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

RE: 2718981 - DETAILS

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

Site Information:

Customer Info: DETAILS Project Name: N/A Model: N/A
Lot/Block: N/A Subdivision: N/A
Address: N/A, N/A
City: N/A State: N/A

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: FBC2020/TPI2014 Design Program: MiTek 20/20 8.4
Wind Code: ASCE 7-16 Wind Speed: 130 mph
Roof Load: 37.0 psf Floor Load: N/A psf

This package includes 20 individual, General Truss Details 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#	Detail Name	Date	No.	Seal#	Detail Name	Date
1	T23399806	MII-REP10	4/2/21	15	T23399820	MII-VALLEY HIGH WIND2	4/2/21
2	T23399807	MII-T-BRACE 2	4/2/21	16	T23399821	MII-VALLEY SP	4/2/21
3	T23399808	MII-SCAB-BRACE	4/2/21	17	T23399822	MII-VALLEY SP	4/2/21
4	T23399809	MII-REP05	4/2/21	18	T23399823	MII-GE146-001	4/2/21
5	T23399810	MII-GE130-D-SP	4/2/21	19	T23399824	MII-REP13B	4/2/21
6	T23399811	MII-GE130-SP	4/2/21	20	T23399825	MII-STRGBCK	4/2/21
7	T23399812	MII-GE140-001	4/2/21				
8	T23399813	MII-GE170-D-SP	4/2/21				
9	T23399814	MII-GE180-D-SP	4/2/21				
10	T23399815	MII-GE180-D-SP	4/2/21				
11	T23399816	MII-PIGGY-ALT-7-16	4/2/21				
12	T23399817	MII-REP01A1	4/2/21				
13	T23399818	MII-TOENAIL_SP	4/2/21				
14	T23399819	MII-VALLEY HIGH WIND1	4/2/21				

This item has been electronically signed and sealed by ORegan, Philip, 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

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

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: ORegan, Philip
My license renewal date for the state of Florida is February 28, 2023.

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.

PHILIP J. O'REGAN LICENSE No 58126 STATE OF FLORIDA PROFESSIONAL ENGINEER

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

RE: $JOBNAME - $JOBDESC

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

Site Information:

Customer Info: $SI_CUSTOMER Project Name: $SI_JOBNAME Model: $SI_MODEL
Lot/Block: $SI_LOTNUM Subdivision: $SI_SUBDIV
Address: $SI_SITEADDR
City: $SI_SITECITY State: $SI_SITESTATE

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

OCTOBER 28, 2016	STANDARD REPAIR FOR ADDING A FALSE BOTTOM CHORD	MII-REP10 T23399806

MiTek USA, Inc.

MiTek USA, Inc.

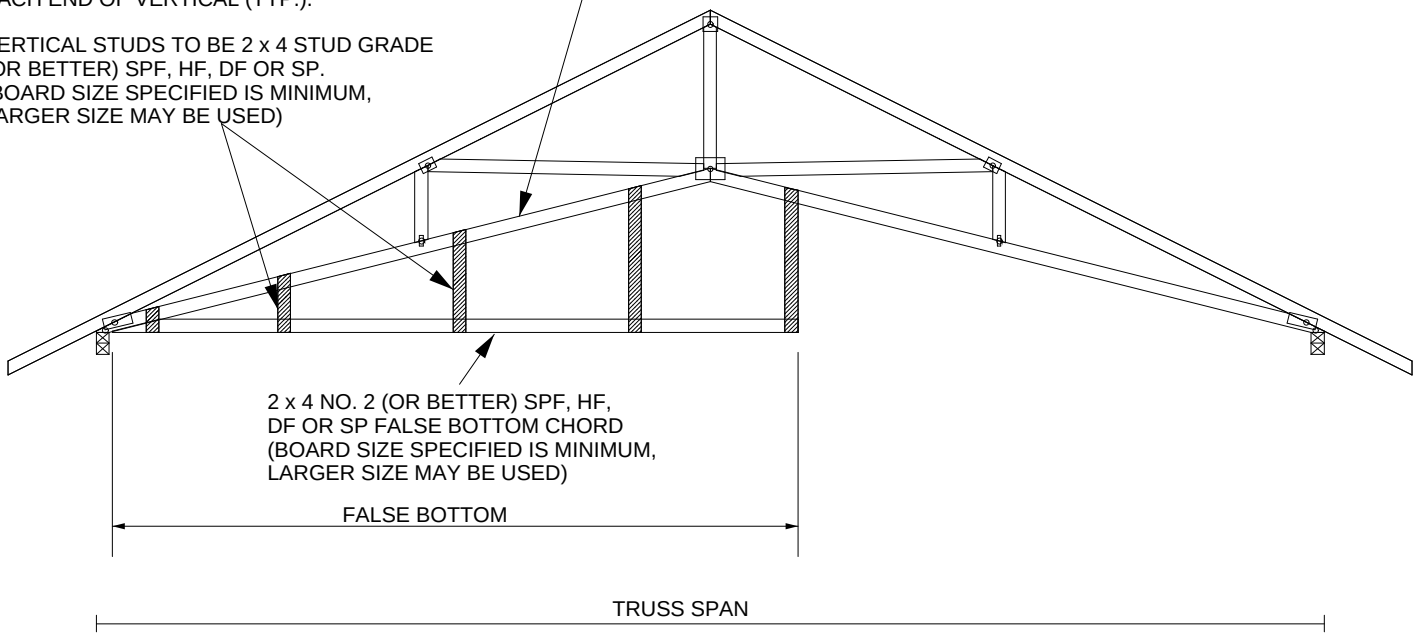
MAIN TRUSS MANUFACTURED WITHOUT FALSE BOTTOM CHORD.

MAIN TRUSS (SPACING = 24" O.C.)

REFER TO THE BOTTOM CHORD BRACING SECTION OF THE INDIVIDUAL TRUSS DESIGN FOR MAXIMUM SPACING OF CONTINUOUS LATERAL BRACING WHENEVER RIGID CEILING MATERIAL IS NOT DIRECTLY ATTACHED TO THE BOTTOM CHORD.

VERTICAL STUDS @ 48" O.C.. ATTACHED WITH (3) - 10d (0.131" X 3") NAILS AT EACH END OF VERTICAL (TYP.).

VERTICAL STUDS TO BE 2 x 4 STUD GRADE (OR BETTER) SPF, HF, DF OR SP. (BOARD SIZE SPECIFIED IS MINIMUM, LARGER SIZE MAY BE USED)



NOTES:

1. LOADING: TOP CHORD: (REFER TO THE MAIN TRUSS DESIGN FOR TOP CHORD LOADING).
   BOTTOM CHORD: LL = 0 PSF, DL = 10 PSF.
2. REFER TO THE MAIN TRUSS DESIGN FOR LUMBER AND PLATING REQUIREMENTS.
3. MAXIMUM BOTTOM CHORD PITCH = 6/12.
4. THE END DISTANCE, EDGE DISTANCE, AND SPACING OF NAILS SHALL BE SUCH AS TO AVOID SPLITTING OF THE WOOD.
5. FALSE BOTTOM CHORD ONLY DESIGNED TO CARRY VERTICAL LOAD. NO LATERAL (SHEAR) LOAD ALLOWED.
6. FILLER MAY EXTEND FOR FULL LENGTH OF TRUSS.

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

AUGUST 1, 2016	T-BRACE / I-BRACE DETAIL WITH 2X BRACE ONLY	MII-T-BRACE 2 T23399807

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.

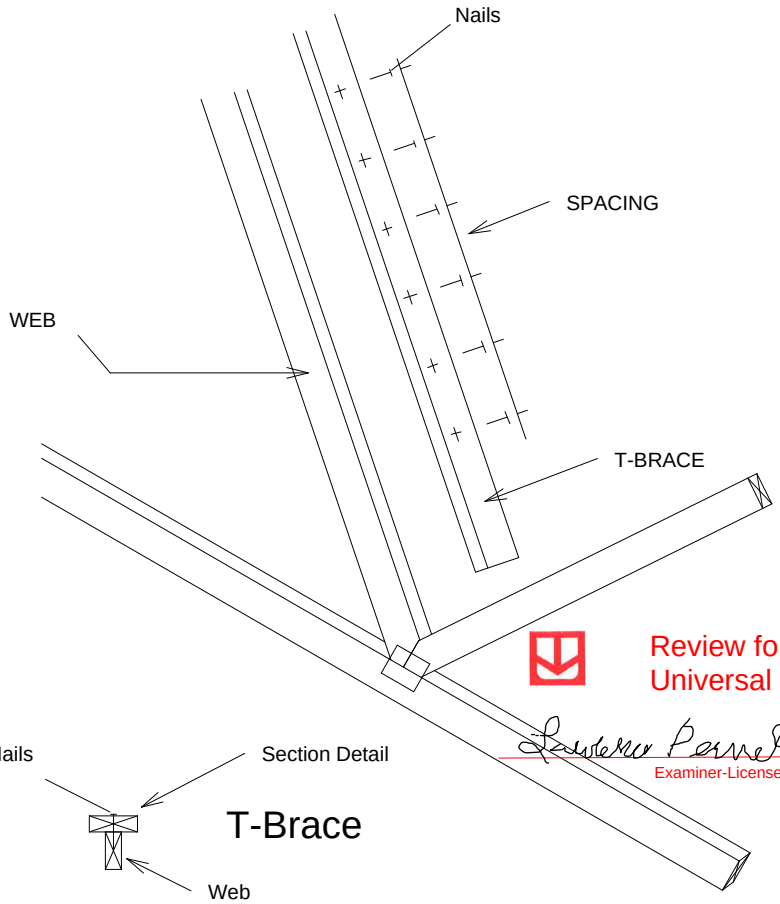
Note: This detail NOT to be used to convert T-Brace / I-Brace webs to continuous lateral braced webs.

Nailing Pattern		
T-Brace size	Nail Size	Nail Spacing
2x4 or 2x6 or 2x8	10d (0.131" X 3")	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

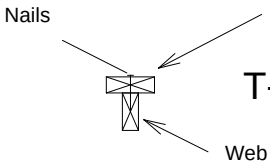
	Brace Size for Two-Ply Truss	
	Specified Continuous Rows of Lateral Bracing	
Web Size	1	2
2x3 or 2x4	2x4 T-Brace	2x4 I-Brace
2x6	2x6 T-Brace	2x6 I-Brace
2x8	2x8 T-Brace	2x8 I-Brace

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

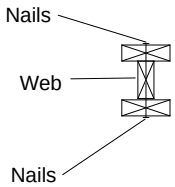


Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.



T-Brace



I-Brace

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

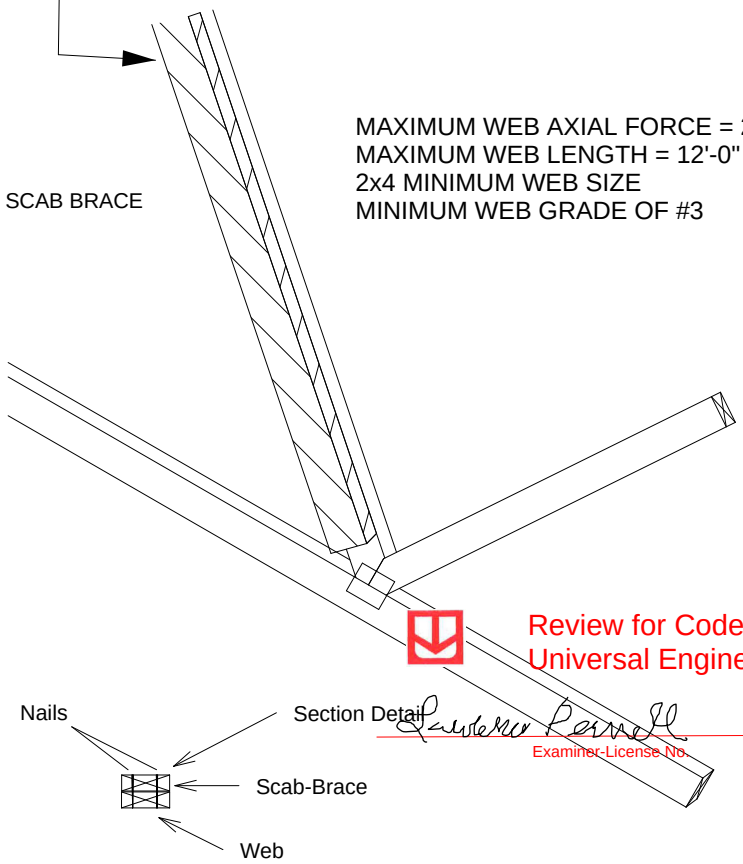
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

MiTek USA, Inc.

Note: Scab-Bracing to be used when continuous lateral bracing at midpoint (or T-Brace) is impractical.
Scab must cover full length of web +/- 6".

*** THIS DETAIL IS NOT APLICABLE WHEN BRACING IS *** REQUIRED AT 1/3 POINTS OR I-BRACE IS SPECIFIED.

APPLY 2x___ SCAB TO ONE FACE OF WEB WITH
2 ROWS OF 10d (0.131" X 3") NAILS SPACED 6" O.C.
SCAB MUST BE THE SAME GRADE, SIZE AND
SPECIES (OR BETTER) AS THE WEB.



MAXIMUM WEB AXIAL FORCE = 2500 lbs
MAXIMUM WEB LENGTH = 12'-0"
2x4 MINIMUM WEB SIZE
MINIMUM WEB GRADE OF #3

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

Section Detail

Scab-Brace must be same species grade (or better) as web member.

This item has been electronically signed and sealed by ORegan, Philip, 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.

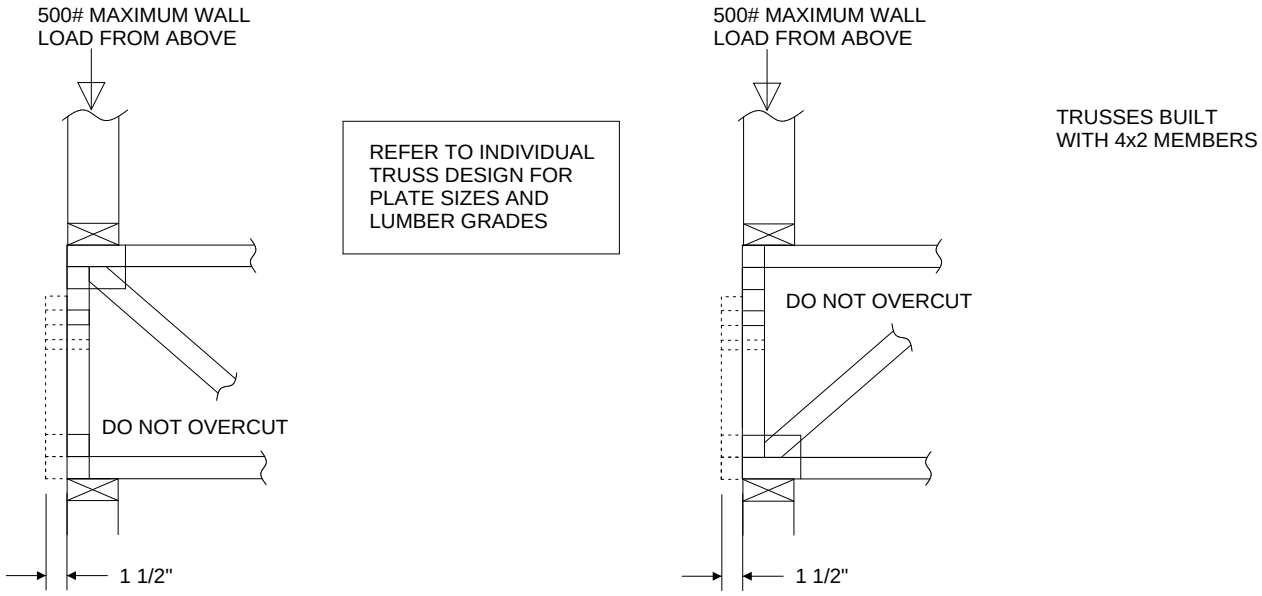
Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

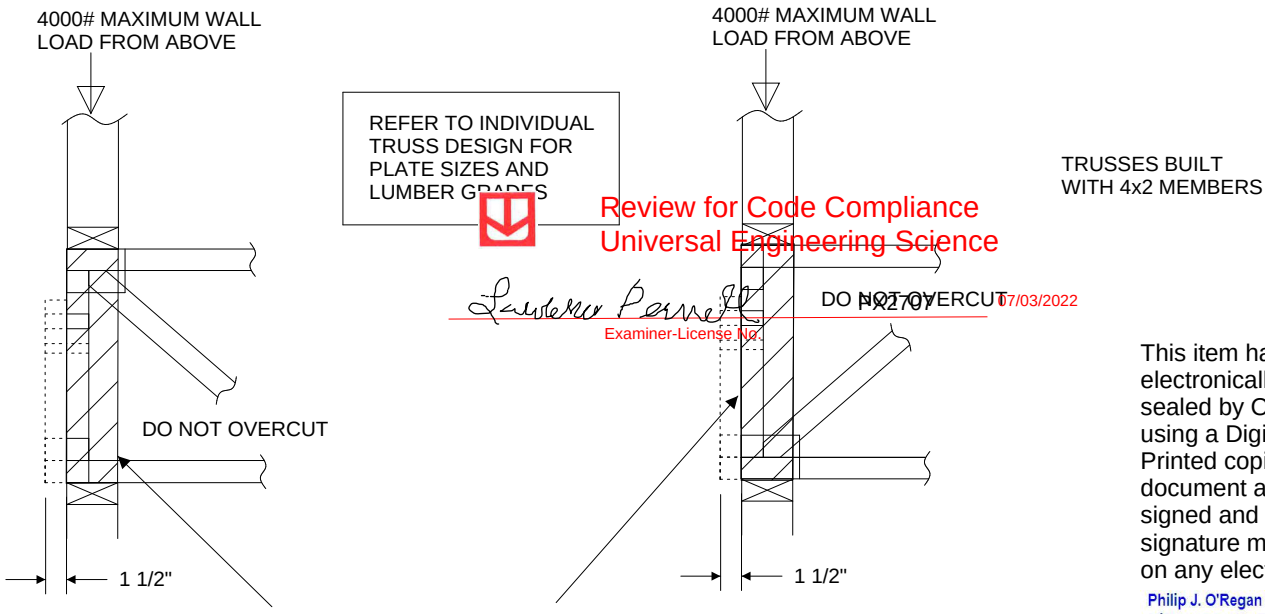
April 2,2021

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

MiTek USA, Inc.

1. THIS IS A SPECIFIC REPAIR DETAIL TO BE USED ONLY FOR ITS ORIGINAL INTENTION. THIS REPAIR DOES NOT IMPLY THAT THE REMAINING PORTION OF THE TRUSS IS UNDAMAGED. THE ENTIRE TRUSS SHALL BE INSPECTED TO VERIFY THAT NO FURTHER REPAIRS ARE REQUIRED. WHEN THE REQUIRED REPAIRS ARE PROPERLY APPLIED, THE TRUSS WILL BE CAPABLE OF SUPPORTING THE LOADS INDICATED.
2. ALL MEMBERS MUST BE RETURNED TO THEIR ORIGINAL POSITIONS BEFORE APPLYING REPAIR AND HELD IN PLACE DURING APPLICATION OF REPAIR.
3. THE END DISTANCE, EDGE DISTANCE, AND SPACING OF NAILS SHALL BE SUCH AS TO AVOID SPLITTING OF THE WOOD.
4. LUMBER MUST BE CUT CLEANLY AND ACCURATELY AND THE REMAINING WOOD MUST BE UNDAMAGED.
5. THIS REPAIR IS TO BE USED FOR SINGLE PLY TRUSSES IN THE 4X_ ORIENTATION ONLY.
6. CONNECTOR PLATES MUST BE FULLY IMBEDDED AND UNDISTURBED.





Review for Code Compliance
Universal Engineering Science

Examiner-License No. PE 87707 07/03/2022

ATTACH 2x4 SQUASH BLOCK (CUT TO FIT TIGHTLY) TO BOTH SIDES OF THE TRUSS AS SHOWN WITH 10d (0.131" X 3") NAILS SPACED 3" O.C.

This item has been electronically signed and sealed by ORegan, Philip, 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.

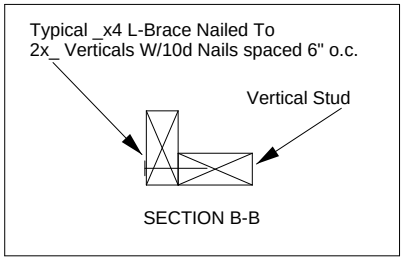
Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

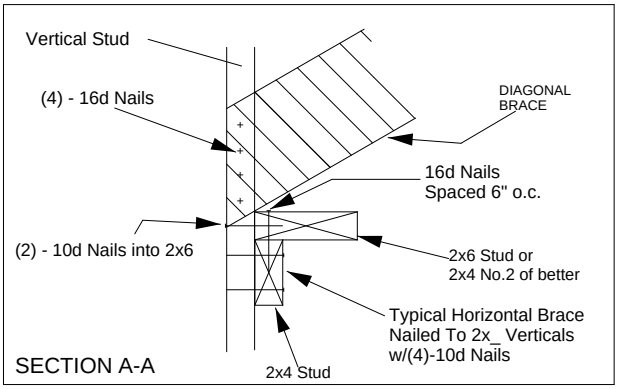
April 2,2021

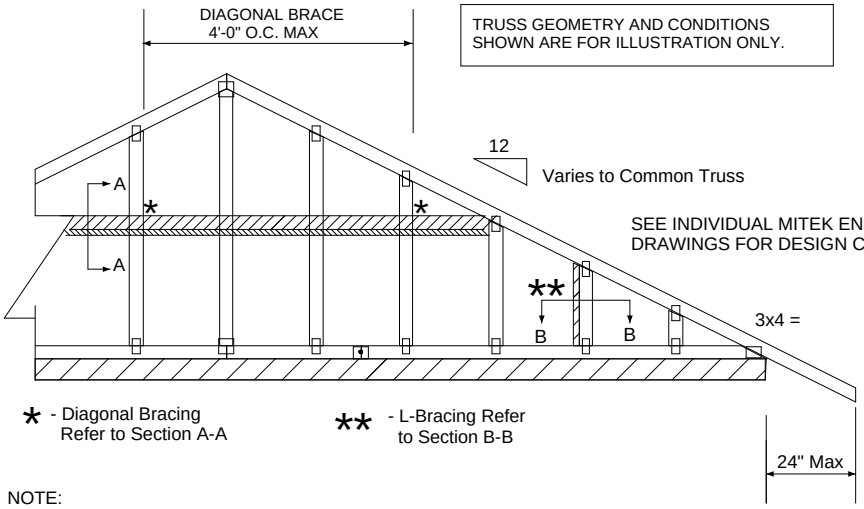
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

APRIL 12, 2019	Standard Gable End Detail	MII-GE130-D-SP T23399810

MiTek USA, Inc.





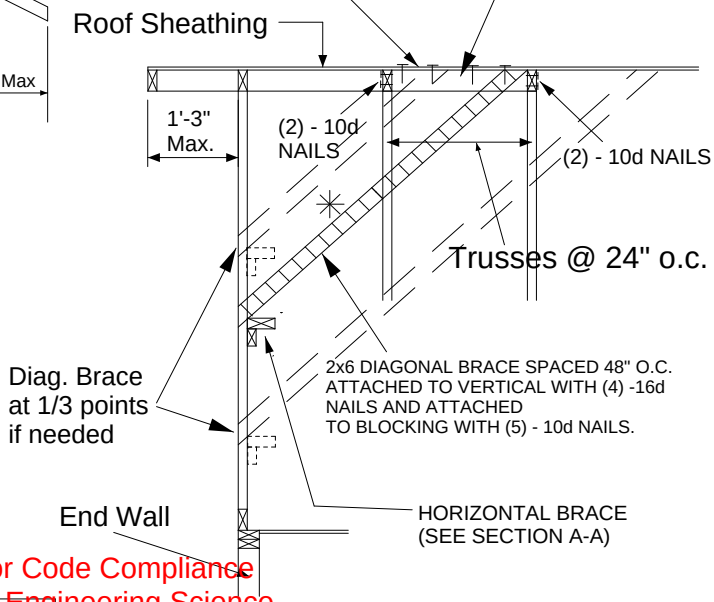


TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY.

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 NAILS.

(4) - 8d (0.131" X 2.5") 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.
10. SOUTHERN PINE LUMBER DESIGN VALUES ARE THOSE EFFECTIVE 06-01-13 BY SPIB/ALSC.
11. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

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 SP No. 3 / Stud	12" O.C.	3-9-13	4-1-1	5-9-6	7-1-3	11-5-7
2x4 SP No. 3 / Stud	16" O.C.	3-5-4	3-6-8	5-0-2	6-10-8	10-3-13
2x4 SP No. 3 / Stud	24" O.C.	2-9-11	2-10-11	4-1-1	5-7-6	8-5-1

✳ 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 diagonal brace with 10d nails 8" o.c., with 3" minimum end distance. Brace must cover 90% of diagonal length.

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022

Examiner-License No.

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

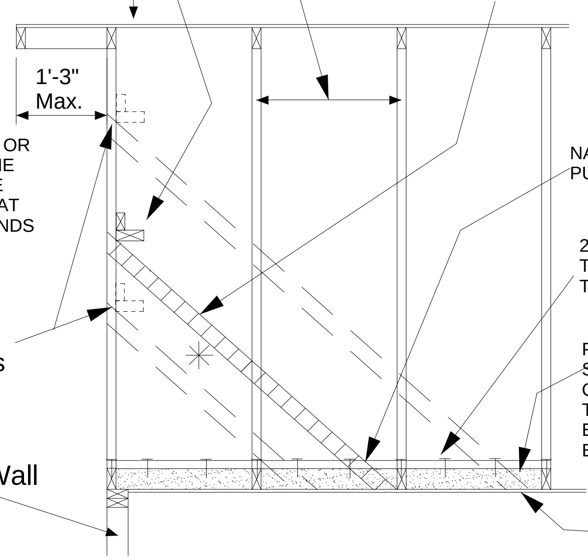
MAX MEAN ROOF HEIGHT = 30 FEET
CATEGORY II BUILDING
EXPOSURE D
ASCE 7-98, ASCE 7-02, ASCE 7-05 130 MPH
ASCE 7-10, ASCE 7-16 160 MPH
DURATION OF LOAD INCREASE 1.60

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

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

MiTek USA, Inc.

ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD



IT IS THE RESPONSIBILITY OF THE BLDG DESIGNER OR THE PROJECT ENGINEER/ARCHTECT TO DESIGN THE CEILING DIAPHRAGM AND ITS ATTACHMENT TO THE TRUSSES TO RESIST ALL OUT OF PLANE LOADS THAT MAY RESULT FROM THE BRACING OF THE GABLE ENDS

BRACING REQUIREMENTS FOR STRUCTURAL GABLE TRUSSES

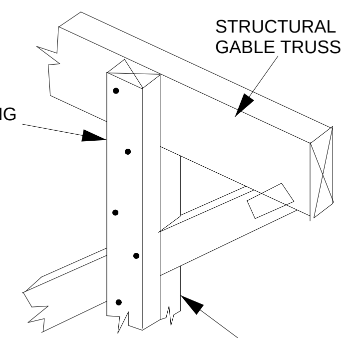
STRUCTURAL GABLE TRUSSES MAY BE BRACED AS NOTED:

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, 16) OR LESS, NAIL ALL MEMBERS WITH ONE ROW OF 10d (0.131" X 3") NAILS SPACED 6" O.C.
- FOR WIND SPEEDS 120-150 MPH (ASCE 7-98, 02, 05), 150-190 MPH (ASCE 7-10, 16) NAIL ALL MEMBERS WITH TWO ROWS OF 10d (0.131" X 3") NAILS SPACED 6" O.C. (2X 4 STUDS MINIMUM)

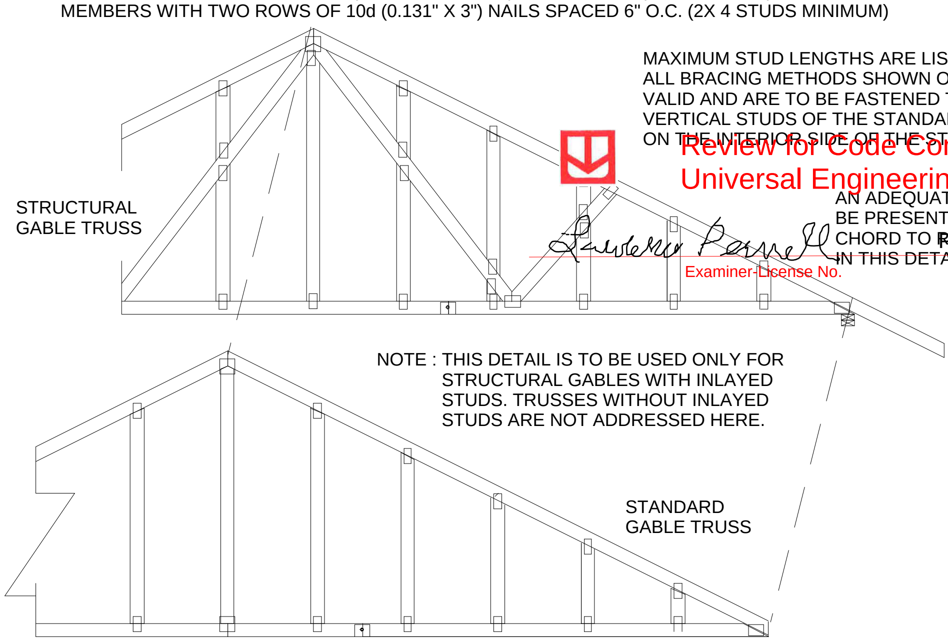


MAXIMUM STUD LENGTHS ARE LISTED ON PAGE 1. ALL BRACING METHODS SHOWN ON PAGE 1 ARE VALID AND ARE TO BE FASTENED TO THE SCABS OR VERTICAL STUDS OF THE STANDARD GABLE TRUSS ON THE INTERIOR SIDE OF THE STRUCTURE.

Review for Code Compliance
Universal Engineering Science

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.

PX2707 07/13/2021
Examiner-License No.



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

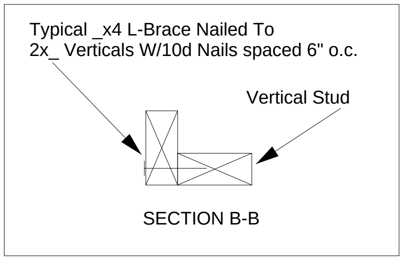
This item has been electronically signed and sealed by ORegan, Philip, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

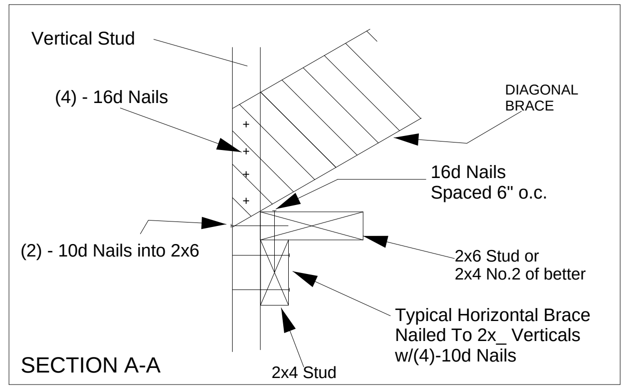
Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

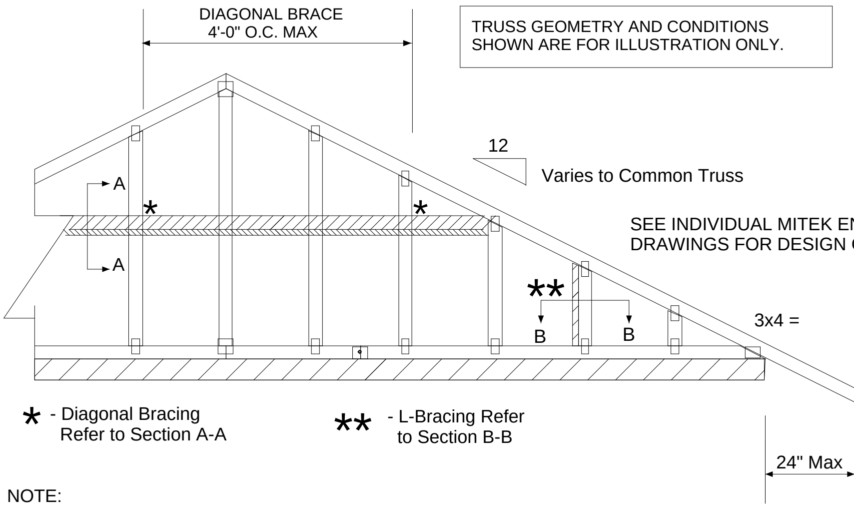
MiTek®
6904 Parke East Blvd.
Tampa, FL 36610

MiTek USA, Inc.





TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY.



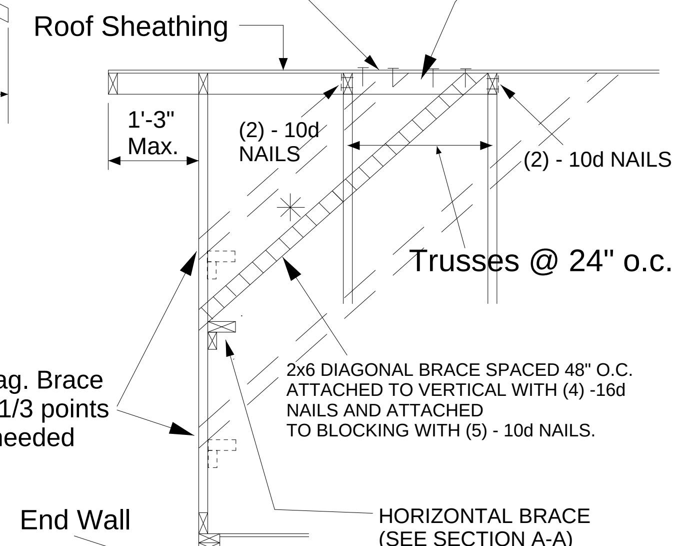
* - Diagonal Bracing Refer to Section A-A

** - L-Bracing Refer to Section B-B

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 NAILS.

(4) - 8d (0.131" X2.5") NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD SPF BLOCK



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.
10. SOUTHERN PINE LUMBER DESIGN VALUES ARE THOSE EFFECTIVE 06-01-13 BY SPIB/ALSC.
11. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

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 SP No. 3 / Stud	12" O.C.	4-0-7	4-5-6	6-3-8	8-0-15	12-1-6
2x4 SP No. 3 / Stud	16" O.C.	3-8-0	3-10-4	5-5-6	7-4-1	11-0-1
2x4 SP No. 3 / Stud	24" O.C.	3-0-10	3-1-12	4-5-6	6-1-5	9-1-15

✳ 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 diagonal brace with 10d nails 8" o.c., with 3" minimum end distance. Brace must cover 90% of diagonal length.

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

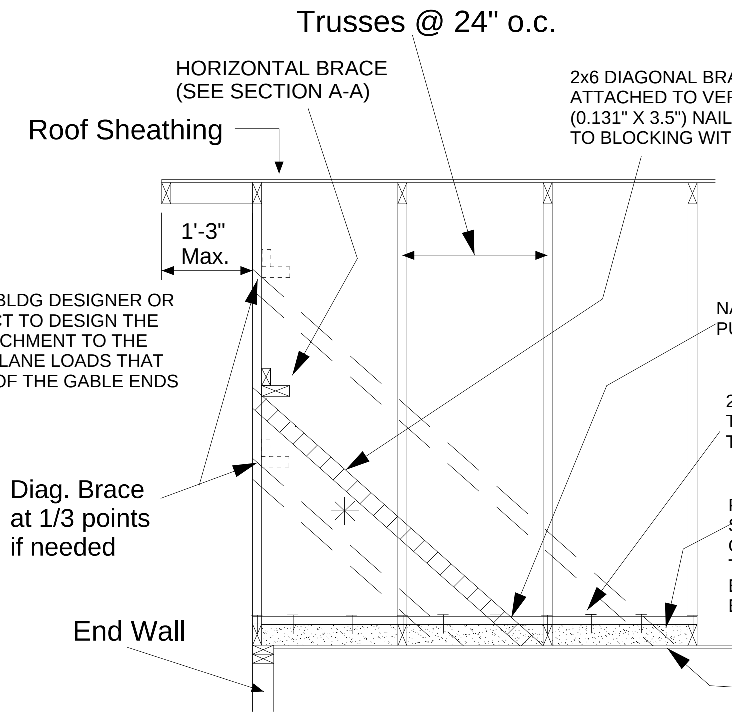
MAX MEAN ROOF HEIGHT = 30 FEET
CATEGORY II BUILDING
EXPOSURE B or C
ASCE 7-98, ASCE 7-02, ASCE 7-05 130 MPH
ASCE 7-10, ASCE 7-16 160 MPH
DURATION OF LOAD INCREASE : 1.60

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

APRIL 12, 2019	Standard Gable End Detail	MII-SHEET 2 T23399811

MiTek USA, Inc.

ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD



2x6 DIAGONAL BRACE SPACED 48" O.C. ATTACHED TO VERTICAL WITH (4) -16d (0.131" X 3.5") NAILS AND ATTACHED TO BLOCKING WITH (5) - 10d (0.131" X 3") NAILS.

IT IS THE RESPONSIBILITY OF THE BLDG DESIGNER OR THE PROJECT ENGINEER/ARCHTECT TO DESIGN THE CEILING DIAPHRAGM AND ITS ATTACHMENT TO THE TRUSSES TO RESIST ALL OUT OF PLANE LOADS THAT MAY RESULT FROM THE BRACING OF THE GABLE ENDS

NAIL DIAGONAL BRACE TO PURLIN WITH TWO 16d (3.5"x0.131") NAILS

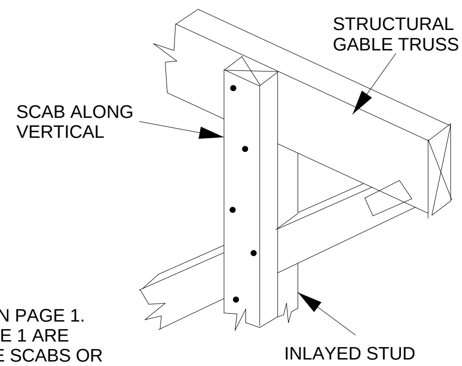
2X 4 PURLIN FASTENED TO FOUR TRUSSES WITH TWO 16d (0.131" X 3.5") NAILS EACH. FASTEN PURLIN TO BLOCKING W/ TWO 16d (0.131" X 3.5") NAILS (MIN)

PROVIDE 2x4 BLOCKING BETWEEN THE TRUSSES SUPPORTING THE BRACE AND THE TWO TRUSSES ON EITHER SIDE AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d (0.131" X 3") NAILS EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d (0.131" X 3") NAILS.

CEILING SHEATHING

BRACING REQUIREMENTS FOR STRUCTURAL GABLE TRUSSES

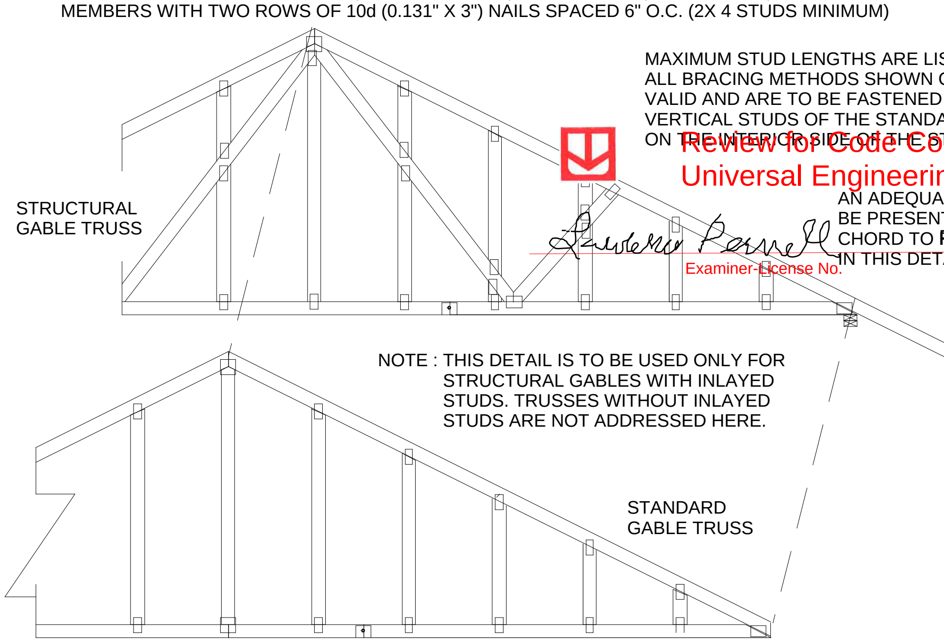
STRUCTURAL GABLE TRUSSES MAY BE BRACED AS NOTED:
METHOD 1 : ATTACH A MATCHING GABLE TRUSS TO THE INSIDE FACE OF THE STRUCTURAL GABLE AND FASTEN PER THE FOLLOWING NAILING SCHEDULE.
METHOD 2 : ATTACH 2X _ SCABS TO THE FACE OF EACH VERTICAL MEMBER ON THE STRUCTURAL GABLE PER THE FOLLOWING NAILING SCHEDULE. 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, 16) OR LESS, NAIL ALL MEMBERS WITH ONE ROW OF 10d (0.131" X 3") NAILS SPACED 6" O.C.
- FOR WIND SPEEDS 120-150 MPH (ASCE 7-98, 02, 05), 150-190 MPH (ASCE 7-10, 16) NAIL ALL MEMBERS WITH TWO ROWS OF 10d (0.131" 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.

Review for Code Compliance
Universal Engineering Science
PX2307 07/03/2023
Examiner-License No.

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.

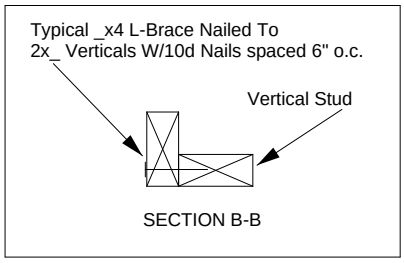
This item has been electronically signed and sealed by ORegan, Philip, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

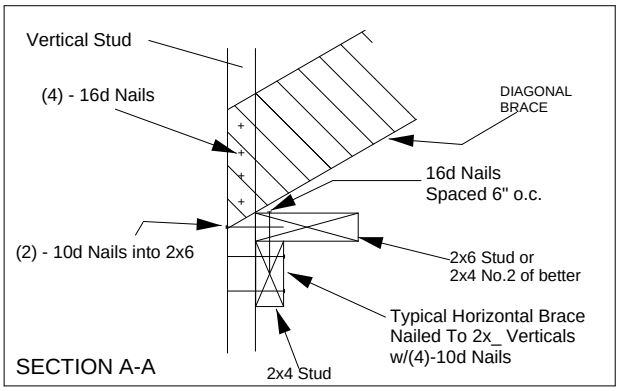
Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

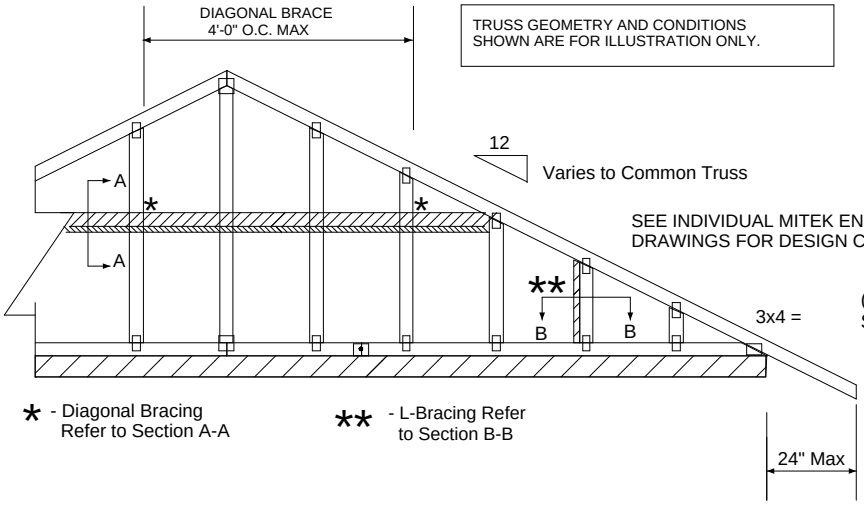
April 2,2021

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

MiTek USA, Inc.

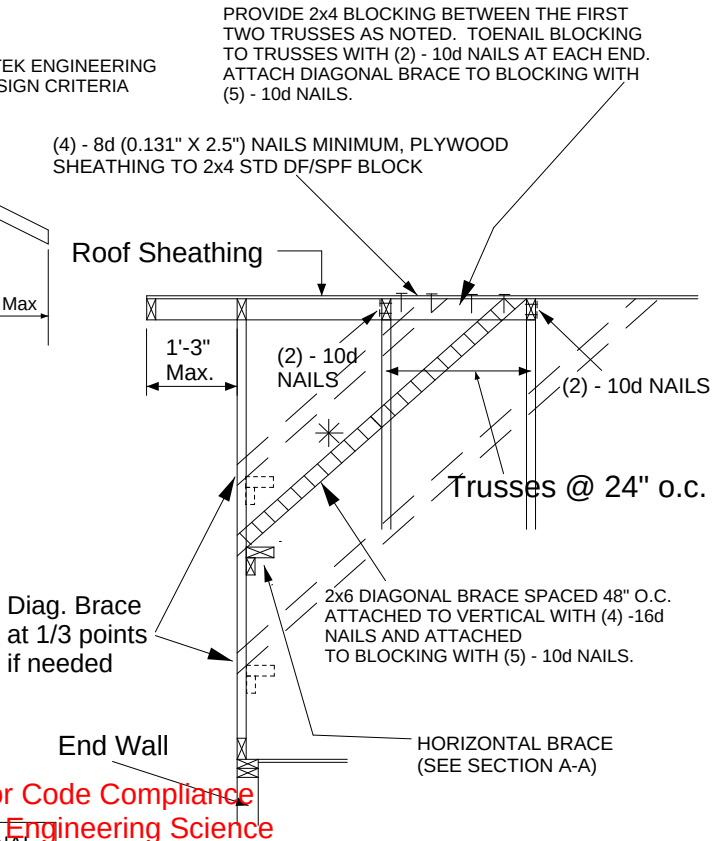






* - Diagonal Bracing Refer to Section A-A

** - 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.
10. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

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 DF/SPF Std/Stud	12" O.C.	3-10-1	3-11-7	5-7-2	7-8-2	11-6-4
2x4 DF/SPF Std/Stud	16" O.C.	3-3-14	3-5-1	4-10-2	6-7-13	9-11-11
2x4 DF/SPF Std/Stud	24" O.C.	2-8-9	2-9-8	3-11-7	5-5-2	8-1-12

✳ 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 nails 8" o.c., with 3" minimum end distance. Brace must cover 90% of diagonal length.

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

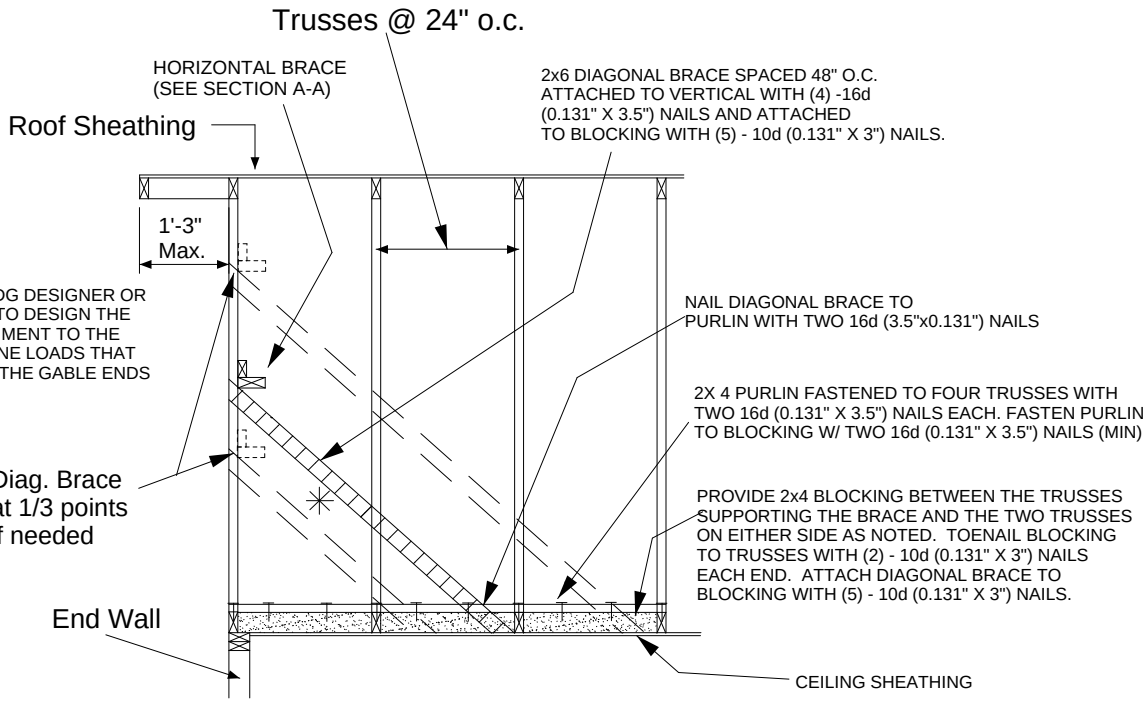
MAXIMUM WIND SPEED = 140 MPH
MAX MEAN ROOF HEIGHT = 30 FEET
CATEGORY II BUILDING
EXPOSURE B or C
ASCE 7-98, ASCE 7-02, ASCE 7-05
DURATION OF LOAD INCREASE 1.60

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

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

MiTek USA, Inc.

ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD

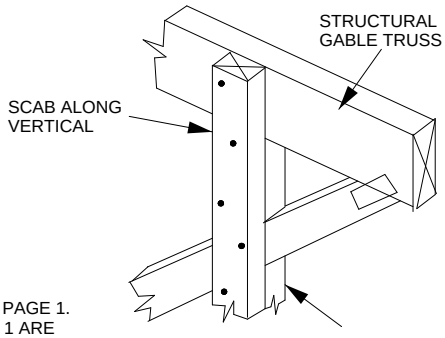


IT IS THE RESPONSIBILITY OF THE BLDG DESIGNER OR THE PROJECT ENGINEER/ARCHTECT TO DESIGN THE CEILING DIAPHRAGM AND ITS ATTACHMENT TO THE TRUSSES TO RESIST ALL OUT OF PLANE LOADS THAT MAY RESULT FROM THE BRACING OF THE GABLE ENDS

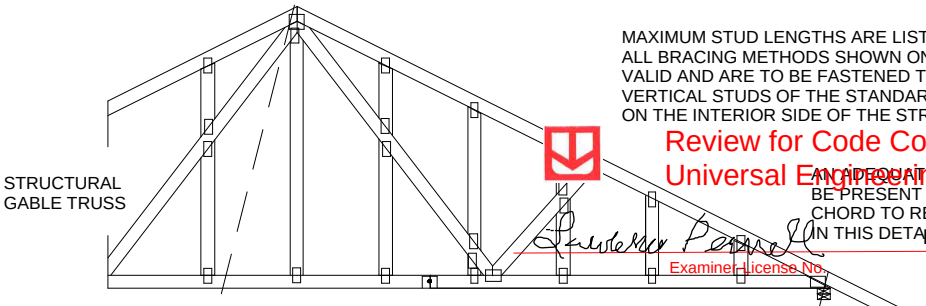
BRACING REQUIREMENTS FOR STRUCTURAL GABLE TRUSSES

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, 16) OR LESS, NAIL ALL MEMBERS WITH ONE ROW OF 10d (0.131" X 3") NAILS SPACED 6" O.C.
- FOR WIND SPEEDS 120-150 MPH (ASCE 7-98, 02, 05), 150-190 MPH (ASCE 7-10, 16) NAIL ALL MEMBERS WITH TWO ROWS OF 10d (0.131" 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.

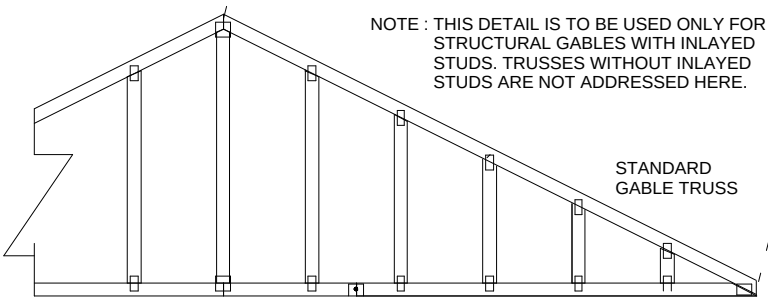


Review for Code Compliance
Universal Engineering Science

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 VERTICALS STUDS ONLY.

Examiner License No.

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



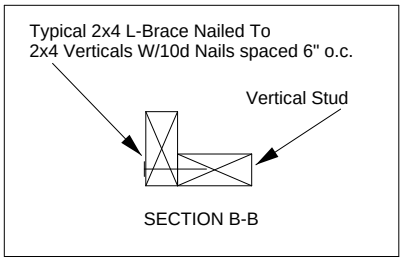
PE-58126

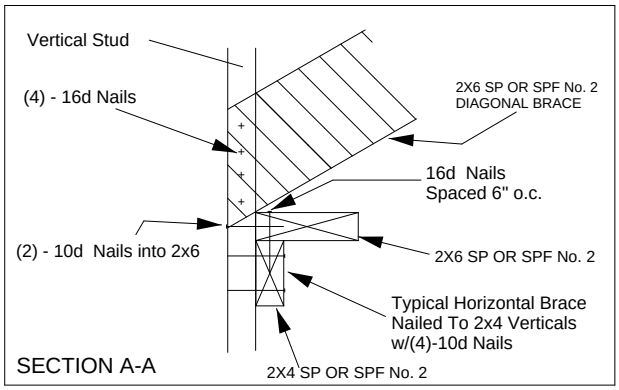
This item has been electronically signed and sealed by ORegan, Philip, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

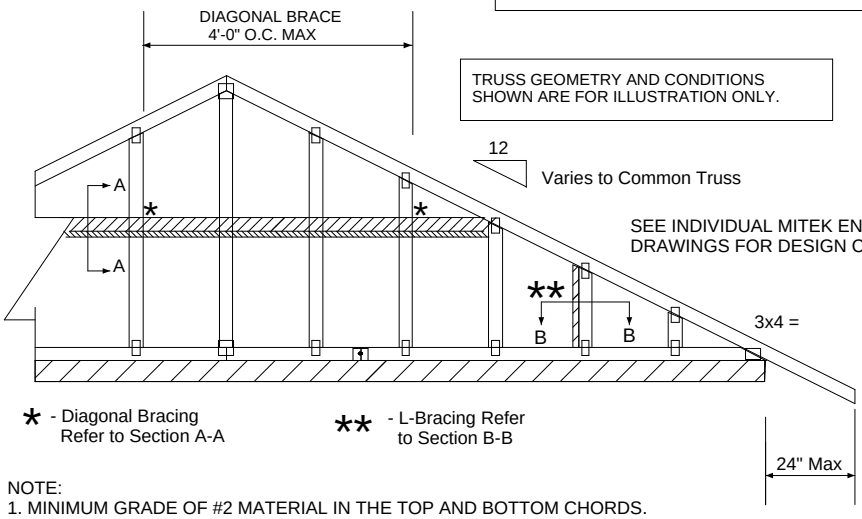
Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

MiTek USA, Inc.





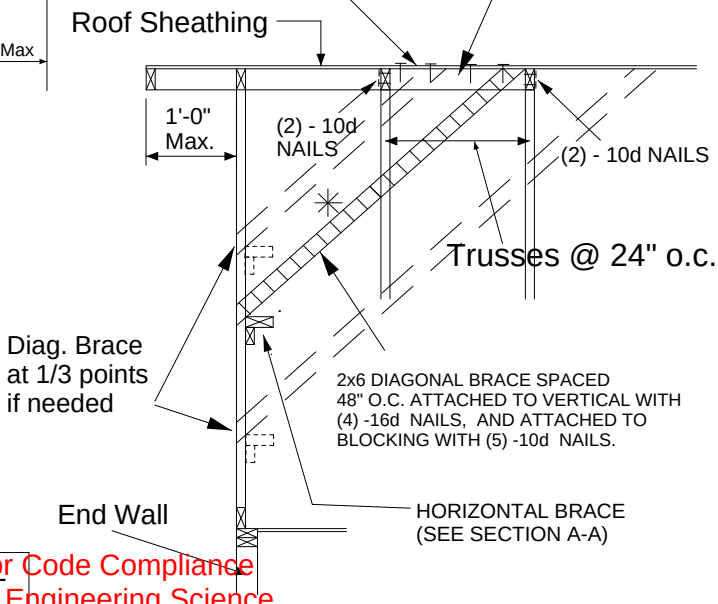


* - Diagonal Bracing Refer to Section A-A

** - L-Bracing Refer to Section B-B

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 NAILS.

(4) - 8d (0.131" X 2.5") NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD SPF BLOCK



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, SPF or SP No.3 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 AND A 2x4 AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST GABLE STUD. ATTACH TO VERTICAL GABLE 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.
10. SOUTHERN PINE LUMBER DESIGN VALUES ARE THOSE EFFECTIVE 06-01-13 BY SPIB/ALSC.
11. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

Minimum Stud Size Species and Grade	Stud Spacing	Without Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
		Maximum Stud Length			
2x4 SP No. 3 / Stud	12" O.C.	3-9-7	5-8-8	6-11-1	11-4-4
2x4 SP No. 3 / Stud	16" O.C.	3-4-12	4-11-15	6-9-8	10-2-3
2x4 SP No. 3 / Stud	24" O.C.	2-9-4	4-0-7	5-6-8	8-3-13
2x4 SP No. 2	12" O.C.	3-11-13	5-8-8	6-11-1	11-11-7
2x4 SP No. 2	16" O.C.	3-7-7	4-11-5	6-11-1	10-10-5
2x4 SP No. 2	24" O.C.	3-1-15	4-0-7	6-3-14	9-5-14

✳ 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 diagonal brace with 10d nails 6" o.c., with 3" minimum end distance. Brace must cover 90% of diagonal length. T or I braces must be 2x4 SPF No. 2 or SP No. 2.

Review for Code Compliance
Universal Engineering Science

Examiner-License No. PX2707 07/03/2022

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

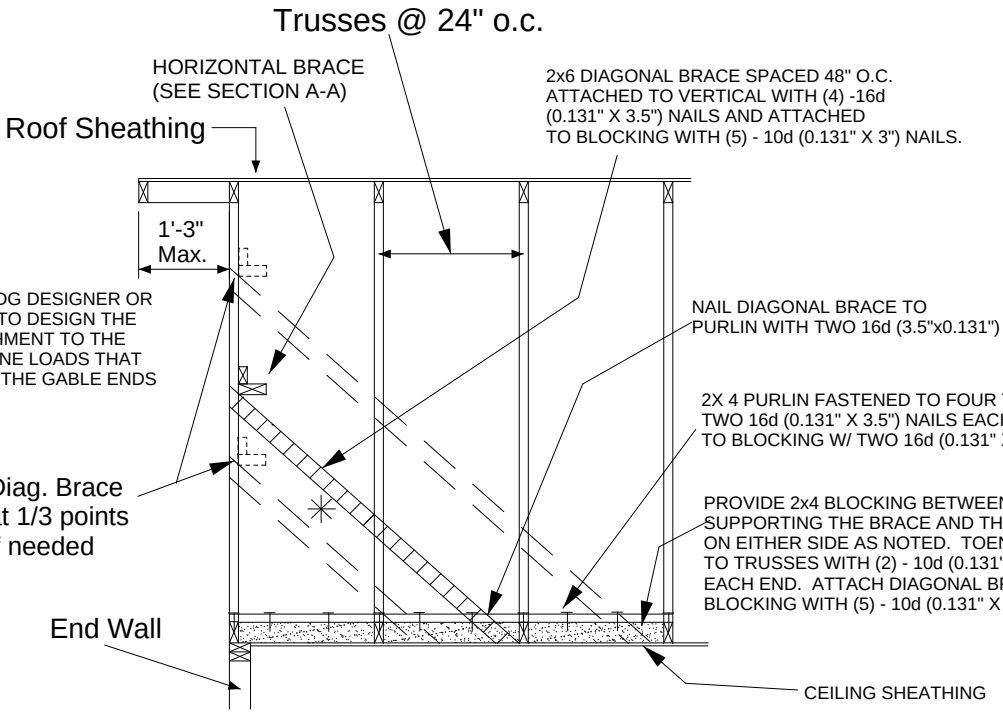
MAX MEAN ROOF HEIGHT = 30 FEET
EXPOSURE D
ASCE 7-10, ASCE 7-16 170 MPH
DURATION OF LOAD INCREASE : 1.60

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

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

MiTek USA, Inc.

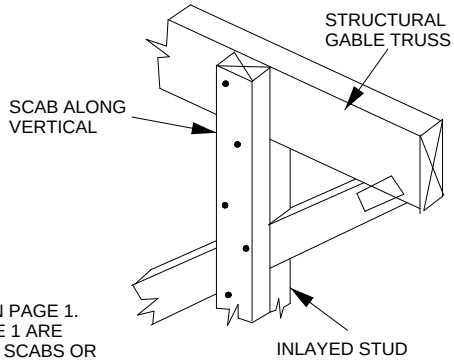
ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD



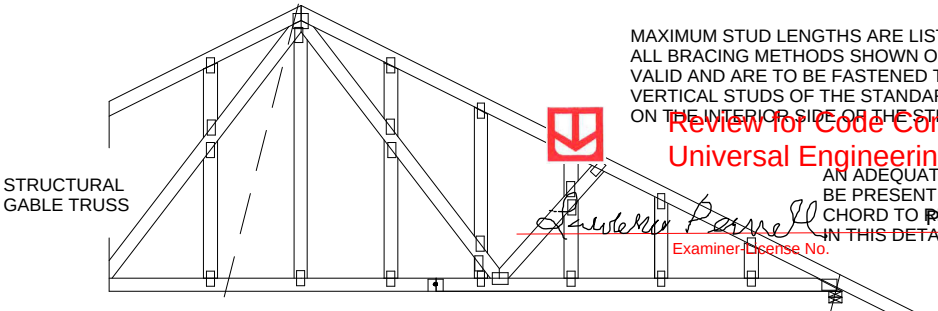
IT IS THE RESPONSIBILITY OF THE BLDG DESIGNER OR THE PROJECT ENGINEER/ARCHTECT TO DESIGN THE CEILING DIAPHRAGM AND ITS ATTACHMENT TO THE TRUSSES TO RESIST ALL OUT OF PLANE LOADS THAT MAY RESULT FROM THE BRACING OF THE GABLE ENDS

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, 16) OR LESS, NAIL ALL MEMBERS WITH ONE ROW OF 10d (0.131" X 3") NAILS SPACED 6" O.C.
- FOR WIND SPEEDS 120-150 MPH (ASCE 7-98, 02, 05), 150-190 MPH (ASCE 7-10, 16) NAIL ALL MEMBERS WITH TWO ROWS OF 10d (0.131" X 3") NAILS SPACED 6" O.C. (2X 4 STUDS MINIMUM)

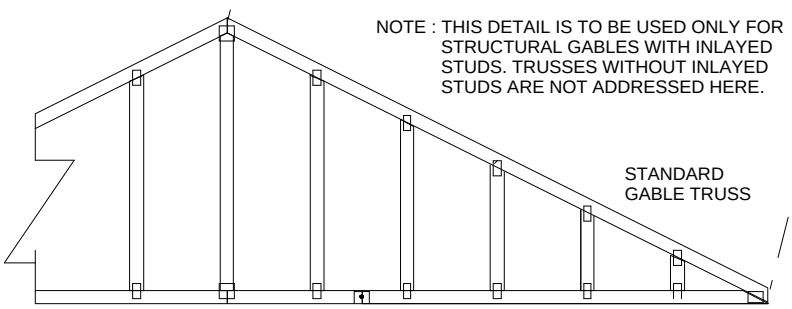


MAXIMUM STUD LENGTHS ARE LISTED ON PAGE 1. ALL BRACING METHODS SHOWN ON PAGE 1 ARE VALID AND ARE TO BE FASTENED TO THE SCABS OR VERTICAL STUDS OF THE STANDARD GABLE TRUSS ON THE INTERIOR SIDE OF THE STRUCTURE.



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.



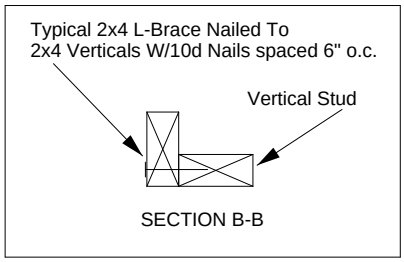
This item has been electronically signed and sealed by ORegan, Philip, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

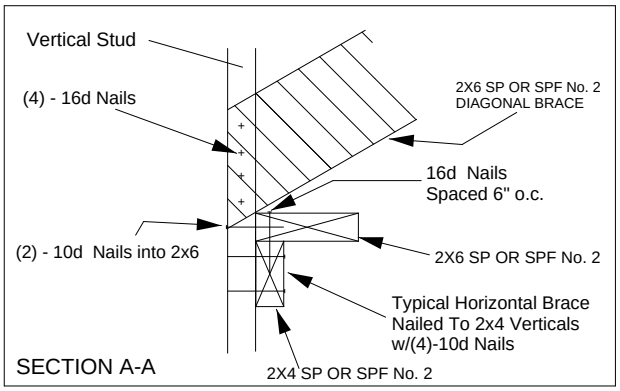
Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

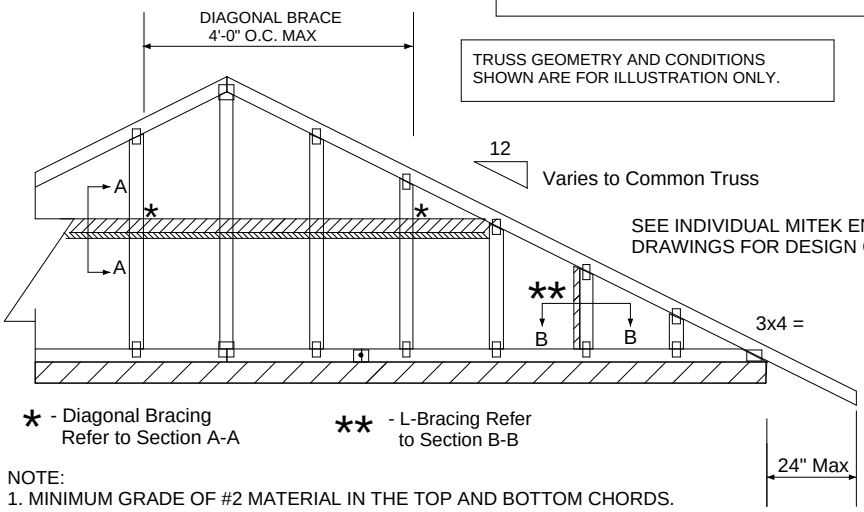
April 2,2021

APRIL 12, 2019	Standard Gable End Detail	MII-GE180-D-SP T23399814

MiTek USA, Inc.







TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY.

SEE INDIVIDUAL MITEK ENGINEERING DRAWINGS FOR DESIGN CRITERIA

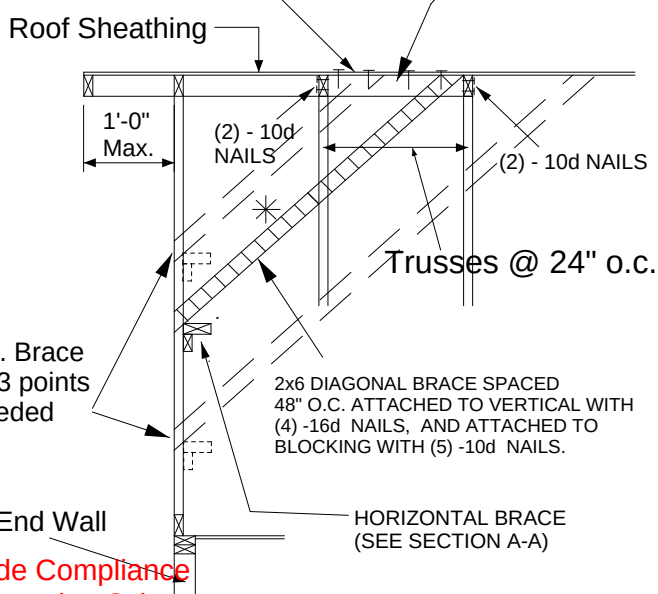
PROVIDE 2x4 BLOCKING BETWEEN THE FIRST TWO TRUSSES AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d NAILS AT EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d NAILS.

(4) - 8d (0.131" X 2.5") NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD SPF BLOCK

* - Diagonal Bracing
Refer to Section A-A

** - L-Bracing Refer
to Section B-B

24" Max



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, SPF or SP No.3 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 AND A 2x4 AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST GABLE STUD. ATTACH TO VERTICAL GABLE 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.
10. SOUTHERN PINE LUMBER DESIGN VALUES ARE THOSE EFFECTIVE 06-01-13 BY SPIB/ALSC.
11. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

Minimum Stud Size Species and Grade	Stud Spacing	Without Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
		Maximum Stud Length			
2x4 SP No. 3 / Stud	12" O.C.	3-7-12	5-4-11	6-2-1	10-11-3
2x4 SP No. 3 / Stud	16" O.C.	3-2-8	4-8-1	6-2-1	9-7-7
2x4 SP No. 3 / Stud	24" O.C.	2-7-7	3-9-12	5-2-13	7-10-4
2x4 SP No. 2	12" O.C.	3-10-0	5-4-11	6-2-1	11-6-1
2x4 SP No. 2	16" O.C.	3-5-13	4-8-1	6-2-1	10-5-7
2x4 SP No. 2	24" O.C.	3-0-8	3-9-12	6-1-1	9-1-9

✳ 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 diagonal brace with 10d nails 6in o.c., with 3in minimum end distance. Brace must cover 90% of diagonal length. T or I braces must be 2x4 SPF No. 2 or SP No. 2.

Examiner-License No. PX2707 07/03/2022

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

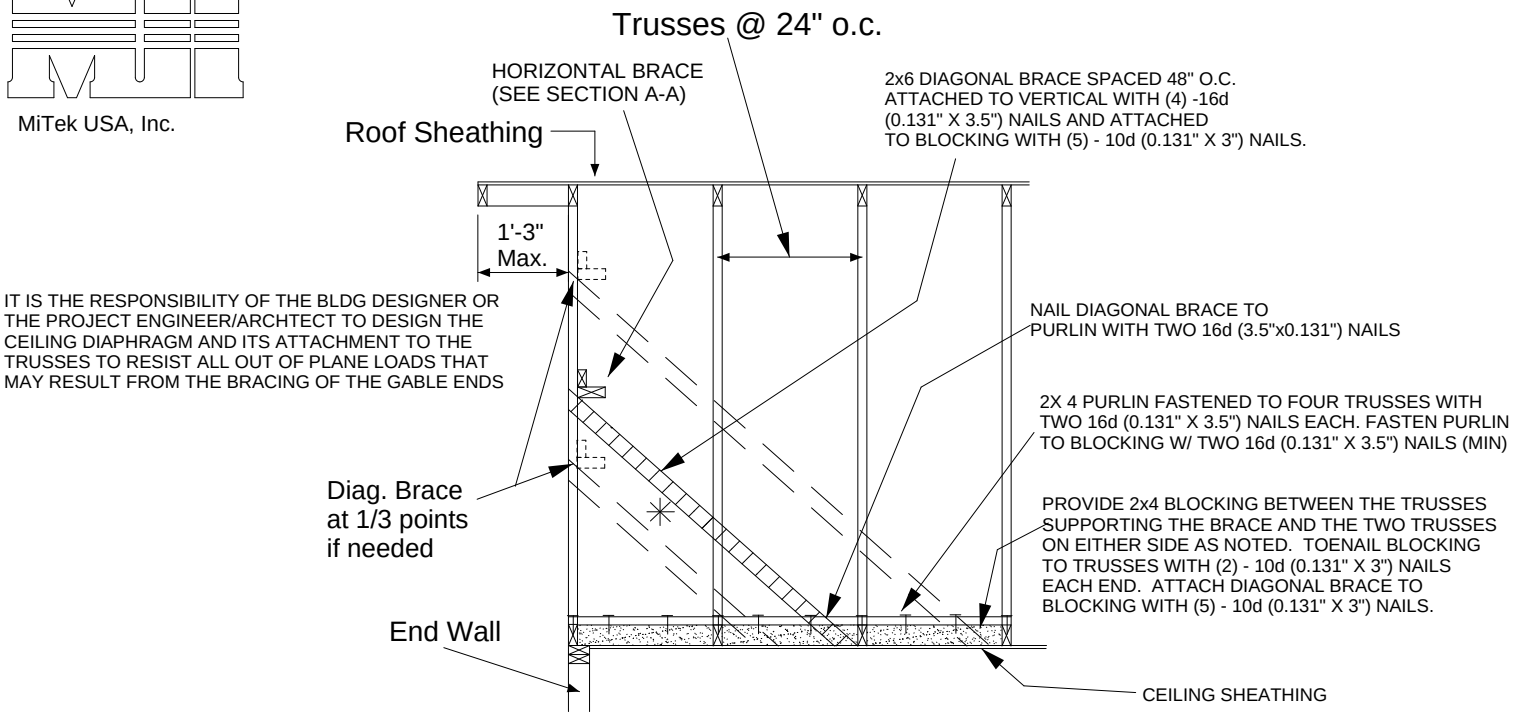
MAX MEAN ROOF HEIGHT = 30 FEET
EXPOSURE D
ASCE 7-10, ASCE 7-16 180 MPH
DURATION OF LOAD INCREASE : 1.60

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

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

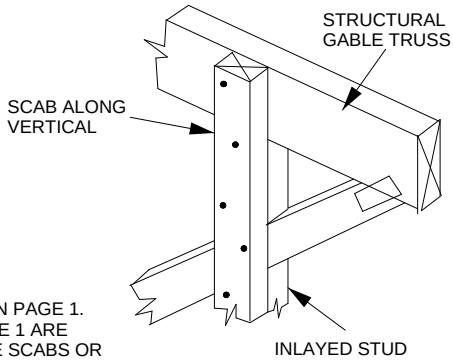
MiTek USA, Inc.

ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD

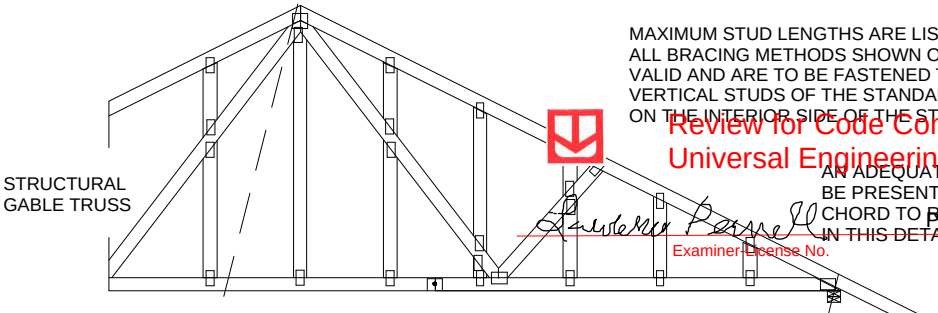


BRACING REQUIREMENTS FOR STRUCTURAL GABLE TRUSSES

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, 16) OR LESS, NAIL ALL MEMBERS WITH ONE ROW OF 10d (0.131" X 3") NAILS SPACED 6" O.C.
- FOR WIND SPEEDS 120-150 MPH (ASCE 7-98, 02, 05), 150-190 MPH (ASCE 7-10, 16) NAIL ALL MEMBERS WITH TWO ROWS OF 10d (0.131" 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.

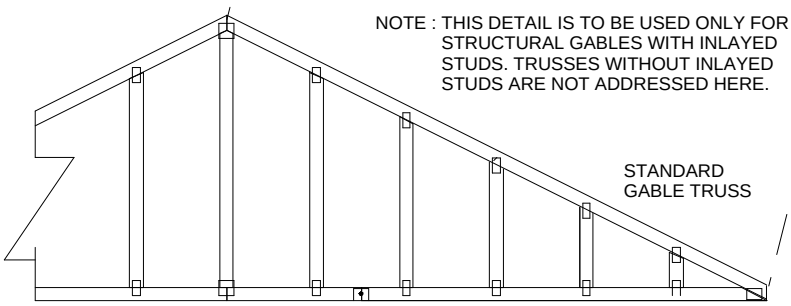


Review for Code Compliance
Universal Engineering Science

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.

PE-2707 07/05/2022
Examiner License No.

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



This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

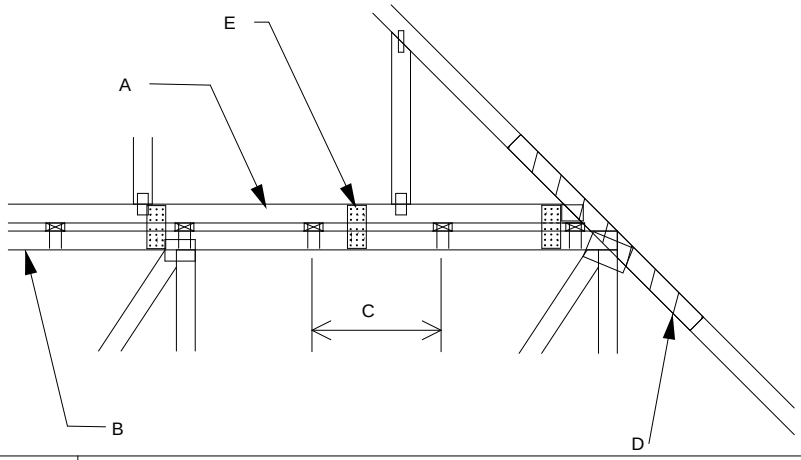
April 2,2021

MiTek USA, Inc.

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
ENCLOSED BUILDING
LOADING = 5 PSF TCDL
ASCE 7-10, ASCE 7-16
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.

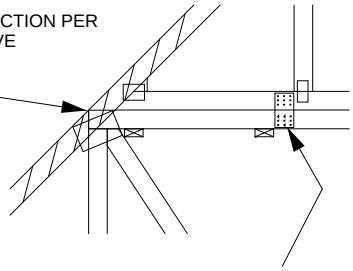
A - PIGGBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING. SHALL BE CONNECTED TO EACH PURLIN WITH (2) (0.131" X 3.5") TOE-NAILED.
B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C. UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING. CONNECT TO BASE TRUSS WITH (2) (0.131" X 3.5") NAILS EACH.
D - 2 X __ X 4'-0" SCAB, SIZE TO MATCH TOP CHORD OF PIGGYBACK TRUSS, MIN GRADE #2, 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 180 MPH WITH A MAXIMUM PIGGYBACK SPAN OF 12 ft.
E - FOR WIND SPEEDS BETWEEN 116 AND 180 MPH, ATTACH MITEK NP37 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT 72" O.C. W/ (4) (0.131" X 1.5") NAILS PER MEMBER. STAGGER NAILS FROM OPPOSING FACES. ENSURE 0.5" NAIL EDGE DISTANCE. (MIN. 2 PAIRS OF PLATES REQ. REGARDLESS OF SPAN)



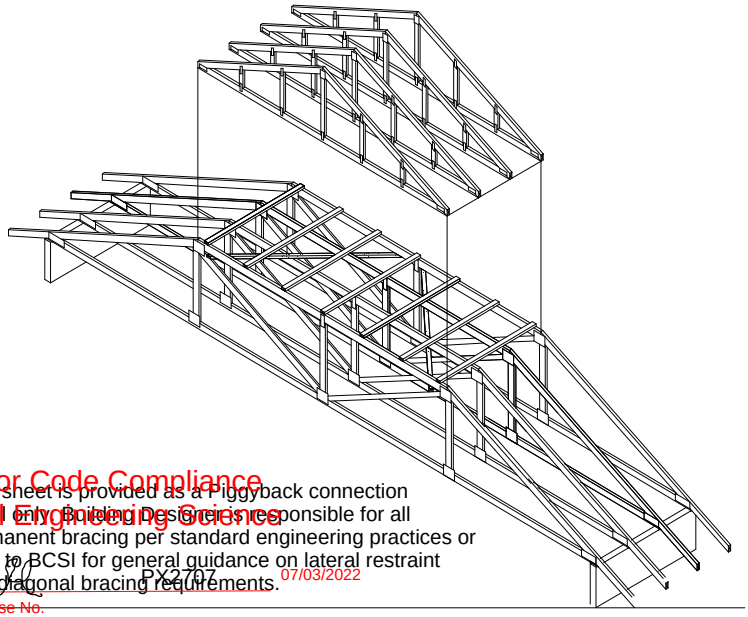
WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

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



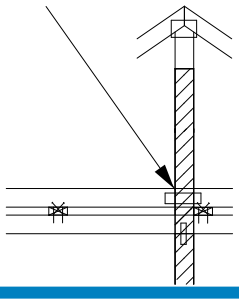
FOR ALL WIND SPEEDS, ATTACH MITEK NP37 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT 48" O.C. W/ (4) (0.131" X 1.5") PER MEMBER. STAGGER NAILS FROM OPPOSING FACES ENSURE 0.5" NAIL EDGE DISTANCE.



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.

Review for Code Compliance
Universal Engineering Sciences
PX2767 07/03/2022
Examiner License No.

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.

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

JANUARY 8, 2019	STANDARD PIGGYBACK TRUSS CONNECTION DETAIL	MII-PIGGY-ALT-7-16 T23399816

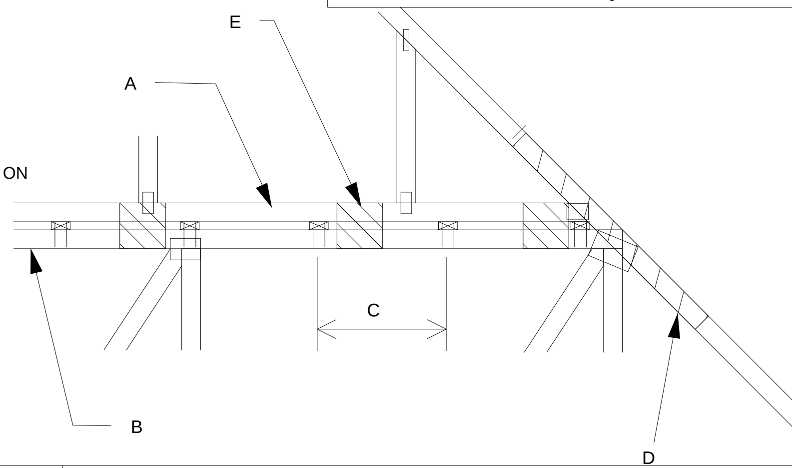
MiTek USA, Inc. Page 1 of 1

MiTek USA, Inc.

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
ENCLOSED BUILDING
LOADING = 5 PSF TCDL MINIMUM
ASCE 7-10, ASCE 7-16
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.

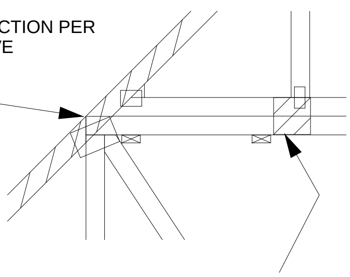
A - PIGGBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING. SHALL BE CONNECTED TO EACH PURLIN WITH (2) 0(0.131" X 3.5") TOE-NAILED.
B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C. UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING. CONNECT TO BASE TRUSS WITH (2) (0.131" X 3.5") NAILS EACH.
D - 2 X __ X 4'-0" SCAB, SIZE TO MATCH TOP CHORD OF PIGGYBACK TRUSS, MIN GRADE #2, 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 180 MPH WITH A MAXIMUM PIGGYBACK SPAN OF 12 ft.
E - FOR WIND SPEED IN THE RANGE 116 MPH - 180 MPH ADD 9" x 9" x 1/2" PLYWOOD (or 7/16" OSB) GUSSET EACH SIDE AT 48" O.C. OR LESS. ATTACH WITH 3 - 6d (0.113" X 2") NAILS INTO EACH CHORD FROM EACH SIDE (TOTAL - 12 NAILS)



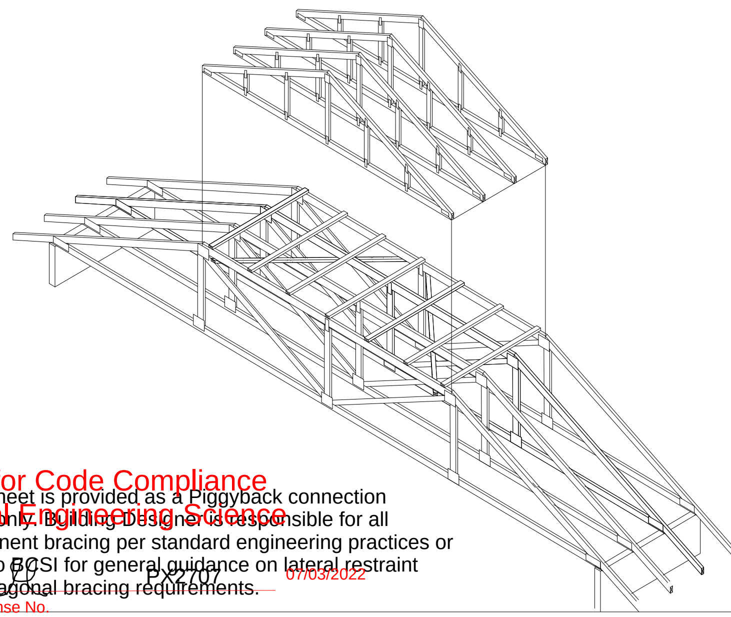
WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

REPLACE TOE NAILING OF PIGGYBACK TRUSS TO PURLINS WITH PLYWOOD GUSSETS 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



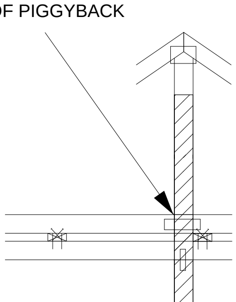
7" x 7" x 1/2" PLYWOOD (or 7/16" OSB) GUSSET EACH SIDE AT 24" O.C. ATTACH WITH 3 - 6d (0.113" X 2") NAILS INTO EACH CHORD FROM EACH SIDE (TOTAL - 12 NAILS)



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.

Review for Code Compliance
Universal Engineering Science
PX2707 07/03/2022
Examiner-License No.

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.

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

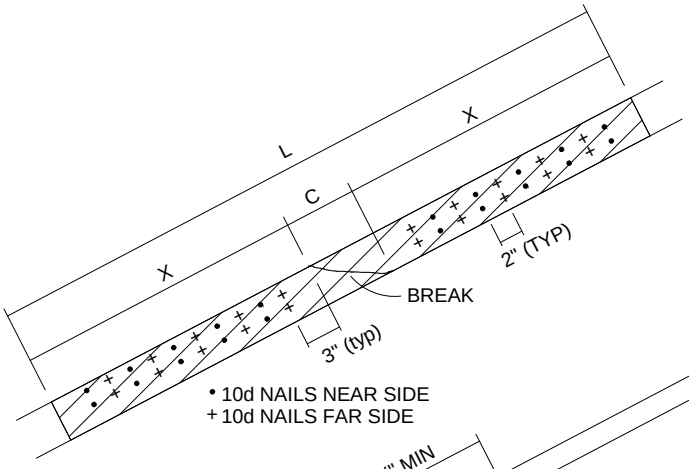
MiTek USA, Inc.

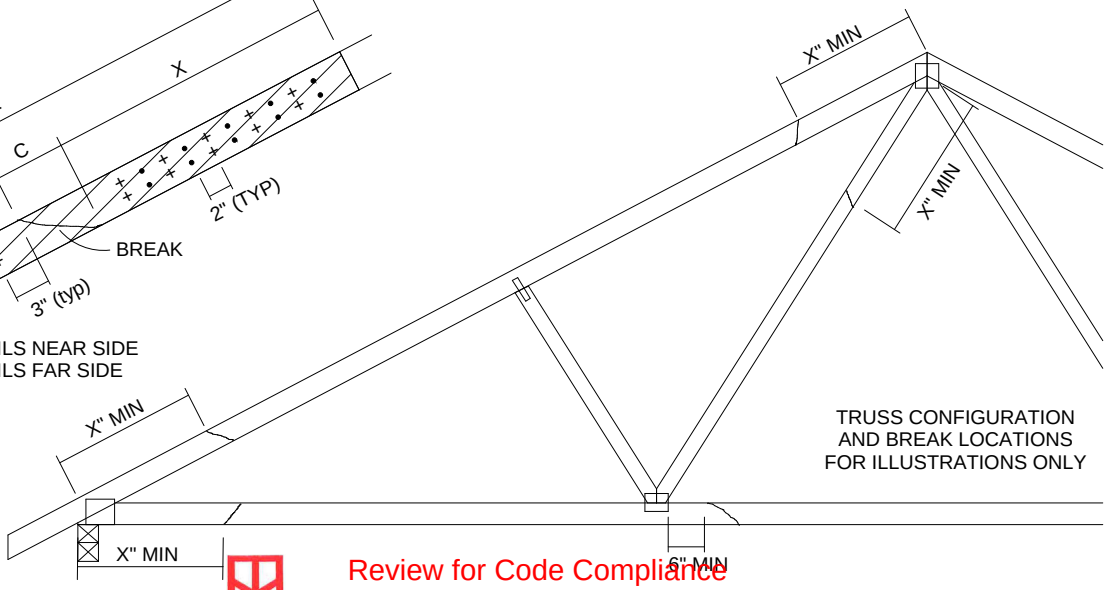
TOTAL NUMBER OF NAILS EACH SIDE OF BREAK *		X INCHES	MAXIMUM FORCE (lbs) 15% LOAD DURATION							
			SP		DF		SPF		HF	
2x4	2x6		2x4	2x6	2x4	2x6	2x4	2x6	2x4	2x6
20	30	24"	1706	2559	1561	2342	1320	1980	1352	2028
26	39	30"	2194	3291	2007	3011	1697	2546	1738	2608
32	48	36"	2681	4022	2454	3681	2074	3111	2125	3187
38	57	42"	3169	4754	2900	4350	2451	3677	2511	3767
44	66	48"	3657	5485	3346	5019	2829	4243	2898	4347

* DIVIDE EQUALLY FRONT AND BACK

ATTACH 2x_ SCAB OF THE SAME SIZE AND GRADE AS THE BROKEN MEMBER TO EACH FACE OF THE TRUSS (CENTER ON BREAK OR SPLICE) WITH 10d (0.131" X 3") NAILS (TWO ROWS FOR 2x4, THREE ROWS FOR 2x6) SPACED 4" O.C. AS SHOWN. STAGGER NAIL SPACING FROM FRONT FACE AND BACK FACE FOR A NET 0-2-0 O.C. SPACING IN THE MAIN MEMBER. USE A MIN. 0-3-0 MEMBER END DISTANCE.

THE LENGTH OF THE BREAK (C) SHALL NOT EXCEED 12". (C=PLATE LENGTH FOR SPLICE REPAIRS)
THE MINIMUM OVERALL SCAB LENGTH REQUIRED (L) IS CALCULATED AS FOLLOWS:
L = (2) X + C





TRUSS CONFIGURATION AND BREAK LOCATIONS FOR ILLUSTRATIONS ONLY

Review for Code Compliance
Universal Engineering Science

THE LOCATION OF THE BREAK MUST BE GREATER THAN OR EQUAL TO THE REQUIRED X DIMENSION FROM ANY PERIMETER BREAK OR HEEL JOINT AND A MINIMUM OF 6" FROM ANY INTERIOR JOINT (SEE SKETCH ABOVE)

DO NOT USE REPAIR FOR JOINT SPLICES

PX2707 07/03/2022
Examiner-License No.

NOTES:
1. THIS REPAIR DETAIL IS TO BE USED ONLY FOR THE APPLICATION SHOWN. THIS REPAIR DOES NOT IMPLY THAT THE REMAINING PORTION OF THE TRUSS IS UNDAMAGED. THE ENTIRE TRUSS SHALL BE INSPECTED TO VERIFY THAT NO FURTHER REPAIRS ARE REQUIRED. WHEN THE REQUIRED REPAIRS ARE PROPERLY APPLIED, THE TRUSS WILL BE CAPABLE OF SUPPORTING THE LOADS INDICATED.
2. ALL MEMBERS MUST BE RETURNED TO THEIR ORIGINAL POSITIONS BEFORE APPLING REPAIR AND HELD IN PLACE DURING APPLICATION OF REPAIR.
3. THE END DISTANCE, EDGE DISTANCE AND SPACING OF NAILS SHALL BE SUCH AS TO AVOID UNUSUAL SPLITTING OF THE WOOD.
4. WHEN NAILING THE SCABS, THE USE OF A BACKUP WEIGHT IS RECOMMENDED TO AVOID LOOSENING OF THE CONNECTOR PLATES AT THE JOINTS OR SPLICES.
5. THIS REPAIR IS TO BE USED FOR SINGLE PLY TRUSSES IN THE 2x_ ORIENTATION ONLY.
6. THIS REPAIR IS LIMITED TO TRUSSES WITH NO MORE THAN THREE BROKEN MEMBERS.

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

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.

THIS DETAIL APPLICABLE TO THE THREE END DETAILS SHOWN BELOW

VIEWS SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY

TOE-NAIL SINGLE SHEAR VALUES PER NDS 2018 (lb/nail)

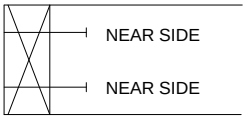
	DIAM.	SP	DF	HF	SPF	SPF-S
3.5" LONG	.131	88.0	80.6	69.9	68.4	59.7
	.135	93.5	85.6	74.2	72.6	63.4
	.162	108.8	99.6	86.4	84.5	73.8
3.25" LONG	.128	74.2	67.9	58.9	57.6	50.3
	.131	75.9	69.5	60.3	59.0	51.1
	.148	81.4	74.5	64.6	63.2	52.5

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

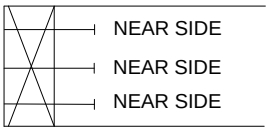
EXAMPLE:
(3) - 16d (0.162" X 3.5") NAILS WITH SPF SPECIES BOTTOM CHORD

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

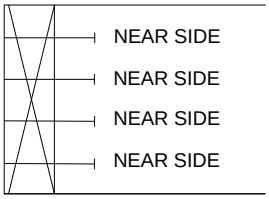
SIDE VIEW
(2x3)
2 NAILS

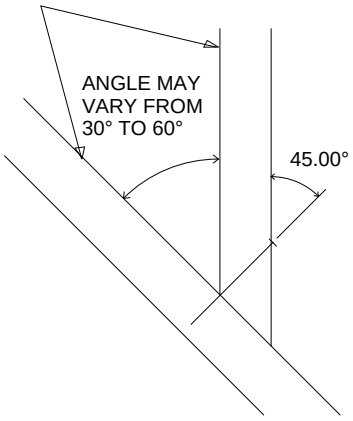


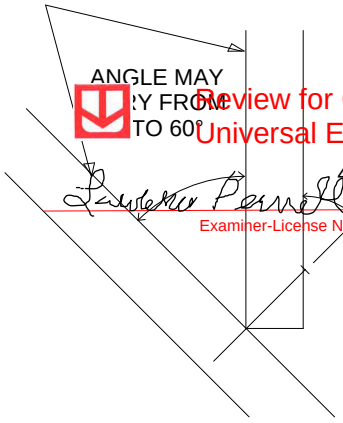
SIDE VIEW
(2x4)
3 NAILS

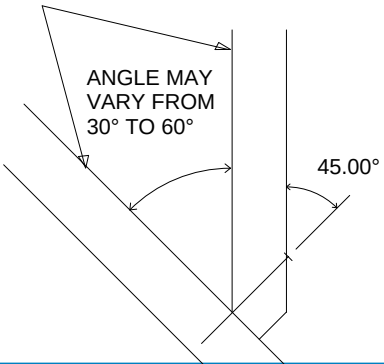


SIDE VIEW
(2x6)
4 NAILS









Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No. Date

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

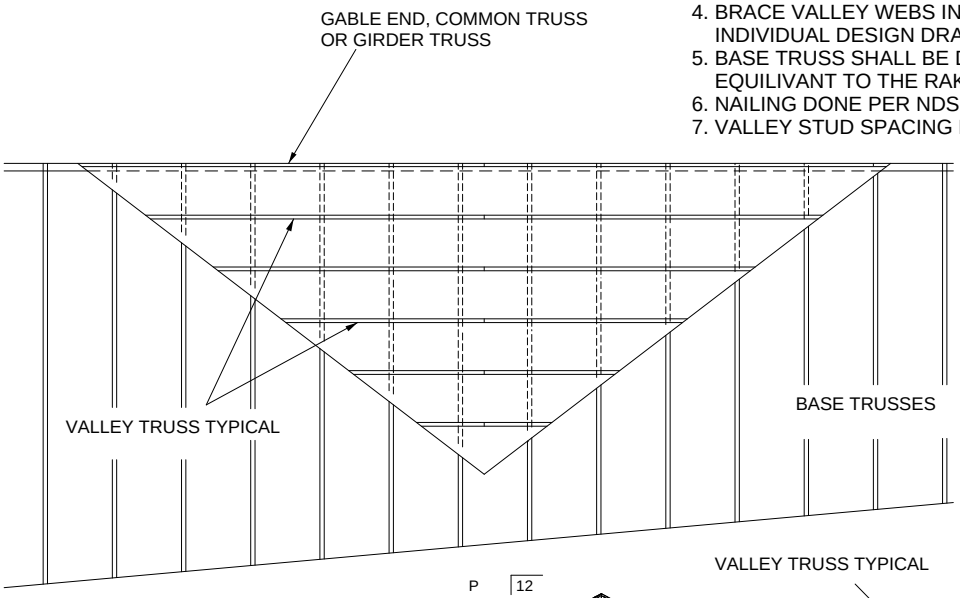
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

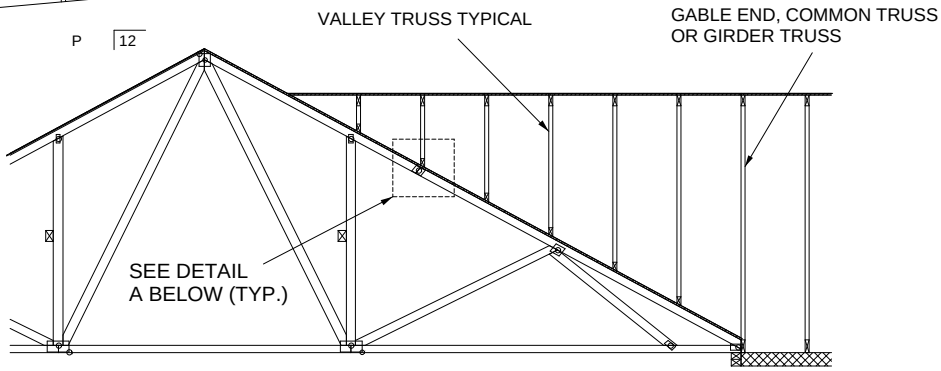
MiTek USA, Inc.

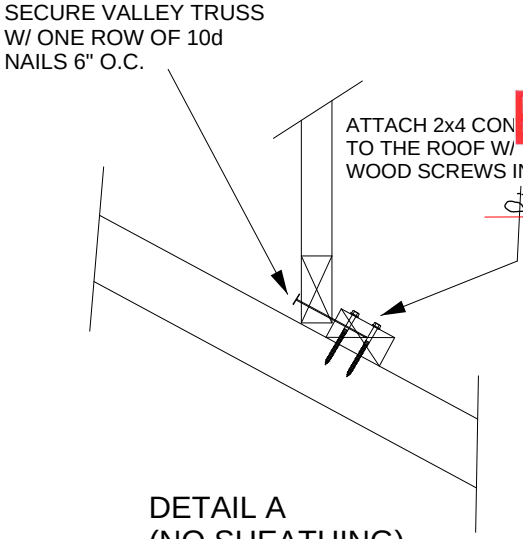
MiTek USA, Inc.

GENERAL SPECIFICATIONS

1. NAIL SIZE 10d (0.131" X 3")
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.







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

WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 146 MPH
WIND DESIGN PER ASCE 7-10, ASCE 7-16 160 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

Review for Code Compliance
Universal Engineering Science

PX2707 07/02/2021
Examiner-License No.

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

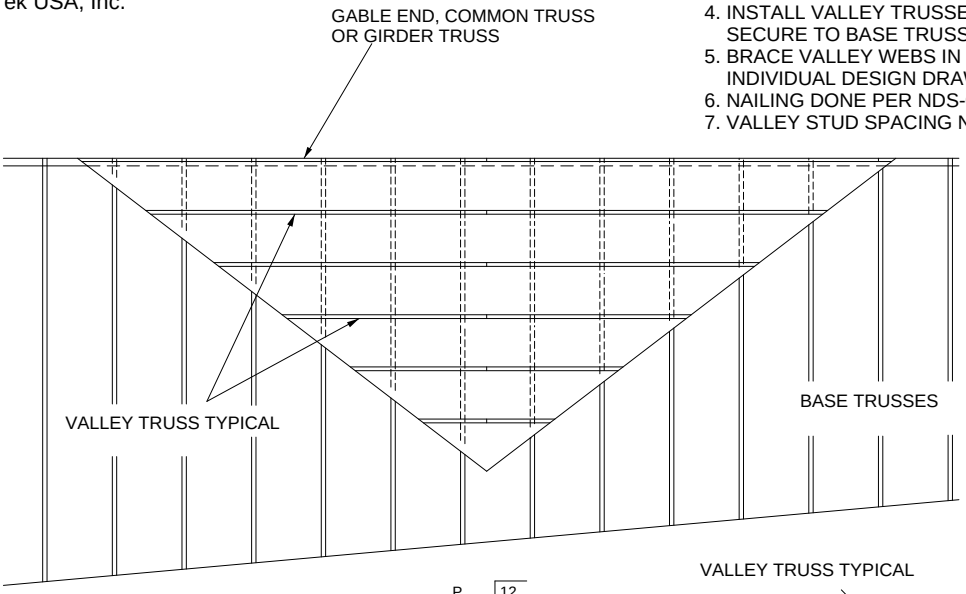
APRIL 12, 2019	TRUSSED VALLEY SET DETAIL	MII-VALLEY HIGH WIND2 T23399820

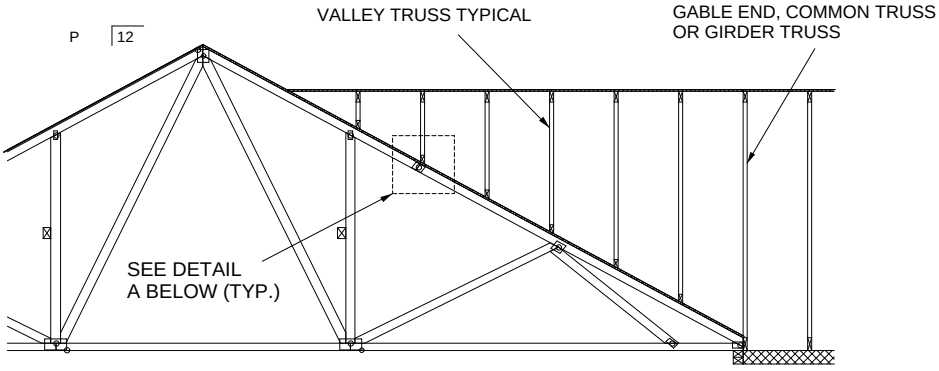
MiTek USA, Inc.

MiTek USA, Inc.

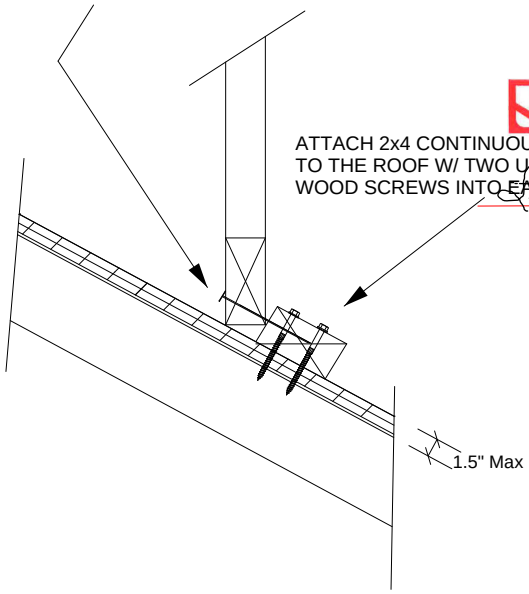
GENERAL SPECIFICATIONS

1. NAIL SIZE 10d (0.131" X 3")
2. WOOD SCREW = 4.5" WS45 USP OR EQUILIVANT
3. INSTALL SHEATHING TO TOP CHORD OF BASE TRUSSES.
4. INSTALL VALLEY TRUSSES (24" O.C. MAXIMUM) AND SECURE TO BASE TRUSSES AS PER DETAIL A
5. BRACE VALLEY WEBS IN ACCORDANCE WITH THE INDIVIDUAL DESIGN DRAWINGS.
6. NAILING DONE PER NDS-01
7. VALLEY STUD SPACING NOT TO EXCEED 48" O.C.





SECURE VALLEY TRUSS W/ ONE ROW OF 10d NAILS 6" O.C.



WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 146 MPH
WIND DESIGN PER ASCE 7-10, ASCE 7-16 160 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

Examiner-License No. PX2707 07/08/2022

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

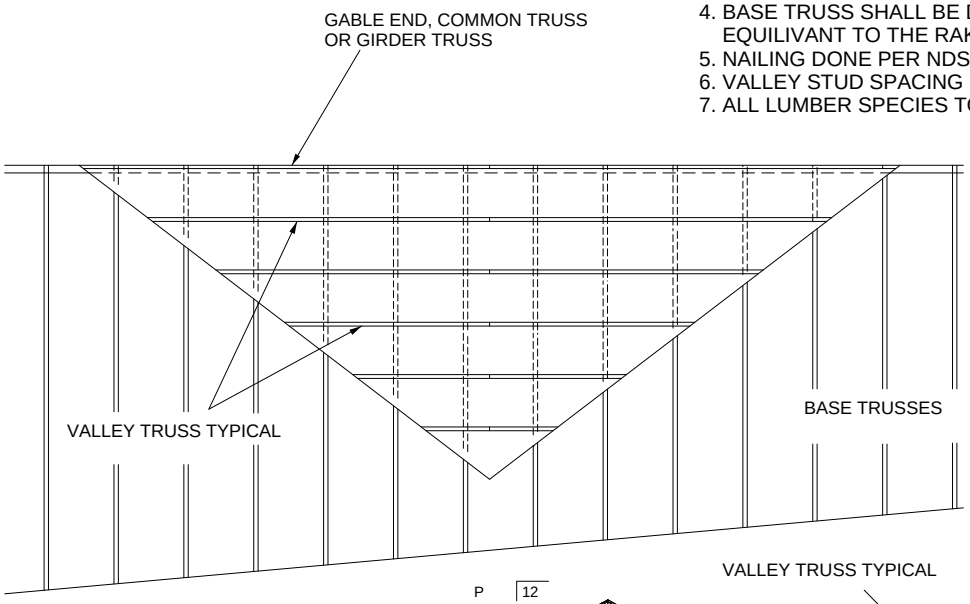
APRIL 12, 2019	TRUSSED VALLEY SET DETAIL	MII-VALLEY SP T23399821

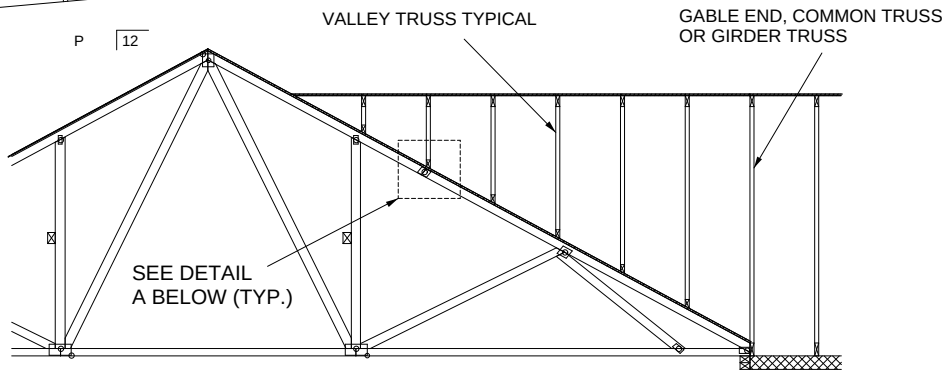
MiTek USA, Inc.

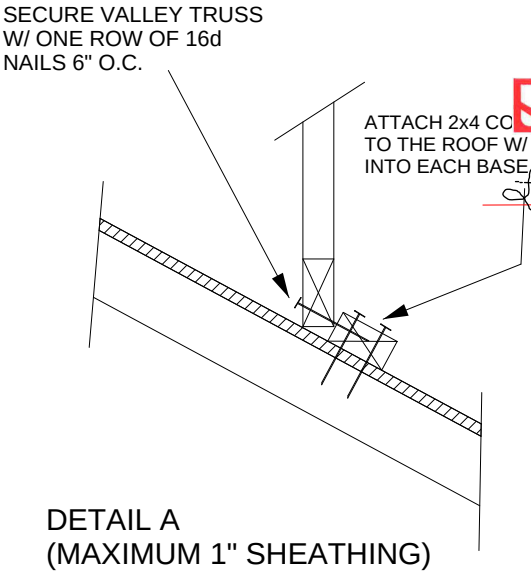
MiTek USA, Inc.

GENERAL SPECIFICATIONS

1. NAIL SIZE 16d (0.131" X 3.5")
2. INSTALL VALLEY TRUSSES (24" O.C. MAXIMUM) AND SECURE PER DETAIL A
3. BRACE VALLEY WEBS IN ACCORDANCE WITH THE INDIVIDUAL DESIGN DRAWINGS.
4. BASE TRUSS SHALL BE DESIGNED WITH A PURLIN SPACING EQUILIVANT TO THE RAKE DIMENSION OF THE VALLEY TRUSS SPACING.
5. NAILING DONE PER NDS - 01
6. VALLEY STUD SPACING NOT TO EXCEED 48" O.C.
7. ALL LUMBER SPECIES TO BE SP.







DETAIL A
(MAXIMUM 1" SHEATHING)
N.T.S.

WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 120 MPH
WIND DESIGN PER ASCE 7-10, ASCE 7-16 150 MPH
MAX MEAN ROOF HEIGHT = 30 FEET
ROOF OPTIONS MINIMUM 3/12 MAXIMUM 10/12
CATEGORY II BUILDING
EXPOSURE C OR B
WIND DURATION OF LOAD INCREASE : 1.60
MAX TOP CHORD TOTAL LOAD = 60 PSF
MAX SPACING = 24" O.C. (BASE AND VALLEY)
MINIMUM REDUCED DEAD LOAD OF 4.2 PSF
ON THE TRUSSES

Examiner-License No. PA2707 07/05/2022

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

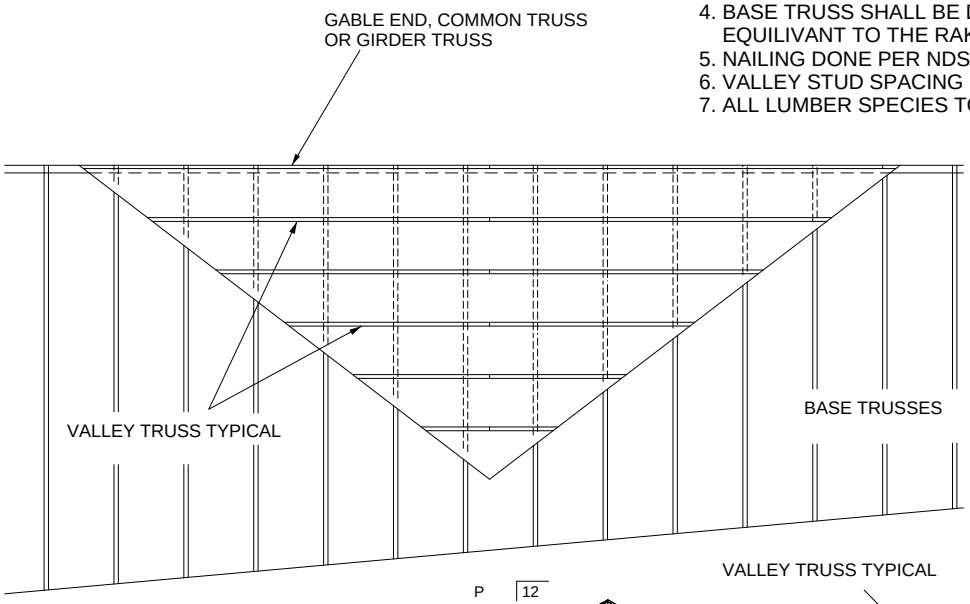
April 2,2021

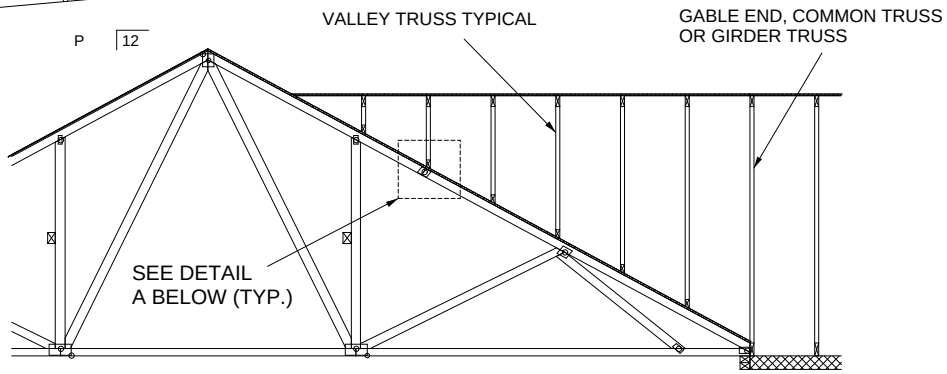
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

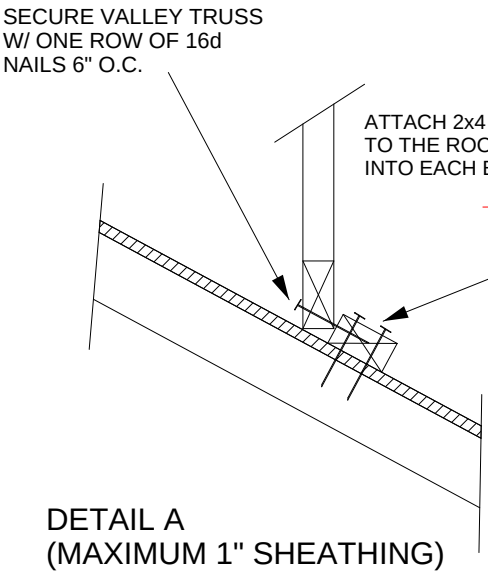
MiTek USA, Inc.

GENERAL SPECIFICATIONS

1. NAIL SIZE 16d (0.131" X 3.5")
2. INSTALL VALLEY TRUSSES (24" O.C. MAXIMUM) AND SECURE PER DETAIL A
3. BRACE VALLEY WEBS IN ACCORDANCE WITH THE INDIVIDUAL DESIGN DRAWINGS.
4. BASE TRUSS SHALL BE DESIGNED WITH A PURLIN SPACING EQUILIVANT TO THE RAKE DIMENSION OF THE VALLEY TRUSS SPACING.
5. NAILING DONE PER NDS - 01
6. VALLEY STUD SPACING NOT TO EXCEED 48" O.C.
7. ALL LUMBER SPECIES TO BE SP.







DETAIL A
(MAXIMUM 1" SHEATHING)
N.T.S.

WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 120 MPH
WIND DESIGN PER ASCE 7-10, ASCE 7-16 150 MPH
MAX MEAN ROOF HEIGHT = 30 FEET
ROOF PITCH = MINIMUM 3/12 MAXIMUM 10/12
CATEGORY II BUILDING
EXPOSURE C OR B
WIND DURATION OF LOAD INCREASE : 1.60
MAX TOP CHORD TOTAL LOAD = 60 PSF
MAX SPACING = 24" O.C. (BASE AND VALLEY)
MINIMUM REDUCED DEAD LOAD OF 4.2 PSF ON THE TRUSSES

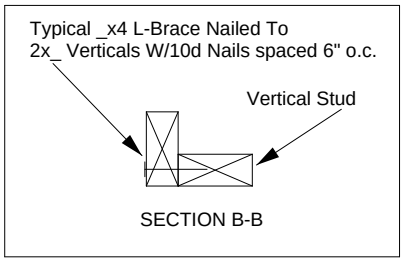
This item has been electronically signed and sealed by ORegan, Philip, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

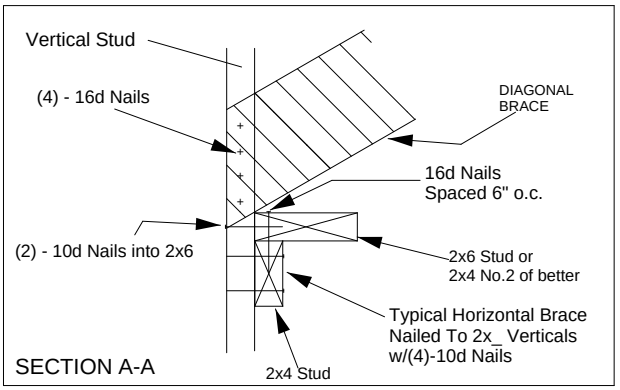
Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

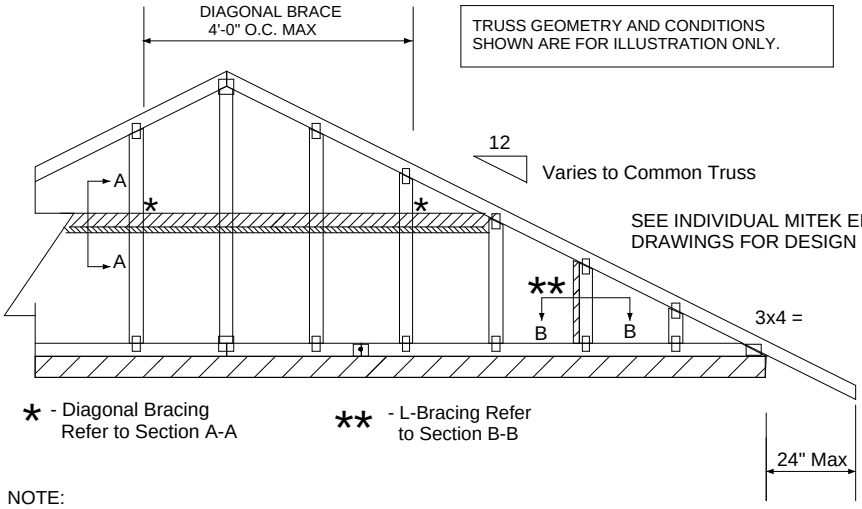
April 2,2021

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

MiTek USA, Inc.

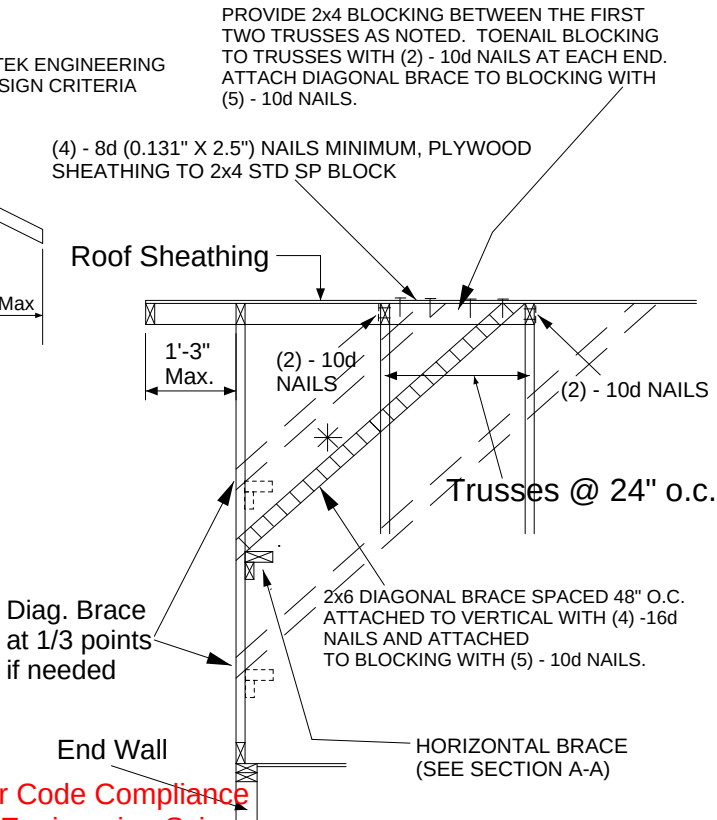






* - Diagonal Bracing Refer to Section A-A

** - 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: 2x4 No 3/STUD SP 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.
10. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

Minimum Stud Size Species and Grade	Stud Spacing	Without Brace	2x4 L-Brace	DIAGONAL BRACE	2 DIAGONAL BRACES AT 1/3 POINTS
		Maximum Stud Length			
2x4 SP No 3/Stud	12" O.C.	3-11-3	6-8-0	7-2-14	11-9-10
2x4 SP No 3/Stud	16" O.C.	3-6-14	5-9-5	7-1-13	10-8-11
2x4 SP No 3/Stud	24" O.C.	3-1-8	4-8-9	6-2-15	9-4-7

✳ 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 nails 8" o.c., with 3" minimum end distance. Brace must cover 90% of diagonal length.

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

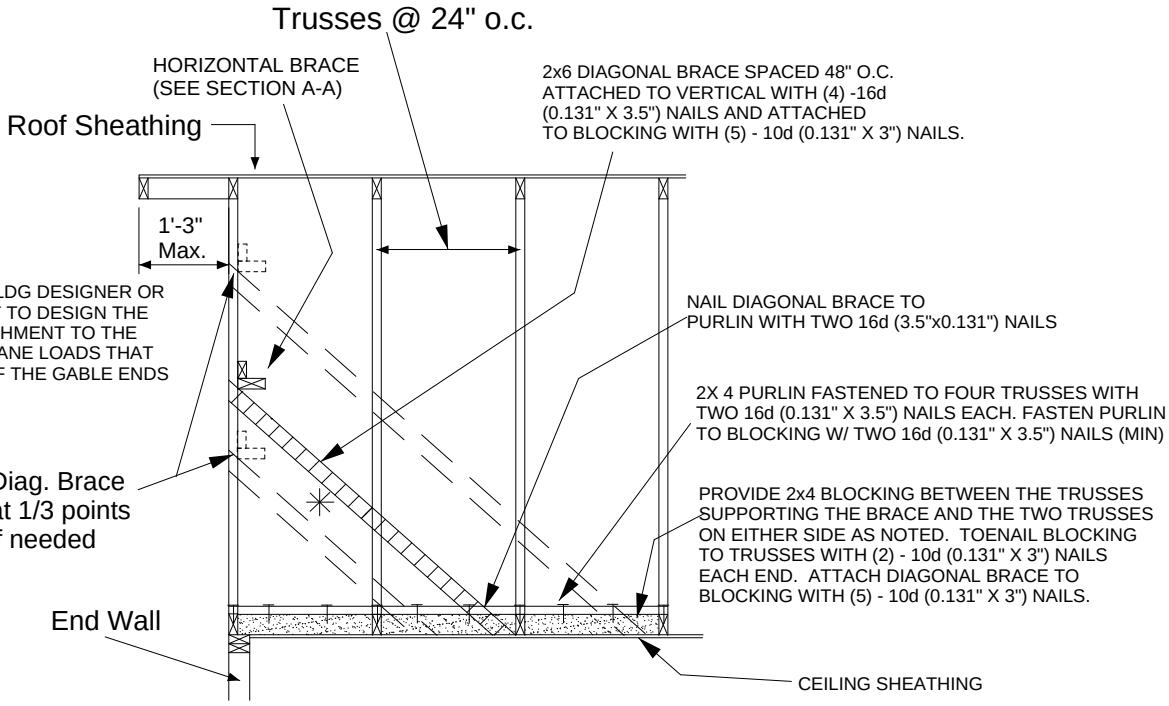
MAXIMUM WIND SPEED = 146 MPH
MAX MEAN ROOF HEIGHT = 30 FEET
CATEGORY II BUILDING
EXPOSURE B or C
ASCE 7-98, ASCE 7-02, ASCE 7-05
DURATION OF LOAD INCREASE 1.60

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

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

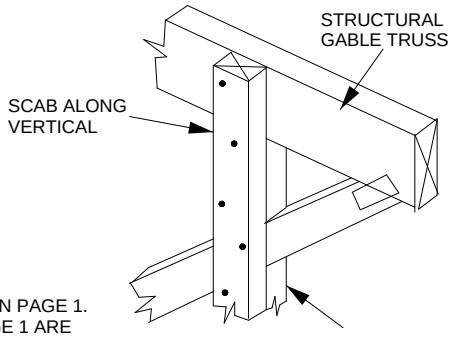
MiTek USA, Inc.

ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD

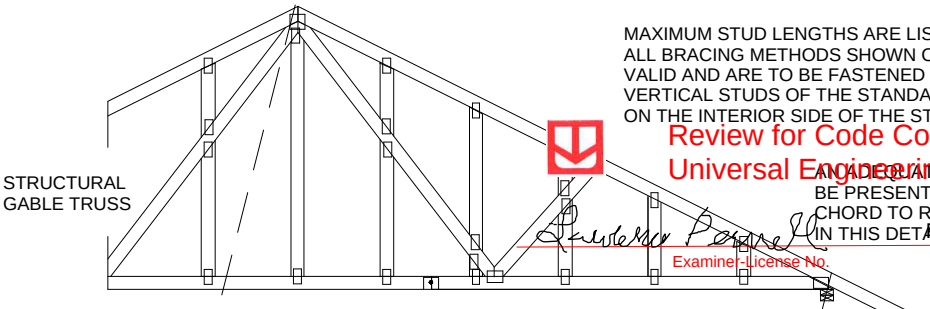


BRACING REQUIREMENTS FOR STRUCTURAL GABLE TRUSSES

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, 16) OR LESS, NAIL ALL MEMBERS WITH ONE ROW OF 10d (0.131" X 3") NAILS SPACED 6" O.C.
- FOR WIND SPEEDS 120-150 MPH (ASCE 7-98, 02, 05), 150-190 MPH (ASCE 7-10, 16) NAIL ALL MEMBERS WITH TWO ROWS OF 10d (0.131" 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.

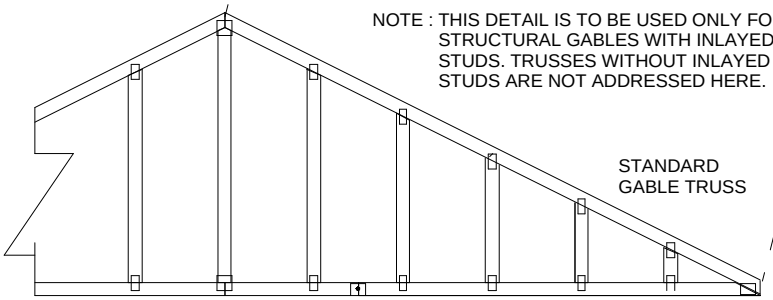


Review for Code Compliance
Universal Engineering Sciences

Examiner License No.

AT LEAST ONE DIAGONAL 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.



This item has been electronically signed and sealed by ORegan, Philip, 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.

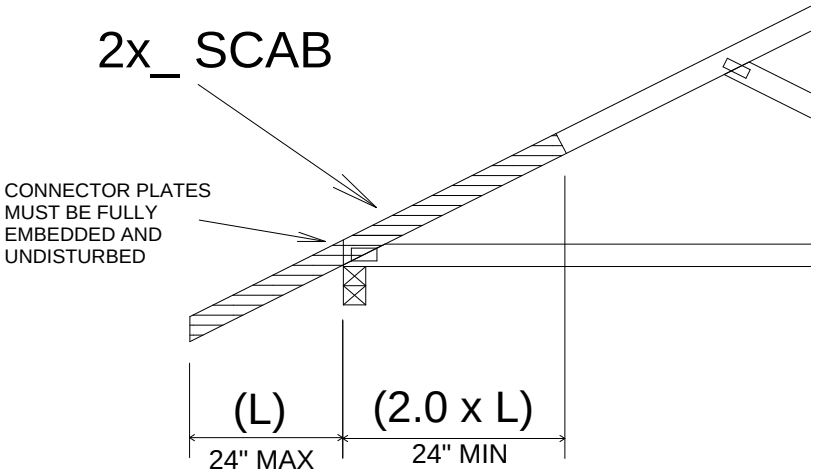
Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

MiTek USA, Inc.

TRUSS CRITERIA:
- LOADING: 40-10-0-10
- DURATION FACTOR: 1.15
- SPACING: 24" O.C.
- TOP CHORD: 2x4 OR 2x6
- PITCH: 4/12 - 12/12
- HEEL HEIGHT: STANDARD HEEL UP TO 12" ENERGY HEEL
- END BEARING CONDITION

NOTES:
1. ATTACH 2x_ SCAB (MINIMUM NO.2 GRADE SPF, HF, SP, DF) TO ONE FACE OF TRUSS WITH TWO ROWS OF 10d (0.131" X 3") SPACED 6" O.C.
2. THE END DISTANCE, EDGE DISTANCE, AND SPACING OF NAILS SHALL BE SUCH AS TO AVOID UNUSUAL SPLITTING OF THE WOOD.
3. WHEN NAILING THE SCABS, THE USE OF A BACKUP WEIGHT IS RECOMMENDED TO AVOID LOOSENING OF THE CONNECTOR PLATES AT THE JOINTS OR SPLICES.



Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

IMPORTANT
This detail to be used only with trusses (spans less than 40') spaced 24" o.c. maximum and having pitches between 4/12 and 12/12 and total top chord loads not exceeding 50 psf.
Trusses not fitting these criteria should be examined individually.

REFER TO INDIVIDUAL TRUSS DESIGN FOR PLATE SIZES AND LUMBER GRADES

This item has been electronically signed and sealed by ORegan, Philip, 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.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022

Examiner-License No.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

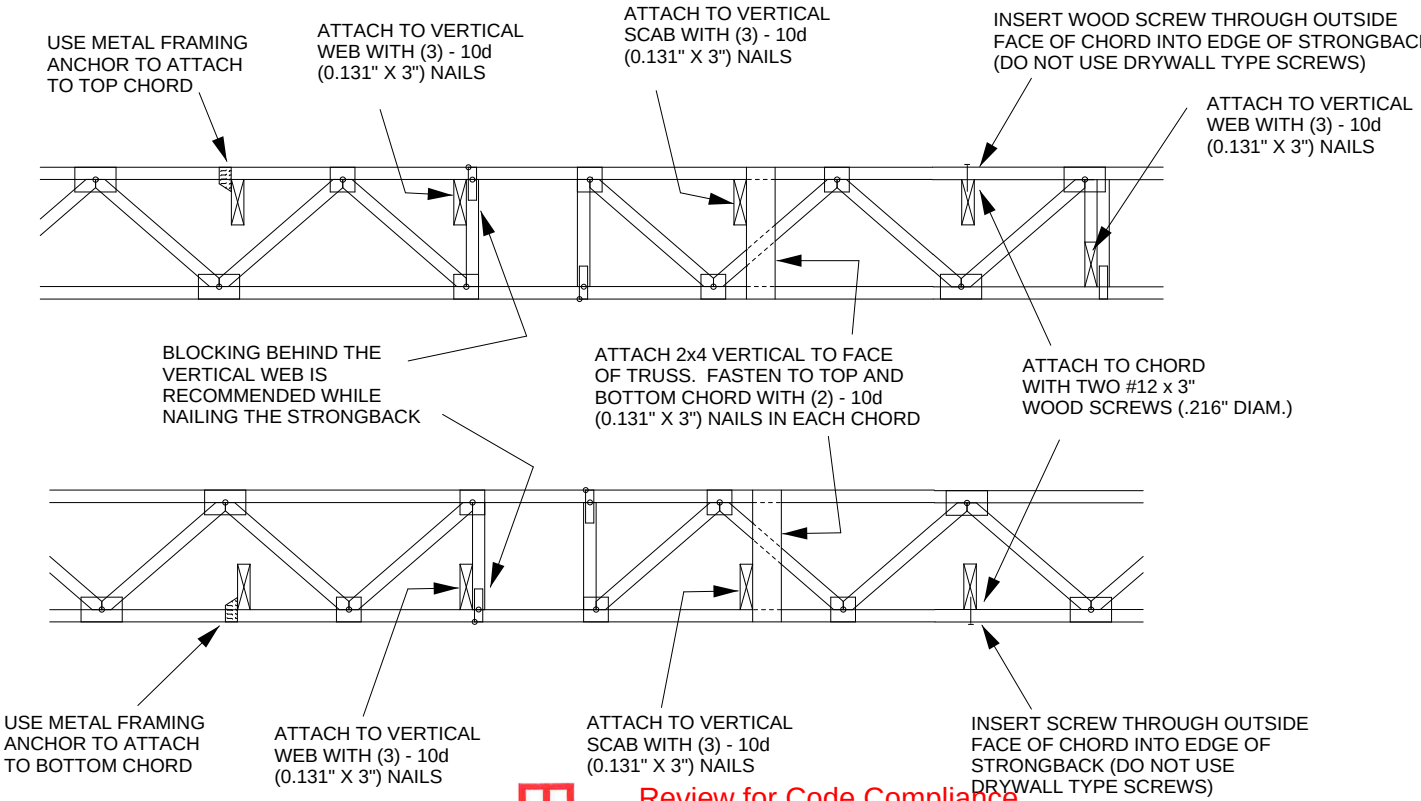
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

MiTek USA, Inc.

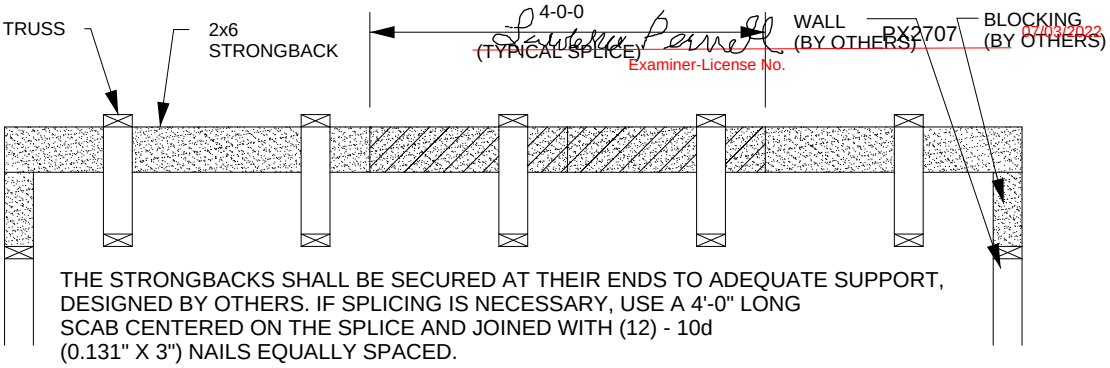
TO MINIMIZE VIBRATION COMMON TO ALL SHALLOW FRAMING SYSTEMS, 2x6 "STRONGBACK" IS RECOMMENDED, LOCATED EVERY 8 TO 10 FEET ALONG A FLOOR TRUSS.

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.



Review for Code Compliance
Universal Engineering Science



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 (0.131" X 3") NAILS EQUALLY SPACED.

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

PX2707 4/19/2022
Examiner-License No.

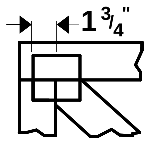
This item has been electronically signed and sealed by ORegan, Philip, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

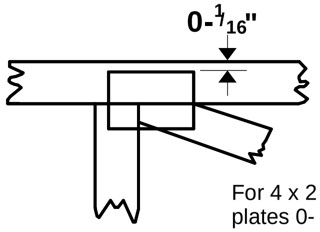
April 2,2021

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.

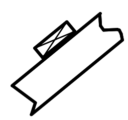
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

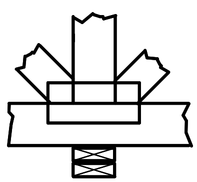
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

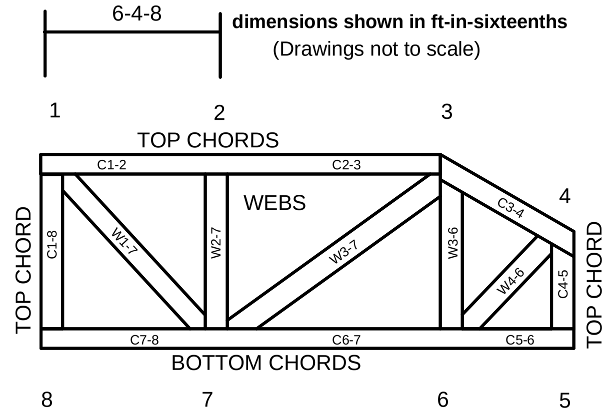


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.

Review for Code Compliance
Universal Engineering Science
PX2207 07/13/2022
Examiner-License No

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

RE: 3100342 -

MiTek USA, Inc.
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Site Information:

Customer Info: Amira Builders Project Name: Ballard Res. Model: Custom
Lot/Block: Tbd Subdivision: Ballard Res.
Address: Tbd, .
City: Alachua 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: FBC2020/TPI2014 Design Program: MiTek 20/20 8.5
Wind Code: ASCE 7-16 Wind Speed: 140 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 67 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	No.	Seal#	Truss Name	Date
1	T28096057	A01	6/24/22	15	T28096071	B03	6/24/22
2	T28096058	A02	6/24/22	16	T28096072	B04	6/24/22
3	T28096059	A03	6/24/22	17	T28096073	C01	6/24/22
4	T28096060	A04	6/24/22	18	T28096074	C02	6/24/22
5	T28096061	A05	6/24/22	19	T28096075	C03	6/24/22
6	T28096062	A06	6/24/22	20	T28096076	C04	6/24/22
7	T28096063	A07	6/24/22	21	T28096077	C04A	6/24/22
8	T28096064	A08	6/24/22	22	T28096078	C05	6/24/22
9	T28096065	A09	6/24/22	23	T28096079	C06	6/24/22
10	T28096066	A10	6/24/22	24	T28096080	C07	6/24/22
11	T28096067	A11	6/24/22	25	T28096081	C08	6/24/22
12	T28096068	A12	6/24/22	26	T28096082	D01	6/24/22
13	T28096069	B01	6/24/22	27	T28096083	D02	6/24/22
14	T28096070	B02	6/24/22	28	T28096084	D02A	6/24/22

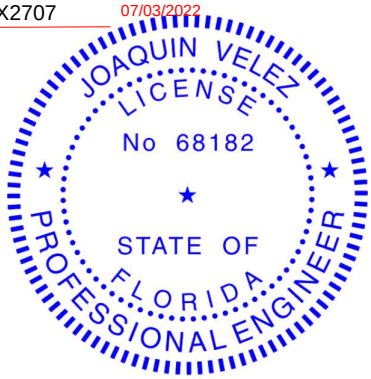
This item has been electronically signed and sealed by Velez, Joaquin, PE using a Digital Signature.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

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 (Groveland, FL).

Truss Design Engineer's Name: Velez, Joaquin
My license renewal date for the state of Florida is February 28, 2023.



Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

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.

June 24,2022

RE: 3100342 -

MiTek USA, Inc.
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Site Information:

Customer Info: Amira Builders Project Name: Ballard Res. Model: Custom
Lot/Block: Tbd Subdivision: Ballard Res.
Address: Tbd, .
City: Alachua State: FL

No.	Seal#	Truss Name	Date
29	T28096085	D03	6/24/22
30	T28096086	D03A	6/24/22
31	T28096087	EJ02	6/24/22
32	T28096088	EJ02A	6/24/22
33	T28096089	EJ02B	6/24/22
34	T28096090	EJ02C	6/24/22
35	T28096091	G01	6/24/22
36	T28096092	G02	6/24/22
37	T28096093	M01	6/24/22
38	T28096094	M02	6/24/22
39	T28096095	M03	6/24/22
40	T28096096	PB01	6/24/22
41	T28096097	PB02	6/24/22
42	T28096098	PB03	6/24/22
43	T28096099	PB04	6/24/22
44	T28096100	PB05	6/24/22
45	T28096101	PB06	6/24/22
46	T28096102	PB07	6/24/22
47	T28096103	PB08	6/24/22
48	T28096104	PB09	6/24/22
49	T28096105	PB10	6/24/22
50	T28096106	T01	6/24/22
51	T28096107	T02	6/24/22
52	T28096108	T03	6/24/22
53	T28096109	V01	6/24/22
54	T28096110	V02	6/24/22
55	T28096111	V03	6/24/22
56	T28096112	V04	6/24/22
57	T28096113	V05	6/24/22
58	T28096114	V06	6/24/22
59	T28096115	V07	6/24/22
60	T28096116	V08	6/24/22
61	T28096117	V09	6/24/22
62	T28096118	V10	6/24/22
63	T28096119	V11	6/24/22
64	T28096120	V12	6/24/22
65	T28096121	V13	6/24/22
66	T28096122	V14	6/24/22
67	T28096123	V15	6/24/22

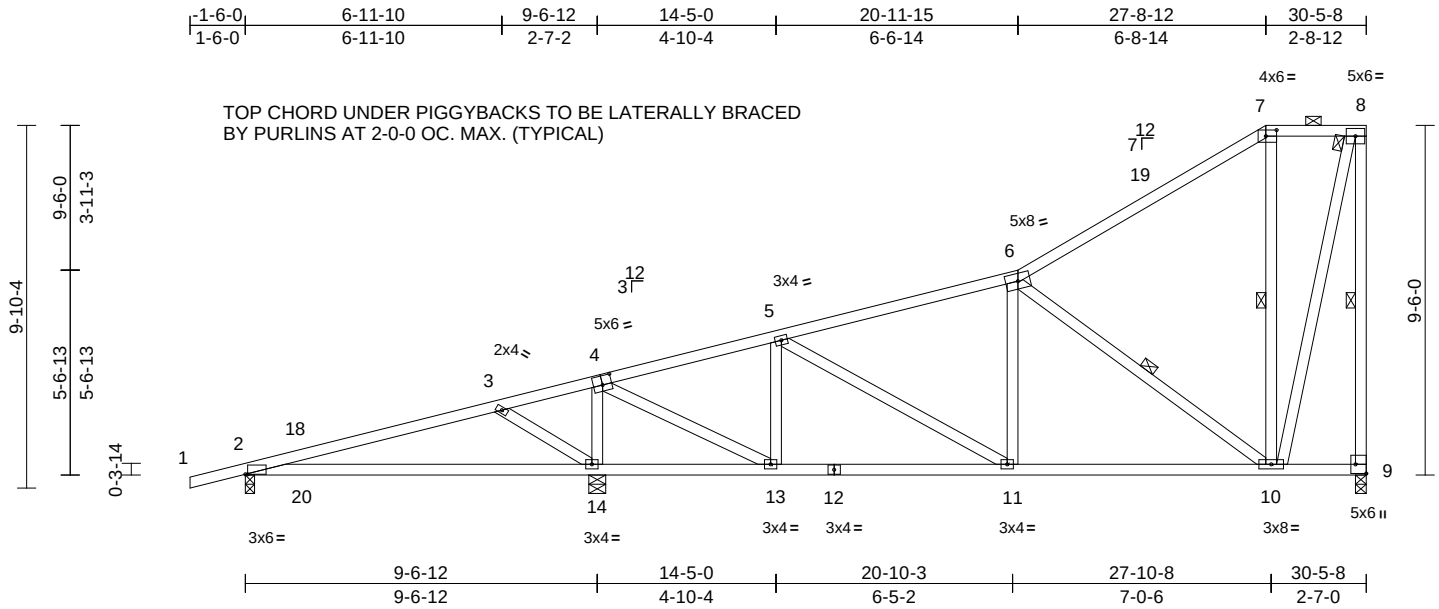
Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

Job	Truss	Truss Type	Qty	Ply	
3100342	A01	Piggyback Base	7	1	T28096057
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:14
ID:Mq4QbtEa0ptCntDX4aX86Az49_Z-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:62.6

Plate Offsets (X, Y): [2:0-0-12,Edge], [4:0-3-0,0-3-0], [7:0-3-8,0-2-0], [9:Edge,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.82	Vert(LL)	0.48	14-17	>241	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.46	Vert(CT)	-0.26	14-17	>443	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.75	Horz(CT)	-0.01	9	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 186 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP M 31 *Except* 12-9:2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 8-9:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-8.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 8-9, 6-10, 7-10

REACTIONS (lb/size) 2=345/0-3-0, 9=768/0-3-8, 14=1402/0-5-8
Max Horiz 2=579 (LC 9)
Max Uplift 2=-383 (LC 6), 9=-386 (LC 10), 14=-778 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-3=-234/329, 3-5=-719/462, 5-6=-821/396, 6-7=-420/260, 7-8=-355/339, 8-9=-760/547
BOT CHORD 2-14=-374/127, 13-14=-456/301, 11-13=-349/635, 10-11=-346/748, 9-10=-204/226
WEBS 5-13=-466/418, 5-11=-130/189, 6-11=0/238, 6-10=-692/466, 7-10=-282/298, 8-10=-440/755, 3-14=-509/670, 4-14=-937/565, 4-13=-594/1165

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-9, Interior (1) 1-6-9 to 24-8-3, Exterior(2R) 24-8-3 to 27-8-12, Exterior (2E) 27-8-12 to 30-3-12 zone; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 386 lb uplift at joint 9, 383 lb uplift at joint 2 and 778 lb uplift at joint 14.
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.
8) Graphic purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

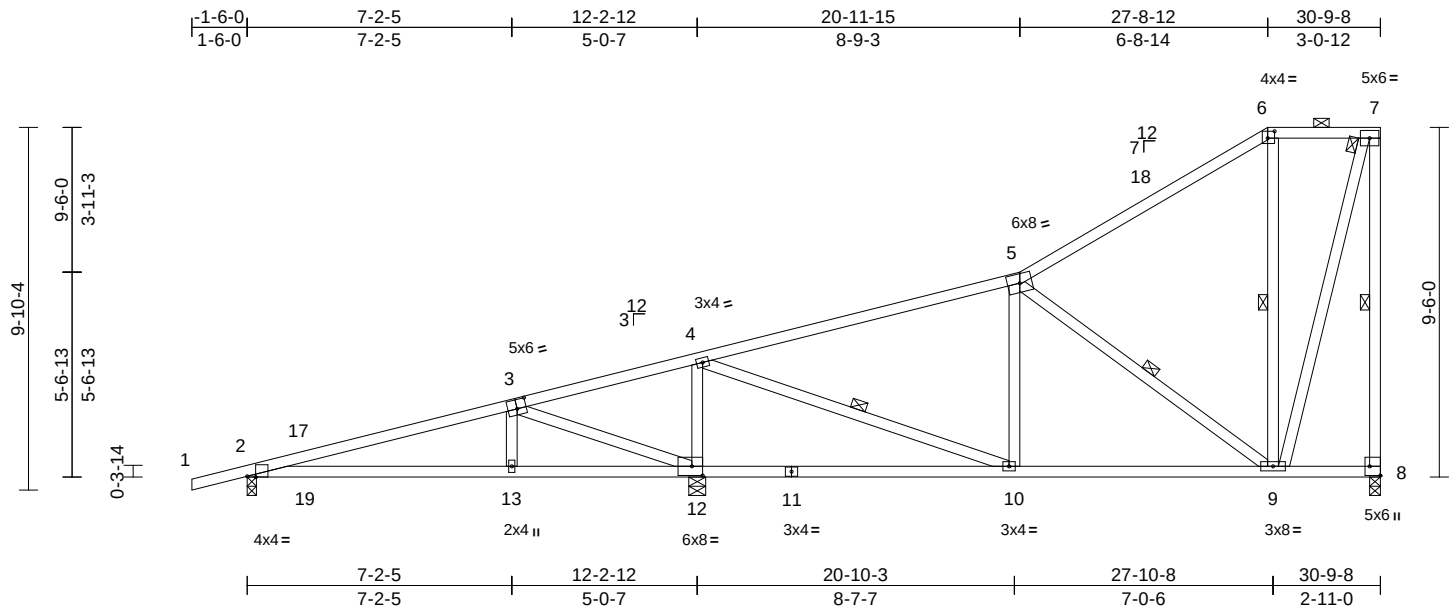
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	A02	Piggyback Base	4	1	T28096058
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:16 Page: 1
ID:EWCDA?TR49pH51KDK8O8Wgz49?Z-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:62.6

Plate Offsets (X, Y): [2:0-2-12,Edge], [3:0-3-0,0-3-0], [6:0-2-4,0-2-4], [8:Edge,0-3-8], [12:0-3-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.76	Vert(LL)	0.26	13-16	>563	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.62	Vert(CT)	-0.22	10-12	>996	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.61	Horz(CT)	-0.01	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 184 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 7-8:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-7.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 7-8, 4-10, 5-9, 6-9

REACTIONS (lb/size) 2=462/0-3-0, 8=655/0-3-8, 12=1424/0-5-8
Max Horiz 2=579 (LC 9)
Max Uplift 2=-454 (LC 6), 8=-319 (LC 10), 12=-856 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-686/858, 4-5=-715/225, 5-6=-412/242, 6-7=-343/319, 7-8=-640/440
BOT CHORD 2-13=-881/436, 12-13=-843/427, 10-12=-401/699, 9-10=-248/560, 8-9=-203/226
WEBS 3-13=-626/233, 3-12=-832/1648, 4-12=-997/800, 4-10=-757/965, 5-10=-156/360, 5-9=-491/353, 6-9=-271/289, 7-9=-352/615

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-15, Interior (1) 1-6-15 to 24-7-13, Exterior(2R) 24-7-13 to 27-8-12, Exterior(2E) 27-8-12 to 30-7-12 zone; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 319 lb uplift at joint 8, 454 lb uplift at joint 2 and 856 lb uplift at joint 12.
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.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

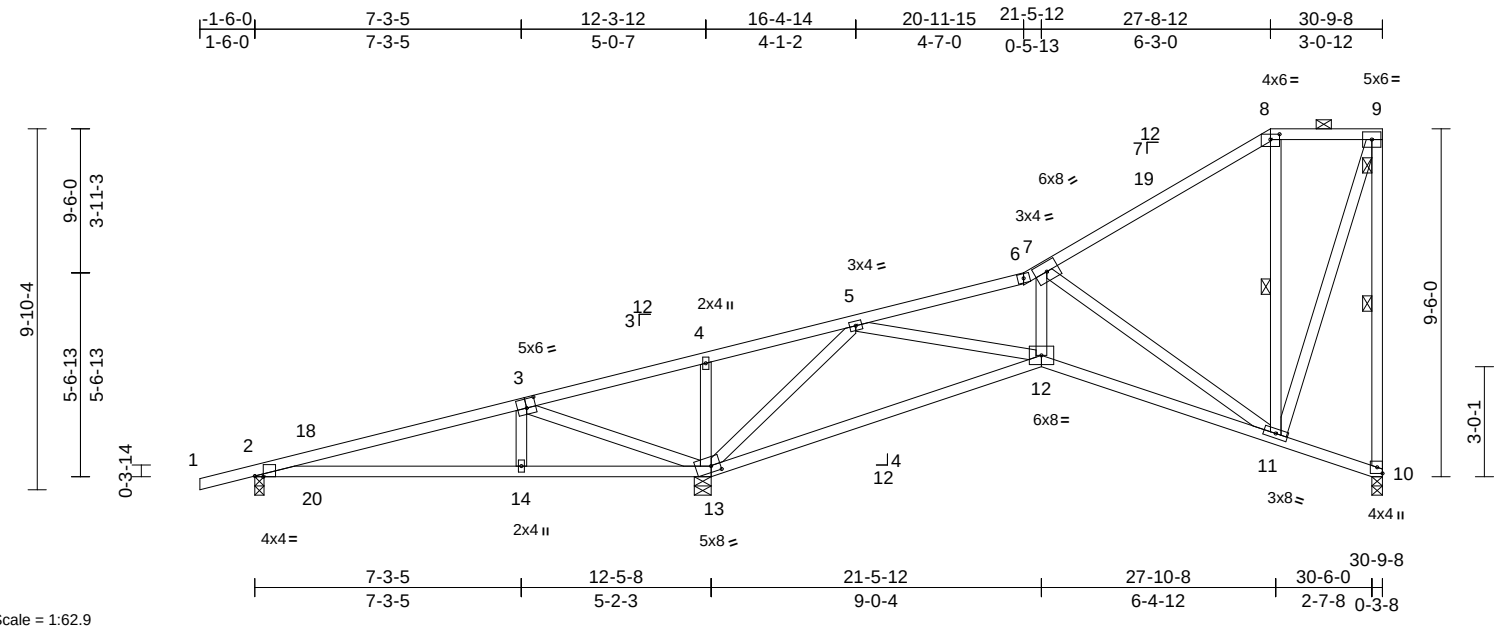
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	A03	Piggyback Base	7	1	T28096059
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:16
ID:Du2fl6ES6pzmsMXdLjZDN9z4919-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:62.9

Plate Offsets (X, Y): [2:0-2-12,Edge], [3:0-3-0,0-3-0], [8:0-3-0,0-1-12], [13:0-3-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.74	Vert(LL)	-0.21	12-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.65	Vert(CT)	-0.43	12-13	>512	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.26	14-17	>572	240	Weight: 181 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 9-10:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-9.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 9-10, 8-11

REACTIONS (lb/size) 2=341/0-3-0, 10=554/0-3-8, 13=1647/0-5-8
Max Horiz 2=581 (LC 9)
Max Uplift 2=-452 (LC 6), 10=-276 (LC 10), 13=-878 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-858/999, 4-5=-810/1013, 5-6=-861/353, 6-7=-738/311, 7-8=-375/220, 8-9=-312/293, 9-10=-540/338
BOT CHORD 2-14=-830/102, 13-14=-793/0, 12-13=-318/454, 11-12=-437/957, 10-11=-191/215
WEBS 3-14=-639/245, 3-13=-975/1784, 4-13=-229/228, 8-11=-233/281, 9-11=-259/538, 7-11=-819/484, 7-12=-78/334, 5-13=-1265/688, 5-12=-356/898

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-15, Interior (1) 1-6-15 to 24-7-13, Exterior(2R) 24-7-13 to 27-8-12, Exterior(2E) 27-8-12 to 30-7-12 zone; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 276 lb uplift at joint 10, 452 lb uplift at joint 2 and 878 lb uplift at joint 13.
8) This 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.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

Joaquin Velez PE
PX2707
Examiner License No.
07/03/2022

This item has been electronically signed and sealed by Velez, Joaquin, 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.

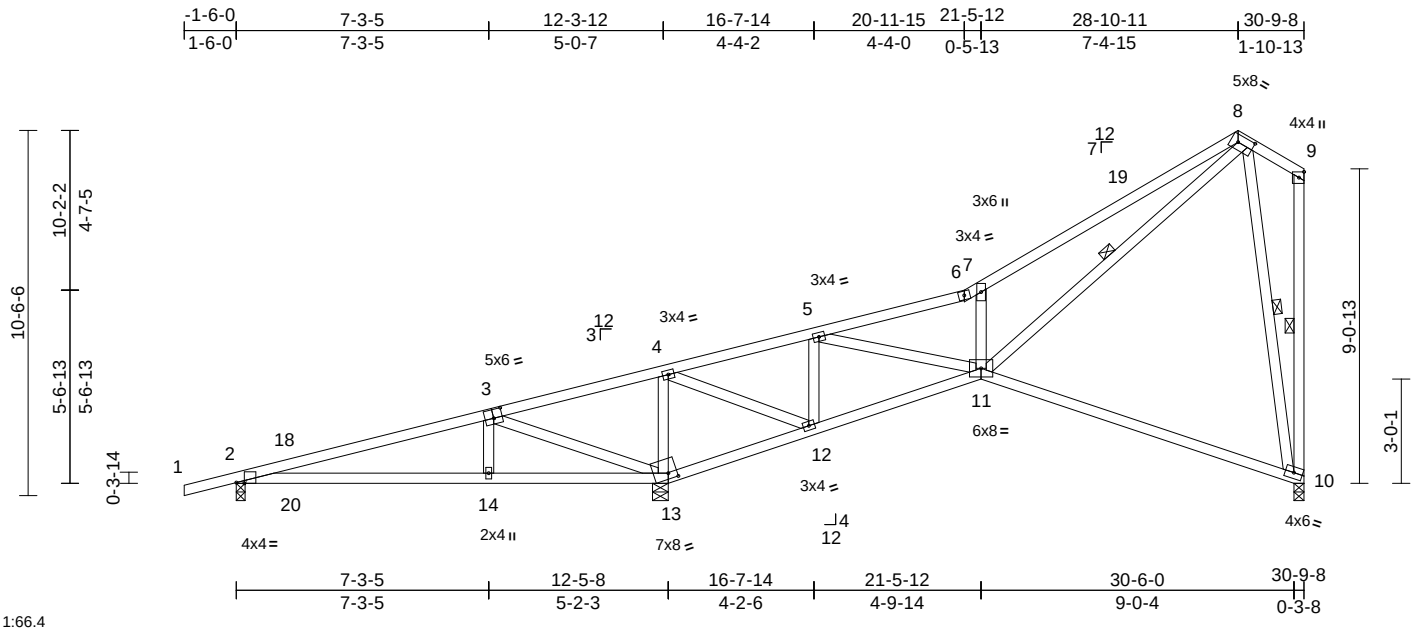
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	A04	Roof Special	3	1	T28096060 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736, Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:16 Page: 1
ID:vfR1J1iQn55el?vPzFlgGbz4937-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:66.4

Plate Offsets (X, Y): [2:0-2-12,Edge], [3:0-3-0,0-3-0], [8:0-5-6,0-2-8], [13:0-3-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.74	Vert(LL)	-0.23	10-11	>961	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.62	Vert(CT)	-0.47	10-11	>465	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.06	10	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.26	14-17	>571	240	Weight: 176 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 11-10:2x4 SP No.1
WEBS 2x4 SP No.3 *Except* 10-9:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 8-11, 9-10, 8-10

REACTIONS (lb/size) 2=318/0-3-0, 10=539/0-3-8, 13=1685/0-5-8
Max Horiz 2=598 (LC 9)
Max Uplift 2=-458 (LC 6), 10=-298 (LC 10), 13=-869 (LC 6)
Max Grav 2=320 (LC 21), 10=566 (LC 17), 13=1685 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-868/1110, 4-5=-367/95, 5-6=-811/331, 6-7=-692/289, 7-8=-992/601, 8-9=-334/318, 9-10=-309/238
BOT CHORD 2-14=-773/83, 13-14=-737/0, 12-13=-1165/1001, 11-12=-265/519, 10-11=-250/228
WEBS 3-14=-624/281, 3-13=-1003/1759, 4-13=-896/546, 8-11=-573/956, 8-10=-669/436, 7-11=-639/572, 5-11=-419/840, 5-12=-670/397, 4-12=-517/1106

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-15, Interior (1) 1-6-15 to 25-9-12, Exterior(2R) 25-9-12 to 28-10-11, Exterior(2E) 28-10-11 to 30-7-12 zone; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-[illegible]all by 2-00-00 wide will fit between the bottom chord and any other members.
6) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 458 lb uplift at joint 2, 869 lb uplift at joint 13 and 298 lb uplift at joint 10.
8) 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.

LOAD CASE(S) Standard

PX2707 07/03/2022
Examiner License No. Date

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

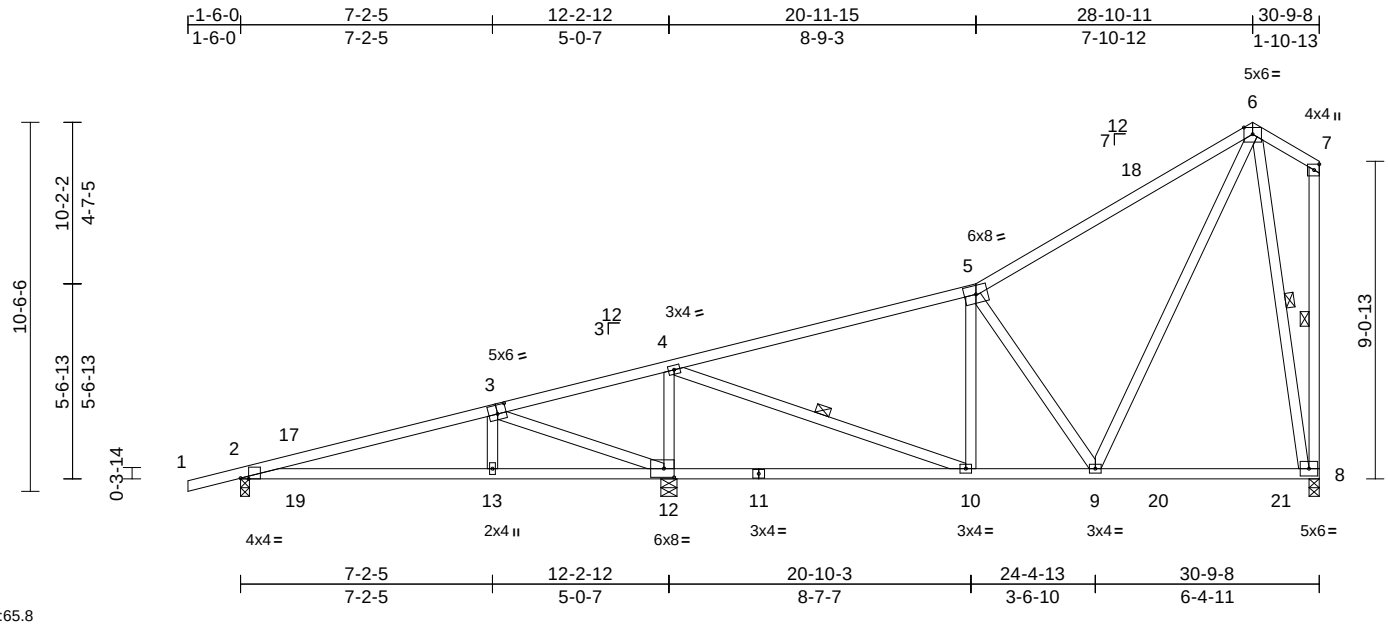
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	A05	Roof Special	2	1	T28096061
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:17
ID:F_4MysXZdItPc5_mnO3wr8z494e-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:65.8

Plate Offsets (X, Y): [2:0-2-12,Edge], [3:0-3-0,0-3-0], [12:0-3-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.68	Vert(LL)	-0.13	10-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.61	Vert(CT)	-0.26	10-12	>846	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.73	Horz(CT)	-0.01	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.26	13-16	>563	240	Weight: 184 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 8-7:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-10, 7-8, 6-8

REACTIONS (lb/size) 2=462/0-3-0, 8=655/0-3-8, 12=1424/0-5-8
Max Horiz 2=597 (LC 9)
Max Uplift 2=-459 (LC 6), 8=-352 (LC 10), 12=-850 (LC 6)
Max Grav 2=466 (LC 23), 8=822 (LC 17), 12=1527 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-670/878, 4-5=-855/222, 5-6=-695/331, 6-7=-317/308, 7-8=-291/261
BOT CHORD 2-13=-877/459, 12-13=-840/446, 10-12=-463/708, 9-10=-261/663, 8-9=-200/204
WEBS 3-13=-626/229, 3-12=-888/1653, 4-12=-991/797, 4-10=-764/1049, 5-10=-192/363, 6-8=-852/378, 6-9=-321/617, 5-9=-439/363

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-15, Interior (1) 1-6-15 to 25-9-12, Exterior(2R) 25-9-12 to 28-10-11, Exterior(2E) 28-10-11 to 30-7-12 zone; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-[illegible] all by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 459 lb uplift at joint 2, 850 lb uplift at joint 12 and 352 lb uplift at joint 8.
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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner License No

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

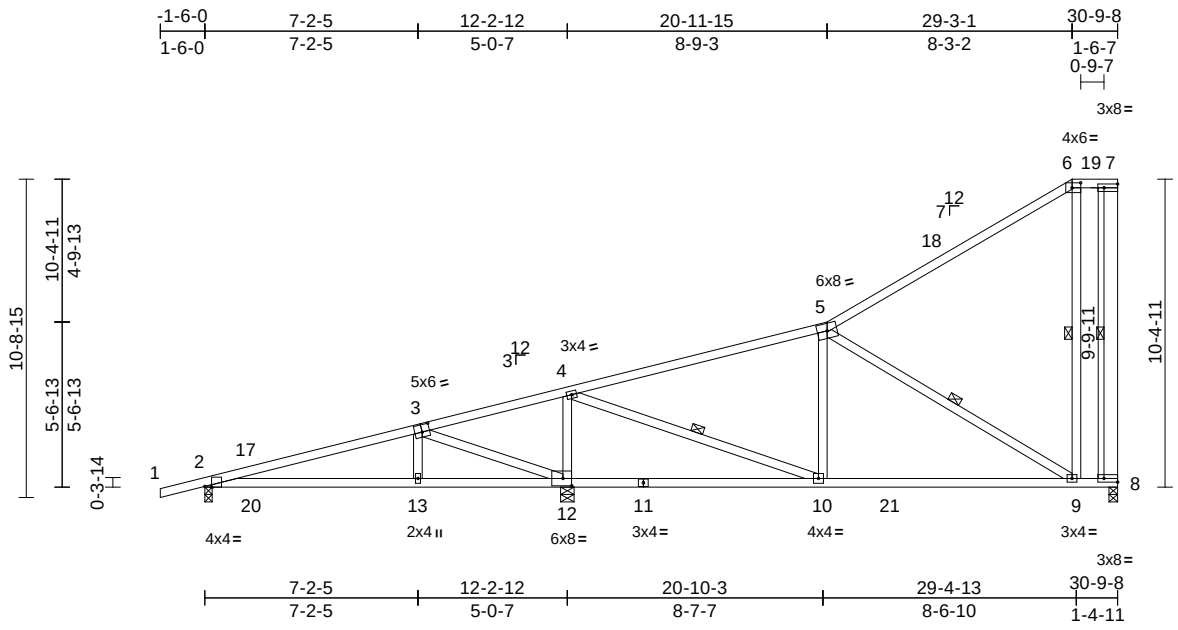
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	A06	Half Hip	1	1	T28096062
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:17

ID:6gC9W_mQhdpUwF5T1xvvFez495e-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:77.7

Plate Offsets (X, Y): [2:0-2-12,Edge], [3:0-3-0,0-3-0], [6:0-3-8,0-2-0], [7:Edge,0-1-8], [8:Edge,0-1-8], [12:0-3-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.72	Vert(LL)	-0.22	9-10	>987	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.86	Vert(CT)	-0.43	9-10	>512	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.51	Horz(CT)	-0.01	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.25	13-16	>576	240	Weight: 183 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 7-8:2x6 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 7-8, 4-10, 5-9, 6-9

REACTIONS (lb/size) 2=394/0-3-0, 8=606/0-3-8, 12=1535/0-5-8
Max Horiz 2=631 (LC 9)
Max Uplift 2=-479 (LC 6), 8=-353 (LC 10), 12=-821 (LC 6)
Max Grav 2=394 (LC 1), 8=718 (LC 17), 12=1661 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-877/763, 4-5=-838/185, 5-6=-398/202, 6-7=-278/288, 7-8=-350/213
BOT CHORD 2-13=-728/177, 12-13=-691/168, 10-12=-751/868, 9-10=-214/591, 8-9=-200/208
WEBS 3-13=-629/243, 3-12=-919/1665, 4-12=-1117/862, 4-10=-892/1333, 5-10=-189/386, 5-9=-560/376, 6-9=-243/405

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-15, Interior (1) 1-6-15 to 24-10-13, Exterior(2R) 24-10-13 to 29-3-1, Exterior(2E) 29-3-1 to 30-6-12 zone; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 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 353 lb uplift at joint 8, 479 lb uplift at joint 2 and 821 lb uplift at joint 12.
8) 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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

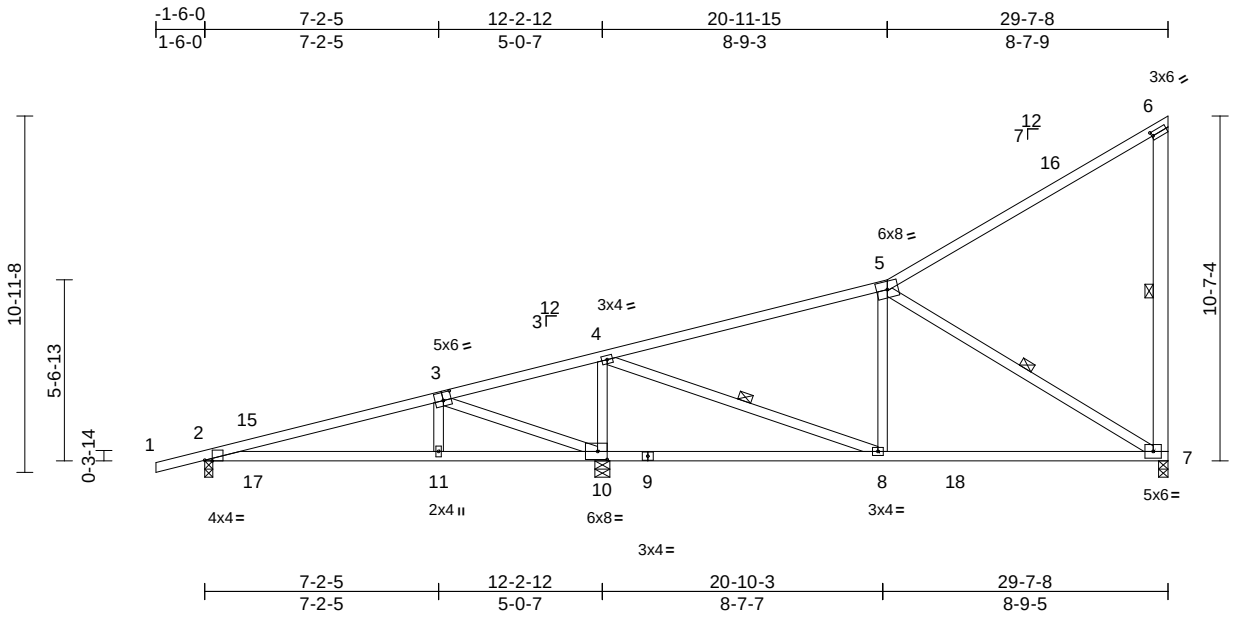
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	A07	Roof Special	1	1	T28096063 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736, Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:17 Page: 1
ID:?esOfvBxmBu9o1?QnaZurjz496N-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:70.9

Plate Offsets (X, Y): [2:0-2-12,Edge], [3:0-3-0,0-3-0], [6:0-0-8,0-1-8], [10:0-3-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.63	Vert(LL)	-0.13	7-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.70	Vert(CT)	-0.23	7-8	>877	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.50	Horz(CT)	-0.02	7	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.26	11-14	>565	240	Weight: 166 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 6-7:2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 6-7, 4-8, 5-7

REACTIONS (lb/size) 2=472/0-3-0, 7=607/0-3-8, 10=1363/0-5-8
Max Horiz 2=635 (LC 9)
Max Uplift 2=-461 (LC 6), 7=-381 (LC 10), 10=-861 (LC 6)
Max Grav 2=477 (LC 2), 7=784 (LC 17), 10=1468 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-717/881, 4-5=-872/183, 5-6=-353/206, 6-7=-313/209
BOT CHORD 2-11=-915/506, 10-11=-877/492, 8-10=-462/671, 7-8=-226/617
WEBS 3-11=-627/240, 3-10=-904/1654, 4-10=-937/757, 4-8=-696/982, 5-8=-114/325, 5-7=-637/416

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 26-4-12, Exterior(2E) 26-4-12 to 29-4-12 zone; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 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 381 lb uplift at joint 7, 461 lb uplift at joint 2 and 861 lb uplift at joint 10.
6) 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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

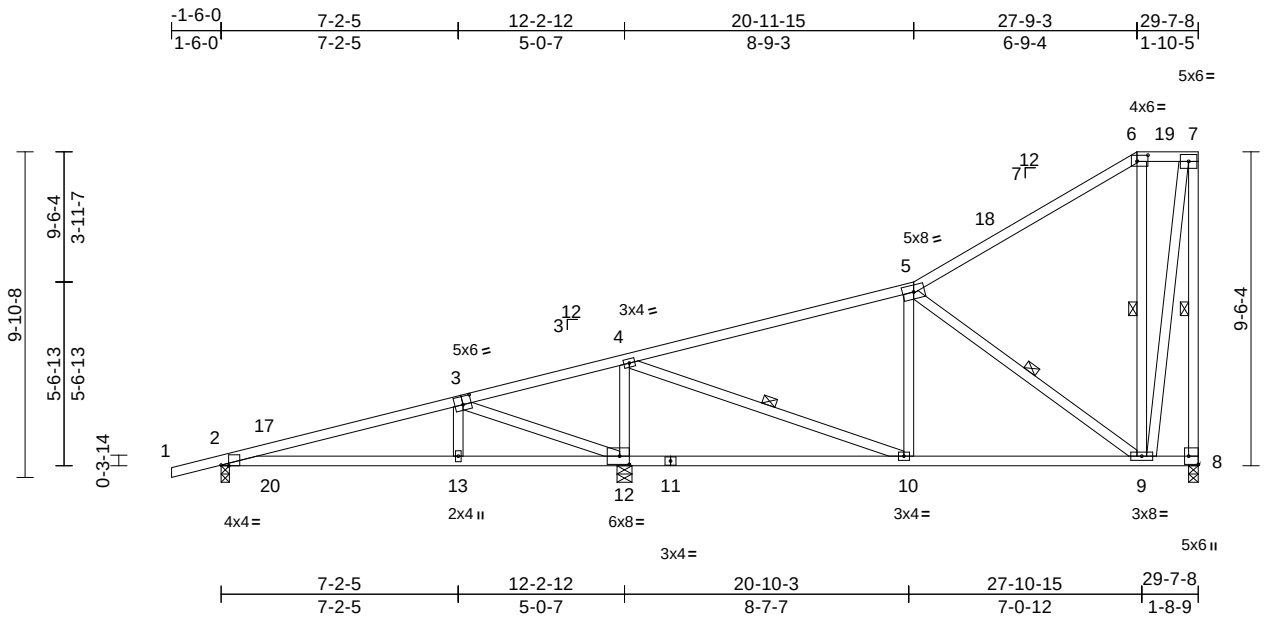
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	A08	Half Hip	1	1	T28096064
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:17
ID:9gwrhQVBBgiESG8Tx62X1iz497G-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:69.9

Plate Offsets (X, Y): [2:0-2-12,Edge], [3:0-3-0,0-3-0], [6:0-4-0,0-2-4], [8:Edge,0-3-8], [12:0-3-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.74	Vert(LL)	0.26	13-16	>565	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.61	Vert(CT)	-0.22	10-12	>943	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.67	Horz(CT)	-0.01	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 180 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 7-8:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 7-8, 4-10, 5-9, 6-9

REACTIONS (lb/size) 2=463/0-3-0, 8=604/0-3-8, 12=1382/0-5-8
Max Horiz 2=580 (LC 9)
Max Uplift 2=-456 (LC 6), 8=-343 (LC 10), 12=-855 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-691/852, 4-5=-677/191, 5-6=-365/200, 6-7=-291/289, 7-8=-620/468
BOT CHORD 2-13=-882/439, 12-13=-845/430, 10-12=-398/698, 9-10=-215/493, 8-9=-205/228
WEBS 3-13=-626/234, 3-12=-833/1648, 4-12=-955/784, 4-10=-730/892, 5-10=-130/347, 5-9=-495/353, 6-9=-362/327, 7-9=-400/652

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 23-6-5, Exterior(2R) 23-6-5 to 27-9-3, Exterior (2E) 27-9-3 to 29-5-12 zone; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 343 lb uplift at joint 8, 456 lb uplift at joint 2 and 855 lb uplift at joint 12.
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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

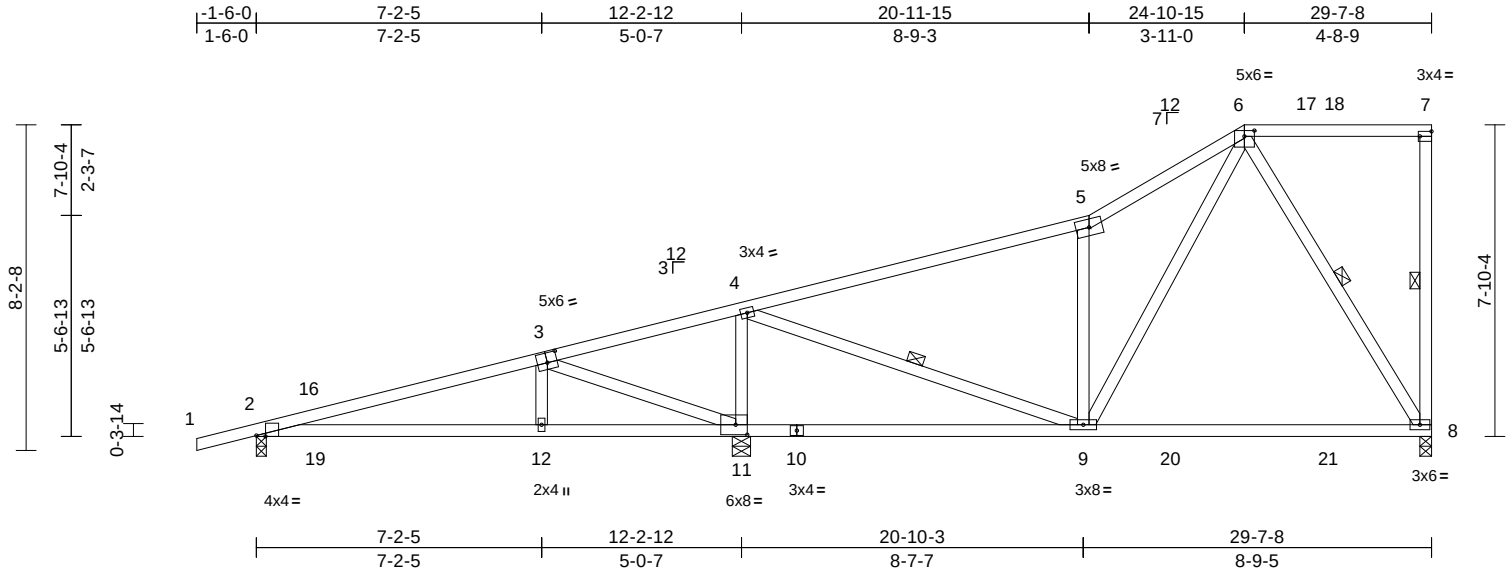
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	A09	Half Hip	1	1	T28096065 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:18 Page: 1
ID:KizIkwpRcAXK6WHW6dW9Dhz4989-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:58.1

Plate Offsets (X, Y): [2:0-2-12,Edge], [3:0-3-0,0-3-0], [6:0-3-0,0-1-12], [7:Edge,0-1-8], [11:0-3-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.86	Vert(LL)	-0.25	8-9	>819	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.82	Vert(CT)	-0.39	8-9	>537	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.50	Horz(CT)	-0.01	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.26	12-15	>565	240	Weight: 163 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, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 7-8, 4-9, 6-8

REACTIONS (lb/size) 2=463/0-3-0, 8=604/0-3-8, 11=1382/0-5-8
Max Horiz 2=482 (LC 9)
Max Uplift 2=-441 (LC 6), 8=-288 (LC 10), 11=-885 (LC 6)
Max Grav 2=469 (LC 2), 8=685 (LC 2), 11=1487 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-685/853, 4-5=-727/225, 5-6=-796/444, 6-7=-186/195, 7-8=-135/182
BOT CHORD 2-12=-868/472, 11-12=-830/458, 9-11=-456/705, 8-9=-207/301
WEBS 3-12=-627/245, 3-11=-899/1640, 4-11=-963/815, 4-9=-760/1002, 5-9=-577/520, 6-9=-346/661, 6-8=-479/285

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 20-11-15, Exterior(2R) 20-11-15 to 26-5-12, Exterior(2E) 26-5-12 to 29-5-12 zone; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 288 lb uplift at joint 8, 441 lb uplift at joint 2 and 885 lb uplift at joint 11.
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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

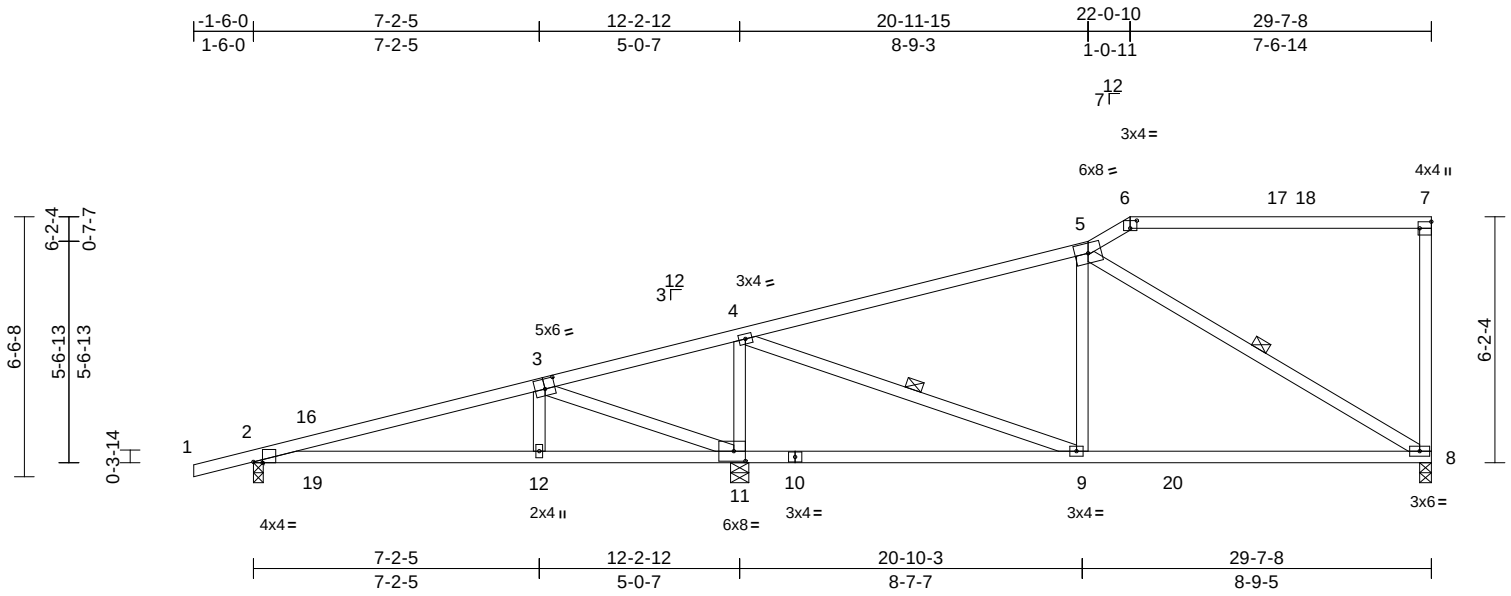
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	A10	Half Hip	1	1	T28096066
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:18
ID:NElq2?zX5fiGjlx3?xGlOwz499F-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:57.9

Plate Offsets (X, Y): [2:0-2-12,Edge], [3:0-3-0,0-3-0], [6:0-2-0,0-2-5], [7:Edge,0-3-8], [11:0-3-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.85	Vert(LL)	-0.15	8-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.73	Vert(CT)	-0.27	8-9	>762	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.50	Horz(CT)	-0.01	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.26	12-15	>564	240	Weight: 149 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, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-9, 5-8

REACTIONS (lb/size) 2=472/0-3-0, 8=610/0-3-8, 11=1366/0-5-8
Max Horiz 2=383 (LC 9)
Max Uplift 2=-439 (LC 6), 8=-280 (LC 7), 11=-929 (LC 6)
Max Grav 2=477 (LC 2), 8=666 (LC 2), 11=1472 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-618/926, 4-5=-652/275, 5-6=-227/262, 6-7=-161/174, 7-8=-244/261
BOT CHORD 2-12=-901/507, 11-12=-864/493, 9-11=-392/679, 8-9=-261/581
WEBS 3-12=-625/241, 3-11=-907/1648, 4-11=-939/793, 4-9=-753/996, 5-9=-116/356, 5-8=-632/316

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 20-11-15, Exterior(2R) 20-11-15 to 26-5-12, Exterior(2E) 26-5-12 to 29-5-12 zone; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 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 280 lb uplift at joint 8, 439 lb uplift at joint 2 and 929 lb uplift at joint 11.
8) 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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

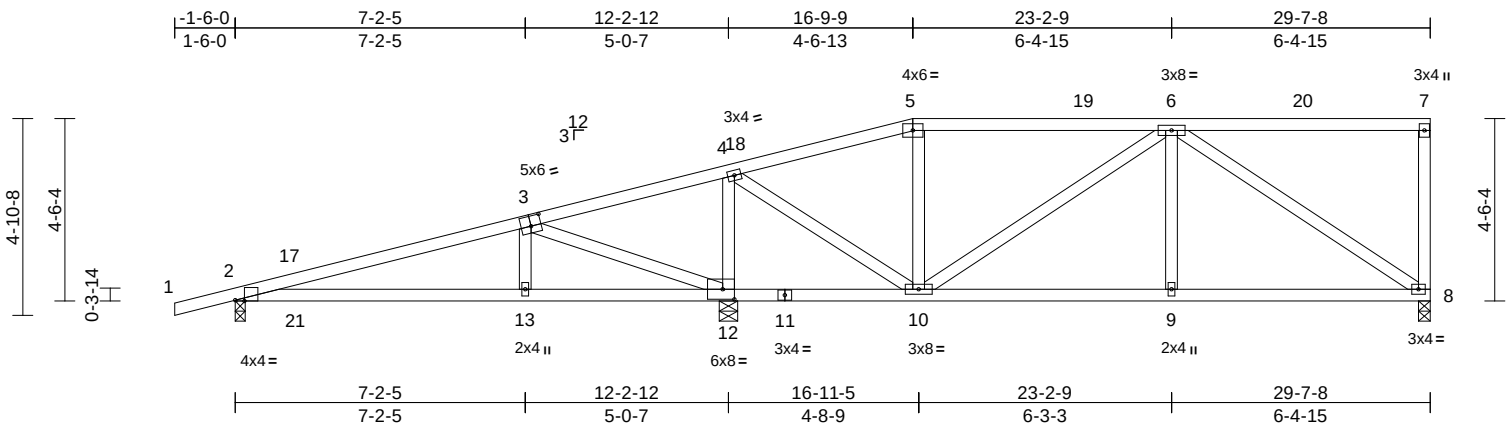
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	A11	Half Hip	1	1	T28096067
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:18
ID:0ku5sfU3HgooXmSZDE3bliz499s-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:57.1

Plate Offsets (X, Y): [2:0-2-12,Edge], [3:0-3-0,0-3-0], [12:0-3-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.59	Vert(LL)	0.25	13-16	>579	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.60	Vert(CT)	-0.16	13-16	>938	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.71	Horz(CT)	-0.02	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 152 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, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 2=438/0-3-0, 8=586/0-3-8, 12=1424/0-5-8
Max Horiz 2=280 (LC 9)
Max Uplift 2=-417 (LC 6), 8=-297 (LC 7), 12=-999 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-4=-794/790, 4-5=-366/181, 5-6=-353/198, 6-7=-117/120, 7-8=-160/176
BOT CHORD 2-13=-765/374, 12-13=-728/364, 10-12=-537/866, 9-10=-339/572, 8-9=-339/572
WEBS 5-10=-235/334, 6-10=-350/351, 6-9=0/273, 6-8=-657/331, 3-12=-962/1703, 3-13=-607/269, 4-12=-1005/859, 4-10=-817/988

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 12-6-11, Exterior(2R) 12-6-11 to 21-0-8, Interior (1) 21-0-8 to 26-5-12, Exterior(2E) 26-5-12 to 29-5-12 zone; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 297 lb uplift at joint 8, 417 lb uplift at joint 2 and 999 lb uplift at joint 12.
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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

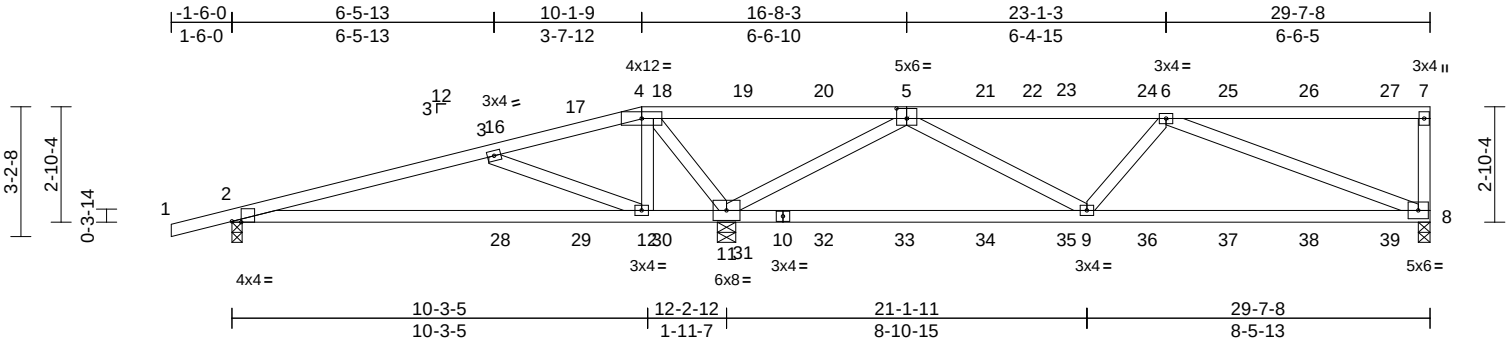
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	A12	Half Hip Girder	1	1	T28096068
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:19 Page: 1
ID:Y?HsWh36WwNmrNHrgOxOOJz49AP-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:57

Plate Offsets (X, Y): [2:0-2-12,Edge], [5:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.76	Vert(LL)	0.43	12-15	>341	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.79	Vert(CT)	-0.42	12-15	>353	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.89	Horz(CT)	-0.02	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS							Weight: 137 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 5-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 2=404/0-3-0, 8=533/0-3-8, 11=1444/0-5-8
Max Horiz 2=174 (LC 7)
Max Uplift 2=-454 (LC 22), 8=-484 (LC 5), 11=-1396 (LC 4)
Max Grav 2=404 (LC 1), 8=634 (LC 17), 11=1477 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-3=-280/497, 3-4=-271/371, 4-6=-901/887, 6-7=-99/84, 7-8=-184/184
BOT CHORD 2-12=-504/257, 11-12=-378/233, 9-11=-343/459, 8-9=-768/968
WEBS 4-12=-538/423, 4-11=-946/1084, 3-12=-606/571, 5-11=-1394/1265, 6-8=-964/748, 6-9=-125/191, 5-9=-394/580

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; end vertical left and right exposed; porch left exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 484 lb uplift at joint 8, 454 lb uplift at joint 2 and 1396 lb uplift at joint 11.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 17 lb down and 20 lb up at 6-7-12, 113 lb down and 4 lb up at 8-7-12, 110 lb down and 54 lb up at 10-7-12, 112 lb down and 54 lb up at 12-7-12, 112 lb down and 54 lb up at 14-7-12, 112 lb down and 54 lb up at 16-7-12, 112 lb down and 54 lb up at 18-7-12, 112 lb down and 53 lb up at 20-7-12, 112 lb down and 54 lb up at 22-7-12, 112 lb down and 54 lb up at 24-7-12, and 112 lb down and 54 lb up at 26-7-12, and 112 lb down and 54 lb up at 28-7-12 on top chord, and 7 lb down and 51 lb up at 6-7-12, 51 lb down and 64 lb up at 8-7-12, 10 lb down and 49 lb up at 10-7-12, 31 lb down and 30 lb up at 12-7-12, 23 lb down and 30 lb up at 14-7-12, 23 lb down and 30 lb up at 16-7-12, 23 lb down and 30 lb up at 18-7-12, 23 lb down and 30 lb up at 20-7-12, 23 lb down and 30 lb up at 22-7-12, 23 lb down and 30 lb up at 24-7-12, and 23 lb down and 30 lb up at 26-7-12, and 24 lb down and 30 lb up at 28-7-12 on bottom chord. The design/selection of such connection device (s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (lb/ft)
Vert: 1-4=-60, 4-7=-60, 8-13=-20
Concentrated Loads (lb)
Vert: 30=7 (F), 31=7 (F), 32=7 (F), 33=7 (F), 34=7 (F), 35=7 (F), 36=7 (F), 37=7 (F), 38=7 (F), 39=7 (F)

This item has been electronically signed and sealed by Velez, Joaquin, 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.

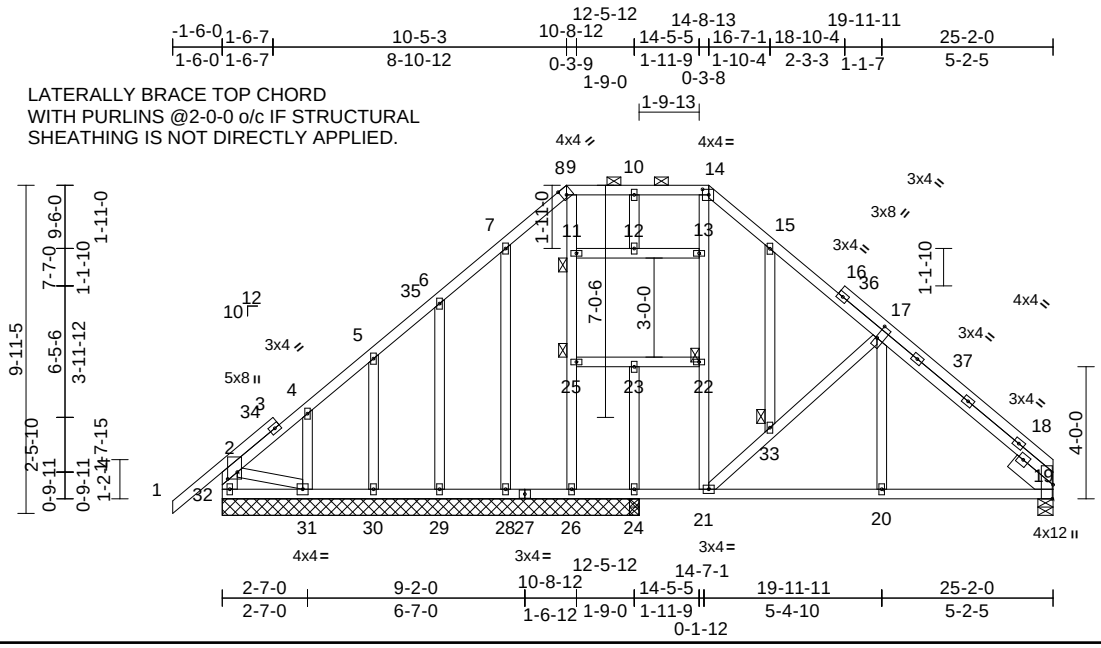
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	B01	Piggyback Base Structural Gable	1	1	T28096069
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736, Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:20 Page: 1

ID:vGjTomY4vpxS7IPCydlSv9z49HX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:69.8

Plate Offsets (X, Y): [2:0-2-8,0-3-8], [8:0-1-12,Edge], [14:0-2-4,0-2-0], [17:0-5-0,0-0-8], [19:0-5-2,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.26	Vert(LL)	-0.06	20-21	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.46	Vert(CT)	-0.14	20-21	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.02	19	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.09	20-21	>999	240	Weight: 212 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 32-2:2x6 SP No.2
OTHERS 2x4 SP No.3
SLIDER Right 2x6 SP No.2 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-14, 11-13.
BOT CHORD Rigid ceiling directly applied.
JOINTS 1 Brace at Jt(s): 33, 25, 22, 11

REACTIONS (lb/size) 19=799/0-5-8, 24=445/12-7-8, 26=-268/12-7-8, 28=112/12-7-8, 29=174/12-7-8, 30=159/12-7-8, 31=24/12-7-8, 32=705/12-7-8
Max Horiz 32=-390 (LC 8)
Max Uplift 19=-401 (LC 11), 24=-173 (LC 11), 26=-422 (LC 18), 28=-147 (LC 10), 29=-176 (LC 10), 30=-168 (LC 10), 31=-237 (LC 10), 32=-336 (LC 6)
Max Grav 19=799 (LC 22), 24=447 (LC 22), 26=403 (LC 11), 28=179 (LC 17), 29=202 (LC 17), 30=193 (LC 17), 31=215 (LC 8), 32=750 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/61, 2-4=-736/398, 4-5=-713/387, 5-6=-683/451, 6-7=-669/537, 7-8=-597/575, 8-9=-455/484, 9-10=-459/487, 10-14=-459/487, 14-15=-554/514, 15-17=-641/468, 17-19=-941/499, 2-32=-717/340, 11-12=-3/6, 12-13=-3/6

BOT CHORD 31-32=-282/308, 30-31=-17/431, 29-30=-17/431, 28-29=-17/431, 26-28=-17/431, 24-26=-18/430, 21-24=-18/430, 20-21=-207/639, 19-20=-207/638, 23-25=-1/1, 22-23=-1/1

WEBS 21-22=-156/235, 13-22=-116/208, 13-14=-119/187, 25-26=-301/335, 11-25=-259/305, 9-11=-262/282, 7-28=-121/161, 6-29=-167/197, 5-30=-154/189, 4-31=-160/178, 2-31=-270/515, 21-33=-412/403, 17-33=-371/368, 17-20=0/121, 15-33=-61/53, 10-12=-40/53, 23-24=-179/42

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) W[illegible]CE 7-16; Vult=140mph (3-second gust) Va[illegible]3mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Ca[illegible]p C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 6-2-4, Exterior(2R) 6-2-4 to 18-11-12, Interior (1) 18-11-12 to 21-10-11, Exterior(2E) 21-10-11 to 24-10-11 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 336 lb uplift at joint 32, 401 lb uplift at joint 19, 422 lb uplift at joint 26, 147 lb uplift at joint 28, 176 lb uplift at joint 29, 168 lb uplift at joint 30, 237 lb uplift at joint 31 and 173 lb uplift at joint 24.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Signature PX2707 07/03/2022
Examiner License No

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

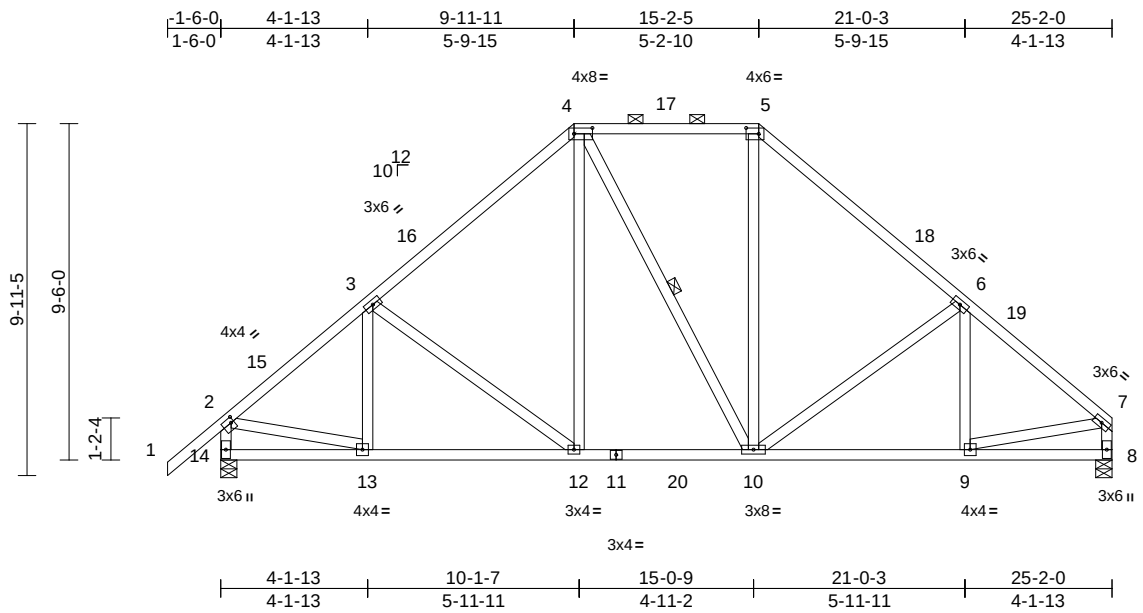
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	B02	Piggyback Base	3	1	T28096070
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:20
ID:6vkAV5McH59Yzy9oYLwsJ4z49Dv-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:65.1

Plate Offsets (X, Y): [2:0-1-0,0-1-12], [4:0-6-4,0-2-0], [5:0-4-4,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.41	Vert(LL)	-0.04	12-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.36	Vert(CT)	-0.09	12-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.36	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.04	12-13	>999	240	Weight: 175 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, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-10

REACTIONS (lb/size) 8=992/0-5-8, 14=1097/0-5-8
Max Horiz 14=409 (LC 7)
Max Uplift 8=-398 (LC 11), 14=-472 (LC 10)
Max Grav 8=1074 (LC 2), 14=1165 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-1196/469, 3-4=-1036/529, 4-5=-724/528, 5-6=-1034/534, 6-7=-1201/482, 2-14=-1106/526, 7-8=-1014/413
BOT CHORD 13-14=-372/362, 12-13=-441/1068, 10-12=-276/799, 9-10=-284/884, 8-9=-55/72
WEBS 4-12=-138/422, 4-10=-180/181, 5-10=-146/402, 2-13=-281/869, 7-9=-259/835, 6-10=-354/336, 3-12=-339/328, 3-13=-89/122, 6-9=-81/121

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 5-8-13, Exterior(2R) 5-8-13 to 19-5-3, Interior (1) 19-5-3 to 22-0-4, Exterior(2E) 22-0-4 to 25-0-4 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 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 472 lb uplift at joint 14 and 398 lb uplift at joint 8.
8) 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.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

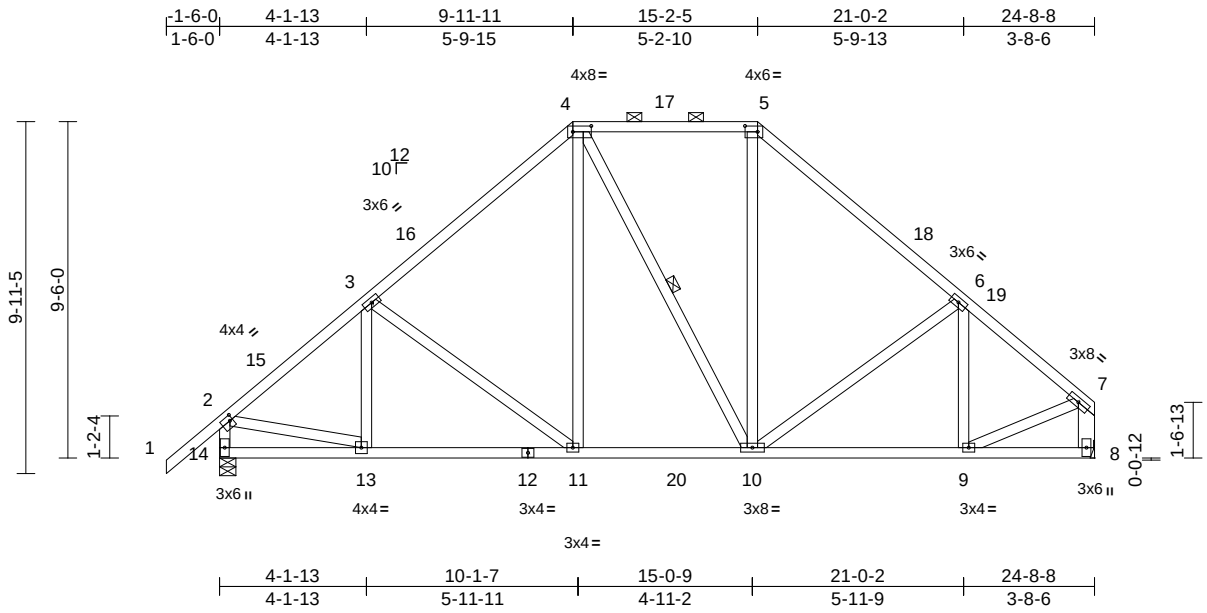
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	B03	Piggyback Base	8	1	T28096071
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:20
ID:LArRWota8JaRdZx3ZtBxY9z49DE-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:65.1

Plate Offsets (X, Y): [2:0-1-0,0-1-12], [4:0-6-4,0-2-0], [5:0-4-4,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.40	Vert(LL)	-0.04	11-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.36	Vert(CT)	-0.09	11-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.03	11-13	>999	240	Weight: 175 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 8-7:2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-10

REACTIONS (lb/size) 8=970/ Mechanical, 14=1075/0-5-8
Max Horiz 14=418 (LC 7)
Max Uplift 8=-386 (LC 11), 14=-465 (LC 10)
Max Grav 8=1051 (LC 2), 14=1142 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-1168/460, 3-4=-1004/518, 4-5=-686/516, 5-6=-985/518, 6-7=-1040/434, 2-14=-1082/518, 7-8=-1005/405
BOT CHORD 13-14=-381/360, 11-13=-437/1047, 10-11=-284/776, 9-10=-268/769, 8-9=-29/32
WEBS 4-11=-138/425, 4-10=-187/181, 5-10=-135/374, 2-13=-273/848, 7-9=-261/799, 6-10=-263/292, 6-9=-181/156, 3-11=-343/329, 3-13=-84/121

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 5-8-13, Exterior(2R) 5-8-13 to 19-5-3, Interior (1) 19-5-3 to 21-5-12, Exterior(2E) 21-5-12 to 24-5-12 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 465 lb uplift at joint 14 and 386 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.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

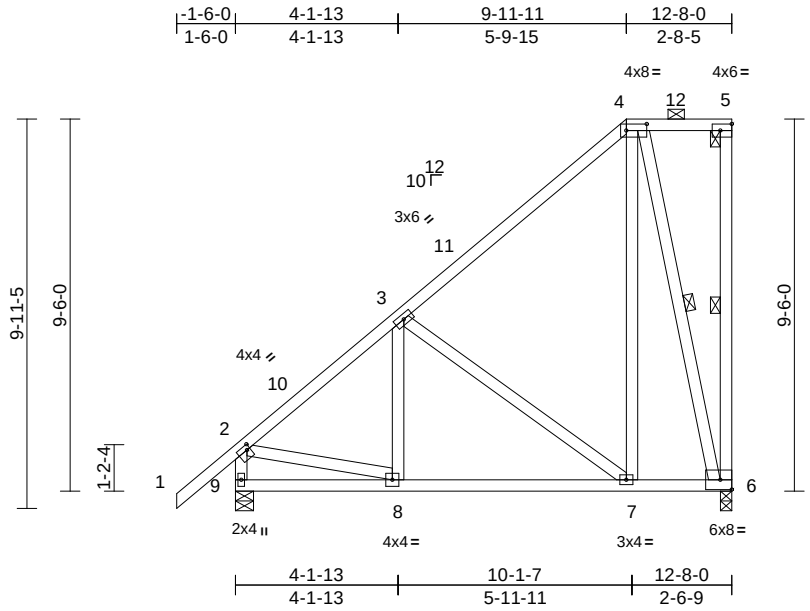
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	B04	Piggyback Base	1	1	T28096072
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:21
ID:a_bQeGe4Tq9Ud1EmgFtphwz3M7A-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:58.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.78	Vert(LL)	-0.03	7-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.50	Vert(CT)	-0.07	7-8	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.48	Horz(CT)	-0.01	6	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.02	6-7	>999	240	Weight: 109 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 5-6:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-6, 4-6

REACTIONS (lb/size) 6=488/0-3-7, 9=600/0-5-8
Max Horiz 9=576 (LC 7)
Max Uplift 6=-359 (LC 7), 9=-230 (LC 10)
Max Grav 6=511 (LC 17), 9=600 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-541/250, 3-4=-379/251, 4-5=-234/256, 5-6=-126/141, 2-9=-569/371
BOT CHORD 8-9=-521/339, 7-8=-374/500, 6-7=-219/197
WEBS 4-7=-292/422, 4-6=-543/366, 2-8=-92/399, 3-7=-382/370, 3-8=0/162

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior (1) 1-6-0 to 5-8-13, Exterior(2R) 5-8-13 to 9-11-11, Exterior (2E) 9-11-11 to 12-6-4 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 359 lb uplift at joint 6 and 230 lb uplift at joint 9.
8) 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.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

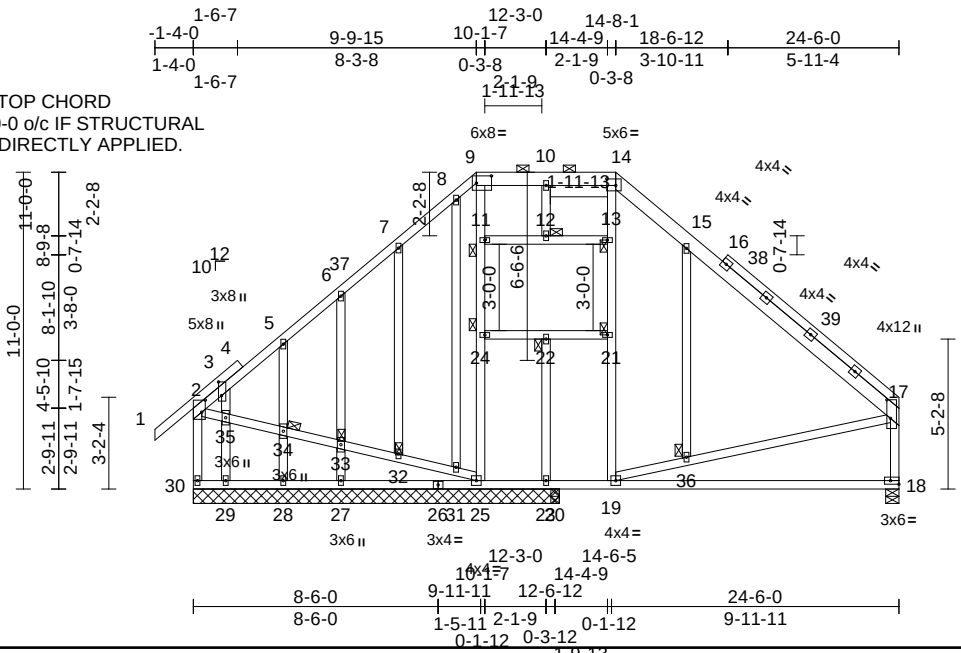
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	C01	Piggyback Base Structural Gable	1	1	T28096073 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736, Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:21 Page: 1
ID:O0Fh4ESVC9gnQzr?ys9QXAz49LX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

LATERALLY BRACE TOP CHORD WITH PURLINS @2-0-0 o/c IF STRUCTURAL SHEATHING IS NOT DIRECTLY APPLIED.



Scale = 1:80

Plate Offsets (X, Y): [2:0-5-0,0-1-8], [3:0-5-11,0-1-4], [9:0-6-4,0-3-0], [14:0-3-12,0-2-12], [17:0-7-12,0-1-8], [18:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.93	Vert(LL)	-0.23	18-19	>622	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.69	Vert(CT)	-0.48	18-19	>297	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.54	Horz(CT)	0.01	18	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.10	18-19	>999	240	Weight: 261 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 9-14,14-17:2x6 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, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 9-14, 11-13.
BOT CHORD Rigid ceiling directly applied.
JOINTS 1 Brace at Jt(s): 32, 33, 34, 36, 24, 21, 22, 11, 13, 12

REACTIONS (lb/size) 18=904/0-5-8, 20=710/0-3-8, 23=-499/12-8-8, 25=-203/12-8-8, 27=345/12-8-8, 28=74/12-8-8, 29=98/12-8-8, 30=696/12-8-8
Max Horiz 30=483 (LC 7)
Max Uplift 18=-342 (LC 11), 20=-761 (LC 11), 23=-570 (LC 18), 25=-492 (LC 9), 27=-336 (LC 10), 28=-96 (LC 10), 29=-120 (LC 10), 30=-374 (LC 6)
Max Grav 18=915 (LC 22), 20=800 (LC 18), 23=602 (LC 11), 25=337 (LC 11), 27=413 (LC 17), 28=94 (LC 17), 29=164 (LC 17), 30=781 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 9-10=-553/431, 10-14=-553/431, 2-30=-743/345, 17-18=-805/373, 1-2=0/50, 2-3=-760/372, 3-5=-790/385, 5-6=-776/383, 6-7=-772/445, 7-8=-726/501, 8-9=-572/456, 14-15=-569/322, 15-17=-827/278, 11-12=-4/11, 12-13=-4/11
BOT CHORD 29-30=-456/412, 28-29=-456/412, 27-28=-456/412, 25-27=-456/412, 23-25=-52/505, 20-23=-52/505, 19-20=-52/505, 18-19=-74/99, 22-24=0/1, 21-22=0/1
WEBS 24-25=-232/294, 11-24=-200/282, 9-11=-174/256, 19-21=-43/233, 13-21=-63/236, 13-14=-72/233, 2-35=-339/694, 34-35=-326/669, 33-34=-326/661, 32-33=-322/673, 31-32=-326/664, 25-31=-362/730, 19-36=-66/439, 17-36=-62/443, 8-31=-98/193, 7-32=-92/117, 6-33=-232/272, 27-33=-328/379, 5-34=-123/149, 28-34=-76/105, 3-35=-133/95, 29-35=-105/144, 15-36=-34/58, 22-23=-174/17, 10-12=-51/52

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-0 to 1-8-0, Interior (1) 1-8-0 to 5-7-1, Exterior(2R) 5-7-1 to 18-10-15, Interior (1) 18-10-15 to 21-6-0, Exterior(2E) 21-6-0 to 24-6-0 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 374 lb uplift at joint 30, 492 lb uplift at joint 25, 342 lb uplift at joint 18, 336 lb uplift at joint 27, 96 lb uplift at joint 28, 120 lb uplift at joint 29, 570 lb uplift at joint 23 and 761 lb uplift at joint 20.
12) 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.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

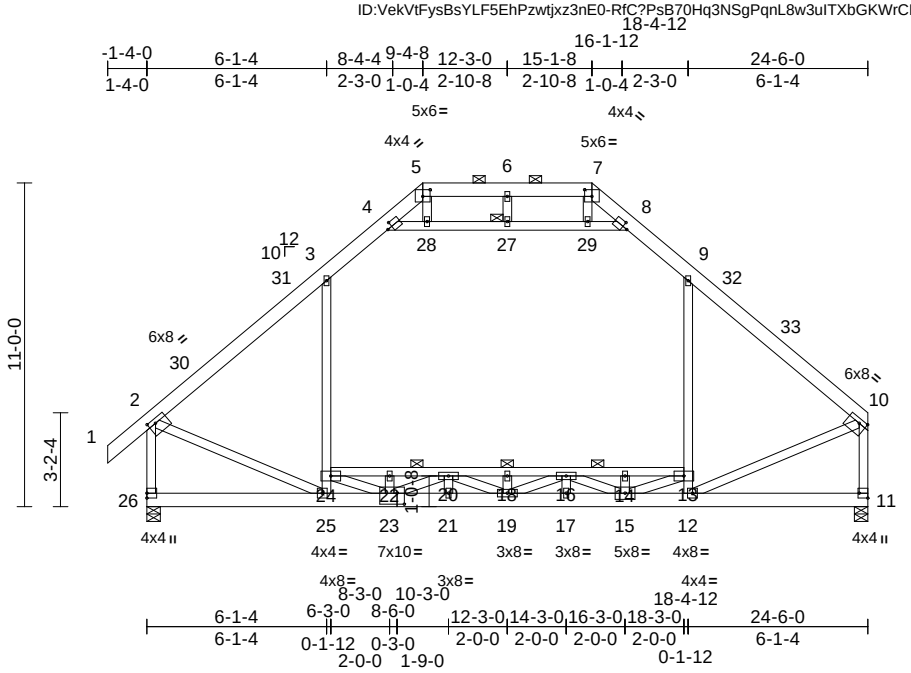
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	C02	Attic	3	1	T28096074
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736, Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:22 Page: 1

ID:VekVtFysBsYLF5EhPzwtjxz3nE0-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:78.3

Plate Offsets (X, Y): [2:0-3-0,0-1-12], [4:0-2-1,0-2-0], [5:0-3-0,0-2-12], [7:0-3-0,0-2-12], [8:0-2-1,0-2-0], [10:0-3-0,0-1-12], [11:Edge,0-3-8], [23:0-3-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.82	Vert(LL)	0.25	25-26	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.96	Vert(CT)	-0.27	18	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.03	11	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Attic	-0.10	13-24	>999	360	Weight: 235 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 24-13:2x4 SP No.3
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-7.
BOT CHORD Rigid ceiling directly applied. Except: 4-6-0 oc bracing: 13-24
JOINTS 1 Brace at Jt(s): 27

REACTIONS (lb/size) 11=1341/0-5-8, 26=1435/0-5-8
Max Horiz 26=489 (LC 7)
Max Uplift 11=-145 (LC 11), 26=-203 (LC 10)
Max Grav 11=1589 (LC 2), 26=1667 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/57, 2-3=-1496/205, 3-4=-1030/372, 4-5=-271/399, 5-6=-87/375, 6-7=-87/375, 7-8=-274/402, 8-9=-1030/375, 9-10=-1492/186, 2-26=-1627/268, 10-11=-1545/180
BOT CHORD 25-26=-496/511, 21-25=-266/3058, 19-21=0/3058, 17-19=0/3029, 15-17=0/3029, 12-15=-15/1004, 11-12=-98/79, 22-24=-1397/189, 20-22=-1397/189, 18-20=-2340/0, 16-18=-2340/0, 14-16=-1428/192, 13-14=-1428/192
WEBS 24-25=-344/253, 3-24=0/608, 12-13=-368/266, 9-13=0/603, 4-28=-1379/221, 27-28=-1357/217, 27-29=-1357/217, 8-29=-1380/221, 2-25=-104/1185, 10-12=-122/1165, 6-27=-51/57, 18-19=-232/0, 5-28=-65/172, 7-29=-68/172, 14-15=-274/0, 16-17=0/95, 20-21=-19/110, 22-23=-274/0, 23-24=-30/1442, 20-23=-1062/68, 19-20=-144/381, 16-19=-186/400, 15-16=-1024/40, 13-15=-31/1462

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-0 to 1-8-0, Interior (1) 1-8-0 to 18-4-12, Exterior(2R) 18-4-12 to 19-4-7, Interior (1) 19-4-7 to 21-4-4, Exterior(2E) 21-4-4 to 24-4-4 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Ceiling dead load (5.0 psf) on member(s). 3-4, 8-9, 4-28, 27-28, 27-29, 8-29; Wall dead load (5.0psf) on member (s).3-24, 9-13
9) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 22-24, 20-22, 18-20, 16-18, 14-16, 13-14
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 203 lb uplift at joint 26 and 145 lb uplift at joint 11.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

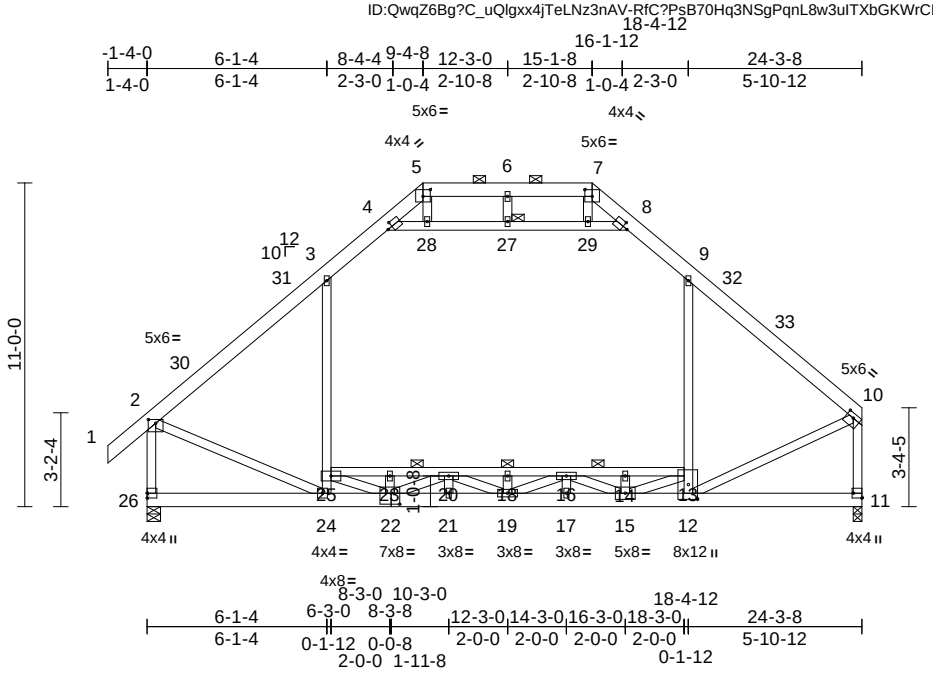
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	C03	Attic	14	1	T28096075 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736, Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:22 Page: 1

ID:QwqZ6Bg?C_uQlgxx4jTeLNz3nAV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:78.3

Plate Offsets (X, Y): [2:0-3-0,0-1-8], [4:0-2-1,0-2-0], [5:0-3-0,0-2-12], [7:0-3-0,0-2-12], [8:0-2-1,0-2-0], [10:0-3-0,0-1-12], [11:Edge,0-3-8], [12:0-6-0,0-3-12], [22:0-3-8,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.83	Vert(LL)	0.25	24-26	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.96	Vert(CT)	-0.27	18-20	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.03	11	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Attic	-0.10	13-25	>999	360	Weight: 234 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2 *Except* 25-13:2x4 SP No.3
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-7.
BOT CHORD Rigid ceiling directly applied. Except: 4-7-0 oc bracing: 13-25
JOINTS 1 Brace at Jt(s): 27

REACTIONS (lb/size) 11=1336/0-3-8, 26=1423/0-5-8
Max Horiz 26=493 (LC 7)
Max Uplift 11=-139 (LC 11), 26=-202 (LC 10)
Max Grav 11=1588 (LC 2), 26=1654 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/57, 2-3=-1475/204, 3-4=-1013/372, 4-5=-278/402, 5-6=-97/362, 6-7=-97/362, 7-8=-284/399, 8-9=-1017/375, 9-10=-1456/188, 2-26=-1605/267, 10-11=-1557/178
BOT CHORD 24-26=-499/511, 21-24=-270/3054, 19-21=0/3054, 17-19=0/2994, 15-17=0/2994, 12-15=-19/968, 11-12=-90/68, 23-25=-1448/174, 20-23=-1439/177, 18-20=-2336/0, 16-18=-2336/0, 14-16=-1384/199, 13-14=-1384/199
WEBS 24-25=-358/246, 3-25=0/601, 12-13=-371/261, 9-13=0/583, 4-28=-1340/216, 27-28=-1324/213, 27-29=-1324/213, 8-29=-1348/217, 2-24=-105/1162, 10-12=-121/1172, 6-27=-50/57, 5-28=-63/166, 7-29=-67/173, 18-19=-232/0, 16-17=0/98, 20-21=-21/113, 14-15=-275/0, 22-23=-270/0, 22-25=-15/1478, 20-22=-1034/70, 19-20=-145/355, 16-19=-186/418, 15-16=-1053/38, 13-15=-38/1433

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-0 to 1-8-0, Interior (1) 1-8-0 to 19-4-7, Exterior(2R) 19-4-7 to 21-1-12, Interior (1) 19-4-7 to 21-1-12, Exterior(2E) 21-1-12 to 24-1-12 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Ceiling dead load (5.0 psf) on member(s). 3-4, 8-9, 4-28, 27-28, 27-29, 8-29; Wall dead load (5.0psf) on member (s).3-25, 9-13
9) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 23-25, 20-23, 18-20, 16-18, 14-16, 13-14
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 26 and 139 lb uplift at joint 11.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

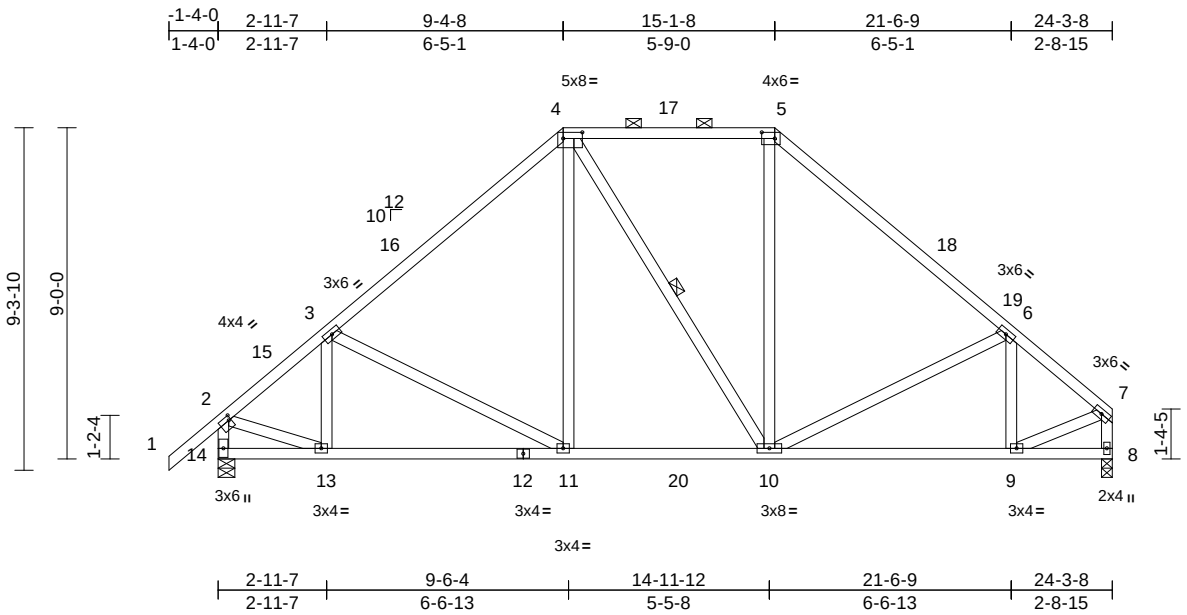
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	C04	Piggyback Base	2	1	T28096076
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:23
ID:kJrHyozyPqdW7nNUKjCWW7z3off-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:62.6

Plate Offsets (X, Y): [2:0-0-12,0-1-8], [4:0-6-4,0-2-0], [5:0-4-4,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.53	Vert(LL)	-0.05	11-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.40	Vert(CT)	-0.11	11-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.03	11-13	>999	240	Weight: 164 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, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-10

REACTIONS (lb/size) 8=957/0-3-8, 14=1051/0-5-8
Max Horiz 14=390 (LC 7)
Max Uplift 8=-386 (LC 11), 14=-453 (LC 10)
Max Grav 8=1038 (LC 2), 14=1121 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/57, 2-3=-1106/440, 3-4=-1035/506, 4-5=-708/518, 5-6=-1023/507, 6-7=-1035/427, 2-14=-1101/499, 7-8=-1026/397
BOT CHORD 13-14=-349/310, 11-13=-469/1038, 10-11=-291/778, 9-10=-314/795, 8-9=-46/46
WEBS 4-11=-84/383, 4-10=-177/176, 5-10=-107/368, 2-13=-358/918, 7-9=-353/871, 6-10=-274/305, 6-9=-219/206, 3-11=-299/320, 3-13=-173/178

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-0 to 1-8-0, Interior (1) 1-8-0 to 5-1-9, Exterior(2R) 5-1-9 to 19-4-7, Interior (1) 19-4-7 to 21-1-12, Exterior(2E) 21-1-12 to 24-1-12 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 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 453 lb uplift at joint 14 and 386 lb uplift at joint 8.
8) 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.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

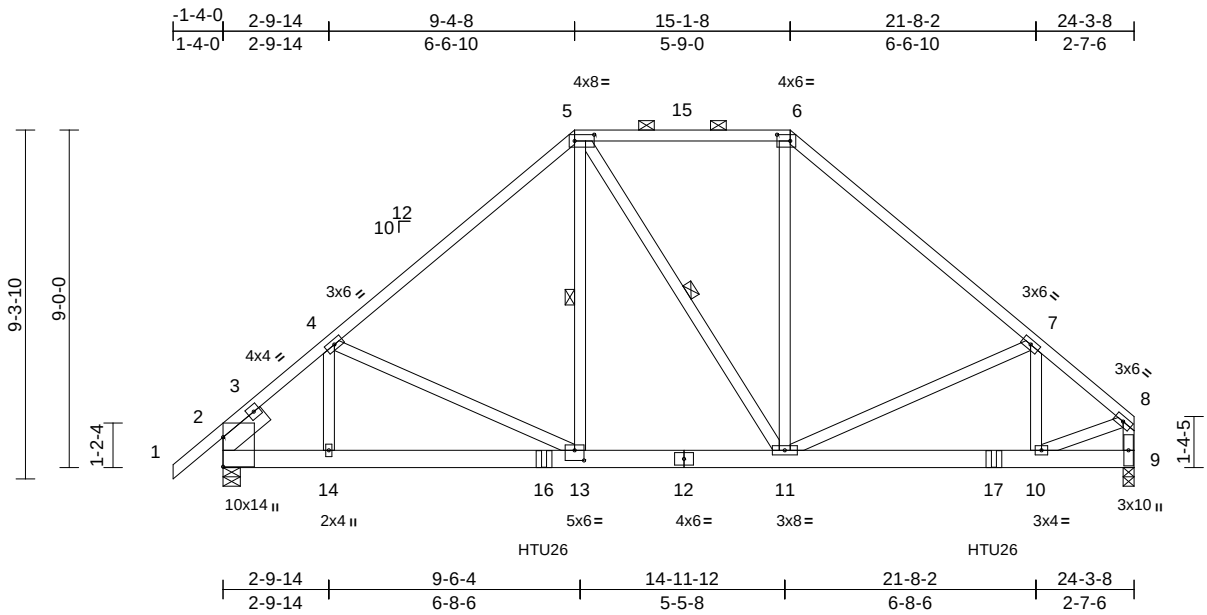
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	C04A	Piggyback Base Girder	1	1	T28096077 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736, Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:23 Page: 1
ID:j5Vajl6Tsvi?9KWDMYLiNFz3oaJ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:61.4

Plate Offsets (X, Y): [5:0-6-4,0-2-0], [6:0-4-4,0-2-0], [13:0-3-0,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.89	Vert(LL)	-0.05	13-14	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.48	Vert(CT)	-0.10	13-14	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.57	Horz(CT)	0.02	9	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS		Wind(LL)	0.13	13-14	>999	240	Weight: 181 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x6 SP No.2 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (5-8-5 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 5-13, 5-11

REACTIONS (lb/size) 2=1301/0-5-8, 9=1253/0-3-8
Max Horiz 2=368 (LC 7)
Max Uplift 2=-979 (LC 8), 9=-928 (LC 9)
Max Grav 2=1548 (LC 15), 9=1448 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-4=-1702/1094, 4-5=-1544/1121, 5-6=-980/840, 6-7=-1331/909, 7-8=-1538/1026, 8-9=-1483/990
BOT CHORD 2-14=-1025/1551, 13-14=-1000/1516, 11-13=-812/1243, 10-11=-816/1160, 9-10=-42/34
WEBS 5-13=-789/1002, 5-11=-440/480, 6-11=-405/625, 8-10=-910/1295, 7-11=-381/459, 7-10=-132/316, 4-13=-320/330, 4-14=-117/257

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 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 979 lb uplift at joint 2 and 928 lb uplift at joint 9.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Use Simpson Strong-Tie HTU26 (20-10d Girder, 14-10dx1 1/2 Truss, Single Ply Girder) or equivalent at 8-6-12 from the left end to connect truss(es) to back face of bottom chord.
10) Use Simpson Strong-Tie HTU26 (20-10d Girder, 11-10dx1 1/2 Truss, Single Ply Girder) or equivalent at 20-6-11 from the left end to connect truss(es) to back face of bottom chord.
11) Fill all nail holes where hanger is in contact with lumber.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (lb/ft)
Vert: 1-5=-60, 5-6=-60, 6-8=-60, 2-9=-20
Concentrated Loads (lb)
Vert: 16=-351 (B), 17=-190 (B)

PX2707 07/03/2022
Examiner License No. Date

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

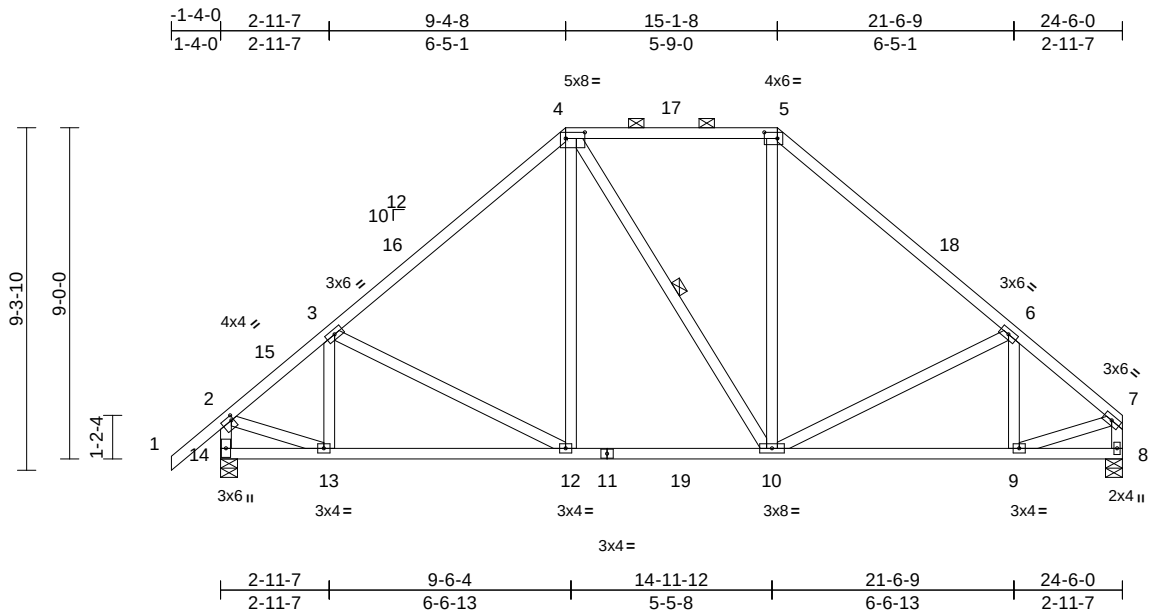
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	C05	Piggyback Base	3	1	T28096078
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:24
ID:ftNmf2NDynRTlF73ywq01nz3ogQ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:62.6

Plate Offsets (X, Y): [2:0-0-12,0-1-8], [4:0-6-4,0-2-0], [5:0-4-4,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.47	Vert(LL)	-0.05	12-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.41	Vert(CT)	-0.11	12-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.03	12-13	>999	240	Weight: 164 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, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-10

REACTIONS (lb/size) 8=966/0-5-8, 14=1060/0-5-8
Max Horiz 14=386 (LC 7)
Max Uplift 8=-390 (LC 11), 14=-456 (LC 10)
Max Grav 8=1047 (LC 2), 14=1130 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/57, 2-3=-1116/442, 3-4=-1047/509, 4-5=-724/522, 5-6=-1043/513, 6-7=-1115/453, 2-14=-1110/501, 7-8=-1026/398
BOT CHORD 13-14=-345/310, 12-13=-471/1045, 10-12=-288/787, 9-10=-325/852, 8-9=-38/38
WEBS 4-12=-84/382, 4-10=-175/176, 5-10=-110/379, 2-13=-360/925, 7-9=-351/892, 6-10=-314/326, 6-9=-166/179, 3-12=-297/319, 3-13=-175/178

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-0 to 1-8-0, Interior (1) 1-8-0 to 5-1-9, Exterior(2R) 5-1-9 to 19-4-7, Interior (1) 19-4-7 to 21-4-4, Exterior(2E) 21-4-4 to 24-4-4 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 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 456 lb uplift at joint 14 and 390 lb uplift at joint 8.
8) 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.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

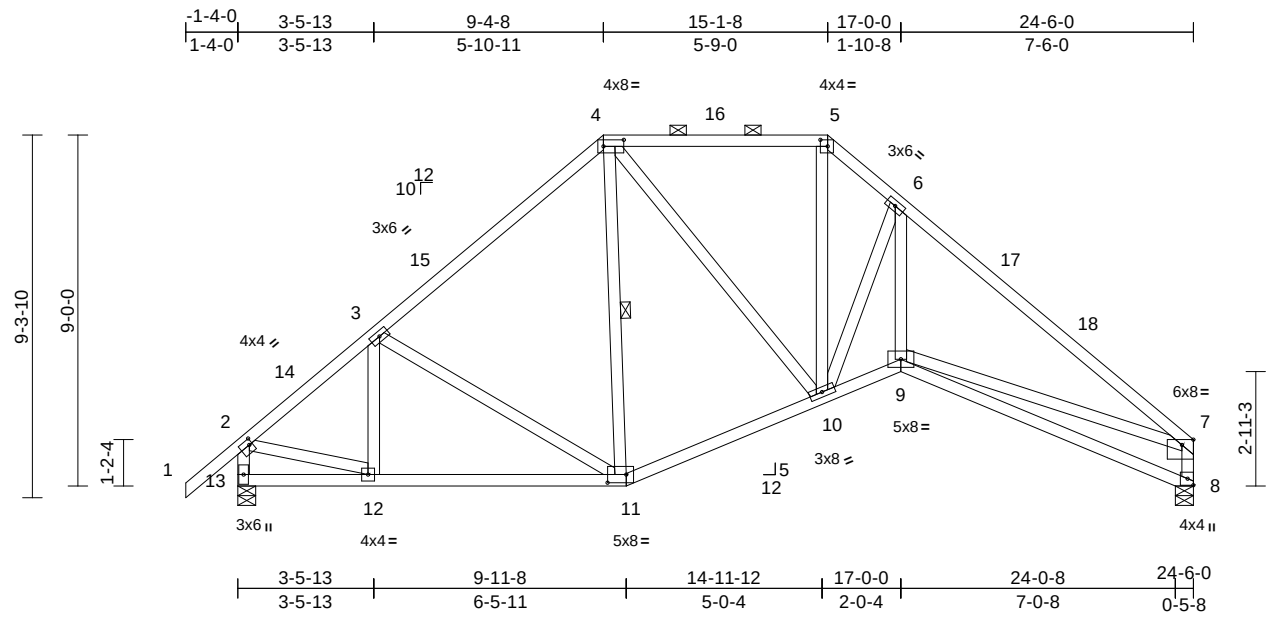
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	C06	Piggyback Base	3	1	T28096079
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:24
ID:qMlHC7hJw6wstHAW7?gcuUz43Ck-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:59.1

Plate Offsets (X, Y): [2:0-1-0,0-1-12], [4:0-6-4,0-2-0], [5:0-2-4,0-2-0], [7:0-3-8,Edge], [11:0-5-12,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.81	Vert(LL)	-0.10	8-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.42	Vert(CT)	-0.22	8-9	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.59	Horz(CT)	0.09	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.07	9	>999	240	Weight: 168 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, except end verticals, and 2-0-0 oc purlins (5-8-8 max.): 4-5.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-11

REACTIONS (lb/size) 8=966/0-5-8, 13=1060/0-5-8
Max Horiz 13=391 (LC 9)
Max Uplift 8=-390 (LC 11), 13=-456 (LC 10)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/57, 2-3=-1057/455, 3-4=-953/515, 4-5=-853/536, 5-6=-1179/716, 6-7=-1755/637, 2-13=-1038/505, 7-8=-994/521
BOT CHORD 12-13=-346/322, 11-12=-438/866, 10-11=-315/711, 9-10=-302/1348, 8-9=-264/328
WEBS 4-11=-85/130, 4-10=-102/368, 5-10=-367/556, 2-12=-293/817, 7-9=-310/1003, 6-10=-1062/627, 6-9=-146/968, 3-11=-288/303, 3-12=-118/142

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-0 to 1-8-0, Interior (1) 1-8-0 to 5-1-9, Exterior(2R) 5-1-9 to 19-4-7, Interior (1) 19-4-7 to 21-4-4, Exterior(2E) 21-4-4 to 24-4-4 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Bearing at joint(s) 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 456 lb uplift at joint 13 and 390 lb uplift at joint 8.
9) Th design requires that a minimum of 7/16 st wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

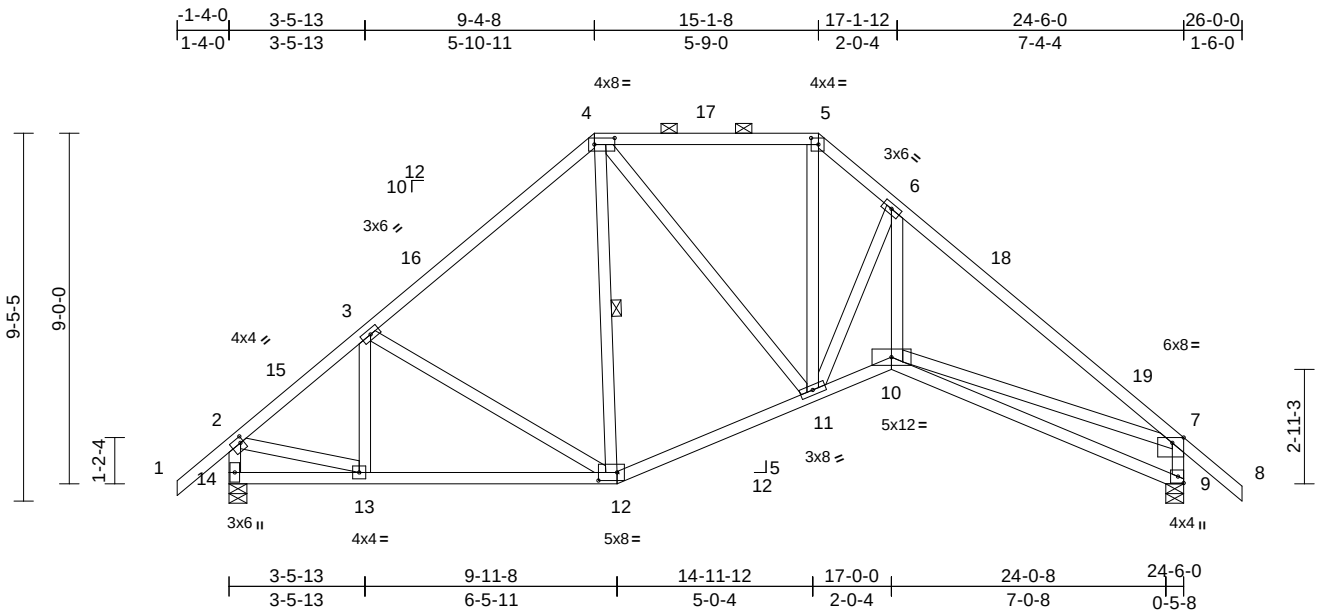
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	C07	Piggyback Base	5	1	T28096080 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736, Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:24 Page: 1
ID:M44BjXr1AwEe5hOFb?xRbwz43Dp-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:59.1

Plate Offsets (X, Y): [2:0-1-0,0-1-12], [4:0-6-4,0-2-0], [5:0-2-4,0-2-0], [7:0-3-8,Edge], [12:0-5-12,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.86	Vert(LL)	-0.10	9-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.42	Vert(CT)	-0.22	9-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.09	9	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.06	10	>999	240	Weight: 171 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, except end verticals, and 2-0-0 oc purlins (5-9-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-12

REACTIONS (lb/size) 9=1068/0-5-8, 14=1056/0-5-8
Max Horiz 14=409 (LC 9)
Max Uplift 9=-463 (LC 11), 14=-455 (LC 10)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/57, 2-3=-1053/450, 3-4=-948/508, 4-5=-846/494, 5-6=-1154/633, 6-7=-1741/530, 7-8=0/63, 2-14=-1035/500, 7-9=-1101/598
BOT CHORD 13-14=-364/356, 12-13=-402/891, 11-12=-292/713, 10-11=-235/1367, 9-10=-272/347
WEBS 4-12=-83/138, 4-11=-76/363, 5-11=-297/515, 2-13=-286/814, 7-10=-302/973, 6-11=-1038/497, 6-10=-98/972, 3-12=-288/303, 3-13=-118/141

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-0 to 1-8-0, Interior (1) 1-8-0 to 5-1-9, Exterior(2R) 5-1-9 to 19-4-7, Interior (1) 19-4-7 to 23-0-0, Exterior(2E) 23-0-0 to 26-0-0 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Bearing at joint(s) 9 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 455 lb uplift at joint 14 and 463 lb uplift at joint 9.
9) Th design requires that a minimum of 7/16 st wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:
June 24,2022

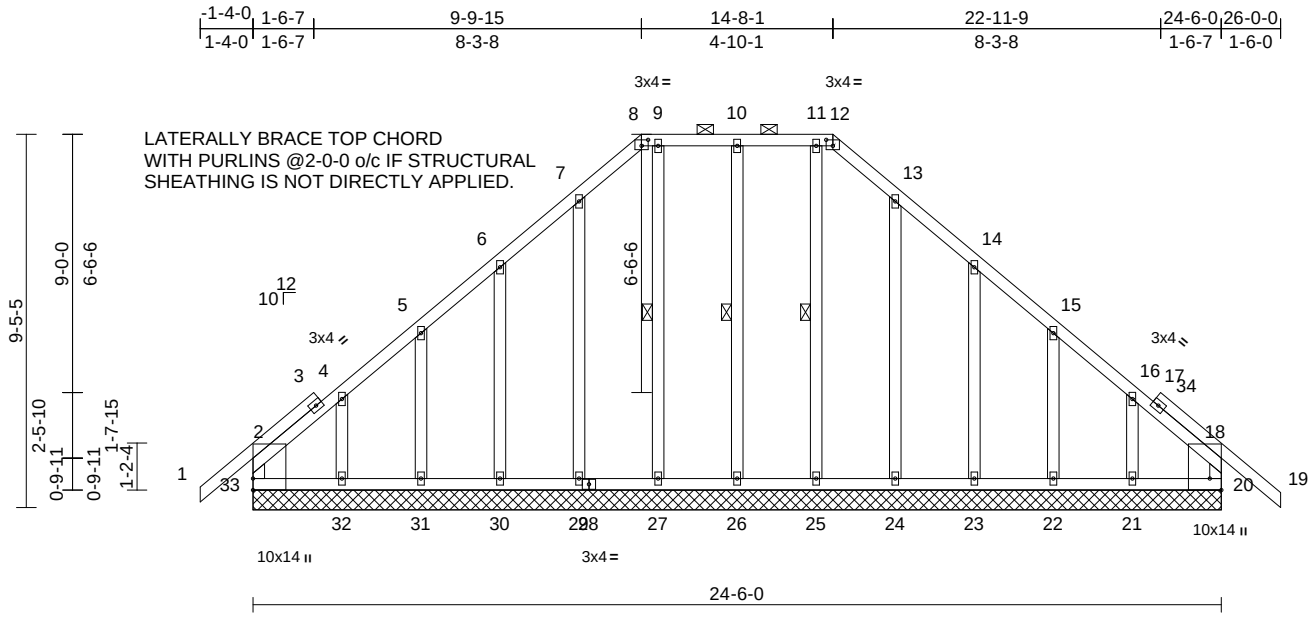
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	C08	Piggyback Base Supported Gable	1	1	T28096081 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:25

ID:_1AbOazENU1?qTJDpA7J8Xz43Ey-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:58.3

Plate Offsets (X, Y): [8:0-2-0,0-1-13], [12:0-2-0,0-1-13], [20:Edge,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.13	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.01	20	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 188 lb	FT = 20%

LUMBER

TOP CHORD 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, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-12.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 10-26, 9-27, 11-25

REACTIONS (lb/size) 20=220/24-6-0, 21=128/24-6-0, 22=165/24-6-0, 23=159/24-6-0, 24=159/24-6-0, 25=155/24-6-0, 26=160/24-6-0, 27=155/24-6-0, 29=159/24-6-0, 30=160/24-6-0, 31=164/24-6-0, 32=138/24-6-0, 33=202/24-6-0
Max Horiz 33=-395 (LC 8)
Max Uplift 20=-114 (LC 7), 21=-227 (LC 11), 22=-153 (LC 11), 23=-188 (LC 11), 24=-115 (LC 11), 26=-107 (LC 6), 27=-34 (LC 9), 29=-121 (LC 10), 30=-187 (LC 10), 31=-150 (LC 10), 32=-248 (LC 10), 33=-181 (LC 6)
Max Grav 20=229 (LC 17), 21=214 (LC 18), 22=190 (LC 18), 23=199 (LC 18), 24=189 (LC 18), 25=196 (LC 19), 26=165 (LC 21), 27=215 (LC 20), 29=198 (LC 17), 30=198 (LC 17), 31=185 (LC 17), 32=243 (LC 17), 33=277 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-33=-232/166, 1-2=0/51, 2-4=-263/258, 4-5=-197/197, 5-6=-163/222, 6-7=-187/342, 7-8=-236/423, 8-9=-202/376, 9-10=-202/376, 10-11=-202/376, 11-12=-202/376, 12-13=-236/423, 13-14=-187/342, 14-15=-109/207, 15-16=-112/120, 16-18=-186/162, 18-19=0/58, 18-20=-198/196
BOT CHORD 32-33=-171/240, 31-32=-171/240, 30-31=-171/240, 29-30=-171/240, 27-29=-171/240, 26-27=-171/240, 25-26=-171/240, 24-25=-171/240, 23-24=-171/240, 22-23=-171/240, 21-22=-171/240, 20-21=-171/240
WEBS 10-26=-125/134, 9-27=-175/74, 7-29=-158/142, 6-30=-163/203, 5-31=-156/184, 4-32=-184/220, 11-25=-150/136, 13-24=-150/136, 14-23=-163/205, 15-22=-157/185, 16-21=-186/206

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-4-0 to 1-8-0, Exterior(2N) 1-8-0 to 6-9-15, Corner(3R) 6-9-15 to 17-8-1, Exterior (2N) 17-8-1 to 23-0-0, Corner(3E) 23-0-0 to 26-0-0 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 181 lb uplift at joint 33, 114 lb uplift at joint 20, 107 lb uplift at joint 26, 34 lb uplift at joint 27, 121 lb uplift at joint 29, 187 lb uplift at joint 30, 150 lb uplift at joint 31, 248 lb uplift at joint 32, 115 lb uplift at joint 24, 188 lb uplift at joint 23, 153 lb uplift at joint 22 and 227 lb uplift at joint 21.

Examiner-License No. PX2707

06/24/2022

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

13) 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.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

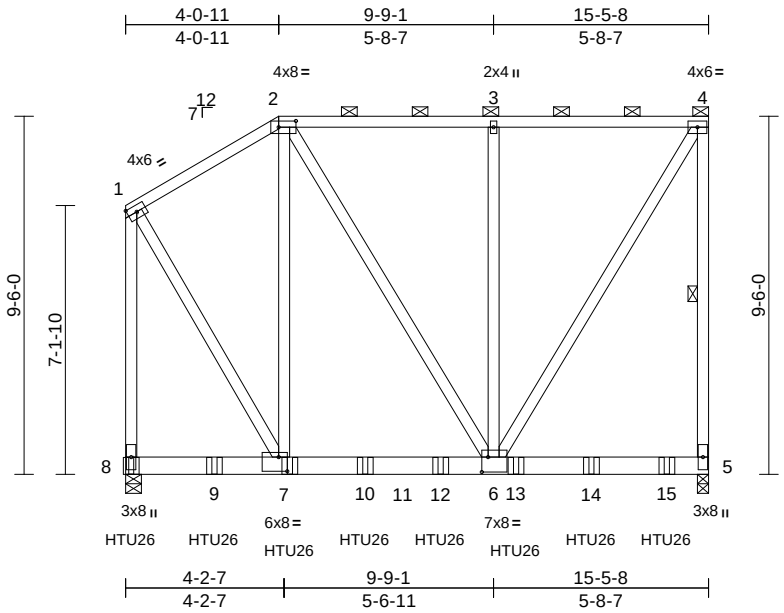
Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	D01	Piggyback Base Girder	1	**2**	T28096082 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736, Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:25 Page: 1
ID:hEvTaTPwJJu1C8FtQcEajQz48wT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:61.1

Plate Offsets (X, Y): [2:0-5-8,0-2-0], [6:0-2-0,0-4-12], [7:0-2-12,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.98	Vert(LL)	-0.07	5-6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.97	Vert(CT)	-0.14	5-6	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.71	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS		Wind(LL)	0.08	5-6	>999	240	Weight: 301 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 2-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-5

REACTIONS (lb/size) 5=4197/0-3-8, 8=4625/0-5-0
Max Horiz 8=-337 (LC 6)
Max Uplift 5=-1893 (LC 5), 8=-1919 (LC 8)
Max Grav 5=4513 (LC 2), 8=4964 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1849/798, 2-3=-1931/826, 3-4=-1931/826, 4-5=-3262/1461, 1-8=-3596/1414
BOT CHORD 7-8=-189/196, 6-7=-718/1555, 5-6=-10/20
WEBS 2-7=-121/354, 2-6=-393/731, 3-6=-384/355, 4-6=-1570/3674, 1-7=-1207/3014

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
6) Provide adequate drainage to prevent water ponding.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1893 lb uplift at joint 5 and 1919 lb uplift at joint 8.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Use Simpson Strong-Tie HTU26 (20-10d Girder, 11-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-2-8 oc max. starting at 0-2-4 from the left end to 14-4-12 to connect truss(es) to back face of bottom chord.
12) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (lb/ft)
Vert: 1-2=-60, 2-4=-60, 5-8=-20
Concentrated Loads (lb)
Vert: 8=-958 (B), 7=-950 (B), 9=-950 (B), 10=-950 (B), 12=-950 (B), 13=-950 (B), 14=-950 (B), 15=-950 (B)

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

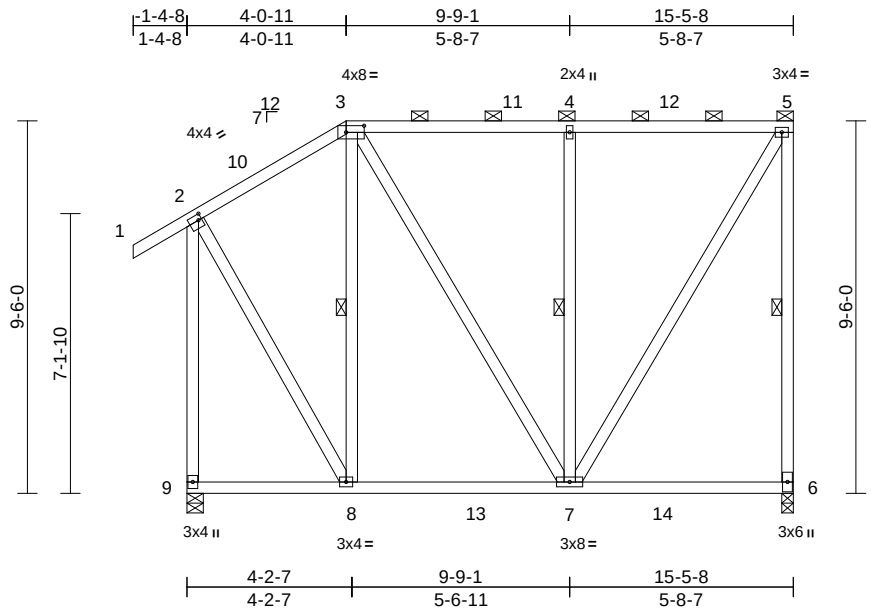
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	D02	Piggyback Base	5	1	T28096083
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:25
ID:46JKXMOAe?rkgT_n81kQSCz48z4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:58.8

Plate Offsets (X, Y): [2:0-1-0,0-1-12], [3:0-5-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.82	Vert(LL)	-0.04	6-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.34	Vert(CT)	-0.07	6-7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.91	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.02	8-9	>999	240	Weight: 141 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, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-5.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-6, 3-8, 4-7

REACTIONS (lb/size) 6=602/0-3-8, 9=702/0-5-0
Max Horiz 9=-352 (LC 8)
Max Uplift 6=-406 (LC 7), 9=-301 (LC 10)
Max Grav 6=701 (LC 2), 9=759 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/46, 2-3=-360/319, 3-4=-292/217, 4-5=-292/217, 5-6=-585/451, 2-9=-707/301
BOT CHORD 8-9=-392/221, 7-8=-315/294, 6-7=-5/9
WEBS 3-8=-242/247, 3-7=-168/186, 4-7=-390/342, 5-7=-414/547, 2-8=-208/460

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-0 to 1-8-0, Exterior(2R) 1-8-0 to 8-4-1, Interior (1) 8-4-1 to 12-4-4, Exterior(2E) 12-4-4 to 15-4-4 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 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 406 lb uplift at joint 6 and 301 lb uplift at joint 9.
8) 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.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

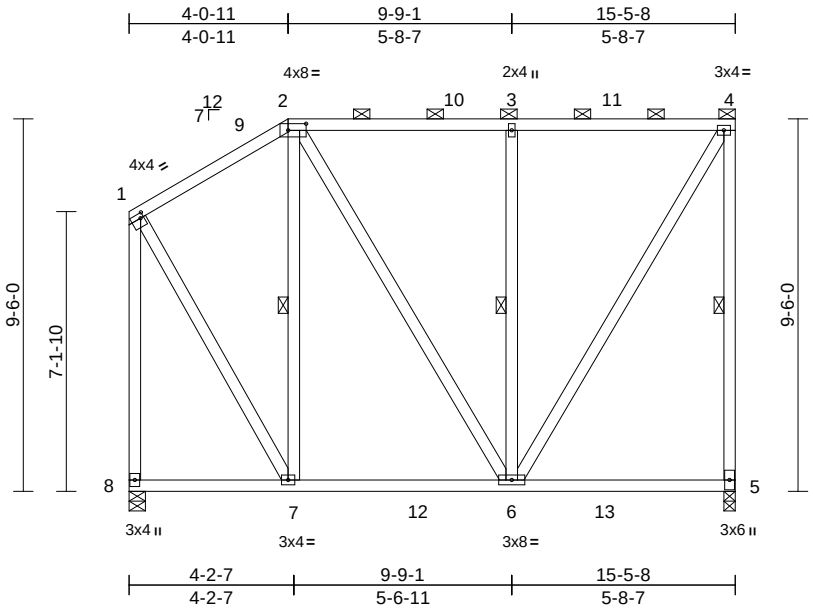
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	D02A	Piggyback Base	6	1	T28096084
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:26
ID:46JKXMOAe?rkgT_n81kQSCz48z4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:58.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.84	Vert(LL)	-0.04	5-6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.34	Vert(CT)	-0.07	5-6	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.02	7-8	>999	240	Weight: 139 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, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 2-4.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-5, 2-7, 3-6

REACTIONS (lb/size) 5=607/0-3-8, 8=607/0-5-0
Max Horiz 8=-341 (LC 8)
Max Uplift 5=-398 (LC 7), 8=-251 (LC 10)
Max Grav 5=705 (LC 2), 8=679 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-353/268, 2-3=-294/198, 3-4=-294/198, 4-5=-589/421, 1-8=-626/249
BOT CHORD 7-8=-316/232, 6-7=-280/302, 5-6=-5/9
WEBS 2-7=-249/257, 2-6=-167/154, 3-6=-389/342, 4-6=-378/551, 1-7=-218/465

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-2-4 to 3-2-4, Exterior(2R) 3-2-4 to 8-4-1, Interior (1) 8-4-1 to 12-4-4, Exterior(2E) 12-4-4 to 15-4-4 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 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 398 lb uplift at joint 5 and 251 lb uplift at joint 8.
8) 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.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

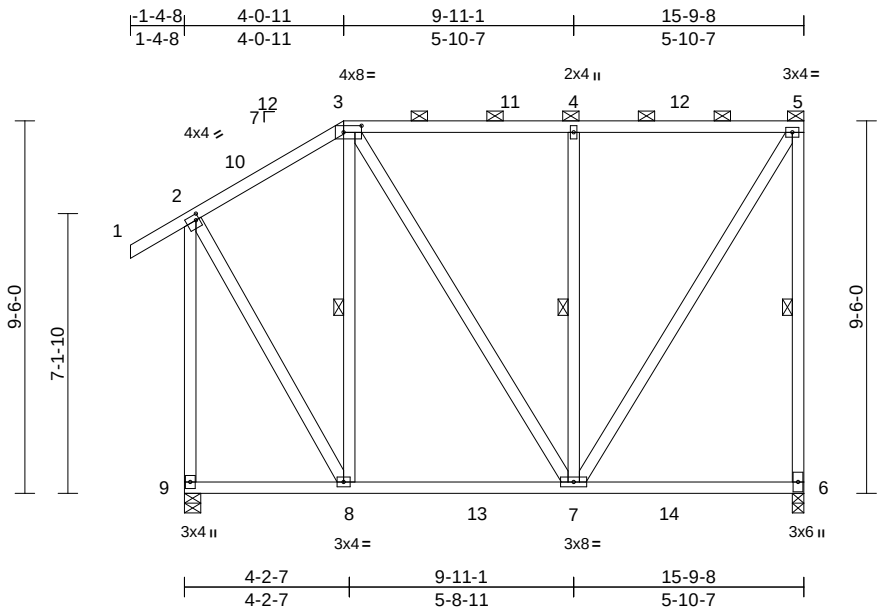
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	D03	Piggyback Base	6	1	T28096085
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:26
ID:yKV_E61Lin4_4sh0NkCOEtz48zY-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:58.8

Plate Offsets (X, Y): [2:0-1-0,0-1-12], [3:0-5-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.83	Vert(LL)	-0.05	6-7	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.36	Vert(CT)	-0.08	6-7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.02	8-9	>999	240	Weight: 143 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, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-5.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 5-6, 3-8, 4-7

REACTIONS (lb/size) 6=616/0-3-8, 9=716/0-5-0
Max Horiz 9=-352 (LC 8)
Max Uplift 6=-412 (LC 7), 9=-308 (LC 10)
Max Grav 6=717 (LC 2), 9=775 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/46, 2-3=-367/321, 3-4=-306/220, 4-5=-306/220, 5-6=-598/447, 2-9=-723/308
BOT CHORD 8-9=-390/220, 7-8=-316/298, 6-7=-5/10
WEBS 3-8=-252/253, 3-7=-166/180, 4-7=-401/352, 5-7=-411/562, 2-8=-214/475

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-0 to 1-8-0, Exterior(2R) 1-8-0 to 8-4-1, Interior (1) 8-4-1 to 12-8-4, Exterior(2E) 12-8-4 to 15-8-4 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 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 412 lb uplift at joint 6 and 308 lb uplift at joint 9.
8) 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.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

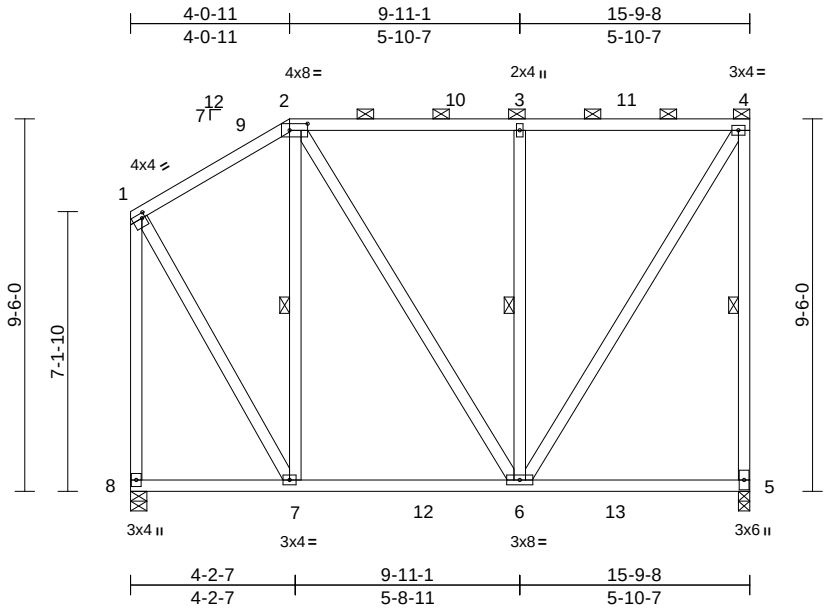
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	D03A	Piggyback Base	1	1	T28096086
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:26
ID:yKV_E61Lin4_4sh0NkCOEtz48zY-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:58.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.84	Vert(LL)	-0.05	5-6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.37	Vert(CT)	-0.08	5-6	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.02	7-8	>999	240	Weight: 140 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, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 2-4.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-5, 2-7, 3-6

REACTIONS (lb/size) 5=620/0-3-8, 8=620/0-5-0
Max Horiz 8=-341 (LC 8)
Max Uplift 5=-403 (LC 7), 8=-258 (LC 10)
Max Grav 5=721 (LC 2), 8=695 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-360/270, 2-3=-308/201, 3-4=-308/201, 4-5=-601/423, 1-8=-643/256
BOT CHORD 7-8=-314/231, 6-7=-281/306, 5-6=-5/10
WEBS 2-7=-259/262, 2-6=-165/148, 3-6=-400/351, 4-6=-376/566, 1-7=-224/480

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-2-4 to 3-2-4, Exterior(2R) 3-2-4 to 8-4-1, Interior (1) 8-4-1 to 12-8-4, Exterior(2E) 12-8-4 to 15-8-4 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 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 403 lb uplift at joint 5 and 258 lb uplift at joint 8.
8) 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.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

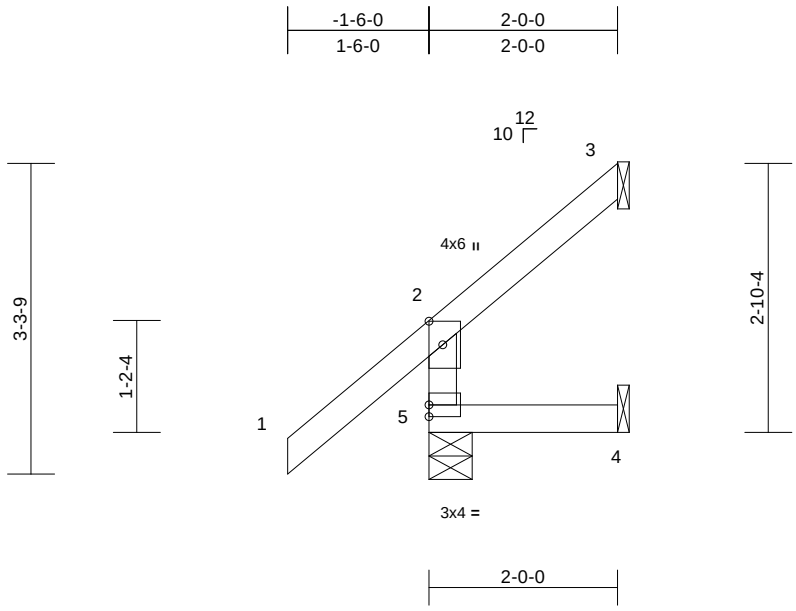
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	EJ02	Jack-Open	9	1	T28096087 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:26 Page: 1
ID:HuODyDwEV0KGLbsZYhPaeOz3OWR-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:24.4

Plate Offsets (X, Y): [2:0-3-0,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.75	Vert(LL)	0.00	4-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.22	Vert(CT)	0.00	4-5	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MR							Weight: 11 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 2-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=22/ Mechanical, 4=7/ Mechanical, 5=217/0-5-8
Max Horiz 5=144 (LC 10)
Max Uplift 3=-78 (LC 10), 4=-23 (LC 10), 5=-49 (LC 10)
Max Grav 3=47 (LC 17), 4=33 (LC 8), 5=217 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-187/279, 1-2=0/63, 2-3=-96/73
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 5, 23 lb uplift at joint 4 and 78 lb uplift at joint 3.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

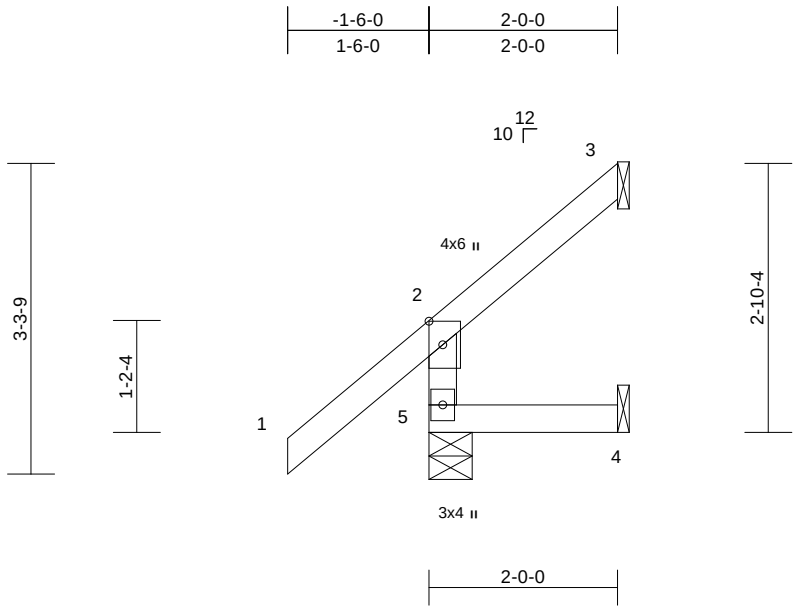
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	EJ02A	Jack-Open	1	1	T28096088
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:26
ID:I9weW17vVETrtCfq2mCZq_z3OWA-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:24.4

Plate Offsets (X, Y): [2:0-3-0,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.78	Vert(LL)	0.01	4-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.22	Vert(CT)	0.01	4-5	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.02	3	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MR							Weight: 11 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 2-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=22/ Mechanical, 4=7/ Mechanical, 5=217/0-5-8
Max Horiz 5=144 (LC 10)
Max Uplift 3=-78 (LC 10), 4=-42 (LC 7), 5=-49 (LC 10)
Max Grav 3=45 (LC 17), 4=31 (LC 3), 5=217 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-187/271, 1-2=0/63, 2-3=-101/72
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical left exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 5, 42 lb uplift at joint 4 and 78 lb uplift at joint 3.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

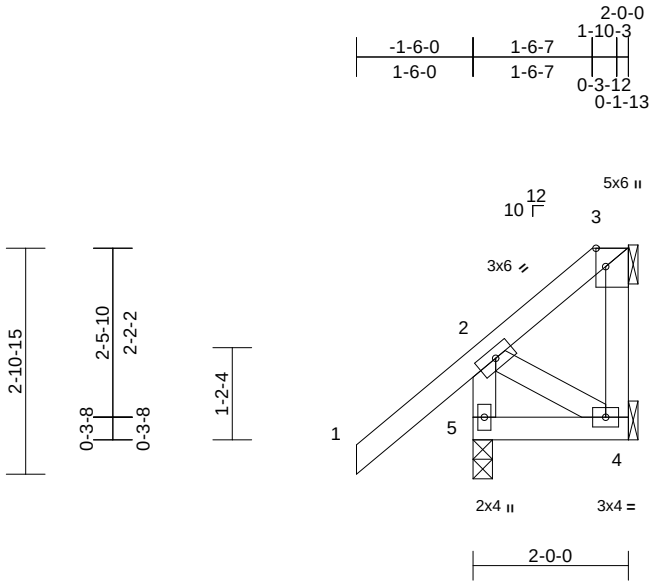
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	EJ02B	Half Hip	1	1	T28096089
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:27
ID:TYcDOcTTvq?tEWoChei7zuz3OVk-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:29.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.52	Vert(LL)	0.00	4-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MP							Weight: 16 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 2-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-3-13 oc bracing.

REACTIONS (lb/size) 3=4/ Mechanical, 4=17/ Mechanical, 5=215/0-3-0
Max Horiz 5=137 (LC 10)
Max Uplift 3=-17 (LC 10), 4=-75 (LC 10), 5=-51 (LC 10)
Max Grav 3=28 (LC 6), 4=34 (LC 3), 5=215 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-63/75, 2-5=-198/209
BOT CHORD 4-5=-387/69
WEBS 2-4=-80/445, 3-4=0/0

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical left exposed; 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 51 lb uplift at joint 5, 75 lb uplift at joint 4 and 17 lb uplift at joint 3.
9) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

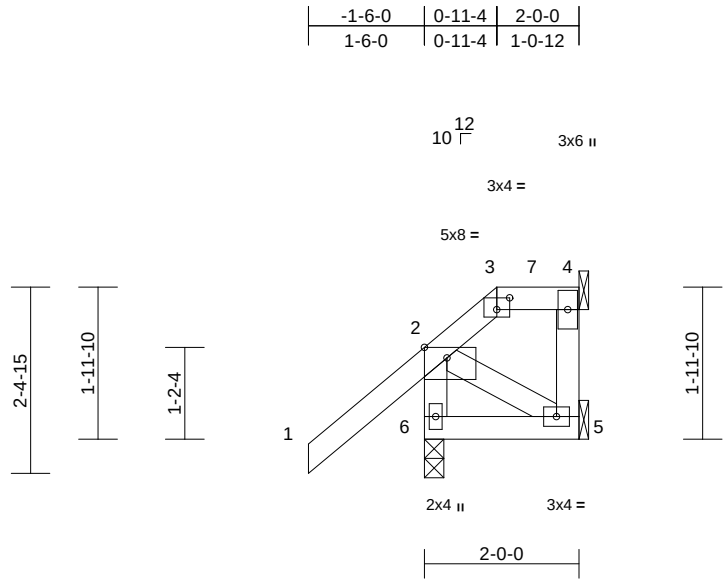
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	EJ02C	Half Hip	1	1	T28096090 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:27
ID:r2L4V5KFZRw2GtZVTOHPY2z3OF7-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:29.8

Plate Offsets (X, Y): [2:0-3-8,Edge], [3:0-2-0,0-1-13]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.56	Vert(LL)	0.00	5-6	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.08	Vert(CT)	0.00	5-6	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MP							Weight: 15 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 2-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 4=26/ Mechanical, 5=-6/ Mechanical, 6=215/0-3-0
Max Horiz 6=93 (LC 10)
Max Uplift 4=-30 (LC 7), 5=-45 (LC 7), 6=-101 (LC 10)
Max Grav 4=26 (LC 1), 5=28 (LC 3), 6=215 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-51/56, 3-4=-16/6, 4-5=0/0, 2-6=-199/326
BOT CHORD 5-6=-105/62
WEBS 2-5=-54/115

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-6-0 to 1-10-4 zone; end vertical left exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 4, 45 lb uplift at joint 5 and 101 lb uplift at joint 6.
8) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

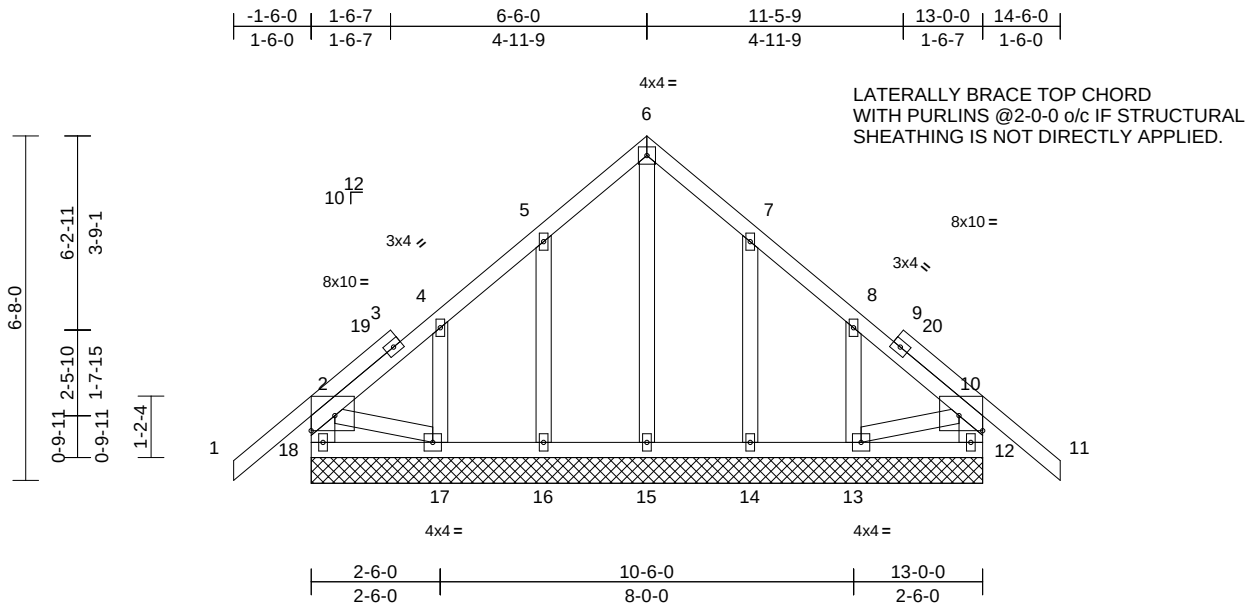
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	G01	Common Supported Gable	1	1	T28096091
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:27
ID:IpPCr5_Tn_WVUsPre4W7Ofz49Q0-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:44.6

Plate Offsets (X, Y): [2:Edge,0-3-8], [10:Edge,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.42	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 93 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x6 SP No.2 *Except* 17-2,13-10:2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS (lb/size) 12=238/13-0-0, 13=136/13-0-0, 14=166/13-0-0, 15=132/13-0-0, 16=166/13-0-0, 17=136/13-0-0, 18=238/13-0-0
Max Horiz 18=292 (LC 9)
Max Uplift 12=-48 (LC 7), 13=-207 (LC 11), 14=-173 (LC 11), 16=-173 (LC 10), 17=-213 (LC 10), 18=-94 (LC 6)
Max Grav 12=238 (LC 1), 13=200 (LC 18), 14=205 (LC 18), 15=163 (LC 20), 16=205 (LC 17), 17=211 (LC 17), 18=239 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-18=-216/216, 1-2=0/61, 2-4=-158/141, 4-5=-118/104, 5-6=-129/248, 6-7=-129/248, 7-8=-73/79, 8-10=-128/78, 10-11=0/61, 10-12=-216/216
BOT CHORD	17-18=-220/239, 16-17=-125/360, 15-16=-125/360, 14-15=-125/360, 13-14=-125/360, 12-13=-47/189
WEBS	6-15=-170/33, 5-16=-168/247, 4-17=-184/208, 7-14=-166/247, 8-13=-184/208, 2-17=-119/182, 10-13=-119/182

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-6-0 to 1-6-0, Exterior(2N) 1-6-0 to 3-6-0, Corner(3R) 3-6-0 to 9-6-0, Exterior(2N) 9-6-0 to 11-6-0, Corner(3E) 11-6-0 to 14-6-0 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) All [illegible] are 2x4 MT20 unless otherwise indicated.
6) Ga[illegible]uires continuous bottom chord bearing.
7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 94 lb uplift at joint 18, 48 lb uplift at joint 12, 173 lb uplift at joint 16, 213 lb uplift at joint 17, 173 lb uplift at joint 14 and 207 lb uplift at joint 13.
12) 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.

LOAD CASE(S) Standard

PX2707 07/03/2022
Examiner License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

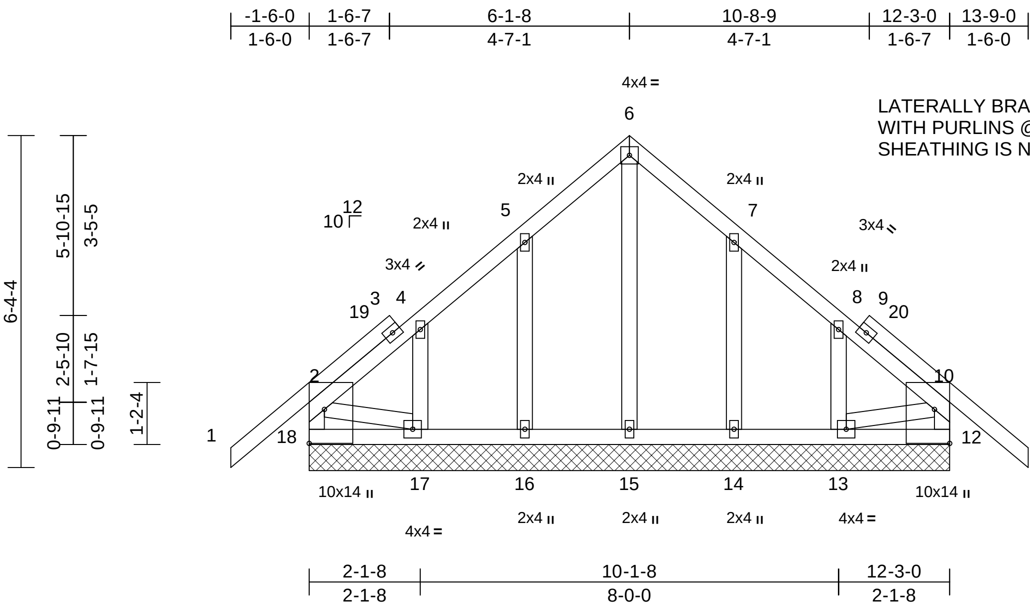
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	G02	Common Supported Gable	1	1	Job Reference (optional) T28096092

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:27 Page: 1

ID:72uANPtuMjr?ME33_drTOFz49Os-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



LATERALLY BRACE TOP CHORD WITH PURLINS @2-0-0 o/c IF STRUCTURAL SHEATHING IS NOT DIRECTLY APPLIED.

Scale = 1:44.1

Plate Offsets (X, Y): [12:Edge,0-3-8], [18:Edge,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.36	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 86 lb	FT = 20%

LUMBER

TOP CHORD 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, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 12=220/12-3-0, 13=122/12-3-0, 14=168/12-3-0, 15=134/12-3-0, 16=168/12-3-0, 17=122/12-3-0, 18=220/12-3-0
Max Horiz 18=274 (LC 9)
Max Uplift 12=-51 (LC 7), 13=-191 (LC 11), 14=-175 (LC 11), 16=-175 (LC 10), 17=-197 (LC 10), 18=-93 (LC 6)
Max Grav 12=220 (LC 1), 13=182 (LC 18), 14=207 (LC 18), 15=162 (LC 20), 16=208 (LC 17), 17=192 (LC 17), 18=224 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-18=-204/213, 1-2=0/56, 2-4=-147/130, 4-5=-113/101, 5-6=-126/245, 6-7=-126/245, 7-8=-72/69, 8-10=-119/77, 10-11=0/56, 10-12=-204/213
BOT CHORD 17-18=-227/226, 16-17=-118/341, 15-16=-118/341, 14-15=-118/341, 13-14=-118/341, 12-13=-38/132
WEBS 6-15=-164/28, 5-16=-171/258, 4-17=-185/174, 7-14=-171/258, 8-13=-185/174, 2-17=-115/223, 10-13=-93/223

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-6-0 to 1-6-0, Exterior(2N) 1-6-0 to 3-1-8, Corner(3R) 3-1-8 to 9-1-8, Exterior(2N) 9-1-8 to 10-9-0, Corner(3E) 10-9-0 to 13-9-0 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 93 lb uplift at joint 18, 51 lb uplift at joint 12, 175 lb uplift at joint 16, 197 lb uplift at joint 17, 175 lb uplift at joint 14 and 191 lb uplift at joint 13.
11) 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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science
PX2707 07/03/2022
Examiner License No

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

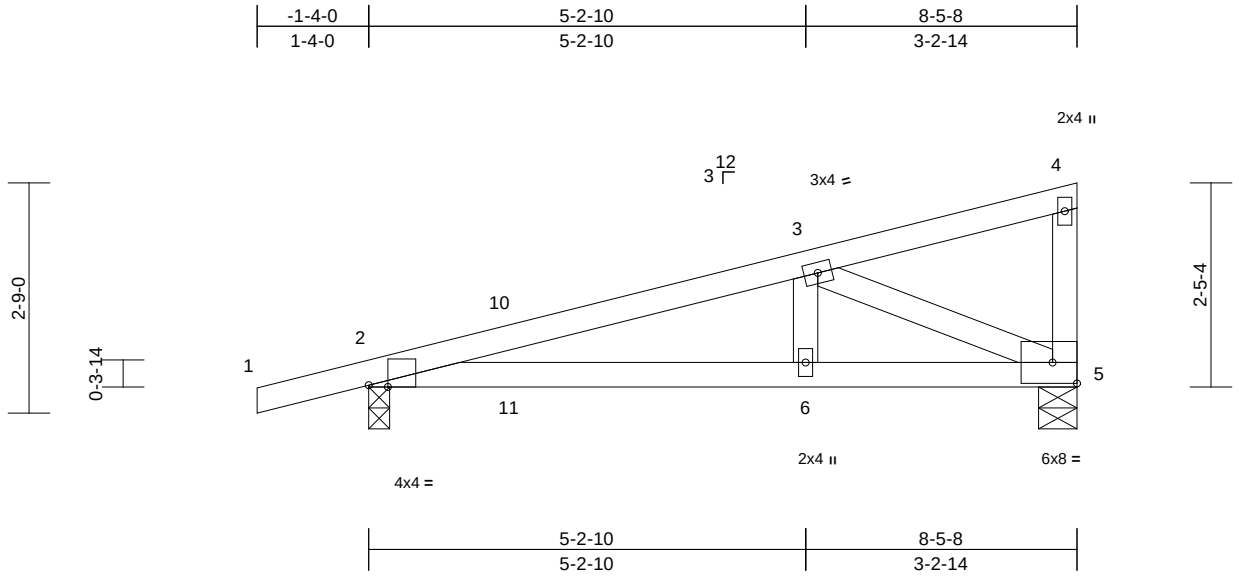
June 24,2022

Job	Truss	Truss Type	Qty	Ply	
3100342	M01	Monopitch	18	1	T28096093 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:28
ID:q4ozV7YW1D6TnUE65EOvUGz49QZ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:27.5

Plate Offsets (X, Y): [2:0-2-12,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.61	Vert(LL)	0.12	6-9	>860	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.44	Vert(CT)	-0.05	6-9	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.51	Horz(CT)	-0.01	5	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 36 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, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 2=419/0-3-0, 5=326/0-5-8
Max Horiz 2=144 (LC 9)
Max Uplift 2=-391 (LC 6), 5=-294 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/19, 2-3=-613/1551, 3-4=-66/68, 4-5=-63/109
BOT CHORD 2-6=-1539/578, 5-6=-1539/578
WEBS 3-5=-619/1703, 3-6=-553/186

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-0 to 1-8-0, Interior (1) 1-8-0 to 5-2-10, Exterior(2E) 5-2-10 to 8-3-12 zone; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 391 lb uplift at joint 2 and 294 lb uplift at joint 5.
6) 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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

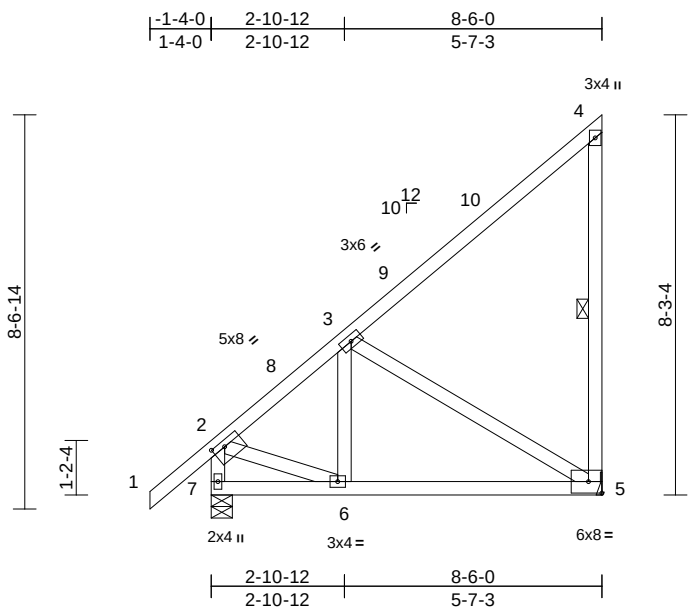
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	M02	Jack-Closed	2	1	T28096094
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:28

ID:IA4tL?2fzIM6MewnBO8iZOz48t3-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:50.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.50	Vert(LL)	-0.03	5-6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.25	Vert(CT)	-0.05	5-6	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS		Wind(LL)	0.01	6-7	>999	240	Weight: 62 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, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 4-5

REACTIONS (lb/size) 5=320/ Mechanical, 7=425/0-5-8
Max Horiz 7=421 (LC 10)
Max Uplift 5=-323 (LC 10), 7=-43 (LC 10)
Max Grav 5=408 (LC 17), 7=425 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-7=-413/86, 1-2=0/57, 2-3=-318/0, 3-4=-222/106, 4-5=-180/321
BOT CHORD 6-7=-493/226, 5-6=-433/343
WEBS 3-5=-386/486, 3-6=0/142, 2-6=0/296

NOTES

1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -1-4-0 to 1-8-0, Interior (1) 1-8-0 to 4-1-5, Exterior(2R) 4-1-5 to 8-4-4 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 43 lb uplift at joint 7 and 323 lb uplift at joint 5.
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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

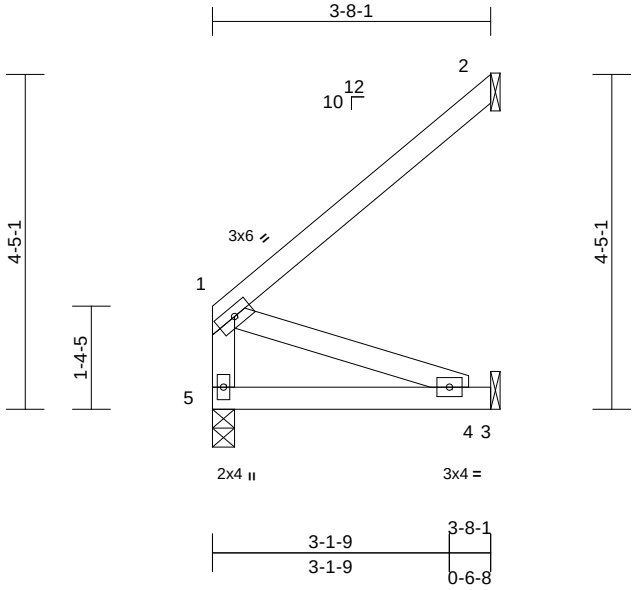
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	M03	Jack-Open	2	1	T28096095
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:28
ID:QxuDeGPUvW8ryFCYyhhknjz48sb-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:30.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.45	Vert(LL)	-0.01	4-5	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.14	Vert(CT)	-0.02	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MP		Wind(LL)	0.00	4-5	>999	240	Weight: 19 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 3-10-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=104/ Mechanical, 3=35/ Mechanical, 5=139/0-3-8
Max Horiz 5=151 (LC 10)
Max Uplift 2=-163 (LC 10), 3=-37 (LC 10)
Max Grav 2=135 (LC 17), 3=69 (LC 3), 5=139 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-5=-104/0, 1-2=-195/98
BOT CHORD 4-5=-323/156, 3-4=0/0
WEBS 1-4=-165/343

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 163 lb uplift at joint 2 and 37 lb uplift at joint 3.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

Lawrence Pennell PX2707 07/03/2022
Examiner-License No.

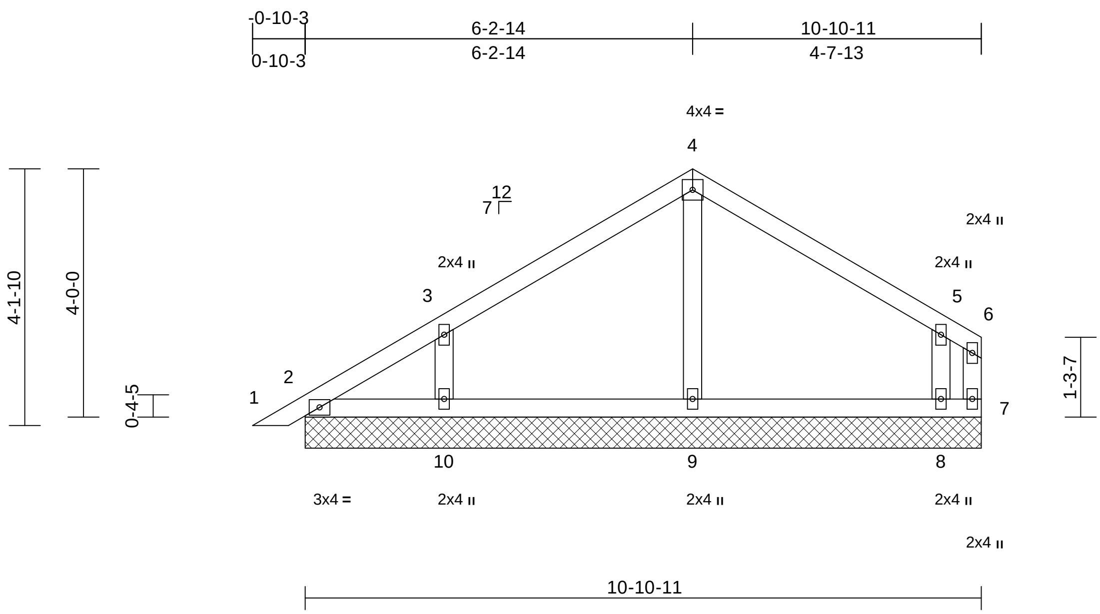
This item has been electronically signed and sealed by Velez, Joaquin, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	PB01	Piggyback	7	1	T28096096 Job Reference (optional)



Scale = 1:37.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.12	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	7	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 46 lb	FT = 20%

LUMBER
TOP CHORD 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, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 2=97/10-10-11, 7=-129/10-10-11, 8=340/10-10-11, 9=302/10-10-11, 10=284/10-10-11, 11=97/10-10-11
Max Horiz 2=172 (LC 9), 11=172 (LC 9)
Max Uplift 2=-57 (LC 6), 7=-204 (LC 18), 8=-336 (LC 11), 9=-49 (LC 10), 10=-236 (LC 10), 11=-57 (LC 6)
Max Grav 2=119 (LC 18), 7=182 (LC 11), 8=451 (LC 18), 9=310 (LC 17), 10=338 (LC 17), 11=119 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-145/140, 3-4=-132/148, 4-5=-121/149, 5-6=-114/78, 6-7=-191/155
BOT CHORD 2-10=-36/37, 9-10=-36/37, 8-9=-36/37, 7-8=-36/37
WEBS 4-9=-225/91, 3-10=-271/289, 5-8=-354/377

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-3-8 to 3-1-0, Interior (1) 3-1-0 to 4-1-0, Exterior(2R) 4-1-0 to 8-7-1, Exterior(2E) 8-7-1 to 11-7-1 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 204 lb uplift at joi[...] lb uplift at joint 2, 49 lb uplift at joint 9, 236 lb up[...]int 10, 336 lb uplift at joint 8 and 57 lb uplift at joi[...]2.
10) 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.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science
RX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

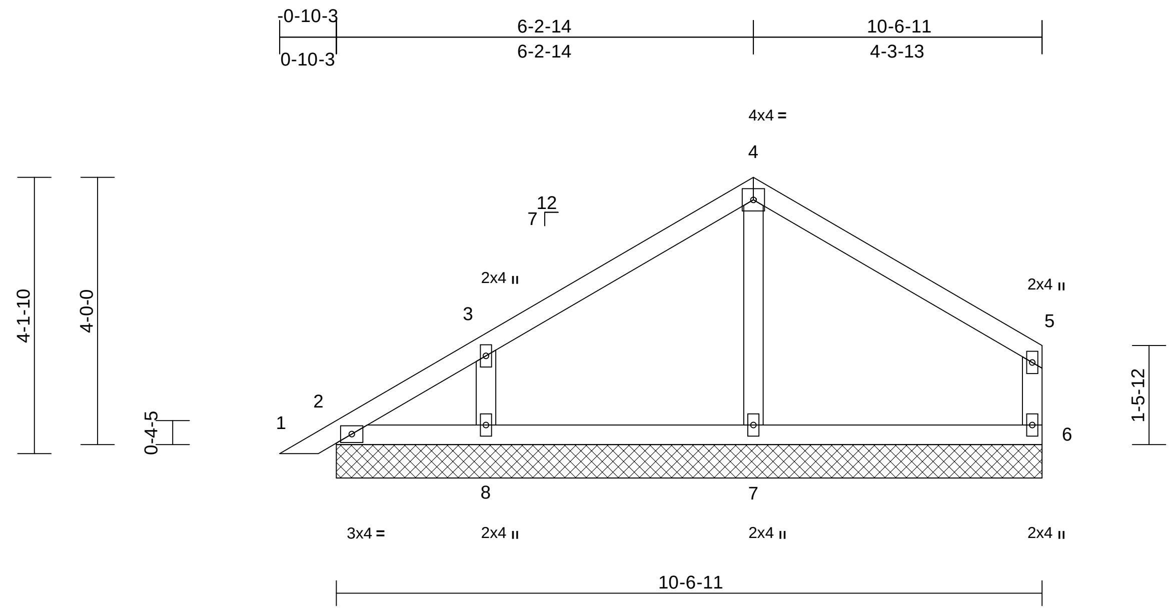
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

Job	Truss	Truss Type	Qty	Ply	
3100342	PB02	Piggyback	11	1	T28096097 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736, Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:29 Page: 1

ID:46JKXMOAe?rkgT_n81kQSCz48z4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:34.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.14	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 44 lb	FT = 20%

LUMBER
TOP CHORD 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, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 2=124/10-6-11, 6=193/10-6-11, 7=271/10-6-11, 8=278/10-6-11, 9=124/10-6-11
Max Horiz 2=176 (LC 9), 9=176 (LC 9)
Max Uplift 2=-79 (LC 6), 6=-151 (LC 11), 7=-45 (LC 7), 8=-235 (LC 10), 9=-79 (LC 6)
Max Grav 2=162 (LC 18), 6=238 (LC 18), 7=299 (LC 17), 8=335 (LC 17), 9=162 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-217/171, 3-4=-208/205, 4-5=-189/200, 5-6=-208/215
BOT CHORD 2-8=-59/62, 7-8=-59/62, 6-7=-59/62
WEBS 4-7=-212/91, 3-8=-269/288

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-3-8 to 3-1-0, Interior (1) 3-1-0 to 4-1-0, Exterior(2R) 4-1-0 to 8-3-1, Exterior(2E) 8-3-1 to 11-3-1 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 151 lb uplift at joi[illegible] lb uplift at joint 2, 45 lb uplift at joint 7, 235 lb up[illegible]int 8 and 79 lb uplift at joint 2.
10) Th[illegible] 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.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science
PX2707 07/03/2022
Examiner Signature

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

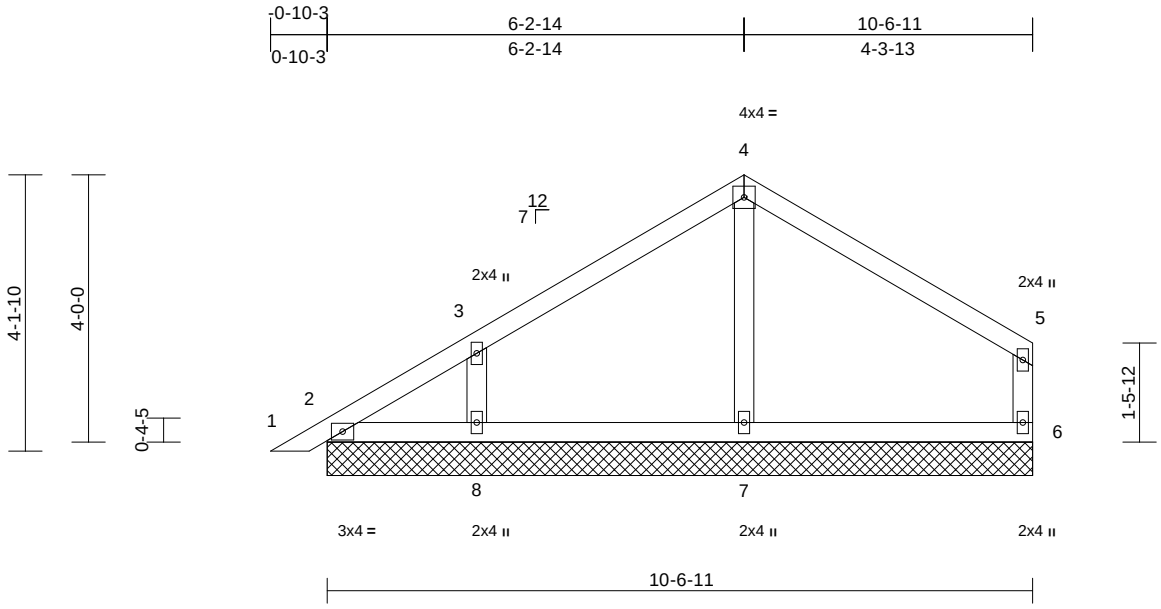
June 24,2022

Job	Truss	Truss Type	Qty	Ply		
3100342	PB03	Piggyback	1	**2**	Job Reference (optional)	T28096098

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:29
ID:0mzWWsd4ArF1SOxRlXatkCz48yn-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:34.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.07	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 88 lb	FT = 20%

LUMBER

TOP CHORD	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, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS (lb/size) 2=125/10-6-11, 6=194/10-6-11, 7=270/10-6-11, 8=278/10-6-11, 9=125/10-6-11
Max Horiz 2=176 (LC 9), 9=176 (LC 9)
Max Uplift 2=-79 (LC 6), 6=-151 (LC 11), 7=-46 (LC 7), 8=-235 (LC 10), 9=-79 (LC 6)
Max Grav 2=162 (LC 18), 6=238 (LC 18), 7=299 (LC 17), 8=335 (LC 17), 9=162 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/17, 2-3=-218/172, 3-4=-209/206, 4-5=-190/201, 5-6=-208/216
BOT CHORD	2-8=-60/63, 7-8=-60/63, 6-7=-60/63
WEBS	4-7=-211/92, 3-8=-270/289

NOTES

1) 2-ply truss to be connected together as follows:
Top chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-3-8 to 3-1-0, Interior (1) 3-1-0 to 4-1-0, Exterior(2R) 4-1-0 to 8-3-1, Exterior(2E) 8-3-1 to 11-3-1 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) 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.
6) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
7) Gable requires continuous bottom chord bearing.
8) Ga[illegible]ds spaced at 4-0-0 oc.
9) Th[illegible] has been designed for a 10.0 psf bottom ch[illegible] load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 151 lb uplift at joint 6, 79 lb uplift at joint 2, 46 lb uplift at joint 7, 235 lb uplift at joint 8 and 79 lb uplift at joint 2.
12) 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.
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examined License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

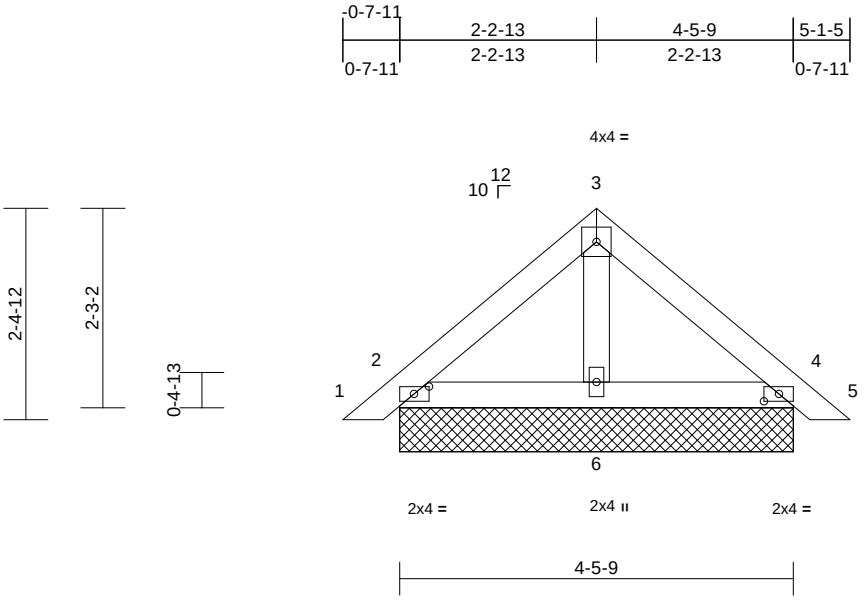
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	PB04	Piggyback	31	1	T28096099
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:29
ID:uuWpWBqPPc6nTXp31IQC3jz43Dq-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:26.1

Plate Offsets (X, Y): [2:0-2-1,0-1-0], [4:0-2-1,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.11	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 20 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 2=131/4-5-9, 4=131/4-5-9, 6=146/4-5-9, 7=131/4-5-9, 11=131/4-5-9
Max Horiz 2=85 (LC 9), 7=85 (LC 9)
Max Uplift 2=-68 (LC 10), 4=-79 (LC 11), 6=-38 (LC 10), 7=-68 (LC 10), 11=-79 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-90/113, 3-4=-84/113, 4-5=0/16
BOT CHORD 2-6=-28/70, 4-6=-21/70
WEBS 3-6=-60/13

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 68 lb uplift at joint 2, 79 lb uplift at joint 4, 38 lb uplift at joint 6, 68 lb uplift at joint 2 and 79 lb uplift at joint 4.
10) 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.
11) See Standard Industry Piggyback Truss Connection De... Connection to base truss as applicable or co...ualified building designer.

LOAD CASE(S) Standard

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

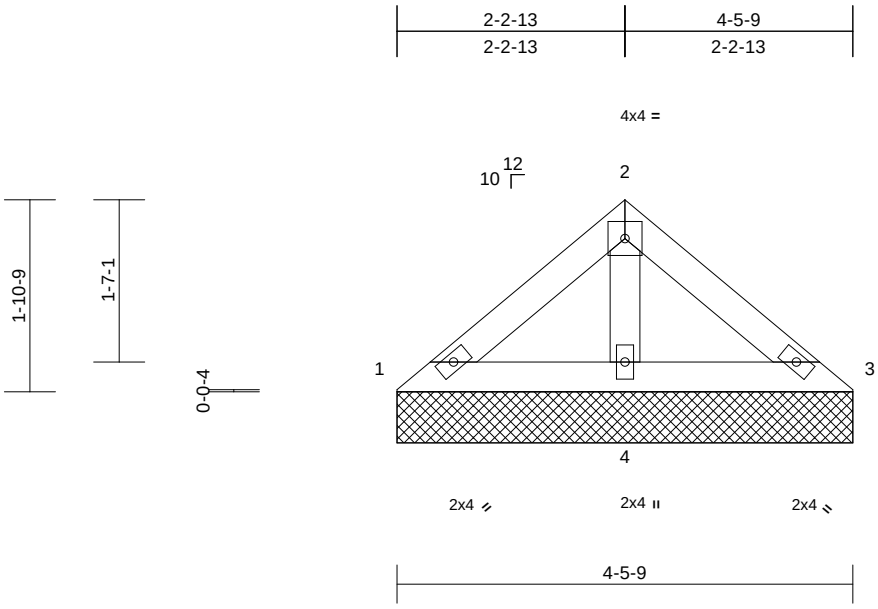
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	PB05	Piggyback	2	1	Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Jan 6 2022 Print: 8.530 S Jan 6 2022 MiTek Industries, Inc. Fri Jun 24 14:48:35 Page: 1
ID:wqhJsuRtRrYwopGpP8eB_zz49LY-_6AgPEhWppVSLs51BywStgrERm_dLsU4xDtGGCz31th



Scale = 1:22.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 16 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 1=50/4-5-9, 3=50/4-5-9, 4=257/4-5-9
Max Horiz 1=-65 (LC 6)
Max Uplift 1=-13 (LC 10), 3=-25 (LC 11), 4=-115 (LC 10)
Max Grav 1=59 (LC 21), 3=59 (LC 22), 4=257 (LC 1)

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

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 1, 25 lb uplift at joint 3 and 115 lb uplift at joint 4.
10) 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.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

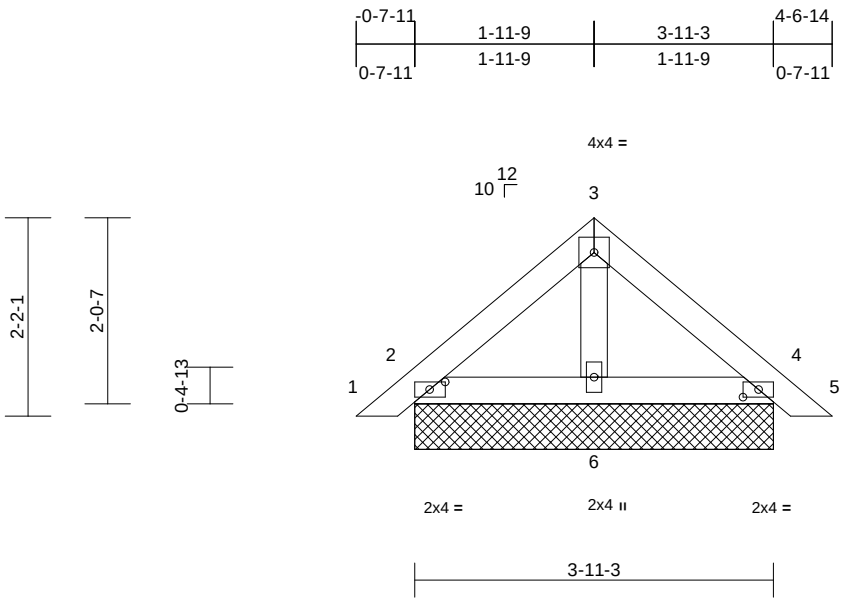
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	PB06	Piggyback	11	1	T28096101 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:30
ID:ejBoHlLzWo1hLoab_eOdmtz49Dw-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:25.3

Plate Offsets (X, Y): [2:0-2-1,0-1-0], [4:0-2-1,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.09	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 18 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 2=117/3-11-3, 4=117/3-11-3, 6=130/3-11-3, 7=117/3-11-3, 11=117/3-11-3
Max Horiz 2=77 (LC 9), 7=77 (LC 9)
Max Uplift 2=-61 (LC 10), 4=-71 (LC 11), 6=-36 (LC 10), 7=-61 (LC 10), 11=-71 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-76/99, 3-4=-69/99, 4-5=0/16
BOT CHORD 2-6=-23/71, 4-6=-19/71
WEBS 3-6=-54/12

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 2, 71 lb uplift at joint 4, 36 lb uplift at joint 6, 61 lb uplift at joint 2 and 71 lb uplift at joint 4.
10) 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.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

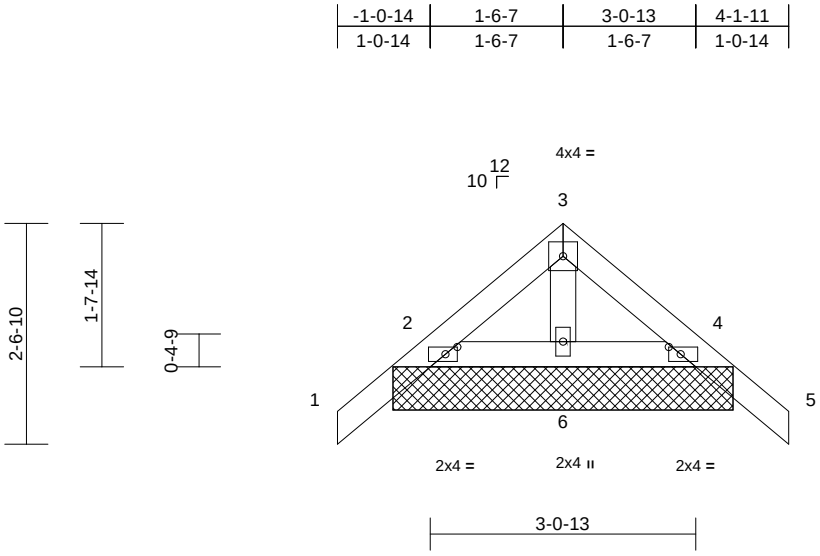
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	PB07	Piggyback	1	1	T28096102 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 E Jan 6 2022 Print: 8.530 E Jan 6 2022 MiTek Industries, Inc. Fri Jun 24 14:48:48 Page: 1
ID:Q495bQXS8VocW9r0OvEDMyz49HY-Zo0zL1sIW6GT109j?uAkSdQbnPnSdCb89OG?mPz31tT



Scale = 1:26.6

Plate Offsets (X, Y): [2:0-1-10,0-1-0], [4:0-1-10,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	10	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MP							Weight: 17 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 5-2-10 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS All bearings 3-11-3.
(lb) - Max Horiz 2=-84 (LC 8), 7=-84 (LC 8)
Max Uplift All uplift 100 (lb) or less at joint(s) except 2=-107 (LC 10), 4=-118 (LC 11), 7=-107 (LC 10), 10=-118 (LC 11)
Max Grav All reactions 250 (lb) or less at joint (s) 2, 4, 6, 7, 10

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

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 107 lb uplift at joint 2, 117 lb uplift at joint 4, 107 lb uplift at joint 2 and 117 lb uplift at joint 4.
10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

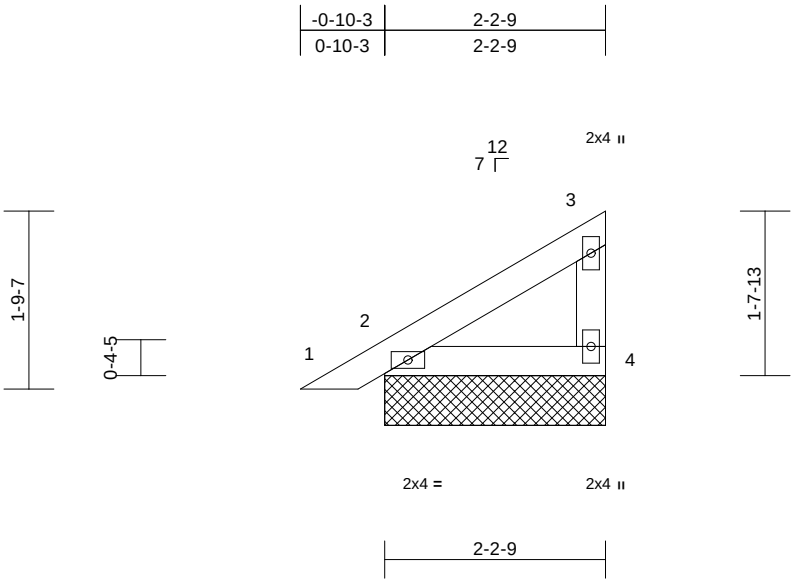
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	PB08	Piggyback	11	1	T28096103 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:30 Page: 1
ID:liUHYmDqLVrvECyQo01_ryz491A-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:23.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MP							Weight: 10 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 3-0-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=121/2-2-9, 4=81/2-2-9, 5=121/2-2-9
Max Horiz 2=81 (LC 9), 5=81 (LC 9)
Max Uplift 2=-60 (LC 10), 4=-49 (LC 10), 5=-60 (LC 10)
Max Grav 2=121 (LC 1), 4=98 (LC 17), 5=121 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-46/34, 3-4=-64/60
BOT CHORD 2-4=-39/39

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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.
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 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 3-06-00 tall by 2-00-00 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 49 lb uplift at joint 4, 60 lb uplift at joint 2 and 60 lb uplift at joint 2.
9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

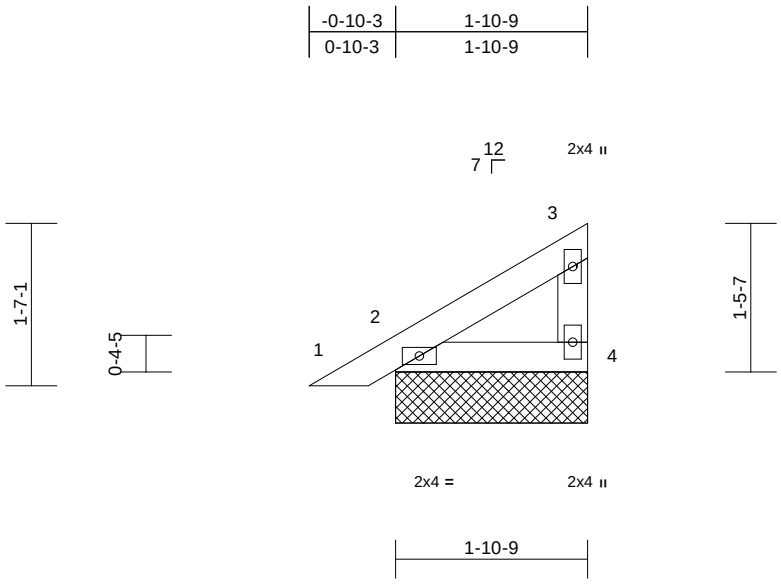
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	PB09	Piggyback	7	1	T28096104 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:30
ID:teW1OXEyFWlL9jeKWt0vZyz49_a-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:22.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MP							Weight: 9 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 2-8-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=108/1-10-9, 4=67/1-10-9, 5=108/1-10-9
Max Horiz 2=70 (LC 9), 5=70 (LC 9)
Max Uplift 2=-56 (LC 10), 4=-40 (LC 10), 5=-56 (LC 10)
Max Grav 2=108 (LC 1), 4=81 (LC 17), 5=108 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-38/28, 3-4=-52/49
BOT CHORD 2-4=-33/33

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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.
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 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 3-06-00 tall by 2-00-00 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 40 lb uplift at joint 4, 56 lb uplift at joint 2 and 56 lb uplift at joint 2.
9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

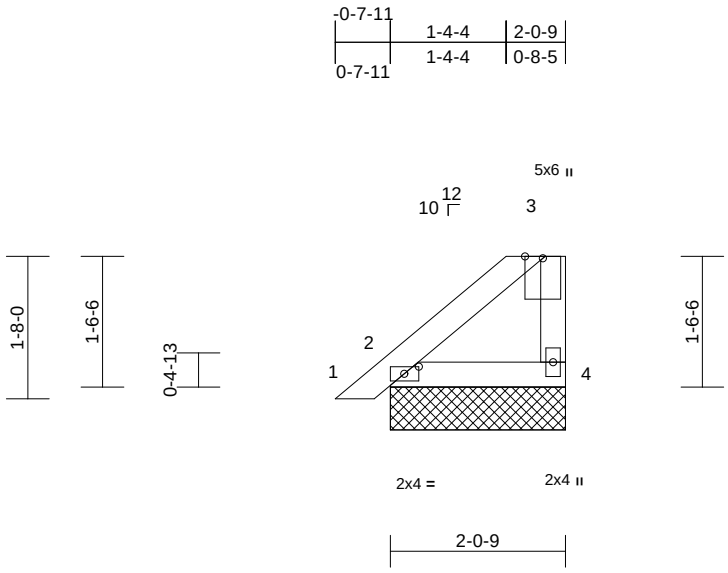
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	PB10	Piggyback	1	1	T28096105
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:30
ID:a_bQeGe4Tq9Ud1EmgFtphwz3M7A-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:26.9

Plate Offsets (X, Y): [2:0-2-1,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.09	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MP							Weight: 9 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 2-8-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=104/2-0-9, 4=76/2-0-9, 5=104/2-0-9
Max Horiz 2=105 (LC 9), 5=105 (LC 9)
Max Uplift 2=-39 (LC 10), 4=-58 (LC 10), 5=-39 (LC 10)
Max Grav 2=104 (LC 1), 4=102 (LC 17), 5=104 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-68/46, 3-4=-68/92
BOT CHORD 2-4=-51/51

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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.
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 58 lb uplift at joint 4, 39 lb uplift at joint 2 and 39 lb uplift at joint 2.
10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

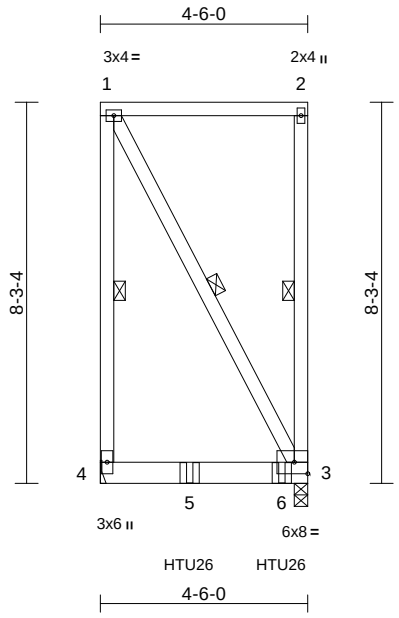
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	T01	Flat Girder	1	1	T28096106 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:31 ID:SJZnJTvt1oRSUmKTu5cogZz3oeR-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:50

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.83	Vert(LL)	-0.02	3-4	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.47	Vert(CT)	-0.04	3-4	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.19	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MP		Wind(LL)	0.05	3-4	>999	240	Weight: 52 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.2 *Except* 3-1:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-9-11 oc bracing.
WEBS 1 Row at midpt 1-4, 2-3, 1-3

REACTIONS (lb/size) 3=572/0-3-8, 4=371/ Mechanical
Max Horiz 4=-447 (LC 4)
Max Uplift 3=-946 (LC 5), 4=-731 (LC 4)
Max Grav 3=916 (LC 15), 4=657 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-371/529, 1-2=-166/126, 2-3=-126/110
BOT CHORD 3-4=-390/349
WEBS 1-3=-475/475

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 731 lb uplift at joint 4 and 946 lb uplift at joint 3.
8) Use Simpson Strong-Tie HTU26 (20-10d Girder, 11-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-11-4 from the left end to 3-11-4 to connect truss(es) to back face of bottom chord.
9) Fill all nail holes where hanger is in contact with lumber.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (lb/ft)
Vert: 1-2=-60, 3-4=-20
Concentrated Loads (lb)
Vert: 5=-300 (B), 6=-306 (B)

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

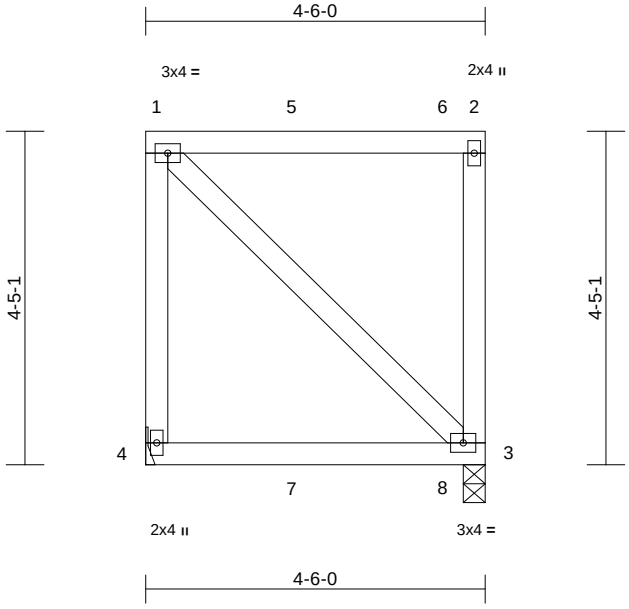
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	T02	Flat Girder	1	1	T28096107 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:31 Page: 1
ID:vEbky?jrptQjZI6PykJ21Cz3oeh-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:30.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.53	Vert(LL)	-0.03	3-4	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.33	Vert(CT)	-0.05	3-4	>970	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.11	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MP		Wind(LL)	0.02	3-4	>999	240	Weight: 33 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 4-6-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=267/0-3-8, 4=210/ Mechanical
Max Horiz 4=234 (LC 7)
Max Uplift 3=-423 (LC 5), 4=-310 (LC 4)
Max Grav 3=378 (LC 15), 4=270 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-203/300, 1-2=-87/66, 2-3=-200/270
BOT CHORD 3-4=-204/183
WEBS 1-3=-164/164

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 310 lb uplift at joint 4 and 423 lb uplift at joint 3.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 151 lb down and 129 lb up at 1-11-4, and 135 lb down and 139 lb up at 3-11-4 on top chord, and 53 lb down and 47 lb up at 1-11-4, and 56 lb down and 44 lb up at 3-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (lb/ft)
Vert: 1-2=-60, 3-4=-20
Concentrated Loads (lb)
Vert: 5=-44 (F), 6=-61 (F), 7=-15 (F), 8=-20 (F)

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

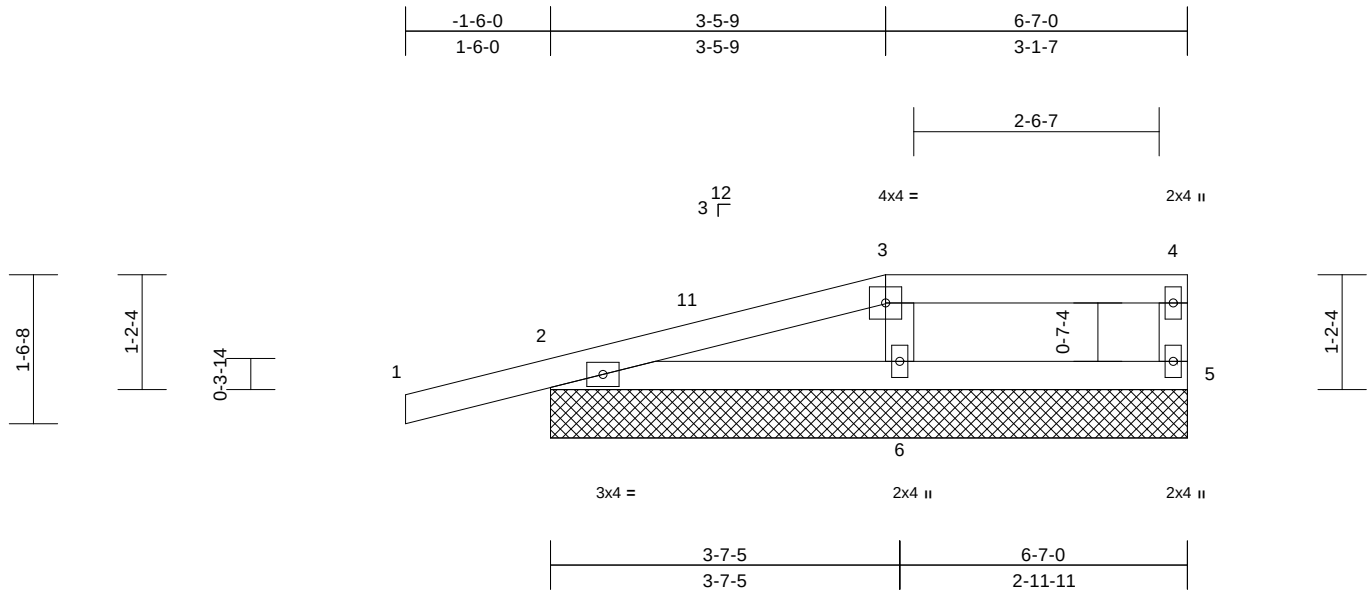
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	T03	Half Hip Supported Gable	1	1	T28096108 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:31 ID:dn_jy9ZevjLelouA0cScK_z3Mvd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:23.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.32	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.14	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 24 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, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 2=247/6-7-0, 5=105/6-7-0, 6=253/6-7-0, 7=247/6-7-0
Max Horiz 2=68 (LC 9), 7=68 (LC 9)
Max Uplift 2=-208 (LC 6), 5=-64 (LC 7), 6=-107 (LC 6), 7=-208 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/22, 2-3=-114/49, 3-4=-25/33, 4-5=-89/200
BOT CHORD 2-6=-29/98, 5-6=-25/33
WEBS 3-6=-165/368

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -1-6-0 to 1-6-0, Corner(3R) 1-6-0 to 3-5-9, Corner(3E) 3-5-9 to 6-5-4 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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.
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 208 lb uplift at joint 2, 64 lb uplift at joint 5, 107 lb uplift at joint 6 and 208 lb uplift at joint 2.
10) 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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

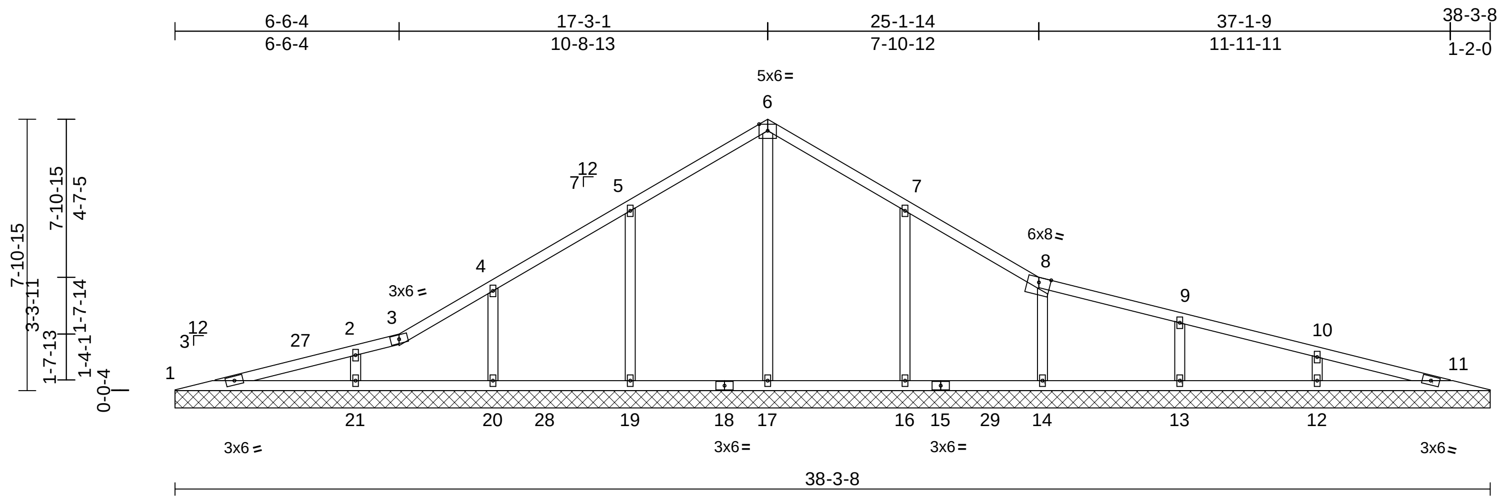
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	V01	Valley	1	1	T28096109 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:31 Page: 1

ID:wjWBwRUBZoXKjkatuavzp6z49Zh-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:67.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.39	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.33	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.63	Horiz(TL)	0.02	11	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 155 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 1=124/38-3-8, 11=0/38-3-8, 12=461/38-3-8, 13=254/38-3-8, 14=225/38-3-8, 16=331/38-3-8, 17=645/38-3-8, 19=349/38-3-8, 20=251/38-3-8, 21=335/38-3-8, 26=0/38-3-8

Max Horiz 1=-214 (LC 8)

Max Uplift 1=-119 (LC 6), 12=-250 (LC 7), 13=-174 (LC 11), 14=-185 (LC 11), 16=-272 (LC 11), 17=-42 (LC 7), 19=-276 (LC 10), 20=-206 (LC 10), 21=-231 (LC 6)

Max Grav 1=147 (LC 21), 11=0 (LC 7), 12=478 (LC 24), 13=274 (LC 2), 14=264 (LC 24), 16=518 (LC 18), 17=733 (LC 17), 19=521 (LC 17), 20=374 (LC 17), 21=389 (LC 23), 26=0 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-304/406, 2-3=-263/415, 3-4=-259/477, 4-5=-188/462, 5-6=-85/444, 6-7=-45/425, 7-8=-70/407, 8-9=-156/341, 9-10=-212/334, 10-11=-305/349

BOT CHORD 1-21=-298/302, 20-21=-298/302, 19-20=-298/302, 17-19=-298/302, 16-17=-298/302, 14-16=-298/302, 13-14=-303/309, 12-13=-303/309, 11-12=-303/309

WEBS 6-17=-566/123, 5-19=-320/330, 4-20=-231/258, 2-21=-240/225, 7-16=-320/328, 8-14=-137/222, 9-13=-216/232, 10-12=-303/270

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-0 to 3-10-15, Interior (1) 3-10-15 to 13-4-1, Exterior(2R) 13-4-1 to 21-4-1, Interior (1) 21-4-1 to 33-4-1, Exterior(2E) 33-4-1 to 37-3-5 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 119 lb uplift at joint 1, 42 lb uplift at joint 17, 276 lb uplift at joint 19, 206 lb uplift at joint 20, 231 lb uplift at joint 21, 272 lb uplift at joint 16, 185 lb uplift at joint 14, 174 lb uplift at joint 13 and 250 lb uplift at joint 12.
11) 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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science
PX2707 07/03/2022

This item has been electronically signed and sealed by Velez, Joaquin, 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.

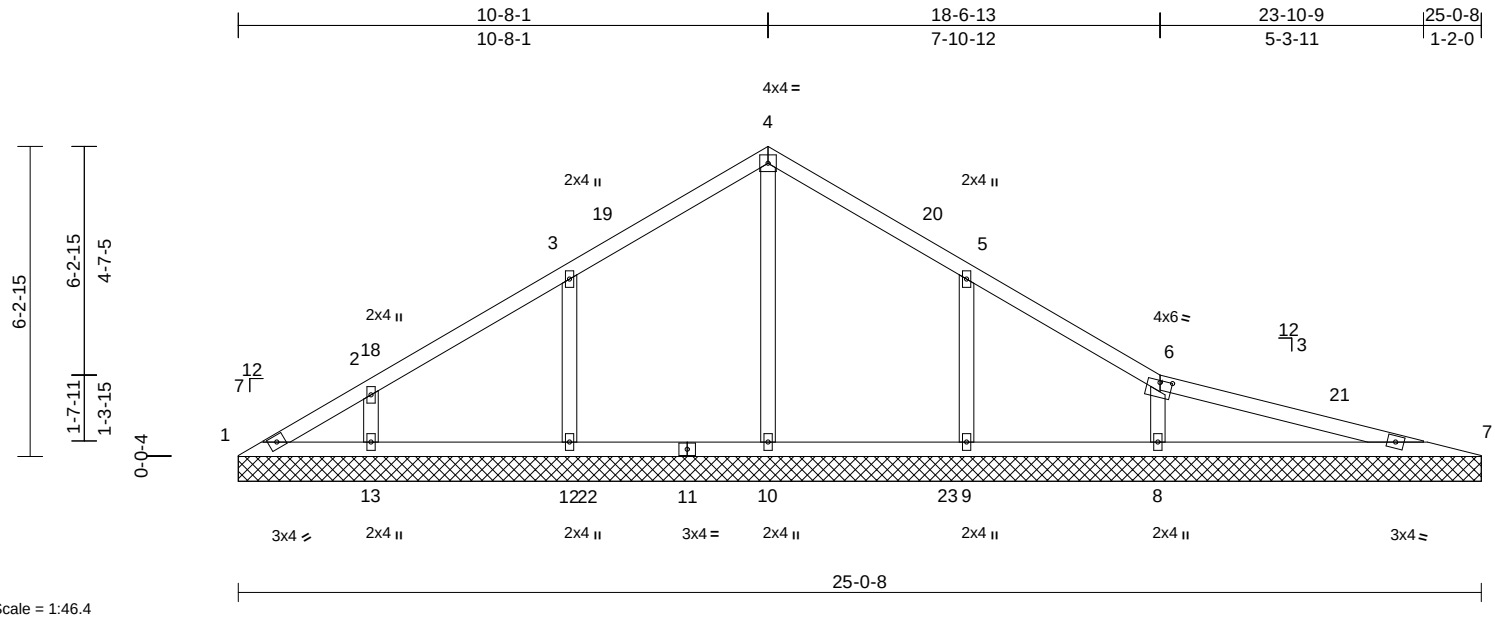
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

Job	Truss	Truss Type	Qty	Ply	
3100342	V02	Valley	1	1	T28096110
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:32 ID:etX5w6bzey9hpLhxz8TOncz49Ro-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:46.4

Plate Offsets (X, Y): [6:0-3-0,0-0-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.34	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.41	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.25	Horiz(TL)	0.01	8	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 98 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 1=18/25-0-8, 7=198/25-0-8, 8=449/25-0-8, 9=267/25-0-8, 10=461/25-0-8, 12=337/25-0-8, 13=274/25-0-8
Max Horiz 1=-242 (LC 6)
Max Uplift 1=-43 (LC 8), 7=-110 (LC 7), 8=-254 (LC 11), 9=-242 (LC 11), 10=-51 (LC 7), 12=-276 (LC 10), 13=-204 (LC 10)
Max Grav 1=94 (LC 7), 7=198 (LC 1), 8=470 (LC 2), 9=446 (LC 18), 10=561 (LC 17), 12=480 (LC 17), 13=361 (LC 17)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-252/289, 2-3=-188/269, 3-4=-87/248, 4-5=-47/233, 5-6=-65/200, 6-7=-501/283
BOT CHORD 1-13=-146/207, 12-13=-146/207, 10-12=-146/207, 9-10=-146/207, 8-9=-146/207, 7-8=-262/479
WEBS 4-10=-370/117, 3-12=-315/317, 2-13=-240/253, 5-9=-307/301, 6-8=-267/243

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 7-8-8, Exterior(2R) 7-8-8 to 13-8-8, Interior (1) 13-8-8 to 22-0-15, Exterior(2E) 22-0-15 to 25-0-15 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) All [illegible] are 2x4 MT20 unless otherwise indicated.
6) Ga[illegible]uires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 43 lb uplift at joint 1, 110 lb uplift at joint 7, 51 lb uplift at joint 10, 276 lb uplift at joint 12, 204 lb uplift at joint 13, 242 lb uplift at joint 9 and 254 lb uplift at joint 8.
11) 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.

LOAD CASE(S) Standard

Joaquin Velez PE PX2707 07/03/2022
Examiner License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

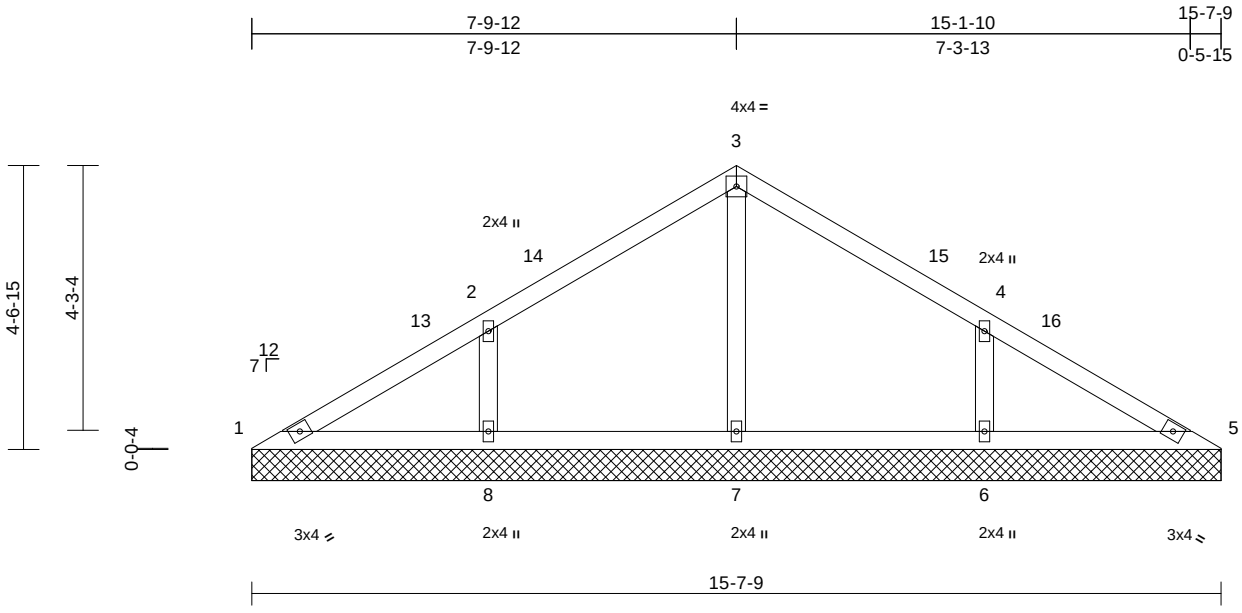
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	V03	Valley	1	1	T28096111 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:32
ID:xDSlOWhM_61h9PjHt651Z4z49Rh-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:37.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 59 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 1=94/15-7-9, 5=94/15-7-9, 6=356/15-7-9, 7=349/15-7-9, 8=356/15-7-9
Max Horiz 1=-171 (LC 6)
Max Uplift 1=-39 (LC 11), 5=-25 (LC 11), 6=-276 (LC 11), 7=-49 (LC 10), 8=-278 (LC 10)
Max Grav 1=106 (LC 18), 5=98 (LC 22), 6=411 (LC 18), 7=349 (LC 1), 8=414 (LC 17)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-155/192, 2-3=-48/155, 3-4=-34/134, 4-5=-126/138
BOT CHORD 1-8=-104/161, 7-8=-104/126, 6-7=-104/126, 5-6=-104/126
WEBS 3-7=-279/103, 2-8=-309/295, 4-6=-307/294

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 4-10-3, Exterior(2R) 4-10-3 to 10-10-3, Interior (1) 10-10-3 to 12-8-0, Exterior(2E) 12-8-0 to 15-8-0 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 1, 25 lb uplift at joint 5, 49 lb uplift at joint 7, 278 lb uplift at [illegible] and 276 lb uplift at joint 6.
10) 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.

LOAD CASE(S) Standard

PX2707 07/03/2022
Engineer-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

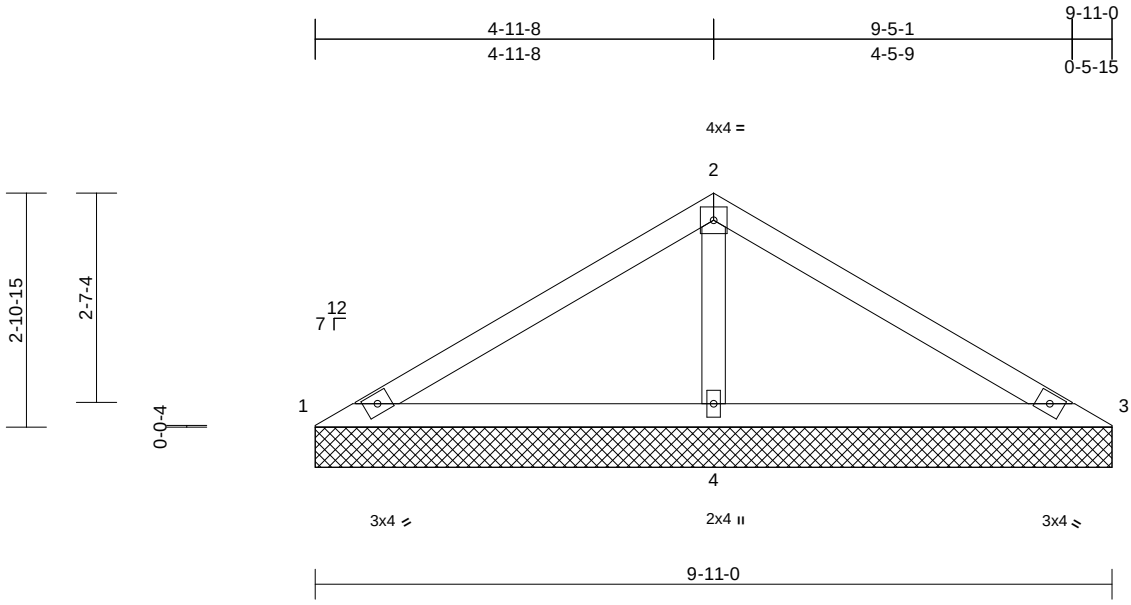
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	V04	Valley	1	1	T28096112 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:32
ID:Lo7t0XjEH1QG0tSsYEekBjz49Re-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:28.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.23	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 34 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 1=49/9-11-0, 3=49/9-11-0, 4=696/9-11-0
Max Horiz 1=106 (LC 7)
Max Uplift 1=-21 (LC 10), 3=-41 (LC 6), 4=-290 (LC 10)
Max Grav 1=86 (LC 21), 3=86 (LC 22), 4=696 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-186/320, 2-3=-186/320
BOT CHORD 1-4=-291/258, 3-4=-291/258
WEBS 2-4=-561/453

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Exterior(2R) 3-0-7 to 6-11-7, Exterior(2E) 6-11-7 to 9-11-7 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 1, 41 lb uplift at joint 3 and 290 lb uplift at joint 4.
10) 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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

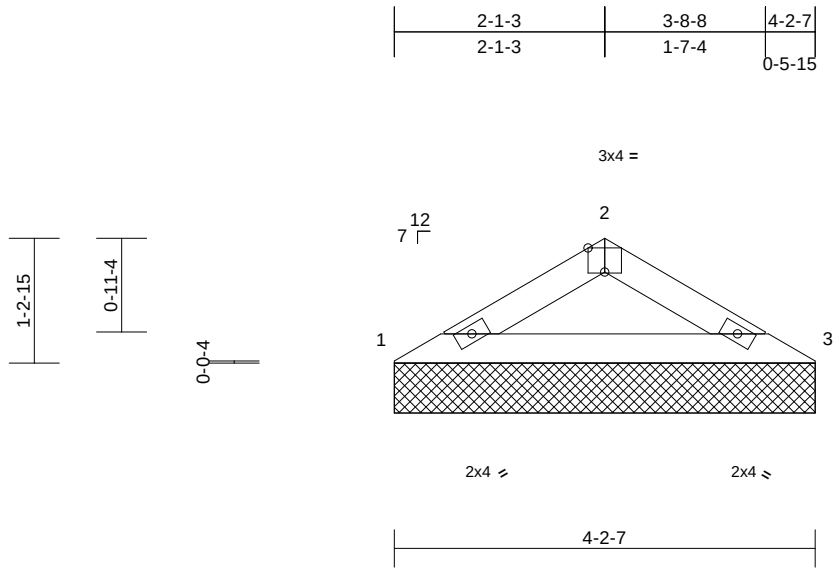
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	V05	Valley	1	1	T28096113
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:32
ID:HBFeRDlUpeg_FBcEgfhCG8z49Rc-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:23

Plate Offsets (X, Y): [2:0-2-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.12	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 12 lb	FT = 20%

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

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

REACTIONS (lb/size) 1=168/4-2-7, 3=168/4-2-7
Max Horiz 1=-42 (LC 6)
Max Uplift 1=-71 (LC 10), 3=-71 (LC 11)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-303/253, 2-3=-303/253
BOT CHORD 1-3=-198/249

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 71 lb uplift at joint 1 and 71 lb uplift at joint 3.
10) 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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

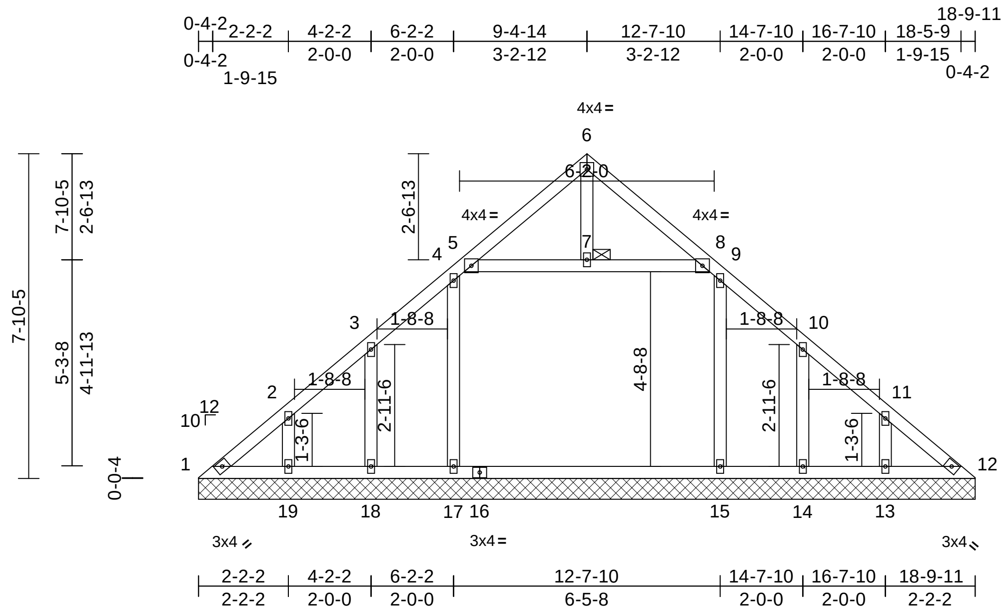
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	V06	Valley	1	1	T28096114 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:32 Page: 1

ID:imxm3FnN6Z2Y6eKpLnEvumz49RZ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:55.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.39	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	12	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 101 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.
BOT CHORD Rigid ceiling directly applied.
JOINTS 1 Brace at Jt(s): 7

REACTIONS (lb/size) 1=103/18-9-11, 12=103/18-9-11, 13=216/18-9-11, 14=92/18-9-11, 15=341/18-9-11, 17=341/18-9-11, 18=92/18-9-11, 19=216/18-9-11
Max Horiz 1=-297 (LC 6)
Max Uplift 1=-112 (LC 6), 12=-27 (LC 7), 13=-164 (LC 11), 14=-177 (LC 11), 15=-52 (LC 11), 17=-106 (LC 10), 18=-173 (LC 10), 19=-171 (LC 10)
Max Grav 1=185 (LC 18), 12=122 (LC 17), 13=287 (LC 18), 14=97 (LC 9), 15=518 (LC 18), 17=578 (LC 17), 18=92 (LC 21), 19=295 (LC 17)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-251/226, 2-3=-238/206, 3-4=-205/262, 4-5=-211/248, 5-6=-215/136, 6-8=-215/136, 8-9=-211/233, 9-10=-143/181, 10-11=-149/109, 11-12=-165/105, 5-7=-74/184, 7-8=-74/184
BOT CHORD 1-19=-121/185, 18-19=-90/145, 17-18=-90/145, 15-17=-90/145, 14-15=-90/145, 13-14=-90/145, 12-13=-90/145
WEBS 9-15=-234/111, 4-17=-293/164, 10-14=-138/178, 11-13=-161/178, 3-18=-138/175, 2-19=-164/181, 6-7=-17/16

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 6-2-6, Exterior(2R) 6-2-6 to 12-7-14, Interior (1) 12-7-14 to 15-10-0, Exterior(2E) 15-10-0 to 18-10-0 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 112 lb uplift at joint 1, 27 lb uplift at joint 12, 52 lb uplift at joint 15, 106 lb uplift at joint 17, 177 lb uplift at joint 14, 164 lb uplift at joint 13, 173 lb uplift at joint 18 and 171 lb uplift at joint 19.
12) 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.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

Review for Code Compliance
Universal Engineering Science
PX2707 07/03/2022

LOAD CASE(S) Standard

This item has been electronically signed and sealed by Velez, Joaquin, 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.

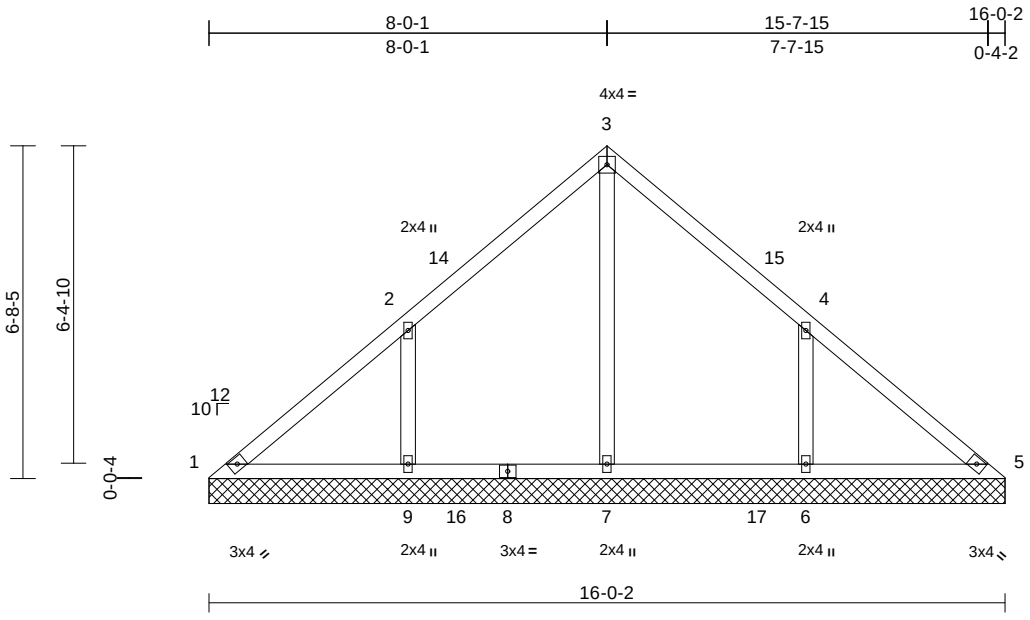
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

Job	Truss	Truss Type	Qty	Ply	
3100342	V07	Valley	1	1	T28096115
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:33 Page: 1
ID:6LcvhGpFOUQ7z63O0wocVPz49RW-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:46.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.16	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.22	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 71 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 1=100/16-0-2, 5=100/16-0-2, 6=370/16-0-2, 7=340/16-0-2, 9=370/16-0-2
Max Horiz 1=-252 (LC 6)
Max Uplift 1=-61 (LC 6), 5=-1 (LC 7), 6=-374 (LC 11), 9=-379 (LC 10)
Max Grav 1=153 (LC 18), 5=108 (LC 17), 6=530 (LC 18), 7=479 (LC 17), 9=536 (LC 17)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-223/256, 2-3=-80/179, 3-4=-67/145, 4-5=-164/190
BOT CHORD 1-9=-139/213, 7-9=-139/213, 6-7=-139/213, 5-6=-139/213
WEBS 3-7=-288/47, 2-9=-347/392, 4-6=-344/389

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 5-0-6, Exterior(2R) 5-0-6 to 11-0-6, Interior (1) 11-0-6 to 13-0-6, Exterior(2E) 13-0-6 to 16-0-6 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 1, 1 lb uplift at joint 5, 379 lb uplift at joint 9 and 374 lb uplift at joint 6.
10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top ch l 1/2" gypsum sheetrock be applied directly to th n chord.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

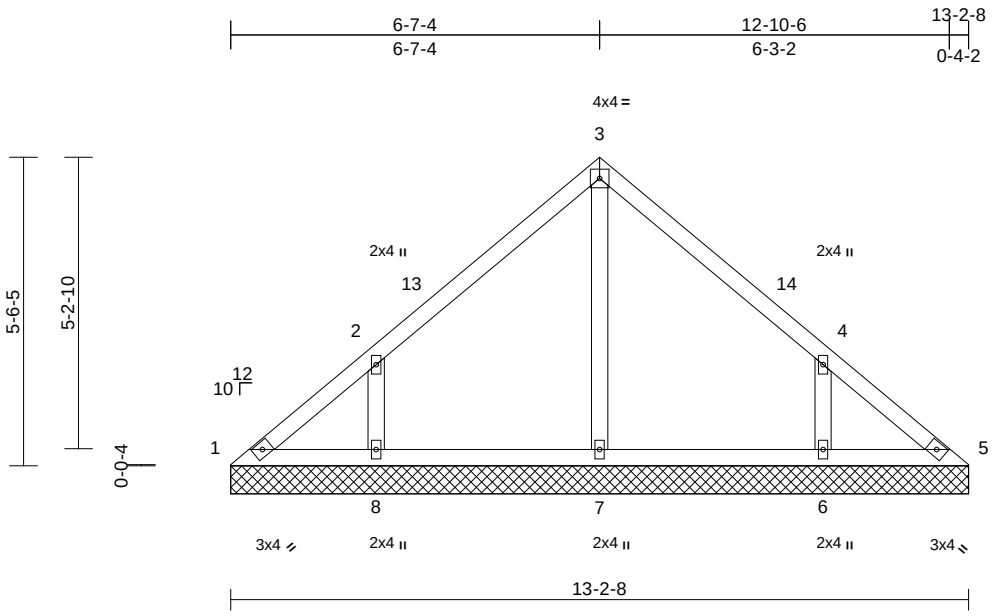
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	V08	Valley	1	1	T28096116
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:33 ID:WwI2KIr8hPoiqZozi2LJ71z49RT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:41.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 56 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 1=86/13-2-8, 5=86/13-2-8, 6=307/13-2-8, 7=272/13-2-8, 8=307/13-2-8
Max Horiz 1=206 (LC 7)
Max Uplift 1=-66 (LC 6), 5=-16 (LC 7), 6=-307 (LC 11), 8=-312 (LC 10)
Max Grav 1=136 (LC 18), 5=98 (LC 17), 6=373 (LC 18), 7=275 (LC 17), 8=379 (LC 17)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-178/173, 2-3=-149/175, 3-4=-131/175, 4-5=-127/103
BOT CHORD 1-8=-81/136, 7-8=-75/135, 6-7=-75/135, 5-6=-75/135
WEBS 3-7=-194/34, 2-8=-304/349, 4-6=-304/349

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 3-7-9, Exterior(2R) 3-7-9 to 9-7-9, Interior (1) 9-7-9 to 10-2-13, Exterior(2E) 10-2-13 to 13-2-13 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 1, 16 lb uplift at joint 5, 312 lb uplift at joint 8 and 307 lb uplift at joint 6.
10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top ch[illegible]l 1/2" gypsum sheetrock be applied directly to th[illegible]n chord.

LOAD CASE(S) Standard

Lawrence Pennell PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

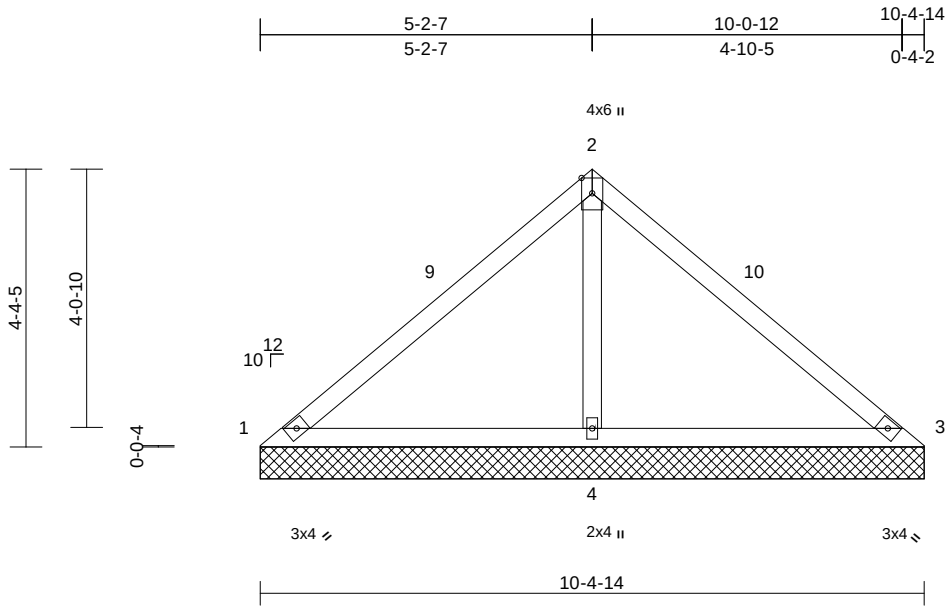
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	V09	Valley	1	1	T28096117
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:33
ID:xVzAyKu0_KAHh1WYNAu0lgz49RQ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:36.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.33	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 40 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 1=39/10-4-14, 3=39/10-4-14, 4=754/10-4-14
Max Horiz 1=-161 (LC 6)
Max Uplift 1=-24 (LC 22), 3=-25 (LC 6), 4=-384 (LC 10)
Max Grav 1=80 (LC 21), 3=80 (LC 22), 4=754 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-224/336, 2-3=-224/315
BOT CHORD 1-4=-296/317, 3-4=-296/317
WEBS 2-4=-654/592

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Exterior(2R) 3-0-5 to 7-5-3, Exterior(2E) 7-5-3 to 10-5-3 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 1, 25 lb uplift at joint 3 and 384 lb uplift at joint 4.
10) 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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

Lawrence Pennell PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

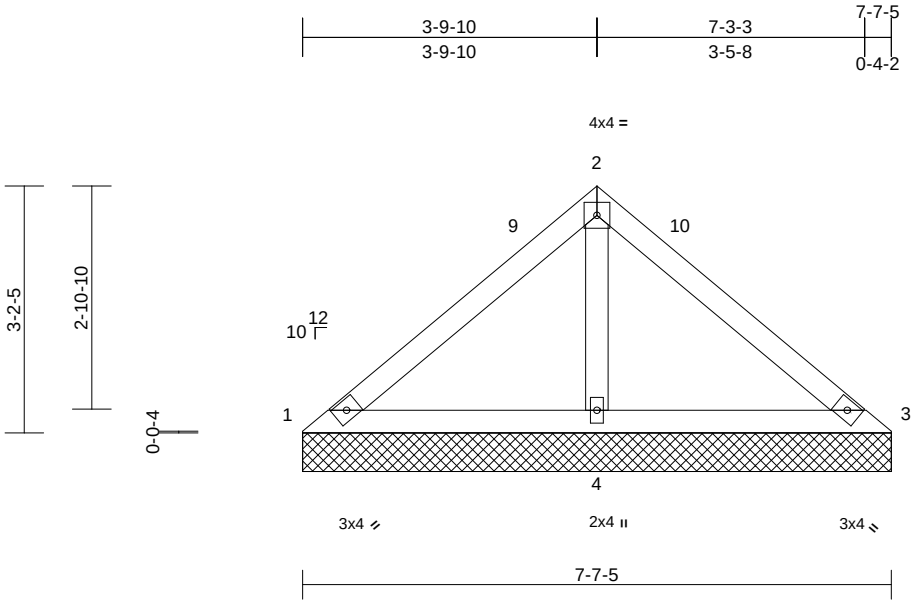
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	V10	Valley	1	1	T28096118
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:34
ID:L4fJaLwvHFZrYUF72JSjNIz49RN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:29.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.20	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 28 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 1=58/7-7-5, 3=58/7-7-5, 4=493/7-7-5
Max Horiz 1=-116 (LC 6)
Max Uplift 1=-4 (LC 11), 3=-23 (LC 11), 4=-235 (LC 10)
Max Grav 1=80 (LC 21), 3=80 (LC 22), 4=493 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-119/200, 2-3=-119/181
BOT CHORD 1-4=-182/218, 3-4=-182/218
WEBS 2-4=-416/402

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Exterior(2R) 3-0-5 to 4-7-10, Exterior(2E) 4-7-10 to 7-7-10 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 1, 23 lb uplift at joint 3 and 235 lb uplift at joint 4.
10) 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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

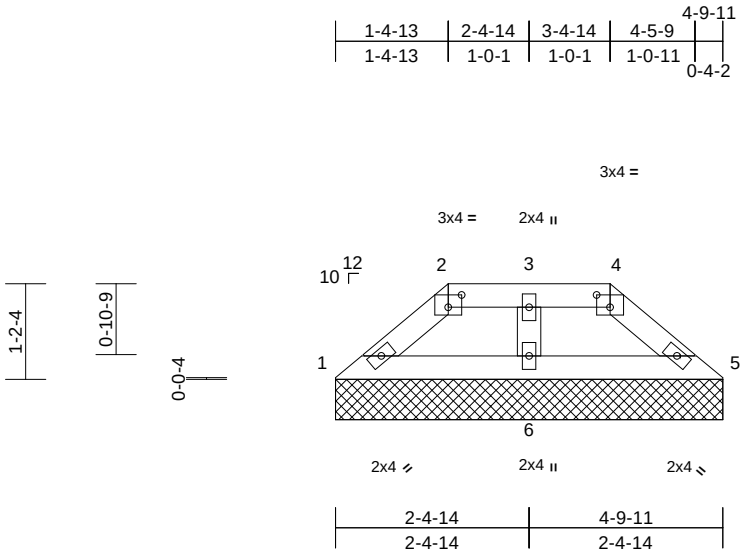
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	V11	Valley	1	1	T28096119
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 S Apr 27 2022 Print: 8.530 S Apr 27 2022 MiTek Industries, Inc. Thu Jun 23 20:42:34
ID:ErupQjzPKT3H15ZuH9WfX8z49RJ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:28.6

Plate Offsets (X, Y): [2:0-2-0,0-1-13], [4:0-2-0,0-1-13]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 15 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.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 1=95/4-9-11, 5=95/4-9-11, 6=194/4-9-11
Max Horiz 1=40 (LC 7)
Max Uplift 1=-48 (LC 10), 5=-51 (LC 11), 6=-70 (LC 10)
Max Grav 1=95 (LC 21), 5=95 (LC 22), 6=194 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-114/108, 2-3=-67/100, 3-4=-67/100, 4-5=-114/108
BOT CHORD 1-6=-65/95, 5-6=-65/84
WEBS 3-6=-108/153

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 1-5-1, Exterior(2R) 1-5-1 to 3-5-3, Exterior(2E) 3-5-3 to 4-10-0 zone; end vertical 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 1, 51 lb uplift at joint 5 and 70 lb uplift at joint 6.
11) 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.

LOAD CASE(S) Standard

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

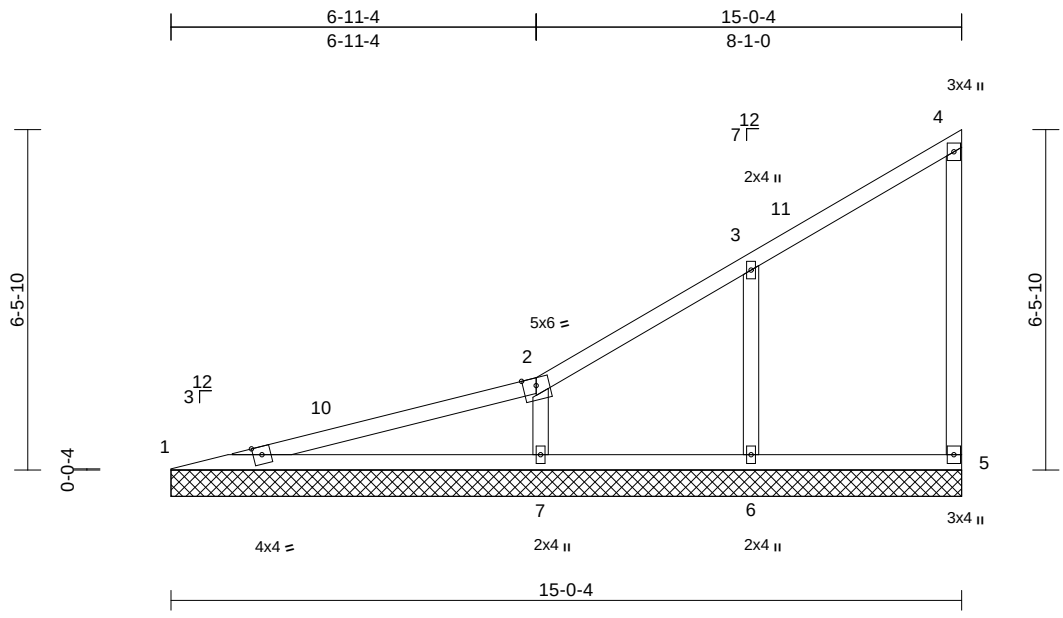
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	V12	Valley	1	1	T28096120 Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 E Jan 6 2022 Print: 8.530 E Jan 6 2022 MiTek Industries, Inc. Fri Jun 24 14:49:31 Page: 1
ID:AVY?PDCKsJSbp0WYueM6o9z49R0-p36DNkOHOKhMhdx_1QRqhhirSkLYCdmT2aBnmPz31so



Scale = 1:43.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.54	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.51	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.01	5	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 61 lb	FT = 20%

LUMBER
TOP CHORD 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, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS All bearings 15-0-4.
(lb) - Max Horiz 1=371 (LC 7)
Max Uplift All uplift 100 (lb) or less at joint(s) 5 except 1=-148 (LC 6), 6=-243 (LC 10), 7=-256 (LC 10)
Max Grav All reactions 250 (lb) or less at joint (s) 1, 5 except 6=467 (LC 17), 7=560 (LC 2)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-10=-699/430, 2-10=-260/131
BOT CHORD 1-7=-456/645
WEBS 3-6=-320/344, 2-7=-337/282

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-0 to 3-1-0, Interior (1) 3-1-0 to 11-11-8, Exterior(2E) 11-11-8 to 14-11-8 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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.
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5 except (jt=lb) 1=147, 6=243, 7=255.
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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

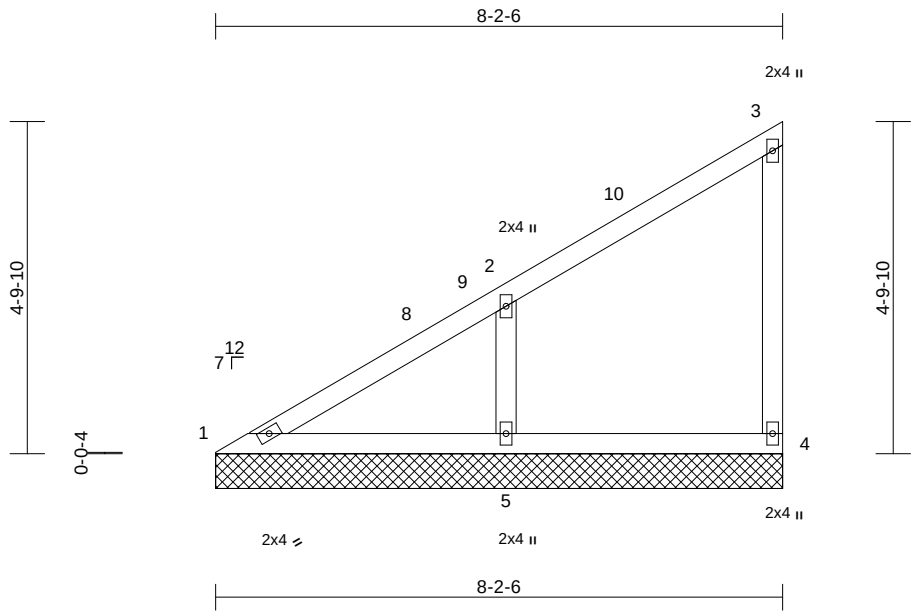
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	V13	Valley	1	1	T28096121
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 E Jan 6 2022 Print: 8.530 E Jan 6 2022 MiTek Industries, Inc. Fri Jun 24 14:49:43

ID:XSLuSwGThr4tvoOVhByHVCz49Qx-SNqluqXoZ0Cf7TsIkxfeADBzMaW203qEoS5PBiz31sc



Scale = 1:33.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.15	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 35 lb	FT = 20%

LUMBER

TOP CHORD	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, except end verticals.
BOT CHORD	Rigid ceiling directly applied.

REACTIONS (lb/size) 1=134/8-2-6, 4=118/8-2-6, 5=392/8-2-6
Max Horiz 1=265 (LC 7)
Max Uplift 1=-11 (LC 6), 4=-75 (LC 7), 5=-277 (LC 10)
Max Grav 1=161 (LC 18), 4=150 (LC 17), 5=446 (LC 17)

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

TOP CHORD	1-8=-260/121
WEBS	2-5=-331/325

NOTES

1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 3-10-3, Exterior(2R) 3-10-3 to 8-1-1 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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.
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 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 3-06-00 tall by 2-00-00 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 75 lb uplift at joint 4, 11 lb uplift at joint 1 and 277 lb uplift at joint 5.
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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

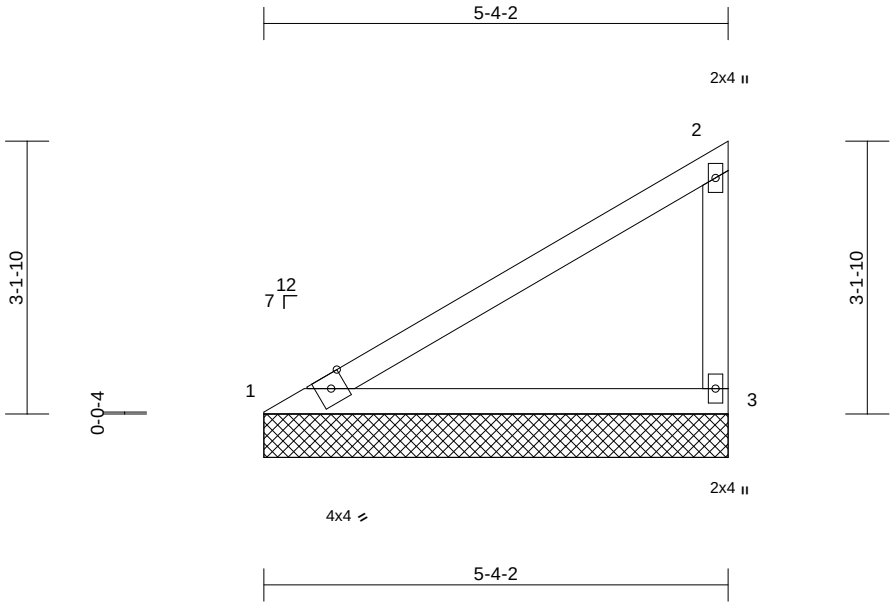
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	V14	Valley	1	1	T28096122
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 E Jan 6 2022 Print: 8.530 E Jan 6 2022 MiTek Industries, Inc. Fri Jun 24 14:49:55 Page: 1
ID:TrTftcHjCTLb85Yupc_lbdz49Qv-6hZIPxgKkijyZJncRTtSflh?lPaWqVI?ZJ?2c0z31sQ



Scale = 1:26.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.36	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-AS							Weight: 20 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, except end verticals.
BOT CHORD Rigid ceiling directly applied.

REACTIONS (lb/size) 1=208/5-4-2, 3=208/5-4-2
Max Horiz 1=167 (LC 7)
Max Uplift 1=-84 (LC 10), 3=-134 (LC 10)
Max Grav 1=208 (LC 1), 3=246 (LC 17)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-338/199
BOT CHORD 1-3=-212/333

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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.
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 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 3-06-00 tall by 2-00-00 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 134 lb uplift at joint 3 and 84 lb uplift at joint 1.
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.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

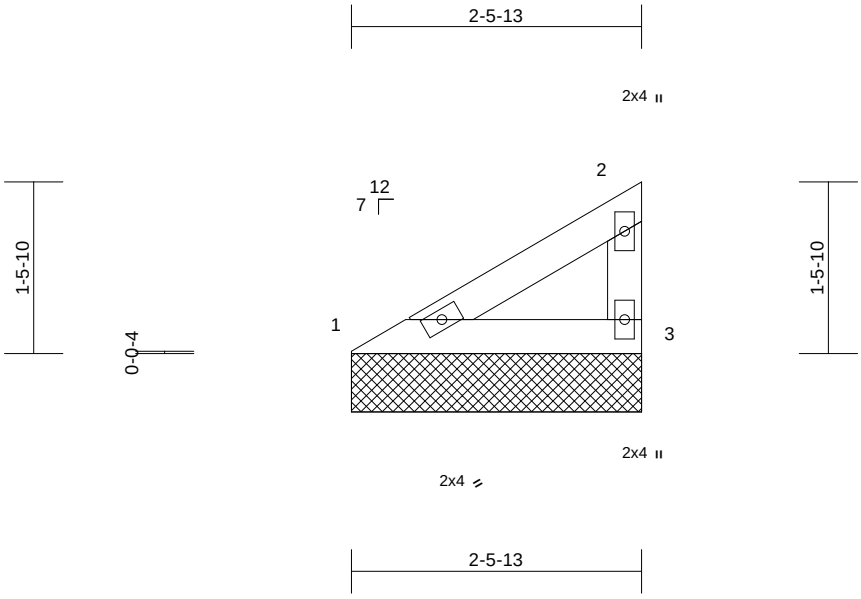
June 24,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
3100342	V15	Valley	1	1	T28096123
					Job Reference (optional)

Builders FirstSource (Groveland, FL), Groveland, FL - 34736,

Run: 8.53 E Jan 6 2022 Print: 8.530 E Jan 6 2022 MiTek Industries, Inc. Fri Jun 24 14:50:04 Page: 1
ID:tQ9nVdKbVOjA?ZHTUkYSCGz49Qs-LQchI0nzdTrh8hzKSsXZXeZcp1i6QZWKdDh0R?z31sH



Scale = 1:19.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.25	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MP							Weight: 8 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 2-5-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=94/2-5-13, 3=94/2-5-13
Max Horiz 1=68 (LC 7)
Max Uplift 1=-39 (LC 10), 3=-59 (LC 10)
Max Grav 1=94 (LC 1), 3=110 (LC 17)

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

NOTES
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=5.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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.
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 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 3-06-00 tall by 2-00-00 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 59 lb uplift at joint 3 and 39 lb uplift at joint 1.

LOAD CASE(S) Standard

Review for Code Compliance
Universal Engineering Science

PX2707 07/03/2022
Examiner-License No.

This item has been electronically signed and sealed by Velez, Joaquin, 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.

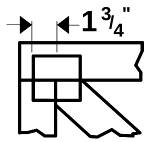
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

June 24,2022

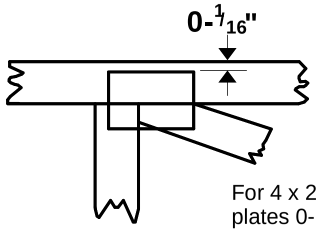
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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- $\frac{1}{16}$" from outside edge of truss.

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

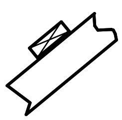
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

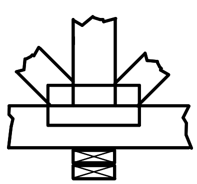
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

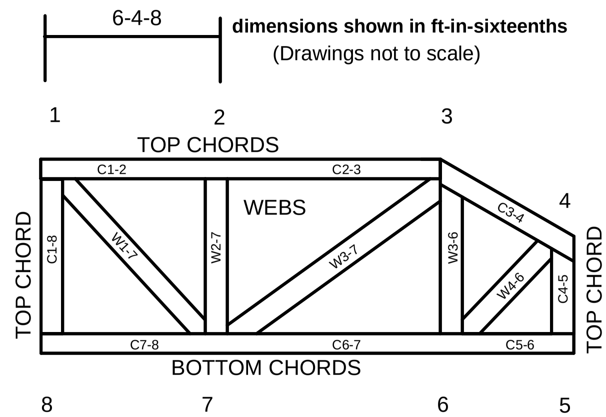


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.

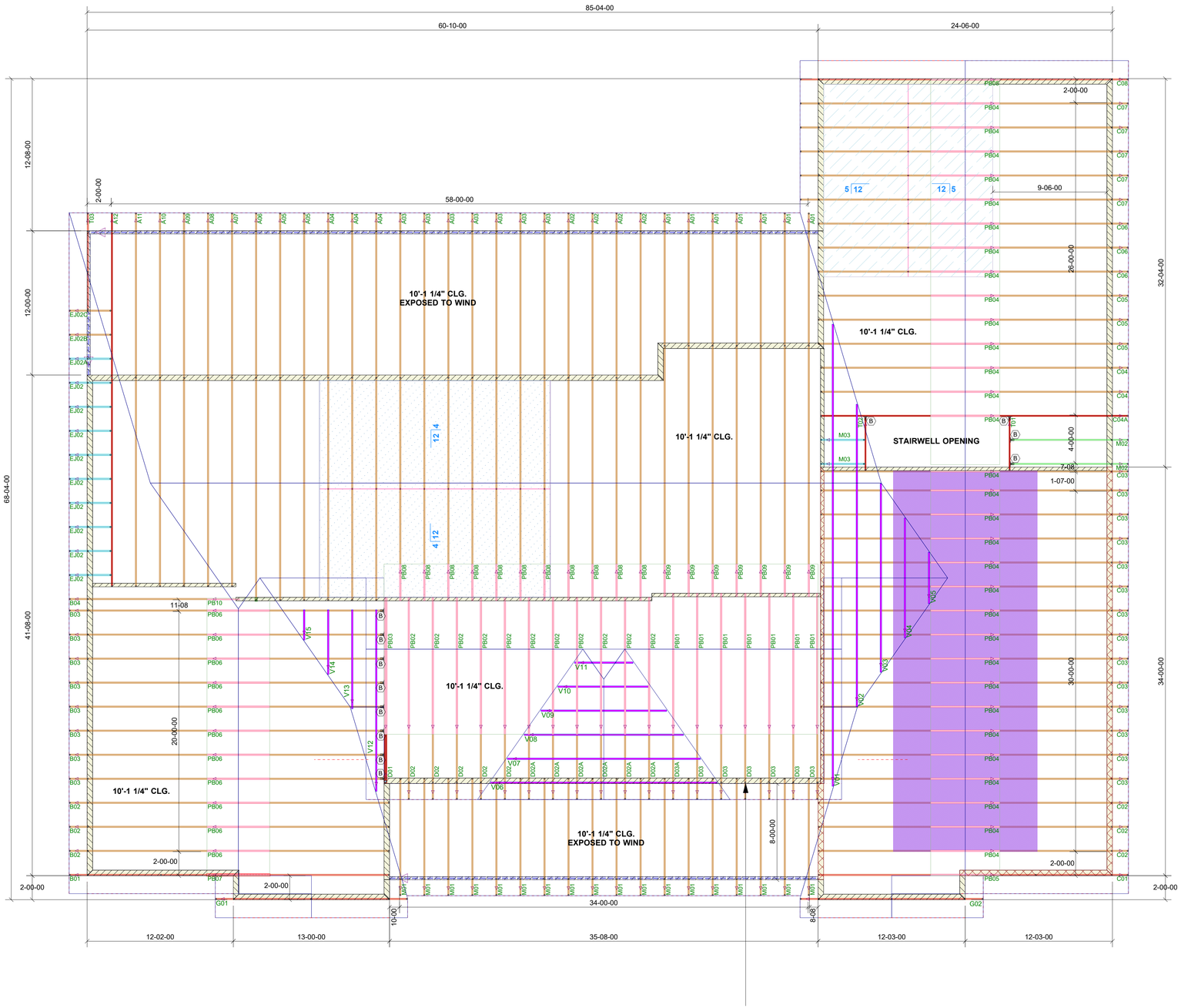
MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020

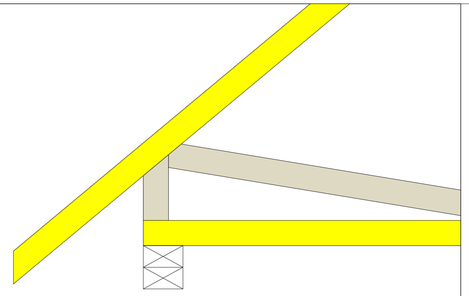
General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

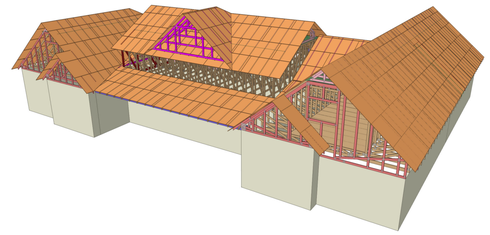
1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed 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.

Review for Code Compliance
Universal Engineering Science
PX2207
07/13/2022
Examiner-License No





OVERHANG DETAIL: TOP CHORD OVERHANG



PROJECTION VIEW

SIMPSON CONNECTOR SCHEDULE

UNLESS OTHERWISE SPECIFIED BY **EOR**, *TRUSS HANGERS LISTED HERE ARE REQUIRED.*

ROOF TRUSS

QTY	ID	MODEL	DOWN	UPLIFT	DETAIL
0	A	LUS24	1085	495	
12	B	HTU26	2945	1315	
0	C	HTU28	3060	2015	
0	D	HTU26-2	2555	1335	
0	E	HTU28-2	3890	2470	
0	F	HGUS26-2	5320	2155	
0	G	HGUS28-2	7460	3235	
0	H	HGUS26-3	5230	2155	
0	J	HGUS28-3	7460	3235	
0	K	HGUS28	9100	4095	
0	L	HGUS26	4500	1725	
0	M	THJA26	2940	915	
0	N	THJU26	1915	1310	

HANGER SCHEDULE

CAUTION!!!

DO NOT ATTEMPT TO ERECT TRUSSES WITHOUT REFERRING TO THE ENGINEERING DRAWINGS AND BSCI-B1 SUMMARY SHEETS.

ALL PERMANENT BRACING MUST BE IN PLACE PRIOR TO LOADING TRUSSES. (ie. SHEATHING, SHINGLES, ETC.)

ALL INTERIOR BEARING WALLS MUST BE IN PLACE PRIOR TO INSTALLING TRUSSES.

REFER TO FINAL ENGINEERING SHEETS FOR THE FOLLOWING.

1) NUMBER OF GIRDER PLIES AND NAILING SCHEDULE.

2) BEARING BLOCK REQUIREMENTS.

3) SCAB DETAILS (IF REQUIRED)

4) UPLIFT AND GRAVITY REACTIONS.

WARNING
Backcharges Will Not Be Accepted Regardless of Fault Without Prior Notification By Customer Within 48 Hours And Investigation By Builders FirstSource.
NO EXCEPTIONS.

The General Contractor Is Responsible For All Connections Other Than Truss to Truss, Gable Shear Wall, And Connections. Temporary and Permanent Bracing, And Ceiling And Roof Diaphram Connections.

ROOF PITCH:	3, 7, 10/12
CEILING PITCH:	4, 5/12
TOP CHORD SIZE:	2 X 4
BOTTOM CHORD SIZE:	VARIES
OVERHANG LENGTH:	18"
END CUT:	PLUMB
CANTILEVER:	0
TRUSS SPACING:	24"
BUILDING CODE:	FBC2020

BEARING HEIGHT SCHEDULE

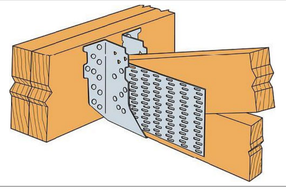
Hatch Legend
4/12 VAULT CLG.
5/12 VAULT CLG.
8'-1 1/4" BRG HGT.
10'-1 1/4" BRG HGT.

BUILDER:	AMIRA BUILDERS
PROJECT:	BALLARD RESIDENCE
MODEL:	CUSTOM
ADDRESS:	NEED ADDRESS
LOT / BLOCK:	
SUBDIVISION:	
CITY:	PALM COAST
DRAWN BY:	RYAN CONARD
JOB # :	3100342
DATE:	6/20/2022
SCALE:	N/A
PLAN DATE:	2/14/2022

REVISIONS:
1.
2.
3.
4.

Review for Code Compliance
Universal Engineering Science

Lawrence Parnell PX2707 07/03/2022
Examiner-License No.



TYP. HTU26 NAILING INSTALLATION

VERIFY ALL DIMENISONS AND CEILING CONDITIONS PRIOR TO APPROVAL
SOME CEILING FRAMING REQUIRED IN FIELD BY BUILDER

MAIN WIND FORCE RESISTING SYSTEM/C-C HYBRID WIND ASCE7-16
ENCLOSED
EXPOSURE CATEGORY C
OCCUPANCY CATEGORY II
WIND LOAD 140 MPH
WIND IMPORTANCE FACTOR 1.00
TRUSSES HAVE BEEN DESIGNED FOR A 10.0 PSF BOTTOM CHORD LIVE LOAD
NONCONCURRENT WITH ANY OTHER LIVE LOADS

ROOF LOADING			FLOOR LOADING		
TCLL:	20	PSF	TCLL:	40	PSF
TCDL:	10	PSF	TCDL:	10	PSF
BCDL:	10	PSF	BCDL:	5	PSF
TOTAL:	40	PSF	TOTAL:	55	PSF
DURATION:	1.25		DURATION:	1.0	

IMPORTANT

This Drawing Must Be Approved And Returned Before Fabrication Will Begin. For Your Protection Check All Dimensions And Conditions Prior To Approval Of Plan.

SIGNATURE BELOW INDICATES ALL NOTES AND DIMENSIONS HAVE BEEN ACCEPTED.

By _____Date_____

Builders FirstSource
4408 Airport Road
Plant City, FL 33567
Phone (813) 305-1300
Fax (813) 305-1301

SHEET SIZE: ARCH D (24" X 36")