conditioning may still need supplemental units on the upper floor to improve air circulation. This often occurs because the upper floor has only supply ductwork without any return-air ducts. In some cases, return-air ductwork can be installed within a wall and connected to the existing ductwork serving the lower floors. It would be advisable to consult several HVAC contractors and obtain at least three quotes for installing return-air ductwork where it currently does not exist. Since contractors may employ different methods, it would be wise to compare several quotes to evaluate the varying costs and approaches.

Whole-House Exhaust Fans

Whole-house fans are usually installed in the ceiling of a main hallway and designed to extract air from the entire house and vent it through the attic. This method can effectively cool the home, but it also creates a path for noise and should be removed or properly sealed when not in use. It is advisable to remove these fans and close off the opening with materials that match the existing ceiling. If you prefer to keep the fan, you can construct a plywood box with doors around it or install it above a closet with doors. The doors would need to be opened before activating the fan.

Other Noise Sources

Mail Slots

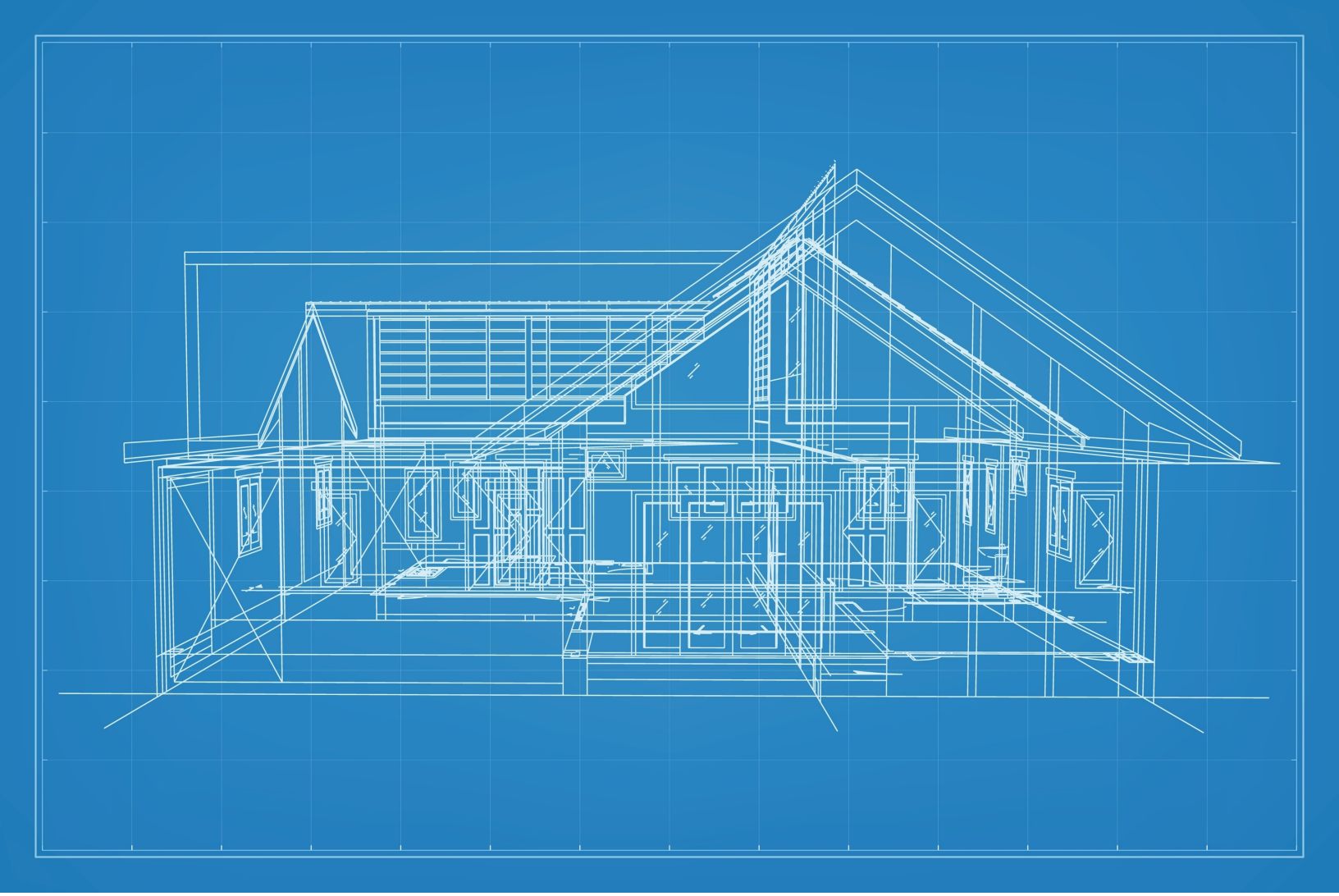
Mail slots are a small physical feature of your home, but they can be a path for noise to enter. Mail slots can be removed by filling the cavity with batt insulation and patching the area to match the existing wall finishes on the interior and exterior. Alternatively, the existing mail slot fixture can remain if the mail slot cavity is filled with insulation and both slot doors are caulked shut.

Carbon Monoxide Detectors

The sound insulation process can greatly reduce natural ventilation, and the home will become more airtight. As a result, you should be mindful of your home's normal emissions from such things as gas appliances and furnaces and whether the installation of carbon monoxide detectors to monitor the CO levels in your home is required.

Glass Block Windows

Some glass block windows have a small vent or louvered window in them which may be used for air circulation or ventilation. Acoustically, the best remedy would be to replace the glass block window with a new operable window with an STC 40 rating. Depending on the construction of the existing window, an operable storm or glass insert could help reduce sound coming through the small vent or louvered window.



Fireplaces

Fireplace chimneys provide a direct route for noise to enter your home. Installing tight-fitting glass fireplace doors instead of a fireplace screen will increase noise reduction when the fireplace is not in use. Noise can be further reduced by installing an operable chimney cap damper that, when closed, seals the top of your chimney, and when open, allows proper chimney exhaust. If the fireplace is not operational, an inflatable damper seal can be installed.

Pet Doors

Unsecured pet doors are another source of noise that can enter the home. Should the homeowner wish to keep the door, when not in use it should have an interior latch that remains flush with the frame. If the door is not required, the door can be removed and the area filled with the materials to match the existing architecture.

Product Summary

To guide you in your noise insulating effort, several suppliers that offer construction elements for potential building upgrades are listed below.

Vinyl Windows		
Sound Control Systems **A Division of Larson Manufacturing Company** 2333 Eastbrook Drive Brookings, SD 57006 800-334-1328 www.larsondoors.com	**Milgard** **Headquarters** Tacoma, WA www.milgard.com	**Andersen Corporation** **Headquarters** Bayport, MN www.andersenwindows.com
Harvey Windows +Doors 1400 Main St Waltham, MA 800-822-0437 https://www.harveywindows.com		

Aluminum Windows		
Peerless Products, Inc. 2403 S. Main Street Fort Scott, KS 66701 620-223-4610 www.peerlessproducts.com	**St. Cloud Window, Inc.** 390 Industrial Blvd. Sauk Rapids, MN 56379 800-383-9311 www.stcloudwindow.com	**Traco, A Division of Kawneer** 555 Guthridge Court Technology Park/Atlanta Norcross, GA 30092 770-449-5555 www.kawneer.com

Wood Windows
Pella Corporation 102 Main Street Pella, IA 50219 877-473-5527 www.pella.com

Storm Windows

Allied Window, Inc.
11111 Canal Road
Cincinnati, OH 45241
800-445-5411
www.alliedwindow.com

Sound Control Systems
A Division of Larson
Manufacturing Company
2333 Eastbrook Drive
Brookings, SD 57006
800-334-1328
www.larsondoors.com

Soundproof Windows, Inc.
4673 Aircenter Circle
Reno, NV 89502
877-438-7843
www.soundproofwindows.com

Mon-Ray, Inc.
7900 Excelsior Blvd., Ste. 140
Minneapolis, MN 55343
800-544-3646
www.monray.com

Prime Doors

Pella Corporation
102 Main Street
Pella, IA 50219
877-473-5527
www.pella.com

Storm Doors

Mon-Ray, Inc.
7900 Excelsior Blvd., Ste. 140
Minneapolis, MN 55343
800-544-3646
www.monray.com

Sound Control Systems
A Division of Larson
Manufacturing Company
2333 Eastbrook Drive
Brookings, SD 57006
800-334-1328
www.larsondoors.com

Sliding Glass Prime Doors

Sound Control Systems
A Division of Larson Manufacturing Company
2333 Eastbrook Drive
Brookings, SD 57006
800-334-1328
www.larsondoors.com

Torrance Aluminum
3087 12th Street
Riverside, CA 92507
844-312-7456
www.torrancealuminum.com

Traco, A Division of Kawneer
555 Guthridge Court
Technology Park/Atlanta
Norcross, GA 30092
770-449-5555
www.kawneer.com

Sliding Glass Storm Doors

Mon-Ray, Inc.
7900 Excelsior Blvd., Ste. 140
Minneapolis, MN 55343
800-544-3646
www.monray.com

Sound Control Systems
A Division of Larson Manufacturing Company
2333 Eastbrook Drive
Brookings, SD 57006
800-334-1328
www.larsondoors.com

Sound-Rated Gypsum Panels

Quiet Rock Panels by Pabco Gypsum
Local Dealer: ABC Supply
1725 N. Delany Rd.
Gurnee, IL 60031
847-360-8094
www.abcsupply.com

Miscellaneous

MChimney Damper
Chim-A-Lator Deluxe adjustable air-tight fireplace damper

Acoustic Sealants and Compounds
GREENchoiceTM Acoustical Sound Sealant
https://www.acousticalsurfaces.com/sealants_adhesives/acoustical-sound-sealant.html

Green Glue
https://www.greengluecompany.com/noiseproofing-products/compound

The above manufacturers can put you in contact with local distributors for acoustic products. You may also be able to find acoustical products that are capable of meeting the needs of your project by reviewing the web pages of building material manufacturers associations such as the Window & Door Manufacturers Association (https://www.wdma.com) or the American Architectural Manufacturers Association (www.arcat.com). Further resources may also be available by contacting your local building products supplier and/or general contractors in your area.

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