CK# 6099

Columbia County Building Permit Application

For Office Use Only Application # 0903-40 Date Received 3/24 By JW Permit # 27721

Zoning Official BLK Date 30.03.09 Flood Zone X Land Use A-3 Zoning A-3

FEMA Map # N/A Elevation N/A MFE 1' above Road River N/A Plans Examiner BLK Date 3/26/09

Comments

NOC EH Deed or PA Site Plan State Road Info Parent Parcel #

Dev Permit # In Floodway Letter of Auth. from Contractor F W Comp. letter

IMPACT FEES: EMS Fire Corr Road/Code

School = TOTAL NA - See attached ~~Letter~~ memo

Septic Permit No. 08-0700 Fax 386-462-1509

Name Authorized Person Signing Permit John D Harrington Phone 352-316-5320

Address 12501 US Hwy 441, Alachua, FL 32615

Owners Name Keith "Adams" Phone 386-462-5323

911 Address 5881 NW Lake Jeffery Rd Lake City, 32055

Contractors Name John Harrington House Craft Homes Phone 386-462-5323

Address 12501 US Hwy 441 Alachua FL 32615

Fee Simple Owner Name & Address Same

Bonding Co. Name & Address —

Architect/Engineer Name & Address Mark Disosway PO 868, Lake City 32056

Mortgage Lenders Name & Address Cash

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

Property ID Number 09-3S-16-02045-007 Estimated Cost of Construction 195,000.00

Subdivision Name Lot Block Unit Phase

Driving Directions 90 W to Lake Jeffery rd make right go 5.5 miles to drive on rte go to end of grass road property on right. Number of Existing Dwellings on Property Ø

Construction of SFD Total Acreage 10 Lot Size

Do you need a - Culvert Permit or Culvert Waiver or (Have an Existing Drive) Total Building Height 19'

Actual Distance of Structure from Property Lines - Front 150+ Side 150+ Side 150+ Rear 150+

Number of Stories 1 Heated Floor Area 2877 Total Floor Area 3024 Roof Pitch 6/12

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.

Spoke w/ Danny 3/30/09 @ office

Columbia County Building Permit Application

TIME LIMITATIONS OF APPLICATION: An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.

TIME LIMITATIONS OF PERMITS: Every permit issued shall become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time work is commenced. A valid permit receives an approved inspection every 180 days. Work shall be considered not suspended, abandoned or invalid when the permit has received an approved inspection within 180 days of the previous approved inspection.

FLORIDA'S CONSTRUCTION LIEN LAW: Protect Yourself and Your Investment: According to Florida Law, those who work on your property or provide materials, and are not paid-in-full, have a right to enforce their claim for payment against your property. This claim is known as a construction lien. If your contractor fails to pay subcontractors or material suppliers or neglects to make other legally required payments, the people who are owed money may look to your property for payment, even if you have paid your contractor in full. This means if a lien is filed against your property, it could be sold against your will to pay for labor, materials or other services which your contractor may have failed to pay.

NOTICE OF RESPONSIBILITY TO BUILDING PERMITEE: ***YOU ARE HEREBY NOTIFIED*** as the recipient of a building permit from Columbia County, Florida, you will be held responsible to the County for any damage to sidewalks and/or road curbs and gutters, concrete features and structures, together with damage to drainage facilities, removal of sod, major changes to lot grades that result in ponding of water, or other damage to roadway and other public infrastructure facilities caused by you or your contractor, subcontractors, agents or representatives in the construction and/or improvement of the building and lot for which this permit is issued. No certificate of occupancy will be issued until all corrective work to these public infrastructures and facilities has been corrected.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

OWNERS CERTIFICATION: 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. I further understand the above written responsibilities in Columbia County for obtaining this Building Permit.

Keith Adams
Owners Signature

CONTRACTORS AFFIDAVIT: By my signature I understand and agree that I have informed and provided this written statement to the owner of all the above written responsibilities in Columbia County for obtaining this Building Permit including all application and permit time limitations.

John D Harrington
Contractor's Signature (Permitee)

Contractor's License Number CRC058087
Columbia County
Competency Card Number _____

Affirmed under penalty of perjury to by the Contractor and subscribed before me this 23rd **day of** March **20**09.
Personally known ____ **or Produced Identification** FLDL H652-464-49-249-0

Deborah Morrison
State of Florida Notary Signature (For the Contractor)

SEAL:

DEBORAH MORRISON
Notary Public - State of Florida
My Commission Expires Sep 17, 2011
Commission # DD 715174

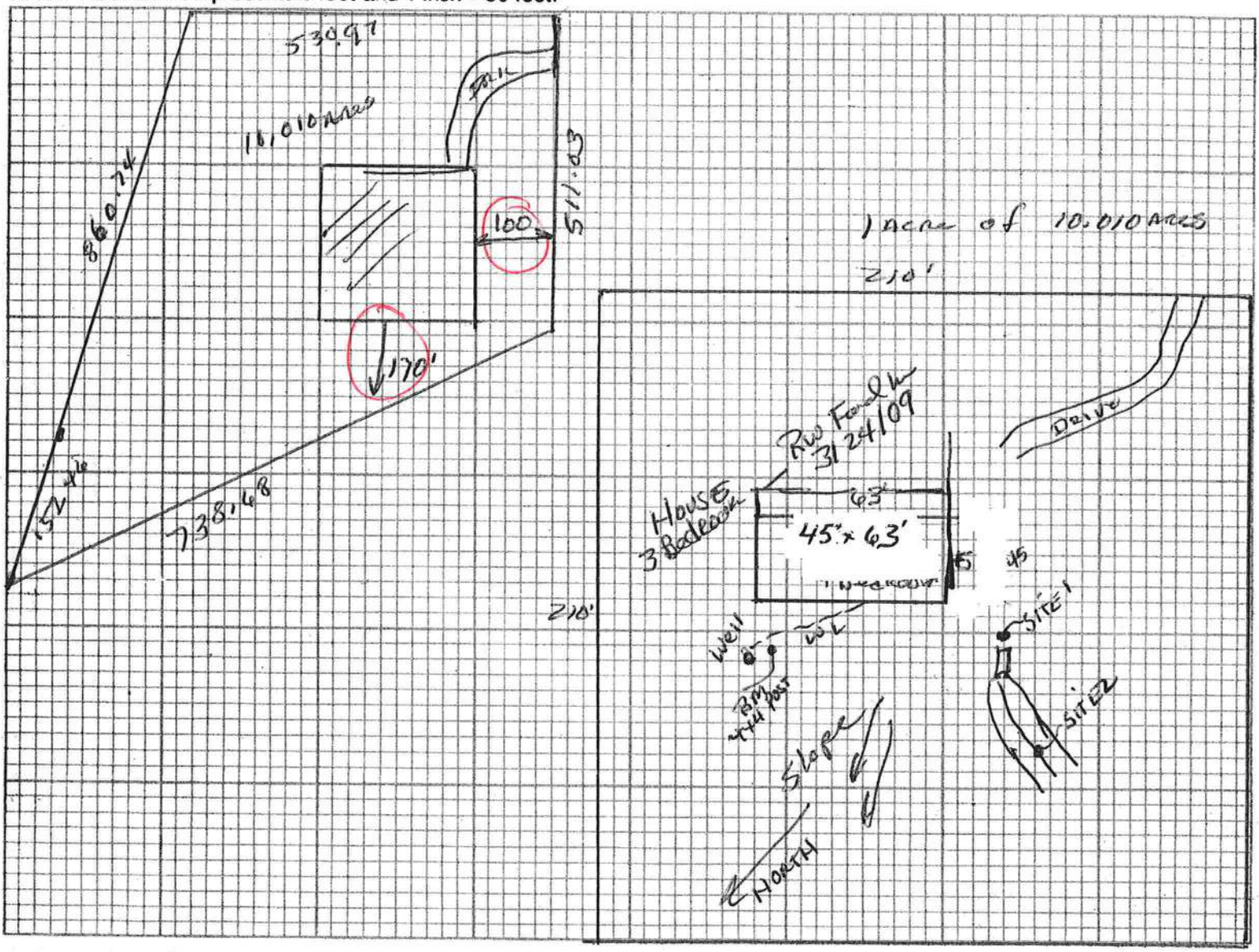
STATE OF FLORIDA
DEPARTMENT OF HEALTH

APPLICATION FOR ONSITE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permit Application Number 08-0700

PART II - SITE PLAN

Scale: Each block represents 5 feet and 1 inch = 50 feet.



Notes: Keith Adams

10.010 ACRS 09-35-16-02045-007

REVISED 3/24/09

Site Plan submitted by: Robert W Fendley
Signature

Agent
Title

Plan Approved ✓ Not Approved _____

Date 10-28-08 3/24/09

By _____ Columbia County Health Department

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT

08-0700

STATE OF FLORIDA
DEPARTMENT OF HEALTH
ON-SITE SEWAGE DISPOSAL SYSTEM
APPLICATION FOR CONSTRUCTION PERMIT

PERMIT NO. 900205
DATE PAID: 10/27/08
FEE PAID: 310.00
RECEIPT #: 1016392

LC

APPLICATION FOR:
[✓] New System [ ] Existing System [ ] Holding Tank [ ] Innovative
[ ] Repair [ ] Abandonment [ ] Temporary [ ] ______

APPLICANT: Keith Adams

AGENT: Robert Ford HFST Inc. TELEPHONE: 755-6372

MAILING ADDRESS: 580 NW Guerdon Rd Lake City Fla 32055

TO BE COMPLETED BY APPLICANT OR APPLICANT'S AUTHORIZED AGENT. SYSTEMS MUST BE CONSTRUCTED BY A PERSON LICENSED PURSUANT TO 489.105(3)(m) OR 489.552, FLORIDA STATUTES.

PROPERTY INFORMATION

LOT: — BLOCK: — SUBDIVISION: meets & Bounds PLATTED: ______

PROPERTY ID #: 09-35-16-02045-007 ZONING: Pastureland I/M OR EQUIVALENT: (Y / N)

PROPERTY SIZE: 10.010 ACRES WATER SUPPLY: [✓] PRIVATE PUBLIC [ ]<=2000GPD [ ]>2000GPD

IS SEWER AVAILABLE AS PER 381.0065, FS? [Y / (N)] DISTANCE TO SEWER: NA FT

PROPERTY ADDRESS: Lake Jeffery Rd

DIRECTIONS TO PROPERTY: Hwy 90 West to Lake Jeffery TR Go To 2nd Eamement to Right Past Closed Store at End on Right (Right gate @ end)

BUILDING INFORMATION [✓] RESIDENTIAL [ ] COMMERCIAL

Unit No	Type of Establishment	No. of Bedrooms	Building Area Sq Ft	Commercial/Institutional System Design Table 1, Chapter 64E-6, FAC
1	MH House	3	2877 (~~2030~~)	RW Ford Jr 3/24/09
2				
3				REVISED 3/24/09
4				

[ ] Floor/Equipment Drains [ ] Other (Specify) ______

SIGNATURE: Robert W Ford Jr DATE: 10/27/08

0903-40

Columbia County Property Appraiser

DB Last Updated: 3/5/2009

2009 Preliminary Values

Tax Record | Property Card | Interactive GIS Map | Print

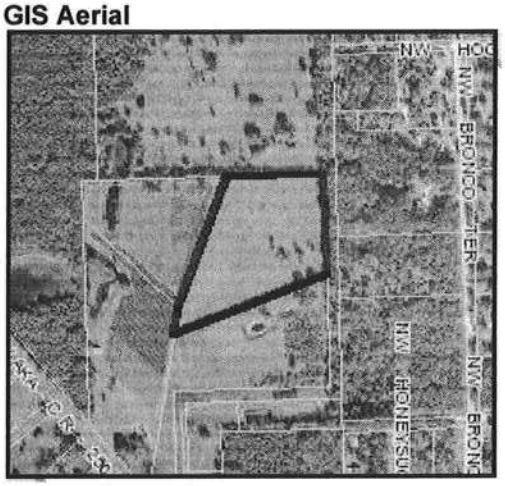
Parcel: 09-3S-16-02045-007

Search Result: 1 of 1

Owner & Property Info

Owner's Name	ADAMS KEITH		
Site Address	LAKE JEFFERY		
Mailing Address	101 COQUINA WAY ST AUGUSTINE, FL 32080		
Use Desc. (code)	VACANT (000000)		
Neighborhood	9316.00	**Tax District**	3
UD Codes	MKTA01	**Market Area**	01
Total Land Area	10.010 ACRES		
Description	COMM AT NE COR OF SE1/4 OF NE 1/4, RUN W 60 FT FOR POB, THENCE S 530.97 FT, S 67 DG W 860.74 FT, N 9 DG E 152.46 FT, N 19 DG E 738.68 FT TO PT ON N LINE OF SE1/4 OF NE1/4, THENCE W 511.03 FT TO POB. WD 1048-2732, WD 1146-218		

GIS Aerial



Property & Assessment Values

Mkt Land Value	cnt: (1)	$74,174.00
Ag Land Value	cnt: (0)	$0.00
Building Value	cnt: (0)	$0.00
XFOB Value	cnt: (0)	$0.00
Total Appraised Value		$74,174.00

Just Value	$74,174.00
Class Value	$0.00
Assessed Value	$74,174.00
Exempt Value	$0.00
Total Taxable Value	$74,174.00

Sales History

Sale Date	Book/Page	Inst. Type	Sale VImp	Sale Qual	Sale RCode	Sale Price
3/21/2008	1146/218	WD	V	U	03	$110,000.00
6/2/2005	1048/2732	WD	V	Q		$84,500.00

Building Characteristics

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

Extra Features & Out Buildings

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

Land Breakdown

Lnd Code	Desc	Units	Adjustments	Eff Rate	Lnd Value
000000	VAC RES (MKT)	10.010 AC	1.00/1.00/1.00/1.00	$7,410.00	$74,174.00

Columbia County Property Appraiser DB Last Updated: 3/5/2009

1 of 1

Prepared by and return to:
Kathryn Lilly/Employee
Haile Title Company, LLC
219 SE Baya Dr.
Lake City, FL 32025
386-754-6600
File Number: **LC08-024**

Inst:200812005630 Date:3/24/2008 Time:10:01 AM
Doc Stamp-Deed:770.00
DC,P.DeWitt Cason,Columbia County Page 1 of 2 B:1146 P:218

[Space Above This Line For Recording Data]

Warranty Deed

This Warranty Deed made this **21st** day of **March, 2008** between **Randell Burnham and Marsha M. Burnham, husband and wife** whose post office address is **155 NW Orbison Dr., Lake City, FL 32055**, grantor, and **Keith Adams** whose post office address is **101 Coquina Way, Saint Augustine, FL 32080**, grantee:

(Whenever used herein the terms "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, trusts and trustees)

Witnesseth, that said grantor, for and in consideration of the sum of TEN AND NO/100 DOLLARS ($10.00) and other good and valuable considerations to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained, and sold to the said grantee, and grantee's heirs and assigns forever, the following described land, situate, lying and being in **Columbia County, Florida** to-wit:

Commence at the Northeast corner of the SE 1/4 of the NE 1/4 of Section 9, Township 3 South, Range 16 East, Columbia County, Florida, and run S.88°40'07"W., along the North line of the SE 1/4 of the NE 1/4, a distance of 60.00 feet to the POINT OF BEGINNING; thence S.01°12'24"E. a distance of 530.97 feet; thence S.67°40'31"W. a distance of 860.74 feet; thence N.09°44'35"E. a distance of 152.46 feet; thence N.19°38'48"E. a distance of 738.68 feet to a point on the North line of the SE 1/4 of the NE 1/4 of Section 9; thence N.88°40'07"E., along said North line of the SE 1/4 of the NE 1/4 of Section 9, a distance of 511.03 feet to the POINT OF BEGINNING. TOGETHER WITH an easement 30.00 feet in width, for ingress, egress, and utilities, more particularly described as follows: Commence at the Northeast corner of the SE 1/4 of the NE 1/4 of Section 9, Township 3 South, Range 16 East, Columbia County, Florida, and run S.01°12'24"E., along the East line of Section 9, a distance of 1192.48 feet; thence S.88°35'02"W. a distance of 815.40 feet; thence S.01°32'45"E. a distance of 759.91 feet to a point on the Northeasterly right of way line of County Road 250 (Lake Jeffery Road); thence N.40°45'33"W., along said Northeasterly right of way line of County Road 250 (Lake Jeffery Road), a distance of 67.15 feet; thence N.39°28'06"W., still along said Northeasterly right of way line of County Road 250 (Lake Jeffery Road), a distance of 238.93 feet to the POINT OF BEGINNING; thence continue N.39°28'06"W., still along said Northeasterly right of way line of County Road 250 (Lake Jeffery Road), a distance of 39.62 feet; thence N.09°44'35"E. a distance of 859.29 feet; thence N.67°40'31"E. a distance of 35.40 feet; thence S.09°44'35"W. a distance of 903.97 feet to the POINT OF BEGINNING.

Parcel Identification Number: 09-3S-16-02045-007

Subject to taxes for 2008 and subsequent years; covenants, conditions, restrictions, easements, reservations and limitations of record, if any.

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, 2007**.

In Witness Whereof, grantor has hereunto set grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

Randell Burnham (Seal)

Witness Name: Pamela S. Beauchamp

Witness Name: Eric Struble

Marsha M. Burnham (Seal)

State of Florida
County of Columbia

The foregoing instrument was acknowledged before me this 21st day of March, 2008 by Randell Burnham and Marsha M. Burnham, who [_] are personally known or [X] have produced a driver's license as identification.

[Notary Seal]

Notary Public

NOTARY PUBLIC-STATE OF FLORIDA
Eric Struble
Commission #DD685132
Expires: JUNE 13, 2011
BONDED THRU ATLANTIC BONDING CO., INC.

Printed Name:

My Commission Expires:

BOARD OF COUNTY COMMISSIONERS • COLUMBIA COUNTY

March 6, 2009

M E M O

TO: John Kerce, Chief Building Official
Brian Kepner, County Planner

FR: Dale Williams, County Manager

RE: Impact Fees – FOR IMMEDIATE ATTENTION

Effective immediately you are to suspend the collection of impact fees. This suspension was approved by the Board of County Commissioners in their regular meeting of March 5, 2009. The suspension includes those fees levied by both ordinances, general government and schools. The approved suspension is in anticipation of a moratorium to be approved March 19, 2009.

You are also requested to provide a list of all impact fees collected since January 1, 2009. This list should include the following information:

1. **the name of the person/business who initially paid the impact fee and the date paid**
2. **the name of the owner on whose project the impact fee was paid**
3. **a "breakdown" on the impact collected by category (i.e. corrections, transportation, EMS, fire, school)**

For those fees recently collected but not yet deposited, I suggest you hold the checks (I assume no cash was collected) until after the March 19, 2009 Public Hearing to impose a moratorium. You should notify the check issuer of the reason you are holding the check.

DW/pds

XC: Impact Fees File
Board of County Commissioners
Outgoing Correspondence

FORM 1100A-08

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs Residential Performance Method A

Project Name:	Adams Residence	Builder Name:	House Craft Homes, LLC
Street:	5881 NW Lake Jeffery Rd	Permit Office:	Columbia
City, State, Zip:	Lake City , Fl ,	Permit Number:	27721
Owner:	Keith Adams	Jurisdiction:	221000
Design Location:	FL, Gainesville		

1. New construction or existing		New (From Plans)		
2. Single family or multiple family		Single-family		
3. Number of units, if multiple family		1		
4. Number of Bedrooms		3		
5. Is this a worst case?		No		
6. Conditioned floor area (ft²)		2877		
7. Windows	Description		Area	
a. U-Factor:	Dbl, U=0.55		121.36	ft²
SHGC:	SHGC=0.70			
b. U-Factor:	Dbl, U=0.55		117.78	ft²
SHGC:	SHGC=0.60			
c. U-Factor:	N/A			ft²
SHGC:				
d. U-Factor:	N/A			ft²
SHGC:				
e. U-Factor:	N/A			ft²
SHGC:				
8. Floor Types		Insulation	Area	
a. Slab-On-Grade Edge Insulation		R=0.0	2877.00	ft²
b. N/A		R=		ft²
c. N/A		R=		ft²

9. Wall Types	Insulation	Area
a. Concrete Block - Int Insul, Exterior	R=6.5	1813.30 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²
d. N/A	R=	ft²
10. Ceiling Types	Insulation	Area
a. Under Attic (Vented)	R=30.0	2877.00 ft²
b. Knee Wall (Vented)	R=19.0	304.00 ft²
c. N/A	R=	ft²

11. Ducts
a. Sup: Attic Ret: Attic AH: Attic Sup. R= 6, 575.4 ft²

12. Cooling systems
a. Central Unit — Cap: 54 kBtu/hr, SEER: 13

13. Heating systems
a. Electric Heat Pump — Cap: 54 kBtu/hr, HSPF: 8.5

14. Hot water systems
a. Electric — Cap: 50 gallons, EF: 0.92
b. Conservation features
None

15. Credits — Pstat

Glass/Floor Area: 0.083

Total As-Built Modified Loads: 42.32
Total Baseline Loads: 52.33

PASS

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

PREPARED BY: _____
DATE: 3/26/09

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

OWNER/AGENT: _____
DATE: 3/26/09

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

BUILDING OFFICIAL: _____
DATE: _____

FORM 1100A-08

Code Compliance Cheklist

Residential Whole Building Performance Method A - Details

ADDRESS: 5881 NW Lake Jeffery Rd
Lake City, Fl,

PERMIT #:

INFILTRATION REDUCTION COMPLIANCE CHECKLIST

COMPONENTS	SECTION	REQUIREMENTS FOR EACH PRACTICE	CHECK
Exterior Windows & Doors	N1106.AB.1.1	Maximum: .3 cfm/sq.ft. window area; .5 cfm/sq.ft. door area.	
Exterior & Adjacent Walls	N1106.AB.1.2.1	Caulk, gasket, weatherstrip or seal between: windows/doors & frames, surrounding wall; foundation & wall sole or sill plate; joints between exterior wall panels at corners; utility penetrations; between wall panels & top/bottom plates; between walls and floor. EXCEPTION: Frame walls where a continuous infiltration barrier is installed that extends from, and is sealed to, the foundation to the top plate.	
Floors	N1106.AB.1.2.2	Penetrations/openings > 1/8" sealed unless backed by truss or joint members. EXCEPTION: Frame floors where a continuous infiltration barrier is installed that is sealed to the perimeter, penetrations and seams.	
Ceilings	N1106.AB.1.2.3	Between walls & ceilings; penetrations of ceiling plane to top floor; around shafts, chases, soffits, chimneys, cabinets sealed to continuous air barrier; gaps in gyp board & top plate; attic access. EXCEPTION: Frame ceilings where a continuous infiltration barrier is installed that is sealed at the perimeter, at penetrations and seams.	
Recessed Lighting Fixtures	N1106.AB.1.2.4	Type IC rated with no penetrations, sealed; or Type IC or non-IC rated, installed inside a sealed box with 1/2" clearance & 3" from insulation; or Type IC with < 2.0 cfm from conditioned space, tested.	
Multi-story Houses	N1106.AB.1.2.5	Air barrier on perimeter of floor cavity between floors.	
Additional Infiltration reqts	N1106.AB.1.3	Exhaust fans vented to outdoors, dampers; combustion space heaters comply with NFPA, have combustion air.	

OTHER PRESCRIPTIVE MEASURES (must be met or exceeded by all residences.)

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	N1112.AB.3	Comply with efficiency requirements in Table N112.ABC.3. Switch or clearly marked circuit breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required.	
Swimming Pools & Spas	N1112.AB.2.3	Spas & heated pools must have covers (except solar heated). Non-commercial pools must have a pump timer. Gas spa & pool heaters must have a minimum thermal efficiency of 78%. Heat pump pool heaters shall have a minimum COP of 4.0.	
Shower heads	N1112.AB.2.4	Water flow must be restricted to no more than 2.5 gallons per minute at 80 PSIG.	
Air Distribution Systems	N1110.AB	All ducts, fittings, mechanical equipment and plenum chambers shall be mechanically attached, sealed, insulated and installed in accordance with the criteria of Section N1110.AB. Ducts in unconditioned attics: R-6 min. insulation.	
HVAC Controls	N1107.AB.2	Separate readily accessible manual or automatic thermostat for each system.	
Insulation	N1104.AB.1 N1102.B.1.1	Ceilings-Min. R-19. Common walls-frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	

PROJECT

Title:	Adams Residence	Bedrooms:	3	Adress Type:	Street Address
Building Type:	FLAsBuilt	Bathrooms:	2	Lot #	
Owner:	Keith Adams	Conditioned Area:	2877	SubDivision:	
# of Units:	1	Total Stories:	1	PlatBook:	
Builder Name:	House Craft Homes, LLC	Worst Case:	No	Street:	5881 NW Lake Jeffery
Permit Office:		Rotate Angle:	0	County:	Columbia
Jurisdiction:		Cross Ventilation:		City, State, Zip:	Lake City ,
Family Type:	Single-family	Whole House Fan:			Fl ,
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

√	Design Location	TMY Site	IECC Zone	Design Temp 97.5 %	Design Temp 2.5 %	Int Design Temp Winter	Int Design Temp Summer	Heating Degree Days	Design Moisture	Daily Temp Range
____	FL, Gainesville	FL_GAINESVILLE_REGI	2	32	92	75	70	1305.5	51	Medium

FLOORS

√	#	Floor Type	Perimeter	R-Value	Area	Tile	Wood	Carpet
____	1	Slab-On-Grade Edge Insulatio	234 ft	0	2877 ft²	0.42	0	0.58

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	Tested	Deck Insul.	Pitch
____	1	Hip	Composition shingles	3218 ft²	0 ft²	Medium	0.96	No	0	26.6 deg

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
____	1	Partial cathedral cei	Vented	300	2877 ft²	N	N

CEILING

√	#	Ceiling Type	R-Value	Area	Framing Frac	Truss Type
____	1	Under Attic (Vented)	30	2877 ft²	0.11	Wood
____	2	Knee Wall (Vented)	19	304 ft²	0.11	Wood

WALLS

√	#	Ornt	Adjacent To	Wall Type	Cavity R-Value	Area	Sheathing R-Value	Framing Fraction	Solar Absor.
____	1	NW	Exterior	Concrete Block - Int Insul	6.5	386.67 ft²		0	0.75
____	2	SW	Exterior	Concrete Block - Int Insul	6.5	520 ft²		0	0.75
____	3	SE	Exterior	Concrete Block - Int Insul	6.5	386.67 ft²		0	0.75
____	4	NE	Exterior	Concrete Block - Int Insul	6.5	520 ft²	2	0	0.5

DOORS

√	#	Ornt	Door Type	Storms	U-Value	Area
____	1	NW	Insulated	None	0.4	19.5 ft²
____	2	NE	Insulated	None	0.4	17.33 ft²
____	3	NE	Wood	None	0.46	17.33 ft²
____	4	SW	Insulated	None	0.4	10.83 ft²

WINDOWS

Window orientation below is as entered. Actual orientation is modified by rotate angle shown in "Project" section above.

√	#	Ornt	Frame	Panes	NFRC	U-Factor	SHGC	Storms	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
____	1	NW	Vinyl	Low-E Double	Yes	0.55	0.6	N	11.11 ft²	2 ft 0 in	0 ft 4 in	HERS 2006	None
____	2	SW	Vinyl	Low-E Double	Yes	0.55	0.6	N	106.67 ft²	2 ft 0 in	0 ft 4 in	HERS 2006	None
____	3	SE	Vinyl	Low-E Double	Yes	0.55	0.7	N	35.56 ft²	2 ft 0 in	0 ft 4 in	HERS 2006	None
____	4	SE	Vinyl	Double (Clear)	Yes	0.55	0.7	N	7.25 ft²	2 ft 0 in	0 ft 4 in	HERS 2006	None
____	5	NE	Vinyl	Double (Clear)	Yes	0.55	0.7	N	10 ft²	6 ft 0 in	0 ft 4 in	HERS 2006	None
____	6	NE	Vinyl	Low-E Double	Yes	0.55	0.7	N	35.56 ft²	2 ft 0 in	0 ft 4 in	HERS 2006	None
____	7	SW	Wood	Double (Clear)	Yes	0.55	0.7	N	11 ft²	6 ft 0 in	0 ft 4 in	HERS 2006	None
____	8	NE	Metal	Double (Clear)	Yes	0.55	0.7	N	22 ft²	6 ft 0 in	0 ft 4 in	HERS 2006	None

INFILTRATION & VENTING

√	Method	SLA	CFM 50	ACH 50	ELA	EqLA	---- Forced Ventilation ---- Supply CFM	Exhaust CFM	Run Time Fraction	Fan Watts
____	Default	0.00036	2717	7.08	149.1	280.5	0 cfm	0 cfm	0	0

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Ductless
____	1	Central Unit	None	SEER: 13	54 kBtu/hr	1620 cfm	0.75	False

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Ductless
____	1	Electric Heat Pump	None	HSPF: 8.5	54 kBtu/hr	False

HOT WATER SYSTEM

√	#	System Type	EF	Cap	Use	SetPnt	Conservation
____	1	Electric	0.92	50 gal	60 gal	120 deg	None

SOLAR HOT WATER SYSTEM

√	FSEC Cert #	Company Name	System Model #	Collector Model #	Collector Area	Storage Volume	FEF
____	None	None			ft²		

DUCTS

✓	#	---- Supply ---- Location	R-Value	Area	---- Return ---- Location	Area	Leakage Type	Air Handler	CFM 25	Percent Leakage	QN	RLF
_____	1	Attic	6	575.4 ft	Attic	143.85	Default Leakage	Attic				

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans: N

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cooling	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
Heating	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
Venting	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]

Thermostat Schedule: HERS 2006 Reference

Schedule Type		Hours 1	2	3	4	5	6	7	8	9	10	11	12
Cooling (WD)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	78	78	78	78	78	78	78	78	78	78
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	78	78	78	78
	PM	78	78	78	78	78	78	78	78	78	78	78	78
Heating (WD)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66
Heating (WEH)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66

NOTICE OF COMMENCEMENT

Inst:200912005263 Date:3/31/2009 Time:1:45 PM
DC,P.DeWitt Cason,Columbia County Page 1 of 1 B:1170 P:690

PERMIT NUMBER: 0903-40

STATE OF: FLORIDA COUNTY OF: ALACHUA CITYOF: Alachua

THE UNDERSIGNED HEREBY gives notice that improvement(s) 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.

DESCRIPTION OF PROPERTY
LOT: BLOCK: SECTION: 09 TOWNSHIP: 35 RANGE: 16E

TAX PARCEL NUMBER: 02045-007

SUBDIVISION PLATBOOK: MAP PAGE:

STREET ADDRESS: 5881 NW Lake Jeffery Rd., Lake City, Fl

GENERAL DESCRIPTION OF IMPROVEMENTS

TO CONSTRUCT: Single Family Residence

OWNER INFORMATION

OWNER NAME: Keith Adams
ADDRESS: 101 Coquina Ave. PHONE NUMBER: (904) 392-6112
CITY: St. Augustine STATE: Fl. ZIP CODE: 32080

INTEREST IN PROPERTY: Fee Simple
FEE SIMPLE TITLEHOLDER NAME:
FEE SIMPLE TITLEHOLDER ADDRESS:
(if other than owner)

CONTRACTOR NAME House Craft Homes, LLC
ADDRESS: 12501 US HWY 441 PHONE NUMBER: (386) 462-5323
CITY: High Springs STATE: Fl ZIP CODE: 32615

BONDING COMPANY:
ADDRESS: PHONE NUMBER:
CITY: STATE: ZIP CODE:

LENDER NAME:
ADDRESS: PHONE NUMBER: CITY: STATE: ZIP CODE:

Persons withing the State of Florida designated by Owner upon whom notices or other documents may be served as provided by

Section 713.13(1)(a) 7., Florida Statutes:

NAME: Keith Adams ADDRESS. 101 Coquina Ave. St. Augustine, Fl 32080
. In addition to himself, Owner designates
of to receive a copy of Lienor's Notice as provided in Section 713.13(1)(b), Florida Statutes. Expiration date is one (1) year from date of recording unless a different date is specified.

SIGNATURE OF OWNER: Keith R Ad

SWORN to and subscribed before me this 26th day of March, A.D. 2009

Notary Public: Jessica L. Harrington

My commission Expires: 11/14/10

SEAL

NOTARY PUBLIC-STATE OF FLORIDA
Jessica R. Harrington
Commission # DD607877
Expires: NOV. 14, 2010
BONDED THRU ATLANTIC BONDING CO., INC.

FAXed
3-25-09
To 386-462-1509
3:13 PM

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

Reference to a building permit application Number: 0903-40

Applicant: House Craft Homes /owner Keith Adams: Property Identification number: 09-3s-16-02045-007

On the date of March 25, 2009 application 0903-40 and plans were submitted and reviewed for compliance of the 2007 Florida Building Code Residential. The documents and plans submitted are for construction of a Group R-3 Single Family Dwelling structure.

Reviewed the following listed information so this building permit application may proceed toward issuance.

The Florida Energy Efficiency Code for Building Construction (form 600-A-2004R) is no longer an acceptable evaluation method, due to the adoption of the Florida Building Code Residential 2007 which became effective March 1, 2009. Please consult with EnergyGauge® to obtain the correct Florida Energy Efficiency Code for Building Construction form to be utilized.

Windload Engineering Sheet S-1 of 1 sheet details the foundations design to be employed for the structure. The foundation plan (sheet 1 of 3) drawn by J.D.H. has conflicting design specification with Windload Engineering Sheet S-1 of 1.
Please have Windload Engineering review sheet 1 of 3 and show a foundation schedule and location for all the shear wall segments and supporting columns.
If the foundation plan (sheet 1 of 3) designed by J.D.H. is to be used as the foundation plan, have Mr. Mark Disosway P.E. for Windload Engineering affixes his embossed seal to the drawing.

The electrical plans indicates the location of the electrical service entrance (meter can) point and the interior location of the electrical circuit panel. At the electrical service entrance point an overcurrent protection device shall be installed on the exterior of structure, which will provide overcurrent protection for the service entry cable to the electrical panels. This overcurrent protection device shall also serves as a means of disconnecting electrical power from the utility company. Conductors used from the exterior overcurrent protection disconnect device to the panel or sub panel shall have four-wire conductors, of which one conductor shall be used as an equipment ground. Please provide the amperage ratings for the electrical service entrance and any additional sub panel.

The removal of the design loads and the code compliance statement shown on sheet 2 of 3 are to be removed from this drawing unless Mr. Mark Disosway P.E. for Windload Engineering affixes his embossed seal to the drawing.

If you should have any question please contact the above address, or call phone number (386) 758-1163.

Please include application number 0903-40 and when making reference to this application.

This is a plan review for compliance with the Florida Building Code 2007only and doesn't make any consideration toward the land use and zoning requirements.

Thank You:

Joe Haltiwanger
Columbia County Building
Department

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 09-3S-16-02045-007 **Building permit No.** 000027721

Use Classification SFD,UTILITY **Fire:** 12.22

Permit Holder HOUSECRAFT HOMES **Waste:** 16.75

Owner of Building KEITH ADAMS **Total:** 28.97

Location: 5881 NW LAKE JEFFREY ROAD, LAKE CITY, FL 32055

Date: 09/10/2009

Harry Dicks

Building Inspector

POST IN A CONSPICUOUS PLACE
(Business Places Only)

RIGHT-J LOAD AND EQUIPMENT SUMMARY
Entire House

Scott Ray

FL Phone: (352)745-0473

Project Information

For: House Craft Homes
12523 U.S. Highway 441, Alachua, FL 32615
Phone: (904)462-5323 Fax: (904)462-1509

Notes:

Design Information

Weather: Gainesville, FL , US

Winter Design Conditions

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

Summer Design Conditions

Outside db	92	°F
Inside db	75	°F
Design TD	17	°F
Daily range	M	
Relative humidity	50	%
Moisture difference	52	gr/lb

Heating Summary

Building heat loss	84493	Btuh
Ventilation air	0	cfm
Ventilation air loss	0	Btuh
Design heat load	84493	Btuh

Sensible Cooling Equipment Load Sizing

Structure	38534	Btuh
Ventilation	0	Btuh
Design temperature swing	3.0	°F
Use mfg. data	n	
Rate/swing multiplier	0.97	
Total sens. equip. load	37378	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	2819	2819
Volume (ft³)	36222	36222
Air changes/hour	0.70	0.40
Equiv. AVF (cfm)	423	242

Latent Cooling Equipment Load Sizing

Internal gains	690	Btuh
Ventilation	0	Btuh
Infiltration	8482	Btuh
Total latent equip. load	9172	Btuh
Total equipment load	46550	Btuh

Heating Equipment Summary

Make		
Trade		
Efficiency	9.2 HSPF	
Heating input		
Heating output	0	Btuh @ 47°F
Heating temp rise	0	°F
Actual heating fan	1844	cfm
Heating air flow factor	0.022	cfm/Btuh
Space thermostat		

Cooling Equipment Summary

Make		
Trade		
Efficiency	13.0 EER	
Sensible cooling	0	Btuh
Latent cooling	0	Btuh
Total cooling	0	Btuh
Actual cooling fan	1844	cfm
Cooling air flow factor	0.048	cfm/Btuh
Load sensible heat ratio	81	%

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RIGHT-J CALCULATION PROCEDURES A, B, C, D
Entire House

Scott Ray

FL Phone: (352)745-0473

Procedure A - Winter Infiltration HTM Calculation*

1.	Winter infiltration AVF								
	0.70	ach	x	36222	ft³	x	0.0167	=	423 cfm
2.	Winter infiltration load								
	1.1	x 423	cfm	x	37	°F	Winter TD =		17234 Btuh
3.	Winter infiltration HTM								
	17234	Btuh	/	281	ft²		Total window and door area =		61.3 Btuh/ft²

Procedure B - Summer Infiltration HTM Calculation

1.	Summer infiltration AVF								
	0.40	ach	x	36222	ft³	x	0.0167	=	242 cfm
2.	Summer infiltration load								
	1.1	x 242	cfm	x	17	°F	Summer TD =		4525 Btuh
3.	Summer infiltration HTM								
	4525	Btuh	/	281	ft²		Total window and door area =		16.1 Btuh/ft²

Procedure C - Latent Infiltration Gain

0.68	x 52	gr/lb	moist.diff.	x	242 cfm	= 8482 Btuh

Procedure D - Equipment Sizing Loads

1. Sensible sizing load

Sensible ventilation load								
1.1 x	0 cfm	vent.	x	17	°F	Summer TD	=	0 Btuh
Sensible load for structure (Line 19)							+	38534 Btuh
Sum of ventilation and structure loads							=	38534 Btuh
Rating and temperature swing multiplier							x	0.97
Equipment sizing load - sensible							=	37378 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	3	people		+	690 Btuh
Infiltration load from Procedure C							+	8482 Btuh
Equipment sizing load - latent							=	9172 Btuh

*Construction Quality is: a

No. of Fireplaces is: 0

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RIGHT-J WORKSHEET
Entire House
Scott Ray

FL Phone: (352)745-0473

MANUAL J: 7th Ed.																		
1	Name of room					Entire House			kit/dinning/lvng			foyer/hall			mstr clst		
2	Length of exposed wall					226.0 ft			64.0 ft			9.0 ft			0.0 ft		
3	Room dimensions								1.0 x 890.0 ft			1.0 x 280.0 ft			9.0 x 6.0 ft		
4	Ceilngs	Condit. Option				12.8 ft		d	14.0 ft	heat/cool		14.0 ft	heat/cool		10.0 ft	heat/cool	
	TYPE OF EXPOSURE		CST NO.	HTM Htg	HTM Clg	Area (ft^2)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft^2)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft^2)	Load (Btuh) Htg	Load (Btuh) Clg	Area (ft^2)	Load (Btuh) Htg	Load (Btuh) Clg
5	Gross Exposed walls and partitions	a	14A	18.9	6.8	2876	****	****	896	****	****	126	****	****	0	****	****
		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	3B	22.5	**	140	3155	****	36	811	****	8	180	****	0	0	****
		b	5E	13.3	**	15	200	****	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			20.9	33	****	689	24	****	523	0	****	0	0	****	0
		NE/NW			0.0	0	****	0	0	****	0	0	****	0	0	****	0
		E/W			69.7	42	****	2929	12	****	850	0	****	0	0	****	0
		SE/SW			0.0	0	****	0	0	****	0	0	****	0	0	****	0
		South			36.8	80	****	2944	0	****	0	8	****	294	0	****	0
		Horz			0.0	0	****	0	0	****	0	0	****	0	0	****	0
8	Other doors	a	11A	21.8	12.2	126	2751	1531	63	1375	766	21	458	255	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	14A	18.9	6.8	2595	48968	17602	797	15039	5406	97	1830	658	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
		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	1.2	1.4	2819	3442	3814	890	1087	1204	280	342	379	54	66	73
		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	30.0	0.0	226	6773	0	64	1918	0	9	270	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
		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		61.3	16.1	281	17234	4525	99	6072	1594	29	1779	467	0	0	0
13	Subtotal loss=6+8..+11+12					****	82522	****	****	26302	****	****	4859	****	****	66	****
	Less external heating					****	0	****	****	0	****	****	0	****	****	0	****
	Less transfer					****	0	****	****	0	****	****	0	****	****	0	****
14	Duct loss					0%	0	****	0%	0	****	0%	0	****	0%	0	****
15	Total loss = 13+14					****	82522	****	****	26302	****	****	4859	****	****	66	****
16	Int. gains: People @ 300					3	****	900	3	****	900	0	****	0	0	****	0
	Appl. @ 1200					3	****	3600	2	****	2400	0	****	0	0	****	0
17	Subtot RSH gain=7+8..+12+16					****	****	38534	****	****	13643	****	****	2053	****	****	73
	Less external cooling					****	****	0	****	****	0	****	****	0	****	****	0
	Less transfer					****	****	0	****	****	0	****	****	0	****	****	0
18	Duct gain					0%	****	0	0%	****	0	0%	****	0	0%	****	0
19	Total RSH gain=(17+18)*PLF					1.00	****	38534	1.00	****	13643	1.00	****	2053	1.00	****	73
20	Air required (cfm)					****	1844	1844	****	588	653	****	109	98	****	1	3

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RIGHT-J WORKSHEET
Entire House
Scott Ray

FL Phone: (352)745-0473

	MANUAL J: 7th Ed.					masterbath			laundry			masterbedroom			bedroom2		
1	Name of room						9.0 ft			0.0 ft			42.0 ft			31.0 ft	
2	Length of exposed wall						9.0 x 18.0 ft			9.0 x 6.0 ft			1.0 x 434.0 ft			1.0 x 192.0 ft	
3	Room dimensions						12.0 ft heat/cool			10.0 ft heat/cool			12.0 ft heat/cool			12.0 ft heat/cool	
4	Ceilngs	Condit. Option															
	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	14A	18.9	6.8	108	****	****	0	****	****	504	****	****	372	****	****
		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	3B	22.5	**	0	0	****	0	0	****	24	541	****	24	541	****
		b	5E	13.3	**	9	120	****	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			20.9	9	****	166	0	****	0	0	****	0	0	****	0
		NE/NW			0.0	0	****	0	0	****	0	0	****	0	0	****	0
		E/W			69.7	0	****	0	0	****	0	24	****	1699	0	****	0
		SE/SW			0.0	0	****	0	0	****	0	0	****	0	0	****	0
		South			36.8	0	****	0	0	****	0	0	****	0	24	****	883
		Horz			0.0	0	****	0	0	****	0	0	****	0	0	****	0
8	Other doors	a	11A	21.8	12.2	0	0	0	0	0	0	42	917	510	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	14A	18.9	6.8	99	1868	672	0	0	0	438	8265	2971	348	6567	2360
		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	1.2	1.4	162	198	219	54	66	73	434	530	587	192	234	260
		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	30.0	0.0	9	270	0	0	0	0	42	1259	0	31	929	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		61.3	16.1	9	552	145	0	0	0	66	4048	1063	24	1472	386
13	Subtotal loss=6+8..+11+12					****	3008	****	****	66	****	****	15559	****	****	9743	****
	Less external heating					****	0	****	****	0	****	****	0	****	****	0	****
	Less transfer					****	0	****	****	0	****	****	0	****	****	0	****
14	Duct loss					0%	0	****	0%	0	****	0%	0	****	0%	0	****
15	Total loss = 13+14					****	3008	****	****	66	****	****	15559	****	****	9743	****
16	Int. gains: People @ 300					0	****	0	0	****	0	0	****	0	0	****	0
	Appl. @ 1200					0	****	0	1	****	1200	0	****	0	0	****	0
17	Subtot RSH gain=7+8..+12+16					****	****	1201	****	****	1273	****	****	6831	****	****	3890
	Less external cooling					****	****	0	****	****	0	****	****	0	****	****	0
	Less transfer					****	****	0	****	****	0	****	****	0	****	****	0
18	Duct gain					0%	****	0	0%	****	0	0%	****	0	0%	****	0
19	Total RSH gain=(17+18)*PLF					1.00	****	1201	1.00	****	1273	1.00	****	6831	1.00	****	3890
20	Air required (cfm)					****	67	57	****	1	61	****	348	327	****	218	186

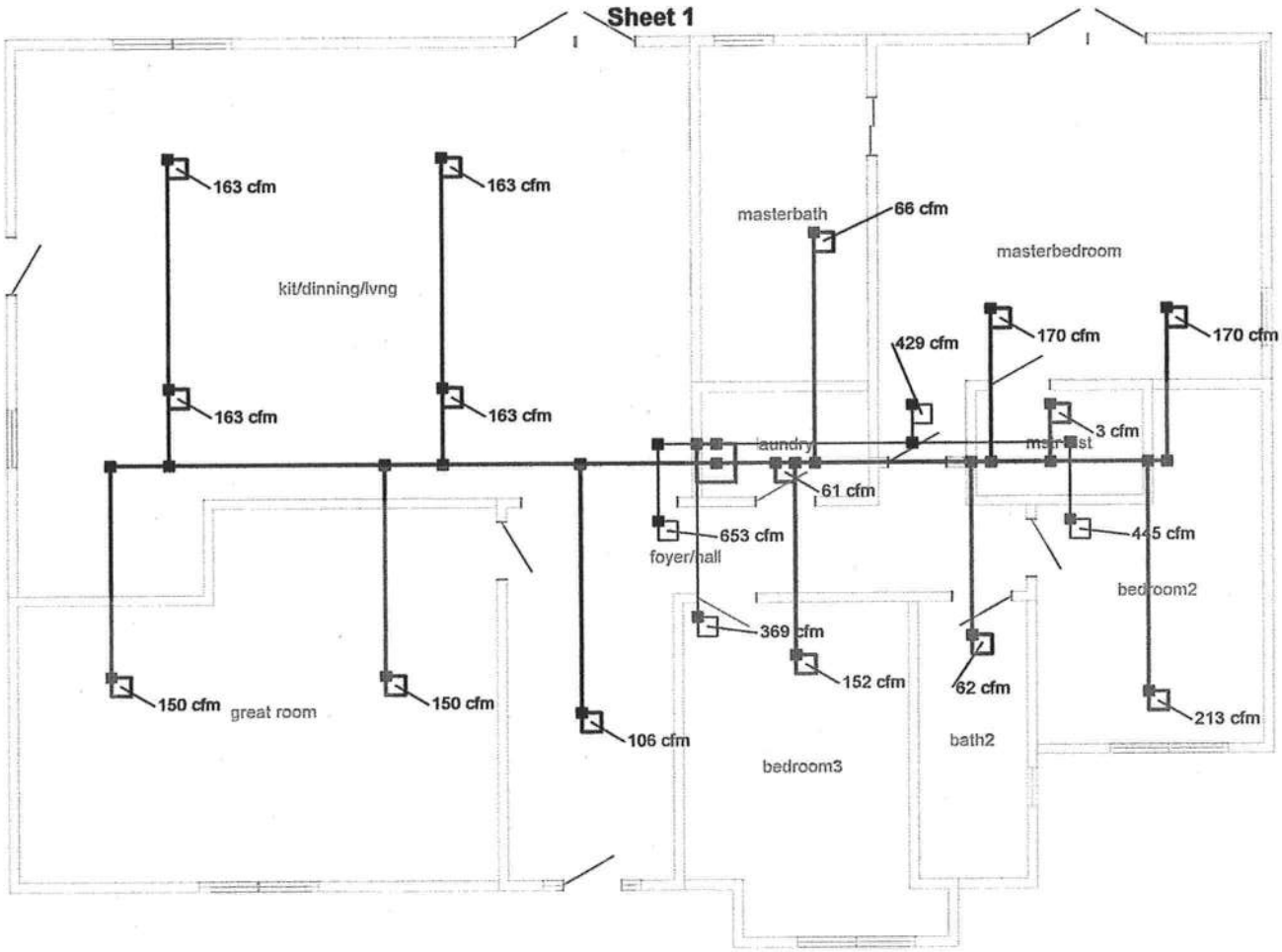
Printout certified by ACCA to meet all requirements of Manual J 7th Ed.

RIGHT-J WORKSHEET
Entire House
Scott Ray

FL Phone: (352)745-0473

	MANUAL J: 7th Ed.		CST	HTM		bath2 11.0 ft 6.0 x 15.0 ft 10.0 ft heat/cool			bedroom3 20.0 ft 1.0 x 213.0 ft 12.0 ft heat/cool			great room 40.0 ft 1.0 x 450.0 ft 13.0 ft heat/cool					
1	Name of room																
2	Length of exposed wall																
3	Room dimensions																
4	Ceilngs	Condit. Option															
	TYPE OF EXPOSURE		NO.	Htg	Clg	Area (ft^2)	Load (Btuh) Htg	Clg	Area (ft^2)	Load (Btuh) Htg	Clg	Area (ft^2)	Load (Btuh) Htg	Clg	Area	Htg	Clg
5	Gross Exposed walls and partitions	a	14A	18.9	6.8	110	****	****	240	****	****	520	****	****		****	****
		b		0.0	0.0	0	****	****	0	****	****	0	****	****		****	****
		c		0.0	0.0	0	****	****	0	****	****	0	****	****		****	****
		d		0.0	0.0	0	****	****	0	****	****	0	****	****		****	****
		e		0.0	0.0	0	****	****	0	****	****	0	****	****		****	****
		f		0.0	0.0	0	****	****	0	****	****	0	****	****		****	****
6	Windows and glass doors Heating	a	3B	22.5	**	0	0	****	24	541	****	24	541	****			****
		b	5E	13.3	**	6	80	****	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	****			****
7	Windows and glass doors Cooling	North			20.9	0	****	0	0	****	0	0	****	0		****	
		NE/NW			0.0	0	****	0	0	****	0	0	****	0		****	
		E/W			69.7	6	****	380	0	****	0	0	****	0		****	
		SE/SW			0.0	0	****	0	0	****	0	0	****	0		****	
		South			36.8	0	****	0	24	****	883	24	****	883		****	
		Horz			0.0	0	****	0	0	****	0	0	****	0		****	
8	Other doors	a	11A	21.8	12.2	0	0	0	0	0	0	0	0	0			
		b		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			
9	Net exposed walls and partitions	a	14A	18.9	6.8	104	1962	705	216	4076	1465	496	9360	3364			
		b		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			
		d		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			
		f		0.0	0.0	0	0	0	0	0	0	0	0	0			
10	Ceilings	a	16G	1.2	1.4	90	110	122	213	260	288	450	549	609			
		b		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			
		d		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			
		f		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	30.0	0.0	11	330	0	20	599	0	40	1199	0			
		b		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			
		d		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			
		f		0.0	0.0	0	0	0	0	0	0	0	0	0			
12	Infiltration	a		61.3	16.1	6	368	97	24	1472	386	24	1472	386			
13	Subtotal loss=6+8..+11+12					****	2850	****	****	6948	****	****	13120	****	****		****
	Less external heating					****	0	****	****	0	****	****	0	****	****		****
	Less transfer					****	0	****	****	0	****	****	0	****	****		****
14	Duct loss					0%	0	****	0%	0	****	0%	0	****	%		****
15	Total loss = 13+14					****	2850	****	****	6948	****	****	13120	****	****		****
16	Int. gains: People @ 300					0	****	0	0	****	0	0	****	0		****	
	Appl. @ 1200					0	****	0	0	****	0	0	****	0		****	
17	Subtot RSH gain=7+8..+12+16					****	****	1304	****	****	3023	****	****	5243	****	****	
	Less external cooling					****	****	0	****	****	0	****	****	0	****	****	
	Less transfer					****	****	0	****	****	0	****	****	0	****	****	
18	Duct gain					0%	****	0	0%	****	0	0%	****	0	%	****	
19	Total RSH gain=(17+18)*PLF					1.00	****	1304	1.00	****	3023	1.00	****	5243		****	
20	Air required (cfm)					****	64	62	****	155	145	****	293	251	****		

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



Job #: **Performed by S.E.R. for:** House Craft Homes 12523 U.S. Highway 441 Alachua, FL 32615 Phone: (904)462-5323 Fax: (904)462-1509	**Scott Ray** FL Phone: (352)745-0473	Scale: 1 : 117 Page 1 Right-Suite Residential (tm) 5.0.66 RSR24126 2009-Mar-23 00:45:00 uments\Wrightsoft HVAC\house craf

Permit # _____
User ID _____

PRODUCT APPROVAL SPECIFICATION SHEET

As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and approval numbers on the building components listed below if they will be utilized on the construction project for which you are applying for a building permit. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. Statewide approved products are listed online @ www.floridabuilding.org

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)	X
1. EXTERIOR DOORS				
A. SWINGING	Masonite	Entry Door	FL. 4940.4	
B. SLIDING	HR Danvid	502 SGD	Fl 6396.5	
C. SECTIONAL/ROLL UP	Overhead Door	Garage door	FL 674	
D. OTHER				
2. WINDOWS				
A. SINGLE/DOUBLE HUNG	Kinco	M50 SH Alum. Window	Fl. 123	
B. HORIZONTAL SLIDER				
C. CASEMENT				
D. FIXED	Kinco	M50 PC Window	Fl. 125	
E. MULLION	HR	340	FL 5872	
F. SKYLIGHTS				
G. OTHER / GLASS BLOCK	Hy-Lite	Glass Block window	FL 1956.3	
3. PANEL WALL				
A. SIDING				
B. SOFFITS	Kaycan	Aluminum soffits	FL 1146.5	
C. STOREFRONTS				
D. GLASS BLOCK				
F. OTHER				
4. ROOFING PRODUCTS				
A. ASPHALT SHINGLES	Tamko	Heritage 38-R	FL. 7154	
B. NON-STRUCT METAL				
C. ROOFING TILES				
D. SINGLE PLY ROOF				
E. OTHER				
5. STRUCT COMPONENTS				
A. WOOD CONNECTORS				
B. WOOD ANCHORS	Simpson	Truss anchors	1901.17 1901.45	
C. TRUSS PLATES			1901.25 1901.21	
D. INSULATION FORMS				
E. LINTELS	Cenemt Precast	Concrete lintels	FL. 4569	
F. TRUSSES	Thomas E. Miller	engineer	PE 56877	
6. NEW EXTERIOR				
ENVELOPE PRODUCTS				
A.				

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

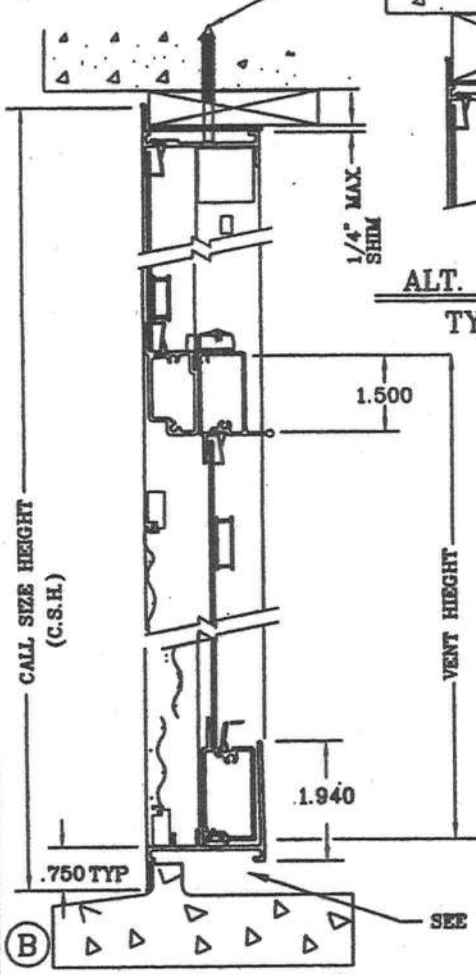
_____

_____

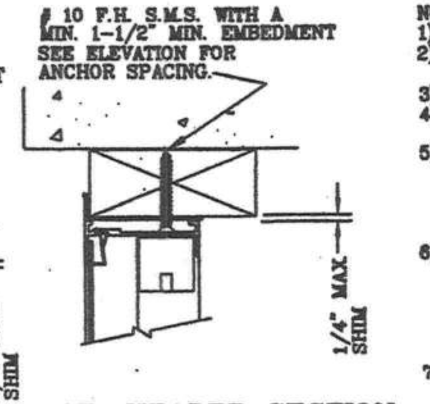
_____ _____

APPLICANT SIGNATURE DATE

WINDOWS, DOORS, AND MULL BARS INFORMATION



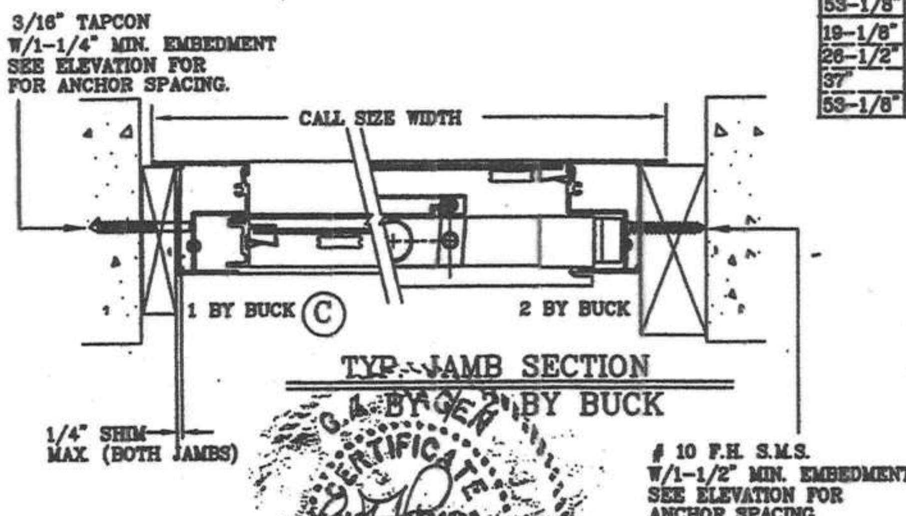
HEADER AND SILL SECTION
TYP. 1 BY BUCK



ALT. HEADER SECTION
TYP. 2 BY BUCK

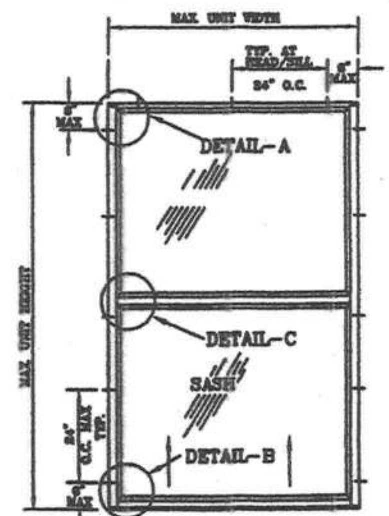
NOTES:
1) SHIM AS REQUIRED, MAX. SHIM STACK 1/4".
2) ALL ALUMINUM EXTRUSIONS ARE ALLOY 6063-T5 OR T6 WITH TYPICAL WALL THICKNESS OF 0.62".
3) USE HIGH QUALITY CAULK BEHIND WINDOW FLANGE.
4) GLASS THICKNESS BASED ON TABLE E1300 GLASS CHARTS, AND MAY VARY DEPENDING ON SIZE.
5) THE RESPONSIBILITY FOR SELECTION OF NORANDEX PRODUCTS TO MEET ANY APPLICABLE LOCAL LAWS, BUILDING CODES, ORDINANCES OR OTHER SAFETY REQUIREMENTS REST SOLELY WITH THE ARCHITECT, BUILDING OWNER OR CONTRACTOR.
6) A PRESSURE TREATED WOODEN BUCK OR MARBLE SILL SHALL BE ADDED UNDER THE PRODUCT TO FULLY SUPPORT UNIT. THIS SUPPORT SHALL BE FIRMLY ATTACHED INTO MASONARY AND SUPPORT THE PRODUCT OVER ITS FULL LENGTH (SUPPLIED BY OTHERS).
7) CONCRETE COMPRESSIVE STRENGTH = 3,000 PSI AT 28 DAYS.

WINDOW DIMENSIONS		FASTENER SCHEDULE	
WIDTH (INCHES)	HEIGHT (INCHES)	NO. ANCHORS HEAD 35 (PSF) AND 45 (PSF)	NO. ANCHORS JAMB 35 (PSF) AND 45 (PSF)
19-1/8"	26"	2	2
26-1/2"		2	2
37"		2	2
53-1/8"		3	2
19-1/8"	38-1/4"	2	3
26-1/2"		2	3
37"		2	3
53-1/8"		3	3
19-1/8"	50-5/8"	2	3
26-1/2"		2	3
37"		2	3
53-1/8"		3	3
19-1/8"	63"	2	3
26-1/2"		2	3
37"		2	3
53-1/8"		3	3
19-1/8"	76-3/4"	2	4
26-1/2"		2	4
37"		2	4
53-1/8"		3	4



TYP. JAMB SECTION
1 BY OR 2 BY BUCK

CHARLES A. PAGEN, P.E.
FL. REG. ENG.
DATE 3/21/02



437 SINGLE HUNG
INSTALLATION DETAIL
AND
FASTENER SCHEDULE

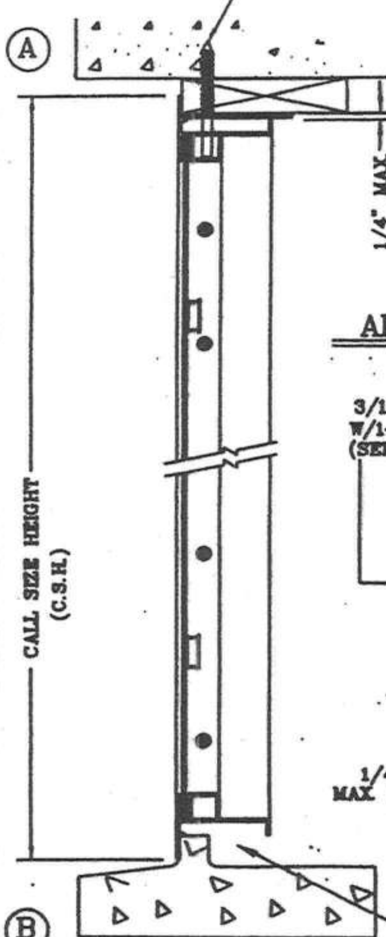
SERIES: 437
ALUMINUM SINGLE HUNG

NORANDEX
4606 30th STREET WEST
BRADENTON, FL. 34207
PHONE: (941) 758-1691

NO.	DATE	REVISIONS DESCRIPTION

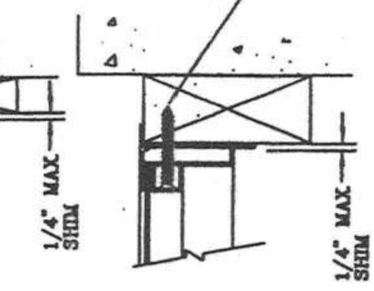
DATE: 12/22/01
SCALE: N.T.S.
DWG. BY: J.R.M.
CHK. BY: RLK
DWG. NO.: FBC-009

3/16" TAPCON WITH A MIN. 1-1/4" MIN. EMBEDMENT SEE ELEVATION FOR ANCHOR SPACING.



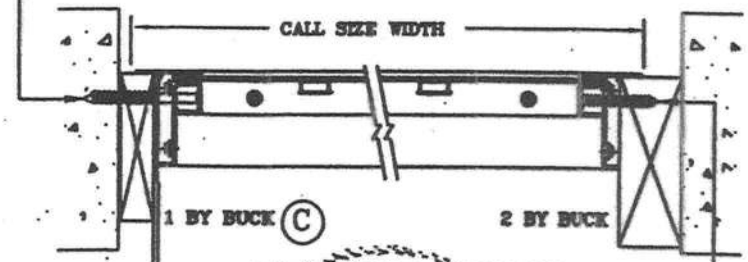
HEADER AND SILL SECTION
TYP. 1 BY BUCK

10 F.H. S.M.S. W/1-1/2" MIN. EMBEDMENT SEE ELEVATION FOR ANCHOR SPACING.



ALT. HEADER SECTION
TYP. 2 BY BUCK

3/16" TAPCON
W/1-1/4" MIN. EMBEDMENT
(SEE ELEVATION FOR ANCHOR SPACING)



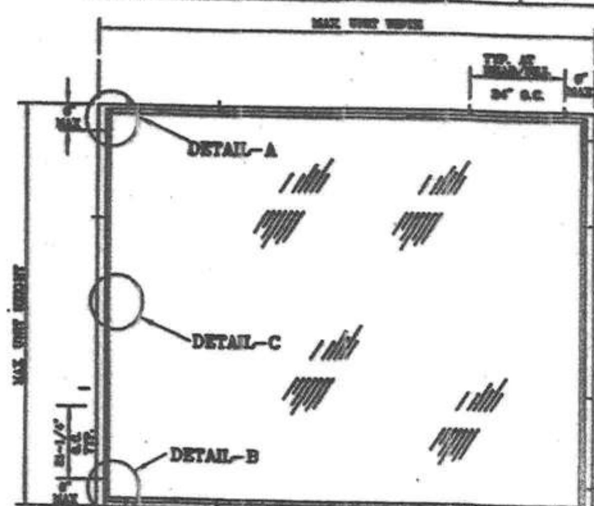
TYP. JAMB SECTION
1 BY / 2 BY BUCK

10 F.H. S.M.S. W/1-1/2" MIN. EMBEDMENT SEE ELEVATION FOR ANCHOR SPACING.

CHARLES A. PAGEN, P.E.
FL. REG. ENG. # 20431
DATE: 12/24/02

NOTES:
1) SHIM AS REQUIRED, MAX. SHIM STACK 1/4".
2) ALL ALUMINUM EXTRUSIONS ARE ALLOY 6063-T5 OR T6 WITH TYPICAL WALL THICKNESS OF 0.62".
3) USE HIGH QUALITY CAULK BEHIND WINDOW FLANGE.
4) GLASS THICKNESS BASED ON TABLE E1300 GLASS CHARTS, AND MAY VARY DEPENDING ON SIZE.
5) THE RESPONSIBILITY FOR SELECTION OF NORANDEX PRODUCTS TO MEET ANY APPLICABLE LOCAL LAWS, BUILDING CODES, ORDINANCES OR OTHER SAFETY REQUIREMENTS REST SOLELY WITH THE ARCHITECT, BUILDING OWNER OR CONTRACTOR.
6) A PRESSURE TREATED WOODEN BUCK OR MARBLE SILL SHALL BE ADDED UNDER THE PRODUCT TO FULLY SUPPORT UNIT. THIS SUPPORT SHALL BE FIRMLY ATTACHED INTO MASONARY AND SUPPORT THE PRODUCT OVER ITS FULL LENGTH (SUPPLIED BY OTHERS).
7) CONCRETE COMPRESSIVE STRENGTH = 3,000 PSI AT 28 DAYS.
8) NOTE * INDICATES THAT EQUAL FASTENERS AT HEAD AND SILL ARE REQUIRED.

WINDOW DIMENSIONS		FASTENER SCHEDULE			
		NO. ANCHORS HEAD/SILL SEE NOTE 8		NO. ANCHORS JAMB	
WIDTH (INCHES)	HEIGHT (INCHES)	35 (PSF)	45-60 (PSF)	35 (PSF)	45-60 (PSF)
19-1/8"	26"	2	2*	2	2
26-1/2"		2	2*	2	2
37"		2	3*	2	2
53-1/8"		3	3*	2	2
19-1/8"	38-1/4"	2	2*	2	3
26-1/2"		2	2*	2	3
37"		2	3*	2	3
53-1/8"		3	4*	2	3
19-1/8"	50-5/8"	2	2*	3	3
26-1/2"		2	2*	3	3
37"		2	3*	3	3
53-1/8"		3	4*	3	3
19-1/8"	63"	2	2*	3	4
26-1/2"		2	2*	3	4
37"		2	3*	3	4
53-1/8"		3	4*	3	4
19-1/8"	76-3/4"	2	2*	3	4
26-1/2"		2	2*	3	4
37"		2	3*	3	4
53-1/8"		3	4*	3	4



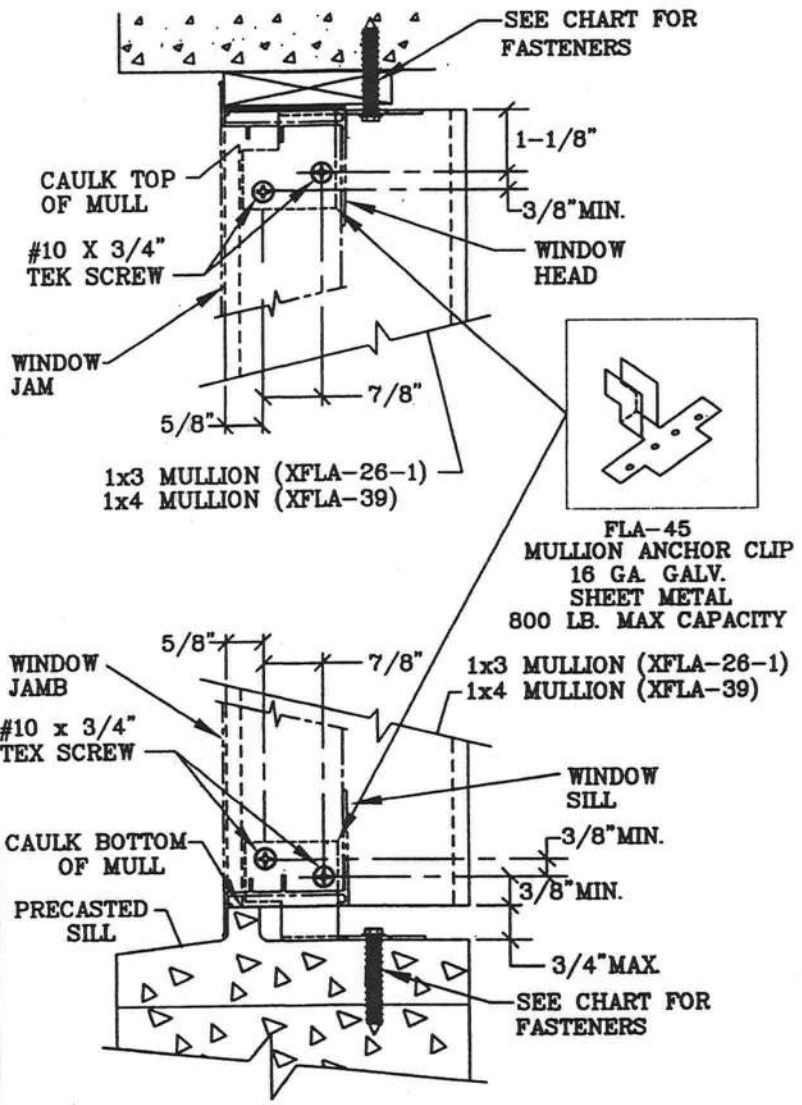
437 FIXED WINDOW INSTALLATION DETAIL AND FASTENER SCHEDULE

SERIES: 437
ALUMINUM FIXED WINDOW

NORANDEX
4605 30th STREET WEST
BRADENTON, FL. 34207
PHONE: (941) 755-1631

NO.	DATE	REVISIONS DESCRIPTION

DATE: 12/22/01
SCALE: N.T.S.
DWG. BY: J.R.M.
CHK. BY: RLK
DWG. NO.: FBD-021



VERTICAL MULLION SCHEDULE

SINGLE UNIT WINDOW WIDTH INCH	SINGLE UNIT WINDOW HEIGHT INCH	TYPE OF MULLION DESIGN PRESSURE 35 PSF	TYPE OF CLIP FLA-45	NUMBER AND TYPE OF FASTENERS
19-1/8"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
26-1/2"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
37"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 4.0	OK	(4) 1/4ø" x 1-1/2" TAPCONS
53-1/8"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 4.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS

G.A. PAGEN CERTIFICATE OF AUTHORIZATION
CHARLES A. PAGEN, P.E.
FL. REG. ENG. # 49121
DATE: 3/21/02

NOTES:
1) ALL ALUMINUM EXTRUSIONS ARE ALLOY 6063 T6, OR 6063 T5.
2) WHEN THERE IS ONE TAPCON (1/4ø" X 1-1/2") ON EACH ANGLE LEG, THE TAPCON SHALL BE PLACED ON MULLION CLIP CENTERLINE.
3) CONCRETE COMPRESSIVE STRENGTH = 3,000 PSI AT 28 DAYS.

VERTICAL MULLION
FLA-45 ANCHOR CLIP
INSTALLATION DETAIL AND
FASTENER SCHEDULE

SERIES: MULLION
ALUMINUM SINGLE HUNG

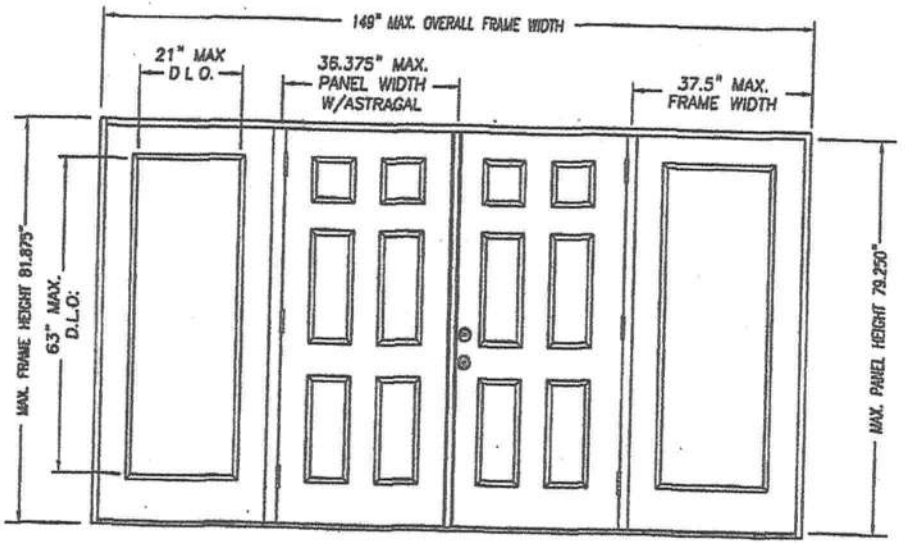
NORANDEX
4606 30th STREET WEST
BRADENTON, FL. 34207
PHONE: (941) 755-1591

NO.	DATE	REVISIONS DESCRIPTION

3/11/02
SCALE: N.T.S.
DWG. BY: RLF
CHK. BY: RLF
DWG. NO.: FSC-028

Masonite

SIDE-HINGED METAL-EDGE STEEL DOOR UNIT
6'-8" DOUBLE DOOR WITH / WITHOUT SIDELITES



DOUBLE INSWING UNIT W/SIDELITES

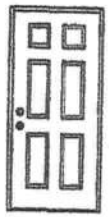
GENERAL NOTES

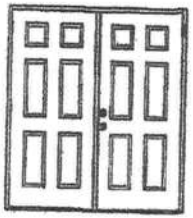
1. EVALUATED FOR USE IN LOCATIONS ADHERING TO THE FLORIDA BUILDING CODE AND WHERE PRESSURE REQUIREMENTS AS DETERMINED BY ASCE 7, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, DOES NOT EXCEED THE DESIGN PRESSURES LISTED.
2. HURRICANE PROTECTIVE SYSTEM (SHUTTERS) IS NOT REQUIRED ON OPAQUE PANELS, BUT IS REQUIRED ON GLAZED SIDELITES
3. POLYURETHANE CORE FLAME SPREAD INDEX OF 50 AND SMOKE DEVELOPED INDEX OF 60 PER ASTM E84.
4. PLASTICS TESTING OF LITE FRAME MATERIAL:

TEST DESCRIPTION	DESIGNATION	RESULT
SELF IGNITION TEMP	ASTM D1929	680 °F > 650 °F
RATE OF BURNING	ASTM D635	1.10 IN/MIN
SMOKE DENSITY	ASTM D2843	69.6%
TENSILE STRENGTH*	ASTM D638	-7.48% DIFF

* COMPARATIVE TENSILE STRENGTH AFTER WEATHERING 4500 HOURS XENON ARC METHOD 1

Addendum to NAMI
Certification No.: NT006115
Reviewed By:
Date Reviewed: 2/12/05


SINGLE DOOR UNIT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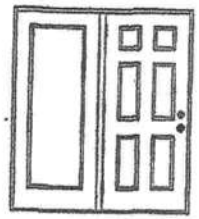
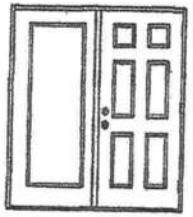

SINGLE DOOR UNIT WITH SIDELITE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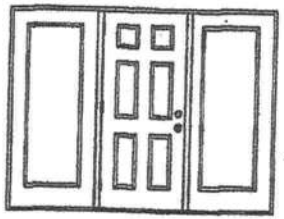

SINGLE DOOR UNIT W/SIDELITES

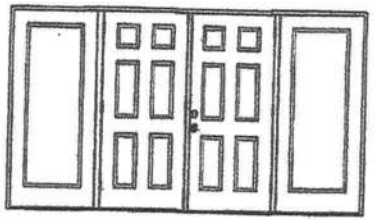

DOUBLE DOOR UNIT W/SIDELITES

TABLE OF CONTENTS

CONFIG	MAX WIDTH	DESIGN PRESSURE RATING		WHERE WATER INFILTRATION PERFORMANCE IS REQUIRED TO BE 15% OF DESIGN PRESSURE	
		INSWING	OUTSWING	INSWING	OUTSWING
X	37.5"	+76.0 / -76.0	+76.0 / -76.0	+19.0 / -19.0	+55.0 / -55.0
XX	74"	+55.0 / -55.0	+55.0 / -55.0	+19.0 / -19.0	+55.0 / -55.0
OX or XO	75"	+55.0 / -55.0	+55.0 / -55.0	+19.0 / -19.0	+55.0 / -55.0
OXO	112.5"	+55.0 / -55.0	+55.0 / -55.0	+19.0 / -19.0	+55.0 / -55.0
OXXO	149"	+55.0 / -55.0	+55.0 / -55.0	+19.0 / -19.0	+55.0 / -55.0

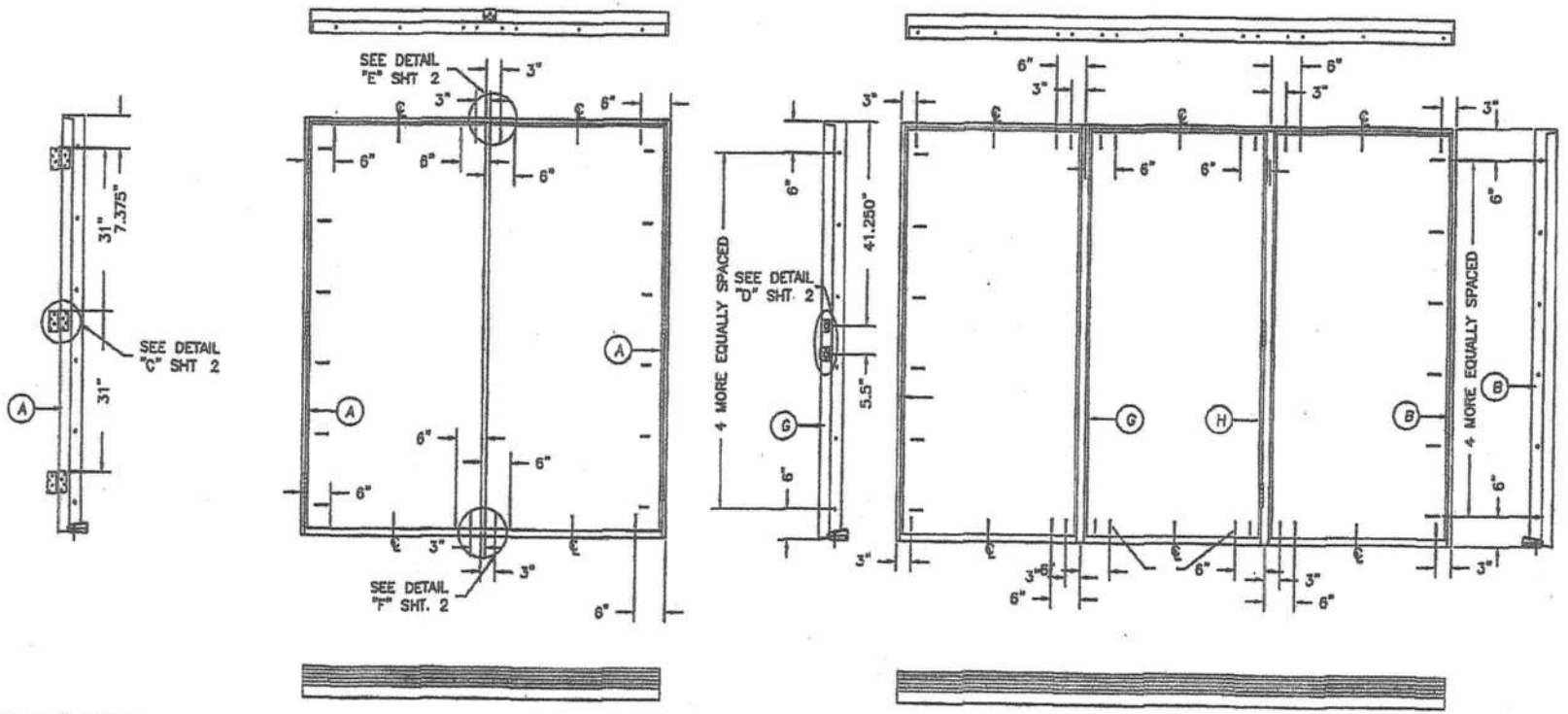
MASONITE INTERNATIONAL CORP.
7300 REAMES RD.
CHARLOTTE, NC 28216

PRODUCT: EXTERIOR DOOR PRODUCT DOUBLE 6'8" OPAQUE METAL-EDGE STEEL DOOR

PART OR ASSEMBLY: TYPICAL ELEVATIONS & GENERAL NOTES

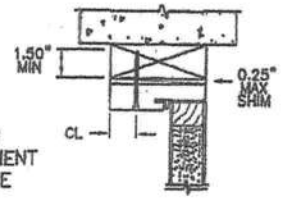
NO.	DATE	REVISIONS	BY

DATE: 7/25/05
SCALE: N.T.S.
DWG. BY: SWS
CHK. BY:
DRAWING NO.: DWG-MA-FL0132-05
SHEET 1 of 3



ATTACHMENT DETAIL

1. ANCHOR ANALYSIS FOR LOADING CONDITIONS PREPARED, SIGNED AND SEALED BY HAROLD E. RUPP, PE (FLORIDA #15935) WITH THE LOWEST (LEAST) FASTENER RATING FROM THE DIFFERENT FASTENERS BEING CONSIDERED FOR USE. JAMB, HEAD, AND THRESHOLD FASTENERS ANALYZED FOR THIS UNIT INCLUDE #10 WOOD SCREWS OR 3/16" TAPCONS. A PHYSICAL SHIM MUST BE PLACED IN SHIM SPACE AT EACH ANCHOR LOCATION.
2. THE WOOD SCREW SINGLE SHEAR DESIGN VALUES COME FROM ANSI/AF&PA NDA FOR SOUTHERN PINE LUMBER AND ACHEIVEMENT OF 1-1/2" MINIMUM EMBEDMENT. THE TAPCON MUST ACHIEVE MINIMUM EMBEDMENT OF 1-1/4".
3. WOOD BUCKS BY OTHERS MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO STRUCTURE.
4. MINIMUM DESIGN VALUE STRENGTH OF ANCHORS 171 LBS.



TYPICAL ANCHOR INSTALLATION

HARDWARE SCHEDULE

1.	KWIKSET OR SCHLEGE ANSI/BHMA GRADE 3 OR BETTER CYLINDRICAL AND DEADLOCK HARDWARE TO BE INSTALLED AT 5-1/2" CENTERLINE.
2.	4" X 4" FULL MORTISE BUTT HINGES

Addendum to NAMI
Certification No.: NI006115
Reviewed By:
Date Reviewed: 8/12/05

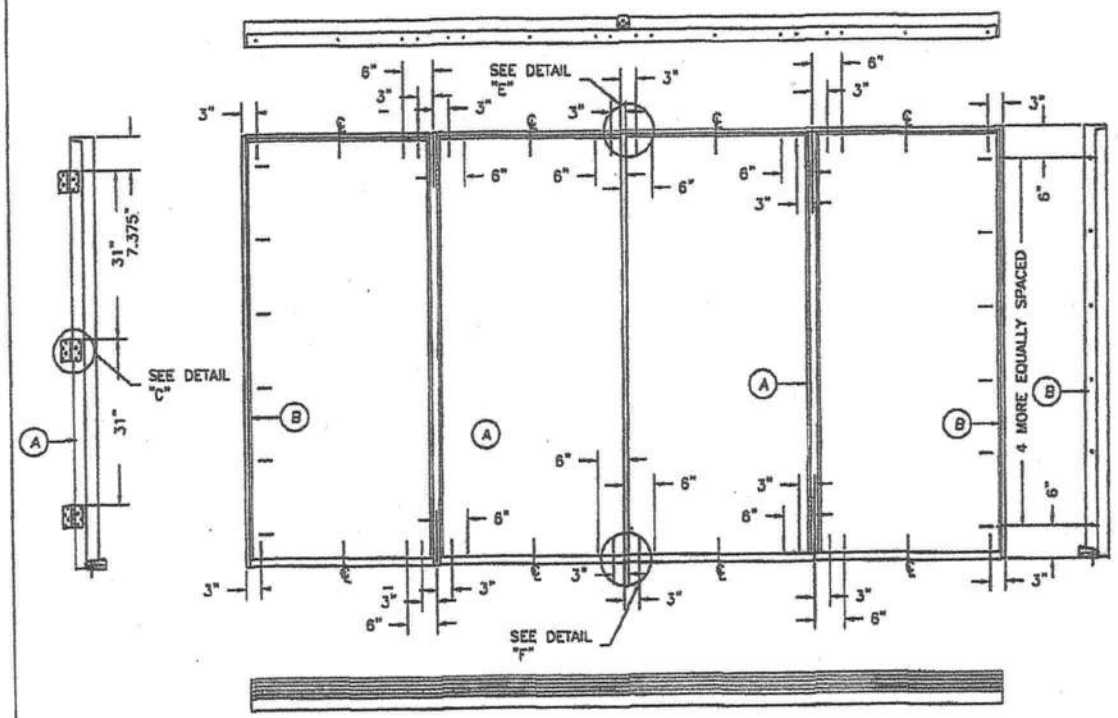
MASONITE INTERNATIONAL CORP.
7300 REAMES RD.
CHARLOTTE, NC 28216

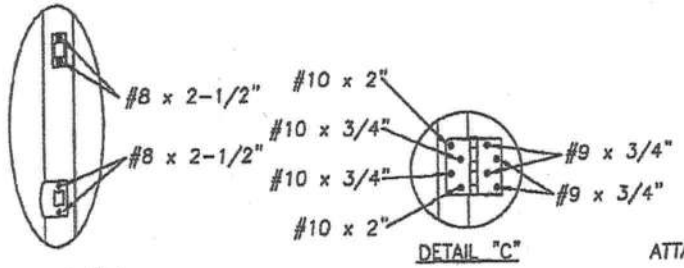
PRODUCT: "EXTERIOR DOOR PRODUCT" 6'-8" METAL-EDGE STEEL DAVINCI DOUBLE DOOR UNIT

PART OR ASSEMBLY: ANCHORING LOCATIONS & DETAILS

NO.	DATE	BY
REVISIONS		

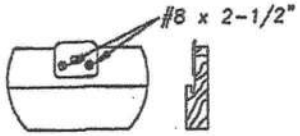
DATE: 7/25/05
SCALE: N.T.S.
DWG. BY: SWS
CHK. BY:
DRAWING NO.: DWG-MA-FL0132-05
SHEET 3 OF 3



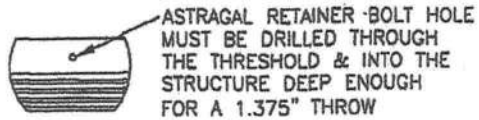


DETAIL "D"

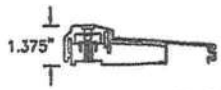
DETAIL "C"



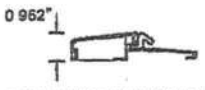
DETAIL "E" ASTRAGAL
ATTACH ASTRAGAL RETAINER BOLT STRIKE PLATE TO FRAME AS SHOWN.



DETAIL "F" ASTRAGAL

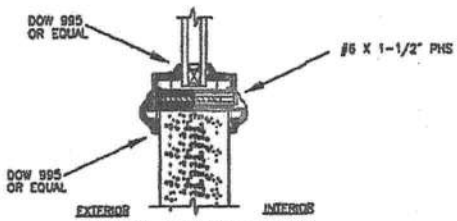


INSWING THRESHOLD



OUTSWING THRESHOLD

Addendum to NAMI
Certification No.: NT006115
Reviewed By:
Date Reviewed: 8/12/05



TYPICAL GLAZING DETAIL

MASONITE INTERNATIONAL CORP.
7300 REAMES RD.
CHARLOTTE, NC 28216

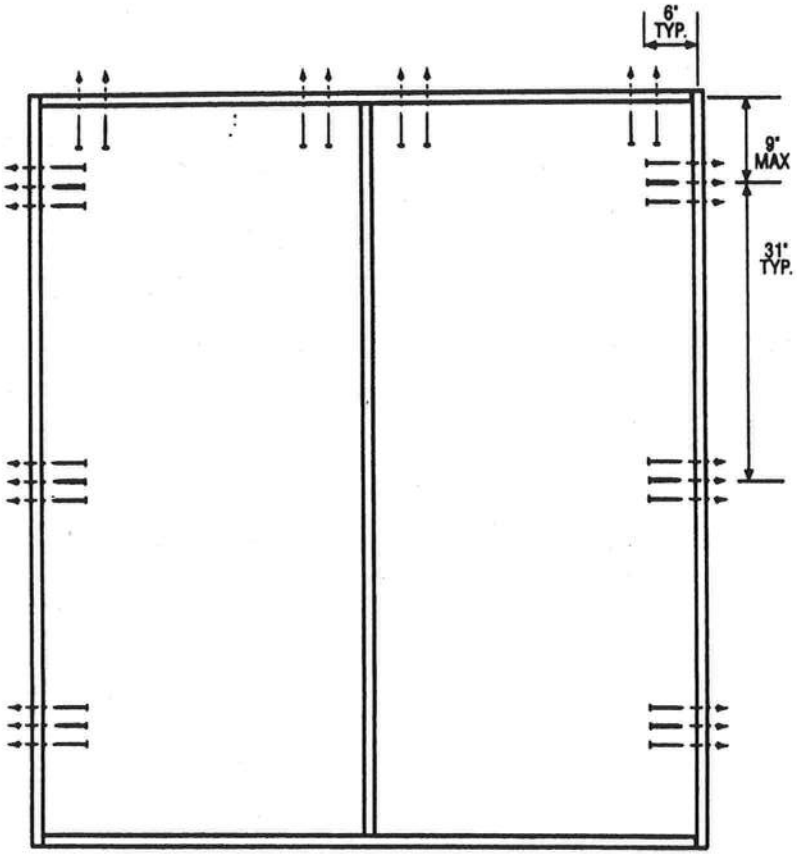
PRODUCT: "EXTERIOR DOOR PRODUCT" DOUBLE 6'-8" CAMBER METAL-EDGE STEEL DOOR

PART OR ASSEMBLY: ANCHORING LOCATIONS & DETAILS

NO.	DATE	REVISIONS	BY

DATE: 7/25/05
SCALE: N.T.S.
DWG. BY: SWS
CHK. BY:
DRAWING NO.: DWC-MA-FL0132-05
SHEET 2 OF 3

DOUBLE DOOR



Minimum Fastener Count

- 6 per vertical framing member for 7'0" heights and smaller
- 8 per vertical framing member for heights greater than 7'0"
- 8 per horizontal framing member

Hinge and strike plates require two 2-1/2" long screws per location.

Rough Opening (RO)

- Width of door unit plus 1/2"
- Height of door unit plus 1/4"

Test Data Review Certificate #3026447A; #3026447B; #3026447C and COP/Test Report Validation Matrix #3026447A-001, 002, 003, 004; #3026447B-001, 002, 003, 004; #3026447C-001, 002, 003, 004 provides additional information - available from the ITS/WH website (www.etsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Latching Hardware:

- Compliance requires that GRADE 3 or better (ANSI/BHMA A156.2) cylindrical and deadlock hardware be installed.
- **UNITS COVERED BY COP DOCUMENT 6247*, 6267*, 3242*, 3247, 3262* or 3267**
  Compliance requires that 8" GRADE 1 (ANSI/BHMA A156.16) surface bolts be installed on latch side of active door panel – (1) at top and (1) at bottom.

*Based on required Design Pressure – see COP sheet for details.

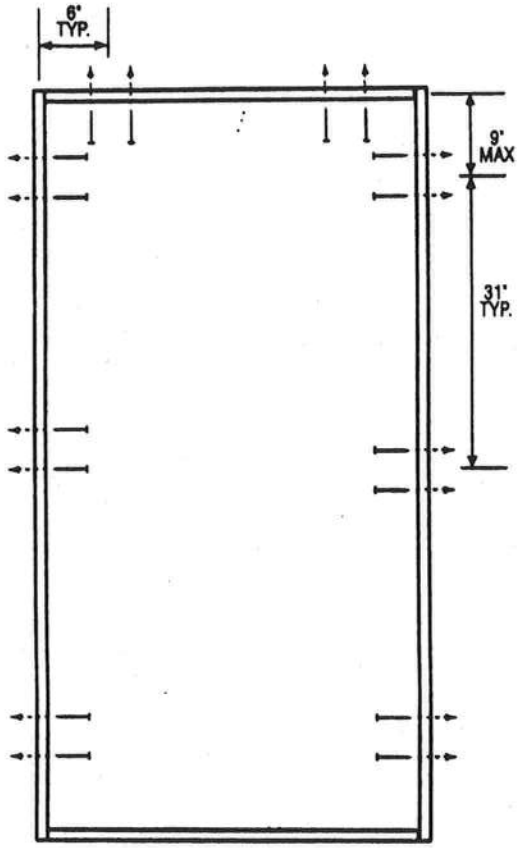
Notes:

1. Anchor calculations have been carried out with the fastener rating from the different fasteners being considered for use. Jamb and head fasteners analyzed for this unit include #8 wood screws and 10d common nails. Threshold fasteners analyzed for this unit include Liquid Nails Builders Choice 490 (or equal structural adhesive).
2. The wood screw and common nail single shear design values come from ANSI/AF & PA NDS for southern pine lumber with a side member thickness of 1-1/4" and achievement of minimum embedment of 1-1/4".
3. Wood bucks by others, must be anchored properly to transfer loads to the structure.

March 10, 2003

Masonite

SINGLE DOOR



Minimum Fastener Count

- 6 per vertical framing member for 7'0" height and smaller
- 8 per vertical framing member for heights greater than 7'0"
- 4 per horizontal framing member

Hinge and strike plates require two 2-1/2" long screws per location.

Rough Opening (RO)

- Width of door unit plus 1/2"
- Height of door unit plus 1/4"

Warnock Hersey Test Data Review Certificate #3026447A; #3026447B; #3026447C and COP/Test Report Validation Matrix #3026447A-001, 002, 003, 004; #3026447B-001, 002, 003, 004; #3026447C-001, 002, 003, 004 provides additional information - available from the ITS/WH website (www.etsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Latching Hardware:

- Compliance requires that GRADE 3 or better (ANSI/BHMA A156.2) cylindrical and deadlock hardware be installed.
- **UNITS COVERED BY COP DOCUMENT 6248*, 6268*, 3241*, 3248, 3261* or 3268**
  Compliance requires that 8" GRADE 1 (ANSI/BHMA A156.16) surface bolts be installed on latch side of active door panel – (1) at top and (1) at bottom.

*Based on required Design Pressure – see COP sheet for details.

Notes:

1. Anchor calculations have been carried out with the fastener rating from the different fasteners being considered for use. Jamb and head fasteners analyzed for this unit include 10d common nails. Threshold fasteners analyzed for this unit include Liquid Nails Builders Choice 490 (or equal structural adhesive).
2. The common nail single shear design values come from ANSI/AF & PA NDS for southern pine lumber with a side member thickness of 1-1/4" and achievement of minimum embedment of 1-1/4".
3. Wood bucks by others, must be anchored properly to transfer loads to the structure.

March 10, 2003

Masonite

NOTICE OF PRODUCT CERTIFICATION

CERTIFICATION NO: NI006592
DATE: 06/16/2006
CERTIFICATION PROGRAM: Structural
COMPANY: Atrium
CODE: A-447-1

The "Notice of Product Certification" is valid only when Administrator's Seal is applied to the upper left hand portion of this form and a certification label is applied to the product. This certification seal represents product conformity to the applicable specification and that all certification criteria has been satisfied.

The product described below is approved for listing in the Directory of Certified Products at www.NAMICertification.com . Please review, and advise NAMI immediately if data, as shown, requires corrections.

COMPANY NAME AND ADDRESS	PRODUCT DESCRIPTION
Atrium Windows & Doors-Florida 3600 Port Jacksonville Parkway Jacksonville, FL 32226	"Mark 40/50 Premium" Aluminum Single Hung Standard Flange Frame Window Configuration: OX Glazing: O-3/16"Annealed Glass/X-5/32" Annealed Glass STP PSF Frame: W-4'5" Sash: W-4'2" Pos+60.0 H-8'1" H-3'3" Neg-67.5

SPECIFICATION	PRODUCT RATING
AAMA/NWWDA 101/I.S.2-97/ AAMA 1302.5-76 Glass Complies to ASTM E1300-02	H-LC35 FER-Passed

Product Tested By: Certified Testing Laboratories
Report No: CTLA-1049W (Structural/FER)
Expiration Date: March 31, 2007

Administrator's Signature: _____

NATIONAL ACCREDITATION AND MANAGEMENT INSTITUTE, INC.
11870 Merchants Walk Suite 202
Newport News, VA 23606
TEL: (757) 594-8658
FAX: (757) 594-8659

GARAGE DOORS INFORMATION

TECHNICAL DATA SHEET #155o

GARAGE DOOR WIND LOAD GUIDE
BASED ON THE 2001 FLORIDA BUILDING CODE (ASCE 7-98) EXPOSURE B

Mean Roof Height	Door Size	90 MPH	100 MPH	110 MPH	120 MPH	130 MPH	140 MPH	150 MPH
Less than 30 Feet	Single 9'x 7'	-14.5	-17.9	-21.6	-25.8	-30.2	-35.1	-40.2
	Double 16'x 7'	-13.7	-16.9	-20.4	-24.3	-28.5	-33.1	-38.0

Design pressures above are in Pounds per Square Foot (PSF)

Testing, if required by local authority, may be performed to ASTM E-330, or preferably DASMA 108.
Impact and cyclic wind pressure testing on glazed doors may be performed to ASTM E-1886, or preferably DASMA 115.

Test conditions:

1. Garage doors shall be tested to both negative and positive pressures. Doors shall be installed simulating normal conditions (i.e., top roller in track radius, other rollers in tracks, all hinges in place, reinforcing hardware in place)
2. Total test duration for each test direction shall be as follows:
   A. Total of 3600/V seconds, at design pressure; where V is fastest-mile design wind speed.
   B. Pressure equal to 1.5 times the design pressure shall be included for 10 seconds during each test.

The door successfully passes the test if it remains safely operable through the full travel up and down, and recovers at least 75% of its maximum deflection. Standard engineering principles may be used to interpolate or extrapolate test results to door sizes not specifically tested. Doors shall include a manufacturer's label certifying compliance to specific load.

This guide is provided for reference purposes only. In all cases the local building authority is the sole and final determinor of the structural and safety requirements, and suitability of the garage door.

Notes:

- Basic Wind Speeds above are three second peak-gust values
- Negative pressures assume door has 2 foot of width in building's end zone.
- Garage doors evaluated as attached to enclosed buildings with a Use Factor of 1.0
- Doors larger than 100 square feet should use the 16 x 7 loads. Doors less than 100 square feet may be interpolated.
- Garage doors evaluated as Components and Cladding
- Installation details vary. Consult manufacturer's instructions.

For more information, contact DASMA, 1300 Sumner Avenue, Cleveland OH 44115-2851
Phone (216) 241-7333 E-mail: dasma@dasma.com Fax (216) 241-0105 URL: www.dasma.com

This Technical Data Sheet was prepared by the members of DASMA's Commercial & Residential Garage Door Division Technical Committee. DASMA is a trade association comprising manufacturers of rolling doors, fire doors, grilles, counter shutters, sheet doors, and related products; upward-acting residential and commercial garage doors; operating devices for garage doors and gates, sensing devices, and electronic remote controls for garage doors and gate operators; as well as companies that manufacture or sell either raw materials or significant components used in the manufacture and installation of the Active Members' products.

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVAL
–	RFP PER DI 10283	8/10/98	DF
A	REV PER DI 10322	9/8/98	DF
B	REV PER DI 10880	10/18/00	RHO

▷ NOTES

1. ALL THE LOAD FROM THE DOOR IS TRANSFERRED TO THE TRACK AND THEN FROM THE TRACK TO THE VERTICAL JAMBS (SPF STUD GRADE OR BETTER). NO LOAD FROM THE DOOR IS TRANSFERRED TO THE HORIZONTAL (TOP) JAMB WITH STANDARD WINDLOAD SYSTEM. WITH VERTICAL WINDLOAD POST, PART OF THE FORCE IS TRANSFERRED TO THE HORIZONTAL GARAGE DOOR HEADER.

2. EACH VERTICAL JAMB SEES A MAXIMUM DESIGN LOAD OF +2989 LB & -2989 LB AND A MAXIMUM TEST LOAD OF +4480 LB & -4480 LB. THE HORIZONTAL GARAGE DOOR HEADER SEES A MAX TEST LOAD OF 1200# FOR SINGLE POST, AND MAX COMBINED LOAD OF 2970# FOR MULTIPLE POSTS.

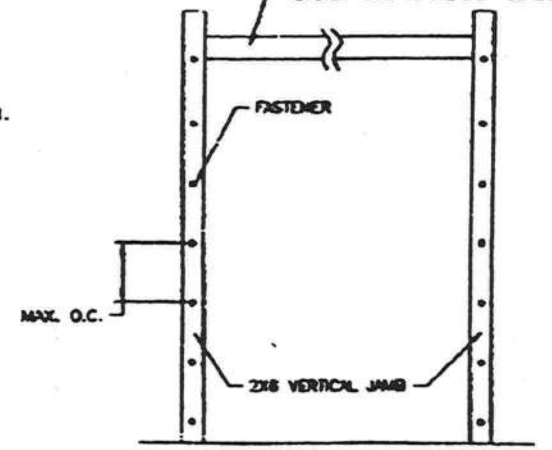
3. ALL JAMB FASTENERS MAY BE (BUT NOT REQUIRED) COUNTERSUNK TO PROVIDE A FLUSH MOUNTING SURFACE.

WOOD FRAME BUILDINGS

STUD WALLS OF DOOR OPENING SHALL BE FRAMED SOLID BY NOT LESS THAN 2 FULL LENGTH STUDS AND 2 HEADERSTUDS USING SPF STUD GRADE OR BETTER WOOD.
STUD WALLS TO BE CONTINUOUS FROM FOOTING TO TIE BEAMS AND IN ACCORDANCE WITH SFBC SECTION 2905.1.
INSTALLATION IN ACCORDANCE WITH DWG 409783 IS AN ACCEPTABLE ALTERNATIVE.

BLOCK WALL OR CONCRETE

2X6 MIN. WOOD JAMB SHALL BE ANCHORED TO GROUT REINFORCED BLOCK WALL OR CONCRETE COLUMN. BLOCK WALL CELLS SHALL BE FILLED WITH CONCRETE AND REINFORCED WITH #5 BAR EXTENDING INTO THE FOOTING AND INTO THE BEAMS. (STRENGTH IS ASSUMED TO BE 2500 PSI). ALL BARS SHALL BE CONTINUOUS FROM THE TIE BEAMS TO FOOTING PER BLOCK WALL OR CONCRETE COLUMN. BLOCK WALLS AND CONCRETE COLUMNS TO BE DESIGNED BY BUILDING PROFESSIONAL OF RECORD AND IN ACCORDANCE WITH SFBC SECTION 2704.2.



2X6 JAMB TO SUPPORTING STRUCTURE ATTACHMENT

(NOT TO BE USED FOR ATTACHMENT OF TRACK BRACKETS TO 2X6 VERTICAL JAMBS OR SUPPORTING STRUCTURE)

BUILDING TYPE	FASTENER TYPE	MIN. NO. OF FASTENERS PER VERTICAL JAMB 7' HIGH	MIN. NO. OF FASTENERS PER VERTICAL JAMB 8' HIGH	MAXIMUM ON CENTER DISTANCE BETWEEN FASTENERS	STEEL WASHERS REQUIRED?
WOOD FRAME (SPF)	5/16" X 3" LAG SCREW (ASTM A307, GRADE A), 1-5/8" MIN. EMBED.	7	8	16"	YES
C-90 BLOCK (2,500 PSI GROUT)	1/4" x 4" ITW TAPCON CONCRETE ANCHOR, 1-3/4" MIN. EMBED.*	7	8	16"	YES
C-90 BLOCK (2,500 PSI GROUT)	3/8" X 4" RAWL LOK/BOLT ANCHOR BOLT, 1-5/8" MIN. EMBED.*	8	7	16"	NO
CONCRETE COLUMN (2,500 PSI)	3/8" X 4" RAWL LOK/BOLT ANCHOR BOLT, 1-5/8" MIN. EMBED.*	6	7	16"	NO

* - TAPCONS/ANCHOR BOLTS CAN BE INSTALLED DIRECTLY THROUGH TRACK BRACKETS/ANGLE IN LIEU OF 5/16" X 1-5/8" LAG SCREWS. RAWL LOK/BOLT SHALL BE TORQUED AS SPECIFIED BY THE RAWL DRILLING AND ANCHORING SYSTEMS DESIGN MANUAL.

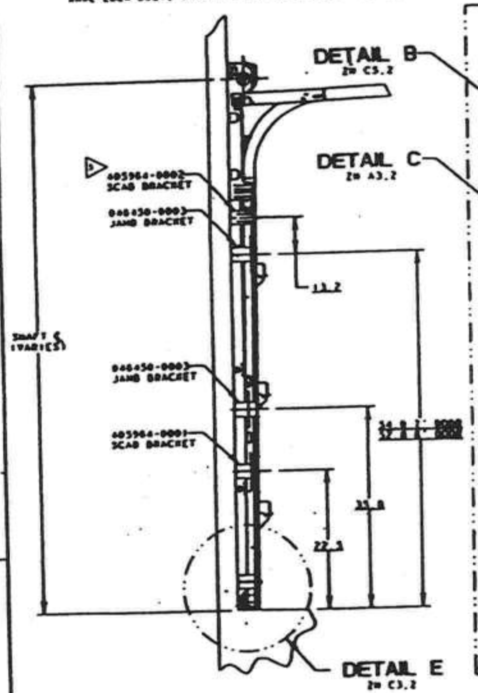
APPROVED

MATERIAL: N/A	DRAWN BY: G. FINEMAN	8/12/98	RESIDENTIAL JAMB DETAIL
FINISH: N/A	CHECKED BY: PE VESSELS	8/19/98	DRAWING NUMBER: D-409431
	APPROVED BY: DAVID FAW	8/19/98	SCALE: FULL — SHEET 1 OF 1

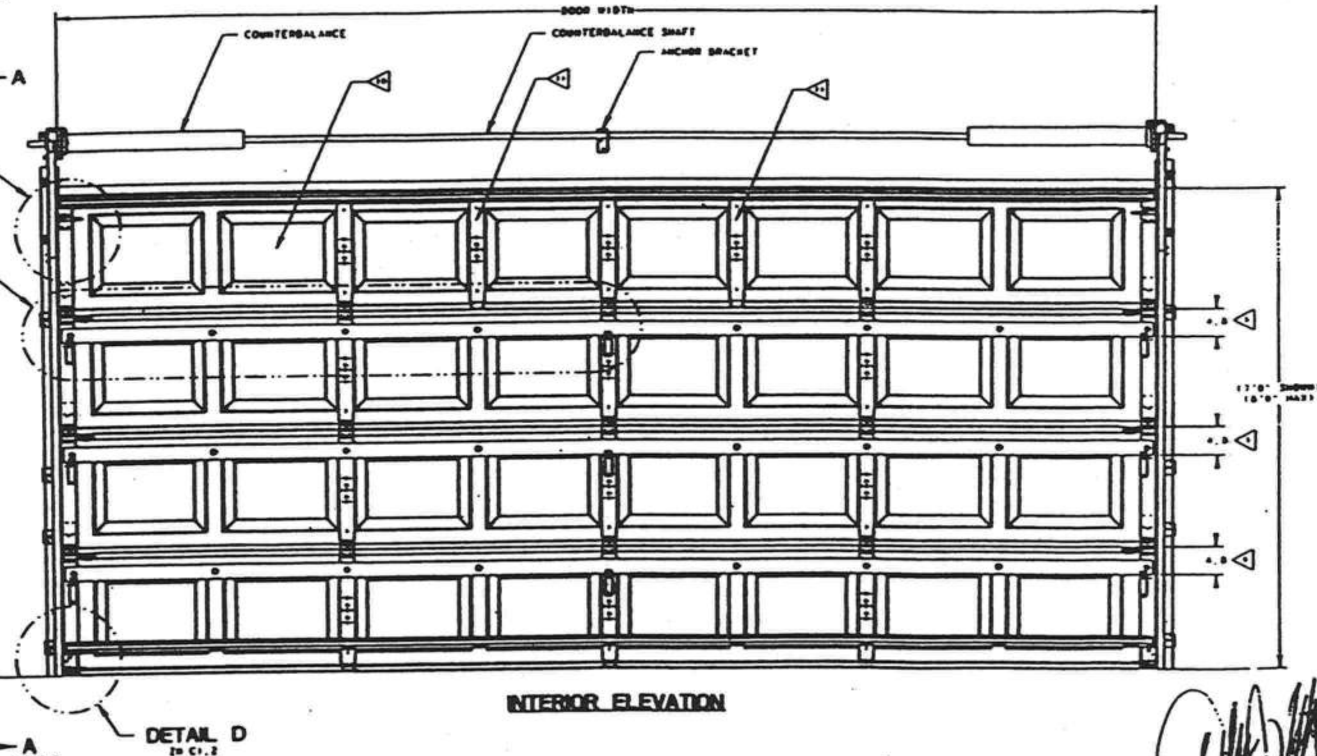
NOTES:
1. TESTED IN ACCORDANCE WITH DASMA 108.
2. FOUR SECTION 7' TALL DOOR SHOWN. 8' DOORS HAVE 5 SECTIONS. SECTION HEIGHTS OF 20.00, 19.00 AND 16.75 ARE AVAILABLE AND MAY BE USED IN COMBINATION TO ACHIEVE VARIOUS DOOR HEIGHTS.
3. EMBOSSMENT PATTERN OF 14.5 X 20.4 SHOWN. ALTERNATE PATTERNS OF 12.5 X 43.4 AND 12.5 X 20.4 MAY BE USED.
4. ARMORTITE/REVOLUTION COUNTERBALANCE SHOWN. TORSION AND EXTENSION COUNTERBALANCE SYSTEMS AVAILABLE. 405964-0002 REQUIRED AT TRACK INTERFACE ON TORSION AND EXTENSION SYSTEMS.
5. USE THIS BRACKET 405964-0002 ON 8' HIGH DOORS ONLY.
6. LOCATE 409517 CHANNELS AS SHOWN. VERTICAL PLACEMENT CAN VARY PLUS/MINUS 3 INCHES.
7. ON THE MIDDLE CENTER STILE THERE IS NO TOOL CLEARANCE HOLE FOR THE UPPER 005911-0001 SCREW. INSTALL FROM BELOW.
8. USE 005911-0001 AB POINT SCREWS FOR ALL COMPONENT INSTALLATION UNLESS OTHERWISE NOTED.
9. JAMB DETAIL TO BE IN ACCORDANCE WITH DRAWING 409703. JAMB/SCAB BRACKET ATTACHING HARDWARE SHALL BE AS FOLLOWS: 005576-0001 SCREW, LAG 5/16 X 1-3/4 - WOOD JAMB; BAHL LOCK BOLT, 5/16 X 1-1/2 EMBEDMENT - CONCRETE BLOCK
10. WINDOW INSTALLATION ALLOWED. WINDOWS MUST BE INSTALLED IN TOP SECTION.
11. EXTRA CENTER STILES ARE NOT REQUIRED ON DOORS WITHOUT A WINDOW SECTION.
12. USE 18 GAUGE CHANNEL

REVISIONS				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	-	REL FOR PRE-PRODUCTION	[illegible]	[illegible]
[illegible]	A	REL FOR PRODUCTION	[illegible]	[illegible]

OHD/GENIE DOOR EQUIVALENCY CHART		
OHD DOOR SERIES No.	GENIE DOOR SERIES No.	PAN STEEL THICKNESS
SERIES 100	SERIES GD5300	24 GA
SERIES 109	SERIES GD5300	24 GA
SERIES 201	SERIES GD5200	25 GA
SERIES 200	SERIES GD5500	25 GA



STD TRACK DETAIL FOR 16' WIDE DOOR



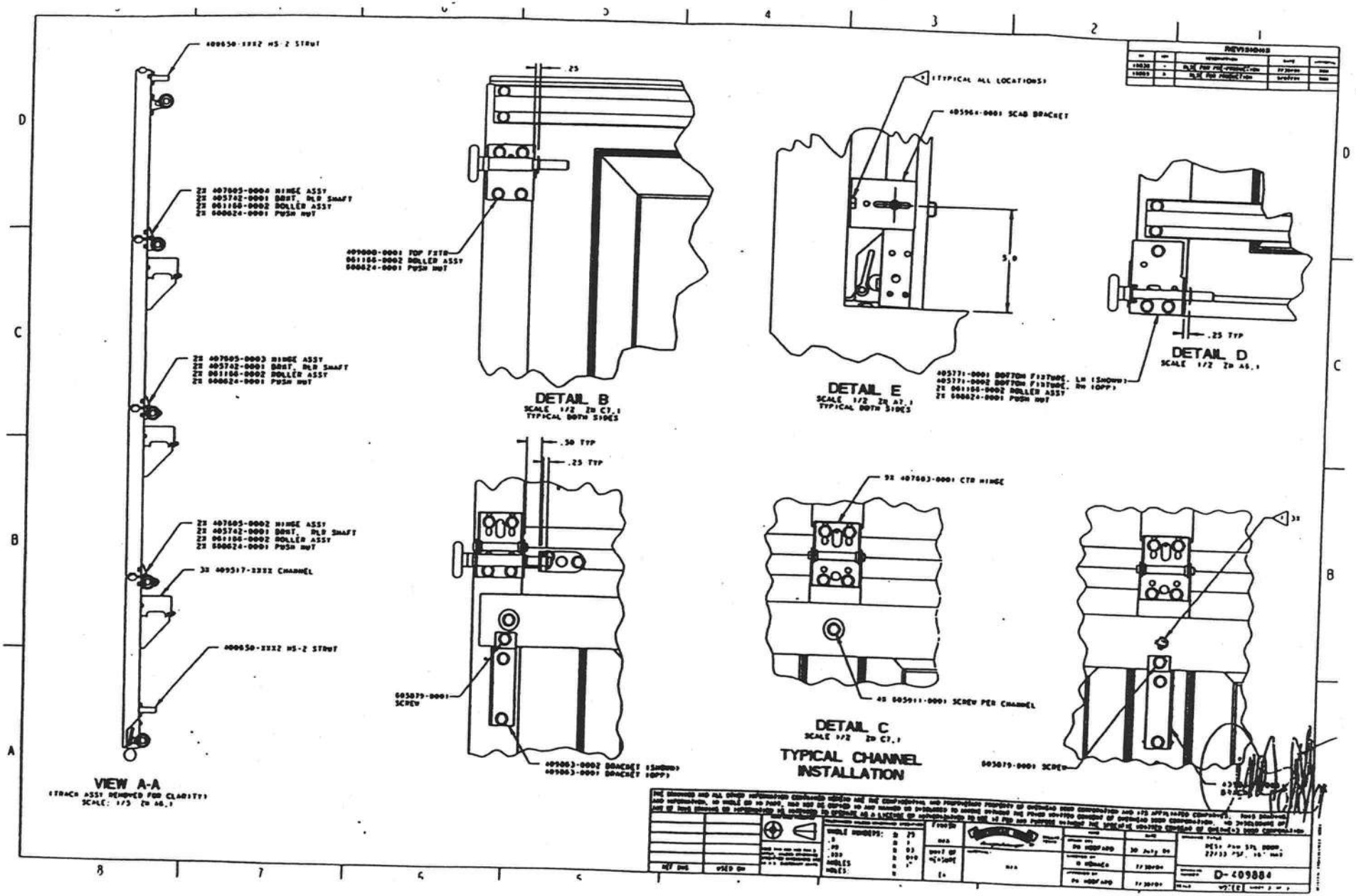
INTERIOR ELEVATION

DOOR WIDTH	CENTER STILE	END STILE	OLD SHAFT BRACKET	STRUTS/SECT	ROLLER	VERT TRK GA	JAMB LOAD (LBF/FT-HFT)
16'	7	SINGLE	YES	[illegible]	STL [illegible]	[illegible]	[illegible]

THE DRAWINGS AND ALL OTHER INFORMATION CONTAINED HEREIN ARE THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF OVERHEAD DOOR CORPORATION AND ITS AFFILIATED COMPANIES. [illegible]

DESC: PAN STL DOOR, 22/33 PSF, 16' [illegible]

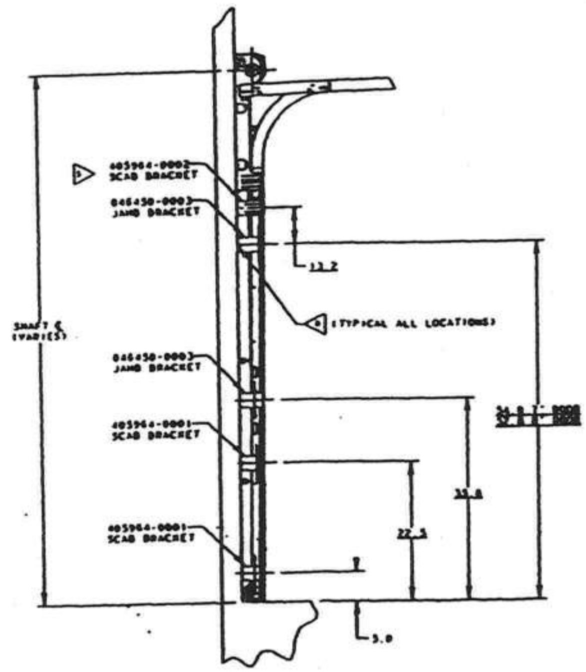
D-40988C


VIEW A-A
DETAIL B
DETAIL C
TYPICAL CHANNEL INSTALLATION
DETAIL D
DETAIL E
D-409884

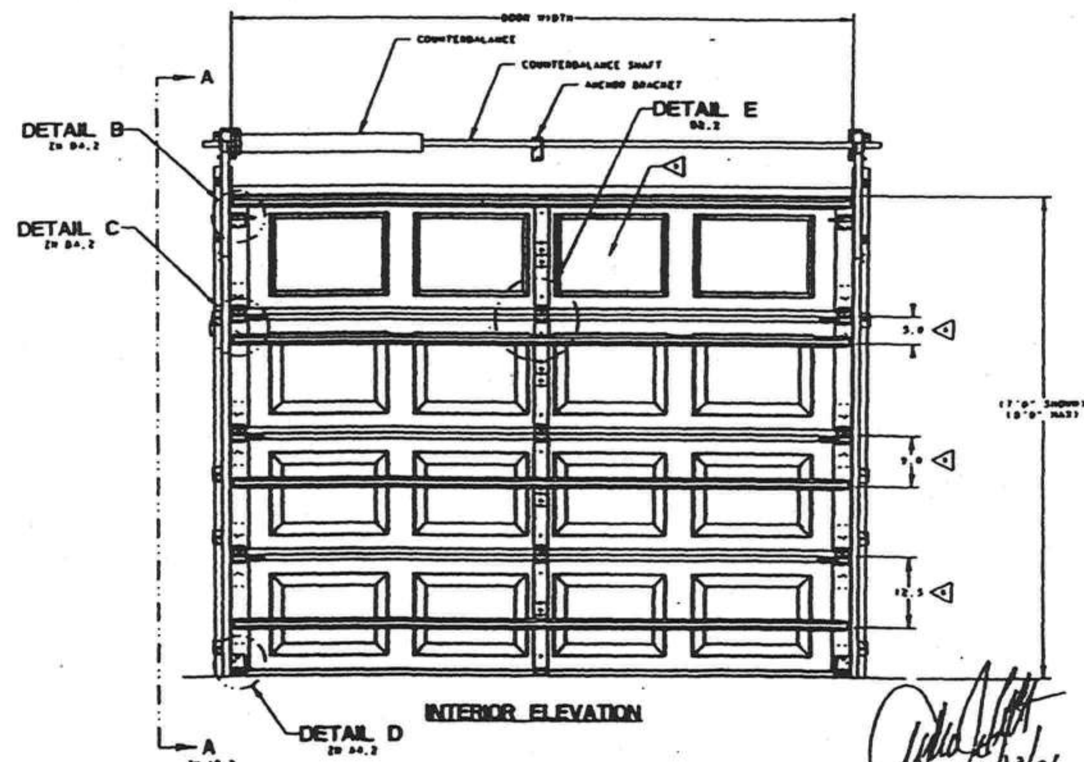
NOTES:
1. TESTED IN ACCORDANCE WITH DASMA 108.
2. FOUR SECTION 7' TALL DOOR SHOWN. 8' DOORS HAVE 5 SECTIONS. SECTION HEIGHTS OF 20.00, 19.00 AND 16.75 ARE AVAILABLE AND MAY BE USED IN COMBINATION TO ACHIEVE VARIOUS DOOR HEIGHTS.
3. EMBOSSMENT PATTERN OF 14.5 X 20.4 SHOWN. ALTERNATE PATTERNS OF 12.5 X 43.4 AND 12.5 X 20.4 MAY BE USED.
4. ADVANTAGE/REVOLUTION COUNTERBALANCE SHOWN. TORSION AND EXTENSION COUNTERBALANCE SYSTEMS AVAILABLE. 405964-0002 REQUIRED AT TRACK INTERFACE ON TORSION AND EXTENSION SYSTEMS.
5. USE THIS BRACKET 405964-0002 ON 8' HIGH DOORS ONLY.
6. LOCATE 400650 STRUTS AS SHOWN. VERTICAL PLACEMENT CAN VARY PLUS/MINUS 3 INCHES.
7. USE 609911-0001 AB POINT SCREWS FOR ALL COMPONENT INSTALLATION UNLESS OTHERWISE NOTED.
8. JAMB DETAIL TO BE IN ACCORDANCE WITH DRAWING 409703. JAMB/SCAB BRACKET ATTACHING HARDWARE SHALL BE AS FOLLOWS: 605574-0001 SCREW, LAG 5/16 X 1-3/4 - WOOD JAMB; BAHL LOCK BOLT, 5/16 X 1-1/2 EMBEDMENT - CONCRETE BLOCK

9. WINDOW INSTALLATION ALLOWED. WINDOWS MUST BE INSTALLED IN TOP SECTION.

OHD/GENIE DOOR EQUIVALENCY CHART		
OHD DOOR SERIES No.	GENIE DOOR SERIES No.	PAN STEEL THICKNESS
SERIES 100	SERIES GDS300	24 GA
SERIES 109	SERIES GDS300	24 GA
SERIES 201	SERIES GDS200	25 GA
SERIES 200	SERIES GDS300	25 GA



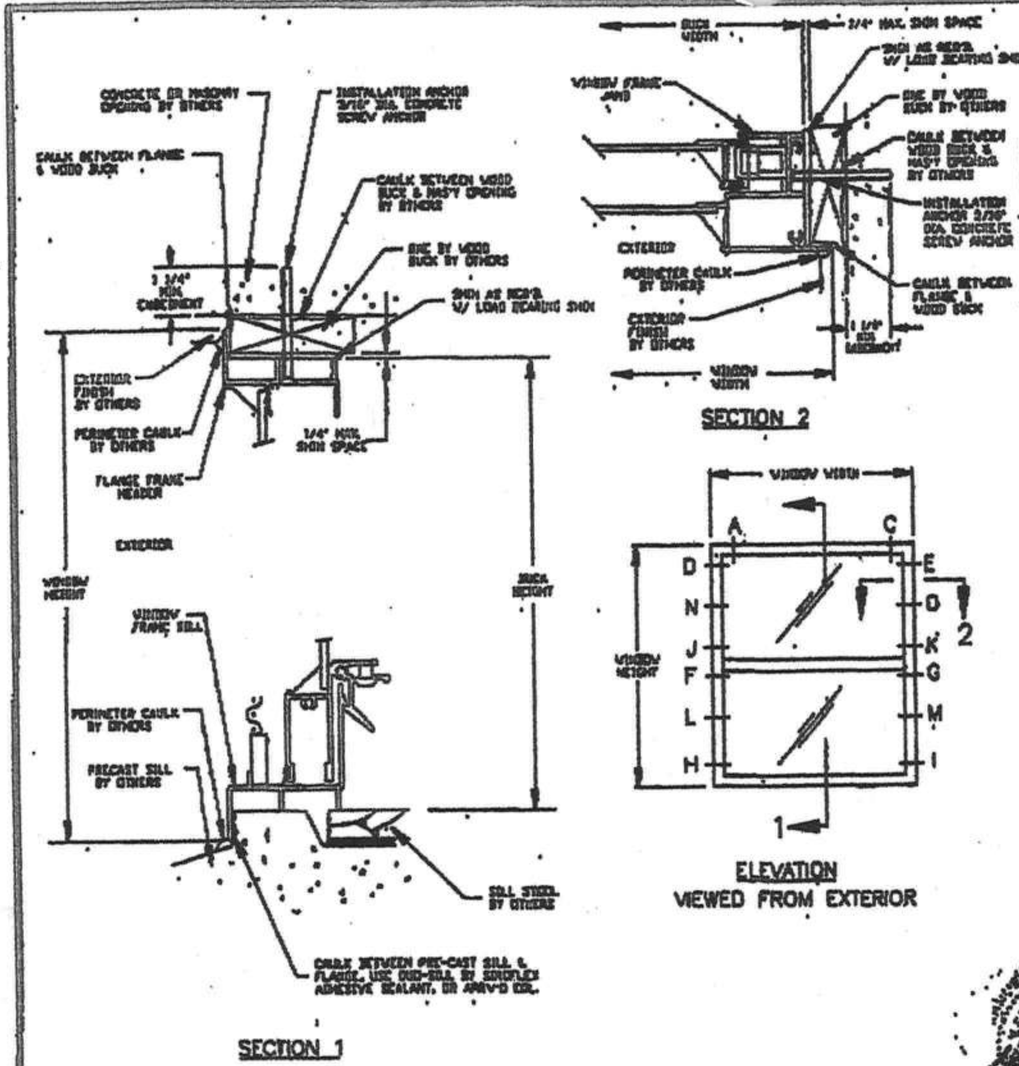
STD TRACK DETAIL FOR 9' WIDE DOOR



INTERIOR ELEVATION

DOOR WIDTH	CENTER STILE	END STILE	RLD SHAFT BRACKET	STRUTS/SECT	ROLLER	VERT TRK GA	JAMB LOAD (+/-FT-HT)
9	1	SINGLE	YES	HS-1 HS-2	STL 3"	049"	99

D-409887



ANCHOR LOCATION CHART					
CALL SIZE	BUCK SIZE	LOCATIONS IN HEAD		LOCATIONS IN JAMB	
		UP TO 45psf	46psf TO 70PSF	UP TO 45psf	46psf TO 70psf
[illegible]	[illegible]	AE	AE	[illegible]	[illegible]
[illegible]	[illegible]	AE	AE	[illegible]	[illegible]
[illegible]	[illegible]	AE	AE	[illegible]	[illegible]
[illegible]	[illegible]	AE	AE	[illegible]	[illegible]

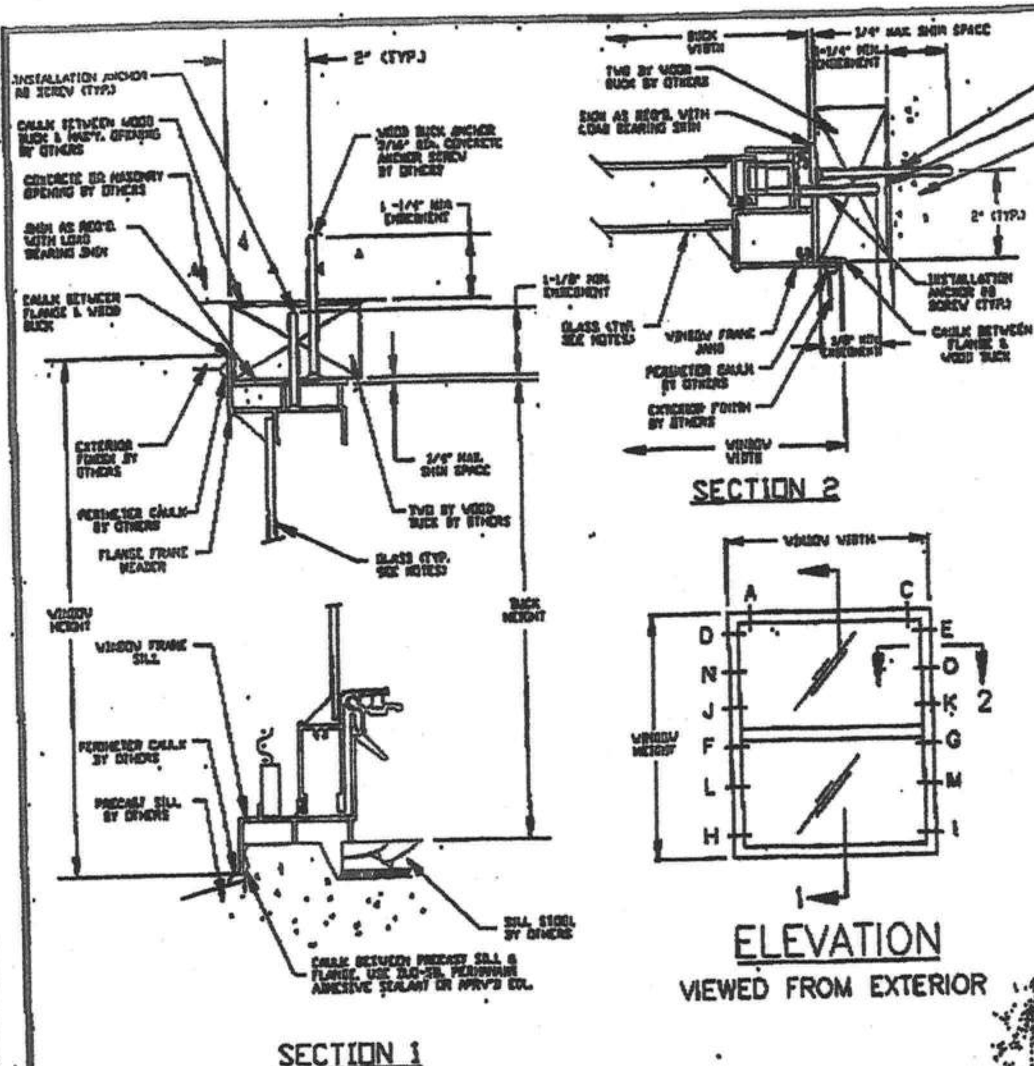
NOTES:
1) SHIM AS REQ'D. AT EACH INSTALLATION ANCHOR W/LOAD BEARING SHIM. MAX. ALLOWABLE SHIM STACK TO BE 1/4". USE SHIMS WHERE SPACE GREATER THAN 1/16" IS PRESENT.
2) WINDOW FRAME MATERIAL: ALUMINUM ALLOY 6063.
3) 3/16" DIA. CONCRETE SCREW ANCHOR MUST BE OF SUFFICIENT LTH. TO ACHIEVE MIN. EMBEDMENT OF 1-1/4" INTO MASONRY OR CONCRETE. (TYP. LTH. 2-3/4")
4) CAULK BEHIND WINDOW FLANGE WITH DUO-SIL ADHESIVE CAULK OR APPROVED EQUAL. APPLICATION OF DUO-SIL ADHESIVE CAULK SEALANT MUST COMPLY WITH SEALANT MANUFACTURER'S RECOMMENDATIONS.
5) USE LATEX CAULK OR EQUIVALENT FOR PERIMETER SEAL AROUND EXTERIOR OF WINDOW FLANGE BY OTHERS.
6) IF EXACT WINDOW SIZE IS NOT LISTED IN ANCHOR CHART, USE ANCHOR QUANTITY LISTED WITH NEXT LARGER SIZE, FOR THE APPROPRIATE DESIGN PRESSURE REQ'D.
7) GLASS THICKNESS MAY VARY PER THE REQUIREMENTS OF ASTM E1300 GLASS CHARTS. SINGLE GLAZING IS SHOWN. INSULATING GLASS ALSO QUALIFIED.
8) LETTER DESIGNATIONS ON THE ANCHOR LOCATION CHART INDICATE WHERE CONCRETE SCREW ANCHORS ARE TO BE INSTALLED WHEN USING THE EXTERIOR ELEVATION AS A KEY.
9) NOT ALL ANCHORS SHOWN ON ELEVATION ARE APPLIED BY FACTORY IN ALL SIZES. ALL FACTORY APPLIED HOLES NOT DESIGNATED FOR CONCRETE SCREW ANCHOR SHOULD BE FILLED WITH #8 SCREWS OF SUFFICIENT LTH. TO PROVIDE MIN. 5/8 IN. EMBEDMENT INTO WOOD BUCK. FACTORY PUNCHED HOLES IN JAMBS ARE TO BE NO MORE THAN 6" FROM CORNERS AND 24" O.C. MAX.

REV.	DESCRIPTION	DATE

KINCO, LTD. 5245 OLD KINGS ROAD JACKSONVILLE, FLORIDA 32254

TITLE: INSTALLATION DETAIL W/ONE BY WOOD BUCK FLG. SINGLE HUNG WINDOW M40/50 & M40/50 HP	
ENGINEER: MANUEL MARTINEZ	DRN: BB	DATE: 11/06/01
DISCIPLINE: CIVIL	SCALE: N.T.S.	DWG. NO.
FL. ENG. NO: 47182	REV. LETTER:	SHEET: 1 OF 1

PREPARED BY: [illegible]



ANCHOR LOCATION CHART

CALL SIZE	BUCK SIZE	LOCATIONS IN HEAD: UP TO 48PSF	LOCATIONS IN HEAD: 48PSF TO 70PSF	LOCATIONS IN JAMB: UP TO 48PSF	LOCATIONS IN JAMB: 48PSF TO 70PSF
[illegible]	[illegible]	A,E	A,E	[illegible]	[illegible]
[illegible]	[illegible]	A,E	A,E	[illegible]	[illegible]
[illegible]	[illegible]	A,E	A,E	[illegible]	[illegible]
[illegible]	[illegible]	A,E	A,E	[illegible]	[illegible]

NOTES:

1) SHIM AS REQ'D. AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM. MAX. ALLOWABLE SHIM SPACE TO BE 1/4". USE SHIMS WHERE SPACE GREATER THAN 1/16" IS PRESENT.
2) WINDOW FRAME MATERIAL: ALUMINUM ALLOY 6063.
3) #8 INSTALLATION ANCHOR SCREW MUST BE OF SUFFICIENT LGH. TO ACHIEVE MIN. EMBEDMENT OF 1-1/8" INTO WOOD BUCK. (APPROX. LENGTH 1 3/4")
4) CAULK BEHIND WINDOW FLANGE WITH GUD-SIL ADHESIVE CAULK OR APPROVED EQUAL. APPLICATION OF GUD-SIL ADHESIVE CAULK SEALANT MUST COMPLY WITH SEALANT MANUFACTURER'S RECOMMENDATIONS.
5) USE LATEX CAULK OR EQUIVALENT FOR PERIMETER SEAL AROUND EXTERIOR OF WINDOW FLANGE BY OTHERS.
6) IF EXACT WINDOW SIZE IS NOT LISTED ON ANCHOR CHART, USE ANCHOR QUANTITY LISTED WITH NEXT LARGER SIZE, FOR THE APPROPRIATE DESIGN PRESSURE REQ'D.
7) GLASS THICKNESS MAY VARY PER THE REQUIREMENTS OF ASTM E1300 GLASS CHARTS. SINGLE GLAZING IS SHOWN, INSULATING GLASS ALSO QUALIFIED.
8) LETTER DESIGNATIONS ON THE ANCHOR CHART INDICATE WHERE ANCHORS ARE TO BE INSTALLED WHEN USING THE EXTERIOR ELEVATION AS A KEY.
9) NOT ALL ANCHORS SHOWN ON ELEVATION ARE APPLIED BY FACTORY IN ALL SIZES. ALL FACTORY APPLIED HOLES NOT DESIGNATED FOR ANCHORS SHOULD BE PUNCHED 6" FROM CORNERS & 24" O.C. MAX. ALL FACTORY APPLIED HOLES NOT DESIGNATED FOR ANCHORS SHOULD BE FILLED WITH #8 SCREWS OF SUFFICIENT LENGTH TO PROVIDE MIN. 1-1/8" EMBEDMENT INTO WOOD BUCK.
10) CONCRETE SCREW ANCHORS FOR THE ATTACHMENT OF WOOD BUCKS ARE TO BE 3/16" DIA. & OF SUFFICIENT LENGTH TO ACHIEVE MIN. EMBEDMENT OF 1-1/4" INTO CONCRETE OR MASONRY. SPACE CONCRETE SCREW ANCHORS 6" FROM END & 24" O.C. MAX.

KINCO, LTD. 5245 OLD KINGS ROAD JACKSONVILLE, FLORIDA 32254			
TITLE: INSTALLATION DETAIL W/TWO BY WOOD BUCK FLG. SINGLE HUNG WINDOW N40/50 & N40/50 HP			
ENGINEER: MANUEL MARTINEZ	DRN: BB	DATE: 11/16/01	
DISCIPLINE: CIVIL	SCALE: N.T.S.	DWG. NO.: [illegible]	
FL. REG. NO: 47182	REV. LETTER:	SHEET: 1 OF 1	

REV.	DESCRIPTION	DATE

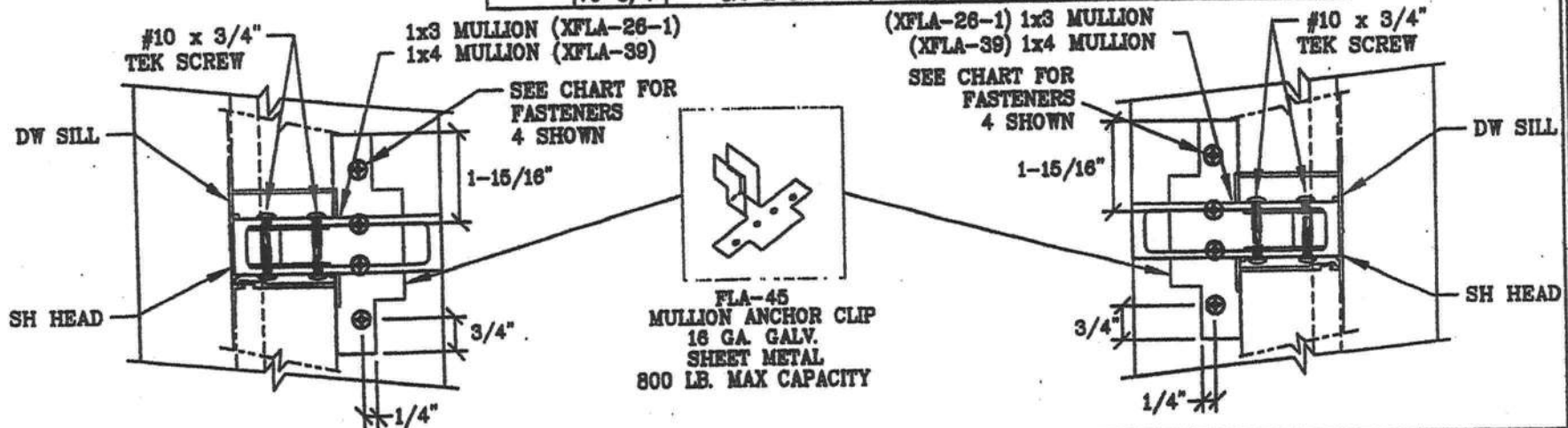
NOTES:

1) ALL ALUMINUM EXTRUSIONS ARE ALLOY 6063 T6, OR 6063 T5.
2) WHEN THERE IS ONE TAPCON (1/4ø" X 1-1/2") ON EACH ANGLE LEG, THE TAPCON SHALL BE PLACED ON MULLION CLIP CENTERLINE.
3) CONCRETE COMPRESSIVE STRENGTH = 3,000 PSI AT 28 DAYS.

CERTIFICATE OF AUTHORIZATION
CHARLES A. [illegible]
FL. REG. ENG. [illegible]
DATE: 3/21/03
ENGINEER

HORIZONTAL MULLION SCHEDULE

SINGLE UNIT WINDOW WIDTH INCH	SINGLE UNIT WINDOW HEIGHT INCH	TYPE OF MULLION DESIGN PRESSURE 35 PSF	TYPE OF CLIP FLA-45	NUMBER AND TYPE OF FASTENERS
19-1/8"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
26-1/2"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
37"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
53-1/8"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS



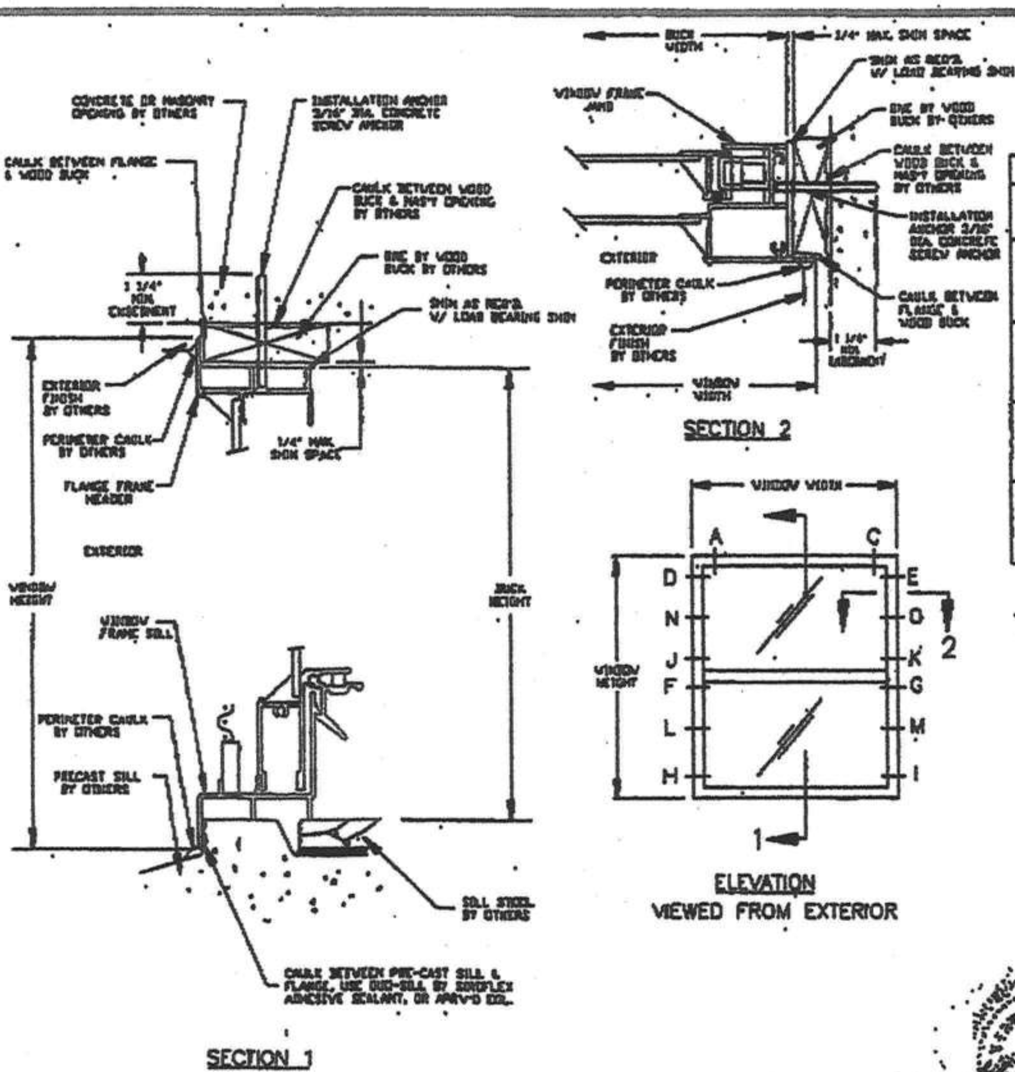
HORIZONTAL MULLION
FLA-45 ANCHOR CLIP
INSTALLATION DETAIL AND
FASTENER SCHEDULE

SERIES: MULLION
ALUMINUM SINGLE HUNG

NORANDEX
4501 36th STREET WEST
BRADENTON, FL 34207
PHONE: (941) 756-7911

NO.	DATE	REVISIONS DESCRIPTION

3/11/03
SCALE: N.T.S.
DWG. BY: RAF
CHK. BY: RLF
DWG. NO.: FRC-036



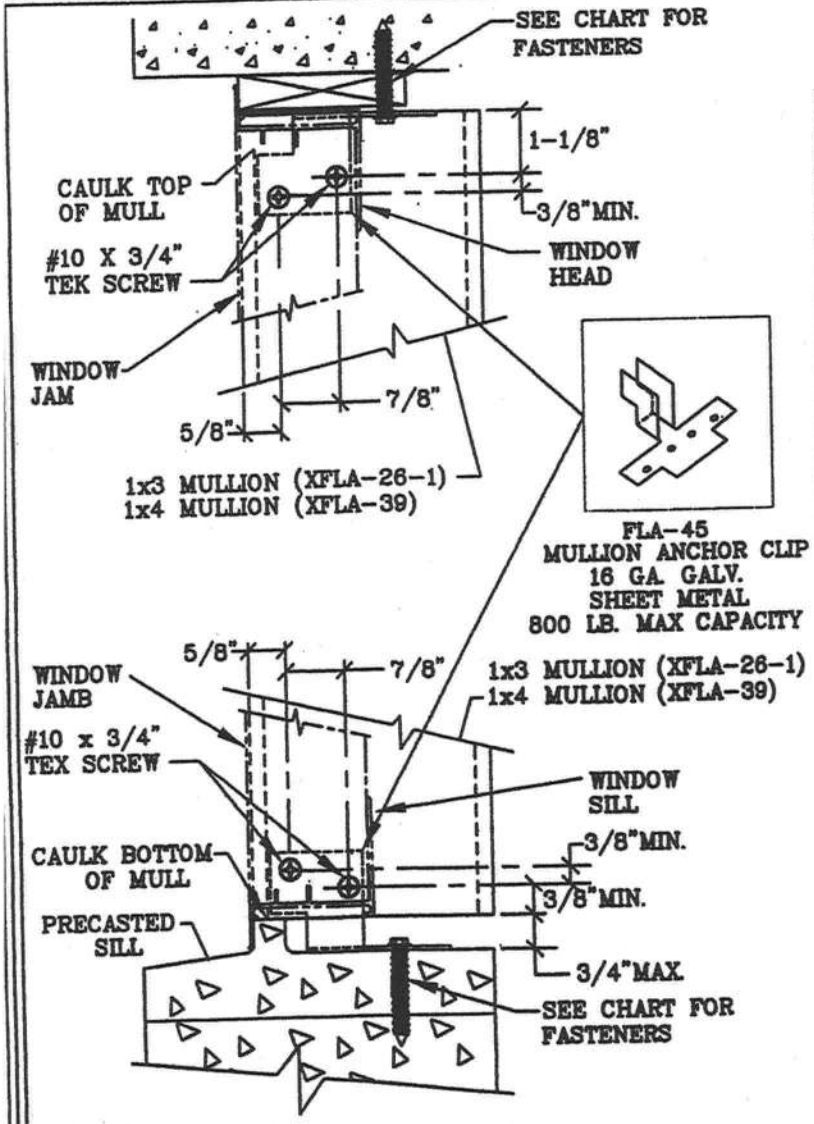
ANCHOR LOCATION CHART					
CALL SIZE	BUCK SIZE	LOCATIONS IN HEAD		LOCATIONS IN JAMB	
		UP TO 45psf	46psf TO 70PSF	UP TO 45psf	46psf TO 70psf
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

NOTES:
1) SHIM AS REQ'D. AT EACH INSTALLATION ANCHOR W/LOAD BEARING SHIM. MAX. ALLOWABLE SHIM STACK TO BE 1/4". USE SHIMS WHERE SPACE GREATER THAN 1/16" IS PRESENT.
2) WINDOW FRAME MATERIAL: ALUMINUM ALLOY 6063.
3) 3/16" DIA. CONCRETE SCREW ANCHOR MUST BE OF SUFFICIENT LTH. TO ACHIEVE MIN. EMBEDMENT OF 1-1/4" INTO MASONRY OR CONCRETE. (TYP. LTH. 2-3/4")
4) CAULK BEHIND WINDOW FLANGE WITH DUO-SIL ADHESIVE CAULK OR APPROVED EQUAL. APPLICATION OF DUO-SIL ADHESIVE CAULK SEALANT MUST COMPLY WITH SEALANT MANUFACTURER'S RECOMMENDATIONS.
5) USE LATEX CAULK OR EQUIVALENT FOR PERIMETER SEAL AROUND EXTERIOR OF WINDOW FLANGE BY OTHERS.
6) IF EXACT WINDOW SIZE IS NOT LISTED IN ANCHOR CHART, USE ANCHOR QUANTITY LISTED WITH NEXT LARGER SIZE, FOR THE APPROPRIATE DESIGN PRESSURE REQ'D.
7) GLASS THICKNESS MAY VARY PER THE REQUIREMENTS OF ASTM E1300 GLASS CHARTS. SINGLE GLAZING IS SHOWN, INSULATING GLASS ALSO QUALIFIED.
8) LETTER DESIGNATIONS ON THE ANCHOR LOCATION CHART INDICATE WHERE CONCRETE SCREW ANCHORS ARE TO BE INSTALLED WHEN USING THE EXTERIOR ELEVATION AS A KEY.
9) NOT ALL ANCHORS SHOWN ON ELEVATION ARE APPLIED BY FACTORY IN ALL SIZES. ALL FACTORY APPLIED HOLES NOT DESIGNATED FOR CONCRETE SCREW ANCHOR SHOULD BE FILLED WITH #8 SCREWS OF SUFFICIENT LTH. TO PROVIDE MIN. 5/8 IN. EMBEDMENT INTO WOOD BUCK. FACTORY PUNCHED HOLES IN JAMBS ARE TO BE NO MORE THAN 6" FROM CORNERS AND 24" O.C. MAX.

REV.	DESCRIPTION	DATE

KINCO, LTD. 5245 OLD KINGS ROAD JACKSONVILLE, FLORIDA 32254

TITLE: INSTALLATION DETAIL W/ONE BY WOOD BUCK FLG. SINGLE HUNG WINDOW M40/50 & M40/50 HP	
ENGINEER: MANUEL MARTINEZ	DRN: BB
DATE: 11/06/01	
DISCIPLINE: CIVIL	SCALE: N.T.S.
P.E. REG. NO: 47182	
SHEET: 1 OF 1	



VERTICAL MULLION SCHEDULE

SINGLE UNIT WINDOW WIDTH INCH	SINGLE UNIT WINDOW HEIGHT INCH	TYPE OF MULLION DESIGN PRESSURE 35 PSF	TYPE OF CLIP FLA-45	NUMBER AND TYPE OF FASTENERS
19-1/8"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
26-1/2"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
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	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
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	76-3/4"	1.0 x 4.0	OK	(4) 1/4ø" x 1-1/2" TAPCONS
53-1/8"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
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	50-5/8"	1.0 x 3.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 4.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS

NOTES:
1) ALL ALUMINUM EXTRUSIONS ARE ALLOY 6063 T6, OR 6063 T5.
2) WHEN THERE IS ONE TAPCON (1/4ø" X 1-1/2") ON EACH ANGLE LEG, THE TAPCON SHALL BE PLACED ON MULLION CLIP CENTERLINE.
3) CONCRETE COMPRESSIVE STRENGTH = 3,000 PSI AT 28 DAYS.

VERTICAL MULLION FLA-45 ANCHOR CLIP INSTALLATION DETAIL AND FASTENER SCHEDULE

SERIES: MULLION ALUMINUM SINGLE HUNG

NORANDEX
4606 30th STREET WEST
BRADENTON, FL. 34207
PHONE: (941) 755-1601

NO.	DATE	REVISIONS DESCRIPTION

3/11/08
SCALE: N.T.S.
DWG. BY: RAP
CHK. BY: RAP
DWG. NO.: FRC-009

Jax Apex Technology, Inc.
4745 Sutton Park Court, Suite 402
Jacksonville, FL 32224

All products listed in this report are currently approved for state use under the provisions of Florida Product Approval Rule 9B-72 and/or 61G15-36. Reference product approval number FL1901. All substantiating data submitted for the original application has been reviewed for compliance with the 2004 Florida Building and *Residential Codes.*

Evaluation reports are the opinion of the engineer who prepared the report, based on the findings, and in no way constitute or imply approval by a local building authority. The engineer, in review of the data submitted, finds that, in his opinion, the product, material, system, or method of construction specifically identified in this report conforms with or is a suitable alternate to that specified in the Florida Building Code, SUBJECT TO THE LIMITATIONS IN THIS REPORT

Jeffrey P. Arneson, P.E., a licensed Florida professional engineer and employee of Jax Apex Technology, Inc. (Apex Technology) has reviewed the data submitted for compliance with the Florida Building Code. Neither Jeffrey P. Arneson, nor Apex Technology, are responsible for any errors or omissions to any documents, calculations, drawings, specifications, tests, or summaries prepared and submitted by the design professional or preparer of record who are listed in the Substantiating Data section of this report.

REPORT NO: SIM200401-R2

EXPIRES: October 1st, 2008

CATEGORY: Metal Connectors

SUBMITTED BY:
SIMPSON STRONG-TIE COMPANY, INC.
4120 DUBLIN BLVD., SUITE 400
DUBLIN, CA 94568

1. PRODUCT NAME

Strap Ties

LSTA9, LSTA12, LSTA15, LSTA18, LSTA21, LSTA24, LSTA30, LSTA36, MSTA9, MSTA12, MSTA15, MSTA18, MSTA21, MSTA24, MSTA30, MSTA36, MSTC28, MSTC40, MSTC52, MSTC66, MSTC78, MST27, MST37, MST48, MST60, MST72, LSTI49, LSTI73, MSTI26, MSTI36, MSTI48, MSTI60, MSTI72, RPS18, RPS22, RPS28, ST2115, ST292, ST2122, ST2215, ST6215, ST6224, ST6236, ST9, ST12, ST18, ST22, FHA6, FHA9, FHA12, FHA18, FHA24, FHA30.

Coiled Strap Ties

CMST12, CMST14, CMSTC16, CS16, CS18, CS20, CS22

Wood to Masonry Strap Ties

MSTAM24, MSTAM36, MSTCM40

Pre-bent Strap Ties

MSTC48B3, MSTC66B3

Heavy Straps

HRS6, HRS8, HRS12

ROOFING INFORMATION

TAMKO BUILDING PRODUCTS

Application Instructions for • HERITAGE® VINTAGE™ AR – Phillipsburg, KS LAMINATED ASPHALT SHINGLES

THESE ARE THE MANUFACTURER'S APPLICATION INSTRUCTIONS FOR THE ROOFING CONDITIONS DESCRIBED. TAMKO BUILDING PRODUCTS, INC. ASSUMES NO RESPONSIBILITY FOR LEAKS OR OTHER ROOFING DEFECTS RESULTING FROM FAILURE TO FOLLOW THE MANUFACTURER'S INSTRUCTIONS.

THIS PRODUCT IS COVERED BY A LIMITED WARRANTY, THE TERMS OF WHICH ARE PRINTED ON THE WRAPPER.

IN COLD WEATHER (BELOW 40°F), CARE MUST BE TAKEN TO AVOID DAMAGE TO THE EDGES AND CORNERS OF THE SHINGLES.

IMPORTANT: It is not necessary to remove the plastic strip from the back of the shingles.

1. ROOF DECK

These shingles are for application to roof decks capable of receiving and retaining fasteners, and to inclines of not less than 2 in. per foot. For roofs having pitches 2 in. per foot to less than 4 in. per foot, refer to special instructions titled "Low Slope Application". Shingles must be applied properly. TAMKO assumes no responsibility for leaks or defects resulting from improper application, or failure to properly prepare the surface to be roofed over.

NEW ROOF DECK CONSTRUCTION: Roof deck must be smooth, dry and free from warped surfaces. It is recommended that metal drip edges be installed at eaves and rakes.

PLYWOOD: All plywood shall be exterior grade as defined by the American Plywood Association. Plywood shall be a minimum of 3/8 in. thickness and applied in accordance with the recommendations of the American Plywood Association.

SHEATHING BOARDS: Boards shall be well-seasoned tongue-and-groove boards and not over 6 in. nominal width. Boards shall be a 1 in. nominal minimum thickness. Boards shall be properly spaced and nailed.

TAMKO does not recommend re-roofing over existing roof.

2. VENTILATION

Inadequate ventilation of attic spaces can cause accumulation of moisture in winter months and a build up of heat in the summer. These conditions can lead to:

1. Vapor Condensation
2. Buckling of shingles due to deck movement.
3. Rotting of wood members.
4. Premature failure of roof.

To insure adequate ventilation and circulation of air, place louvers of sufficient size high in the gable ends and/or install continuous ridge and soffit vents. FHA minimum property standards require one square foot of net free ventilation area to each 150 square feet of space to be vented, or one square foot per 300 square feet if a vapor barrier is installed on the warm side of the ceiling or if at least one half of the ventilation is provided near the ridge. If the ventilation openings are screened, the total area should be doubled.

IT IS PARTICULARLY IMPORTANT TO PROVIDE ADEQUATE VENTILATION.

3. FASTENERS

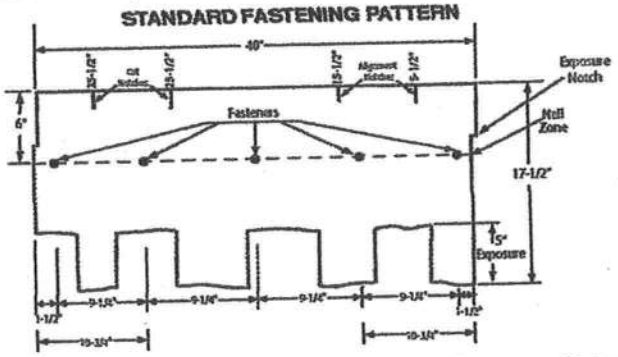
WIND CAUTION: Extreme wind velocities can damage these shingles after application when proper sealing of the shingles does not occur. This can especially be a problem if the shingles are applied in cooler months or in areas on the roof that do not receive direct sunlight. These conditions may impede the sealing of the adhesive strips on the shingles. The inability to seal down may be compounded by prolonged cold weather conditions and/or blowing dust. In these situations, hand sealing of the shingles is recommended. Shingles must also be fastened according to the fastening instructions described below.

Correct placement of the fasteners is critical to the performance of the shingle. If the fasteners are not placed as shown in the diagram and described below, this will result in the termination of TAMKO's liabilities under the limited warranty. TAMKO will not be responsible for damage to shingles caused by winds in excess of the applicable miles per hour as stated in the limited warranty. See limited warranty for details.

FASTENING PATTERNS: Fasteners must be placed 6 in. from the top edge of the shingle located horizontally as follows:

1) Standard Fastening Pattern. (For use on decks with slopes 2 in. per foot to 21 in. per foot.) One fastener 1-1/2 in. back from each end, one 10-3/4 in. back from each end and one 20 in. from one end of the shingle for a total of 5 fasteners. (See standard fastening pattern illustrated below).

STANDARD FASTENING PATTERN



2) Mansard or Steep Slope Fastening Pattern. (For use on decks with slopes greater than 21 in. per foot.) Use standard nailing instructions with four additional nails placed 6 in. from the butt edge of the shingle making certain nails are covered by the next (successive) course of shingles.

(Continued)

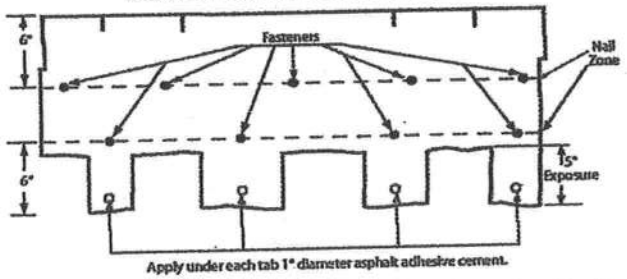
(CONTINUED from Pg. 1)

TAMKO BUILDING PRODUCTS

• HERITAGE® VINTAGE™ AR – Phillipsburg, KS
LAMINATED ASPHALT SHINGLES

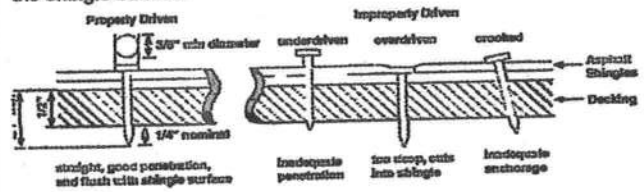
Each shingle tab must be sealed underneath with quick setting asphalt adhesive cement immediately upon installation. Spots of cement must be equivalent in size to a $.25 piece and applied to shingles with a 5 in. exposure, use 9 fasteners per shingle.

MANSARD FASTENING PATTERN



Apply under each tab 1" diameter asphalt adhesive cement.

NAILS: TAMKO recommends the use of nails as the preferred method of application. Standard type roofing nails should be used. Nail shanks should be made of minimum 12 gauge wire, and a minimum head diameter of 3/8 in. Nails should be long enough to penetrate 3/4 in. into the roof deck. Where the deck is less than 3/4 in. thick, the nails should be long enough to penetrate completely through plywood decking and extend at least 1/8 in. through the roof deck. Drive nail head flush with the shingle surface.



4. UNDERLAYMENT

UNDERLAYMENT: An underlayment consisting of asphalt saturated felt must be applied over the entire deck before the installation of TAMKO shingles. Failure to add underlayment can cause premature failure of the shingles and leaks which are not covered by TAMKO's limited warranty. Apply the felt when the deck is dry. On roof decks 4 in. per foot and greater apply the felt parallel to the eaves lapping each course of the felt over the lower course at least 2 in. Where ends join, lap the felt 4 in. If left exposed, the underlayment felt may be adversely affected by moisture and weathering. Laying of the underlayment and the shingle application must be done together.

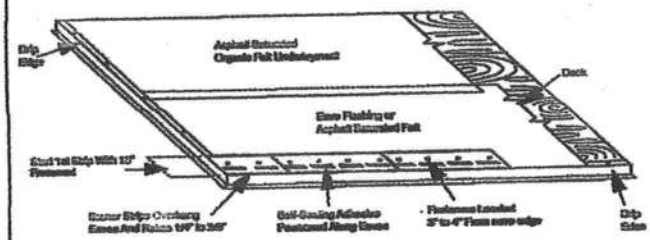
Products which are acceptable for use as underlayment are:

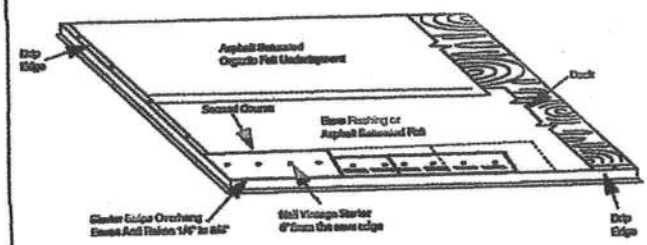
- TAMKO No. 15 Asphalt Saturated Organic Felt
- A non-perforated asphalt saturated organic felt which meets ASTM: D226, Type I or ASTM D4869, Type I
- Any TAMKO non-perforated asphalt saturated organic felt
- TAMKO TW Metal and Tile Underlayment, TW Underlayment and Moisture Guard Plus® (additional ventilation maybe required. Contact TAMKO's technical services department for more information)

In areas where ice builds up along the eaves or a back-up of water from frozen or clogged gutters is a potential problem, TAMKO's Moisture Guard Plus® waterproofing underlayment (or any specialty eaves flashing product) may be applied to eaves, rakes, ridges, valleys, around chimneys, skylights or dormers to help prevent water damage. Contact TAMKO's Technical Services Department for more information. TAMKO does not recommend the use of any substitute products as shingle underlayment.

5. APPLICATION INSTRUCTIONS

STARTER COURSE: Two starter course layers must be applied prior to application of Heritage Vintage AR Shingles.
The first starter course may consist of TAMKO Shingle Starter, three tab self-sealing type shingles or a 9 inch wide strip of mineral surface roll roofing. If three tab self-sealing shingles are used, remove the exposed tab portion and install with the factory applied adhesive adjacent to the eaves. If using three tab self-sealing shingles or shingle starter, remove 18 in. from first shingle to offset the end joints of the Vintage Starter. Attach the first starter course with approved fasteners along a line parallel to and 3 in. to 4 in. above the eave edge. The starter course should overhang both the eave and rake edge 1/4 in. to 3/8 in. Over the first starter course, install Heritage Vintage Starter AR and begin at the left rake edge with a full size shingle and continue across the roof nailing the Heritage Vintage Starter AR along a line parallel to and 6 in. from the eave edge.





Note: Do not allow Vintage Starter AR joints to be visible between shingle tabs. Cutting of the starter may be required.

HERITAGE VINTAGE STARTER AR
12 1/2" x 36" 20 PIECES PER BUNDLE
60 LINEAL FT. PER BUNDLE

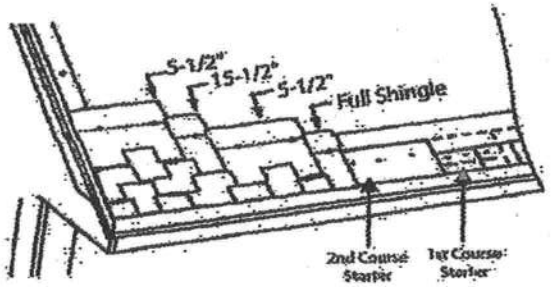
(Continued)

(CONTINUED from Pg. 2)

TAMKO BUILDING PRODUCTS

• HERITAGE® VINTAGE™ AR – Phillipsburg, KS
LAMINATED ASPHALT SHINGLES

SHINGLE APPLICATION: Start the first course at the left rake edge with a full size shingle and overhang the rake edge 1/4 in. to 3/8 in.. To begin the second course, align the right side of the shingle with the 5-1/2 in. alignment notch on the first course shingle making sure to align the exposure notch. (See shingle illustration on next page) Cut the appropriate amount from the rake edge so the overhang is 1/4" to 3/8". For the third course, align the shingle with the 15-1/2 in. alignment notch at the top of the second course shingle, again being sure to align the exposure notch. Cut the appropriate amount from the rake edge. To begin the fourth course, align the shingle with the 5-1/2 in. alignment notch from the third course shingle while aligning the exposure notch. Cut the appropriate amount from the rake edge. Continue up the rake in as many rows as necessary using the same formula as outlined above. Cut pieces may be used to complete courses at the right side. As you work across the roof, install full size shingles taking care to align the exposure notches. Shingle joints should be no closer than 4 in.



6. LOW SLOPE APPLICATION
On pitches 2 in. per foot to 4 in. per foot cover the deck with two layers of underlayment. Begin by applying the underlayment in a 19 in. wide strip along the eaves and overhanging the drip edge by 1/4 to 3/4 in. Place a full 36 in. wide sheet over the 19 in. wide starter piece, completely overlapping it. All succeeding courses will be positioned to overlap the preceding course by 19 in. If winter temperatures average 25°F or less, thoroughly cement the laps of the entire underlayment to each other with plastic cement from eaves and rakes to a point of a least 24 in. inside the interior wall line of the building. As an alternative, TAMKO's Moisture Guard Plus self-adhering waterproofing underlayment may be used in lieu of the cemented felts.

7. VALLEY APPLICATION
TAMKO recommends an open valley construction with Heritage Vintage AR shingles.

To begin, center a sheet of TAMKO Moisture Guard Plus, TW Underlayment or TW Metal & Tile Underlayment in the valley.

After the underlayment has been secured, install the recommended corrosion resistant metal (26 gauge galvanized metal or an equivalent) in the valley. Secure the valley metal to the roof deck. Overlaps should be 12" and cemented.

Following valley metal application; a 9" to 12" wide strip of TAMKO Moisture Guard Plus, TW Underlayment or TW Metal & Tile Underlayment should be applied along the edges of the metal valley flashing (max. 6" onto metal valley flashing) and on top of the valley underlayment. The valley will be completed with shingle application.

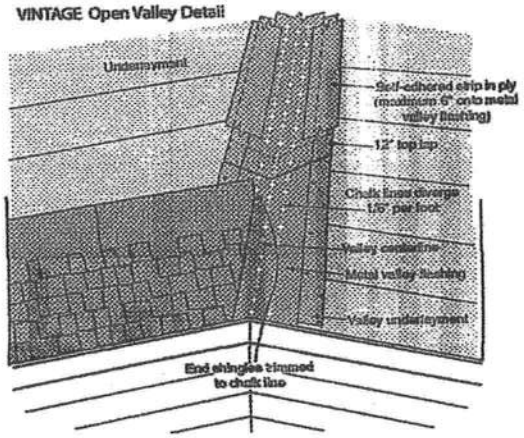
SHINGLE APPLICATION INSTRUCTIONS (OPEN VALLEY)
- Snap two chalk lines, one on each side of the valley centerline over the full length of the valley flashing. Locate the upper ends of the chalk lines 3" to either side of the valley centerline.
- The lower end should diverge from each other by 1/8" per foot. Thus, for an 8' long valley, the chalk lines should be 7" either side of the centerline at the eaves and for a 16' valley 8".

As shingles are applied toward the valley, trim the last shingle in each course to fit on the chalk line. Never use a shingle trimmed to less than 12" in length to finish a course running into a valley. If necessary, trim the adjacent shingle in the course to allow a longer portion to be used.

- Clip 1" from the upper corner of each shingle on a 45° angle to direct water into the valley and prevent it from penetrating between the courses.

- Form a tight seal by cementing the shingle to the valley lining with a 3" width of asphalt plastic cement (conforming to ASTM D 4586).

VINTAGE Open Valley Detail



• **CAUTION:**
Adhesive must be applied in smooth, thin, even layers.

Excessive use of adhesive will cause blistering to this product.

TAMKO assumes no responsibility for blistering.

(Continued)

(CONTINUED from Pg. 3)

TAMKO BUILDING PRODUCTS

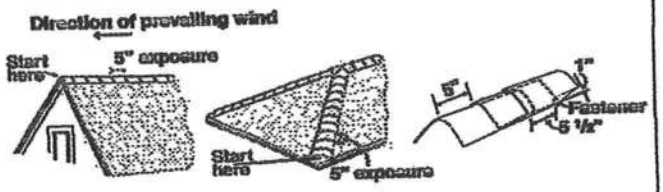
• HERITAGE® VINTAGE™ AR – Phillipsburg, KS
LAMINATED ASPHALT SHINGLES

8. HIP AND RIDGE FASTENING DETAIL

Apply the shingles with a 5 in. exposure beginning at the bottom of the hip or from the end of the ridge opposite the direction of the prevailing winds. Secure each shingle with one fastener on each side, 5-1/2 in. back from the exposed end and 1 in. up from the edge. TAMKO recommends the use of TAMKO Heritage Vintage Hip & Ridge shingle products.

Fasteners should be 1/4 in. longer than the ones used for shingles.

IMPORTANT: PRIOR TO INSTALLATION, CARE NEEDS TO BE TAKEN TO PREVENT DAMAGE WHICH CAN OCCUR WHILE BENDING SHINGLE IN COLD WEATHER.



THESE ARE THE MANUFACTURER'S APPLICATION INSTRUCTIONS FOR THE ROOFING CONDITIONS DESCRIBED. TAMKO BUILDING PRODUCTS, INC. ASSUMES NO RESPONSIBILITY FOR LEAKS OR OTHER ROOFING DEFECTS RESULTING FROM FAILURE TO FOLLOW THE MANUFACTURER'S INSTRUCTIONS.

INTERIOR WALL INSULATION INFORMATION

R-Matte® Plus-3

Sheathing Insulation

07212/RMRP

MANUFACTURER
Rmax, Inc.
13524 Welch Road; Dallas, Texas 75244-5291
Phone - 972-387-4500 800-627-0890 (Central)
800-845-4455 (Eastern) 800-762-9462 (Western)
Email: rmax@rmaxinc.com
Web Site: http://www.rmaxinc.com

PRODUCT DESCRIPTION

R-Matte® Plus-3 is a rigid foam plastic thermal insulation board composed of polyisocyanurate foam bonded to a durable white-matte non-glare aluminum facer and a reflective reinforced aluminum facer. R-Matte® Plus-3 utilizes a new and environmentally friendly blowing agent. This sheathing insulation is suitable for use in wall applications in new residential, commercial, agricultural and industrial buildings and in thermal retrofit construction within existing buildings.

R-Matte® Plus-3 is available in standard four (4) foot wide panels. Standard panel lengths are eight (8) and nine (9) feet. Custom length panels are available for special orders. See "Thermal Properties" for standard thicknesses and thermal resistance values of R-Matte® Plus-3.

R-Matte® Plus-3 is shipped in bundles that are approximately 48 inches high and wrapped in plastic for easy handling.

NOTE: All Rmax products must be tarped, placed on skids, and kept dry before and throughout construction.

Technical Data

TYPICAL PHYSICAL PROPERTIES:		
Property	Test Method	Results
Density, Overall, Nominal	ASTM D1622	2.0 pcf
Compressive Strength	ASTM D1621	30 psi (Avg.)
Flame Spread, Core	ASTM E84	35 or less
Smoke Developed	ASTM E84	40 - 110
Water Vapor Transmission	ASTM E96	< 1 perm
Water Absorption	ASTM C209	< 1% Vol.
Dimensional Stability	ASTM D2126 7 days, 158°F, 98% rh	<2% Linear Change
Service Temperatures		-40°F to +250°F
Note: Physical Properties shown are based on data obtained under controlled conditions and are subject to normal manufacturing tolerances. Flame spread numbers are shown for comparison purposes only and are not intended to represent the performance of R-Matte® Plus-3 and related components under actual fire conditions.		

APPLICABLE STANDARDS

R-Matte® Plus-3 is manufactured to meet the physical property requirements of Product Specification ASTM C1289, Type I.

R-Matte® Plus-3 is accepted as a nonstructural insulative sheathing board by the following major model building codes: National Building Code (BOCA), Section 2603; Standard Building Code (SBCCI), Section 2603; Uniform Building Code (ICBO), Section 2602.

APPLICATION / INSTALLATION

Applications - This product is designed to be covered with siding materials of wood, wood-based products, hardboard, aluminum, vinyl, brick or stucco veneers. The white-matte finished (non-glare) side of this sheathing panel is installed facing to the outside of the wall structure when the exterior siding will be either wood, wood-based products, hardboard, aluminum or vinyl sidings. The reflective aluminum side of the sheathing panel is installed to the outside of the wall when the exterior finish will be either brick or stucco.

Stud Wall Construction - R-Matte® Plus-3 is applied to the exterior face of wood or metal studs to cover all studs, sills, plates and header constructions in order to provide insulation over details not normally covered by insulation products. R-Matte® Plus-3 may be secured to the studs with bugle-head screws, galvanized roofing nails, or common nails driven through cap washers. The interior of the stud wall system should be protected with a suitable vapor retarder.

R-Matte® Plus-3 may be applied to the interior face of studs, metal or wood, to cover the interior face of these framing members. R-Matte® Plus-3 may be secured with bugle-head screws, galvanized roofing nails, or construction adhesives. The interior of the stud wall system should be protected with a suitable vapor retarder and thermal barrier.

Cavity Wall Construction - R-Matte® Plus-3 is secured to the dry face of the masonry block wall with a high grade adhesive. R-Matte® Plus-3 can be cut by simple methods to fit between masonry joint reinforcements placed to tie the brick veneer to the concrete block back-up. R-Matte® Plus-3 is an excellent cavity insulation product fitting between the masonry block and finished brick veneer of any residential or commercial product.

Masonry Wall Construction - R-Matte® Plus-3 is applied to either the exterior face or interior face of concrete or concrete masonry walls to provide an insulation layer over the entire surface. R-Matte® Plus-3 may be secured to the inside face of a concrete or concrete masonry wall, either over or under the furring members, and covered with a minimum 1/2 inch gypsum wallboard interior finish. Adhesives may be used to hold the R-Matte® Plus-3 in place against the wall temporarily. However, permanent attachment of the R-Matte® Plus-3, furring, or gypsum wallboard with adhesives is not acceptable. The gypsum wallboard must be secured with suitable screws or nails.

Re-Siding Construction - R-Matte® Plus-3 is applied over existing sound and solid siding. It is then covered with a suitable new siding of aluminum, vinyl, wood or wood fiber based products. The R-Matte® Plus-3 is secured with galvanized nails of sufficient length to penetrate the old sidings and sheathings below by at least one inch into the existing wall studs.

Exterior Stucco Construction - R-Matte® Plus-3 may be used as the insulative sheathing under hard coat stucco finishes. First, cover the R-Matte® Plus-3 with a suitable separation layer such as an organic or inorganic felt. Then, attach conventional metal wire lath and expansion joints with appropriate fasteners as dictated by the local building code. R-Matte® Plus-3 may be secured to the studs with bugle-head screws, galvanized roofing nails, or common nails driven through cap washers. The interior of the stud wall system should be protected with a suitable vapor retarder. Rmax does not recommend the direct attachment of stucco, portland cement or polymer-modified types, directly to the face of the insulation product. Consult stucco manufacturers for details.

WARRANTY

See "Sales Policy" for warranty conditions. Rmax does not assume any responsibility or liability for the performance of any products other than those manufactured by Rmax.

AVAILABILITY

Rmatte® Plus-3 is available through an extensive distribution network. Contact Rmax Sales for product availability, pricing information, and the nearest distribution center.

WARNING

DO NOT leave R-Matte® Plus-3 exposed. Polyisocyanurate foam is an organic material which will burn when exposed to an ignition source of sufficient heat and intensity, and may contribute to flames spreading. Installations utilizing Rmax R-Matte® Plus-3 must be fully protected on the interior side of walls and roofs by a minimum of 1/2 inch gypsum board or equivalent. Masonry or concrete that is a minimum of one-inch thick or plywood that is a minimum of 1/2 inch thick or wood that is a minimum of one-inch nominal thickness is recognized as a suitable thermal barrier. Consult the Local Building Official for specific governing codes and requirements.

LIMITATIONS

R-Matte® Plus-3 is not recommended, nor warranted, for use as a commercial roofing insulation for use directly under membrane systems. See Rmax, Inc. for suitable commercial roofing insulation products.

R-Matte® Plus-3 is not a structural panel. Stud walls insulated with R-Matte® Plus-3 must be properly braced for lateral loads according to the requirements of the local building codes.

THERMAL PROPERTIES/PRODUCT DATA "R" means resistance to heat flow. The higher the R-value, the greater the insulating power

Nominal Thickness	Thermal[1] R-Value	Bundle Data (48" x 96")		Truckload Data (48" x 96")	
		Pieces	Sq. Ft.	Pieces	Sq. Ft.
0.5"	3.2	96	3,072	2,304	73,728
0.625"	4.0	76	2,432	1,824	58,368
0.75"	5.0	60	1,920	1,440	46,080
1.0"	6.4	48	1,536	1,152	36,864

[1]Thermal values are determined by using ASTM C518 test method at 75°F mean temperature on material conditioned according to PIMA Technical Bulletin No. 101.

Embedded Truss Anchors

META12, META14, META16, META18, META20, META22, META24, META40, HETA12, HETA16, HETA20, HETA24, HETA40, HETAL12, HETAL16, HETAL20, HHETA12, HHETA16, HHETA20, HHETA24, HHETA40

2. SCOPE OF EVALUATION

Load Evaluation as a Structural Component using the requirements of the Florida Building and Residential Codes

3.11 MSTCB3 Pre-bent Strap Tie. The MSTC48B3 and MSTC66B3 Pre-bent Strap Ties are designed to transfer a heavy tension load from framing on an upper story wall to a beam or header on the story below. For example, this could be from shearwall overturning or a large girder truss uplift load. They are installed with 10d common nails, with a minimum of four nails in the bottom of the beam or header. Allowable loads are shown in Table 8. The straps are manufactured from 14 ga. steel meeting ASTM A-653 SS Grade 50, Class 1. They are coated with a G90 galvanized finish.

3.12 META, HETA, HETAL, HHETA Embedded Truss Anchors. Embedded Truss Anchors are used to anchor a wood member (usually a truss) to a masonry or concrete wall. Embedded truss anchors fasten to a single-ply wood truss with 10d×1½ nails or to a multiple-ply truss with 16d common nails. They are embedded in the masonry or concrete wall to a depth indicated on the side of the anchor (4" for META, HETA, and HETAL, and $5^{1}/_{16}$" for HETAL). The strap portion of the anchor is 1⅛" wide. Allowable loads are shown in Table 9 for single installations and Table 10 for double installations. The anchors are manufactured from steel meeting ASTM A-653 SS Grade 50, Class 1, with the exception of the truss seat of the HETAL which is manufactured from steel meeting ASTM A-653 SS Grade 33. Steel thickness is as specified in Table 9. The Embedded Truss Anchors are coated with a G90 galvanized finish.

4. MATERIALS

4.1 Steel. Steel specifications for each product listed in this evaluation report shall be as indicated in the previous section. In addition to the standard G90 finish, some products are available with a G185 finish, indicated as Z-Max. Allowable loads published in this report will apply to G185 products as well as G90 products.

4.2 Wood. Wood members to which these connectors are fastened shall be solid sawn lumber, glued-laminated lumber, or structural composite lumber having dimensions consistent with the connector dimensions shown in Tables1 through 4. Unless otherwise noted, lumber shall be Southern Pine or Douglas Fir-Larch having a minimum specific gravity of 0.50. Where indicated by SPF, lumber shall be Spruce-Pine-Fir having a minimum specific gravity of 0.42.

4.3 Nails and Bolts. Unless noted otherwise, nails shall be common nails. Nails shall comply with ASTM F 1667 and shall have the minimum bending yield strengths F_{yb}:

Nail Pennyweight	Nail Shank Diameter (inch)	F_{yb} (psi)
10d Common	0.148	90,000
16d Sinker	0.148	90,000
16d Common	0.162	90,000

Fasteners for galvanized connectors in pressure-preservative treated wood shall be hot-dipped zinc coated galvanized steel, except where otherwise permitted by the treatment manufacturer. Fasteners for stainless steel connectors shall be stainless steel.

4.4 Concrete/Masonry. Concrete and Masonry design specifications shall be the stricter of the specifications by the engineer of record, the Florida Building Code minimum standards, or the following:

Material	Specification	Minimum Compressive Strength
Concrete, f'c	-	2500 psi
Masonry, f'm	ASTM E447	1500 psi
Masonry Unit	ASTM C90	1900 psi
Mortar	ASTM C270 Type S	1800 psi (or by proportions)
Grout	ASTM C476	2000 psi (or by proportions)

5. INSTALLATION

Installation shall be in accordance with this report and the most recent edition of the Simpson Strong-Tie *Wood Construction Connectors* catalog. Information in this report supersedes any conflicting information between information provided in this report and the catalogue, the information in this report supersedes the catalogue.

6. SUBSTANTIATING DATA

Test data submitted by Testing Engineers Inc. and Product Testing, Inc., and signed and sealed calculations performed by Jeremy Gilstrap, P.E. in accordance with the 2004 Florida Building and Residential Codes.

7. FINDINGS

Upon review of the data submitted by Simpson Strong-Tie, it is my opinion that the connectors as described in this report conform with or are a suitable alternative to the standards and sections in the 2004 Florida Building and Residential Code editions listed in section 10 of this report. Connectors shall be installed in accordance with this report. Maximum allowable loads shall not exceed the allowable loads listed in this report.

8. LIMITATIONS

1. Maximum allowable loads shall not exceed the allowable loads listed in this report. Allowable loads listed in this report are based on allowable stress design. The loads in this report are not applicable to Load and Resistance Factor Design.
2. Capacity of wood members is not covered by this report. Capacity of wood members must be checked by the building designer.
3. Allowable loads for more than one direction for a single connection cannot be added together. A design load which can be divided into components in the directions given must be evaluated as follows:
   (Design Uplift/Allowable Uplift) + (Design Lateral Parallel to Plate/Allowable Lateral Parallel to Plate) + (Design Lateral Perp. to Plate/Allowable Lateral Perp. to Plate) < 1.0

9. ALLOWABLE LOADS

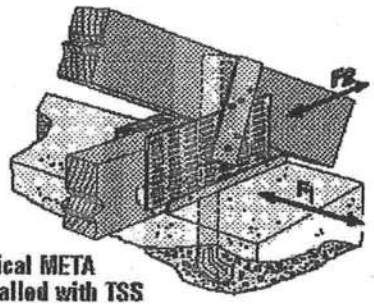
The tables that follow provide the allowable loads for the aforementioned products.

TABLE 9 ALLOWABLE LOADS

Model No.	Ga	H	Fasteners and Uplift								Lateral Loads	
			160 Load Duration Increase				133 Load Duration Increase				133/160	
			1 Ply So. Pine Truss		2 or 3 Ply So. Pine Truss		1 Ply So. Pine Truss		2 or 3 Ply So. Pine Truss		F_1 (parallel to wall)	F_2 (perpen. to wall)
			Fasteners	Load	Fasteners	Load	Fasteners	Load	Fasteners	Load		
META12	18	8	7-10d×1½	1450	6-16d	1450	7-10d×1½	1240	7-16d	1450	280	725
META14		10	7-10d×1½	1450	6-16d	1450	9-10d×1½	1450	7-16d	1450	280	725
META16		12	7-10d×1½	1450	6-16d	1450	9-10d×1½	1450	7-16d	1450	280	725
META18		14	7-10d×1½	1450	6-16d	1450	9-10d×1½	1450	7-16d	1450	280	725
META20		16	6-10d×1½	1270	5-16d	1245	8-10d×1½	1415	6-16d	1250	280	725
			7-10d×1½	1450	6-16d	1450	9-10d×1½	1450	7-16d	1450	280	725
META22		18	7-10d×1½	1450	6-16d	1450	9-10d×1½	1450	7-16d	1450	280	725
META24		20	7-10d×1½	1450	6-16d	1450	9-10d×1½	1450	7-16d	1450	280	725
META40		36	7-10d×1½	1450	6-16d	1450	9-10d×1½	1450	7-16d	1450	280	725
HETA12	16	8	7-10d×1½	1520	7-16d	1780	7-10d×1½	1265	7-16d	1475	280	725
HETA16		12	9-10d×1½	1810	8-16d	1810	10-10d×1½	1810	9-16d	1810	280	725
HETA20		16	8-10d×1½	1735	7-16d	1780	9-10d×1½	1630	8-16d	1690	280	725
			9-10d×1½	1810	8-16d	1810	10-10d×1½	1810	9-16d	1810	280	725
HETA24		20	9-10d×1½	1810	8-16d	1810	10-10d×1½	1810	9-16d	1810	280	725
HETA40		36	9-10d×1½	1810	8-16d	1810	10-10d×1½	1810	9-16d	1810	280	725
HHETA12	14	8	7-10d×1½	1565	7-16d	1820	7-10d×1½	1305	7-16d	1520	435	815
HHETA16		12	10-10d×1½	2235	9-16d	2235	12-10d×1½	2235	11-16d	2235	435	815
HHETA20		16	9-10d×1½	2010	8-16d	2080	11-10d×1½	2050	10-16d	2170	435	815
			10-10d×1½	2235	9-16d	2235	12-10d×1½	2235	11-16d	2235	435	815
HHETA24		20	10-10d×1½	2235	9-16d	2235	12-10d×1½	2235	11-16d	2235	435	815
HHETA40		36	10-10d×1½	2235	9-16d	2235	12-10d×1½	2235	11-16d	2235	435	815
HETAL12	16	7	10-10d×1½	1085	10-16d	1270	10-10d×1½	905	10-16d	1055	415	1100
HETAL16		11	14-10d×1½	1810	13-16d	1810	15-10d×1½	1810	14-16d	1810	415	1100
HETAL20		15	14-10d×1½	1810	13-16d	1810	15-10d×1½	1810	14-16d	1810	415	1100

Notes:

1. Loads do not include a stress increase on the strength of the steel. No further increases are permitted. Reduce loads where other loads govern.
2. Five nails must be installed into the truss seat of the HETAL
3. Parallel-to-plate load towards face of HETAL is 1975 lbs.
4. Except for HETAL straps, lateral loads are based on a minimum installation of 12 nails and the strap wrapped over the heel
5. Minimum f'c is 2,000psi
6. It is acceptable to use a reduced number of fasteners in a product provided that there is a reduction in load capacity. The load per nail can be approximated by dividing the allowable load by the number of fasteners. This concept applies to all member sizes. There should be a minimum of 4 nails installed in the strap.



Typical META Installed with TSS

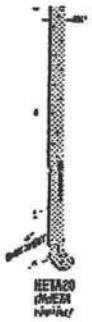
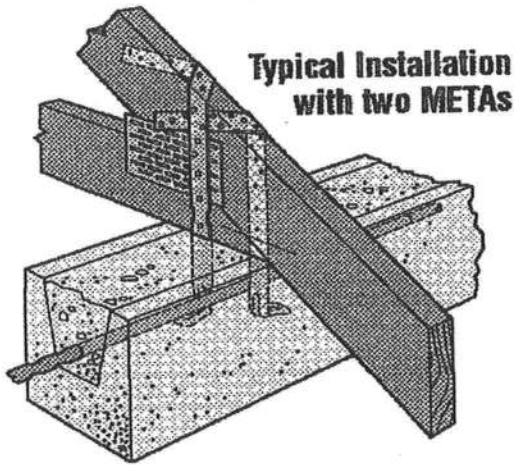


TABLE 10 ALLOWABLE LOADS FOR DOUBLE EMBEDDED TRUSS ANCHORS										
Double Embedded Anchor Installation Into Grouted CMU Bond Beam										
Model No.	Uplift - 160 Load Duration Increase				Uplift - 133 Load Duration Increase				Lateral Loads 133/160	
	1 Ply Southern Pine Truss		2 or 3 Ply Southern Pine Truss		1 Ply Southern Pine Truss		2 or 3 Ply Southern Pine Truss		F_1 (parallel to wall)	F_2 (perpen. to wall)
	Fasteners	Load	Fasteners	Load	Fasteners	Load	Fasteners	Load		
META	10-10d×1½	1985	14-16d	1900	12-10d×1½	1985	14-16d	1900	1210	1160
HETA	10-10d×1½	2035	12-16d	2500	12-10d×1½	2035	14-16d	2500	1225	1520
HHETA	10-10d×1½	2035	12-16d	2500	12-10d×1½	2035	14-16d	2500	1225	1520

Notes:

1. Minimum f'c is 2,500psi.
2. Install with spoons facing outward and spaced no more than 1/8" wider than the truss width.
3. Install half of the required number of fasteners in each strap.
4. For uplift loads for poured concrete tie beam applications with 2 or 3 ply trusses, increase the META load by 35%, the HETA load by 8%, and the HHETA load by 34%. Listed lateral loads apply to concrete applications.
5. Lateral loads apply only to anchors spaced a minimum of 3" apart.



Typical Installation with two METAs

10. CODE REFERENCES:

Florida Building Code 2004 Edition

Section 104.11	Alternate Materials and Methods
Chapter 1714.2	Load Test Procedure Specified
Chapter 21	Masonry
Chapter 22	Steel
Chapter 23	Wood

Florida Residential Code 2004 Edition

R101.2.1	Scope
R4407	HVHZ Masonry
R4408	HVHZ Steel
R4409	HVHZ Wood

11. IDENTIFICATION:

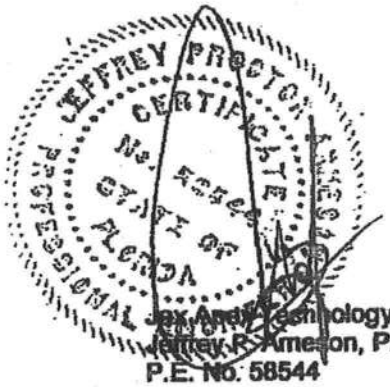
Each connector covered by this report shall be stamped with the manufacturer's name and/or trademark and the product name.

12. PERIOD OF ISSUANCE:

The content of this report expires on October 1st, 2008. For information on this report, contact Apex Technology. (904) 821-5200

13. CERTIFICATION OF INDEPENDENCE:

Jeffrey P. Ameson, the Florida engineer who prepared this report, and Apex Technology have no financial interest in the manufacturing, sales, or distribution of the products included in this report. Jeffrey P. Ameson and Apex Technology comply with all criteria as stated in Florida Administrative Code Chapter 9B-72.110.



Apex Technology, Inc.
Jeffrey P. Ameson, P.E.
P.E. No. 58544
August 5, 2005

SIMPSON

META/HETA/HHETA/HETAL/TSS

EMBEDDED TRUSS ANCHORS AND TRUSS SEAT SNAP-IN

The embedded truss anchor series provides an engineered method to properly attach roof trusses to concrete and masonry walls. The products are designed with staggered nail patterns for greater uplift resistance. New to this year's catalog is information regarding the use of two anchors on single- and multi-ply trusses.

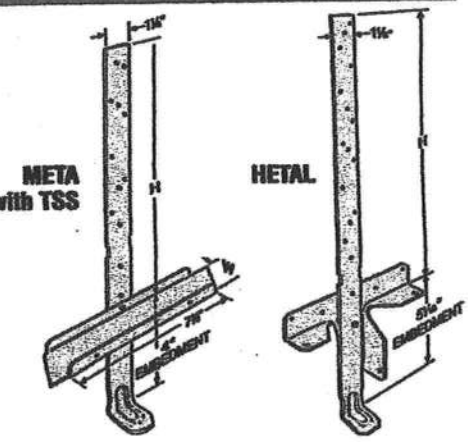
The TSS, a companion product of the META, provides a moisture barrier between the concrete and truss. The preassembled unit is riveted with no height adjustment.

MATERIAL: HHETA–14 gauge; HETA–16 ga; HETAL strap 16 gauge, truss seat 18 gauge; META–18 gauge; TSS–22 gauge.

FINISH: Galvanized. Some products available in Z-MAX; see Corrosion Resistance, page 5.

INSTALLATION:
- Use all specified fasteners. See General Notes.
- The META, HETA and HHETA are embedded 4" into a concrete beam or grouted block wall; HETAL is embedded 5¹⁄₁₆".
- Do not drive nails through the truss plate on the opposite side of the truss, which could force the plate off the truss.
- The TSS moisture barrier may be preattached to the truss using 6d commons.

CODES: See page 10 for Code Listing Key Chart.



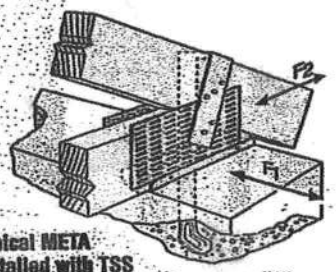
Model No.	W
TSS2	1¾
TSS2-2	3½
TSS4	3⅝

Model No.	H	Fasteners and Uplift								Lateral Loads (133 & 160)				Code Ref.
		133 Load Duration Increase				160 Load Duration Increase				DF/SP		SPF/HF		
		1 Ply So. Pine Truss		2 or 3 Ply So. Pine Truss		1 Ply So. Pine Truss		2 or 3 Ply So. Pine Truss						
		Fasteners	Load	Fasteners	Load	Fasteners	Load	Fasteners	Load	F_1	F_2	F_1	F_2	
META12	8	7-10dx1½	1240	7-16d	1450	7-10dx1½	1450	6-16d	1450	335	635	270	545	160
META14	10	9-10dx1½	1450	7-16d	1450	7-10dx1½	1450	6-16d	1450	335	635	270	545	
META16	12	9-10dx1½	1450	7-16d	1450	7-10dx1½	1450	6-16d	1450	335	635	270	545	
META18	14	9-10dx1½	1450	7-16d	1450	7-10dx1½	1450	6-16d	1450	335	635	270	545	
META20 ×	16	8-10dx1½	1415	6-16d	1250	6-10dx1½	1270	5-16d	1245	335	635	270	545	
		9-10dx1½	1450	7-16d	1450	7-10dx1½	1450	6-16d	1450	335	635	270	545	
META22 ×	18	9-10dx1½	1450	7-16d	1450	7-10dx1½	1450	6-16d	1450	335	635	270	545	
META24	20	9-10dx1½	1450	7-16d	1450	7-10dx1½	1450	6-16d	1450	335	635	270	545	
META40	36	9-10dx1½	1450	7-16d	1450	7-10dx1½	1450	6-16d	1450	—	—	—	—	
HETA12	8	7-10dx1½	1265	7-16d	1475	7-10dx1½	1520	7-16d	1780	335	730	270	625	8, 62
HETA16	12	10-10dx1½	1810	9-16d	1810	9-10dx1½	1810	8-16d	1810	335	730	270	625	
HETA20 ×	16	9-10dx1½	1630	8-16d	1690	8-10dx1½	1735	7-16d	1780	335	730	270	625	
		10-10dx1½	1810	9-16d	1810	9-10dx1½	1810	8-16d	1810	335	730	270	625	
HETA24 ×	20	10-10dx1½	1810	9-16d	1810	9-10dx1½	1810	8-16d	1810	335	730	270	625	170
HETA40	36	10-10dx1½	1810	9-16d	1810	9-10dx1½	1810	8-16d	1810	—	—	—	—	
HHETA12	8	7-10dx1½	1305	7-16d	1520	7-10dx1½	1565	7-16d	1820	335	730	270	625	160
HHETA16	12	12-10dx1½	2235	11-16d	2235	10-10dx1½	2235	9-16d	2235	335	730	270	625	
HHETA20	16	11-10dx1½	2050	10-16d	2170	9-10dx1½	2010	8-16d	2080	335	730	270	625	
		12-10dx1½	2235	11-16d	2235	10-10dx1½	2235	9-16d	2235	335	730	270	625	
HHETA24	20	12-10dx1½	2235	11-16d	2235	10-10dx1½	2235	9-16d	2235	335	730	270	625	
HHETA40	36	12-10dx1½	2235	11-16d	2235	10-10dx1½	2235	9-16d	2235	—	—	—	—	
HETAL12	7	10-10dx1½	905	10-16d	1055	10-10dx1½	1085	10-16d	1270	415	1100	355	945	8, 62
HETAL16	11	15-10dx1½	1810	14-16d	1810	14-10dx1½	1810	13-16d	1810	415	1100	355	945	
HETAL20	15	15-10dx1½	1810	14-16d	1810	14-10dx1½	1810	13-16d	1810	415	1100	355	945	

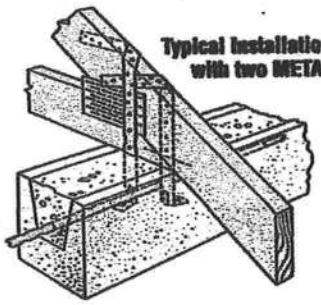
1. Loads include a 33% or 60% load duration increase on the fasteners for seismic or wind loading, but do not include a 33% stress increase on the steel capacity. Refer to page 12 for further explanation.
2. Five nails must be installed into the truss seat of the HETAL.
3. Parallel-to-plate load towards face of HETAL is 1975 lbs.
4. Lateral loads are based on a minimum installation of 12 nails and the strap wrapped over the heel.
5. Minimum f'c is 2,000psi.
6. It is acceptable to use a reduced number of fasteners in a product provided that there is a reduction in load capacity. The load per nail can be approximated by dividing the allowable load by the number of fasteners. This concept applies to all member sizes. There should be a minimum of 4 nails installed in the strap.

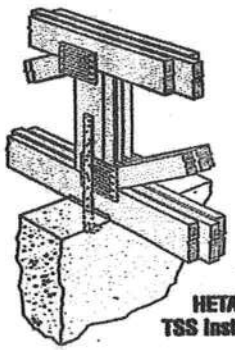
Model No.	Double Embedded Anchor Installation Into Grouted CMU Bond Beam								Lateral Loads (133 & 160)				Code Ref.
	133 Load Duration Increase				160 Load Duration Increase				DF/SP		SPF/HF		
	1 Ply So. Pine Truss		2 or 3 Ply So. Pine Truss		1 Ply So. Pine Truss		2 or 3 Ply So. Pine Truss						
	Fasteners	Load	Fasteners	Load	Fasteners	Load	Fasteners	Load	F_1	F_2	F_1	F_2	
META	12-10dx1½	1985	14-16d	1900	10-10dx1½	1985	14-16d	1900	1210	1160	1040	1000	160
HETA	12-10dx1½	2035	14-16d	2500	10-10dx1½	2035	12-16d	2500	1225	1520	1055	1305	

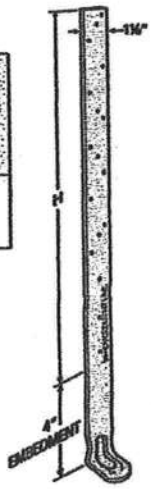
1. For concrete tie beam applications for 2 or 3 ply trusses, increase the META load 35% and the HETA load 8%.
2. Divide total number of fasteners equally between both straps.
3. Minimum f'c is 2,500 psi.
4. See Instruction to the Designer page 9 for loads in multiple directions.
5. Lateral loads are based on a minimum installation of 12 nails and the strap wrapped over the heel.



Typical META Installed with TSS


Typical Installation with two METAs


Typical HETA20 with TSS Installation



HETA20 (HHETA similar)

/MGT/HGT HEAVY GIRDER TIEDOWNS

SIMPSON Strong-Tie

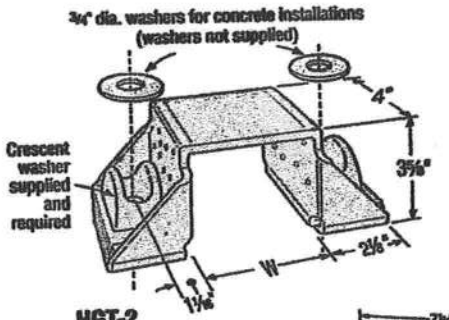
GT provide lighter load alternatives for
he HGT-4 is sized for 4-2x widths. This series
uplift resistance for wood frame and concrete block
n. The HGT can be installed on trusses and beams
chord slopes from 3:12 to 8:12. Available in 2-ply,
and 4-ply widths.

MATERIAL: LGT—14 ga; MGT—12 ga; HGT—7 ga.

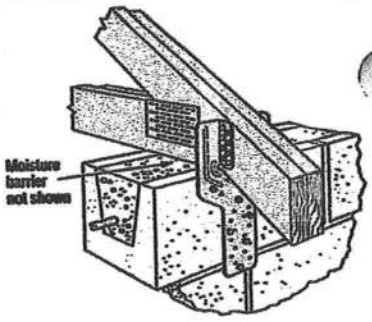
FINISH: HGT—Simpson gray paint;
LGT, MGT— galvanized

INSTALLATION:
- When the HGT-3 is used with a 2-ply girder or beam, shimming is required. Fasten to act as one unit.
- Attach to grouted concrete block with a minimum one #5 rebar horizontal in the top lintel block.
- Minimum f'_c = 2500 psi maximum aggregate ⅜".

CODES: See page 10 for Code Listing Key Chart.

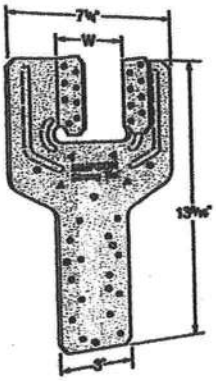


HGT-2
(HGT-3 and HGT-4 similar)

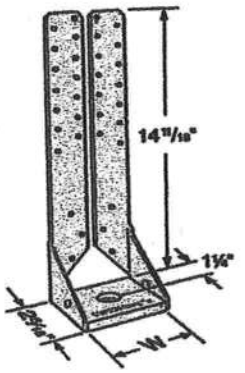


Typical LGT2 Installation into Masonry

Model No.	W	O.C. Dim Between Anchors	Fasteners: Anchor Dia. Concrete	Fasteners: Girder	Avg Ult	DFL/SP Allowable Loads (133/160)	SPF Allowable Loads (133/160)	Code Ref.
MGT	3¾	—	1-⅝	22-10d	13005	3965	3330	160
HGT-2	3⁵⁄₁₆	5¼	2-¾	16-10d	35400	10980	6485	6,38, 62
HGT-3	4¹⁵⁄₁₆	7⅜	2-¾	16-10d	35580	10530	9035	
HGT-4	6⁹⁄₁₆	9	2-¾	16-10d	28805	9250	9250	



LGT2

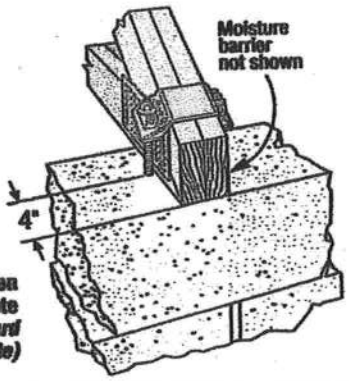


MGT

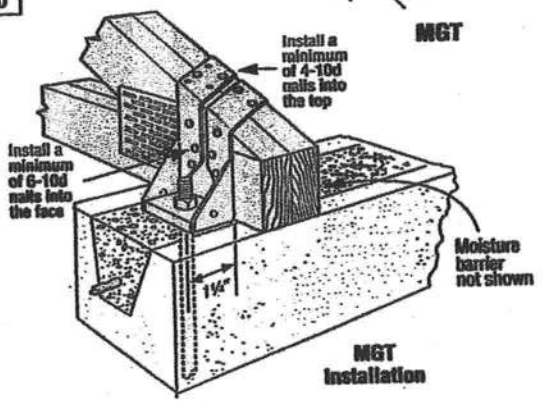
Masonry Application

Model No.	W	O.C. Dim Between Anchors	Fasteners: CMU	Fasteners: Concrete	Fasteners: Girder	Avg Ult	DFL/SP Allowable Loads (133/160)	SPF Allowable Loads (133/160)	Code Ref.
LGT2	3½	—	7-¼x2¼ Titen	7-¼x1¾ Titen	16-16d Sinker	6533	2150	1850	160

1. Attached members must be designed to sist applied loads.
2. To achieve the loads listed, anchorage into a ncrete block bond beam shall be designed y the building designer.
3. To achieve the loads listed for the HGT, anchorage into a 8" wide concrete tie-beam can be made using Simpson SET epoxy with a ¾" diameter anchor and a minimum embedment depth of 12".
4. Allowable loads have been increased 33% and 60% for earthquake or wind loading; no further increase allowed; reduce where other loads govern.



Typical HGT-2 Installation into Concrete
(¾" diameter standard washers required for concrete)



MGT Installation

MTSM/HTSM TWIST STRAPS

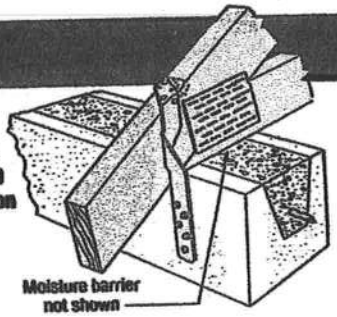
The MTSM and HTSM offer high strength truss to masonry connections.

MATERIAL: MTSM–16 gauge; HTSM–14 gauge

FINISH: Galvanized. Some products available in stainless steel and Z-MAX; see Corrosion-Resistance, page 5.

INSTALLATION:
- Use all specified fasteners. See General Notes.
- Attach to grouted concrete block with a minimum one #5 rebar horizontal.
- Minimum f'_c = 2500 psi maximum aggregate ⅜".

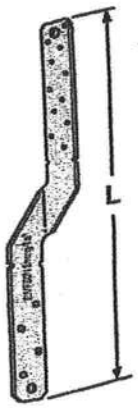
CODES: See page 10 for Code Listing Key Chart.



Typical MTSM20 Installation

Model No.	L	Fasteners[2]: Truss	Fasteners[2]: CMU	Fasteners[2]: Concrete	Douglas Fir-Larch/So Pine Allowable Uplift Loads[1]: 10d (133/160)	Douglas Fir-Larch/So Pine Allowable Uplift Loads[1]: 10dx1½" (133)	Douglas Fir-Larch/So Pine Allowable Uplift Loads[1]: 10dx1½" (160)	Spruce-Pine-Fir Allowable Uplift Loads[1]: 10d (133/160)	Spruce-Pine-Fir Allowable Uplift Loads[1]: 10dx1½" (133)	Spruce-Pine-Fir Allowable Uplift Loads[1]: 10dx1½" (160)	Code Ref.
MTSM16	16	7-10d	4-¼x2¼ Titen	4-¼x1¾ Titen	860	840	860	750	730	750	160
MTSM20	20	7-10d	4-¼x2¼ Titen	4-¼x1¾ Titen	860	840	860	750	730	750	
HTSM16	16	8-10d	4-¼x2¼ Titen	4-¼x1¾ Titen	1175	1045	1175	1020	905	1020	
HTSM20	20	10-10d	4-¼x2¼ Titen	4-¼x1¾ Titen	1175	1045	1175	1020	1020	1020	

MTSM20



MTSM16

1. Loads have been increased 33% and 60% for earthquake or wind loading; no further increase allowed; reduced where other loads govern.
2. Twist straps do not have to be wrapped over the truss to achieve the allowable load.
3. Minimum edge distance for Titens is 1½".

ALUM FASICA & SOFFIT

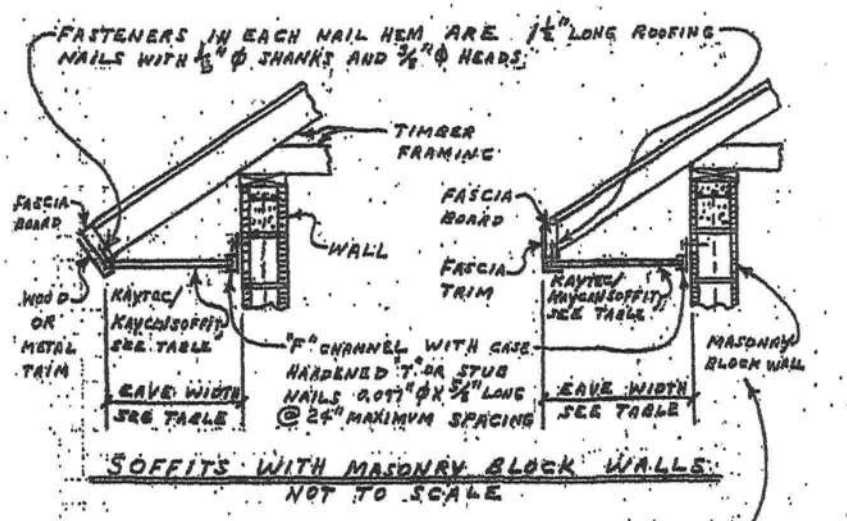
ALLOWABLE DESIGN WIND PRESSURES IN PSF

KAYTEC/KAYCAN SOFFIT TYPE	EAVE WIDTH IN INCHES				
	12"	15"	18"	21"	24"
SP-600 (ALUMINUM) 16" VENTED CATALOG # 0605	+/-72.6	+/-58.1	+/-48.4	+/-41.5	+/-36.3
SP-600 (ALUMINUM) 16" SOLID CATALOG # 0606	+/-72.2	+/-57.7	+/-48.1	+/-41.2	+/-36.1
VENTED PANEL 12" (ALUMINUM) CATALOG # 9509	+/-96.6	+/-77.2	+/-64.4	+/-55.2	+/-48.3
SOLID PANEL 12" (ALUMINUM) CATALOG # 9510	+/-96.0	+/-76.8	+/-64.0	+/-54.9	+/-48.0
FULL O-VENT T4 (12") VINYL PRODUCT CODE: 0622	+/-47.5	+/-36.5	+/-29.7	+/-25.2	+/-21.6
ECO SOLID, CENTER VENT & FULL VENT T4 (12") VINYL PROD. CODES 0623, 0624, 0631	+/-45.3	+/-34.9	+/-28.4	+/-23.9	+/-20.6
SOLID, CENTER VENT & FULL VENT T4 (12") VINYL PROD. CODES 0623, 0624, 0631	+/-45.3	+/-34.9	+/-28.4	+/-23.9	+/-20.6
SOLID & VENTED OE (10") VINYL PROD. CODES 0616, 0618	+/-54.4	+/-41.8	+/-34.0	+/-28.6	+/-24.7
BEADED, SOLID AND VENTED T8.67 (8") VINYL PROD. CODES: 0639, 0635	+/-68.0	+/-52.3	+/-42.5	+/-35.8	+/-30.9

GENERAL NOTES

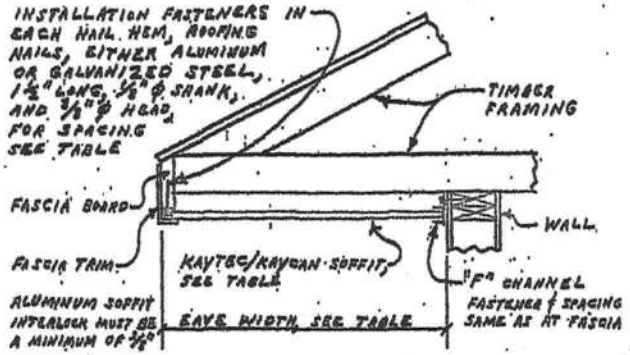
1. DESIGN PRESSURES LISTED IN TABLE ARE BASED ON A RATIONAL ANALYSES FOR ALUMINUM SOFFITS DONE IN HR ENGINEERING PROJECT 04020003, AND A COMPARATIVE ANALYSES FOR VINYL SOFFITS DONE IN 04050001 THAT ARE IN CONFORMANCE WITH FLORIDA BUILDING CODE 2004 SECTION 1609 "WIND LOADS".

2. FLORIDA BUILDING CODE 2004 DOES NOT DIRECTLY MANDATE WIND LOAD DESIGN PRESSURES ON SOFFITS.



SOFFITS WITH MASONRY BLOCK WALLS.
NOT TO SCALE

ALTERNATE WALL DETAIL
NOT TO SCALE



SOFFIT WITH WOOD FRAMED WALL
NOT TO SCALE

HR Engineering, Inc.	DATE: 14 JULY 2005	PROJECT NO. 05070005 SHEET 1 OF 1
CLIENT: KAYTEC INC.	BY: A. REEVES	PROJECT NAME: KAYTEC/RAYCAN SOFFITS

Allen N. Reeves
14 July 2005

Accessories

Technical

Fax 706 454-3622

PULLOUT IN CONCRETE (3145 PSI, cured 40 days)

Anchor Diameter	Depth of Embedment in Solid Material (inches) 1"	1-1/4	1-1/2"	1-3/4"
3/16"	341 lbs.	581 lbs.	883 lbs.	1059 lbs.
1/4"	718 lbs.	1138 lbs.	1537 lbs.	1880 lbs.

Test Number CH3932/Pittsburgh Testing Laboratories

PULLOUT IN HOLLOW BLOCK

Anchor Diameter	Depth of Embedment in Solid Material (inches) 1"	1-1/4	1-1/2"	1-3/4
3/16"	209 lbs.	357 lbs.	468 lbs.	547 lbs.
1/4"	406 lbs.	615 lbs.	851 lbs.	984 lbs.

Test Number CH3748/Pittsburgh Testing Laboratories

SHEAR STRENGTH

Anchor Diameter	Anchor Embedment	Shear Strength 3145 PSI Stone Rock Concrete	Shear Strength Lightweight Hollow Block
3/16"	1-1/4"	852 lbs.	731 lbs.
1/4"	1-1/4"	1604 lbs.	1058 lbs.

Test Number CH3932/Pittsburgh Testing Laboratories

Fixture Thickness	Recommended Anchor Length	Drill Bit Length
0" to 1/4"	1-3/4"	3-1/2"
1/4" to 3/4"	1-3/4"	3-1/2"
3/4" to 1-1/4"	2-1/4"	4-1/2"
1-1/4" to 1-3/4"	2-3/4"	4-1/2"
1-3/4" to 2-1/4"	3-1/4"	5-1/2"
2-1/4" to 2-3/4"	3-3/4"	5-1/2"
2-1/2" to 3"	4"	5-1/2"

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800.727.5633

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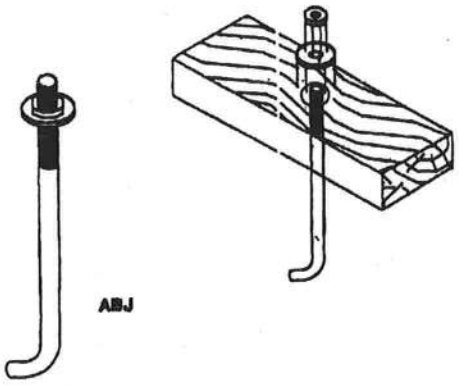
Technical Support (800) SE SPECS - (800) 737-7327

ANCHOR BOLT WITH NUT & 1" WASHER

Design Features:
- Bolt only with code minimum embedment with 3000 PSI concrete will resist 4,800 lbs, see washer capacity below.

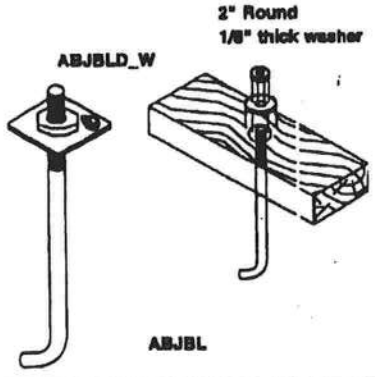
Materials: Black and galvanized steel

Footnote: Other sizes available on request. All references to bolts or MB's are structural quality through bolts equal to or better than ASTM Standard A307.



SIZE	PRODUCT CODE	DESCRIPTION	PER CTN
1/2 X8	ABJBL8C	Black	50
1/2 X8	ABJBL8C	Black	50
1/2 X10	ABJBL10C	Black	50
1/2 X12	ABJBL12C	Black	50
1/2 X14	ABJBL14C	Black	50
1/2 X16	ABJBL16C	Black	50
1/2 X18	ABJBL18C	Black	50
1/2 X8	ABJGA8	Galv.	50
1/2 X8	ABJGA8	Galv.	50
5/8 X10	ABJBL10D	Black	50
5/8 X12	ABJBL12D	Black	50

ANCHOR BOLT (WITH NUT & 2"X2"X1/8" WASHER)



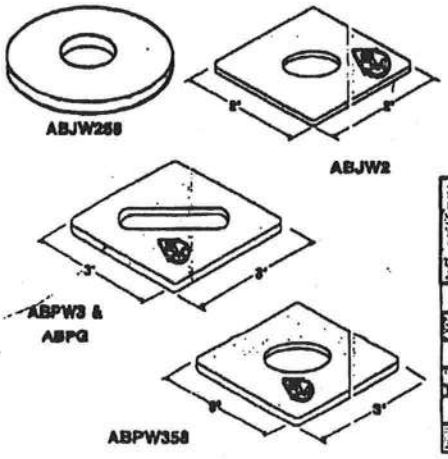
Design Features:
- 6" minimum embedment with 3000 PSI concrete will resist 1,635 lbs.

Materials: Black steel

Footnote: *Supplied with a 2" round washer 1/8" thick.
Wind uplift loads are based on the shear capacity of No. 2 Southern Pine. Compression perpendicular to grain 565 (psi).

SIZE	PRODUCT CODE	DESCRIPTION	PER CTN
1/2x8	ABJBL8W	Black	50
1/2x8	ABJBL8W	Black	50
1/2x10	ABJBL10W	Black	50
5/8x10	ABJBL10DW*	Black	50
5/8x12	ABJBL12DW*	Black	50

ANCHOR BOLT WASHER/PLATE



Design Features:
- The washer/plate adds increased resistance to wind uplift for bottom slil plate anchor bolt.

Materials: 10 Gauge Galvanized & 1/8 & 1/4 Black steel

Footnote: *Also available in 50# ctn approximately 345 pcs.
Wind uplift loads are based on the shear capacity of No. 2 Southern Pine. Compression perpendicular to grain 565 (psi).
+Round hole in washer.

SIZE (INCHES)	GAUGE	PRODUCT CODE	ANCHOR BOLT (DIAMETER)	ALLOWABLE LOADS WIND / EARTHQUAKE UPLIFT 133%	UPLIFT 100%	PER CTN
2x2	1/8	ABJW2*	1/2"	1635	1635	50
2" Round	1/8	ABJW2SS*	5/8"	1470	1470	50
3x3	10	ABPG12	1/2"	3675	3675	40
3x3	10	ABPG58	5/8"	3675	3675	40
3x3	1/4	ABPW3	1/2"	4800	4800	40
3x3	1/4	ABPW358	5/8"	4800	4800	40

Cement Precast Products, Inc.

INSTALLATION INSTRUCTIONS

Version 1.0

February 28, 2005

Cement Precast Products, Inc.

PRECAST LINTELS
(6", 8" AND 12" WIDE)

In order for proper installation of precast and prestressed lintels, DANSCO Engineering, LLC, has prepared this installation instructions to be used in conjunction with quality control methods of the contractor and good construction practices.

Preparation

1. All reinforcements shall be cleaned by removing mud, oil, or other materials that will adversely affect or reduce bond at the time mortar or grout is placed. Reinforcement with rust, mill scale, or a combination of both will be accepted as being satisfactory without cleaning or brushing provided the dimensions and weights, including heights of deformations, of a cleaned sample are not less than required by the ASTM specification covering this reinforcement in this Specification.

2. Prior to placing masonry, remove laitance, loose aggregate, and anything else that would prevent mortar from bonding to the lintel.

3. Debris – Construct grout spaces free of mortar dropping, debris, loose aggregates, and any material deleterious to masonry grout.

Lintel / masonry erection

1. Placing lintel – Length of bearing of lintels on their support shall be a minimum of 4 inches for filled lintels and 6 ½ inches for unfilled lintels in the direction of span. Provide a temporary support for lintels that are greater than 14' – 0"; the temporary support shall not be removed until 2 days after the grout placement.

2. Placing mortar and units (for composite lintels only)
   - Bed and head joints – Unless otherwise required, construct 3/8 inches thick bed and head joints. Construct joints that also conform to the following:
   a) Unless otherwise required, tool joint with a round jointer when the mortar is thumbprint hard.
   b) Remove masonry protrusions extending ½ inches or more into cells or cavities to be grouted.

   - Place hollow units so:
   a) Face shells of bed joints are fully mortared.
   b) Head joints are mortared, a minimum distance from each face equal to the face shell thickness of the unit.

c) Vertical cells to be grouted are aligned and unobstructed openings for grout are provided in accordance with the Project Drawings.

- Place clean units while the mortar is soft and plastic. Remove and relay in fresh mortar any unit disturbed to the extend that initial bond is broken after initial positioning.

Reinforcement installation

a) Support and fasten reinforcement together to prevent displacement beyond the tolerances allowed by construction loads or by placement of grout or mortar.
b) Completely embed reinforcing bars in grout in accordance with ACI530-02 Article 3.5.
c) Maintain clear distance between reinforcing bars and any face of masonry unit or formed surface, but not less than ¼ inches for fine grout or ½ inches for coarse grout.
d) Splice only where indicated on the Project Drawings, unless otherwise acceptable.
e) Unless accepted by the Architect/ Engineer, do not bend reinforcement after it is embeded in grout or mortar.
f) Place joint reinforcement so that longitudinal wires are embeded in mortar with a minimum cover of ½ inches when not exposed to weather or earth and 5/8 inches when exposed to weather or earth.

Grout placement

a) Placing time – Place grout within 1½ hours from introducing water in the mixture and prior to initial set.
b) Confinement – Confine grout to the areas indicated on the Project Drawings. Use material to confine grout that permits bond between masonry units and mortar.
c) Grout pour height – Do not exceed the maximum grout pour height given in the ACI530-02 Table 7.
d) Grout lift height – Place grout in lifts not exceeding 5 feet.
e) Consolidation – Consolidate grout at the time of placement.
   - Consolidate grout pours 12 inches or less in height by mechanical vibration or by puddling.
   - Consolidate pours exceeding 12 inches in height by mechanical vibration and reconsolidate by mechanical vibration after initial water loss and settlement has occurred.

Field quality control

a) Verify masonry unit strength, f'm in accordance with the ACI530-02 Article 1.6.
b) Sample and test grout as required by the ACI530-02 Articles 1.4B and 1.6.

DE
DANSCO ENGINEERING, LLC

P.O. Box 3400
Apollo Beach, FL 33572

Telephone (813) 645-0166
Facsimile (813) 645-9698

E-mail: dengine1@danscoengineering.com
CA25948

Cement Precast Products, Inc.

Precast concrete lintels 6", 8" and 12" wide have been reviewed by our office for compliance with the following codes:

- Florida Building Code 2004 Residential, sections R402.2 and R606.
- Florida Building Code 2004 Building, sections 1901.2 and 2107.

Our review is limited to the precast concrete lintels together with verification that they are accurate and appropriate for use according to the requirements of the above-referenced codes. Only Cement Precast Products, Inc. lintels may be used for the work depicted herein.

THUY H. HUYNH
LICENSE
No. 60122
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Thuy H. Huynh, PE
Fla. Reg. No. 60122

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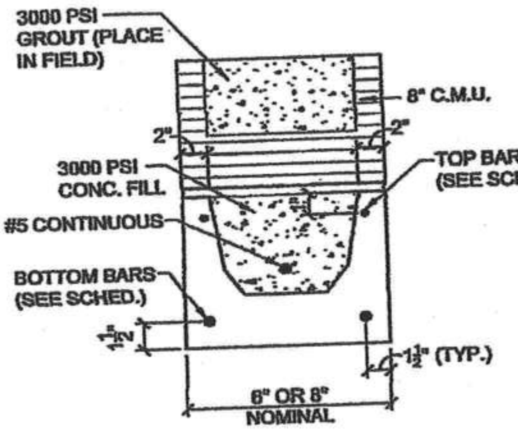
LINTEL
INFORMATION

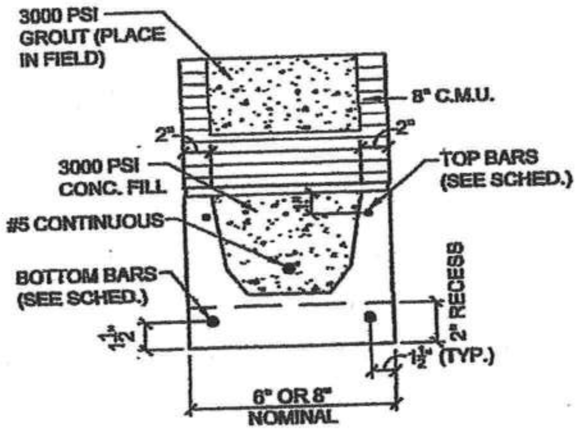
cp

Cement Precast Products, Inc.

2033 N.E. 27th Avenue Gainesville, Fl 32609 - (352) 372-0953 - Fax (352) 378-4611
www.cementprecast.com



TYPICAL LINTEL SECTION
(6" OR 8"x16" LINTEL IS SHOWN)



TYPICAL RECESS LINTEL SECTION
(6" OR 8"x16" LINTEL IS SHOWN)

ENGINEERING SPECIFICATIONS:

1.) SAFE LOADS ARE TOTAL SUPERIMPOSED ALLOWABLE LOADS.
2.) DESIGNER MAY EVALUATE CONCENTRATED LOADS FROM THE SAFE LOAD TABLES BY CALCULATING MAX. RESISTING SHEAR AND MOMENT FOR THE LISTED LINTELS.
3.) SAFE LOADS LISTED ON ALL TABLES ARE IN UNITS OF POUND PER LINEAR FOOT.

GENERAL NOTES:

1.) CODES:
- 1.1 FLORIDA BUILDING CODE 2004 RESIDENTIAL, SECTIONS R402.2, & R606.
- 1.2 FLORIDA BUILDING CODE 2004 BUILDING, SECTIONS 1901.2 & 2107.
- 1.3 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-02).
- 1.4 AMERICAN SOCIETY OF CIVIL ENGINEERS MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES(ASCE 7-98).

2.) CONCRETE:
- 2.1 CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS:
  - 2.1.1 CONCRETE FILL (PLACE IN FIELD) - 3000 PSI
  - 2.1.2 PRECAST W/ STANDARD REINFORCEMENT - 5000 PSI
  - 2.1.3 GROUT PER ASTM C476 - 3000 PSI W/ MAX. 3/8" AGGERATE, 8" TO 11" SLUMP.
- 2.2 REINFORCING BARS:
  - 2.2.1 STEEL IN LINTEL AND KNOCKOUT BLOCK (PLACED IN FIELD) ASTM A615 (GRADE 40).
- 2.3 DETAIL REINFORCEMENT IN ACCORDANCE WITH ACI 315.
- 2.4 CONCRETING OPERATIONS SHALL COMPLY WITH ACI STANDARDS.

3) MASONRY:
- 3.1 DESIGN AND CONSTRUCTION SHALL CONFORM TO THE SPECIFICATION OF THE NATIONAL CONCRETE MASONRY ASSOCIATION AND ACI 530-02.
- 3.2 MINIMUM MASONRY UNIT STRENGTH: F'M 1500 PSI.
- 3.3 MORTAR SHALL BE TYPE S.

4) STRUCTURAL:
- 4.1 SAFE LOAD VALUES ARE BASED ON LINTELS HAVING A BEARING OF 4".
- 4.2 FOR LINTELS THAT ARE GREATER THAN 14'-0" CLEAR SPAN THEY SHALL BE PROVIDED A TEMPORARY SUPPORT, AND THE TEMPORARY SUPPORT SHALL NOT BE REMOVED UNTIL 2 DAYS AFTER GROUT PLACEMENT.

THUY H. HUYNH
LICENSE
No. 60122
STATE OF FLORIDA
PROFESSIONAL ENGINEER
APR 06 2005

- [ ] SAMUEL A. GREENBERG, P.E. #9248
- [ ] IRWIN J. BENSON, P.E. #49158
- [x] THUY H. HUYNH, P.E. #60122

DANSCO ENGINEERING, LLC.

GENERAL NOTES & DETAILS		
CEMENT PRECAST PRODUCTS INC.	REV.:	DATE: 03/04/05
		DWG: E.M.
		SCALE: N.T.S.
DE# 24-4547		SK1

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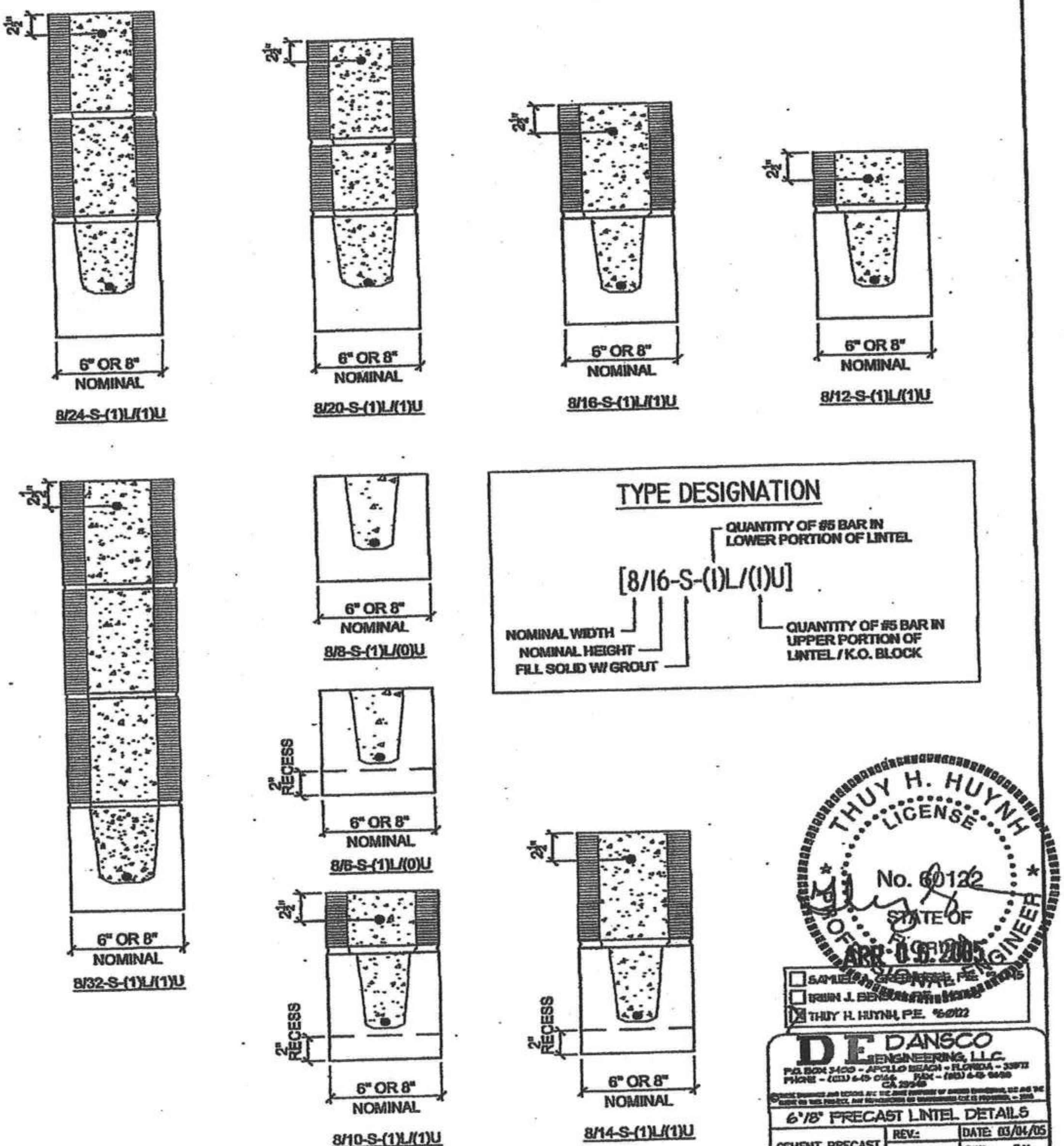
www.cementprecast.com



SAMUEL ... P.E.
IRWIN J. BEN...
☒ THUY H. HUYNH, P.E. #60122

DANSCO ENGINEERING, LLC
P.O. BOX 3400 - APOLLO BEACH - FLORIDA - 33572
PHONE - (813) 645-0166 FAX - (813) 645-9690
CA 29948

6"/8" PRECAST LINTEL DETAILS

CEMENT PRECAST PRODUCTS INC.	REV.:	DATE: 03/04/05
		DWG: E.M.
		SCALE: N.T.S.
DE# 24-4547		SK2

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www.cementprecast.com

8" LINTEL SAFE GRAVITY LOADS (PLF)

LINTEL TOTAL LENGTH	CLEAR SPAN	TOP REINF.	BOTTOM REINF.	8/8-S-(0)L	8/12-S-(0)L	8/16-S-(0)L	8/20-S-(0)L	8/24-S-(0)L	8/32-S-(0)L
				8/8-S-(1)L	8/12-S-(1)L	8/16-S-(1)L	8/20-S-(1)L	8/24-S-(1)L	8/32-S-(1)L
3'-0"	1'-8"	None	(2) #3	3859	8159	10000	10000	10000	10000
				3859	10000	10000	10000	10000	10000
3'-6"	2'-2"	None	(2) #3	2861	5757	8114	10000	10000	10000
				2861	7219	10000	10000	10000	10000
4'-0"	2'-8"	None	(2) #3	2270	4279	6034	7791	9550	10000
				2270	5183	10000	10000	10000	10000
4'-6"	3'-2"	None	(2) #3	1879	3301	4658	6015	7375	10000
				1879	4037	7450	10000	10000	10000
4'-8"	3'-4"	None	(2) #3	1776	3048	4301	5556	6811	9324
				1776	3759	5748	10000	10000	10000
5'-4"	4'-0"	None	(2) #3	1340	2275	3213	4153	5093	5744
				1457	2943	4895	8224	10000	10000
5'-10"	4'-6"	None	(2) #3	1101	1875	2644	3418	4193	6975
				1282	2529	4055	6408	9705	10000
6'-4"	5'-0"	(2) #2	(2) #4	1178	2258	3513	5083	6245	8570
				1178	2258	3513	5323	8288	10000
6'-6"	5'-2"	(2) #2	(2) #4	1166	2167	3347	4808	5907	8107
				1166	2167	3347	5015	7653	10000
6'-8"	5'-4"	(2) #2	(2) #4	1098	2084	3196	4554	5595	7680
				1098	2084	3196	4741	7121	10000
7'-6"	6'-2"	(2) #2	(2) #4	938	1745	2604	3539	4349	5972
				938	1745	2604	3719	5281	10000
7'-8"	6'-4"	(2) #3	(2) #4	912	1690	2511	3376	4150	5699
				912	1690	2511	3565	5020	9974
8'-0"	6'-8"	(2) #3	(2) #4	862	1589	2342	3082	3789	5204
				862	1589	2342	3291	4567	9115
8'-8"	7'-4"	(2) #3	(2) #4	778	1407	2001	2596	3193	4387
				778	1448	2063	2850	3889	7207
9'-4"	8'-0"	(2) #3	(2) #5	718	1292	1856	2527	3461	5859
				718	1292	1856	2527	3368	5944
10'-4"	9'-0"	(2) #3	(2) #5	632	1125	1597	2141	2800	4669
				632	1125	1597	2141	2800	4669
11'-4"	10'-0"	(2) #3	(2) #5	563	995	1399	1854	2391	3837
				563	995	1399	1854	2391	3837
12'-0"	10'-8"	(2) #3	(2) #5	524.	923	1291	1701	2178	3427
				524	923	1291	1701	2178	3427
12'-8"	11'-4"	(2) #3	(2) #5	490	861	1198	1570	1998	3066
				490	861	1198	1570	1998	3093
13'-4"	12'-0"	(2) #3	(2) #5	460	806	1117	1457	1932	2748
				460	806	1117	1457	1932	2817
14'-0"	12'-8"	(2) #3	(2) #5	434	757	1046	1359	1712	2475
				434	757	1046	1359	1712	2585
14'-8"	13'-4"	(2) #4	(2) #6	412	716	985	1275	1600	2391
				412	716	985	1275	1600	2391
15'-8"	14'-4"	(2) #4	(2) #6	377	658	903	1163	1452	2142
				380	658	903	1168	1452	2142
17'-4"	16'-0"	(2) #4	(2) #6	263	579	790	1012	1255	1822
				290	579	790	1012	1255	1822
19'-4"	18'-0"	(2) #4	(2) #6	157	505	686	874	1076	1540
				173	505	686	874	1076	1540
20'-0"	18'-8"	(2) #5	(2) #6	132	484	656	835	1027	1463
				140	484	656	835	1027	[illegible]
21'-4"	20'-0"	(2) #5	(2) #6	95	372	604	766	939	1329
				105	440	604	766	939	[illegible]
22'-0"	20'-8"	(2) #5	(2) #6	80	323	580	735	901	1271
				89	382	580	735	901	[illegible]
24'-0"	22'-8"	(2) #5	(2) #6	N.R.	214	493	656	800	1120
				N.R.	258	519	656	[illegible]	1120

N.R. = NOT RECOMMENDED

THUY H. HUYNH LICENSE No. 60122 STATE OF FLORIDA PROFESSIONAL ENGINEER

APR 06 2009

☐ SAMUEL A. GREENBERG, P.E. #34245
☐ IRIEN J. BENSON, P.E. #49158
☒ THUY H. HUYNH, P.E. #60122

DANSCO ENGINEERING, L.L.C.

8" LINTEL SAFE GRAVITY LOADS		
CEMENT PRECAST PRODUCTS INC.	REV.:	DATE: 03/04/05
		DWG: E.H.
		SCALE: N.T.S.
DE# 24-4547		SK7

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cp Cement Precast Products, Inc.

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www.cementprecast.com

LINTEL				8" LINTEL SAFE UPLIFT LOADS (PLF)						LATERAL LOADS (PLF)	
TOTAL LENGTH	CLEAR SPAN	TOP REINF.	BOTTOM REINF.	8/8-S-(1)U	8/12-S-(1)U	8/16-S-(1)U	8/20-S-(1)U	8/24-S-(1)U	8/32-S-(1)U	8/8-P	8/8-S
				8/8-S-(2)U	8/12-S-(2)U	8/16-S-(2)U	8/20-S-(2)U	8/24-S-(2)U	8/32-S-(2)U		
3'-0"	1'-8"	None	(2) #3	3369	9999	10000	10000	10000	10000	811	2089
				3369	10000	10000	10000	10000	10000		
3'-6"	2'-2"	None	(2) #3	2539	6508	10000	10000	10000	10000	575	1481
				2539	10000	10000	10000	10000	10000		
4'-0"	2'-8"	None	(2) #3	2038	4763	7739	10000	10000	10000	429	1105
				2038	4763	9803	10000	10000	10000		
4'-6"	3'-2"	None	(2) #3	1701	3756	5993	7894	9796	10000	332	855
				1701	3756	6316	10000	10000	10000		
4'-8"	3'-4"	None	(2) #3	1613	3508	5541	7298	9057	10000	307	791
				1613	3508	6288	10000	10000	10000		
5'-4"	4'-0"	None	(2) #3	1334	2401	4162	5481	6803	9448	230	594
				1334	2401	3658	7739	10000	10000		
5'-10"	4'-6"	None	(2) #3	1182	2350	3439	4530	5622	7808	190	491
				1182	2777	3874	6101	10000	10000		
6'-4"	5'-0"	(2) #2	(2) #4	1110	1975	2890	3906	4724	6561	333	894
				1110	2115	3325	5036	7760	10000		
6'-6"	5'-2"	(2) #2	(2) #4	1083	1869	2736	3603	4472	6211	316	847
				1083	2035	3175	4750	7213	10000		
6'-8"	5'-4"	(2) #2	(2) #4	1048	1772	2594	3416	4240	5888	299	803
				1048	1960	3038	4511	6738	10000		
7'-6"	6'-2"	(2) #2	(2) #4	802	1384	2025	2663	3311	4598	233	627
				802	1655	2480	3579	5068	9101		
7'-8"	6'-4"	(2) #3	(2) #4	916	1322	1934	2548	3162	4392	273	742
				988	1605	2414	3486	4890	8892		
8'-0"	6'-8"	(2) #3	(2) #4	823	1209	1770	2331	2893	4018	249	679
				823	1511	2259	3164	4413	7955		
8'-8"	7'-4"	(2) #3	(2) #4	746	1023	1498	1973	2449	3410	205	575
				746	1359	2002	2775	3764	6731		
9'-4"	8'-0"	(2) #3	(2) #5	721	877	1294	1694	2099	2916	175	663
				721	1233	1798	2460	3281	5752		
10'-4"	9'-0"	(2) #3	(2) #5	639	711	1040	1370	1700	2362	125	529
				639	1083	1569	2101	2751	4570		
11'-4"	10'-0"	(2) #3	(2) #5	573	587	859	1132	1405	1952	92	437
				573	985	1376	1834	2360	3760		
12'-0"	10'-8"	(2) #3	(2) #5	536	522	764	1006	1249	1735	N.R	389
				537	900	1278	1691	2188	3404		
12'-8"	11'-4"	(2) #3	(2) #5	479	467	684	900	1118	1552	N.R	348
				505	843	1190	1569	1999	3073		
13'-4"	12'-0"	(2) #3	(2) #5	431	420	615	810	1006	1397	N.R	313
				476	793	1115	1462	1864	2788		
14'-0"	12'-8"	(2) #3	(2) #5	388	380	557	733	910	1264	N.R	283
				451	741	1040	1370	1729	2602		
14'-8"	13'-4"	(2) #4	(2) #6	432	346	506	667	827	1149	N.R	447
				443	697	989	1288	1619	2275		
15'-8"	14'-4"	(2) #4	(2) #6	353	302	442	582	723	1004	N.R	357
				400	688	867	1146	1427	1988		
17'-4"	16'-0"	(2) #4	(2) #6	258	246	360	474	588	817	N.R	251
				329	579	705	893	1180	1817		
19'-4"	18'-0"	(2) #4	(2) #6	169	196	288	379	471	654	N.R	169
				180	383	564	746	929	1294		
20'-0"	18'-8"	(2) #5	(2) #6	181	183	269	354	439	610	N.R	168
				196	357	532	697	867	1208		
21'-4"	20'-0"	(2) #5	(2) #6	141	161	235	310	385	535	N.R	131
				152	298	482	644	760	1060		
22'-0"	20'-8"	(2) #5	(2) #6	126	151	221	291	362	503	N.R	116
				135	260	434	574	714	995		
24'-0"	22'-8"	(2) #5	(2) #6	101	134	196	259	321	446	N.R	80
				108	212	385	509	634	883		

N.R. = NOT RECOMMENDED

THUY H. HUYNH
LICENSE
No. 60122
STATE OF FLORIDA
PROFESSIONAL ENGINEER
APR 06 2005

☐ SAMUEL A. GREENBERG, P.E. #34245
☐ IRWIN J. BENSON, P.E. #49158
☒ THUY H. HUYNH, P.E. #60122

DE DANSCO ENGINEERING, L.L.C.
P.O. BOX 3400 • APOLLO BEACH • FLORIDA • 33572
PHONE • (813) 645 [illegible] FAX • (813) 645 [illegible]
CA 7[illegible]

8" LINTEL SAFE UPLIFT LOADS

CEMENT PRECAST PRODUCTS INC.	REV.:	DATE: 03/04/05
		DWG: E.M.
		SCALE: N.T.S.
DE# 24-4547		SK8

G:\data\engineering\CEMENT PRECAST PRODUCTS\24454\8.5x11\SK08.dwg, 3/15/2005 2:22:47 PM, LVasquez

cp
Cement Precast Products, Inc.
2033 N.E. 27th Avenue Gainesville, Fl 32609 - (352) 372-0953 - Fax: (352) 378-4611
www.cementprecast.com

LINTEL				8" RECESS LINTEL SAFE UPLIFT LOADS (PLF)		
TOTAL LENGTH	CLEAR SPAN	TOP REINF.	BOTTOM REINF.	8/6-S-(1)U 8/6-S-(2)U	8/10-S-(1)U 8/10-S-(2)U	8/14-S-(1)U 8/14-S-(2)U
3'-6"	2'-2"	None	(2) #3	2571 2571	3966 3986	8716 9281
4'-0"	2'-8"	None	(2) #3	2063 2063	3063 3063	6237 6237
4'-4"	3'-0"	None	(2) #3	1823 1823	2660 2660	5122 5122
4'-6"	3'-2"	None	(2) #3	1723 1723	2496 2496	4701 4701
4'-8"	3'-4"	None	(2) #3	1633 1633	2350 2350	4345 4345
5'-8"	4'-4"	None	(2) #3	1244 1224	1742 1742	2986 2986
6'-8"	5'-4"	(2) #2	(2) #4	1005 1005	1358 1348	2179 2275
7'-8"	6'-4"	(2) #3	(2) #4	708 842	1013 1148	1625 1837

THUY H. HUYNH
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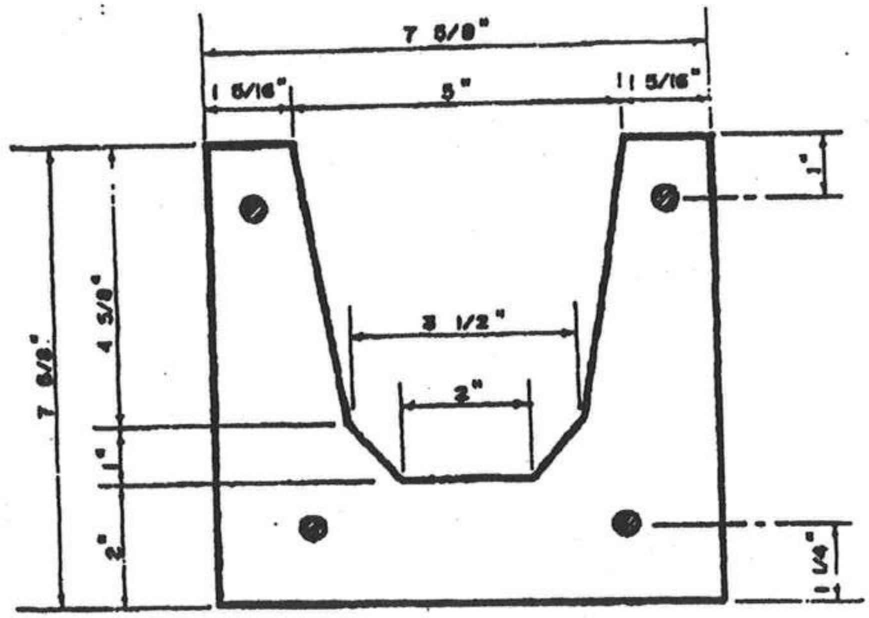
APR 0 6 2005

☐ SAMUEL J. GREENBERG, P.E. 42345
☐ IRWIN SILVERSTEIN, P.E.
☑ THUY H. HUYNH, P.E. 60122

DANSCO ENGINEERING, L.L.C.
P.O. BOX 3400 - APOLLO BEACH - FLORIDA - 33572

8" RECESS LINTEL SAFE UPLIFT LOADS		
CEMENT PRECAST PRODUCTS INC.	REV.:	DATE: 03/04/05
		DWG: E.M.
		SCALE: N.T.S.
DE# 24-4547		SK10

G:\data\engineering\CEMENT PRECAST PRODUCTS\24454\8.5x11\SK10.dwg, 3/15/2005 2:09:35 PM, EMontanez



Lintel Concrete Strength = 4000 psi
Fill Concrete Strength = 3000 psi
Steel Strength = Grade 60 (#6), Grade 40 (#2 - #5)

TYPE	TOP BARS	BOTTOM BARS
A	NONE	2 - #3
B	2 - #2	2 - #4
C	2 - #3	2 - #4
D	2 - #3	2 - #5
E	2 - #4	2 - #6

Turner Pest Control
What's Bugging You?

Main Office: 480 Edgewood Ave. S.
Jacksonville, Fl 32205-3775
Phone: (904) 355-5300
Fax: (904) 353-1488
Toll Free: (800) 225-5305
www.turnerpest.com

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(772) 621-7905
Tampa, Florida
(813) 681-6381
Daytona, Florida
(386) 788-8303
St. Marys, Georgia
(912) 576-1300

Order: 3301411
Work Date: 04/14/09 Tuesday
Time: 10:00
Map:
Route:
Tech: RRODRIGUEZ

Location: [182615] Bill-To: [135812]

27721

Mr Farrmond
~~5881~~ Nw Lake Jeffery Rd
Lake City, FL 32055-4785

Target Pest:
Last Service:
Terms NET 30
PO:
County: COLUMBIA

SERVICE	DESCRIPTION	PRICE
PRE-RES SOIL	SOIL TREATMENT - SINGLE FAMILY - CYPER	
	3024 sq ft--Larry 386-623-6374--concrete co.--Dan--	

THANK YOU FOR ALLOWING THE TURNER FAMILY TO SERVE YOU!