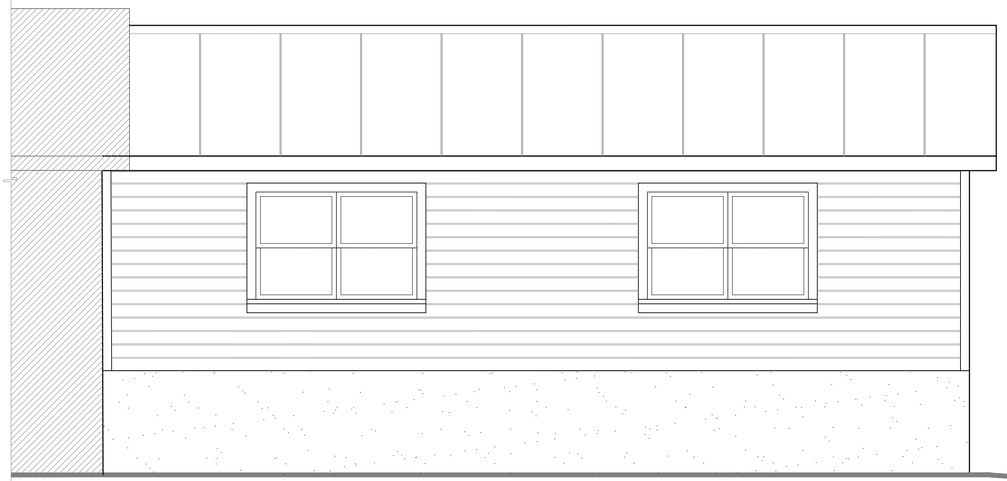
A NEW RESIDENTIAL ADDITON FOR:

JARED & MEGAN JACOBSON



CODE REFERENCES

APPLICABLE CODES:

FLORIDA BUILDING CODE - 2017 EDITION
(BUILDING, FUEL GAS, MECHANICAL AND PLUMBING VOLUMES)
NFPA 1 UNIFORM FIRE CODE - 2018 EDITION
NFPA 70 - NATIONAL ELECTRIC CODE - 2017 EDITION
NFPA 101 - LIFE SAFETY CODE, 2018 EDITION

OCCUPANCY （FBC CHAPTER 3）: RESIDENTIAL - GROUP R-3

TYPE OF CONSTRUCTION （FBC CHAPTER 6）: TYPE V

GENERAL BUILDING LIMITATIONS - FL. BLDG. CODE, CHAPTER 5:

GROUP R-3	TYPE V（UNPROTECTED, SPRINKLERED)	
	ALLOWABLE:	PROVIDED:
MAX HEIGHT （TABLE 504.3）	55' - 65'	Under 17'
MAX STORIES （TABLE 504.4）	4	1
MAX AREA （TABLE 506.2）	UL （UNLIMITED)	643 s.f. （GROSS)

MEANS OF EGRESS - FL. BLDG. CODE, CHAPTER 10:

OCCUPANCY CLASSIFICATION		
RESIDENTIAL - GROUP R-3	REQUIRED	PROVIDED
MIN. FLOOR ALLOWANCES / OCCUPANT （TABLE 1004.1.2)	200 Gross s.f.min. / occupant	643 Gross s.f.
SIZE OF EXIT DOORS （1010.1.1)	32"	35"
EXIT ACCESS TRAVEL DISTANCE （TABLE 1017.2)	200' （w/out sprinkler system)	47' max.
MINIMUM # OF EXITS （1006.3.2 - NOTE 4）	1	1

BUILDING DATA

A new, 643 s.f. （gross.) single-story, wood-framed addition to an existing residence in Fort White, Florida.

GENERAL NOTES

1. All dimensions and heights within these drawings are to be considered as +/- and shall be field-verified.

   NOTE: New scissor truss bearing is called out at 8'-0" in these drawings. The trusses and the sheathing and ice and water shield above them must fit under the existing roof rake. Special attention must be made to this issue （bearing height may need to be lowered）.

2. All dimensions are to finished face of GWB partitions, face of CMU and centerline of columns unless otherwise indicated.

3. If any conflict should arise between the Architect's and the Structural Engineer's drawings / reports, the Engineer's information shall prevail.

4. All work shall be performed in a first class, workmanlike manner according to best trade practices. Materials and equipment shall be new, and all construction shall be in good and usable condition at the date of completion.

5. All work shall be performed in accordance with all Federal, State and Local Codes, authorities or agencies having jurisdiction.

6. The General Contractor shall verify existing conditions of the site. Discrepancies shall be reported to the Architect prior to proceeding with construction.

7. The General Contractor shall properly protect the work for public safety and against accidents, weather or any other hazard with lights, guard rails or barricades as applicable.

PROJECT TEAM

OWNER:
Jared & Megan Jacobson
217 S.W. Boulder Glen
Fort White, FL 32038
Cell: 352-262-0489
jared@themasterslawncare.com

ARCHITECT:
Michele Borst Architect
4926 N.W. 19th Place
Gainesville, FL 32605
352-281-4755
micheleborst@gmail.com

STRUCTURAL ENGINEER
（Windload Calculations）:
Bodo & Associates, Inc.
P.O.Box 357605
Gainesville, FL 32635-7605
bodoinc@aol.com

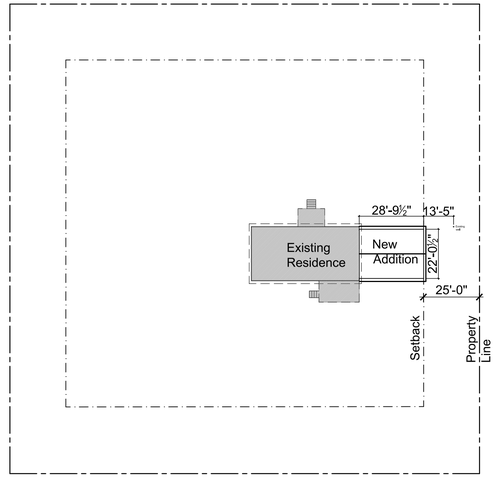
INDEX OF DRAWINGS

ARCHITECT'S DRAWINGS

WIND DESIGN CRITERIA

Refer to Wind Load Calculations for wind design pressures.

SITE PLAN



SITE PLAN
SCALE: 1/32" = 1'-0"

Revisions

Michele Borst Architect, P.A.
Florida License AR 91522
California License C 15582
4926 N.W. 19th Place
Gainesville, FL 32605
Cell: 352.281.4755
micheleborst1@gmail.com

STATE OF FLORIDA
MICHELE ZACHARIAS BORST
AR91522
Michele Z. Borst
REGISTERED ARCHITECT

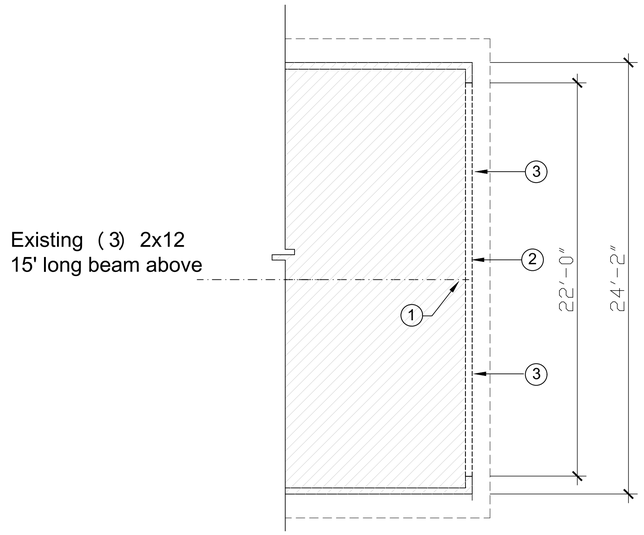
Jacobson Residence
217 SW Boulder Glen
Fort White, Florida 32038

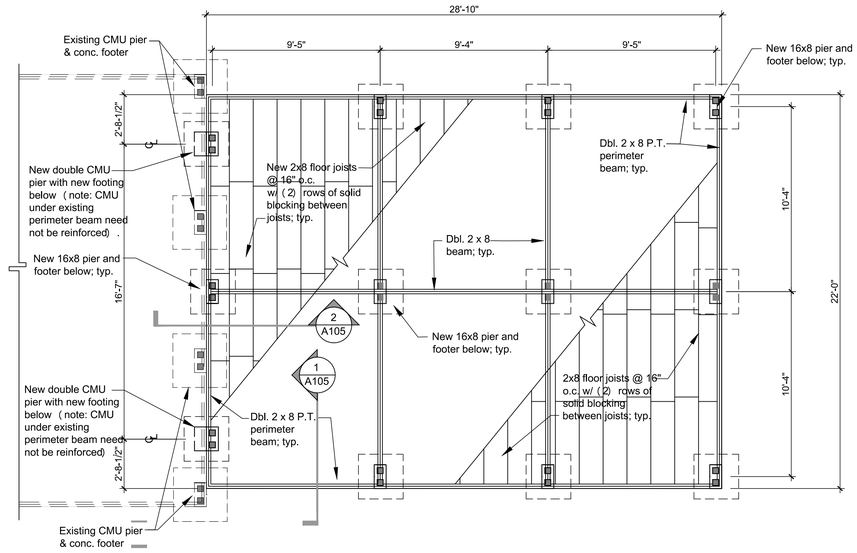
Project No.
2020.4

Sheet Title
COVER SHEET & PROJECT INFO.

Sheet No.
A000

Date
08.08.2020





DEMOLITION SCHEDULE:
(1) PROVIDE SUFFICIENT TEMPORARY SUPPORT FOR EXISTING (3) 2 x 12 BEAM.
(2) REMOVE EXISTING WALL FROM FINISH FLOOR TO 9'-0" A.F.F.
(3) REMOVE EXISTING WINDOWS & HARDWARE.
DEMOLITION LEGEND:
----- INDICATES DEMOLITION.
[- - -] INDICATES WALL TO BE REMOVED.
[ ] INDICATES EXISTING WALL TO REMAIN.

FOUNDATION NOTES:	FRAMING NOTES:
1. All concrete in footings and slabs shall be 3,000 psi. 2. All steel reinforcements shall be 40 grade min. 3. Provide steel reinforcing with a minimum of 3" of concrete cover in all footings. 4. The bottom of all footings shall be a minimum of 12" below finished grade. 5. Footers: 30" x 30" x 16" w/ 4 - #5 X 24" rebar each way. 6. 8" x 16" CMU piers w/ #5 vertical rebar & grout-filled cells. 7. Provide 2 HETA/ 16 tie downs at each corner. 8. Provide 1 HETA/ 16 at each pier to tie down floor system.	1. All above - grade P.T. shall be ACQ .25 min. 2. All below - grade P.T. shall be ACQ .40 min.

DEMOLITION PLAN

SCALE: 1/4" = 1'-0"

NORTH

FOUNDATION & FLOOR FRAMING PLAN

SCALE: 1/4" = 1'-0"

NORTH

Revisions

Michele Borst Architect, P.A.
Cell: 352.281.4755
micheleborst1@gmail.com
Florida License AR 91522
California License C 15582
4926 N.W. 19th Place
Gainesville, FL 32605

STATE OF FLORIDA
MICHELE ZACHARIAS BORST
AR91522
REGISTERED ARCHITECT

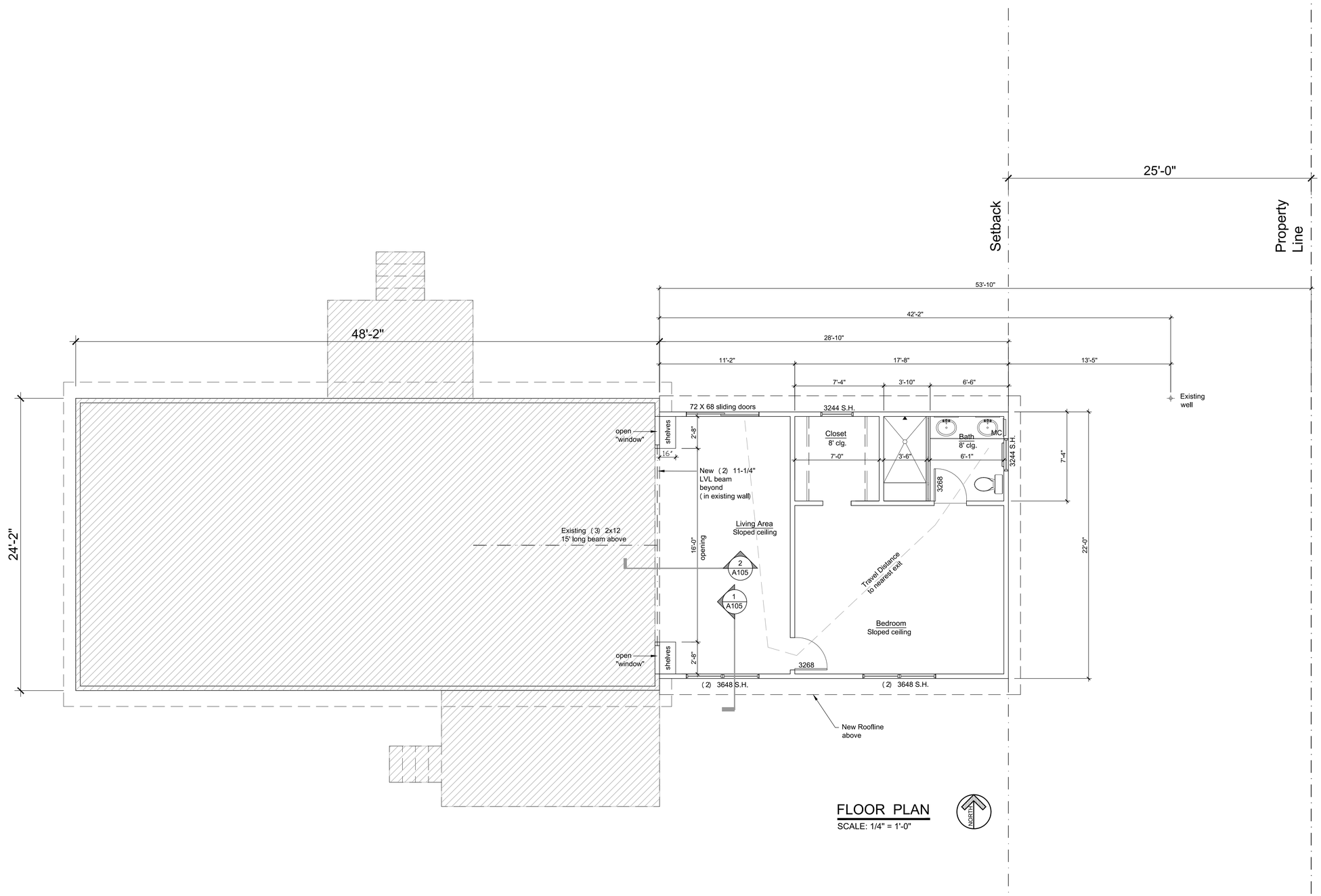
Jacobson Residence
217 SW Boulder Glen
Fort White, Florida 32038

Project No.
2020.4

Sheet Title
DEMOLITION, FOUNDATION & FLOOR FRAMING PLANS

Sheet No.
A101

Date
08.08.2020



FLOOR PLAN

SCALE: 1/4" = 1'-0"

NORTH

Revisions

Michele Borst Architect, P.A.

Florida License AR 91522
California License C 15582

Cell: 352.281.4755

micheleborst1@gmail.com

4926 N.W. 19th Place
Gainesville, FL 32605

STATE OF FLORIDA
MICHELE ZACHARIAS-BORST
AR91522
Michele Z. Borst
REGISTERED ARCHITECT

Jacobson Residence

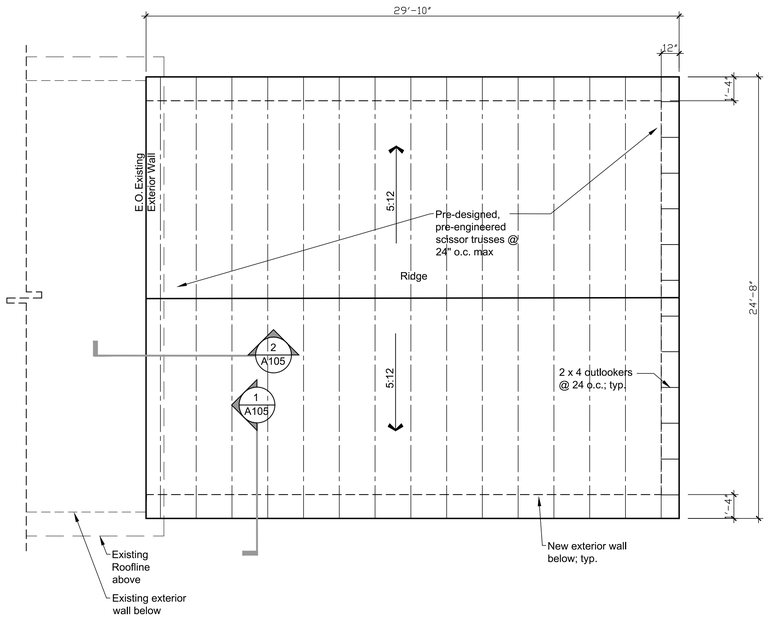
217 SW Boulder Glen
Fort White, Florida 32038

Project No.
2020.4

Sheet Title
FLOOR PLAN

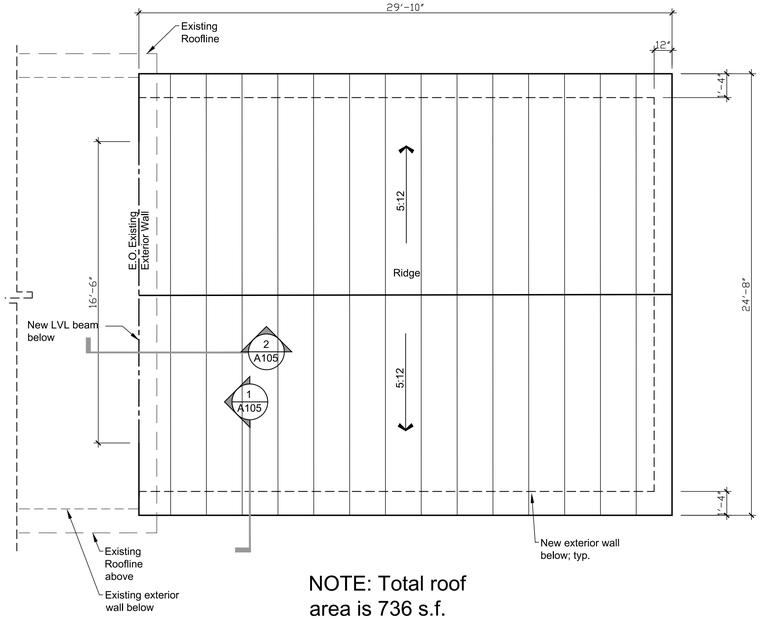
Sheet No.
A102

Date
08.08.2020



ROOF FRAMING PLAN

SCALE: 1/4" = 1'-0"



NOTE: Total roof area is 736 s.f.

ROOF PLAN

SCALE: 1/4" = 1'-0"

AREAS:

TOTAL ROOF AREA: 736 S.F.

LEGEND:

- TRUSS / RAFTER
- EXTERIOR WALL BELOW
- BEAM BELOW
- ALUMINUM GUTTER

STRUCTURAL ENGINEER NOTES:

THE STRUCTURAL ENGINEER HAS PROVIDED ALL REQUIRED INFORMATION PERTAINING TO ALL STRUCTURAL PORTIONS OF THIS PROJECT EXCEPT FOR THE TRUSS DESIGNS, WHICH WILL BE PROVIDED BY A ROOF TRUSS COMPANY. ENGINEERING DESIGN FOR THE ROOF TRUSSES AND ROOF FRAMING WILL BE DESIGNED BY A ROOF TRUSS COMPANY.

HOLDDOWN SCHEDULE:

REFER TO STRUCTURAL DRAWINGS FOR ALL STRUCTURAL CONNECTORS.

TYPICAL ROOF SHEATHING SCHEDULE:

SEE STRUCTURAL DRAWINGS.

ROOF TRUSS NOTE:

THE TRUSS MANUFACTURER SHALL:

1. VERIFY ALL DIMENSIONS.
2. SUBMIT TRUSS LAYOUT TO THE ARCHITECT FOR REVIEW PRIOR TO COMMENCEMENT OF WORK.
3. SUBMIT SHOP DRAWINGS, WHICH SHALL CONTAIN ALL STRUCTURAL AND WINDLOADING INFORMATION REQUIRED TO DETERMINE ALL LOADING CONDITIONS. DESIGN PARAMETERS FOR LOADING CONDITIONS SHALL BE BASED ON CLEAR SPAN CONDITIONS UNLESS SHOWN OTHERWISE ON ARCHITECT'S CONSTRUCTION DOCUMENTS. ANY PROPOSED DEVIATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO SHOP DRAWING REVIEW. IF THE ARCHITECT IS NOT NOTIFIED IN ADVANCE, THE GENERAL CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL COST OF ADDITIONAL WORK THAT IS REQUIRED, INCLUDING - BUT NOT LIMITED TO - ADDITIONAL COLUMNS, FOOTINGS, BEAMS, AND RE-WORK OF EXISTING WORK IN PLACE.

THE ENGINEERED TRUSS PLACEMENTS ON THIS DRAWING ARE DIAGRAMATIC ONLY, TO SHOW THE ARCHITECT'S INTENT. REFER TO THE TRUSS MANUFACTURER'S DRAWINGS FOR DETAILED INFORMATION.

Revisions

Michele Borst Architect, P.A.
Florida License AR 91522
California License C 15582
4926 N.W. 19th Place
Gainesville, FL 32605
Cell: 352.281.4755
micheleborst1@gmail.com

STATE OF FLORIDA
MICHELE ZACHARIAS BORST
AR91522
REGISTERED ARCHITECT

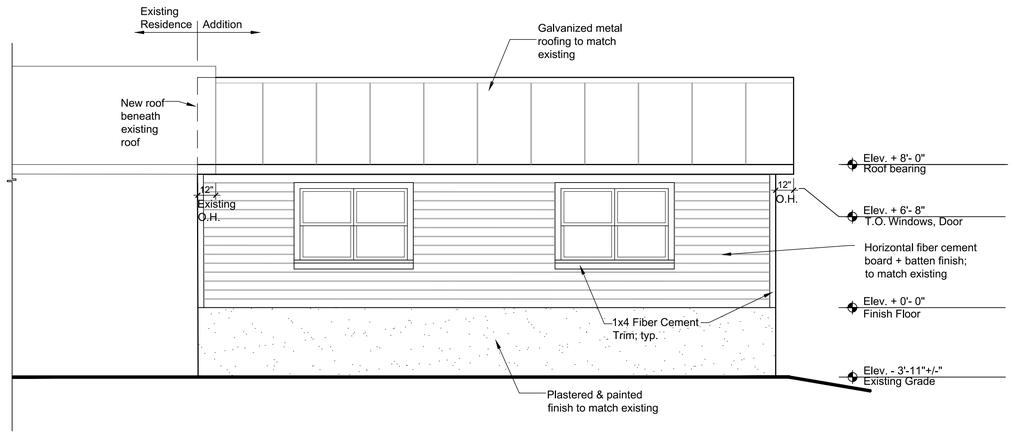
Jacobson Residence
217 SW Boulder Glen
Fort White, Florida 32038

Project No.
2020.4

Sheet Title
ROOF & ROOF FRAMING PLANS

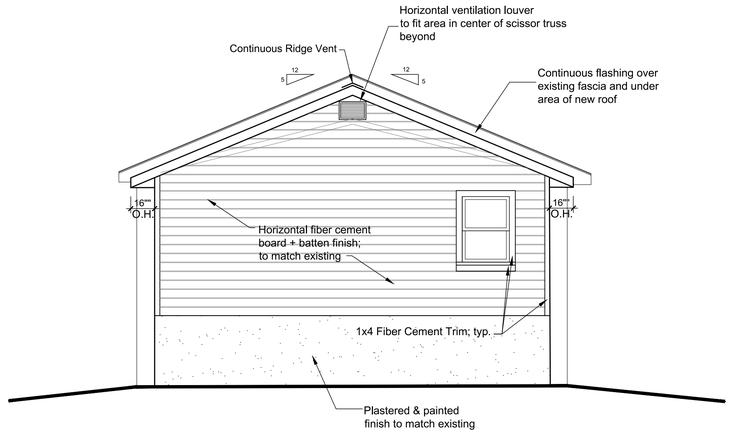
Sheet No.
A103

Date
08.08.2020



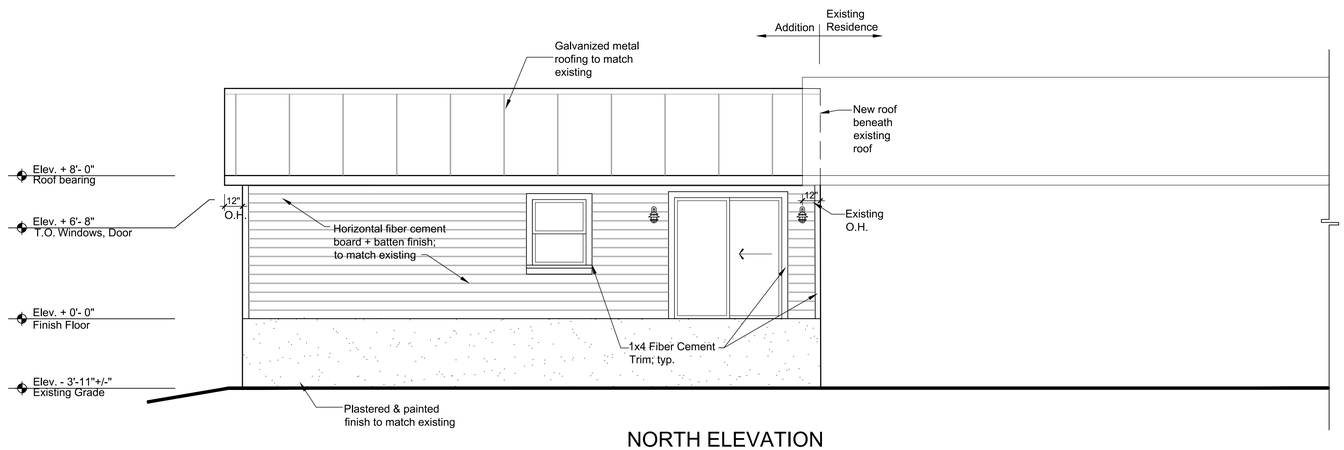
SOUTH ELEVATION

SCALE: 1/4" = 1'-0"



EAST ELEVATION

SCALE: 1/4" = 1'-0"



NORTH ELEVATION

SCALE: 1/4" = 1'-0"

Revisions

Michele Borst Architect, P.A.
Cell: 352.281.4755
micheleborst1@gmail.com
Florida License AR 91522
California License C 15582
4926 N.W. 19th Place
Gainesville, FL 32605

STATE OF FLORIDA
MICHELE ZACHARIAS BORST
AR91522
REGISTERED ARCHITECT

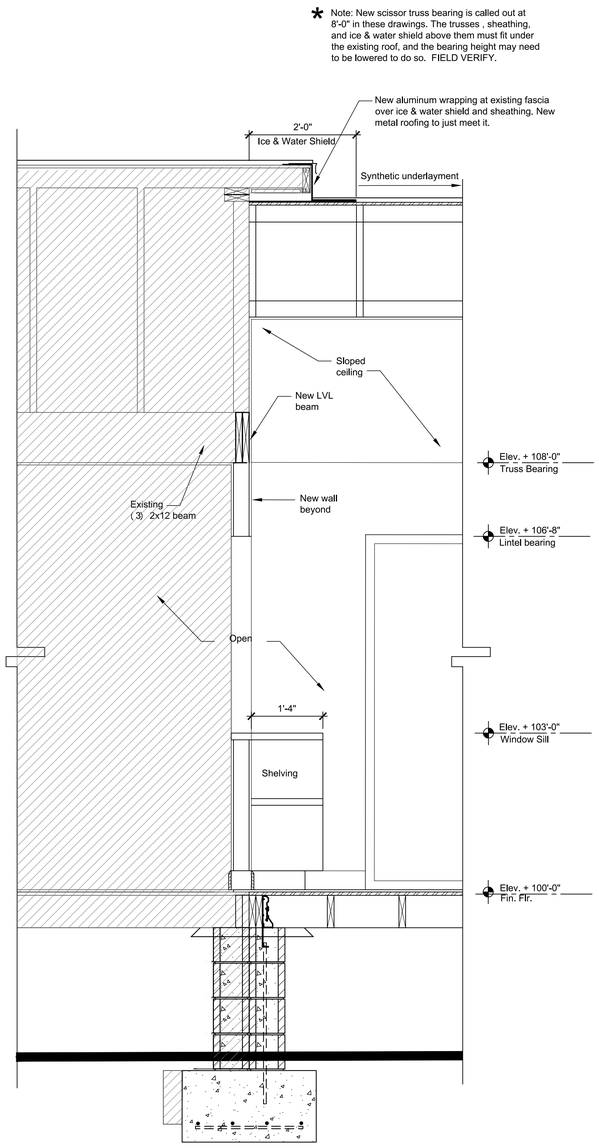
Jacobson Residence
217 SW Boulder Glen
Fort White, Florida 32038

Project No.
2020.4

Sheet Title
EXTERIOR
ELEVATIONS

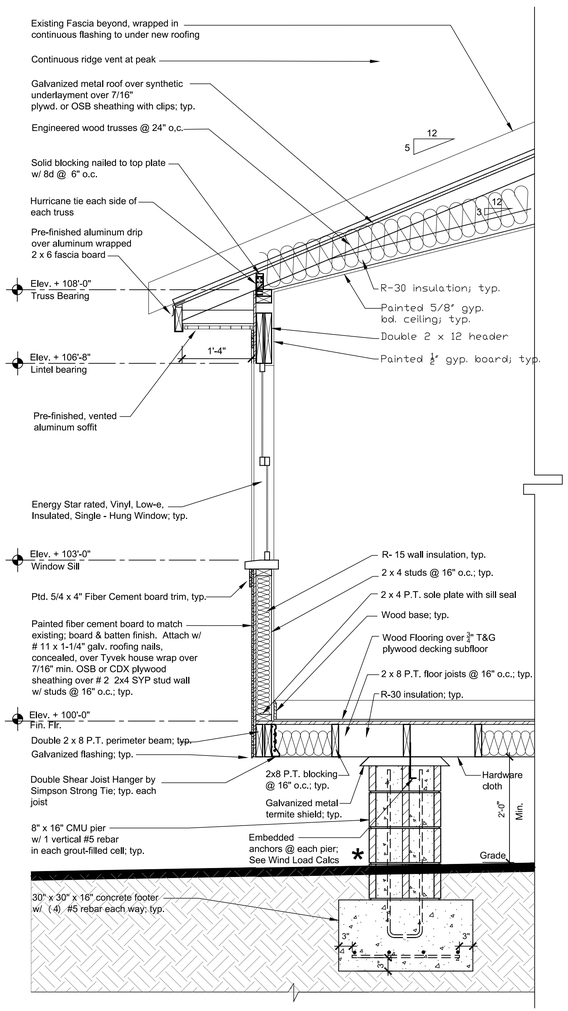
Sheet No.
A104

Date
08.08.2020



2 NEW TO EXISTING SECTION

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



1 TYPICAL WALL SECTION

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

* Note: this corner pier and footer (one of two at the existing wall / foundation) is set in from the outside wall to support the new LVL beam above. Perimeter beams are cantalievered at these two corners.

Revisions

Michele Borst Architect, P.A.

Cell: 352.281.4755

micheleborst@gmail.com

Florida License AR 91522
California License C 15582

4926 N.W. 19th Place
Gainesville, FL 32605

STATE OF FLORIDA
MICHELE ZACHARIAS BORST
AR91522
Michele Z. Borst
REGISTERED ARCHITECT

Jacobson Residence
217 SW Boulder Glen
Fort White, Florida 32038

Project No.
2020.4

Sheet Title
BUILDING SECTIONS

Sheet No.
A105

Date
08.08.2020

ELECTRICAL SYMBOLS LEGEND

TYPICAL LEGEND; ALL SYMBOLS MAY NOT APPLY

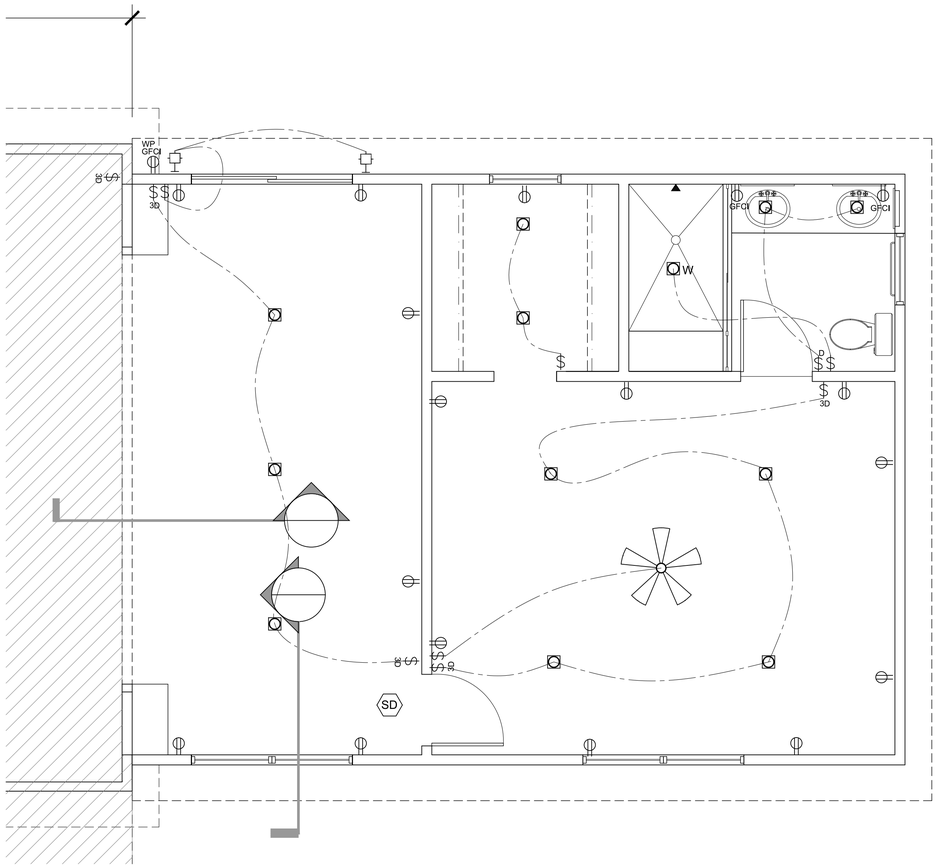
- $ Single Pole Switch
- $F Fan Light Switch
- $3 3-way Switch
- $4 4-way Switch
- $D Dimmer Switch
- (T) Timer
- Receptacle - 110 V
- GFCI Receptacle - 110 V - w/ Ground Fault Circuit Interrupter
- WP GFCI Weatherproof Receptacle - 110 V - w/ Ground Fault Circuit Interrupter
- Electrical Disconnect
- Electrical Panel
- Meter
- Hi-output, variable speed paddle fan w/ light fixture; fan and light to be separately controlled.
- Recessed Light Fixture
- Recessed Light Fixture; wall -wash
- V Recessed Light Fixture - vaporproof
- W Recessed; waterproof, UL Rated.
- Ceiling-mounted Light Fixture
- Wall-mounted Light Fixture
- Wall-mounted, Exterior rated, UL approved Light Fixture
- Exhaust Fan
- Exhaust Fan with Light
- HL Heat Lamp
- Track Lights
- Track Lights
- 2 Bulb Fluorescent Fixture
- 4 Bulb Fluorescent Fixture
- SD Photoelectric Smoke Detector
- SD D Photoelectric Smoke Detector w/ sampling tubes in AC Ductwork

ELECTRICAL POWER/LIGHTING PLAN NOTES

1. ALL ELECTRICAL AND LIGHTING WORK SHALL COMPLY WITH THE MOST CURRENT N.E.C. AND FLORIDA BUILDING CODE REGULATIONS.
2. THE ELECTRICIAN SHALL VERIFY LOCATIONS AND REQUIREMENTS OF ALL LIGHTING AND SWITCHING - AS WELL AS VARIOUS SYSTEMS REQUIRING ELECTRICAL SERVICE - WITH OWNER, GENERAL CONTRACTOR AND SPECIFIC INSTALLERS - PRIOR TO COMMENCEMENT OF WORK. PROVIDE ALL WIRING AS NEEDED FOR A PROPER AND COMPLETE INSTALLATION.
3. AN ELECTRICAL ENGINEER OR CONTRACTOR'S MASTER ELECTRICIAN SHALL SIZE PANEL (S) AS NEEDED .
4. AN ELECTRICAL ENGINEER OR CONTRACTOR'S MASTER ELECTRICIAN SHALL PROVIDE THE ELECTRICAL PANEL SCHEDULE, LOAD CALCULATIONS AND ELECTRICAL RISER DIAGRAM AS REQUIRED BY COUNTY BUILDING DEPARTMENT.
5. ALL LOAD CENTERS, BREAKERS AND POWER DISCONNECTS SHALL BE BY SQUARE D.
6. ALL POWER DISTRIBUTION SHALL BE COPPER WIRE; NO SMALLER THAN 12 GAUGE.
7. ALL TELEPHONE AND DATA WIRING SHALL BE CAT 5-E; TWISTED AND SHIELDED PLENUM RATED. VERIFY WIRE GAUGE AND NUMBER OF PAIRS WITH COMMUNICATIONS CONSULTANT.
8. USE 1-2-3-G WIRE TO ALL PENDANT LIGHTS OR PADDLE FANS.
9. ALLCONDUIT SHALL BE SCHEDULE 40 PVC.
10. ALL ELECTRIC BOXES WILL BE STEEL, AND ALL STEEL BOXES WILL CONTAIN A GREEN-GROUNDING WIRE AND SCREW.
11. ALL RECEPTACLES AND SWITCHES SHALL BE LEVITON, DECORA STYLE, IN IVORY.
12. ALL RECEPTACLES SHALL BE LOCATED AT 12" A.F.F. - OR AT 42" ABOVE KITCHEN AND BATHROOM COUNTERTOPS, UNLESS OTHERWISE NOTED.
13. ALL SWITCHES SHALL BE LOCATED AT 48" A.F.F. UNLESS OTHERWISE NOTED.
13. ALL OUTLETS IN BATHROOMS, UTILITY ROOMS AND ANY OTHER WET AREAS TO BE GROUND -FAULT PROTECTED (GFI)

GENERAL NOTES

1. THE ELECTRIC AL POWER & LIGHTING LAYOUT SHOWN ON THIS DRAWING MAY BE REVISED BY THE OWNER WITHIN COMPLIANCE OF ALL REQUIRED BUILDING CODES .



ELECTRIC POWER & LIGHTING PLAN

SCALE: 3/8" = 1'-0"

Revisions

Michele Borst Architect, P.A.
Florida License AR 91522
California License C 15582
4926 N.W. 19th Place
Gainesville, FL 32605
Cell: 352.281.4755
micheleborst@gmail.com

STATE OF FLORIDA
MICHELE ZACHARIAS BORST
AR91522
Michele Z. Borst
REGISTERED ARCHITECT

Jacobson Residence
217 SW Boulder Glen
Fort White, Florida 32038

Project No.
2020.4

Sheet Title
ELECTRICAL - LTG. & PWR PLAN

Sheet No.
A106

Date
08.08.2020

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

RE: JACOBSONAD -

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

Site Information:
Customer Info: JACOBSON, JARED & MEGAN Project Name: JACOBSON ADDITION Model:
Lot/Block: Subdivision:
Address: 217 SW BOULDER GLEN
City: FT WHITE State: FL

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

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):
Design Code: FBC2017/TPI2014 Design Program: MiTek 20/20 8.2
Wind Code: ASCE 7-10 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 2 individual, 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.

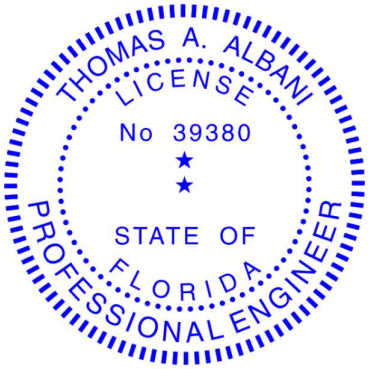
No.	Seal#	Truss Name	Date
1	T20832474	A	7/24/20
2	T20832475	AET	7/24/20

This item has been electronically signed and sealed by Albani, Thomas, PE using a Digital Signature.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Mayo Truss Company, Inc..

Truss Design Engineer's Name: Albani, Thomas
My license renewal date for the state of Florida is February 28, 2021.

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 or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO 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.



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

July 24,2020

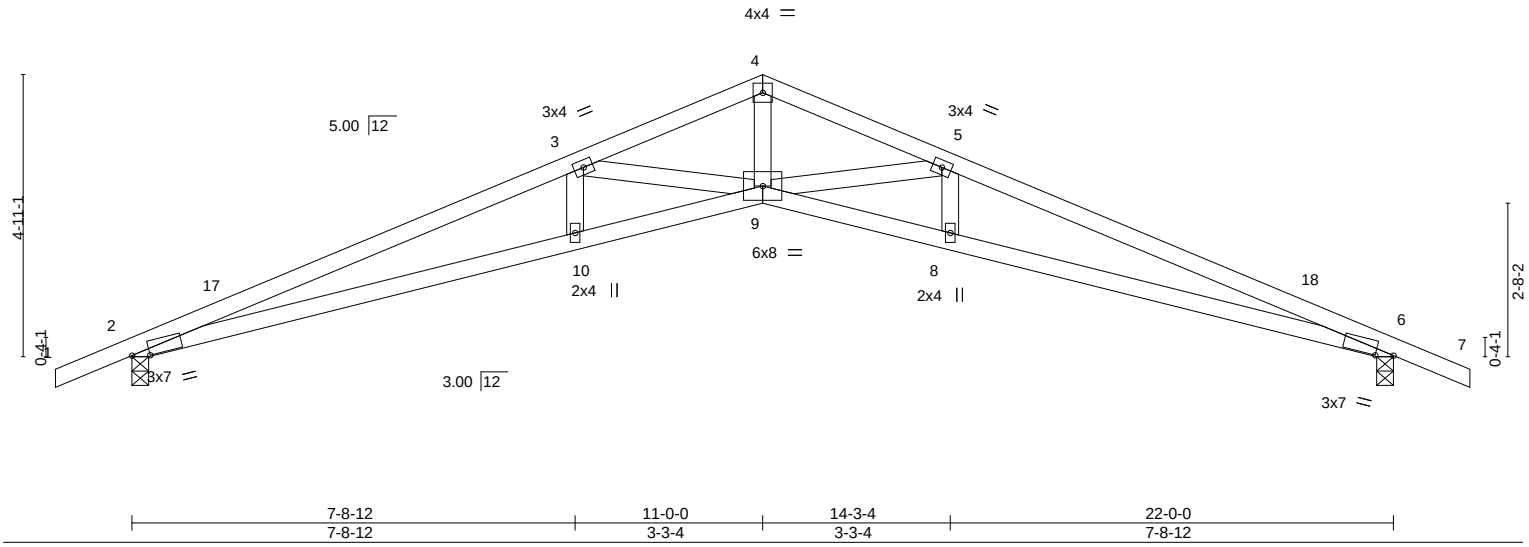
Job	Truss	Truss Type	Qty	Ply	
JACOBSONAD	A	Scissor	15	1	T20832474
					Job Reference (optional)

SANTA FE TRUSS COMPANY INC, BELL FL

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Jul 24 11:10:35 2020 Page 1
ID:dqit0Q3ZUdxIEfQlq37pT8ycgXR-j4Zk2CVkyso4ohw1MZ_4QksSer0Q21N0Z64mSfyutA2

-1-4-0 | 7-8-12 | 11-0-0 | 14-3-4 | 22-0-0 | 23-4-0
1-4-0 | 7-8-12 | 3-3-4 | 3-3-4 | 7-8-12 | 1-4-0

Scale = 1:40.2



7-8-12 | 11-0-0 | 14-3-4 | 22-0-0
7-8-12 | 3-3-4 | 3-3-4 | 7-8-12

Plate Offsets (X,Y)-- [2:0-3-12,0-0-13], [6:0-3-12,0-0-13]

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	0.78	Vert(LL)	-0.32	9	>817	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.94	Vert(CT)	-0.65	9	>407	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.43	6	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-AS		Wind(LL)	0.21	9	>999	240	Weight: 89 lb	FT = 15%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (size) 2=0-3-8, 6=0-3-8
Max Horz 2=-66(LC 10)
Max Uplift 2=-95(LC 12), 6=-95(LC 12)
Max Grav 2=960(LC 1), 6=960(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-3575/318, 3-4=-2726/243, 4-5=-2726/235, 5-6=-3575/340
BOT CHORD 2-10=-211/3348, 9-10=-207/3337, 8-9=-244/3337, 6-8=-248/3348
WEBS 4-9=-130/1928, 5-9=-825/170, 3-9=-825/172

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (directional) and C-C Exterior(2) -1-4-0 to 1-8-0, Interior(1) 1-8-0 to 11-0-0, Exterior(2) 11-0-0 to 14-3-4, Interior(1) 14-3-4 to 23-4-0 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.
5) Bearing at joint(s) 2, 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 95 lb uplift at joint 2 and 95 lb uplift at joint 6.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

This item has been electronically signed and sealed by Albani, Thomas, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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

July 24,2020

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	
JACOBSONAD	AET	GABLE	1	1	T20832475
					Job Reference (optional)

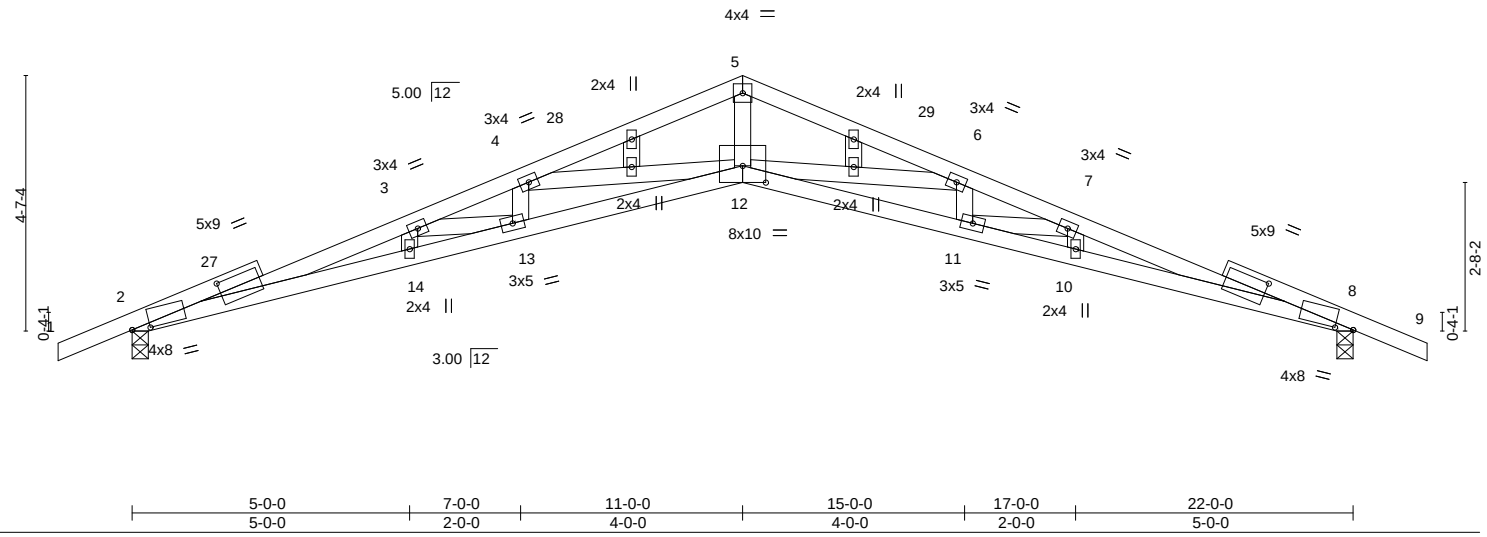
SANTA FE TRUSS COMPANY INC, BELL FL

8.240 s Mar 9 2020 MiTek Industries, Inc. Fri Jul 24 11:10:36 2020 Page 1

ID:dqit0Q3ZUdxIEfQlq37pT8ycgXR-CG76FYWNjAwxQrVEwGVJyyPdPFQSnT59omqK?6yutA1

-1-4-0	5-0-0	7-0-0	11-0-0	15-0-0	17-0-0	22-0-0	23-4-0
1-4-0	5-0-0	2-0-0	4-0-0	4-0-0	2-0-0	5-0-0	1-4-0

Scale = 1:41.5



5-0-0	7-0-0	11-0-0	15-0-0	17-0-0	22-0-0
5-0-0	2-0-0	4-0-0	4-0-0	2-0-0	5-0-0

Plate Offsets (X,Y)-- [2:0-3-15,0-0-7], [2:1-8-11,0-2-4], [8:1-8-11,0-2-4], [8:0-3-15,0-0-7], [12:0-5-0,0-3-10]

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	0.78	Vert(LL)	-0.51	12-13	>515	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.70	Vert(CT)	-1.04	12-13	>251	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.62	8	n/a	n/a		
BCDL	10.0	Code	FBC2017/TPI2014	Matrix-AS		Wind(LL)	0.35	12-13	>752	240	Weight: 101 lb	FT = 15%

LUMBER-

TOP CHORD 2x4 SP No.1 *Except* 1-2,8-9: 2x4 SP No.2
BOT CHORD 2x4 SP SS
WEBS 2x4 SP No.2
OTHERS 2x4 SP No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=62(LC 11)
Max Uplift 2=-94(LC 12), 8=-54(LC 12)
Max Grav 2=945(LC 1), 8=790(LC 1)

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

TOP CHORD 2-3=-4923/461, 3-4=-4354/410, 4-5=-3114/281, 5-6=-3115/272, 6-7=-4249/394, 7-8=-4632/367
BOT CHORD 2-14=-407/4742, 13-14=-403/4746, 12-13=-335/4155, 11-12=-332/4058, 10-11=-320/4457, 8-10=-320/4444
WEBS 5-12=-104/2081, 6-12=-1072/168, 6-11=0/287, 7-11=-390/0, 4-12=-1166/206, 4-13=0/303, 3-13=-569/70

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (directional) and C-C Exterior(2) -1-4-0 to 1-8-0, Interior(1) 1-8-0 to 11-0-0, Exterior(2) 11-0-0 to 14-0-0, Interior(1) 14-0-0 to 23-4-0 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 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.
7) Bearing at joint(s) 2, 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 94 lb uplift at joint 2 and 54 lb uplift at joint 8.
9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

This item has been electronically signed and sealed by Albani, Thomas, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

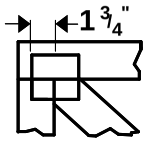
Thomas A. Albani PE No.39380
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

July 24,2020

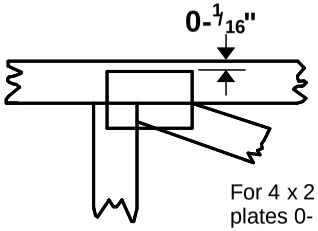
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

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.

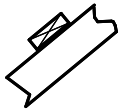
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

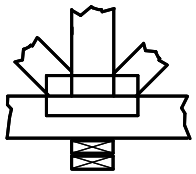
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

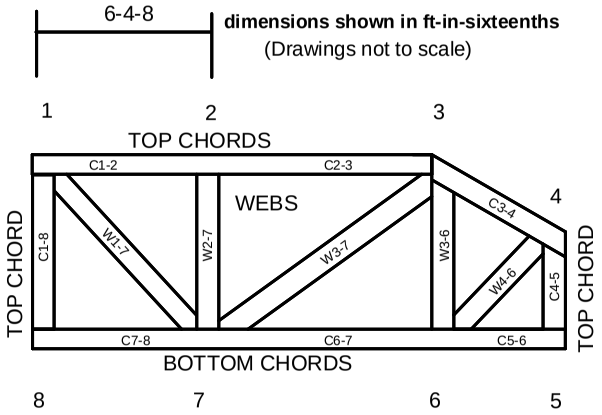


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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



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.

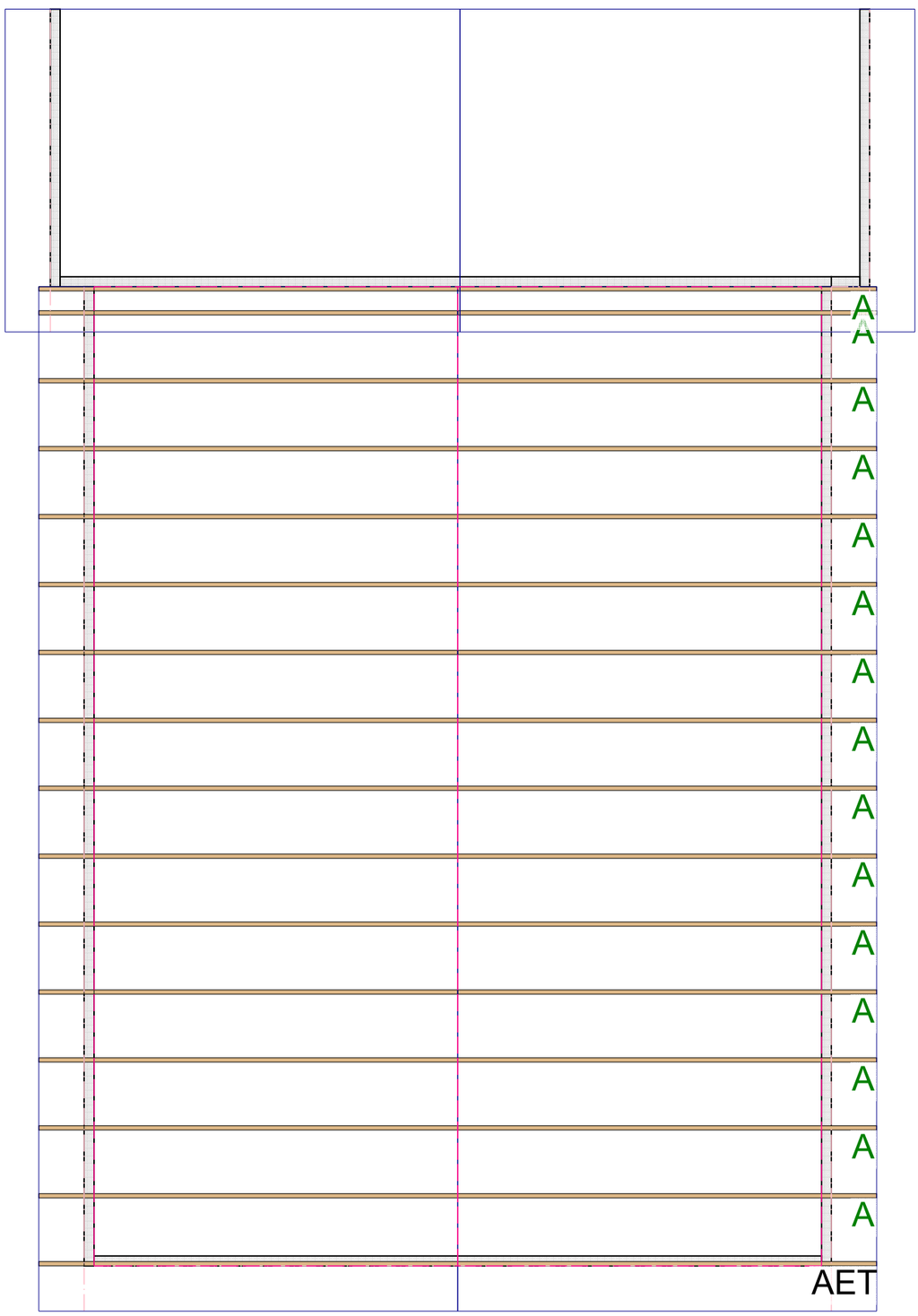
MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020

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.

21.The design does not take into account any dynamic or other loads other than those expressly stated.



Santa Fe Truss

BELL, FL PHONE 386-454-7711 FAX 800-853-1556

Job Name: JACOBSON ADDITION

Customer: JACOBSON, JARED & MEGAN

Design Parameters and General Description

Code compliance:	Florida Building Code, 6th edition (2017); ASCE/SEI 7-10	
Risk category:	II	(Table 1604.5)[1]
Ultimate design wind speed, V_{ult}:	130 mph	
Nominal design wind speed, V_{asd}:	101 mph	
Wind directionality factor, K_d :	0.85	(Table 26.6-1)[2]
Exposure category:	B	(Section 26.7)
Topographic factor, K_{zt} :	1.0	(Section 26.8)
Gust effect factor, G:	0.85	(Section 26.9.1)
Enclosure class:	enclosed (by definition)	(Section 26.2)
Int. press. coeff., GC_{pi} :	±0.18	(Table 26.11-1)
Mean roof height:	<30 ft.	
Number of stories:	one	
Plan dimensions:	22.00 ft. x 28.83 ft.	
Exterior walls:	wood frame	
Type of roof:	gable	
Roof slope:	5:12	
Eave height:	<10 ft.	
Roof overhang:	1.33 ft.	

Drawings

See drawings for additional details. In case of conflict, the more restrictive requirements of the drawings or these calculations govern.

Roof Framing

Pre-engineered wood trusses at 24" o.c. See truss design by *Thomas A. Albani, PE*, dated July 24, 2020 for details.

Roof Sheathing

Minimum 7/16" Exposure 1 wood structural panels. Install with long dimension perpendicular to framing and staggered end joints. Fasten to roof framing w/ 8d common or ring-shank nails at 6 in. o.c. on edges and 6 in. o.c. at intermediate framing. **Use 8d ring-shank nails spaced at 4 in. o.c. within five feet of roof edges.** Provide blocking at 48 in. max. o.c. in first two framing spaces at gable end. Blocking shall be full depth of truss chords.

Attila A. Bodo
State of Florida
Professional Engineer
License No. 15834

This document has been digitally signed and sealed by Attila A. Bodo, PE on August 7, 2020 using a digital signature. Printed copies of this document are not considered signed and sealed and the ***SHA*** authentication code must be verified on any electronic copies.

[1] Florida Building Code, Building, 6th edition (2017)

[2] Unless noted otherwise, references are in ASCE/SEI 7-10.

Maximum Wind Pressures

MWFRS:

exposure coefficient, K_h:	0.70		(Table 28.3-1)
velocity pressure, q_z :	25.7 psf		(Eq. 28.3-1)
roof external pressure coefficient, GC_{pf} :		-1.07 (maximum)	(Fig. 28.4-1)
maximum design wind pressure on roof:		-32.2 psf	(Eq. 28.4-1)
total wall external pressure coefficient, GC_{pf} :		1.44 (maximum)	(Fig. 28.4-1)
total design wind pressure on walls:		37.1 psf	(Eq. 28.4-1)

Components and cladding (C&C):

exposure coefficient, K_h:	0.70		(Table 30.3-1)
velocity pressure, q_z :	25.7 psf		(Eq. 30.3-1)
roof external pressure coefficient, GC_p :		-2.6 (maximum)	(Fig. 30.4-2B)
roof design wind pressure, p :		-71.6 psf	(Eq. 30.4-1)
wall external pressure coefficient, GC_p :		-1.4 (maximum)	(Fig. 30.4-1)
wall design wind pressure, p :		-40.7 psf	(Eq. 30.4-1)

Exterior Frame Walls

Studs: 2x4 at 16" o.c.
use: SPF No. 2 grade or better

Shearwall Sheathing

Minimum 15/32" sheathing grade plywood or 7/16" OSB; attach all edges to framing with 8d common nails at 4 in. o.c. Attach to intermediate framing with 8d common nails at 12 in. o.c. Sheathing shall be applied to outside face of **all exterior frame walls**.

Headers

Provide headers in accordance with Section 2308 of the *Florida Building Code, Building, 6th edition (2017)* and/or the drawings.

Foundations (sizes based on wind load requirements only)

Pier footing: 2'-6"x2'-6"x1'-4"T, reinforced with (4) #5x24" bars each way. The bottom of the footing shall be at least 12" below finished grade.

Pier: 8x16 concrete masonry units, all cells filled, reinforced with (1) #5 dowel in each filled cell.

Connector Schedule

To Connect	To	No.	Product Code[1]	Fastener	Uplift/ Lateral Capacity, lb
truss A; joint 2	top plates	1	H2.5T	(5+5) 8dx1½" common nails	420/145
truss A; joint 6	top plates	1	TC24[3]	(4+4) 10dx3" common nails	300/-
truss AET; joint 2	top plates	1	H2.5T	(5+5) 8dx1½" common nails	420/145
truss AET; joint 8	top plates	1	TC24[3]	(4+4) 10dx3" common nails	300/-
top plates	stud	1	SSP	(3+4) 10dx1½" common nails	330/-
stud	perimeter beam[4]	1	MSTA15	(6+6) 10dx2½" common nails	970/-
header	header stud(s)	1[2]	MSTA15	(6+6) 10dx2½" common nails	970/-
header stud(s)	perimeter beam[4]	1[2]	MSTA15	(6+6) 10dx2½" common nails	970/-
floor joist	perimeter beam	1	LUS26	(4+4) 10dx3" common nails	1165/-
long perimeter beam	short perimeter beam	1	HUC28-2[5]	(6) 10dx3" into long beam (12) 16dx3½" into short beam	2085/-
perimeter beam	concrete	1	META16	(8) 10dx1½" common nails	1450/340

Notes:
1. Product codes refer to connector hardware as manufactured by Simpson Strong-Tie Company, Inc., Pleasanton, CA. Other manufacturers' products of equal or higher capacity may be substituted.
2. Use one connector on each header stud.
3. Drive the nails into the truss at the inside end of the slotted holes and clinch on back side. Do not seat these nails into the truss, allow room under the nail head for movement of the truss relative to the wall.
4. All metal hardware and fasteners in contact with pressure-treated wood shall be corrosion-resistant.
5. At cantilevered end only (near existing house).
6. Unless noted otherwise, all nails to be common wire nails with the following diameters:
   a. 8d: 0.131 in.
   b. 10d: 0.148 in.
   c. 16d: 0.162 in.
7. Connections not otherwise specified herein or shown on the drawings shall be in accordance with the *Florida Building Code, Building, 6th edition (2017)*.