



City of Chicago
Richard M. Daley, Mayor



Sound Insulating Your Home



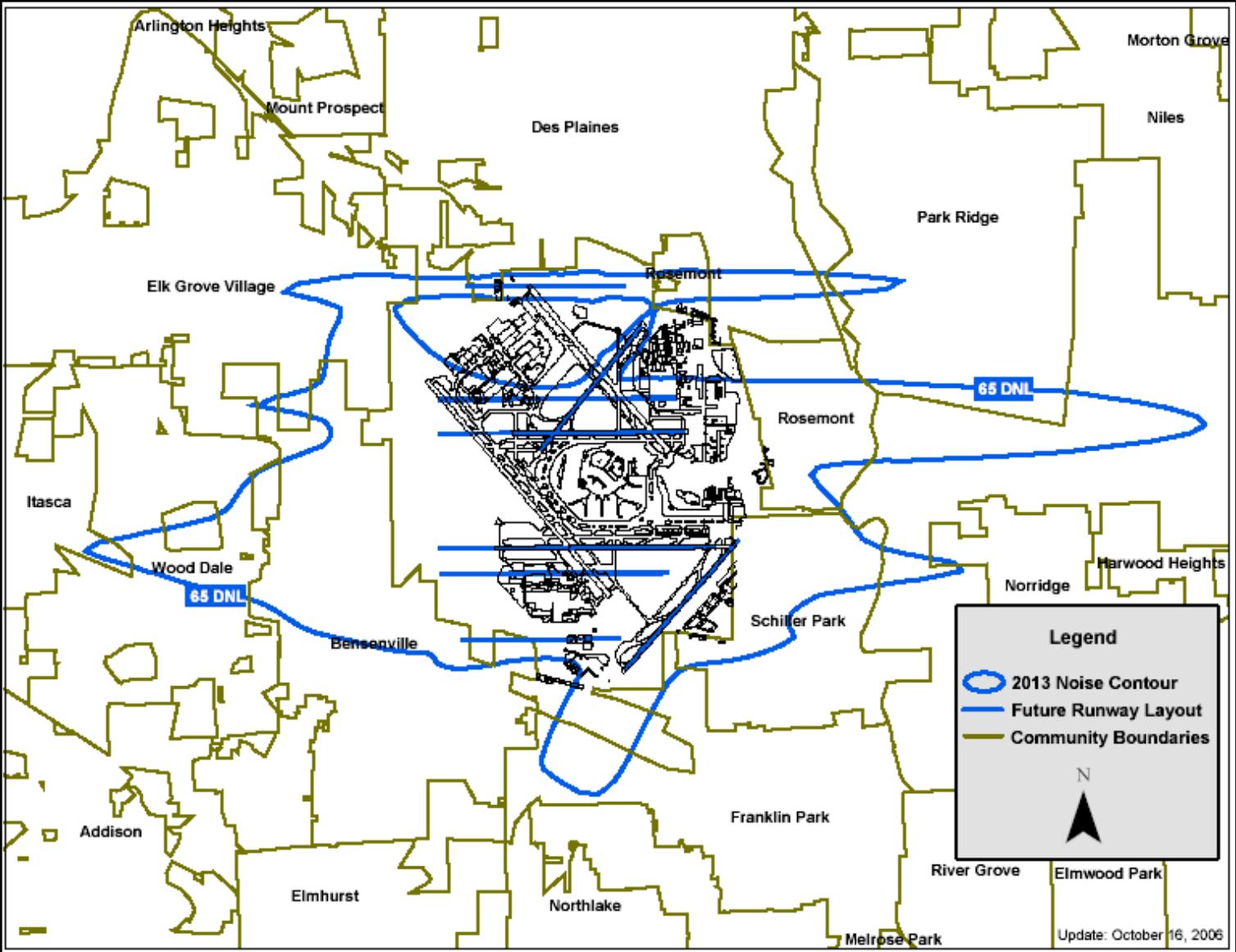
O'Hare Residential Sound Insulation Program

Nuria I. Fernandez
Commissioner
City of Chicago, Department of Aviation

Arlene J. Mulder
Chair, O'Hare Noise Compatibility Commission
Mayor, Village of Arlington Heights



Residential Sound Insulation Program



Welcome

The City of Chicago Department of Aviation and the O'Hare Noise Compatibility Commission (ONCC) are pleased to present you with this guidebook on sound insulating your home. The genesis for development of this guidebook came in response to requests from residents in municipalities near the airport that desire to insulate their homes to reduce the impact of aircraft and other noise sources. This booklet is the product of research and review by the City's Department of Aviation, Airport Owners Representatives, the City's consultant to the Residential Sound Insulation Program, and the ONCC's Residential Sound Insulation Committee.

The ONCC was created by Chicago Mayor Richard M. Daley in 1996 to bring a fresh, non-confrontational approach to addressing jet noise issues at O'Hare International Airport. Creation of the ONCC resulted from an unprecedented commitment to share decision-making with regional leaders in implementing effective and permanent noise reduction programs. The ONCC's membership as of 2007 consists of:

Arlington Heights	Northlake	School District 63
Bartlett	Oak Park	School District 80
Bellwood	Palatine	School District 81
Chicago	Park Ridge	School District 84
Des Plaines	River Forest	School District 84.5
Elmwood Park	River Grove	School District 85.5
Franklin Park	Rolling Meadows	School District 86
Harwood Heights	Rosemont	School District 87
Hoffman Estates	Schaumburg	School District 88
Maywood	Stone Park	School District 89
Melrose Park	Wood Dale	School District 214
Mount Prospect	Cook County	School District 234
Niles	School District 59	School District 299
Norridge		School District 401

Through its Committees and programs, the ONCC brings to the same table all the parties that are most able to reduce aircraft noise including: city and suburban leaders, the Federal Aviation Administration, the airlines, pilots and air traffic controllers. Together, we are working on solutions to reduce the impacts of aircraft noise.

We hope you find the information on the following pages useful and comprehensive. To further guide you in your endeavor, a listing of material manufacturers who currently provide sound-attenuating products to the program is provided on the inside of the back cover. Please contact them for material specifications and local distributors. The Department of Aviation and the ONCC appreciate the opportunity to provide this information and look forward to continuing our efforts to improve the quality of life for O'Hare's neighbors.

Table of Contents

	<u>Page</u>
Introduction	1
Windows	
Replacement Windows	3
Storm Windows	5
Maintenance to Existing Windows	5
Skylights	5
Doors	
Replacing Prime Doors	6
Replacing Storm Doors	7
Weatherstripping Existing Doors	7
Door Installation and Maintenance	8
Sidelights	8
Wall Modifications	
Below 75 DNL	9
Above 75 DNL	9
Over 80 DNL	10
Ceiling Modifications	
Modifications to Ceilings with Acoustical Tile	11
Modifications to Gypsum Board Ceilings	12
Insulation	
Walls	13
Attics	13
Vents	
Attic Vents	14
Kitchen Exhaust Vents	
Through-Wall Exhaust	15
Ducted Exhaust	15

Table of Contents

	<u>Page</u>
HVAC Modifications	
Central Air Conditioning	16
Through-Wall Heaters and Air Conditioners	16
Return Air	17
Whole-House Exhaust Fans	17
Miscellaneous	
Mail Slots	18
Carbon Monoxide Detectors	18
Glass Block Windows	18
Fireplaces	18
Details	
Window Details	
W1 New Acoustical Window in Frame Home	19
W2 New Acoustical Window in Brick Home	20
Door Details	
D1 New Pre-Hung Prime Door	21
D2 New Storm Door	22
D3 New Weatherstripping in New Pre-Hung Doors	23
Ceiling Detail	
C1 New Drywall over Existing Ceiling	24
Insulation Detail	
I1 Insulation for Typical Home	25
Vent Details	
V1 New Wall Ventilation Baffle	26
V2 New Roof Vent Baffle	27
V3 New Gable Vent Baffle	28
V4 New Ridge Vent Baffle	29

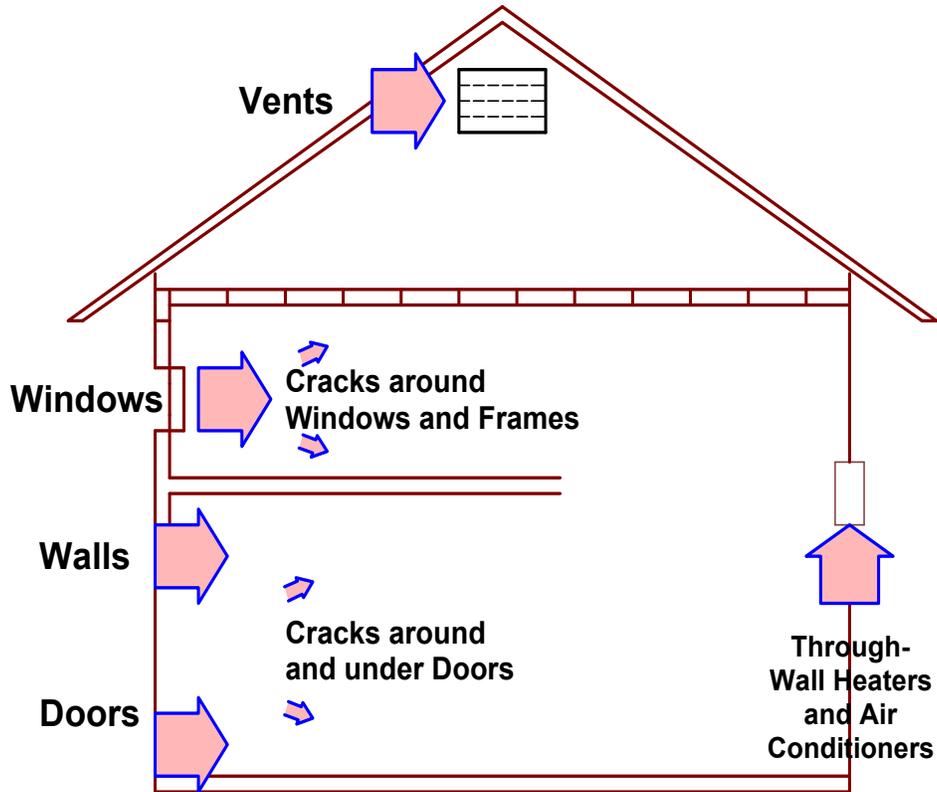
Introduction

Noise enters your home in the same way air enters – through cracks and openings in your home’s exterior. Sound insulating your home is merely sealing up the points of air entry and in some cases increasing the mass through which noise must travel. The City of Chicago has been conducting a Residential Sound Insulation Program (RSIP) since 1996. Under this program, homes are selected for the RSIP based on their locations within a noise contour.

A noise contour is generated by compiling all the aircraft flight information for an entire year. This information is entered into a computer that calculates noise levels, and generates a noise contour map which displays the day/night average noise level (DNL) in the areas surrounding the airport. A ten decibel penalty is added to all flights between 10 PM and 7 AM due to the additional disturbance of nighttime activity. This computer-generated noise contour must then be reviewed and accepted by the Federal Aviation Administration before it can be used as the basis of the RSIP. For a single-family, owner-occupied home to be considered for inclusion in the City of Chicago’s RSIP, it currently must be located within the 69 DNL or greater noise contour.

This book outlines some of the things you can do to your home to decrease the effects from aircraft noise. You may be able to do some of these things yourself rather inexpensively. However, some items are more difficult and may require the work to be performed by professionals. In some cases, we have provided a brief overview of guidelines for installation. ***Please understand, however, this is not an installation procedure manual.***

The following graphic shows some of the points of entry for air and noise:



Three Major Paths For Noise Transmission:

- Gaps and Cracks**
- Windows and Doors**
- Walls and Vents**

Windows

Old, loose-fitting windows that may rattle when a plane goes overhead or a truck or train passes are probably the greatest source of noise transmission in a home since the windows are in every room. Quality windows, installed in accordance with sound reduction construction procedures, will give you the greatest benefit. If you do not wish to purchase new windows, adding storm windows or merely sealing your existing windows will help alleviate some air and noise transmission.

Replacement Windows

The windows being used in the City of Chicago's Residential Sound Insulation Program are acoustically-rated windows with an STC (sound transmission class that denotes a material's ability to resist sound transmission) rating of 40 to 44, depending on the home's proximity to the airport. The combination of the glass layers, glass thickness and the air spaces between the glass give the windows the acoustical rating. There are few window manufacturers that make "acoustic" windows. Genuine acoustic windows are tested by an accredited laboratory to obtain a certified Sound Transmission Class (STC) rating. When looking for acoustic windows, be sure to request a window with a minimum STC rating of 40.



The Chicago area has several manufacturers of good-quality thermal pane windows that will provide some noise relief. If you purchase thermal pane windows that do not have the storm windows built into the window unit, you should make sure they have wood or metal frames. Windows with wood or metal frames tend to be more compatible with storm windows. Vinyl windows typically are not as compatible with separate storm windows.

Storm windows with laminated glass provide better protection from noise than a non-laminated pane of glass. Increasing glass thickness also improves acoustical performance. Be sure to check with your window manufacturer concerning compatibility regarding storm windows and your existing window units. ***Placing a storm window over any existing window may cause damage to either the storm or prime window.***

As important as the quality of the window itself is the method of installation. Most window installers do not install windows following sound reducing techniques. To obtain the full acoustical benefit, all voids around the windows must be filled with insulation and wood blocking, and the perimeter of the windows must be thoroughly caulked so no air can leak through. Since this is not a typical window installation, you may want to have your purchase agreement with the window company state that the windows will be installed in accordance with the details included in this booklet - Detail W1 if you have frame walls or Detail W2 if you have brick walls. This will give you the greatest sound reduction benefit from your new windows.



Storm Windows

The combination of glass and air spaces increases the acoustical rating of window units. The addition of storm windows over your existing windows will increase the acoustical rating. It should be noted that storm windows should not be installed over vinyl-framed windows. The heat build-up from the sun between the panes of glass may cause the vinyl to warp. Acoustical storm windows are usually constructed with 3/16" or 1/4" laminated glass.

Maintenance to Existing Windows

Windows that rattle are a source of air and noise infiltration. Replace any pieces of glass containing cracks. Apply a thin bead of clear silicone caulk around the glass to secure the glass to the frame. Apply caulk around the window frame to prevent air and noise from leaking in around the window.



Skylights

Sound is decreased when it has to travel through mass. By adding a skylight, the mass of the shingles, roof decking and insulation are replaced with a sheet of glass. Typically, skylights are a substantial source for sound transmission. Adding a storm window unit to an existing skylight will reduce some noise transmission. There are some storm window manufacturers that make units which mount on the inside of the existing skylight. There are also a limited number of window companies that sell complete acoustically-rated skylight replacement units. Follow the manufacturer's instructions regarding proper installation to ensure the best performance.

Doors

Doors are another common source for noise and air infiltration. A prime door and a storm door act much like the thermal pane windows and storm windows in that the combination of the doors with the air space in between increases the acoustical integrity of the unit. The installation of new doors with weatherstripping, a new threshold and a bottom sweep will give you the greatest benefit; however, any of the following modifications will give you some decrease in noise and air infiltration. Acoustically rated prime doors, or doors that carry an STC rating around 40 or higher, can be very expensive. If cost is a concern, or if you purchase a door with an STC rating below 40, install a prime and storm door combination.

Replacing Prime Doors

Pre-hung wood solid-core doors should be used. Steel or metal doors are generally not acoustically acceptable because they are constructed of a thin outer layer of metal filled with cork or foam, and do not have sufficient mass to provide adequate sound reduction. A pre-hung door has less tendency to warp than a solid core door that is installed into an existing frame. The installation technique should include removing the existing door and jamb, filling all voids around the door with wood blocking and insulation, and installing the prehung unit. (See *Details D1 and D3 on pages 21 and 23 for the proper method of installation.*) Weatherstripping should be applied around the top and side frames, and a sweep installed on the bottom of the door.



Two critical aspects to look at when choosing a prime door are: (1) the seals and (2) the weight or mass of the door. The better the seals and the greater mass the door has, the better the door will perform against noise. When looking at the seals of the prime door, make sure there is good contact between the weatherstripping on the door frame and the top and sides of the door itself. Make sure the door sweep is made of a durable material and that it makes solid contact with the threshold. Check to make sure that there is no light infiltration along any of the perimeter seals. (Refer to *details D1 and D3 on pages 21 and 23.*)

Replacing Storm Doors

As with prime doors, the acoustical performance of a storm door is also dependent on the door's seals and mass. There are acoustically-rated storm doors available from several manufacturers. However, if you're willing to sacrifice some acoustic reliability for a more cost-effective alternative, a solid core storm door that has a minimum of 3/16" laminated glass is preferred. Once the storm door is completely installed, there should be no light penetration around the perimeter of the door. (*Refer to Detail D2 on page 22.*) Keep in mind that a storm door only has acoustical benefit when the storm window is in place. Consider self-storing glazing units if you occasionally want to use the screens for ventilation purposes.



Weatherstripping Existing Doors

A properly weatherstripped door will provide resistance when you close the door. It is important that weatherstripping be applied on both the prime and the storm doors. Most hardware stores and lumber yards carry weatherstripping intended for homeowner installation. We recommend that the weatherstrip be of sufficient thickness to 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 weatherstrip must be adjusted until no light is visible or new weatherstripping should be installed. (*See Detail D3 on page 23.*)

Door Installation and Maintenance

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 is no spacing or gaps greater than ½” between the door frame and the existing wall framing (rough opening). Gaps less than ½” wide should be filled. A method that provides good insulation and sound attenuation includes using fiberglass wrap insulation, polyethylene foam backing rod and caulking. All of these materials should be available at your local hardware store.

Sidelights

If your existing sidelights are not in vinyl frames, add an additional layer of glass to the existing sidelights – preferably a pre-fabricated storm unit. Manufacturers of acoustic storm doors typically manufacture matching storm units for sidelights. Otherwise, mounting a minimum 3/16” thick interior tempered laminated glass panel in a custom wood frame approximately 2” from the existing sidelight will also help. If you choose to build your own storm unit, mount the storm on the inside of the existing sidelight. If purchasing a unit, follow the manufacturer’s installation instructions for either interior or exterior applications.



Wall Modifications

Many times paneling is installed directly to wall studs. This commonly is found in home additions. On exterior walls, paneling alone is not a sufficient wall mass, and noise will be readily transmitted into the home. There are different sound-insulating modifications, depending on the noise contour (DNL) in which the home is located. Wall board should be fastened to studs as follows: 1 ¼" length screws for first layer and 1 ⅝" length screws for the second layer. Please reference your home's location in the DNL contour located inside the front cover of this handbook for specification recommendations.

Below 75 DNL

Remove paneling, install blanket (batt) insulation (R13 or 3 ½" thick fiberglass) in the walls, install one (1) layer of ⅝" thick gypsum board (drywall) vertically attaching them to the studs, tape joints using paper reinforcing tape and an all-purpose joint compound. Be sure that all corners and edges are taped. The paneling may then be reinstalled or the walls sanded and painted or wall-papered.

Above 75 DNL

Remove paneling, install blanket (batt) insulation (R13 or 3 ½" thick fiberglass) in the walls, install two (2) layers of ⅝" gypsum board vertically, attaching them to the studs and offsetting the top layer at least 10" from the bottom layer, tape the top layer's joints using paper reinforcing tape and an all-purpose joint compound. Be sure that all corners and edges are taped. The paneling may then be reinstalled or the wall sanded and painted or wallpapered.



Over 80 DNL

Remove paneling, install blanket (batt) insulation (R13 or 3 ½" thick fiberglass) in the walls, install one (1) layer of ½" cement board then one (1) layer of 5/8" gypsum board vertically, attaching them to the studs and offsetting the top layer (gypsum board) at least 10" from the bottom layer (cement board), tape joints of top layer using paper reinforcing tape and an all-purpose joint compound. Be sure that all corners and edges are taped. The paneling may then be reinstalled or the walls sanded and painted or wallpapered. Cement board and gypsum board can also be applied over existing gypsum board in high noise-impacted areas to alleviate transmission of exterior noise. *(If cement board cannot be located, you can use board that is made for the installation of ceramic wall tile.)*



Ceiling Modifications

Ceiling modifications should be done under two conditions: 1) when a home has an acoustic tile ceiling in a room that does not have a floor above it, and 2) on the top floor in homes in very highly impacted noise contours (75+ DNL).

Modifications to Ceilings with Acoustical Tile

The acoustic tile used in most homes decreases noise within the room. However, it is very thin and exterior noises will enter the room due to the lack of mass. If the room has an attic above it, place at least 8" of R25 fiberglass insulation on the attic floor and replace the existing ceiling tiles with acoustically rated tiles with a CAC (another sound transmission rating) of no less than 40 and an NRC rating of at least 55. Keep in mind, however, that even the best suspended ceiling tiles do not block as much noise as $\frac{5}{8}$ " gypsum board (drywall).

If there is no attic above the ceiling, the acoustical tile must be removed and a $\frac{5}{8}$ " gypsum board ceiling must be installed. Attached the gypsum board to the roof joists and place blanket (batt) insulation above the gypsum board. Rafter vent channels should be used to make sure that air can circulate between the insulation and the roof deck. Tape joints using paper reinforcing tape and an all-purpose joint compound. Be sure that all corners and edges are taped.

If you want to use suspended ceiling tile as a finish material, it is recommended that at least one layer of $\frac{5}{8}$ " gypsum board be installed above the ceiling tile.



Modifications to Gypsum Board Ceilings In the 75+ DNL Noise Contour

If there is an attic above the room, install at least 8" of R25 insulation to the attic floor and place $\frac{3}{4}$ " plywood over the insulation. In rooms with existing drywall ceilings, install a second layer of $\frac{5}{8}$ " drywall with 1 $\frac{5}{8}$ " length screws fastened into the ceiling joists above. (See *Detail C1 on page 24.*) In rooms with existing acoustic tile ceilings, two (2) layers of $\frac{5}{8}$ " gypsum board should be installed, offset by at least 10". (The first layer should be attached to the ceiling joists above with 1 $\frac{1}{4}$ " length screws and the second layer should be attached to the ceiling joists above with 1 $\frac{5}{8}$ " length screws.) Tape joints using paper reinforcing tape and an all-purpose joint compound. Be sure that all corners and edges are taped.

If there is no attic above the room, install one (1) layer of $\frac{1}{2}$ " cement board over the existing drywall ceiling with 1 $\frac{5}{8}$ " length screws fastened into the ceiling joists and one layer of $\frac{5}{8}$ " gypsum board offset by at least 10" also fastened into the ceiling joists with 2 $\frac{1}{2}$ " to 3" length screws. Tape joints using paper reinforcing tape and an all-purpose joint compound. Be sure that all corners and edges are taped.



Insulation

Adding mass to voids between walls and on attic floors will help diminish noise. (See *Detail I1* on page 25.) Insulation helps absorb noise.

Walls

Frame homes require insulation in exterior walls for energy efficiency, as well as to decrease exterior noise infiltration. Fiberglass blown-in insulation can be installed from the interior or exterior of the home. In most cases, homeowners will hire an insulation contractor to perform this work. Holes are drilled into the wall near the top and bottom of the wall between each pair of studs. A hollow wand is inserted into the holes through which insulation is blown into the wall. (One hole in the center of the wall can be used; however, you must make sure the wand is long enough to reach to top and bottom of the wall cavity.)

Attics

The floor of the attic should have at least 8" of R25 insulation. The addition of $\frac{1}{2}$ " or $\frac{3}{4}$ " plywood over the insulation will increase the mass. Attic insulation can be either blown-in or blanket (batt) fiberglass insulation.



Vents

Attic Vents

You need vents for air circulation. Vents are holes in the exterior of your home through which noise has a direct entry route. Baffle boxes are partial enclosures built around vents to reduce some noise. Just like a muffler on your car's exhaust pipe, baffles act as mufflers to absorb some noise. It is not recommended to install baffles or modify your home's ventilation system without first consulting a professional mechanical contractor, architect or building code inspector. *(Refer to details V2, V3 and V4.)*



Kitchen Exhaust Vents

There are two main types of kitchen exhaust fans, each requiring different sound insulating modifications:

- 1) Through-Wall Exhaust: Remove exhaust fan, insulate wall and patch interior drywall. The exterior can be patched by installing plywood and covering it with the same material as the exterior of the remainder of the home, or by installing plywood and reattaching the existing fan cover. Install a ductless range hood, if permitted by code, or a ducted exhaust hood as detailed in Item 2 below. (Note: Ductless range hoods are not permitted per code in Arlington Heights.)
- 2) Ducted Exhaust: All ducted exhausts should extend to an exterior location. Modifications need to be made only if the ductwork to the exterior is predominantly straight and does not have any elbows (90 degree turns). To reduce sound transmission, the ductwork in the attic should be extended to exhaust out of the eave of the house. Care should be taken to not have any elbow (90° turns) and to keep the ductwork as straight as possible to avoid the collection of grease in the ductwork, which could develop into a fire hazard.



It is not recommended to install a baffle over a motorized or powered vent.

HVAC Modifications

The acronym HVAC stands for heating, ventilating and air conditioning. The ventilation portion of this section is the major cause of air and noise infiltration. Mechanical systems often require vents that are openings to the exterior of the home.

Central Air Conditioning

The installation of central air conditioning to the entire home will attain the most noise reduction in the summer since it gives you the ability to keep doors and windows closed.

Through-Wall Heaters and Air Conditioners

Normally, these devices are found in room additions because it was less expensive when building the addition to put small, independent units in than to extend existing ductwork and upgrade the entire home's mechanical system. However, both of these items require vents through which air and noise have 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. This may be an option when it comes time to replace your 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 require patching the wall as stated above.



Return Air

Many times, homes with central air conditioning still require the use of window air conditioning units on the upper floor due to poor air circulation. In the majority of cases, this is due to the upper floor having only supply ductwork and no return-air ductwork. The cost of installing return-air ductwork varies greatly, depending on the construction of the home. In some instances, return-air ductwork can be installed in a wall and tied into the existing ductwork for the lower floors. It may be valuable to call a few heating contractors and get proposals on the cost of installing return-air ductwork where none exists. The methods used by different contractors and the costs associated with such methods make it advisable to get more than one proposal.



Whole-House Exhaust Fans

These fans are found in attics away from view; however, the fan sits in a hole in your ceiling through which air and noise enter your home. It is recommended that these fans be removed and the opening patched with materials matching the existing ceiling. If you want to keep your fan, a plywood box with doors can be built around the fan. The doors would then have to be manually opened before the fan is turned on.

Miscellaneous

Mail Slots

Though mail slots allow minimal noise infiltration compared to vents, doors and windows, they are holes in walls through which air and noise enter. You can remove the interior and exterior mail slot fixtures, stuff the mail slot cavity with batt insulation and patch both sides to match the existing wall finish. 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 essentially reduces or eliminates air infiltration and natural ventilation. This means your home will become more airtight, making you more susceptible to your home's normal emissions from such things as gas appliances and furnaces. It is a good idea to install a carbon monoxide detector to monitor the CO levels in your home. Be sure to follow the manufacturer's installation instructions.

Glass Block Windows

Glass block windows often have a small vent or louvered window in them. This is a community code requirement for air circulation. Unfortunately, there is nothing that can be done to sound insulate the small vent or louvered window. The best remedy would be to replace the glass block window with an operable acoustical window.

Fireplaces

Fireplaces provide a direct route for air and noise to enter your home. Installing tight-fitting glass doors in lieu of a fireplace screen will lessen the air infiltration when the fireplace is not in use.

SPACES AROUND THE WINDOW ON ALL SIDES ARE FILLED WITH SOLID WOOD FOR GAPS OVER 1/2" WIDE AND WITH TIGHTLY PACKED INSULATION FOR SPACES UNDER 1/2" WIDE

ALL INTERIOR TRIM IS REPLACED WHEN WINDOWS ARE INSTALLED FROM THE INTERIOR OF THE HOUSE

ALL EXTERIOR TRIM IS REPLACED WHEN WINDOWS ARE INSTALLED FROM THE EXTERIOR OF THE HOUSE

ALL EXTERIOR TRIM IS COVERED WITH ALUMINUM CLADDING OR PRIMED AND PAINTED

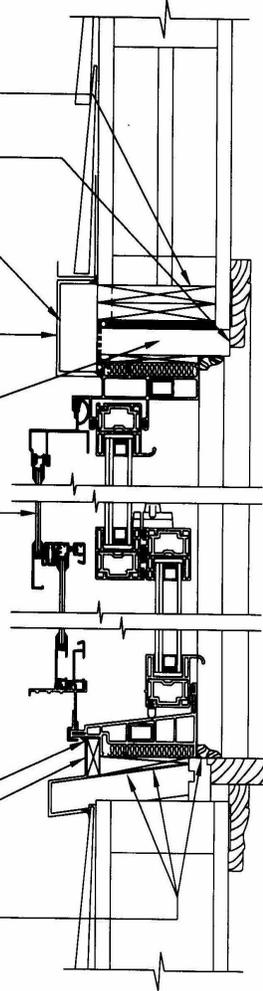
ALL ROTTEN OR DAMAGED WOOD FRAMING IS REPLACED BEFORE INSTALLATION OF NEW WINDOW

A NEW DOUBLE PANE WITH EXTERIOR STORM (3 PANES TOTAL) WINDOW WITH A SCREEN INSTALLED AFTER THE EXISTING WINDOW IS REMOVED

NEW SEALANT IS APPLIED AROUND ENTIRE WINDOW AT EITHER THE EXTERIOR OR INTERIOR SIDE

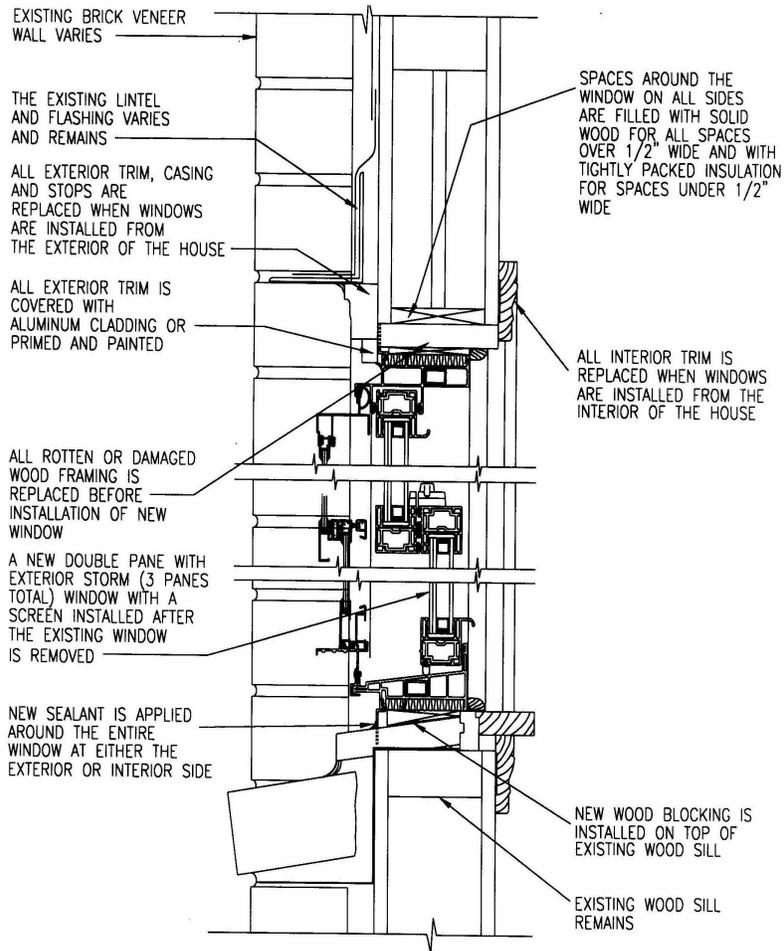
NEW WEATHERSTOPS ARE PROVIDED WHERE NECESSARY

A NEW WOOD SILL, WOOD BLOCKING, INSULATION AND SEALANT ARE INSTALLED



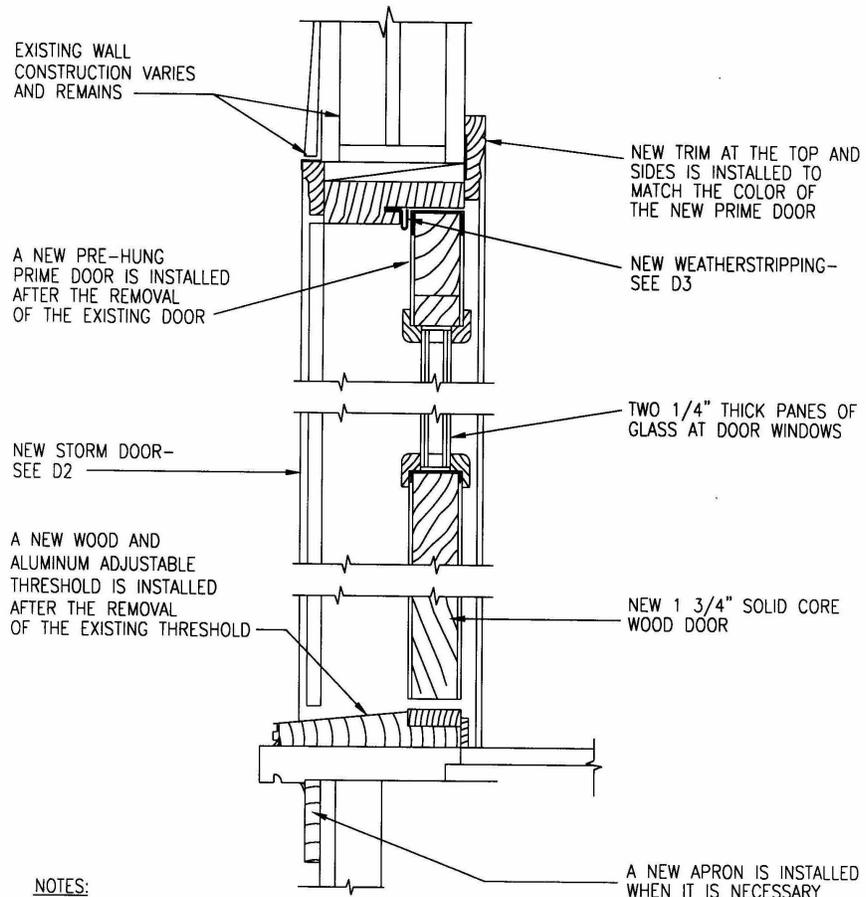
W1 WINDOW DETAIL
NEW ACOUSTICAL WINDOW IN FRAME HOME

W1



W2 WINDOW DETAIL
NEW ACOUSTICAL WINDOW IN BRICK HOME

W2

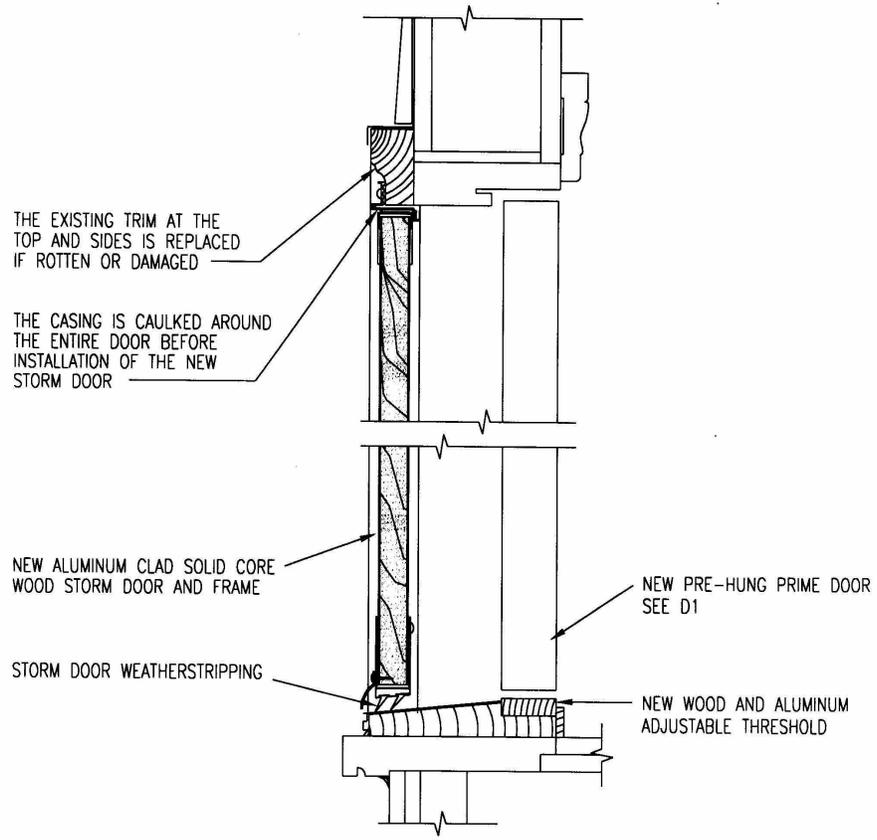


NOTES:

1. HOMEOWNERS HAVE THE OPTION OF HAVING EXISTING HARDWARE RE-INSTALLED OR HAVING NEW HARDWARE INSTALLED.

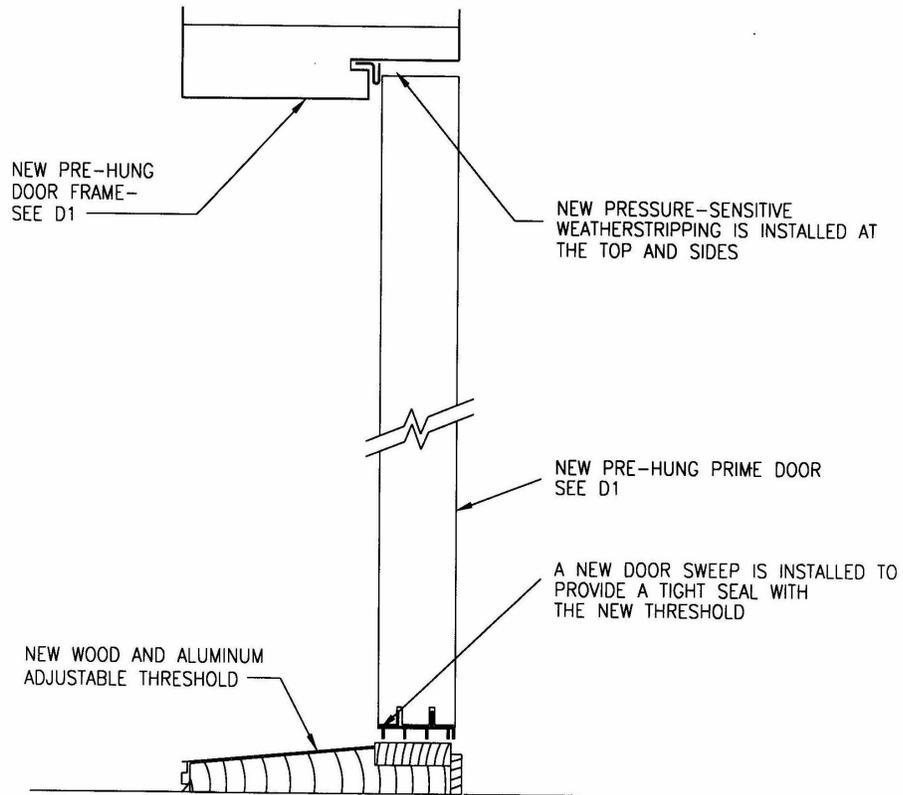
D1 DOOR DETAIL
NEW PRE-HUNG PRIME DOOR

D1



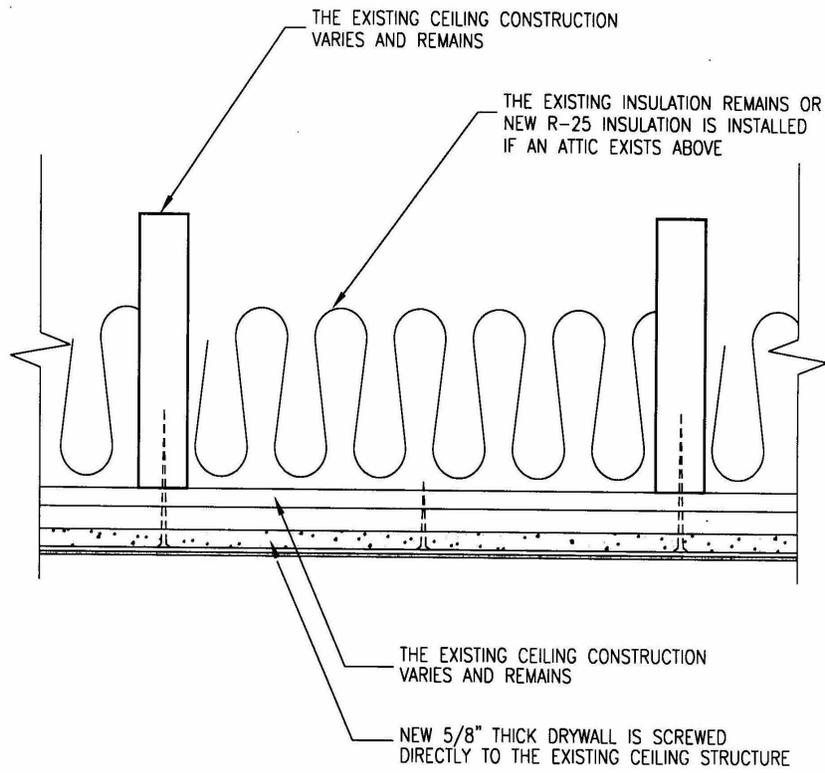
D2 DOOR DETAIL
NEW STORM DOOR

D2



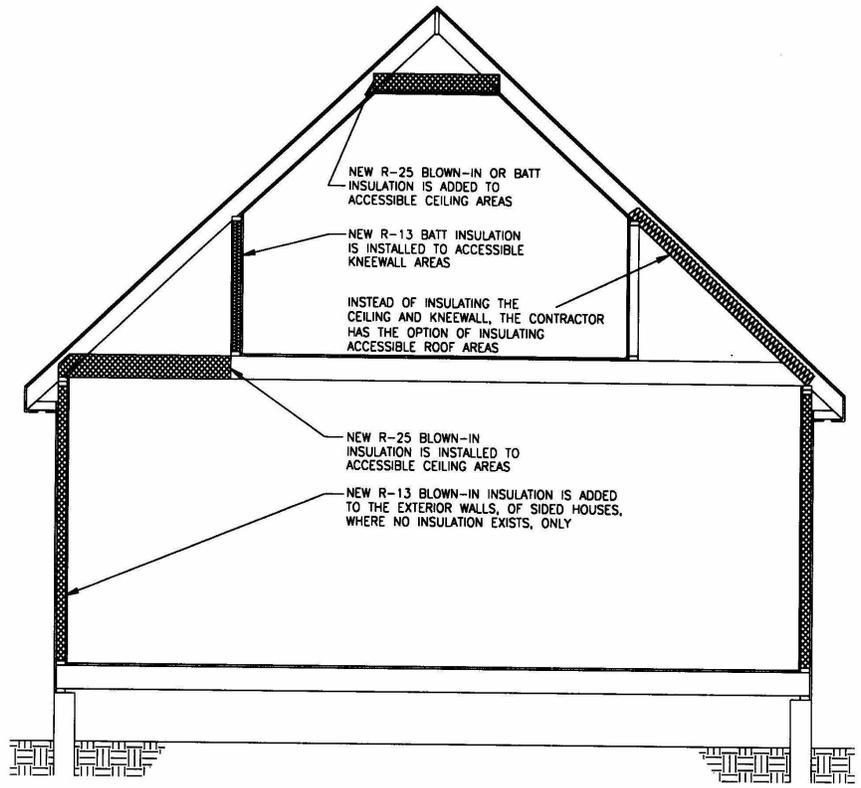
D3 DOOR DETAIL
 NEW WEATHERSTRIPPING IN NEW PRE-HUNG DOORS

D3

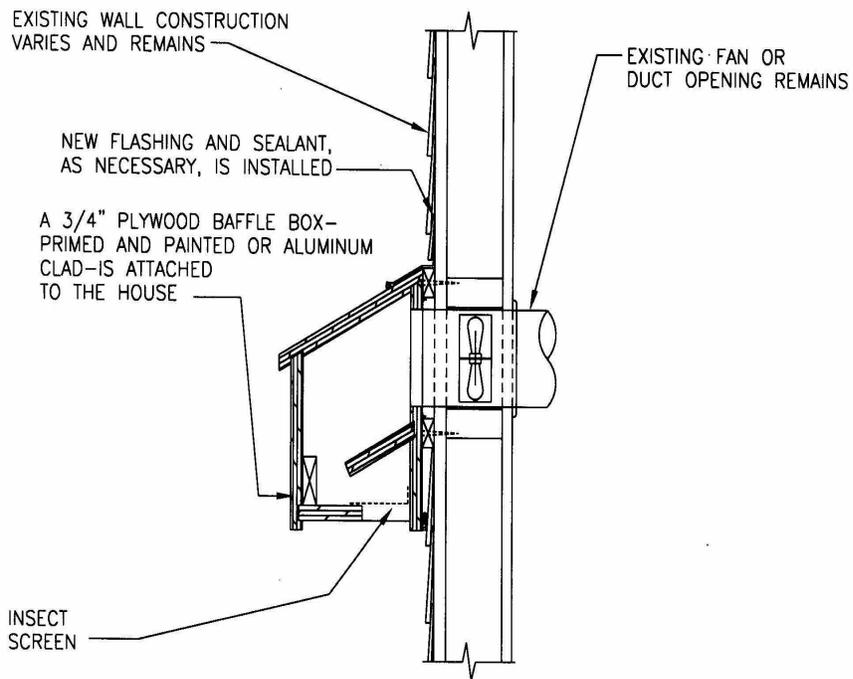


C1 CEILING DETAIL
 NEW DRYWALL OVER EXISTING CEILING

C1

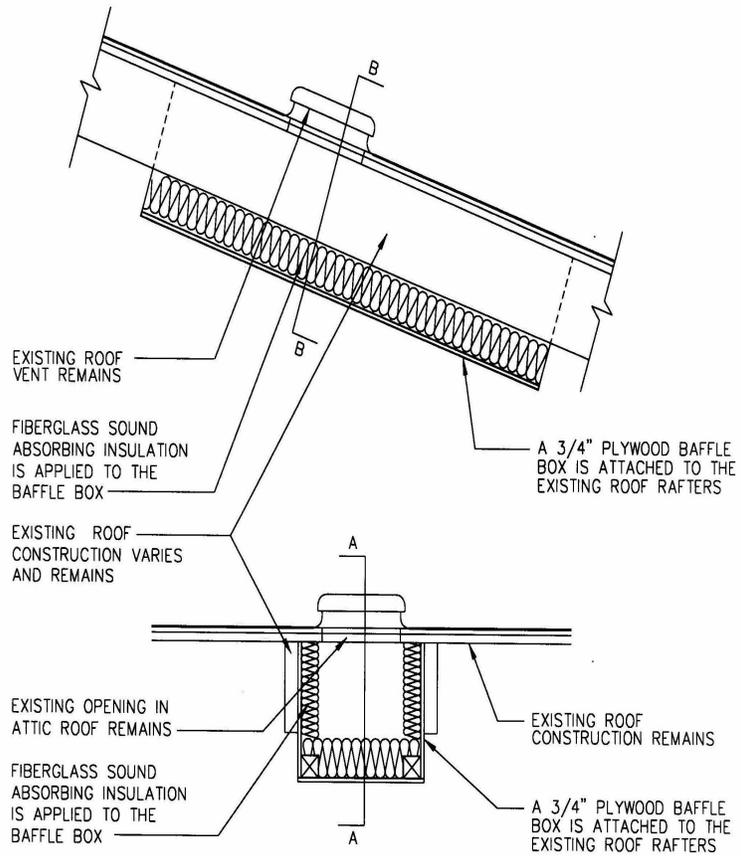


11
 INSULATION FOR TYPICAL HOME
 DIAGRAMMATIC ONLY (NO SCALE)



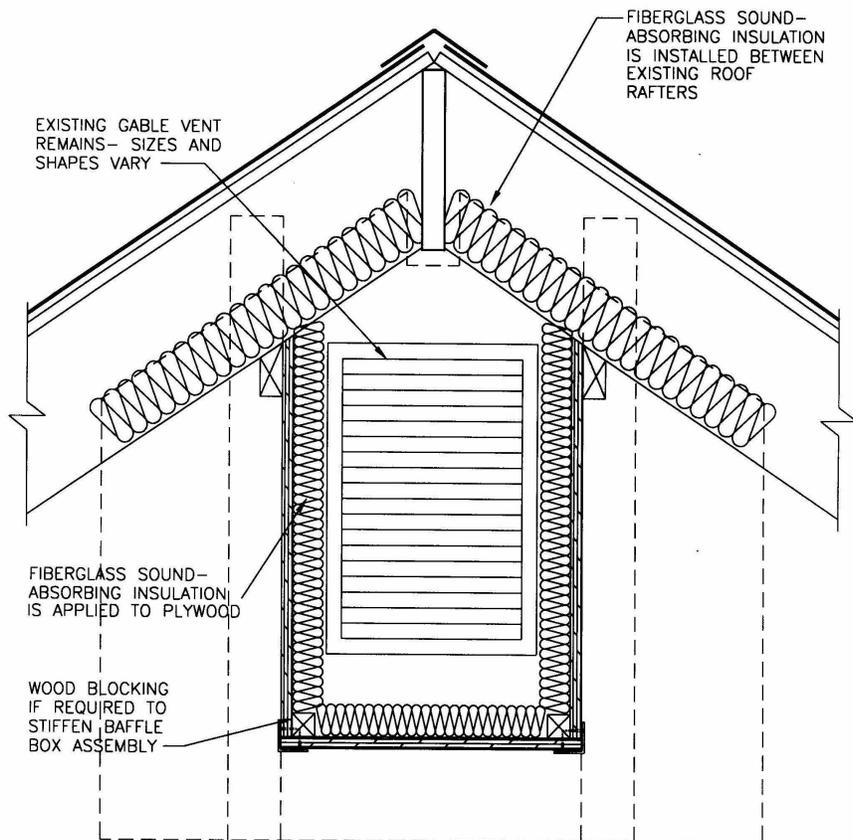
V1
 VENT DETAIL
 NEW WALL VENTILATION BAFFLE

V1



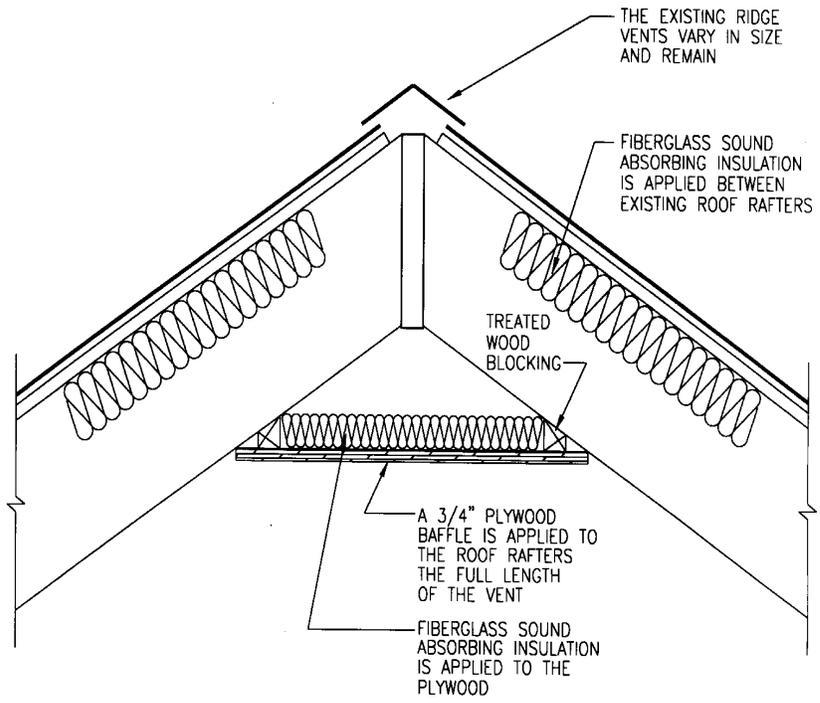
V2 VENT DETAIL
 NEW ROOF VENT BAFFLE

V2



V3
 VENT DETAIL
 NEW GABLE VENT BAFFLE

V3



V4
 VENT DETAIL
 NEW RIDGE VENT BAFFLE

V4

Suppliers for Residential Sound Insulating Products

Windows

Harvey Acoustical Windows
c/o West Roofing and Supply
1797 Winthrop Drive
Des Plaines, IL 60018
847-795-9378
www.harveyind.com

Graham Architectural Products
1551 Mount Rose Avenue
York, PA 17403
800-755-6274
www.grahamarch.com

Sound Solutions Windows & Doors
4532 S. Kolin Avenue
Chicago, IL 60632
773-446-7800

Storm Windows

Mon-Ray, Inc.
8224 Olson Memorial Highway
Minneapolis, MN 55427
800-544-3646
www.monray.com

Peerless Products, Inc.
2403 S. Main Street
Fort Scott, KS 66701
800-279-9999
www.peerlesswindows.com

Sound Control Systems Inc.
A Division of Larson Industries
Brookings, SD 57006
800-334-1328
www.larsondoors.com

Prime Doors

Central Door Distributors, Inc.
150 State Street
Calumet City, IL 60409
708-862-4300
www.centraldoordist.com

Hess-Armaclad, Inc.
P.O. Box 127
Route 997
Quincy, PA 17247
800-541-6666

Illinois Flush Door
P.O. Box 905
Plainfield, IL 60544
815-436-3113
www.hesswindows.com

Illinois Flush Door
P.O. Box 905
Plainfield, IL 60544
815-436-3113
815-436-3114

Lynden Door, Inc.
P.O. Box 528
177 W. Main Street
Lynden, WA 98264
360-354-5676
www.lyndendoor.com

PEM Millwork of Minnesota
5671 International Parkway
New Hope, MN 763-541-1133

Storm Doors

Hess-Armaclad, Inc.
P.O. Box 127
Route 997
Quincy, PA 17247
800-541-6666
www.hesswindows.com

Mon-Ray, Inc.
8224 Olson Memorial Highway
Minneapolis, MN 55427
800-544-3646
www.monray.com

Sound Control Systems Inc.
A Division of Larson Industries
Brookings, SD 57006
800-334-1328
www.larsondoors.com

Patio Doors

Graham Architectural Products
1551 Mount Rose Avenue
York, PA 17403
800-755-6274
www.grahamarch.com

International Window Corp.
5625 E. Firestone Boulevard
South Gate, CA 90280
562-928-6411
www.intlwindow.com

Window Technologies, Inc./
Century Manufacturing, Inc.
4620 Andrews Street
North Las Vegas, NV 89031
800-654-7027
www.windowtech.com

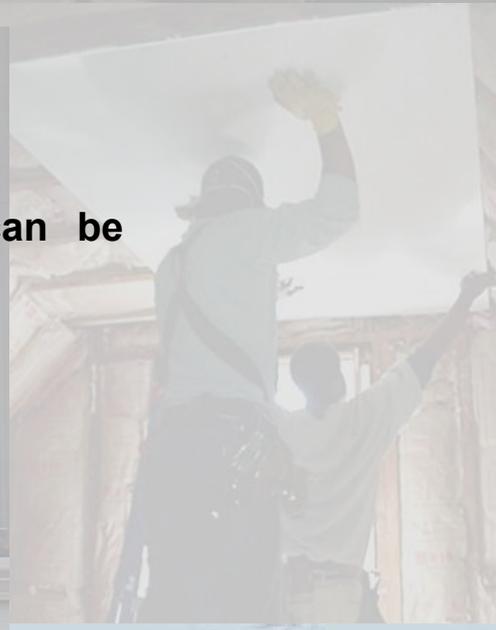
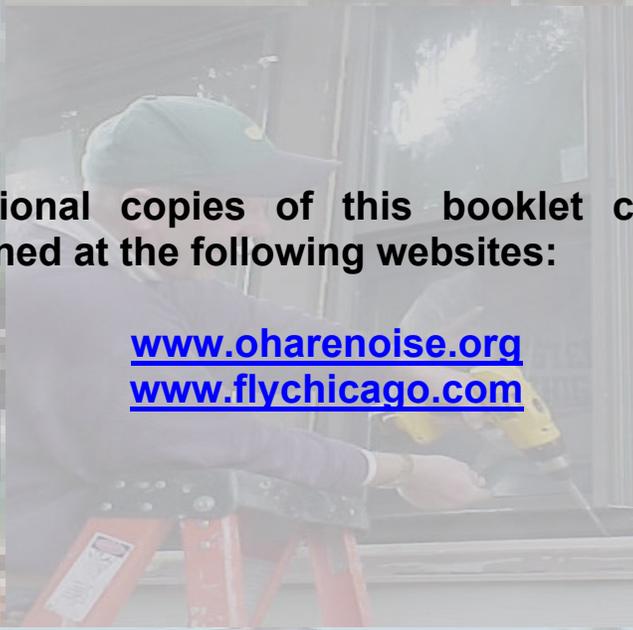
Sliding Storm Doors

Mon-Ray, Inc.
8224 Olson Memorial Highway
Minneapolis, MN 55427
800-544-3646
www.monray.com

Peerless Products, Inc.
2403 S. Main Street
Fort Scott, KS 66701
800-279-9999
www.peerlesswindows.com

Sound Control Systems Inc.
A Division of Larson Industries
Brookings, SD 57006
800-334-1328
www.larsondoors.com

The above manufacturers have acoustical products that meet the specifications of the City of Chicago's Residential Sound Insulation Program and can put you in contact with local distributors.



Additional copies of this booklet can be obtained at the following websites:

www.oharenoise.org
www.flychicago.com



Updated June 1, 2007