DATE 09/05/2007

Columbia County Building Permit

This Permit Expires One Year From the Date of Issue

PERMIT 000026200

APPLICANT JEFFREY HILL PHONE 752-7730

ADDRESS 908 SE COUNTRY CLUB RD LAKE CITY FL 32025

OWNER EL RANCHO NO TENGO PHONE 752-7730

ADDRESS 1633 SE COUNTRY CLUB RD LAKE CITY FL 32025

CONTRACTOR SAME AS APPLICANT PHONE 752-7730

LOCATION OF PROPERTY BAYA, TR ON COUNTRY CLUB, 1.6 MILES ON LEFT

TYPE DEVELOPMENT SFD,UTILITY ESTIMATED COST OF CONSTRUCTION 65500.00

HEATED FLOOR AREA 1310.00 TOTAL AREA 1560.00 HEIGHT STORIES 1

FOUNDATION CONC WALLS FRAMED ROOF PITCH 4/12 FLOOR SLAB

LAND USE & ZONING RR MAX. HEIGHT 14

Minimum Set Back Requirments: STREET-FRONT 25.00 REAR 15.00 SIDE 10.00

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

PARCEL ID 03-4S-17-07486-001 SUBDIVISION

LOT BLOCK PHASE UNIT TOTAL ACRES

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

EXISTING | 06-196 | BK | JH | Y

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

COMMENTS: FLOOR ONE FOOT ABOVE THE ROAD, NOC ON FILE

Check # or Cash 8019

FOR BUILDING & ZONING DEPARTMENT ONLY

(footer/Slab)

Temporary Power date/app. by | Foundation date/app. by | Monolithic date/app. by

Under slab rough-in plumbing date/app. by | Slab date/app. by | Sheathing/Nailing date/app. by

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

Electrical rough-in date/app. by | Heat & Air Duct date/app. by | Peri. beam (Lintel) date/app. by

Permanent power date/app. by | C.O. Final date/app. by | Culvert date/app. by

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

Reconnection date/app. by | Pump pole date/app. by | Utility Pole date/app. by

M/H Pole date/app. by | Travel Trailer date/app. by | Re-roof date/app. by

BUILDING PERMIT FEE $ 330.00 CERTIFICATION FEE $ 7.80 SURCHARGE FEE $ 7.80

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

FLOOD DEVELOPMENT FEE $ FLOOD ZONE FEE $ 25.00 CULVERT FEE $ **TOTAL FEE** 420.60

INSPECTORS OFFICE CLERKS OFFICE CH

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

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

This Permit Must Be Prominently Posted on Premises During Construction

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

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

Columbia County Building Permit Application

For Office Use Only Application # 0608-12 Date Received 8/4/06 By Originally By JW Permit # 26200

Application Approved by - Zoning Official BLK Date 06.08.07 Plans Examiner BLK Date 8-1-07

Flood Zone X Development Permit N/A Zoning RR Land Use Plan Map Category Res. U.L. Dev

Comments

☒ NOC ☒ EH ☒ Deed or PA ☒ Site Plan ☐ State Road Info ☐ Parent Parcel # ☐ Development Perm

Name Authorized Person Signing Permit El Rancho No Tengo. Inc. Phone 386-752-7730 Fax

Address 908 S.E. Country Club Rd., Lake City, FL 32025

Owners Name El Rancho No Tengo, Inc. Phone 386-752-7730

911 Address 1633 S.E. Country Club Rd Lake City, FL 32025

Contractors Name NONE Phone

Address

Fee Simple Owner Name & Address El Rancho No Tengo, Inc., 908 S.E. Country Club, Lake City, FL 32025

Bonding Co. Name & Address NONE

Architect/Engineer Name & Address Mark Disosway, P.O. Box 868, Lake City, FL 32056

Mortgage Lenders Name & Address East Bank of the Mississippi

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

Property ID Number 03-4S-17E-07486-001 Estimated Cost of Construction 2,650.00

Subdivision Name NONE Lot ____ Block ____ Unit ____ Phase ____

Driving Directions From Col. Co. Courthouse, travel East on Hiway 90 to S.E. Country Club Rd., turn South, proceed 1.6 miles, property on left at dog usually sleeping under oak tree

Type of Construction EFD Number of Existing Dwellings on Property 0

Total Acreage 10 Lot Size 10 Ac. Do you need a - Culvert Permit or Culvert Waiver or Have an Existing Dri

Actual Distance of Structure from Property Lines - Front 300' Side 100' Side 1300' Rear 270'

Total Building Height 14' Number of Stories 1 Heated Floor Area 1310 / 1560 Roof Pitch 4/12

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

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

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

Jeffrey L. Hill President

Owner Builder or Authorized Person - By Notarized Letter

STATE OF FLORIDA
COUNTY OF COLUMBIA

MY COMMISSION # DD 674556
EXPIRES: June 8, 2011
Bonded Thru Notary Public Underwriters

Sworn to (or affirmed) and subscribed before me this 31st day of August 2007.

Personally known ____ or Produced Identification ✓ FL Drivers Lic

Contractor Signature

Contractors License Number

Competency Card Number

NOTARY STAMP/SEAL

Linda S. Howard

Notary Signature

(Revised Sept. 2006

NOTORIZED DISCLOSURE STATEMENT

FOR OWNER/BUILDER WHEN ACTING AS THER OWN CONTRACTOR AND CLAIMING EXEMPTION OF CONTRACTOR LICENSING REQUIREMENTS IN ACCORDANCE WITH FLORIDA STATUTES, ss. 489.103(7).

State law requires construction to be done by licensed contractors. You have applied for a permit under an exemption to that law. The exemption allows you, as the owner of your property, to act as your own contractor with certain restrictions even though you do not have a license. You must provide direct, onsite supervision of the construction yourself. You may build or improve a one-family or two-family residence or a farm outbuilding. You may also build or improve a commercial building, provided your costs do not exceed $75,000. The building or residence must be for your own use or occupancy. It may not be built or substantially improved for sale or lease. If you sell or lease a building you have built or substantially improved yourself within 1 year after the construction is complete, the law will presume that you built or substantially improved it for sale or lease, which is a violation of this exemption. You may not hire an unlicensed person to act as your contractor or to supervise people working on your building. It is your responsibility to make sure that people employed by you have licenses required by state law and by county or municipal licensing ordinances. You may not delegate the responsibility for supervising work to a licensed contractor who is not licensed to perform the work being done. Any person working on your building who is not licensed must work under your direct supervision and must be employed by you, which means that you must deduct F .I.C.A. and withholding tax and provide workers' compensation for that employee, all as prescribed by law. Your construction must comply with all applicable laws, ordinances, building codes, and zoning regulations.

TYPE OF CONSTRUCTION

(X) Single Family Dwelling
( ) Farm Outbuilding
( ) Two-Family Residence
( ) Other_____

NEW CONSTRUCTION OR IMPROVEMENT

(X) New Construction
( ) Addition, Alteration, Modification or other Improvement

I El Rancho No Tengo, Inc., have been advised of the above disclosure statement for exemption from contractor licensing as an owner/builder. I agree to comply with all requirements provided for in Florida Statutes ss.489.103(7) allowing this exception for the construction permitted by Columbia County Building Permit Number _____

James L. Hill Pres. 7-31-07
Owner Builder Signature Date

LINDA S. HOWARD
MY COMMISSION # DD 674556
EXPIRES: June 8, 2011
Bonded Thru Notary Public Underwriters

The above signer is personally known to me or produced identification FL Drivers Lic

Notary Signature Linda S. Howard Date 7/31/07 (Stamp / Seal)

FOR BUILDING USE ONLY

I hereby certify that the above listed owner/builder has been notified of the disclosure statement in Florida Statutes ss 489.103(7).

Date_____ Building Official/Representative_____

FLORIDA DEPARTMENT OF STATE
DIVISION OF CORPORATIONS

Detail by Entity Name

Florida Profit Corporation

EL RANCHO NO TENGO, INC.

Filing Information

Document Number	384336
FEI Number	591351704
Date Filed	06/21/1971
State	FL
Status	ACTIVE
Last Event	REINSTATEMENT
Event Date Filed	10/05/1995
Event Effective Date	NONE

Principal Address

908 S.E. COUNTRY CLUB ROAD
LAKE CITY FL 32025

Changed 04/13/2004

Mailing Address

908 S.E. COUNTRY CLUB ROAD
LAKE CITY FL 32025

Changed 04/13/2004

Registered Agent Name & Address

HILL, JEFFREY L.
908 S.E. COUNTRY CLUB ROAD
LAKE CITY FL 32025 US

Name Changed: 05/25/1990

Address Changed: 04/13/2004

Officer/Director Detail

Name & Address

Title P/D

HILL, JEFFREY L SR.
908 S.E. COUNTRY CLUB RD.
LAKE CITY FL 32025

Title VST

HILL, LINDA P
908 S.E. COUNTRY CLUB RD.
LAKE CITY FL 32025

Title D

HARTLEY, TIMOTHY
649 PENNSYLVANIA AVE
LAKE CITY FL 32025

Annual Reports

Report Year	Filed Date
2005	05/04/2005
2006	04/21/2006
2007	04/09/2007

Document Images

04/09/2007 -- ANNUAL REPORT

04/21/2006 -- ANNUAL REPORT

05/04/2005 -- ANNUAL REPORT

04/13/2004 -- ANNUAL REPORT

04/09/2003 -- ANNUAL REPORT

05/19/2002 -- ANNUAL REPORT

05/16/2001 -- ANNUAL REPORT

05/01/2000 -- ANNUAL REPORT

04/29/1999 -- ANNUAL REPORT

05/19/1998 -- ANNUAL REPORT

08/18/1997 -- ANNUAL REPORT

08/19/1996 -- ANNUAL REPORT

Note: This is not official record. See documents if question or conflict.

Address For: El Rancho No Tengo, Inc.

COLUMBIA COUNTY 9-1-1 ADDRESSING

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

Addressing Maintenance

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

DATE REQUESTED: 8/2/2007 **DATE ISSUED:** 8/3/2007

ENHANCED 9-1-1 ADDRESS:

1633 SE COUNTRY CLUB RD

LAKE CITY FL 32025

PROPERTY APPRAISER PARCEL NUMBER:

03-4S-17-07486-001

Remarks:

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.

884

pproved Address

UG 0 3 2007

ddressing/GIS Dept

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

Reference to a building permit application Number: 0608-12

Owner/Builder Jeffery Hill /El Rancho No Tengo Inc.

On the date of August 14, 2006 application 0608-12 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 0608-12 and when making reference to this application.

This is a plan review for compliance with the Florida Residential Code 2004 only and doesn't make any consideration toward the land use and zoning requirements.

To help ensure compliance with the Florida Residential Code 2004 the comments below need to be addressed on the plans.

1. Please submit a site plan showing the dimensions of lot, dimensions of building, set backs of the building , location of all other buildings on the

property, well and septic tank location if applicable, and all utility easements. Provide a full legal description of property.

2. Please provide a copy of a signed released site plan from the Columbia County Environmental Health Department which confirms approval of the waste water disposal system.
3. Please submit a letter form the potable water well contractor which will describe the equipment to be used to supply potable water to this dwelling. Include the size of pump motor, size of pressure tank and cycle stop valve if used.
4. Please verify that section R309.1 of the Florida Residential Building Code will be complied with. As this section relates to the garage entry door in to the residence. 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
5. The submitted truss plans and engineered drawing for the structure will be required to have a raised embossed engineered seal from Alpine Engineered Product Inc.
6. Please submit the required forms to show compliance with the FBC-2004 chapter 13energy effiency Sections 13-101.2.1 New construction: new residential construction shall comply with this code by using the following

compliance methods: Subchapter 13-6, Residential buildings compliance methods. Single-family residential buildings and Multiple-family buildings of three stories or less shall comply with this chapter of the code. This subchapter contains three compliance methods:

Method A: Whole Building Performance Method

Method B: Component Prescriptive Method

Method C: Limited Applications Prescriptive Method

Joe Haltiwanger

Plan Examiner
Columbia County

NOTICE OF COMMENCEMENT FORM
COLUMBIA COUNTY, FLORIDA

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

Tax Parcel ID Number 03-4S-17-07486-001

Inst:[illegible] Date: 7/21/2006 Time:[illegible]
DC,P.DeWitt Cason,Columbia County B:[illegible] P:[illegible]

1. **Description of property: (legal description of the property and street address or 911 address)**
   North 1/2 of the South 1/2 of the SW 1/4 of the S.W. 1/4 of Section 3, Township 4 South, Range 17 East, Columbia County, Florida

2. **General description of improvement:** 1311 square foot Dwelling

3. **Owner Name & Address** Jeffrey Hill Jr. 908 S.E. Country Club Rd., Lake City, Fl. 32025 **Interest in Property** OWNER

4. **Name & Address of Fee Simple Owner (if other than owner):** El Rancho No Tengo, Inc 908 S.E. Country Club Rd. Lake City Fl. 32025

5. **Contractor Name** N/A **Phone Number**
   Address

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

7. **Lender Name** East Bank of Mississippi **Phone Number** BR549
   Address Selma Alabama

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

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

10. **Expiration date of the Notice of Commencement (the expiration date is 1 (one) year from the date of recording, (Unless a different date is specified)** Aug 2, 2007

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

Sworn to (or affirmed) and subscribed before day of August 4, **20**06

NOTARY STAMP/SEAL

Notary Public State of Florida
Tracy L Duckett
My Commission DD462701
Expires 08/31/2009

[signature]
Signature of Owner
Jeffrey Hill, JR.

Tracy L Duckett
Signature of Notary
Personally Known

BOARD OF COUNTY COMMISSIONERS • COLUMBIA COUNTY

October 16, 2008

Mr. Jeffrey Hill
908 SE Country Club Road
Lake City, Florida 32025

RE: Request for Residential Electric Release

Dear Jeffrey:

The purpose of this letter is to respond to recent inquiries regarding your owner/contractor residence on Old Country Club Road and the need for an electric utility connection approval.

I have spoken with the Columbia County Building Department. All requirements have been met with the exception of submitting a culvert permit application. Based on conversation with Ken Sweet, County Road Construction Manager, you should apply for a culvert waiver. The access from Country Club Road occurs at a point that does not require a culvert. You will be allowed to place fill in the existing county swale to county specifications. This same access from Country Club Road will serve your proposed subdivision.

I have also spoke with Hugh Giebeig, Director, Columbia County Public Health Unit. Issues pertaining to your septic tank permit have been resolved. Please advise if I may be of further assistance.

Sincerely,

Dale Williams
County Manager

DW/cnb

XC: John Kerce, Building & Zoning Coordinator
Brian Kepner, County Planner
Hugh Giebeig, Administrator Health Department
Mark Landers, Director Environmental Health
Ken Sweet, Road Construction Supervisor
Stephen Bailey, Commissioner

Columbia County Building Permit Application

Revised 9-23-04

For Office Use Only Application # 0608-12 Date Received 8/4 By JW Permit # _____

Application Approved by - Zoning Official BLK Date 21.12.06 Plans Examiner OK JTH Date 12-13-06

Flood Zone X Development Permit N/A Zoning RR Land Use Plan Map Category RES U.2. DEN.

Comments NO SITE PLAN EH / WW

Applicants Name Jeffrey Hill, JR. Phone 386-752-7730

Address 908 S.E. Country Club Rd. Lake City Fl. 32025

Owners Name SAME Phone 752-7730

911 Address SAME

Contractors Name NONE Phone _____

Address _____

Fee Simple Owner Name & Address El Rancho No Tengo Inc, 908 S.E. Country Cl. Lake City Fl.

Bonding Co. Name & Address NONE

Architect/Engineer Name & Address Mark Disosway, P.O. Box 868, Lake City, Fl. 32056

Mortgage Lenders Name & Address East Bank of Mississippi

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

Property ID Number 03-4S-17E-07486-001 Estimated Cost of Construction $2750.00

Subdivision Name NONE Lot — Block — Unit ____ Phase ____

Driving Directions From Col. Co. Courthouse, travel East on hiway 90 to S.E. Country Club Rd., turn South, proceed 1.6 miles, property on left

Type of Construction Dwelling - S70 Number of Existing Dwellings on Property 0

Total Acreage 10 Ac. Lot Size 10 Ac. Do you need a - Culvert Permit or Culvert Waiver or Have an Existing Drive

Actual Distance of Structure from Property Lines - Front 300' Side 100' Side 1300' Rear 270'

Total Building Height 14' Number of Stories 1 Heated Floor Area 1310 Roof Pitch 4/12

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

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

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

Owner Builder or Agent (Including Contractor)

Jeff Hill, JR.

STATE OF FLORIDA

COUNTY OF COLUMBIA

Sworn to (or affirmed) and subscribed before me this 4th day of August 2006.

Personally known or Produced Identification

Contractor Signature

Contractors License Number _____

Competency Card Number _____

NOTARY STAMP/SEAL

Notary Public State of Florida
Tracy L Duckett
My Commission DD462701
Expires 08/31/2009

Tracy L Duckett

Notary Signature

DISCLOSURE STATEMENT

FOR OWNER/BUILDER WHEN ACTING AS THER OWN CONTRACTOR AND CLAIMING EXEMPTION OF CONTRACTOR LICENSING REQUIREMENTS IN ACCORDANCE WITH FLORIDA STATUTES, ss. 489.103(7).

State law requires construction to be done by licensed contractors. You have applied for a permit under an exemption to that law. The exemption allows you, as the owner of your property, to act as your own contractor with certain restrictions even though you do not have a license. You must provide direct, onsite supervision of the construction yourself. You may build or improve a one-family or two-family residence or a farm outbuilding. You may also build or improve a commercial building, provided your costs do not exceed $25,000. The building or residence must be for your own use or occupancy. It may not be built or substantially improved for sale or lease. If you sell or lease a building you have built or substantially improved yourself within 1 year after the construction is complete, the law will presume that you built or substantially improved it for sale or lease, which is a violation of this exemption. You may not hire an unlicensed person to act as your contractor or to supervise people working on your building. It is your responsibility to make sure that people employed by you have licenses required by state law and by county or municipal licensing ordinances. You may not delegate the responsibility for supervising work to a licensed contractor who is not licensed to perform the work being done. Any person working on your building who is not licensed must work under your direct supervision and must be employed by you, which means that you must deduct F .I.C.A. and withholding tax and provide workers' compensation for that employee, all as prescribed by law. Your construction must comply with all applicable laws, ordinances, building codes, and zoning regulations.

TYPE OF CONSTRUCTION

(X) Single Family Dwelling
( ) Two-Family Residence
( ) Farm Outbuilding
( ) Other_____
( ) New Construction
( ) Addition, Alteration, Modification or other Improvement

NEW CONSTRUCTION OR IMPROVEMENT

I Jeffrey Hill, JR. , have been advised of the above disclosure statement for exemption from contractor licensing as an owner/builder. I agree to comply with all requirements provided for in Florida Statutes ss.489.103(7) allowing this exception for the construction permitted by Columbia County Building Permit Number_____

J. Hill, Jr. 8-3-06

Signature Date

FOR BUILDING USE ONLY

I hereby certify that the above listed owner/builder has been notified of the disclosure statement in Florida Statutes ss 489.103(7).

Date 8.4.06 Building Official/Representative David Kunn

STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
CONSTRUCTION PERMIT

PERMIT NO. 060196N
DATE PAID: 3-1-06
FEE PAID: 215.00
RECEIPT #: 5060301021

CONSTRUCTION PERMIT FOR:

[X] New System [ ] Existing System [ ] Holding Tank [ ] Innovative
[ ] Repair [ ] Abandonment [ ] Temporary [ ] ______

APPLICANT: El Rancho No Tengo Inc.

PROPERTY ADDRESS: 27th Place, LC, FL, 32024

LOT: na BLOCK: na SUBDIVISION: na

PROPERTY ID #: 3-4-17-07486-001 [SECTION, TOWNSHIP, RANGE, PARCEL NUMBER] [OR TAX ID NUMBER]

SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS AND STANDARDS OF SECTION 381.0065, F.S., AND CHAPTER 64E-6, F.A.C. DEPARTMENT APPROVAL OF SYSTEM DOES NOT GUARANTEE SATISFACTORY PERFORMANCE FOR ANY SPECIFIC PERIOD OF TIME. ANY CHANGE IN MATERIAL FACTS, WHICH SERVED AS A BASIS FOR ISSUANCE OF THIS PERMIT, REQUIRE THE APPLICANT TO MODIFY THE PERMIT APPLICATION. SUCH MODIFICATIONS MAY RESULT IN THIS PERMIT BEING MADE NULL AND VOID. ISSUANCE OF THIS PERMIT DOES NOT EXEMPT THE APPLICANT FROM COMPLIANCE WITH OTHER FEDERAL, STATE, OR LOCAL PERMITTING REQUIRED FOR DEVELOPMENT OF THIS PROPERTY.

SYSTEM DESIGN AND SPECIFICATIONS

TANK
- [900] GALLONS / GPD SEPTIC TANK/AEROBIC UNIT CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
- [ ] GALLONS / GPD ______ CAPACITY MULTI-CHAMBERED/IN-SERIES [ ]
- [ ] GALLONS GREASE INTERCEPTOR CAPACITY [MAXIMUM CAPACITY SINGLE TANK: 1250 GALLONS]
- [ ] GALLONS DOSING TANK CAPACITY [ ] GALLONS @ [ ] DOSES PER 24 HRS # PUMPS [ ]

DRAINFIELD
- [334] SQUARE FEET PRIMARY DRAINFIELD SYSTEM
- [ ] SQUARE FEET ______ SYSTEM
- TYPE SYSTEM: [X] STANDARD [ ] FILLED [ ] MOUND [ ] ______
- CONFIGURATION: [X] TRENCH [ ] BED [ ] ______
- LOCATION OF BENCHMARK: OAK EN of site
- ELEVATION OF PROPOSED SYSTEM SITE [12] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
- BOTTOM OF DRAINFIELD TO BE [32] [INCHES/FT] [ABOVE/BELOW] BENCHMARK/REFERENCE POINT
- FILL REQUIRED: [NA] INCHES EXCAVATION REQUIRED: [NA] INCHES

OTHER

SPECIFICATIONS BY: [signature] TITLE: MASTER CONTRACTOR

APPROVED BY: [signature] TITLE: ES III Columbia CHD

DATE ISSUED: 3/13/06 EXPIRATION DATE: 9/13/07

DH 4016, 10/97 (Previous Editions May Be Used)

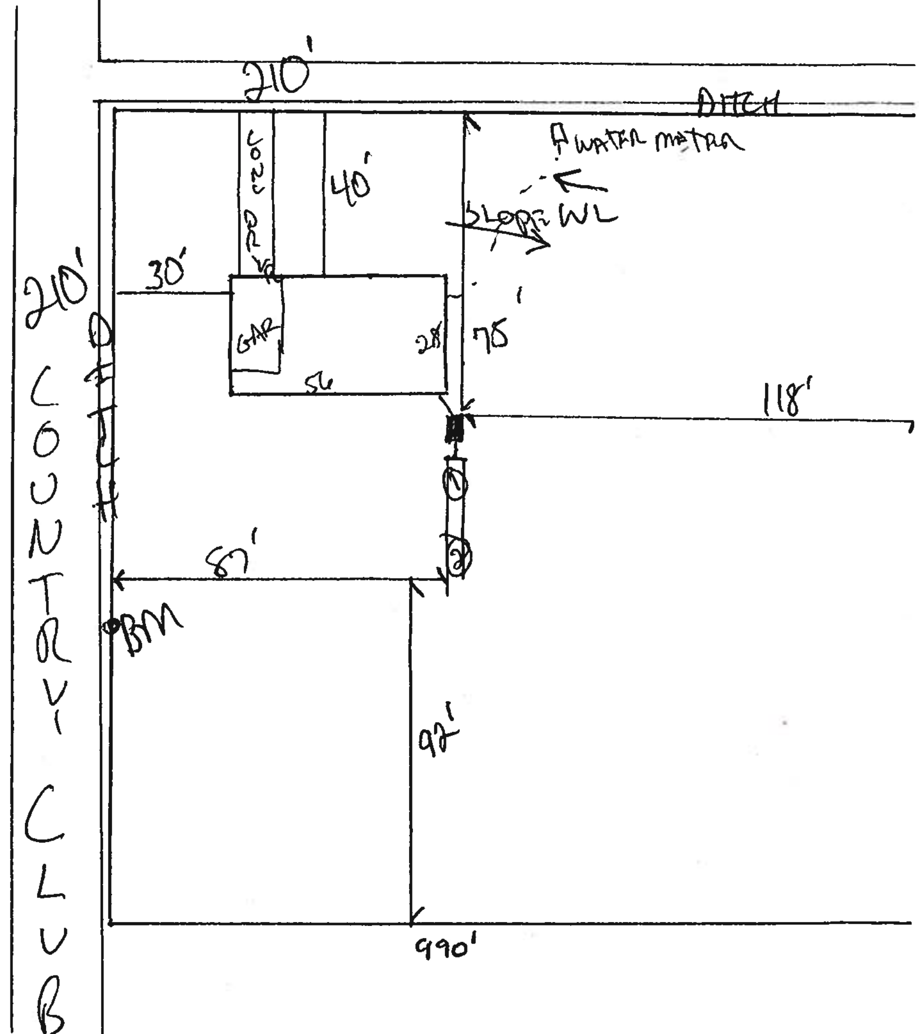
STATE OF FLORIDA
DEPARTMENT OF HEALTH
APPLICATION F0R ONSITE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permit Application Number 06-0196 N

---------------------------- PART II - SITEPLAN ----------------------------

Scale: 1 inch = 50 feet.

SEE ATTACHED



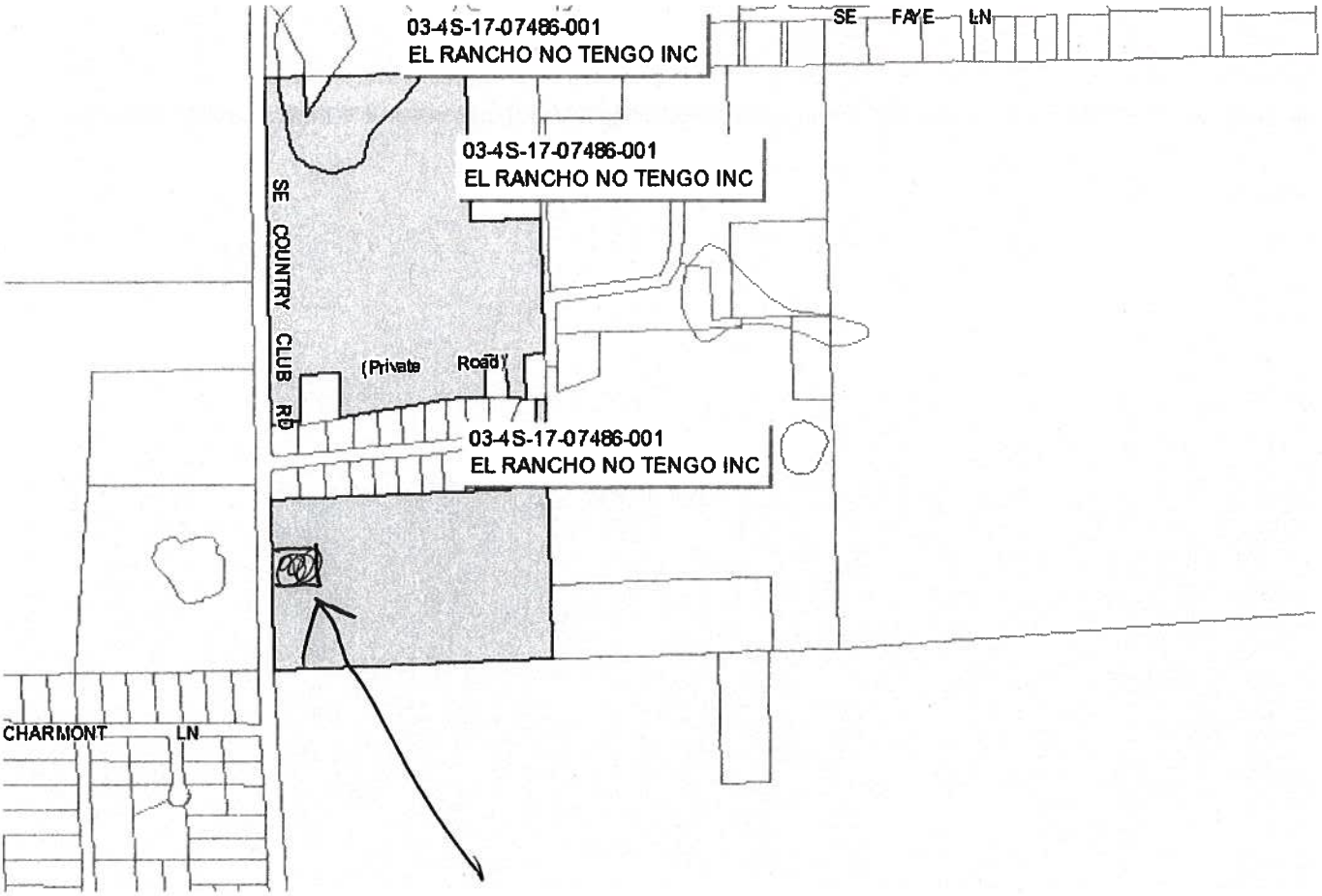
Notes: 1 of 60 ACRES

Site Plan submitted by: [signature] MASTER CONTRACTOR

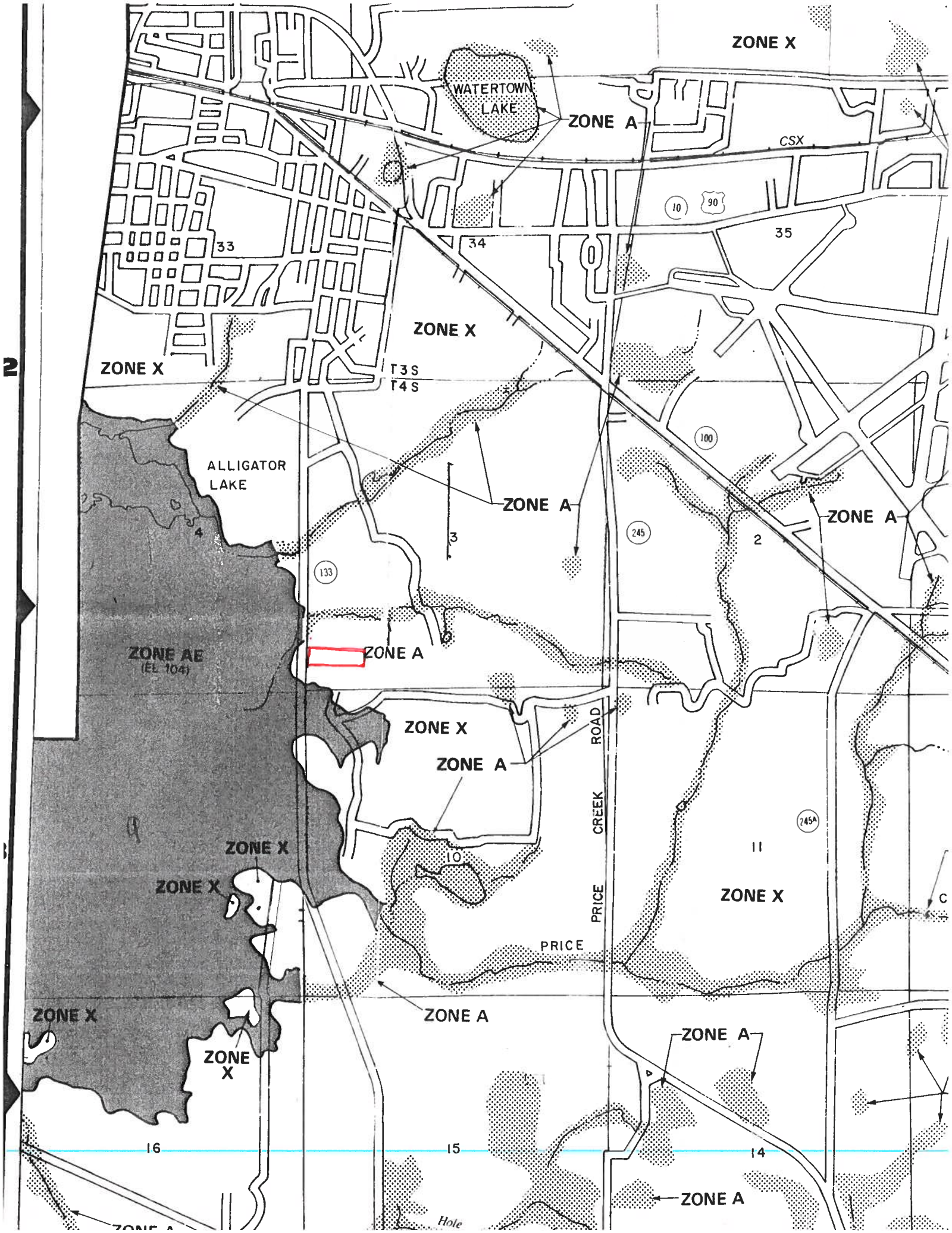
Plan Approved ✓ Not Approved_____ Date 3/13/06

By [signature] Columbia County Health Department

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT



SITE LOCATION


ZONE X
WATERTOWN LAKE
ZONE A
CSX
10
90
33
34
35
ZONE X
ZONE X
T3S
T4S
100
ALLIGATOR LAKE
ZONE A
ZONE A
4
3
245
2
133
ZONE AE
(EL 104)
ZONE A
ZONE X
ZONE A
ROAD
CREEK
245A
11
ZONE X
ZONE X
10
ZONE X
PRICE
PRICE
ZONE A
ZONE X
ZONE A
ZONE X
16
15
14
ZONE A
Hole

Notice of Treatment A00 to 12823

Applicator: Florida Pest Control & Chemical Co. (www.flapest .com)
Address: BAYA AVE
City LAKE CITY Phone 752 1703

Site Location: Subdivision
Lot # Block# Permit # 26200
Address 1633 SE Country Club RD

Product used	Active Ingredient	% Concentration
☐ Premise	Imidacloprid	0.1%
☐ Termidor	Fipronil	0.12%
☐ Bora-Care	Disodium Octaborate Tetrahydrate	23.0%

Type treatment: ☐ Soil ☐ Wood

Area Treated	Square feet	Linear feet	Gallons Applied
Front/Back Porches	284	73	30

As per Florida Building Code 104.2.6 – If soil chemical barrier method for termite prevention is used, final exterior treatment shall be completed prior to final building approval.

If this notice is for the final exterior treatment, initial this line _____.

1/23/08 Date | 0800 Time | F254 Print Technician's Name

Remarks:

Applicator - White Permit File - Canary Permit Holder - Pink
10/05 ©

BP# 26200

Notice of Treatment 12823

Applicator: Florida Pest Control & Chemical Co. (www.flapest .com)
Address: 536 SE Bayia DR.
City Lake City Phone (386) 752-1703

Site Location: Subdivision
Lot # Block# Permit # 26200
Address 1633 SE Country Club Rd.

Product used	Active Ingredient	% Concentration
☑ Premise	Imidacloprid	0.1%
☐ Termidor	Fipronil	0.12%
☐ Bora-Care	Disodium Octaborate Tetrahydrate	23.0%

Type treatment: ☑ Soil ☐ Wood

Area Treated	Square feet	Linear feet	Gallons Applied
MAIN Body	1440	168	80

As per Florida Building Code 104.2.6 – If soil chemical barrier method for termite prevention is used, final exterior treatment shall be completed prior to final building approval.

If this notice is for the final exterior treatment, initial this line _____.

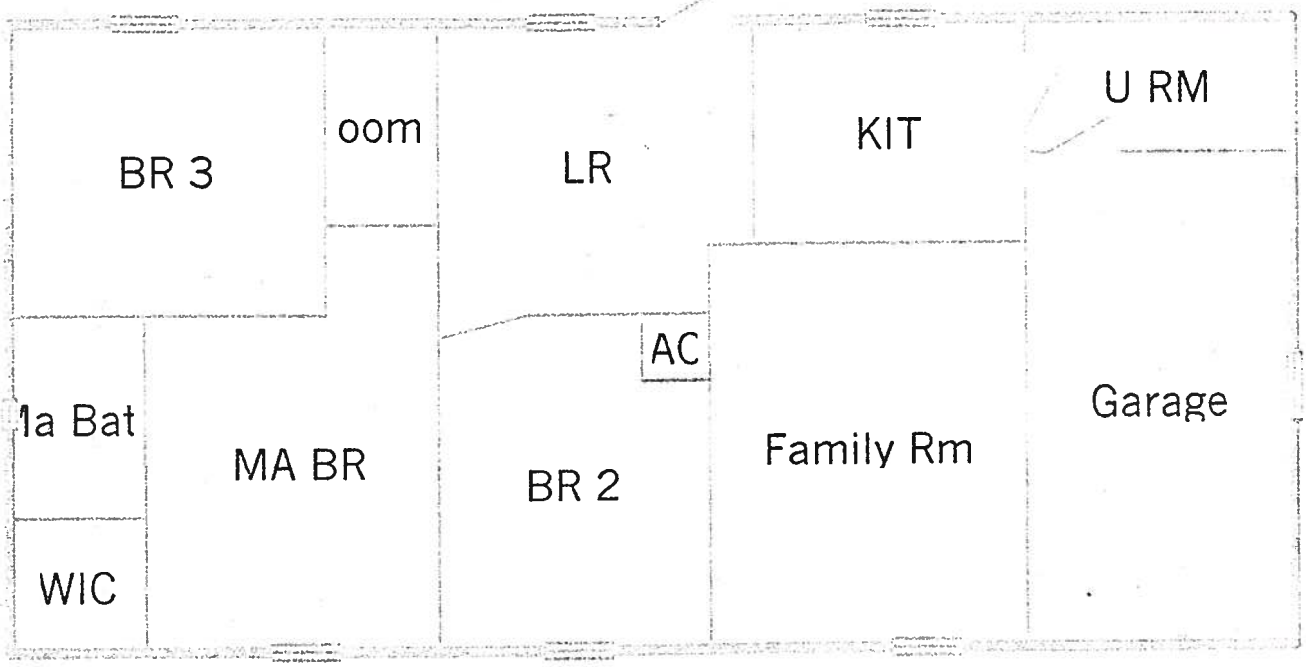
12-04-07 Date | 8:00 A Time | [signature] Print Technician's Name

Remarks: _____

Applicator - White Permit File - Canary Permit Holder - Pink

10/05 ©

TOTAL HOME



Job #: **Performed by AW** **for:** Jeffery Hill LAKE CITY, FL	**COUNTRY COMFORT HEATING & A. C.** RT. 18 BOX 360 LAKE CITY, FL 32025 Phone: 904-752-5841	Scale: 1 : 102 Page 1 Right-Suite Residential (tm) 5.0.55 RSR26315 2002-May-07 14:27:21 ghtsoft HVAC\Template\Hill, Jeffery

Columbia County Property Appraiser

DB Last Updated: 8/1/2006

2006 Proposed Values

Parcel: 03-4S-17-07486-001

Tax Record | Property Card | Interactive GIS Map | Print

Owner & Property Info

Search Result: 1 of 1

Owner's Name	EL RANCHO NO TENGO INC
Site Address	
Mailing Address	908 SE COUNTRY CLUB ROAD LAKE CITY, FL 32025
Description	W1/2 OF SW1/4, EX E1/2 OF NE1/4 OF NW1/4 OF SW1/4 & EX 1 AC DESC ORB 590-376 & EX 0.51 AC DESC ORB 889-1171 & EX 0.50 AC DESC ORB 892-1036 & EX A PARCEL DESC IN ORB 998-2032 EX HAIGHT-ASHBURY S/D

Use Desc. (code)	PASTURELAN (006200)
Neighborhood	3417.00
Tax District	2
UD Codes	MKTA06
Market Area	06
Total Land Area	60.520 ACRES

Property & Assessment Values

Mkt Land Value	cnt: (3)	$21,250.00
Ag Land Value	cnt: (1)	$10,713.00
Building Value	cnt: (0)	$0.00
XFOB Value	cnt: (1)	$150.00
Total Appraised Value		$32,113.00

Just Value	$319,000.00
Class Value	$32,113.00
Assessed Value	$32,113.00
Exempt Value	$0.00
Total Taxable Value	$32,113.00

Sales History

Sale Date	Book/Page	Inst. Type	Sale Vlmp	Sale Qual	Sale RCode	Sale Price
NONE						

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)
0294	SHED WOOD/	1995	$150.00	1.000	8 x 10 x 0	(.00)

Land Breakdown

Lnd Code	Desc	Units	Adjustments	Eff Rate	Lnd Value
009900	AC NON-AG (MKT)	1.000 AC	1.00/1.00/1.00/1.00	$5,000.00	$5,000.00
006200	PASTURE 3 (AG)	59.520 AC	1.00/1.00/1.00/1.00	$180.00	$10,713.00
009910	MKT.VAL.AG (MKT)	59.520 AC	1.00/1.00/1.00/1.00	$0.00	$297,600.00
009945	WELL/SEPT (MKT)	7.000 UT - (.000AC)	1.00/1.00/1.00/1.00	$2,000.00	$14,000.00
009947	SEPTIC (MKT)	3.000 UT - (.000AC)	1.00/1.00/1.00/1.00	$750.00	$2,250.00

Columbia County Property Appraiser DB Last Updated: 8/1/2006

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

FORM 600B-01 — **Residential Component Prescriptive Method B** — **NORTH 1 2 3**

Compliance with Method B Chapter 6 of the Florida Energy Efficiency Code may be demonstrated by the use of Form 600B for single and multifamily residences of 3 stories or less in height, and additions to existing residential buildings. To comply, a building must meet or exceed all of the energy efficiency prescriptives in any one of the prescriptive component packages and comply with the prescriptive measures listed in Table 6B-1 of this form. An alternative method is provided for additions of 600 square feet or less by use of Form 600C. If a building does not comply with this method, it may still comply under other sections in Chapter 6 of the Code.

PROJECT NAME: AND ADDRESS:	Jeffrey Hill Residence 147 S.E. Lindale Glen Lake City, Fl. 32025	BUILDER: Jeffrey Hill	
		PERMITTING OFFICE:	CLIMATE ZONE: 1 ☐ 2 ☐ 3 ☑
OWNER: Jeffrey L. Hill, SR.		PERMIT NO.:	JURISDICTION NO.:

GENERAL DIRECTIONS

1. New construction including additions which incorporates any of the following features cannot comply using this method: steel stud walls, single assembly roof/ceiling construction, or skylights or other non-vertical roof glass.
2. Choose one of the component packages "A" through "E" from Table 6B-1 by which you intend to comply with the Code. Circle the column of the package you have chosen.
3. Fill in all the applicable spaces of the "To Be Installed" column on Table 6B-1 with the information requested. All "To Be Installed" values must be equal to or more efficient than the required levels.
4. Complete page 1 based on the "To Be Installed" column information.
5. Read "Minimum Requirements for All Packages", Table 6B-2 and check each box to indicate your intent to comply with all applicable items.
6. Read, sign and date the "Prepared By" certification statement at the bottom of page 1. The owner or owner's agent must also sign and date the form.

	Please Print	CK
1. Compliance package chosen (A-F)	A	
2. New construction or addition	New	
3. Single family detached or Multifamily attached	Single	
4. If Multifamily—No. of units covered by this submission	–	
5. Is this a worst case? (yes / no)	Yes	
6. Conditioned floor area (sq. ft.)	1320	
7. Predominant eave overhang (ft.)	1'4"	
	Single Pane / Double Pane	
8. Glass type and area :		
a. Clear glass	8a. ____ sq. ft. / 89 sq. ft.	
b. Tint, film or solar screen	8b. ____ sq. ft. / ____ sq. ft.	
9. Percentage of glass to floor area	9. 6.8 %	
10. Floor type, area or perimeter, and insulation:		
a. Slab on grade (R-value)	10a. R= ____ ____ lin. ft.	
b. Wood, raised (R-value)	10b. R= ____ ____ sq. ft.	
c. Wood, common (R-value)	10c. R= ____ ____ sq. ft.	
d. Concrete, raised (R-value)	10d. R= 7 1610 sq. ft.	
e. Concrete, common (R-value)	10e. R= ____ ____ sq. ft.	
11. Wall type, area and insulation:		
a. Exterior: 1. Masonry (Insulation R-value)	11a-1 R= 5 1166 sq. ft.	
2. Wood frame (Insulation R-value)	11a-2 R= ____ ____ sq. ft.	
b. Adjacent: 1. Masonry (Insulation R-value)	11b-1 R= ____ ____ sq. ft.	
2. Wood frame (Insulation R-value)	11b-2 R= 11 1166 sq. ft.	
12. Ceiling type, area and insulation:		
a. Under attic (Insulation R-value)	12a. R= 30 1320 sq. ft.	
b. Single assembly (Insulation R-value)	12b. R= ____ ____ sq. ft.	
13. Air Distribution System: Duct insulation, location Test report (attach if required)	13. R= 6 Attic	
14. Cooling system	14a. Type: Central	
(Types: central, room unit, package terminal A.C., gas, none)	14b. SEER/EER: SEER 12.0	
	14c. Capacity: 24,000 BTU	
15. Heating system:	15a. Type: elec. strip	
(Types: heat pump, elec. strip, nat. gas, L.P. gas, gas h.p., room or PTAC, none)	15b. HSPF/COP/AFUE: HSPF	
	15c. Capacity: 10 KW	
16. Hot water system:	16a. Type: Electric	
(Types: elec., nat. gas, L.P. gas, solar, heat rec., ded. heat pump, other, none)	16b. EF: .88	

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

PREPARED BY: Jeffrey Hill DATE: 6-18-06

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

OWNER AGENT: Jeffrey Hill DATE 6-18-06

Review of 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 in accordance with Section 553.908, F.S.

BUILDING OFFICIAL: _____

DATE: _____

TABLE 6B-1 **MINIMUM REQUIREMENTS** **Climate Zones 1 2 3**

COMPONENTS		PACKAGES FOR NEW CONSTRUCTION					TO BE INSTALLED
		A	B	C	D	E	
GLASS	Max.%of glass to Floor Area	15%	15%	20%	20%	25%	15 %
	Type	Double Clear (DC)	Double Clear (DC)	Double Clear (DC)	Double Clear (DC)	Double Tint (DT)	DC: ☑ DT: ☐
	Overhang	1'4"	2'	2'	2'	2'	1'6" FEET
WALLS	Masonry	EXTERIOR AND ADJACENT MASONRY WALLS R-5 COMMON MASONRY WALLS R-3 EACH SIDE.					EXT: R = ____ ADJ: R = ____ COM: R = ____
	Wood Frame	EXTERIOR, ADJACENT, AND COMMON WOOD FRAME WALLS R-11					EXT: R = 11 ADJ: R = ____ COM: R = ____
CEILINGS		R-30	R-30	R-30	R-30	R-30	UNDER ATTIC: R = 30 COMMON: R = ____
		(NO SINGLE ASSEMBLY CEILINGS ALLOWED)					
FLOORS	Slab-On-Grade	R-0					R = 0
	Raised Wood	R-19 (ONLY STEM WALL CONSTRUCTION ALLOWED EXCEPT PACKAGE C)					R = ____
	Raised Concrete	R-7					R = ____
DUCTS		R-6	R-6	R-6, TESTED	R-6	R-6, TESTED	R = 6 COND. ☐
SPACE COOLING (SEER)		12.0	10.5	12.0	11.0	12.0	SEER = 12.0
HEAT	Elect. (HSPF)	7.9	7.1	7.4	7.4	7.4	COP= 7.9
	Gas/Oil (AFUE)	MINIMUM OF .73 (Direct heating) or .78 (Central)					AFUE = ____
HOT WATER SYSTEM	Electric Resistance**	EF .88	NOT ALLOWED (SEE BELOW)	EF .91	NOT ALLOWED (SEE BELOW)	EF .91	EF = .88
	Gas & Oil **	MINIMUM EF OF .54				NATURAL GAS ONLY (SEE BELOW)	EF = ____
	Other	Any of the following are allowed: dedicated heat pump, heat recovery unit or solar system.					DHP: ☐ EF= ____ HRU: ☐ SOLAR: ☐ EF= ____

* Single package units minimum SEER=9.7, HSPF = 6.6.

** Minimum efficiencies for gas and electric hot water systems apply to to 40 gallon water heaters. Refer to Table 6-12 for minimum Code efficiencies for oil water heaters and other sizes.

DESCRIPTION OF BUILDING COMPONENTS LISTED

Percent of Glass to Floor Area: This percentage is calculated by dividing the total of all glass areas by the total conditioned floor area.

Overhang: The overhang is the distance the roof or soffit projects out horizontally from the face of the glass. All glass areas shall be under an overhang of at least the prescribed length with the following exceptions: 1) glass on the gabled ends of a house and 2) the glass in the lower stories of a multi-story house.

Wall, Ceiling and Floor Insulation Values: The R-values indicated represent the minimum acceptable insulation level added to the structural components of the wall, ceiling or floor. The R-value of the structural building materials shall not be included in this calculation. "Common" components are those separating conditioned tenancies in a multifamily building. "Adjacent" components separate conditioned space from unconditioned but enclosed space. "Exterior" components separate conditioned space from unconditioned and unenclosed space.

Floor: Slab-on-grade floors without edge insulation are acceptable. Raised wood floors shall have continuous stem walls with insulation placed on the stem wall or under the floor except Package C.

Ducts: "TESTED" shall mean the ducts have less than 5% leakage based on a certified test report by a State-approved tester.

Space Cooling System: Cooling systems shall have a Seasonal Energy Efficiency Ratio (SEER) for central units or Energy Efficiency Ratio (EER) for room units or PTAC's equal to or greater than the prescribed value.

Electric Space Heating Option: Heat pump systems shall be rated with a Heating Seasonal Performance Factor (HSPF) equal to or greater than the prescribed HSPF. Heat pump systems may contain electric strip backups meeting the criteria of section 608.1.ABC.3.2.1.2. No electric resistance space heat is allowed for these packages.

Electric Resistance Hot Water Option: For packages designated "Not Allowed", an electric resistance hot water system may be installed only in conjunction with one of the "Other Hot Water System Options". See below.

Other Hot Water System Options: Any dedicated heat pump, heat recovery unit, or solar hot water system may be installed. Solar systems must have an EF of 1.5 or higher. Electric resistance systems having an EF of .88 or greater, or natural gas systems with EF .54 or greater may be used in conjunction with these systems.

TABLE 6B-2 MINIMUM REQUIREMENTS FOR ALL PACKAGES

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Exterior Joints & Cracks	606.1	To be caulked, gasketed, weather-stripped or otherwise sealed.	✓
Exterior Windows & Doors	606.1	Max .3 cfm/sq.ft. window area; .5 cfm/sq.ft. door area.	✓
Sole & Top Plates	606.1	Sole plates and penetrations through top plates of exterior walls must be sealed.	✓
Recessed Lighting	606.1	Type IC rated with no penetrations (two alternatives allowed).	N/A
Multi-story Houses	606.1	Air barrier on perimeter of floor cavity between floors.	N/A
Exhaust Fans	606.1	Exhaust fans vented to unconditioned space shall have dampers, except for combustion devices with integral exhaust ductwork.	✓
Water Heaters	612.1	Comply with efficiency requirements in Table 6-12. Switch or clearly marked circuit breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required for vertical pipe risers.	✓
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 minimum thermal efficiency of 78%.	N/A
Hot Water Pipes	612.1	Insulation is required for hot water circulating systems (including heat recovery units).	N/A
Shower Heads	612.1	Water flow must be restricted to no more than 2.5 gallons per minute at 80 PSIG.	✓
HVAC Duct Construction, Insulation & Installation	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 610.1. Ducts in attics must be insulated to a minimum of R-6.	✓
HVAC Controls	607.1	Separate readily accessible manual or automatic thermostat for each system.	✓

MEMORANDUM

Date: 18 February 2008

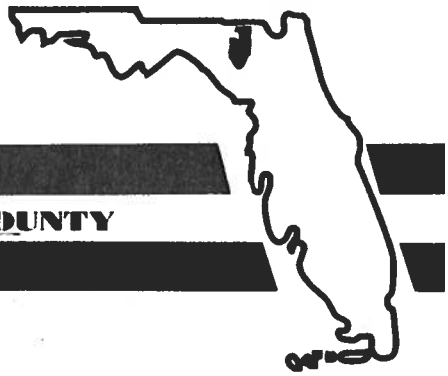
To: Mark Lander, Director Environmental Health Department

From: Brian L. Kepner, County Planner BLK

Re: El Rancho No Tango, Inc. Septic Tank Permit No. 06-196

I have pulled the file concerning the building permit that goes along with the above referenced septic tank permit. According to our records, the above referenced septic tank permit was issued to El Rancho No Tango, Inc. on 13 March 2006. The original building permit application was received on 4 August 2006. Upon review of the application, the plans examiner found that several items were missing and notification of those missing items was transmitted to the applicant on 14 August 2006. The plans examiner approved building code compliance on the application on 13 December 2006. About that time it was discovered that there were legal issues concerning ownership of the property as indicated on the application and if a corporation can pull a building permit as an owner builder. Eventually those issues were resolved with a revised application and supporting documentation. The building permit application was approved again by the building department on 1 August 2007 and by the zoning department on 6 August 2007. Notes in the file indicate that the applicant was left a message via the phone on 9 August 2007. The building permit was issued on 5 September 2007.

Those are the facts concerning the building permit in relationship with above referenced septic tank permit. The County Building and Zoning Department did delay in the issuance of the building permit in order to be in compliance with State Statutes and County Regulations. You can see however that there were issues that had to be resolved with the applicant before the permit could be issued.



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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 03-4S-17-07486-102 **Building permit No.** 000022756

Use Classification SFD,UTILITY **Fire:** 71.00

Permit Holder JEFFREY HILL **Waste:** 147.00

Owner of Building JEFFREY HILL **Total:** 218.00

Location: 147 SE LINDALE GLEN(HAIGHT ASHBURY,LOT 2)

Date: 10/20/2005

Harry Dicks

Building Inspector

POST IN A CONSPICUOUS PLACE
(Business Places Only)

American

Inst:2005023225 Date:09/21/2005 Time:13:55
Doc Stamp-Deed : 805.00
DC,P.DeWitt Cason,Columbia County B:1059 P:182

Corporate Warranty Deed

This Indenture, made , September 20, 2005 A.D.
Between

El Rancho No Tengo,Inc. whose post office address is: 908 SE Country Club Road, Lake City, Florida 32025 a corporation existing under the laws of the State of Florida, Grantor and

Laura Taylor Goes and Libronio Goes, wife and husband whose post office address is: 283 SW Creekside Lane, Lake City, Florida 32025, Grantee,

Witnesseth, that the said Grantor, for and in consideration of the sum of Ten and No/100 Dollars ($10.00), to it in hand paid by the said Grantee, the receipt whereof is hereby acknowledged, has granted, bargained and sold to the said Grantee forever, the following described land, situate, lying and being in the County of Columbia, State of Florida, to wit:

Lot 2, of Plat of Haight-Ashbury Subdivision, according to the Plat thereof, as recorded in Plat Book 7, at Page 185, of the Public Records of Columbia County, Florida

NB: GRANTOR RESERVES A 30 FOOT UTILITY EASEMENT ALONG THE NORTH LINE OF SAID LOT.

NB: NO AGRICULTURAL ALLOTMENT IS BEING CONVEYED BY THE GRANTOR AND IS HEREBY RESERVED BY THE GRANTOR

Subject to taxes for the current year, covenants, restrictions and easements of record, if any.

Parcel Identification Number: **07486-001**

And the said Grantor does hereby fully warrant the title to said land, and will defend the same against the lawful claims of all persons whomsoever.

In Witness Whereof, the said Grantor has caused this instrument to be executed in its name by its duly authorized officer and caused its corporate seal to be affixed the day and year first above written.

El Rancho No Tengo,Inc.

Signed and Sealed in Our Presence:

By: _____
Jeffrey L. Hill
Its: President / Director

Elaine R. Davis
Witness Print Name: ELAINE R. DAVIS

Johnny M. Hamm
Witness Print Name: Johnny M. Hamm

(Corporate Seal)

State of Florida
County of Columbia

The foregoing instrument was acknowledged before me this 20th day of September, 2005, by Jeffrey L. Hill, the President / Director of El Rancho No Tengo,Inc. A corporation existing under the laws of the State of Florida, on behalf of the corporation.
He/She is personally known to me or has produced Known as identification.

Elaine R. Davis (Seal)
Notary Public
Notary Printed Name: ELAINE R. DAVIS

My Commission Expires:

ELAINE R. DAVIS
Notary Public - State of Florida
My Commission Expires Oct 14, 2007
Commission # DD 223411
Bonded By National Notary Assn.

Prepared by:
Elaine R. Davis, an employee of
American Title Services of Lake City, Inc.,
330 SW Main Boulevard
Lake City, Florida 32025

DISCLOSURE STATEMENT

FOR OWNER/BUILDER WHEN ACTING AS THER OWN CONTRACTOR AND CLAIMING EXEMPTION OF CONTRACTOR LICENSING REQUIREMENTS IN ACCORDANCE WITH FLORIDA STATUTES, ss. 489.103(7).

State law requires construction to be done by licensed contractors. You have applied for a permit under an exemption to that law. The exemption allows you, as the owner of your property, to act as your own contractor with certain restrictions even though you do not have a license. You must provide direct, onsite supervision of the construction yourself. You may build or improve a one-family or two-family residence or a farm outbuilding. You may also build or improve a commercial building, provided your costs do not exceed $25,000. The building or residence must be for your own use or occupancy. It may not be built or substantially improved for sale or lease. If you sell or lease a building you have built or substantially improved yourself within 1 year after the construction is complete, the law will presume that you built or substantially improved it for sale or lease, which is a violation of this exemption. You may not hire an unlicensed person to act as your contractor or to supervise people working on your building. It is your responsibility to make sure that people employed by you have licenses required by state law and by county or municipal licensing ordinances. You may not delegate the responsibility for supervising work to a licensed contractor who is not licensed to perform the work being done. Any person working on your building who is not licensed must work under your direct supervision and must be employed by you, which means that you must deduct F .I.C.A. and withholding tax and provide workers' compensation for that employee, all as prescribed by law. Your construction must comply with all applicable laws, ordinances, building codes, and zoning regulations.

TYPE OF CONSTRUCTION

(X) Single Family Dwelling
( ) Two-Family Residence
( ) Farm Outbuilding
( ) Other_____
( ) New Construction
( ) Addition, Alteration, Modification or other Improvement

NEW CONSTRUCTION OR IMPROVEMENT

I Jeffrey L. Hill, SR. , have been advised of the above disclosure statement for exemption from contractor licensing as an owner/builder. I agree to comply with all requirements provided for in Florida Statutes ss.489.103(7) allowing this exception for the construction permitted by Columbia County Building Permit Number_____

Signature Nov. 8, 2004
Date

FOR BUILDING USE ONLY

I hereby certify that the above listed owner/builder has been notified of the disclosure statement in Florida Statutes ss 489.103(7).

Date 11/8/04 Building Official/Representative Danielle Lanier

Date	Inspection	Inspect.	Owner	Pass	Location	Permit
02/16/05	Rough Plumbing	Richard	Jeffery Hill	OK	Haight-Ashbury Lot 2	22756
02/21/05	Footer	Harry	Jeffery Hill	OK	Haight-Ashbury Lot 2	22756
02/21/05	Slab	Harry	Jeffery Hill	OK	Haight-Ashbury Lot 2	22756
02/21/05	Set Backs	Harry	Jeffery Hill	OK	Haight-Ashbury Lot 2	22756
06/30/05	Framing	Harry	Jeffery Hill	Not Right	Haight-Ashbury Lot 2	22756
06/30/05	Electrical	Harry	Jeffery Hill	OK	Haight-Ashbury Lot 2	22756
06/30/05	Plumbing	Harry	Jeffery Hill	OK	Haight-Ashbury Lot 2	22756
06/30/05	A/C	Harry	Jeffery Hill	OK	Haight-Ashbury Lot 2	22756
07/29/05	Framing	Harry	Jeffery Hill	OK	Haight-Ashbury Lot 2	22756
07/29/05	Electrical	Harry	Jeffery Hill	OK	Haight-Ashbury Lot 2	22756
07/29/05	Plumbing	Harry	Jeffery Hill	OK	Haight-Ashbury Lot 2	22756
07/29/05	A/C	Harry	Jeffery hill	OK	Haight-Ashbury Lot 2	22756
09/20/05	Perm Power	Harry	Jeffery Hill	OK	Haight-Ashbury Lot 2	22756
10/11/05	Final	Harry	Jeffery Hill	Not Right	Haight-Ashbury Lot 2	22756
10/20/05	Recheck Final	Harry	Jeffery Hill	OK	Haight-Ashbury Lot 2	22756

Columbia County Property Appraiser

DB Last Updated: 8/1/2006

2006 Proposed Values

Parcel: 03-4S-17-07486-102

Tax Record | Property Card | Interactive GIS Map | Print

Search Result: 1 of 1

Owner & Property Info

Owner's Name	SEXTON JODY & MARGARET R
Site Address	
Mailing Address	127 SE LINDALE GLN LAKE CITY, FL 32025
Description	LOT 2 HAIGHT-ASHBURY S/D. WD 1059-182, WD 1075-2296.

Use Desc. (code)	SINGLE FAM (000100)
Neighborhood	3417.00
Tax District	2
UD Codes	MKTA06
Market Area	06
Total Land Area	0.460 ACRES

Property & Assessment Values

Mkt Land Value	cnt: (1)	$18,000.00
Ag Land Value	cnt: (0)	$0.00
Building Value	cnt: (1)	$83,068.00
XFOB Value	cnt: (1)	$1,080.00
Total Appraised Value		$102,148.00

Just Value	$102,148.00
Class Value	$0.00
Assessed Value	$102,148.00
Exempt Value	$0.00
Total Taxable Value	$102,148.00

Sales History

Sale Date	Book/Page	Inst. Type	Sale Vlmp	Sale Qual	Sale RCode	Sale Price
2/28/2006	1075/2296	WD	I	Q		$144,000.00
9/20/2005	1059/182	WD	I	Q		$115,000.00

Building Characteristics

Bldg Item	Bldg Desc	Year Blt	Ext. Walls	Heated S.F.	Actual S.F.	Bldg Value
1	SINGLE FAM (000100)	2005	Common BRK (19)	1360	1908	$83,068.00
	Note: All S.F. calculations are based on exterior building dimensions.					

Extra Features & Out Buildings

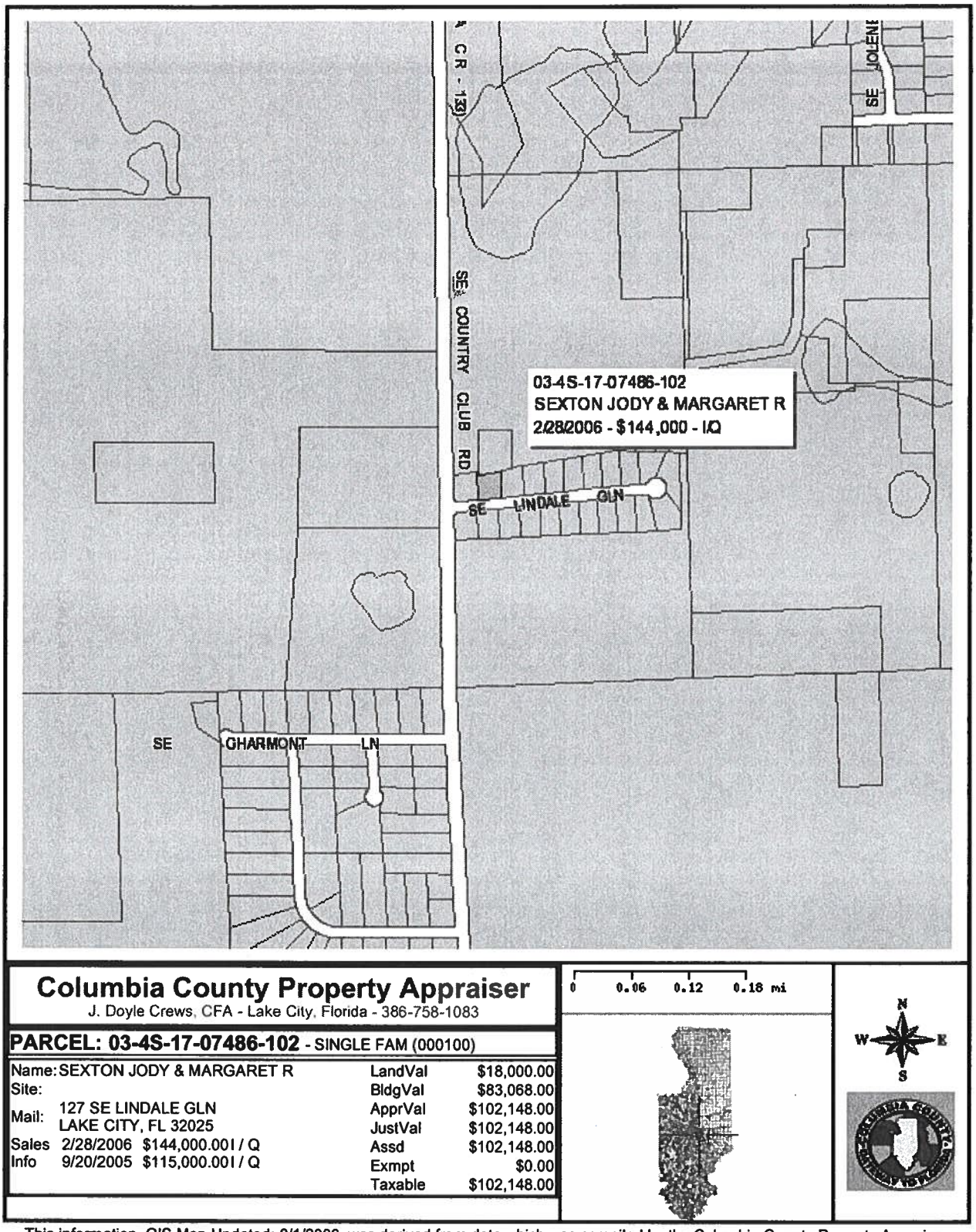
Code	Desc	Year Blt	Value	Units	Dims	Condition (% Good)
0166	CONC,PAVMT	2005	$1,080.00	540.000	10 x 54 x 0	(.00)

Land Breakdown

Lnd Code	Desc	Units	Adjustments	Eff Rate	Lnd Value
000100	SFR (MKT)	1.000 LT - (.460AC)	1.00/1.00/1.00/1.00	$18,000.00	$18,000.00

Columbia County Property Appraiser DB Last Updated: 8/1/2006

1 of 1



Columbia County Property Appraiser

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

PARCEL: 03-4S-17-07486-102 - SINGLE FAM (000100)

Name:	SEXTON JODY & MARGARET R	LandVal	$18,000.00
Site:		BldgVal	$83,068.00
Mail:	127 SE LINDALE GLN LAKE CITY, FL 32025	ApprVal	$102,148.00
		JustVal	$102,148.00
Sales	2/28/2006 $144,000.00 I / Q	Assd	$102,148.00
Info	9/20/2005 $115,000.00 I / Q	Exmpt	$0.00
		Taxable	$102,148.00

This information, GIS Map Updated: 8/1/2006, 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.

(1)

Prepared by:
Elaine R. Davis / Megan Marable
American Title Services of Lake City, Inc.
330 SW Main Boulevard
Lake City, Florida 32025

File Number: 06-205

Inst:2006005099 Date:03/01/2006 Time:15:31
Doc Stamp-Deed : 1008.00
1.2 DC,P.DeWitt Cason,Columbia County B:1075 P:2296

Warranty Deed

Made this February 28, 2006 A.D.

By **Laura Taylor Goes and Libronio Goes, wife and husband,** whose address is: 283 SW Creekside Lane, Lake City, Florida 32025, hereinafter called the grantor,

to **Jody Sexton and Margaret R. Sexton, husband and wife,** whose post office address is: 127 SE Lindale Glenn, Lake City, Florida 32025, hereinafter called the grantee:

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

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

Lot 2, of Plat of Haight-Ashbury Subdivision, according to the Plat thereof, as recorded in Plat Book 7, at Page 185, of the Public Records of Columbia County, Florida

Parcel ID Number: **07486-001**

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

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

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

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

Signed, sealed and delivered in our presence:

Megan Marable
Witness Printed Name Megan Marable

Kimberly A Albritton
Witness Printed Name Kimberly A. Albritton

Laura Taylor Goes (Seal)
Laura Taylor Goes
Address: 283 SW Creekside Lane, Lake City, Florida 32025

Libronio Goes (Seal)
Libronio Goes
Address:

State of Florida
County of Columbia

The foregoing instrument was acknowledged before me this 28th day of February, 2006, by Laura Taylor Goes and Libronio Goes, wife and husband, who is/are personally known to me or who has produced Drivers Licenses as identification.

Megan M. Marable
Notary Public
Print Name:

My Commission Expires:

MEGAN M MARABLE
MY COMMISSION # DD412865
EXPIRES: Mar. 30, 2009
(407) 398-0153 Florida Notary Service.com

Test Results: (Continued)

Paragraph	Title of Test - Test Method	Results	Allowed
2.1.8	Forced Entry Resistance per ASTM F 588-97		
	Type: A Grade: 10		
	Lock Manipulation Test	No entry	No entry
	Test A1 thru A5	No entry	No entry
	Test A7	No entry	No entry
	Lock Manipulation Test	No entry	No entry
	Optional Performance		
4.4.1	Uniform Load Deflection per ASTM E 330 (Measurements reported were taken on the meting rail) (Loads were held for 52 seconds)		
	@ 45.0 psf (positive)	0.91"*	0.29" max.
	@ 45.0 psf (negative)	0.97"*	0.29" max.
4.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the meeting rail) (Loads held for 10 seconds)		
	@ 67.5 psf (positive)	0.14"	0.20" max.
	@ 67.5 psf (negative)	0.19"	0.20" max.
4.4.2	@ 70.8 psf (negative)	0.20"	0.20" max.

* *Exceeds L/175 for deflection, but meets 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

MAH:baw
01-40351.03

Allen N. Reeves, P.E.
Director - Engineering Services
15 FEBRUARY 2002

ALLEN N. REEVES
CERTIFICATE NO. 19354
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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 and secured with PVC snap-in glazing beads.

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

ITS Intertek Testing Services

Test Data Review Certificate

Certificate #3026447C

This certifies that Intertek Testing Services/ETL Semko has reviewed structural load test data and documentation supplied by Masonite/Premdor Exterior Door Products on the product lines indicated below to determine the appropriate design load and impact ratings as specified by Miami-Dade County, Florida Protocol PA201, PA202 and PA203.

The data supplied was reviewed for applicability in support of the data contained in the Masonite/Premdor Product Performance Data Manual for the product line and product models indicated below. ITS/ETL Semko certifies that the test reports provided are consistent with the Masonite Certificate of Performance sheets (COP's) contained in the product performance data manual specified herein. The attached Masonite/Premdor COP/Test Report Validation Matrices (uniquely numbered by product model) provides correlation information for each product model reviewed indicating the test lab, report number(s), product size and installation information and ratings for design load and applicability of the large missile impact test. All applicable COP's and Matrices must bear the Warnock Hersey verification stamp .

Product Line: **Entergy Entry Doors**

Product Models:

Wood-Edge Steel Door	**(Matrix #3026447C-001)**
Metal-Edge Steel Door	**(Matrix #3026447C-002)**
Fiberglass Door	**(Matrix #3026447C-003)**

ITS/ETL-Semko has no direct knowledge of the tests conducted and has made no attempt to verify the accuracy or correctness of the data submitted. The review conducted was only to determine that the manufacturer's claims as represented in the COP's are correct representations of the data supplied from the laboratories. ITS/ETL Semko's review was for structural performance results only and did not include review of air infiltration or water penetration test results.

ISSUED: 6-14-02

BY: _____

Jim Turgeson, Project Manager

MI HOME PRODUCTS

- PRIME ALUMINUM WINDOWS -

INSTALLATION INSTRUCTIONS FOR "NAIL FIN" PRODUCTS

MI Home Products appreciates your recent purchase of a maintenance free prime window, which will not rust, rot, mildew, or warp. This is a quality product that left our factory in good condition – proper handling and installation are just as important as good design and workmanship. Please follow these recommendations to allow this product to complete its function.

1. Handle units one at a time in the closed and locked position and take care not to scratch frame or glass or to bend the nailing fin.

2. Set unit plumb and square into opening and make sure that there is 3/16" ± 1/16" clearance around the frame. Fasten unit into opening in the closed and locked position, making sure that fasteners are screwed in straight in order to avoid twisting or bowing of the frame. Make sure that sill is straight and level. Check operation of unit before any and all fasteners are set.

3. Use # 8 sheet metal or wood screws with a minimum of 1" penetration into the framing (stud). Place first screws (two at each corner) 3" from end of fin. For positive and negative DPs (design pressures) up to 35, do not exceed 24" spacing of additional screws. For DPs from 35.1 to 50, do not exceed 18". Install load bearing shim adjacent to each anchor. Use shim where space exceeds 1/16".

4. Flash over head and caulk outside perimeter in accordance with code requirements and good installation practices.

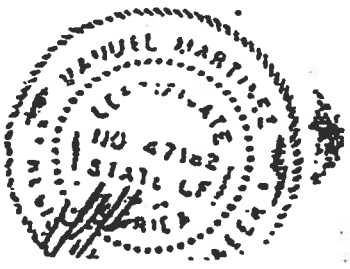
5. Fill voids between frame and construction with loose batten type insulation or <u>non-expanding</u> aerosol foam specifically formulated for windows and doors to eliminate drafts. The use of <u>expanding</u> aerosol type insulating foam, which can bow the frame, waives all stated warranties.

6. Remove plaster, mortar, paint and any other debris that may have collected on the unit and make sure that sash/vent tracks and interlocks are also clear. Do not use abrasives, solvents, ammonia, vinegar, alkaline, or acid solutions for clean-up, especially with insulated glass units as their use could cause chemical breakdown of the glass seal. Take care not to scratch glass; scratches severely weaken glass and it could eventually break from thermal expansion and contraction. Clean units with water and mild detergent as you would you automobile.

- CAUTION -

MI Home Products or its representatives are unable to control and cannot assume responsibility for the selection and placement of their products in a building or structure in a manner required by laws, statutes, and/or building codes. The purchaser is solely responsible for knowledge of and adherence to the same. MI Home Products window products are not provided with safety glazing unless specifically ordered with such. Many laws and codes require safety glazing near doors, bathtubs, and shower enclosures. Also be aware of emergency egress code requirements.

Corporate Headquarters:
650 West Market St.
Gratz, PA 17030-0370
(717) 365-3300



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

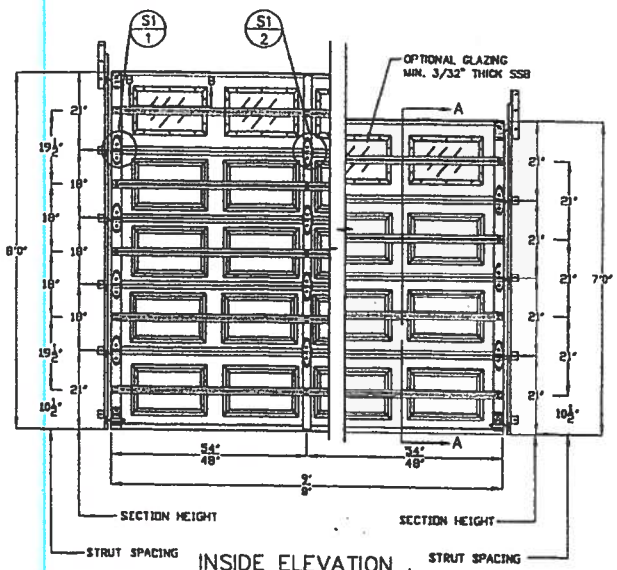
Reference should be made to Report No. 01-41134.01 dated 03/26/02 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

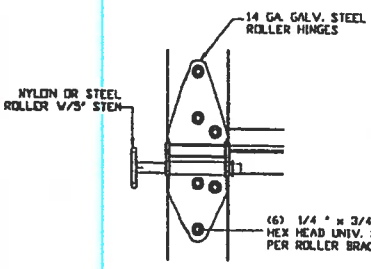
Mark A. Hess, Technician

MAH:nlb

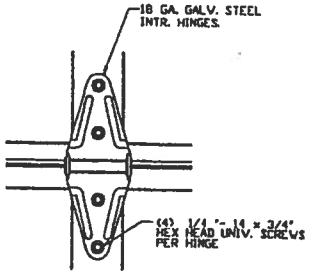
9x7



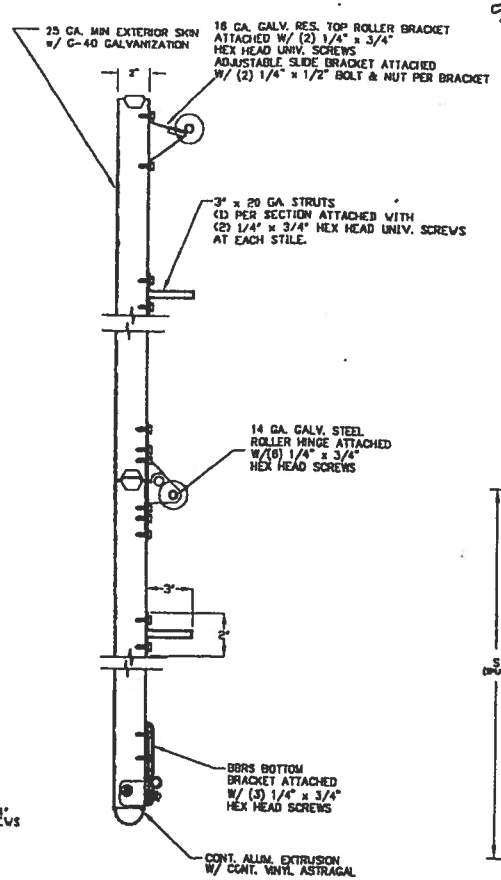
INSIDE ELEVATION



TYP. ROLLER BRACKET S1 1
N.T.S.



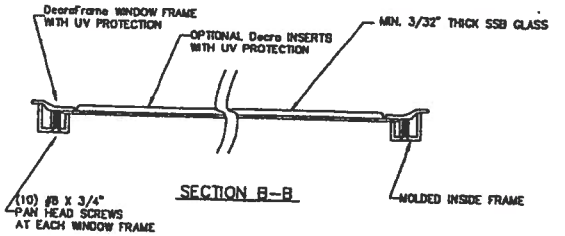
TYP. HINGE CONNECTION S1 2
N.T.S.

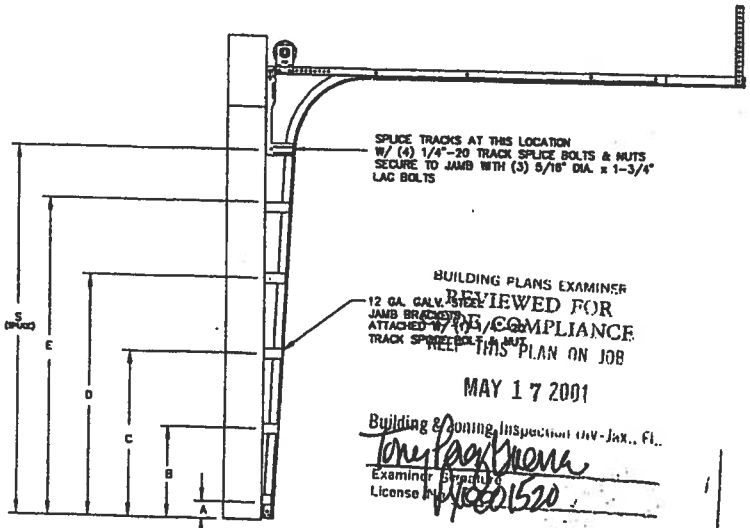


SECTION A-A (SIDE VIEW)

GLAZING OPTION CROSS SECTION

TEST No. SBC-580-011 ON OCTOBER 12, 1995 INCLUDED GLASS WINDOWS IN THE DOOR BEING USED. THE TEST PRESSURES WERE +48.4 PSF AND -54.7 PSF. BY COMPARISION, FOUR (4) WINDOWS MAY BE INSTALLED IN (1) ONE SECTION OF THE 9' X 7' AND 9' X 8' MODEL 600 AND 850 DOORS.



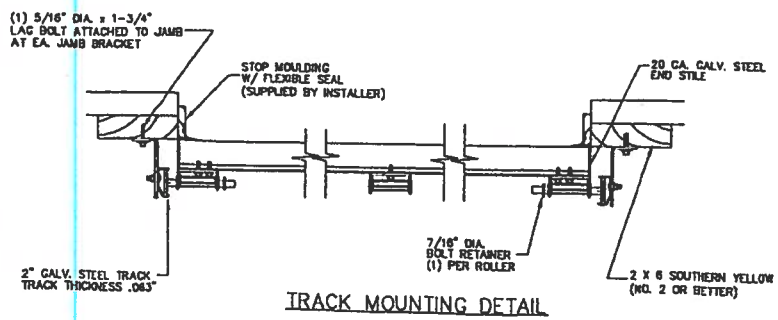


TRACK CONFIGURATION FOR 6'6" UP TO 8' TALL DOORS

JAMB BRACKET LOCATIONS

	A	B	C	D	E	S
6'-6"	4"	21-1/2"	39"	57"		70"
7'-0"	4"	21-1/2"	42"	63"		76"
7'-6"	4"	18"	36"	54"	72"	82"
8'-0"	4"	21-1/2"	39"	57"	75"	88"

BUILDING PLANS EXAMINER
REVIEWED FOR
FBC/ENERGY COMPLIANCE
KEEP THIS PLAN ON JOB
MAY 17 2001
Building & Zoning Inspection Dept., Jax., Fl.
Examiner Signature
License #



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 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C.

VERTICAL JAMB ATTACHMENT TO 2,000 PSI CONCRETE
HILTI KWIK BOLT 3/8" X 4" STARTING 6" FROM ENDS THEN 24" O.C.
HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS THEN 24" O.C.
ITW/RAMSET RED HEAD 3/8" X 3" STARTING 6" FROM ENDS THEN 24" O.C.

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

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

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. (.019") MIN. ROLL FORMED LIGHT COMMERCIAL QUALITY, C-40 GALVANIZATION.
3. DOORS UP TO 7'0" HIGH CONSIST OF (4) SECTIONS AS SHOWN.
4. DOORS UP TO 8'0" HIGH CONSIST OF (5) SECTIONS AS SHOWN.
5. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTRED 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 SECTION 1605 WIND LOAD DESIGN CRITERIA THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING THE FOLLOWING PARAMETERS:
   A. BASIC WIND SPEED OF 110 MPH
   B. DOOR CAN BE INSTALLED WITH 5 FEET OF DOORS WIDTH INSIDE THE EDGE STRIP.
   C. 15' MEAN ROOF HEIGHT AT ANY SLOPE
   D. USE FACTOR OF 1.0
   E. EXPOSURE RATING OF C

MAX SIZE 9' x 8'

DESIGN LOADS +28.7 PSF -31.3 PSF

TEST LOADS +43.0 PSF -46.8 PSF

REV	DESCRIPTION OF REVISION	DATE

Amarr Garaga Doors

MODEL #600 STRATFORD
MODEL #850 HERITAGE III

SIZE	DRAWN BY	DATE	DRAWING NUMBER
B	CHECKED BY	DATE	SBC-580-00

SCALE: AS SHOWN | SHEET 1 OF 1

WOOD-EDGE STEEL DOORS

CERTIFIED TEST REPORTS:

NCTL 210-1864-5, 6

Certifying Engineer and License Number: Barry D. Portney, P.E. / 16258.

Unit Tested in Accordance with Miami-Dade BCCO PA201, PA202 and PA203.

Door panels constructed from 26-gauge 0.017" thick steel skins. Both stiles constructed from wood. Top end rails constructed of 0.032" steel. Bottom end rails constructed of 0.032" steel. Interior cavity of slab filled with rigid polyurethane foam core.

Frame constructed of wood with an extruded aluminum threshold.

PRODUCT COMPLIANCE LABELING:

TESTED IN ACCORDANCE WITH
MIAMI-DADE BCCO
PA201, PA202 & PA203

COMPANY NAME
CITY, STATE

To the best of my knowledge and ability the above side-hinged exterior door unit conforms to the requirements of the 2001 Florida Building Code, Chapter 17 (Structural Tests and Inspections).

Kurt L Balthazor

State of Florida, Professional Engineer
Kurt Balthazor, P.E. – License Number 56533

Test Data Review Certificate #3026447C and COP/Test Report Validation Matrix #3026447C-001 provides additional information - available from the ITS/WH website (www.etlsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Entergy
Entry Systems

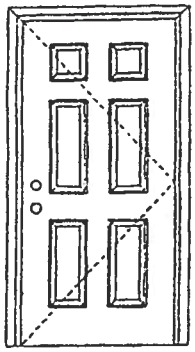
June 17, 2002
Our continuing program of product improvement makes specifications, design and product detail subject to change without notice.

PREMDOR Collection
Premium Quality Doors

Exclusively from Masonite
Masonite International Corporation

WOOD-EDGE STEEL DOORS

APPROVED ARRANGEMENT:



Note:
Units of other sizes are covered by this report as long as the panel used does not exceed 3'0" x 6'8".

Test Data Review Certificate #3026447C and COP/Test Report Validation Matrix #3026447C-001 provides additional information - available from the ITS/WH website (www.etlsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Single Door
Maximum unit size = 3'0" x 6'8"

Design Pressure
+76.0/-76.0
limited water unless special threshold design is used

Large Missile Impact Resistance
Hurricane protective system (shutters) is NOT REQUIRED.

Actual design pressure and impact resistant requirements for a specific building design and geographic location is determined by ASCE 7-national, state or local building codes specify the edition required.

MINIMUM ASSEMBLY DETAIL:

Compliance requires that minimum assembly details have been followed – see MAD-WL-MA0001-02.

MINIMUM INSTALLATION DETAIL:

Compliance requires that minimum installation details have been followed – see MID-WL-MA0001-02.

APPROVED DOOR STYLES:


Flush


Arch Top 3-panel


6-panel


New England 4-panel

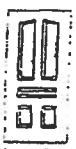

Eyebrow 4-panel


8-panel


9-panel


5-panel


5-panel with scroll


Eyebrow 5-panel


Eyebrow 5-panel with scroll

Entergy
Entry Systems

June 17, 2002
Our continuing program of product improvement makes specifications, design and product detail subject to change without notice.

PREMDOR Collection Premium Quality Doors

Exclusively from Masonite
Masonite International Corporation

TEST RESULTS

Par. No.	Title of Test & Method	Measured	Allowed
	Air Infiltration - ASTM E283 1.57 psf (25 mph)	Pass	Pass / Fail
2.1.3	Water Resistance - ASTM E547 5.0 GPH/FT² WTP= 3.0 psf	No Leakage	No Leakage
2.1.4.2 *	Uniform Load Structural - ASTM E330 30.0 psf Exterior 30.0 psf Interior	 0.000" 0.000"	 0.285" 0.285"
	Forced Entry Resistance (see Appendix A for results)	Meets as Stated	

OPTIONAL PERFORMANCE

4.3	Water Resistance - ASTM E547 5.0 GPH/FT² WTP= 7.50 psf	No leakage	No Leakage
	Uniform Load Structural - ASTM E330 75.0 psf Exterior 75.0 psf Interior	 0.000" 0.000"	 0.285" 0.285"
	No glass breakage or permanent damage causing the unit to be inoperable		

TEST COMPLETED 07/15/98

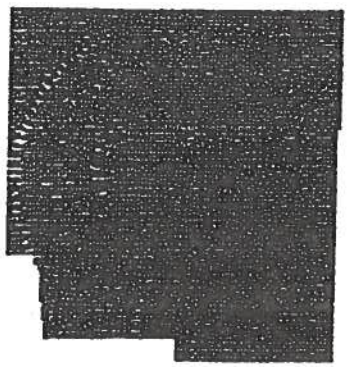
The tested specimen meets (or exceeds) the performance levels specified in Table 2.1 of AAMA/NWWDA 101/I.S.2-97 for air infiltration. The listed results were secured by using the designated test methods and indicate compliance with the performance requirements of the referenced specification paragraphs for the F-C50 72x72 product designation.

Detailed drawings were available for laboratory records and compared to the test specimen at the time of this report. A copy of this report along with representative sections of the test specimen will be retained by NCTL for a period of four (4) years. The results obtained apply only to the specimen tested. No conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen may be drawn from this test. This report does not constitute certification of the product which may only be granted by a certification program validator.

NATIONAL CERTIFIED TESTING LABORATORIES

Wayne Breighner
Manager, Great Lakes

Barry Portnoy, P.E.
5767 Major Boulevard
Orlando, FL 32819

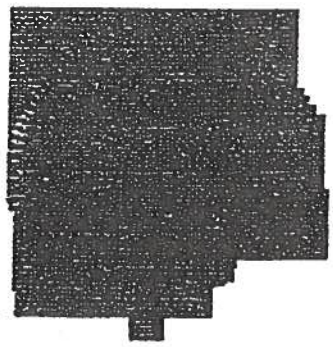


APPENDIX A
Forced Entry Resistance Test Results

Test Method: *ASTM F588-97, "Standard Test Methods For Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact."*

Test Results

Paragraph No.	*Loads*	*Duration*	*Measured*	*Allowed*
10.2.4.2	*N/A*	*5 Minutes*	*No Entry*	*No Entry*



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

Rendered to:

MI HOME PRODUCTS, INC.

SERIES/MODEL: 740/744
TYPE: Aluminum Single Hung Window with Flange

Title of Test	Results
Rating	H-R45 53 x 73
Overall Design Pressure	45 psf
Operating Force	23 lbs max.
Air Infiltration	0.10 cfm/ft^2
Water Resistance	6.75 psf
Structural Test Pressure	+67.5 psf -70.8 psf
Deglazing	Passed
Forced Entry Resistance	Grade 10

Reference should be made to Report No. 01-40351.04 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

Mark A. Hess

Mark A. Hess, Technician

MAH:baw

Allen M. Reeves
15 FEBRUARY 2002

ALLEN M. REEVES
No. 19354
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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

Paragraph	Title of Test - Test Method	Results	Allowed
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.

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

Paragraph	Title of Test - Test Method	Results	Allowed
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.

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

Allen 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.

NATIONAL CERTIFIED TESTING LABORATORIES

1464 GEMINI BOULEVARD • ORLANDO, FLORIDA 32837
PHONE (407) 240-1356 • FAX (407) 240-8882

IN-PLANT WITNESS
STRUCTURAL PERFORMANCE TEST REPORT

Report No:	*NCTL-310-0005-2.1*
Test Date:	*07/14/98*
Report Date:	*08/03/98*
Expiration Date:	*07/30/02*
Revision Date:	*09/29/98*

Client: *Metal Industries Home Products*
650 West Market Street
Gratz, PA 17030

Test Specimen: Betterbilt, Inc.'s Series "BB165/740/744" Fixed Lite Aluminum Prime Window (F. C50 72 x 72). This unit was fin mounted and is "valid for tempered glass only."

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

Test Site: Betterbilt, Smyrna, TN, all calibrations were performed before testing.

TEST SPECIMEN DESCRIPTION

General: The test specimen was an aluminum prime window measuring 71-1/4" wide by 71-1/4" high overall. The fixed lite was glazed to the frame members, providing a viewing area of 69" wide by 69" high. The frame was of double screw (#8x5/8) butt-type corner construction. From the interior view the left corners were sealed with small joint sealant and the right corners employed gasket tape.

Glazing: The lite was interior glazed using 3/16" clear tempered glass with a butyl tape back-bedding, a vinyl bulb gasket, and an extruded aluminum glazing bead. The glazing bead was fastened with #8x7/8 screws every 8".

Weatherseals: No weatherseals employed.

Weeps: No apparent weeps employed.

Interior & Exterior Surface Finish: Mill finished aluminum.

Sealant: The left frame corners were sealed with a small-joint sealant and the right frame corners employed gasket tape.

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 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.

Mark Disosway, P.E.
POB 868, Lake City, FL 32056, Ph 904-754-5419, Fax 904-754-6749

WIND LOAD ENGINEERING - SBC 1997, Section 1606 - 100 MPH Wind Speed – Exposure C - 1.0 Use Factor

Reference: Design Drawings, Floor Plan with shear wall segments identified is attached. Hip roof.

Component	Description	Anchors, Connectors, Reinforcement *
Footings and Foundations		
Strip footing	20"Wx10"D poured concrete	2-#5 bars, continuous. Footing may be stepped for grade variations.
Concrete block stem wall	8"x8"x16" block, running bond, w/ header block, fully grouted.	#5 vertical dowel at corners and 96"OC max. Dowels w/ std hook in footing and slab. Max 5 courses; min 1 course.
Porch footing	12"Wx12"D turned down edge monolithic.	2-#5 bars, continuous.
Monolithic, opt.	12"Wx18"D monolithic for wood ext. or 12"Wx16"D w/ 4" brick ledge.	2-#5 bars, continuous
Floor System	4" concrete, poured monolithic with stem wall grout.	6"x6"-10/10 welded wire mesh, overlap slab edge bar. 1-#5 bar, continuous, in slab edge / stem wall header block.
Notes:	3000psi concrete. Grade40 bars 25"lap.	Embedded anchors in poured concrete; see applicable components.
Roof System		
Trusses / Girders	Wood trusses with engineering design provided by truss manufacturer.	Select hurricane clips based on truss engineering uplift reactions. Strap rafters to trusses with min uplift 450lb each end.

Uplift force, lb.	Top connector - Simpson≠			Bottom connector - Simpson≠	
≤ 415	H2.5	10 – 8d	415	No special connector required.	
≤ 750	H16 or HDPT1	6 – 10d, 1½"	750	No special connector required.	
≤ 905	H10	16 – 8d, 1½"	905	SP4 top and bottom at 6'OC	760
≤ 1250	H16 or HDPT1	10 – 10d, 1½"	1250	SP4 top and bottom at 4'OC	760
≤ 1245	HTS20	24 – 10d, 1½"	1245	LTT19 w/8 – 16d + ½"AB	1080
≤ 2490	2 - HTS20	24 – 10d, 1½"	2490	HD2A-2.5", 5/8"AB	2565
Uplift greater than 2500 lb requires engineering approval.					

Roof sheathing diaphragm.	7/16"OSB perpendicular to trusses	Nailed to roof framing with 8d common nails 6"OC edges, 12"OC field, 4"OC gables.

CERTIFICATION:
I hereby certify that the accompanying Wind Load Analysis for [redacted] House - Hill Plan 3 - Lot 2, Blk B, Smithfield Estates demonstrates compliance with SBCCI "Standard Building Code", Section 1606, to the best of my knowledge.

Revision A – Add 32' x 5' porch.

Mark Disosway
19APR01

Mark D. Disosway III
Florida Registered P.E. No.53915

Component	Description	Anchors, Connectors, Reinforcement *
Shear Wall Segments		
Sole plate	2x4 PT pine bearing on foundation wall.	Anchor bolts 1/2"-A307 w/7"embedment, 1st -8"from corner, then 48"OC.
Studs	SPF No.1&2 at 16"OC (1-2x4 to 10', 2-2x4 to 12.5'), 1-2x6 to 16'. 2-2x6 to 21')	1 - SP4 hold down on bottom of corner studs at each end of walls with shear wall segments. (Note: Add SP4 top and bottom at corners, openings, and 48"OC for Columbia County.)
Double top plate	2 - 2x4 SPF No.1&2	Overlap splices 4'; nail splice with2-16d common nails 12"OC.
Sheathing	7/16"OSB, 48"W placed vertically, continuous from top plate to sole plate.	8d common nails, 4"OC top, 4"OC bot, 4"OC edge, 8"OC field. (OSB must cover top plate or use LSTA9 at 32"OC.)
Other walls		
Exterior walls	Same as shear walls.	Same as shear walls.
Headers with uplift	Header design per SBC.	Select connectors for top and bottom of header studs based on truss manufacturer's engineered uplift reactions. End nail header to each header stud with 6 – 12d.*
	To determine uplift at each end of header, total uplifts for all trusses bearing on header and divide by 2. * (Example connectors table below.)	Uplift force, lb. / Top connector / Bottom connector
		≤ 800 / End nail with 6 – 12d. / SP4, 6 – 10d / 690
		≤ 1500 / LSTA12 / 755 / 2 - SP4, 6–10d-1½",½"AB. / 1380
		≤ 1750 / 1-LSTA18 / 1055 / LTT20B-nail / 1750
		≤ 2500 / 2-LSTA18 / 2110 / HD2A-2.5" / 2565
		Uplift greater than 2500 lb requires engineering approval.
Cripples	2x4 SPF No.1&2 W/ 7/16"OSB	Sheathing nailing alone is adequate for uplift. 8d nails 4"OC
Porches		
Porch posts	Typical post spacing 8'; porch width 5'.	Select post anchors and hold down straps for 1600 lb uplift reactions. (Examples table below.)
		Uplift force, lb. / Anchors (for stated load) / Hurricane straps (for stated load)
		1055 / LTT19 / 1205 lb / LSTA18 / 1055 lb
		2110 / ABU44 / 2200 lb / 2xLSTA18 / 2110 lb
		1800 / ABU44 / 2200 lb / LCE4 / 1800 lb
Porch beams	Beam design per SBC. 2-2x6 is OK for <200 plf vertical load w/8'span.	Select connectors based on uplift reactions.
Porch rafters	2x4 SPF#2 with 5' span (support at beam, wall, and top chord of truss).	20ga x 1.25" strap each end with 8 – 8d, 400 lb uplift.

≠ Manufacturer and product number for connectors, anchors, and reinforcement are listed for example not endorsement. An equivalent device of the same or other manufacturer can be substituted for any devices listed in the example tables as long as it meets the required load capacities. Manufacturer's installation instructions must be followed to achieve rated loads.

* It is the builder's responsibility to provide a continuous load path from trusses to foundation.

* Since truss engineering was not complete at the time of this analysis, it is the builder's responsibility to select uplift connections based on truss engineering uplift and provide footings for interior bearing walls identified on truss engineering. Builder is to furnish truss engineering to wind load engineer for review of truss reactions on the building structure.

* Since site conditions are not known at the time of this analysis, it is the builder's responsibility to verify soil and clean fill are compacted to provide 2000 psf minimum bearing capacity.

RIGHT-J CALCULATION PROCEDURES A, B, C, D
Entire House
COUNTRY COMFORT HEATING & A. C.

Job: 5-8-01

RT. 18 BOX 360, LAKE CITY, FL 32025 Phone: 904-752-5841

Procedure A - Winter Infiltration HTM Calculation*

1.	Winter infiltration AVF								
	1.0	ach	x	10080	ft³	x 0.0167	=	168	cfm
2.	Winter infiltration load								
	1.1	x168	cfm	x 45	°F	Winter TD =		8333	Btuh
3.	Winter infiltration HTM								
	8333	Btuh	/	109	ft²	Total window and door area =		76.4	Btuh/ft²

Procedure B - Summer Infiltration HTM Calculation

1.	Summer infiltration AVF								
	0.5	ach	x	10080	ft³	x 0.0167	=	84	cfm
2.	Summer infiltration load								
	1.1	x84	cfm	x 25	°F	Summer TD =		2315	Btuh
3.	Summer infiltration HTM								
	2315	Btuh	/	109	ft²	Total window and door area =		21.2	Btuh/ft²

Procedure C - Latent Infiltration Gain

0.68	x52	gr/lb	moist.diff.	x	84 cfm	=	2952 Btuh

Procedure D - Equipment Sizing Loads

1. Sensible sizing load

Sensible ventilation load			
1.1 x 0 cfm vent. x 25 °F Summer TD	=	0	Btuh
Sensible load for structure (Line 19)	+	15198	Btuh
Sum of ventilation and structure loads	=	15198	Btuh
Rating and temperature swing multiplier	x	1.05	
Equipment sizing load - sensible	=	15958	Btuh

2. Latent sizing load

Latent ventilation load			
0.68 x 0 cfm vent. x 52 gr/lb moist.diff.	=	0	Btuh
Internal loads = 230 Btuh x 14 people	+	3220	Btuh
Infiltration load from Procedure C	+	2952	Btuh
Equipment sizing load - latent	=	6172	Btuh

*Construction Quality is: a No. of Fireplaces is: 0

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

RIGHT-J LOAD AND EQUIPMENT SUMMARY
Entire House
COUNTRY COMFORT HEATING & A. C.

Job: 5-8-01

RT. 18 BOX 360, LAKE CITY, FL 32025 Phone: 904-752-5841

Project Information

For: Jeffery Hill
LAKE CITY, FL

Notes: INSTALL NEW HEAT PUMP SYSTEM

Design Information

Weather: Jacksonville, Cecil Field NAS, FL, US

Winter Design Conditions

Outside db	***25***	°F
Inside db	70	°F
Design TD	45	°F

Summer Design Conditions

Outside db	***100***	°F
Inside db	75	°F
Design TD	25	°F
Daily range	M	
Relative humidity	50	%
Moisture difference	52	gr/lb

Heating Summary

Building heat loss	22436	Btuh
Ventilation air	0	cfm
Ventilation air loss	0	Btuh
Design heat load	22436	Btuh

Sensible Cooling Equipment Load Sizing

Structure	15198	Btuh
Ventilation	0	Btuh
Design temperature swing	3.0	°F
Use mfg. data	n	
Rate/swing multiplier	1.05	
Total sens. equip. load	15958	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	1260	1260
Volume (ft³)	10080	10080
Air changes/hour	1.0	0.5
Equiv. AVF (cfm)	168	84

Latent Cooling Equipment Load Sizing

Internal gains	3220	Btuh
Ventilation	0	Btuh
Infiltration	2952	Btuh
Total latent equip. load	6172	Btuh
Total equipment load	22130	Btuh

Heating Equipment Summary

Make Amana
Trade TempAssure
RHA24B2A

Efficiency	6.8 HSPF	
Heating input		
Heating output	22000	Btuh @ 47°F
Heating temp rise	27	°F
Actual heating fan	753	cfm
Heating air flow factor	0.034	cfm/Btuh

Space thermostat

Cooling Equipment Summary

Make Amana
Trade TempAssure
RHA24B2A
CCF24FCC+BBA24A2A

Efficiency	10.1 SEER	
Sensible cooling	15820	Btuh
Latent cooling	6780	Btuh
Total cooling	22600	Btuh
Actual cooling fan	753	cfm
Cooling air flow factor	0.050	cfm/Btuh
Load sensible heat ratio	71	%

Bold/Italic values have been manually overridden

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

RIGHT-J WINDOW DATA

COUNTRY COMFORT HEATING & A. C.

Job: 5-8-01

RT. 18 BOX 360, LAKE CITY, FL 32025 Phone: 904-752-5841

WND W	SKY	DIR	WALL	GLAZ	LOWE	STRM	SHAD	OVHG	NGLZ	ANGL	SHCO	OVRX	OVRY	WHGT	CHTM	WNAR	SHAR
BR 3																	
a	n	n	a	c	n	0	d	1	2	90	1.0	1.5	1.0	5.0	18.0	15.0	0.0
BR 2																	
a	n	s	a	c	n	0	d	1	2	90	1.0	1.5	1.0	5.0	27.0	15.0	0.7
LR																	
a	n	n	a	c	n	0	d	1	2	90	1.0	1.5	1.0	5.0	18.0	15.0	0.0
MA BR																	
a	n	s	a	c	n	0	d	1	2	90	1.0	1.5	1.0	5.0	27.0	15.0	0.7
Room7																	
Ma Bath																	
a	n	w	a	c	n	0	n	1	2	90	1.0	1.5	1.0	3.0	74.0	4.0	0.3
WIC																	
KIT																	
a	n	n	a	c	n	0	d	1	2	90	1.0	1.5	1.0	3.0	18.0	9.0	0.0
Family Rm																	
a	n	s	a	c	n	0	d	1	2	90	1.0	1.5	1.0	5.0	27.0	15.0	0.7

RIGHT-J WORKSHEET
Entire House
COUNTRY COMFORT HEATING & A. C.

Job: 5-8-01

RT. 18 BOX 380, LAKE CITY, FL 32025 Phone: 904-752-5841

MANUAL J: 7th Ed.

					Entire House			BR 3			BR 2			LR		
1	Name of room															
2	Length of exposed wall				117.7 ft			27.0 ft			11.8 ft			13.8 ft		
3	Room dimensions							14.0 x 13.0 ft			1.0 x 173.0 ft			1.0 x 173.0 ft		
4	Ceilings	Condit. Option			8.0 ft	heat/cool	d	8.0 ft	heat/cool		8.0 ft	heat/cool		8.0 ft	heat/cool	
	TYPE OF EXPOSURE		CST NO.	HTM Htg	HTM Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg
5	Gross Exposed walls and partitions	a	12C	4.1	2.6	941	****	****	216	****	****	95	****	****	111	****	****
		b		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
		c		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
		d		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
		e		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
		f		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
6	Windows and glass doors Heating	a	3C	32.6	**	88	2871	****	15	489	****	15	489	****	15	489	****
		b		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
		c		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
		d		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
		e		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
		f		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
7	Windows and glass doors Cooling	North			18.1	42	****	750	15	****	270	1	****	13	15	****	270
		NE/NW			0.0	0	****	0	0	****	0	0	****	0	0	****	0
		E/W			74.0	4	****	272	0	****	0	0	****	0	0	****	0
		SE/SW			0.0	0	****	0	0	****	0	0	****	0	0	****	0
		South			27.0	43	****	1155	0	****	0	14	****	385	0	****	0
		Horz			0.0	0	****	0	0	****	0	0	****	0	0	****	0
8	Other doors	a	10G	30.2	19.2	21	633	402	0	0	0	0	0	0	21	633	402
		b		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
9	Net exposed walls and partitions	a	12C	4.1	2.6	832	3371	2142	201	814	517	80	323	205	75	302	192
		b		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		d		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		e		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		f		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
10	Ceilings	a	16G	1.5	1.6	1260	1871	2037	182	270	294	178	264	288	178	264	288
		b		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		d		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		e		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		f		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
11	Floors (Note: room perimeter is displ. for slab floors)	a	22A	36.5	0.0	118	4289	0	27	984	0	12	431	0	14	504	0
		b		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		d		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		e		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		f		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
12	Infiltration	a		76.4	21.2	109	8333	2315	15	1147	319	15	1147	319	36	2752	764
13	Subtotal loss=8+8..+11+12					****	21368	****	****	3705	****	****	2654	****	****	4946	****
	Less external heating					****	0	****	****	0	****	****	0	****	****	0	****
	Less transfer					****	0	****	****	0	****	****	0	****	****	0	****
14	Duct loss					5%	1068	****	5%	185	****	5%	133	****	5%	247	****
15	Total loss = 13+14					****	22436	****	****	3890	****	****	2787	****	****	5193	****
16	Int. gains: People @ 300					14	****	4200	2	****	600	2	****	600	4	****	1200
	Appl. @ 1200					1	****	1200	0	****	0	0	****	0	0	****	0
17	Subtot RSH gain=7+8..+12+16					****	****	14474	****	****	2000	****	****	1810	****	****	3117
	Less external cooling					****	****	0	****	****	0	****	****	0	****	****	0
	Less transfer					****	****	0	****	****	0	****	****	0	****	****	0
18	Duct gain					5%	****	724	5%	****	100	5%	****	90	5%	****	156
19	Total RSH gain=(17+18)*PLF					1.00	****	15198	1.00	****	2100	1.00	****	1900	1.00	****	3273
20	Air required (cfm)					****	753	753	****	131	104	****	94	94	****	174	162

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

RIGHT-J WORKSHEET
Entire House
COUNTRY COMFORT HEATING & A. C.

Job: 5-8-01

RT. 18 BOX 360, LAKE CITY, FL 32025 Phone: 904-752-5841

	MANUAL J: 7th Ed.					MA BR			Room7			Ma Bath			WIC		
1	Name of room																
2	Length of exposed wall					13.0 ft			5.0 ft			9.0 ft			12.0 ft		
3	Room dimensions					1.0 x 215.0 ft			5.0 x 9.0 ft			6.0 x 9.0 ft			6.0 x 6.0 ft		
4	Ceilings	Condit. Option				8.0 ft heat/cool			8.0 ft heat/cool			8.0 ft heat/cool			8.0 ft heat/cool		
	TYPE OF EXPOSURE		CST NO.	HTM Htg	HTM Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft²)	Load (Btuh) Htg	Load (Btuh) Clg
5	Gross Exposed walls and partitions	a	12C	4.1	2.6	104	****	****	40	****	****	72	****	****	96	****	****
		b		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
		c		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
		d		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
		e		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
		f		0.0	0.0	0	****	****	0	****	****	0	****	****	0	****	****
6	Windows and glass doors Heating	a	3C	32.6	**	15	489	****	0	0	****	4	131	****	0	0	****
		b		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
		c		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
		d		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
		e		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
		f		0.0	**	0	0	****	0	0	****	0	0	****	0	0	****
7	Windows and glass doors Cooling	North			18.1	1	****	13	0	****	0	0	****	8	0	****	0
		NE/NW			0.0	0	****	0	0	****	0	0	****	0	0	****	0
		E/W			74.0	0	****	0	0	****	0	4	****	272	0	****	0
		SE/SW			0.0	0	****	0	0	****	0	0	****	0	0	****	0
		South			27.0	14	****	385	0	****	0	0	****	0	0	****	0
		Horz			0.0	0	****	0	0	****	0	0	****	0	0	****	0
8	Other doors	a	10G	30.2	19.2	0	0	0	0	0	0	0	0	0	0	0	0
		b		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
9	Net exposed walls and partitions	a	12C	4.1	2.6	89	360	229	40	162	103	68	275	175	96	389	247
		b		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		d		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		e		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		f		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
10	Ceilings	a	16G	1.5	1.6	215	319	348	45	67	73	54	80	87	38	53	58
		b		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		d		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		e		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		f		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
11	Floors (Note: room perimeter is displ. for slab floors)	a	22A	36.5	0.0	13	474	0	5	182	0	9	328	0	12	437	0
		b		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		c		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		d		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		e		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
		f		0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
12	Infiltration	a		76.4	21.2	15	1147	319	0	0	0	4	306	86	0	0	0
13	Subtotal loss=6+8..+11+12					****	2790	****	****	411	****	****	1120	****	****	880	****
	Less external heating					****	0	****	****	0	****	****	0	****	****	0	****
	Less transfer					****	0	****	****	0	****	****	0	****	****	0	****
14	Duct loss					5%	139	****	5%	21	****	5%	56	****	5%	44	****
15	Total loss = 13+14					****	2929	****	****	432	****	****	1176	****	****	924	****
16	Int. gains: People @ 300					2	****	600	0	****	0	0	****	0	0	****	0
	Appl. @ 1200					0	****	0	0	****	0	0	****	0	0	****	0
17	Subtot RSH gain=7+8..+12+16					****	****	1894	****	****	176	****	****	627	****	****	305
	Less external cooling					****	****	0	****	****	0	****	****	0	****	****	0
	Less transfer					****	****	0	****	****	0	****	****	0	****	****	0
18	Duct gain					5%	****	95	5%	****	9	5%	****	31	5%	****	15
19	Total RSH gain=(17+18)*PLF					1.00	****	1988	1.00	****	185	1.00	****	659	1.00	****	321
20	Air required (cfm)					****	98	99	****	14	9	****	39	33	****	31	16

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

Architectural Testing

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

Rendered to:

MI HOME PRODUCTS, INC.
P.O. Box 370
Gratz, Pennsylvania 17030-0370

Report No: 01-40351.03
Test Dates: 10/22/01
And: 10/23/01
Report Date: 02/15/02
Expiration Date: 10/23/05

Project Summary: Architectural Testing, Inc. (ATI) was contracted by MI Home Products, Inc. to witness performance testing on a Series/Model 740/744, aluminum single hung window at MI Home Products, Inc.'s test facility in Elizabethville, Pennsylvania. The sample tested successfully met the performance requirements for a H-R45 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: 740/744

Type: Aluminum Single Hung Window With Nail Fin

Overall Size: 4' 4-1/8" wide by 5' 11-5/8" high

Active Sash Size: 4' 2-3/4" wide by 2' 11-5/8" high

Fixed Daylight Opening Size: 4' 1-1/8" wide by 2' 9" high

Screen Size: 4' 1-7/8" wide by 2' 11-5/16" high

Finish: All aluminum was polished.

Glazing Details: The active sash and fixed lite were glazed with one sheet of 1/8" thick clear tempered glass. Each sash was channel glazed using a flexible vinyl gasket.

ALLEN M. REEVES
CERTIFICATE
NO. 19354
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Allen M. Reeves

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

Test Specimen Description: (Continued)

Weatherstripping:

Description	Quantity	Location
0.330" high by 0.187" backed polypile with center fin	1 Row	Fixed meeting rail interlock
0.170" high by 0.187" backed polypile with center fin	1 Row	Fixed lite, stiles and top rail
3/8" diameter hollow bulb gasket	1 Row	Bottom rail
0.310" high by 0.187" backed polypile with center fin	1 Row	Active sash stiles
0.150" high by 0.187" wide polypile	1 Row	Active sash stiles

Frame Construction: All frame members were constructed of extruded aluminum with coped, butted and sealed corners fastened with two screws each. Fixed meeting rail was secured utilizing one screw in each end directly through exterior face into jamb. Silicone was utilized around exterior meeting rail/jamb joinery.

Sash Construction: All sash members were constructed of extruded aluminum with coped and butted corners fastened with one screw each.

Screen Construction: The screen frame was constructed from roll-formed aluminum members with plastic keyed corners. The screening consisted of a fiberglass mesh and was secured with a flexible vinyl spline.

Hardware:

Description	Quantity	Location
Plastic tilt latch	2	One each end of the interior Meeting rail
Metal sweep lock	2	13" from meeting rail ends
Balance assembly	2	One per jamb
Screen tension spring	2	One per end of screen stile
Tilt pin	2	One each end of bottom rail

Allen N. Reeves
15 FEBRUARY 2002

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Test Specimen Description: (Continued)

Drainage: Sloped sill

Reinforcement: No reinforcement was utilized.

Installation: The test specimen was installed into the #2 2 x 8 Spruce-Pine-Fir wood buck with 1" galvanized roofing nails through the nail fin every 8" on center. 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	24 lbs	30 lbs max.
2.1.2	Air Infiltration (ASTM E 283) @ 1.57 psf (25 mph)	0.10 cfm/ft^2	0.30 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.

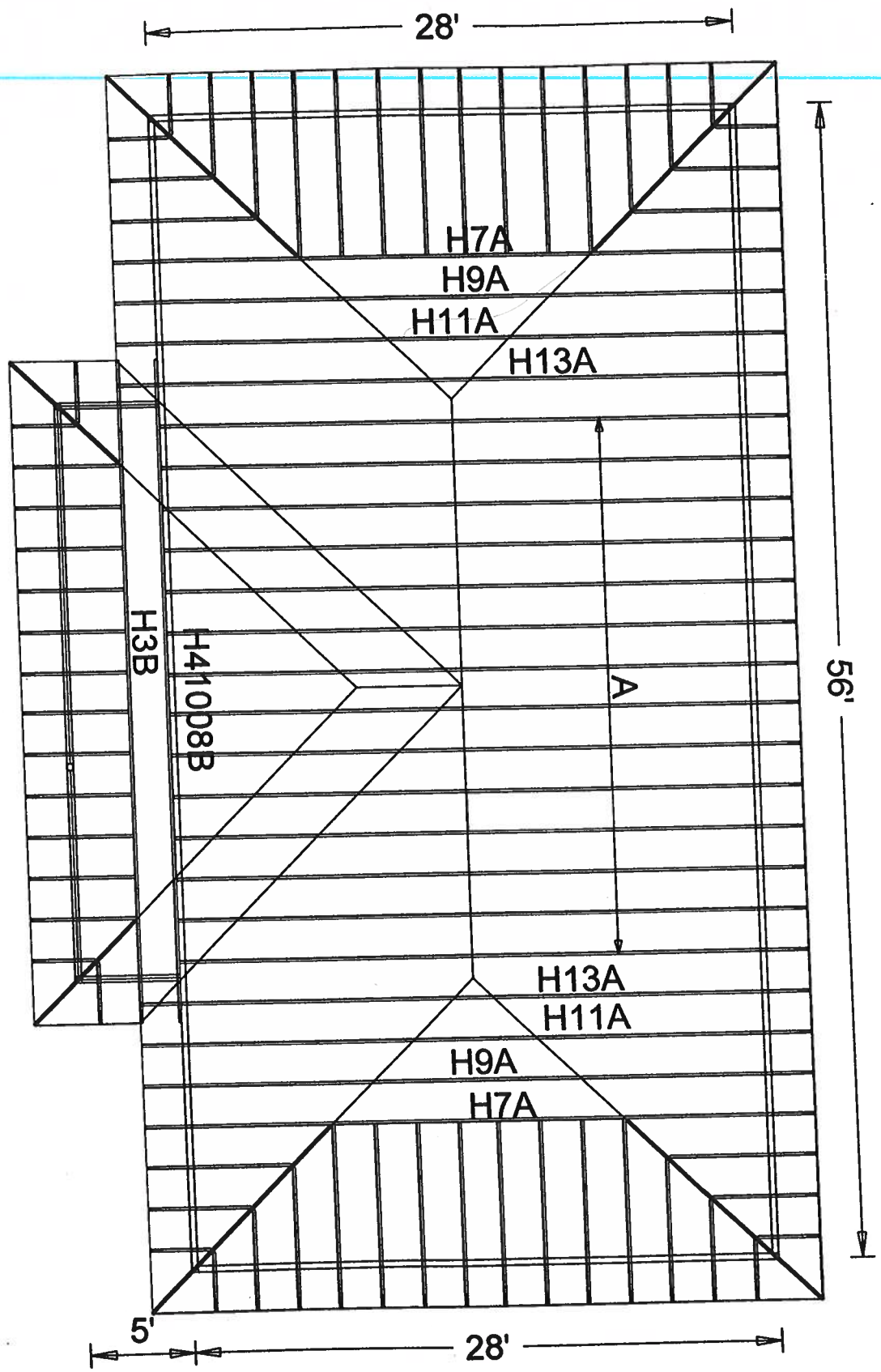
2.1.3	Water Resistance (ASTM E 547-96) (with and without screen) WTP = 6.75 psf	No leakage	No leakage
2.1.4.1	Uniform Load Deflection per ASTM E 330 (Measurements reported were taken on the meeting rail) (Loads were held for 52 seconds)		
	@ 15.0 psf (positive)	0.86"*	0.29" max.
	@ 15.0 psf (negative)	0.81"*	0.29" max.

*Note: * Exceeds L/175 for deflection, but meets all other test requirements.*

2.1.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the meeting rail) (Loads were held for 10 seconds)		
	@ 22.5 psf (positive)	0.01"	0.20" max.
	@ 22.5 psf (negative)	<0.01"	0.20" max.
2.2.1.6.2	Deglazing Test per ASTM E 987 In operating direction at 70 lbs		
	Top rail	0.06"/12%	0.50"/100%
	Bottom rail	0.06"/12%	0.50"/100%
	In remaining direction at 50 lbs		
	Left stile	0.03"/6%	0.50"/100%
	Right stile	0.03"/6%	0.50"/100%

Allen N. Reeves
15 FEBRUARY 2002

ALLEN N. REEVES CERTIFICATE NO. 10354 STATE OF FLORIDA PROFESSIONAL ENGINEER



JEFFERY HILL, JR.

PLAN 3

PAGE NO: 1 OF 1	JOB NO: 421	DESIGNED BY:	JOB DESCRIPTION: JEFFERY HILL/PLAN 3	JOB LOCATION:

Alpine Engineered Products, Inc.

1950 Marley Drive Haines City, FL 33844
Florida Engineering Certificate of Authorization Number: 567
Florida Certificate of Product Approval # FL1999
 Document ID:1SH6487-Z0102082614

Truss Fabricator:	Anderson Truss Company
Job Identification:	421-JEFFERY HILL/PLAN 3 (421|-JEFFERY HILL/PLAN 3)
Truss Count:	13
Model Code:	Florida Building Code 2001
Truss Criteria:	ANSI/TPI-1995(STD)/FBC
Engineering Software:	Alpine Software,Version 6.33.0716.23.
Structural Engineer of Record:	
Address:	
Minimum Design Loads:	Roof - 40 PSF @ 1.25 Duration Floor - N/A Wind - 110 MPH ASCE-98 -Closed

Seal Date: 11/02/2004
Truss Design Engineer
Nawaf Essayed
Florida License Number: 58604
1950 Marley Drive
Haines City, FL 33844

Notes:

1. Determination as to the suitability of these truss components for the structure is the responsibility of the building designer/engineer of record, as defined in ANSI/TPI 1-1995 Section 2.2
2. The seal date shown on the individual truss component drawings must match the seal date on this index sheet.
3. As shown on attached drawings; the drawing number is preceded by: HCUSR487

No Standard Details

#	Ref	Description	Drawing#	Date
1	00786	--H7A	04288143	10/14/04
2	00787	--A	04288139	10/14/04
3	00788	--H13A	04288144	10/14/04
4	00789	--H11A	04288140	10/14/04
5	00790	--H9A	04288141	10/14/04
6	00791	--H3B	04288145	10/14/04
7	00792	--H41008B	04288142	10/14/04
8	00793	--EJ7	04288146	10/14/04
9	00794	--CJ5	04288147	10/14/04
10	00795	--HJ7	04288148	10/14/04
11	00796	--CJ3	04288149	10/14/04
12	00797	--CJ1	04288150	10/14/04
13	00798	--HJ3	04288151	10/14/04

Top chord 2x4 SP #2 Dense :T2 2x6 SP #1 Dense:
Bot chord 2x6 SP #1 Dense
Webs 2x4 SP #3

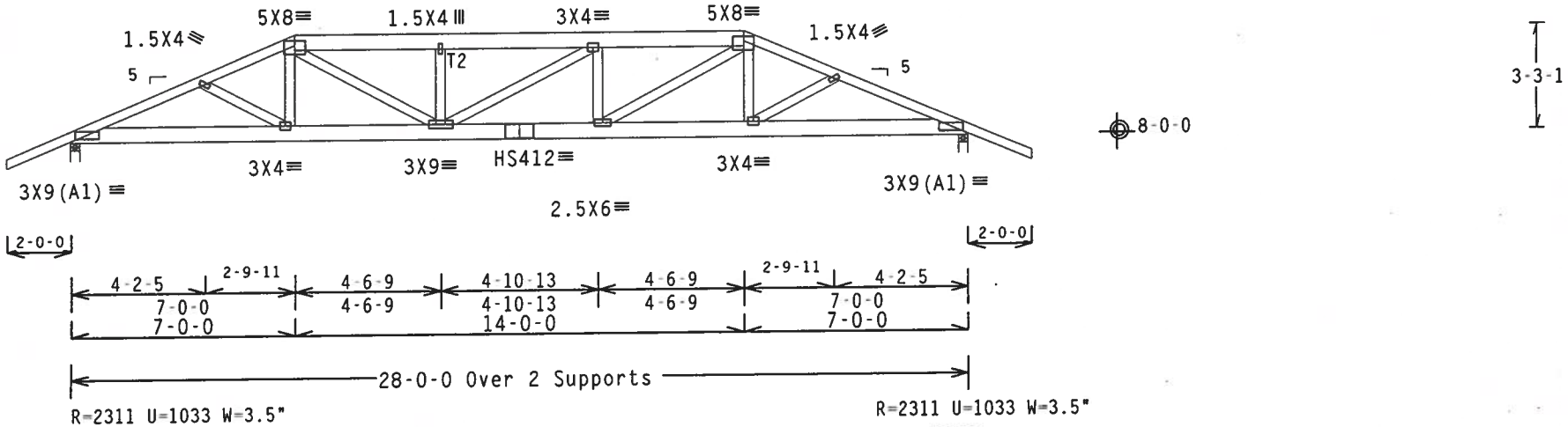
Roof overhang supports 2.00 psf soffit load.

Left side jacks have 7-0-0 setback with 0-0-0 cant and 2-0-0 overhang.
End jacks have 7-0-0 setback with 0-0-0 cant and 2-0-0 overhang. Right
side jacks have 7-0-0 setback with 0-0-0 cant and 2-0-0 overhang.

110 mph wind, 15.00 ft mean hgt, ASCE 7-98, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=0.0 psf, wind BC DL=0.0 psf.

#1 hip supports 7-0-0 jacks with no webs.

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



LT TYP. 20 Gauge HS,Wave TPI Design Crit: TPI-1995(STD)/FBC 6.3[illegible] FL/-/5/-/-/R/- Scale =.1875"/Ft.

ALPINE
Alpine Engineered Products, Inc.
1950 Marley Drive
Haines City, FL 33844
FL Certificate of Authorization # 567

WARNING TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSI 1-03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 583 D'ONOFRIO DR., SUITE 200, MADISON, WI 53719) AND WTCA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LN, MADISON, WI 53719) FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.

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

RAWAF E. ESAYED
CERTIFICATE
No. 58604
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Nov 02 '04

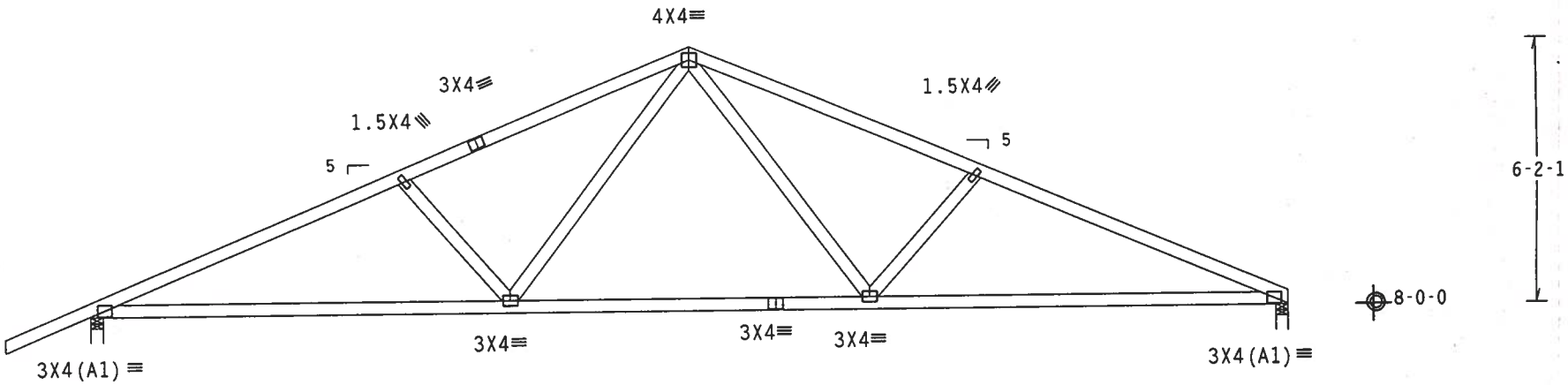
TC LL	20.0 PSF	REF R487-- 786
TC DL	10.0 PSF	DATE 10/14/04
BC DL	10.0 PSF	DRW HCUSR487 04288143
BC LL	0.0 PSF	HC-ENG WHD/NE
TOT.LD.	40.0 PSF	SEQN- 104229
DUR.FAC.	1.25	
SPACING	SEE ABOVE	JREF- 1SH6487_Z01

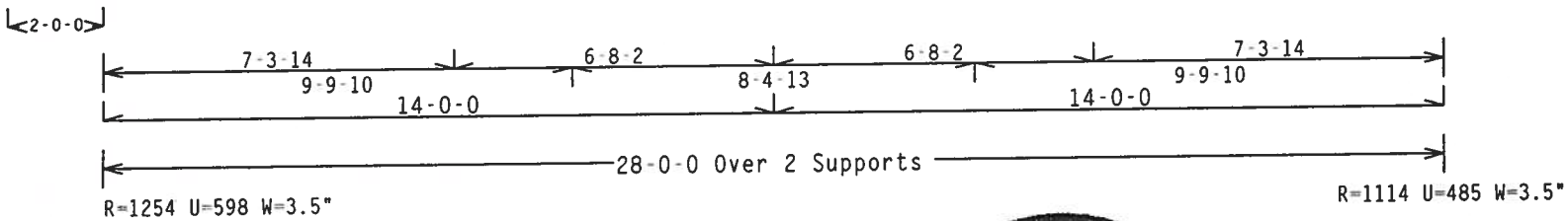
Top chord 2x4 SP #2 Dense
Bot chord 2x4 SP #2 Dense
Webs 2x4 SP #3

Roof overhang supports 2.00 psf soffit load.

110 mph wind, 10.84 ft mean hgt, ASCE 7-98, CLOSED bldg, not located within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=0.0 psf, wind BC DL=0.0 psf.

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





PLT TYP. Wave TPI | Design Crit: TPI-1995(STD)/FBC | 6.[illegible]23 | QTY 14 | FL/-/5/-/-/R/- | Scale =.25"/Ft.

ALPINE
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1950 Marley Drive
Haines City, FL 33844
FL Certificate of Authorization # 567

NAWAF E. ESAYED
CERTIFICATE
No. 58604
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Nov 02 '04

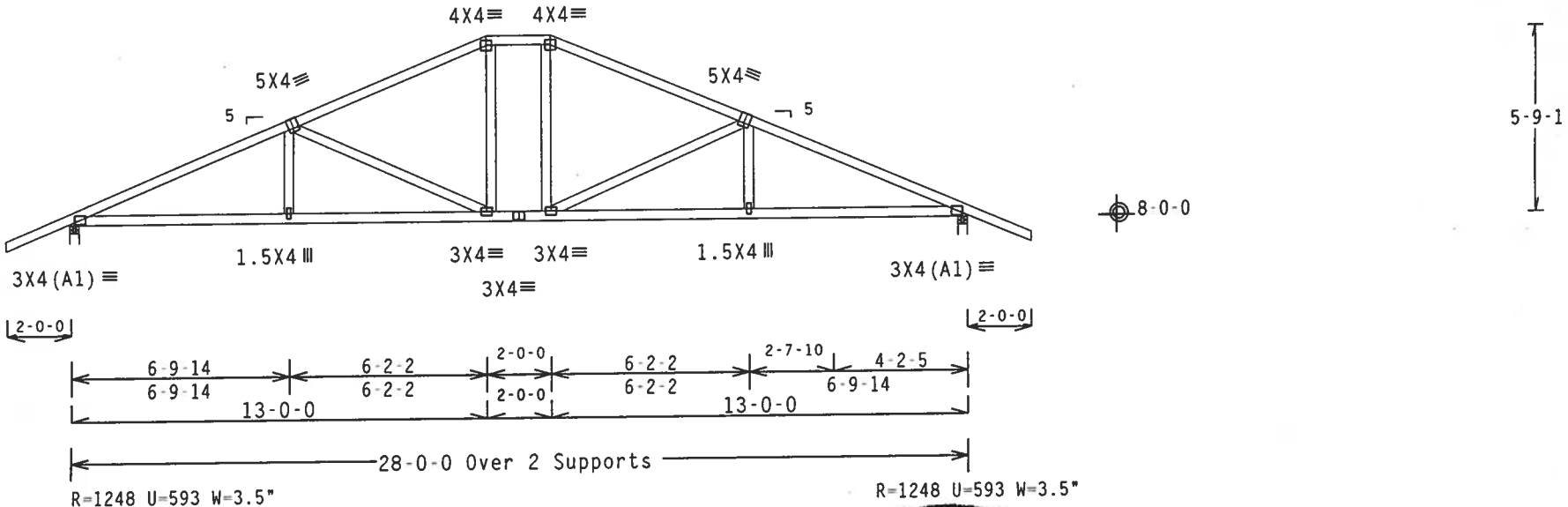
TC LL	20.0 PSF	REF	R487-- 787
TC DL	10.0 PSF	DATE	10/14/04
BC DL	10.0 PSF	DRW	HCUSR487 04288139
BC LL	0.0 PSF	HC-ENG	WHD/NE *
TOT.LD.	40.0 PSF	SEQN-	104232
DUR.FAC.	1.25		
SPACING	24.0"	JREF-	1SH6487_Z01

Top chord 2x4 SP #2 Dense
Bot chord 2x4 SP #2 Dense
Webs 2x4 SP #3

Roof overhang supports 2.00 psf soffit load.

110 mph wind, 10.63 ft mean hgt, ASCE 7-98, CLOSED bldg, not located within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=0.0 psf, wind BC DL=0.0 psf.

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



LT TYP. Wave TPI | Design Crit: TPI-1995(STD)/FBC | 6.[illegible]/16/23 | QTY 2 | FL/-/5/-/-/R/- | Scale =.1875"/Ft.

ALPINE
Alpine Engineered Products, Inc.
1950 Marley Drive
Haines City, FL 33844
FL Certificate of Authorization # 567

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NAWAF E. ESAYED
CERTIFICATE
No. 58604
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Nov 02 '04

TC LL	20.0 PSF	REF	R487-- 788
TC DL	10.0 PSF	DATE	10/14/04
BC DL	10.0 PSF	DRW	HCUSR487 04288144
BC LL	0.0 PSF	HC-ENG	WHD/NE
TOT.LD.	40.0 PSF	SEQN-	104235
DUR.FAC.	1.25		
SPACING	24.0"	JREF-	1SH6487_Z01

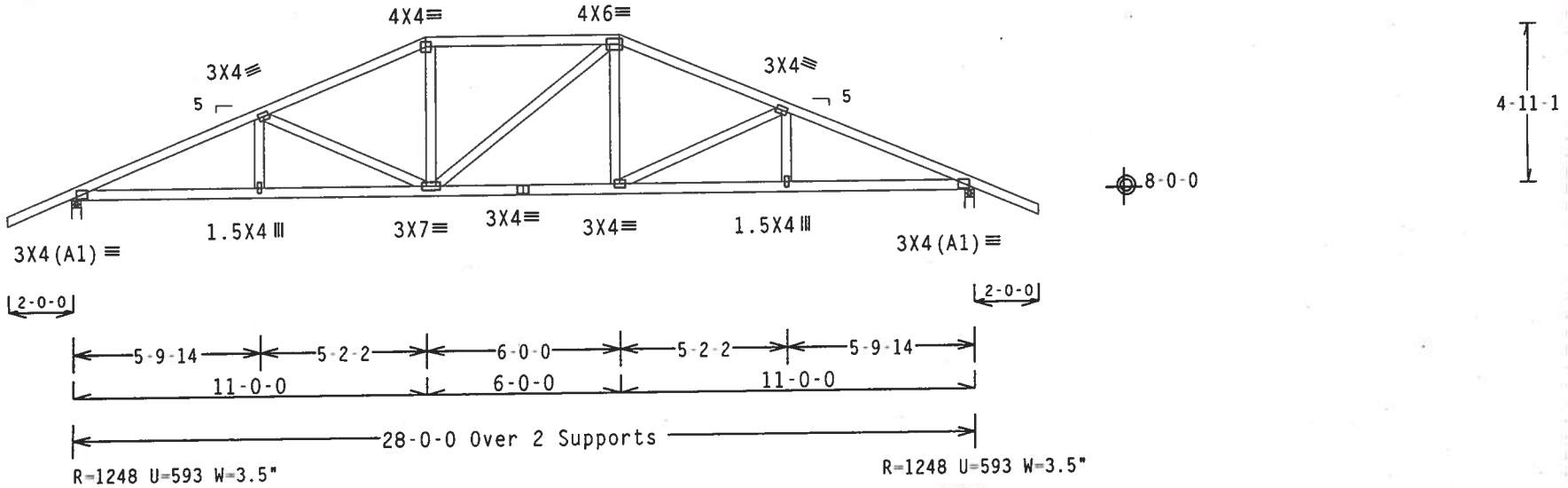
(421 JEFFERY HILL/PLAN 3 - H11A)

Top chord 2x4 SP #2 Dense
Bot chord 2x4 SP #2 Dense
Webs 2x4 SP #3

Roof overhang supports 2.00 psf soffit load.

110 mph wind, 10.21 ft mean hgt, ASCE 7-98, CLOSED bldg, not located within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=0.0 psf, wind BC DL=0.0 psf.

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



'LT TYP. Wave TPI

Design Crit: TPI-1995(STD)/FBC 6.3 [illegible] FL/-/5/-/-/R/-

Scale =.1875"/Ft.

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NAWAF E. ESAYED CERTIFICATE No.58604 STATE OF FLORIDA PROFESSIONAL ENGINEER

Nov 02 [illegible]

TC LL	20.0 PSF	REF R487-- 789
TC DL	10.0 PSF	DATE 10/14/04
BC DL	10.0 PSF	DRW HCUSR487 04288140
BC LL	0.0 PSF	HC-ENG WHD/NE *
TOT.LD.	40.0 PSF	SEQN- 104238
DUR.FAC.	1.25	
SPACING	24.0"	JREF- 1SH6487_Z01

ALPINE

Alpine Engineered Products, Inc.
1950 Marley Drive
Haines City, FL 33844
FL Certificate of Authorization # 567

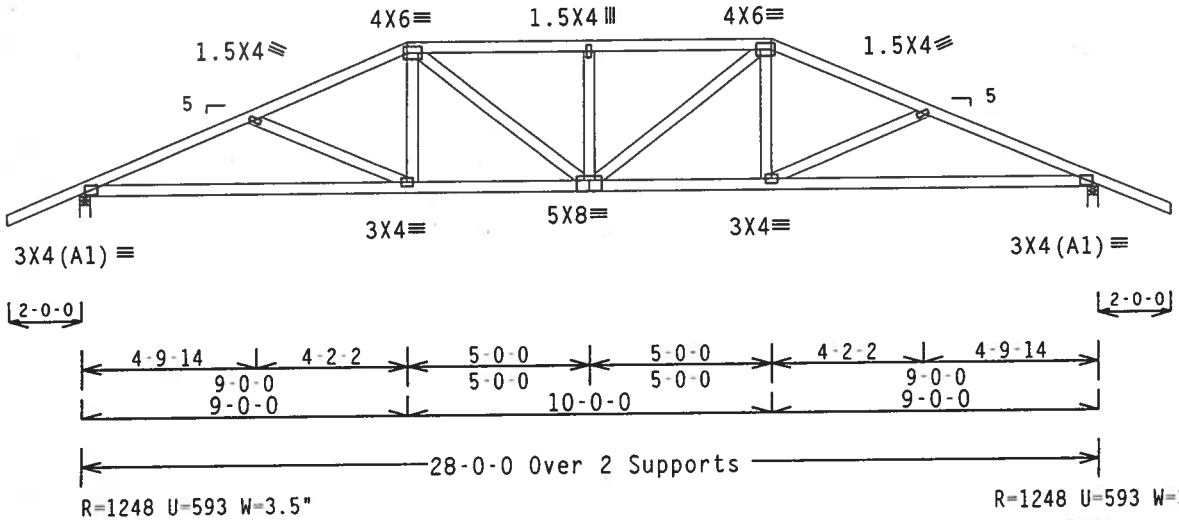
(421 JEFFERY HILL/PEAK 3 ...)

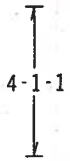
Top chord 2x4 SP #2 Dense
Bot chord 2x4 SP #2 Dense
Webs 2x4 SP #3

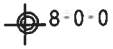
Roof overhang supports 2.00 psf soffit load.

110 mph wind, 9.80 ft mean hgt, ASCE 7-98, CLOSED bldg, not located within 4.50 ft from roof edge, CAT II, EXP B, wind TC DL=0.0 psf, wind BC DL=0.0 psf.

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







LT TYP. Wave TPI Design Crit: TPI-1995(STD)/FBC 6.33 FL/-/5/-/-/R/- Scale =.1875"/Ft.

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1950 Marley Drive
Haines City, FL 33844
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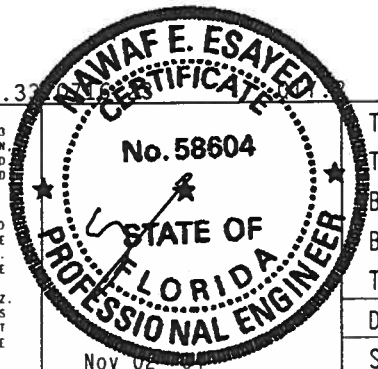


Nov 02 04

TC LL	20.0 PSF	REF R487-- 790
TC DL	10.0 PSF	DATE 10/14/04
BC DL	10.0 PSF	DRW HCUSR487 04288141
BC LL	0.0 PSF	HC-ENG WHD/NE *
TOT.LD.	40.0 PSF	SEQN- 104241
DUR.FAC.	1.25	
SPACING	24.0"	JREF- 1SH6487_Z01

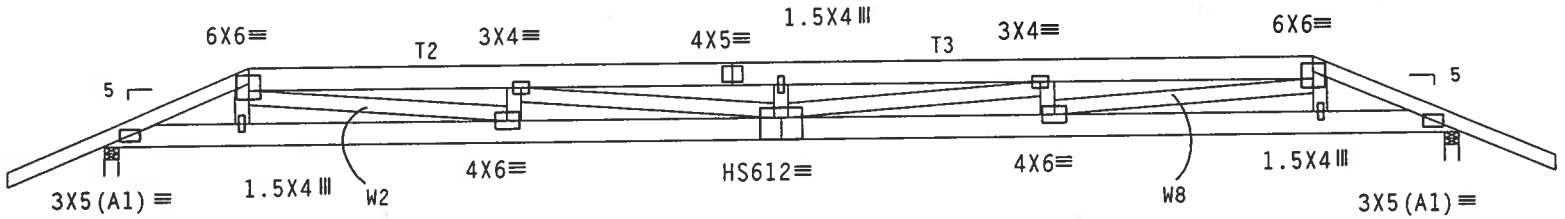
Top chord 2x4 SP #2 Dense :T2, T3 2x6 SP #1 Dense:
Bot chord 2x6 SP #1 Dense
Webs 2x4 SP #3 :W2, W8 2x4 SP #2 Dense:

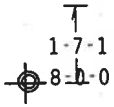
Roof overhang supports 2.00 psf soffit load.

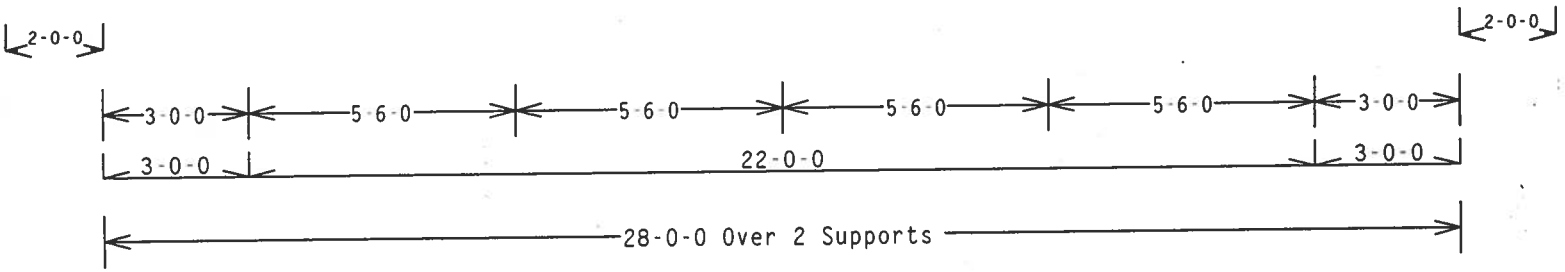
Deflection meets L/240 live and L/180 total load.

110 mph wind, 15.00 ft mean hgt, ASCE 7-98, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=0.0 psf, wind BC DL=0.0 psf.

#1 hip supports 3-0-0 jacks with no webs.







R=1296 U=570 W=3.5"

R=1296 U=570 W=3.5"

LT TYP. 20 Gauge HS,Wave TPI Design Crit: TPI-1995(STD)/FBC 6.3 QTY: FL/-/5/-/-/R/- Scale =.25"/Ft.

ALPINE
Alpine Engineered Products, Inc.
1950 Marley Drive
Haines City, FL 33844
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NAWAF E. ESAYED
CERTIFICATE
No. 58604
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Nov 02 '04

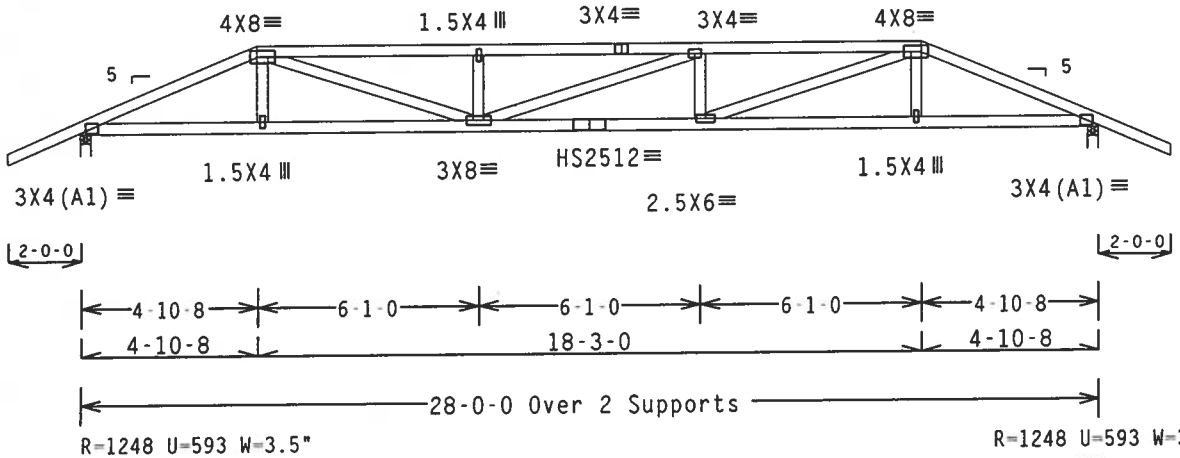
TC LL	20.0 PSF	REF	R487-- 791
TC DL	10.0 PSF	DATE	10/14/04
BC DL	10.0 PSF	DRW	HCUSR487 04288145
BC LL	0.0 PSF	HC-ENG	WHD/NE
TOT.LD.	40.0 PSF	SEQN-	104247
DUR.FAC.	1.25		
SPACING	SEE ABOVE	JREF-	1SH6487_Z01

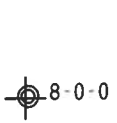
Top chord 2x4 SP #2 Dense
Bot chord 2x4 SP #2 Dense
Webs 2x4 SP #3

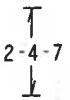
Deflection meets L/240 live and L/180 total load.

110 mph wind, 8.94 ft mean hgt, ASCE 7-98, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=0.0 psf, wind BC DL=0.0 psf.

Roof overhang supports 2.00 psf soffit load.







LT TYP. 20 Gauge HS,Wave TPI Design Crit: TPI-1995(STD)/FBC 6.33 FL/-/5/-/-/R/- Scale =.1875"/Ft.

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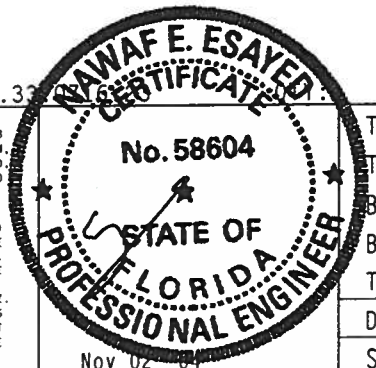


Nov 02 04

TC LL	20.0 PSF	REF	R487-- 792
TC DL	10.0 PSF	DATE	10/14/04
BC DL	10.0 PSF	DRW	HCUSR487 04288142
BC LL	0.0 PSF	HC-ENG	WHD/NE *
TOT.LD.	40.0 PSF	SEQN-	104250
DUR.FAC.	1.25		
SPACING	24.0"	JREF-	1SH6487_Z01

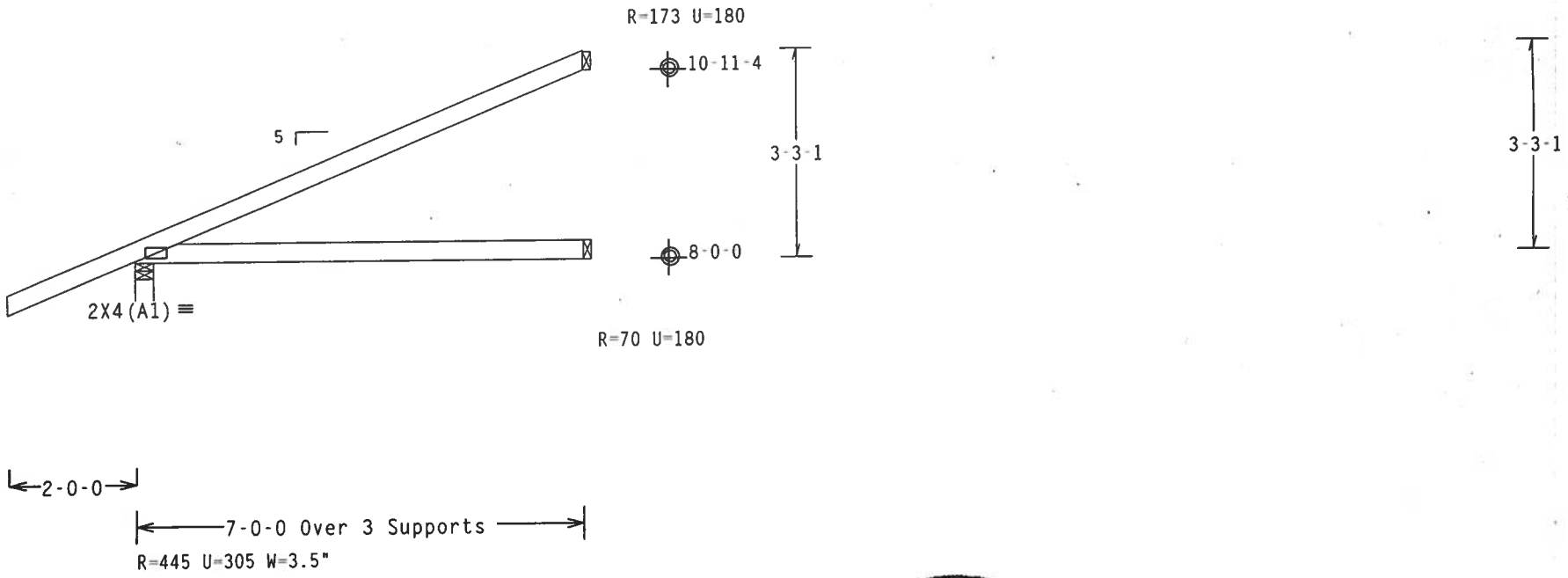
Top chord 2x4 SP #2 Dense
Bot chord 2x4 SP #2 Dense

Roof overhang supports 2.00 psf soffit load.

PROVIDE (2) 16d COMMOM (0.162"x3.5") TOE-NAILS AT TOP CHORD.
PROVIDE (2) 16d COMMON (0.162"x3.5") TOE-NAILS AT BOTTOM CHORD.

110 mph wind, 9.38 ft mean hgt, ASCE 7-98, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=0.0 psf, wind BC DL=0.0 psf.

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



LT TYP. Wave TPI Design Crit: TPI-1995(STD)/FBC 6.37 FL/-/5/-/-/R/- Scale =.375"/Ft.

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1950 Marley Drive
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NAWAF E. ESAYED CERTIFICATE No. 58604 STATE OF FLORIDA PROFESSIONAL ENGINEER
Nov 02 04

TC LL	20.0 PSF	REF R487-- 793
TC DL	10.0 PSF	DATE 10/14/04
BC DL	10.0 PSF	DRW HCUSR487 04288146
BC LL	0.0 PSF	HC-ENG WHD/NE
TOT.LD.	40.0 PSF	SEQN- 104225
DUR.FAC.	1.25	
SPACING	24.0"	JREF- 1SH6487_Z01

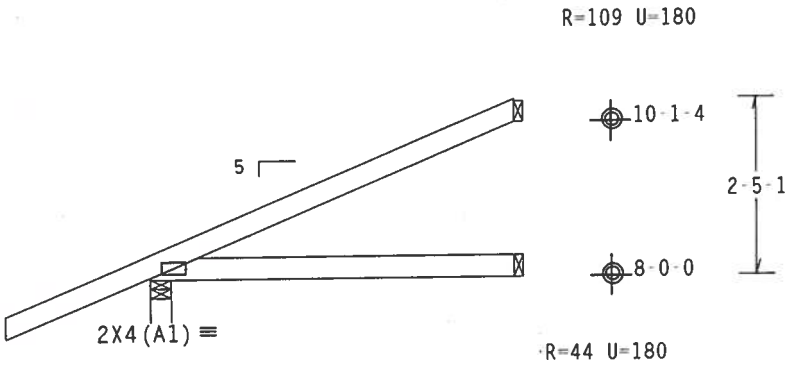
Top chord 2x4 SP #2 Dense
Bot chord 2x4 SP #2 Dense

Roof overhang supports 2.00 psf soffit load.

PROVIDE (2) 16d COMMOM (0.162"x3.5") TOE-NAILS AT TOP CHORD.
PROVIDE (2) 16d COMMON (0.162"x3.5") TOE-NAILS AT BOTTOM CHORD.

110 mph wind, 8.96 ft mean hgt, ASCE 7-98, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=0.0 psf, wind BC DL=0.0 psf.

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



2-5-1

PLT TYP. Wave TPI

Design Crit: TPI-1995(STD)/FBC 6.3

FL/-/5/-/-/R/-

Scale =.375"/Ft.

TC LL	20.0 PSF
TC DL	10.0 PSF
BC DL	10.0 PSF
BC LL	0.0 PSF
TOT.LD.	40.0 PSF
DUR.FAC.	1.25
SPACING	24.0"

REF	R487-- 794
DATE	10/14/04
DRW	HCUSR487 04288147
HC-ENG	WHD/NE
SEQN-	104253
JREF-	1SH6487_Z01

ALPINE
Alpine Engineered Products, Inc.
1950 Marley Drive
Haines City, FL 33844
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NAWAF E. ESAYED CERTIFICATE No. 58604 STATE OF FLORIDA PROFESSIONAL ENGINEER
Nov 02 04

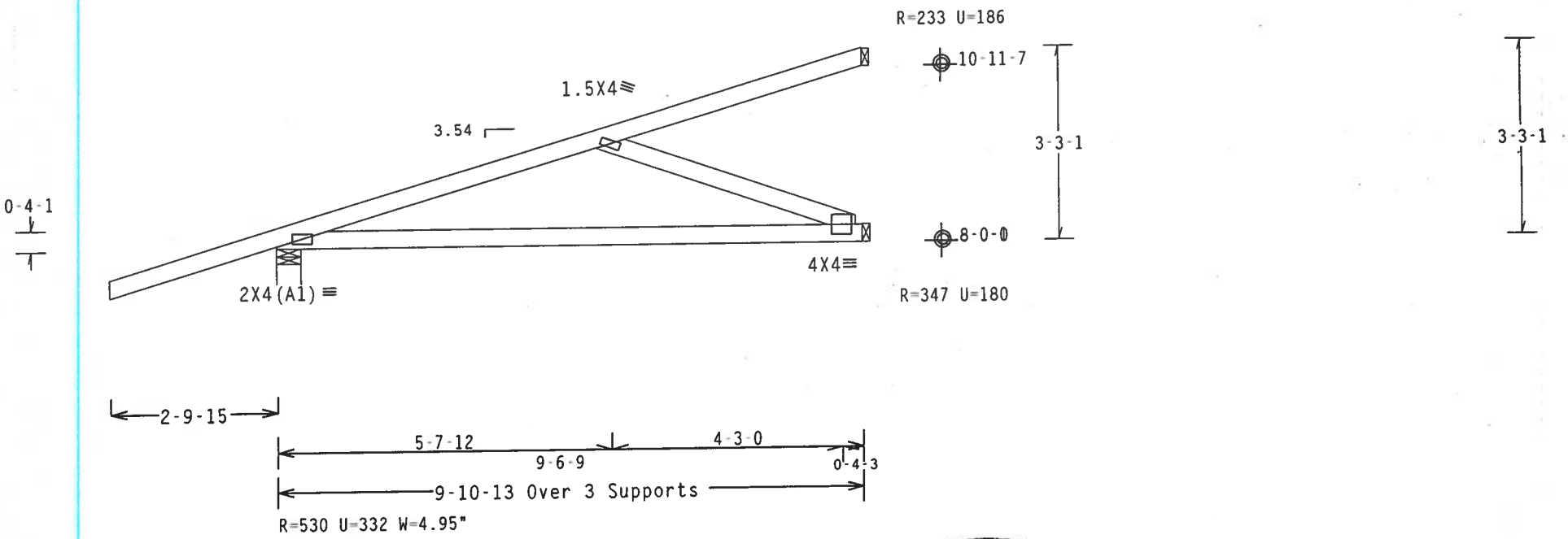
op chord 2x4 SP #2 Dense
ot chord 2x4 SP #2 Dense
Webs 2x4 SP #3

ipjack supports 7-0-0 setback jacks with no webs.

ROVIDE (3) 16d COMMOM (0.162"x3.5") TOE-NAILS AT TOP CHORD.
ROVIDE (3) 16d COMMON (0.162"x3.5") TOE-NAILS AT BOTTOM CHORD.

110 mph wind, 15.00 ft mean hgt, ASCE 7-98, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=0.0 psf, wind BC DL=0.0 psf.

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



LT TYP. Wave TPI

Design Crit: TPI-1995(STD)/FBC 6.37

FL/-/5/-/-/R/-

Scale =.375"/Ft.

TC LL	20.0 PSF
TC DL	10.0 PSF
BC DL	10.0 PSF
BC LL	0.0 PSF
TOT.LD.	40.0 PSF
DUR.FAC.	1.25
SPACING	SEE ABOVE

REF	R487-- 795
DATE	10/14/04
DRW	HCUSR487 04288148
HC-ENG	WHD/NE
SEQN-	104256
JREF-	1SH6487_Z01

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NAWAF E. ESAYED CERTIFICATE No. 58604 STATE OF FLORIDA PROFESSIONAL ENGINEER

Nov 02

ALPINE

Alpine Engineered Products, Inc.
1950 Marley Drive
Haines City, FL 33844
FL Certificate of Authorization # 567

421 JEFFERY HILL, FAM [illegible]

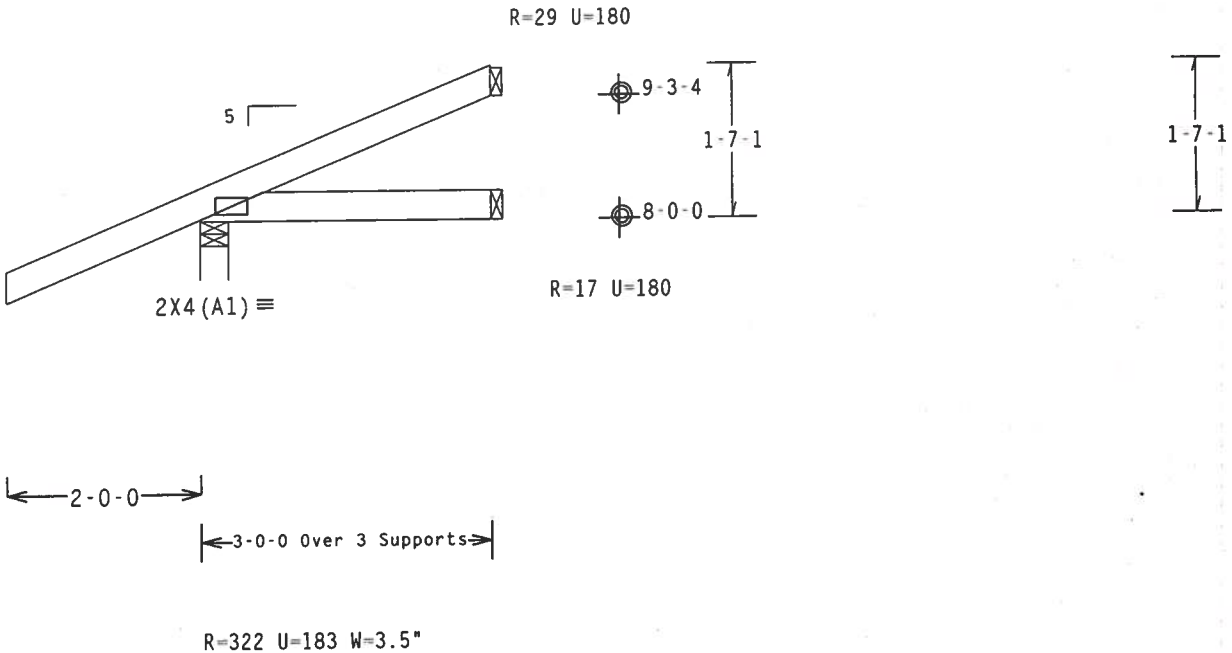
op chord 2x4 SP #2 Dense
ot chord 2x4 SP #2 Dense

oof overhang supports 2.00 psf soffit load.

ROVIDE (2) 16d COMMOM (0.162"x3.5") TOE-NAILS AT TOP CHORD.
ROVIDE (2) 16d COMMON (0.162"x3.5") TOE-NAILS AT BOTTOM CHORD.

110 mph wind, 8.55 ft mean hgt, ASCE 7-98, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=0.0 psf, wind BC DL=0.0 psf.

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



LT TYP. Wave TPI Design Crit: TPI-1995(STD)/FBC 6.3 [illegible] 20 FL/-/5/-/-/R/- Scale =.5"/Ft.

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WARNING TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSI 1-03 (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 583 D'ONOFRIO DR., SUITE 200, MADISON, WI 53719) AND WTCA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LN MADISON, WI 53719) FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.

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

NAWAF E. ESAYED CERTIFICATE No.58604 STATE OF FLORIDA PROFESSIONAL ENGINEER
Nov 02 04

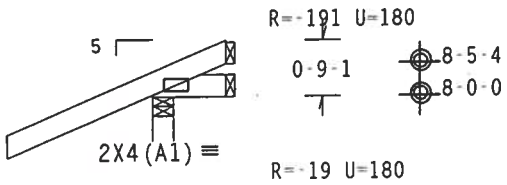
TC LL	20.0 PSF	REF R487-- 796
TC DL	10.0 PSF	DATE 10/14/04
BC DL	10.0 PSF	DRW HCUSR487 04288149
BC LL	0.0 PSF	HC-ENG WHD/NE
TOT.LD.	40.0 PSF	SEQN- 104259
DUR.FAC.	1.25	
SPACING	24.0"	JREF- 1SH6487_Z01

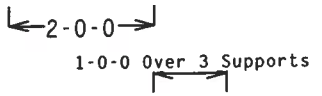
op chord 2x4 SP #2 Dense
ot chord 2x4 SP #2 Dense

Roof overhang supports 2.00 psf soffit load.

10 mph wind, 8.13 ft mean hgt, ASCE 7-98, CLOSED bldg, Located anywhere
roof, CAT II, EXP B, wind TC DL=0.0 psf, wind BC DL=0.0 psf.

OVIDE (2) 16d COMMOM (0.162"x3.5") TOE-NAILS AT TOP CHORD.
OVIDE (2) 16d COMMON (0.162"x3.5") TOE-NAILS AT BOTTOM CHORD.





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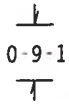

_T TYP. Wave TPI

Design Crit: TPI-1995(STD)/FBC 6.3 [illegible]3 QTY: 2 FL/-/5/-/-/R/-

Scale =.375"/Ft.

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NAWAF E. ESAYED
CERTIFICATE
No. 58604
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Nov 02 '04

TC LL	20.0 PSF	REF R487-- 797
TC DL	10.0 PSF	DATE 10/14/04
BC DL	10.0 PSF	DRW HCUSR487 04288150
BC LL	0.0 PSF	HC-ENG WHD/NE
TOT.LD.	40.0 PSF	SEQN- 104262
DUR.FAC.	1.25	
SPACING	24.0"	JREF- 1SH6487_Z01

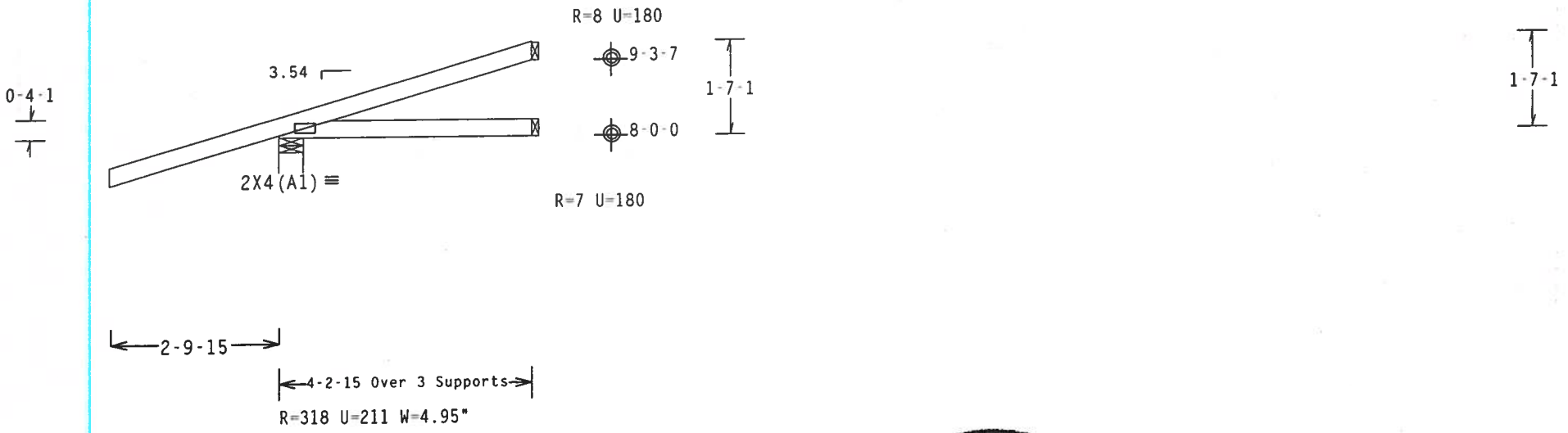
)p chord 2x4 SP #2 Dense
)t chord 2x4 SP #2 Dense

pjack supports 3-0-0 setback jacks with no webs.

OVIDE (2) 16d COMMOM (0.162"x3.5") TOE-NAILS AT TOP CHORD.
OVIDE (2) 16d COMMON (0.162"x3.5") TOE-NAILS AT BOTTOM CHORD.

110 mph wind, 15.00 ft mean hgt, ASCE 7-98, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=0.0 psf, wind BC DL=0.0 psf.

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



T TYP. Wave TPI

Design Crit: TPI-1995(STD)/FBC 6.3

FL/-/5/-/-/R/-

Scale =.375"/Ft.

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RAWAF E. ESAYED CERTIFICATE No. 58604 STATE OF FLORIDA PROFESSIONAL ENGINEER

Nov 02 '04

TC LL	20.0 PSF	REF	R487-- 798
TC DL	10.0 PSF	DATE	10/14/04
BC DL	10.0 PSF	DRW	HCUSR487 04288151
BC LL	0.0 PSF		HC-ENG WHD/NE
TOT.LD.	40.0 PSF	SEQN-	104265
DUR.FAC.	1.25		
SPACING	SEE ABOVE	JREF-	1SH6487_Z01

Hill

SECTION 07525

GAFGLAS® DESIGN LINE

ABC Independent Inc.

12345 Any Street
Anyplace, TX

PREPARED BY:

Roofer/Rep

4321 One St.

Righthere, TX

PROJECT NO: GAF-I-0-3-C

GAFMC SBS HEAT WELD' ROOFING SYSTEMS
KEY TO SPECIFICATION NUMBERS

Substrate

N	Nailable
NN	Non-nailable
I	Insulated
R	Recover over existing roof. May include additional insulation.

I-1-2-25/HGFR

Number of Base Plies

0	None
1	One Ply
2	Two Plies
3	Three Plies

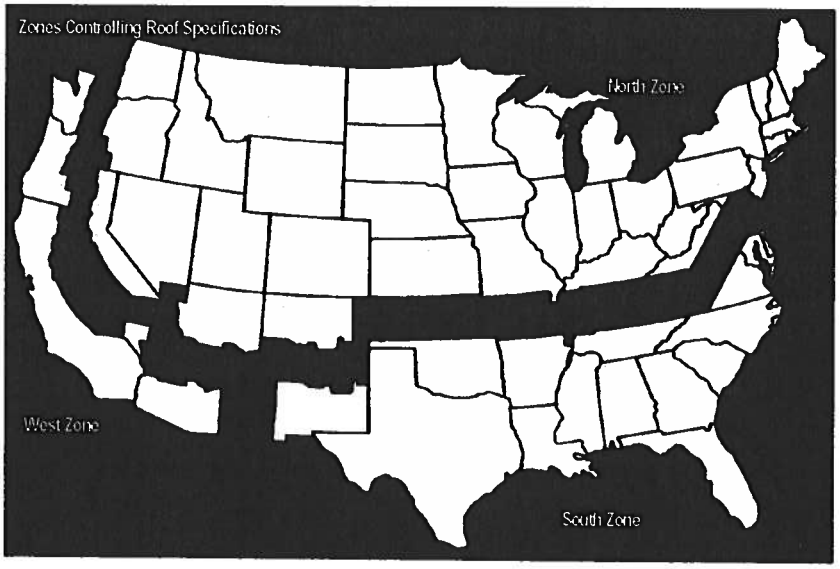
Base plies can include: GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima Base Sheet, RUBEROID® Modified Base Sheet, GAFGLAS® Stratavent® Eliminator™ Nailable, GAFGLAS® FlexPly™ 6 or GAFGLAS® Ply 4.

Top Ply or Plies of Heat Weld™ Membranes

HG	Heat Weld™
25	Heat Weld™ 25
HS	Heat Weld™ Smooth
HGFR	Heat Weld™ 170 FR
HGP	Heat Weld™ Plus
HGPFR	Heat Weld™ Plus FR

Number of Plies of Heat Weld™ Membranes

1	One Ply
2	Two Plies



North Zone includes Alaska
West Zone includes Hawaii
South Zone includes Puerto Rico
Note: The West Zone comprises low elevation regions only. Mountainous areas in the South and West Zones should comply with North Zone specifications.

SECTION 07525
BUILT UP ROOFING

1.0 GENERAL

1.01 GENERAL NOTES

A. Preceding the start up of job, the contractor shall decide to his satisfaction that all the specifications are workable as specified, that there is nothing that would deter the contractor's required warranty, and that no existing conditions at the site prevent the contractor from performing the job in a professional and safe manner. When the job starts, it will be assumed that the contractor approves the existing conditions and the specifications.

B. Detailed drawings and dimensions contained in these specifications shall be assumed to be approximate. If work requirements at the jobsite disclose an alteration to the dimensions of this specification, the contractor shall contact the Contractor Services of GAF at 1-800-ROOF-411.

1.02 QUALITY ASSURANCE

A. All work performed by the contractor shall be done by competent, highly skilled workmen equipped with equipment and tools necessary to perform all construction in accordance with this specification and detail drawings. Any and all substandard work will be rejected.

B. The contractor shall develop and present a verifiable in-house contractor quality control program to the building owner, which can be followed during the construction of the GAFMC roof system.

1.03 JOB CONDITIONS

A. Environmental Requirements:

1. Work shall only begin when the contractor has decided to his satisfaction, that all specifications are workable as specified, and that the contractor can meet project and code requirements.

2. Do not begin work when inclement weather is forecast to occur prior to the anticipated time of completion of the work item.

3. The contractor shall be responsible for verifying the existing and forecasted weather conditions to determine when the conditions are acceptable for roof work.

4. Roof application shall not proceed when there is moisture present in any form on the deck including but not limited to rain, dew, ice, frost or snow.

5. Do not apply roofing membrane to a frozen deck.

6. Roof application shall not proceed when using hot asphalt when the ambient air temperature is below 45°F (7.2°C).

7. The contractor shall be prepared at all times to protect any uncompleted roof work from the rapid changes in the weather. If work continues during sudden rains to protect the interior of the building, then these areas shall be subsequently removed and replaced.

8. The contractor shall observe the provisions of Section 1.09, regarding material storage and handling of the roofing products in cold weather.

B. Areas of the substrate where ponding water occurs shall be built up prior to the installation of the roof system.

C. (Option) Do not remove anymore of the existing roof system than can be completely reinstalled with the new roofing system in the same day.

D. Ensure that the roof deck is structurally sound to support the live and dead load requirements of the new roofing system and rigid enough to support construction traffic. Do not store or load the roof deck above its load capacity.

1.04 SYSTEMS DESCRIPTION

A. Built Up Roofing System:

1. Asphalt, insulation, asphalt, ply sheet, asphalt, ply sheet, asphalt, ply sheet and coating, I-0-3-C, by GAF.

2. Asphalt, insulation, asphalt, insulation, asphalt, ply sheet, asphalt, ply sheet, asphalt, ply sheet and coating, I-0-3-C, by GAF.

3. Insulation, fasteners, asphalt, ply sheet, asphalt, ply sheet, asphalt, ply sheet and coating, I-0-3-C, by GAF.

4. Insulation, fasteners, asphalt, insulation, asphalt, ply sheet, asphalt, ply sheet, asphalt, ply sheet and coating, I-0-3-C, by GAF.

5. Venting base sheet, fasteners, asphalt, insulation, asphalt, ply sheet, asphalt, ply sheet, asphalt, ply sheet and coating, I-0-3-C, by GAF.

6. Venting base sheet, fasteners, asphalt, insulation, asphalt, insulation, asphalt, ply sheet, asphalt, ply sheet, asphalt, ply sheet and coating, I-0-3-C, by GAF.

7. Base sheet, fasteners, asphalt, insulation, asphalt, ply sheet, asphalt, ply sheet, asphalt, ply sheet and coating, I-0-3-C, by GAF.

8. Base sheet, fasteners, asphalt, insulation, asphalt, insulation, asphalt, ply sheet, asphalt, ply sheet, asphalt, ply sheet and coating, I-0-3-C, by GAF.

1.05 PERFORMANCE REQUIREMENTS

A. Roof System shall be in compliance with the following regulatory agencies and with local codes.

1. Underwriters Laboratories, Inc. (UL) Class A fire hazard classification.

2. Underwriters Laboratories, Inc. (UL) Class B fire hazard classification.

3. Factory Mutual Research Corporation (FM) Class 1A-60 windstorm classification.

4. Factory Mutual Research Corporation (FM) Class 1A-75 windstorm classification.

5. Factory Mutual Research Corporation (FM) Class 1A-90 windstorm classification.

6. Factory Mutual Research Corporation (FM) Class 1A-120 windstorm classification

1.06 GUARANTEE REQUIREMENTS

A. No manufacturer's guarantee shall be issued for this roofing system, including but not limited to any and all forms of expressed or implied guarantees.

B. GAF Five (5) Year Limited Warranty on Material

C. GAF Five (5) Year Commercial Roof Guarantee

D. GAF System Pledge® Five (5) Year Roof Guarantee

1. Accumulative Liability limited to $100.00 per square

E. GAF Diamond Pledge® Five (5) Year Roof Guarantee

F. GAF Ten (10) Year Limited Warranty on Material

G. GAF Ten (10) Year Commercial Roof Guarantee

H. GAF System Pledge® Ten (10) Year Roof Guarantee

1. Accumulative Liability limited to $100.00 per square

I. GAF Diamond Pledge® Ten (10) Year Roof Guarantee

1.07 SUBMITTALS

A. Submit most recent product samples and literature from GAFGLAS®, applicable to this specification.

B. Submit Photostat copy of GAFGLAS® Master Roofing Contractor Letter.

C. Submit Photostat copy of GAFGLAS® Master Select Roofing Contractor Letter.

1.08 REFERENCES

A. National Roofing Contractors Association (NRCA) - Roofing and Waterproofing Manual

B. Underwriters Laboratories (UL) - Fire Hazard Classification

C. Factory Mutual Research Corporation (FM) – Approval Guide

D. Sheet Metal Air Conditioning Contractors National Association, Inc. (SMACNA) - "Architectural Sheet Metal Manual"

E. Asphalt Roofing Manufacturer's Association (ARMA)

F. ASTM C 208 \ FS LLL-I-535 - Insulation board, thermal (cellulose fiber board)

G. ASTM C 728 \ FS HH-I-529b - Insulation board, thermal (expanded perlite mineral aggregate)

H. ASTM C 1289 \ FS-HH-1972/Gen. - Standard specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.

I. FS HH-I-1972/Gen. - Insulation board, thermal (isocyanurate/perlite composite)

J. ASTM D 41 - Asphalt primer used in roofing, dampproofing and waterproofing

K. ASTM D 312 - Asphalt used in roofing

L. ASTM D 1227, Type II or IV, Asphalt based roof emulsion coating (fibrated)

M. ASTM D 2178, Type IV - Asphalt impregnated glass (felt) mat used as an inter-ply in roofing and waterproofing

N. ASTM D 2824, Type III, Asphalt based aluminum roof coating

O. ASTM D 4586 – Standard Specification for Asphalt Roof Cement, Asbestos-Free

P. ASTM D 4601, Type II \ FS SS-R-620B, Type II - Asphalt impregnated glass (felt) mat used as a base sheet in roofing and waterproofing

Q. ASTM D 4897, Type I/II - Asphalt impregnated glass (felt) mat used as a vented base sheet in roofing and waterproofing

R. ASTM D 5147, Standard test method for sampling and testing modified bituminous sheet material.

S. ASTM D 6163, Type I, Grade S – Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bitumen Sheet Materials Using Glass Fiber Reinforcements.

T. ASTM D 6163, Type I, Grade G – Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bitumen Sheet Materials Using Glass Fiber Reinforcements.

U. ASTM D 6164, Type I, Grade S – Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bitumen Sheet Materials Using Polyester Reinforcements.

V. ASTM D 6164, Type I, Grade G – Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bitumen Sheet Materials Using Polyester Reinforcements.

W. ASTM D 6164, Type II, Grade G – Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bitumen Sheet Materials Using Polyester Reinforcements.

X. ASTM D 6221, Type I, – Standard Specification for Reinforced Bituminous Flashing Sheets for Roofing and Waterproofing.

Y. ASTM D 6221, Type II, – Standard Specification for Reinforced Bituminous Flashing Sheets for Roofing and Waterproofing.

Z. ASTM D 6222, Type 1, Grade S – Standard Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using Polyester Reinforcements.

AA. ASTM D 6222, Type 1, Grade G – Standard Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using Polyester Reinforcements.

BB. ASTM D 6222, Type II, Grade G – Standard Specification for Atactic Polypropylene (APP) Modified Bituminous Sheet Materials Using Polyester Reinforcements.

1.09 MATERIAL, DELIVERY, STORAGE AND HANDLING

A. Unload and handle all roofing and construction materials with care

B. Examine all materials as they are received. Do not use any materials that are damaged, unlabeled or otherwise unfit for use. Materials must display legible labels, which identify the materials and applicable reference standards.

C. Immediately notify carrier and GAFMC or other manufacturer of damaged, wet or defective materials.

D. Do not expose materials to moisture in any form before, during, or after delivery to the site. Reject delivery of materials that show evidence of contact with moisture.

E. At the job site, no more material should be stored that will be used within two weeks. For periods longer than two weeks, the materials should be properly warehoused, i.e., dry, ventilated, on pallets, etc. No more material should be stored on the roof than can be used within five days. When prolonged inclement weather threatens, i.e., rainy seasons, no more roofing materials should be supplied to the rooftop than can be used within two days.

F. Store roll goods on end on pallets in a clean, dry, well-ventilated protected area. Take care to prevent damage to roll ends or edges. Do not double stack modified bitumen products.

G. Remove manufacturer supplied plastic covers from materials provided with such covers. Use "breathable" type covers such as canvas tarpaulins to allow venting and protection from weather and moisture. Cover and protect materials at the end of each day work. Do not remove any protective tarpaulins until immediately before material will be installed.

H. Lightweight insulation products should be properly stored and weighted to avoid weather and wind damage.

I. Store roofing asphalt to prevent leakage and carton deterioration.

J. Store all coatings and sealants/caulks to protect from freezing. Frozen material must be discarded and replaced. Properly seal all liquid material containers after use.

K. Materials shall be stored above 55°F (12.6°C) a minimum of 24 hours prior to application.

2.0 PRODUCTS

2.01 SHEET MATERIALS

A. Dry Sheathing Paper: Red Rosin Paper, unsaturated.

B. Heavyweight asphalt coated glass fiber base sheet: Conforms to or exceeds requirements of ASTM D 4601, Type II, UL Type G2 BUR, and Federal Spec SS-R-620B Type II. Each roll contains three (3) squares (320 sq. ft.) of material, 39.4" x 97.5' (1 m x 29.7 m); 75 lbs. (34.1 kg), **GAFGLAS® #75 Base Sheet**, by GAFMC.

C. High performance, asphalt coated, glass-reinforced base sheet: Conforms to or exceeds requirements of ASTM D 4601, Type II, UL Type G2 BUR, and Federal Spec SS-R-620B Type II. Each roll contains two (2) squares (214 sq. ft.) of material, 39.4" x 65.2' (1 m x 19.9 m); 75 lbs. (34.1 kg), **GAFGLAS® #80 ULTIMA Base Sheet**, by GAFMC.

D. Moisture resistant and flame retardant inorganic base sheet, asphalt coated with mineral granules: Conforms to or exceeds requirements of ASTM D 3672 Type II and ASTM D 4897, Type II and UL Type G2 BUR. Each roll contains one square of material, 39.4" x 32.6' (1 m x 9.9 m); 69 lbs. (31 kg), **GAFGLAS® STRATAVENT® Eliminator™ Nailable**, by GAFMC.

E. Moisture resistant and flame retardant inorganic base sheet, asphalt coated with mineral granules, has 1/2"(inch) perforations, 3 in a row with groups spaced 3 inches apart on center: Conforms to or exceeds requirements of ASTM D 3672 Type II and ASTM D 4897, Type II and UL Type G2 BUR. Each roll contains one square of material, 39.4" x 32.6' (1 m x 9.9 m); 60 lbs.

(27.3 kg), **GAFGLAS® STRATAVENT® Eliminator™ Perforated**, by GAFMC.

F. Glass fiber asphalt saturated ply sheet, strong and lightweight. Conforms to or exceeds requirements of ASTM D 2178 Type IV and UL Type G1 BUR Each roll contains five (5) squares (530 sq. ft.) of material, 39.4" x 161.8' (1.0m x 49.3m), 40 lbs. (18.2 kg), **GAFGLAS® Ply 4**, by GAFMC.

2.02 BITUMINOUS MATERIALS

A. Asphalt bitumen: ASTM D 312 Type I

B. Asphalt bitumen: ASTM D 312 Type II

C. Asphalt bitumen: ASTM D 312 Type III

D. Asphalt bitumen: ASTM D 312 Type IV

E. SEBS modified asphalt: ASTM D 312 Type III

F. SEBS modified asphalt: ASTM D 312 Type III

G. SEBS modified asphalt: ASTM D 312 Type IV

H. SBS cement: ASTM D 4586, **Matrix™ 201 System Pro SBS Flashing Cement**, by BMCA.

I. SBS cement: ASTM D 4586, **Matrix™ 202 Select SBS Flashing Cement**, by BMCA.

J. Roof cement: ASTM D 4586, **Matrix™ 203 Standard Plastic Roof Cement**, by BMCA.

K. Asphalt primer: ASTM D 41 **Matrix™ 307 Standard Asphalt Primer**, by BMCA

2.03 MANUFACTURER'S - INSULATION

A. EnergyGuard™ PolyIso Roof Insulation

B. EnergyGuard™ Tapered Foam Roof Insulation

C. EnergyGuard™ Composite Roof Insulation

D. EnergyGuard™ Tapered Composite Roof Insulation

E. BMCA Permalite® Roof Insulation

F. BMCA Permalite® Taper Roof Insulation

G. BMCA Permalite® ½" Recover Board

H. BMCA Regular Fiberboard

I. BMCA High Density Fiberboard

2.04 INSULATION

A. ASTM D 1289 / FS HH-I-1972, Gen., Isocyanurate board, with a strong white or black fibrous glass facer, with the following characteristics:

1. Board Thickness:

2. Thermal Resistance (R value) of:

B. ASTM D 1289 / FS HH-I-1972, Gen., Rigid high thermal polyisocyanurate foam insulation with 1/2" perlite roof insulation laminated to one side and a strong white fibrous glass facer on the other, with the following characteristics:

1. Board Thickness:

2. Thermal Resistance (R value) of:

C. FS HH-I-529b, ANSI/ASTM C 728, Expanded perlite mineral aggregate board; with the following characteristics:

1. Board Density: 9-lb./cu. ft. min.

2. Board Thickness:

3. Thermal Resistance (R value) of:

D. High density board made of expanded perlite mineral and cellulosic fiber, and the minimum recycled content is 30% by weight; with the following characteristics:

1. Board Density: 9-lb./cu. ft. min.

2. Board Thickness: 1/2" (13 mm)

3. Thermal Resistance (R value) of: 1.32

E. FS LLL-I-535, Class C, ANSI/ASTM C 208, Cellulose fiber board

1. Board Thickness: 1/2"

2. Thermal Resistance (R value) of: 1.32

2.05 ROOF BOARD

A. GP Dens-Deck® Prime Roof Board

1. Board Thickness:

2. Thermal Resistance (R value) of:

B. GP Dens-Deck® Roof Board

1. Board Thickness:

2. Thermal Resistance (R value) of:

2.06 EDGE STRIP

A. BMCA Tapered Edge Strip is designed to provide a smooth transition from horizontal to vertical surfaces or for transitions from lower to higher elevations.

B. BMCA Tapered Edge Strip is made of Permalite rigid perlite insulation board. The tapered edge strips are flame resistant and easy to install.

2.07 CANT STRIP

A. BMCA Cant Strip is designed to provide a smooth transition from horizontal to vertical surfaces (e.g. roof-to-wall transitions) or for transitions from lower to higher elevations.

B. BMCA Cant Strip is made of Permalite rigid perlite insulation board. The cant strips are flame resistant and easy to install.

2.08 BASE FLASHING

A. Strong, heavily asphalt-coated, glass fiber mat flashing sheet. Each roll contains 2 squares (214 sq. ft.) of material, 39.4" x 65.2' (1.0m x 19.9m). Roll weight 76 lbs. (34.5 kg), **GAFGLAS® Flashing**, by GAFMC.

B. Strong, resilient, asphalt modified bitumen membrane containing a core of non-woven polyester mat coated with flexible, SBS polymer-modified asphalt.

Conforms to or exceeds requirements of ASTM D 6164 Type I Grade G. Each roll contains one square of material, 39.4" x 33.6' (1 m x 10.3 m), 102 lbs. (46.4 kg), **RUBEROID® MOP (Granule)**, by GAFMC.

C. Premium, heavy-duty asphalt modified bitumen membrane containing a core of non-woven polyester mat coated with flexible, SBS polymer-modified asphalt. Conforms to or exceeds requirements of ASTM D 6164 Type II Grade G. Each roll contains one square of material, 39.4" x 33.6' (1 m x 10.3 m), 102 lbs. (46.4 kg), **RUBEROID® MOP PLUS**, by GAFMC.

D. Smooth surfaced - tough, resilient, asphalt modified bitumen membrane containing a core of non-woven polyester mat coated with weather resistant, APP polymer-modified asphalt. Conforms to or exceeds requirements of ASTM D 6222 Type I Grade S. Each roll contains one square of material, 39.4" x 32.9' (1 m x 10 m), 87 lbs. (39.5 kg) **RUBEROID® TORCH Smooth** - by GAFMC.

E. Granule surfaced - tough, resilient, asphalt modified bitumen membrane containing a core of non-woven polyester mat coated with weather resistant, APP polymer-modified asphalt. Conforms to or exceeds requirements of ASTM D 6222 Type I Grade G. Each roll contains one square of material, 39.4" x 32.9' (1 m x 10 m), 102 lbs. (46.4 kg) **RUBEROID® TORCH Granule** - by GAFMC.

F. Premium, fire resistant, granule surfaced strong, heavyweight, resilient, asphalt modified bitumen membrane containing a core of non-woven polyester mat coated with weather resistant, APP polymer-modified asphalt. Conforms to or exceeds requirements of ASTM D 6222 Type II Grade G. Each roll contains 3/4 square of material, 39.4" x 24.6' (1 m x 7 m), 90 lbs. (40.9 kg) **RUBEROID® TORCH FR** – by GAFMC.

G. Premium, heavy duty granule surfaced APP modified asphalt membrane. Polyester (250 g/m^2) reinforcement, asphalt modified bitumen membrane containing a core of non-woven polyester mat coated with weather resistant, APP polymer-modified asphalt. Conforms to or exceeds requirements of ASTM D 6222 Type II Grade G. Each roll contains 3/4 square of material 39.4" x 24.6' (1 m x 7 m), 93 lbs. (42.3 kg) **RUBEROID® TORCH PLUS** – by GAFMC.

H. Tough, resilient, asphalt modified bitumen membrane containing a core of non-woven polyester mat coated with flexible, SBS polymer-modified asphalt designed for heat weld application. Conforms to or exceeds requirements of ASTM D 6164 Type I Grade G. Each roll contains one square of material, 39.4" x 33.6' (1 m x 10.3 m), 102 lbs. (46.4 kg), **RUBEROID® SBS Heat-Weld™ Granule**, by GAFMC.

I. Premium, heavy-duty asphalt modified bitumen membrane containing a core of non-woven polyester mat coated with flexible, SBS polymer-modified asphalt designed for heat weld application. Conforms to or exceeds requirements of ASTM D 6164 Type II Grade G. Each roll contains one square of material, 39.4" x 33.6' (1 m x 10.3 m), 103 lbs. (46.7 kg), **RUBEROID® SBS Heat-Weld™ Plus**, by GAFMC.

J. Premium, fire retarding bitumen membrane containing a high tensile woven fiberglass scrim coated with an SBS polymer-modified asphalt and covered with a protective foil facing with small built-in control channels. Conforms to or exceeds requirements of ASTM D 6298. Each roll contains one square of material, 39.75" x 33.4' (1 m x 10.1 m); 101 lbs. (45.8 kg), **RUBEROID® ULTRACLAD® SBS**, by GAFMC.

2.09 ROOF SURFACING

A. Fibrated Asphalt Emulsion Roof Coating

1. Conforming to or exceeding ASTM D 1227, Type IV Fibrated.

2. **Matrix™ 306 Select Non-Fibered Asphalt Emulsion**, conforming to or exceeding ASTM D 1227 Type III, by BMCA.

B. Glaze coat of asphalt

1. **Special Asphalt Roofing Bitumen**, conforming to or exceeding ASTM D 312, Type I.

C. Aluminum Roof Coating

1. **Matrix® 301 System Pro Aluminum Roof Coating**, conforming to or exceeding, ASTM D 2824, Type III, asphalt base, premium heavy bodied with special reinforcing fibers, by BMCA.

2. **Matrix® 302 System Pro Aluminum Roof Coating**, conforming to or exceeding, ASTM D 2824, Type III, premium, high aluminum content, by BMCA.

3. **Matrix® 303 Select Aluminum Roof Coating**, conforming to or exceeding, ASTM D 2824, Type III, heavy bodied with special reinforcing fibers, by BMCA.

4. **Matrix® System Pro 304 Aluminum Roof Coating**, conforming to or exceeding, ASTM D 2824, Type III, premium, high aluminum content, by BMCA.

2.010 RELATED MATERIALS

A. Mechanical Fasteners

1. Drill•Tec™ Standard Roofing Fastener: Alloy steel fastener with CR-10 coating with a .220" diameter thread: Factory Mutual Standard 4470 Approved, #3 Phillips truss head or hex head, Drill•Tec™ Fasteners, by BMCA.

2. Drill•Tec™ ASAP® 3P Fastener: Assembled screw and 3" locking plastic plate. Alloy steel fastener with CR-10 coating with a .220" diameter thread: Factory Mutual Standard 4470 Approved, #3 Phillips truss head, Drill•Tec™ Fasteners, by BMCA.

3. Drill•Tec™ ASAP® 3S Fastener: Assembled screw and 3" steel plate. Alloy steel fastener with CR-10 coating with a .220" diameter thread: Factory Mutual Standard 4470 Approved, #3 Phillips truss head, Drill•Tec™ Fasteners, by BMCA.

4. Drill•Tec™ Heavy Duty Roofing Fastener: Heavy duty gauge alloy steel fastener with CR-10 coating with a .245" diameter thread: Factory Mutual Standard 4470 Approved, #3 Phillips truss head for use on heavy steel decks, Drill•Tec™ Fasteners, by BMCA.

5. Drill•Tec™ NTB®-1HWO Fastener: A large diameter glass filled nylon auger with a 1" head. Major thread diameter of .750". To be used with 3" Steel Round Plate or a 2" steel plate with barbs, Drill•Tec™ Fasteners, by BMCA

6. Drill•Tec™ NTB®-1HWW Fastener: A large diameter glass filled nylon auger with a 1" head and with locking wire barbs. Major thread diameter of .750". To be used with 3" Steel Round Plate or a 2" steel plate with barbs, Drill•Tec™ Fasteners, by BMCA

7. Drill•Tec™ LiteDeck Fastener: A large diameter reinforced nylon screw with a #3 square drive flat head. Tread diameter of .375" and shank diameter of .312". Uses a 3" (7.5 cm) Metal Round Plate fastening system, DRILL-TEC™ Fasteners, by BMCA.

8. Drill•Tec™ CR Base Sheet Fastener: G-90 galvanized, CR-10 Corrosion resistant coating with 1.125" x1" head and 1.75"leg length. Uses 2.75" Diameter Galvalume steel roof disc, DRILL-TEC™ Fasteners, by BMCA.

9. Drill•Tec™ CR 1.2 Base Sheet Fastener: G-90 galvanized, CR-10 Corrosion resistant coating with 1.125" x1" head and 1.2"leg length.

Uses 2.75" Diameter Galvalume steel roof disc, DRILL-TEC™ Fasteners, by BMCA.

10. Drill•Tec™ 2" Galvalume® Plate: Galvalume, 2" (5.1 cm) diameter, center hole .25" (inch), for use with Standard, Heavy Duty, CD-10, Fluted Nail or Toggle Bolt, DRILL-TEC™ Fasteners, by BMCA.

11. Drill•Tec™ 3" Galvalume® Plate: Galvalume, 3" (7.5 cm) diameter, center hole .25" (inch), for use with Standard, Heavy Duty, CD-10, Fluted Nail or Toggle Bolt, DRILL-TEC™ Fasteners, by BMCA.

12. Drill•Tec™ 2" NTB Plate: Galvalume, plate with extra wide diameter and steel barbs, designed specifically for NTB Fastener, DRILL-TEC™ Fasteners, by BMCA.

13. Drill•Tec™ 3" NTB Plate: Galvalume, plate with extra wide diameter, designed specifically for NTB Fastener, DRILL-TEC™ Fasteners, by BMCA.

14. Drill•Tec™ Lite-Deck Plate: Galvalume, plate with extra wide diameter designed specifically for Lite-Deck Fastener, DRILL-TEC™ Fasteners, by BMCA.

15. Drill•Tec™ 3" Locking Plastic Plates: Made of high strength polyolefin. The screw head locks under the lip into the slotted configuration to prevent screw pop-up. DRILL-TEC™ Fasteners, by BMCA.

16. Drill•Tec ™ Base Sheet Plate: 2.75" Disk for use with CR Base Sheet Fasteners , DRILL TEC™ Fasteners, by BMCA.

17. Threaded Cap Nail - Annular-threaded electro-galvanized with yellow di-chromate coating, with 1" (25 mm) round or square cap, as manufactured by the Simplex Nail Corporation.

18. Two-piece tube nail, 1" (25 mm) diameter cap; when the nail is driven down through the tube of first part that was installed, the nail hooks up to provide backout resistance), as manufactured by The Simplex Corporation.

19. Nail-Tite Type R Fasteners: Self locking one piece fastener for securing base ply when roofing over existing poured gypsum roof decks. Shank: 1" tapered cone precision formed from corrosion resistant galvanized (G-90) steel. Cap: 1-1/4" round cap formed from corrosion resistant Galvalume (AZ-55) steel, reinforced to resist cupping during driving. The shank is securely wedged to cap forming rigid one piece fastener, by E. S. Products

B. One Way Vents

1. The Metalastic® One Way Vent is a pressure relief device consisting of a one-piece spun aluminum vent pre-flashed with modified bitumen. Internally, the Metalastic® One Way Vent contains a neoprene valve that allows air pressure and moisture vapor to escape out of the system without allowing additional air and moisture vapor to return. Metalastic® One Way Vent, by MWeld.

C. Standard Vents

1. A Metalastic® Standard Vent is a spun aluminum vent, pre-flashed with modified bitumen designed to waterproof soil pipes and roofing protrusions. Metalastic® Standard Vent, by MWeld.

NOTE: Not for use over active pipes that emit steam or excessive moisture vapor, condensation may occur. Not for use over boiler or heater/furnace vent pipes.

D. Adjustable Vents

1. The Metalastic®Adjustable Vent unit is a two piece roof flashing unit consisting of a pre-flashed spun aluminum base and a flexible upper boot, allowing for waterproofing of tall or awkward roof protrusions. Metalastic®Adjustable Vent, by MWeld.

E. Pre-Flashed Plumbing Vent

1. The Metalastic® Plumbing Vent is a pre-flashed with modified bitumen membrane and is designed to waterproof vent pipes. Metalastic® Plumbing Vent can be used as a pipe cover to replace finger and cap flashing on standard vent pipe details. Metalastic® Plumbing Vent makes a quick and effective repair for cracked or leaky pipe flashing on existing roofs, Metalastic®Plumbing Vent, by MWeld.

F. Scuppers

1. The Metalastic® Scupper is a pre-flashed metal through-wall roof drain designed for easy installation to aid in quick lateral removal of water. Metalastic® Scupper, by MWeld.

G. Drains

1. Metalastic® Drain is a spun aluminum (or copper) roof drain with gravel guard, strainer cap, and waterproofing plumbing seal attached. Metalastic® Drain is pre-flashed with modified bitumen and is

available in full and insert sized to accommodate new construction and retrofit applications. Metalastic® Drain, by MWeld.

H. M-Curb System

1. M-Curb systems are composed of a structural urethane outer shell, bonded to the roof surface, filled with a 2" (50 mm) thick urethane rubber sealant. The urethane sealant, M-Thane, conforms to the shape of any roof penetration through a roof surface to protect the roof system from moisture.

I. Expansion Joint Covers

1. Roof expansion joint covers are factory fabricated assemblies used to accommodate three-dimensional joints in a roof structure. Heavy reinforced flexible cover with a flexible flame retardant foam bellows for support. Nailing flanges conform to curb irregularities, Metalastic Expansion Joint Covers, by BMCA

J. Gravel Guard

1. Three-piece fascia system with a unique roof flange design that creates a water and wind proof seal at the building perimeter, Gravel Guard MB, by MWeld.

3.0 EXECUTION

3.01 EXAMINATION

A. Verify that the surfaces and site conditions are ready to receive work.

B. Verify that the deck is supported and secured.

C. Verify that the deck is cleaned and smooth, free of depressions, waves, or projections, and properly sloped to drains, valleys, eaves, scuppers or gutters.

D. Verify that the deck surfaces are dry and free of ice or snow.

E. Verify that all roof openings, curbs, pipes, sleeves, ducts, vents or other penetrations through the roof are solidly set, and that all flashings, tapered edges and cant strips, reglets, and wood nailers are secure and tight to the building as per this specification.

F. The beginning of installation of the roof system signifies the contractor accept the existing conditions as being in compliance with the requirements of this specification.

3.02 PROTECTION

A. Protect any adjacent building surfaces against damage from the installation of the roofing system.

B. The contractor shall observe fire and safety precautions as recommended by Asphalt Roofing Manufacturer's Association and the National Roofing Contractors Association.

C. (Option - Reroof only) Removal of the existing roof surface will be limited to the area that will be completely reroofed that day with the new roofing system.

D. All debris from the roofing operations shall be removed daily from the roof deck and jobsite and disposed at an approved, suitable disposal site.

3.03 PREPARATION OF THE DECK

A. Metal Deck

1. Metal decks must be a minimum uncoated thickness of 22 gauge (0.8 mm) and should have a G-90 galvanized finish on all panels.

2. Can be categorized into 3 configurations:

   a. narrow rib, 1" (25 mm) flute opening or smaller;

   b. intermediate rib, 1" – 1-3/4" (25 mm – 44 mm) flute opening;

   c. wide rib, 1-3/4" – 2-1/2" (44 mm – 64 mm) flute opening

3. Must comply with the gauge and span requirements in the current Factory Mutual FM Approval Guide and be installed in accordance with Loss Prevention Data Sheet 1-28 or specific FM approval.

4. Wood nailers of equivalent thickness to the roof insulation must be provided at perimeters and projection openings to act as an insulation stop and to provide for the nailing of the flanges of metal flashing.

5. Insulation boards thick enough to span the flutes of the steel deck as recommended by the insulation manufacturer are required and must be secured to the steel deck with approved Drill•Tec mechanical fasteners to meet at least an FMRC 1-60 uplift resistance rating.

6. Insulation should be installed over steel decks with long sides continuous, either parallel or at right angles too steel deck ribs. The

board edges that are parallel with the steel deck ribs must rest firmly on the bearing surface of the steel deck. The joints of parallel courses of insulation should be staggered.

7. When reroofing over steel decks, surface corrosion shall be removed, repairs to holes or severely corroded areas made. Loose or inadequately secured decking shall be fastened, and irreparable or otherwise defective decking shall be replaced.

B. Loadmaster

1. The Loadmaster deck shall be installed as per the deck manufacturer's specifications.

2. The metal deck used in the Loadmaster system must be no lighter than 25 gauge.

3. Only specifications using white granule surfaced or gravel surfaced membranes are acceptable over this deck.

C. Structural Concrete Deck

1. Minimum deck thickness is 4" (10.2 cm) in thickness.

2. Only poured in place concrete decks that provide bottom side drying are acceptable. Decks that are poured over non-vented metal decks or pans that remain in place can trap moisture in the deck under the roof system and are not acceptable.

3. The roof deck shall be properly cured prior to application of the roofing system; twenty-eight (28) days is normally required for proper curing. Curing agents must be checked for compatibility with roofing materials. Prior to the installation of the roof assemblies, GAFMC recommends the evaluation of the surface moisture and deck's dryness through the use of ASTM D-4263 or hot bitumen test.

4. The deck must be smooth, level and cannot be wet or frozen. If deck is determined to be wet, it must be allowed to dry.

5. Treat cracks greater than 1/8" (3 mm) in width in accordance with the deck manufacturer's recommendations.

6. Sumps for the roof drains should be provided in the casting of the deck.

7. For insulated decks, wood nailers of equivalent thickness to the roof insulation must be provided at perimeters and projection openings to

act as an insulation stop and to provide for the nailing of the flanges of metal flashing.

8. When applying insulation directly to the deck, prime deck with asphalt/concrete primer, ASTM D 41 at the rate of one gallon per 100 square feet (0.4 L/m^2) and allow the primer to dry prior to the application of the roofing system.

9. Decks with broomed or textured surfaces are not acceptable for direct application of an non-insulated roofing system.

10. In all retrofit roof applications, it is required that deck be inspected for defects. Any defects are to be corrected as per the deck manufacturer's recommendations prior to the new roof application.

D. Precast Concrete Deck

1. Precast concrete decks are usually manufactured as planks or slabs and constructed on steel reinforced Portland cement and solid aggregate; often they are made with hollow cores to minimize their weight.

2. It is the responsibility of the engineer, architect, building owner or the roofing contractor to determine the fitness of a deck for direct membrane application to a concrete deck.

3. The deck must be smooth, level and cannot be wet or frozen. If deck is determined to be wet, it must be allowed to dry.

4. Prior to the installation of the roof assemblies, GAFMC recommends the evaluation of the surface moisture and deck's dryness through the use of ASTM D-4263 or hot bitumen test.

5. All deformed panels must be replaced.

6. Joints must be filled with a masonry grout to correct imperfections between slabs and feathered to provide a slope not greater than ¼" per foot (2.1 cm/m), for non-insulated assemblies or 1/8" per foot (1.0 cm/m) for insulated assemblies.

7. Fill depressions with masonry grout and finished smooth, then a leveling course of lightweight insulating concrete (minimum 2" (5.1 cm) thickness) must be applied. Do not seal joints between the slabs; leave open to permit venting and drying of roof fill from below.

8. For insulated decks, wood nailers of equivalent thickness to the roof insulation must be provided at perimeters and projection openings to

act as an insulation stop and to provide for the nailing of the flanges of metal flashing.

9. When applying insulation directly to the deck, prime deck with asphalt/concrete primer, ASTM D 41 at the rate of one gallon per 100 square feet (0.4 L/m^2) and allow the primer to dry prior to the application of the roofing system. Hold back bitumen at the joints approximately 4" (10.2 cm) to prevent bitumen drippage.

10. In all retrofit roof applications, it is required that deck be inspected for defects. Any defects are to be corrected as per the deck manufacturer's recommendations prior to the new roof application.

E. Pretressed Concrete Deck

1. Decks should have a minimum 2" (5.1 cm) cellular lightweight concrete fill be installed over all prestressed concrete decks prior to installation of the roof system and/or insulation because variations in camber and thickness of prestressed concrete members may make securement of the roof system difficult.

2. It is the responsibility of the engineer, architect, building owner or the roofing contractor to determine the fitness of a deck for direct membrane application to a concrete deck.

3. The deck must be smooth, level and cannot be wet or frozen. If deck is determined to be wet, it must be allowed to dry.

4. Lightweight fills can also be poured to provide slope in the deck to facilitate drainage.

5. The 2" (5.1 cm) minimum fill thickness at low points allows for mechanical attachment of the base sheet to the deck.

6. Provisions must be made for the curing or drying of the fill installed over the top of the prestressed deck members.

7. In all retrofit roof applications, it is required that deck be inspected for defects. Any defects are to be corrected as per the deck manufacturer's recommendations prior to the new roof application.

F. Gypsum Deck

1. Gypsum decks must be smooth and free from deflections or ridges.

2. An average fastener withdrawal resistance as recommended b the fastener manufacturer must be obtained; however, at no time should the withdrawal be less than 40 lbs. (178 N) per fastener.

3. If either surface-wet or frozen, a poured gypsum deck is not suitable to receive a roof.

4. Poured-in-place gypsum nailable roof decks contain a large percentage of moisture. All necessary precautions must be taken to avoid the entrapment of moisture under the roofing system, including but not limited to venting at the bottom and top side of the deck, as well as at the perimeter and all penetrations.

G. Lightweight Insulating Concrete Deck

1. Lightweight insulating concrete decks are required to have a minimum thickness of 2" (5.1 cm), a minimum compressive strength of 125 psi (87,000 kg/m^2) and a density of 22 pcf (352 kg/m^2). Individual deck manufacturer's standards apply when their specifications exceed these minimum thickness, compressive strength, and density requirements.

2. Where the Mean January Temperature (reference current ASHRAE Fundamentals Handbook) is below 40°F (4.4°C), lightweight insulating concrete decks must be poured and roofed between April 1st and October 31st, this type of deck is unacceptable in Alaska.

3. The lightweight insulating deck/fill must be installed by an applicator approved, in writing, by the deck manufacturer.

4. The roof system shall be installed as soon as possible following deck curing to prevent damage from exposure to precipitation; the maximum drying time before installation of the roof system shall be the maximum time required by the deck manufacturer.

5. LWIC should not be poured during rainy periods; deck areas, which have frozen before they have cured, must be removed and replaced. Decks, which receive precipitation prior to installation of the roof membrane, must be checked for moisture content and dryness.

6. Aggregate based lightweight insulating concrete decks require bottom side venting as provided. Solid metal decking and structural concrete decks require bottom side venting as acceptable to receive an aggregate based lightweight insulating concrete mix.

7. Cellular lightweight insulating concrete decks, can be installed over non-slotted, or slotted, galvanized metal decking designed for cellular LWIC or structural concrete.

8. Topside or perimeter venting is required. Use one way pressure release vents with all specifications installed over these decks at a rate of one vent for each 10 squares (1000 ft²) (92.90 m²).

9. On new lightweight insulating concrete decks, use a STRATAVENT® Eliminator™ Nailable as the base sheet. over dry, old decks with less than 20% moisture content, GAFGLAS® #75 base Sheet may be used as the base sheet with prior approval.

10. Mechanically attach the GAFGLAS® base sheet using the Drill•Tec™ Base Sheet Fastener, nail the two inch side lap on 9" centers; in the field of the sheet, stagger nail on 18""centers, in two rows located approximately 12" from each sheet edge.

11. For FMRC Approved installation patterns refer to the current FMRC Approval Guide for formally approved systems and fastening patterns.

12. Lightweight insulating concrete decks are acceptable only on slopes up to 1" per foot (8.3 cm/m).

13. Do not attach insulation directly to lightweight concrete decks. Over old, dry decks, additional board insulation may be solidly mopped to an approved mechanically attached anchor sheet (base sheet).

14. In all retrofit roof applications, it is required that the deck be inspected for defects. Any defects are to be corrected as per the deck manufacturer's recommendations prior to the new roof application.

H. Wood Decks (Plank/Heavy Timber)

1. Wood boards must be at least 1" nominal thickness and have a nominal width of 4'-6". Tongue and groove or shiplap lumber is preferred to square edge material since subsequent shrinkage or warping of square edge planks may cause ridging of the roof system above adjacent boards.

2. All boards must have a bearing on rafters at each end and be securely nailed.

3. Lumber should be kiln dried.

4. Preservatives or fire retardants used to treat decking must be compatible with roofing materials.

5. Decking should be kept dry and roofed promptly after installation.

6. Knotholes or large cracks in excess of ¼" (6 mm) should be covered with securely nailed sheet metal.

7. When light metal wall ties or other structural metal are exposed on top of the wood deck, cover them with a heavy ply of a roofing sheet, such as Stratavent® Eliminator™ Nailable Base Sheet, extending 2"-6" (5.1 cm – 15.2 cm) beyond the metal in all directions. Nail in place before applying the base ply.

8. Attach an acceptable base sheet through flat metal caps or use nails with attached 1" (25 mm) square or round metal caps that have a minimum withdrawal resistance of 40 pounds each (178 N).

9. In all retrofit roof applications, it is required that deck be inspected for defects. Any defects are to be corrected as per deck manufacturer's recommendations and standards of the APA/Engineered Wood Association prior to new roof application.

I. Plywood

1. Plywood sheathing shall be exterior grade, minimum 4 ply, not less than 15/32" (12 mm) thick.

2. Preservatives or fire retardants used to treat decking must be compatible with roofing materials.

3. Plywood must be installed over joists not greater than 24" (61 cm) o.c.

4. Plywood must be installed so that all four sides of each plywood panel bear on and are secured to joist and cross blocking; the APA/Engineered Wood Association (APA) recommendations. "H" clips are not acceptable.

5. Panels must be installed with a 1/8" to 1/4" (3mm – 6mm) gap between panels and must match vertically at joints to within (1/8" (3mm).

6. Decking should be kept dry and roofed promptly after installation.

7. Knotholes or large cracks in excess of ¼" (6mm) should be covered with securely nailed sheet metal.

8. When light metal wall ties or other structural metal are exposed on top of the wood deck, cover them with a heavy ply of a roofing sheet, such as Stratavent® Eliminator™ Nailable Base Sheet, extending 2"-6" (5.1 cm – 15.2 cm) beyond the metal in all directions. Nail in place before applying the base ply.

9. Attach an acceptable base sheet through flat metal caps or use nails with attached 1" (25 mm) square or round metal caps that have a minimum withdrawal resistance of 40 pounds each (178 N).

10. In all retrofit roof applications, it is required that deck be inspected for defects. Any defects are to be corrected as per deck manufacturer's recommendations and standards of the APA/Engineered Wood Association prior to new roof application.

J. Oriented Strand Board Deck

1. Only products with the Structural 1 rating should be used as a decking material.

2. Weyerhaeuser's Struc-One oriented strand board is an acceptable substrate to receive a GAFMC roofing assembly. It must be a minimum of ½" (13mm) thick

3. Preservatives or fire retardants used to treat decking must be compatible with roofing materials.

4. OSB must be installed over joists not greater than 24" (61 cm) o.c.

5. OSB must be installed so that all four sides of each plywood panel bear on and are secured to joist and cross blocking; the APA/Engineered Wood Association (APA) recommendations. "H" clips are not acceptable.

6. Panels must be installed with a 1/8" to 1/4" (3mm – 6mm) gap between panels and must match vertically at joints to within (1/8" (3mm).

7. Decking should be kept dry and roofed promptly after installation.

8. Knotholes or large cracks in excess of ¼" (6mm) should be covered with securely nailed sheet metal.

9. When light metal wall ties or other structural metal are exposed on top of the wood deck, cover them with a heavy ply of a roofing sheet, such as Stratavent® Eliminator™ Nailable Base Sheet, extending 2"-

6" (5.1 cm – 15.2 cm) beyond the metal in all directions. Nail in place before applying the base ply.

10. Attach an acceptable base sheet through flat metal caps or use nails with attached 1" (25 mm) square or round metal caps that have a minimum withdrawal resistance of 40 pounds each (178 N).

11. In all retrofit roof applications, it is required that deck be inspected for defects. Any defects are to be corrected as per deck manufacturer's recommendations and standards of the APA/Engineered Wood Association prior to new roof application.

K. Cementitious Structural Wood Fiber Deck

1. Decks must be protected from the weather during storage and application; any decking which becomes wet or is deformed should be removed and replaced with new decking.

2. Decks should not be installed over high humidity occupancies.

3. Must have a minimum design load as recommended by the deck manufacturer.

4. All structural wood fiber deck panels must be anchored against uplift and lateral movement.

5. Joints must be level; deck erector must correct any irregularities.

6. Install a mechanically attached base sheet prior to installation of insulation or roofing membranes; an average fastener withdrawal resistance as recommended by the fastener manufacturer must be obtained.

7. In all retrofit roof applications, it is required that the deck be inspected for defects. Any defects are to be corrected as per the deck manufacturer's recommendations prior to the new roof application.

3.04 SURFACE PREPARATION

A. New Construction

1. Installation of conduits or piping between the deck and the membrane is not acceptable. All openings in the deck, curbs or projections through the deck shall be completed before starting the application of the roof system.

2. The surface to receive roof systems shall be smooth, dry, clean, and free of sharp projections and depressions.

3. The roof deck must provide positive drainage. Outlets must be placed and installed to remove water promptly and completely from the roof.

4. Expansion joints, roof vents, roof drains, etc., must be installed using acceptable industry standards.

B. Complete tearoff

1. The existing system shall be completely removed down to deck. The deck shall be inspected, cleaned, repaired and otherwise conditioned to conform to the requirements of a new deck.

2. All old flashing must be removed and stripped from all walls, curbs, etc.

3. All existing composition and metal flashing must be removed and replaced.

4. All metal counter-flashing, metal coping and other metal work above the roof system must be inspected, and replaced or repaired as necessary to provide a watertight assembly.

5. Prime all masonry, metal and existing asphalt surfaces and substrate with asphalt primer where roofing materials are to be adhered.

6. Inspect all roof drains and outlets. Remove existing drain flashings and replace broken or stripped bolts, clamping rings. Plastic drains are not acceptable. All drains, including retrofit or insert drains, must be sumped to promptly remove water from the roof surface and meet code requirements.

7. All rooftop equipment shall be carefully removed, stored as directed, and reinstalled after completion of the work. Nailers and curbs shall be removed and replaced with new treated lumber if necessary. All penetrations and expansion joints shall extend approximately 8" (20 cm) above the top of the finished roof surface. Openings shall be covered temporarily with plywood and roof membrane while equipment is stored elsewhere. Air intake and exhaust openings shall not be sealed but shall be hooded to permit flow of air. Ducts and equipment on legs shall be reinstalled so that there is sufficient clearance for future roof maintenance. Existing drains shall be completely cleaned or replaced. Broken or missing screens shall be replaced.

8. All work shall be coordinated so that all materials removed each day shall be replaced the same day with the complete roofing system and sheet metal flashings.

3.05 BITUMEN

A. Do not mix different types of asphalt.

B. Use only an ASTM D 312, Type III or Type IV Steep Asphalt. **Type III asphalt may be used on slopes up to ½" per ft (4cm/m) Type IV asphalt must be used on all slopes greater than ½" per foot (4 cm/m)**

C. Discontinue application of asphalt over any substrate where foaming of asphalt is observed.

D. Application with hot asphalt requires continuous, uniform interply mopping rates of 25 lbs. +/- 20% per 100 square feet of roof area (1.2 kg/m²). Too little asphalt may result in voids, while too much asphalt can result in membrane slippage.

E. When applying fiberglass base or fiberglass interply sheets, the point of application temperature of the asphalt must be at the Equiviscous Temperature (EVT) with a tolerance of +/- 25°F (13.9°C), at which a viscosity of 125 centipoise is attained. When using mechanical asphalt applicators, the target viscosity should be 75 centipoise.

F. For all SBS modified asphalt flashings; the minimum point of application temperature of the asphalt must be at the EVT or 425°F (218°C), whichever is greater, with a rolling bank (puddle) of mopping asphalt across the full width of the roll.

G. The equiviscous temperature (EVT) for the asphalt can be found on the asphalt cartons or bills of lading.

H. For substrates that absorb asphalt, apply the asphalt in sufficient quantity to assure the level of adhesion specified.

I. Asphalt application shall not commence when the outside temperatures is below 45°F (7.2°C) unless cold weather application instructions are followed such as using insulated piping and luggers may be necessary to maintain the required asphalt temperature at the point of application and using products stored above 55°F (12.6°C) for at least 24 hours prior to installation.

J. The operator of the roofing bitumen kettle shall be fully trained and familiar with its safe operation and have the required safety equipment and clothing for his protection.

K. Under no circumstances shall the roofing bitumen kettle be left unattended while operating.

L. Accurate thermometers to check temperatures at the kettle and point of application are required.

M. Do not heat the asphalt to or above its flash point.

N. Do not hold the asphalt at temperatures above the finished blowing temperature for more than 4 hours.

O. Do not keep heated tankers above 325°F (163°C) overnight or weekends.

P. The roofing bitumen kettle shall be placed a safe distance from the building up on plywood or a tarp to facilitate easy clean up.

3.06 VAPOR RETARDER APPLICATION

A. General

1. The best vapor retarder material cannot be effective in reducing transmission of moisture vapor if it not properly installed or if it is damaged or punctured or punctured during the time of application. **Laps and joints must be properly sealed, projections extending through the vapor retarder must be flashed or enveloped at the vapor retarder level to insure integrity of the vapor retarder, and all punctures in the vapor retarder must be repaired prior to installation of the roof insulation.** Insulation boards should be installed immediately over the vapor retarder to protect the vapor retarder from punctures or damage caused by subsequent construction traffic.

2. When a vapor retarder is installed, allow for venting any trapped gases between the roof membrane and vapor retarder by using perimeter venting or by using one-way vents placed one vent for every 1,000 square feet, venting from the surface of the vapor retarder. When using isocyanurate insulation above a vapor retarder, GAFMC recommends Stratavent® Eliminator™ – Perforated venting base sheet as the first ply over the isocyanurate insulation.

B. Steel Decks

1. Install the vapor retarder over a minimum layer of non-isocyanurate insulation of sufficient thickness to span the deck flutes. (Refer to insulation installation also).

2. Starting at the low point of the roof, chalk line the surface of the bottom layer of insulation to serve as guides for the proper mopping and laying of the vapor retarder plies, then install two plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly® 6 felt over the insulation. Install 19 11/16" (50 cm) and 39-3/8" (100.0 cm) widths and follow with a second full 39-3/8" (100.0) width sheet with a maximum of 17-11/16" (44.9 cm) exposure, applied shingle style. Lap felts 20 11/16" (52.6 cm) with an 18 11/16" (45.7 cm) exposure and lap 4" (10.2 cm) on ends. Stagger adjacent end laps a minimum of 18" (45.7 cm). Install the felts in full and uniform mopping of hot asphalt applied at the rate of 25 lb/square (1.2 kg/m²) +/- 20%.

C. Non-Nailable Decks:

1. Prime the deck with asphalt primer (ASTM D 41) applied at the rate of 1 gal/square (0.41 L/m²) minimum or as required by the primer manufacturer.

2. For precast or prestressed concrete decks,

a. Hold primer application back 4" (10.2 cm) from panel joints, cracks or roof openings. Allow the primer adequate time to dry.

b. Over the panel joints install a minimum 8" (20.3 cm) strip of GAFGLAS® #75 Base centered over the joint and spot attached on one side to the deck with hot asphalt.

3. Starting at the low point of the roof, install two plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly® 6 felt over the deck. Install 19 11/16" (50 cm) and 39-3/8" (100.0 cm) widths and follow with a second full 39-3/8" (100.0) width sheet with a maximum of 17-11/16" (44.9 cm) exposure, applied shingle style. Lap felts 20 11/16" (52.6 cm) with an 18 11/16" (45.7 cm) exposure and lap 4" (10.2 cm) on ends. Stagger adjacent end laps a minimum of 18" (45.7 cm). Install the felts in full and uniform mopping of hot asphalt applied at the rate of 25 lb/square (1.2 kg/m²) +/- 20%.

D. Poured Gypsum Deck:

1. First Ply: Mechanically fasten one ply of GAFGLAS® #75 Base Sheet using fasteners approved for applicable deck type. Fasten to the deck lapping 2" (5.1 cm) at side laps and 4" (10.2 cm) on end laps with three rows of fasteners. The first row (on the seam) will be 1" (2.5 cm) from the leading edge and on 9" (22.9 cm) centers. The second row of fasteners 14" (35.6 cm) from the leading edge and on 18" (45.7 cm) centers. The third row of fasteners shall be 26" (66.0 cm) from the

leading edge on 18" (45.7 cm) centers. The centers for the second and third rows should be staggered.

2. Second Ply: Install GAFGLAS® Ply 4 or GAFGLAS® FlexPly® 6 in a full and uniform mopping of hot asphalt over the base sheet, applied at the rate of 25 lb/square (1.2 kg/m²) +/- 20%. Lap the ply sheet 2" (5.1 cm) at side laps and 4" (10.2) cm on end laps.

3. (Option) Second & Third Ply: Starting at the low point of the roof, install two plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly® 6 felt over the base sheet. Install 19 11/16" (50 cm) and 39-3/8" (100.0 cm) widths and follow with a second full 39-3/8" (100.0) width sheet with a maximum of 17-11/16" (44.9 cm) exposure, applied shingle style. Lap felts 20 11/16" (52.6 cm) with an 18 11/16" (45.7 cm) exposure and lap 4" (10.2 cm) on ends. Stagger adjacent end laps a minimum of 18" (45.7 cm). Install the felts in full and uniform mopping of hot asphalt applied at the rate of 25 lb/square (1.2 kg/m²) +/- 20%.

E. Lightweight Insulating Concrete Deck:

1. First Ply: Mechanically fasten one ply of GAFGLAS® #75 Base Sheet or STRATAVENT® Eliminator™ Nailable Base Sheet using fasteners approved for applicable deck type. Fasten to the deck lapping 2" (5.1 cm) at side laps and 4" (10.2 cm) on end laps with three rows of fasteners. The first row (on the seam) will be 1" (2.5 cm) from the leading edge and on 9" (22.9 cm) centers. The second row of fasteners 14" (35.6 cm) from the leading edge and on 18" (45.7 cm) centers. The third row of fasteners shall be 26" (66.0 cm) from the leading edge on 18" (45.7 cm) centers. The centers for the second and third rows should be staggered.

2. Second Ply: Install GAFGLAS® Ply 4 or GAFGLAS® FlexPly® 6 in a full and uniform mopping of hot asphalt over the base sheet, applied at the rate of 25 lb/square (1.2 kg/m²) +/- 20%. Lap the ply sheet 2" (5.1 cm) at side laps and 4" (10.2) cm on end laps.

3. (Option) Second & Third Ply: Starting at the low point of the roof, install two plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly® 6 felt over the base sheet. Install 19 11/16" (50 cm) and 39-3/8" (100.0 cm) widths and follow with a second full 39-3/8" (100.0) width sheet with a maximum of 17-11/16" (44.9 cm) exposure, applied shingle style. Lap felts 20 11/16" (52.6 cm) with an 18 11/16" (45.7 cm) exposure and lap 4" (10.2 cm) on ends. Stagger adjacent end laps a minimum of 18" (45.7 cm). Install the felts in full and uniform mopping of hot asphalt applied at the rate of 25 lb/square (1.2 kg/m²) +/- 20%.

F. Wood Deck:

1. Lay one ply of rosin-sized paper dry; lap side laps a minimum of 2" (5 cm) and the head laps a minimum of 6" (15 cm). Stagger all adjacent end laps a minimum of 12" (30.5 cm).

2. First Ply: Mechanically fasten one ply of GAFGLAS® #75 Base Sheet using fasteners approved for applicable deck type. Fasten to the deck lapping 2" (5.1 cm) at side laps and 4" (10.2 cm) on end laps with three rows of fasteners. The first row (on the seam) will be 1" (2.5 cm) from the leading edge and on 9" (22.9 cm) centers. The second row of fasteners 14" (35.6 cm) from the leading edge and on 18" (45.7 cm) centers. The third row of fasteners shall be 26" (66.0 cm) from the leading edge on 18" (45.7 cm) centers. The centers for the second and third rows should be staggered.

3. Second Ply: Install GAFGLAS® Ply 4 or GAFGLAS® FlexPly 6 in a full and uniform mopping of hot asphalt over the base sheet, applied at the rate of 25 lb/square (1.2 kg/m²) +/- 20%. Lap the ply sheet 2" (5.1 cm) at side laps and 4" (10.2) cm on end laps.

4. (Option) Second & Third Ply: Starting at the low point of the roof, install two plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly® 6 felt over the base sheet. Install 19 11/16" (50 cm) and 39-3/8" (100.0 cm) widths and follow with a second full 39-3/8" (100.0) width sheet with a maximum of 17-11/16" (44.9 cm) exposure, applied shingle style. Lap felts 20 11/16" (52.6 cm) with an 18 11/16" (45.7 cm) exposure and lap 4" (10.2 cm) on ends. Stagger adjacent end laps a minimum of 18" (45.7 cm). Install the felts in full and uniform mopping of hot asphalt applied at the rate of 25 lb/square (1.2 kg/m²) +/- 20%.

G. Structural Wood Fiber Deck:

1. Lay one ply of rosin-sized paper dry; lap side laps a minimum of 2" (5 cm) and the head laps a minimum of 6" (15 cm). Stagger all adjacent end laps a minimum of 12" (30.5 cm).

2. First Ply: Mechanically fasten one ply of GAFGLAS® #75 Base Sheet using fasteners approved for applicable deck type. Fasten to the deck lapping 2" (5.1 cm) at side laps and 4" (10.2 cm) on end laps with three rows of fasteners. The first row (on the seam) will be 1" (2.5 cm) from the leading edge and on 9" (22.9 cm) centers. The second row of fasteners 14" (35.6 cm) from the leading edge and on 18" (45.7 cm) centers. The third row of fasteners shall be 26" (66.0 cm) from the leading edge on 18" (45.7 cm) centers. The centers for the second and third rows should be staggered.

3. Second Ply: Install GAFGLAS® Ply 4 or GAFGLAS® FlexPly® 6 in a full and uniform mopping of hot asphalt over the base sheet, applied

at the rate of 25 lb/square (1.2 kg/m²) +/- 20%. Lap the ply sheet 2" (5.1 cm) at side laps and 4" (10.2) cm on end laps.

4. (Option) Second & Third Ply: Starting at the low point of the roof, install two plies of GAFGLAS® Ply 4 or GAFGLAS® FlexPly® 6 felt over the base sheet. Install 19 11/16" (50 cm) and 39-3/8" (100.0 cm) widths and follow with a second full 39-3/8" (100.0) width sheet with a maximum of 17-11/16" (44.9 cm) exposure, applied shingle style. Lap felts 20 11/16" (52.6 cm) with an 18 11/16" (45.7 cm) exposure and lap 4" (10.2 cm) on ends. Stagger adjacent end laps a minimum of 18" (45.7 cm). Install the felts in full and uniform mopping of hot asphalt applied at the rate of 25 lb/square (1.2 kg/m²) +/- 20%.

3.07 INSULATION APPLICATION

A. General:

1. Do not apply roof insulation and roofing until all other work trades have completed jobs that require them to traverse the deck on foot or with equipment. A vapor retarder (membrane type) coated lightly with asphalt may be applied to protect the inside of the structure before the insulation and final roofing are installed. Before the application of the insulation, the vapor retarder must be carefully repaired.

2. Do not install wet damaged or warped insulation boards.

3. Install insulation boards with staggered board joints in one direction (unless taping joint).

4. Install insulation board snug. Gap between board joints must not exceed ¼" (6 mm). All gaps in excess of ¼" (6 mm) must be filled with like insulation material.

5. Do not kick insulation boards into place.

6. Install insulation boards per insulation board manufacturer's requirements.

7. Edges of insulation board shall be mitered and filled at ridges and elsewhere to prevent open joints or irregular surfaces. Avoid breaking or crushing of the insulation at the corners.

8. Do not install insulation over old lightweight insulating concrete deck without the use of a vapor retarder. Do not install insulation over new lightweight insulating concrete.

9. For steep slope roof applications, if insulation is to be installed, mechanically attach insulation or mop between wood nailers.

B. EnergyGuard™ PolyIso Roof Insulation

C. EnergyGuard™ Composite Roof Insulation

D. BMCA Permalite® Roof Insulation

E. BMCA Permalite® ½" Recover Board

F. BMCA Regular Fiberboard

G. BMCA High Density Fiberboard

H. GP Dens-Deck® Prime Roof Board

I. GP Dens-Deck® Roof Board

1. The roof deck shall be smooth, dry, clean, and free of sharp projections and depressions. All wood nailers shall be the same thickness as the insulation.

2. Set the insulation with long joints continuous. The short joints shall be staggered. Insulation shall be installed with coated side up.

3. Insulation thickness shall be uniform over common roof areas.

4. Boards shall be tightly butted against each other but shall not be kicked into position. Boards shall be cut to fit neatly against adjoining surfaces.

5. Insulation must not be left exposed to the weather. No more insulation shall be applied than can be completely covered with the finished roof per day.

6. It is recommended that the insulation be set in more than one layer. Additional layers of insulation shall be installed with the joints staggered in one direction, assuring that board ends and sides touch all along their length. Press each board firmly in place. Stagger the joints of each additional layer by as much as possible in relation to the insulation joints in the layer(s) below to eliminate continuous vertical gaps.

7. Individual layers of insulation must not exceed 3" (7.6 mm) in thickness nor total thickness of all layers should not exceed 5" (12.7 cm) without written approval of GAFMC Contractor Services.

8. Secure base layer of insulation to deck with appropriate fasteners and plates. The insulation must be securely attached to the roof deck. A minimum FMRC 1-60 attachment is recommended. Refer to FMRC Approval Guide for FM Fastening patterns. Factory Mutual requires fastener density increases in perimeters and corner areas for FM 1-60 and FM 1-90 or greater. Refer to FM Loss Prevention Data Sheets 1-7, 1-28, 1-29 and 1-49.

J. EnergyGuard™ PolyIso Roof Insulation

K. EnergyGuard™ Composite Roof Insulation

L. BMCA Permalite® Roof Insulation

M. BMCA Permalite® ½" Recover Board

N. BMCA Regular Fiberboard

O. BMCA High Density Fiberboard

P. GP Dens-Deck® Prime Roof Board

Q. GP Dens-Deck® Roof Board

1. The roof deck shall be smooth, dry, clean, and free of sharp projections and depressions. All wood nailers shall be the same thickness as the insulation.

2. Maximum board size shall be 4' x 4' (1.22m x 1.22m) for mopping application.

3. Set the insulation with long joints continuous. The short joints shall be staggered. Insulation shall be installed with coated side up.

4. Insulation thickness shall be uniform over common roof areas.

5. Boards shall be tightly butted against each other but shall not be kicked into position. Boards shall be cut to fit neatly against adjoining surfaces.

6. Insulation must not be left exposed to the weather. No more insulation shall be applied than can be completely covered with the finished roof per day.

7. It is recommended that the insulation be set in more than one layer. Additional layers of insulation shall be installed with the joints staggered in one direction, assuring that board ends and sides touch all along their length. Press each board firmly in place. Stagger the joints of each additional layer by as much as possible in relation to the insulation joints in the layer(s) below to eliminate continuous vertical gaps.

8. Individual layers of insulation must not exceed 3" (7.6 mm) in thickness nor total thickness of all layers should not exceed 5" (12.7 cm) without written approval of GAFMC Contractor Services.

9. The insulation shall be solidly adhered in hot asphalt at the rate of 25 lbs. per 100 square feet (1.2 kg/m^2). Any additional layers are also adhered in this manner.

R. EnergyGuard™ Tapered Foam Roof Insulation

S. EnergyGuard™ Tapered Composite Roof Insulation

T. BMCA Permalite® Taper Roof Insulation

1. Verify that all drawings and details are measured correctly. Any and all deviations shall be reported to the insulation manufacturer's tapered design department before shipment.

2. Verify from the detailed board layout pattern that is provided by designer that all piece quantities have been delivered to the jobsite and that the insulation is not damaged.

3. The roof deck shall be smooth, dry, clean, and free of sharp projections and depressions. All wood nailers shall be the same thickness as the insulation.

4. Prior to the start of the job, verify that the distance between the drain and the perimeter match with the shop drawings.

5. Verify that the taper system will meet the drain pieces.

6. Start at the drain (low point) and work to the high point. When installing the boards, verify that the boards are laid out according to the letters on each board and per the shop drawings.

7. Boards shall be tightly butted against each other but shall not be kicked into position. Boards shall be cut to fit neatly against adjoining surfaces.

8. Verify all valleys and hips are all cut on the factory 45 degree angle. Valleys (hips) are made up of (2) valley (hip) pieces.

9. All crickets shall be field cut.

10. Set the insulation with long joints continuous. The short joints shall be staggered. Insulation shall be installed with coated side up.

11. Boards shall be tightly butted against each other but shall not be kicked into position. Boards shall be cut to fit neatly against adjoining surfaces.

12. Apply only as much of the taper system that may be completely covered with the roofing system per day.

13. It is recommended that the insulation be set in more than one layer. Additional layers of insulation shall be installed with the joints staggered in one direction, assuring that board ends and sides touch all along their length. Press each board firmly in place. Stagger the joints of each additional layer by as much as possible in relation to the insulation joints in the layer(s) below to eliminate continuous vertical gaps.

14. Individual layers of insulation must not exceed 3" (7.6 mm) in thickness nor total thickness of all layers should not exceed 5" (12.7 cm) without written approval of GAFMC Contractor Services.

15. Secure base layer of insulation to deck with appropriate fasteners and plates. The insulation must be securely attached to the roof deck. A minimum FMRC 1-60 attachment is recommended. Refer to FMRC Approval Guide for FM Fastening patterns. Factory Mutual requires fastener density increases in perimeters and corner areas for FM 1-60 and FM 1-90 or greater. Refer to FM Loss Prevention Data Sheets 1-7, 1-28, 1-29 and 1-49.

U. EnergyGuard™ Tapered Foam Roof Insulation

V. EnergyGuard™ Tapered Composite Roof Insulation

W. BMCA Permalite® Taper Roof Insulation

1. Verify that all drawings and details are measured correctly. Any and all deviations shall be reported to the insulation manufacturer's tapered design department before shipment.

2. Verify from the detailed board layout pattern that is provided by designer that all piece quantities have been delivered to the jobsite and that the insulation is not damaged.

3. The roof deck shall be smooth, dry, clean, and free of sharp projections and depressions. All wood nailers shall be the same thickness as the insulation.

4. Prior to the start of the job, verify that the distance between the drain and the perimeter match with the shop drawings.

5. Verify that the taper system will meet the drain pieces.

6. Maximum board size shall be 4' x 4' (1.22m x 1.22m) for mopping application.

7. Start at the drain (low point) and work to the high point. When installing the boards, verify that the boards are laid out according to the letters on each board and per the shop drawings.

8. Boards shall be tightly butted against each other but shall not be kicked into position. Boards shall be cut to fit neatly against adjoining surfaces.

9. Verify all valleys and hips are all cut on the factory 45 degree angle. Valleys (hips) are made up of (2) valley (hip) pieces.

10. All crickets shall be field cut.

11. Set the insulation with long joints continuous. The short joints shall be staggered. Insulation shall be installed with coated side up.

12. Boards shall be tightly butted against each other but shall not be kicked into position. Boards shall be cut to fit neatly against adjoining surfaces.

13. Apply only as much of the taper system that may be completely covered with the roofing system each day.

14. It is recommended that the insulation be set in more than one layer. Additional layers of insulation shall be installed with the joints staggered in one direction, assuring that board ends and sides touch all along their length. Press each board firmly in place. Stagger the

joints of each additional layer by as much as possible in relation to the insulation joints in the layer(s) below to eliminate continuous vertical gaps.

15. Individual layers of insulation must not exceed 3" (7.6 mm) in thickness nor total thickness of all layers should not exceed 5" (12.7 cm) without written approval of GAFMC Contractor Services.

16. The insulation shall be solidly adhered in hot asphalt at the rate of 25 lbs. per 100 square feet (1.2 kg/m^2). Any additional layers are also adhered in this manner.

X. BMCA Wood Fiber Roof Insulation

Y. GP Dens-Deck® Prime Roof Board

Z. GP Dens-Deck® Roof Board

1. Maximum board size shall be 4' x 4' (1.22m x 1.22m) for mopping application.

2. Set the insulation with long joints continuous. The short joints shall be staggered. Insulation shall be installed with coated side up.

3. Insulation thickness shall be uniform over common roof areas.

4. Boards shall be tightly butted against each other but shall not be kicked into position. Boards shall be cut to fit neatly against adjoining surfaces.

5. Insulation must not be left exposed to the weather. No more insulation shall be applied than can be completely covered with the finished roof per day.

6. The insulation shall be solidly adhered in hot asphalt at the rate of 25 lbs. per 100 square feet (1.2 kg/m^2). Any additional layers are also adhered in this manner.

3.08 CANT STRIPS

A. BMCA Perlite cant strips must be installed at the intersection of the roof and all walls, parapets, curbs, or transitions approaching 90°, to be flashed. They shall be approximately 4" (10.2 cm) in horizontal and 4" (10.2 cm) in vertical dimension. The face of the cant shall have an incline of not more than 45 degrees with the roof.

B. Wood cants shall be solid, and pressure treated for rot resistance. Fiberboard cants shall comply with Federal Specification LLL-1-535. Use solid wood cants when mechanical securement to cants is required or when solid wood cants will help stabilize the vertical wood nailers at projections or expansion joint openings.

C. Masonry cants shall be integrally cast to the wall and deck. They shall be finished and prepared with the same care as the deck. The cant shall be so constructed that it provides a vertical offset equal in thickness to the roof insulation.

D. Metal cant or metal curb strips are not approved.

E. Cants shall always be installed on top of the roof insulation, or wood nailers.

F. Mechanically fasten cant where applicable. Otherwise, set in hot asphalt or Matrix Trowel Grade SBS flashing cement and install as shown in the flashing details section.

G. Neatly fit all joints and miters.

3.09 WOOD NAILERS

A. Wood nailers must be 3-1/2" (8.9 cm) minimum width or 1" (25 mm) wider than metal flange and minimum 1" (25 mm) thick and securely fastened to the deck.

B. Wood nailers must be pressure treated and have water based preservatives. Petroleum or creosote base preservatives are not recommended because of possible incompatibility with asphalt-based products.

C. Wood nailers are required at all eaves, gable ends, penetrations or wherever metal flanges must be incorporated into the roof system.

D. Nailers must be mechanically fastened to the deck.

E. Wood nailers shall be the same thickness as tapered edge strip or insulation.

F. For roof systems requiring perimeter venting, nailers shall be slotted.

3.010 WOOD NAILERS ON STEEP SLOPES

A. If slope is 1 inch per foot butt less than 2 inches per foot, (8.4 cm but less than 16.7 cm per meter) use wood nailers at the eave, at the ridge and at intermediate points of no more than 16 feet (4.9 m). All dimensions are from

inside face to inside face of the wood nailers. Ensure a snug fit with the courses of insulation, but where possible, avoid cutting the insulation.

B. If slope is 2 inches per foot to 3 inches per foot (16.7 cm to 25.0 cm per meter), use wood nailers at the eave, at the ridge and at intermediate spacing of no more than 8 feet (2.4 m). All dimensions are from inside face to inside face of the wood nailers.

C. The roofs with slopes greater than 3 inches per foot (25.0 cm per meter) contact GAFMC Contractor Services at 1-800-ROOF-411.

D. On ridges where insulation stops are required, treated wood nailers must be minimum 3-1/2 inches (8.9 cm) wide and equal in thickness to the insulation. Nailers shall be secured mechanically to the deck on both sides of the ridge. Where nailers meet, bevel edges to form a flush surface for membrane application.

E. Nailers must be mechanically fastened to the deck installed at right angles to the direction of the slope.

3.011 ROOF TAPE

A. Roof tape, if required over insulation joints, shall be laid evenly, smoothly and embedded in a uniform coating of hot steep asphalt with 4" (10.2 cm) end laps. Care is to be taken to assure smooth application of tape, and full embedment of the tape in the asphalt.

B. Application of the asphalt and tape may be made by either "back mopping" the tape and pressing the tape into place or by use of taping machine (small felt layer) which will apply asphalt to the tape in a continuous operation.

3.012 BASE SHEET APPLICATION

A. GAFGLAS® #75 Base Sheet

B. GAFGLAS® #80 ULTIMA Base Sheet

C. GAFGLAS® STRATAVENT® Eliminator™ Nailable

1. Roll the base sheet out over nailable deck, and allow to relax. Lap the base sheet so the flow of water is over or parallel to, but never against the laps.

2. Lap the base sheet 2" (5.1 cm), and 4" (10.2 cm) on the ends. Keeping the base sheet taut, push out all wrinkles and buckles ahead as fastening proceeds.

3. Mechanically fasten with three rows of fasteners. The first row (on the seam) will be 1" (2.5 cm) from the leading edge and on 9" (22.9 cm) centers. Locate the second row of fasteners 14" (35.6 cm) from the leading edge and on 18" (45.7 cm) centers. The third row of fasteners shall be 26" (66.0 cm) from the leading edge on 18" (45.7 cm) centers. The centers for the second and third rows should be staggered.

4. Turn base sheet up to the top of the cant.

5. Stagger adjacent end laps a minimum of 18" (45.7 cm) apart.

6. A minimum FMRC 1-60 attachment is recommended. Refer to FMRC Approval Guide for FM Fastening patterns. Factory Mutual requires fastener density increases in perimeters and corner areas for FM 1-60 and FM 1-90 or greater. Refer to FM Loss Prevention Data Sheets 1-7, 1-28, 1-29 and 1-49.

7. **Note: When fastening base sheets using screws and plates without insulation, the plate must be of a design that allows it to lie flat on the deck.**

D. GAFGLAS® #75 Base Sheet

E. GAFGLAS® #80 ULTIMA Base Sheet

1. Roll the base sheet out over plywood or OSB deck, and allow to relax. Lap the base sheet so the flow of water is over or parallel to, but never against the laps.

2. Lap the base sheet 2" (5.1 cm), and 4" (10.2 cm) on the ends. Keeping the base sheet taut, push out all wrinkles and buckles ahead as fastening proceeds.

3. Mechanically fasten with three rows of fasteners. Using threaded cap nails, the first row (on the seam) will be 1" (2.5 cm) from the leading edge and on 9" (22.9 cm) centers. Locate the second row of fasteners 14" (35.6 cm) from the leading edge and on 18" (45.7 cm) centers. The third row of fasteners shall be 26" (66.0 cm) from the leading edge on 18" (45.7 cm) centers. The centers for the second and third rows should be staggered.

4. Turn base sheet up to the top of the cant.

5. Stagger adjacent end laps a minimum of 18" (45.7 cm) apart.

F. GAFGLAS® STRATAVENT® Eliminator™ Perforated

1. STRATAVENT® Eliminator™ Perforated is rolled out granule side down, over primed non-nailable deck and shall be lapped so flow of water is over or parallel to, but never against the laps.

2. Lap 2" (5 cm) on sides and 4" (10.2 cm) on ends. Turn sheet over roof edge and extend up above the top of the cant.

3.013 PLY SHEET APPLICATION

A. GAFGLAS® Ply 4

1. Three-ply application: Install starter strips of 13-1/8" (33.3 cm) 26-1/4" (66.7 cm) and 39-3/8" (100.0 cm) widths and follow with a second 39-3/8" (100.0 cm) width sheet with a maximum of 11-1/8" (28.3 cm) exposure, applied shingle style. Lap felts 26-15/16" (68.4 cm) with a 12-7/16" (31.6 cm) exposure and 6" (15.2 cm) on end laps. Stagger adjacent end laps a minimum 18" (45.7 cm) apart.

2. Embed the full width of each ply in hot asphalt in a uniform layer, without voids, at the rate of 25 lb/square (1.2 kg/m^2) +/-20%. Each ply shall be lightly broomed as it is applied. Turn ply up to top of cant.

3. Stagger ply sheet side and end laps from underlying base sheet laps.

4. The ply sheet shall be applied so that the flow of water is over or parallel to, but never against the laps.

3.014 STEEP SLOPE APPLICATION

A. Install all plies of base and ply sheets vertically on slopes of 1 inch per foot (8.4 cm per meter) and greater and back-nail them into wood nailers or nailable decks approximately 4 inch (10.2 cm) from the leading edge of the sheets. All end laps must be at wood nailers and blind nailed into the wood nailer on 6-inch (15.2 cm) center. Use nails with integral metal heads at least 1 inch round or square.

B. At ridges, base plies must extend across opposite sides of ridge, over the nailer and be fastened on 6-inch (15.2 cm) centers. An additional layer of base sheet shall be centered over the ridge overlapping the fasteners at least 6 inches (15.2 cm).

C. At ridges, cap sheet must extend across opposite sides of ridge over the nailer and be fastened with screws and 3-inch (7.6 cm) plates on 8-inch (20.3 cm) centers. An additional full width ply of cap sheet shall be centered over the ridge to form a ridge cap overlapping the fasteners at least 6 inches (15.2 cm).

3.015 FLASHING

A. General Instructions:

1. Refer to the construction details, which depict flashing requirements for typically encountered conditions. Install flashing materials as shown in the construction details.

2. Acceptable RUBEROID® membranes for flashing membranes are RUBEROID® HEAT-WELD, RUBEROID® TORCH, RUBEROID® SBS Cold Applied or Mop Applied and RUBEROID® ULTRA CLAD™ (Torch or Mop applied). Refer to Flashing Specification Plates for flashing designations and guarantee length eligibility.

3. Basic wood blocking anchorage recommendations are found in Factory Mutual Loss Prevention Data Sheet 1-49. These recommendations are required for Factory Mutual approved projects.

4. All penetrations should be at least 2' (61 cm) from the curbs, walls, and edges to provide adequate space for proper flashing.

5. Install flashing sheets starting at low points.

6. Maintain asphalt at EVT +/-25°F (13.9°C) for all base and ply sheets used in flashing details. Apply flashing membranes at the EVT temperatures or 425°F (218°C), whichever is greater.

7. All masonry and sheet metal shall be primed with Matrix #307 Standard Asphalt roof primer and allowed to dry prior to be fully adhered to with flashing sheets.

8. Do not use metal base flashing.

9. Base flashing shall extend a minimum of 8" (20.3 cm) and a maximum of 24" (61.0 cm) above the roofline.

10. RUBEROID® MOP applied membranes used for flashing material can only be installed using ASTM D 312, Type IV, hot asphalt or trowel grade modified adhesive. Use only polyester reinforced membrane for flashing materials, unless using multiple strip-in plies.

11. Wood curbs and walls must be covered with a layer of approved GAFGLAS® Base Sheet or base ply of selected two-ply flashing system and fastened 8" (20.3 cm) o.c. in all directions with approved fasteners with minimum 1" diameter or square caps. All vertical laps shall be 4" (10.2 cm). Backer ply shall extend out onto field of roof as shown in applicable GAFMC construction detail.

12. It is recommended that the finished ply of base flashing be run vertically to provide a selvage edge that will aid in achieving proper adhesion at the 3" (7.6 cm) vertical laps. If the sheet is run horizontally, the vertical laps must be a minimum of 6" (15.2 cm) and the selvage edge must be removed from the sheet or fully covered by the counter-flashing. The finished flashing ply shall extend out onto the field of the roof as shown in the applicable GAFMC construction detail, and must be extended a minimum of 4" (10.2 cm) beyond the edge of the prior flashing plies. The flashing must be soundly adhered to the parapet, cant area and roof surface to result in a minimum void, non-bridging construction.

13. Trowel Grade Adhesive Application: Apply trowel grade adhesive with trowel or wide-edged putty knife at approximately 1/8" (3 mm) thickness in a full and uniform application. Firmly press sheet into adhesive. Immediately nail the top of the flashing as specified in flashing detail to prevent slippage.

14. Hot Asphalt Application: Be careful to insure SBS flashing sheets are set in asphalt when the asphalt is at the proper temperatures (minimum 425°F (218°C). back mopping the sheet is recommended, with the sheet being quickly applied to the substrate. Firmly press sheet into adhesive. Immediately nail the top of the flashing as specified in flashing detail to prevent slippage.

15. Nail the flashing at its top edge using nails having a minimum 1 inch round or square integral metal head. Nail on 8 inch centers for heights up to 12 inches. Nail on 4 inch centers for heights 12 inches up to 24 inches.

16. Corner membrane flashings, such as "bow ties" for outside corners and "footballs" for inside corners or other membrane reinforcements are required to ensure that base flashing corners are sealed at cant areas. Alternate method of corner reinforcing; install a smooth MB membrane reinforcement piece on the prepared corner substrate prior to final surfacing membrane. Refer to BUR Flashing Details section.

17. Alternate flashing material: BMCA Lexsuco® Flashings can also be used in conjunction with BUR Roofing Systems and qualify to be included in guarantees up to 10 years. Refer to the BMCA Lexsuco® Flashing literature for information and installation instructions.

18. Install metal or other membrane counter flashing so that the counter flashing extends a minimum of 4 inches below the nails at the top edge of the flashing.

B. Flashing Design 1XT: Consisting of one layer of [CHOOSE ONE] RUBEROID® TORCH, TORCH FR OR TORCH PLUS, torch applied.

1. Starting at the top of flashing height, position the torch applied RUBEROID® membrane to provide 4" (10 cm) side laps. If desired, nail across top of sheet to facilitate installation.

2. Fully torch apply the RUBEROID® TORCH, RUBEROID® TORCH FR, or RUBEROID® TORCH PLUS membrane to the primed parapet by heating the underside of the membrane. Obtain a minimum ¼"bitumen flow out at all membrane laps. Additional heat is required at membrane laps where granules exist to cause granules to just begin to sink into top surface compound.

C. Flashing Design 1XT: Consisting of one layer of [CHOOSE ONE] RUBEROID® TORCH SMOOTH, torch applied.

1. Starting at the top of flashing height, position the torch applied RUBEROID® membrane to provide 4" (10 cm) side laps. If desired, nail across top of sheet to facilitate installation.

2. Fully torch apply the RUBEROID® TORCH SMOOTH membrane to the primed parapet by heating the underside of the membrane. Obtain a minimum ¼"bitumen flow out at all membrane laps. Additional heat is required at membrane laps where granules exist to cause granules to just begin to sink into top surface compound.

3. Apply coating to base flashing per surfacing execution instruction.

D. Flashing Design 1XH: Consisting of one layer of [CHOOSE ONE] RUBEROID® SBS HEAT-WELD™ Granule, RUBEROID® SBS HEAT-WELD™ 170FR, RUBEROID® SBS HEAT-WELD™ PLUS, RUBEROID® SBS HEAT-WELD™ PLUS FR, torch applied.

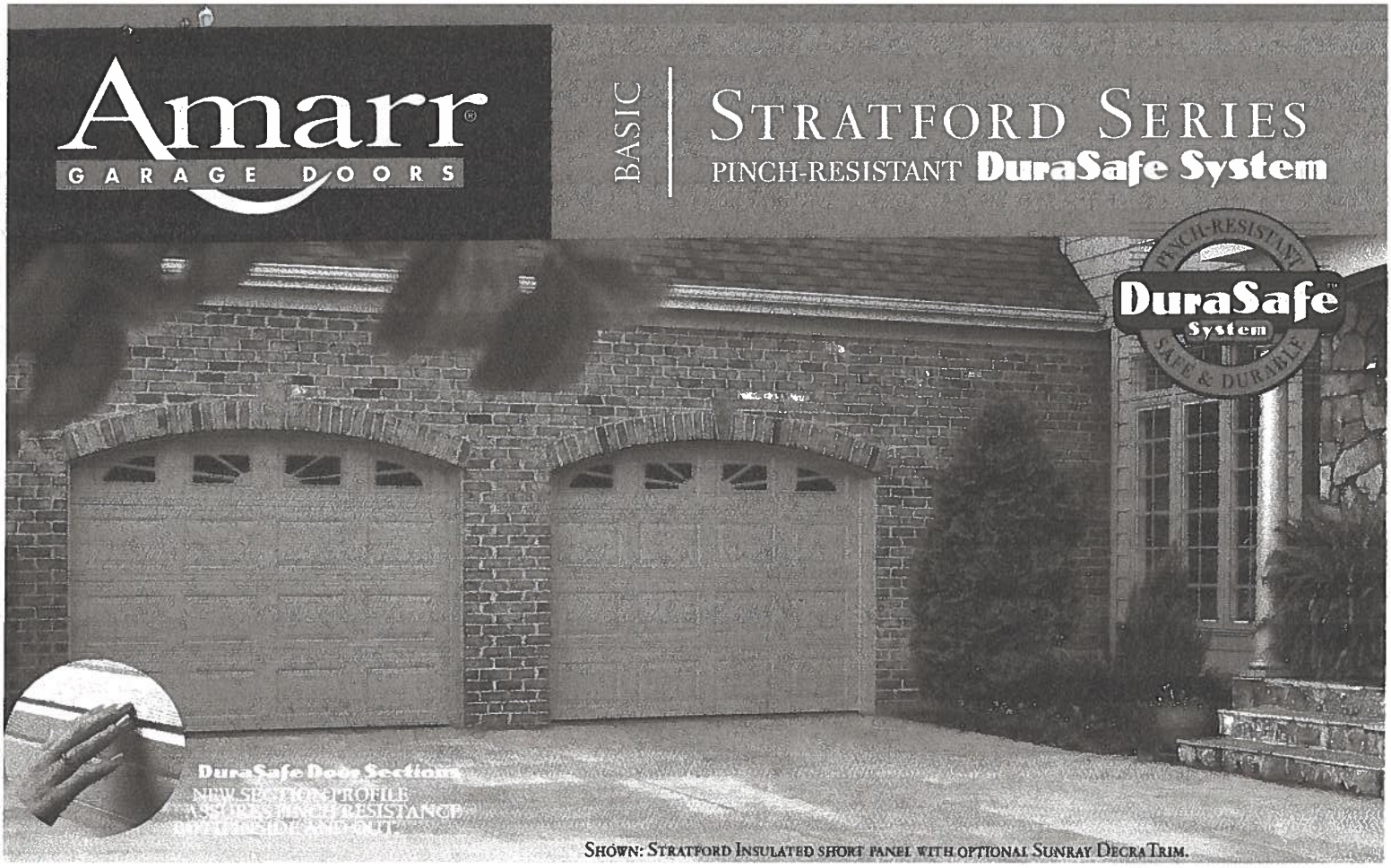
1. Starting at the top of flashing height, position the torch applied RUBEROID® membrane to provide 4" (10 cm) side laps. If desired, nail across top of sheet to facilitate installation.

2. Fully torch apply the RUBEROID® SBS HEAT-WELD™ Granule, RUBEROID® SBS HEAT-WELD™ 170FR, RUBEROID® SBS HEAT-WELD™ PLUS, RUBEROID® SBS HEAT-WELD™ PLUS FR membrane to the primed parapet by heating the underside of the membrane. Obtain a minimum ¼" bitumen flow out at all membrane laps. Additional heat is required at membrane laps where granules exist to cause granules to just begin to sink into top surface compound.

Amarr®
GARAGE DOORS

BASIC

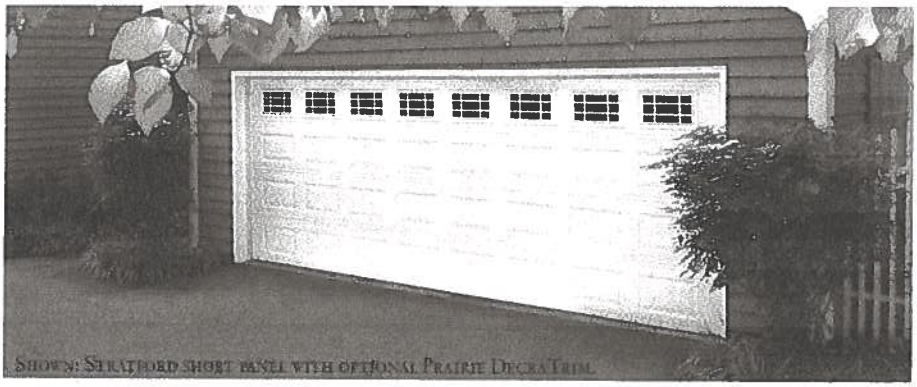
STRATFORD SERIES
PINCH-RESISTANT **DuraSafe System**



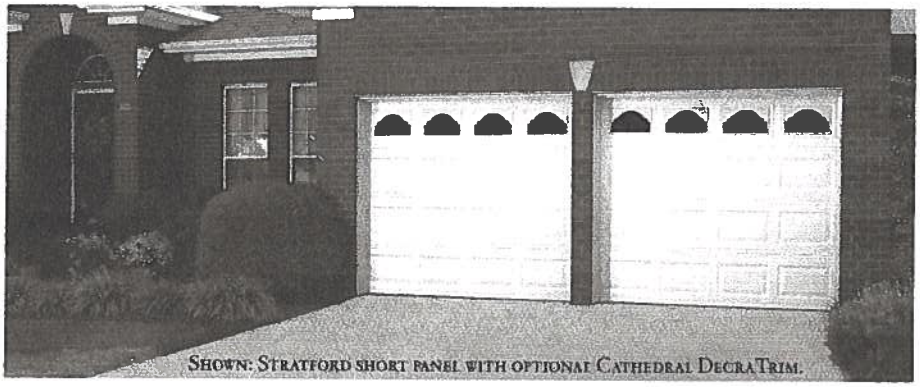
SHOWN: STRATFORD INSULATED SHORT PANEL WITH OPTIONAL SUNRAY DECRATRIM.

STRATFORD WITH DURASAFE

THE 2" THICK STRATFORD WITH DURASAFE SERIES PROVIDES HOMEOWNERS EXCELLENT THERMAL PROTECTION AND HANDSOME GOOD LOOKS. FEATURES INCLUDE TRUE 25-GAUGE STEEL CONSTRUCTION. THE STRATFORD INSULATED IS AVAILABLE WITH OPTIONAL 1-7/16" (3.7 CM) INSULATION WITH A LAMINATED BACKING AND AN R-VALUE OF 5.65. A SUPERLATIVE ADDITION TO ANY HOME; THE STRATFORD OFFERS HOMEOWNERS AN EXCEPTIONAL VALUE.



SHOWN: STRATFORD SHORT PANEL WITH OPTIONAL PRAIRIE DECRATRIM.



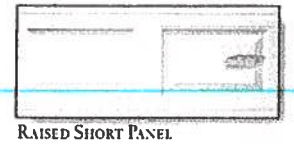
SHOWN: STRATFORD SHORT PANEL WITH OPTIONAL CATHEDRAL DECRATRIM.

15-Year
LIMITED WARRANTY

THE STRATFORD SERIES FEATURES A LIMITED 15 YEAR WARRANTY ON PAINT AND FINISH, AND 1-YEAR ON HARDWARE.

DESIGN ELEMENTS

THE STRATFORD SERIES DOORS ARE AVAILABLE WITH A RAISED SHORT PANEL DESIGN IN YOUR CHOICE OF THREE COLORS.*



RAISED SHORT PANEL

WHITE

ALMOND (SELECT AREAS)

SANDTONE

* ACTUAL PAINT COLORS MAY VARY FROM SAMPLES SHOWN.

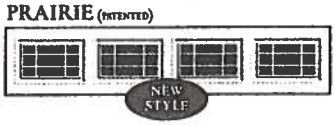
DecraTrim Window Accents

ADD VISUAL APPEAL TO YOUR WINDOWS WITH A VARIETY OF COLOR-MATCHED, EASY-TO-SNAP-IN DECRATRIM INSERTS.

CLEAR

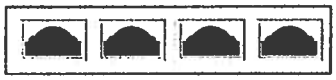
No Inserts

PRAIRIE (PATENTED)

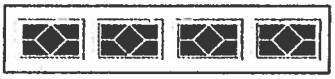


CASCADE

CATHEDRAL



WATERFORD



WAGON WHEEL

STOCKTON

SUNRAY

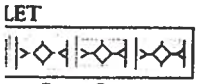
FULL SUNRAY

ONLY AVAILABLE ON 16' (487.68 cm) 17' (518.16 cm) 18' (548.64 cm)

DecraGlass™ Windows

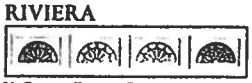
ADD A TOUCH OF ELEGANCE WITH TRANSLUCENT, TEMPERED DECRAGLASS.

LET



AME & ETCHED DESIGN

RIVIERA



V-GROOVE ETCHED DESIGN

VICTORIAN

V-GROOVE ETCHED DESIGN

HORIZONS

FROSTED RESIN DESIGN

FLEUR

FROSTED RESIN DESIGN

WS, DECRATRIM, AND DECRAGLASS ARE NOT AVAILABLE FOR 15'6" AND 15'8" SHORT PANEL DOORS.

The Amarr Philosophy

CE 1951, WE HAVE SUCCESSFULLY RAISED THE STANDARDS OF QUALITY, VALUE, AND ENDABILITY IN OUR INDUSTRY. TODAY, WITH THE SAME PROMISE OF INDIVIDUAL TENTION AND GREAT VALUE FOR ALL OUR CUSTOMERS, WE REMAIN COMMITTED TO ERING PRODUCTS AND SERVICES THAT RAISE THOSE STANDARDS EVEN HIGHER.

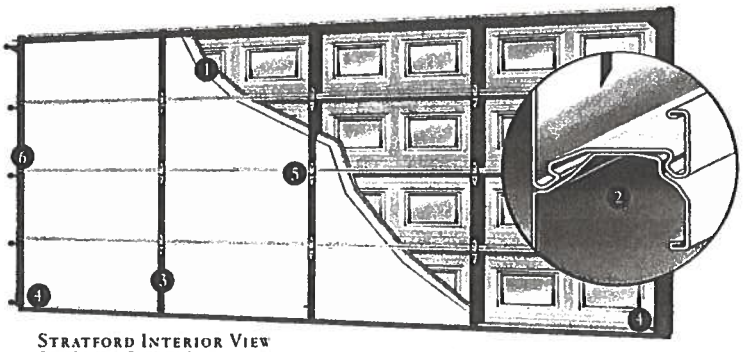
BASIC

Stratford Series

PINCH-RESISTANT **DuraSafe System**

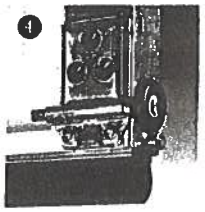
PRODUCT CLASSIFICATION	BEST WeatherGuard™	BETTER Heritage	BASIC Stratford

DURASAFE SYSTEM FEATURES INCLUDE INBOARD DESIGN CENTER HINGES AND END HINGES, NEW PINCH RESISTANT SECTIONS, AND TAMPER RESISTANT BOTTOM BRACKETS. THESE FEATURES RESULT IN A NEW DESIGN FOR OVERALL HOMEOWNER SAFETY.



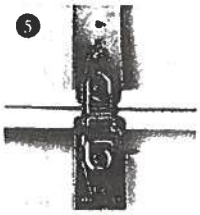
STRATFORD INTERIOR VIEW
Insulation Optional

1 EVERY AMARR GARAGE DOOR IS CONSTRUCTED OF RUGGED REAL-GAUGE STEEL. STRATFORD INSULATED DOORS FEATURE AN EXTERIOR LAYER OF HEAVY 25-GAUGE STEEL AND AN INTERIOR LAYER OF INSULATION. STRATFORD NON-INSULATED DOORS CONSIST OF A SINGLE-LAYER OF HEAVY 25-GAUGE STEEL. DOORS ARE HOT-DIPPED GALVANIZED TO HELP PREVENT RUSTING AND FEATURE A TWO-STEP PAINT PROCESS THAT INCLUDES A PRIMER COAT AND A TOUGH POLYESTER TOPCOAT THAT REQUIRES NO PAINTING.



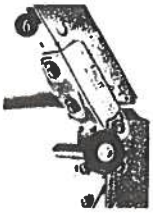
2 UNIQUE TONGUE AND GROOVE SECTION PROFILE ASSURES PINCH RESISTANCE BOTH INSIDE AND OUT WHILE HELPING ELIMINATE DRAFTS AND OFFERING SUPERIOR PROTECTION AGAINST THE ELEMENTS.

3 GALVANIZED END AND CENTER STILES.



4 NEW PATENTED TAMPER RESISTANT BOTTOM BRACKETS HELP PREVENT ACCIDENTS. FULL-LENGTH ROLLER TUBE PREVENTS SLIP-OUTS. THE WEATHER SEAL PROVIDES A FLEXIBLE, CONTOURED VINYL SEAL BETWEEN THE DOOR AND FLOOR TO HELP PREVENT OUTSIDE AIR, DIRT, DUST, AND MOISTURE FROM SEEPING INTO THE GARAGE.

5 PATENTED FLUSH MOUNT INBOARD DESIGN CENTER HINGES PROVIDE PINCH RESISTANT PROTECTION AND A LOW PROFILE CLEAN LOOK ON THE INSIDE OF THE DOOR.



6 WITH MOST OF ITS ACTION HIDDEN INSIDE THE DOOR, OUR PATENTED END HINGES LEAVE NO ROOM FOR FINGERS.

AMARR DURASAFE DOORS UNDER 8'9" WILL BE SUPPLIED WITH DURASAFE HARDWARE. STANDARDS FOR PINCH RESISTANCE DO NOT APPLY TO DOORS OVER 8' HIGH SINCE THE POTENTIAL FOR PINCH POINTS ARE ABOVE TYPICAL GRASPING HEIGHTS. AMARR DOORS OVER 8'9" ARE SUPPLIED WITH CONVENTIONAL HARDWARE.

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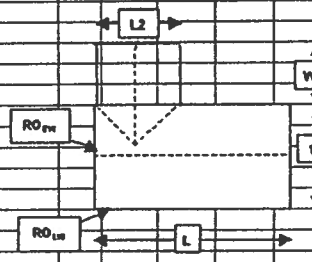
Wrightsoft Corporation

Note: Actual costs and savings may differ due to weather, operating conditions, maintenance, and construction.

10171		Project number
HillPlan3		Project name
Spec		Owner
Glenwood King Construction		Client
Columbia		Location
10/17/00		Date of data entry
100	mph	Wind Speed
1		Use factor
Enclosed		Degree of enclosure
Permanent		Permanent or relocatable building
New residence		Type of building
1		One or Two story building
Rectangle		General shape of building (show diagram)
Hip		Gable end or Hip
56.0	ft	L, Length, parallel to ridge, along bearing walls out to out of studs
	ft	L2, "L" stem
28.0	ft	W1, Width, perpendicular to ridge, along end walls
	ft	W2, "L" stem
6.0	:12	Roof slope
1.5	ft	Roof overhang, end wall
1.5	ft	Roof overhang, long wall
2.0	ft	Normal truss spacing
2.0	ft	Normal gable end rake overhang outlooker spacing
8.1	ft	Normal height of exterior walls
16	in	Normal stud spacing



6.6	ft	Eave height, end wall
6.6	ft	Eave height, long wall
26.6	deg	Roof slope
14.2	ft	Mean roof height 33ft max
20.4	psf	Velocity pressure
3.0	ft	Edge strip width

House Shearwall Analysis: Wind perpendicular to the ridge

Wind pressure based on MWFRS coeff, SBC 1999, Fig.1606.2B

Zone	1E	2E	3E	4E	1	2	3	4
GCp coefficient	0.7	-1	-1	-0.95	0.4	-0.75	-0.75	-0.7

352	ft2	Vertical projection of roof
4377	lb	Transverse Wind Force at Top of Wall
16	"OC	Wall studs spacing
SPF No1&2		Wall stud framing lumber
7/16" OSB		Wall shear siding material (All edges nailed)
8d Common		Fasteners
4	"OC	Fastener edge spacing
8	"OC	Fastener interior spacing
490	plf	Allowable unit shear on shearwalls
8.9	ft	**MINIMUM REQUIRED TOTAL SHEARWALL LENGTH**
53.0	ft	**Actual transverse shearwalls**
210	plf	Allowable unit shear on roof diaphragm
21	ft	Minimum required total dragstrut length
56	ft	Actual endwalls dragstrut
OK	SBC	Code compliance

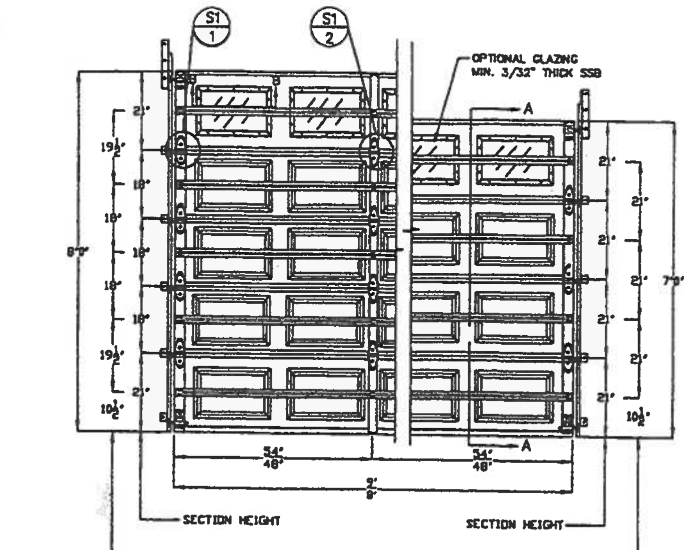
House Shearwall Analysis: Wind parallel to the ridge

Wind pressure based on MWFRS coeff, SBC 1999, Table1606.2C

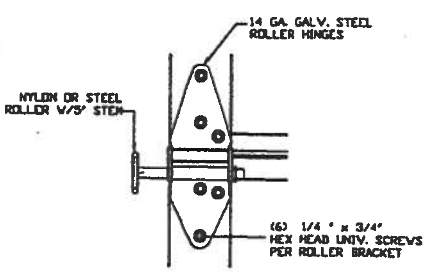
Zone	2E	3E	5E	6E	2	3	5	6
GCp coefficient	-1.4	-0.8	0.5	-0.7	-1	-0.65	0.25	-0.55

128	ft2	Vertical projection of roof
2255	lb	Longitudinal Wind Force at Top of Wall
16	"OC	Wall studs spacing
SPF No1&2		Wall stud framing lumber
7/16" OSB		Wall shear siding material (All edges nailed)
8d Common		Fasteners
4	"OC	Fastener edge spacing
8	"OC	Fastener interior spacing
490	plf	Allowable unit shear on shearwalls
4.6	ft	**MINIMUM REQUIRED TOTAL SHEARWALL LENGTH**
76.0	ft	**Actual shearwalls**
210	plf	Allowable unit shear on roof diaphragm
11	ft	Minimum required total dragstrut length
112	ft	Actual sidewalls dragstrut
OK	SBC	Code compliance

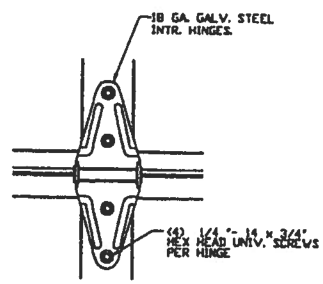
9X7



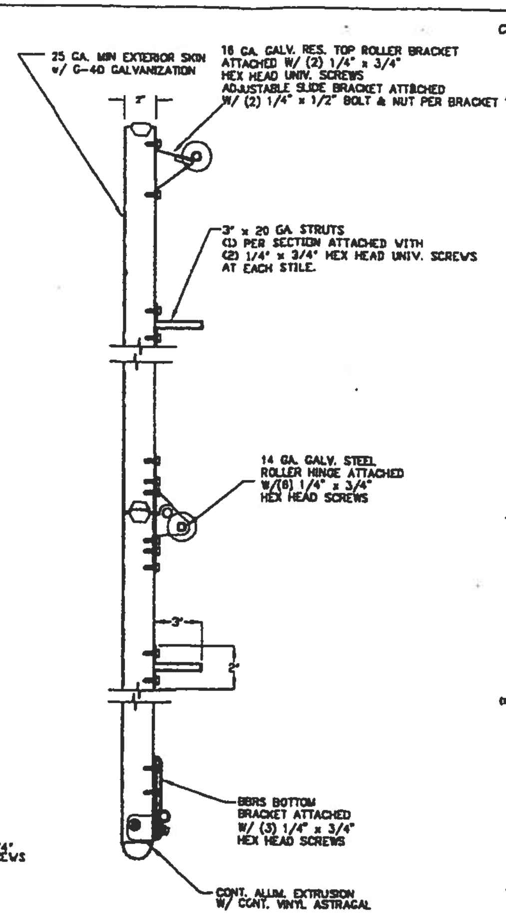
INSIDE ELEVATION



TYP. ROLLER BRACKET (S1/1)
N.T.S.



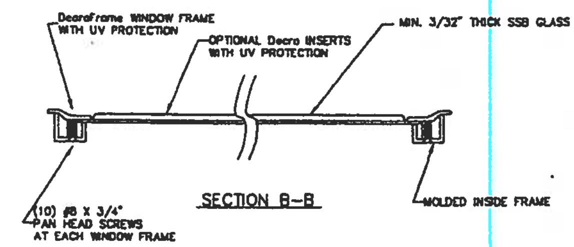
TYP. HINGE CONNECTION (S1/2)
N.T.S.



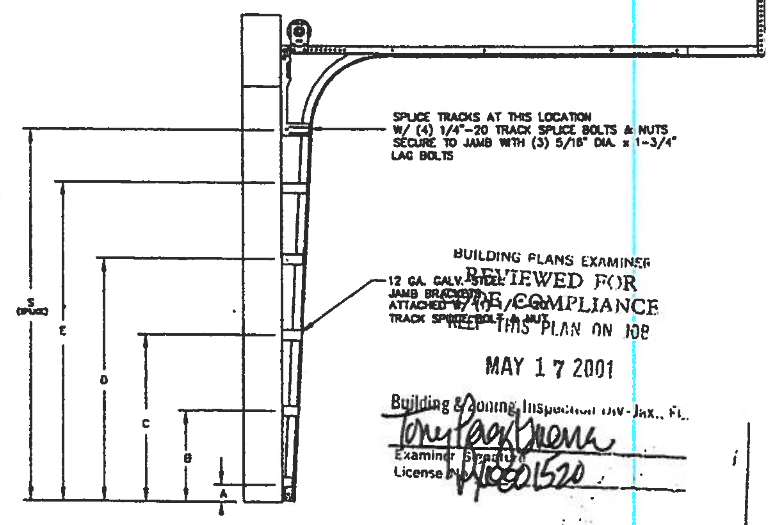
SECTION A-A (SIDE VIEW)

GLAZING OPTION CROSS SECTION

TEST No. SBC-580-011 ON OCTOBER 12, 1995 INCLUDED GLASS WINDOWS IN THE DOOR BEING USED. THE TEST PRESSURES WERE +48.4 PSF AND -54.7 PSF. BY COMPARISION, FOUR (4) WINDOWS MAY BE INSTALLED IN (1) ONE SECTION OF THE 9' X 7' AND 9' X 8' MODEL 600 AND 850 DOORS.



SECTION B-B



BUILDING PLANS EXAMINER
REVIEWED FOR CODE COMPLIANCE
KEEP THIS PLAN ON JOB
MAY 1 7 2001
Building & Zoning Inspection Div-Jax., FL.
Examiner Signature
License No.

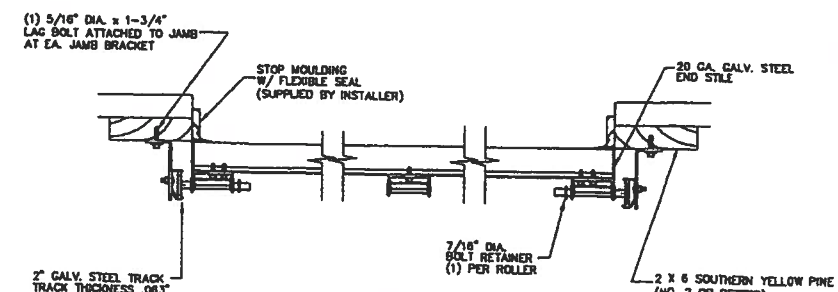
TRACK CONFIGURATION FOR 6'6" UP TO 8' TALL DOORS

JAMB BRACKET LOCATIONS

	A	B	C	D	E	S
6'-6"	4"	21-1/2"	39"	57"		70"
7'-0"	4"	21-1/2"	42"	63"		76"
7'-6"	4"	18"	36"	54"	72"	82"
8'-0"	4"	21-1/2"	39"	57"	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. (.019") MIN. ROLL FORMED LIGHT COMMERCIAL QUALITY, G-40 GALVANIZATION.
3. DOORS UPTO 7'0" HIGH CONSIST OF (4) SECTIONS AS SHOWN.
4. DOORS UPTO 8'0" HIGH CONSIST OF (5) SECTIONS AS SHOWN.
5. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTRED 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 SECTION 1606 WIND LOAD DESIGN CRITERIA THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING THE FOLLOWING PARAMETERS:
   A. BASIC WIND SPEED OF 110 MPH
   B. DOOR CAN BE INSTALLED WITH 5 FEET OF DOORS WIDTH INSIDE THE EDGE STRIP.
   C. 15' MEAN ROOF HEIGHT AT ANY SLOPE
   D. USE FACTOR OF 1.0
   E. EXPOSURE RATING OF C



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 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C.

VERTICAL JAMB ATTACHMENT TO 2,000 PSI CONCRETE
HILTI KWIK BOLT 3/8" X 4" STARTING 6" FROM ENDS THEN 24" O.C.
HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS THEN 24" O.C.
ITW/RAMSET RED HEAD 3/8" X 3" STARTING 6" FROM ENDS THEN 24" O.C.

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

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

MAX SIZE 9' x 8'

DESIGN LOADS +28.7 PSF -31.3 PSF

TEST LOADS +43.0 PSF -46.9 PSF

Amarr GARAGE DOORS

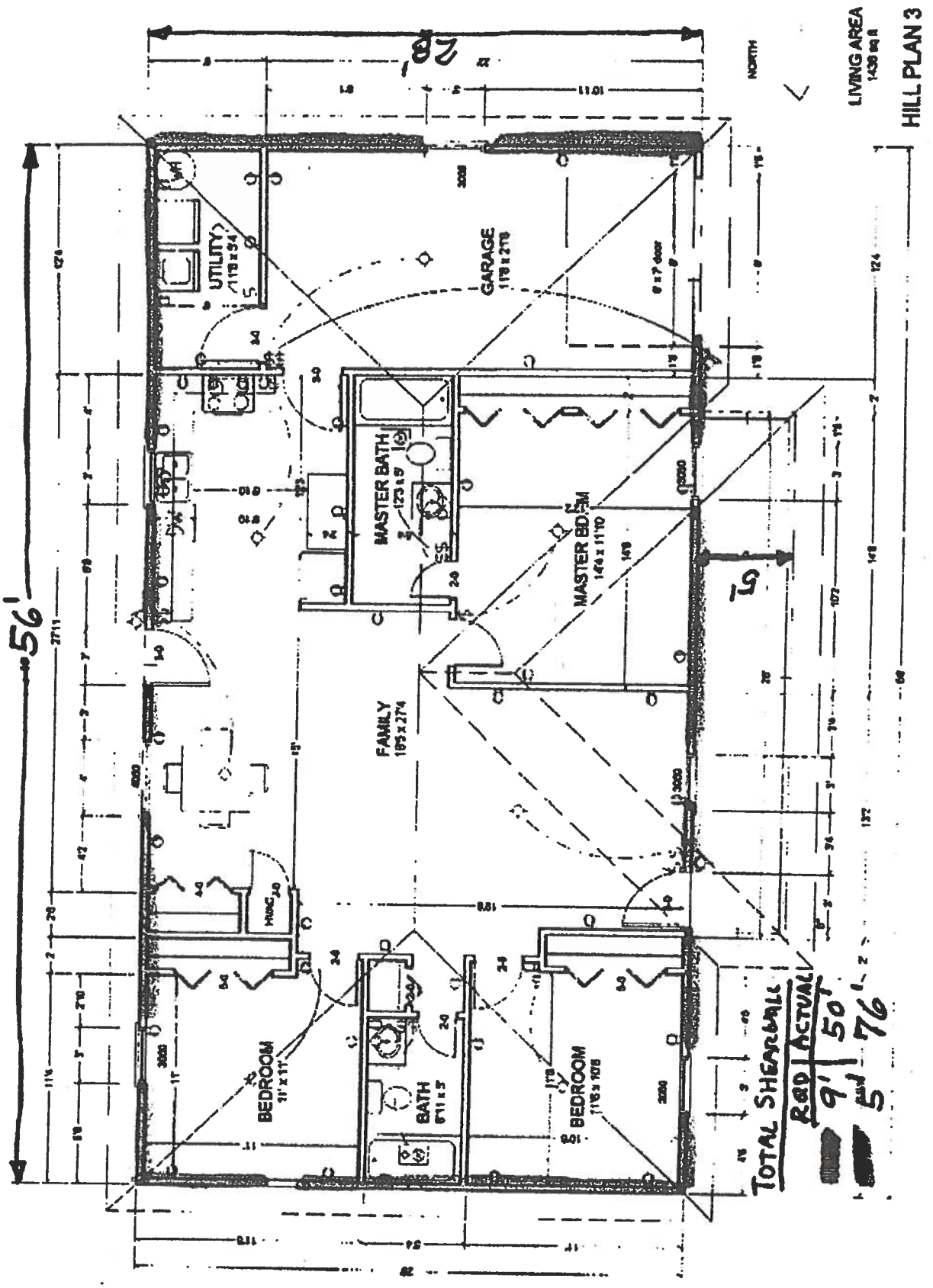
MODEL #600 STRATFORD
MODEL #850 HERITAGE III

SIZE B

SBC-580-

SCALE: NOT TO SCALE

Note: This report establishes the minimum requirements for wind load stability. It is the owner/builder's responsibility to provide materials and construction techniques, which comply with SBC requirements for the stated wind velocity.



Atn: webbie

Columbia County Building Department
Culvert Waiver

Culvert Waiver No. 000001679

DATE: 10/15/2008 BUILDING PERMIT NO. 26200

APPLICANT JEFFERY HILL PHONE 752-7730

ADDRESS 908 SE COUNTRY CLUB RD LAKE CITY FL 32025

OWNER EL RANCHO NO TENGO PHONE 752-7730

ADDRESS 1633 SE COUNTRY CLUB RD LAKE CITY FL 32025

CONTRACTOR SAME AS APPLICANT PHONE

LOCATION OF PROPERTY BAYA, R ON COUNTRY CLUB RD, 1.6 MILES ON LEFT

SUBDIVISION/LOT/BLOCK/PHASE/UNIT

PARCEL ID # 03-4S-17-07486-001

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

SIGNATURE

A SEPARATE CHECK IS REQUIRED
MAKE CHECKS PAYABLE TO BCC

Amount Paid 50.00

PUBLIC WORKS DEPARTMENT USE ONLY

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

✓ APPROVED _____ NOT APPROVED - NEEDS A CULVERT PERMIT

COMMENTS:

SIGNED: Willie Mentes DATE: 10-23-08

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

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

26208

8-19-08

I spoke with Ken Sweet concerning the entrance onto Jeffrey Hill's property located on old Country Club Road. He approved the entrance as is and said He would make sure all requirements ~~were~~ are going to be meet.

Harry Dicks

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 03-4S-17-07486-022 **Building permit No.** 000026200

Use Classification SFD,UTILITY **Fire:** 51.36

Permit Holder SAME AS APPLICANT **Waste:** 134.00

Owner of Building EL RANCHO NO TENGO(LANCE HILL) **Total:** 185.36

Location: 1633 SE COUNTRY CLUB RD, LAKE CITY, FL 32025

Date: 02/20/2009

Harry Dicks

Building Inspector

POST IN A CONSPICUOUS PLACE
(Business Places Only)

[Federal Register: December 27, 2005 (Volume 70, Number 247)]
[Rules and Regulations]
[Page 76385-76392]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr27de05-4]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-22358; Directorate Identifier 2005-NE-20-AD; Amendment 39-14431; AD 2005-26-10]

RIN 2120-AA64

Airworthiness Directives; Engine Components Inc. (ECi) Reciprocating Engine Cylinder Assemblies

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for Lycoming Engines (formerly Textron Lycoming) models 320, 360, and 540 series, "Parallel Valve" reciprocating engines, with certain Engine Components Inc. (ECi) cylinder assemblies, part number (P/N) AEL65102 series "Classic Cast", installed. This AD requires replacing these ECi cylinder assemblies. This AD results from reports of about 30 failures of the subject cylinder assemblies marketed by ECi. We are issuing this AD to prevent loss of engine power due to cracks in the cylinder assemblies and possible engine failure caused by separation of a cylinder head.

DATES: This AD becomes effective January 31, 2006.

ADDRESSES: You may examine the AD docket on the Internet at *http://dms.dot.gov* or in Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Peter Hakala, Aerospace Engineer, Special Certification Office, FAA, Rotorcraft Directorate, 2601 Meacham Blvd., Fort Worth, TX 76193; telephone (817) 222-5145; fax (817) 222-5785.

SUPPLEMENTARY INFORMATION: The FAA proposed to amend 14 CFR part 39 with a proposed AD. The proposed AD applies to certain ECi cylinder assemblies, P/N AEL65102 series, with casting P/N AEL65099, installed on Lycoming Engines models 320, 360, and 540 series, parallel valve reciprocating engines. Parallel valve Lycoming reciprocating engines are identified by the intake and exhaust valves in a parallel configuration. We published the proposed AD in the Federal Register on September 9, 2005 (70 FR 53586). That action proposed to require replacing these ECi cylinder assemblies.

Holton 110 S.E. 354-7189 Meg. Glen

iper Aircraft: Tri-Pacer (PA–22 "150", PA–22S "150"), Apache (PA–23)
oyn Aircraft: Doyn-Cessna (170, 170A, 170B)
O.C.A.T.A.: Horizon (Gardan)
iper Aircraft: Tri-Pacer (PA–22 "150", PA–22S "150"), Agriculture (PA–18A 50") Super Cub (PA–18 "150"), Caribbean (PA–22 "150"), Pawnee (PA–25)
ıtermountain Mfg. Co.: Call Air Texas (A–5, A–5T)
ake Aircraft: Colonial (C–1)
awdon Bros.: Rawdon (T–1, T–15, T–15D)
ninn Engineering: Shinn (2150–A)
infia: Ranquel (1A)–46)
eiva: (1PD–5802)
ıd: Gardan-Horizon (GY–80)
aVerda: Falco (F8L Series II, America)
lalmo: Vipan (MF1–10)
ingsford Smith: Autocrat (SCRM–153)
ero Commander: 100
iper Aircraft: Tri-Pacer (PA–22 "150", PA–22S "150"), Cherokee (PA–28 50"), Super Cub (PA–18 "150")
hampion Aircraft: Challenger (7GCA, 7GCB, 7KC), Citabria (7GCAA, GCRC), Agriculture (7GCBA)
eagle: Pup (150)
rtic: Interstate S1B2
obinson: R–22Varga: Kachina 2150A
obinson: R–22
icare: Cicare AG
ellanca Aircraft: Citabria 150 (7GCAA), Citabria 150S (7GCBC)
iper Aircraft: Apache (PA–23)
oyn Aircraft: Doyn-Cessna (170, 170A, 170B)
orben-Fettes: Globe Special (Globe GC–1B)
iper Aircraft: Apache (PA–23)
oyn Aircraft: Doyn-Cessna (170, 170A, 170B)
eal II: TSC (1A2)
iper Aircraft: Apache (PA–23 "160")
oyn Aircraft: Doyn-Cessna (170, 170A, 170B)
lalmo: Vipan (MF1–10)
iper Aircraft: Apache (PA–23 "160")
oyn Aircraft: Doyn-Cessna (170, 170A, 170B)
iper Aircraft: Tri-Pacer (PA–22 "160", PA–22S "160")
iper Aircraft: Tri-Pacer (PA–22 "160", PA–22S "160")
eagle: Airedale (D5–160)
uji-Heavy Industries: Fuji (F–200)
irapuru: Aerotec 122
obinson: R–22
laule: MX–7–160
ycon
iper Aircraft: Apache (PA–23 "160")
oyn Aircraft: Doyn-Cessna (170, 170A, 170B)

nd any final
a.m. and 5 p.m.,
00) 647-5227) is
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is AD. We have

ed AD comment
ast four years
olies. ECi is very
Bulletin No. 05-08,
er assemblies.
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assemblies. For
the proposed AD,

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or are already
tates. We estimate
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ft inspections of
work hour. From
ated May 2000, the

O–320–B3B	Piper Aircraft: Apache (PA–23 "160")
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B)
	Sud: Gardan (GY80–160)
O–320–C1A	Piper Aircraft: Apache (PA–23 "160")
	Riley Aircraft: Rayjay (Apache)
O–320–C1B	Piper Aircraft: Apache (PA–23 "160")
O–320–C3A	Piper Aircraft: Apache (PA–23 "160")
O–320–C3B	Piper Aircraft: Apache (PA–23 "160")
O–320–D1A	Sud: Gardan (GY–80)
	Gyroflug: Speed Cancard
	Grob: G115
O–320–D1F	Slingsby: T67 Firefly
O–320–D2A	Piper Aircraft: Cherokee (PA–28S "160")
	Robin: Major (DR400–140B), Chevalier (DR–360), (R–3140)
	S.O.C.A.T.A.: Tampico TB9
	Slingsby: T67C Firefly
	Daetwyler: MD–3–160
	Nash Aircraft Ltd.: Petrel
	Aviolight: P66D Delta
	General Avia: Pinguino
O–320–D2B	Beech Aircraft: Musketeer (M–23)
	Piper Aircraft: Cherokee (PA–28 "160")
O–320–D2J	Cessna Aircraft: Skyhawk 172
O–320–D3G	Piper Aircraft: Warrior II, Cadet (PA–28–161)
O–320–E1A	Grob: G115
O–320–E1C	M.B.B. (Messerschmitt-Boelkow-Blohm): Monsun (BO–209–B)
O–320–E1F	M.B.B.: Monsun (BO–209–B)
O–320–E2A	Piper Aircraft: Cherokee (PA–28 "140", PA–28 "150")
	Robin: Major (DR–340), Sitar, Bagheera (GY–100–135)
	S.O.C.A.T.A.: Super Rallye (MS–886), Rallye Commodore (MS–892)
	Siai-Marchetti: (S–202)
	F.F.A.: Bravo (AS–202/15)
	Partenavia: Oscar (P66B), Bucker (131 APM)
	Aeromot: Paulistina P–56
	Pezetel: Koliber 150
O–320–E2C	Beech Aircraft: Musketeer III (M–23III)
	M.B.B.: Monsun (BO–209–B)
O–320–E2D	Cessna Aircraft: Cardinal (172–I, 177)
O–320–E2F	M.B.B.: Monsun (BO–209–B),
	Wassmer Pacific (WA–51)
O–320–E2G	American Aviation Corp.: Traveler
O–320–E3D	Piper Aircraft: Cherokee (140)
	Beech Aircraft: Sport
O–320–H2AD	Cessna Aircraft: Skyhawk 172
	Partenavia: P–66C
IO–320–B2A	Piper Aircraft: Twin Comanche (PA–30)
IO–320–B1C	Hi. Shear: Wing
IO–320–B1D	Ted Smith Aircraft: Aerostar
IO–320–C1A	Piper Aircraft: Twin Comanche (PA–30 Turbo)

IO–320–D1A	M.B.B.: Monsun (BO–209–C)
IO–320–D1B	M.B.B.: Monsun (BO–209–C)
IO–320–E1A	M.B.B.: Monsun (BO–209–C)
IO–320–E1B	Bellanca Aircraft
IO–320–E2A	Champion Aircraft: Citabria
IO–320–E2B	Bellanca Aircraft
IO–320–F1A	CAAR Engineering: Carr Midget
LIO–320–B1A	Piper Aircraft: Twin Comanche (PA–39)
LIO–320–C1A	Piper Aircraft: Twin Comanche (PA–39)
AIO–320–B1B	M.B.B.: Monsun (BO–209–C)
AEIO–320–D1B	Slingsby: T67M Firefly
AEIO–320–D2B	Hundustan Aeronautics Ltd.: HT–2
AEIO–320–E1A	Bellanca Aircraft
	Champion Aircraft
AEIO–320–E1B	Bellanca Aircraft
	Champion Aircraft: Decathalon (8KCAB–CS)
AEIO–320–E2B	Bellanca Aircraft
	Champion Aircraft: Decathalon (8KCAB)
O–320–A1A	Riley Aircraft: Riley Twin
O–360–A1A	Beech Aircraft: Travel Air (95, B–95)
	Piper Aircraft: Comanche (PA–24)
	Intermountain Mfg. Co.: Call Air (A–6)
	Lake Aircraft: Colonial (C–2, LA –4, 4A or 4P)
	Doyn Aircraft: Doyn-Cessna (170B, 172, 172A, 172B)
	Mooney Aircraft: Mark "20B"(M–20B)
	Earl Horton: Pawnee (Piper PA–25)
	Dinfia: Ranquel (1A–51)
	Neiva: (1PD–5901)
	Regente: (N–591)
	Wassmer: Super 4 (WA–50A), Sancy (WA–40), Baladou (WA–40), Pariou (WA–40)
	Sud: Gardan (GY–180)
	Bolkow: (207)
	Partenavia: Oscar (P–66)
	Siai-Marchetti: (S–205)
	Procaer: Picchio (F–15–A)
	S.A.A.B.: Safir (91–D)
	Malmo: Vipan (MF–10B)
	Aero Boero: AB–180
	Beagle: Airedale (A–109)
	DeHavilland: Drover (DHA–3MK3)
	Kingsford-Smith: Bushmaster (J5–6)
	Aero Engine Service Ltd.: Victa (R–2)
O–360–A1AD	S.O.C.A.T.A.: Tabago TB–10

O–360–A1D	Piper Aircraft: Comanche (PA–24)
	Lake Aircraft: Colonial (LA –4, 4A or 4P)
	Doyn Aircraft: Doyn-Beech (Beech 95)
	Mooney Aircraft: Master "21"(M–20E), Mark "20B", "20D", (M20B, M20C), Mooney Statesman (M–20G)
	Dinfia: Querandi (1A–45)
	Wassmer: (WA–50)
	Malmo: Vipan (MF1–10)
	Cessna Aircraft: Skyhawk
	Doyn Aircraft: Doyn-Piper (PA–23 "160")
O–360–A1F6	Cessna Aircraft: Cardinal
O–360–A1F6D	Cessna Aircraft: Cardinal 177
	Teal III: TSC (1A3)
O–360–A1G6	Aero Commander
O–360–A1G6D	Beech Aircraft: Duchess 76
O–360–A1H6	Piper Aircraft: Seminole (PA–44)
O–360–A1LD	Wassmer: Europa WA–52
O–360–A1P	Aviat: Husky
O–360–A2A	Center Est Aeronautique: Regente (DR–253)
	S.O.C.A.T.A.: Rallye Commodore (MS–893)
	Societe Aeronautique Normande: Mousquetaire (D–140)
	Bolkow: Klemm (K1–107C)
	Partenavia: Oscar (P–66)
	Beagle: Husky (D5–180) (J1–U)
O–360–A2D	Piper Aircraft: Comanche (PA–24), Cherokee "C"(PA–28 "180")
	Mooney Aircraft: Master "21"(M–20D), Mark "21"(M–20E)
O–360–A2E	Std. Helicopter
O–360–A2F	Aero Commander: Lark (100)
	Cessna Aircraft: Cardinal
O–360–A2G	Beech Aircraft: Sport
O–360–A3A	C.A.A.R.P.S.A.N.: (M–23III)
	Societe Aeronautique Normande: Jodel (D–140C)
	Robin: Regent (DR400/180), Remorqueur (DR400/180R). R–3170
	S.O.C.A.T.A.: Rallye 180GT, Sportavia Sportsman (RS–180)
	Norman Aeroplace Co.: NAC–1 Freelance
	Nash Aircraft Ltd.: Petrel
O–360–A3AD	S.O.C.A.T.A.: TB–10
	Robin: Aiglon (R–1180T)
O–360–A4A	Piper Aircraft: Cherokee "D"(PA–28 "180")
O–360–A4D	Varga: Kachina
O–360–A4G	Beech Aircraft: Musketeer Custom III
O–360–A4K	Grumman American: Tiger
	Beech Aircraft: Sundowner 180
O–360–A4M	Piper Aircraft: Archer II (PA–28 "18") Valmet: PIK–23
O–360–A4N	Cessna Aircraft: 172 (Optional)
O–360–A4P	Penn Yan: Super Cub Conversion
O–360–A5AD	C. Itoh and Co.: Fuji FA–200
O–360–B2C	Seabird Aviation: SB7L
O–360–C1A	Intermountain Mfg. Co.: Call Air (A–6)

O–360–C1E	Bellanca Aircraft: Scout (8GCBC–CS)
O–360–C1F	Maule: Star Rocket MX–7–180
O–360–C1G	Christen: Husky (A–1)
O–360–C2B	Hughes Tool Co.: (269A)
O–360–C2D	Hughes Tool Co.: (269A)
O–360–C2E	Hughes Tool Co.: (YHO–2HU) Military
	Bellanca Aircraft: Scout (8GCBC FP)
O–360–C4F	Maule: MX–7–180A
O–360–C4P	Penn Yan: Super Cub Conversion
O–360–E1A6D	Piper Aircraft: Seminole (PA–44 "180")
O–360–F1A6	Cessna Aircraft: Cutlass RG
O–360–J2A	Robinson: R22
IO–360–B1A	Beech Aircraft: Travel-Air (B–95A)
	Doyn Aircraft: Doyn-Piper (PA–23 "200")
IO–360–B1B	Beech Aircraft: Travel-Air (B–95B)
	Doyn Aircraft: Doyn-Piper (PA–23 "200")
	Fuji: (FA–200)
IO–360–B1D	United Consultants: See-Bee
IO–360–B1E	Piper Aircraft: Arrow (PA–28 "180R")
IO–360–B1F	Utva: 75
IO–360–B2E	C.A.A.R.P. C.A.P. (10)
IO–360–B1F6	Great Lakes: Trainer
IO–360–B1G6	American Blimp: Spector 42
IO–360–B2F6	Great Lakes: Trainer
LO–360–A1G6D	Beech Aircraft: Duchess
LO–360–A1H6	Piper Aircraft: Seminole (PA–44)
IO–360–E1A	T.R. Smith Aircraft: Aerostar
IO–360–L2A	Cessna Aircraft: Skyhawk C–172
IO–360–M1A	Diamond Aircraft: DA–40
IO–360–M1B	Vans Aircraft: RV6, RV7, RV8
	Lancair: 360
AIO–360–B1B	Moravan: Zlin (Z–526–L)
AEIO–360–B1F	F.F.A.: Bravo (200)
	Grob: G115/Sport-Acro
AEIO–360–B1G6	Great Lakes
AEIO–360–B2F	Mundry: CAP–10
AEIO–360–B4A	Pitts: S–1S
AEIO–360–H1A	Bellanca Aircraft: Super Decathalon (8KCAB–180)
AEIO–360–H1B	American Champion: Super Decathalon
TO–360–C1A6D	Avions Pierre Robin
	Partenavia
	Rockwell: 112TC
TO–360–F1A6D	Maule: Star Rocket (M–5–210TC)
TIO–360–C1A6D	Partenavia: P68C–TC
VO–360–A1A	Brantly Hynes Helicopter: (B–2)
VO–360–A1B	Brantly Hynes Helicopter: (B–2, B2–A). Military (YHO–3BR)
VO–360–B1A	Brantly Hynes Helicopter: (B–2, B2–A)
IVO–360–A1A	Brantly Hynes Helicopter: (B2–B)
HO–360–B1A	Hughes Tool Co.: (269A)

HO–360–B1B	Hughes Tool Co.: (269A)
HO–360–C1A	Schweizer: (300C)
HIO–360–B1A	Hughes Tool Co.: Military (269–A–1). (TH–55A)
HIO–360–B1B	Hughes Tool Co.: (269A)
HIO–360–G1A	Schweizer: (CB)
O–540–A1A	Rhein-Flugzeugbau: (RF–1)
O–540–A1A5	Piper Aircraft: Comanche (PA–24 "150")
	Helio: Military (H–250)
	Yoeman Aviation: (YA–1)
O–540–A1B5	Piper Aircraft: Aztec (PA–23 "250"), Comanche (PA–24 "250")
O–540–A1C5	Piper Aircraft: Comanche (PA–24 "250")
O–540–A1D	Found Bros.: (FBA–2C)
	Dornier: (DO–28–B1)
O–540–A1D5	Piper Aircraft: Aztec (PA–23 "250"), Comanche (PA–24 "250"), Military Aztec (U–11A)
	Dornier: (DO–28)
O–540–A2B	Aero Commander: (500)
	Mid-States Mfg. Co.: Twin Courier (H–500), (U–5)
O–540–A3D5	Piper Aircraft: Navy Aztec (PA–23 "250")
O–540–B1A5	Piper Aircraft: Apache (PA–23 "235")
O–540–B1B5	Piper Aircraft: Cherokee (PA–24 "250")
	Doyn Aircraft: Doyn-Piper (PA–24 "250")
O–540–B1D5	Wassmer: (WA–421)
O–540–B2B5	Piper Aircraft: Pawnee (PA–24 "235"), Cherokee (PA–28 "235"), Aztec (PA–23 "235")
	Intermountain Mfg. Co.: Call Air (A–9)
	Rawdon Bros.: Rawdon (T–1)
	S.O.C.A.T.A.: Rallye 235CA
O–540–B2C5	Piper Aircraft: Pawnee (PA–24 "235")
O–540–B4B5	Piper Aircraft: Cherokee (PA–28 "235")
	Embraer: Corioca (EMB–710)
	S.O.C.A.T.A.: Rallye 235GT, Rallye 235C
	Maule: Star Rocket (MX–7–235), Super Rocket (M–6–235),
	Super Std. Rocket (M–7–235)
O–540–E4A5	Piper Aircraft: Comanche (PA–24 "260")
	Aviamilano: Flamingo (F–250)
	Siai-Marchetti: (SF–260), (SF–208)
O–540–E4B5	Britten-Norman: (BN–2)
	Piper Aircraft: Cherokee Six (PA–32 "260")
O–540–E4C5	Pilatus Britten-Norman: Islander (BN–2A–26), Islander (BN–2A–27), Islander II (BN–2B–26), Islander (BN–2A–21), Trislander (BN–2A–Mark III–2)
O–540–F1B5	Omega Aircraft: (BS–12D1)
	Robinson: (R–44)
O–540–G1A5	Piper Aircraft: Pawnee (PA–25 "260")
O–540–H1B5D	Aero Boero: 260
O–540–H2A5	Embraer: Impanema "AG"
	Gippsland: GA–200
O–540–H2B5D	Aero Boero: 260

O–540–J1A5D	Maule: Star Rocket (MX–7–235), Super Rocket (M–6–235), Super Std. Rocket (M–7–235)
O–540–J3A5	Robin: R–3000/235
O–540–J3A5D	Piper Aircraft: Dakota (PA–28–236)
O–540–J3C5D	Cessna Aircraft: Skylane RG
O–540–L3C5D	Cessna Aircraft: TR–182, Turbo Skylane RG
IO–540–C1B5	Piper Aircraft: Aztec B (PA–23 "250"), Comanche (PA–24 "250")
IO–540–C1C5	Riley Aircraft: Turbo-Rocket
IO–540–C4B5	Piper Aircraft: Aztec C (PA–23 "250"), Aztec F
	Wassmer: (WA4–21)
	Avions Pierre Robin: (HR100/250)
	Bellanca Aircraft: Aries T–250
	Aerofab: Renegade 250
IO–540–C4D5	S.O.C.A.T.A.: TB–20
IO–540–C4D5D	S.O.C.A.T.A.: Trinidad TB–20
IO–540–D4A5	Piper Aircraft: Comanche (PA–24 "260")
	Siai-Marchetti: (SF–260)
IO–540–D4B5	Cerva: (CE–43 Guepard)
IO–540–J4A5	Piper Aircraft: Aztec (PA–23 "250")
IO–540–R1A5	Piper Aircraft: Comanche (PA–24)
IO–540–T4A5D	General Aviation: Model 114
IO–540–T4B5	Commander: 114B
IO–540–T4B5D	Rockwell: 114
IO–540–T4C5D	Lake Aircraft: Seawolf
IO–540–V4A5	Maule: MT–7–260, M–7–260
	Aircraft Manufacturing Factory
IO–540–V4A5D	Brooklands: Scoutmaster
IO–540–W1A5	Maule: MX–7–235, MT–7–235, M7–235
IO–540–W1A5D	Maule: Star Rocket (MX–7–235), Super Rocket (M–6–235), Super Std. Rocket (M–7–235)
IO–540–W3A5D	Schweizer: Power Glider
AEIO–540–D4A5	Christen: Pitts (S–2S), S–2B)
	Siai-Marchetti: SF–260
	H.A.L.: HPT–32
	Slingsby: Firefly T3A
AEIO–540–D4B5	Moravan: Zlin-50L
	H.A.L.: HPT–32
AEIO–540–D4D5	Burkhart Grob: Grob G, 115T Aero
TIO–540–C1A	Piper Aircraft: Turbo Aztec (PA–23–250)
TIO–540–K1AD	Piper Aircraft
TIO–540–AA1AD	Aerofab Inc.: Turbo Renegade (270)
TIO–540–AB1AD	S.O.C.A.T.A.: Trinidad TC TB–21
TIO–540–AB1BD	Schweizer
TIO–540–AF1A	Mooney Aircraft: "TLS"M20M
TIO–540–AF1B	Mooney Aircraft: "TLS"M20M
TIO–540–AG1A	Commander Aircraft: 114TC
TIO–540–AK1A	Cessna Aircraft: Turbo Skylane T182T
LTIO–540–K1AD	Piper Aircraft

Unsafe Condition

(d) This AD results from reports of about 30 failures of the subject cylinder assemblies marketed by ECi. We are issuing this AD to prevent loss of engine power due to cracks in the cylinder assemblies and possible engine failure caused by separation of a cylinder head.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

Engines Not Repaired or Overhauled Since New

(f) If your engine has not been overhauled or had any major repair since new, no further action is required.

Engines Overhauled or Repaired Since New

(g) If your engine was overhauled or repaired since new, do the following:

(1) Determine if ECi cylinder assemblies, P/N AEL65102 series "Classic Cast", with casting P/N AEL65099 and SNs 1 through 9879 are installed on your engine, as follows:

(i) Inspect the engine log books and maintenance records for reference to the subject ECi cylinder assemblies.

(ii) If the engine log books and maintenance records did not record the P/N and SN of the cylinder assemblies, visually inspect the cylinder assemblies and verify the P/N and SN of the cylinder assemblies.

(2) If the cylinder assemblies are not ECi, P/N AEL65102 series "Classic Cast", with casting P/N AEL65099, no further action is required.

(3) If any cylinder assembly is an ECi P/N AEL65102 series "Classic Cast", with casting P/N AEL65099 and a SN 1 through 9879, do the following:

(i) If the cylinder assembly has fewer than 800 operating hours-in-service (HIS) on the effective date of this AD, replace the cylinder assembly at no later than 800 operating HIS. No action is required until the operating HIS reaches 800 hours.

(ii) If the cylinder assembly has 800 operating HIS or more on the effective date of this AD, replace the cylinder assembly within 60 operating HIS after the effective date of this AD.

Definition of a Replacement Cylinder Assembly

(h) For the purpose of this AD, a replacement cylinder assembly is defined as follows:

(1) A serviceable cylinder assembly made by Lycoming Engines.

(2) A serviceable FAA-approved, Parts Manufacturer Approval cylinder assembly from another manufacturer.

(3) A serviceable ECi cylinder assembly, P/N AEL65102 series, "Titan", with casting P/N AEL85009.

(4) A serviceable ECi cylinder assembly, P/N AEL65102 series, with casting P/N AEL65099, that has a SN 9880 or higher.

Prohibition of Cylinder Assemblies, P/N AEL65102 Series "Classic Cast", With Casting P/N AEL65099 and SNs 1 Through 9879

(i) After the effective date of this AD, do not install any Eci cylinder assembly, P/N AEL65102, with casting P/N AEL65099 that has a SN 1 through 9879, onto any engine.

Alternative Methods of Compliance

(j) The Manager, Special Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Related Information

(k) ECi Service Bulletin No. 05-08, dated September 1, 2005, pertains to the subject of this AD.

Issued in Burlington, Massachusetts, on December 19, 2005.
Peter A. White,
Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. 05-24449 Filed 12-23-05; 8:45 am]
BILLING CODE 4910-13-P

U.S. Department
of Transportation

**Federal Aviation
Administration**

Aircraft Certification Service
Delegation & Airworthiness Programs Branch
PO Box 26460, AIR-140
Oklahoma City, OK 73125-0460

Official Business
Penalty for Private Use $300

**PRESORT
FIRST CLASS MAIL
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OKLA. CITY, OK
FAA-G-44**

4 DS

EL RANCHO NO TENGO INC 5594W AD05-26-10
1400 OLD COUNTRY CLUB ROAD
LAKE CITY FL 32055

FLIGHT INFORMATION
CRITICAL TO FLYING SAFETY

**URGENT
FORWARD TO AIRCRAFT
OPERATOR**

1500.

Tipp IA-5

tipp 98 custom

Angel w/hopper (halo) w/tank
Angel speed

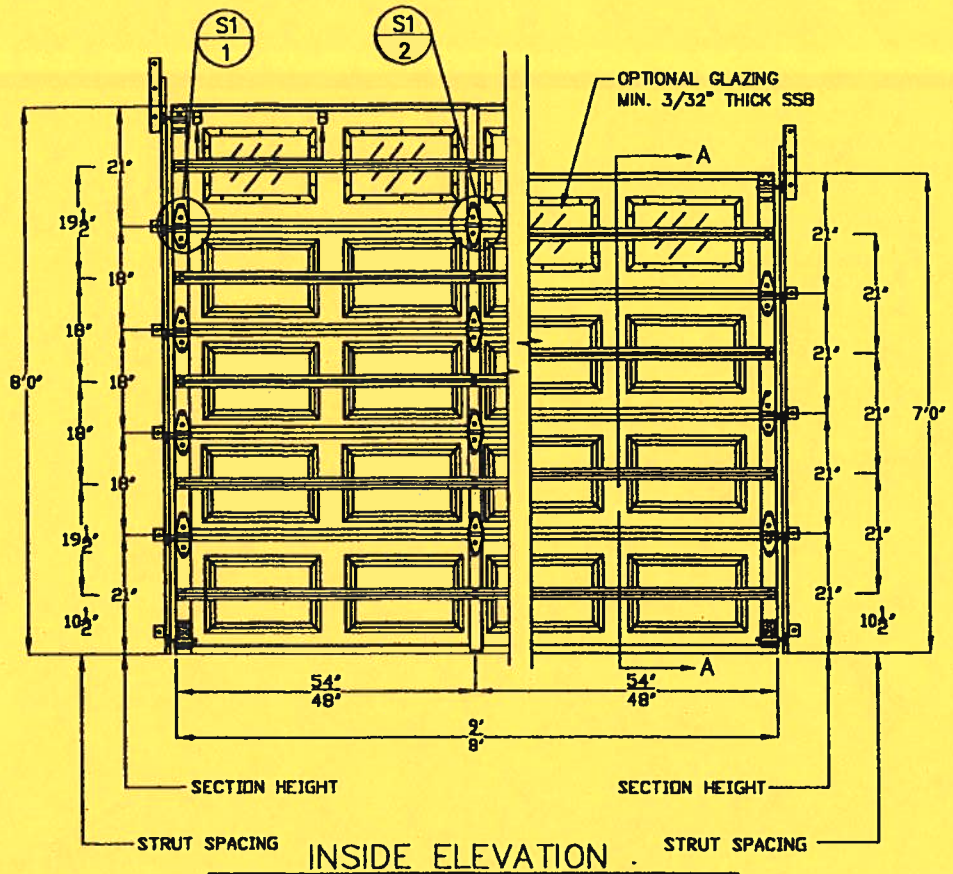
spider -

spider -

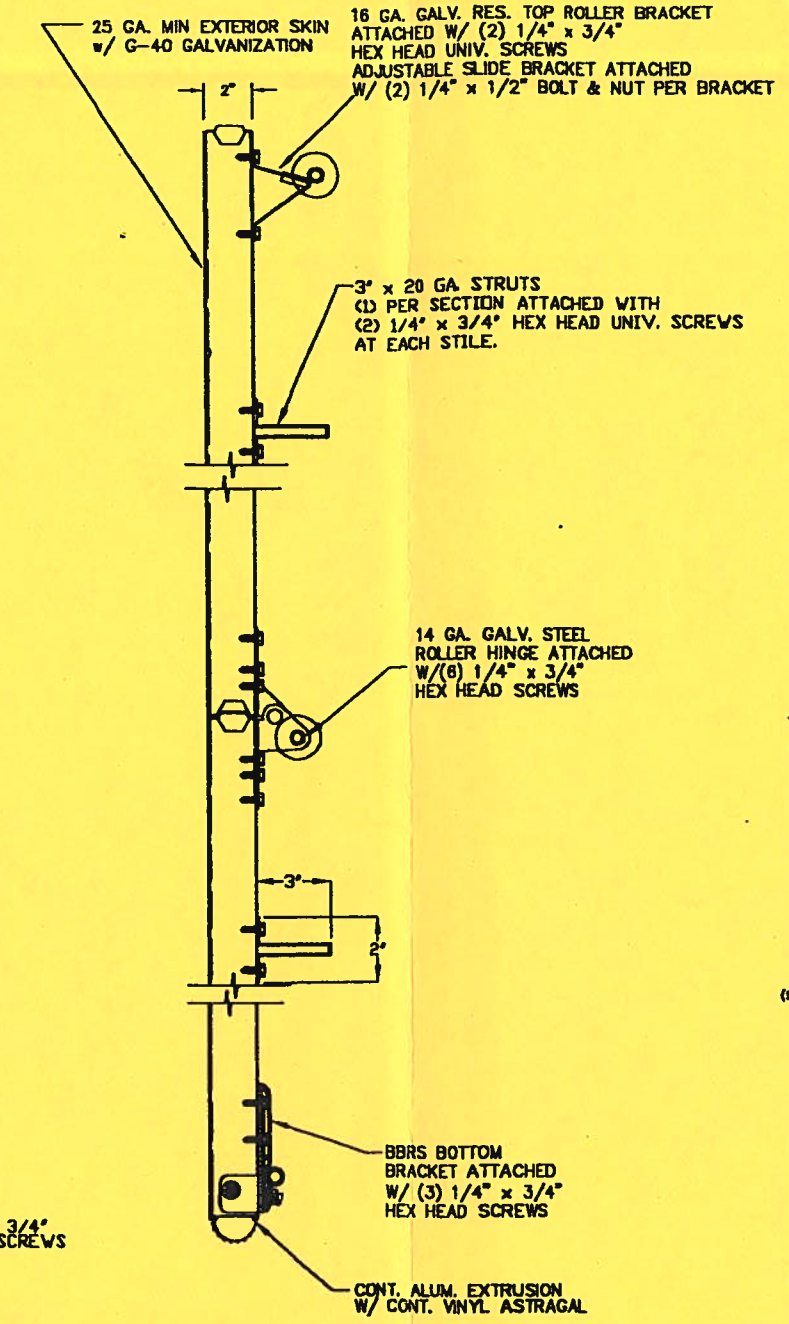
ion -

diablo -

9X7



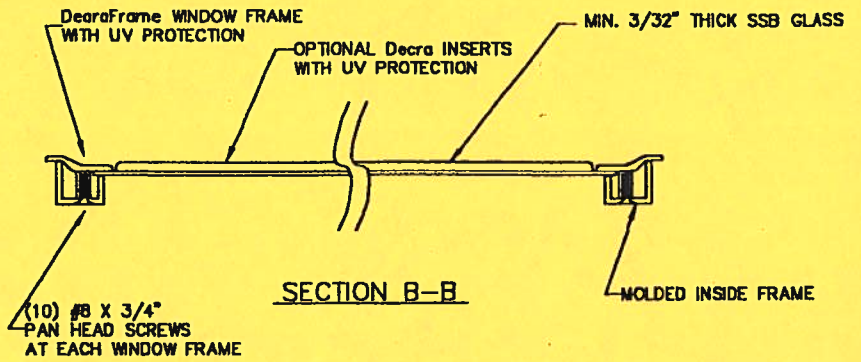
INSIDE ELEVATION



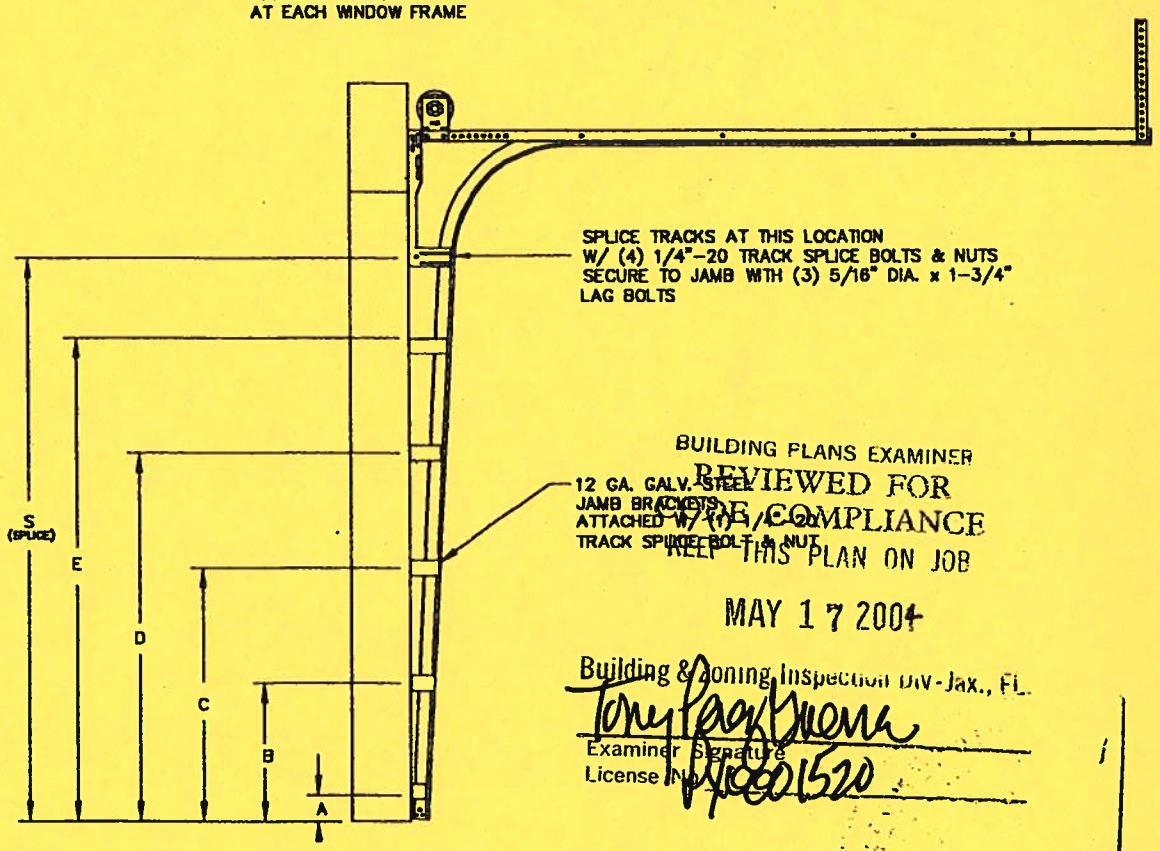
SECTION A-A (SIDE VIEW)

GLAZING OPTION CROSS SECTION

TEST No. SBC-580-011 ON OCTOBER 12, 1995 INCLUDED GLASS WINDOWS IN THE DOOR BEING USED. THE TEST PRESSURES WERE +48.4 PSF AND -54.7 PSF. BY COMPARISION, FOUR (4) WINDOWS MAY BE INSTALLED IN (1) ONE SECTION OF THE 9' X 7' AND 9' X 8' MODEL 600 AND 950 DOORS.



SECTION B-B



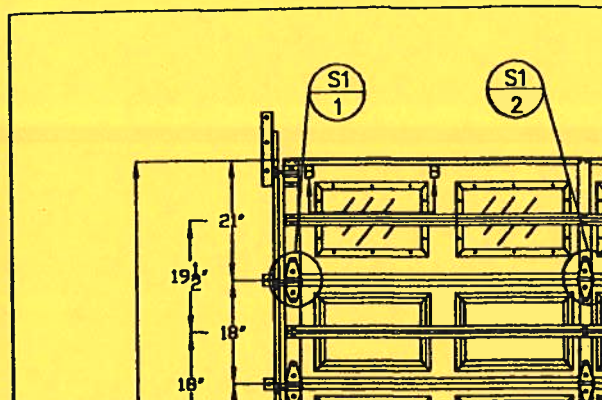
TRACK CONFIGURATION FOR 6'6" UP TO 8' TALL DOORS

BUILDING PLANS EXAMINER
REVIEWED FOR
CODE COMPLIANCE
KEEP THIS PLAN ON JOB

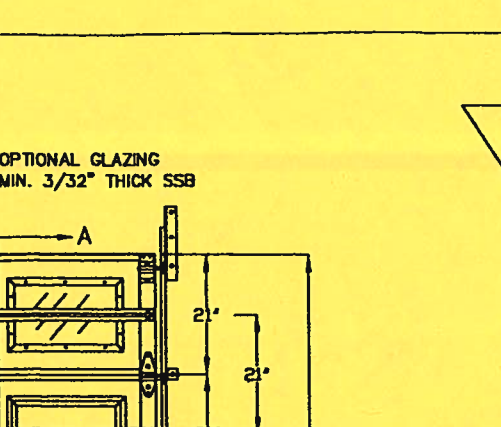
MAY 17 2004

Building & Zoning Inspection Div-Jax., FL.
Examiner Signature
License No. 0000520

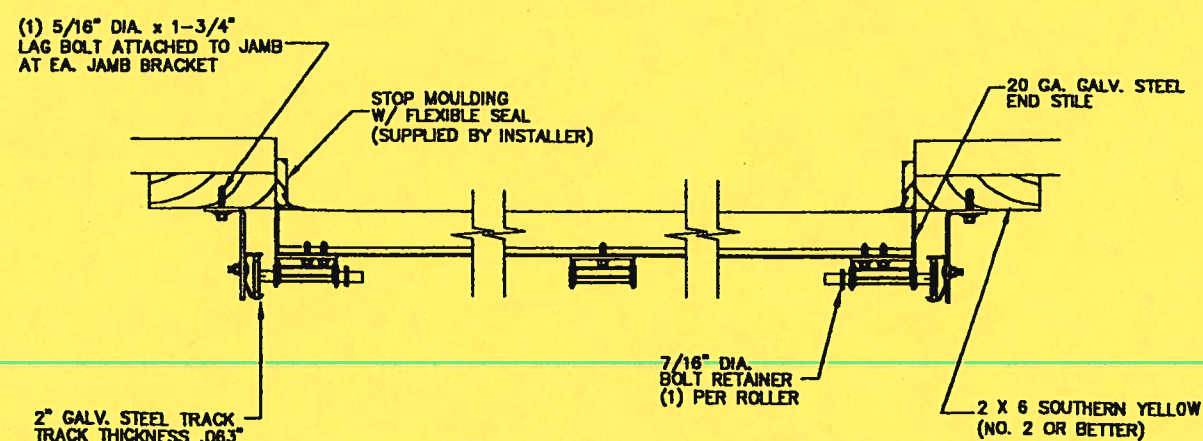
4/19/04



TYP. ROLLER BRACKET (S1/1) N.T.S.



TYP. HINGE CONNECTION (S1/2) N.T.S.



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 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C.

VERTICAL JAMB ATTACHMENT TO 2,000 PSI CONCRETE
HILTI KWIK BOLT 3/8" X 4" STARTING 6" FROM ENDS THEN 24" O.C.
HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS THEN 24" O.C.
ITW/RAMSET RED HEAD 3/8" X 3" STARTING 6" FROM ENDS THEN 24" O.C.

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

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

JAMB BRACKET LOCATIONS

	A	B	C	D	E	S
6'-6"	4"	21-1/2"	39"	57"		70"
7'-0"	4"	21-1/2"	42"	63"		76"
7'-6"	4"	18"	36"	54"	72"	82"
8'-0"	4"	21-1/2"	39"	57"	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 LIGHT COMMERCIAL QUALITY, G-40 GALVANIZATION.
3. DOORS UPTO 7'0" HIGH CONSIST OF (4) SECTIONS AS SHOWN.
4. DOORS UPTO 8'0" HIGH CONSIST OF (5) SECTIONS AS SHOWN.
5. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTRED 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 SECTION 1606 WIND LOAD DESIGN CRITERIA THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING THE FOLLOWING PARAMETERS:
   A. BASIC WIND SPEED OF 110 MPH
   B. DOOR CAN BE INSTALLED WITH 5 FEET OF DOORS WIDTH INSIDE THE EDGE STRIP.
   C. 15° MEAN ROOF HEIGHT AT ANY SLOPE
   D. USE FACTOR OF 1.0

MAX SIZE
9' x 8'

DESIGN LOADS
+28.7 PSF
-31.3 PSF

TEST LOADS
+43.0 PSF
-46.9 PSF

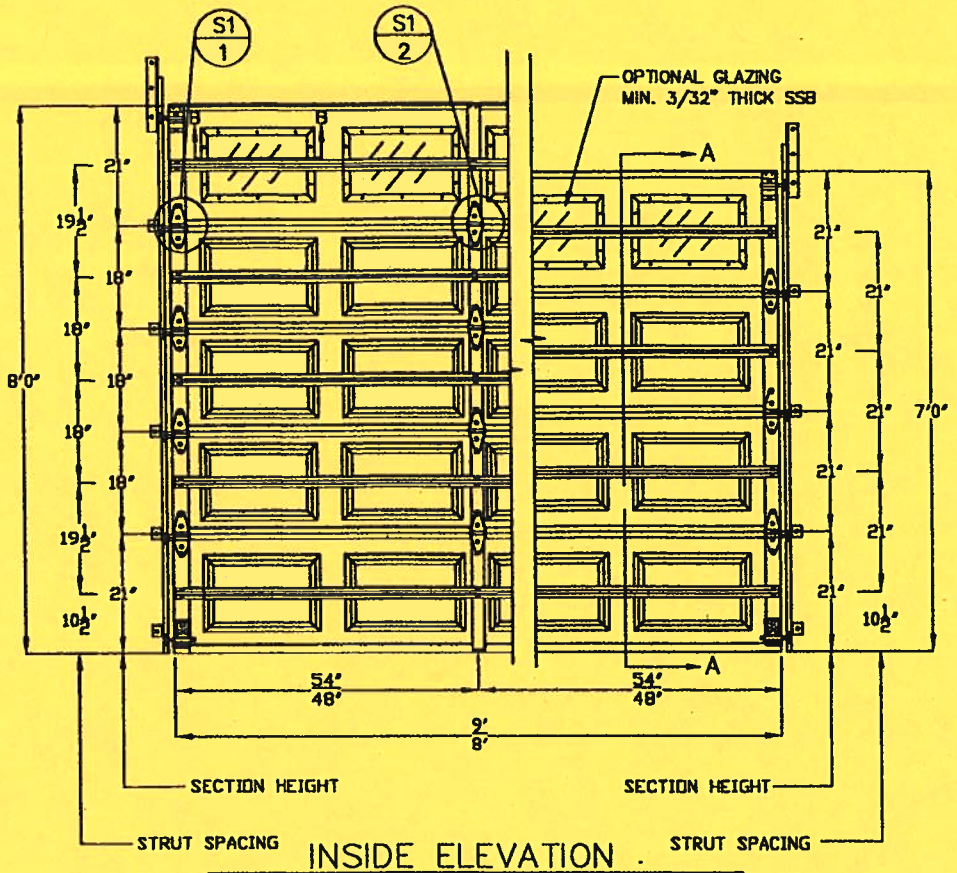
REV	DESCRIPTION OF REVISIONS	DATE	BY

Amarr GARAGE DOORS
5926 GRASSY CREEK BLVD. WINSTON-SALEM, N.C. 27105

MODEL #600 STRATFORD
MODEL #950 HERITAGE III

SIZE	DRAWN BY	DATE	DRAWING NUMBER
B	CHECKED BY	DATE	SBC-580-007-J

9x7



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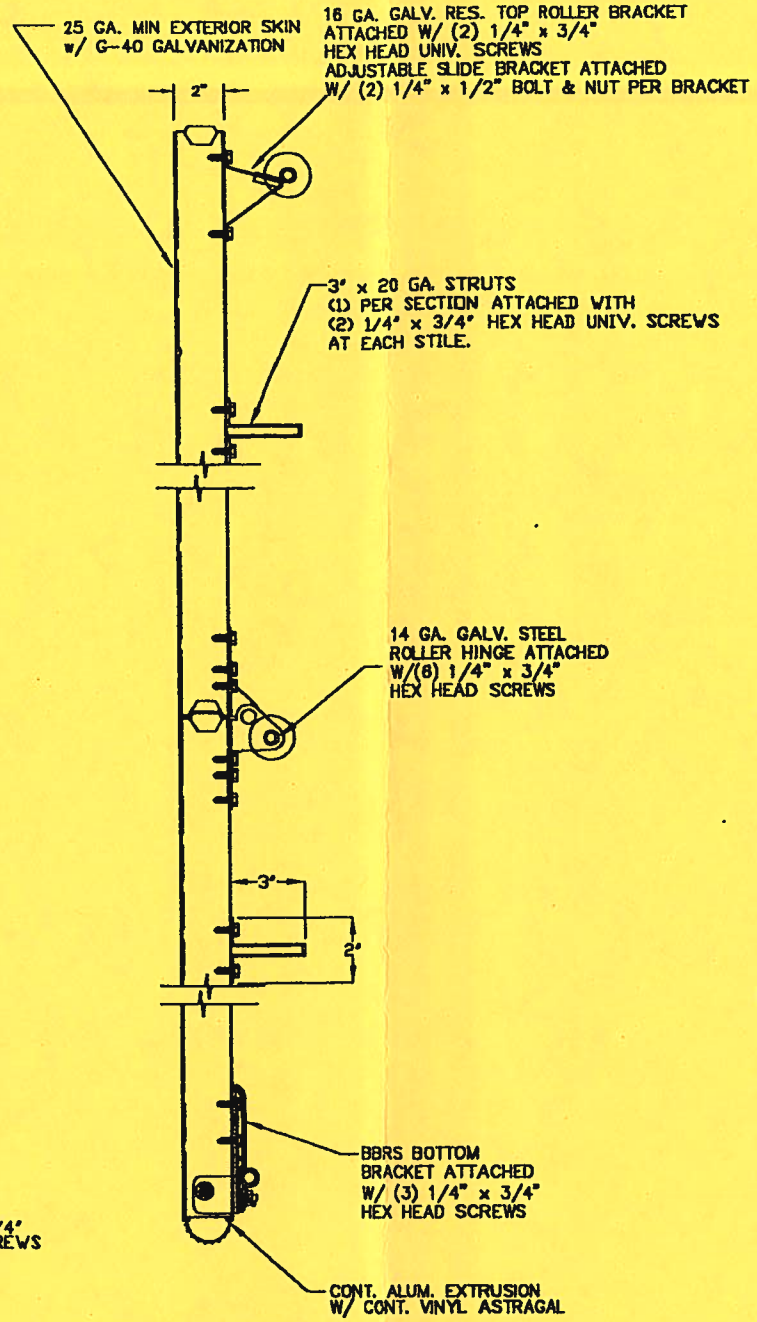

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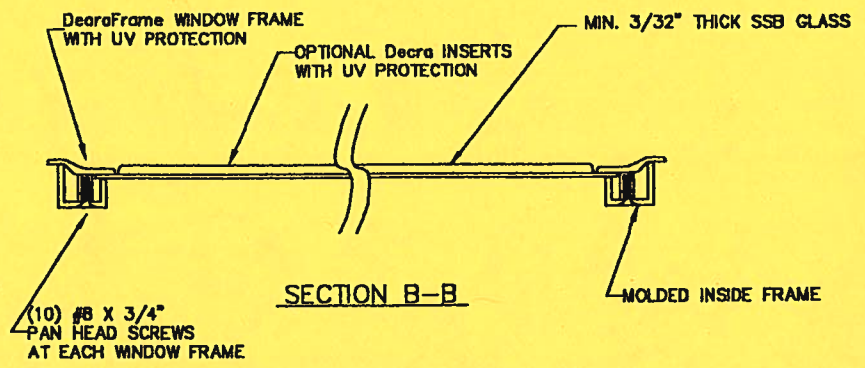
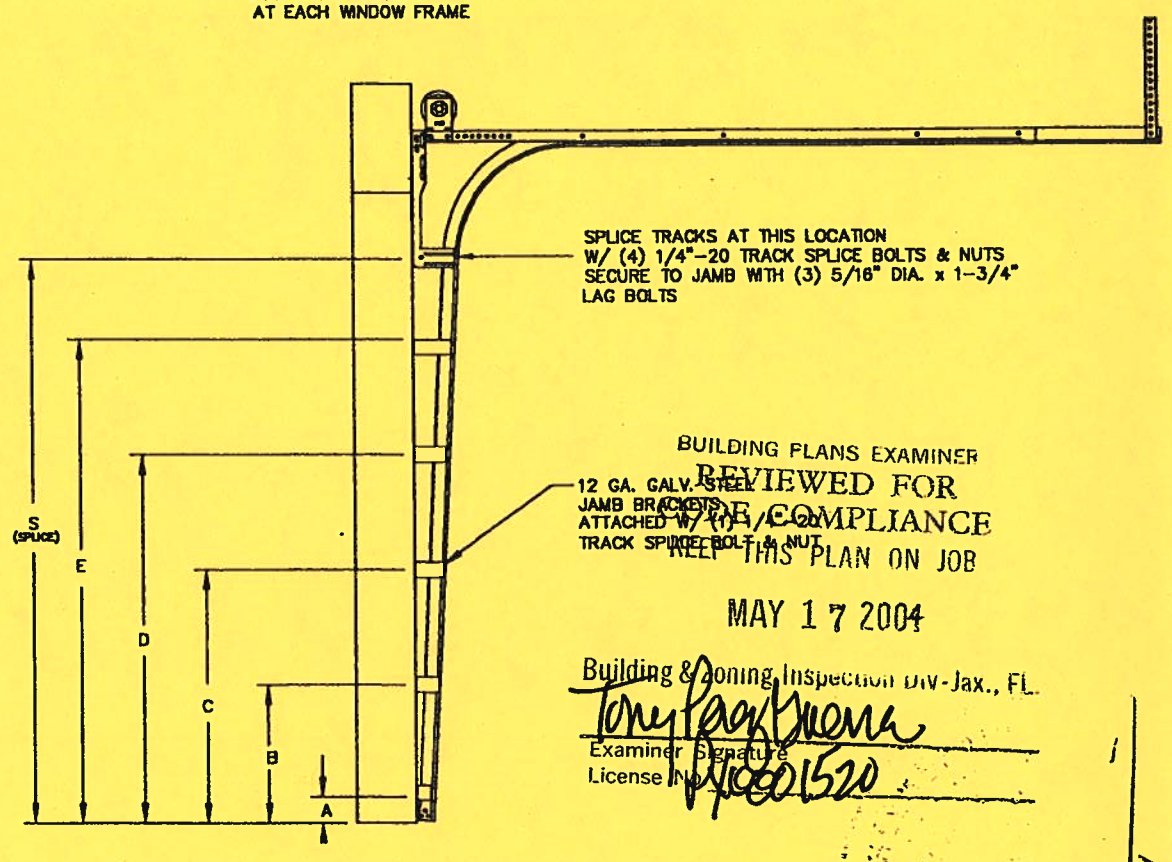


SECTION B-B



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

BUILDING PLANS EXAMINER
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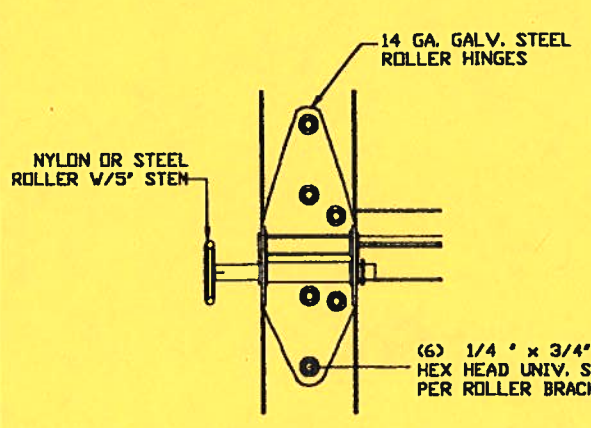
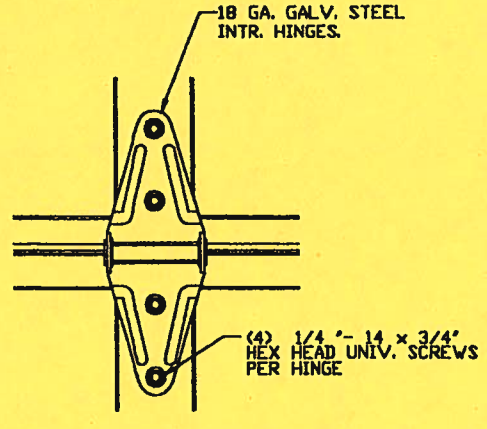
CODE COMPLIANCE
KEEP THIS PLAN ON JOB
MAY 17 2004
Building & Zoning Inspection Div-Jax., FL.
Examiner Signature
License No. 0001520

4/19/04



TYP. ROLLER BRACKET (S1/1) N.T.S.



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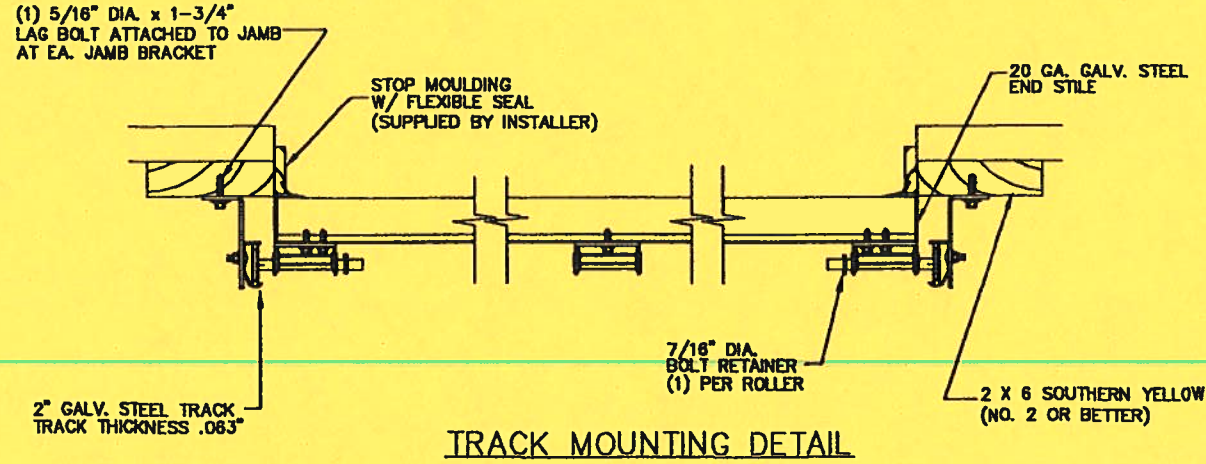

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   C. 15' MEAN ROOF HEIGHT AT ANY SLOPE
   D. USE FACTOR OF 1.0
   E. EXPOSURE RATING OF C

MAX SIZE 9' x 8'

DESIGN LOADS
+28.7 PSF
-31.3 PSF

TEST LOADS
+43.0 PSF
-46.9 PSF

REV	DESCRIPTION OF REVISIONS	DATE	BY

Amarr GARAGE DOORS
6999 GRASSY CREEK BLVD. WINSTON-SALEM, N.C. 27105

MODEL #600 STRATFORD
MODEL #950 HERITAGE III

SIZE	DRAWN BY	DATE	DRAWING NUMBER
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