DATE 08/09/2016

Columbia County Building Permit

This Permit Must Be Prominently Posted on Premises During Construction

PERMIT
000034328

APPLICANT MIKE TODD PHONE 755-4387

ADDRESS 129 NE COLBURN AVE LAKE CITY FL 32055

OWNER DAVID RANDALL MORGAN PHONE 601-529-4755

ADDRESS 220 SW RIVERSIDE AVE FORT WHITE FL 32038

CONTRACTOR MIKE TODD PHONE 755-4387

LOCATION OF PROPERTY 47 S, R 27, L RIVERSIDE AVE, ON RIGHT LOT 5

TYPE DEVELOPMENT SFD, UTILITY ESTIMATED COST OF CONSTRUCTION 161900.00

HEATED FLOOR AREA 2128.00 TOTAL AREA 3238.00 HEIGHT 35.00 STORIES 2

FOUNDATION PIERS WALLS FRAMED ROOF PITCH 5/12 FLOOR WOOD

LAND USE & ZONING ESA-2 MAX. HEIGHT 35

Minimum Set Back Requirments: STREET-FRONT 30.00 REAR 25.00 SIDE 10.00

NO. EX.D.U. 1 FLOOD ZONE AE DEVELOPMENT PERMIT NO. 16-007

PARCEL ID 23-6S-15-00533-000 SUBDIVISION THREE RIVERS ESTATES

LOT 5 BLOCK PHASE UNIT 1 TOTAL ACRES 1.44

Culvert Permit No.	Culvert Waiver	Contractor's License Number	Applicant/Owner/Contractor
		CRC006209	

Driveway Connection	Septic Tank Number	LU & Zoning checked by	Approved for Issuance	New Resident	Time/STUP No.
EXISTING	16-046-M	BS	TC	N	

COMMENTS: MINIMUM FLOOR ELEVATION 35.4', NEED ELEVATION CERTIFICATE BEFORE POWER, 1 FT RISE REC'D, NOC ON FILE, SEE SURVEY FOR ELEVATIONS, COMBINATION PERMIT WITH 34327 RELOCATION

Check # or Cash 17406

FOR BUILDING & ZONING DEPARTMENT ONLY

Temporary Power _____ date/app. by

Foundation _____ date/app. by

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

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

Slab _____ date/app. by

Sheathing/Nailing _____ date/app. by

Framing _____ date/app. by

Insulation _____ date/app. by

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

Electrical rough-in _____ date/app. by

Heat & Air Duct _____ date/app. by

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

Pool _____ date/app. by

Permanent power _____ date/app. by

C.O. Final _____ date/app. by

Culvert _____ date/app. by

Pump pole _____ date/app. by

Utility Pole _____ date/app. by

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

Reconnection _____ date/app. by

RV _____ date/app. by

Re-roof _____ date/app. by

BUILDING PERMIT FEE $ 810.00 CERTIFICATION FEE $ 16.19 SURCHARGE FEE $ 16.19

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

FLOOD DEVELOPMENT FEE $ 50.00 FLOOD ZONE FEE $ 25.00 CULVERT FEE $ **TOTAL FEE** 967.38

INSPECTORS OFFICE CLERKS OFFICE

NOTICE: IN ADDITION TO THE REQUIREMENTS OF THIS PERMIT, THERE MAY BE ADDITIONAL RESTRICTIONS APPLICABLE TO THIS PROPERTY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.

NOTICE: ALL OTHER APPLICABLE STATE OR FEDERAL PERMITS SHALL BE OBTAINED BEFORE COMMENCEMENT OF THIS PERMITTED DEVELOPMENT.

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

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 THE WORK IS COMMENCED. A VALID PERMIT RECIEVES AN APPROVED INSPECTION EVERY 180 DAYS. WORK SHALL BE CONSIDERED NOT SUSPENDED, ABANDONED OR INVALID WHEN THE PERMIT HAS RECIEVED AN APPROVED INSPECTION WITHIN 180 DAYS OT THE PREVIOUS INSPECTION.

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

Emailed for site plans 8-2-16

$967.38 ck 17406

RES. CHECKLIST

Columbia County New Building Permit Application

For Office Use Only Application # 1606-37 Date Received 6/13 By LH Permit # 34328

Zoning Official [illegible] Date 7-29-16 Flood Zone AE Land Use ESA Zoning ESA-2

FEMA Map # 458C Elevation 34.4' MFE 35.4' River Fich Plans Examiner TC Date 8-1-16

Comments See Survey For Elevations / 1' Rise Letter Rec'd, Need finished Const. Elevation Cert. before power

☑ NOC ☑ EH ☑ Deed or PA ☑ Site Plan ☐ State Road Info ☑ Well letter Existing ☑ 911 Sheet ☐ Parent Parcel #

☐ Dev Permit # 16-007 ☐ In Floodway ☐ Letter of Auth. from Contractor ☐ F W Comp. letter

☐ Owner Builder Disclosure Statement ☐ Land Owner Affidavit ☐ Ellisville Water ☑ App Fee Paid ☑ Sub VF Form

Septic Permit No. 16-0464-M OR City Water Fax

Applicant (Who will sign/pickup the permit) Mike Todd Phone 386-755-4387

Address 129 N.E Colburn Ave Lake City FL 32055

Owners Name David Randell Morgan Phone 601-529-4755

911 Address 220 S.W Riverside Ave Ft White FL 32038

Contractors Name Mike Todd Phone 386-755-4387

Address 129 N E Colburn Ave Lake City FL 32055

Contractor Email mike@miketoddconstruction.com ***Include to get updates on this job.

Fee Simple Owner Name & Address

Bonding Co. Name & Address

Architect/Engineer Name & Address Keen Engineering/Surveying Inc. 9263 CR 417 Live Oak FL 32060

Mortgage Lenders Name & Address

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

Property ID Number 00-00-00-00533-000 Estimated Construction Cost $229,908.73

Subdivision Name Three River Estates Lot 5 Block Unit 1 Phase

Driving Directions from a Major Road 47 to SR 27 go left 5 miles to Riverside Ave, go left. Lot 5 is on Right.

Construction of New House Commercial OR X Residential

Proposed Use/Occupancy Sgl. Fam Number of Existing Dwellings on Property 1

Is the Building Fire Sprinkled? N Y If Yes, blueprints included Or Explain

Circle Proposed - Culvert Permit or Culvert Waiver or D.O.T. Permit or Have an Existing Drive

Site Plan attached

Actual Distance of Structure from Property Lines - Front Side See Site Plan Side Rear

Number of Stories 2 Heated Floor Area 2128 Total Floor Area 3238 Acreage 1.542

Zoning Applications applied for (Site & Development Plan, Special Exception, etc.) Connected to Same power supply

Left Mike a VM 8-2-16

Columbia County Building Permit Application

CODE: Florida Building Code 2014 and the 2011 National Electrical Code.

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.

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 pursued in good faith or a permit has been issued.

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 CONTRACTOR AND AGENT: ***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 COMMENCEMENT 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 CERTIFY THAT ALL THE FOREGOING INFORMATION IS ACCURATE AND THAT ALL WORK WILL BE DONE IN COMPLIANCE WITH ALL APPLICABLE LAWS REGULATING CONSTRUCTION AND ZONING.

NOTICE TO OWNER: There are some properties that may have deed restrictions recorded upon them. These restrictions may limit or prohibit the work applied for in your building permit. You must verify if your property is encumbered by any restrictions or face possible litigation and or fines.

David Morgan
Print Owners Name

Owners Signature

****Property owners must sign here before any permit will be issued.**

****If this is an Owner Builder Permit Application then, ONLY the owner can sign the building permit when it is issued.**

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.

Contractor's Signature

Contractor's License Number CGC006209
Columbia County
Competency Card Number 539

Affirmed under penalty of perjury to by the Contractor and subscribed before me this 13 **day of** June **20**16

Personally known ✓ **or Produced Identification** _____

(SEAL)

State of Florida Notary Signature (For the Contractor)

CAROLYN A. PARRATO
MY COMMISSION EXPIRES
April 27, 2017
#FF 009624
Bonded thru Notary Public Underwriters
NOTARY PUBLIC STATE OF FLORIDA

Relocation "Cabin"

SUBCONTRACTOR VERIFICATION FORM

APPLICATION NUMBER 1606-36 CONTRACTOR Mike Todd PHONE 386.755.9387

THIS FORM MUST BE SUBMITTED PRIOR TO THE ISSUANCE OF A PERMIT

In Columbia County one permit will cover all trades doing work at the permitted site. It is REQUIRED that we have records of the subcontractors who actually did the trade specific work under the permit. Per Florida Statute 440 and Ordinance 89-6, a contractor shall require all subcontractors to provide evidence of workers' compensation or exemption, general liability insurance and a valid Certificate of Competency license in Columbia County.

Any changes, the permitted contractor is responsible for the corrected form being submitted to this office prior to the start of that subcontractor beginning any work. Violations will result in stop work orders and/or fines.

ELECTRICAL H.C	Print Name Matt Burns Electric License #: EC13006531	Signature See Attached Phone #: 386-935-0444
MECHANICAL/ A/C 13	Print Name D.L. Williams Htg + Cooling License #: CAC1816913	Signature D. L. Williams Phone #: 386-754-1987
PLUMBING/ GAS 298	Print Name Hometown Plumbing License #: CFC1728890	Signature Phone #: 386-754-6140
ROOFING	Print Name Mike Todd Construction License #:	Signature Phone #:
SHEET METAL	Print Name License #:	Signature Phone #:
FIRE SYSTEM/ SPRINKLER	Print Name License#:	Signature Phone #:
SOLAR	Print Name License #:	Signature Phone #:

Specialty License	License Number	Sub-Contractors Printed Name	Sub-Contractors Signature
MASON LIAB	000222	Harold Houston Construction	Harold Houston
CONCRETE FINISHER	000310	Parrish Enterprises	
FRAMING			
INSULATION			
STUCCO			
DRYWALL			
PLASTER			
CABINET INSTALLER			
PAINTING	1040	John Davis Painting	
ACOUSTICAL CEILING			
GLASS			
CERAMIC TILE			
FLOOR COVERING	000710	Brown Vann - Carpet One	
ALUM/VINYL SIDING			
GARAGE DOOR			
METAL BLDG ERECTOR			

F. S. 440.103 Building permits; identification of minimum premium policy.--Every employer shall, as a condition to applying for and receiving a building permit, show proof and certify to the permit issuer that it has secured compensation for its employees under this chapter as provided in ss. 440.10 and 440.38, and shall be presented each time the employer applies for a building permit.

Columbia County Building Department
Flood Development Permit

Development Permit
F 023- 16-007

DATE 08/09/2016 BUILDING PERMIT NUMBER 000034328

APPLICANT MIKE TODD PHONE 755-4387

ADDRESS 129 NE COLBURN AVE LAKE CITY FL 32055

OWNER DAVID RANDALL MORGAN PHONE 601-529-4755

ADDRESS 220 SW RIVERSIDE AVE FORT WHITE FL 32038

CONTRACTOR MIKE TODD PHONE 755-4387

ADDRESS 129 NE COLBURN AVE LAKE CITY FL 32055

SUBDIVISION THREE RIVERS ESTATES Lot 5 Block ____ Unit 1 Phase ____

TYPE OF DEVELOPMENT SFD, UTILITY PARCEL ID NO. 23-6S-15-00533-000

FLOOD ZONE AE BY BS 2-4-2009 FIRM COMMUNITY # 120070 - PANEL # 458-C

FIRM 100 YEAR ELEVATION 34.4' PLAN INCLUDED YES or NO

REQUIRED LOWEST HABITABLE FLOOR ELEVATION 35.4'

IN THE REGULATORY FLOODWAY YES or NO RIVER Ichetucknee

SURVEYOR / ENGINEER NAME Curtis Keen LICENSE NUMBER 23836

✓ ONE FOOT RISE CERTIFICATION INCLUDED

____ ZERO RISE CERTIFICATION INCLUDED

____ SRWMD PERMIT NUMBER ____
(INCLUDING THE ONE FOOT RISE CERTIFICATION)

DATE THE FINISHED FLOOR ELEVATION CERTIFICATE WAS PROVIDED ____

INSPECTED DATE ____ BY ____

COMMENTS ____

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

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

PERMIT NO. 16-0464M
DATE PAID: 8/2/16
FEE PAID: 215.00
RECEIPT #: 1250664

APPLICATION FOR:
[ ] New System [ ] Existing System [ ] Holding Tank [ ] Innovative
[ ] Repair [ ] Abandonment [ ] Temporary [X] MODIFICATION

APPLICANT: David Morgan

AGENT: ROCKY FORD, A & B CONSTRUCTION TELEPHONE: 386-497-2311

MAILING ADDRESS: 546 SW Dortch Street, FT. WHITE, FL, 32038

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. IT IS THE APPLICANT'S RESPONSIBILITY TO PROVIDE DOCUMENTATION OF THE DATE THE LOT WAS CREATED OR PLATTED (MM/DD/YY) IF REQUESTING CONSIDERATION OF STATUTORY GRANDFATHER PROVISIONS.

PROPERTY INFORMATION

LOT: 5 BLOCK: na SUB: Three Rivers Estates unit 1 PLATTED: 5/1/02

PROPERTY ID #: 00-00-00-00533-000 ZONING: Res I/M OR EQUIVALENT: [Y / N]

PROPERTY SIZE: 1.54 ACRES WATER SUPPLY: [X] PRIVATE PUBLIC [ ]<=2000GPD [ ]>2000GPD

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

PROPERTY ADDRESS: 218 SW Riverside Ave, Fort White, FL, 32038

DIRECTIONS TO PROPERTY: 47 South, TR on US 27, TL on Riverside (3 Rivers), 5th lot on the right

BUILDING INFORMATION [X] RESIDENTIAL [ ] COMMERCIAL

Unit No	Type of Establishment	No. of Bedrooms	Building Area Sqft	Commercial/Institutional System Design Table 1, Chapter 64E-6, FAC
1	SF Residential	3	2512	ORIGINAL 384 SQ FOOT ADDING
2				2128 SQ FT & 3/BR'S
3				

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

SIGNATURE: Rocky D Ford DATE: 1/26/2016

DH 4015, 08/09 (Obsoletes previous editions which may not be used)
Incorporated 64E-6.001, FAC

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

Permit Application Number_____

MORGAN

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

Scale: 1 inch = 40 feet.

SEE ATTACHED

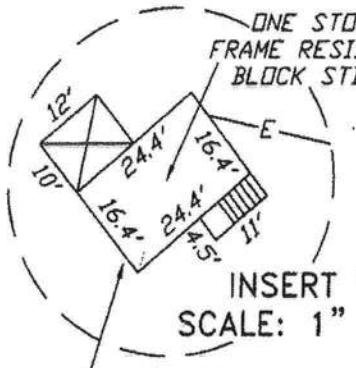
Notes: _____

Site Plan submitted by: Rocky D [illegible] MASTER CONTRACTOR

Plan Approved ✓ Not Approved____ Date 8/5/16

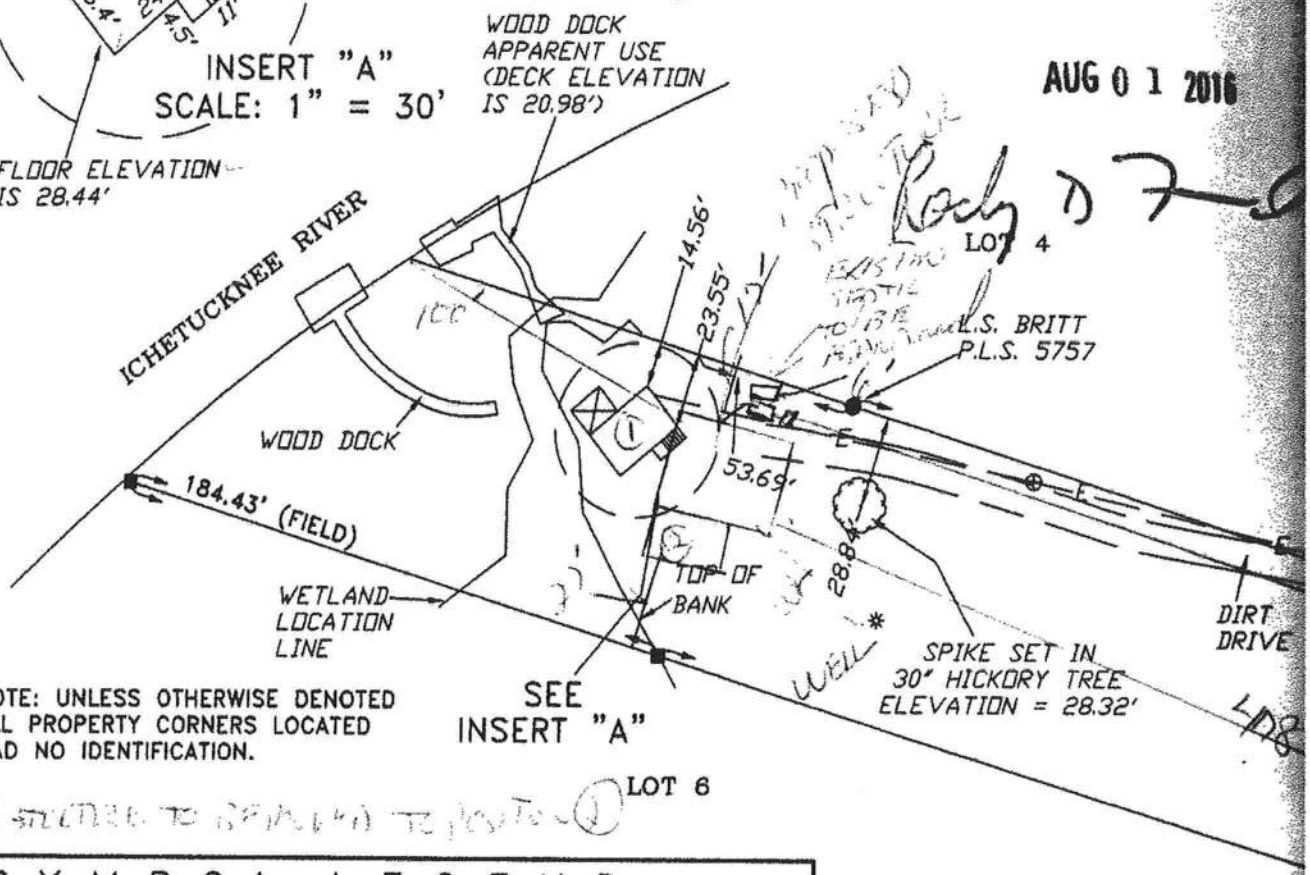
By [illegible] Columbia County Health Department

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT



DESCRIPTION:
LOT 5 OF "THREE RIVERS ESTATES SECTION NO. 1" AS PER PLAT THEREOF RECORDED IN PLAT BOOK 3, PAGE 53 OF THE PUBLIC RECORDS OF COLUMBIA COUNTY, FLORIDA.
TOGETHER WITH AND SUBJECT TO AN EASEMENT FOR INGRESS AND EGRESS:
(SEE SHEET # 2 FOR DESCRIPTION AND DETAILS)

AUG 0 1 2016



NOTE: UNLESS OTHERWISE DENOTED ALL PROPERTY CORNERS LOCATED HAD NO IDENTIFICATION.

SYMBOL LEGEND:

■	4"X4" CONCRETE MONUMENT FOUND	℄	CENTERLINE
□	4"X4" CONCRETE MONUMENT SET	--E--	ELECTRIC LINES
●	IRON PIPE FOUND	--X--	WIRE FENCE
○	IRON PIN AND CAP SET	--O--	CHAIN LINK FENCE
×	"X" CUT IN PAVEMENT	--□--	WOODEN FENCE
+	CALCULATED PROPERTY CORNER	—·—	SECTION LINE
⊙	NAIL & DISK	(PLAT)	AS PER A PLAT OF RECORD
⊕	POWER POLE	(DEED)	AS PER A DEED OF RECORD
▲	WATER METER	(CALC.)	AS PER CALCULATIONS
⊙	UTILITY BOX	(FIELD)	AS PER FIELD MEASUREMENTS
✱	WELL	P.R.M.	PERMANENT REFERENCE MARKER
Ⓐ	SANITARY MANHOLE	P.C.P.	PERMANENT CONTROL POINT
+	SIGN POST		

N

SCALE: 1" = 60'

0 15 30 60 120
GRAPHIC SCALE

CERTIFIED TO:

DAVID & BRYAN MORGAN

FIELD BOOK: SEE PAGE(S): FILE

SURVEYOR'S CERTIFIC

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE UNDER MY TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOA IN CHAPTER 61G17-6 FLORIDA ADMINISTRATIVE CODE PURSU

10/29/15 FIELD SURVEY DATE

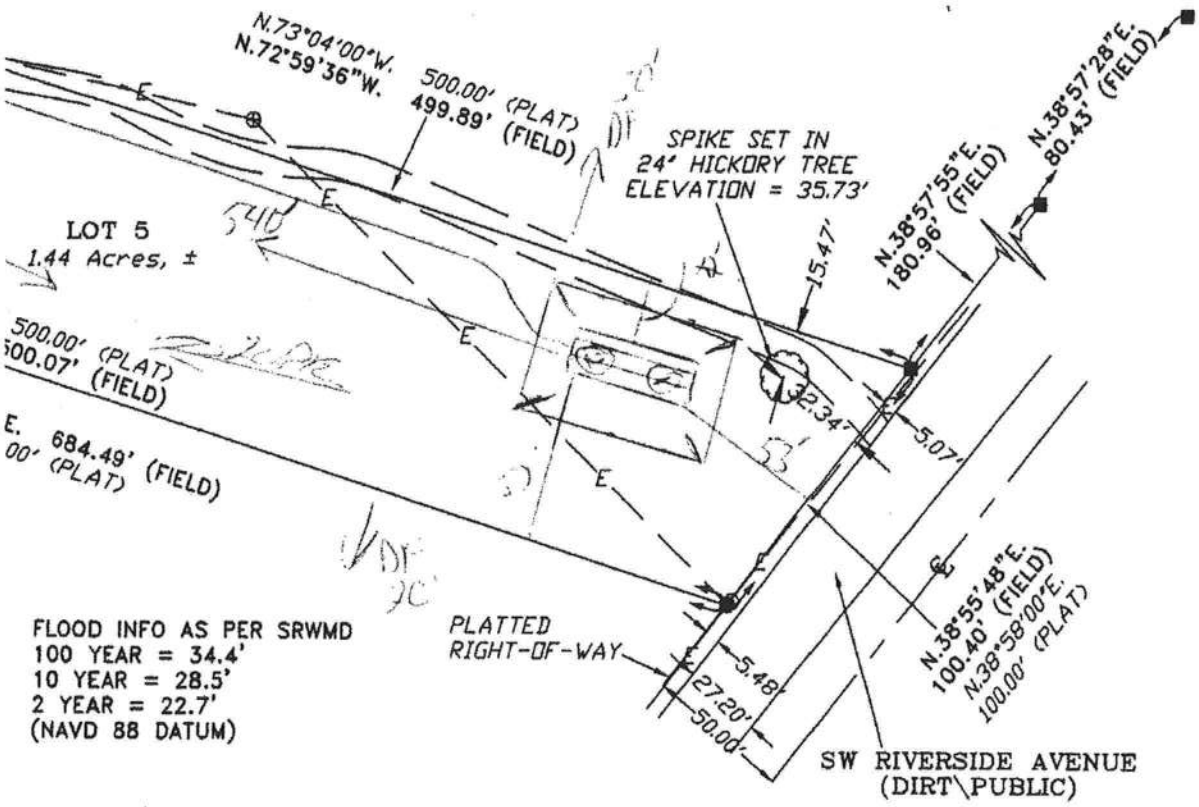
11/05/15 DRAWING DATE

NOTE: UNLESS IT BEARS THE SIGNATURE AND THE ORIGINAL RAI HAPPER THIS DRAWING, SKETCH, PLAT OR MAP IS FOR INFORMAT

BOUNDARY SURVEY IN SECTION 26, TOWNSHIP 6 SOUTH, RANGE 15 EAST, COLUMBIA COUNTY, FLORIDA.

SURVEYOR'S NOTES:

1. BOUNDARY BASED ON MONUMENTATION FOUND IN ACCORDANCE WITH THE RETRACEMENT OF THE ORIGINAL SURVEY FOR SAID PLAT OF RECORD.
2. BEARINGS ARE BASED ON SAID PLAT OF RECORD.
3. THIS PARCEL IS IN ZONE "AE" AND IS SUBJECT TO FLOODING. A BASE FLOOD ELEVATION IS ESTABLISHED TO BE 34.4 FEET AS PER FLOOD INSURANCE RATE MAP, DATED 4 FEBRUARY, 2009 FIRM PANEL NO. 12023C0458C. HOWEVER, THE FLOOD INSURANCE RATE MAPS ARE SUBJECT TO CHANGE. (BASED ON NAVD 88 DATUM)
4. THE IMPROVEMENTS, IF ANY, INDICATED ON THIS SURVEY DRAWING ARE AS LOCATED ON DATE OF FIELD SURVEY AS SHOWN HEREON.
5. IF THEY EXIST, NO UNDERGROUND ENCROACHMENTS AND/OR UTILITIES WERE LOCATED FOR THIS SURVEY EXCEPT AS SHOWN HEREON.
6. THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A TITLE COMMITMENT OR A TITLE POLICY.
7. DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMAL PARTS THEREOF.
8. THIS SURVEY DOES NOT REFLECT OR DETERMINE OWNERSHIP.
9. THE ADJACENT OWNERSHIP INFORMATION AS SHOWN HEREON IS BASED ON THE COUNTY PROPERTY APPRAISERS GIS SYSTEM, UNLESS OTHERWISE DENOTED.
10. ALL ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88 DATUM.



PONSIBLE CHARGE AND MEETS THE MINIMUM
F PROFESSIONAL SURVEYORS AND MAPPERS
TIONS PURSUANT TO 472.027 FLORIDA STATUTES.

L. SCOTT BRITT, P.S.M.
CERTIFICATION # 5757
SEAL OF A FLORIDA LICENSED SURVEYOR AND
PURPOSES ONLY AND IS NOT VALID.

BRITT SURVEYING & MAPPING, LLC
LAND SURVEYORS AND MAPPERS, L.B. # 8016
2086 SW MAIN BLVD, SUITE. 112, LAKE CITY, FLORIDA 32025
(386)752-7163 FAX (386)752-5573
www.brittsurvey.com

WORK ORDER # L-23730

ONE FOOT RISE CERTIFICATION

OWNER: David & Bryn Morgan

DESCRIPTION: Lot 5, Three Rivers Estates Section no. 1, Columbia County, Florida

BASE FLOOD ELEVATION: 34.4'

COMMUNITY PANEL NUMBER: 12023C0458C dated 02/04/2009

PROJECT: 28' x 46' HOME, 28'x46' CONCRETE PAD AT GRADE
24' x 16' EXISTING HOME/10'x12' EXISTING PORCH

FLOOD AREA (isolated) AT BASE FLOOD ELEVATION= 140 ACRES

FILL OF FLOODPLAIN: N/A

LOWEST AVERAGE GROUND ELEVATION AT BUILDING = 24.5'

I hereby certify that the placement of the 28'x46' raised home on columns, 28'x 46' concrete pad at grade, 24'x 16' home/10'x12' proch will increase the Suwannee River floodplain less than one foot at the project location. The average ground elevation at the home is 24.5'. The lowest horizontal member of the home will be required to be set at 12 inches above the 100 year flood minimum.

Curtis E. Keen 7/26/16

Curtis E. Keen, PE #23836
EB #3761

Date: 07/26/16

Copy: David Morgan

CURTIS E. KEEN
LICENSE
No. 23836
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

ONE FOOT RISE CALCULATIONS

OWNER: David & Bryn Morgan

DESCRIPTION: Lot 5, Three Rivers Estates Section no. 1, Columbia County, Florida

BASE FLOOD ELEVATION: 34.4'

COMMUNITY PANEL NUMBER: 12023C0458C dated 02/04/2009

PROJECT: 28' x 46' HOME, 28'x 46' CONCRETE PAD AT GRADE.
24' x 16' EXISTING HOME/10'x12' EXISTING PORCH

FLOOD AREA (isolated) AT BASE FLOOD ELEVATION= 140 ACRES

FILL OF FLOODPLAIN: N/A

LOWEST AVERAGE GROUND ELEVATION AT BUILDING = 24.5'

This project will be located in the staging area of the Ichetucknee River and not the floodway. No step backwater calculations are required. The calculations are based on the amount of floodplain volume removed if the foundation is enclosed.

$$\% \text{ FLOODPLAIN AREA REMOVED} = \frac{1{,}792 \text{ s.f.}/43{,}560 \text{ s.f.}}{140 \text{ acres}} = 0.0294\%$$

$$\text{FLOODPLAIN LEVEL INCREASE} = \frac{1{,}792 \text{ s.f.} \times 1.0 \text{ feet}}{140 \text{ ac.} \times 43{,}560 \text{ s.f.}} = 0.0003 \text{ foot}$$

Curtis E. Keen 7/26/16

Curtis E. Keen, PE #23836
EB #3761
Date: 07/26/16

Copy: David Morgan

CURTIS E. KEEN
LICENSE
No. 23836
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Columbia County Property Appraiser

updated: 5/5/2016

2015 Tax Year

Tax Collector | Tax Estimato | Property Card | Parcel List Generator | Interactive GIS Map | Print

Parcel: 00-00-00-00533-000

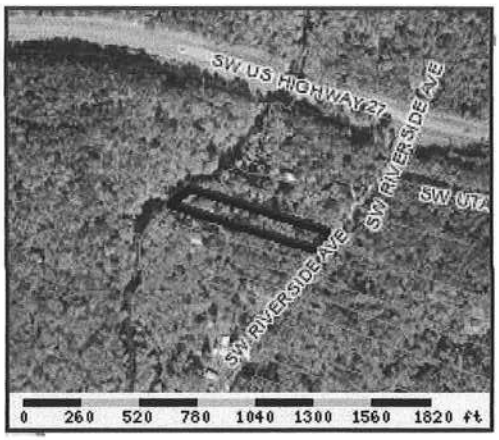
<< Next Lower Parcel | Next Higher Parcel >>

<< Prev Search Result: 16 of 73 Next >>

Owner & Property Info

Owner's Name	MORGAN DAVID RANDAL &		
Mailing Address	BRYNN PARKER MORGAN 2103 WHITNEY OAKS DR OCEAN SPRINGS, MS 39564		
Site Address	218 SW RIVERSIDE AVE		
Use Desc. (code)	SINGLE FAM (000100)		
Tax District	3 (County)	**Neighborhood**	100000
Land Area	1.542 ACRES	**Market Area**	02
Description	NOTE: This description is not to be used as the Legal Description for this parcel in any legal transaction.		

LOT 5 UNIT 1 THREE RIVERS ESTATES. ORB 327-638, WD 1195- 1190, WD 1282-590,



Property & Assessment Values

2015 Certified Values		
Mkt Land Value	cnt: (0)	$95,000.00
Ag Land Value	cnt: (1)	$0.00
Building Value	cnt: (1)	$12,907.00
XFOB Value	cnt: (1)	$1,914.00
Total Appraised Value		$109,821.00
Just Value		$109,821.00
Class Value		$0.00
Assessed Value		$109,821.00
Exempt Value		$0.00
Total Taxable Value		Cnty: $109,821 Other: $109,821 | Schl: $109,821

2016 Working Values		(...Hide Values)
Mkt Land Value	cnt: (0)	$95,000.00
Ag Land Value	cnt: (1)	$0.00
Building Value	cnt: (1)	$12,504.00
XFOB Value	cnt: (1)	$1,914.00
Total Appraised Value		$109,418.00
Just Value		$109,418.00
Class Value		$0.00
Assessed Value		$109,418.00
Exempt Value		$0.00
Total Taxable Value		Cnty: $109,418 Other: $109,418 | Schl: $109,418

NOTE: **2016 Working Values are NOT certified values and therefore are subject to change before being finalized for ad valorem assessment purposes.**

Sales History

Show Similar Sales within 1/2 mile

Sale Date	OR Book/Page	OR Code	Vacant / Improved	Qualified Sale	Sale RCode	Sale Price
9/29/2014	1282/590	WD	I	Q	01	$142,500.00
5/28/2010	1195/1190	WD	I	Q	01	$141,300.00

Building Characteristics

Bldg Item	Bldg Desc	Year Blt	Ext. Walls	Heated S.F.	Actual S.F.	Bldg Value
1	SFR PILING (000300)	1960	AVERAGE (05)	384	504	$12,504.00
	Note: All S.F. calculations are based on exterior building dimensions.					

Extra Features & Out Buildings

Code	Desc	Year Blt	Value	Units	Dims	Condition (% Good)
0084	DOCK-RIVER	1993	$1,914.00	0000330.000	0 x 0 x 0	(000.00)

LOT 5 OF "THREE RIVERS ESTATES SECTION NO. 1" AS PER THE PLAT THEREOF RECORDED IN PLAT BOOK 3, PAGE 53 OF THE PUBLIC RECORDS OF COLUMBIA COUNTY, FLORIDA.
TOGETHER WITH AND SUBJECT TO AN EASEMENT FOR INGRESS AND EGRESS.
(SEE SHEET # 2 FOR DESCRIPTION AND DETAILS)

FRAME RESIDENCE
BLOCK STILTS

INSERT "A"
SCALE: 1" = 30'

FLOOR ELEVATION
IS 28.44'

WOOD DOCK
APPARENT USE
(DECK ELEVATION
IS 20.98')

Neighbor's House

Neighbor's Main House

ICHETUCKNEE RIVER

SEPTIC TANK
APPARENT USE

LOT 4

L.S. BRITT
PLS. 5757

184.43' (FIELD)

septic field

DIRT
DRIVE
220'

65' well

SEE
INSERT "A"

NOTE: UNLESS OTHERWISE DENOTED
ALL PROPERTY CORNERS LOCATED
HAD NO IDENTIFICATION.

6' Between Dwellings

LOT 6

SPIKE SET IN
30" HICKORY TREE
ELEVATION = 28.32'

SYMBOL LEGEND:

NOTICE OF COMMENCEMENT

Clerk's Office Stamp

Inst: 201612009778 Date: 06/13/2016 Time: 2:34PM
Page 1 of 1 B: 1316 P: 1912, P.DeWitt Cason, Clerk of Court
Columbia, County, By: BD
Deputy Clerk

Tax Parcel Identification Number:

00-00-00-00533-000

THE UNDERSIGNED hereby gives notice that improvements will be made to certain real property, and in accordance with Section 713.13 of the Florida Statutes, the following information is provided in this **NOTICE OF COMMENCEMENT**.

1. Description of property *(legal description)*: Lot 5 unit 1 Three Rivers Estates
   a) Street *(job)* Address: 218 S.W. Riverside Ave Ft White Fl 32038
2. General description of improvements: Relocate Existing Cabin, Build new House
3. Owner Information or Lessee information if the Lessee contracted for the improvements:
   a) Name and address: David Morgan 218 S.W Riverside Ave Ft White Fl 32038
   b) Name and address of fee simple titleholder (if other than owner) _____
   c) Interest in property Owner
4. Contractor Information
   a) Name and address: Mike Todd Construction 129 N.E Colburn Ave Lake City Fl 32055
   b) Telephone No.: 386-755-4387
5. Surety Information (if applicable, a copy of the payment bond is attached):
   a) Name and address: _____
   b) Amount of Bond: _____
   c) Telephone No.: _____
6. Lender
   a) Name and address: _____
   b) Phone No. _____
7. Person within 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:
   a) Name and address: Mike Todd Construction 129 NE Colburn Ave Lake City Fl. 32055
   b) Telephone No.: 386-755-4387
8. In addition to himself or herself, Owner designates the following person to receive a copy of the Lienor's Notice as provided in Section 713.13(1)(b), Florida Statutes:
   a) Name: Mike Todd OF Mike Todd Construction Inc.
   b) Telephone No.: 386-755-4387
9. Expiration date of Notice of Commencement **(the expiration date will be 1 year from the date of recording unless a different date is specified)**: _____

WARNING TO OWNER: ANY PAYMENTS MADE BY THE OWNER AFTER THE EXPIRATION OF THE NOTICE OF COMMENCEMENT ARE CONSIDERED IMPROPER PAYMENTS UNDER CHAPTER 713, PART I, SECTION 713.13, FLORIDA STATUTES, AND CAN RESULT IN YOUR 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 YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.

STATE OF FLORIDA
COUNTY OF COLUMBIA

10. _____
Signature of Owner or Lessee, or Owner's or Lessee's Authorized Office/Director/Partner/Manager

Contractor Mike Todd
Printed Name **and** Signatory's Title/Office

The foregoing instrument was acknowledged before me, a Florida Notary, this 13 day of June, 2016, by:

Mike Todd as Agent for David Morgan.
(Name of Person) (Type of Authority) (name of party on behalf of whom instrument was executed)

Personally Known ✓ OR Produced Identification ____ Type _____

Notary Signature _____ Notary Stamp or Seal

CAROLYN A. PARLATO
MY COMMISSION EXPIRES
April 27, 2017
#FF 009624
Bonded thru Notary Public Underwriters
NOTARY PUBLIC, STATE OF FLORIDA

Columbia County Property Appraiser

updated: 5/5/2016

2015 Tax Year

Tax Collector | Tax Estimato | Property Card | Parcel List Generator | Interactive GIS Map | Print

Parcel: 00-00-00-00533-000

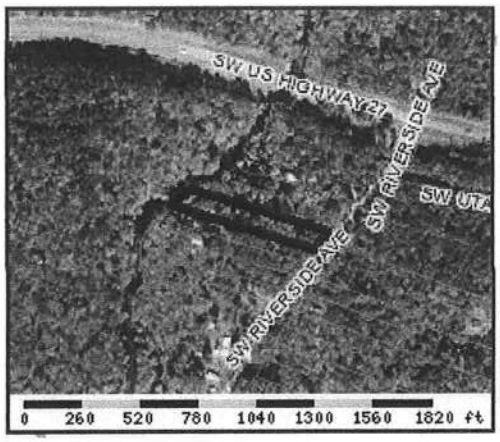
<< Next Lower Parcel | Next Higher Parcel >>

<< Prev Search Result: 16 of 73 Next >>

Owner & Property Info

Owner's Name	MORGAN DAVID RANDAL &		
Mailing Address	BRYNN PARKER MORGAN 2103 WHITNEY OAKS DR OCEAN SPRINGS, MS 39564		
Site Address	218 SW RIVERSIDE AVE		
Use Desc. (code)	SINGLE FAM (000100)		
Tax District	3 (County)	**Neighborhood**	100000
Land Area	1.542 ACRES	**Market Area**	02
Description	NOTE: This description is not to be used as the Legal Description for this parcel in any legal transaction.		

LOT 5 UNIT 1 THREE RIVERS ESTATES. ORB 327-638, WD 1195- 1190, WD 1282-590,



Property & Assessment Values

2015 Certified Values		
Mkt Land Value	cnt: (0)	$95,000.00
Ag Land Value	cnt: (1)	$0.00
Building Value	cnt: (1)	$12,907.00
XFOB Value	cnt: (1)	$1,914.00
Total Appraised Value		$109,821.00
Just Value		$109,821.00
Class Value		$0.00
Assessed Value		$109,821.00
Exempt Value		$0.00
Total Taxable Value		Cnty: $109,821 Other: $109,821 | Schl: $109,821

2016 Working Values		(...Hide Values)
Mkt Land Value	cnt: (0)	$95,000.00
Ag Land Value	cnt: (1)	$0.00
Building Value	cnt: (1)	$12,504.00
XFOB Value	cnt: (1)	$1,914.00
Total Appraised Value		$109,418.00
Just Value		$109,418.00
Class Value		$0.00
Assessed Value		$109,418.00
Exempt Value		$0.00
Total Taxable Value		Cnty: $109,418 Other: $109,418 | Schl: $109,418

NOTE: **2016 Working Values are NOT certified values and therefore are subject to change before being finalized for ad valorem assessment purposes.**

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	Note: All S.F. calculations are based on exterior building dimensions.					

Extra Features & Out Buildings

Code	Desc	Year Blt	Value	Units	Dims	Condition (% Good)
0084	DOCK-RIVER	1993	$1,914.00	0000330.000	0 x 0 x 0	(000.00)

Land Breakdown

Lnd Code	Desc	Units	Adjustments	Eff Rate	Lnd Value
000132	SFR RIVER (MKT)	100 FF - (0000001.542AC)	1.00/1.00/1.00/1.00	$950.00	$95,000.00

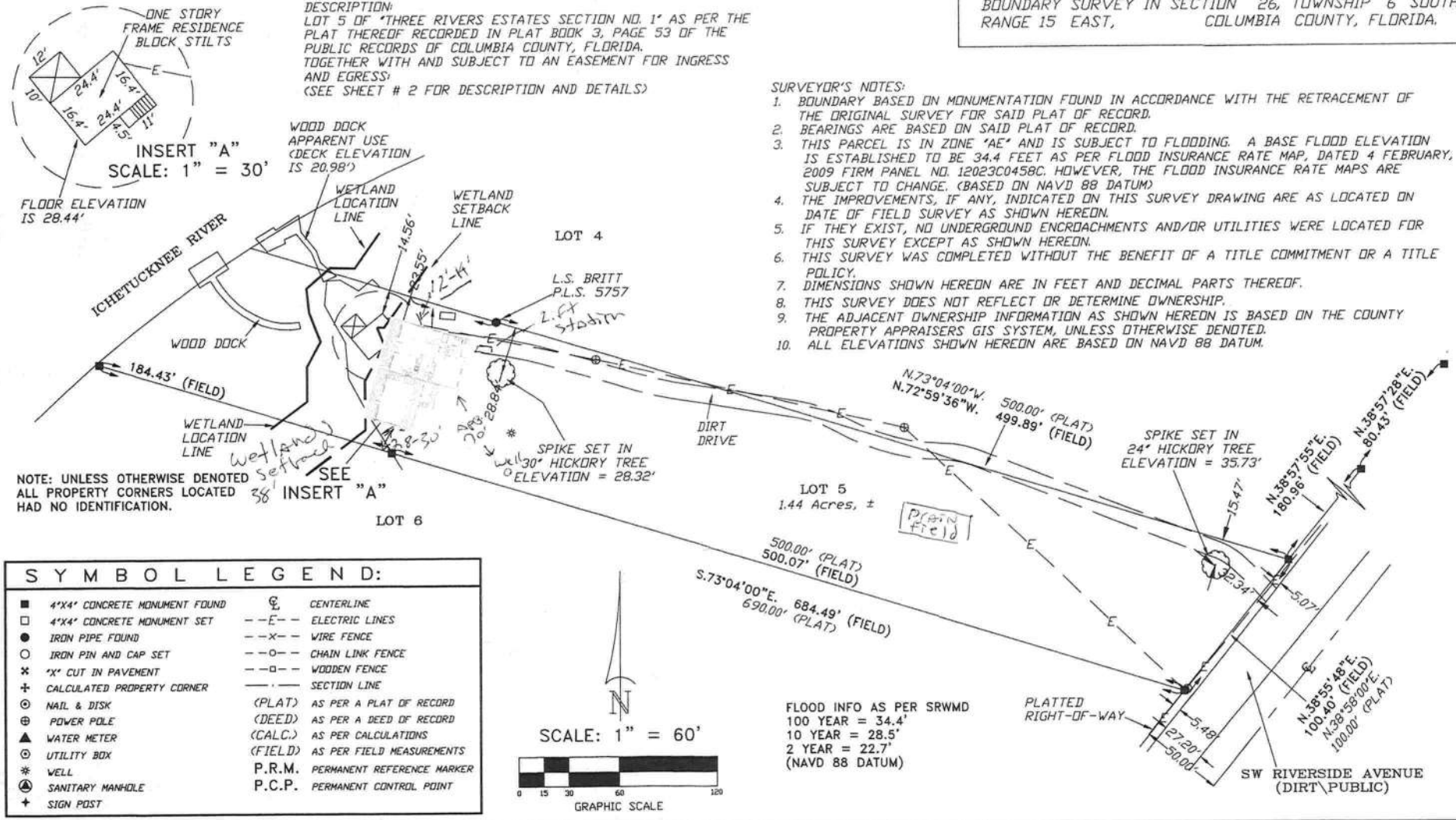
Columbia County Property Appraiser updated: 5/5/2016

<< Prev 16 of 73 Next >>

BOUNDARY SURVEY IN SECTION 26, TOWNSHIP 6 SOUTH, RANGE 15 EAST, COLUMBIA COUNTY, FLORIDA.

DESCRIPTION:
LOT 5 OF "THREE RIVERS ESTATES SECTION NO. 1" AS PER THE PLAT THEREOF RECORDED IN PLAT BOOK 3, PAGE 53 OF THE PUBLIC RECORDS OF COLUMBIA COUNTY, FLORIDA.
TOGETHER WITH AND SUBJECT TO AN EASEMENT FOR INGRESS AND EGRESS:
(SEE SHEET # 2 FOR DESCRIPTION AND DETAILS)

SURVEYOR'S NOTES:
1. BOUNDARY BASED ON MONUMENTATION FOUND IN ACCORDANCE WITH THE RETRACEMENT OF THE ORIGINAL SURVEY FOR SAID PLAT OF RECORD.
2. BEARINGS ARE BASED ON SAID PLAT OF RECORD.
3. THIS PARCEL IS IN ZONE "AE" AND IS SUBJECT TO FLOODING. A BASE FLOOD ELEVATION IS ESTABLISHED TO BE 34.4 FEET AS PER FLOOD INSURANCE RATE MAP, DATED 4 FEBRUARY, 2009 FIRM PANEL NO. 12023C0458C. HOWEVER, THE FLOOD INSURANCE RATE MAPS ARE SUBJECT TO CHANGE. (BASED ON NAVD 88 DATUM)
4. THE IMPROVEMENTS, IF ANY, INDICATED ON THIS SURVEY DRAWING ARE AS LOCATED ON DATE OF FIELD SURVEY AS SHOWN HEREON.
5. IF THEY EXIST, NO UNDERGROUND ENCROACHMENTS AND/OR UTILITIES WERE LOCATED FOR THIS SURVEY EXCEPT AS SHOWN HEREON.
6. THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A TITLE COMMITMENT OR A TITLE POLICY.
7. DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMAL PARTS THEREOF.
8. THIS SURVEY DOES NOT REFLECT OR DETERMINE OWNERSHIP.
9. THE ADJACENT OWNERSHIP INFORMATION AS SHOWN HEREON IS BASED ON THE COUNTY PROPERTY APPRAISERS GIS SYSTEM, UNLESS OTHERWISE DENOTED.
10. ALL ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88 DATUM.



NOTE: UNLESS OTHERWISE DENOTED ALL PROPERTY CORNERS LOCATED HAD NO IDENTIFICATION.

FLOOD INFO AS PER SRWMD
100 YEAR = 34.4'
10 YEAR = 28.5'
2 YEAR = 22.7'
(NAVD 88 DATUM)

SYMBOL LEGEND:

■	4"X4" CONCRETE MONUMENT FOUND	℄	CENTERLINE
□	4"X4" CONCRETE MONUMENT SET	--E--	ELECTRIC LINES
●	IRON PIPE FOUND	--X--	WIRE FENCE
○	IRON PIN AND CAP SET	--O--	CHAIN LINK FENCE
×	"X" CUT IN PAVEMENT	--□--	WOODEN FENCE
✢	CALCULATED PROPERTY CORNER	—·—	SECTION LINE
⊙	NAIL & DISK	(PLAT)	AS PER A PLAT OF RECORD
⊕	POWER POLE	(DEED)	AS PER A DEED OF RECORD
▲	WATER METER	(CALC.)	AS PER CALCULATIONS
⊙	UTILITY BOX	(FIELD)	AS PER FIELD MEASUREMENTS
✻	WELL	P.R.M.	PERMANENT REFERENCE MARKER
Ⓐ	SANITARY MANHOLE	P.C.P.	PERMANENT CONTROL POINT
✦	SIGN POST		

CERTIFIED TO:

DAVID & BRYAN MORGAN

FIELD BOOK: SEE PAGE(S): FILE

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE UNDER MY RESPONSIBLE CHARGE AND MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

10/29/15 FIELD SURVEY DATE
11/05/15 DRAWING DATE
L. SCOTT BRITT, P.S.M. CERTIFICATION # 5757

NOTE: UNLESS IT BEARS THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER THIS DRAWING, SKETCH, PLAT OR MAP IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT VALID.

BRITT SURVEYING & MAPPING, LLC
LAND SURVEYORS AND MAPPERS, L.B. # 8016
2086 SW MAIN BLVD, SUITE. 112, LAKE CITY, FLORIDA 32025
(386)752-7163 FAX (386)752-5573
www.brittsurvey.com

WORK ORDER # L-23730

BOUNDARY SURVEY IN SECTION 26, TOWNSHIP 6 SOUTH, RANGE 15 EAST, COLUMBIA COUNTY, FLORIDA.

DESCRIPTION:
LOT 5 OF "THREE RIVERS ESTATES SECTION NO. 1" AS PER THE PLAT THEREOF RECORDED IN PLAT BOOK 3, PAGE 53 OF THE PUBLIC RECORDS OF COLUMBIA COUNTY, FLORIDA.
TOGETHER WITH AND SUBJECT TO AN EASEMENT FOR INGRESS AND EGRESS:
(SEE SHEET # 2 FOR DESCRIPTION AND DETAILS)

SURVEYOR'S NOTES:
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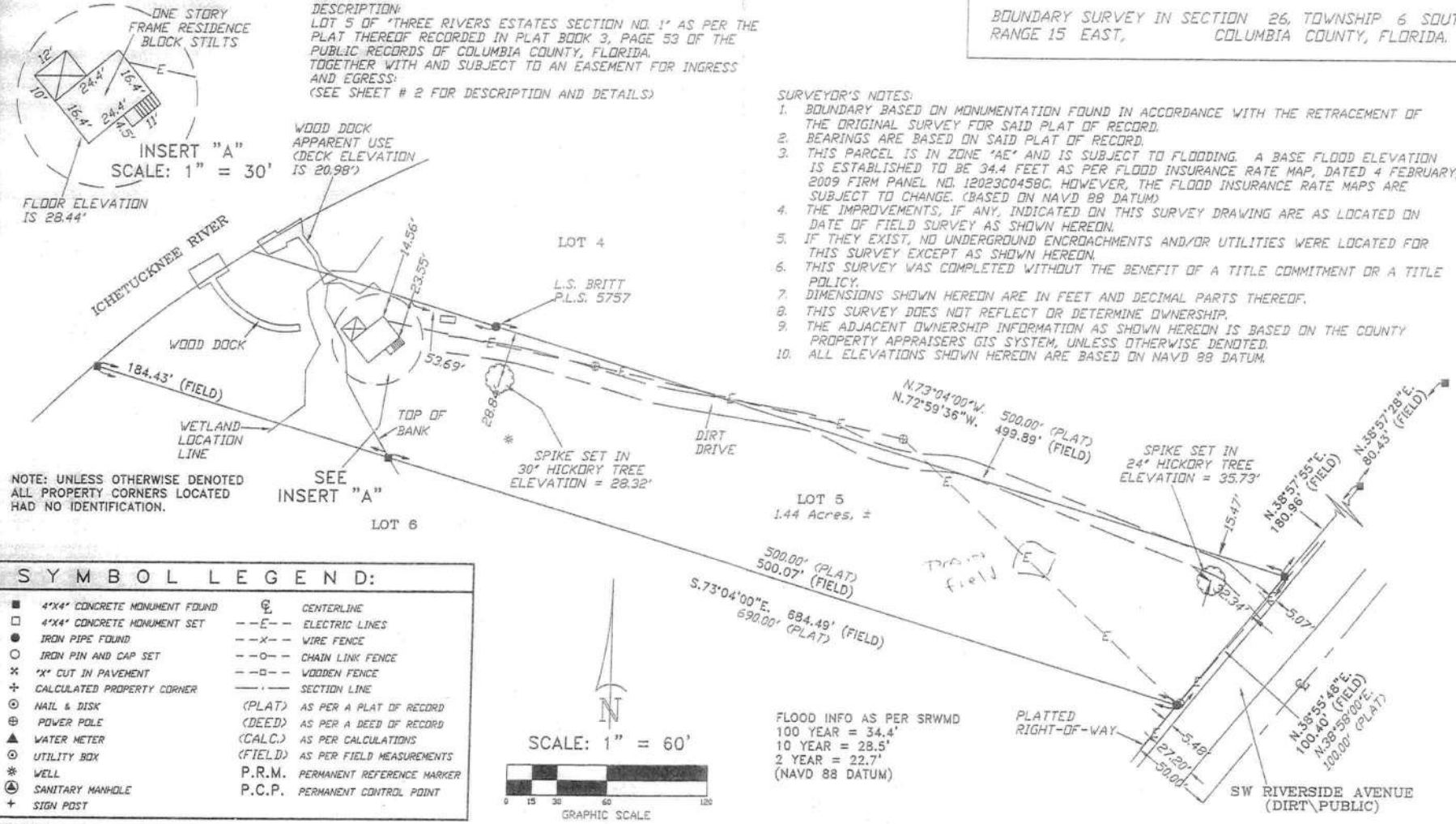
2. BEARINGS ARE BASED ON SAID PLAT OF RECORD.
3. THIS PARCEL IS IN ZONE "AE" AND IS SUBJECT TO FLOODING. A BASE FLOOD ELEVATION IS ESTABLISHED TO BE 34.4 FEET AS PER FLOOD INSURANCE RATE MAP, DATED 4 FEBRUARY, 2009 FIRM PANEL NO. 12023C0458C. HOWEVER, THE FLOOD INSURANCE RATE MAPS ARE SUBJECT TO CHANGE. (BASED ON NAVD 88 DATUM)
4. THE IMPROVEMENTS, IF ANY, INDICATED ON THIS SURVEY DRAWING ARE AS LOCATED ON DATE OF FIELD SURVEY AS SHOWN HEREON.
5. IF THEY EXIST, NO UNDERGROUND ENCROACHMENTS AND/OR UTILITIES WERE LOCATED FOR THIS SURVEY EXCEPT AS SHOWN HEREON.
6. THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A TITLE COMMITMENT OR A TITLE POLICY.
7. DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMAL PARTS THEREOF.
8. THIS SURVEY DOES NOT REFLECT OR DETERMINE OWNERSHIP.
9. THE ADJACENT OWNERSHIP INFORMATION AS SHOWN HEREON IS BASED ON THE COUNTY PROPERTY APPRAISERS GIS SYSTEM, UNLESS OTHERWISE DENOTED.
10. ALL ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88 DATUM.



NOTE: UNLESS OTHERWISE DENOTED ALL PROPERTY CORNERS LOCATED HAD NO IDENTIFICATION.

FLOOD INFO AS PER SRWMD
100 YEAR = 34.4'
10 YEAR = 28.5'
2 YEAR = 22.7'
(NAVD 88 DATUM)

SYMBOL LEGEND:

■	4"X4" CONCRETE MONUMENT FOUND	℄	CENTERLINE
□	4"X4" CONCRETE MONUMENT SET	--E--	ELECTRIC LINES
●	IRON PIPE FOUND	--X--	WIRE FENCE
○	IRON PIN AND CAP SET	--O--	CHAIN LINK FENCE
⤫	"X" CUT IN PAVEMENT	--□--	WOODEN FENCE
+	CALCULATED PROPERTY CORNER	—·—	SECTION LINE
⊙	NAIL & DISK	(PLAT)	AS PER A PLAT OF RECORD
⊕	POWER POLE	(DEED)	AS PER A DEED OF RECORD
▲	WATER METER	(CALC.)	AS PER CALCULATIONS
⊙	UTILITY BOX	(FIELD)	AS PER FIELD MEASUREMENTS
✻	WELL	P.R.M.	PERMANENT REFERENCE MARKER
Ⓐ	SANITARY MANHOLE	P.C.P.	PERMANENT CONTROL POINT
+	SIGN POST		

CERTIFIED TO:

DAVID & BRYAN MORGAN

FIELD BOOK: SEE PAGE(S): FILE

SURVEYOR'S CERTIFICATION

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10/29/15 FIELD SURVEY DATE
11/05/15 DRAWING DATE

L. SCOTT BRITT, P.S.M. CERTIFICATION # 5757

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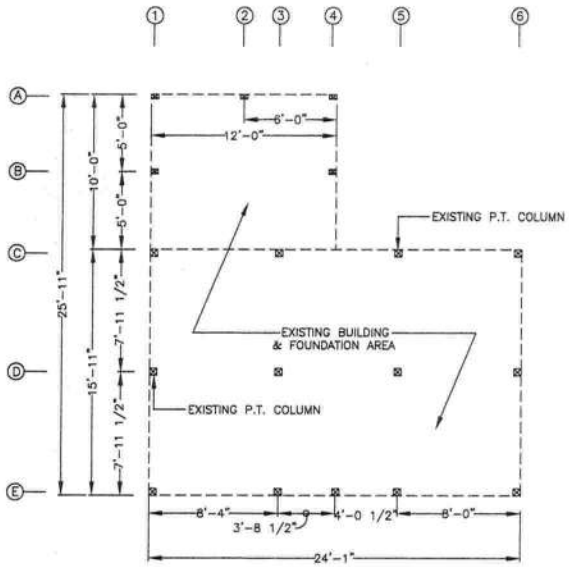
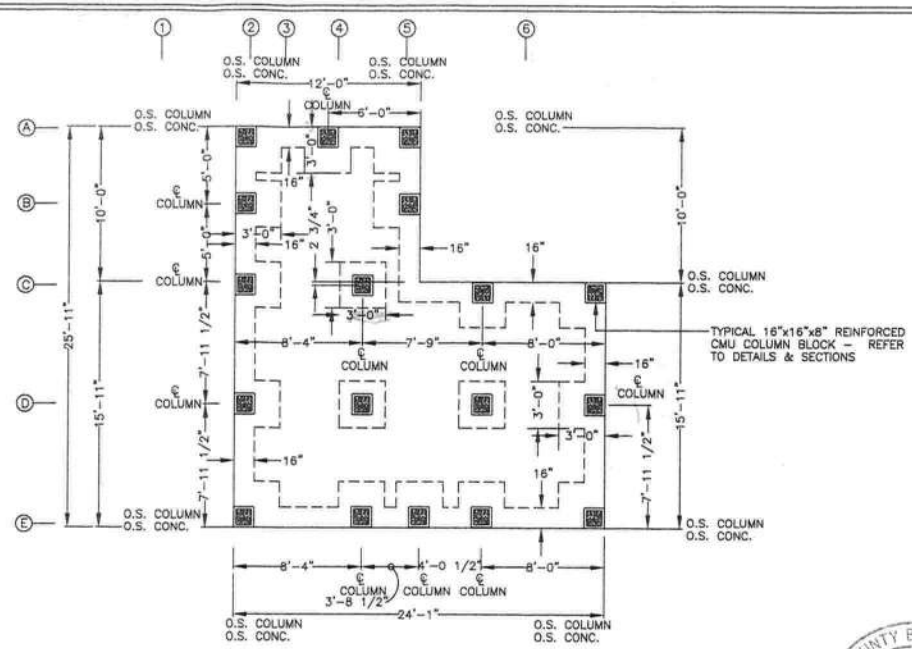
www.brittsurvey.com

WORK ORDER # L-23730

SCALE NOTE:
PLAN VIEW: 1/8"=1'-0



1 A2.1.0 EXISTING DWELLING FOUNDATION PLAN VIEW
SCALE: N.T.S.



2 A2.1.0 RELOCATED DWELLING FOUNDATION PLAN VIEW
SCALE: N.T.S.

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for FILE COPY
Code Compliance
PLANS EXAMINER

REFER TO SHEET No. S1.1.0 FOR CMU COLUMN & FOUNDATION REQUIREMENTS.

HEIGHT OF NEW COLUMN: FINISH FLOOR HEIGHTS OF RELOCATED BUILDING SHALL MATCH ADJACENT NEW CONSTRUCTION

A P.T. 2x SHALL BE ATTACHED TO THE TOP OF THE CMU PIER/ COLUMN W/ 1– A307 ANCHOR BOLT

EACH REINFORCED CMU COLUMN SHALL BE ATTACHED TO DOUBLE 2x8 BAND JOISTS OR INTERIOR JOISTS W/ 1–MODEL No. PA51 BY SIMPSON STRONG–TIE OR EQUAL W/ 9–16d COMMON NAILS AS SPECIFIED BY MANUFACTURER

DETAILS FOR NEW CONSTRUCTION ARE SIMILAR TO THOSE REQUIRED FOR THIS SPECIFIC RELCOATION.

CERTIFICATION:

THESE PLANS FOR THE MORGAN RESIDENCE WILL COMPLY WITH SECTION 1609 OF THE FLORIDA BUILDING CODE, 2014 EDITION FOR A 120 MPH WIND LOAD, 3 SECOND GUST, EXPOSURE C, WITH THE INTERNAL PRESSURE OF + 0.18 AND – 0.18 INCLUDED IN THESE LOADS.

COMPONENTS/CLADDING ROOF = – 22.17 PSF
+ 11.86 PSF

COMPONENTS/CLADDING ROOF = – 51.82 PSF
OVERHANG + 11.86 PSF

COMPONENTS/CLADDING/WALLS = – 33.32 PSF
+ 25.22 PSF

Curtis Keen 6/24/16
CURTIS E. KEEN, PE #23836

PROJECT No. MORGAN–A2.1.0.DWG SHEET No. A2.1.0	DATE 02/26/16	EXISTING & RELOCATED BUILDING FOUNDATION PLAN VIEWS MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA	KEEN ENGINEERING & SURVEYING, INC. 9263 CR 417 LIVE OAK, FLORIDA 32060 386–362–4787 ENG. LIC. EB 3761

STATE CODES: FLORIDA

5TH EDITION (2014) FLORIDA BUILDING CODE RESIDENTIAL COMMERCIAL (FBC)
5TH EDITION (2014) FLORIDA BUILDING CODE ENERGY CONSERVATION
5TH EDITION (2014) FLORIDA BUILDING CODE MECHANICAL
2011 NATIONAL ELECTRICAL CODE (NEC)
5TH EDITION (2014) FLORIDA BUILDING CODE PLUMBING
2014 FLORIDA ACCESSIBLE CODE FOR BUILDING CONSTRUCTION
AMERICANS WITH DISABILITIES ACT (MOST CURRENT REVISIONS)

DESIGN CRITERIA

WIND LOAD DESIGN	120 MPH
EXPOSURE	C
FIRST FLOOR LIVE LOAD	40 PSF
FIRST FLOOR DEAD LOAD	10 PSF
SECOND FLOOR LIVE LOAD	40 PSF OR 0 PSF
SECOND FLOOR DEAD LOAD	10 PSF OR 0 PSF
ROOF LIVE LOAD	20 PSF
ROOF DEAD LOAD	14 PSF
ATTIC LIVE LOAD	10 PSF
ATTIC DEAD LOAD	0 PSF
SESMIC GROUP	N/A
FIRE RATING EXTERIOR WALLS/INTERIOR WALLS	REFER TO DETAILS & SECTIONS
INNER PRESSURE COEFFICIENT	-0.18 (ENCLOSED BUILDING)
IMPORTANCE FACTOR	1.0
MEAN ROOF HEIGHT	20.0'

OCCUPANT LOAD IS BASED UPON 200 S.F. PER PERSON
ACCESSIBILITY REQUIREMENTS REFER TO ACCESSIBLE REQUIREMENTS

AS BUILT DRAWINGS

AT THE START OF CONSTRUCTION, CONTRACTOR SHALL SECURE ONE SET OF PRINTS TO BE BE MAINTAINED IN A CLEAN CONDITION AT THE PROJECT SITE. APPROVED CHANGES (IF ANY) IN CONSTRUCTION SHALL BE NOTED THERON DAILY, AS MADE, AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL CORRECT THESE PRINTS TO REFLECT NEATLY AND ACCURATELY ANY AND ALL CHANGES TO THE PROJECT. THESE PRINTS SHALL BE PRESENTED TO THE OWNER AS "ASBUILT" DRAWINGS DURING FINAL INSPECTION OF THE CONSTRUCTION PROJECT.

GENERAL NOTES

ALL WORK SHALL BE IN ACCORDANCE WITH THE 2014 EDITION OF THE INTERNATIONAL CODE, AS ADOPTED AND SUPPLEMENTED BY LOCAL REGULATIONS.
- VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES.
- NO CHANGES OF INFORMATION SHOWN ON THESE DRAWINGS SHALL BE MADE WITHOUT THE SPECIFIC PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- THE ENGINEER SHALL BE NOTIFIED OF ANY PROPOSED MODIFICATIONS.
- DEMOLITION SHALL INCLUDE REMOVAL, TRANSPORT AND DISPOSAL OF ALL WASTE MATERIAL RELATED TO CONSTRUCTION TO AN APPROVED DISPOSAL FACILITY.
- ALL STRUCTURAL ELEMENTS ARE DESIGNED TO SUSTAIN SPECIFIED DEAD AND LIVE LOADS IN COMBINATION SO AS TO PRODUCE THE MOST CRITICAL CONDITIONS. SEE ABOVE CRITERIA.

DIMENSIONAL LUMBER

- ALL MATERIAL SHALL BE S4S AND GRADE STAMPED BY AN AGENCY CERTIFIED BY THE AMERICAN LUMBER STANDARDS COMMITTEE'S BOARD OF REVIEW AND MANUFACTURED IN ACCORDANCE WITH PS 20, LATEST EDITION.
HANDRAILS AND DECKING (AS MAY BE APPLICABLE) SHALL BE SOUTHERN YELLOW PINE, No.1 OR No.2 AS SPECIFIED IN THE NOTES AND DETAILS WITH A MAXIMUM MOISTURE CONTENT OF 19%.
FRAMING MATERIAL SHALL BE SPRUCE OR SOUTHERN YELLOW PINE No.2 OR BETTER AS NOTED IN NOTES AND DETAILS WITH A MAXIMUM MOISTURE CONTENT OF 19%.
ALL LUMBER SHALL CONFORM TO AMERICAN SOFTWOOD LUMBER STANDARD PS-20, LATEST REV.
ALL SOUTHERN PINE SHALL COMPLY WITH THE FOLLOWING MINIMUM ALLOWABLE UNIT STRESSES:

LIGHT FRAMING	Fb (BENDING) 1500 P.S.I.
2x2 THROUGH 4x4	E. 1,600,000 P.S.I.
STRUCTURAL JOISTS AND PLANKS	Fb (BENDING) 1200 P.S.I.
2x5 THROIGH 4x16	E. 1,600,000 P.S.I.
BEAMS AND STRINGERS	Fb (BENDING) 1100 P.S.I.
POSTS AND TIMBERS	E. 1,400,000 P.S.I.

WANES ARE NOT ACCEPTABLE IN EXPOSED MATERIAL
- ALL LUMBER IN CONTACT W/ MASONRY OR SPECIFIED AS TREATED OR " P.T." SHALL BE PRESSURE TREATED IN CONFORMANCE WITH THE AMERICAN WOOD PRESERVERS ASSOCIATION STANDARD P5, WITH A MINIMUM CHROMATED COPPER ARSENATE (CCA) RETENTION AS FOLLOWS:

USE / EXPOSURE	RETENTION
ABOVE GROUND	0.25
GROUND CONTACT	0.40
FRESH WATER	0.40
WOOD FOUNDATION	0.60
SALT / BRACKISH WATER	2.50

- FIELD CUTS, HOLES AND DAMAGE SHALL BE FIELD TREATED WITH COPPER NAPHTHENATE SOLUTION ON ACCORDANCE WITH AWPA M4
DECKING SHALL BE CUT IN CONTINUOUS LENGTHS, WITH BARK SIDE OF DECKING FACING UPWARD AND SECURED W/ 12d ANNULAR RING OR SPIRAL RING NAILS OR DECKING SCREWS TO PREVENT SPLITTING OF DECKING MATERIAL.
- ALL HANDRAILS AND CORNERS SHALL BE BEVELED AND SANDED TO REMOVE SPLINTERS AND SHARP EDGES.
- ALL FASTENERS SHALL BE AS DESCRIBED IN DETAILS & NOTES ELSEWHERE THESE PLANS.
- REFER TO DETAILS & SECTIONS ELSEWHERE THESE PLANS FOR ADDITIONAL REQUIREMENTS

MECHANICAL CONNECTORS

MECHANICAL CONNECTORS FOR WOOD CONSTRUCTION SHALL BE SIMPSON STRONG-TIE OR APPROVED SUBSTITUTE, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LITERATURE AND SPECIFICATIONS FOR THE INTENDED USE. REFER TO DETAILS AND NOTES ELSEWHERE THESE PLANS FOR REQUIRED SPECIFIC DEVICES AND LOCATIONS.

GENERAL FASTENER SCHEDULE FOR WOOD CONSTRUCTION

CONNECTION	FASTENER	NUMBER OR SPACING
JOIST TO BAND JOIST, FACE NAIL	16d COMMON	3
JOIST TO SILL/GIRDER, TOE NAIL	8d COMMON	3
BRIDGING TO JOIST, TOE NAIL EACH END	8d COMMON	2
SOLE PLATE TO JOIST/BLOCKING, FACE NAIL	16d COMMON	16" O.C.
TOP OR SOLE PLATE TO STUD, END NAILED	16d COMMON	2
STUD TO SOLE PLATE, TOE NAIL	8d COMMON	4
DOUBLED STUDS, FACE NAIL	10d COMMON	24" O.C.
DOUBLED TOP PLATES, FACE NAIL	10d COMMON	16" O.C.
TOP PLATES, LAP AND INTERSECTIONS FACE NAIL	———	2-16d OR 3-10d COMMON
CONTINUOUS HEADER, TWO PIECES	16d COMMON	16" O.C. ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOE NAIL	8d COMMON	3
CONTINUOUS HEADER TO STUD, TOE NAIL	8d COMMON	3
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	———	3-16d OR 4-10d COMMON
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	———	3-16d OR 4-10d COMMON
RAFTER TO PLATE, TOE NAIL	8d COMMON	3
BUILT UP CORNER STUDS	16d COMMON	24" O.C.
BUILT UP GIRDERS & BEAMS, OF THREE MEMBERS	20d COMMON	32" O.C. AT TOP AND BOTTOM AND STAGGERED 2 ENDS AND EACH SPLICE
STUDS TO SOLE PLATE, END NAIL	16d COMMON	2 EACH END
GYPSUM WALLBOARD, 1/2"	1 3/8" DRYWALL NAIL	7" O.C. ON CEILINGS 8" O.C. ON WALLS
GYPSUM WALLBOARD, 5/8"	1 1/2" DRYWALL NAIL	7" O.C. ON CEILINGS 8" O.C. ON WALLS
ROOF SHEATHING, 1/2", EXPOSURE1 C-D PLYWOOD 180 P.L.F. DIAPHRAGM SHEAR CAPACITY	8d COMMON	6" O.C. EDGES, INTERMEDIATE FRAMING 4" O.C. GABLE END WALL OR GABLE TRUSS
ROOF SHEATHING, 1/2", 2-M-W OR 2-M-3 PARTICLE BOARD 180 P.L.F. DIAPHRAGM SHEAR CAPACITY	8d COMMON	6" O.C. EDGES, INTERMEDIATE FRAMING 4" O.C. GABLE END WALL OR GABLE TRUSS

NOTE: REFER TO LISTED FOUNDATION SCHEDULES, WALL SCHEDULES & ROOF SCHEDULES FOR SPECIFIC REQUIRED MECHANICAL FASTENING DEVICES, COORDINATING WITH PLAN VIEWS FOR LOCATIONS OF ATTACHMENT.

CONCRETE/MASONRY

REFER TO TYPICAL FOUNDATION SECTIONS, DETAILS AND SPECIFIC REQUIREMENTS ELSEWHERE THESE PLANS. SEE ALSO APPLICABLE WALL SECTIONS AND RELATED REQUIREMENTS.

DAVID & BRYN MORGAN RESIDENCE
LOT 5, THREE RIVERS ESTATES SECTION NO. 1
COLUMBIA COUNTY, FLORIDA

SRWMD FLOOD INFORMATION

2 YR FLOOD: 22.7 FEET
10 YR FLOOD: 28.5 FEET
100 YR FLOOD: 34.4 FEET

COLUMBIA COUNTY BUILDING
Received for FILE COPY
Code Compliance
PLANS EXAMINER

CERTIFICATION:

THESE PLANS FOR THE MORGAN RESIDENCE WILL COMPLY WITH SECTION 1609 OF THE FLORIDA BUILDING CODE, 2014 EDITION FOR A 120 MPH WIND LOAD, 3 SECOND GUST, EXPOSURE C, WITH THE INTERNAL PRESSURE OF + 0.18 AND - 0.18 INCLUDED IN THESE LOADS.

COMPONENTS/CLADDING ROOF = - 22.17 PSF
+ 11.86 PSF

COMPONENTS/CLADDING ROOF = - 51.82 PSF
OVERHANG + 11.86 PSF

COMPONENTS/CLADDING/WALLS = - 33.32 PSF
+ 25.22 PSF

Curtis E. Keen 5/11/16
CURTIS E. KEEN, PE #23836

MECHANICAL NOTES

1. ALL SUPPLY REGISTERS ARE ADJUSTABLE, EXCEPT WHERE OTHERWISE SPECIFIED
2. INTERIOR DOORS SHALL BE UNDERCUT ABOVE FINISH FLOOR FOR AN AIR RETURN AND OR NOTED IN SCHEDULES OR PLAN VIEWS ELSEWHERE THESE PLANS
3. BATHROOM VENT FANS SHALL PROVIDE A MINIMUM OF 50 CFM OF VENTILATION REFER TO ELECTRICAL SCHEDULES FOR ADDITIONAL MINIMUM CFM REQUIRED
4. HVAC EQUIPMENT SHALL BE EQUIPPED WITH OUTSIDE FRESH AIR INTAKE TO PROVIDE A MINIMUM OF 20 CFM PER PERSON
5. ALL VENTS SHALL BE DUCTED TO THE EXTERIOR OF DWELLING
6. ALL DUCT SYSTEM COMPONENTS INSTALLED IN THE ATTIC AREA W/ INSULATION SHALL HAVE A MINIMUM R-VALUE OF R-8.0
AIR DUCTS, FITTINGS, MECHANICAL EQUIPMENT & PLENUM CHAMBERS SHALL BE MECHANICALLY ATTACHED, SEALED, INSULATED & INSTALLED PER TABLE 503.2.7.2
7. ALL HVAC COMPONENTS INSTALLED ON SITE SHALL BE INSTALLED, TESTED & BALANCED IN ACCORDANCE WITH SECTION 503.2.9.1 BY HVAC CONTRACTOR
8. INSTALLED HVAC EQUIPMENT SHALL MEET THE MINIMUM EFFICIENCIES OF TABLES 503.2.2 (1) THROUGH (8)
9. ATTIC VENTILATION IS ACHIEVED BY END WALL, RIDGE & SOFFIT VENTS WITH A MINIMUM OF 13.87 NET SQUARE FEET FREE AREA OF ATTIC VENTILATION. AND SHALL FULLY COMPLY WITH SECTION 1203 OF THE F.B.C.
RIDGE, SOFFIT AND GABLE END WALL VENTS SHALL BE PROTECTED FROM RAIN INTRUSION & INSECT OR VERMIN INTRUSION COMPLYING W/ SECTION 1203 OF F.B.C.
10. CRAWL SPACE VENTILATION IS NOT APPLICABLE
11. REFER TO HVAC MECHANICAL DRAWINGS, DETAILS, SPECIFICATIONS AND NOTES FOR ADDITIONAL REQUIREMENTS.

INTAKE OPENINGS

R303.5.1 INTAKE OPENINGS
MECHANICAL AND GRAVITY OUTDOOR INTAKE OPENINGS SHALL BE LOCATED A MINIMUM 10 FEET FROM ANY HAZARDOUS OR NOXIOUS CONTAMINATE, SUCH AS VENTS AS CHIMNEYS, PLUMBING VENTS, STREETS, ALLEYS, PARKING LOTS AND LOADING DOCKS, EXCEPT AS OTHERWISE SPECIFIED IN THIS CODE. WHERE SOURCE OF CONTAMINATE IS LOCATED WITHIN 10 FEET OF AN AIR INTAKE OPENING THE OPENINGS SHALL BE LOCATED A MINIMUM OF 2 FEET BELOW THE CONTAMINATE SOURCE.

R303.6 OUTSIDE OPENING PROJECTION
AIR EXHAUST AND INTAKE OPENINGS THAT TERMINATE OUTDOORS SHALL BE PROTECTED WITH CORROSION RESISTANT SCREENS, LOUVERS OR GRILLES HAVING A MINIMUM OPENING OF 1/4 INCH AND A MAXIMUM OPENING OF 1/2 INCH IN ANY DIMENSION. OPENING SHALL BE PROTECTED AGAINST LOCAL WEATHER CONDITIONS. OUTDOOR AND EXHAUST INTAKE OPENINGS SHALL MEET THE PROVISIONS FOR EXTERIOR WALL OPENING PROTECTIVES IN ACCORDANCE WITH THIS CODE.

WINDOW AND OTHER OPENINGS FOR THE PURPOSE OF LIGHT AND VENTILATION IN THE EXTERIOR WALLS ACCESSIBLE TO RODENTS BY THE WAY OF EXPOSED PIPES, WIRES, CONDUITS AND OTHER APPURTENANCES SHALL BE COVERED WITH WIRE MESH (0.035 INCH) THICK OR SOLID METAL GUARDS (0.024 INCH) THICK OR HEAVIER. GUARDS SHALL BE FITTED AROUND THESE FIXTURES. IN ADDITION THEY SHALL BE FASTENED SECURELY TO AND SHALL EXTEND PERPENDICULAR FROM THE EXTERIOR WALL FOR A MINIMUM 12 INCHES BEYOND EITHER SIDE OF APPURTENANCES.

PLUMBING NOTES

REFER TO SPECIFIC PLANS, DETAILS, REQUIREMENTS AND SPECIFICATIONS ELSEWHERE THESE PLANS

WINDOWS AND DOORS

ALL WINDOWS OR DOORS SERIES FROM SELECTED MANUFACTURERS SHALL COMPLY WITH FBC 502.3.2
ALL JOINTS/CRACKS SHALL BE CAULKED, GASKETED, WEATHER STRIPPED OR OTHER WISE SEALED AND SHALL COMPLY WITH FBC 502.3.3
PRODUCT APPROVAL SPECIFICATION SHEET ALONG WITH MANUFACTURER'S INSTALLATION REQUIREMENTS FBC 1715.5 SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

1. ALL GLAZING WITHIN 24 INCHES ARC OF ALL DOORS, WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR, ALL GLAZING IN DOORS SHALL BE SAFETY TEMPERED OR ACRYLIC PLASTIC SHEET.
2. MINIMUM FINISH CORRIDOR WIDTH SHALL BE AS NOTED AND SHALL NOT BE REDUCED OR ADJUSTED BY CONTRACTOR.
3. ALL WINDOWS GLASS AND DOORS SHALL COMPLY W/ AAMA - NWWDA 101-1.S.2
4. ALL MATERIALS USED IN CONSTRUCTION OF THIS BUILDING WHICH ARE COVERED BY THE FLORIDA BUILDING COMMISSION CHAPTER 61 G20-3.006 RULES SHALL HAVE CURRENT FLORIDA APPROVAL.
5. IF WINDOW SILLS ARE LESS THAN 24 INCHES ABOVE FINISH FLOOR & OVER 7 FEET ABOVE ADJACENT FINISH GRADE FULLY COMPLIANT WINDOW GUARDS SHALL BE REQUIRED.
6. REFER TO PLAN VIEWS & RELATED SCHEDULES FOR FULLY COMPLIANT WINDOW & DOOR EGRESS SIZES AND LOCATIONS

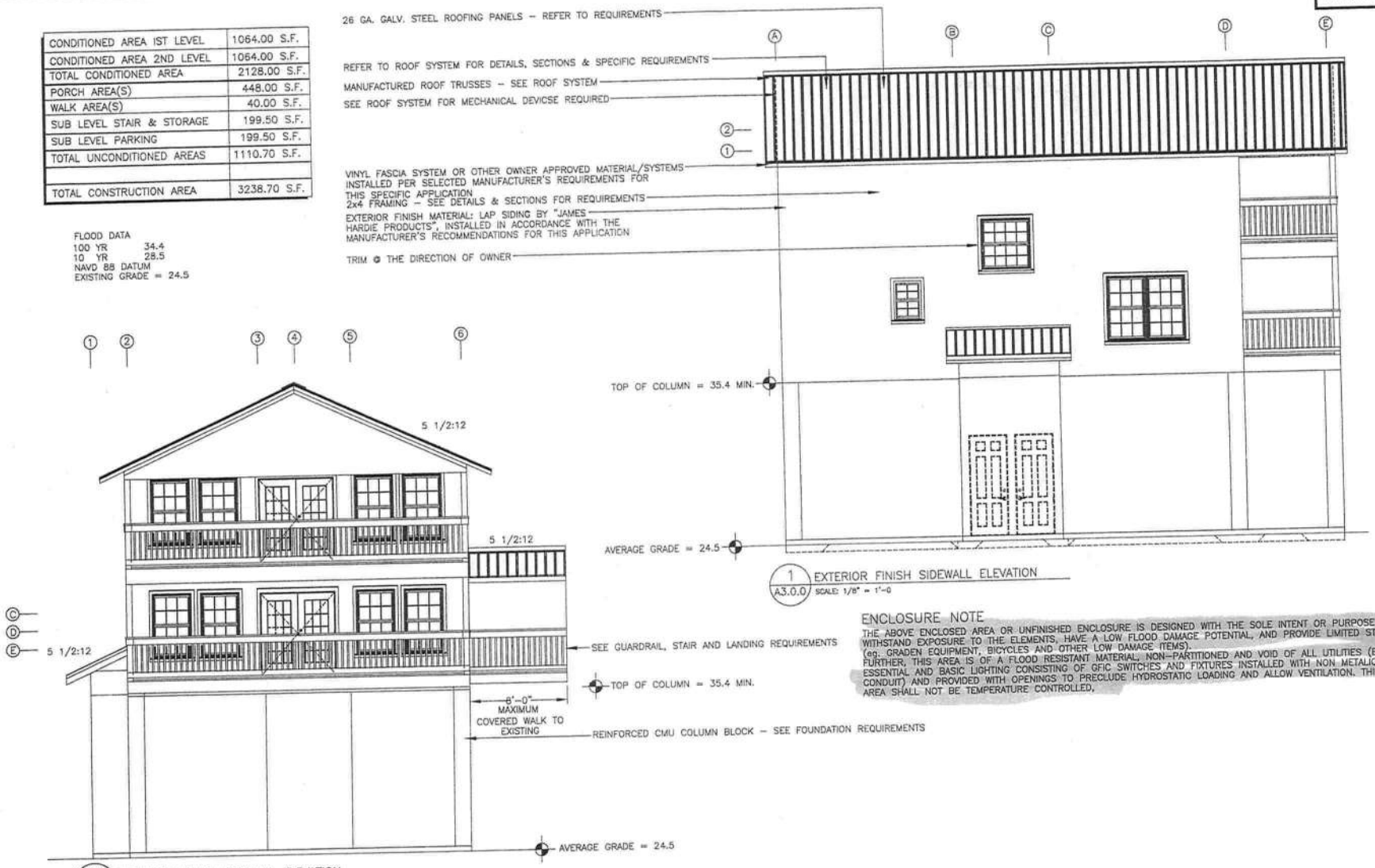
PROJECT No. MORGAN-A1.0.0.DWG SHEET No. A1.0.0	DATE 02/26/16	MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

KEEN ENGINEERING & SURVEYING, INC.
9263 CR 417
LIVE OAK, FLORIDA 32060
386-362-4787
ENG. LIC. EB 3761

SCALE NOTE:
ELEVATIONS: 1/8"=1'-0

CONDITIONED AREA 1ST LEVEL	1064.00 S.F.
CONDITIONED AREA 2ND LEVEL	1064.00 S.F.
TOTAL CONDITIONED AREA	2128.00 S.F.
PORCH AREA(S)	448.00 S.F.
WALK AREA(S)	40.00 S.F.
SUB LEVEL STAIR & STORAGE	199.50 S.F.
SUB LEVEL PARKING	199.50 S.F.
TOTAL UNCONDITIONED AREAS	1110.70 S.F.
TOTAL CONSTRUCTION AREA	3238.70 S.F.

FLOOD DATA
100 YR 34.4
10 YR 28.5
NAVD 88 DATUM
EXISTING GRADE = 24.5



1 A3.0.0 EXTERIOR FINISH SIDEWALL ELEVATION
SCALE: 1/8" = 1'-0

2 A3.0.0 EXTERIOR FINISH ENDWALL ELEVATION
SCALE: 1/8" = 1'-0

ENCLOSURE NOTE

THE ABOVE ENCLOSED AREA OR UNFINISHED ENCLOSURE IS DESIGNED WITH THE SOLE INTENT OR PURPOSE TO WITHSTAND EXPOSURE TO THE ELEMENTS, HAVE A LOW FLOOD DAMAGE POTENTIAL, AND PROVIDE LIMITED STORAGE (eg. GRADEN EQUIPMENT, BICYCLES AND OTHER LOW DAMAGE ITEMS).
FURTHER, THIS AREA IS OF A FLOOD RESISTANT MATERIAL, NON-PARTITIONED AND VOID OF ALL UTILITIES (EXCEPT ESSENTIAL AND BASIC LIGHTING CONSISTING OF GFIC SWITCHES AND FIXTURES INSTALLED WITH NON METALIC CONDUIT) AND PROVIDED WITH OPENINGS TO PRECLUDE HYDROSTATIC LOADING AND ALLOW VENTILATION. THIS AREA SHALL NOT BE TEMPERATURE CONTROLLED.

PROJECT No. MORGAN-A3.0.0.DWG SHEET No. A3.0.0	DATE 02/26/16	EXTERIOR FINISH ELEVATIONS MISC. NOTES, REFERENCES & INSTRUCTIONS 	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

KEEN ENGINEERING & SURVEYING, INC.
9263 CR 417
LIVE OAK, FLORIDA 32060
386-362-4787
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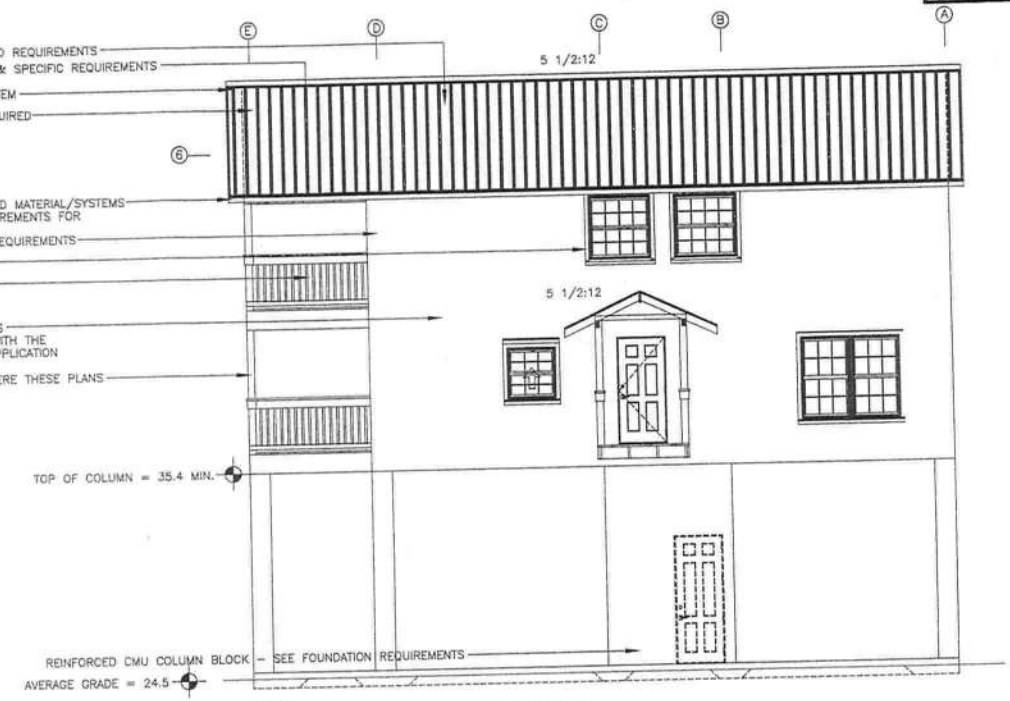
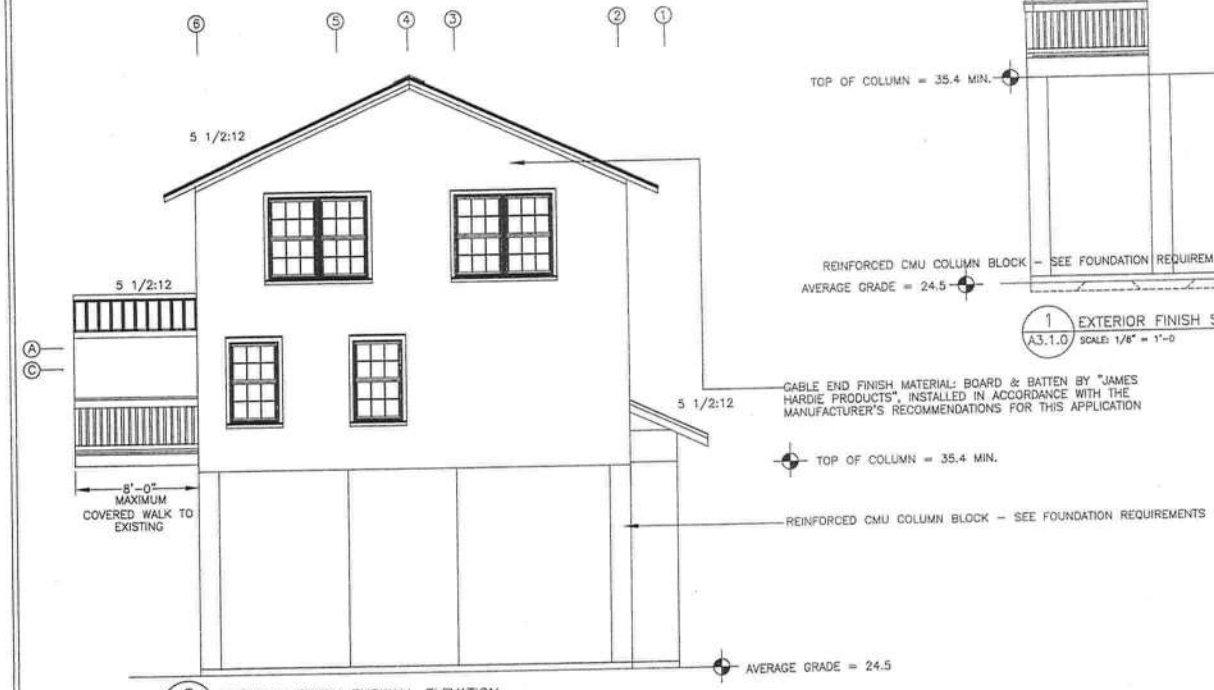
SCALE NOTE:
ELEVATIONS: 1/8"=1'-0

CONDITIONED AREA 1ST LEVEL	1064.00 S.F.
CONDITIONED AREA 2ND LEVEL	1064.00 S.F.
TOTAL CONDITIONED AREA	2128.00 S.F.
PORCH AREA(S)	448.00 S.F.
WALK AREA(S)	40.00 S.F.
SUB LEVEL STAIR & STORAGE	199.50 S.F.
SUB LEVEL PARKING	199.50 S.F.
TOTAL UNCONDITIONED AREAS	1110.70 S.F.
TOTAL CONSTRUCTION AREA	3238.70 S.F.



1 A3.1.0 EXTERIOR FINISH SIDEWALL ELEVATION
SCALE: 1/8" = 1'-0



2 A3.0.0 EXTERIOR FINISH ENDWALL ELEVATION
SCALE: 1/8" = 1'-0

PROJECT No. MORGAN-A3.0.0.DWG SHEET No. A3.1.0	DATE 02/26/16	EXTERIOR FINISH ELEVATIONS MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

KEEN ENGINEERING & SURVEYING, INC.
9263 CR 417
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386-362-4787
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WINDOW																	RATING			FRAME					DETAILS				
CATEGORY	TYPE	WIDTH	HEIGHT	HORIZONTAL SLIDER	FIXED	SINGLE HUNG	DOUBLE HUNG	HOLLOW METAL	SOLID CORE WOOD	HOLLOW CORE WOOD	STILE AND RAIL WOOD	ALUMINUM	VINYL	VINYL / ALUMINUM	OBSCURRED GLASS	TEMPERED GLASS	WIRED GLASS (RATED)				TYPE	HOLLOW METAL WELDED	HOLLOW METAL KNOCKDOWN	WOOD	ALUMINUM	VINYL / ALUMINUM	HEAD	JAMB	SILL	TYPE	
	A	3'-0"	5'-0			●								●								●				●	M	M	M	A	SOME LOCATIONS REQUIRE TEMPERED GLAZING
	B	2'-0"	3'-0			●								●	●							●				●	M	M	M	B	
	C	6'-0	5'-0			●								●								●				●	M	M	M	C	
	D	3'-0	3'-0			●								●		●						●				●	M	M	M	D	
	E	4'-0	4'-0			●								●	●	●						●				●	M	M	M	E	

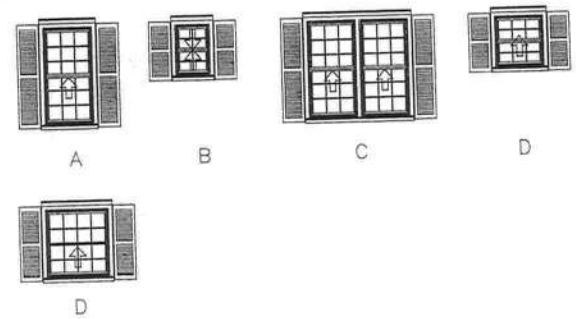
REMARKS

A	3'-0"	5'-0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS – SOME LOCATIONS REQUIRE TEMPERD GLAZING
B	2'-0"	3'-0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS – SECURED GLASS OPTION
C	6'-0	5'-0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS
D	3'-0	3'-0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS – SELECTED LOCATIONS W/ OBSCURRED GLASS OPTION
E	4'-0	4'-0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS

ADDITIONAL WINDOW NOTES

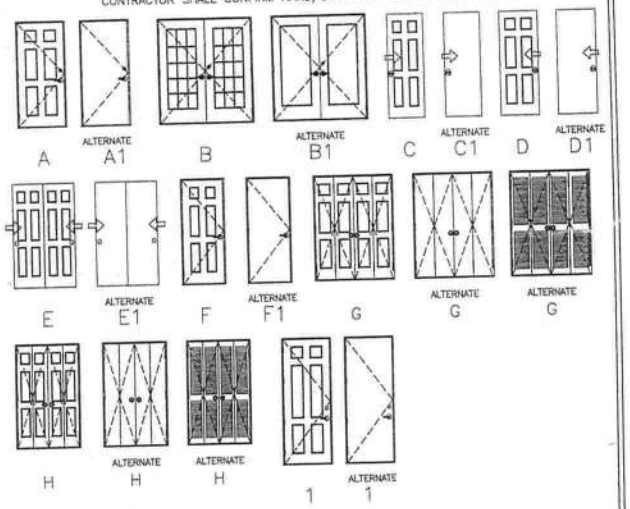
REFER TO PLAN VIEWS & ELEVATIONS FOR SPECIFIC DESIGNATIONS FOR REQUIRED EGRESS WINDOWS
IF WINDOW SILLS ARE LESS THAN 24" ABOVE FINISH FLOOR AND OVER 7'-0 ABOVE ADJACENT FINISH GRADE FULLY COMPLIANT WINDOW GUARDS ARE REQUIRED
CONTRACTOR SHALL PROVIDE ALL APPROVAL SPECIFICATIONS & REQUIREMENTS PER F.B.C. 1715.5 & MANUFACTURER'S INSTALLATION REQUIREMENTS

DOOR															RATING			FRAME						DETAILS				THRESHOLD				HDWR				REMARKS
CATEGORY	DOOR NUMBER	TYPE	WIDTH	HEIGHT 6'-8"	HEIGHT 8'-0	1 3/8" THICK	INSUL. METAL	SOLID CORE WOOD	HOLLOW CORE WOOD	STILE AND RAIL WOOD	ALUMINUM	TEMPERED GLASS	WIRED GLASS	FINISH	20 MINUTE LABEL	C LABEL 3/4 HR	B LABEL 1 HR	TYPE	HOLLOW METAL WELDED	HOLLOW METAL KNOCKDOWN	WOOD	ALUMINUM	HEAD	JAMB	SILL	FINISH	THRESHOLD/ACC	1/4" UNDERCUT	3/4" UNDERCUT	SMOKE SEALS	DOOR NUMBER	AUTOMATIC CLOSURE DEVICE	DOOR VIEWER	HANDLES LEVER TYPE	LOCKSETS	
SUB	A-01	1	3'-0"		●	●	●							P1				A	●				M	M	M	P2	●				01				L1	HINGED – TYPE OPTION A1
SUB	02	1	3'-0"		●	●	●							P1				A	●				M	M	M	P2	●				02				L1	HINGED –
SUB	03	1	3'-0"		●	●	●							P1				A	●				M	M	M	P2	●				03				L1	HINGED –
SUB	04	A	3'-0"	●		●	●							P1				A	●				M	M	M	P2	●				04				L1	HINGED –
SUB	05	A	3'-0"	●		●	●							P1				A	●				M	M	M	P2	●				05				L1	HINGED – 2 LEAF
SUB	06	B	6'-0"	●		●	●					●		P1				B	●				M	M	M	P2	●				06				L1	HINGED – 2 LEAF
FIRST FLOOR	07	C	2'-4"	●		●		●						P3				C			●		W	W	/	P2			●		07					POCKET –
FIRST FLOOR	08	D	2'-8"	●		●		●						P3				D			●		W	W	/	P2			●		08					POCKET –
FIRST FLOOR	09	E	4'-0"	●		●		●						P3				E			●		W	W	/	P2			●		09					BY-PASS – 2 LEAF
FIRST FLOOR	10	E	4'-0"	●		●		●						P3				E			●		W	W	/	P4			●		10					BY-PASS – 2 LEAF
FIRST FLOOR	11	F	2'-8"	●		●		●						P3				F			●		W	W	/	P4			●		11				L2	HINGED –
FIRST FLOOR	12	F	2'-8"	●		●		●						P3				F			●		W	W	/	P4			●		12				L2	HINGED –
FIRST FLOOR	13	F	2'-8"	●		●				●				P3				F			●		W	W	/	P4			●		13					HINGED –
FIRST FLOOR	14	G	5'-0	●										P3				G			●		W	W	/	P4			●		14					BI-FLD. – 4 LEAF
FIRST FLOOR	15	H	4'-0	●						●				P3				H			●		W	W	/	P4					15					BI-FLD.–4 LEAF–RETURN AIR GRILL OPTION
FIRST FLOOR	16	H	4'-0	●						●				P3				H			●		W	W	/	P4					16					BI-FLD.–4 LEAF–RETURN AIR GRILL OPTION
SECOND FLOOR	17	H	4'-0	●						●				P3				H			●		W	W	/	P4					17					BI-FLD. – 4 LEAF
SECOND FLOOR	18	H	4'-0	●						●				P3				H			●		W	W	/	P4					18					BI-FLD. – 4 LEAF
SECOND FLOOR	19	H	4'-0	●						●				P3				H			●		W	W	/	P4					19					BI-FLD. – 4 LEAF
SECOND FLOOR	20	F	2'-8"	●					●					P3				F			●		W	W	/	P4					20				L2	HINGED –
SECOND FLOOR	21	H	4'-0	●						●				P3				H			●		W	W	/	P4					21					BI-FLD. – 4 LEAF
SECOND FLOOR	22	F	2'-8"	●					●					P3				F			●		W	W	/	P4					22					HINGED –
SECOND FLOOR	23	F	2'-8"						●					P3				F			●		W	W	/	P4					23				L2	HINGED –
SECOND FLOOR	24	H	4'-0	●						●				P3				H			●		W	W	/	P4					24					BI-FLD. – 4 LEAF
SECOND FLOOR	25	B	6'-0"	●		●	●					●		P1				B	●				M	M	M	P2	●				25				L1	HINGED – 2 LEAF



NOTE: ABOVE ILLUSTRATIONS SHOW OPTIONAL DIVIDED LITES AND OPTIONAL SYNTHETIC, NON OPERABLE SHUTTERS

CONTRACTOR SHALL CONFIRM HAND/SWING BY PLAN VIEW LOCATIONS



WINDOWS AND DOORS

ALL WINDOWS OR DOORS SERIES FROM SELECTED MANUFACTURERS SHALL COMPLY WITH FBC 502.3.2
ALL JOINTS/CRACKS SHALL BE CAULKED, GASKETED, WEATHER STRIPPED OR OTHER WISE SEALED AND SHALL COMPLY WITH FBC 502.3.3
PRODUCT APPROVAL SPECIFICATION SHEET ALONG WITH MANUFACTURER'S INSTALLATION REQUIREMENTS FBC 1715.5 SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

1. ALL GLAZING WITHIN 24 INCHES ARC OF ALL DOORS, WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR, ALL GLAZING IN DOORS SHALL BE SAFETY TEMPERED OR ACRYLIC PLASTIC SHEET.
2. MINIMUM FINISH CORRIDOR WIDTH SHALL BE AS NOTED AND SHALL NOT BE REDUCED OR ADJUSTED BY CONTRACTOR.
3. ALL WINDOWS GLASS AND DOORS SHALL COMPLY W/ AAMA – NWWDA 101–1.S.2
4. ALL MATERIALS USED IN CONSTRUCTION OF THIS BUILDING WHICH ARE COVEDED BY THE FLORIDA BUILDING COMMISSION CHAPTER 61 G20–3.006 RULES SHALL HAVE CURRENT FLORIDA APPROVAL.
5. IF WINDOW SILLS ARE LESS THAN 24 INCHES ABOVE FINISH FLOOR & OVER 7 FEET ABOVE ADJACENT FINISH GRADE FULLY COMPLIANT WINDOW GUARDS SHALL BE REQUIRED.
6. REFER TO PLAN VIEWS & RELATED SCHEDULES FOR FULLY COMPLIANT WINDOW & DOOR EGRESS SIZES AND LOCATIONS

PROJECT No. MORGAN–A5.0.0.DWG	DATE 02/26/16	WINDOW & DOOR SCHEDULES MISC. NOTES, REFERENCES & INSTRUCTIONS	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA	KEEN ENGINEERING & SURVEYING, INC. 9263 CR 417 LIVE OAK, FLORIDA 32060 386–362–4787 ENG. LIC. EB 3761
SHEET No. A5.0.0		© 2016 KEEN ENGINEERING & SURVEYING, INC.			

WINDOW																		RATING			FRAME					DETAILS				
CATEGORY	TYPE	WIDTH	HEIGHT	HORIZONTAL SLIDER	FIXED	SINGLE HUNG	DOUBLE HUNG	HOLLOW METAL	SOLID CORE WOOD	HOLLOW CORE WOOD	STILE AND RAIL WOOD	ALUMINUM	VINYL	VINYL / ALUMINUM	OBSCURRED GLASS	TEMPERED GLASS	WIRED GLASS (RATED)				TYPE	HOLLOW METAL WELDED	HOLLOW METAL KNOCKDOWN	WOOD	ALUMINUM	VINYL / ALUMINUM	HEAD	JAMB	SILL	TYPE	
	A	3'-0"	5'-0			●								●								●				●	M	M	M	A	SOME LOCATIONS REQUIRE TEMPERED GLAZING
	B	2'-0"	3'-0			●								●	●							●				●	M	M	M	B	
	C	6'-0	5'-0			●								●								●				●	M	M	M	C	
	D	3'-0	3'-0			●								●		●						●				●	M	M	M	D	
	E	4'-0	4'-0			●								●	●	●						●				●	M	M	M	E	

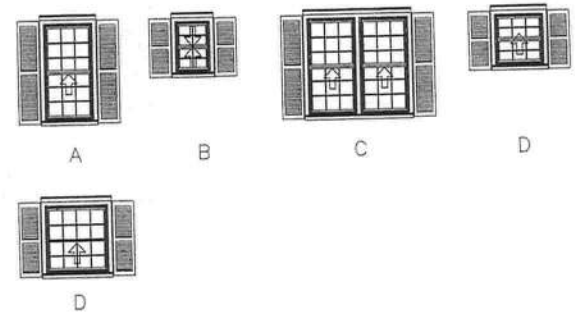
REMARKS

A	3'-0"	5'-0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS – SOME LOCATIONS REQUIRE TEMPERED GLAZING	
B	2'-0"	3'-0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS – SECURED GLASS OPTION	
C	6'-0	5'-0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS	
D	3'-0	3'-0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS – SELECTED LOCATIONS W/ OBSCURRED GLASS OPTION	
E	4'-0	4'-0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS	

ADDITIONAL WINDOW NOTES

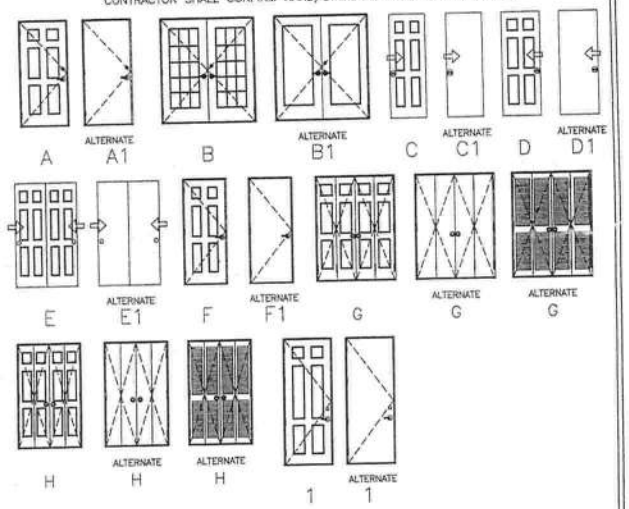
REFER TO PLAN VIEWS & ELEVATIONS FOR SPECIFIC DESIGNATIONS FOR REQUIRED EGRESS WINDOWS
IF WINDOW SILLS ARE LESS THAN 24" ABOVE FINISH FLOOR AND OVER 7'-0 ABOVE ADJACENT FINISH GRADE FULLY COMPLIANT WINDOW GUARDS ARE REQUIRED
CONTRACTOR SHALL PROVIDE ALL APPROVAL SPECIFICATIONS & REQUIREMENTS PER F.B.C. 1715.5 & MANUFACTURER'S INSTALLATION REQUIREMENTS

DOOR															RATING			FRAME					DETAILS				THRESHOLD				HDWR				REMARKS
CATEGORY	DOOR NUMBER	TYPE	WIDTH	HEIGHT 6'-8"	HEIGHT 8'-0	1 3/8" THICK	INSUL. METAL	SOLID CORE WOOD	HOLLOW CORE WOOD	STILE AND RAIL WOOD	ALUMINUM	TEMPERED GLASS	WIRED GLASS	FINISH	20 MINUTE LABEL	C LABEL 3/4 HR	B LABEL 1 HR	TYPE	HOLLOW METAL WELDED	HOLLOW METAL KNOCKDOWN	WOOD	ALUMINUM	HEAD	JAMB	SILL	FINISH	THRESHOLD/ACC	1/4" UNDERCUT	3/4" UNDERCUT	SMOKE SEALS	DOOR NUMBER	AUTOMATIC CLOSURE DEVICE	DOOR VIEWER	HANDLES LEVER TYPE	LOCKSETS	
SUB	A-01	1	3'-0"		●	●	●							P1				A	●				M	M	M	P2	●				01				L1	HINGED – TYPE OPTION A1
	02	1	3'-0"		●	●	●							P1				A	●				M	M	M	P2	●				02				L1	HINGED –
	03	1	3'-0"		●	●	●							P1				A	●				M	M	M	P2	●				03				L1	HINGED –
FIRST FLOOR	04	A	3'-0"	●		●	●							P1				A	●				M	M	M	P2	●				04				L1	HINGED –
	05	A	3'-0"	●		●	●							P1				B	●				M	M	M	P2	●				05				L1	HINGED – 2 LEAF
	06	B	6'-0"	●		●	●					●		P1									M	M	M	P2					06					POCKET –
	07	C	2'-4"	●		●			●					P3				C			●		W	W		P2			●		07					POCKET –
	08	D	2'-6"	●		●			●					P3				D			●		W	W		P2			●		08					BY-PASS – 2 LEAF
	09	E	4'-0"	●		●			●					P3				E			●		W	W		P4			●		09					BY-PASS – 2 LEAF
	10	E	4'-0"	●		●			●					P3				F			●		W	W		P4			●		10				L2	HINGED –
	11	F	2'-8"	●		●			●					P3				F			●		W	W		P4			●		11				L2	HINGED –
	12	F	2'-8"	●		●			●					P3				F			●		W	W		P4			●		12					HINGED –
	13	F	2'-8"	●		●				●				P3				G			●		W	W		P4			●		13					BI-FLD. – 4 LEAF
	14	G	5'-0	●						●				P3				H			●		W	W		P4					14					BI-FLD.-4 LEAF-RETURN AIR GRILL OPTION
	15	H	4'-0	●						●				P3				H			●		W	W		P4					15					BI-FLD.-4 LEAF-RETURN AIR GRILL OPTION
SECOND FLOOR	16	H	4'-0	●						●				P3				H			●		W	W		P4					16					BI-FLD. – 4 LEAF
	17	H	4'-0	●						●				P3				H			●		W	W		P4					17					BI-FLD. – 4 LEAF
	18	H	4'-0	●						●				P3				H			●		W	W		P4					18					BI-FLD. – 4 LEAF
	19	H	4'-0	●						●				P3				H			●		W	W		P4					19					BI-FLD. – 4 LEAF
	20	F	2'-8"	●					●					P3				F			●		W	W		P4					20				L2	HINGED –
	21	H	4'-0	●						●				P3				F			●		W	W		P4					21					BI-FLD. – 4 LEAF
	22	F	2'-8"	●					●					P3				F			●		W	W		P4					22					HINGED –
	23	F	2'-8"						●					P3				H			●		W	W		P4					23				L2	HINGED –
	24	H	4'-0	●						●				P3									W	W		P4					24					BI-FLD. – 4 LEAF
	25	B	6'-0"	●		●	●					●		P1				B	●				M	M	M	P2	●				25				L1	HINGED – 2 LEAF



NOTE: ABOVE ILLUSTRATIONS SHOW OPTIONAL DIVIDED LITES AND OPTIONAL SYNTHETIC, NON OPERABLE SHUTTERS

CONTRACTOR SHALL CONFIRM HAND/SWING BY PLAN VIEW LOCATIONS



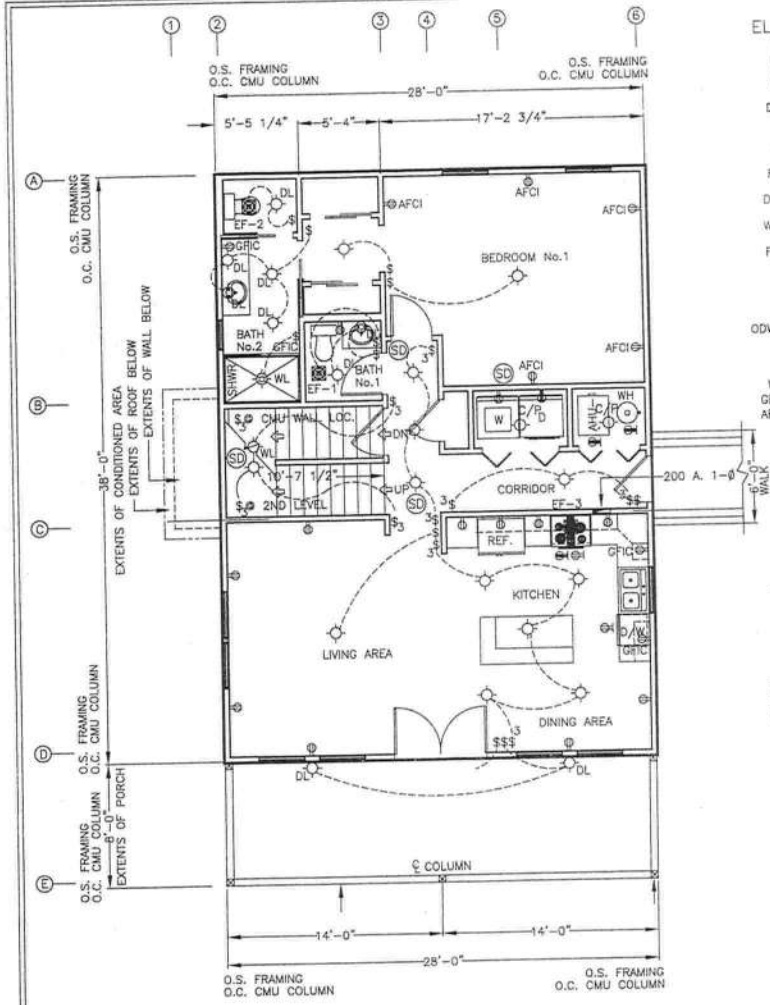
WINDOWS AND DOORS

ALL WINDOWS OR DOORS SERIES FROM SELECTED MANUFACTURERS SHALL COMPLY WITH FBC 502.3.2
ALL JOINTS/CRACKS SHALL BE CAULKED, GASKETED, WEATHER STRIPPED OR OTHER WISE SEALED AND SHALL COMPLY WITH FBC 502.3.3
PRODUCT APPROVAL SPECIFICATION SHEET ALONG WITH MANUFACTURER'S INSTALLATION REQUIREMENTS FBC 1715.5 SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

1. ALL GLAZING WITHIN 24 INCHES ARC OF ALL DOORS, WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR, ALL GLAZING IN DOORS SHALL BE SAFETY TEMPERED OR ACRYLIC PLASTIC SHEET.
2. MINIMUM FINISH CORRIDOR WIDTH SHALL BE AS NOTED AND SHALL NOT BE REDUCED OR ADJUSTED BY CONTRACTOR.
3. ALL WINDOWS GLASS AND DOORS SHALL COMPLY W/ AAMA – NWWDA 101–1.S.2
4. ALL MATERIALS USED IN CONSTRUCTION OF THIS BUILDING WHICH ARE COVEDED BY THE FLORIDA BUILDING COMMISSION CHAPTER 61 G20–3.006 RULES SHALL HAVE CURRENT FLORIDA APPROVAL.
5. IF WINDOW SILLS ARE LESS THAN 24 INCHES ABOVE FINISH FLOOR & OVER 7 FEET ABOVE ADJACENT FINISH GRADE FULLY COMPLIANT WINDOW GUARDS SHALL BE REQUIRED.
6. REFER TO PLAN VIEWS & RELATED SCHEDULES FOR FULLY COMPLIANT WINDOW & DOOR EGRESS SIZES AND LOCATIONS

PROJECT No. MORGAN–A5.0.0.DWG	DATE 02/26/16	WINDOW & DOOR SCHEDULES MISC. NOTES, REFERENCES & INSTRUCTIONS	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA	KEEN ENGINEERING & SURVEYING, INC. 9263 CR 417 LIVE OAK, FLORIDA 32060 386–362–4787 ENG. LIC. EB 3761
SHEET No. A5.0.0					

SCALE NOTE:
PLAN VIEW: 1/8"=1'-0



1 FIRST LEVEL ELECTRICAL PLAN VIEW
E2.0.0 SCALE: N.T.S.

ELECTRICAL FIXTURE SYMBOLS

- FLUORESCENT STRIP FIXTURE, SURFACE MOUNTED
- FLUORESCENT, SURFACE MOUNTED
- OWNER SELECTED FIXTURE – CONTRACTOR INSTALLED
- D – DROP MOUNTED FIXTURE
- WALL BRACKET MOUNTED INCANDESCENT OR HID FIXTURE
- SURFACE MOUNTED FIXTURE
- R – RECESSED DOWNLIGHT
- DL – RECESSED DOWNLIGHT OR SURFACE MOUNTED FIXTURE – DAMP LOCATION RATED
- WL – RECESSED DOWNLIGHT OR SURFACE MOUNTED FIXTURE – WET LOCATION RATED
- FL – RECESSED DOWNLIGHT OR SURFACE MOUNTED FIXTURE – FLUORSCENT LAMP
- EXTERIOR FLOOD LIGHTING: LOCATIONS & SWITCHES @ OWNER'S DIRECTION
- GROUND MOUNTED FLOOD OR DIRECTIONAL DOWNLIGHT LOW VOLTAGE SYSTEM LOCATED @ THE DIRECTION OF THE OWNER
- ODWH – ON DEMAND WATER HEATER: MFGR., SIZE, ETC. @ DIR. OF OWNER
- DUPLEX RECEPTACLE, WALL MOUNTED 12" A.F.F. UNLESS OTHERWISE NOTED NOTE: RECEPTACLES LOCATED @ ALL COUNTER AREAS SHALL BE 43" A.F.F. UNLESS OTHERWISE NOTED
- WP – DUPLEX RECEPTACLE, WALL MOUNTED 12" A.F.F. WEATHERPROOF BOX/CONNECTION
- GFIC – DUPLEX RECEPTACLE W/ GROUND FAULT CIRCUIT INTERRUPTER, WALL MOUNTED
- AFCI – DUPLEX RECEPTACLE W/ ARC FAULT CIRCUIT INTERRUPTER, WALL MOUNTED
- DUPLEX RECEPTACLE W/ GROUND FAULT CIRCUIT INTERRUPTER, FLOOR MOUNTED EXACT LOCATION AS DETERMINED BY OWNER @ TIME OF INSTALLATION
- 220 RECEPTACLE OR CONNECTION – SEE PLAN VIEW(S) FOR LOCATIONS
- TELEPHONE OUTLET WALL MOUNTED 18" A.F.F. NOTE: LOCATE @ OWNER'S DIRECTION
- TELEPHONE DATA OUTLET, WALL MOUNTED 18" A.F.F. UNLESS OTHERWISE INDICATD NOTE: LOCATE @ OWNER'S DIRECTION
- $ – SINGLE POLE TOGGLE SWITCH MOUNTED @ 48" A.F.F.
- $D – SINGLE POLE DIMMER SWITCH WALL MOUNTED 48" A.F.F.
- $3 – THREE-WAY TOGGLE SWITCH
- $M – SINGLE POLE MOTOR RATED TOGGLE SWITVH
- FLUSH MOUNTED, 200A., 240/120 1 – Ø ELECTRICAL PANEL – TOP @ 6'-6" A.F.F.
- DISCONNECT SWITCH: SIZE AS NOTED ADJACENT TO SYMBOL
- OWNER SELECTED CEILING FAN W/ OPTIONAL LIGHT KIT BY MANUFACTURER OWNER SELECTED MANUFACTURER & MODEL – SIZE AS NOTED ON PLANS FAN AND OR LIGHT MAY BE SWITCHED – REFER TO PLAN VIEW(S)
- EF-1 – EXHAUST FAN: OWNER APPROVED PROVIDING A MIN. 40 CFM
- EF-2 – EXHAUST FAN: OWNER APPROVED PROVIDING A MIN. 30 CFM
- EF-3 – EXHAUST FAN: BY OWNER APPROVED STOVE MANUFACTURER
- CAT 5 WIRE @ OWNER SELECTED LOCATIONS
- SPEAKERS & RELATED SOUND DEVICES – LOCATE @ OWNER'S DIRECTION
- TV – TELEVISION COAXIAL OUTLET SHALL BE LOCATED 18" A.F.F. NOTE: SEE PLAN VIEW & LOCATE ADDITIONAL @ OWNER'S DIRECTION
- SD – SMOKE DETECTOR: CEILING MOUNTED UNLESS OTHERWISE NOTED ALL SMOKE DETECTORS SHALL BE 120 VOLT WITH BATTERY BACKUP, OF THE PHOTOELECTRIC TYPE AND SHALL BE INTERLOCKED TOGETHER. INSTALL INSIDE AND NEAR ALL BEDROOMS ON SEPERATE CIRCUIT TO THE MAIN DISTRIBUTION PANEL. ADDITIONAL LOCATIONS MAY BE DETERMINED BY THE FIRE MARSHALL. REFER TO PLAN VIEWS FOR LOCATIONS

FIRST LEVEL ELECTRICAL NOTES: ALL LIGHTING, SWITCHING FOR LIGHTING AND RECEPTACLES SHALL BE WET LABLE AND IN APPROPRIATE WEATHER PROOF BOXES W/ APPROVED CONNECTIONS WITH GROUND FAULT INTERRUPTER CIRCUITRY.
ALL WIRING SHALL BE INSTALLED IN NMT CONDUIT PER LATEST EDITION OF THE N.E.C.

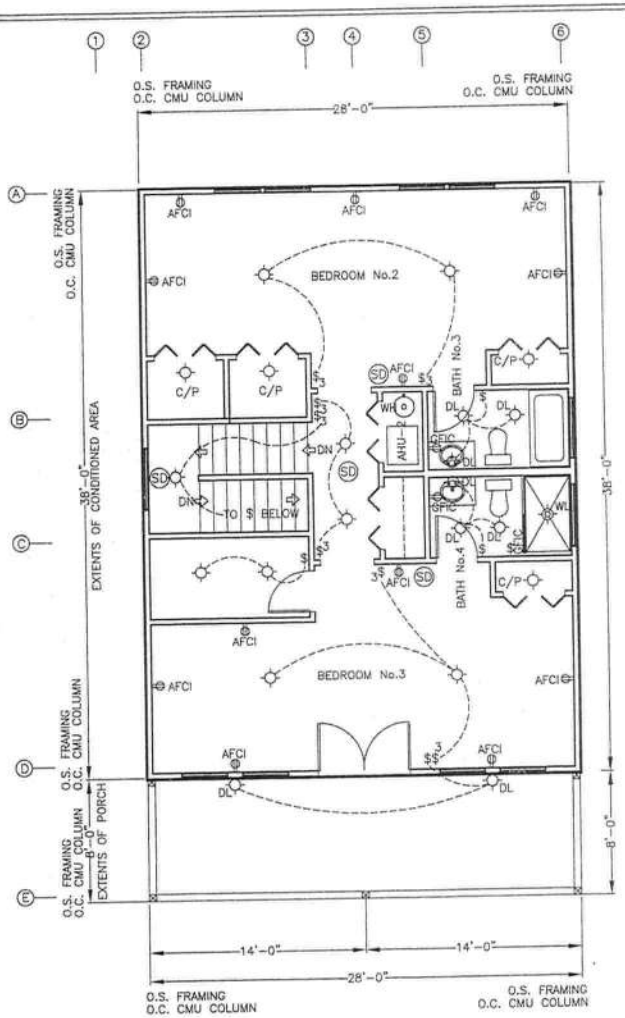
ELECTRICAL NOTES

1. ALL WORK SHALL BE FULLY COMPLIANT WITH THE MOST CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
2. ALL CIRCUITS & EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE APPROPRIATE ARTICLES OF THE NEC.
3. WHEN LIGHT FIXTURES ARE INSTALLED IN CLOSETS THEY SHALL BE SURFACE MOUNTED OR RECESSED. INCANDESCENT FIXTURES SHALL HAVE COMPLETELY ENCLOSED LAMPS. SURFACE MOUNTED INCANDESCENT FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 12 INCHES AND ALL OTHER FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 6 INCHES FROM "STORAGE AREAS" AS DEFINED BY NEC 410-8(o).
4. WHEN WATER HEATERS ARE INSTALLED THEY SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE WATER HEATERS SERVED. THE BRANCH CIRCUIT SWITCH OR CIRCUIT BREAKER SHALL BE PREMITTED TO SERVE IS WITHIN SIGHT FROM THE WATER HEATER OR IS CAPABLE OF BEING LOCKED IN THE OPEN POSITION.
5. HVAC EQUIPMENT SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE EQUIPMENT SERVED. A UNIT SWITCH WITH A MARKED "OFF" THAT IS A PART OF THE HVAC EQUIPMENT AND DISCONNECTS ALL UNGROUNDED CONDUCTORS SHALL BE PERMITTED AS THE DISCONNECTING MEANS WHERE OTHER DISCONNECTING ARE ALSO PROVIDED BY A READILY ACCESSIBLE CIRCUIT BREAKER.
6. PRIOR TO ENERGIZING THE ELECTRICAL SYSTEM THE INTERRUPTING RATING OF THE MAIN BREAKER MUST BE VERIFIED AS BEING IN COMPLIANCE WITH SECTION 110-9 OF THE NEC BY ELECTRICAL CONTRACTOR
7. THE MAIN ELECTRICAL PANEL AND FEEDERS IF NOT SPECIFICALLY DEFINED IN THESE PLANS ARE DESIGNED BY OTHERS.
8. NOT USED
9. ALL RECEPTACLES INSTALLED IN WET LOCATIONS (EXTERIOR) SHALL BE IN WEATHER PROOF (WP) ENCLOSURES. THE INTEGRITY OF WHICH IS NOT AFFECTED WHEN AN ATTACHMENT PLUG CAP IS INSERTED OR REMOVED. THE RECEPTACLE ITSELF SHALL ALSO BE LISTED FOR USE IN DAMP AND WET LOCATIONS AS PER MOST CURRENT EDITION OF THE NEC.
10. EXTERIOR LIGHTS NOT INTENDED FOR 24 HOUR USE SHALL BE CONNECTED TO A PHOTOCELL OR TIMER.
11. ALL EXPOSED ELECTRICAL SERVICE CONDUCTORS SHALL BE FULLY ENCLOSED IN APPROPRIATELY SIZED NON METALIC CONDUIT (NMT) PER THE LATEST EDITION OF THE NEC.
12. ALL LIGHTING SWITHES NOT INDICATED BY LOCATION ON THE PLAN VIEW(S) SHALL BE LOCATED @ THE DIRECTION OF THE OWNER IN FULL COMPLIANCE WITH ALL APPLICABLE SECTIONS OF THE NEC.
13. ALL SMOKE DETECTORS SHALL BE 120 VOLT (120 V.) WITH BATTERY BACKUP OF THE PHOTOELECTRIC TYPE AND SHALL BE INTERLOCKED TOGETHER. INSTALLATION SHALL BE INSIDE AND NEAR ALL BEDROOMS ON A SEPERATE CIRCUIT TO THE MAIN DISTRIBUTION PANEL. REFER TO PLAN VIEW FOR SUGGESTED LOCATIONS WITH ALL ADJUSTMENTS AND ADDITIONAL LOCATIONS DETERMINED BY LOCAL FIRE MARSHALL.
14. PROVIDE COMBINATION SMOKE/CARBON MONOXIDE DETECTORS WHEN ANY FOSSIL FUEL APPLIANCES ARE PROVIDED OR INSTALLED.
15. ELECTRICAL CONTRACTOR SHALL REFER TO SPECIFIC LOCATIONS AND NOTES ON THE PLAN VIEWS FOR GROUND FAULT INTERRUPTER CIRCUITS (GFIC) SWITCHES, RECEPTACLES AND RELATED ELEMENTS.
16. ELECTRICAL CONTRACTOR SHALL REFER TO SPECIFIC LOCATIONS AND NOTES ON THE PLAN VIEW(S) FOR ARC FAULT CIRCUIT INTERRUPTER (AFCI) SWITCHES, RECEPTACLES AND RELATED ELEMENTS.
17. PROVIDE TAMPER RESISTANT RECEPTACLES IN ACCORDANCE WOTH SECTION 406.11 OF 2014 NEC
18. REFER TO ELECTRICAL PLANS, DETAILS, SECTIONS, NOTES AND SPECIFICATIONS FOR FOR ADDITIONAL REQUIREMENTS.

PROJECT No. MORGAN-E2.0.0.DWG SHEET No. E2.0.0	DATE 02/26/16	FIRST LEVEL ELECTRICAL PLAN VIEW MISC. NOTES, REFERENCES & INSTRUCTIONS 	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

KEEN ENGINEERING & SURVEYING, INC.
9263 CR 417
LIVE OAK, FLORIDA 32060
386-362-4787
ENG. LIC. EB 3761

SCALE NOTE:
PLAN VIEW: 1/8"=1'-0



3 SECOND LEVEL PLAN VIEW
E3.0.0

ELECTRICAL FIXTURE SYMBOLS

- FLUORESCENT STRIP FIXTURE, SURFACE MOUNTED
- FLUORESCENT, SURFACE MOUNTED
- OWNER SELECTED FIXTURE – CONTRACTOR INSTALLED
- D- DROP MOUNTED FIXTURE
- WALL BRACKET MOUNTED INCANDESCENT OR HID FIXTURE
- SURFACE MOUNTED FIXTURE
- R- RECESSED DOWNLIGHT
- DL- RECESSED DOWNLIGHT OR SURFACE MOUNTED FIXTURE – DAMP LOCATION RATED
- WL- RECESSED DOWNLIGHT OR SURFACE MOUNTED FIXTURE – WET LOCATION RATED
- FL- RECESSED DOWNLIGHT OR SURFACE MOUNTED FIXTURE – FLUORSCENT LAMP
- EXTERIOR FLOOD LIGHTING: LOCATIONS & SWITCHES @ OWNER'S DIRECTION
- GROUND MOUNTED FLOOD OR DIRECTIONAL DOWNLIGHT LOW VOLTAGE SYSTEM LOCATED @ THE DIRECTION OF THE OWNER
- ODWH ON DEMAND WATER HEATER: MFGR., SIZE, ETC. @ DIR. OF OWNER
- DUPLEX RECEPTACLE, WALL MOUNTED 12" A.F.F. UNLESS OTHERWISE NOTED
  NOTE: RECEPTACLES LOCATED @ ALL COUNTER AREAS SHALL BE 43" A.F.F. UNLESS OTHERWISE NOTED
- WP DUPLEX RECEPTACLE, WALL MOUNTED 12" A.F.F. WEATHERPROOF BOX/CONNECTION
- GFIC DUPLEX RECEPTACLE W/ GROUND FAULT CIRCUIT INTERRUPTER, WALL MOUNTED
- AFCI DUPLEX RECEPTACLE W/ ARC FAULT CIRCUIT INTERRUPTER, WALL MOUNTED
- DUPLEX RECEPTACLE W/ GROUND FAULT CIRCUIT INTERRUPTER, FLOOR MOUNTED EXACT LOCATION AS DETERMINED BY OWNER @ TIME OF INSTALLATION
- 220 RECEPTACLE OR CONNECTION – SEE PLAN VIEW(S) FOR LOCATIONS
- TELEPHONE OUTLET WALL MOUNTED 18" A.F.F.
  NOTE: LOCATE @ OWNER'S DIRECTION
- TELEPHONE DATA OUTLET, WALL MOUNTED 18" A.F.F. UNLESS OTHERWISE INDICATD
  NOTE: LOCATE @ OWNER'S DIRECTION
- $ SINGLE POLE TOGGLE SWITCH MOUNTED @ 48" A.F.F.
- $D SINGLE POLE DIMMER SWITCH WALL MOUNTED 48" A.F.F.
- $3 THREE-WAY TOGGLE SWITCH
- $M SINGLE POLE MOTOR RATED TOGGLE SWITVH
- FLUSH MOUNTED, 200A., 240/120 1 – ϕ ELECTRICAL PANEL – TOP @ 6'-6" A.F.F.
- DISCONNECT SWITCH: SIZE AS NOTED ADJACENT TO SYMBOL
- OWNER SELECTED CEILING FAN W/ OPTIONAL LIGHT KIT BY MANUFACTURER OWNER SELECTED MANUFACTURER & MODEL – SIZE AS NOTED ON PLANS FAN AND OR LIGHT MAY BE SWITCHED – REFER TO PLAN VIEW(S)
- EF-1 EXHAUST FAN: OWNER APPROVED PROVIDING A MIN. 40 CFM
- EF-2 EXHAUST FAN: OWNER APPROVED PROVIDING A MIN. 30 CFM
- EF-3 EXHAUST FAN: BY OWNER APPROVED STOVE MANUFACTURER
- CAT 5 WIRE @ OWNER SELECTED LOCATIONS
- SPEAKERS & RELATED SOUND DEVICES – LOCATE @ OWNER'S DIRECTION
- TV TELEVISION COAXIAL OUTLET SHALL BE LOCATED 18" A.F.F.
  NOTE: SEE PLAN VIEW & LOCATE ADDITIONAL @ OWNER'S DIRECTION
- SD SMOKE DETECTOR: CEILING MOUNTED UNLESS OTHERWISE NOTED
  ALL SMOKE DETECTORS SHALL BE 120 VOLT WITH BATTERY BACKUP, OF THE PHOTOELECTRIC TYPE AND SHALL BE INTERLOCKED TOGETHER. INSTALL INSIDE AND NEAR ALL BEDROOMS ON SEPERATE CIRCUIT TO THE MAIN DISTRIBUTION PANEL. ADDITIONAL LOCATIONS MAY BE DETERMINED BY THE FIRE MARSHALL. REFER TO PLAN VIEWS FOR LOCATIONS

FIRST LEVEL ELECTRICAL NOTES: ALL LIGHTING, SWITCHING FOR LIGHTING AND RECEPTACLES SHALL BE WET LABLE AND IN APPROPRIATE WEATHER PROOF BOXES W/ APPROVED CONNECTIONS WITH GROUND FAULT INTERRUPTER CIRCUITRY.
ALL WIRING SHALL BE INSTALLED IN NMT CONDUIT PER LATEST EDITION OF THE N.E.C.

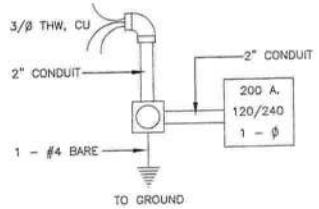
ELECTRICAL NOTES

1. ALL WORK SHALL BE FULLY COMPLIANT WITH THE MOST CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
2. ALL CIRCUITS & EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE APPROPRIATE ARTICLES OF THE NEC.
3. WHEN LIGHT FIXTURES ARE INSTALLED IN CLOSETS THEY SHALL BE SURFACE MOUNTED OR RECESSED. INCANDESCENT FIXTURES SHALL HAVE COMPLETELY ENCLOSED LAMPS. SURFACE MOUNTED INCANDESCENT FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 12 INCHES AND ALL OTHER FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 6 INCHES FROM "STORAGE AREAS" AS DEFINED BY NEC 410–B(a).
4. WHEN WATER HEATERS ARE INSTALLED THEY SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE WATER HEATERS SERVED. THE BRANCH CIRCUIT SWITCH OR CIRCUIT BREAKER SHALL BE PREMITTED TO SERVE IS WITHIN SIGHT FROM THE WATER HEATER OR IS CAPABLE OF BEING LOCKED IN THE OPEN POSITION.
5. HVAC EQUIPMENT SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE EQUIPMENT SERVED. A UNIT SWITCH WITH A MARKED "OFF" THAT IS A PART OF THE HVAC EQUIPMENT AND DISCONNECTS ALL UNGROUNDED CONDUCTORS SHALL BE PERMITTED AS THE DISCONNECTING MEANS WHERE OTHER DISCONNECTING ARE ALSO PROVIDED BY A READILY ACCESSIBLE CIRCUIT BREAKER.
6. PRIOR TO ENERGIZING THE ELECTRICAL SYSTEM THE INTERRUPTING RATING OF THE MAIN BREAKER MUST BE VERIFIED AS BEING IN COMPLIANCE WITH SECTION 110–9 OF THE NEC BY ELECTRICAL CONTRACTOR
7. THE MAIN ELECTRICAL PANEL AND FEEDERS IF NOT SPECIFICALLY DEFINED IN THESE PLANS ARE DESIGNED BY OTHERS.
8. NOT USED
9. ALL RECEPTACLES INSTALLED IN WET LOCATIONS (EXTERIOR) SHALL BE IN WEATHER PROOF (WP) ENCLOSURES. THE INTEGRITY OF WHICH IS NOT AFFECTED WHEN AN ATTACHMENT PLUG CAP IS INSERTED OR REMOVED. THE RECEPTACLE ITSELF SHALL ALSO BE LISTED FOR USE IN DAMP AND WET LOCATIONS AS PER MOST CURRENT EDITION OF THE NEC.
10. EXTERIOR LIGHTS NOT INTENDED FOR 24 HOUR USE SHALL BE CONNECTED TO A PHOTOCELL OR TIMER.
11. ALL EXPOSED ELECTRICAL SERVICE CONDUCTORS SHALL BE FULLY ENCLOSED IN APPROPRIATELY SIZED NON METALIC CONDUIT (NMT) PER THE LATEST EDITION OF THE NEC.
12. ALL LIGHTING SWITHES NOT INDICATED BY LOCATION ON THE PLAN VIEW(S) SHALL BE LOCATED @ THE DIRECTION OF THE OWNER IN FULL COMPLIANCE WITH ALL APPLICABLE SECTIONS OF THE NEC.
13. ALL SMOKE DETECTORS SHALL BE 120 VOLT (120 V.) WITH BATTERY BACKUP OF THE PHOTOELECTRIC TYPE AND SHALL BE INTERLOCKED TOGETHER. INSTALLATION SHALL BE INSIDE AND NEAR ALL BEDROOMS ON A SEPERATE CIRCUIT TO THE MAIN DISTRIBUTION PANEL. REFER TO PLAN VIEW FOR SUGGESTED LOCATIONS WITH ALL ADJUSTMENTS AND ADDITIONAL LOCATIONS DETERMINED BY LOCAL FIRE MARSHALL.
14. PROVIDE COMBINATION SMOKE/CARBON MONOXIDE DETECTORS WHEN ANY FOSSIL FUEL APPLIANCES ARE PROVIDED OR INSTALLED.
15. ELECTRICAL CONTRACTOR SHALL REFER TO SPECIFIC LOCATIONS AND NOTES ON THE PLAN VIEWS FOR GROUND FAULT INTERRUPTER CIRCUITS (GFIC) SWITCHES, RECEPTACLES AND RELATED ELEMENTS.
16. ELECTRICAL CONTRACTOR SHALL REFER TO SPECIFIC LOCATIONS AND NOTES ON THE PLAN VIEW(S) FOR ARC FAULT CIRCUIT INTERRUPTER (AFCI) SWITCHES, RECEPTACLES AND RELATED ELEMENTS.
17. PROVIDE TAMPER RESISTANT RECEPTACLES IN ACCORDANCE WOTH SECTION 406.11 OF 2014 NEC
18. REFER TO ELECTRICAL PLANS, DETAILS, SECTIONS, NOTES AND SPECIFICATIONS FOR FOR ADDITIONAL REQUIREMENTS.

PROJECT No. MORGAN–E3.0.0.DWG SHEET No. E3.0.0	DATE 02/26/16	SECOND LEVEL ELECTRICAL PLAN VIEW MISC. NOTES, REFERENCES & INSTRUCTIONS 	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA	KEEN ENGINEERING & SURVEYING, INC. 9263 CR 417 LIVE OAK, FLORIDA 32060 386–362–4787 ENG. LIC. EB 3761

ELECTRICAL NOTES

1. ALL WORK SHALL BE FULLY COMPLIANT WITH THE MOST CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
2. ALL CIRCUITS & EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE APPROPRIATE ARTICLES OF THE NEC.
3. WHEN LIGHT FIXTURES ARE INSTALLED IN CLOSETS THEY SHALL BE SURFACE MOUNTED OR RECESSED. INCANDESCENT FIXTURES SHALL HAVE COMPLETELY ENCLOSED LAMPS. SURFACE MOUNTED INCANDESCENT FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 12 INCHES AND ALL OTHER FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 6 INCHES FROM "STORAGE AREAS" AS DEFINED BY NEC 410-8(a).
4. WHEN WATER HEATERS ARE INSTALLED THEY SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE WATER HEATERS SERVED. THE BRANCH CIRCUIT SWITCH OR CIRCUIT BREAKER SHALL BE PREMITTED TO SERVE IS WITHIN SIGHT FROM THE WATER HEATER OR IS CAPABLE OF BEING LOCKED IN THE OPEN POSITION.
5. HVAC EQUIPMENT SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE EQUIPMENT SERVED. A UNIT SWITCH WITH A MARKED "OFF" THAT IS A PART OF THE HVAC EQUIPMENT AND DISCONNECTS ALL UNGROUNDED CONDUCTORS SHALL BE PERMITTED AS THE DISCONNECTING MEANS WHERE OTHER DISCONNECTING ARE ALSO PROVIDED BY A READILY ACCESSIBLE CIRCUIT BREAKER.
6. PRIOR TO ENERGIZING THE ELECTRICAL SYSTEM THE INTERRUPTING RATING OF THE MAIN BREAKER MUST BE VERIFIED AS BEING IN COMPLIANCE WITH SECTION 110-9 OF THE NEC BY ELECTRICAL CONTRACTOR
7. THE MAIN ELECTRICAL PANEL AND FEEDERS IF NOT SPECIFICALLY DEFINED IN THESE PLANS ARE DESIGNED BY OTHERS.
8. NOT USED
9. ALL RECEPTACLES INSTALLED IN WET LOCATIONS (EXTERIOR) SHALL BE IN WEATHER PROOF (WP) ENCLOSURES. THE INTEGRITY OF WHICH IS NOT AFFECTED WHEN AN ATTACHMENT PLUG CAP IS INSERTED OR REMOVED. THE RECEPTACLE ITSELF SHALL ALSO BE LISTED FOR USE IN DAMP AND WET LOCATIONS AS PER MOST CURRENT EDITION OF THE NEC.
10. EXTERIOR LIGHTS NOT INTENDED FOR 24 HOUR USE SHALL BE CONNECTED TO A PHOTOCELL OR TIMER.
11. ALL EXPOSED ELECTRICAL SERVICE CONDUCTORS SHALL BE FULLY ENCLOSED IN APPROPRIATELY SIZED NON METALIC CONDUIT (NMT) PER THE LATEST EDITION OF THE NEC.
12. ALL LIGHTING SWITHES NOT INDICATED BY LOCATION ON THE PLAN VIEW(S) SHALL BE LOCATED @ THE DIRECTION OF THE OWNER IN FULL COMPLIANCE WITH ALL APPLICABLE SECTIONS OF THE NEC.
13. ALL SMOKE DETECTORS SHALL BE 120 VOLT (120 V.) WITH BATTERY BACKUP OF THE PHOTOELECTRIC TYPE AND SHALL BE INTERLOCKED TOGETHER. INSTALLATION SHALL BE INSIDE AND NEAR ALL BEDROOMS ON A SEPERATE CIRCUIT TO THE MAIN DISTRIBUTION PANEL. REFER TO PLAN VIEW FOR SUGGESTED LOCATIONS WITH ALL ADJUSTMENTS AND ADDITIONAL LOCATIONS DETERMINED BY LOCAL FIRE MARSHALL.
14. PROVIDE COMBINATION SMOKE/CARBON MONOXIDE DETECTORS WHEN ANY FOSSIL FUEL APPLIANCES ARE PROVIDED OR INSTALLED.
15. ELECTRICAL CONTRACTOR SHALL REFER TO SPECIFIC LOCATIONS AND NOTES ON THE PLAN VIEWS FOR GROUND FAULT INTERRUPTER CIRCUITS (GFIC) SWITCHES, RECEPTACLES AND RELATED ELEMENTS.
16. ELECTRICAL CONTRACTOR SHALL REFER TO SPECIFIC LOCATIONS AND NOTES ON THE PLAN VIEW(S) FOR ARC FAULT CIRCUIT INTERRUPTER (AFCI) SWITCHES, RECEPTACLES AND RELATED ELEMENTS.
17. PROVIDE TAMPER RESISTANT RECEPTACLES IN ACCORDANCE WOTH SECTION 406.11 OF 2014 NEC
18. REFER TO ELECTRICAL PLANS, DETAILS, SECTIONS, NOTES AND SPECIFICATIONS FOR FOR ADDITIONAL REQUIREMENTS.



1 E2.4.0 ELECTRICAL SCHEMATIC RISER: 1ST LEVEL
SCALE: NO SCALE

CLOTHES DRYER

M5102.2 GENERAL
CLOTHES DRYERS SHALL BE EXHAUSTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS & REQUIREMENTS

M1502.3 TERMINATION
EXHAUST DUCTS SHALL TERMINATE ON THE OUTSIDE OF THE BUILDING. EXHAUST DUCT TERMINATION SHALL BE IN ACCORDANCE WITH DRYER MANUFACTURER'S INSTRUCTIONS. THE DUCT SHALL TERMINATE NOT LESS THAN 3 FEET IN ANY DIRECTION FROM OPENING INTO BUILDING. EXHAUST DUCT TERMINATIONS SHALL BE EQUIPPED WITH A BACKDRAFT DAMPER. SCREENS SHALL NOT BE INSTALLED AT THE DUCT TERMINATION

M1502.4 DRYER EXHAUST DUCTS
DRYER EXHAUST DICTS SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS M1502.4.1 THROUGH M1502.4.6.

M1502.4.1 MATERIAL AND SIZE
EXHAUST DUCTS SHALL HAVE A SMOOTH INTERIOR FINISH AND SHALL BE CONSTRUCTED OF METAL OF 0.016 INCH THICK. THE EXHAUST DUCT SIZE SHALL BE 4 INCHES NOMINAL IN DIAMETER.
M1502.4.2 DUCT INSTALLATION
EXHSUT DUCTS SHALL BE SUPPORTED AT 4 FOOT INTERVALS AND SECURED IN PLACE. THE INSERT END OF DUCT SHALL EXT END INTO THE ADJOINING DUCT IN THE DIRECTION OF THE AIRFLOW. DUCTS SHALL NOT BE JOINED WITH SCREENS THAT PROTRUDE INTO THE INSIDE OF THE DUCT.

M1502.4.3 TRANSISTION DUCT
TRANSISTION DUCTS SHALL BE A SINGLE LENGTH THAT IS LISTED AND LABELED IN ACCORD WITH UL 2158A. TRANSISTION DUCT SHALL BE A MAXIMUM OF 8 FEET IN LENGTH.

M1502.4.4 DUCT LENGTH
THE MAXIMUM ALLOWABLE EXHAUST DUCT LENGTH SHALL BE DETERMINED BY ONE OF THE METHODS SPECIFIED IN SECTION M1502.4.4.1 OR M1502.4.4.2

M1502.4.4.1 SPECIFIED LENGTH
THE MAXIMUM LENGTH OF THE EXHAUST DUCT SHALL BE 25 FEET FROM THE CONNECTION TO THE TRANSISTION DUCT FROM DRYER TO THE OUTLET TERMINAL. SEE TABLE M1502.4.4.1 FOR REDUCED LENGTH DUE TO TURNS.

INTAKE OPENINGS

R303.5.1 INTAKE OPENINGS
MECHANICAL AND GRAVITY OUTDOOR INTAKE OPENINGS SHALL BE LOCATED A MINIMUM 10 FEET FROM ANY HAZARDOUS OR NOXIOUS CONTAMINATE, SUCH AS VENTS AS CHIMNEYS, PLUMBING VENTS, STREETS, ALLEYS, PARKING LOTS AND LOADING DOCKS, EXCEPT AS OTHERWSIE SPECIFIED IN THIS CODE. WHERE SOURCE OF CONTAMINATE IS LOCATED WITHIN 10 FEET OF AN AIR INTAKE OPENING THE OPENINGS SHALL BE LOCATED A MINIMUM OF 2 FEET BELOW THE CONTAMINATE SOURCE.

R303.6 OUTSIDE OPENING PROJECTION
AIR EXHAUST AND INTAKE OPENINGS THAT TERMINATE OUTDOORS SHALL BE PROTECTED WITH CORRISIGN RESISTANT SCREENS, LOUVERS OR GRILLES HAVING A MINIMUM OPENING OF 1/4 INCH AND A MAXIMUM OPENING OF 1/2 INCH IN ANY DIMENSION. OPENING SHALL BE PROTECTED AGAINST LOCAL WEATHER CONDITIONS. OUTDOOR AND EXHAUST INTAKE OPENINGS SHALL MEET THE PROVISIONS FOR EXTERIOR WALL OPENING PROTECTIVES IN ACCORDANCE WITH THIS CODE.

WINDOW AND OTHER OPENINGS FOR THE PURPOSE OF LIGHT AND VENTILATION IN THE EXTERIOR WALLS ACCESSIBLE TO RODENTS BY THE WAY OF EXPOSED PIPES, WIRES, CONDUITS AND OTHER APPURTENANCES SHALL BE COVERED WITH WIRE MESH (0.035 INCH) THICK OR SOLID METAL GUARDS (0.024 INCH) THICK OR HEAVIER. GUARDS SHALL BE FITTED AROUND THESE FIXTURES. IN ADDITION THEY SHALL BE FASTENED SECURELY TO AND SHALL EXTEND PERPENDICULAR FROM THE EXTERIOR WALL FOR A MINIMUM 12 INCHES BEYOND EITHER SIDE OF APPURTENANCES.

MECHANICAL NOTES

1. ALL SUPPLY REGISTERS ARE ADJUSTABLE, EXCEPT WHERE OTHERWISE SPECIFIED
2. INTERIOR DOORS SHALL BE UNDERCUT ABOVE FINISH FLOOR FOR AN AIR RETURN AND OR NOTED IN SCHEDULES OR PLAN VIEWS ELSEWHERE THESE PLANS
3. BATHROOM VENT FANS SHALL PROVIDE A MINIMUM OF 50 CFM OF VENTILATION REFER TO ELECTRICAL SCHEDULES FOR ADDITIONAL MINIMUM CFM REQUIRED
4. HVAC EQUIPMENT SHALL BE EQUIPPED WITH OUTSIDE FRESH AIR INTAKE TO PROVIDE A MINIMUM OF 20 CFM PER PERSON
5. ALL VENTS SHALL BE DUCTED TO THE EXTERIOR OF DWELLING
6. ALL DUCT SYSTEM COMPONENTS INSTALLED IN THE ATTIC AREA W/ INSULATION SHALL HAVE A MINIMUM R-VALUE OF R-8.0
AIR DUCTS, FITTINGS, MECHANICAL EQUIPMENT & PLENUM CHAMBERS SHALL BE MECHANICALLY ATTACHED, SEALED, INSULATED & INSTALLED PER TABLE 503.2.7.2
7. ALL HVAC COMPONENTS INSTALLED ON SITE SHALL BE INSTALLED, TESTED & BALANCED IN ACCORDANCE WITH SECTION 503.2.9.1 BY HVAC CONTRACTOR
8. INSTALLED HVAC EQUIPMENT SHALL MEET THE MINIMUM EFFICIENCIES OF TABLES 503.2.2 (1) THROUGH (8)

PLUMBING NOTES

1. ALL PLUMBING FIXTURES SHALL HAVE SEPERATE SHUT OFF VALVES
2. WATER HEATER SHALL HAVE SAFETY PAN WITH 3/4 INCH DRAIN TO EXTERIOR, T&P RELIEF VALVE W/ DRAIN TO EXTERIOR, AND A SHUTOFF VALVE WITHIN 3 FEET ON A POTABLE COLD WATER LINE W/ DRAIN TO EXTERIOR, AND A SHUTOFF VALVE WITHIN 3 FEET ON A POTABLE COLD WATER LINE
3. POTABLE WATER SUPPLY LINES SHALL BE PEX, CPVC OR COPPER, WHEN PEX SUPPLY LINES ARE INSTALLED THE MAXIMUM WATER HEATER TEMPERATURE SETTING IS 180°. THE PEX PIPE SHALL BE INSTALLED TO COMPLY WITH THE MANUFACTURER'S LIMITATIONS AND SPECIFIC REQUIREMENTS FOR THIS APPLICATION
4. WATER CLOSETS AVERAGE USAGE SHALL NOT EXCEED 1.6 GALLONS PER FLUSH
5. SHOWER STALLS SHALL BE COVERED WITH NON-ASBORANT MATERIAL TO A MINIMUM HEIGHT OF 72 INCHES ABOVE THE FINISHED FLOOR
6. SHOWERS SHALL BE CONTROLLED BY AN APPROVED MIXING VALVE WITH A MAXIMUM WATER OUTLET TEMPERATURE 120° F.
7. AIR ADMITTANCE VALVES SHALL CONFORM TO ASSE 1051. THE VALVES SHALL BE LOCATED A MINIMUM OF 4 INCHES ABOVE THE HORIZONTAL DRAIN OR FIXTURE DRAIN BEING VENTED AND MUST BE INSTALLED IN WELL VENTILATED SPACES OR BE PROVIDED WITH VENTILATED ACCESS.
8. WATER HAMMER ARRESTORS SHALL BE INSTALLED WHERE QUICK CLOSING VALVES ARE UTILIZED (i.e. DISHWASHERS, CLOTHING WASHERS, ICE MAKERS AND OTHER QUICK CLOSING DEVICES W/ SOLENOID VALVES). ARRESTORS SHALL BE INSTALLED IN ACCORD WITH MANUFACTURER'S SPECIFICATIONS
9. SINKS 2.2 GALS AND LAVS 2.2 GALS PER MINUITE MAXIMUM @ 60 PSI
10. SHOWER HEADS SHALL NOT USE MORE THAN 2.5 GALS/MIN. @ 80 PSI PER ANSI STD A112.181M
11. AN APPROVED THERMAL EXPANSION DEVICE SHALL BE INSTALLED IN THE WATER SUPPLY SYSTEM IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. SUCH A DEVICE IS REQUIRED WHEN BACK FLOW PREVENTORS, PRESSURE REDUCING VALVES, CHECK VALVES OR A SYSTEM WHICH MAY PREVENT PRESSURE RELIEF
12. AN ACCESSIBLE SHUT OFF VALVE SHALL BE PROVIDED AHEAD OF THE FIRST OUTLET OR BRANCH CONNECTED TO THE SERVICE OR DISTRIBUTION PIPE.
13. CHANGE IN DIRECTION OF SCHEDULE 40 DWV-PVC AND ABS DRAINAGE PIPING SHALL BE MADE BY THE APPROPRIATE USE OF 45° (0.785 RADIUS) WYES, QUARTER BENDS, OR LONG SWEEP QUARTER BENDS, ONE-SIXTH, ONE-EIGHTH, ONE-SIXTEENTH, OR BY A COMBINATION OF THESE OR EQUIVALEANT FITTINGS. SINGLE AND DOUBLE SANITARY TEES AND QUARTER BENDS MAY BE USED IN DRAINAGE LINES ONLY WHERE THE DIRECTION OF FLOW IS FROM THE HORIZONTAL TO THE VERTICAL.
14. SHORT SWEEPS NOT LESS THAN 3 INCHES DIAMETER MAY BE USED IN SOIL AND WASTE LINES WHERE THE CHANGE IN DIRECTION OF FLOW IS FROM THE HORIZONTAL TO THE VERTICAL AND MAY BE FOR MAKING NECESSARY OFFSETS BETWEEN THE CEILING AND THE NEXT FLOOR ABOVE.
15. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL SPECIFICATIONS & REQUIREMENTS

WATER HEATER NOTES

1. WATER HEATER SHALL BE PROVIDED WITH A COLD WATER "DIP" TUBE WITH A HOLE AT THE TOP OR A VACUME RELIEF VALVE INSTALLED IN THE COLD WATER SUPPLY LINE ABOVE THE TOP OF THE WATER HEATER TANK; BOTTOM FED WATER HEATERS SHALL HAVE A VACUME RELIEF VALVE COMPLYING WITH ANSI Z21.22 INSTALLED.
2. WATER HEATERS SHALL BE PROVIDED WITH A TEMPERATURE AND PRESSURE RELIEF VALVE COMPLYING W. ANSI Z21.22 INSTALLED IN THE SHELL OF THE WATER HEATER TANK. THE VALVE SHALL BE ACTUATED BY THE WATER IN THE TOP 6 INCHES OF THE TANK AND SHALL HAVE A TEMPERATURE RATING OF NOT MORE THAN 210°F AND A PRESSURE SETTING NOT EXCEEDING THE TANKS RATED WORKING PRESSURE OR 150 PSI WHICHEVER IS LESS.
3. WATER HEATERS SHALL BE EQUIPPED WITH AN ENERGY CUTOFF DEVICE THAT WILL CUT OFF THE SUPPLY OF HEAT ENERGY TO THE WATER TANK BEFORE THE TEMPERATURE OF THE WATER IN THE TANK EXCEEDS 210°F.
4. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL SPECIFICATIONS & REQUIREMENTS

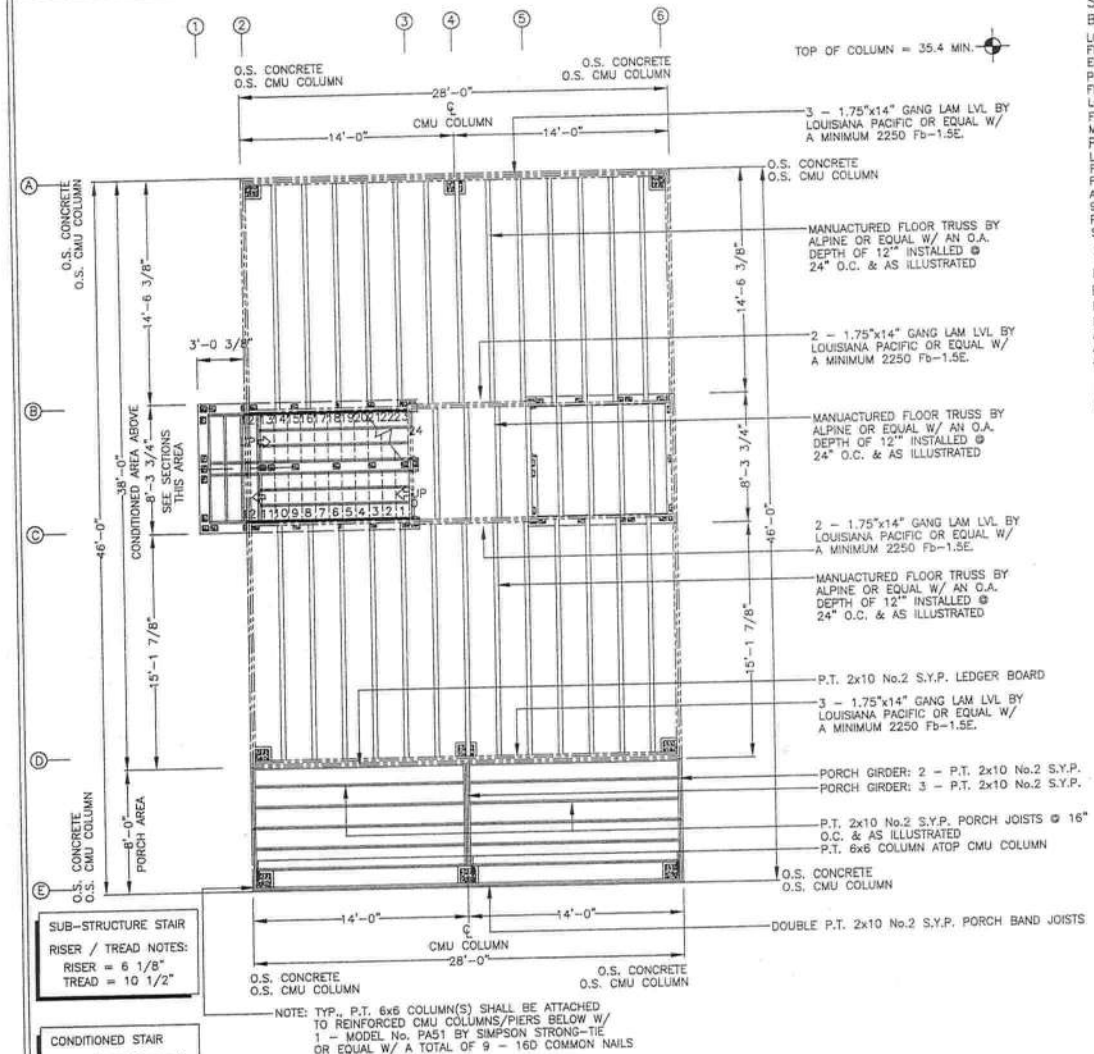
PIPING INSULATION

ALL PIPING SHALL BE INSULATED AS FOLLOWS:

CW PIPING & RUNOUTS	1/2" THICK
HW PIPING (2" OR LESS)	1" THICK
HW PIPING (OVER 2")	1 1/2" THICK
HW RETURN PIPING	1/2" THICK

ALL INSULATION SHALL MEET UL 273 FOR FLAME & SMOKE STANDARDS. INSULATION SHALL BE EQUAL TO OWENINGS CORNING FIBERGLASS ASJ/SSL-II WITH ALL SERVICE JACKET. ANY PIPING LOCATED IN AREAS SUBJECT TO FREEZING SHALL BE HEAT TAPED WITH DOUBLE THE THICKNESS OF THE ABOVE INSULATION. AREAS CONSIDERED SUBJECT TO FREEZING INCLUDE ATTIC AND NON-HEATED AREAS (EXCLUDING CHASES).

PROJECT No. MORGAN-E4.0.0.DWG	DATE 02/26/16	ELECTRICAL RISER MISC. NOTES, REFERENCES & INSTRUCTIONS	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA	KEEN ENGINEERING & SURVEYING, INC. 9263 CR 417 LIVE OAK, FLORIDA 32060 386-362-4787 ENG. LIC. EB 3761
SHEET No. E4.0.0		© 2016 KEEN ENGINEERING & SURVEYING, INC.			



SUB-STRUCTURE STAIR
RISER / TREAD NOTES:
RISER = 6 1/8"
TREAD = 10 1/2"

CONDITIONED STAIR
RISER / TREAD NOTES:
RISER = 6 1/2"
TREAD = 10 1/2"

1 / S1.2.0 FIRST LEVEL FLOOR FRAMING PLAN VIEW
SCALE: N.T.S.

SCALE NOTE:
PLAN VIEW: 1/8"=1'-0

SCHEDULE OF REQUIRED FLOOR SYSTEM MECHANICAL FASTENERS

BAND JOISTS/FLOOR GIRDERS

LOCATION OF ALL CONDITIONED AREA MULIT-PLY FLOOR GIRDERS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
FLOOR GIRDERS AS ILLUSTRATED SHALL BE 2 – OR – 3 – 14"x1.75" GANG LAM LVL BY LOUISIANA PACIFIC OR EQUAL W/ A MIN. 2250 Fb 1.5E.
P.T. 2X SHALL BE ATTACHED TO THE TOP CMU COLUMN COURSE OR CMU FILLED CELL WALL COURSE BENEATH ALL FLOOR GIRDER BEARING W/ 1– A307 STANDARD ANCHOR BOLT
LOCATION OF ALL CONDITIONED AREA SINGLE PLY FLOOR GIRDERS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
FLOOR GIRDERS AS ILLUSTRATED SHALL BE 1 – 14"x1.75" GANG LAM LVL BY LOUISIANA PACIFIC OR EQUAL W/ A MINIMUM. 2250 Fb 1.5E.

PORCH AREA COLUMNS/PIERS

LOCATION OF ALL PORCH AREA MULIT-PLY FLOOR GIRDERS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
FLOOR GIRDERS AS ILLUSTRATED SHALL BE 2 – OR – 3 – P.T. 2x10 No.2 S.Y.P. ATTACHED TO TOP OF COLUMN/PIER W/ 1 – MODEL No. PA51 BY SIMPSON STRONG-TIE OR EQUAL TO EACH MULTI-PLY BUILT-UP FLOOR GIRDER AS NOTED ON THE PLAN VIEWS & DETAILED ELSEWHERE THESE PLANS, ATTACHED TO GIRDERS W/ A MINIMUM OF 9 – 16d COMMON NAILS AS SPECIFIED BY MANUFACTURER.
P.T. 2X SHALL BE ATTACHED TO THE TOP CMU COURSE BENEATH ALL FLOOR GIRDER BEARING W/ 1 – A307 STANDARD ANCHOR BOLT
3 – PLY GIRDER SHALL BE ATTACHED TO LVL BAND BEAM W/ 1 – MODEL No. U210-3 MAX BY SIMPSON STRONG TIE OR EQUAL W/ A TOTAL OF 18 – 16d COMMON NAILS & 10-10d COMMON NAILS PER DEVICE
REFER TO SPECIAL DETAILS AND REQUIREMENTS FOR ADDITIONAL DEVICES ELSEWHERE THESE PLANS

BAND JOISTS (CONDITIONED AREA)

LOCATION OF ALL CONDITIONED AREA BAND JOISTS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
BAND JOISTS AS ILLUSTRATED SHALL BE 1 – OR 2 –14"x1.75" GANG LAM LVL BY LOUISIANA PACIFIC OR EQUAL WITH A MINIMUM 2250 Fb 1.5E – ATTACHED TO TOP COURSE OF CMU COLUMN/PIER W/ 1 – MODEL No. PA51 BY SIMPSON ATTACHED TO GIRDERS W/ A MINIMUM OF 9 – 16D COMMON NAILS PER DEVICE
ATTACH LVL BAND JOISTS TO CMU WALL FILLED CELL WALL COURSING @ ALL CORNERS & 4'-0 O.C. MAXIMUM W/ 1 – MODEL No. PA51 BY SIMPSON STRONG-TIE OR EQUAL W/ 9 – 16d COMMON NAILS PER DEVICE

MANUFACTURED FLOOR TRUSSES

LOCATION OF ALL FLOOR JOISTS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
LOCATION OF ALL FLOOR TRUSSES – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
FLOOR TRUSSES AS ILLUSTRATED SHALL BE ALPINE SYSTEM 42F W/ AN OVERALL DEPTH OF 12" INSTALLED @ 24" O.C. & AS ILLUSTRATED OR NOTED & ATTACHED TO GIRDERS OR BAND JOISTS W/ 1 – MODEL No. IT412 BY SIMPSON STRONG-TIE OR EQUAL @ EACH END OF EACH FLOOR TRUSS TO GIRDER OR BAND JOISTS CONNECTIONS W/ A TOTAL OF 6 – 10d COMMON NAILS & 2 – 10d x 1 1/2" NAILS PER DEVICE

EXTERIOR WALL STUDS

LOCATION OF ALL EXTERIOR WALL 2X4 or 2X6 STUDS – SEE FLOOR PLAN VIEW FOR LOCATIONS
EXTERIOR WALL STUDS SHALL BE 2x4 OR 2x6 SPRUCE @ 16" O.C., TYPICAL ALONG THE LENGTH OF THE EXTERIOR WALLS. STUDS SHALL BE ATTACHED TO BOT. 2x PLATES AS DESCRIBED OR NOTED ELSEWHERE THESE PLANS AND REQUIRE 1 – MODEL No. CS18 COILED STRAP BY SIMPSON STRONG-TIE OR EQUAL 33 INCHES LONG INSTALLED W/ A TOTAL OF 18 – 10d COMM9N NAILS ATTACHED TO PERIMETER LVL BAND JOISTS/GIRDERS AND STUD ABOVE @ 48" O.C. COINCIDING WITH THE SP4 DEVICE @ TOP PLATES CONNECTIONS. 2 – ADDITIONAL DEVICES ARE REQUIRED @ ALL OUTSIDE CORNERS INSTALLED A MAXIMUM OF 6 INCHES FROM CORNERS, 1 EACH SIDE OF CORNER.

EXTERIOR WALL OPENINGS

LOCATION OF ALL EXTERIOR 2x4 WALL OPENINGS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
A "HEADER" OF 2 – 2x12 No.2 S.Y.P. W/ 1 – 15/32" CDX CORE SHALL BE INSTALLED AS NOTED THESE PLANS
36" WIDE OPENINGS REQUIRE A MINIMUM OF 2 CONTINUOUS STUDS EACH SIDE OF OPENINGS W/ 1 – MODEL No. H6 BY SIMPSON STRONG-TIE OR EQUAL @ EACH SIDE OF OPENINGS W/ A TOTAL OF 16 – 8d COMMON NAILS PER DEVICE
48" WIDE OPENINGS REQUIRE 3 – CONTINUOUS STUDS EACH SIDE OF OPENING W/ 1 – MODEL No. H6 BY SIMPSON STRONG-TIE OR EQUAL @ EACH SIDE OF OPENINGS W/ A TOTAL OF 16 – 8d COMMON NAILS PER DEVICE.
72" WIDE OPENINGS REQUIRE 4 – CONTINUOUS STUDS EACH SIDE OF OPENING W/ 2 – MODEL No. H6 BY SIMPSON STRONG-TIE OR EQUAL @ EACH SIDE OF OPENINGS W/ A TOTAL OF 16 – 8d COMMON NAILS PER DEVICE.
REFER TO DETAILS FOR ADDITIONAL REQUIREMENTS

PORCH AREA GIRDERS/BAND BEAMS

LOCATION OF REAR PORCH GIRDERS/BAND BEAMS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
PORCH BAND BEAMS SHALL BE DOUBLE P.T. 2x10 No.2 S.Y.P. ATTACHED TO PIERS/COLUMNS W/ 1 – MODEL No. PA51 BY SIMPSON STRONG-TIE OR EQUAL WITH A MINIMUM OF 9 – 16d COMMON NAILS PER DEVICE
PORCH GIRDERS SHALL BE 3 – P.T. 2x10 No.2 S.Y.P. ATTACHED TO PIER'S COLUMNS W/ 1 – MODEL No. PA51 BY SIMPSON STRONG-TIE OR EQUAL W/ A TOTAL OF 9 – 16d COMMON NAILS PER DEVICE
3-PLY GIRDERS SHALL BE ATTACHED TO 3-PLY LVL GIRDERS W/ 1 –MODEL No. U210-3 MAX BY SIMPSON STRONG TIE OR EQUAL W/ A TOTAL OF 18 – 16d COMMON NAILS & 10-10d COMMON NAILS PER DEVICE

PORCH AREA DECK JOISTS

LOCATION OF PORCH DECK JOISTS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
PORCH AREA DECK JOISTS SHALL BE P.T. 2x10 No.2 S.Y.P. @ 16" O.C. & AS ILLUSTRATED ON THE PLAN VIEW AND SHALL BE ATTACHEDTO GIRDERS AND BAND JOISTS W/ 1 – MODEL No. U210 BY SIMPSON STRONG-TIE OR EQUAL @ EACH END OF EACH JOISTS W/ A TOTAL OF 10 – 10d COMMON NAILS & 6 –10d x 1 1/2' NAILS PER DEVICE
NOTE: A P.T. 2x8 No.2 S.Y.P. LEDGER BOARD IS REQUIRED TO BE ATTACHED TO MAIN DWELLING BAND JOISTS W/ #10d COMMON NAILS @ 12' O.C. STAGGERED – REFER TO PLAN VIEWS FOR LOCATIONS

PORCH DECKING

LOCATION OF REAR PORCH DECKING – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
PORCH DECKING SHALL BE P.T. 2x6 No.2 S.Y.P. ATTACHED TO JOISTS, GIRDERS & BAND BEAMS W/ 3-10d ANNULAR RING NAILS PER EACH CONNECTION TO EACH JOIST, GIRDER OR BAND BEAM. ALTERNATE SHALL BE 3 – #12 SCREWS W/ A MINIMUM EMBEDMENT OF 2"

PORCH AREA P.T. WOOD COLUMNS

REFER TO DETAILS & SECTIONS ELSEWHERE THESE PLANS FOR SPECIFIC DEVICES & INSTALLATION

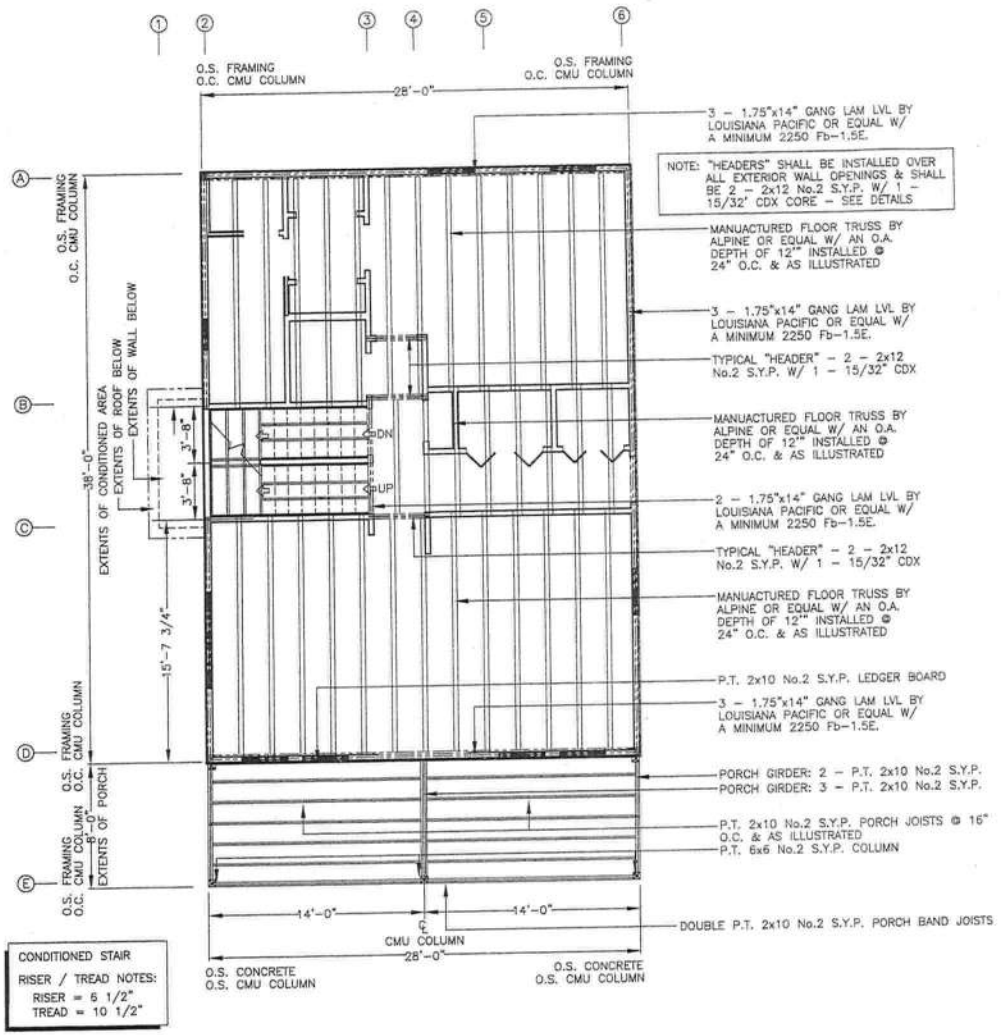
STAIR REQUIREMENTS

REFER TO DETAILS & SECTIONS ELSEWHERE THESE PLANS FOR SPECIFIC DEVICES & INSTALLATION

PROJECT No. MORGAN-S1.2.0.DWG SHEET No. S1.2.0	DATE 02/26/16	FIRST LEVEL FLOOR FRAMING PLAN VIEW MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

KEEN ENGINEERING & SURVEYING, INC.
9263 CR 417
LIVE OAK, FLORIDA 32060
386-362-4787
ENG. LIC. EB 3761

SCALE NOTE:
PLAN VIEW: 1/8"=1'-0



CONDITIONED STAIR

RISER / TREAD NOTES:
RISER = 6 1/2"
TREAD = 10 1/2"

1 / S1.3.0 SECOND LEVEL FLOOR FRAMING PLAN VIEW
SCALE: N.T.S.

SCHEDULE OF REQUIRED FLOOR SYSTEM MECHANICAL FASTENERS

BAND JOISTS/FLOOR GIRDERS

LOCATION OF ALL CONDITIONED AREA MULIT-PLY FLOOR GIRDERS - SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
FLOOR GIRDERS AS ILLUSTRATED SHALL BE 2 - OR - 3 - 14"x1.75" GANG LAM LVL BY LOUISIANA PACIFIC OR EQUAL W/ A MIN. 2250 Fb 1.5E.
LOCATION OF ALL CONDITIONED AREA BAND JOISTS - SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
BAND JOISTS AS ILLUSTRATED SHALL BE 1 - OR 2 -14"x1.75" GANG LAM LVL BY LOUISIANA PACIFIC OR EQUAL WITH A MINIMUM 2250 Fb 1.5E - ATTACHED TO 2x STUDS BENEATH W/ 1 - MODEL No. CS18 COILED STRAP BY SIMPSON STRONG-TIE OR EQUAL W/ A MINIMUM LENGTH EACH SIDE OF LVL JOISTS TO STUD ABOVE AND BENEATH OF 9" (O.A. LENGTH OD 34") AND SHALL BE INSTALLED @ ALL CORNERS 16" FROM ALL CORNERS & 48" O.C. TO COINCIDE W/ SP4 DEVICE @ TOP PLATES ABOVE AND BENEATH GIRDER W/ A TOTAL OF 18 - 10d COMMON NAILS

MANUFACTURED FLOOR TRUSSES

LOCATION OF ALL FLOOR JOISTS - SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
LOCATION OF ALL FLOOR TRUSSES - SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
FLOOR TRUSSES AS ILLUSTRATED SHALL BE ALPINE SYSTEM 42F W/ AN OVERALL DEPTH OF 12" INSTALLED @ 24" O.C. & AS ILLUSTRATED OR NOTED & ATTACHED TO GIRDERS OR BAND JOISTS W/ 1 - MODEL No. ITT412 BY SIMPSON STRONG-TIE OR EQUAL @ EACH END OF EACH FLOOR TRUSS TO GIRDER OR BAND JOISTS CONNECTIONS W/ A TOTAL OF 6 - 10d COMMON NAILS & 2 - 10d x 1 1/2" NAILS PER DEVICE
1 - MODEL No. H4 BY SIMPSON STRONG-TIE OR EQUAL SHALL BE ATTACHED TO EACH FLOOR TRUSS TO DOUBLE TOP PLATES CONNECTIONS W/ A TOTAL OF 8 - 8d COMMON NAILS PER DEVICE

EXTERIOR WALL STUDS

LOCATION OF ALL EXTERIOR WALL 2X4 or 2X6 STUDS - SEE FLOOR PLAN VIEW FOR LOCATIONS
EXTERIOR WALL STUDS SHALL BE 2x4 OR 2x6 SPRUCE @ 16" O.C., TYPICAL ALONG THE LENGTH OF THE EXTERIOR WALLS. STUDS SHALL BE ATTACHED TO BOT. 2x PLATES AS DESCRIBED OR NOTED ELSEWHERE THESE PLANS AND REQUIRE 1 - MODEL No. CS18 COILED STRAP BY SIMPSON STRONG-TIE OR EQUAL 34 INCHES LONG INSTALLED PER ABOVE DIRECTIONS

EXTERIOR WALL OPENINGS

LOCATION OF ALL EXTERIOR 2x4 WALL OPENINGS - SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
A "HEADER" OF 2 - 2x12 No.2 S.Y.P. W/ 1 - 15/32" CDX CORE SHALL BE INSTALLED AS NOTED THESE PLANS
36" WIDE OPENINGS REQUIRE A MINIMUM OF 2 CONTINUOUS STUDS EACH SIDE OF OPENINGS W/ 1 - MODEL No. H6 BY SIMPSON STRONG-TIE OR EQUAL @ EACH SIDE OF OPENINGS W/ A TOTAL OF 16 - 8d COMMON NAILS PER DEVICE
48" WIDE OPENINGS REQUIRE 2 - CONTINUOUS STUDS EACH SIDE OF OPENING W/ 1 - MODEL No. H6 BY SIMPSON STRONG-TIE OR EQUAL @ EACH SIDE OF OPENINGS W/ A TOTAL OF 16 - 8d COMMON NAILS PER DEVICE.
72" WIDE OPENINGS REQUIRE 4 - CONTINUOUS STUDS EACH SIDE OF OPENING W/ 2 - MODEL No. H6 BY SIMPSON STRONG-TIE OR EQUAL @ EACH SIDE OF OPENINGS W/ A TOTAL OF 16 - 8d COMMON NAILS PER DEVICE.
REFER TO DETAILS FOR ADDITIONAL REQUIREMENTS

PORCH AREA GIRDERS/BAND BEAMS

LOCATION OF PORCH GIRDERS/BAND BEAMS - SEE FLOOR SYSTEM FOR LOCATIONS
PORCH BAND BEAMS SHALL BE DOUBLE P.T. 2x10 No.2 S.Y.P. ATTACHED TO P.T. 6x6 COLUMNS W/ 1 -MODEL No. CCQ3-6SDS2.5 BY SIMPSON STRONG-TIE OR EQUAL @ CONNECTION OF 3-PLY GIRDER TO BAND BEAM LOCATIONS INSTALLED W/ A TOTAL OF 30 - 1/4" x 2 1/2' SDS SCREWS BY SIMPSON STRONG-TIE OR EQUAL.
CORNER PORCH BAND BEAMS SHALL BE ATTACHED TO P.T. 6x6 COLUMN W/ 1 - MODEL No. EPC46 BY SIMPSON STRONG-TIE OR EQUAL W/ A TOTAL OF 14 - 16d COMMON NAILS
3 - PLY GIRDER SHALL BE ATTACHED TO DWELLING LVL GIRDER W/ 1 - MODEL No. U210-3 BY SIMPSON STRONG-TIE OR EQUAL W/ A TOTAL OF 18 - 16d COMMON NAILS PER DEVICE.
DOUBLE P.T. BAND JOISTS SHALL BE ATTACHED TO LVL BAND BEAMS W/ 1 - MODEL No. LUS210-2 BY SIMPSON STRONG-TIE OR EQUAL W/ A TOTAL OF 14 - 16d COMMON NAILS PER DEVICE

PORCH AREA DECK JOISTS

LOCATION OF PORCH DECK JOISTS - SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
PORCH AREA DECK JOISTS SHALL BE P.T. 2x10 No.2 S.Y.P. @ 16" O.C. & AS ILLUSTRATED ON THE PLAN VIEW AND SHALL BE ATTACHEDTO GIRDERS AND BAND JOISTS W/ 1 - MODEL No. U210 BY SIMPSON STRONG-TIE OR EQUAL @ EACH END OF EACH JOISTS W/ A TOTAL OF 10 - 10d COMMON NAILS & 6 -10d x 1 1/2' NAILS PER DEVICE
NOTE: A P.T. 2x8 No.2 S.Y.P. LEDGER BOARD IS REQUIRED TO BE ATTACHED TO MAIN DWELLING BAND JOISTS W/ #10d COMMON NAILS @ 12" O.C. STAGGERED - REFER TO PLAN VIEWS FOR LOCATIONS

PORCH DECKING

LOCATION OF REAR PORCH DECKING - SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
PORCH DECKING SHALL BE P.T. 2x6 No.2 S.Y.P. ATTACHED TO JOISTS, GIRDERS & BAND BEAMS W/ 3-10d ANNULAR RING NAILS PER EACH CONNECTION TO EACH JOIST, GIRDER OR BAND BEAM. ALTERNATE SHALL BE 3 - #12 SCREWS W/ A MINIMUM EMBEDMENT OF 2"

PORCH AREA P.T. WOOD COLUMNS

SEE ABOVE DEVICES - SEE ALSO SECTIONS 7 DETAILS

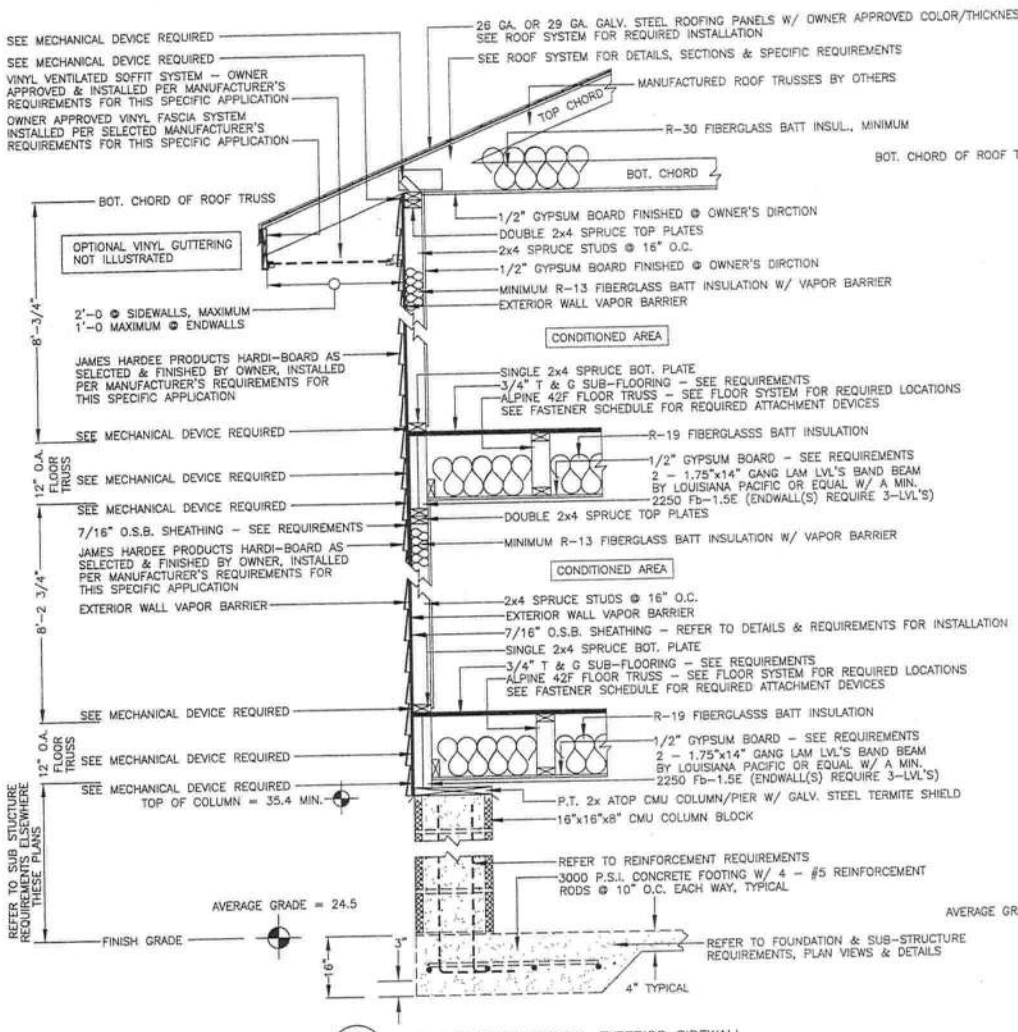
STAIR REQUIREMENTS

REFER TO DETAILS & SECTIONS ELSEWHERE THESE PLANS FOR SPECIFIC DEVICES & INSTALLATION

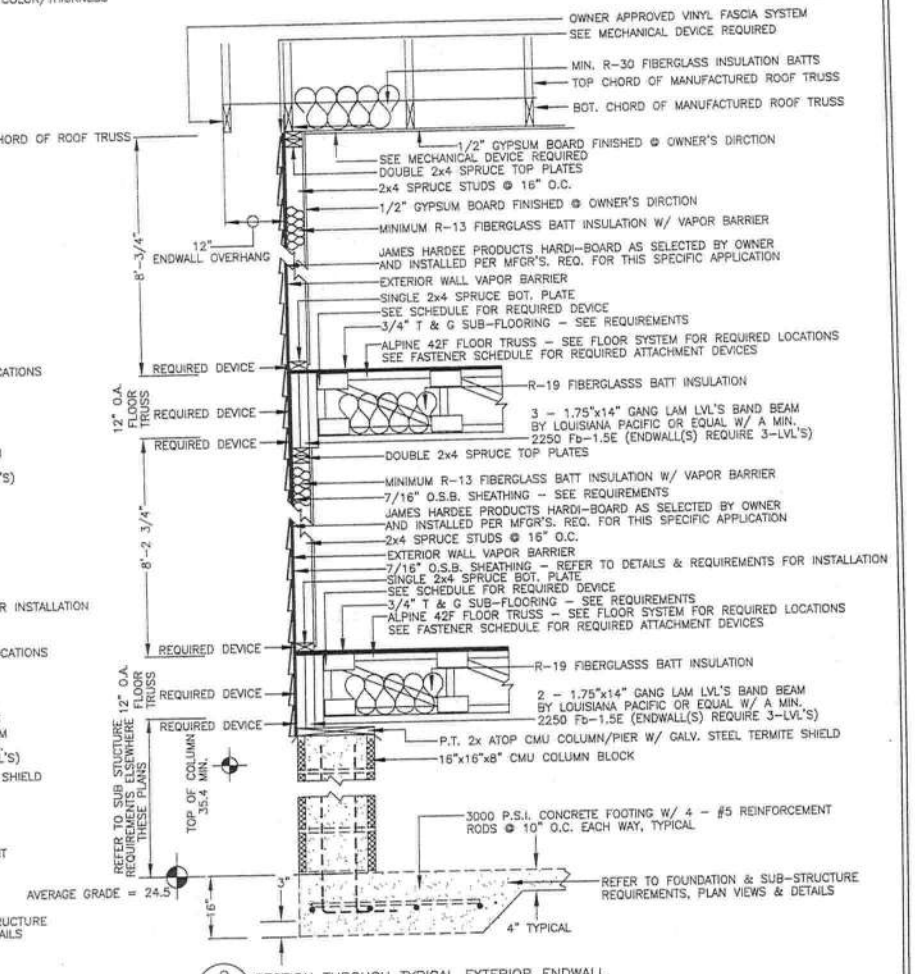
PROJECT No. MORGAN-S1.3.0.DWG SHEET No. S1.3.0	DATE 02/26/16	SECOND LEVEL FLOOR FRAMING PLAN VIEW MISC. NOTES, REFERENCES & INSTRUCTIONS 	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

KEEN ENGINEERING & SURVEYING, INC.
9263 CR 417
LIVE OAK, FLORIDA 32060
386-362-4787
ENG. LIC. EB 3761

SCALE NOTE:
SECTIONS/DETAILS: N.T.S.



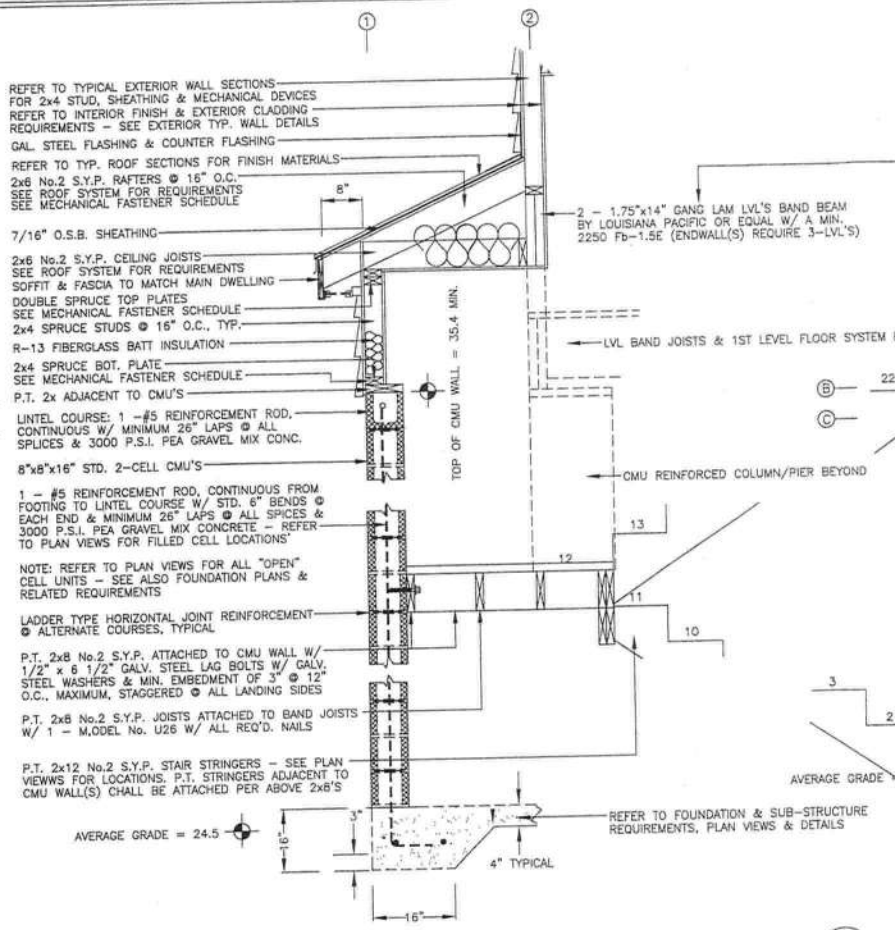
1 / S2.0.0 SECTION THROUGH TYPICAL EXTERIOR SIDEWALL
SCALE: N.T.S.



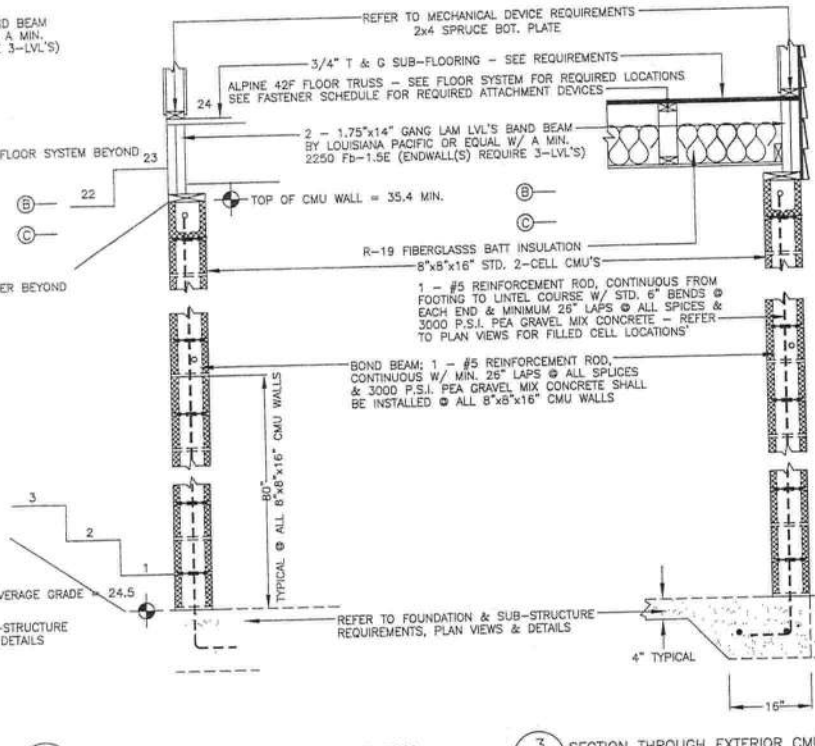
2 / S2.0.0 SECTION THROUGH TYPICAL EXTERIOR ENDWALL
SCALE: N.T.S.

PROJECT No. MORGAN-S2.0.0.DWG SHEET No. S2.0.0	DATE 02/26/16	REFERENCED EXTERIOR WALL SECTIONS & DETAILS MISC. NOTES, REFERENCES & INSTRUCTIONS 	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA	KEEN ENGINEERING & SURVEYING, INC. 9263 CR 417 LIVE OAK, FLORIDA 32060 386-362-4787 ENG. LIC. EB 3761

SCALE NOTE:
SECTIONS/DETAILS: N.T.S.



1 SECTION THROUGH PROJECTED STAIR CMU WALL
S2.1.0 SCALE: N.T.S.

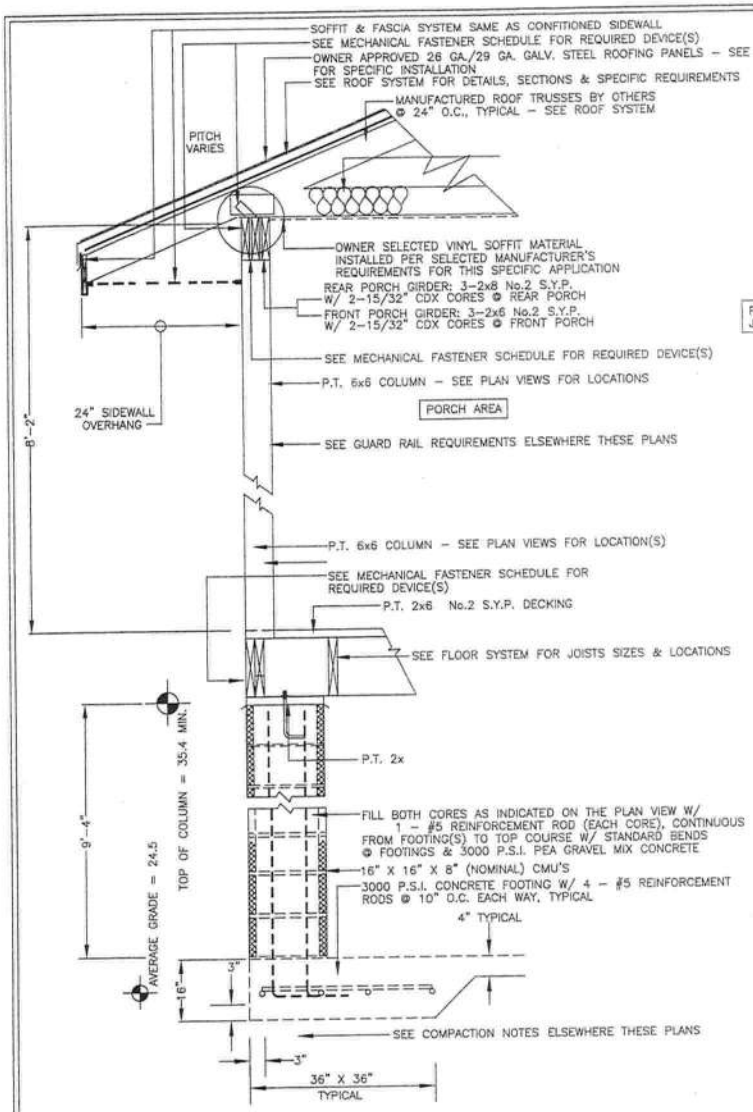


2 SECTION THROUGH INTERIOR STAIR CMU WALL
S2.1.0 SCALE: N.T.S.

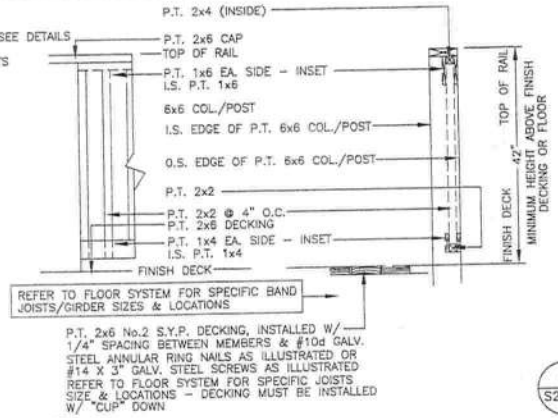
3 SECTION THROUGH EXTERIOR CMU SIDEWALL
S2.1.0 SCALE: N.T.S.
LIMITED STORAGE AREA

PROJECT No. MORGAN-S2.1.0.DWG SHEET No. S2.1.0	DATE 02/26/16	REFERENCED FOUNDATION SECTIONS & DETAILS MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA	KEEN ENGINEERING & SURVEYING, INC. 9263 CR 417 LIVE OAK, FLORIDA 32060 386-362-4787 ENG. LIC. EB 3761

SCALE NOTE:
SECTIONS/DETAILS: N.T.S.



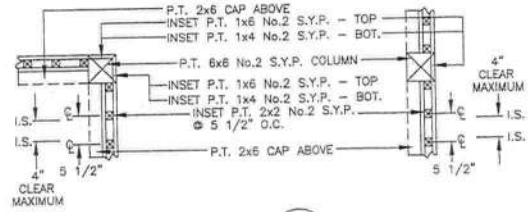
1 S2.2.0 SECTION THROUGH REAR PORCH SIDEWALL
SCALE: N.T.S.



2 S2.2.0 TYPICAL SECTION THROUGH GUARD RAIL
SCALE: N.T.S.

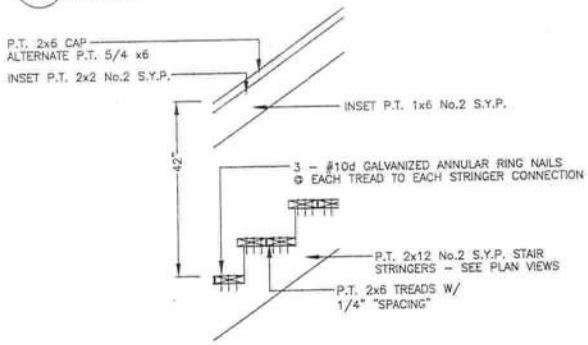
THIS HEIGHT ABOVE FINISH GRADE REQUIRES A GUARD RAILING SYSTEM

NOTE: ALTERNATE MANUFACTURED RAIL SYSTEM INSTALLED PER SELECTED MANUFACTURER'S REQUIREMENTS FOR THIS SPECIFIC APPLICATION INCLUDING ALL ATTACHMENTS & DEVICES & INSTALLED TO ENSURE A FULLY COMPLIANT GUARD RAILING SYSTEM

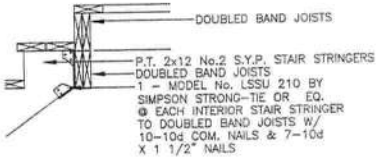


3 S2.2.0 CORNER POSTS: PLAN VIEW
SCALE: N.T.S.

4 S2.2.0 IN-LINE POSTS: PLAN VIEW
SCALE: N.T.S.



5 S2.2.0 SUB STRUCTURE STAIR DETAILS
SCALE: N.T.S. SIMILIAR @ CONDITIONED STAIR ABOVE



6 S2.2.0 SUB STRUCTURE STAIR LANDING
SCALE: N.T.S. SIMILIAR @ CONDITIONED STAIR ABOVE

CONDITIONED STAIR
RISER / TREAD NOTES:
RISER = 6 1/2"
TREAD = 10 1/2"

SUB-STRUCTURE STAIR
RISER / TREAD NOTES:
RISER = 6 1/8"
TREAD = 10 1/2"

PROJECT No. MORGAN-S2.0.0.DWG SHEET No. S2.2.0	DATE 02/26/16	REFERENCED EXTERIOR WALL SECTIONS & DETAILS MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

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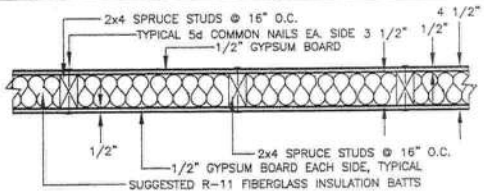
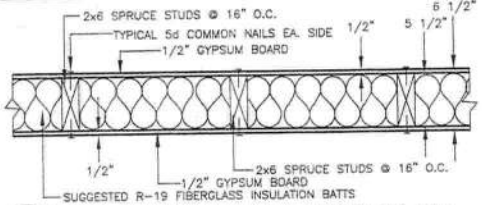


1A TYPICAL ENLARGED PLAN VIEW: INTERIOR 2x4 WALL
S2.3.0 SCALE: N.T.S.

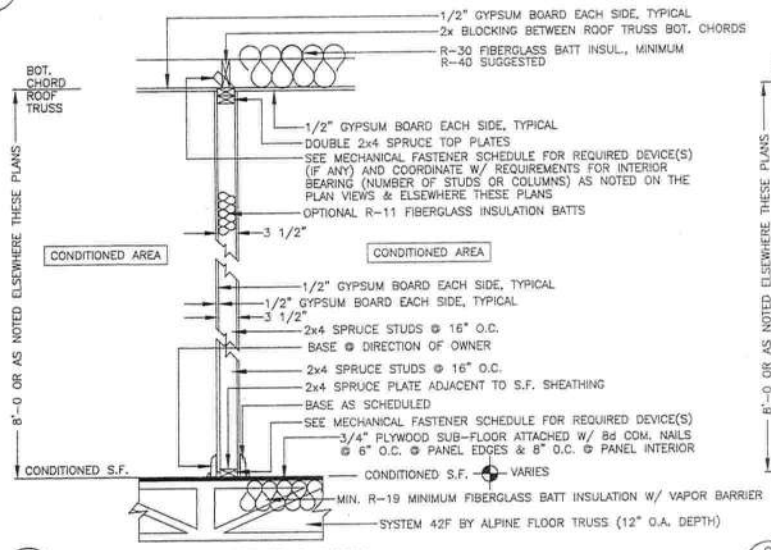
FASTENING SCHEDULES: INTERIOR WOOD FRAMING

CONNECTION	FASTENER	NUMBER OR SPACING
TOP OR SOLE PLATE TO STUD, END NAILED	16d COMMON	2
STUD TO SOLE PLATE, TOE NAIL	16d COMMON	4
DOUBLED STUDS, FACE NAIL	10d COMMON	24" O.C.
DOUBLED TOP PLATES, FACE NAIL	10d COMMON	16" O.C.
TOP PLATES, LAP AND INTERSECTIONS FACE NAIL	———	3-10d COMMON
CONTINUOUS HEADER, TWO PIECES	16d COMMON	16" O.C. ALONG EACH EDGE
CONTINOUS HEADER TO STUD, TOE NAIL	16d COMMON	3
CONTINUOUS HEADER, THREE PIECES	10d COMMON	12" O.C. ALONG EACH EDGE
BUILT UP CORNER STUDS	16d COMMON	24" O.C.
BUILT UP GIRDERS & BEAMS, OF THREE MEMBERS	20d COMMON	32" O.C. AT TOP & BOTTOM & STAGGERED 2 ENDS & EACH SPLICE
STUDS TO SOLE PLATE, END NAIL	16d COMMON	2 EACH END



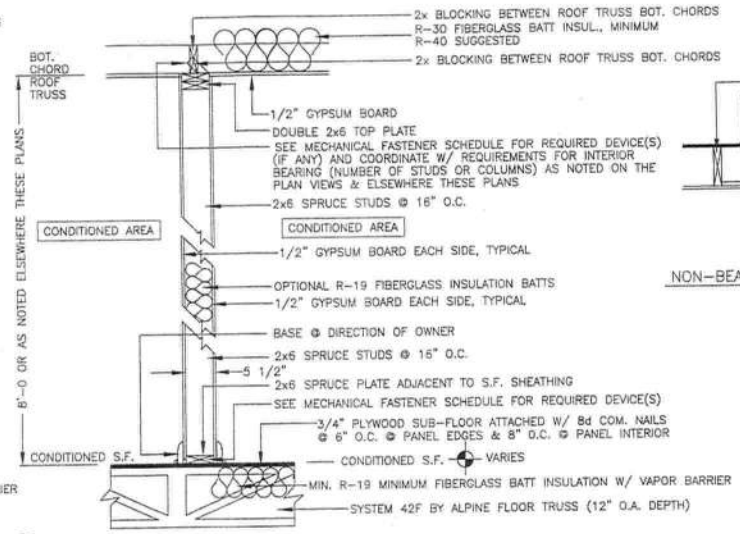
2A TYPICAL ENLARGED PLAN VIEW: INTERIOR 2x6 WALL
S2.3.0 SCALE: N.T.S.

SCALE NOTE:
SECTIONS/DETAILS: N.T.S.



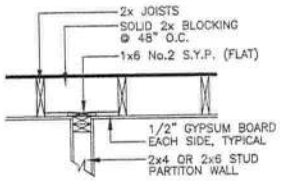
1 TYPICAL SECTION @ INTERIOR 2x4 WALL
S2.3.0 SCALE: N.T.S.

NOTE: REFER TO ADDITIONAL REQUIREMENTS ELSEWHERE THESE PLANS FOR INTERIOR BEARING AS MAY BE REQUIRED – SEE FOUNDATION PLANS AND RELATED REQUIREMENTS

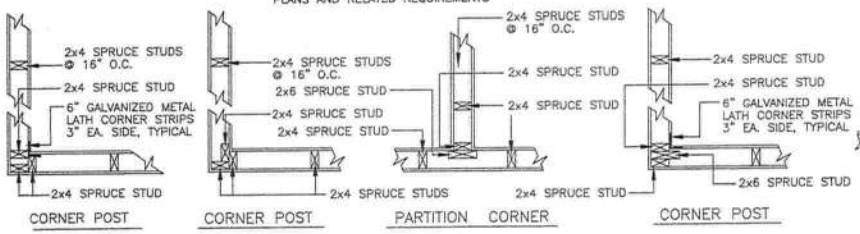


2 TYPICAL SECTION @ INTERIOR 2x6 WALL
S2.3.0 SCALE: N.T.S.

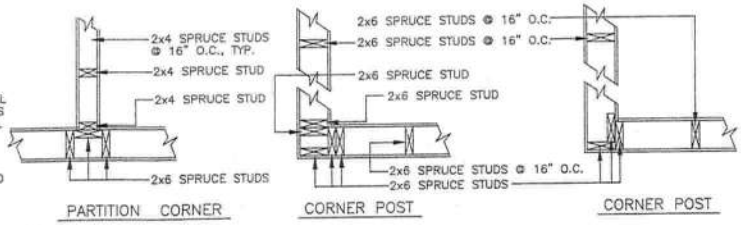
NOTE: REFER TO ADDITIONAL REQUIREMENTS ELSEWHERE THESE PLANS FOR INTERIOR BEARING AS MAY BE REQUIRED – SEE FOUNDATION PLANS AND RELATED REQUIREMENTS



NON-BEARING PARTITION TO CEIL. JOISTS



1B SUGGESTED FRAMING TECHNIQUES: 2x4 WALL
S2.3.0 SCALE: N.T.S.



2B SUGGESTED FRAMING TECHNIQUES: 2x6 WALL
S2.3.0 SCALE: N.T.S.

PROJECT No. MORGAN-S2.3.0.DWG SHEET No. S2.3.0	DATE 02/26/16	REFERENCED SECTIONS & DETAILS MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

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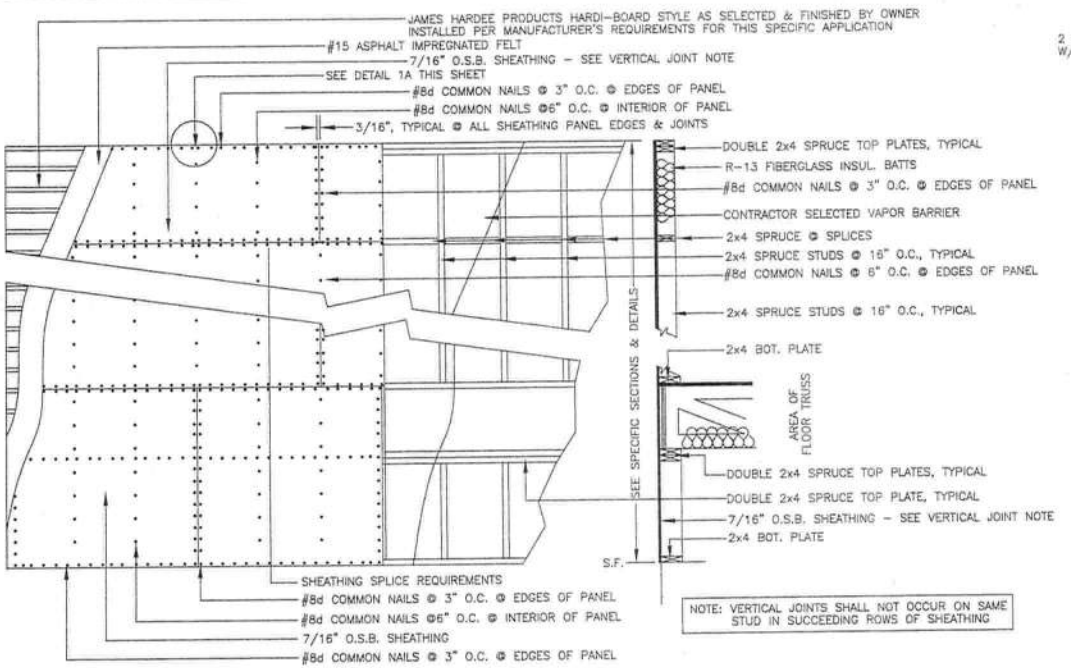
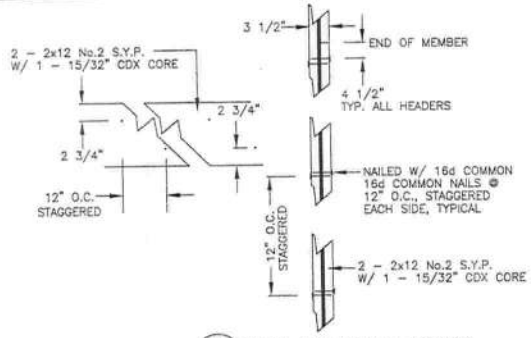
SCALE NOTE:
SECTIONS/DETAILS: N.T.S.

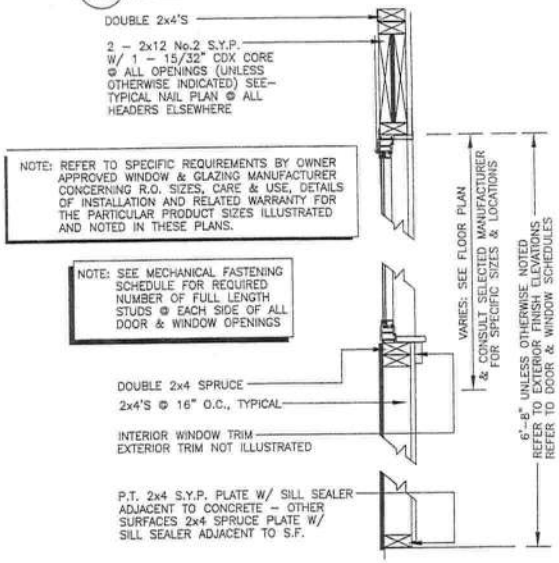


NOTE: VERTICAL JOINTS SHALL NOT OCCUR ON SAME STUD IN SUCCEEDING ROWS OF SHEATHING

1 S2.3.0 SHEATHING DETAIL - ELEVATION VIEW
SCALE: N.T.S.



2 S2.3.0 TYPICAL EXTERIOR WALL "HEADER"
SCALE: N.T.S.

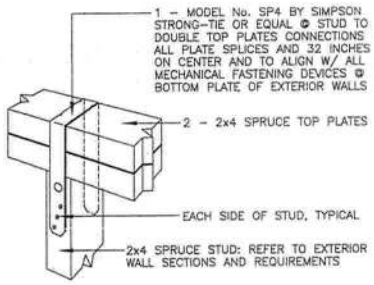


NOTE: REFER TO SPECIFIC REQUIREMENTS BY OWNER APPROVED WINDOW & GLAZING MANUFACTURER CONCERNING R.O. SIZES, CARE & USE, DETAILS OF INSTALLATION AND RELATED WARRANTY FOR THE PARTICULAR PRODUCT SIZES ILLUSTRATED AND NOTED IN THESE PLANS.

NOTE: SEE MECHANICAL FASTENING SCHEDULE FOR REQUIRED NUMBER OF FULL LENGTH STUDS @ EACH SIDE OF ALL DOOR & WINDOW OPENINGS

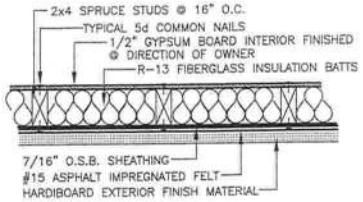
NOTE: CONTRACTOR SHALL PROVIDE ALL APPROVAL SPECIFICATIONS & REQUIREMENTS PER F.B.C. 1715.5 & FULLY COMPLY W/ ALL MANUFACTURER'S REQUIREMENTS FOR OWNER SELECTED MODELS & PROPER INSTALLATION OF WINDOWS & DOORS.

3 S2.1.0 TYPICAL SECTION THROUGH EXTERIOR WALL OPENING
SCALE: N.T.S.
SEE PLAN VIEWS FOR APPLICABLE LOCATIONS



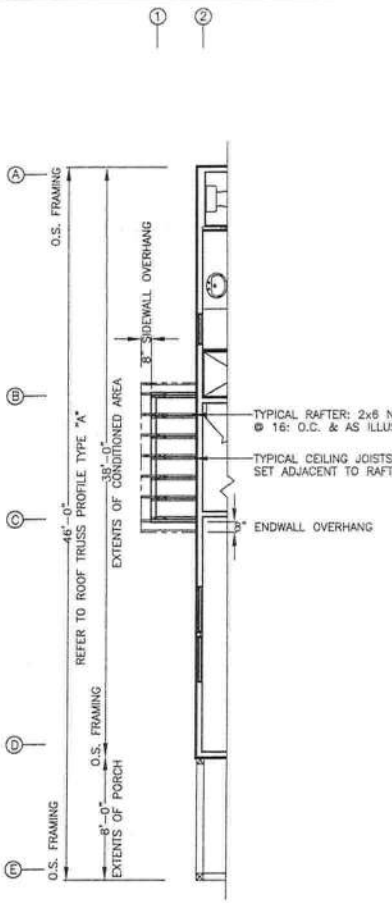
1A S2.2.0 TOP PLATE DEVICES
SCALE: N.T.S.

NOTE: GYPSUM BOARD SHALL BE INSTALLED W/ 5d (COOLER) NAILS @ 7" O.C. @ EDGES OF PANEL & @ INTERIOR AREAS OF PANEL(S). 1 1/4" TYPE W, #6 DRYWALL SCREWS MAY BE SUBSTITUTED FOR NAILS @ THE PREVIOUSLY DESCRIBED SPACING(S) FOR NAILS.

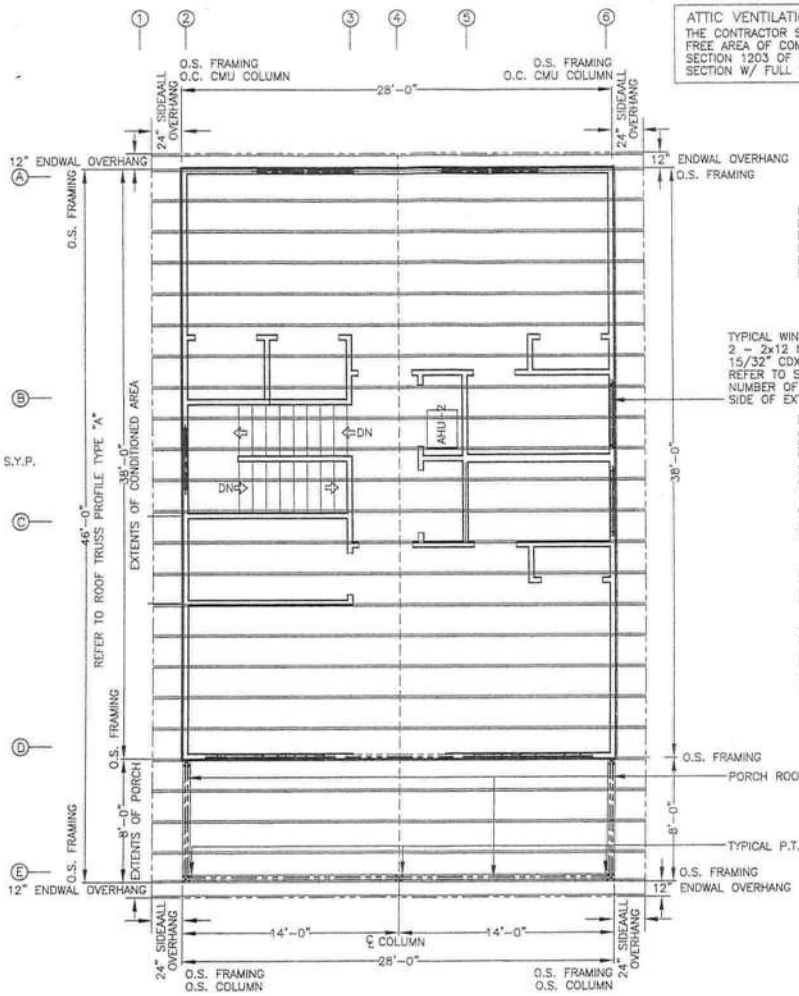


1B S2.2.0 TYPICAL ENLARGED PLAN VIEW: EXTERIOR WALL
SCALE: N.T.S.

PROJECT No. MORGAN-S2.4.0.DWG	DATE 02/26/16	REFERENCED SECTIONS & DETAILS MISC. NOTES, REFERENCES & INSTRUCTIONS	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA	KEEN ENGINEERING & SURVEYING, INC.	9263 CR 417 LIVE OAK, FLORIDA 32060 386-362-4787 ENG. LIC. EB 3761
SHEET No. S2.4.0						



1 DIMENSIONED ROOF SYSTEM PLAN VIEW
S3.0.0 SCALE: 1/8" = 1'-0 STAIRWAY PROJECTED AREA



2 DIMENSIONED ROOF SYSTEM PLAN VIEW
S3.0.0 SCALE: 1/8" = 1'-0 MAIN DWELLING ROOF AREA

ATTIC VENTILATION MAIN DWELLING ROOF AREA
THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 10.20 NET SQUARE FEET OF FREE AREA OF COMBINED RIDGE, SOFFIT AND END WALL VENTS COMPLYING W/ SECTION 1203 OF THE F.B.C. SUCH VENTS SHALL BE AS DESCRIBED IN THIS SECTION W/ FULL PROTECTION FROM RAIN, INSECT OR VERMIN INTRUSION.

SCALE NOTE:
PLAN VIEW: 1/8"=1'-0

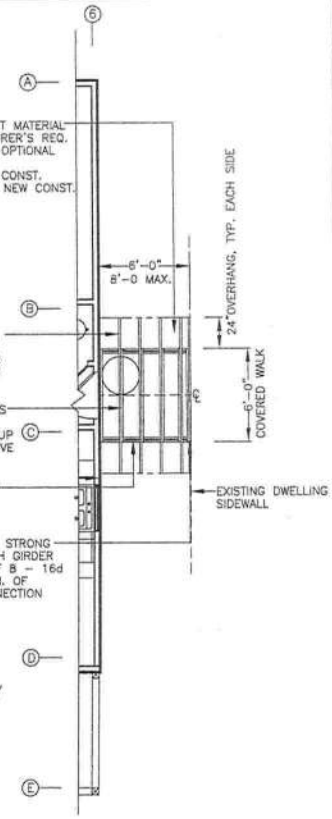
NOTE: CEILING SHALL BE VINYL SOFFIT MATERIAL INSTALLED PER SELECTED MANUFACTURER'S REQ. FOR THIS SPECIFIC APPLICATION, W/ OPTIONAL FIBERGLASS BATT INSULATION
ROOF SHEATHING SHALL MATCH NEW CONST.
FINISH ROOF MATERIAL SHALL MATCH NEW CONST.

TYPICAL WINDOW/DOOR HEADER: 2 - 2x12 No.2 S.Y.P. W/ 2-15/32" CDX CORES
REFER TO SCHEDULES FOR REQUIRED NUMBER OF CONTINUOUS STUDS EA. SIDE OF EXTERIOR WALL OPENINGS

RAFTER: 2x6 No.2 S.Y.P. @ 16" O.C. & AS ILLUSTRATED & ATTACHED TO EACH 2-PLY BUILT-UP ROOF GIRDER W/ 1 - MODEL No. H4 BY SIMPSON STRONG-TIE OR EQUAL W/ A TOTAL OF 8 - 8d COMMON NAILS
1 - 2x4 No. 2 S.Y.P. CEILING JOISTS ATTACHED ADJACENT TO RAFTERS AS ILLUSTRATED & ATTACHED TO BUILT-UP GIRDER W/ SAME DEVICE LISTED ABOVE

ROOF GIRDER: 2 - 2x6 No.2 S.Y.P. W/ 1 - 15/32" CDX CORE, TYP. EACH SIDE OF WALK

1 - MODEL No. LUS46 BY SIMPSON STRONG TIE OR EQUAL @ EACH END OF EACH GIRDER DWELLING SIDEWALLS W/ A TOTAL OF 8 - 16d COMMON NAILS PER DEVICE & A MIN. OF 4 - CONTINUOUS STUDS EACH CONNECTION IN WALL CAVITY



3 DIMENSIONED ROOF SYSTEM PLAN VIEW
S3.0.0 SCALE: 1/8" = 1'-0 CONNECTION WALK TO EXIST.

ATTIC ACCESS LOCATION(S): IF NOT SPECIFICALLY LOCATED OR NOTED ON PLAN VIEWS, ATTIC ACCESS SHALL BE @ DIRECTION OF OWNER

PROJECT No. MORGAN-S3.0.0.DWG SHEET No. S3.0.0	DATE 02/26/16	DIMENSIONED ROOF SYSTEM PLAN VIEWS MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

KEEN ENGINEERING & SURVEYING, INC.
9263 CR 417
LIVE OAK, FLORIDA 32060
386-362-4787
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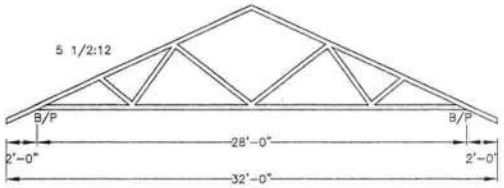
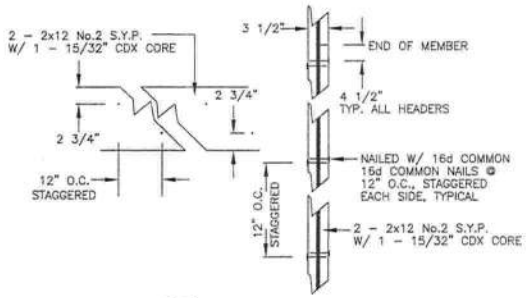
NOTE: INTERIOR & GABLE END TRUSSES TO BE DESIGNED AND CERTIFIED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA AS SATISFACTORY FOR THIS APPLICATION ACCORDING TO THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE FLORIDA BUILDING CODE. DRAWING(S) (IF ANY) DEPICTED ARE INTENDED FOR INFORMATION REGARDING REQUIRED SPAN, BEARING POINTS, OVERHANGS AND PITCH OF TOP CHORD MEMBERS. THEY ARE NOT INTENDED TO ACCURATELY REFLECT OR REPRESENT WEBBING, CHORD MEMBER SIZES OR PLATED CONNECTIONS.

NOTE: MANUFACTURER TO SPECIFY ALL BRACING, HANDLING & INSTALLATION PRACTICES TO ENSURE PROPER STRUCTURAL INTEGRITY OF INSTALLED TRUSSES.

SCALE NOTE:
DETAILS/SECTIONS: N.T.S.



1 / S3.1.0 SUGGESTED ROOF TRUSS PROFILE TYPE "A"
SCALE: N.T.S.



2 / S2.3.0 TYPICAL EXTERIOR WALL "HEADER"
SCALE: N.T.S.

SCHEDULE OF REQUIRED ROOF SYSTEM MECHANICAL FASTENERS & DEVICES

TRUSS TYPE "A" AND/OR ALTERNATE "A1"

LOCATION OF MAIN DWELLING (CONDITIONED & REAR PORCH AREAS) MANUFACTURED ROOF TRUSSES: SEE PLAN VIEW FOR LOCATIONS

1 - MODEL No. H4 BY SIMPSON STRONG-TIE OR EQUAL @ EACH BEARING POINT OF ROOF TRUSS TO TOP PLATES, HEADER OR BUILT-UP PORCH GIRDER ATTACHED W/ A TOTAL OF 8 - 8d COMMON NAILS PER DEVICE

LOCATION OF MAIN DWELLING GABLE END (CONDITIONED & PORCH AREAS) MANUFACTURED ROOF TRUSSES: SEE PLAN VIEW

2 - MODEL No. H4 BY SIMPSON STRONG-TIE OR EQUAL @ EACH BEARING POINT OF ROOF TRUSS TO TOP PLATES OR BUILT-UP PORCH GIRDER ATTACHED W/ A TOTAL OF 8 - 8d COMMON NAILS PER DEVICE

REAR PORCH GIRDERS: SEE PLAN VIEWS FOR LOCATIONS

LOCATION OF 3-PLY BUILT-UP PORCH GIRDERS - SEE PLAN VIEW FOR LOCATIONS
BUILT-UP PORCH GIRDER SHALL BE 3 - P.T. 2x10 No.2 S.Y.P. W/ 2 - 15/32" CDX CORES

1 - MODEL No. AC6 MAX. OR AC6 MAX BY SIMPSON STRONG-TIE OR EQUAL @ EACH BUILT-UP GIRDER TO P.T. COLUMN TOP CONNECTION ATTACHED W/ A TOTAL OF 20 - 16d COMMON NAILS (AC6 MAX) OR 28 = 16d COMMON NAILS (AC6 MAX)

1 - MODEL No. U210-3 BY SIMPSON STRONG-TIE OR EQUAL @ EACH BUILT-UP ROOF GIRDER TO DWELLING ENDWALL CONNECTION W/ A TOTAL OF 18 - 16d COMMON NAILS PER DEVICE.

PORCH COLUMNS: SEE PLAN VIEWS FOR LOCATIONS

LOCATION OF P.T. 6x6 PORCH COLUMNS - SEE PLAN VIEW FOR LOCATIONS
REAR PORCH COLUMNS SHALL BE P.T. 6x6 No.2 S.Y.P. AS ILLUSTRATED
SEE ABOVE GIRDERS FOR REQUIRED ATTACHMENT DEVICE(S)

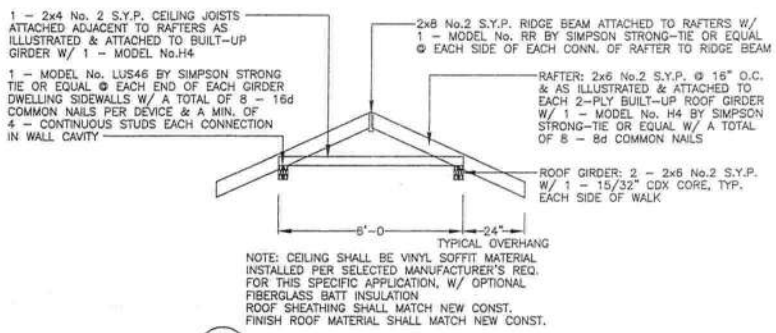
COVERED WALK ROOF

RIDGE BEAM SHALL BE 1 - 2x10 No.2 S.Y.P. - SEE ROOF SYSTEM PLAN VIEW FOR LOCATIONS
REFER TO DETAILS FOR REQUIRED DEVICES

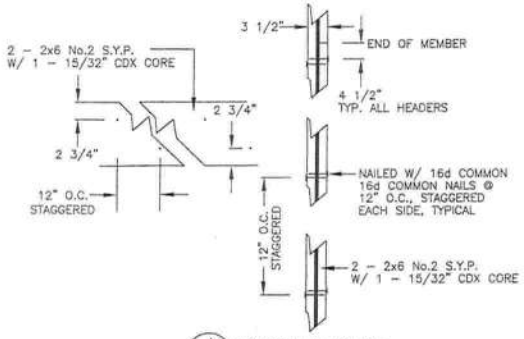
RAFTERS SHALL BE 2x6 No.2 S.Y.P. - SEE ROOF SYSTEM PLAN VIEW FOR LOCATIONS
REFER TO DETAILS FOR REQUIRED DEVICES

CEILING JOISTS SHALL BE 2x4 No.2 S.Y.P. - SEE ROOF SYSTEM PLAN VIEW FOR LOCATIONS
REFER TO DETAILS FOR REQUIRED ATTACHMENT

COORDINATE W/ DETAILS AND OTHER REQUIREMENTS ELSEWHERE THESE PLANS

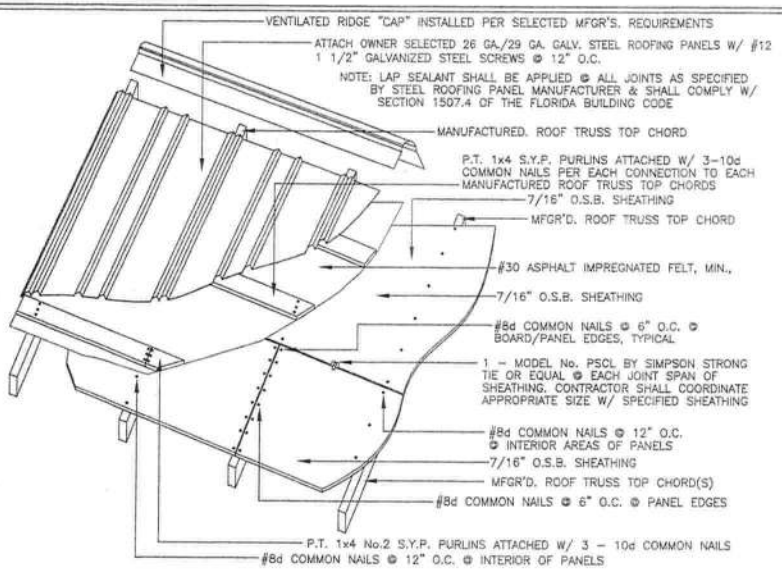


3 / S3.1.0 ROOF SECTION THROUGH "WALK" AREA
SCALE: N.T.S.



4 / S2.3.0 COVERED WALK GIRDER
SCALE: N.T.S.

PROJECT No. MORGAN-S3.1.0.DWG SHEET No. S3.1.0	DATE 02/26/16	ROOF SYSTEM MANUFACTURED TRUSS PROFILE REFERENCED SECTIONS & DETAILS ROOF SYSTEM MECHANICAL DEVICE ATTACHMENT SCHEDULE MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA	KEEN ENGINEERING & SURVEYING, INC. 9263 CR 417 LIVE OAK, FLORIDA 32060 386-362-4787 ENG. LIC. EB 3761

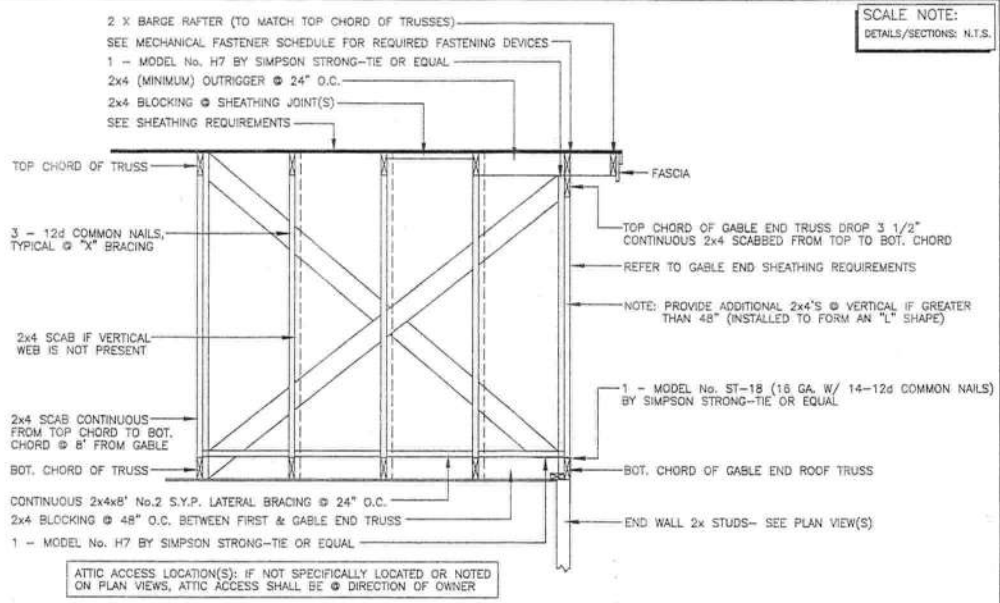


NOTE: REFER TO AND COORDINATE W/ DETAILS, SECTIONS & SCHEDULES FOR REQUIRED MECHANICAL ATTACHMENT DEVICES ELSEWHRE THESE PLANS

NOTE: RAKE, EAVE AND RIDGE PANEL ELEMENTS BY APPROVED STEEL ROOFING MANUFACTURER

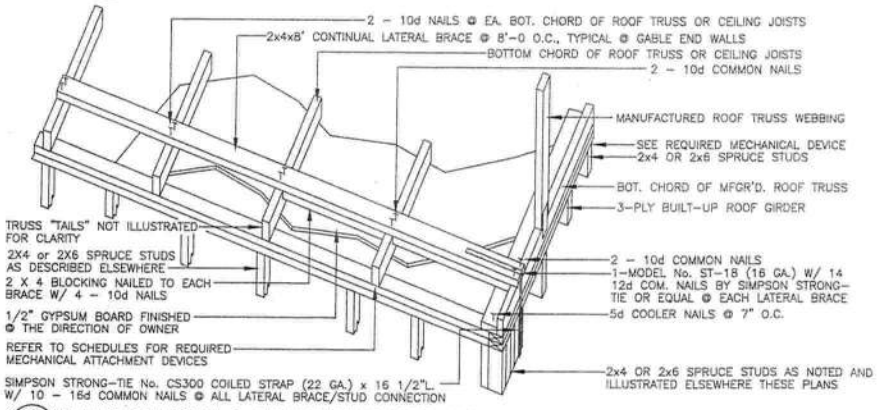
1 / S3.2.0 ROOFING PANELS & SHEATHING CONNECTIONS TO TRUSSES
SCALE: N.T.S.

SCALE NOTE:
DETAILS/SECTIONS: N.T.S.

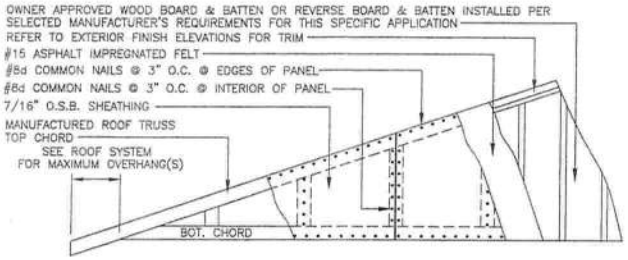


ATTIC ACCESS LOCATION(S): IF NOT SPECIFICALLY LOCATED OR NOTED ON PLAN VIEWS, ATTIC ACCESS SHALL BE @ DIRECTION OF OWNER

3 / S3.2.0 GABLE ENDWALL FRAMING REQUIREMENTS
SCALE: N.T.S.



2 / S3.2.0 CEILING CONNECTION @ GABLE ENDWALLS/SIDEWALLS
SCALE: N.T.S.



NOTE: ALL OWNER APPROVED TRIM AND FASCIA MATERIALS SHALL BE INSTALLED PER SELECTED MANUFACTURER'S REQUIREMENTS FOR THIS SPECIFIC APPLICATION

4 / S3.2.0 GABLE ENDWALL SHEATHING REQUIREMENTS
SCALE: N.T.S.

PROJECT No. MORGAN-S3.2.0.DWG SHEET No. S3.2.0	DATE 02/26/16	REFERENCED ROOF DETAILS & SECTIONS MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

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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.

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)
1. EXTERIOR DOORS			
A. SWINGING	Dyke	Inswing / outswing steel	FL4904-R5 ✓
B. SLIDING			
C. SECTIONAL			
D. ROLL UP			
E. AUTOMATIC			
F. OTHER			
2. WINDOWS			
A. SINGLE HUNG	MI	Vinyl Single Hung	~~FL12250-R11~~ 15217 ✓
B. HORIZONTAL SLIDER			
C. CASEMENT			
D. DOUBLE HUNG			
E. FIXED			
F. AWNING			
G. PASS THROUGH			
H. PROJECTED			
I. MULLION			
J. WIND BREAKER			
K. DUAL ACTION			
L. OTHER			
3. PANEL WALL			
A. SIDING	Certainteed	Fibercement siding	5734-R3
B. SOFFITS			
C. EIFS			
D. STOREFRONTS			
E. CURTAIN WALLS			
F. WALL LOUVER			
G. GLASS BLOCK			
H. MEMBRANE			
I. GREENHOUSE			
J. OTHER			
4. ROOFING PRODUCTS			
A. ASPHALT SHINGLES			
B. UNDERLAYMENTS			
C. ROOFING FASTENERS			
D. NON-STRUCTURAL METAL ROOFING	Gulf Coast Supply	26 G.A Tuff Rib	11651.22 R1 ✓
E. WOOD SHINGLES AND SHAKES			
F. ROOFING TILES			
G. ROOFING INSULATION			
H. WATERPROOFING			
I. BUILT UP ROOFING ROOF SYSTEMS			
J. MODIFIED BITUMEN			
K. SINGLE PLY ROOF SYSTEMS			
L. ROOFING SLATE			
M. CEMENTS-ADHESIVES COATINGS			

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for FILE COPY
Code Compliance
PLANS EXAMINER

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)

N. LIQUID APPLIED ROOF SYSTEMS			
O. ROOF TILE ADHESIVE			
P. SPRAY APPLIED POLYURETHANE ROOF			
Q. OTHER			
5. SHUTTERS			
A. ACCORDION			
B. BAHAMA			
C. STORM PANELS			
D. COLONIAL			
E. ROLL-UP			
F. EQUIPMENT			
G. OTHERS			
6. SKYLIGHTS			
A. SKYLIGHT			
B. OTHER			
7. STRUCTURAL COMPONENTS			
A. WOOD CONNECTORS/ ANCHORS	Simpson	LSTA-MSTA-ESP4	FL 13872-R1
B. TRUSS PLATES			
C. ENGINEERED LUMBER			
D. RAILING			
E. COOLERS-FREEZERS			
F. CONCRETE ADMIXTURES			
G. MATERIAL			
H. INSULATION FORMS			
I. PLASTICS			
J. DECK-ROOF			
K. WALL			
L. SHEDS			
M. OTHER			
8. NEW EXTERIOR ENVELOPE PRODUCTS			
A.			
B.			

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

_____

_____

APPLICANT SIGNATURE DATE

COLUMBIA COUNTY BUILDING DEPARTMENT
RESIDENTIAL CHECK LIST

MINIMUM PLAN REQUIREMENTS: FLORIDA BUILDING CODE RESIDENTIAL 2014 EFFECTIVE 1 JULY 2015
AND THE NATIONAL ELECTRICAL 2011 EFFECTIVE 1 JULY 2015

ALL REQUIREMENTS ARE SUBJECT TO CHANGE

ALL BUILDING PLANS MUST INDICATE COMPLIANCE WITH THE CURRENT 2014 FLORIDA BUILDING CODES RESIDENTIAL, EFFECTIVE 1 JULY 2015. NATIONAL ELECTRICAL CODE 2011 EFFECTIVE 1 JULY 2015. ALL PLANS OR DRAWINGS SHALL PROVIDE CALCULATIONS AND DETAILS THAT HAVE THE SEAL AND SIGNATURE OF A CERTIFIED ARCHITECT OR ENGINEER REGISTERED IN THE STATE OF FLORIDA, OR ALTERNATE METHODOLOGIES, APPROVED BY THE STATE OF FLORIDA BUILDING COMMISSION FOR ONE-AND-TWO FAMILY DWELLINGS.

FOR DESIGN PURPOSES THE FOLLOWING BASIC WIND SPEEDS ARE PER FLORIDA BUILDING CODE FIGURE 1609-A THROUGH 1609-C ULTIMATE DESIGN WIND SPEEDS FOR RISK CATEGORY AND BUILDINGS AND OTHER STRUCTURES
Revised 7/1/15

	GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL			Items to Include- Each Box shall be Circled as Applicable		
				Yes	No	N/A
1	Two (2) complete sets of plans containing the following:			✓		
2	All drawings must be clear, concise, drawn to scale, details that are not used shall be marked void			✓		
3	**Condition space (Sq. Ft.)**	2128	**Total (Sq. Ft.) under roof** 3238.70	IIIIIIII	IIIIIIII	IIIII

Designers name and signature shall be on all documents and a licensed architect or engineer, signature and official embossed seal shall be affixed to the plans and documents as per the FLORIDA BUILDING CODES RESIDENTIAL R101.2.1

Site Plan information including:

4	Dimensions of lot or parcel of land	✓		
5	Dimensions of all building set backs	✓		
6	Location of all other structures (include square footage of structures) on parcel, existing or proposed well and septic tank and all utility easements.	✓		
7	Provide a full legal description of property.	✓		

Wind-load Engineering Summary, calculations and any details are required.

	GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable		
8	**Plans or specifications must show compliance with FBCR Chapter 3**	IIIIII	IIIII	IIIIII
		YES	NO	N/A
9	Basic wind speed (3-second gust), miles per hour	✓		
10	(Wind exposure – if more than one wind exposure is used, the wind exposure and applicable wind direction shall be indicated)	✓		
11	Wind importance factor and nature of occupancy	✓		
12	The applicable internal pressure coefficient, Components and Cladding	✓		
13	The design wind pressure in terms of psf (kN/m²), to be used for the design of exterior component, cladding materials not specifally designed by the registered design professional.	✓		

Elevations Drawing including:

14	All side views of the structure	✓		
15	Roof pitch	✓		
16	Overhang dimensions and detail with attic ventilation	✓		
17	Location, size and height above roof of chimneys			✓
18	Location and size of skylights with Florida Product Approval			✓
18	Number of stories	✓		
20A	Building height from the established grade to the roofs highest peak	✓		

Floor Plan including:

20	Dimensioned area plan showing rooms, attached garage, breeze ways, covered porches, deck, balconies	✓		
21	Raised floor surfaces located more than 30 inches above the floor or grade	✓		
22	All exterior and interior shear walls indicated	✓		
23	Shear wall opening shown (Windows, Doors and Garage doors)	✓		
24	Show compliance with Section FBCR 310 Emergency escape and rescue opening shown in each bedroom (net clear opening shown) and Show compliance with Section FBC 1405.13.2 where the opening of an operable window is located more than 72 inches above the finished grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches above the finished floor of the room in which the window is located. Glazing between the floor and 24 inches shall be fixed or have openings through which a 4-inch-diameter sphere cannot pass.	✓		
25	Safety glazing of glass where needed	✓		
26	Fireplaces types (gas appliance) (vented or non-vented) or wood burning with Hearth (see chapter 10 and chapter 24 of FBCR)			✓
27	Show stairs with dimensions (width, tread and riser and total run) details of guardrails, Handrails	✓		
28	Identify accessibility of bathroom (see FBCR SECTION 320)	✓		

All materials placed within opening or onto/into exterior walls, soffits or roofs shall have Florida product approval number and mfg. installation information submitted with the plans
(see Florida product approval form)

GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable

FBCR 403: Foundation Plans

		YES	NO	N/A
29	Location of all load-bearing walls footings indicated as standard, monolithic, dimensions, size and type of reinforcing.	✓		
30	All posts and/or column footing including size and reinforcing	✓		
31	Any special support required by soil analysis such as piling.			✓
32	Assumed load-bearing valve of soil_____ Pound Per Square Foot			✓
33	Location of horizontal and vertical steel, for foundation or walls (include # size and type) **For** structures with foundation which establish new electrical utility companies service connection a Concrete Encased Electrode will be required within the foundation to serve as an grounding electrode system. Per the National Electrical Code article 250.52.3	✓		

FBCR 506: CONCRETE SLAB ON GRADE

34	Show Vapor retarder (6mil. Polyethylene with joints lapped 6 inches and sealed)			✓
35	Show control joints, synthetic fiber reinforcement or welded fire fabric reinforcement and Supports			✓

FBCR 318: PROTECTION AGAINST TERMITES

36	Indicate on the foundation plan if soil treatment is used for subterranean termite prevention or Submit other approved termite protection methods. **Protection shall be provided by registered termiticides**	✓		

FBCR 606: Masonry Walls and Stem walls (load bearing & shear Walls)

37	Show all materials making up walls, wall height, and Block size, mortar type	✓		
38	Show all Lintel sizes, type, spans and tie-beam sizes and spacing of reinforcement	✓		

Metal frame shear wall and roof systems shall be designed, signed and sealed by Florida Prof. Engineer or Architect

Floor Framing System: First and/or second story

39	Floor truss package shall including layout and details, signed and sealed by Florida Registered Professional Engineer	✓		
40	Show conventional floor joist type, size, span, spacing and attachment to load bearing walls, stem walls and/or priers			✓
41	Girder type, size and spacing to load bearing walls, stem wall and/or priers	✓		
42	Attachment of joist to girder	✓		
43	Wind load requirements where applicable	✓		
44	Show required under-floor crawl space			✓
45	Show required amount of ventilation opening for under-floor spaces	✓		
46	Show required covering of ventilation opening	✓		
47	Show the required access opening to access to under-floor spaces	✓		
48	Show the sub-floor structural panel sheathing type, thickness and fastener schedule on the edges & intermediate of the areas structural panel sheathing	✓		
49	Show Draftstopping, Fire caulking and Fire blocking	✓		
50	Show fireproofing requirements for garages attached to living spaces, per FBCR section 302.6			✓
51	Provide live and dead load rating of floor framing systems (psf).	✓		

FBCR CHAPTER 6 WOOD WALL FRAMING CONSTRUCTION

	GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable		
		YES	NO	N/A
52	Stud type, grade, size, wall height and oc spacing for all load bearing or shear walls	✓		
53	Fastener schedule for structural members per table IRC 602.3 are to be shown	✓		
54	Show Wood structural panel's sheathing attachment to studs, joist, trusses, rafters and structural members, showing fastener schedule attachment on the edges & intermediate of the areas structural panel sheathing	✓		
55	Show all required connectors with a max uplift rating and required number of connectors and oc spacing for continuous connection of structural walls to foundation and roof trusses or rafter systems	✓		
56	Show sizes, type, span lengths and required number of support jack studs, king studs for shear wall opening and girder or header per FBCB 2308.9.5	✓		
57	Indicate where pressure treated wood will be placed	✓		
58	Show all wall structural panel sheathing, grade, thickness and show fastener schedule for structural panel sheathing edges & intermediate areas	✓		
59	A detail showing gable truss bracing, wall balloon framing details or/ and wall hinge bracing detail	✓		

FBCR :ROOF SYSTEMS:

60	Truss design drawing shall meet section FBCR 802.1.7.1 Wood trusses	✓		
61	Include a layout and truss details, signed and sealed by Florida Professional Engineer	✓		
62	Show types of connector's assemblies' and resistance uplift rating for all trusses and rafters	✓		
63	Show gable ends with rake beams showing reinforcement or gable truss and wall bracing details	✓		
64	Provide dead load rating of trusses	✓		

FBCR 802:Conventional Roof Framing Layout

65	Rafter and ridge beams sizes, span, species and spacing			✓
66	Connectors to wall assemblies' include assemblies' resistance to uplift rating			✓
67	Valley framing and support details			✓
68	Provide dead load rating of rafter system			✓

FBCR 803 ROOF SHEATHING

69	Include all materials which will make up the roof decking, identification of structural panel sheathing, grade, thickness	✓		
70	Show fastener Size and schedule for structural panel sheathing on the edges & intermediate areas	✓		

ROOF ASSEMBLIES FRC Chapter 9

71	Include all materials which will make up the roof assembles covering	✓		
72	Submit Florida Product Approval numbers for each component of the roof assembles covering	✓		

FBCR Energy Conservation R.401

Residential construction shall comply with this code by using the following compliance methods in the Residential buildings compliance methods. **Two of the required forms are to be submitted**, *R 402-2014 As an alternative to the computerized Compliance Method A, the Alternate Residential Point System Method hand calculation, Alternate Form R 402-2014, may be used. All requirements specific to this calculation are located in Sub appendix C to Appendix G. Buildings complying by this alternative shall meet all mandatory requirements of this chapter. Computerized versions of the Alternate Residential Point System Method shall not be acceptable for code compliance.*

	GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable		
		YES	NO	N/A
73	Show the insulation R value for the following areas of the structure	✓		
74	Attic space	✓		
75	Exterior wall cavity	✓		
76	Crawl space			✓

HVAC information

77	Submit two copies of a Manual J sizing equipment or equivalent computation study	✓		
78	Exhaust fans shown in bathrooms **Mechanical exhaust capacity of 50 cfm intermittent or 20 cfm continuous required**	✓		
79	Show clothes dryer route and total run of exhaust duct	✓		

Plumbing Fixture layout shown

80	All fixtures waste water lines shall be shown on the foundation plan	✓		
81	Show the location of water heater	✓		

Private Potable Water

82	Pump motor horse power	✓		
83	Reservoir pressure tank gallon capacity	✓		
84	Rating of cycle stop valve if used	✓		

Electrical layout shown including

85	Show Switches, receptacles outlets, lighting fixtures and Ceiling fans	✓		
86	Show all 120-volt, single phase, 15- and 20-ampere branch circuits outlets required to be protected by **Ground-Fault Circuit Interrupter (GFCI) Article 210.8 A**	✓		
87	Show the location of smoke detectors & Carbon monoxide detectors	✓		
88	Show service panel, sub-panel, location(s) and total ampere ratings	✓		
89	On the electrical plans identify the electrical service overcurrent protection device for the main electrical service. This device shall be installed on the exterior of structures to serve as a disconnecting means for the utility company electrical service. Conductors used from the exterior disconnecting means to a panel or sub panel shall have four-wire conductors, of which one conductor shall be used as an equipment ground. Indicate if the utility company service entrance cable will be of the overhead or underground type. **For structures** with foundation which establish new electrical utility companies service connection a Concrete Encased Electrode will be required within the foundation to serve as an Grounding electrode system. Per the National Electrical Code article 250.52.3	✓		
90	Appliances and HVAC equipment and disconnects	✓		
91	Show all 120-volt, single phase, 15- and 20-ampere branch circuits supplying outlets installed in dwelling unit family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas shall be protected by a listed **Combination arc-fault circuit interrupter,** Protection device. NEC 210.12A	✓		

GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable

THE FOLLOWING ITEMS MUST BE SUBMITTED WITH BUILDING PLANS

		YES	NO	N/A
92	**Building Permit Application** A current Building Permit Application is to be completed, by following the Checklist all supporting documents must be submitted. There is a **$15.00** application fee. The completed application with attached documents and application fee can be mailed.	✓		
93	**Parcel Number** The parcel number (Tax ID number) from the Property Appraisers Office (386) 758-1083 is required. A copy of property deed is also required. www.columbiacountyfla.com	✓		
94	**Environmental Health Permit or Sewer Tap Approval** A copy of a approved Columbia County Environmental Health (386) 758-1058	✓		
95	**City of Lake City** A City Water and/or Sewer letter. Call 386-752-2031			✓
96	**Toilet facilities shall be provided for all construction sites**			
97	**Town of Fort White** (386) 497-2321 If the parcel in the application for building permit is within the Corporate city limits of Fort White, an approval land use development letter issued by the Town of Fort is required to be submitted with the application for a building permit.			✓
98	**Flood Information:** All projects within the Floodway of the Suwannee or Santa Fe Rivers shall require permitting through the Suwannee River Water Management District, before submitting a application to this office. Any project located within a flood zone where the base flood elevation (100 year flood) has been established shall meet the requirements of Section 8.5.2 of the Columbia County Land Development Regulations. Any project located within a flood zone where the base flood elevation has not been established (Zone A) shall meet the requirements of Section 8.5.3 of the Columbia County Land Development Regulations	✓		
99	**CERTIFIED FINISHED FLOOR ELEVATIONS** will be required on any project where the approved FIRM Flood Maps show the property is in a AE, Floodway, and AH flood zones. Additionally One Foot Rise letters are required for AE and AH zones. In the Floodway Flood zones a Zero Rise letter is required.	✓		
100	A Flood development permit is also required for AE, Floodway & AH. Development permit cost is **$50.00**			
101	**Driveway Connection:** If the property does not have an existing access to a public road, then an application for a culvert permit **($25.00)** must be made. County Public Works Dept. determines the size and length of every culvert before instillation and completes a final inspection before permanent power is granted. If the applicant feels that a culvert is not needed, they may apply for a culvert waiver **($50.00)** Separate Check when issued. If the project is to be located on an F.D.O.T. maintained road, then an F.D.O.T. access permit is required.	✓		
102	**911 Address:** An application for a 911address must be applied for and **received** through the Columbia County Emergency Management Office of 911 Addressing Department (386) 758-1125.	✓		

Disclosure Statement for Owner Builders *If you as the applicant will be acting as an owner/builder under section 489.103(7) of the Florida Statutes, submit the required owner builder disclosure statement form.*

Notice Of Commencement

A notice of commencement form **recorded** in the Columbia County Clerk Office is required to be filed with the building department Before Any Inspections can be preformed.

Section R101.2.1 of the Florida Building Code Residential:

The provisions of Chapter 1, Florida Building Code shall govern the administration and enforcement of the Florida Building Code, Residential.

Manual S Compliance Report
Entire House

Job: 1
Date: Jun 06, 2016
By: Derick Williams
Plan: 1

Project Information

For: Morgan, Mike Todd Const
Lake City, Fl

Cooling Equipment

Design Conditions

Outdoor design DB:	92.0°F	Sensible gain:	16963	Btuh		Entering coil DB:	75.0°F
Outdoor design WB:	76.3°F	Latent gain:	3533	Btuh		Entering coil WB:	62.5°F
Indoor design DB:	75.0°F	Total gain:	20496	Btuh			
Indoor RH:	50%	Estimated airflow:	776	cfm			

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Generic		Model: SEER 14.0, HSPF 8.1		
Actual airflow:	776	cfm			
Sensible capacity:	0	Btuh	0% of load		
Latent capacity:	0	Btuh	0% of load		
Total capacity:	0	Btuh	0% of load	SHR:	0%

Heating Equipment

Design Conditions

Outdoor design DB:	33.4°F	Heat loss:	18314	Btuh		Entering coil DB:	68.0°F
Indoor design DB:	68.0°F						

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for FILE COPY
Code Compliance
PLANS EXAMINER

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Generic		Model: SEER 14.0, HSPF 8.1		
Actual airflow:	776	cfm			
Output capacity:	24000	Btuh	131% of load		
Supplemental heat required:		0	Btuh		

Capacity balance: 23 °F
Economic balance: -99 °F

Backup equipment type:		Elec strip			
Manufacturer:			Model:		
Actual airflow:	776	cfm			
Output capacity:	5.4	kW	100% of load	Temp. rise:	0 °F

The above equipment was selected in accordance with ACCA Manual S.

Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts)

Form RPER 1 15 Mar 09

Columbia
Header Information

Contractor: ,

Mechanical license:

Building plan #: 1

Home address (Street or Lot#, Block, Subdivision): , Entire House

REQUIRED ATTACHMENTS	ATTACHED	
Manual J1 Form (and supporting worksheets):	Yes ☐	No ☐
or MJ1AE Form* (and supporting worksheets):	Yes ☐	No ☐
OEM performance data (heating, cooling, blower):	Yes ☐	No ☐
Manual D Friction Rate Worksheet:	Yes ☐	No ☐
Duct distribution sketch:	Yes ☐	No ☐

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature:	33	°F
Indoor temperature:	68	°F
Total heat loss:	18314	Btuh

Summer Design Conditions

Outdoor temperature:	92	°F
Indoor temperature:	75	°F
Grains difference:	47 gr/lb @50% RH	
Sensible heat gain:	17488	Btuh
Latent heat gain:	3642	Btuh
Total heat gain:	21130	Btuh

Building Construction Information

Building

Orientation: North, East, West, South, Northeast, Northwest, Southeast, Southwest	Front Door faces North	
Number of bedrooms:	1	
Conditioned floor area:	1968	ft²
Number of occupants:	4	

Windows

Eave overhang depth:	2.0	ft
Internal shade: Blinds, drapes, etc.	blinds	
Number of skylights:	0	

HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Furnace, Heat pump, Boiler, etc.	Split ASHP	
Model:	Generic SEER 14.0, HSPF 8.1	
Heating output capacity: Heat pumps - capacity at winter design outdoor conditions	0	Btuh
Aux. heating output capacity:	18314	Btuh

Cooling Equipment Data

Equipment type: Air Conditioner, Heat pump, etc.	Split ASHP	
Model:	Generic SEER 14.0, HSPF 8.1+	
Total cooling capacity:	0	Btuh
Sensible cooling capacity:	0	Btuh
Latent cooling capacity:	0	Btuh

Blower Data

Heating cfm:	776
Cooling cfm:	776
Static pressure: Fan's rated external static pressure for design airflow	0.50 in H2O

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow:	776	cfm
Equipment design ESP:	0.50	in H2O
Total device pressure losses:	0	in H2O
Available static pressure (ASP):	0.50	in H2O

Longest supply duct:	290	ft
Longest return duct:	0	ft
Total effective length (TEL):	290	ft
Friction rate: Friction Rate = ASP ÷ (TEL x 100)	0.173	in/100ft

Duct Materials Used	
Trunk duct:	Round flex vinyl
Branch duct:	Round flex vinyl

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____ Date: _____

Reserved for County, Town Municipality or Authority having jurisdiction use.

*Home qualifies for MJ1AE Form based on Abridged Edition Checklist

Load Short Form
Entire House

Job: 1
Date: Jun 06, 2016
By: Derick Williams
Plan: 1

Project Information

For: Morgan, Mike Todd Const
Lake City, Fl

Design Information

	Htg	Clg
Outside db (°F)	33	92
Inside db (°F)	68	75
Design TD (°F)	35	17
Daily range	-	M
Inside humidity (%)	50	50
Moisture difference (gr/lb)	29	47

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

HEATING EQUIPMENT

Make	Generic
Trade	
Model	SEER 14.0, HSPF 8.1
AHRI ref	
Efficiency	8.1 HSPF
Heating input	
Heating output	23881 Btuh @ 47°F
Temperature rise	28 °F
Actual air flow	776 cfm
Air flow factor	0.042 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	

COOLING EQUIPMENT

Make	Generic
Trade	
Cond	SEER 14.0, HSPF 8.1
Coil	
AHRI ref	
Efficiency	12.2 EER, 14 SEER
Sensible cooling	16800 Btuh
Latent cooling	7200 Btuh
Total cooling	24000 Btuh
Actual air flow	776 cfm
Air flow factor	0.046 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.83

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
br1	238	2342	1150	99	53
living	210	2729	3993	116	183
mech	45	497	200	21	9
utility	72	96	519	4	24
toilet	20	464	185	20	8
bath1	55	711	655	30	30
bath2	36	48	22	2	1
hall	54	363	148	15	7
hall2	44	58	27	2	1
kitchen	210	2364	2940	100	134
loft2	304	3390	2812	144	129
clos2	50	280	123	12	6
clos6	20	209	88	9	4
clos5	20	15	11	1	1
loft1	340	3514	2870	149	131
bath3	50	391	502	17	23

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

bath4	50	391	502	17	23
utilty	25	19	14	1	1
clos4	40	224	98	9	5
clos3	30	168	74	7	3
stor	25	19	14	1	1
hall3	30	22	16	1	1
Entire House	1968	18314	16963	776	776
Other equip loads		0	0		
Equip. @ 0.97 RSM			16454		
Latent cooling			3533		
TOTALS	1968	18314	19987	776	776

Duct System Summary
Entire House

Job: 1
Date: Jun 06, 2016
By: Derick Williams
Plan: 1

Project Information

For: Morgan, Mike Todd Const
Lake City, Fl

	Heating	Cooling
External static pressure	0.50 in H2O	0.50 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.50 in H2O	0.50 in H2O
Supply / return available pressure	0.250 / 0.250 in H2O	0.250 / 0.250 in H2O
Lowest friction rate	0.173 in/100ft	0.173 in/100ft
Actual air flow	776 cfm	776 cfm
Total effective length (TEL)	290 ft	

Supply Branch Detail Table

Name		Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
bath1	h	711	30	30	0.314	4.0	0x0	VIFx	29.0	130.0	st6
bath2	h	48	2	1	0.379	4.0	0x0	VIFx	22.0	110.0	st6
bath3	c	502	17	23	0.209	4.0	0x0	VIFx	39.0	200.0	st4
bath4	c	502	17	23	0.258	4.0	0x0	VIFx	34.0	160.0	st4
br1	h	2342	99	53	0.286	6.0	0x0	VIFx	25.0	150.0	st6
clos2	h	280	12	6	0.190	4.0	0x0	VIFx	43.0	220.0	st4
clos3	h	168	7	3	0.177	4.0	0x0	VIFx	43.0	240.0	st4
clos4	h	224	9	5	0.254	4.0	0x0	VIFx	37.0	160.0	st5
clos5	h	15	1	1	0.252	4.0	0x0	VIFx	38.0	160.0	st5
clos6	h	209	9	4	0.246	4.0	0x0	VIFx	43.0	160.0	st5
hall	h	363	15	7	0.243	4.0	0x0	VIFx	26.0	180.0	st6A
hall2	h	58	2	1	0.294	4.0	0x0	VIFx	30.0	140.0	st2
hall3	h	22	1	1	0.237	4.0	0x0	VIFx	31.0	180.0	st4
kitchen	c	2940	100	134	0.287	7.0	0x0	VIFx	34.1	140.0	st2
living	c	3993	116	183	0.286	8.0	0x0	VIFx	34.7	140.0	st2
loft1	h	3514	149	131	0.235	7.0	0x0	VIFx	43.0	170.0	st5
loft2	h	3390	144	129	0.173	7.0	0x0	VIFx	39.5	250.0	st4
mech	h	497	21	9	0.286	4.0	0x0	VIFx	35.0	140.0	st2
stor	h	19	1	1	0.215	4.0	0x0	VIFx	32.0	200.0	st4
toilet	h	464	20	8	0.220	4.0	0x0	VIFx	37.0	190.0	st6A
utility	c	519	4	24	0.292	4.0	0x0	VIFx	31.0	140.0	st2
utilty	h	19	1	1	0.267	4.0	0x0	VIFx	27.0	160.0	st4

Project Summary
Entire House

Job: 1
Date: Jun 06, 2016
By: Derick Williams
Plan: 1

Project Information

For: Morgan, Mike Todd Const
Lake City, Fl

Notes:

Design Information

Weather: Gainesville Regional AP, FL, US

Winter Design Conditions

Outside db	33	°F
Inside db	68	°F
Design TD	35	°F

Summer Design Conditions

Outside db	92	°F
Inside db	75	°F
Design TD	17	°F
Daily range	M	
Relative humidity	50	%
Moisture difference	47	gr/lb

Heating Summary

Structure	18314	Btuh
Ducts	0	Btuh
Central vent (0 cfm)	0	Btuh
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	18314	Btuh

Sensible Cooling Equipment Load Sizing

Structure	16963	Btuh
Ducts	0	Btuh
Central vent (0 cfm)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.97	
Equipment sensible load	16454	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	1968	1968
Volume (ft³)	19680	19680
Air changes/hour	0.50	0.26
Equiv. AVF (cfm)	164	85

Latent Cooling Equipment Load Sizing

Structure	3533	Btuh
Ducts	0	Btuh
Central vent (0 cfm)	0	Btuh
Equipment latent load	3533	Btuh
Equipment total load	19987	Btuh
Req. total capacity at 0.70 SHR	2.0	ton

Heating Equipment Summary

Make	Generic
Trade	
Model	SEER 14.0, HSPF 8.1
AHRI ref	

Efficiency	8.1 HSPF	
Heating input		
Heating output	23881	Btuh @ 47°F
Temperature rise	28	°F
Actual air flow	776	cfm
Air flow factor	0.042	cfm/Btuh
Static pressure	0.50	in H2O
Space thermostat		

Cooling Equipment Summary

Make	Generic
Trade	
Cond	SEER 14.0, HSPF 8.1
Coil	
AHRI ref	
Efficiency	12.2 EER, 14 SEER

Sensible cooling	16800	Btuh
Latent cooling	7200	Btuh
Total cooling	24000	Btuh
Actual air flow	776	cfm
Air flow factor	0.046	cfm/Btuh
Static pressure	0.50	in H2O
Load sensible heat ratio	0.83	

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st2	Peak AVF	609	677	0.173	485	16.0	0 x 0	VinlFlx	st1
st6	Peak AVF	166	99	0.220	477	8.0	0 x 0	VinlFlx	st1
st1	Peak AVF	776	776	0.173	556	16.0	0 x 0	VinlFlx	
st6A	Peak AVF	35	15	0.220	401	4.0	0 x 0	VinlFlx	st6
st3	Peak AVF	366	326	0.173	466	12.0	0 x 0	VinlFlx	st2
st4	Peak AVF	198	185	0.173	568	8.0	0 x 0	VinlFlx	st3
st5	Peak AVF	168	140	0.235	481	8.0	0 x 0	VinlFlx	st3

Return Branch Detail Table

Name	Grill Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb1	0x 0	776	776	0	0	0	0	0x 0		VIFx	

FLORIDA BUILDING CODE, ENERGY CONSERVATION

Residential Building Thermal Envelope Approach

FORM R402-2014 **Climate Zone ☐**

Scope: Compliance with Section R402.1.1 of the *Florida Building Code, Energy Conservation*, shall be demonstrated by the use of Form R402 for single- and multiple-family residences of three stories or less in height, additions to existing residential buildings, alterations, renovations, and building systems in existing buildings, as applicable. To comply, a building must meet or exceed all of the energy efficiency requirements on Table R402A and all applicable mandatory requirements summarized in Table R402B of this form. If a building does not comply with this method, or by the UA Alternative method, it may still comply under Section R405 of the *Florida Building Code, Energy Conservation*.

PROJECT NAME: AND ADDRESS:	BUILDER:
OWNER: DAVID & BRYN MORGAN	PERMITTING OFFICE:
	JURISDICTION NUMBER:
	PERMIT NUMBER:

General Instructions:

1. **Fill in all the applicable spaces of the "To Be Installed" column on Table R402A with the information requested. All "To Be Installed" values must be equal to or more efficient than the required levels.**
2. **Complete page 1 based on the "To Be Installed" column information.**
3. **Read the requirements of Table R402B and check each box to indicate your intent to comply with all applicable items.**
4. **Read, sign and date the "Prepared By" certification statement at the bottom of page 1. The owner or owner's agent must also sign and date the form.**

1. New construction, addition, or existing building	1.	NEW
2. Single-family detached or multiple-family attached	2.	SF
3. If multiple-family, number of units covered by this submission	3.	—
4. Is this a worst case? (yes/no)	4.	NO
5. Conditioned floor area (sq. ft.)	5.	1,064 Per floor
6. Windows, type and area		
a) *U*-factor:	6a.	0.65
b) Solar Heat Gain Coefficient (SHGC)	6b.	0.25
c) Area	6c.	135
7. Skylights		
a) *U*-factor:	7a.	—
b) Solar Heat Gain Coefficient (SHGC)	7b.	—
8. Floor type, area or perimeter, and insulation:		
a) Slab-on-grade (*R*-value)	8a.	—
b) Wood, raised (*R*-value)	8b.	1,064
c) Wood, common (*R*-value)	8c.	—
d) Concrete, raised (*R*-value)	8d.	—
e) Concrete, common (*R*-value)	8e.	—
9. Wall type and insulation:		
a) Exterior: 1. Wood frame (Insulation *R*-value)	9a1.	13
2. Masonry (Insulation *R*-value)	9a2.	—
b) Adjacent: 1. Wood frame (Insulation *R*-value)	9b1.	—
2. Masonry (Insulation *R*-value)	9b2.	—
10. Ceiling type and insulation		
a) Attic (Insulation R-value)	10a.	30
b) Single assembly (Insulation *R*-value)	10b.	—
11. Air distribution system:		
a) Duct location, insulation	11a.	ATTIC
b) AHU location	11b.	CONDITIONED
c) Total duct leakage. Test report attached.	11c.	cfm/100 s.f. Yes ☐ No ☐
12. Cooling system: a) type	12a.	CENTRAL
b) efficiency	12b.	SEER 14.0
13. Heating system: a) type	13a.	HEAT PUMP
b) efficiency:	13b.	8.2
14. HVAC sizing calculation: attached	14.	Yes ☐ No ☒
15. Water heating system: a) type	15a.	ELECTRIC
b) efficiency	15b.	0.90

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for FILE COPY
Code Compliance
PLANS EXAMINER

I hereby certify that the plans and specifications covered by this form are in compliance with the *Florida Building Code, Energy Conservation*.
PREPARED BY: Curtis Kern Date 5/10/16

I hereby certify that this building is in compliance with the *Florida Building Code, Energy Conservation*.
OWNER/AGENT:_____ Date:_____

Review of plans and specifications covered by this form indicate compliance with the *Florida Building Code, Energy Conservation*. Before construction is complete, this building will be inspected for compliance in accordance with Section 553.908, F.S.
CODE OFFICIAL:_____
Date: _____

TABLE R402B MANDATORY REQUIREMENTS			
Component	**Section**	**Summary of Requirement(s)**	**Check**
Air leakage	R402.4	To be caulked, gasketed, weatherstripped or otherwise sealed per Table R402.4.1.1. Recessed lighting: IC-rated as having ≤ 2.0 cfm tested to ASTM E 283. Windows and doors: 0.3 cfm/sq.ft (swinging doors: 0.5 cfm/sf) when tested to NFRC 400 or AAMA/WDMA/CSA 101/I.S. 2/A440. Fireplaces: Tight-fitting flue dampers & outdoor combustion air.	✓
Programmable thermostat	R403.1.2	Where forced-air furnace is primary system, a programmable thermostat is required.	✓
Air distribution system	R403.2.2 R403.2.4	Ducts shall be tested to Section 803 of the RESNET standards by an energy rater certified in accordance with Section 553.99, *Florida Statutes*, or as authorized by *Florida Statutes*. Air handling units are not allowed in attics.	✓
Water heaters	R403.4	Comply with efficiencies in Table C404.2. Hot water pipes insulated to ≥ R-3 to kitchen outlets, other cases. Circulating systems to have an automatic or accessible manual OFF switch. Heat trap required for vertical pipe risers.	✓
Swimming pools & spas	R403.9	Spas and heated pools must have vapor-retardant covers or a liquid cover or other means proven to reduce heat loss except if 70% of heat from site-recovered energy. Off/timer switch required. Gas heaters minimum thermal efficiency is 82%. Heat pump pool heaters minimum COP is 4.0.	—
Cooling/heating equipment	R403.6	Sizing calculation performed & attached. Special occasion cooling or heating capacity requires separate system or variable capacity system.	
Lighting equipment	R404.1	At least 75% of permanently installed lighting fixtures shall be high-efficacy lamps.	✓

Lumber design values are in accordance with ANSI/TPI 1 section 6.3
These truss designs rely on lumber values established by others.

RE: 755227 - MIKE TODD CONST. - MORGAN RES.

MiTek USA, Inc.
6904 Parke East Blvd.
Tampa, FL 33610-4115

Site Information:
Customer Info: Mike Todd Const. Project Name: 755227 Model: Morgan Res.
Lot/Block: Subdivision:
Address: 218 SW Riverside Ave.
City: Columbia Cty State: FL

Name Address and License # of Structural Engineer of Record, If there is one, for the building.
Name: Unknown at time of seals License #: Unknown at time of seals
Address: Unknown at time of seals
City: Unknown at time of seals State: Unknown at time of seals

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):
Design Code: FBC2014/TPI2007 Design Program: MiTek 20/20 7.6
Wind Code: ASCE 7-10 Wind Speed: 130 mph
Roof Load: 37.0 psf Floor Load: 55.0 psf

This package includes 9 individual, dated Truss Design Drawings and 0 Additional Drawings.
With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

No.	Seal#	Truss Name	Date
1	T8884698	F01	6/20/016
2	T8884699	F02	6/20/016
3	T8884700	F03	6/20/016
4	T8884701	KW1	6/20/016
5	T8884702	T01	6/20/016
6	T8884703	T01G	6/20/016
7	T8884704	T01GG	6/20/016
8	T8884705	T02	6/20/016
9	T8884706	T02G	6/20/016

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for FILE COPY
Code Compliance
PLANS EXAMINER

The truss drawing(s) referenced above have been prepared by MiTek Industries, Inc. under my direct supervision based on the parameters provided by Builders FirstSource-Jacksonville.

Truss Design Engineer's Name: Albani, Thomas
My license renewal date for the state of Florida is February 28, 2017.

IMPORTANT NOTE: Truss Engineer's responsibility is solely for design of individual trusses based upon design parameters shown on referenced truss drawings. Parameters have not been verified as appropriate for any use. Any location identification specified is for file reference only and has not been used in preparing design. Suitability of truss designs for any particular building is the responsibility of the building designer, not the Truss Engineer, per ANSI/TPI-1, Chapter 2.

THOMAS A. ALBANI
LICENSE
No. 39380
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Thomas A. Albani PE No.39380
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:
June 20,2016

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	F01	FLOOR	18	1	T8884698
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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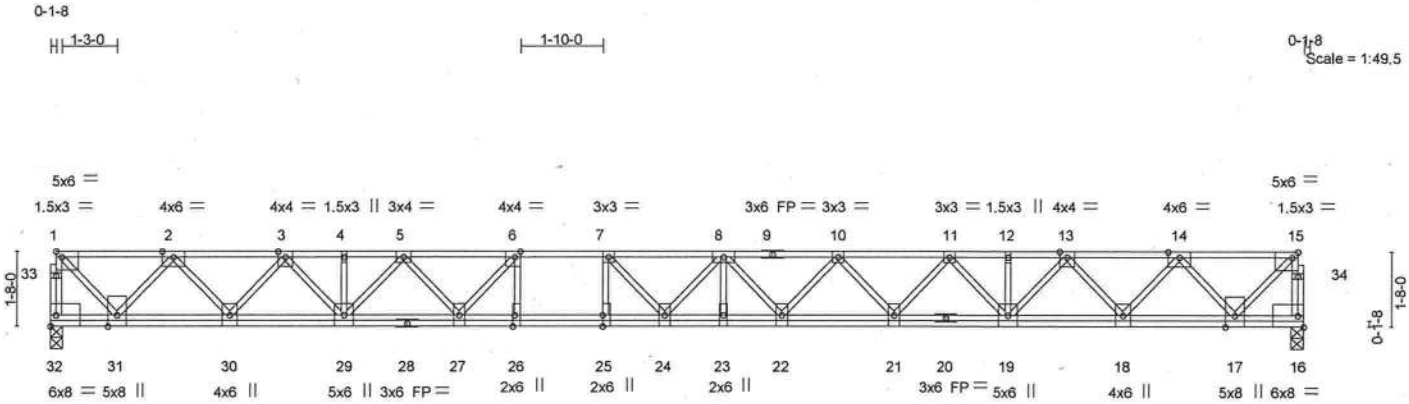
ID:Awd7fSKXwInKYwWX1sWuKPzyL?0-HIixVSp9iKdyvJcJ7TopYs8WvM70QfphVDrEj7z4JnQ



6-6-0	10-6-0	12-4-0	15-1-0	21-5-8	27-11-8
6-6-0	4-0-0	1-10-0	2-9-0	6-4-8	6-6-0

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [6:0-1-8,Edge], [15:0-1-8,Edge], [25:0-3-0,0-0-0], [26:0-3-0,Edge]

LOADING (psf)		SPACING-	1-7-2	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.45	Vert(LL)	-0.45	24	>731	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.48	Vert(TL)	-0.71	24	>468	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.71	Horz(TL)	0.07	16	n/a	n/a		
BCDL	5.0	Code FBC2014/TPI2007		(Matrix)							Weight: 195 lb	FT = 11%F, 11%E

LUMBER-
TOP CHORD 2x4 SP M 31(flat)
BOT CHORD 2x4 SP M 31(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 32=1209/0-3-4, 16=1209/0-3-4

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 32-33=-1198/0, 1-33=-1197/0, 16-34=-1197/0, 15-34=-1196/0, 1-2=-1040/0, 2-3=-2710/0, 3-4=-4042/0, 4-5=-4042/0, 5-6=-4929/0, 6-7=-5463/0, 7-8=-5642/0, 8-9=-5478/0, 9-10=-5478/0, 10-11=-4949/0, 11-12=-4035/0, 12-13=-4035/0, 13-14=-2712/0, 14-15=-1040/0

BOT CHORD 30-31=0/1974, 29-30=0/3431, 28-29=0/4567, 27-28=0/4567, 26-27=0/5463, 25-26=0/5463, 24-25=0/5463, 23-24=0/5669, 22-23=0/5669, 21-22=0/5298, 20-21=0/4580, 19-20=0/4580, 18-19=0/3428, 17-18=0/1974

WEBS 6-26=-85/592, 7-25=-563/128, 1-31=0/1491, 2-31=-1447/0, 2-30=0/1140, 3-30=-1117/0, 3-29=0/922, 5-29=-790/0, 5-27=0/621, 6-27=-1006/0, 15-17=0/1490, 14-17=-1448/0, 14-18=0/1142, 13-18=-1111/0, 13-19=0/914, 11-19=-820/0, 11-21=0/573, 10-21=-540/0, 10-22=0/305, 8-22=-312/0, 7-24=-303/588

NOTES- (5)

1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x6 MT20 unless otherwise indicated.
3) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	F02	Floor	5	1	T8884699
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

7.640 s Apr 19 2016 MiTek Industries, Inc. Mon Jun 20 18:37:24 2016 Page 1

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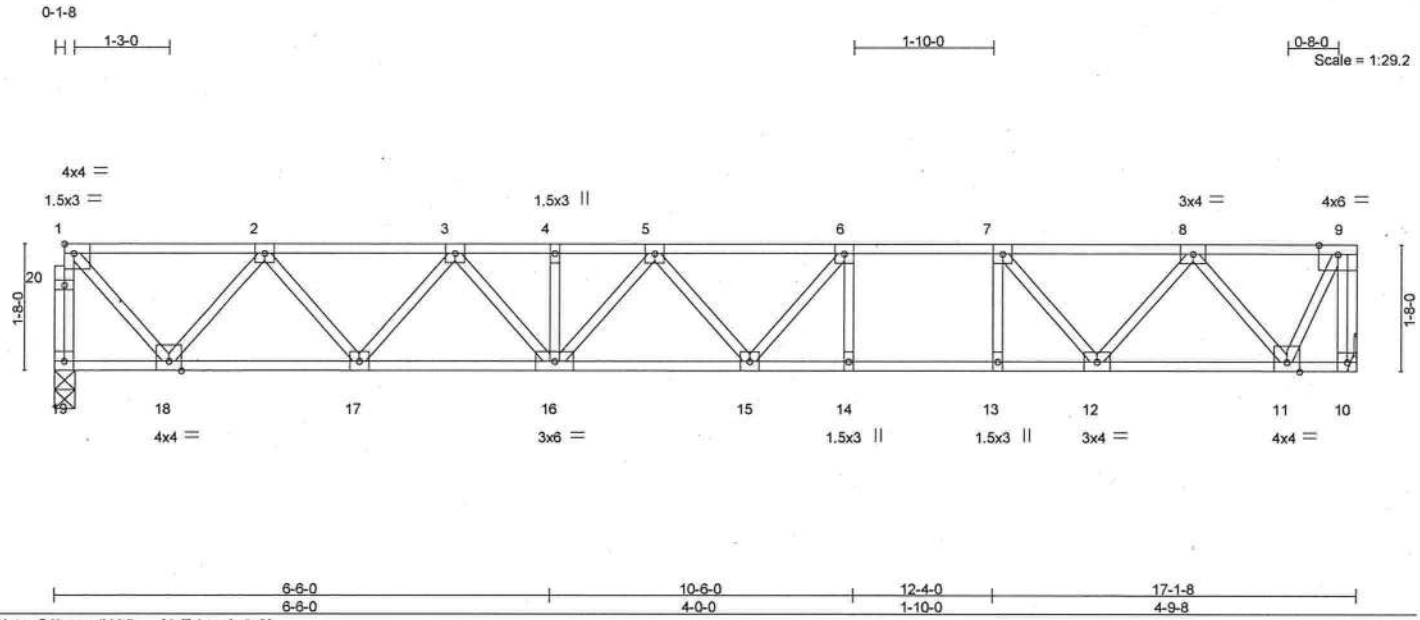

Plate Offsets (X,Y)-- [1:Edge,0-1-8]

LOADING (psf)		SPACING-	1-7-2	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.34	Vert(LL)	-0.18	14-15	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.60	Vert(TL)	-0.28	14-15	>736	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.41	Horz(TL)	0.03	10	n/a	n/a		
BCDL	5.0	Code FBC2014/TPI2007		(Matrix)							Weight: 98 lb	FT = 11%F, 11%E

LUMBER-
TOP CHORD 2x4 SP M 31(flat)
BOT CHORD 2x4 SP M 31(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 19=735/0-3-4, 10=740/Mechanical

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 19-20=-730/0, 1-20=-730/0, 9-10=-751/0, 1-2=-582/0, 2-3=-1420/0, 3-4=-1899/0, 4-5=-1899/0, 5-6=-1989/0, 6-7=-1783/0, 7-8=-1259/0, 8-9=-348/0
BOT CHORD 17-18=0/1096, 16-17=0/1724, 15-16=0/2056, 14-15=0/1783, 13-14=0/1783, 12-13=0/1783, 11-12=0/863
WEBS 6-14=-323/0, 7-13=0/348, 1-18=0/852, 2-18=-816/0, 2-17=0/515, 3-17=-483/0, 3-16=0/270, 6-15=-49/416, 9-11=0/761, 8-11=-817/0, 8-12=0/629, 7-12=-814/0

NOTES- (7)
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x3 MT20 unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.
7) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

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Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	F03	Floor Girder	1	1	T8884700
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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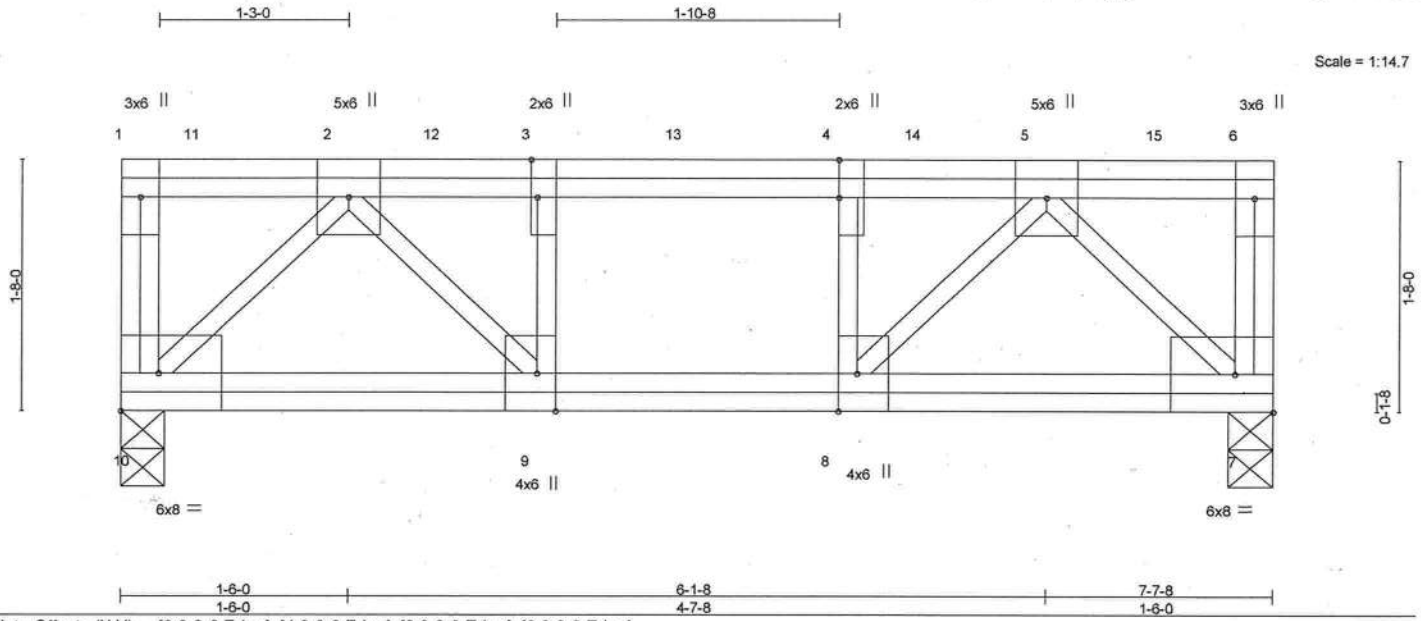

Plate Offsets (X,Y)– [3:0-3-0,Edge], [4:0-3-0,Edge], [8:0-3-0,Edge], [9:0-3-0,Edge]

LOADING (psf)		SPACING-	1-7-2	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.22	Vert(LL)	-0.02	8-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.17	Vert(TL)	-0.03	8-9	>999	240		
BCLL	0.0	Rep Stress Incr	NO	WB	0.57	Horz(TL)	0.01	7	n/a	n/a		
BCDL	5.0	Code FBC2014/TPI2007		(Matrix)							Weight: 66 lb	FT = 11%F, 11%E

LUMBER-

TOP CHORD 2x4 SP M 31(flat)
BOT CHORD 2x4 SP M 31(flat)
WEBS 2x4 SP No.3(flat)

BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 10=2033/0-3-8, 7=1994/0-3-8

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 1-10=-423/0, 6-7=-378/0, 2-12=-2353/0, 3-12=-2353/0, 3-13=-2353/0, 4-13=-2353/0, 4-14=-2353/0, 5-14=-2353/0
BOT CHORD 9-10=0/1544, 8-9=0/2353, 7-8=0/1550
WEBS 5-7=-2225/0, 2-10=-2217/0, 5-8=0/1196, 2-9=0/1203, 3-9=-864/0, 4-8=-862/0

NOTES- (6)

1) Unbalanced floor live loads have been considered for this design.
2) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
3) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
4) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 727 lb down at 0-7-0, 727 lb down at 2-2-2, 676 lb down at 3-9-4, and 727 lb down at 5-4-6, and 727 lb down at 6-11-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
5) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
6) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

LOAD CASE(S) Standard

1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
   Uniform Loads (plf)
   Vert: 7-10=-8, 1-6=-80
   Concentrated Loads (lb)
   Vert: 11=-676(F) 12=-676(F) 13=-676(F) 14=-676(F) 15=-676(F)

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Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	KW1	GABLE	2	1	T8884701 Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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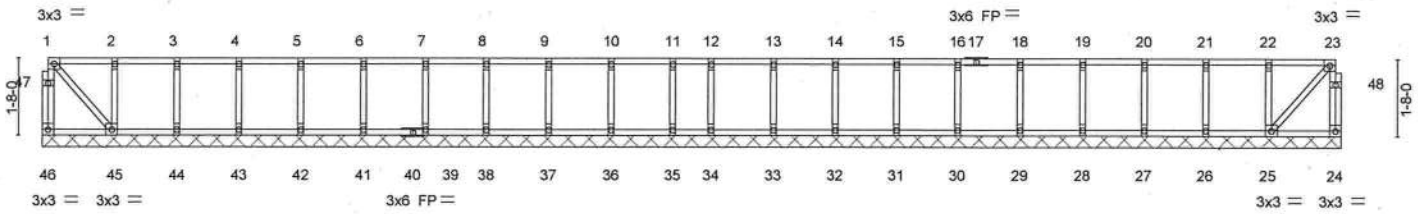
ID:Awd7fSKXwlnKYwWX1sWuKPzyL?0-D7qhv8qPEyug9dmiEurHdHDzwAw_uks_yXKLo?z4JnO

0-1-8 0-1-8

Scale: 1/4"=1'



1-6-12	2-10-12	4-2-12	5-6-12	6-10-12	8-2-12	9-6-12	10-10-12	12-2-12	13-6-12	14-4-12	15-8-12	17-0-12	18-4-12	19-8-12	21-0-12	22-4-12	23-8-12	25-0-12	26-4-12	27-11-8
1-6-12	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	0-10-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-6-12

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.00	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.04	Horz(TL)	-0.00	25	n/a	n/a		
BCDL	5.0	Code FBC2014/TPI2007		(Matrix)							Weight: 138 lb	FT = 11%F, 11%E

LUMBER-

TOP CHORD	2x4 SP M 31(flat)
BOT CHORD	2x4 SP M 31(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 10-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 10-0-0 oc bracing: 45-46,24-25.

REACTIONS. All bearings 27-11-8.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 46, 24, 45, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 44, 43, 42, 41, 39, 38, 37, 36, 35

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES- (7)
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	T01	COMMON	18	1	T8884702
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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ID:Awd7fSKXwInKYwWX1sWuKPzyL?0-AWxRKqsfmZ8OOxw5MJtliiJBVzOFMYjHQrpSsuz4JnM

-2-0-0	7-1-0	14-0-0	20-11-0	28-0-0	30-0-0
2-0-0	7-1-0	6-11-0	6-11-0	7-1-0	2-0-0

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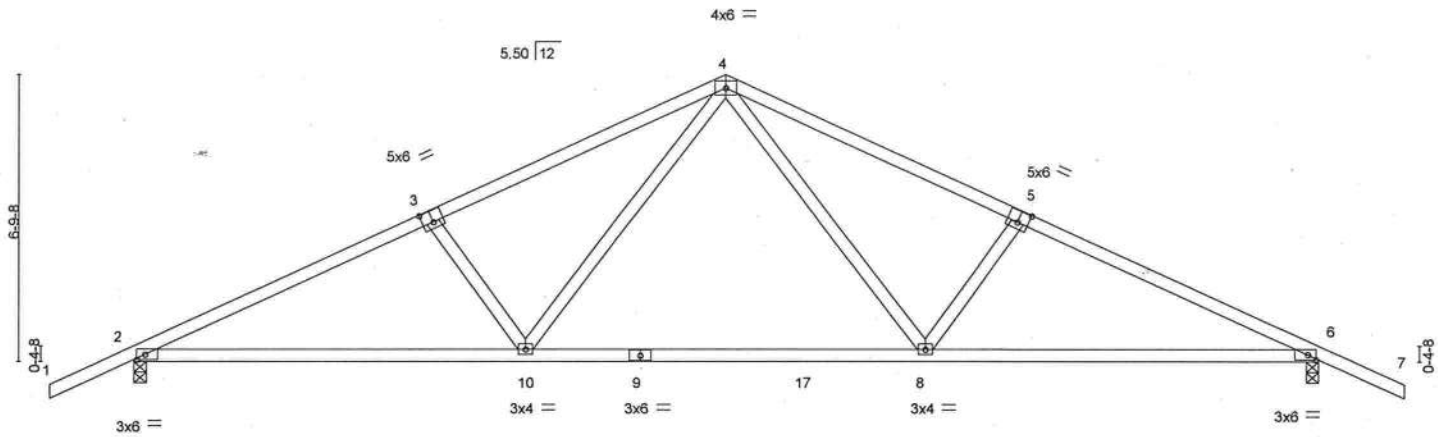

9-3-3	18-8-13	28-0-0
9-3-3	9-5-10	9-3-3

Plate Offsets (X,Y)-- [2:0-2-6,0-1-8], [3:0-3-0,0-3-4], [5:0-3-0,0-3-4], [6:0-2-6,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.54	Vert(LL)	-0.32	8-10	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.85	Vert(TL)	-0.61	8-10	>554	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.40	Horz(TL)	0.08	6	n/a	n/a		
BCDL	10.0	Code FBC2014/TPI2007		(Matrix-M)							Weight: 129 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-7-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-8-8 oc bracing.

REACTIONS. (lb/size) 2=1144/0-3-8, 6=1144/0-3-8
Max Horz 2=-154(LC 17)
Max Uplift 2=-460(LC 12), 6=-460(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1863/1007, 3-4=-1657/969, 4-5=-1657/969, 5-6=-1863/1007
BOT CHORD 2-10=-767/1631, 9-10=-376/1079, 9-17=-376/1079, 8-17=-376/1079, 6-8=-773/1631
WEBS 4-8=-316/623, 5-8=-371/375, 4-10=-316/625, 3-10=-371/375

NOTES- (7)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 460 lb uplift at joint 2 and 460 lb uplift at joint 6.
6) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
7) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	T01G	GABLE	1	1	T8884703
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

7.640 s Apr 19 2016 MiTek Industries, Inc. Mon Jun 20 18:37:28 2016 Page 1

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-2-0-0 | 14-0-0 | 28-0-0 | 30-0-0

2-0-0 | 14-0-0 | 14-0-0 | 2-0-0

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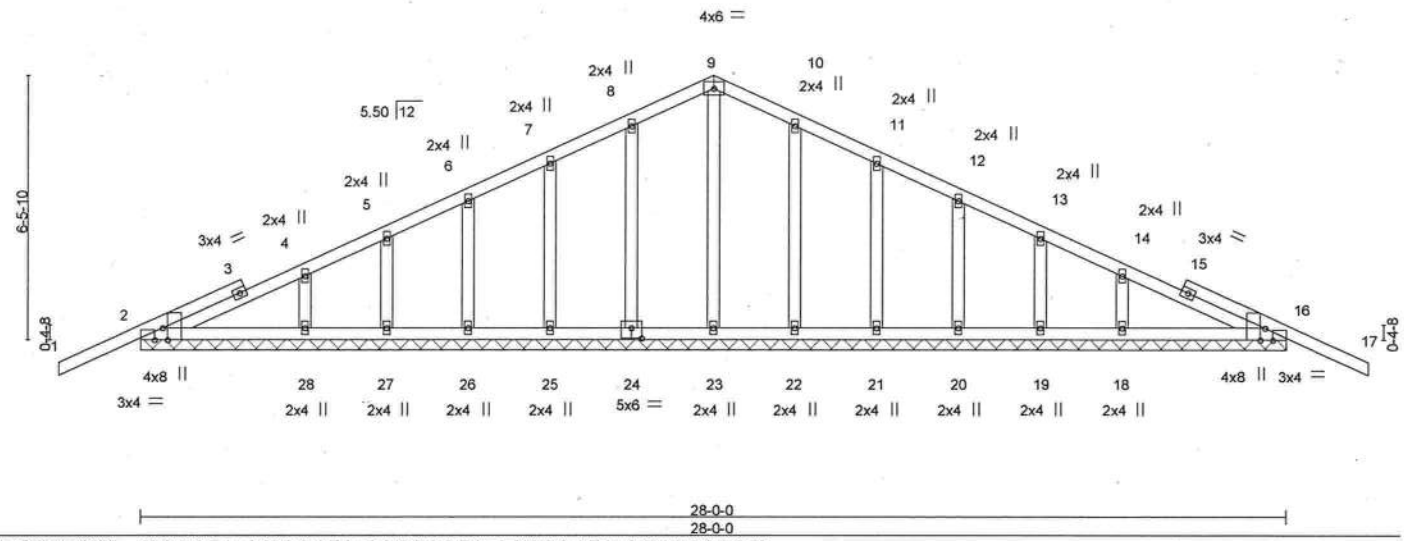

Plate Offsets (X,Y)– [2:0-3-8,Edge], [2:0-2-4,Edge], [16:0-3-8,Edge], [16:0-2-4,Edge], [24:0-3-0,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.30	Vert(LL)	-0.02	17	n/r	120	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.10	Vert(TL)	-0.02	17	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.10	Horz(TL)	0.01	16	n/a	n/a		
BCDL	10.0	Code FBC2014/TPI2007		(Matrix)							Weight: 156 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS. All bearings 28-0-0.
(lb) - Max Horz 2=147(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 24, 25, 26, 27, 22, 21, 20, 19 except 2=-105(LC 8), 16=-123(LC 13), 28=-113(LC 12), 18=-118(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 23, 24, 25, 26, 27, 28, 22, 21, 20, 19, 18 except 2=267(LC 1), 16=267(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 8-9=-81/252, 9-10=-81/252

NOTES- (10)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24, 25, 26, 27, 22, 21, 20, 19 except (jt=lb) 2=105, 16=123, 28=113, 18=118.
9) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
10) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

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Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	T01GG	GABLE	1	1	T8884704
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

7.640 s Apr 19 2016 MiTek Industries, Inc. Mon Jun 20 18:37:30 2016 Page 1

ID:Awd7fSKXwlnKYwWX1sWuKPzyL?0-a5dazruY3UWzFOef1RQSKLxmXBcEZ_?j6p26TDz4JnJ

-2-0-0 | 14-0-0 | 28-0-0 | 30-0-0

2-0-0 | 14-0-0 | 14-0-0 | 2-0-0

Scale = 1:52.6

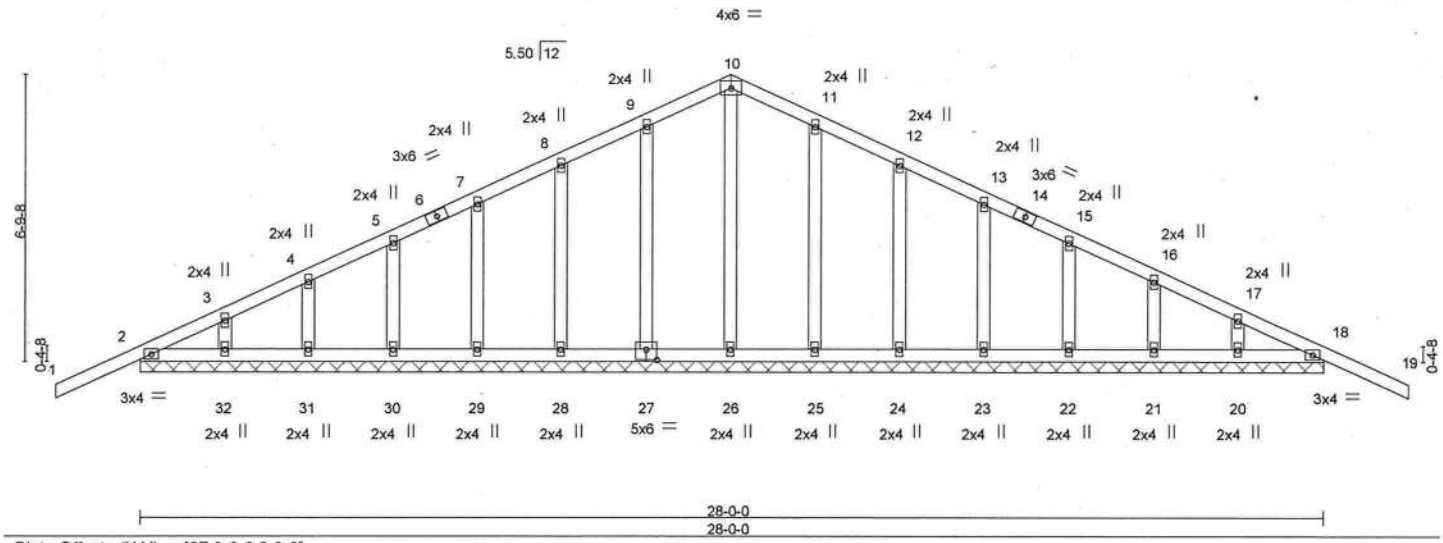

Plate Offsets (X,Y)-- [27:0-3-0,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.30	Vert(LL)	-0.02	19	n/r	120	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.13	Vert(TL)	-0.04	19	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(TL)	0.01	18	n/a	n/a		
BCDL	10.0	Code FBC2014/TPI2007		(Matrix)							Weight: 158 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 28-0-0.
(lb) - Max Horz 2=-154(LC 13)
Max Uplift All uplift 100 lb or less at joint(s) 27, 28, 29, 30, 32, 25, 24, 23, 22, 20 except 2=-117(LC 8), 31=-103(LC 12), 21=-103(LC 13), 18=-112(LC 9)
Max Grav All reactions 250 lb or less at joint(s) 2, 26, 27, 28, 29, 30, 31, 32, 25, 24, 23, 22, 21, 20, 18

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 9-10=-95/268, 10-11=-95/268

NOTES- (10)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 27, 28, 29, 30, 32, 25, 24, 23, 22, 20 except (jt=lb) 2=117, 31=103, 21=103, 18=112.
9) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
10) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

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Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	T02	COMMON	3	1	T8884705
					Job Reference (optional)

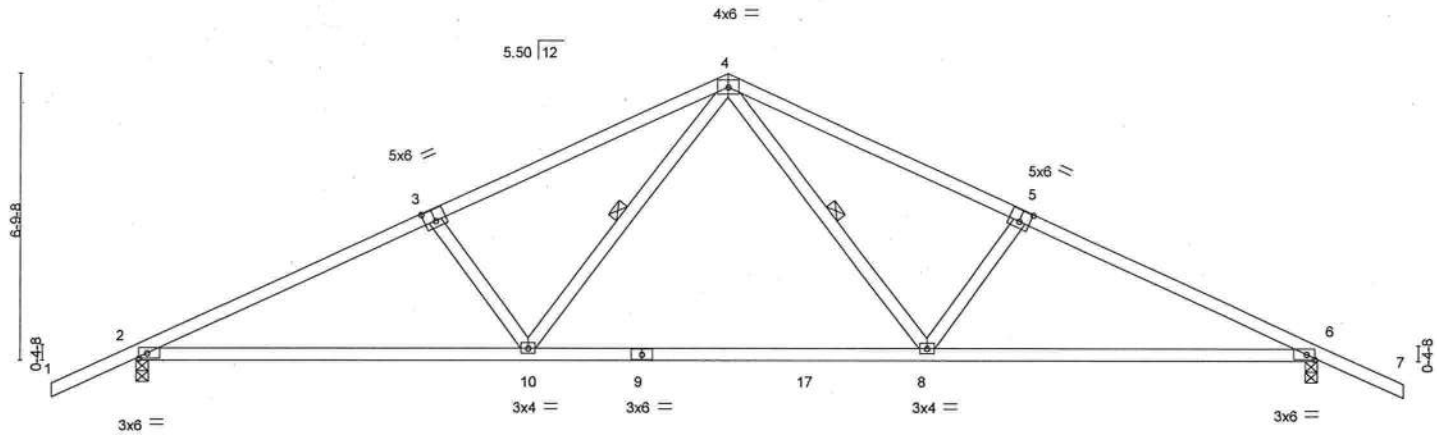
Builders FirstSource, Lake City, FL 32055

7.640 s Apr 19 2016 MiTek Industries, Inc. Mon Jun 20 18:37:31 2016 Page 1

ID:Awd7fSKXwInKYwWX1sWuKPzyL?0-2HByABvAqoeqtYDsb9yhsYTpwamBIOzsLTnf?fz4JnI

-2-0-0	7-1-0	14-0-0	20-11-0	28-0-0	30-0-0
2-0-0	7-1-0	6-11-0	6-11-0	7-1-0	2-0-0

Scale = 1:52.6



9-3-3	18-8-13	28-0-0
9-3-3	9-5-10	9-3-3

Plate Offsets (X,Y)– [2:0-2-6,0-1-8], [3:0-3-0,0-3-4], [5:0-3-0,0-3-4], [6:0-2-6,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.71	Vert(LL)	0.38	8-10	>894	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.85	Vert(TL)	-0.61	8-10	>554	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.32	Horz(TL)	0.08	6	n/a	n/a		
BCDL	10.0	Code FBC2014/TPI2007		(Matrix-M)							Weight: 129 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-7-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 3-10-9 oc bracing.
WEBS 1 Row at midpt 4-8, 4-10

REACTIONS. (lb/size) 2=1144/0-3-8, 6=1144/0-3-8
Max Horz 2=154(LC 12)
Max Uplift 2=-561(LC 9), 6=-561(LC 8)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1863/2159, 3-4=-1657/2120, 4-5=-1657/2119, 5-6=-1863/2159
BOT CHORD 2-10=-1817/1631, 9-10=-1072/1079, 9-17=-1072/1079, 8-17=-1072/1079, 6-8=-1823/1631
WEBS 4-8=-910/623, 5-8=-371/382, 4-10=-910/625, 3-10=-371/382

NOTES- (7)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=561, 6=561.
6) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
7) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	T02G	COMMON STRUCTURAL GA	1	1	T8884706
					Job Reference (optional)

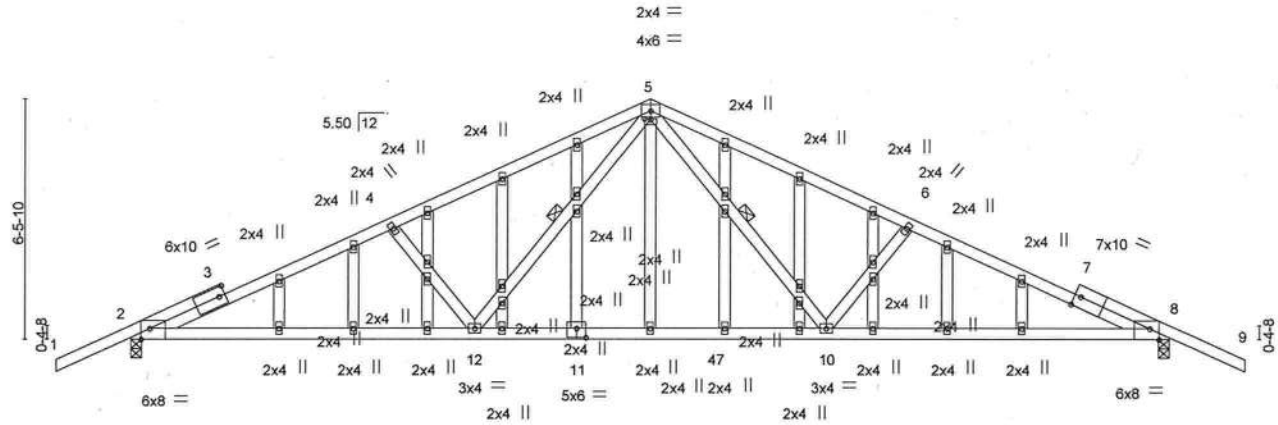
Builders FirstSource, Lake City, FL 32055

7.640 s Apr 19 2016 MiTek Industries, Inc. Mon Jun 20 18:37:32 2016 Page 1

ID:Awd7fSKXwInKYwWX1sWuKPzyL?0-WTlKNXwob5mhVio29sTwPm0xU_6P1qo0Z7XCY5z4JnH

-2-0-0	7-1-0	14-0-0	20-11-0	28-0-0	30-0-0
2-0-0	7-1-0	6-11-0	6-11-0	7-1-0	2-0-0

Scale = 1:59.9



9-3-3	18-8-13	28-0-0
9-3-3	9-5-10	9-3-3

Plate Offsets (X,Y)-- [2:0-2-15,Edge], [5:0-2-0,0-0-4], [7:0-2-0,Edge], [8:0-2-15,Edge], [11:0-3-0,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.91	Vert(LL)	0.41	10-12	>802	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.85	Vert(TL)	-0.64	10-12	>523	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.34	Horz(TL)	0.07	8	n/a	n/a		
BCDL	10.0	Code FBC2014/TPI2007		(Matrix-M)							Weight: 188 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.1 *Except*
1-3,7-9: 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 3-5-12 oc bracing.
WEBS 1 Row at midpt 5-10, 5-12

REACTIONS. (lb/size) 2=1141/0-3-8, 8=1141/0-3-8
Max Horz 2=147(LC 12)
Max Uplift 2=-559(LC 8), 8=-559(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=-1969/2335, 3-4=-1991/2390, 4-5=-1791/2301, 5-6=-1791/2301, 6-7=-1991/2390, 7-8=-1969/2335
BOT CHORD 2-12=-2071/1819, 11-12=-1149/1127, 11-47=-1149/1127, 10-47=-1149/1127, 8-10=-2092/1819
WEBS 5-10=-1043/694, 6-10=-447/503, 5-12=-1043/699, 4-12=-447/503

NOTES- (9)

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=559, 8=559.
8) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
9) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

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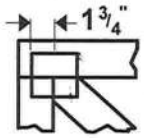
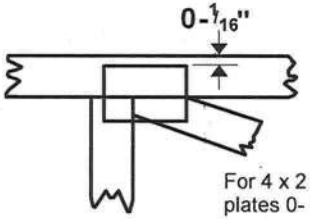
Tampa, FL 36610

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

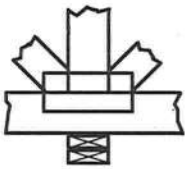
4 x 4

The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION

Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

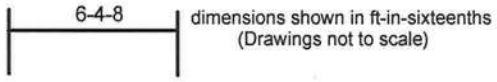


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

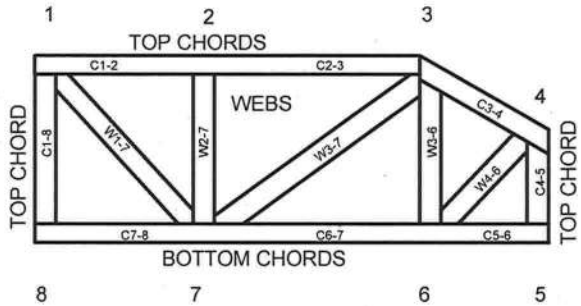
Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



dimensions shown in ft-in-sixteenths (Drawings not to scale)



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek Engineering Reference Sheet: MII-7473 rev. 10/03/2015

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.

August 10, 2010	T-BRACE / I-BRACE DETAIL WITH 2X BRACE ONLY	ST - T-BRACE 2

MiTek USA, Inc.

Note: T-Bracing / I-Bracing to be used when continuous lateral bracing is impractical. T-Brace / I-Brace must cover 90% of web length.

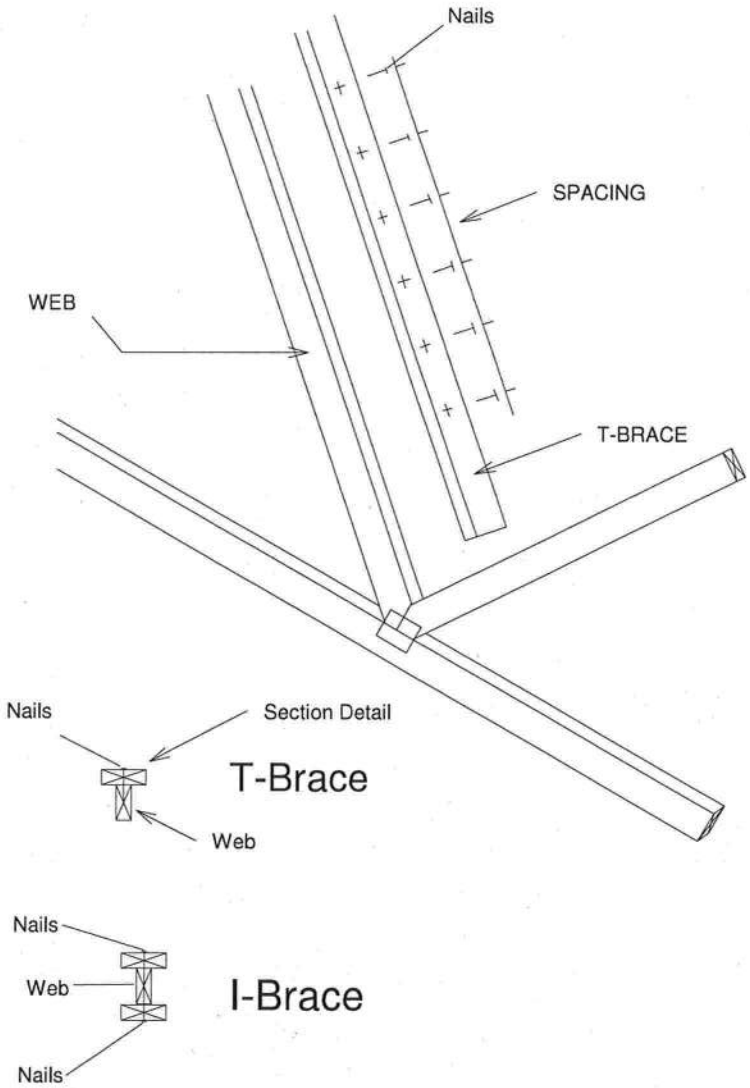
Note: This detail NOT to be used to convert T-Brace / I-Brace webs to continuous lateral braced webs.

Nailing Pattern		
T-Brace size	Nail Size	Nail Spacing
2x4 or 2x6 or 2x8	10d	6" o.c.
Note: Nail along entire length of T-Brace / I-Brace (On Two-Ply's Nail to Both Plies)		

	Brace Size for One-Ply Truss	
	Specified Continuous Rows of Lateral Bracing	
Web Size	1	2
2x3 or 2x4	2x4 T-Brace	2x4 I-Brace
2x6	2x6 T-Brace	2x6 I-Brace
2x8	2x8 T-Brace	2x8 I-Brace

	Brace Size for Two-Ply Truss	
	Specified Continuous Rows of Lateral Bracing	
Web Size	1	2
2x3 or 2x4	2x4 T-Brace	2x4 I-Brace
2x6	2x6 T-Brace	2x6 I-Brace
2x8	2x8 T-Brace	2x8 I-Brace

T-Brace / I-Brace must be same species and grade (or better) as web member.



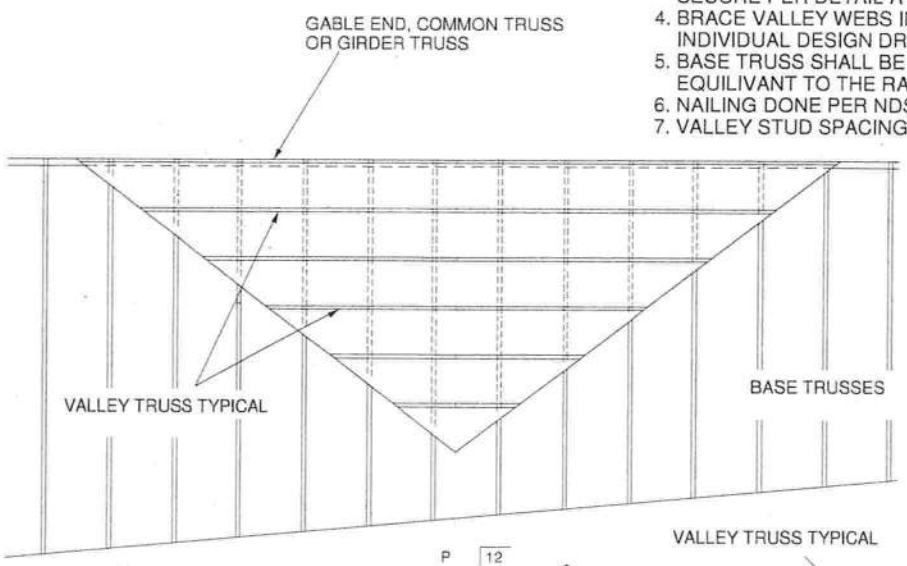
FEBRUARY 14, 2012	TRUSSED VALLEY SET DETAIL	ST-VALLEY HIGH WIND1

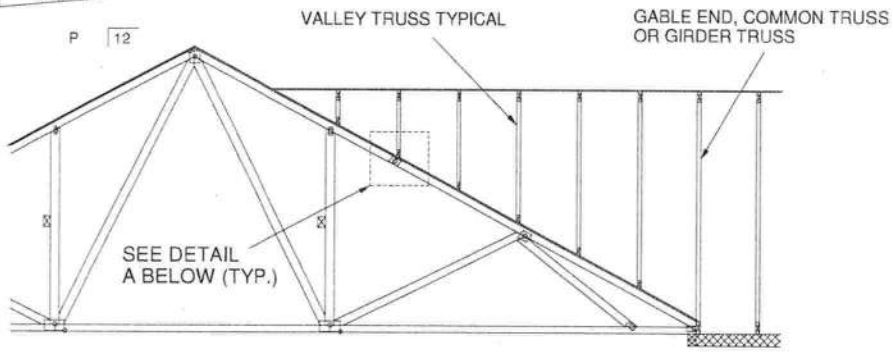
MiTek USA, Inc.

MiTek USA, Inc.

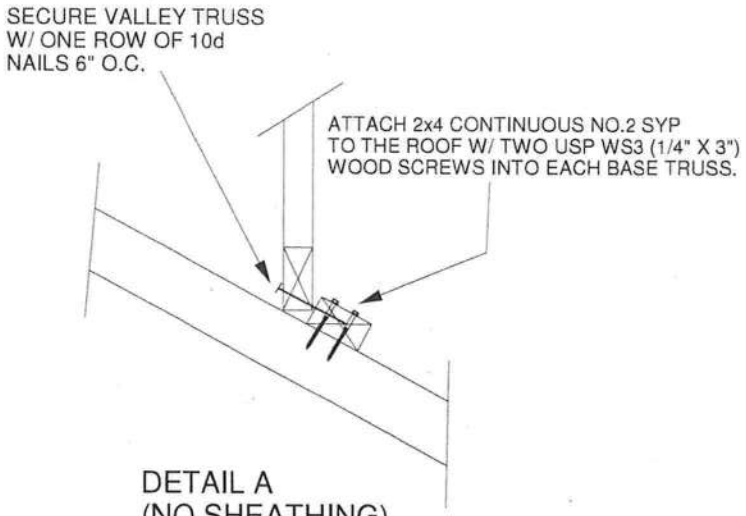
GENERAL SPECIFICATIONS

1. NAIL SIZE = 3" X 0.131" = 10d
2. WOOD SCREW = 3" WS3 USP OR EQUIVALENT
   DO NOT USE DRYWALL OR DECKING TYPE SCREW
3. INSTALL VALLEY TRUSSES (24" O.C. MAXIMUM) AND
   SECURE PER DETAIL A
4. BRACE VALLEY WEBS IN ACCORDANCE WITH THE
   INDIVIDUAL DESIGN DRAWINGS.
5. BASE TRUSS SHALL BE DESIGNED WITH A PURLIN SPACING
   EQUILIVANT TO THE RAKE DIMENSION OF THE VALLEY TRUSS SPACING.
6. NAILING DONE PER NDS - 01
7. VALLEY STUD SPACING NOT TO EXCEED 48" O.C.





WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 146 MPH
WIND DESIGN PER ASCE 7-10 160 MPH
MAX MEAN ROOF HEIGHT = 30 FEET
ROOF PITCH = MINIMUM 3/12 MAXIMUM 6/12
CATEGORY II BUILDING
EXPOSURE C
WIND DURATION OF LOAD INCREASE : 1.60
MAX TOP CHORD TOTAL LOAD = 50 PSF
MAX SPACING = 24" O.C. (BASE AND VALLEY)
MINIMUM REDUCED DEAD LOAD OF 6 PSF
ON THE TRUSSES



DETAIL A
(NO SHEATHING)
N.T.S.

JANUARY 28, 2015	LATERAL TOE-NAIL DETAIL	ST-TOENAIL_SP

MiTek USA, Inc.

NOTES:
1. TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 45 DEGREES WITH THE MEMBER AND MUST HAVE FULL WOOD SUPPORT. (NAIL MUST BE DRIVEN THROUGH AND EXIT AT THE BACK CORNER OF THE MEMBER END AS SHOWN.
2. THE END DISTANCE, EDGE DISTANCE, AND SPACING OF NAILS SHALL BE SUCH AS TO AVOID UNUSUAL SPLITTING OF THE WOOD.
3. ALLOWABLE VALUE SHALL BE THE LESSER VALUE OF THE TWO SPECIES FOR MEMBERS OF DIFFERENT SPECIES.

TOE-NAIL SINGLE SHEAR VALUES PER NDS 2001 (lb/nail)

	DIAM.	SP	DF	HF	SPF	SPF-S
3.5" LONG	.131	88.0	80.6	69.9	68.4	59.7
	.135	93.5	85.6	74.2	72.6	63.4
	.162	108.8	99.6	86.4	84.5	73.8
3.25" LONG	.128	74.2	67.9	58.9	57.6	50.3
	.131	75.9	69.5	60.3	59.0	51.1
	.148	81.4	74.5	64.6	63.2	52.5

VALUES SHOWN ARE CAPACITY PER TOE-NAIL.
APPLICABLE DURATION OF LOAD INCREASES MAY BE APPLIED.

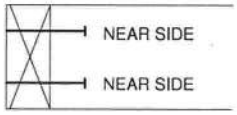
EXAMPLE:
(3) - 16d NAILS (.162" diam. x 3.5") WITH SPF SPECIES BOTTOM CHORD

For load duration increase of 1.15:
3 (nails) X 84.5 (lb/nail) X 1.15 (DOL) = 291.5 lb Maximum Capacity

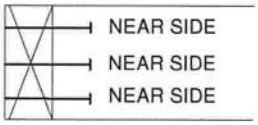
THIS DETAIL APPLICABLE TO THE THREE END DETAILS SHOWN BELOW

VIEWS SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY

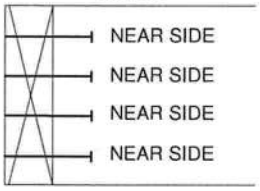
SIDE VIEW
(2x3)
2 NAILS

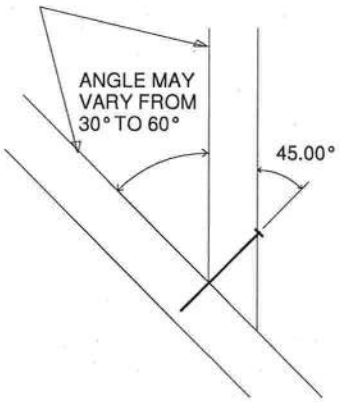


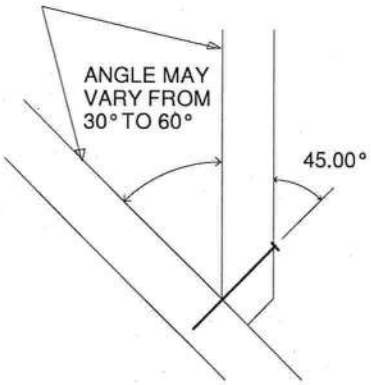
SIDE VIEW
(2x4)
3 NAILS

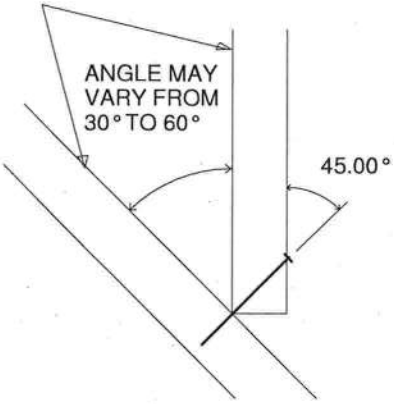


SIDE VIEW
(2x6)
4 NAILS









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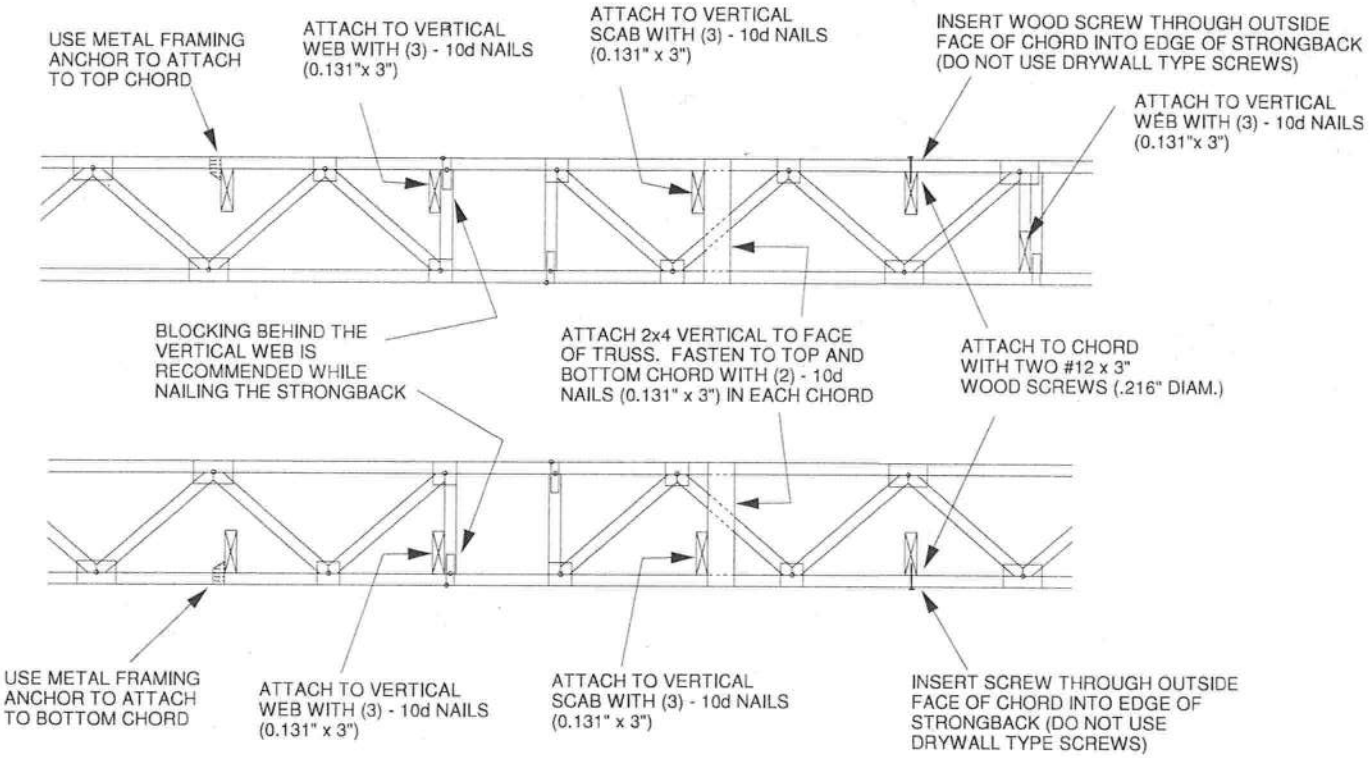
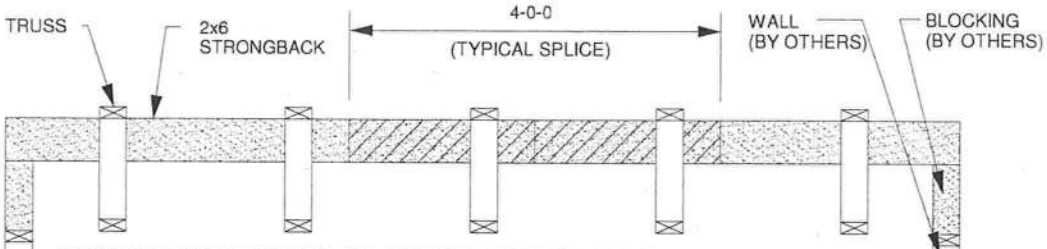
TO MINIMIZE VIBRATION COMMON TO ALL SHALLOW FRAMING SYSTEMS, 2x6 "STRONGBACK" IS RECOMMENDED, LOCATED EVERY 8 TO 10 FEET ALONG A FLOOR TRUSS.

NOTE 1: 2X6 STRONGBACK ORIENTED VERTICALLY MAY BE POSITIONED DIRECTLY UNDER THE TOP CHORD OR DIRECTLY ABOVE THE BOTTOM CHORD. SECURELY FASTENED TO THE TRUSS USING ANY OF THE METHODS ILLUSTRATED BELOW.

NOTE 2: STRONGBACK BRACING ALSO SATISFIES THE LATERAL BRACING REQUIREMENTS FOR THE BOTTOM CHORD OF THE TRUSS WHEN IT IS PLACED ON TOP OF THE BOTTOM CHORD, IS CONTINUOUS FROM END TO END, CONNECTED WITH A METHOD OTHER THAN METAL FRAMING ANCHOR, AND PROPERLY CONNECTED, BY OTHERS, AT THE ENDS.





THE STRONGBACKS SHALL BE SECURED AT THEIR ENDS TO ADEQUATE SUPPORT, DESIGNED BY OTHERS. IF SPLICING IS NECESSARY, USE A 4'-0" LONG SCAB CENTERED ON THE SPLICE AND JOINED WITH (12) - 10d NAILS (0.131" x 3") EQUALLY SPACED.

ALTERNATE METHOD OF SPLICING:
OVERLAP STRONGBACK MEMBERS A MINIMUM OF 4'-0" AND FASTEN WITH (12) - 10d NAILS (0.131" x 3") STAGGERED AND EQUALLY SPACED.
(TO BE USED ONLY WHEN STRONGBACK IS NOT ALIGNED WITH A VERTICAL)

FEBRUARY 14, 2012	STANDARD PIGGYBACK TRUSS CONNECTION DETAIL	ST-PIGGY-7-10

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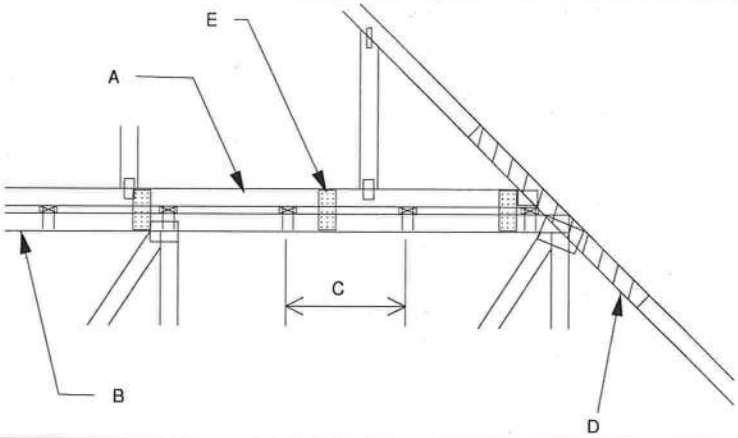
MAXIMUM WIND SPEED = REFER TO NOTES D AND OR E
MAX MEAN ROOF HEIGHT = 30 FEET
MAX TRUSS SPACING = 24 " O.C.
CATEGORY II BUILDING
EXPOSURE B or C
ASCE 7-10
DURATION OF LOAD INCREASE : 1.60

DETAIL IS NOT APPLICABLE FOR TRUSSES TRANSFERING DRAG LOADS (SHEAR TRUSSES). ADDITIONAL CONSIDERATIONS BY BUILDING ENGINEER/DESIGNER ARE REQUIRED.

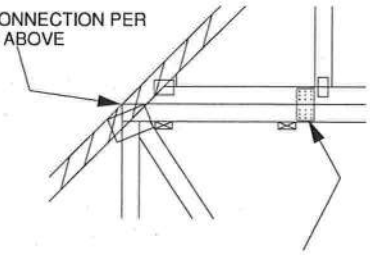
A - PIGGBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING. SHALL BE CONNECTED TO EACH PURLIN WITH (2) 0.131" X 3.5" TOE NAILED.
B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C. UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING. CONNECT TO BASE TRUSS WITH (2) 0.131" X 3.5" NAILS EACH.
D - 2 X __ X 4'-0" SCAB, SIZE AND GRADE TO MATCH TOP CHORD OF PIGGYBACK TRUSS, ATTACHED TO ONE FACE, CENTERED ON INTERSECTION, WITH (2) ROWS OF 0.131" X 3" NAILS @ 4" O.C. SCAB MAY BE OMITTED PROVIDED THE TOP CHORD SHEATHING IS CONTINUOUS OVER INTERSECTION AT LEAST 1 FT. IN BOTH DIRECTIONS AND:
1. WIND SPEED OF 115 MPH OR LESS FOR ANY PIGGYBACK SPAN, OR
2. WIND SPEED OF 116 MPH TO 160 MPH WITH A MAXIMUM PIGGYBACK SPAN OF 12 ft.
E - FOR WIND SPEEDS BETWEEN 126 AND 160 MPH, ATTACH MITEK 3X8 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT 72" O.C. W/ (4) 0.131" X 1.5" PER MEMBER. STAGGER NAILS FROM OPPOSING FACES. ENSURE 0.5" EDGE DISTANCE. (MIN. 2 PAIRS OF PLATES REQ. REGARDLESS OF SPAN)



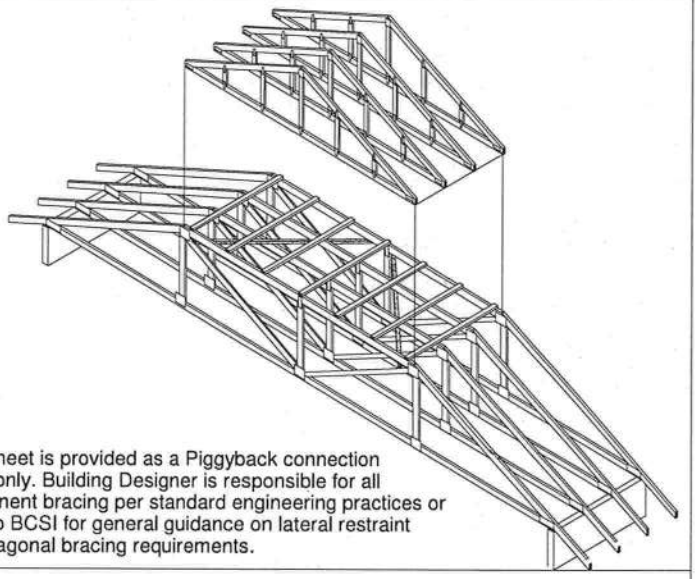
WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

REPLACE TOE NAILING OF PIGGYBACK TRUSS TO PURLINS WITH Nail-On PLATES AS SHOWN, AND INSTALL PURLINS TO BOTTOM EDGE OF BASE TRUSS TOP CHORD AT SPECIFIED SPACING SHOWN ON BASE TRUSS MITEK DESIGN DRAWING.

SCAB CONNECTION PER NOTE D ABOVE

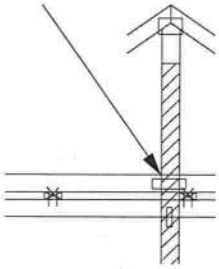


FOR ALL WIND SPEEDS, ATTACH MITEK 3X6 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT 48" O.C. W/ (4) 0.131" X 1.5" PER MEMBER. STAGGER NAILS FROM OPPOSING FACES ENSURE 0.5" EDGE DISTANCE.



This sheet is provided as a Piggyback connection detail only. Building Designer is responsible for all permanent bracing per standard engineering practices or refer to BCSI for general guidance on lateral restraint and diagonal bracing requirements.

VERTICAL WEB TO EXTEND THROUGH BOTTOM CHORD OF PIGGYBACK



FOR LARGE CONCENTRATED LOADS APPLIED TO CAP TRUSS REQUIRING A VERTICAL WEB:

1) VERTICAL WEBS OF PIGGYBACK AND BASE TRUSS MUST MATCH IN SIZE, GRADE, AND MUST LINE UP AS SHOWN IN DETAIL.
2) ATTACH 2 x ___ x 4'-0" SCAB TO EACH FACE OF TRUSS ASSEMBLY WITH 2 ROWS OF 10d (0.131" X 3") NAILS SPACED 4" O.C. FROM EACH FACE. (SIZE AND GRADE TO MATCH VERTICAL WEBS OF PIGGYBACK AND BASE TRUSS.) (MINIMUM 2X4)
3) THIS CONNECTION IS ONLY VALID FOR A MAXIMUM CONCENTRATED LOAD OF 4000 LBS (@1.15). REVIEW BY A QUALIFIED ENGINEER IS REQUIRED FOR LOADS GREATER THAN 4000 LBS.
4) FOR PIGGYBACK TRUSSES CARRYING GIRDER LOADS, NUMBER OF PLYS OF PIGGYBACK TRUSS TO MATCH BASE TRUSS.
5) CONCENTRATED LOAD MUST BE APPLIED TO BOTH THE PIGGYBACK AND THE BASE TRUSS DESIGN.

FEBRUARY 14, 2012	Standard Gable End Detail	ST-GE130-001

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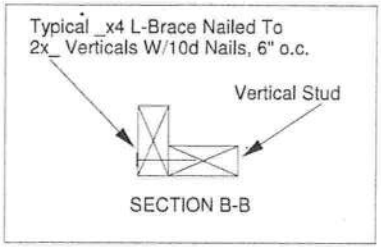
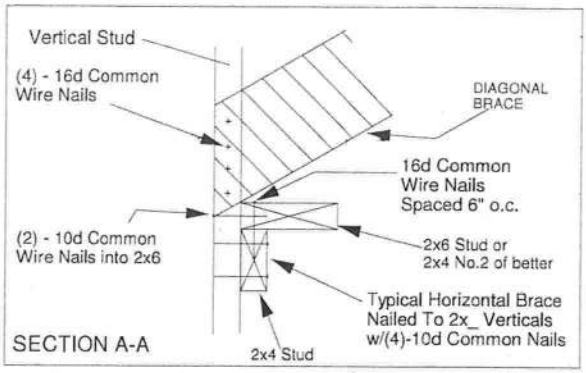
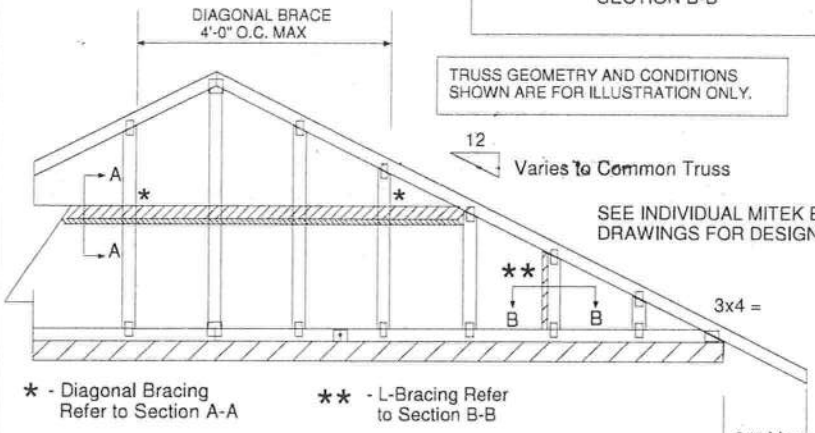


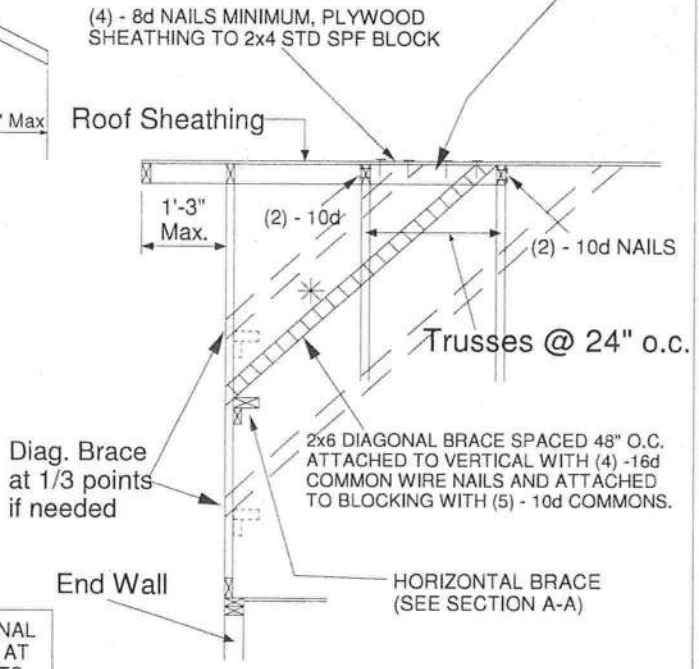




TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY.

SEE INDIVIDUAL MITEK ENGINEERING DRAWINGS FOR DESIGN CRITERIA

PROVIDE 2x4 BLOCKING BETWEEN THE FIRST TWO TRUSSES AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d NAILS AT EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d COMMON WIRE NAILS.



NOTE:
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH. GRADES: 1x4 SRB OR 2x4 STUD OR BETTER WITH ONE ROW OF 10d NAILS SPACED 6" O.C.
5. DIAGONAL BRACE TO BE APPROXIMATELY 45 DEGREES TO ROOF DIAPHRAM AT 4'-0" O.C.
6. CONSTRUCT HORIZONTAL BRACE CONNECTING A 2x6 STUD AND A 2x4 STUD AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST STUD. ATTACH TO VERTICAL STUDS WITH (4) 10d NAILS THROUGH 2x4. (REFER TO SECTION A-A)
7. GABLE STUD DEFLECTION MEETS OR EXCEEDS L/240.
8. THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
9. DO NOT USE FLAT BOTTOM CHORD GABLES NEXT TO SCISSOR TYPE TRUSSES.

Minimum Stud Size Species and Grade	Stud Spacing	Without Brace	1x4 L-Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
		Maximum Stud Length				
2x4 SPF Std/Stud	12" O.C.	4-0-7	4-3-2	6-0-4	8-0-15	12-1-6
2x4 SPF Std/Stud	16" O.C.	3-7-0	3-8-4	5-2-10	7-1-15	10-8-15
2x4 SPF Std/Stud	24" O.C.	2-11-1	3-0-2	4-3-2	5-10-3	8-9-4

✳ Diagonal braces over 6'-3" require a 2x4 T-Brace attached to one edge. Diagonal braces over 12'-6" require 2x4 I-braces attached to both edges. Fasten T and I braces to narrow edge of web with 10d common wire nails 8in o.c., with 3in minimum end distance. Brace must cover 90% of diagonal length.

MAX MEAN ROOF HEIGHT = 30 FEET
CATEGORY II BUILDING
EXPOSURE B or C
ASCE 7-98, ASCE 7-02, ASCE 7-05 130 MPH
ASCE 7-10 160 MPH
DURATION OF LOAD INCREASE : 1.60

STUD DESIGN IS BASED ON COMPONENTS AND CLADDING.
CONNECTION OF BRACING IS BASED ON MWFRS.

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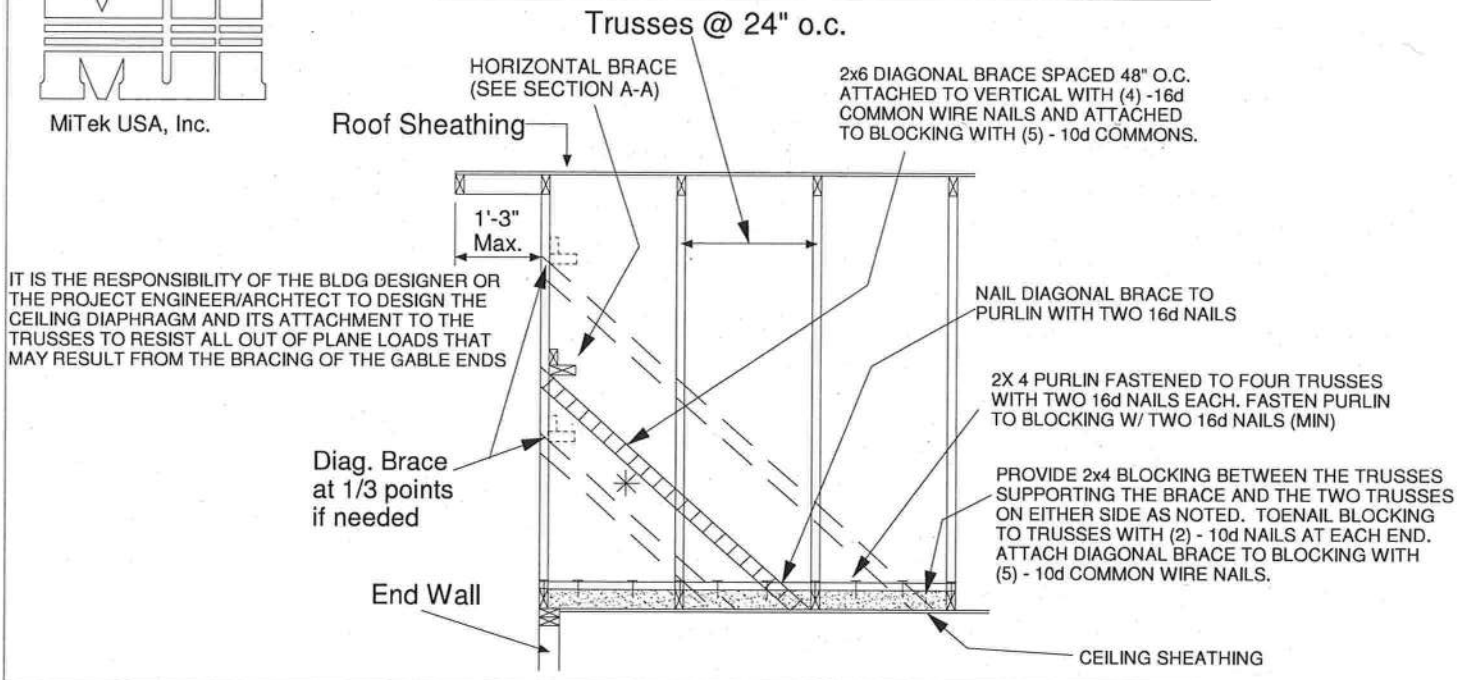
ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD



BRACING REQUIREMENTS FOR STRUCTURAL GABLE TRUSSES

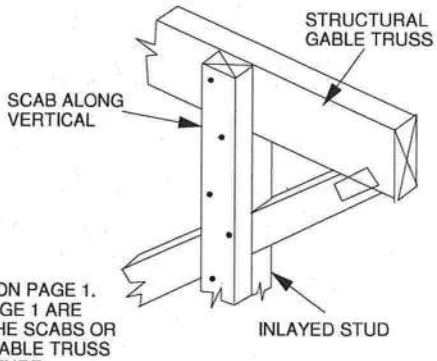
STRUCTURAL GABLE TRUSSES MAY BE BRACED AS NOTED:

METHOD 1 : ATTACH A MATCHING GABLE TRUSS TO THE INSIDE FACE OF THE STRUCTURAL GABLE AND FASTEN PER THE FOLLOWING NAILING SCHEDULE.

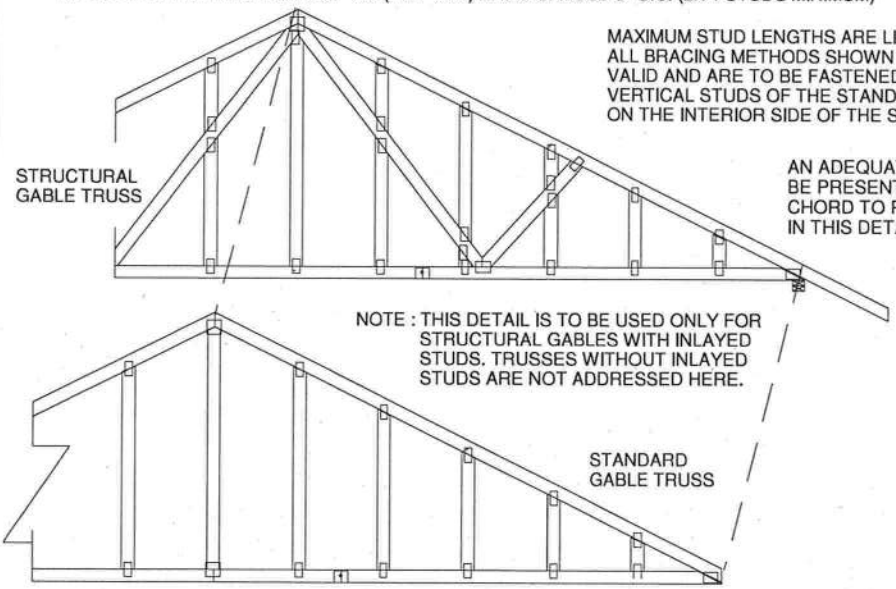
METHOD 2 : ATTACH 2X _ SCABS TO THE FACE OF EACH VERTICAL MEMBER ON THE STRUCTURAL GABLE PER THE FOLLOWING NAILING SCHEDULE. SCABS ARE TO BE OF THE SAME SIZE, GRADE AND SPECIES AS THE TRUSS VERTICALS

NAILING SCHEDULE:

- FOR WIND SPEEDS 120 MPH (ASCE 7-98, 02, 05), 150 MPH (ASCE 7-10) OR LESS, NAIL ALL MEMBERS WITH ONE ROW OF 10d (.131" X 3") NAILS SPACED 6" O.C.
- FOR WIND SPEEDS GREATER 120 MPH (ASCE 7-98, 02, 05), 150 MPH (ASCE 7-10) NAIL ALL MEMBERS WITH TWO ROWS OF 10d (.131" X 3") NAILS SPACED 6" O.C. (2X 4 STUDS MINIMUM)



MAXIMUM STUD LENGTHS ARE LISTED ON PAGE 1. ALL BRACING METHODS SHOWN ON PAGE 1 ARE VALID AND ARE TO BE FASTENED TO THE SCABS OR VERTICAL STUDS OF THE STANDARD GABLE TRUSS ON THE INTERIOR SIDE OF THE STRUCTURE.



AN ADEQUATE DIAPHRAGM OR OTHER METHOD OF BRACING MUST BE PRESENT TO PROVIDE FULL LATERAL SUPPORT OF THE BOTTOM CHORD TO RESIST ALL OUT OF PLANE LOADS. THE BRACING SHOWN IN THIS DETAIL IS FOR THE VERTICAL/STUDS ONLY.

NOTE : THIS DETAIL IS TO BE USED ONLY FOR STRUCTURAL GABLES WITH INLAYED STUDS. TRUSSES WITHOUT INLAYED STUDS ARE NOT ADDRESSED HERE.

Multiple-Member Connections for Side-Loaded Beams with Concentrated Loads

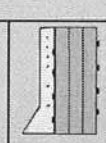
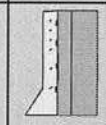
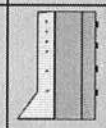
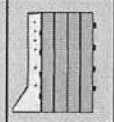
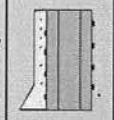
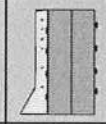
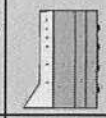
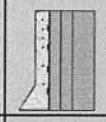
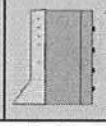
Table 1: Maximum Concentrated Load Applied to Beam – Bolt or Nail Connection (lbs)[1]

Beam Configuration	Hanger Type	½"ø or ¾"ø Bolts[3][4]					16d (0.148" x 3¼") Nails			
		Bolt Diameter[2]	# Bolts				# Nails			
			2	4	6	8	6	12	18	24
3-ply 1¾" (5¼" Beam) 	FACE	0.5	2,100	4,200	6,300	8,400	2,125[5]	4,250[5]	6,370[5]	8,495[5]
		0.75	3,060	6,120	9,180	12,240				
	TOP	0.5	760	1,525	2,285	3,050	1,060[6]	2,125[6]	3,185[6]	4,250[6]
		0.75	930	1,860	2,790	3,720				
3½"+1¾" (5¼" Beam) 	FACE	---	---	---	---	---	---	---	---	---
		---	---	---	---	---				
	TOP	0.5	1,050	2,100	3,150	4,200	1,060	2,125	3,185	4,250
		0.75	1,530	3,060	4,590	6,120				
3½"+1¾" (5¼" Beam) 	FACE / TOP	0.5	2,100	4,200	6,300	8,400	2,125[5]	4,250[5]	6,370[5]	8,495[5]
		0.75	3,060	6,120	9,180	12,240				
4-ply 1¾" (7" Beam) 	FACE	0.5	1,400	2,800	4,200	5,600	---	---	---	---
		0.75	2,040	4,080	6,120	8,160				
	TOP	0.5	675	1,355	2,030	2,710	---	---	---	---
		0.75	825	1,655	2,480	3,305				
2-ply 1¾" + 3½" (7" Beam) 	FACE	0.5	2,800	5,600	8,400	11,200	2,830[5]	5,665[5]	8,495[5]	11,330[5]
		0.75	5,025	10,050	15,070	20,095				
	TOP	0.5	935	1,865	2,800	3,735	945[6]	1,890[6]	2,830[6]	3,775[6]
		0.75	1,360	2,720	4,080	5,440				
2-ply 3½" (7" Beam) 	FACE / TOP	0.5	1,720	3,440	5,160	6,880	---	---	---	---
		0.75	2,480	4,960	7,440	9,920				
2-ply 1¾" + 3½" (7" Beam) 	FACE / TOP	0.5	1,015	2,030	3,050	4,065	---	---	---	---
		0.75	1,240	2,480	3,720	4,960				
2-ply 1¾" + 3½" (7" Beam) 	FACE	0.5	1,720	3,440	5,160	6,880	---	---	---	---
		0.75	2,480	4,960	7,440	9,920				
	TOP	0.5	675	1,355	2,030	2,710	---	---	---	---
		0.75	825	1,655	2,480	3,305				
5¼" + 1¾" (7" Beam) 	FACE / TOP	0.5	2,800	5,600	8,400	11,200	2,830[5]	5,665[5]	8,495[5]	11,330[5]
		0.75	5,025	10,050	15,070	20,095				

1. See page 4 for table General Notes, connection details and beam depth limitations.
2. Washers required. Bolt holes to be 9/16" maximum for ½" bolts, 13/16" maximum for ¾" bolts.
3. Minimum end distance for bolts is 6".
4. Drilling bolt holes reduces the section of the beam and thus the load capacity of the supporting member. Shear and moment capacity of the beam must be checked at the location of each row of bolts.
5. Number of required nails shown must be installed from side opposite hanger.
6. Number of required nails shown must be installed from hanger side. Additionally, install half the number of required nails from side opposite hanger.

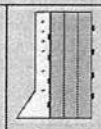
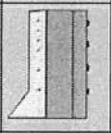
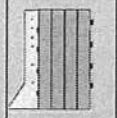
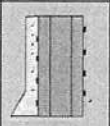
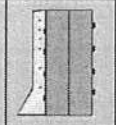
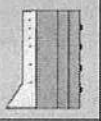
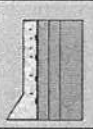
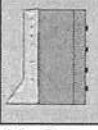
CONTACT US ▪ 1.888.iLevel8 (1.888.453.8358) ▪ www.iLevel.com

Table 2A: Maximum Concentrated Load Applied to Beam – Wood Screw Connection (lbs)[1]

Beam Configuration		Hanger Type	Wood Screw Length	Fastener Type							
				USP WS				Simpson SDS			
				# Screws				# Screws			
				2	4	6	8	2	4	6	8
3-ply 1¾" (5¼" Beam)		FACE [3]	3½"	1,435	2,870	4,305	5,740	2,040	4,080	6,120	8,160
		TOP [2]	3½"	720	1,435	2,155	2,870	1,020	2,040	3,060	4,080
3½"+1¾" (5¼" Beam)		FACE	3½"	---	---	---	---	---	---	---	---
		TOP [4]	3½"	720	1,435	2,155	2,870	1,020	2,040	3,060	4,080
3½"+1¾" (5¼" Beam)		FACE / TOP [3]	3½"	1,435	2,870	4,305	5,740	2,040	4,080	6,120	8,160
4-ply 1¾" (7" Beam)		FACE [2]	6"[5]	1,055	2,110	3,165	4,220	1,360	2,720	4,080	5,440
		TOP [2]	6"[5]	705	1,405	2,110	2,810	905	1,815	2,720	3,625
2-ply 1¾" + 3½" (7" Beam)		FACE [3]	3½"	1,915	3,825	5,740	7,655	2,720	5,440	8,160	10,880
			6"[5]	2,110	4,220	6,325	8,435	2,720	5,440	8,160	10,880
		TOP [2]	3½"	640	1,275	1,915	2,550	905	1,815	2,720	3,625
			6"[5]	705	1,405	2,110	2,810	905	1,815	2,720	3,625
2-ply 3½" (7" Beam)		FACE / TOP [2]	6"[5]	1,055	2,110	3,165	4,220	930	1,860	2,785	3,715
2-ply 1¾" + 3½" (7" Beam)		FACE / TOP [3]	6"[5]	1,055	2,110	3,165	4,220	1,360	2,720	4,080	5,440
2-ply 1¾" + 3½" (7" Beam)		FACE[4]	6"[5]	1,055	2,110	3,165	4,220	930	1,860	2,785	3,715
		TOP[4]	6"[5]	705	1,405	2,110	2,810	905	1,815	2,720	3,625
5¼" + 1¾" (7" Beam)		FACE / TOP [3]	3½"	1,915	3,825	5,740	7,655	2,720	5,440	8,160	10,880

1. See page 4 for table General Notes, connection details and beam depth limitations.
2. Install screws from both sides of beam.
3. Install screws from side opposite hanger only.
4. Install screws from hanger side only.
5. 6" SDS or WS screws can be used with Parallam® PSL and Microllam® LVL, but are not recommended for TimberStrand® LSL.

Table 2B: Maximum Concentrated Load Applied to Beam – Wood Screw Connection (lbs)[1]

Beam Configuration		Hanger Type	Wood Screw Length	Connection Name: TrussLok, # Screws: 2	4	6	8
3-ply 1¾" (5¼" Beam)		FACE [3]	3⅜"	1,600	3,205	4,805	6,410
		TOP [2]	3⅜"	800	1,600	2,405	3,205
3½"+1¾" (5¼" Beam)		FACE	3⅜"	---	---	---	---
		TOP [4]	3⅜"	800	1,600	2,405	3,205
3½"+1¾" (5¼" Beam)		FACE / TOP [3]	3⅜"	1,600	3,205	4,805	6,410
4-ply 1¾" (7" Beam)		FACE [2]	5", 6¾"	1,160	2,320	3,480	4,640
		TOP [2]	5", 6¾"	775	1,545	2,320	3,095
2-ply 1¾" + 3½" (7" Beam)		FACE [3]	3⅜"	2,135	4,270	6,410	8,545
			5", 6¾"	2,320	4,640	6,960	9,280
		TOP [2]	3⅜"	710	1,425	2,135	2,850
			5", 6¾"	775	1,545	2,320	3,095
2-ply 3½" (7" Beam)		FACE / TOP [2]	5", 6¾"	1,160	2,320	3,480	4,640
2-ply 1¾" + 3½" (7" Beam)		FACE / TOP [3]	5", 6¾"	1,160	2,320	3,480	4,640
2-ply 1¾" + 3½" (7" Beam)		FACE[4]	5", 6¾"	1,160	2,320	3,480	4,640
		TOP [4]	5", 6¾"	1,160	2,320	3,480	4,640
5¼" + 1¾" (7" Beam)		FACE / TOP [3]	5", 6¾"	2,320	4,640	6,960	9,280

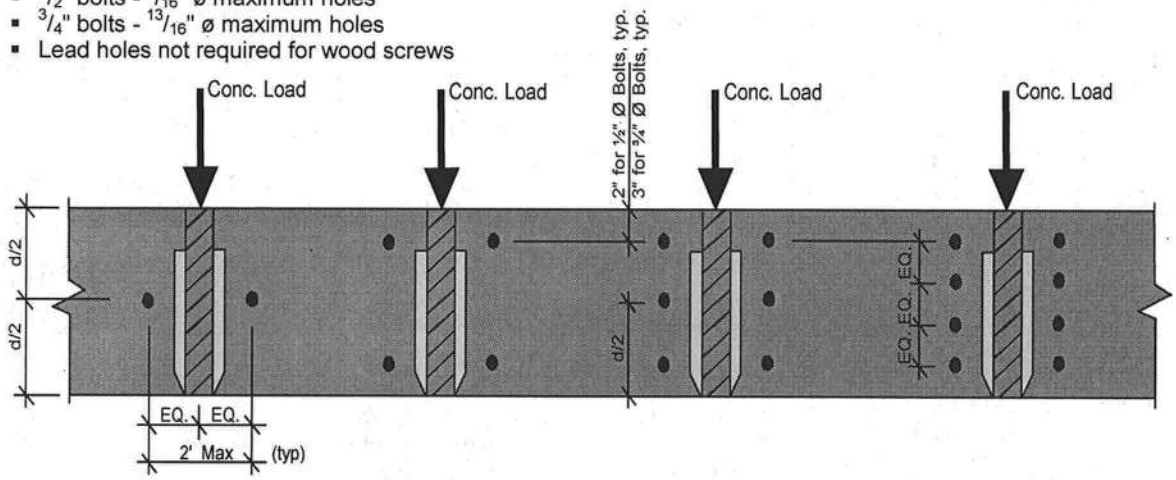
1. See page 4 for table General Notes, connection details and beam depth limitations.
2. Install screws from both sides of beam.
3. Install screws from side opposite hanger only.
4. Install screws from hanger side only.

Table 1, 2A, 2B General Notes

- Connections are based on NDS® 2005 or manufacturer's code report.
- All plies must be the same material and grade.
- Values are for 100% duration of load. Increase 15% for snow load or 25% for non-snow roof load conditions, where code allows.
- Rotational effects should be considered for 7" wide beams loaded from one side only.
- Capacities shown for face mount hanger conditions are based on 16d common (0.162" x 3½") nails installed in the hanger. Other nails used for face mount hanger installations invalidate the capacities in these tables.
- Verify adequacy of beam with all loads applied by using iLevel software or other methods.
- See the iLevel Trus Joist® Beams, Headers, and Columns Specifier's Guide (#TJ-9000) for required connections for uniform side loads.

Bolt or Wood Screw Connection Details

- $^{1}/_{2}$" bolts - $^{9}/_{16}$" ø maximum holes
- $^{3}/_{4}$" bolts - $^{13}/_{16}$" ø maximum holes
- Lead holes not required for wood screws



2 Fastener Pattern

4 Fastener Pattern
Min. Beam Depth:
d = 7¼" for ½" ø bolts
d = 9¼" for ¾" ø bolts

6 Fastener Pattern
Min. Beam Depth:
d = 9¼" for ½" ø bolts
d = 14" for ¾" ø bolts

8 Fastener Pattern
Min. Beam Depth:
d = 11¼" for ½" ø bolts
d = 16" for ¾" ø bolts

Nailed Connection Detail

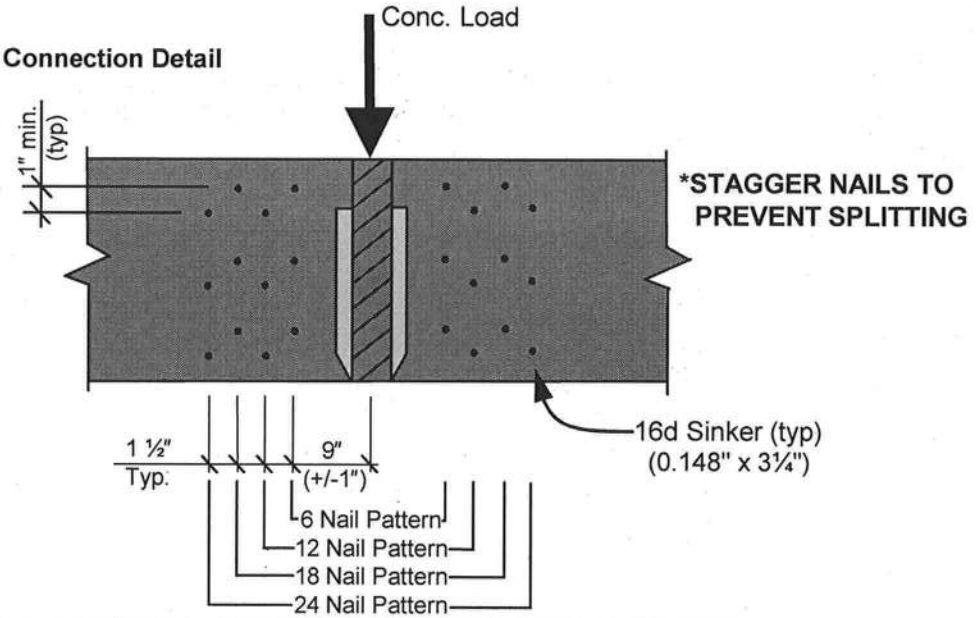


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Table 3: Allowable Capacities of 5¼" Beams with Bolt Connections

		Bolt Dia.	Conn. Loc.	Beam Depth									
				7¼"	9¼"	9½"	11¼"	11⅞"	14"	16"	18"	20"	24"
TimberStrand® LSL	Max Shear (lbs)	½"	< 5d		6,235	6,545	8,755	9,560	12,345	15,005			
			≥ 5d		10,150	10,500	12,950	13,825	16,800	19,600			
		¾"	< 5d		3,995	4,260	6,210	6,940	9,510	12,015			
			≥ 5d		8,750	9,100	11,550	12,425	15,400	18,200			
	Max Moment (ft-lb)	½"	2		10,605	15,295	15,685	23,905	32,760	42,265			
			4		9,355	13,470	13,730	20,915	28,725	37,250			
			6		9,350	13,470	13,730	20,910	28,725	37,245			
			8				13,510	20,575	28,275	36,685			
		¾"	2		10,600	15,290	15,685	23,900	32,755	42,260			
			4		9,900	14,215	14,195	21,490	29,020	37,225			
			6						29,015	37,220			
			8							36,655			
Microllam® LVL	Max Shear (lbs)	½"	< 5d	2,745	4,445	4,665	6,240	6,810	8,795	10,690	12,610	14,545	18,440
			≥ 5d	5,235	7,230	7,480	9,225	9,850	11,970	13,965	15,960	17,955	21,945
		¾"	< 5d	1,455	2,845	3,035	4,425	4,945	6,775	8,560	10,390	12,250	16,040
			≥ 5d	4,240	6,235	6,485	8,230	8,855	10,975	12,970	14,965	16,960	20,950
	Max Moment (ft-lb)	½"	2	9,960	16,220	17,105	23,990	26,730	36,385	46,670	58,130	70,740	99,375
			4	9,025	14,305	15,065	21,000	23,385	31,905	41,130	51,535	63,100	89,670
			6		14,305	15,060	20,995	23,385	31,905	41,125	51,530	63,100	89,670
			8				20,660	23,010	31,405	40,510	50,795	62,250	88590
		¾"	2	9,950	16,210	17,100	23,985	26,725	36,380	46,665	58,125	70,740	99,370
			4		15,145	15,895	21,710	24,030	32,235	41,105	51,120	62,285	88,015
			6						32,230	41,100	51,115	62,280	88,010
			8							40,475	50,335	61,335	86,745
Parallam® PSL	Max Shear (lbs)	½"	< 5d		4,520	4,745	6,350	6,930	8,950	10,880	12,830		
			≥ 5d		7,360	7,615	9,390	10,025	12,180	14,210	16,240		
		¾"	< 5d		2,895	3,090	4,505	5,030	6,895	8,710	10,575		
			≥ 5d		6,345	6,600	8,375	9,010	11,165	13,195	15,225		
	Max Moment (ft-lb)	½"	2		18,090	19,080	26,760	29,815	40,740	52,430	65,495		
			4		15,960	16,805	23,420	26,085	35,725	46,205	58,065		
			6		15,955	16,800	23,420	26,080	35,725	46,205	58,060		
			8				23,045	25,665	35,165	45,510	57,235		
		¾"	2		18,080	19,070	26,755	29,810	40,735	52,425	65,490		
			4		16,890	17,730	24,215	26,805	36,095	46,180	57,600		
			6						36,085	46,170	57,595		
			8							45,470	56,715		

Table 3 General Notes

- Connection location refers to distance from face of bearing to centerline of connection, where d is the beam depth. Less than 5d refers to connections located less than five times the depth of the beam from the face of bearing.
- Shear reduction has been taken in accordance with NDS 3.4.3.3.
- All values shown are for 5¼" widths. Multiply by 1.33 for 7" wide beams.
- 9¼" and 11¼" TimberStrand® LSL are 1.3E grade, all other depths are 1.55E grade.

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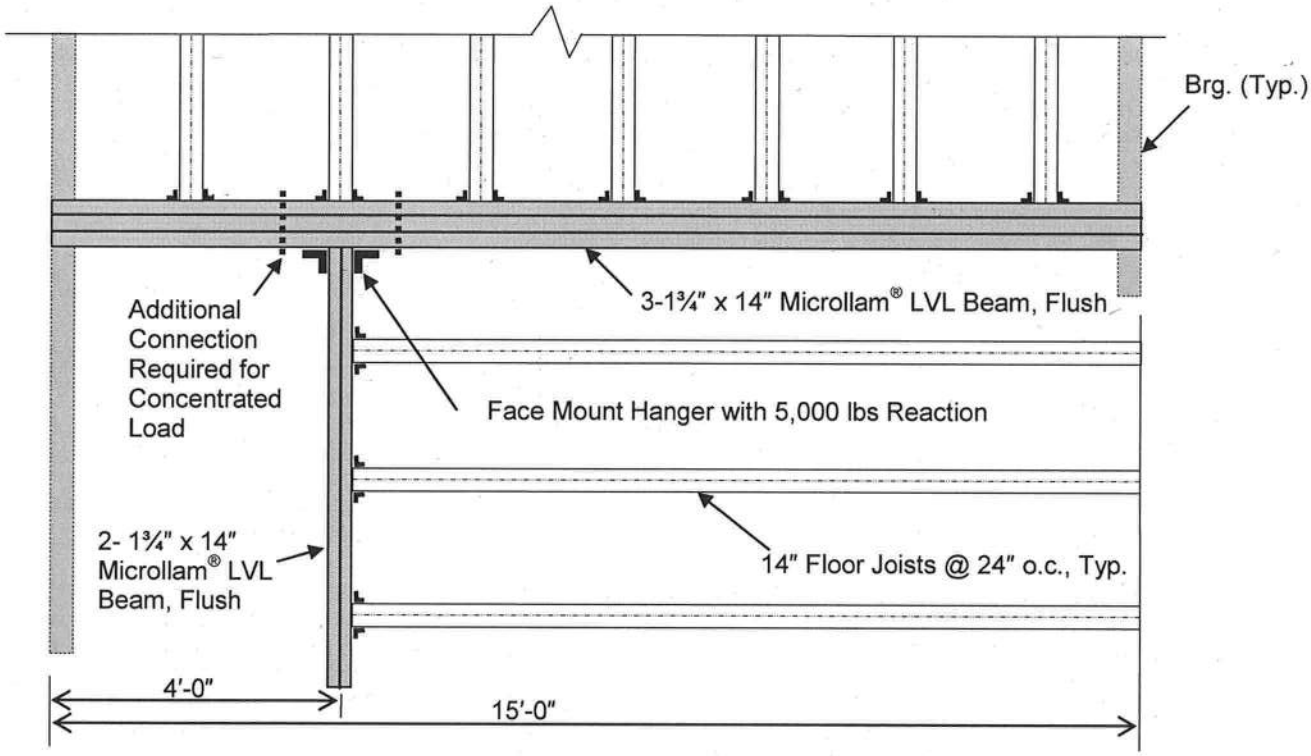
Connection Design Example

Given the floor framing shown below, specify the necessary connections for the a 3-ply Microllam® LVL beam supporting a 2-ply Microllam® LVL beam on one side and floor joists from the other side. The floor joists apply a 500 plf load to the side of the beam while the 2-ply beam reaction is 5,000 lbs. See the following page for the solution.



Partial Framing Plan

Solution:

- Use the iLevel Trus Joist® Beams, Headers, and Columns Specifier's Guide (#TJ-9000) to select a connection for the uniform loading. Multiple options exist that meets or exceed the 500 plf requirement:
  - 2 rows of ½" diameter bolts at 16" on-center (570 plf)
  - 2 rows of USP WS35 wood screws at 16" on-center (540 plf) on each side of beam
  - 2 rows of SDS ¼" x 3½" at 24" on-center (510 plf) on each side of beam
  - 2 rows of 5" TrussLok wood screws at 24" on-center (500 plf)

- Determine what additional connection is needed for the concentrated load using the information in this Technical Bulletin:
  1. Using Table 1, 2A or 2B of this bulletin, locate the section for a 3-ply 1¾" member and face mount hanger. Again, multiple options exist that exceed the 5,000 lb load requirement:
     - ½" diameter bolts in a 6-bolt connection (6,300 lbs)
     - 16d (0.148" x 3¼") sinker nails in an 18-nail connection (6,370 lbs)
     - 3½" WS wood screws in an 8-screw connection (5,740 lbs)
     - 3½" SDS wood screws in a 6-screw connection (6,120 lbs)
     - 3⅜" TrussLok wood screws in an 8-screw connection (6,410 lbs)

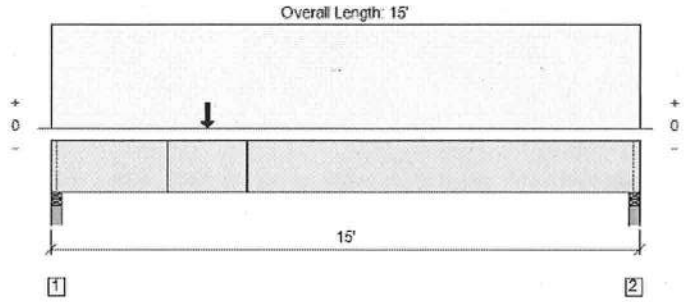
     Note that the allowable applied concentrated load is dependent upon the type of hanger used and 16d common nails must be used for face mount hanger installation to achieve the capacities shown.

  2. If the bolted connection option is chosen, the 3-ply beam must be checked for the effect of the bolt holes from the 6-bolt connection. This task may be accomplished by utilizing the location analysis feature in iLevel software. Per the detail on page 4, the bolt holes will be located approximately 1' to either side of the concentrated load location. After inputting the span and load information, choose the two locations corresponding to the concentrated load location (+/-) 1'. Upon completion of the analysis, compare the calculated shear and moment for each of the two locations against the reduced allowable shear and moment capacities of the beam for the bolt pattern selected using Table 3 on page 5 of this bulletin.

     See the Forte® software output on the following page for results of this analysis. The 3-ply Microllam® LVL beam works for the given loading. Refer to the highlighted values for the results at both bolt locations (1' on either side of the load). The highest calculated shear at either location is 6035 lbs. The highest calculated moment is 25,215 ft-lbs. The connection is less than 5d (48" < 14" * 5 = 70") from the end of the member. From Table 3 of this bulletin, the reduced allowable shear for the 3-ply 14" Microllam® LVL beam with the 6 bolt pattern located less than 5d from the end of the member is 8,795 lbs while the reduced allowable moment is 31,905 ft-lbs. Therefore, the beam is acceptable with the 6 bolt connection.

- Select the preferred options for both the uniform load connection along the length of the beam and the concentrated load connection at the hanger location and specify both on the drawings including information on fastener type, size, spacing and installation pattern as appropriate.

3 PIECE(S) 1 3/4" x 14" 1.9E Microllam® LVL PASSED



All Dimensions are Horizontal; Drawing is Conceptual

Design Results	Actual @ Location	Allowed	Result	LDF
Member Reaction (lbs)	7595 @ 2"	7809	Passed (97%)	- -
Shear (lbs)	6837 @ 1' 5 1/2"	13965	Passed (49%)	1.0
Moment (Ft-lbs)	25215 @ 4' 11 7/8"	36387	Passed (69%)	1.0
Live Load Defl. (in)	0.356 @ 7' 1 13/16"	0.489	Passed (L/494)	- -
Total Load Defl. (in)	0.456 @ 7' 1 7/8"	0.733	Passed (L/386)	- -

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Design results assume a fully braced condition where all compression edges (top and bottom) are properly braced to provide lateral stability.
- Bracing (Lu): All compression edges (top and bottom) must be braced at 13' 15/16" o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.

Supports	Total Bearing	Available Bearing	Required Bearing	Support Reactions (lbs) Dead / Floor / Roof / Snow	Accessories
1 - Stud wall - Spruce Pine Fir	3.50"	3.50"	3.40"	1641 / 5955 / 0 / 0	Blocking
2 - Stud wall - Spruce Pine Fir	3.50"	3.50"	2.33"	1164 / 4045 / 0 / 0	Blocking

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Roof Live (non-snow: 1.25)	Snow (1.15)	Comments
1 - Uniform(PSF)	0 to 15'	1'	100.0	400.0	0.0	0.0	10' Floor
2 - Point(lb)	4'	N/A	1000	4000	0	0	

Location Analysis	Shear (lbs) Actual / Allowed / LDF	Moment (Ft – lbs) Actual / Allowed / LDF	Comments
1 - 3'	6035 / 13965 / 1.0	19186 / 36387 / 1.0	BOLTS LEFT OF HANGER
2 - 5'	39 / 12569 / 0.9	25215 / 36387 / 1.0	BOLTS RIGHT OF HANGER

Forte™ Software Operator	Job Notes

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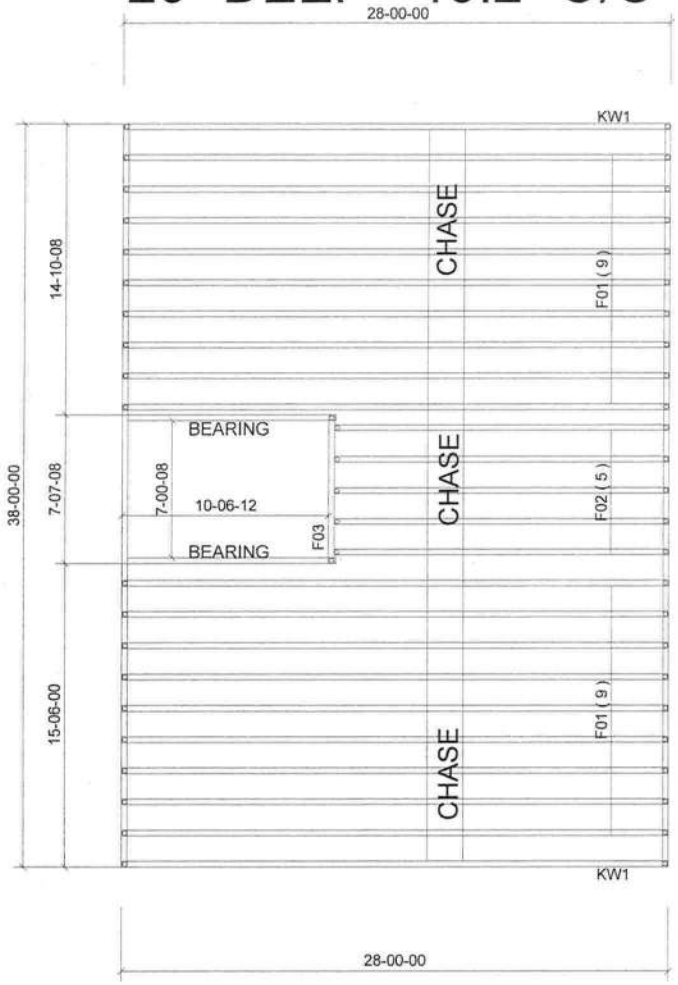
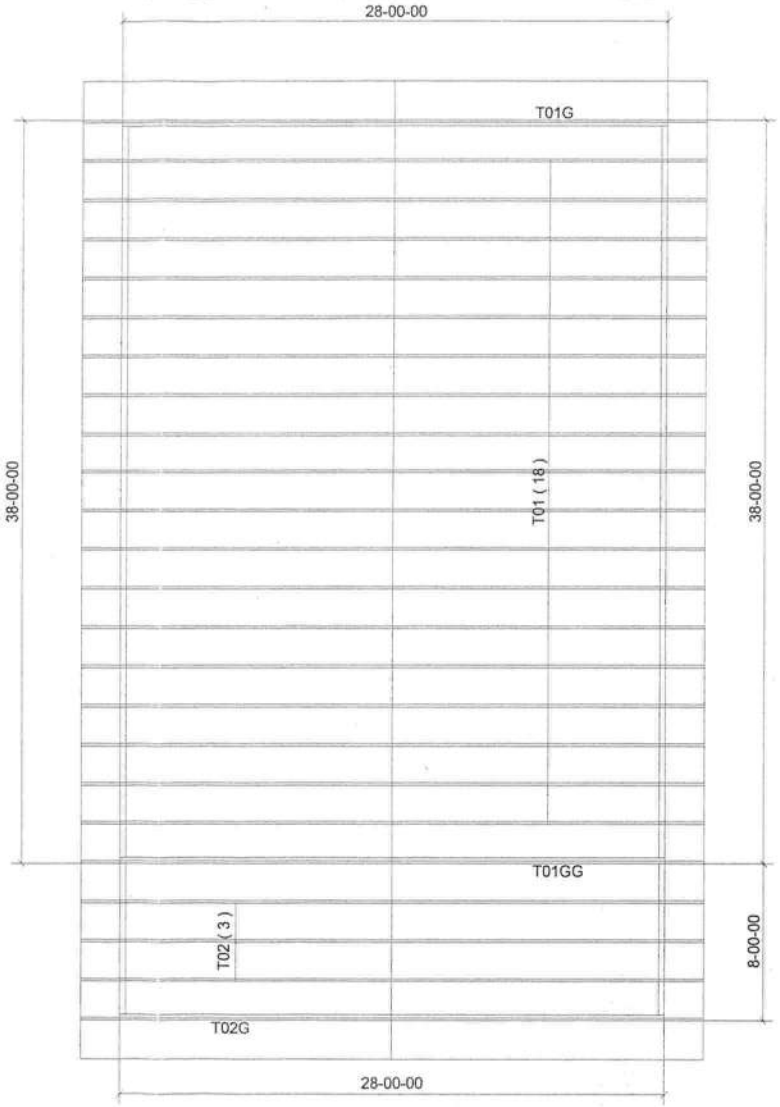
iLevel® Forte™ v1.1, Design Engine: V4.8.0.1

Page 1 of 1

20" DEEP - 19.2" O/C



5.5/12 PITCH - 24" O/H



BEARING HEIGHT SCHEDULE

- 8' 1-1/8"
- 9' 1-1/8"
- 10' 1-1/8"
- 11' 1-1/8"
- 12' 1-1/8"

NOTES:

1) REFER TO HB-71 (RECOMMENDATIONS FOR HANDLING, INSTALLATION AND TEMPORARY BRACING). REFER TO ENGINEERED DRAWINGS FOR PERMANENT BRACING REQUIRED.
2) ALL TRUSSES (INCLUDING TRUSSES UNDER VALLEY FRAMING) MUST BE COMPLETELY DIAGONAL OR REFER TO DETAIL V105 FOR ALTERNATE BRACING REQUIREMENTS.
3) ALL VALLEYS ARE TO BE CONVENTIONALLY FRAMED BY BUILDER.
4) ALL TRUSSES ARE DESIGNED FOR 2' o.c. MAXIMUM SPACING, UNLESS OTHERWISE NOTED.
5) ALL WALLS SHOWN ON PLACEMENT PLAN ARE CONSIDERED TO BE LOAD BEARING, UNLESS OTHERWISE NOTED.
6) ST42 TRUSSES MUST BE INSTALLED WITH THE TOP BEING UP.
7) BEAM/HEADER/LINTEL (BOM) TO BE FURNISHED BY BUILDER.

Builders FirstSource

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Freeport
PHONE: 850-835-4541 FAX: 850-835-6835

BUILDER: MIKE TODD CONST.

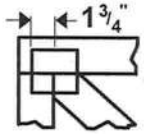
LOT/ADDRESS: MORGAN HOUSE

MODEL:		Revision:
		Ref. By:
DATE: 2-2-16	DRAWN BY: KLH	Original Reference #: 755227
Reference and	Reference and #	Ref. and 755227

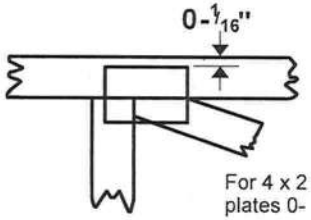
MITEK PLATE APPROVAL #'s 2197.2 - 2197.4, WEYERHAUSER PRODUCT #'s 1630.2 - 1630.10

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

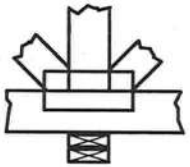
4 x 4

The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION

Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

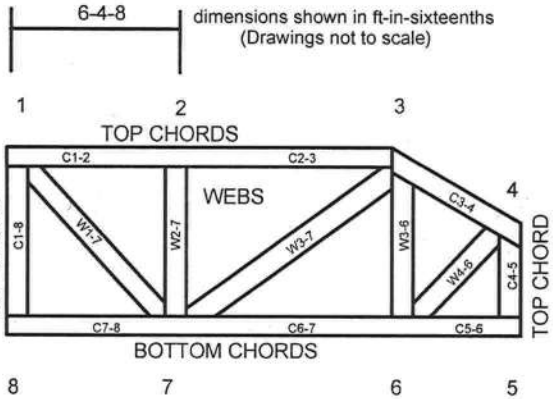


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3
These truss designs rely on lumber values established by others.

RE: 755227 - MIKE TODD CONST. - MORGAN RES.

MiTek USA, Inc.
6904 Parke East Blvd.
Tampa, FL 33610-4115

Site Information:
Customer Info: Mike Todd Const. Project Name: 755227 Model: Morgan Res.
Lot/Block: Subdivision:
Address: 218 SW Riverside Ave.
City: Columbia Cty State: FL

Name Address and License # of Structural Engineer of Record, If there is one, for the building.
Name: Unknown at time of seals License #: Unknown at time of seals
Address: Unknown at time of seals
City: Unknown at time of seals State: Unknown at time of seals

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):
Design Code: FBC2014/TPI2007 Design Program: MiTek 20/20 7.6
Wind Code: ASCE 7-10 Wind Speed: 130 mph
Roof Load: 37.0 psf Floor Load: 55.0 psf

This package includes 15 individual, dated Truss Design Drawings and 0 Additional Drawings.
With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

No.	Seal#	Truss Name	Date
1	T10408273	F01	2/9/17
2	T10408274	F02	2/9/17
3	T10408275	F03	2/9/17
4	T10408276	F04	2/9/17
5	T10408277	F05	2/9/17
6	T10408278	F06	2/9/17
7	T10408279	F07	2/9/17
8	T10408280	F08	2/9/17
9	T10408281	F09	2/9/17
10	T10408282	KW1	2/9/17
11	T10408283	T01	2/9/17
12	T10408284	T01G	2/9/17
13	T10408285	T01GG	2/9/17
14	T10408286	T02	2/9/17
15	T10408287	T02G	2/9/17

The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Builders FirstSource-Jacksonville.

Truss Design Engineer's Name: Velez, Joaquin
My license renewal date for the state of Florida is February 28, 2019.

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek. Any project specific information included is for MiTek's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

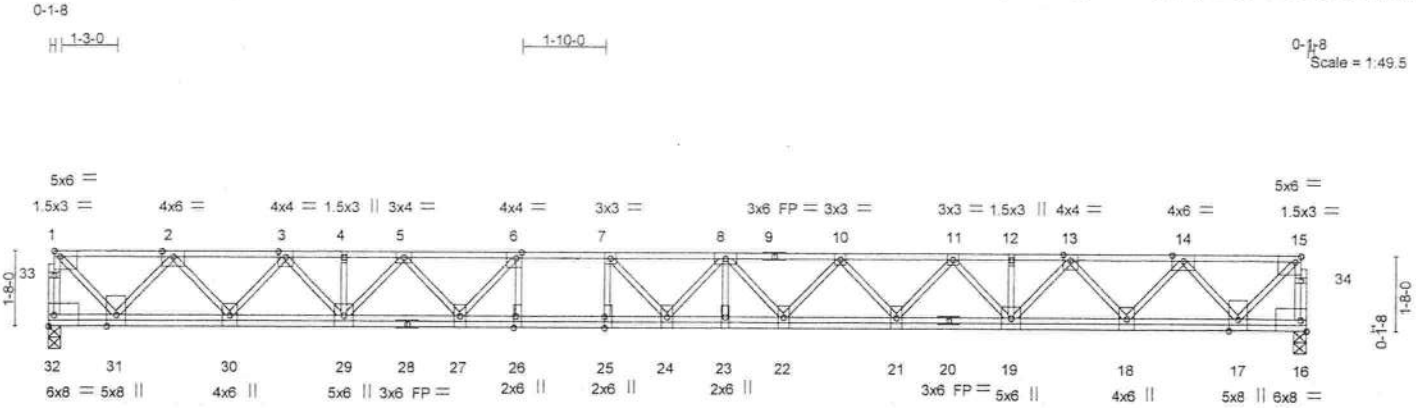
JOAQUIN VELEZ
LICENSE
No. 68182
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:
February 9,2017

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	F01	FLOOR	18	1	T10408273
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

7.640 s Apr 19 2016 MiTek Industries, Inc. Thu Feb 09 16:09:53 2017 Page 1
ID:Awd7fSKXwInKYwWX1sWuKPzyL?0-th7?l_RGUs5aKj5pHTjTZx7gycr9T9eBaAZBfYzmcjS



6-6-0	10-6-0	12-4-0	15-1-0	21-5-8	27-11-8
6-6-0	4-0-0	1-10-0	2-9-0	6-4-8	6-6-0

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [6:0-1-8,Edge], [15:0-1-8,Edge], [25:0-3-0,0-0-0], [26:0-3-0,Edge]

LOADING (psf)		SPACING-	1-7-2	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.45	Vert(LL)	-0.45	24	>731	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.48	Vert(TL)	-0.71	24	>468	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.71	Horz(TL)	0.07	16	n/a	n/a		
BCDL	5.0	Code FBC2014/TPI2007		(Matrix)							Weight: 195 lb	FT = 11%F, 11%E

LUMBER-
TOP CHORD 2x4 SP M 31(flat)
BOT CHORD 2x4 SP M 31(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 32=1209/0-3-4, 16=1209/0-3-4

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 32-33=-1198/0, 1-33=-1197/0, 16-34=-1197/0, 15-34=-1196/0, 1-2=-1040/0, 2-3=-2710/0, 3-4=-4042/0, 4-5=-4042/0, 5-6=-4929/0, 6-7=-5463/0, 7-8=-5642/0, 8-9=-5478/0, 9-10=-5478/0, 10-11=-4949/0, 11-12=-4035/0, 12-13=-4035/0, 13-14=-2712/0, 14-15=-1040/0

BOT CHORD 30-31=0/1974, 29-30=0/3431, 28-29=0/4567, 27-28=0/4567, 26-27=0/5463, 25-26=0/5463, 24-25=0/5463, 23-24=0/5669, 22-23=0/5669, 21-22=0/5298, 20-21=0/4580, 19-20=0/4580, 18-19=0/3428, 17-18=0/1974

WEBS 6-26=-85/592, 7-25=-563/128, 1-31=0/1491, 2-31=-1447/0, 2-30=0/1140, 3-30=-1117/0, 3-29=0/922, 5-29=-790/0, 5-27=0/621, 6-27=-1006/0, 15-17=0/1490, 14-17=-1448/0, 14-18=0/1142, 13-18=-1111/0, 13-19=0/914, 11-19=-820/0, 11-21=0/573, 10-21=-540/0, 10-22=0/305, 8-22=-312/0, 7-24=-303/588

NOTES- (5)
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x6 MT20 unless otherwise indicated.
3) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	F03	Floor Girder	1	1	T10408275
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

7.640 s Apr 19 2016 MiTek Industries, Inc. Thu Feb 09 16:09:54 2017 Page 1
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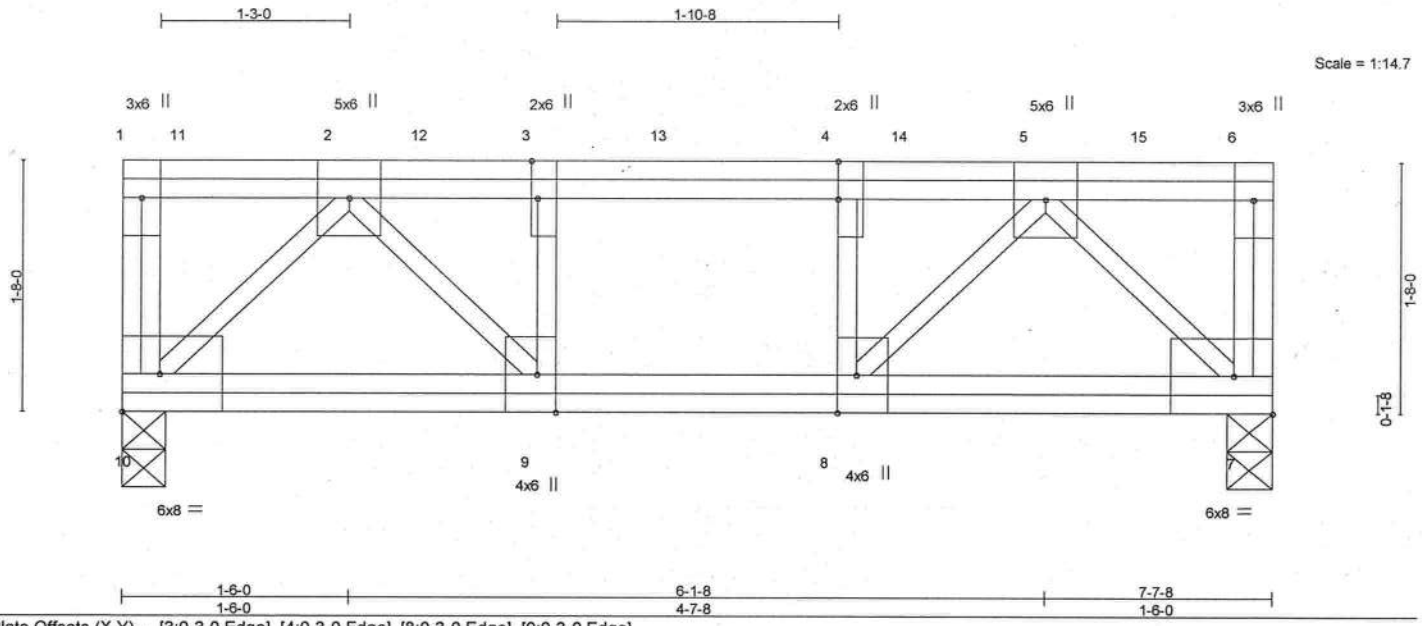

Plate Offsets (X,Y)-- [3:0-3-0,Edge], [4:0-3-0,Edge], [8:0-3-0,Edge], [9:0-3-0,Edge]

LOADING (psf)		SPACING-	1-7-2	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.22	Vert(LL)	-0.02	8-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.17	Vert(TL)	-0.03	8-9	>999	240		
BCLL	0.0	Rep Stress Incr	NO	WB	0.58	Horz(TL)	0.01	7	n/a	n/a		
BCDL	5.0	Code FBC2014/TPI2007		(Matrix)							Weight: 66 lb	FT = 11%F, 11%E

LUMBER-
TOP CHORD 2x4 SP M 31(flat)
BOT CHORD 2x4 SP M 31(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 10=2092/0-3-8, 7=1958/0-3-8

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-10=-487/0, 6-7=-335/0, 2-12=-2354/0, 3-12=-2354/0, 3-13=-2354/0, 4-13=-2354/0, 4-14=-2354/0, 5-14=-2354/0
BOT CHORD 9-10=0/1540, 8-9=0/2354, 7-8=0/1556
WEBS 5-7=-2234/0, 2-10=-2211/0, 5-8=0/1190, 2-9=0/1212, 3-9=-866/0, 4-8=-858/0

NOTES- (6)
1) Unbalanced floor live loads have been considered for this design.
2) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
3) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
4) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 730 lb down at 0-5-14, 725 lb down at 2-1-0, 676 lb down at 3-8-2, and 716 lb down at 5-3-4, and 728 lb down at 6-10-6 on top chord. The design/selection of such connection device(s) is the responsibility of others.
5) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
6) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

LOAD CASE(S) Standard
1) Dead + Floor Live (balanced): Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (plf)
Vert: 7-10=-8, 1-6=-80
Concentrated Loads (lb)
Vert: 11=-693(F) 12=-676(F) 13=-676(F) 14=-676(F) 15=-683(F)

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	F02	Floor	5	1	T10408274

Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

7.640 s Apr 19 2016 MiTek Industries, Inc. Thu Feb 09 16:09:54 2017 Page 1

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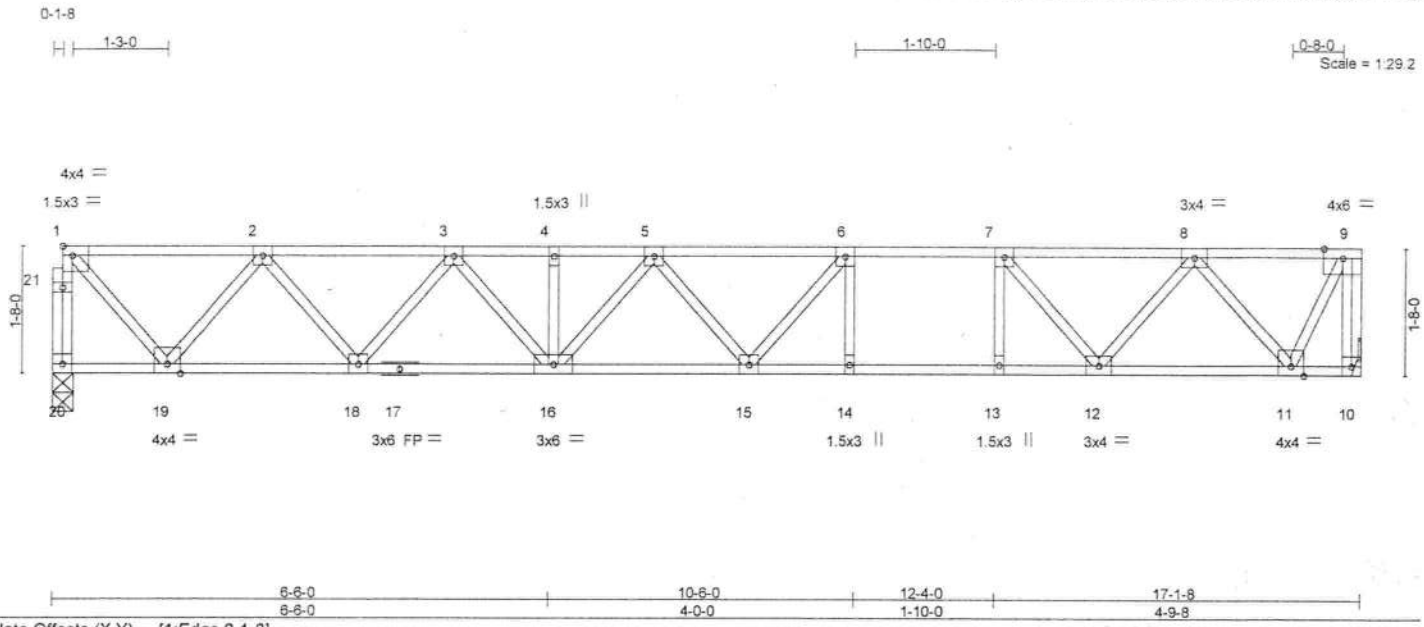

Plate Offsets (X,Y)-- [1:Edge,0-1-8]

LOADING (psf)		SPACING-	1-7-2	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.34	Vert(LL)	-0.18	14-15	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.60	Vert(TL)	-0.28	14-15	>736	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.41	Horz(TL)	0.03	10	n/a	n/a		
BCDL	5.0	Code FBC2014/TPI2007		(Matrix)							Weight: 98 lb	FT = 11%F, 11%E

LUMBER-

TOP CHORD 2x4 SP M 31(flat)
BOT CHORD 2x4 SP M 31(flat)
WEBS 2x4 SP No.3(flat)

BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 20=735/0-3-4, 10=740/Mechanical

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 20-21=-730/0, 1-21=-730/0, 9-10=-751/0, 1-2=-582/0, 2-3=-1420/0, 3-4=-1899/0, 4-5=-1899/0, 5-6=-1989/0, 6-7=-1783/0, 7-8=-1259/0, 8-9=-348/0
BOT CHORD 18-19=0/1096, 17-18=0/1724, 16-17=0/1724, 15-16=0/2056, 14-15=0/1783, 13-14=0/1783, 12-13=0/1783, 11-12=0/863
WEBS 6-14=-323/0, 7-13=0/348, 1-19=0/852, 2-19=-816/0, 2-18=0/515, 3-18=-483/0, 3-16=0/270, 6-15=-49/416, 9-11=0/761, 8-11=-817/0, 8-12=0/629, 7-12=-814/0

NOTES- (7)

1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x3 MT20 unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.
7) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

MiTek
6904 Parke East Blvd.
Tampa, FL 33610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	F04	FLOOR	9	1	T10408276
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

7.640 s Apr 19 2016 MiTek Industries, Inc. Thu Feb 09 16:09:55 2017 Page 1

ID:Awd7fSKXwInKYwWX1sWuKPzyL?0-p3FlAgSX0ULIZ1FCPumxeMC?dbYCx5KU2U2IkRzmqjQ

1-3-0 1-11-4 0-1-8

Scale = 1:26.3

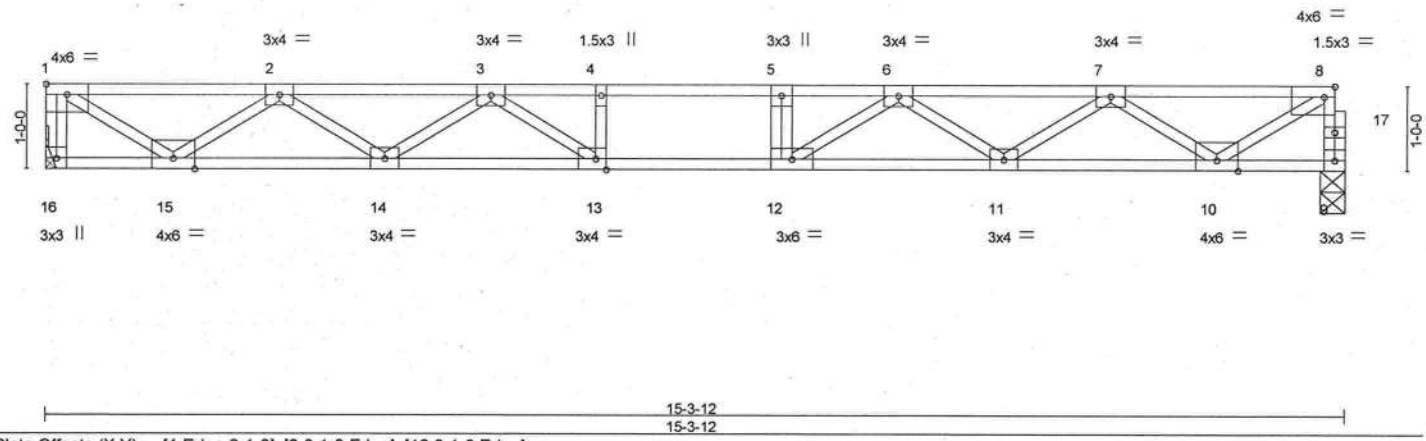

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [8:0-1-8,Edge], [13:0-1-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.57	Vert(LL)	-0.22	12-13	>837	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.45	Vert(TL)	-0.34	12-13	>535	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.63	Horz(TL)	0.05	9	n/a	n/a		
BCDL	5.0	Code FBC2014/TPI2007		(Matrix)							Weight: 75 lb	FT = 11%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP M 31(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 16=828/Mechanical, 9=822/0-3-8

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-16=-820/0, 9-17=-816/0, 8-17=-814/0, 1-2=-1123/0, 2-3=-2681/0, 3-4=-3504/0, 4-5=-3504/0, 5-6=-3504/0, 6-7=-2682/0, 7-8=-1125/0
BOT CHORD 14-15=0/2117, 13-14=0/3209, 12-13=0/3504, 11-12=0/3210, 10-11=0/2115
WEBS 8-10=0/1283, 1-15=0/1332, 7-10=-1208/0, 2-15=-1213/0, 7-11=0/692, 2-14=0/688, 6-11=-644/0, 3-14=-645/0, 6-12=0/641, 3-13=0/642

NOTES- (6)
1) Unbalanced floor live loads have been considered for this design.
2) Refer to girder(s) for truss to truss connections.
3) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) CAUTION, Do not erect truss backwards.
6) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	F05	FLOOR	4	1	T10408277

Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

7.640 s Apr 19 2016 MiTek Industries, Inc. Thu Feb 09 16:09:56 2017 Page 1

ID:Awd7fSKXwlnKYwWX1sWuKPzyL?0-HGp8N0T9nnU9BAqOycHAAalBV?usgYndH8nrGtzmqjP

1-3-0 1-9-12

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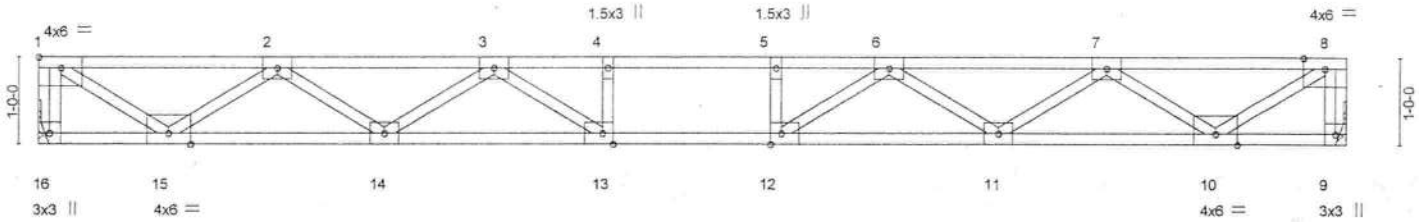

1-6-0	4-0-0	11-0-12	13-6-12	15-0-12
1-6-0	2-6-0	7-0-12	2-6-0	1-6-0

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [12:0-1-8,Edge], [13:0-1-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.50	Vert(LL)	-0.20	12-13	>878	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.42	Vert(TL)	-0.32	12-13	>562	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.62	Horz(TL)	0.05	9	n/a	n/a		
BCDL	5.0	Code FBC2014/TPI2007		(Matrix)							Weight: 73 lb	FT = 11%F, 11%E

LUMBER-

TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP M 31(flat)
WEBS 2x4 SP No.3(flat)

BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 16=815/Mechanical, 9=815/Mechanical

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 1-16=-806/0, 8-9=-806/0, 1-2=-1102/0, 2-3=-2622/0, 3-4=-3394/0, 4-5=-3394/0, 5-6=-3394/0, 6-7=-2622/0, 7-8=-1102/0
BOT CHORD 14-15=0/2076, 13-14=0/3130, 12-13=0/3394, 11-12=0/3130, 10-11=0/2076
WEBS 8-10=0/1306, 1-15=0/1306, 7-10=-1190/0, 2-15=-1190/0, 7-11=0/666, 2-14=0/666, 6-11=-620/0, 3-14=-620/0, 6-12=-20/596, 3-13=-20/596

NOTES- (6)

1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x4 MT20 unless otherwise indicated.
3) Refer to girder(s) for truss to truss connections.
4) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	F06	FLOOR	9	1	T10408278
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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ID:Awd7fSKXwInKYwWX1sWuKPzyL?0-HGp8N0T9nnU9BAqOycHAAalCV?vSgY3dH8nrGtzmqjP

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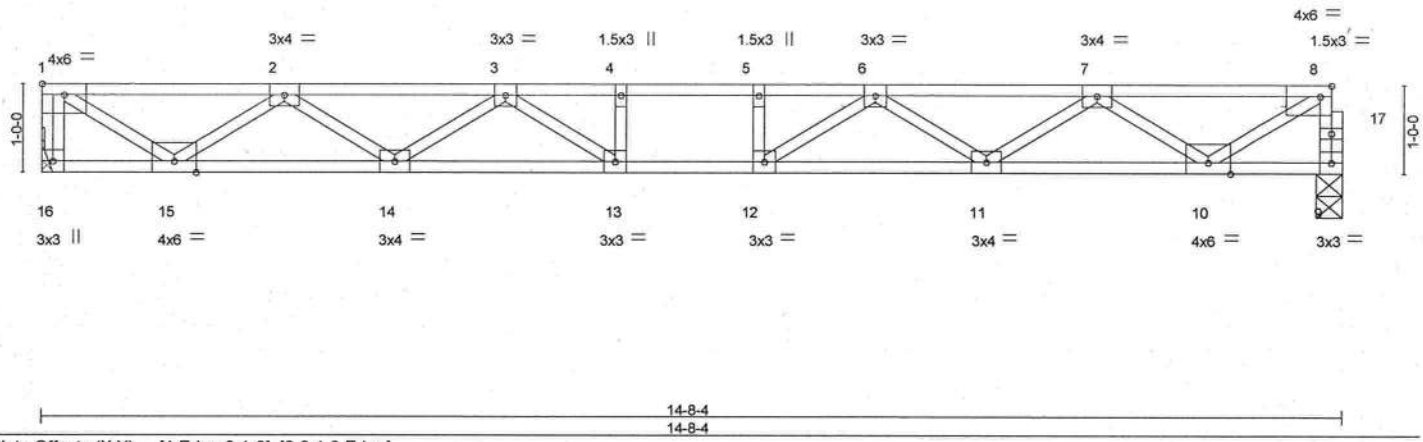

Plate Offsets (X,Y)-- [1:Edge,0-1-8], [8:0-1-8,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.43	Vert(LL)	-0.18	12-13	>945	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.38	Vert(TL)	-0.29	12-13	>606	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.60	Horz(TL)	0.04	9	n/a	n/a		
BCDL	5.0	Code FBC2014/TPI2007		(Matrix)							Weight: 72 lb	FT = 11%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP M 31(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 16=794/Mechanical, 9=788/0-3-8

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-16=-786/0, 9-17=-782/0, 8-17=-780/0, 1-2=-1069/0, 2-3=-2532/0, 3-4=-3233/0, 4-5=-3233/0, 5-6=-3233/0, 6-7=-2531/0, 7-8=-1072/0
BOT CHORD 14-15=0/2015, 13-14=0/3011, 12-13=0/3233, 11-12=0/3012, 10-11=0/2012
WEBS 8-10=0/1221, 1-15=0/1267, 7-10=-1148/0, 2-15=-1154/0, 7-11=0/633, 2-14=0/632, 6-11=-587/0, 3-14=-585/0, 6-12=-54/527, 3-13=-53/527

NOTES- (6)
1) Unbalanced floor live loads have been considered for this design.
2) Refer to girder(s) for truss to truss connections.
3) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) CAUTION, Do not erect truss backwards.
6) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

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Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	F07	FLOOR	4	1	T10408279
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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ID:Awd7fSKXwInKYwWX1sWuKPzyL?0-mSNWaMUnY5c0pKPbWJoPjnINKPEwP?VnVoXPcKzmqjO

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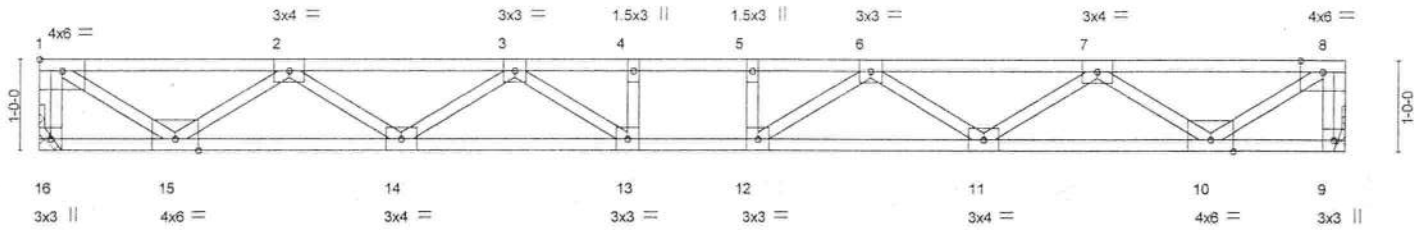

1-6-0	4-0-0	10-5-4	12-11-4	14-5-4
1-6-0	2-6-0	6-5-4	2-6-0	1-6-0

Plate Offsets (X,Y)-- [1:Edge,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.43	Vert(LL)	-0.17	12-13	>992	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.37	Vert(TL)	-0.27	12-13	>635	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.59	Horz(TL)	0.04	9	n/a	n/a		
BCDL	5.0	Code FBC2014/TPI2007		(Matrix)							Weight: 71 lb	FT = 11%F, 11%E

LUMBER-

TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP M 31(flat)
WEBS 2x4 SP No.3(flat)

BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 16=780/Mechanical, 9=780/Mechanical

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 1-16=-772/0, 8-9=-772/0, 1-2=-1048/0, 2-3=-2472/0, 3-4=-3127/0, 4-5=-3127/0, 5-6=-3127/0, 6-7=-2472/0, 7-8=-1048/0
BOT CHORD 14-15=0/1973, 13-14=0/2932, 12-13=0/3127, 11-12=0/2932, 10-11=0/1973
WEBS 8-10=0/1242, 1-15=0/1242, 7-10=-1130/0, 2-15=-1130/0, 7-11=0/609, 2-14=0/609, 6-11=-562/0, 3-14=-562/0, 6-12=-72/483, 3-13=-72/483

NOTES- (5)

1) Unbalanced floor live loads have been considered for this design.
2) Refer to girder(s) for truss to truss connections.
3) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

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Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	F08	FLOOR	4	1	T10408280
					Job Reference (optional)

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ID:Awd7fSKXwlnKYwWX1sWuKPzyL?0-mSNWaMUnY5c0pKPbWJoPjnIMSPCZP4hnVoXPoKzmqjO

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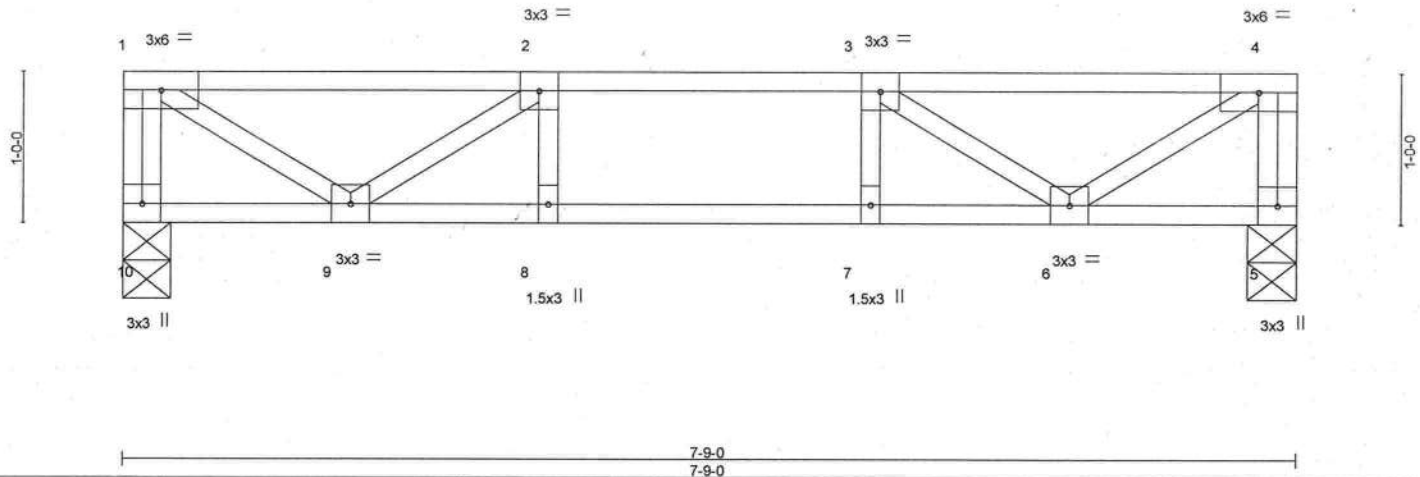

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.49	Vert(LL)	-0.04	8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.45	Vert(TL)	-0.05	8	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.26	Horz(TL)	0.01	5	n/a	n/a		
BCDL	5.0	Code FBC2014/TPI2007		(Matrix)							Weight: 38 lb	FT = 11%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 10=413/0-3-13, 5=413/0-3-13

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-10=-406/0, 4-5=-406/0, 1-2=-460/0, 2-3=-879/0, 3-4=-460/0
BOT CHORD 8-9=0/879, 7-8=0/879, 6-7=0/879
WEBS 4-6=0/546, 1-9=0/546, 3-6=-503/0, 2-9=-503/0

NOTES- (4)
1) Unbalanced floor live loads have been considered for this design.
2) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
3) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
4) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	F09	FLOOR	4	1	T10408281
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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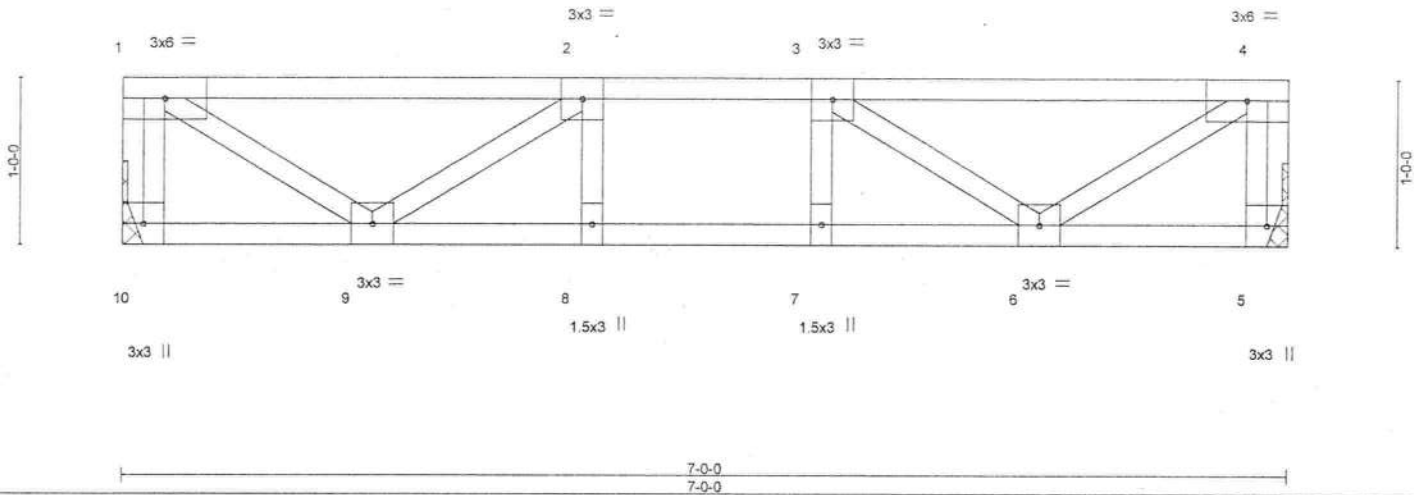

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.48	Vert(LL)	-0.03	6-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.38	Vert(TL)	-0.03	8-9	>999	240		
BCLL	0.0	Rep Stress Incr	YES	WB	0.22	Horz(TL)	0.01	5	n/a	n/a		
BCDL	5.0	Code FBC2014/TPI2007		(Matrix)							Weight: 36 lb	FT = 11%F, 11%E

LUMBER-
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 10=371/Mechanical, 5=371/Mechanical

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-10=-365/0, 4-5=-365/0, 1-2=-394/0, 2-3=-746/0, 3-4=-394/0
BOT CHORD 8-9=0/746, 7-8=0/746, 6-7=0/746
WEBS 4-6=0/467, 1-9=0/467, 3-6=-423/0, 2-9=-423/0

NOTES- (5)
1) Unbalanced floor live loads have been considered for this design.
2) Refer to girder(s) for truss to truss connections.
3) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
4) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
5) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

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Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	KW1	GABLE	2	1	T10408282
					Job Reference (optional)

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ID:Awd7fSKXwInKYwWX1sWuKPzyL?0-EexuohVPJPktQU_n40JeG?qeCpfq8bRwkSGyLmzmqjN

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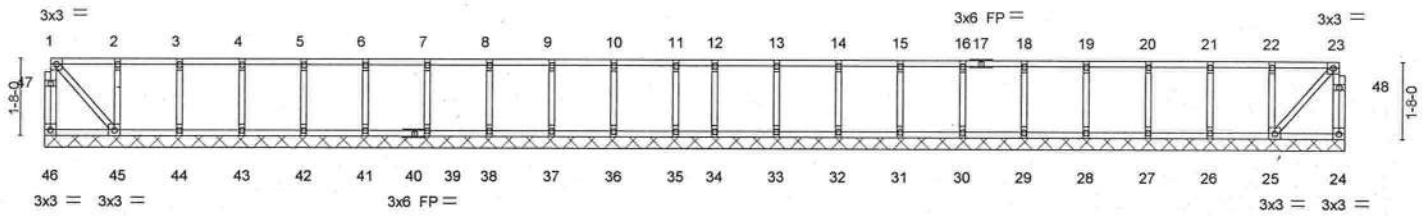

1-6-12	2-10-12	4-2-12	5-6-12	6-10-12	8-2-12	9-6-12	10-10-12	12-2-12	13-6-12	14-4-12	15-8-12	17-0-12	18-4-12	19-8-12	21-0-12	22-4-12	23-8-12	25-0-12	26-4-12	27-11-8
1-6-12	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	0-10-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-4-0	1-6-12

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.00	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.04	Horz(TL)	-0.00	25	n/a	n/a		
BCDL	5.0	Code FBC2014/TPI2007		(Matrix)							Weight: 138 lb	FT = 11%F, 11%E

LUMBER-

TOP CHORD	2x4 SP M 31(flat)
BOT CHORD	2x4 SP M 31(flat)
WEBS	2x4 SP No.3(flat)
OTHERS	2x4 SP No.3(flat)

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 10-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 10-0-0 oc bracing: 45-46,24-25.

REACTIONS. All bearings 27-11-8.
(lb) - Max Grav All reactions 250 lb or less at joint(s) 46, 24, 45, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 44, 43, 42, 41, 39, 38, 37, 36, 35

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES- (7)
1) All plates are 1.5x3 MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-0-0 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	T01	COMMON	18	1	T10408283
					Job Reference (optional)

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ID:Awd7fSKXwlnKYwWX1sWuKPzyL?0-irVG?1V14isk2eYzekqtoCNh1Costy24z60WtCzmqjM

-2-0-0	7-1-0	14-0-0	20-11-0	28-0-0	30-0-0
2-0-0	7-1-0	6-11-0	6-11-0	7-1-0	2-0-0

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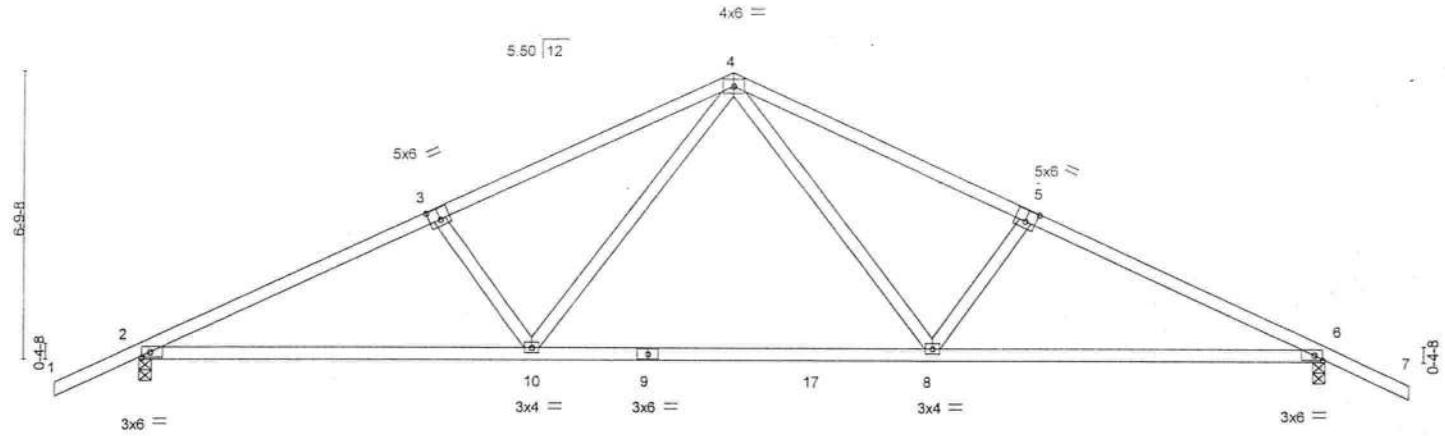

9-3-3	18-8-13	28-0-0
9-3-3	9-5-10	9-3-3

Plate Offsets (X,Y)-- [2:0-2-6,0-1-8], [3:0-3-0,0-3-4], [5:0-3-0,0-3-4], [6:0-2-6,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.54	Vert(LL)	-0.32	8-10	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.85	Vert(TL)	-0.61	8-10	>554	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.40	Horz(TL)	0.08	6	n/a	n/a		
BCDL	10.0	Code FBC2014/TPI2007		(Matrix-M)							Weight: 129 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-7-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-8-8 oc bracing.

REACTIONS. (lb/size) 2=1144/0-3-8, 6=1144/0-3-8
Max Horz 2=-154(LC 17)
Max Uplift 2=-460(LC 12), 6=-460(LC 13)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1863/1007, 3-4=-1657/969, 4-5=-1657/969, 5-6=-1863/1007
BOT CHORD 2-10=-767/1631, 9-10=-376/1079, 9-17=-376/1079, 8-17=-376/1079, 6-8=-773/1631
WEBS 4-8=-316/623, 5-8=-371/375, 4-10=-316/625, 3-10=-371/375

NOTES- (7)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 460 lb uplift at joint 2 and 460 lb uplift at joint 6.
6) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
7) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

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Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	T01G	GABLE	1	1	T10408284
					Job Reference (optional)

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ID:Awd7fSKXwInKYwWX1sWuKPzyL?0-A12eDNWfr0_bgo79BRM6LQwwacKncUzDBml3PezmqjL

-2-0-0 | 14-0-0 | 28-0-0 | 30-0-0

2-0-0 | 14-0-0 | 14-0-0 | 2-0-0

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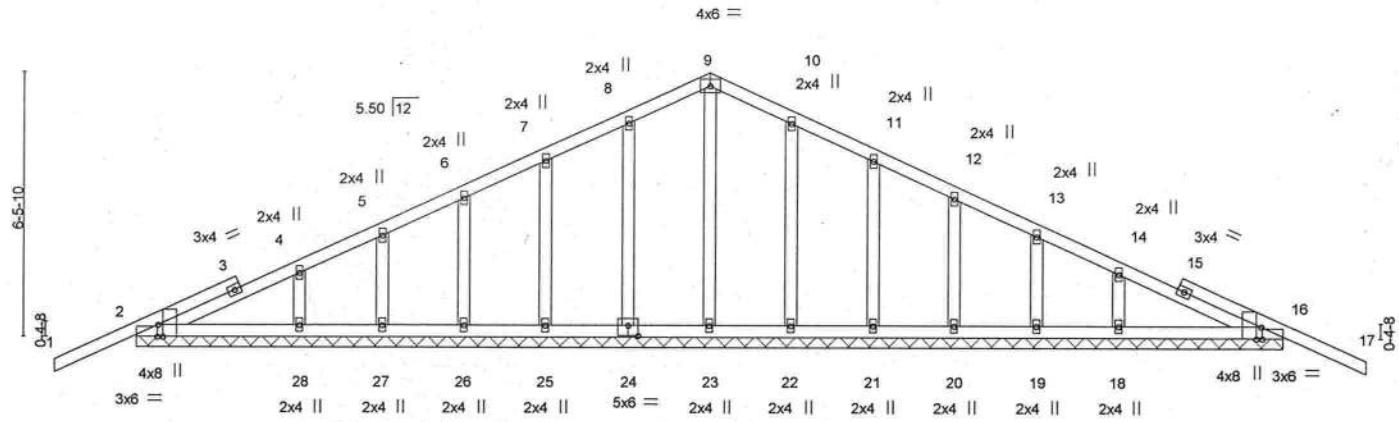


Plate Offsets (X,Y)-- [2:0-3-8,Edge], [2:0-0-4,Edge], [16:0-3-8,Edge], [16:0-0-4,Edge], [24:0-3-0,0-3-0]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.30	Vert(LL)	-0.02	17	n/r	120	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.10	Vert(TL)	-0.02	17	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.10	Horz(TL)	0.01	16	n/a	n/a		
BCDL	10.0	Code FBC2014/TPI2007		(Matrix)							Weight: 156 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS. All bearings 28-0-0.
(lb) - Max Horz 2=147(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 24, 25, 26, 27, 22, 21, 20, 19 except 2=-105(LC 8), 16=-123(LC 13), 28=-113(LC 12), 18=-118(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 23, 24, 25, 26, 27, 28, 22, 21, 20, 19, 18 except 2=267(LC 1), 16=267(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 8-9=-81/252, 9-10=-81/252

NOTES- (10)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24, 25, 26, 27, 22, 21, 20, 19 except (jt=lb) 2=105, 16=123, 28=113, 18=118.
9) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
10) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	T01GG	GABLE	1	1	T10408285
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

7.840 s Apr 19 2016 MiTek Industries, Inc. Thu Feb 09 16:10:01 2017 Page 1

ID:Awd7fSKXwInKYwWX1sWuKPzyL?0-eDc1QjXIcK6SHyiMI9tLtdS5K0gcLx4MQQVcx5zmqjK

-2-0-0 | 14-0-0 | 28-0-0 | 30-0-0

2-0-0 | 14-0-0 | 14-0-0 | 2-0-0

Scale = 1:52.6

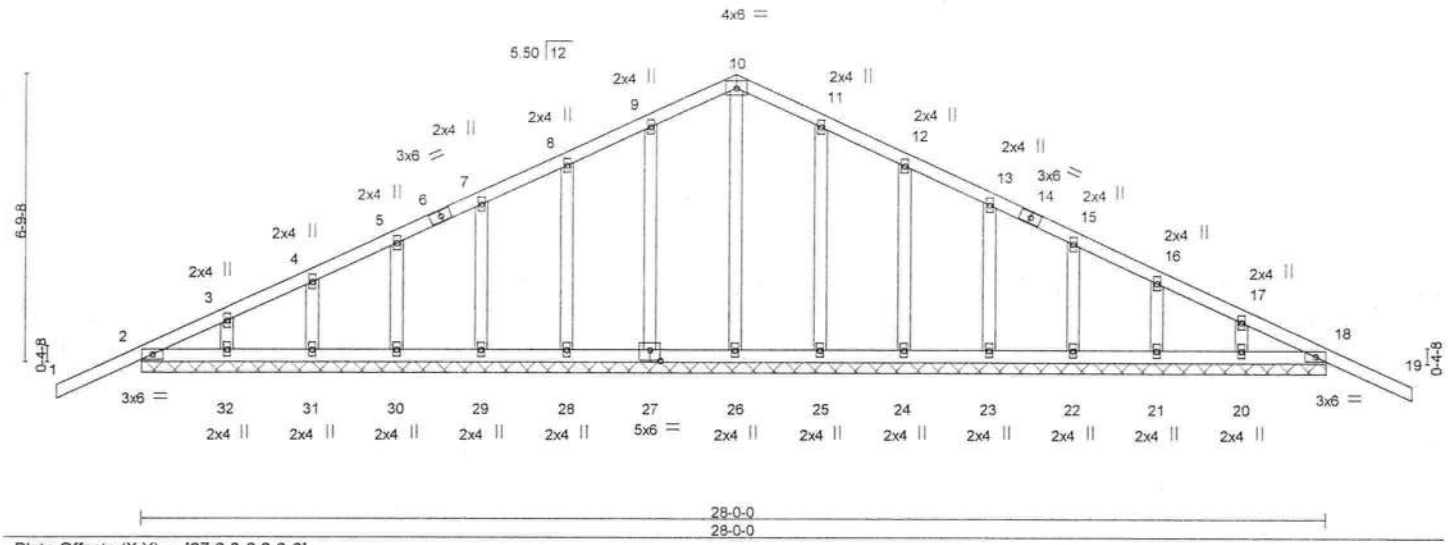


Plate Offsets (X,Y)-- [27:0-3-0,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.30	Vert(LL)	-0.02	19	n/r	120	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.13	Vert(TL)	-0.04	19	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(TL)	0.01	18	n/a	n/a		
BCDL	10.0	Code FBC2014/TPI2007		(Matrix)							Weight: 158 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 28-0-0.
(lb) - Max Horz 2=-154(LC 13)
Max Uplift All uplift 100 lb or less at joint(s) 27, 28, 29, 30, 32, 25, 24, 23, 22, 20 except 2=-117(LC 8), 31=-103(LC 12), 21=-103(LC 13), 18=-112(LC 9)
Max Grav All reactions 250 lb or less at joint(s) 2, 26, 27, 28, 29, 30, 31, 32, 25, 24, 23, 22, 21, 20, 18

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 9-10=-95/268, 10-11=-95/268

NOTES- (10)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 27, 28, 29, 30, 32, 25, 24, 23, 22, 20 except (jt=lb) 2=117, 31=103, 21=103, 18=112.
9) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
10) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	T02	COMMON	3	1	T10408286
					Job Reference (optional)

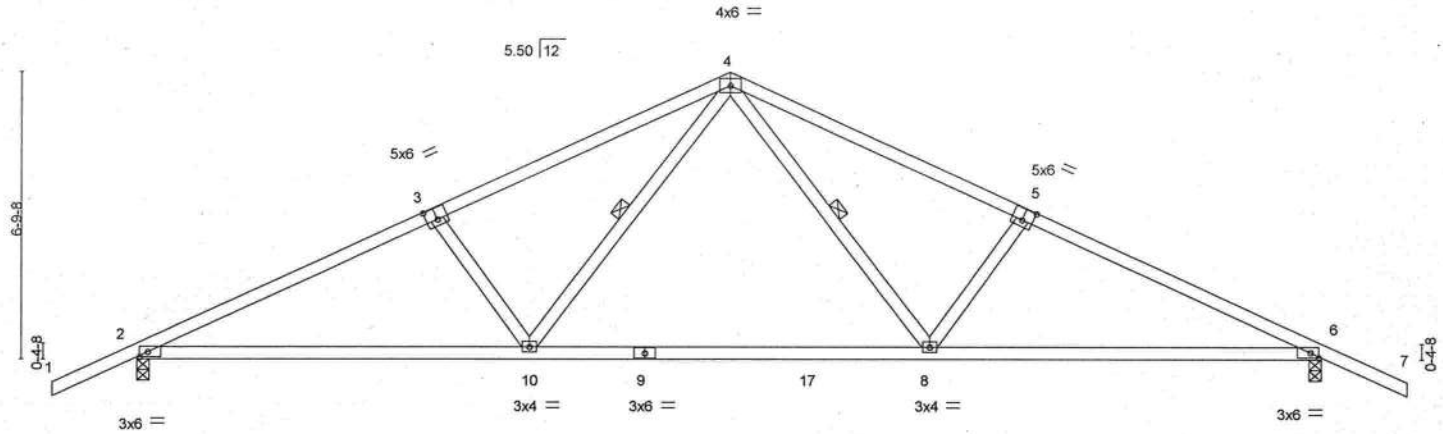
Builders FirstSource, Lake City, FL 32055

7.640 s Apr 19 2016 MiTek Industries, Inc. Thu Feb 09 16:10:02 2017 Page 1

ID:Awd7fSKXwInKYwWX1sWuKPzyL?0-6QAPe3YwNdEJv5HYJsOaQr?8iQqZ4L2Wf4EAUXzmqjJ

-2-0-0	7-1-0	14-0-0	20-11-0	28-0-0	30-0-0
2-0-0	7-1-0	6-11-0	6-11-0	7-1-0	2-0-0

Scale = 1:52.6



9-3-3	18-8-13	28-0-0
9-3-3	9-5-10	9-3-3

Plate Offsets (X,Y)-- [2:0-2-6,0-1-8], [3:0-3-0,0-3-4], [5:0-3-0,0-3-4], [6:0-2-6,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.71	Vert(LL)	0.38	8-10	>894	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.85	Vert(TL)	-0.61	8-10	>554	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.32	Horz(TL)	0.08	6	n/a	n/a		
BCDL	10.0	Code FBC2014/TPI2007		(Matrix-M)							Weight: 129 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-7-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 3-10-9 oc bracing.
WEBS 1 Row at midpt 4-8, 4-10

REACTIONS. (lb/size) 2=1144/0-3-8, 6=1144/0-3-8
Max Horz 2=-154(LC 17)
Max Uplift 2=-561(LC 9), 6=-561(LC 8)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1863/2159, 3-4=-1657/2120, 4-5=-1657/2119, 5-6=-1863/2159
BOT CHORD 2-10=-1817/1631, 9-10=-1072/1079, 9-17=-1072/1079, 8-17=-1072/1079, 6-8=-1823/1631
WEBS 4-8=-910/623, 5-8=-371/382, 4-10=-910/625, 3-10=-371/382

NOTES- (7)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=561, 6=561.
6) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
7) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	MIKE TODD CONST. - MORGAN RES.
755227	T02G	COMMON STRUCTURAL GA	1	1	T10408287
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

7.640 s Apr 19 2016 MiTek Industries, Inc. Thu Feb 09 16:10:03 2017 Page 1

ID:Awd7fSKXwInKYwWX1sWuKPzyL?0-acknrPZY8xMAXFsktavpz2XGGqAnpntfuk_j0zzmqjI

-2-0-0	7-1-0	14-0-0	20-11-0	28-0-0	30-0-0
2-0-0	7-1-0	6-11-0	6-11-0	7-1-0	2-0-0

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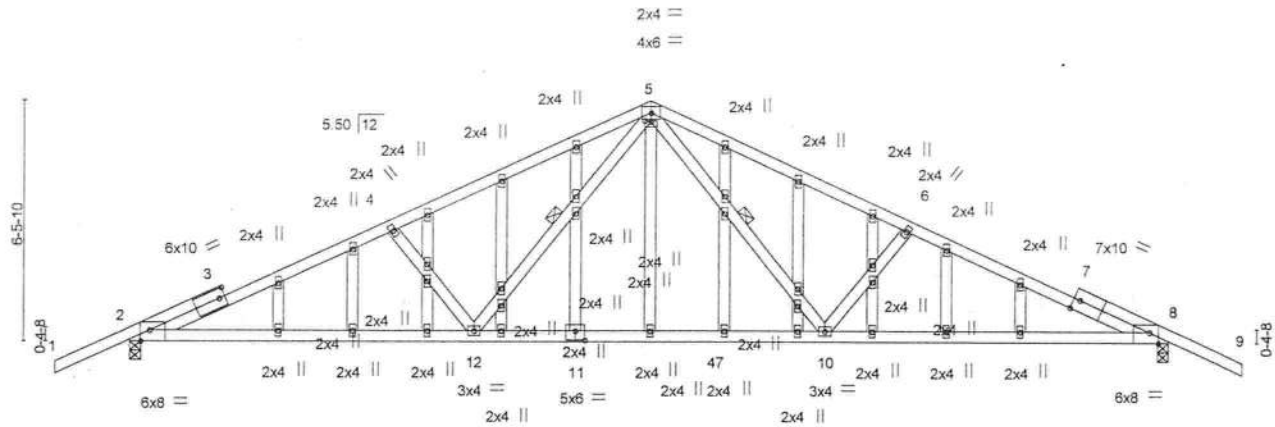


9-3-3	18-8-13	28-0-0
9-3-3	9-5-10	9-3-3

Plate Offsets (X,Y)-- [2:0-2-15,Edge], [5:0-2-0,0-0-4], [7:0-2-0,Edge], [8:0-2-15,Edge], [11:0-3-0,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.91	Vert(LL)	0.41	10-12	>802	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.85	Vert(TL)	-0.64	10-12	>523	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.34	Horz(TL)	0.07	8	n/a	n/a		
BCDL	10.0	Code FBC2014/TPI2007		(Matrix-M)							Weight: 188 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.1 *Except*
1-3,7-9: 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 3-5-12 oc bracing.
WEBS 1 Row at midpt 5-10, 5-12

REACTIONS. (lb/size) 2=1141/0-3-8, 8=1141/0-3-8
Max Horz 2=147(LC 12)
Max Uplift 2=-559(LC 8), 8=-559(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=-1969/2335, 3-4=-1991/2390, 4-5=-1791/2301, 5-6=-1791/2301, 6-7=-1991/2390, 7-8=-1969/2335
BOT CHORD 2-12=-2071/1819, 11-12=-1149/1127, 11-47=-1149/1127, 10-47=-1149/1127, 8-10=-2092/1819
WEBS 5-10=-1043/694, 6-10=-447/503, 5-12=-1043/699, 4-12=-447/503

NOTES- (9)

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=559, 8=559.
8) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
9) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

August 10, 2010	T-BRACE / I-BRACE DETAIL WITH 2X BRACE ONLY	ST - T-BRACE 2

MiTek USA, Inc.

Note: T-Bracing / I-Bracing to be used when continuous lateral bracing is impractical. T-Brace / I-Brace must cover 90% of web length.

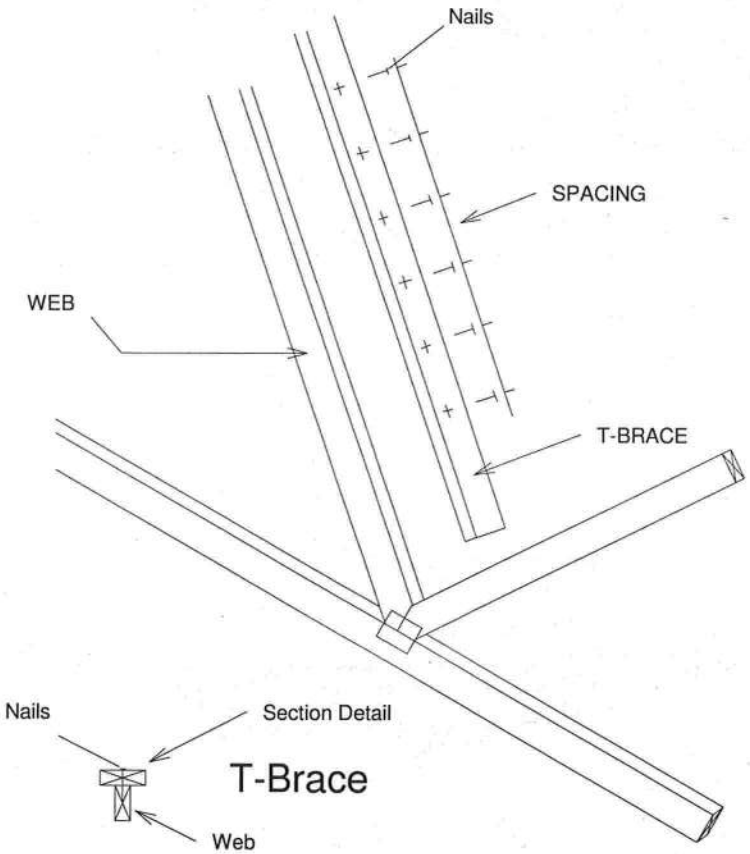
Note: This detail NOT to be used to convert T-Brace / I-Brace webs to continuous lateral braced webs.

Nailing Pattern		
T-Brace size	Nail Size	Nail Spacing
2x4 or 2x6 or 2x8	10d	6" o.c.
Note: Nail along entire length of T-Brace / I-Brace (On Two-Ply's Nail to Both Plies)		

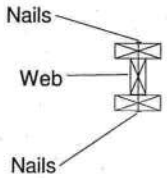
	Brace Size for One-Ply Truss	
	Specified Continuous Rows of Lateral Bracing	
Web Size	1	2
2x3 or 2x4	2x4 T-Brace	2x4 I-Brace
2x6	2x6 T-Brace	2x6 I-Brace
2x8	2x8 T-Brace	2x8 I-Brace

	Brace Size for Two-Ply Truss	
	Specified Continuous Rows of Lateral Bracing	
Web Size	1	2
2x3 or 2x4	2x4 T-Brace	2x4 I-Brace
2x6	2x6 T-Brace	2x6 I-Brace
2x8	2x8 T-Brace	2x8 I-Brace

T-Brace / I-Brace must be same species and grade (or better) as web member.



T-Brace



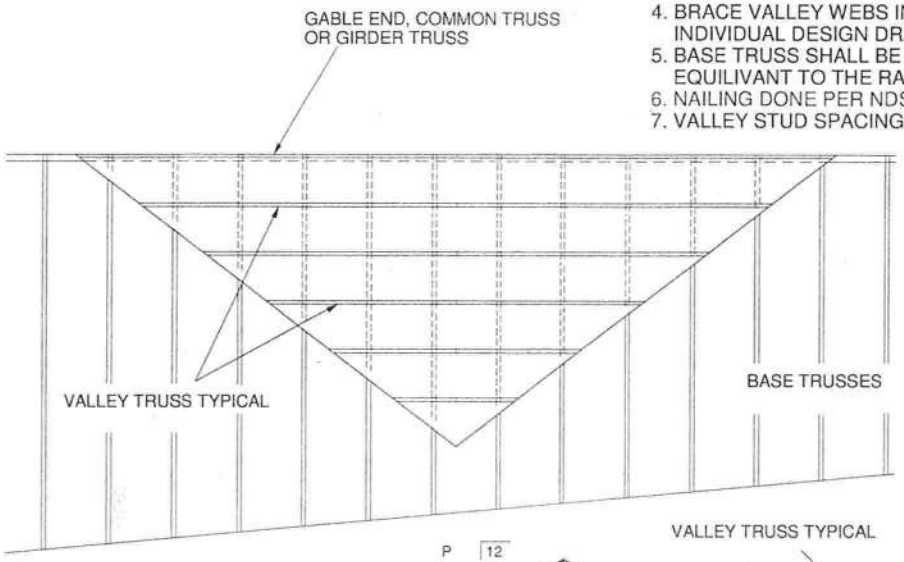
I-Brace

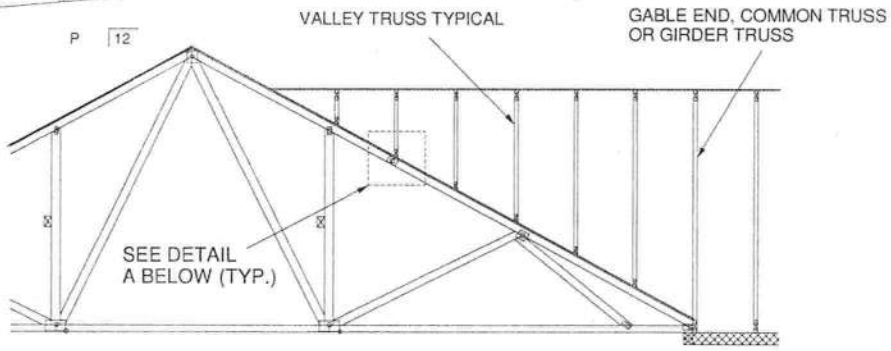
FEBRUARY 14, 2012	TRUSSED VALLEY SET DETAIL	ST-VALLEY HIGH WIND1

MiTek USA, Inc.

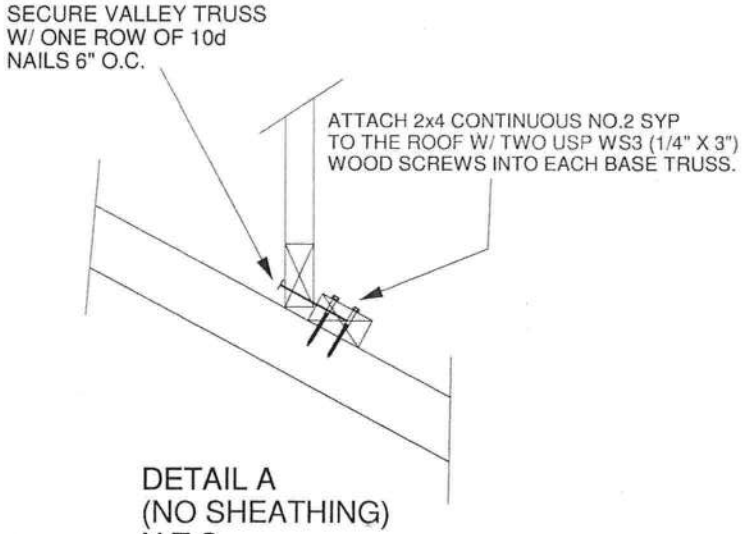
GENERAL SPECIFICATIONS

1. NAIL SIZE = 3" X 0.131" = 10d
2. WOOD SCREW = 3" WS3 USP OR EQUIVALENT
   DO NOT USE DRYWALL OR DECKING TYPE SCREW
3. INSTALL VALLEY TRUSSES (24" O.C. MAXIMUM) AND
   SECURE PER DETAIL A
4. BRACE VALLEY WEBS IN ACCORDANCE WITH THE
   INDIVIDUAL DESIGN DRAWINGS.
5. BASE TRUSS SHALL BE DESIGNED WITH A PURLIN SPACING
   EQUILIVANT TO THE RAKE DIMENSION OF THE VALLEY TRUSS SPACING.
6. NAILING DONE PER NDS - 01
7. VALLEY STUD SPACING NOT TO EXCEED 48" O.C.





WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 146 MPH
WIND DESIGN PER ASCE 7-10 160 MPH
MAX MEAN ROOF HEIGHT = 30 FEET
ROOF PITCH = MINIMUM 3/12 MAXIMUM 6/12
CATEGORY II BUILDING
EXPOSURE C
WIND DURATION OF LOAD INCREASE : 1.60
MAX TOP CHORD TOTAL LOAD = 50 PSF
MAX SPACING = 24" O.C. (BASE AND VALLEY)
MINIMUM REDUCED DEAD LOAD OF 6 PSF
ON THE TRUSSES



DETAIL A
(NO SHEATHING)
N.T.S.

JANUARY 28, 2015	LATERAL TOE-NAIL DETAIL	ST-TOENAIL_SP

MiTek USA, Inc.

NOTES:
1. TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 45 DEGREES WITH THE MEMBER AND MUST HAVE FULL WOOD SUPPORT. (NAIL MUST BE DRIVEN THROUGH AND EXIT AT THE BACK CORNER OF THE MEMBER END AS SHOWN.
2. THE END DISTANCE, EDGE DISTANCE, AND SPACING OF NAILS SHALL BE SUCH AS TO AVOID UNUSUAL SPLITTING OF THE WOOD.
3. ALLOWABLE VALUE SHALL BE THE LESSER VALUE OF THE TWO SPECIES FOR MEMBERS OF DIFFERENT SPECIES.

TOE-NAIL SINGLE SHEAR VALUES PER NDS 2001 (lb/nail)

	DIAM.	SP	DF	HF	SPF	SPF-S
3.5" LONG	.131	88.0	80.6	69.9	68.4	59.7
	.135	93.5	85.6	74.2	72.6	63.4
	.162	108.8	99.6	86.4	84.5	73.8
3.25" LONG	.128	74.2	67.9	58.9	57.6	50.3
	.131	75.9	69.5	60.3	59.0	51.1
	.148	81.4	74.5	64.6	63.2	52.5

VALUES SHOWN ARE CAPACITY PER TOE-NAIL.
APPLICABLE DURATION OF LOAD INCREASES MAY BE APPLIED.

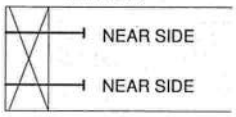
EXAMPLE:
(3) - 16d NAILS (.162" diam. x 3.5") WITH SPF SPECIES BOTTOM CHORD

For load duration increase of 1.15:
3 (nails) X 84.5 (lb/nail) X 1.15 (DOL) = 291.5 lb Maximum Capacity

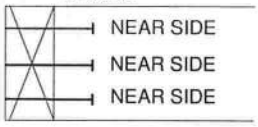
THIS DETAIL APPLICABLE TO THE THREE END DETAILS SHOWN BELOW

VIEWS SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY

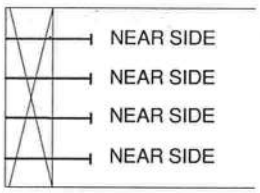
SIDE VIEW
(2x3)
2 NAILS

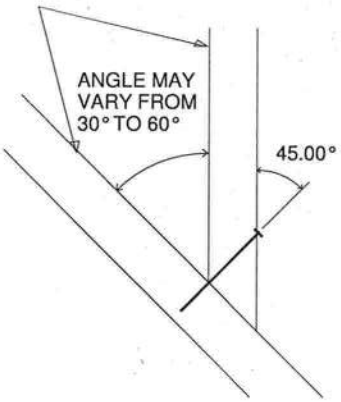


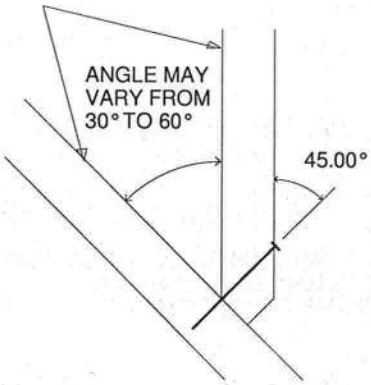
SIDE VIEW
(2x4)
3 NAILS

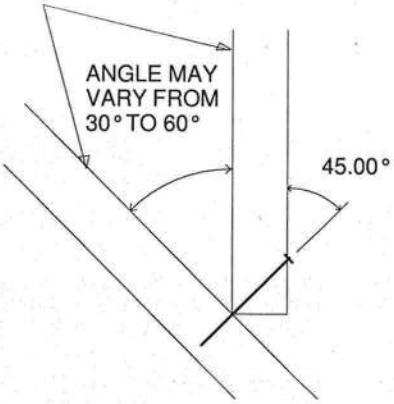


SIDE VIEW
(2x6)
4 NAILS









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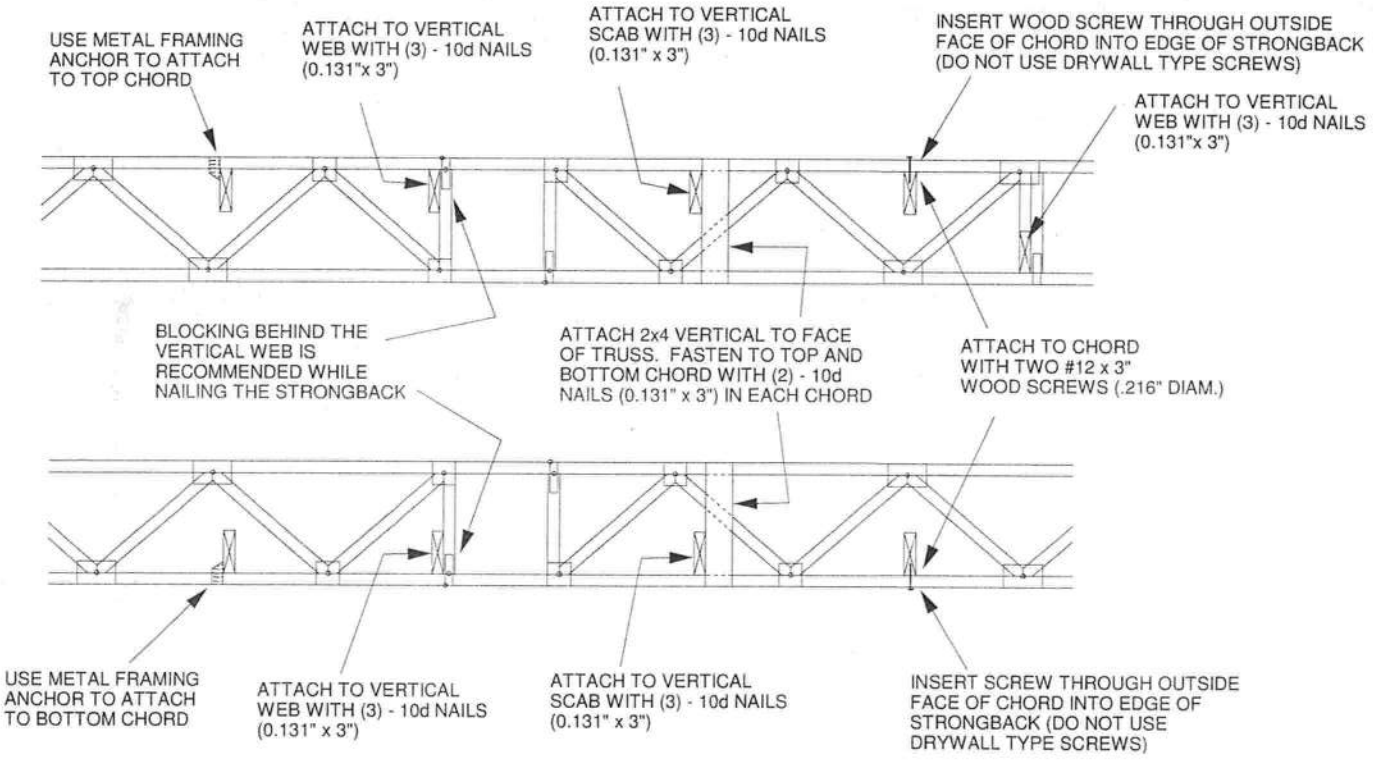
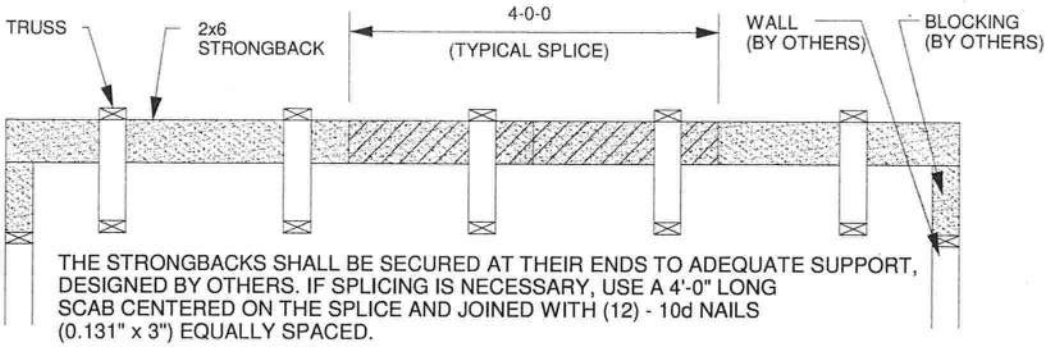
TO MINIMIZE VIBRATION COMMON TO ALL SHALLOW FRAMING SYSTEMS, 2x6 "STRONGBACK" IS RECOMMENDED, LOCATED EVERY 8 TO 10 FEET ALONG A FLOOR TRUSS.

NOTE 1: 2X6 STRONGBACK ORIENTED VERTICALLY MAY BE POSITIONED DIRECTLY UNDER THE TOP CHORD OR DIRECTLY ABOVE THE BOTTOM CHORD. SECURELY FASTENED TO THE TRUSS USING ANY OF THE METHODS ILLUSTRATED BELOW.

NOTE 2: STRONGBACK BRACING ALSO SATISFIES THE LATERAL BRACING REQUIREMENTS FOR THE BOTTOM CHORD OF THE TRUSS WHEN IT IS PLACED ON TOP OF THE BOTTOM CHORD, IS CONTINUOUS FROM END TO END, CONNECTED WITH A METHOD OTHER THAN METAL FRAMING ANCHOR, AND PROPERLY CONNECTED, BY OTHERS, AT THE ENDS.





THE STRONGBACKS SHALL BE SECURED AT THEIR ENDS TO ADEQUATE SUPPORT, DESIGNED BY OTHERS. IF SPLICING IS NECESSARY, USE A 4'-0" LONG SCAB CENTERED ON THE SPLICE AND JOINED WITH (12) - 10d NAILS (0.131" x 3") EQUALLY SPACED.

ALTERNATE METHOD OF SPLICING:
OVERLAP STRONGBACK MEMBERS A MINIMUM OF 4'-0" AND FASTEN WITH (12) - 10d NAILS (0.131" x 3") STAGGERED AND EQUALLY SPACED.
(TO BE USED ONLY WHEN STRONGBACK IS NOT ALIGNED WITH A VERTICAL)

FEBRUARY 14, 2012	STANDARD PIGGYBACK TRUSS CONNECTION DETAIL	ST-PIGGY-7-10

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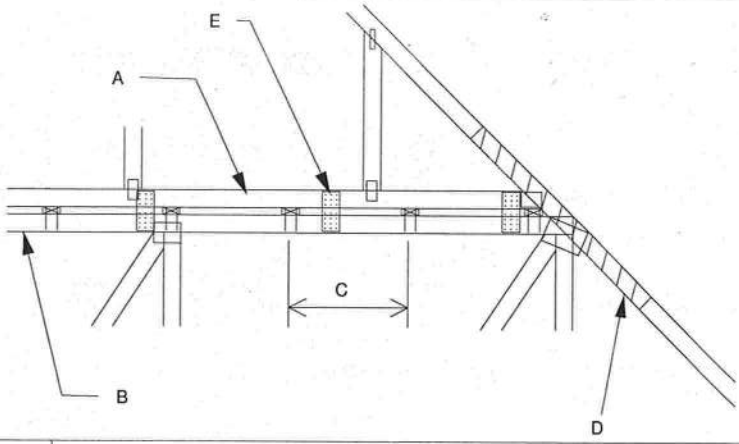
MAXIMUM WIND SPEED = REFER TO NOTES D AND OR E
MAX MEAN ROOF HEIGHT = 30 FEET
MAX TRUSS SPACING = 24 " O.C.
CATEGORY II BUILDING
EXPOSURE B or C
ASCE 7-10
DURATION OF LOAD INCREASE : 1.60

DETAIL IS NOT APPLICABLE FOR TRUSSES TRANSFERING DRAG LOADS (SHEAR TRUSSES). ADDITIONAL CONSIDERATIONS BY BUILDING ENGINEER/DESIGNER ARE REQUIRED.

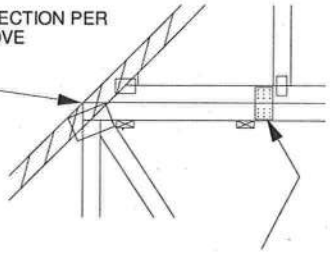
A - PIGGBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING. SHALL BE CONNECTED TO EACH PURLIN WITH (2) 0.131" X 3.5" TOE NAILED.
B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C. UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING. CONNECT TO BASE TRUSS WITH (2) 0.131" X 3.5" NAILS EACH.
D - 2 X __ X 4'-0" SCAB, SIZE AND GRADE TO MATCH TOP CHORD OF PIGGYBACK TRUSS, ATTACHED TO ONE FACE, CENTERED ON INTERSECTION, WITH (2) ROWS OF 0.131" X 3" NAILS @ 4" O.C. SCAB MAY BE OMITTED PROVIDED THE TOP CHORD SHEATHING IS CONTINUOUS OVER INTERSECTION AT LEAST 1 FT. IN BOTH DIRECTIONS AND:
1. WIND SPEED OF 115 MPH OR LESS FOR ANY PIGGYBACK SPAN, OR
2. WIND SPEED OF 116 MPH TO 160 MPH WITH A MAXIMUM PIGGYBACK SPAN OF 12 ft.
E - FOR WIND SPEEDS BETWEEN 126 AND 160 MPH, ATTACH MITEK 3X8 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT 72" O.C. W/ (4) 0.131" X 1.5" PER MEMBER. STAGGER NAILS FROM OPPOSING FACES. ENSURE 0.5" EDGE DISTANCE. (MIN. 2 PAIRS OF PLATES REQ. REGARDLESS OF SPAN)



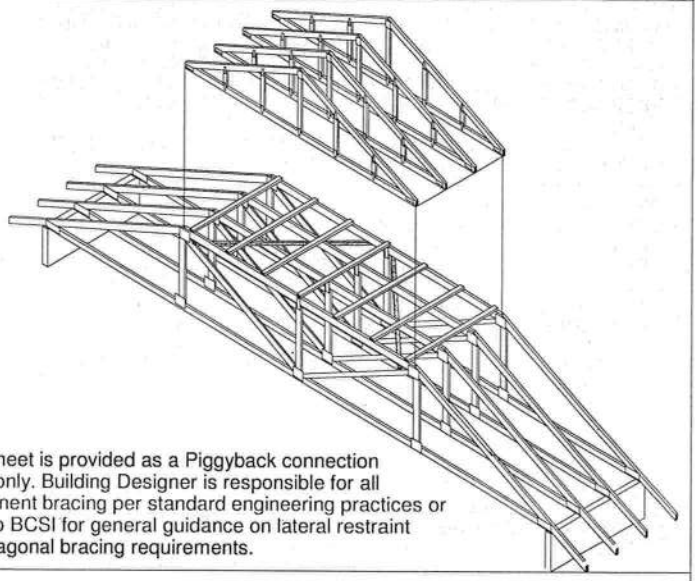
WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

REPLACE TOE NAILING OF PIGGYBACK TRUSS TO PURLINS WITH Nail-On PLATES AS SHOWN, AND INSTALL PURLINS TO BOTTOM EDGE OF BASE TRUSS TOP CHORD AT SPECIFIED SPACING SHOWN ON BASE TRUSS MITEK DESIGN DRAWING.

SCAB CONNECTION PER NOTE D ABOVE

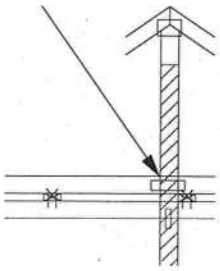


FOR ALL WIND SPEEDS, ATTACH MITEK 3X6 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT 48" O.C. W/ (4) 0.131" X 1.5" PER MEMBER. STAGGER NAILS FROM OPPOSING FACES ENSURE 0.5" EDGE DISTANCE.



This sheet is provided as a Piggyback connection detail only. Building Designer is responsible for all permanent bracing per standard engineering practices or refer to BCSI for general guidance on lateral restraint and diagonal bracing requirements.

VERTICAL WEB TO EXTEND THROUGH BOTTOM CHORD OF PIGGYBACK



FOR LARGE CONCENTRATED LOADS APPLIED TO CAP TRUSS REQUIRING A VERTICAL WEB:

1) VERTICAL WEBS OF PIGGYBACK AND BASE TRUSS MUST MATCH IN SIZE, GRADE, AND MUST LINE UP AS SHOWN IN DETAIL.
2) ATTACH 2 x ___ x 4'-0" SCAB TO EACH FACE OF TRUSS ASSEMBLY WITH 2 ROWS OF 10d (0.131" X 3") NAILS SPACED 4" O.C. FROM EACH FACE. (SIZE AND GRADE TO MATCH VERTICAL WEBS OF PIGGYBACK AND BASE TRUSS.) (MINIMUM 2X4)
3) THIS CONNECTION IS ONLY VALID FOR A MAXIMUM CONCENTRATED LOAD OF 4000 LBS (@1.15). REVIEW BY A QUALIFIED ENGINEER IS REQUIRED FOR LOADS GREATER THAN 4000 LBS.
4) FOR PIGGYBACK TRUSSES CARRYING GIRDER LOADS, NUMBER OF PLYS OF PIGGYBACK TRUSS TO MATCH BASE TRUSS.
5) CONCENTRATED LOAD MUST BE APPLIED TO BOTH THE PIGGYBACK AND THE BASE TRUSS DESIGN.

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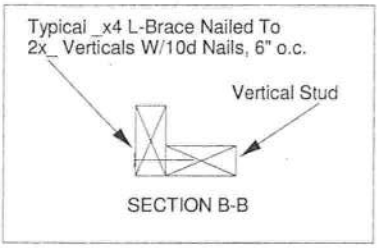
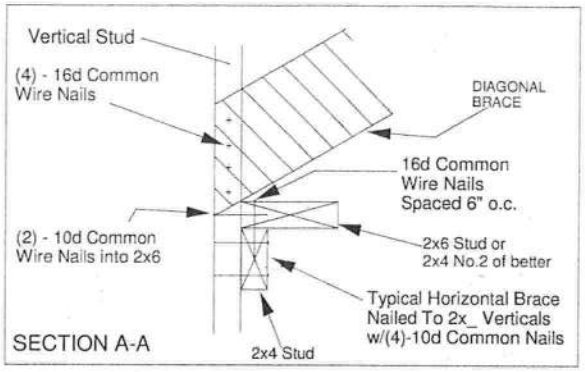
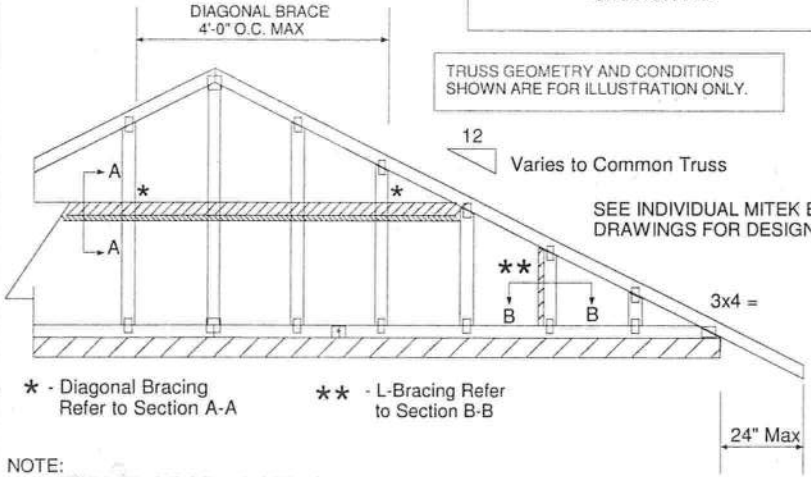






TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY.

12 Varies to Common Truss

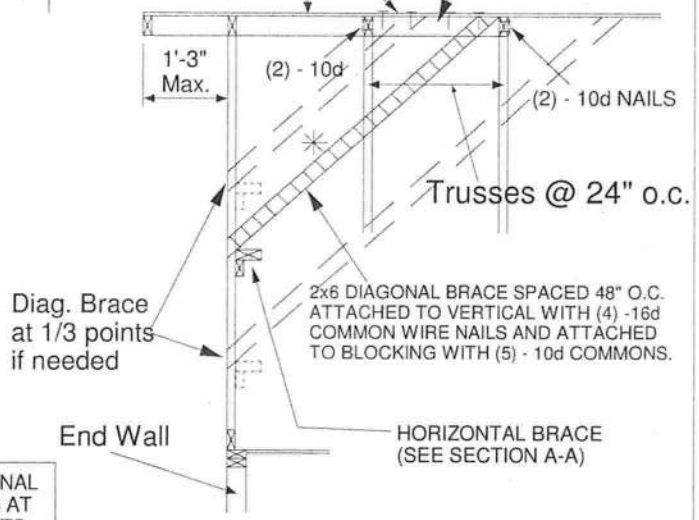
SEE INDIVIDUAL MITEK ENGINEERING DRAWINGS FOR DESIGN CRITERIA

PROVIDE 2x4 BLOCKING BETWEEN THE FIRST TWO TRUSSES AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d NAILS AT EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d COMMON WIRE NAILS.

(4) - 8d NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD SPF BLOCK

* - Diagonal Bracing Refer to Section A-A

** - L-Bracing Refer to Section B-B



NOTE:
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH. GRADES: 1x4 SRB OR 2x4 STUD OR BETTER WITH ONE ROW OF 10d NAILS SPACED 6" O.C.
5. DIAGONAL BRACE TO BE APPROXIMATELY 45 DEGREES TO ROOF DIAPHRAM AT 4'-0" O.C.
6. CONSTRUCT HORIZONTAL BRACE CONNECTING A 2x6 STUD AND A 2x4 STUD AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST STUD. ATTACH TO VERTICAL STUDS WITH (4) 10d NAILS THROUGH 2x4. (REFER TO SECTION A-A)
7. GABLE STUD DEFLECTION MEETS OR EXCEEDS L/240.
8. THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
9. DO NOT USE FLAT BOTTOM CHORD GABLES NEXT TO SCISSOR TYPE TRUSSES.

Minimum Stud Size Species and Grade	Stud Spacing	Without Brace	1x4 L-Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
		Maximum Stud Length				
2x4 SPF Std/Stud	12" O.C.	4-0-7	4-3-2	6-0-4	8-0-15	12-1-6
2x4 SPF Std/Stud	16" O.C.	3-7-0	3-8-4	5-2-10	7-1-15	10-8-15
2x4 SPF Std/Stud	24" O.C.	2-11-1	3-0-2	4-3-2	5-10-3	8-9-4

✳ Diagonal braces over 6'-3" require a 2x4 T-Brace attached to one edge. Diagonal braces over 12'-6" require 2x4 I-braces attached to both edges. Fasten T and I braces to narrow edge of web with 10d common wire nails 8in o.c., with 3in minimum end distance. Brace must cover 90% of diagonal length.

MAX MEAN ROOF HEIGHT = 30 FEET
CATEGORY II BUILDING
EXPOSURE B or C
ASCE 7-98, ASCE 7-02, ASCE 7-05 130 MPH
ASCE 7-10 160 MPH
DURATION OF LOAD INCREASE : 1.60

STUD DESIGN IS BASED ON COMPONENTS AND CLADDING.
CONNECTION OF BRACING IS BASED ON MWFRS.

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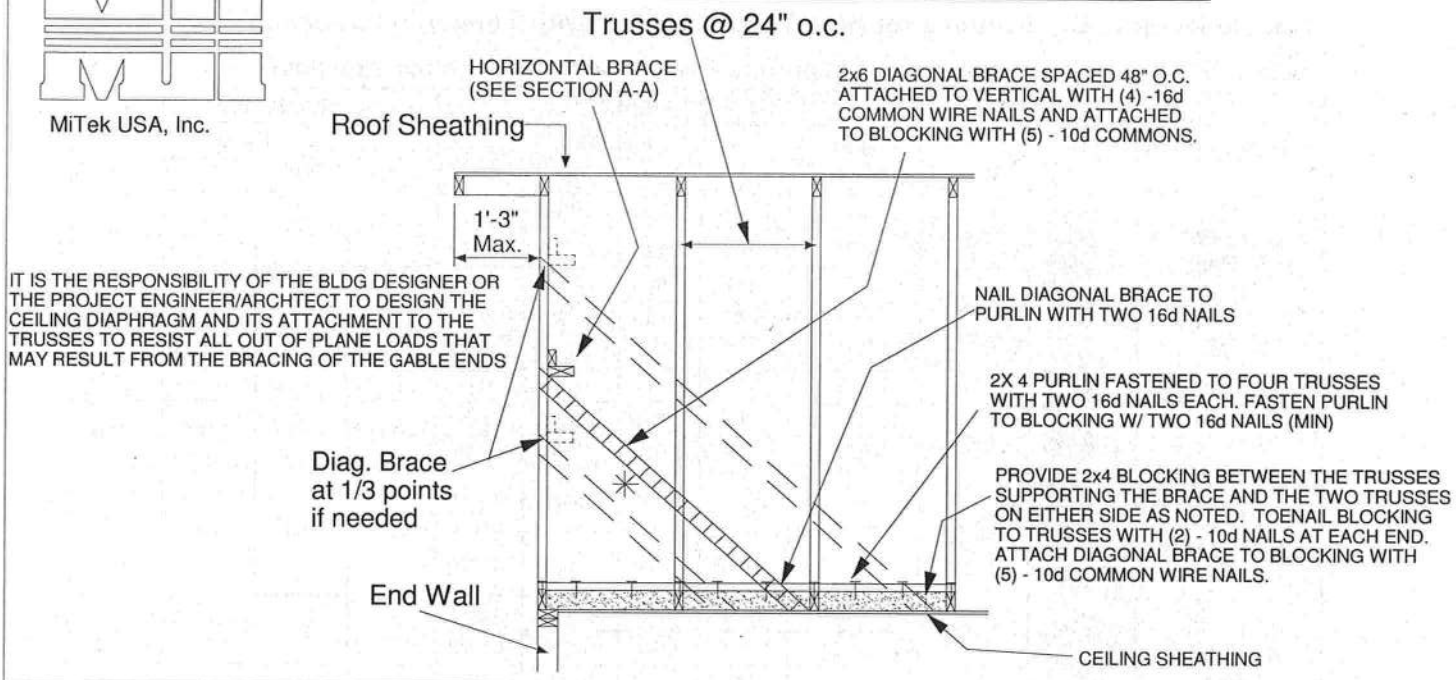
ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD



BRACING REQUIREMENTS FOR STRUCTURAL GABLE TRUSSES

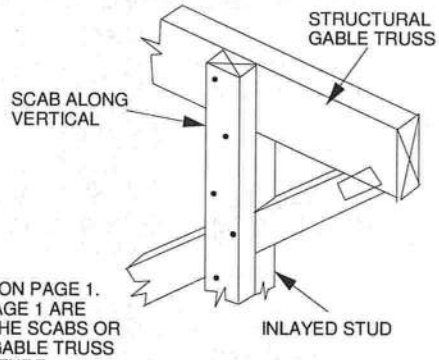
STRUCTURAL GABLE TRUSSES MAY BE BRACED AS NOTED:

METHOD 1 : ATTACH A MATCHING GABLE TRUSS TO THE INSIDE FACE OF THE STRUCTURAL GABLE AND FASTEN PER THE FOLLOWING NAILING SCHEDULE.

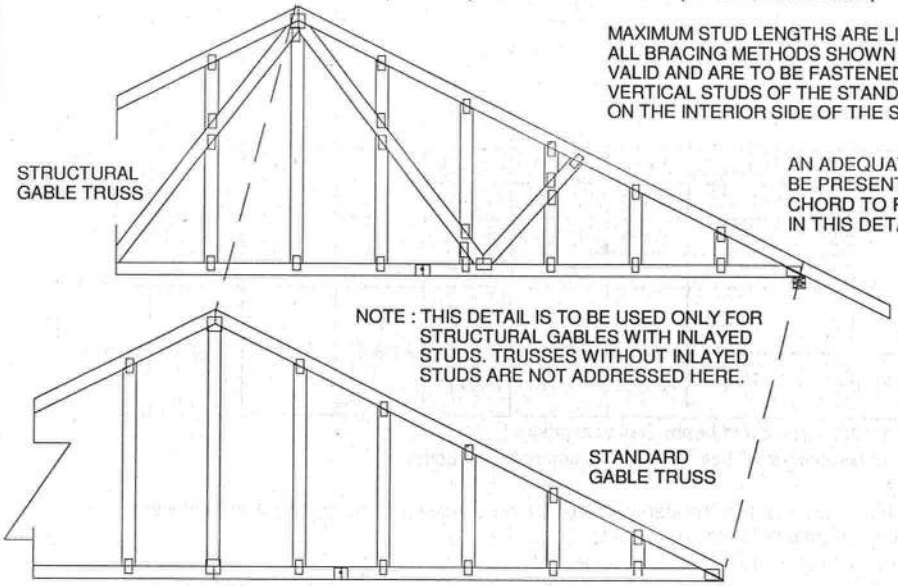
METHOD 2 : ATTACH 2X _ SCABS TO THE FACE OF EACH VERTICAL MEMBER ON THE STRUCTURAL GABLE PER THE FOLLOWING NAILING SCHEDULE. SCABS ARE TO BE OF THE SAME SIZE, GRADE AND SPECIES AS THE TRUSS VERTICALS

NAILING SCHEDULE:

- FOR WIND SPEEDS 120 MPH (ASCE 7-98, 02, 05), 150 MPH (ASCE 7-10) OR LESS, NAIL ALL MEMBERS WITH ONE ROW OF 10d (.131" X 3") NAILS SPACED 6" O.C.
- FOR WIND SPEEDS GREATER 120 MPH (ASCE 7-98, 02, 05), 150 MPH (ASCE 7-10) NAIL ALL MEMBERS WITH TWO ROWS OF 10d (.131" X 3") NAILS SPACED 6" O.C. (2X 4 STUDS MINIMUM)



MAXIMUM STUD LENGTHS ARE LISTED ON PAGE 1. ALL BRACING METHODS SHOWN ON PAGE 1 ARE VALID AND ARE TO BE FASTENED TO THE SCABS OR VERTICAL STUDS OF THE STANDARD GABLE TRUSS ON THE INTERIOR SIDE OF THE STRUCTURE.



AN ADEQUATE DIAPHRAGM OR OTHER METHOD OF BRACING MUST BE PRESENT TO PROVIDE FULL LATERAL SUPPORT OF THE BOTTOM CHORD TO RESIST ALL OUT OF PLANE LOADS. THE BRACING SHOWN IN THIS DETAIL IS FOR THE VERTICAL/STUDS ONLY.

NOTE : THIS DETAIL IS TO BE USED ONLY FOR STRUCTURAL GABLES WITH INLAYED STUDS. TRUSSES WITHOUT INLAYED STUDS ARE NOT ADDRESSED HERE.

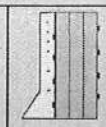
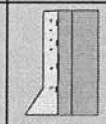
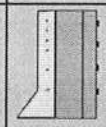
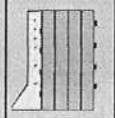
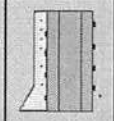
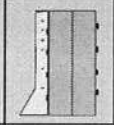
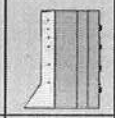
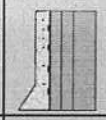
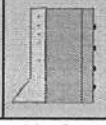
Multiple-Member Connections for Side-Loaded Beams with Concentrated Loads

Table 1: Maximum Concentrated Load Applied to Beam – Bolt or Nail Connection (lbs)[1]

Beam Configuration		Hanger Type	½"ø or ¾"ø Bolts[3][4]					16d (0.148" x 3¼") Nails			
			Bolt Diameter[2]	# Bolts				# Nails			
				2	4	6	8	6	12	18	24
3-ply 1¾" (5¼" Beam)		FACE	0.5	2,100	4,200	6,300	8,400	2,125[5]	4,250[5]	6,370[5]	8,495[5]
			0.75	3,060	6,120	9,180	12,240				
		TOP	0.5	760	1,525	2,285	3,050	1,060[6]	2,125[6]	3,185[6]	4,250[6]
			0.75	930	1,860	2,790	3,720				
3½"+1¾" (5¼" Beam)		FACE	---	---	---	---	---	---	---	---	---
			---	---	---	---	---				
		TOP	0.5	1,050	2,100	3,150	4,200	1,060	2,125	3,185	4,250
			0.75	1,530	3,060	4,590	6,120				
3½"+1¾" (5¼" Beam)		FACE / TOP	0.5	2,100	4,200	6,300	8,400	2,125[5]	4,250[5]	6,370[5]	8,495[5]
			0.75	3,060	6,120	9,180	12,240				
4-ply 1¾" (7" Beam)		FACE	0.5	1,400	2,800	4,200	5,600	---	---	---	---
			0.75	2,040	4,080	6,120	8,160				
		TOP	0.5	675	1,355	2,030	2,710	---	---	---	---
			0.75	825	1,655	2,480	3,305				
2-ply 1¾" + 3½" (7" Beam)		FACE	0.5	2,800	5,600	8,400	11,200	2,830[5]	5,665[5]	8,495[5]	11,330[5]
			0.75	5,025	10,050	15,070	20,095				
		TOP	0.5	935	1,865	2,800	3,735	945[6]	1,890[6]	2,830[6]	3,775[6]
			0.75	1,360	2,720	4,080	5,440				
2-ply 3½" (7" Beam)		FACE / TOP	0.5	1,720	3,440	5,160	6,880	---	---	---	---
			0.75	2,480	4,960	7,440	9,920				
2-ply 1¾" + 3½" (7" Beam)		FACE / TOP	0.5	1,015	2,030	3,050	4,065	---	---	---	---
			0.75	1,240	2,480	3,720	4,960				
2-ply 1¾" + 3½" (7" Beam)		FACE	0.5	1,720	3,440	5,160	6,880	---	---	---	---
			0.75	2,480	4,960	7,440	9,920				
		TOP	0.5	675	1,355	2,030	2,710	---	---	---	---
			0.75	825	1,655	2,480	3,305				
5¼" + 1¾" (7" Beam)		FACE / TOP	0.5	2,800	5,600	8,400	11,200	2,830[5]	5,665[5]	8,495[5]	11,330[5]
			0.75	5,025	10,050	15,070	20,095				

1. See page 4 for table General Notes, connection details and beam depth limitations.
2. Washers required. Bolt holes to be 9/16" maximum for ½" bolts, 13/16" maximum for ¾" bolts.
3. Minimum end distance for bolts is 6".
4. Drilling bolt holes reduces the section of the beam and thus the load capacity of the supporting member. Shear and moment capacity of the beam must be checked at the location of each row of bolts.
5. Number of required nails shown must be installed from side opposite hanger.
6. Number of required nails shown must be installed from hanger side. Additionally, install half the number of required nails from side opposite hanger.

Table 2A: Maximum Concentrated Load Applied to Beam – Wood Screw Connection (lbs)[1]

Beam Configuration		Hanger Type	Wood Screw Length	Fastener Type							
				USP WS				Simpson SDS			
				# Screws				# Screws			
				2	4	6	8	2	4	6	8
3-ply 1¾" (5¼" Beam)		FACE [3]	3½"	1,435	2,870	4,305	5,740	2,040	4,080	6,120	8,160
		TOP [2]	3½"	720	1,435	2,155	2,870	1,020	2,040	3,060	4,080
3½"+1¾" (5¼" Beam)		FACE	3½"	---	---	---	---	---	---	---	---
		TOP [4]	3½"	720	1,435	2,155	2,870	1,020	2,040	3,060	4,080
3½"+1¾" (5¼" Beam)		FACE / TOP [3]	3½"	1,435	2,870	4,305	5,740	2,040	4,080	6,120	8,160
4-ply 1¾" (7" Beam)		FACE [2]	6"[5]	1,055	2,110	3,165	4,220	1,360	2,720	4,080	5,440
		TOP [2]	6"[5]	705	1,405	2,110	2,810	905	1,815	2,720	3,625
2-ply 1¾" + 3½" (7" Beam)		FACE [3]	3½"	1,915	3,825	5,740	7,655	2,720	5,440	8,160	10,880
			6"[5]	2,110	4,220	6,325	8,435	2,720	5,440	8,160	10,880
		TOP [2]	3½"	640	1,275	1,915	2,550	905	1,815	2,720	3,625
			6"[5]	705	1,405	2,110	2,810	905	1,815	2,720	3,625
2-ply 3½" (7" Beam)		FACE / TOP [2]	6"[5]	1,055	2,110	3,165	4,220	930	1,860	2,785	3,715
2-ply 1¾" + 3½" (7" Beam)		FACE / TOP [3]	6"[5]	1,055	2,110	3,165	4,220	1,360	2,720	4,080	5,440
2-ply 1¾" + 3½" (7" Beam)		FACE[4]	6"[5]	1,055	2,110	3,165	4,220	930	1,860	2,785	3,715
		TOP[4]	6"[5]	705	1,405	2,110	2,810	905	1,815	2,720	3,625
5¼" + 1¾" (7" Beam)		FACE / TOP [3]	3½"	1,915	3,825	5,740	7,655	2,720	5,440	8,160	10,880

1. See page 4 for table General Notes, connection details and beam depth limitations.
2. Install screws from both sides of beam.
3. Install screws from side opposite hanger only.
4. Install screws from hanger side only.
5. 6" SDS or WS screws can be used with Parallam® PSL and Microllam® LVL, but are not recommended for TimberStrand® LSL.

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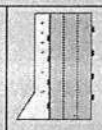
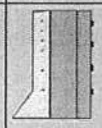
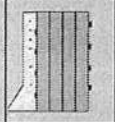
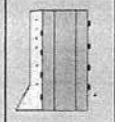
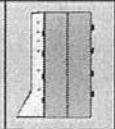
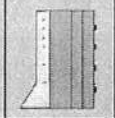
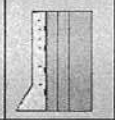
Table 2B: Maximum Concentrated Load Applied to Beam – Wood Screw Connection (lbs)[1]

Beam Configuration		Hanger Type	Wood Screw Length	Connection Name: TrussLok, # Screws: 2	4	6	8
3-ply 1¾" (5¼" Beam)		FACE [3]	3⅜"	1,600	3,205	4,805	6,410
		TOP [2]	3⅜"	800	1,600	2,405	3,205
3½"+1¾" (5¼" Beam)		FACE	3⅜"	---	---	---	---
		TOP [4]	3⅜"	800	1,600	2,405	3,205
3½"+1¾" (5¼" Beam)		FACE / TOP [3]	3⅜"	1,600	3,205	4,805	6,410
4-ply 1¾" (7" Beam)		FACE [2]	5", 6¾"	1,160	2,320	3,480	4,640
		TOP [2]	5", 6¾"	775	1,545	2,320	3,095
2-ply 1¾" + 3½" (7" Beam)		FACE [3]	3⅜"	2,135	4,270	6,410	8,545
			5", 6¾"	2,320	4,640	6,960	9,280
		TOP [2]	3⅜"	710	1,425	2,135	2,850
			5", 6¾"	775	1,545	2,320	3,095
2-ply 3½" (7" Beam)		FACE / TOP [2]	5", 6¾"	1,160	2,320	3,480	4,640
2-ply 1¾" + 3½" (7" Beam)		FACE / TOP [3]	5", 6¾"	1,160	2,320	3,480	4,640
2-ply 1¾" + 3½" (7" Beam)		FACE[4]	5", 6¾"	1,160	2,320	3,480	4,640
		TOP [4]	5", 6¾"	1,160	2,320	3,480	4,640
5¼" + 1¾" (7" Beam)		FACE / TOP [3]	5", 6¾"	2,320	4,640	6,960	9,280

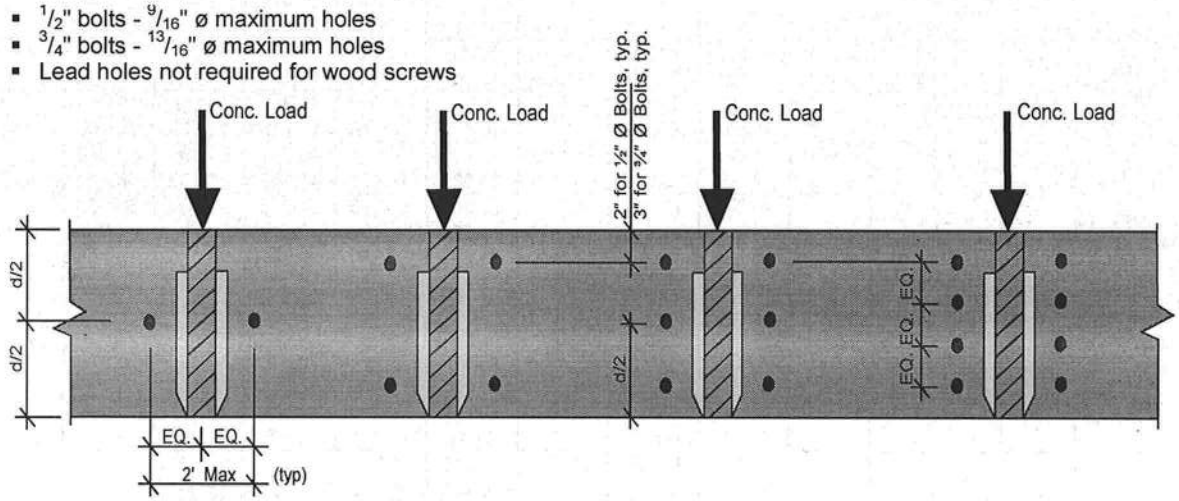
1. See page 4 for table General Notes, connection details and beam depth limitations.
2. Install screws from both sides of beam.
3. Install screws from side opposite hanger only.
4. Install screws from hanger side only.

Table 1, 2A, 2B General Notes

- Connections are based on NDS® 2005 or manufacturer's code report.
- All plies must be the same material and grade.
- Values are for 100% duration of load. Increase 15% for snow load or 25% for non-snow roof load conditions, where code allows.
- Rotational effects should be considered for 7" wide beams loaded from one side only.
- Capacities shown for face mount hanger conditions are based on 16d common (0.162" x 3½") nails installed in the hanger. Other nails used for face mount hanger installations invalidate the capacities in these tables.
- Verify adequacy of beam with all loads applied by using iLevel software or other methods.
- See the iLevel Trus Joist® Beams, Headers, and Columns Specifier's Guide (#TJ-9000) for required connections for uniform side loads.

Bolt or Wood Screw Connection Details

- $^{1}/_{2}$" bolts - $^{9}/_{16}$" ø maximum holes
- $^{3}/_{4}$" bolts - $^{13}/_{16}$" ø maximum holes
- Lead holes not required for wood screws



2 Fastener Pattern

4 Fastener Pattern
Min. Beam Depth:
d = 7¼" for ½" ø bolts
d = 9¼" for ¾" ø bolts

6 Fastener Pattern
Min. Beam Depth:
d = 9¼" for ½" ø bolts
d = 14" for ¾" ø bolts

8 Fastener Pattern
Min. Beam Depth:
d = 11¼" for ½" ø bolts
d = 16" for ¾" ø bolts

Nailed Connection Detail

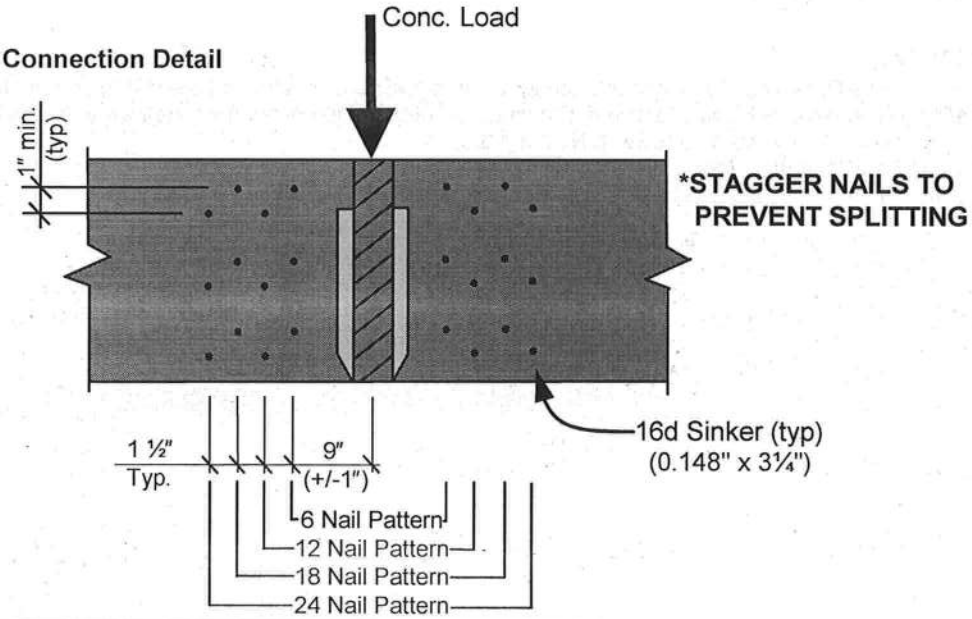


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Table 3: Allowable Capacities of 5¼" Beams with Bolt Connections

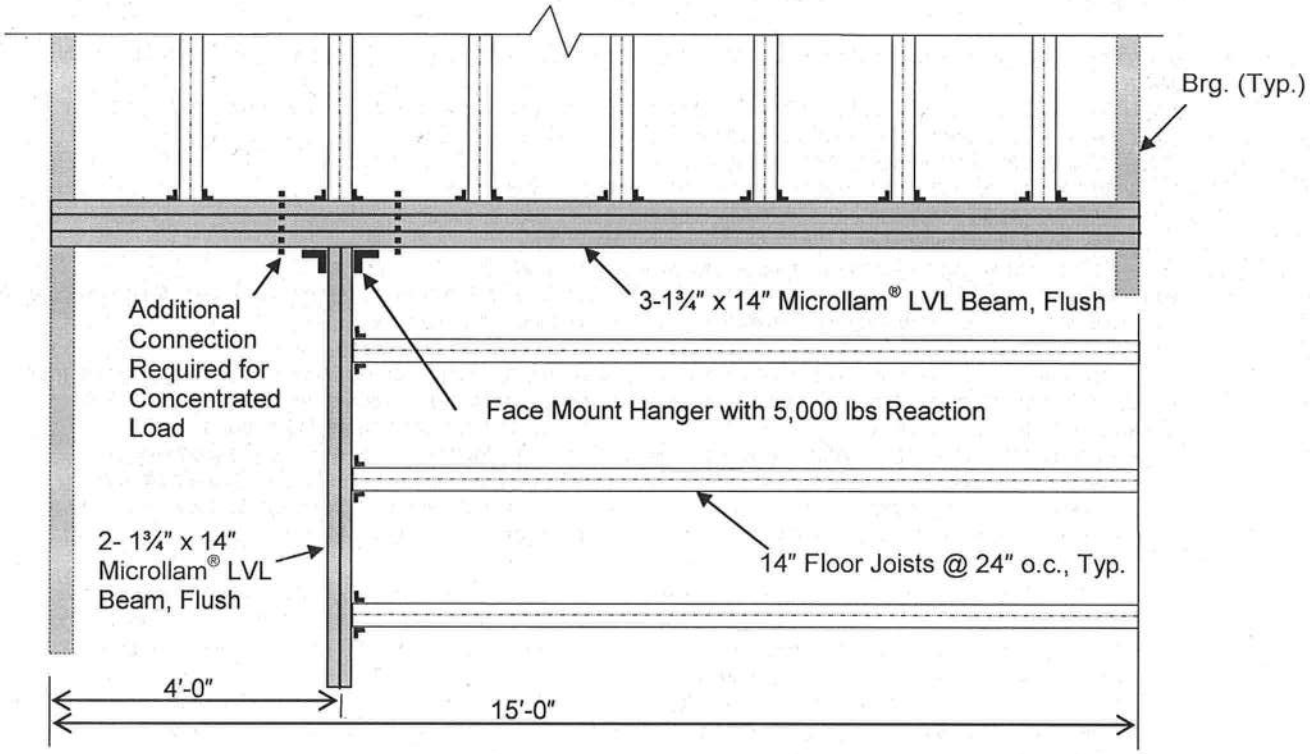
		Bolt Dia.	Conn. Loc.	Beam Depth									
				7¼"	9¼"	9½"	11¼"	11⅞"	14"	16"	18"	20"	24"
TimberStrand® LSL	Max Shear (lbs)	½"	< 5d		6,235	6,545	8,755	9,560	12,345	15,005			
			≥ 5d		10,150	10,500	12,950	13,825	16,800	19,600			
		¾"	< 5d		3,995	4,260	6,210	6,940	9,510	12,015			
			≥ 5d		8,750	9,100	11,550	12,425	15,400	18,200			
	Max Moment (ft-lb)	½"	2		10,605	15,295	15,685	23,905	32,760	42,265			
			4		9,355	13,470	13,730	20,915	28,725	37,250			
			6		9,350	13,470	13,730	20,910	28,725	37,245			
			8				13,510	20,575	28,275	36,685			
		¾"	2		10,600	15,290	15,685	23,900	32,755	42,260			
			4		9,900	14,215	14,195	21,490	29,020	37,225			
			6						29,015	37,220			
			8							36,655			
Microllam® LVL	Max Shear (lbs)	½"	< 5d	2,745	4,445	4,665	6,240	6,810	8,795	10,690	12,610	14,545	18,440
			≥ 5d	5,235	7,230	7,480	9,225	9,850	11,970	13,965	15,960	17,955	21,945
		¾"	< 5d	1,455	2,845	3,035	4,425	4,945	6,775	8,560	10,390	12,250	16,040
			≥ 5d	4,240	6,235	6,485	8,230	8,855	10,975	12,970	14,965	16,960	20,950
	Max Moment (ft-lb)	½"	2	9,960	16,220	17,105	23,990	26,730	36,385	46,670	58,130	70,740	99,375
			4	9,025	14,305	15,065	21,000	23,385	31,905	41,130	51,535	63,100	89,670
			6		14,305	15,060	20,995	23,385	31,905	41,125	51,530	63,100	89,670
			8				20,660	23,010	31,405	40,510	50,795	62,250	88590
		¾"	2	9,950	16,210	17,100	23,985	26,725	36,380	46,665	58,125	70,740	99,370
			4		15,145	15,895	21,710	24,030	32,235	41,105	51,120	62,285	88,015
			6						32,230	41,100	51,115	62,280	88,010
			8							40,475	50,335	61,335	86,745
Parallam® PSL	Max Shear (lbs)	½"	< 5d		4,520	4,745	6,350	6,930	8,950	10,880	12,830		
			≥ 5d		7,360	7,615	9,390	10,025	12,180	14,210	16,240		
		¾"	< 5d		2,895	3,090	4,505	5,030	6,895	8,710	10,575		
			≥ 5d		6,345	6,600	8,375	9,010	11,165	13,195	15,225		
	Max Moment (ft-lb)	½"	2		18,090	19,080	26,760	29,815	40,740	52,430	65,495		
			4		15,960	16,805	23,420	26,085	35,725	46,205	58,065		
			6		15,955	16,800	23,420	26,080	35,725	46,205	58,060		
			8				23,045	25,665	35,165	45,510	57,235		
		¾"	2		18,080	19,070	26,755	29,810	40,735	52,425	65,490		
			4		16,890	17,730	24,215	26,805	36,095	46,180	57,600		
			6						36,085	46,170	57,595		
			8							45,470	56,715		

Table 3 General Notes

- Connection location refers to distance from face of bearing to centerline of connection, where d is the beam depth. Less than 5d refers to connections located less than five times the depth of the beam from the face of bearing.
- Shear reduction has been taken in accordance with NDS 3.4.3.3.
- All values shown are for 5¼" widths. Multiply by 1.33 for 7" wide beams.
- 9¼" and 11¼" TimberStrand® LSL are 1.3E grade, all other depths are 1.55E grade.

Connection Design Example

Given the floor framing shown below, specify the necessary connections for the a 3-ply Microllam® LVL beam supporting a 2-ply Microllam® LVL beam on one side and floor joists from the other side. The floor joists apply a 500 plf load to the side of the beam while the 2-ply beam reaction is 5,000 lbs. See the following page for the solution.



Partial Framing Plan

Solution:

- Use the iLevel Trus Joist® Beams, Headers, and Columns Specifier's Guide (#TJ-9000) to select a connection for the uniform loading. Multiple options exist that meets or exceed the 500 plf requirement:
  - 2 rows of ½" diameter bolts at 16" on-center (570 plf)
  - 2 rows of USP WS35 wood screws at 16" on-center (540 plf) on each side of beam
  - 2 rows of SDS ¼" x 3½" at 24" on-center (510 plf) on each side of beam
  - 2 rows of 5" TrussLok wood screws at 24" on-center (500 plf)

- Determine what additional connection is needed for the concentrated load using the information in this Technical Bulletin:
  1. Using Table 1, 2A or 2B of this bulletin, locate the section for a 3-ply 1¾" member and face mount hanger. Again, multiple options exist that exceed the 5,000 lb load requirement:
     - ½" diameter bolts in a 6-bolt connection (6,300 lbs)
     - 16d (0.148" x 3¼") sinker nails in an 18-nail connection (6,370 lbs)
     - 3½" WS wood screws in an 8-screw connection (5,740 lbs)
     - 3½" SDS wood screws in a 6-screw connection (6,120 lbs)
     - 3⅜" TrussLok wood screws in an 8-screw connection (6,410 lbs)

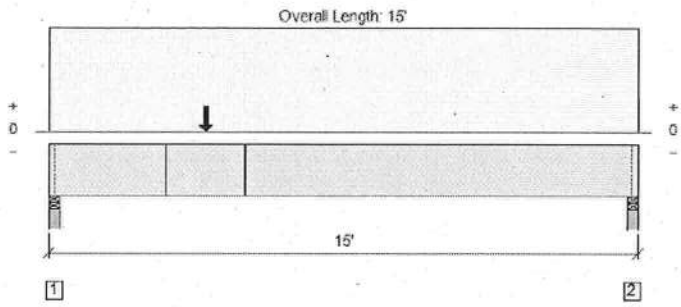
     Note that the allowable applied concentrated load is dependent upon the type of hanger used and 16d common nails must be used for face mount hanger installation to achieve the capacities shown.

  2. If the bolted connection option is chosen, the 3-ply beam must be checked for the effect of the bolt holes from the 6-bolt connection. This task may be accomplished by utilizing the location analysis feature in iLevel software. Per the detail on page 4, the bolt holes will be located approximately 1' to either side of the concentrated load location. After inputting the span and load information, choose the two locations corresponding to the concentrated load location (+/-) 1'. Upon completion of the analysis, compare the calculated shear and moment for each of the two locations against the reduced allowable shear and moment capacities of the beam for the bolt pattern selected using Table 3 on page 5 of this bulletin.

     See the Forte® software output on the following page for results of this analysis. The 3-ply Microllam® LVL beam works for the given loading. Refer to the highlighted values for the results at both bolt locations (1' on either side of the load). The highest calculated shear at either location is 6035 lbs. The highest calculated moment is 25,215 ft-lbs. The connection is less than 5d (48" < 14" * 5 = 70") from the end of the member. From Table 3 of this bulletin, the reduced allowable shear for the 3-ply 14" Microllam® LVL beam with the 6 bolt pattern located less than 5d from the end of the member is 8,795 lbs while the reduced allowable moment is 31,905 ft-lbs. Therefore, the beam is acceptable with the 6 bolt connection.

- Select the preferred options for both the uniform load connection along the length of the beam and the concentrated load connection at the hanger location and specify both on the drawings including information on fastener type, size, spacing and installation pattern as appropriate.

3 PIECE(S) 1 3/4" x 14" 1.9E Microllam® LVL PASSED



All Dimensions are Horizontal; Drawing is Conceptual

Design Results	Actual @ Location	Allowed	Result	LDF
Member Reaction (lbs)	7595 @ 2"	7809	Passed (97%)	--
Shear (lbs)	6837 @ 1' 5 1/2"	13965	Passed (49%)	1.0
Moment (Ft-lbs)	25215 @ 4' 11 7/8"	36387	Passed (69%)	1.0
Live Load Defl. (in)	0.356 @ 7' 1 13/16"	0.489	Passed (L/494)	--
Total Load Defl. (in)	0.456 @ 7' 1 7/8"	0.733	Passed (L/386)	--

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Design results assume a fully braced condition where all compression edges (top and bottom) are properly braced to provide lateral stability.
- Bracing (Lu): All compression edges (top and bottom) must be braced at 13' 15/16" o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.

Supports	Total Bearing	Available Bearing	Required Bearing	Support Reactions (lbs) Dead / Floor / Roof / Snow	Accessories
1 - Stud wall - Spruce Pine Fir	3.50"	3.50"	3.40"	1641 / 5955 / 0 / 0	Blocking
2 - Stud wall - Spruce Pine Fir	3.50"	3.50"	2.33"	1164 / 4045 / 0 / 0	Blocking

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Roof Live (non-snow: 1.25)	Snow (1.15)	Comments
1 - Uniform(PSF)	0 to 15'	1'	100.0	400.0	0.0	0.0	10' Floor
2 - Point(lb)	4'	N/A	1000	4000	0	0	

Location Analysis	Shear (lbs) Actual / Allowed / LDF	Moment (Ft – lbs) Actual / Allowed / LDF	Comments
1 - 3'	6035 / 13965 / 1.0	19186 / 36387 / 1.0	BOLTS LEFT OF HANGER
2 - 5'	39 / 12569 / 0.9	25215 / 36387 / 1.0	BOLTS RIGHT OF HANGER

Forte™ Software Operator	Job Notes

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Page 1 of 1

Alternative Fall Protection Plans – Planes

After conducting a JHA, if the qualified person is able to demonstrate that conventional fall protection measures are infeasible (3) or present a greater hazard (4) to a particular worker or the entire crew, an employer may implement a written alternative fall protection plan in compliance with residential construction fall protection under 29 CFR 1926.501(b)(13).

The fall protection plan's alternative measures must apply to sufficiently trained and experienced workers (5), and the plan must meet the requirements of 29 CFR 1926.502(k) and be site-specific. The use of alternative measures shall be used in conjunction with conventional fall protection systems (6), and the use of alternative methods shall be as limited as possible.

Ground Assembly

Pre-assemble a truss system on the ground. Fully laterally restrain and diagonally brace, per **BCSI-B1*** and **BCSI-B2**,* the bottom chord and web member planes .Completely brace, per **BCSI-B1*** and **BCSI-B2**,* or sheath the top chord plane, for adequate stability. Lift and set in place. This pre-assembled section may then be used as an attachment point for personal fall restraint anchorage.

Definitions

(1) Under 29 CFR 1926.503(a)(2), a qualified person is one who should have knowledge, and be able to provide training to others, in the following areas: "the nature of fall hazards in the work area; the correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used; the use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, controlled access zones, and other protection to be used; the role of each employee in the safety monitoring system when this system is used; the limitations on the use of mechanical equipment during the performance of roofing work on low-sloped roofs; the correct procedures for the handling and storage of equipment and materials and the erection of overhead protection; and, the role of employees in fall protection plans."
(2) Commentary E5.4.2.2 of ANSI/ASSE Z359.2-2007 states, "The impact of fall forces on beams, columns and their supports other than anchorages are not addressed by this standard."
(3) Under 29 CFR 1926.500(b), infeasible means "that it is impossible to perform the construction work using a conventional fall protection system (i.e., guardrail system, safety net system, or personal fall arrest system) or that it is technologically impossible to use any one of these systems to provide fall protection."
(4) 29 CFR 1926.501(b)(2)(i) states, "there is a presumption that it is feasible and will not create a greater hazard to implement at least one of the [listed] fall protection systems. Accordingly, the employer has the burden of establishing that it is appropriate to implement a fall protection plan which complies with 1926.502(k) for a particular workplace situation, in lieu of implementing any of those systems."
(5) 29 CFR 1926.503(a)(1) states, "the employer program shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to be followed in order to minimize these hazards.
(6) Under 29 CFR 1926.500(b), conventional fall protection systems are: "guardrail system, safety net system, or personal fall arrest system."

Alternativos de Protección Contra Caídas

Después de realizar una evaluación JHA, si la persona calificada es capaz de demostrar que las medidas convencionales de protección contra caídas son irrealizables (3) o presentan un mayor peligro (4) para un trabajador en particular o la cuadrilla entera, un empleador puede implementar un plan de protección contra caídas alternativo por escrito en cumplimiento con 29 CFR 1926.501(b)(13) para protección contra caídas en construcción residencial.

Las medidas alternativas del plan de protección contra caídas deberán aplicarse a trabajadores suficientemente capacitados y experimentados (5), y el plan deberá cumplir los requisitos de 29 CFR 1926.502(k) y ser específicas para cada sitio. El uso de medidas alternativas se utilizará en conjunción con sistemas de protección contra caídas (6), y el uso de métodos alternativos será lo más limitado posible.

Montaje en el terreno

*Realice el montaje previo de un sistema de entramado en el terreno. Restrinja lateralmente por completo y apuntale diagonalmente la cuerda inferior y los planos de la pieza de enrejado según **BCSI-B1*** y **BCSI-B2**.* Apuntale completamente, según **BCSI-B1*** y **BCSI-B2**.* o forre el plano de la cuerda superior, para conseguir la estabilidad adecuada. Alce y establezca en su lugar. Esta sección previamente montada puede utilizarse entonces como un punto de acoplamiento para anclaje de restricción personal contra caídas.*

Definiciones

(1) Bajo 29 CFR 1926.503(a)(2), una persona calificada es aquella que debe tener conocimientos y aptitud para proporcionar capacitación a otros, en las áreas siguientes: "la naturaleza de los peligros de caída en el área de trabajo; los procedimientos correctos para levantar, mantener, desmontar e inspeccionar los sistemas de protección contra caídas a utilizarse; el uso y la operación de sistemas de rampas de protección, sistemas personales para detención de caídas, sistemas de redes de seguridad, sistemas de líneas de advertencias, sistemas de monitoreo de seguridad, zonas de acceso controlado y otra protección a utilizarse; la función de cada empleado en el sistema de monitoreo de seguridad cuando se utilice este sistema; las limitaciones sobre el uso de equipos mecánicos durante la realización de trabajo en tejados de baja pendiente; los procedimientos correctos para el manejo y almacenamiento de equipo y materiales, y la construcción de protección superior; y la función de los empleados en planes de protección contra caídas".
(2) El comentario E5.4.2.2 de ANSI/ASSE Z359.2-2007 establece, "El impacto de las fuerzas de caída sobre vigas, columnas y sus soportes que no sean anclajes no se tratan en esta norma".
(3) Según 29 CFR 1926.500(b), irrealizable significa "que es imposible llevar a cabo el trabajo de construcción usando un sistema convencional de protección contra caídas (por ejemplo, sistemas de rampas de protección, sistema de red de seguridad o sistema de protección personal para detención de caídas), o que es tecnológicamente imposible usar cualquiera de estos sistemas para proporcionar protección contra caídas".
(4) 29 CFR 1926.501(b)(2)(i) establece que, "hay una suposición de que es realizable y que no se creará un peligro mayor al implementar al menos uno de los sistemas de protección contra caídas [indicados]. Por consiguiente, el empleador tiene la responsabilidad de establecer que es apropiado implementar un plan de protección contra caídas que se adhiera a 1926.502(k) para una situación particular en el lugar de trabajo, en lugar de implementar cualquiera de esos sistemas".
(5) 29 CFR 1926.503(a)(1) establece que "el programa del empleador permitirá a cada empleado poder reconocer los peligros de caídas y capacitará a cada empleado en los procedimientos a seguir para minimizar estos peligros".
(6) Según 29 CFR 1926.500(b), los sistemas convencionales de protección contra caídas son: "sistema de rampas de protección, sistema de red de seguridad o sistema de protección personal para detención de caídas".

***Contact the component manufacturer for more information or consult a Professional Engineer for assistance.**

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To view a non-printing PDF of this document, visit sbcindustry.com/b11.

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B11 Fall Protection & Trusses
Protección de Caída y Trusses

Regulations on fall protection and erection/installation of trusses in residential construction are contained in OSHA's Fall Protection Standard, 29 CFR 1926 Subpart M(the Standard). Section 1926.501(b)(13) of the Standard states in part: "Each employee engaged in residential construction activities 6 feet or more above lower levels shall be protected by guardrail systems, scaffolding, a safety net system or a personal fall arrest system."

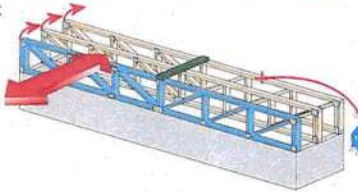
Las regulaciones sobre protección contra caídas y levantamiento/instalación de entramados en construcción residencial vienen contenidos en la Regulación de Protección contra Caídas de OSHA, 29 CFR 1926 Subparte M (el Estándar). La sección 1926.501(b)(13) de la regulación establece en parte: "Cada empleado que participe en actividades de construcción residencial a 6 pies o más por encima de niveles inferiores deberán estar protegidos por sistemas de rampas de protección, andamiaje, un sistema de red de seguridad o un sistema de protección personal para detención de caídas."

SBCA has created an alternate fall protection plan template, complete with links throughout the document to the applicable steps to follow in its online step-by-step approach to erecting an initial truss system under OSHA's fall protection requirements. Visit sbcindustry.com/fp

Truss Systems

⚠ **DANGER** Any part of an inadequately braced or sheathed roof or floor truss system used as an anchorage point for any type of personal fall arrest system is dangerous and will increase the risk of serious injury or death.

⚠ **WARNING** Roof and floor trusses that are not properly braced per BCSI or sheathed are not able to resist lateral impact loads associated with falls. A falling worker attached to an inadequately braced set of trusses could cause all the previously set trusses to collapse in a domino effect.



☑ Refer to **BCSI-B1*** and **BCSI-B2** for recommendations on proper bracing of trusses.

☑ Refer to **BCSI-B1*** for recommendations on proper hoisting of trusses.

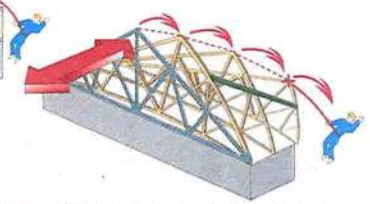
⚠ **DANGER** Do not walk on unbraced trusses.

⚠ **DANGER** Do not stand on Truss overhangs until Structural Sheathing has been applied to the Truss and overhangs.

Sistemas de Entramama

***¡PELIGRO!** Cualquier pieza de un sistema de entramado de techo o el piso apuntalado o forrado de forma inadecuada que se utilice como punto de anclaje para cualquier tipo de sistema de protección personal para detención de caídas es peligroso y aumentará el riesgo de lesiones personales de gravedad o la muerte.*

***¡ADVERTENCIA!** Los entramados de techo y piso que no están correctamente apuntalados según BCSI o forrados no pueden resistir cargas de impacto lateral asociadas con caídas. Un trabajador que sufra una caída y que esté acoplado a un conjunto de entramados que no estén apuntalados adecuadamente podría provocar que los entramados fijados previamente se colapsen con un efecto dominó.*



*Consulte **BCSI-B1*** sobre recomendaciones para levantar correcto de los entramados.*

***¡PELIGRO!** No camine sobre entramados no apuntalados.*

***¡PELIGRO!** No se pare en el braguero voladizos hasta revestimiento estructural se ha aplicado a la armadura y voladizos.*

B11Fall 150722

DANGER Do not walk on trusses or gable end frames lying flat, they do not have the structural strength to support a worker safely while oriented flat.

¡PELIGRO! *No camine sobre entramados ni estructuras de muro piñón dispuestos horizontalmente ya que no poseen la resistencia estructural para poder soportar a un trabajador con seguridad con orientación horizontal.*

Site-Specific Job Hazard Assessment

Fall protection and safety measures are jobsite and building specific. The appropriate fall protection method must be determined through a site-specific job hazard assessment (JHA) conducted by a qualified person (1) who can design, install, and use fall protection systems and is authorized to correct any problems. The JHA is intended to assist in identifying risks and identify the least hazardous way to install trusses for a particular job.

Fall hazards identified in the JHA shall be addressed with conventional methods whenever possible, including: guardrails, scaffolding, safety nets, personal fall arrest systems or catch platforms.

Employers must consider whether it is safer to design and install a safe work platform/system around a hazard.

WARNING All fall protection solutions come with their own inherent hazards during use.

CAUTION Addressing fall protection hazards may be obvious, but other hazards must also be considered when choosing the appropriate site-specific fall protection systems. This includes:

1. electrical hazards, including power lines;
2. projectile hazards while using pneumatic nail guns;
3. tripping hazards from cords and bracing materials; and,
4. lower level hazards, such as wall bracing, which some fall protection systems do not protect against.

Evaluación de Peligros de Trabajos en Sitios Específicos

La protección contra caídas y las medidas de seguridad son específicas para cada sitio de trabajo o edificio. El método apropiado para la protección contra caídas deberá determinarse siguiendo una evaluación de peligros en el trabajo (JHA) específicos, realizados por una persona que esté calificada (1) que pueda diseñar, instalar y utilizar sistemas de protección para caídas, y que esté autorizada para corregir cualquier problema. La JHA tiene el propósito de ayudar en la detección de riesgos e identificar la forma menos peligrosa para instalar entramados para un trabajo en particular.

Los peligros sobre de caídas identificados en la JHA serán tratados con métodos convencionales cuando sea posible como, por ejemplo: rampas de protección, andamiaje, redes de seguridad, sistema de protección personal para detención de caídas o plataformas de agarre.

Los empleados deberán considerar si es seguro diseñar e instalar una plataforma/sistema de trabajo seguro alrededor de un peligro.

¡ADVERTENCIA! *Todas las soluciones de protección contra caídas vienen con sus propios peligros durante el uso*

¡CAUCIÓN! *La solución de peligros para la protección contra caídas puede ser obvia, pero deberán considerarse otros peligros al al elegir los sistemas de protección contra caídas apropiados para un sitio específico. Esto incluye:*

1. *peligros de carácter eléctrico, como líneas de conducción eléctrica;*
2. *peligros de objetos lanzados violentamente por el uso de engrapadoras neumáticas tipo pistola;*
3. *peligros de tropiezos por cables y materiales de apunta lamiento; y,*
4. *peligros de niveles bajos, como un apuntalamiento de pared, contra lo que no protegen los sistemas de protección contra caídas.*

FALL PROTECTION & TRUSSES

Fall Protection Equipment Installation

DANGER Individual trusses alone are NOT designed to SUPPORT fall protection equipment.

The Contractor is responsible for the construction means, methods, techniques, sequences, procedures, programs, and safety in connection with the receipt, storage, handling, installation, restraining, and bracing of trusses.

☑ Refer to ANSI/ASSE Z359.2-2007, Minimum Requirements for a Comprehensive Managed Fall Protection Program, for guidance in meeting minimum fall protection equipment installation and use requirements. This standard refers to equipment only, and does not apply to the underlying structure to which the equipment is attached.(2)

CAUTION While the equipment itself may resist the forces generated by a falling worker, it is up to a qualified person to determine whether the building's structural system to which the fall protection equipment is attached meets or exceeds this standard as well.

Scaffolding

Use of interior or exterior scaffolding as a fall arrest system is permitted, but installation and use must adhere to the Standard requirements in 29 CFR 1926.500.

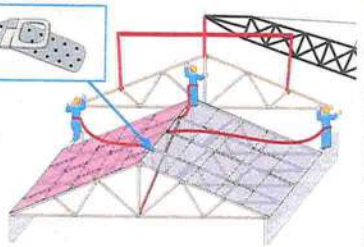
Guard Rails

Use of guard rails along the perimeter of the work area as a fall arrest system is permitted, but installation and use must adhere to the Standard requirements in 29 CFR 1926.500.

Roof Peak Anchors

WARNING Completely brace, per BCSI-B1* and BCSI-B2* or sheath trusses, before installing a roof anchor for use as personal fall restraint system. Installation and use must adhere to the Standard requirements in 29 CFR 1926.500.

WARNING It is always safest to sheath a section (e.g. 3 or more trusses) of the roof system before installing a roof anchor for use as a personal fall restraint system. Installation and use must adhere to the Standard requirements in 29 CFR 1926.500.



Instalación de Equipo de Protección Contra Caídas

¡PELIGRO! *Los entramados individuales por sí solos NO están diseñados para SOPORTAR equipo de protección contra caídas.*

El contratista será responsable de los medios de construcción, los métodos, las técnicas, las secuencias, los procedimientos, los programas y la seguridad en lo que se refiere a recepción, almacenamiento, manejo, instalación, restricción y apuntalamiento de entramados

Consulte ANSI/ASSE Z359.2-2007, Minimum Requirements for a Comprehensive Managed Fall Protection Program (Requisitos mínimos para un programa completo de protección contra caídas) si desea información para el cumplimiento de los requisitos mínimos para la instalación y uso de equipo de protección contra caídas. Esta norma se refiere a equipo solamente, y no es aplicable a la estructura subyacente a la que esté acoplado el equipo.(2)

¡CAUCIÓN! *Aunque el equipo por sí mismo puede resistir las fuerzas generadas por la caída de un trabajador, es responsabilidad de una persona calificada determinar si el sistema estructural del edificio al que se acopla el equipo de protección contra caídas cumple o supera está regulación también.*

Andamiaje

Está permitido el uso de andamiaje interior o exterior como sistema para detención de caídas, pero la instalación y el uso deberá adherirse a los requisitos regulatorios descritos en 29 CFR 1926.500.

Rampas de Protección

Se permite el uso de rampas de protección a lo largo del perímetro del área de trabajo como sistema para detención de caídas, pero la instalación y el uso deberán adherirse a los requisitos de la regulación que se encuentran en 29 CFR 1926.500.

Anclajes de Tejado

¡ADVERTENCIA! *Apuntale completamente, según BCSI-B1* y BCSI-B2* o forre los entramados, antes de instalar un anclaje de tejado para su uso como sistema personal de restricción de caídas. La instalación y el uso deberá adherirse a los requisitos regulatorios que se indican en 29 CFR 1926.500.*

¡ADVERTENCIA! *Siempre es más seguro forrar una sección (por ejemplo, 3 o más entramados) del sistema de tejado antes de instalar un anclaje de tejado para uso como sistema personal de restricción de caídas. La instalación y el uso deberá adherirse a los requisitos regulatorios que se indican en 29 CFR 1926.500.*

BCSI-B11 SUMMARY SHEET

GENERAL NOTES

Trusses are not marked in any way to identify the frequency or location of temporary lateral restraint and diagonal bracing. Follow the recommendations for handling, installing and temporary restraining and bracing of trusses. Refer to **BCSI** – Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses*** for more detailed information.

Truss Design Drawings may specify locations of permanent lateral restraint or reinforcement for individual truss members. Refer to the **BCSI-B3*** for more information. All other permanent bracing design is the responsibility of the building designer.

NOTAS GENERALES

*Los trusses no están marcados de ningún modo que identifique la frecuencia o localización de restricción lateral y arriostre diagonal temporales. Use las recomendaciones de manejo, instalación, restricción y arriostre temporal de los trusses. Vea el folleto **BCSI** – Guía de Buena Práctica para el Manejo, Instalación, Restricción y Arriostre de los Trusses de Madera Conectados con Placas de Metal*** para información más detallada.*

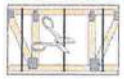
*Los dibujos de diseño de los trusses pueden especificar las localizaciones de restricción lateral permanente o refuerzo en los miembros individuales del truss. Vea la hoja resumen **BCSI-B3*** para más información. El resto de los diseños de arriostres permanentes son la responsabilidad del diseñador del edificio.*

WARNING The consequences of improper handling, erecting, installing, restraining and bracing can result in a collapse of the structure, or worse, serious personal injury or death.

¡ADVERTENCIA! *El resultado de un manejo, levantamiento, instalación, restricción y arriostre incorrecto puede ser la caída de la estructura o aún peor, heridas o muertos.*

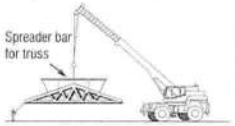
CAUTION Exercise care when removing banding and handling trusses to avoid damaging trusses and prevent injury. Wear personal protective equipment for the eyes, feet, hands and head when working with trusses.

PRECAUCIÓN! *Utilice cautela al quitar las ataduras o los pedazos de metal de sujetar para evitar daño a los trusses y prevenir la herida personal. Lleve el equipo protectivo personal para ojos, pies, manos y cabeza cuando trabaja con trusses.*



CAUTION Use special care in windy weather or near power lines and airports.

PRECAUCIÓN! *Utilice cuidado especial en días ventosos o cerca de cables eléctricos o de aeropuertos.*

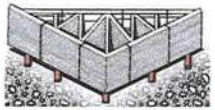


HANDLING — MANEJO

NOTICE Avoid lateral bending.
Evite la flexión lateral.

NOTICE The contractor is responsible for properly receiving, unloading and storing the trusses at the jobsite. Unload trusses to smooth surface to prevent damage.

El contratista tiene la responsabilidad de recibir, descargar y almacenar adecuadamente los trusses en la obra. Descargue los trusses en la tierra liso para prevenir el daño.



☑ Use proper rigging and hoisting equipment.

Use equipo apropiado para levantar e improvisar.

☑ Trusses may be unloaded directly on the ground at the time of delivery or stored temporarily in contact with the ground after delivery. If trusses are to be stored for more than one week, place blocking of sufficient height beneath the stack of trusses at 8' (2.4 m) to 10' (3 m) on-center (o.c.).

Los trusses pueden ser descargados directamente en el suelo en aquel momento de entrega o almacenados temporalmente en contacto con el suelo después de entrega. Si los trusses estarán guardados para más de una semana, porque bloqueando de altura suficiente debajo de la pila de los trusses a 8 hasta 10 pies en centro (o.c.).

☑ For trusses stored for more than one week, cover bundles to protect from the environment.

Para trusses guardados por más de una semana, cubra los paquetes para protegerlos del ambiente.

Refer to **BCSI*** for more detailed information pertaining to handling and jobsite storage of trusses.

*Vea el folleto **BCSI*** para información más detallada sobre el manejo y almacenado de los trusses en área de trabajo.*

⊘ **DO NOT** store unbraced bundles upright.

NO *almacene verticalmente los trusses sueltos.*

⊘ **DO NOT** store on uneven ground.

NO *almacene en tierra desigual.*

HOISTING AND PLACEMENT OF TRUSS BUNDLES
RECOMENDACIONES PARA LEVANTAR PAQUETES DE TRUSSES

⊘ **DON'T** overload the crane.
NO *sobrecargue la grúa.*

⊘ **NEVER** use banding to lift a bundle.
NUNCA *use las ataduras para levantar un paquete.*

☑ A single lift point may be used for bundles of top chord pitch trusses up to 45° (13.7 m) and parallel chord trusses up to 30' (9.1 m). Use at least two lift points for bundles of top chord pitch trusses up to 60' (18.3 m) and parallel chord trusses up to 45' (13.7 m). Use at least three lift points for bundles of top chord pitch trusses >60' (18.3m) and parallel chord trusses >45' (13.7 m).

Puede usar un solo lugar de levantar para paquetes de trusses de la cuerda superior hasta 45° y trusses de cuerdas paralelas de 30' o menos. Use por lo menos dos puntos de levantar con grupos de trusses de cuerda superior inclinada hasta 60' y trusses de cuerdas paralelas hasta 45'. Use por lo menos dos puntos de levantar con grupos de trusses de cuerda superior inclinada mas de 60' y trusses de cuerdas paralelas mas de 45'.

WARNING Do not over load supporting structure with truss bundle.

¡ADVERTENCIA! *No sobrecargue la estructura apoyada con el paquete de trusses.*

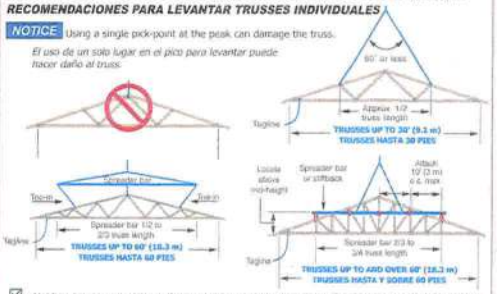
☑ Place truss bundles in stable position.

Puse paquetes de trusses en una posición estable.

MECHANICAL HOISTING RECOMMENDATIONS FOR SINGLE TRUSSES
RECOMENDACIONES PARA LEVANTAR TRUSSES INDIVIDUALES

NOTICE Using a single pick-point at the peak can damage the truss.

El uso de un solo lugar en el pico para levantar puede hacer daño al truss.



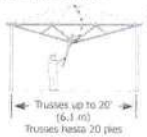
☑ Hold each truss in position with the erection equipment until top chord temporary lateral restraint is installed and the truss is fastened to the bearing points.

Sostenga cada truss en posición con equipo de grúa hasta que la restricción lateral temporal de la cuerda superior esté instalado y el truss está asegurado en los soportes.

INSTALLATION OF SINGLE TRUSSES BY HAND
RECOMMENDACIONES DE LEVANTAMIENTO DE TRUSSES INDIVIDUALES POR LA MANO

☑ Trusses 20' (6.1 m) or less, support near peak.

Soporte cerca al pico los trusses de 20 pies o menos.



☑ Trusses 30' (9.1 m) or less, support at quarter points.

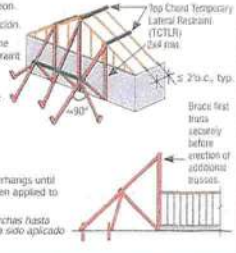
Soporte de los cuartos de tramo los trusses de 30 pies o menos.

TEMPORARY RESTRAINT & BRACING
RESTRICCIÓN Y ARRIOSTRE TEMPORAL

NOTICE Refer to **BCSI-B2*** for more information.
*Vea el resumen **BCSI-B2*** para más información.*

☑ Locate ground braces for first truss directly in line with all rows of top chord temporary lateral restraint (see table in the next column).

Coloque los arriostres de tierra para el primer truss directamente en línea con cada una de las filas de restricción lateral temporal de la cuerda superior (vea la tabla en la próxima columna).



⊘ **DO NOT** walk on unbraced trusses.
NO *camine en trusses sueltos.*

⊘ **DO NOT** stand on truss overhangs until Structural Sheathing has been applied to the truss and overhangs.

NO *se pare en voladizos cerchas hasta Revestimiento estructural ha sido aplicado a la armadura y voladizos.*

STEPS TO SETTING TRUSSES
LAS MEDIDAS DE LA INSTALACIÓN DE LOS TRUSSES

☑ **1)** Install ground bracing. **2)** Set first truss and attach securely to ground bracing. **3)** Set next 4 trusses with short member temporary lateral restraint (see below). **4)** Install top chord diagonal bracing (see below). **5)** Install web member plane diagonal bracing to stabilize the first five trusses (see below). **6)** Install bottom chord temporary lateral restraint and diagonal bracing (see below). **7)** Repeat process with groups of four trusses until all trusses are set.

1) *Instale los arriostres de tierra. **2)** Instale el primero truss y ate seguramente al arriostre de tierra. **3)** Instale los próximos 4 trusses con restricción lateral temporal de miembro corto (vea abajo). **4)** Instale el arriostre diagonal de la cuerda superior (vea abajo). **5)** Instale arriostre diagonal para los planos de los miembros secundarios para estabilice los primeros cinco trusses (vea abajo). **6)** Instale la restricción lateral temporal y arriostre diagonal para la cuerda inferior (vea abajo). **7)** Repita este procedimiento en grupos de cuatro trusses hasta que todos los trusses estén instalados.*

NOTICE Refer to **BCSI-B2*** for more information.
*Vea el resúmen **BCSI-B2*** para más información.*

RESTRAINT/BRACING FOR ALL PLANES OF TRUSSES
RESTRICCIÓN/ARRIOSTRE PARA TODOS PLANOS DE TRUSSES

☑ Minimum lumber used for lateral restraint and diagonal bracing is 2x4 stress-graded lumber. Attach to each truss with at least 2-10d (0.128x3"), 2-12d (0.128x3.25") or 2-16d (0.131x3.5") nails.

La madera 2x4 clasificada por estrés es la madera mínima utilizada para restricción lateral y arriostramiento diagonal. Atarlas a cada traguero con al mínimo 2 clavos 10d(0.128x3"), 12d (0.128x3.25") o 16d (0.131x3.5").

☑ This restraint and bracing method is for all trusses except 3x2 and 4x2 parallel chord trusses (PCTs). See top of next column for temporary restraint and bracing of PCTs.

Este método de restricción y arriostre es para todo trusses excepto trusses de cuerdas paralelas (PCTs) 3x2 y 4x2. Vea la parte superior de la columna para la restricción y arriostre temporal de PCTs.

1) TOP CHORD — *CUERDA SUPERIOR*

Truss Span *Longitud de Tramo*	Top Chord Temporary Lateral Restraint (TCTLR) Spacing *Espaciamiento del Arriostre Temporal de la Cuerda Superior*
Up to 30' (9.1 m)	10' (3 m) o.c. max.
30' (9.1 m) – 45' (13.7 m)	8' (2.4 m) o.c. max.
45' (13.7 m) – 60' (18.3 m)	6' (1.8 m) o.c. max.
60' (18.3 m) – 80' (24.4 m)*	4' (1.2 m) o.c. max.

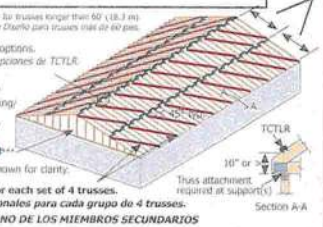
*Consult a Registered Design Professional for trusses longer than 60' (18.3 m).
*Consulte a un Profesional Registrado de Diseño para trusses más de 60 pies.

☑ See **BCSI-B2*** for TCTLR options.
*Vea el **BCSI-B2*** para las opciones de TCTLR.*

NOTICE Refer to **BCSI-B3*** for Gable End Frame restraint/bracing/reinforcement information.
*Para información sobre restricción/arriostre/refuerzo para Armazones Hastiales vea el resumen **BCSI-B3****

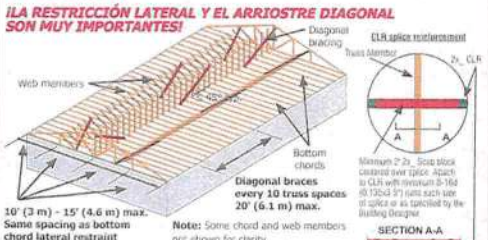
Note: Ground bracing not shown for clarity.

☑ **Repeat diagonal braces for each set of 4 trusses.**
Repita los arriostres diagonales para cada grupo de 4 trusses.

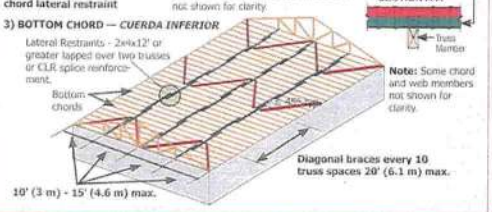


2) WEB MEMBER PLANE — *PLANO DE LOS MIEMBROS SECUNDARIOS*

NOTICE **LATERAL RESTRAINT & DIAGONAL BRACING ARE VERY IMPORTANT**
¡LA RESTRICCIÓN LATERAL Y EL ARRIOSTRE DIAGONAL SON MUY IMPORTANTES!



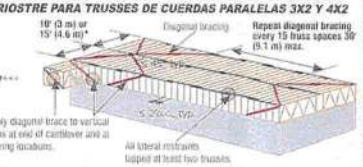
3) BOTTOM CHORD — *CUERDA INFERIOR*



Note: Some chord and web members not shown for clarity.

RESTRAINT & BRACING FOR 3x2 AND 4x2 PARALLEL CHORD TRUSSES
RESTRICCIÓN Y ARRIOSTRE PARA TRUSSES DE CUERDAS PARALELAS 3X2 Y 4X2

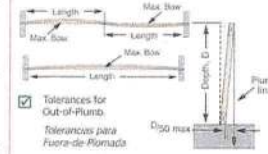
NOTICE Refer to **BCSI-B7*** for more information.
Vea el resumen **BCSI-B7*** para más información.



***Top chord temporary lateral restraint spacing shall be 10' (3 m) o.c. max. for 3x2 chords and 15' (4.6 m) o.c. for 4x2 chords.**

INSTALLING — *INSTALACIÓN*

☑ Tolerances for Out-of-Plane.
Tolerancias para Fuera-de-Plano.



☑ Tolerances for Out-of-Plumb.
Tolerancias para Fuera-de-Plomada

Out-of-Plumb		
D/50	D (ft.)	
1/4" (6 mm)	1' (0.3 m)	
1/2" (12 mm)	2' (0.6 m)	
3/4" (19 mm)	3' (0.9 m)	
1" (25 mm)	4' (1.2 m)	
1-1/4" (32 mm)	5' (1.5 m)	
1-1/2" (38 mm)	6' (1.8 m)	
1-3/4" (45 mm)	7' (2.1 m)	
2" (51 mm)	20' (22.4 m)	

Out-of-Plane	
Max. Bow	Truss Length
3/4" (19 mm)	12.5' (3.8 m)
7/8" (22 mm)	14.6' (4.5 m)
1" (25 mm)	16.7' (5.1 m)
1-1/8" (29 mm)	18.8' (5.7 m)
1-1/4" (32 mm)	20.8' (6.3 m)
1-3/8" (35 mm)	22.9' (7.0 m)
1-1/2" (38 mm)	25.0' (7.6 m)
1-3/4" (45 mm)	29.2' (8.9 m)
2" (51 mm)	≥33.3' (10.1 m)

CONSTRUCTION LOADING
CARGA DE CONSTRUCCIÓN

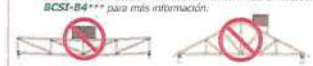
⊘ **DO NOT** proceed with construction until all lateral restraint and bracing is securely and properly in place.

NO *proceda con la construcción hasta que todas las restricciones laterales y los arriostres estén colocados en forma apropiada y segura.*

⊘ **DO NOT** exceed maximum stack heights. Refer to **BCSI-B4*** for more information.

NO *exceda las alturas máximas de montón. Vea el resumen **BCSI-B4**** para más información.*

Maximum Stack Height for Material on Trusses	
Material	Height
Gypsum Board	12" (305 mm)
Plywood or OSB	16" (406 mm)
Asphalt Shingles	2 bundles
Concrete Block	8" (203 mm)
Clay Tile	3-4 tiles high



⊘ **NEVER** stack materials near a peak, at mid-span, on cantilevers or overhangs.
NUNCA *apile los materiales cerca de un pica, a centro de la luz, en cantilevers o aleros.*

⊘ **DO NOT** overload small groups or single trusses.
NO *sobrecargue pequeños grupos o trusses individuales.*

☑ Place loads over as many trusses as possible.
Coloque las cargas sobre tantos trusses como sea posible.

☑ Position loads over load bearing walls.
Coloque las cargas sobre las paredes soportantes.

ALTERATIONS — *ALTERACIONES*

NOTICE Refer to **BCSI-B5** ***
*Vea el resumen **BCSI-B5** ***

⊘ **DO NOT** cut, alter, or drill any structural member of a truss unless specifically permitted by the truss design drawing.

NO *corte, altere o perfore ningún miembro estructural de un truss, a menos que esté específicamente permitido en el dibujo del diseño del truss.*

NOTICE Trusses that have been overloaded during construction or altered without the Truss Manufacturer's prior approval may render the Truss Manufacturer's limited warranty null and void.

Trusses que se han sobrecargado durante la construcción o han sido alterados sin la autorización previa del Fabricante de Trusses, pueden hacer nulo y sin efecto la garantía limitada del Fabricante de Trusses.

****Contact the Component Manufacturer for more information or consult a Registered Design Professional for assistance.**
To view a non-printing PDF of this document, visit sbcindustry.com/B1

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Field Assembly and Other Special Conditions
Ensamblaje de Campo y Otros Condiciones Especiales

Certain sizes or shapes of trusses require some assembly at the jobsite. Refer to the TDDs for specific instructions on assembly methods, unless the construction documents indicate otherwise.

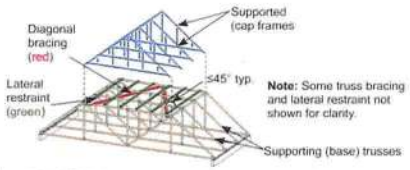
Ciertos tamaños o formas de trusses requieren algún ensamblaje en la obra. Refiera a los dibujos del diseño de truss para instrucciones específicas sobre ensamblaje de montaje, a menos que los documentos de construcción indiquen lo contrario.

The contractor is responsible for proper field assembly.

El contratista es responsable para el ensamblaje de campo apropiado.

Piggyback Trusses
Trusses de Piggyback

☑ The supporting (base) trusses shall be completely installed with all truss member AND permanent building stability bracing, as required, BEFORE installing the supported (cap) frames.
Los trusses soportantes serán completamente instalados con todos miembros de trusses Y el arriostre de estabilidad permanente de construcción como es requerido ANTES de instalar los armazones ("cap") soportados.



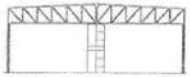
Note: Some truss bracing and lateral restraint not shown for clarity.

⚠ **WARNING** Adequately restrain and brace the flat portion of the supporting trusses to prevent buckling.
¡ADVERTENCIA! *Restrinja y arriostre adecuadamente la parte plana de los trusses soportantes para prevenir el fallar.*

☑ For more information on how to permanently laterally restrain and diagonally brace piggyback truss assemblies refer to **BCSI-B3**.***
*Para más información sobre como restringir lateralmente permanetemente y arriostrar diagonalmente sistemas de trusses de piggyback refiere al **BCSI-B3**.****

Field Spliced Trusses
Trusses Empalmados En Campo

☑ Splicing can be performed on the ground before installation or the truss sections can be supported by temporary shoring after being hoisted into place and the splices installed from a safe working surface.
Empalmando puede ser hecho en el suelo antes de la instalación o las secciones de trusses pueden ser soportados por "shoring" temporal después de que sean levantados en lugar y los empalmes son instalados de una superficie de trabajo segura.



Field-spliced trusses with temporary center support

Valley Set Frame Installation
Instalación de Armazón de Conjunto de Valle

☑ The top chords of the supporting trusses must be braced properly. This can be accomplished by attaching structural sheathing or with rows of lateral restraint, spaced no more than the maximum on center spacing specified on the TDD, and diagonal bracing.
Las cuerdas superiores de los trusses de soporte tienen que ser arriostrados apropiadamente. Esto puede ser hecho por sujetar el entablado estructural o con filas de restricción lateral, espaciados no más que el máximo en el espaciamiento del centro que es especificado en el dibujo del diseño de truss, y arriostre diagonal.

Valley sets as over-framing

This document applies to all sloped and flat chord trusses built with the wide-face of the lumber oriented vertically. Examples include:
Este documento aplica a todos trusses de cuerda pendiente y plana construidos con la cara-ancha de la madera orientada verticalmente, tales como:

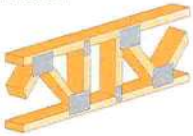
Gambrel truss

Mono truss

Scissors truss

Parallel chord truss

For parallel chord trusses manufactured with 3x2 or 4x2 lumber, see BCSI-B7.*
Para los trusses de cuerdas paralelas fabricados con madera 3x2 o 4x2, vea el resumen BCSI-B7.*



For trusses spaced more than 2'-0" on-center, see BCSI-B10.*
Para los trusses espaciados más de 2 pies en el centro, vea el Resumen BCSI B10.*

***Contact the component manufacturer for more information or consult a registered design professional for assistance.**

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B2 Truss Installation & Temporary Restraint/Bracing
Instalación de Trusses & Restricción/Arriostre Temporal

For Trusses Up to 2'-0" On-Center and 80'-0" in Length
Para Trusses Hasta 2 Pies En Centro y Hasta 80 Pies De Longitud

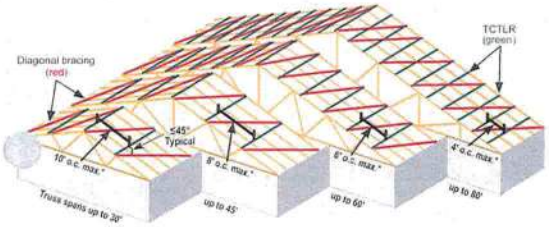
⚠ **WARNING** Spans over 60' require more complex temporary installation restraint/bracing. Consult a registered design professional.
¡ADVERTENCIA! *Los tramos más de 60 pies requieren restricción/arriostre de instalación temporal más complejo. Consulte a un profesional registrado de diseño.*

⚠ **DANGER** Disregarding handling, installing, restraining and bracing safety recommendations is the principal cause of truss erection/installation accidents.
PELIGRO *El no seguir las recomendaciones de manejo, instalación, restricción y arriostre es la causa principal de los accidentes durante la erección/instalación de trusses.*

NOTICE Lateral restraint is NOT adequate without diagonal bracing.
La Restricción Lateral NO es adecuada sin el Arriostre Diagonal.

☑ Always diagonally brace for safety!
¡Siempre arriostre diagonalmente para seguridad!

Maximum Spacing For Top Chord Temporary Lateral Restraint (TCTLR)
El Espaciamiento Máximo Para La Restricción Lateral Temporal De La Cuerda Superior (TCTLR)



The graphic at left shows the maximum on-center spacing (see * at left) of TCTLR based on truss span from the table in Step 2 on page 2.
- Ground bracing not shown for clarity.
- Apply diagonal bracing or structural sheathing immediately. For spans over 60' applying structural sheathing immediately is the preferred method.

*El dibujo a la izquierda muestra el espaciamiento máximo en el centro (vea * a la izquierda) del TCTLR basado en los tramos de trusses de la tabla en el Paso 2 en la página 2.*
- *No se muestra el arriostre de tierra para claridad.*
- *Aplique inmediatamente el Arriostre Diagonal o el Entablado Estructural (structural sheathing). Para tramos más de 60 pies el método preferido es entablarlos inmediatamente.*

Check These Items Before Starting Truss Erection/Installation and Correct as Needed
Revise Estos Puntos Antes De Empezar La Erección/Instalación y Corríjalos Cuando Es Necesario

☑ Building dimensions match the construction documents.
Las dimensiones del edificio concuerdan con los documentos de construcción.

☑ Bearing supports (e.g., walls, columns, headers, beams, etc.) are accurately and securely installed, plumb and properly braced.
Los soportes que sostienen cargas (ej., paredes, columnas, vigas de cabezera, vigas, etcétera) son instalados seguramente y con precisión, y son niveladas y arriostrados apropiadamente.

☑ Hangers, tie-downs, restraint and bracing materials are on site and accessible.
Los colgadores (hangers), soportes de anclaje (tie-downs) y materiales de restricción y arriostre están accesibles en la obra.

☑ Erection/installation crew is aware of installation plan and lateral restraint/diagonal bracing requirements.
El personal de erección/instalación es consciente del plan de instalación y los requisitos de restricción/arriostre.

☑ Multi-ply trusses, including girders, are correctly fastened together prior to lifting into place.
Los trusses de varias capas, incluyendo travesaños, son fijados juntos correctamente antes de levantarlos en lugar.

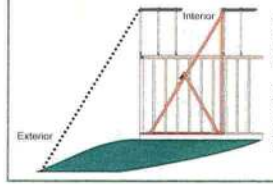
☑ Any truss damage is reported to truss manufacturer. Refer to **BCSI-B5**.*** Do not install damaged trusses unless instructed to do so by the building designer, truss designer or truss manufacturer.
*Algún daño a los trusses ha sido reportado al fabricante de trusses. Vea el resumen **BCSI-B5**.*** No instale trusses dañados a menos que se dijeren el diseñador del edificio, el diseñador del truss o el fabricante del truss.*

☑ Trusses are the correct dimension.
Los trusses son la dimensión correcta.

☑ Tops of bearing supports are flat, level and at the correct elevation.
La parte superior de los soportes de cojinete son planas, niveladas y a la elevación correcta.

☑ Jobsite is clean and neat, and free of obstructions.
La obra está limpia, ordenada y sin obstrucciones.

☑ Ground bracing procedure for first truss is based on site and building configuration.
El procedimiento de Arriostre de Tierra para el primer truss es basado en el terreno y la configuración del edificio.

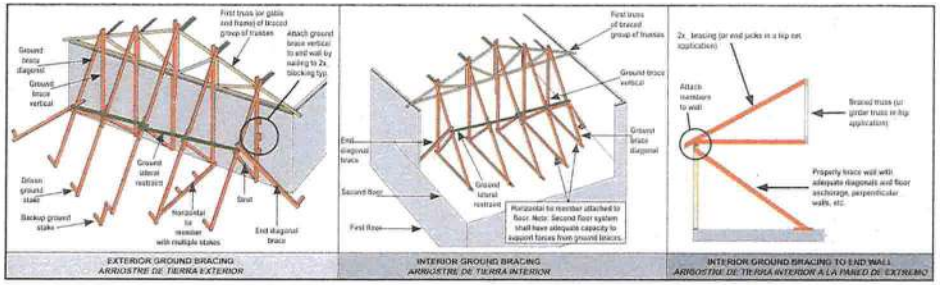


If ground level is too far from truss for exterior ground bracing, use interior ground bracing.
Si el nivel del terreno es demasiado lejos para usar Arriostre de Tierra exterior, use Arriostre de Tierra interior.

B2Temp 160715

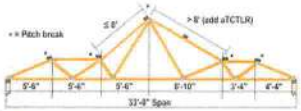
Steps to Setting Trusses
Pasos Para El Montaje De Trusses

1. Establish Ground Bracing Procedure: Exterior or Interior
Establezca el Procedimiento de Arriostre de Tierra: Exterior o Interior



2. Determine the Locations for TCTLR and Ground Braces
Determine las Ubicaciones para TCTLR y los Arriostres de Tierra

☑ Use truss span to determine spacing for top chord temporary lateral restraint (TCTLR) from table at right.
Use el tramo del truss para determinar el espaciamiento para restricción lateral temporal de la cuerda superior (TCTLR) en la tabla a la derecha.

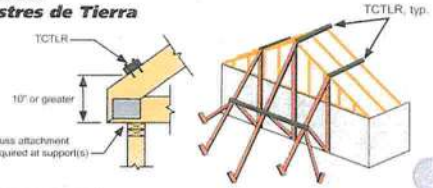


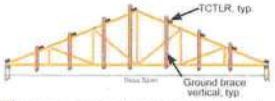
☑ Locate additional TCTLR at each pitch break.
Localice TCTLR adicional en cada rotura de inclinación.

☑ Locate additional TCTLR over bearings if the heel height is 10" or greater.
Localice TCTLR adicional sobre los soportes si la altura del talón (heel height) es de 10 pulgadas o más.

Maximum Top Chord Temporary Lateral Restraint Spacing**	
Truss Span	TCTLR Spacing
Up to 30'	10' on-center maximum
30' - 45'	8' on-center maximum
45' - 60'	6' on-center maximum
60' - 80'**	4' on-center maximum

*Consult a registered design professional for trusses longer than 60'
**For trusses spaced greater than 2' o.c., see also BCSI-B10.

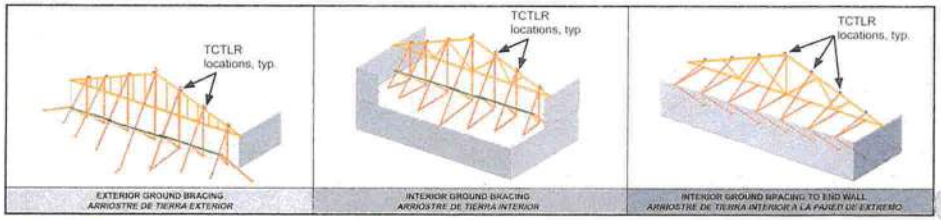




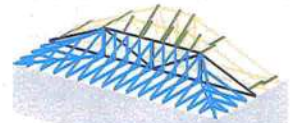
☑ Locate a ground brace vertical at each TCTLR location.
Localice una vertical de arriostre de tierra en cada lugar de TCTLR.

3. Set First Truss and Fasten Securely to Ground Braces
Coloque el Primer Truss y Fíjelo Seguramente a los Arriostres de Tierra

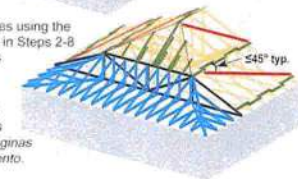
☑ Set first truss (or gable end frame) and fasten securely to ground braces and to the wall, or as directed by the building designer. Examples of first truss installed include:
Coloque el primer truss (o armazón hastial) y fíjelo seguramente a las verticales de arriostre de tierra y a la pared, o como se dirige el diseñador del edificio. Ejemplos del primer truss instalado incluyen:



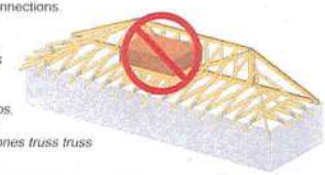
⚠ **CAUTION** First truss must be attached securely to all bearings and to all required ground braces prior to removing the hoisting supports.
CAUTELA *El primer truss tiene que ser sujetado seguramente a todos soportes y a todas arriostres de tierra requeridos, antes de quitar los soportes de levantamiento.*



Step 6 Install pitched trusses using the guidelines provided in Steps 2-8 on pages 2-5 of this document.
Instale los trusses pendientes usando las pautas provistas en Pasos 2-8 en páginas 2-5 de este documento.



🚫 **DO NOT** stack materials or stand at locations that will cause instability, such as on cantilevers, overhangs, end jacks, or near truss-to-girder truss connections.
NO *amontone los materiales o de pie en lugares que causarán inestabilidad, como en voladizos, salientes, tomas finales, o conexiones truss truss cerca a viga.*



Long Span Truss Installation
Instalación de Trusses de Tramos Largos

⚠ **DANGER** Trusses with clear spans of 60 feet or greater are extremely dangerous to install and require more detailed safety and handling measures than shorter span trusses.
PELIGRO *Trusses de 60 pies de largo o más son extremamente peligrosos a instalar y requieren medidas de seguridad y manejo más detalladas que trusses de vanos más cortos.*

Before Starting
Antes de Empezar

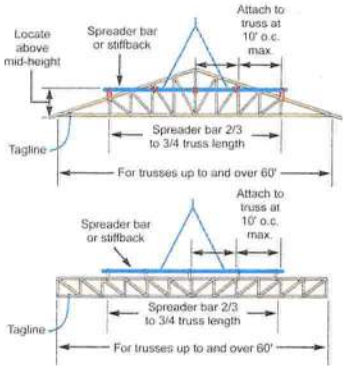
☑ Hire a registered design professional to design the temporary restraint/bracing, the permanent individual truss member restraint/bracing and to supervise the erection process. This is required by some building codes.
Contrate un Profesional Registrado de Diseño para proveer un plan de restricción/arriostre temporal de los permanentes miembros individuales de braguero y para supervisar el proceso de erección. Esto es el requisito en algunos códigos de construcción.

☑ Develop a safe, effective truss installation method and inform all crew members of their roles.
Elabore un método seguro y efectivo de la instalación de trusses e informe todos miembros del personal de sus papeles.

☑ Use personnel who have experience installing trusses 60' and greater in span.
Use instaladores quienes tienen experiencia en instalar trusses de 60 pies o más de tramo.

☑ Ensure that the walls and supporting structure are stable and adequately restrained and braced.
Asegúrese que las paredes y la estructura soportante son estables y adecuadamente restringidas y arriostradas.

☑ Have all necessary lifting equipment and building materials on hand. Make sure the crane operator understands the special hoisting requirements of long span trusses (see BCSI-B1).™
Tenga todo el equipo de levantar y los materiales de construcción necesarios a la mano. Asegúrese que el operador de grúa entiende los requisitos especiales de levantar los trusses de tramos largos (vea BCSI-B1).™



Tips For Safe and Efficient Installations
Consejos para Instalaciones Seguras y Eficientes

☑ Assemble the first five trusses with all structural sheathing, restraint and bracing, either as the trusses are installed or built as a unit on the ground and lifted into place.
Ensamble los primeros cinco trusses con todo el entablado estructural, restricción y arriostre, cualquier cuando los trusses son instalados o son construidos como una unidad en la tierra y levantados en lugar.

☑ Keep trusses straight during hoisting to minimize bending out-of-plane.
Mantenga los trusses derechos durante el levantamiento para minimizar el doblado fuera-de-plano.

☑ Add a temporary center support to provide greater stability and leave in place until all permanent building stability bracing is installed.
Agregue un soporte temporal en el centro para proveer más estabilidad y quedarlo en lugar hasta que todo el arriostre de estabilidad permanente de construcción es instalado.

☑ Apply structural sheathing to the top chord as the trusses are being installed.
Aplique el entablado estructural a la cuerda superior mientras los trusses estén instalados.

☑ Install all permanent individual truss member restraint and bracing immediately.
Instale todo el arriostre y restricción permanente de miembros de trusses individuales inmediatamente.

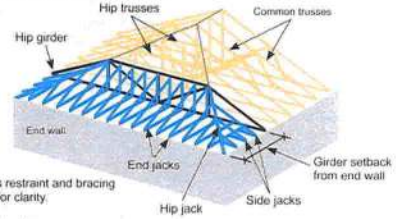
Alternate Installation Method: Build It On the Ground and Lift It Into Place
Método Alterno de Instalación: Construirlo en la Tierra y Levantarlo en Lugar

- ☑ Ensure level bearing; set, position, plumb and properly restrain and brace the trusses as modules on the ground.
  Asegúrese que el soporte es nivelado; colocar, posicionar, nivelar y restringir y arriostrar apropiadamente el grupo de trusses en la tierra.
- ☑ Apply structural sheathing for stability. Begin at the heel and alternate 4'x8' and 4'x4' sheets up to the peak.
  Aplique el entablado estructural para estabilidad. Empiece en el talón y alterne láminas de 4 pies x 8 pies y 4 pies x 4 pies hasta el pico.
- ☑ Be sure to install all top chord, web member and bottom chord lateral restraint and bracing prior to lifting the module.
  Asegúrese de instalar toda la restricción y arriostre de la cuerda superior, el miembro secundario, y la cuerda inferior antes de levantar el módulo.
- ⚠ **CAUTION** Additional restraint and bracing may be required to safely lift units into place.
  CAUTELA *La restricción y arriostre adicional pueden ser requeridos para levantar los módulos en sitio sin peligro.*
- ☑ Be sure to get proper guidance from a registered design professional to insure modules are designed and installed safely and properly.
  Asegúrese de obtener consejos apropiados por un profesional registrado de diseño para asegurar que los módulos son diseñados y instalados apropiadamente y sin peligro.

Hip Set Assembly and Bracing
Ensamblaje y Arriostre del Grupo de Cadera

Permanently connecting the end jacks to the end wall and girder as early in the installation process as possible dramatically increases the stability of the hip girder and the safety of the structure.

Conectando permanentemente los gatos extremos a la pared extremo y el travesaño tan temprano en el proceso de instalación como sea posible aumenta drásticamente la estabilidad del travesaño de cadera (hip girder) y la seguridad de la estructura.



Note: Truss restraint and bracing not shown for clarity.

Use the following sequence:

Use la siguiente secuencia:

Step 1 Position the hip girder on the bearing walls at the specified end wall setback and permanently attach to supports.

Posicione el travesaño de cadera en las paredes de soporte al "setback" especificado de la pared extremo y sujete a los soportes permanentemente.

NOTICE Whenever possible, connect multi-ply girder trusses together and install the end jack hangers (if required) prior to erection/installation. **All plies of a multi-ply girder shall be attached per the fastening schedule on the TDD before attaching any framing members or applying any loads.**

Siempre que sea posible, conecte los trusses de travesaño de varias-capas juntos y instale los colgadores de gato extremo (si requerido) antes de la erección/instalación. ***Todas capas de un travesaño de varias capas sujetarán por el horario de fijar en el dibujo del diseño de truss antes de sujetar algunos miembros de arriostre o de aplicar algunas cargas.***

Step 2 Install hip jacks, and end jacks at maximum 10' on-center while crane continues to hold girder in place.

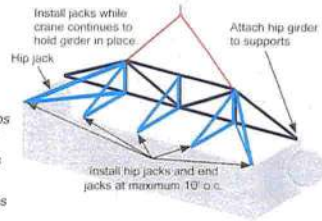
Instale los gatos de cadera y los gatos extremos a 10 pies máximo en centro mientras la grúa continua mantener el travesaño en lugar.

Note: Attach jack trusses to top chord and bottom chord of girder truss. The connection to the top chord is important as it helps to stabilize the top chord of the girder.

Sujete los trusses de gatos a la cuerda superior y la cuerda inferior del truss de travesaño. La conexión por encima es importante porque ayuda a estabilizar la cuerda superior del travesaño.

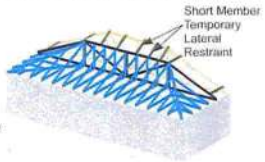
Step 3 Install all remaining end and side jacks with all permanent truss-to-bearing connections (e.g., hangers and tie-downs).

Instale todos los gatos extremos y gatos de rincón restantescon todas las conexiones permanentes de truss-a-soporte (Ej. colgadores y soportes de anclaje).



Step 4 Install the next hip truss with 2x4 short member temporary lateral restraints. Attach each short member temporary lateral restraint to the top chord of the hip girder and adjacent hip truss with two nails at each connection. The short member temporary lateral restraints should be long enough to extend at least 1 1/2" past the top chord of each truss. Place short member temporary lateral restraints at pitch breaks and at intervals along the top chords in accordance with Step 2 on page 2.

Instale el próximo truss de cadera con 2x4 restricciones laterales temporales para miembros cortos. Sujete cada restricción lateral temporal del miembro corto a la cuerda superior del travesaño de cadera y al truss de cadera contiguo con dos clavos a cada conexión. Las restricciones laterales temporales para miembros cortos deben ser bastante largo para extender a un mínimo de 1 ½" pasado de la cuerda superior de cada truss. Puse la restricción lateral temporal de miembros cortos a roturas del pendiente y a intervalos por las cuerdas superiores según el Paso 2 en la página 2.

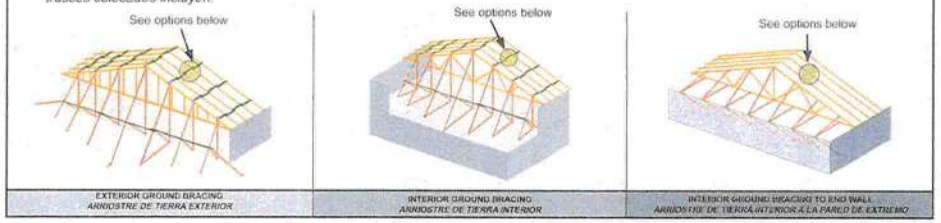


Step 5 Install remaining hip trusses. For the flat portion of each hip truss, use short member temporary lateral restraints that are at least double the length of the first set of short member temporary lateral restraints (see Figure on next page). For the sloped chords of the trusses, install short member temporary lateral restraints according to one of the three options in Step 4 on page 3.

Instale los restantes de los trusses de cadera. Para la parte plana de cada truss de cadera use restricciones laterales temporales de miembros cortos que son por lo menos dobles la longitud del primer grupo de restricciones temporales laterales de miembros cortos (vea la figura en la próxima página). Para las cuerdas pendientes de los trusses, instale las restricciones laterales temporales de miembros cortos según uno de las tres opciones en Paso 4 en la página 3.

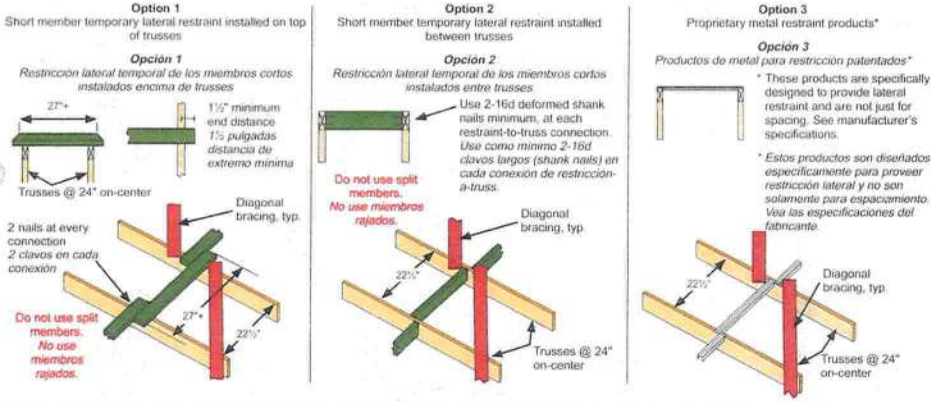
4. Set Trusses 2, 3, 4 & 5 with TCTLR in Line with Ground Bracing
Coloque los Trusses 2, 3, 4 y 5 con TCTLR en Línea con los Arriostres de Tierra

☑ Attach trusses securely at all bearings, shimming bearings as necessary. Examples of first five trusses set include:
Sujete seguramente los trusses a todos los soportes, rellenar sólidamente los soportes como sea necesario. Ejemplos de los primeros cinco trusses colocados incluyen:



NOTICE The following three (3) Short Member Temporary Lateral Restraint options **require that the diagonal bracing be installed continuously**. See figure for Option B in Step 8 on page 5.

Las siguientes tres opciones para instalar la Restricción Lateral Temporal de los Miembros Cortos requieren que el arriostre diagonal está instalado continuamente. Vea la figura de Opción B en el Paso 8 en la página 5.



⚠ **CAUTION** Each truss must be attached securely at all bearing locations and all TCTLR installed before removing the hoisting supports.

CAUTELA *Cada truss tiene que ser sujetado seguramente en todas ubicaciones de soportes y todas las TCTLR instaladas antes de quitar los soportes de levantar.*

LATERAL RESTRAINT/BRACING MATERIAL AND CONNECTIONS
CONNEXIONES Y MATERIALES DE RESTRICCIÓN/ARRIOSTRE LATERAL

☑ Minimum size of bracing and lateral restraint material is 2x4 stress-graded lumber or approved proprietary metal restraint/bracing, unless otherwise specified by the building designer.
El tamaño del material de restricción lateral y arriostre debe ser por lo menos 2x4 madera graduada por esfuerzo o restricción/arriostre de metal patentado aprobado, a menos que especifique el diseñador del edificio.

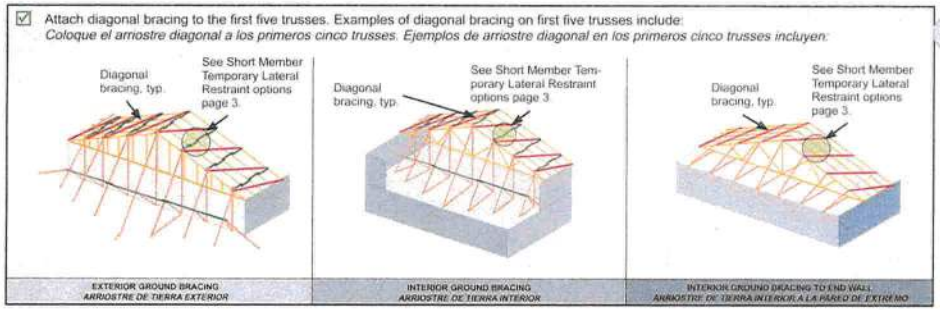
☑ All bracing and lateral restraint members must be connected to each truss with at least 2 nails (see minimum sizes below), except for the short member restraints shown in Step 4, Option 2 (see above), which require 2-16d deformed-shank (i.e., ring- or screw-shank) nails.
Todos los miembros de restricción lateral y arriostre tienen que ser conectados a cada truss con un mínimo de 2 clavos (ver los tamaños mínimos mostrados abajo) excepto para las restricciones de miembros cortos mostrados en el Paso 4, Opción 2 (vea arriba), cuales requieren 2-16d clavos con largos desformados (Ej. Largos de anillos o tornillos).

☑ Drive nails flush. If the temporary restraint and bracing is to be removed when the permanent bracing is installed, use double-headed nails for ease of removal.
Clave los clavos al raso. Si la restricción y arriostre temporal será quitado al instalació del arriostre permanente, use clavos de dos cabezas para quitarlos más fácilmente.

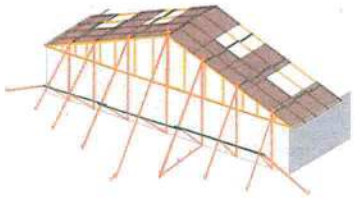
10d (0.128x3")
12d (0.128x3.25")
16d (0.131x3.5")

5. Install Top Chord Diagonal Bracing
Instale El Arriostre Diagonal de la Cuerda Superior

☑ Attach diagonal bracing to the first five trusses. Examples of diagonal bracing on first five trusses include:
Coloque el arriostre diagonal a los primeros cinco trusses. Ejemplos de arriostre diagonal en los primeros cinco trusses incluyen:



☑ Or start applying structural sheathing. Example of structural sheathing installed on first five trusses.
O empiece en aplicar el entablado estructural. Ejemplo de entablado estructural instalado en los primeros cinco trusses.

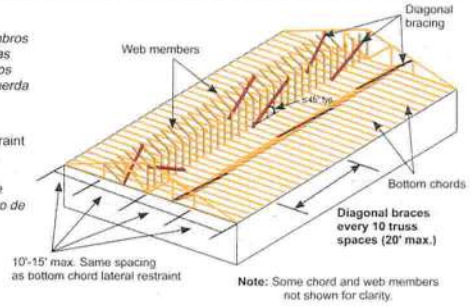


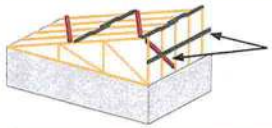
6. Install Web Member Diagonal Bracing
Instale el Arriostre Diagonal de Miembros Secundarios

☑ Temporary web member diagonal bracing acts with the top chord and bottom chord temporary lateral restraint and diagonal bracing to form triangulation perpendicular to the plane of the truss and prevents trusses from leaning or dominoing.
El arriostre diagonal temporal de los miembros secundarios trabaja con la restricción lateral y el arriostre diagonal temporales de la cuerda superior e inferior para formar una triangulación perpendicular al plano del truss y evita que los trusses se inclinen o caigan como dominós.

☑ Install diagonal bracing at about 45° to the horizontal on web members (verticals whenever possible) located at or near rows of bottom chord lateral restraint. Web diagonal bracing must extend from the top chord to the bottom chord. Repeat at the intervals shown in the figure below.
Instale el arriostre diagonal a aproximadamente 45 grados en los miembros secundarios (verticales cuando sea posible) colocados en o cerca de las filas de restricción lateral de la cuerda inferior. Arriostre diagonal para los miembros secundarios tiene que extender de la cuerda superior a la cuerda inferior. Repita a los intervalos mostrados en la figura a la derecha.

NOTICE The requirements for web permanent individual truss member restraint are specified on the truss design drawing (TDD). Refer to **BCSI-B3** for more information.™
*Los requisitos para la restricción permanente de miembros individuales de truss para miembros secundarios son especificados en el dibujo del diseño de truss. Vea el resumen **BCSI-B3** para más información.™*





NOTICE Mono trusses, deep flat trusses and other types of trusses with deep ends also require temporary lateral restraint and diagonal bracing on the vertical web member at the deep end of the truss.
Los trusses de una sola pendiente, trusses planos y profundos y otros tipos de trusses con extremos profundos también requieren restricción lateral temporal y arriostre diagonal en los miembros secundarios largos al parte profundo del truss.

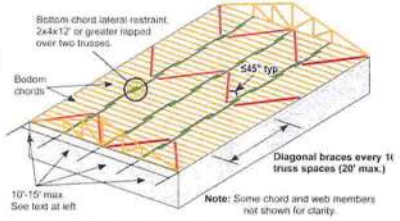
7. Install Bottom Chord Lateral Restraint and Diagonal Bracing
Instale la Restricción Lateral y el Arriostre Diagonal de la Cuerda Inferior

☑ Bottom chord temporary lateral restraint and diagonal bracing stabilizes the bottom chord plane during installation and helps maintain proper spacing of the trusses.
La Restricción lateral temporal y el arriostre diagonal de la cuerda inferior estabilizan el plano de la cuerda inferior durante la instalación y asiste en mantener el espaciamiento apropiado de los trusses.

☑ Install rows of **temporary** lateral restraint at 15' on-center maximum. Remove, if desired, after the permanent ceiling diaphragm is in place.
*Instale filas de restricción lateral **temporal** a 15 pies en el centro como máximo. Quítelos, si así lo desea, después que el diafragma permanente del techo esté colocado.*

☑ Install rows of **permanent** lateral restraint at 10' on-center maximum. Required spacing may be less; check the TDD and/or with the building designer.
*Instale filas de restricción lateral **permanente** a 10 pies en el centro como máximo. El espaciamiento especificado puede ser menor; verifique el dibujo del diseño de truss con el diseñador del edificio.*

☑ Install diagonal bracing at intervals of 20' maximum along the run of trusses.
Instale el arriostre diagonal a intervalos de 20 pies máximo a lo largo de la línea de trusses.



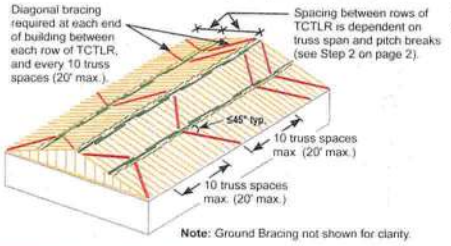
⚠ **CAUTION** Do not remove ground bracing until all top chord, bottom chord and web lateral restraint and bracing is installed on at least the first five trusses.
CAUTELA *No remueva el arriostre de tierra hasta que toda la restricción lateral y arriostre de la cuerda superior, la cuerda inferior y los miembros secundarios estén instalados en por lo menos los primeros cinco trusses.*

8. Repeat Steps 4 Through 7 with Groups of Four Trusses Using Option A or B
Repita los Pasos 4 a 7 con Grupos de Cuatro Trusses Usando la Opción A o la Opción B

Option A: Install the next four trusses using short member temporary lateral restraint Options 1 - 3 per Step 4 on page 3. Add long-length (minimum 2x4x12') continuous lateral restraint (CLR) to tie trusses together. Overlap the ends of the CLR at least 2 trusses. Install diagonal bracing at intervals of 20' maximum along the run of trusses (see Figure below).

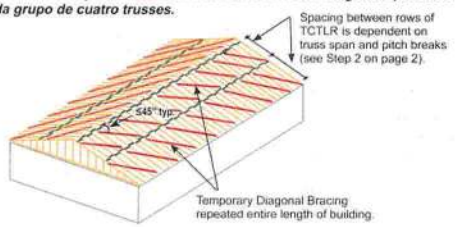
Instale los siguientes cuatro trusses utilizando las opciones 1-3 por el Paso 4 en la página 3 de la restricción lateral de miembros cortos. Añade la restricción lateral continua (CLR) de longitud-largo (mínimo 2x4x12') para atar junto los trusses. Solaparse las puntas del CLR a mínimo de dos trusses. Instale el arriostre diagonal cada 20 pies máximo a lo largo de la línea de trusses (vea la Figura abajo).

NOTICE The maximum diagonal brace spacing provided in this Option assumes ground bracing is properly installed and in place.
El espaciamiento máximo de arriostre diagonal en esta Opción asume que el arriostre de tierra está en sitio y es instalado correctamente.



Option B: Install diagonal bracing on each group of four trusses that have been set with short member temporary lateral restraint per Step 4 on page 3.
Instale el arriostre diagonal en cada grupo de cuatro trusses que han sido colocados con la restricción lateral temporal de miembros cortos por el paso 4 en la página 3.

⚠ **WARNING** After the initial group of five trusses are installed and braced (i.e., lateral restraint and diagonal bracing), **DO NOT** set more than four trusses when using short member temporary lateral restraint before you **STOP**, and diagonally brace as shown. **Option B is NOT permissible without diagonal bracing being installed with each group of four trusses.**
¡ADVERTENCIA!** Después de que el primer grupo de cinco trusses sea instalado y arriostrado (Ej. restricción lateral y arriostre diagonal), **NO** coloque más de cuatro trusses cuando se usa la restricción lateral temporal de los miembros cortos antes que usted **PARA**, y arriéstrelo diagonalmente como mostrado. **Esta opción B NO funciona sin el arriostre diagonal aplicado a cada grupo de cuatro trusses.



ENSURE THAT ALL TRUSSES ARE PROPERLY DIAGONALLY BRACED.
ASEGÚRESE QUE TODOS LOS TRUSSES ESTÉN ARRIOSTRADOS DIAGONALMENTE APROPIADAMENTE.

☑ Apply structural sheathing early and often.

🚫 **DO NOT** wait until all trusses are set to apply structural sheathing.
Aplique el entablado estructural temprano y con frecuencia.
***NO** ESPERE hasta que todos los trusses estén colocados para aplicar el entablado estructural.*

⚠ **CAUTION!** Remove only as much top chord temporary lateral restraint and diagonal bracing as necessary to nail down the next sheet of structural sheathing. DO NOT exceed truss design load with construction loads. (SEE **BCSI-B4**)™
CAUTELA *Quite sólo tanta restricción lateral temporal y arriostre diagonal de la cuerda superior como sea necesario para clavar la siguiente hoja de entablado estructural. NO EXCEDA la carga de diseño de truss con cargas de construcción. (VEA **BCSI-B4**)™*

Delivery

Builders FirstSource

Sold To:	Mike Todd Const.	AppWrt Job No. 970576	Ship Date 1/20/2016
		OnLine Job No. 576	Quote
		P.T.	Account
		Sales No	PO

Plant: Lake City Truss 2525 E Duval Street Lake City, FL 386-755-6894	SubDvsn: MORGAN HOUSE, FL Lot: N/A Model/Elev: CUSTOM / GABLE Options Shipment Roof	Req'rd Engineering	Req'rd Layouts

Sales Rep KIMBER HOLLOWAY Sales Area Dist Center Designer Holloway, Kim	Directions	Job Contacts Name TIM Phone Fax	Site Office

Truss ID / Span	Quantity	Type	Slope (Depth)	Left	Right	Stub		Height / Weight/Ply	Total Weight
F04 15-3-12	9	FLOOR	Depth: 12"						
F05 15-0-12	4	FLOOR	Depth: 12"						
F06 14-8-4	9	FLOOR	Depth: 12"						
F07 14-5-4	4	FLOOR	Depth: 12"						
F08 7-9-0	4	FLOOR	Depth: 12"						
F09 7-0-0	4	FLOOR	Depth: 12"						
Total Trusses:	34								

Miscellaneous Items:	Quantity	Item	Description
	44	LUS46	4x Hanger (LUS46)

Trusses	0	Jacks	0	Beams	0	Hangers	44
Piggy Backs	0	Others	0	TJI	0	TieDowns	0
Valleys	0	Floors	34	Trim-It	0	Misc	0

Delivery Person

Delivered By: _____

Date: _____

Remarks:

On Site Receiver

Received By: _____

Date: _____

Remarks:

Delivery

Builders FirstSource

Sold To:	Mike Todd Const.	**AppWrt Job No.** 970576	**Ship Date** 1/20/2016
		OnLine Job No. 576	**Quote**
		P.T.	**Account**
		Sales No	**PO**

Plant: Lake City Truss 2525 E Duval Street Lake City, FL 386-755-6894	**SubDvsn:** MORGAN HOUSE, FL **Lot:** N/A **Model/Elev:** CUSTOM / GABLE **Options** **Shipment** Roof	**Req'rd Engineering**	**Req'rd Layouts**

Sales Rep KIMBER HOLLOWAY **Sales Area** **Dist Center** **Designer** Holloway, Kim	**Directions**	**Job Contacts** / **Site** / **Office** **Name** TIM **Phone** **Fax**	

	Truss ID / Span	Quantity	Type	Slope (Depth)	Left	Right	Stub		Height / Weight/Ply	Total Weight
	F04 15-3-12	9	FLOOR	Depth: 12"						
	F05 15-0-12	4	FLOOR	Depth: 12"						
	F06 14-8-4	9	FLOOR	Depth: 12"						
	F07 14-5-4	4	FLOOR	Depth: 12"						
	F08 7-9-0	4	FLOOR	Depth: 12"						
	F09 7-0-0	4	FLOOR	Depth: 12"						
	Total Trusses:	34								

Miscellaneous Items:	Quantity	Item	Description
	44	LUS46	4x Hanger (LUS46)

Trusses	0	Jacks	0	Beams	0	Hangers	44
Piggy Backs	0	Others	0	TJI	0	TieDowns	0
Valleys	0	Floors	34	Trim-It	0	Misc	0

Delivery Person

Delivered By: _____

Date: _____

Remarks:

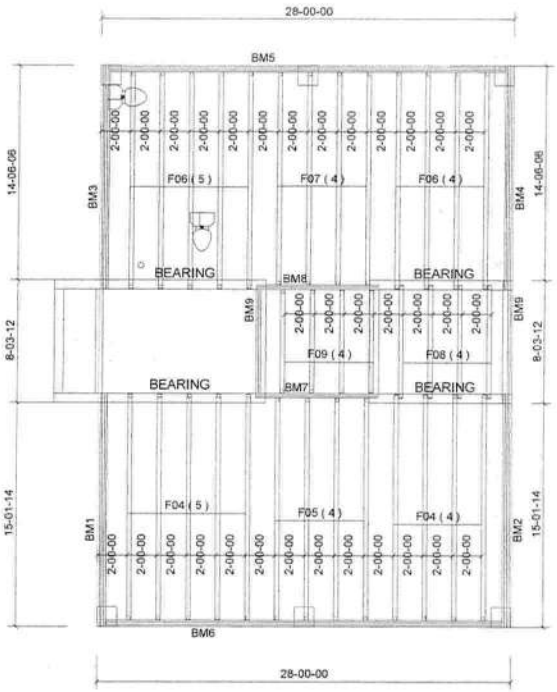
On Site Receiver

Received By: _____

Date: _____

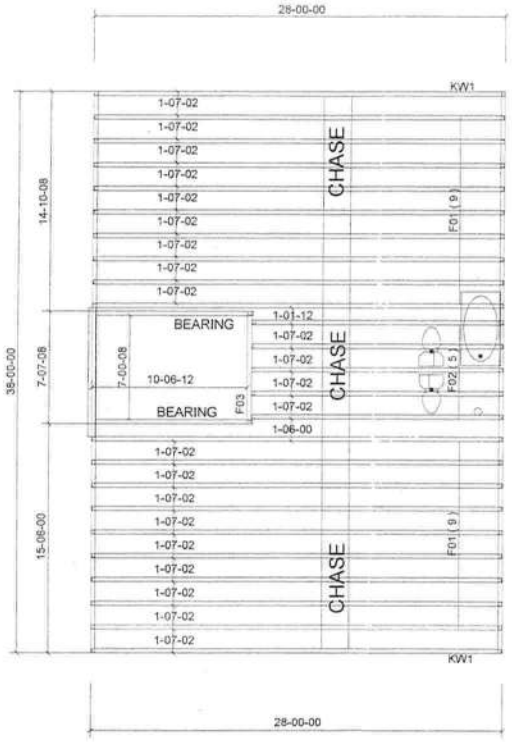
Remarks:

14" DEEP BEAMS
12" DEEP FLOORS
24" O/C

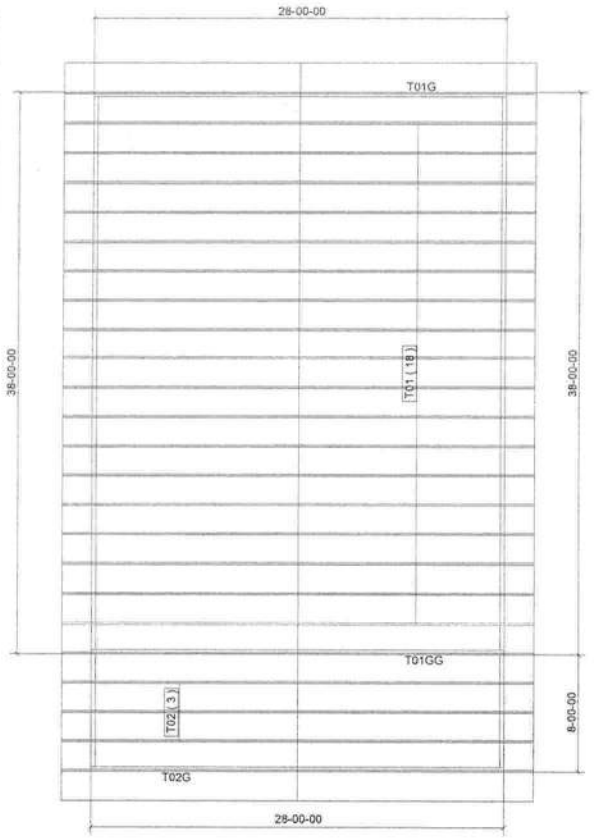


BM1-BM2-BM3-BM4 = 4 PLY
BM5-BM6 = 3 PLY
BM7-BM8-BM9 = 2PLY

20" DEEP FLOOR
19.2" O/C



5.5/12 PITCH
24" O/H



BEARING HEIGHT SCHEDULE

- 8' 1-1/8"
- 9' 1-1/8"
- 10' 1-1/8"
- 11' 1-1/8"
- 12' 1-1/8"

NOTES:

1) REFER TO HB 18 RECOMMENDATIONS FOR HANDLING INSTALLATION AND TEMPORARY BRACING. REFER TO ENGINEERED DRAWINGS FOR PERMANENT BRACING REQUIRED.
2) ALL TRUSSES (INCLUDING TRUSSES UNDER VALLEY FRAMING) MUST BE COMPLETELY DECKED OR REFER TO DETAIL V109 FOR ALTERNATE BRACING REQUIREMENTS.
3) ALL VALLEYS ARE TO BE CONVENTIONALLY FRAMED BY BUILDER.
4) ALL TRUSSES ARE DESIGNED FOR 2' o.c. MAXIMUM SPACING UNLESS OTHERWISE NOTED.
5) ALL WALLS SHOWN ON PLACEMENT PLAN ARE CONSIDERED TO BE LOAD BEARING UNLESS OTHERWISE NOTED.
6) 4X2 TRUSSES MUST BE INSTALLED WITH THE 'LOP' SIDE UP.
7) BEAMS ARE ADEQUATE (HDR) TO BE FURNISHED BY BUILDER.

Builders FirstSource

Jacksonville
PHONE: 904-772-6100 FAX: 904-772-1475

Tampa
PHONE: 813-621-9851 FAX: 813-628-8456

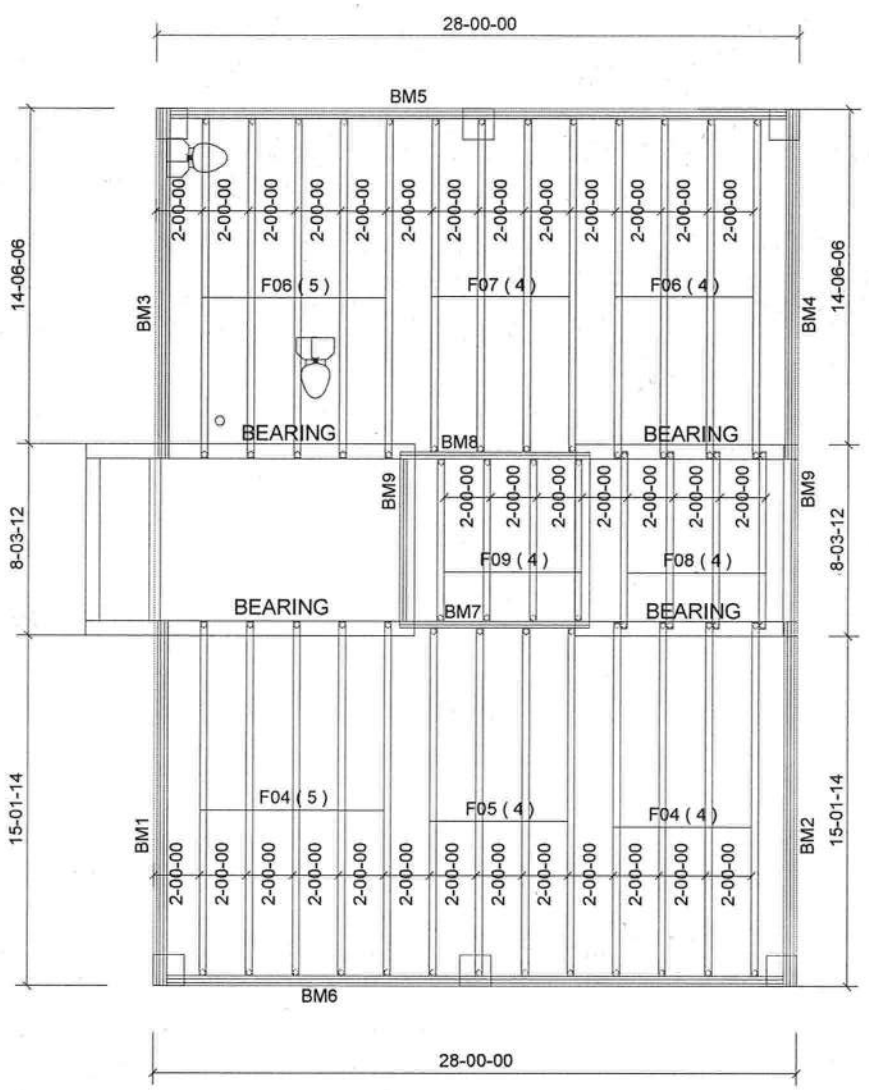
Freeport
PHONE: 850-835-4941 FAX: 850-835-6835

BUILDER: MIKE TODD CONST.
LEGAL ADDRESS: MORGAN RES.

DATE	DRAWN	Original Submittal
12-29-16	KLH	755227
Revised Date	Revised Job #	Job # 755227

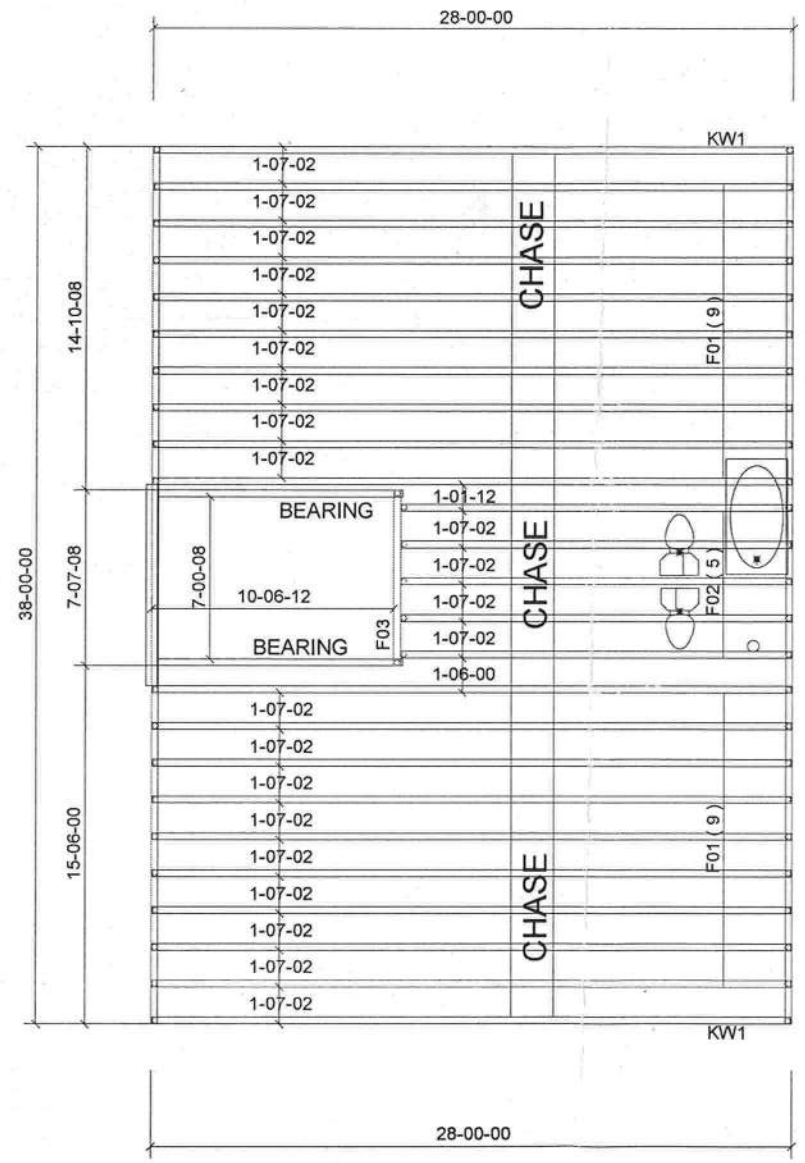
MITEK PLATE APPROVAL #'s 2197.2 - 2197.4, WEYERHAUSER PRODUCT #'s 1630.2 - 1630.10

14" DEEP BEAMS
12" DEEP FLOORS
24" O/C

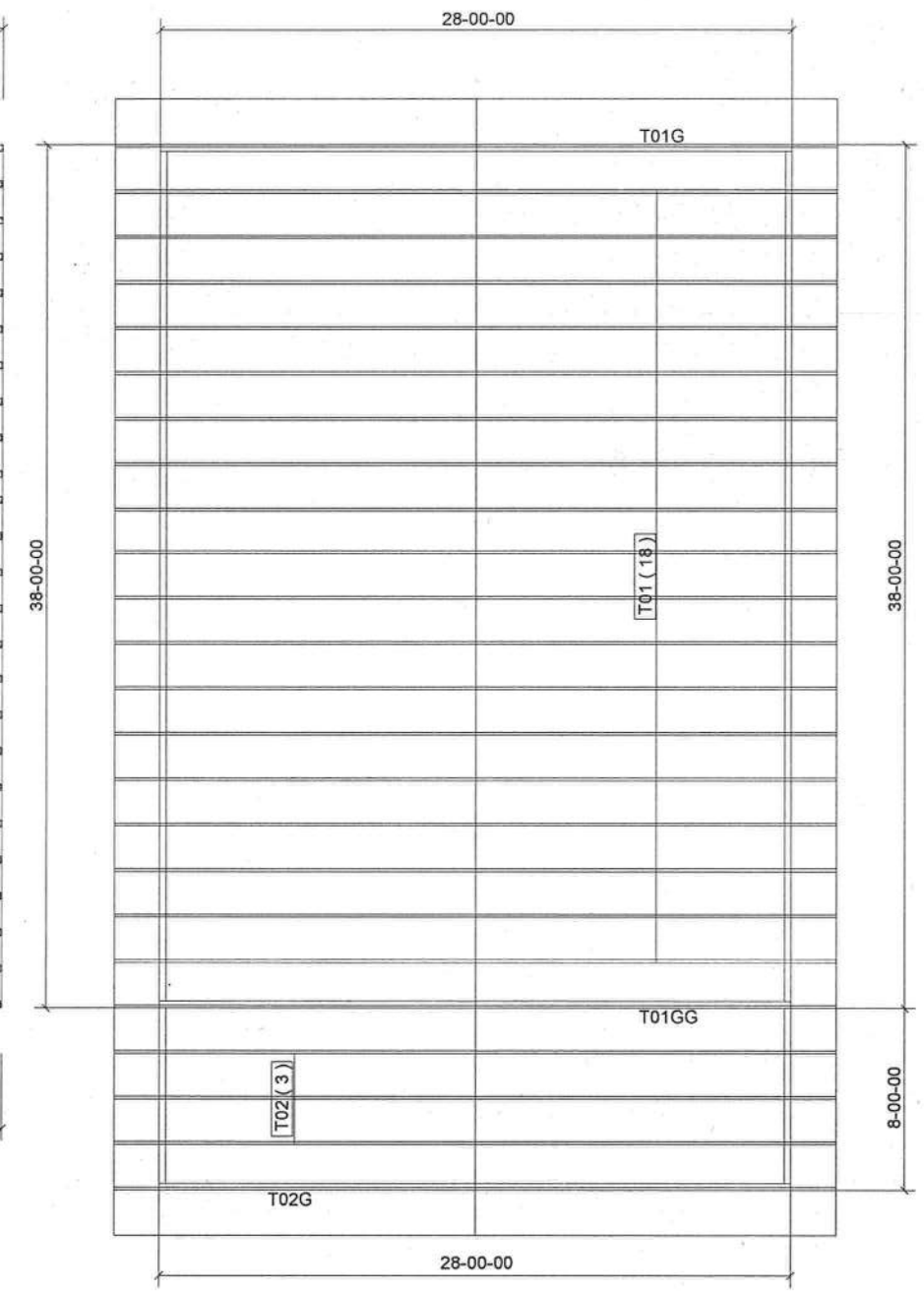


BM1-BM2-BM3-BM4 = 4 PLY
BM5-BM6 = 3 PLY
BM7-BM8-BM9 = 2PLY

20" DEEP FLOOR
19.2" O/C



5.5/12 PITCH
24" O/H



BEARING HEIGHT SCHEDULE

- 8' 1-1/8"
- 9' 1-1/8"
- 10' 1-1/8"
- 11' 1-1/8"
- 12' 1-1/8"

NOTES:

1) REFER TO HIB 91 (RECOMMENDATIONS FOR HANDLING INSTALLATION AND TEMPORARY BRACING.) REFER TO ENGINEERED DRAWINGS FOR PERMANENT BRACING REQUIRED.
2) ALL TRUSSES (INCLUDING TRUSSES UNDER VALLEY FRAMING) MUST BE COMPLETELY DECKED OR REFER TO DETAIL V105 FOR ALTERNATE BRACING REQUIREMENTS.
3) ALL VALLEYS ARE TO BE CONVENTIONALLY FRAMED BY BUILDER.
4) ALL TRUSSES ARE DESIGNED FOR 2' o.c. MAXIMUM SPACING, UNLESS OTHERWISE NOTED.
5) ALL WALLS SHOWN ON PLACEMENT PLAN ARE CONSIDERED TO BE LOAD BEARING, UNLESS OTHERWISE NOTED.
6) SY42 TRUSSES MUST BE INSTALLED WITH THE TOP BEING UP.
7) BEAM/HEADER/LINTEL (HDR) TO BE FURNISHED BY BUILDER.

Builders FirstSource

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Tampa
PHONE: 813-621-9831 FAX: 813-628-8956

Freeport
PHONE: 850-835-4541 FAX: 850-835-6835

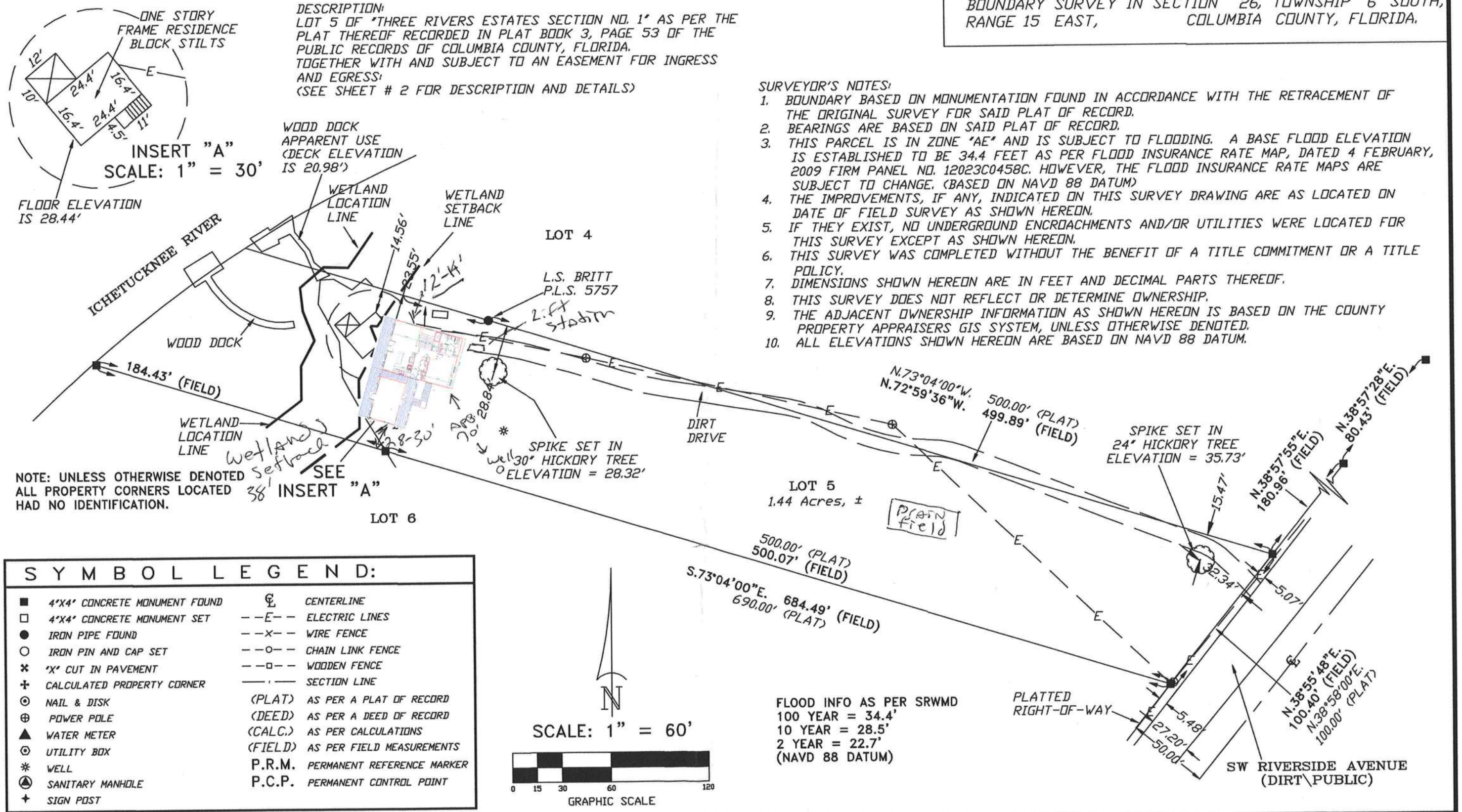
BUILDER: MIKE TODD CONST.		
LEGAL ADDRESS: MORGAN RES.		
MODEL:		Revision: / Rev. By:
DATE: 12-29-16	DRAWN BY: KLH	Original Reference #: 755227
1st Level Job #:	2nd Level Job #:	Roof Job #: 755227

MITEK PLATE APPROVAL #'s 2197.2 - 2197.4, WEYERHAUSER PRODUCT #'s 1630.2 - 1630.10

BOUNDARY SURVEY IN SECTION 26, TOWNSHIP 6 SOUTH, RANGE 15 EAST, COLUMBIA COUNTY, FLORIDA.

DESCRIPTION:
LOT 5 OF "THREE RIVERS ESTATES SECTION NO. 1" AS PER THE PLAT THEREOF RECORDED IN PLAT BOOK 3, PAGE 53 OF THE PUBLIC RECORDS OF COLUMBIA COUNTY, FLORIDA.
TOGETHER WITH AND SUBJECT TO AN EASEMENT FOR INGRESS AND EGRESS:
(SEE SHEET # 2 FOR DESCRIPTION AND DETAILS)

SURVEYOR'S NOTES:
1. BOUNDARY BASED ON MONUMENTATION FOUND IN ACCORDANCE WITH THE RETRACEMENT OF THE ORIGINAL SURVEY FOR SAID PLAT OF RECORD.
2. BEARINGS ARE BASED ON SAID PLAT OF RECORD.
3. THIS PARCEL IS IN ZONE "AE" AND IS SUBJECT TO FLOODING. A BASE FLOOD ELEVATION IS ESTABLISHED TO BE 34.4 FEET AS PER FLOOD INSURANCE RATE MAP, DATED 4 FEBRUARY, 2009 FIRM PANEL NO. 12023C0458C. HOWEVER, THE FLOOD INSURANCE RATE MAPS ARE SUBJECT TO CHANGE. (BASED ON NAVD 88 DATUM)
4. THE IMPROVEMENTS, IF ANY, INDICATED ON THIS SURVEY DRAWING ARE AS LOCATED ON DATE OF FIELD SURVEY AS SHOWN HEREON.
5. IF THEY EXIST, NO UNDERGROUND ENCROACHMENTS AND/OR UTILITIES WERE LOCATED FOR THIS SURVEY EXCEPT AS SHOWN HEREON.
6. THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A TITLE COMMITMENT OR A TITLE POLICY.
7. DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMAL PARTS THEREOF.
8. THIS SURVEY DOES NOT REFLECT OR DETERMINE OWNERSHIP.
9. THE ADJACENT OWNERSHIP INFORMATION AS SHOWN HEREON IS BASED ON THE COUNTY PROPERTY APPRAISERS GIS SYSTEM, UNLESS OTHERWISE DENOTED.
10. ALL ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88 DATUM.



NOTE: UNLESS OTHERWISE DENOTED ALL PROPERTY CORNERS LOCATED HAD NO IDENTIFICATION.

SYMBOL LEGEND:

■	4"X4" CONCRETE MONUMENT FOUND	℄	CENTERLINE
□	4"X4" CONCRETE MONUMENT SET	--E--	ELECTRIC LINES
●	IRON PIPE FOUND	--X--	WIRE FENCE
○	IRON PIN AND CAP SET	--O--	CHAIN LINK FENCE
✕	"X" CUT IN PAVEMENT	--□--	WOODEN FENCE
✢	CALCULATED PROPERTY CORNER	—·—	SECTION LINE
⊙	NAIL & DISK	(PLAT)	AS PER A PLAT OF RECORD
⊕	POWER POLE	(DEED)	AS PER A DEED OF RECORD
▲	WATER METER	(CALC.)	AS PER CALCULATIONS
⊙	UTILITY BOX	(FIELD)	AS PER FIELD MEASUREMENTS
✳	WELL	P.R.M.	PERMANENT REFERENCE MARKER
Ⓐ	SANITARY MANHOLE	P.C.P.	PERMANENT CONTROL POINT
✦	SIGN POST		

CERTIFIED TO:

DAVID & BRYAN MORGAN

FIELD BOOK: SEE PAGE(S): FILE

SURVEYOR'S CERTIFICATION:

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE UNDER MY RESPONSIBLE CHARGE AND MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

10/29/15 — FIELD SURVEY DATE
11/05/15 — DRAWING DATE
L. SCOTT BRITT, P.S.M. CERTIFICATION # 5757

NOTE: UNLESS IT BEARS THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER THIS DRAWING, SKETCH, PLAT OR MAP IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT VALID.

BRITT SURVEYING & MAPPING, LLC
LAND SURVEYORS AND MAPPERS, L.B. # 8016
2086 SW MAIN BLVD, SUITE. 112, LAKE CITY, FLORIDA 32025
(386)752-7163 FAX (386)752-5573
www.brittsurvey.com

WORK ORDER # L-23730

BOUNDARY SURVEY IN SECTION 26, TOWNSHIP 6 SOUTH, RANGE 15 EAST, COLUMBIA COUNTY, FLORIDA.

DESCRIPTION:
LOT 5 OF "THREE RIVERS ESTATES SECTION NO. 1" AS PER THE PLAT THEREOF RECORDED IN PLAT BOOK 3, PAGE 53 OF THE PUBLIC RECORDS OF COLUMBIA COUNTY, FLORIDA.
TOGETHER WITH AND SUBJECT TO AN EASEMENT FOR INGRESS AND EGRESS:
(SEE SHEET # 2 FOR DESCRIPTION AND DETAILS)

SURVEYOR'S NOTES:
1. BOUNDARY BASED ON MONUMENTATION FOUND IN ACCORDANCE WITH THE RETRACEMENT OF THE ORIGINAL SURVEY FOR SAID PLAT OF RECORD.
2. BEARINGS ARE BASED ON SAID PLAT OF RECORD.
3. THIS PARCEL IS IN ZONE "AE" AND IS SUBJECT TO FLOODING. A BASE FLOOD ELEVATION IS ESTABLISHED TO BE 34.4 FEET AS PER FLOOD INSURANCE RATE MAP, DATED 4 FEBRUARY, 2009 FIRM PANEL NO. 12023C0458C. HOWEVER, THE FLOOD INSURANCE RATE MAPS ARE SUBJECT TO CHANGE. (BASED ON NAVD 88 DATUM)
4. THE IMPROVEMENTS, IF ANY, INDICATED ON THIS SURVEY DRAWING ARE AS LOCATED ON DATE OF FIELD SURVEY AS SHOWN HEREON.
5. IF THEY EXIST, NO UNDERGROUND ENCROACHMENTS AND/OR UTILITIES WERE LOCATED FOR THIS SURVEY EXCEPT AS SHOWN HEREON.
6. THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A TITLE COMMITMENT OR A TITLE POLICY.
7. DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMAL PARTS THEREOF.
8. THIS SURVEY DOES NOT REFLECT OR DETERMINE OWNERSHIP.
9. THE ADJACENT OWNERSHIP INFORMATION AS SHOWN HEREON IS BASED ON THE COUNTY PROPERTY APPRAISERS GIS SYSTEM, UNLESS OTHERWISE DENOTED.
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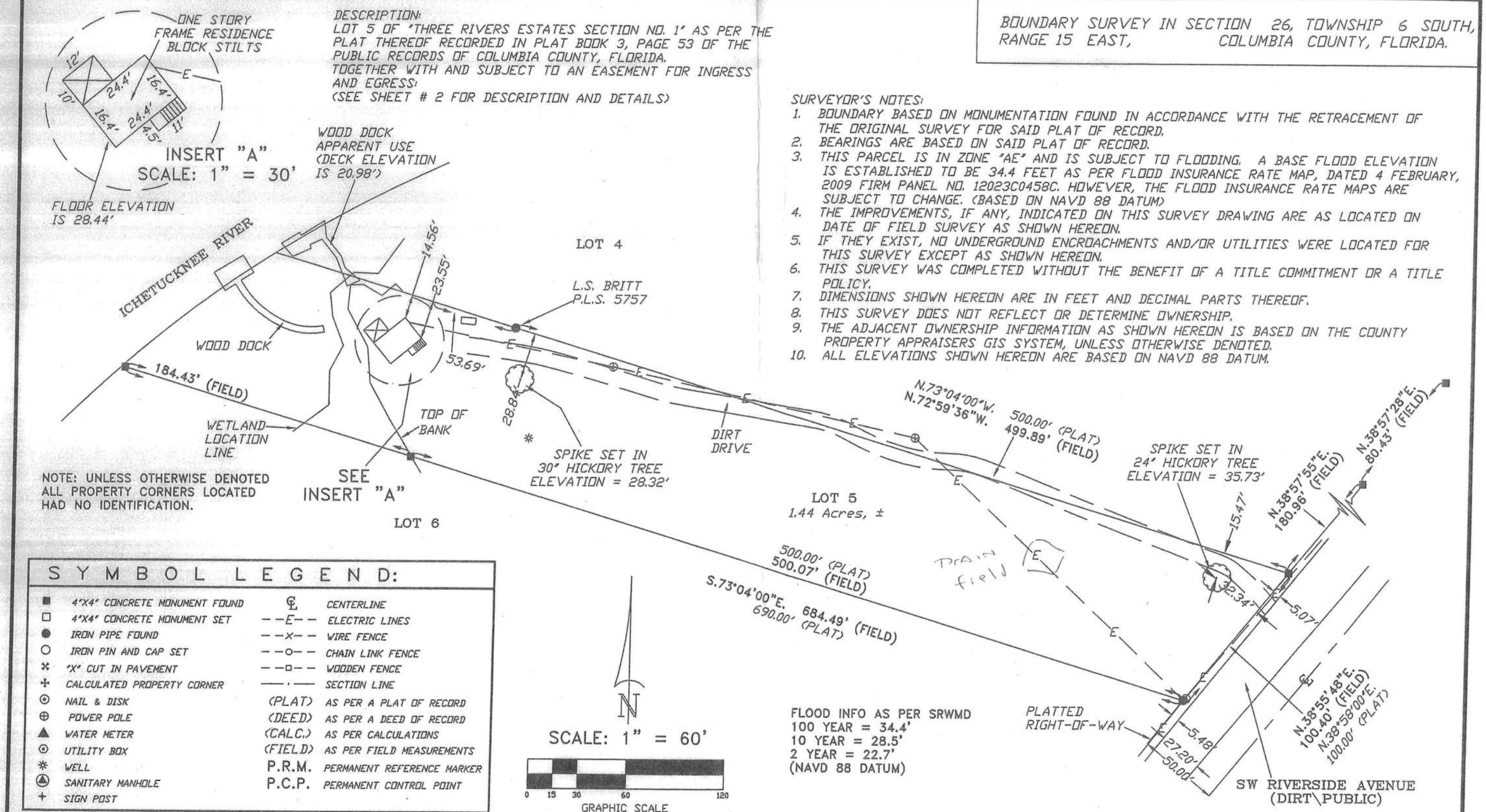

NOTE: UNLESS OTHERWISE DENOTED ALL PROPERTY CORNERS LOCATED HAD NO IDENTIFICATION.

SYMBOL LEGEND:

■	4"X4" CONCRETE MONUMENT FOUND	℄	CENTERLINE
□	4"X4" CONCRETE MONUMENT SET	--E--	ELECTRIC LINES
●	IRON PIPE FOUND	--X--	WIRE FENCE
○	IRON PIN AND CAP SET	--O--	CHAIN LINK FENCE
✕	"X" CUT IN PAVEMENT	--□--	WOODEN FENCE
+	CALCULATED PROPERTY CORNER	—·—	SECTION LINE
⊙	NAIL & DISK	(PLAT)	AS PER A PLAT OF RECORD
⊕	POWER POLE	(DEED)	AS PER A DEED OF RECORD
▲	WATER METER	(CALC.)	AS PER CALCULATIONS
⊙	UTILITY BOX	(FIELD)	AS PER FIELD MEASUREMENTS
✳	WELL	P.R.M.	PERMANENT REFERENCE MARKER
Ⓐ	SANITARY MANHOLE	P.C.P.	PERMANENT CONTROL POINT
+	SIGN POST		

CERTIFIED TO:

DAVID & BRYAN MORGAN

FIELD BOOK: SEE PAGE(S): FILE

SURVEYOR'S CERTIFICATION:

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10/29/15 FIELD SURVEY DATE
11/05/15 DRAWING DATE

L. SCOTT BRITT, P.S.M.
CERTIFICATION # 5757

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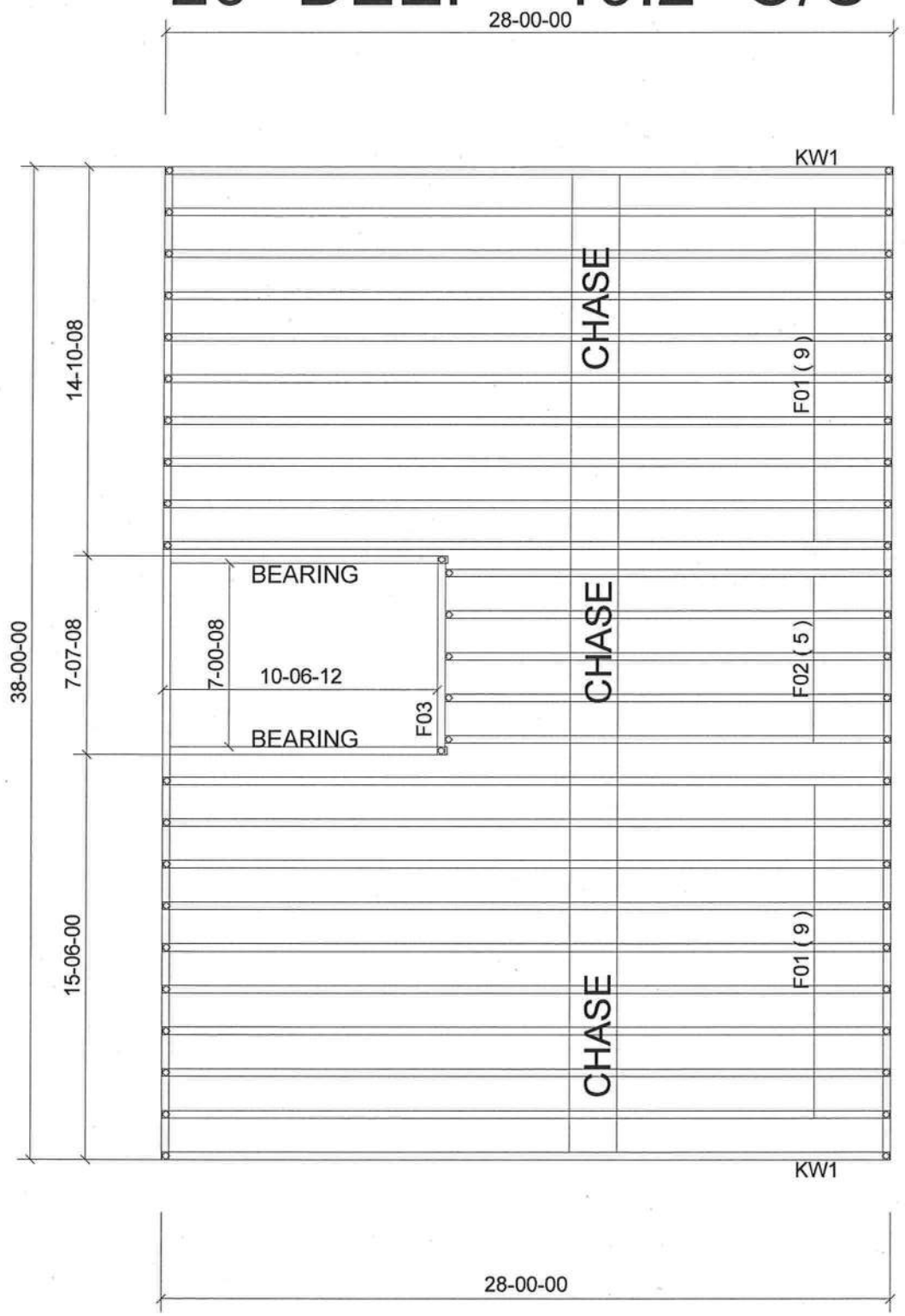
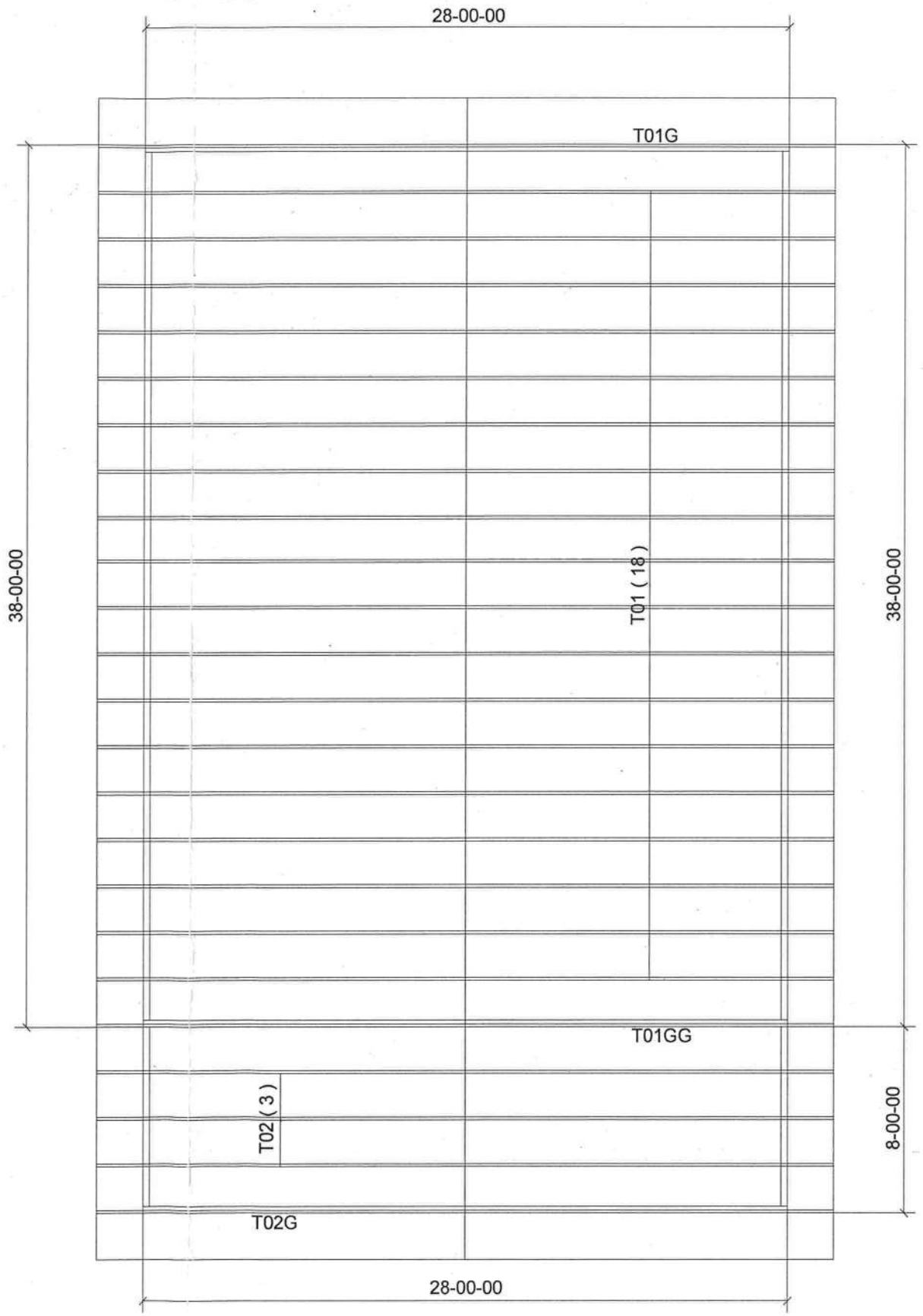
WORK ORDER # L-23730

20" DEEP - 19.2" O/C



5.5/12 PITCH - 24" O/H



BEARING HEIGHT SCHEDULE

- 8' 1-1/8"
- 9' 1-1/8"
- 10' 1-1/8"
- 11' 1-1/8"
- 12' 1-1/8"

NOTES:

1.) REFER TO HIB 91 (RECOMMENDATIONS FOR HANDLING INSTALLATION AND TEMPORARY BRACING) REFER TO ENGINEERED DRAWINGS FOR PERMANENT BRACING REQUIRED.

2.) ALL TRUSSES (INCLUDING TRUSSES UNDER VALLEY FRAMING) MUST BE COMPLETELY DECKED OR REFER TO DETAIL V105 FOR ALTERNATE BRACING REQUIREMENTS.

3.) ALL VALLEYS ARE TO BE CONVENTIONALLY FRAMED BY BUILDER.

4.) ALL TRUSSES ARE DESIGNED FOR 2' o.c. MAXIMUM SPACING, UNLESS OTHERWISE NOTED.

5.) ALL WALLS SHOWN ON PLACEMENT PLAN ARE CONSIDERED TO BE LOAD BEARING, UNLESS OTHERWISE NOTED.

6.) SY42 TRUSSES MUST BE INSTALLED WITH THE TOP BEING UP.

7.) BEAM/HEADER/LINTEL (HDR) TO BE FURNISHED BY BUILDER.

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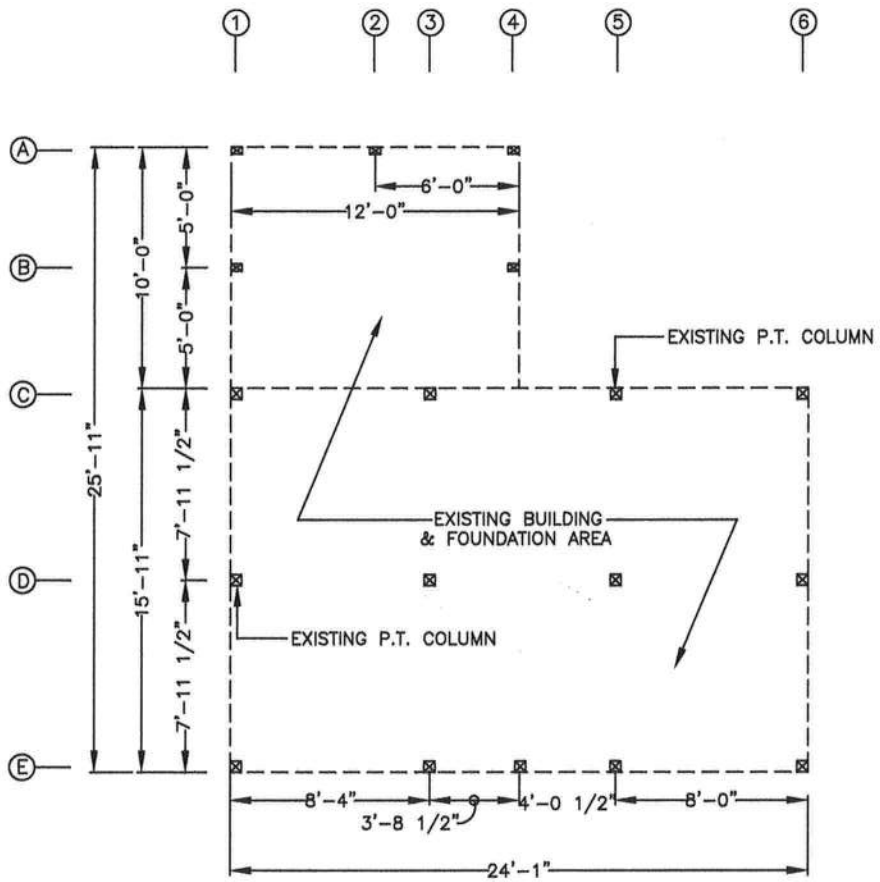
Freeport
PHONE: 850-835-4541 FAX: 850-835-6835

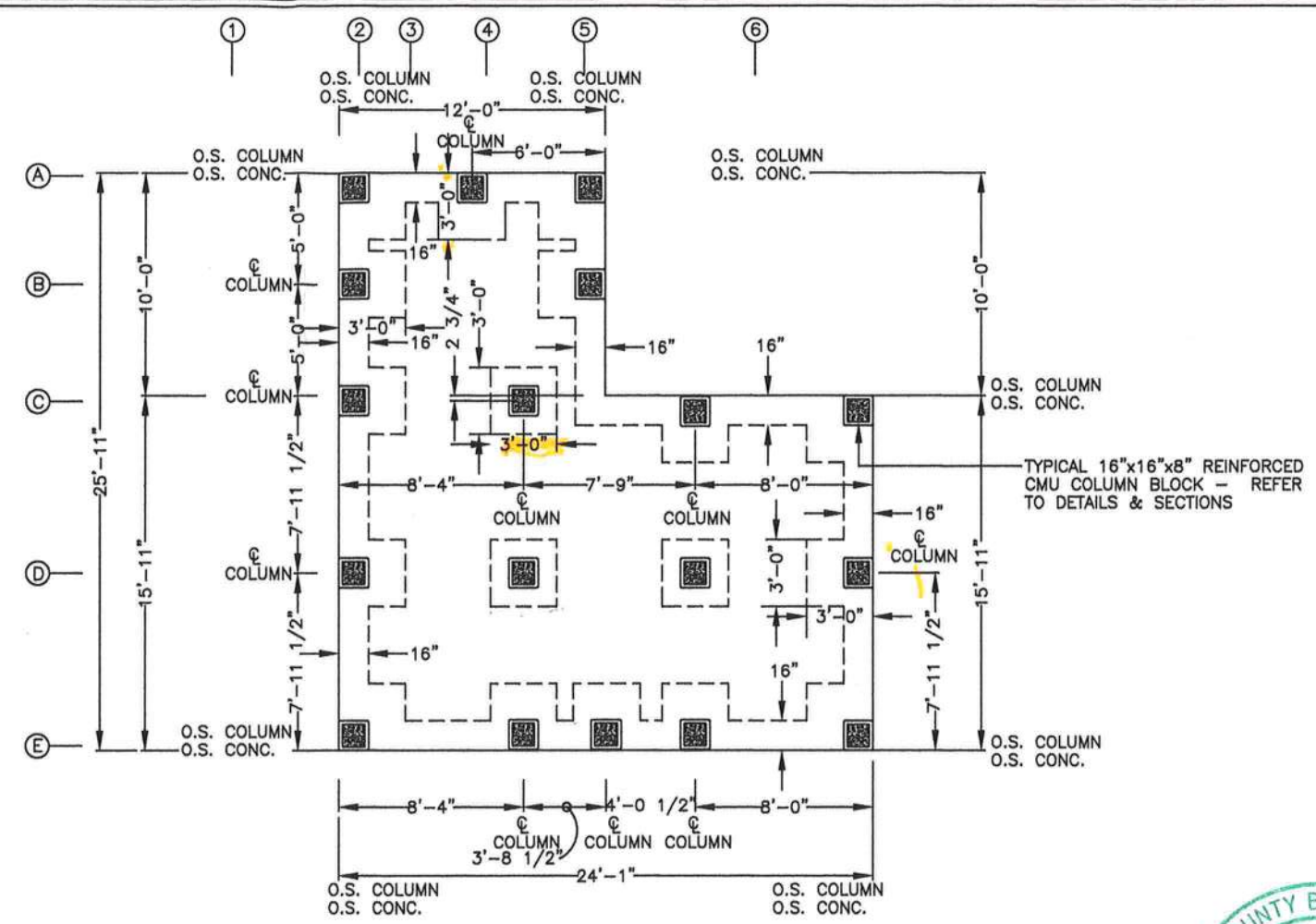
BUILDER: MIKE TODD CONST.		
LEGAL ADDRESS: MORGAN HOUSE		
MODEL:		Revision: / Rev. By:
DATE: 2-2-16	DRAWN BY: KLH	Original Reference #: 755227
1st Level Job #:	2nd Level Job #:	Roof Job #: 755227

MITEK PLATE APPROVAL #'s 2197.2 - 2197.4, WEYERHAUSER PRODUCT #'s 1630.2 - 1630.10

SCALE NOTE:
PLAN VIEW: 1/8"=1'-0



1 A2.1.0 EXISTING DWELLING FOUNDATION PLAN VIEW
SCALE: N.T.S.



2 A2.1.0 RELOCATED DWELLING FOUNDATION PLAN VIEW
SCALE: N.T.S.

REFER TO SHEET No. S1.1.0 FOR CMU COLUMN & FOUNDATION REQUIREMENTS.

HEIGHT OF NEW COLUMN: FINISH FLOOR HEIGHTS OF RELOCATED BUILDING SHALL MATCH ADJACENT NEW CONSTRUCTION

A P.T. 2x SHALL BE ATTACHED TO THE TOP OF THE CMU PIER/ COLUMN W/ 1– A307 ANCHOR BOLT

EACH REINFORCED CMU COLUMN SHALL BE ATTACHED TO DOUBLE 2x8 BAND JOISTS OR INTERIOR JOISTS W/ 1–MODEL No. PA51 BY SIMPSON STRONG–TIE OR EQUAL W/ 9–16d COMMON NAILS AS SPECIFIED BY MANUFACTURER

DETAILS FOR NEW CONSTRUCTION ARE SIMILAR TO THOSE REQUIRED FOR THIS SPECIFIC RELCOATION.

CERTIFICATION:

THESE PLANS FOR THE MORGAN RESIDENCE WILL COMPLY WITH SECTION 1609 OF THE FLORIDA BUILDING CODE, 2014 EDITION FOR A 120 MPH WIND LOAD, 3 SECOND GUST, EXPOSURE C, WITH THE INTERNAL PRESSURE OF + 0.18 AND – 0.18 INCLUDED IN THESE LOADS.

COMPONENTS/CLADDING ROOF = – 22.17 PSF
+ 11.86 PSF

COMPONENTS/CLADDING ROOF = – 51.82 PSF
OVERHANG + 11.86 PSF

COMPONENTS/CLADDING/WALLS = – 33.32 PSF
+ 25.22 PSF

Curtis Keen 6/24/16
CURTIS E. KEEN, PE #23836

PROJECT No. MORGAN–A2.1.0.DWG SHEET No. A2.1.0	DATE 02/26/16	EXISTING & RELOCATED BUILDING FOUNDATION PLAN VIEWS MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA	KEEN ENGINEERING & SURVEYING, INC. 9263 CR 417 LIVE OAK, FLORIDA 32060 386–362–4787 ENG. LIC. EB 3761

STATE CODES: FLORIDA

5TH EDITION (2014) FLORIDA BUILDING CODE RESIDENTIAL COMMERCIAL (FBC)
5TH EDITION (2014) FLORIDA BUILDING CODE ENERGY CONSERVATION
5TH EDITION (2014) FLORIDA BUILDING CODE MECHANICAL
2011 NATIONAL ELECTRICAL CODE (NEC)
5TH EDITION (2014) FLORIDA BUILDING CODE PLUMBING
2014 FLORIDA ACCESSIBLE CODE FOR BUILDING CONSTRUCTION
AMERICANS WITH DISABILITIES ACT (MOST CURRENT REVISIONS)

DESIGN CRITERIA

WIND LOAD DESIGN	120 MPH
EXPOSURE	C
FIRST FLOOR LIVE LOAD	40 PSF
FIRST FLOOR DEAD LOAD	10 PSF
SECOND FLOOR LIVE LOAD	40 PSF OR 0 PSF
SECOND FLOOR DEAD LOAD	10 PSF OR 0 PSF
ROOF LIVE LOAD	20 PSF
ROOF DEAD LOAD	14 PSF
ATTIC LIVE LOAD	10 PSF
ATTIC DEAD LOAD	0 PSF
SESMIC GROUP	N/A
FIRE RATING EXTERIOR WALLS/INTERIOR WALLS	REFER TO DETAILS & SECTIONS
INNER PRESSURE COEFFICIENT	-0.18 (ENCLOSED BUILDING)
IMPORTANCE FACTOR	1.0
MEAN ROOF HEIGHT	20.0'
OCCUPANT LOAD IS BASED UPON 200 S.F. PER PERSON	
ACCESSIBILITY REQUIREMENTS	REFER TO ACCESSIBLE REQUIREMENTS

AS BUILT DRAWINGS

AT THE START OF CONSTRUCTION, CONTRACTOR SHALL SECURE ONE SET OF PRINTS TO BE BE MAINTAINED IN A CLEAN CONDITION AT THE PROJECT SITE. APPROVED CHANGES (IF ANY) IN CONSTRUCTION SHALL BE NOTED THERON DAILY, AS MADE, AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL CORRECT THESE PRINTS TO REFLECT NEATLY AND ACCURATELY ANY AND ALL CHANGES TO THE PROJECT. THESE PRINTS SHALL BE PRESENTED TO THE OWNER AS "ASBUILT" DRAWINGS DURING FINAL INSPECTION OF THE CONSTRUCTION PROJECT.

GENERAL NOTES

ALL WORK SHALL BE IN ACCORDANCE WITH THE 2014 EDITION OF THE INTERNATIONAL CODE, AS ADOPTED AND SUPPLEMENTED BY LOCAL REGULATIONS.
- VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES.
- NO CHANGES OF INFORMATION SHOWN ON THESE DRAWINGS SHALL BE MADE WITHOUT THE SPECIFIC PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- THE ENGINEER SHALL BE NOTIFIED OF ANY PROPOSED MODIFICATIONS.
- DEMOLITION SHALL INCLUDE REMOVAL, TRANSPORT AND DISPOSAL OF ALL WASTE MATERIAL RELATED TO CONSTRUCTION TO AN APPROVED DISPOSAL FACILITY.
- ALL STRUCTURAL ELEMENTS ARE DESIGNED TO SUSTAIN SPECIFIED DEAD AND LIVE LOADS IN COMBINATION SO AS TO PRODUCE THE MOST CRITICAL CONDITIONS. SEE ABOVE CRITERIA.

DIMENSIONAL LUMBER

- ALL MATERIAL SHALL BE S4S AND GRADE STAMPED BY AN AGENCY CERTIFIED BY THE AMERICAN LUMBER STANDARDS COMMITTEE'S BOARD OF REVIEW AND MANUFACTURED IN ACCORDANCE WITH PS 20, LATEST EDITION.
HANDRAILS AND DECKING (AS MAY BE APPLICABLE) SHALL BE SOUTHERN YELLOW PINE, No.1 OR No.2 AS SPECIFIED IN THE NOTES AND DETAILS WITH A MAXIMUM MOISTURE CONTENT OF 19%.
FRAMING MATERIAL SHALL BE SPRUCE OR SOUTHERN YELLOW PINE No.2 OR BETTER AS NOTED IN NOTES AND DETAILS WITH A MAXIMUM MOISTURE CONTENT OF 19%.
ALL LUMBER SHALL CONFORM TO AMERICAN SOFTWOOD LUMBER STANDARD PS-20, LATEST REV.
ALL SOUTHERN PINE SHALL COMPLY WITH THE FOLLOWING MINIMUM ALLOWABLE UNIT STRESSES:

LIGHT FRAMING	Fb (BENDING) 1500 P.S.I.
2x2 THROUGH 4x4	E. 1,600,000 P.S.I.
STRUCTURAL JOISTS AND PLANKS	Fb (BENDING) 1200 P.S.I.
2x5 THROIGH 4x16	E. 1,600,000 P.S.I.
BEAMS AND STRINGERS	Fb (BENDING) 1100 P.S.I.
POSTS AND TIMBERS	E. 1,400,000 P.S.I.

WANES ARE NOT ACCEPTABLE IN EXPOSED MATERIAL
- ALL LUMBER IN CONTACT W/ MASONRY OR SPECIFIED AS TREATED OR " P.T." SHALL BE PRESSURE TREATED IN CONFORMANCE WITH THE AMERICAN WOOD PRESERVERS ASSOCIATION STANDARD P5, WITH A MINIMUM CHROMATED COPPER ARSENATE (CCA) RETENTION AS FOLLOWS:

USE / EXPOSURE	RETENTION
ABOVE GROUND	0.25
GROUND CONTACT	0.40
FRESH WATER	0.40
WOOD FOUNDATION	0.60
SALT / BRACKISH WATER	2.50

- FIELD CUTS, HOLES AND DAMAGE SHALL BE FIELD TREATED WITH COPPER NAPHTHENATE SOLUTION ON ACCORDANCE WITH AWPA M4
DECKING SHALL BE CUT IN CONTINUOUS LENGTHS, WITH BARK SIDE OF DECKING FACING UPWARD AND SECURED W/ 12d ANNULAR RING OR SPIRAL RING NAILS OR DECKING SCREWS TO PREVENT SPLITTING OF DECKING MATERIAL.
- ALL HANDRAILS AND CORNERS SHALL BE BEVELED AND SANDED TO REMOVE SPLINTERS AND SHARP EDGES.
- ALL FASTENERS SHALL BE AS DESCRIBED IN DETAILS & NOTES ELSEWHERE THESE PLANS.
- REFER TO DETAILS & SECTIONS ELSEWHERE THESE PLANS FOR ADDITIONAL REQUIREMENTS

MECHANICAL CONNECTORS

MECHANICAL CONNECTORS FOR WOOD CONSTRUCTION SHALL BE SIMPSON STRONG-TIE OR APPROVED SUBSTITUTE, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LITERATURE AND SPECIFICATIONS FOR THE INTENDED USE. REFER TO DETAILS AND NOTES ELSEWHERE THESE PLANS FOR REQUIRED SPECIFIC DEVICES AND LOCATIONS.

GENERAL FASTENER SCHEDULE FOR WOOD CONSTRUCTION

CONNECTION	FASTENER	NUMBER OR SPACING
JOIST TO BAND JOIST, FACE NAIL	16d COMMON	3
JOIST TO SILL/GIRDER, TOE NAIL	8d COMMON	3
BRIDGING TO JOIST, TOE NAIL EACH END	8d COMMON	2
SOLE PLATE TO JOIST/BLOCKING, FACE NAIL	16d COMMON	16" O.C.
TOP OR SOLE PLATE TO STUD, END NAILED	16d COMMON	2
STUD TO SOLE PLATE, TOE NAIL	8d COMMON	4
DOUBLED STUDS, FACE NAIL	10d COMMON	24" O.C.
DOUBLED TOP PLATES, FACE NAIL	10d COMMON	16" O.C.
TOP PLATES, LAP AND INTERSECTIONS FACE NAIL	——	2-16d OR 3-10d COMMON
CONTINUOUS HEADER, TWO PIECES	16d COMMON	16" O.C. ALONG EACH EDGE
CEILING JOISTS TO PLATE, TOE NAIL	8d COMMON	3
CONTINUOUS HEADER TO STUD, TOE NAIL	8d COMMON	3
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	——	3-16d OR 4-10d COMMON
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	——	3-16d OR 4-10d COMMON
RAFTER TO PLATE, TOE NAIL	8d COMMON	3
BUILT UP CORNER STUDS	16d COMMON	24" O.C.
BUILT UP GIRDERS & BEAMS, OF THREE MEMBERS	20d COMMON	32" O.C. AT TOP AND BOTTOM AND STAGGERED 2 ENDS AND EACH SPLICE
STUDS TO SOLE PLATE, END NAIL	16d COMMON	2 EACH END
GYPSUM WALLBOARD, 1/2"	1 3/8" DRYWALL NAIL	7" O.C. ON CEILINGS 8" O.C. ON WALLS
GYPSUM WALLBOARD, 5/8"	1 1/2" DRYWALL NAIL	7" O.C. ON CEILINGS 8" O.C. ON WALLS
ROOF SHEATHING, 1/2", EXPOSURE1 C-D PLYWOOD	8d COMMON	6" O.C. EDGES, INTERMEDIATE FRAMING
180 P.L.F. DIAPHRAGM SHEAR CAPACITY		4" O.C. GABLE END WALL OR GABLE TRUSS
ROOF SHEATHING, 1/2", 2-M-W OR 2-M-3 PARTICLE BOARD	8d COMMON	6" O.C. EDGES, INTERMEDIATE FRAMING
180 P.L.F. DIAPHRAGM SHEAR CAPACITY		4" O.C. GABLE END WALL OR GABLE TRUSS

NOTE: REFER TO LISTED FOUNDATION SCHEDULES, WALL SCHEDULES & ROOF SCHEDULES FOR SPECIFIC REQUIRED MECHANICAL FASTENING DEVICES, COORDINATING WITH PLAN VIEWS FOR LOCATIONS OF ATTACHMENT.

CONCRETE/MASONRY

REFER TO TYPICAL FOUNDATION SECTIONS, DETAILS AND SPECIFIC REQUIREMENTS ELSEWHERE THESE PLANS. SEE ALSO APPLICABLE WALL SECTIONS AND RELATED REQUIREMENTS.

DAVID & BRYN MORGAN RESIDENCE
LOT 5, THREE RIVERS ESTATES SECTION NO. 1
COLUMBIA COUNTY, FLORIDA

SRWMD FLOOD INFORMATION

2 YR FLOOD: 22.7 FEET
10 YR FLOOD: 28.5 FEET
100 YR FLOOD: 34.4 FEET

COLUMBIA COUNTY BUILDING
Received for FILE COPY
Code Compliance
PLANS EXAMINER

CERTIFICATION:

THESE PLANS FOR THE MORGAN RESIDENCE WILL COMPLY WITH SECTION 1609 OF THE FLORIDA BUILDING CODE, 2014 EDITION FOR A 120 MPH WIND LOAD, 3 SECOND GUST, EXPOSURE C, WITH THE INTERNAL PRESSURE OF + 0.18 AND - 0.18 INCLUDED IN THESE LOADS.

COMPONENTS/CLADDING ROOF = - 22.17 PSF
+ 11.86 PSF

COMPONENTS/CLADDING ROOF = - 51.82 PSF
OVERHANG + 11.86 PSF

COMPONENTS/CLADDING/WALLS = - 33.32 PSF
+ 25.22 PSF

Curtis E. Keen 5/11/16
CURTIS E. KEEN, PE #23836

MECHANICAL NOTES

1. ALL SUPPLY REGISTERS ARE ADJUSTABLE, EXCEPT WHERE OTHERWISE SPECIFIED
2. INTERIOR DOORS SHALL BE UNDERCUT ABOVE FINISH FLOOR FOR AN AIR RETURN AND OR NOTED IN SCHEDULES OR PLAN VIEWS ELSEWHERE THESE PLANS
3. BATHROOM VENT FANS SHALL PROVIDE A MINIMUM OF 50 CFM OF VENTILATION REFER TO ELECTRICAL SCHEDULES FOR ADDITIONAL MINIMUM CFM REQUIRED
4. HVAC EQUIPMENT SHALL BE EQUIPPED WITH OUTSIDE FRESH AIR INTAKE TO PROVIDE A MINIMUM OF 20 CFM PER PERSON
5. ALL VENTS SHALL BE DUCTED TO THE EXTERIOR OF DWELLING
6. ALL DUCT SYSTEM COMPONENTS INSTALLED IN THE ATTIC AREA W/ INSULATION SHALL HAVE A MINIMUM R-VALUE OF R-8.0
AIR DUCTS, FITTINGS, MECHANICAL EQUIPMENT & PLENUM CHAMBERS SHALL BE MECHANICALLY ATTACHED, SEALED, INSULATED & INSTALLED PER TABLE 503.2.7.2
7. ALL HVAC COMPONENTS INSTALLED ON SITE SHALL BE INSTALLED, TESTED & BALANCED IN ACCORDANCE WITH SECTION 503.2.9.1 BY HVAC CONTRACTOR
8. INSTALLED HVAC EQUIPMENT SHALL MEET THE MINIMUM EFFICIENCIES OF TABLES 503.2.2 (1) THROUGH (8)
9. ATTIC VENTILATION IS ACHIEVED BY END WALL, RIDGE & SOFFIT VENTS WITH A MINIMUM OF 13.87 NET SQUARE FEET FREE AREA OF ATTIC VENTILATION. AND SHALL FULLY COMPLY WITH SECTION 1203 OF THE F.B.C.
RIDGE, SOFFIT AND GABLE END WALL VENTS SHALL BE PROTECTED FROM RAIN INTRUSION & INSECT OR VERMIN INTRUSION COMPLYING W/ SECTION 1203 OF F.B.C.
10. CRAWL SPACE VENTILATION IS NOT APPLICABLE
11. REFER TO HVAC MECHANICAL DRAWINGS, DETAILS, SPECIFICATIONS AND NOTES FOR ADDITIONAL REQUIREMENTS.

INTAKE OPENINGS

R303.5.1 INTAKE OPENINGS
MECHANICAL AND GRAVITY OUTDOOR INTAKE OPENINGS SHALL BE LOCATED A MINIMUM 10 FEET FROM ANY HAZARDOUS OR NOXIOUS CONTAMINATE, SUCH AS VENTS AS CHIMNEYS, PLUMBING VENTS, STREETS, ALLEYS, PARKING LOTS AND LOADING DOCKS, EXCEPT AS OTHERWISE SPECIFIED IN THIS CODE. WHERE SOURCE OF CONTAMINATE IS LOCATED WITHIN 10 FEET OF AN AIR INTAKE OPENING THE OPENINGS SHALL BE LOCATED A MINIMUM OF 2 FEET BELOW THE CONTAMINATE SOURCE.

R303.6 OUTSIDE OPENING PROJECTION
AIR EXHAUST AND INTAKE OPENINGS THAT TERMINATE OUTDOORS SHALL BE PROTECTED WITH CORROSION RESISTANT SCREENS, LOUVERS OR GRILLES HAVING A MINIMUM OPENING OF 1/4 INCH AND A MAXIMUM OPENING OF 1/2 INCH IN ANY DIMENSION. OPENING SHALL BE PROTECTED AGAINST LOCAL WEATHER CONDITIONS. OUTDOOR AND EXHAUST INTAKE OPENINGS SHALL MEET THE PROVISIONS FOR EXTERIOR WALL OPENING PROTECTIVES IN ACCORDANCE WITH THIS CODE.

WINDOW AND OTHER OPENINGS FOR THE PURPOSE OF LIGHT AND VENTILATION IN THE EXTERIOR WALLS ACCESSIBLE TO RODENTS BY THE WAY OF EXPOSED PIPES, WIRES, CONDUITS AND OTHER APPURTENANCES SHALL BE COVERED WITH WIRE MESH (0.035 INCH) THICK OR SOLID METAL GUARDS (0.024 INCH) THICK OR HEAVIER. GUARDS SHALL BE FITTED AROUND THESE FIXTURES. IN ADDITION THEY SHALL BE FASTENED SECURELY TO AND SHALL EXTEND PERPENDICULAR FROM THE EXTERIOR WALL FOR A MINIMUM 12 INCHES BEYOND EITHER SIDE OF APPURTENANCES.

PLUMBING NOTES

REFER TO SPECIFIC PLANS, DETAILS, REQUIREMENTS AND SPECIFICATIONS ELSEWHERE THESE PLANS

WINDOWS AND DOORS

ALL WINDOWS OR DOORS SERIES FROM SELECTED MANUFACTURERS SHALL COMPLY WITH FBC 502.3.2
ALL JOINTS/CRACKS SHALL BE CAULKED, GASKETED, WEATHER STRIPPED OR OTHER WISE SEALED AND SHALL COMPLY WITH FBC 502.3.3
PRODUCT APPROVAL SPECIFICATION SHEET ALONG WITH MANUFACTURER'S INSTALLATION REQUIREMENTS FBC 1715.5 SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

1. ALL GLAZING WITHIN 24 INCHES ARC OF ALL DOORS, WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR, ALL GLAZING IN DOORS SHALL BE SAFETY TEMPERED OR ACRYLIC PLASTIC SHEET.
2. MINIMUM FINISH CORRIDOR WIDTH SHALL BE AS NOTED AND SHALL NOT BE REDUCED OR ADJUSTED BY CONTRACTOR.
3. ALL WINDOWS GLASS AND DOORS SHALL COMPLY W/ AAMA - NWWDA 101-1.S.2
4. ALL MATERIALS USED IN CONSTRUCTION OF THIS BUILDING WHICH ARE COVERED BY THE FLORIDA BUILDING COMMISSION CHAPTER 61 G20-3.006 RULES SHALL HAVE CURRENT FLORIDA APPROVAL.
5. IF WINDOW SILLS ARE LESS THAN 24 INCHES ABOVE FINISH FLOOR & OVER 7 FEET ABOVE ADJACENT FINISH GRADE FULLY COMPLIANT WINDOW GUARDS SHALL BE REQUIRED.
6. REFER TO PLAN VIEWS & RELATED SCHEDULES FOR FULLY COMPLIANT WINDOW & DOOR EGRESS SIZES AND LOCATIONS

PROJECT No. MORGAN-A1.0.0.DWG	DATE 02/26/16	MISC. NOTES, REFERENCES & INSTRUCTIONS	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:
SHEET No. A1.0.0			

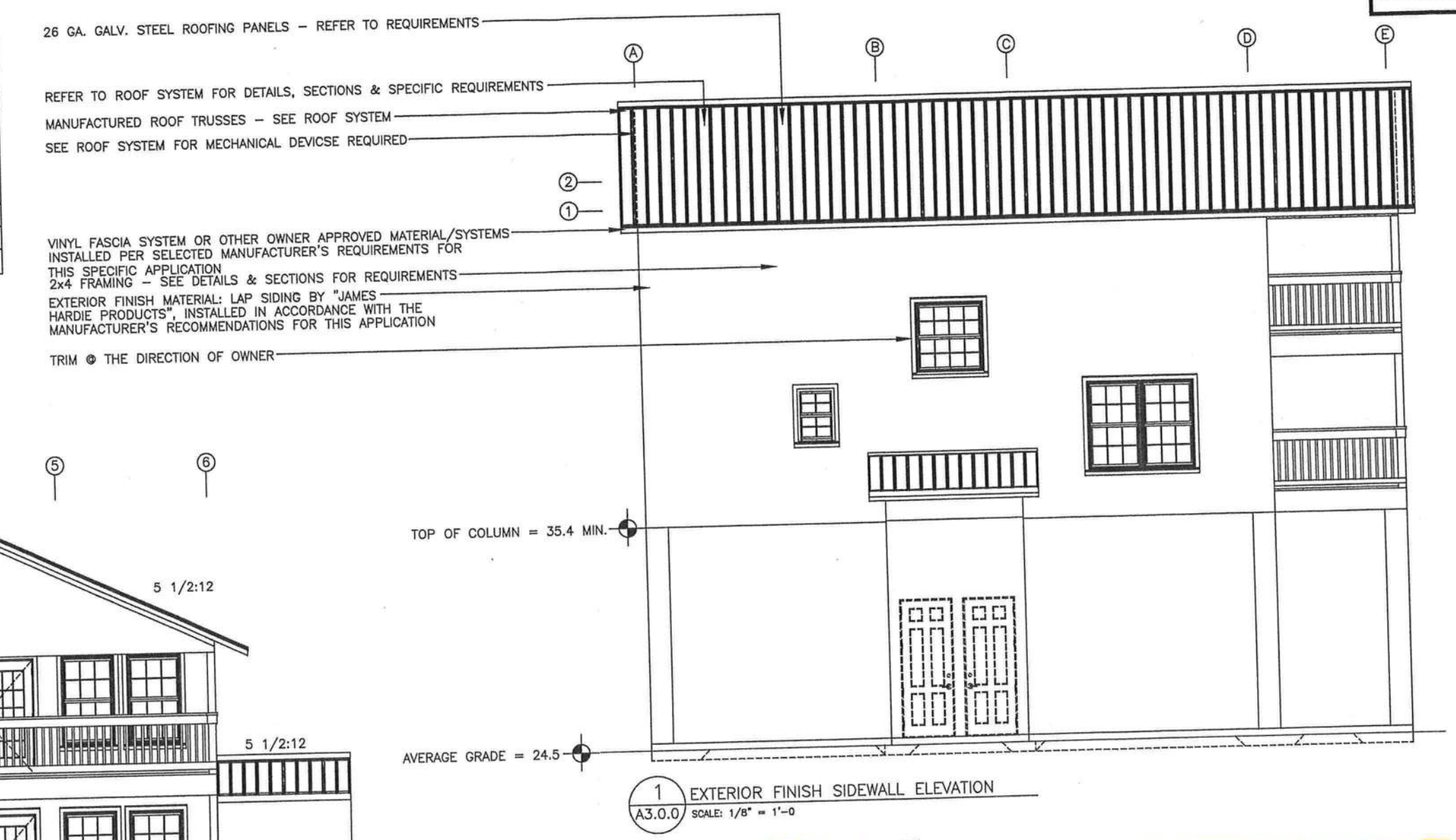
MORGAN RESIDENCE
COLUMBIA COUNTY, FLORIDA

KEEN ENGINEERING & SURVEYING, INC.
9263 CR 417
LIVE OAK, FLORIDA 32060
386-362-4787
ENG. LIC. EB 3761

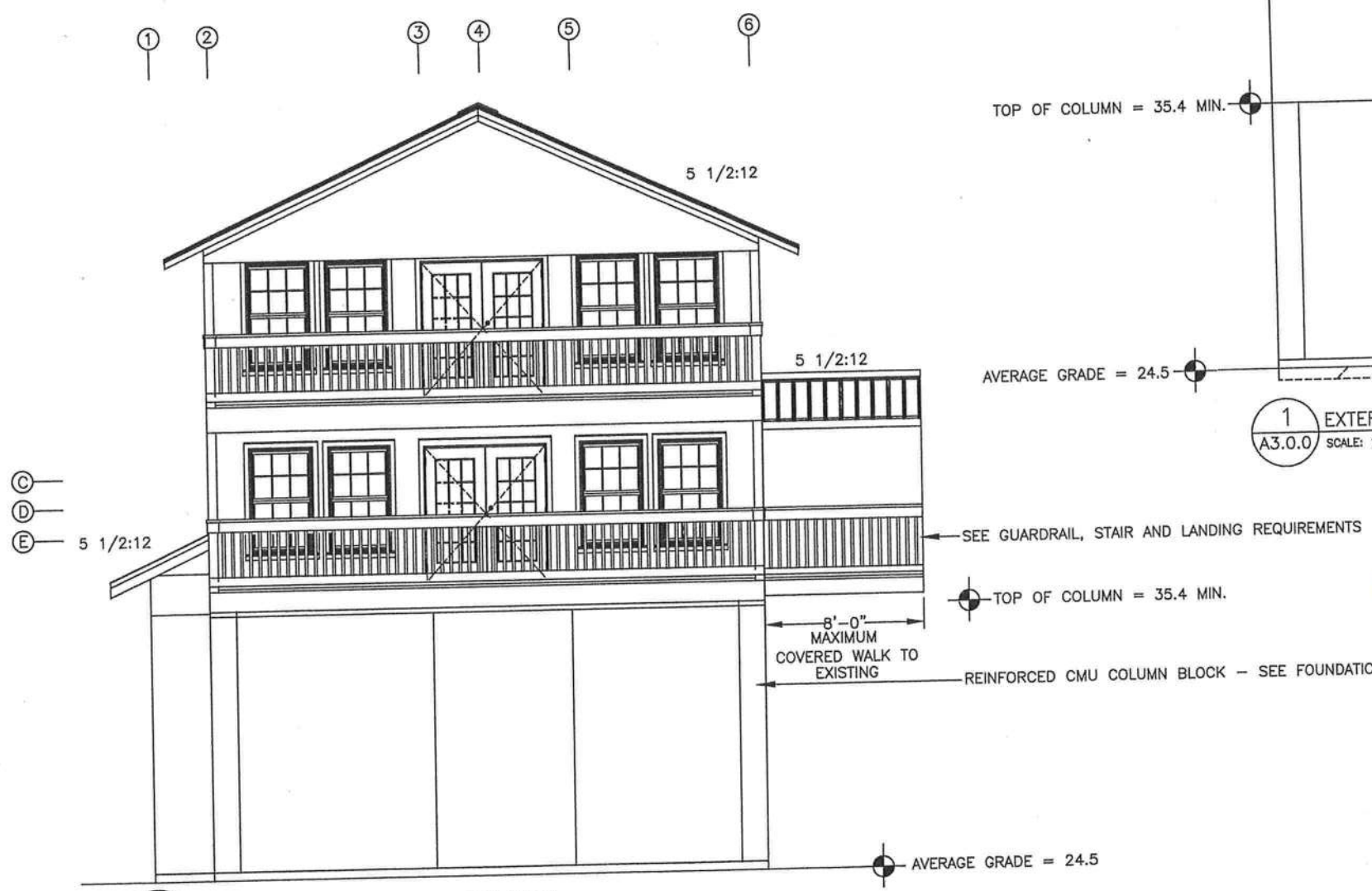
SCALE NOTE:
ELEVATIONS: 1/8"=1'-0

CONDITIONED AREA IST LEVEL	1064.00 S.F.
CONDITIONED AREA 2ND LEVEL	1064.00 S.F.
TOTAL CONDITIONED AREA	2128.00 S.F.
PORCH AREA(S)	448.00 S.F.
WALK AREA(S)	40.00 S.F.
SUB LEVEL STAIR & STORAGE	199.50 S.F.
SUB LEVEL PARKING	199.50 S.F.
TOTAL UNCONDITIONED AREAS	1110.70 S.F.
TOTAL CONSTRUCTION AREA	3238.70 S.F.

FLOOD DATA
100 YR 34.4
10 YR 28.5
NAVD 88 DATUM
EXISTING GRADE = 24.5



1 A3.0.0 EXTERIOR FINISH SIDEWALL ELEVATION
SCALE: 1/8" = 1'-0



2 A3.0.0 EXTERIOR FINISH ENDWALL ELEVATION
SCALE: 1/8" = 1'-0

ENCLOSURE NOTE

THE ABOVE ENCLOSED AREA OR UNFINISHED ENCLOSURE IS DESIGNED WITH THE SOLE INTENT OR PURPOSE TO WITHSTAND EXPOSURE TO THE ELEMENTS, HAVE A LOW FLOOD DAMAGE POTENTIAL, AND PROVIDE LIMITED STORAGE (eg. GRADEN EQUIPMENT, BICYCLES AND OTHER LOW DAMAGE ITEMS).
FURTHER, THIS AREA IS OF A FLOOD RESISTANT MATERIAL, NON-PARTITIONED AND VOID OF ALL UTILITIES (EXCEPT ESSENTIAL AND BASIC LIGHTING CONSISTING OF GFIC SWITCHES AND FIXTURES INSTALLED WITH NON METALIC CONDUIT) AND PROVIDED WITH OPENINGS TO PRECLUDE HYDROSTATIC LOADING AND ALLOW VENTILATION. THIS AREA SHALL NOT BE TEMPERATURE CONTROLLED,

PROJECT No. MORGAN-A3.0.0.DWG SHEET No. A3.0.0	DATE 02/26/16	EXTERIOR FINISH ELEVATIONS MISC. NOTES, REFERENCES & INSTRUCTIONS 	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

KEEN ENGINEERING & SURVEYING, INC.
9263 CR 417
LIVE OAK, FLORIDA 32060
386-362-4787
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SCALE NOTE:
ELEVATIONS: 1/8"=1'-0

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TOTAL CONDITIONED AREA	2128.00 S.F.
PORCH AREA(S)	448.00 S.F.
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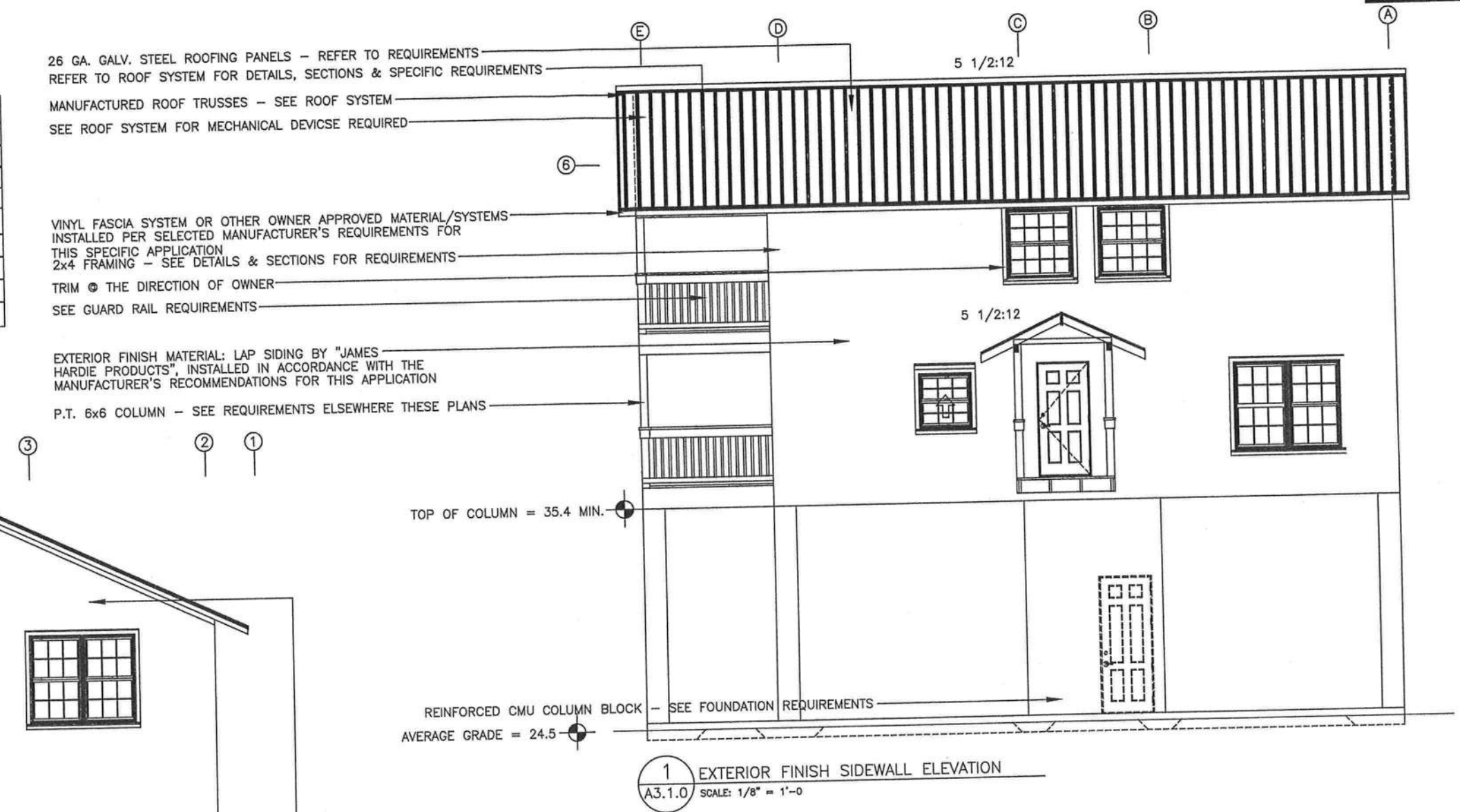
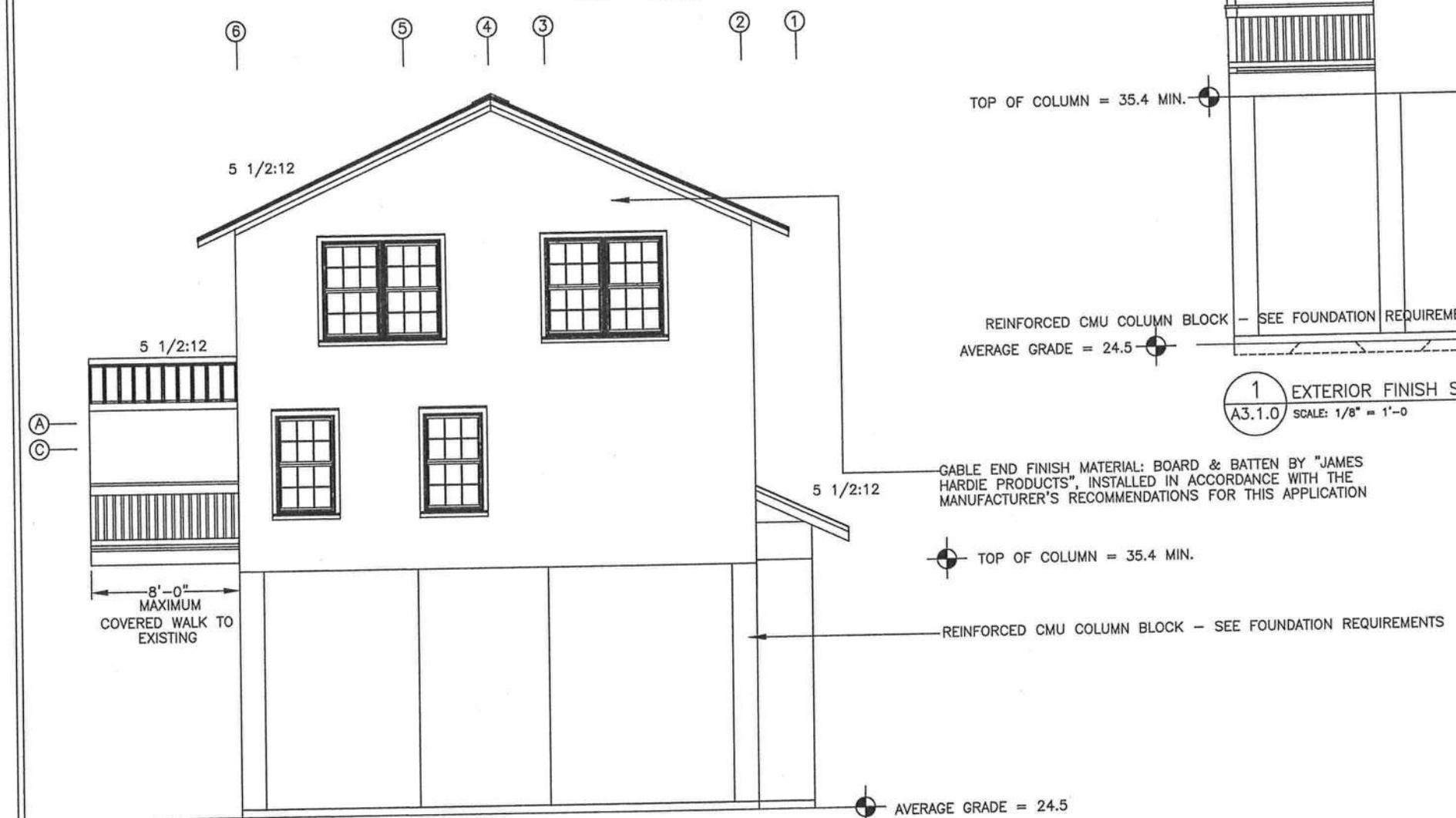
SUB LEVEL PARKING	199.50 S.F.
TOTAL UNCONDITIONED AREAS	1110.70 S.F.
TOTAL CONSTRUCTION AREA	3238.70 S.F.



1 / A3.1.0 EXTERIOR FINISH SIDEWALL ELEVATION
SCALE: 1/8" = 1'-0



2 / A3.0.0 EXTERIOR FINISH ENDWALL ELEVATION
SCALE: 1/8" = 1'-0

PROJECT No. MORGAN-A3.0.0.DWG	DATE 02/26/16	EXTERIOR FINISH ELEVATIONS MISC. NOTES, REFERENCES & INSTRUCTIONS	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA
SHEET No. A3.1.0		© 2016 KEEN ENGINEERING & SURVEYING, INC.		

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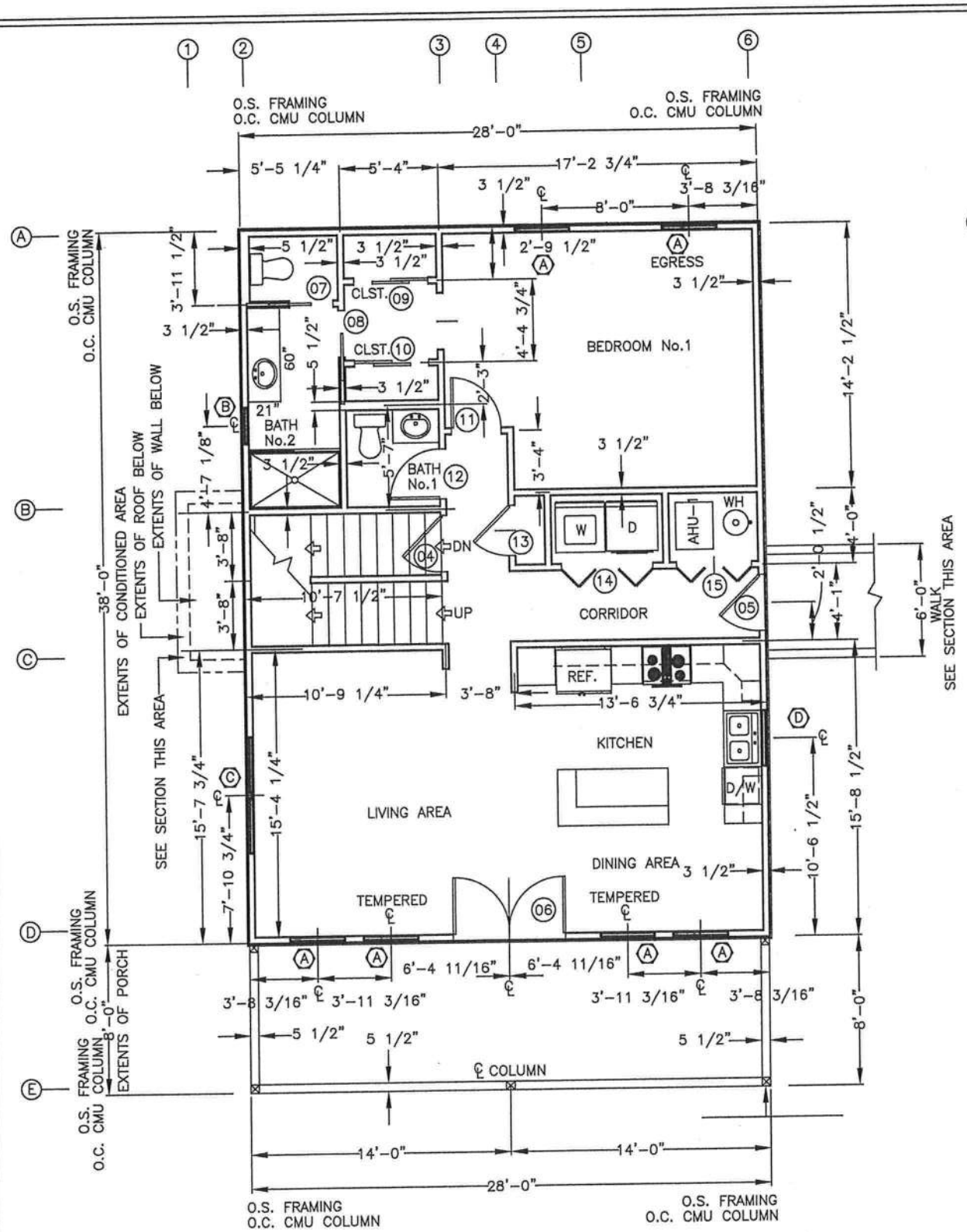
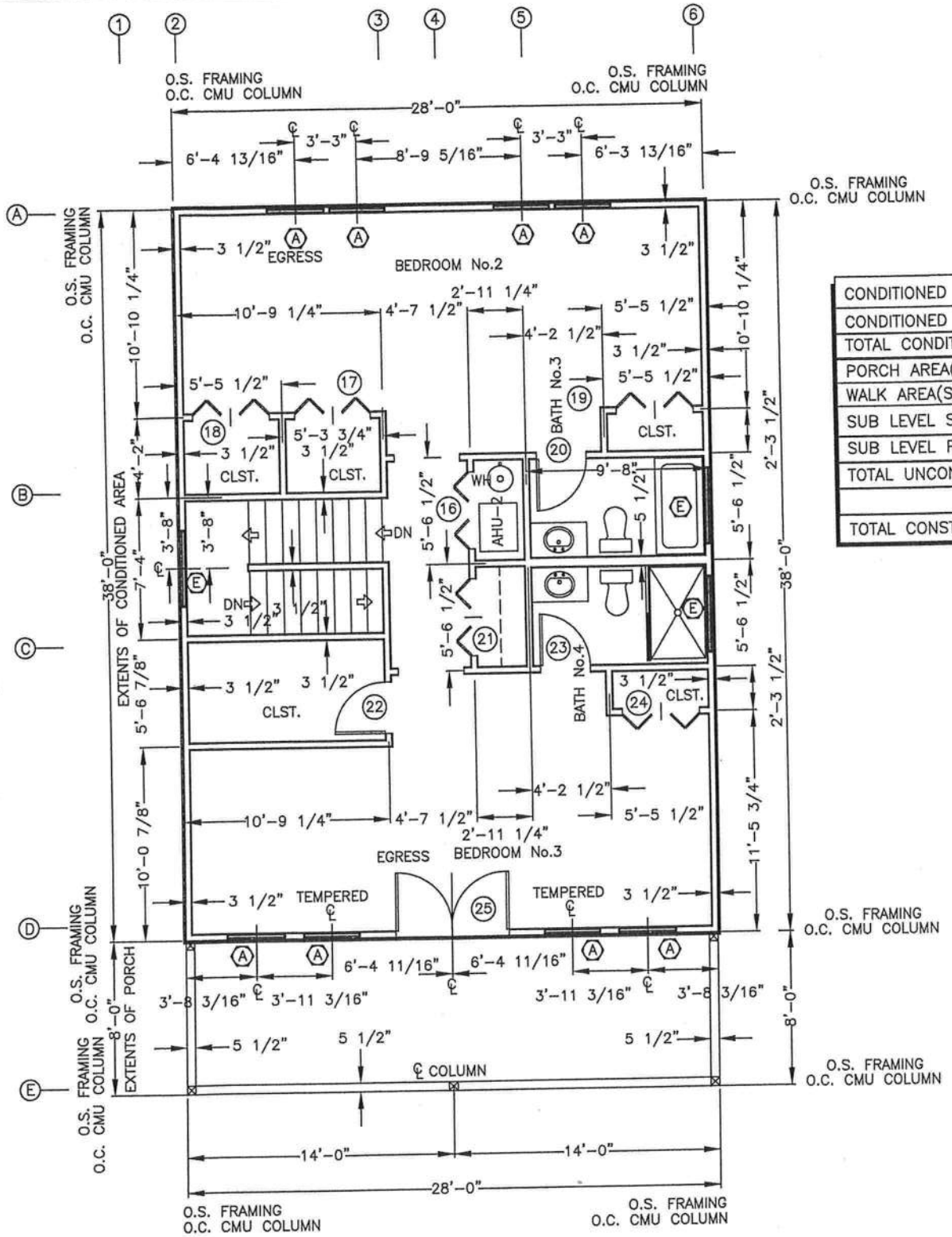
LIVE OAK, FLORIDA 32060
386-362-4787
ENG. LIC. EB 3761

SCALE NOTE:
PLAN VIEW: 1/8"=1'-0



2 FIRST LEVEL PLAN VIEW
A2.0.0 SCALE: N.T.S.



3 SECOND LEVEL PLAN VIEW
A2.0.0 SCALE: N.T.S.

CONDITIONED AREA IST LEVEL	1064.00 S.F.
CONDITIONED AREA 2ND LEVEL	1064.00 S.F.
TOTAL CONDITIONED AREA	2128.00 S.F.
PORCH AREA(S)	448.00 S.F.
WALK AREA(S)	40.00 S.F.
SUB LEVEL STAIR & STORAGE	199.50 S.F.
SUB LEVEL PARKING	199.50 S.F.
TOTAL UNCONDITIONED AREAS	1110.70 S.F.
TOTAL CONSTRUCTION AREA	3238.70 S.F.

PROJECT No. MORGAN-A2.0.0.DWG	DATE 02/26/16
SHEET No. A2.0.0	

FIRST & SECOND LEVELS DIMENSIONED PLAN VIEWS
MISC. NOTES, REFERENCES & INSTRUCTIONS

Curtis E. Keen, PE #23836
Certification of Authorization #3761
DATE:

MORGAN RESIDENCE
COLUMBIA COUNTY, FLORIDA

KEEN ENGINEERING & SURVEYING, INC.
9263 CR 417
LIVE OAK, FLORIDA 32060
386-362-4787
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WINDOW																		RATING				FRAME					DETAILS				
CATEGORY	TYPE	WIDTH	HEIGHT	HORIZONTAL SLIDER	FIXED	SINGLE HUNG	DOUBLE HUNG	HOLLOW METAL	SOLID CORE WOOD	HOLLOW CORE WOOD	STILE AND RAIL WOOD	ALUMINUM	VINYL	VINYL / ALUMINUM		OBSCURRED GLASS	TEMPERED GLASS	WIRED GLASS (RATED)				TYPE	HOLLOW METAL WELDED	HOLLOW METAL KNOCKDOWN	WOOD	ALUMINUM	VINYL / ALUMINUM	HEAD	JAMB	SILL	TYPE	
	A	3'–0"	5'–0			●								●									●				●	M	M	M	A	SOME LOCATIONS REQUIRE TEMPERED GLAZING
	B	2'–0"	3'–0			●								●		●							●				●	M	M	M	B	
	C	6'–0	5'–0			●								●									●				●	M	M	M	C	
	D	3'–0	3'–0			●								●			●						●				●	M	M	M	D	
	E	4'–0	4'–0			●								●		●	●						●				●	M	M	M	E	

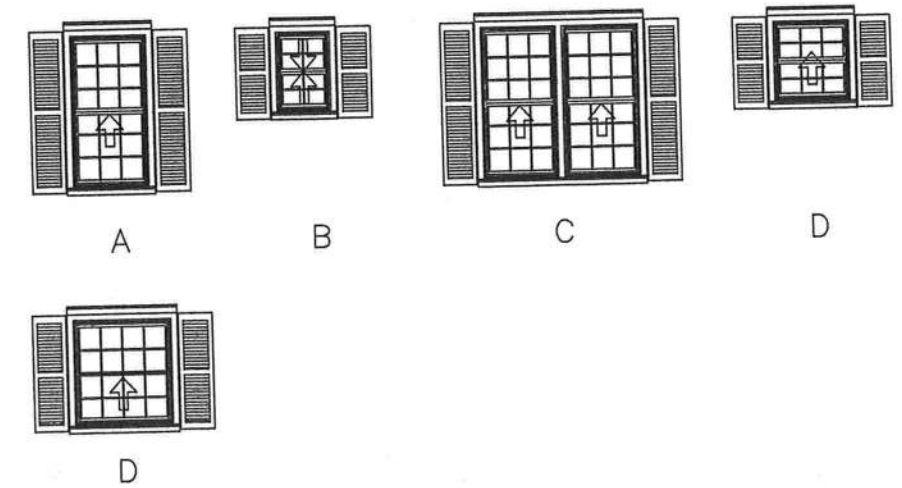
REMARKS

A	3'–0"	5'–0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS – SOME LOCATIONS REQUIRE TEMPERD GLAZING
B	2'–0"	3'–0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS – SECURED GLASS OPTION
C	6'–0	5'–0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS
D	3'–0	3'–0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS
E	4'–0	4'–0	EXTERIOR – INSUL., – DIVIDED LITE OPTION – CONTRACTOR SHALL PROVIDE APPROVAL SPECIFICATIONS REQUIREMENTS PER F.B.C. 1715.5 & MFGR'S. INSTALLATION REQUIREMENTS – SELECTED LOCATIONS W/ OBSCURRED GLASS OPTION

ADDITIONAL WINDOW NOTES

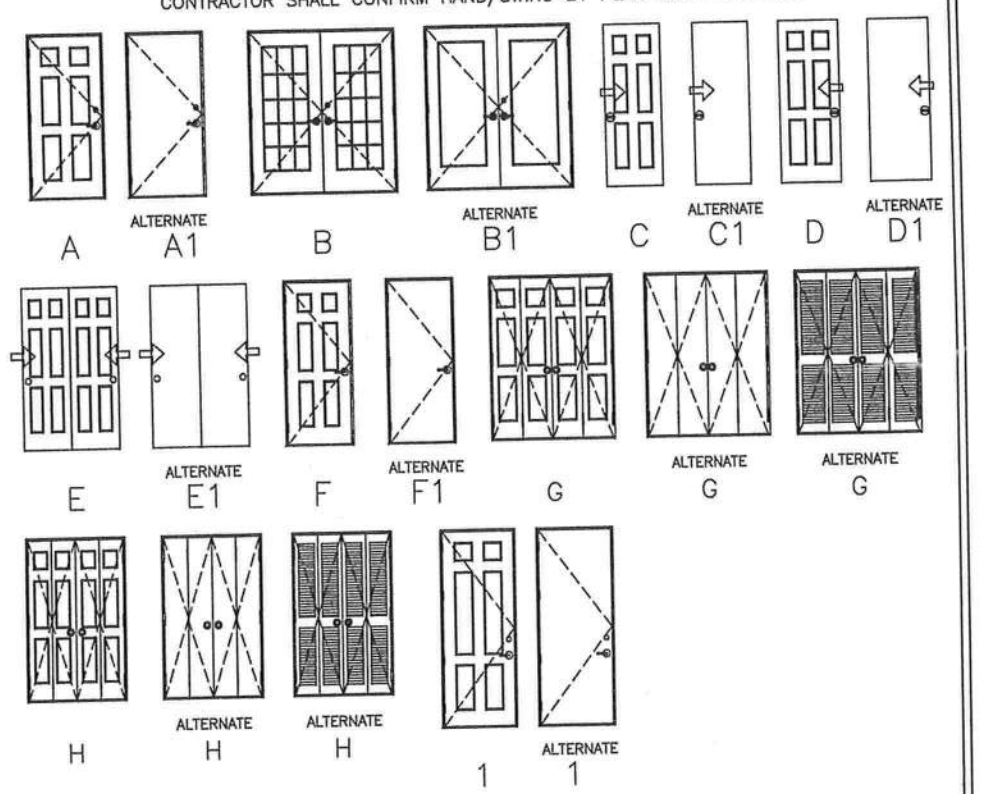
REFER TO PLAN VIEWS & ELEVATIONS FOR SPECIFIC DESIGNATIONS FOR REQUIRED EGRESS WINDOWS
IF WINDOW SILLS ARE LESS THAN 24" ABOVE FINISH FLOOR AND OVER 7'–0 ABOVE ADJACENT FINISH GRADE FULLY COMPLIANT WINDOW GUARDS ARE REQUIRED
CONTRACTOR SHALL PROVIDE ALL APPROVAL SPECIFICATIONS & REQUIREMENTS PER F.B.C. 1715.5 & MANUFACTURER'S INSTALLATION REQUIREMENTS

DOOR															RATING				FRAME						DETAILS				THRESHOLD				HDWR				REMARKS	
CATEGORY	DOOR NUMBER	TYPE	WIDTH	HEIGHT 6'–8"	HEIGHT 8'–0	1 3/8" THICK	INSUL. METAL	SOLID CORE WOOD	HOLLOW CORE WOOD	STILE AND RAIL WOOD	ALUMINUM	TEMPERED GLASS	WIRED GLASS	FINISH	20 MINUTE LABEL	C LABEL 3/4 HR	B LABEL 1 HR		TYPE	HOLLOW METAL WELDED	HOLLOW METAL KNOCKDOWN	WOOD	ALUMINUM		HEAD	JAMB	SILL	FINISH	THRESHOLD/ACC	1/4" UNDERCUT	3/4" UNDERCUT	SMOKE SEALS	DOOR NUMBER	AUTOMATIC CLOSURE DEVICE	DOOR VIEWER	HANDLES LEVER TYPE	LOCKSETS	
SUB	A–01	1	3'–0"		●	●	●							P1					A	●					M	M	M	P2	●				01				L1	HINGED – TYPE OPTION A1
	02	1	3'–0"		●	●	●							P1					A	●					M	M	M	P2	●				02				L1	HINGED –
	03	1	3'–0"		●	●	●							P1					A	●					M	M	M	P2	●				03				L1	HINGED –
FIRST FLOOR	04	A	3'–0"	●		●	●							P1					A	●					M	M	M	P2	●				04				L1	HINGED –
	05	A	3'–0"	●		●	●							P1					A	●					M	M	M	P2	●				05				L1	HINGED –
	06	B	6'–0"	●		●	●					●		P1					B	●					M	M	M	P2	●				06				L1	HINGED – 2 LEAF
	07	C	2'–4"	●		●		●						P3					C			●			W	W		P2			●		07					POCKET –
	08	D	2'–6"	●		●		●						P3					D			●			W	W		P2			●		08					POCKET –
	09	E	4'–0"	●		●		●						P3					E			●			W	W		P2			●		09					BY–PASS – 2 LEAF
	10	E	4'–0"	●		●		●						P3					E			●			W	W		P4			●		10					BY–PASS – 2 LEAF
	11	F	2'–8"	●		●		●						P3					F			●			W	W		P4			●		11				L2	HINGED –
	12	F	2'–8"	●		●		●						P3					F			●			W	W		P4			●		12				L2	HINGED –
	13	F	2'–8"	●		●				●				P3					F			●			W	W		P4			●		13					HINGED –
	14	G	5'–0	●										P3					G			●			W	W		P4			●		14					BI–FLD. – 4 LEAF
	15	H	4'–0	●						●				P3					H			●			W	W		P4					15					BI–FLD.–4 LEAF–RETURN AIR GRILL OPTION
	16	H	4'–0	●						●				P3					H			●			W	W		P4					16					BI–FLD.–4 LEAF–RETURN AIR GRILL OPTION
SECOND FLOOR	17	H	4'–0	●						●				P3					H			●			W	W		P4					17					BI–FLD. – 4 LEAF
	18	H	4'–0	●						●				P3					H			●			W	W		P4					18					BI–FLD. – 4 LEAF
	19	H	4'–0	●						●				P3					H			●			W	W		P4					19					BI–FLD. – 4 LEAF
	20	F	2'–8"	●				●						P3					F			●			W	W		P4					20				L2	HINGED –
	21	H	4'–0	●						●				P3					H			●			W	W		P4					21					BI–FLD. – 4 LEAF
	22	F	2'–8"	●					●					P3					F			●			W	W		P4					22					HINGED –
	23	F	2'–8"					●						P3					F			●			W	W		P4					23				L2	HINGED –
	24	H	4'–0	●						●				P3					H			●			W	W		P4					24					BI–FLD. – 4 LEAF
	25	B	6'–0"	●		●	●					●		P1					B	●					M	M	M	P2	●				25				L1	HINGED – 2 LEAF



NOTE: ABOVE ILLUSTRATIONS SHOW OPTIONAL DIVIDED LITES AND OPTIONAL SYNTHETIC, NON OPERABLE SHUTTERS

CONTRACTOR SHALL CONFIRM HAND/SWING BY PLAN VIEW LOCATIONS



WINDOWS AND DOORS

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3. ALL WINDOWS GLASS AND DOORS SHALL COMPLY W/ AAMA – NWWDA 101–1.S.2
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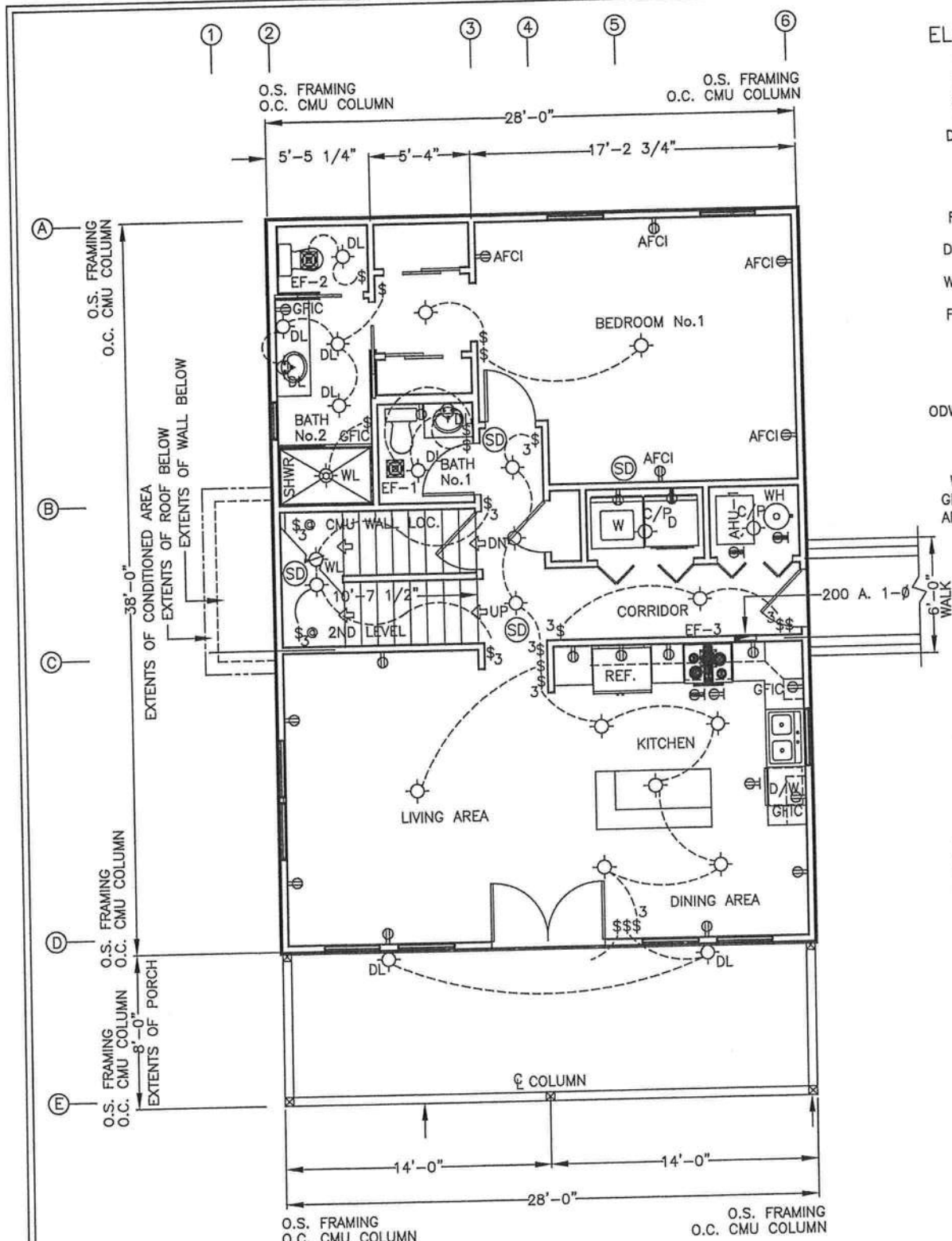
PROJECT No.	DATE	
MORGAN–A5.0.0.DWG	02/26/16	WINDOW & DOOR SCHEDULES MISC. NOTES, REFERENCES & INSTRUCTIONS
SHEET No. A5.0.0		© 2016 KEEN ENGINEERING & SURVEYING, INC.

Curtis E. Keen, PE #23836
Certification of Authorization #3761
DATE:

MORGAN RESIDENCE
COLUMBIA COUNTY, FLORIDA

KEEN ENGINEERING & SURVEYING, INC.
9263 CR 417
LIVE OAK, FLORIDA 32060
386–362–4787
ENG. LIC. EB 3761

SCALE NOTE:
PLAN VIEW: 1/8"=1'-0



1 FIRST LEVEL ELECTRICAL PLAN VIEW
E2.0.0 SCALE: N.T.S.

ELECTRICAL FIXTURE SYMBOLS

- FLUORESCENT STRIP FIXTURE, SURFACE MOUNTED
- FLUORESCENT, SURFACE MOUNTED
- OWNER SELECTED FIXTURE – CONTRACTOR INSTALLED
- D – DROP MOUNTED FIXTURE
- WALL BRACKET MOUNTED INCANDESCENT OR HID FIXTURE
- SURFACE MOUNTED FIXTURE
- R – RECESSED DOWNLIGHT
- DL – RECESSED DOWNLIGHT OR SURFACE MOUNTED FIXTURE – DAMP LOCATION RATED
- WL – RECESSED DOWNLIGHT OR SURFACE MOUNTED FIXTURE – WET LOCATION RATED
- FL – RECESSED DOWNLIGHT OR SURFACE MOUNTED FIXTURE – FLUORSCENT LAMP
- EXTERIOR FLOOD LIGHTING: LOCATIONS & SWITCHES @ OWNER'S DIRECTION
- GROUND MOUNTED FLOOD OR DIRECTIONAL DOWNLIGHT LOW VOLTAGE SYSTEM LOCATED @ THE DIRECTION OF THE OWNER
- ODWH – ON DEMAND WATER HEATER: MFGR., SIZE, ETC. @ DIR. OF OWNER
- DUPLEX RECEPTACLE, WALL MOUNTED 12" A.F.F. UNLESS OTHERWISE NOTED
  NOTE: RECEPTACLES LOCATED @ ALL COUNTER AREAS SHALL BE 43" A.F.F. UNLESS OTHERWISE NOTED
- WP – DUPLEX RECEPTACLE, WALL MOUNTED 12" A.F.F. WEATHERPROOF BOX/CONNECTION
- GFIC – DUPLEX RECEPTACLE W/ GROUND FAULT CIRCUIT INTERRUPTER, WALL MOUNTED
- AFCI – DUPLEX RECEPTACLE W/ ARC FAULT CIRCUIT INTERRUPTER, WALL MOUNTED
- DUPLEX RECEPTACLE W/ GROUND FAULT CIRCUIT INTERRUPTER, FLOOR MOUNTED EXACT LOCATION AS DETERMINED BY OWNER @ TIME OF INSTALLATION
- 220 RECEPTACLE OR CONNECTION – SEE PLAN VIEW(S) FOR LOCATIONS
- TELEPHONE OUTLET WALL MOUNTED 18" A.F.F.
  NOTE: LOCATE @ OWNER'S DIRECTION
- TELEPHONE DATA OUTLET, WALL MOUNTED 18" A.F.F. UNLESS OTHERWISE INDICATD
  NOTE: LOCATE @ OWNER'S DIRECTION
- $ – SINGLE POLE TOGGLE SWITCH MOUNTED @ 48" A.F.F.
- $D – SINGLE POLE DIMMER SWITCH WALL MOUNTED 48" A.F.F.
- $3 – THREE-WAY TOGGLE SWITCH
- $M – SINGLE POLE MOTOR RATED TOGGLE SWITVH
- FLUSH MOUNTED, 200A., 240/120 1 – Ø ELECTRICAL PANEL – TOP @ 6'-6" A.F.F.
- DISCONNECT SWITCH: SIZE AS NOTED ADJACENT TO SYMBOL
- OWNER SELECTED CEILING FAN W/ OPTIONAL LIGHT KIT BY MANUFACTURER
  OWNER SELECTED MANUFACTURER & MODEL – SIZE AS NOTED ON PLANS
  FAN AND OR LIGHT MAY BE SWITCHED – REFER TO PLAN VIEW(S)
- EF-1 – EXHAUST FAN: OWNER APPROVED PROVIDING A MIN. 40 CFM
- EF-2 – EXHAUST FAN: OWNER APPROVED PROVIDING A MIN. 30 CFM
- EF-3 – EXHAUST FAN: BY OWNER APPROVED STOVE MANUFACTURER
- CAT 5 WIRE @ OWNER SELECTED LOCATIONS
- SPEAKERS & RELATED SOUND DEVICES – LOCATE @ OWNER'S DIRECTION
- TV – TELEVISION COAXIAL OUTLET SHALL BE LOCATED 18" A.F.F.
  NOTE: SEE PLAN VIEW & LOCATE ADDITIONAL @ OWNER'S DIRECTION
- SD – SMOKE DETECTOR: CEILING MOUNTED UNLESS OTHERWISE NOTED
  ALL SMOKE DETECTORS SHALL BE 120 VOLT WITH BATTERY BACKUP, OF THE PHOTOELECTRIC TYPE AND SHALL BE INTERLOCKED TOGETHER. INSTALL INSIDE AND NEAR ALL BEDROOMS ON SEPERATE CIRCUIT TO THE MAIN DISTRIBUTION PANEL. ADDITIONAL LOCATIONS MAY BE DETERMINED BY THE FIRE MARSHALL. REFER TO PLAN VIEWS FOR LOCATIONS

FIRST LEVEL ELECTRICAL NOTES: ALL LIGHTING, SWITCHING FOR LIGHTING AND RECEPTACLES SHALL BE WET LABLE AND IN APPROPRIATE WEATHER PROOF BOXES W/ APPROVED CONNECTIONS WITH GROUND FAULT INTERRUPTER CIRCUITRY.
ALL WIRING SHALL BE INSTALLED IN NMT CONDUIT PER LATEST EDITION OF THE N.E.C.

ELECTRICAL NOTES

1. ALL WORK SHALL BE FULLY COMPLIANT WITH THE MOST CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
2. ALL CIRCUITS & EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE APPROPRIATE ARTICLES OF THE NEC.
3. WHEN LIGHT FIXTURES ARE INSTALLED IN CLOSETS THEY SHALL BE SURFACE MOUNTED OR RECESSED. INCANDESCENT FIXTURES SHALL HAVE COMPLETELY ENCLOSED LAMPS. SURFACE MOUNTED INCANDESCENT FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 12 INCHES AND ALL OTHER FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 6 INCHES FROM "STORAGE AREAS" AS DEFINED BY NEC 410-B(a).
4. WHEN WATER HEATERS ARE INSTALLED THEY SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE WATER HEATERS SERVED. THE BRANCH CIRCUIT SWITCH OR CIRCUIT BREAKER SHALL BE PREMITTED TO SERVE IS WITHIN SIGHT FROM THE WATER HEATER OR IS CAPABLE OF BEING LOCKED IN THE OPEN POSITION.
5. HVAC EQUIPMENT SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE EQUIPMENT SERVED. A UNIT SWITCH WITH A MARKED "OFF" THAT IS A PART OF THE HVAC EQUIPMENT AND DISCONNECTS ALL UNGROUNDED CONDUCTORS SHALL BE PERMITTED AS THE DISCONNECTING MEANS WHERE OTHER DISCONNECTING ARE ALSO PROVIDED BY A READILY ACCESSIBLE CIRCUIT BREAKER.
6. PRIOR TO ENERGIZING THE ELECTRICAL SYSTEM THE INTERRUPTING RATING OF THE MAIN BREAKER MUST BE VERIFIED AS BEING IN COMPLIANCE WITH SECTION 110-9 OF THE NEC BY ELECTRICAL CONTRACTOR
7. THE MAIN ELECTRICAL PANEL AND FEEDERS IF NOT SPECIFICALLY DEFINED IN THESE PLANS ARE DESIGNED BY OTHERS.
8. NOT USED
9. ALL RECEPTACLES INSTALLED IN WET LOCATIONS (EXTERIOR) SHALL BE IN WEATHER PROOF (WP) ENCLOSURES. THE INTEGRITY OF WHICH IS NOT AFFECTED WHEN AN ATTACHMENT PLUG CAP IS INSERTED OR REMOVED. THE RECEPTACLE ITSELF SHALL ALSO BE LISTED FOR USE IN DAMP AND WET LOCATIONS AS PER MOST CURRENT EDITION OF THE NEC.
10. EXTERIOR LIGHTS NOT INTENDED FOR 24 HOUR USE SHALL BE CONNECTED TO A PHOTOCELL OR TIMER.
11. ALL EXPOSED ELECTRICAL SERVICE CONDUCTORS SHALL BE FULLY ENCLOSED IN APPROPRIATELY SIZED NON METALIC CONDUIT (NMT) PER THE LATEST EDITION OF THE NEC.
12. ALL LIGHTING SWITHES NOT INDICATED BY LOCATION ON THE PLAN VIEW(S) SHALL BE LOCATED @ THE DIRECTION OF THE OWNER IN FULL COMPLIANCE WITH ALL APPLICABLE SECTIONS OF THE NEC.
13. ALL SMOKE DETECTORS SHALL BE 120 VOLT (120 V.) WITH BATTERY BACKUP OF THE PHOTOELECTRIC TYPE AND SHALL BE INTERLOCKED TOGETHER. INSTALLATION SHALL BE INSIDE AND NEAR ALL BEDROOMS ON A SEPERATE CIRCUIT TO THE MAIN DISTRIBUTION PANEL. REFER TO PLAN VIEW FOR SUGGESTED LOCATIONS WITH ALL ADJUSTMENTS AND ADDITIONAL LOCATIONS DETERMINED BY LOCAL FIRE MARSHALL.
14. PROVIDE COMBINATION SMOKE/CARBON MONOXIDE DETECTORS WHEN ANY FOSSIL FUEL APPLIANCES ARE PROVIDED OR INSTALLED.
15. ELECTRICAL CONTRACTOR SHALL REFER TO SPECIFIC LOCATIONS AND NOTES ON THE PLAN VIEWS FOR GROUND FAULT INTERRUPTER CIRCUITS (GFIC) SWITCHES, RECEPTACLES AND RELATED ELEMENTS.
16. ELECTRICAL CONTRACTOR SHALL REFER TO SPECIFIC LOCATIONS AND NOTES ON THE PLAN VIEW(S) FOR ARC FAULT CIRCUIT INTERRUPTER (AFCI) SWITCHES, RECEPTACLES AND RELATED ELEMENTS.
17. PROVIDE TAMPER RESISTANT RECEPTACLES IN ACCORDANCE WOTH SECTION 406.11 OF 2014 NEC
18. REFER TO ELECTRICAL PLANS, DETAILS, SECTIONS, NOTES AND SPECIFICATIONS FOR FOR ADDITIONAL REQUIREMENTS.

PROJECT No. MORGAN-E2.0.0.DWG	DATE 02/26/16	FIRST LEVEL ELECTRICAL PLAN VIEW MISC. NOTES, REFERENCES & INSTRUCTIONS	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA
SHEET No. E2.0.0				

KEEN ENGINEERING & SURVEYING, INC.
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LIVE OAK, FLORIDA 32060
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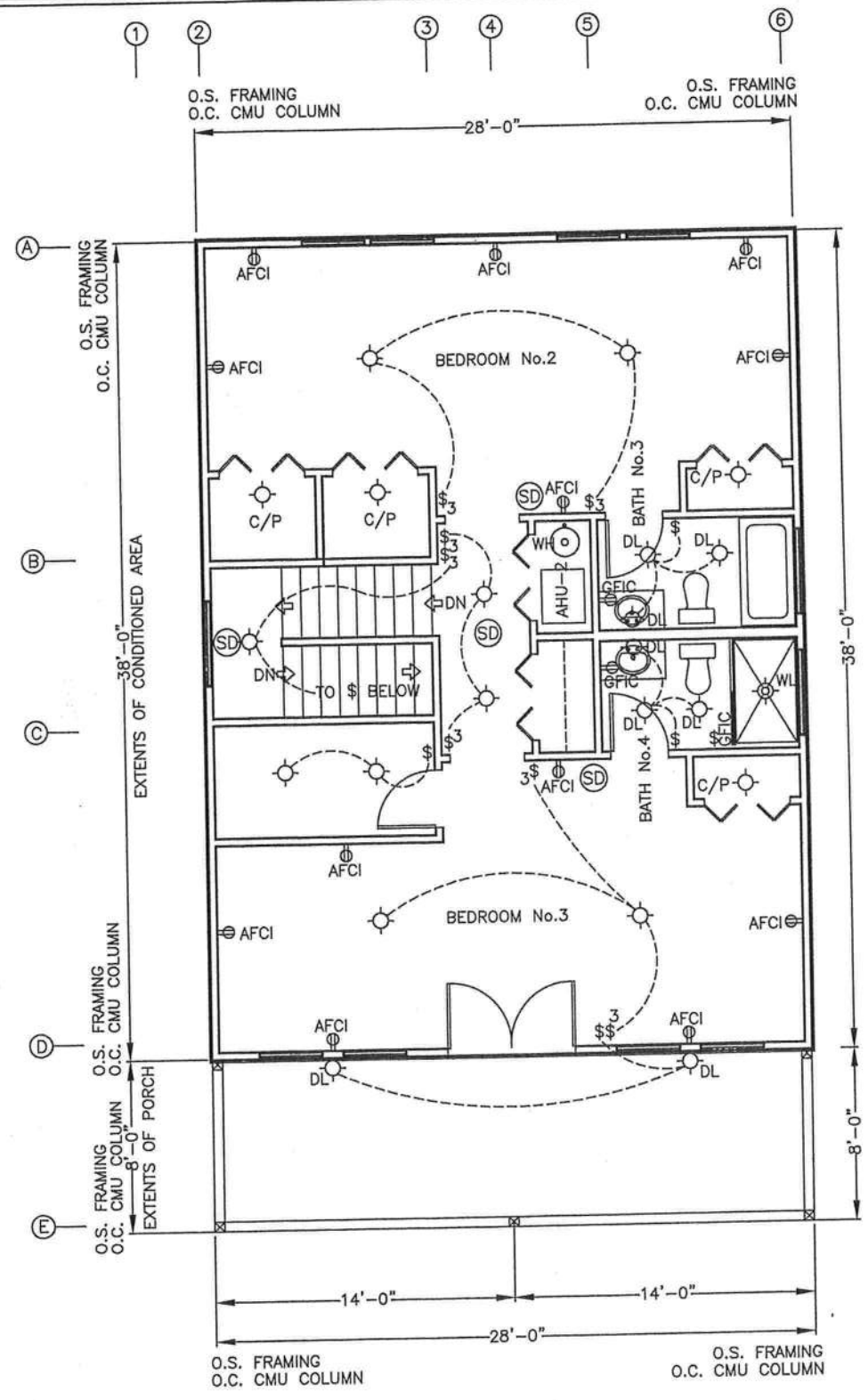

3 / E3.0.0 SECOND LEVEL PLAN VIEW

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PROJECT No. MORGAN-E3.0.0.DWG SHEET No. E3.0.0	DATE 02/26/16	SECOND LEVEL ELECTRICAL PLAN VIEW MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

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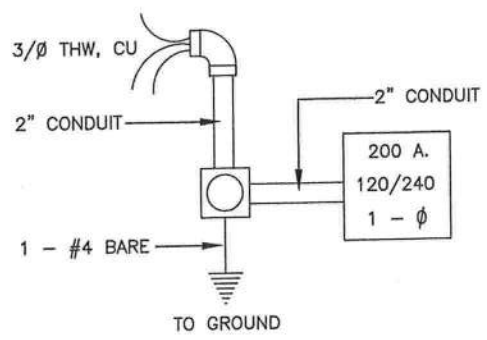

1 E2.4.0 ELECTRICAL SCHEMATIC RISER: 1ST LEVEL
SCALE: NO SCALE

CLOTHES DRYER

M5102.2 GENERAL
CLOTHES DRYERS SHALL BE EXHAUSTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS & REQUIREMENTS

M1502.3 TERMINATION
EXHAUST DUCTS SHALL TERMINATE ON THE OUTSIDE OF THE BUILDING. EXHAUST DUCT TERMINATION SHALL BE IN ACCORDANCE WITH DRYER MANUFACTURER'S INSTRUCTIONS. THE DUCT SHALL TERMINATE NOT LESS THAN 3 FEET IN ANY DIRECTION FROM OPENING INTO BUILDING. EXHAUST DUCT TERMINATIONS SHALL BE EQUIPPED WITH A BACKDRAFT DAMPER. SCREENS SHALL NOT BE INSTALLED AT THE DUCT TERMINATION

M1502.4 DRYER EXHAUST DUCTS
DRYER EXHAUST DICTS SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS M1502.4.1 THROUGH M1502.4.6.

M1502.4.1 MATERIAL AND SIZE
EXHAUST DUCTS SHALL HAVE A SMOOTH INTERIOR FINISH AND SHALL BE CONSTRUCTED OF METAL OF 0.016 INCH THICK. THE EXHAUST DUCT SIZE SHALL BE 4 INCHES NOMINAL IN DIAMETER.
M1502.4.2 DUCT INSTALLATION
EXHSUT DUCTS SHALL BE SUPPORTED AT 4 FOOT INTERVALS AND SECURED IN PLACE. THE INSERT END OF DUCT SHALL EXT END INTO THE ADJOINING DUCT IN THE DIRECTION OF THE AIRFLOW. DUCTS SHALL NOT BE JOINED WITH SCREENS THAT PROTRUDE INTO THE INSIDE OF THE DUCT.

M1502.4.3 TRANSISTION DUCT
TRANSISTION DUCTS SHALL BE A SINGLE LENGTH THAT IS LISTED AND LABELED IN ACCORD WITH UL 2158A. TRANSISTION DUCT SHALL BE A MAXIMUM OF 8 FEET IN LENGTH.

M1502.4.4 DUCT LENGTH
THE MAXIMUM ALLOWABLE EXHAUST DUCT LENGTH SHALL BE DETERMINED BY ONE OF THE METHODS SPECIFIED IN SECTION M1502.4.4.1 OR M1502.4.4.2

M1502.4.4.1 SPECIFIED LENGTH
THE MAXIMUM LENGTH OF THE EXHAUST DUCT SHALL BE 25 FEET FROM THE CONNECTION TO THE TRANSISTION DUCT FROM DRYER TO THE OUTLET TERMINAL. SEE TABLE M1502.4.4.1 FOR REDUCED LENGTH DUE TO TURNS.

INTAKE OPENINGS

R303.5.1 INTAKE OPENINGS
MECHANICAL AND GRAVITY OUTDOOR INTAKE OPENINGS SHALL BE LOCATED A MINIMUM 10 FEET FROM ANY HAZARDOUS OR NOXIOUS CONTAMINATE, SUCH AS VENTS AS CHIMNEYS, PLUMBING VENTS, STREETS, ALLEYS, PARKING LOTS AND LOADING DOCKS, EXCEPT AS OTHERWSIE SPECIFIED IN THIS CODE. WHERE SOURCE OF CONTAMINATE IS LOCATED WITHIN 10 FEET OF AN AIR INTAKE OPENING THE OPENINGS SHALL BE LOCATED A MINIMUM OF 2 FEET BELOW THE CONTAMINATE SOURCE.

R303.6 OUTSIDE OPENING PROJECTION
AIR EXHAUST AND INTAKE OPENINGS THAT TERMINATE OUTDOORS SHALL BE PROTECTED WITH CORRISION RESISTANT SCREENS, LOUVERS OR GRILLES HAVING A MINIMUM OPENING OF 1/4 INCH AND A MAXIMUM OPENING OF 1/2 INCH IN ANY DIMENSION. OPENING SHALL BE PROTECTED AGAINST LOCAL WEATHER CONDITIONS. OUTDOOR AND EXHAUST INTAKE OPENINGS SHALL MEET THE PROVISIONS FOR EXTERIOR WALL OPENING PROTECTIVES IN ACCORDANCE WITH THIS CODE.

WINDOW AND OTHER OPENINGS FOR THE PURPOSE OF LIGHT AND VENTILATION IN THE EXTERIOR WALLS ACCESSIBLE TO RODENTS BY THE WAY OF EXPOSED PIPES, WIRES, CONDUITS AND OTHER APPURTENANCES SHALL BE COVERED WITH WIRE MESH (0.035 INCH) THICK OR SOLID METAL GUARDS (0.024 INCH) THICK OR HEAVIER. GUARDS SHALL BE FITTED AROUND THESE FIXTURES. IN ADDITION THEY SHALL BE FASTENED SECURELY TO AND SHALL EXTEND PERPENDICULAR FROM THE EXTERIOR WALL FOR A MINIMUM 12 INCHES BEYOND EITHER SIDE OF APPURTENANCES.

MECHANICAL NOTES

1. ALL SUPPLY REGISTERS ARE ADJUSTABLE, EXCEPT WHERE OTHERWISE SPECIFIED
2. INTERIOR DOORS SHALL BE UNDERCUT ABOVE FINISH FLOOR FOR AN AIR RETURN AND OR NOTED IN SCHEDULES OR PLAN VIEWS ELSEWHERE THESE PLANS
3. BATHROOM VENT FANS SHALL PROVIDE A MINIMUM OF 50 CFM OF VENTILATION REFER TO ELECTRICAL SCHEDULES FOR ADDITIONAL MINIMUM CFM REQUIRED
4. HVAC EQUIPMENT SHALL BE EQUIPPED WITH OUTSIDE FRESH AIR INTAKE TO PROVIDE A MINIMUM OF 20 CFM PER PERSON
5. ALL VENTS SHALL BE DUCTED TO THE EXTERIOR OF DWELLING
6. ALL DUCT SYSTEM COMPONENTS INSTALLED IN THE ATTIC AREA W/ INSULATION SHALL HAVE A MINIMUM R-VALUE OF R-8.0
   AIR DUCTS, FITTINGS, MECHANICAL EQUIPMENT & PLENUM CHAMBERS SHALL BE MECHANICALLY ATTACHED, SEALED, INSULATED & INSTALLED PER TABLE 503.2.7.2
7. ALL HVAC COMPONENTS INSTALLED ON SITE SHALL BE INSTALLED, TESTED & BALANCED IN ACCORDANCE WITH SECTION 503.2.9.1 BY HVAC CONTRACTOR
8. INSTALLED HVAC EQUIPMENT SHALL MEET THE MINIMUM EFFICIENCIES OF TABLES 503.2.2 (1) THROUGH (8)

PLUMBING NOTES

1. ALL PLUMBING FIXTURES SHALL HAVE SEPERATE SHUT OFF VALVES
2. WATER HEATER SHALL HAVE SAFETY PAN WITH 3/4 INCH DRAIN TO EXTERIOR, T&P RELIEF VALVE W/ DRAIN TO EXTERIOR, AND A SHUTOFF VALVE WITHIN 3 FEET ON A POTABLE COLD WATER LINE W/ DRAIN TO EXTERIOR, AND A SHUTOFF VALVE WITHIN 3 FEET ON A POTABLE COLD WATER LINE
3. POTABLE WATER SUPPLY LINES SHALL BE PEX, CPVC OR COPPER, WHEN PEX SUPPLY LINES ARE INSTALLED THE MAXIMUM WATER HEATER TEMPERATURE SETTING IS 180°. THE PEX PIPE SHALL BE INSTALLED TO COMPLY WITH THE MANUFACTURER'S LIMITATIONS AND SPECIFIC REQUIREMENTS FOR THIS APPLICATION
4. WATER CLOSETS AVERAGE USAGE SHALL NOT EXCEED 1.6 GALLONS PER FLUSH
5. SHOWER STALLS SHALL BE COVERED WITH NON-ASBORANT MATERIAL TO A MINIMUM HEIGHT OF 72 INCHES ABOVE THE FINISHED FLOOR
6. SHOWERS SHALL BE CONTROLLED BY AN APPROVED MIXING VALVE WITH A MAXIMUM WATER OUTLET TEMPERATURE 120° F.
7. AIR ADMITTANCE VALVES SHALL CONFORM TO ASSE 1051. THE VALVES SHALL BE LOCATED A MINIMUM OF 4 INCHES ABOVE THE HORIZONTAL DRAIN OR FIXTURE DRAIN BEING VENTED AND MUST BE INSTALLED IN WELL VENTILATED SPACES OR BE PROVIDED WITH VENTILATED ACCESS.
8. WATER HAMMER ARRESTORS SHALL BE INSTALLED WHERE QUICK CLOSING VALVES ARE UTILIZED (i.e. DISHWASHERS, CLOTHING WASHERS, ICE MAKERS AND OTHER QUICK CLOSING DEVICES W/ SOLENOID VALVES). ARRESTORS SHALL BE INSTALLED IN ACCORD WITH MANUFACTURER'S SPECIFICATIONS
9. SINKS 2.2 GALS AND LAVS 2.2 GALS PER MINUITE MAXIMUM @ 60 PSI
10. SHOWER HEADS SHALL NOT USE MORE THAN 2.5 GALS/MIN @ 80 PSI PER ANSI STD A112.181M
11. AN APPROVED THERMAL EXPANSION DEVICE SHALL BE INSTALLED IN THE WATER SUPPLY SYSTEM IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. SUCH A DEVICE IS REQUIRED WHEN BACK FLOW PREVENTORS, PRESSURE REDUCING VALVES, CHECK VALVES OR A SYSTEM WHICH MAY PREVENT PRESSURE RELIEF
12. AN ACCESSIBLE SHUT OFF VALVE SHALL BE PROVIDED AHEAD OF THE FIRST OUTLET OR BRANCH CONNECTED TO THE SERVICE OR DISTRIBUTION PIPE.
13. CHANGE IN DIRECTION OF SCHEDULE 40 DWV-PVC AND ABS DRAINAGE PIPING SHALL BE MADE BY THE APPROPRIATE USE OF 45° (0.785 RADIUS) WYES, QUARTER BENDS, OR LONG SWEEP QUARTER BENDS, ONE-SIXTH, ONE-EIGHTH, ONE-SIXTEENTH, OR BY A COMBINATION OF THESE OR EQUIVALEANT FITTINGS. SINGLE AND DOUBLE SANITARY TEES AND QUARTER BENDS MAY BE USED IN DRAINAGE LINES ONLY WHERE THE DIRECTION OF FLOW IS FROM THE HORIZONTAL TO THE VERTICAL.
14. SHORT SWEEPS NOT LESS THAN 3 INCHES DIAMETER MAY BE USED IN SOIL AND WASTE LINES WHERE THE CHANGE IN DIRECTION OF FLOW IS FROM THE HORIZONTAL TO THE VERTICAL AND MAY BE FOR MAKING NECESSARY OFFSETS BETWEEN THE CEILING AND THE NEXT FLOOR ABOVE.
15. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL SPECIFICATIONS & REQUIREMENTS

WATER HEATER NOTES

1. WATER HEATER SHALL BE PROVIDED WITH A COLD WATER "DIP" TUBE WITH A HOLE AT THE TOP OR A VACUME RELIEF VALVE INSTALLED IN THE COLD WATER SUPPLY LINE ABOVE THE TOP OF THE WATER HEATER TANK; BOTTOM FED WATER HEATERS SHALL HAVE A VACUME RELIEF VALVE COMPLYING WITH ANSI Z21.22 INSTALLED.
2. WATER HEATERS SHALL BE PROVIDED WITH A TEMPERATURE AND PRESSURE RELIEF VALVE COMPLYING W. ANSI Z21.22 INSTALLED IN THE SHELL OF THE WATER HEATER TANK. THE VALVE SHALL BE ACTUATED BY THE WATER IN THE TOP 6 INCHES OF THE TANK AND SHALL HAVE A TEMPERATURE RATING OF NOT MORE THAN 210°F AND A PRESSURE SETTING NOT EXCEEDING THE TANKS RATED WORKING PRESSURE OR 150 PSI WHICHEVER IS LESS.
3. WATER HEATERS SHALL BE EQUIPPED WITH AN ENERGY CUTOFF DEVICE THAT WILL CUT OFF THE SUPPLY OF HEAT ENERGY TO THE WATER TANK BEFORE THE TEMPERATURE OF THE WATER IN THE TANK EXCEEDS 210°F.
4. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL SPECIFICATIONS & REQUIREMENTS

PIPING INSULATION

ALL PIPING SHALL BE INSULATED AS FOLLOWS:

CW PIPING & RUNOUTS	1/2" THICK
HW PIPING (2" OR LESS)	1" THICK
HW PIPING (OVER 2")	1 1/2" THICK
HW RETURN PIPING	1/2" THICK

ALL INSULATION SHALL MEET UL 273 FOR FLAME & SMOKE STANDARDS. INSULATION SHALL BE EQUAL TO OWENINGS CORNING FIBERGLASS ASJ/SSL-II WITH ALL SERVICE JACKET. ANY PIPING LOCATED IN AREAS SUBJECT TO FREEZING SHALL BE HEAT TAPED WITH DOUBLE THE THICKNESS OF THE ABOVE INSULATION. AREAS CONSIDERED SUBJECT TO FREEZING INCLUDE ATTIC AND NON-HEATED AREAS (EXCLUDING CHASES).

Curtis E. Keen, PE #23836
Certification of Authorization #3761
DATE:

MORGAN RESIDENCE
COLUMBIA COUNTY, FLORIDA

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386-362-4787
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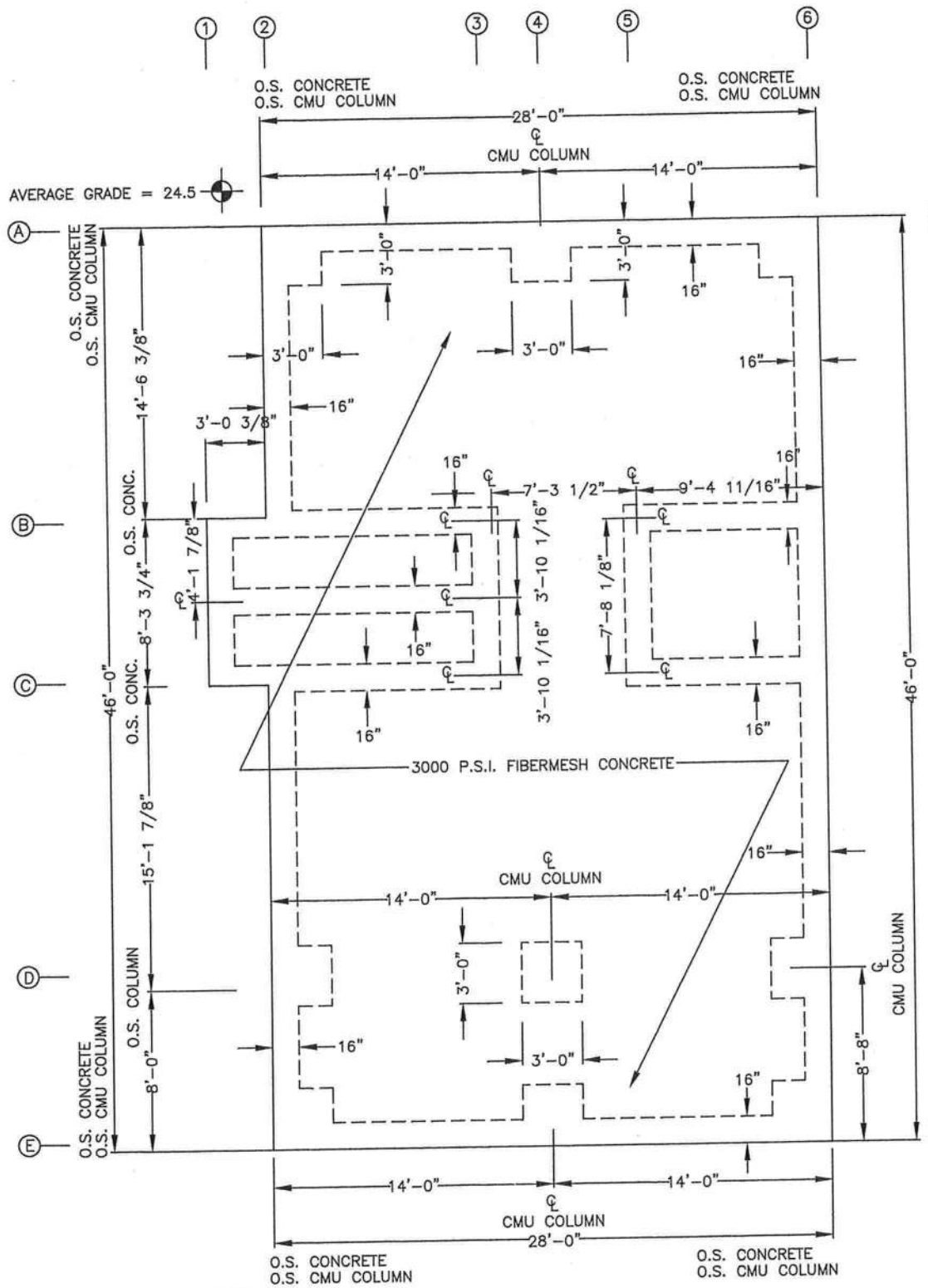
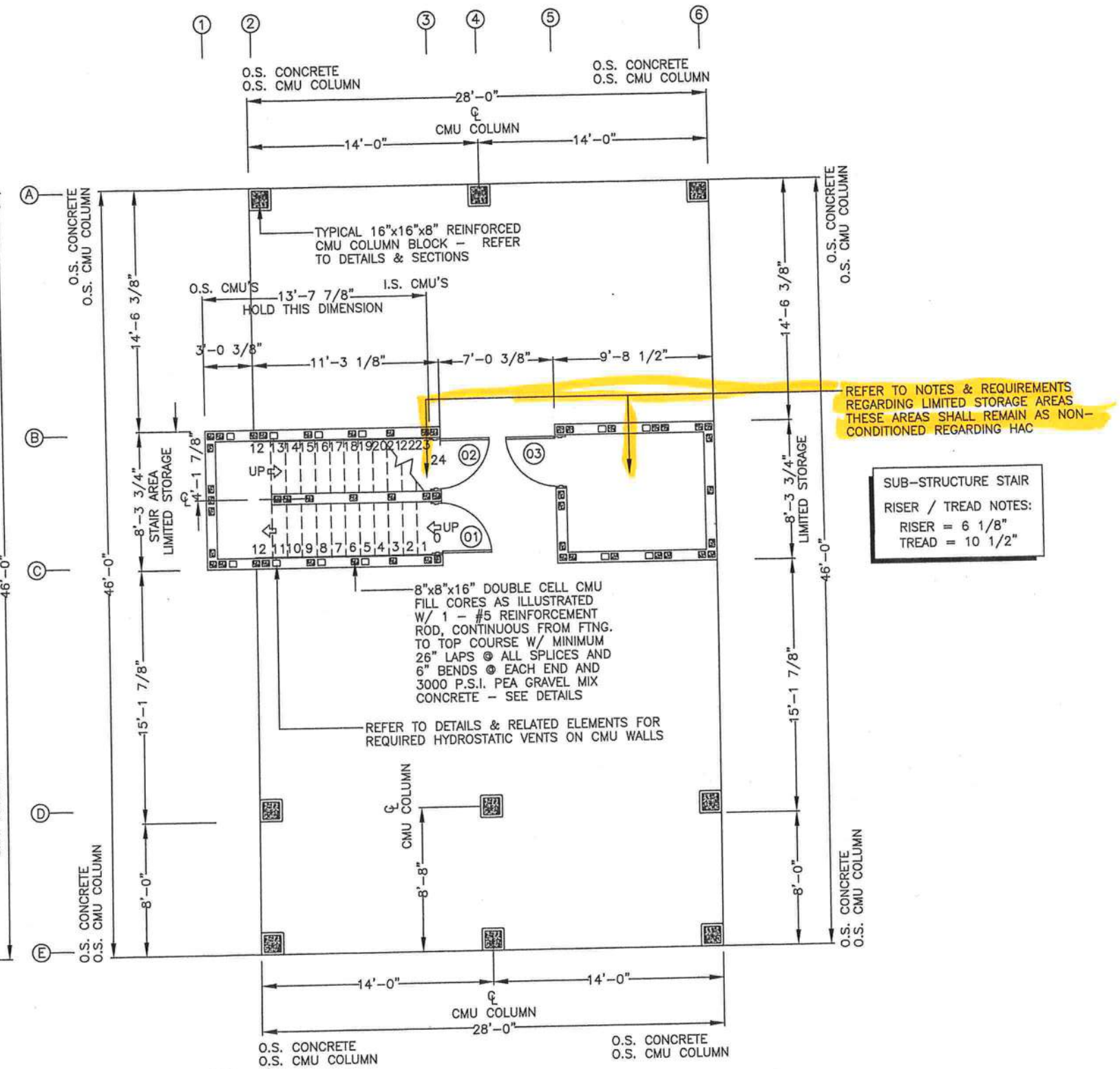
SCALE NOTE:
PLAN VIEW: 1/8"=1'-0



1 S1.0.0 FOUNDATION PLAN VIEW
SCALE: N.T.S.



2 S1.0.0 SUBSTRUCTURE PLAN VIEW
SCALE: N.T.S.

PROJECT No. MORGAN–A2.0.0.DWG SHEET No. A2.0.0	DATE 02/26/16	DIMENSIONED DWELLING PLAN VIEWS MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:

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SCALE NOTE:
SECTIONS/DETAILS: N.T.S.

CONCRETE & RELATED REQUIREMENTS

CONCRETE

1. CONCRETE CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACI 318," & "MANUAL CONCRETE PRACTICE, PART 1 ACI 305 & ACI 306," & MANUAL OF CONCRETE PARACTICE, PART 1 ACI 305 & 306" LATEST EDITION
2. CEMENT FOR CONCRETE SHALL MEET THE REQUIREMENTS OF ASTM C 150
3. AGGREGRATES FOR CONCRETE SHALL MEET THE REQUIREMENTS OF ASTM C 33
4. WATER FOR CONCRETE SHALL BE POTABLE WATER
5. OPTIONAL: TEST CONCRETE FOR COMPRESSION WITH 1 SET OF 3 CYLINDERS FOR EACH 50 CUBIC YARDS OF CONCRETE PLACED ON A GIVEN DAY. BREAK 1 CYLINDER @ 7 DAYS AND THE OTHERS @ 28 DAYS. TESTING WILL BE PAID FOR BY OWNER.
6. CONCRETE SHALL HAVE STRENGTHS AND CHARACTERISTICS AS INDICATED ELSEWHERE THESE PLANS
7. SAWED JOINTS MUST BE SAWED WITHIN 24 HOURS OF PLACEMENT OF CONCRETE
8. REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF ASTM A615 GR 60 UNLESS OTHERWISE NOTED
9. NOT USED
10. NOT USED
11. SLAB REINFORCING SHALL BE IN TOP 1/2 OF SLAB OR AS ILLUSTRATED
12. VIBRATE OR SCREEN ALL CONCRETE THOROUGHLY INTO PLACE
13. MINUMUM COVER OF REINFORCEMENT SHALL BE AS REQUIRED BY CODE
14. MOIST CURE CONCRETE FOR 7 DAYS AFTER PLACING
15. PROVIDE VAPOR BARRIER OF POLYETHELENE UNDER SLAB(S)
16. PLACE CONTROL JOINTS IN SLAB TO PROVIDE MAXIMUM SLAB SIZE OF 600 SQUARE FEET
17. CONCRETE TEMPERATURE SHALL NOT EXCEED 90 DEGREES F DURING PLACEMENT
18. CONCRETE SHALL BE PLACED IN A MANNER TO PRVENT SEGREGATION
19. CONCRETE SHALL NOT BE ALLOWED TO FREE FALL MORE THAN 60 INCHES
20. AREAS TO RECEIVE CONCRETE SHALL BE CLEAR OF ANY DEBRIS AND SHALL HAVE REINFORCING STEEL PROPERLY POSITIONED PRIOR TO CONCRETE PLACEMENT
21. FOR LOCATION OF CONTROL OR CONSTRUCTION JOINTS OTHER THAN THOSE ILLUSTRATED VERIFY W/ ENGINEER
22. NOT USED
23. ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A 307
24. ANCHOR BOLTS AND DOWELS SHALL BE SET IN SUCH A MANNER THAT THEIR FULL EMBEDDED LENGTH SHALL BE COVERED WITH CONCRETE
25. LAP SPLICES SHALL BE 40 BAR DIAMETERS OR AS SHOWN OR NOTED ELSEWHERE THESE PLANS
26. DETAILING, FABRICATION AND PLACEMENT OF REINFORCEMENT STEEL SHALL CONFORM TO CURRENT CRSI AND ACI SPECIFICATIONS
27. REINFORCING STEEL SHALL BE FREE OF LOOSE RUST, MIL SCALE AND COATINGS THAT WOULD REDUCE OR DESTROY BOND
28. REINFORCING BARS SHALL NOT BE REDUCED IN SECTION, KINKED OR BENT OTHER THAN INDICATED
29. NOT USED
30. SUPPORT REINFORCING STEEL IN CHAIRS
31. KEEP ONE SET OF CONCRETE CYLINDERS ON SITE AT ALL TIMES TO MAKE SAMPLES IN CASE CONCRETE CHARACTER CHANGES

REINFORCING STEEL

1. REINFORCEING STEEL SHALL BE #5 UNLESS OTHERWISE NOTED
2. ALL REINFORCING STEEL SHALL BE A MINIMUM OF GRADE 40 AND IDENTIFIED IN ACCORDANCE W/ ASTM A615, A616, A617 OR A 706
3. SPLICES SHALL BE LAP SPLICES W/ A MINIMUM OF 25" FOR #5 BARS
4. FOR MINIMUM COVER OVER REINFORCEMENT – SEE DETAILS & SECTIONS ELSEWHERE THESE PLANS
5. ALL REINFORCEMENT IN CMU'S SHALL EXTEND A MINIMUM OF 6" INTO ALL FOOTINGS W/ A 6" STANDARD BEND

METAL ACCESSORIES

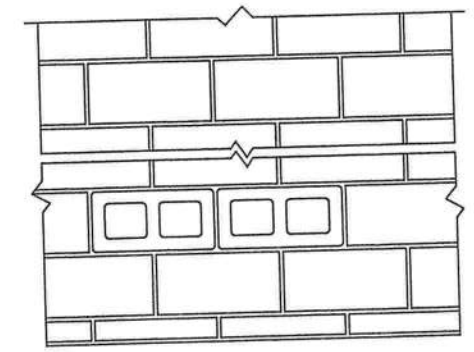
1. ALL JOINT REINFORCEMENT & ANCHOR TIES SHALL CONFORM TO ASTM A36 & A366 AS REQUIRED
2. LONGITUDINAL WIRES OF JOINT REINFORCEMENT SHALL BE FULLY EMBEDED IN MOTAR OR GROUT W/ A MINIMUM COVER OF 5/8" WHEN EXPOSED TO EARTH OR WEATHER AND A MINIMUM OF 1/2" WHEN NOT EXPOSED TO EARTH OR WEATHER
3. METAL ACCESSORIES USED IN EXTERIOR WALL CONSTRUCTION SHALLBE GALVANIZED IN ACCORDANCE W/ ASTM A153 CLASS B–2
4. METAL ACCESSORIES USED IN INTERIOR WALL CONSTRUCTION SHALL BE MILL GALVANIZED IN ACCORDANCE W/ ASTM A641, CLASS 1

FILL COMPACTION

1. PRIOR TO GRADING OPERATIONS ALL SOIL, ORGANIC LITTER AND FILL SHALL BE STRIPPED FROM BUILDING AREA
2. COMPACTION SHALL NOT BE LESS THAN 98% OF THE STANDARD PROCTOR DENSITY
3. ALL FILL MATERIAL SHALL BE INORGANIC W/ NOT MORE THAN 30% BY WEIGHT FINER THAN 200 U.S. STANDARD SIEVE CONFORMING TO
   A. LIQUID LIMIT, LW.....30 MAXIMUM
   B. ELASTICITY, LW.....15, MAXIMUM
   C. DRY UNIT WEIGHT.....100 LBS. PER CU. FT.
4. ALL FILL MATERIAL SHALL BE UNIFORMLY PLACED @ OPTIMUM MOISTURE CONTENT IN 6" UNIFORM LAYERS AND COMPACTED TO A DENSITY OF 98% OF THE STANDARD PROCTOR IN ACCORDANCE W/ ASTM D698T
5. FOOTINGS EXCAVATIONS SHALL BE INSPECTED PRIR TO PLACING ANY CONCRETE TO ENSURE THAT FOOTINGS REST UPON SOUND EARTH
6. ALL SUBGRADES MUST BE LEVEL, SMOOTH AND UNIFORMLY COMPACTED
7. SUB GRADE MUST BE ACCURATE WITHING 1/4" OF THE DESIGNATED LEVEL
8. ANY WALL WHICH IS TO RECEIVE BACK FILL ON BOTH SIDES SHALL HAVE THE BACK FILL PLACED SIMULTANEOUSLY ON BOTH SIDES IN EVEN LAYERS AS PREVIOUSLY DESCRIBED SO AS NOT TO APPLY UNEVEN LOADS

GENERAL

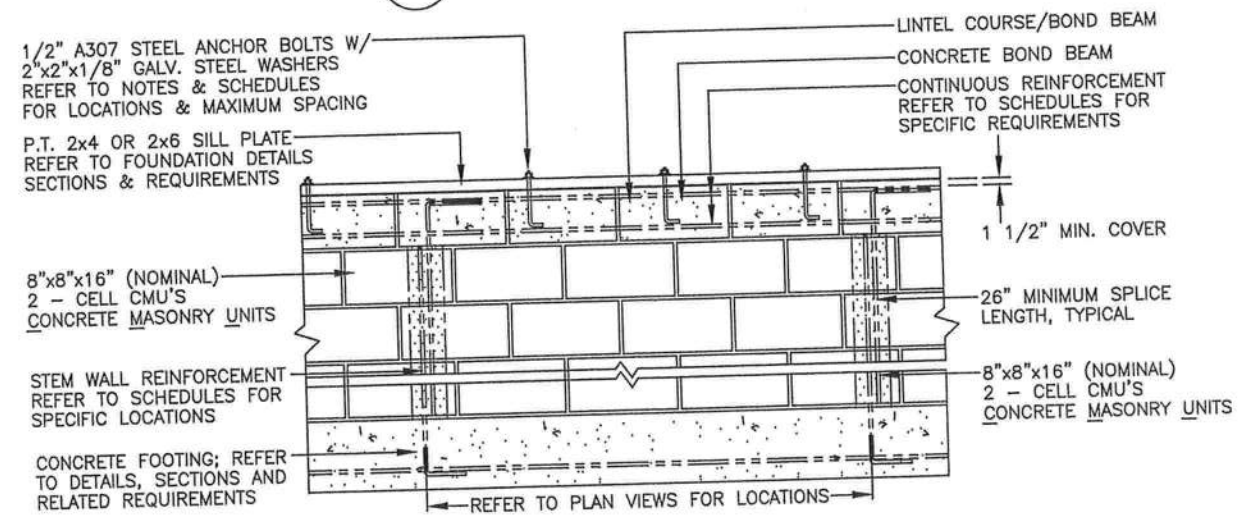
1. FOOTINGS SHALL BE LEVEL OR STEPPED AS INDICATED ON PLAN VIEWS & DETAILS OR SECTIONS
2. SOIL, WASTE PIPES OR BUILDING DRAINS PASSING UNDER A FOOTING OR THROUGH A FOUNDATION SHALL BE PROVIDED W/ A RELIEVING ARCH OR AN IRON PIPE SLEEVE A MINIMUM OF 2 – PIPE SIZES GREATER THAN THE PIPE PASSING THROUGH
3. STEM WALLS SHALL EXTEND NO GREATER THAN 3 FEET ABOVE THE FINISH GRADE AND CONSTRUCTED W/ THE PREVIOUSLY DESCRIBED MASONRY UNITS
4. ALL STATE AND LOCAL CODES SHALL BE COMPLIED WITH BY THE CONTRACTOR
5. 2000 P.S.F. SOILD BEARING PRESSURE SHALL BE OBTAINED UNDER ALL FOOTINGS & SLABS



TYPICAL CMU; REFER TO PLAN VIEWS FOR REINFORCEMENT & SPECIFIC LOCATIONS

TYPICAL TWO CELL CMU INSTALLED ON SIDE W/ INSECT & VERMIN PROOF SCREENING TO PROVIDE THE MINIMAL HYDROSTATIC OPENINGS. REFER TO NOTES & REQUIREMENTS THESE OPENINGS SHALL NOT BE BLOCKED OR OBSTRUCTED IN ANY MANNER.

1 / S1.1.0 TYPICAL ELEVATION @ CMU WALL(S)
SCALE: N.T.S.



2 / S1.0.0 TYPICAL SECTION @ CMU WALL(S)
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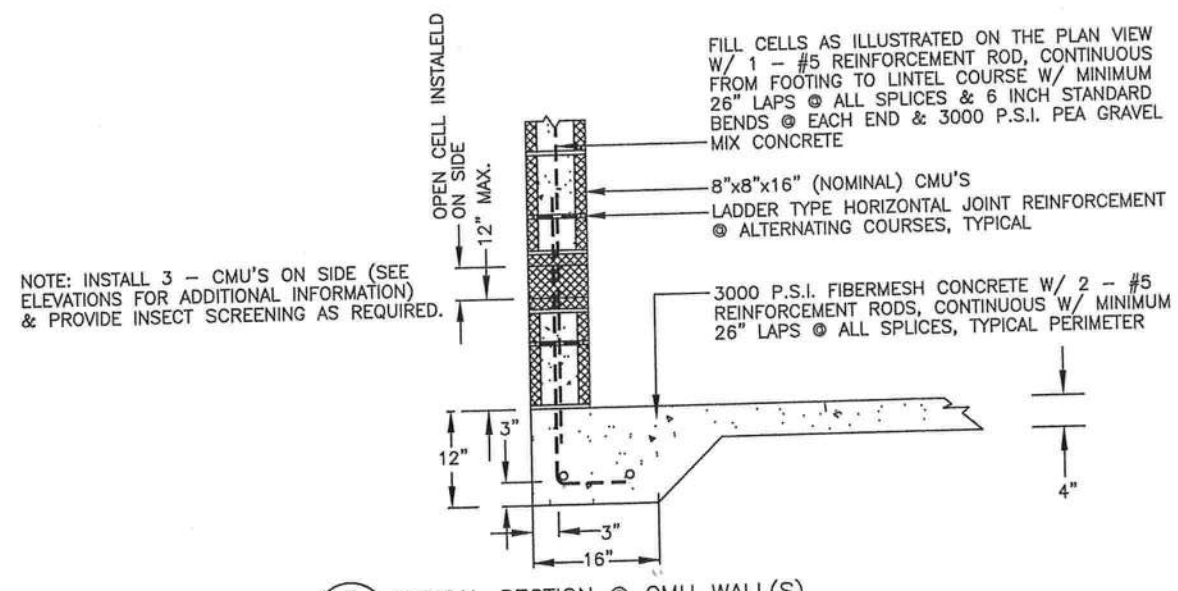
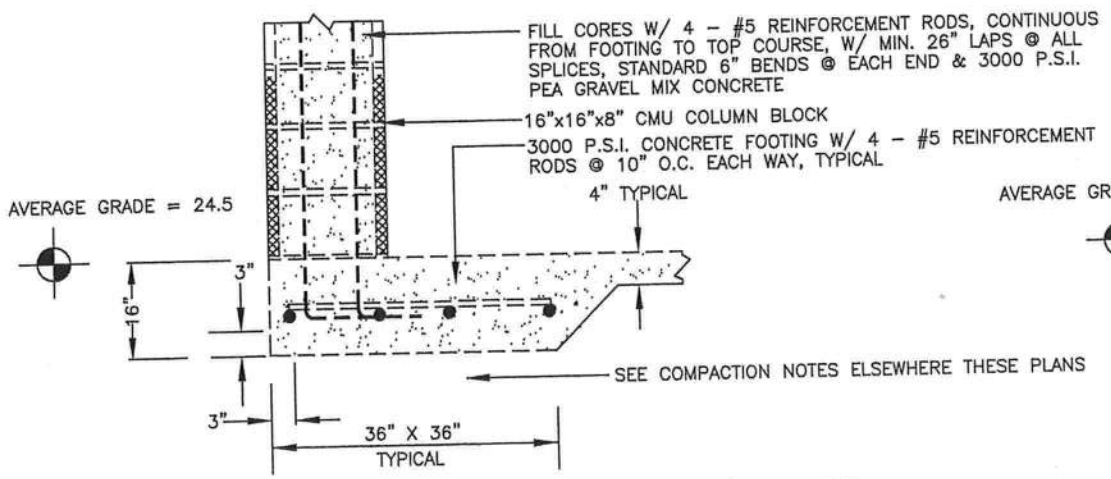


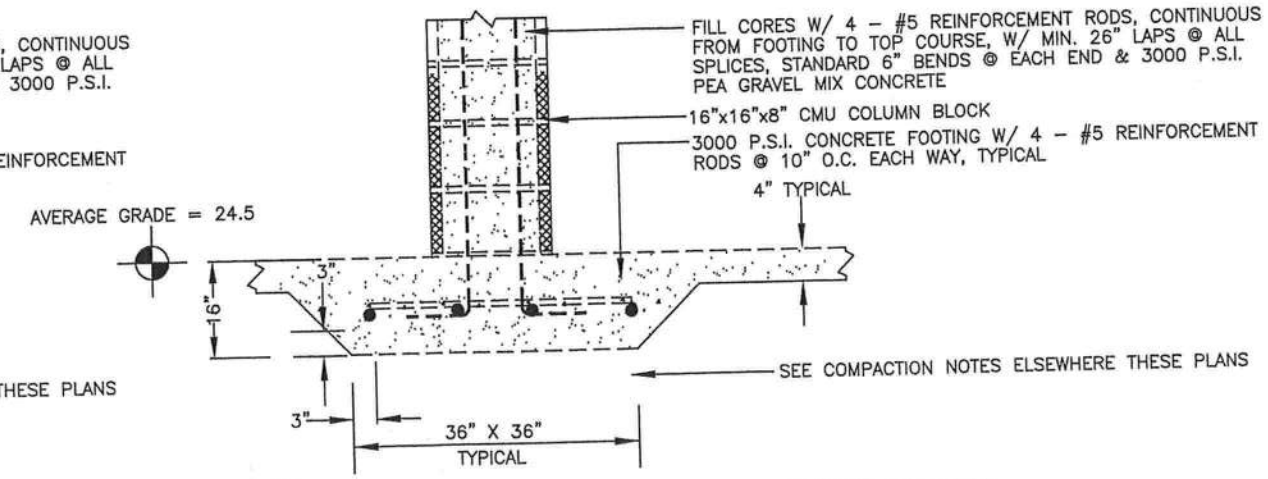
3 / S1.0.0 TYPICAL SECTION @ CMU WALL(S)
SCALE: N.T.S.

PROJECT No.	DATE	REFERENCED FOUNDATION SECTIONS & DETAILS MISC. NOTES, REFERENCES & INSTRUCTIONS	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA	KEEN ENGINEERING & SURVEYING, INC. 9263 CR 417 LIVE OAK, FLORIDA 32060 386–362–4787 ENG. LIC. EB 3761
MORGAN–S1.1.0.DWG	02/26/16				
SHEET No. S1.1.0					

SCALE NOTE:
SECTIONS/DETAILS: N.T.S.



1 S.1.1.1 TYPICAL SECTION THROUGH EXTERIOR PIERS/ COLUMNS
SCALE: N.T.S.



2 S.1.1.1 TYPICAL SECTION THROUGH INTERIOR PIERS/ COLUMNS
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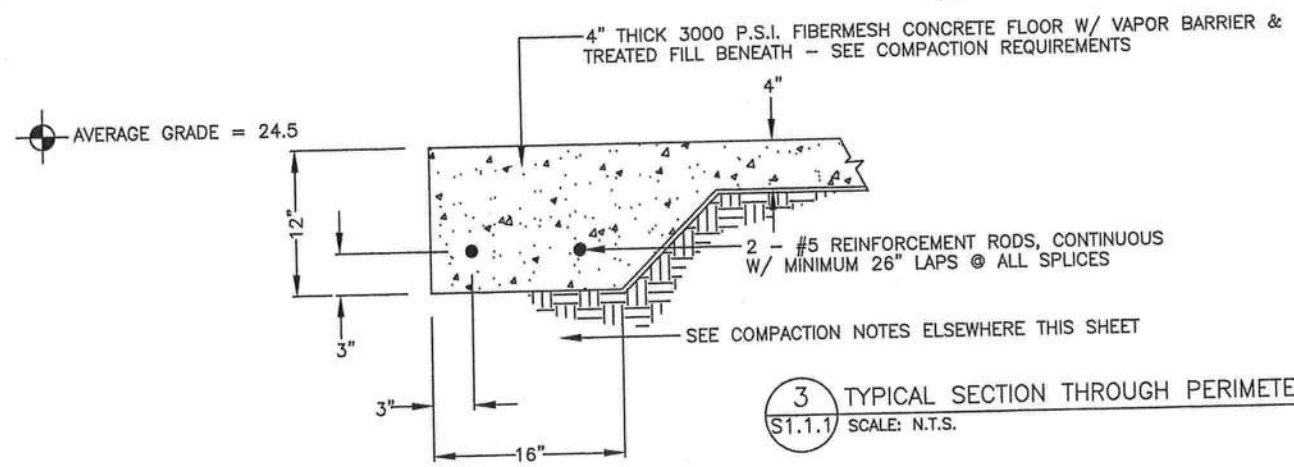
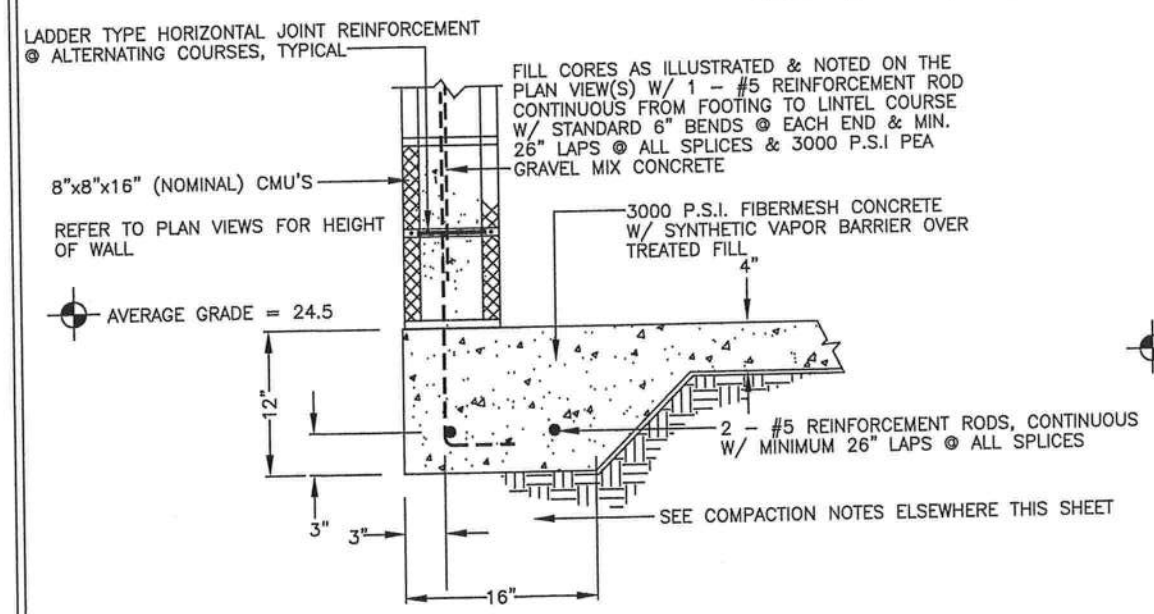
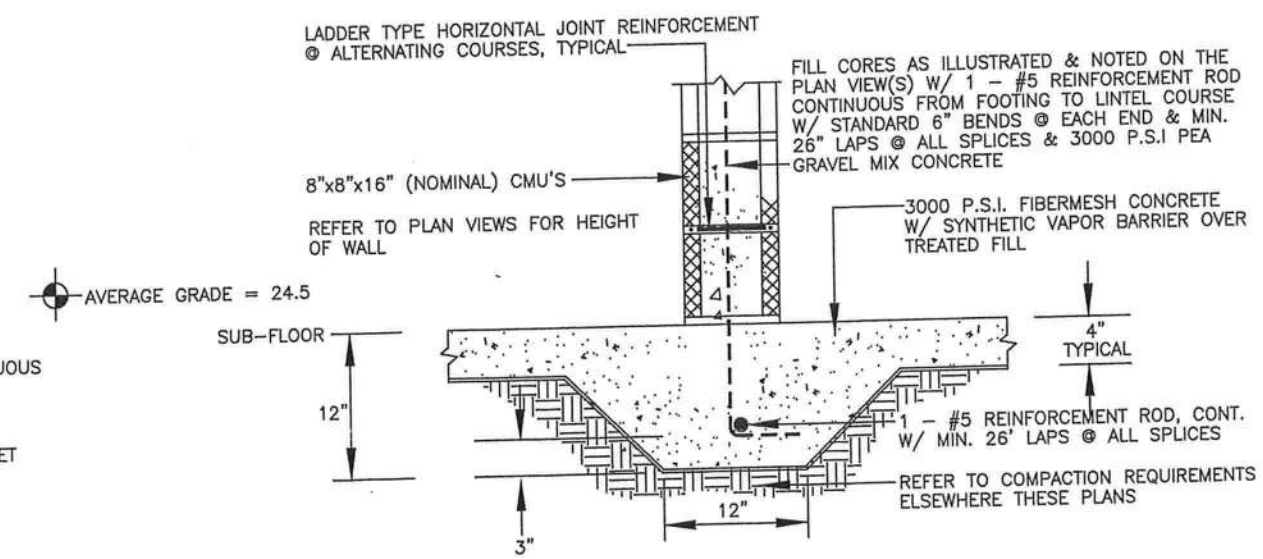


3 S1.1.1 TYPICAL SECTION THROUGH PERIMETER
SCALE: N.T.S.



4 S1.1.1 TYPICAL SECTION THROUGH EXTERIOR PIERS/ COLUMNS
SCALE: N.T.S.



5 S1.1.1 TYPICAL SECTION @ INTERIOR BEARING
SCALE: N.T.S.

PROJECT No. MORGAN–S1.1.1.DWG SHEET No. S1.1.1	DATE 02/26/16	REFERENCED FOUNDATION SECTIONS & DETAILS MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:

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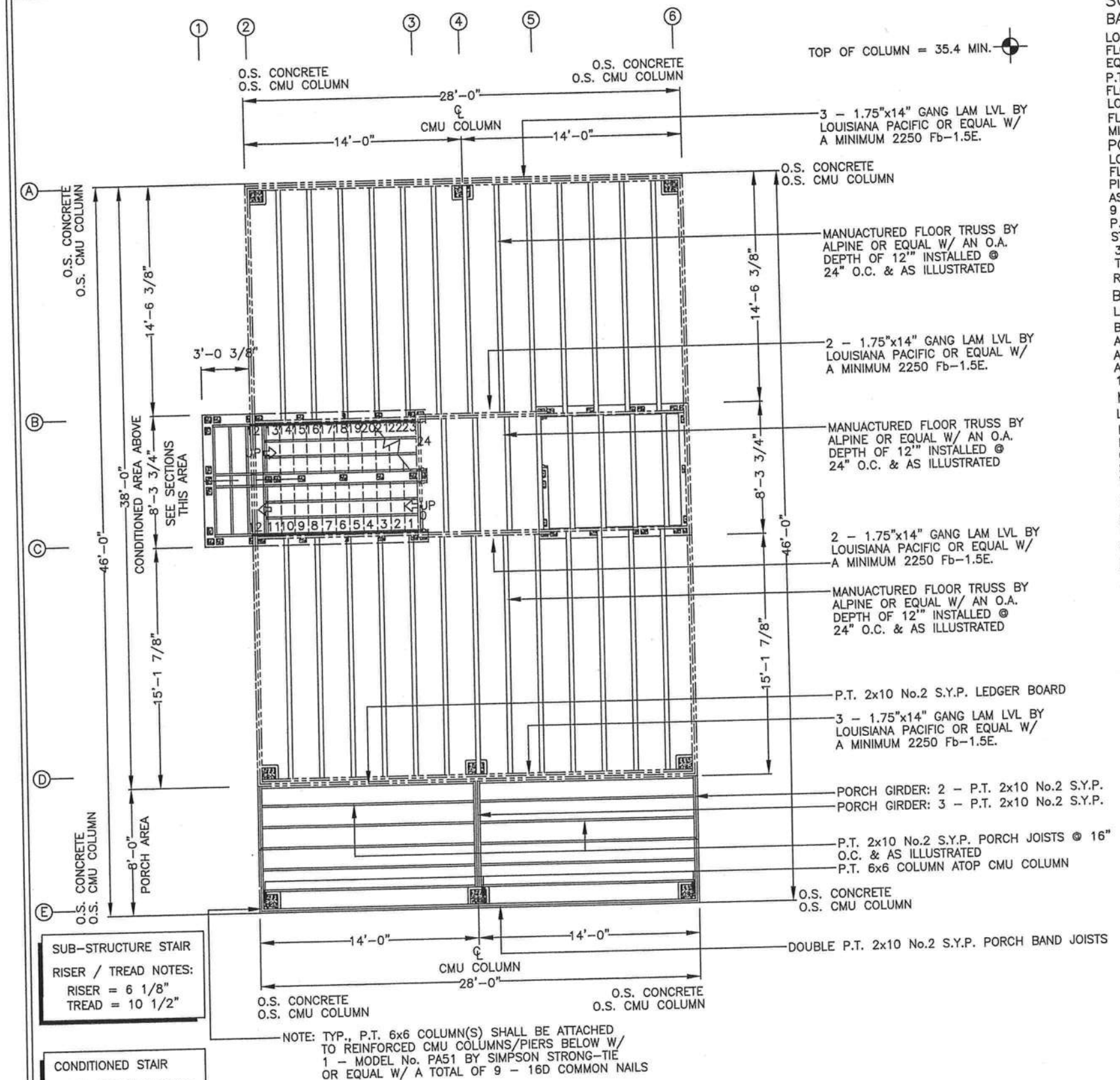


SUB-STRUCTURE STAIR
RISER / TREAD NOTES:
RISER = 6 1/8"
TREAD = 10 1/2"

CONDITIONED STAIR
RISER / TREAD NOTES:
RISER = 6 1/2"
TREAD = 10 1/2"

1 / S1.2.0 FIRST LEVEL FLOOR FRAMING PLAN VIEW
SCALE: N.T.S.

SCALE NOTE:
PLAN VIEW: 1/8"=1'-0

SCHEDULE OF REQUIRED FLOOR SYSTEM MECHANICAL FASTENERS

BAND JOISTS/FLOOR GIRDERS

LOCATION OF ALL CONDITIONED AREA MULIT-PLY FLOOR GIRDERS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
FLOOR GIRDERS AS ILLUSTRATED SHALL BE 2 – OR – 3 – 14"x1.75" GANG LAM LVL BY LOUISIANA PACIFIC OR EQUAL W/ A MIN. 2250 Fb 1.5E.
P.T. 2X SHALL BE ATTACHED TO THE TOP CMU COLUMN COURSE OR CMU FILLED CELL WALL COURSE BENEATH ALL FLOOR FLOOR GIRDER BEARING W/ 1– A307 STANDARD ANCHOR BOLT
LOCATION OF ALL CONDITIONED AREA SINGLE PLY FLOOR GIRDERS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
FLOOR GIRDERS AS ILLUSTRATED SHALL BE 1 – 14"x1.75" GANG LAM LVL BY LOUISIANA PACIFIC OR EQUAL W/ A MINIMUM. 2250 Fb 1.5E.

PORCH AREA COLUMNS/PIERS

LOCATION OF ALL PORCH AREA MULIT-PLY FLOOR GIRDERS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
FLOOR GIRDERS AS ILLUSTRATED SHALL BE 2 – OR – 3 – P.T. 2x10 No.2 S.Y.P. ATTACHED TO TOP OF COLUMN/ PIER W/ 1 – MODEL No. PA51 BY SIMPSON STRONG-TIE OR EQUAL TO EACH MULTI-PLY BUILT-UP FLOOR GIRDER AS NOTED ON THE PLAN VIEWS & DETAILED ELSEWHERE THESE PLANS, ATTACHED TO GIRDERS W/ A MINIMUM OF 9 – 16d COMMON NAILS AS SPECIFIED BY MANUFACTURER.
P.T. 2X SHALL BE ATTACHED TO THE TOP CMU COURSE BENEATH ALL FLOOR GIRDER BEARING W/ 1 – A307 STANDARD ANCHOR BOLT
3 – PLY GIRDER SHALL BE ATTACHED TO LVL BAND BEAM W/ 1 – MODEL No. U210-3 MAX BY SIMPSON STRONG TIE OR EQUAL W/ A TOTAL OF 18 – 16d COMMON NAILS & 10-10d COMMON NAILS PER DEVICE
REFER TO SPECIAL DETAILS AND REQUIREMENTS FOR ADDITIONAL DEVICES ELSEWHERE THESE PLANS

BAND JOISTS (CONDITIONED AREA)

LOCATION OF ALL CONDITIONED AREA BAND JOISTS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
BAND JOISTS AS ILLUSTRATED SHALL BE 1 – OR 2 –14"x1.75" GANG LAM LVL BY LOUISIANA PACIFIC OR EQUAL WITH A MINIMUM 2250 Fb 1.5E – ATTACHED TO TOP COURSE OF CMU COLUMN/PIER W/ 1 – MODEL No. PA51 BY SIMPSON ATTACHED TO GIRDERS W/ A MINIMUM OF 9 – 16D COMMON NAILS PER DEVICE
ATTACH LVL BAND JOISTS TO CMU WALL FILLED CELL WALL COURSING @ ALL CORNERS & 4'-0 O.C. MAXIMUM W/ 1 – MODEL No. PA51 BY SIMPSON STRONG-TIE OR EQUAL W/ 9 – 16d COMMON NAILS PER DEVICE

MANUFACTURED FLOOR TRUSSES

LOCATION OF ALL FLOOR JOISTS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
LOCATION OF ALL FLOOR TRUSSES – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
FLOOR TRUSSES AS ILLUSTRATED SHALL BE ALPINE SYSTEM 42F W/ AN OVERALL DEPTH OF 12" INSTALLED @ 24" O.C. & AS ILLUSTRATED OR NOTED & ATTACHED TO GIRDERS OR BAND JOISTS W/ 1 – MODEL No. ITT412 BY SIMPSON STRONG-TIE OR EQUAL @ EACH END OF EACH FLOOR TRUSS TO GIRDER OR BAND JOISTS CONNECTIONS W/ A TOTAL OF 6 – 10d COMMON NAILS & 2 – 10d x 1 1/2' NAILS PER DEVICE

EXTERIOR WALL STUDS

LOCATION OF ALL EXTERIOR WALL 2X4 or 2X6 STUDS – SEE FLOOR PLAN VIEW FOR LOCATIONS
EXTERIOR WALL STUDS SHALL BE 2x4 OR 2x6 SPRUCE @ 16" O.C., TYPICAL ALONG THE LENGTH OF THE EXTERIOR WALLS. STUDS SHALL BE ATTACHED TO BOT. 2x PLATES AS DESCRIBED OR NOTED ELSEWHERE THESE PLANS AND REQUIRE 1 – MODEL No. CS18 COILED STRAP BY SIMPSON STRONG-TIE OR EQUAL 33 INCHES LONG INSTALLED W/ A TOTAL OF 18 – 10d COMM9N NAILS ATTACHED TO PERIMETER LVL BAND JOISTS/GIRDERS AND STUD ABOVE @ 48" O.C. COINCIDING WITH THE SP4 DEVICE @ TOP PLATES CONNECTIONS. 2 – ADDITIONAL DEVICES ARE REQUIRED @ ALL OUTSIDE CORNERS INSTALLED A MAXIMUM OF 6 INCHES FROM CORNERS, 1 EACH SIDE OF CORNER.

EXTERIOR WALL OPENINGS

LOCATION OF ALL EXTERIOR 2x4 WALL OPENINGS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
A "HEADER" OF 2 – 2x12 No.2 S.Y.P. W/ 1 – 15/32" CDX CORE SHALL BE INSTALLED AS NOTED THESE PLANS
36" WIDE OPENINGS REQUIRE A MINIMUM OF 2 CONTINUOUS STUDS EACH SIDE OF OPENINGS W/ 1 – MODEL No. H6 BY SIMPSON STRONG-TIE OR EQUAL @ EACH SIDE OF OPENINGS W/ A TOTAL OF 16 – 8d COMMON NAILS PER DEVICE
48" WIDE OPENINGS REQUIRE 3 – CONTINUOUS STUDS EACH SIDE OF OPENING W/ 1 – MODEL No. H6 BY SIMPSON STRONG-TIE OR EQUAL @ EACH SIDE OF OPENINGS W/ A TOTAL OF 16 – 8d COMMON NAILS PER DEVICE.
72" WIDE OPENINGS REQUIRE 4 – CONTINUOUS STUDS EACH SIDE OF OPENING W/ 2 – MODEL No. H6 BY SIMPSON STRONG-TIE OR EQUAL @ EACH SIDE OF OPENINGS W/ A TOTAL OF 16 – 8d COMMON NAILS PER DEVICE.
REFER TO DETAILS FOR ADDITIONAL REQUIREMENTS

PORCH AREA GIRDERS/BAND BEAMS

LOCATION OF REAR PORCH GIRDERS/BAND BEAMS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
PORCH BAND BEAMS SHALL BE DOUBLE P.T. 2x10 No.2 S.Y.P. ATTACHED TO PIERS/COLUMNS W/ 1 – MODEL No. PA51 BY SIMPSON STRONG-TIE OR EQUAL WITH A MINIMUM OF 9 – 16d COMMON NAILS PER DEVICE
PORCH GIRDERS SHALL BE 3 – P.T. 2x10 No.2 S.Y.P, ATTACHED TO PIER'S COLUMNS W/ 1 – MODEL No. PA51 BY SIMPSON STRONG-TIE OR EQUAL W/ A TOTAL OF 9 – 16d COMMON NAILS PER DEVICE
3-PLY GIRDERS SHALL BE ATTACHED TO 3-PLY LVL GIRDERS W/ 1 –MODEL No. U210-3 MAX BY SIMPSON STRONG TIE OR EQUAL W/ A TOTAL OF 18 – 16d COMMON NAILS & 10-10d COMMON NAILS PER DEVICE

PORCH AREA DECK JOISTS

LOCATION OF PORCH DECK JOISTS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
PORCH AREA DECK JOISTS SHALL BE P.T. 2x10 No.2 S.Y.P. @ 16" O.C. & AS ILLUSTRATED ON THE PLAN VIEW AND SHALL BE ATTACHEDTO GIRDERS AND BAND JOISTS W/ 1 – MODEL No. U210 BY SIMPSON STRONG-TIE OR EQUAL @ EACH END OF EACH JOISTS W/ A TOTAL OF 10 – 10d COMMON NAILS & 6 –10d x 1 1/2' NAILS PER DEVICE
NOTE: A P.T. 2x8 No.2 S.Y.P. LEDGER BOARD IS REQUIRED TO BE ATTACHED TO MAIN DWELLING BAND JOISTS W/ #10d COMMON NAILS @ 12' O.C. STAGGERED – REFER TO PLAN VIEWS FOR LOCATIONS

PORCH DECKING

LOCATION OF REAR PORCH DECKING – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
PORCH DECKING SHALL BE P.T. 2x6 No.2 S.Y.P. ATTACHED TO JOISTS, GIRDERS & BAND BEAMS W/ 3-10d ANNULAR RING NAILS PER EACH CONNECTION TO EACH JOIST, GIRDER OR BAND BEAM. ALTERNATE SHALL BE 3 – #12 SCREWS W/ A MINIMUM EMBEDMENT OF 2"

PORCH AREA P.T. WOOD COLUMNS

REFER TO DETAILS & SECTIONS ELSEWHERE THESE PLANS FOR SPECIFIC DEVICES & INSTALLATION

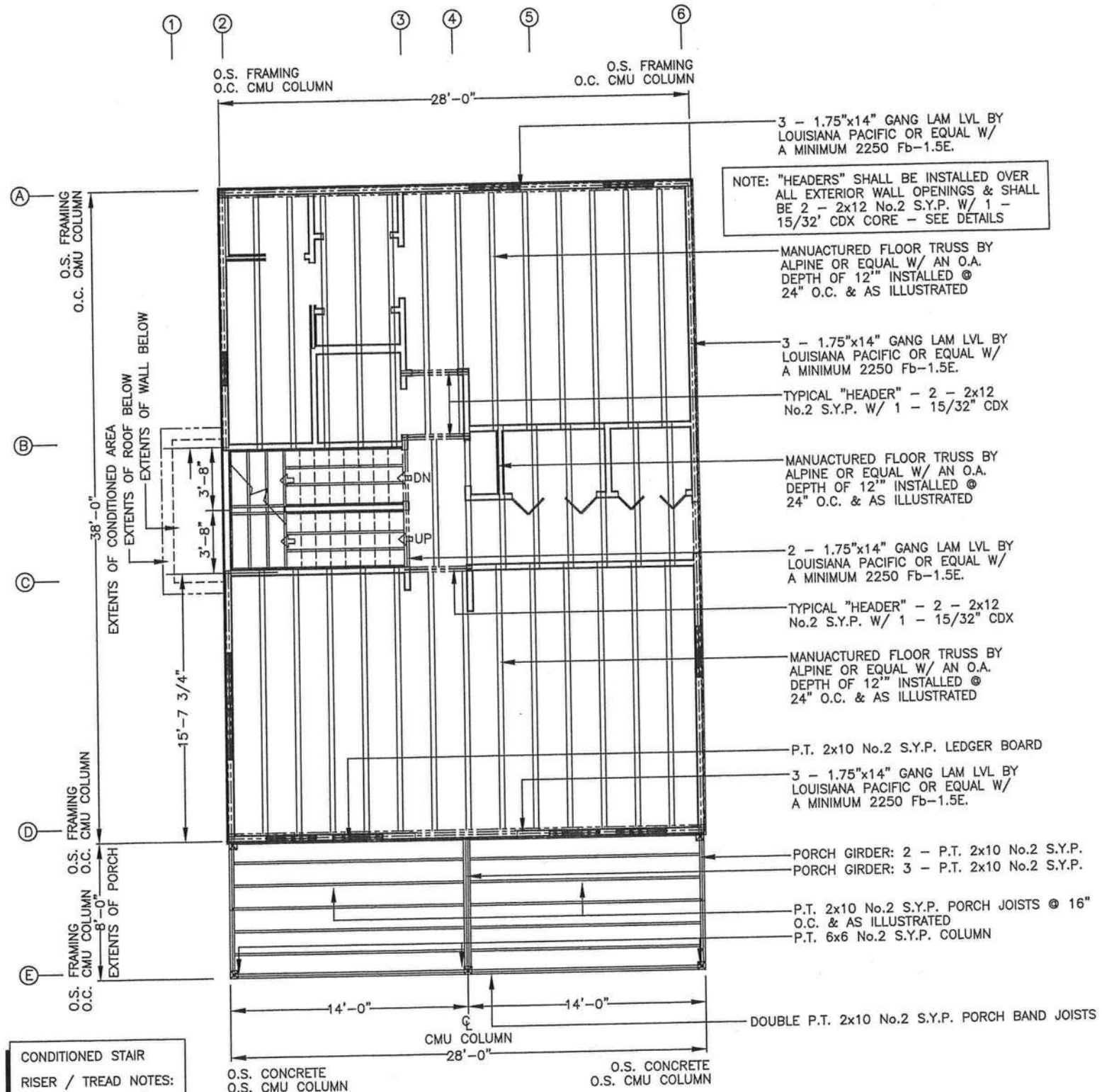
STAIR REQUIREMENTS

REFER TO DETAILS & SECTIONS ELSEWHERE THESE PLANS FOR SPECIFIC DEVICES & INSTALLATION

PROJECT No. MORGAN-S1.2.0.DWG SHEET No. S1.2.0	DATE 02/26/16	FIRST LEVEL FLOOR FRAMING PLAN VIEW MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

KEEN ENGINEERING & SURVEYING, INC.
9263 CR 417
LIVE OAK, FLORIDA 32060
386-362-4787
ENG. LIC. EB 3761

SCALE NOTE:
PLAN VIEW: 1/8"=1'-0



CONDITIONED STAIR

RISER / TREAD NOTES:
RISER = 6 1/2"
TREAD = 10 1/2"

1 / S1.3.0 SECOND LEVEL FLOOR FRAMING PLAN VIEW
SCALE: N.T.S.

SCHEDULE OF REQUIRED FLOOR SYSTEM MECHANICAL FASTENERS

BAND JOISTS/FLOOR GIRDERS

LOCATION OF ALL CONDITIONED AREA MULIT–PLY FLOOR GIRDERS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
FLOOR GIRDERS AS ILLUSTRATED SHALL BE 2 – OR – 3 – 14"x1.75" GANG LAM LVL BY LOUISIANA PACIFIC OR EQUAL W/ A MIN. 2250 Fb 1.5E.
LOCATION OF ALL CONDITIONED AREA BAND JOISTS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
BAND JOISTS AS ILLUSTRATED SHALL BE 1 – OR 2 –14"x1.75" GANG LAM LVL BY LOUISIANA PACIFIC OR EQUAL WITH A MINIMUM 2250 Fb 1.5E – ATTACHED TO 2x STUDS BENEATH W/ 1 – MODEL No. CS18 COILED STRAP BY SIMPSON STRONG–TIE OR EQUAL W/ A MINIMUM LENGTH EACH SIDE OF LVL JOISTS TO STUD ABOVE AND BENEATH OF 9" (O.A. LENGTH OD 34") AND SHALL BE INSTALLED @ ALL CORNERS 16" FROM ALL CORNERS & 48" O.C. TO COINCIDE W/ SP4 DEVICE @ TOP PLATES ABOVE AND BENEATH GIRDER W/ A TOTAL OF 18 – 10d COMMON NAILS

MANUFACTURED FLOOR TRUSSES

LOCATION OF ALL FLOOR JOISTS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
LOCATION OF ALL FLOOR TRUSSES – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
FLOOR TRUSSES AS ILLUSTRATED SHALL BE ALPINE SYSTEM 42F W/ AN OVERALL DEPTH OF 12" INSTALLED @ 24" O.C. & AS ILLUSTRATED OR NOTED & ATTACHED TO GIRDERS OR BAND JOISTS W/ 1 – MODEL No. ITT412 BY SIMPSON STRONG–TIE OR EQUAL @ EACH END OF EACH FLOOR TRUSS TO GIRDER OR BAND JOISTS CONNECTIONS W/ A TOTAL OF 6 – 10d COMMON NAILS & 2 – 10d x 1 1/2" NAILS PER DEVICE
1 – MODEL No. H4 BY SIMPSON STRONG–TIE OR EQUAL SHALL BE ATTACHED TO EACH FLOOR TRUSS TO DOUBLE TOP PLATES CONNECTIONS W/ A TOTAL OF 8 – 8d COMMON NAILS PER DEVICE

EXTERIOR WALL STUDS

LOCATION OF ALL EXTERIOR WALL 2X4 or 2X6 STUDS – SEE FLOOR PLAN VIEW FOR LOCATIONS
EXTERIOR WALL STUDS SHALL BE 2x4 OR 2x6 SPRUCE @ 16" O.C., TYPICAL ALONG THE LENGTH OF THE EXTERIOR WALLS. STUDS SHALL BE ATTACHED TO BOT. 2x PLATES AS DESCRIBED OR NOTED ELSEWHERE THESE PLANS AND REQUIRE 1 – MODEL No. CS18 COILED STRAP BY SIMPSON STRONG–TIE OR EQUAL 34 INCHES LONG INSTALLED PER ABOVE DIRECTIONS

EXTERIOR WALL OPENINGS

LOCATION OF ALL EXTERIOR 2x4 WALL OPENINGS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
A "HEADER" OF 2 – 2x12 No.2 S.Y.P. W/ 1 – 15/32" CDX CORE SHALL BE INSTALLED AS NOTED THESE PLANS
36" WIDE OPENINGS REQUIRE A MINIMUM OF 2 CONTINUOUS STUDS EACH SIDE OF OPENINGS W/ 1 – MODEL No. H6 BY SIMPSON STRONG–TIE OR EQUAL @ EACH SIDE OF OPENINGS W/ A TOTAL OF 16 – 8d COMMON NAILS PER DEVICE
48" WIDE OPENINGS REQUIRE 2 – CONTINUOUS STUDS EACH SIDE OF OPENING W/ 1 – MODEL No. H6 BY SIMPSON STRONG–TIE OR EQUAL @ EACH SIDE OF OPENINGS W/ A TOTAL OF 16 – 8d COMMON NAILS PER DEVICE.
72" WIDE OPENINGS REQUIRE 4 – CONTINUOUS STUDS EACH SIDE OF OPENING W/ 2 – MODEL No. H6 BY SIMPSON STRONG–TIE OR EQUAL @ EACH SIDE OF OPENINGS W/ A TOTAL OF 16 – 8d COMMON NAILS PER DEVICE.
REFER TO DETAILS FOR ADDITIONAL REQUIREMENTS

PORCH AREA GIRDERS/BAND BEAMS

LOCATION OF PORCH GIRDERS/BAND BEAMS – SEE FLOOR SYSTEM FOR LOCATIONS
PORCH BAND BEAMS SHALL BE DOUBLE P.T. 2x10 No.2 S.Y.P. ATTACHED TO P.T. 6x6 COLUMNS W/ 1 –MODEL No. CCQ3–6SDS2.5 BY SIMPSON STRONG–TIE OR EQUAL @ CONNECTION OF 3–PLY GIRDER TO BAND BEAM LOCATIONS INSTALLED W/ A TOTAL OF 30 – 1/4" x 2 1/2' SDS SCREWS BY SIMPSON STRONG–TIE OR EQUAL.
CORNER PORCH BAND BEAMS SHALL BE ATTACHED TO P.T. 6x6 COLUMN W/ 1 – MODEL No. EPC46 BY SIMPSON STRONG–TIE OR EQUAL W/ A TOTAL OF 14 – 16d COMMON NAILS
3 – PLY GIRDER SHALL BE ATTACHED TO DWELLING LVL GIRDER W/ 1 – MODEL No. U210–3 BY SIMPSON STRONG–TIE OR EQUAL W/ A TOTAL OF 18 – 16d COMMON NAILS PER DEVICE.
DOUBLE P.T. BAND JOISTS SHALL BE ATTACHED TO LVL BAND BEAMS W/ 1 – MODEL No. LUS210–2 BY SIMPSON STRONG–TIE OR EQUAL W/ A TOTAL OF 14 – 16d COMMON NAILS PER DEVICE

PORCH AREA DECK JOISTS

LOCATION OF PORCH DECK JOISTS – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
PORCH AREA DECK JOISTS SHALL BE P.T. 2x10 No.2 S.Y.P. @ 16" O.C. & AS ILLUSTRATED ON THE PLAN VIEW AND SHALL BE ATTACHEDTO GIRDERS AND BAND JOISTS W/ 1 – MODEL No. U210 BY SIMPSON STRONG–TIE OR EQUAL @ EACH END OF EACH JOISTS W/ A TOTAL OF 10 – 10d COMMON NAILS & 6 –10d x 1 1/2' NAILS PER DEVICE
NOTE: A P.T. 2x8 No.2 S.Y.P. LEDGER BOARD IS REQUIRED TO BE ATTACHED TO MAIN DWELLING BAND JOISTS W/ #10d COMMON NAILS @ 12' O.C. STAGGERED – REFER TO PLAN VIEWS FOR LOCATIONS

PORCH DECKING

LOCATION OF REAR PORCH DECKING – SEE FLOOR SYSTEM PLAN VIEW FOR LOCATIONS
PORCH DECKING SHALL BE P.T. 2x6 No.2 S.Y.P. ATTACHED TO JOISTS, GIRDERS & BAND BEAMS W/ 3–10d ANNULAR RING NAILS PER EACH CONNECTION TO EACH JOIST, GIRDER OR BAND BEAM. ALTERNATE SHALL BE 3 – #12 SCREWS W/ A MINIMUM EMBEDMENT OF 2"

PORCH AREA P.T. WOOD COLUMNS

SEE ABOVE DEVICES – SEE ALSO SECTIONS 7 DETAILS

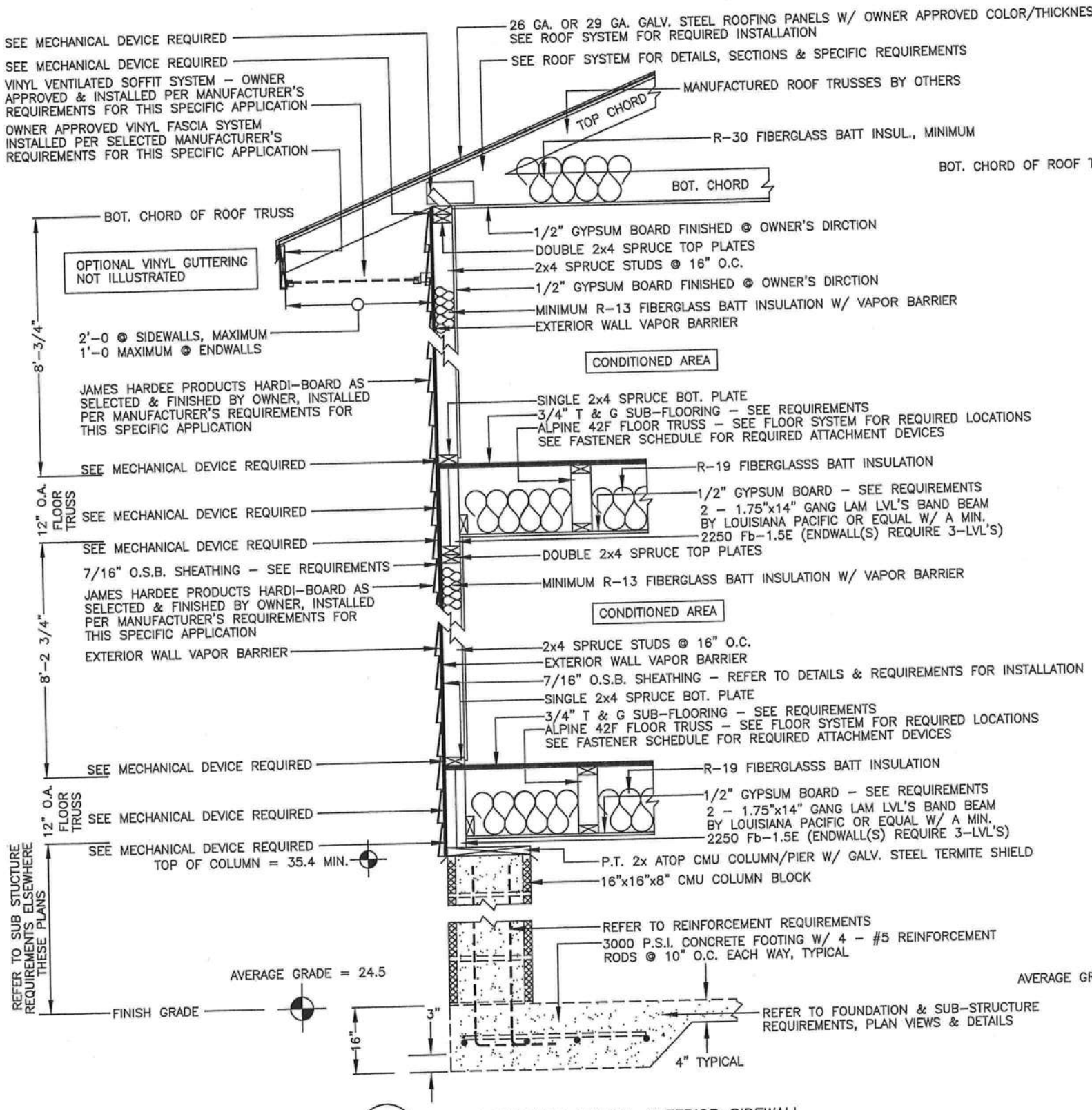
STAIR REQUIREMENTS

REFER TO DETAILS & SECTIONS ELSEWHERE THESE PLANS FOR SPECIFIC DEVICES & INSTALLATION

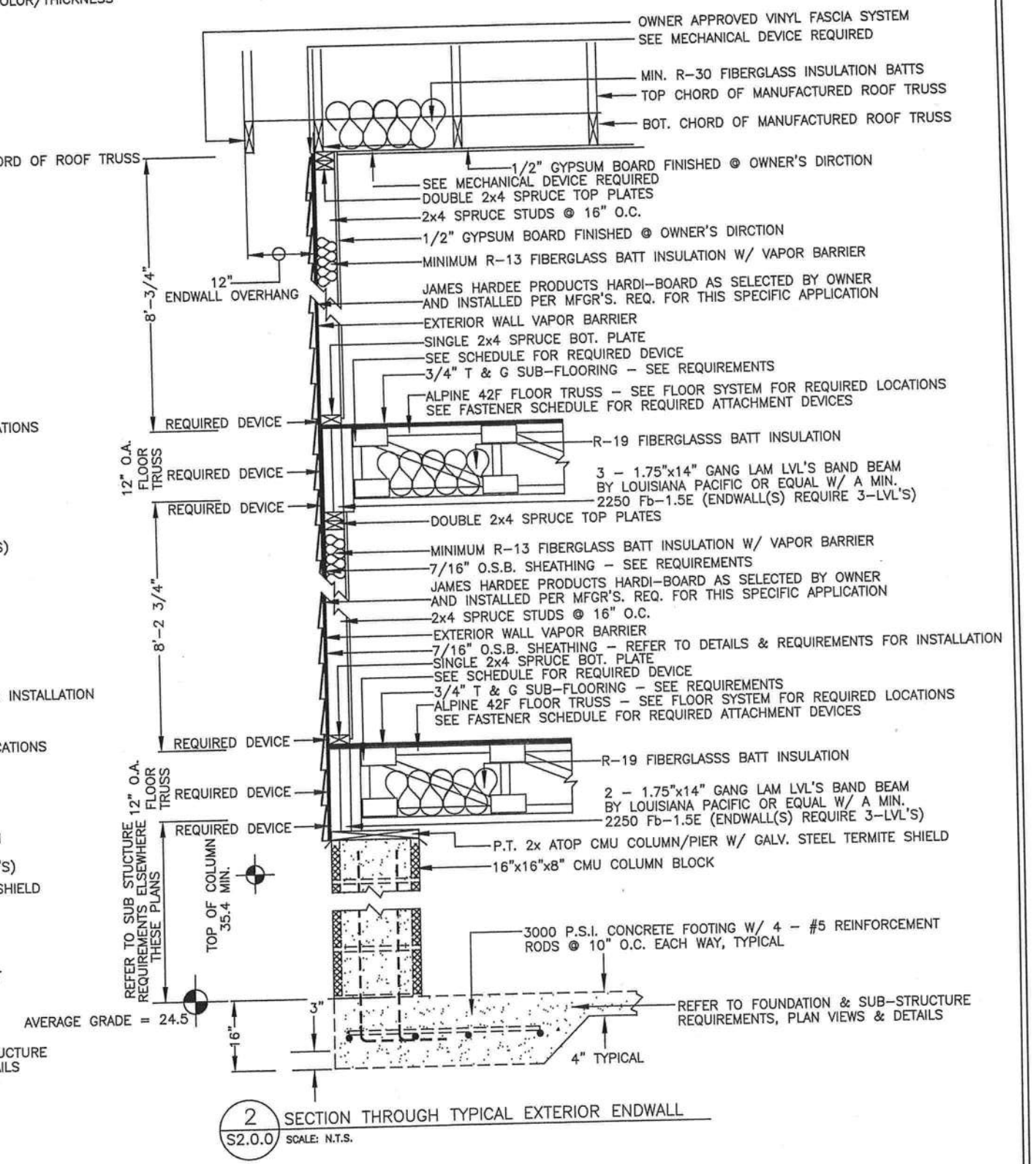
PROJECT No. MORGAN–S1.3.0.DWG	DATE 02/26/16	SECOND LEVEL FLOOR FRAMING PLAN VIEW MISC. NOTES, REFERENCES & INSTRUCTIONS	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA
SHEET No. S1.3.0				

KEEN ENGINEERING & SURVEYING, INC.
9263 CR 417
LIVE OAK, FLORIDA 32060
386–362–4787
ENG. LIC. EB 3761

SCALE NOTE:
SECTIONS/DETAILS: N.T.S.



1 / S2.0.0 SECTION THROUGH TYPICAL EXTERIOR SIDEWALL
SCALE: N.T.S.



2 / S2.0.0 SECTION THROUGH TYPICAL EXTERIOR ENDWALL
SCALE: N.T.S.

PROJECT No. MORGAN-S2.0.0.DWG SHEET No. S2.0.0	DATE 02/26/16	REFERENCED EXTERIOR WALL SECTIONS & DETAILS MISC. NOTES, REFERENCES & INSTRUCTIONS 	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

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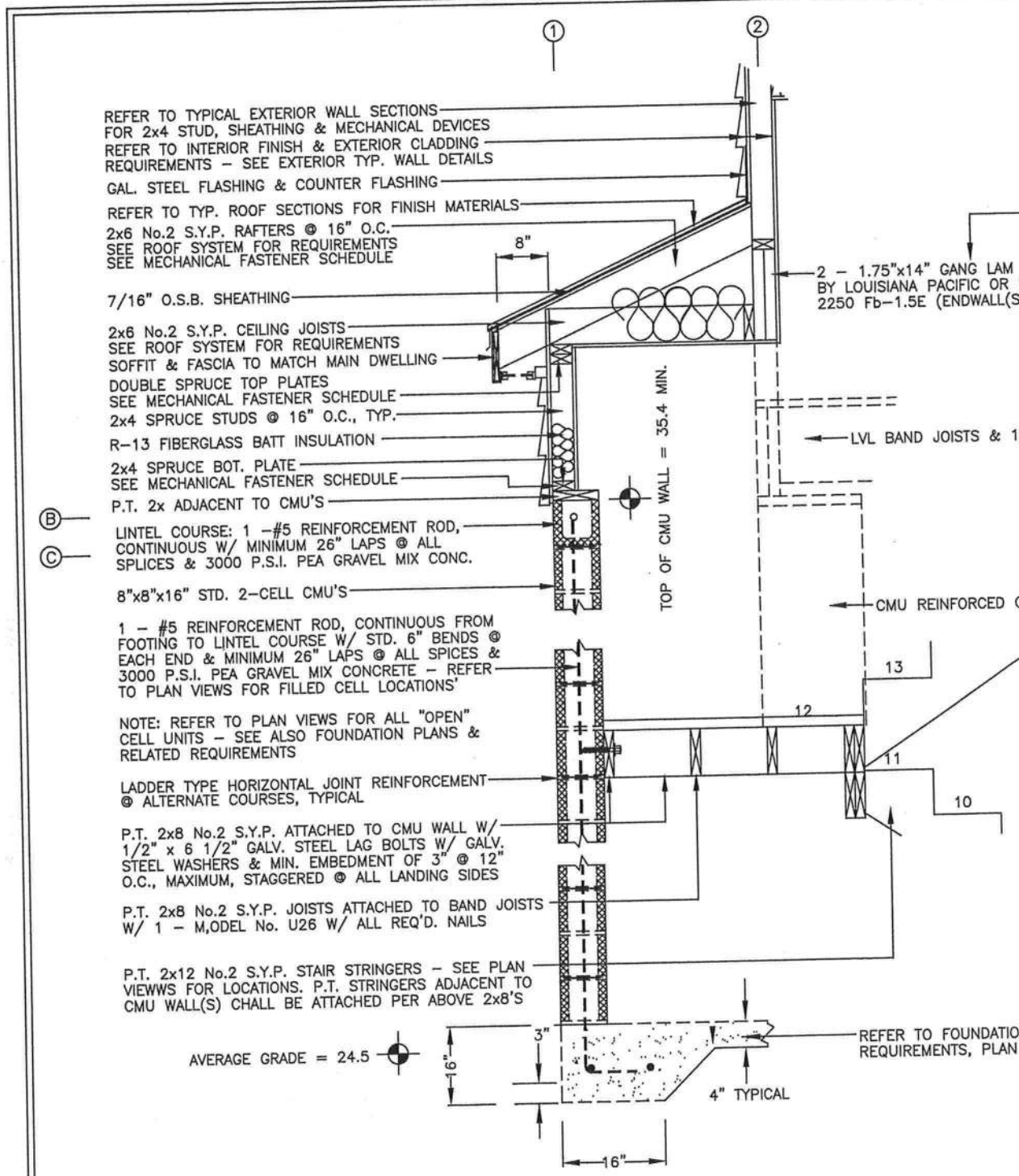
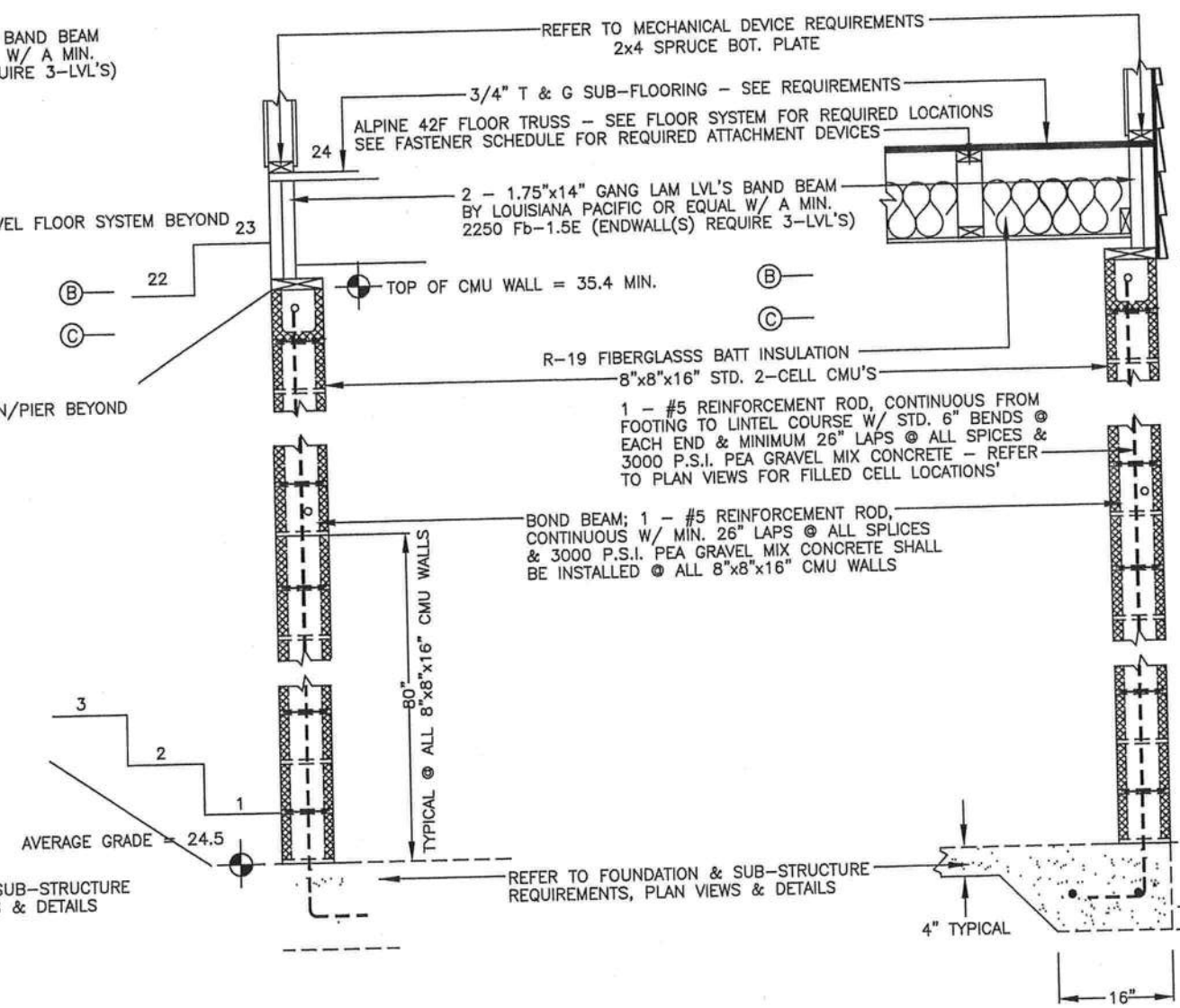
SCALE NOTE:
SECTIONS/DETAILS: N.T.S.



1 S2.1.0 SECTION THROUGH PROJECTED STAIR CMU WALL
SCALE: N.T.S.



2 S2.1.0 SECTION THROUGH INTERIOR STAIR CMU WALL
SCALE: N.T.S.

3 S2.1.0 SECTION THROUGH EXTERIOR CMU SIDEWALL
LIMITED STORAGE AREA
SCALE: N.T.S.

PROJECT No. MORGAN-S2.1.0.DWG SHEET No. S2.1.0	DATE 02/26/16	REFERENCED FOUNDATION SECTIONS & DETAILS MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

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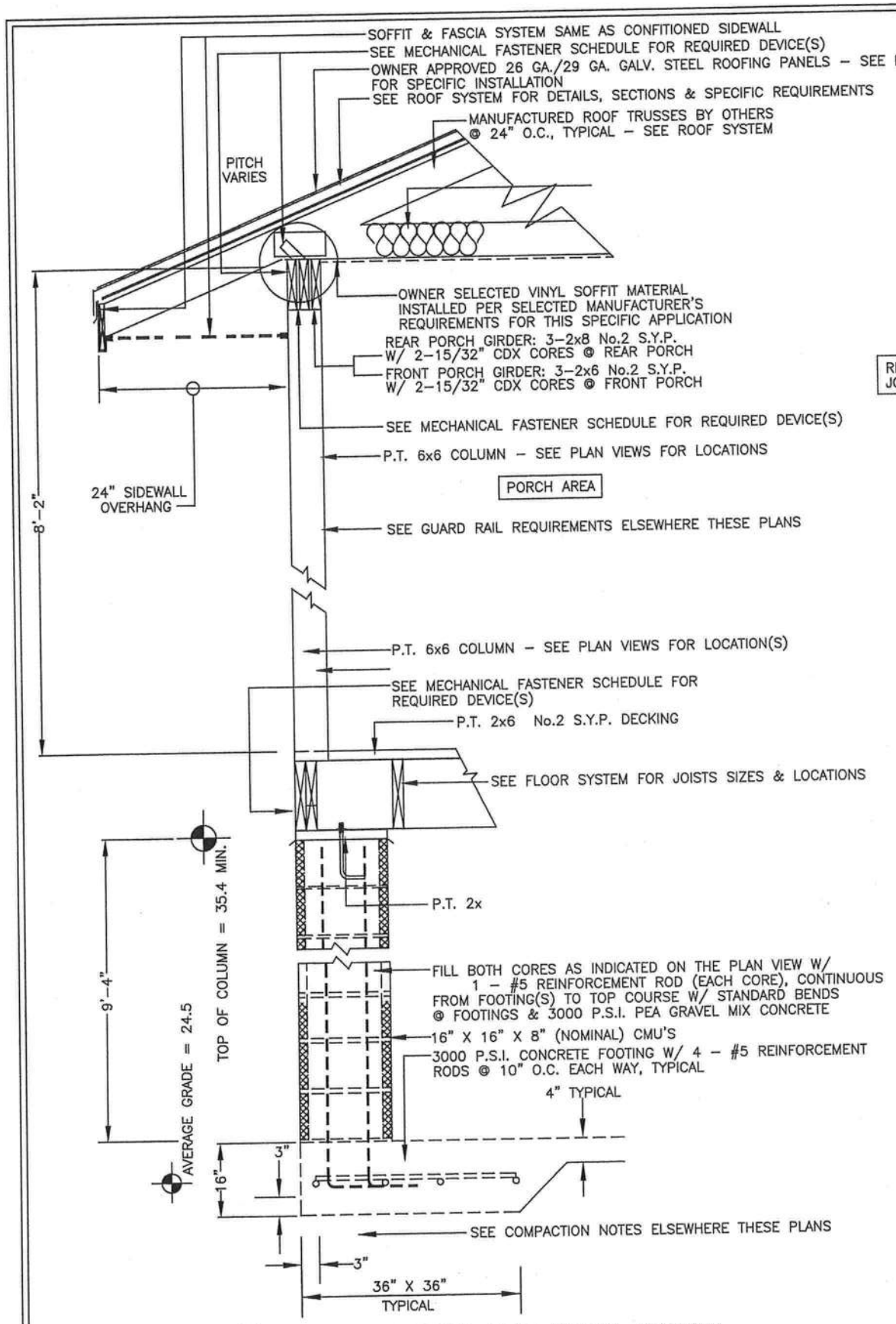
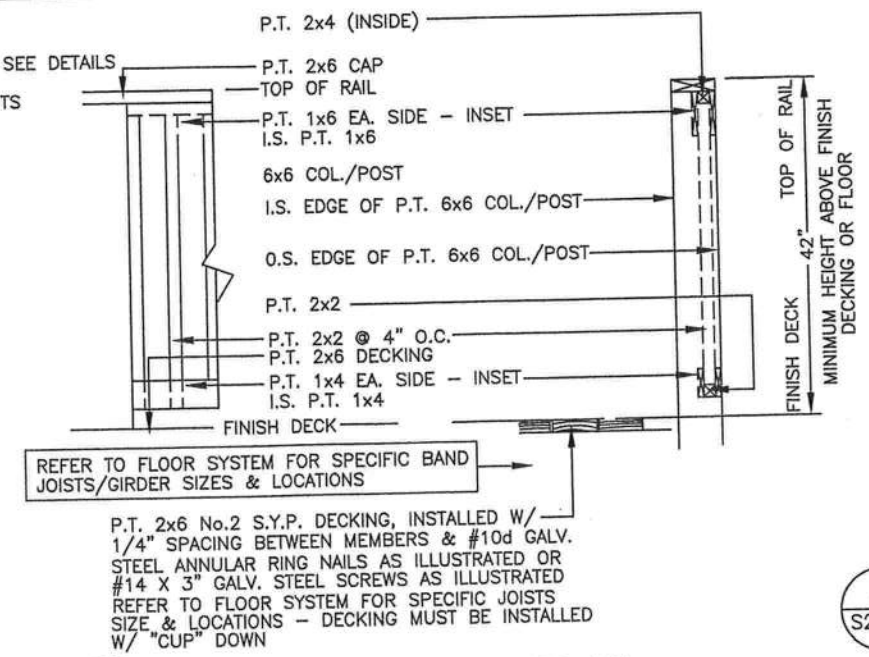
SCALE NOTE:
SECTIONS/DETAILS: N.T.S.



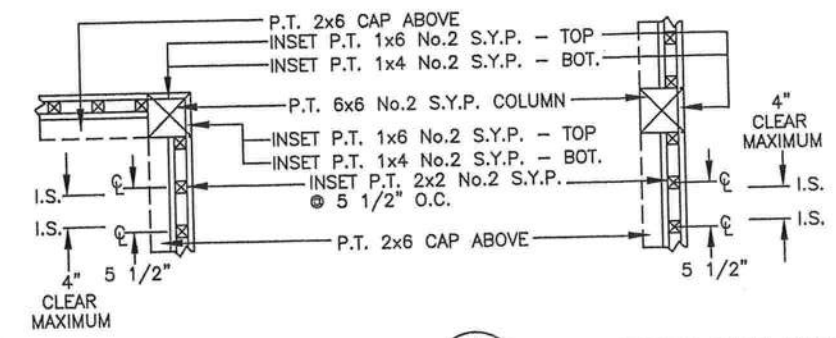
1 S2.2.0 SECTION THROUGH REAR PORCH SIDEWALL
SCALE: N.T.S.



2 S2.2.0 TYPICAL SECTION THROUGH GUARD RAIL
SCALE: N.T.S.

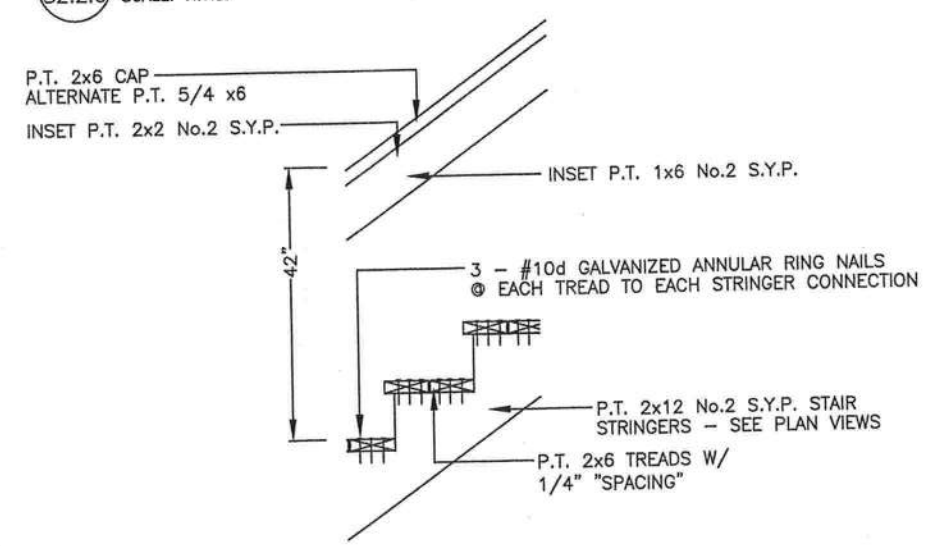
THIS HEIGHT ABOVE FINISH GRADE REQUIRES A GUARD RAILING SYSTEM

NOTE: ALTERNATE MANUFACTURED RAIL SYSTEM INSTALLED PER SELECTED MANUFACTURER'S REQUIREMENTS FOR THIS SPECIFIC APPLICATION INCLUDING ALL ATTACHMENTS & DEVICES & INSTALLED TO ENSURE A FULLY COMPLIANT GUARD RAILING SYSTEM

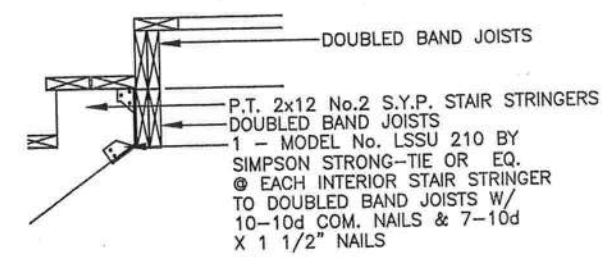


3 S2.2.0 CORNER POSTS: PLAN VIEW
SCALE: N.T.S.

4 S2.2.0 IN-LINE POSTS: PLAN VIEW
SCALE: N.T.S.



5 S2.2.0 SUB STRUCTURE STAIR DETAILS
SCALE: N.T.S. SIMILIAR @ CONDITIONED STAIR ABOVE



6 S2.2.0 SUB STRUCTURE STAIR LANDING
SCALE: N.T.S. SIMILIAR @ CONDITIONED STAIR ABOVE

CONDITIONED STAIR
RISER / TREAD NOTES:
RISER = 6 1/2"
TREAD = 10 1/2"

SUB–STRUCTURE STAIR
RISER / TREAD NOTES:
RISER = 6 1/8"
TREAD = 10 1/2"

PROJECT No. MORGAN–S2.0.0.DWG SHEET No. S2.2.0	DATE 02/26/16	REFERENCED EXTERIOR WALL SECTIONS & DETAILS MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

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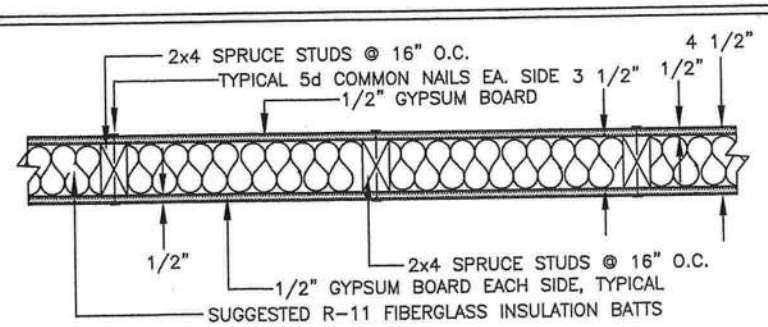
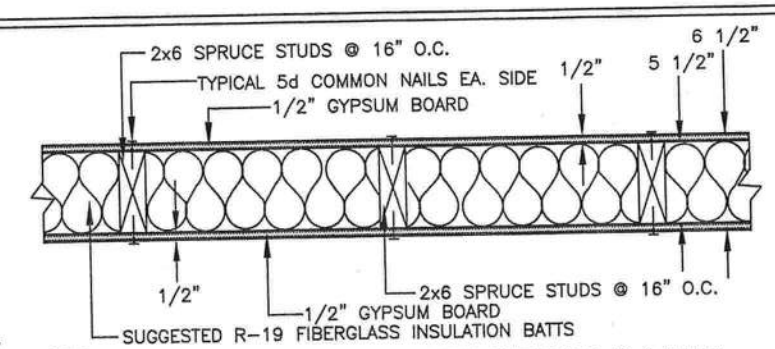


1A / S2.3.0 TYPICAL ENLARGED PLAN VIEW: INTERIOR 2x4 WALL
SCALE: N.T.S.

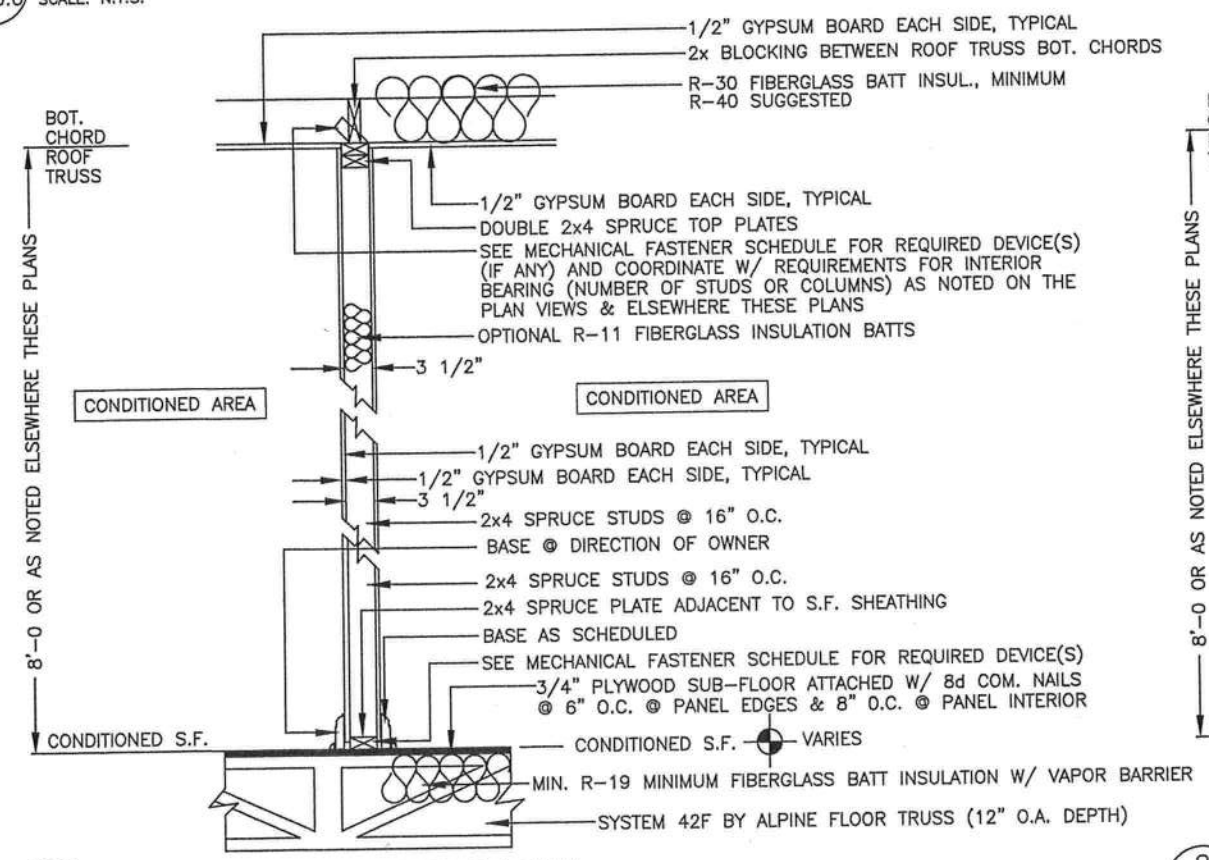
FASTENING SCHEDULES: INTERIOR WOOD FRAMING

CONNECTION	FASTENER	NUMBER OR SPACING
TOP OR SOLE PLATE TO STUD, END NAILED	16d COMMON	2
STUD TO SOLE PLATE, TOE NAIL	16d COMMON	4
DOUBLED STUDS, FACE NAIL	10d COMMON	24" O.C.
DOUBLED TOP PLATES, FACE NAIL	10d COMMON	16" O.C.
TOP PLATES, LAP AND INTERSECTIONS FACE NAIL	——	3-10d COMMON
CONTINUOUS HEADER, TWO PIECES	16d COMMON	16" O.C. ALONG EACH EDGE
CONTINOUS HEADER TO STUD, TOE NAIL	16d COMMON	3
CONTINUOUS HEADER, THREE PIECES	10d COMMON	12" O.C. ALONG EACH EDGE
BUILT UP CORNER STUDS	16d COMMON	24" O.C.
BUILT UP GIRDERS & BEAMS, OF THREE MEMBERS	20d COMMON	32" O.C. AT TOP & BOTTOM & STAGGERED 2 ENDS & EACH SPLICE
STUDS TO SOLE PLATE, END NAIL	16d COMMON	2 EACH END



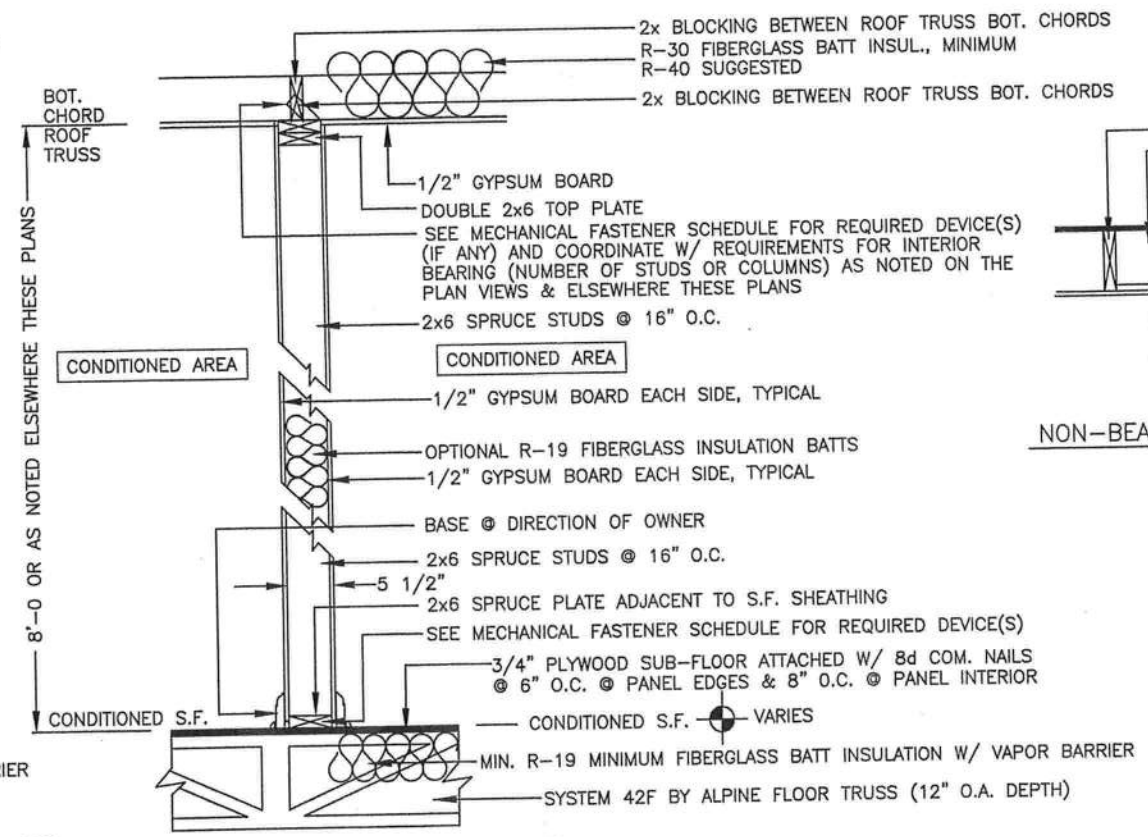
2A / S2.3.0 TYPICAL ENLARGED PLAN VIEW: INTERIOR 2x6 WALL
SCALE: N.T.S.

SCALE NOTE:
SECTIONS/DETAILS: N.T.S.



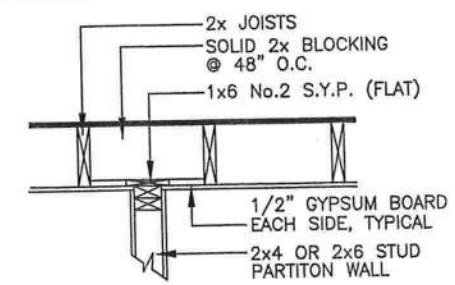
1 / S2.3.0 TYPICAL SECTION @ INTERIOR 2x4 WALL
SCALE: N.T.S.

NOTE: REFER TO ADDITIONAL REQUIREMENTS ELSEWHERE THESE PLANS FOR INTERIOR BEARING AS MAY BE REQUIRED – SEE FOUNDATION PLANS AND RELATED REQUIREMENTS

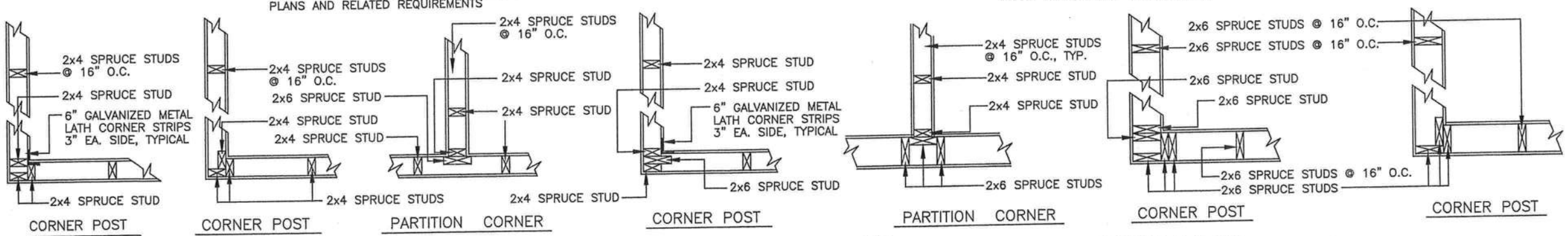


2 / S2.3.0 TYPICAL SECTION @ INTERIOR 2x6 WALL
SCALE: N.T.S.

NOTE: REFER TO ADDITIONAL REQUIREMENTS ELSEWHERE THESE PLANS FOR INTERIOR BEARING AS MAY BE REQUIRED – SEE FOUNDATION PLANS AND RELATED REQUIREMENTS



NON-BEARING PARTITION TO CEIL. JOISTS



1B / S2.3.0 SUGGESTED FRAMING TECHNIQUES: 2x4 WALL
SCALE: N.T.S.

2B / S2.3.0 SUGGESTED FRAMING TECHNIQUES: 2x6 WALL
SCALE: N.T.S.

PROJECT No.	DATE
MORGAN-S2.3.0.DWG	02/26/16
SHEET No. S2.3.0	

REFERENCED SECTIONS & DETAILS
MISC. NOTES, REFERENCES & INSTRUCTIONS

Curtis E. Keen, PE #23836
Certification of Authorization #3761
DATE:

MORGAN RESIDENCE
COLUMBIA COUNTY, FLORIDA

KEEN ENGINEERING & SURVEYING, INC.
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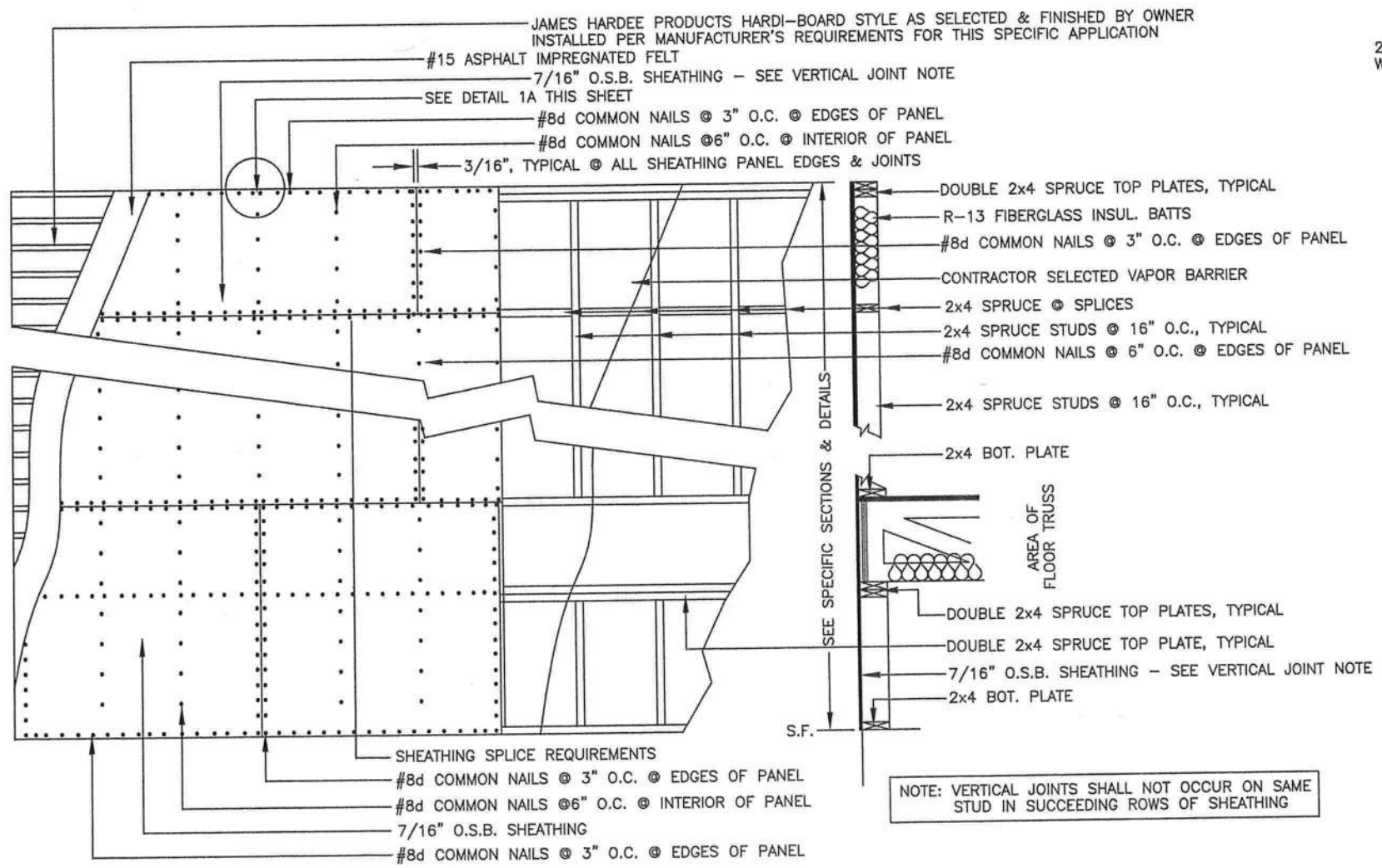
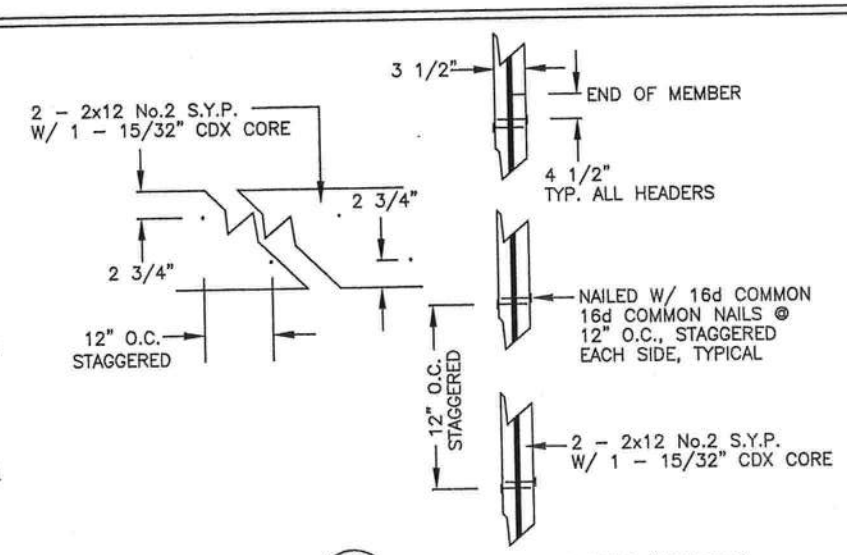
LIVE OAK, FLORIDA 32060
386-362-4787
ENG. LIC. EB 3761

SCALE NOTE:
SECTIONS/DETAILS: N.T.S.

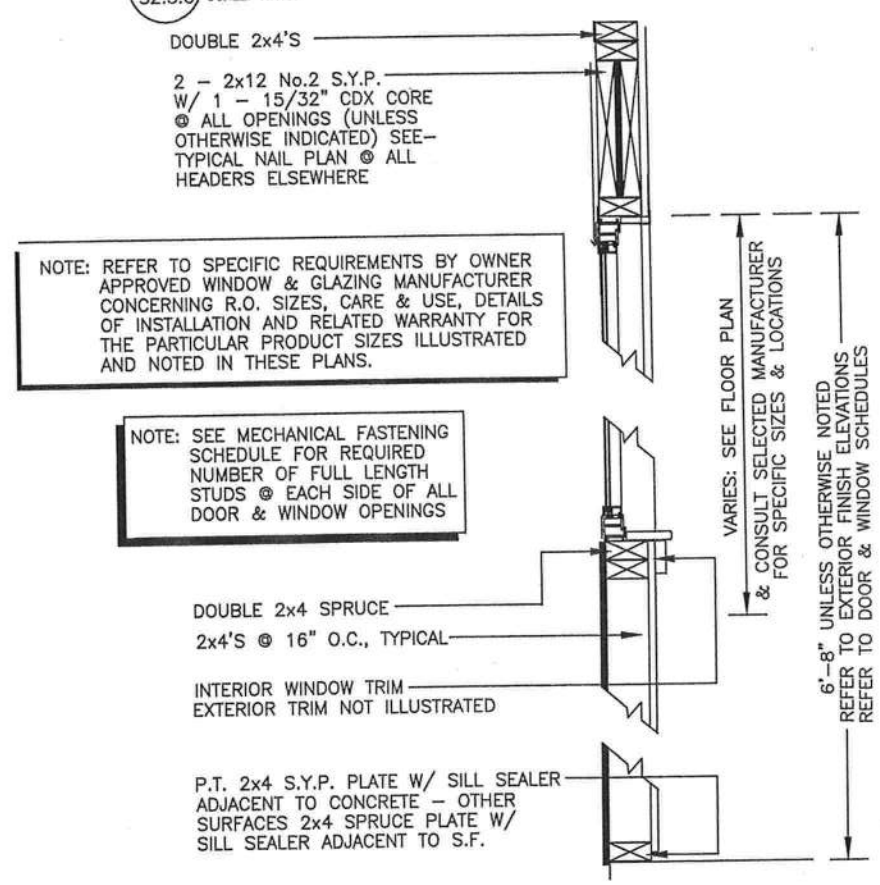


NOTE: VERTICAL JOINTS SHALL NOT OCCUR ON SAME STUD IN SUCCEEDING ROWS OF SHEATHING

1 S2.3.0 SHEATHING DETAIL – ELEVATION VIEW
SCALE: N.T.S.



2 S2.3.0 TYPICAL EXTERIOR WALL "HEADER"
SCALE: N.T.S.

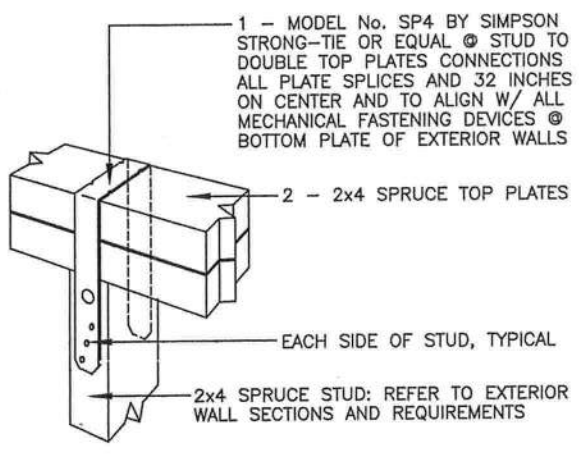


NOTE: REFER TO SPECIFIC REQUIREMENTS BY OWNER APPROVED WINDOW & GLAZING MANUFACTURER CONCERNING R.O. SIZES, CARE & USE, DETAILS OF INSTALLATION AND RELATED WARRANTY FOR THE PARTICULAR PRODUCT SIZES ILLUSTRATED AND NOTED IN THESE PLANS.

NOTE: SEE MECHANICAL FASTENING SCHEDULE FOR REQUIRED NUMBER OF FULL LENGTH STUDS @ EACH SIDE OF ALL DOOR & WINDOW OPENINGS

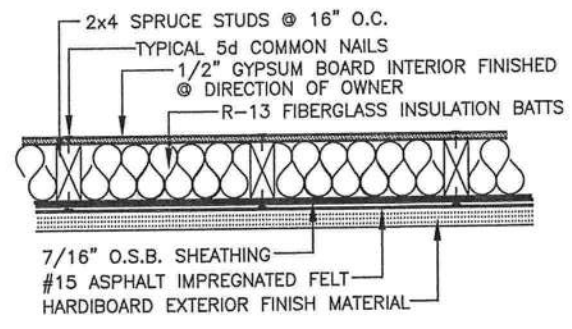
NOTE: CONTRACTOR SHALL PROVIDE ALL APPROVAL SPECIFICATIONS & REQUIREMENTS PER F.B.C. 1715.5 & FULLY COMPLY W/ ALL MANUFACTURER'S REQUIREMENTS FOR OWNER SELECTED MODELS & PROPER INSTALLATION OF WINDOWS & DOORS.

3 S2.1.0 TYPICAL SECTION THROUGH EXTERIOR WALL OPENING
SCALE: N.T.S.
SEE PLAN VIEWS FOR APPLICABLE LOCATIONS



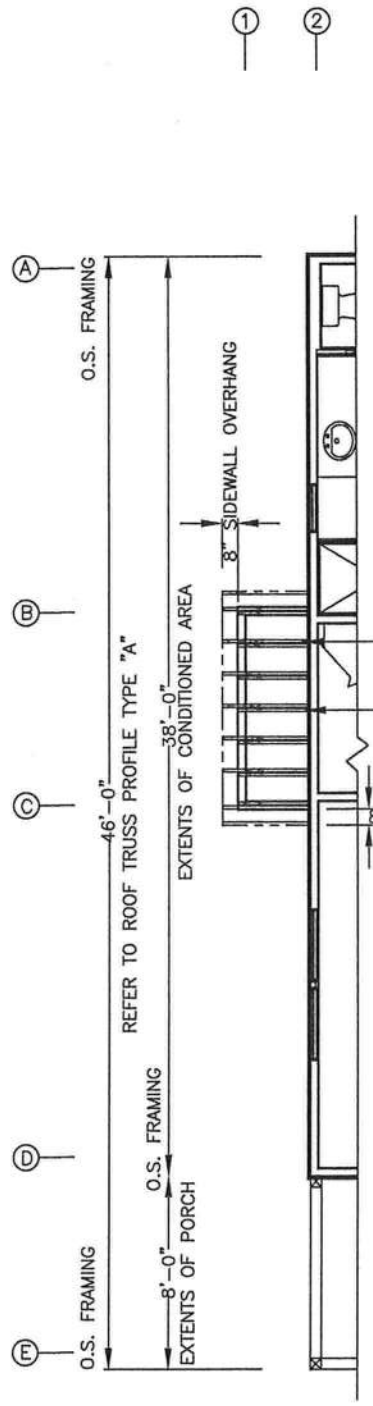
1A S2.2.0 TOP PLATE DEVICES
SCALE: N.T.S.

NOTE: GYPSUM BOARD SHALL BE INSTALLED W/ 5d (COOLER) NAILS @ 7" O.C. @ EDGES OF PANEL & @ INTERIOR AREAS OF PANEL(S). 1 1/4" TYPE W, #6 DRYWALL SCREWS MAY BE SUBSTITUTED FOR NAILS @ THE PREVIOUSLY DESCRIBED SPACING(S) FOR NAILS.

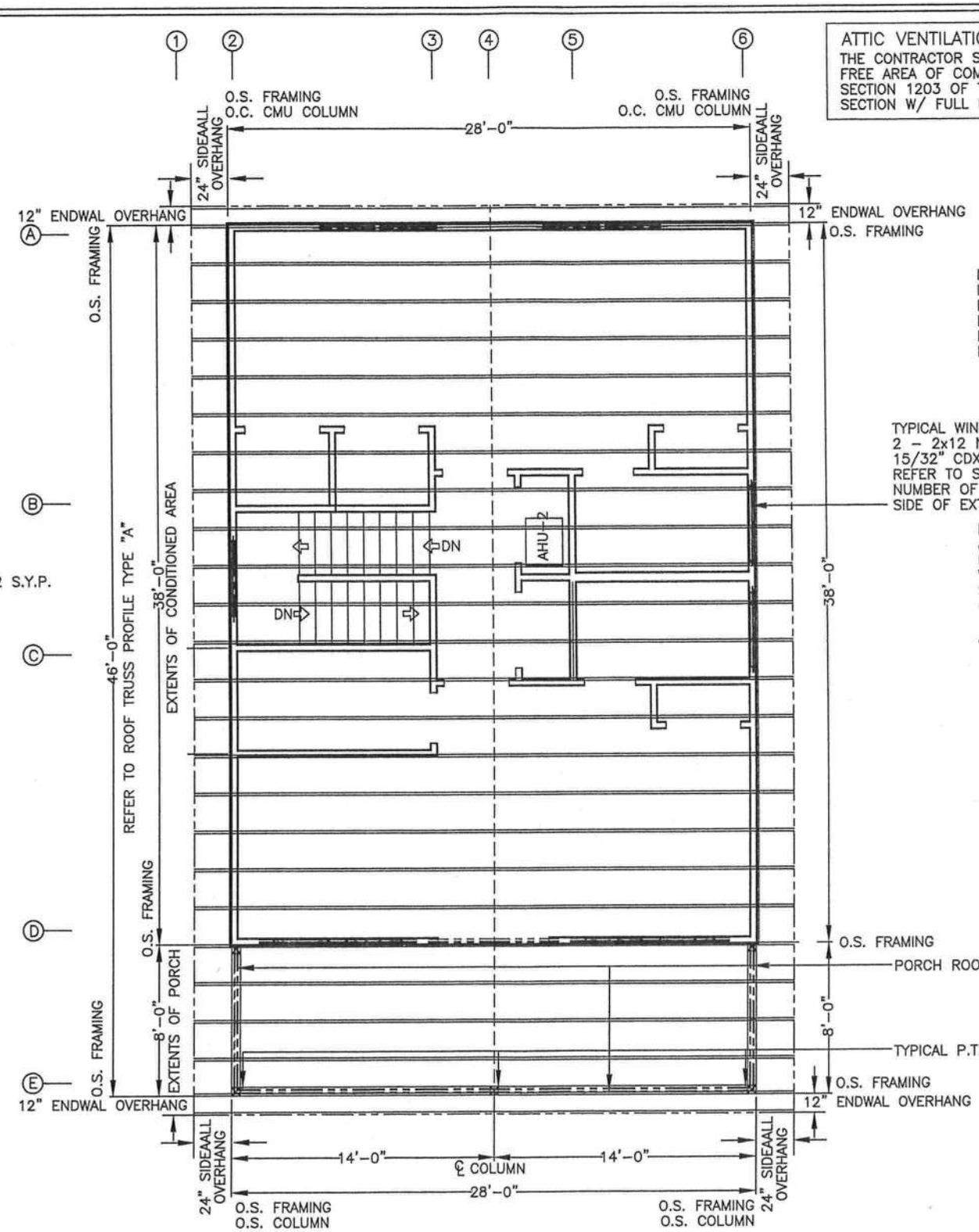


1B S2.2.0 TYPICAL ENLARGED PLAN VIEW: EXTERIOR WALL
SCALE: N.T.S.

PROJECT No. MORGAN-S2.4.0.DWG	DATE 02/26/16	REFERENCED SECTIONS & DETAILS MISC. NOTES, REFERENCES & INSTRUCTIONS	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA	KEEN ENGINEERING & SURVEYING, INC. 9263 CR 417 LIVE OAK, FLORIDA 32060 386-362-4787 ENG. LIC. EB 3761
SHEET No. S2.4.0					



1 S3.0.0 DIMENSIONED ROOF SYSTEM PLAN VIEW
SCALE: 1/8" = 1'-0 STAIRWAY PROJECTED AREA

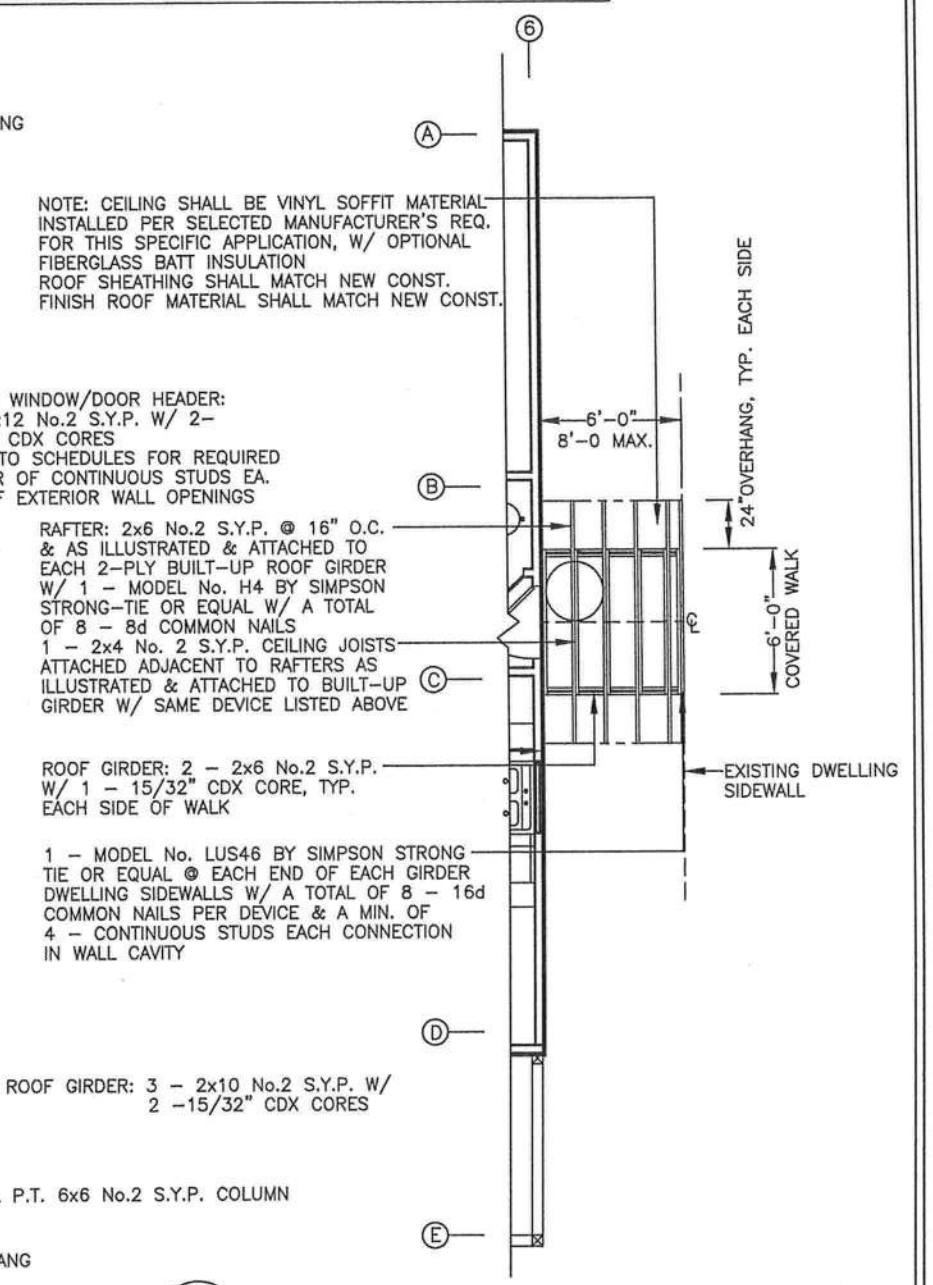


2 S3.0.0 DIMENSIONED ROOF SYSTEM PLAN VIEW
SCALE: 1/8" = 1'-0 MAIN DWELLING ROOF AREA

ATTIC VENTILATION MAIN DWELLING ROOF AREA

THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 10.20 NET SQUARE FEET OF FREE AREA OF COMBINED RIDGE, SOFFIT AND END WALL VENTS COMPLYING W/ SECTION 1203 OF THE F.B.C. SUCH VENTS SHALL BE AS DESCRIBED IN THIS SECTION W/ FULL PROTECTION FROM RAIN, INSECT OR VERMIN INTRUSION.

SCALE NOTE:
PLAN VIEW: 1/8"=1'-0



3 S3.0.0 DIMENSIONED ROOF SYSTEM PLAN VIEW
SCALE: 1/8" = 1'-0 CONNECTION WALK TO EXIST.

ATTIC ACCESS LOCATION(S): IF NOT SPECIFICALLY LOCATED OR NOTED ON PLAN VIEWS, ATTIC ACCESS SHALL BE @ DIRECTION OF OWNER

PROJECT No. MORGAN–S3.0.0.DWG SHEET No. S3.0.0	DATE 02/26/16	DIMENSIONED ROOF SYSTEM PLAN VIEWS MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

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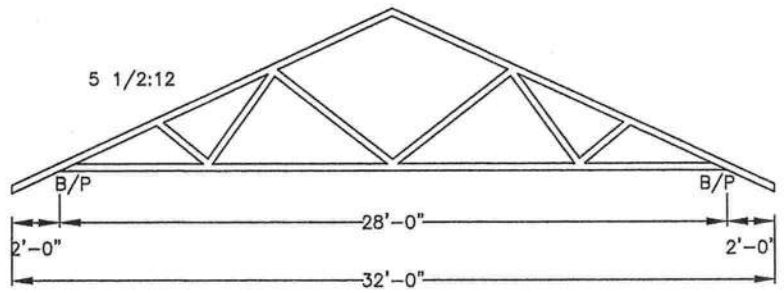
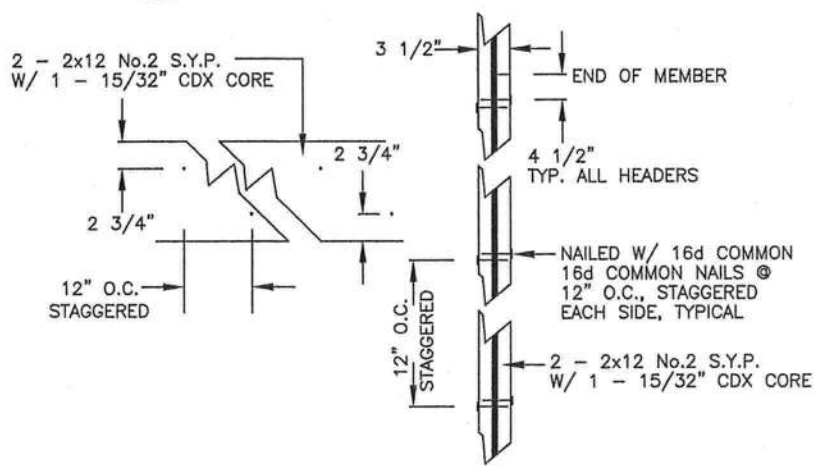
NOTE: INTERIOR & GABLE END TRUSSES TO BE DESIGNED AND CERTIFIED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA AS SATISFACTORY FOR THIS APPLICATION ACCORDING TO THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE FLORIDA BUILDING CODE. DRAWING(S) (IF ANY) DEPICTED ARE INTENDED FOR INFORMATION REGARDING REQUIRED SPAN, BEARING POINTS, OVERHANGS AND PITCH OF TOP CHORD MEMBERS. THEY ARE NOT INTENDED TO ACCURATELY REFLECT OR REPRESENT WEBBING, CHORD MEMBER SIZES OR PLATED CONNECTIONS.

NOTE: MANUFACTURER TO SPECIFY ALL BRACING, HANDLING & INSTALLATION PRACTICES TO ENSURE PROPER STRUCTURAL INTEGRITY OF INSTALLED TRUSSES.

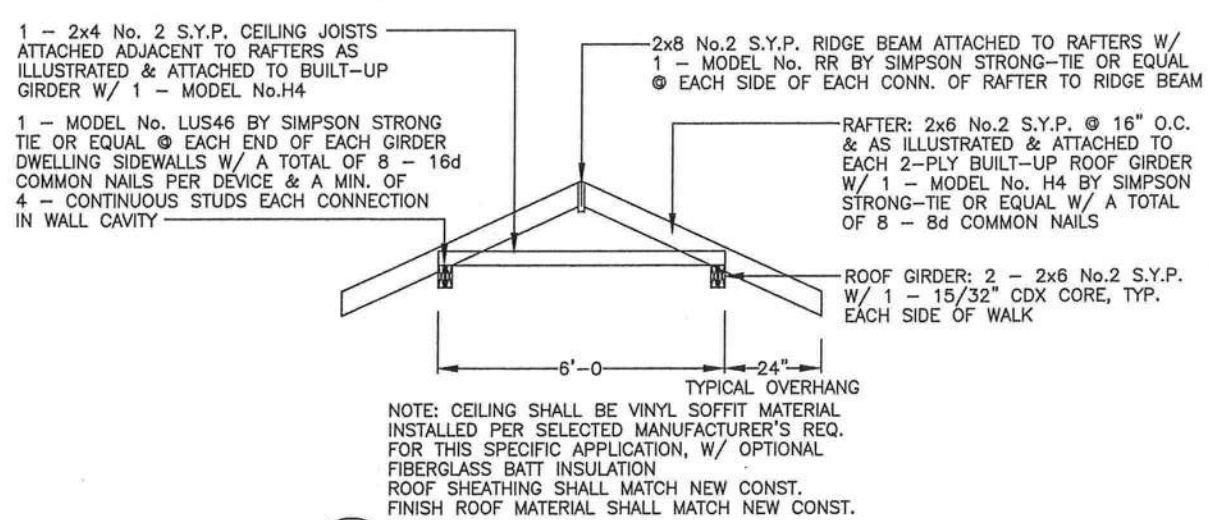
SCALE NOTE:
DETAILS/SECTIONS: N.T.S.



1 / S3.1.0 SUGGESTED ROOF TRUSS PROFILE TYPE "A'
SCALE: N.T.S.



2 / S2.3.0 TYPICAL EXTERIOR WALL "HEADER"
SCALE: N.T.S.



NOTE: CEILING SHALL BE VINYL SOFFIT MATERIAL INSTALLED PER SELECTED MANUFACTURER'S REQ. FOR THIS SPECIFIC APPLICATION, W/ OPTIONAL FIBERGLASS BATT INSULATION
ROOF SHEATHING SHALL MATCH NEW CONST.
FINISH ROOF MATERIAL SHALL MATCH NEW CONST.

3 / S3.1.0 ROOF SECTION THROUGH "WALK" AREA
SCALE: N.T.S.

SCHEDULE OF REQUIRED ROOF SYSTEM MECHANICAL FASTENERS & DEVICES

TRUSS TYPE "A" AND/OR ALTERNATE "A1"

LOCATION OF MAIN DWELLING (CONDITIONED & REAR PORCH AREAS) MANUFACTURED ROOF TRUSSES: SEE PLAN VIEW FOR LOCATIONS

1 – MODEL No. H4 BY SIMPSON STRONG–TIE OR EQUAL @ EACH BEARING POINT OF ROOF TRUSS TO TOP PLATES, HEADER OR BUILT–UP PORCH GIRDER ATTACHED W/ A TOTAL OF 8 – 8d COMMON NAILS PER DEVICE

LOCATION OF MAIN DWELLING GABLE END (CONDITIONED & PORCH AREAS) MANUFACTURED ROOF TRUSSES: SEE PLAN VIEW

2 – MODEL No. H4 BY SIMPSON STRONG–TIE OR EQUAL @ EACH BEARING POINT OF ROOF TRUSS TO TOP PLATES OR BUILT–UP PORCH GIRDER ATTACHED W/ A TOTAL OF 8 – 8d COMMON NAILS PER DEVICE

REAR PORCH GIRDERS: SEE PLAN VIEWS FOR LOCATIONS

LOCATION OF 3–PLY BUILT–UP PORCH GIRDERS – SEE PLAN VIEW FOR LOCATIONS
BUILT–UP PORCH GIRDER SHALL BE 3 – P.T. 2x10 No.2 S.Y.P. W/ 2 – 15/32" CDX CORES

1 – MODEL No. AC6 MAX OR ACE6 MAX BY SIMPSON STRONG–TIE OR EQUAL @ EACH BUILT–UP GIRDER TO P.T. COLUMN TOP CONNECTION ATTACHED W/ A TOTAL OF 20 – 16d COMMON NAILS (ACE6 MAX) OR 28 = 16d COMMON NAILS (AC6 MAX)

1 – MODEL No. U210–3 BY SIMPSON STRONG–TIE OR EQUAL @ EACH BUILT–UP ROOF GIRDER TO DWELLING ENDWALL CONNECTION W/ A TOTAL OF 18 – 16d COMMON NAILS PER DEVICE.

PORCH COLUMNS: SEE PLAN VIEWS FOR LOCATIONS

LOCATION OF P.T. 6x6 PORCH COLUMNS – SEE PLAN VIEW FOR LOCATIONS
REAR PORCH COLUMNS SHALL BE P.T. 6x6 No.2 S.Y.P. AS ILLUSTRATED
SEE ABOVE GIRDERS FOR REQUIRED ATTACHMENT DEVICE(S)

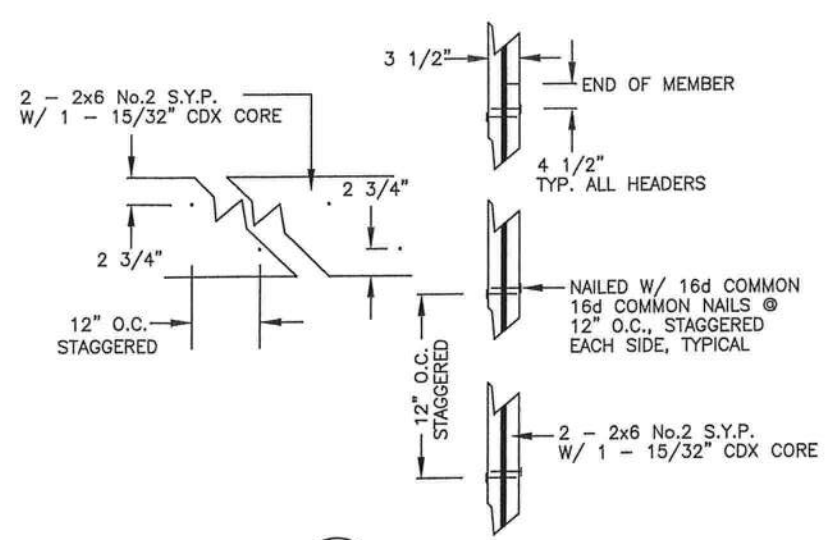
COVERED WALK ROOF

RIDGE BEAM SHALL BE 1 – 2x10 No.2 S.Y.P. – SEE ROOF SYSTEM PLAN VIEW FOR LOCATIONS
REFER TO DETAILS FOR REQUIRED DEVICES

RAFTERS SHALL BE 2x6 No.2 S.Y.P. – SEE ROOF SYSTEM PLAN VIEW FOR LOCATIONS
REFER TO DETAILS FOR REQUIRED DEVICES

CEILING JOISTS SHALL BE 2x4 No.2 S.Y.P. – SEE ROOF SYSTEM PLAN VIEW FOR LOCATIONS
REFER TO DETAILS FOR REQUIRED ATTACHMENT

COORDINATE W/ DETAILS AND OTHER REQUIREMENTS ELSEWHERE THESE PLANS



4 / S2.3.0 COVERED WALK GIRDER
SCALE: N.T.S.

PROJECT No. MORGAN–S3.1.0.DWG SHEET No. S3.1.0	DATE 02/26/16	ROOF SYSTEM MANUFACTURED TRUSS PROFILE REFERENCED SECTIONS & DETAILS ROOF SYSTEM MECHANICAL DEVICE ATTACHMENT SCHEDULE MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

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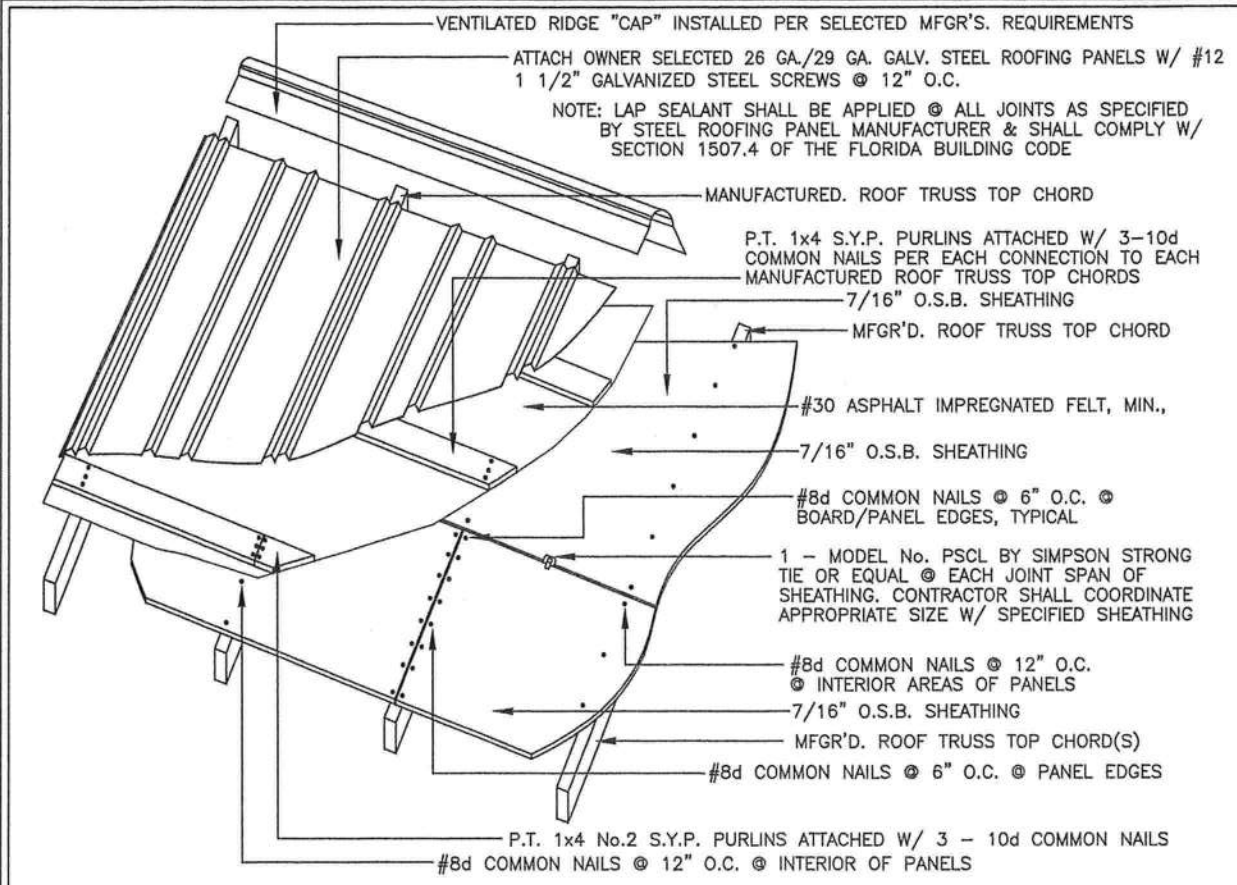
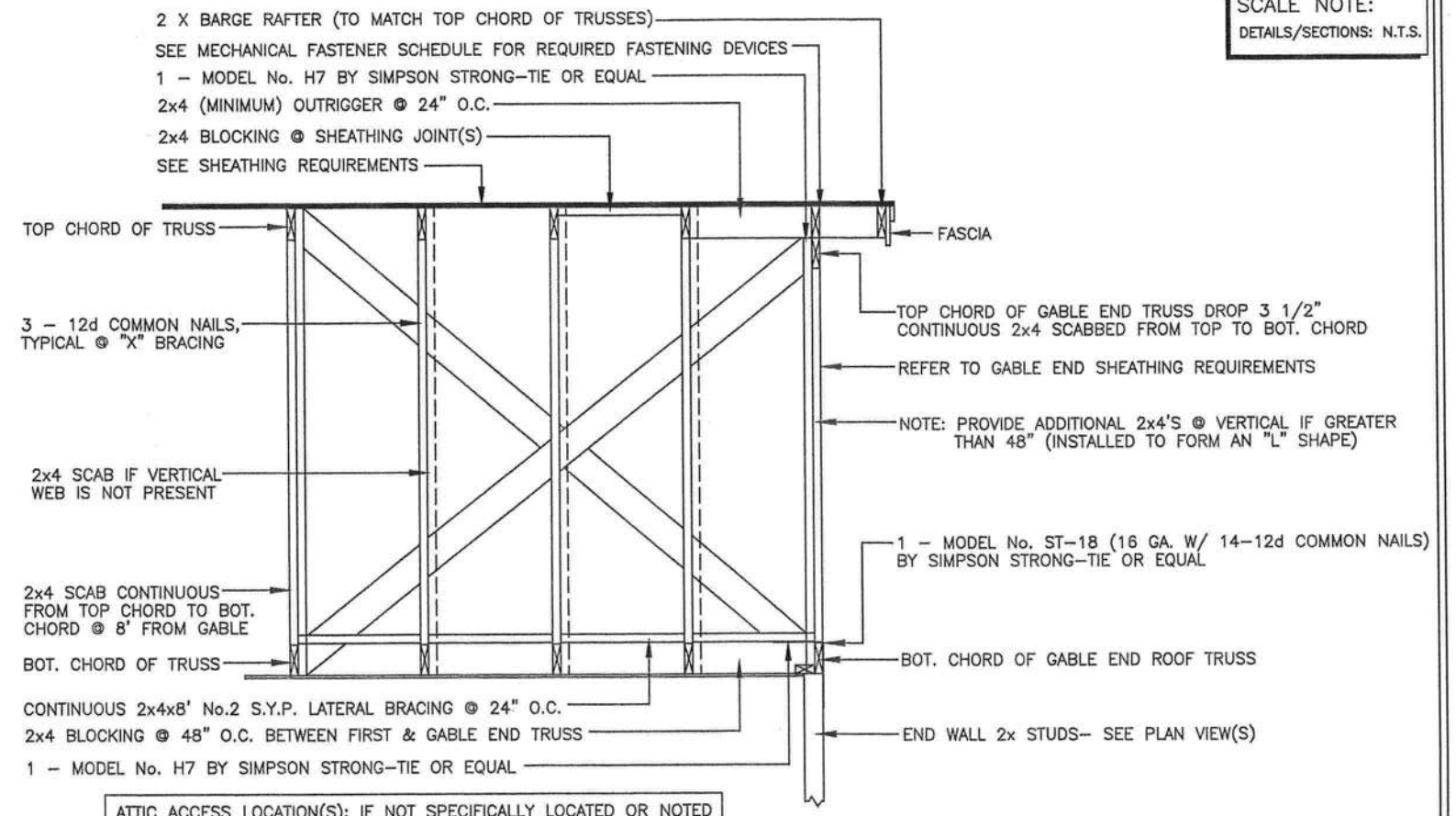
SCALE NOTE:
DETAILS/SECTIONS: N.T.S.



NOTE: REFER TO AND COORDINATE W/ DETAILS, SECTIONS & SCHEDULES FOR REQUIRED MECHANICAL ATTACHMENT DEVICES ELSEWHRE THESE PLANS

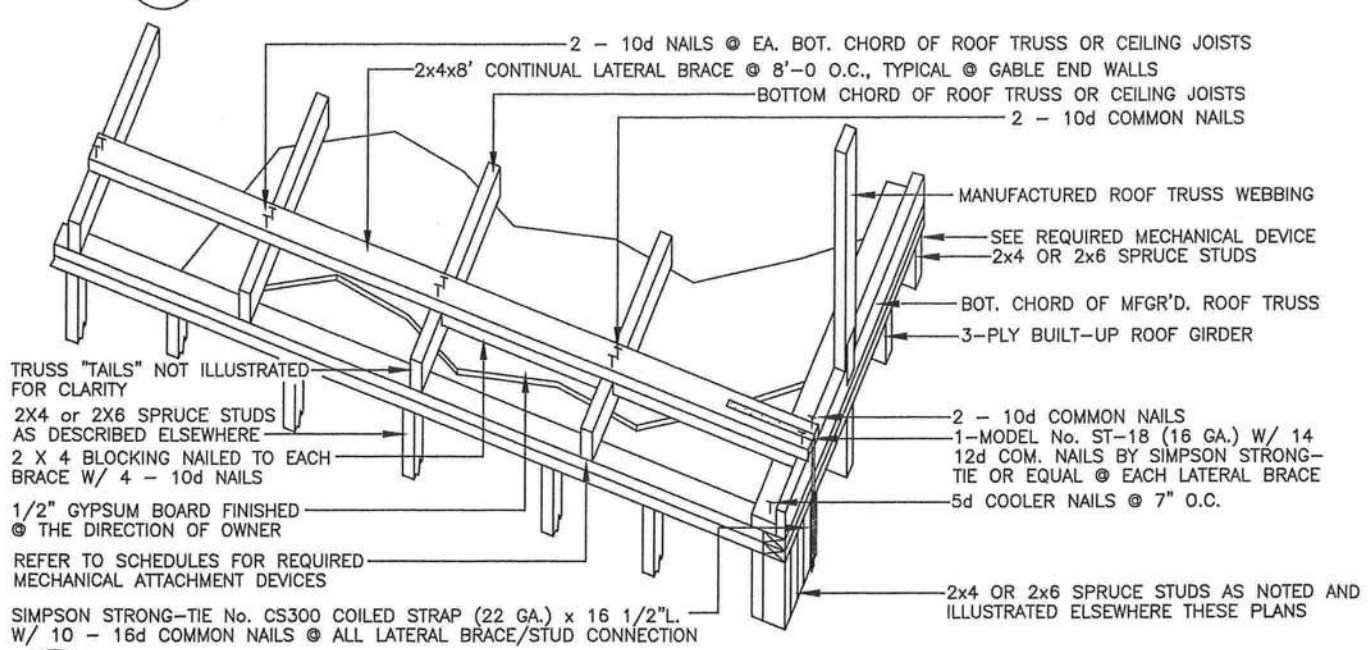
NOTE: RAKE, EAVE AND RIDGE PANEL ELEMENTS BY APPROVED STEEL ROOFING MANUFACTURER

1 / S3.2.0 ROOFING PANELS & SHEATHING CONNECTIONS TO TRUSSES
SCALE: N.T.S.

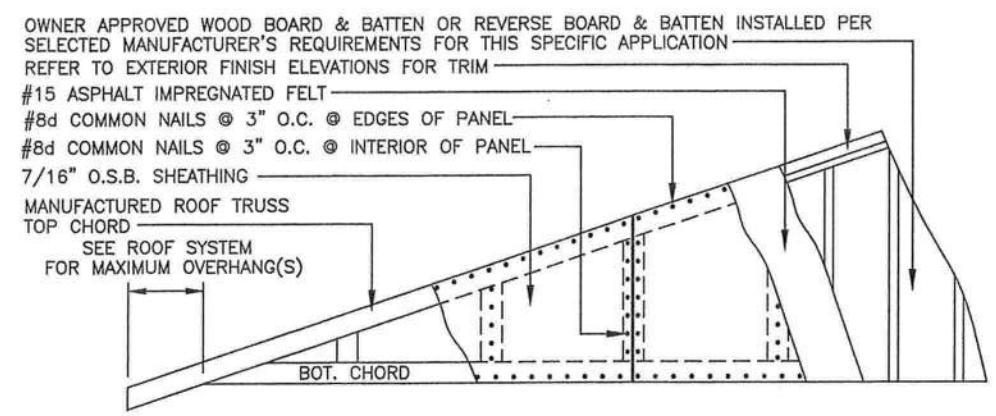


ATTIC ACCESS LOCATION(S): IF NOT SPECIFICALLY LOCATED OR NOTED ON PLAN VIEWS, ATTIC ACCESS SHALL BE @ DIRECTION OF OWNER

3 / S3.2.0 GABLE ENDWALL FRAMING REQUIREMENTS
SCALE: N.T.S.



2 / S3.2.0 CEILING CONNECTION @ GABLE ENDWALLS/SIDEWALLS
SCALE: N.T.S.



NOTE: ALL OWNER APPROVED TRIM AND FASCIA MATERIALS SHALL BE INSTALLED PER SELECTED MANUFACTURER'S REQUIREMENTS FOR THIS SPECIFIC APPLICATION

4 / S3.2.0 GABLE ENDWALL SHEATHING REQUIREMENTS
SCALE: N.T.S.

PROJECT No. MORGAN-S3.2.0.DWG SHEET No. S3.2.0	DATE 02/26/16	REFERENCED ROOF DETAILS & SECTIONS MISC. NOTES, REFERENCES & INSTRUCTIONS © 2016 KEEN ENGINEERING & SURVEYING, INC.	Curtis E. Keen, PE #23836 Certification of Authorization #3761 DATE:	MORGAN RESIDENCE COLUMBIA COUNTY, FLORIDA

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