SIDDIQ KHAN & ASSOCIATES, INC
CONSULTING ENGINEERS AND PLANNERS
7400 S.W. 50TH TERRACE, SUITE 105
MIAMI, FLORIDA 33155

(305) 662-2301
FAX: (305) 661-3962
www.ska-engineering.com

B0600445
Lance 5/6/08

April 29, 2008

City of Miami Beach
Building Department
1700 Convention Center Drive
2nd floor – City Hall
Miami, FL 33139

RE: Gainor Residence, 5800 North Bay Road, Miami Beach, FL
SKA Project No. 05-618.02
Process Number: B0600445

Subject: Inspection 1143 roof Sheathing – north ridge blocking nailer

Dear Building Official,

SKA's Inspector preformed inspection for roof sheathing attachment on 9/12/2006. During that inspection he observed and verified the installation of the ridge blocking and that the sheathing was indeed nailed to the blocking.

If you have any questions or are in need of clarification, please do not hesitate to contact our office.

Sincerely,
Siddiq Khan & Associates, Inc.

Taimur A. Khan, P.E., S.E.C.B.
V. President; FL PE 60994

MIAMI-DADE

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

Metcoe Skylight Specialty Co., Inc.
1715 West 135th Street
Gardena, CA. 90249

BLSLTC2-34

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: 9/16" Laminated Glass and Aluminum Extrusions Skylight System

APPROVAL DOCUMENT: Drawing No. 04-138, titled "36'-0" cMax. Wide Impact Resistant Gabled Skylight" sheets 1 through 7 of 7, dated 10/15/04, last revision #1 dated 04/22/05, prepared, signed and sealed by Walter A. Tillit Jr., P.E., bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of this page 1, evidence submitted page(s) as well as approval document mentioned above. The submitted documentation was reviewed by **Helmy A. Makar, P.E.**

Helmy A. Makar
05/19/2005

COD
6/14/05

NOA No 05-0104.01
Expiration Date: May 19, 2010
Approval Date: May 19, 2005
Page 1

Metcoe Skylight Specialty Co., Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 04-138, titled "16'-0" Max. Wide Impact Resistant Gabled Skylight " sheets 1 through 7 of 7, dated 10/15/04, last revision #1 dated 04/22/05, prepared, signed and sealed by Walter A. Tillit Jr., P.E.,*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Load Test, and Uniform Static air Pressure Test on Metcoe Skylight Specialty Systems, prepared by American Test Lab of South Florida, Report No. 0204.01-04, dated 08/18/04, signed and sealed by William R. Mehner, P.E.*

C. CALCULATIONS

1. *Calculation titled " 16'-0" Max. Wide Impact Resistant Gabled Skylight ", 21 pages, dated 11/08/04, signed and sealed by Walter A. Tillit Jr., P.E.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance office.*

E. MATERIAL CERTIFICATIONS

1. *Mill Certified Test Report issued by International Extrusion Corporation, dated 08/06/04, for Die #21116 with the Chemical Composition and Alloy Temper.*
2. *Mill Certified Test Report issued by International Extrusion Corporation, dated 11/18/04, for Die #H-13273 with the Chemical Composition and Alloy Temper.*

Helmy A. Makar, P.E.
Product Control Examiner
NOA No 05-0104.01
Expiration Date: May 19, 2010
Approval Date: May 19, 2005

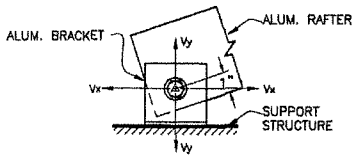
GENERAL NOTES:

1. SKYLIGHT SHOWN ON THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2001 EDITION OF THE FLORIDA BUILDING CODE.
THIS SKYLIGHT MAY BE INSTALLED AT HIGH VELOCITY HURRICANE ZONES.
DESIGN LIVE AND WIND LOADS SHALL BE DETERMINED AS PER SECTIONS 1615 AND 1619 OF THE ABOVE MENTIONED CODE. IN ORDER TO VERIFY THAT ANCHORS ON THIS P.A.D. WERE NOT OVERSTRESSED UNDER DESIGN PRESSURE RATINGS INDICATED ON NOTE 2 BELOW, THE 33% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS USED IN THE ANALYSIS.

1A. SHOP DRAWINGS AND STRUCTURAL CALCULATIONS SHALL BE SUBMITTED FOR EVERY PERMIT. DRAWINGS MAY INCLUDE LARGER SKYLIGHT WIDTH, LENGTH AND RISE W/ CORRESPONDING LARGER CROSS SECTION RAFTERS & MULLIONS, BUT PRESSURE RATING AS WELL AS MAX. GLASS PANEL SIZE SHALL **NOT** EXCEED THOSE INDICATED ON THIS DRAWING. (SEE NOTES 2 AND 11 RESPECTIVELY)
THIS P.A.D. COVERS GABLE SHAPE SKYLIGHTS. OTHER SHAPES/CONFIGURATIONS W/ SLOPED GLASS MAY BE ALSO ACCEPTED. PROVIDED THAT ABOVE MENTIONED CONDITIONS ARE COMPLIED WITH. THE DESIGN OF LARGER COMPONENTS FOR LARGER SKYLIGHTS SHALL BE PERFORMED BY A FLORIDA P.E. AND REVIEWED BY THE STRUCTURAL PLANS EXAMINER OF THE CORRESPONDING BUILDING DEPARTMENT ON A JOB SPECIFIC BASIS. (SEE NOTE 18).

2. DESIGN PRESSURE RATING AT ROOF IS: +75.0 psf (WINDWARD SIDE), −75.0psf (LEEWARD SIDE).
DESIGN PRESSURE RATING AT WALL IS: +75.0, −75.0 psf.
DESIGN PRESSURE RATING AS PER SECTION 1606.1.4 OF THE FLORIDA BUILDING CODE, PER TAS 201, 202, 203, PER AMERICA TESTING LABORATORY REPORT # 0204.01-04.
WATER AND AIR INFILTRATION TESTING AS PER TAS 202, QUALIFYING ASTM E 331 AND ASTM E 283 RESPECTIVELY.

3. STRUCTURAL ADEQUACY OF SUPPORTING STRUCTURAL MEMBERS IS NOT PART OF THIS P.A.D. STRUCTURAL DESIGN OF THE STRUCTURE THAT WILL PROVIDE SUPPORT TO THIS SKYLIGHT SHALL BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD FOR THE PROJECT. STRUCTURAL DESIGN SHALL INCLUDE AND TAKE INTO CONSIDERATION THE ACTUAL Vx AND Vy LOADS TRANSFERRED FROM THIS SKYLIGHT TO THE SUPPORT STRUCTURE, BASED ON DEAD, LIVE & WIND LOADS AND USING THE LOAD COMBINATIONS AS PER SECTIONS 2.3 OR 2.4 OF A.S.C.E. 7-98 STANDARD. ADEQUACY OF SUPPORTING STRUCTURAL MEMBERS SHALL BE REVIEWED BY THE STRUCTURAL PLANS EXAMINER OF THE CORRESPONDING BUILDING DEPARTMENT ON A JOB SPECIFIC BASIS.



4. ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION 6063-T6 ALLOY AND TEMPER.

5. ALL ALUMINUM SHEET SHALL BE ALUMINUM ASSOCIATION 5005-H16 ALLOY AND HARDNESS.

6. ALL SCREWS TO BE STAINLESS STEEL AISI SERIES 304 OR 316 STRAIN HARDENED OR HEAT TREATED WITH MIN. TENSILE LOAD CAPACITY Tu=4275# & MIN. ULTIMATE SHEAR LOAD CAPACITY Su=2700#, PER ASTM B-593 & B-594.

7. ALL ALUMINUM POP RIVETS TO BE 5052 ALUMINUM ALLOY WITH ALUMINUM MANDREL.

8. BOLTS TO BE STAINLESS STEEL AISI SERIES 304 OR 316 WITH 50 ksi (Min.) YIELD STRENGTH AND 90 ksi TENSILE STRENGTH, PER ASTM B-593 AND B-594.

9. GLAZING SYSTEM SHALL COMPRISE OF THE FOLLOWING COMPONENTS:

9.1. ALL GASKETS TO BE MADE OF EXTRUDED SILICONE, WITH DUROMETER HARDNESS=55, ULTIMATE TENSILE=1400 psi MIN., ELONGATION=334% MIN.

9.2. ALL BACKER RODS TO BE TUNDRA FOAM POLYURETHANE MANUFACTURED BY INDUSTRIAL THERMO POLYMERS LIMITED, WITH THE FOLLOWING PHYSICAL PROPERTIES:

POLYURETHANE QUALITY	ASTM 1564
NON-COMPRESSED DENSITY	2-3 lbs/cu. ft.
COMPRESSED DENSITY	4-6 lbs/cu. ft.
COMPRESSION DEFLECTION	1 psi @ 25%.
ELONGATION	130%.
TENSILE STRENGTH	15 lbs MIN.
TEMPERATURE RANGE (INTERMITTENT)	−70° TO 450°F.

9.3. STRUCTURAL SILICONE FOR GLASS SEALANT AT RAFTERS TO BE DOW CORNING 995 SILICONE STRUCTURAL ADHESIVE.

9.4. ALL BACKER ROD JOINTS SEALANT TO BE DOW CORNING 791 SILICONE PERIMETER SEALANT.

9.5. ALL GLAZING BLOCKS TO BE NEOPRENE OR RUBBER MATERIAL WITH A DUROMETER HARNESS=90.

10. ALL FLASHING TO BE LAPPED 3" AND SET ON A BED OF SILICONE SEALANT.

11. GLASS TO BE SENTRY GLASS PLUS, MIAMI-DADE COUNTY APPROVED NOA No: 01-1204.01, 9/16" THICK IMPACT RESISTANT LAMINATED GLASS, MANUFACTURED BY EI. DUPONT DENEMOURS, INC. Max. GLASS PANEL SIZE IS 48" x 100 5/16". (MAX. GLASS AREA = 33.4 FT^2 BETWEEN SUPPORTS), IT SHALL CONSIST OF 1/4" HEAT STRENGTHENED GLASS + 0.090" SENTRY GLASS PLUS INTERLAYER BY DUPONT + 1/4" HEAT STRENGTHENED GLASS.

12. ALL WELDING TO CONFORM TO THE AMERICAN WELDING SOCIETY A.W.S. D.1.2 1998 EDITION REGULATIONS. USE CERTIFIED WELDERS. USE ER-4043 OR ER-5356 ELECTRODES.

13. ALUMINUM MEMBERS IN CONTACT WITH CONCRETE SHALL BE PROTECTED ACCORDINGLY WITH SECTION 2003.8.4.4 OF THE 2001 EDITION OF THE FLORIDA BUILDING CODE.

14. ALUMINUM MEMBERS IN CONTACT WITH STEEL SHALL BE PROTECTED ACCORDINGLY WITH SECTION 2003.8.4.2 OF THE 2001 EDITION OF THE FLORIDA BUILDING CODE.

15. PAINT, FINISH AND COLOR TO BE SELECTED BY ARCHITECT OF RECORD FOR THE JOB IN COORDINATION W/ METCOE, AND SHALL COMPLY WITH AAMA 1600 SPECIFICATION, SECTION 3.11.

16. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE THE SKYLIGHT IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE, SEE NOTE 3 ABOVE.
CONTRACTOR IS TO SEAL/CAULK ALL SKYLIGHT COMPONENT EDGES AS INDICATED ON THIS DRAWING TO PREVENT WIND/RAIN INTRUSION.

17. SKYLIGHT INSTALLATION SHALL COMPLY WITH SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.

18. (a) THE PRODUCT APPROVAL DOCUMENT (P.A.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT.

(b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT BASED ON THIS PRODUCT APPROVAL PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.
CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.

(c) THIS PRODUCT APPROVAL DOCUMENT WILL BE CONSIDERED INVALID IF MODIFIED.

(d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE PROFESSIONAL OF RECORD (P.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.A.D. PROFESSIONAL OF RECORD, ACTING AS DELEGATED ENGINEER TO THE P.A.D. ENGINEER, SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

(e) THIS P.A.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER THAT PREPARED IT.

F.B.C.(H.V.H.Z.)/MIAMI-DADE COUNTY

Approved as complying with the Florida Building Code
Date 05/19/2005
NOA# 05-0104.11
Miami-Dade Product Control
Division
By Henry A. Mahr
MIAMI-DADE COUNTY

APR 2 5 2005
P.E. SEAL/SIGNATURE/DATE

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 , Fax : (305)871-1531
EB-0008719
WALTER A. TILLIT Jr. P. E.
FLORIDA Lic. # 44167

16'-0" Max. WIDE IMPACT RESISTANT GABLED SKYLIGHT

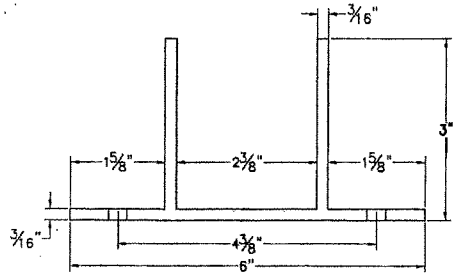
AS SHOWN *SCALE*

METCOE
SKYLIGHT SPECIALTY CO., INC.
1716 WEST 135th STREET
GARDENA, CA. 90249
FLORIDA DISTRIBUTOR: SKYLIGHT CONCEPTS

10/15/04 *DATE*

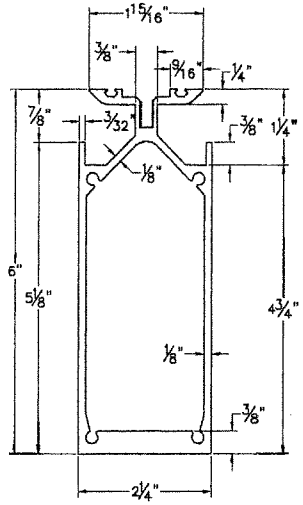
04-138 DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	GENERAL	4/22/05	5		
2	-	-	6		

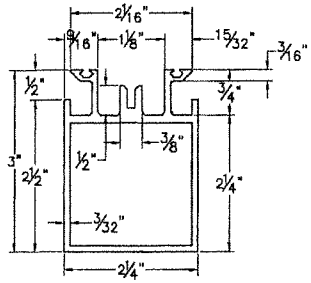


BRACKET #116

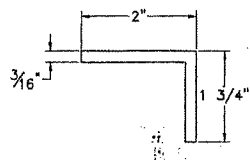
MIN. 3" LONG OR AS NEEDED BY DESIGN.
(SEE SHEET 4 OF 7 FOR DETAILS).
SEE NOTE 1A/1.



RIDGE RAFTER #38



X-MEMBER #118



ANGLE CLIP
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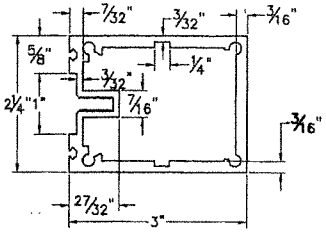

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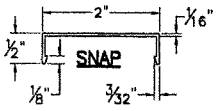
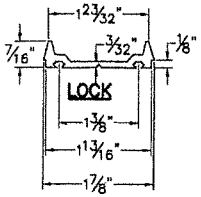
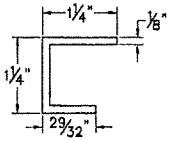
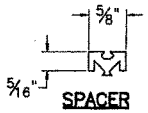




#41A & B
ALUM. LOCK CAP &
ALUM. SNAP CAP.



SILL GLASS CAP



SPACER
EXTRUDED ALUM.
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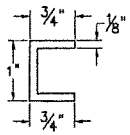

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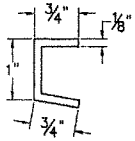

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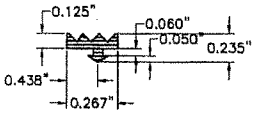

GASKET
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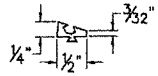
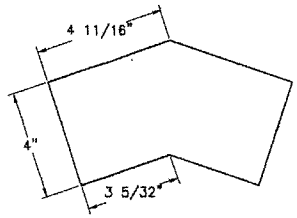
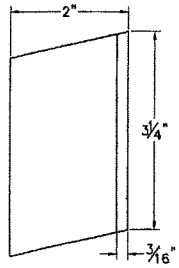


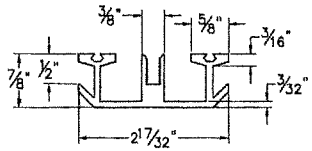
PITCH ADJ
EXTRUDED ALUM.



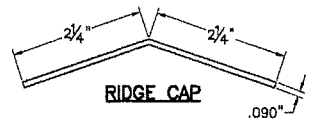
1/4" ALUM PLATE



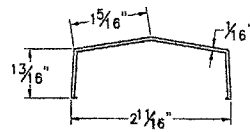
ANGLE CLIP



X-MEMBER #14



RIDGE CAP



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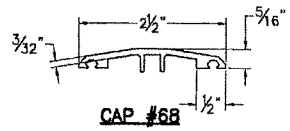
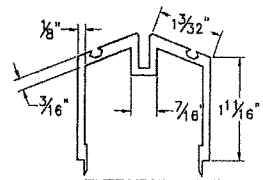


CAP #68



EXTRUDED ALUM.
PITCH ADJUSTER #46

COMPONENTS

SCALE = 1/2"=1"

F.B.C.(H.V.H.Z.)/MIAMI-DADE COUNTY

Approved as complying with the
Florida Building Code
Date 05/19/2005
NOA# 05-0124.01
Miami Dade Product Control
Division
By

MIAMI-DADE COUNTY

APR 25 2005
P.E. SEAL/SIGNATURE/DATE

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 ; Fax : (305)871-1531
EB-0006719
WALTER A. TILLIT Jr. P. E.
FLORIDA Lic. # 44167

16'-0" Max. WIDE IMPACT RESISTANT
GABLED SKYLIGHT

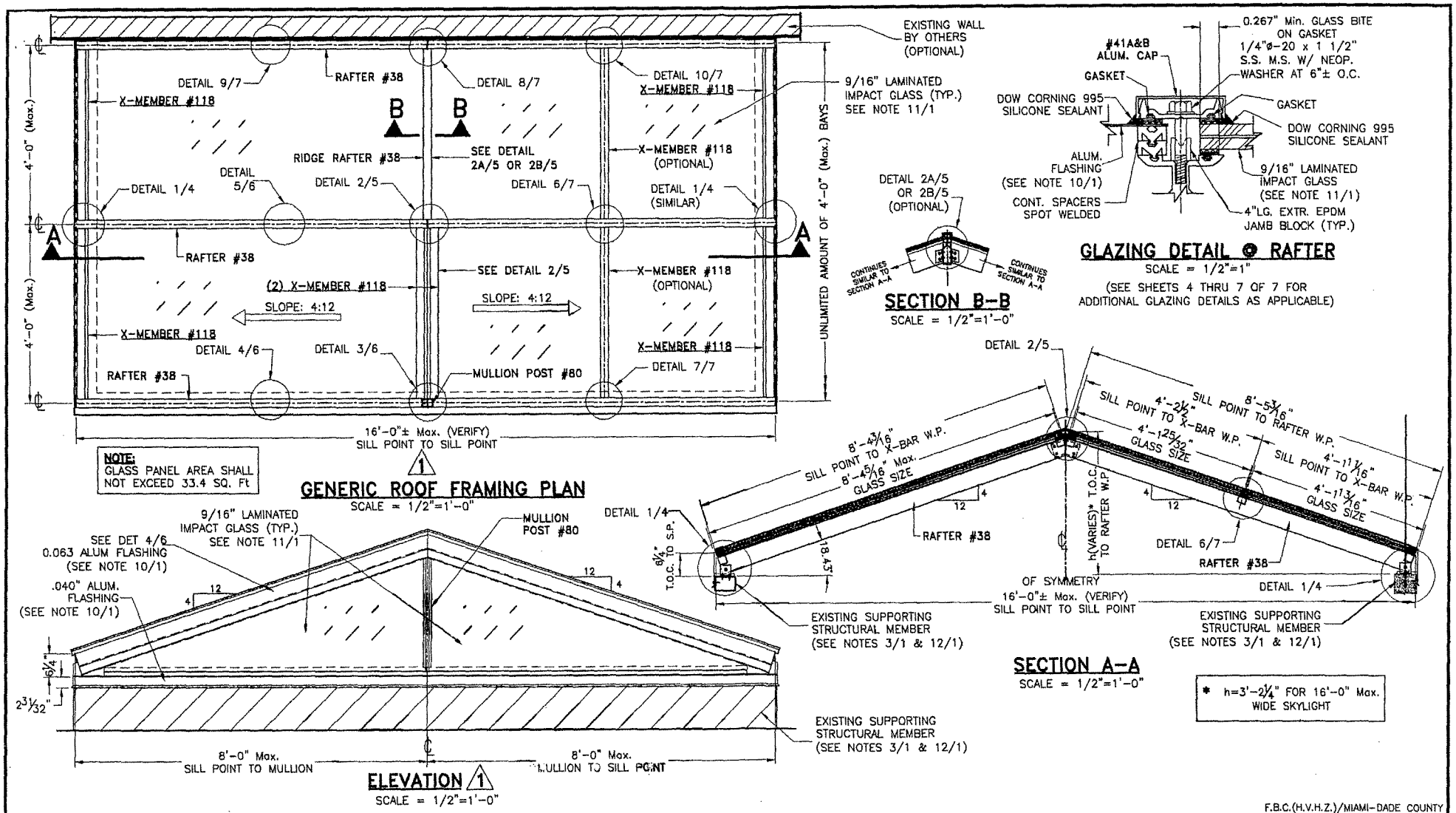
AS SHOWN
SCALE

METCOE
SKYLIGHT SPECIALTY CO., INC.
1715 WEST 135th STREET
GARDENA, CA. 90249
FLORIDA DISTRIBUTOR: SKYLIGHT CONCEPTS

10/15/04
DATE

04-138
DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	GENERAL	1/28/05	3		
2	-	-	4		



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Date 05/19/2005
NOA# 05-0104.01
Miami Dade Product Control Division
By Herbert A. Martin
MIAMI-DADE COUNTY

APR 25 2005
P.E. SEAL/SIGNATURE/DATE

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
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16'-0" Max. WIDE IMPACT RESISTANT GABLED SKYLIGHT

AS SHOWN — SCALE

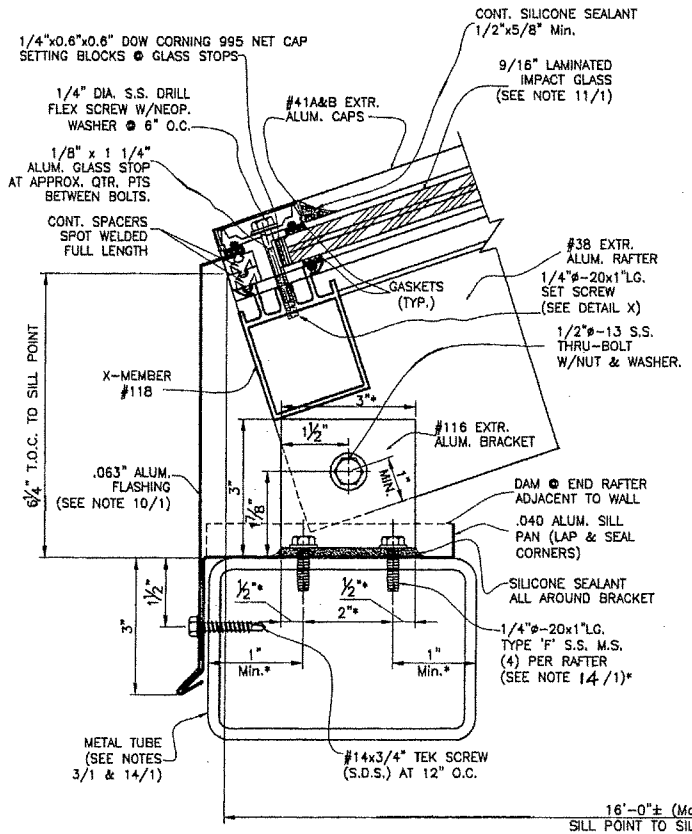
METCOE
SKYLIGHT SPECIALTY CO., INC.
1715 WEST 135th STREET
GARDENA, CA. 90249
FLORIDA DISTRIBUTOR: SKYLIGHT CONCEPTS

10/15/04 — DATE

04-138 — DRAWING No

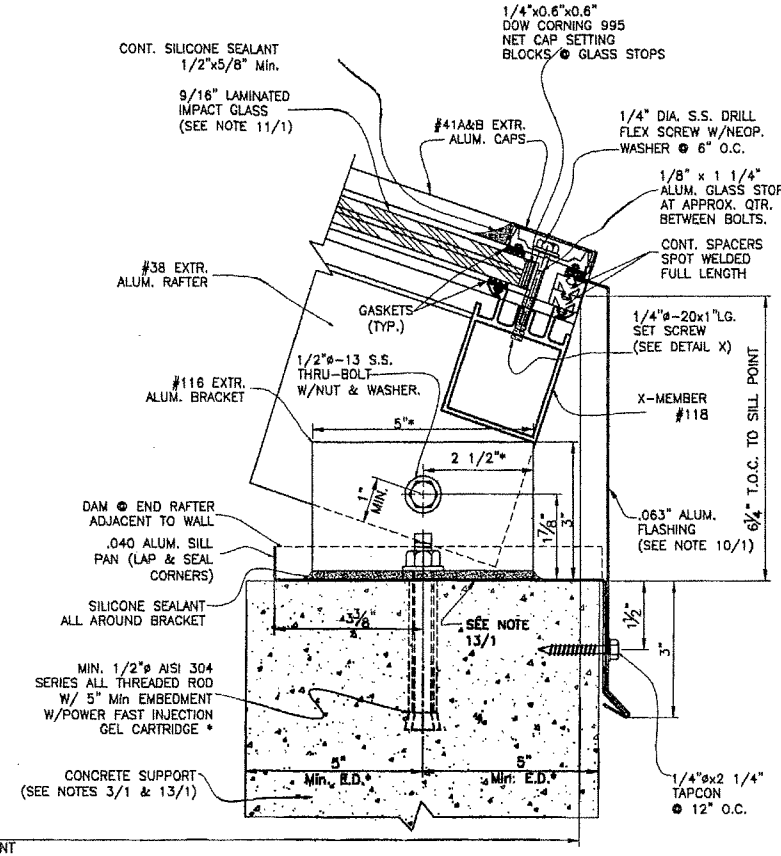
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	GENERAL	4/22/05	3		
2	-	-	4		

SHEET 3 OF 7



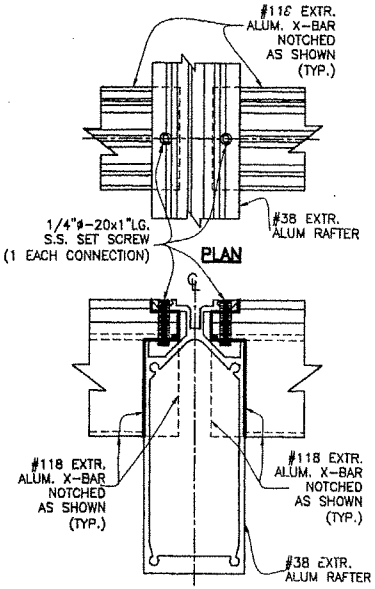
DETAIL 1 TO METAL

SCALE = 3/8"=1"



DETAIL 1 TO CONCRETE

SCALE = 3/8"=1"



DETAIL X

SCALE = 3/8"=1"

* THESE ANCHORS AND BRACKET LENGTHS ARE ONLY REQUIRED FOR ±75 psf. DESIGN LOAD AT ALL AREAS OF A 16' WIDE GABLE SKYLIGHT W/WALLS. ACTUAL ANCHOR TYPE, SIZE, EMBEDMENT AND EDGE DISTANCE AS WELL AS BRACKET LENGTH WILL VARY WITH EACH APPLICATION. SEE GENERAL NOTE 17 ON SHEET 2.

F.B.C.(H.V.H.Z.)/MIAMI-DADE COUNTY

Approved as complying with the Florida Buiding Code
Date 05/19/2005
NOA# 05-0104.01
Miami Dade Product Control Division
By

MIAMI-DADE COUNTY

APR 25 2005
P.E. SEAL/SIGNATURE/DATE

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. St., Ste. 303, VIRGINIA GARDENS, FL. 33166
Phone : (305)871-1530 , Fax : (305)871-1531
EB-0006719
WALTER A. TILLIT Jr. P. E.
FLORIDA Lic. # 44167

16'-0" Max. WIDE IMPACT RESISTANT GABLED SKYLIGHT

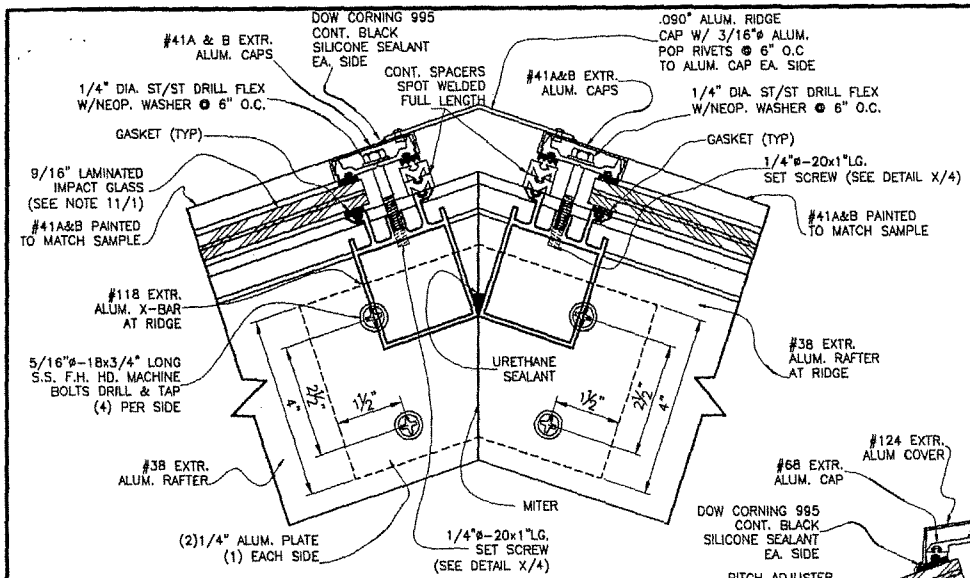
AS SHOWN SCALE

METCOE
SKYLIGHT SPECIALTY CO., INC.
1715 WEST 135th STREET
GARDENA, CA. 90249
FLORIDA DISTRIBUTOR: SKYLIGHT CONCEPTS

10/15/04 DATE

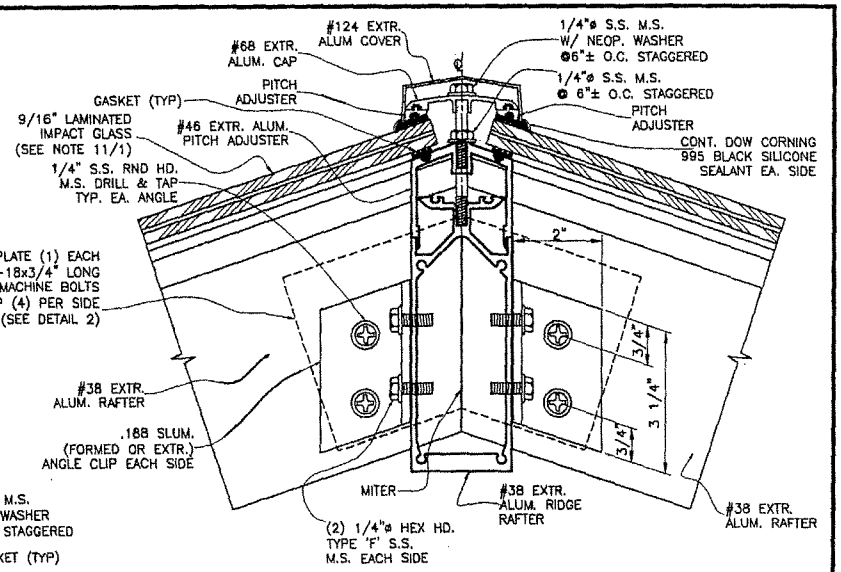
04-138 DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	GENERAL	4/22/05	3		
2	-	-	4		



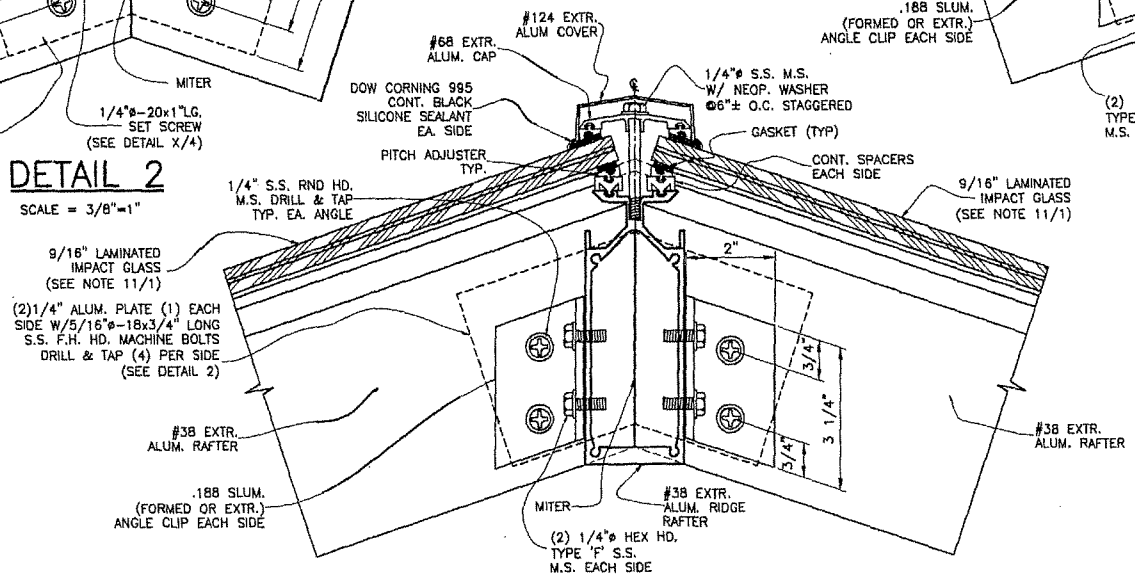
DETAIL 2

SCALE = 3/8"=1"



DETAIL 2A

SCALE = 3/8"=1"



DETAIL 2B

SCALE = 3/8"=1"

F.B.C.(H.V.H.Z.)/MIAMI-DADE COUNTY

Approved as complying with the Florida Building Code
Date 05/19/2005
NOA# 05-0564.01
Miami-Dade Product Control Division
By

MIAMI-DADE COUNTY

APR 26 2005
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TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL. 33166
Phone : (305)871-1530 . Fax : (305)871-1531
EB-0006718
WALTER A. TILLIT Jr. P. E.
FLORIDA Lic. # 44167

16'-0" Max. WIDE IMPACT RESISTANT GABLED SKYLIGHT

AS SHOWN
SCALE

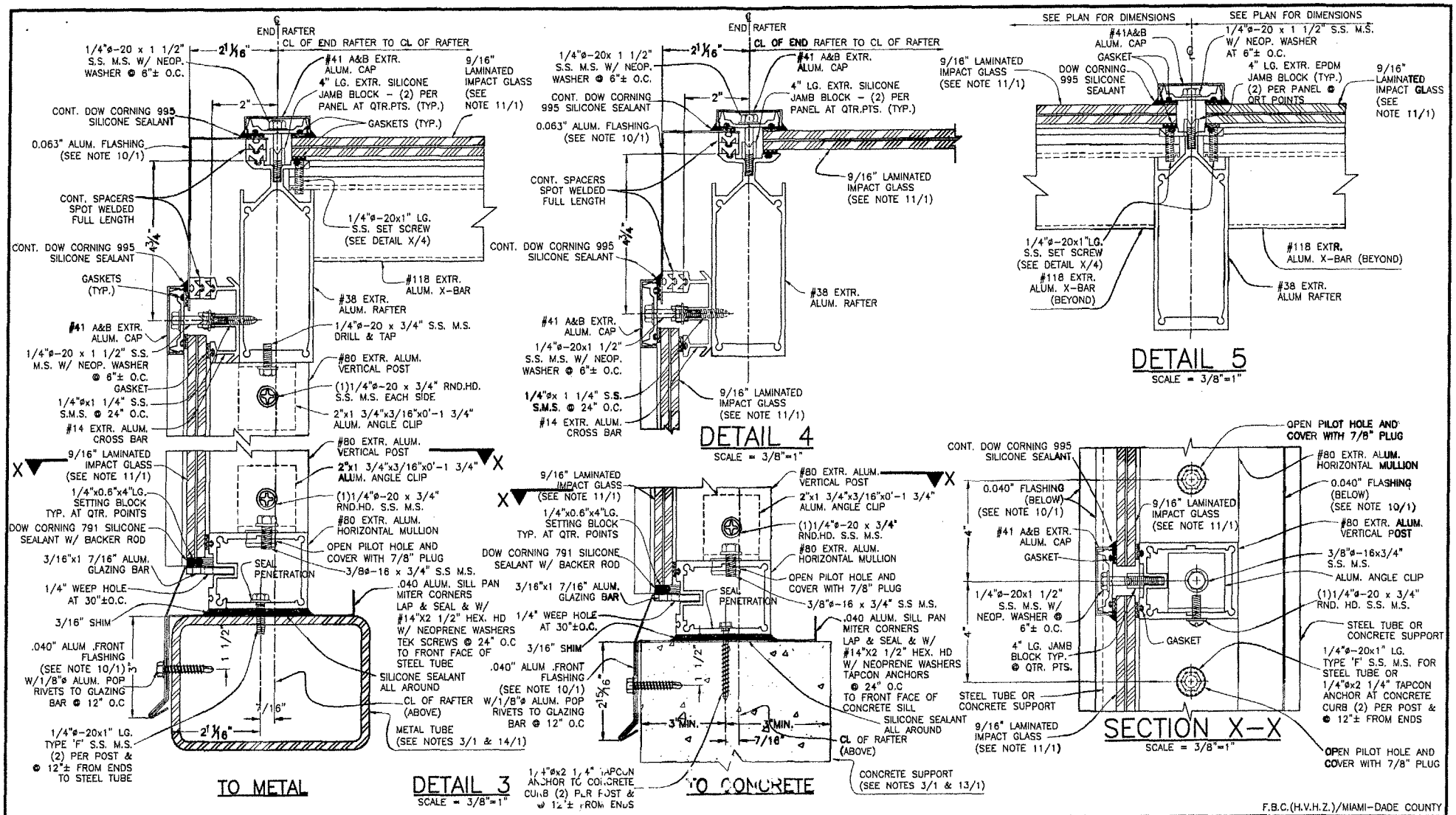
METCOE
SKYLIGHT SPECIALTY CO., INC.
1715 WEST 135th STREET
GARDENA, CA. 90249
FLORIDA DISTRIBUTOR: SKYLIGHT CONCEPTS

10/15/04
DATE

04-138
DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	GENERAL	4/22/05	3		
2	-	-	4		

SHEET 5 OF 7



F.B.C.(H.V.H.Z.)/MIAMI-DADE COUNTY

Approved as complying with the Florida Building Code
Date 05/12/2005
NOA# 05-0104.01
Miami-Dade Product Control
Division
By
MIAMI-DADE COUNTY

APR 25 2005
P.E. SEAL/SIGNATURE/DATE

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6356 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL. 33166
Phone : (305)871-1530 ; Fax : (305)871-1531
EB-0006719
WALTER A. TILLIT Jr. P. E.
FLORIDA Lic. # 44167

16'-0" Max. WIDE IMPACT RESISTANT GABLED SKYLIGHT

AS SHOWN
SCALE

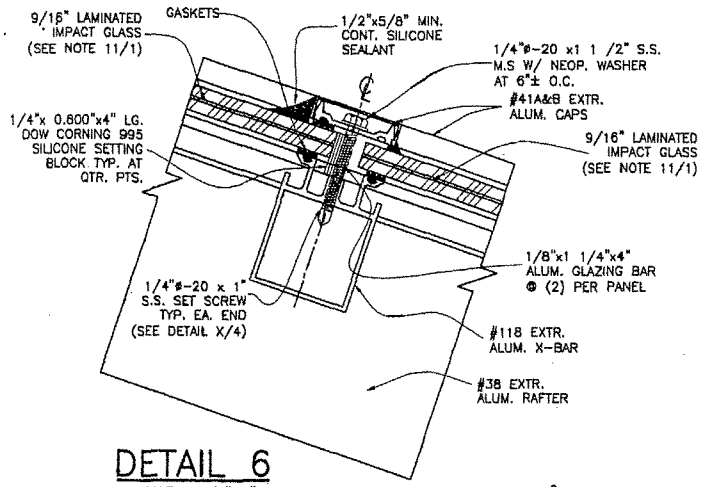
METCOE
SKYLIGHT SPECIALTY CO., INC.
17115 WEST 135th STREET
GARDENA, CA. 90249
FLORIDA DISTRIBUTOR: SKYLIGHT CONCEPTS

10/15/04
DATE

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	GENERAL	1/22/05	3		
2	-	-	4		

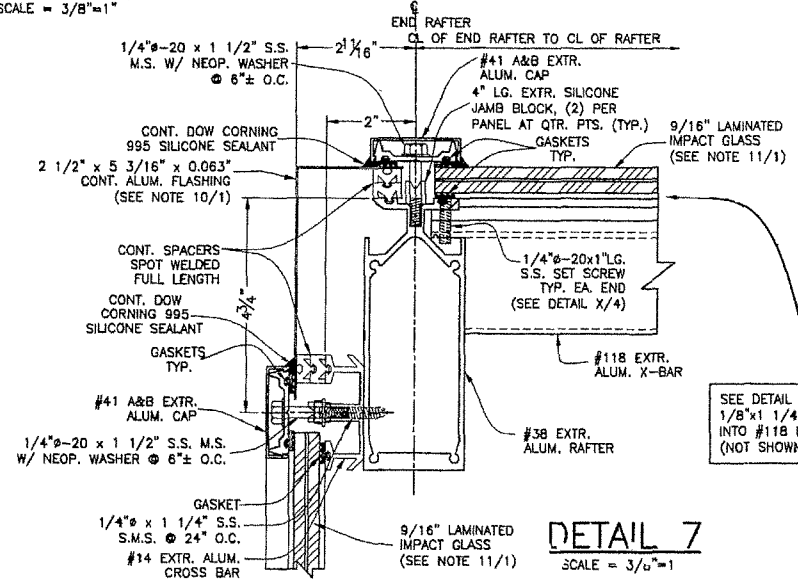
04-138
DRAWING No

SHEET 6 OF 7



DETAIL 6

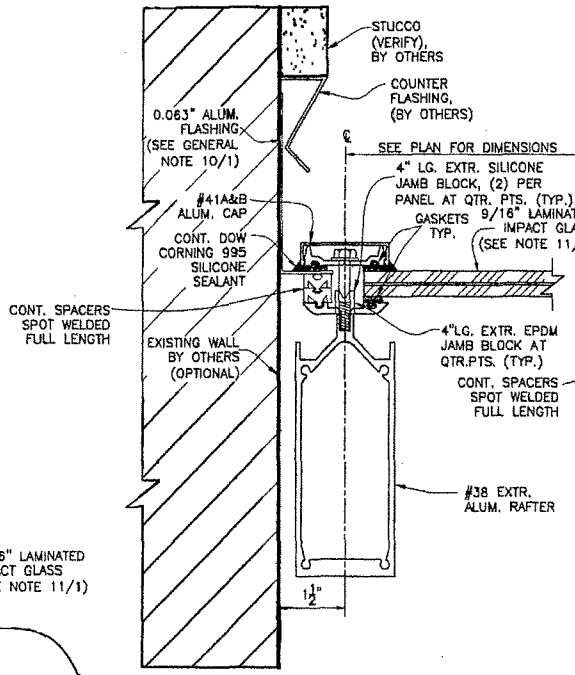
SCALE = 3/8"=1"



DETAIL 7

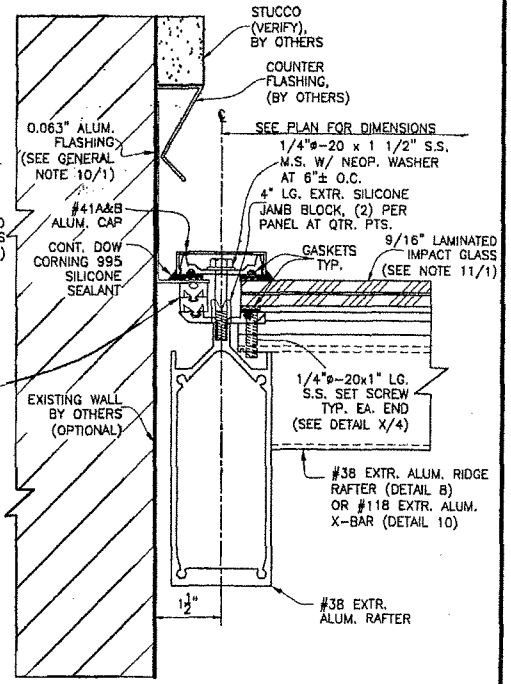
SCALE = 3/8"=1

SEE DETAIL 6 FOR INSTALLATION OF 1/8"x1 1/4" ALUM. GLAZING BAR INTO #118 EXTR. ALUM. X-BAR (NOT SHOWN HERE FOR CLARITY).



DETAIL 9

SCALE = 3/8"=1"



DETAILS 8 & 10

SCALE = 3/8"=1"

F.B.C.(H.V.H.Z.)/MIAMI-DADE COUNTY

Approved as complying with the Florida Building Code
Date 05/19/2005
NOA# 05-0119.01
Miami-Dade Product Control Division
By

MIAMI-DADE COUNTY

APR 26 2005

P.E. SEAL/SIGNATURE/DATE

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EB-0005719
WALTER A. TILLIT Jr. P. E.
FLORIDA Lic. # 44167

16'-0" Max. WIDE IMPACT RESISTANT GABLED SKYLIGHT

AS SHOWN — SCALE

METCOE
SKYLIGHT SPECIALTY CO., INC.
1716 WEST 135th STREET
GARDENA, CA. 90249
FLORIDA DISTRIBUTOR: SKYLIGHT CONCEPTS

10/15/04 — DATE

04-138 — DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	GENERAL	4/22/05	3		
2	-	-	4		

SHEET 7 OF 7

Wind Calculations - Per ASCE 7-02

Building Description

County:	Miami-Dade		
Importance Category:	I =	II	
Wind Exposure:	Exp =	C	
Length of SkyLight:	L =	6.5 ft	parallel to ridge
Width of SkyLight:	W or B =	5.5 ft	perpendicular to ridge
Mean Roof Height:	H =	10 ft	
Roof Pitch:	Slope =	0.25 in	
	φ =	14.04 °	

Calculations

Wind Speed:	V =	150 mph	
Importance Factor:	I =	1.00	ASCE 7-02 (Table 6-1)
Topography Factor:	K_1 =	0	ASCE 7-02 (Section 6.5.7)
	K_2 =	0	
	K_3 =	0	
	K_{zt} =	1	
Directionality Factor:	K_d =	0.85	ASCE 7-02 (Table 6-4)
		1.00	(Uplift Calculation)
Exposure Coefficient:	K_z =	0.85	ASCE 7-02 (Table 6-3)
Terrain Exposure Constant:	α =	9.5	ASCE 7-02 (Table 6-2)
	z_g =	900	
	z_{min} =	15	
Applicable Internal Pressure Coefficient:	GC_{pi} =	0.18	ASCE 7-02 (Figure 6-5)
Enclosed Building		-0.18	
Velocity Pressure:	q_z =	41.56 psf	ASCE 7-02 (Equation 6-15)

Pressures for Main Wind Force Resisting System

(For Connection Analysis)

Walls

G = 0.85 ASCE 7-02 (Section 6.5.8)

L/B = 1.18

C_p = 0.8 Windward ASCE 7-02 (Figure 6-4)

-0.46 Leeward

-0.7 Sidewall

Worst Case

Pressures		Total
28.26	7.48	35.74
-16.38	-7.48	-23.86
-24.73	-7.48	-32.21

p_{wall} = 35.74 psf (max) p_{wall} diaphragm = 44.64 psf (Windward + Leeward)

Roof

q = 48.90 psf (uplift)

G = 0.85 ASCE 7-02 (Section 6.5.8)

H/L = 1.54

H/B = 1.82

C_p = -1.3 Windward ASCE 7-02 (Figure 6-6)

-0.7 Leeward

-1.3 Parallel to Ridge

0.8 Overhang ASCE 7-02 (Section 6.5.11.4.1)

Worst Case

Pressures		Total
-54.03	-8.80	-62.83
-29.09	-8.80	-37.89
-54.03	-8.80	-62.83

Resisting Dead Load = 10 psf

	Main Roof	Overhang
p (gross) psf	62.83	47.92
p (net) psf	52.83	37.92

Pressures for Components & Cladding

(For Member Analysis)

Walls (N/A)

p = 41.56 psf

A = 10.00 ft^2 (Tributary Area) ASCE 7-02 (Figure 6-11A)

GC_p = -1.1 Zone 4-

-1.4 Zone 5-

1 Zone 4 & 5+

	Zone 4	Zone 5	Zone 4 & 5
p psf	-53.20	-65.67	49.04

Roof **Gable Roof 7° < θ < 27°**

p = 48.90 psf (uplift)

A = 18.2 ft^2 (Tributary Area) ASCE 7-02 (Figure 6-11C)

GC_p = -0.87 Zone 1

-1.6 Zone 2

-2.43 Zone 3

0.46 Zone 1,2 & 3

Resisting Dead Load = 10 psf

	Zone 1	Zone 2	Zone 3	Zone 1, 2, & 3
p (gross) psf	-51.34	-87.03	-127.62	31.29
p (net) psf	-41.34	-77.03	-117.62	21.29

Extrusion Type = 60-1

Extrusion ID = SkyLight

Properties:

I_x =	1.24	in^4	b =	2.25	in
S =	0.80	in^3	h =	2.3125	in
A =	1.1904	in^2	b_{inner} =	2	in
E =	10100	ksi	h_{inner} =	2.0625	in
J =	1.25	in	t_1 =	0.125	in
I_y =	0.68	in^4	t_2 =	0.125	in
k =	1		A_w =	0.546875	in^2
r =	0.85	in	A_f =	0.53125	in^2

$Deflection_{(Allowable)}$ = 0.18 in $\frac{L}{240}$

Calculations:

Wind Load = -87.03 psf (For Member Analysis) Wind Load = 62.83 psf (For Connection Analysis)

Extrusion Load = 2.75 ft (Contributing Width)

Extrusion Span = 6.50 ft

L_b = 3.25 ft

Static Length = 3.50 ft

P_{Axial} = 996.00 lb (Calculated Using Dr. Frame 2.0 See attached printouts)

f_a = 0.84 ksi

W = 19.95 lb/in (For Member Analysis) W = 14.40 lb/in (For Connection Analysis)

M = 8904.00 in-lb (Calculated Using Dr. Frame 2.0 See attached printouts)

$F_{b(Calculated)}$ = 15.00 ksi $S_{x(Required)}$ = 0.59 in^3

Deflection = 0.06 in **DEFLECTION REQUIREMENT MET** $\Delta = \frac{5wL^4}{384EI}$

Case 1: N/A $\frac{f_a}{F_a} + \frac{C_{mx} f_{bx}}{F_{bx}(1 - f_a/F_{ex})} + \frac{C_{my} f_{by}}{F_{by}(1 - f_a/F_{ey})} \le 1.0$

Case 2: N/A $\frac{f_a}{F_{ao}} + \frac{f_{bx}}{F_{bx}} + \frac{f_{by}}{F_{by}} \le 1.0$

Case 3: MEMBER WORKS $\frac{f_a}{F_a} + \frac{f_{bx}}{F_{bx}} + \frac{f_{by}}{F_{by}} \le 1.0$

Case 4: MEMBER WORKS $f_b < F_b$

Connection Analysis - Worst Case

Connection 1/2 for SkyLight

Withdrawl

Uplift = 692.00 lb

Bolt Size = 3/8" 3" Min. Embedment
Lag Bolt

Number of Bolts = 2

Allowable Withdrawl = 352 lb/in NDS-1991 (Table 9.2A)

Penetration = 3 in

Withdrawl Capacity$_{(Allowable)}$ = 1056 lb

Withdrawl Capacity$_{(Actual)}$ = 346.00 lb

CONNECTION WORKS

Horizontal Reaction = 381.00 lb

Bolt Size = 3/8" 3" Min. Embedment
Lag Bolt

Number of Bolts = 2

Shear Strength = 270 lb NDS-1991 (Table 9.3B)

Load Duration Factor (C_D) = 1.6 NDS-1991 (Section 7.3.2)

Safety Factor = 1 If Safety Factor = 1, Allowable Loads were provided by Manufacturer

Shear Strength$_{(Allowable)}$ = 432.00 lb

Shear Load$_{(Actual)}$ = 190.50 lb

CONNECTION WORKS

$$\frac{Withdrawl_{Actual}}{Withdrawl_{Allowable}} + \frac{Shear_{Actual}}{Shear_{Allowable}} \le 1.0 \qquad \frac{346.00}{1056} + \frac{190.50}{432.00} = \mathbf{0.768624}$$

CONNECTION WORKS

Connection 1/2 for SkyLight

Uplift = 692.00 lb

Bolt Size = 3/8"
S.S. Thru Bolt

Number of Bolts = 1

Shear Strength = 2560 lb Aluminum Design Manual 2005 (Table 5-5)

Safety Factor = 2.34 If Safety Factor = 1, Allowable Loads were provided by Manufacturer

$Shear\ Strength_{(Allowable)}$ = 1094.02 lb

$Shear\ Load_{(Actual)}$ = 346.00 lb (Double Shear so divide by 2)

CONNECTION WORKS

Horizontal Reaction = 381.00 lb

Bolt Size = 3/8"
S.S. Thru Bolt

Number of Bolts = 1

Shear Strength = 2560 lb Aluminum Design Manual 2005 (Table 5-5)

Safety Factor = 2.34 If Safety Factor = 1, Allowable Loads were provided by Manufacturer

$Shear\ Strength_{(Allowable)}$ = 1094.02 lb

$Shear\ Load_{(Actual)}$ = 190.50 lb (Double Shear so divide by 2)

CONNECTION WORKS

$$\frac{Shear_{Actual}}{Shear_{Allowable}} + \frac{Shear_{Actual}}{Shear_{Allowable}} \leq 1.0 \qquad \frac{346.00}{1094.02} + \frac{190.50}{1094.02} = \mathbf{0.490395}$$

CONNECTION WORKS

GAINER-Member.DRF Rept

Automatically Generated Dr.Frame 1.1 Report File

File name: GAINER-Member.DRF
Exported at Time: 11:20; Date: 3/14/2006

--- Comments ---
Enter your comments here.

--- Units ---

Length	Displ	Rotation	Emod	MomInertia	Force	Moment	DistLoad	CSArea
ft	in	deg	ksi	in^4	lb	ft-lb	lb/ft	in^2

MODEL DATA

--- Materials (2) ---

ID	E
1	29000
2	10100

--- Cross Sections (16)---

ID	Area	Ix	Iy	Zx	Zy	Sx	Sy	tw	bf	d
Custom-16	0.0992	1.236	1.236	0.804	180	1e-06	1e-06	0.0208333	0.333333	0.192708
Custom-15	0.0992	250	250	180	180	1e-06	1e-06	0.0208333	0.333333	1
Custom-12	0.1485	31.57	31.57	7.27	180	1e-06	1e-06	0.0208333	0.333333	0.59375
Custom-11	0.299167	31.57	31.57	7.27	180	1e-06	1e-06	0.0208333	0.333333	0.59375
Custom-7	0.14	5.2	5.2	2.08	180	1e-06	1e-06	0.0208333	0.333333	0.416667
Custom-4	0.119792	2.98	2.98	1.49	180	1e-06	1e-06	0.0208333	0.333333	0.333333
Custom-3	0.833333	250	250	180	180	1e-06	1e-06	0.0208333	0.333333	1
Custom-2	0.443	63.79	63.79	11.9	180	1e-06	1e-06	0.0208333	0.333333	0.698333
Custom-3	0.1485	4.187	4.187	1.8246	180	1e-06	1e-06	0.0208333	0.333333	0.302083
Custom-5	0.244792	31.5	31.5	6.3	180	1e-06	1e-06	0.0208333	0.333333	0.302083
Custom-6	0.244792	31.5	31.5	6.3	180	1e-06	1e-06	0.0208333	0.333333	0.833333
Custom-8	0.270833	9.44	9.44	3.78	180	1e-06	1e-06	0.0208333	0.333333	0.416667
Custom-9	0.2275	13.379	13.379	3.889	180	1e-06	1e-06	0.0208333	0.333333	0.4375
Custom-10	0.2275	13.379	13.379	2.73	180	1e-06	1e-06	0.0208333	0.333333	0.4375
Custom-13	0.140625	5.2041	5.2041	1.8246	180	1e-06	1e-06	0.0208333	0.333333	0.302083
Custom-14	0.140625	5.2041	5.2041	2.08164	180	1e-06	1e-06	0.0208333	0.333333	0.416667

--- Joints (3)---

ID	x	y
O	1	-11
N	5	-14
M	-3	-14

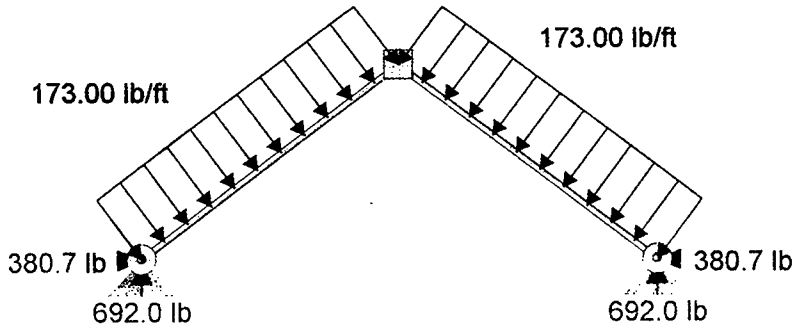
--- Members (2)---

MemberID	Length	JointFixities	MaterialID	CrossSectionID	Misfit
O-N	5	fixed-free2	Custom-16	0	
M-O	5	free-fixed2	Custom-16	0	

--- Supports (2)---

ID	AppliedToID	RelativeDist	SupportType	AssocDirection	PrescribedTranslation-x	-y	PrescrRot-z
1	N	NA	pinned	0	1	0	0	0
2	M	NA	pinned	0	1	0	0	0

Load Combination: Scratch: 1.00S



GAINER-Connection.DRF Rept

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--- Comments ---
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--- Units ---

Length	Displ	Rotation	Emod	MomInertia	Force	Moment	DistLoad	CSArea
ft	in	deg	ksi	in^4	lb	ft-lb	lb/ft	in^2

MODEL DATA

--- Materials (2) ---

ID	E
1	29000
2	10100

--- Cross Sections (16)---

ID	Area	Ix	Iy	Zx	Zy	Sx	Sy	tw	bf	d
Custom-16	0.0992	1.236	1.236	0.804	180	1e-06	1e-06	0.0208333	0.333333	0.192708
Custom-15	0.0992	250	250	180	180	1e-06	1e-06	0.0208333	0.333333	1
Custom-12	0.1485	31.57	31.57	7.27	180	1e-06	1e-06	0.0208333	0.333333	0.59375
Custom-11	0.299167	31.57	31.57	7.27	180	1e-06	1e-06	0.0208333	0.333333	0.59375
Custom-7	0.14	5.2	5.2	2.08	180	1e-06	1e-06	0.0208333	0.333333	0.416667
Custom-4	0.119792	2.98	2.98	1.49	180	1e-06	1e-06	0.0208333	0.333333	0.333333
Custom-3	0.833333	250	250	180	180	1e-06	1e-06	0.0208333	0.333333	1
Custom-2	0.443	63.79	63.79	11.9	180	1e-06	1e-06	0.0208333	0.333333	0.698333
Custom-3	0.1485	4.187	4.187	1.8246	180	1e-06	1e-06	0.0208333	0.333333	0.302083
Custom-5	0.244792	31.5	31.5	6.3	180	1e-06	1e-06	0.0208333	0.333333	0.302083
Custom-6	0.244792	31.5	31.5	6.3	180	1e-06	1e-06	0.0208333	0.333333	0.833333
Custom-8	0.270833	9.44	9.44	3.78	180	1e-06	1e-06	0.0208333	0.333333	0.416667
Custom-9	0.2275	13.379	13.379	3.889	180	1e-06	1e-06	0.0208333	0.333333	0.4375
Custom-10	0.2275	13.379	13.379	2.73	180	1e-06	1e-06	0.0208333	0.333333	0.4375
Custom-13	0.140625	5.2041	5.2041	1.8246	180	1e-06	1e-06	0.0208333	0.333333	0.302083
Custom-14	0.140625	5.2041	5.2041	2.08164	180	1e-06	1e-06	0.0208333	0.333333	0.416667

--- Joints (3)---

ID	x	y
O	1	-11
N	5	-14
M	-3	-14

--- Members (2)---

MemberID	Length	JointFixities	MaterialID	CrossSectionID	Misfit
O-N	5	fixed-free2	Custom-16	0	
M-O	5	free-fixed2	Custom-16	0	

--- Supports (2)---

ID	AppliedToID	RelativeDist	SupportType	AssocDirection	PrescribedTranslation-x	-y	PrescrRot-z
1	N	NA	pinned	0	1	0	0	0
2	M	NA	pinned	0	1	0	0	0

--- Internal Hinges (2)---
ID ElementJoints_A-B RelativeDist SpringStiff

ACTIVE LOAD COMBINATION (Factored Loads)

--- Joint Loads (0)---

--- Member Point Loads (0)---

--- Distributed Loads (2)---

LoadSetID	StartMemberID	RelLoc	Force-x	-y	EndMemberID	RelLoc	Force-x	-y
Scratch Load	O-N	0	-103.8	-138.4	O-N	1	-103.8	-138.4
Scratch Load	M-O	0	103.8	-138.4	M-O	1	103.8	-138.4

RESULT DATA

Support Reactions

ID	Reaction_F-x	-y	M-z
1	-380.658	692	0
2	380.658	692	0

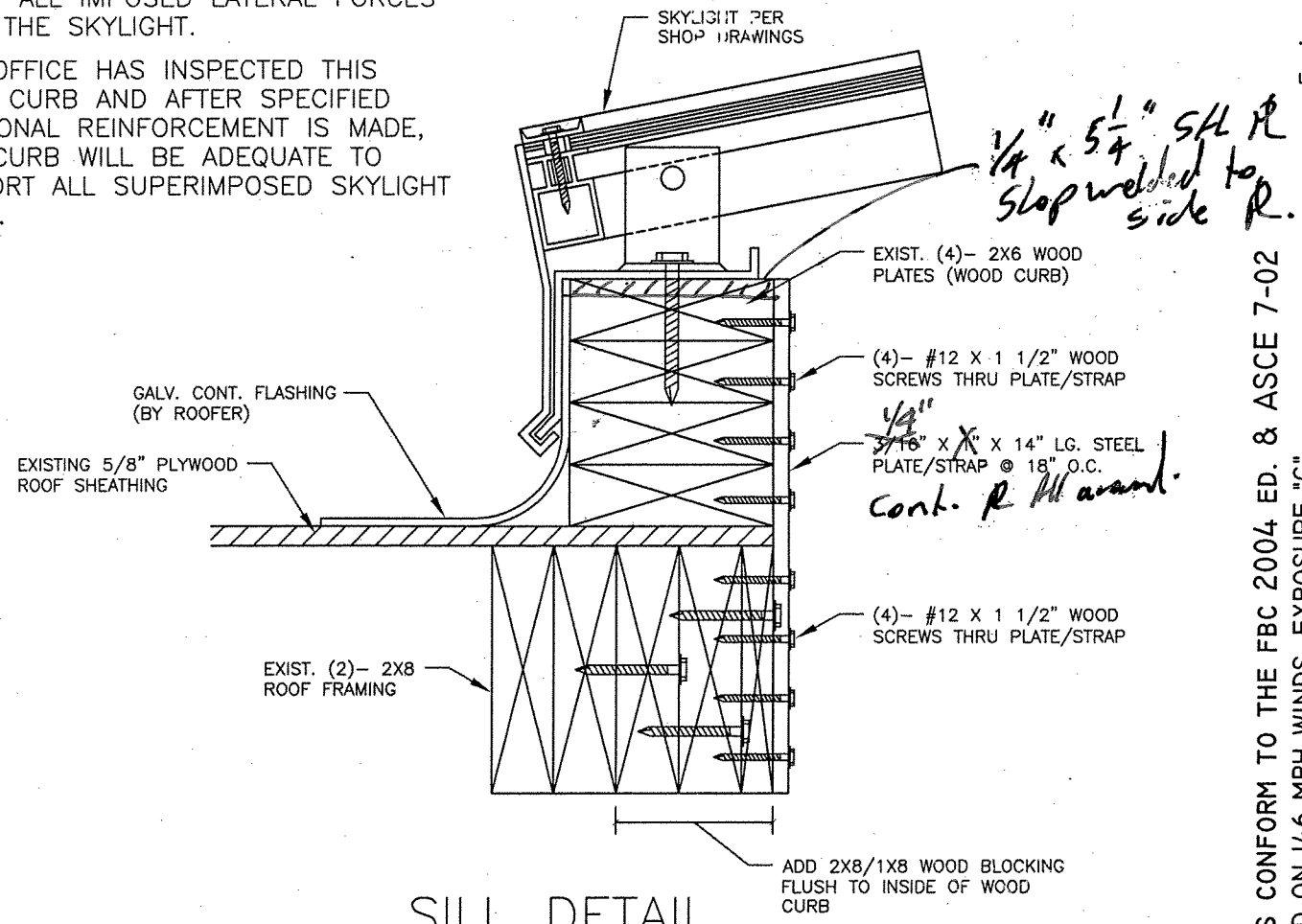
Table of Contents

Gainer Residence
5800 N. Bay Road
Miami Beach, Florida
Miami-Dade County

3/22/07

NOTES:

1. THIS SKYLIGHT CURB AS SHOWN WILL RESIST ALL IMPOSED LATERAL FORCES FROM THE SKYLIGHT.
2. THIS OFFICE HAS INSPECTED THIS WOOD CURB AND AFTER SPECIFIED ADDITIONAL REINFORCEMENT IS MADE, THIS CURB WILL BE ADEQUATE TO SUPPORT ALL SUPERIMPOSED SKYLIGHT LOADS.



SILL DETAIL
N.T.S.

6/12/07

THESE PLANS CONFORM TO THE FBC 2004 ED. & ASCE 7-02
DESIGN BASED ON 146 MPH WINDS, EXPOSURE "C"

Engineering Business CA 00009677

TARNOWSKI ENGINEERING, INC.
Civil ○ Structural ○ Architectural
7360 N.W. 5th Street
Plantation , FL. 33317
Phone (954) 727 – 2027 Fax (954) 727 – 9644

SILL DETAIL FOR:
GAINER RES.
5800 N. BAY RD.
MIAMI BEACH, FL.
CONTRACTOR: SKYLIGHT CONCEPTS

JOB #: GAINER
DATE: 06/11/07
SCALE: N.T.S.
DRAWN BY: W.T.F.
CHECKED BY:
SHEET NO. 1 OF 1

STRUCTURAL CALCULATIONS

(Based on Florda Building Code 2004 Edition)

For proposed SkyLight by:

Metcoe

Gainer Residence
5800 N. Bay Road
Miami Beach, Florida

Miami-Dade County

REVIEW OF STRUCTURAL SUBMITTAL PREPARED BY SPECIALTY ENGINEER

☐ No Exceptions Taken ☒ Revise and Resubmit
☐ Furnish as Corrected ☐ Rejected

Scope of Review Consists of:

1. Specified structural submittal has been furnished.
2. Submittal has been signed and sealed by a Florida Registered Professional.
3. Specialty Engineer has understood our intent and used this specified criteria (no detailed check of calculations was performed).
4. Configuration set forth in the structural submittal is consistent with that on the structural construction documents (no check of dimensions was performed except at interface area).

Date: 5/14/07 Reviewed By: TKK

SIDDIQ KHAN AND ASSOCIATES, INC.
7400 SW 50 Terrace, Suite 105
Miami, FL 33155

Box out Frame To Truss
Connection To Truss

Prepared by:

Constantino "Gus" Tarnowski, P.E.
Lic. No. 0050662
Tarnowski Enginering, Inc.
7360 N.W. 5 Street
Plantation, Florida 33317
954-727-2027/954-727-9644
gus@tarnowskieng.com

March 20, 2007

3/22/07

NOTES:

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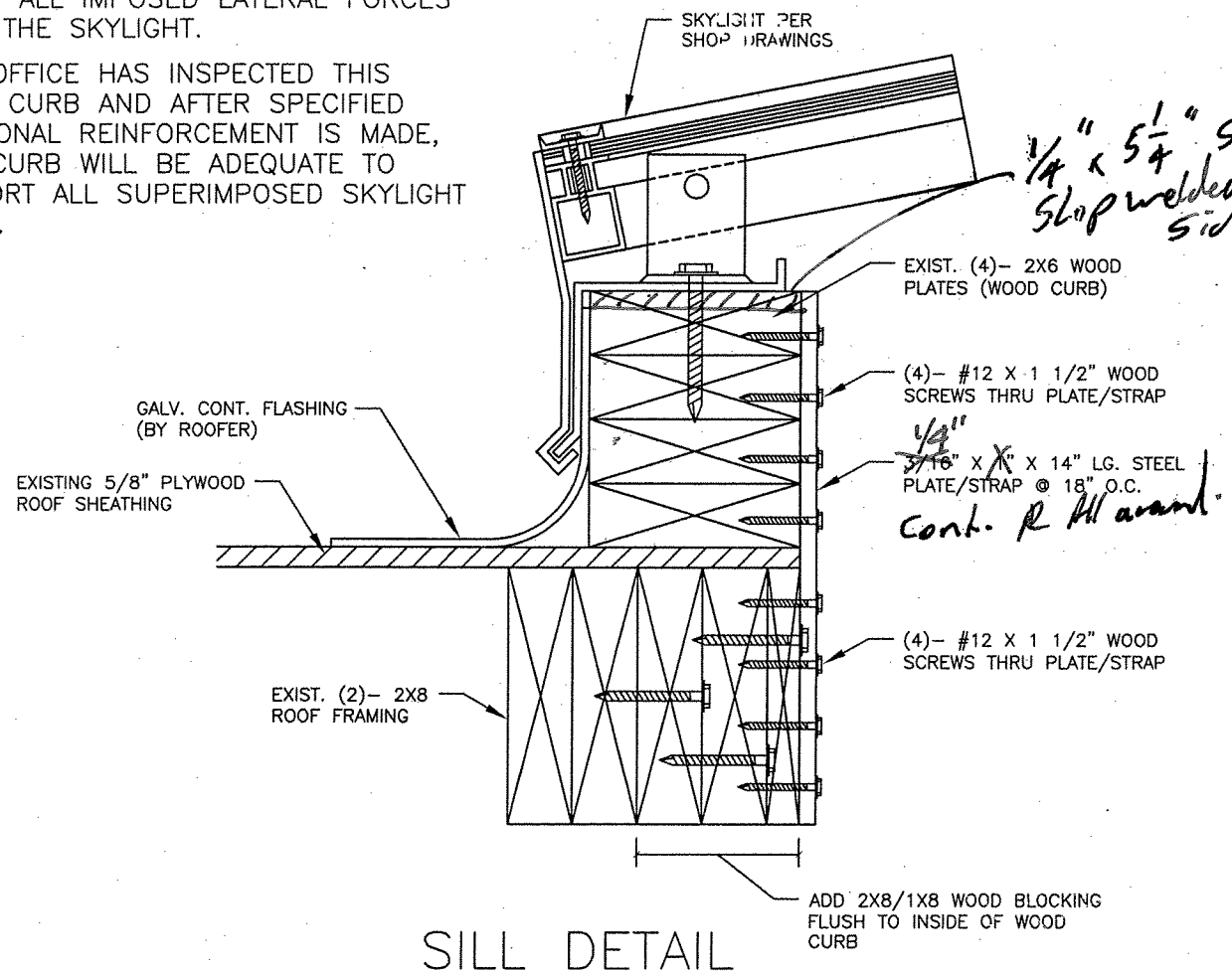

SILL DETAIL

N.T.S.

6/12/07

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DESIGN BASED ON 146 MPH WINDS, EXPOSURE "C"

Engineering Business CA 00009677

SILL DETAIL FOR:

GAINER RES.
5800 N. BAY RD.
MIAMI BEACH, FL.

CONTRACTOR: SKYLIGHT CONCEPTS

JOB #: GAINER
DATE: 06/11/07
SCALE: N.T.S.
DRAWN BY: W.T.F.
CHECKED BY:
SHEET NO. 1 OF 1

TARNOWSKI ENGINEERING, INC.
Civil ○ Structural ○ Architectural
7360 N.W. 5th Street
Plantation , FL. 33317
Phone (954) 727 – 2027 Fax (954) 727 – 9644

STRUCTURAL CALCULATIONS

(Based on Florda Building Code 2004 Edition)

For proposed SkyLight by:

Metcoe

Gainer Residence
5800 N. Bay Road
Miami Beach, Florida

Miami-Dade County

REVIEW OF STRUCTURAL SUBMITTAL
PREPARED BY SPECIALTY ENGINEER

☐ EXCEPTIONS TAKEN ☒ REVISE AND RESUBMIT
☐ AS CORRECTED ☐ REJECTED

SCOPE OF REVIEW CONSISTS OF

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DATE: 5/14/07 REVIEWED BY: TKK

SIDDIQ KHAN AND ASSOCIATES, INC.
7400 SW 50 TERRACE, SUITE 105
MIAMI, FL 33155

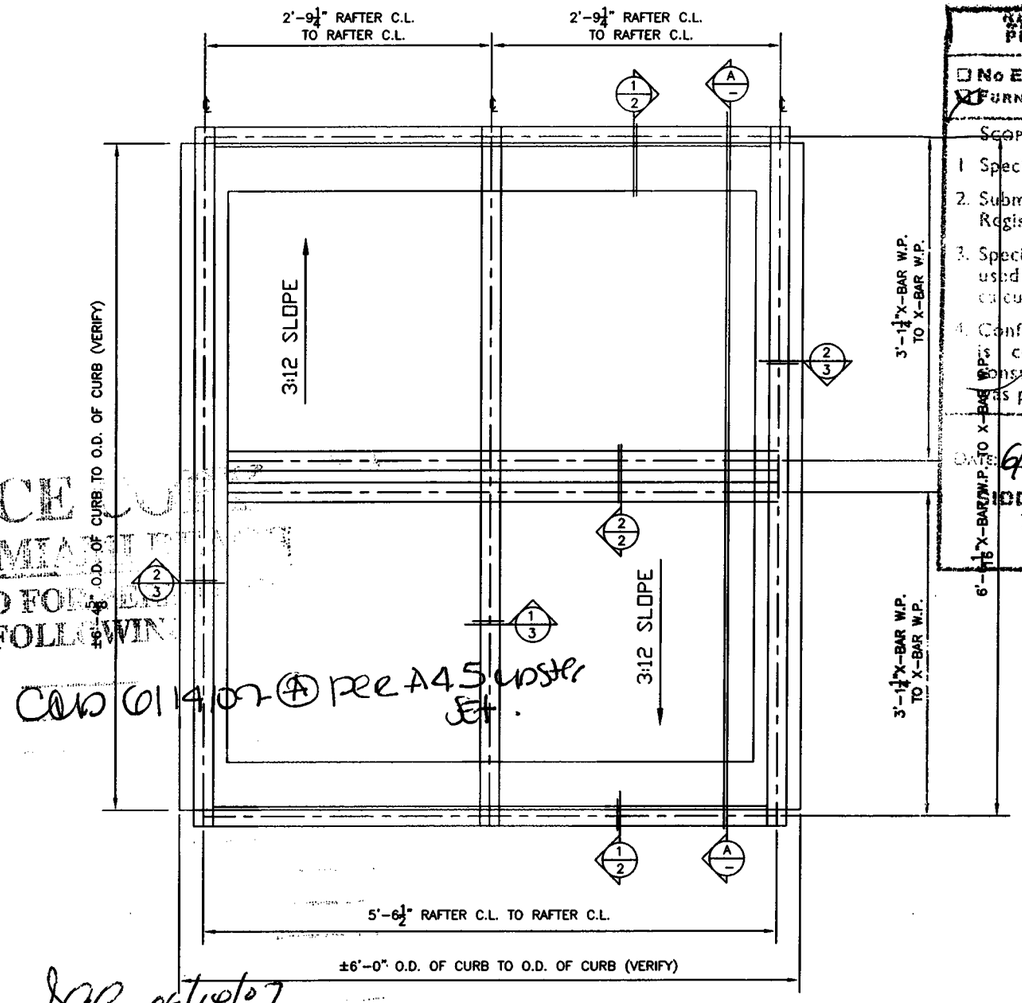
Box out Frame To Truss
Connection To Truss

Prepared by:

Constantino "Gus" Tarnowski, P.E.
Lic. No. 0050662
Tarnowski Enginering, Inc.
7360 N.W. 5 Street
Plantation, Florida 33317
954-727-2027/954-727-9644
gus@tarnowskieng.com

March 20, 2007

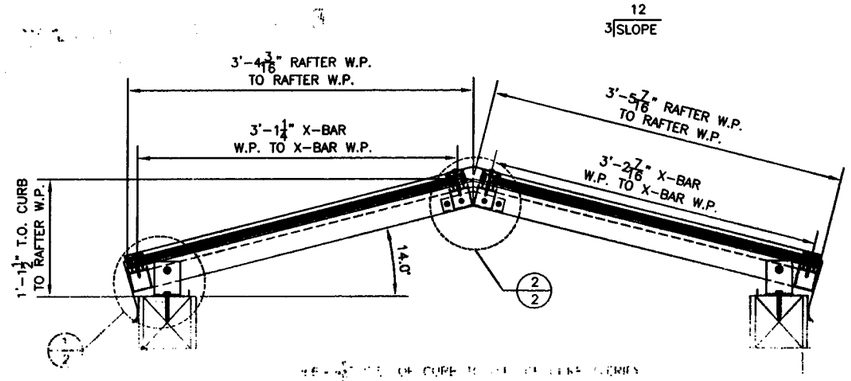
3/22/07



DOUBLE PITCH RIDGE SKYLIGHT PLAN VIEW

SCALE: 1 1/2" = 1'-0" DADE COUNTY

(1) UNIT REQUIRED



OFFICE COPY

CITY OF MIAMI BEACH

APPROVED FOR PERMIT

THE FOLLOWING

BUILDING:
ZONING:
DRB/HPB:
CONCURRENCY:
PLUMBING:
ELECTRICAL:
MECHANICAL:
FIRE PREVENTION:
ENGINEERING:
PUBLIC WORKS:
STRUCTURAL:
ACCESSIBILITY:
ELEVATOR:

As per Florida Statutes

REVIEWED FOR CODE COMPLIANCE

CAD 6/14/07 (A) Pre A45 Update Set.

JAG 06/14/07

REVIEW OF STRUCTURAL SUBMITTAL PREPARED BY SPECIALTY ENGINEER

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Date: 6/14/07 Reviewed By: JAK

SIDDIQ KHAN AND ASSOCIATES, INC.
7400 SW 50 Terrace, Suite 105
Miami, FL 33155

Connection Detail Provided 6/12/07 by Sp. Engineer.

GENERAL NOTES

ALL EXTRUDED ALUMINUM TO BE 6063-T6 ALLOY.

ALL SHEET ALUMINUM TO BE 5052-H34 ALLOY. (STRUCTURAL, U.O.N.)

ALL SHEET ALUMINUM TO BE 5005-H14 ALLOY. (FLASHING, ETC...)

ALL STAINLESS STEEL BOLTS TO BE A.S.T.M. A-193, GRADE B8

ALUMINUM PARTS SHALL BE WELDED WITH AN INERT GAS SHIELDED ARC OR RESISTANCE WELDING PROCESS. NO WELDING PROCESS THAT REQUIRES FLUX SHALL BE USED. FILLER ALLOYS COMPLYING WITH THE REQUIREMENTS OF FLORIDA BLDG. CODE - 2004

ALL WELDS OF STRUCTURAL MEMBERS SHALL BE PERFORMED BY WELDERS QUALIFIED IN ACCORDANCE WITH THE PROCEDURES OF THE FLORIDA BLDG. CODE - 2004

ALL DIMENSIONS TO BE VERIFIED BEFORE FABRICATION.

ALL FLASHING TO BE LAPPED 3" AND SET IN A BED OF SILICONE SEALANT

ALL DISSIMILAR METALS TO BE SEPARATED WITH AN ISOLATOR.

FINISH: KYNAR 500

COLOR: BRONZE

ISOLATOR: POLYETHYLENE TAPE

GLAZING: BY SKYLIGHT CONCEPTS:

9/16" LAMINATED GLASS CONSISTING OF:
1/4" CLEAR H.S.
.090" PVB INTERLAYER
1/4" CLEAR H.S.

~~SKYLIGHT(S) WILL IMPOSE LATERAL FORCES ON THE PERIMETER CURBS. ALL CURBS SUPPORTING THE SKYLIGHT(S) MUST BE DESIGNED AND CONSTRUCTED, BY OTHERS, TO RESIST SUCH LOADS.~~

Takeout -

EXTRUSION LIST

ITEM NO.	EXTRUSION	QTY.	PART SIZE
1	#118 EXTR.	8	2'-9 1/4"
2	#60-1 EXTR	6	3'-5 7/16"
3	#41-A EXTR.	3	2'-10"
4	#41-B EXTR.	8	2'-10"
5	#41-A EXTR.	6	3'-5"
6	#41-B EXTR.	6	3'-6"
7	#116 EXTR.	6	0'-3"
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

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Date: 5/14/07 Reviewed By: JAK

SIDDIQ KHAN AND ASSOCIATES, INC.
7400 SW 50 Terrace, Suite 105
Miami, FL 33155

Detail Connection to Purlins
Provide Calcs Coord w/Arch.

5/22/07

METCOE
SKYLIGHT SPECIALISTS
GARDENA, CA

MESS SHEET METAL CO.

QUALITY CONTROL

OPERATIONS

PRODUCTION

JOB NAME GAINER RES.

CONTRACTOR SKYLIGHT CONCEPTS

ADDRESS 5800 N. BAY RD. MIAMI BEACH, FL

1715 WEST 135th STREET
GARDENA CA 90249
PHONE 310/354-0030
FAX 310/523-5803
WWW.METCOE.COM

METCOE

TARNOWSKI ENGINEERING, INC.
Chas. Structural Architectural
7360 N.W. 5th street
PLANTATION, FL 33317
Engineering Business CA 00009677
Phone: (954) 727-2027 Fax: (954) 727-9144

REVISIONS

SKYLIGHT CONCEPTS

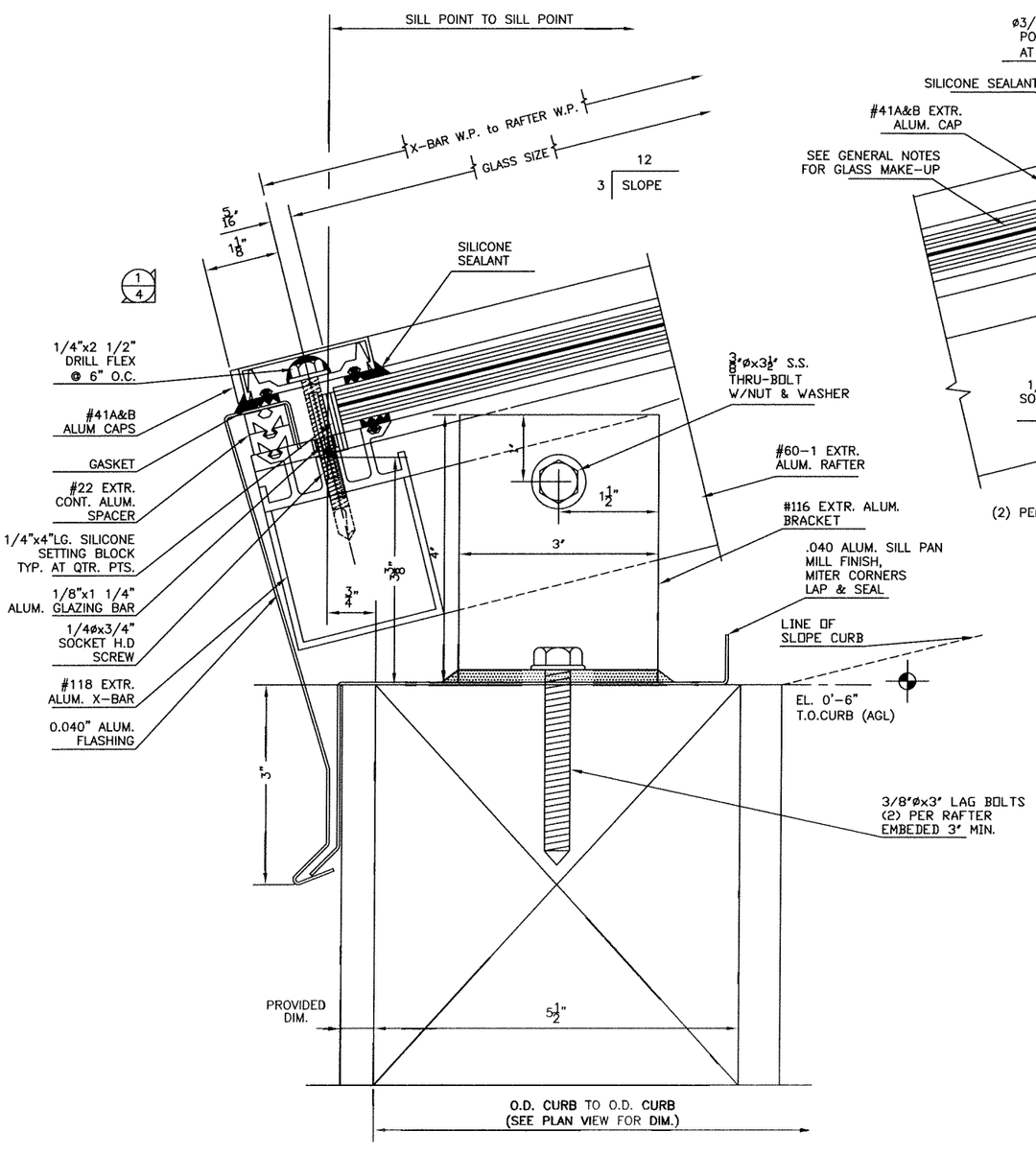
JOB NO. 346

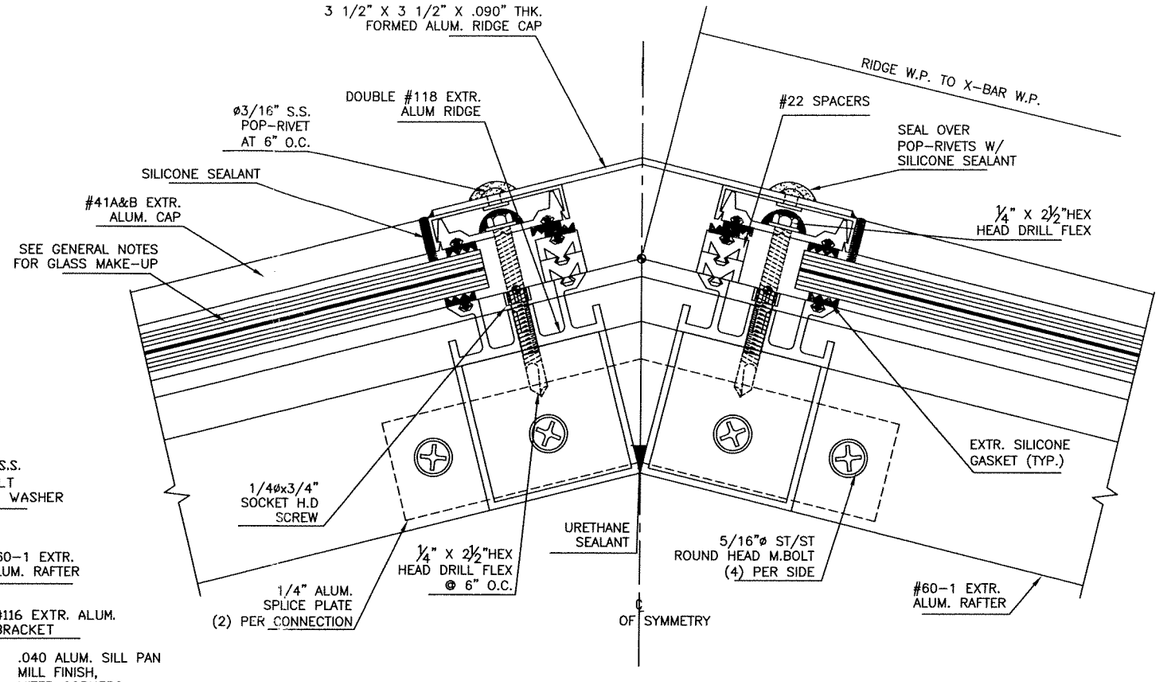
DETAIL PLAN VIEW

DRAWN BY

CHECKED BY

DATE 3/2/06





2/2 HEAD DETAIL
SCALE: FULL

Con

QUALITY CONTROL

OPERATIONS

PRODUCTION

JOB NAME GAINER RES.

CONTRACTOR SKYLIGHTS CONCEPTS

ADDRESS 5800 N. BAY RD. MIAMI BEACH, FL

METCOE
1715 WEST 135th STREET
GARDENA CA 90249
PHONE 310/354-0030
FAX 310/523-5803
WWW.METCOE.COM

TARNOWSKI ENGINEERING, INC.
Civil Structural Architectural
7360 N.W. 5th street
PLANTATION, FL. 33317
Engineering Business CA 00009677
Phone: (954) 727-2027 Fax: (954) 727-964-

REVISIONS

DRAWN BY S.G.

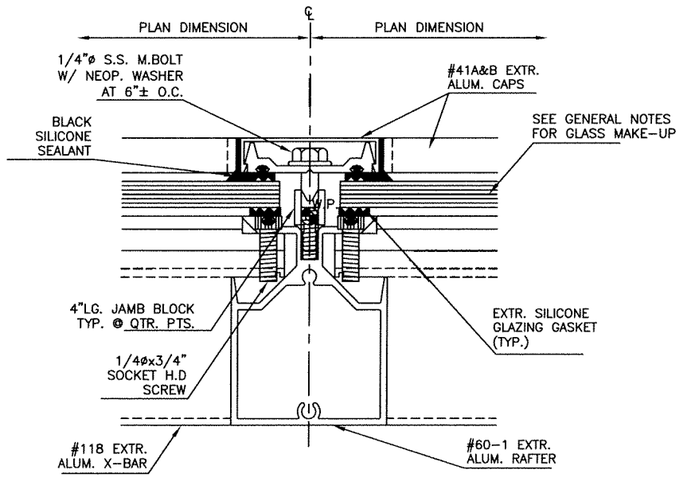
CHECKED BY

DATE 3/2/07

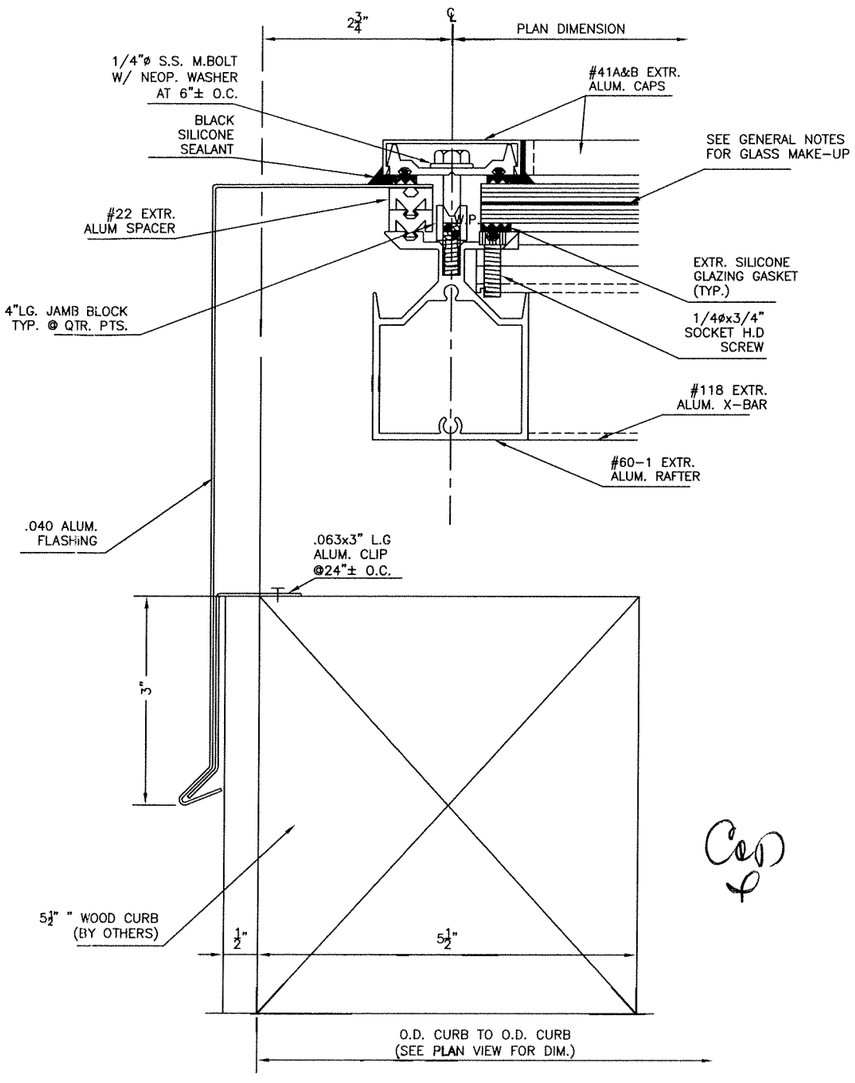
JOB NO. 346

DETAIL DETAIL

METCOE
A WEISS SHEET METAL CO. SKYLIGHT SPECIALISTS CO.



1/3 RAFTER DETAIL
SCALE: FULL



2/3 END DETAIL
SCALE: FULL

QUALITY CONTROL

OPERATIONS

PRODUCTION

JOB NAME GAINER RES.

CONTRACTOR SKYLIGHT CONCEPTS

ADDRESS 5800 N. BAY RD. MIAMI BEACH, FL

METCOE
1715 WEST 135th STREET
GARDENA CA 90249
PHONE 310/354-5030
FAX 310/525-5803
WWW.METCOE.COM

TARNOWSKI ENGINEERING, INC.
Civil Structural Architectural
7360 N.W. 5th street
PLANTATION, FL. 33317
Engineering Business CA 00009677
Phone: (954) 727-2027 Fax: (954) 727-964-

REVISIONS

DRAWN BY J.G.

CHECKED BY

DATE 3/2/07

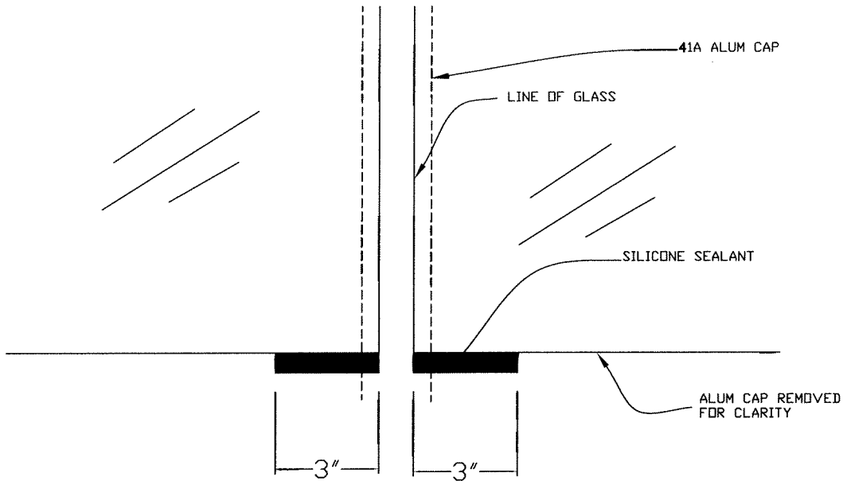
JOB NO. 346

DETAIL

DETAIL

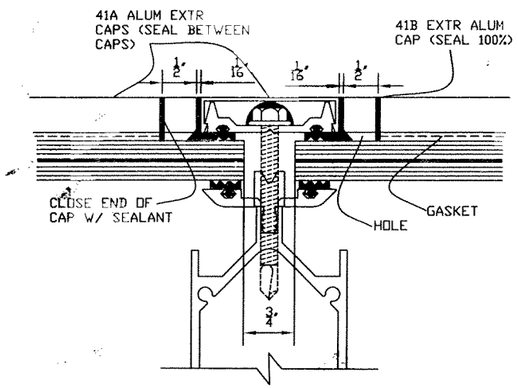
WEISS SHEET METAL CO.

METCOE



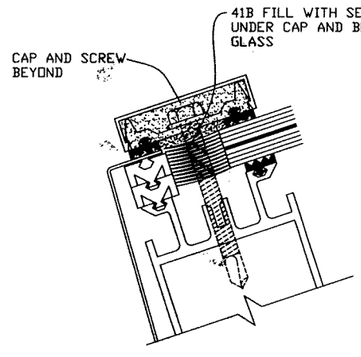
SEALANT BETWEEN GLASS DETAIL D/4

SCALE: 6" = 1'-0"



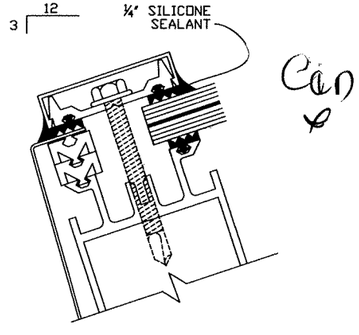
41A&B SEALANT DETAIL A/4

SCALE: FULL



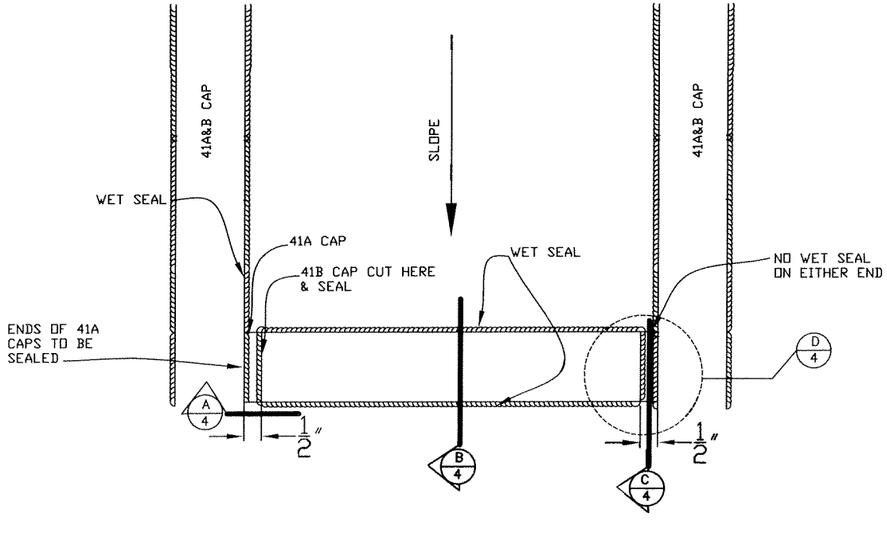
41B CAP SEALANT DETAIL C/4

SCALE: FULL



41A CAP SEALANT DETAIL B/4

SCALE: FULL



1/4 41A X-BAR CAP TO 41A CONN. PLAN

SCALE: 6" = 1'-0"

QUALITY CONTROL

OPERATIONS

PRODUCTION

JOB NAME GAINER RES.

CONTRACTOR SKYLIGHT CONCEPTS

ADDRESS 5800 N. BAY RD. MIAMI BEACH, FL

METCOE
1715 WEST 135th STREET
GARDENA CA 90249
PHONE 310/354-0030
FAX 310/523-5803
WWW.METCOE.COM

TARNOWSKI ENGINEERING, INC.
Civil Structural Architectural
7360 N.W. 5th street
PLANTATION, FL 33317
Engineering Business CA 00009677
Phone: (954) 727-2027 Fax: (954) 727-9644

REVISIONS

DRAWN BY J.G.

CHECKED BY

DATE 3/2/07

JOB NO. 346

DETAIL DETAIL

F WEISS SHEET METAL CO.

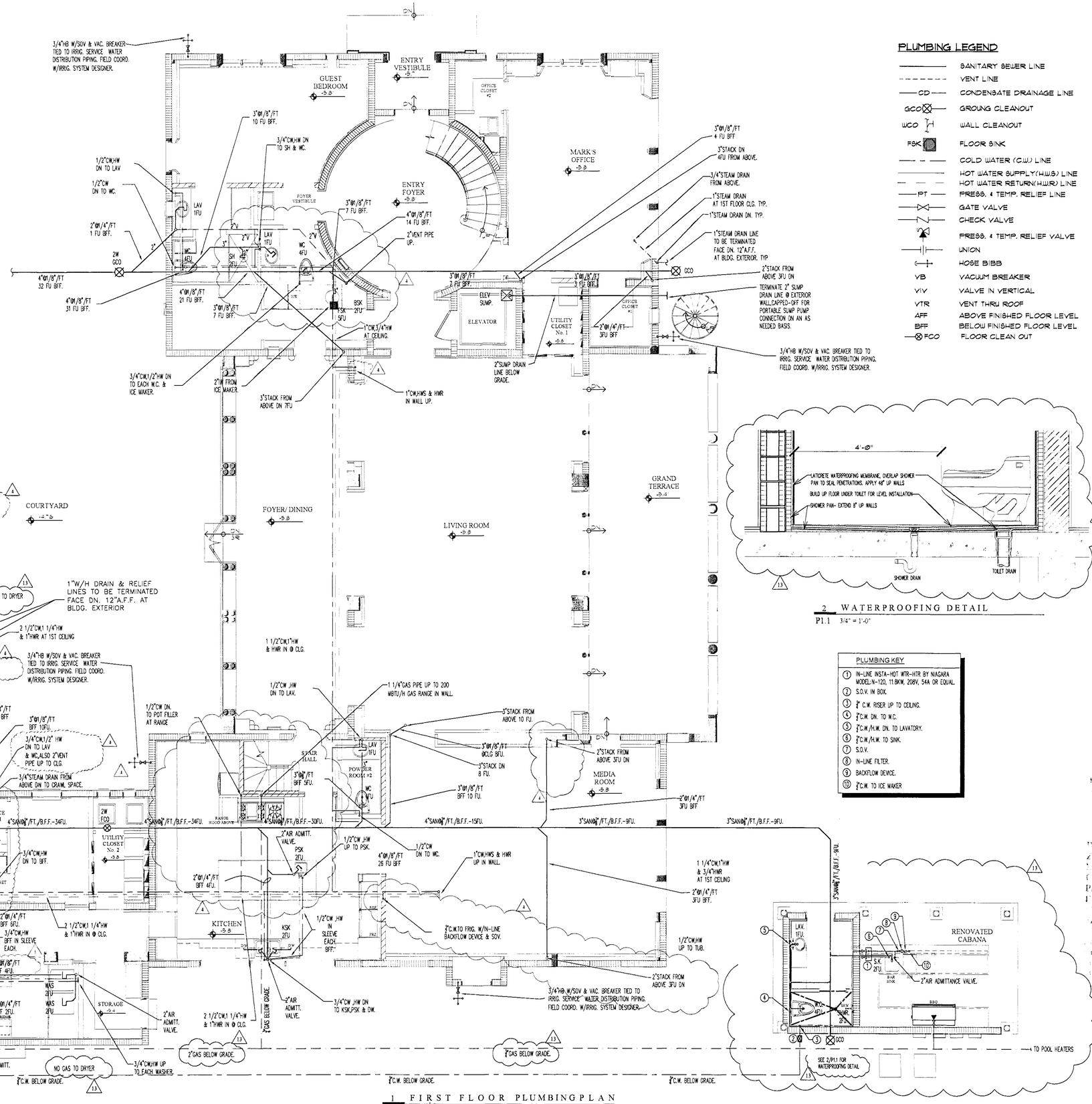
METCOE

SKYLIGHT SPECIALISTS CO.

SHEET TITLE:	FIRST FLOOR PLAN
DRAWN:	
DATE:	10.19.05
REVISIONS:	DATE:
1 — GENERAL REVISION 1-06	
4 — GENERAL REVISION 11-07	
13	

PLUMBING LEGEND

———	SANITARY SEWER LINE
- - - - - -	VENT LINE
—CD—	CONDENSATE DRAINAGE LINE
GCO	GROUNG CLEANOUT
WCO	WALL CLEANOUT
FSK	FLOOR SINK
— — —	COLD WATER (C.W.) LINE
———	HOT WATER SUPPLY(H.W.S.) LINE
— — —	HOT WATER RETURN(H.W.R.) LINE
—PT—	PRESS. & TEMP. RELIEF LINE
	GATE VALVE
	CHECK VALVE
	PRESS. & TEMP. RELIEF VALVE
	UNION
	HOSE BIBB
VB	VACUUM BREAKER
V/V	VALVE IN VERTICAL
VTR	VENT THRU ROOF
AFF	ABOVE FINISHED FLOOR LEVEL
BFF	BELOW FINISHED FLOOR LEVEL
FCO	FLOOR CLEAN OUT



PLUMBING KEY

1. IN-LINE INSTA-HOT WTR-HTR BY NIAGARA MODEL:N-120, 11.8KW, 208V, 54A OR EQUAL.
2. S.O.V. IN BOX.
3. 3/4" C.W. RISER UP TO CEILING.
4. 3/4"C.W. DN. TO W.C.
5. 3/4"C.W./H.W. DN. TO LAVATORY.
6. 3/4"C.W./H.W. TO SINK.
7. S.O.V.
8. IN-LINE FILTER.
9. BACKFLOW DEVICE.
10. 3/4"C.W. TO ICE MAKER

1 FIRST FLOOR PLUMBINGPLAN
P1.1 3/16" = 1'-0"

2 WATERPROOFING DETAIL
P1.1 3/4" = 1'-0"

3DESIGN INC.
ANTHONY LEON
ARCHITECTURE
AR0016752
1234 WASHINGTON AVE. SUITE#207 MIAMI BEACH, FL 33139 T.305.531.5208 F.305.531.4515

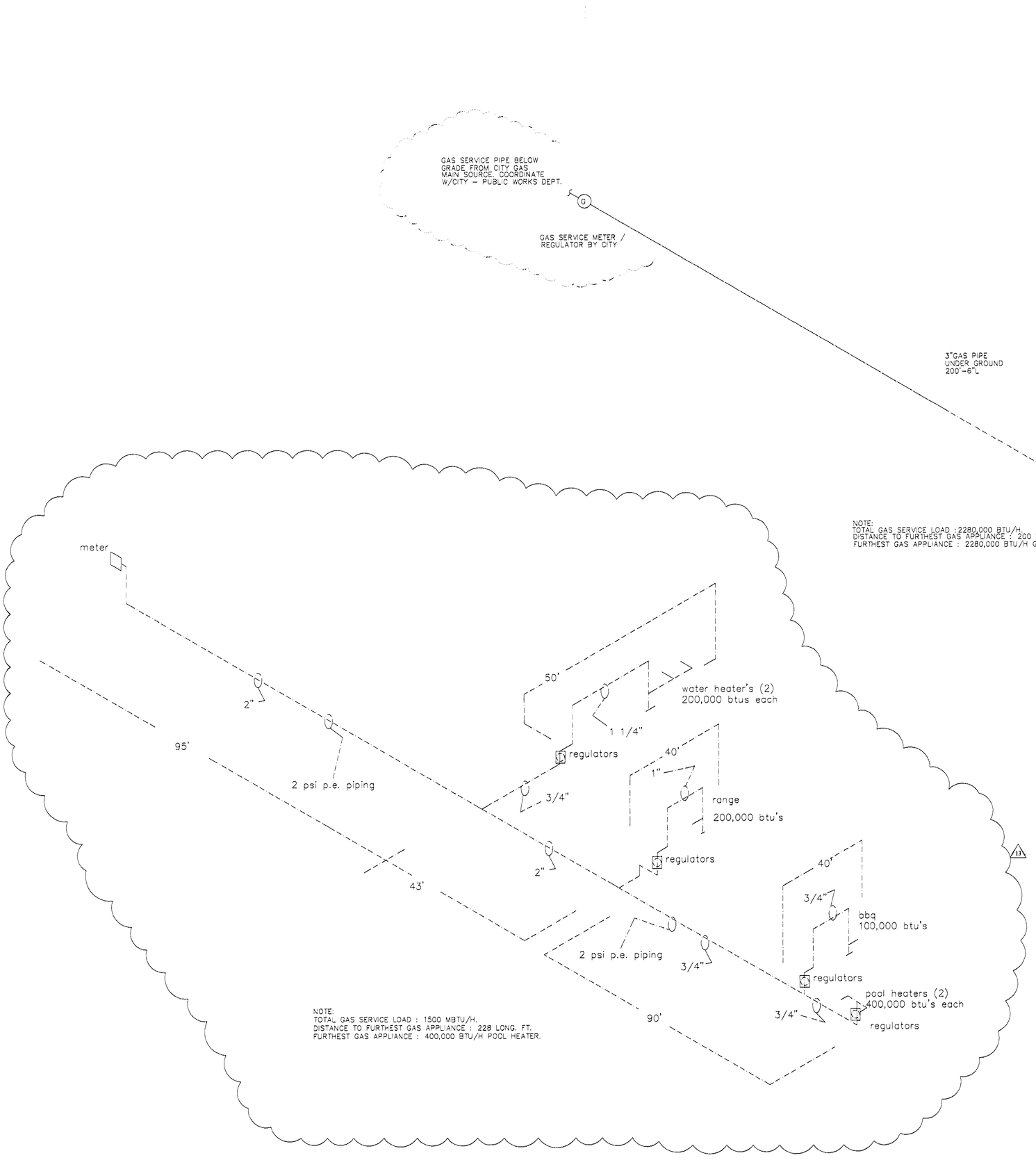
SET 10.19.05

PERMIT / BID SET

ESI
ENERGY SCIENCES INC
CONSULTING ENGINEERS
ESSER ANDOGOLLA, P.E.
MECH./ELEC. - #42454
8585 DOUGLAS ROAD
MIAMI, FL 33173
TEL 305-448-8826
FAX 305-448-7276
e-mail essergy@bellsouth.net

THE GAINOR RESIDENCE
5800 NORTH BAY ROAD
MIAMI BEACH, FLORIDA

P1.1	
P3.1	



1 GAS RISER DIAGRAM
P2.3 NTS

SHEET TITLE:	FIRST FLOOR PLAN
DRAWN:	
DATE:	10.19.05
REVISIONS:	DATE:
13	GENERAL REVISION 1/30/06

10.19.05

PERMIT/BID SET

ESI DESIGN INC
ARCHITECTURE
ANTHONY LEON
AR0009552
1234 WASHINGTON AVE. SUITE#207 MIAMI BEACH, FL 33139 T.305.534.5208 F.305.531.4515

ESI
ENERGY SCIENCES INC
CONSULTING ENGINEERS
ERDEN ANDROGLU P.E.
MECH./ELEC. – #42454
3680 DOUGLAS ROAD
MIAMI, FL 33133
TEL. 305-448-3600
FAX 305-448-7378
e-mail energy@bellsouth.net

THE TAINOR RESIDENCE
3500 NORTH BAY ROAD
MIAMI BEACH, FLORIDA

DESIGN REVIEW AND PRESERVATION FOR BUILDING PERMITS
FINAL BY INITIALS DATE 12/02/06
ISSUED AS NOTED
SEE [illegible] FOR [illegible] REVISIONS
[illegible] AS NOTED
[illegible] BY
[illegible] TO THE [illegible]
13 1/30/06

P2.3

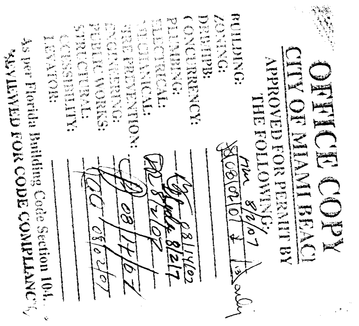
P3.1

1/30/06

5800 N Bay Rd

BMS0702837

Office Copy



High Velocity Hurricane Zone Uniform Permit Application
Florida Building Code Edition 2004

INSTRUCTION PAGE

COMPLETE THE NECESSARY SECTIONS OF THE UNIFORM ROOFING PERMIT APPLICATION FORM AND ATTACH THE REQUIRED DOCUMENTS BELOW:

Roof System	Required Sections of the Permit Application Form	Attachments Required See List Below
Low Slope Application	A,B,C	1,2,3,4,5,6,7
Prescriptive BUR-RAS 150	A,B,C	4,5,6,7
Asphaltic Shingles	A,B,D	1,2,4,5,6,7
Concrete or Clay Tile	A,B,D,E	2,3,4,5,6,7
Metal Roofs	A,B,D	1,2,3,4,5,6,7
Wood Shingles and Shakes	A,B,D	1,2,4,5,6,7
Other	As Applicable	1,2,3,4,5,6,7

ATTACHMENTS REQUIRED:

1.	**Fire Directory Listing - Not Required For Tile Which Have Valid NOA**
2.	**From Product Approval:** **Front Page** **Specific System Description** **Specific System Limitations** **General Limitations** **Applicable Detail Drawings**
3.	**Design calculations per Chapter 16, or if applicable, RAS 127 or RAS 128**
4.	**Other Component Notices of Acceptance (Skylights, Turbines, Ridge Vents, Etc.)**
5.	**Municipal Permit Application**
6.	***Owner's Notification for Roofing Considerations* (Re-Roofing Only)**
7.	**Any Required Roof Testing/Calculation Documentation**

Florida Building Code Edition 2004

High Velocity Hurricane Zone Uniform Permit Application Form

Section A (General Information)

Permit No. B060045

Contractor's Name: DIVERSIFICATION ROOFING ENTERPRISE

Job Address: 5800 N. BAY ROAD

ROOF CATEGORY

- [x] Low Slope
- [ ] Asphaltic Shingles
- [ ] Mechanically Fastened Tile
- [ ] Metal Panel/Shingles
- [x] Mortar/Adhesive Set Tile
- [ ] Wood Shingles/Shakes

Prescriptive BUR-RAS 150

ROOF TYPE

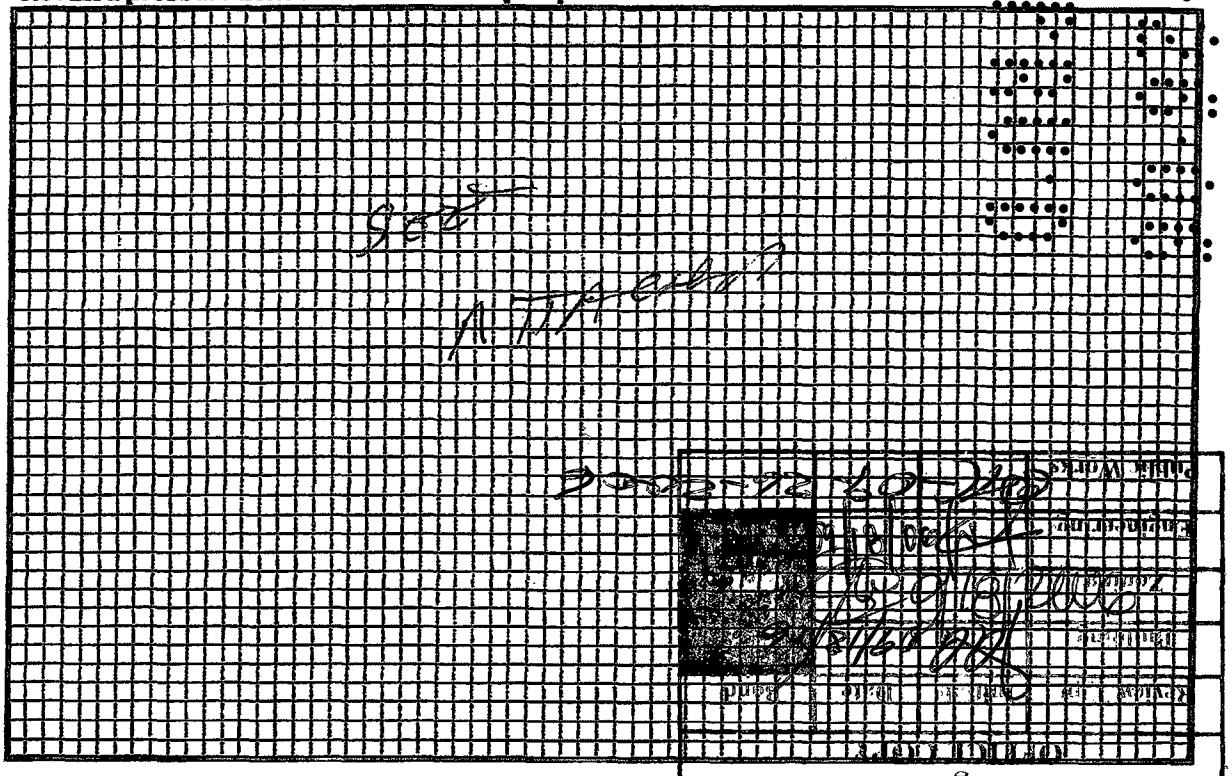
- [x] New Roof
- [ ] Re-Roofing
- [ ] Recovering
- [ ] Repair
- [ ] Maintenance

ROOF SYSTEM INFORMATION

Low Slope Roof Area (SF)	Steep Sloped Roof Area (SF)	Total (SF)
800	10,200	11,000

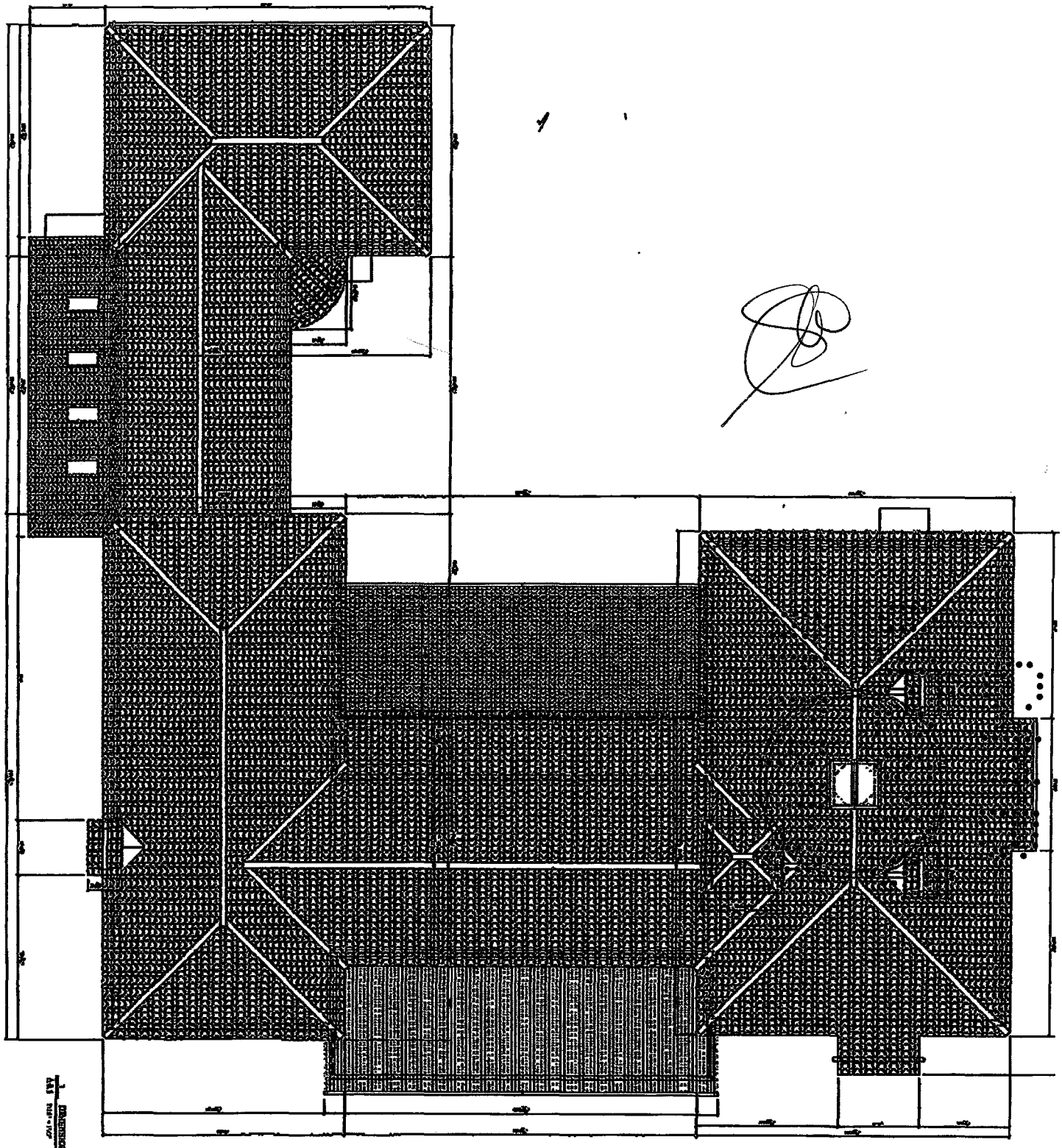
Section B (Roof Plan)

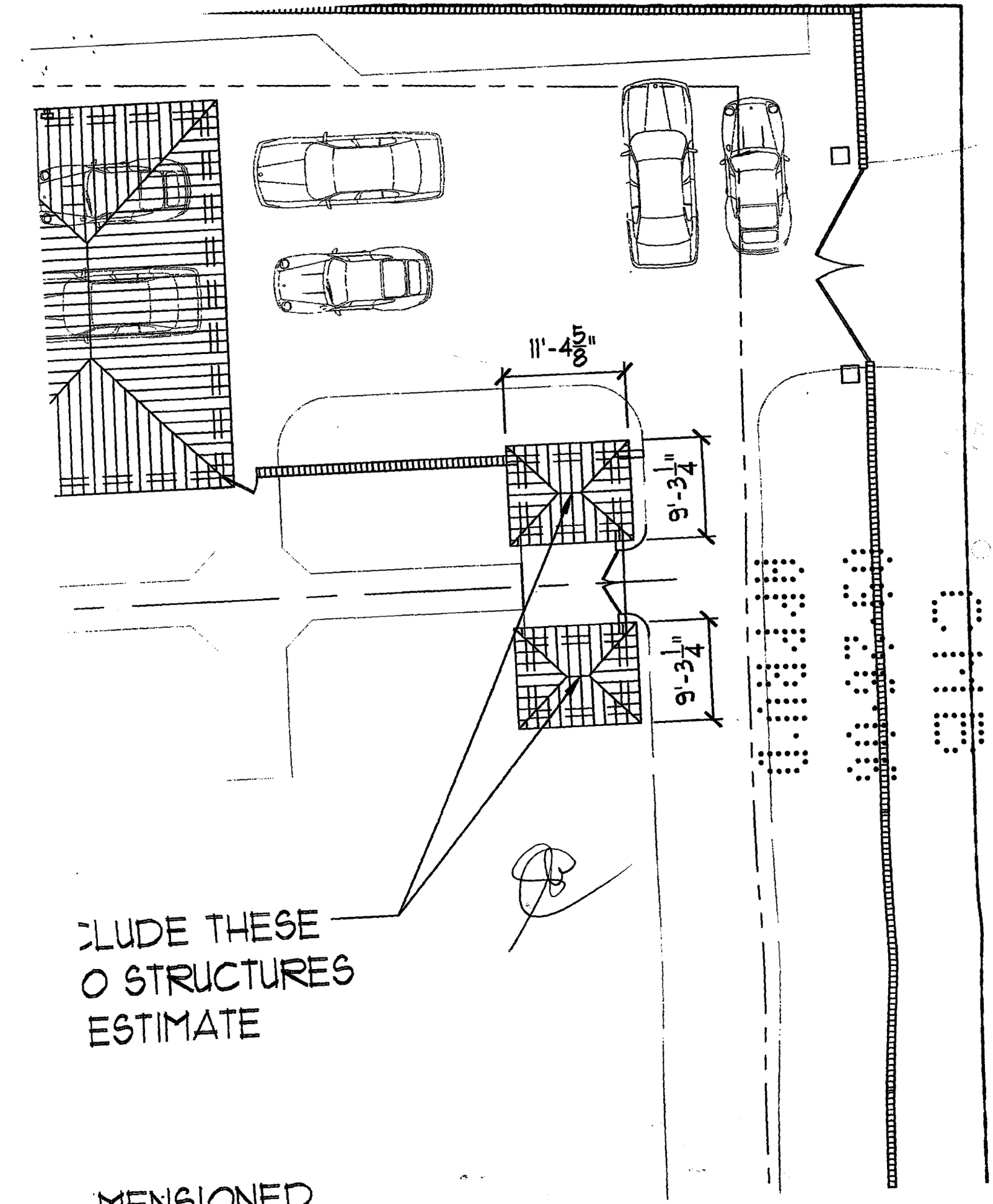
Sketch Roof Plan: Illustrate all levels and sections, roof drains, scuppers, overflow scuppers and, overflow drains. Include dimensions of sections and levels, clearly identify dimensions of elevated pressure zones and location of parapets.



City of Miami Beach
Building Department
Roofing Permit
Approved 09/27/05

City of Miami Beach Building Department Roofing Permit OFFICE COPY			
Review Type	Initials	Date	Hold
Building			
Zoning			
Engineering			
Public Works			





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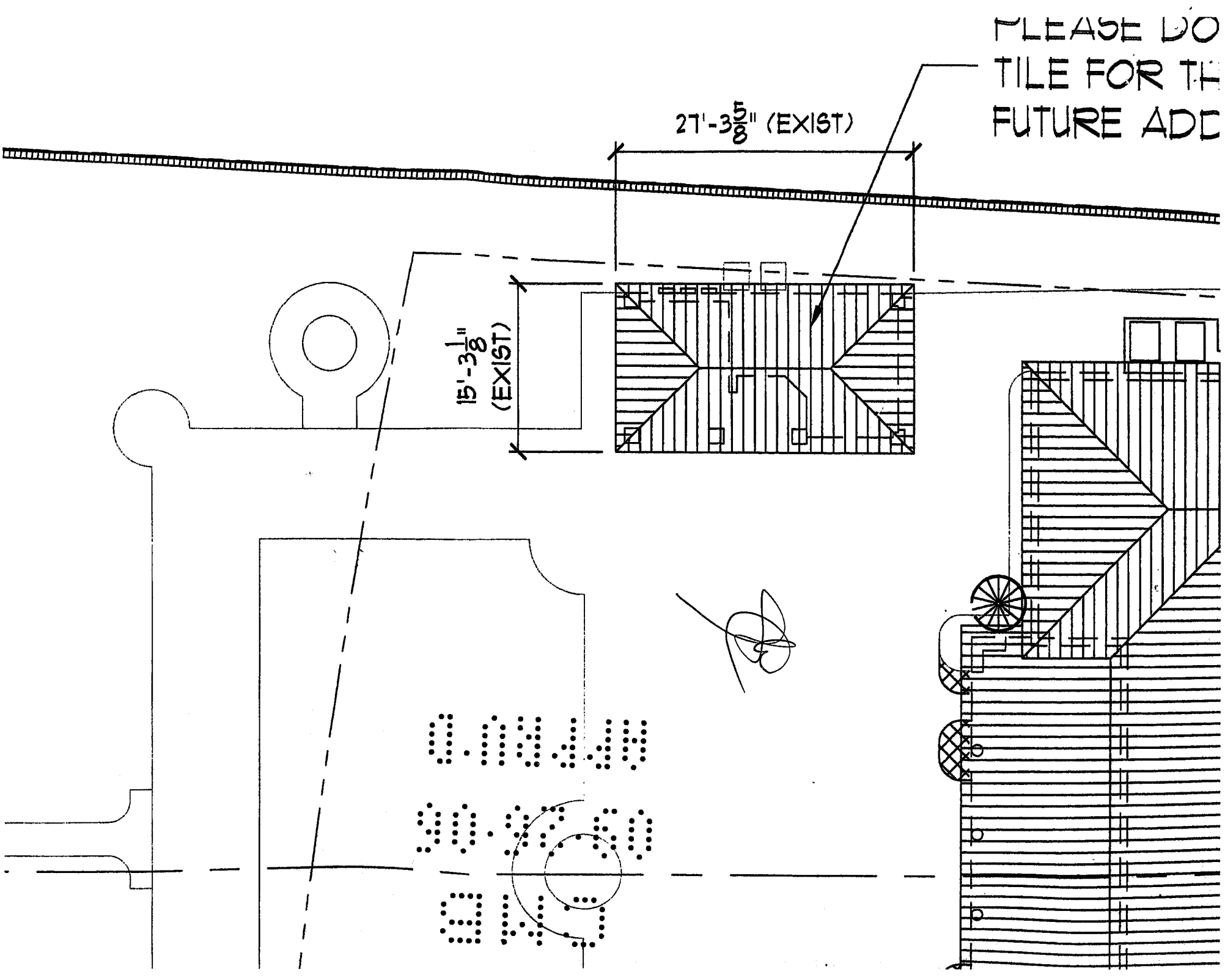

PLEASE DO
TILE FOR TH
FUTURE ADD
27'-3 5/8" (EXIST)
15'-3 1/8" (EXIST)

Florida Building Code Edition 2004

High Velocity Hurricane Zone Uniform Permit Application Form

Section C (Low Sloped Roof Systems)

Fill in Specific Roof Assembly Components and Identify Manufacturer
(If a component is not used, identify as "NA")

System Manufacturer: GAF

*NOA # 03-0501, 02

Design Wind Pressures, From RAS 128 or Calculations

*Pmax1: -51.4 Pmax2: -86.3 Pmax3: -129.9

*Max: Design Pressure, From the Specific NOA

***Not required for prescriptive RAS 150 systems.**

System: -60

Deck: WOOD

Type: SHEATHING

Guage/Thickness: 5/8"

Slope: 1/2" : 12"

Anchor/Base Sheet & No. of Ply(s): GAF GLAS #80 (1)

Anchor/Base Sheet Fastener/Bonding Material:
1 1/4" RS NAILS + 3" DRILL TOC INSULATION PLATES 9" O.C.

Insulation Base Layer: N/A

Base Insulation Size and Thickness: N/A

Base Insulation Fastener/Bonding Material: N/A

Top Insulation Layer: N/A

Top Insulation Size and Thickness: N/A

Top Insulation Fastener/Bonding Material: N/A

Ply Sheet(s) and No. of Ply(s): N/A

Ply Sheet Fastener/Bonding Material: N/A

Top Ply: RUBEROID TORCH FR

Top Ply Fastener/Bonding Material: TORCH DOWN

Surfacing: NONE

Fastener Spacing for Anchor/Base Sheet
(From N.O.A. or R.A.S. 150 Table 1)

Field: 8" "oc@Lap,#Rows 4 @ 8 "oc

Perimeter: 6" "oc@Lap,#Rows 4 @ 6 "oc

Corner: 6" "oc@Lap,#Rows 4 @ 6 "oc

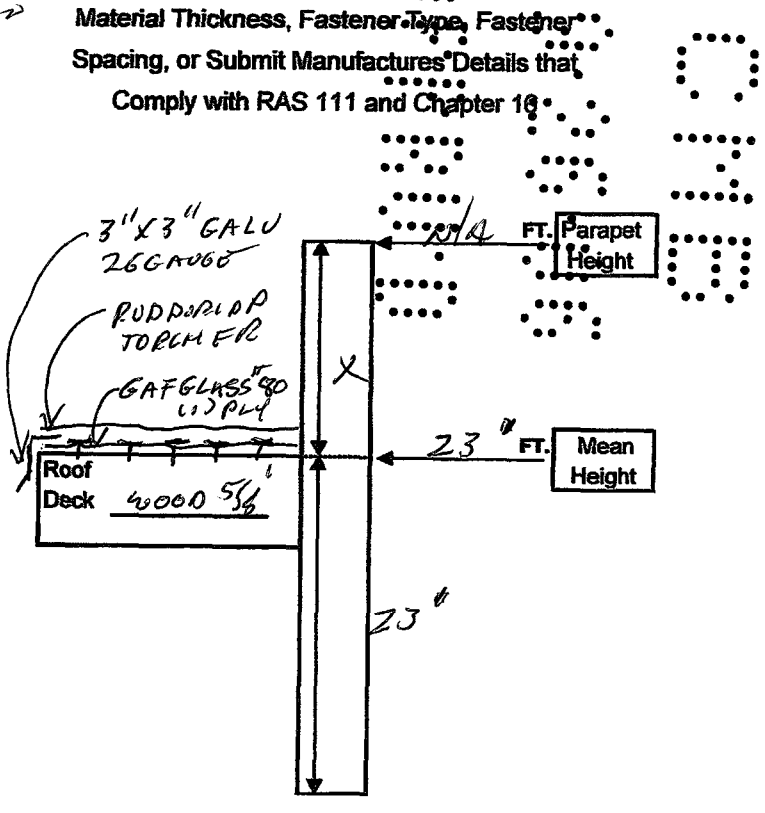
Number of Fasteners Per Insulation Board
(From N.O.A. or R.A.S. 150 Table 2)

Field: N/A Perimeter: N/A Corner: N/A

Iustrated Components Noted and Details as applicable

Woodblocking, Gutter, Edge Termination, Stripping, Flashing, Continuous Cleat, Cant Strip, Base Flashing, Counter -Flashing, Coping, Etc.

Indicate: Mean Roof Height, Parapet Height, Height of Base Flashing, Component Material, Material Thickness, Fastener Type, Fastener Spacing, or Submit Manufactures Details that Comply with RAS 111 and Chapter 16



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High Velocity Hurricane Zone Uniform Permit Application Form

Section D (Steep Sloped Roof System)

NOTE: Items 3 & 4 are not required for shingles with NOA

1. Roof System Manufacturer: KANDE HEY-RALEIGH MFG-FL

2. Notice of Acceptance Number: 02-0825.06

3. Minimum Design Wind Pressures, If Applicable (From RAS 127 or Calculations-Method 1):

   Pmax1: N/A Pmax2: N/A Pmax3: N/A **or M, From Sec. E, Method 2 :** 45.5

4. Maximum Design Pressure
   (From the NOA Specific System): N/A

5. Method of Tile Attachment: POLY PRO AH160 FOAM ADHESIVE

Steep Sloped Roof System Description

Roof Slope: 4 " : 12"

Ridge Ventilation? N/A

Mean Roof Height: 23 ' 6 "

Deck Type: WOOD 5/8"

Type Underlayment: 30# FELT ASTM D 226 TYPE II GAF TILE UNDERLAYMENT MDA# 05-0922.07

Insulation: N/A

Fire Barrier: N/A

Fastener Type & Spacing: 1¼" R.S. NAILS 6" O.C. FIELD

Adhesive Type: POLY PRO AH160

Type Cap Sheet: ONDURA ROOF TILE UNDERLAYMENT MDA. 05-0922.07

Roof Covering: CONCRETE TILE

Type & Size Drip Edge: 3½"x3" 26 GAUGE GALV. NAILED 4" O.C.

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High Velocity Hurricane Zone Uniform Permit Application Form

Section E (Tile Calculations)

For Moment based tile systems, choose either Method 1 or 2. Compare the values for M_r with the values from M_f. If the M_f values are greater than or equal to the M_r values for each area of the roof, then the tile attachment method is acceptable.

Method 1 "Moment Based Tile Calculations Per RAS 127"

(P_1:_____ Xλ_____ = _____) - Mg: _____ = M_{r1} _____ NOA M_f _____

(P_2:_____ Xλ_____ = _____) - Mg: _____ = M_{r2} _____ NOA M_f _____

(P_3:_____ Xλ_____ = _____) - Mg: _____ = M_{r3} _____ NOA M_f _____

Method 2 "Simplified Tile Calculation Per Table Below"

Required Moment of Resistance (M_r) From Table Below : 33.8 Product Approval M_f 45.5

M_r Required Moment Resistance*					
Mean Roof Height → / Roof Slope ↓	15'	20'	25'	30'	40'
2:12	34.4	36.5	38.2	39.7	42.2
3:12	32.2	34.4	36.0	37.4	39.8
4:12	30.4	32.2	33.8	35.1	37.3
5:12	28.4	30.1	31.6	32.8	34.9
6:12	26.4	28.0	29.4	30.5	32.4
7:12	24.4	25.9	27.1	28.2	30.0

*Must be used in conjunction with a list of Moment Based Tile Systems endorsed by the Broward County Board of Rules and Appeals.

For Uplift Based Tile Systems use Method 3. Compare the values for F' with the values for F_r. If the F' values are greater than or equal to the F_r values for each area of the roof, then the tile attachment method is acceptable.

Method 3 "Uplift Based Tile Calculations Per RAS 127"

(P_1: _____ x l: _____ = _____ x w:= _____) - W: _____ x cos θ: _____ = Fr_1: _____ Product Approval F' _____

(P_2: _____ x l: _____ = _____ x w:= _____) - W: _____ x cos θ: _____ = Fr_2: _____ Product Approval F' _____

(P_3: _____ x l: _____ = _____ x w:= _____) - W: _____ x cos θ: _____ = Fr_3: _____ Product Approval F' _____

Where to Obtain Information		
Description	**Symbol**	**Where To Find**
Design Pressure	P_1 or P_2 or P_3	RAS 127 Table 1 or by an engineering analysis prepared by PE based on ASCE 7
Mean Roof Height	H	Job Site
Roof Slope	θ	Job Site
Aerodynamic Multiplier	λ	Product Approval
Restoring Moment due to Gravity	M_g	Product Approval
Attachment Resistance	M_f	Product Approval
Required Moment Resistance	M_r	Calculated
Minimum Attachment Resistance	F'	Product Approval
Required Uplift Resistance	F_r	Calculated
Average Tile Weight	W	Product Approval
Tile Dimensions	l=length w=width	Product Approval
All calculations must be submitted to the Building Official at the time of permit application.		

SECTION 1524
HIGH-VELOCITY HURRICANE ZONES—
REQUIRED OWNERS NOTIFICATION FOR ROOFING CONSIDERATIONS

1524.1 Scope.

As it pertains to this section, it is the responsibility of the roofing contractor to provide the owner with the required roofing permit, and to explain to the owner the content of this section. The provisions of Chapter 15 of the Florida Building Code, Building govern the minimum requirements and standards of the industry for roofing system installations. Additionally, the following items should be addressed as part of the agreement between the owner and the contractor. The owner's initial in the designated space indicates that the item has been explained.

_____ 1. **Aesthetics-workmanship:** The workmanship provisions of Chapter 15 (High-Velocity Hurricane Zone) are for the purpose of providing that the roofing system meets the wind resistance and water intrusion performance standards. Aesthetics (appearance) are not a consideration with respect to workmanship provisions. Aesthetic issues such as color or architectural appearance, that are not part of a zoning code, should be addressed as part of the agreement between the owner and the contractor.

_____ 2. **Renailing wood decks:** When replacing roofing, the existing wood roof deck may have to be renailed in accordance with the current provisions of Chapter 16 (High-Velocity Hurricane Zones) of the. (The roof deck is usually concealed prior to removing the existing roof system.)

_____ 3. **Common roofs:** Common roofs are those which have no visible delineation between neighboring units (i.e., townhouses, condominiums, etc.). In buildings with common roofs, the roofing contractor and/or owner should notify the occupants of adjacent units of roofing work to be performed.

_____ 4. **Exposed ceilings:** Exposed, open beam ceilings are where the underside of the roof decking can be viewed from below. The owner may wish to maintain the architectural appearance; therefore, roofing nail penetrations of the underside of the decking may not be acceptable. The owner provides the option of maintaining this appearance.

_____ 5. **Ponding water:** The current roof system and/or deck of the building may not drain well and may cause water to pond (accumulate) in low-lying areas of the roof. Ponding can be an indication of structural distress and may require the review of a professional structural engineer. Ponding may shorten the life expectancy and performance of the new roofing system. Ponding conditions may not be evident until the original roofing system is removed. Ponding conditions should be corrected.

_____ 6. **Overflow scuppers** (wall outlets): It is required that rainwater flow off so that the roof is not overloaded from a buildup of water. Perimeter/edge walls or other roof extensions may block this discharge if overflow scuppers (wall outlets) are not provided. It may be necessary to install overflow scuppers in accordance with the requirements of: Chapter 15 and 16 herein and the Florida Building Code, Plumbing.

_____ 7. **Ventilation:** Most roof structures should have some ability to vent natural airflow through the interior of the structural assembly (the building itself). The existing amount of attic ventilation shall not be reduced. It may be beneficial to consider additional venting which can result in extending the service life of the roof.

Owner's/Agent's Signature	Date	Contractor's Signature	Date
Ben Ramos	8/24/06	[signature]	08/1/06

UL Online Certifications Directory

TGFU.R1306
Roofing Systems

Page Bottom

Roofing Systems

See General Information for Roofing Systems

GAF MATERIALS CORP R1306

1361 ALPS RD

WAYNE, NJ 07470 USA

"Ruberoid 20" or "Ruberoid Modified Base Sheet" may be utilized as an alternate to Type G2 base sheets in any of the following Classifications.

1/2 in. thick (min) gypsum board or 1/4 in. thick (min) G-P Gypsum DensDeck® may be used in any existing noncombustible deck Classification. When this is done, the resulting roofing system is acceptable for use over combustible (15/32 in. min) roof decks. The joints in the gypsum board and overlayment board are offset 6 in. with the joints in the deck. If polystyrene is part of the roof system, it must be placed below the overlayment board.

Also, multiple plies of "GAFGLAS Ply 4" or "Ply 6" may be adhered to G-P Gypsum DensDeck® in hot asphalt.

"EnergyGuard Ultra" is an acceptable alternate to "EnergyGuard" in any applicable Classification.

"GAF Stratavent Eliminator Venting Base Sheet (Nailable)" may be mechanically attached or hot mopped over noncombustible decks and as a recover over existing roof systems.

GAFGLAS Perlite Insulation may be utilized as a cover board over "EVERGUARD" insulation in any of the following systems.

Unless otherwise indicated, the roof insulation is mechanically fastened, adhered with hot mopping asphalt or urethane insulation adhesive. Polystyrene reference in any of the following Classficatons include "ENERGuard EPS Insulation".

References to glass fiber insulation include "EnergyGuard Fiberglass Insulation".

ASPHALT FELT SYSTEMS WITH HOT ROOFING ASPHALT

Type G2 asphalt glass mat base sheet ("GAFGLAS #75 Base Sheet" or "GAFGLAS #80 ULTIMA") is a suitable alternate for Type G1 asphalt glass fiber ply sheet ("GAFGLAS Ply 4" or "GAFGLAS Ply 6") in the Class A, B or C roof systems indicated below.

The roof deck may first be covered with a Type G2 asphalt glass mat base sheet "GAF Stratavent Eliminator Venting Base Sheet (Perforated)" or "GAF Stratavent Eliminator Venting Base Sheet (Nailable)" . Perforated to be mopped and nailable to be mechanically attached granule side down.

As an option Type G2 asphalt glass mat base sheet ("GAFGLAS #75 Base Sheet", "GAFGLAS #80 ULTIMA" or "GAF Stratavent Eliminator Venting Base Sheet (Nailable)" may be substituted for G1 asphalt glass fiber ply sheet ("GAFGLAS Ply 4" or "GAFGLAS Ply 6") as the nailed base ply in the following systems.

Bottom ply or base sheet may be solid mopped, spot mopped or mechanically fastened.

Unless otherwise indicated, all insulations may be hot mopped or mechanically fastened.

"GAFGLAS Flashing" or "Ruberoid" may be used for flashing in any of the Class A, B or C systems listed below.

When "perlite" is referenced, this includes "GAFTEMP PERMALITE®" or any other UL Classified perlite insulation.

Crushed stone or slag are suitable alternates for gravel in any of the Class A, B or C systems listed.

Structural cement fiber building units are considered suitable to be included as a deck in the following Class A, B or C systems listed over C-15/32 or NC.

The use of gypsum board under any of the following Class A, B or C systems does not adversely effect the rating. The use of 1/2 in. min gypsum board is an acceptable alternate for insulation over C-15/32 decks.

The use of polystyrene insulation board between min 3/4 in. perlite board and deck with rosin paper (perlite/rosin paper/polystyrene/perlite) is a suitable alternate for isocyanurate board in the following Class A, B or C systems.

"BMCA EnergyGuard RA", "BMCA Tapered EnergyGuard RA" and "BMCA EnergyGuard RA" may be substituted for any Atlas polyisocyanurate insulation in any of the following Classifications.

Trumbull "Perma Mop" may be utilized with any of the following "Asphalt Felt Systems with Hot Roofing Asphalt".

GAFGLAS #80 Premium Base Sheet may be used in any of the following systems.

"GAFGLAS Flex Ply 6" is a suitable alternate to "GAFGLAS Ply 6".

"GAFTEMP Permalite Recover Board" may be used in lieu of any perlite insulation in any of the following NC Classifications.

Unless otherwise indicated, any of the "Asphalt Felt Systems with Hot Roofing Asphalt" may be surfaced with "Fireshield MB" at 2.5 - 3.0 gal/sq.

Class A, B and C

Hot roofing asphalt, for use with organic and glass felts or modified bitumen membranes.

"Ruberoid Heat Weld" SBS roofing membrane may be used in lieu of "Ruberoid Mop" SBS products in any applicable Classification.

Class A

1. **Deck:** C-15/32 **Incline:** 3

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Ply Sheet: — Three or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6", hot mopped.
Surfacing: — Gravel.

2. **Deck:** C-15/32 **Incline:** 2

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Ply Sheet: — Three or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6".
Cap Sheet: — One layer Type G3 "GAFGLAS Mineral Surfaced Cap Sheet" or "EnergyCap Mineral Surfaced Cap Sheet".

3. **Deck:** NC **Incline:** 2

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, 2 in. max.
Ply Sheet: — Two or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6".
Cap Sheet: — One layer Type G3 "GAFGLAS Mineral Surfaced Cap Sheet" or "EnergyCap Mineral Surfaced Cap Sheet".

4. **Deck:** NC **Incline:** 1/2

Insulation: — One or two layers "Isotherm R", 4 in. max, hot mopped.
Ply Sheet: — Any UL Classified gravel surfaced Class A asphalt glass fiber mat system.

5. **Deck:** C-15/32 **Incline:** 1

Slip Sheet (Optional): — Red rosin paper, nailed to deck.
Base Sheet: — One layer Type G2 "GAFGLAS #75 Base Sheet" (may be nailed).
Ply Sheet: — One or more layers Type G1 "GAFGLAS Ply 4" or GAFGLAS Ply 6".
Cap Sheet: — One layer Type G3 "GAFGLAS Mineral Surfaced Cap Sheet" or "EnergyCap Mineral Surfaced Cap Sheet".

6. **Deck:** NC **Incline:** 3

Base Sheet: — One layer Type G2 "GAFGLAS #75 Base Sheet".
Ply Sheet: — One or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6".
Cap Sheet: — One layer Type G3 "GAFGLAS Mineral Surfaced Cap Sheet" or "EnergyCap Mineral Surfaced Cap Sheet".

7. **Deck:** C-15/32 **Incline:** 2

Insulation: — One or more layers perlite, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, phenolic, 1.0 in. min (offset from plywood joints 6 in.).
Base Sheet: — One or more layers Type G1, G2 or G3.
Membrane: — One or more layers "Ruberoid Torch" (Smooth or Granule), "Ruberoid Torch Plus" (granule), "Ruberoid Mop" (Smooth or Granule) or "Ruberoid Mop Plus" (granule).
Cap Sheet: — Type G3 "GAFGLAS Mineral Surfaced Cap Sheet" or "EnergyCap Mineral Surfaced Cap Sheet", hot mopped.

8. **Deck:** C-15/32 **Incline:** 2

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Base Sheet: — Two or more layers Type G2 or G3.
Ply Sheet (Optional): — One or more layers Type G1.
Membrane: — One or more layers "Ruberoid Torch" (Smooth or Granule), "Ruberoid Torch Plus" (granule), "Ruberoid Mop" (Smooth or Granule) or "Ruberoid Mop Plus" (granule).
Cap Sheet: — Type G3 "GAFGLAS Mineral Surfaced Cap Sheet" or "EnergyCap Mineral Surfaced Cap Sheet", hot mopped.

9. **Deck:** NC **Incline:** 2

Insulation (Optional): — Perlite, glass fiber, polyisocyanurate, wood fiber, mechanically fastened, any thickness.
Base Sheet: — One or more layers Type G2, "GAFGLASS #75 Base Sheet".
Ply Sheet: — One or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6".
Cap Sheet: — Type G3 "GAFGLAS Mineral Surfaced Cap Sheet", hot mopped.
Surfacing: — "Fireshield MB", 2.5 - 3.0 gal./sq.

Class B

1. **Deck:** C-15/32 **Incline:** 3-1/2

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Ply Sheet: — Two or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6"
Cap Sheet: — Type G3 "GAFGLAS Mineral Surfaced Cap Sheet" or "EnergyCap Mineral Surfaced Cap Sheet", hot mopped.

2. **Deck:** C-15/32 **Incline:** 3-1/2

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Base Sheet: — Two or more layers Type G1, G2 or G3.
Membrane: — One or more layers "Ruberoid Torch" (Smooth or Granule), "Ruberoid Torch Plus" (granule), "Ruberoid Mop" (Smooth or Granule) or "Ruberoid Mop Plus" (granule).
Cap Sheet: — "GAFGLAS Mineral Surfaced Cap Sheet" or "EnergyCap Mineral Surfaced Cap Sheet", hot mopped.

Class C

1. **Deck:** C-15/32 **Incline:** 1/2

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Ply Sheet: — Three or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6".
Surfacing: — "Special Roofing Bitumen" 20 lbs/sq.

COAL TAR FELT SYSTEMS WITH HOT ROOFING COAL TAR

Class A

1. **Deck:** C-15/32 **Incline:** 1/2

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Ply Sheet: — Three or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6", hot mopped with coal tar bitumen.
Surfacing: — Gravel.

COMBINATION HOT AND COLD SYSTEMS

Class A

1. **Deck:** NC **Incline:** 2

Insulation (Optional): — One or more layers perlite, wood fiber or glass fiber, 2 in. max.
Ply Sheet: — Three or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6".
Surfacing: — Grundy Industries "al MB Aluminum Roof Coating" at 1-1/2 gal/sq.

2. **Deck:** NC **Incline:** 1

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Ply Sheet: — Three or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6".
Surfacing: — "Weather Coat Emulsion" at 3 gal/sq.

3. **Deck:** NC **Incline:** 1/2

Insulation: — One or two layers "Isotherm R", 4 in., hot mopped.
Ply Sheet: — Any UL Classified gravel surfaced Class A asphalt glass fiber mat system.

4. **Deck:** NC **Incline:** 2

Insulation (Optional): — Isocyanurate, perlite, isocyanurate/composite, wood fiber and glass fiber, any thickness, mechanically fastened.
Base Sheet: — One ply Type G1 or G2, mechanically fastened or hot mopped.
Ply Sheet: — One or more plies Type G1 or G2, adhered with hot roofing asphalt.
Surfacing: — "GAF Premium Fibered Aluminum Roof Coating", 1-1/2 gal/sq or "GAF Weather Coat Emulsion", 3 gal/sq.

5. **Deck:** NC **Incline:** 1

Insulation (Optional): — Perlite, glass fiber, polyisocyanurate, wood fiber, mechanically fastened, any thickness.
Base/Ply Sheet: — One or more plies Type G1 or type G2, hot mopped in place.
Coating: — "Fibered Aluminum Roof Coating".

6. **Deck:** NC **Incline:** 1

Insulation (Optional): — Perlite, glass fiber, polyisocyanurate, wood fiber, mechanically fastened, any thickness.
Base/Ply Sheet: — One or more plies Type G1 or Type G2, fully adhered with either "Ruberoid Modified Bitumen Adhesive" or "Ruberoid Modified Bitumen flashing Cement".
Coating: — "Fibered Aluminum Roof Coating", 1-1/2 gal/sq.

7. **Deck:** C 15/32 **Incline:** 1

Base Sheet: — One or more plies Type G2, mechanically fastened.
Ply Sheet: — Three or more plies Type G1, hot mopped in place.
Coatings: — "Fibered Aluminum Roof Coating", 1-1/2 gal/sq.

8. **Deck:** NC **Incline:** ½

Base Sheet: — Any UL Classified Type G1 or Type G2 base sheet, mechanically fastened.
Base Sheet: — Any UL Classified Type G1 or Type G2 base sheet, max. 2 plies, fully adhered with "Matrix Standard Cold Lap Adhesive 103", 2 gal./sq.
Surfacing: — "Matrix 322 White Elastomeric Roof Coating", 2 gal./sq.

9. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — Perlite, glass fiber, polyisocyanurate, wood fiber, mechanically fastened, any thickness.
Ply Sheet: — Three or more layers Type G1 "GAFGLAS Ply 6", hot mopped.
Surfacing: — "Fireshield MB", 1.5 - 2.0 gal./sq.

Class B

1. **Deleted.**

2. **Deck:** C-15/32 **Incline:** 2

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Ply Sheet: — Three or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6", hot mopped.
Surfacing: — Grundy Industries "al MB Aluminum Roof Coating", 1-1/2 gal/sq.

3. **Deck:** NC **Incline:** 2

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Ply Sheet: — Three or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6".
Surfacing: — "Weather Coat Emulsion AF" at 1-1/2 gal/sq.

Class C

1. **Deck:** C-15/32 **Incline:** Unlimited

Insulation (Optional): — One or more layers perlite, wood fiber or glass fiber, 2 in. max.
Ply Sheet: — Three or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6".
Surfacing: — Grundy Industries "al MB Aluminum Roof Coating" at 1-1/2 gal/sq or "Weather Coat Emulsion" at 3 gal/sq.

2. **Deck:** C-15/32 **Incline:** 2

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Ply Sheet: — Three or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6".
Surfacing: — Grundy Industries "al MB Aluminum Roof Coating" at 1-1/2 gal/sq.

3. **Deck:** C-15/32 **Incline:** Unlimited

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Ply Sheet: — Three or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6".
Surfacing: — "Weather Coat Emulsion" at 3 gal/sq.

FLUID APPLIED COATING SYSTEM

1. **Deck:** NC **Incline:** Unlimited

Surfacing: — "Weathercote Low VOC" or "Weathercote" - 2 gal/sq.

SINGLE PLY MEMBRANE ROOFING SYSTEMS (MODIFIED BITUMEN)

Unless otherwise indicated phenolic insulation may be used in any of the following systems.

Unless otherwise indicated any of the following Single Ply Membrane Systems may utilize multiple layers of Ruberoid Membrane.

"GAF Premium Aluminum Roof Coating" may be used on any of the following Classifications not exceeding 1/2 in.

"GAF Weater Coat Emulsion" may be used on any of the following noncombustible Classifications not exceeding 1/2 in.

Ruberoid® Modified Bitumen Adhesive, Monsey Corp. "MBA Gold" and Karnak "No. 81" adhesives may be used in any of the following noncombustible deck Classifications.

Tropical Asphalt "No. 711 AF" adhesive may be used in any of the following Classifications.

GAFGLAS #80 Premium Base Sheet may be used in any of the following systems.

(Optional) Noncombustible deck classifications are applicable for use over combustible (15/32 in. min plywood) decks when 1/2 in. (min) gypsum board or 1/4 in. (min) G-P Gypsum DensDeck® are used directly over the deck with all joints staggered 6 in. (min) from plywood joints.

A vapor barrior may be optionally installed under all systems utilizing "EVERGUARD" insulation. "EVERGUARD" insulation is an acceptable alternate in any polyisocyanurate insulation of the following systems. GAFGLAS Perlite may be used as an option over EVERGUARD Insulation. GAFGLAS Stratavent Perforated Base Sheet may be utilized as an additional ply in any of the following systems.

The following membranes may be *used interchangeably within their own group:*

A. "Ruberoid Torch Granule", "Ruberoid Torch Granule Plus", "Ruberoid Torch Granule 1", Ruberoid Torch 180.

B. "Ruberoid Mop Smooth", "SBS HW Smooth", "Ruberoid 601 Cap Plus", "Ruberoid 30" .

C. "Ruberoid Mop Granule", "Ruberoid Mop Plus Granule", "SBS HW Granule", "SBS HW Plus".

D. "Ruberoid Mop 170 FR (1 sq)", "Ruberoid Mop 170 FR (1/2 sq)" .

E. "Ruberoid Mop FR 2", Ruberoid 30 FR", "Ruberoid SBS Heat Weld 170 FR" .

F. "Ruberoid 20", "SBS HW (Heat Weld) 25".

G. "Flame Free 180 FR", "Ruberoid Torch FR", "Bral Supreme Plus APP Granule FR", "GBSP-250FR", "Bral Supreme APP Granule FR" .

Unless otherwise indicated, the Modified Bitumen (Granule) membrane may be surfaced with "Fireshield MB" at 2.5 - 3.0 gal/sq. and the incline of the resultant system would be increased to a 3/4 in. incline. But if the incline of the Classified system is greater than a 3/4 in. incline, the incline of the roofing system would be maintained when surfaced with "Fireshield MB" at 2.5 - 3.0 gal/sq.

Unless otherwise indicated "Ruberoid EnergyCap SBS 30FR" is an acceptable alternate for "Ruberoid 30 FR" or "Ruberoid Mop 170 FR" in any applicable Classification.

Class A - Ballasted

1. **Deck:** NC **Incline:** 2

Insulation: — *One or two layers "Isotherm R", any thickness, loose laid or mechanically fastened.*
Membrane: — Any UL Classified membrane used in a ballasted system.
Surfacing: — River bottom stone, 3/4 to 1-1/2 in. diam, 1000 lbs/sq.

2. **Deck:** C-15/32 **Incline:** 1/4 (NC-2)

Insulation: — Perlite, glass fiber or wood fiber, 3/4 to 1-1/2 in.
Membrane: — "Ruberoid Torch Granule 1" (modified bitumen).
Surfacing: — Gravel at 400 lbs/sq, loose laid or concrete blocks, at 10 lbs/sq and spaced not more than 1/8 in.

3. **Deck:** NC **Incline:** 3

Insulation (Optional): — Perlite, glass fiber or wood fiber, 3/4 to 1-1/2 in.
Base Sheet (Optional): — Type 15 asphalt organic felt or Type G2.
Membrane: — "Ruberoid Torch Granule 1" (modified bitumen).
Surfacing: — Gravel.

4. **Deck:** C-15/32 **Incline:** 1/4

Insulation (Optional): — Perlite, glass fiber or wood fiber, any thickness.
Membrane: — "Ruberoid Torch Granule 1" (modified bitumen).
Slip Sheet: — 0.004 in. polyethylene (not UL Classified).
Surfacing: — 3/4 in. thick concrete with one layer of No. 10 Summerville Quarry tile (or equivalent) grouted in place.

5. **Deck:** NC **Incline:** 2

Insulation (Optional): — Perlite, glass fiber or wood fiber, any thickness.
Membrane: — "Ruberoid Torch Granule 1" (modified bitumen).
Surfacing: — 3/4 to 1-1/2 in. diam river bottom stone at 1000 lb/sq or concrete pavers weighing not less than 10 lb/sq ft and spaced not more than 1/8 in.

6. **Deck:** NC **Incline:** 3

Insulation: — a)Polystyrene, 2 in. max, b)Isocyanurate, any thickness, laid loosely.
Membrane: — "EverGuard SR" or "EverGuard FB", 40-100 mil (TPA), laid loosely.
Surfacing: — River bottom stone (3/4 - 1-1/2 in. diam) at 1000 lb/sq or concrete roof pavers.

7. **Deck:** C-15/32 **Incline:** 1/2

Slip Sheet: — One or more layers Atlas Roofing "FR50", mechanically fastened.
Membrane: — "EverGuard TPO^2 Plus" , 45 mil.
Surfacing: — River bottom stone, (3/4 to 1-1/2 in. diam) at 1000 lbs/sq or concrete roof pavers.

8. **Deck:** C-15/32 **Incline:** 1/2

Base Sheet: — Two or more layers Type G2, "GAFGLAS Basesheet #75", mechanically fastened.
Membrane: — "EverGuard TPO^2 Plus", 45 mil.
Surfacing: — River bottom stone, (3/4 to 1-1/2 in. diam) at 1000 lbs/sq or concrete roof pavers.

Class A - Fully Adhered

1. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Base Sheet (Optional): — One or more layers Type G1, G2 or G3.
Membrane: — One or more layers "Ruberoid Torch" (Smooth or Granule), "Ruberoid Torch Granule Plus", "Ruberoid Mop" (Smooth or Granule) or "Ruberoid Mop Plus Granule" (granule).
Surfacing: — Gravel, 400 lbs/sq, loose laid or applied in a flood coat of hot roofing asphalt.

2. **Deck:** NC **Incline:** 1/2

Base Sheet (Optional): — One or more layers Type G1, G2 or G3.
Membrane: — One or more layers "Ruberoid Torch" (Smooth or Granule), "Ruberoid Torch Granule Plus", "Ruberoid Mop" (Smooth or Granule) or "Ruberoid Mop Plus Granule".
Coating: — Karnak No. 97, 1-1/2 - 3 gal/sq.

3. **Deck:** NC **Incline:** 1/4

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, any thickness.
Base Sheet (Optional): — One or more layers Type G1, G2 or G3.
Membrane: — One or more layers "Ruberoid Torch" (Smooth or Granule), "Ruberoid Torch Granule Plus", "Ruberoid Mop Granule" or "Ruberoid Mop Plus Granule".
Coating: — Karnak No. 97, 1-1/2 - 3 gal/sq.

4. **Deck:** C-15/32 **Incline:** 1/2

Insulation: — One or more layers perlite, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, phenolic, 1-1/2 in. min thickness (offset from plywood joints 6 in.).
Base Sheet: — One or more layers Type G2 or G3.
Ply Sheet (Optional): — One or more layers Type G1.
Membrane: — One or more layers "Ruberoid Torch" (Smooth or Granule), "Ruberoid Torch Granule Plus", "Ruberoid Mop" (Smooth or Granule) or "Ruberoid Mop Plus Granule".
Surfacing: — Karnak No. 97, 1-1/2 - 3 gal/sq.

5. **Deck:** NC **Incline:** 1/2

Base Sheet (Optional): — One or more layers Type G1, G2 or G3.
Membrane: — One or more layers "Ruberoid Torch" (Smooth or Granule), "Ruberoid Torch Granule Plus".
Surfacing (Optional): — Karnak "No. 97" or "169" at 1-3 gal/sq or Grundy Ind. "20 F Emulsion" at 3 gal/sq.

6. **Deck:** C-15/32 **Incline:** 1/2

Insulation: — One or more layers perlite, glass fiber, 3/4 in. min, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, 1-1/2 in. min.
Base Sheet (Optional): — One or more layers Type G1, G2 or G3.
Membrane: — One or more layers "Ruberoid Torch" (Smooth or Granule), "Ruberoid Torch Granule Plus", "Ruberoid Mop" (Smooth or Granule) or "Ruberoid Mop Plus Granule".
Surfacing: — Gravel.

7. **Deck:** C-15/32 **Incline:** 1/2

Insulation (Optional): — One or more layers perlite, wood fiber, glass fiber, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite.
Base Sheet: — Two or more layers Type G2 or G3.
Ply Sheet (Optional): — One or more layers Type G1.
Membrane: — One or more layers "Ruberoid Torch" (Smooth or Granule), "Ruberoid Torch Granule Plus", "Ruberoid Mop" (Smooth or Granule) or "Ruberoid Mop Plus Granule".
Surfacing: — Karnak No. 97, 1-1/2 - 3 gal/sq or gravel.

8. **Deck:** NC **Incline:** 1/2

Insulation: — One or more layers perlite, glass fiber, 3/4 in. min, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, 1-1/2 in. min.
Base Sheet (Optional): — One or more layers Type G1, G2 or G3.
Membrane: — One or more layers "Ruberoid Torch" (Smooth or Granule), "Ruberoid Torch Granule Plus", "Ruberoid Mop" (Smooth or Granule) or "Ruberoid Mop Plus Granule".
Surfacing: — Grundy "AL MB Aluminum Roof Coating" at 1-2 gal/sq.

9. **Deck:** C-15/32 **Incline:** 1/2

Insulation (Optional): — One or more layers perlite, glass fiber, 3/4 in. min, isocyanurate, urethane, perlite/isocyanurate composite, perlite/urethane composite, phenolic, 1-1/2 in. min.
Base Sheet: — One or more layers Type G2 "GAFGLAS #75 Base Sheet", hot mopped or mechanically fastened in place.
Ply Sheet: — One or more layers Type G1 "GAFGLAS Ply 4", hot mopped in place.
Membrane: — "Ruberoid Mop 170 FR".
Surfacing — (Optional): "GAF Fibered Aluminum Coating" at 1-1/2 gal/sq or "GAF Weather Coat Emulsion" at 3 gal/sq.

10. **Deleted.**

11. **Deleted.**

12. **Deleted.**

13. **Deleted.**

14. **Deleted.**

15. **Deck:** C-15/32 **Incline:** 1/2

Insulation (Optional): — Perlite, fiber glass, isocyanurate, urethane or perlite/isocyanurate composite.
Base Sheet: — One or more layers Type G2 or G3 base sheet, hot mopped or mechanically fastened.
Ply Sheet (Optional): — One or more layers Type G1, hot mopped in place.
Membrane: — "Ruberoid Mop 170 FR".

16. **Deck:** C-15/32 **Incline:** 1/2

Insulation (Optional): — Perlite, fiber glass, isocyanurate, urethane or perlite/isocyanurate composite, offset 6 in. from joints.
Base Sheet: — One or more layers Type G-2 or G-3 base sheet, hot mopped or mechanically fastened.
Ply Sheet (Optional): — One or more layers Type G-1, hot mopped in place.
Membrane: — One layer "Ruberoid Torch Smooth" or "Ruberoid Mop Smooth".
Membrane: — One layer "Ruberoid Mop 170 FR".

17. **Deck:** NC **Incline:** 1

Insulation (Optional): — Perlite, fiber glass, wood fiber, isocyanurate, urethane or perlite/isocyanurate composite.
Base Sheet: — One or more layers Type G2 or G3 base sheet, hot mopped or mechanically fastened.
Ply Sheet (Optional): — One or more layers Type G1, hot mopped in place.
Membrane: — One layer "Ruberoid Mop 170 FR"

18. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — Perlite, fiber glass, wood fiber, isocyanurate, urethane or perlite/isocyanurate composite.
Base Sheet (Optional): — One or more layers Type G-2 or G-3 base sheet, hot mopped or mechanically fastened.
Ply Sheet (Optional): — One or more layers Type G-1, hot mopped in place.
Membrane: — One layer "Ruberoid Torch Smooth" (smooth), "Ruberoid Mop Smooth".
Membrane: — One layer "Ruberoid Mop 170 FR" (granule).

19. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — One or more layers perlite, glass fiber, isocyanurate, urethane or perlite/isocyanurate composite, any thickness.
Base Sheet: — One or more plies Type G1 or G2, hot mopped or adhered with Karnak Chemical "No. 81" or Gibson-Homan "No. 6160" cold applied adhesive at 1-1/2 gal/sq.
Membrane: — One layer "Ruberoid Mop 170 FR", hot mopped or adhered with Karnak Chemical "No. 81" or Gibson-Homan "No. 6160" cold applied adhesive at 1-1/2 gal/sq.

20. **Deleted.**

21. **Deck:** C-15/32 **Incline:** 1/2

Insulation (Optional): — Polyisocyanurate, wood fiber, perlite, glass fiber any thickness, hot mopped or mechanically fastened.
Base Sheet: — One or more plies Type G2 "GAFGLAS #75" base sheets, hot mopped or mechanically fastened.
Membrane: — One or more plies "Ruberoid 30 FR" hot mopped in place.

22. **Deck:** C-15/32 **Incline:** 1/2

Insulation (Optional): — Polyisocyanurate, wood fiber, perlite, or glass fiber any thickness, hot mopped or mechanically fastened.
Base Sheet: — One or more plies Type G2 "GAFGLAS #75" hot mopped or mechanically fastened.
Ply Sheet: — One or more plies "Ruberoid 20", hot mopped in place.
Membrane: — One or more plies "Ruberoid 30 FR", hot mopped in place.

23. **Deck:** C-15/32 **Incline:** 1/2

Insulation (Optional): — Fiber glass or perlite, mechanically fastened.
Base Sheet: — One or more layers Type G2, hot mopped or mechanically fastened.
Ply Sheet: — Two or more layers Type G1, hot mopped or mechanically fastened.
Membrane: — "Ruberoid 30" or "Ruberoid Modified Cap Sheet 601", hot mopped in place.
Surfacing: — Karnak Chemical "Karnak No. 97 Fibrated Aluminum Asphalt Roof Coating" or "Karnak No. 97 Asbestos Free Aluminum Roof Coating" at 1 to 2 gal/sq.

24. **Deck:** NC **Incline:** 1/4

Insulation (Optional): — Polyisocyanurate, perlite, glass fiber or wood fiber, 2 in. max.
Base Sheet: — Type 15 asphalt organic felt or Type G2, mechanically fastened or adhered with hot roofing asphalt.
Membrane: — "Ruberoid Torch Granule 1" (modified bitumen).
Surfacing: — Karnak Chemical "Karnak No. 97 Fibrated Aluminum Asphalt Roof Coating" or "Karnak No. 97 Asbestos Free Aluminum Roof Coating" at 1 to 2 gal/sq.

25. **Deck:** C-15/32 **Incline:** 1/4

Insulation: — Two layers glass fiber (staggered joints), 1 in. each.
Base Sheet: — Type G2, mechanically fastened or adhered with hot roofing asphalt.
Membrane: — "Ruberoid Torch Granule 1" (modified bitumen).
Surfacing: — Karnak Chemical "Karnak No. 97 Fibrated Aluminum Asphalt Roof Coating" at 1 to 2 gal/sq.

26. **Deck:** NC **Incline:** 1/4

Membrane: — "Ruberoid Torch Granule 1" (modified bitumen).
Surfacing: — Karnak Chemical "Karnak No. 97 Fibrated Aluminum Asphalt Roof Coating" at 1 to 2 gal/sq.

27. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — Perlite, wood fiber or glass fiber, 1 in. max, mechanically fastened or adhered with hot roofing asphalt.
Base Sheet: — Type G2 or "Flex Base 60" (modified bitumen), mechanically fastened or adhered with hot roofing asphalt.
Membrane: — "Ruberoid Torch Granule 1", heat fused.
Surfacing: — Monsey Products "Endure Aluminum Roof Coating", "Weather Check" or "Pro-Grade Aluminum Roof Coating", 1.5 gal/sq.

28. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — Perlite, wood fiber, glass fiber or isocyanurate/urethane board, 2 in. max, mechanically fastened.
Base Sheet: — Type G2 (modified bitumen), mechanically fastened or adhered with hot roofing asphalt.
Membrane: — "Ruberoid Torch Granule 1" (modified bitumen), heat fused.
Surfacing: — Monsey Products "Dura-White", "Endure White Elastomeric Roof Coating" or "Pro-Grade White Elastomeric Roof Coating", 3 gal/sq.

29. **Deck:** NC **Incline:** No limitation

Insulation (Optional): — Polyisocyanurate, urethane, glass fiber, perlite, wood fiber, any combination in any thickness, mechanically fastened or adhered with hot roofing asphalt.
Base Sheet: — Type G2 (modified bitumen), mechanically fastened.
Membrane: — "Ruberoid Torch Granule 1", heat fused.
Surfacing: — "Tuff-Corp" field mixed insulating coating composed of 6-2/3 cu ft of perlite, 7 lb of "TC-500 Masterbatch", 94 lb Portland cement and 17 gal of water spray applied to min 1/2 in.

30. **Deck:** C-15/32 **Incline:** No limitation

Insulation (Optional): — Polyisocyanurate, urethane, glass fiber, perlite, any combination in any thickness, mechanically fastened.

Base sheet: — Type G2 (modified bitumen), mechanically fastened or adhered with hot roofing asphalt.
Membrane: — "Ruberoid Torch Granule 1", heat fused.
Surfacing: — "Tuff-Corp" field mixed insulating coating composed of 6-2/3 cu ft of perlite, 7 lb of "TC-500 Masterbatch", 94 lb Portland cement and 17 gal of water spray applied to min 1/2 in.

31. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — Glass fiber, perlite, wood fiber, 1 in. max, mechanically fastened or adhered with hot roofing asphalt.
Base Sheet: — Type G2, mechanically fastened or adhered with hot roofing asphalt.
Membrane: — "Ruberoid Torch Granule 1" (modified bitumen), heat fused.
Surfacing: — Henry "No. 229 Asphalt Emulsion" at 1 gal/sq or GEO Industries "No. 929 Aluminum Emulsion" at 1 gal/sq.

32. **Deck:** NC **Incline:** 1/2

Insulation: — Polyisocyanurate, glass fiber, perlite, wood fiber, hot mopped or mechanically fastened any thickness.
Base Sheet: — Type G2, mechanically fastened or hot mopped.
Membrane: — "Ruberoid Torch Granule 1", heat fused in place.
Surfacing: — Henry, "Henry 520 Aluminum", applied at 1-1/2 gal/sq.

33. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — Polyisocyanurate, glass fiber, perlite, wood fiber, any thickness, mechanically fastened or adhered with hot roofing asphalt.
Base Sheet: — Type G2, mechanically fastened or adhered with hot roofing asphalt.
Membrane: — "Ruberoid Torch Granule 1" (modified bitumen), heat fused.
Surfacing: — National Varnish "ALUM-A-GARD Fibered Aluminum Roof Coating", at 1-1/2 gal/sq.

34. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — Polyisocyanurate, glass fiber, perlite, wood fiber, any thickness, mechanically fastened or adhered with hot roofing asphalt.
Base Sheet: — Type G2, mechanically fastened or adhered with hot roofing asphalt.
Membrane: — "Ruberoid Torch Granule 1" (modified bitumen), heat fused.
Surfacing: — Henry "Henry 520 Aluminum", at 1-1/2 gal/sq.

35. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — Polyisocyanurate, glass fiber, perlite, wood fiber, any combination, any thickness, mechanically fastened.
Base Sheet: — Type G2, mechanically fastened.
Membrane: — "Ruberoid Torch Granule 1" (modified bitumen), heat fused in place.
Surfacing: — "ALUM-A-GARD Fibered Aluminum Roof Coating" or "ALUM-A-GARD Nonfibered Aluminum Roof Coating" at 1-1/2 gal/sq.

36. **Deck:** C-15/32 **Incline:** 1/4

Insulation: — Two layers glass fiber (staggered joints), 1 in. each.
Base Sheet: — Type G2, mechanically fastened or adhered with hot roofing asphalt.
Membrane: — "Ruberoid Torch Granule 1" (modified bitumen).
Surfacing: — Gibson-Homans "Black Jack 5176 Fibered Aluminum Roof Coating" or "PC 401 Fibered Aluminum Roof Coating" at 2 gal/sq.

37. **Deck:** NC **Incline:** 1/4

Membrane: — "Ruberoid Torch Granule 1" (modified bitumen).
Surfacing: — Gibson-Homans "Black Jack 5176 Fibered Aluminum Roof Coating" or "PC 401 Fibered Aluminum Roof Coating" at 2 gal/sq.

38. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — Polyisocyanurate, glass fiber, perlite, wood fiber, any thickness, mechanically fastened or adhered with hot roofing asphalt.
Base Sheet: — Type G2, mechanically fastened or adhered with hot roofing asphalt.
Membrane: — "Ruberoid Torch Granule 1" (modified bitumen), heat fused.
Surfacing: — Gibson-Homans "Black Jack 5176 Fibered Aluminum Roof Coating" or "PC 401 Fibered Aluminum Roof Coating" at 2 gal/sq.

39. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — Perlite or glass fiber, max 1 in. thick, mechanically fastened or mopped asphalt.
Base Sheet: — One ply Type G2, mechanically fastened or mopped with asphalt.
Ply Sheet (Optional): — One or more plies Type G1 or G2, mopped with asphalt.
Membrane: — "Ruberoid Torch Granule 1", heat fused.

40. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — Polyisocyanurate, perlite or glass fiber, any thickness.
Base Sheet: — One ply Type G2, mechanically fastened or hot mopped.
Ply Sheet (Optional): — One or more plies Type G1 or G2, hot mopped.
Membrane: — "Ruberoid Torch Granule 1" (modified bitumen), heat fused.

41. **Deck:** NC **Incline:** 3

Insulation (Optional): — Any UL Classified insulation exept EPS, any thickness, mechanically fastened.
Base Sheet: — Type G1 or G2, mechanically fastened or hot mopped.
Membrane: — "Ruberiod® UltraClad™" (modified bitumen), Torched.

42. **Deck:** 15/32 **Incline:** Unlimited

Base Sheet: — One or more plies Type G2, mechanically fastened.
Ply Sheet: — Type G1 or G2, mechanically fastened or hot mopped.
Membrane: — "Ruberiod® UltraClad™" (modified bitumen), Torched.

43. **Deck:** NC **Incline:** 1/2

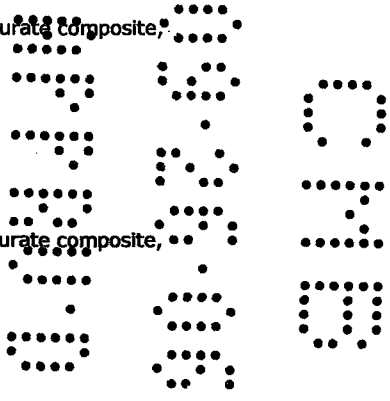
Base Sheet: — One or more layers "GAFG Glass # 75", Type G1 or G2, hot mopped or mechanically fastened.
Membrane: — "Ruberoid Mop Granule", hot mopped in place.

44. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — One or more layers perlite, glass fiber, isocyanurate, perlite/isocyanurate composite, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Base Sheet: — One or more layers Type G1 or G2, hot mopped or mechanically fastened.
Ply Sheet (Optional): — One or more layers Type G1, hot mopped or mechanically fastened.
Membrane: — One or more layers "Ruberiod Mop Smooth".
Surfacing: — "Weathercote Low VOC" or "Gray MB Plus", 2 gal/sq.

45. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — One or more layers perlite, glass fiber, isocyanurate, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, any thickness.
Base Sheet: — Type G2, mechanically fastened or hot mopped.
Ply Sheet (Optional): — Type G1, hot mopped.
Membrane: — "Ruberoid Mop 170 FR" (modified bitumen), hot mopped.
Surfacing: — "Weathercote Low VOC" or "Gray MB Plus", 2 gal/sq.



46. **Deck:** NC **Incline:** 1

Insulation (Optional): — One or more layers perlite, glass fiber, isocyanurate, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, any thickness.
Base Sheet: — Type G2, mechanically fastened or hot mopped.
Ply Sheet (Optional): — Type G1, hot mopped.
Membrane: — "Ruberoid Mop 170 FR" (modified bitumen), hot mopped.
Surfacing: — "Weathercote", 2 gal/sq.

47. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — One or more layers perlite, glass fiber, isocyanurate, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, any thickness.
Base Sheet: — Type G2, mechanically fastened
Ply Sheet: — Type G2, adhered with "Matrix 102", 2 gal/sq.
Membrane: — "Ruberoid Mop 170 FR" (modified bitumen), adhered with "Matrix 102", 2 gal/sq.

48. **Deck:** C-15/32 **Incline:** 1/2

Insulation (Optional): — One or more layers perlite, glass fiber, isocyanurate, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, any thickness.
Base Sheet: — Type G2, mechanically fastened.
Ply Sheet: — Type G2, adhered with "Matrix 102", 2 gal/sq.
Membrane: — "Ruberoid Mop 170 FR" (modified bitumen), adhered with "Matrix 102", 2 gal/sq.

48. **Deleted.**

49. **Deck:** NC **Incline:** 1/2

Base Sheet: — One or more layers "GAFGLAS #75", Type G1 or G2, hot mopped or mechanically fastened.
Ply Sheet (Optional): — One or more layers "Ruberoid 20", hot mopped or mechanically attached.
Membrane: — "Ruberoid 30", hot mopped in place.

50. **Deck:** NC **Incline:** 1

Insulation (Optional): — One or more layers perlite, glass fiber, isocyanurate, perlite/isocyanurate composite, perlite/urethane composite, wood fiber/isocyanurate composite, phenolic, any thickness.
Base Sheet: — One or more layers Type G1 or G2, mechanically fastened.
Ply Sheet: — Two or more layers Type G1, "GAFGLAS Flexply 6", fully adhered with "Matrix 103" adhesive, 2 gal/sq.
Surfacing: — No. 11 mineral granules adhered with "Matrix 103" adhesive, 2 gal/sq.

51. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — Wood fiber, glass fiber or perlite, 1/2 in. min thickness over any UL Classified insulation, any combination, any thickness.
Base Sheet: — One or more layers "Liberty MA Base Sheet", mechanically fastened.
Cap Sheet: — One layer "Liberty FR SBS Self-Adhering Cap Sheet", self adhered.

52. **Deck:** C-15/32 **Incline:** 1/2

Base Sheet — Type G2 "GARGLAS #75" base sheet, mechanically fastened.
Base Sheet: — One or ore layers "Liberty MA Base Sheet", mechanically fastened.
Cap Sheet: — "Liberty FR SBS Self-Adhering Cap Sheet" , self adhered.

53. **Deck:** NC **Incline:** 1

Insulation (Optional): — Any UL Classified polyisocyanurate, perlite, wood fiber, glass fiber any thickness.
Base Sheet: — One or more layers Type G2 "GAFGLAS No. 75" base sheet, mechanically fastened.
Ply Sheet (Optional): — One or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6", mechanically fastened or hot mopped.
Membrane: — "Ruberoid EnergyCap APP 250FR", heat fused.

54. **Deck:** NC **Incline:** 1

Insulation (Optional): — Any UL Classified polyisocyanurate, perlite, wood fiber, glass fiber any thickness.
Base Sheet: — One or more layers Type G2 "GAFGLAS No. 75" base sheet, mechanically fastened.
Ply Sheet (Optional): — One or more layers Type G1 "GAFGLAS Ply 4" or "GAFGLAS Ply 6", mechanically fastened or hot mopped.
Membrane: — "Ruberoid 30 FR", hot mopped.
Surfacing: — "EnergyCote", 0.6 gal./sq.

55. **Deck:** C-15/32 **Incline:** 1

Primer: — "Fire Out" at 1gal/sq.
Base Sheet: — One ply Type G2, mechanically fastened.
Membrane: — "Ruberoid Torch Granule", "Ruberoid Torch Granule 1", "Ruberoid Torch Granule Plus", "Ruberoid Torch FR", heat fused.

56. **Deck:** C-15/32 **Incline:** 1/2

Primer: — "Fire Out" at 1gal/sq.
Base Sheet: — One ply Type G2, mechanically fastened.
Ply Sheet (Optional): — One ply Type G1 or G2, mechanically fastened.
Membrane: — "Ruberoid Torch Granule", "Ruberoid Torch Granule 1", "Ruberoid Torch Granule Plus", "Ruberoid Torch FR", heat fused.

57. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — 1/2 in. wood fiber, mechanically fastened.
Base Sheet: — One ply "Liberty SBS Self-Adhering Base/Ply Sheet", self adhered.
Membrane: — One ply "Ruberoid SBS Heat Weld 170 FR", "Ruberoid Mop FR 2", "Ruberoid 30 FR", "SBS HW (Heat Weld) FR Plus", heat fused.

58 **Deck:** C-15/32 **Incline:** 1/2

Insulation (Optional): — Any UL Classified, any thickness, mechanically fastened.
Barrier Board: — 1/2 in. thick gypsum board or 1/4 in. G-P Gypsym Corp. "DensDeck® Roofboard", mechanically fastened.
Base Sheet: — One ply "Liberty SBS Self-Adhering Base/Ply Sheet", self adhered.
Membrane: — One ply "Ruberoid SBS Heat Weld 170 FR", "Ruberoid Mop FR 2", "Ruberoid 30 FR", "SBS HW (Heat Weld) FR Plus", heat fused.

59 **Deck:** NC **Incline:** 1

Primer: — "Fire Out" at 1 gal/sq.
Base Sheet (Optional): — One ply "Liberty MA Base Sheet", mechanically fastened.
Ply Sheet: — One ply "Liberty SBS Self-Adhering Base/Ply Sheet", self adhered.
Cap Sheet: — One ply "Liberty FR SBS Self-Adhering Cap Sheet", self adhered.

MIAMI-DADE

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

GAF Material Corporation
1361 Alps Road
Wayne, NJ 07470

SCOPE:
This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by the BCCO and accepted by the Building Code and Product Review Committee to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: GAF Ruberoid® Modified Bitumen Roof System for Wood Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews NOA #02-0408.10 and consists of pages 1 through 31.
The submitted documentation was reviewed by Frank Zuloaga, RRC.

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	SBS/APP, Modified Bitumen
Deck Type:	Wood
Maximum Design Pressure	-75 psf
Fire Classification:	See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
GAF Asphalt Concrete Primer (Matrix™ 307 Primer)	5, 55 gallons	ASTM D 41	Asphalt concrete primer used to promote adhesion of asphalt in built-up roofing.
GAF Mineral Shield® Granules	60 lb. Bags 100 lb. bags	ASTM D 1863	Granules for surfacing of exposed asphalt, cold process cement or emulsion. GAF Mineral Shield® Granules shall be used for flashing applications only.
GAF WeatherCoat® Emulsion (Matrix™ Fibered 305 Emulsion)	5 gallons	ASTM 1227	Surface coating for smooth surfaced roofs.
GAF Premium Fibered Aluminum Roof Coating (Matrix™ System Pro Aluminum Roof Coating Fibered 301)	1, 5 gallons	ASTM D 2824	Fibered aluminum coating.
GAF Jetblack All Weather Plastic Cement (Matrix™ Standard Wet/Dry Roof Cement 204)	1, 5 gallons	ASTM D 3019 ASTM D 3409	Refined asphalt blended with a mineral stabilizer and fibers. Permits adhesion to wet and dry surfaces.
GAFGLAS #75®	39.37" (1 meter) Wide	ASTM D 4601	Asphalt impregnated and coated glass mat base sheet.
GAFGLAS #80 Ultima™ Base Sheet	39.37" (1 meter) Wide	ASTM D4601	Asphalt impregnated and coated, fiberglass base sheet
GAFGLAS Flex Ply™ 6	39.37" (1 meter) Wide	ASTM D 2178	Type VI asphalt impregnated glass felt with asphalt coating.
GAFGLAS Ply 4®	39.37" (1 meter) Wide	ASTM D 2178	Type IV asphalt impregnated glass felt with asphalt coating.
GAFGLAS®Mineral Surfaced Cap Sheet	39.37" (1 meter) Wide	ASTM D 3909	Asphalt coated, glass fiber mat cap sheet surfaced with mineral granules.
GAFGLAS® STRATAVENT® Eliminator Perforated	39.37" (1 meter) Wide	ASTM D3672 ASTM D 4897	Fiberglass base sheet coated on both sides with asphalt. Surfaced on the bottom side with mineral granules embedded in asphaltic coating with factory perforations.

Product	Dimensions	Test Specification	Product Description
GAFGLAS® Flashing	various		Asphalt coated glass fiber mat flashing sheet available in three sizes.
GAFGLAS® STRATAVENT® Eliminator Perforated Nailable	39.37" (1 meter) Wide	ASTM D3672 ASTM D 4897	Fiberglass base sheet coated on both sides with asphalt. Surfaced on the bottom side with mineral granules embedded in asphaltic coating.
RUBEROID® SBS Heat-Weld™ Smooth	1 meter (39.37") wide	ASTM D-6164	Non-Woven Polyester mat coated with polymer-modified asphalt and smooth surfaced.
RUBEROID® SBS Heat-Weld™ Granule	1 meter (39.37") wide	ASTM D-6164	Non-Woven Polyester mat coated with polymer modified asphalt and surfaced with mineral granules.
RUBEROID® SBS Heat-Weld™ 170 FR	1 meter (39.37") wide	ASTM D-6164	Non-Woven Polyester mat coated with fire retardant polymer modified asphalt and surfaced with mineral granules.
RUBEROID® SBS Heat-Weld™ PLUS	1 meter (39.37") wide	ASTM D-6164	Non-Woven Polyester mat coated with polymer modified asphalt and surfaced with mineral granules.
RUBEROID® SBS Heat-Weld PLUS FR	1 meter (39.37") wide	ASTM D-6164	Non-Woven Polyester mat coated with fire retardant polymer modified asphalt and surfaced with mineral granules.
RUBEROID Modified Base Sheet	39.37" (1 meter) Wide	ASTM D4601, Type II, UL Type G2 BUR	Premium glass fiber reinforced SBS-modified base sheet
RUBEROID® Modified Bitumen Adhesive	5 gallons	ASTM D 3019 Type III	Fiber reinforced, rubberized Adhesive
RUBEROID® SBS Heat-Weld™ 25	1 meter (39.37") wide	ASTM D-6164	Non-Woven Polyester mat coated with polymer-modified asphalt and smooth surfaced.
Ruberoid® Mop Granule	39.37" (1 meter) Wide	ASTM D 6222 ASTM D 5147	Non-woven polyester mat coated with polymer modified asphalt and surfaced with mineral granules.
RUBEROID MOP Smooth	1 sq. roll 87 lbs.	ASTM D 6298 ASTM D 5147	Non-woven polyester mat coated with polymer-modified asphalt and smooth surfaced.
RUBEROID MOP PLUS	39.37" (1 meter) Wide	ASTM D 6164 ASTM D 5147	Non-woven polyester mat coated with polymer modified asphalt and surfaced with mineral granules.
RUBEROID MOP 170FR	39.37" (1 meter) Wide	ASTM D 6164 ASTM D 5147	Non-Woven polyester mat coated with fire retardant polymer modified asphalt and surfaced with mineral granules.
RUBEROID MOP FR	39.37" (1 meter) Wide	ASTM D 6164 ASTM D 5147	Non-Woven polyester mat coated with fire retardant polymer modified asphalt and surfaced with mineral granules.
RUBEROID TORCH Smooth	39.37" (1 meter) Wide	ASTM D 6222 ASTM D 5147	Heavy duty, polyester reinforced, asphalt modified bitumen membrane, smooth surface.

Product	Dimensions	Test Specification	Product Description
RUBEROID TORCH Granule	39.37" (1 meter) Wide	ASTM D 6222 ASTM D 5147	Heavy duty, polyester reinforced, asphalt modified bitumen membrane, granule surface.
RUBEROID TORCH PLUS	39.37" (1 meter) Wide	ASTM D 6222 ASTM D 5147	Heavy duty, polyester reinforced, asphalt modified bitumen membrane, granule surface
RUBEROID TORCH FR	39.37" (1 meter) Wide	ASTM D 6222 ASTM D 5147	Heavy duty, polyester reinforced, coated with fire retardant asphalt modified bitumen membrane, granule surface.
RUBEROID 170FR TORCH	39.37" (1 meter) Wide	ASTM D 6222 ASTM D 5147	Heavy duty, polyester reinforced, coated with fire retardant asphalt modified bitumen membrane, granule surface.
Ruberoid® 20	39.37" (1 meter) Wide	ASTM D 6163 ASTM D 5147	SBS modified asphalt base sheet reinforce with a glass fiber mat.
Ruberoid® 30	39.37" (1 meter) Wide	ASTM D 6163 ASTM D 5147	Non woven fiberglass mat coated with polymer modified asphalt and surfaced with mineral granules.
Ruberoid® 30 FR	39.37" (1 meter) Wide	ASTM D 6298 ASTM D 5147	Non woven fiberglass mat coated with fire retardant, polymer modified asphalt and surfaced with mineral granules.1
RUBEROID® ULTRACLAD® SBS	39.37" (1 meter) Wide	ASTM D 6163 ASTM D 5147	Woven fiberglass mat coated with Polymer modified asphalt surfaced with aluminum, copper or stainless steel foil.
RUBEROID® Dual FR	39.37" (1 meter) Wide	ASTM D 6164 ASTM D 5147	Non-woven polyester and fiberglass mat coated with file retardant, polymer-modified asphalt and surfaced with mineral granules.
Vent Stacks (metal and plastic)		PA 100(A) ASTM D 1929 ASTM D 635	One-way valve vent used to relieve built-up pressure within the roof system. GAF Vent Stacks are available in metal or plastic.
GAF Aluminum Emulsion	5 gallons	None	Mineral colloidal bituminous emulsion with reflective aluminum flakes
GAF Aluminum Roof Paint (Matrix™ System Pro Aluminum Roof Coating Fibered 302)	5 gallons	ASTM D2824, Type I	Non-fibered. Aluminum pigmented, asphalt roof coating
GAF Built-Up Roofing Asphalt	100 lb. cartons, bulk	ASTM D312, Types I, II, III and IV	Interply mopping and surfacing asphalt
RUBEROID MOD Asphalt, Asphalt L & Asphalt P	60 lb. kegs		SEBS modified asphalt
Shingle-Mate™ Underlayment	4 sq. roll 30 lbs.		Fiberglass reinforced shingle underlayment
Tile-Mate Modified Base Sheet	1.5 sq. roll	ASTM D 5147	SBS modified asphalt base sheet and interply sheet reinforce with a glass fiber mat tile underlayment.

Product	Dimensions	Test Specification	Product Description
Tile-Mate Modified Cap	1 sq. roll 103 lbs.	ASTM D 5147	Non-woven polyester mat coated with polymer modified asphalt and surfaced with mineral granules tile underlayment.
Tile-Mate Modified Cap Plus	1 sq. roll 102 lbs.	ASTM D 5147	Non-woven polyester mat coated with polymer modified asphalt and surfaced with mineral granules tile underlayment.
TopCoat® Surface Seal SB (Matrix 602 SB Coating)	5 gallons		Surface coating for smooth surfaced and mineral surfaced roofs.
GAF WeatherCote® MB+(Matrix 715 MB Coating)	5 gallons		Surface coating for smooth surfaced and mineral surfaced roofs.
TopCoat MB+(Matrix 715 MB Coating)	5 gallons		Surface coating for smooth surfaced and mineral surfaced roofs.
WeatherCote™ (Matrix 531 WeatherCote® Elastomeric Flashing Grade)	5 gallons		Surface coating for smooth surfaced and mineral surfaced roofs.
Matrix Low VOC	5 gallons		Surface coating for smooth surfaced and mineral surfaced roofs.
Matrix 101 System Pro SBS Adhesive	5 gallons	ASTM D3019	Cold Applied Modified SEBS Asphalt Adhesive
(Ruberoid®MB) Matrix 201 System Pro SBS Flashing	5 gallons	ASTM D3019	Cold Applied Modified SEBS Asphalt Adhesive – Flashing Grade.
(Ruberoid®MB) Matrix 102 Select SBS Adhesive	5 gallons	ASTM D3019	Cold Applied Modified SEBS Asphalt Adhesive.
(Ruberoid®MB) Matrix 202 Select SBS Flashing	5 gallons	ASTM D4586	Cold Applied Modified SEBS Asphalt Adhesive – Flashing Grade.
Matrix 203 Standard Plastic Cement	5 gallons	ASTM D4586	Standard Plastic Asphalt Roofing Cement
Matrix 213 Gun Grade Plastic Cement	5 gallons	ASTM D4586	Standard Plastic Asphalt Roofing Cement Caulk Grade.
Matrix 103 Cold Adhesive	5 gallons	ASTM D3019	Cold Applied Asphalt Adhesive.
Matrix 303 Select Fibered Aluminum	5 gallons	ASTM D 2824	Fibered aluminum coating.
Matrix 304 Select Non-Fibered	5 gallons	ASTM D2824, Type I	Non-fibered. Aluminum pigmented, asphalt roof coating.
RUBEROID® Modified Bitumen Adhesive	5 gallons	ASTM D 3019 Type III	Fiber reinforced, rubberized Adhesive

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
GAFTEMP Isotherm R, RA, RN & Composite, EnergyGuard RA	Polyisocyanurate foam insulation	GAF Materials Corp.
GAFTEMP® Composite A & N	Polyisocyanurate foam insulation with high density fiberboard or Permalite perlite insulation.	GAF Materials Corp.
(BMCA)GAFTEMP® Fiberboard	Fiberboard insulation.	GAF Materials Corp.
GAFTEMP® Permalite	Perlite insulation board.	GAF Materials Corp.
GAFTEMP GAFCANT™	Cut perlite board	GAF Materials Corp.
GAFTEMP Permalite Recover Board	Perlite recover board	GAF Materials Corp.
GAFTEMP GAFEDGE™ Tapered Edge Strip	Tapered perlite board	GAF Materials Corp.
(BMCA) GAFTEMP® High Density Fiberboard	High density wood fiberboard insulation.	GAF Materials Corp.
BMCA EnergyGuard, RA	Polyisocynurate foam insulation	BMCA
BMCA Composite EnergyGuard, RA	Polyisocynurate/wood fiberboard composite	BMCA
PYROX	Polyisocyanurate foam insulation	Apache Products Co.
White Line	Polyisocyanurate foam insulation	Apache Products Co.
ACFoam I, II & Composite	Polyisocyanurate foam insulation	Atlas Energy Products
ISO 95+	Polyisocyanurate foam insulation	Firestone Building Products, Inc.
ISO 95+ Composite	Polyisocyanurate/perlite ridged insulation	Firestone Building Products, Inc.
EPS	Extruded polystyrene insulation	Generic
Wood Fiber	Wood fiber insulation board	Generic
High Density Wood Fiberboard	Wood fiber insulation board	Generic
Pelite/Urethane Composite	Perlite / urethane composite board insulation	Generic
Perlite Insulation	Perlite insulation board	generic
Dens Deck	Water resistant gypsum board	G-P Gypsum Corp.
E'NRG'Y-2 & E'NRG'Y-2 PLUS, UltraGard Gold	Polyisocyanurate foam insulation	Johns Manville

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
FiberGlass Roof Insulation	Glass fiber/Mineral fiber insulation	Johns Manville
ISORoc	Polyisocyanurate foam / rockwool composite insulation	Johns Manville
Structodek	Wood fiber insulation board	Masonite.
Multi-Max & FA	Polyisocyanurate roof insulation	RMax, Inc.
Paroc Base Board Paroc Cap Board	Rockwool insulation	Partek, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	GAFTITE® (Drill-Tec®) #12 Standard & #14 Heavy Duty Roofing Fastener	Insulation fastener for steel, wood & concrete decks.		GAF Materials Corp.
2.	GAFTITE® (Drill-Tec®) ASAP	Pre-assembled GAFTITE Fasteners and metal and plastic plates.		GAF Materials Corp.
3.	GAFTITE® (Drill-Tec®) Base Sheet Fastener and Plate	Base sheet fastening assembly.		GAF Materials Corp.
4.	Galvalume Plates (Drill-Tec® Metal)	Round galvalume stress plates.	3" and 3 ½"	GAF Materials Corp.
5.	Polypropylene Plates (Drill-Tec® Plastic)	Round polypropylene stress plates.	3" and 3 ½"	GAF Materials Corp.
6.	Dekfast Fasteners #12, #14 & #15	Insulation fastener for wood, steel and concrete decks		Construction Fasteners Inc
7.	Dekfast Hex Plate	Galvalume hex stress plate.	2 7/8" x 3 ¼"	Construction Fasteners Inc.
8.	Dekfast Lock Plate	Polypropylene locking plate.	3" x 3 ¼"	Construction Fasteners Inc.
9.	#12 Roofgrip Fasteners	Insulation fastener for wood and steel.		ITW Buildex Corp.
10.	Metal Plate	Galvalume stress plate.	3" round 3" square	ITW Buildex Corp.
11.	Gearlok Plastic Plate	Polypropylene round plate	3.2"	ITW Buildex Corp.
12.	Glasfast Fastener	Insulation fastener assembly with recessed plastic plate		Johns Manville

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
13.	Olympic Fastener #12 & #14	Insulation fastener		Olympic Manufacturing Group, Inc.
14.	Olympic Fastener ASAP	Pre-assembled Insulation fastener and plate		Olympic Manufacturing Group, Inc.
15.	Olympic Polypropylene	Polypropylene plastic plate	3.25" round	Olympic Manufacturing Group, Inc.
16.	Olympic G-2	3.5" round galvalume AZ55 steel plate	3.5" round	Olympic Manufacturing Group, Inc.
17.	Olympic Standard	3" round galvalume AZ50 steel plate	3" round	Olympic Manufacturing Group, Inc.
18.	Insul-Fixx Fastener	Insulation fastener for steel and wood decks		SFS/Stadler
19.	Insul-Fixx S Plate	3" round galvalume AZ50 steel plate	3" round	SFS/Stadler
20.	Insul-Fixx P Plate	3" round polyethylene stress plate	3" round	SFS/Stadler
21.	Tru-Fast	Insulation fastener for steel and wood decks		The Tru-Fast Corp.
22.	Tru-Fast Plates	3" round galvalume AZ55 steel plate	3" round	The Tru-Fast Corp.
23.	Tru-Fast Plates	Polyethylene plastic plate	3" round	The Tru-Fast Corp.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Factory Mutual Research Corp.	Current Insulation Attachment Requirements	FMRC 1996	01.01.96
Factory Mutual Research Corp.	FMRC 4470 - PA 114	J.I. 1B9A8.AM J.I. 3D4Q2.AM	09.04.97 04.30.97
Trinity Engineering	Wind Uplift PA 114	4483.04 97-1	06.06.97
PRI Asphalt Technologies, Inc.	GAF-020-02-01	ASTM D 4977	02.01.02
IRT of S. Fl.	02-005	TAS 114	01.18.02
IRT of S. Fl.	02-014	TAS 114	03.22.02

APPROVED ASSEMBLIES

Membrane Type: SBS
Deck Type 1I: Wood, Insulated
Deck Description: $^{19}/_{32}$" or greater plywood or wood plank
System Type A (1): Anchor sheet mechanically fastened, all layers of insulation adhered with approved asphalt.
All General and System Limitations shall apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-I, ENRGY 2, GAFTEMP® Isotherm R, ENRGY 2 Plus, GAFTEMP Isotherm RA, GAFTEMP Isotherm RN, GAFTEMP Composite, GAFTEMP Composite A, GAFTEMP Composite N, ISORoc, BMCA EnergyGuard, BMCA EnergyGuard Composite, EnergyGard ISO, EnergyGuard RA Composite, EnergyGuard RA		
Minimum 1" thick	N/A	N/A
Wood Fiber, GAFTEMP® Fiberboard, BCMA High Density Wood Fiber, GAFTEMP® High Density Wood Fiber, GAFTEMP Recover Board		
Minimum ½" thick	N/A	N/A
Paroc, Perlite, GAFTEMP® Permalite		
Minimum ¾" thick	N/A	N/A
Fiberglas		
Minimum $^{15}/_{16}$" thick	N/A	N/A

Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down. GAF requires either a ply of GAFGLAS STRATAVENT® Eliminator Perforated laid dry or a layer of GAFTEMP® PERMALITE or wood fiber overlay board on all isocyanurate applications.

Anchor sheet: GAFGLAS #80 Ultima™ Base Sheet, STRATAVENT® Eliminator Perforated Nailable Base Sheet, RUBEROID Modified Base Sheet, RUBEROID® 20, RUBEROID SBS Heat-Weld™ Smooth or RUBEROID SBS Heat-Weld 25 base sheet mechanically fastened to deck as described below;

Fastening Options: GAFGLAS® Ply 4®, GAFGLAS Flex Ply™ 6, GAFGLAS #75 Base Sheet or any of above Anchor sheets attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the lap staggered and in two rows 12" o.c. in the field.
(Maximum Design Pressure –45 psf, See General Limitation #7)

GAFGLAS® Ply 4®, GAFGLAS Flex Ply™ 6, GAFGLAS #75 Base Sheet or any of above Anchor sheets attached to deck with Drill-Tec (GAFTITE) #12 or #14 Screws and 3" Plates, 12" o.c. in 3 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 12" o.c. in the field of the sheet.
(Maximum Design Pressure –45 psf, See General Limitation #7)

GAFGLAS Flex Ply™ 6, GAFGLAS #75 Base Sheet or any of above Anchor sheets attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the 4" lap staggered and in two rows 9" o.c. in the field. ***(Maximum Design Pressure –52.5 psf, See General Limitation #7)***

GAFGLAS #75 Base Sheet or any of above Anchor sheets attached to deck with Drill-Tec (GAFTITE) #12 or #14 Screws and 3" Plates, 12" o.c. in 4 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 9" o.c. in the field of the sheet.

(Maximum Design Pressure –60 psf, See General Limitation #7)

Any of above Anchor sheets attached to deck approved annular ring shank nails and 3" inverted Drill-Tec (GAFTITE) insulation plates at a fastener spacing of 9" o.c. at the 4" lap staggered in two rows 9" in the field.

(Maximum Design Pressure –60 psf, See General Limitation #7)

GAFGLAS #75 Base Sheet or any of above Anchor sheets attached to deck with Drill-Tec (GAFTITE) #12 or #14 Screws and 3" Plates, 8" o.c. in 4 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 9" o.c. in the field of the sheet.

(Maximum Design Pressure –75 psf, See General Limitation #7)

Base Sheet: (Optional) Install one ply of GAFGLAS® #75, GAFGLAS #80 ULTIMA™ Base Sheet, GAFGLAS® PLY 4®, GAFGLAS Flex Ply™ 6, GAFGLAS STRATAVENT® Eliminator Perforated (laid dry), RUBEROID Modified Base Sheet, RUBEROID MOP Smooth, RUBEROID® 20, RUBEROID SBS Heat-Weld™ Smooth or RUBEROID SBS Heat-Weld 25 directly over the top layer of insulation. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq (see General Limitation #4).

Ply Sheet: (Optional) One or more plies GAFGLAS PLY 4®, GAFGLAS Flex Ply 6 sheet, GAFGLAS #80, RUBEROID MOP Smooth, RUBEROID® 20 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One or more plies of RUBEROID® 20, RUBEROID 30, RUBEROID 30 FR RUBEROID MOP Smooth, Ruberoid® Mop 170 FR, Ruberoid® Mop Granule, RUBEROID MOP PLUS, RUBEROID MOP FR, RUBEROID ULTRACLAD®, or RUBEROID Dual FR fully adhered in an approved asphalt at an application rate of 25 lb./sq. ± 15%.

Surfacing: (Optional, required if RUBEROID MOP Smooth or RUBEROID 20 is top membrane) Install one of the following:

1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. GAFGLAS Mineral Surfaced Cap Sheet in an approved asphalt at an application rate of 25 lb./sq. ± 15%.
3. GAF Weathercote® MB+(Matrix 715 MB Coating), Applied at 1 to 1.5 gal./sq.
4. Top Coat® Surface Seal SB(Matrix 602 SB Coating), Applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: See Fastening above.

Membrane Type: APP/SBS Heat Weld

Deck Type 1: Wood, Non-insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank decks

System Type E (1): Base sheet mechanically fastened.

All General and System Limitations shall apply.

Base sheet: GAFGLAS #80 Ultima™ Base Sheet, STRATAVENT® Eliminator Perforated Nailable, RUBEROID Modified Base Sheet, RUBEROID MOP Smooth, RUBEROID® 20, RUBEROID SBS Heat-Weld™ Smooth or RUBEROID SBS Heat-Weld 25 base sheet mechanically fastened to deck as described below;

Fastening Options: GAFGLAS® Ply 4®, GAFGLAS Flex Ply™ 6, GAFGLAS #75 Base Sheet or any of above Base sheets attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the lap staggered and in two rows 12" o.c. in the field.
(Maximum Design Pressure –45 psf, See General Limitation #7)

GAFGLAS® Ply 4®, GAFGLAS Flex Ply™ 6, GAFGLAS #75 Base Sheet or any of above Base sheets attached to deck with Drill-Tec (GAFTITE) #12 or #14 Screws and 3" Plates, 12" o.c. in 3 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 12" o.c. in the field of the sheet.
(Maximum Design Pressure –45 psf, See General Limitation #7)

GAFGLAS Flex Ply™ 6, GAFGLAS #75 Base Sheet or any of above Base sheets attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the 4" lap staggered and in two rows 9" o.c. in the field.
(Maximum Design Pressure –52.5 psf, See General Limitation #7)

GAFGLAS #75 Base Sheet or any of above Base sheets attached to deck with Drill-Tec (GAFTITE) #12 or #14 Screws and 3" Plates, 12" o.c. in 4 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 9" o.c. in the field of the sheet.
(Maximum Design Pressure –60 psf, See General Limitation #7)

Any of above Base sheets attached to deck approved annular ring shank nails and 3" inverted Drill-Tec (GAFTITE) insulation plates at a fastener spacing of 9" o.c. at the 4" lap staggered in two rows 9" in the field.
(Maximum Design Pressure –60 psf, See General Limitation #7)

GAFGLAS #75 Base Sheet or any of above Base sheets attached to deck with Drill-Tec (GAFTITE) #12 or #14 Screws and 3" Plates, 8" o.c. in 4 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 9" o.c. in the field of the sheet.
(Maximum Design Pressure –75 psf, See General Limitation #7)

Ply Sheet: (Optional except over RUBEROID Modified Base Sheet, RUBEROID MOP Smooth, RUBEROID® 20, RUBEROID SBS Heat-Weld™ Smooth or RUBEROID SBS Heat-Weld) One or more plies GAFGLAS PLY 4®, GAFGLAS® PLY 6® Ply or GAFGLAS Flex Ply 6 sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or Ruberoid Torch Smooth torch applied according to manufacturer's application instructions.

Membrane: One ply of Ruberoid® Torch Smooth, Ruberoid® Torch Granule, Ruberoid® Torch Plus Granule or Ruberoid® Torch FR torch applied according to manufacturer's application instructions.
Or
One or more plies of RUBEROID® SBS Heat-Weld™ PLUS, RUBEROID® SBS Heat-Weld™ PLUS FR, RUBEROID® SBS Heat-Weld™ 170 FR, RUBEROID® SBS Heat-Weld™, RUBEROID® SBS Heat-Weld™ Smooth, RUBEROID® UltraClad™ SBS and RUBEROID® SBS Heat-Weld™ 25 applied according to manufacturer's application instructions.

Surfacing: (Optional) Install one of the following:

1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. GAF Premium Fibered Aluminum Roof Coating, at 1.5 gal. /sq. or GAF WeatherCoat® Emulsion at 3 gal./sq. (Torch Smooth applications only)
3. GAF Weathercote® MB+(Matrix 715 MB Coating), Applied at 1 to 1.5 gal./sq.
4. Top Coat® Surface Seal SB(Matrix 602 SB Coating), Applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: See Fastening Above

Membrane Type: SBS

Deck Type 1: Wood, Non-insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type E-2: RUBEROID® Tile Underlayment, Base Sheet mechanically attached.

All General and System Limitations shall apply.

Anchor sheet: GAFGLAS® #80 Ultima™ Base Sheet, RUBEROID® 20 base sheet or Tile-Mate Modified Base Sheet applied with a minimum 2" side lap and a minimum 6"end lap. Base sheet may be applied at a right angle (90°) to the slope of the deck with approved annular ring shank nails and tin caps at a fastener spacing of 6" o.c. at the 2" side lap, and two 12" o.c. staggered rows along the center of the sheet.

Ply Sheet: (Optional) One, or more plies GAFGLAS PLY 4® Ply, GAFGLAS FlexPly™ 6 sheet, GAFGLAS #80 Ultima™, RUBEROID MOP Smooth or RUBEROID® 20 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply RUBEROID® MOP, RUBEROID® MOP PLUS, RUBEROID® SBS Heat-Weld™ Granule, RUBEROID® SBS Heat-Weld™ PLUS, Tile-Mate Modified Cap or Tile-Mate Modified Cap Plus, membrane may be applied at a right angle (90°) to the slope of the deck* adhered in a full mopping of Type IV asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. Membrane shall be backnailed to deck with approved annular ring shank nails and tin caps in accordance to applicable Building Code. No nails or tin caps shall be exposed.

* Membrane may also be installed parallel to the slope of the roof (i.e. strapping). If membrane is strapped, then anchor sheet and ply sheet must also be strapped.

Maximum Design Pressure: Refer to tile manufacturer's NOA.

Maximum Slope: Must Comply with Roofing Application Standard RAS 118, RAS 119, RAS 120 and applicable Building Code.

Membrane Type: SBS Cold Applied for mechanically fastened tile systems only.

Deck Type 1: Wood, Non-insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type E-3: RUBEROID® Tile Underlayment, Base Sheet mechanically attached.

All General and System Limitations shall apply.

Anchor sheet: GAFGLAS® GAFGLAS #80 Ultima™ Base Sheet, RUBEROID® 20 base sheet or Tile-Mate Modified Base Sheet applied with a minimum 2" side lap and a minimum 6"end lap. Base sheet may be applied at a right angle (90°) to the slope of the deck with approved annular ring shank nails and tin caps at a fastener spacing of 6" o.c. at the 2" side lap, and two 12" o.c. staggered rows along the center of the sheet.

Membrane: One ply RUBEROID® MOP, RUBEROID® MOP PLUS, Tile-Mate Modified Cap or Tile-Mate Modified Cap Plus, membrane may be applied at a right angle (90°) to the slope of the deck* adhered with Ruberoid Adhesive or Matrix Select 102 at a rate of 1-2 gal/sq. Membrane shall be backnailed to deck with approved annular ring shank nails and tin caps at a maximum fastener spacing of 6" o.c. No nails or tin caps shall be exposed. **Allow 72 hour cure prior to loading and installing tiles.**

* Membrane may also be installed parallel to the slope of the roof (i.e. strapping). If membrane is strapped, then anchor sheet and ply sheet must also be strapped.

Maximum Design Pressure: Refer to tile manufacturer's NOA.

Maximum Slope: Must Comply with Roofing Application Standard RAS 118, RAS 119, RAS 120 and applicable Building Code.

WOOD DECK SYSTEM LIMITATIONS:

1 A slip sheet is required with Ply 4 and Flex Ply ™ 6 when used as a mechanically fastened base or anchor sheet.
2. Minimum ¼" Dens Deck or ½ Type X gypsum board is acceptable to be installed directly over the wood deck.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F) value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a *minimum* fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9B-72 of the Florida Administrative Code.

END OF THIS ACCEPTANCE

MIAMI-DADE

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

GAF Material Corporation
1361 Alps Road
Wayne, NJ 07470

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by the BCCO and accepted by the Building Code and Product Review Committee to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: GAF UnderRoof Tile Underlayment

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA No. 04-0504.04 and consists of pages 1 through 3.
The submitted documentation was reviewed by Jorge L. Acebo.

PRODUCT CONTROL ACCEPTED

NOA No.: 05-0922.07
Expiration Date: 07/15/09
Approval Date: 03/02/06

ROOFING ASSEMBLY APPROVAL

Category:	Roofing
Sub-Category:	07520 Underlayment
Material:	SBS

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

Product	Dimensions	Test Specification	Product Description
UnderRoof Tile Underlayment	39.375" x 67.75' rolls	TAS 103	SBS Self-adhering reinforced membrane for use as an underlayment in sloped roof assemblies.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Test Name/Report	Date
PRI Asphalt Technologies, Inc.	GAF-042-02-01	TAS 103	02/16/04
PRI Asphalt Technologies, Inc.	GAF-042-02-02	TAS 114	03/12/04

APPROVED ASSEMBLIES:

Deck Type 1: Wood, non-insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System E(1): Anchor sheet mechanically fastened deck, membrane adhered.

Base Sheet: One or more plies of ASTM D 226 Type II or ASTM D 2626 with a minimum 4" side lap and a 6" end lap mechanically fastened to deck with approved nails and tin caps 6" o.c. at the laps and two staggered rows 12" o.c. the field of the roll.

Membrane: One or more plies of UnderRoof Tile Underlayment with a minimum 4" side lap and 6" end lap. Place the first course of membrane parallel to the eave, rolling the membrane to obtain maximum contact. Remove the release membrane as the membrane is applied. Vertical strapping of the roof with UnderRoof Tile Underlayment is acceptable.

Surfacing: Approved for Adhered Roof Tile and Mechanically Fastened Roof Tile Assemblies.

LIMITATIONS

1. Fire classification is not part of this acceptance.
2. This acceptance is for prepared roofing applications. Minimum deck requirements shall be in compliance with applicable building code. UnderRoof Tile Underlayment shall be installed in strict compliance with applicable Building Code.
3. UnderRoof Tile Underlayment shall be applied to a smooth, clean and dry surface with deck free of irregularities.
4. UnderRoof Tile Underlayment shall not be applied over an existing roof membrane.
5. UnderRoof Tile Underlayment shall not be left exposed as a temporary roof for longer than 60 days of application.
6. The standard maximum roof pitch for UnderRoof Tile Underlayment shall be 6:12 for all tile profiles directly to roof deck. Roof slope of 7:12 or greater shall be installed with battens and approved tiles with integral batten lugs.
7. Refer to Prepared Roofing system Product Control Notice of Acceptance for listed approval of this product with specific prepared roofing products.
8. Tiles shall be stored and loaded on roof on battens. Care should be taken during the loading procedure to keep foot traffic to a minimum and to avoid dropping of tile directly on the underlayment.
9. UnderRoof Tile Underlayment may be used with any approved roof covering Notice of Acceptance listing UnderRoof Tile Underlayment as a component part of an assembly in the Notice of Acceptance. If UnderRoof Tile Underlayment is not listed, a request may be made to the Authority Having Jurisdiction (AHJ) or the Miami-Dade County Product Control Department for approval provided that appropriate documentation is provided to detail compatibility of the products, wind uplift resistance, and fire testing results.
10. Re-fasten any loose decking panels, and carefully checked for protruding nail heads. Sweep the deck thoroughly to remove any dust and debris prior to application.
11. When applying the membrane in the valley, start at the low point and work to the high point, rolling the membrane from the center outward in both directions. For ridge applications, center the membrane and roll from the center outward in both directions.
12. Roll or broom the entire membrane surface so as to have 100% contact with the surface, giving special attention to overlap areas.
13. Flash vent pipes, stacks, chimneys and penetrations in compliance with Roof Assembly current Product Control Notice of Acceptance and applicable Building Code.
14. All protrusions or drains shall be initially taped with a 6" piece of underlayment. The flashing tape shall be pressed in place and formed around the protrusion to ensure a tight fit. A second layer of UnderRoof Tile Underlayment shall be applied over the underlayment.
15. All membranes shall bear the imprint or identifiable marking of the manufacturer's name or logo, or following statement: "Miami-Dade County Product Control Approved" or the Miami-Dade logo.
16. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9B-72 of the Florida Administrative Code.

END OF THIS ACCEPTANCE

MIAMI-DADE

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

Polyfoam Products, Inc.
11715 Boudreaux Road
Tomball, TX 77375

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by the BCCO and accepted by the Building Code and Product Review Committee to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The BCCO (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BCCO reserves the right to revoke this acceptance, if it is determined by BCCO that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Polypro® AH160

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews NOA No.01-0521.02 and consists of pages 1 through 7
The submitted documentation was reviewed by Jorge L. Acebo.

NOTICE: In addition to the requirement of this Approval, there may be additional restrictions applicable to this property that may be found in the Public Records of this County, and there may be additional permits required from other governmental entities such as water management districts, state agencies, or federal agencies. The City of Miami Beach assumes no responsibility as to accuracy of results from these plans which are approved subject to compliance with all Local, State, and Local Laws, Rules and Regulations.

PRODUCT CONTROL APPROVED

ROOFING ASSEMBLY APPROVAL:

Category: Roofing
Sub Category: Roof tile adhesive
Materials: Polyurethane

SCOPE:

This approves **Polypro® AH160** as manufactured by **Polyfoam Products, Inc.** as described in Section 2 of this Notice of Acceptance. For the locations where the design pressure requirements, as determined by applicable building code, does not exceed the design pressure values obtained by calculations in compliance with Roofing Application Standard RAS 127, for use with approved flat, low, and high profile roof tiles system using Polypro® AH 160. Where the attachment calculations are done as a moment based system for single patty placement, and as an uplift based system for double patty systems

PRODUCTS MANUFACTURED BY APPLICANT:

Product	Dimensions	Test Specifications	Product Description
Polypro® AH160	N/A	TAS 101	Two component polyurethane foam adhesive
Foampro® RTF1000	N/A		Dispensing Equipment
ProPack® 30 & 100	N/A		Dispensing Equipment

PRODUCTS MANUFACTURED BY OTHERS:

Any Miami-Dade County Product Control Accepted Roof Tile Assembly having a current NOA which list moment resistance values with the use of Polypro AH160 roof tile adhesive.

PHYSICAL PROPERTIES:

Property	Test	Results
Density	ASTM D 1622	1.6 lbs./ft.^{3}
Compressive Strength	ASTM D 1621	18 PSI Parallel to rise 12 PSI Perpendicular to rise
Tensile Strength	ASTM D 1623	28 PSI Parallel to rise
Water Absorption	ASTM D 2127	0.08 Lbs./Ft^2
Moisture Vapor Transmission	ASTM E 96	3.1 Perm / Inch
Dimensional Stability	ASTM D 2126	+0.07% Volume Change @ -40° F., 2 weeks +6.0% Volume Change @158°F., 100% Humidity, 2 weeks
Closed Cell Content	ASTM D 2856	86%

Note: The physical properties listed above are presented as typical average values as determined by accepted ASTM test methods and are subject to normal manufacturing variation.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Test Name/Report	Date
Center for Applied Engineering	#94-060	TAS 101	04/08/94
	257818-1PA	TAS 101	12/16/96
	25-7438-3	SSTD 11-93	10/25/95
	25-7438-4		
	25-7438-7	SSTD 11-93	11/02/95
	25-7492	SSTD 11-93	12/12/95
Miles Laboratories Polymers Division	NB-589-631	ASTM D 1623	02/01/94
Ramtech Laboratories, Inc.	9637-92	ASTM E 108	04/30/93
Southwest Research Institute	01-6743-011	ASTM E 108	11/16/94
	01-6739-062b[1]	ASTM E 84	01/16/95
Trinity Engineering	7050.02.96-1	TAS 114	03/14/96
Celotex Corp. Testing Services	528454-2-1	TAS 101	10/23/98
	528454-9-1		
	528454-10-1		
	520109-1	TAS 101	12/28/98
	520109-2		
	520109-3		
	520109-6		
	520109-7		
	520191-1	TAS 101	03/02/99
	520109-2-1		

LIMITATIONS:

1. Fire classification is not part of this acceptance. Refer to the Prepared Roof Tile Assembly for fire rating.

2. Polypro® AH160 shall solely be used with flat, low, & high tile profiles.

3. Minimum underlayment shall be in compliance with the Roofing Application Standard RAS 120.

4. Roof Tile manufactures acquiring acceptance for the use of Polypro® AH160 roof tile adhesive with their tile assemblies shall test in accordance with TAS 101.

5. Roof Tile manufactures acquiring acceptance for the use of HANDI-STICK roof tile adhesive with their tile assemblies shall test in accordance with TAS 101 with section 10.4 as modified herein.

$$F' = \frac{\left(\frac{F}{2}\right) W}{MS}$$

INSTALLATION:

1. Polypro® AH160 may be used with any roof tile assembly having a current NOA that lists uplift resistance values with the use of Polypro® AH160.
2. Polypro® AH160 shall be applied in compliance with the Component Application section and the corresponding Placement Details noted herein. The roof tile assembly's adhesive attachment with the use of Polypro® AH160 shall provide sufficient attachment resistance, expressed as an uplift based system, to meet or exceed the uplift resistance determined in compliance with Miami-Dade County Roofing Application Standards RAS 127. The adhesive attachment data is noted in the roof tile assembly NOA
3. Polypro® AH160 roof tile adhesive and its components shall be installed in accordance with Roofing Application Standard RAS 120, and Polyfoam Products, Inc. Polypro® AH160 Operating Instruction and Maintenance Booklet.
4. Installation must be by a Factory Trained 'Qualified Applicator' approved and licensed by Polyfoam Products, Inc. Polyfoam Products Inc. shall supply a list of approved applicators to the authority having jurisdiction.
5. Calibration of the Foampro® dispensing equipment is required before application of any adhesive. The mix ratio between the "A" component and the "B" component shall be maintained between 1.0-1.15 (A): 1.0 (B). The dispense timer shall be set to deliver 0.0175 to 0.15 pounds per tile as determined at calibration. No other settings shall be approved.
6. Polypro® AH160 shall be applied with Foampro RTF1000 or ProPack® 30 & 100 dispensing equipment only.
7. Polypro® AH160 shall not be exposed permanently to sunlight.
8. Tiles must be adhered in freshly applied adhesive. Tile must be set within 2 to 3 minutes after Polypro® AH160 has been dispensed.
9. Polypro® AH160 placement and minimum patty weight shall be in accordance with the 'Placement Details' herein. Each generic tile profile requires the specific placement noted herein.

Table 1: Adhesive Placement For Each Generic Tile Profile

Tile Profile	Placement Detail	Single Paddy Weight Min. (grams)	Two Paddy Weight per paddy Min. (grams)
Flat, Low, High Profiles	#1	35	N/A
High Profile (2 Piece Barrel)	#1	17/side on cap and 34/pan	N/A
Flat, Low, High Profiles	#2	24	N/A
Flat, Low, High Profiles	#3		8

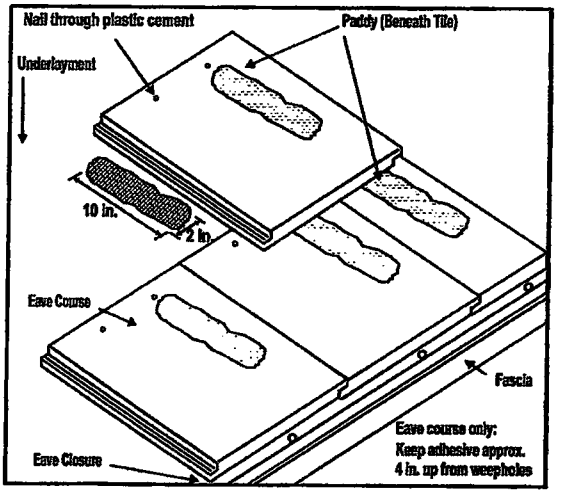
LABELING:

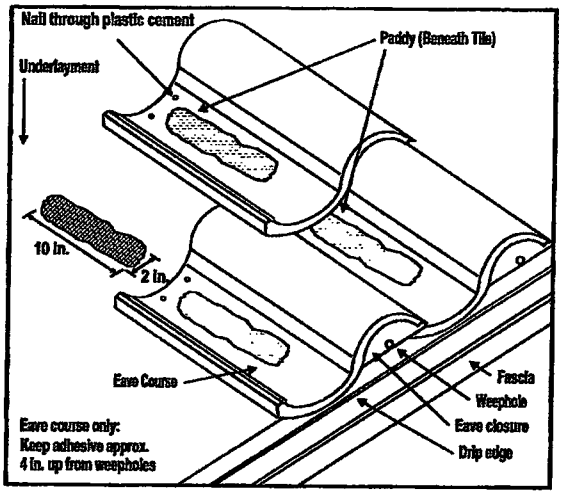
All Polypro® AH160 containers shall comply with the Standard Conditions listed herein.

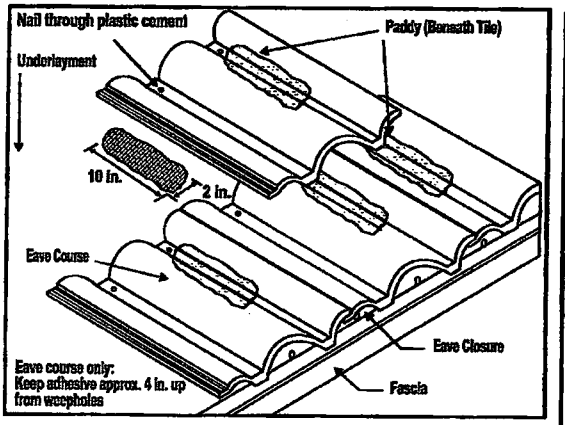
BUILDING PERMIT REQUIREMENTS:

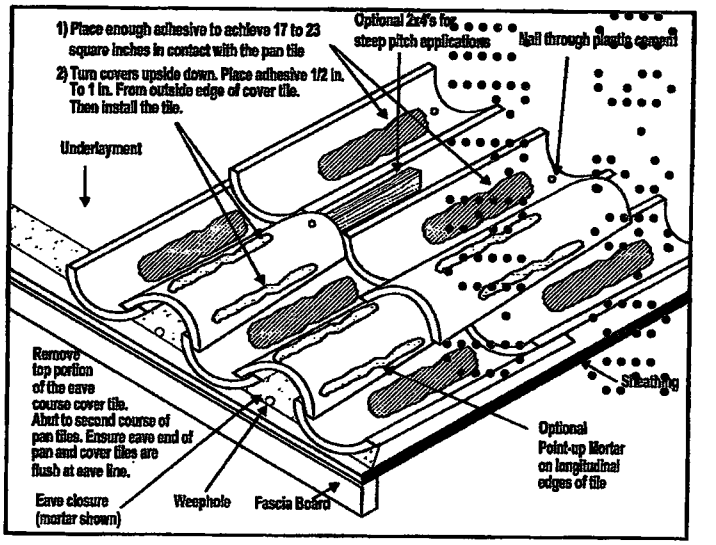
As required by the Building Official or applicable building code in order to properly evaluate the installation of this system.

ADHESIVE PLACEMENT DETAIL 1
SINGLE PATTY

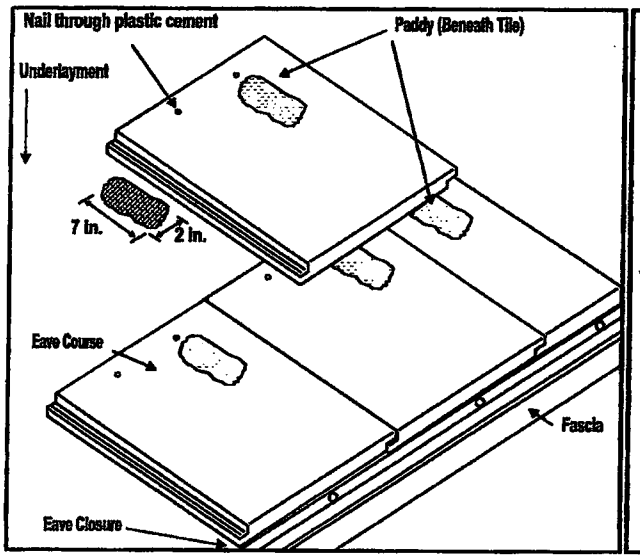


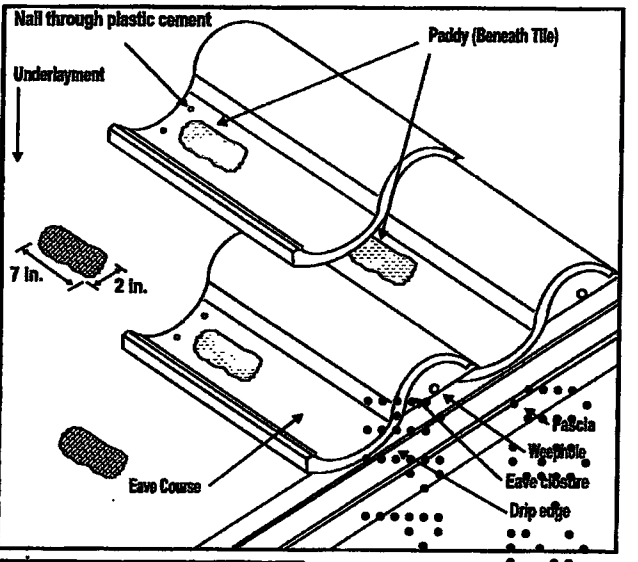


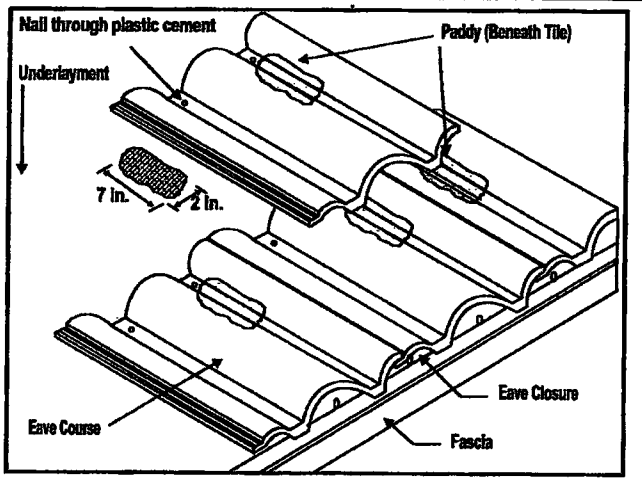




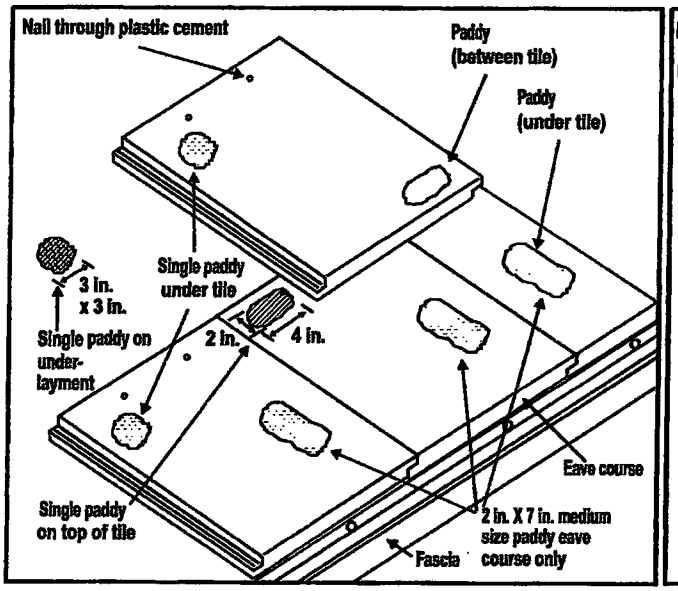
ADHESIVE PLACEMENT DETAIL 2
SINGLE PATTY

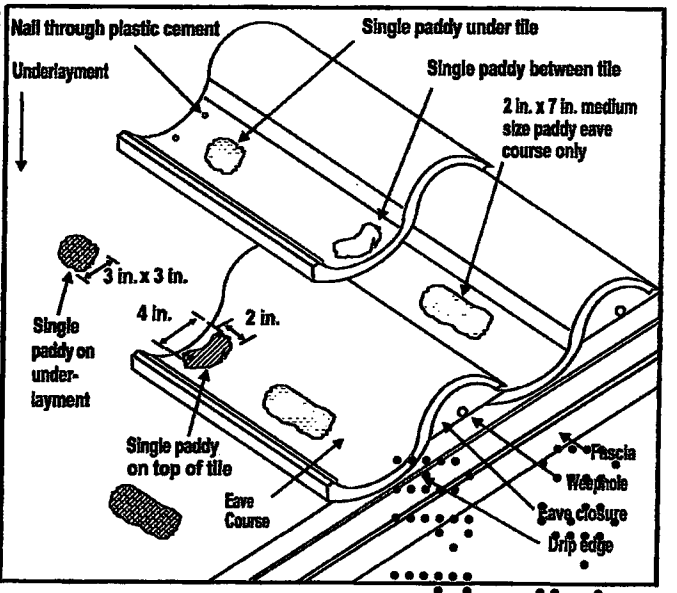


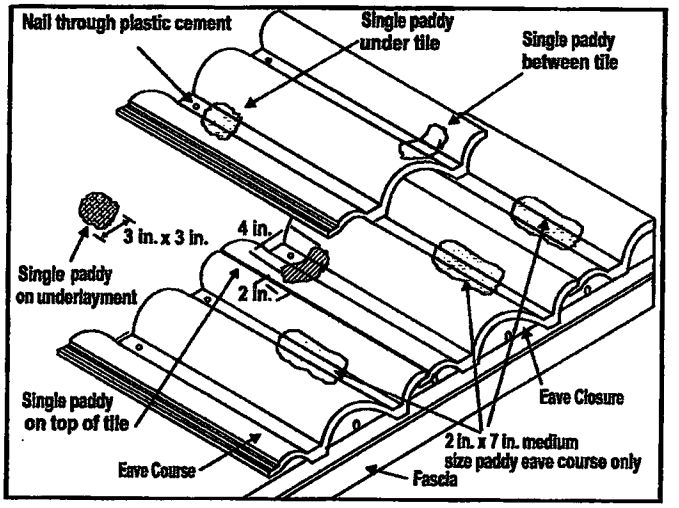




ADHESIVE PLACEMENT DETAIL 3
DOUBLE PATTY







END OF THIS ACCEPTANCE

MIAMI-DADE

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

BORA 06547

NOTICE OF ACCEPTANCE (NOA)

Vande Hey-Raleigh Mfg., Inc.
1665 Bohm Drive
Little Chute, WI 54140-2529

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Vande Hey-Raleigh "High Barrel Spanish" Concrete Roofing Tile

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This consists of pages 1 through 5.
The submitted documentation was reviewed by Frank Zuloaga, RRC

ROOFING ASSEMBLY APPROVAL

Category: Roofing

Sub-Category: Roofing Tiles
Material: Concrete

1. SCOPE

This roofing system using **Vande Hey-Raleigh Mfg., Inc. "High Barrel Spanish"** Concrete Roof Tiles, as manufactured by Vande Hey-Raleigh Mfg. and described in Section 2 of this Notice of Acceptance. For locations where the pressure requirements, as determined by applicable Building Code does not exceed the design pressure values obtained by calculations in compliance with RAS 127 using the values listed in section 4 herein. The attachment calculations shall be done as a moment based system.

2. PRODUCT DESCRIPTION

Manufactured by Applicant	Dimensions	Test Specifications	Product Description
High Barrel Spanish Tile	l = 17-¼" w = 13" $^{7}/_{8}$" thick	PA 112	Low profile extruded concrete roof tile equipped with one nail hole. For direct deck or battened nail-on or mortar or adhesive set applications
Trim Pieces	l = varies w = varies varying thickness	PA 112	Accessory trim, concrete roof pieces for use at hips, rakes, ridges and valley terminations. Manufactured for each tile profile.

2.1 COMPONENTS OR PRODUCTS MANUFACTURED BY OTHERS

Product	Dimensions	Test Specifications	Product Description	Manufacturer
Tile Nails	Min. 10dx 3"	PA 114 Appendix E	Corrosion resistant screw or smooth shank nails	generic
Tile Screws	#8x 2 ½" long 0.335" head dia. 0.131" shank dia. 0.175" screw thread dia.	PA 114 Appendix E	Corrosion resistant, coated, square drive, galvanized, coarse thread wood screws	generic

3. LIMITATIONS

3.1 Fire classification is not part of this acceptance.
3.2 For mortar or adhesive set tile applications, a static field uplift test shall be performed in accordance with RAS 106.
3.3 Applicant shall retain the services of a Miami-Dade County Certified Laboratory to perform quarterly test in accordance with PA 112, appendix 'A'. Such testing shall be submitted to the Miami-Dade County Building Code Compliance Office for review.
3.4 Minimum underlayments shall be in compliance with the applicable Roofing Applications Standards listed section 4.1 herein.
3.5 30/90 hot mopped underlayment applications may be installed perpendicular to the roof slope unless stated otherwise by the underlayment material manufacturers published literature.
3.6 This acceptance is for wood deck applications. Minimum deck requirements shall be in compliance with applicable building code.

4. INSTALLATION

4.1 Vande Hey-Raleigh Mfg. and its components shall be installed in strict compliance with Roofing Application Standard RAS 118, RAS 119, and RAS 120.

4.2 Data For Attachment Calculations

Table 1: Aerodynamic Multipliers - λ (ft^3)

Tile Profile	λ (ft^3) Batten Application	λ (ft^3) Direct Deck Application
High Barrel Spanish Tile	0.332	0.306

Table 2: Restoring Moments due to Gravity - M_g (ft-lbf)

Tile Profile	< 3":12"		4" :12"		5" :12"		6" :12"		7" :12" or greater	
	Battens	Direct Deck	Battens	Direct Deck	Battens	Direct Deck	Battens	Direct Deck	Battens	Direct Deck
High Barrel Spanish Tile	7.39	8.42	7.26	8.28	7.09	8.09	6.91	7.88	6.70	7.64

Table 3: Attachment Resistance Expressed as a Moment - M_f (ft-lbf) for Nail-On Systems				
Tile Profile	**Fastener Type**	**Direct Deck (min 15/32" plywood)**	**Direct Deck (min. 19/32" plywood)**	**Battens**
High Barrel Spanish Tile	2-10d Ring Shank Nails	27.8	37.4	28.8
	1-10d Smooth or Screw Shank Nail	8.8	11.8	4.1
	2-10d Smooth or Screw Shank Nails	16.4	21.9	7.1
	1 #8 Screw	25.8	25.8	22.9
	2 #8 Screw	47.1	47.1	49.1
	1-10d Smooth or Screw Shank Nail (Field Clip)	24.3	24.3	24.2
	1-10d Smooth or Screw Shank Nail (Eave Clip)	19.0	19.0	22.1
	2-10d Smooth or Screw Shank Nails (Field Clip)	35.5	35.5	34.8
	2-10d Smooth or Screw Shank Nails (Eave Clip)	31.9	31.9	32.2
	2-10d Ring Shank Nails[1]	43.0	67.5	50.9
1 Installation with a 4" tile headlap and fasteners are located a min. of 2½" from head of tile.				

Table 4: Attachment Resistance Expressed as a Moment M_f (ft-lbf) for Two Patty Adhesive Set Systems		
Tile Profile	**Tile Application**	**Minimum Attachment Resistance**
High Barrel Spanish Tile	Adhesive	26.1[3]
2 See manufactures component approval for installation requirements.		
3 Dow Chemical USA TileBond Average weight per patty 11.4 grams. Polyfoam Product, Inc. PolyPro™ Average weight per patty 8 grams.		

Table 4A: Attachment Resistance Expressed as a Moment - M_f (ft-lbf) for Single Patty Adhesive Set Systems		
Tile Profile	**Tile Application**	**Minimum Attachment Resistance**
High Barrel Spanish Tile	Polyfoam PolyPro™	86.61[4]
	Polyfoam PolyPro™	45.5[5]
4 Large paddy placement weight 54 grams of PolyPro™.		
5 Medium paddy placement weight 24 grams of PolyPro™.		

5. LABELING

All tiles shall bear the imprint or identifiable marking of the manufacturer's name or logo, or following statement: "Miami-Dade County Product Control Approved".

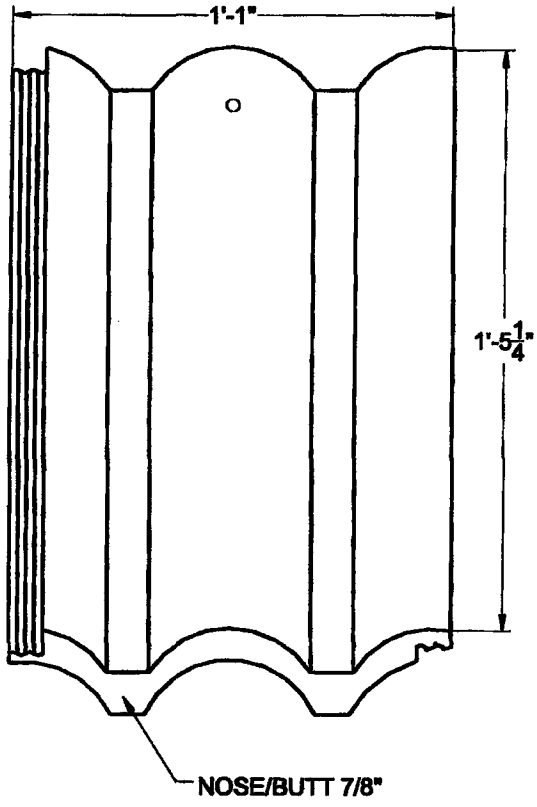
6. BUILDING PERMIT REQUIREMENTS

6.1 Application for building permit shall be accompanied by copies of the following:

6.1.1 This Notice of Acceptance.

6.1.2 Any other documents required by the Building Official or applicable building code in order to properly evaluate the installation of this system.

PROFILE DRAWINGS



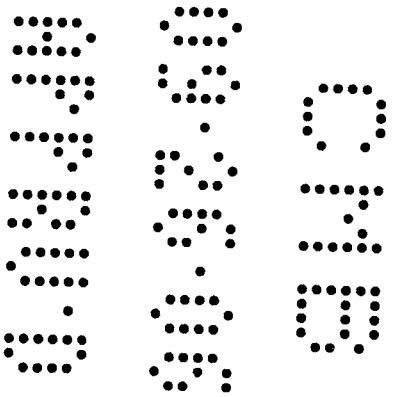
HIGH BARREL SPANISH TILE

A. TESTS:

Test Agency	Test Identifier	Test Name/Report	Date
IBA Consultants, Inc.	2373-14	TAS 112	June 2002

B. OTHER

1. Notice of Acceptance number 02-0828.06
2. NTRMA Member.



B0606547

5800 N BAY RD

48 HOURS PRIOR TO EXCAVATING
CONTRACTOR SHALL CALL FOR LOCATION
OF UNDERGROUND UTILITIES
SUNSHINE ONE-CALL 1-800-432-4770
CITY OF MIAMI BEACH 305-673-7080

PUBLIC WORKS
PLAN REVIEW NOTICE
Phone 305-673-7080 Fax 305-673-7028

THIS PLAN REVIEW CONSTITUTES APPROVAL FOR OBTAINING BUILDING PERMITS ONLY.

All construction and/or use of equipment in the right-of-way and/or easements, requires a separate Public Works Department permit prior to start of construction.

Permit Requirements: Proof of existing sidewalk/swale area conditions (pictures) and/or posting of sidewalk/roadway bonds (Public Works inspection of the right-of-way will be required prior to final sign-off on the C.C. / C.O., or the release of bonds.)

Approved/Reviewed By: _____ **Date:** 9-11-06

City of Miami Beach
Building Department
Roofing Permit
OFFICE COPY

		Date
		9/11/06
		09/26/06
		9-11-06

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908
www.buildingcodeonline.com

NOTICE OF ACCEPTANCE (NOA)

Peetz Windows and Doors, Inc.
5783 SW 40th Street PMB 220
Miami, FL 33155

B07-0360

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: American Inswing Wood Doors – L.M.I.

APPROVAL DOCUMENT: Drawing No. **1324A**, titled "American Inswing Impact Wood Door", sheets 1 through 12 of 12, dated 03/22/05, prepared by W.W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren Schaefer, P.E., bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impacts

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of this page 1 and evidence pages E-1, and E-2, as well as approval document mentioned above

The submitted documentation was reviewed by **Herminio F. Gonzalez, P.E., Director, BCCO**

7/28/05

7/19/05

NOA No 05-0622.03
Expiration Date: August 18, 2010
Approval Date: August 18, 2005
Page 1

Peetz Windows and Doors, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **1324,** titled "American Inswing Impact Wood Door", sheets 1 through 12 of 12, dated 03/22/05, prepared by W.W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren Schaefer, P.E.

B. TESTS

1. Test reports on 1) Air Infiltration Test, per FBC, TAS 202-94
   2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94.
   3) Water Resistance Test, per FBC, TAS 202-94.
   4) Large Missile Impact Test per FBC, TAS 201-94
   5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   6) Forced Entry Test, per FBC 2411 3.2.1 and TAS 202-94

   along with the manufacturer's parts drawings, installation diagram and marked-up drawings of a inswing wood door prepared by Hurricane Test Laboratory, Inc. Test Report No. **HTL-0284-1018-04**, dated 06/03/05, signed and sealed by Vinu J. Abraham, P.E.
2. Test reports on 1) Air Infiltration Test, per FBC, TAS 202-94
   2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94.
   3) Water Resistance Test, per FBC, TAS 202-94.
   4) Large Missile Impact Test per FBC, TAS 201-94
   5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   6) Forced Entry Test, per FBC 2411 3.2.1 and TAS 202-94

   along with the manufacturer's parts drawings, installation diagram and marked-up drawings of a inswing wood door window prepared by Hurricane Test Laboratory, Inc. Test Report No. **HTL-0284-0114-05**, dated 06/03/05, signed and sealed by Vinu J. Abraham, P.E.

C. CALCULATIONS

1. Anchor Calculations and structural analysis, prepared by W.W. Schaefer Engineering & Consulting, P.A., dated 04/13/05, signed and sealed by Warren Schaefer, P.E.
2. Revised Anchor Calculations and structural analysis, prepared by W.W. Schaefer Engineering & Consulting, P.A., dated 07/13/05, signed and sealed by Warren Schaefer, P.E.

D. QUALITY ASSURANCE

1. Miami Dade Building Code Compliance Office (BCCO).

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **01-0205.02** issued to Solutia Inc. for their "Saflex /Keepsafe Maximum" dated 05/17/01, expiring on 05/21/06.

for M Shark

Herminio F. Gonzalez, P.E.
Director, Building Code Compliance Office
NOA No 05-0622.03
Expiration Date: August 18, 2010
Approval Date: August 18, 2005

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. Notice of Acceptance No. **03-0415.13** issued to Solutia Inc. for their "Vanceva Composites" dated 12/11/03, expiring on 12/11/08.

F. STATEMENTS

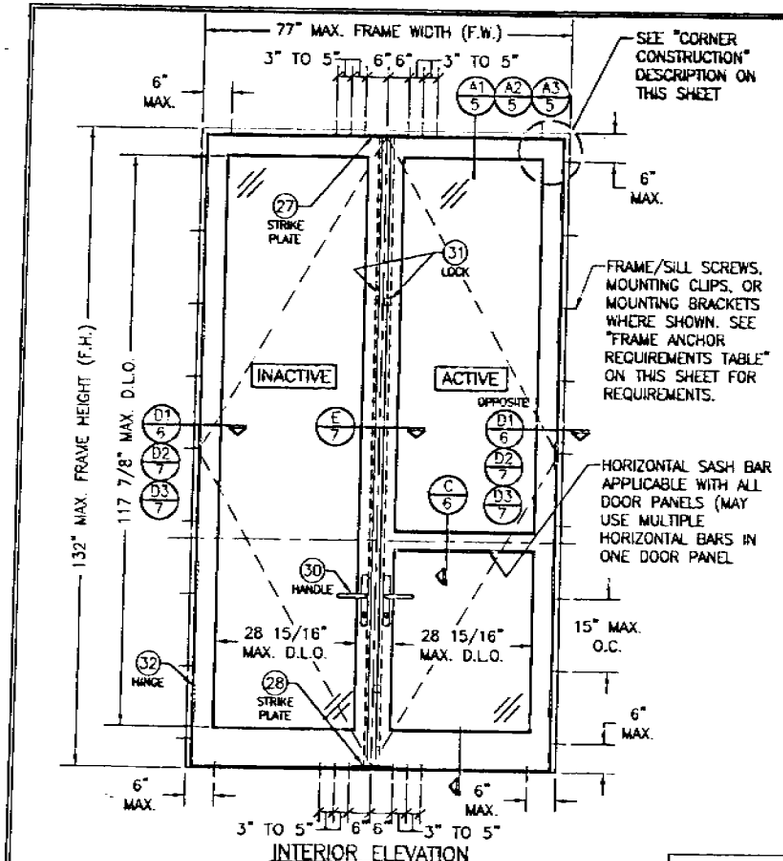
1. Statement letter of conformance and no financial interest, dated June 10, 2005, signed and sealed by Warren Schaeffer, P.E.

G. OTHER

1. Letter from the consultant stating that the product is in compliance with the Florida Building Code (FBC).

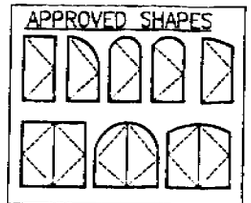
for M Thate

Herminio F. Gonzalez, P.E.
Director, Building Code Compliance Office
NOA No 05-0622.03
Expiration Date: August 18, 2010
Approval Date: August 18, 2005



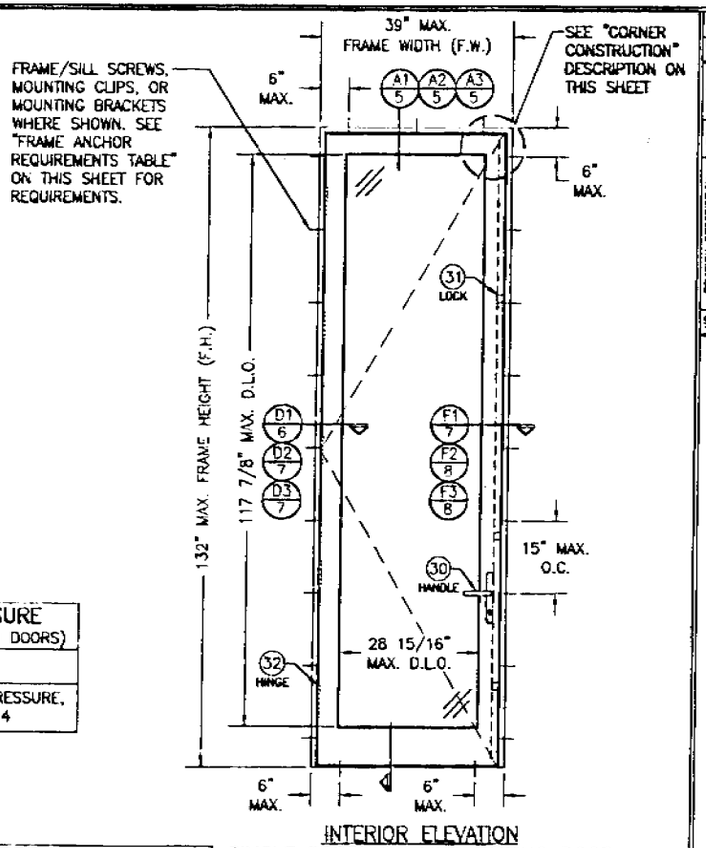
INTERIOR ELEVATION
DOUBLE RECTANGULAR IN-SWING DOOR
SCALE: 1/2" = 1'-0"

APPROVED SHAPES



NOTES:
1. OTHER SHAPES MAY APPLY PROVIDING THEY ARE SIMILAR TO THOSE SHOWN & HAVE CORNER CONSTRUCTION AS DESCRIBED ON THIS SHEET.
2. ALL SHAPED UNITS MUST FIT INSCRIBED INTO THE ALLOWABLE RECTANGULAR UNITS & BE GOVERNED BY THE ALLOWABLE PRESSURE OF THE RESPECTIVE RECTANGULAR UNIT.

ALLOWABLE DESIGN PRESSURE (SINGLE, DOUBLE & TRANSOM MULLED DOORS)
+/- 70 PSF
FOR VERTICAL MULLION ALLOWABLE PRESSURE, SEE MULLION LOAD TABLE ON SHEET 4



INTERIOR ELEVATION
SINGLE RECTANGULAR IN-SWING DOOR
SCALE: 1/2" = 1'-0"

GENERAL NOTES

1. THESE DOOR SYSTEMS HAVE BEEN TESTED, ANALYZED AND APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN LOADS" TABLE(S).
2. BUCKING, OPENINGS & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & MAY NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS.
4. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED & PROPOSED FOR WATER, AIR, IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH THE 2004 FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 & 203 FOR LARGE MISSILE IMPACT WINDOWS.
5. THESE DOOR SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE 2004 FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
6. IMPACT SHUTTERS ARE NOT REQUIRED WITH THESE DOORS.
7. ALL ANCHORS SHALL BE INSTALLED AS SPECIFIED ON THESE DRAWINGS. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
8. ALL FRAME ANCHORS SECURING WINDOW FRAME TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.

CORNER CONSTRUCTION:

JAMBS: COPED, BUTTED TOGETHER, JOINED WITH 3 NO. 10 X 3 1/8" SCREWS & GLUED WITH BINDAN D4 OR EQUAL.

SASH: MULTI-FORKED, BUTTED & GLUED WITH BINDAN D4 OR EQUAL, OR COPED, BUTTED TOGETHER & JOINED WITH (6) 3/8" X 3 15/16" WOOD DOWELS & GLUED WITH BINDAN D4 OR EQUAL

FRAME ANCHOR REQUIREMENTS TABLE

SHEAR SCREWS			
OPENING TYPE (SUBSTRATE)	JAMB TO OPENING FASTENER TYPE	MINIMUM EMBED.	MINIMUM EDGE DIST.
2X_ WOOD FRAME OR BUCK	NO. 14 SMS SCREW	1 1/4"	3/4"
CMU/CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/4"	2"
MIN. 18 GA. 33 KSI METAL STUD OR 36 KSI STRUCTURAL STEEL	NO. 14 SELF TAPPING SCREWS	FULL	1/2"
MOUNTING CLIP SCREWS			
2X_ WOOD FRAME OR BUCK	NO. 8 X 1 1/2" SMS SCREWS	1 3/8"	1/2"
MIN. 1/8" THICK 36 KSI STEEL	NO. 10 SELF TAPPING SCREWS	FULL	1/2"
MOUNTING BRACKET SCREWS			
2X_ WOOD FRAME OR BUCK	NO. 8 X 1 1/2" SMS SCREWS	1 3/8"	1/2"
MIN. 18 GA. 33 KSI METAL STUD OR 36 KSI STRUCTURAL STEEL	NO. 10 SELF TAPPING SCREWS	FULL	1/2"

(1) CONCRETE SCREWS SHALL BE ELCO OR ITW RAMSET/RED HEAD TAPCONS OR HILTI KWIK-CON II (HARDENED STEEL OR S.S.)

Approved as complying with the Florida Building Code
Date 08/17/05
NOA# 05-0727.03
Miami-Dade Product Control Division
By

CERTIFICATION
JUL 14 2005
WARREN W. SCHAEFER P.E. NO. 41135

NO.	REVISION DESCRIPTION	BY	DATE

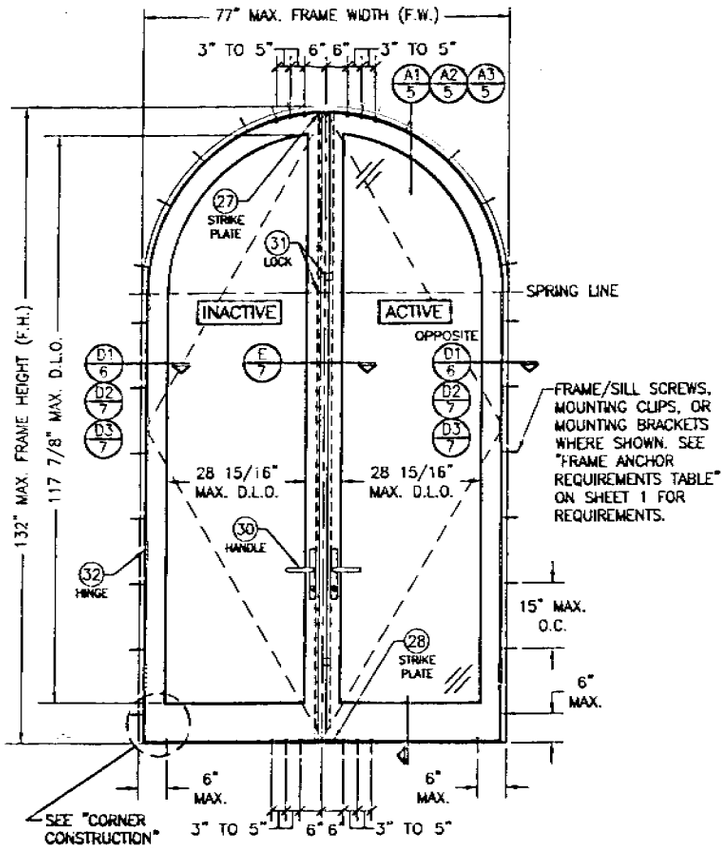
DRAWN BY: S.T.P.
CHECKED BY: W.W.S.
PLOT: 1=1
DATE: 7/27/05

DRAWING TITLE: AMERICAN IN-SWING IMPACT WOOD DOORS

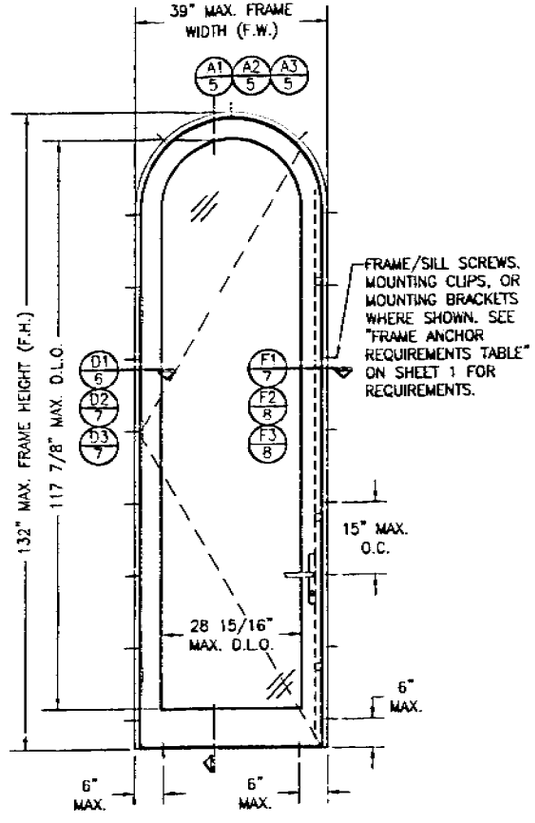
CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
8895 N. MILITARY TRAIL, SUITE B-204
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4902 FAX: 561-775-4903

MANUFACTURER
PEETZ WINDOWS & DOORS
5783 S.W. 40TH STREET, PMB 220
MIAMI, FL 33155
305-665-0291

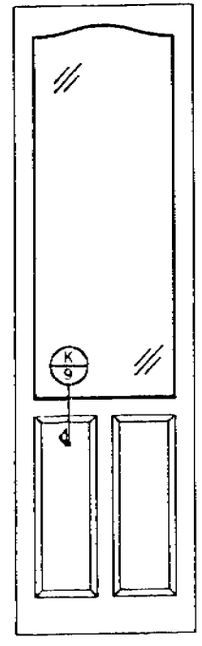
DRAWING NO. 1324A REV.
SHEET NO. 1 OF 12



INTERIOR ELEVATION
DOUBLE HALF ROUND DOOR
SCALE: 1/2" = 1'-0"
(OTHER SHAPES APPLY. SEE SHAPES TABLE ON SHEET 1)



INTERIOR ELEVATION
SINGLE HALF ROUND DOOR
SCALE: 1/2" = 1'-0"
(OTHER SHAPES APPLY. SEE SHAPES TABLE ON SHEET 1)



INTERIOR ELEVATION SOLID
RAISED PANEL WITH
STANDARD MID RAILS
SCALE: 1/2"=1'-0"

1. TOP & MID RAILS MAY BE OF ANY CONFIGURATION PROVIDING THE SMALLEST CROSS SECTION OF RAILS IS EQUAL TO OR LARGER THAN THAT DETAILED IN DRAWINGS.
2. MULTIPLE MID RAIL (BOTH HORIZONTAL & VERTICAL) MAY BE USED WITH THESE PANELS.
3. PARTIAL PANEL CONDITION IS SHOWN ABOVE. FULL PANEL DOORS AND OTHER PANEL CONFIGURATIONS ARE ALSO PART OF THIS APPROVAL AND ARE SIMILAR IN CONSTRUCTION TO THAT SHOWN ABOVE.
4. PANEL ONLY IS SHOWN. FOR INSTALLATION INTO FRAME, SEE OTHER ELEVATIONS.

Approved as complying with the Florida Building Code
Date: 08/18/05
NOA# 05-0622.02
Miami-Dade Product Control
Marking
By:

DRAWN BY: STR | CHECKED BY: WWS
FILE: | DATE:

NO.	REVISION DESCRIPTION	BY	DATE

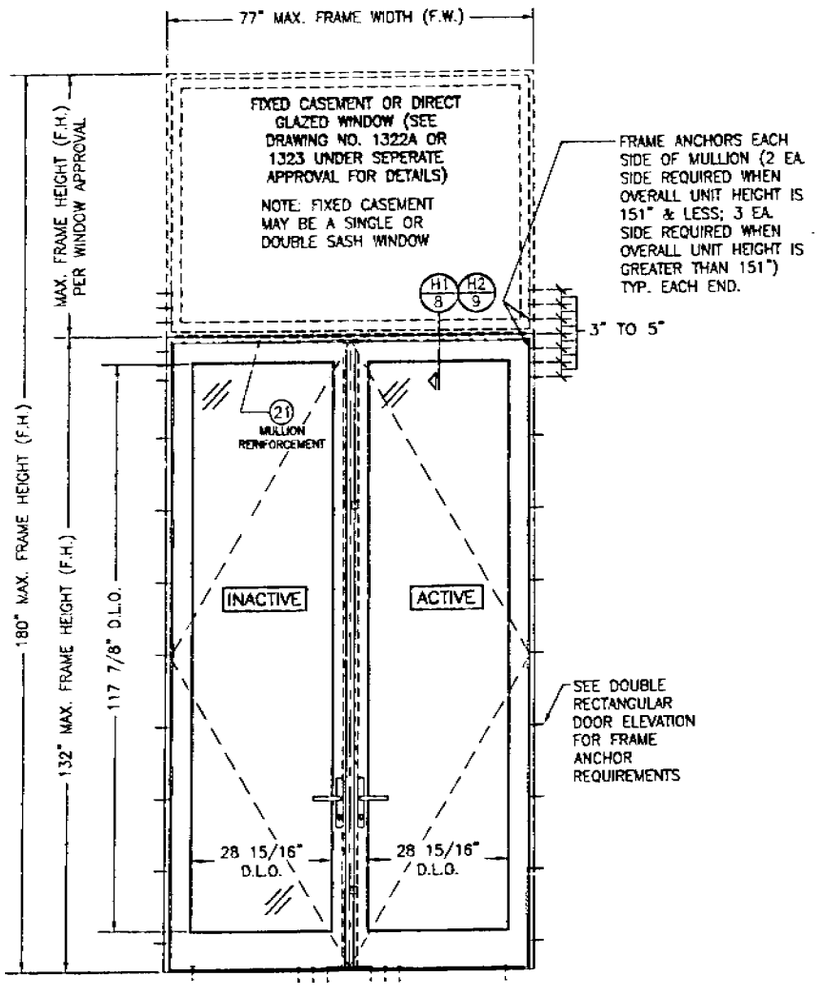
DRAWING TITLE: AMERICAN IN-SWING IMPACT WOOD DOORS

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
8895 N. MILITARY TRAIL, SUITE C-204
PALM BEACH GARDENS, FL 33410
PHONE 561-775-4902 FAX: 561-775-4903

MANUFACTURER
PEETZ WINDOWS & DOORS
5783 S.W. 40TH STREET, PMB 220
MIAMI, FL 33155
305-665-0291

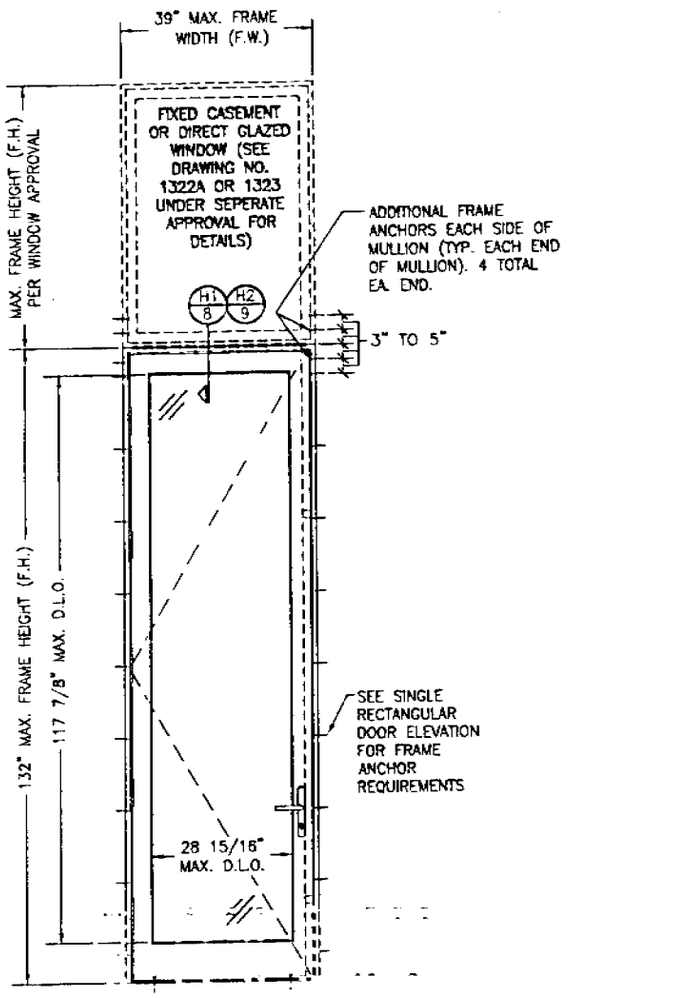
CERTIFICATION
JUL 14 2005
WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

DRAWING NO. 1324A | REV.
SHEET NO. 2 OF 12



INTERIOR ELEVATION
DOUBLE DOOR WITH TRANSOM
SCALE: 3/4" = 1'-0"

SEE DOUBLE RECTANGULAR DOOR ELEVATION FOR DOOR DETAIL NOT SHOWN



INTERIOR ELEVATION
SINGLE DOOR WITH TRANSOM
SCALE: 3/4" = 1'-0"

SEE SINGLE RECTANGULAR DOOR ELEVATION FOR DOOR DETAIL NOT SHOWN

NOTE: DOOR MAY ALSO BE A FIXED PANEL DOOR

Approved as complying with the Florida Building Code
Date 08/18/05
NOA# 05-0622.03
Miami-Dade Product Control Division
By

DRAWN BY: S.T.R. CHECKED BY: W.W.S.
PLOT: 1=24 DATE: 8/22/05

NO.	REVISION DESCRIPTION	BY	DATE

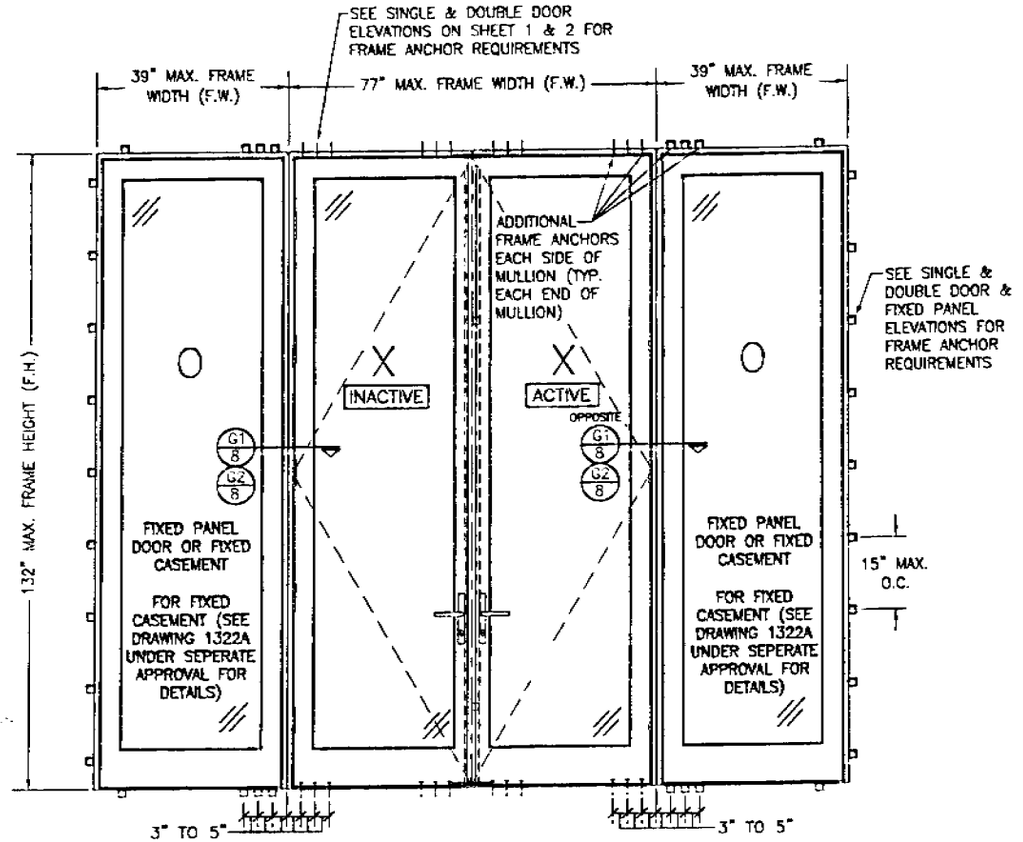
DRAWING TITLE: AMERICAN IN-SWING IMPACT WOOD DOORS

MANUFACTURER
PEETZ WINDOWS & DOORS
5783 S.W. 40TH STREET, PMB 220
MIAMI, FL 33155
305-665-0291

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
6845 N. MILITARY TRAIL SUITE C-204
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4902 FAX: 561-775-4903

CERTIFICATION
JUL 14 2005
WARREN W. SCHAEFER, P.E. NO. 44135

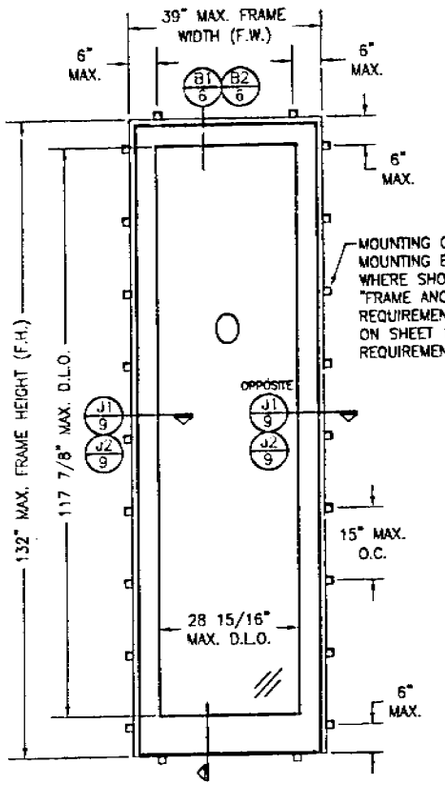
DRAWING NO. 1324A
SHEET NO. 3 OF 12



INTERIOR ELEVATION
DOUBLE OUTSWING DOOR WITH SIDELITES
SCALE: 3/4" = 1'-0"

SEE DOUBLE & SINGLE DOOR ELEVATIONS FOR DETAIL NOT SHOWN

(OXXO UNIT SHOWN. ALL OTHER FIXED/OPERABLE COMBINATIONS ALSO APPLY WITH THE MULLION CONDITIONS SHOWN.)



INTERIOR ELEVATION
SINGLE FIXED PANEL
SCALE: 3/4" = 1'-0"

Approved as complying with the Florida Building Code
Date: 08/16/05
NOA# 05-0622.03
Miami-Dade Product Control
Division
By:

NO.	REVISION DESCRIPTION	BY	DATE

DRAWN BY: S.T.R.
CHECKED BY: W.W.S.
PLOT:
DATE: 7/22/05

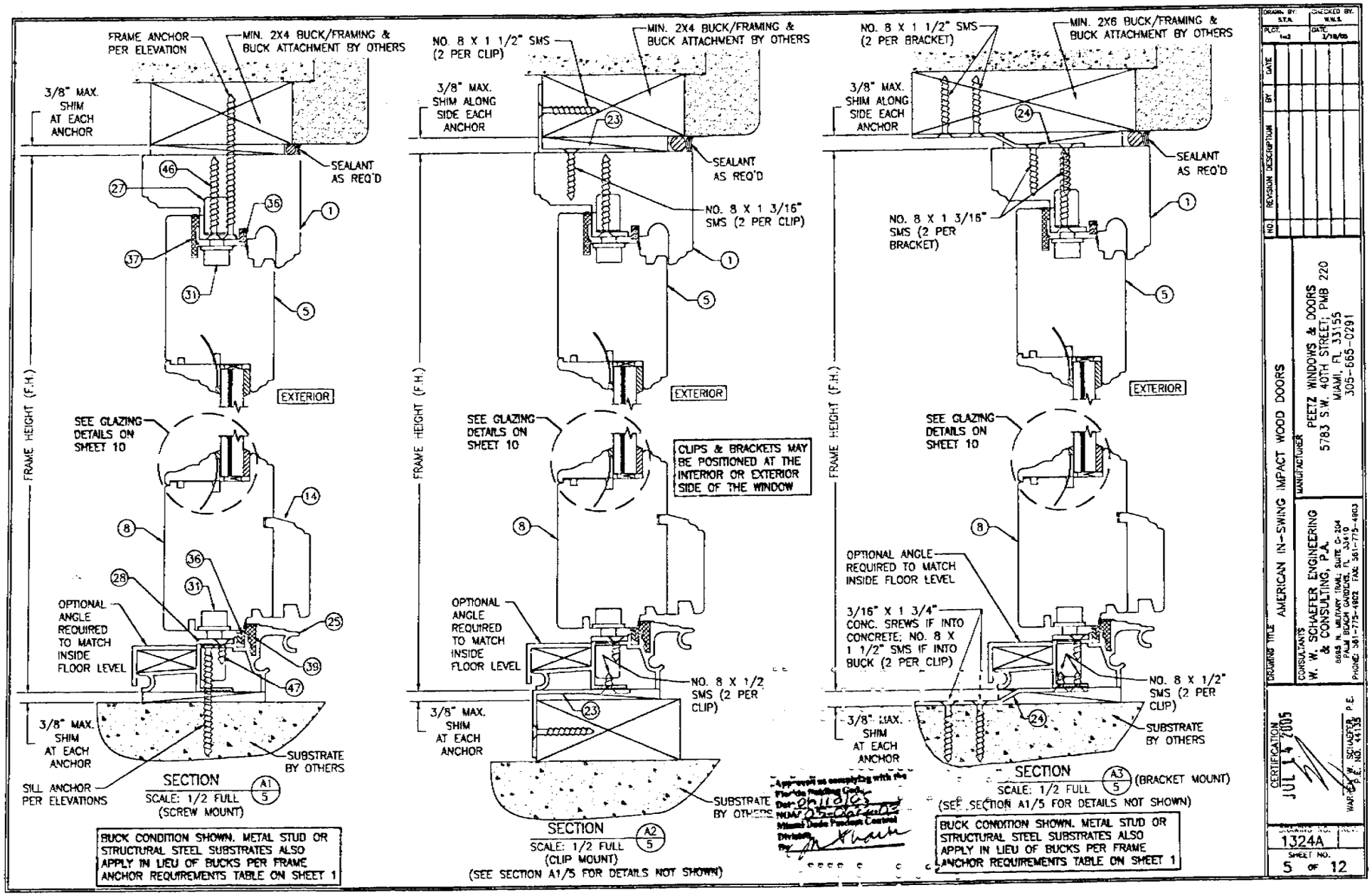
DRAWING TITLE: AMERICAN IN-SWING IMPACT WOOD DOORS

MANUFACTURER: PEETZ WINDOWS & DOORS, 5783 S.W. 40TH STREET; PMB 220, MIAMI, FL 33155, 305-665-0291

CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A., 8585 N. MILITARY TRAIL, SUITE C-204, PALM BEACH GARDENS, FL 33410, PHONE 561-775-4902 FAX 561-775-4903

CERTIFICATION
JUL 14 2005
WARREN W. SCHAEFER P.E. P.E. NO. 44133

DRAWING NO. 1324A
SHEET NO. 4 OF 12



DRAWN BY: A.T.A. | CHECKED BY: W.W.S.
PLOT: 1=2 | DATE: 7/18/05

NO	REVISION DESCRIPTION	BY	DATE

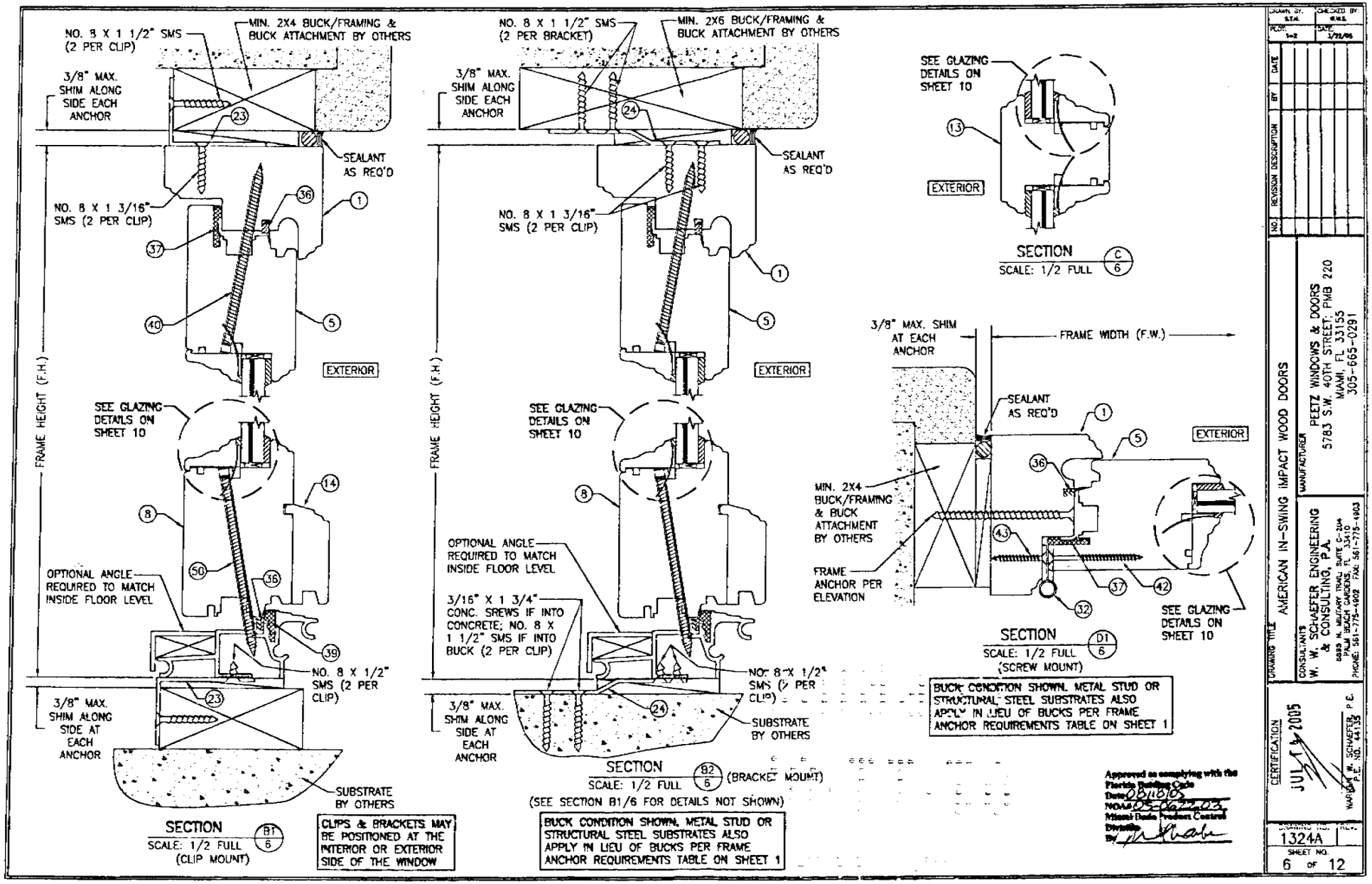
DRAWING TITLE: AMERICAN IN-SWING IMPACT WOOD DOORS

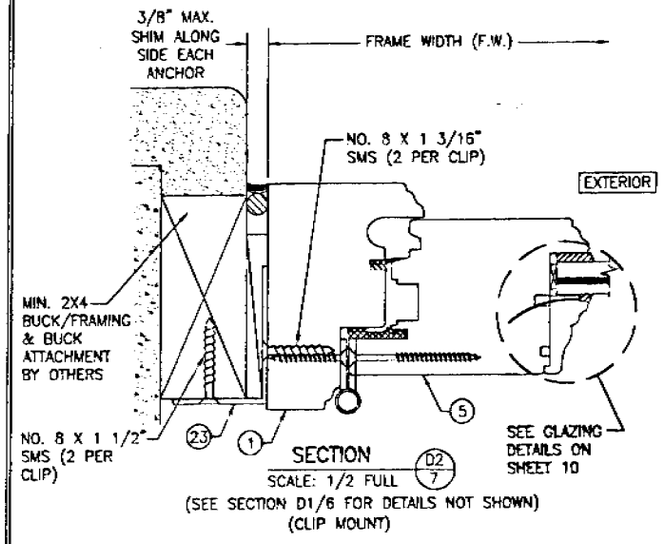
MANUFACTURER: PEETZ WINDOWS & DOORS
5783 S.W. 40TH STREET; PMB 220
MIAMI, FL 33155
305-665-0291

CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
8668 N. MILITARY TRAIL, SUITE C-204
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4802 FAX: 561-775-4803

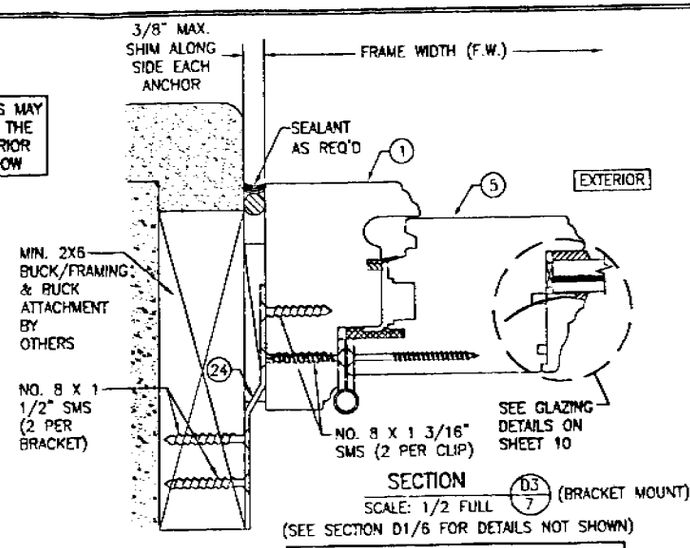
CERTIFICATION
JUL 14 2005
WARREN W. SCHAEFER P.E.
REG. NO. 44133

DRAWING NO. 1324A
SHEET NO. 5 OF 12

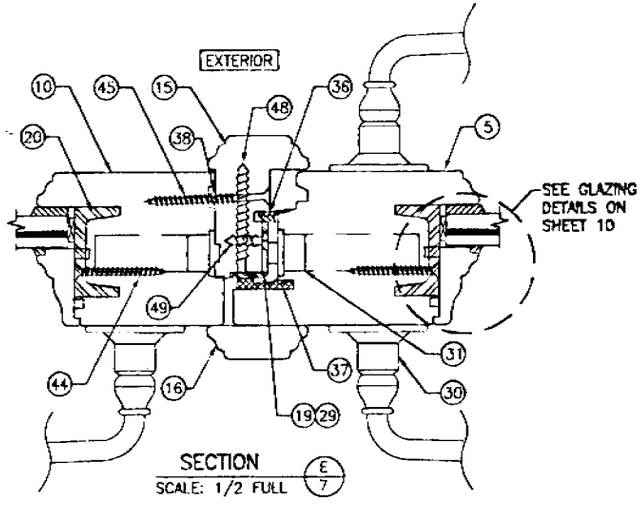

NO. 8 X 1 1/2" SMS (2 PER CLIP)
MIN. 2X4 BUCK/FRAMING & BUCK ATTACHMENT BY OTHERS
3/8" MAX. SHIM ALONG SIDE EACH ANCHOR
SEALANT AS REQ'D
NO. 8 X 1 3/16" SMS (2 PER CLIP)
FRAME HEIGHT (F.H.)
EXTERIOR
SEE GLAZING DETAILS ON SHEET 10
OPTIONAL ANGLE REQUIRED TO MATCH INSIDE FLOOR LEVEL
NO. 8 X 1/2" SMS (2 PER CLIP)
3/8" MAX. SHIM ALONG SIDE AT EACH ANCHOR
SUBSTRATE BY OTHERS
SECTION B1/6
SCALE: 1/2 FULL (CLIP MOUNT)
CLIPS & BRACKETS MAY BE POSITIONED AT THE INTERIOR OR EXTERIOR SIDE OF THE WINDOW
NO. 8 X 1 1/2" SMS (2 PER BRACKET)
MIN. 2X6 BUCK/FRAMING & BUCK ATTACHMENT BY OTHERS
3/16" X 1 3/4" CONC. SREWS IF INTO CONCRETE; NO. 8 X 1 1/2" SMS IF INTO BUCK (2 PER CLIP)
SECTION B2/6 (BRACKET MOUNT)
SCALE: 1/2 FULL
(SEE SECTION B1/6 FOR DETAILS NOT SHOWN)
BUCK CONDITION SHOWN. METAL STUD OR STRUCTURAL STEEL SUBSTRATES ALSO APPLY IN LIEU OF BUCKS PER FRAME ANCHOR REQUIREMENTS TABLE ON SHEET 1
SECTION C/6
SCALE: 1/2 FULL
3/8" MAX. SHIM AT EACH ANCHOR
FRAME WIDTH (F.W.)
MIN. 2X4 BUCK/FRAMING & BUCK ATTACHMENT BY OTHERS
FRAME ANCHOR PER ELEVATION
SECTION D1/6
SCALE: 1/2 FULL (SCREW MOUNT)
BUCK CONDITION SHOWN. METAL STUD OR STRUCTURAL STEEL SUBSTRATES ALSO APPLY IN LIEU OF BUCKS PER FRAME ANCHOR REQUIREMENTS TABLE ON SHEET 1
Approved as complying with the Florida Building Code
Date: 08/18/05
NOA# 05-0504.03
Miami-Dade Product Control Division
By:
DRAWN BY: STA
CHECKED BY: MWS
SCALE: 1=2
DATE: 3/22/05
NO. REVISION DESCRIPTION BY DATE
DRAWING TITLE: AMERICAN IN-SWING IMPACT WOOD DOORS
MANUFACTURER: PEETZ WINDOWS & DOORS 5783 S.W. 40TH STREET; PMB 220 MIAMI, FL 33155 305-665-0291
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8889 N. MILITARY TRAIL SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903
CERTIFICATION
JUL 7 2005
WARREN W. SCHAEFER, P.E. NO. 44139
DRAWING NO. 1324A
SHEET NO. 6 OF 12

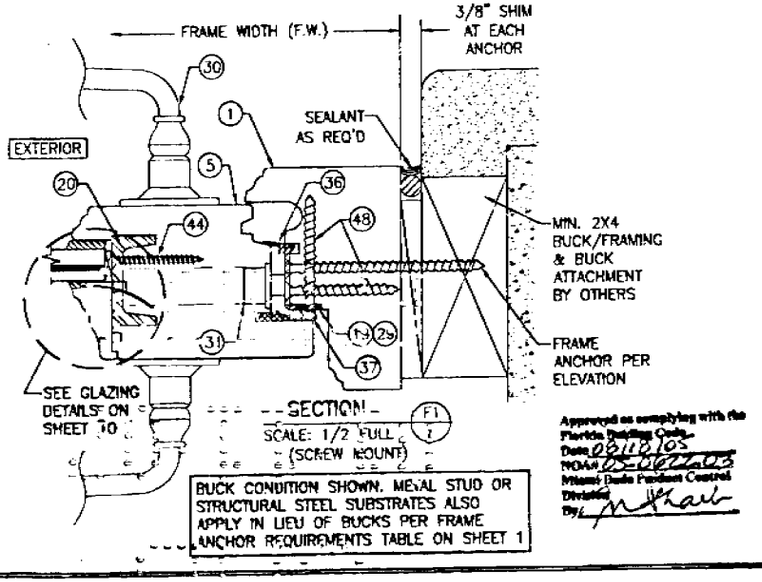


CLIPS & BRACKETS MAY BE POSITIONED AT THE INTERIOR OR EXTERIOR SIDE OF THE WINDOW



BUCK CONDITION SHOWN. METAL STUD OR STRUCTURAL STEEL SUBSTRATES ALSO APPLY IN LIEU OF BUCKS PER FRAME ANCHOR REQUIREMENTS TABLE ON SHEET 1





BUCK CONDITION SHOWN. METAL STUD OR STRUCTURAL STEEL SUBSTRATES ALSO APPLY IN LIEU OF BUCKS PER FRAME ANCHOR REQUIREMENTS TABLE ON SHEET 1

Approved as complying with the Florida Building Code
Date 08/10/05
NOA# 05-0622.05
Miami-Dade Product Control Division
By

NO.	REVISION DESCRIPTION	BY	DATE

DRAWN BY: S.T.R. | CHECKED BY: W.W.S.
SCALE: 1=1 | DATE: 3/23/05

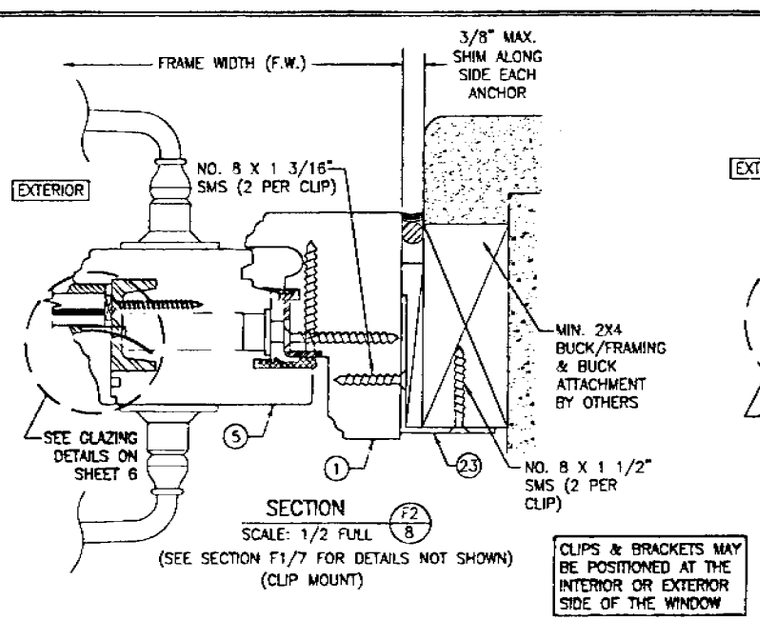
DRAWING TITLE: AMERICAN IN-SWING IMPACT WOOD DOORS

MANUFACTURER: PEETZ WINDOWS & DOORS
5783 S.W. 40TH STREET, PMB 220
MIAMI, FL 33155
305-665-0291

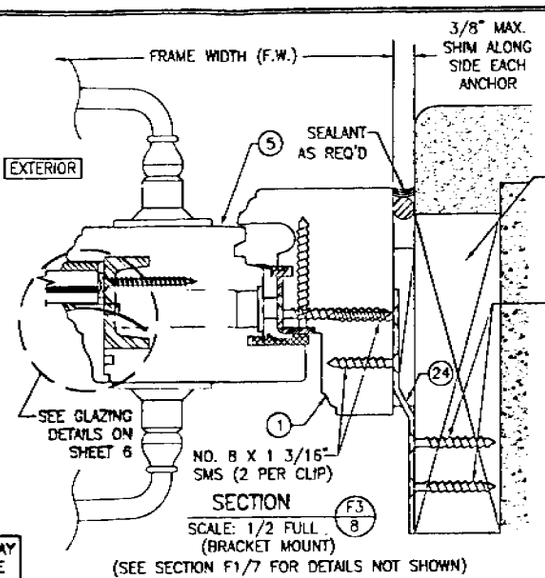
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
6885 W. MILITARY TRAIL, SUITE C-204
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4902 FAX: 561-775-4903

CERTIFICATION
JUL 14 2005
WARREN W. SCHAEFER, P.E.
P.E. NO. 44133

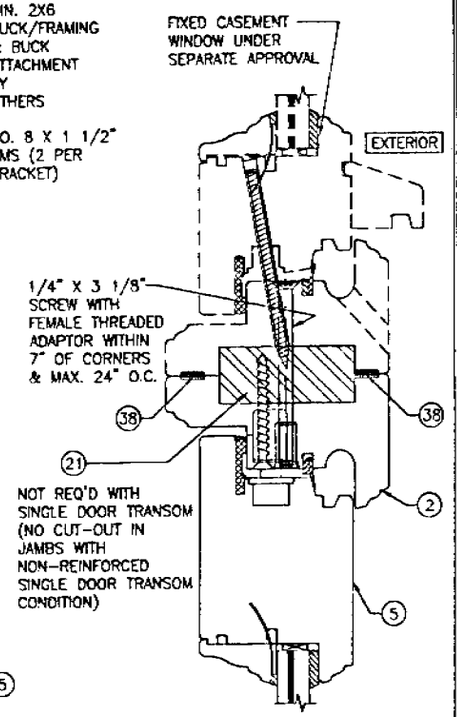
DRAWING NO. 1324A
SHEET NO. 7 OF 12

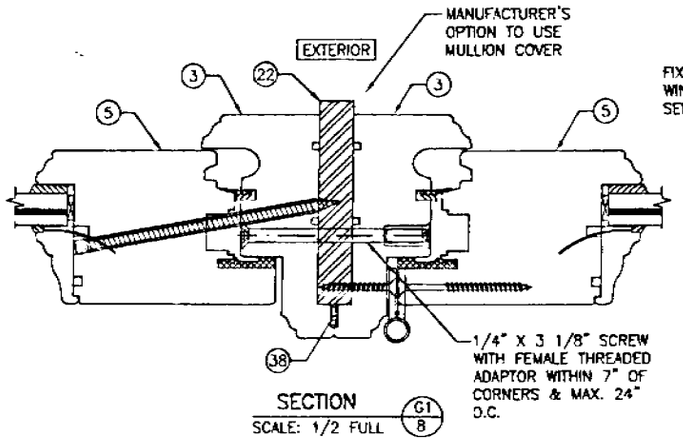


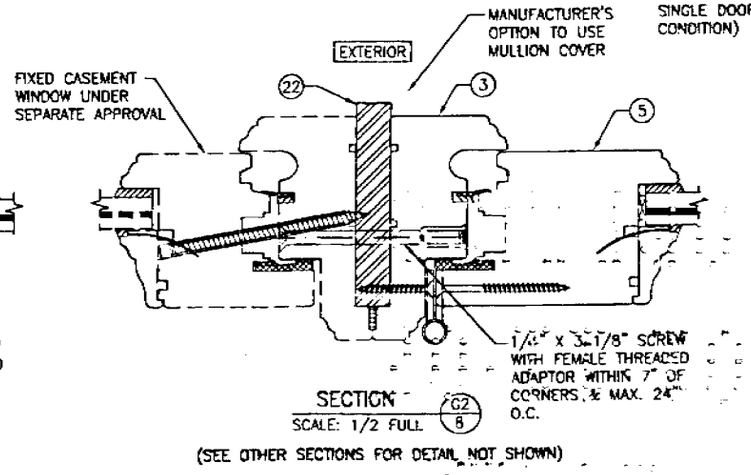
CLIPS & BRACKETS MAY BE POSITIONED AT THE INTERIOR OR EXTERIOR SIDE OF THE WINDOW



BUCK CONDITION SHOWN. METAL STUD OR STRUCTURAL STEEL SUBSTRATES ALSO APPLY IN LIEU OF BUCKS PER FRAME ANCHOR REQUIREMENTS TABLE ON SHEET 1







Approved as complying with the Florida Building Code
Date 08/18/05
NOA# 05-0614.03
Miami-Dade Product Control Division
By

DRAWN BY: S.T.R.	CHECKED BY: W.W.S.
PLOT: 1=1	DATE: 3/22/05

NO.	REVISION DESCRIPTION	BY	DATE

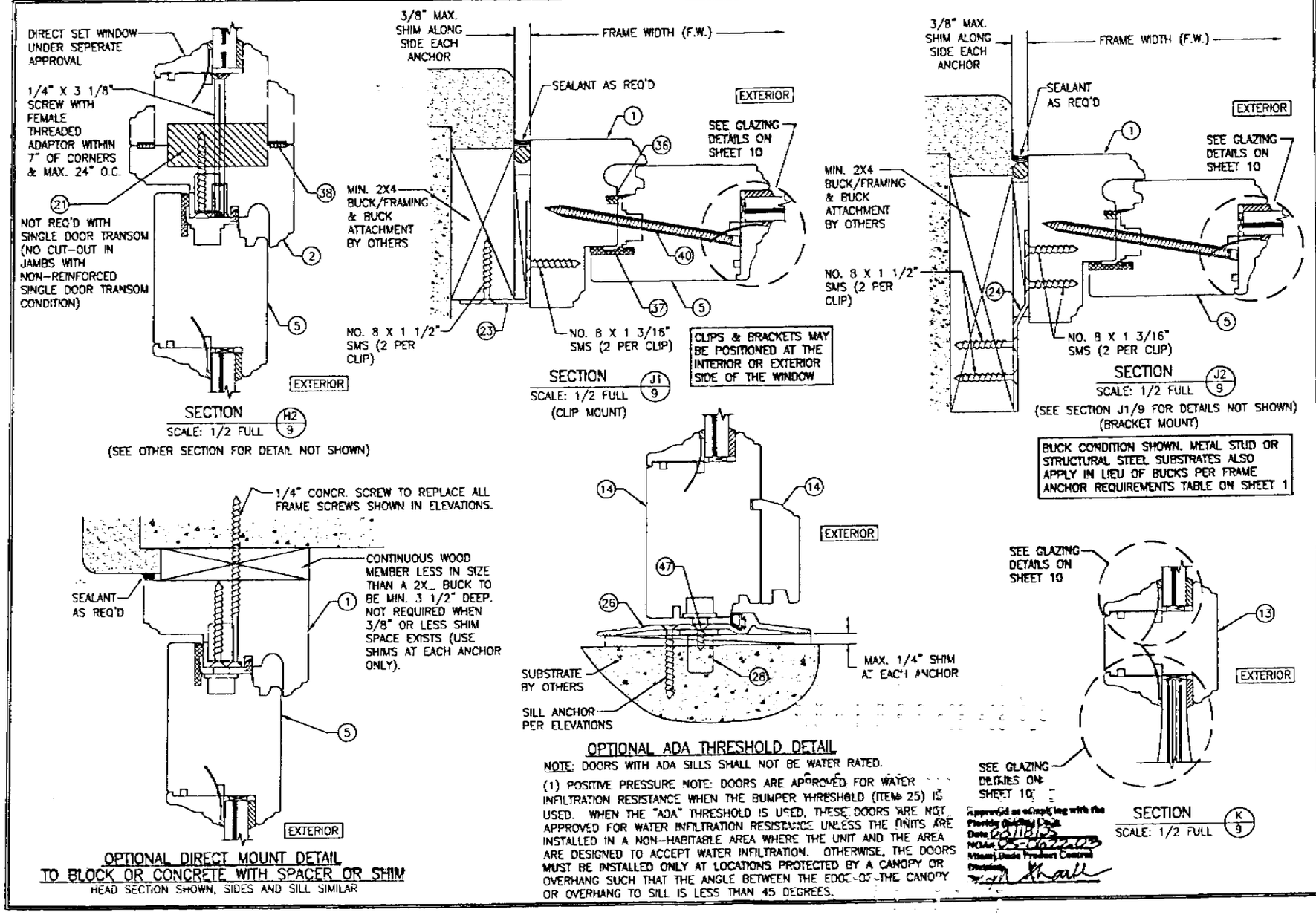
DRAWING TITLE: AMERICAN IN-SWING IMPACT WOOD DOORS

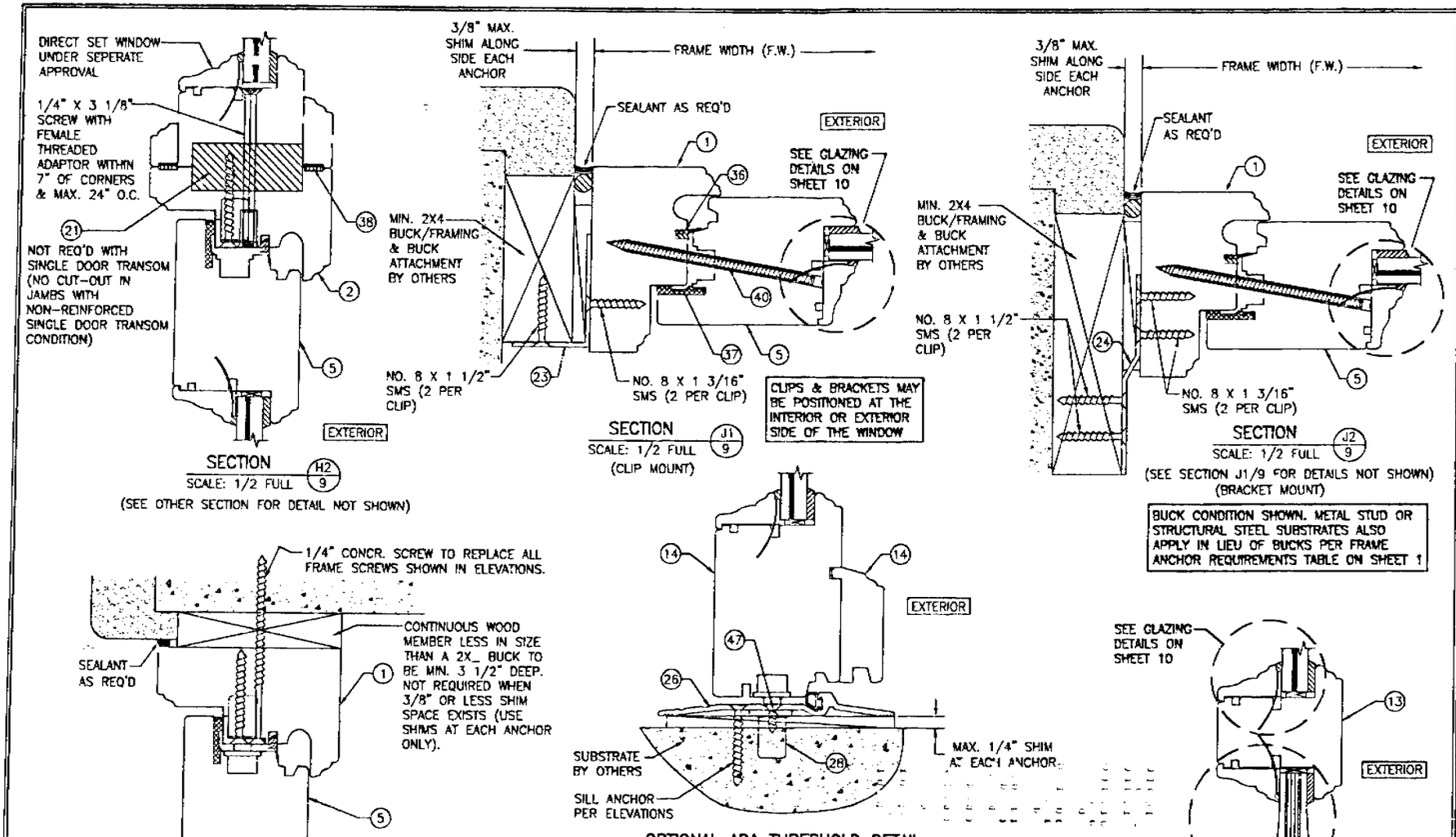
MANUFACTURER: PEETZ WINDOWS & DOORS
5783 S.W. 40TH STREET, PMB 220
MIAMI, FL 33155
305-665-0291

CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
8585 N. MILITARY TRAIL, SUITE C-204
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4902 FAX: 561-775-4903

CERTIFICATION
JUL 14 2005
WARREN W. SCHAEFER, P.E. NO. 44135

DRAWING NO. 1324A
REV.
SHEET NO. 8 OF 12


DIRECT SET WINDOW UNDER SEPERATE APPROVAL
1/4" X 3 1/8" SCREW WITH FEMALE THREADED ADAPTOR WITHIN 7" OF CORNERS & MAX. 24" O.C.
NOT REQ'D WITH SINGLE DOOR TRANSOM (NO CUT-OUT IN JAMBS WITH NON-REINFORCED SINGLE DOOR TRANSOM CONDITION)
EXTERIOR
SECTION H2/9
SCALE: 1/2 FULL
(SEE OTHER SECTION FOR DETAIL NOT SHOWN)
3/8" MAX. SHIM ALONG SIDE EACH ANCHOR
FRAME WIDTH (F.W.)
SEALANT AS REQ'D
EXTERIOR
SEE GLAZING DETAILS ON SHEET 10
MIN. 2X4 BUCK/FRAMING & BUCK ATTACHMENT BY OTHERS
NO. 8 X 1 1/2" SMS (2 PER CLIP)
NO. 8 X 1 3/16" SMS (2 PER CLIP)
CLIPS & BRACKETS MAY BE POSITIONED AT THE INTERIOR OR EXTERIOR SIDE OF THE WINDOW
SECTION J1/9
SCALE: 1/2 FULL
(CLIP MOUNT)
3/8" MAX. SHIM ALONG SIDE EACH ANCHOR
FRAME WIDTH (F.W.)
SEALANT AS REQ'D
EXTERIOR
SEE GLAZING DETAILS ON SHEET 10
MIN. 2X4 BUCK/FRAMING & BUCK ATTACHMENT BY OTHERS
NO. 8 X 1 1/2" SMS (2 PER CLIP)
NO. 8 X 1 3/16" SMS (2 PER CLIP)
SECTION J2/9
SCALE: 1/2 FULL
(SEE SECTION J1/9 FOR DETAILS NOT SHOWN)
(BRACKET MOUNT)
BUCK CONDITION SHOWN. METAL STUD OR STRUCTURAL STEEL SUBSTRATES ALSO APPLY IN LIEU OF BUCKS PER FRAME ANCHOR REQUIREMENTS TABLE ON SHEET 1
1/4" CONCR. SCREW TO REPLACE ALL FRAME SCREWS SHOWN IN ELEVATIONS.
CONTINUOUS WOOD MEMBER LESS IN SIZE THAN A 2X_ BUCK TO BE MIN. 3 1/2" DEEP. NOT REQUIRED WHEN 3/8" OR LESS SHIM SPACE EXISTS (USE SHIMS AT EACH ANCHOR ONLY).
SEALANT AS REQ'D
EXTERIOR
OPTIONAL DIRECT MOUNT DETAIL
TO BLOCK OR CONCRETE WITH SPACER OR SHIM
HEAD SECTION SHOWN, SIDES AND SILL SIMILAR
EXTERIOR
SUBSTRATE BY OTHERS
SILL ANCHOR PER ELEVATIONS
MAX. 1/4" SHIM AT EACH ANCHOR
OPTIONAL ADA THRESHOLD DETAIL
NOTE: DOORS WITH ADA SILLS SHALL NOT BE WATER RATED.
(1) POSITIVE PRESSURE NOTE: DOORS ARE APPROVED FOR WATER INFILTRATION RESISTANCE WHEN THE BUMPER THRESHOLD (ITEM 25) IS USED. WHEN THE "ADA" THRESHOLD IS USED, THESE DOORS ARE NOT APPROVED FOR WATER INFILTRATION RESISTANCE UNLESS THE UNITS ARE INSTALLED IN A NON-HABITABLE AREA WHERE THE UNIT AND THE AREA ARE DESIGNED TO ACCEPT WATER INFILTRATION. OTHERWISE, THE DOORS MUST BE INSTALLED ONLY AT LOCATIONS PROTECTED BY A CANOPY OR OVERHANG SUCH THAT THE ANGLE BETWEEN THE EDGE OF THE CANOPY OR OVERHANG TO SILL IS LESS THAN 45 DEGREES.
SEE GLAZING DETAILS ON SHEET 10
EXTERIOR
SEE GLAZING DETAILS ON SHEET 10
SECTION K/9
SCALE: 1/2 FULL
Approved as complying with the Florida Building Code
Date 05-20-05
NOA# 05-0520.03
Miami-Dade Product Control Division
DRAWN BY: S.T.R.
CHECKED BY: W.W.S.
PLOT: 1=2
DATE: 3/21/05
NO. REVISION DESCRIPTION BY DATE
DRAWING TITLE
AMERICAN IN-SWING IMPACT WOOD DOORS
MANUFACTURER
PEETZ WINDOWS & DOORS
5783 S.W. 40TH STREET, PMB 220
MIAMI, FL 33155
305-665-0291
CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
6895 N. MILITARY TRAIL, SUITE J-204
JUPITER, FLORIDA 33458
PHONE: 561-775-4902 FAX: 561-775-4903
CERTIFICATION
JUL 14 2005
WARREN W. SCHAEFER P.E.
P.E. NO. 44135
DRAWING NO. 1324A
SHEET NO. 9 OF 12



DRAWN BY: S.T.H. | CHECKED BY: W.W.S.
PLOT: 1=1 | DATE: 3/22/05

NO.	REVISION DESCRIPTION	BY	DATE

DRAWING TITLE: AMERICAN IN-SWING IMPACT WOOD DOORS

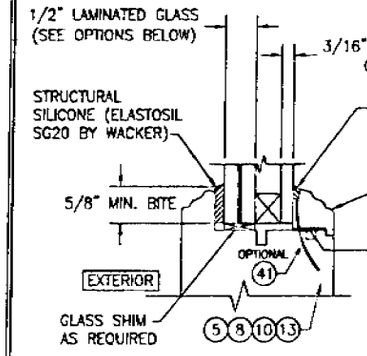
MANUFACTURER: PEETZ WINDOWS & DOORS
5783 S.W. 40TH STREET; PMB 220
MIAMI, FL 33155
305-665-0291

CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
8895 N. MILITARY TRAIL SUITE C-204
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4902 FAX: 561-775-4903

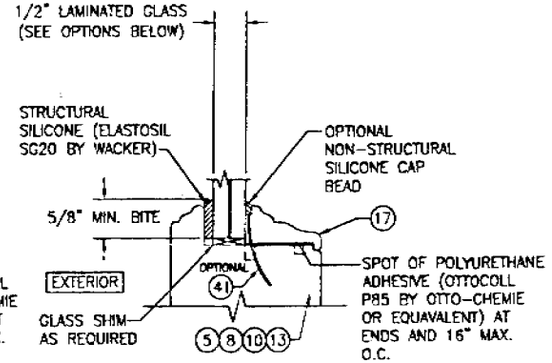
CERTIFICATION
JUL 14 2005
WARREN W. SCHAEFER P.E.
FLORIDA P.E. NO. 44133

DRAWING NO. 1324A | REV.

SHEET NO. 9 OF 12



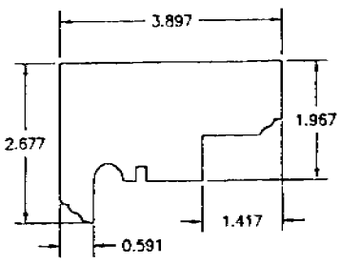
I.G. GLAZING DETAIL



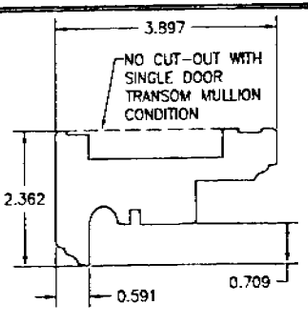
NON-I.G. GLAZING DETAIL

GLASS OPTION:
1. 1/2" THICK SOLUTIA SAFLEX III LAMINATED OUTER GLASS (3/16" AN/0.09 SAFLEX IIIG PVB/1/4" AN); 3/16" TEMPERED SINGLE PANE INNER GLASS & 1/2" AIR SPACE
2. 1/2" THICK SOLUTIA VANCEVA LAMINATED OUTER GLASS (3/16" AN/0.075" VANCEVA/1/4" AN); 3/16" TEMPERED SINGLE PANE INNER GLASS & 1/2" AIR SPACE

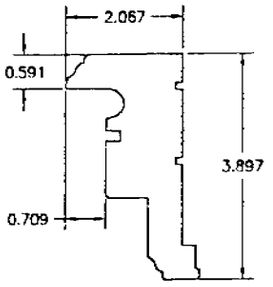
GLASS OPTION:
1. 1/2" THICK SOLUTIA SAFLEX III LAMINATED GLASS (3/16" AN/0.09 SAFLEX IIIG PVB/1/4" AN)
2. 1/2" THICK SOLUTIA VANCEVA LAMINATED GLASS (3/16" AN/0.075" VANCEVA/1/4" AN)



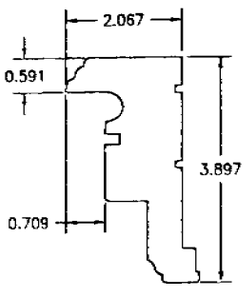
(1) HEAD AND SIDE JAMB



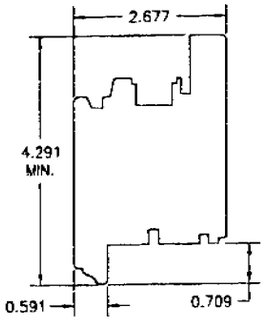
(2) MULLION HEAD JAMB



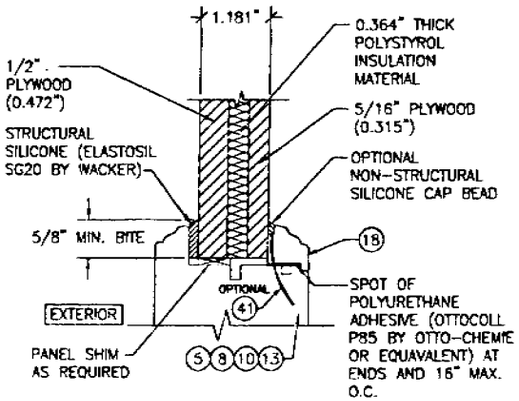
(3) MULLION SIDE JAMB



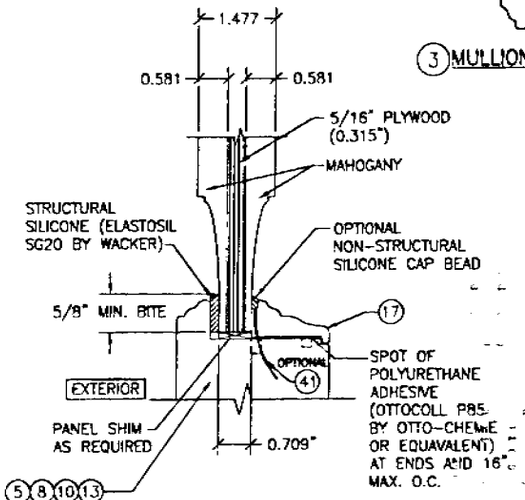
(3) MULLION SIDE JAMB



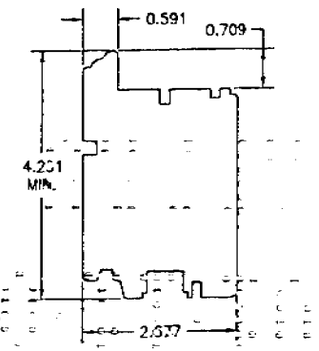
(5) STILE AND TOP RAIL



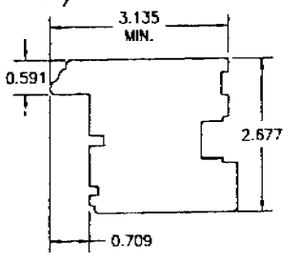
FLUSH PANEL GLAZING DETAIL



RAISED PANEL GLAZING DETAIL



(8) BOTTOM RAIL



(10) MEETING STILE

Approved as complying with the Florida Building Code,
Date: 08/18/03
NOA #: 03-0702.03
Miami-Dade Product Control
Division
By:

DRAWN BY: S.S.R.
CHECKED BY: W.W.S.
PLOT: 1=2
DATE: 3/22/05

NO.	REVISION DESCRIPTION	BY	DATE

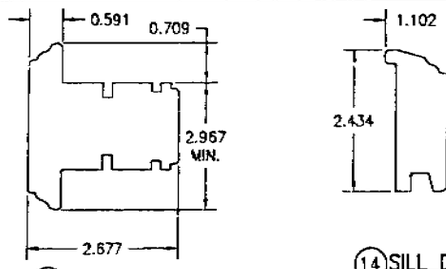
DRAWING TITLE: AMERICAN IN-SWING IMPACT WOOD DOORS

MANUFACTURER: PEETZ WINDOWS & DOORS
5783 S.W. 40TH STREET; PMB 220
MIAMI, FL 33155
305-665-0291

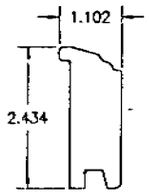
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
8895 N. MILITARY TRAIL; SUITE C-204
PALM BEACH GARDENS, FL 33410
PHONE 561-775-4902 FAX 561-775-4903

CERTIFICATION
JUL 14 2005
WARREN W. SCHAEFER, P.E.
REG. NO. 44135

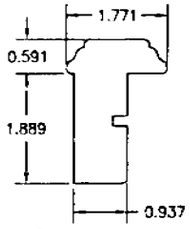
DRAWING NO. 1324A
SHEET NO. 10 OF 12



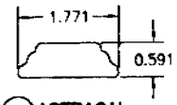
(13) MID RAIL



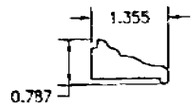
(14) SILL DRIP



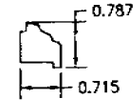
(15) ASTRAGAL
(INACTIVE LEAF)



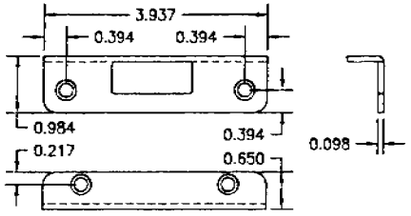
(16) ASTRAGAL COVER
(ACTIVE LEAF)



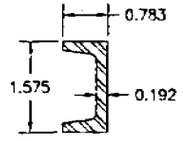
(17) NON-I.G. GLAZING BEAD



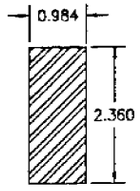
(18) I.G. GLAZING BEAD



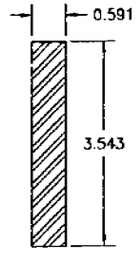
(19) STRIKE PLATE



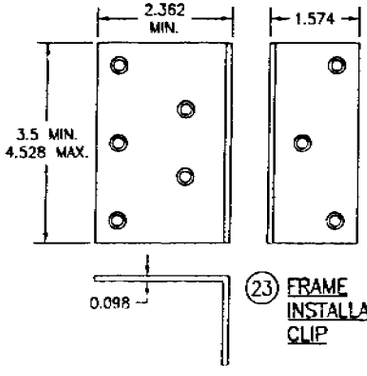
(20) STILE REINFORCEMENT



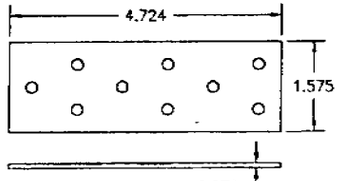
(21) TRANSOM MULLION REINFORCEMENT



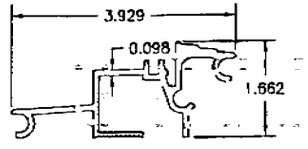
(22) VERTICAL MULLION REINFORCEMENT



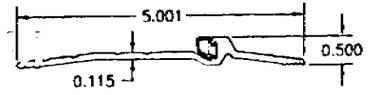
(23) FRAME INSTALLATION CLIP



(24) FRAME INSTALLATION BRACKET



(25) INSWING BUMPER THRESHOLD



(26) ADA THRESHOLD

Approved as complying with the Florida Building Code
Date: 08/18/05
NOA: 05-0622.03
Miami-Dade Product Control
Division
By:

DRAWN BY: S.T.R.
CHECKED BY: W.W.S.
PLOT: 1=1
DATE: 3/22/05

NO.	REVISION DESCRIPTION	BY	DATE

DRAWING TITLE
AMERICAN IN-SWING IMPACT WOOD DOORS

MANUFACTURER
PEETZ WINDOWS & DOORS
5783 S.W. 40TH STREET, PMB 220
MIAMI, FL 33155
305-665-0291

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
6895 N. MILITARY TRAIL, SUITE D-204
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4802 FAX: 561-775-4803

CERTIFICATION
JUL 14 2005
WARREN W. SCHAEFER P.E.
FLORIDA P.E. NO. 44133

1324A

SHEET NO.
11 OF 12