

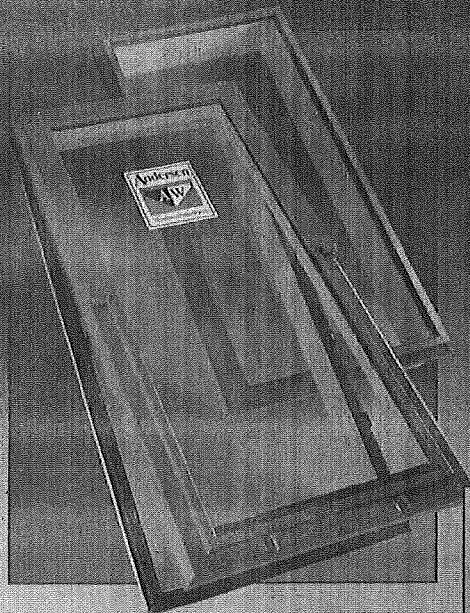
To: Christine Boulware
From: Ken Doyle
KenDoyle@umn.edu
612.298.6820
Re: 705 Summit
Date: November 3, 2011

Late this afternoon I received a legible copy of the literature Andersen Corporation still has regarding my roof windows (attached). From that literature I make these inferences:

1. These are top quality windows from a top-quality manufacturer. They were, I believe, the best money could buy.
2. Select models of these windows were designed, manufactured, and sold as egress windows. Indeed, the models I bought were pre-approved by Tate Halverson, Senior Plans Examiner. The installation was inspected and approved by Inspector Jack Hager. No Fire Inspector over the years has raised any question about these windows.
3. If an "awning window" is defined as a window hinged at the top – as it is in the dictionaries I consulted -- it's clear that these are not awning windows. They are not hinged at the top.
4. They are "pivoting roof windows" and can open to many positions. Their hardware is at the sides, and there is no hardware that obstructs the large clear openings, Note the top-center photograph on the first page of the Andersen document.

In my opinion, these windows are of higher quality and safer than any alternative, and certainly more consistent with the architecture of this Cass Gilbert building.

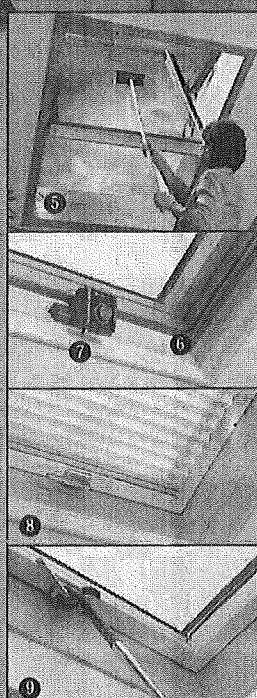
ANDERSEN® ROOF WINDOW



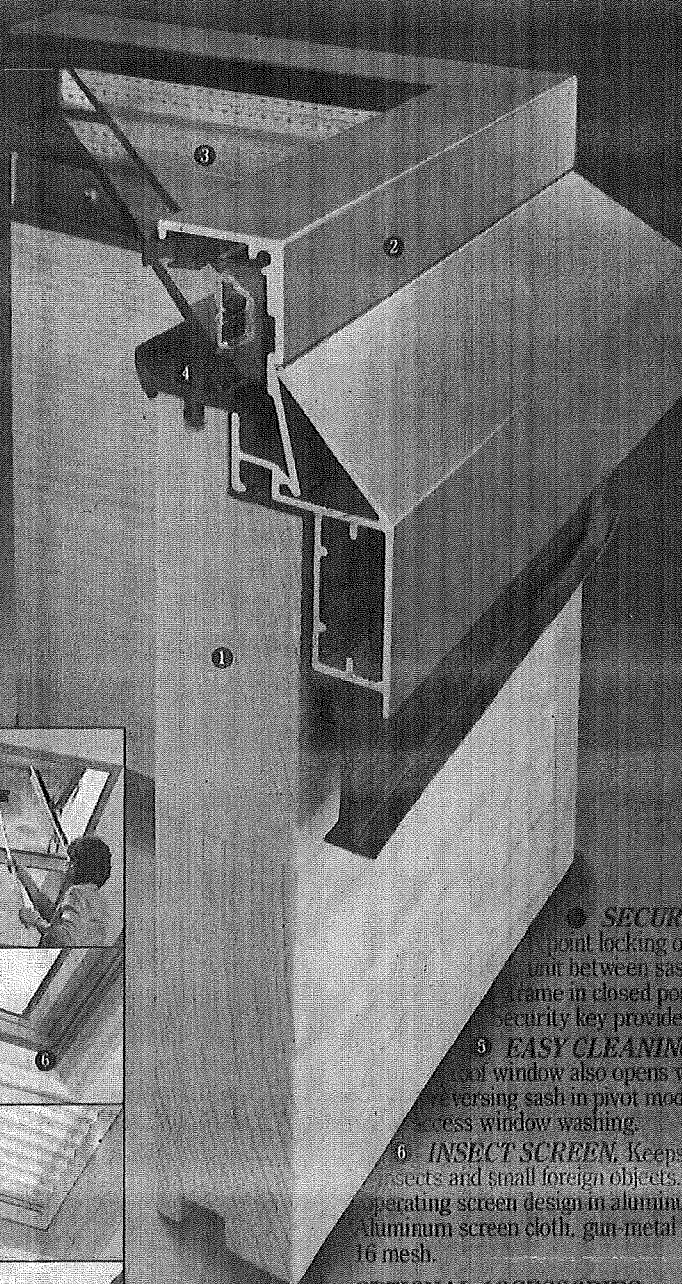
Andersen® venting and stationary roof windows offer advantages not found in ordinary "skylight" type windows. The Andersen venting roof window opens to many different positions using an operating lever located conveniently at the window base. The unique roof window flashing system resists water or ice build-up and helps prevent leakage. Installation can be made in any roof slope from 9° to 80°. For angles 60° to 80°, an optional deflector shield is available for maximum weathertightness. For installations less than 18½° (4/12 roof), an optional curb flashing is required.

VENT AND STATIONARY UNIT FEATURES:

- ➊ **FRAME.** Water repellent preservative treated wood frame. Low maintenance aluminum structural frame cover has high temperature baked on acrylic Terratone® color finish.
- ➋ **SASH.** Water repellent preservative treated wood sash (on vent unit). Aluminum structural sash cover in high temperature baked on acrylic Terratone® finish. Allen wrench provided for sash adjustment on vent unit.
- ➌ **GLAZING.** Vent and stationary units have High-Performance or High-Performance Sun tempered insulating glass with gasket glazing system. Stationary unit can be ordered with optional High-Performance, or High-Performance Sun laminated/tempered insulating glass with gasket glazing system. (Installations over 4000' altitude require high-altitude glass.) For this and other special glazings, contact your local Andersen supplier.
- ➍ **WEATHERSTRIPPING.** Weatherstripping is located both outside of sash (where sash and frame meet) and surrounding entire frame to form an extremely weathertight seal.



- ➎ **FLASHING.** Specially designed aluminum flashing prevents water, ice and snow build-up. Standard flashing for tile or shingle roofs available. For installations greater than 60°, optional water deflector is recommended. For installations less than 18½° (4/12 roof), incline curb flashing is required. Flashing is required on all installations.
- ➏ **OPERATION MODES.** Venting roof window operates in either awning or pivot modes for many different opening positions. Normal venting in awning position can be obtained with screen in place. Two additional lock positions also offer limited ventilation.
- ➐ **RELEASE OPERATOR.** Venting roof window hardware is conveniently placed at bottom of window for easy operation. Hardware comes installed on unit.



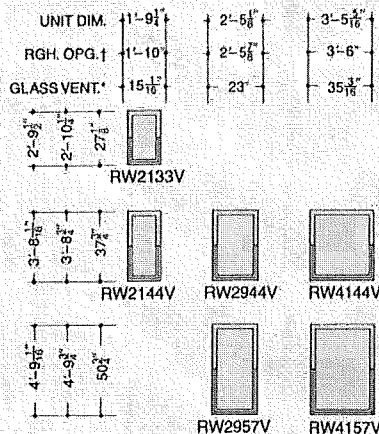
- ➑ **SECURITY.** Bar-point locking on venting unit between sash and frame in closed position. Security key provided.
- ➒ **EASY CLEANING.** Venting roof window also opens wide by reversing sash in pivot mode, for easy access window washing.
- ➓ **INSECT SCREEN.** Keeps out insects and small foreign objects. Sliding operating screen design in aluminum frame. Aluminum screen cloth, gun-metal finish, 18 x 16 mesh.

OPTIONAL ACCESSORIES:

- ➑ **ELECTRIC WINDOW OPENER.** For convenient power operation in out-of-reach installations. Requires special adapter package. See page 78 for more information.
- ➒ **PLEATED SHADE.** Allows for light control and helps minimize sunlight when necessary to prevent excessive heat build-up. When used with the Andersen® Electric Window Opener the extension pole may be required to operate the shade.
- ➓ **EXTENSION POLE.** For out-of-reach installations. Pole comes in 6' and 11' sizes.
- ➑ **TILE AND SHINGLE FLASHING.** Allows flashing of unit depending on type of construction.
- ➒ **INCLINE CURB FLASHING.** Required for roof slope installations less than 18½° to 9° incline.
- ➓ **AUXILIARY WATER DEFLECTOR.** For installations from 60° to 80°.
- ➑ **MULL TRANSOM FLASHING.** Allows joining units by channeling water down between units.

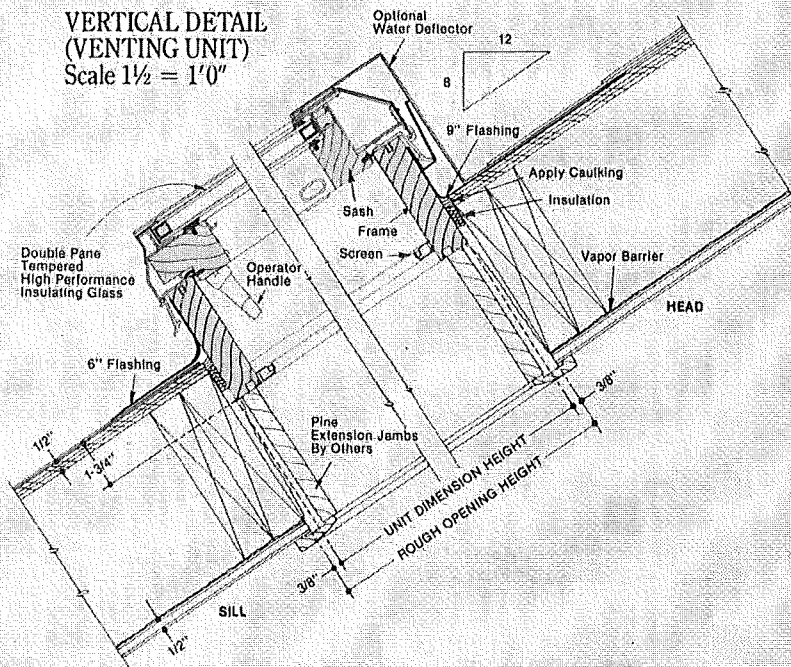
ANDERSEN® ROOF WINDOW

ROOF WINDOW BASIC UNIT SIZES (VENTING)



*Unobstructed glass sizes shown in inches.

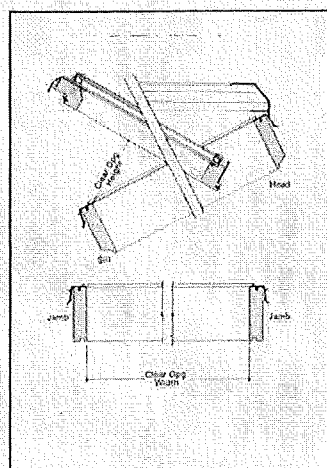
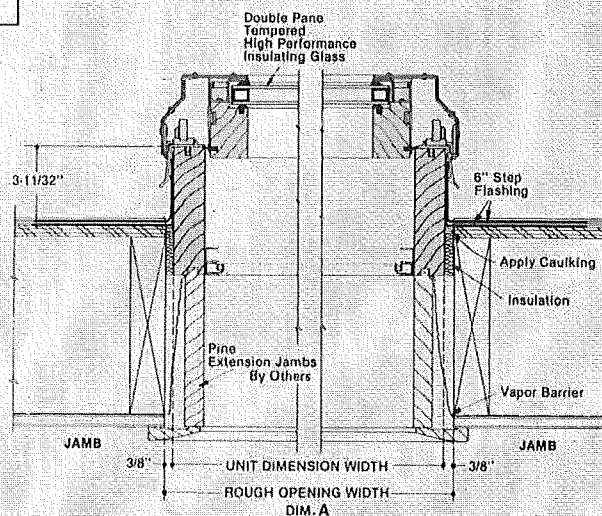
VERTICAL DETAIL (VENTING UNIT) Scale 1 1/2" = 1'0"



ROOF WINDOW OPENING SPECIFICATIONS (VENTING UNITS)

Unit No.	Sq. Ft. Clear Opg.	Max. Clear Opg. in Full Open Position		Sq. Ft. Glass	Crack Opg. Lin. Ft. Vent Sash Only	Sq. Ft. Vent.
		Width	Height			
RW2133V	2.03	18 3/4"	15 5/8"	2.80	8'3 5/16"	3.45
RW2144V	2.82	18 3/4"	21 1/8"	3.91	10'0 9/16"	4.84
RW2944V	3.86	26 5/8"	20 7/8"	5.99	11'4 5/16"	6.87
RW2957V	4.65	26 5/8"	25 1/8"	8.03	13'6 5/16"	9.27
RW4144V	5.73	38 1 1/16"	21 1/4"	9.20	13'4 3/4"	10.02
RW4157V	6.60	38 1 1/16"	24 1/2"	12.33	15'6 1/4"	13.52

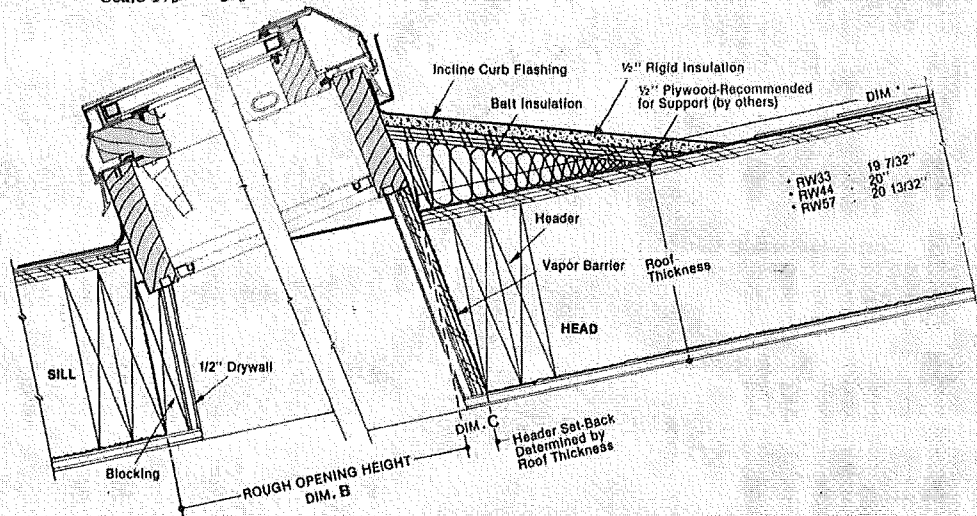
HORIZONTAL SIDE-JAMB DETAIL (VENTING UNIT) Scale 1 1/2" = 1'0"



ANDERSEN® ROOF WINDOW

VERTICAL DETAIL (VENTING UNIT)

Scale 1½" = 1'0"



VENTING AND STATIONARY UNIT

INCLINE CURB FLASHING ROUGH OPENINGS

†When installing units with incline curb flashing use these rough openings

Unit	Width Dim. A	Height Dim. B
2133	21 5/8"	34 3/4"
2144	21 5/8"	45 1/2"
2944	29 1/2"	45 1/2"
2957	29 1/2"	58 3/4"
4144	41 3/4"	45 1/2"
4157	41 3/4"	58 3/4"

Header Set Back

Roof Thickness	Dim. C
6 1/2"	1 3/16"
8 1/2"	1 1/8"
10 1/2"	1 1/2"
12 1/2"	1 3/16"

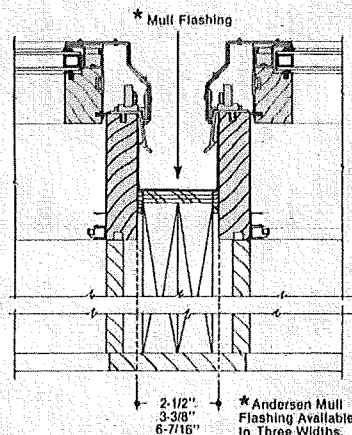
ROOF PITCH/SLOPE CHART

Roof Pitch	Roof Slope
2/12	9° 26'
3/12	14°
4/12	18° 26'
5/12	22° 37'
6/12	26° 34'
7/12	30° 15'
8/12	33° 41'
9/12	36° 52'
10/12	39° 48'
11/12	42° 30'
12/12	45°
14/12	49° 24'
20/12	59°
40/12	70°
68/12	80°

NOTE: Installation can be made in any roof slope from 9° to 80°. Incline curb flashing is required for roof installations less than 18 1/2° (4/12 pitch) to 9° (2/12 pitch) minimum.

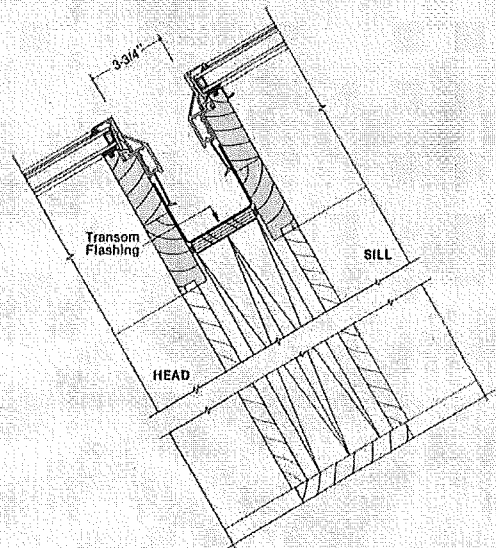
MULLION DETAIL FOR VENTING AND STATIONARY UNITS

Scale 1½" = 1'0"



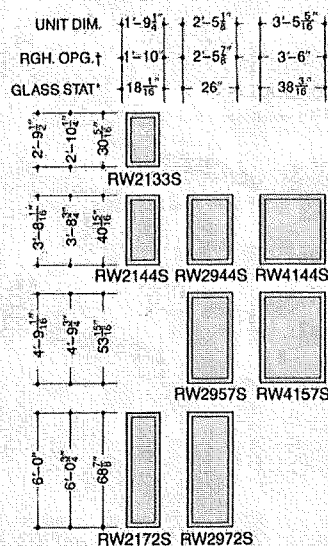
TRANSOM DETAIL FOR VENTING AND STATIONARY UNITS

Scale 1½" = 1'0"

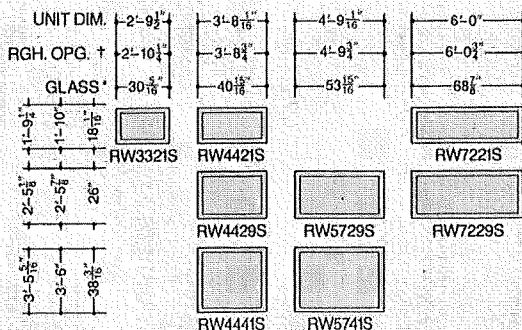


ANDERSEN® ROOF WINDOW

BASIC UNIT SIZES (STATIONARY)



*Unobstructed glass sizes shown in inches.



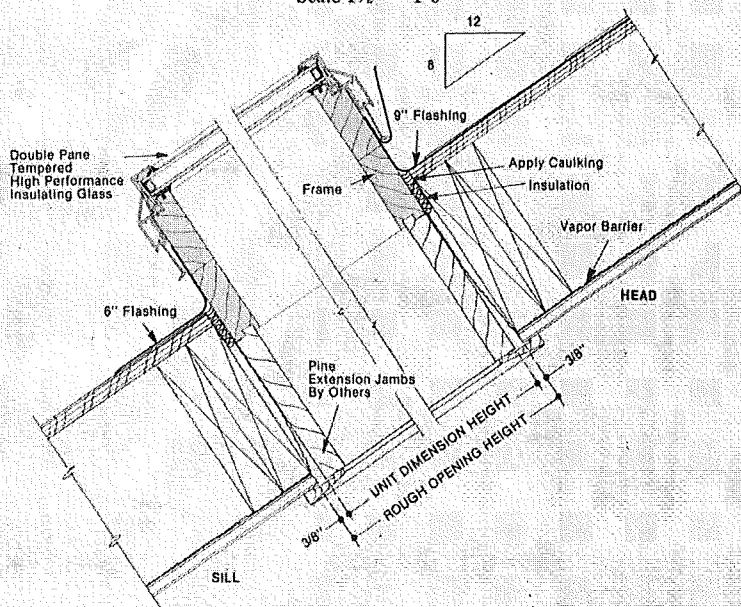
ROOF WINDOW SQUARE FEET OF GLASS (STATIONARY UNIT)

Stat. Units	Sq. Ft. Glass	Stat. Units	Sq. Ft. Glass
RW2133S/3321S	3.9	RW2957S/5729S	9.9
RW2144S/4421S	5.2	RW2972S/7229S	12.4
RW2172S/7221S	8.6	RW4144S/4441S	11.0
RW2944S/4429S	7.5	RW4157S/5741S	14.4

NOTE: Always install stationary roof window units with condensation channel on sill. Incline curb flashing (shown on page 66) is required for roof installations less than 18 $\frac{1}{2}$ ° (4/12 pitch) to 9° (2/12 pitch) minimum. Not available for 2172S and 2972S sizes.

VERTICAL DETAIL (STATIONARY UNIT)

Scale 1 $\frac{1}{2}$ " = 1'0"



HORIZONTAL SIDE JAMB DETAIL (STATIONARY UNIT)

Scale 1 $\frac{1}{2}$ " = 1'0"

