DATE 05/08/2007

Columbia County Building Permit

This Permit Expires One Year From the Date of Issue

PERMIT 000025787

APPLICANT LINDA RODER PHONE 752-2281

ADDRESS 387 SW KEMP COURT LAKE CITY FL 32024

OWNER ALTAMIRA FARMS PHONE 813 514-2816

ADDRESS 166 NE ROE PLACE WHITE SPRINGS FL 32096

CONTRACTOR ISAAC CONSTRUCTION PHONE 719-7143

LOCATION OF PROPERTY 441N, 11 MILES PAST I-10, TR INTO DEER RUN, TO THE END ON LEFT

TYPE DEVELOPMENT SFD,UTILITY ESTIMATED COST OF CONSTRUCTION 112700.00

HEATED FLOOR AREA 2254.00 TOTAL AREA 4253.00 HEIGHT 24.00 STORIES 2

FOUNDATION CONC WALLS FRAMED ROOF PITCH 6/12 FLOOR SLAB

LAND USE & ZONING A-1 MAX. HEIGHT 24

Minimum Set Back Requirments: STREET-FRONT 30.00 REAR 25.00 SIDE 25.00

NO. EX.D.U. 0 FLOOD ZONE X DEVELOPMENT PERMIT NO.

PARCEL ID 05-1S-17-04492-010 SUBDIVISION DEER RUN PRESERVATION

LOT 8/9 BLOCK PHASE UNIT TOTAL ACRES 40.00

000001381 CBC059323

Culvert Permit No. Culvert Waiver Contractor's License Number Applicant/Owner/Contractor

WAIVER 07-291 BK JH Y

Driveway Connection Septic Tank Number LU & Zoning checked by Approved for Issuance New Resident

COMMENTS: ONE FOOT ABOVE THE ROAD, NOC ON FILE

Check # or Cash 8114

FOR BUILDING & ZONING DEPARTMENT ONLY

Temporary Power _____ date/app. by

Foundation _____ date/app. by

Monolithic (footer/Slab) _____ date/app. by

Under slab rough-in plumbing _____ date/app. by

Slab _____ date/app. by

Sheathing/Nailing _____ date/app. by

Framing _____ date/app. by

Rough-in plumbing above slab and below wood floor _____ date/app. by

Electrical rough-in _____ date/app. by

Heat & Air Duct _____ date/app. by

Peri. beam (Lintel) _____ date/app. by

Permanent power _____ date/app. by

C.O. Final _____ date/app. by

Culvert _____ date/app. by

M/H tie downs, blocking, electricity and plumbing _____ date/app. by

Pool _____ date/app. by

Reconnection _____ date/app. by

Pump pole _____ date/app. by

Utility Pole _____ date/app. by

M/H Pole _____ date/app. by

Travel Trailer _____ date/app. by

Re-roof _____ date/app. by

BUILDING PERMIT FEE $ 565.00 CERTIFICATION FEE $ 21.27 SURCHARGE FEE $ 21.27

MISC. FEES $ 0.00 ZONING CERT. FEE $ 50.00 FIRE FEE $ 0.00 WASTE FEE $

FLOOD DEVELOPMENT FEE $ FLOOD ZONE FEE $ 25.00 CULVERT FEE $ **TOTAL FEE** 682.54

INSPECTORS OFFICE _____ CLERKS OFFICE CH

NOTICE: IN ADDITION TO THE REQUIREMENTS OF THIS PERMIT, THERE MAY BE ADDITIONAL RESTRICTIONS APPLICABLE TO THIS PROPERTY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. AND THERE MAY BE ADDITIONAL PERMITS REQUIRED FROM OTHER GOVERNMENTAL ENTITIES SUCH AS WATER MANAGEMENT DISTRICTS, STATE AGENCIES, OR FEDERAL AGENCIES.

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

This Permit Must Be Prominently Posted on Premises During Construction

PLEASE NOTIFY THE COLUMBIA COUNTY BUILDING DEPARTMENT AT LEAST 24 HOURS IN ADVANCE OF EACH INSPECTION, IN ORDER THAT IT MAY BE MADE WITHOUT DELAY OR INCONVIENCE, PHONE 758-1008. THIS PERMIT IS NOT VALID UNLESS THE WORK AUTHORIZED BY IT IS COMMENCED WITHIN 6 MONTHS AFTER ISSUANCE.

The Issuance of this Permit Does Not Waive Compliance by Permittee with Deed Restrictions.

Columbia County Building Permit Application

UC# 9114

For Office Use Only Application # 0704-09 Date Received 4/4/07 By CF Permit # 13811 35787

Application Approved by - Zoning Official BLK Date 4.04.07 Plans Examiner OK JTH Date 4-12-07

Flood Zone X Development Permit N/A Zoning A-1 Land Use Plan Map Category A-1

Comments

Need NOC Need EH ☐ Deed or PA ☐ Site Plan ☐ State Road Info ☐ Parent Parcel # ☐ Development Permit

Name Authorized Person Signing Permit Linda or Melanie Roder Fax 752-2282 Phone 752-2281

Address 387 SW Kemp Ct Lake City FL 32024

Owners Name Altamira Farms, LLC Phone (813) 514-2816

911 Address 1166 NE Roe Place, White Springss 32096

Contractors Name Isaac Bratkovich of Isaac Construction Phone 719-7143

Address 2109 W. US Hwy 90 Lake City FL 32055

Fee Simple Owner Name & Address NA

Bonding Co. Name & Address NA

Architect/Engineer Name & Address Gary Gill 130 W. Howard St. Live Oak, FL

Mortgage Lenders Name & Address NA

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

Property ID Number 05-15-17-04492-010 Estimated Cost of Construction 258 K

Subdivision Name Deer Run Preservation Lot 8+9 Block ____ Unit ____ Phase ____

Driving Directions Hwy 441 N, 11 miles past I-10 turn R into Deer Run, follow easement to end on left

Type of Construction SFD Number of Existing Dwellings on Property 0

Total Acreage 40ac Lot Size ____ Do you need a - Culvert Permit or Culvert Waiver or Have an Existing Drive

Actual Distance of Structure from Property Lines - Front 1050' Side 700' Side 578' Rear 200'

Total Building Height 24'-11½" Number of Stories 2 Heated Floor Area 2254 TOTAL 4253 Roof Pitch 6-12 4-12

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.

Owner Builder or Authorized Person by Notarized Letter

Isaac Bratkovich

Contractor Signature

Contractors License Number CBC 059323

Competency Card Number

NOTARY STAMP/SEAL

STATE OF FLORIDA
COUNTY OF COLUMBIA

Barbara C. Webster
Commission # DD329279
Expires July 2, 2008
Bonded Troy Fain - Insurance, Inc. 800-365-7019

Sworn to (or affirmed) and subscribed before me this 21ST day of March 2007.

Personally known X or Produced Identification ____

Barbara C. Webster

Notary Signature

(Revised Sept. 2006)

ISAAC CONSTRUCTION, LLC.
FINE CUSTOM HOMEBUILDING

"BUILDING DREAM HOMES"

2109 W. US HWY 90 | SUITE #170 PMB338
LAKE CITY, FL 32055

March 20, 2007

Columbia County Building Department
135 NE Hernando Avenue
Suite B 21
Lake City, FL 32055

RE: Altamira Farm, LLC Parcel # 05-1S-17-04492-010

LETTER OF AUTHORIZATION

I, Isaac Bratkovich authorize Linda Roder or Melanie Roder to be the representative for Isaac Construction, Inc. in all aspects of applying for the building permit for Manuel Solorzano with the Columbia County Building Department.

Isaac Bratkovich, President
Isaac Construction, Inc.

The foregoing was acknowledged before me on this 1st day of December, 2004, by Isaac Bratkovich, as the President of Isaac Construction, Inc. He is personally known to me and did take an oath.

NOTARY PUBLIC STATE OF FLORIDA
Barbara C. Webster
Commission # DD329279
Expires July 2, 2008
Bonded Troy Fain - Insurance, Inc. 800-385-7019

Notary Public

My Commission Expires: 7-2-08

Prepared by:
Matthew D. Rocco
Sierra Title, LLC
619 SW Baya Drive, Suite 102
Lake City, Florida 32025

File Number: 06-0388

Inst:2006029677 Date:12/18/2006 Time:15:47
Doc Stamp-Deed : 1442.00
DC,P.DeWitt Cason,Columbia County B:1105 P:553

General Warranty Deed

Made this December 15, 2006 A.D. By **Zachariah P Cook, a married man and Kim N Heitzman, a married man,** Post Office Box 788, Lake City, FL 32056, hereinafter called the grantor, to **Altamira Farm, LLC, a Florida Limited Liability Company,** whose post office address is: 1221 Bruce B Downs #110, Wesley Chapel, FL 33543, 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:

See Attached Schedule "A"

Said property is not the homestead of the Grantor(s) under the laws and constitution of the State of Florida in that neither Grantor(s) nor any members of the household of Grantor(s) reside thereon.

Parcel ID Number: **R04492-006**

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, 2006.

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:

Witness Printed Name **Matthew D. Rocco**

Witness Printed Name Aaron Nickelson

(Seal)
Zachariah P Cook
Address: P O Box 788, Lake City, FL 32056

(Seal)
Kim N Heitzman
Address: P O Box 788, Lake City, FL 32056

State of Florida
County of Columbia

The foregoing instrument was acknowledged before me this 15th day of December, 2006, by Zachariah P Cook, a married man and Kim N Heitzman, a married man, who is/are personally known to me or who has produced as identification.

Notary Public
Print Name:

My Commission Expires:

Notary Public State of Florida
Matthew Rocco
My Commission DD578349
Expires 09/17/2010

DEED Individual Warranty Deed with Non-Homestead-Legal on Schedule A
Closers' Choice

Prepared by:
Matthew D. Rocco
Sierra Title, LLC
619 SW Baya Drive, Suite 102
Lake City, Florida 32025

File Number: 06-0388

Schedule "A"

(TRACT #8)
A part of the SE 1/4 of Section 5, Township 1 South, Range 17 East, Columbia County, Florida, more particularly described as follows: Begin at the Southeast corner of the SE 1/4 of said Section 5 and Run S.88°18'50"W., along the South line of the SE 1/4 of said Section 5, a distance of 655.01 feet; thence N.01°57'24"W., a distance of 1337.13 feet; thence N.88°14'14"E., a distance of 655.00 feet to the East line of the said SE 1/4; thence S.01°57'24"E., a distance of 1334.91 feet to the Point of Beginning. Subject to an easement for ingress, egress and utilities over and across the North 30.00 feet thereof.

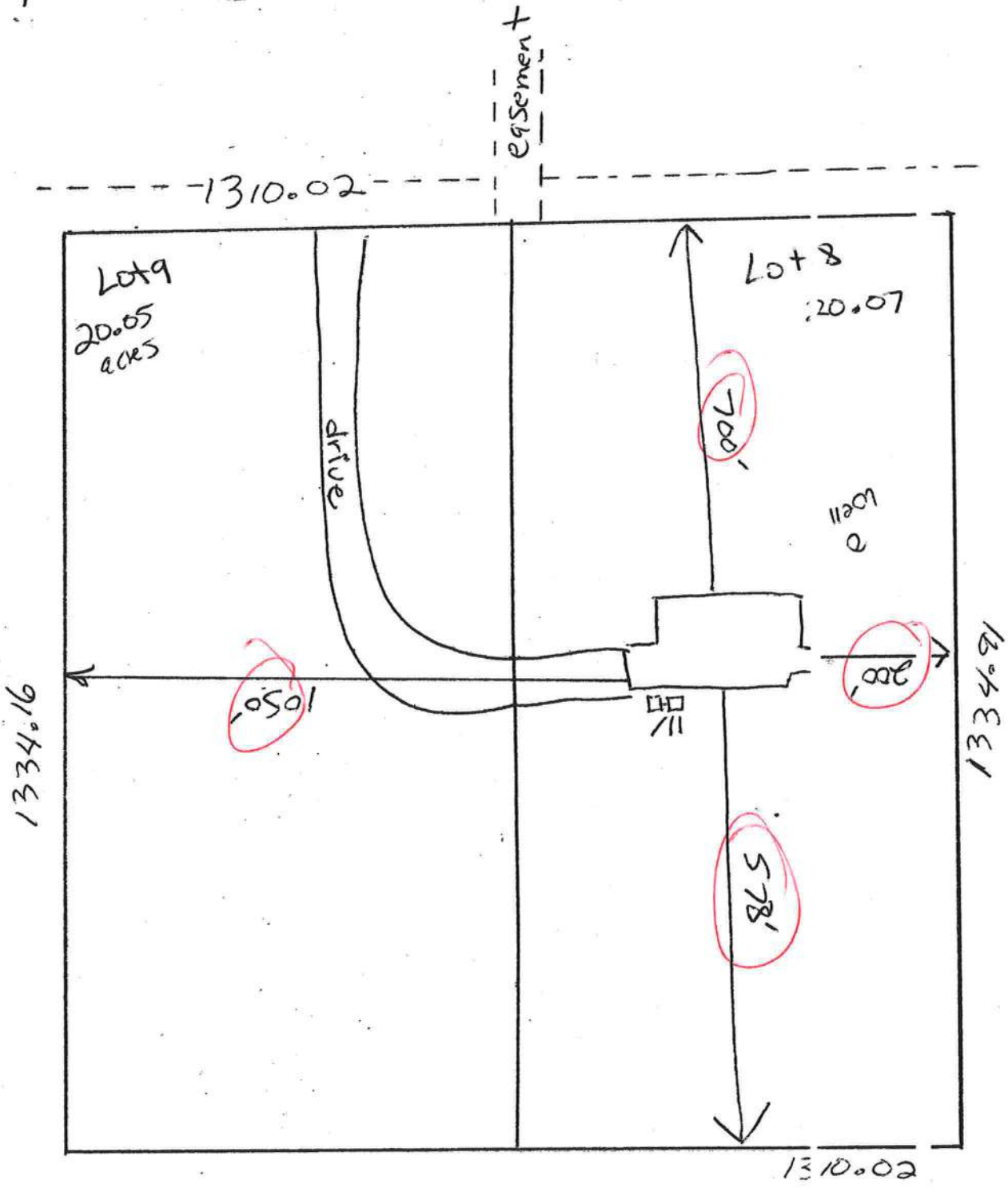
ALSO:
(TRACT #9)
A part of the SE 1/4 of Section 5, Township 1 South, Range 17 East, Columbia County, Florida, more particularly described as follows: Commence at the Southeast corner of the SE 1/4 of said Section 5 and run S.88°18'50"W., along the South line of the SE 1/4 of said Section 5, a distance of 655.00 feet for a Point of Beginning; thence continue S.88°18'50"W., a distance of 655.01 feet; thence N.01°57'24"W., a distance of 1333.16 feet; thence N.88°14'14"E., a distance of 655.00 feet; thence S.01°57'24"E., a distance of 1337.13 feet to the Point of Beginning. Subject to an easement for ingress, egress and utilities over and across the North 30.00 feet thereof.

Also together with an easement for ingress & egress over and across the following described parcel: a part of the South 1/2 of Section 5, Township 1 South, Range 17 East, Columbia County, Florida, being a 60.00 foot wide easement, for ingress, egress and utilities, 30.00 feet left and 30.00 feet right of the following described center line: commence at the Southeast corner of said Section 5, and run N.01°57'24"W., along the East line of said Section 5, a distance of 1334.91 feet for a Point of Beginning, thence S.88°14'14"W., a distance of 655.00 feet to a point hereinafter known as point "A", thence continue N.88°14'14"W., a distance of 716.92 feet; thence return to point "A" and run N.01°57'24"W., a distance of 909.58 feet; thence N.50°12'22"W., a distance of 593.41 feet to a point that lies 30.00 feet South of the North line of the South 1/2 of said Section 5; thence S.88°09'22"W., parallel with the North line of the South 1/2 of said Section 5, a distance of 1537.22 feet; thence S.88°10'06"W., still parallel with the North line of the said South 1/2 of Section 5, a distance of 1051.05 feet; thence S.01°39'41"E., a distance of 276.94 feet; thence S.46°46'15"W., a distance of 480.67 feet; thence S.88°20'19"W., a distance of 1042.87 feet to the Easterly right-of-way line of U.S. Highway #441 for a Point of Termination of said centerline.

Inst:2006029677 Date:12/18/2006 Time:15:47
Doc Stamp-Deed : 1442.00
DC,P.DeWitt Cason,Columbia County B:1105 P:554

↑N

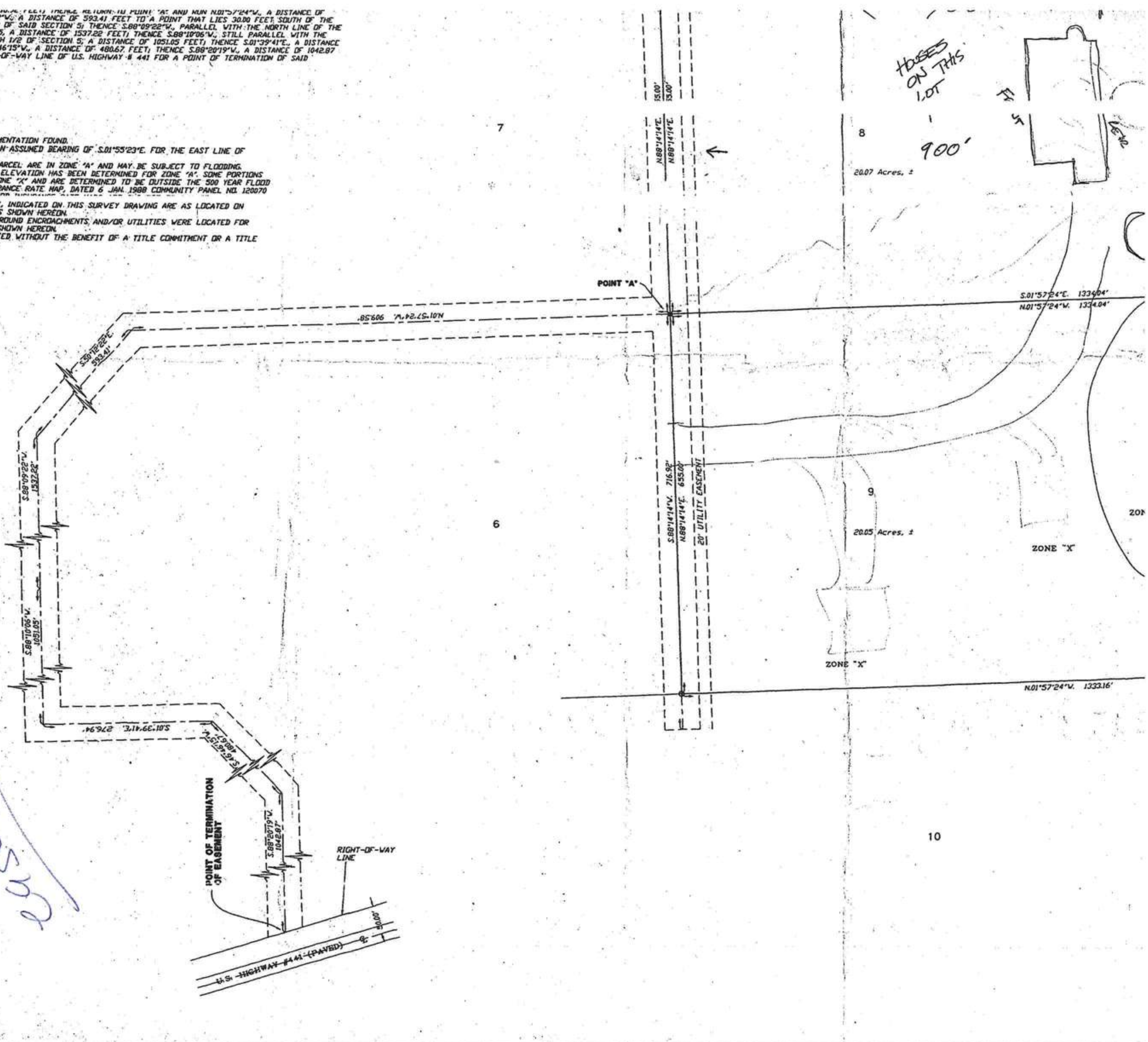
Altamira Farm LLC
05-15-17-04492-010



... 909.58 FEET; THENCE N.50°12'22"W., A DISTANCE OF 593.41 FEET TO A POINT THAT LIES 30.00 FEET SOUTH OF THE NORTH LINE OF THE SOUTH 1/2 OF SAID SECTION 5; THENCE S.88°09'22"W., PARALLEL WITH THE NORTH LINE OF THE SOUTH 1/2 OF SAID SECTION 5, A DISTANCE OF 1537.22 FEET; THENCE S.88°10'06"W., STILL PARALLEL WITH THE NORTH LINE OF THE SAID SOUTH 1/2 OF SECTION 5, A DISTANCE OF 1051.05 FEET; THENCE S.01°39'41"E., A DISTANCE OF 276.94 FEET; THENCE S.46°46'15"W., A DISTANCE OF 480.67 FEET; THENCE S.88°20'19"W., A DISTANCE OF 1042.87 FEET TO THE EASTERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY # 441 FOR A POINT OF TERMINATION OF SAID CENTERLINE.

SURVEYOR'S NOTES:

1. BOUNDARY BASED ON MONUMENTATION FOUND.
2. BEARINGS ARE BASED ON AN ASSUMED BEARING OF S.01°55'23"E. FOR THE EAST LINE OF THE SW 1/4, SECTION 5.
3. SOME PORTIONS OF THIS PARCEL ARE IN ZONE "A" AND MAY BE SUBJECT TO FLOODING. HOWEVER, NO BASE FLOOD ELEVATION HAS BEEN DETERMINED FOR ZONE "A". SOME PORTIONS OF THIS PARCEL ARE IN ZONE "X" AND ARE DETERMINED TO BE OUTSIDE THE 500 YEAR FLOOD PLAIN AS PER FLOOD INSURANCE RATE MAP, DATED 6 JAN. 1988 COMMUNITY PANEL NO. 120070 ...
4. THE IMPROVEMENTS, IF ANY, INDICATED ON THIS SURVEY DRAWING ARE AS LOCATED ON 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.



ASPEN
PEST CONTROL, INC.

Lake City (386) 755-3611
Gainesville (352) 495-5751
Fax (386) 755-3885
Toll Free 1-800-611-4707

Notice of Intent for Preventative Treatment for Termites

(As required by Florida Building Code (FBC) 104.2.6)

Aspen Pest Control, Inc.
(386) 755-3611
State License # - JB109476
State Certification # - JF104376

Altamira Farms LLC 05-1s-17-04492-010 Columbia County (Isaac Const.)
Address of Treatment or Lot/Block of Treatment

Bora-Care Wood Treatment – 23% Disodium Octaborate Tetrahydrate
Method of Termite Prevention Treatment – Soil Barrier, Wood Treatment, Bait System, Other

Application onto Structural Wood
Description of Treatment

The above named structure will receive a complete treatment for the prevention of subterranean termites at the dried-in stage of construction. Treatment is done in accordance with the rules and laws established by the Florida Department of Agriculture and Consumer Services and according to EPA registered label directions as stated in Florida Building Code Section 1861.1.8.

Celia Dropleau
Authorized Signature

3-22-07
Date

FORM 600A-2004R EnergyGauge® 4.5

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs

Residential Whole Building Performance Method A

Project Name:	**Solorzano Residence**	Builder:	ISAAC Const
Address:		Permitting Office:	Columbia
City, State:	,	Permit Number:	25787
Owner:	**Manuel Solorzano**	Jurisdiction Number:	221000
Climate Zone:	**North**		

1. New construction or existing	New	12. Cooling systems	
2. Single family or multi-family	Single family	a. Central Unit	Cap: 48.0 kBtu/hr
3. Number of units, if multi-family	1		SEER: 13.00
4. Number of Bedrooms	2	b. N/A	
5. Is this a worst case?	Yes		
6. Conditioned floor area (ft²)	2254 ft²	c. N/A	
7. Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)			
a. U-factor:	Description Area	13. Heating systems	
(or Single or Double DEFAULT)	7a. (Dble, U=0.3) 557.5 ft²	a. Electric Heat Pump	Cap: 48.0 kBtu/hr
b. SHGC:			HSPF: 7.70
(or Clear or Tint DEFAULT)	7b. (SHGC=0.39) 557.5 ft²	b. N/A	
8. Floor types			
a. Raised Wood, Post or Pier	R=11.0, 1933.0ft²	c. N/A	
b. N/A			
c. N/A		14. Hot water systems	
9. Wall types		a. Electric Resistance	Cap: 40.0 gallons
a. Log, 6 inch, Exterior	R=0.0, 1256.0 ft²		EF: 0.97
b. N/A		b. N/A	
c. N/A			
d. N/A		c. Conservation credits	
e. N/A		(HR-Heat recovery, Solar DHP-Dedicated heat pump)	
10. Ceiling types		15. HVAC credits	MZ-C, PT, CF,
a. Single Assembly	R=19.0, 2305.0 ft²	(CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)	
b. N/A			
c. N/A			
11. Ducts			
a. Sup: Con. Ret: Con. AH: Interior	Sup. R=6.0, 250.0 ft		
b. N/A			

Glass/Floor Area: 0.25 Total as-built points: 23765 Total base points: 24726 **PASS**

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

PREPARED BY: Gary Gill

DATE: 3/15/07

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

OWNER/AGENT: [signature]

DATE: 3-19-07

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.

GREAT SEAL OF THE STATE OF FLORIDA IN GOD WE TRUST

BUILDING OFFICIAL: _____

DATE: _____

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

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BASE

GLASS TYPES

.18 X	Conditioned Floor Area	X BSPM	= Points
.18	2254.0	18.59	7542.0

WALL TYPES	Area	X BSPM	= Points
Adjacent	0.0	0.00	0.0
Exterior	1256.0	1.70	2135.2
Base Total:	**1256.0**		**2135.2**

DOOR TYPES	Area	X BSPM	= Points
Adjacent	0.0	0.00	0.0
Exterior	74.7	6.10	455.7
Base Total:	**74.7**		**455.7**

CEILING TYPES	Area	X BSPM	= Points
Under Attic	1933.0	1.73	3344.1
Base Total:	**1933.0**		**3344.1**

FLOOR TYPES	Area	X BSPM	= Points
Slab	0.0(p)	0.0	0.0
Raised	1933.0	-3.99	-7712.7
Base Total:			**-7712.7**

AS-BUILT

Type/SC	Overhang Ornt	Len	Hgt	Area X	SPM X	SOF	= Points
1.Double,U=0.25,SHGC=0.	E	10.0	3.6	18.0	25.82	0.36	165.0
2.Double,U=0.25,SHGC=0.	E	10.0	6.8	23.4	25.82	0.44	264.0
3.Double,U=0.25,SHGC=0.	E	10.0	3.6	9.0	25.82	0.36	82.0
4.Double,U=0.25,SHGC=0.	E	10.0	3.6	14.3	25.82	0.36	131.0
5.Double,U=0.25,SHGC=0.	E	10.0	9.0	23.4	25.82	0.49	296.0
6.Double,U=0.25,SHGC=0.	S	9.0	9.3	28.5	22.17	0.53	332.0
7.Double,U=0.25,SHGC=0.	W	10.0	6.8	46.8	23.77	0.45	503.0
8.Double,U=0.25,SHGC=0.	W	2.0	11.0	300.0	23.77	0.96	6860.0
9.Double,U=0.25,SHGC=0.	N	2.0	9.3	28.5	12.50	0.96	340.0
10.Double,U=0.25,SHGC=0	NE	2.0	4.7	20.4	18.51	0.80	302.0
11.Double,U=0.25,SHGC=0	NW	2.0	4.7	20.4	16.46	0.82	275.0
12.Double,U=0.25,SHGC=0	N	2.0	4.7	6.8	12.50	0.86	72.0
13.Double,U=0.25,SHGC=0	S	2.0	4.5	9.0	22.17	0.69	138.0
14.Double,U=0.25,SHGC=0	N	2.0	4.5	9.0	12.50	0.85	95.0
As-Built Total:				**557.5**			**9855.0**

Type	R-Value	Area X	SPM	= Points
1. Log, 6 inch, Exterior	0.0	1256.0	1.50	1884.0
As-Built Total:		**1256.0**		**1884.0**

Type	Area X	SPM	= Points
1.Exterior Wood	66.4	6.10	405.0
2.Exterior Wood	8.3	6.10	50.6
As-Built Total:	**74.7**		**455.7**

Type	R-Value	Area X	SPM X SCM	= Points
1. Single Assembly	19.0	2305.0	5.64 X 1.00	13000.2
As-Built Total:		**2305.0**		**13000.2**

Type	R-Value	Area X	SPM	= Points
1. Raised Wood, Post or Pier	11.0	1933.0	1.05	2039.3
As-Built Total:		**1933.0**		**2039.3**

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,	PERMIT #:

BASE				AS-BUILT						
INFILTRATION	Area X	BSPM	= Points		Area X	SPM	= Points			
	2254.0	10.21	23013.3		2254.0	10.21	23013.3			
Summer Base Points: 28777.6				**Summer As-Built Points:**						**50247.5**
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 48000btuh ,SEER/EFF(13.0) Ducts:Con(S),Con(R),Int(AH),R6.0(INS)						
				50248	1.00	(1.00 x 1.147 x 0.91)	0.260	0.857	11691.3	
28777.6	**0.3250**	**9352.7**		**50247.5**	**1.00**	**1.044**	**0.260**	**0.857**	**11691.3**	

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	2254.0	20.17	8183.0	1.Double,U=0.25,SHGC=0.	E	10.0	3.6	18.0	3.93	1.51	106.0	
				2.Double,U=0.25,SHGC=0.	E	10.0	6.8	23.4	3.93	1.38	127.0	
				3.Double,U=0.25,SHGC=0.	E	10.0	3.6	9.0	3.93	1.51	53.0	
				4.Double,U=0.25,SHGC=0.	E	10.0	3.6	14.3	3.93	1.51	84.0	
				5.Double,U=0.25,SHGC=0.	E	10.0	9.0	23.4	3.93	1.32	121.0	
				6.Double,U=0.25,SHGC=0.	S	9.0	9.3	28.5	0.67	2.67	51.0	
				7.Double,U=0.25,SHGC=0.	W	10.0	6.8	46.8	4.99	1.20	280.0	
				8.Double,U=0.25,SHGC=0.	W	2.0	11.0	300.0	4.99	1.01	1510.0	
				9.Double,U=0.25,SHGC=0.	N	2.0	9.3	28.5	7.24	1.00	206.0	
				10.Double,U=0.25,SHGC=0	NE	2.0	4.7	20.4	6.67	1.02	138.0	
				11.Double,U=0.25,SHGC=0	NW	2.0	4.7	20.4	7.06	1.01	145.0	
				12.Double,U=0.25,SHGC=0	N	2.0	4.7	6.8	7.24	1.01	49.0	
				13.Double,U=0.25,SHGC=0	S	2.0	4.5	9.0	0.67	1.50	9.0	
				14.Double,U=0.25,SHGC=0	N	2.0	4.5	9.0	7.24	1.01	65.0	
				As-Built Total:				**557.5**			**2944.0**	

WALL TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM	= Points
Adjacent	0.0	0.00	0.0	1. Log, 6 inch, Exterior	0.0	1256.0	4.50	5652.0
Exterior	1256.0	3.70	4647.2					
Base Total:	**1256.0**		**4647.2**	**As-Built Total:**		**1256.0**		**5652.0**

DOOR TYPES	Area X	BWPM	= Points	Type	Area X	WPM	= Points
Adjacent	0.0	0.00	0.0	1.Exterior Wood	66.4	12.30	816.7
Exterior	74.7	12.30	918.8	2.Exterior Wood	8.3	12.30	102.1
Base Total:	**74.7**		**918.8**	**As-Built Total:**	**74.7**		**918.8**

CEILING TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM X WCM	= Points
Under Attic	1933.0	2.05	3962.6	1. Single Assembly	19.0	2305.0	1.86 X 1.00	4287.3
Base Total:	**1933.0**		**3962.6**	**As-Built Total:**		**2305.0**		**4287.3**

FLOOR TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM	= Points
Slab	0.0(p)	0.0	0.0	1. Raised Wood, Post or Pier	11.0	1933.0	1.55	2996.1
Raised	1933.0	0.96	1855.7					
Base Total:			**1855.7**	**As-Built Total:**		**1933.0**		**2996.1**

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,	PERMIT #:

BASE				AS-BUILT						
INFILTRATION	Area X	BWPM	= Points		Area X	WPM	= Points			
	2254.0	-0.59	-1329.9		2254.0	-0.59	-1329.9			
Winter Base Points:			**18237.5**	**Winter As-Built Points:**						**15468.4**
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 48000 btuh ,EFF(7.7) Ducts:Con(S),Con(R),Int(AH),R6.0						
				15468.4	1.000	(1.000 x 1.169 x 0.93) 0.443		0.950	7075.1	
18237.5	**0.5540**	**10103.6**		**15468.4**	**1.00**	**1.087**	**0.443**	**0.950**	**7075.1**	

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
2	2635.00	5270.0		40.0	0.97	2	1.00	2499.18	1.00	4998.4
				As-Built Total:						**4998.4**

CODE COMPLIANCE STATUS

BASE				AS-BUILT			
Cooling Points	+ Heating Points	+ Hot Water Points	= Total Points	Cooling Points	+ Heating Points	+ Hot Water Points	= Total Points
9353	**10104**	**5270**	**24726**	**11691**	**7075**	**4998**	**23765**

PASS

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 circ 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.	

HALL'S PUMP & WELL SERVICE, INC.

SPECIALIZING IN 4"-6" WELLS

DONALD AND MARY HALL
OWNERS

PHONE (904) 752-
FAX (904) 755-70
LAKE CITY, FLORIDA
904 NW Main Blv

June 12, 2002

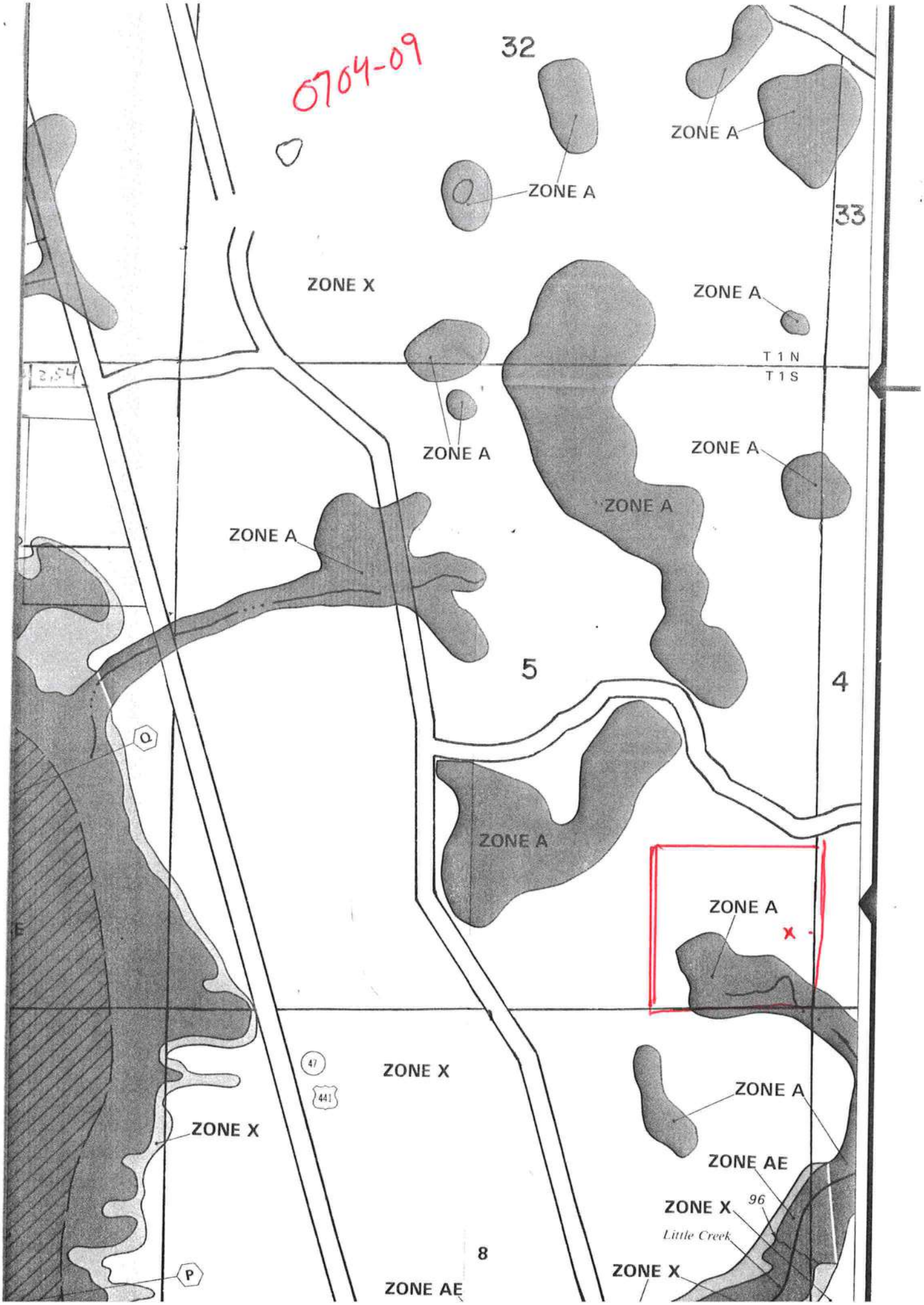
NOTICE TO ALL CONTRACTORS

Please be advised that due to the new building codes we will use a large capacity diaphram tank on all new wells. This will insure a minimum of one (1) minute draw down or one (1) minute refill. If a smaller diaphram tank is used then we will install a cycle stop valve which will produce the same results.

If you have any questions please feel free to call our office anytime.

Thank you,

Donald D. Hall
DDH/jk


0704-09
32
33
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47
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96
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Little Creek
8
P
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ZONE AE

Columbia County Property Appraiser

J. Doyle Crews, CFA - Lake City, Florida - 386-758-1083

PARCEL: 05-1S-17-04492-010 - NO AG ACRE (009900)

Name:	ALTAMIRA FARM LLC	LandVal	$180,000.00
Site:		BldgVal	$0.00
Mail:	1221 BRUCE B DOWNS #110 WESLEY CHAPEL, FL 33543	ApprVal	$180,000.00
		JustVal	$180,000.00
Sales Info	12/15/2006$206,000.00V / Q	Assd	$180,000.00
		Exmpt	$0.00
		Taxable	$180,000.00

0 0.2 0.4 0.6 mi

N W E S

This information, GIS Map Updated: 4/11/2007, was derived from data which was compiled by the Columbia County Property Appraiser Office solely for the governmental purpose of property assessment. This information should not be relied upon by anyone as a determination of the ownership of property or market value. No warranties, expressed or implied, are provided for the accuracy of the data herein, it's use, or it's interpretation. Although it is periodically updated, this information may not reflect the data currently on file in the Property Appraiser's office. The assessed values are NOT certified values and therefore are subject to change before being finalized for ad valorem assessment purposes.

07-04-07

NOTICE OF COMMENCEMENT FORM
COLUMBIA COUNTY, FLORIDA

THE UNDERSIGNED hereby gives notice that improvement will be made to certain real property, and in accordance with Chapter 713, Florida Statutes, the following information is provided in this Notice of Commencement.

Tax Parcel ID Number 05-15-17-04492-010 (Altamura Farms)
Deer Run Preservation

1. Description of property: (legal description of the property and street address or 911 address)
Begin at the SE CORNER of SEC Run W along the S line 1310.02 Ft, N 1333.16 Ft, E 1310.00 Ft, to the E line of the SE1/4, Thence run S 1334.91 Ft to POB ORB 559-499, ORB 595-183, ORB 578-2224 WD 10-29-1982, WD 1105-553. 44N, 11 miles past I-10 to Deer Run, to end of left

2. General description of improvement: single family dwelling

3. Owner Name & Address Altamura Farms

Interest in Property

4. Name & Address of Fee Simple Owner (if other than owner):

5. Contractor Name ISAAC Construction Phone Number 719-7143
Address 2109 W US Hwy 90, Suite 170 Lake City, FL 32055

6. Surety Holders Name n/A Phone Number
Address
Amount of Bond n/A

7. Lender Name n/A
Address

Inst:200700B315 Date:04/12/2007 Time:11:24
D.C. DC,P.DeWitt Cason,Columbia County B:1115 P:915

8. Persons within the State of Florida designated by the Owner upon whom notices or other documents may be served as provided by section 718.13 (1)(a) 7; Florida Statutes:
Name n/A Phone Number
Address

9. In addition to himself/herself the owner designates n/A of
to receive a copy of the Lienor's Notice as provided in Section 713.13 (1)-
(a) 7. Phone Number of the designee

10. Expiration date of the Notice of Commencement (the expiration date is 1 (one) year from the date of recording,
(Unless a different date is specified)

NOTICE: AS PER CHAPTER 713, Florida Statutes:
The owner must sign the notice of commencement and no one else may be permitted to sign in his/her stead.

Barbara C. Webster
Commission # DD329279
Expires July 2, 2008

Sworn to (or affirmed) and subscribed before me this 11th day of April, 2007

Signature of Owner

DIRECTOR / MEMBER MANAGER
ALTAMURA FARM, L.L.C.

NOTARY STAMP/SEAL

Barbara C Webster
Signature of Notary

COLUMBIA COUNTY 9-1-1 ADDRESSING

P. O. Box 1787, Lake City, FL 32056-1787
PHONE: (386) 758-1125 * FAX: (386) 758-1365 * Email: ron croft@columbiacountyfla.com

Addressing Maintenance

To maintain the Countywide Addressing Policy you must make application for a 9-1-1 Address at the time you apply for a building permit. The established standards for assigning and posting numbers to all principal buildings, dwellings, businesses and industries are contained in Columbia County Ordinance 2001-9. The addressing system is to enable Emergency Service Agencies to locate you in an emergency, and to assist the United States Postal Service and the public in the timely and efficient provision of services to residents and businesses of Columbia County.

DATE REQUESTED: 3/21/2007 **DATE ISSUED:** 5/7/2007

ENHANCED 9-1-1 ADDRESS:

166 NE ROE PL

WHITE SPRINGS FL 32096

PROPERTY APPRAISER PARCEL NUMBER:

05-13-17-04492-010

Remarks:

LOT 8 & 9 OF UNRECORDED DIVISION OF PROPERTY

Address Issued By: _____
Columbia County 9-1-1 Addressing / GIS Department

NOTICE: THIS ADDRESS WAS ISSUED BASED ON LOCATION INFORMATION RECEIVED FROM THE REQUESTER. SHOULD, AT A LATER DATE, THE LOCATION INFORMATION BE FOUND TO BE IN ERROR, THIS ADDRESS IS SUBJECT TO CHANGE.

741

Approved Address

MAY 07 2007

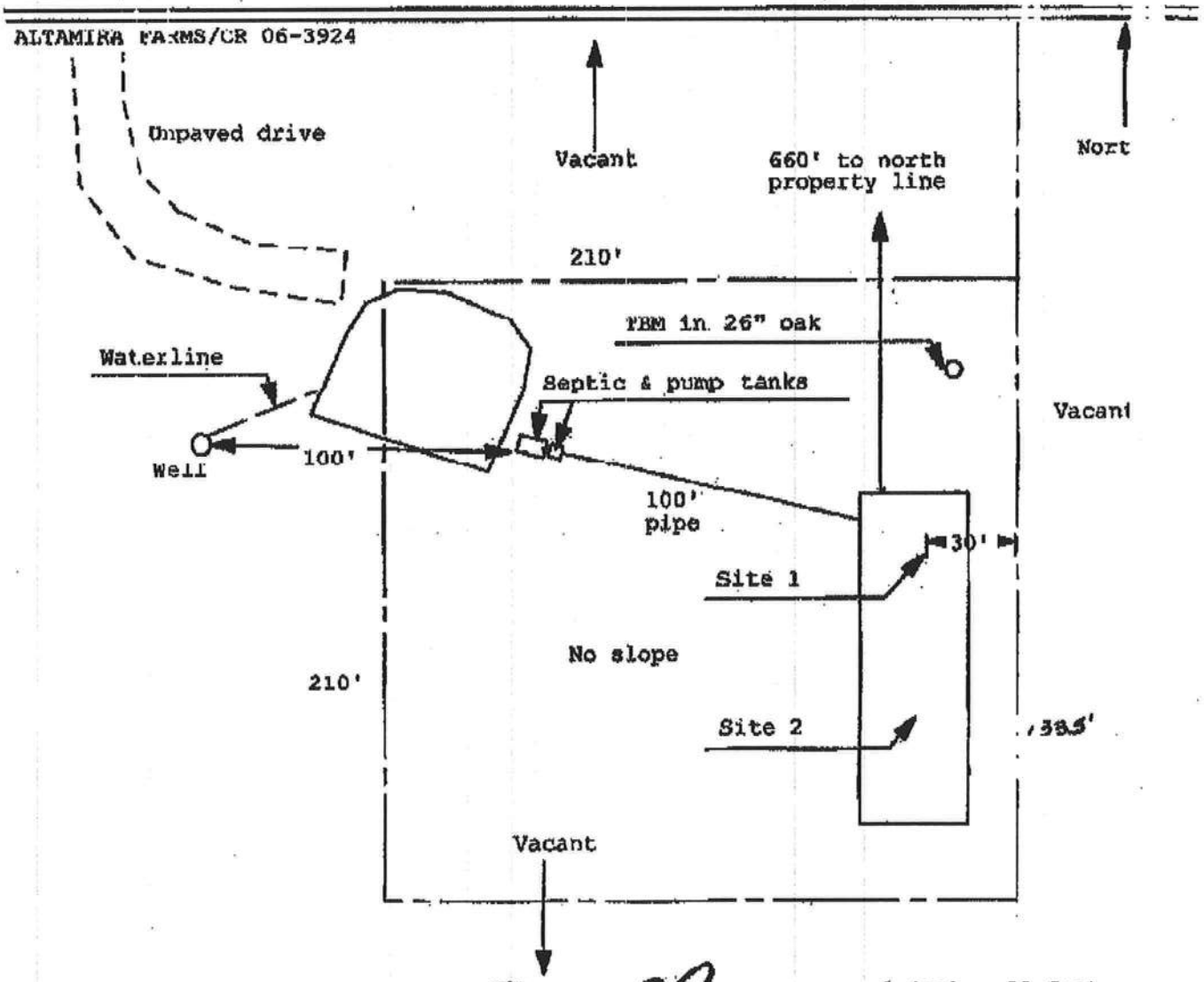
911Addressing/GIS Dept

07-0407

Application for Onsite Sewage Disposal System Construction Permit. Part II Site Plan

Permit Application Number: 07-091

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH UNIT



1 inch = 50 feet

Site Plan Submitted By Paul Hoyt **Date** 3/21/07

Plan Approved ✓ **Not Approved** ____ **Date** 4/12/07

By [signature] Columbia **CPHU**

Notes:

Attn: Meggie

Columbia County Building Department
Culvert Waiver

Culvert Waiver No. 000001381

DATE: 05/08/2007 BUILDING PERMIT NO. 25787

APPLICANT LINDA RODER PHONE 752-2281

ADDRESS 387 SW KEMP COURT LAKE CITY FL 32024

OWNER ALTAMIRA FARMS PHONE 813 514-2816

ADDRESS 166 NE ROE PLACE WHITE SPRINGS FL 32096

CONTRACTOR ISAAC CONSTRUCTION PHONE 719-7143

LOCATION OF PROPERTY 441N, 11 MILES FROM I-10, TR INTO DEER RUN, TO THE END ON LEFT

SUBDIVISION/LOT/BLOCK/PHASE/UNIT DEER RUN PRESER. 8/9

PARCEL ID # 05-1S-17-04492-010

I HEREBY CERTIFY THAT I UNDERSTAND AND WILL FULLY COMPLY WITH THE DECISION OF THE COLUMBIA COUNTY PUBLIC WORKS DEPARTMENT IN CONNECTION WITH THE HEREIN PROPOSED APPLICATION.

SIGNATURE: Linda Roder

A SEPARATE CHECK IS REQUIRED
MAKE CHECKS PAYABLE TO BCC

Amount Paid 50.00

PUBLIC WORKS DEPARTMENT USE ONLY

I HEREBY CERTIFY THAT I HAVE EXAMINED THIS APPLICATION AND DETERMINED THAT THE CULVERT WAIVER IS:

✓ APPROVED _____ NOT APPROVED - NEEDS A CULVERT PERMIT

COMMENTS: Privet Rd.

SIGNED: [signature] DATE: 5-14-07

ANY QUESTIONS PLEASE CONTACT THE PUBLIC WORKS DEPARTMENT AT 386-752-5955.

135 NE Hernando Ave., Suite B-21
Lake City, FL 32055
Phone: 386-758-1008 Fax: 386-758-2160

RECEIVED
MAY 10 2007
By _____

COLUMBIA COUNTY BOARD OF COMMISSIONERS FLORIDA

New Construction Subterranean Termite Soil Treatment Record

OMB Approval No. 2502-0525

This form is completed by the licensed Pest Control Company.

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This information is mandatory and is required to obtain benefits. HUD may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB control number.
Section 24 CFR 200.926d(b)(3) requires that the sites for HUD insured structures must be free of termite hazards. This information collection requires the builder to certify that an authorized Pest Control company performed all required treatment for termites, and that the builder guarantees the treated area against infestation for one year. Builders, pest control companies, mortgage lenders, homebuyers, and HUD as a record of treatment for specific homes will use the information collected. The information is not considered confidential.

This report is submitted for informational purposes to the builder on proposed (new) construction cases when soil treatment for prevention of subterranean termite infestation is specified by the builder, architect, or required by the lender, architect, FHA, or VA.

All contracts for services are between the Pest Control Operator and builder, unless stated otherwise.

#25787

Section 1: General Information (Treating Company Information)

Company Name: Aspen Pest Control, Inc.
Company Address: 301 NW Cole Terrace City Lake City State FL Zip 32055
Company Business License No. JB109476 Company Phone No. 386-755-9811
FHA/VA Case No. (if any)

Section 2: Builder Information

Company Name: Isaac Tonat Company Phone No.

Section 3: Property Information

Location of Structure(s) Treated (Street Address or Legal Description, City, State and Zip) 441 North At end Deer Run Last Lot

Type of Construction (More than one box may be checked) ☑ Slab ☐ Basement ☑ Crawl ☐ Other
Approximate Depth of Footing: Outside 0 Inside 0 Type of Fill Mix

Section 4: Treatment Information

Date(s) of Treatment(s) 5-21-07
Brand Name of Product(s) Used Fifus
EPA Registration No. 53883-164
Approximate Final Mix Solution % .06
Approximate Size of Treatment Area: Sq. ft. 3941 Linear ft. 249 Linear ft. of Masonry Voids 249
Approximate Total Gallons of Solution Applied 165
Was treatment completed on exterior? ☑ Yes ☐ No
Service Agreement Available? ☑ Yes ☐ No

Note: Some state laws require service agreements to be issued. This form does not preempt state law.

Attachments (List)
Comments Treated Slab - Stem walls - Piers

Name of Applicator(s) Steve Aranza Certification No. (if required by State law) JF104376

The applicator has used a product in accordance with the product label and state requirements. All treatment materials and methods used comply with state and federal regulations.

Authorized Signature Date 5-21-07

Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010. 1012; 31 U.S.C. 3729, 3802)

CERTIFICATE OF

OCCUPANCY

COLUMBIA COUNTY, FLORIDA

Department of Building and Zoning Inspection

This Certificate of Occupancy is issued to the below named permit holder for the building and premises at the below named location, and certifies that the work has been completed in accordance with the Columbia County Building Code.

Parcel Number 05-1S-17-04492-010 **Building permit No.** 000025787

Use Classification SFD,UTILITY **Fire:** 122.20

Permit Holder ISAAC CONSTRUCTION **Waste:** 167.50

Owner of Building ALTAMIRA FARMS **Total:** 289.70

Location: 166 NE ROE PLACE, WHITE SPRINGS, FL

Date: 12/13/2007

COLUMBIA COUNTY FLORIDA

Building Inspector

POST IN A CONSPICUOUS PLACE
(Business Places Only)

GTC DESIGN GROUP

STRUCTURAL AND WIND LOAD CALCULATIONS

For

Suwannee River Log Homes

Issac Construction and Manuel Solorzona

3/12/10

Gary Gill, P.E. 51942
P.O. Box 187
130 West Howard Street
Live Oak, FL 32064
Ph. (386) 362-3678
Fax (386) 362-6133
AUTH # 9461

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

Analysis by: G. GILL **Company Name:** GTC DESIGNGROUP
Description: Solorzano

User Input Data		
Structure Type	Building	
Basic Wind Speed (V)	110	mph
Struc Category (I, II, III, or IV)	II	
Exposure (B, C, or D)	B	
Struc Nat Frequency (n1)	1	Hz
Slope of Roof	12.0	:12
Slope of Roof (Theta)	45.0	Deg
Type of Roof	Gabled	
Kd (Directonality Factor)	0.85	
Eave Height (Eht)	9.30	ft
Ridge Height (RHt)	16.50	ft
Mean Roof Height (Ht)	12.90	ft
Width Perp. To Wind Dir (B)	26.00	ft
Width Paral. To Wind Dir (L)	10.00	ft

Calculated Parameters		
Type of Structure		
Height/Least Horizontal Dim	1.29	
Flexible Structure	No	

Calculated Parameters		
Importance Factor	1	
Hurricane Prone Region (V>100 mph)		
Table 6-2 Values		
Alpha =	7.000	
zg =	1200.000	
At =	0.143	
Bt =	0.840	
Bm =	0.450	
Cc =	0.300	
l =	320.00	ft
Epsilon =	0.333	
Zmin =	30.00	ft

Gust Factor Category I: Rigid Structures - Simplified Method			
Gust1	For rigid structures (Nat Freq > 1 Hz) use 0.85	0.85	
Gust Factor Category II: Rigid Structures - Complete Analysis			
Zm	Zmin	30.00	ft
Izm	Cc * (33/z)^0.167	0.3048	
Lzm	l*(zm/33)^Epsilon	309.99	ft
Q	(1/(1+0.63*((B+Ht)/Lzm)^0.63))^0.5	0.9243	
Gust2	0.925*((1+1.7*Izm*3.4*Q)/(1+1.7*3.4*Izm))	0.8804	
Gust Factor Summary			
G	Since this is not a flexible structure the lessor of Gust1 or Gust2 are used	0.85	

Fig 6-5 Internal Pressure Coefficients for Buildings, Gcpi

Condition	Gcpi	
	Max +	Max -
Open Buildings	0.00	0.00
Partially Enclosed Buildings	0.55	-0.55
Enclosed Buildings	0.18	-0.18
Enclosed Buildings	**0.18**	**-0.18**

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

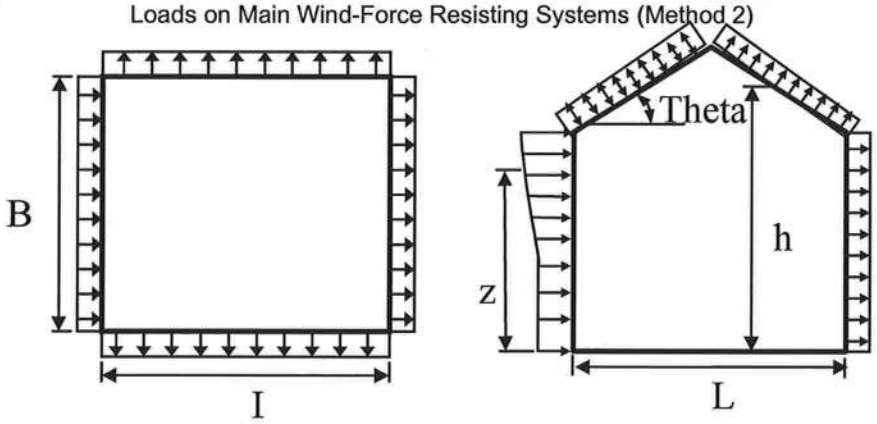
6.5.12.2.1 Design Wind Pressure - Buildings of All Heights

Elev	Kz	Kzt	qz	Pressure (lb/ft^2)						
				Windward Wall*		Leeward Wall		Total	Shear	Moment
ft			lb/ft^2	+GCpi	-GCpi	+GCpi	-GCpi	+/-Gcpi	(Kip)	(Kip-ft)
16.5	0.59	1.00	15.55	7.85	13.30	-9.15	-3.71	17.01	0.66	0.50
15	0.57	1.00	15.13	7.57	13.01	-9.15	-3.71	16.72	7.18	59.85

Note: 1) Positive forces act toward the face and Negative forces act away from the face.

Figure 6-6 - External Pressure Coefficients, Cp

Loads on Main Wind-Force Resisting Systems (Method 2)



Variable	Formula	Value	Units
Kh	2.01*(15/zg)^(2/Alpha)	0.57	
Kht	Topographic factor (Fig 6-4)	1.00	
Qh	.00256*(V)^2*I*Kh*Kht*Kd	15.13	psf
Khcc	Comp & Clad: Table 6-3 Case 1	0.70	
Qhcc	.00256*V^2*I*Khcc*Kht*Kd	18.45	psf

Wall Pressure Coefficients, Cp	
Surface	**Cp**
Windward Wall (See Figure 6.5.12.2.1 for Pressures)	0.8

Roof Pressure Coefficients, Cp	
Roof Area (sq. ft.)	-
Reduction Factor	1.00

Calculations for Wind Normal to 26 ft Face *Additional Runs may be req'd for other wind directions*	Cp	Pressure (psf) +GCpi	 -GCpi
Leeward Walls (Wind Dir Normal to 26 ft wall)	-0.50	-9.15	-3.71
Leeward Walls (Wind Dir Normal to 10 ft wall)	-0.27	-6.20	-0.75
Side Walls	-0.70	-11.73	-6.28
Roof - Wind Normal to Ridge (Theta>=10) - for Wind Normal to 26 ft face			
Windward - Min Cp	0.00	0.00	0.00
Windward - Max Cp	0.30	1.13	6.58
Leeward Normal to Ridge	-0.60	-10.44	-4.99
Overhang Top (Windward)	0.00	0.00	0.00
Overhang Top (Leeward)	-0.60	-7.72	-7.72

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

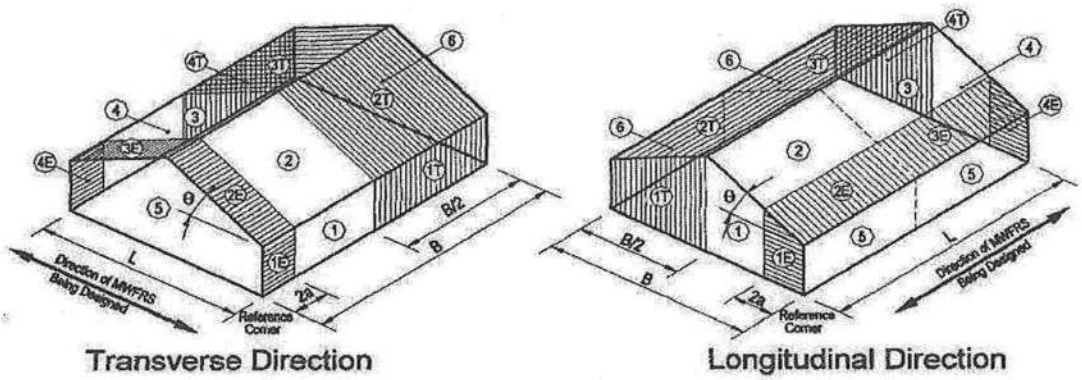
Overhang Bottom (Applicable on Windward only)	0.80	10.29	10.29
Roof - Wind Parallel to Ridge (All Theta) - for Wind Normal to 10 ft face			
Dist from Windward Edge: 0 ft to 25.8 ft - Max Cp	-0.18	-5.04	0.41
Dist from Windward Edge: 0 ft to 6.45 ft - Min Cp	-0.90	-14.26	-8.81
Dist from Windward Edge: 6.45 ft to 10 ft - Min Cp	-0.90	-14.30	-8.85
Dist from Windward Edge: 12.9 ft to 25.8 ft - Min Cp	-0.50	-9.15	-3.71
Dist from Windward Edge: > 25.8 ft	-0.30	-6.58	-1.13

* Horizontal distance from windward edge

Figure 6-10 - External Pressure Coefficients, GCpf

Loads on Main Wind-Force Resisting Systems w/ Ht <= 60 ft

Kh =	2.01*(15/zg)^(2/Alpha)	=	0.70
Kht =	Topographic factor (Fig 6-2)	=	1.00
Qh =	0.00256*(V)^2*ImpFac*Kh*Kht*Kd	=	18.45
Theta =	Angle of Roof	=	45.0 Deg



Torsional Load Cases

Wind Pressures on Main Wind Force Resisting System						
Surface	GCpf	+GCpi	-GCpi	qh (psf)	Min P (psf)	Max P (psf)
1	0.56	0.18	-0.18	18.45	7.01	13.65
2	0.21	0.18	-0.18	18.45	0.55	7.19
3	-0.43	0.18	-0.18	18.45	-11.25	-4.61
4	-0.37	0.18	-0.18	18.45	-10.15	-3.50
5	-0.45	0.18	-0.18	18.45	-11.62	-4.98
6	-0.45	0.18	-0.18	18.45	-11.62	-4.98
1E	0.69	0.18	-0.18	18.45	9.41	16.05
2E	0.27	0.18	-0.18	18.45	1.66	8.30
3E	-0.53	0.18	-0.18	18.45	-13.10	-6.46
4E	-0.48	0.18	-0.18	18.45	-12.17	-5.53

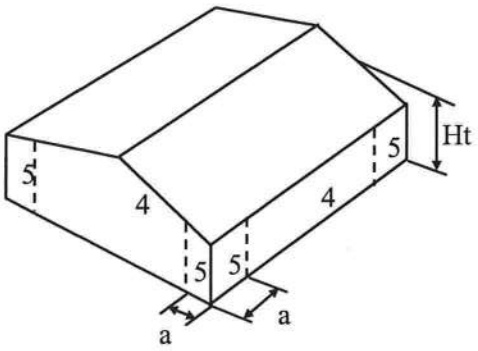
* p = qh * (GCpf - GCpi)

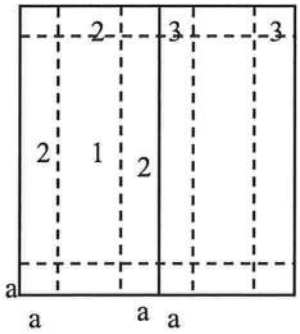
WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

Figure 6-11 - External Pressure Coefficients, GCp

Loads on Components and Cladding for Buildings w/ Ht <= 60 ft





Gabled Roof

7 < Theta <= 45

a = 1 ==> 3.00 ft

Double Click on any data entry line to receive a help Screen

Component	Width (ft)	Span (ft)	Area (ft^2)	Zone	GCp		Wind Press (lb/ft^2	
					Max	Min	Max	Min
ROOF	10	1	10.00	1	0.90	-1.00	19.92	-21.77
ROOF EDGE	10	1	10.00	2	0.90	-1.20	19.92	-25.46
WALL	10	1	10.00	4	1.00	-1.10	21.77	-23.61
WALL EDGE	10	1	10.00	5	1.00	-1.40	21.77	-29.15
ROOF EDGE	10	1	10.00	2H	0.90	-2.00	16.60	-36.89

Note: * Enter Zone 1 through 5, or 1H through 3H for overhangs.

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

Analysis by: G. GILL **Company Name:** GTC DESIGNGROUP
Description: Solorzano

User Input Data		
Structure Type	Building	
Basic Wind Speed (V)	110	mph
Struc Category (I, II, III, or IV)	II	
Exposure (B, C, or D)	B	
Struc Nat Frequency (n1)	1	Hz
Slope of Roof	6.0	:12
Slope of Roof (Theta)	26.6	Deg
Type of Roof	Gabled	
Kd (Directonality Factor)	0.85	
Eave Height (Eht)	9.30	ft
Ridge Height (RHt)	16.50	ft
Mean Roof Height (Ht)	12.90	ft
Width Perp. To Wind Dir (B)	60.00	ft
Width Paral. To Wind Dir (L)	26.00	ft

Calculated Parameters		
Importance Factor	1	
Hurricane Prone Region (V>100 mph)		
Table 6-2 Values		
Alpha =	7.000	
zg =	1200.000	
At =	0.143	
Bt =	0.840	
Bm =	0.450	
Cc =	0.300	
l =	320.00	ft
Epsilon =	0.333	
Zmin =	30.00	ft

Calculated Parameters	
Type of Structure	
Height/Least Horizontal Dim	0.50
Flexible Structure	No

Gust Factor Category I: Rigid Structures - Simplified Method			
Gust1	For rigid structures (Nat Freq > 1 Hz) use 0.85	0.85	
Gust Factor Category II: Rigid Structures - Complete Analysis			
Zm	Zmin	30.00	ft
Izm	Cc * (33/z)^0.167	0.3048	
Lzm	l*(zm/33)^Epsilon	309.99	ft
Q	(1/(1+0.63*((B+Ht)/Lzm)^0.63))^0.5	0.8933	
Gust2	0.925*((1+1.7*Izm*3.4*Q)/(1+1.7*3.4*Izm))	0.8620	
Gust Factor Summary			
G	Since this is not a flexible structure the lessor of Gust1 or Gust2 are used	0.85	

Fig 6-5 Internal Pressure Coefficients for Buildings, Gcpi

Condition	Gcpi	
	Max +	Max -
Open Buildings	0.00	0.00
Partially Enclosed Buildings	0.55	-0.55
Enclosed Buildings	0.18	-0.18
Enclosed Buildings	**0.18**	**-0.18**

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

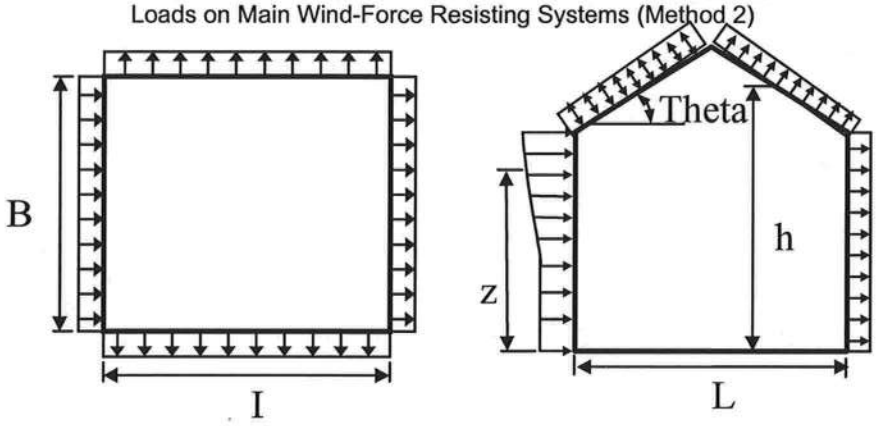
6.5.12.2.1 Design Wind Pressure - Buildings of All Heights

Elev	Kz	Kzt	qz	Pressure (lb/ft^2)						
				Windward Wall*		Leeward Wall		Total	Shear	Moment
ft			lb/ft^2	+GCpi	-GCpi	+GCpi	-GCpi	+/-Gcpi	(Kip)	(Kip-ft)
16.5	0.59	1.00	15.55	7.85	13.30	-9.15	-3.71	17.01	1.53	1.15
15	0.57	1.00	15.13	7.57	13.01	-9.15	-3.71	16.72	16.58	138.12

Note: 1) Positive forces act toward the face and Negative forces act away from the face.

Figure 6-6 - External Pressure Coefficients, Cp

Loads on Main Wind-Force Resisting Systems (Method 2)



Variable	Formula	Value	Units
Kh	2.01*(15/zg)^(2/Alpha)	0.57	
Kht	Topographic factor (Fig 6-4)	1.00	
Qh	.00256*(V)^2*I*Kh*Kht*Kd	15.13	psf
Khcc	Comp & Clad: Table 6-3 Case 1	0.70	
Qhcc	.00256*V^2*I*Khcc*Kht*Kd	18.45	psf

Wall Pressure Coefficients, Cp	
Surface	**Cp**
Windward Wall (See Figure 6.5.12.2.1 for Pressures)	0.8

Roof Pressure Coefficients, Cp	
Roof Area (sq. ft.)	-
Reduction Factor	1.00

Calculations for Wind Normal to 60 ft Face *Additional Runs may be req'd for other wind directions*	Cp	Pressure (psf) +GCpi	 -GCpi
Leeward Walls (Wind Dir Normal to 60 ft wall)	-0.50	-9.15	-3.71
Leeward Walls (Wind Dir Normal to 26 ft wall)	-0.28	-6.38	-0.94
Side Walls	-0.70	-11.73	-6.28
Roof - Wind Normal to Ridge (Theta>=10) - for Wind Normal to 60 ft face			
Windward - Min Cp	-0.27	-6.16	-0.71
Windward - Max Cp	0.20	-0.13	5.32
Leeward Normal to Ridge	-0.60	-10.44	-4.99
Overhang Top (Windward)	-0.27	-3.43	-3.43
Overhang Top (Leeward)	-0.60	-7.72	-7.72

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

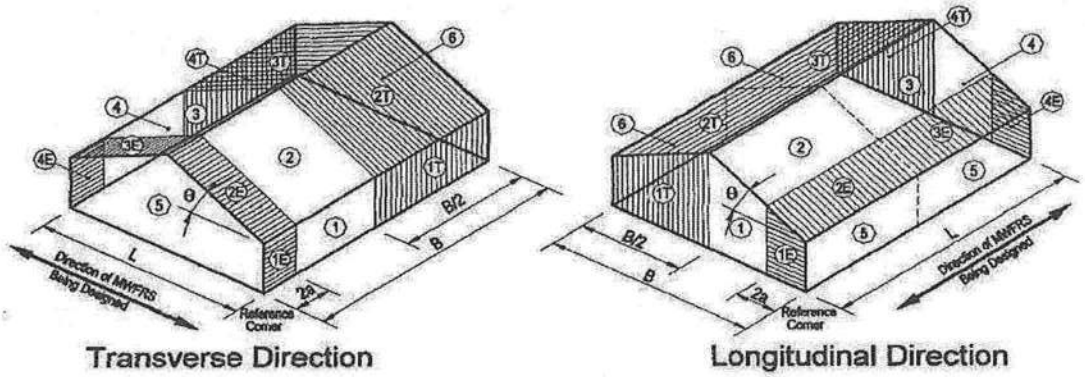
Overhang Bottom (Applicable on Windward only)	0.80	10.29	10.29
Roof - Wind Parallel to Ridge (All Theta) - for Wind Normal to 26 ft face			
Dist from Windward Edge: 0 ft to 25.8 ft - Max Cp	-0.18	-5.04	0.41
Dist from Windward Edge: 0 ft to 6.45 ft - Min Cp	-0.90	-14.30	-8.85
Dist from Windward Edge: 6.45 ft to 12.9 ft - Min Cp	-0.90	-14.30	-8.85
Dist from Windward Edge: 12.9 ft to 25.8 ft - Min Cp	-0.50	-9.15	-3.71
Dist from Windward Edge: > 25.8 ft	-0.30	-6.58	-1.13

* Horizontal distance from windward edge

Figure 6-10 - External Pressure Coefficients, GCpf

Loads on Main Wind-Force Resisting Systems w/ Ht <= 60 ft

Kh =	2.01*(15/zg)^(2/Alpha)	=	0.70
Kht =	Topographic factor (Fig 6-2)	=	1.00
Qh =	0.00256*(V)^2*ImpFac*Kh*Kht*Kd	=	18.45
Theta =	Angle of Roof	=	26.6 Deg



Torsional Load Cases

Wind Pressures on Main Wind Force Resisting System						
Surface	GCpf	+GCpi	-GCpi	qh (psf)	Min P (psf)	Max P (psf)
1	0.55	0.18	-0.18	18.45	6.82	13.46
2	-0.10	0.18	-0.18	18.45	-5.09	1.55
3	-0.45	0.18	-0.18	18.45	-11.57	-4.93
4	-0.39	0.18	-0.18	18.45	-10.52	-3.88
5	-0.45	0.18	-0.18	18.45	-11.62	-4.98
6	-0.45	0.18	-0.18	18.45	-11.62	-4.98
1E	0.73	0.18	-0.18	18.45	10.10	16.74
2E	-0.19	0.18	-0.18	18.45	-6.74	-0.10
3E	-0.58	0.18	-0.18	18.45	-14.10	-7.46
4E	-0.53	0.18	-0.18	18.45	-13.18	-6.54

* p = qh * (GCpf - GCpi)

Title : Solorzona **Job #**
Dsgnr: Gary Gill **Date:**
Description :

Scope :

Timber Beam & Joist

Description Floor girders

Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

		Floor Girder 1	Floor Girder 2
Timber Section		**6x12**	**3-2x12**
Beam Width	in	5.500	4.500
Beam Depth	in	11.500	11.250
Le: Unbraced Length	ft	0.00	0.00
TImber Grade		Douglas Fir - Larch,	Southern Pine, No.2 Southern Pine, No.2 anthony 24F, Anthony Southern Pine, No.2
Fb - Basic Allow	psi	1,150.0	975.0
Fv - Basic Allow	psi	95.0	90.0
Elastic Modulus	ksi	1,800.0	1,600.0
Load Duration Factor		1.000	1.000
Member Type		Sawn	Manuf/Pine
Repetitive Status		No	No

Center Span Data

Span	ft	13.00	7.25
Dead Load	#/ft	70.00	140.00
Live Load	#/ft	280.00	560.00

Results

Ratio =		0.6364	0.6215
Mmax @ Center	in-k	88.72	55.19
@ X =	ft	6.50	3.62
fb : Actual	psi	731.9	581.4
Fb : Allowable	psi	1,150.0	975.0
		Bending OK	**Bending OK**
fv : Actual	psi	46.2	55.9
Fv : Allowable	psi	95.0	90.0
		Shear OK	**Shear OK**

Reactions

@ Left End	DL	lbs	455.00	507.50
	LL	lbs	1,820.00	2,030.00
	Max. DL+LL	lbs	2,275.00	2,537.50
@ Right End	DL	lbs	455.00	507.50
	LL	lbs	1,820.00	2,030.00
	Max. DL+LL	lbs	2,275.00	2,537.50

Deflections

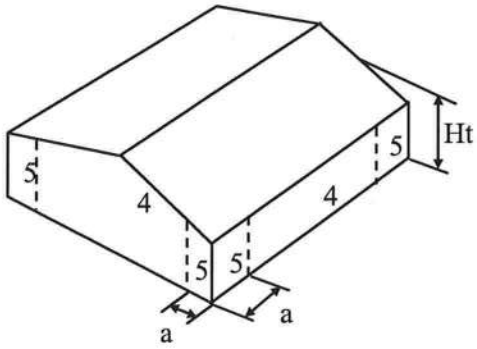
		Ratio OK	Deflection OK
Center DL Defl	in	-0.036	-0.010
L/Defl Ratio		4,351.4	8,540.4
Center LL Defl	in	-0.143	-0.041
L/Defl Ratio		1,087.9	2,135.1
Center Total Defl	in	-0.179	-0.051
Location	ft	6.500	3.625
L/Defl Ratio		870.3	1,708.1

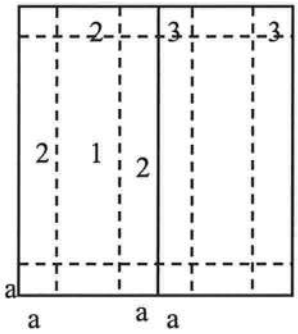
WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

Figure 6-11 - External Pressure Coefficients, GCp

Loads on Components and Cladding for Buildings w/ Ht <= 60 ft





Gabled Roof

7 < Theta <= 45

a = 2.6 ==> 3.00 ft

Double Click on any data entry line to receive a help Screen

Component	Width (ft)	Span (ft)	Area (ft^2)	Zone	GCp		Wind Press (lb/ft^2	
					Max	Min	Max	Min
ROOF	10	1	10.00	1	0.50	-0.90	12.54	-19.92
ROOF EDGE	10	1	10.00	2	0.50	-1.70	12.54	-34.68
WALL	10	1	10.00	4	1.00	-1.10	21.77	-23.61
WALL EDGE	10	1	10.00	5	1.00	-1.40	21.77	-29.15
ROOF EDGE	10	1	10.00	2H	0.50	-2.20	10.00	-40.58

Note: * Enter Zone 1 through 5, or 1H through 3H for overhangs.

SUWANNEE RIVER
LOG HOMES, INC.

4345 HIGHWAY 90 WEST, WELLBORN, FL 32094
PHONE 386-963-5647
FAX 386-963-2809

0704 09
Altamira Farms

PROJECT NAME: ISAAC CONSTRUCTION & SOLORZANO

PROJECT LOCATION: COLUMBIA COUNTY, FLORIDA

PERMIT APPL. NUMBER: 0704-09

TO WHOM IT MAY CONCERN,

1. THE BALCONY SHALL HAVE A RAILING IN COMPLIANCE WITH SECTION R312.1 OF THE FRC.
2. PLEASE REFER TO THE ATTACHED SHEETS FOR THE FIRE RATING EQUATION OF THE LOG WALL.
3. PLEASE REFER TO THE ATTACHED SHEET FOR THE TRUSS BRACING DETAIL.

THANK YOU,

GARY J. GILL, P.E.
4/7/09

Gary J. Gill, P.E. #51942
P.O. Box 187
130 West Howard Street
Live Oak FL, 32064
Phone: (386) 362-3678
Fax: (386) 362-6133
STRUCTURAL/CIVIL ENGINEERS Auth. #: 9461

SUWANNEE RIVER
LOG HOMES, INC.

4345 HIGHWAY 90 WEST, WELLBORN, FL 32094
PHONE 386-963-5647
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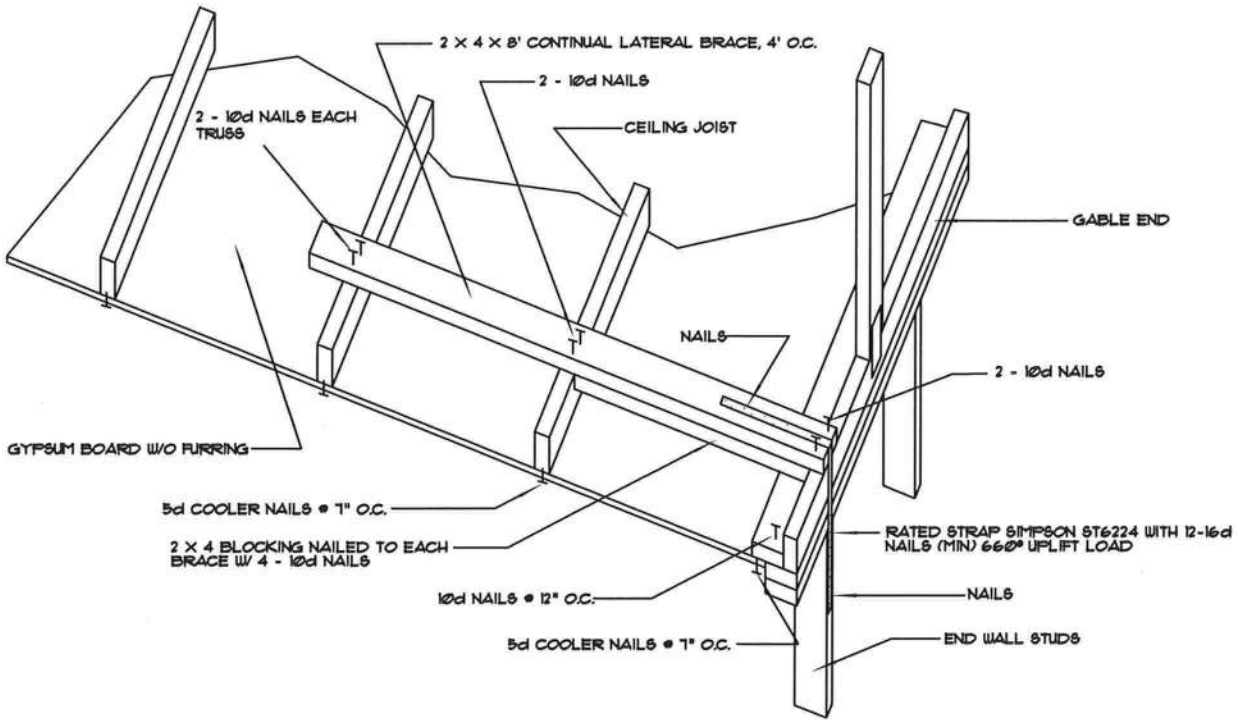
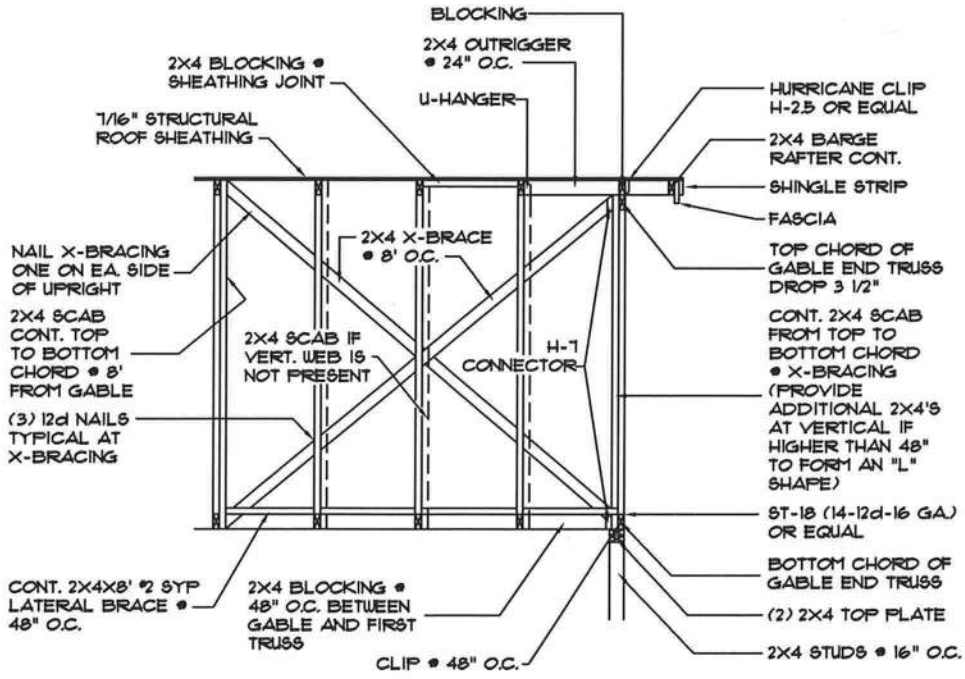


CEILING CONNECTION TO GABLE ENDWALL FOR GYPSUM BOARD DIAPHRAGMS



PLATFORM FRAMING GABLE END

Gary J. Gill, P.E. #51942
P.O. Box 187
130 West Howard Street
Live Oak FL, 32064
Phone: (386) 362-3678
Fax: (386) 362-6133
STRUCTURAL/CIVIL ENGINEERS
Auth. #: 9461

Fire Performance of Log Walls

Species	Burn Rate
Douglas Fir, Redwood	1.6 inches per hour
Bald Cypress, Spruce	1.7 inches per hour
Oak, Northern Red / White	1.8 / 1.5 inches per hour
Pine: Eastern White	1.6 inches per hour
Ponderosa	2.1 inches per hour
Southern	2.2 inches per hour
Sugar	2.0 inches per hour

This information is valuable in determining fire resistance because it illustrates how much wood is removed from the structural integrity of the member after burning for one hour. If only 3 inches of sound wood were capable of supporting design loads, the overall thickness of the log wall could be 4.6 to 5 inches.

> For more information on fire safety and the performance of wood in fire, refer to the *Wood Handbook: Wood as an Engineering Material* (FPL-GTR-113) and other Forest Service publications.

Code Comparison: Solid Wood Walls vs. Heavy Timber Construction Type

Heavy timber construction is considered fire-resistive if the structure can maintain its integrity for a specific amount of time during a fire. The structure can consist of timber framing to provide the entire support; curtain walls or load bearing walls must be fire-resistive construction. The intent of the codes is to provide a barrier to movement of fire through containment with minimal impact on structural integrity. Containment is measured by temperature rise on the wall surface opposite of the fire exposure while the construction continues to support the design loads.

Load Transfer Comparison

In heavy timber construction, the structural loads placed on the assembly are transferred from spanning members (beams, rafters, joists) to specific bearing areas (post, column, mullion). In log buildings, the log wall is a fully supported beam supporting the same structural frame members.

- *Rather than substantial concentrated loads on a few vertical members supporting the entire framework, log wall construction spreads the loads throughout the entire structure.*
- *Secondly, the log wall assembly is likely to be only exposed to fire on one side while the timber column will have three or all four surfaces exposed.*

These are important considerations since the log building is likely to be less prone to collapse in any one area under a fire condition.

Fire Exposure Comparison

Since log walls are a solid assembly extending from subfloor to roof, there is only opportunity for exposure on two sides of the assembly. The concept that the unobstructed height of the log wall is to be used in determining fire resistance is supported by Rule 1 from T.Z. Harmathy's *Ten Rules of Fire Endurance Rating* (published in 1965 in *Fire Technology*). This rule states:

> The "thermal" fire endurance of a construction consisting of a number of parallel layers is greater than the sum of the "thermal" fire endurance characteristics of the individual layers when exposed separately to fire.

This rule, as substantiated by testing on glu-lam beams, supports the fact that the fire rating of a log wall would be based on the total height of the assembly as defined by contiguous courses (layers) and protected openings. The effective height would be determined to the bottom of an adjoining horizontal interface (floor or roof assembly).

Therefore, to differentiate solid wood walls from other types of wood construction in model codes, the Log Homes Council established the following definition of log wall construction:

> Log wall construction is a type of construction in which the exterior building walls are constructed of solid wood members not less than 6" (152mm) in nominal thickness in which fire resistance is attained by the size and low thermal conductivity of the wood members.

This definition is directly correlated to the requirement for Heavy Timber Construction that calls for a minimum 6" dimension to structural members. In the absence of supporting research, it is impractical to include smaller wood members in the log wall.

Calculating Fire Resistance Rating

The desire to establish a reasonable fire rating for solid wood walls included a search for existing methodology that could be logically applied. The research effort uncovered formulas for determining fire resistance for beams and columns published by the American Institute of Timber Construction, American Forest and Paper Association, CABO National Evaluation Service (NER-250), and adopted into each of the model building codes (BOCA, ICBO, SBCCI).

Referring to ICBO's Uniform Building Code, Chapter 7 Fire-Resistant Materials and Construction, Section 703.3 Calculating Fire Resistance: "The fire-resistive rating of a material or assembly may be established by calculations. The procedures used for such calculations shall be in accordance with U.B.C. Standard 7-7." The 1994 Uniform Building Code Standard 7-7, *Methods for Calculating Fire Resistance of Steel, Concrete, Wood, Concrete Masonry and Clay Masonry Construction, Part VI – Method for Design of One-hour Fire-resistive Exposed Wood Member 6-inch (152mm) Nominal or Greater* (NER-250) defines the procedure to establish the fire rating of columns or beams and to determine the size required to be treated as one hour.

Given that the standard only provides guidelines for columns (exposed on four sides) and beams (exposed on three sides), the approach to calculate a fire rating for a log wall will begin with the conservative equation for beams. Per the published standards, the calculation of fire resistance rating for a given timber beam size, in minutes, is equal to

Minutes of Fire Resistance Rating = $2.54\ Zb\ [4-(b/d)]$.

Where:

- b = *the breadth (width) of a beam or larger side of a column before exposure to fire, inches. By definition of this section, the minimum breadth is 6-in. nominal (5.5-in. actual per the National Design Specification for Wood).*
- *d* = *the depth of a beam or smaller side of a column before exposure to fire, inches. It is assumed that each horizontally laid wall-log (as defined by ASTM D-3957) acts as a beam to support roof/floor loading. Whether considered as acting independently or collectively (e.g., as a glu-lam timber), the depth of the beam would be considered to be the height (in inches) of the contiguous wall-log surfaces. Therefore, the depth of an 8-ft. high log wall would be 96-in.; the depth of a header over a door/window opening might be 8 to 18 inches.*
- *Z* = *the load factor taken from the graph of load on a member as a percent of allowable (UBC Figure 7-7-1, NER-250 Figure 1). For all beams, the maximum load factor is 1.3 and assumes that the load on the member as a percent of allowable load is no more than 50%.*

The load factor, Z, is typically established at 1.3 for a beam or 1.5 for a column that is loaded to 50% of less of its allowable load. As described above, the log wall is capable of acting as a structural beam but is fully supported by the foundation, and it is limited in exposure to either interior or exterior. Considering that the log wall will not be loaded as much as 50% of allowable and exposure from 2 sides versus the 3 provided by beams and 4 by columns, it appears logical that the load factor of 1.5 for columns would be applicable.

Using these criteria, the ratings for a 4" and 6" thick log wall were calculated as follows. The first three calculations maintain the premise assumed above. The last provides a more conservative approach that coincides with the definition of heavy timber construction.

a) If b>=4", d=96" (8-ft.), and Z=1.5; (2.54*1.5*4*[4-(4/96)]) = 60.325 minutes
b) If b>=6", d=96" (8-ft.), and Z=1.5; (2.54*1.5*6*[4-(6/96)]) = 90.4875 minutes
c) If b>=8", d=96" (8-ft.), and Z=1.5; (2.54*1.5*8*[4-(6/96)]) = 120.015 minutes
d) If rating = 60 minutes, b=d, and Z=1.3; (60/(2.54*1.3*<[> 4-(4/4)])) = 6.057 inches.

Based on the calculation model above, research data on timbers, and fire testing (see Summary of Fire Tests & Supporting Opinions in the back of this paper), the Log Homes Council contends that the fire-resistive ratings of solid wood walls can be determined on the basis of the minimum thickness of the wall. Due to the continuous support provided under log walls, this determination should be made using a load factor of 1.5 used typically for columns. As one can see above, as the log wall thickness increases, so does the fire rating of the log wall assembly.

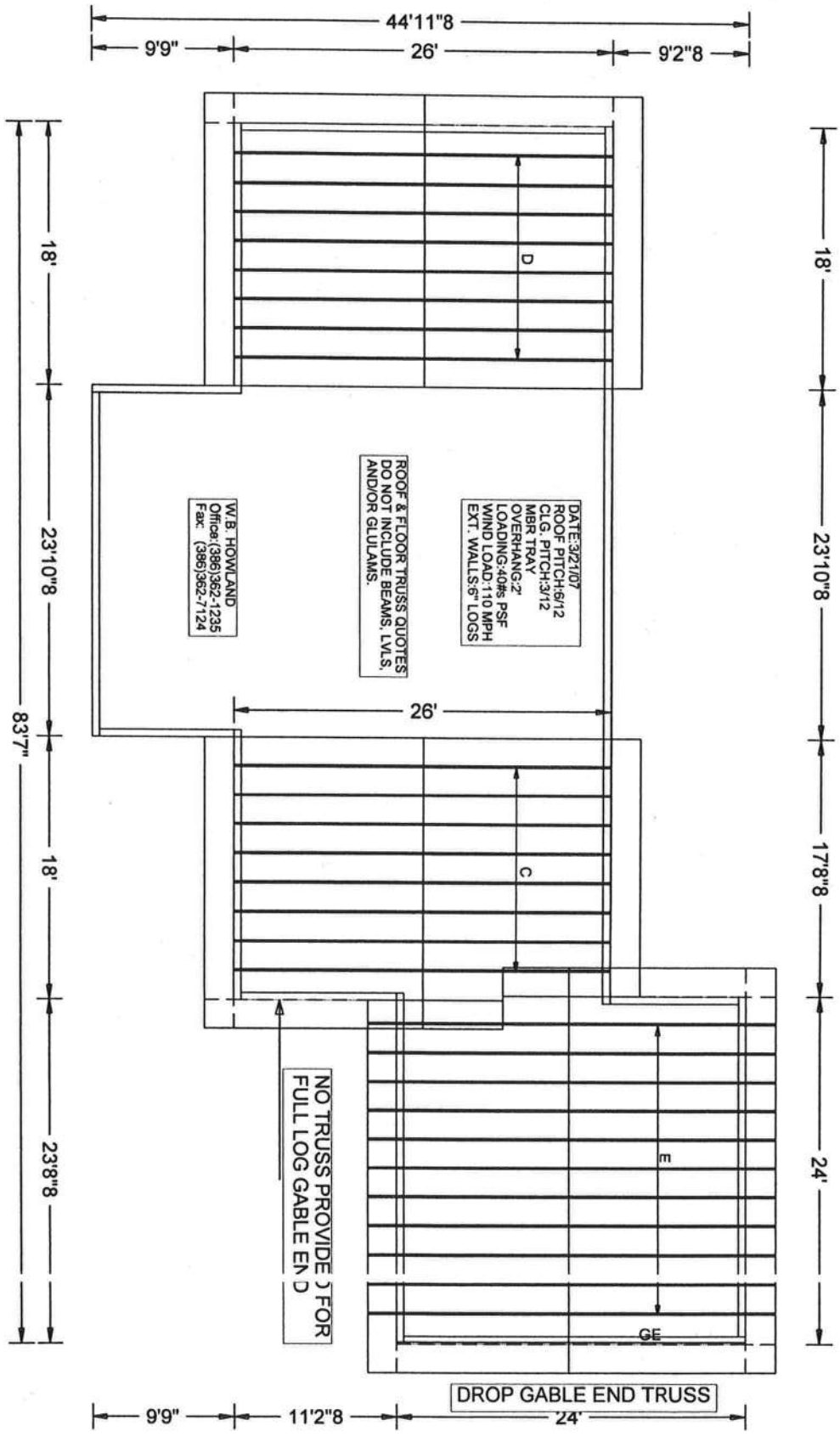
The Urban-Wildland Interface Fire Code

The effort of the Log Homes Council to gain recognition of solid wood walls as a fire-resistive construction culminated in 1996 with the acceptance of log wall construction in the Urban-Wildland Interface Fire Code o the ICC. This code defines log wall construction as

> ... a type of construction in which exterior walls are constructed of solid wood members and where the smallest horizontal dimension of each solid wood member is at least 6 inches (152mm).

Further, the code makes exception for heavy timber or log wall construction in its requirement for one-hour fire ratings for exterior walls in its Class 1 and Class 2 Ignition-Resistant Construction categories. Additionally, Table 503.1–Ignition-Resistant Construction relates Moderate, High, and Extreme Hazard to the Water Supply and the Defensible Space. For High and Extreme Hazard classes, "Exterior walls shall have a fire-resistive rating of not less than one-hour and the exterior surfaces of such walls shall be noncombustible. Usage of log wall construction is allowed.

The code review committee found the arguments of the Log Homes Council and National Association of Home Builders to be persuasive but maintained that the calculation would be determined using the 1.3 load factor for beams. The Log Homes Council believes this to be a conservative approach.



PAGE NO:	JOB NO:	Job Name: ISAAC/SOLORZANO Customer: SUWANNEE RIVER LOG HOMES Designer: Lynn Bell	
1 OF 1	4441		

ITW Building Components Group, Inc.

1950 Marley Drive Haines City, FL 33844
Florida Engineering Certificate of Authorization Number: 567
Florida Certificate of Product Approval # FL1999
 Document ID:1T5Z215-Z0226110622

Truss Fabricator:	W.B. Howland
Job Identification:	4441-/ISAAC/SOLORZANO /SUWANNEE RIVER LOG HOMES -- , **
Truss Count:	4
Model Code:	Florida Building Code 2004 and 2006 Supplement
Truss Criteria:	ANSI/TPI-2002(STD)/FBC
Engineering Software:	Alpine Software,Version 7.25.
Structural Engineer of Record:	The identity of the structural EOR did not exist as of
Address:	the seal date per section 61G15-31.003(5a) of the FAC
Minimum Design Loads:	Roof - 40.0 PSF @ 1.25 Duration
	Floor - N/A
	Wind - 110 MPH ASCE 7-02 -Closed

Seal Date: 03/26/2007

-Truss Design Engineer-
James F. Collius Jr.
Florida License Number: 52212
1950 Marley Drive
Haines City, FL 33844

Notes:

1. Determination as to the suitability of these truss components for the structure is the responsibility of the building designer/engineer of record, as defined in ANSI/TPI 1
2. The drawing date shown on this index sheet must match the date shown on the individual truss component drawing.
3. As shown on attached drawings; the drawing number is preceded by: HCUSR215

Details: A11015EE-GBLLETIN-

#	Ref	Description	Drawing#	Date
1	64645--D		07085026	03/26/07
2	64646--E		07085028	03/26/07
3	64647--GE		07085027	03/26/07
4	64648--C		07085029	03/26/07

(4441-/ISAAC/SOLORZANO /SUWANNEE RIVER LOG HOMES -- , ** - D)

Top chord 2x4 SP #2 N
Bot chord 2x4 SP #2 N
Webs 2x4 SP #2 N

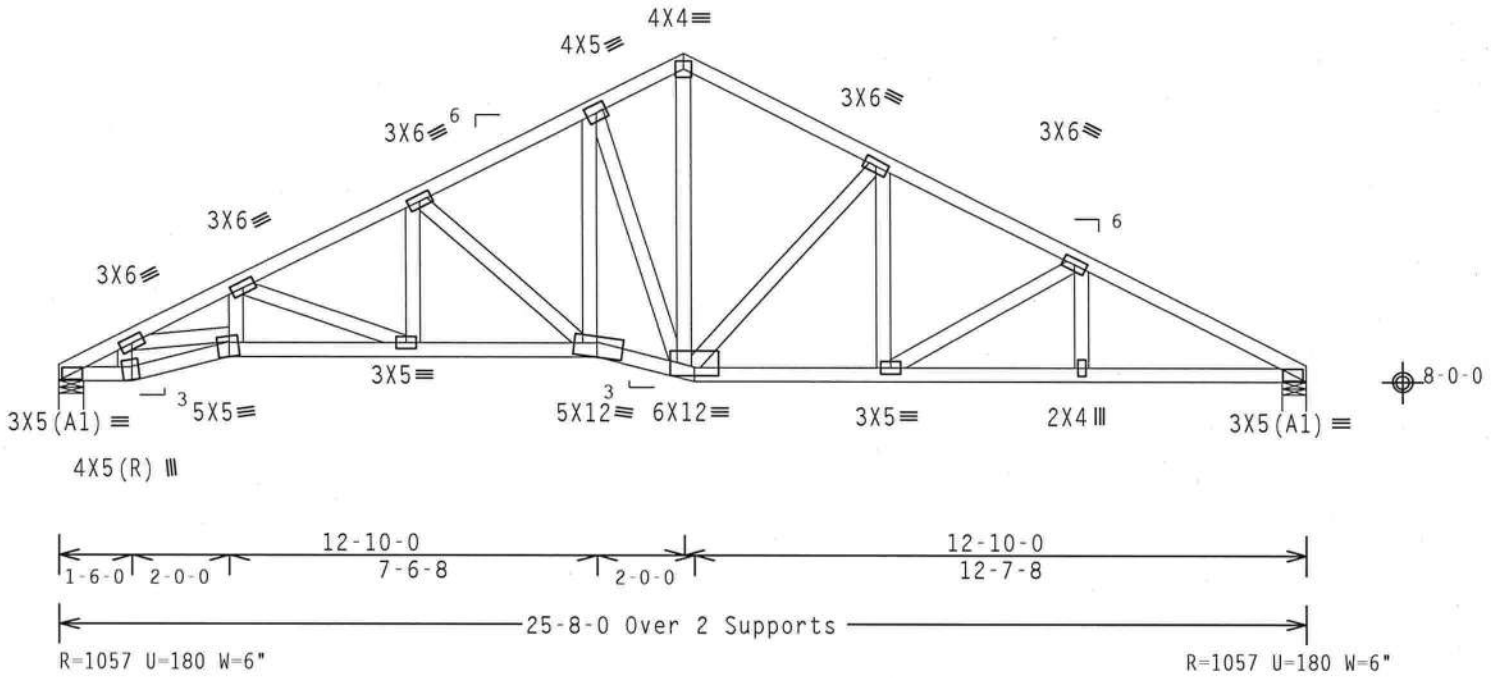
Wind reactions based on MWFRS pressures.

Plates sized for a minimum of 3.00 sq.in./piece.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf. Iw=1.00 GCpi(+/-)=0.18

Deflection meets L/240 live and L/180 total load.

The overall height of this truss excluding overhang is 6-9-3.



Design Crit: TPI-2002(STD)/FBC

PLT TYP. Wave

Cq/RT=1.00(1.25)/10(0) 7.25.0503 QTY:9 FL/-/5/-/-/R/- Scale =.25"/Ft.

ALPINE

ITW Building Components Group, Inc.
Haines City, FL 33844
FL Certificate of Authorization # 567

WARNING TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSI (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 218 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA, 22314) AND WTCA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LANE, MADISON, WI 53719) FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.

IMPORTANTFURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ITW BCG, INC. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN; ANY FAILURE TO BUILD THE TRUSS IN COMFORMANCE WITH TPI; OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES. DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPEC. BY AF&PA) AND TPI. ITW BCG CONNECTOR PLATES ARE MADE OF 20/18/16GA (W,H/SS/K) ASTM A653 GRADE 40/60 (W, K/H,SS) GALV. STEEL. APPLY PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 160A-Z. ANY INSPECTION OF PLATES FOLLOWED BY (1) SHALL BE PER ANNEX A3 OF TPI1-2002 SEC.3. A SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN SHOWN. THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.

JAMES E. COLLINS, JR. LICENSE No. 52212 STATE OF FLORIDA PROFESSIONAL ENGINEER
Mar 26 '07

TC LL	20.0 PSF	REF	R215-- 64645
TC DL	10.0 PSF	DATE	03/26/07
BC DL	10.0 PSF	DRW	HCUSR215 07085026
BC LL	0.0 PSF	HC-ENG	RA/AP *
TOT.LD.	40.0 PSF	SEQN-	42582
DUR.FAC.	1.25	FROM	LRB
SPACING	24.0"	JREF-	1T5Z215_Z02

(4441-/ISAAC/SOLORZANO /SUWANNEE RIVER LOG HOMES -- , ** - E)

Top chord 2x4 SP #2 N
Bot chord 2x4 SP #2 N
Webs 2x4 SP #2 N

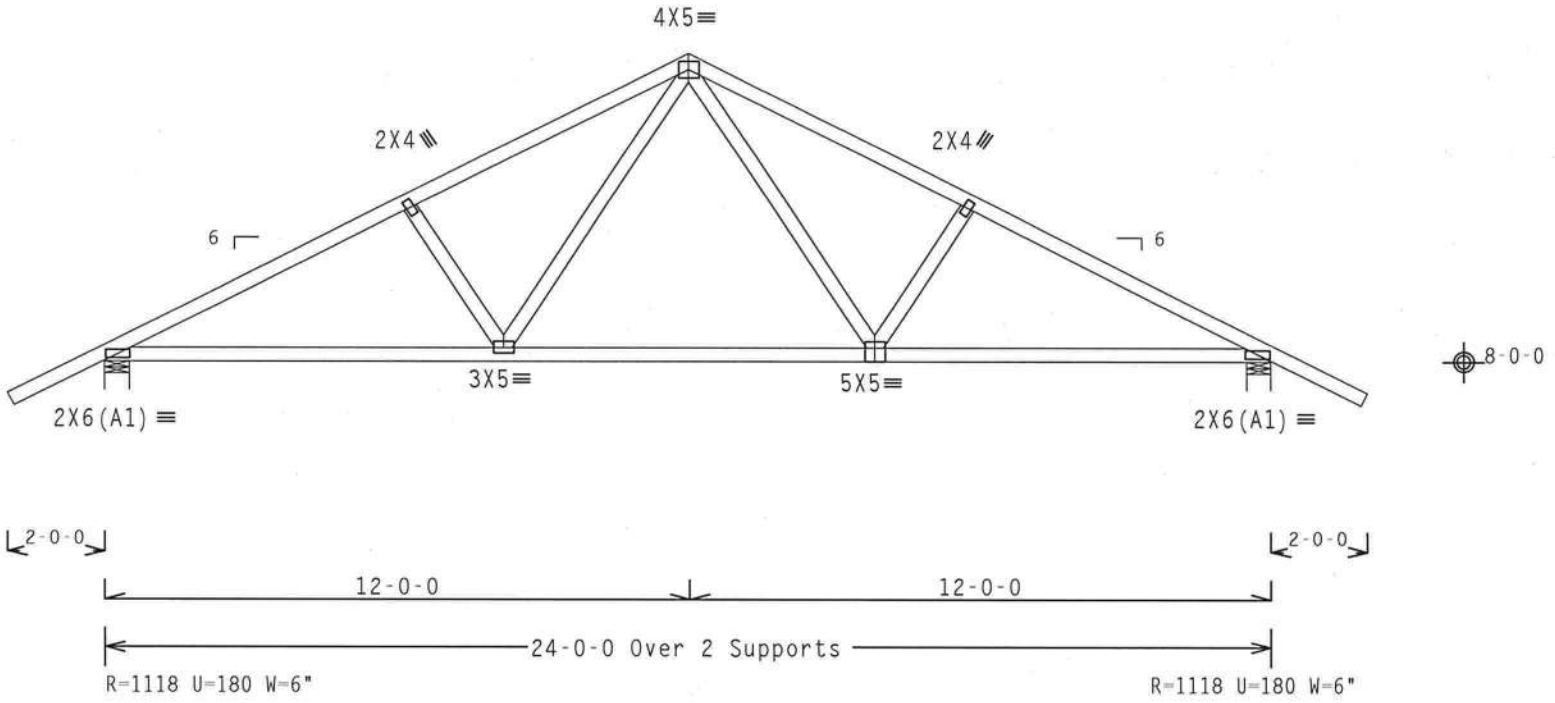
Wind reactions based on MWFRS pressures.

Plates sized for a minimum of 3.00 sq.in./piece.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf. Iw=1.00 GCpi(+/-)=0.18

Deflection meets L/240 live and L/180 total load.

The overall height of this truss excluding overhang is 6-4-3.



Design Crit: TPI-2002(STD)/FBC

PLT TYP. Wave

Cq/RT=1.00(1.25)/10(0) 7.25.0503 QTY:10 FL/-/5/-/-/R/- Scale =.25"/Ft.

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JAMES F. COLLINS JR. LICENSE No. 52242 STATE OF FLORIDA PROFESSIONAL ENGINEER

Mar 26 '07

TC LL	20.0 PSF	REF	R215-- 64646
TC DL	10.0 PSF	DATE	03/26/07
BC DL	10.0 PSF	DRW	HCUSR215 07085028
BC LL	0.0 PSF	HC-ENG	RA/AP *
TOT.LD.	40.0 PSF	SEQN-	42597
DUR.FAC.	1.25	FROM	LRB
SPACING	24.0"	JREF-	1T5Z215_Z02

(4441-/ISAAC/SOLORZANO /SUWANNEE RIVER LOG HOMES -- , ** - GE)

Top chord 2x4 SP #2 N
Bot chord 2x4 SP #2 N
Webs 2x4 SP #2 N

Wind reactions based on MWFRS pressures.

See DWGS A11015EE0207 & GBLLETIN0207 for more requirements.

Plates sized for a minimum of 3.00 sq.in./piece.

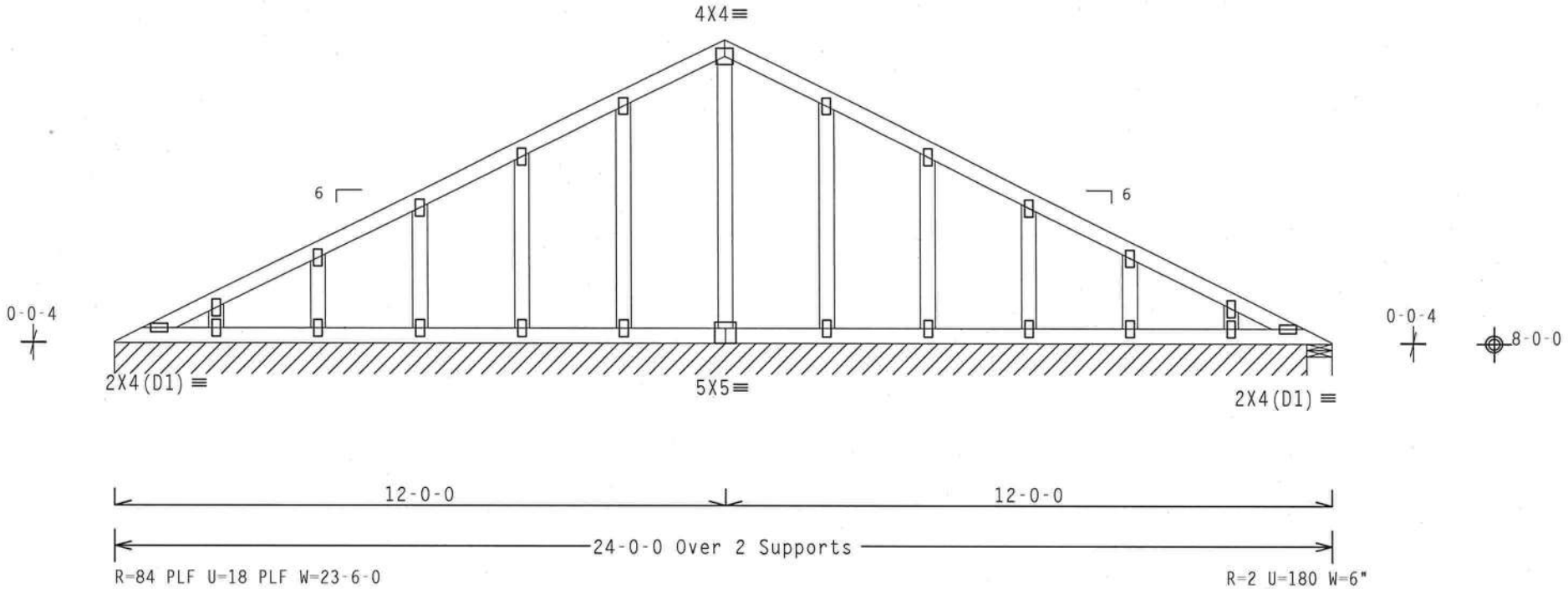
THE BUILDING DESIGNER IS RESPONSIBLE FOR THE DESIGN OF THE ROOF AND CEILING DIAPHRAGMS, GABLE END SHEAR WALLS, AND SUPPORTING SHEAR WALLS. SHEAR WALLS MUST PROVIDE CONTINUOUS LATERAL RESTRAINT TO THE GABLE END. ALL CONNECTIONS TO BE DESIGNED BY THE BUILDING DESIGNER.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf. Iw=1.00 GCpi(+/-)=0.18

Gable end supports 8" max rake overhang.

Deflection meets L/240 live and L/180 total load.

The overall height of this truss excluding overhang is 6-0-4.



Note: All Plates Are 2X4 Except As Shown.

Design Crit: TPI-2002(STD)/FBC

PLT TYP. Wave Cq/RT=1.00(1.25)/10(0) 7.25.0503.06 QTY:1 FL/-/5/-/-/R/- Scale =.3125"/Ft.

ALPINE

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FL Certificate of Authorization # 567

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JAMES F. COLLINS JR. LICENSE No. 52218 STATE OF FLORIDA PROFESSIONAL ENGINEER
Mar 26 07

TC LL	20.0 PSF	REF	R215-- 64647
TC DL	10.0 PSF	DATE	03/26/07
BC DL	10.0 PSF	DRW	HCUSR215 07085027
BC LL	0.0 PSF		HC-ENG RA/AP
TOT.LD.	40.0 PSF	SEQN-	42603
DUR.FAC.	1.25	FROM	LRB
SPACING	24.0"	JREF-	1T5Z215_Z02

(4441-/ISAAC/SOLORZANO /SUWANNEE RIVER LOG HOMES -- , ** - C)

Top chord 2x4 SP #2 N
Bot chord 2x4 SP #2 N
Webs 2x4 SP #2 N

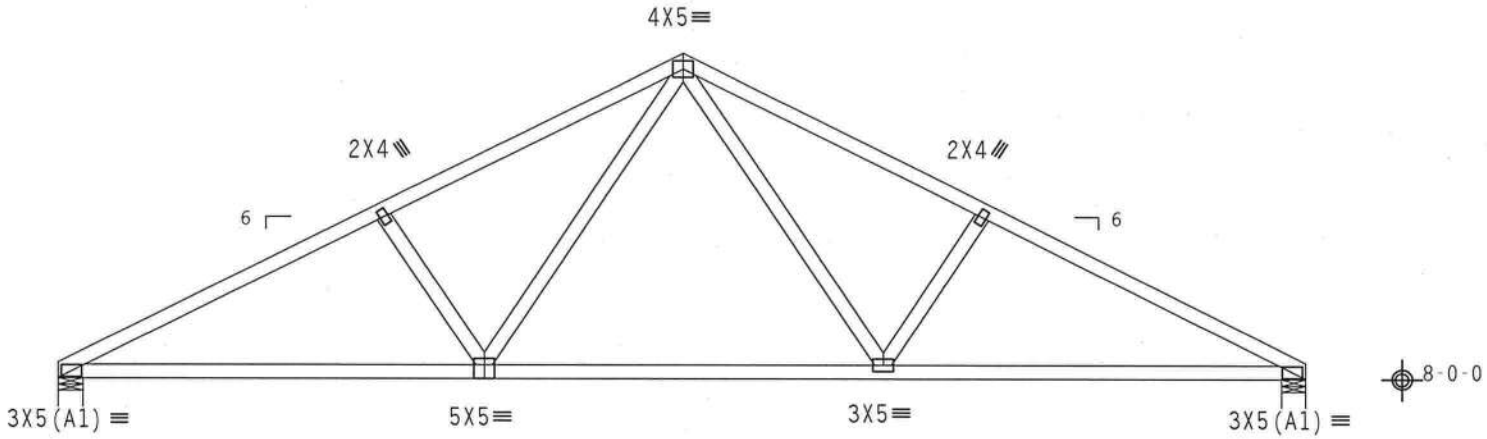
Wind reactions based on MWFRS pressures.

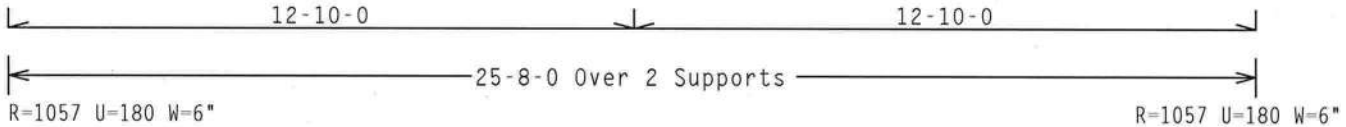
Plates sized for a minimum of 3.00 sq.in./piece.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, not located within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf. Iw=1.00 GCpi(+/-)=0.18

Deflection meets L/240 live and L/180 total load.

The overall height of this truss excluding overhang is 6-9-3.





Design Crit: TPI-2002(STD)/FBC

PLT TYP. Wave Cq/RT=1.00(1.25)/10(0) 7.25.0503.0 QTY:10 FL/-/5/-/-/R/- Scale =.25"/Ft.

ALPINE

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JAMES F. COLLINS, JR. LICENSE No. 52212 STATE OF FLORIDA PROFESSIONAL ENGINEER
Mar 26 07

TC LL	20.0 PSF	REF	R215-- 64648
TC DL	10.0 PSF	DATE	03/26/07
BC DL	10.0 PSF	DRW	HCUSR215 07085029
BC LL	0.0 PSF	HC-ENG	RA/WHK *
TOT.LD.	40.0 PSF	SEQN-	42623
DUR.FAC.	1.25	FROM	LRB
SPACING	24.0"	JREF-	1T5Z215_Z02

ASCE 7-02: 110 MPH WIND SPEED, 15' MEAN HEIGHT, ENCLOSED, I = 1.00, EXPOSURE C

MAX GABLE VERTICAL LENGTH

2X4 GABLE VERTICAL SPACING	SPECIES	BRACE GRADE	NO BRACES	(1) 1X4 "L" BRACE *		(1) 2X4 "L" BRACE *		(2) 2X4 "L" BRACE **		(1) 2X6 "L" BRACE *		(2) 2X6 "L" BRACE **	
				GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B
24" O.C.	SPF HF	#1 / #2	3' 10"	6' 8"	6' 10"	7' 11"	8' 1"	9' 5"	9' 8"	12' 5"	12' 9"	14' 0"	14' 0"
		#3	3' 9"	6' 0"	6' 0"	7' 11"	7' 11"	9' 5"	9' 5"	12' 4"	12' 4"	14' 0"	14' 0"
		STUD	3' 9"	6' 0"	6' 0"	7' 11"	7' 11"	9' 5"	9' 5"	12' 3"	12' 3"	14' 0"	14' 0"
		STANDARD	3' 9"	5' 2"	5' 2"	6' 9"	6' 9"	9' 1"	9' 1"	10' 7"	10' 7"	14' 0"	14' 0"
	SP DFL	#1	4' 3"	6' 8"	7' 2"	7' 11"	8' 6"	9' 5"	10' 2"	12' 5"	13' 5"	14' 0"	14' 0"
		#2	4' 2"	6' 8"	7' 2"	7' 11"	8' 6"	9' 5"	10' 2"	12' 5"	13' 5"	14' 0"	14' 0"
		#3	4' 0"	6' 2"	6' 2"	7' 11"	8' 1"	9' 5"	9' 11"	12' 5"	12' 8"	14' 0"	14' 0"
		STUD	4' 0"	6' 1"	6' 1"	7' 11"	8' 0"	9' 5"	9' 11"	12' 5"	12' 6"	14' 0"	14' 0"
		STANDARD	3' 10"	5' 3"	5' 3"	6' 11"	6' 11"	9' 4"	9' 4"	10' 10"	10' 10"	14' 0"	14' 0"
16" O.C.	SPF HF	#1 / #2	4' 5"	7' 8"	7' 10"	9' 1"	9' 4"	10' 10"	11' 1"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	4' 4"	7' 4"	7' 4"	9' 1"	9' 1"	10' 10"	10' 10"	14' 0"	14' 0"	14' 0"	14' 0"
		STUD	4' 4"	7' 4"	7' 4"	9' 1"	9' 1"	10' 10"	10' 10"	14' 0"	14' 0"	14' 0"	14' 0"
		STANDARD	4' 4"	6' 4"	6' 4"	8' 4"	8' 4"	10' 10"	10' 10"	12' 11"	12' 11"	14' 0"	14' 0"
	SP DFL	#1	4' 10"	7' 8"	8' 3"	9' 1"	9' 9"	10' 10"	11' 8"	14' 0"	14' 0"	14' 0"	14' 0"
		#2	4' 9"	7' 8"	8' 3"	9' 1"	9' 9"	10' 10"	11' 8"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	4' 6"	7' 7"	7' 7"	9' 1"	9' 6"	10' 10"	11' 4"	14' 0"	14' 0"	14' 0"	14' 0"
		STUD	4' 6"	7' 6"	7' 6"	9' 1"	9' 6"	10' 10"	11' 4"	14' 0"	14' 0"	14' 0"	14' 0"
		STANDARD	4' 5"	6' 5"	6' 5"	8' 6"	8' 6"	10' 10"	11' 1"	13' 3"	13' 3"	14' 0"	14' 0"
12" O.C.	SPF HF	#1 / #2	4' 11"	8' 5"	8' 8"	10' 0"	10' 3"	11' 11"	12' 3"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	4' 9"	8' 5"	8' 5"	10' 0"	10' 0"	11' 11"	11' 11"	14' 0"	14' 0"	14' 0"	14' 0"
		STUD	4' 9"	8' 5"	8' 5"	10' 0"	10' 0"	11' 11"	11' 11"	14' 0"	14' 0"	14' 0"	14' 0"
		STANDARD	4' 9"	7' 3"	7' 3"	9' 7"	9' 7"	11' 11"	11' 11"	14' 0"	14' 0"	14' 0"	14' 0"
	SP DFL	#1	5' 4"	8' 5"	9' 1"	10' 0"	10' 9"	11' 11"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"
		#2	5' 3"	8' 5"	9' 1"	10' 0"	10' 9"	11' 11"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	5' 0"	8' 5"	8' 5"	10' 0"	10' 6"	11' 11"	12' 6"	14' 0"	14' 0"	14' 0"	14' 0"
		STUD	5' 0"	8' 5"	8' 7"	10' 0"	10' 6"	11' 11"	12' 6"	14' 0"	14' 0"	14' 0"	14' 0"
		STANDARD	4' 11"	7' 5"	7' 5"	9' 10"	9' 10"	11' 11"	12' 3"	14' 0"	14' 0"	14' 0"	14' 0"

BRACING GROUP SPECIES AND GRADES:

GROUP A:

SPRUCE-PINE-FIR	
#1 / #2	STANDARD
#3	STUD

HEM-FIR	
#2	STUD
#3	STANDARD

DOUGLAS FIR-LARCH
#3
STUD
STANDARD

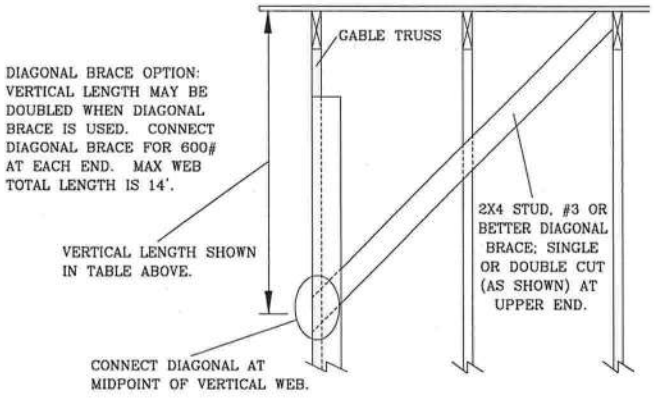
SOUTHERN PINE
#3
STUD
STANDARD

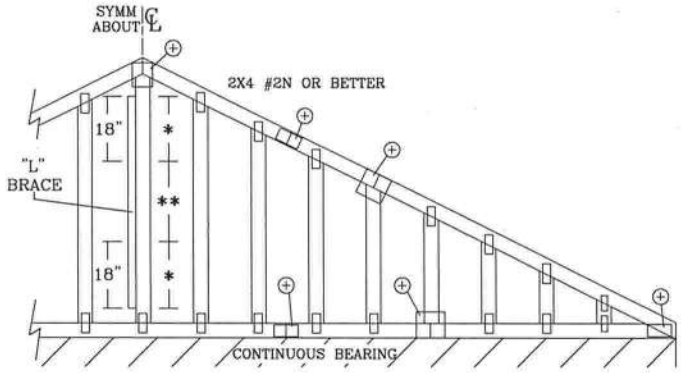
GROUP B:

HEM-FIR
#1 & BTR
#1

SOUTHERN PINE
#1
#2

DOUGLAS FIR-LARCH
#1
#2





REFER TO CHART ABOVE FOR MAX GABLE VERTICAL LENGTH.

GABLE TRUSS DETAIL NOTES:

LIVE LOAD DEFLECTION CRITERIA IS L/240.

PROVIDE UPLIFT CONNECTIONS FOR 80 PLF OVER CONTINUOUS BEARING (5 PSF TC DEAD LOAD).

GABLE END SUPPORTS LOAD FROM 4' 0" OUTLOOKERS WITH 2' 0" OVERHANG, OR 12" PLYWOOD OVERHANG.

ATTACH EACH "L" BRACE WITH 10d NAILS.
* FOR (1) "L" BRACE: SPACE NAILS AT 2" O.C. IN 18" END ZONES AND 4" O.C. BETWEEN ZONES.
** FOR (2) "L" BRACES: SPACE NAILS AT 3" O.C. IN 18" END ZONES AND 6" O.C. BETWEEN ZONES.

"L" BRACING MUST BE A MINIMUM OF 80% OF WEB MEMBER LENGTH.

GABLE VERTICAL PLATE SIZES

VERTICAL LENGTH	NO SPLICE
LESS THAN 4' 0"	1X4 OR 2X3
GREATER THAN 4' 0", BUT LESS THAN 11' 6"	2X4
GREATER THAN 11' 6"	2.5X4

+ REFER TO COMMON TRUSS DESIGN FOR PEAK, SPLICE, AND HEEL PLATES.

ALPINE

ITW BUILDING COMPONENTS GROUP, INC.
POMPANO BEACH, FLORIDA

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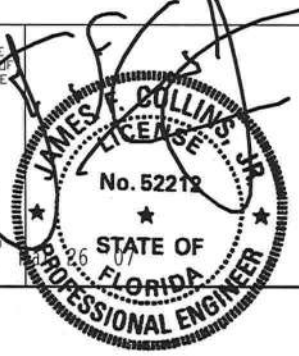
IMPORTANT FURNISH COPY OF THIS DESIGN TO INSTALLATION CONTRACTOR. ITW BCG, INC. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN; ANY FAILURE TO BUILD THE TRUSS IN CONFORMANCE WITH TPI; OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES. DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPEC, BY AF&PA) AND TPI. ITW, BCG CONNECTOR PLATES ARE MADE OF 20/18/16GA (W,H/SS/K) ASTM A653 GRADE 40/60 (W,K,H,SS) GALV. STEEL. APPLY PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 160A-Z. ANY INSPECTION OF PLATES FOLLOWED BY (I) SHALL BE PER ANNEX A3 OF TPI 1-2002 SEC. 3. A SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN SHOWN. THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER, PER ANSI/TPI 1 SEC. 2.

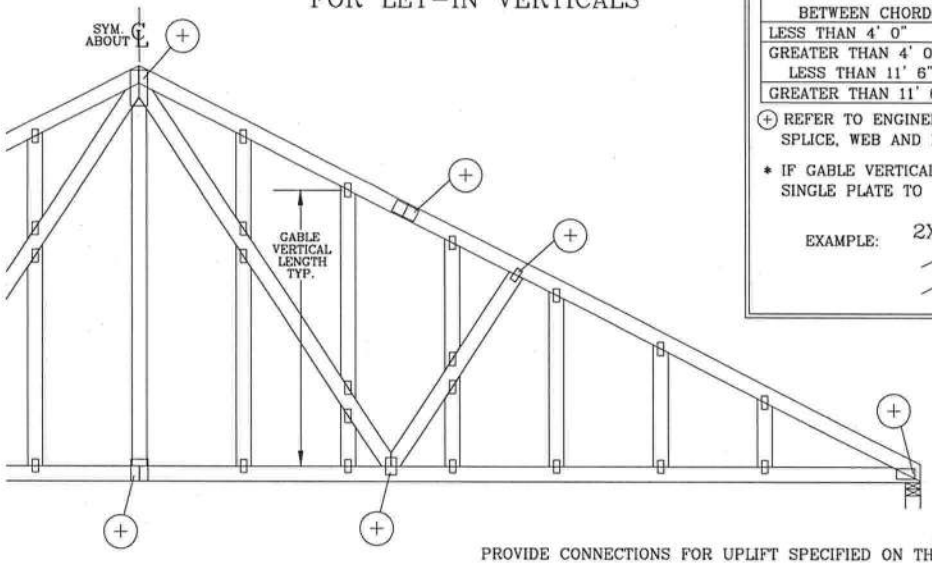


MAX. TOT. LD. 60 PSF

MAX. SPACING 24.0"

REF	ASCE7-02-GAB11015
DATE	2/23/07
DRWG	A11015EE0207
-ENG	

GABLE DETAIL
FOR LET-IN VERTICALS

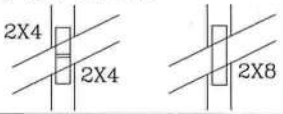


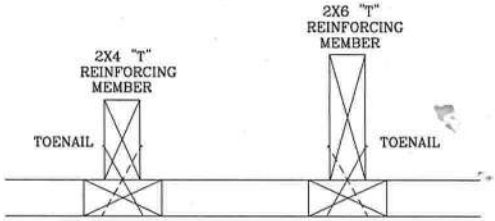
GABLE VERTICAL PLATE SIZES		
VERTICAL LENGTH BETWEEN CHORDS	PLATE SIZE	IF PLATES OVERLAP*
LESS THAN 4' 0"	1X4 OR 2X3	2X8
GREATER THAN 4' 0", BUT LESS THAN 11' 6"	2X4	2X8
GREATER THAN 11' 6"	2.5X4	2.5X8

⊕ REFER TO ENGINEERED TRUSS DESIGN FOR PEAK, SPLICE, WEB AND HEEL PLATES.

* IF GABLE VERTICAL PLATES OVERLAP, USE A SINGLE PLATE TO SPAN THE WEB.

EXAMPLE:





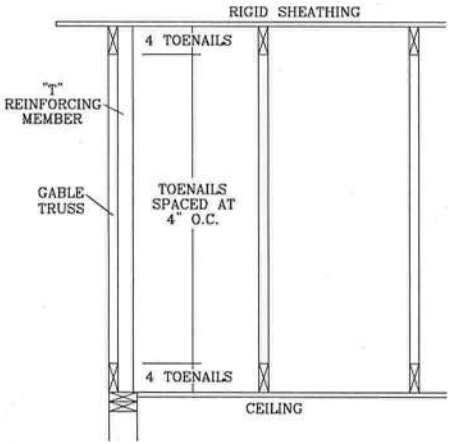
TO CONVERT FROM "L" TO "T" REINFORCING MEMBERS, MULTIPLY "T" FACTOR BY LENGTH (BASED ON GABLE VERTICAL SPECIES, GRADE AND SPACING) FOR (1) 2X4 "L" BRACE, GROUP A, OBTAINED FROM THE APPROPRIATE ALPINE GABLE DETAIL FOR ASCE OR SBCCI WIND LOAD.

MAXIMUM ALLOWABLE "T" REINFORCED GABLE VERTICAL LENGTH IS 14' FROM TOP TO BOTTOM CHORD.

WEB LENGTH INCREASE W/ "T" BRACE

WIND SPEED AND MRH	"T" REINF. MBR. SIZE	SBCCI	ASCE
110 MPH	2x4	10 %	10 %
15 FT	2x6	40 %	50 %
110 MPH	2x4	10 %	10 %
30 FT	2x6	50 %	50 %
100 MPH	2x4	10 %	10 %
15 FT	2x6	30 %	50 %
100 MPH	2x4	10 %	10 %
30 FT	2x6	40 %	40 %
90 MPH	2x4	20 %	10 %
15 FT	2x6	20 %	40 %
90 MPH	2x4	10 %	10 %
30 FT	2x6	30 %	50 %
80 MPH	2x4	10 %	20 %
15 FT	2x6	10 %	30 %
80 MPH	2x4	20 %	10 %
30 FT	2x6	20 %	40 %
70 MPH	2x4	0 %	20 %
15 FT	2x6	0 %	20 %
70 MPH	2x4	10 %	20 %
30 FT	2x6	10 %	30 %

EXAMPLE:
ASCE WIND SPEED = 100 MPH
MEAN ROOF HEIGHT = 30 FT
GABLE VERTICAL = 24" O.C. SP #3
"T" REINFORCING MEMBER SIZE = 2X4
"T" BRACE INCREASE (FROM ABOVE) = 10% = 1.10
(1) 2X4 "L" BRACE LENGTH = 6' 7"
MAXIMUM "T" REINFORCED GABLE VERTICAL LENGTH
1.10 x 6' 7" = 7' 3"



PROVIDE CONNECTIONS FOR UPLIFT SPECIFIED ON THE ENGINEERED TRUSS DESIGN.

ATTACH EACH "T" REINFORCING MEMBER WITH
HAND DRIVEN NAILS:
10d COMMON (0.148"X 3.",MIN) TOENAILS AT 4" O.C. PLUS
(4) 16d COMMON (0.162" X 3.5",MIN) TOENAILS IN TOP AND BOTTOM CHORD.
GUN DRIVEN NAILS:
8d COMMON (0.131"X 2.5",MIN) TOENAILS AT 4" O.C. PLUS
(4) TOENAILS IN TOP AND BOTTOM CHORD.

THIS DETAIL TO BE USED WITH THE APPROPRIATE ALPINE GABLE DETAIL FOR ASCE OR SBCCI WIND LOAD.
ASCE 7-93 GABLE DETAIL DRAWINGS
A11015EN0207, A10015EN0207, A09015EN0207, A08015EN0207, A07015EN0207, A11030EN0207, A10030EN0207, A09030EN0207, A08030EN0207, A07030EN0207
ASCE 7-98 GABLE DETAIL DRAWINGS
A13015EC0207, A12015EC0207, A11015EC0207, A10015EC0207, A08515EC0207, A13030EC0207, A12030EC0207, A11030EC0207, A10030EC0207, A08530EC0207
ASCE 7-02 GABLE DETAIL DRAWINGS
A13015EE0207, A12015EE0207, A11015EE0207, A10015EE0207, A08515EE0207, A13030EE0207, A12030EE0207, A11030EE0207, A10030EE0207, A08530EE0207
ASCE 7-05 GABLE DETAIL DRAWINGS
A13015E50207, A12015E50207, A11015E50207, A10015E50207, A08515E50207, A13030E50207, A12030E50207, A11030E50207, A10030E50207, A08530E50207

SEE APPROPRIATE ALPINE GABLE DETAIL (ASCE OR SBCCI WIND LOAD) FOR MAXIMUM UNREINFORCED GABLE VERTICAL LENGTH.

THIS DRAWING REPLACES DRAWINGS GAB98117 876,719 & HC26294035

ALPINE
ITW BUILDING COMPONENTS GROUP, INC.
POMPANO BEACH, FLORIDA

WARNING TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSI (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 218 NORTH LEE STR., SUITE 312, ALEXANDRIA, VA. 22314) AND WTCA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LN, MADISON, WI 53719) FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.

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MAX TOT. LD. 60 PSF
DUR. FAC. ANY
MAX SPACING 24.0"

REF	LET-IN VERT
DATE	2/23/07
DRWG	GBLLETIN0207
-ENG	DLJ/KAR

metal Roofing

FL3576	MILLENNIUM METALS INC.	Roofing	Non-structural Metal Roofing	Schaefer, P.E. (561) 775-4902	☑ Evaluation Report - Hardcopy Received

Page: Go

Page 1 / 1

CALCULATED BY _____ DATE _____ JOB NO. _____

CHECKED BY _____ DATE _____ SUBJECT _____ SH 1 OF 8

SKETCH NO. _____ SCALE _____

CALCULATIONS FOR

ATTACHMENTS FOR

RIB PANELS

29 & 26 Gauge

FOR

MILLENNIUM

METALS, INC.

1339 HAINES STREET EXPRESSWAY • JACKSONVILLE, FL 32202
904-358-8366 • WATTS 1-877-358-7668 (ROOF)
FAX 904-358-8295

Greatest Mean Height 30' Exposure B

Pitches 3/12 to 12/12

BY

[signature] #6579

2/14/2013

CHECKED BY ______ DATE ______ SUBJECT ______

SKETCH NO. ______ SCALE ______ RIB PANELS

ZONE	TYPE OF FASTENER	ATTACHMENT MATERIAL	FASTENER SIZE	WIND SPEED 100 MPH ON CENTER SPACING	110 MPH ON CENTER SPACING	120 MPH ON CENTER SPACING	140 MPH ON CENTER SPACING
ZON[E] 1 THR[U] ZON[E] 3	WOOD SCREW	EXISTING 1/2" TIMBER DECK WITH BATTENS**	#9 x 3 1/2	16" O.C.	16" O.C.	16" O.C.	16" O.C.
		5/8" THICK PLYWOOD	#9 x 1 1/2"	16" O.C.	16" O.C.	16" O.C.	16" O.C.
		2x4 RAFTERS @ 24" O.C. WITH BATTENS	#9 x 3"	24" O.C.	24" O.C.	24" O.C.	24" O.C.
	METAL SCREW	16 THROUGH 18 GAUGE	#12 x 1"	16" O.C.	16" O.C.	16" O.C.	16" O.C.
		20 THROUGH 26 GAUGE	#14 x 7/8	16" O.C.	16" O.C.	16" O.C.	SEE NOTE

TYPICAL ATTACHMENT IS 9" O.C. EXCEPT AS NOTED

NOTE - DOUBLE SCREWS @ 9" O.C. WITH ROWS OF 16" PER DETAIL C.

** Battens 2x4 Attached over 1/2" Plywood 12" O.C. (10d)
with A #8 x 3" Ring Shank Fastener

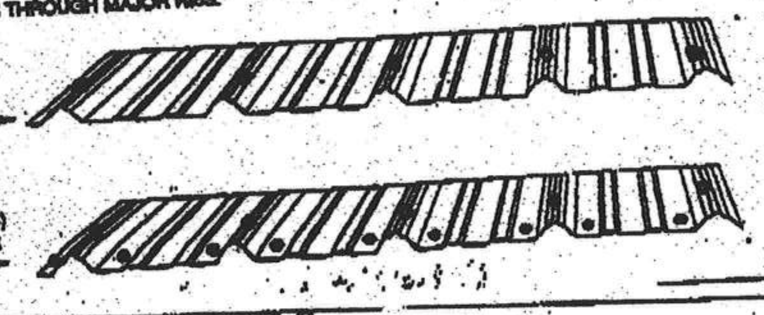
2x4 open Rafter Attachment of Battens are the Responsibility of the Engineer of the Post Frame Application

RIB PANEL FASTENING RECOMMENDATIONS (ON RIB)

Alternative

NOTE: [N]AIL ATTACHME[N]TS IS THROUGH MAJOR RIBS.

DETAIL B
[F]IELD PURLIN
AT[TA]CHMENT #9 x 2 1/2
[W]OOD FASTENE[R]



DETAIL C
(EAV[ES], RIDGES & EN[D] [O]LAPS)
#9 x [1] 1/2 WOOD FAS[T]ENER

[signature]
3/14/2003

FA 5 0 5 F 3 5 8 2

D[A]LE J. KELL[E]Y, JR., P.E.
Co[n]sulting Str[u]ctural Engineer
JA[C]KSONVILLE, [F]LORIDA

DOL J. KELLEY, JR., P.E.
Con ulting Struc tural Engineer
JACK ONVILLE, FLORIDA

JOB TITLE MILLENNIUM

DLK DATE 2/2003

JOB NO. 01 2

Consulting Structural Engineer
JACKSONVILLE, FLORIDA

JOB TITLE MILLENNIUM

JOB NO. ____

CALCULATED BY D.J.K. DATE 2/2003

CHECKED BY ____ DATE ____

SUBJECT RIB PANELS

SH. 3 OF 8

SKETCH NO. ____ SCALE ____

RIB PANELS :

UPLIFT ATTACHMENTS -

ZONE 1

WOOD SCREWS INTO 1/2 TIMBER
UPLIFT = 152 #/IN x 1/2 = 76# x 1.6 = 121

TABLE 1606.3E
100 MPH = -18.0 #/□'

ZONE 2
100 MPH = -34.8 #/□'

ZONE 3
100 MPH = -45.4 #/□' 121# / 45.4 #/□' = 2.66□'

SCREWS @ 9" O.C. 2.66□' / .75' = 3.55 > 1.33

NOTE - USE 9" O.C. WITH ROWS @ 16" O.C. MAX.

MILLENNIUM METALS, INC.

Rib Panel

36" Net Coverage

38" Overall Width

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Weight PSF	Width (in)	Ix in.^4	Sx in^3	Ix in.^4	Sx in^3
							Positive Bending		Negative Bending	
26	80	0.0187	36	36	0.91	48	.0238	.0488	.0855	.1882
29	80	0.0142	36	36	0.69	40.576	.0222	.0374	.0898	.1786

5/8" PLYWOOD
PULL OUT = 152 #/IN x .625" = 95 x 1.6 = 152 #/SCREW

ZONE 3 - 152# / 45.4 #/□' = 3.34□' / .75' = 4.46 > 1.33 MAX.

2x4 BATTENS @ 24" O.C.
PULL OUT = 152 #/IN x 1.5" = 228 x 1.6 = 364 #
MAX PULL = .75' x 2' x 45.4 #/□' = 68.1 # < 364 # CAPACITY

#12 SCREWS INTO METAL
#12 - 18 GAUGE - ULT = 487/3 = 162 # x 1.3 = 210 #
#14 - 26 GAUGE - ULT = 14?/3 = 470 x 1.3 = 611

MAX PULL-OUT = .75 x 1.33 x 45.4 #/□' = 45 # < 61.1

OK FOR #12 SCREWS @ 9" AND ROWS OF 16"

[signature]
2/14/2003

DOLE J. KELLEY, JR., P.E.
Consulting Structural Engineer
JACKSONVILLE, FLORIDA

JOB TITLE MILLENNIUM
JOB NO.
CALCULATED BY DJK DATE 2/2003
CHECKED DATE
SKETCH NO SCALE
SUBJECT RIB PANELS SH 4 OF 8

RIB PANELS CONT.

WIND PRESSURE

ZONE 1 = -24.8 #/□'
ZONE 2 = -40.1 #/□'
ZONE 3 = -55.0 #/□'

1/2" TIMBER WOOD SCREWS PULL OUT CAPACITY = 121#
9" X 16" = 1.0" = -55# < 121

5/8" PLYWOOD = PULL OUT CAPACITY = 152#
9" X 16" = 2.0" X -55 = 53# < 152

2X4 PURLINS @ 24" O.C.
PULL OUT CAPACITY = 364#
2" X 24" = 1.5" X -55 1/2 = 82.5# < 364

SCREWS INTO METAL DECK

#12 THRU 18 GA. = CAPACITY = 210#
#14 THRU 22 GA. = CAPACITY = 61.1#

MAX PULL OUT = .75 X 133 X -55 #/□' = 58# < 61.1#

FLORIDA BUILDING CODE — BUILDING

1606.2.5 Components and cladding. Pressure for wind loading actions on components and cladding shall be determined from Table 1606.2B for enclosed portions of the building and Table 1606.2C for overhangs, based on the effective area for the element under consideration. The pressures in Table 1606.2C include internal pressure. The pressure shall be applied in accordance with the loading diagrams in Figure 1606.2c.

DOL J. KELLEY JR., P.E.
Con ulting Struc ural Engineer
JACK ONVILLE, FL RIDA

JOB TITLE: MILLENNIUM
CALCULATED BY: DJK DATE: 2/2003
CHECKED BY: DATE:
SUBJECT: RIB PANELS JOB NO.:
SKETCH NO.: SCALE: SH 5 OF 8

RIB PANELS
120 MPH - UPLIFT
ZONE 1 = -25.9 #/□'
ZONE 2 = -50.1 #/□'
ZONE 3 = -65.4 #/□'

1/2" TIMBER - PULL OUT CAPACITY = 121#
9" x 16" = 1.0□' x 65.4# = 65.4# < 121

5/8" PLYWOOD: PULL OUT CAPACITY = 152#
9" x 16" = 1.0□' x 65.4 #/□' = 65.4# < 152#

2x4 BATTENS @ 24" O.C.
PULL OUT CAPACITY = 96.4#
MAX UPLIFT = .75 x 2' x 65.4 = 98.1#

SCREWS INTO METAL

#1 - 18 GAUGE = 210#
#1 - 26 GAUGE = 61# < 65.4

IN ZONE 3 - USE 9 x 1'-0" = .75 x 65.4 #/□' = 49# < 61#

[signature]
2/?/2003

DOLE J[illegible] KELLEY, [illegible]R., P.E.
Consul[illegible]ng Structu[illegible]al Engineer
JACKSO[illegible]VILLE, FLORI[illegible]DA

JOB TITLE MILLENNIUM
JOB NO.
CALCULAT[ED] BY DJK DATE 2003
CHECKED [B]Y DATE
SKETCH N[O.] SCALE
SUBJECT RIB PANELS SH 6 OF 8

RI[B] PANELS CONT'
1[?]0 M.P.H.

ZONE 1 = -35.3 #/′
ZONE 2 = -68.1 #/′
ZONE 3 = -89.0 #/′

1/2" TI[M]BER PULL OUT CAPACITY = 121#
U[P]LIFT = 9"×16" = 1.0′ × 89.0 = 89.0# < 121#

5/8" P[LY]WOOD = PULL OUT CAPACITY = 152#
UPL[IF]T = 9"×16" = 1.0′ × 89 #/′ = 89# < 152#

2×4 BATTENS @ 24" O.C. /
PULL OUT CAPACITY = 364#
UPLIFT = 9"×24" = 1.5′ × 89 #/′ = 133# < 364#

[S]CREWS INTO METAL

#1[?] - 18 GAUGE = 210# > 89#

#1[?] - 26 GAUGE = 61#/SCREW — IN ZONE 3, DOUBLE UP ON SCREWS ON EACH SIDE OF RIBS.

9"

0.375×1.33 = .5′ × 89.0 #/′ = 44.5#/SCREW < 61.0#

2/17/2003

POLE J. ELLEY, JR., P.E.
Consulting Structural Engineer
JACKSONVILLE, FLORIDA

JOB TITLE MILLENNIUM

CALCULATED BY DJK DATE 2/2003

CHECKED BY _____ DATE _____

SKETCH NO _____ SCALE _____

SUBJECT RIB PANELS

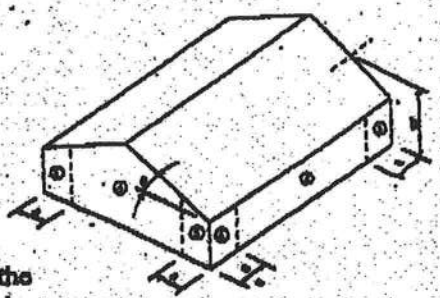
JOB NO. _____

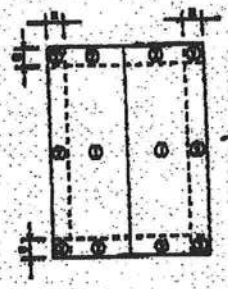
SH 7 OF 8

UPLIFT VALUES:

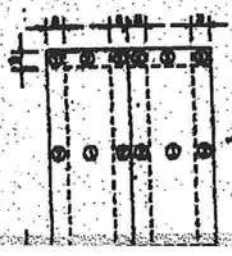
TABLE 1609.5.2
COMPONENT AND CLADDING WIND LOADS FOR A BUILDING WITH A MEAN ROOF HEIGHT OF 60 FEET LOCATED IN EXPOSURE B (psf)

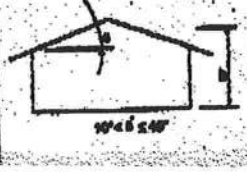
Zone[1]	Effective wind area (ft²)	Basic Wind Speed V (mph - 3 second gust)											
		85		90		100		110		120		130	
Roof Angle = 0-10 degrees													
1	10.0	10.0	-15.0	10.0	-14.6	10.0	-18.0	10.0	-21.8	10.0	-25.9	10.4	-30.4
1	20.0	10.0	-12.7	10.0	-14.6	10.0	-17.0	10.0	-21.8	10.0	-25.9	10.4	-30.4
1	50.0	10.0	-12.8	10.0	-13.7	10.0	-16.0	10.0	-20.5	10.0	-24.4	10.6	-28.6
1	100.0	10.0	-11.6	10.0	-12.0	10.0	-15.0	10.0	-19.0	10.0	-22.7	10.0	-27.0
2	10.0	10.0	-21.3	10.0	-24.4	10.0	-28.5	10.0	-32.5	10.5	-43.5	12.4	-51.0
2	20.0	10.0	-18.5	10.0	-21.8	10.0	-25.0	10.0	-28.5	10.0	-38.0	11.9	-45.0
2	50.0	10.0	-16.4	10.0	-18.4	10.0	-22.7	10.0	-27.5	10.0	-36.7	10.0	-43.4
3	100.0	10.0	-14.1	10.0	-16.8	10.0	-19.5	10.0	-25.1	10.0	-33.5	11.4	-39.8
3	10.0	10.0	-30.8	10.0	-36.8	10.0	-42.4	10.0	-48.0	10.8	-64.1	13.4	-76.0
3	20.0	10.0	-27.2	10.0	-32.5	10.0	-37.6	10.0	-42.8	10.0	-57.2	11.8	-67.8
3	50.0	10.0	-23.7	10.0	-28.1	10.0	-32.5	10.0	-37.0	10.0	-49.5	10.3	-58.8
3	100.0	10.0	-19.1	10.0	-23.5	10.0	-27.0	10.0	-30.6	10.0	-40.9	10.4	-48.6
Roof Angle = 10-30 degrees													
1	10.0	10.0	-11.8	10.0	-13.8	10.4	-16.5	12.5	-18.9	14.9	-22.7	17.5	-27.0
1	20.0	10.0	-11.8	10.0	-13.0	10.0	-15.0	11.4	-18.4	13.6	-22.0	16.0	-27.0
1	50.0	10.0	-11.1	10.0	-12.5	10.0	-15.4	10.0	-17.8	11.9	-22.3	13.9	-26.0
1	100.0	10.0	-10.8	10.0	-12.1	10.0	-14.9	10.0	-18.1	10.5	-21.5	12.4	-25.2
2	10.0	10.0	-25.1	10.0	-29.2	10.4	-34.8	12.5	-40.1	14.9	-50.1	17.5	-58.7
2	20.0	10.0	-22.5	10.0	-26.0	10.0	-31.5	11.4	-38.2	13.6	-45.4	16.0	-53.5
2	50.0	10.0	-18.7	10.0	-22.1	10.0	-27.5	10.0	-33.0	11.9	-39.5	13.9	-46.1
2	100.0	10.0	-17.4	10.0	-19.6	10.0	-24.1	10.0	-28.1	10.5	-34.7	12.4	-40.7
3	10.0	10.0	-35.1	10.0	-40.2	10.4	-44.8	12.5	-48.1	14.9	-60.1	17.5	-70.7
3	20.0	10.0	-30.8	10.0	-35.6	10.0	-41.5	11.4	-48.2	13.6	-54.4	16.0	-64.2
3	50.0	10.0	-25.7	10.0	-30.1	10.0	-35.5	10.0	-39.6	11.9	-47.4	13.9	-55.3
3	100.0	10.0	-23.7	10.0	-28.1	10.0	-32.5	10.0	-37.0	10.5	-41.6	12.4	-48.8
Roof Angle = 30-45 degrees													
1	10.0	11.9	-13.0	12.5	-14.6	13.5	-16.0	15.9	-21.8	22.7	-25.9	27.0	-30.4
1	20.0	11.8	-12.9	12.0	-13.8	13.0	-17.1	15.4	-20.7	22.0	-24.8	27.0	-29.0
1	50.0	11.1	-11.8	12.5	-12.5	13.4	-15.9	15.8	-19.2	22.2	-23.9	27.0	-28.0
1	100.0	10.8	-10.9	12.1	-12.1	14.0	-14.9	16.1	-18.1	21.5	-21.5	26.5	-25.5
2	10.0	11.9	-16.2	12.5	-17.0	13.5	-21.0	15.9	-25.8	22.7	-33.8	27.0	-41.2
2	20.0	11.8	-14.8	12.0	-16.0	13.0	-20.1	15.4	-24.3	22.0	-33.0	27.0	-41.0
2	50.0	11.1	-13.7	12.5	-14.8	13.4	-18.9	15.8	-22.8	22.2	-32.0	27.0	-40.0
3	100.0	10.8	-13.0	12.1	-14.6	14.0	-18.0	16.1	-21.8	21.5	-30.6	26.5	-38.4
3	10.0	11.9	-16.2	12.5	-17.0	13.5	-21.0	15.9	-25.8	22.7	-33.8	27.0	-41.2
3	20.0	11.8	-14.8	12.0	-16.0	13.0	-20.1	15.4	-24.3	22.0	-33.0	27.0	-41.0
3	50.0	11.4	-13.7	12.5	-14.8	13.4	-18.9	15.8	-22.8	22.2	-32.0	27.0	-40.0
3	100.0	10.8	-13.0	12.1	-14.6	14.0	-18.0	16.1	-21.8	21.5	-30.6	26.5	-38.4





1606.2.1 Edge strip and end zones. The width of the edge strip (a), as shown in Figure 1606.2 (c), shall be 10% of the least horizontal dimension or 40% of the eave height, whichever is less but not less than either 4% of the least horizontal dimension or 3 feet (914 mm). End zones as shown in Figure 1606.2b shall be twice the width of the edge strip (a).





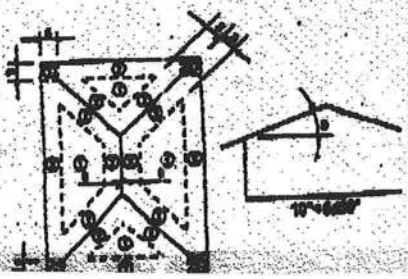


FIGURE 1609.6(c)
COMPONENT AND CLADDING LOADING DIAGRAMS

DOLE J. [illegible] BILLEY, JR., P.E.
Consulting Structural Engineer
JACKSONVILLE, FLORIDA

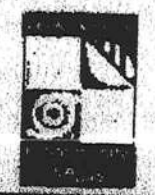
CALCULATED BY DJK DATE 2/2003
CHECKED BY DATE
SKETCH NO SCALE

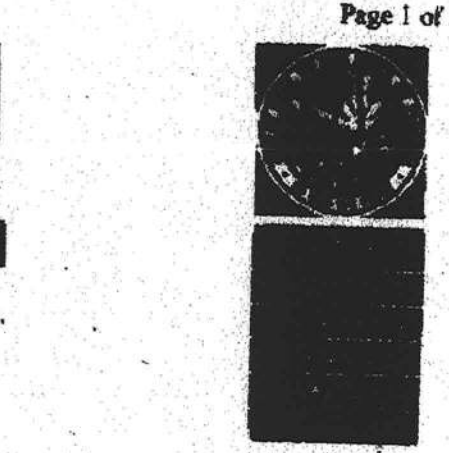
JOB TITLE MILLENNIUM
JOB NO.
SUBJECT RIB PANELS
SH 8 OF 8
2

DESIGN VALUES.

Table 2.3.2 Frequently Used Load Duration Factors, C_D[a]

Load Duration	C_D	Typical Design Loads



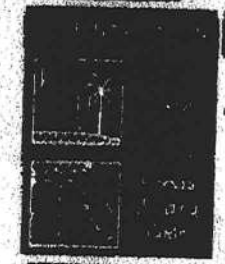


The Florida Department of Community Affairs

Building Code Information System

FLORIDA BUILDING CODE

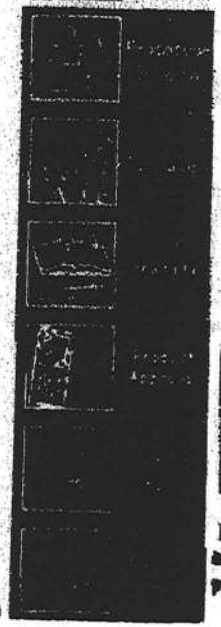
Overview | User Registration | Organization Registration | User Affiliation | Organization Search | Organization Accreditation



Select the organization type, status, or name to find an organization

Organization Type: Product Manufacturer

Approval Status: (ALL)



Organization Name: General American Door - Product Manufacturer

Cancel Search

Result List for Organizations

Displaying 1-1 of 1

Name	City	Contact	Phone	Type	Expire	Status
General American Door	Montgomery	James Campbell	6308593000	Product Manufacturer	01/01/2099	Approved
Org Code: PDM System ID: 3585			Site Link: www.gadco.com			

Displaying 1-1 of 1

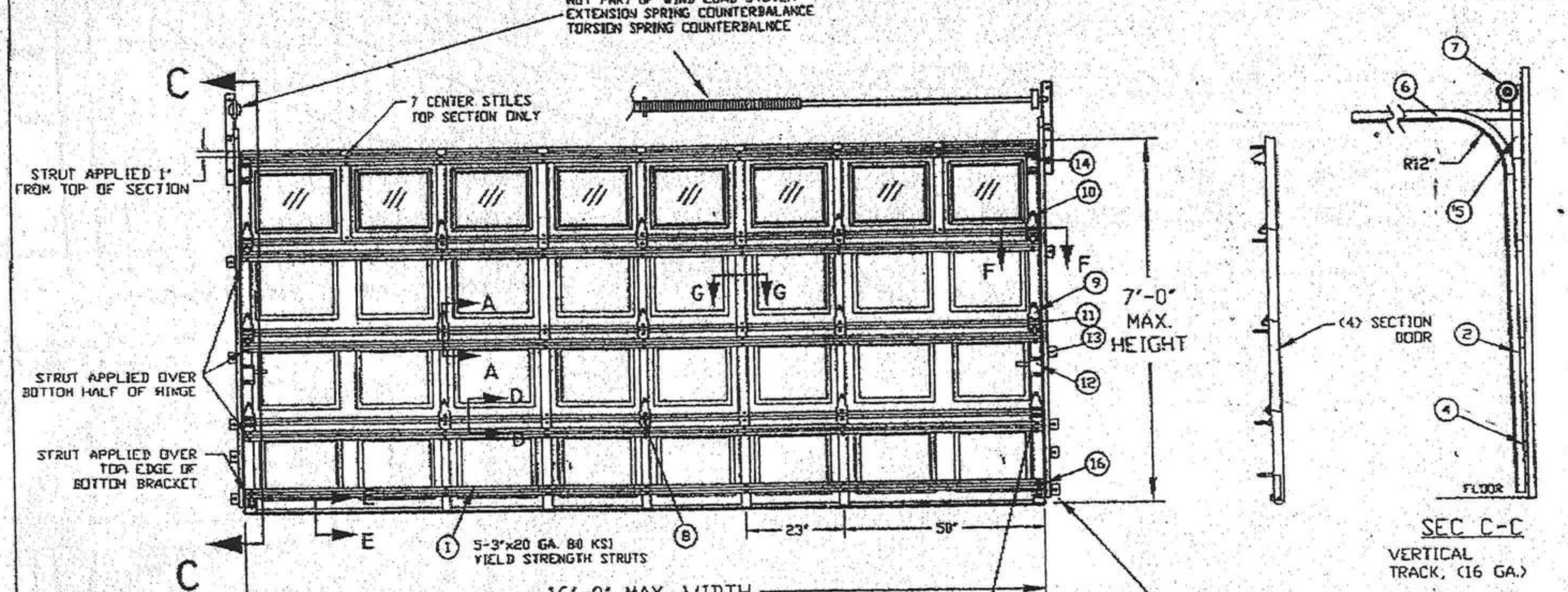
Sectional Roll Up Garage door

FL 20166

REV.	DATE	BY	DESCRIPTION
A - A	11-10-00	DW	SEE E.C.N. 831

NOTES:

1. TESTED TO POSITIVE AND NEGATIVE 20 PSF DESIGN AND POSITIVE AND NEGATIVE 30 PSF TEST PRESSURES PER ASTM E-330
2. MAXIMUM SECTION HEIGHT= 21"
3. SECTION HEIGHTS OF 21.00" AND 19.50" ARE AVAILABLE AND MAY BE USED IN ANY COMBINATION TO ACHIEVE VARIOUS DOOR HEIGHTS.
4. WINDOWS MAY BE INSTALLED IN THE TOP SECTION (AS TESTED WITH 1/8" DSB GLASS OR EQUIVALENT) OR IN THE SECTION IMMEDIATELY BELOW THE TOP SECTION.
5. MINIMUM LENGTH OF ROLLER STEM IS 5½" (7" AS TESTED)
6. THE STRUT PLACEMENT ON DOOR MUST BE CONSISTENT WITH THE DOOR SHOWN.
7. STRUTS SECURED AT ALL LOCATIONS WITH TEK SCREWS.
8. QUANTITY OF SIDE LOCKS CAN BE 0,1, OR 2 AS TESTED.
9. DROP IN TYPE OF INSULATION IS OPTIONAL



INSIDE ELEVATION

The seal on this drawing only certifies that the product(s) illustrated and described here represent the configuration(s) dimensions and installation(s) the door as tested

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL PE No. 24280 NASER R. KEYVAN

LISTED

REPORT No. 2202

TEST REPORTS ON FILE VIDEO 10/19/00 (00293)

DESIGN LOAD +20.0 PSF & -20.0 PSF
TEST LOAD +30.0 PSF & -30.0 PSF

GADCO DOORS
SERIES 7400, EXTERIOR STEEL =.017 MIN (AS TESTED)
SERIES 7524, EXTERIOR STEEL =.024" MIN
(TESTED) WITH WINDOWS

MAXIMUM DOOR WIDTH	MAXIMUM DOOR HEIGHT	TYPICAL CTR. STILE SPACING	STRUTS 80 KSI SIZE	STRUTS 80 KSI QTY.	VERTICAL TRACK
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

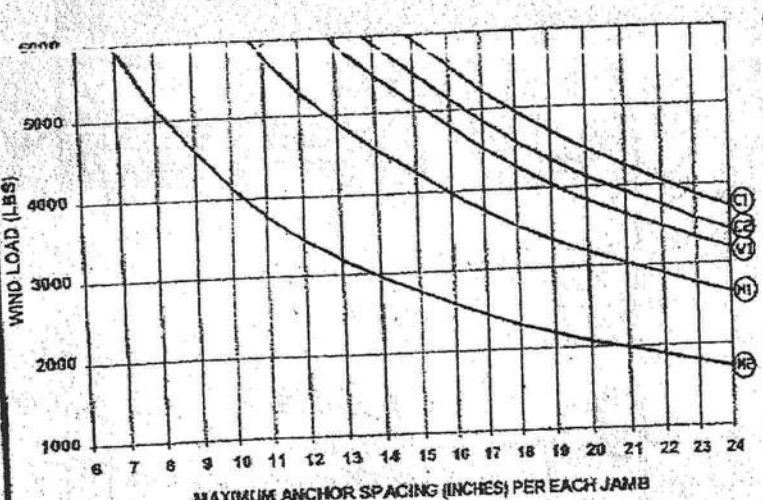
GADCO GENERAL AMERICAN DOOR COMPANY
5050 BASELINE ROAD
MONTGOMERY, IL

SCALE: 1:35	APPROVED BY:	DRAWN BY: D. WIETMAN
DATE: 10-20-00		REVISED: (A) 11-16-00

DESCRIPTION: 16' X 7' MAX. RAISED PANEL STEEL DOOR -WINDLOAD ±20 PSF

DRAWING NUMBER

WIND LOAD vs ANCHOR SPACING



- (C1) CONCRETE BACKUP HILTI KWIK BOLT II EXPANSION ANCHOR 3/8" DIA. 1-5/8" EMBEDMENT
- (C2) CONCRETE BACKUP RAWL LOK/BOLT SLEEVE ANCHOR 3/8" DIA. 1-5/8" EMBEDMENT
- (M1) MASONRY(CMU) BACKUP RAWL LOK/BOLT SLEEVE ANCHOR 3/8" DIA. 1-5/8" EMBEDMENT
- (M2) MASONRY(CMU) BACKUP ITW BUILDEX TAPCON MASONRY ANCHOR 1/4" DIA. 1-3/4" EMBEDMENT
- (W1) WOOD STUD BACKUP LAG SCREWS 5/16" DIA. 1-1/2" EMBEDMENT

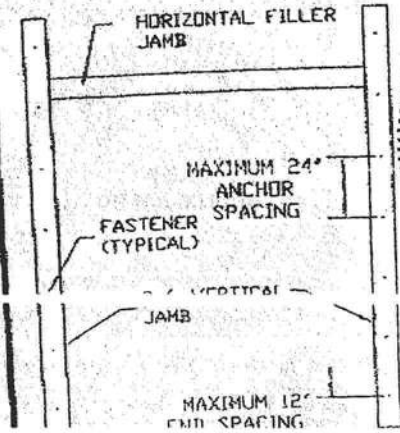
DESIGN LOAD (LBS/FT²) X GARAGE DOOR AREA(WIDTH-FT X HEIGHT-FT) = WIND LOAD(LBS)

EXAMPLE

30 LBS/FT² X (16 FT WIDE X 8 FT HIGH) = 3840 LBS

- (C1) USE 22" SPACING
- (C2) USE 21" SPACING
- (W1) USE 19" SPACING
- (M1) USE 16" SPACING
- (M2) USE 10" SPACING

SEE NOTE 11 FOR ADDITIONAL REQUIRED 2X6 WOOD JAMB ANCHORS



NORTH CAROLINA PROFESSIONAL SEAL PE No. 024280 ENGINEER NASER R KEYVAN

3/8/2002

STATE OF FLORIDA PROFESSIONAL ENGINEER

2x6 JAMB TO SUPPORTING STRUCTURE ATTACHMENT

2x6 PRESSURE TREATED (GRADE #2 OR BETTER SOUTHERN PINE) WOOD JAMB SHALL BE ANCHORED TO BUILDING WOOD FRAME, GROUTED AND REINFORCED CONCRETE MASONRY UNIT (CMU) WALLS OR COLUMNS, OR REINFORCED CONCRETE COLUMNS.

NOTES:

1) ALL DOOR OPENING SURROUNDING STRUCTURE TO BE DESIGNED BY REGISTERED ENGINEER OR ARCHITECT WITH DUE CONSIDERATION GIVEN TO INSTALLATIONS USING CENTER "HURRICANE" POSTS.

2) ALL DOOR OPENING STRUCTURE AND FASTENERS TO COMPLY WITH ALL APPLICABLE CODES INCLUDING SBCCI "STANDARD FOR HURRICANE RESISTANT RESIDENTIAL CONSTRUCTION SSTD 10," CURRENT EDITION.

3) ALL FASTENERS TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, INSTRUCTIONS AND RECOMMENDATIONS.

4) WOOD FRAME BUILDINGS: STUDS AT EACH SIDE OF DOOR OPENING SHALL BE PROPERLY DESIGNED, CONNECTED, ANCHORED AND SHALL CONSIST OF A MINIMUM OF THREE (3) LAMINATIONS OF 2X6 PRESSURE TREATED SOUTHERN PINE (#2 GRADE OR BETTER) WALL STUDS CONTINUOUS FROM FOOTING TO DOUBLE TOP PLATE.

5) REINFORCED CMU OR CONCRETE: 2X6 WOOD JAMB SHALL BE ANCHORED TO SOLIDLY GROUTED AND REINFORCED CONCRETE MASONRY UNIT (CMU) WALLS OR COLUMNS, OR REINFORCED CONCRETE COLUMNS. ANCHOR SPACING AND EMBEDMENT IS BASED ON CONCRETE MASONRY UNITS COMPLYING WITH ASTM C90 WITH A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 2150 PSI, GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI; REINFORCED CONCRETE COLUMNS WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI.

6) EMBEDMENTS LISTED ARE THE MINIMUM ALLOWABLE EMBEDMENTS.

7) ANCHORS FOR CONCRETE AND CONCRETE MASONRY UNITS (CMU) SHALL HAVE A MINIMUM 3" EDGE DISTANCE FROM ALL EDGES OF CONCRETE OR CONCRETE MASONRY UNITS. ANCHORS FOR CONCRETE AND CMU SHALL HAVE A MINIMUM SPACING OF 3-3/4"

8) LAG SCREWS SHALL BE CENTERED IN ONE OF THE 1-1/2" DIMENSION FACES OF THE TRIPLE 2X6 WALL STUDS.

9) WASHERS ARE REQUIRED ON ALL FASTENERS.

10) THE WIND LOAD VS. ANCHOR SPACING CHART IS FOR A MAXIMUM DOOR SIZE OF 18' X 8' AT A MAXIMUM 42 PSF DESIGN WIND LOAD.

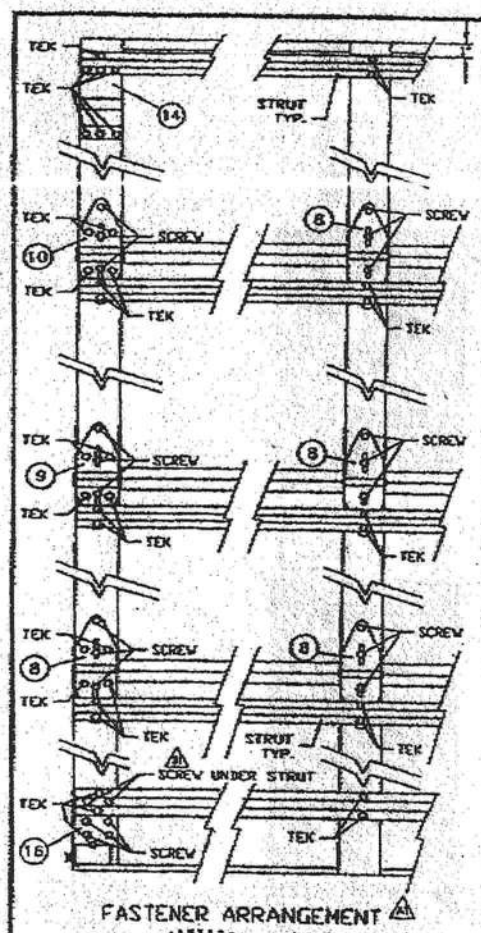
11) FOR THE UPPER THREE INDIVIDUAL STEEL JAMB BRACKETS, BRACKETS SHALL BE CENTERED BETWEEN THE TWO CLOSEST 2X6 WOOD JAMB ANCHORS. IF THE STEEL JAMB BRACKET IS NOT CENTERED BETWEEN THE TWO CLOSEST 2X6 WOOD JAMB ANCHORS, ADD AN ADDITIONAL 2X6 WOOD JAMB ANCHOR NEAR THAT STEEL BRACKET TO INSURE THAT THE LOAD FROM THE STEEL BRACKET IS EQUALLY TRANSFERRED TO TWO WOOD JAMB ANCHORS.

GENERAL AMERICAN DOOR COMPANY
5500 BASELINE ROAD
MONTGOMERY, IL 60538

SCALE NONE	APPROVED BY	DRAWN BY DV
DATE 8-30-99		REVISED

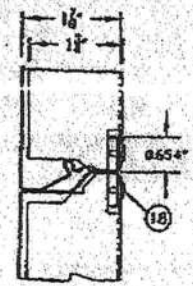
DESCRIPTION: JAMB TO STRUCTURE ATTACHMENT FOR WIND LOADED GARAGE DOORS

SHEET NUMBER | DRAWING NUMBER

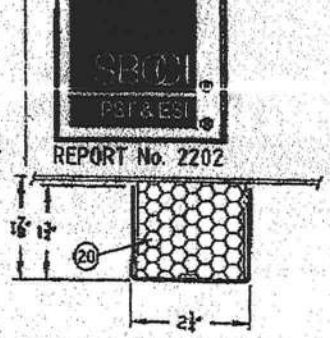


FASTENER ARRANGEMENT

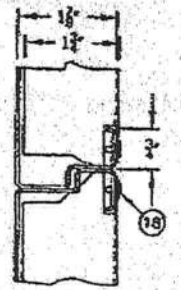
LISTED
SBCCI PST & ESI
REPORT No. 2202



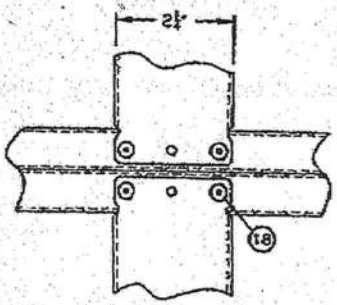
SEC D-D
PAN ATTACHMENT TO STILE (OPTIONAL)



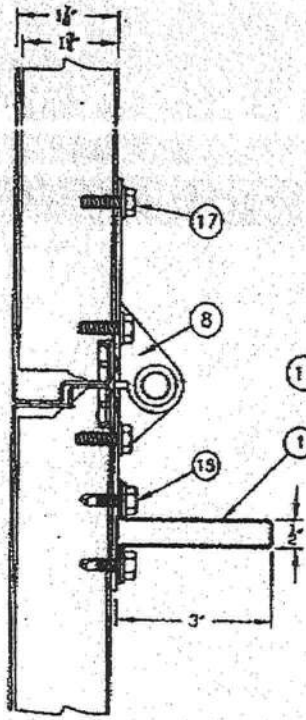
SEC G-G
CENTER STILE
20 GA. GALVANIZED



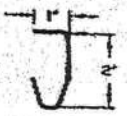
SEC D-D
PAN ATTACHMENT TO STILE (AS TESTED)



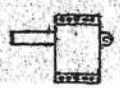
PAN ATTACHMENT TO STILE



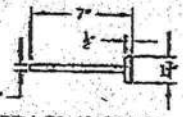
SEC A-A



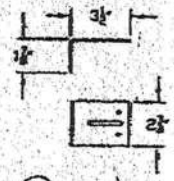
TRACK
16 GA. (055 MIN.)



(12) SIDE LOCK

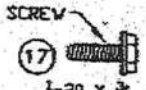


(11) ROLLER 10 BALLS

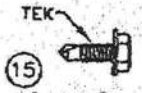


(4) #6 JAMB BRACKET

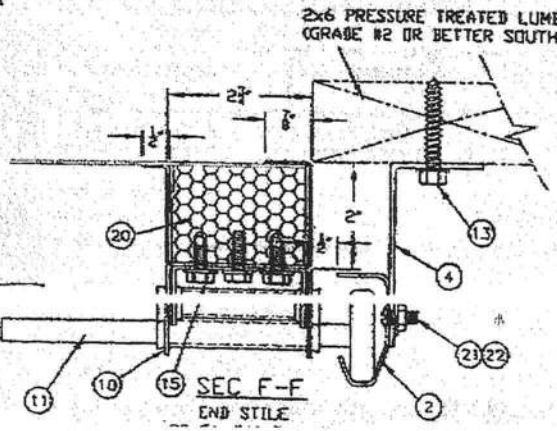
5-3"x20 GA. 80 KSI YIELD STRENGTH HONNED STRUT APPLIED WITH 2 TEK SCREWS PER HINGE OR STILE LOCATION (14 PER STRUT, MINIMUM)



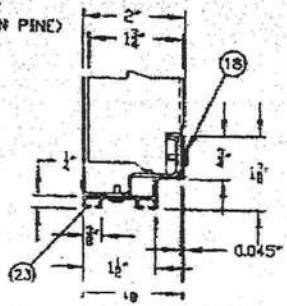
(17) 1/4-20 X 3/4 HEX WASHERHEAD SCREW



(15) 1/4-20 X 3/4 HWH TEK SCREW WITH #2 REDUCED POINT



SEC F-F
END STILE



SEC E-E

ITEM	PART NO.	DESCRIPTION
23	3485	BOTTOM RAIL 6063 T6 ALUM EXT.
22	1391	1/4"-20 X 5/8" RIBBED NECK SCREW
21	4044	1/4"-20 SERRATED FLANGE NUT
20		LOW DENSITY FILLER BLOCK EPS
19		
18	4389	POP RIVET, 5/32" STEEL
17	4229	HEX WASHERHEAD SCREW 1/4"-20 X 3/4"
16	1399LHR	BOTTOM ROLLER BRACKET
15	0138	HWH TEK SCREW 1/4-20 X 3/4 W/ REDUCED PT.
14	3875	TOP SUPPORT BRACKET
13	4043	5/16" X 1-5/8" LAG SCREW
12	4710	SIDE LOCK
11	4306	LONG STEM ROLLER 2"
10	4203	ROLLER CARRIER HINGE #3 (14 GA)
9	4202	ROLLER CARRIER HINGE #2 (14 GA)
8	4201	ROLLER CARRIER HINGE #1 (14 GA)
7		COUNTER BALANCE (TORSION BAR & SPRINGS)
6		HORIZONTAL TRACK & ANGLE (16 GA)
5		VERTICAL FLAG ANGLE
4	4585-6	TRACK BRACKET #6 (12 GA)
3		
2		VERTICAL TRACK (16 GA)
1		3" HONED STRUT (20 GA) MIN. YIELD STR. 80KSI

GADCO
5050 BASELINE ROAD
MONTGOMERY, IL 60538

SCALE: NONE
DATE: 11-7-00
DRAWN BY: D. VIEDMAN
REVISED: (B) 12-1-00

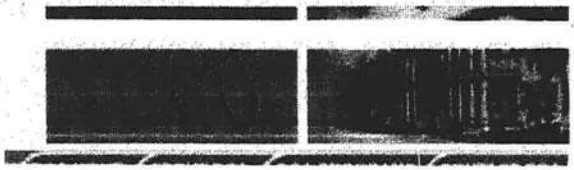
DESCRIPTION: 16' X 7' MAX RAISED PANEL STEEL DOOR

PAGE 2 OF 2
DRAWING NUMBER: W13228-2

NORTH CAROLINA PROFESSIONAL SEAL PE No. 024280 ENGINEER

The seal on this drawing only certifies that the product(s) illustrated and described herein represent the configuration(s), dimensions and installation(s) [illegible]

FLORIDA DEPARTMENT OF
Community Affairs



Product Approval
USER: Public User

FL #	FL1097-R1
Application Type	Revision
Code Version	2004
Application Status	Approved
Comments	
Archived	☐
Product Manufacturer	Andersen Corporation
Address/Phone/Email	100 Fourth Avenue North Bayport, MN 55003 (651) 264-5308 abarstad@andersencorp.com
Authorized Signature	Alan Barstad abarstad@andersencorp.com
Technical Representative Address/Phone/Email	
Quality Assurance Representative Address/Phone/Email	

Category	Exterior Doors
Subcategory	Swinging Exterior Door Assemblies
Compliance Method	Certification Mark or Listing
Certification Agency	Window and Door Manufacturers Association

Referenced Standard and Year (of Standard)

Standard	Year
101/I.S.2	1997
101/I.S.2/NAFS	2002
ASTM E 1996	2002

Equivalence of Product Standards Certified By

Product Approval Method	Method 1 Option A
Date Submitted	11/02/2005
Date Validated	11/14/2005
Date Pending FBC Approval	11/14/2005
Date Approved	12/06/2005

Summary of Products

FL #	Model, Number or Name	Description

1097.1	400 Series Frenchwood Hinged Patio Door - Double - Impact Resistant	Wood Inswing Patio Door

Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Hallmark Certificate: 129-H-665.02 Rating is HGD-R45 72" x 83" Unit tested was a FWH60611AP with HPIR Glass Hallmark Certificate: 129-H-665.04 Rating is Missle Level D, Cycle Pressure +50/-65 Unit tested was a FWH60611AP with HPIR Glass Hallmark Certificate: 129-H-673.01 Rating is HGD-R40 1810mm x 2426mm Unit tested was a FWH6080SA with HPIR Glass Hallmark Certificate: 129-H-673.00 Rating is HGD-R40 72" x 96" Unit tested was a FWH6080AP with HPIR Glass Hallmark Certificate: 129-H-673.02 Rating is Missle Level D, Cycle Pressure +50/-65 Unit tested was a FWH 6080AP with HPIR Glass	**Certification Agency Certificate** **Installation Instructions** PTID_1097_R1_I_FWH Impact and Non-Impact.pdf PTID_1097_R1_I_FWO Impact and Non-Impact.pdf PTID_1097_R1_I_FWSL and FWT Impact and Non-Impact.pdf Verified By:

1097.2	400 Series Frenchwood Hinged Patio Door - Double - Non Impact	Wood Inswing Patio Door

Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Hallmark Certificate: 129-H-618.01 Rating is HGD-R55 72" x 83" Unit tested was a FWH60611SA with HP Glass Hallmark Certificate: 129-H-616.00 Rating is HGD-R40 72" x 83" Unit tested was a FWH6080AP with HP Glass Hallmark	**Certification Agency Certificate** **Installation Instructions** Verified By:

Certificate: 129-H-618.00 Rating is HGD-R40 72" x 96" Unit tested was a FWH6080SA with HP Glass		

1097.3	400 Series Frenchwood Hinged Patio Door - Single - Impact Resistant	Wood Inswing Patio Door
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Hallmark Certificate: 129-H-671.00 Rating is HGD-R50 37" x 96" Unit tested was a FWH3180A with HPIR Glass Hallmark Certificate: 129-H-671.02 Rating is Missle Level D, Cycle Pressure +50/-65 Unit tested was a FWH3180A with HPIR Glass Hallmark Certificate: 129-H-672.00 Rating is HGD-R50 37" x 96" Unit tested was a FWH3180S with HPIR Glass Hallmark Certificate: 129-H-672.02 Rating is Missle Level D, Cycle Pressure +50/-65 Unit tested was a FWH3180S with HPIR Glass		**Certification Agency Certificate** **Installation Instructions** Verified By:

1097.4	400 Series Frenchwood Hinged Patio Door - Single - Non Impact	Wood Inswing Patio Door
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Hallmark Certificate: 129-H-620.00 Rating is HGD-R60 37" x 96" Unit tested was a FWH3180A with HP Glass Hallmark Certificate: 129-H-619.00 Rating is HGD-R60 37" x 96" Unit tested was a FWH3180S with HP Glass Hallmark Certificate:		**Certification Agency Certificate** **Installation Instructions** Verified By:

129-H-698.00 Rating is HGD-R40 39" x 96" Unit tested was a FWH3380A with HP Glass		

1097.5	400 Series Frenchwood Hinged Patio Door - Triple - Non Impact	Wood Inswing Patio Door
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Hallmark Certificate: 129-H-617.00 Rating is HGD-R55 108" x 83" Unit tested was a FWH90611SAS with HP Glass Hallmark Certificate: 129-H-617.01 Rating is HGD-R40 108" x 96" Unit tested was a FWH9080SAS with HP Glass		**Certification Agency Certificate** **Installation Instructions** Verified By:

1097.6	400 Series Frenchwood Outswing Patio Door - Double - Impact Resistant	Wood Outswing Patio Door
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Hallmark Certificate: 129-H-647.00 Rating is HGD-C50 72" x 96" Unit tested was a FWO6080AP with HPIR Glass Hallmark Certificate: 129-H-643.00 Rating is Missle Level D, Cycle Pressure +50/-65 Unit tested was a FWO6080AP with HPIR Glass		**Certification Agency Certificate** **Installation Instructions** Verified By:

1097.7	400 Series Frenchwood Outswing Patio Door - Double	Wood Outswing Patio Door

	- Non Impact	
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Hallmark Certificate: 129-H-678.02 Rating is HGD-R50 72" x 83" Unit tested was a FWO60611AP with HP Glass Hallmark Certificate: 129-H-682.00 Rating is HGD-LC40 72" x 96" Unit tested was a FWO6080AP with HP Glass Hallmark Certificate: 129-H-681.00 Rating is HGD-LC55 72" x 96" Unit tested was a FWO6080AP with DP Upgrade and HP Glass		**Certification Agency Certificate** **Installation Instructions** Verified By:
1097.8	400 Series Frenchwood Outswing Patio Door - Single - Impact Resistant	Wood Outswing Patio Door
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Hallmark Certificate: 129-H-645.00 Rating is HGD-C50 37" x 96" Unit tested was a FWO3180A with HPIR Glass Hallmark Certificate: 129-H-644.00 Rating is Missle Level D, Cycle Pressure +50/-65 Unit tested was a FWO3180A with HPIR Glass Hallmark Certificate: 129-H-646.00 Rating is Missle Level D, Cycle Pressure +50/-65 Unit tested was a FWO3180S with HPIR Glass Hallmark Certificate: 129-H-646.03 Rating is HGD-C50 37" x 96" Unit tested was a FWO3180S with HPIR Glass		**Certification Agency Certificate** **Installation Instructions** Verified By:
1097.9	400 Series Frenchwood	Wood Outswing Patio Door

	Outswing Patio Door - Single - Non Impact	
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Hallmark Certificate: 129-H-677.00 Rating is HGD-R65 37" x 83" Unit tested was a FWO31611A with HP Glass Hallmark Certificate: 129-H-675.00 Rating is HGD-LC60 37" x 96" Unit tested was a FWO3180A with HP Glass Hallmark Certificate: 129-H-646.01 Rating is HGD-C50 37" x 96" Unit tested was a FWO3180S with HP Glass Hallmark Certificate: 129-H-697.00 Rating is HGD-R40 39" x 96" Unit tested was a FWO3380A with HP Glass		**Certification Agency Certificate** **Installation Instructions** Verified By:

1097.10	400 Series Frenchwood Sidelite - Impact Resistant	Wood Sidelite Patio Door
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Hallmark Certificate: 129-H-679.00 Rating is SLT-LC65 476mm x 2426mm Unit tested was a FWSL1780 with HPIR Glass Hallmark Certificate: 129-H-679.01 Rating is Missle Level D, Cycle Pressure +50/-65 Unit tested was a FWSL1780 with HPIR Glass		**Certification Agency Certificate** **Installation Instructions** Verified By:

1097.11	400 Series Frenchwood Transom - Impact Resistant	Wood Transom Patio Door

Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Hallmark Certificate: 129-H-676.00 Rating is TR-LC65 1310mm x 552mm Unit tested was a FWT60110 with HPIR Glass Hallmark Certificate: 129-H-676.01 Rating is Missle Level D, Cycle Pressure +50/-65, Size is 52" x 22" Unit tested was a FWT60110 with HPIR Glass	**Certification Agency Certificate** **Installation Instructions** Verified By:

Back Next

DCA Administration

Department of Community Affairs
Florida Building Code Online
Codes and Standards
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100
(850) 487-1824, Suncom 277-1824, Fax (850) 414-8436

Product Approval Accepts:

Altamira Farms LLC

COLUMBIA COUNTY BUILDING DEPARTMENT

RESIDENTIAL MINIMUM PLAN REQUIREMENTS AND CHECKLIST FOR FLORIDA BUILDING CODE 2001 ONE (1) AND TWO (2) FAMILY DWELLINGS

ALL REQUIREMENTS ARE SUBJECT TO CHANGE
EFFECTIVE MARCH 1, 2002

ALL BUILDING PLANS MUST INDICATE THE FOLLOWING ITEMS AND INDICATE COMPLIANCE WITH CHAPTER 1606 OF THE FLORIDA BUILDING CODE 2001 BY PROVIDING CALCULATIONS AND DETAILS THAT HAVE THE SEAL AND SIGNATURE OF A CERTIFIED ARCHITECT OR ENGINEER REGISTERED IN THE STATE OF FLORIDA, OR ALTERNATE METHODOLOGIES, APPROVED BY THE STATE OF FLORIDA BUILDING COMMISSION FOR ONE-AND-TWO FAMILY DWELLINGS. FOR DESIGN PURPOSES THE FOLLOWING BASIC WIND SPEED AS PER FIGURE 1606 SHALL BE USED.

WIND SPEED LINE SHALL BE DEFINED AS FOLLOWS: THE CENTERLINE OF INTERSTATE 75.

1. ALL BUILDINGS CONSTRUCTED EAST OF SAID LINE SHALL BE -------- 100 MPH
2. ALL BUILDINGS CONSTRUCTED WEST OF SAID LINE SHALL BE --------110 MPH
3. NO AREA IN COLUMBIA COUNTY IS IN A WIND BORNE DEBRIS REGION

APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL

GENERAL REQUIREMENTS: Two (2) complete sets of plans containing the following:

Applicant	Plans Examiner	
☑	☐	All drawings must be clear, concise and drawn to scale ("Optional " details that are not used shall be marked void or crossed off). Square footage of different areas shall be shown on plans.
☑	☐	Designers name and signature on document (FBC 104.2.1). If licensed architect or engineer, official seal shall be affixed.
☑	☐	**Site Plan including:** a) Dimensions of lot b) Dimensions of building set backs c) Location of all other buildings on lot, well and septic tank if applicable, and all utility easements. d) Provide a full legal description of property.
☑	☐	**Wind-load Engineering Summary, calculations and any details required** a) Plans or specifications must state compliance with FBC Section 1606 b) The following information must be shown as per section 1606.1.7 FBC a. Basic wind speed (MPH) b. Wind importance factor (I) and building category c. Wind exposure – if more than one wind exposure is used, the wind exposure and applicable wind direction shall be indicated d. The applicable internal pressure coefficient e. Components and Cladding. The design wind pressure in terms of psf (kN/m²), to be used for the design of exterior component and cladding materials not specifally designed by the registered design professional
☑	☐	**Elevations including:**
☑	☐	a) All sides
☑	☐	b) Roof pitch
☑	☐	c) Overhang dimensions and detail with attic ventilation
☑	☐	d) Location, size and height above roof of chimneys
☑	☐	e) Location and size of skylights
☑	☐	f) Building height
☑	☐	e) Number of stories

Floor Plan including:

- a) Rooms labeled and dimensioned
- b) Shear walls
- c) Windows and doors (including garage doors) showing size, mfg., approval listing and attachment specs. (FBC 1707) and safety glazing where needed (egress windows in bedrooms to be shown)
- d) Fireplaces (gas appliance) (vented or non-vented) or wood burning with hearth
- e) Stairs with dimensions (width, tread and riser) and details of guardrails and handrails
- f) Must show and identify accessibility requirements (accesssable bathroom)

Foundation Plan including:

- a) Location of all load-bearing wall with required footings indicated as standard Or monolithic and dimensions and reinforcing
- b) All posts and/or column footing including size and reinforcing
- c) Any special support required by soil analysis such as piling
- d) Location of any vertical steel

Roof System:

a) Truss package including:

1. Truss layout and truss details signed and sealed by Fl. Pro. Eng.
2. Roof assembly (FBC 104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)

b) Conventional Framing Layout including:

1. Rafter size, species and spacing
2. Attachment to wall and uplift
3. Ridge beam sized and valley framing and support details
4. Roof assembly (FBC 104.2.1 Roofing systems, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)

Wall Sections including:

a) Masonry wall

1. All materials making up wall
2. Block size and mortar type with size and spacing of reinforcement
3. Lintel, tie-beam sizes and reinforcement
4. Gable ends with rake beams showing reinforcement or gable truss and wall bracing details
5. All required connectors with uplift rating and required number and size of fasteners for continuous tie from roof to foundation
6. Roof assembly shown here or on roof system detail (FBC 104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with resistance rating)
7. Fire resistant construction (if required)
8. Fireproofing requirements
9. Shoe type of termite treatment (termiticide or alternative method)
10. Slab on grade
    a. Vapor retarder (6mil. Polyethylene with joints lapped 6 inches and sealed)
    b. Must show control joints, synthetic fiber reinforcement or Welded fire fabric reinforcement and supports
11. Indicate where pressure treated wood will be placed
12. Provide insulation R value for the following:
    a. Attic space
    b. Exterior wall cavity
    c. Crawl space (if applicable)

☑ ☐ b) Wood frame wall

1. All materials making up wall
2. Size and species of studs
3. Sheathing size, type and nailing schedule
4. Headers sized
5. Gable end showing balloon framing detail or gable truss and wall hinge bracing detail
6. All required fasteners for continuous tie from roof to foundation (truss anchors, straps, anchor bolts and washers)
7. Roof assembly shown here or on roof system detail (FBC104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)
8. Fire resistant construction (if applicable)
9. Fireproofing requirements
10. Show type of termite treatment (termiticide or alternative method)
11. Slab on grade
    a. Vapor retarder (6Mil. Polyethylene with joints lapped 6 inches and sealed
    b. Must show control joints, synthetic fiber reinforcement or welded wire fabric reinforcement and supports
12. Indicate where pressure treated wood will be placed
13. Provide insulation R value for the following:
    a. Attic space
    b. Exterior wall cavity
    c. Crawl space (if applicable)

☐ ☐ c) Metal frame wall and roof (designed, signed and sealed by Florida Prof. Engineer or Architect)

Floor Framing System:

☑ ☐ a) Floor truss package including layout and details, signed and sealed by Florida Registered Professional Engineer

☑ ☐ b) Floor joist size and spacing

☐ ☐ c) Girder size and spacing

☐ ☐ d) Attachment of joist to girder

☐ ☐ e) Wind load requirements where applicable

Plumbing Fixture layout

Electrical layout including:

☐ ☐ a) Switches, outlets/receptacles, lighting and all required GFCI outlets identified

☐ ☐ b) Ceiling fans

☐ ☐ c) Smoke detectors

☐ ☐ d) Service panel and sub-panel size and location(s)

☐ ☐ e) Meter location with type of service entrance (overhead or underground)

☐ ☐ f) Appliances and HVAC equipment

HVAC information

☑ ☐ a) Manual J sizing equipment or equivalent computation

☑ ☐ b) Exhaust fans in bathroom

☑ ☐ **Energy Calculations** (dimensions shall match plans)

☐ ☐ **Gas System** Type (LP or Natural) Location and BTU demand of equipment

Disclosure Statement for Owner Builders

Notice Of Commencement

Private Potable Water

a) Size of pump motor

b) Size of pressure tank

c) Cycle stop valve if used

I nstall ation

f r Anderse n® 400 Series Frenchwood® Hinged Patio Doors or

0 Series Frenchwood Hinged Patio Doors with Stormwatch Protection

(Perfo ance Impact Resistant Glass)

NSTALLE R: Please leave this guide with the building owner to file for future re ference.

ongratulatic ns! You have just purchased one of the many fine Andersen® products. Proper assembly, nstallation nd maintena nce are essential if the benefits of your Andersen product are to be fully attained. Therefor , please rea nd follow th s instruction guide completely. If your abilities do not match this procedure's requirement , contact an xperienced ontractor. You may direct any questions about this or other products to your local Anders n dealer, fo nd n the Yellow Pages under "Windows" or call Andersen WindowCare® service center at 1-888-888-7020 Monday thro gh riday, 7 a.m to 7 p.m. Central Time and Saturday, 8 a.m. to 4 p.m. Central Time. Thank you for choosi g Andersen

mportant Safety, Assembly, and Installation Information

very assem ly and installation is different (windloads, structural support, etc.). Andersen strongly recc mmends onsultation with an Andersen supplier or an experienced contractor, architect, or structural engineer pri r to the ssembly an l installation of any Andersen product. For installation methods not covered in this guide, (.e. through amb) please visit the Architect Detail File on the web (www.andersenwindows.com). Andersen has no r sponsibility n egard to the post-manufactured assembly and installation of Andersen products.

⚠ WARNING

Using ladder s and/or scaffolding and working at e evated levels may be hazardous. Follow equip ment manufacturer's instructions or safe operation. Use extreme caution whe working around window and door oper in s. Falling from opening may result in per onal injury or death.

⚠ WARNING

Improper use of hand/power tools could result in personal injury and/or product damage. Follow manufacturer's instructions for safe operation of equipment. Always wear safety glasses.

⚠ WARNING

Weight of window/ loor unit(s) and accessories wi l vary. Use reasonable numbe of people w h sufficient strength o lift, carry, and install window and door unit(s) and access ries. Alwa s use appropriate lift ng techniqu s.

⚠ WARNING

Unless spec fically ordered, Andersen windows and doors are not equipped with safety glass, and if brok en, could fragment ca sing injury. Many laws and building codes require safety glass in locations adjacent to or n ar doors. Andersen w ndows are available with safety glass that may reduce the likelihood of injury when broken. I formation on safety gl ss is available from your local Andersen dealer.

⚠ CAUTION

- Andersen® Head Flashing and Installation Flanges **DO NOT** take the place of standard window and door flashing. U t must be p operly flashed and sealed with silicone for protection against water and air infiltration. Use n on-reflectiv flashings. Highly reflective flashing tapes can raise the surface temperature of the vinyl to the point wh ere vinyl deformatic n and product damage may occur.
- Do not ap ly any type of film to glass. Thermal stress conditions resulting in glass damage could occu .
- Use of mo /able insulating materials such as window coverings, shutters, and other shading devices m y damage glass and/ or vinyl. In addition, excessive condensation may result causing deterioration of windows ar d doors.

⚠ WARNING

Ac essories su h as grilles, art glass, and insect sc ens may d slodge and become airborne if window/ dc r is impact d by wind borne debris from severe st rms or hurr cane strength winds. In the event of a st rm, remove all accessories from windows/doors and m ve to a safe location. **DO NOT** stand in front of or ne r windows/ doors.

⚠ WARNING

U secured doc r may swing op n or closed causing injury. S ure door w en open.

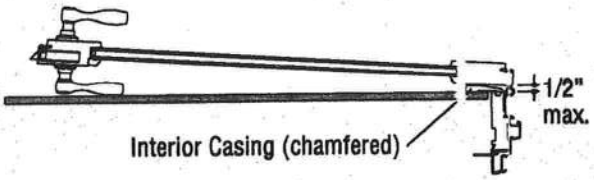
NOTICE

l ock Operation

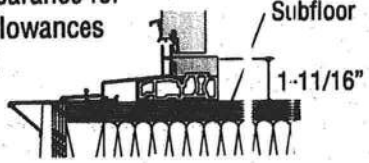
- o lock, lift l andle to engage upper and ower hock b olts. Turn lock turn-piece to orizonta pc sition.
- o unlock, tu rn lock turn-piece to vertical osition. Op en door by bringing handle ownward.

NOTICE

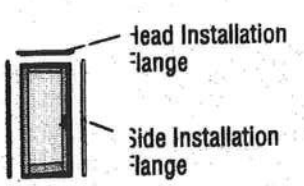
- For installations where full panel (180° operation is desired, install unit flush to interior surface and apply interior casing no thicker than 1/2". If thicker Interior Casing is used, chamfer edge to prevent interference with panel, as shown.



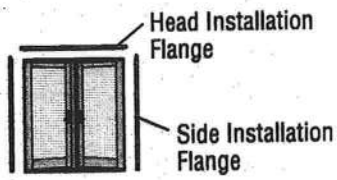
- For installations where interior finishing material is higher than 1-11/16" above the subfloor, raise door by placing a wooden spacer under sill to gain sufficient clearance for door to open. Allowances **must** be made in height of rough opening.



- For **Double Insect Screen Track, Exterior Extension Jambs**, and/or **Exterior Sill Extension Kits**, apply kits **before** unit is installed.

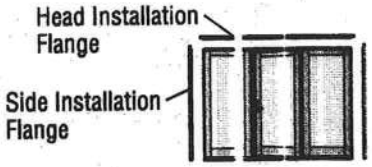


S gle/Stationary Panel



Double Panel Jamb Hinged

Double Panel Astragal Hinged*



Triple Pan l Astragal Hir ed*

* **NOT** Available with S ormwatch Prote on

Unit Designa ion	2168	2768	2968	3168	21611	27611	29611	31611	2180	2780	2980	31
Rough Openi g Width	2'1"	2'7"	2'9"	3'1"	2'1"	2'7"	2'9"	3'1"	2'1"	2'7"	2'9"	3'
Rough Openi g Height	6'8"	6'8"	6'8"	6'8"	6'11"	6'11"	6'11"	6'11"	8'0"	8'0"	8'0"	8'
Weight (lbs)	100	105	115	125	110	115	125	135	125	135	150	

Unit Designa ion	4168	5068	5468	6068	41611	50611	54611	60611	4180	5080	5480	60
Rough Openi g Width	4'1"	5'0"	5'4"	6'0"	4'1"	5'0"	5'4"	6'0"	4'1"	5'0"	5'4"	6'
Rough Openi g Height	6'8"	6'8"	6'8"	6'8"	6'11"	6'11"	6'11"	6'11"	8'0"	8'0"	8'0"	8'
Weight (lbs)	150	185	197	215	165	195	205	225	185	230	240	

Unit Designa ion	8068	9068	80611	90611	8080	9080
Rough Open ng Width	8'0"	9'0"	8'0"	9'0"	8'0"	9'0"
Rough Open ng Height	6'8"	6'8"	6'11"	6'11"	8'0"	8'0"
Weight (lbs)	280	350	295	360	360	405

! CAUTION

- Steel fast ners will corrode when used with ACQ Pressure Treated Lumber.
- Obtain an I use the appropriate size stainless steel screws, as called out in this installation guide, to fasten unit any rough opening made from ACQ Pressure Treated Lumber.
- Failure to use stainless steel fastners may result in fastner corrosion causing product damage.

I arts Include d

-) Instructio n Guide
-) Patio Doc r Unit
-) Head Inst allation Flange
-) Side Insta llation Flanges
-) Screw Pa k

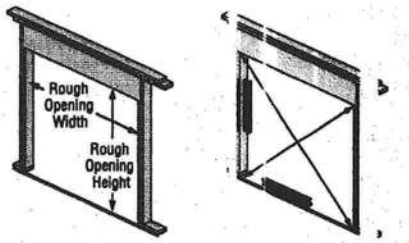
Tools & Supplies

- Safety Glasses
- Hammer
- Tape Measure
- 4' Level
- Flat Blade Screwdriver
- Phillips Screwdriver
- Small Pry Bar
- Caulk Gun
- Silicone Primer
- Silicone Sealant
- Wood Block
- Shims
- Cement Screws (concrete/masonry installation)

. Prepare Rough Opening

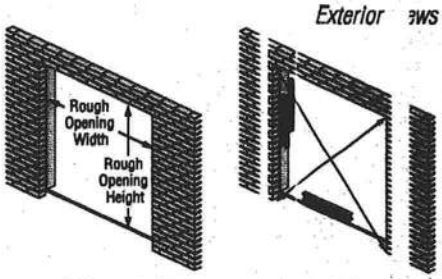
⚠ CAUTION

DO NOT nstall unit directly on masonry/concrete surface. Place full length ba rrier (i.e. treated wood, tar paper, ice/water membrane) betwee unit sill and masonry/concrete surface. Failure to use barrier a id to seal it to unit sill and masonry/concrete surface may result in oroduct and/or property damage. Entire barrier must be sealed tc masonry/concrete surface to help prevent water infiltration. Barrier tl ickness must not exceed 1/4".



Standard Cons truction

Exterior ews



Masonry/Concrete onstruction

Prepare rc ugh opening based on unit size according to table on **Page 2.**

Check sill late for level. Sill **must** be level, shim if necessary.

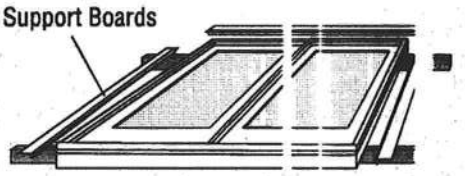
Check rou jh opening for plumb and level. If rough opening is **not** plumb or l evel, correct as necessary.

Check ope ning for square by measuring diagonally, upper left to lower right and u pper right to lower left corner. If measurements are within 1/8", open ng is square. If rough opening is **not** square, correct if needed.

. Prepare Unit

⚠ WARNING

Weigh: f Patio Doors will vary. Use a reasonable number of people with suff cient strength to lift, carry, and install door unit(s) and accesso ies. Always use appropriate lifting techniques.

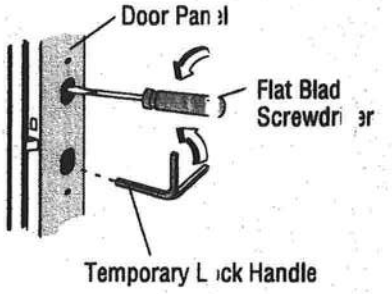


Exterior Si Up

Remove u nit from carton. Place unit exterior side up on support boards (to protect hinges) over a clean flat work surface.

⚠ WARNING

Door pa els must be in locked position before beginning. Failure to do so m y result in panels inadvertently opening causing personal injury, p operty, and/or product damage.



Insert *Tem porary Lock Handle* into lower lock hole on door panel and turn upwar ds to lock door. Insert flat blade screwdriver into upper lock hole and tu rn to the right to lock dead bolt. Door panels **must** be in locked pos tion before beginning.

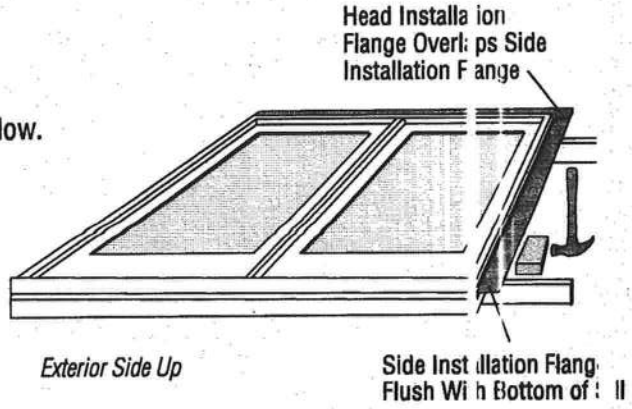
Remove pa cking blocks. Do not remove panel *Spacer Clips* until **Step 10.**

3. Apply Ins allation Flanges

⚠ CAUTION

Head Insta lation Flange must overlap Side Installation Flanges to :he exterior to help prevent water infiltration.

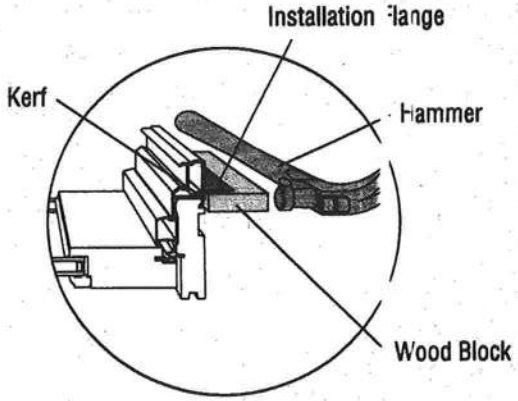
-)etermine if *Installation Flange* is used based on charts below.
- 'osition *Sid e Installation Flange* in kerf on frame with hort leg fac ng interior and end flush with bottom of ill. Place w ood block against short leg of *Side nstallation Flange* and tap until fully seated.
- Repeat for o pposite *Side Installation Flange.*
- Repeat for *H ead Installation Flange* making sure it verlaps *Sid e Installation Flanges* to the exterior.



WALL THICKNESS	INSTALLATION FLANGE	SILL EXTENDER
4 1/2"	Yes	No
5 1/4"	Yes	Optional
6 9/16"	No (Backer Rod and Silicone)	Required
7 9/16"	No (Backer Rod and Silicone)	Required

DOUBLE INSEC SCREEN TRACK T	INSTALLATION FLANGE	SILL EXTENDER
4 1/2"	Yes	No
5 1/4"	Yes	Optional
6 9/16"	No (Backer Rod and Silicone)	Required
7 9/16"	No (Backer Rod and Silicone)	Required

EXTERIOR EXTENSION JAM S	INSTALLATION FLANGE	SILL EXTENDER
4 1/2"	Yes	No
5 1/4"	Yes	Optional
6 9/16"	Yes	Required
7 9/16"	Yes	Required

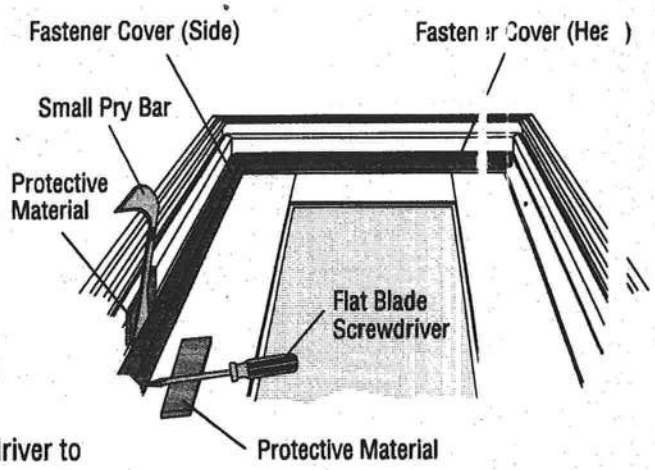


4 Remove Fastener Covers

⚠ CAUTION

Protect fr me and door panel from damage when removing Fastener Covers by inserting protective material b tween door and prying tools.

- nsert a sm ll pry bar between frame and side *Fastener Cover* at bo tom of unit using protective material between fra ne and tool.
- nsert a flat blade screwdriver under *Fastener Cover* using protective n aterial between panel and tool.
- Push small ry bar outwards and lift up slightly on screwdriver to emove *Fas ener Cover.*
- Repeat for c pposite side *Fastener Cover* and head *Fastener Cover.*

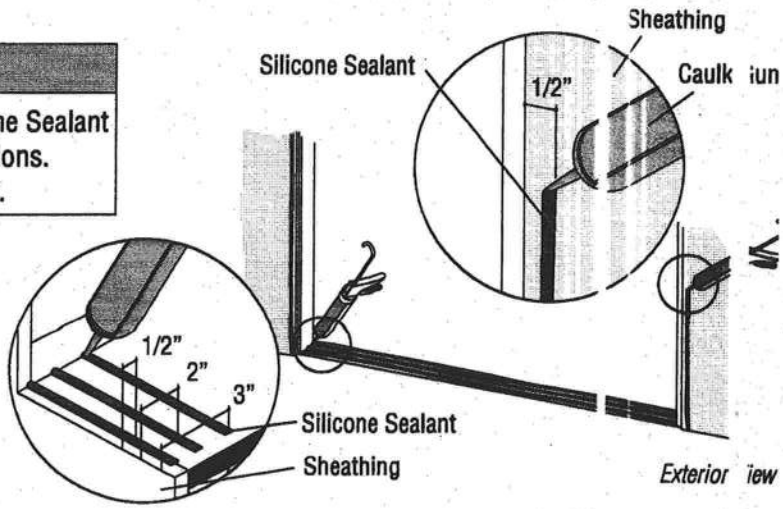


. Seal Ro ugh Opening

⚠ CAUTION

Clean ar d prepare surfaces receiving Silicone Sealant followin product's manufacturer's instructions. Failure t do so may cause water infiltration.

- Apply thre , 3/8" beads of silicone sealant to bottom of rough opening full length, as shown.
- Apply 1/4' bead of silicone sealant around full perimeter of rough opening 1/2" from edge.



Exterior iew

. Install Unit

⚠ WARNING

Weigh f Patio Doors will vary. Use a reasonable numbe of people with sufficient strength to lift, carry, ar d install door unit(s) and accessories. Always use appropriate lifting techniques.

⚠ WARNING

Support unit in rough opening at all times until secured. Failure to support unit could result in unit falling o t causing personal injury, property, and/or product damage.

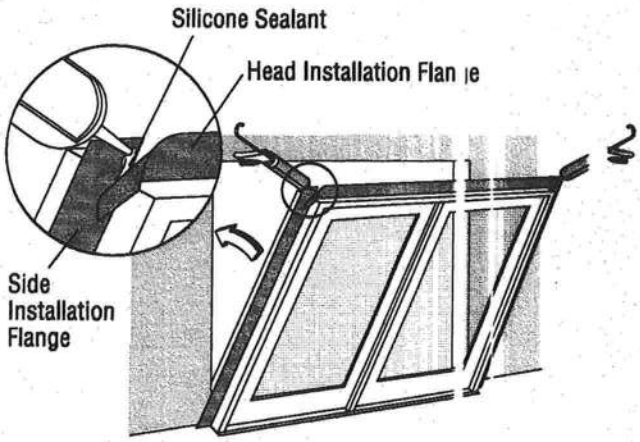
⚠ CAUTION

Installation Flanges are for sealing only. **DO NOT** use for fastening unit. Installation Flanges must be flush with exterior of opening

Apply 1/4" bead of silicone sealant between head and side Instal ation flanges at corners where flanges intersect a head jamb.

Lift and ce nter unit in rough opening, setting sill of unit onto silico ne sealant, from the exterior.

Press unit firmly into silicone sealant around perimeter of rough o pening. Installation flanges must be flush with exteri or of opening.

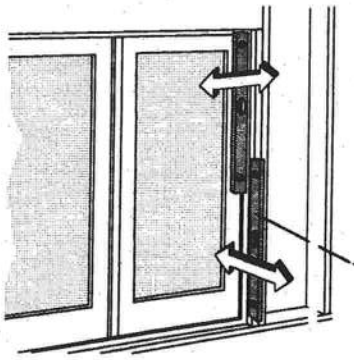


Exterior iew

7. Plumb and Level Unit

Adjust doo r in opening from the interior, entire unit must be pl umb, level, and square.

Check unit for square by measuring diagonally, upper left t lower right and upper right to lower left corners. Unit **must** be square, correct if necessary.



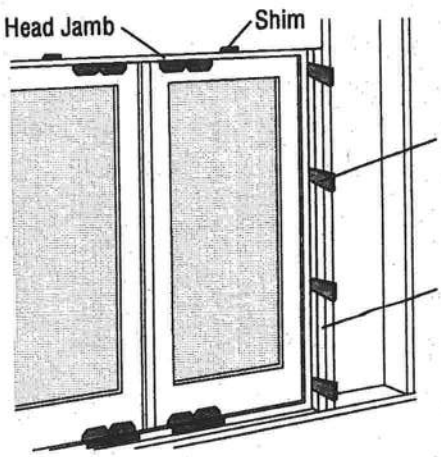
Interior iew

8. Shim Unit

⚠ CAUTION

Shims mus t be used between jambs and framing to prevent bo wing when frame is secured.

- nsert shims between rough opening and door unit, irectly abo v e and below hinges and near each nstallatior h ole in jambs, from the interior. Shims revent jamt s from bowing when unit is secured to ough openi ng.



Interior Vi

9. Fasten Unit

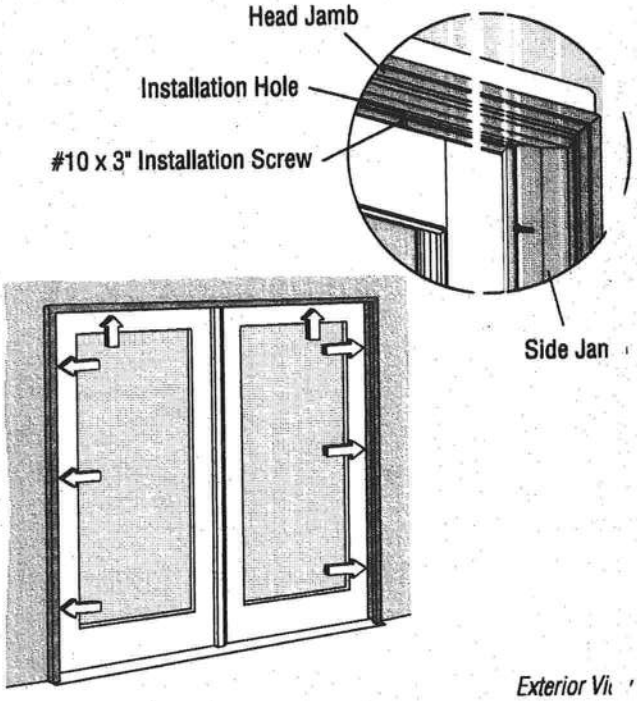
⚠ CAUTION

- Steel fas eners will corrode when used with ACQ Pressur Treated Lumber.
- Obtain a id use the appropriate size stainless steel screws, as called out in this installation guide, to fasten u nit to any rough opening made from ACQ Pressur Treated Lumber.
- Failure t o use stainless steel fastners may result in fastner c orrosion causing product damage.

NOTICE

Screw an Hinge color must match. Screws used to secure un t through installation holes will be covered by Fasten r Covers. Retain color matching Screws to secure Hinges in **Step 11.**

- For whi e interior units, use brass colored #10 x 3" Screws to secure Side Jambs and white #10 x 3" Screws to secure Hinges.
- For uni s with brass colored Hinges, use white #10 x 3 Screws to secure Side Jambs and brass colored #10 x 3" Screws to secure Hinges.

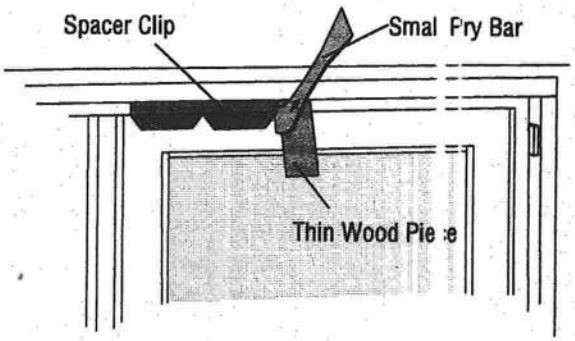


Exterior Vi

Fasten unit through installation holes in *Head* and *Side Jambs* into rough opening using *#10 x 3" Screws* from the exterio . For white interior units, use brass colored *#10 x 3" S rews*. For all other units, use white *#10 x 3" S rews*. **DO NOT** tighten screws at this point. Take care n ot to scratch door finish.

10. Remo re Spacer Clips

- Insert a s nall pry bar between frame and *Spacer Clips.* using pro ective material between frame and small pry bar. Pry ip on *Spacer Clips* to remove.



Interio iew

11. Secur e Hardware

⚠ CAUTION

Units r ay have factory installed screws in hardware locatio s where #10 X 3" Screws will be fastened. For un ts with factory installed screws, remove screws shown in illustration and replace with #10 x 3 Screws, provided. Proper screws must be used fo unit to perform properly.

- Fasten *Si e Jambs* through outer holes of all *Hinges* using *#1(x 3" Screws,* as shown. For white interior units, usa white *#10 x 3" Screws.* For brass Hinges, use brass col red *#10 x 3" Screws.*
- For **Doo Units with Stormwatch™ Protection**, place a 1/2" x 4" : 10" shim block directly above *Head Jamb Lock Rec iver*, between header and head jamb.

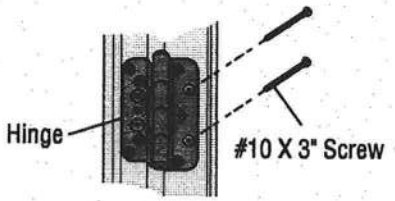
⚠ CAUTION

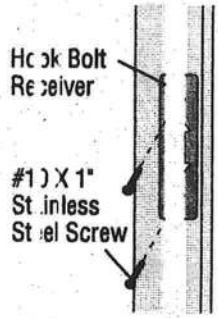
- Stee asteners will corrode when used with ACQ Press ire Treated Lumber.
- Obtai and use the appropriate size stainless steel screw s, as called out in this installation guide, to fasten unit to any rough opening made from ACQ Press ire Treated Lumber.
- Failur to use stainless steel fastners may result in fastne corrosion causing product damage.

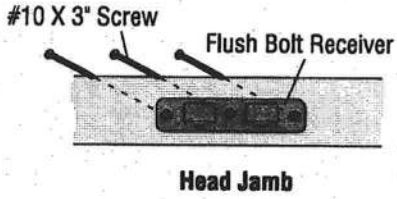
Remove *G old Colored #10 x 1" Screws* in *Flush Bolt Receivers* and replace with *#10 x 3" Screws.*

Remove *G old Colored #10 x 1" Screws* in *Hook Bolt Receivers* and replace with *Stainless Steel #10 x 1" Screws.*

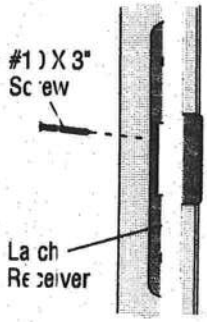
Fasten thr ugh *Latch Receiver* using *#10 x 3" Screws.*

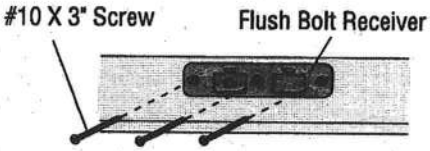






Head Jamb

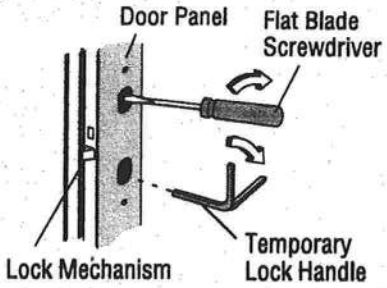


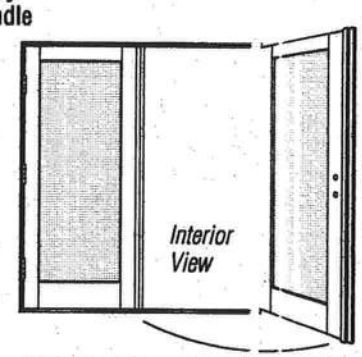


Sill

1 . Check (learance and Swing

- Insert a flat blade screwdriver into upper lock hole on door panel and turn left to unlock dead bolt. Insert *Temporary Lock Handle* into lower lock hole and turn down.
- Adjust *Latch Blocker* and *Receiver* and *Hook Bolt Receiver* (AP/PA Units) to achieve adequate weatherstrip compression, if required. Refer to hinge and hardware adjustment instruction guide for this product.
- Determine if clearance and swing are correct. *Door Panel* should remain motionless through entire swing range. If clearance and/or swing are **not** correct: First, recheck rough opening for plumb and square. If rough opening is **not** plumb or level, correct as necessary. Second, recheck sill plate for level. Third, refer to hinge and hardware adjustment instruction guide for this product

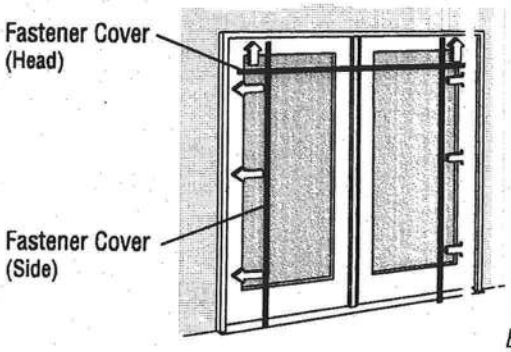




Door should remain motionless when positioned at any point in the entire swing range.

1 . Secure Unit and Apply Fastener Covers

- Tighten installation screws. Door **must** remain plumb while tightening.
- Position head *Fastener Covers* and snap into place by tapping lightly. Repeat for side *Fastener Covers*.



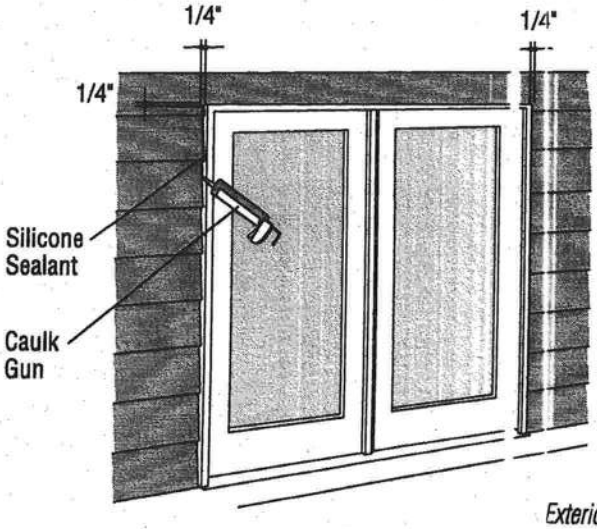
Exterior View

1 . Apply Exterior Finish and Seal

NOTICE

For installations not using Installation Flanges, backer rod (not supplied) must be inserted around perimeter of door between frame and exterior finish in place of Installation Flanges.

- Apply exterior finish over *Installation Flanges* leaving 1/4" between door frame and exterior finish.
- Apply a continuous bead of silicone sealant around exterior perimeter of door between frame and exterior finish.



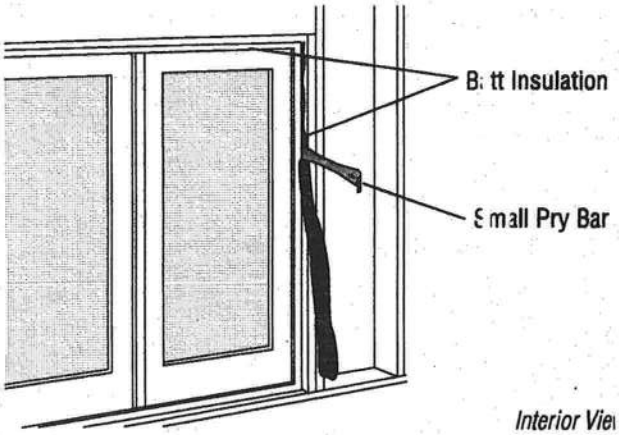
Exterior Vi

1 . Insulat Around Unit

⚠ CAUTION

When ins ılating between the unit's frame and rough op ning, or between units when joining, **DO NOT** c verpack batt insulation or overfill with foam. Bo wed jambs will result affecting product performa ıce and/or improper unit operation.

- Insert insu l ıtion between door frame and rough opening fro n the interior. **DO NOT** overpack batt insulation o · overfill with expandable foam.



Interior Vie

F ıishing, (leaning, and Maintenance Instructions

⚠ CAUTION

- **DO NO** ' expose unfinished wood to high moistu e conditions, excessive heat or humidi y. Finish interior wood surfaces immedi ately after installation. Unfinished wood s rfaces will discolor, deteriorate, and/or may bow and split.
- **DO NO** ' stain or paint weatherstrip, silicone beads, vinyl, glass, or hardware.
- Acid so utions used to wash masonry/concre e will damage glass, fasteners, hardwa e, and metal flashing. Follow the acid solutio manufacturer's instructions carefully. Protect and/or cover Andersen products during he cleaning process to prevent acid contact If acid does come in contact with unit, im mediately wash all surfaces with clean water.

INTERIOR FINISHING

Read and follow finishing manufacturer's instructior and warnings on each container of finish material fo priming, painting, staining, and varnishi ıg.

CLEANING

Clean exterior frame, sash members, and i ısect screens using a mild detergent-and-water solution an a soft cloth or brush. **DO NOT** use abrasiv e cleaners c solutions containing corrosive solvents. F or persister dirt or grime, use a nonabrasive cleanser c r a mixture of water and alcohol or ammonia.

MAINTENANCE

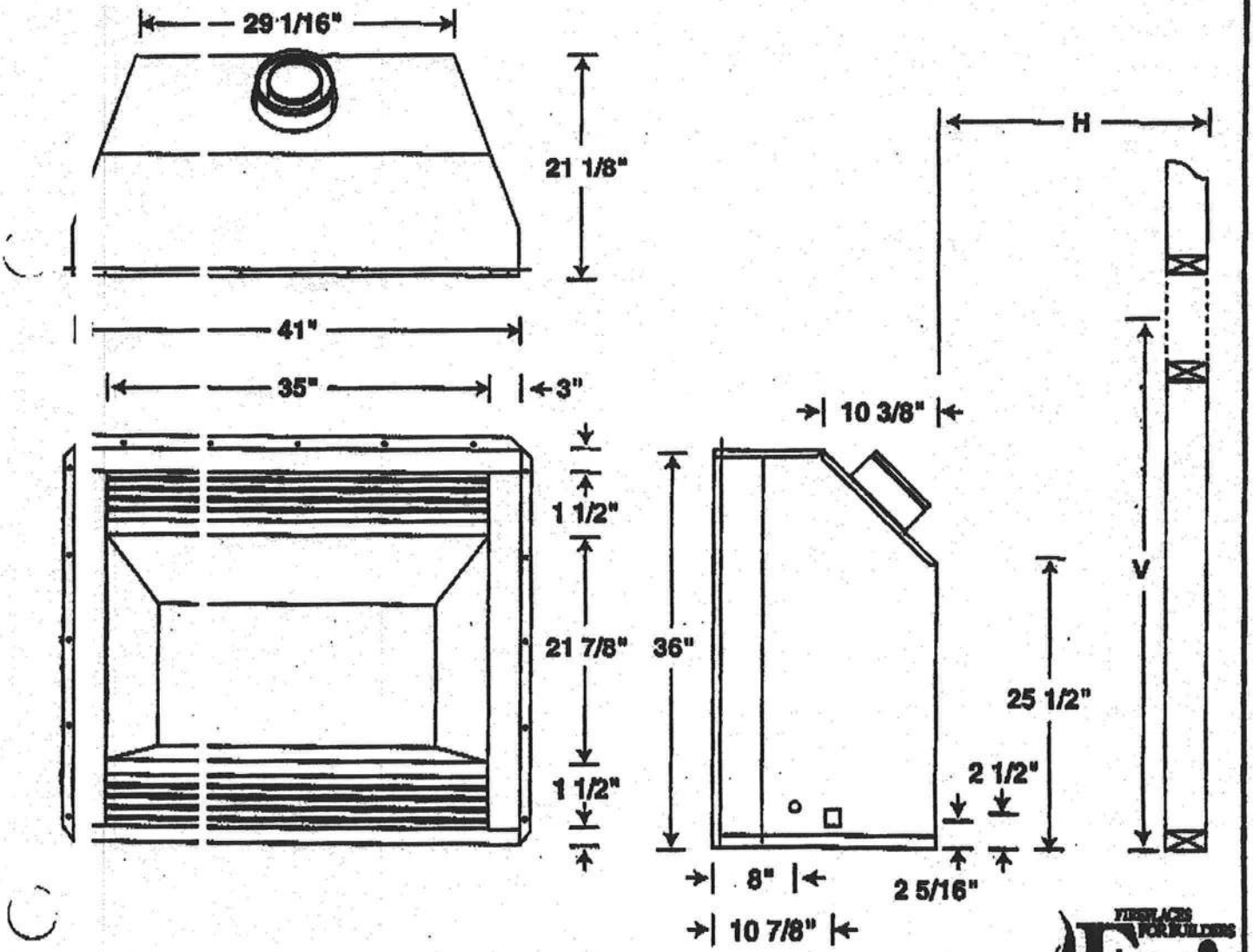
Immediately sand and refinish any interior wood that becomes stained or mildewed to prevent f rther discoloration and/or damage. For further nformation contact your local Andersen dealer. Deale s can be found in the Yellow Pages under Windows.

Victorian

36" Direct Vent Fireplace
(5" - 8" Vent Pipe)

Typ. Ground Floor Installation (1 - 45° Elbow)		
Horiz. Run (H)	Min. Height (V)	Required Horiz. Pipe
17" max.	36"	12" max.

Installations requiring 2 - 45° and 90° Elbow		
Horiz. Run (H)	Min. Height (V)	Required Vent Pipe
30" max.	47 1/4"	none
48" max.	57 1/4"	12"
60" max.	69 1/4"	24"
84" max.	81 1/4"	36"
144" max.	93 1/4"	48"



Fmi

THE 'RENAISSANCE SERIES

Victorian

36" AND 42" DIRECT VENT GAS FIREPLACES

Model V36 and V42

Timeless Beauty—And The Latest Technologies

VFI's Victorian direct vent gas fireplaces are the ideal match for today's energy-efficient homes. The Victorian is the centerpiece of our exciting new Renaissance Series, which offers a consistent look, sizing, and construction across the entire line... plus beautiful new features homeowners will love!

Homeowner Highlights:

Distinctive looks—Features random flame pattern and realistic glowing ember bed burner... plus exquisite new split oak ceramic fiber logs.

Operation and maintenance are a breeze—Operates from wall switch or remote control. Hinged glass door swings open for easy maintenance and never needs adjustment.

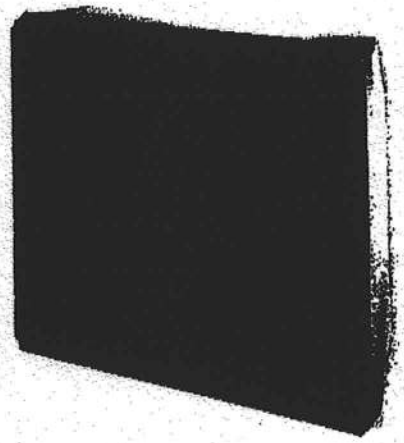
Attractive accessories—You have an array of eye-catching extras, including brass or platinum louvers and trim, realistic textured brick liner kits, and much more.

Builder Benefits:

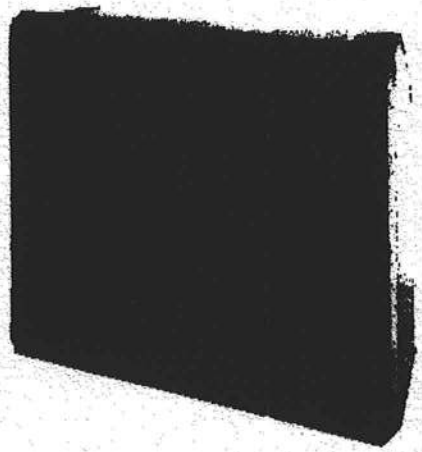
Secure, straight installation—We've added full-length nailing flanges, and drywall stops.

Venting options—Our 45° slant back design lets you choose between horizontal and vertical venting for painless installation. Your choice of hard or flexible venting.

More standard features—Flex gas connector, shut-off valve and pre-wired "J" box are all standard.



V36N features black rolled louvers.



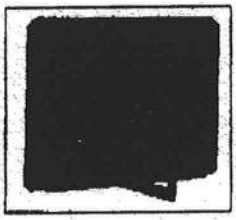
V42NH features black rolled louvers and textured herringbone brick-lined interior.

Victorian Direct Vent Fireplace Product Offering Summary

36" & 42" Direct Vent Fireplace Models Available With The Following:

- Millivolt Or Electronic Ignition
- Natural Or Propane Fuel
- Black, Standard Brick, And Herringbone Pattern Refractory Brick Interiors
- All fireplaces use 3" - 8" pipe. 36" models @ 32,000 Btu/42" models @ 35,000Btu.

Victorian models offer random, tiered flame patterns and gorgeous glowing ember bed burners.

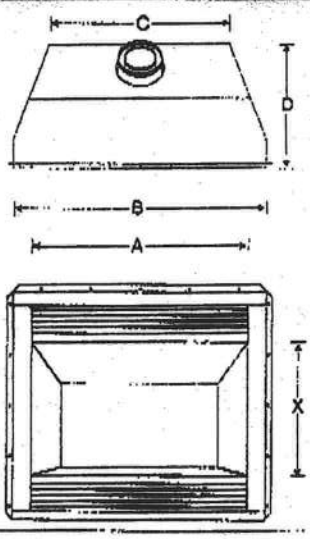


Hinged, tool-less entry door swings open for easy maintenance.

Accessory Offering Summary

- Smooth Face, Stamped Steel and Rolled Black Louver Panels
- Louver Trim (Brushed Brass & Platinum)
- Perimeter Trim Kits (Black, Brushed Brass & Platinum)
- Standard & Herringbone Refractory Brick Liners
- Remote Control Kits
- Fan Kits
- Deflection Hoods

Dimensions



	36"	42"
A	36	42
B	41	48
C	29	36
D	21 1/8	23 1/8
E	10 1/3	10 1/3
X	21 3/4	25 3/4
Y	38	40
Z	25 1/2	29 1/3

FIREPLACES FOR BUILDERS

DESA International

www.desaint.com

For more information, call (800) 888-2050

DESA INTERNATIONAL HPA HEARTH PRODUCTS ASSOCIATION Made in USA

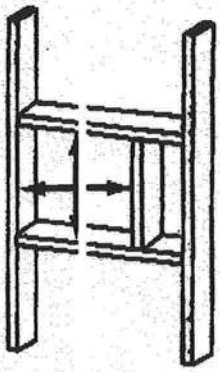
Printed in U.S.A.

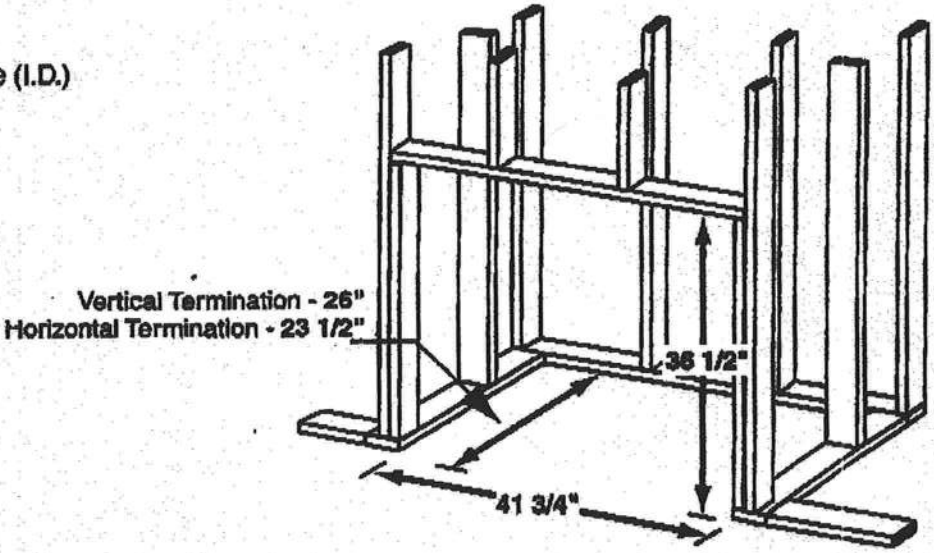
Victorian

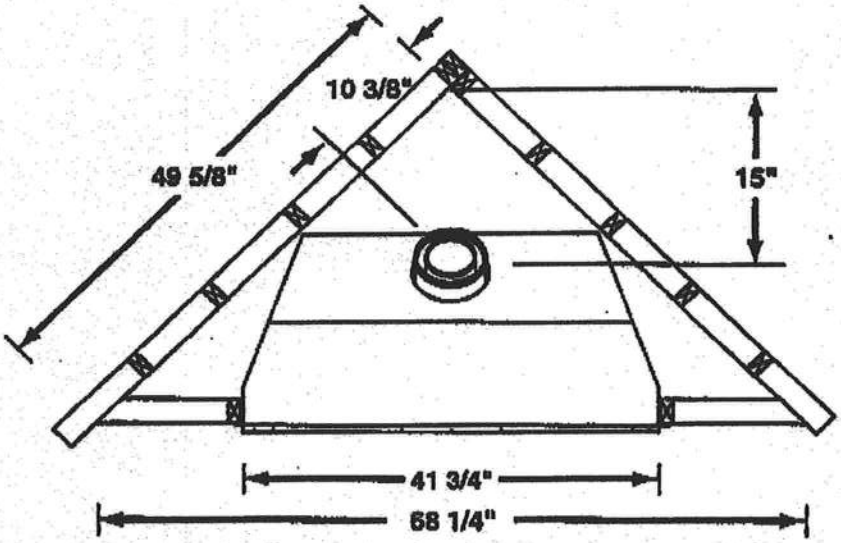
6" Direct Vent Fireplace

Framing Dimensions

Vent Opening 10 3/4" Square (I.D.)







NOTE:
Built-in Features Such as Mantels, Bookshelfs, etc. Made of Combustible Materials Must Maintain Minimum Clearances from the Fireplace. See Installation Instructions for Complete Information

FIREPLACES FOR LIFE Fmi

SOLORZANO
HVAC LOAD ANALYSIS

for

ISAAC CONSTRUCTION

Prepared By:

DAVID HALL
DAVID HALL'S INC.
PO BOX 244
LAKE CITY FL. 32056
386-755-9792
3/28/07

Miscellaneous Project Data

Proje File Name: ISAAC, SOLORZANO

System Input Data

—System 1—	Outdoor Dry Bulb	Outdoor Wet Bulb	Indoor Rel.Hum.	Indoor Dry Bulb	Grains Difference
Winte	31	N/A	N/A	72	N/A
Sumr er:	98	83	50%	75	83

External Overhangs

No.	Projection	Offset	No.	Projection	Offset
1	3	1	6	0	0
2	5	0	7	0	0
3	4	0.5	8	0	0
4	0	0	9	0	0
5	0	0	10	0	0

Duct Sizing Inputs

	Runouts	Main Trunk
Duct laterial:	Flexible Duct	Fiberglass Duct Board
Roug ness Factor	0.010000	0.003000
Pres ire Drop:	0.1000 In.wg/100 Ft.	0.1000 In.wg/100 Ft.
Minin um Velocity:	450.0 Ft./Minute	650.0 Ft./Minute
Maxi um Velocity	750.0 Ft./Minute	900.0 Ft./Minute
Minir um Height:	0 Inches	0 Inches
Maxi um Height:	0 Inches	0 Inches

Outside Air Data

	Winter		Summer	
Infiltr ion:	0.900	AC/Hr	0.400	AC/Hr
Volu e of Conditi oned Space:	X 27130	Cu.Ft.	X 27130	Cu.Ft.
	24,417	Cu.Ft./Hr	10,852	Cu.Ft./Hr
	X 0.0167		X 0.0167	
Tota Building Infil ration:	406.95	CFM	180.8667	CFM
Tota Building Ver tilation:	0	CFM	0	CFM

—System 1—

Infiltr tion & Venti ation Sensible Gain Multiplier:	25.30	= (1.10 X 23.00 Summer Temp. Difference)
Infiltr tion & Venti ation Latent Gain Multiplier:	56.64	= (0.68 X 83.30 Grains Difference)
Infiltr tion & Venti ation Sensible Loss Multiplier:	45.10	= (1.10 X 41.00 Winter Temp. Difference)

Total Building Summary Loads

Comp / Desc	nent / tion	Area Quan	Sen. Loss	Lat. Gain	Sen. Gain	Total Gain
3C	Window Do uble Pane Clear Glass Metal Frame	317	9,424	0	11,452	11,452
8C	Glass Door Single Clr Glass Metal Frame	168	7,956	0	7,040	7,040
10D	Door Wooc Solid Core	21	396	0	257	257
12C	Wall R-11 + 1/2" Gypsum(R-0.5)	1,508	5,563	0	3,609	3,609
16G	Ceiling R-3) Insulation	2,268	3,066	0	3,517	3,517
19D	Floor Over Basement/Encl Crawl Hardwood + R-19	2,052	2,187	0	0	0
22A	Slab on Gr de No Edge Insulation	30	996	0	0	0
Subto	als for struc ure:	6,364	29,588	0	25,875	25,875
Activ	People:	4	0	920	1,200	2,120
Inacti	e People:	0	0	0	0	0
Appli	nces:	0	0	1,200	1,200	2,400
Lighti	g:	0	0		4,501	
Ducty	ork:	0	2,398	0	3,736	3,736
Infiltr	ion: Winter CFM: 406.9, Summer CFM: 180.9	506	18,352	10,243	4,577	14,820
Venti	tion: Winter CFM: 0.0, Summer CFM: 0.0	0	0	0	0	0
Sens	le Gain Tot l:				41,089	
Temp	erature Swir g Multiplier:				X1.00	
Build	g Load Tot ls:		50,338	12,363	41,089	53,452

Check Figures

Total Building Sup ply CFM: 1868
Squa e feet of roc n area: 2,254

CFM per square foot: 0.829
Square feet per ton: 503.198

Building Loads

Total	eating requ red with outside air:	50,338 Btuh	50.338 MBH
Total	ensible gai :	41,089 Btuh	77 %
Total	atent gain:	12,363 Btuh	23 %
Total	ooling requ red with outside air:	53,452 Btuh	4.454 Tons (based on sensible + latent)
			4.479 Tons (based on 77% sensible capacity)

Notes

Calc ations are b ased on 7th edition of ACCA Manual J.
All c nputed resu lts are estimates as building use and weather may vary.
Be s e to select a unit that meets both sensible and latent loads.

System #1 Summary Loads

Component Description	Area Quan	Sen. Loss	Lat. Gain	Sen. Gain	Total Gain
3C Window Double Pane Clear Glass Metal Frame	317	9,424	0	11,452	11,452
8C Glass Door Single Clr Glass Metal Frame	168	7,956	0	7,040	7,040
10D Door Wood Solid Core	21	396	0	257	257
12C Wall R-11 - 1/2" Gypsum(R-0.5)	1,508	5,563	0	3,609	3,609
16G Ceiling R-3) Insulation	2,268	3,066	0	3,517	3,517
19D Floor Over Basement/Encl Crawl Hardwood + R-19	2,052	2,187	0	0	0
22A Slab on Gr de No Edge Insulation	30	996	0	0	0
Subtotals for structure:	6,364	29,588	0	25,875	25,875
Active People:	4	0	920	1,200	2,120
Inactive People:	0	0	0	0	0
Appliances:	0	0	1,200	1,200	2,400
Lighting:	0	0		4,501	
Ductwork:	0	2,398	0	3,736	3,736
Infiltration: Winter CFM: 406.9, Summer CFM: 180.9	506	18,352	10,243	4,577	14,820
Ventilation: Winter CFM: 0.0, Summer CFM: 0.0	0	0	0	0	0
Sensible Gain Total:				41,089	
Temperature Swing Multiplier:				X1.00	
System Load Totals:		50,338	12,363	41,089	53,452

Check Figures

Supply CFM:	1,868	CFM per square foot:	0.829
Square feet of room area:	2,254	Square feet per ton:	503.198

System Loads

Total heating required with outside air:	50,338	Btuh	50.338	MBH
Total sensible gain:	41,089	Btuh	77	%
Total latent gain:	12,363	Btuh	23	%
Total cooling required with outside air:	53,452	Btuh	4.454	Tons (based on sensible + latent)
			4.479	Tons (based on 77% sensible capacity)

Notes

Calculations are based on 7th edition of ACCA Manual J.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads.

Room Load Summary Reports

System #1 Room Load Summary

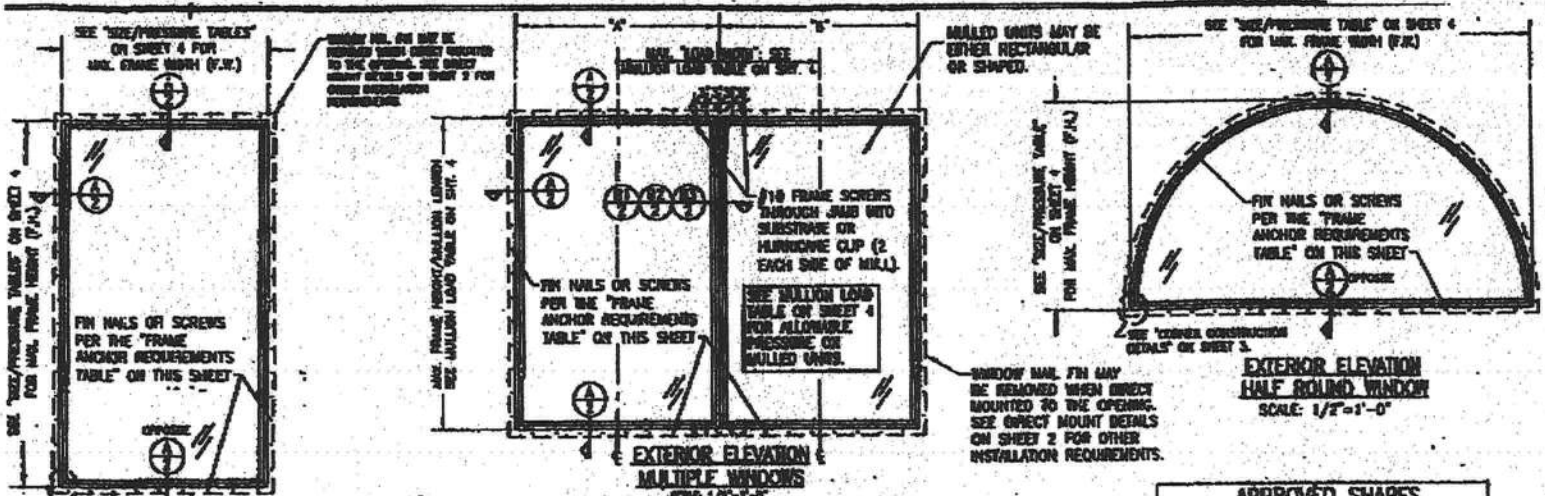
No	Room Name	Area SF	Htg Sens Btuh	Htg Nom CFM	Run Duct Size	Run Duct Vel	Clg Sens Btuh	Clg Lat Btuh	Clg Nom CFM	Zone Adj Fact	Clg Adj CFM	Air Sys CFM
	—Zone 1—											
1	Dining Room	216	5,807	75	1-9	532	4,342	1,080	197	1.19	235	197
2	Bedroom#2	168	2,083	27	1-5	554	1,661	243	76	1.00	76	76
3	Bath	66	746	10	1-4	426	817	121	37	1.00	37	37
4	Living Room	624	19,494	253	2-12	599	15,345	5,272	698	1.35	942	698
5	Kitchen	182	1,454	19	1-7	496	2,914	1,612	132	1.00	132	132
6	Breakfast Nook	168	4,323	56	1-7	470	2,765	850	126	1.00	126	126
7	Master Bedroom	270	6,805	88	1-11	531	5,707	1,566	259	1.35	350	259
8	Master Closet	66	353	5	1-3	569	614	0	28	1.00	28	28
9	Master Bath	118	3,461	45	1-6	539	2,327	769	106	1.00	106	106
10	Laundry	31	160	2	1-2	694	333	0	15	1.00	15	15
11	Closet	24	154	2	1-2	685	329	0	15	1.00	15	15
12	Loft	321	5,498	71	3-4	683	3,936	850	179	1.00	179	179
System 1 Totals		2254	50,338	654			41,089	12,363	1,868		2,240	1,868

Main Trunk Size: 20x16 in.

System #1 Cooling System Summary

	Cooling Tons	Sensible/Latent Split	Sensible Btuh	Latent Btuh	Total Btuh
Net Required:	4.454	77%/23%	41,089	12,363	53,452
Recommended:	4.479	77%/23%	41,389	12,363	53,752

Wood Windows



UP TO 4 WINDOWS MAY BE MULLED EITHER HORIZONTALLY OR VERTICALLY WITHIN THE RESTRICTIONS SHOWN. NOTE: THAT THIS MULLION CONDITION IS ONLY APPLICABLE WITH ONE (1) DIRECTIONAL MULLING.

(IF VERTICALLY STACKED, MANUFACTURER MUST INSURE THAT THE DEAD WEIGHT OF THE WINDOWS DOES NOT CAUSE ANY WINDOW FAILURES OR DEFORMATIONS)

NAIL FIN MOUNT CONDITION IS SHOWN IN THESE ELEVATIONS. FOR OTHER MOUNTING OPTIONS (SHEAR SCREW, DIRECT & CLIP MOUNT), SEE SHEET 2.

APPROVED SHAPES

NOTES:
1. OTHER SHAPES MAY APPLY PROVIDING THEY ARE SIMILAR TO THOSE SHOWN & HAVE CORNER CONSTRUCTION PER CORNER DETAILS.
2. ALL UNITS MUST FIT INSCRIBED INTO THE ALLOWABLE LOAD TABLE DIMENSIONS (SEE SHEET 4) & BE GOVERNED BY THE ALLOWABLE PRESSURE OF THE RESPECTIVE UNIT SIZE IN THE LOAD TABLE.

GENERAL NOTES

1. THESE WINDOW SYSTEMS HAVE BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN LOADS" TABLE.
2. [illegible] OPENINGS, & [illegible] MUST BE PROPERLY INSTALLED TO TRANSFER LOADS TO THE STRUCTURE.
3. ALL [illegible] & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & [illegible]
4. THESE WINDOW SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH & MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (F.B.C.)
5. THESE WINDOWS HAVE BEEN TESTED IN ACCORDANCE WITH [illegible] 2-97 "VOLUNTARY SPECIFICATIONS FOR ALUMINUM, VINYL (PVC) AND WOOD WINDOWS AND GLASS DOORS." REFERENCE TEST REPORT [illegible]
6. [illegible]
7. THESE WINDOW SYSTEMS ARE NON-IMPACT RATED & MUST BE SHUTTERED WHERE REQUIRED BY CODE.
8. ALL WINDOW SIZES SPECIFIED AS ALLOWABLE IN THE "WINDOW SIZE/PRESSURE TABLE" HAVE BEEN COMPARED TO THE TESTED UNIT & ARE RESTRICTED BY THE OVERALL SIZE (AREA) OF THE TESTED UNIT. ALL COMPONENTS HAVE BEEN CHECKED, INCLUDING GLASS, TO ASTM E1300, TO SUPPORT THESE LOADS AS SPECIFIED IN THE LOAD TABLE. [illegible]
9. TESTED UNITS USED A VARIATION OF GLASS TYPES [illegible] & GLASS THICKNESSES. GLASS TO BE USED WITH THESE [illegible] SHALL BE AS SPECIFIED BY THESE DRAWINGS WITH WIND LOAD RESTRICTIONS AS SET BY THE [illegible]

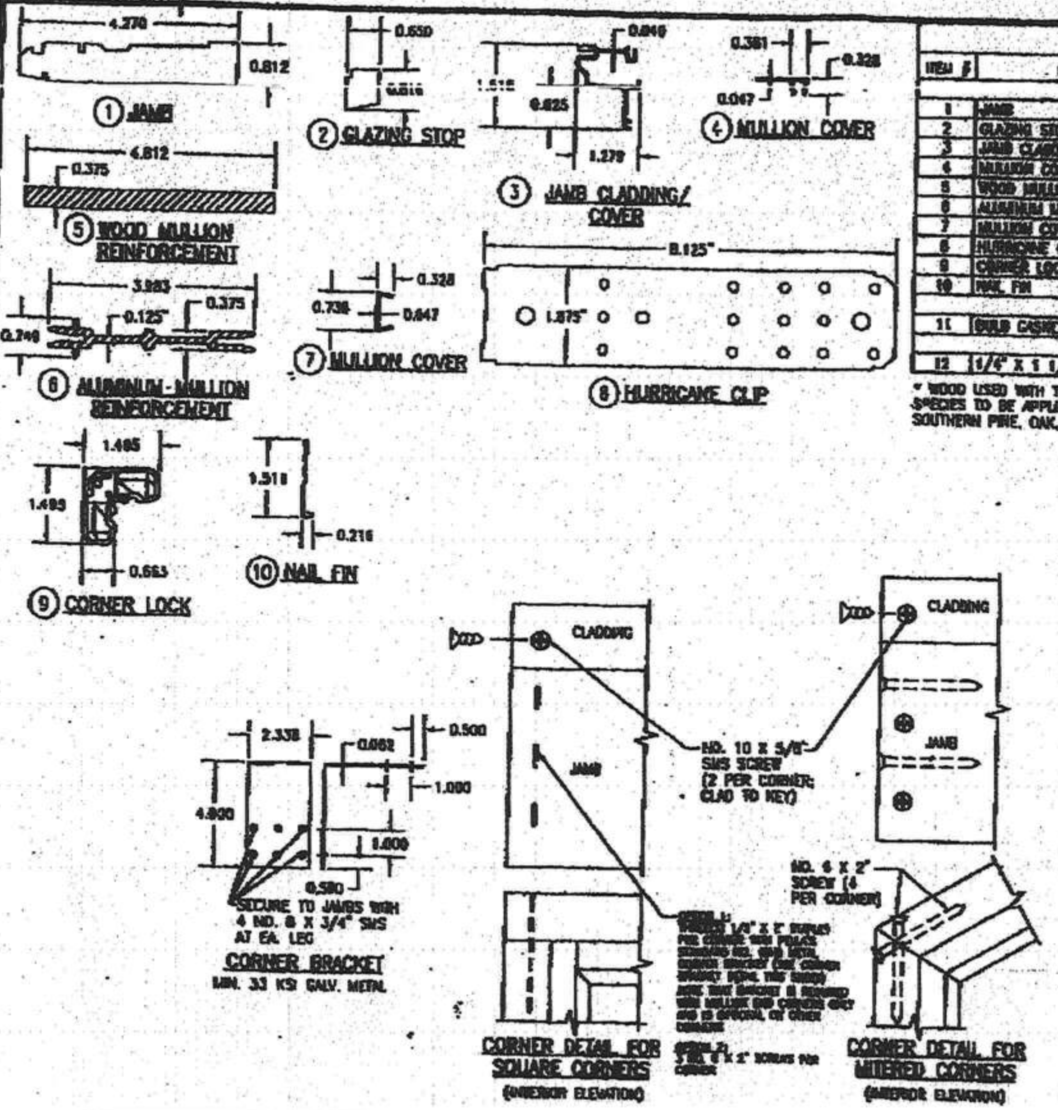
FRAME ANCHOR REQUIREMENTS TABLE					
FIN SCREWS					
OPENING TYPE (SUBSTRATE)	[illegible]	[illegible]	[illegible]	[illegible] SPACING	[illegible]
	2" X 11 GA. ROOFING NAILS	1 [illegible]	1/2"	[illegible] O.C.	3"
[illegible] WOOD FRAME OR [illegible]	1 3/4" X 11 GA. ROOFING NAILS	1 [illegible]	1/2"	6" O.C.	3"
	1 1/2" X 11 GA. ROOFING NAILS	1 [illegible]	1/2"	[illegible] O.C.	3"
[illegible] WOOD FRAME OR [illegible]	[illegible]	[illegible]	1/2"	[illegible] O.C.	3"
* SHEAR SCREWS					
[illegible] WOOD FRAME OR [illegible]	[illegible]	1 1/4"	3/4"	[illegible] O.C.	4"
CMU/CONCRETE	3/16" [illegible]	1 1/4"	[illegible]	[illegible] O.C.	6"
[illegible]					

* SHEAR SCREW ANCHOR NOTE: FRAME MAY BE EITHER DIRECT MOUNTED TO THE OPENING, MOUNTED ONTO A CONTINUOUS SPACER, OR ANCHORED TO A MIN. 2X4 NO. 2 SOUTHERN PINE WOOD BUCK. WHEN ANCHORED THROUGH JAMB TO A 2X4 BUCK, [illegible] SHALL BE USED. WHEN ANCHORED WITH [illegible] DIRECT MOUNTED OR MOUNTED WITH SPACER, 3/16" CONCRETE SCREWS SHALL BE USED. SEE "ANCHOR REQUIREMENTS TABLE" FOR [illegible]

DRAWING TITLE	ALUMINUM CLAD WOOD FIXED FRAME NON-IMPACT WINDOWS
PREPARED BY	W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
PREPARED FOR	PELLA CORPORATION, 102 MAIN STREET, PELLA, IA 50219, 641-621-1000
CERTIFICATION	[illegible] P.E.
DRAWING NO.	1141
SHEET	1 OF 4

FEB 14 2003

SEE GLAZING DETAIL ON THIS SHEET
SECTION
SCALE: 1/2 FULL
FRAME HEIGHT (F.H.)
SEALANT BY OTHERS
EXTERIOR
MIN. SPACE
1/4" @ SILL
3/8" @ JAMBS
1/2" @ HEAD
SILICONE GLAZING
1/2" DOUBLE SIDED FOAM GLAZING TAPE
GLAZING SHIM (2 PER SIDE AT EA. CORNER)
FOR UNITS WITH A FRAME LEG > 36", APPLY A 1/8" WIDE CONTINUOUS BEAD OF GLUE PRIOR TO ATTACHING STOPS. SHIPS OF 2' ALLOWED PER FOOT OF LINEAL
1/8" MIN. TEMPERED
5/8" MIN. (1" MAX.)
GLAZING DETAIL
(I.G. GLASS)
9/16" MIN. BITE
SPACER
SILICONE GLAZING
GLAZING SHIM (2 PER SIDE AT EA. CORNER)
1/2" DOUBLE SIDED FOAM GLAZING TAPE
FOR UNITS WITH A FRAME LEG > 36", APPLY A 1/8" WIDE CONTINUOUS BEAD OF GLUE PRIOR TO ATTACHING STOPS. SHIPS OF 2' ALLOWED PER FOOT OF LINEAL
1/8" MIN. TEMPERED
GLAZING DETAIL
(SINGLE PANE GLASS)
9/16" MIN. BITE
SILICONE GLAZING
GLAZING SHIM (2 PER SIDE AT EA. CORNER)
1/2" DOUBLE SIDED FOAM GLAZING TAPE
FOR UNITS WITH A FRAME LEG > 36", APPLY A 1/8" WIDE CONTINUOUS BEAD OF GLUE PRIOR TO ATTACHING STOPS. SHIPS OF 2' ALLOWED PER FOOT OF LINEAL
1/8" MIN. TEMPERED
SECTION
SCALE: 1/2 FULL
CONT. SEALANT
1/2" X 1" CORRUGATED FASTENER @ 6" FROM ENDS & 16" TO 12" O.C.
SECTION
SCALE: 1/2 FULL
CONT. SEALANT BEHIND MULL COVER
1/2" X 1" CORRUGATED FASTENER @ 6" FROM ENDS & 16" TO 12" O.C.
(WITH NO REINFORCEMENT)
SECTION
SCALE: 1/2 FULL
CONT. SEALANT BEHIND MULL COVER
1/2" X 1" CORRUGATED FASTENER @ 6" FROM ENDS & 16" TO 12" O.C.
(WITH ALUMINUM REINFORCEMENT)
SECTION
SCALE: 1/2 FULL
(WITH WOOD REINFORCEMENT)
OPTIONAL CLIP INSTALLATION
HEAD DETAIL SHOWN SIMILAR
SEE SECTIONS FOR DETAIL NOT SHOWN
(SIMILAR FOR ALL JAMB TYPES)
HURRICANE CLIP WITHIN 6" OF CORNERS & SPACED MAX. 6" O.C.
MIN. 8-X 3/4" PAN SMS SCREWS (2 PER CLIP)
MIN. 2X6 BUCK & FASTENERS BY OTHERS
NO. 8 X 1.5" SMS (1 PER CLIP INTO BUCK AT 20-30 DEG ANGLE)
1/4" MIN.
1/2" MIN. TO CENTER OF SCREW
DIRECT MOUNT DETAIL IN BLOCK
HEAD DETAIL SHOWN SIMILAR
SEE SECTIONS FOR DETAIL NOT SHOWN
(SIMILAR FOR ALL JAMB TYPES)
SEALANT & BACKER ROD BY OTHERS
EXTERIOR
3/16" CONCRETE SCREW (REF. ANCHOR REQUIREMENTS TABLE ON SHEET 1 FOR OTHER INSULATION REQUIREMENTS)
CONTINUOUS WOOD MEMBER LESS IN SIZE THAN A 2X, SHIM TO BE MIN. 3 1/2" DEEP NOT REQUIRED WHEN 1/4" OR LESS SHIM SPACE EXISTS (USE SMS ONLY).
OPTIONAL SHEAR SCREW MOUNT DETAIL
HEAD DETAIL SHOWN SIMILAR
SEE SECTIONS FOR DETAIL NOT SHOWN
(SIMILAR FOR ALL JAMB TYPES)
SEALANT & BACKER ROD BY OTHERS
EXTERIOR
NO. 10 SCREWS (REF. ANCHOR REQUIREMENTS TABLE ON SHEET 1 FOR OTHER INSULATION REQUIREMENTS)
1/4" MAX. SHIM
IF SHIM SPACE EXCEEDS 1/4", A CONTINUOUS MEMBER MIN. 3 1/2" DEEP MUST BE PLACED AS A SPACER AND THE FRAME SCREWED MUST RUN THROUGH SPACER AND INTO BUCK/FRAMING MEMBER.
ALUMINUM CLAD WOOD FIXED FRAME NON-IMPACT WINDOWS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
PELLA CORPORATION
102 MAIN STREET
PELLA, IA 50219
641-621-1000
FEB 19 2003



BILL OF MATERIALS

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
	PARTS	
1	JAMB	* PONDEROSA/SUGAR PINE
2	GLAZING STOP	* PONDEROSA/SUGAR PINE
3	JAMB CLADDING	6063-T6 ALUMINUM
4	MULLION COVER	6063-T6 ALUMINUM (CONT.)
5	WOOD MULLION REINFORCEMENT	SOUTHERN PINE
6	ALUMINUM MULLION REINFORCEMENT	6063-T5 OR T6 ALUMINUM 0/ 1/8" WALL
7	MULLION COVER	6063-T6 ALUMINUM (CONTINUOUS)
8	HURRICANE CLIP	0.085" THK. HR 63 GALV. STEEL
9	CORNER LOCK	NYLON
10	NAIL FIN	.0235" ALUMINUM
	SEALS & SEALANTS	
11	BULB GASKET	PVC
	MISCELLANEOUS FASTENERS	
12	1/4" X 1 1/8" 18 GA STAPLE	WITHIN 2" OF CORNERS & 6" (+/-) O.C.

* WOOD USED WITH TEST UNITS WAS SELECT WESTERN PINE. ALTERNATE WOOD SPECIES TO BE APPLICABLE WITH THESE WINDOWS IS MIN. GRADE 2 MAHOGANY, SOUTHERN PINE, OAK, CHERRY, MAPLE, DOUGLAS FIR & CYPRUS.

ALUMINUM CLAD WOOD FIXED FRAME NON-IMPACT WINDOWS

PELLA CORPORATION
102 MAIN STREET
PELLA, IA 50219
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W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.

CERTIFICATION

P.E.

FEB 14 2003

1141

3 of 4

(1) ALLOWABLE SIZE & DESIGN PRESSURE TABLE FOR WINDOWS USING I.G. GLASS WITH MIN. 1/8" TEMPERED PANES OR SINGLE PANE 1/4" TEMPERED GLASS

MAX. SHORT DIMENSION (2)(3) (IN.)	MAX. LONG DIMENSION (2) (IN.)	MAX. DESIGN PRESSURE (PSF)
72	120	50.0
73.5	114	50.0

(1) ALLOWABLE SIZE & DESIGN PRESSURE TABLE FOR WINDOWS USING MIN. 1/8" SINGLE PANE TEMPERED GLASS

(2) SHORT DIMENSION	DESIGN LOAD CAPACITY (POSITIVE & NEGATIVE PSF)								
30" OR LESS	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
36"	50.0	50.0	50.0	50.0	50.0	50.0	50.0	X	X
42"	50.0	50.0	50.0	50.0	50.0	X	X	X	X
48"	50.0	50.0	50.0	X	X	X	X	X	X
54"	50.0	50.0	X	X	X	X	X	X	X
60"	50.0	X	X	X	X	X	X	X	X
(2) LONG DIMENSION	60" OR LESS	66"	72"	78"	84"	90"	96"	108"	120"

TABLE NOTES:

(1) IN DETERMINING WIND LOADS, ASTM E1300-98 WAS USED CONSIDERING A 3 SECOND GUST WIND SPEED TO BE CONSISTENT WITH ASCE 7-98 CALCULATED PRESSURES.

(2) ALL WINDOW DIMENSION VALUES SHOWN ARE +/-1/2" & ARE FRAME (F.H. & F.W.) DIMENSIONS

(3) THOSE SIZES WITH LOADS USED ARE MAXIMUM ALLOWABLE SIZES AT THAT LOAD. IF NO LOAD IS LISTED FOR A GIVEN SIZE, THAT SIZE EXCEEDS ALLOWABLE AND IS NOT ACCEPTABLE.

(1) ALLOWABLE SIZE & DESIGN PRESSURE TABLE FOR WINDOWS USING MIN 5/32" SINGLE PANE TEMPERED GLASS

(2) SHORT DIMENSION	DESIGN LOAD CAPACITY (POSITIVE & NEGATIVE PSF)								
30" OR LESS	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
36"	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
42"	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
48"	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
54"	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
60"	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0
66"	X	43.6	43.6	43.6	43.6	43.6	43.6	43.6	43.6
72"	X	X	40.0	40.0	40.0	40.0	40.0	40.0	40.0
72.5"	X	X	X	36.1	36.1	36.1	36.1	36.1	X
(2) LONG DIMENSION	60" OR LESS	66"	72"	78"	84"	90"	96"	108"	120"

MULLION LOAD TABLE

MULLION LENGTH (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURES (PSF) MULLION "B1"	MULLION "B2"	MULLION "B3"
54 OR LESS	54 & UP	[illegible]	[illegible]	[illegible]
60	[illegible]	[illegible]	[illegible]	[illegible]
66	[illegible]	[illegible]	[illegible]	[illegible]
72	[illegible]	[illegible]	[illegible]	[illegible]
78	[illegible]	[illegible]	[illegible]	[illegible]
84	[illegible]	[illegible]	[illegible]	[illegible]

MULLION LOAD TABLE (CONT'D)

MULLION LENGTH (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURES (PSF) MULLION "B1"	MULLION "B2"	MULLION "B3"
90	[illegible]	[illegible]	[illegible]	[illegible]
96	[illegible]	[illegible]	[illegible]	[illegible]
108	[illegible]	[illegible]	[illegible]	[illegible]
120	[illegible]	[illegible]	[illegible]	[illegible]

MULLION "B1" = MULLION SECTION "B1" ON SHEET 2
MULLION "B2" = MULLION SECTION "B2" ON SHEET 2
MULLION "B3" = MULLION SECTION "B3" ON SHEET 2

NOTE: THE LESSER OF THE MULLION LOAD OR THE ALLOWABLE LOAD FOR THE INDIVIDUAL WINDOWS SHALL CONTROL AS THE ALLOWABLE LOAD ON THE MULLED SYSTEM.

CERTIFICATION

ALUMINUM CLAD WOOD FIXED FRAME NON-IMPACT WINDOWS

W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.

PELLA CORPORATION
102 MAIN STREET
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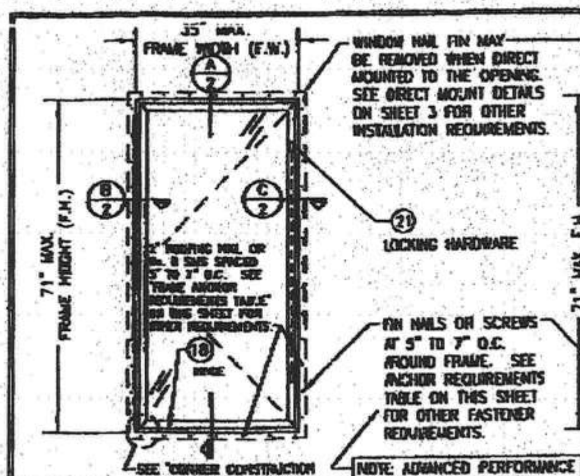
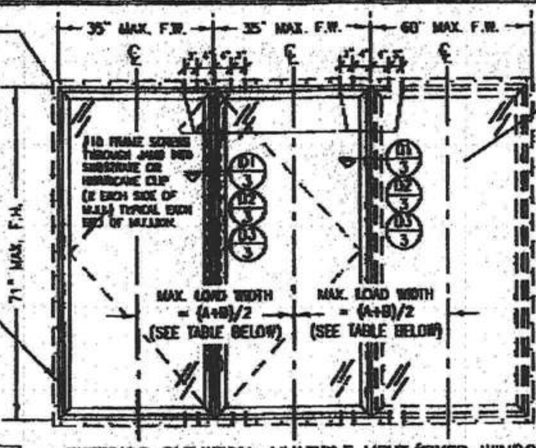


EXTERIOR ELEVATION RECTANGULAR WINDOW

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

NOTE: ADVANCED PERFORMANCE WINDOWS MUST BE SHEAR SCREW MOUNTED ONLY (NO FIN OR CLIP MOUNT ALLOWED).

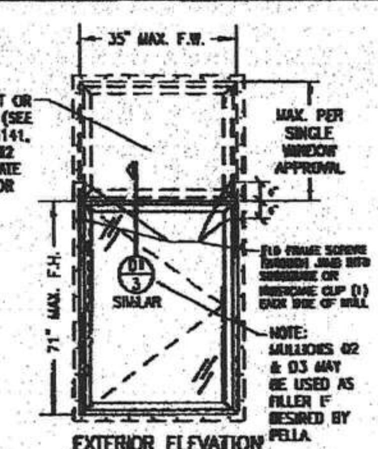


EXTERIOR ELEVATION: MULTIPLE VENT/FIXED WINDOWS

UP TO FOUR WINDOWS MAY BE COMBINED IN ONE OPENING WITH ANY COMBINATION OF FIXED &/OR OPERABLE WINDOWS

SEE SINGLE WINDOW ELEVATION FOR CASEMENT WINDOW DETAILS

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



EXTERIOR ELEVATION MULTIPLE VENT/FIXED WINDOWS

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

UP TO FOUR UNITS MAY BE COMBINED VERTICALLY IN ONE OPENING

(IF VERTICALLY STACKED, MANUFACTURER MUST INSURE THAT THE DEAD WEIGHT OF THE WINDOWS DOES NOT CAUSE ANY WINDOW FAILURE OR DEFORMATION)

MULTIPLE UNIT NOTES:
1. ALL WINDOWS ARE RESTRICTED BY THE CONDITIONS SHOWN.
2. THE MAXIMUM ALLOWABLE PRESSURE FOR A COMBINED UNIT IS RESTRICTED BY THE SAME ALLOWABLE PRESSURE FOR THE SINGLE WINDOWS.
3. FOR MULLED COMBINATIONS OR SITUATIONS OUTSIDE OF THAT SHOWN ABOVE, MULLIONS CERTIFIED BY A REGISTERED ENGINEER SHALL BE USED.

LOCK & SNUBBER REQUIREMENTS

WINDOW HEIGHT	LOCK POINTS REQUIRED	SNUBBERS REQUIRED
29" & LESS	1 AT SILL	(1) 0
29 ≤ 35	1 AT SILL	(1) 1
GREATER THAN 35"	2 EA. SIDE	(1) 1

1) 3 SNUBBERS REQUIRED WITH ADVANCED PERFORMANCE WINDOW (75 PSF RATING) & STANDARD WINDOW WITH 60 PSF RATING.

NAIL FIN MOUNT CONDITION IS SHOWN IN THESE ELEVATIONS. FOR OTHER MOUNTING OPTIONS (SHEAR SCREW, DIRECT & CLIP MOUNT), SEE SHEET 3.

GLASS TYPE TO BE SPECIFIED BY PELLA BASED ON ALLOWABLE GLASS LOAD AS DETERMINED BY ASTM E1300.

MULLION LOAD TABLE

MULLION SPAN (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (PSF) MULLION "01"	MULLION "02"	MULLION "03"
71	23 OR LESS	71.7	75.0	75.0
	29	61.8	73.8	75.0
	33	54.3	64.8	75.0
	37	48.8	57.6	75.0
	41	43.8	52.1	75.0
	48	37.3	44.6	70.9
65	29 OR LESS	75.0	75.0	75.0
	33	[illegible]	75.0	75.0
	37	[illegible]	[illegible]	75.0
	41	[illegible]	62.1	75.0
	48	44.4	[illegible]	75.0
53 OR LESS	41 OR LESS	[illegible]	75.0	75.0
	48	[illegible]	75.0	75.0

FRAME ANCHOR REQUIREMENTS TABLE

OPENING TYPE (SUBSTRATE)	JAMB TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.	MAXIMUM SPACING	MAX. DIST. FROM CORNER
FIN SCREWS					
2X_ WOOD FRAME OR BUCK	2" X 11GA. ROOFING NAILS	1 7/8"	1/2"	5" TO 7" O.C.	2"
2X_ WOOD FRAME OR BUCK	NO. 8 SMS SCREW	1 1/8"	1/2"	5" TO 7" O.C.	2"
* SHEAR SCREWS					
2X_ WOOD FRAME OR BUCK	NO. 10 SMS SCREW	1 1/4"	3/4"	18"	6"

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

* SHEAR SCREW ANCHOR NOTE: FRAME MAY BE EITHER DIRECT MOUNTED TO THE OPENING, MOUNTED ONTO A CONTINUOUS SPACER, OR ANCHORED TO A MIN. 2X4 NO. 3 SOUTHERN PINE WOOD BUCK. WHEN ANCHORED THROUGH JAMB TO A 2X4 BUCK, NO. 10 SCREWS SHALL BE USED. WHEN ANCHORED WITH NAIL FIN INTO 2X4 BUCK, 2" X 11GA. ROOFING NAILS OR NO. 8 SCREWS SHALL BE USED. WHEN DIRECT MOUNTED OR MOUNTED WITH SPACER, 3/16" CONCRETE SCREWS SHALL BE USED. SEE "ANCHOR REQUIREMENTS TABLE" FOR FIXED REQUIREMENTS. PROPER ISOLATION SHALL BE USED BETWEEN ALL DISSIMILAR MATERIALS (BLOCK/CONCRETE & ALUMINUM).

* ALLOWABLE DESIGN LOAD (SINGLE WINDOWS)

POSITIVE	NEGATIVE
STANDARD SERIES WITHOUT KIT (1 SNUBBER)	
50 PSF	50 PSF
STANDARD SERIES WITH KIT (3 SNUBBERS)	
60 PSF	60 PSF
# ADVANCED PERFORMANCE SERIES	
75 PSF	75 PSF

ADVANCED PERFORMANCE CONTAINS THE FOLLOWING OVER & ABOVE THE STANDARD:
1) 3 ADVANCED PERFORMANCE SNUBBERS @ HEAD VS. 1 STANDARD SNUBBER
2) MINIMUM 1/8" TEMPERED GLASS
3) ADVANCED PERFORMANCE WINDOW MUST BE SHEAR SCREW MOUNTED TO OPENING ONLY.

GENERAL NOTES

1. THESE WINDOW SYSTEMS HAVE BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN LOADS" TABLE.
2. BUCKING, OPENINGS, & BUCKING FASTENERS MUST BE PROPERLY INSTALLED TO TRANSFER LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & MAY NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS.
4. THESE WINDOW SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH & MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (F.B.C.)
5. THESE WINDOWS HAVE BEEN TESTED IN ACCORDANCE WITH AAMA/WDMA 101/I.S. 2-97 "VOLUNTARY SPECIFICATIONS FOR ALUMINUM, VINYL (PVC) AND WOOD WINDOWS AND GLASS DOORS." REFERENCE TEST REPORT NO'S. 02-32712.01 & 02-32713.01 BY AIR, ARCHITECTURAL TESTING INC. AND [illegible] (ADVANCED PERFORMANCE) BY [illegible] TESTING AS APPLICABLE TO THESE DRAWINGS.
6. TESTS COMPLETED INCLUDE AIR INFILTRATION PER ASTM E283, WATER RESISTANCE PER ASTM E547, [illegible] PER ASTM E330 & FORCED ENTRY PER ASTM F588.
7. THESE WINDOW SYSTEMS ARE NON-IMPACT RATED & MUST BE SHUTTERED WHERE REQUIRED BY CODE.
8. ALL WINDOW SIZES SPECIFIED AS ALLOWABLE IN THE "WINDOW SIZE/PRESSURE TABLE" HAVE BEEN COMPARED TO THE TESTED UNIT & ARE RESTRICTED BY THE OVERALL SIZE (AREA) OF THE TESTED UNIT. ALL COMPONENTS HAVE BEEN CHECKED TO SUPPORT THESE LOADS AS SPECIFIED IN THE DP TABLE.
9. GLASS TO BE USED WITH THESE WINDOW UNITS SHALL BE AS SPECIFIED IN THESE DRAWINGS WITH GLASS TYPE AND THICKNESS BEING DETERMINED BY PELLA AS [illegible]

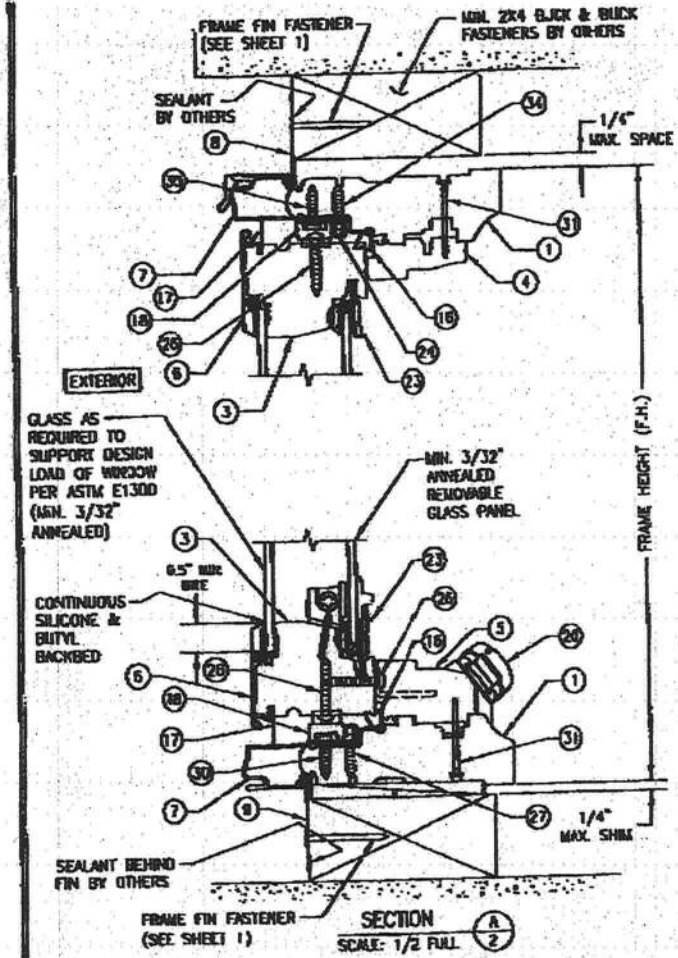
DRAWING TITLE: ALUMINUM CLAD WOOD NON-IMPACT OPERABLE CASEMENT WINDOW (STANDARD & ADVANCED PERFORMANCE DESIGNER SMARTSASH II & III SERIES)

CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.

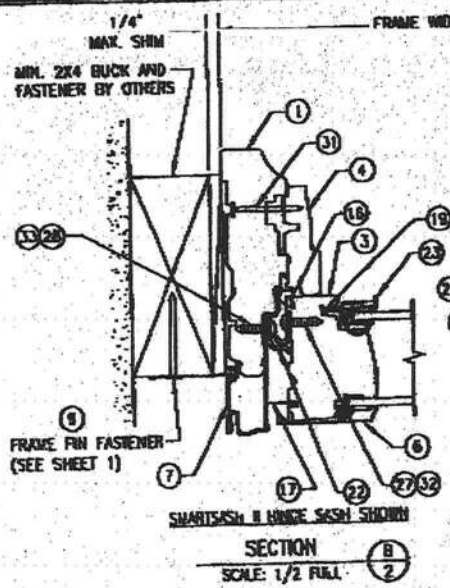
MANUFACTURER: PELLA CORPORATION, 102 MAIN STREET, PELLA, IA 50219, 641-621-1000

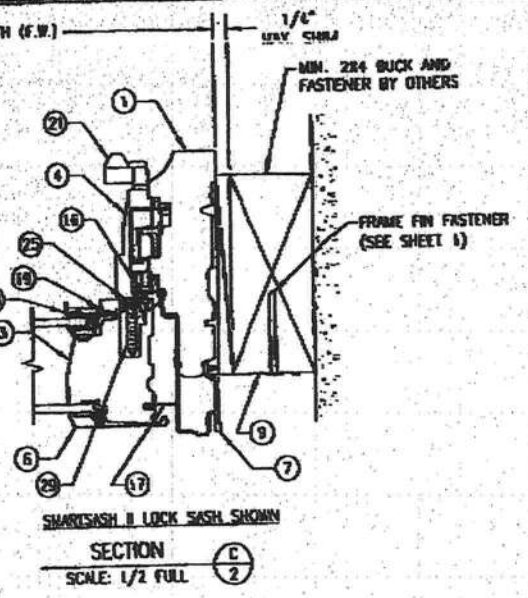
CERTIFICATION: JAN 16 2003 — W. W. SCHAEFER, P.E.

DRAWING NO. 1159 — SHEET NO. 1 OF 4



SMARTSASH II SINGLE PANE GLASS SHOWN WITH REMOVABLE PANEL. SEE OPTIONAL GLAZING DETAIL FOR SMARTSASH III WITH I.G.





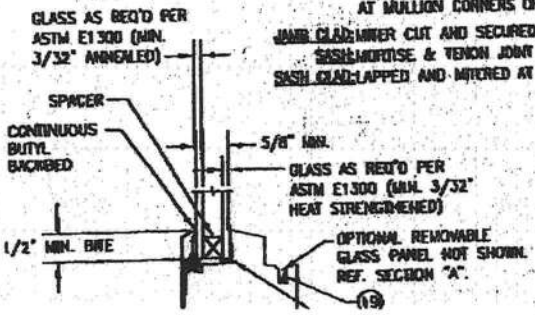
CORNER CONSTRUCTION:

WOOD JAMB: COPED, BUTTED AND SECURED WITH THREE (3) 1/2" X 2 1/4" STAPLES PER CORNER. NOTE THAT 3 NO. 8 X 2" SCREWS SHALL BE ADDED TO OR IN PLACE OF THE STAPLES AT MULLION CORNERS OR THE CORNER BRACKET SHOWN BELOW SHALL BE USED.

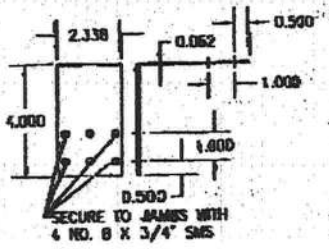
JAMB CLAD: MITER CUT AND SECURED WITH CORNER KEY AND 2 NO. 10 X 1/2" SCREWS.

SASH: MORTISE & TENON JOINT WITH ADHESIVE AND ONE(1) 1 3/4" STAPLE PER CORNER.

SASH CLAD: LAPPED AND MITERED AT CORNERS.



GLAZING DETAIL FOR OPTIONAL SMARTSASH III (I.G. GLASS)



CORNER BRACKET

MIN. 33 KSI GALV. METAL

(OPTIONAL AT STANDARD JAMB CORNERS; MANDATORY AT MULLION CORNERS)

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PELLA, IA 50219
641-621-1000

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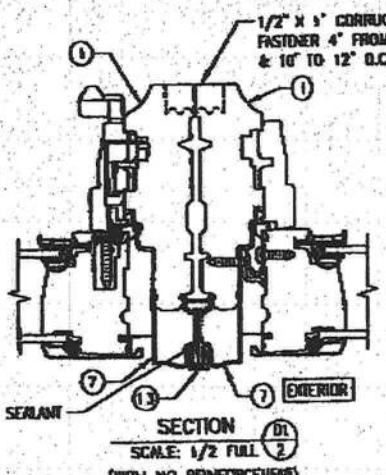
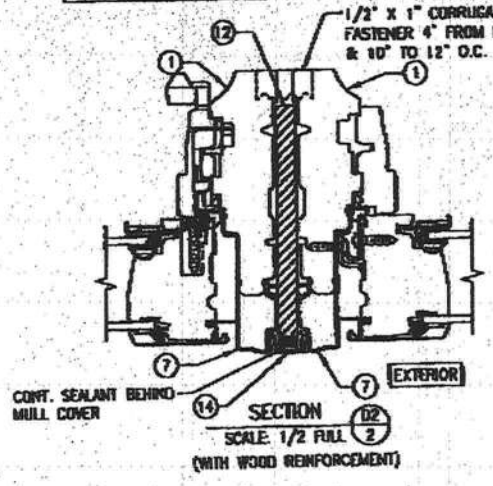
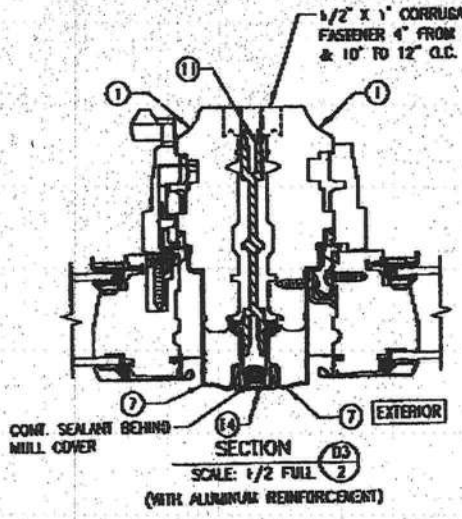
MULLION DETAILS SHOWN AS OPERABLE TO OPERABLE. OPERABLE MULLED TO FIXED WINDOW SECTION IS SIMILAR.



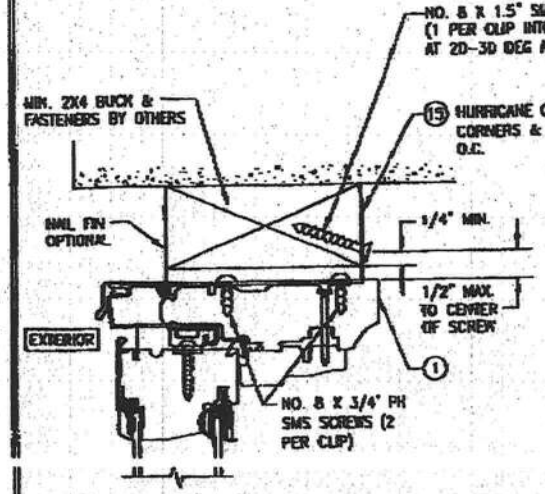
SECTION D1/2
SCALE: 1/2 FULL
(WITH NO REINFORCEMENT)



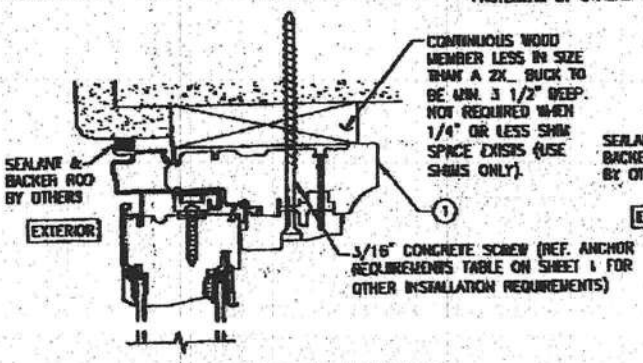
SECTION D2/2
SCALE: 1/2 FULL
(WITH WOOD REINFORCEMENT)



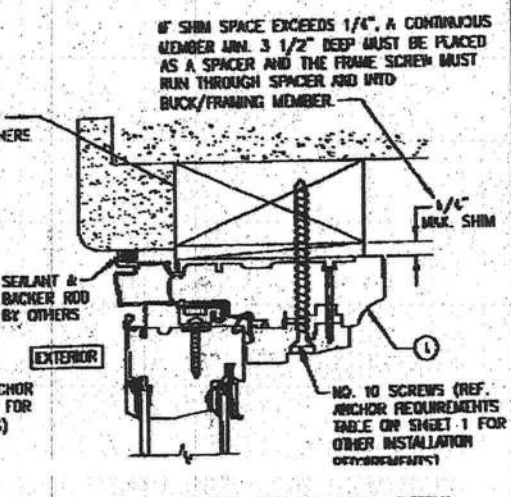
SECTION D3/2
SCALE: 1/2 FULL
(WITH ALUMINUM REINFORCEMENT)



OPTIONAL CLIP INSTALLATION
HEAD DETAIL SHOWN; OTHER JAMBS SIMILAR
SEE SECTIONS FOR DETAIL NOT SHOWN
(SIMILAR FOR ALL JAMB TYPES)



DIRECT MOUNT DETAIL IN BLOCK
HEAD DETAIL SHOWN; OTHER JAMBS SIMILAR
SEE SECTIONS FOR DETAIL NOT SHOWN
(SIMILAR FOR ALL JAMB TYPES)



OPTIONAL SHEAR SCREW MOUNT DETAIL
HEAD DETAIL SHOWN; OTHER JAMBS SIMILAR
SEE SECTIONS FOR DETAIL NOT SHOWN
(SIMILAR FOR ALL JAMB TYPES)

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JAN 16 2004

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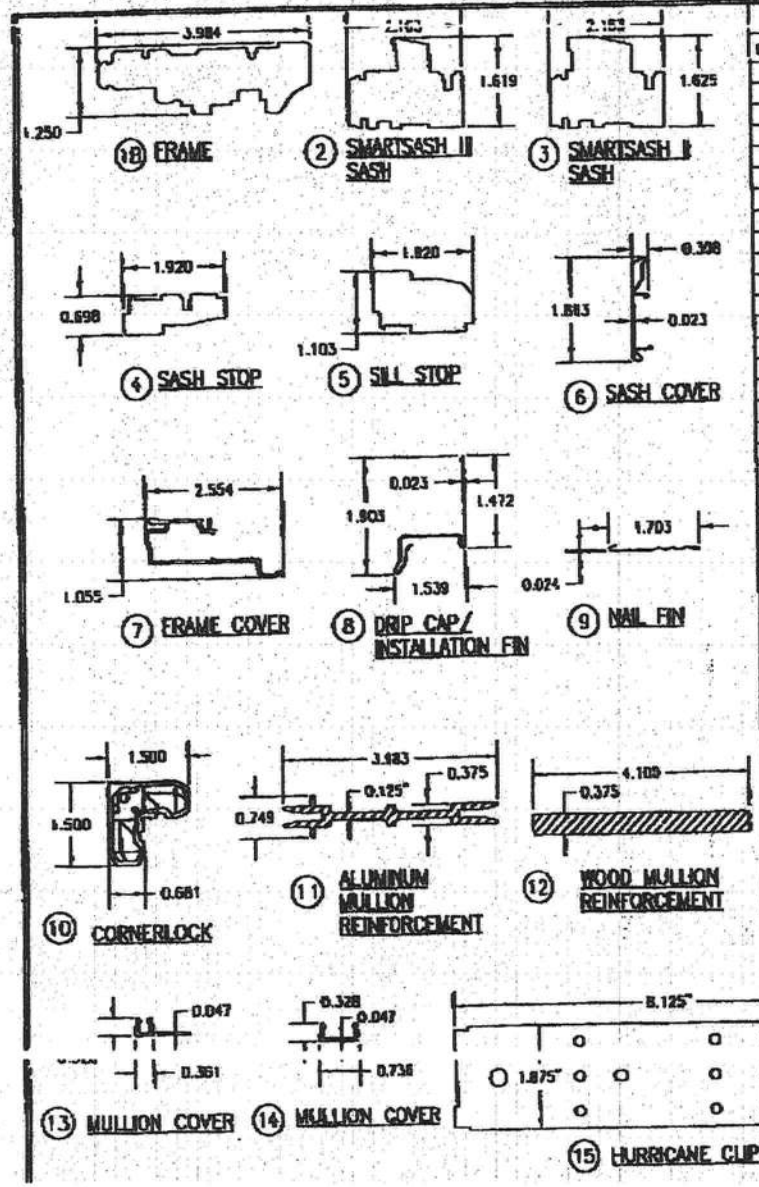
SHEET NO. 3 OF 4



BILL OF MATERIALS

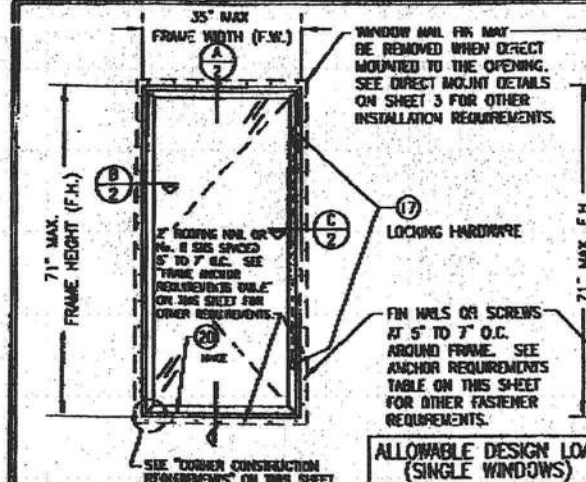
ITEM #	PART #	ITEM DESCRIPTION	MANUFACTURER/NOTES
		PARTS	
1	358C/BH/BK	FRAME	• PONDEROSA/SUGAR PINE
2	37AK/AJ/AN	SMARTSASH III SASH	• PONDEROSA/SUGAR PINE
3	37AC/AD/AG	SMARTSASH II SASH	• PONDEROSA/SUGAR PINE
4	39C6/N9/L1	SASH STOP	• PONDEROSA/SUGAR PINE
5	338F	SILL STOP	0.235" ALUMINUM
6	42AS/AR/AU	SASH COVER	6063-T5 ALUMINUM
7	72NC/ND/NE	FRAME COVER	NYLON
8	42AG	DRIP CAP/INSTALLATION FIN	0.235" ALUMINUM
9	4267	NAIL FIN	NYLON
10	7700	CORNER LOCK	6063-T5 OR T6 ALUMINUM
11	7353	ALUMINUM MULLION REINFORCEMENT	SOUTHERN PINE
12	–	WOOD MULLION REINFORCEMENT	6063-T5 ALUMINUM (CONTINUOUS)
13	7217	MULLION COVER	6063-T5 ALUMINUM (CONTINUOUS)
14	7334	MULLION COVER	0.085" THK. REI 85 GALV. STEEL
15	50710008	HURRICANE CLIP	
		SEALS & SEALANTS	
16	2A49	WEATHERSTRIP	VINYL
17	7580	RAINSTRIP	VINYL
		HARDWARE	
18	1AM/JC	HINGE ASSEMBLY	–
19	4640	DCP STRIKE	2 PER WIDTH & 2 PER HEIGHT
20	188F	INTEGRATED OPERATOR CRANK ASSEMBLY	–
21	4682/C5, 5049	2-POINT LOCK ASSEMBLY	PELLA
22A	4927/4923-1	SNUBBER ASSEMBLY (STANDARD SERIES)	REF. QUANTITIES FROM SHEET 1
22B	7267/7280	SNUBBER ASSEMBLY (ADVANCED PERFORMANCE)	3 PER WINDOW
23	00*A	DOUBLE GLAZING PANEL ASSEMBLY	WITHIN 4" OF CORNERS & 12" TO 18" O.C. PER PELLA SPECIFICATION
24	47L9	HINGE SLIDE	–
25	5007	SASH STRIKE	–
		FASTENERS	
26	56061601	#6 X 1" PH SCREW	3 AT TOP HINGE/4 AT LOWER HINGE/3 AT EA. SHOE
27	56061100	#6 X 11/16" PH SCREW (STANDARD SERIES)	2 PER SNUBBER INTO SASH
28	53061201	#8 X 3/4" FH SCREW (STANDARD SERIES)	1 PER SNUBBER INTO FRAME
29	53061411	#8 X 1" FH SCREW	2 PER LOCK ASSEMBLY
30	55101201	#10 X .770 FH	1 PER HINGE ASSEMBLY
31	60092202	.080" X 1 3/8" RINGSHANK NAIL	3" FROM CORNERS & MAX. 6" O.C.
32	53082407	#8 X 1 1/2" PH SCREW (ADVANCED PERFORM.)	2 PER SNUBBER INTO SASH
33	56061100	#6 X 11/16" PH SCREW (ADVANCED PERFORM.)	1 PER SNUBBER INTO FRAME
34	56061100	#6 X 11/16" PH SCREW	3 PER HINGE SLIDE

* WOOD USED WITH TEST UNITS WAS SELECT WESTERN PINE. ALTERNATE WOOD SPECIES TO BE APPLICABLE WITH THESE WINDOWS IS MIN. GRADE 2 MAHOGANY, SOUTHERN PINE, OAK, CHERRY, MAPLE, DOUGLAS FIR & CYPRUS.

ALUMINUM CLAD WOOD NON-IMPACT OPERABLE CASEMENT WINDOW (STANDARD & ADVANCED PERFORMANCE DESIGNER SMARTSASH II & III SERIES)

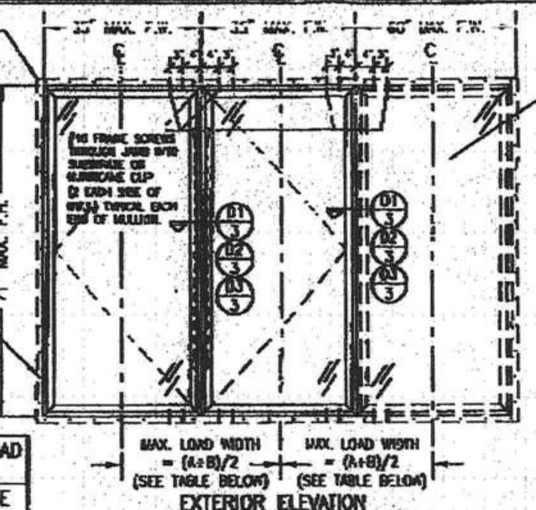
PELLA CORPORATION
102 MAIN STREET
PELLA, IA 50219
641-621-1000

DRAWING NO. 1159
SHEET NO. 4 OF 4



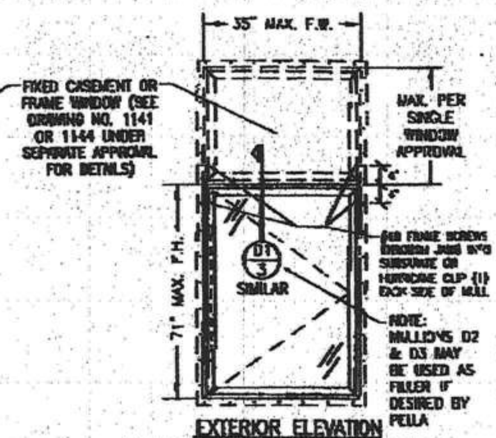
EXTERIOR ELEVATION
RECTANGULAR WINDOW
SCALE: 1/2"=1'-0"

ALLOWABLE DESIGN LOAD (SINGLE WINDOWS)	
POSITIVE	NEGATIVE
50 PSF	50 PSF



EXTERIOR ELEVATION
MULTIPLE CASEMENT/FIXED WINDOWS

UP TO FOUR WINDOWS MAY BE COMBINED IN ONE OPENING WITH ANY COMBINATION OF FIXED &/OR OPERABLE WINDOWS
SEE SINGLE WINDOW ELEVATION FOR CASEMENT WINDOW DETAILS
SCALE: 1/2"=1'-0"



EXTERIOR ELEVATION
MULTIPLE CASEMENT/FIXED WINDOWS
SCALE: 1/2"=1'-0"

UP TO FOUR UNITS MAY BE COMBINED VERTICALLY IN ONE OPENING
(IF VERTICALLY STACKED, MANUFACTURER MUST INSURE THAT THE DEAD WEIGHT OF THE WINDOWS DOES NOT CAUSE ANY WINDOW FAILURE OR DEFORMATION)

MULTIPLE UNIT NOTES:
1. ALL WINDOWS ARE RESTRICTED BY THE DIMENSIONS SHOWN.
2. THE MAXIMUM ALLOWABLE PRESSURE FOR A COMBINED UNIT IS RESTRICTED BY THE SAME ALLOWABLE PRESSURE FOR THE SINGLE WINDOWS.
3. FOR MULLED COMBINATIONS OR SITUATIONS OUTSIDE OF THAT SHOWN ABOVE, MULLIONS CERTIFIED BY A REGISTERED ENGINEER SHALL BE USED.

NAIL FIN MOUNT CONDITION IS SHOWN IN THESE ELEVATIONS. FOR OTHER MOUNTING OPTIONS (SHEAR SCREW, DIRECT & CLIP MOUNT), SEE SHEET 3.

GLASS TYPE TO BE SPECIFIED BY PELLA BASED ON ALLOWABLE GLASS LOAD AS DETERMINED BY ASTM E1300.

MULLION LOAD TABLE				
MULLION SPAN (IN)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)		
		MULLION "D1"	MULLION "D2"	MULLION "D3"
72	33 OR LESS	50.0	50.0	50.0
	37	49.8	50.0	50.0
	41	43.8	50.0	50.0
	45	37.5	45.0	50.0
	55	33.8	39.6	50.0
65	41 OR LESS	50.0	50.0	50.0
	48	44.5	50.0	50.0
	56	35.8	48.8	50.0
53 OR LESS	56 OR LESS	50.0	50.0	50.0

LOCK & SNUBBER REQUIREMENTS		
WINDOW HEIGHT	LOCK POINTS REQUIRED	SNUBBERS REQUIRED
ALL SIZES	2	1

GENERAL NOTES

1. THESE WINDOW SYSTEMS HAVE BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN LOADS" TABLE.
2. BUCKING, OPENINGS, & BUCKING FASTENERS MUST BE PROPERLY INSTALLED TO TRANSFER LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & MAY NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS.
4. THESE WINDOW SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH & MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (F.B.C.)
5. THESE WINDOWS HAVE BEEN TESTED IN ACCORDANCE WITH AAMA/WDMA 101/I.S. 2-97 "VOLUNTARY SPECIFICATIONS FOR ALUMINUM, VINYL (PVC) AND WOOD WINDOWS AND GLASS DOORS." REFERENCE TEST REPORT NO'S. 02-32337.01, 02-32338.01, 02-32339.01 & 02-36531.02 BY ATI, ARCHITECTURAL TESTING INC., AS APPLICABLE TO THESE DRAWINGS.
6. TESTS COMPLETED INCLUDE AIR INFILTRATION PER ASTM E283, WATER RESISTANCE PER ASTM E547 & E331, UNIFORM LOAD STRUCTURAL PER ASTM E330 & FORCED ENTRY PER ASTM F588.
7. [illegible] REQUIRED BY CODE.
8. ALL WINDOW SIZES SPECIFIED AS ALLOWABLE IN THE "WINDOW SIZE/PRESSURE TABLE" HAVE BEEN COMPARED TO THE TESTED UNIT & ARE RESTRICTED BY THE OVERALL SIZE (AREA) OF THE TESTED UNIT. ALL COMPONENTS HAVE BEEN CHECKED TO SUPPORT THESE LOADS AS SPECIFIED IN THE LOAD TABLE.
9. GLASS TO BE USED WITH THESE WINDOW UNITS SHALL BE AS SPECIFIED IN THESE DRAWINGS WITH GLASS TYPE AND THICKNESS BEING DETERMINED BY PELLA AS REQUIRED TO MEET DESIGN PRESSURES PER ASTM E1300.

FRAME ANCHOR REQUIREMENTS TABLE					
FIN SCREWS					
OPENING TYPE (SUBSTRATE)	JAMB TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.	MAXIMUM SPACING	MAX. DIST. FROM CORNER
2X_ WOOD FRAME OR BUCK	2" X 11GA. ROOFING NAILS	1 7/8"	1/2"	5" TO 7" O.C.	2"
2X_ WOOD FRAME OR BUCK	NO. 8 SMS SCREW	1 1/8"	1/2"	5" TO 7" O.C.	2"
* SHEAR SCREWS					
2X_ WOOD FRAME OR BUCK	NO. 10 SMS SCREW	1 1/4"	3/4"	16"	6"
CMU/CONCRETE	**3/16" CONCRETE SCREWS	1 1/4"	2"	18"	6"

**CONCRETE SCREWS SHALL BE ITW RAMSET/RED HEAD OR ELCO TAPCONS, ULTRA-CON OR POWERS RAWL TAPPER. (HARDENED STEEL OR S.S.)

* SHEAR SCREW ANCHOR NOTE: FRAME MAY BE EITHER DIRECT MOUNTED TO THE OPENING, MOUNTED ONTO A CONTINUOUS SPACER, OR ANCHORED TO A MIN. 2X4 NO. 3 SOUTHERN PINE WOOD BUCK. WHEN ANCHORED THROUGH JAMB TO A 2X4 BUCK, NO. 10 SCREWS SHALL BE USED. WHEN ANCHORED WITH NAIL FIN INTO 2X4 BUCK, 2" X 11GA. ROOFING NAILS OR NO. 8 SCREWS SHALL BE USED. WHEN DIRECT MOUNTED OR MOUNTED WITH SPACER, 3/16" CONCRETE SCREWS SHALL BE USED. SEE "ANCHOR REQUIREMENTS TABLE" FOR EMBED REQUIREMENTS. PROPER MATERIAL SHALL BE USED BETWEEN ALL DISSIMILAR MATERIALS (BLOCK/CONCRETE & ALUMINUM).

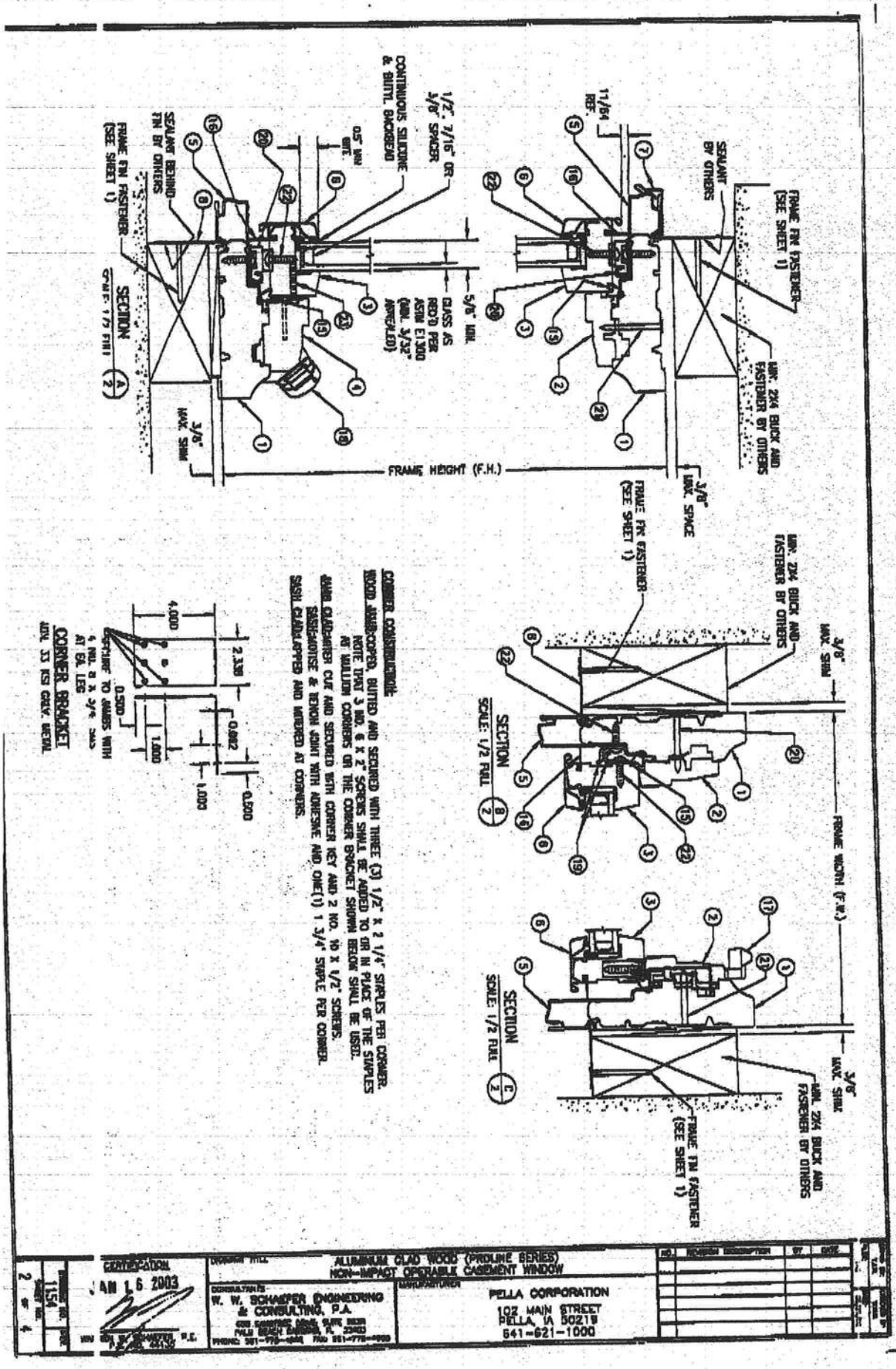
DRAWING TITLE: ALUMINUM CLAD WOOD (PROLINE SERIES) NON-IMPACT OPERABLE CASEMENT WINDOW

MANUFACTURER: PELLA CORPORATION, 102 MAIN STREET, PELLA, IA 50219, 641-[illegible]000

CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.

CERTIFICATION: JAN 16 2003, W. W. SCHAEFER, P.E.

DRAWING NO. 1154, SHEET NO. 1 OF 4



ALUMINUM CLAD WOOD (PROLINE SERIES)
NON-IMPACT OPERABLE CASEMENT WINDOW

PELLA CORPORATION
102 MAIN STREET
PELLA, IA 50219
641-621-1000

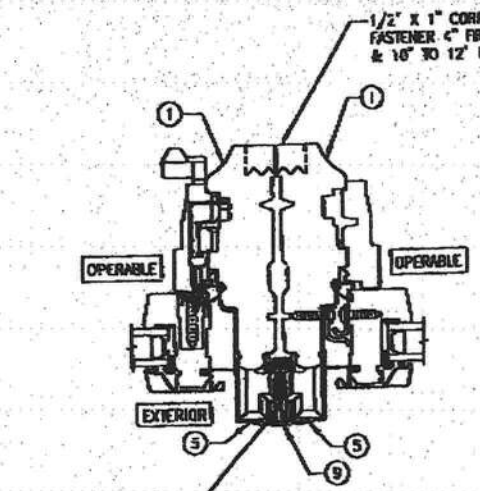
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.

CERTIFICATION
JAN 16 2003

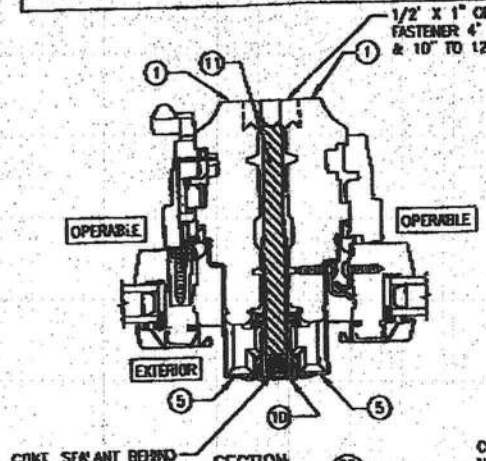
NO.	REVISION DESCRIPTION	BY	DATE

1154
2 of 4

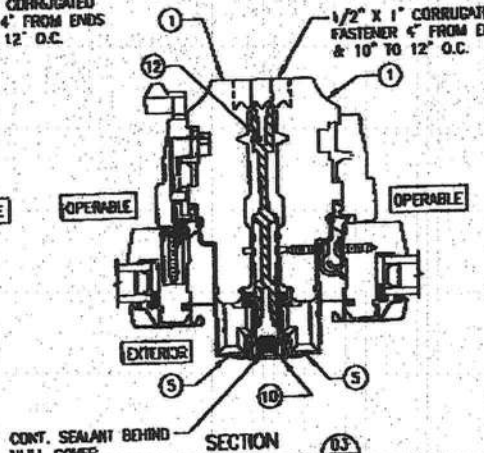
MULLION DETAILS SHOWN AS OPERABLE TO OPERABLE CASEMENT. OPERABLE MULLED TO FIXED WINDOW SECTION IS SIMILAR.



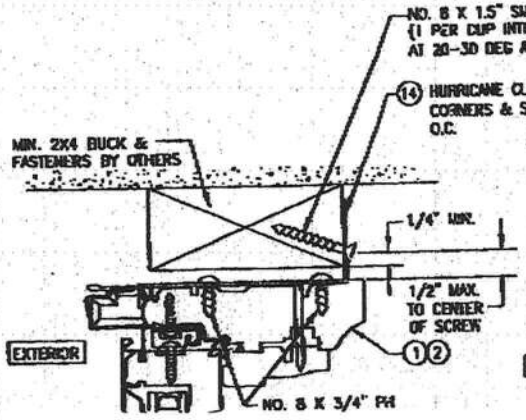
SECTION D1/3
SCALE: 1/2 FULL
(WITH NO REINFORCEMENT)



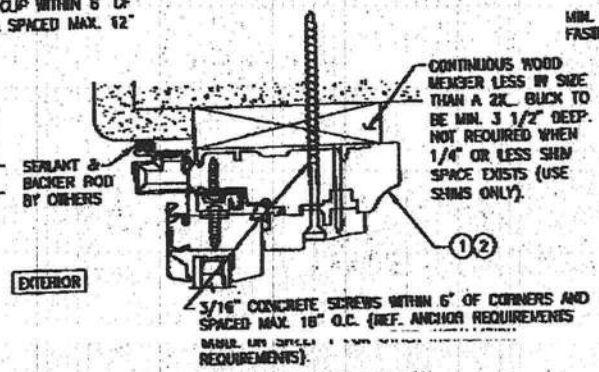
SECTION D2/3
SCALE: 1/2 FULL
(WITH WOOD REINFORCEMENT)



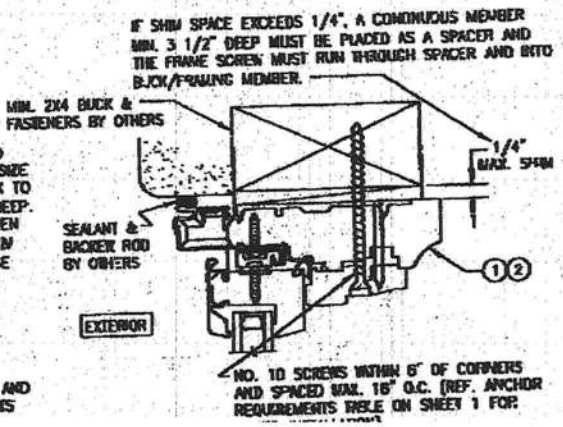
SECTION D3/3
SCALE: 1/2 FULL
(WITH ALUM REINFORCEMENT)



OPTIONAL CLIP INSTALLATION
HEAD DETAIL SHOWN; OTHER JAMBS SIMILAR
SEE SECTIONS FOR DETAIL NOT SHOWN
(SIMILAR FOR ALL JAMB TYPES)



DIRECT MOUNT DETAIL IN BLOCK
HEAD DETAIL SHOWN; OTHER JAMBS SIMILAR
SEE SECTIONS FOR DETAIL NOT SHOWN
(SIMILAR FOR ALL JAMB TYPES)



OPTIONAL SHEAR SCREW MOUNT DETAIL
HEAD DETAIL SHOWN; OTHER JAMBS SIMILAR
SEE SECTIONS FOR DETAIL NOT SHOWN
(SIMILAR FOR ALL JAMB TYPES)

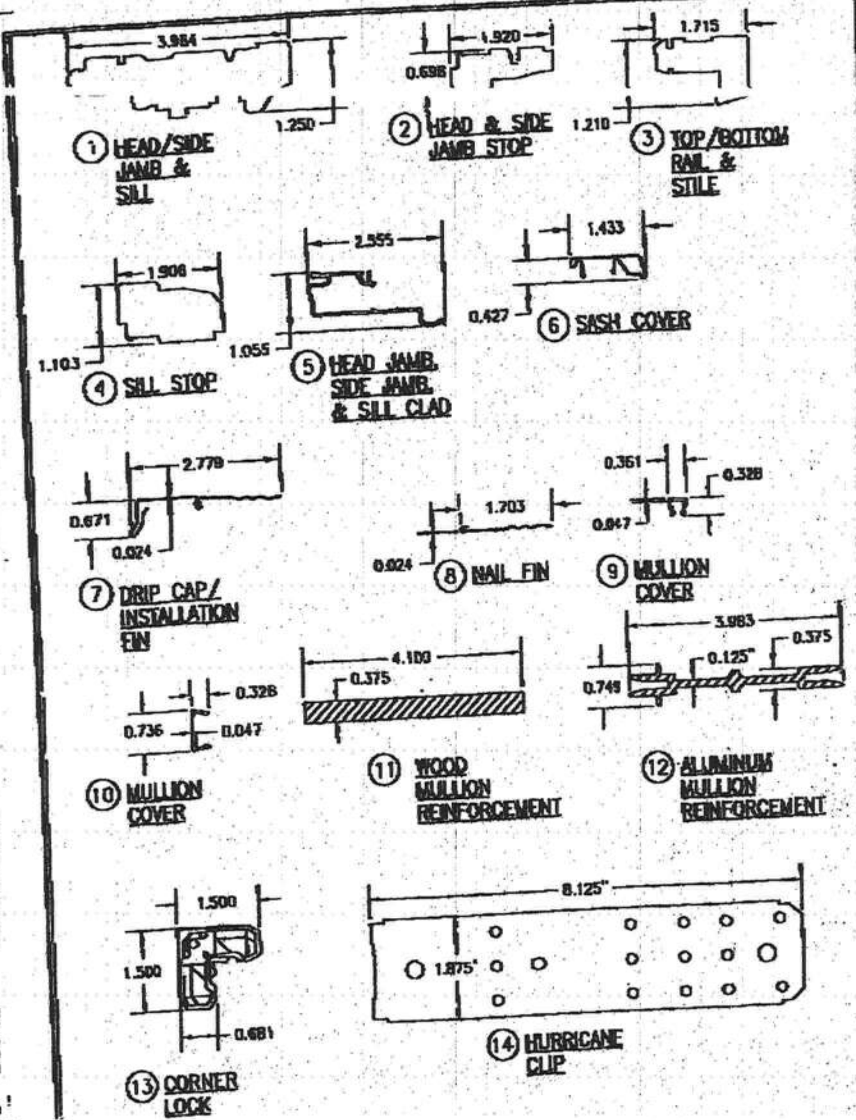
ALUMINUM CLAD WOOD (PROLINE SERIES) NON-IMPACT OPERABLE CASEMENT WINDOW

PELLA CORPORATION
102 MAIN STREET
PELLA, IA 50219
641-621-1000

W. V. SCHAEFER ENGINEERING CONSULTING, P.A.

JAN 6 2005

PROJECT NO. 1154 REV.
SHEET NO. 3 OF 4



BILL OF MATERIALS

ITEM #	PART #	ITEM DESCRIPTION	MANUFACTURER/NOTES
		PARTS	
1	3586/BH/BK	HEAD, SIDE JAMB & SILL	* PONDEROSA/SUGAR PINE
2	[illegible]	[illegible]	* PONDEROSA/SUGAR PINE
3	33BF/EJ/EK/FD	TOP/BOTTOM SASH RAIL & STILE	* PONDEROSA/SUGAR PINE
4	33BF/BD	SILL STOP	6063-T6 ALUMINUM
5	72HC/HD/HE	HEAD/SIDE JAMB & SILL CLAD	3003-H14 OR 3105-H24 ALUMINUM
6	43AJ/AM/AL/AK	SASH COVER	0.235" ALUMINUM
7	4246	DRIP CAP/INSTALLATION FIN	0.235" ALUMINUM
8	4267	NAIL FIN	6063-T6 ALUMINUM (CONTINUOUS)
9	7217	MULLION COVER	6063-T6 ALUMINUM (CONTINUOUS)
10	7354	MULLION COVER	SOUTHERN PINE
11	–	WOOD MULLION REINFORCEMENT	6063-T5 OR T6 ALUMINUM
12	7353	ALUMINUM MULLION REINFORCEMENT	NYLON
13	7710	CORNER LOCK	0.05" THK. FB 65 GALV. STEEL
14	5071	HURRICANE CLIP	
		SEALS & SEALANTS	
15	3AAW	WEATHERSTRIP	FLEXABLE SEMI-RIGID PVC
16	7590	RAINSTRIP	FLEXABLE SEMI-RIGID PVC
		HARDWARE	
17	16B2/B3/C5/C6 & 5046	2-POINT LOCK ASSEMBLY	PELLA
18	168F	OPERATOR CRANK ASSEMBLY	PELLA/TRUTH
19	49J7/4823	METAL SNUBBER	PELLA
20	1AJA/J3/JC/JD	TOP & BOTTOM SCISSOR HINGE	PELLA S.S.
		MISCELLANEOUS FASTENERS	
21	–	NAIL, 10d X 1 1/2" RING SHANK NAIL	3" FROM ENDS & 4" O.C.
22	56061100	SCREW, #6 x 11/16" PH	2/SASH SNUBBER & 1/JAMB SNUBBER
23	56061501	SCREW, #6 x 1" PH	AS REQ'D WITH OPERATOR.

* WOOD USED WITH TEST UNITS WAS SELECT WESTERN PINE. ALTERNATE WOOD SPECIES TO BE APPLICABLE WITH THESE WINDOWS IS MIN. GRADE 2 MAHOGANY, SOUTHERN PINE, OAK, CHERRY, MAPLE, DOUGLAS FIR & CYPRUS.

DRAWING TITLE: ALUMINUM CLAD WOOD (PROLINE SERIES) NON-IMPACT DOUBLE HUNG WINDOW

MANUFACTURER: PELLA CORPORATION, 102 MAIN STREET, PELLA, IA 50219, 641-621-1000

CONSULTANT: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.

CERTIFICATION: JAN 16 2003

DRAWING NO. 1154

SHEET NO. 4 of 4