Columbia County Building Permit Application

Revised 9-23-04

For Office Use Only Application # 0603-58 Date Received 3/16/06 By CT Permit # 24312/10

Application Approved by - Zoning Official BLK Date 23 MAR 06 Plans Examiner OK JTH Date 3-24-06

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

Comments ONE SET OF PLAN ONLY TURN IN

NO-NOC

Applicants Name Glenwood King Phone 755-0680 755-6030

Address 139 SW Dunn Way Lake City FL 32024

Owners Name Chris Ballard Phone

911 Address 267 SW Forest Glen Lake City FL 32025

Contractors Name Glenwood King Construction Inc. Phone 397-4708

Address 139 SW Dunn Way Lake City FL 32024

Fee Simple Owner Name & Address NA

Bonding Co. Name & Address NA

Architect/Engineer Name & Address Mark Disosway

Mortgage Lenders Name & Address NA

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

Property ID Number 05-5S-17-09116-121 Estimated Cost of Construction 330,000.00

Subdivision Name Hills at Rose Creek Lot 21 Block ____ Unit ____ Phase ____

Driving Directions 41/441 south turn right on Tustenuggee, TL At Rose Creek, on Hill Creek Drive, TL on Oak Way, TR on Forest Glen, 2nd lot on left.

Type of Construction New House Number of Existing Dwellings on Property 0

Total Acreage 5 Lot Size ____ Do you need a - (Culvert Permit) or Culvert Waiver or Have an Existing Dri

Actual Distance of Structure from Property Lines - Front 140 ✓ Side 200 ✓ Side 300 ✓ Rear 130 ✓

Total Building Height 25 Number of Stories 1 Heated Floor Area 3329 Roof Pitch 8/12

PORCH 420 GARAGE 781 total 4530

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.

Glenwood King
Owner Builder or Agent (Including Contractor)

Contractor Signature

Contractors License Number

Competency Card Number

NOTARY STAMP/SEAL

STATE OF FLORIDA
COUNTY OF COLUMBIA

Sworn to (or affirmed) and subscribed before me this 16th day of March 2006.

Personally known ✓ or Produced Identification ____

Notary Signature

1039

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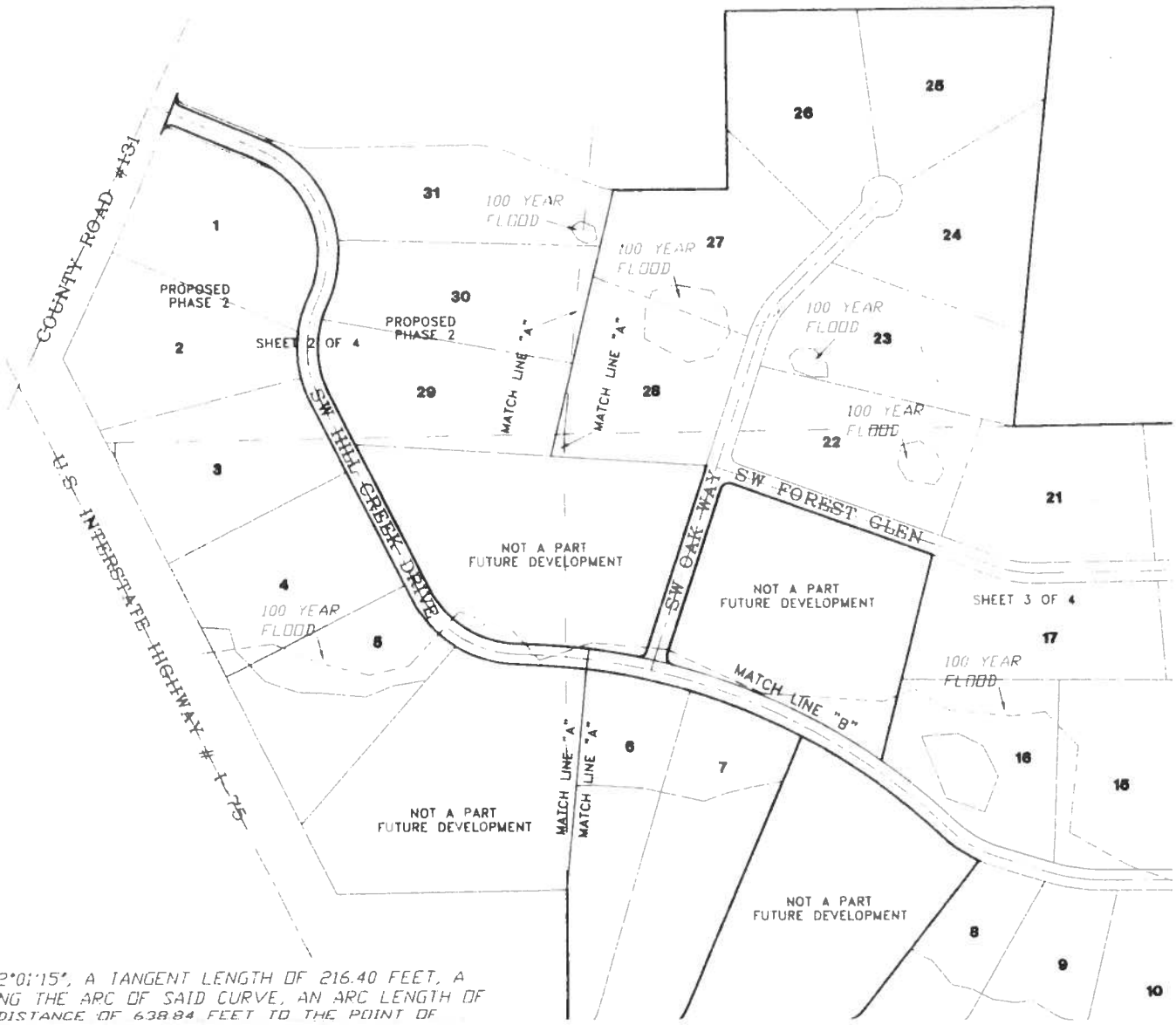
THE ARC OF SAID
CURVATURE OF
CENTRAL ANGLE OF 62°01'15", A TANGENT LENGTH OF 216.40 FEET, A
)4 FEET, THENCE ALONG THE ARC OF SAID CURVE, AN ARC LENGTH OF
ICE N.26°55'27"W., A DISTANCE OF 638.84 FEET TO THE POINT OF

"HILLS AT ROSE CREEK"

IN SECTION 32, TOWNSHIP 4 SOUTH, RANGE 17 EAST, AND
SECTION 5, TOWNSHIP 5 SOUTH, RANGE 17 EAST,
COLUMBIA COUNTY, FLORIDA



, A CHORD BEARING OF N.21°17'14"W AND A CHORD LENGTH OF 433.91
OF 485.05 FEET TO THE POINT OF TANGENCY OF SAID CURVE, THENCE
VATURE OF A CURVE TO THE LEFT, HAVING A RADIUS OF 25.00 FEET,
T, A CHORD BEARING OF S.67°23'39"W AND A CHORD LENGTH OF 35.36
OF 39.27 FEET TO THE POINT OF TANGENCY OF SAID CURVE, THENCE
'ATURE OF A CURVE TO THE LEFT, HAVING A RADIUS OF 25.00 FEET, A
A CHORD BEARING OF S.22°36'21"E AND A CHORD LENGTH OF 35.36
OF 39.27 FEET TO THE POINT OF TANGENCY OF SAID CURVE, THENCE
VATURE OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 360.00 FEET,
EET, A CHORD BEARING OF S.21°17'14"E AND A CHORD LENGTH OF 520.70
OF 582.06 FEET TO THE POINT OF REVERSE CURVATURE OF A CURVE
E OF 51°57'20", A TANGENT LENGTH OF 146.18 FEET, A CHORD BEARING
LONG THE ARC OF SAID CURVE, AN ARC LENGTH OF 272.04 FEET TO
DISTANCE OF 638.84 FEET TO THE POINT OF CURVATURE OF A
'AL ANGLE OF 62°01'15", A TANGENT LENGTH OF 180.33 FEET, A CHORD
THENCE ALONG THE ARC OF SAID CURVE, AN ARC LENGTH OF 324.74
E RIGHT, HAVING A RADIUS OF 1930.00 FEET, A CENTRAL ANGLE OF
OF S.85°50'24"E AND A CHORD LENGTH OF 209.08 FEET, THENCE ALONG
END OF SAID CURVE; THENCE CONTINUE ALONG SAID CURVE HAVING
NGENT LENGTH OF 71.33 FEET, A CHORD BEARING OF S.80°37'06"E AND
D CURVE, AN ARC LENGTH OF 142.59 FEET TO THE POINT OF REVERSE
'0 FEET, A CENTRAL ANGLE OF 83°24'09", A TANGENT LENGTH OF 22.28
33.26 FEET, THENCE ALONG THE ARC OF SAID CURVE, AN ARC
/E, THENCE N.18°05'44"E, A DISTANCE OF 570.81 FEET, THENCE
A DISTANCE OF 802.59 FEET TO THE POINT OF BEGINNING. COLUMBIA

KEY MAP

NOT TO SCALE

SUBJECT PROPERTY

WITH THE RETRACEMENT OF
DED BY CLIENT.
7'W FOR THE NORTHERLY

BE SUBJECT TO FLOODING
D FOR ZONE "A" SOME PORTIONS
BE OUTSIDE THE 500 YEAR FLOOD
988 COMMUNITY PANEL NO 120070
IBJECT TO CHANGE.

TILITIES WERE LOCATED FOR

TITLE COMMITMENT OR A TITLE

ID FRONT OF EACH LOT AND (7.5) SEVEN
ARE HEREBY CREATED AND PROVIDED FOR
UNDERGROUND UTILITIES AND DRAINAGE
DING SITE, ONLY THE OUTSIDE BOUNDARY
NT.
CORDED ON THIS PLAT THAT MAY

THE MINIMUM TECHNICAL STANDARDS

PROVED ON JULY 02, 2003

FLOOD NOTICE:

THE FOLLOWING LOTS ARE AFFECTED BY
THE 100 YEAR FLOOD ELEVATION

THE 100 YEAR FLOOD ELEVATION IS 86.50 FEET FOR
LOTS 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, AND 16

THE 100 YEAR FLOOD ELEVATION IS 108.50 FEET FOR
LOTS: 27 AND 28

THE 100 YEAR FLOOD ELEVATION IS 105.50 FEET FOR
LOT 22 AND 23.

NOTICE:
THIS PLAT AS RECORDED IN ITS GRAPHICAL FORM, IS THE OFFICIAL DEPICTION OF THE SUBDIVIDED LANDS DESCRIBED HEREIN AND WILL IN NO CIRCUMSTANCES BE SUPPLANTED IN AUTHORITY BY OTHER GRAPHICAL OR DIGITAL FORM OF THE PLAT. THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.

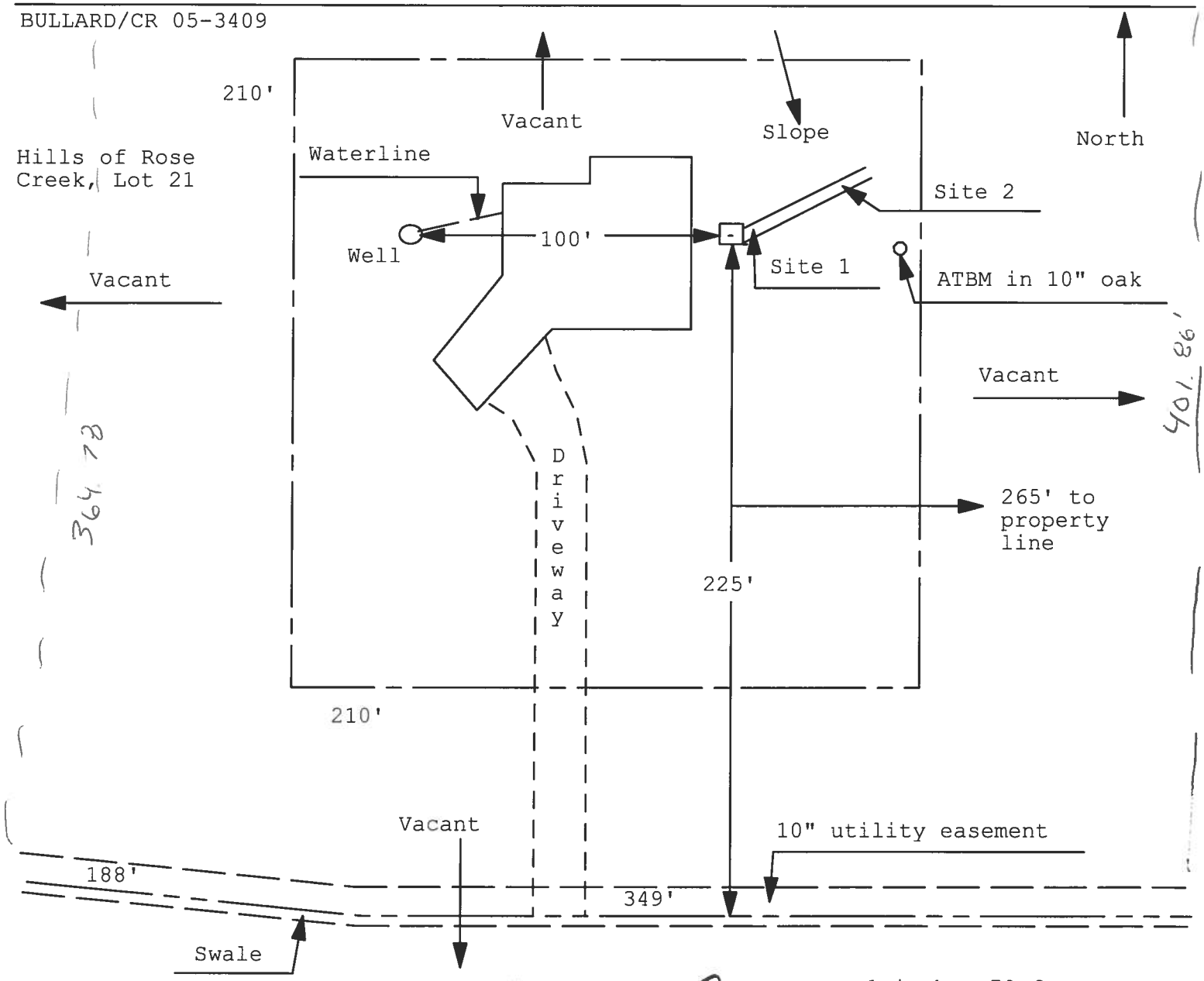
*NTS SHALL ALSO BE FOR THE CONSTRUCTION,
SERVICES; PROVIDED, HOWEVER, NO SUCH
LE TELEVISION SERVICES SHALL INTERFERE
R OTHER PUBLIC UTILITY. IN THE EVENT THAT
UTILITY, IT SHALL BE SOLELY RESPONSIBLE*

DEVELOPER:
A BAR S LAND AND
CATTLE COMPANY
386-752-5035
3814 S. 1st. STREET
LAKE CITY, FL 32025

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

Permit Application Number: 06-024

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH UNIT

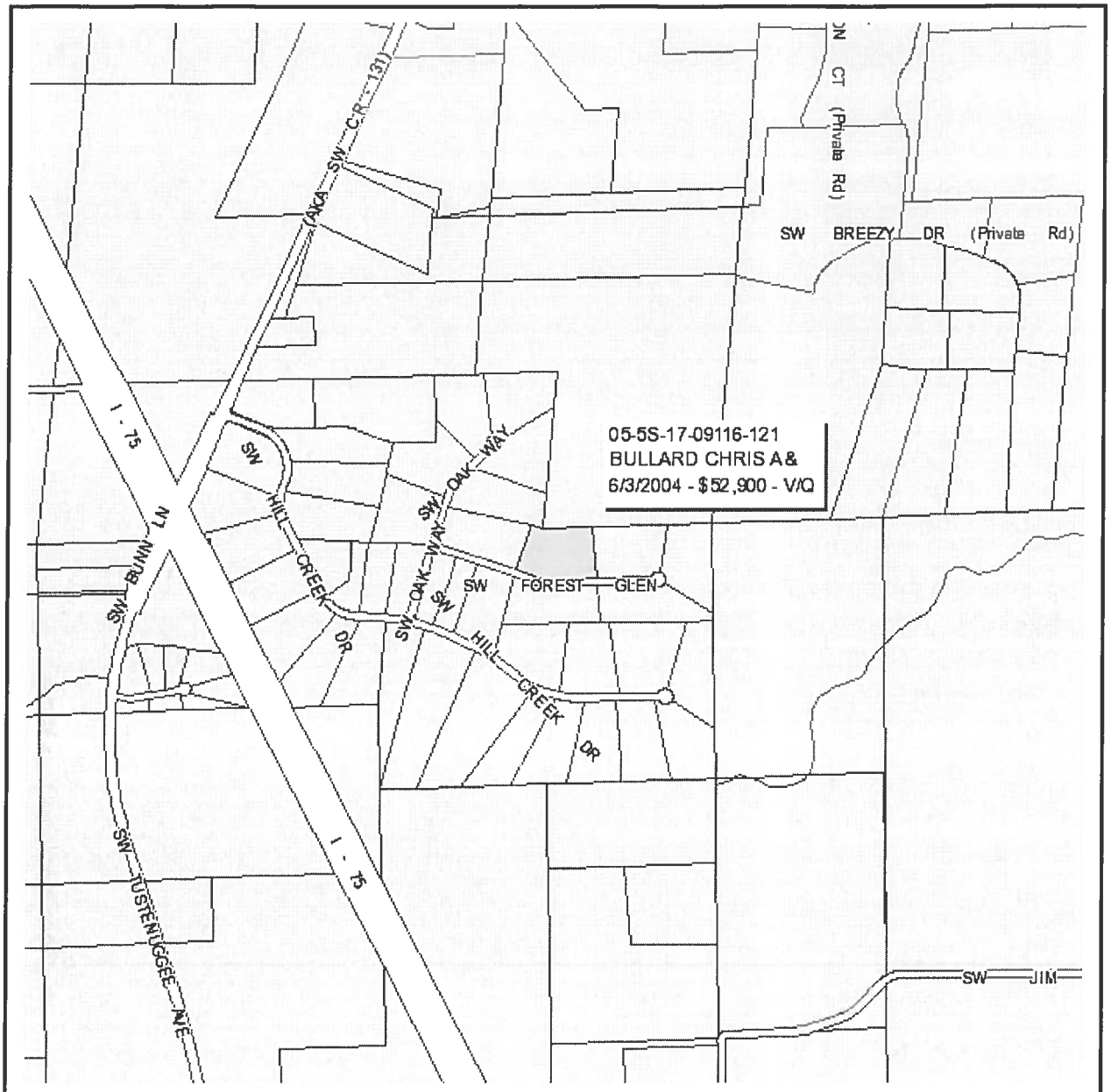


Site Plan Submitted By Paul Lloyd **Date** 3/7/06

Plan Approved ✓ **Not Approved** ____ **Date** 3/15/06

By [illegible] Columbia **CPHU**

Notes: _____



Columbia County Property Appraiser

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

PARCEL: 05-5S-17-09116-121 - VACANT (000000)

LOT 21 HILLS AT ROSE CREEK S/D PHASE 1. WD 1017-1874.

Name:	BULLARD CHRIS A &	LandVal	$50,000.00
Site:		BldgVal	$0.00
	TAMMY D CONLEY (JTWRS)	ApprVal	$50,000.00
Mail:	P O BOX 1432	JustVal	$50,000.00
	LAKE CITY, FL 32056	Assd	$50,000.00
Sales Info	6/3/2004 $52,900.00 V / Q	Exmpt	$0.00
		Taxable	$50,000.00

0 0.1 0.2 0.3 mi

N W E S

This information, GIS Map Updated: 2/7/2006, 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.

Columbia County Property Appraiser

DB Last Updated: 3/7/2006

2006 Proposed Values

Parcel: 05-5S-17-09116-121

Tax Record | Property Card | Interactive GIS Map | Print

Owner & Property Info

Search Result: 1 of 1

Owner's Name	BULLARD CHRIS A &
Site Address	
Mailing Address	TAMMY D CONLEY (JTWRS) P O BOX 1432 LAKE CITY, FL 32056
Brief Legal	LOT 21 HILLS AT ROSE CREEK S/D PHASE 1. WD 1017-1874.

Use Desc. (code)	VACANT (000000)
Neighborhood	32417.00
Tax District	3
UD Codes	MKTA02
Market Area	02
Total Land Area	5.010 ACRES

Property & Assessment Values

Mkt Land Value	cnt: (1)	$50,000.00
Ag Land Value	cnt: (0)	$0.00
Building Value	cnt: (0)	$0.00
XFOB Value	cnt: (0)	$0.00
Total Appraised Value		$50,000.00

Just Value	$50,000.00
Class Value	$0.00
Assessed Value	$50,000.00
Exempt Value	$0.00
Total Taxable Value	$50,000.00

Sales History

Sale Date	Book/Page	Inst. Type	Sale Vlmp	Sale Qual	Sale RCode	Sale Price
6/3/2004	1017/1874	WD	V	Q		$52,900.00

Building Characteristics

Bldg Item	Bldg Desc	Year Blt	Ext. Walls	Heated S.F.	Actual S.F.	Bldg Value
NONE						

Extra Features & Out Buildings

Code	Desc	Year Blt	Value	Units	Dims	Condition (% Good)
NONE						

Land Breakdown

Lnd Code	Desc	Units	Adjustments	Eff Rate	Lnd Value
000000	VAC RES (MKT)	1.000 LT - (5.010AC)	1.00/1.00/1.00/1.00	$50,000.00	$50,000.00

Columbia County Property Appraiser DB Last Updated: 3/7/2006

1 of 1

Disclaimer

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 ISSUED: 1 December 2005

ENHANCED 9-1-1 ADDRESS:

267 SW FOREST GLN (LAKE CITY, FL 32025)

Addressed Location 911 Phone Number: NOT AVAIL.

OCCUPANT NAME: NOT AVAIL.

OCCUPANT CURRENT MAILING ADDRESS:

PROPERTY APPRAISER PARCEL NUMBER: 05-5S-17-09116-121

Other Contact Phone Number (If any):

Building Permit Number (If known):

Remarks: LOT 21, HILLS AT ROSE CREEK, PHASE 1, S/D

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.

COLUMBIA COUNTY
9-1-1 ADDRESSING
APPROVED

PHONE:

WATER WE LS
PUMPS & SER /ICE

LYNCH WELL DRILLING, INC.

ROUTE 6, BOX 464
TUSTENUGGEE ROAD
LAKE CITY, FLORIDA 32025

11-14-02

Josh & Amy McCardle

4" well with 1 HP sub. pump, 1¼ galv. drop pipe and 81 gal. bladder tank. Pump gives 20 GPM a minute, tank has 25.1 drawdown at 30/50 pressure. Tank PC244.

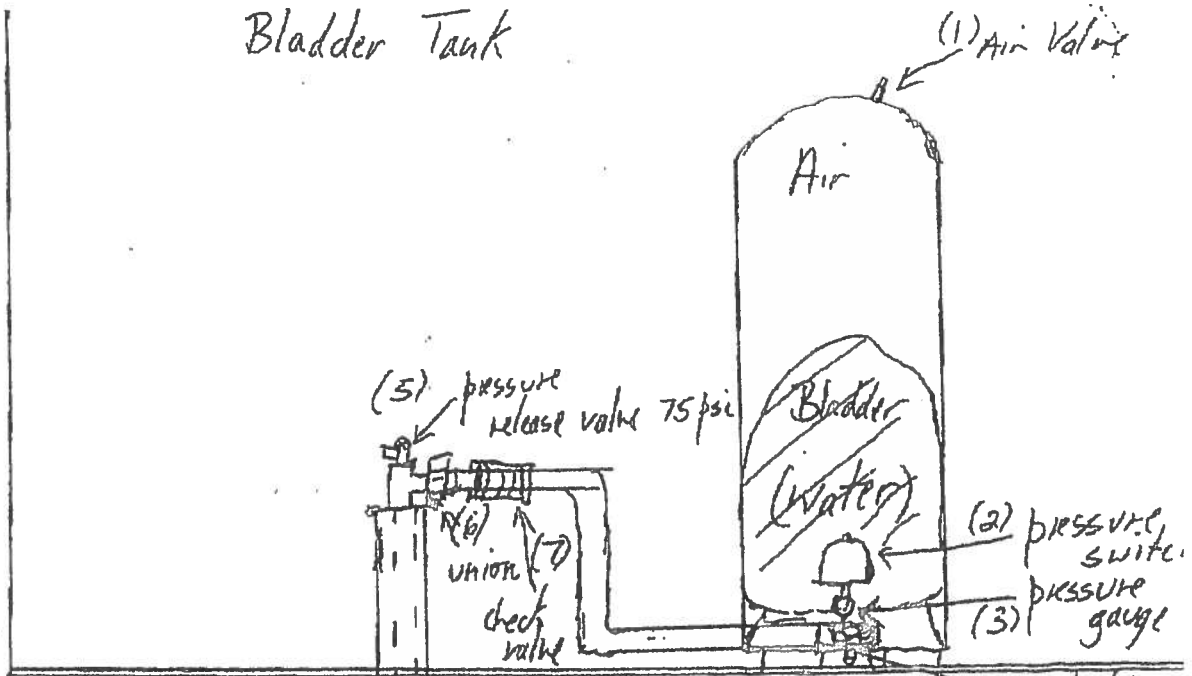
Thank You,

Linda Newcomb

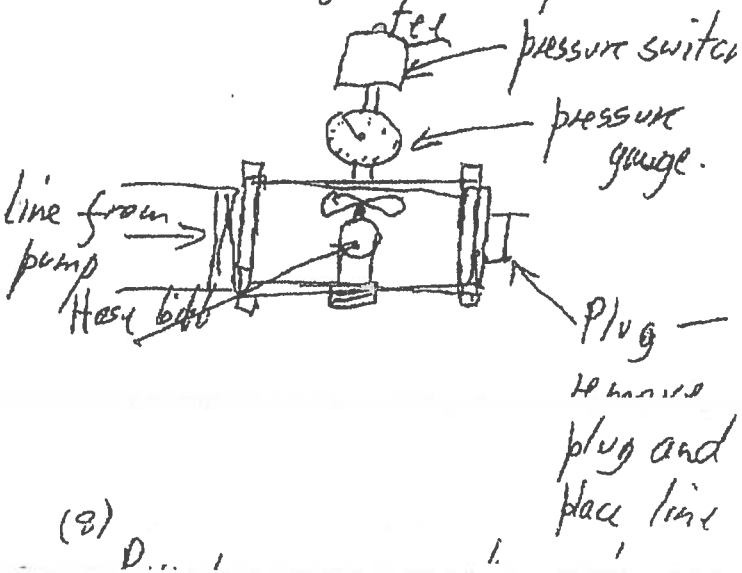
Linda Newcomb
General Manager

1. Air Valve. Allows air to be put into tank. Must be at or 2 psi below cut-in pressure with tank empty.
2. Pressure switch. Sets cut-in and cut-off pressure for pump.
3. Pressure gauge. Shows actual pressure in tank
4. Hose bibb. May be used to drain tank or for watering purposes
5. Pressure release valve. Safety device to prevent explosion of tank.
6. Union. Used to separate tank from well
7. Check valve. Prevents water from running back down well.
8. Pump. Pushes water up

Bladder Tank



Enlarged view of tank



(8) D...

SPECIFICATIONS

MODEL	.37 DRAWDOWN - GALLONS @20/40	.31 DRAWDOWN - GALLONS @30/50	.27 DRAWDOWN - GALLONS @40/60	TOTAL TANK VOLUME	DIA.	HEIGHT	WEIGHT	SYSTEM CONNECTION SIZE	FACTORY PRECHARGE PRESSURE
JR6	.78	.65	.57	2.1 gals.	9.0"	11.3"	7.0 lbs.	¾"	28 psi
JR15	1.7	1.4	1.2	4.5 gals.	10.0"	15.7"	10.0 lbs.	¾"	28 psi
JR20*	2.2	1.8	1.6	6.0 gals.	10.0"	19.375"	12.0 lbs.	¾"	28 psi
JR25*	3.1	2.6	2.3	8.5 gals.	12.6"	19.3"	18.0 lbs.	¾"	28 psi
JR44HS	5.2	4.3	3.8	14.0 gals.	16.0"	18.0"	29.0 lbs.	¾"	28 psi
PC44	5.2	4.3	3.8	14.0 gals.	16.0"	21.7"	31.5 lbs.	1"	28 psi
PC66	7.4	6.2	5.4	20.0 gals.	16.0"	28.8"	38.5 lbs.	1"	28 psi
PC88	9.6	8.1	7.0	26.0 gals.	16.0"	36.0"	43.0 lbs.	1"	28 psi
PC111	11.8	9.9	8.6	32.0 gals.	21.0"	27.8"	59.5 lbs.	1"	28 psi
PC122	12.3	10.3	9.0	33.4 gals.	16.0"	42.8"	57.0 lbs.	1"	28 psi
PC144	16.3	13.6	11.9	44.0 gals.	21.0"	36.2"	71.5 lbs.	1¼"	38 psi
PC211	22.9	19.2	16.7	62.0 gals.	21.0"	47.9"	85.0 lbs.	1¼"	38 psi
PC244	30.0	25.1	21.9	81.0 gals.	21.0"	62.0"	103.0 lbs.	1¼"	38 psi
PC266	31.5	26.4	23.0	85.0 gals.	26.0"	44.4"	140.0 lbs.	1¼"	38 psi
PC366	43.6	36.8	32.1	119.0 gals.	26.0"	62.0"	168.0 lbs.	1¼"	38 psi

* Add "S" for horizontal models with pump stand.

FORM 600A-2004 EnergyGauge® 4.1

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs

Residential Whole Building Performance Method A

Project Name:	**BullardChris&Tammy**	Builder:	
Address:	**Lot: 22, Sub: Hills of Rose, Plat:**	Permitting Office:	Columbia
City, State:	**Columbia, FL**	Permit Number:	24312
Owner:	**Bullard Chris & Tammy**	Jurisdiction Number:	22000
Climate Zone:	**North**		

1. New construction or existing	New	12. Cooling systems	
2. Single family or multi-family	Single family	a. Central Unit	Cap: 62.0 kBtu/hr
3. Number of units, if multi-family	1		SEER: 12.00
4. Number of Bedrooms	3	b. N/A	
5. Is this a worst case?	Yes	c. N/A	
6. Conditioned floor area (ft²)	3329 ft²	13. Heating systems	
7. Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)		a. Electric Heat Pump	Cap: 62.0 kBtu/hr
a. U-factor:	Description Area		HSPF: 7.60
(or Single or Double DEFAULT) 7a.	(Dble Default) 480.4 ft²	b. N/A	
b. SHGC:		c. N/A	
(or Clear or Tint DEFAULT) 7b.	(Clear) 480.4 ft²	14. Hot water systems	
8. Floor types		a. Electric Resistance	Cap: 40.0 gallons
a. Slab-On-Grade Edge Insulation	R=0.0, 310.0(p) ft		EF: 0.93
b. N/A		b. N/A	
c. N/A		c. Conservation credits (HR-Heat recovery, Solar DHP-Dedicated heat pump)	
9. Wall types		15. HVAC credits (CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)	
a. Frame, Wood, Exterior	R=13.0, 2085.6 ft²		
b. Frame, Wood, Adjacent	R=13.0, 210.0 ft²		
c. N/A			
d. N/A			
e. N/A			
10. Ceiling types			
a. Under Attic	R=30.0, 3397.0 ft²		
b. N/A			
c. N/A			
11. Ducts			
a. Sup: Unc. Ret: Unc. AH: Garage	Sup. R=6.0, 220.0 ft		
b. N/A			

Glass/Floor Area: 0.14 Total as-built points: 40476 Total base points: 41244 **PASS**

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

PREPARED BY: Jason Cannon

DATE: 2-21-06

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

OWNER/AGENT: _____

DATE: _____

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

BUILDING OFFICIAL: _____

DATE: _____

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

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **Lot: 22, Sub: Hills of Rose, Plat: , Columbia, FL,** PERMIT #:

BASE				AS-BUILT								
GLASS TYPES .18 X Conditioned Floor Area	X BSPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	SPM X	SOF	= Points	
.18	**3329.0**	**20.04**	**12008.4**	Double, Clear	W	1.5	6.0	12.0	38.52	0.91	422.2	
				Double, Clear	SW	1.5	3.7	4.4	40.16	0.74	130.8	
				Double, Clear	SW	1.5	3.7	6.7	40.16	0.74	199.1	
				Double, Clear	SW	1.5	7.0	15.0	40.16	0.92	554.0	
				Double, Clear	NW	1.5	8.0	90.0	25.97	0.96	2251.9	
				Double, Clear	NW	17.0	9.0	42.0	25.97	0.55	599.2	
				Double, Clear	NE	99.0	10.0	20.0	29.56	0.44	260.5	
				Double, Clear	SW	99.0	10.0	10.0	40.16	0.37	147.8	
				Double, Clear	NW	1.5	7.0	30.0	25.97	0.95	738.0	
				Double, Clear	NE	1.5	7.0	60.0	29.56	0.94	1674.0	
				Double, Clear	NE	1.5	3.7	13.3	29.56	0.81	319.8	
				Double, Clear	SE	1.5	0.0	42.0	42.75	0.38	681.3	
				Double, Clear	SW	1.5	7.0	15.0	40.16	0.92	554.0	
				Double, Clear	SE	1.5	7.0	30.0	42.75	0.92	1178.2	
				Double, Clear	SE	1.5	8.0	12.0	42.75	0.95	484.8	
				Double, Clear	SE	1.5	9.0	42.0	42.75	0.96	1728.5	
				Double, Clear	E	1.5	8.0	36.0	42.06	0.96	1450.0	
				As-Built Total:				**480.4**			**13374.1**	

WALL TYPES	Area X	BSPM	= Points	Type	R-Value	Area X	SPM	= Points
Adjacent	210.0	0.70	147.0	Frame, Wood, Exterior	13.0	2085.6	1.50	3128.4
Exterior	2085.6	1.70	3545.5	Frame, Wood, Adjacent	13.0	210.0	0.60	126.0
Base Total:	**2295.6**		**3692.5**	**As-Built Total:**		**2295.6**		**3254.4**

DOOR TYPES	Area X	BSPM	= Points	Type	Area X	SPM	= Points
Adjacent	20.0	1.60	32.0	Exterior Insulated	30.0	4.10	123.0
Exterior	50.0	4.10	205.0	Exterior Insulated	20.0	4.10	82.0
				Adjacent Insulated	20.0	1.60	32.0
Base Total:	**70.0**		**237.0**	**As-Built Total:**	**70.0**		**237.0**

CEILING TYPES	Area X	BSPM	= Points	Type	R-Value	Area X	SPM X SCM	= Points
Under Attic	2947.0	1.73	5098.3	Under Attic	30.0	3397.0	1.73 X 1.00	5876.8
Base Total:	**2947.0**		**5098.3**	**As-Built Total:**		**3397.0**		**5876.8**

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **Lot: 22, Sub: Hills of Rose, Plat: , Columbia, FL,** PERMIT #:

BASE				AS-BUILT					
FLOOR TYPES	Area X	BSPM	= Points	Type	R-Value	Area X	SPM	=	Points
Slab	310.0(p)	-37.0	-11470.0	Slab-On-Grade Edge Insulation	0.0	310.0(p	-41.20		-12772.0
Raised	0.0	0.00	0.0						
Base Total:			**-11470.0**	**As-Built Total:**		**310.0**			**-12772.0**
INFILTRATION	Area X	BSPM	= Points			Area X	SPM	=	Points
	3329.0	10.21	33989.1			3329.0	10.21		33989.1
Summer Base Points: 43555.3				**Summer As-Built Points:**					**43959.4**
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 62000 btuh ,SEER/EFF(12.0) Ducts:Unc(S),Unc(R),Gar(AH),R6.0(INS)					
				43959	1.00	(1.09 x 1.147 x 1.00)	0.284	1.000	15631.4
43555.3	**0.4266**		**18580.7**	**43959.4**	**1.00**	**1.250**	**0.284**	**1.000**	**15631.4**

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **Lot: 22, Sub: Hills of Rose, Plat: , Columbia, FL,** 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	3329.0	12.74	7634.1	Double, Clear	W	1.5	6.0	12.0	20.73	1.02	254.6	
				Double, Clear	SW	1.5	3.7	4.4	16.74	1.17	86.1	
				Double, Clear	SW	1.5	3.7	6.7	16.74	1.17	131.2	
				Double, Clear	SW	1.5	7.0	15.0	16.74	1.04	261.7	
				Double, Clear	NW	1.5	8.0	90.0	24.30	1.00	2188.3	
				Double, Clear	NW	17.0	9.0	42.0	24.30	1.03	1053.9	
				Double, Clear	NE	99.0	10.0	20.0	23.57	1.06	500.3	
				Double, Clear	SW	99.0	10.0	10.0	16.74	2.03	339.9	
				Double, Clear	NW	1.5	7.0	30.0	24.30	1.00	730.2	
				Double, Clear	NE	1.5	7.0	60.0	23.57	1.00	1419.5	
				Double, Clear	NE	1.5	3.7	13.3	23.57	1.02	319.2	
				Double, Clear	SE	1.5	0.0	42.0	14.71	2.65	1636.8	
				Double, Clear	SW	1.5	7.0	15.0	16.74	1.04	261.7	
				Double, Clear	SE	1.5	7.0	30.0	14.71	1.07	471.7	
				Double, Clear	SE	1.5	8.0	12.0	14.71	1.05	185.1	
				Double, Clear	SE	1.5	9.0	42.0	14.71	1.04	640.4	
				Double, Clear	E	1.5	8.0	36.0	18.79	1.02	690.0	
				As-Built Total:				**480.4**			**11170.5**	

WALL TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM	= Points
Adjacent	210.0	3.60	756.0	Frame, Wood, Exterior	13.0	2085.6	3.40	7091.0
Exterior	2085.6	3.70	7716.7	Frame, Wood, Adjacent	13.0	210.0	3.30	693.0
Base Total:	**2295.6**		**8472.7**	**As-Built Total:**		**2295.6**		**7784.0**

DOOR TYPES	Area X	BWPM	= Points	Type	Area X	WPM	= Points
Adjacent	20.0	8.00	160.0	Exterior Insulated	30.0	8.40	252.0
Exterior	50.0	8.40	420.0	Exterior Insulated	20.0	8.40	168.0
				Adjacent Insulated	20.0	8.00	160.0
Base Total:	**70.0**		**580.0**	**As-Built Total:**	**70.0**		**580.0**

CEILING TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM X WCM	= Points
Under Attic	2947.0	2.05	6041.4	Under Attic	30.0	3397.0	2.05 X 1.00	6963.8
Base Total:	**2947.0**		**6041.4**	**As-Built Total:**		**3397.0**		**6963.8**

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **Lot: 22, Sub: Hills of Rose, Plat: , Columbia, FL,** PERMIT #:

BASE				AS-BUILT					
FLOOR TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM	=	Points
Slab	310.0(p)	8.9	2759.0	Slab-On-Grade Edge Insulation	0.0	310.0(p	18.80		5828.0
Raised	0.0	0.00	0.0						
Base Total:			**2759.0**	**As-Built Total:**		**310.0**			**5828.0**
INFILTRATION	Area X	BWPM	= Points			Area X	WPM	=	Points
	3329.0	-0.59	-1964.1			3329.0	-0.59		-1964.1
Winter Base Points:			**23523.0**	**Winter As-Built Points:**					**30362.2**
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 62000 btuh ,EFF(7.6) Ducts:Unc(S),Unc(R),Gar(AH),R6.0					
				30362.2	1.000	(1.069 x 1.169 x 1.00)	0.449	1.000	17024.2
23523.0	**0.6274**	**14758.3**		**30362.2**	**1.00**	**1.250**	**0.449**	**1.000**	**17024.2**

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: **Lot: 22, Sub: Hills of Rose, Plat: , Columbia, FL,** 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
3		2635.00	7905.0	40.0	0.93	3		1.00	2606.67	1.00	7820.0
				As-Built Total:							**7820.0**

CODE COMPLIANCE STATUS

BASE				AS-BUILT			
Cooling Points	+ Heating Points	+ Hot Water Points	= Total Points	Cooling Points	+ Heating Points	+ Hot Water Points	= Total Points
18581	**14758**	**7905**	**41244**	**15631**	**17024**	**7820**	**40476**

PASS

Code Compliance Checklist

Residential Whole Building Performance Method A - Details

ADDRESS: **Lot: 22, Sub: Hills of Rose, Plat: , Columbia, FL,** PERMIT #:

6A-21 INFILTRATION REDUCTION COMPLIANCE CHECKLIST

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

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

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

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 83.4

The higher the score, the more efficient the home.

Bullard Chris & Tammy, Lot: 22, Sub: Hills of Rose, Plat: , Columbia, FL,

1.	New construction or existing	New
2.	Single family or multi-family	Single family
3.	Number of units, if multi-family	1
4.	Number of Bedrooms	3
5.	Is this a worst case?	Yes
6.	Conditioned floor area (ft²)	3329 ft²
7.	Glass type [1] and area: (Label reqd. by 13-104.4.5 if not default)	
	a. U-factor: (or Single or Double DEFAULT) 7a.	Description Area (Dble Default) 480.4 ft²
	b. SHGC: (or Clear or Tint DEFAULT) 7b.	(Clear) 480.4 ft²
8.	Floor types	
	a. Slab-On-Grade Edge Insulation	R=0.0, 310.0(p) ft
	b. N/A	
	c. N/A	
9.	Wall types	
	a. Frame, Wood, Exterior	R=13.0, 2085.6 ft²
	b. Frame, Wood, Adjacent	R=13.0, 210.0 ft²
	c. N/A	
	d. N/A	
	e. N/A	
10.	Ceiling types	
	a. Under Attic	R=30.0, 3397.0 ft²
	b. N/A	
	c. N/A	
11.	Ducts	
	a. Sup: Unc. Ret: Unc. AH: Garage	Sup. R=6.0, 220.0 ft
	b. N/A	
12.	Cooling systems	
	a. Central Unit	Cap: 62.0 kBtu/hr SEER: 12.00
	b. N/A	
	c. N/A	
13.	Heating systems	
	a. Electric Heat Pump	Cap: 62.0 kBtu/hr HSPF: 7.60
	b. N/A	
	c. N/A	
14.	Hot water systems	
	a. Electric Resistance	Cap: 40.0 gallons EF: 0.93
	b. N/A	
	c. Conservation credits (HR-Heat recovery, Solar DHP-Dedicated heat pump)	
15.	HVAC credits (CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)	

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

Builder Signature: _____ Date: _____

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

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

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

Parcel ID # Lot 21 Hills at Rose Creek 05-5S-17-09116-121

COLUMBIA COUNTY BUILDING DEPARTMENT **Revised 10-01-05**

RESIDENTIAL MINIMUM PLAN REQUIREMENTS AND CHECKLIST FOR FLORIDA BUILDING CODE 2004 and FLORIDA RESIDENTIAL CODE 2004 WITH AMENDMENTS ONE (1) AND TWO (2) FAMILY DWELLINGS

ALL REQUIREMENTS ARE SUBJECT TO CHANGE
EFFECTIVE OCTOBER 1, 2005

ALL BUILDING PLANS MUST INDICATE THE FOLLOWING ITEMS AND INDICATE COMPLIANCE WITH CHAPTER 16 OF THE FLORIDA BUILDING CODE 2004 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 1609 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 106.1). 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** Plans or specifications must state compliance with FBC Section 1609. The following information must be shown as per section 1603.1.4 FBC a. Basic wind speed (3-second gust), miles per hour (km/hr). b. Wind importance factor, Iw, and building classification from Table 1604.5 or Table 6-1, ASCE 7 and building classification in Table 1-1, ASCE 7. c. Wind exposure, if more than one wind exposure is utilized, the wind exposure and applicable wind direction shall be indicated. d. The applicable enclosure classifications and, if designed with ASCE 7, internal pressure coefficient. e. Components and Cladding. The design wind pressures 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

- [x] [ ] d) Location, size and height above roof of chimneys.
- [ ] [ ] e) Location and size of skylights
- [x] [x] f) Building height
- [x] [x] e) Number of stories

Floor Plan including:

- [x] [x] a) Rooms labeled and dimensioned.
- [x] [x] b) Shear walls identified.
- [ ] [ ] c) Show product approval specification as required by Fla. Statute 553.842 and Fla. Administrative Code 9B-72 **(see attach forms).**
- [x] [x] d) Show safety glazing of glass, where required by code.
- [x] [ ] e) Identify egress windows in bedrooms, and size.
- [x] [ ] f) Fireplace (gas vented), (gas non-vented) or wood burning with hearth, **(Please circle applicable type).**
- [x] [ ] g) Stairs with dimensions (width, tread and riser) and details of guardrails and handrails.
- [x] [ ] h) Must show and identify accessibility requirements (accessible bathroom)

Foundation Plan including:

- [x] [ ] a) Location of all load-bearing wall with required footings indicated as standard or monolithic and dimensions and reinforcing.
- [x] [x] 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:

- [x] [x] a) Truss package including:
    1. Truss layout and truss details signed and sealed by Fl. Pro. Eng.
    2. Roof assembly (FBC 106.1.1.2)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 106.1.1.2)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 shall be designed by a Windload engineer using the engineered roof truss plans.
    6. Roof assembly shown here or on roof system detail (FBC 106.1.1.2) 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) shall be designed by a Windload engineer using the engineered roof truss plans.
7. Roof assembly shown here or on roof system detail (FBC 106.1.1.2) 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

☑ ☐ g) Arc Fault Circuits (AFCI) in bedrooms

☑ ☐ h) Exhaust fans in bathroom

HVAC information

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

☑ ☐ b) Manual J sizing equipment or equivalent computation

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

☐ ☐ **Disclosure Statement for Owner Builders**

☐ ☐ ***Notice Of Commencement Required Before Any Inspections Will Be Done**

☑ ☐ **Private Potable Water**

a) Size of pump motor
b) Size of pressure tank
c) Cycle stop valve if used

THE FOLLOWING ITEMS MUST BE SUBMITTED WITH BUILDING PLANS

1. **Building Permit Application:** A current Building Permit Application form is to be completed and submitted for all residential projects.

2. **Parcel Number:** The parcel number (Tax ID number) from the Property Appraiser (386) 758-1084 is required. A copy of property deed is also requested.

3. **Environmental Health Permit or Sewer Tap Approval:** A copy of the Environmental Health permit, existing septic approval or sewer tap approval is required before a building permit can be issued. (386) 758-1058 **(Toilet facilities shall be provided for construction workers)**

4. **City Approval:** **If the project is to be located within the city limits of the Town of Fort White**, prior approval is required. The Town of Fort White approval letter is required to be submitted by the owner or contractor to this office when applying for a Building Permit. **(386) 497-2321**

5. **Flood Information:** All projects within the Floodway of the Suwannee or Santa Fe Rivers shall require permitting through the Suwannee River Water Management District, before submitting application to this office. Any project located within a flood zone where the base flood elevation (100 year flood) has been established shall meet the requirements of Section 8.8 of the Columbia County Land Development Regulations. Any project located within a flood zone where the base flood elevation has not been established (Zone A) shall meet the requirements of Section 8.7 of the Columbia County Land Development Regulations. **CERTIFIED FINISHED FLOOR ELEVATIONS WILL BE REQUIRED ON ANY PROJECT WHERE THE BASE FLOOD ELEVATION (100 YEAR FLOOD) HAS BEEN ESTABLISHED.**
A development permit will also be required. Development permit cost is **$50.00**

6. **Driveway Connection:** If the property does not have an existing access to a public road, then an application for a culvert permit **($25.00)** must be made. If the applicant feels that a culvert is not needed, they may apply for a culvert waiver **($50.00)**. All culvert waivers are sent to the Columbia County Public Works Department for approval or denial. **If the project is to be located on a F.D.O.T. maintained road, than an F.D.O.T. access permit is required.**

7. **911 Address:** If the project is located in an area where the 911 address has been issued, then the proper paperwork from the 911 Addressing Department must be submitted. (386) 752-8787

ALL REQUIRED INFORMATION IS TO BE SUBMITTED FOR REVIEW. YOU WILL BE NOTIFIED WHEN YOUR APPLICATION AND PLANS ARE APPROVED AND READY TO PERMIT. PLEASE DO NOT EXPECT OR REQUEST THAT PERMIT APPLICATIONS BE REVIEWED OR APPROVED WHILE YOU ARE HERE – TIME WILL NOT ALLOW THIS –PLEASE DO NOT ASK

PRODUCT APPROVAL SPECIFICATION SHEET

Location:_____ **Project Name:**_____

As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and the product approval number(s) on the building components listed below if they will be utilized on the construction project for which you are **applying for a building permit on or after April 1, 2004**. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. More information about statewide product approval can be obtained at www.floridabuilding.org

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)
A. EXTERIOR DOORS			
1. Swinging			
2. Sliding			
3. Sectional			
4. Roll up			
5. Automatic			
6. Other			
B. WINDOWS			
1. Single hung			
2. Horizontal Slider			
3. Casement			
4. Double Hung			
5. Fixed			
6. Awning			
7. Pass -through			
8. Projected			
9. Mullion			
10. Wind Breaker			
11 Dual Action			
12. Other			
C. PANEL WALL			
1. Siding			
2. Soffits			
3. EIFS			
4. Storefronts			
5. Curtain walls			
6. Wall louver			
7. Glass block			
8. Membrane			
9. Greenhouse			
10. Other			
D. ROOFING PRODUCTS			
1. Asphalt Shingles			
2. Underlayments			
3. Roofing Fasteners			
4. Non-structural Metal Rf			
5. Built-Up Roofing			
6. Modified Bitumen			
7. Single Ply Roofing Sys			
8. Roofing Tiles			
9. Roofing Insulation			
10. Waterproofing			
11. Wood shingles /shakes			
12. Roofing Slate			

Category/Subcategory (cont.)	Manufacturer	Product Description	Approval Number(s)
13. Liquid Applied Roof Sys			
14. Cements-Adhesives – Coatings			
15. Roof Tile Adhesive			
16. Spray Applied Polyurethane Roof			
17. Other			
E. SHUTTERS			
1. Accordion			
2. Bahama			
3. Storm Panels			
4. Colonial			
5. Roll-up			
6. Equipment			
7. Others			
F. SKYLIGHTS			
1. Skylight			
2. Other			
G. STRUCTURAL COMPONENTS			
1. Wood connector/anchor			
2. Truss plates			
3. Engineered lumber			
4. Railing			
5. Coolers-freezers			
6. Concrete Admixtures			
7. Material			
8. Insulation Forms			
9. Plastics			
10. Deck-Roof			
11. Wall			
12. Sheds			
13. Other			
H. NEW EXTERIOR ENVELOPE PRODUCTS			
1.			
2.			

The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite; 1) copy of the product approval, 2) the performance characteristics which the product was tested and certified to comply with, 3) copy of the applicable manufacturers installation requirements.

I understand these products may have to be removed if approval cannot be demonstrated during inspection

_____

_____

_____

_____ _____

Contractor or Contractor's Authorized Agent Signature Print Name Date

_____ _____

Location Permit # **(FOR STAFF USE ONLY)**

NOTICE:

ADDRESSES BY APPOINTMENT ONLY!

TO OBTAIN A 9-1-1 ADDRESS THE REQUESTER MUST CONTACT THE COLUMBIA COUNTY 9-1-1 ADDRESSING DEPARTMENT AT (386) 752-8787 FOR AN APPOINTMENT TIME AND DATE:

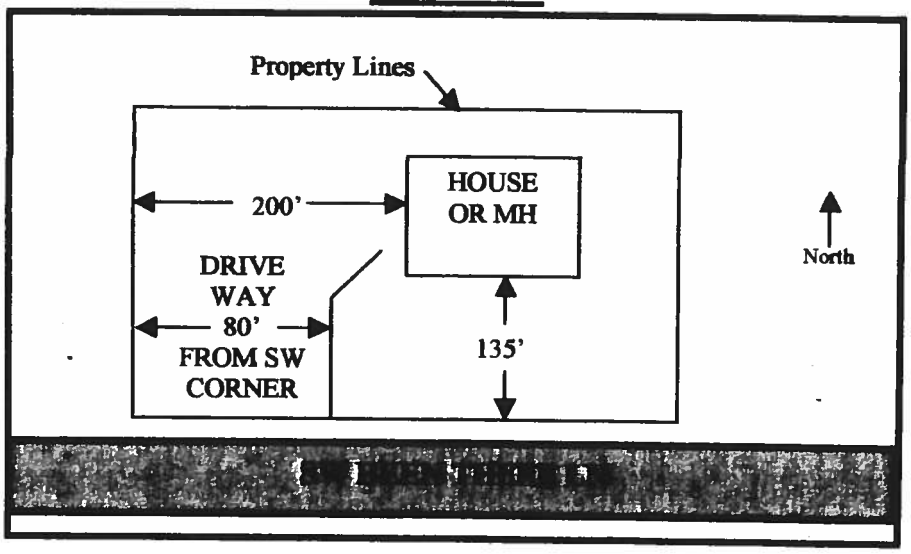
YOU CAN NOT OBTAIN A NEW ADDRESS OVER THE TELEPHONE. MUST MAKE AN APPOINTMENT!

THE ADDRESSING DEPARTMENT IS LOCATED AT 263 NW LAKE CITY AVENUE (OFF OF WEST U.S. HIGHWAY 90 WEST OF INTERSTATE 75 AT THE COLUMBIA COUNTY EMERGENCY OPERATIONS CENTER).

THE REQUESTER WILL NEED THE FOLLOWING:

1. THE PARCEL OR TAX ID NUMBER (SAMPLE: "25-4S-17-12345-123" OR "R12345-123) FOR THE PROPERTY.
2. A PLAT, PLAN, SITE PLAN, OR DRAWING SHOWING THE PROPERTY LINES OF THE PARCEL.
   a. LOCATION OF PLANNED RESIDENT OR BUSINESS STRUCTURE ON THE PROPERTY WITH DISTANCES FROM TWO OF THE PROPERTY LINES TO THE STRUCTURE (SEE SAMPLE BELOW).
   b. LOCATION OF THE ACCESS POINT (DRIVEWAY, ETC.) ON THE ROADWAY FROM WHICH LOCATION IS TO BE ADDRESSED WITH A DISTANCE FROM A PARALLEL PROPERTY LINE AND OR PROPERTY CORNER (SEE SAMPLE BELOW).
   c. TRAVEL OF THE DRIVEWAY FROM THE ACCESS POINT TO THE STRUCTURE (SEE SAMPLE BELOW).

SAMPLE:



NOTE: 5 TO 7 WORKING DAYS MAY BE REQUIRED IF ADDRESSING DEPARTMENT NEEDS TO CONDUCT AN ON SITE SURVEY.

Attn: Jimmy
758-4735

Underwriters Laboratories Inc.®

333 Pfingsten Road
Northbrook, Illinois 60062-2096
United States Country Code (1)
(847) 272-8800
Fax No. (847) 509-6395
http://www.ul.com

April 5, 2002

Mr. R. Allan Snyder
CertainTeed Corporation
1400 Union Meeting Road
P.O. Box 1100
Blue Bell, PA 19422

Shingles

Our Reference: R684

Dear Mr. Snyder:

This is in response to your request to identify products that are currently Listed with Underwriters Laboratories Inc. Following are those products:

Product	Conforms to Standards			
	ASTM D 3462	ASTM D 3161 Modified to (110-mph)	M-DC PA 107 (110-mph)	Attachment (Minimum # Nails)
Presidential Shake TL (& AR)	YES	YES	YES	5
Presidential Shake (& AR)	YES	YES	YES	5
Grand Manor Shangle (& AR)	YES	YES	YES	5
Carriage House Shangle (& AR)	YES	YES	YES	5
Hatteras (& AR)	YES	YES	YES	5
Landmark TL/Ambassador (& AR)	YES	YES	YES	4
Landmark 50 (& AR) (formerly Landmark 40 & AR)	YES	YES	YES	4
Landmark 40 (& AR) (formerly Landmark 30 & AR)	YES	YES	YES	4
Landmark 30 (& AR) (formerly Landmark 25 & AR)	YES	YES	YES	4
Celotex Dimensional 40 (& AR)	YES	YES	YES	4
Celotex Dimensional 30 (& AR)	YES	YES	YES	4
Firehalt 2000 (& AR)	YES	YES	YES	4
High Sierra (& AR)	YES	YES	YES	4
Estate (& AR)	YES	YES	YES	4
Highlands AR	YES	YES	YES	4
Classic Horizon (& AR)	YES	YES	YES	4
CT20 (& CT20 AR)	YES	YES	YES	4
XT25 (& XT25 AR)/FungusBuster 25	YES	YES	YES	4
XT30 (& XT30 AR)	YES	YES	YES	4

ARCHITECTURAL TESTING INC.
130 Derry Court • York, PA 17406-8405
web www.archtest.com • Facsimile 717-764-4129 • Telephone 717-764-7700

5-10 x 5-0 Twin
(QUALIFIES 3-0 x 5-0)

OK for 120

STRUCTURAL TEST REPORT SUMMARY

Rendered to:

MI HOME PRODUCTS, INC.

SERIES/MODEL: 650
TYPE: Twin Aluminum Single Hung Window

CONTAINING Hung & Sill

Title of Test	Results
Overall Design Pressure	35.0 psf
Operating Force	18 lb max
Air Infiltration	0.20 cfm/ft²
Water Resistance	5.25 psf
Structural Test Pressure	70.5 psf
Deglazing	Passed
Forced Entry Resistance	Grade 10

2 of 47

Reference should be made to Report No. 01-36060.01 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

Scott D. Kramer

Scott D. Kramer, Technician

SDK:nlb

ARCHITECTURAL TESTING INC.

130 Derry Court • York, PA 17402-9405
web www.testati.com • Facsimile 717-764-4129 • Telephone 717-764-7700

STRUCTURAL TEST REPORT

Rendered to:

MI HOME PRODUCTS, INC.
650 West Market Street
P.O. Box 370
Gratz, Pennsylvania 17030-0370

Report No: 01-36060.0
Test Date: 11/04/9
Report Date: 11/29/9
Expiration Date: 11/04/0

Project Summary: Architectural Testing, Inc. (ATI) was contracted to perform tests on a Series/Model 650, twin aluminum single hung window at MI Home Products' test facility in Elizabethville, Pennsylvania. Test specimen description and results are reported herein.

Test Specification: The test specimen was evaluated in accordance with the following:

ASTM E 283-91, *Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen*

ASTM E 330-97, *Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference*

ASTM E 547-96, *Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Differential*

Test Specimen Description:

Series/Model: 650

Type: Twin Aluminum Single Hung Window

Overall Size: 5' 10-1/4" wide by 5' 0" high

Active Size (2): 2' 8-3/4" wide by 2' 6-1/4" high

Fixed Daylight Opening Size (2): 2' 6- 1/4" wide by 2' 3" high

Screen Size (2): 2' 7-3/4" wide by 2' 4-1/4" high

st Specimen Description: (Continued)

Finish: All aluminum was painted white.

Glazing Details: Both the active sash and fixed lites utilized 5/8" thick insulating glass fabricated from two sheets of 3/32" thick clear annealed glass and a desiccant filled metal spacer system. The active sash were channel glazed with a flexible wedge gasket. The fixed lites were interior glazed, back bedded with single sided adhesive foam tape and held-in-place with PVC snap-in glazing beads.

Weatherstripping:

Description	Quantity	Location
0.270" backed by 0.190" high polypile with center fin	1 Row	Fixed meeting stile
3/8" high vinyl wrapped foam bulb	1 Row	Bottom rail
0.187" backed by 0.250" high polypile with center fin	2 Rows	Stiles
1/4" high polypile dust plug	2 Rows	Ends of bottom rail, top of each stile

Frame Construction: Frame was constructed of extruded aluminum members and all corners were coped, butted, sealed, and fastened with two screws per corner. The fixed meeting rail was attached to the jambs with a plastic clip and two screws per end.

Mullion Construction: The mullion was constructed of an extruded aluminum member. It was fastened to the head and sill with four screws per end. All screw heads were sealed as well as the butt joint at the sill.

Sash Construction: The sash were constructed of extruded aluminum members and all corners were coped, butted, and fastened with one screw per corner.

Screen Construction: The screen was constructed of rolled aluminum members and the corners were keyed. The screen mesh was held-in-place with a flexible spline.

t Specimen Description: (Continued)

Hardware:

Description	Quantity	Location
Plastic tilt latches	4	Ends of interior meeting rail
Metal pivot bars	4	Ends of the bottom rails
Metal sweep lock	2	Midspan of interior meeting rail
Metal keeper	2	Midspan of fixed meeting rail
Sash stops	4	One per jamb
Block and tackle balance system	4	One per jamb
Spring loaded latch pins	2	6" from ends of screen top rail

Drainage:

Description	Quantity	Location
Sloped sill	1	Sill
1/4" wide by 3/16" high weepslot	4	Ends of exterior vertical sill leg

Installation: The test unit was installed into the 2" x 8" nominal Spruce-Pine-Fir #2 wood test buck utilizing the integral nailing fin and 1" roofing nails. Five per top, bottom, and sides of the nail fin were evenly spaced. The nail fin was bedded in a silicone sealant.

Test Results:

The results are tabulated as follows:

Title of Test - Test Method	Results
Air Infiltration per ASTM E 283	
@ 0.56 psf (15 mph)	0.15 cfm/ft^2
@ 1.57 psf (25 mph)	0.29 cfm/ft^2
Water Resistance per ASTM E 547 (with and without screen) WTP = 5.25 psf	No leakage
Uniform Load Structural (Measurements reported were taken on the meeting rail) (load held for 33 seconds)	
@ 47.0 psf (exterior)	0.010"
@ 47.0 psf (interior)	0.015"
Uniform Load Structural (Measurements reported were taken on the meeting rail) (load held for 10 seconds)	
@ 70.5 psf (exterior)	0.060"
@ 70.5 psf (interior)	0.040"

Detailed drawings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product which may only be granted by the certification program administrator.

For ARCHITECTURAL TESTING, INC:

Scott D. Kramer
Technician

Bruce W. Croak
Project Manager

SDK:nlb
01-36060.01

AAMA/NWWDA 101/I.S.2-97
TEST REPORT SUMMARY

Rendered to:

MI HOME PRODUCTS, INC.

SERIES/MODEL: 650 Fin
TYPE: Aluminum Single Hung Window

Title of Test	Results
Rating	H-R40 52 x 72
Overall Design Pressure	+45.0 psf -47.2 psf
Operating Force	11 lb max.
Air Infiltration	0.13 cfm/ft²
Water Resistance	6.00 psf
Structural Test Pressure	+67.5 psf -70.8 psf
Deglazing	Passed
Forced Entry Resistance	Grade 10

Reference should be made to Report No. 01-41134.01 dated 03/26/02 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

Mark A. Hess, Technician

MAH:nlb

Architectural Testing

AAMA/NWWDA 101/I.S.2-97 TEST REPORT

Rendered to:

MI HOME PRODUCTS, INC.
650 West Market Street
P.O. Box 370
Gratz, Pennsylvania 17030-0370

Report No: 01-41134.01
Test Date: 03/07/02
Report Date: 03/26/02
Expiration Date: 03/07/06

Project Summary: Architectural Testing, Inc. (ATI) was contracted by MI Home Products, Inc. to perform tests on Series/Model 650 Fin, aluminum single hung window at their facility located in Elizabethville, Pennsylvania. The samples tested successfully met the performance requirements for a H-R40 52 x 72 rating.

Test Specification: The test specimen was evaluated in accordance with AAMA/NWWDA 101/I.S.2-97, *Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.*

Test Specimen Description:

Series/Model: 650 Fin

Type: Aluminum Single Hung Window

Overall Size: 4' 4-1/4" wide by 6' 0-3/8" high

Active Sash Size: 4' 1-3/4" wide by 3' 0-5/8" high

Daylight Opening Size: 3' 11-3/8" wide by 2' 9-1/2" high

Screen Size: 4' 0-1/4" wide by 2' 11-1/8" high

Finish: All aluminum was white.

Glazing Details: The active and fixed lites utilized 5/8" thick, sealed insulating glass constructed from two sheets of 1/8" thick, clear annealed glass and a metal reinforced butyl spacer system. The active sash was channel glazed utilizing a flexible vinyl wrap-around gasket. The fixed lite was interior glazed against double-sided adhesive foam tape an secured with PVC snap-in glazing beads.

130 Derry Court
York, PA 17402-9605
phone: 717.764.7700
fax: 717.764.4129
www.architest.com

Test Specimen Description: (Continued)

Weatherstripping:

Description	Quantity	Location
0.230" high by 0.270" backed polypile with center fin	1 Row	Fixed meeting rail
0.250" high by 0.187" backed polypile with center fin	2 Rows	Active sash stiles
1/2" x 1/2" dust plug	4 Pieces	Active sash, top and bottom of stiles
1/4" foam-filled vinyl bulb seal	1 Row	Active sash, bottom rail

Frame Construction: The frame was constructed of extruded aluminum with coped, butted, and sealed corners fastened with two #8 x 1" screws through the head and sill into each jamb screw boss. End caps were utilized on the ends of the fixed meeting rail and secured with two 1-1/4" screws per cap. Meeting rail was secured to the frame utilizing two 1-1/4" screws.

Sash Construction: The sash was constructed of extruded aluminum with coped, butted, and sealed corners fastened with two #8 x 1-1/2" screws through the rails into each jamb screw boss.

Screen Construction: The screen was constructed from roll-formed aluminum with keyed corners. The fiberglass mesh was secured with a flexible spline.

Hardware:

Description	Quantity	Location
Metal cam lock with keeper	1	Midspan, active meeting rail with keeper adjacent on fixed meeting rail
Plastic tilt latch	2	Active sash, meeting rail ends
Metal tilt pin	2	Active sash, bottom rail ends
Balance assembly	2	One in each jamb
Screen plunger	2	4" from rail ends on top rail

Test Specimen Description: (Continued)

Drainage: Sloped sill

Reinforcement: No reinforcement was utilized.

Installation: The test specimen was installed into a 2 x 8 #2 Spruce-Pine-Fir wood test buck with #8 x 1-5/8" drywall screws every 8" on center around the nail fin. Polyurethane was used as a sealant under the nail fin and around the exterior perimeter.

Test Results:

The results are tabulated as follows:

Paragraph	Title of Test - Test Method	Results	Allowed
2.2.1.6.1	Operating Force	11 lbs	30 lbs max.
2.1.2	Air Infiltration (ASTM E 283-91) @ 1.57 psf (25 mph)	0.13 cfm/ft^2	0.3 cfm/ft^2 max.

Note #1: The tested specimen meets the performance levels specified in AAMA/NWWDA 101/I.S. 2-99 for air infiltration.

2.1.3	Water Resistance (ASTM E 547-00) (with and without screen) WTP – 2.86 psf	No leakage	No leakage
2.1.4.1	Uniform Load Deflection (ASTM E 330-97) (Measurements reported were taken on the meeting rail) (Loads were held for 33 seconds)		
	@ 25.9 psf (positive)	0.42"*	0.26" max.
	@ 34.7 psf (negative)	0.43"*	0.26" max.

**Exceeds L/175 for deflection, but passes all other test requirements.*

2.1.4.2	Uniform Load Structural (ASTM E 330-97) (Measurements reported were taken on the meeting rail) (Loads were held for 10 seconds)		
	@ 38.9 psf (positive)	0.02"	0.18" max.
	@ 52.1 psf (negative)	0.02"	0.18" max.

Test Specimen Description: (Continued)

Paragraph	Title of Test - Test Method	Results	Allowed
2.2.1.6.2	Deglazing Test (ASTM E 987)		
	In operating direction at 70 lbs		
	Meeting rail	0.12"/25%	0.50"/100%
	Bottom rail	0.12"/25%	0.50"/100%
	In remaining direction at 50 lbs		
	Left stile	0.06"/12%	0.50"/100%
	Right stile	0.06"/12%	0.50"/100%
2.1.8	Forced Entry Resistance (ASTM F 588-97)		
	Type: A		
	Grade: 10		
	Lock Manipulation Test	No entry	No entry
	Tests A1 through A5	No entry	No entry
	Test A7	No entry	No entry
	Lock Manipulation Test	No entry	No entry
Optional Performance			
4.3	Water Resistance (ASTM E 547-00)		
	(with and without screen)		
	WTP = 6.00 psf	No leakage	No leakage
4.4.1	Uniform Load Deflection (ASTM E 330-97)		
	(Measurements reported were taken on the meeting rail)		
	(Loads were held for 33 seconds)		
	@ 45.0 psf (positive)	0.47"*	0.26" max.
	@ 47.2 psf (negative)	0.46"*	0.26" max.
4.4.2	Uniform Load Structural (ASTM E 330-97)		
	(Measurements reported were taken on the meeting rail)		
	(Loads were held for 10 seconds)		
	@ 67.5 psf (positive)	0.05"	0.18" max.
	@ 70.8 psf (negative)	0.05"	0.18" max.

Exceeds L/175 for deflection, but passes all other test requirements.

Detailed drawings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product, which may only be granted by the certification program administrator.

For ARCHITECTURAL TESTING, INC:

Mark A. Hess
Technician

Allan N. Reeves, P.E.
Director - Engineering Services

MAH:mlb
01-41134.01

DOCUMENT CONTROL ADDENDUM #01-41134.00

Current Issue Date: 03/26/02

Report No.: 01-41134.01

Requested by: William Emley, MI Home Products, Inc.
Purpose: AAMA/NWWDA 101/I.S.2-97 testing of a Series/Model 650 Fin, aluminum single hung window.
Issued Date: 03/26/02
Comments: Certification copy of report to John Smith at Associated Laboratories, Inc. Florida P.E. seal required on every page of report.

AAMA/NWWDA 101/I.S.2-97
TEST REPORT SUMMARY

Rendered to:

MI HOME PRODUCTS, INC.

SERIES/MODEL: 650 Fin
TYPE: Aluminum Single Hung Window

Title of Test	Results
Rating	H-R40 52 x 72
Overall Design Pressure	+45.0 psf -67.5 psf
Operating Force	11 lb max.
Air Infiltration	0.12 cfm/ft²
Water Resistance	6.00 psf
Structural Test Pressure	+67.5 psf -70.5 psf
Deglazing	Passed
Forced Entry Resistance	Grade 10

Reference should be made to Report No. 01-41134.01 dated 03/26/02 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

Mark A. Hess, Technician

MAH:mlb

Architectural Testing

AAMA/NWWDA 101/I.S.2-97 TEST REPORT

Rendered to:

MI HOME PRODUCTS, INC.
650 West Market Street
P.O. Box 370
Gratz, Pennsylvania 17030-0370

Report No: 01-41134.01
Test Date: 03/07/02
Report Date: 03/26/02
Expiration Date: 03/07/06

Project Summary: Architectural Testing, Inc. (ATI) was contracted by MI Home Products, Inc. to perform tests on Series/Model 650 Fin, aluminum single hung window at their facility located in Elizabethville, Pennsylvania. The samples tested successfully met the performance requirements for a H-R40 52 x 72 rating.

Test Specification: The test specimen was evaluated in accordance with AAMA/NWWDA 101/I.S.2-97, *Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.*

Test Specimen Description:

Series/Model: 650 Fin

Type: Aluminum Single Hung Window

Overall Size: 4' 4-1/4" wide by 6' 0-3/8" high

Active Sash Size: 4' 1-3/4" wide by 3' 0-5/8" high

Daylight Opening Size: 3' 11-3/8" wide by 2' 9-1/2" high

Screen Size: 4' 0-1/4" wide by 2' 11-1/8" high

Finish: All aluminum was white.

Glazing Details: The active and fixed fins utilized 5/8" thick, sealed insulating glass constructed from two sheets of 1/8" thick, clear annealed glass and a metal reinforced butyl spacer system. The active sash was channel glazed utilizing a flexible vinyl wrap-around gasket. The fixed fin was interior glazed against double-sided adhesive foam tape and secured with PVC snap-in glazing beads.

150 Derry Court
York, PA 17402-9405
phone: 717.764.7700
fax: 717.764.4129
www.architest.com

Test Specimen Description: (Continued)

Weatherstripping:

Description	Quantity	Location
0.230" high by 0.270" backed polypile with center fin	1 Row	Fixed meeting rail
0.250" high by 0.187" backed polypile with center fin	2 Rows	Active sash stiles
1/2" x 1/2" dust plug	4 Pieces	Active sash, top and bottom of stiles
1/4" foam-filled vinyl bulb seal	1 Row	Active sash, bottom rail

Frame Construction: The frame was constructed of extruded aluminum with coped, butted, and sealed corners fastened with two #8 x 1" screws through the head and sill into each jamb screw boss. End caps were utilized on the ends of the fixed meeting rail and secured with two 1-1/4" screws per cap. Meeting rail was secured to the frame utilizing two 1-1/4" screws.

Sash Construction: The sash was constructed of extruded aluminum with coped, butted, and sealed corners fastened with two #8 x 1-1/2" screws through the rails into each jamb screw boss.

Screen Construction: The screen was constructed from roll-formed aluminum with keyed corners. The fiberglass mesh was secured with a flexible spline.

Hardware:

Description	Quantity	Location
Metal cam lock with keeper	1	Midspan, active meeting rail with keeper adjacent on fixed meeting rail
Plastic tilt latch	2	Active sash, meeting rail ends
Metal tilt pin	2	Active sash, bottom rail ends
Balance assembly	2	One in each jamb
Screen plunger	2	4" from rail ends on top rail

Test Specimen Description: (Continued)

Drainage: Sloped sill

Reinforcement: No reinforcement was utilized.

Installation: The test specimen was installed into a 2 x 8 #2 Spruce-Pine-Fir wood test buck with #8 x 1-5/8" drywall screws every 8" on center around the nail fin. Polyurethane was used as a sealant under the nail fin and around the exterior perimeter.

Test Results:

The results are tabulated as follows:

Paragraph	Title of Test - Test Method	Results	Allowed
2.2.1.6.1	Operating Force	11 lbs	30 lbs max.
2.1.2	Air Infiltration (ASTM E 283-91) @ 1.57 psf (25 mph)	0.13 cfm/ft^2	0.3 cfm/ft^2 max.

Note #1: The tested specimen meets the performance levels specified in AAMA/NWWDA 101/I.S. 2-97 for air infiltration.

2.1.3	Water Resistance (ASTM E 547-00) (with and without screen) WTP = 2.86 psf	No leakage	No leakage
2.1.4.1	Uniform Load Deflection (ASTM E 330-97) (Measurements reported were taken on the meeting rail) (Loads were held for 30 seconds)		
	@ 25.9 psf (positive)	0.42"*	0.26" max.
	@ 34.7 psf (negative)	0.43"*	0.26" max.

**Exceeds L/175 for deflection, but passes all other test requirements.*

2.1.4.2	Uniform Load Structural (ASTM E 330-97) (Measurements reported were taken on the meeting rail) (Loads were held for 10 seconds)		
	@ 38.9 psf (positive)	0.02"	0.18" max.
	@ 52.1 psf (negative)	0.02"	0.18" max.

T: Specimen Description: (Continued)

Paragraph	Title of Test – Test Method	Results	Allowed
2.2.1.6.2	Deglazing Test (ASTM E 987)		
	In operating direction at 70 lbs		
	Meeting rail	0.12"/25%	0.50"/100%
	Bottom rail	0.12"/25%	0.50"/100%
	In remaining direction at 50 lbs		
	Left stile	0.06"/12%	0.50"/100%
	Right stile	0.06"/12%	0.50"/100%
2.1.8	Forced Entry Resistance (ASTM F 588-97)		
	Type: A Grade: 10		
	Lock Manipulation Test	No entry	No entry
	Tests A1 through A5	No entry	No entry
	Test A7	No entry	No entry
	Lock Manipulation Test	No entry	No entry
	Optional Performance		
4.3	Water Resistance (ASTM E 547-00) (with and without screen) WTP = 6.00 psf	No leakage	No leakage
4.4.1	Uniform Load Deflection (ASTM E 330-97) (Measurements reported were taken on the meeting rail) (Loads were held for 33 seconds)		
	@ 45.0 psf (positive)	0.47"*	0.26" max.
	@ 47.2 psf (negative)	0.46"*	0.26" max.
4.4.2	Uniform Load Structural (ASTM E 330-97) (Measurements reported were taken on the meeting rail) (Loads were held for 10 seconds)		
	@ 67.5 psf (positive)	0.05"	0.18" max.
	@ 70.8 psf (negative)	0.05"	0.18" max.

Exceeds L/175 for deflection, but passes all other test requirements.

De[illegible]iled drawings, representative samples of the test specimen, and a copy of this report will be ret[illegible]ned by ATI for a period of four years. The above results were secured by using the de[illegible]gnated test methods and they indicate compliance with the performance requirements of the ab[illegible]e referenced specification. This report does not constitute certification of this product, wh[illegible]ch may only be granted by the certification program administrator.

Fo[illegible] ARCHITECTURAL TESTING, INC:

M[illegible]rk A. Hess
T[illegible]chnician

Allan N. Reeves, P.E.
Director - Engineering Services

[illegible] AH:mb
[illegible]-41134.01

DOCUMENT CONTROL ADDENDUM #01-41134.00

Current Issue Date: 03/26/02

Report No.: 01-41134.01

Requested by: William Emley, MI Home Products, Inc.
Purpose: AAMA/NWWDA 101/I.S.2-97 testing of a Series/Model 650 Fin, aluminum single hung window.
Issued Date: 03/26/02
Comments: Certification copy of report to John Smith at Associated Laboratories, Inc. Florida P.E. seal required on every page of report.

ARCHITECTURAL TESTING INC.
130 Derry Court • York, PA 17402-9463
web www.atiinc.com • Facsimile 717-764-1129 • Telephone 717-764-7700

5-10 x 5-0 Twin
(EQUALPIES 3-0 x 5-0)

OK for 120

STRUCTURAL TEST REPORT SUMMARY

Rendered to:

MI HOME PRODUCTS, INC.

SERIES/MODEL: 450
TYPE: Twin Aluminum Single Hung Window
CONFIGURATION: Horiz. Slider

Title of Test	Results
Overall Design Pressure	35.0 psf
Operating Force	16 lbs. max.
Air Infiltration	0.30 cfm/sq.ft.
Water Resistance	6.00 psf
Structural Test Pressure	52.5 psf
Deflection	Passed
Forced Entry Resistance	Grade 10

2 of 47

Reference should be made to Report No. 01-36060.01 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

Scott D. Kramer, Technician

SDK:sb

ARCHITECTURAL TESTING INC.
130 Derry Court • York, PA 17402-9405
web www.testati.com • Facsimile 717-764-4129 • Telephone 717-764-7700

STRUCTURAL TEST REPORT

Rendered to:

MI HOME PRODUCTS, INC.
650 West Market Street
P.O. Box 370
Gratz, Pennsylvania 17030-0370

Report No: 01-36060.01
Test Date: 11/04/99
Report Date: 11/29/99
Expiration Date: 11/04/03

Projec Summary: Architectural Testing, Inc. (ATI) was contracted to perform tests on a Series/ lodel 650, twin aluminum single hung window at MI Home Products' test facility in Elizab hville, Pennsylvania. Test specimen description and results are reported herein.

Test S ecification: The test specimen was evaluated in accordance with the following:

A TM E 283-91, *Standard Test Method for Determining the Rate of Air Leakage Through E erior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across th Specimen*

A TM E 330-97, *Standard Test Method for Structural Performance of Exterior Windows, C rtain Walls, and Doors by Uniform Static Air Pressure Difference*

A TM E 547-96, *Standard Test Method for Water Penetration of Exterior Windows, C rtain Walls, and Doors by Cyclic Static Air Pressure Differential*

Test pecimen Description:

ries/Model: 650

ype: Twin Aluminum Single Hung Window

verall Size: 5' 10-1/4" wide by 5' 0" high

ctive Size (2): 2' 8-3/4" wide by 2' 6-1/4" high

ixed Daylight Opening Size (2): 2' 6- 1/4" wide by 2' 3" high

creen Size (2): 2' 7-3/4" wide by 2' 4-1/4" high

<t Specimer Description: (Continued)

Finish: A aluminum was painted white.

Glazing etails: Both the active sash and fixed lites utilized 5/8" thick insulating glass fabricatec rom two sheets of 3/32" thick clear annealed glass and a desiccant filled metal spacer sy: m. The active sash were channel glazed with a flexible wedge gasket. The fixed lites wer interior glazed, back bedded with single sided adhesive foam tape and held-in-place wit PVC snap-in glazing beads.

Weather ripping:

Descr tion	Quantity	Location
0.270 backed by 0.190" high lypile with cente fin	1 Row	Fixed meeting stile
3/8" gh vinyl wrapped foam ulb	1 Row	Bottom rail
0.18 backed by 0.250" high olypile with cente fin	2 Rows	Stiles
1/4" igh polypile dust lug	2 Rows	Ends of bottom rail, top of each stile

Frame Construction: Frame was constructed of extruded aluminum members and all corners were coped, butted, sealed, and fastened with two screws per corner. The fixed meetin rail was attached to the jambs with a plastic clip and two screws per end.

Mullio Construction: The mullion was constructed of an extruded aluminum member. It was fa ened to the head and sill with four screws per end. All screw heads were sealed as well as he butt joint at the sill.

Sash onstruction: The sash were constructed of extruded aluminum members and all corner were coped, butted, and fastened with one screw per corner.

Scree Construction: The screen was constructed of rolled aluminum members and the corner were keyed. The screen mesh was held-in-place with a flexible spline.

t Specimen eseription: (Continued)

Hardware

Descrip on	Quantity	Location
Plastic t latches	4	Ends of interior meeting rail
Metal p ot bars	4	Ends of the bottom rails
Metal s eep lock	2	Midspan of interior meeting rail
Metal k eper	2	Midspan of fixed meeting rail
Sash st ps	4	One per jamb
Block a d tackle balance system	4	One per jamb
Spring oaded latch p s	2	6" from ends of screen top rail

Drainag

Descr tion	Quantity	Location
Slope sill	1	Sill
1/4" w de by 3/16" high s epslot	4	Ends of exterior vertical sill leg

Installa on: The test unit was installed into the 2" x 8" nominal Spruce-Pine-Fir #2 wood test buc utilizing the integral nailing fin and 1" roofing nails. Five per top, bottom, and sides of e nail fin were evenly spaced. The nail fin was bedded in a silicone sealant.

st Results:

The result ıre tabulated as follows:

Title of Test - Test Method	Results
Air Infiltration per ASTM E 283	
@ 0.56 psf (15 mph)	0.15 cfm/ft^2
@ 1.57 psf (25 mph)	0.29 cfm/ft^2
Water Resistance per ASTM E 547 (with and without screen) WTP = 5.25 psf	No leakage
Uniform Load Structural (Measurements reported were taken on the meeting rail) (load held for 33 seconds)	
@ 47.0 psf (exterior)	0.010"
@ 47.0 psf (interior)	0.015"
Uniform Load Structural (Measurements reported were taken on the meeting rail) (load held for 10 seconds)	
@ 70.5 psf (exterior)	0.060"
@ 70.5 psf (interior)	0.040"

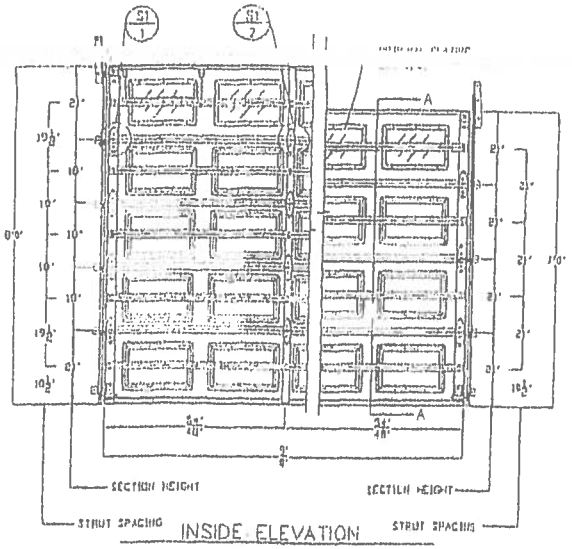
Detailed dra ings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated t st methods and they indicate compliance with the performance requirements of the above refere ced specification. This report does not constitute certification of this product which may only be ganted by the certification program administrator.

For ARCHI ECTURAL TESTING, INC:

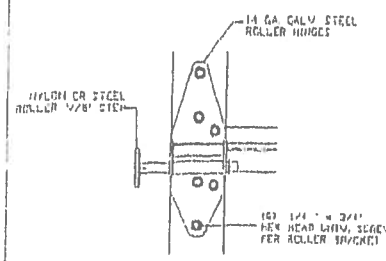
Scott D. Kr mer
Technician

Bruce W. Croak
Project Manager

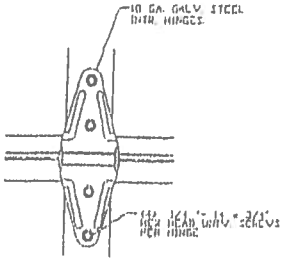
SDK:nlb
01-36060.01



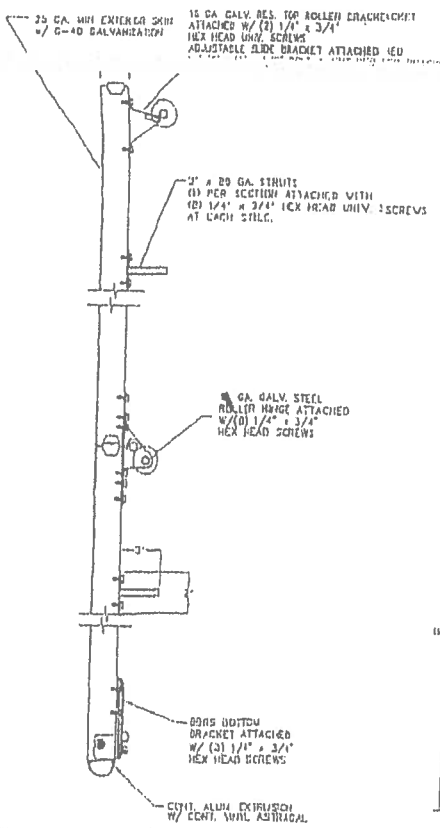
INSIDE ELEVATION



TYP. ROLLER BRACKET (SI/1) N.T.S



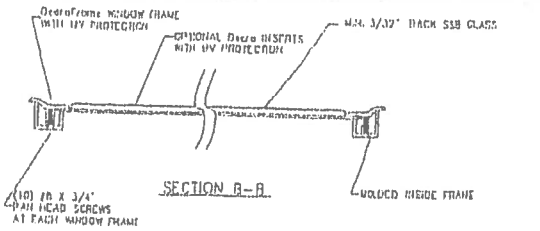
TYP. HINGE CONNECTION (SI/2) N.T.S



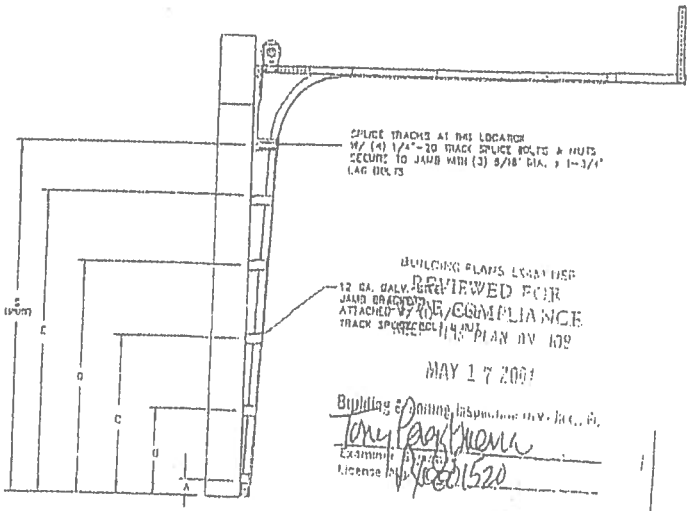
SECTION A-A (SIDE VIEW)

GLAZING OPTION CROSS SECTION

TEST NO. SDC-200-011 ON OCTOBER 12, 1995 INSULATED GLASS WINDOWS IN THE DOOR BEING USED. THE TEST PRESSURES WERE +114.6 PSF AND -54.7 PSF. BY COMPARISON, FOUR (4) WINDOWS MAY BE



SECTION B-B

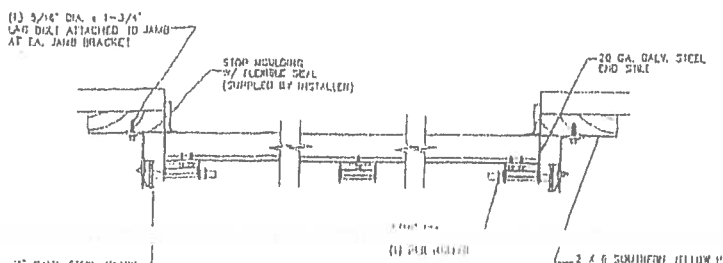


TRACK CONFIGURATION FOR 6'-0" UP TO 8' TALL DOORS

BUILDING PLANS EXAMINER REVIEWED FOR CODE COMPLIANCE 2003 IRC PLAN RV 109

MAY 17 2004

Building & Zoning Inspections Dept., Co., FL
Examiner Tony Peacheux
License No. 0001520



TRACK MOUNTING DETAIL

WOOD JAMB ATTACHMENT TO STRUCTURE

RATED FOR 110 MPH FASTEST-MILE BASIC WIND SPEEDS

VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
5/16" x 5" LAG SCREWS STARTING 6" FROM ENDS WITH 24" O.C.

VERTICAL JAMB ATTACHMENT TO CONCRETE
HILTI KWIK BOLT 3/8" x 4" STARTING 6" FROM ENDS WITH 24" O.C.
HILTI SLEEVE ANCHOR 3/8" x 3-3/4" STARTING 6" FROM ENDS WITH 24" O.C.
ITW/RAMSET HEX HEAD 1/4" x 3" STARTING 6" FROM ENDS WITH 24" O.C.

VERTICAL JAMB ATTACHMENT TO STEEL
HILTI SLEEVE ANCHOR 3/8" x 3-3/4" STARTING 6" FROM ENDS WITH 24" O.C.
ITW/RAMSET FASTON 1/4" x 3-1/4" STARTING 6" FROM ENDS USE PLATES OR FASTENERS (3" MINIMUM) AT 24" O.C.

PREPARATION OF WORK UNDER THE DIRECTION OF ENGINEER

JAMB BRACKET LOCATIONS

	A	B	C	D	E	F
6'-6"	4"	21-1/2"	39"	97"		70"
7'-0"	4"	21-1/2"	42"	63"		76"
7'-6"	4"	10"	36"	54"	72"	82"
8'-0"	4"	21-1/2"	39"	97"	75"	88"

SPECIFICATIONS AND NOTES

1. DOORS AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
2. DOOR SECTIONS SHALL BE 25 GA. (.018") MIN. ROLL FORMED USING COMMERCIAL QUALITY, G-40 GALVANIZATION.
3. DOORS UP TO 7'0" INCH CONSIST OF (1) SECTIONS AS SHOWN.
4. DOORS UP TO 8'0" INCH CONSIST OF (3) SECTIONS AS SHOWN.
5. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS
6. THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURE DESCRIBED IN ASTM E330-90, AND THE SOUTHERN BUILDING CODE CERTIFICATION PROGRAM

DESIGN PARAMETERS
A BASIC WIND SPEED OF 110 MPH
B DOOR CAN BE INSTALLED WITH 3 FEET OF DOORS WIDE INSIDE THE DOOR SIDES
C 12" WEAR ZONE HEIGHT AT ANY SIDE
D USE FACTOR OF 1.0
E COMPOSITE RATING OF C

MODEL #600 STRATFORD
MODEL #650 HERITAGE III

SD	DRAWN BY	DATE	SCALE
B			SDC-500-001-1

COBRA® VENTILATION PRODUCTS

GAF MATERIALS CORPORATION

40 YEAR LIMITED WARRANTY ON COBRA® VENTILATION PRODUCTS

Limited Warranty. GAF Materials Corporation ("GAFMC") warrants to you, the original owner of COBRA® Exhaust Vent, COBRA® Rigid Vent II® Exhaust Vent, and COBRA® Snow Country® Rigid Exhaust Vent ("COBRA® Ventilation Products") that, if your COBRA® Ventilation Products do not remain free from manufacturing defects that adversely affect their performance, GAFMC will provide you with the exclusive remedy set forth below.

This Warranty is NOT transferable. The warranty period starts at the completion of ventilation installation and, unless terminated by the sale of the property upon which COBRA® Ventilation Products are applied, or the removal of your COBRA® Ventilation Products for re-use, expires at the end of forty (40) years.

Exclusive Remedy. For any COBRA® Ventilation Products which do not perform as stated above, GAFMC, at its sole option and as its only obligation to you, will either (1) provide you with replacement COBRA® Ventilation Products; (2) repair the affected COBRA® Ventilation Products; or (3) refund the full original purchase price (excluding labor) of the your COBRA® Ventilation Products. Decisions as to the extent of the nonconforming COBRA® Ventilation Products will be made solely by GAFMC. Any replacement COBRA® Ventilation Products, as well as any remaining original products, will be warranted only for the remainder of the original warranty period.

Limitations on Coverage. GAFMC will NOT be liable for and this warranty does NOT apply to:

(1) Damages to your COBRA® Ventilation Products resulting from anything other than an inherent manufacturing defect in your exhaust vent, including but not limited to:
   (a) Improper fastening of your COBRA® Ventilation Products, faulty application, or application not in strict accordance with GAFMC's application instructions.
   (b) Application of cleaning solutions, paint, or coatings.
   (c) Settlement or movement of the building walls, foundation, or roof deck.
   (d) Defects in, or failure or misapplication of, materials used (i) either as a roof base over which COBRA® Ventilation Products were applied, or (ii) as the roof cap applied over COBRA® Ventilation Products.
(2) Damages to your COBRA® Ventilation Products resulting from causes beyond normal wear and tear, including, but not limited to:
   (a) Acts of God, such as hailstorms, windstorms, or other unusually strong storms.
   (b) Impact of foreign objects or traffic on the roof.
   (c) Improper storage or handling of the COBRA® Ventilation Products.
(3) DAMAGE TO THE INTERIOR OR EXTERIOR OF ANY BUILDING or to any property contained in or near it, including, but not limited to, snow infiltration and mold growth.
(4) Damages resulting from the removal and reinstallation of your COBRA® Ventilation Products.
(5) Labor costs incurred in connection with the removal or replacement of your COBRA® Ventilation Products or related work.

Notification of Claims. To file a claim under this Warranty, you must send a notice in writing, together with proof of purchase to establish that you are the original owner and proof of application date, to: GAF Materials Corporation, Warranty Service Department, 1361 Alps Road, Wayne, New Jersey 07470, within thirty (30) days after discovery of the alleged defect. NOTE: Notice to your contractor or dealer is NOT notice to GAFMC. Within a reasonable time after proper notification, GAFMC will evaluate your claim and resolve it in accordance with the terms of this Warranty. GAFMC may require you to submit, at your own expense, a sample for testing and/or photographs. You should have this warranty certificate signed and dated by your contractor or dealer to help establish proof of purchase and related information. You should retain this certificate for your records in the event you need to file a claim.

Sole and Exclusive Warranty. THIS WARRANTY IS EXCLUSIVE AND REPLACES ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. This written warranty is your exclusive warranty from GAF Materials Corporation and represents THE SOLE REMEDY AVAILABLE to any owner of COBRA® Ventilation Products. GAFMC makes no other representation or warranty of any kind other than that stated herein. GAFMC WILL NOT BE LIABLE IN ANY EVENT FOR CONSEQUENTIAL DAMAGES of any kind whether from breach of this warranty, negligence, strict liability in tort, or for any other cause. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above exclusions or limitations may not apply to you.

Modification of Warranty. This Limited Warranty may not be changed or modified except in writing, signed by an officer of GAFMC. No one (other than an officer of GAFMC) has authority to assume any additional liability or responsibility for GAFMC in connection with your COBRA® Ventilation Products except as described in this Warranty. The Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Effective Date. This Limited Warranty is effective for COBRA® Ventilation Products installed after March 1, 2005.

TION 4 – REACTIVITY HAZARD DATA

ILITY Stable _X_ Unstable ___	Conditions To Avoid ACIDS
ibility (Materials to Avoid) MAY BREAK DOWN WHEN EXPOSED TO STRONG ACIDS	
ious Decomposition Products N/A	
ARDOUS POLYMERIZATION ___ May Occur _X_ Will Not Occur	Conditions To Avoid N/A

CTION 5 – HEALTH HAZARD DATA

IARY ROUTES OF ENTRY: Inhalation ___ Skin Absorption ___ Ingestion _X_ Not Haz	CARCINOGEN LISTED IN: ___ NTP ___ IARC Monograph ___ OSHA _X_ Not Listed
ALTH ARDS Acute / Chronic	
s and Symptoms of Exposure MAY ABRADE SKIN WITH PROLONGED CONTACT	
ical Conditions Generally Aggravated by Exposure N/A	
ERGENCY FIRST AID PROCEDURES - Seek medical assistance for further treatment, observation and support if necessary.	
Contact FLUSH EYES WITH COOL FLOWING WATER	
Contact WASH CONTACT AREAS WITH WARM SOAPY WATER	
estion NONE RESPIRABLE	
estion NOT HAZARDOUS	

CTION 6 – CONTROL AND PROTECTIVE MEASURES

piratory Protection (Specify Type) N/A		
tective Gloves USE IS RECOMMENDED		Eye Protection USE IS RECOMMENDED
NTILATION	___ Local Exhaust N/A	___ Mechanical (General) N/A
PE USED	___ Special N/A	___ Other (Specify) N/A
er Protective Clothing and Equipment N/A		
ienic Work Practices OBSERVE ORDINARY MEASURES FOR INDUSTRIAL HYGIENE		

CTION 7 – PRECAUTIONS FOR SAFE HANDLING AND USE/LEAK PROCEDURES

ps to be Taken if Material is Spilled or Released PICK UP PIECES

ste Disposal Methods DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS

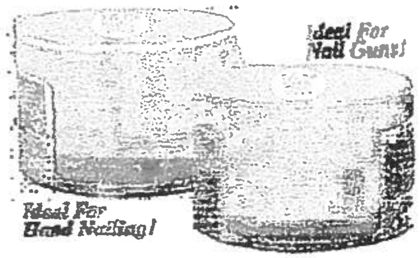
cautions to be Taken in Handling and Storage NONE

er Precautions and/or Special Hazards NONE

Cobra®

Exhaust Vent For Roof Ridges

Cobra Ridge Vents Are The #1 Choice Of Professional Builders & Remodelers![1]



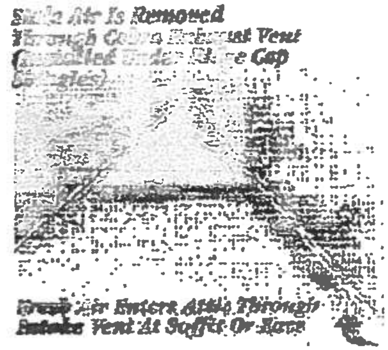
Homeowner's Best Choice

- *Breathe Your Attic*...Allows heat and condensation to escape at the most effective location—the ridge
- *Invisible*...100% shingle-over design is virtually invisible when installed
- *Superior Protection*...Helps to prevent wood rot and extends the life of your exterior paint
- *Safeguards Possessions*...Helps limit mildew growth caused by damp attic air
- *Energy Efficient*...May even reduce your utility bills
- *Weatherproof*...passes 110 mph wind driven rain and snow infiltration tests
- *Safer*...Helps prevent problems with insects, birds, and animals in your attic
- *Peace Of Mind*...Backed by a 40-year ltd. warranty*

*See ltd. warranty for complete coverage and restrictions.

Professional's Best Choice

- *Greater Homeowner Satisfaction*...Low-profile design is hidden by ridge cap shingle
- *Easy To Install*...Quick 3-step process; no need for complicated fitting, wrapping, connectors, or end plugs
- *Nails Included*...Smart Nails for reliable installation or 1¾" coil nails for nail guns
- *Superior Performance*... Net free ventilating area: Cobra® Hand Nail: 16.9 sq. in./linear foot Cobra® Nail Gun: 14.1 sq. in./linear foot at the most effective part of the roof
- *More Reliable*...Will not crack or dent during shipping or installation; won't corrode, rust, or turn brittle
- *Hip & Ridge Compatible*...Works with traditional sizes (9", 11¼" & 12")



Balanced Ventilation Requirements

Balanced ventilation requires 1 square foot of ventilation for every 300 square feet of attic floor space.

1. Calculate the total square footage of the attic floor area (round up to the next highest number). This number will determine the minimum total linear feet of Cobra Exhaust Vent that is needed.
2. Find the appropriate amount of Cobra Exhaust Vent and minimum intake ventilation that corresponds to the total attic square footage.

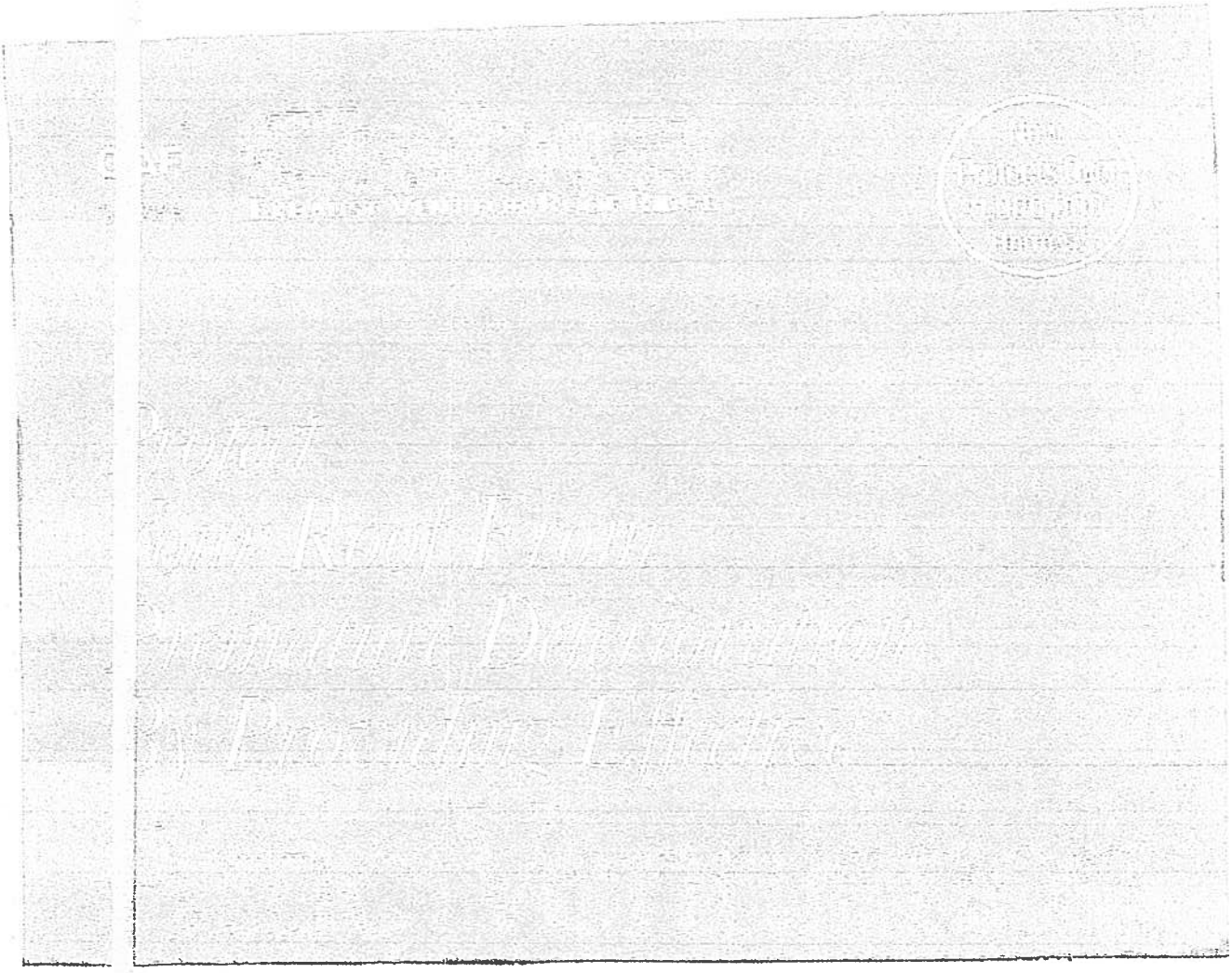
Total Attic Square Footage	Recommended Length of Cobra Exhaust Vent (Feet)*	Minimum Intake Ventilation Net Free Area (Sq. In.)
1600	22/27	384
1900	27/32	456
2200	31/37	528
2500	35/42	600
2800	40/47	672
3100	44/52	744
3400	48/57	816

	ICBO		UL	BOCA / DADE COUNTY	CCMC
Cobra® Hand Nail	Yes	Yes	Yes	Yes	Yes
Cobra® Nail Gun	No	Yes	U.S. Only	No	No

GAF MATERIALS CORPORATION

A Name You Can Trust Since 1886... From North America's Largest Roofing Manufacturer

[1]Source: 2001 Builder Magazine Brand Use Study & 2001 Remodeling Magazine Brand Use Study



Effective attic ventilation is critical for a long-lasting roof! A properly balanced tic ventilation system will help to: Remove excess heat and moisture to protect your roof m premature deterioration • Prevent roof rot in your attic or roof deck • Minimize peeling

Cobra® Exhaust Vent
Instructions for Nail Gun Application

Roof Deck:
Use only over a nail-rammed, supported wood deck, tightly constructed with maximum 6" lumber, having adequate nail-holding capacity. Plywood decking as recommended by the American Plywood Ass'n is acceptable.

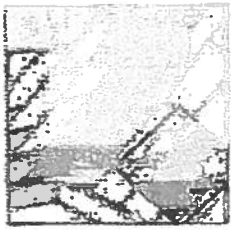
Slope Restrictions: Use only on slopes between 2/12 and 20/12.

1.

Instructions for Slots...

Cut a 2" (5.1cm) slot along ridge, 1" (2.5cm) on each side. Leave uncut (closed) sheathing area of 6" (15.2cm) at each end of the ridge.

Cut through the sheathing only, avoiding roof trusses. (In homes with a ridge board, cut 3 1/2" (8.9cm) slot, 1 3/4" (4.4cm) on each side.)
(Figure A)

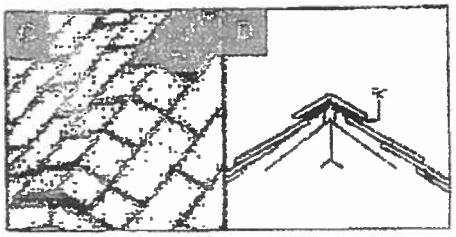


2.

Ridge Vent Installation...

Unroll COBRA® EXHAUST VENT along the entire length of the ridge, covering uncut 6" (15.2cm) sheathing area on both ends.
(Figure B)

Shorter lengths can be joined by overlapping and butting the ends.
(See Inset, Figure B)



3.

Cap Shingle Installation...

Install cap shingles directly over COBRA® EXHAUST VENT. With nail-gun version, use enclosed gun adapter and 1 3/4" (4.4cm) barbed coil nails.
(Figure C)
See page 2 for instructions on installing roll-on shingles.

Cobra® Exhaust Vent has a 3/4" (2cm) nominal thickness for optimum ventilation. Be sure not to crush or compress the product during installation.
(Figure D)

NOTE: Calculations for a Balanced Ventilation System...

To achieve a "balanced system" with COBRA® EXHAUST VENT, there must be an air intake system (i.e. soffits or undereave vents). For proper ventilation, the amount of undereave ventilation must equal the amount of ventilation at the ridge. NOTE: In no case should the amount of exhaust ventilation exceed the amount of intake ventilation.

- To determine the minimum square feet of net free ventilation area (NFVA) needed for a balanced ventilation system, use the following formula:

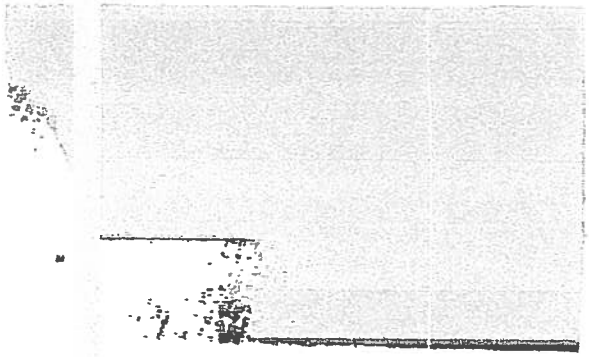
$$\frac{\text{Sq. ft. of attic floor space}}{300} = \text{Min. Sq. ft. of NFVA needed}$$

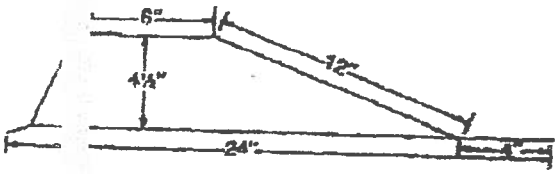
- COBRA® EXHAUST VENT has 16.9 (metal nail) and 14.1 (coil gun) square inches of NFVA per lineal foot. To determine how many feet of Cobra Ridge Vent is needed, use the following formula:
  1/2 x (Min. Sq. ft. of NFVA needed) x 144/16.9 or 14.1 = Min. lineal feet of ridge vent needed

- To determine the amount of undereave vent required, use the following formula:
  X = NFVA (Sq. In. per lin. ft.) of the undereave vent or intake vent system selected
  1/2 x (Min. Sq. Ft. of NFVA needed) x 144/X = Min. lineal feet of undereave vent needed

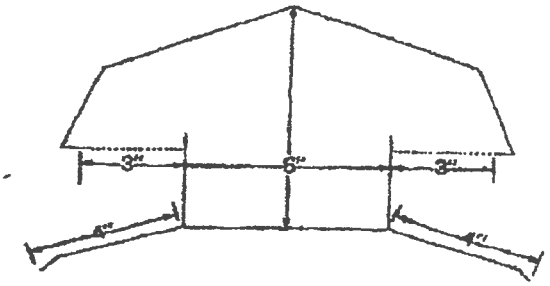
GAF
GAF MATERIALS CORPORATION

Roof Ventilator





Ridge Ventilator



Turn Your Attic into a "Heat Shield" and CUT YOUR AIR CONDITIONING COST.

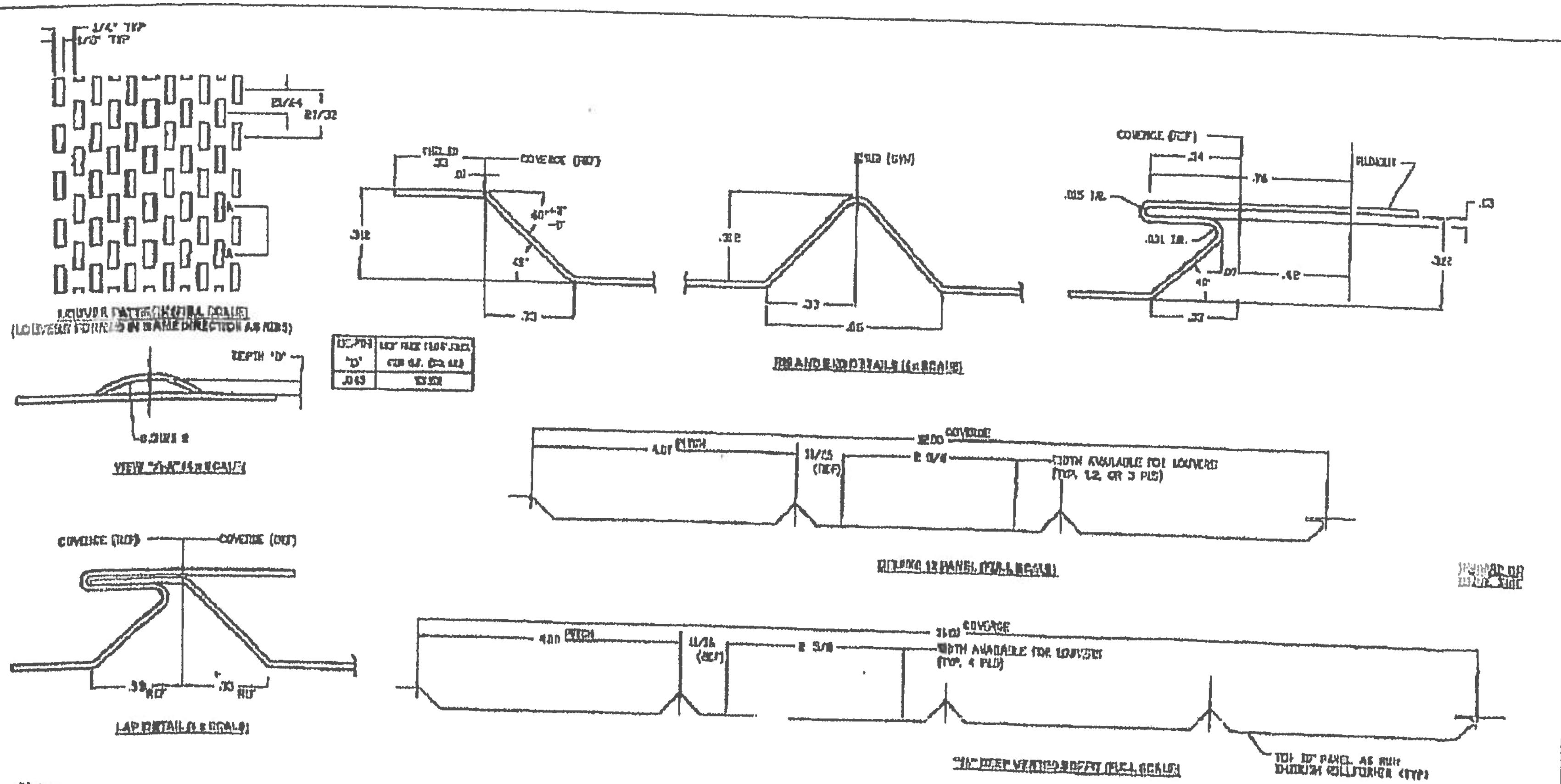
The new hugging low profile Stampco Ventilator is made from 26 gauge G-90 prime galvanized sheet steel with galvanized steel mesh covering the free air flow opening. These vents are soldered, sealed and riveted at the joint to further strengthen the vent body. The free air flow area being on the down side of the vent allows hot air to escape and helps to keep out blowing rain.

Stock sizes are 4, 6, 8 and 10 feet. All ventilators are available in cartons at a small additional cost. Minimum order is 20 vents.

Special order vents made on request. Painted galvanized and aluminum vents available on special order.

Each square foot of a Stampco roof ventilator allows 36 square inches of free air flow. Example – a 6' roof vent would have 216 square inches or 1½ square feet of free air flow. A Stampco ridge vent has double the free air space of the roof vent.

We also have the equipment to do custom stamping and forming of sheet metal items.



Notes:

(1) Make 16" Soffit from Aluminum Alloy 3105 - H16 (Gauge 0.013)

(2) Make 12" Soffit from Aluminum Alloy 3003 - H14 (Gauge 0.014)

(3) Calculated Coil Width: [illegible] Inches (16" Soffit) 14.00 Inches (12" Soffit)

(4) All Inside Bend Radii are 0.019 Unless Otherwise Noted

(5) Standard Manufacturing Tolerances:

Dimension +/- 0.005

Radius +/- .015

Angle + / - [illegible]

(6) Tooling Machinery Must Be in Control and Capable of Manufacturing Parts Within Established Specifications and Tolerances.

(7) Ashley Part Numbers: [illegible] - 12" Soffit Products [illegible] - 16" Soffit Products Where NN designates Finish Color

(8) Design Pressure Rating (PSF):

12" Solid Soffit
12" Vented Soffit
16" Solid Soffit
16" Vented Soffit

NOTE: FL406 FLORIDA PROUDCT APPROVAL NUMBER

Rev	Revision	Date	By

CAMERON ASHLEY
BUILDING PRODUCTS

Ashley Division
[illegible] W. Clifton Street
Tampa, FL 33[illegible]
Telephone (813) [illegible]
Fax (813) [illegible]

SOLID AND PERFORATED

[illegible]

Drawn by: DYK | DATE: 01-30-2004 | SCALE: N.T.S. | S-01

User: Public User - Not Associated with Organization -

Need Help ?

Application #:	FL406
Date Submitted:	09/30/2003
Code Version:	2001
Product Manufacturer:	Cameron Ashley Building Products
Address/Phone/email:	5120 W. Clifton St Tampa, FL 33634 (813) 884-0444
Technical Representative:	Do Kim
Technical Representative Address/Phone/email:	5120 W. Clifton St. Tampa, FL 33634 (813) 884-0444 dokim@guardx.com
Quality Assurance Representative:	PFS Corporation
Quality Assurance Representative Address/Phone/email:	2402 Daniels St. Madison, WI 53718 (608) 221-3361 alkuchl@mindspring.com
Category:	Panel Walls
Subcategory:	Soffits
Evaluation Method:	Evaluation Report from a Florida Registered Architect or Florida Professional Engineer

Referenced Standards from the Florida Building Code:

Section	Standard	Year
2002.2	Aluminum Design Manual	1994

Florida Engineer or Architect Name:	John Laliotis
Florida License:	PE- 24664

Quality Assurance Entity:	PFS Corporation
Validation Entity:	Michael Biller
Authorized Signature:	Do Kim dokim@guardx.com
Evaluation/Test Reports Uploaded:	PTID_406_T_Ashleyscan.pdf
Installation Documents Uploaded:	
Product Approval Method:	Method 1 Option D
Application Status:	Approved
Date Validated:	11/24/2003
Date Approved:	12/01/2003
Date Certified to the 2004 Code:	

Page: Go

Page 1 / 1

App/Seq #	Product Model # or Name	Model Description	Limits of Use
406.1	#41550	16" Quad Four Q/4	
406.2	#45102	Aluminum Triple Four T/4	
406.3	#45102N	NASA Triple 4 Vented	

Next

Residential System Sizing Calculation

Summary

Bullard Chris & Tammy

Columbia, FL

Project Title:
BullardChris&Tammy

Class 3 Rating
Registration No. 0
Climate: North

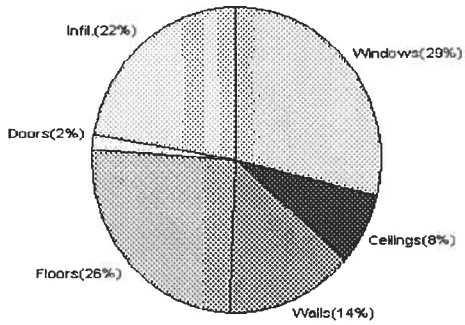
2/21/2006

Location for weather data: Gainesville - Defaults: Latitude(29) Altitude(152 ft.) Temp Range(M) Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(54gr.)					
Winter design temperature	33	F	Summer design temperature	92	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	37	F	Summer temperature difference	17	F
Total heating load calculation	**52986**	**Btuh**	**Total cooling load calculation**	**49691**	**Btuh**
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	117.0	62000	Sensible (SHR = 0.75)	107.9	46500
Heat Pump + Auxiliary(0.0kW)	117.0	62000	Latent	235.4	15500
			Total (Electric Heat Pump)	124.8	62000

WINTER CALCULATIONS

Winter Heating Load (for 3329 sqft)

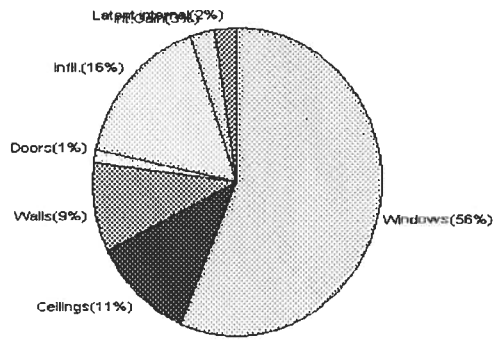
Load component			Load	
Window total	480	sqft	15464	Btuh
Wall total	2296	sqft	7539	Btuh
Door total	70	sqft	907	Btuh
Ceiling total	3397	sqft	4003	Btuh
Floor total	310	sqft	13535	Btuh
Infiltration	285	cfm	11539	Btuh
Duct loss			0	Btuh
Subtotal			**52986**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**52986**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 3329 sqft)

Load component			Load	
Window total	480	sqft	28005	Btuh
Wall total	2296	sqft	4667	Btuh
Door total	70	sqft	686	Btuh
Ceiling total	3397	sqft	5626	Btuh
Floor total			0	Btuh
Infiltration	147	cfm	2742	Btuh
Internal gain			1380	Btuh
Duct gain			0	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Total sensible gain			**43106**	**Btuh**
Latent gain(ducts)			0	Btuh
Latent gain(infiltration)			5385	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1200	Btuh
Total latent gain			**6585**	**Btuh**
TOTAL HEAT GAIN			**49691**	**Btuh**



For Florida residences only

EnergyGauge® System Sizing
PREPARED BY: Y&M
DATE: 2-21-06

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Bullard Chris & Tammy

Project Title: BullardChris&Tammy

Class 3 Rating
Registration No. 0

Columbia, FL

Climate: North

Reference City: Gainesville (Defaults) Winter Temperature Difference: 37.0 F

2/21/2006

This calculation is for Worst Case. The house has been rotated 315 degrees.

Component Loads for Whole House

Window	Panes/SHGC/Frame/U	Orientation	Area(sqft) X	HTM=	Load
1	2, Clear, Metal, 0.87	W	12.0	32.2	386 Btuh
2	2, Clear, Metal, 0.87	SW	4.4	32.2	142 Btuh
3	2, Clear, Metal, 0.87	SW	6.7	32.2	216 Btuh
4	2, Clear, Metal, 0.87	SW	15.0	32.2	483 Btuh
5	2, Clear, Metal, 0.87	NW	90.0	32.2	2897 Btuh
6	2, Clear, Metal, 0.87	NW	42.0	32.2	1352 Btuh
7	2, Clear, Metal, 0.87	NE	20.0	32.2	644 Btuh
8	2, Clear, Metal, 0.87	SW	10.0	32.2	322 Btuh
9	2, Clear, Metal, 0.87	NW	30.0	32.2	966 Btuh
10	2, Clear, Metal, 0.87	NE	60.0	32.2	1931 Btuh
11	2, Clear, Metal, 0.87	NE	13.3	32.2	428 Btuh
12	2, Clear, Metal, 0.87	SE	42.0	32.2	1352 Btuh
13	2, Clear, Metal, 0.87	SW	15.0	32.2	483 Btuh
14	2, Clear, Metal, 0.87	SE	30.0	32.2	966 Btuh
15	2, Clear, Metal, 0.87	SE	12.0	32.2	386 Btuh
16	2, Clear, Metal, 0.87	SE	42.0	32.2	1352 Btuh
17	2, Clear, Metal, 0.87	E	36.0	32.2	1159 Btuh
	Window Total		480(sqft)		15464 Btuh
Walls	Type	R-Value	Area X	HTM=	Load
1	Frame - Wood - Ext(0.09)	13.0	2086	3.3	6849 Btuh
2	Frame - Wood - Adj(0.09)	13.0	210	3.3	690 Btuh
	Wall Total		2296		7539 Btuh
Doors	Type		Area X	HTM=	Load
1	Insulated - Adjacent		20	12.9	259 Btuh
2	Insulated - Exterior		20	12.9	259 Btuh
3	Insulated - Exterior		30	12.9	388 Btuh
	Door Total		70		907Btuh
Ceilings	Type/Color/Surface	R-Value	Area X	HTM=	Load
1	Vented Attic/D/Shin)	30.0	3397	1.2	4003 Btuh
	Ceiling Total		3397		4003Btuh
Floors	Type	R-Value	Size X	HTM=	Load
1	Slab On Grade	0	310.0 ft(p)	43.7	13535 Btuh
	Floor Total		310		13535 Btuh
			Zone Envelope Subtotal:		41447 Btuh
Infiltration	Type	ACH X	Zone Volume	CFM=	
	Natural	0.58	29470	284.9	11539 Btuh
Ductload	Unsealed, R6.0, Supply(Attic), Return(Attic)			(DLM of 0.00)	0 Btuh
Zone #1			**Sensible Zone Subtotal**		**52986 Btuh**

Manual J Winter Calculations

Residential Load - Component Details (continued)

Bullard Chris & Tammy

Columbia, FL

Project Title:
BullardChris&Tammy

Class 3 Rating
Registration No. 0
Climate: North

2/21/2006

WHOLE HOUSE TOTALS

	Subtotal Sensible	52986 Btuh
	Ventilation Sensible	0 Btuh
	Total Btuh Loss	52986 Btuh

Key: Window types (SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)
(Frame types - metal, wood or insulated metal)
(U - Window U-Factor or 'DEF' for default)
(HTM - ManualJ Heat Transfer Multiplier)
Key: Floor size (perimeter(p) for slab-on-grade or area for all other floor types)

For Florida residences only

System Sizing Calculations - Winter

Residential Load - Room by Room Component Details

Bullard Chris & Tammy | Project Title: BullardChris&Tammy | Class 3 Rating
Columbia, FL | Registration No. 0 | Climate: North

Reference City: Gainesville (Defaults) Winter Temperature Difference: 37.0 F | 2/21/2006

This calculation is for Worst Case. The house has been rotated 315 degrees.

Component Loads for Zone #1: Main

Window	Panes/SHGC/Frame/U	Orientation	Area(sqft) X	HTM=	Load
1	2, Clear, Metal, 0.87	W	12.0	32.2	386 Btuh
2	2, Clear, Metal, 0.87	SW	4.4	32.2	142 Btuh
3	2, Clear, Metal, 0.87	SW	6.7	32.2	216 Btuh
4	2, Clear, Metal, 0.87	SW	15.0	32.2	483 Btuh
5	2, Clear, Metal, 0.87	NW	90.0	32.2	2897 Btuh
6	2, Clear, Metal, 0.87	NW	42.0	32.2	1352 Btuh
7	2, Clear, Metal, 0.87	NE	20.0	32.2	644 Btuh
8	2, Clear, Metal, 0.87	SW	10.0	32.2	322 Btuh
9	2, Clear, Metal, 0.87	NW	30.0	32.2	966 Btuh
10	2, Clear, Metal, 0.87	NE	60.0	32.2	1931 Btuh
11	2, Clear, Metal, 0.87	NE	13.3	32.2	428 Btuh
12	2, Clear, Metal, 0.87	SE	42.0	32.2	1352 Btuh
13	2, Clear, Metal, 0.87	SW	15.0	32.2	483 Btuh
14	2, Clear, Metal, 0.87	SE	30.0	32.2	966 Btuh
15	2, Clear, Metal, 0.87	SE	12.0	32.2	386 Btuh
16	2, Clear, Metal, 0.87	SE	42.0	32.2	1352 Btuh
17	2, Clear, Metal, 0.87	E	36.0	32.2	1159 Btuh
	Window Total		480(sqft)		15464 Btuh
Walls	Type	R-Value	Area X	HTM=	Load
1	Frame - Wood - Ext(0.09)	13.0	2086	3.3	6849 Btuh
2	Frame - Wood - Adj(0.09)	13.0	210	3.3	690 Btuh
	Wall Total		2296		7539 Btuh
Doors	Type		Area X	HTM=	Load
1	Insulated - Adjacent		20	12.9	259 Btuh
2	Insulated - Exterior		20	12.9	259 Btuh
3	Insulated - Exterior		30	12.9	388 Btuh
	Door Total		70		907Btuh
Ceilings	Type/Color/Surface	R-Value	Area X	HTM=	Load
1	Vented Attic/D/Shin)	30.0	3397	1.2	4003 Btuh
	Ceiling Total		3397		4003Btuh
Floors	Type	R-Value	Size X	HTM=	Load
1	Slab On Grade	0	310.0 ft(p)	43.7	13535 Btuh
	Floor Total		310		13535 Btuh
			Zone Envelope Subtotal:		41447 Btuh
Infiltration	Type	ACH X	Zone Volume	CFM=	
	Natural	0.58	29470	284.9	11539 Btuh
Ductload	Unsealed, R6.0, Supply(Attic), Return(Attic)			(DLM of 0.00)	0 Btuh
Zone #1			**Sensible Zone Subtotal**		**52986 Btuh**

Manual J Winter Calculations

Residential Load - Component Details (continued)

Bullard Chris & Tammy

Columbia, FL

Project Title:
BullardChris&Tammy

Class 3 Rating
Registration No. 0
Climate: North

2/21/2006

WHOLE HOUSE TOTALS

	Subtotal Sensible	52986 Btuh
	Ventilation Sensible	0 Btuh
	Total Btuh Loss	52986 Btuh

Key: Window types (SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)
(Frame types - metal, wood or insulated metal)
(U - Window U-Factor or 'DEF' for default)
(HTM - ManualJ Heat Transfer Multiplier)
Key: Floor size (perimeter(p) for slab-on-grade or area for all other floor types)

For Florida residences only

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Bullard Chris & Tammy

Project Title: BullardChris&Tammy

Class 3 Rating
Registration No. 0

Columbia, FL

Climate: North

Reference City: Gainesville (Defaults) Summer Temperature Difference: 17.0 F

2/21/2006

This calculation is for Worst Case. The house has been rotated 315 degrees.

Component Loads for Whole House

Window	Type* Pn/SHGC/U/InSh/ExSh/IS	Ornt	Overhang Len	Hgt	Window Area(sqft) Gross	Shaded	Unshaded	HTM Shaded	Unshaded	Load
1	2, Clear, 0.87, None,N,N	W	1.5ft.	6ft.	12.0	0.0	12.0	29	80	954 Btuh
2	2, Clear, 0.87, None,N,N	SW	1.5ft.	3.66	4.4	1.4	3.0	29	63	229 Btuh
3	2, Clear, 0.87, None,N,N	SW	1.5ft.	3.66	6.7	2.1	4.6	29	63	348 Btuh
4	2, Clear, 0.87, None,N,N	SW	1.5ft.	7ft.	15.0	1.6	13.4	29	63	885 Btuh
5	2, Clear, 0.87, None,N,N	NW	1.5ft.	8ft.	90.0	0.0	90.0	29	60	5403 Btuh
6	2, Clear, 0.87, None,N,N	NW	17ft.	9ft.	42.0	0.0	42.0	29	60	2522 Btuh
7	2, Clear, 0.87, None,N,N	NE	99ft.	10ft.	20.0	0.0	20.0	29	60	1201 Btuh
8	2, Clear, 0.87, None,N,N	SW	99ft.	10ft.	10.0	10.0	0.0	29	63	290 Btuh
9	2, Clear, 0.87, None,N,N	NW	1.5ft.	7ft.	30.0	0.0	30.0	29	60	1801 Btuh
10	2, Clear, 0.87, None,N,N	NE	1.5ft.	7ft.	60.0	0.0	60.0	29	60	3602 Btuh
11	2, Clear, 0.87, None,N,N	NE	1.5ft.	3.66	13.3	0.0	13.3	29	60	798 Btuh
12	2, Clear, 0.87, None,N,N	SE	1.5ft.	0ft.	42.0	42.0	0.0	29	63	1216 Btuh
13	2, Clear, 0.87, None,N,N	SW	1.5ft.	7ft.	15.0	1.6	13.4	29	63	885 Btuh
14	2, Clear, 0.87, None,N,N	SE	1.5ft.	7ft.	30.0	3.1	26.9	29	63	1771 Btuh
15	2, Clear, 0.87, None,N,N	SE	1.5ft.	8ft.	12.0	1.0	11.0	29	63	715 Btuh
16	2, Clear, 0.87, None,N,N	SE	1.5ft.	9ft.	42.0	3.1	38.9	29	63	2521 Btuh
17	2, Clear, 0.87, None,N,N	E	1.5ft.	8ft.	36.0	0.0	36.0	29	80	2863 Btuh
	Window Total				480 (sqft)					28005 Btuh

Walls	Type	R-Value/U-Value	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	13.0/0.09	2085.6	2.1	4350 Btuh
2	Frame - Wood - Adj	13.0/0.09	210.0	1.5	317 Btuh
	Wall Total		2296 (sqft)		4667 Btuh

Doors	Type	Area (sqft)	HTM	Load
1	Insulated - Adjacent	20.0	9.8	196 Btuh
2	Insulated - Exterior	20.0	9.8	196 Btuh
3	Insulated - Exterior	30.0	9.8	294 Btuh
	Door Total	70 (sqft)		686 Btuh

Ceilings	Type/Color/Surface	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/DarkShingle	30.0	3397.0	1.7	5626 Btuh
	Ceiling Total		3397 (sqft)		5626 Btuh

Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	310 (ft(p))	0.0	0 Btuh
	Floor Total		310.0 (sqft)		0 Btuh

			Zone Envelope Subtotal:		38984 Btuh
Infiltration	Type	ACH	Volume(cuft)	CFM=	Load
	SensibleNatural	0.30	29470	147.4	2742 Btuh
Internal gain		Occupants	Btuh/occupant	Appliance	Load
		6	X 230 +	0	1380 Btuh
Duct load	Unsealed, R6.0, Supply(Attic), Return(Attic)			DGM = 0.00	0.0 Btuh
			Sensible Zone Load		**43106 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Bullard Chris & Tammy

Columbia, FL

Project Title:
BullardChris&Tammy

Class 3 Rating
Registration No. 0
Climate: North

2/21/2006

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	**Sensible Envelope Load All Zones**	**43106 Btuh**
	Sensible Duct Load	0 Btuh
	Total Sensible Zone Loads	**43106 Btuh**
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	**43106 Btuh**
	Latent infiltration gain (for 54 gr. humidity difference)	5385 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	0 Btuh
	Latent occupant gain (6 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	**6585 Btuh**
	TOTAL GAIN	**49691 Btuh**

*Key: Window types (Pn - Number of panes of glass)
(SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)
(U - Window U-Factor or 'DEF' for default)
(InSh - Interior shading device: none(N), Blinds(B), Draperies(D) or Roller Shades(R))
(ExSh - Exterior shading device: none(N) or numerical value)
(BS - Insect screen: none(N), Full(F) or Half(H))
(Ornt - compass orientation)

For Florida residences only

System Sizing Calculations - Summer

Residential Load - Room by Room Component Details

Bullard Chris & Tammy

Project Title: BullardChris&Tammy

Class 3 Rating
Registration No. 0

Columbia, FL

Climate: North

Reference City: Gainesville (Defaults) Summer Temperature Difference: 17.0 F

2/21/2006

This calculation is for Worst Case. The house has been rotated 315 degrees.

Component Loads for Zone #1: Main

Window	Type* Pn/SHGC/U/InSh/ExSh/IS	Ornt	Overhang Len	Hgt	Window Area(sqft) Gross	Shaded	Unshaded	HTM Shaded	Unshaded	Load
1	2, Clear, 0.87, None,N,N	W	1.5ft.	6ft.	12.0	0.0	12.0	29	80	954 Btuh
2	2, Clear, 0.87, None,N,N	SW	1.5ft.	3.66	4.4	1.4	3.0	29	63	229 Btuh
3	2, Clear, 0.87, None,N,N	SW	1.5ft.	3.66	6.7	2.1	4.6	29	63	348 Btuh
4	2, Clear, 0.87, None,N,N	SW	1.5ft.	7ft.	15.0	1.6	13.4	29	63	885 Btuh
5	2, Clear, 0.87, None,N,N	NW	1.5ft.	8ft.	90.0	0.0	90.0	29	60	5403 Btuh
6	2, Clear, 0.87, None,N,N	NW	17ft.	9ft.	42.0	0.0	42.0	29	60	2522 Btuh
7	2, Clear, 0.87, None,N,N	NE	99ft.	10ft.	20.0	0.0	20.0	29	60	1201 Btuh
8	2, Clear, 0.87, None,N,N	SW	99ft.	10ft.	10.0	10.0	0.0	29	63	290 Btuh
9	2, Clear, 0.87, None,N,N	NW	1.5ft.	7ft.	30.0	0.0	30.0	29	60	1801 Btuh
10	2, Clear, 0.87, None,N,N	NE	1.5ft.	7ft.	60.0	0.0	60.0	29	60	3602 Btuh
11	2, Clear, 0.87, None,N,N	NE	1.5ft.	3.66	13.3	0.0	13.3	29	60	798 Btuh
12	2, Clear, 0.87, None,N,N	SE	1.5ft.	0ft.	42.0	42.0	0.0	29	63	1216 Btuh
13	2, Clear, 0.87, None,N,N	SW	1.5ft.	7ft.	15.0	1.6	13.4	29	63	885 Btuh
14	2, Clear, 0.87, None,N,N	SE	1.5ft.	7ft.	30.0	3.1	26.9	29	63	1771 Btuh
15	2, Clear, 0.87, None,N,N	SE	1.5ft.	8ft.	12.0	1.0	11.0	29	63	715 Btuh
16	2, Clear, 0.87, None,N,N	SE	1.5ft.	9ft.	42.0	3.1	38.9	29	63	2521 Btuh
17	2, Clear, 0.87, None,N,N	E	1.5ft.	8ft.	36.0	0.0	36.0	29	80	2863 Btuh
	Window Total				480 (sqft)					28005 Btuh

Walls	Type	R-Value/U-Value	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	13.0/0.09	2085.6	2.1	4350 Btuh
2	Frame - Wood - Adj	13.0/0.09	210.0	1.5	317 Btuh
	Wall Total		2296 (sqft)		4667 Btuh

Doors	Type	Area (sqft)	HTM	Load
1	Insulated - Adjacent	20.0	9.8	196 Btuh
2	Insulated - Exterior	20.0	9.8	196 Btuh
3	Insulated - Exterior	30.0	9.8	294 Btuh
	Door Total	70 (sqft)		686 Btuh

Ceilings	Type/Color/Surface	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/DarkShingle	30.0	3397.0	1.7	5626 Btuh
	Ceiling Total		3397 (sqft)		5626 Btuh

Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	310 (ft(p))	0.0	0 Btuh
	Floor Total		310.0 (sqft)		0 Btuh

	Zone Envelope Subtotal:		38984 Btuh

Infiltration	Type	ACH	Volume(cuft)	CFM=	Load
	SensibleNatural	0.30	29470	147.4	2742 Btuh

Internal gain	Occupants	Btuh/occupant	Appliance	Load
	6	X 230 +	0	1380 Btuh

Duct load			
	Unsealed, R6.0, Supply(Attic), Return(Attic)	DGM = 0.00	0.0 Btuh
		Sensible Zone Load	**43106 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Bullard Chris & Tammy

Columbia, FL

Project Title:
BullardChris&Tammy

Class 3 Rating
Registration No. 0
Climate: North

2/21/2006

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	**Sensible Envelope Load All Zones**	**43106 Btuh**
	Sensible Duct Load	0 Btuh
	Total Sensible Zone Loads	**43106 Btuh**
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	**43106 Btuh**
	Latent infiltration gain (for 54 gr. humidity difference)	5385 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	0 Btuh
	Latent occupant gain (6 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	**6585 Btuh**
	TOTAL GAIN	**49691 Btuh**

*Key: Window types (Pn - Number of panes of glass)
(SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)
(U - Window U-Factor or 'DEF' for default)
(InSh - Interior shading device: none(N), Blinds(B), Draperies(D) or Roller Shades(R))
(ExSh - Exterior shading device: none(N) or numerical value)
(BS - Insect screen: none(N), Full(F) or Half(H))
(Ornt - compass orientation)

For Florida residences only

Residential Window Diversity

MidSummer

Bullard Chris & Tammy

Columbia, FL

Project Title:
BullardChris&Tammy

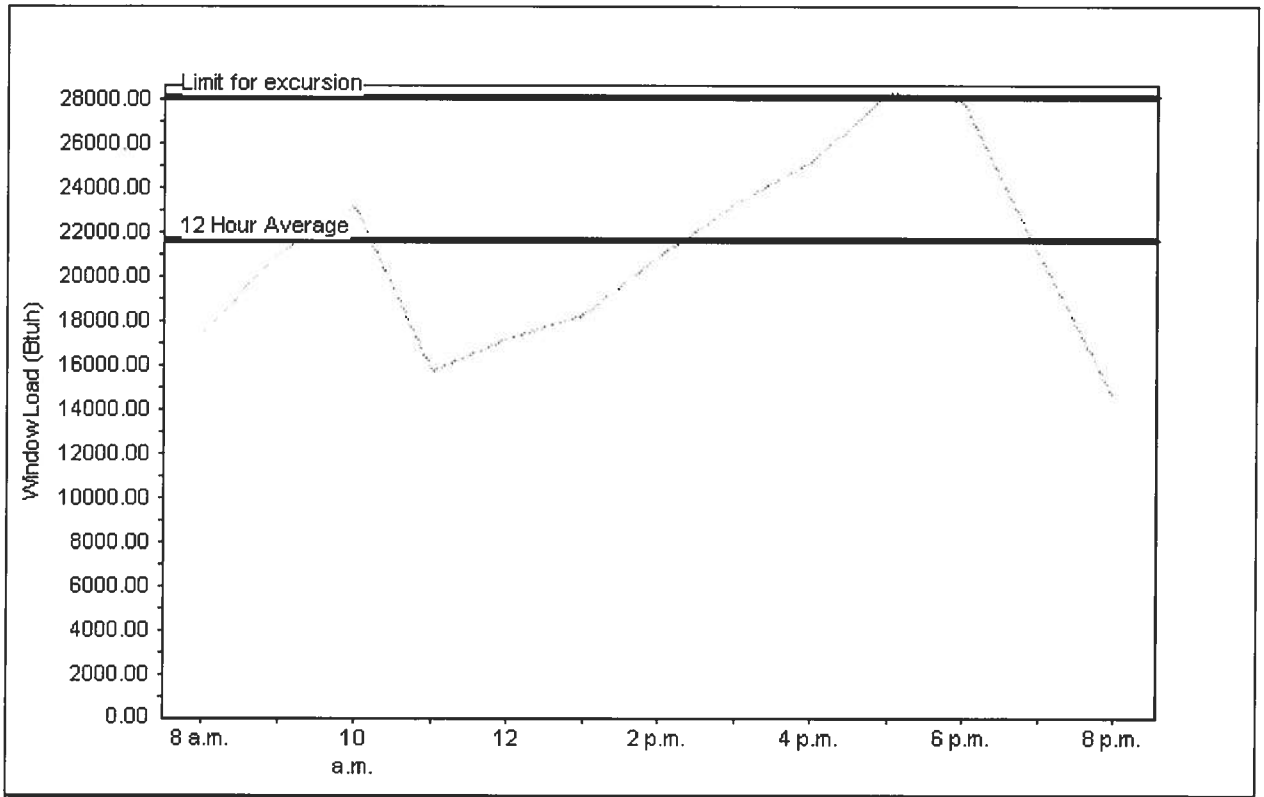
Class 3 Rating
Registration No. 0
Climate: North

2/21/2006

Weather data for: Gainesville - Defaults

Summer design temperature	92 F	Average window load for July	21604 Btu
Summer setpoint	75 F	Peak window load for July	28215 Btu
Summer temperature difference	17 F	Excusion limit(130% of Ave.)	28085 Btu
Latitude	29 North	Window excursion (July)	130 Btuh

WINDOW Average and Peak Loads



Total July Window Load(Radiation and conduction)

Warning: This application has glass areas that produce relatively large heat gains for part of the day. Variable air volume devices may be required to overcome spikes in solar gain for one or more rooms. A zoned system may be required or some rooms may require zone control.

EnergyGauge® System Sizing for Florida residences only
PREPARED BY: Glen Cannon
DATE: 2-21-06

From: The Columbia County Building Department
Plans Review
135 NE Hernando Av.
P. O Box 1529
Lake City Florida, 32056-1529

Reference to a building permit application Number: 0603-58

Glenwood King owner Chris Bullard lot 21 Hills at Rose Creek

On the date of March 13, 2006 application 0603-58 and plans for construction of a single family dwelling were reviewed and the following information or alteration to the plans will be required to continue processing this application. If you should have any question please contact the above address, or contact phone number (386) 758-1163 or fax any information to (386) 754-7088.

Please include application number 0603-58 when making reference to this application.

1. Please show compliance with the FRC-2004 sections R309 Garage: R309.1

   A: Opening protection: Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 13/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 13/8 inches (35 mm) thick, or 20-minute fire-rated doors.

   B: R309.2 Separation required. The garage shall be separated from the residence and its attic area by not less than ½-inch (12.7 mm) gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8-inch (15.9 mm) Type X gypsum board or equivalent. Where the separation is a floor-ceiling assembly, the structure

supporting the separation shall also be protected by not less than ½-inch (12.7 mm) gypsum board or equivalent.

2. Please show compliance with the FRC-2004 sections R311.5 Stairways. Show the stair treads and risers along with the total height of the stairway.

3. Please verify that the egress windows within the bonus room second floor area will comply with the FBC-2004 Section R310.1.1 Minimum opening area: All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet (0.530 m2).

4. Please show the material that used as sub flooring on the bonus room floor system.

5. Show the type, size and attachment method of the joists system that span between the C3G trusses in the walkout dormer area.

Thank you,

Joe Haltiwanger
Plan Examiner
Columbia County Building Department

Columbia County Building Department
Culvert Permit

Culvert Permit No.
000001029

DATE 03/28/2006 PARCEL ID # 05-5S-17-09116-121

APPLICANT GLENWOOD KING PHONE 755.6030

ADDRESS 139 SW DUNN WAY LAKE CITY FL 32024

OWNER CHRIS BULLARD PHONE

ADDRESS 267 SW FOREST GLEN LAKE CITY FL 32025

CONTRACTOR GLENWOOD KING PHONE 755.6030

LOCATION OF PROPERTY 41/441-S TO C-131-S,TR TO ROSE CREEK ON HILL CREEK DR,TL TO OAK WAY

TL, TO FOREST GLEN, 2ND LOT ON L.

SUBDIVISION/LOT/BLOCK/PHASE/UNIT HILLS @ ROSE CREEK 21

SIGNATURE Glenwood King

INSTALLATION REQUIREMENTS

[X] Culvert size will be 18 inches in diameter with a total lenght of 32 feet, leaving 24 feet of driving surface. Both ends will be mitered 4 foot with a 4 : 1 slope and poured with a 4 inch thick reinforced concrete slab.

INSTALLATION NOTE: Turnouts will be required as follows:
a) a majority of the current and existing driveway turnouts are paved, or;
b) the driveway to be served will be paved or formed with concrete.
Turnouts shall be concrete or paved a minimum of 12 feet wide or the width of the concrete or paved driveway, whichever is greater. The width shall conform to the current and existing paved or concreted turnouts.

[ ] Culvert installation shall conform to the approved site plan standards.

[ ] Department of Transportation Permit installation approved standards.

[ ] Other

ALL PROPER SAFETY REQUIREMENTS SHOULD BE FOLLOWED DURING THE INSTALATION OF THE CULVERT.

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

Amount Paid 25.00

COLUMBIA COUNTY GATEWAY TO FLORIDA

UNIVERSAL
ENGINEERING SCIENCES

Consultants In: Geotechnical Engineering • Environmental Sciences • Construction Materials Testing

4475 S.W. 35th Terrace • Gainesville, Florida 32608 • (352) 372-3392

REPORT ON IN-PLACE DENSITY TESTS

Permit # 00003912

CLIENT: Richardson Site Prep

PROJECT: Hills @ Rose Creek Lot #21
269 SW Forest Glen (Lake City, FL)

AREA TESTED: Fill & prop Bldg. PAD

COURSE: 1/2

DEPTH OF TEST: 0-1

TYPE OF TEST: D-2922

DATE TESTED: 4/7/06

NOTE: The below tests DO/DO NOT meet the minimum 95 % compaction requirements of maximum density.

REMARKS:

LOCATION OF TESTS	DRY DEN.	MAX. DEN.	% MAX. DEN.	% MOIST.	OPT. MOIST.
		112.0			11.0
App. Cntr of PAD	106.4		95.0	5.4	
App. Cntr. of N END of PAD	106.4		95.0	6.2	
App. Cntr. of S.W. Corner of PAD	106.6		95.2	5.7	

4404

TECH. JT

24312

Return To:
Eddie Anderson

NOTICE OF COMMENCEMENT

STATE OF FLORIDA
COUNTY OF: Columbia

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:

1. Description of Property: Lot 21 267 SW Forest Glen — Hills of Rose Creek Lake City, FL 32025

2. General Description of Improvements: Residential Construction

3. Name and Address of Owner: Chris & Tammy Bullard P.O. Box 1432 Lake City, FL 32056

Interest in Property: Fee Simple

Name and Address of Fee Simple Titleholder (if other than owner): N/A

4. Name and Address of Contractor: Glenwood King Construction, Inc. 139 SW Dunn Way Lake City FL 32024

5. Name and Address of Surety on payment bond, if any, and amount of such bond: N/A

Amount of Bond: $0

6. Name and Address of Lender:

MERCANTILE BANK
425 22nd Avenue North
St. Petersburg, FL 33704

Attention: Brooke Wilson

Inst:2006008898 Date:04/12/2006 Time:09:12
DC,P.DeWitt Cason,Columbia County B:1080 P:869

7. Persons within the State of Florida designated by Owner upon whom notices or other documents may be served as provided by Section 713.13 (1)(b), Florida Statutes:

MERCANTILE BANK
425 22nd Avenue North
St. Petersburg, FL 33704

Attention: Brooke Wilson

8. In addition to himself, Owner designates BROOKE WILSON of THE LENDER to receive a copy of the Lienor's Notice as provided in Section 713.13(1)(b), Florida Statutes.

9. Expiration date of Notice of Commencement (the expiration date is 1 year from the date of recording unless a different date is specified)

OWNER: Chris & Tammy Bullard

C A Bullard

Tammy D Bullard

STATE OF FLORIDA
COUNTY OF: Columbia

I HEREBY CERTIFY that before me personally appeared CHRIS A BULLARD AND TAMMY D BULLARD as identification, to me personally known or who has produced _____ known to me to be the person described in and who executed the foregoing instrument, and severally acknowledged the execution thereof to be his free act and deed, for the uses and purposes therein expressed.

WITNESS my hand and official seal at LAKE CITY said County and State, this 11th day of APRIL, 2006.

Andrea L. Walder

Notary Public
Print Name: _____

My Commission Expires:

Andrea L Walder
My Commission DD258030
Expires October 21 2007

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 05-5S-17-09116-121 **Building permit No.** 000024312

Use Classification SFD, UTILITY **Fire:** 61.38

Permit Holder GLENWOOD KING **Waste:** 184.25

Owner of Building CHRIS BULLARD **Total:** 245.63

Location: 267 SW FOREST GLEN,LAKE CITY,FL 32025

Date: 11/16/2006

Building Inspector

POST IN A CONSPICUOUS PLACE
(Business Places Only)