NOC / Septic / 911 address

Columbia County Building Permit Application

943.14 Ck# 8988

Revised 9-23-0

For Office Use Only Application # 0608-68 Date Received 9-25-06 By LH Permit # 122/25068

Application Approved by - Zoning Official BLK Date 27.09.06 Plans Examiner OKYTH Date 10-2-06

Flood Zone X Development Permit N/A Zoning A-3 Land Use Plan Map Category A-3

Comments NOC / ~~Septic~~ / ~~911 Address~~

Applicants Name Matt Cason - MARY ANN Crawford Phone 752 5152

Address 853 SW Sisters Welcome Rd Lake City FL

Owners Name Rick Bickwell Phone 752-5192

911 Address 677 NW Indian Springs Dr, Lake City, FL 32055

Contractors Name Stanley Crawford Const. Phone 752-5152

Address 853 SW Sisters Welcome Rd Lake City FL

Fee Simple Owner Name & Address

Bonding Co. Name & Address

Architect/Engineer Name & Address Mark Disosway 754 5419

Mortgage Lenders Name & Address

Circle the correct power company - FL Power & Light - Clay Elec. - Suwannee Valley Elec. - Progressive Energy

Property ID Number 12-3S-15-00167-027 Estimated Cost of Construction 275,000

Subdivision Name Oak Haven Lot 12 Block B Unit ___ Phase ___

Driving Directions Hwy 90 W, TR on Lake Jeffery Rd, TL on Indian Springs Dr, 4th lot on left after Live Oak Pl

Type of Construction Residential - SFD Number of Existing Dwellings on Property 0

Total Acreage 4.43 Lot Size ___ Do you need a - Culvert Permit or Culvert Waiver or Have an Existing Drive

Actual Distance of Structure from Property Lines - Front 120 Side 200 Side 85 Rear 375

Total Building Height 32'8" Number of Stories 2 Heated Floor Area 3199 Roof Pitch 12/12

TOTAL 4314

Application is hereby made to obtain a permit to do work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work be performed to meet the standards of all laws regulating construction in this jurisdiction.

OWNERS AFFIDAVIT: I hereby certify that all the foregoing information is accurate and all work will be done in compliance with all applicable laws and regulating construction and zoning.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

Stanley Crawford

Owner Builder or Agent (including Contractor)

JANET L. CHEEK
MY COMMISSION # DD 226496
EXPIRES: June 25, 2007
Bonded Thru Notary Public Underwriters

Stanley Crawford

Contractor Signature

Contractors License Number RG-0042896

Competency Card Number 5627

NOTARY STAMP/SEAL

STATE OF FLORIDA
COUNTY OF COLUMBIA

Sworn to (or affirmed) and subscribed before me this 25th day of September 2006.

Personally known ✓ or Produced Identification ___

Janet L. Cheek

Notary Signature

TW left word w/ JANET: 10.01.06

Prepared by:
Robert Cabral Jr
Provident Title & Mortgage, Inc.
444 SW Alachua Avenue
Lake City, Florida 32025

File Number: 06-495

Inst:2006020853 Date:09/01/2006 Time:13:16
Doc Stamp-Deed : 630.00
DC,P.DeWitt Cason,Columbia County B:1094 P:1955

General Warranty Deed

Made this August 30, 2006 A.D. By **Lewis Culbreath, Managing member of Kingdom First Investments LP and Pamela Culbreath, Managing member of Kingdom First Investments LP, husband and wife,** whose address is: 1931 SE 52nd Street, Ocala FL 34480, hereinafter called the grantor, to **Richard Bicknell, an unmarried man,** whose post office address is: 232 Lake Valley Terrace, Lake City FL 32055, hereinafter called the grantee:

(Whenever used herein the term "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth, that the grantor, for and in consideration of the sum of Ten Dollars, ($10.00) and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situate in Columbia County, Florida, viz:

Lot 12, Block B, OAKHAVEN, a subdivision according to the plat thereof as recorded in Plat Book 5, Pages 54 – 54A of the Public Records of Columbia County, Florida.

Parcel ID Number: **12-3S-15-00167-027**

Together with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

To Have and to Hold, the same in fee simple forever.

And the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land; that the grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances except taxes accruing subsequent to December 31, 2005.

In Witness Whereof, the said grantor has signed and sealed these presents the day and year first above written.

Signed, sealed and delivered in our presence:

LeAnna Williams
Witness Printed Name LeAnna Williams

Sharon Harrazin
Witness Printed Name Sharon Harrazin

Lewis Culbreath (Seal)
Lewis Culbreath, Managing member of Kingdom First Investments LP
Address 1931 SE 52nd Street, Ocala FL 34480

Pamela Culbreath (Seal)
Pamela Culbreath, Managing member of Kingdom First Investments LP
Address: 1931 SE 52nd Street, Ocala FL 34480

State of Florida
County of Columbia

The foregoing instrument was acknowledged before me this 30th day of August, 2006, by Lewis Culbreath, Managing member of Kingdom First Investments LP and Pamela Culbreath, Managing member of Kingdom First Investments LP, husband and wife, who is/are personally known to me or who has produced _____ as identification.

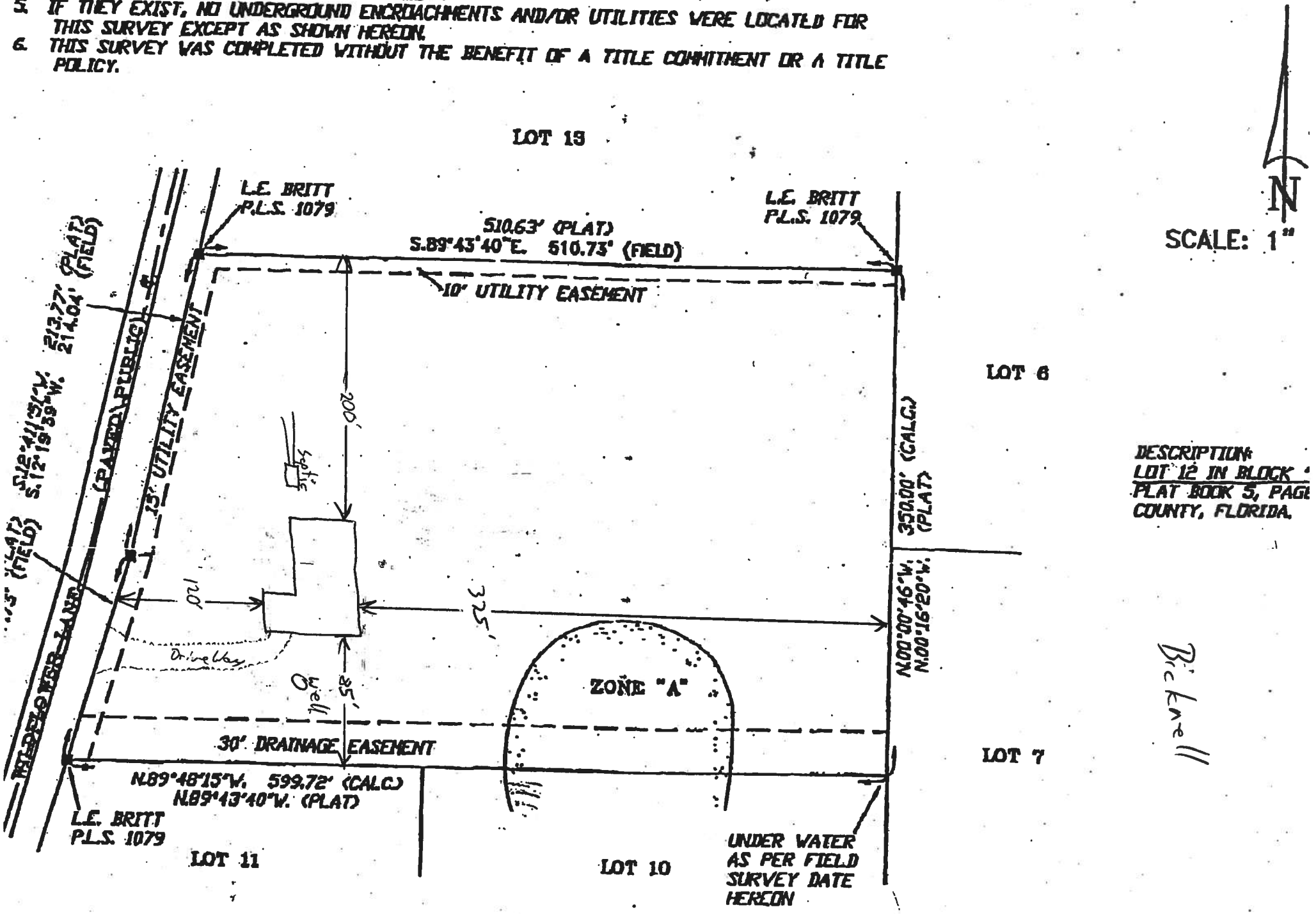
Notary Public: Lindsey Skaggs
Print Name: Lindsey Skaggs
My Commission Expires: 6/26/10

NOTARY PUBLIC STATE OF FLORIDA
LINDSEY SKAGGS
MY COMMISSION # DD568566
EXPIRES: June 26, 2010
(407) 398-0153 Florida Notary Service.com

DEED Individual Warranty Deed - Legal on Face
Closers' Choice

DATE OF FIELD SURVEY AS SHOWN HEREON.

5. IF THEY EXIST, NO UNDERGROUND ENCROACHMENTS AND/OR UTILITIES WERE LOCATED FOR THIS SURVEY EXCEPT AS SHOWN HEREON.
6. THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A TITLE COMMITMENT OR A TITLE POLICY.



DESCRIPTION:
LOT 12 IN BLOCK
PLAT BOOK 5, PAGE
COUNTY, FLORIDA.

Bicknell

RIGHT-J LOAD AND EQUIPMENT SUMMARY
Entire House

Touchstone Heating and Air, Inc.

Job: Rick Bicknell 09/19/06

P.O. Box 327, Lake Butler, FL 32054 Phone: 386-496-3467 Fax: 386-496-3147

Project Information

For: Stanley Crawford Construction
1531 S.W. Commercial Glen, Lake City, Fl 32025
Phone: 386-752-5152 Fax: 386-755-2165

Notes: First Floor

Design Information

Weather: Gainesville, FL , US

Winter Design Conditions

Outside db	33	°F
Inside db	70	°F
Design TD	37	°F

Summer Design Conditions

Outside db	93	°F
Inside db	75	°F
Design TD	18	°F
Daily range	M	
Relative humidity	50	%
Moisture difference	50	gr/lb

Heating Summary

Building heat loss	24038	Btuh
Ventilation air	0	cfm
Ventilation air loss	0	Btuh
Design heat load	24038	Btuh

Sensible Cooling Equipment Load Sizing

Structure	35692	Btuh
Ventilation	990	Btuh
Design temperature swing	3.0	°F
Use mfg. data	n	
Rate/swing multiplier	0.98	
Total sens. equip. load	35946	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	1

	Heating	Cooling
Area (ft²)	2279	2279
Volume (ft³)	19132	19132
Air changes/hour	0.10	0.20
Equiv. AVF (cfm)	32	64

Latent Cooling Equipment Load Sizing

Internal gains	4370	Btuh
Ventilation	1697	Btuh
Infiltration	2165	Btuh
Total latent equip. load	8232	Btuh
Total equipment load	44180	Btuh
Req. total capacity at 0.70% SHR	4.3	ton

Heating Equipment Summary

Make Trane
Trade
2TWB3048A1000A

Efficiency	9.1 HSPF	
Heating input		
Heating output	46000	Btuh @ 47°F
Heating temp rise	25	°F
Actual heating fan	1650	cfm
Heating air flow factor	0.069	cfm/Btuh

Space thermostat

Cooling Equipment Summary

Make Trane
Trade
2TWB3048A1000A
2TEC3F48A1000A

Efficiency	13.0 SEER	
Sensible cooling	35700	Btuh
Latent cooling	15300	Btuh
Total cooling	51000	Btuh
Actual cooling fan	1650	cfm
Cooling air flow factor	0.046	cfm/Btuh
Load sensible heat ratio	82	%

Bold/italic values have been manually overridden

Printout certified by ACCA to meet all requirements of Manual J 7th Ed.

FORM 600A-2004 EnergyGauge® 4.0

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs

Residential Whole Building Performance Method A

Project Name:	BICKNELL	Builder:	STAN. CRAWFORD
Address:		Permitting Office:	
City, State:	,	Permit Number:	
Owner:		Jurisdiction Number:	
Climate Zone:	North		

1.	New construction or existing	New	
2.	Single family or multi-family	Single family	
3.	Number of units, if multi-family	1	
4.	Number of Bedrooms	4	
5.	Is this a worst case?	Yes	
6.	Conditioned floor area (ft²)	3199 ft²	
7.	Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)		
a.	U-factor: (or Single or Double DEFAULT)	7a. Description: (Dble Default)	Area: 502.0 ft²
b.	SHGC: (or Clear or Tint DEFAULT)	7b. (Clear)	502.0 ft²
8.	Floor types		
a.	Slab-On-Grade Edge Insulation	R=0.0, 246.0(p) ft	
b.	N/A		
c.	N/A		
9.	Wall types		
a.	Frame, Wood, Exterior	R=19.0, 2260.0 ft²	
b.	Frame, Wood, Adjacent	R=13.0, 210.0 ft²	
c.	N/A		
d.	N/A		
e.	N/A		
10.	Ceiling types		
a.	Under Attic	R=30.0, 2279.0 ft²	
b.	Under Attic	R=19.0, 244.0 ft²	
c.	N/A		
11.	Ducts		
a.	Sup: Unc. Ret: Unc. AH: Attic	Sup. R=6.0, 288.0 ft	
b.	Sup: Unc. Ret: Unc. AH: Attic	Sup. R=6.0, 144.0 ft	

12.	Cooling systems		
a.	Central Unit	Cap: 36.0 kBtu/hr SEER: 13.00	
b.	Central Unit	Cap: 24.0 kBtu/hr SEER: 13.00	
c.	N/A		
13.	Heating systems		
a.	Electric Heat Pump	Cap: 37.0 kBtu/hr HSPF: 7.40	
b.	Electric Heat Pump	Cap: 25.0 kBtu/hr HSPF: 7.40	
c.	N/A		
14.	Hot water systems		
a.	Electric Resistance	Cap: 50.0 gallons EF: 0.92	
b.	Electric Resistance	Cap: 50.0 gallons EF: 0.92	
c.	Conservation credits (HR-Heat recovery, Solar DHP-Dedicated heat pump)		
15.	HVAC credits (CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)		

Glass/Floor Area: 0.16 Total as-built points: 42425 Total base points: 42861 **PASS**

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: [redacted]

DATE: 9/11/6

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: _____

DATE: _____

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.

BUILDING OFFICIAL: _____

DATE: _____

1 Predominant glass type. For actual glass type and areas, see Summer & Winter Glass output on pages 2&4.

FORM 600A-2004 EnergyGauge® 4.0

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BASE				AS-BUILT								
GLASS TYPES .18 X Conditioned Floor Area	X BSPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	SPM X	SOF	= Points	
.18	3199.0	20.04	11639.4	Double, Clear	W	2.0	6.0	199.0	38.52	0.85	6511.7	
				Double, Clear	N	2.0	6.0	80.0	19.20	0.90	1382.5	
				Double, Clear	E	2.0	6.0	148.0	42.06	0.85	5279.3	
				Double, Clear	S	2.0	6.0	75.0	35.67	0.78	2087.5	
				As-Built Total:				502.0			15261.1	
WALL TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM =		Points	
Adjacent	210.0	0.70	147.0	Frame, Wood, Exterior			19.0	2260.0	0.90		2034.0	
Exterior	2260.0	1.70	3842.0	Frame, Wood, Adjacent			13.0	210.0	0.60		126.0	
Base Total:	2470.0		3989.0	As-Built Total:				2470.0			2160.0	
DOOR TYPES	Area X	BSPM =	Points	Type				Area X	SPM =		Points	
Adjacent	18.0	2.40	43.2	Exterior Insulated				36.0	4.10		147.6	
Exterior	36.0	6.10	219.6	Adjacent Insulated				18.0	1.60		28.8	
Base Total:	54.0		262.8	As-Built Total:				54.0			176.4	
CEILING TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM X SCM =		Points	
Under Attic	2279.0	1.73	3942.7	Under Attic			30.0	2279.0	1.73 X 1.00		3942.7	
				Under Attic			19.0	244.0	2.34 X 1.00		571.0	
Base Total:	2279.0		3942.7	As-Built Total:				2523.0			4513.6	
FLOOR TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM =		Points	
Slab	246.0(p)	-37.0	-9102.0	Slab-On-Grade Edge Insulation			0.0	246.0(p	-41.20		-10135.2	
Raised	0.0	0.00	0.0									
Base Total:			-9102.0	As-Built Total:				246.0			-10135.2	
INFILTRATION	Area X	BSPM =	Points					Area X	SPM =		Points	
	3199.0	10.21	32661.8					3199.0	10.21		32661.8	

FORM 600A-2004 EnergyGauge® 4.0

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BASE			AS-BUILT					
Summer Base Points: 43293.7			**Summer As-Built Points:**					**44637.7**
Total Summer Points	X System Multiplier	= Cooling Points	Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Cooling Points
			(sys 1: Central Unit 36000 btuh ,SEER/EFF(13.0) Ducts:Unc(S),Unc(R),Att(AH),R6.0(INS)					
			44638	0.60	(1.09 x 1.147 x 1.11)	0.263	1.000	9758.0
			(sys 2: Central Unit 24000 btuh ,SEER/EFF(13.0) Ducts:Unc(S),Unc(R),Att(AH),R6.0(INS)					
			44638	0.40	(1.09 x 1.147 x 1.11)	0.263	1.000	6505.3
43293.7	**0.4266**	**18469.1**	**44637.7**	**1.00**	**1.388**	**0.263**	**1.000**	**16263.3**

FORM 600A-2004 EnergyGauge® 4.0

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BASE				AS-BUILT							
GLASS TYPES .18 X Conditioned Floor Area	X BWPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	WPM X	WOF	= Points
.18	3199.0	12.74	7335.9	Double, Clear	W	2.0	6.0	199.0	20.73	1.04	4301.1
				Double, Clear	N	2.0	6.0	80.0	24.58	1.00	1975.4
				Double, Clear	E	2.0	6.0	148.0	18.79	1.06	2949.8
				Double, Clear	S	2.0	6.0	75.0	13.30	1.26	1255.1
				As-Built Total:				502.0			10481.4
WALL TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM	=	Points
Adjacent	210.0	3.60	756.0	Frame, Wood, Exterior			19.0	2260.0	2.20		4972.0
Exterior	2260.0	3.70	8362.0	Frame, Wood, Adjacent			13.0	210.0	3.30		693.0
Base Total:	2470.0		9118.0	As-Built Total:				2470.0			5665.0
DOOR TYPES	Area X	BWPM =	Points	Type				Area X	WPM	=	Points
Adjacent	18.0	11.50	207.0	Exterior Insulated				36.0	8.40		302.4
Exterior	36.0	12.30	442.8	Adjacent Insulated				18.0	8.00		144.0
Base Total:	54.0		649.8	As-Built Total:				54.0			446.4
CEILING TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM X	WCM =	Points
Under Attic	2279.0	2.05	4671.9	Under Attic			30.0	2279.0	2.05 X 1.00		4671.9
				Under Attic			19.0	244.0	2.70 X 1.00		658.8
Base Total:	2279.0		4671.9	As-Built Total:				2523.0			5330.7
FLOOR TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM	=	Points
Slab	246.0(p)	8.9	2189.4	Slab-On-Grade Edge Insulation			0.0	246.0(p	18.80		4624.8
Raised	0.0	0.00	0.0								
Base Total:			2189.4	As-Built Total:				246.0			4624.8
INFILTRATION	Area X	BWPM =	Points					Area X	WPM	=	Points
	3199.0	-0.59	-1887.4					3199.0	-0.59		-1887.4

FORM 600A-2004

EnergyGauge® 4.0

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,	PERMIT #:

BASE			AS-BUILT					
Winter Base Points:		**22077.7**	**Winter As-Built Points:**					**24661.0**
Total Winter Points	X System Multiplier	= Heating Points	Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Heating Points
			(sys 1: Electric Heat Pump 37000 btuh ,EFF(7.4) Ducts:Unc(S),Unc(R),Att(AH),R6.0					
			24661.0	0.597	(1.069 x 1.169 x 1.10)	0.461	1.000	9322.4
			(sys 2: Electric Heat Pump 25000 btuh ,EFF(7.4) Ducts:Unc(S),Unc(R),Att(AH),R6.0					
			24661.0	0.403	(1.069 x 1.169 x 1.10)	0.461	1.000	6298.9
22077.7	**0.6274**	**13851.5**	**24661.0**	**1.00**	**1.375**	**0.461**	**1.000**	**15621.3**

FORM 600A-2004 EnergyGauge® 4.0

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BASE				AS-BUILT							
WATER HEATING											
Number of Bedrooms	X	Multiplier	= Total	Tank Volume	EF	Number of Bedrooms	X Tank Ratio	X Multiplier	X Credit Multiplier	= Total	
4		2635.00	10540.0	50.0	0.92	4	0.50	2635.00	1.00	5270.0	
				50.0	0.92	4	0.50	2635.00	1.00	5270.0	
				As-Built Total:							10540.0

CODE COMPLIANCE STATUS

BASE				AS-BUILT			
Cooling Points +	Heating Points +	Hot Water Points =	Total Points	Cooling Points +	Heating Points +	Hot Water Points =	Total Points
18469	13852	10540	42861	16263	15621	10540	42425

PASS

FORM 600A-2004 EnergyGauge® 4.0

Code Compliance Checklist

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

6A-21 INFILTRATION REDUCTION COMPLIANCE CHECKLIST

COMPONENTS	SECTION	REQUIREMENTS FOR EACH PRACTICE	CHECK
Exterior Windows & Doors	606.1.ABC.1.1	Maximum .3 cfm/sq ft. window area; .5 cfm/sq ft. door area.	
Exterior & Adjacent Walls	606.1.ABC.1.2.1	Caulk, gasket, weatherstrip or seal between: windows/doors & frames, surrounding wall, foundation & wall sole or sill plate; joints between exterior wall panels at corners; utility penetrations; between wall panels & top/bottom plates; between walls and floor. EXCEPTION: Frame walls where a continuous infiltration barrier is installed that extends from, and is sealed to, the foundation to the top plate.	
Floors	606.1.ABC.1.2.2	Penetrations/openings >1/8" sealed unless backed by truss or joint members. EXCEPTION: Frame floors where a continuous infiltration barrier is installed that is sealed to the perimeter, penetrations and seams.	
Ceilings	606.1.ABC.1.2.3	Between walls & ceilings; penetrations of ceiling plane of top floor; around shafts, chases, soffits, chimneys, cabinets sealed to continuous air barrier; gaps in gyp board & top plate; attic access. EXCEPTION: Frame ceilings where a continuous infiltration barrier is installed that is sealed at the perimeter, at penetrations and seams.	
Recessed Lighting Fixtures	606.1.ABC.1.2.4	Type IC rated with no penetrations, sealed; or Type IC or non-IC rated, installed inside a sealed box with 1/2" clearance & 3" from insulation; or Type IC rated with < 2.0 cfm from conditioned space, tested.	
Multi-story Houses	606.1.ABC.1.2.5	Air barrier on perimeter of floor cavity between floors.	
Additional Infiltration reqts	606.1.ABC.1.3	Exhaust fans vented to outdoors, dampers, combustion space heaters comply with NFPA, have combustion air	

6A-22 OTHER PRESCRIPTIVE MEASURES (must be met or exceeded by all residences.)

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	612.1	Comply with efficiency requirements in Table 612.1.ABC.3.2. Switch or clearly marked circuit breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required	
Swimming Pools & Spas	612.1	Spas & heated pools must have covers (except solar heated). Non-commercial pools must have a pump timer. Gas spa & pool heaters must have a minimum thermal efficiency of 78%.	
Shower heads	612.1	Water flow must be restricted to no more than 2.5 gallons per minute at 80 PSIG.	
Air Distribution Systems	610.1	All ducts, fittings, mechanical equipment and plenum chambers shall be mechanically attached, sealed, insulated, and installed in accordance with the criteria of Section 610. Ducts in unconditioned attics, R-6 min. insulation.	
HVAC Controls	607.1	Separate readily accessible manual or automatic thermostat for each system.	
Insulation	604.1, 602.1	Ceilings-Min. R-19. Common walls-Frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 82.9

The higher the score, the more efficient the home.

1.	New construction or existing	New	12.	Cooling systems	
2.	Single family or multi-family	Single family	a.	Central Unit	Cap: 36.0 kBtu/hr SEER: 13.00
3.	Number of units, if multi-family	1	b.	Central Unit	Cap: 24.0 kBtu/hr SEER: 13.00
4.	Number of Bedrooms	4	c.	N/A	
5.	Is this a worst case?	Yes			
6.	Conditioned floor area (ft²)	3199 ft²			
7.	Glass type [1] and area: (Label reqd. by 13-104.4.5 if not default)		13.	Heating systems	
a.	U-factor: (or Single or Double DEFAULT)	Description Area 7a. (Dble Default) 502.0 ft²	a.	Electric Heat Pump	Cap: 37.0 kBtu/hr HSPF: 7.40
b.	SHGC: (or Clear or Tint DEFAULT)	7b. (Clear) 502.0 ft²	b.	Electric Heat Pump	Cap: 25.0 kBtu/hr HSPF: 7.40
8.	Floor types		c.	N/A	
a.	Slab-On-Grade Edge Insulation	R=0.0, 246.0(p) ft			
b.	N/A		14.	Hot water systems	
c.	N/A		a.	Electric Resistance	Cap: 50.0 gallons EF: 0.92
9.	Wall types		b.	Electric Resistance	Cap: 50.0 gallons EF: 0.92
a.	Frame, Wood, Exterior	R=19.0, 2260.0 ft²	c.	Conservation credits (HR-Heat recovery, Solar DHP-Dedicated heat pump)	
b.	Frame, Wood, Adjacent	R=13.0, 210.0 ft²	15.	HVAC credits (CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)	
c.	N/A				
d.	N/A				
e.	N/A				
10.	Ceiling types				
a.	Under Attic	R=30.0, 2279.0 ft²			
b.	Under Attic	R=19.0, 244.0 ft²			
c.	N/A				
11.	Ducts				
a.	Sup: Unc. Ret: Unc. AH: Attic	Sup. R=6.0, 288.0 ft			
b.	Sup: Unc. Ret: Unc. AH: Attic	Sup. R=6.0, 144.0 ft			

I certify that this home has complied with the Florida Energy Efficiency Code For Building Construction through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant features.

Builder Signature: _____ Date: _____

Address of New Home: _____ City/FL Zip: _____

**NOTE: The home's estimated energy performance score is only available through the FLA/RES computer program. This is not a Building Energy Rating. If your score is 80 or greater (or 86 for a US EPA/DOE EnergyStar™ designation), your home may qualify for energy efficiency mortgage (EEM) incentives if you obtain a Florida Energy Gauge Rating. Contact the Energy Gauge Hotline at 321/638-1492 or see the Energy Gauge web site at www.fsec.ucf.edu for information and a list of certified Raters. For information about Florida's Energy Efficiency Code For Building Construction, contact the Department of Community Affairs at 850/487-1824.*

[1] Predominant glass type. For actual glass type and areas, see Summer & Winter Glass output on pages 2&4.

MEMBER OF The North Central Florida Water Well

Clyatt Well Drilling, Inc.
(Established in 1971)
POST OFFICE BOX 180
WORTHINGTON SPRINGS, FLORIDA 32697

Telephone Number (386)496-2488
FAX Number (386)496-4640

K. Melaine "Red" Clyatt

June 18, 2002

Columbia County Building Department
Post Office Box 1529
Lake City, Florida 32056

To Whom It May Concern:

As required by building code regulations for Columbia County in order that a building permit can be issued, the following well information is provided with regard to the above-referenced well:

Size of Pump Motor:	1-1/2 Horse Power
Size of Pressure Tank:	220 Gallon Equivalent
Cycle Stop Valve Used:	No

Should you require any additional information, please do not hesitate to contact us.

Respectfully,

CLYATT WELL DRILLING, INC.

K. Melaine "Red" Clyatt
President

MEMBER OF The North Central Florida Water Well

Clyatt Well Drilling, Inc.
(Established in 1971)
POST OFFICE BOX 180
WORTHINGTON SPRINGS, FLORIDA 32697

Telephone Number (386)496-2488
FAX Number (386)496-4640

K. Melaine "Red" Clyatt

PUMP AND TANK SPECIFICATIONS FOR
STANDARD 4" RESIDENTIAL WELLS

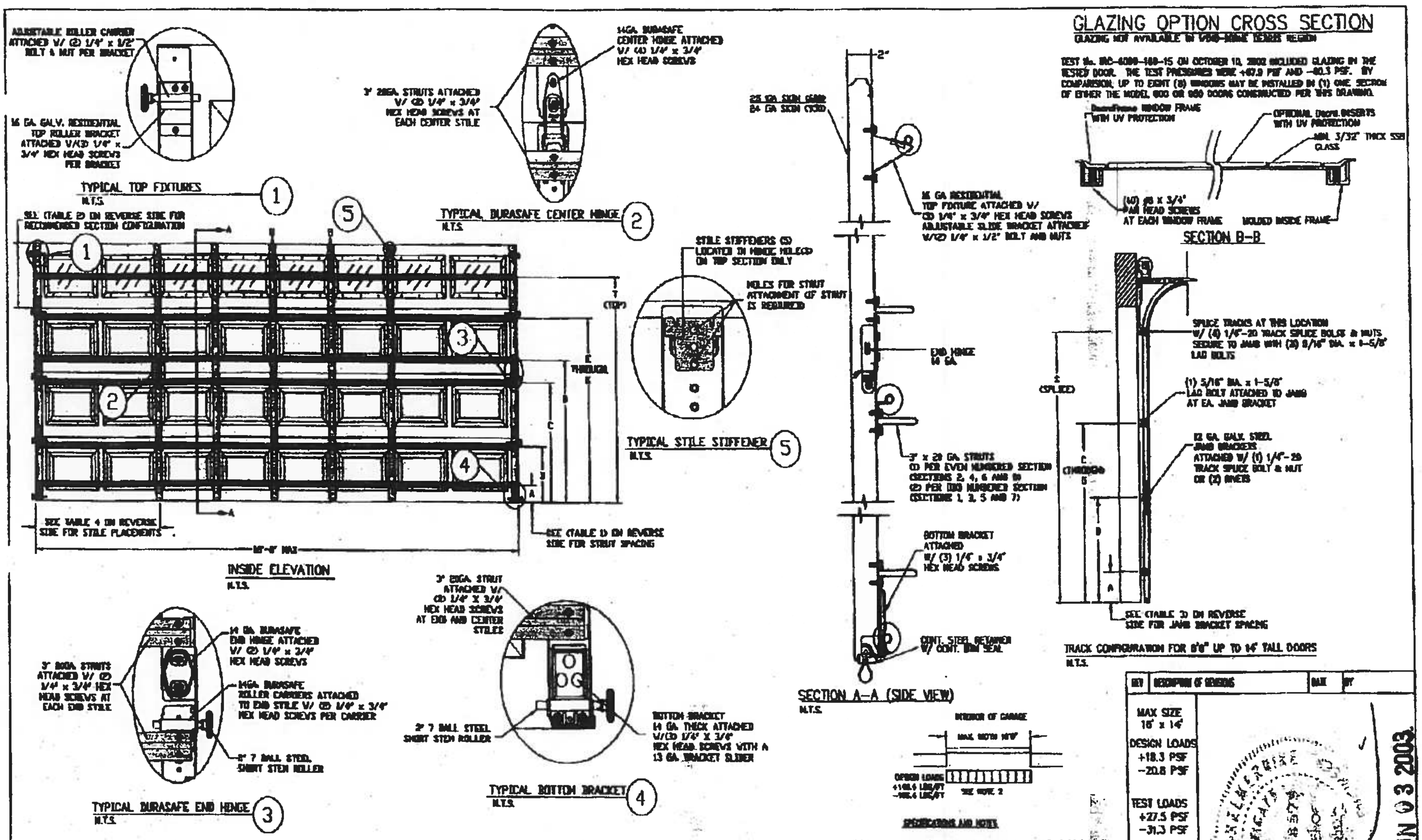
PUMPS

1 Horse Power Submersible Pump
20 Gallons Per Minute
Voltage: 240
Phase: (Single) 1

1.5 Horse Power Submersible Pump
25 Gallons Per Minute
Voltage: 240
Phase: (Single) 1

TANK

WF-255 Captive Air Tank
Capacity 81 Gallons
Equivalent 220 Gallons
Draw Down 25 Gallons



WOOD JAMB ATTACHMENT TO STRUCTURE

RATED FOR 110 MPH PEAK GUST, EXPOSURE B, 30' OR LESS MEAN ROOF HEIGHT

2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C. (1 1/2" EMBEDMENT)

2 X 6 VERTICAL JAMB ATTACHMENT TO 3,000 PSI CONCRETE
[illegible] 3/8" X 4" STARTING 6" FROM ENDS THEN 24" O.C. (2 1/2" EMBEDMENT)
[illegible] SLEEVE ANCHOR 3/8" X 3-3/8" STARTING 6" FROM ENDS THEN 24" O.C. (1 1/4" EMBEDMENT)
[illegible] 3/8" X 4" STARTING 6" FROM ENDS THEN 24" O.C. (2 1/2" EMBEDMENT)

2 X 6 VERTICAL JAMB ATTACHMENT TO C-90 BLOCK
[illegible] SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS THEN 24" O.C. (1 1/4" EMBEDMENT)
[illegible] TAPCON 1/4" X 2-3/4" STARTING 6" FROM ENDS, USE PAIRS OF FASTENERS (3" APART) AT 18" O.C.(1 1/4" EMBEDMENT)

*LAGS AND BOLTS CAN BE COUNTERSUNK TO PROVIDE A FLUSH MOUNTING SURFACE.
*PREPARATION OF WOOD JAMBS BY OTHERS

SPECIFICATIONS AND NOTES

1. ALL THE LOAD FROM THE DOOR IS TRANSFERRED TO THE VERTICAL TRACK. FROM THE TRACK THE LOAD IS TRANSFERRED TO THE VERTICAL JAMBS. THE HORIZONTAL JAMB OR HEADER RECEIVES NO PORTION OF THE LOAD TRANSFERRED FROM THE DOOR.
2. EACH VERTICAL [illegible] +148.4 LBS/FT & -168.4 LBS/FT
3. DOORS AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
4. DOOR SECTIONS SHALL BE 25 GA. MIN. (.019") ROLLED FORMED [illegible] COMMERCIAL QUALITY, G-40 GALVANIZATION
5. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.
6. THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURE DESCRIBED IN DASMA 108, ASTM E330, AND THE SOUTHERN BUILDING CODE SECTION 1606 WIND LOAD DESIGN CRITERIA. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-98 WITH THE FOLLOWING PARAMETERS:
   A. BASIC WIND SPEED OF 110 MPH (PEAK GUST)
   B. DOOR CAN BE INSTALLED WITH 5 FEET OF DOORS WIDTH INSIDE THE BRICK STOP.
   C. 30' OR LESS MEAN ROOF HEIGHT AT ANY SLOPE
   D. USE FACTOR OF 1.0
   E. EXPOSURE RATING OF B
7. REFER TO TABLES ON THE REVERSE SIDE FOR ADDITIONAL DOOR WIDTHS AND THEIR DESIGN PRESSURES.

MAX SIZE 18' x 14'

DESIGN LOADS +18.3 PSF -20.8 PSF

TEST LOADS +27.5 PSF -31.3 PSF

JUN 03 2003

Amarr Garage Doors
165 CARRIAGE COURT WINSTON-SALEM, NC. 27105

MODEL #600 STRATFORD w/DuraSafe
MODEL #650 HERITAGE w/DuraSafe
Short Panel, Long Panel, and Flush Panel

SIZE	DRAWN BY	DATE	DRAWING NUMBER
B	CHECKED BY AME	DATE 04/09/03	IRC-6016-110-15

ENGINEER: THOMAS L. SHLEMBERGE P.E. LIC. No. 034878 | SHEET 1 OF 1

MIAMI-DADE

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

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

CONTRACTOR LICENSING SECTION
(305) 375-2527 FAX (305) 375-2558

CONTRACTOR ENFORCEMENT DIVISION
(305) 375-2966 FAX (305) 375-2908

PRODUCT CONTROL DIVISION
(305) 375-2902 FAX (305) 372-6339

PRODUCT CONTROL NOTICE OF ACCEPTANCE

Premdor Entry Systems
911 E. Jeferson, P.O. Box 76
Pittsburgh ,KS 66762

Your application for Notice of Acceptance (NOA) of:
Entergy 6-8 S/E Inswing Opaque Double w/sidelites Residential Insulated Steel Door
under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This NOA shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at any time from a jobsite or manufacturer's plant for quality control testing. If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined by BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

ACCEPTANCE NO.: 01-0314.23
EXPIRES: 04/02/2006

Raul Rodriguez
Chief Product Control Division

THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL CONDITIONS
BUILDING CODE & PRODUCT REVIEW COMMITTEE

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Miami-Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.
Director
Miami-Dade County
Building Code Compliance Office

APPROVED: 06/05/2001

Premdor Entry Systems

ACCEPTANCE No.: 01-0314.23

APPROVED : JUN 05 2001

EXPIRES : April 02, 2006

NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS

1. SCOPE

1.1 This renews the Notice of Acceptance No. 00-0321.25 which was issued on April 28, 2000. It approves a residential insulated door, as described in Section 2 of this Notice of Acceptance, designed to comply with the South Florida Building Code (SFBC), 1994 Edition for Miami-Dade County, for the locations where the pressure requirements, as determined by SFBC Chapter 23, do not exceed the Design Pressure Rating values indicated in the approved drawings.

2. PRODUCT DESCRIPTION

2.1 The **Series Entergy 6-8 S/E Inswing Opaque Double Residential Insulated Steel Doors with Sidelites-Impact Resistant Door Slab Only** and its components shall be constructed in strict compliance with the following documents: Drawing No **31-1029-EM-I**, Sheets 1 through 6 of 6, titled "Premdor (Entergy Brand) Double Door with Sidelites in Wood Frames with Bumper Threshold (Inswing)," prepared by manufacturer, dated 7/29/97 with revision C dated 01/11/00, 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. These documents shall hereinafter be referred to as the approved drawings.

3. LIMITATIONS

3.1 This approval applies to single unit applications of pair of doors and single door only, as shown in approved drawings. Single door units shall include all components described in the active leaf of this approval.

3.2 Unit shall be installed only at locations protected by a canopy or overhang such that the angle between the edge of canopy or overhang to sill is less than 45 degrees. Unless unit is installed in non-habitable areas where the unit and the area are designed to accept water infiltration.

4. INSTALLATION

4.1 The residential insulated steel door and its components shall be installed in strict compliance with the approved drawings.

4.2 Hurricane protection system (shutters):

4.2.1 Door: the installation of this unit **will not require** a hurricane protection system.

4.2.2 Sidelite: the installation of this unit **will require** a hurricane protection system.

5. LABELING

5.1 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".

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 Duplicate copies of the approved drawings, as identified in Section 2 of this Notice of Acceptance, clearly marked to show the components selected for the proposed installation.

6.1.3 Any other documents required by the Building Official or the South Florida Building Code (SFBC) in order to properly evaluate the installation of this system.

Manuel Perez

Manuel Perez, P.E. Product Control Examiner
Product Control Division

Premdor Entry Systems

ACCEPTANCE No.: 01-0314.23

APPROVED : JUN 05-2001

EXPIRES : April 02, 2006

NOTICE OF ACCEPTANCE: STANDARD CONDITIONS

1. Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documentation, including test supporting data, engineering documents, are no older than eight (8) years.

2. Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approved", or as specifically stated in the specific conditions of this Acceptance.

3. Renewals of Acceptance will not be considered if:
   a. There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes.
   b. The product is no longer the same product (identical) as the one originally approved.
   c. If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product.
   d. The engineer who originally prepared, signed and sealed the required documentation initially submitted, is no longer practicing the engineering profession.

4. Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.

5. Any of the following shall also be grounds for removal of this Acceptance:
   a. Unsatisfactory performance of this product or process.
   b. Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purposes.

6. The Notice of Acceptance 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 Notice of Acceptance is displayed, then it shall be done in its entirety.

7. A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all time. The engineer needs not reseal the copies.

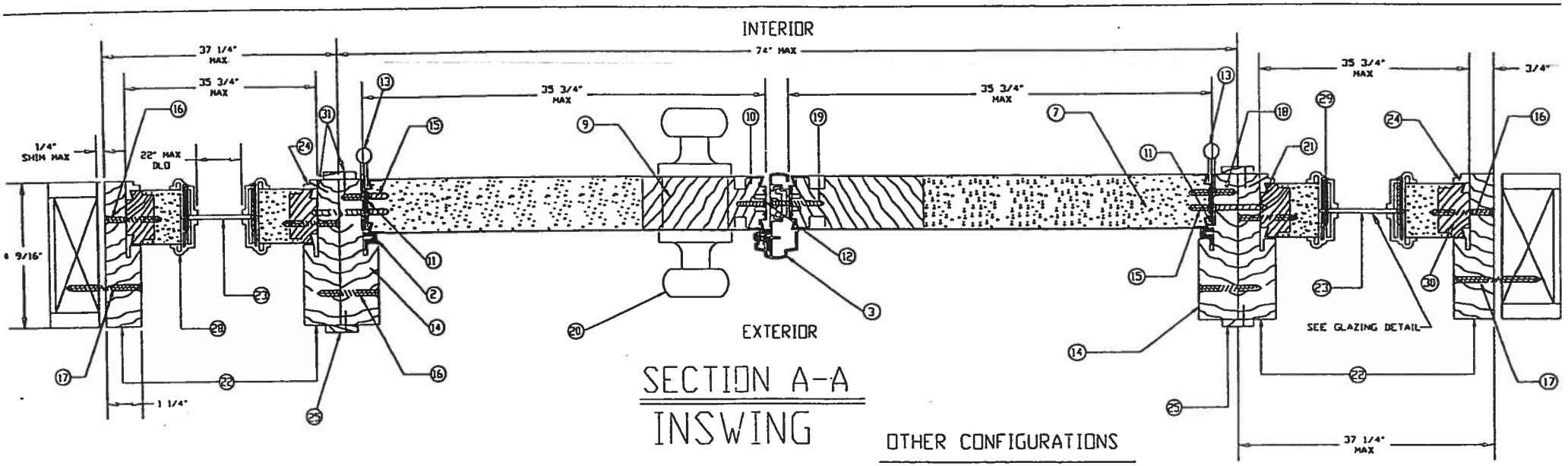
8. Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.

9. This Notice of Acceptance consists of pages 1, 2 and this last page 3.

END OF THIS ACCEPTANCE

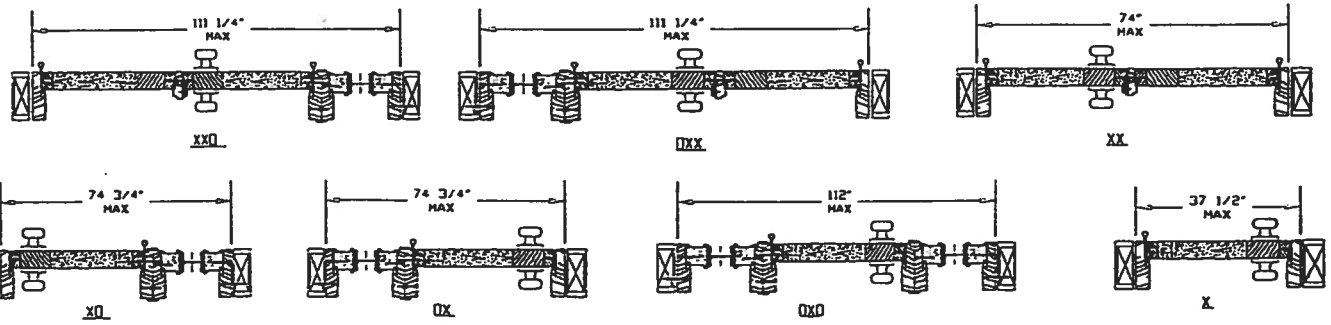
Manuel Perez

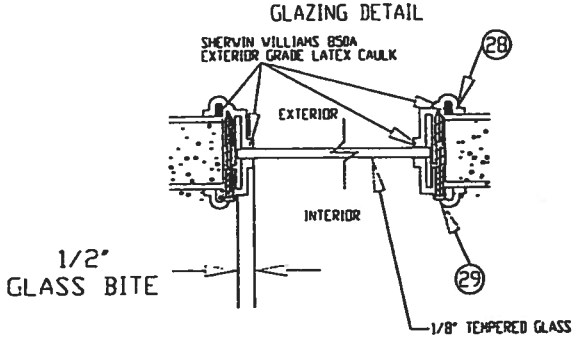
Manuel Perez, P.E., Product Control Examiner
Product Control Division



SECTION A-A
INSWING

OTHER CONFIGURATIONS





APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE: JUN 05 2001
BY:
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 01-0314.23

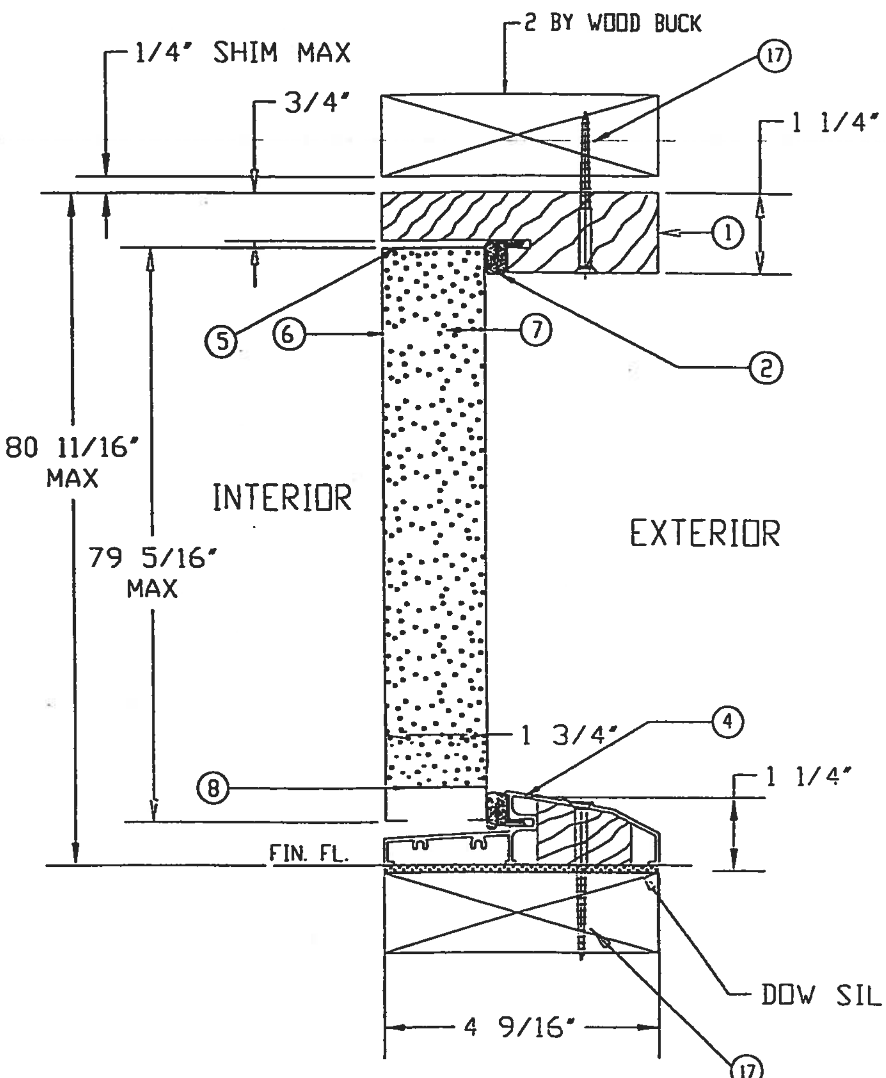
C	DADE COUNTY MODIFICATIONS	5/31/01	JL
B	ADDED PAGE 5 (DOOR OPTIONS)	08-1-98	RS
A	ADD SCREWS TO LITE FRAMES & ADD OTHER DOOR CONFIGURATIONS	12-10-97	RS
LTR	REVISIONS	DATE	BY

LOUIS UNLESS NOTED, TYP. : EC : MC :
EXTERIOR UNLESS NOTED, STD. CONT. NO'S
ENGINEER:
DRAWN BY: RS | DATE: 7-29-97
PART NAME: ENTRY DOOR W/SIDELITES 12-10-97
SCALE: NTS

PREMDOR ENTRY SYSTEMS
90 E. JEFFERSON
PONTIAC, FL 48342

31-1029-EM-1
SHEET 2 OF 6

REVISION LETTER C



SECTION B-B

MATERIALS LIST

ITEM NO.	DESCRIPTION	PART NUMBER	COMMENTS
1	WOOD HEAD JAMB	EM-14	1 1/4" X 4 9/16" MTL. TO BE PINE OR EQUIVALENT
2	COMPRESSION WEATHERSTRIP	EM-25	LOCKSCREEN BRAND LOXSEAL 9650 (BRONZE)
3	ALUMINUM ASTRAGAL	EM-12	PREMDOR BRAND OR EQUIVALENT- 5/8" ALUMINUM ASTRAG
4	ALUMINUM-BUMPER THRESHOLD	EM-15	PREMDOR BRAND OR EQUIVALENT - 1 1/4" x 4 9/16"
5	TOP CHANNEL	EM-08	PREMDOR BRAND - 1 11/16" - 20 GA STEEL
6	STEEL SKIN	26 ga. (.017 +.004 -.000)	MIN. YIELD STRENGTH 25,000 PSI; MIN. THICKNESS PER TENSILE TEST REPORT IS .017"
7	POLYURETHANE FOAM CORE	BASF FOAM - DENSITY 2.0 TO 2.5 lbs./ft³	
8	BOTTOM CHANNEL	EM-07	PREMDOR BRAND - 1 11/16" - 20 GA STEEL
9	WOOD LOCK BLOCK	EM-09	4" X 9 1/2" MTL. TO BE PINE OR EQUIVALENT
10	STRIKE STILE	EM-06	PREMDOR BRAND - 1 11/16" - 20 GA STEEL
11	HINGE STILE	EM-05	PREMDOR BRAND - 1 11/16" - 20 GA STEEL
12	LOCK PREP FILLER PLATE	EM-10	PREMDOR BRAND - .050" THICK- MTL. TO BE POLYETHYLE
13	4"x4" HINGE	EM-16	HAGER BRAND HINGE OR EQUIVALENT - .097 THICK (STEE
14	WOOD HINGE JAMB	EM-13	1 1/4" X 4 9/16" MTL. TO BE PINE OR EQUIVALENT
15	#10-24 x 1/2" F.H.M.S.		(4) SCREWS PER HINGE INTO DOOR
16	#10 X 2" F.H.W.S.		(5) SCREWS THROUGH HINGE JAMB INTO SIDELITE JAMB, 8" DOWN FROM T MAX 18" O.C. THEREAFTER (10) SCREWS THROUGH STRIKE JAMB INTO SIDELITE JAMB, 4" DOWN FROM 1 MAX 8" O.C. THEREAFTER (6) SCREWS THROUGH EACH SIDELITE JAMB INTO SIDELITE, 4" DOWN FROM TOP, MAX 15" O.C. THEREAFTER
17	#10 F.H.W.S. W/MINIMUM 1 1/2 EMBEDMENT OR 3/16" PFH TAPCONS W/MINIMUM 1 1/2 EMBEDMENT		REFER TO ELEVATION VIEW, FOR # OF SCREWS USED AND LOCATIONS
18	#10 X 3/4" F.H.W.S.		(2) SCREWS PER HINGE INTO JAMB
19	#8 x 2" F.H.W.S.		(2) SCREWS AT EACH STRIKE PLATE
20	LOCKSET		KWIKSET BRAND 200 LOCK OR HARLOC BRAND 100 LOCK
21	#10 X 1 3/4" F.H.W.S.		(2) SCREWS PER HINGE INTO JAMB
22	WOOD SIDELITE JAMB	EM-18	1 1/4" X 4 9/16" MTL. TO BE PINE OR EQUIVALENT
23	22" X 64" SINGLE PANEL GLASS	EM-19	TEMPERED GLASS IN POLYPROPYLENE FRAME- DC-1643 - (ODL- 1/8" CLEAR TEMPERED GLASS
24	SIDELITE TRIM (WOOD)	EM-20	5/16 x 1/2" MTL. TO BE PINE OR EQUIVALENT
25	WOOD CASING	EM-21	1/8" x 1" MTL. TO BE PINE OR EQUIVALENT - ITEMS ARE MOLDINGS US FOR "SIDE BY SIDE JAMBS" AS MULLIONS
26	WOOD SIDELITE HEAD JAMB	EM-22	1 1/4" X 4 9/16" MTL. TO BE PINE OR EQUIVALENT
27	WOOD SIDELITE BASE	EM-23	1 1/4" X 4 9/16" MTL. TO BE PINE OR EQUIVALENT
28	POLYPROPYLENE LITE FRAME	DC-1643, ODL-2	HP Polypropylene by ODL
29	#6 X 1 1/2" PAN HEAD SCREWS		18 PER FRAME SCREW SPACING TO BE 3" IN FROM EACH CORNER AND N TO EXCEED 14" OC THERE AFTER
30	SIDELITE STILES	EM-26	15/16" X 1 11/16" MTL. TO BE PINE OR EQUIVALENT
31	PIN NAIL		3/4" LONG NAIL, 4" IN FROM END, MAX 8" O.C. THEREAFTER, USED ON MULLIONS AND TR

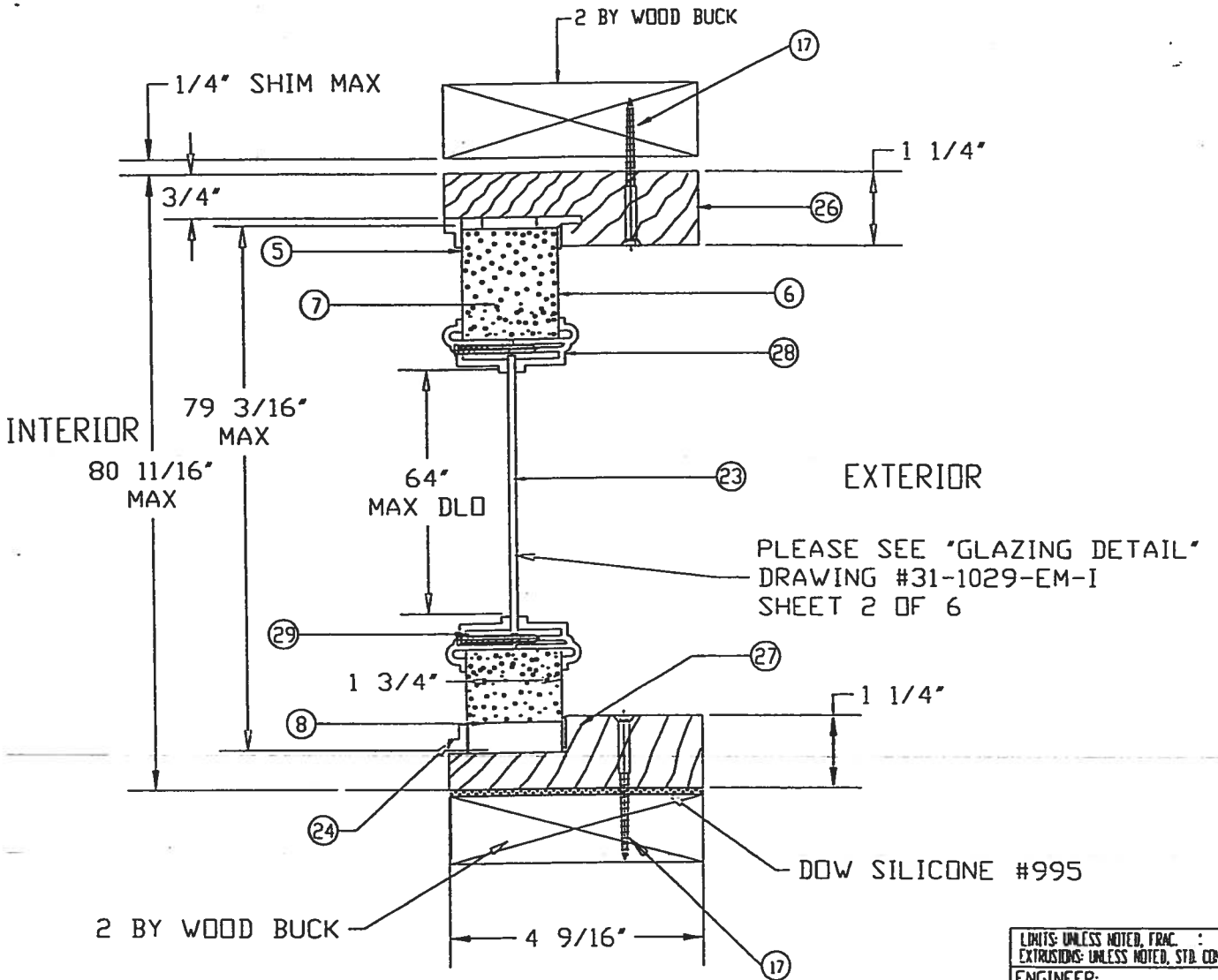
APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE JUN 05 2001
BY [signature]
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 01-0314.23

B	DADE COUNTY MODIFICATIONS	1/11/01	JD
A	ADDED PAGE 5 (DOOR OPTIONS)	10-1-98	RS
LTR.	REVISIONS	DATE	BY

LIMITS: UNLESS NOTED, FRAC. : DEC. : ANG. :
EXTRUSIONS: UNLESS NOTED, STD. COML. TOL'S.
ENGINEER:
DR. BY R.S. DATE 7-29-97
PART NAME: ENTERGY STEEL EDGE DOOR (B-B)
MAT'L:
SCALE:

PREMDOR ENTRY SYSTEMS
911 E. JEFFERSON
PITTSBURG, KS. 66762

A 31-1029-EM-I
SHEET 3 OF 6
REVISION LETTER B



SECTION C-C

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE JUN 05 2001
BY
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 01-0314.23

LTR	REVISIONS	DATE	BY
D	DADE COUNTY MODIFICATIONS	6/11/01	JD
C	MATERIAL WAS POLYSTYRENE	6-2-99	RS
B	ADDED PAGE 5 (DOOR OPTIONS)	10-1-98	RS
A	ADD SCREWS TO LITE FRAME & MATERIAL LIST	12-18-97	R.S.

LIMITS: UNLESS NOTED, FRAC. : DEC. : ANG. :
EXTRUSIONS: UNLESS NOTED, STD. COM'L TOL'S.

ENGINEER:

DR. BY R.S. | DATE 7-29-97

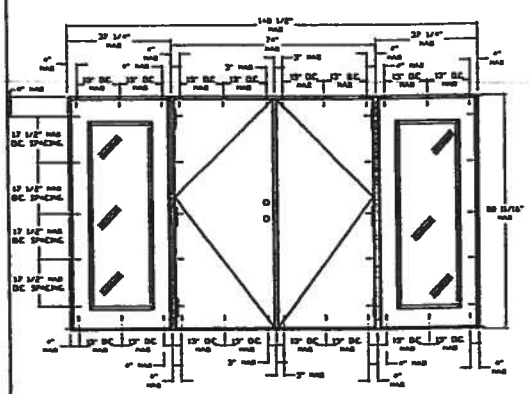
PART NAME: ENTERGY METAL EDGE SIDELITE (C-C)
MAT'L: | SCALE:

PREMDOR ENTRY SYSTEMS
911 E. JEFFERSON
PITTSBURG, KS. 66762

31-1029-EM-I
SHEET 4 OF 6

REVISION LETTER D

OTHER DOOR CONFIGURATIONS



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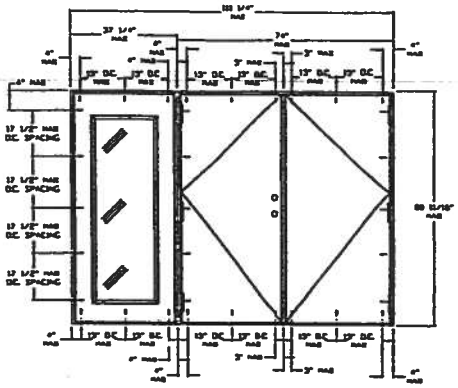

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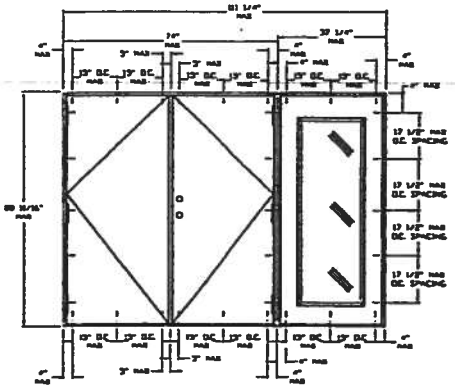

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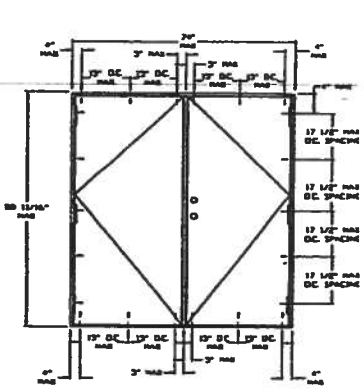

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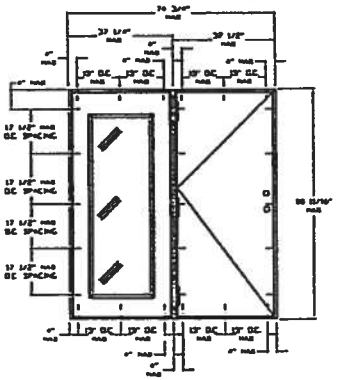

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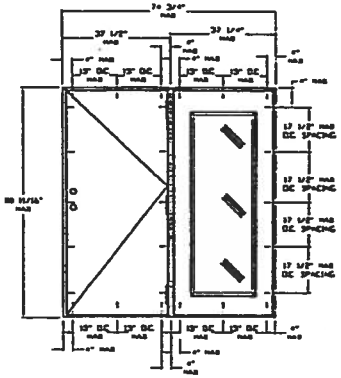

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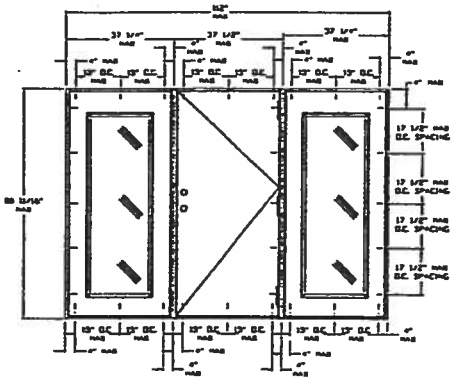
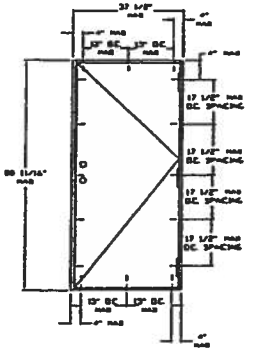


OXO



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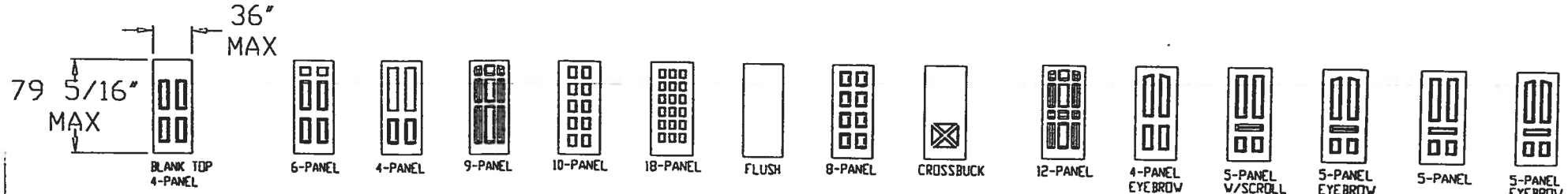
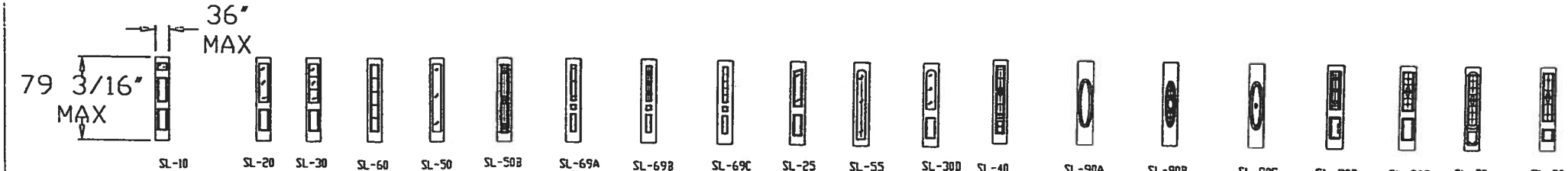
APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE JUN 05 2001
BY
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 01-0314.23

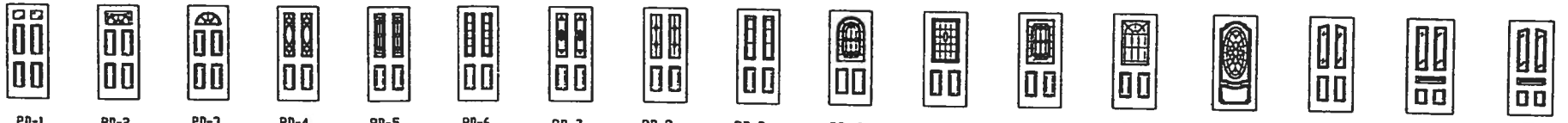
LIMITS: UNLESS NOTED, FRAC : DEC : ANG : EXTRUSIONS: UNLESS NOTED, STD COML TOL'S			
ENGINEER:	LTR	REVISIONS	DATE BY
	PART NAME:		
DR. BY J.D. DATE 1-11-01	MAT'L:	SCALE:	
PREMDOR ENTRY SYSTEMS 911 E. JEFFERSON PITTSBURG, KS. 66762	31-1029-EM-I SHEET 5 OF 6		
	REVISION LETTER		

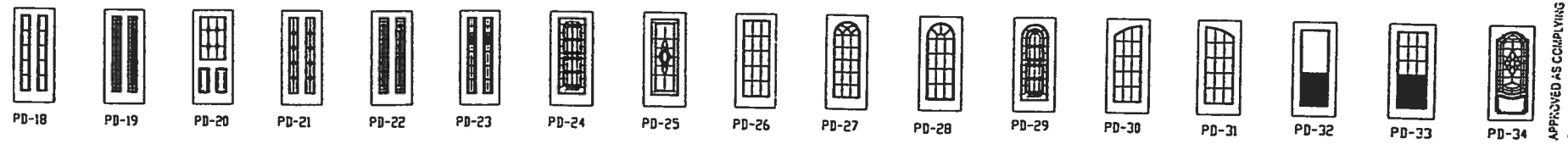
OTHER DOOR PANEL STYLES

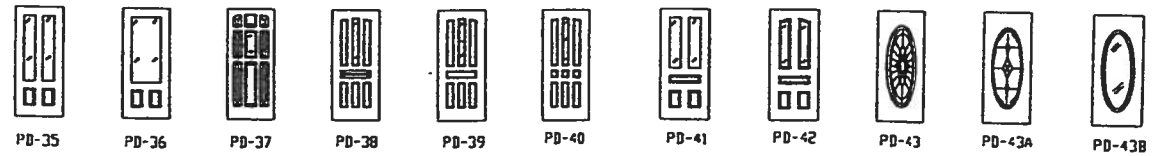


OTHER SIDELITE STYLES









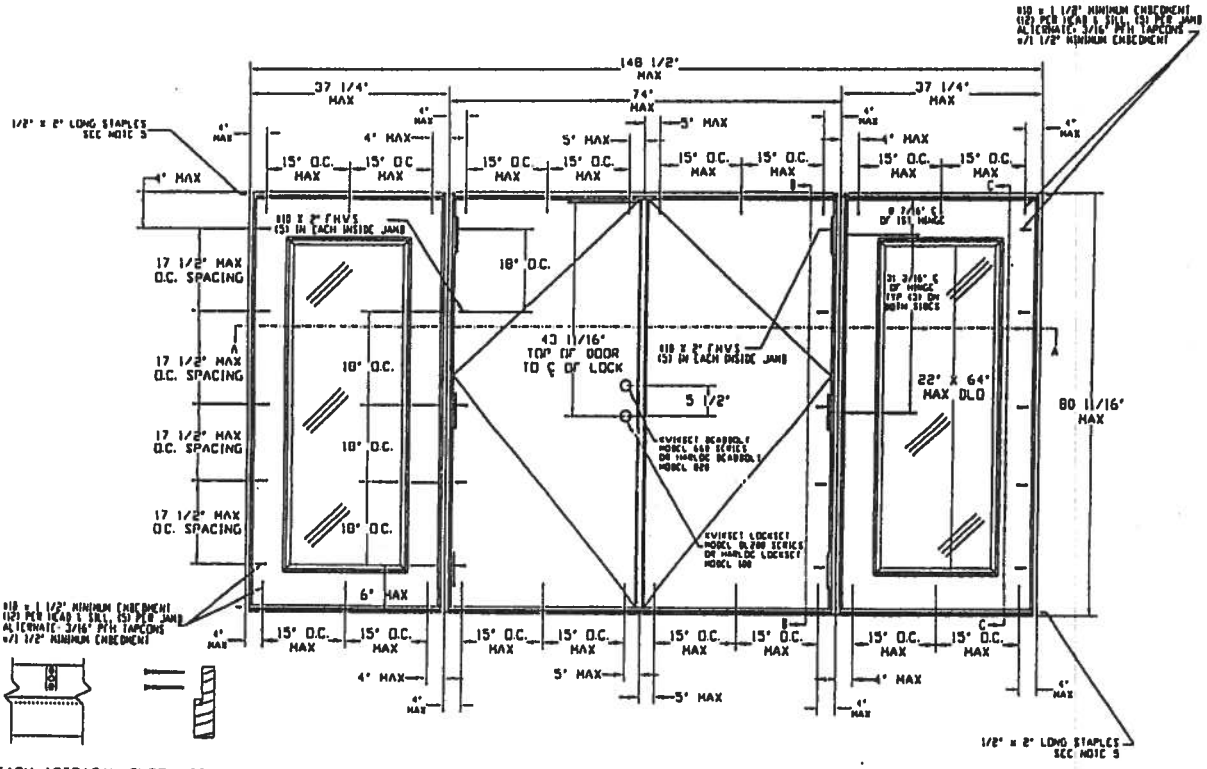
APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE JUN 05 2001
BY
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO 01-0314.23

LIMITS: UNLESS NOTED, FRAC. : DEC. : ANG. : EXTRUSIONS: UNLESS NOTED, STD. COM'L. TOL'S			
ENGINEER:	LTR.	REVISIONS	DATE / BY
DR. BY J.D. / DATE 1/15/01	PART NAME: PREMDOR DOOR OPTIONS		
	MAT'L:	SCALE:	

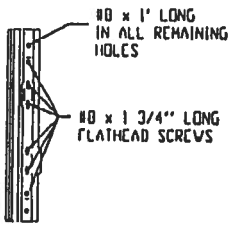
PREMDOR ENTRY SYSTEMS
911 E. JEFFERSON
PITTSBURG, KS. 66762

31-1029-EM-I
SHEET 6 OF 6
REVISION LETTER

PREMDOR (ENTERGY BRAND) DOUBLE DOOR WITH SIDELITES IN WOOD FRAMES WITH BUMPER THRESHOLD (INSWING)



ATTACH ASTRAGAL THROW BOLT STRIKE PLATE TO THE HEADER AND THRESHOLD WITH #10 x 1 3/4" FLATHEAD SCREWS



ASTRAGAL

NOTES:

.) WOOD BUCKS BY OTHERS. MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.
2.) THE PRECEDING DRAWINGS ARE INTENDED TO QUALIFY THE FOLLOWING INSTALLATIONS.
. WOOD FRAME CONSTRUCTION WHERE DOOR SYSTEM IS ANCHORED TO A MINIMUM TWO BY WOOD OPENING.
. MASONRY OR CONCRETE CONSTRUCTION WHERE DOOR SYSTEM IS ANCHORED TO A MINIMUM TWO BY STRUCTURAL WOOD BUCK.
. MASONRY OR CONCRETE CONSTRUCTION WHERE DOOR SYSTEM IS ANCHORED DIRECTLY TO CONCRETE OR MASONRY WITH OR WITHOUT A NON-STRUCTURAL INE BY WOOD BUCK.
. ALL ANCHORING SCREWS TO BE #10 WITH MINIMUM 1 1/2" EMBEDMENT INTO WOOD SUBSTRATE OR 3/16" PFH TAPCONS WITH 1 1/2" MINIMUM EMBEDMENT INTO MASONRY.
. UNIT MUST BE INSTALLED WITH 'MIAMI-DADE COUNTY APPROVED' SHUTTERS
. THREE STAPLES PER SIDE JAMB INTO HEADER ON SIDELITES AND DOOR, THREE STAPLES PER JAMB INTO THRESHOLD ON SIDELITES AND DOOR.
. LATEX SEALANT TO BE APPLIED AT SIDE BY SIDE JAMBS AND SIDELITES.
. DOOR/SIDELITE HEADER, DOOR/SIDELITE JAMBS, AND SIDELITE BASE CORNERS ARE COPED AND BUTT JOINED.
. DOORS SHALL BE PRE-PAINTED WITH A WATER-BASED EPOXY RUST INHIBITIVE PRIMER PAINT WITH A DRY FILM THICKNESS OF 0.8 TO 1.2 MIL.
). FRAMES SHALL BE PRE-PAINTED WITH AN ACRYLIC LATEX WATER-BASED/ WATER-REDUCIBLE WHITE PRIMER WITH A DRY FILM THICKNESS OF 0.8 TO 1.2 MIL.

DESIGN PRESSURE RATINGS		
	WHERE WATER INFILTRATION REQUIREMENT IS NEEDED x	WHERE WATER INFILTRATION REQUIREMENT IS NOT NEEDED
Positive	NOT APPROVED x	+55.0 psf
Negative	NOT APPROVED x	-55.0 psf

x UNITS SHALL BE INSTALLED ONLY AT LOCATIONS PROTECTED BY A CANOPY OR OVERHANG SUCH THAT THE ANGLE BETWEEN THE EDGE OF CANOPY OR OVERHANG TO SILL IS LESS THAN 45 DEGREES. UNLESS UNIT IS INSTALLED IN NON-HABITABLE AREAS WHERE THE UNIT AND THE AREA ARE DESIGNED TO ACCEPT WATER INFILTRATION.

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE JUN 05 2001
BY [signature]
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 01-0314.23

C	DADE COUNTY MODIFICATIONS	1/11/00	JB
B	ADDED PAGE 5 (DOOR OPTIONS)	10-1-98	RS
A	ADD OTHER DOOR CONFIGURATIONS	12/18/97	RS
LTR	REVISIONS	DATE	BY

LIMITS UNLESS NOTED, FRAC. ± DEC. ± ANG. ±
EXTRUSIONS UNLESS NOTED, STD. COM. TOL'S
ENGINEER:
DR BY R.S. DATE 7-29-97
PART NAME: ENTERGY METAL CLAD DOUBLE DOOR W/SIDELITES
MATL: SCALE: N.T.S.

PREMDOR ENTRY SYSTEMS
911 E. JEFFERSON
PITTSBURG, KS 66762

31-1029-EM-I
SHEET 1 OF 6

Architectural

ELK Premium Roofing

March 6, 2002

Subject: Elk Product Approval Information

All Prestique® and Capstone® products manufactured in Tuscaloosa, AL are certified under the Miami – Dade County Building Code Office (BCCO). These products also meet the requirements for the Florida Building Code since they are MD approved. The following test protocols must be passed by each of the products in order for MD product certification:
ASTM D3462
PA 100 (110 mph uplift and wind driven rain resistance)
PA 107 (Modified ASTM D3161 - 110 mph wind uplift resistance)

The nailing patterns that were used during the PA 100 and PA 107 wind test protocols for the Prestique and Capstone products are listed below. Also listed below are the Miami – Dade Notice of Acceptance Numbers (NOA).

Raised Profile, Prestique High Definition, Prestique 25, or Prestique 30 –
PA 100 = 4 nails
PA 107 = 5 nails
MD NOA# = 01-1226.04

Prestique I 35 or Prestique I* –
PA 100 = 4 nails
PA 107 = 5 nails
MD NOA# = 01-1226.05

Prestique Plus or Prestique Gallery Collection* –
PA 100 = 4 nails
PA 107 = 4 nails
MD NOA# = 01-1226.03

Capstone*
PA 100 = 4 Nails
PA 107 = 4 Nails
MD NOA# = 01-0523.01
* As per the Elk Limited Warranty, six nails are required for the Elk high wind warranty.

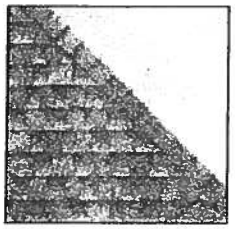
If there are any questions please contact:

Mike Reed – Technical Manager
(205) 342-0287

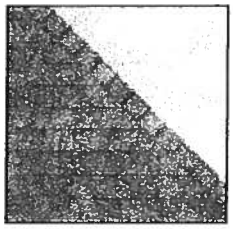
or

Daniel DeJarnette – QA Engineer
(205) 342-0298

ELK Roofing Products Specifications – Tuscaloosa, AL



PRESTIQUE®
HIGH DEFINITION®



RAISED PROFILE™

Prestique Plus *High Definition* and Prestique Gallery Collection

Product size	13¼"x 39⅜"
Exposure	5⅝"
Pieces/Bundle	16
Bundles/Square	4/98.5 sq.ft.
Squares/Pallet	11

50-year limited warranty period: non-prorated coverage for shingles and application labor for the initial 5 years, plus an option for transferability*; prorated coverage for application labor and shingles for balance of limited warranty period; 5-year limited wind warranty*.

Raised Profile

Product size	13¼"x 38¾"
Exposure	5⅝"
Pieces/Bundle	22
Bundles/Square	3/100 sq.ft.
Squares/Pallet	16

30-year limited warranty period: non-prorated coverage for shingles and application labor for the initial 5 years, plus an option for transferability*; prorated coverage for application labor and shingles for balance of limited warranty period; 5-year limited wind warranty*.

Prestique I *High Definition*

Product size	13¼"x 39⅜"
Exposure	5⅝"
Pieces/Bundle	16
Bundles/Square	4/98.5 sq.ft.
Squares/Pallet	14

40-year limited warranty period: non-prorated coverage for shingles and application labor for the initial 5 years, plus an option for transferability*; prorated coverage for application labor and shingles for balance of limited warranty period; 5-year limited wind warranty*.

Prestique *High Definition*

Product size	13¼"x 38¾"
Exposure	5⅝"
Pieces/Bundle	22
Bundles/Square	3/100 sq.ft.
Squares/Pallet	16

30-year limited warranty period: non-prorated coverage for shingles and application labor for the initial 5 years, plus an option for transferability*; prorated coverage for application labor and shingles for balance of limited warranty period; 5-year limited wind warranty*.

HIP AND RIDGE SHINGLES

Seal-A-Ridge w/*FLX*
Size: 12"x 12"
Exposure: 6⅛"
Pieces/Bundle: 45
Coverage: 4 Bundles = 100 linear feet

Elk Starter Strip
52 Bundles/Pallet
18 Pallets/Truck
936 Bundles/Truck
19 Pieces/Bundle
1 Bundle = 120.33 linear feet

Available Colors: Antique Slate, Weatheredwood, Shakewood, Sablewood, Hickory, Barkwood**, Forest Green, Wedgewood**, Birchwood**, Sandalwood. Gallery Collection: Balsam Forest™, Weathered Sage™, Sienna Sunset™.

All Prestique, Raised Profile and Seal-A-Ridge roofing products contain Elk WindGuard® sealant. WindGuard activates with the sun's heat, bonding shingles into a wind and weather resistant cover that resists blow-offs and leaks.

Check for availability with built-in StainGuard® treatment to inhibit the discoloration of roofing granules caused by the growth of certain types of algae. Not available in Sablewood.

All Prestique and Raised Profile shingles meet UL® Wind Resistant (UL 997) and Class "A" Fire Ratings (UL 790); and ASTM Specifications D 3018, Type-I; D 3161, Type-I; E 108 and the requirements of ASTM D 3462.

All Prestique and Raised Profile shingles meet the latest Metro Dade building code requirements.

***See actual limited warranty for conditions and limitations.**
****Check for product availability.**

Specifications

Scope: Work includes furnishing all labor, materials and equipment necessary to complete installation of (name) shingles specified herein. Color shall be (name of color). Hip and ridge type to be Elk Seal-A-Ridge with formula *FLX*.

All exposed metal surfaces (flashing, vents, etc.) to be painted with matching Elk roof accessory paint.

Preparation of Roof Deck: Roof deck to be dry, well-seasoned 1" x 6" (25.4mm x 152.4mm) boards; exterior-grade plywood (exposure 1 rated sheathing) at least 3/8" (9.525mm) thick conforming to the specifications of the American Plywood Association; 7/16" (11.074mm) oriented strandboard; or chipboard. Most fire retardant plywood decks are NOT approved substrates for Elk shingles. Consult Elk Field Service for application specifications over other decks and other slopes.

Materials: Underlayment for standard roof slopes, 4" per foot (101.6/304.8mm) or greater: apply non-perforated No. 15 or 30 asphalt-saturated felt underlayment. For low slopes [4" per foot (101.6/304.8mm) to a minimum of 2" per foot (50.8/304.8mm)], use two plies of underlayment overlapped a minimum of 19". Fasteners shall be of sufficient length and holding power for securing material as required by the application instructions printed on shingle wrapper.

For areas where algae is a problem, shingles shall be (name) with StainGuard treatment, as manufactured by the Elk Tuscaloosa plant. Hip and ridge type to be Seal-A-Ridge with formula *FLX* with StainGuard treatment.

Complete application instructions are published by Elk and printed on the back of every shingle bundle. All warranties are contingent upon the correct installation as shown on the instructions. These instructions are the minimum required to meet Elk application requirements. In some areas, building codes may require additional application techniques or methods beyond our instructions. In these cases, the local code must be followed. Under no circumstances will Elk accept application requirements less than those contained in its application instructions.

For specifications in CSI format, call 800.354.SPEC (7732) or e-mail specinfo@elkcorp.com.

Southeast & Atlantic Office:
800.945.5551

Corporate Headquarters:
800.354.7732

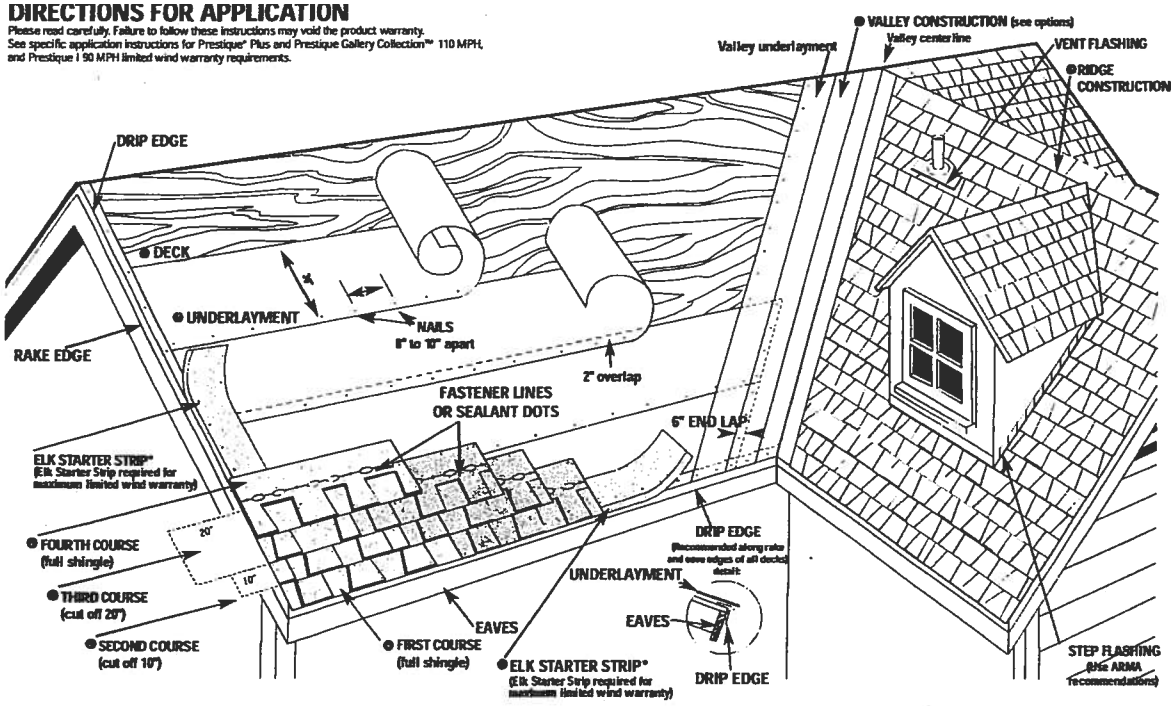
Plant Location:
800.945.5545

ELK
www.elkcorp.com

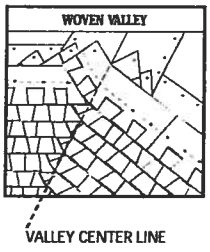
SSOOT 01/02

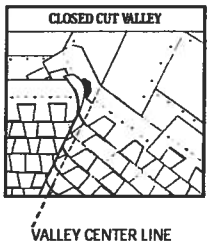
DIRECTIONS FOR APPLICATION

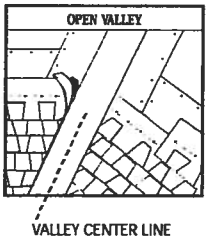
Please read carefully. Failure to follow these instructions may void the product warranty.
See specific application instructions for Prestique® Plus and Prestique Gallery Collection™ 110 MPH, and Prestique I 90 MPH limited wind warranty requirements.



❺ **VALLEY CONSTRUCTION OPTION** (California Open and California Closed are also acceptable) NOTE: For complete ARMA valley installation details, see ARMA Residential Asphalt Roofing Manual.







DIRECTIONS FOR APPLICATION

These application instructions are the minimum required to meet Elk's application requirements. Your failure to follow these instructions may void the product warranty. In some areas, the building codes may require additional application techniques or methods beyond our instructions. In these cases, the local code must be followed. Under no circumstances will Elk accept application requirements that are less then those printed here. Shingles should not be jammed tightly together. All attics should be properly ventilated. Note: It is not necessary to remove tape on back of shingle.

❶ DECK PREPARATION

Roof decks should be dry, well-seasoned 1" x 6" boards or exterior grade plywood minimum 3/8" thick and conform to the specifications of the American Plywood Association or 7/16" oriented strandboard, or 7/16" chipboard.

❷ UNDERLAYMENT

Apply underlayment (Non-Perforated No. 15 or 30 asphalt saturated felt). Cover drip edge at eaves only.

For low slope (2/12 up to 4/12), completely cover the deck with two plies of underlayment overlapping a minimum of 19". Begin by fastening a 19" wide strip of underlayment placed along the eaves. Place a full 36" wide sheet over the starter, horizontally placed along the eaves and completely overlapping the starter strip.

EAVE FLASHING FOR ICE DAMS (ASK A ROOFING CONTRACTOR, REFER TO ARMA MANUAL OR CHECK LOCAL CODES)

For standard slope (4/12 to less than 21/12), use coated roll roofing of no less than 50 pounds over the felt underlayment extending from the eave edge to a point at least 24" beyond the inside wall of the living space below or one layer of a self-adhered eave and flashing membrane.

For low slope (2/12 up to 4/12), use a continuous layer of asphalt plastic cement between the two plies of underlayment from the eave edge up roof to a point at least 24" beyond the inside wall of the living space below or one layer of a self-adhered eave and flashing membrane.

Consult the Elk Field Service Department for application specifications over other decks and other slopes.

❼ STARTER SHINGLE COURSE

USE AN ELK STARTER STRIP OR A STRIP SHINGLE INVERTED WITH THE HEADLAP APPLIED AT THE EAVE EDGE. With at least 4" trimmed from the end of the first shingle, start at the rake edge overhanging the eave 1/2" to 3/4". Fasten 2" from the lower edge and 1" from each side. Shingles may be applied with a course alignment of 45° on the roof.

❶ FIRST COURSE

Start at rake and continue course with full shingles laid flush with the starter course.

❷ SECOND COURSE

Start at the rake with the shingle having 10" trimmed off and continue across roof with full shingles.

❸ THIRD COURSE

Start at the rake with the shingle having 20" trimmed off and continue across roof with full shingles.

❹ FOURTH COURSE

Start at the rake and continue with full shingles across roof.

FIFTH AND SUCCEEDING COURSES.

Repeat application as shown for second, third, and fourth courses. Do not rack shingles straight up the roof.

❺ VALLEY CONSTRUCTION

Open, woven and closed cut valleys are acceptable when applied by Asphalt Roofing Manufacturing Association (ARMA) recommended procedures. For metal valleys, use 36" wide vertical underlayment prior to applying 18" metal flashing (secure edge with nails). No nails are to be within 6" of valley center.

❻ RIDGE CONSTRUCTION

For ridge construction use Class "A" Seal-A-Ridge® with formula *FLX*™ (See ridge package for installation instructions.)

FASTENERS

While nailing is the preferred method for Elk shingles, Elk will accept fastening methods according to the following instructions.

Always nail or staple through the fastener line or on products without fastener lines, nail or staple between and in line with sealant dots.

NAILS: Corrosive resistant, 3/8" head, minimum 12-gauge roofing nails. Elk recommends 1-1/4" for new roofs and 1-1/2" for roof-overs. In cases where you are applying shingles to a roof that has an exposed overhang, for new roofs only, 3/4" ring shank nails are allowed to be used from the eave's edge to a point up the roof that is past the outside wall line. 1" ring shank nails allowed for re-roof.

STAPLES: Corrosive resistant, 16-gauge minimum, crown width minimum of 15/16". Note: An improperly adjusted staple gun can result in raised staples that can cause a fish-mouthed appearance and can prevent sealing.

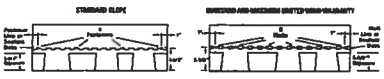
Fasteners should be long enough to obtain 3/4" deck penetration or penetration through deck, whichever is less.

MANSARD APPLICATIONS

Correct fastening is critical to the performance of the roof. For slopes exceeding 60° (or 21/12) use six fasteners per shingle. Locate fasteners in the fastener area 1" from each side edge with the remaining four fasteners equally spaced along the length of the double thickness (laminated) area. Only fastening methods according to the above instructions are acceptable.

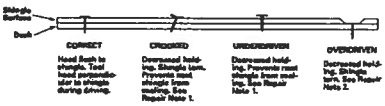
LIMITED WIND WARRANTY

- For a Limited Wind Warranty, all Prestique and Raised Profile™ shingles must be applied with 4 properly placed fasteners, or in the case of mansard applications, 6 properly placed fasteners per shingle.
- For a Limited Wind Warranty up to 110 MPH for Prestique Gallery Collection or Prestique Plus or 90 MPH for Prestique I, shingles must be applied with 6 properly placed NAILS per shingle. SHINGLES APPLIED WITH STAPLES WILL NOT QUALIFY FOR THIS ENHANCED LIMITED WIND WARRANTY. Also, Elk Starter Strip shingles must be applied at the eaves and rake edges to qualify Prestique Plus, Prestique Gallery Collection and Prestique I shingles for this enhanced Limited Wind Warranty. Under no circumstances should the Elk Shingles or the Elk Starter Strip overhang the eaves or rake edge more than 3/4 of an inch.



HELP STOP BLOW-OFFS AND CALL-BACKS

A minimum of four fasteners must be driven into the DOUBLE THICKNESS (laminated) area of the shingle. Nails or staples must be placed along – and through – the "fastener line" or on products without fastener lines, nail or staple between and in line with sealant dots. CAUTION: Do not use fastener line for shingle alignment.



Refer to local codes which in some areas may require specific application techniques beyond those Elk has specified.
All Prestique and Raised Profile shingles have a U.L.® Wind Resistance Rating when applied in accordance with these instructions using nails or staples on re-roofs as well as new construction.

CAUTION TO WHOLESALER: Careless and improper storage or handling can harm fiberglass shingles. Keep these shingles completely covered, dry, reasonably cool, and protected from the weather. Do not store near various sources of heat. Do not store in direct sunlight until applied. DO NOT DOUBLE STACK. Systematically rotate all stock so that the material that has been stored the longest will be the first to be moved out.

ELK

www.elkcorp.com

Underwriters Laboratories Inc.®

333 Pfingsten Road
Northbrook, Illinois 60062-2096
United States Country Code (1)
(847) 272-8800
FAX No. (847) 272-8129
http://www.ul.com

March 4, 2002

GAF Materials Corporation
Mr Randall Ziegler
1361 Alps Road
Wayne, NJ 07470

Our Reference: R21

Subject: UL Listed products

Dear Mr Ziegler:

This is is response to your request to identify some of the products that are curently Listed with Underwriters Laboratories relating to various Standards. Following are those products:

Royal Sovereign®
Marquis®/Marquis® WeatherMax®
SLATELINE®
Grand canyon™
Grand Sequoia®
Country Mansion™
Country Estates™
Timberline 30™
Timberline Select™ 40
Timberline Ultra™
Sentinel®
The above products have been tested to ASTM D3462 , Class A UL790/ASTM E108 and UL 997/ ASTM D3161(secured with 4 nails)with velocities up to 110 mph and have successfully met those test criteria.

If you have any questions please feel free to contact the writer.

Very truly yours,

Roger Anderson (Ext. 43283)
Senior Engineering Associate
Conformity Assessment Services- 3011E-NBK

Reviewed by,

Douglas C. Miller (Ext. 43262)
Engineering Group Leader
Conformity Assessment Services- 3011E-NBK

** TOTAL PAGE.01 **

GAF®

GAF MATERIALS CORPORATION

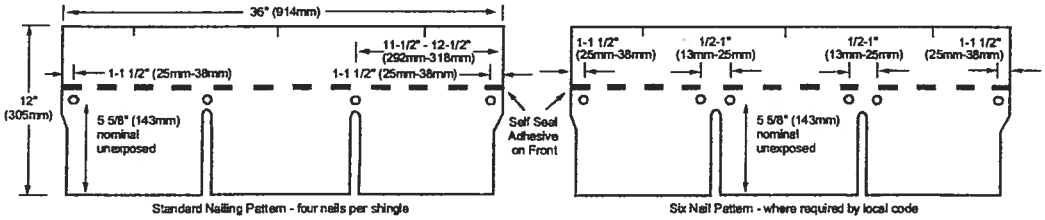
MARQUIS WeatherMax® SHINGLES

ROYAL SOVEREIGN® SHINGLES

SENTINEL® SHINGLES

APPLICATION INSTRUCTIONS

Note: These shingles must be nailed a nominal 5 5/8" (143mm) from bottom of shingles, not in or above self seal, as shown. Nails should remain unexposed.



GENERAL INSTRUCTIONS

• **ROOF DECKS:** For use on new or reroofing work over well-seasoned, supported wood deck, tightly-constructed with maximum 6" (152mm) wide lumber, having adequate nail-holding capacity and smooth surface. Plywood decking as recommended by The Engineered Wood Assn. is acceptable. Plywood decks for Class A installations must be 3/8" (10mm) thick or greater with underlayments as noted below. Shingles must **not** be fastened directly to insulation or insulated deck unless authorized in writing by GAF Materials Corporation. Roof decks and existing surfacing material must be **dry** prior to application of shingles.

• **UNDERLAYMENT:** Underlayment is required on new construction and required for reroofing when old roof is removed from the deck. Use only "breather type" material like GAF Materials Corporation Shingle-Mate® Underlayment or equivalent. Underlayments must be installed flat, without wrinkles.

• **FASTENERS:** Use of nails is recommended. (Staple specifications and application instructions are available from GAF Materials Corporation, Contractor Services Dept., 1361 Alps Road, Wayne, NJ 07470.) Use only zinc coated steel or aluminum, 10-12 gauge, barbed, deformed or smooth shank roofing nails with heads 3/8" (10mm) to 7/16" (12mm) in diameter. Fasteners should be long enough to penetrate at least 3/4" (19mm) into wood decks or just through the plywood decks. Fasteners must be driven flush with the surface of the shingle. Over driving will damage the shingle. Raised fasteners will interfere with the sealing of the shingles. For normal installation, four fasteners must be installed per shingle, a nominal 5 5/8" (143mm) up from the bottom of the shingle. Fasteners must be installed approximately 1"- 1 1/2" (25-38mm) and 11 1/2"-12 1/2" (292-318mm) from each side.

• **WIND RESISTANT:** These shingles have a special thermal sealant that firmly bonds the shingles together after application when exposed to sun and warm temperatures. Shingles installed in Fall or Winter may not seal until the following Spring. If shingles are damaged by winds before sealing or are not exposed to adequate surface temperatures, or if the self-sealant gets dirty, the shingles may never seal. Failure to seal under these circumstances results from the nature of self-sealing shingles and is not a manufacturing defect. To insure immediate sealing, apply 2 quarter-sized dabs of shingle tab adhesive on the back of each tab, approximately 1" (25mm) from end and 1" (25mm) up from bottom of each tab corner. The shingle must be pressed firmly into the adhesive.
NOTE: Application of excess tab adhesive can cause blistering of the shingle.
For maximum wind resistance along rakes, cement shingles to underlayment and each other in a 4" (102mm) width of asphalt plastic roof cement.
NOTE: The film strips on the back of each shingle are to prevent sticking together of the shingles while in the bundle. Their removal is NOT required during application.

• **CANADIAN COLD WEATHER APPLICATIONS:** CSA A123.5-M90 mandates that shingles applied between September 1 and April 30 shall be adhered with a compatible field-applied adhesive. See Wind Resistant for GAF Materials Corporation's recommendations for the application of that adhesive.

• **MANSARD AND STEEP SLOPE APPLICATIONS:** For roof slopes greater than 21" (1750mm/m) per foot (do NOT use on vertical side walls), shingle sealing must be enhanced by hand sealing. After fastening the shingle in place, apply 2 quarter-sized dabs of shingle tab adhesive as indicated in Wind Resistant above. The shingle must be pressed firmly into the adhesive.

• **EXPOSURE:** 5" (127mm)

• **THROUGH VENTILATION:** All roof structures must be provided with through ventilation to prevent entrapment of moisture laden air behind roof sheathing. Ventilation provisions must at least meet or exceed current F.H.A., H.U.D. or local code minimum requirements.

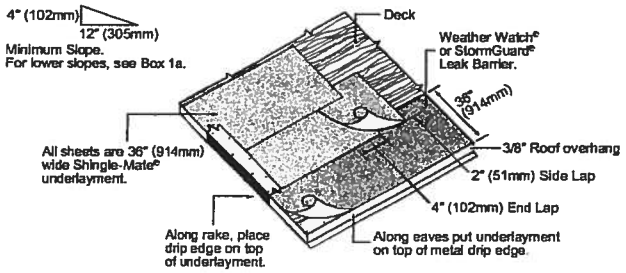
• **NON-CORRODING METAL DRIP EDGES:** Recommended along rake and eave edges on all decks, especially plywood decks.

• **ASPHALT PLASTIC CEMENT:** For use as shingle tab adhesive. Must conform to ASTM D4586 Type I or II.

1 Underlayment: Standard Slope–4/12 (333mm/m) or more

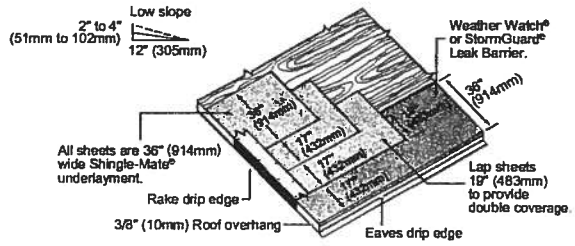
Application of underlayment: Cover deck with one layer of underlayment installed without wrinkles. Use only enough nails to hold underlayment in place until covered by shingles.

Application of eave flashing: Install eave flashing such as GAF Materials Corporation Weather Watch® or StormGuard® Leak Barrier in localities where leaks may be caused by water backing up behind ice or debris dams. Eave flashing must overhang the roof edge by 3/8" (10mm) and extend 24" (610mm) beyond the inside wall line.



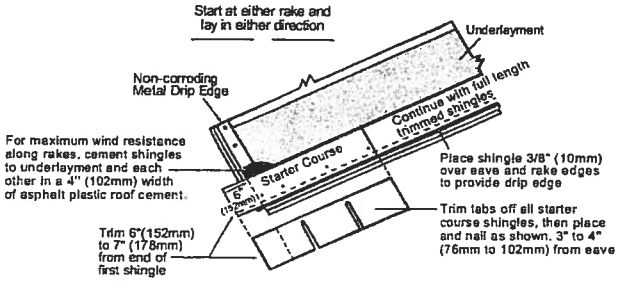
1a Underlayment: Low Slope 2/12-4/12 (167mm-333mm/m)

Application of underlayment and eave flashing: Completely cover the deck with two layers of underlayment as shown. Use only enough nails to hold underlayment in place until covered by shingles. Use blind nailing for eave flashings. At eaves and where ice dams can be expected, use one layer of GAF Materials Corporation Weather Watch® or StormGuard® Leak Barrier. Eave flashing must overhang the roof edge by 3/8" (10mm) and extend 24" (610mm) beyond the inside wall line. Where ice dams or debris dams are not expected, install 2 plies of Shingle-Mate® underlayment.



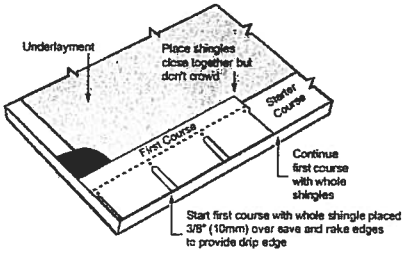
2 Starter Course

Use of any GAF MC 3-tab Shingle is recommended. Apply as shown.



3 First Course

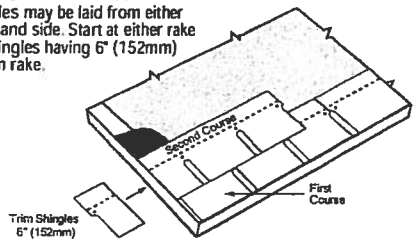
Start and continue with full shingles laid flush with the starter course. Shingles may be laid from left to right or right to left. DO NOT lay shingles straight up the roof since this procedure can cause an incorrect color blend on the roof and may damage the shingles.



4 Second Course

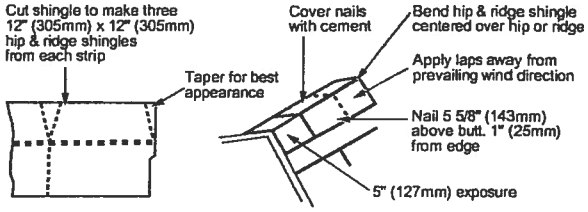
Start and continue second course and all even numbered courses as shown. Position the shingle on the top of the cutouts of the underlying shingle so that there will be 5" (127mm) of each shingle exposed. Strike a chalk line about every 6 courses to check parallel alignment with eaves. Factory applied self-sealing dots on lower courses are designed to seal down the shingle tabs in an upper course.

NOTE: Shingles may be laid from either left or right hand side. Start at either rake edge with shingles having 6" (152mm) trimmed from rake.

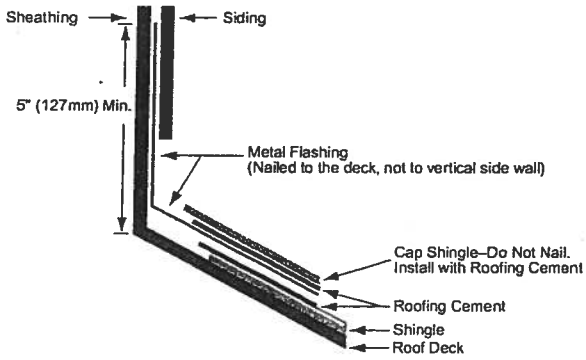


5 Hip and Ridge

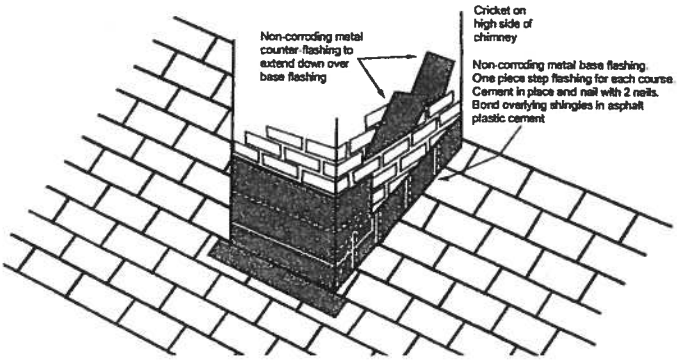
Use GAF hip & ridge shingles, or cut hip & ridge shingles from these full shingles, and apply as shown. Position laps away from prevailing wind direction.



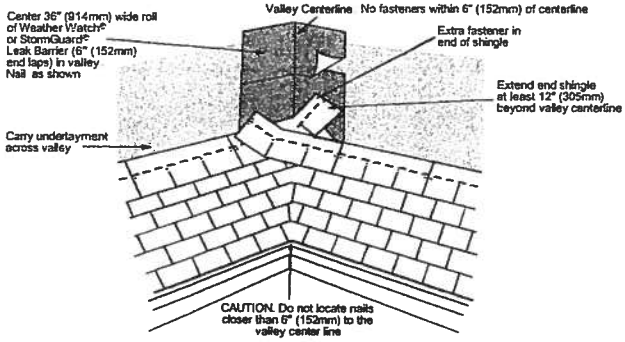
6 Wall Flashing (Sloped Roof to Vertical Wall)



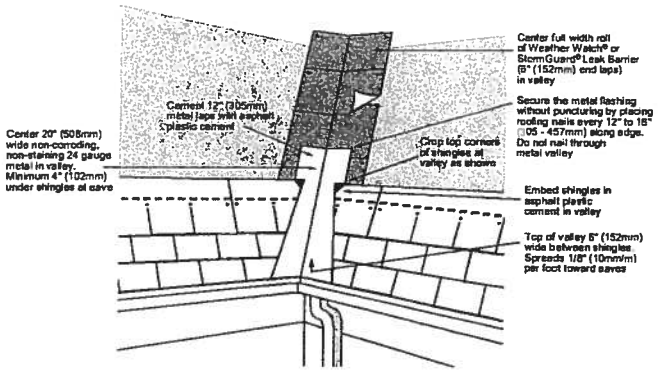
7 Chimney Flashing



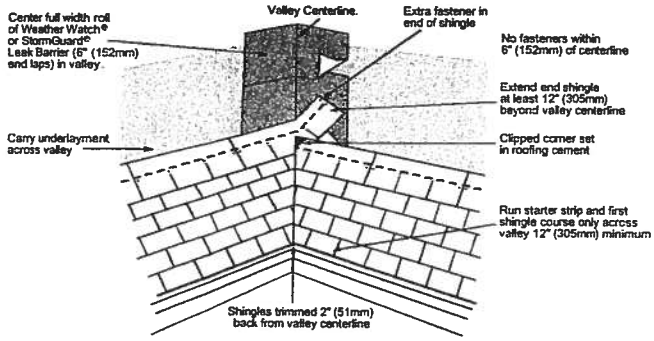
8 Valley Construction - Closed or Woven Valley



9 Valley Construction–Open Cut



10 Valley Construction–Closed Cut



Precautionary Notes

These shingles are fiberglass, self-sealing asphalt shingles. Because of the natural characteristics of the high quality waterproofing material used, these shingles will be stiff in cold weather and flexible in hot weather.

1. Bundles should not be dropped on edge nor should attempt be made to separate shingles by "breaking" over ridge or other bundles.
2. Handle carefully. Shingles can easily be broken in cold weather or their edges damaged in hot weather.
3. All exposed materials must be of Class A type.
4. Storage should be in a covered, ventilated area–maximum temperature 110°F (43°C.) Store on flat surface and use weight equalization boards if pallets are to be double stacked. Shingles must be protected from weather when stored at job site. Do not store near steam pipes, radiators, etc., or in sunlight. All rolled product must be stored on ends.
5. If shingles are to be applied during PROLONGED COLD periods or in areas where airborne dust or sand can be expected before sealing occurs, the shingles MUST be hand sealed. See Wind Resistant instructions.

Re-Roofing

If old asphalt shingles are to remain in place, nail down or cut away all loose, curled or lifted shingles; replace with new; and just before applying the new roofing, sweep the surface clean of all loose debris. Since any irregularities may show through the new shingles, be sure the underlying shingles provide a smooth surface. Fasteners must be of sufficient length to penetrate the wood deck at least 3/4" (19mm) or just through plywood. Follow other above instructions for application. *Note:* Shingles can be applied over wood shingles when precautions have been taken to provide an acceptable smooth surface. This includes cutting back old shingles at eaves and rakes and installing new wood edging strips as needed. Make surface smooth and use beveled wood strips if necessary. Install #30 underlayment to maintain Class A rating.

ENGLISH 110600

GAF®

GAF MATERIALS CORPORATION

TIMBERLINE® Ultra® SHINGLES

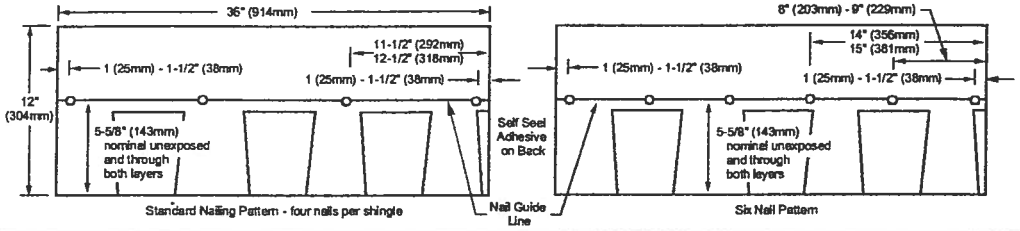
TIMBERLINE® SELECT 40 SHINGLES

TIMBERLINE® 30 SHINGLES

APPLICATION INSTRUCTIONS

Timberline® Series shingles come in either 36" (914mm) or 36-15/16" (938mm) lengths, depending on shingle brand. Application instructions apply to both.

These shingles must be nailed a nominal 5-5/8" (143mm) from bottom of shingles, as shown, to allow for penetration through the double ply area just above the tabs. Nails should remain unexposed.



GENERAL INSTRUCTIONS

• **ROOF DECKS:** For use on new or reroofing work over well-seasoned, supported wood deck, tightly-constructed with maximum 6" (152mm) wide lumber, having adequate nail-holding capacity and smooth surface. Plywood decking as recommended by The Engineered Wood Assn. is acceptable. Plywood decks for Class A installations must be 3/8" (10mm) thick or greater with underlayments as noted below. Shingles must **not** be fastened directly to insulation or insulated deck unless authorized in writing by GAF Materials Corporation. Roof decks and existing surfacing material must be dry prior to application of shingles.

• **UNDERLAYMENT:** Underlayment beneath shingles has many benefits, including preventing wind driven rain from reaching the interior of the building and preventing sap in some wood decking from reacting with asphalt shingles. Underlayment is also required by many code bodies. Consult your local building department for its requirements. Where an underlayment is to be installed, a breather-type underlayment such as GAFMC's Shingle-Mate® underlayment is recommended. Underlayment must be installed flat, without wrinkles.

• **FASTENERS:** Use of nails is recommended. (Staple specifications and application instructions are available from GAF Materials Corporation, Contractor Services Dept., 1361 Alps Road, Wayne, NJ 07470.) Use only zinc coated steel or aluminum, 10-12 gauge, barbed, deformed or smooth shank roofing nails with heads 3/8" (10mm) to 7/16" (12mm) in diameter. Fasteners should be long enough to penetrate at least 3/4" (19mm) into wood decks or just through the plywood decks. Fasteners must be driven flush with the surface of the shingle. Over driving will damage the shingle. Raised fasteners will interfere with the sealing of the shingles. For normal installation, four fasteners must be installed per shingle, a nominal 5-5/8" (143mm) up from the bottom of the shingle, to penetrate both layers of the shingle. Fasteners must be installed approximately 1"- 1 1/2" (25-38mm) and 11-1/2"-12-1/2" (292-318mm) from each side.

• **WIND RESISTANT:** These shingles have a special thermal sealant that firmly bonds the shingles together after application when exposed to sun and warm temperatures. Shingles installed in Fall or Winter may not seal until the following Spring. If shingles are damaged by winds before sealing or are not exposed to adequate surface temperatures, or if the self-sealant gets dirty, the shingles may never seal. Failure to seal under these circumstances results from the nature of self-sealing shingles and is not a manufacturing defect. To insure immediate sealing, apply 4 quarter-sized dabs of shingle tab adhesive on the back of the shingle 1" (25mm) and 13" (330mm) in from each side and 1" (25mm) up from bottom of the shingle. The shingle must be pressed firmly into the adhesive.
NOTE: Application of excess tab adhesive can cause blistering of the shingle.
For maximum wind resistance along rakes, cement shingles to underlayment and each other in a 4" (102mm) width of asphalt plastic roof cement.
NOTE: The film strips on the back of each shingle are to prevent sticking together of the shingles while in the bundle. Their removal is NOT required during application.

• **CANADIAN COLD WEATHER APPLICATIONS:** CSA 123.5-M90 mandates that shingles applied between September 1 and April 30 shall be adhered with a compatible field-applied adhesive. See Wind Resistant for GAF Materials Corporation's recommendations for the application of that adhesive.

• **MANSARD AND STEEP SLOPE APPLICATIONS:** For roof slopes greater than 21" (1750mm/m) per foot (do NOT use on vertical side walls), shingle sealing must be enhanced by hand sealing. After fastening the shingle in place, apply 4 quarter-sized dabs of shingle tab adhesive as indicated in Wind Resistant above. The shingle must be pressed firmly into the adhesive.

• **EXPOSURE:** 5" (127mm)

• **THROUGH VENTILATION:** All roof structures must be provided with through ventilation to prevent entrapment of moisture laden air behind roof sheathing. Ventilation provisions must at least meet or exceed current F.H.A., H.U.D. or local code minimum requirements.

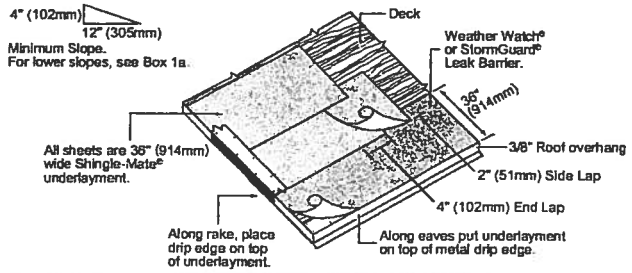
• **NON-CORRODING METAL DRIP EDGES:** Recommended along rake and eave edges on all decks, especially plywood decks.

• **ASPHALT PLASTIC CEMENT:** For use as shingle tab adhesive. Must conform to ASTM D4586 Type I or II.

1 Underlayment: Standard Slope–4/12 (333mm/m) or more

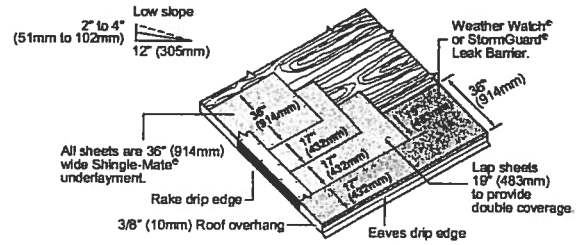
Application of underlayment: Cover deck with one layer of underlayment installed without wrinkles. Use only enough nails to hold underlayment in place until covered by shingles.

Application of eave flashing: Install eave flashing such as GAF Materials Corporation Weather Watch® or StormGuard® Leak Barrier in localities where leaks may be caused by water backing up behind ice or debris dams. Eave flashing must overhang the roof edge by 3/8" (10mm) and extend 24" (610mm) beyond the inside wall line.



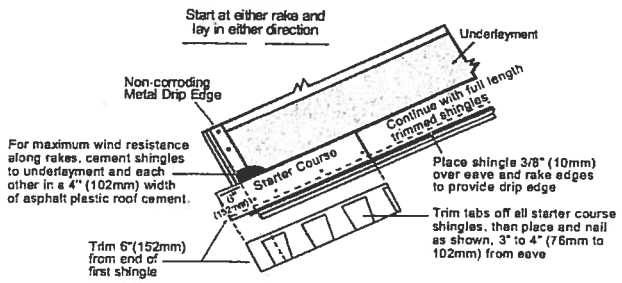
1a Underlayment: Low Slope 2/12-4/12 (167mm-333mm/m)

Application of underlayment and eave flashing: Completely cover the deck with two layers of underlayment as shown. Use only enough nails to hold underlayment in place until covered by shingles. Use blind nailing for eave flashings. At eaves and where ice dams can be expected, use one layer of GAF Materials Corporation Weather Watch® or StormGuard® Leak Barrier. Eave flashing must overhang the roof edge by 3/8" (10mm) and extend 24" (610mm) beyond the inside wall line. Where ice dams or debris dams are not expected, install 2 plies of Shingle-Mate® underlayment.



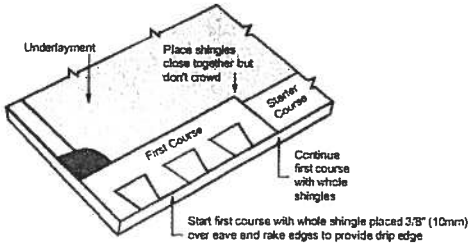
2 Starter Course

Apply as shown.



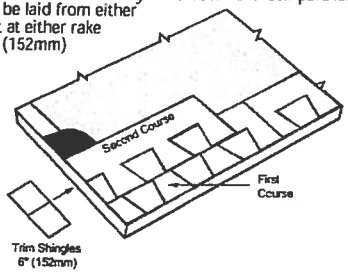
3 First Course

Start and continue with full shingles laid flush with the starter course. Shingles may be laid from left to right or right to left. DO NOT lay shingles straight up the roof since this procedure can cause an incorrect color blend on the roof and may damage the shingles.



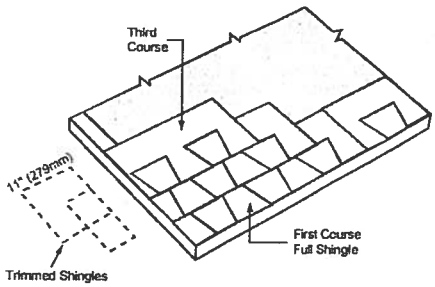
4 Second Course

Start and continue second course as shown. Trim 6" (152mm) from the end of the shingle. Position the shingles in the second and subsequent courses flush with the tops of the wide cutouts. This results in a 5" (127mm) exposure. Continue with full width shingles across the roof. Strike a chalk line about every 6 courses to check parallel alignment with eaves. NOTE: Shingles may be laid from either left or right hand side. Start at either rake edge with shingles having 6" (152mm) trimmed from rake.



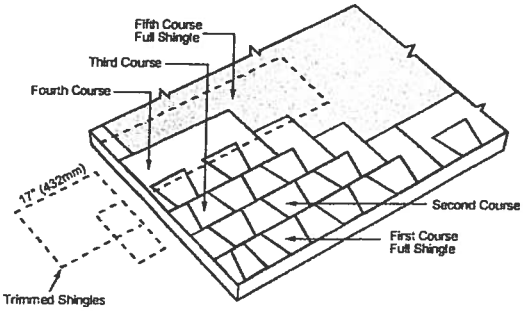
5 Third Course

Trim 11" (279mm) from the first shingle in the course then continue with full shingles across the roof.



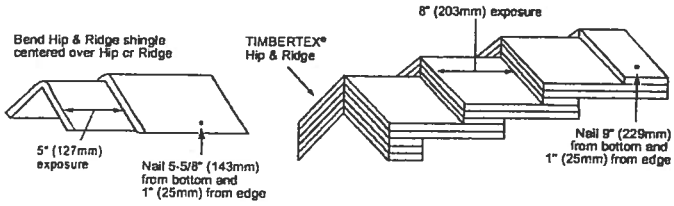
6 Fourth Course and Remaining Courses

Trim 17" (432 mm) from first shingle in the course, then continue with full shingles across the roof. Fifth and subsequent courses repeat full shingle instructions from Step 3.

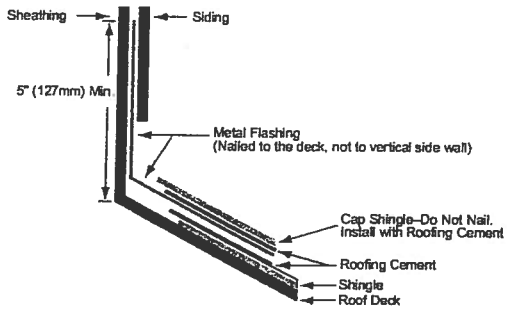


7 Hip and Ridge

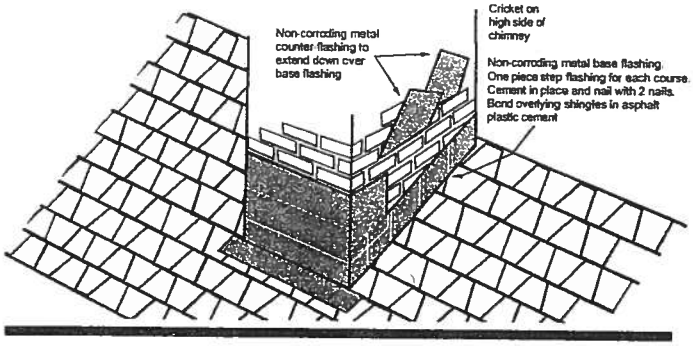
For single layer application, use hip and ridge shingles and apply as shown. To enhance appearance, use GAF TIMBERTEX® or a double layer application of Universal Hip & Ridge. (One bundle of TIMBERTEX® Hip & Ridge covers 20 lineal ft.–6.1 meters.) For double application, start with triple thickness of precut Hip & Ridge shingles and continue remainder with double thickness. Fasten in same manner as single application shown. Apply laps away from prevailing wind direction.



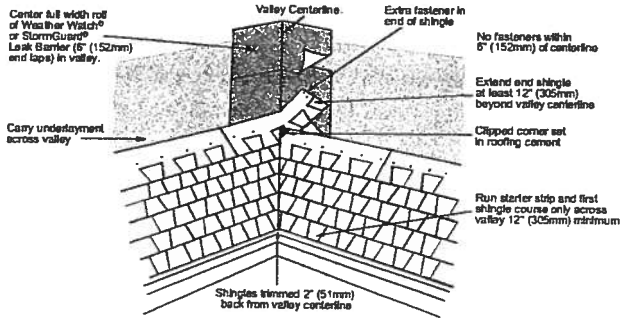
8 Wall Flashing (Sloped Roof to Vertical Wall)



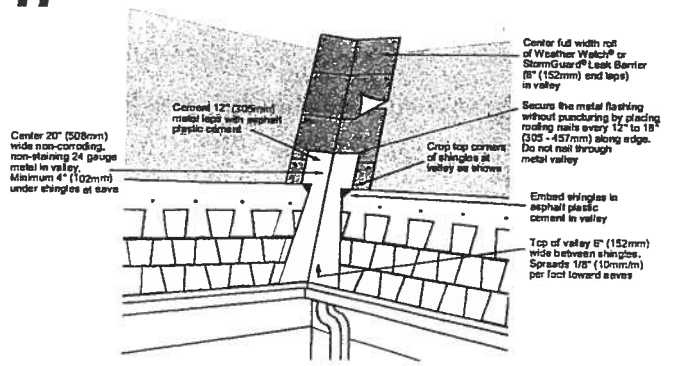
9 Chimney Flashing



10 Valley Construction–Closed Cut



11 Valley Construction–Open



Precautionary Notes

Timberline® Series shingles are fiberglass, self-sealing asphalt shingles. Because of the natural characteristics of the high quality waterproofing material used, these shingles will be stiff in cold weather and flexible in hot weather.

1. Bundles should not be dropped on edge nor should attempt be made to separate shingles by "breaking" over ridge or other bundles.
2. Handle carefully. Shingles can easily be broken in cold weather or their edges damaged in hot weather.
3. All exposed materials must be of Class A type.
4. Storage should be in a covered, ventilated area–maximum temperature 110°F (43°C.) Store on flat surface and use weight equalization boards if pallets are to be double stacked. Shingles must be protected from weather when stored at job site. Do not store near steam pipes, radiators, etc., or in sunlight. All rolled product must be stored on ends.
5. If shingles are to be applied during PROLONGED COLD periods or in areas where airborne dust or sand can be expected before sealing occurs, the shingles MUST be hand sealed. See Wind Resistant instructions.

Re-Roofing

If old asphalt shingles are to remain in place, nail down or cut away all loose, curled or lifted shingles; replace with new; and just before applying the new roofing, sweep the surface clean of all loose debris. Since any irregularities may show through the new shingles, be sure the underlying shingles provide a smooth surface. Fasteners must be of sufficient length to penetrate the wood deck at least 3/4" (19mm) or just through plywood. Follow other above instructions for application.

Note: Shingles can be applied over wood shingles when precautions have been taken to provide an acceptable smooth surface. This includes cutting back old shingles at eaves and rakes and installing new wood edging strips as needed. Make surface smooth and use beveled wood strips if necessary. Install #30 underlayment to maintain Class A rating.

This product is sold with an express LIMITED WARRANTY only. A copy of the LIMITED WARRANTY stating its terms and restrictions is printed on the product wrapper or may be obtained from the distributor of this product or directly from GAF Materials Corporation. Any deviation from printed instructions shall be the responsibility of applicator and/or specifier.

ENGLISH 121201

CERTIFIED TESTING LABORATORIES

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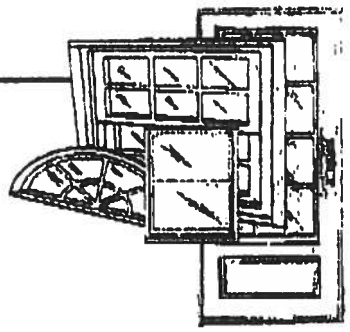
(407) 384-7744 • Fax (407) 384-7751
Web Site: www.ctlarch.com
E-mail: ctlarch.com



Report Number: CTLA-991W-1-AWT
Report Date: February 18, 2003

STRUCTURAL PERFORMANCE TEST REPORT

Client: ACTION WINDOOR TECHNOLOGY INC
1312 W. CROSBY ROAD
CARROLLTON, TX 75006

Product Type and Series: **AWT Series 3950 Vinyl Fin Frame Single Hung Window with Reinforced Sash Top Rail, Stiles & Meeting Rail H-R40 (36"x 72")**

Test Specifications: AAMA/NWWDA 101/I.S.2-97 "Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors"

Frame: Vinyl Fin frame measured 35.50" wide x 71.50" high overall. Mitered corner weld construction. Fixed meeting rail secured to each frame jamb with one (1) #8 x 2" PH., PH. screw.

Ventilator: Operable sash measured 33.375" wide x 35.25" high overall. Mitered corner weld construction. Clear lite measured 31.5625" high x 33.5625" high. Fixed lite measured 32.50" wide x 33.4375"high.

Weather Stripping: One (1) strip of woolpile .220" high with integral plastic fin frame sill. One (1) strip of woolpile .250" high with integral plastic fin sash top rail exterior. One (1) strip of woolpile .250" high each sash stile exterior leg. One (1) strip of woolpile .250" high with integral plastic fin each sash stile interior leg. One (1) strip of foam filled bulb weatherstrip sash bottom rail.

Hardware & Location: Two (2) metallic sweep locks located on sash top rail approx 8" from each end of rail. Two (2) metallic keepers located on fixed meeting rail. One (1) tilt latch at each end of sash top rail. One (1) block and tackle at each frame jamb. One (1) pivot bar at each end of sash bottom rail.

Glazing: 5/8" insulated annealed glass consisting of .125" glass .375" air space with swiggle .125" glass. Sash exterior glazed. Fixed lite interior glazed adhesive foam strip backbedding and vinyl snap in glazing bead.

Sealant: A silicone type sealant was used on sill and to seal specimen to test buck.

Weep System: Weep notch measuring 2.25" x leg height located each end of sill weeping to the exterior

Muntins: N/A

Reinforcement: Fixed meeting rail has one (1) piece of extruded aluminum reinforcement measuring .662" wide x .755" high x .099" thick x full length. Top rail, and sash stiles has one (1) piece of extruded aluminum reinforcement measuring .590" wide x .995" high x .115" thick x full length.

Additional Description: N/A

Screen: Roll formed aluminum frame, fiberglass mesh with vinyl spline. Two (2) metallic retainer clips and two (2) metallic plungers. Corners secured with plastic corner keys

Installation: Twenty-six (26) 1.75" roofing nails were used to secure the specimen to the wood test buck. Five (5) were located in head and sill measuring 4", 13", 21", 29", and 33" from left jamb. Eight (8) were located in each jamb measuring 4.50", 14.25", 24", 32.75", 42", 57.25", 60.50" and 70" from sill.

Surface Finish: White Vinyl

Comment: Nominal 2 mil polyethylene film was used to seal against air leakage during structural loads. The film was used in a manner that did not influence the test results

Performance Test Results

Paragraph No	Title of Test	Method	Measured	Allowed
2.1.2	Air Infiltration @1.57 psf	ASTM E283-91	.18 cfm/ft²	.34 cfm/ft²
	The tested specimen meets or exceeds the performance levels specified in AAMA/NWWDA 101/I.S.2-97. Results recorded in two (2) decimals at the clients request. Unit tested with shims installed under cam locks.			
2.1.3	Water Resistance @ 5.0 gph/ft²	ASTM E547-93 Four (4) five (5) minute cycles	No Entry	No Entry
	WTP= 6.75 psf	ASTM E331-93 Fifteen (15) minute duration	No Entry	No Entry
	Unit tested with insect screen.			
2.1.3	Water Resistance @ 5.0 gph/ft²	ASTM E547-93 Four (4) five (5) minute cycles	No Entry	No Entry
	WTP= 6 psf	ASTM E331-93 Fifteen (15) minute duration	No Entry	No Entry
	Unit tested without insect screen.			
2.1.4.2	Uniform Load Structural Permanent Deformation	ASTM E330-90 Ten (10) second load		
	@ 60 psf positive		.015"	.134"
	@ 60 psf negative		.005"	.134"
2.1.8	Forced Entry Resistance	AAMA 1302.5-76		
	Test A		0"	½"
	Test B		0"	½"
	Test C		0"	½"
	Test D, E and F		0"	½"
	Test G		0"	½"

Performance Test Results (continued)

Paragraph No	Title of Test		Method	Measured	Allowed
2.2.2.5.1	Operating Force Sash		AAMA/NWWDA 101/I.S.2-97	18 lbs.	30 lbs.
2.2.2.5.2	Deglazing		ASTM E987-88		
	Top Rail	70 lbs		.039" = 7.8%<100%	
	Bottom Rail	70 lbs.		.038" = 7.6%<100%	
	Left Side	50 lbs.		.050" = 10%<100%	
	Right Side	50 lbs.		.035" = 7.0%<100%	
2.1.7	Welded Corner Test		AAMA/NWWDA 101/ IS2-97	Passed	

Test Date November 21, 2002

Test Completion Date: November 21, 2002

Remarks: Detailed drawings were available for laboratory records and comparison to the test specimen at the time of this report. A copy of this report along with representative sections of the test specimen will be retained by CTL for a period of four (4) years. The results obtained apply only to the specimen tested.

This test report does not constitute certification of this product, but only that the above test results were obtained using the designated test methods and they indicate compliance with the performance requirements (paragraphs as listed) of the above referenced specifications.

Certified Testing Laboratories assumes that all information provided by the client is accurate and that the physical and chemical properties of the components are as stated by the manufacturer.

Certified Testing Laboratories, Inc

James W. Blakely
Vice President
Architectural Division

cc: Action Windoor Technology Inc. (3)
File (1)

Report Number: ETC-04-034-14644.0
Test Start Date: 04/10/03
Test Finish Date: 03/16/04
Report Date: 03/18/04
Expiration Date: 03/18/08

Fenestration Structural Test Report

Rendered To:

Vinyl Building Products, Inc.
One Raritan Road
Oakland, NJ 07436

Series/Model

2900 Horizontal Slider (OX)

Description: The product tested was a vinyl Horizontal Sliding window. The test specimen was glazed with 5/8-inch thick insulating glass units constructed with double strength annealed glass. The frame size was 69 inches wide by 48 inches high by 2-3/4 inches deep. See Appendix A.

Test Specification: ANSI/AAMA/NWWDA 101/I.S.2

Summary of Results

Overall Design Pressure	35.0 psf
Air Leakage Rate	0.18 scfm/ft^2
Maximum Water Pressure Achieved	5.25 psf
Maximum Structural Pressure Achieved	60.0 psf
Forced Entry Resistance – (ASTM)	Grade 10
Product Designation	**H–R35 69 x 48**

TEST REPORT

ETC Laboratories

Specifications: The test specimen was evaluated in accordance with ANSI/AAMA/NWWDA 101/I.S.2 "Voluntary Specification for Aluminum, Vinyl and Wood Windows and Glass Doors". Sections 1, 2 and 4 only. All performance specifications in this standard shall be met for full compliance to the standard and for product certification, labeling or represented as conforming to this standard.

Referenced Test Reports: NONE
Note – The test data in any section below with an "RTR" comment have not been obtained from this specimen but from the Referenced Test Report with a specimen of the same or larger size and identical construction.

Design Pressure (DP): The product tested herein has been first evaluated to the Gateway pressure in the referenced specification for the performance class rating achieved.

Gateway Performance Tests

Specification Paragraph	Title of Test	Results	Allowed
2.1.2	*Air Infiltration – ASTM E283*		
	Test Pressure - 1.57 psf	0.18 scfm/ft^2	0.30 scfm/ft^2
	The tested specimen exceeds the performance levels specified in ANSI/AAMA/NWWDA 101/I.S.2 for air infiltration.		
2.1.3	*Water Resistance – ASTM E547*		
	5 gal/hr-ft^2 – 4 Test cycles – 24 Minutes		
	Design Pressure - 15.0 psf		
	Test Pressure – 2.86 psf		
	With and Without Screen	Pass	No Leakage
2.1.4.2	*Uniform Structural Load - ASTM E330*		
	Design Pressure - 15.0 psf		
	Test Pressure		
	Positive Load – 22.5 psf (150% x DP)	0.033 in.	0.177 in.
	Negative Load – 22.5 psf (150% x DP)	0.020 in.	0.177 in
	Note: Measurement taken after load from center of the meeting stile		
2.1.7	*Corner Weld*		
	Frame – 4 Corners	Pass	< 100%
	Sashes – 4 Corners	Pass	< 100%
2.1.8	*Forced Entry Resistance - ASTM E588*		
	Lock/Tool Manipulation	Pass	No Entry
	Tests A1 through A7	Pass	No Entry
	Lock/Tool Manipulation	Pass	No Entry
2.2.1.6.1	*Operating Force – No Standardized Method*		
	Right Sash – Open/Close	18/18 lbf	20 lbf
2.2.1.6.2	*Deglazing – ASTM E987*		
	Right Sash: Left Stile - 70 lbf	0.0%	<100%
	Right Stile - 70 lbf	0.0%	<100%
	Top Rail - 50 lbf	0.0%	<100%
	Bottom Rail - 50 lbf	0.0%	<100%

TEST REPORT
ETC Laboratories

Optional Performance Tests

The manufacturer specified herein has successfully achieved all the required criteria in Section 2 of the referenced specification for the Gateway size of the achieved Performance Rating and has further successfully tested the product to higher performance levels as indicated below.

Design Pressure (DP): The product tested herein has been additionally evaluated to the Design Pressure referenced below.

Specification Paragraph	Title of Test	Results	Allowed
4.3	*Water Resistance - ASTM E547* 5 gal/hr-ft^2 – 4 Test cycles – 24 Minutes Design Pressure - 35.0 psf Test Pressure – 5.25 psf (15% x DP) With and Without Screen	Pass	No Leakage
4.4	*Uniform Structural Load - ASTM E330* Design Pressure - 40.0 psf Test Pressure Positive Load – 60.0 psf (150% x DP) Negative Load – 60.0 psf (150% x DP) Note: Measurement taken after load from center of meeting stile	 0.069 in. 0.066 in.	 0.177 in. 0.177 in.

TEST REPORT

ETC Laboratories

Conditions, Terms, and General Notes Regarding These Tests

The product tested **Has Been** compared to the detailed drawings, bill of materials and fabrication information supplied by the client so named herein. Our analysis, which includes dimensional and component description comparisons, indicate the tested product and engineering information supplied by the client "**Are Equivalent**". **See Appendix A.** The report and representative samples will be retained for four years from the date of initial test.

These test results were obtained by employing all requirements of the designated test methods with no deviations. The test results and specimen supplied for testing are in compliance with the referenced specifications.

The test results are specific to the product tested by this laboratory and of the sample supplied by the client named herein, and they relate to no other product either manufactured by the client, a Fabricator of the client or of installed field performance.

This report does not constitute an AAMA or NWWDA certified product under the certification programs of these organizations. The program administrator of these programs and organizations may only grant product certification.

ETC Laboratories makes no opinions or endorsements regarding this product and its performance. This report may not be reproduced or quoted in partial form without the expressed written approval of ETC Laboratories.

No conclusions of any kind regarding the adequacy of the glass in the test specimen may be drawn from the test. Procedure "A" in ASTM E330 was used for this test.

ETC Laboratories letters, reports, its name or insignia or mark are for the exclusive use of the client so named herein and any other use is strictly prohibited. The report, letters and the name of ETC Laboratories, its seal or mark shall not be used in any circumstance to the general public or in any advertising.

Limitation of Liability: Due diligence was used in rendering this professional opinion. By acceptance of this report, this client agrees to hold harmless and indemnify ETC Laboratories, its employees and offices and owners against all claims and demands of any kind whatsoever, which arise out of or in any manner connected with the performance of work referred to herein.

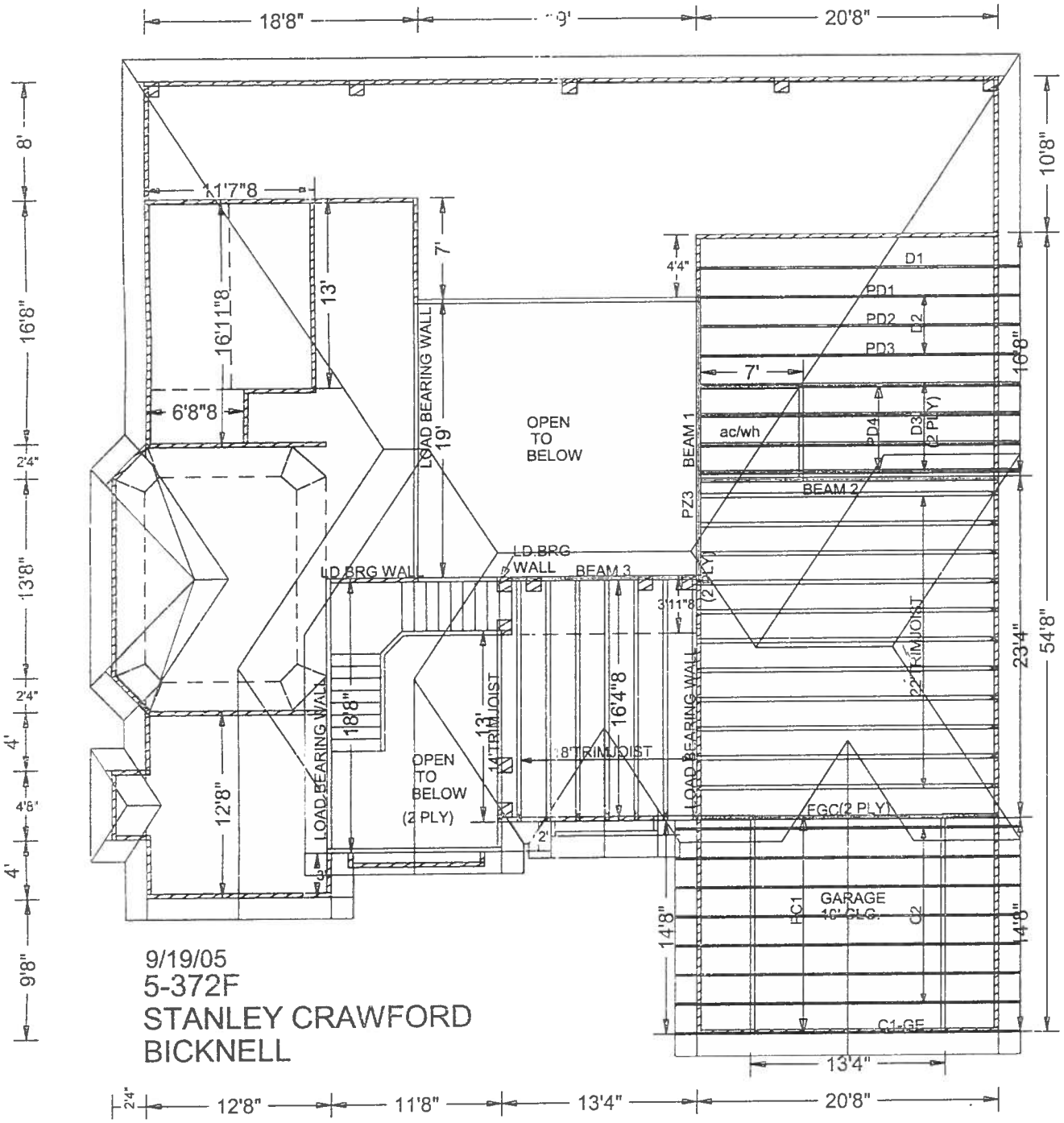
FOR ETC LABORATORIES

Mark Sennett
AWS Supervisor

Arthur Murray, VP
Manager, Wind Engineering Laboratory

TEST REPORT

ETC Laboratories



BEAM SCHEDULE
BEAM 1 (2 PLY) 1 3/4"X24"X 19' 9 1/2"
BEAM 2 (2 PLY) 1 3/4"X16"X20'8"
BEAM 3 (2 PLY) 1 3/4"X16"X13'

9/19/05
5-372F
STANLEY CRAWFORD
BICKNELL

Scale: 3/32" = 1'

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