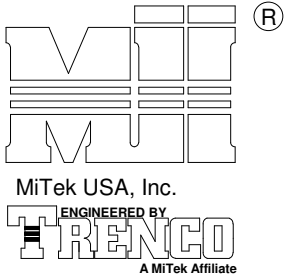


AUGUST 1, 2016

T-BRACE / I-BRACE DETAIL WITH 2X BRACE ONLY

MII-T-BRACE 2

MiTek USA, Inc. Page 1 of 1



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

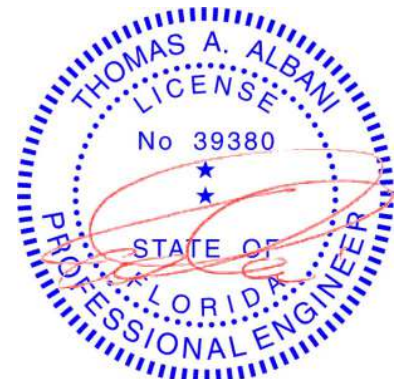
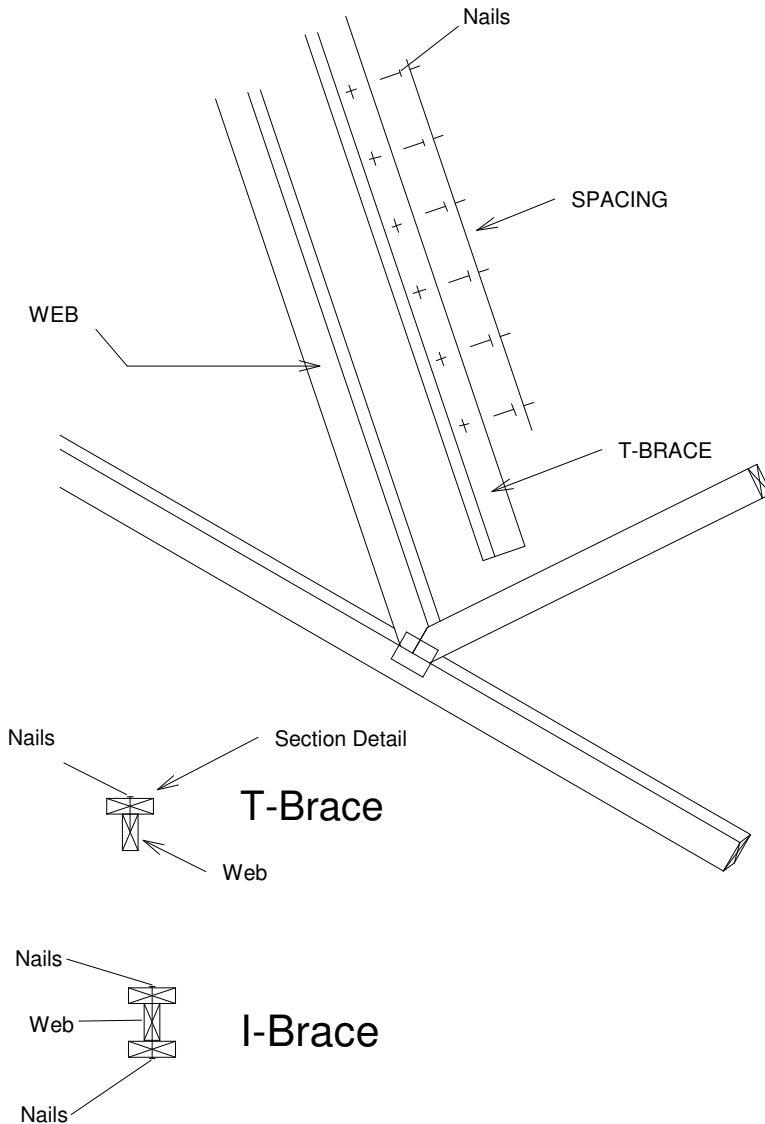
Web Size	1	2
2x3 or 2x4	2x4 T-Brace	2x4 I-Brace
2x6	2x6 T-Brace	2x6 I-Brace
2x8	2x8 T-Brace	2x8 I-Brace

Brace Size for Two-Ply Truss

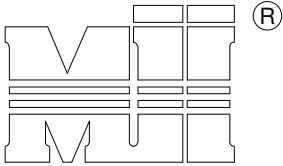
Specified Continuous Rows of Lateral Bracing

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.



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Date:



MiTek USA, Inc.



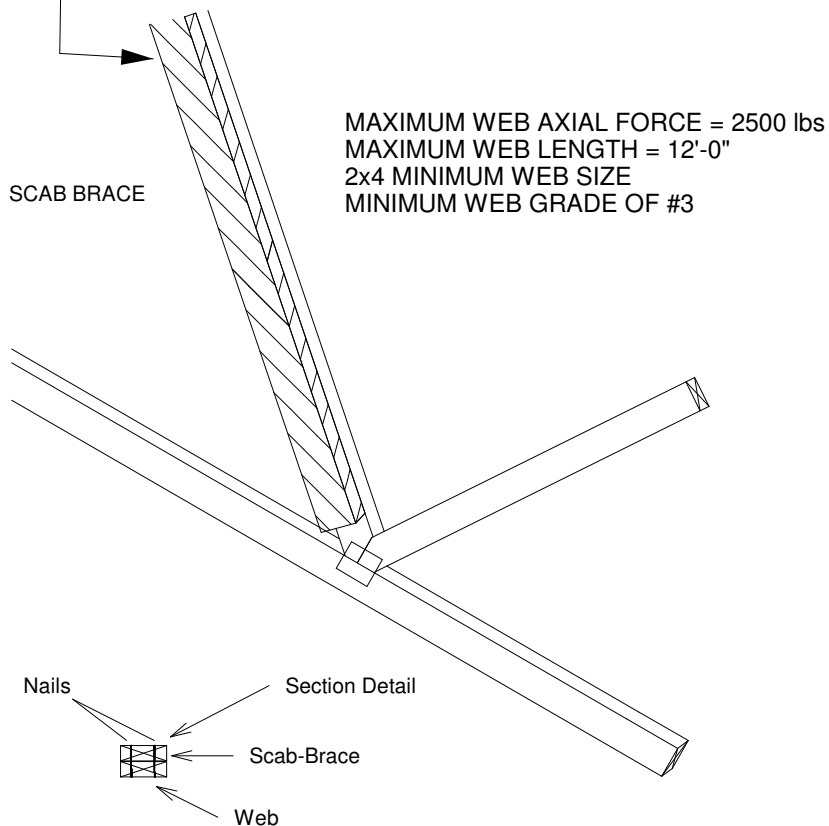
MiTek USA, Inc.

Page 1 of 1

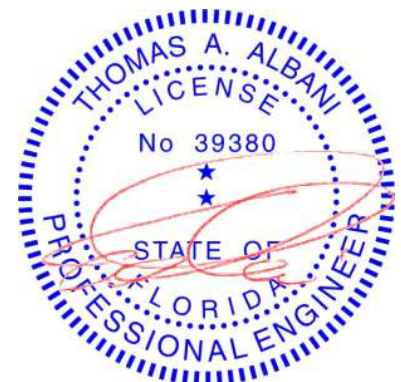
Note: Scab-Bracing to be used when continuous lateral bracing at midpoint (or T-Brace) is impractical.
Scab must cover full length of web +/- 6".

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

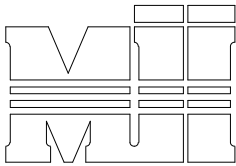
APPLY 2x SCAB TO ONE FACE OF WEB WITH
2 ROWS OF 10d (0.131" X 3") NAILS SPACED 6" O.C.
SCAB MUST BE THE SAME GRADE, SIZE AND
SPECIES (OR BETTER) AS THE WEB.



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



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Date:

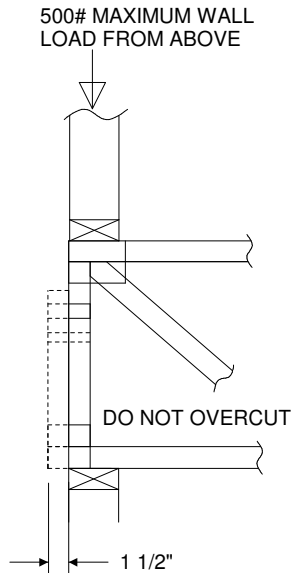


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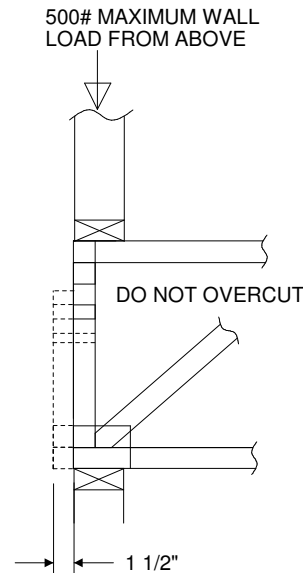


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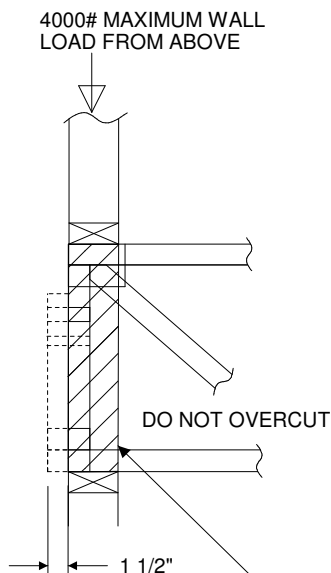
1. THIS IS A SPECIFIC REPAIR DETAIL TO BE USED ONLY FOR ITS ORIGINAL INTENTION. THIS REPAIR DOES NOT IMPLY THAT THE REMAINING PORTION OF THE TRUSS IS UNDAMAGED. THE ENTIRE TRUSS SHALL BE INSPECTED TO VERIFY THAT NO FURTHER REPAIRS ARE REQUIRED. WHEN THE REQUIRED REPAIRS ARE PROPERLY APPLIED, THE TRUSS 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.



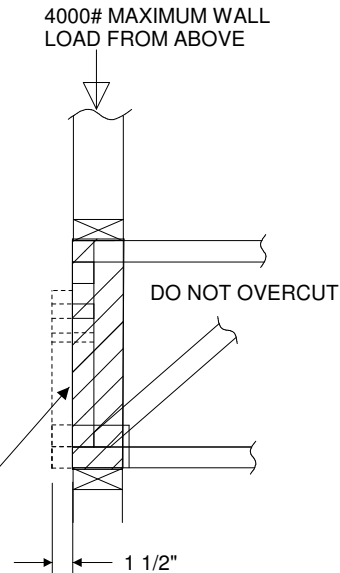
REFER TO INDIVIDUAL
TRUSS DESIGN FOR
PLATE SIZES AND
LUMBER GRADES



TRUSSES BUILT
WITH 4x2 MEMBERS

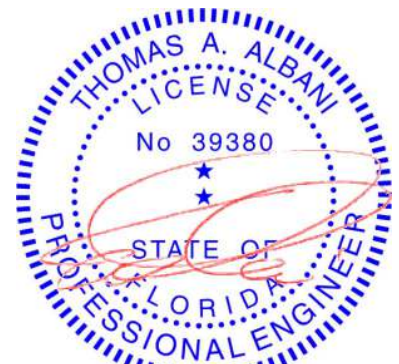


REFER TO INDIVIDUAL
TRUSS DESIGN FOR
PLATE SIZES AND
LUMBER GRADES

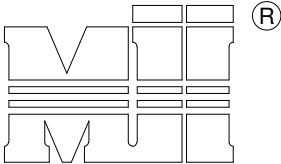


TRUSSES BUILT
WITH 4x2 MEMBERS

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.



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Date:



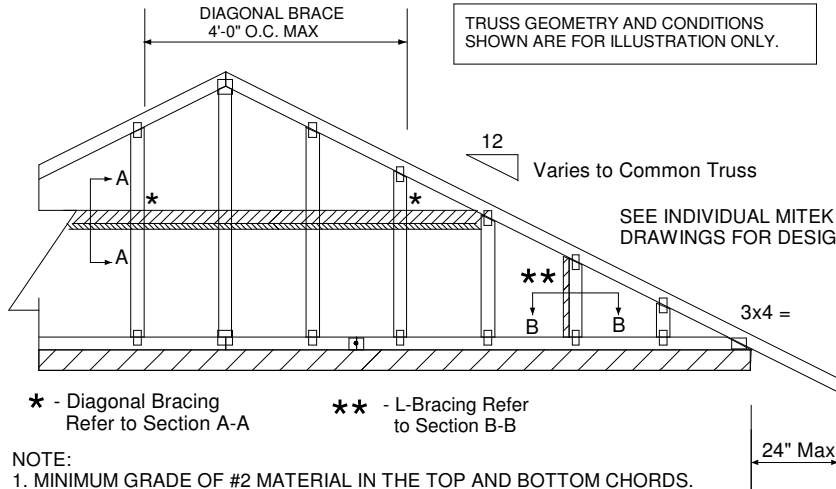
MiTek USA, Inc.

ENGINEERED BY
TRENGO
 A MiTek Affiliate

 Typical 1/4 L-Brace Nailed To
 2x Verticals w/10d Nails spaced 6" o.c.

Vertical Stud

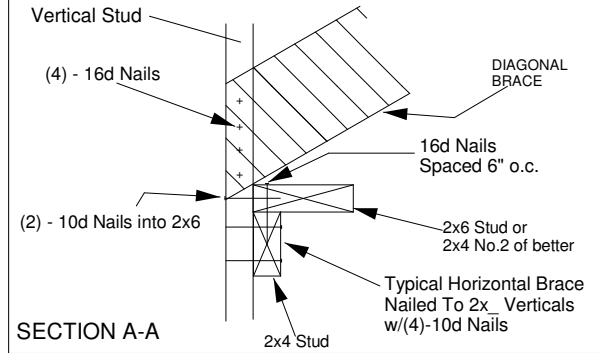
SECTION B-B

 TRUSS GEOMETRY AND CONDITIONS
 SHOWN ARE FOR ILLUSTRATION ONLY.

 * - 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")

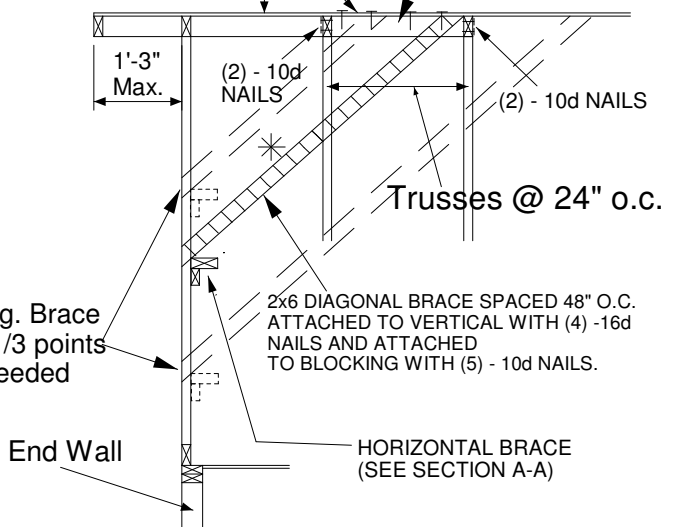


SECTION A-A

 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

Roof Sheathing

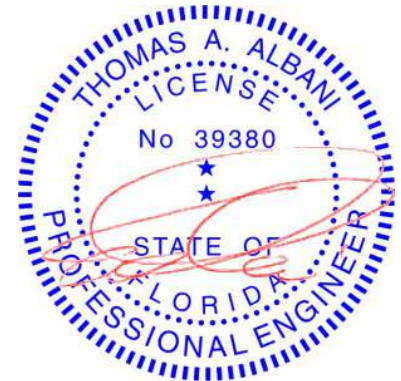

 Diag. Brace
 at 1/3 points
 if needed

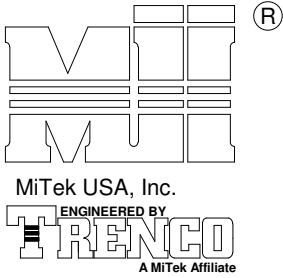
 HORIZONTAL BRACE
 (SEE SECTION A-A)

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
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.

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

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

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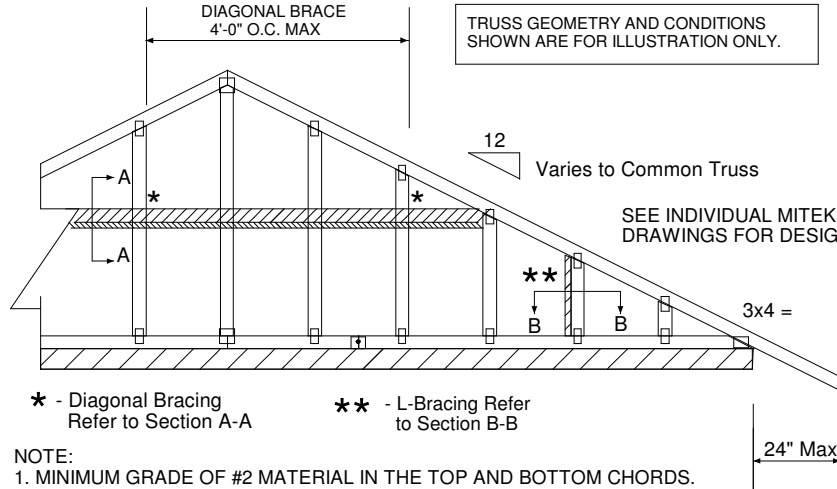


Typical 1x4 L-Brace Nailed To
2x Verticals W/10d Nails spaced 6" o.c.

Vertical Stud

SECTION B-B

TRUSS GEOMETRY AND CONDITIONS
SHOWN ARE FOR ILLUSTRATION ONLY.

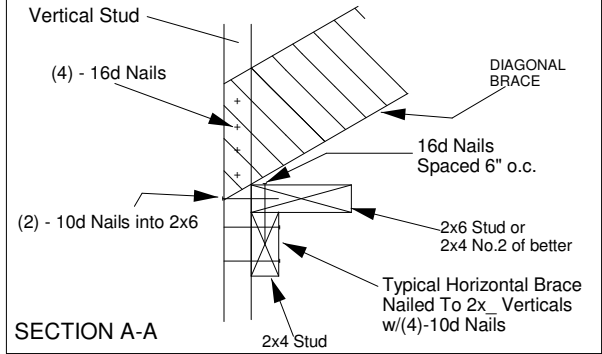


* - Diagonal Bracing
Refer to Section A-A

** - 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")

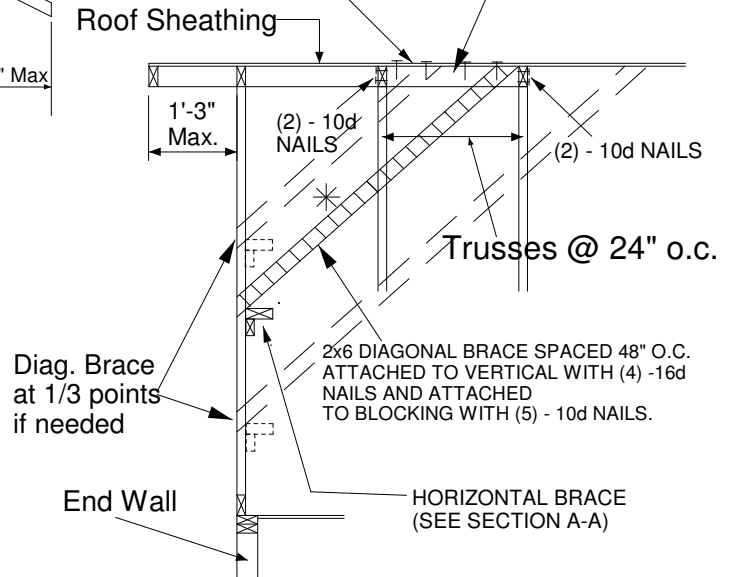


SECTION A-A

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

Roof Sheathing



Diag. Brace
at 1/3 points
if needed

End Wall

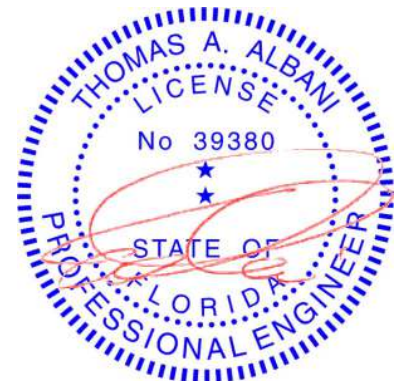
HORIZONTAL BRACE
(SEE SECTION A-A)

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

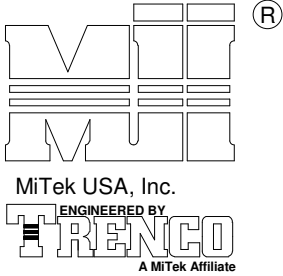
- * Diagonal braces over 6'-3" require a 2x4 T-Brace attached to one edge. Diagonal braces over 12'-6" require 2x4 I-braces attached to both edges. Fasten T and I braces to narrow edge of diagonal brace with 10d nails 8" o.c., with 3" minimum end distance. Brace must cover 90% of diagonal length.

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

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



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Date:

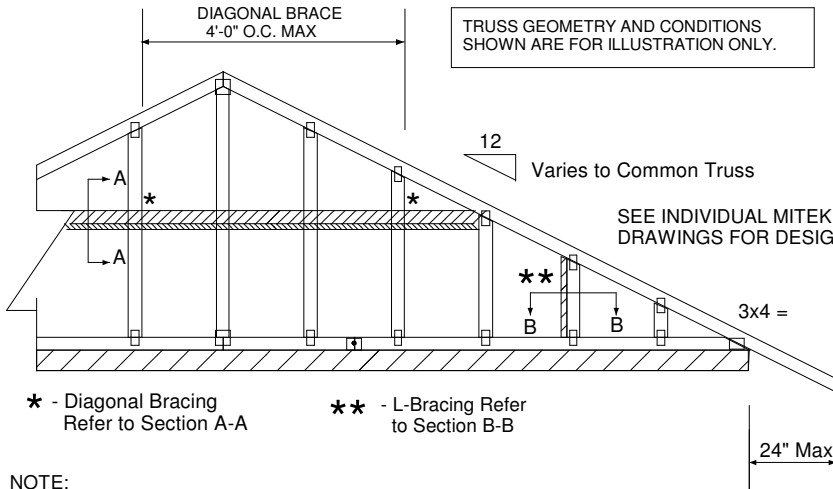


Typical 1x4 L-Brace Nailed To
2x Verticals w/10d Nails spaced 6" o.c.

Vertical Stud

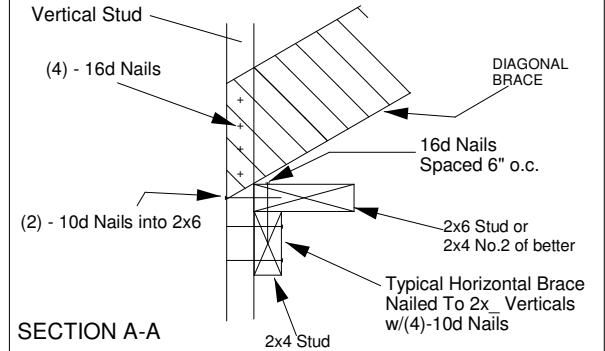
SECTION B-B

TRUSS GEOMETRY AND CONDITIONS
SHOWN ARE FOR ILLUSTRATION ONLY.



NOTE:

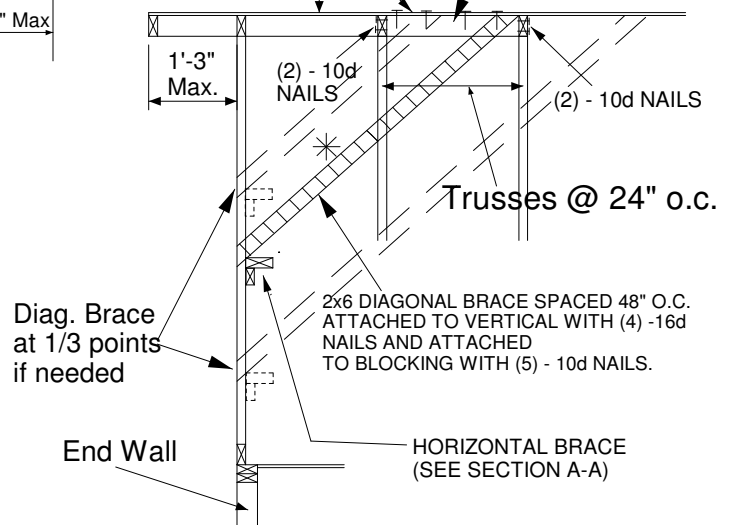
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF 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")



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 DF/SPF BLOCK

Roof Sheathing



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

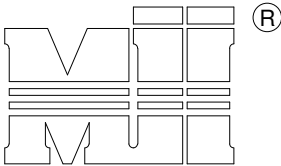
- * Diagonal braces over 6'-3" require a 2x4 T-Brace attached to one edge. Diagonal braces over 12'-6" require 2x4 I-braces attached to both edges. Fasten T and I braces to narrow edge of web with 10d nails 8" o.c., with 3" minimum end distance. Brace must cover 90% of diagonal length.

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.



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Date:



MiTek USA, Inc.

ENGINEERED BY
TRENCO

A MiTek Affiliate

Typical 2x4 L-Brace Nailed To
2x4 Verticals W/10d Nails spaced 6" o.c.

Vertical Stud

SECTION B-B

TRUSS GEOMETRY AND CONDITIONS
SHOWN ARE FOR ILLUSTRATION ONLY.

Varies to Common Truss

SEE INDIVIDUAL MITTEK ENGINEERING
DRAWINGS FOR DESIGN CRITERIA

3x4 =

24" Max

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

NOTE:

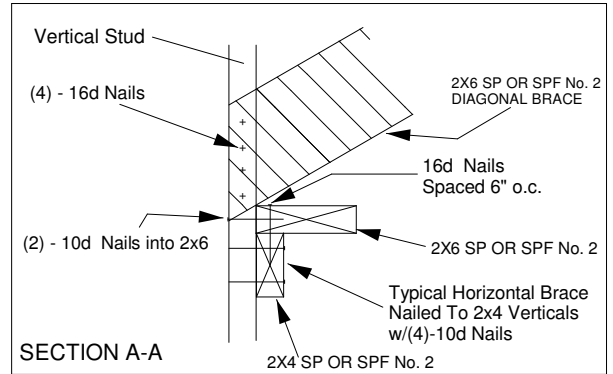
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH, 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.

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

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



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.

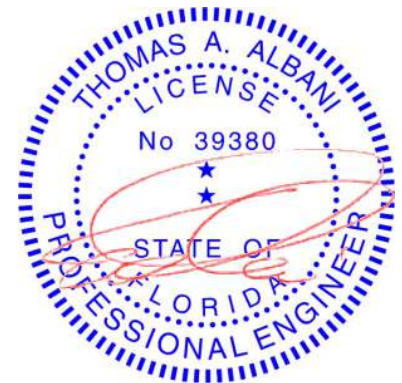
(4) - 8d (0.131" X 2.5") NAILS MINIMUM, PLYWOOD SHEATHING TO 2x4 STD SPF BLOCK

Roof Sheathing

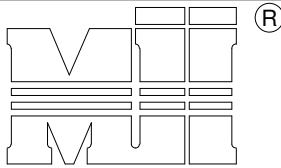
Diag. Brace at 1/3 points if needed

End Wall

HORIZONTAL BRACE (SEE SECTION A-A)



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Date:



MiTek USA, Inc.

ENGINEERED BY
TRENCOA MiTek Affiliate
DIAGONAL BRACE
4'-0" O.C. MAXTypical 2x4 L-Brace Nailed To
2x4 Verticals W/10d Nails spaced 6" o.c.

Vertical Stud

SECTION B-B

TRUSS GEOMETRY AND CONDITIONS
SHOWN ARE FOR ILLUSTRATION ONLY.12
Varies to Common TrussSEE INDIVIDUAL MITEK ENGINEERING
DRAWINGS FOR DESIGN CRITERIA

3x4 =

24" Max

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

NOTE:

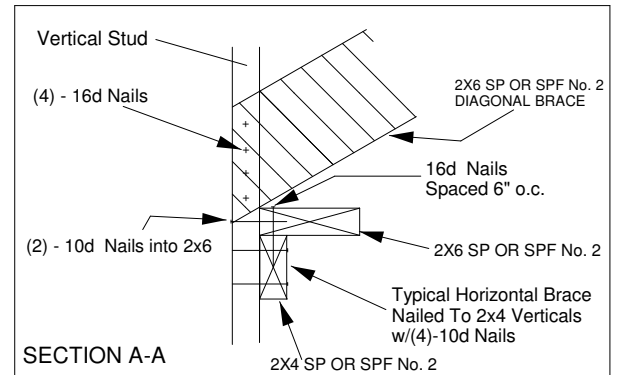
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH. 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
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.

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

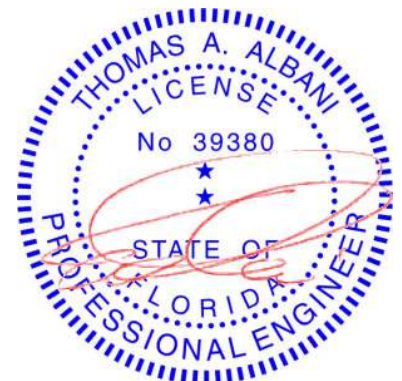
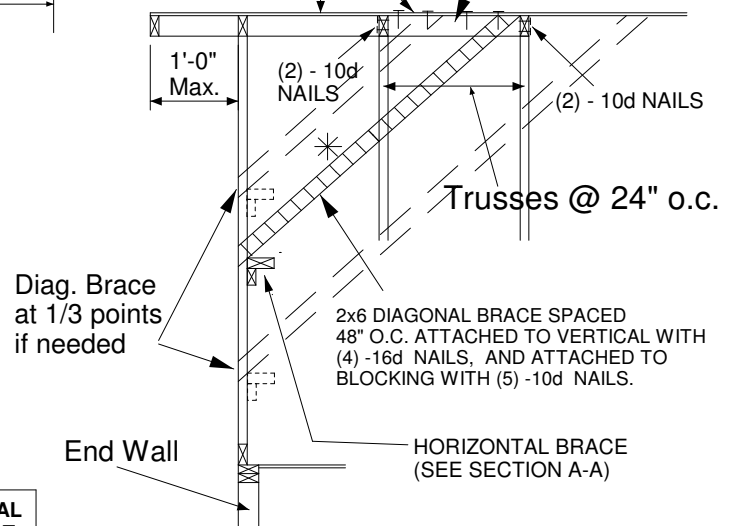
STUD DESIGN IS BASED ON COMPONENTS AND CLADDING.
CONNECTION OF BRACING IS BASED ON MWFRS.



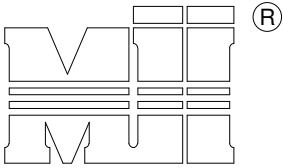
PROVIDE 2x4 BLOCKING BETWEEN THE FIRST TWO TRUSSES AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d NAILS AT EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d NAILS.

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

Roof Sheathing



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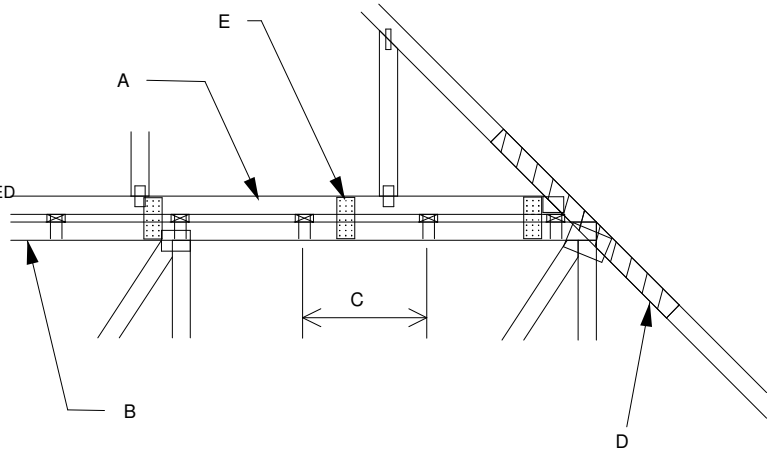
MiTek USA, Inc.



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
 ASCE 7-10
 DURATION OF LOAD INCREASE : 1.60

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

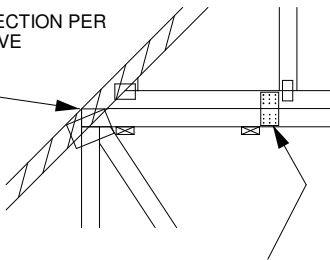
- A - PIGGYBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
 SHALL BE CONNECTED TO EACH PURLIN
 WITH (2) (0.131" X 3.5") TOE-NAILED.
- B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
- C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C.
 UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING.
 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 160 MPH WITH A MAXIMUM
 PIGGYBACK SPAN OF 12 ft.
- E - FOR WIND SPEEDS BETWEEN 126 AND 160 MPH, ATTACH
 MITEK 3X8 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT
 72" O.C. W/ (4) (0.131" X 1.5") NAILS PER MEMBER. STAGGER NAILS
 FROM OPPOSING FACES. ENSURE 0.5" EDGE DISTANCE.
 (MIN. 2 PAIRS OF PLATES REQ. REGARDLESS OF SPAN)



WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

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

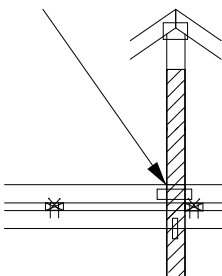
SCAB CONNECTION PER
 NOTE D ABOVE



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

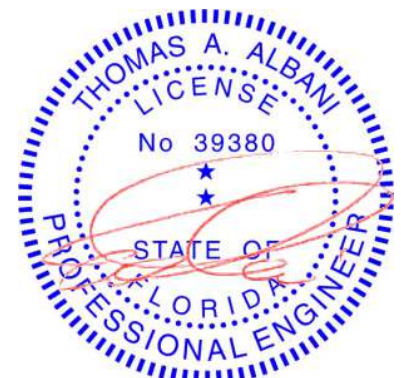
This sheet is provided as a Piggyback connection
 detail only. Building Designer is responsible for all
 permanent bracing per standard engineering practices or
 refer to BCSI for general guidance on lateral restraint
 and diagonal bracing requirements.

VERTICAL WEB TO
 EXTEND THROUGH
 BOTTOM CHORD
 OF PIGGYBACK



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

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



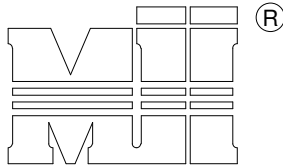
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 6904 Parke East Blvd. Tampa FL 33610
 Date:

AUGUST 1, 2016

STANDARD PIGGYBACK TRUSS CONNECTION DETAIL

MII-PIGGY-ALT
7-10

MiTek USA, Inc. Page 1 of 1



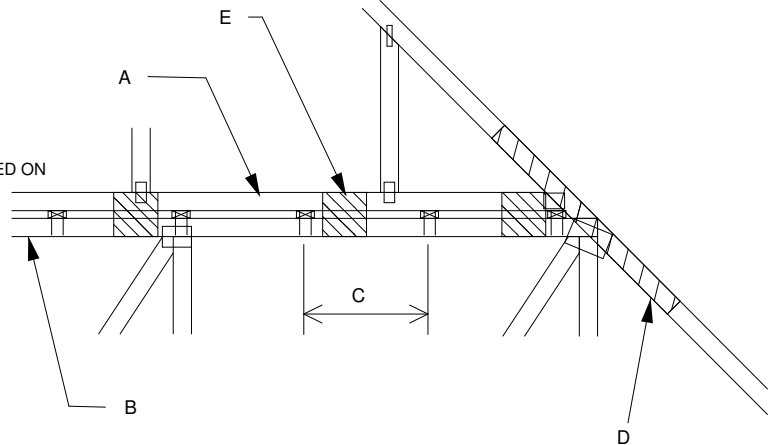
MiTek USA, Inc.



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
ASCE 7-10
DURATION OF LOAD INCREASE : 1.60

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

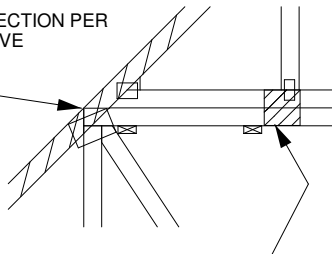
- A - PIGGYBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
SHALL BE CONNECTED TO EACH PURLIN
WITH (2) 0(0.131" X 3.5") TOE-NAILED.
- B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
- C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C.
UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING.
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 160 MPH WITH A MAXIMUM
PIGGYBACK SPAN OF 12 ft.
- E - FOR WIND SPEED IN THE RANGE 126 MPH - 160 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)



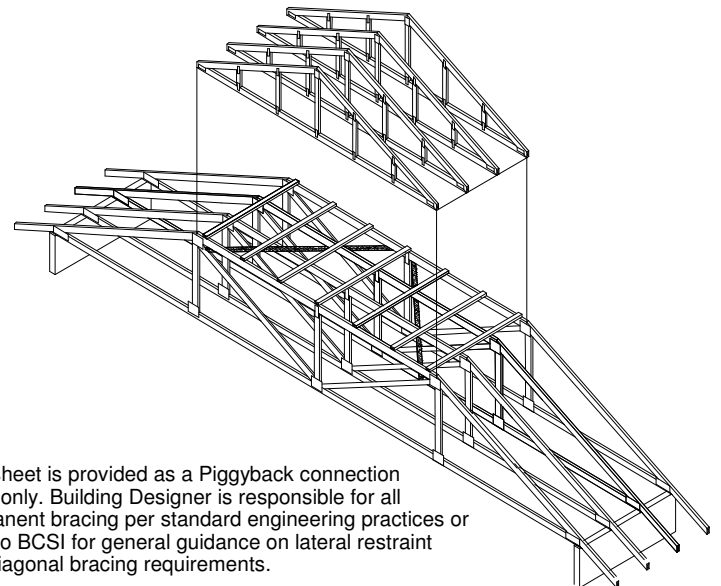
WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

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

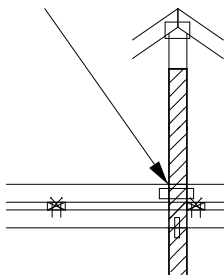


7" x 7" x 1/2" PLYWOOD (or 7/16" OSB) GUSSET EACH SIDE AT 24" O.C.
ATTACH WITH 3 - 6d (0.113" X 2") NAILS INTO EACH CHORD
FROM EACH SIDE (TOTAL - 12 NAILS)



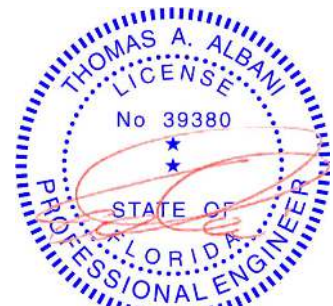
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and diagonal bracing requirements.

VERTICAL WEB TO
EXTEND THROUGH
BOTTOM CHORD
OF PIGGYBACK

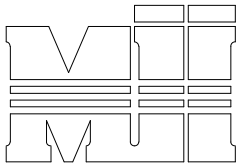


FOR LARGE CONCENTRATED LOADS APPLIED
TO CAP TRUSS REQUIRING A VERTICAL WEB:

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



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MiTek USA, Inc.

ENGINEERED BY
TRENCO
 A MiTek Affiliate

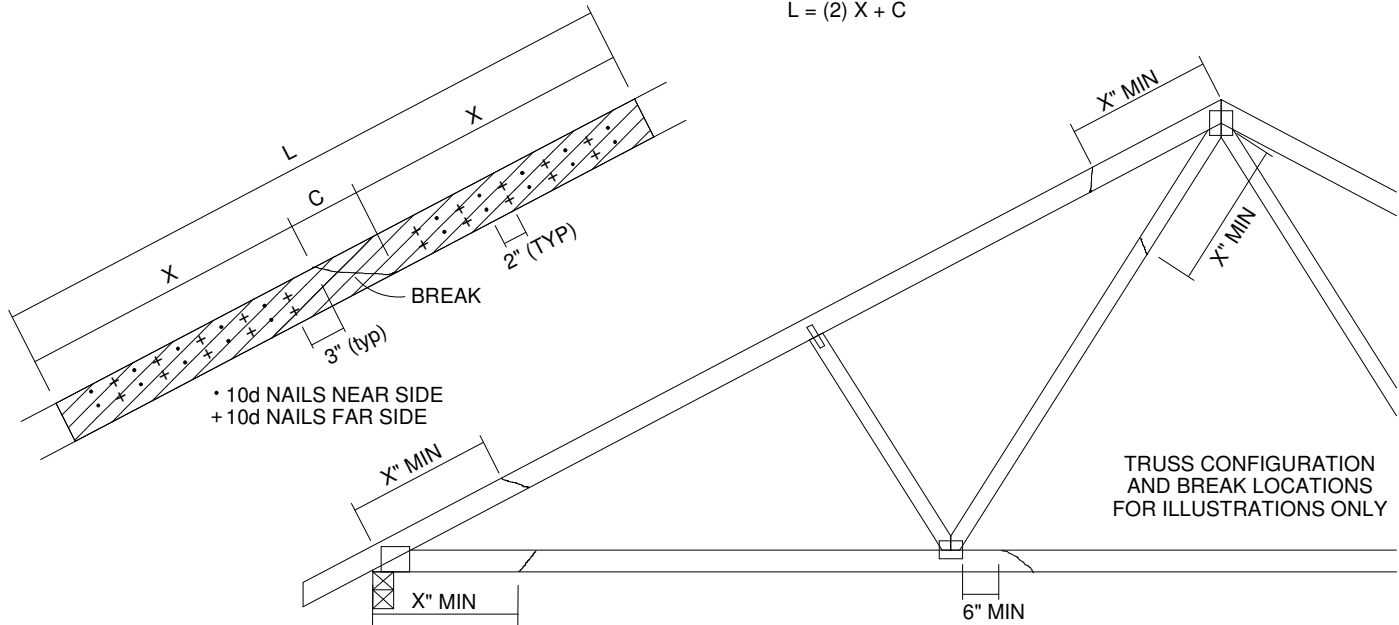
TOTAL NUMBER OF NAILS EACH SIDE OF BREAK *		X INCHES	MAXIMUM FORCE (lbs) 15% LOAD DURATION							
			SP		DF		SPF		HF	
2x4	2x6		2x4	2x6	2x4	2x6	2x4	2x6	2x4	2x6
20	30	24"	1706	2559	1561	2342	1320	1980	1352	2028
26	39	30"	2194	3291	2007	3011	1697	2546	1738	2608
32	48	36"	2681	4022	2454	3681	2074	3111	2125	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:

$$L = (2) X + C$$

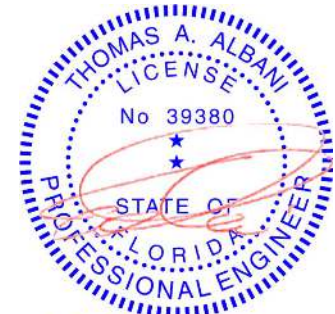


THE LOCATION OF THE BREAK MUST BE GREATER THAN OR EQUAL TO THE REQUIRED X DIMENSION FROM ANY PERIMETER BREAK OR HEEL JOINT AND A MINIMUM OF 6" FROM ANY INTERIOR JOINT (SEE SKETCH ABOVE)

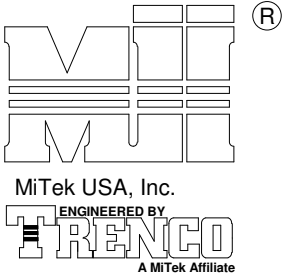
DO NOT USE REPAIR FOR JOINT SPLICES

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 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 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.



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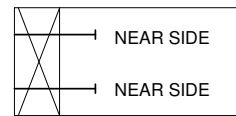
NOTES:

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.

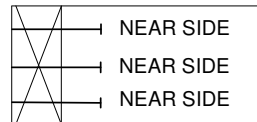
THIS DETAIL APPLICABLE TO THE
THREE END DETAILS SHOWN BELOW

VIEWS SHOWN ARE FOR
ILLUSTRATION PURPOSES ONLY

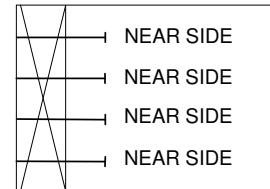
SIDE VIEW
(2x3)
2 NAILS



SIDE VIEW
(2x4)
3 NAILS



SIDE VIEW
(2x6)
4 NAILS



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

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

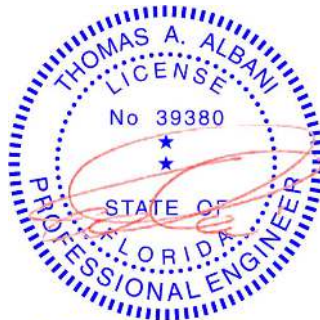
VALUES SHOWN ARE CAPACITY PER TOE-NAIL.
APPLICABLE DURATION OF LOAD INCREASES MAY BE APPLIED.

EXAMPLE:

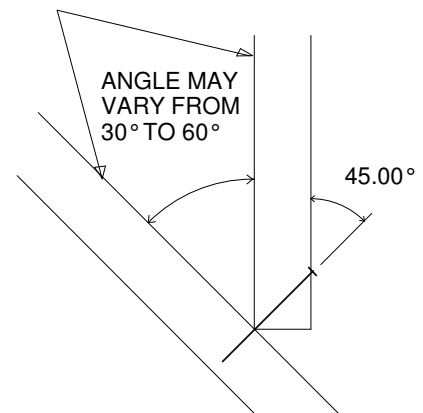
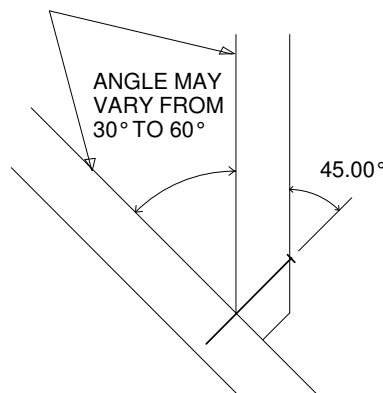
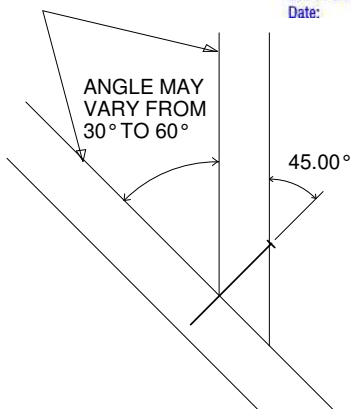
(3) - 16d (0.162" X 3.5") NAILS WITH SPF SPECIES BOTTOM CHORD

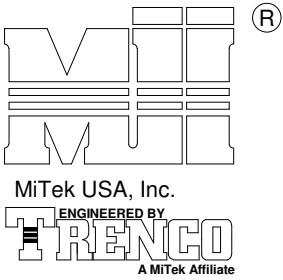
For load duration increase of 1.15:

3 (nails) X 84.5 (lb/nail) X 1.15 (DOL) = 291.5 lb Maximum Capacity



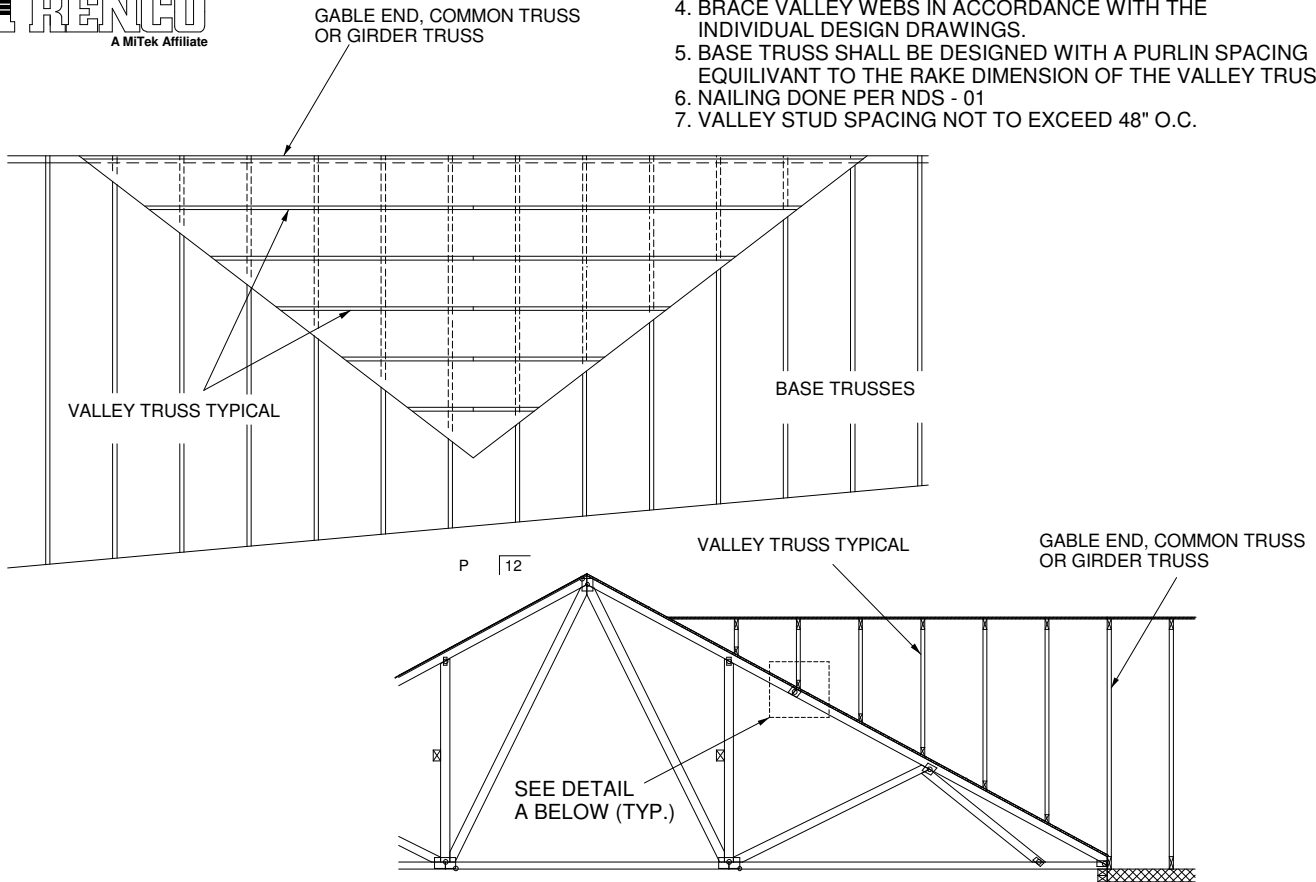
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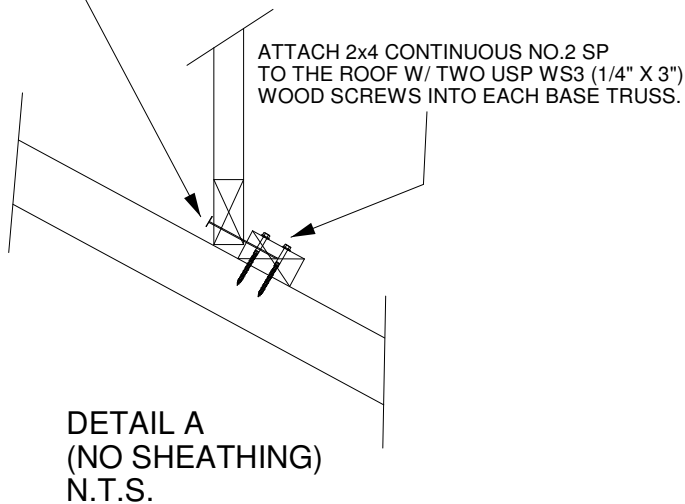


GENERAL SPECIFICATIONS

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 EQUIVARIANT 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.



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

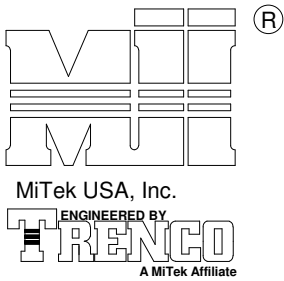


DETAIL A
(NO SHEATHING)
N.T.S.

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

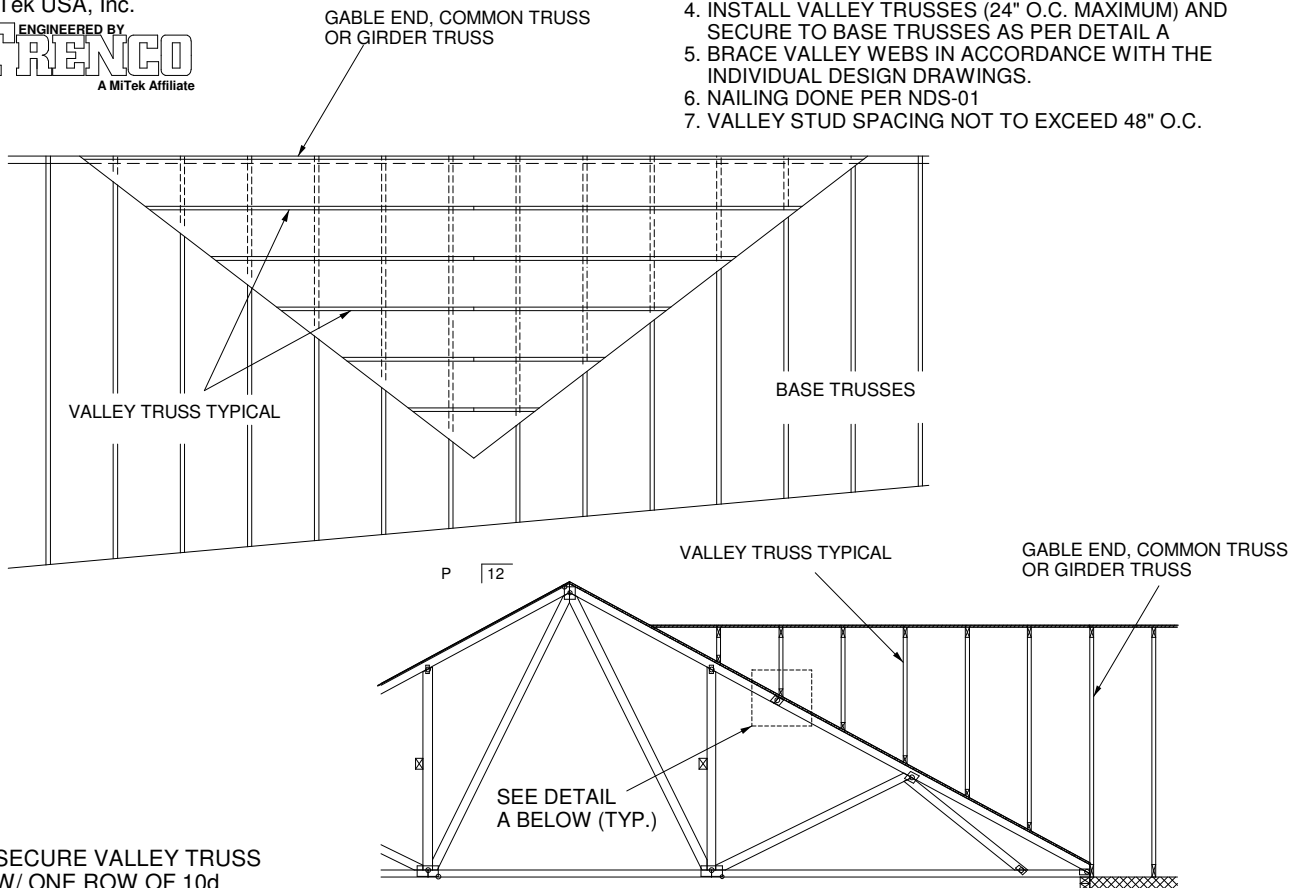


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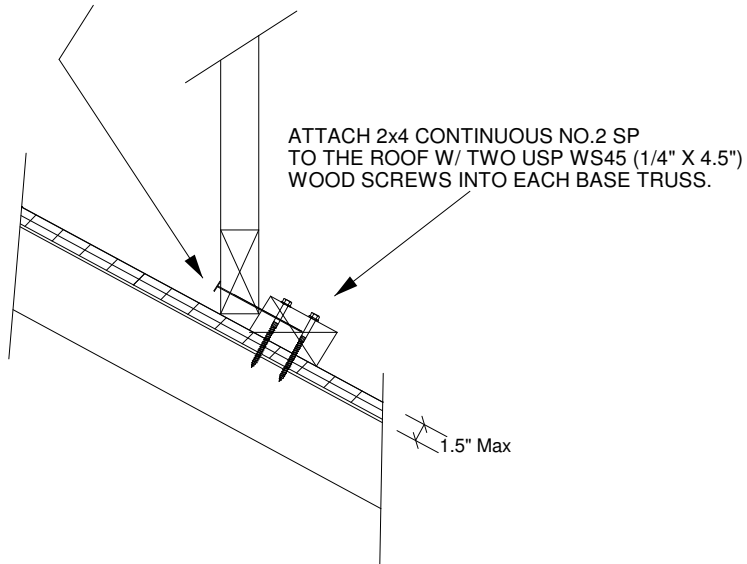


GENERAL SPECIFICATIONS

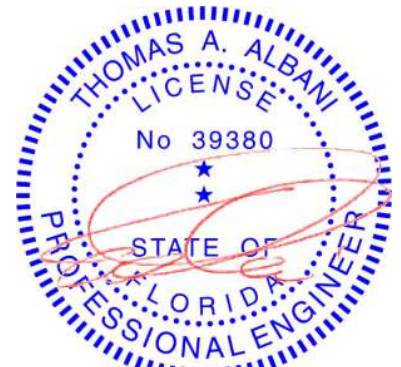
1. NAIL SIZE 10d (0.131" X 3")
2. WOOD SCREW = 4.5" WS45 USP OR EQUIVANT
3. INSTALL SHEATHING TO TOP CHORD OF BASE TRUSSES.
4. INSTALL VALLEY TRUSSES (24" O.C. MAXIMUM) AND SECURE TO BASE TRUSSES AS PER DETAIL A
5. BRACE VALLEY WEBS IN ACCORDANCE WITH THE INDIVIDUAL DESIGN DRAWINGS.
6. NAILING DONE PER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



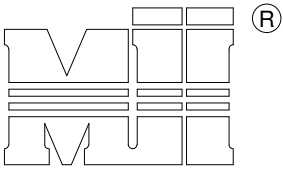
SECURE VALLEY TRUSS
W/ ONE ROW OF 10d
NAILS 6" O.C.



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



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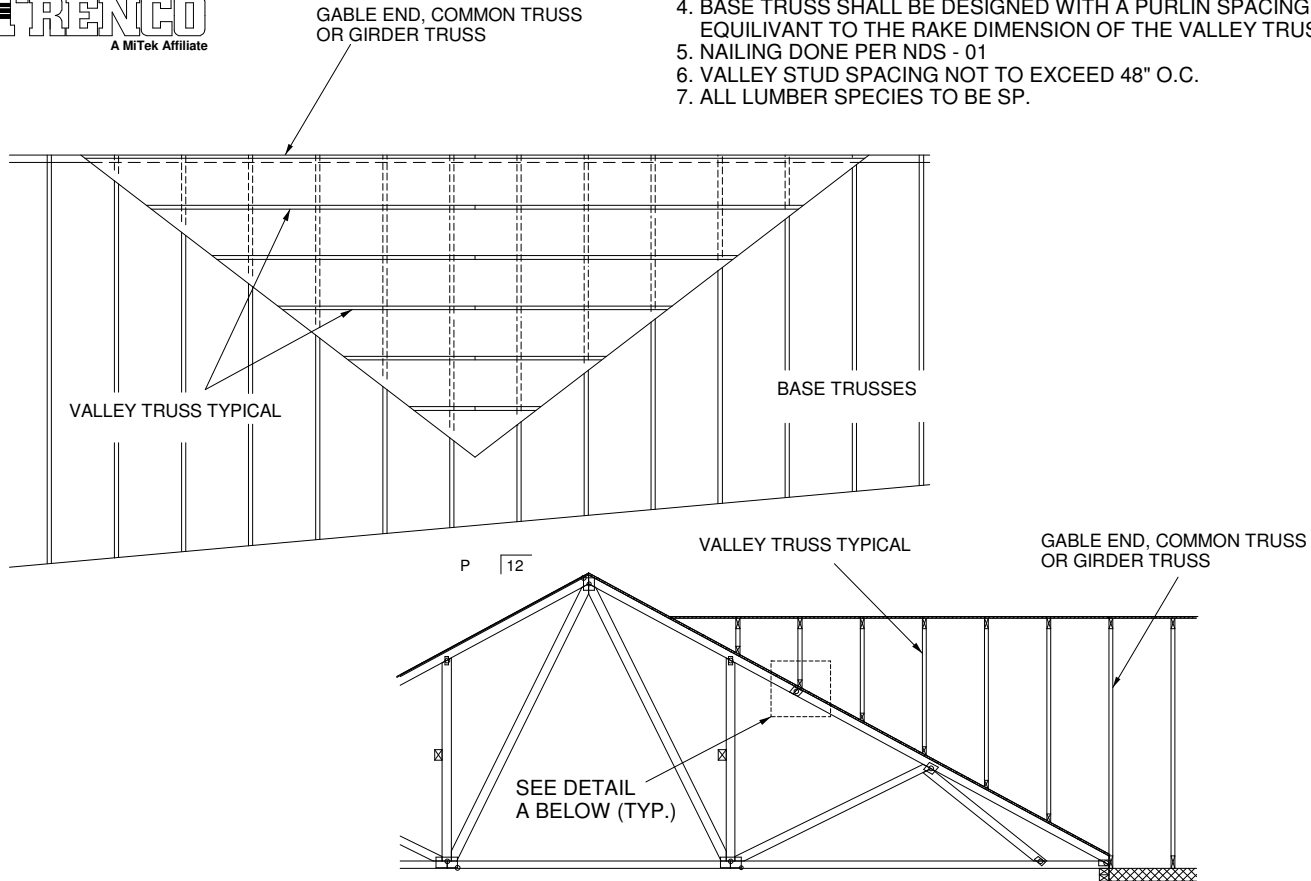


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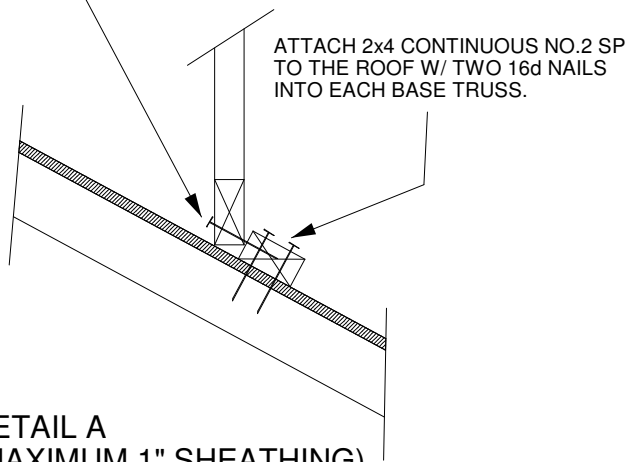
ENGINEERED BY
TRENCO
A MiTek Affiliate

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 EQUIVARIANT 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.



SECURE VALLEY TRUSS
W/ ONE ROW OF 16d
NAILS 6" O.C.



ATTACH 2x4 CONTINUOUS NO.2 SP
TO THE ROOF W/ TWO 16d NAILS
INTO EACH BASE TRUSS.

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 7-10 150 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



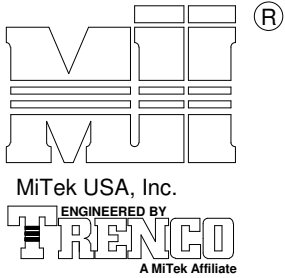
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Date:

AUGUST 1, 2016

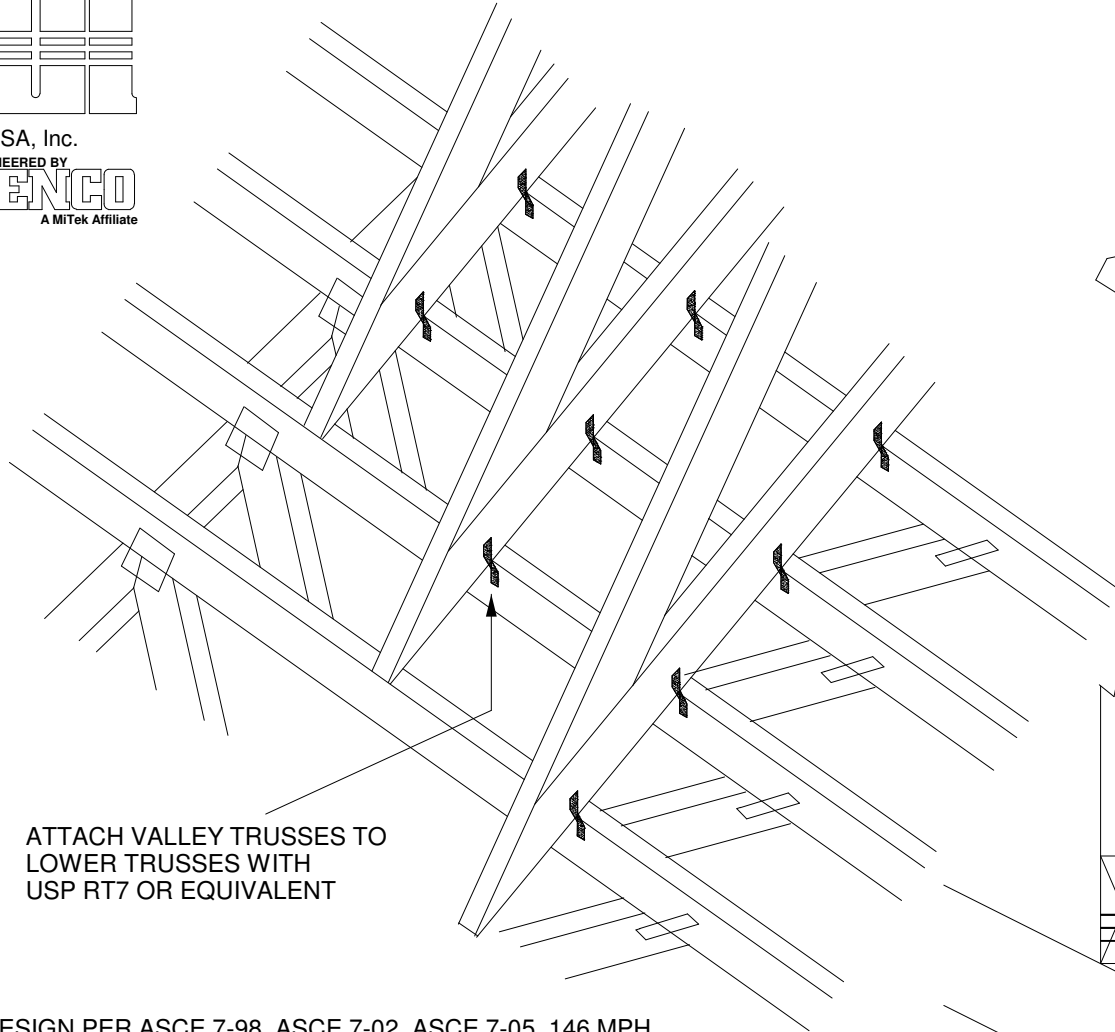
TRUSSED VALLEY SET DETAIL
(HIGH WIND VELOCITY)

MII-VALLEY

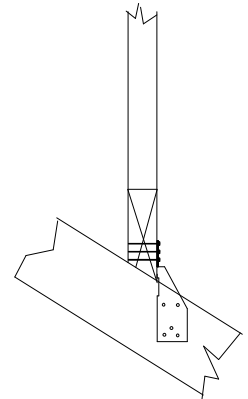
MiTek USA, Inc. Page 1 of 1



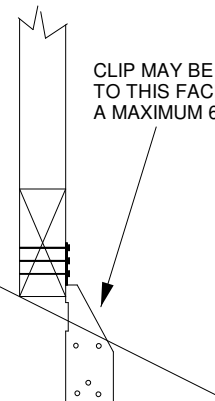
NOTE: VALLEY STUD SPACING NOT
TO EXCEED 48" O.C. SPACING



ATTACH VALLEY TRUSSES TO
LOWER TRUSSES WITH
USP RT7 OR EQUIVALENT



FOR BEVELED BOTTOM
CHORD, CLIP MAY BE
APPLIED TO EITHER FACE



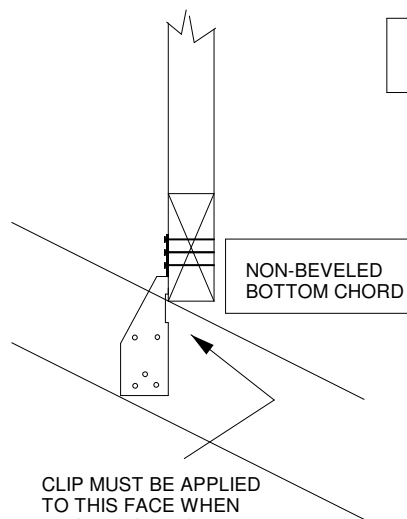
CLIP MAY BE APPLIED
TO THIS FACE UP TO
A MAXIMUM 6/12 PITCH

WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 146 MPH
WIND DESIGN PER ASCE 7-10 160 MPH
MAX MEAN ROOF HEIGHT = 30 FEET
CATEGORY II BUILDING
EXPOSURE B or C
WIND DURATION OF LOAD INCREASE : 1.6
MAX TOP CHORD TOTAL LOAD = 50 PSF
MAX SPACING = 24" O.C. (BASE AND VALLEY)

SUPPORTING TRUSSES DIRECTLY UNDER
VALLEY TRUSSES MUST BE DESIGNED
WITH A MAXIMUM UNBRACED LENGTH OF
2'-10" ON AFFECTED TOP CHORDS.

NOTES:

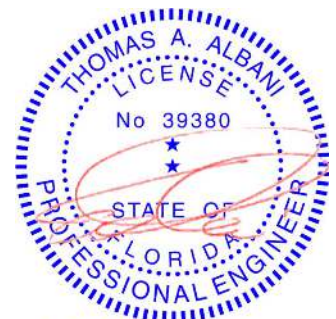
- SHEATHING APPLIED AFTER
INSTALLATION OF VALLEY TRUSSES
- THIS DETAIL IS NOT APPLICABLE FOR
SPF-S SPECIES LUMBER.



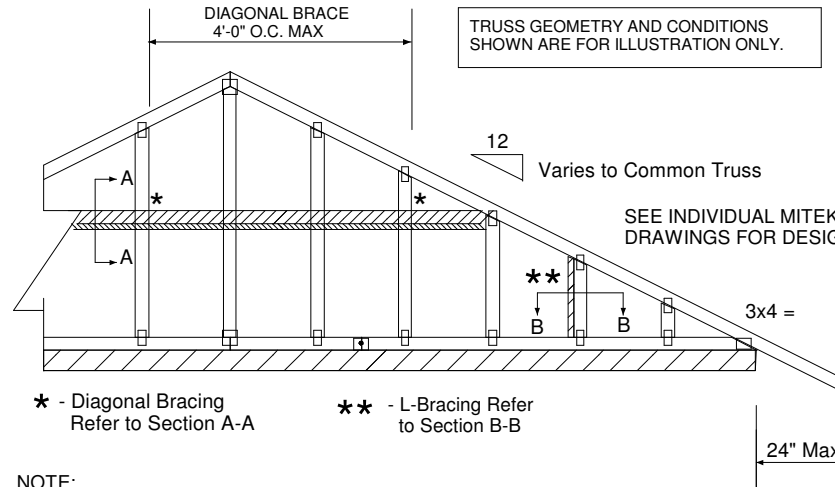
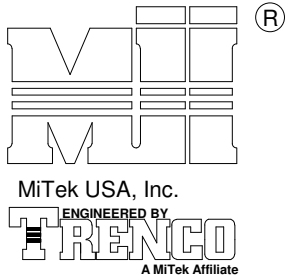
CLIP MUST BE APPLIED
TO THIS FACE WHEN
PITCH EXCEEDS 6/12.
(MAXIMUM 12/12 PITCH)

NON-BEVELED
BOTTOM CHORD

NON-BEVELED
BOTTOM CHORD



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NOTE:

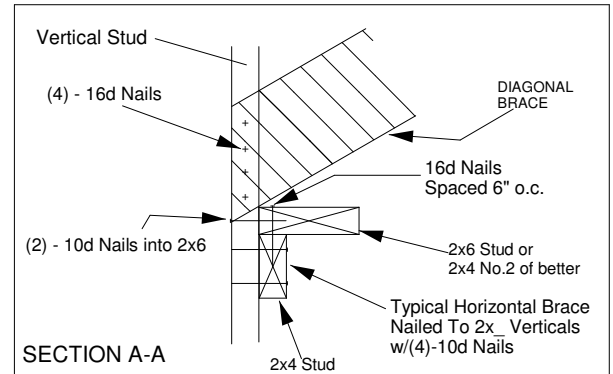
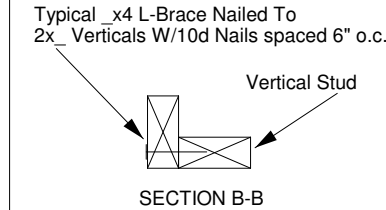
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF 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.

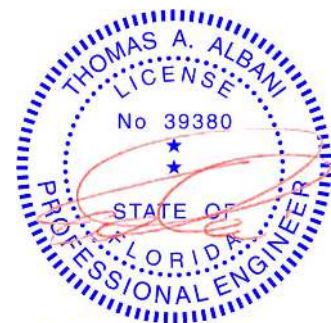
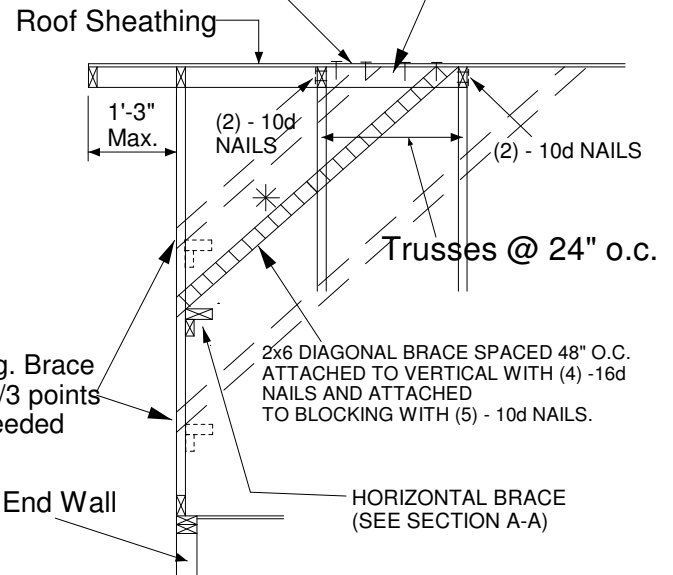
MAXIMUM WIND SPEED = 146 MPH
MAX MEAN ROOF HEIGHT = 30 FEET
CATEGORY II BUILDING
EXPOSURE B or C
ASCE 7-98, ASCE 7-02, ASCE 7-05
DURATION OF LOAD INCREASE : 1.60

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

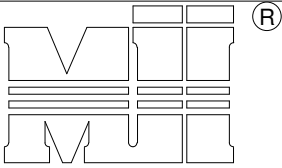


PROVIDE 2x4 BLOCKING BETWEEN THE FIRST TWO TRUSSES AS NOTED. TOENAIL BLOCKING TO TRUSSES WITH (2) - 10d NAILS AT EACH END. ATTACH DIAGONAL BRACE TO BLOCKING WITH (5) - 10d NAILS.

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



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TRUSS CRITERIA:

LOADING: 40-10-0-10

DURATION FACTOR: 1.15

SPACING: 24" O.C.

TOP CHORD: 2x4 OR 2x6

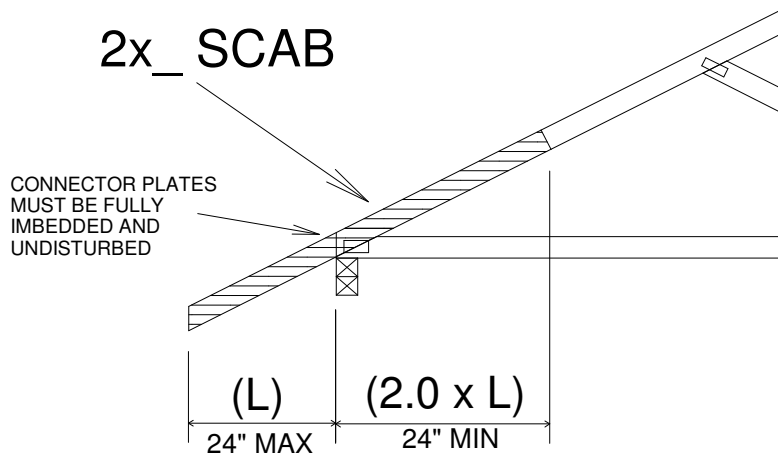
PITCH: 4/12 - 12/12

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.

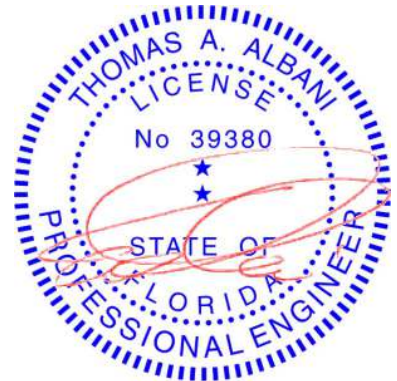


IMPORTANT

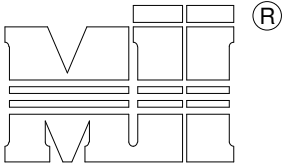
This detail to be used only with trusses (spans less than 40') spaced 24" o.c. maximum and having pitches between 4/12 and 12/12 and total top chord loads not exceeding 50 psf.

Trusses not fitting these criteria should be examined individually.

REFER TO INDIVIDUAL TRUSS DESIGN
FOR PLATE SIZES AND LUMBER GRADES



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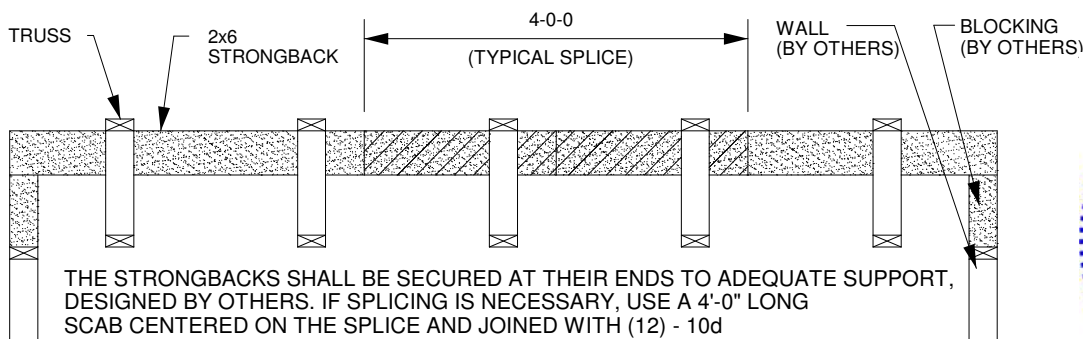
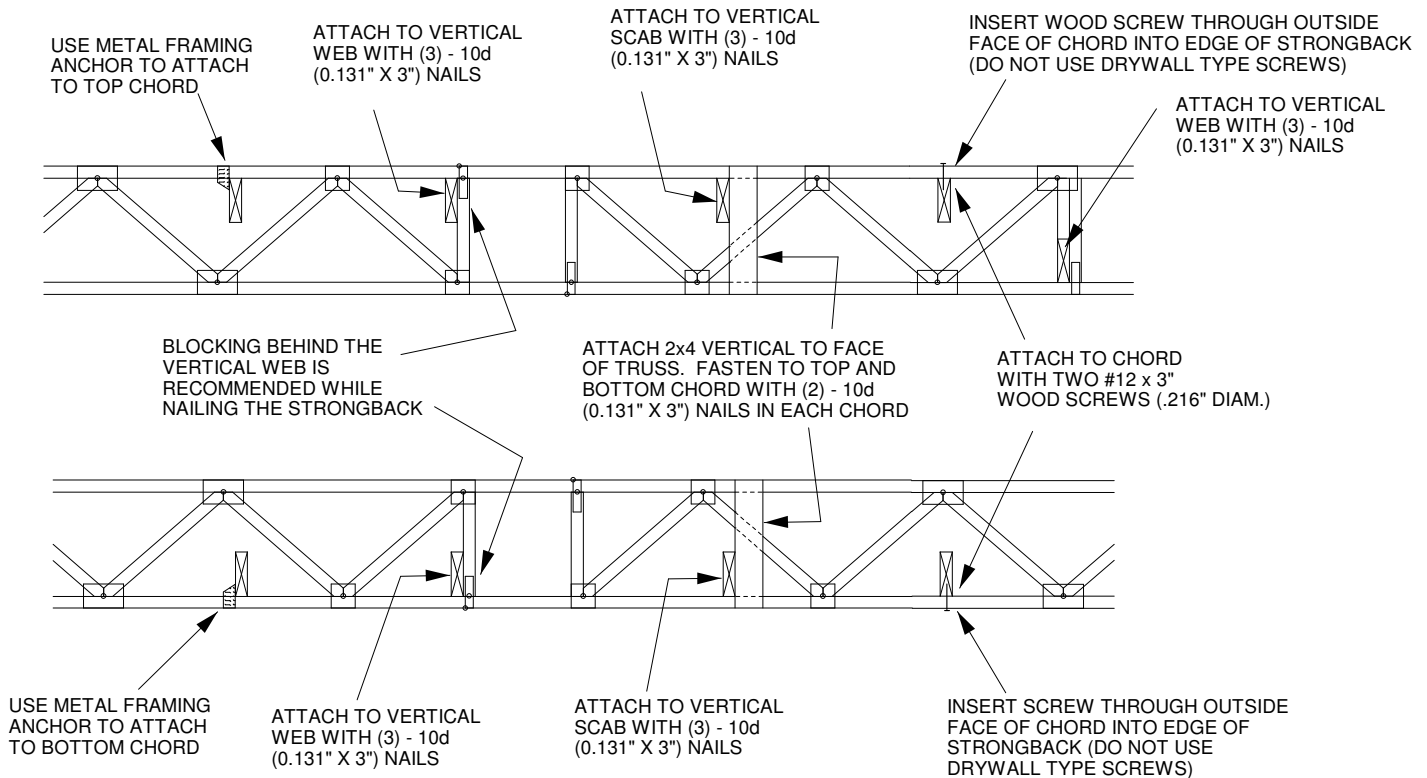
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TO MINIMIZE VIBRATION COMMON TO ALL SHALLOW FRAMING SYSTEMS, 2x6 "STRONGBACK" IS RECOMMENDED, LOCATED EVERY 8 TO 10 FEET ALONG A FLOOR TRUSS.

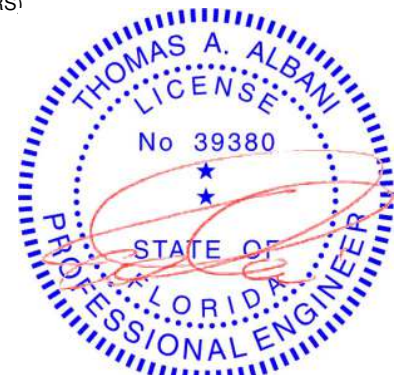
NOTE 1: 2X6 STRONGBACK ORIENTED VERTICALLY MAY BE POSITIONED DIRECTLY UNDER THE TOP CHORD OR DIRECTLY ABOVE THE BOTTOM CHORD. SECURELY FASTENED TO THE TRUSS USING ANY OF THE METHODS ILLUSTRATED BELOW.

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



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



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

RE: 3267212 - PFS SOLUTIONS - SPEC HSE

MiTek USA, Inc.

16023 Swingley Ridge Rd
Chesterfield, MO 63017

Site Information:

Customer Info: PFS SOLUTIONS Project Name: Spec Hse Model: Custom
Lot/Block: N/A Subdivision: N/A
Address: 947 SW Jaguar Drive, N/A
City: Columbia Cty 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: 130 mph
Roof Load: 37.0 psf Floor Load: N/A psf

This package includes 27 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	T28510296	CJ01	8/12/22	15	T28510310	T07	8/12/22
2	T28510297	CJ03	8/12/22	16	T28510311	T08	8/12/22
3	T28510298	CJ05	8/12/22	17	T28510312	T09	8/12/22
4	T28510299	EJ01	8/12/22	18	T28510313	T10	8/12/22
5	T28510300	HJ10	8/12/22	19	T28510314	T11	8/12/22
6	T28510301	PB01	8/12/22	20	T28510315	T12	8/12/22
7	T28510302	T01	8/12/22	21	T28510316	T13	8/12/22
8	T28510303	T01G	8/12/22	22	T28510317	T14	8/12/22
9	T28510304	T02	8/12/22	23	T28510318	T15	8/12/22
10	T28510305	T03	8/12/22	24	T28510319	T16	8/12/22
11	T28510306	T03G	8/12/22	25	T28510320	T17	8/12/22
12	T28510307	T04	8/12/22	26	T28510321	T18	8/12/22
13	T28510308	T05	8/12/22	27	T28510322	T19	8/12/22
14	T28510309	T06	8/12/22				

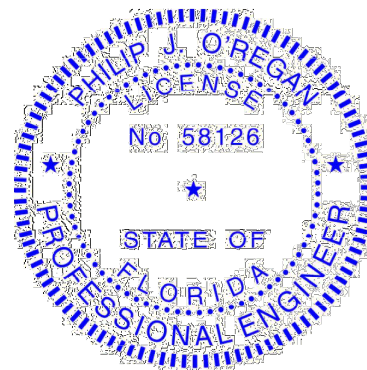
This item has been electronically signed and sealed by ORegan, Philip, PE using a Digital Signature.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

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-Lake City, FL.

Truss Design Engineer's Name: ORegan, Philip

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



Philip J. ORegan PE No. 58126
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.

August 12, 2022

ORegan, Philip

1 of 1

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510296
3267212	CJ01	Jack-Open	4	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:09 2022 Page 1
ID:AikhQnQaXdkp1nIRSQBZ3qyp?mU-EX588_1zegO99VqG6cWX4BkVhJifGzalXT1?rYyp_gq

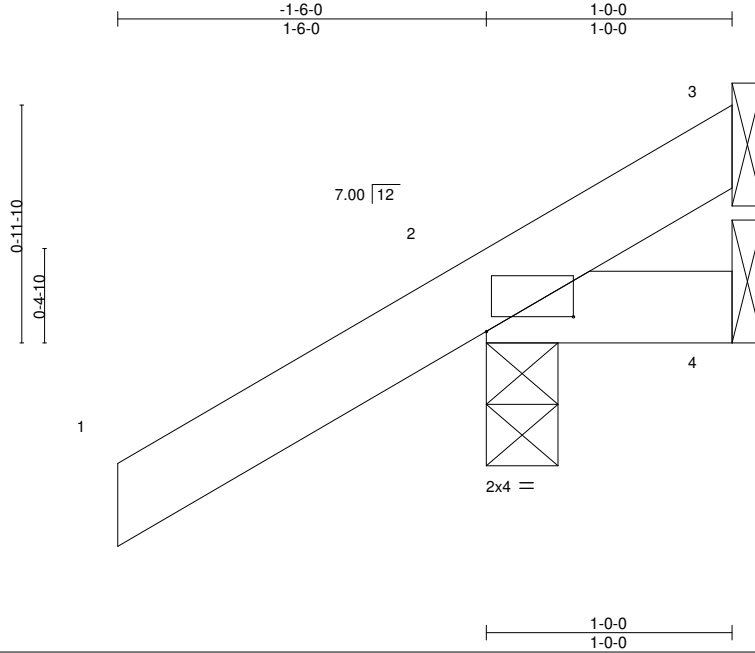


Plate Offsets (X,Y)--		[2:0-4-4,0-0-12]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.25	TC 0.16
TCDL 7.0	Lumber DOL	1.25	BC 0.04
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00
BCDL 10.0	Code	FBC2020/TPI2014	Matrix-MP
DEFL.	in (loc)	I/defl	L/d
Vert(LL)	0.00 7	>999	240
Vert(CT)	0.00 7	>999	180
Horz(CT)	0.00 2	n/a	n/a
PLATES	GRIP		
MT20	244/190		
Weight: 6 lb		FT = 20%	

LUMBER-

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

REACTIONS.

(size) 3=Mechanical, 2=0-3-8, 4=Mechanical
Max Horz 2=46(LC 12)
Max Uplift 3=6(LC 1), 2=68(LC 12), 4=19(LC 1)
Max Grav 3=7(LC 16), 2=179(LC 1), 4=20(LC 16)

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

NOTES-

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone;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 3-6-0 tall by 2-0-0 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 6 lb uplift at joint 3, 68 lb uplift at joint 2 and 19 lb uplift at joint 4.

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 Inc. DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

August 12,2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510297
3267212	CJ03	Jack-Open	4	1	Job Reference (optional)	

Builders FirstSource (Lake City, FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:10 2022 Page 1

ID:AikhQnQaXdkp1nIRSQBZ3qyp?mU-ijfWLK1bPzW0nfPSgJ1mdOHgji1O?Qpvm7nZN?yp_gp

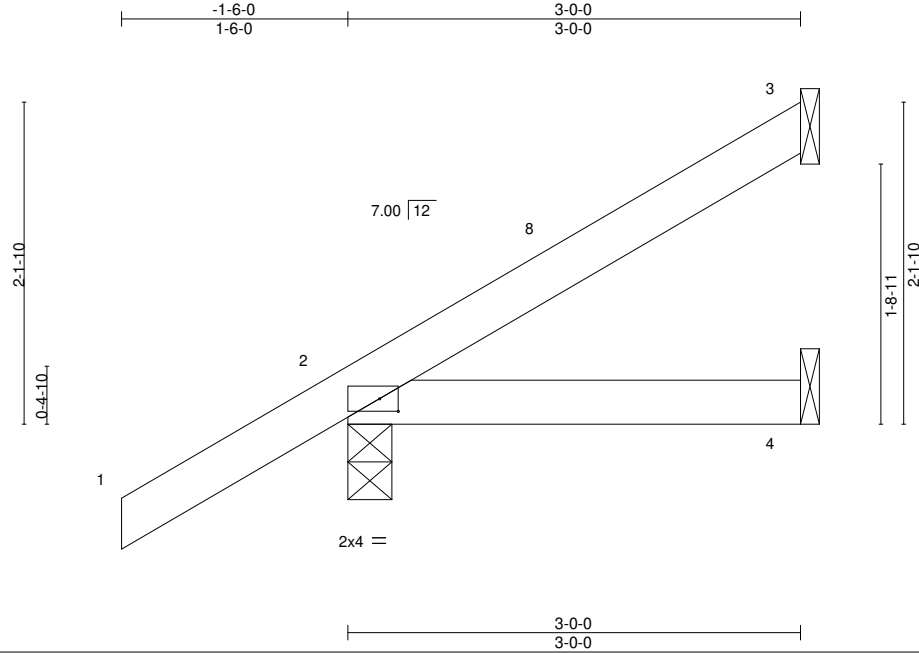


Plate Offsets (X,Y)--		[2:0-1-8,0-1-0]								
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0		Plate Grip DOL 1.25		TC 0.14		Vert(LL) -0.00 4-7	>999	240	MT20	244/190
TCDL 7.0		Lumber DOL 1.25		BC 0.07		Vert(CT) -0.01 4-7	>999	180		
BCLL 0.0 *		Rep Stress Incr YES		WB 0.00		Horz(CT) 0.00 3	n/a	n/a		
BCDL 10.0		Code FBC2020/TPI2014		Matrix-MP					Weight: 12 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

REACTIONS.

(size) 3=Mechanical, 2=0-3-8, 4=Mechanical
Max Horz 2=85(LC 12)
Max Uplift 3=-39(LC 12), 2=-54(LC 12)
Max Grav 3=63(LC 19), 2=210(LC 1), 4=50(LC 3)

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

NOTES-

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior(1) 1-6-0 to 2-11-4 zone;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 3-6-0 tall by 2-0-0 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 39 lb uplift at joint 3 and 54 lb uplift at joint 2.

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Date: 8/11/2022

August 12, 2022

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Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



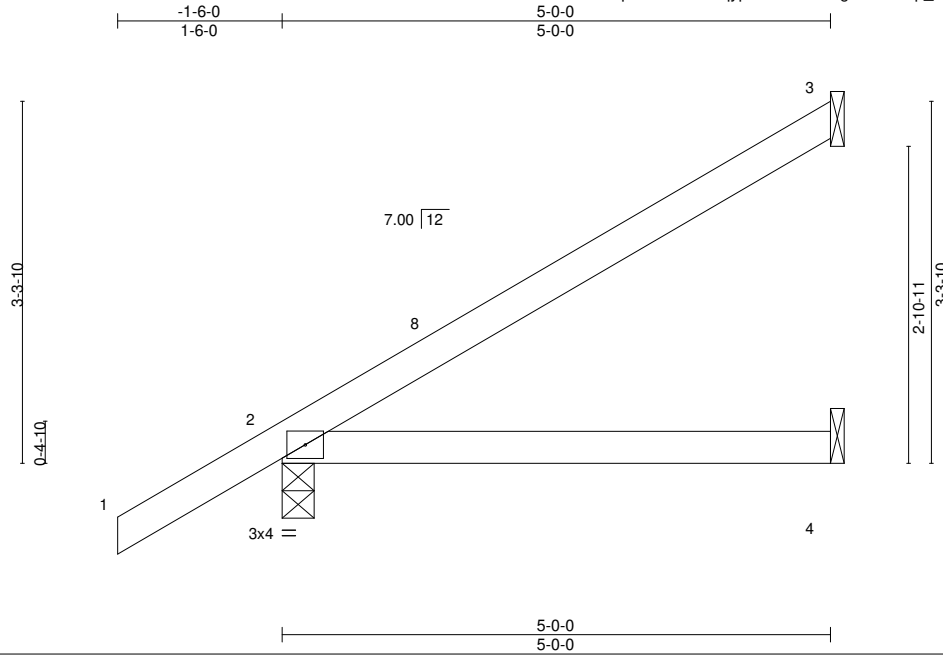
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510298
3267212	CJ05	Jack-Open	4	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:11 2022 Page 1

ID:AikhQnQaXDkp1nIRSQBZ3qyp?mU-AvDuZg2DAHftPp_eD1Y?9cppD6L_kt32_nW6vRyp_go



Scale = 1:21.0

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.28	Vert(LL)	0.03	4-7	>999	MT20	244/190
TCDL 7.0	Plate Grip DOL 1.25	BC 0.24	Vert(CT)	-0.05	4-7	>999		
BCLL 0.0 *	Lumber DOL 1.25	WB 0.00	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-MP					Weight: 19 lb	FT = 20%
	Code FBC2020/TPI2014							

LUMBER-

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 3=Mechanical, 2=0-3-8, 4=Mechanical
Max Horz 2=125(LC 12)
Max Uplift 3=-73(LC 12), 2=-57(LC 12)
Max Grav 3=118(LC 19), 2=276(LC 1), 4=89(LC 3)

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

NOTES-

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior(1) 1-6-0 to 4-11-4 zone;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 3-6-0 tall by 2-0-0 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 73 lb uplift at joint 3 and 57 lb uplift at joint 2.

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Philip J. O'Regan PE No.58126
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Date: 8/12/2022

August 12,2022

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510299
3267212	EJ01	Jack-Partial	27	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:11 2022 Page 1

ID:AikhQnQaXDkp1nIRSQBZ3qyp?mU-AvDuZg2DAHfPp_eD1Y?9cpkm6Gckt32_nW6vRyp_go



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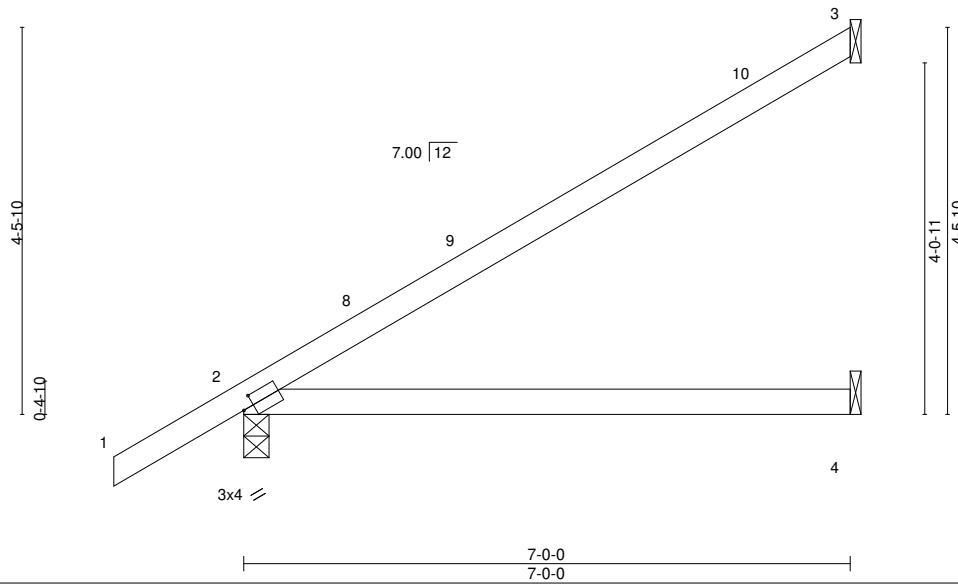


Plate Offsets (X,Y)--		[2:0-1-8,0-1-8]	
LOADING (psf)		SPACING-	2-0-0
TCLL 20.0		Plate Grip DOL	1.25
TCDL 7.0		Lumber DOL	1.25
BCLL 0.0 *		Rep Stress Incr	YES
BCDL 10.0		Code	FBC2020/TPI2014
		CSI.	
		TC 0.63	
		BC 0.52	
		WB 0.00	
		Matrix-MS	
		DEFL.	
		in (loc)	I/defl L/d
		Vert(LL) 0.11 4-7 >775	240
		Vert(CT) -0.22 4-7 >379	180
		Horz(CT) 0.01 2 n/a	n/a
		PLATES	GRIP
		MT20	244/190
		Weight: 25 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING-

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

REACTIONS.

(size) 3=Mechanical, 2=0-3-8, 4=Mechanical
Max Horz 2=159(LC 12)
Max Uplift 3=94(LC 12), 2=66(LC 12)
Max Grav 3=171(LC 19), 2=346(LC 1), 4=126(LC 3)

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

NOTES-

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior(1) 1-6-0 to 6-11-4 zone;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 3-6-0 tall by 2-0-0 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 94 lb uplift at joint 3 and 66 lb uplift at joint 2.

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Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

August 12, 2022

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Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



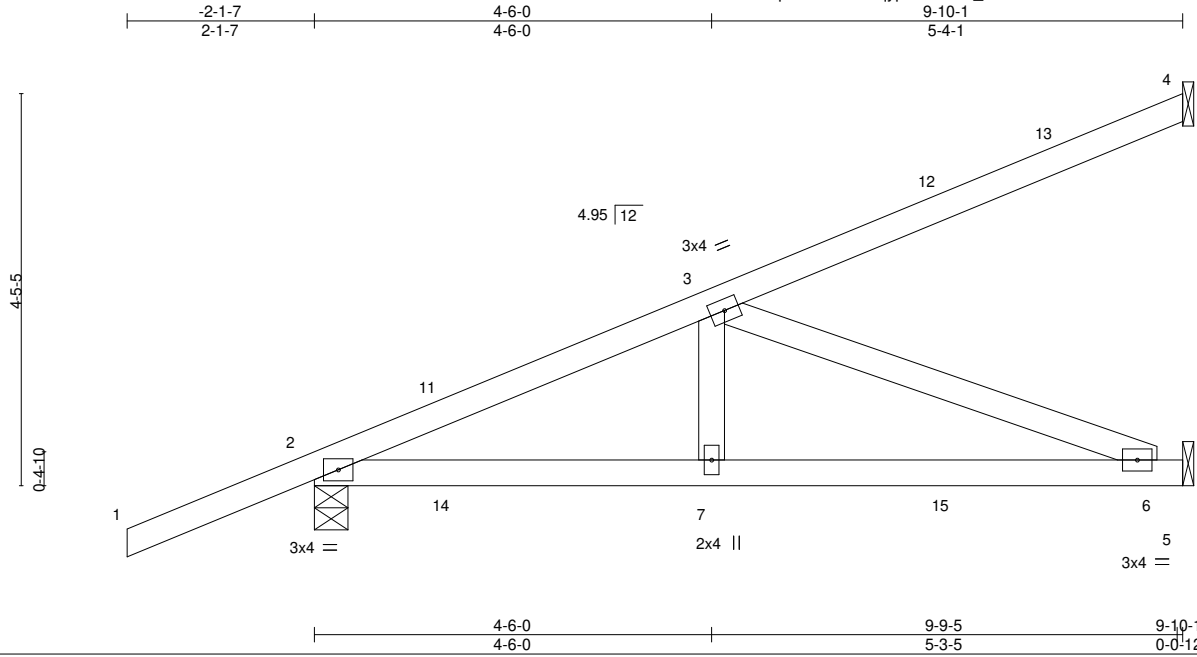
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510300
3267212	HJ10	Diagonal Hip Girder	2	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:13 2022 Page 1

ID:AikhQnQaXDkp1nIRSQBZ3qyp?mU-6ILf_M4Uiuvbe771LRbTE1v43wxuChMLS5?D_Kyp_gm



LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.58	Vert(LL) -0.05	6-7	>999	240		MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.60	Vert(CT) -0.11	6-7	>999	180			
BCLL 0.0 *	Rep Stress Incr NO	WB 0.40	Horz(CT) 0.01	5	n/a	n/a			
BCDL 10.0	Code FBC2020/TPI2014	Matrix-MS						Weight: 44 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 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 4=Mechanical, 2=0-4-9, 5=Mechanical
Max Horz 2=159(LC 26)
Max Uplift 4=-84(LC 8), 2=-184(LC 4), 5=-77(LC 8)
Max Grav 4=149(LC 1), 2=527(LC 1), 5=299(LC 1)

FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-727/186
BOT CHORD 2-7=-260/629, 6-7=-260/629
WEBS 3-7=0/283, 3-6=-674/279

NOTES-

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 84 lb uplift at joint 4, 184 lb uplift at joint 2 and 77 lb uplift at joint 5.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 61 lb down and 73 lb up at 1-6-1, 61 lb down and 73 lb up at 1-6-1, 78 lb down and 42 lb up at 4-4-0, 78 lb down and 42 lb up at 4-4-0, and 106 lb down and 84 lb up at 7-1-15, and 106 lb down and 84 lb up at 7-1-15 on top chord, and 19 lb down and 44 lb up at 1-6-1, 19 lb down and 44 lb up at 1-6-1, 24 lb down at 4-4-0, 24 lb down at 4-4-0, and 46 lb down at 7-1-15, and 46 lb down at 7-1-15 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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

- Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-4=-54, 5-8=-20
Concentrated Loads (lb)
Vert: 7=-5(F=-3, B=-3) 12=-73(F=-36, B=-36) 15=-59(F=-29, B=-29)

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Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

August 12, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



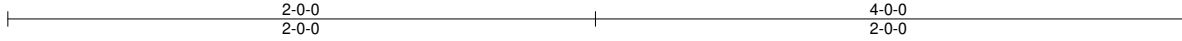
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510301
3267212	PB01	Piggyback	4	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:14 2022 Page 1

ID:AikhQnQaXDkp1nIRSQBZ3qyp?mU-bUu1Bi56TC1SGGiDv96inEROVKPVxEpVgllmWmyp_gl



Scale = 1:7.8

0-1-10

0-1-10

LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	20.0	Plate Grip DOL	1.25	TC	0.02	Vert(LL)	0.00 4 n/r 120	MT20		244/190	
TCDL	7.0	Lumber DOL	1.25	BC	0.06	Vert(CT)	0.00 4 n/r 120				
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00 4 n/a n/a				
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-P							
								Weight: 10 lb		FT = 20%	

LUMBER-

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 2=2-3-11, 4=2-3-11
Max Horz 2=-22(LC 10)
Max Uplift 2=-30(LC 12), 4=-30(LC 13)
Max Grav 2=114(LC 1), 4=114(LC 1)

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

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 2 and 30 lb uplift at joint 4.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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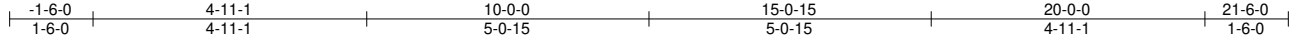
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510302
3267212	T01	Common	7	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:15 2022 Page 1

ID:AikhQnQaXDkp1nIRSQBZ3qyp?mU-3hSPP25kEW9JtQHPSsdxKS_UCjXugdpevPUK2Cyp_gk



4x6 ||

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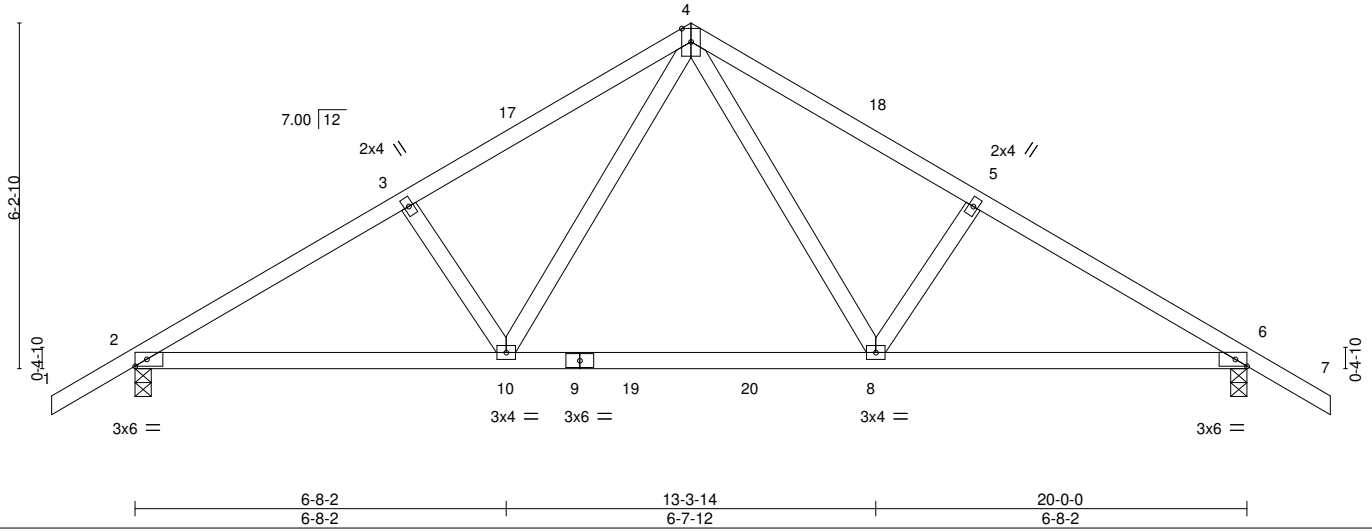


Plate Offsets (X,Y)-- [6:0-2-8,Edge]

LOADING (psf)	SPACING-		CSI.	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC 0.35	Vert(LL)	-0.16	8-10	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.95	Vert(CT)	-0.31	8-10	>781	180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.27	Horz(CT)	0.04	6	n/a	n/a		
BCDL 10.0	Code FBC2020/TPI2014		Matrix-MS						Weight: 99 lb	FT = 20%

LUMBER-

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

REACTIONS.

(size) 2=0-3-8, 6=0-3-8
Max Horz 2=-148(LC 10)
Max Uplift 2=-237(LC 12), 6=-237(LC 13)
Max Grav 2=1116(LC 19), 6=1116(LC 20)

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

TOP CHORD 2-3=-1696/346, 3-4=-1588/362, 4-5=-1589/362, 5-6=-1696/346
BOT CHORD 2-10=-314/1519, 8-10=-131/992, 6-8=-216/1409
WEBS 4-8=-190/799, 5-8=-253/169, 4-10=-190/799, 3-10=-253/169

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior(1) 1-6-0 to 10-0-0, Exterior(2R) 10-0-0 to 13-0-0, Interior(1) 13-0-0 to 21-6-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 237 lb uplift at joint 2 and 237 lb uplift at joint 6.
- 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

- Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-4=-54, 4-7=-54, 10-11=-20, 8-10=-80(F=-60), 8-14=-20

This item has been electronically signed and sealed by O'Regan, 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 Inc. DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

August 12, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

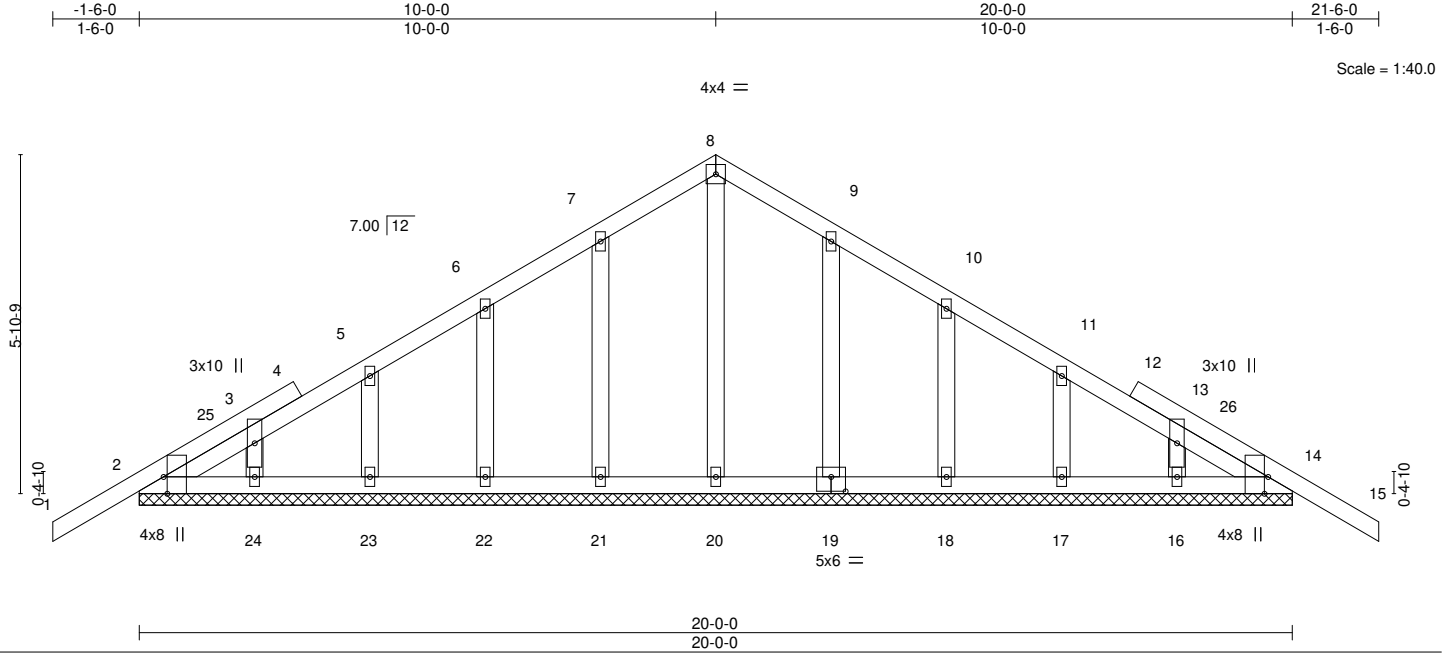


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510303
3267212	T01G	Common Supported Gable	1	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:17 2022 Page 1
ID:AikhQnQaXDkp1nIRSQBZ3qyp?mU-?3a9pj7_m7P07kRoahfPPt3t6XRg8ZXxNizQ75yp_gi



LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.13	Vert(LL)	-0.01 15	n/r	120	MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.03	Vert(CT)	-0.01 15	n/r	120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.07	Horz(CT)	0.00 14	n/a	n/a		
BCDL 10.0	Code FBC2020/TPI2014	Matrix-S					Weight: 114 lb	FT = 20%

LUMBER-

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

BRACING-

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

REACTIONS.

- All bearings 20-0-0.
(lb) - Max Horz 2=-140(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 14, 21, 22, 23, 24, 19, 18, 17, 16
Max Grav All reactions 250 lb or less at joint(s) 2, 14, 20, 21, 22, 23, 24, 19, 18, 17, 16

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

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-6-0 to 1-6-0, Exterior(2N) 1-6-0 to 10-0-0, Corner(3R) 10-0-0 to 13-0-0, Exterior(2N) 13-0-0 to 21-6-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 14, 21, 22, 23, 24, 19, 18, 17, 16.

This item has been electronically signed and sealed by O'Regan, 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 Inc.-DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd, Chesterfield, MO 63017
Date: 8/11/2022

August 12, 2022

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510304
3267212	T02	Common	3	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:18 2022 Page 1
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4x6 ||

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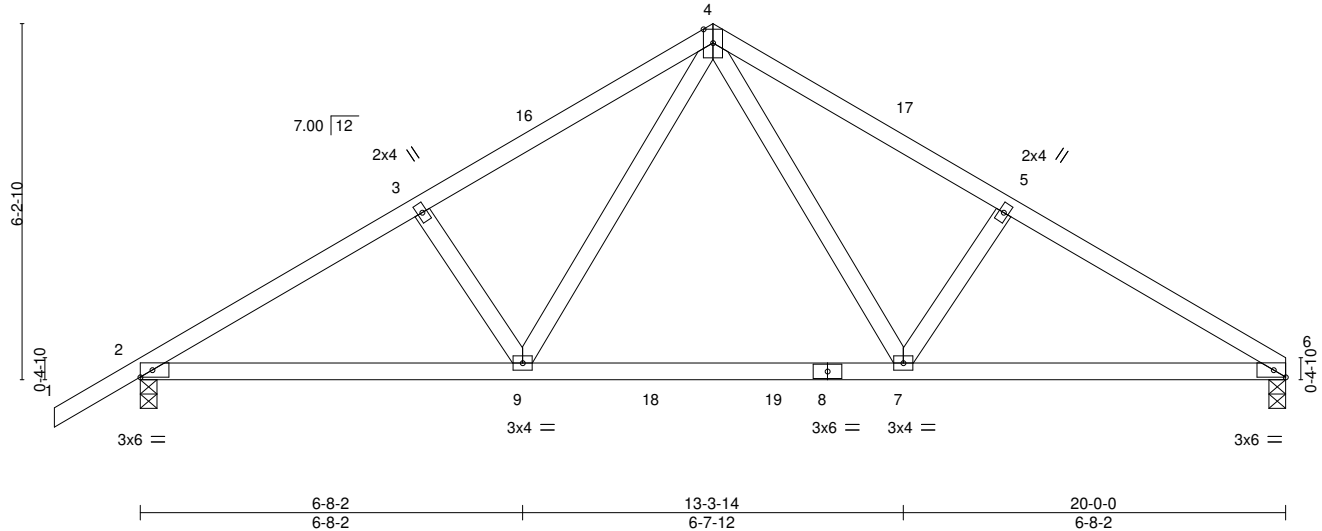


Plate Offsets (X,Y)-- [6:0-2-8,Edge]

LOADING (psf)	SPACING-		CSI.	DEFL.	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC 0.35	Vert(LL)	-0.16	7-9	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.94	Vert(CT)	-0.30	7-9	>787	180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.28	Horz(CT)	0.04	6	n/a	n/a		
BCDL 10.0	Code FBC2020/TPI2014		Matrix-MS						Weight: 96 lb	FT = 20%

LUMBER-

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

REACTIONS.

(size) 6=0-3-8, 2=0-3-8
Max Horz 2=141(LC 9)
Max Uplift 6=203(LC 13), 2=237(LC 12)
Max Grav 6=1039(LC 20), 2=1118(LC 19)

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

TOP CHORD 2-3=-1699/347, 3-4=-1591/363, 4-5=-1604/371, 5-6=-1712/355
BOT CHORD 2-9=-328/1512, 7-9=-145/985, 6-7=-250/1431
WEBS 4-7=-198/814, 5-7=-261/174, 4-9=-189/798, 3-9=-253/169

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior(1) 1-6-0 to 10-0-0, Exterior(2R) 10-0-0 to 13-0-0, Interior(1) 13-0-0 to 20-0-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=203, 2=237.
- 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

- Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-4=-54, 4-6=-54, 9-13=-20, 7-9=-80(F=-60), 7-10=-20

BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-5-3 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

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Philip J. O'Regan PE No.58126
MiTek Inc.-DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

August 12,2022

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510305
3267212	T03	Common	2	1	Job Reference (optional)	

Builders FirstSource (Lake City, FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:19 2022 Page 1
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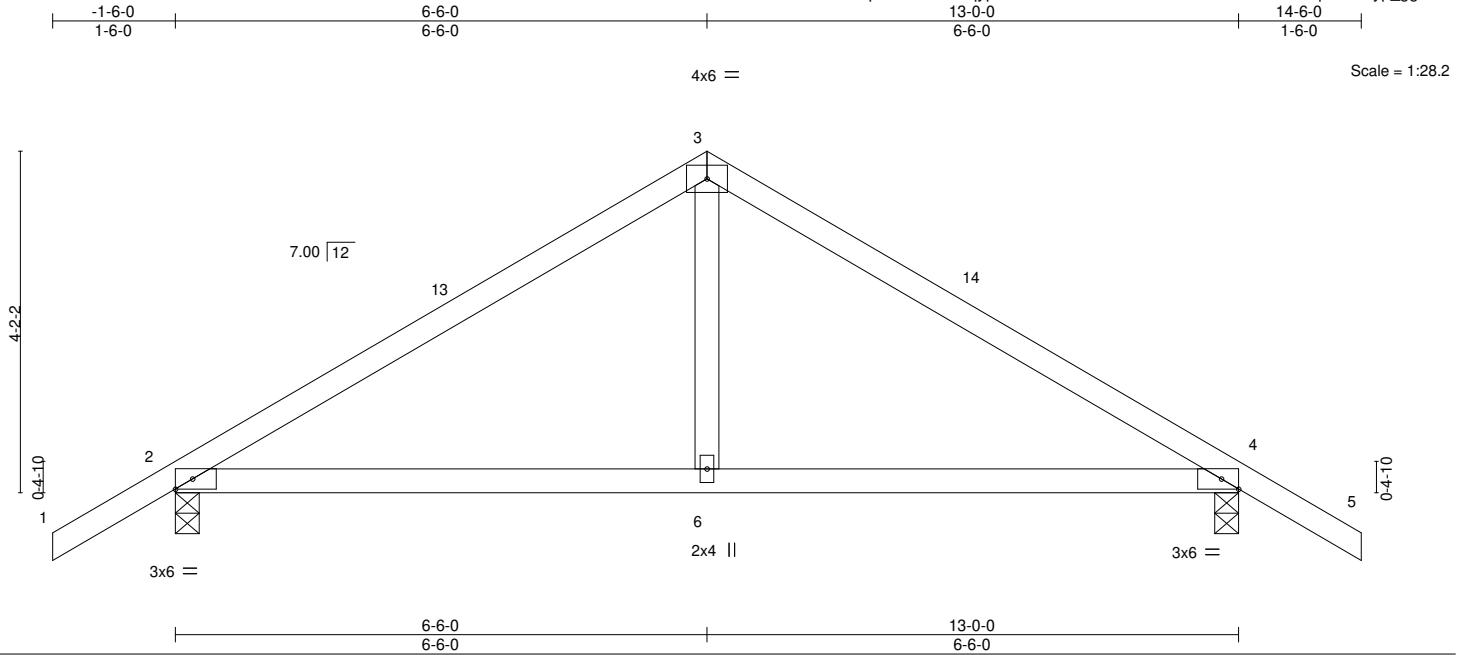


Plate Offsets (X,Y)-- [4:0-2-8,Edge]									
LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES	
TCLL	20.0	Plate Grip DOL	1.25	TC	0.44	Vert(LL)	-0.05	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.43	Vert(CT)	-0.09		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS				Weight: 53 lb	FT = 20%

LUMBER-

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

REACTIONS.

(size) 2=0-3-8, 4=0-3-8
Max Horz 2=-103(LC 10)
Max Uplift 2=-131(LC 12), 4=-131(LC 13)
Max Grav 2=562(LC 1), 4=562(LC 1)

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

TOP CHORD 2-3=-607/160, 3-4=-607/160
BOT CHORD 2-6=-45/455, 4-6=-45/455
WEBS 3-6=0/298

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior(1) 1-6-0 to 6-6-0, Exterior(2R) 6-6-0 to 9-6-0, Interior(1) 9-6-0 to 14-6-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=131, 4=131.

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Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

August 12, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



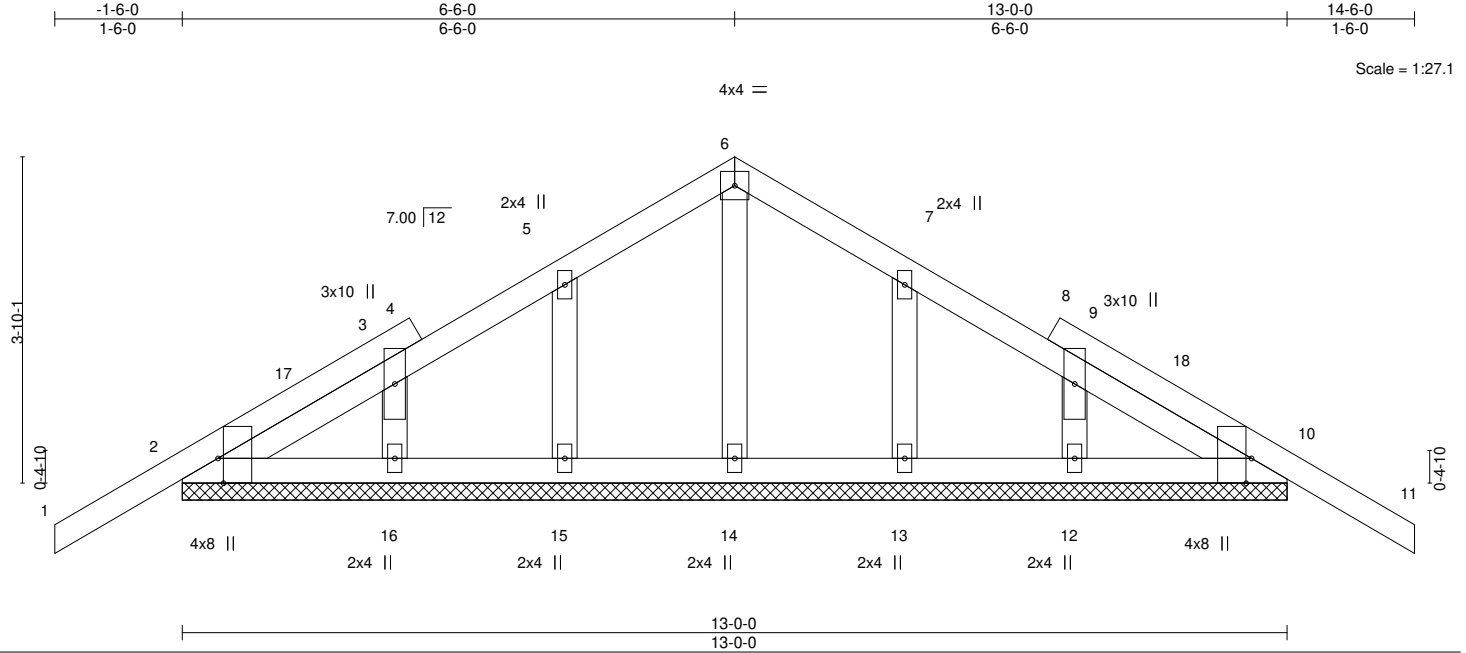
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510306
3267212	T03G	Common Supported Gable	1	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:20 2022 Page 1

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LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	20.0	Plate Grip DOL	1.25	TC	0.14	Vert(LL)	-0.01 11 n/r 120	MT20		244/190	
TCDL	7.0	Lumber DOL	1.25	BC	0.04	Vert(CT)	-0.01 11 n/r 120				
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00 10 n/a n/a				
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-S							
								Weight: 69 lb		FT = 20%	

LUMBER-

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

BRACING-

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

REACTIONS.

All bearings 13'-0".
(lb) - Max Horz 2=95(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 2, 10, 15, 16, 13, 12
Max Grav All reactions 250 lb or less at joint(s) 2, 10, 14, 15, 16, 13, 12

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

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Corner(3E) -1'-6" to 1'-6", Exterior(2N) 1'-6" to 6'-6", Corner(3R) 6'-6" to 9'-6", Exterior(2N) 9'-6" to 14'-6" zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2'-0" oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-6" tall by 2'-0" wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 15, 16, 13, 12.

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MiTek Inc.-DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510307
3267212	T04	Common	3	1	Job Reference (optional)	

Builders FirstSource (Lake City, FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:21 2022 Page 1
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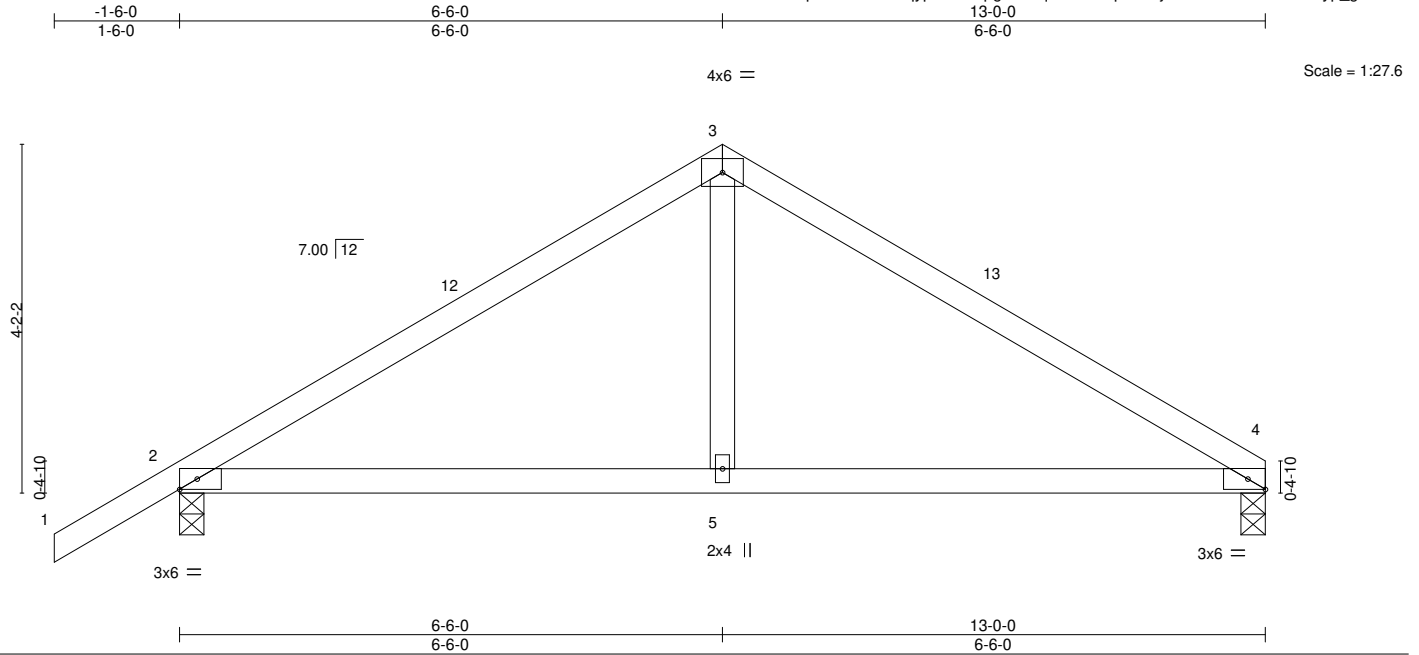


Plate Offsets (X,Y)-- [4:0-2-8,Edge]											
LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	I/defl	L/d	PLATES
TCLL	20.0	Plate Grip DOL	1.25	TC	0.47	Vert(LL)	-0.06	5-8	>999	240	MT20
TCDL	7.0	Lumber DOL	1.25	BC	0.43	Vert(CT)	-0.11	5-8	>999	180	GRIP
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.01	4	n/a	n/a	244/190
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS							Weight: 50 lb
											FT = 20%

LUMBER-

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

REACTIONS.

(size) 4=0-3-8, 2=0-3-8
Max Horz 2=96(LC 11)
Max Uplift 4=97(LC 13), 2=132(LC 12)
Max Grav 4=476(LC 1), 2=567(LC 1)

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

TOP CHORD 2-3=-620/170, 3-4=-618/171
BOT CHORD 2-5=-68/466, 4-5=-68/466
WEBS 3-5=-2/300

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-6-0, Interior(1) 1-6-0 to 6-6-0, Exterior(2R) 6-6-0 to 9-6-0, Interior(1) 9-6-0 to 13-0-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 2=132.

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August 12, 2022

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Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd
Chesterfield, MO 63017

16023 Swingley Ridge Rd
Chesterfield, MO 63017

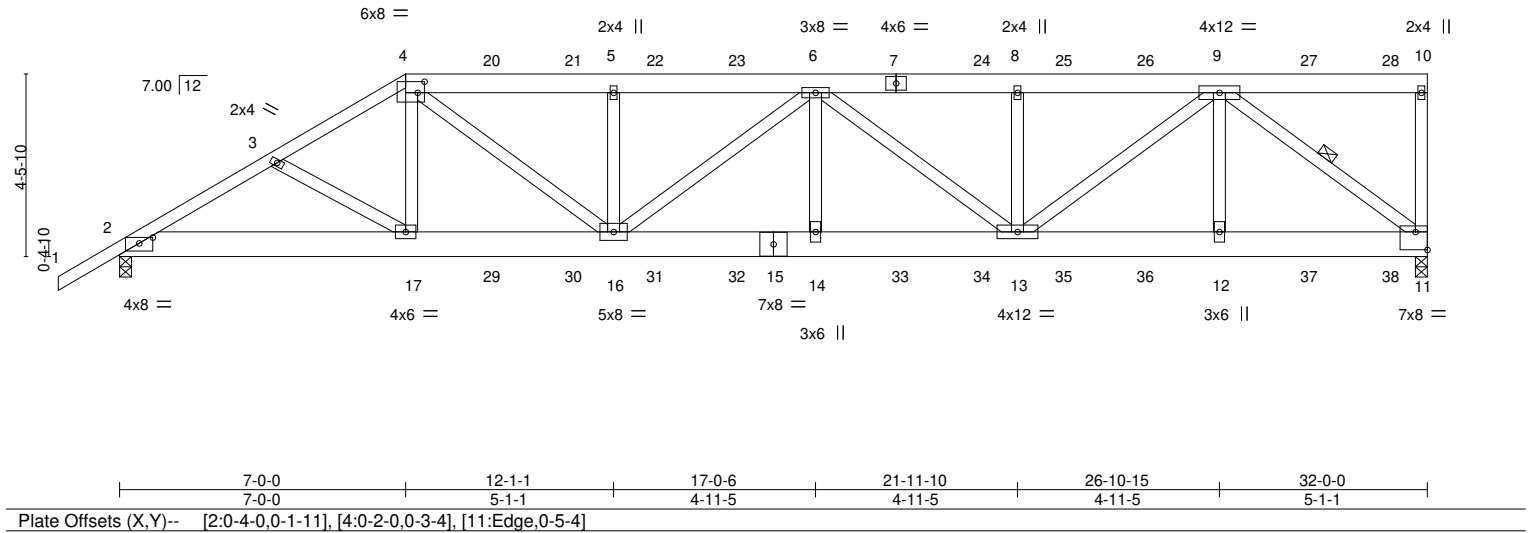
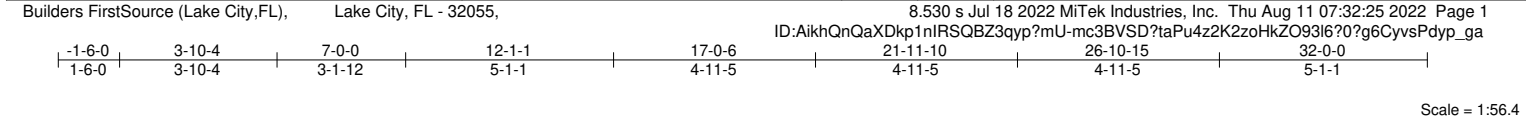
Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510308
3267212	T05	Common Girder	1	2	Job Reference (optional)	

Builders FirstSource (Lake City,FL),
Lake City, FL - 32055,
8.530 s Jul 18 2022
MiTek Industries, Inc.
Thu Aug 11 07:32:23 2022
Page 2
ID:AikhQnQaXDkp1nIRSQBZ3qyp?mU-qDxQ4nCLz9ArtuywYmpe8JsEyRuY7vpleQlKkyp_gc

LOAD CASE(S) Standard
 Concentrated Loads (lb)
 Vert: 14=-2566(F) 15=-1157(F) 16=-1157(F)



Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510309
3267212	T06	Half Hip Girder	1	1	Job Reference (optional)	



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.45	in (loc) l/defl L/d	MT20	244/190
TCDL 7.0	Plate Grip DOL 1.25	BC 0.26	Vert(LL) -0.19 14-16 >999 240		
BCLL 0.0 *	Lumber DOL 1.25	WB 0.89	Vert(CT) -0.36 14-16 >999 180		
BCDL 10.0	Rep Stress Incr NO	Matrix-MS	Horz(CT) 0.07 11 n/a n/a		
	Code FBC2020/TPI2014			Weight: 251 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.2 *Except* 1-4: 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-8-7 oc purlins, except end verticals.
BOT CHORD 2x8 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 8-11-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 9-11

REACTIONS. (size) 11=0-3-8, 2=0-3-8
Max Horz 2=165(LC 8)
Max Uplift 11=-991(LC 5), 2=-730(LC 8)
Max Grav 11=2725(LC 1), 2=2389(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-4207/1337, 3-4=-4076/1340, 4-5=-4898/1690, 5-6=-4894/1688, 6-8=-4452/1554, 8-9=-4452/1554, 10-11=-381/213
BOT CHORD 2-17=-1206/3585, 16-17=-1177/3524, 14-16=-1815/5212, 13-14=-1815/5212, 12-13=-980/2789, 11-12=-980/2789
WEBS 4-17=-116/671, 4-16=-684/1782, 5-16=-616/337, 6-16=-443/192, 6-14=-5/431, 6-13=-971/334, 8-13=-499/279, 9-13=-734/2126, 9-12=0/444, 9-11=-3534/1241

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone; Lumber DOL=1.60 plate grip DOL=1.60
 - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - Provide adequate drainage to prevent water ponding.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 11=991, 2=730.
 - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 128 lb down and 101 lb up at 7-0-0, 125 lb down and 98 lb up at 9-0-12, 125 lb down and 98 lb up at 11-0-12, 125 lb down and 98 lb up at 13-0-12, 125 lb down and 98 lb up at 15-0-12, 125 lb down and 98 lb up at 17-0-12, 125 lb down and 98 lb up at 19-0-12, 125 lb down and 98 lb up at 21-0-12, 125 lb down and 98 lb up at 23-0-12, 125 lb down and 98 lb up at 25-0-12, 125 lb down and 98 lb up at 27-0-12, 125 lb down and 98 lb up at 29-0-12, and 128 lb down and 98 lb up at 31-0-12, and 139 lb down and 96 lb up at 31-10-4 on top chord, and 336 lb down and 126 lb up at 7-0-0, 86 lb down and 20 lb up at 9-0-12, 86 lb down and 20 lb up at 11-0-12, 86 lb down and 20 lb up at 13-0-12, 86 lb down and 20 lb up at 15-0-12, 86 lb down and 20 lb up at 17-0-12, 86 lb down and 20 lb up at 19-0-12, 86 lb down and 20 lb up at 21-0-12, 86 lb down and 20 lb up at 23-0-12, 86 lb down and 20 lb up at 25-0-12, 86 lb down and 20 lb up at 27-0-12, and 86 lb down and 20 lb up at 29-0-12, and 91 lb down and 18 lb up at 31-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

Continued on Page 2 (S) section, loads applied to the face of the truss are noted as front (F) or back (B).

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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 Inc. DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

August 12, 2022

MiTek

16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510309
3267212	T06	Half Hip Girder	1	1	Job Reference (optional)	

LOAD CASE(S)
Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-4=-54, 4-10=-54, 2-11=-20

Concentrated Loads (lb)

Vert: 4=-109(F) 7=-109(F) 10=-139(F) 17=-336(F) 14=-64(F) 6=-109(F) 12=-64(F) 9=-109(F) 20=-109(F) 21=-109(F) 22=-109(F) 23=-109(F) 24=-109(F) 25=-109(F) 26=-109(F) 27=-109(F) 28=-115(F) 29=-64(F) 30=-64(F) 31=-64(F) 32=-64(F) 33=-64(F) 34=-64(F) 35=-64(F) 36=-64(F) 37=-64(F) 38=-67(F)


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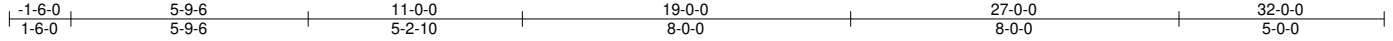
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510311
3267212	T08	Hip	1	1	Job Reference (optional)	

Builders FirstSource (Lake City, FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:27 2022 Page 1

ID:AikhQnQaXDkp1nIRSQBZ3qyp?mU-i_Bxw8FGPCgcJGCj9Orlp_URyZj9UyjPgGOyTWyp_gY



Scale = 1:56.1

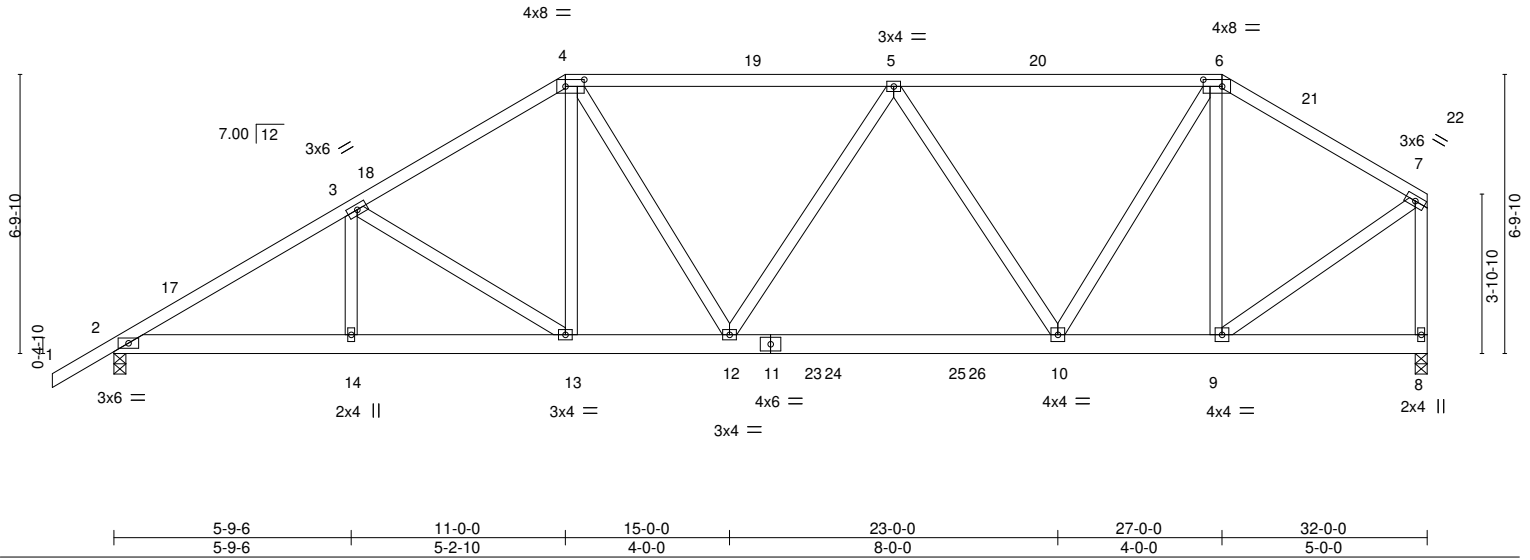


Plate Offsets (X,Y)-- [4:0-5-8,0-2-0], [6:0-5-8,0-2-0]									
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in (loc)	I/defl	L/d
TCLL	20.0	Plate Grip DOL	1.25	TC	0.74	Vert(LL)	-0.11 10-12	>999	240
TCDL	7.0	Lumber DOL	1.25	BC	0.53	Vert(CT)	-0.22 10-12	>999	180
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.05 8	n/a	n/a
BCDL	10.0	Code	FBC2020/TP12014	Matrix-MS					
						PLATES		GRIP	
						MT20		244/190	
						Weight: 217 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 3-3-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.

(size) 2=0-3-8, 8=0-3-8
Max Horz 2=192(LC 12)
Max Uplift 2=239(LC 12), 8=142(LC 13)
Max Grav 2=1405(LC 2), 8=1373(LC 2)

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

TOP CHORD 2-3=-2307/328, 3-4=-1854/278, 4-5=-1750/204, 5-6=-1423/115, 6-7=-1120/134, 7-8=-1286/157
BOT CHORD 2-14=-378/1949, 13-14=-378/1949, 12-13=-227/1555, 10-12=-199/1712, 9-10=-77/912
WEBS 3-14=0/260, 3-13=-561/181, 4-13=-101/377, 4-12=-9/435, 5-10=-599/200, 6-10=-31/983, 6-9=-547/51, 7-9=-104/1113

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-8-6, Interior(1) 1-8-6 to 11-0-0, Exterior(2R) 11-0-0 to 15-6-5, Interior(1) 15-6-5 to 27-0-0, Exterior(2R) 27-0-0 to 31-6-5, Interior(1) 31-6-5 to 31-10-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 150.0lb AC unit load placed on the bottom chord, 19-0-0 from left end, supported at two points, 4-0-0 apart.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=239, 8=142.

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Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd, Chesterfield, MO 63017
Date: 8/12/2022

August 12, 2022

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510313
3267212	T10	Hip	1	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:30 2022 Page 1

ID:AikhQnQaXDkp1nIRSQBZ3qyp?mU-7Zs4YAH8i72AAkxlrWOSQc6_gmlEhNsrMEdc4qyp_gV

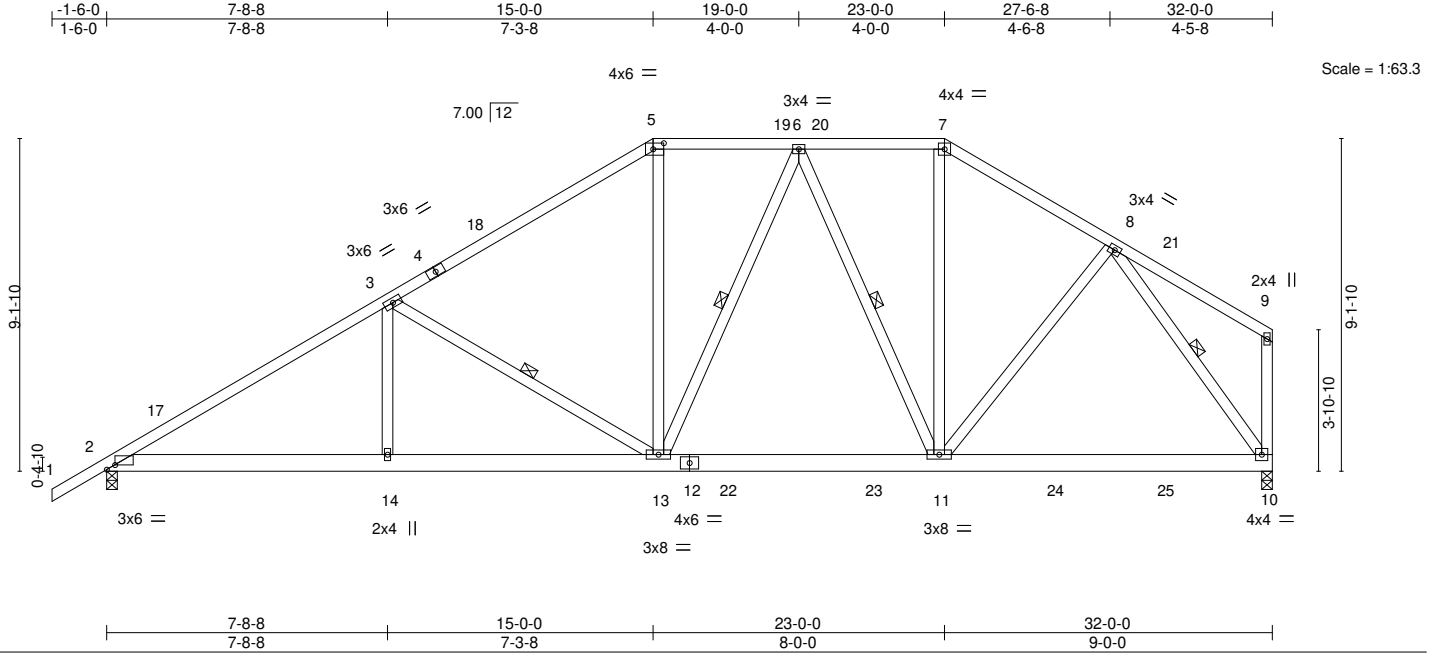


Plate Offsets (X,Y)-- [2:0-2-12,0-1-8], [5:0-3-8,0-2-0]

LOADING (psf)	SPACING-		CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC 0.59	Vert(LL)	-0.09 14-16	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.57	Vert(CT)	-0.17 11-13	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.44	Horz(CT)	0.05 10	n/a	n/a		
BCDL 10.0	Code FBC2020/TPI2014		Matrix-MS					Weight: 228 lb	FT = 20%

LUMBER-

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

REACTIONS.

(size) 2=0-3-8, 10=0-3-8
Max Horz 2=226(LC 12)
Max Uplift 2=231(LC 12), 10=134(LC 13)
Max Grav 2=1445(LC 19), 10=1421(LC 2)

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

TOP CHORD 2-3=-2241/304, 3-5=-1621/200, 5-6=-1328/224, 6-7=-1117/161, 7-8=-1343/148
BOT CHORD 2-14=-372/1967, 13-14=-372/1967, 11-13=-93/1260, 10-11=-62/850
WEBS 3-14=0/328, 3-13=-764/290, 5-13=0/538, 6-13=-73/274, 6-11=-435/142, 7-11=-23/478,
8-11=-34/463, 8-10=-1435/101

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-8-6, Interior(1) 1-8-6 to 15-0-0, Exterior(2R) 15-0-0 to 19-6-5, Interior(1) 19-6-5 to 23-0-0, Exterior(2R) 23-0-0 to 27-7-10, Interior(1) 27-7-10 to 31-10-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 150.0lb AC unit load placed on the bottom chord, 19-0-0 from left end, supported at two points, 4-0-0 apart.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=231, 10=134.

This item has been electronically signed and sealed by O'Regan, 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 Inc. DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

August 12, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



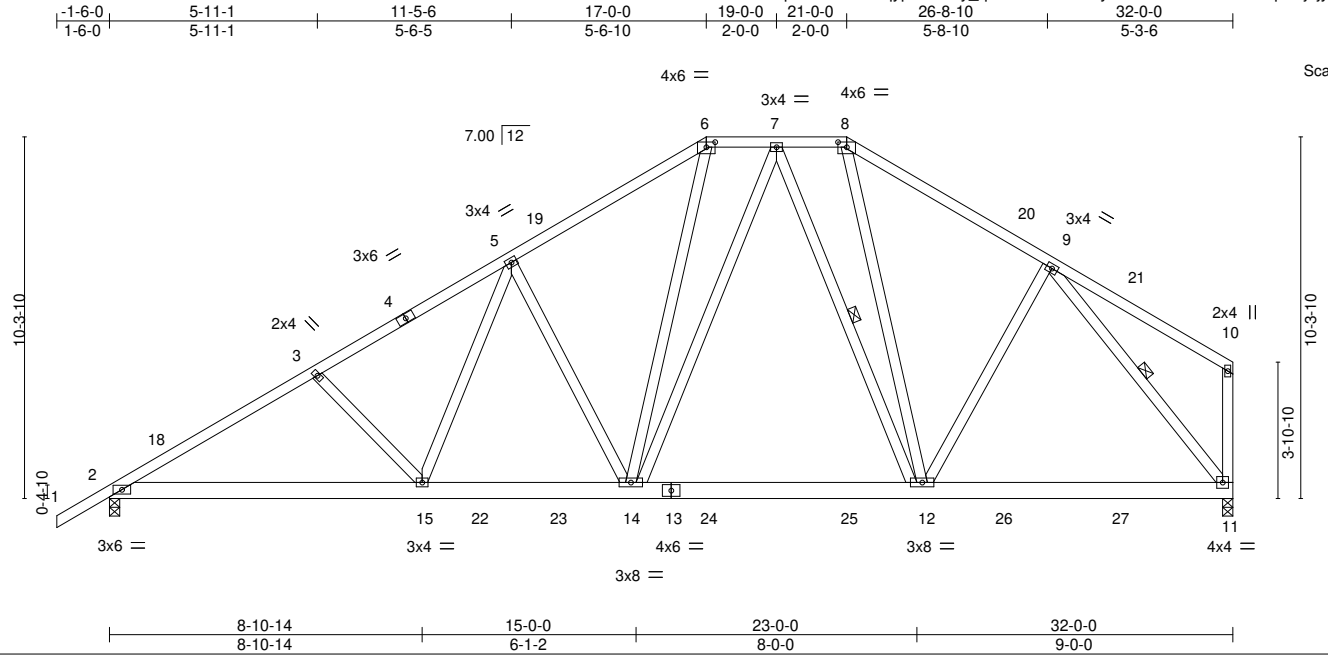
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510314
3267212	T11	Hip	1	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:32 2022 Page 1

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LOADING (psf)		SPACING-		CSI.		DEFL.		PLATES		GRIP	
TCLL	20.0	Plate Grip DOL	1.25	TC	0.33	Vert(LL)	-0.10 15-17 >999 240	MT20		244/190	
TCDL	7.0	Lumber DOL	1.25	BC	0.59	Vert(CT)	-0.21 12-14 >999 180				
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.05 11 n/a n/a				
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS							
								Weight: 246 lb FT = 20%			

LUMBER-

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

REACTIONS.

(size) 2=0-3-8, 11=0-3-8
Max Horz 2=244(LC 12)
Max Uplift 2=225(LC 12), 11=129(LC 13)
Max Grav 2=1497(LC 19), 11=1437(LC 2)

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

TOP CHORD 2-3=-2314/311, 3-5=-2150/297, 5-6=-1639/239, 6-7=-1239/246, 7-8=-1013/195,
8-9=-1358/168
BOT CHORD 2-15=-414/2094, 14-15=-247/1700, 12-14=-75/1136, 11-12=-63/953
WEBS 3-15=-294/180, 5-15=-127/548, 5-14=-637/279, 6-14=-25/606, 7-14=-119/383,
8-12=-22/470, 9-12=-18/396, 9-11=-1508/97, 7-12=-364/129

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-8-6, Interior(1) 1-8-6 to 17-0-0, Exterior(2E) 17-0-0 to 21-0-0, Exterior(2R) 21-0-0 to 25-6-5, Interior(1) 25-6-5 to 31-10-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 150.0lb AC unit load placed on the bottom chord, 19-0-0 from left end, supported at two points, 4-0-0 apart.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=225, 11=129.

This item has been electronically signed and sealed by O'Regan, 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 Inc. DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

August 12, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510315
3267212	T12	Piggyback Base	1	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:33 2022 Page 1

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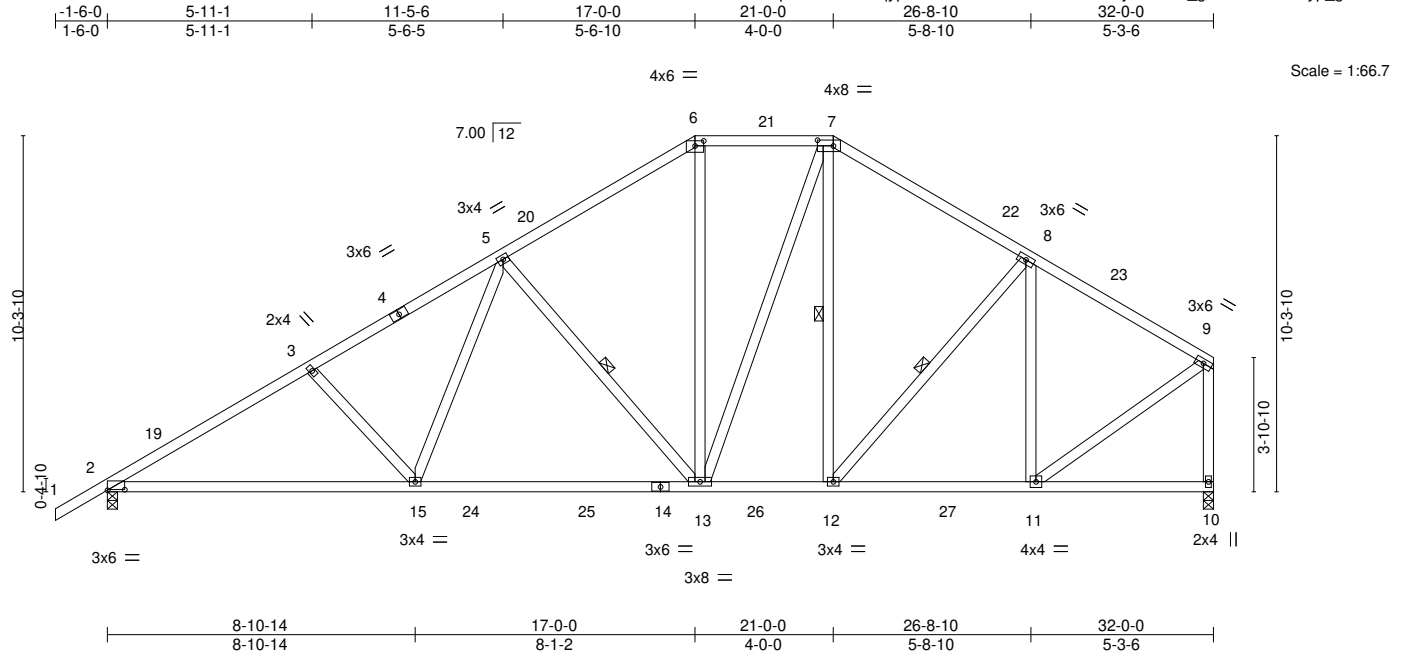


Plate Offsets (X,Y)-- [2:0-6-0,0-0-4], [6:0-3-0,0-1-12], [7:0-5-8,0-2-0]

LOADING (psf)	SPACING-		CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC 0.36	Vert(LL)	-0.19 13-15	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.91	Vert(CT)	-0.31 13-15	>999	180		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.42	Horz(CT)	0.06 10	n/a	n/a		
BCDL 10.0	Code FBC2020/TP12014		Matrix-MS					Weight: 215 lb	FT = 20%

LUMBER-

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

REACTIONS.

(size) 2=0-3-8, 10=0-3-8
Max Horz 2=244(LC 12)
Max Uplift 2=285(LC 12), 10=218(LC 13)
Max Grav 2=1434(LC 19), 10=1326(LC 2)

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

TOP CHORD 2-3=-2182/419, 3-5=-2014/406, 5-6=-1308/313, 6-7=-1076/310, 7-8=-1193/285,
8-9=-1095/200, 9-10=-1254/229
BOT CHORD 2-15=-509/1978, 13-15=-354/1557, 12-13=-140/978, 11-12=-131/906
WEBS 3-15=-302/184, 5-15=-93/623, 5-13=-695/261, 6-13=-81/459, 7-13=-127/381,
8-11=-434/130, 9-11=-157/1092

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-8-6, Interior(1) 1-8-6 to 17-0-0, Exterior(2E) 17-0-0 to 21-0-0, Exterior(2R) 21-0-0 to 25-6-5, Interior(1) 25-6-5 to 31-10-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=285, 10=218.

This item has been electronically signed and sealed by O'Regan, 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 Inc. DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

August 12, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510316
3267212	T13	Hip Girder	1	1	Job Reference (optional)	

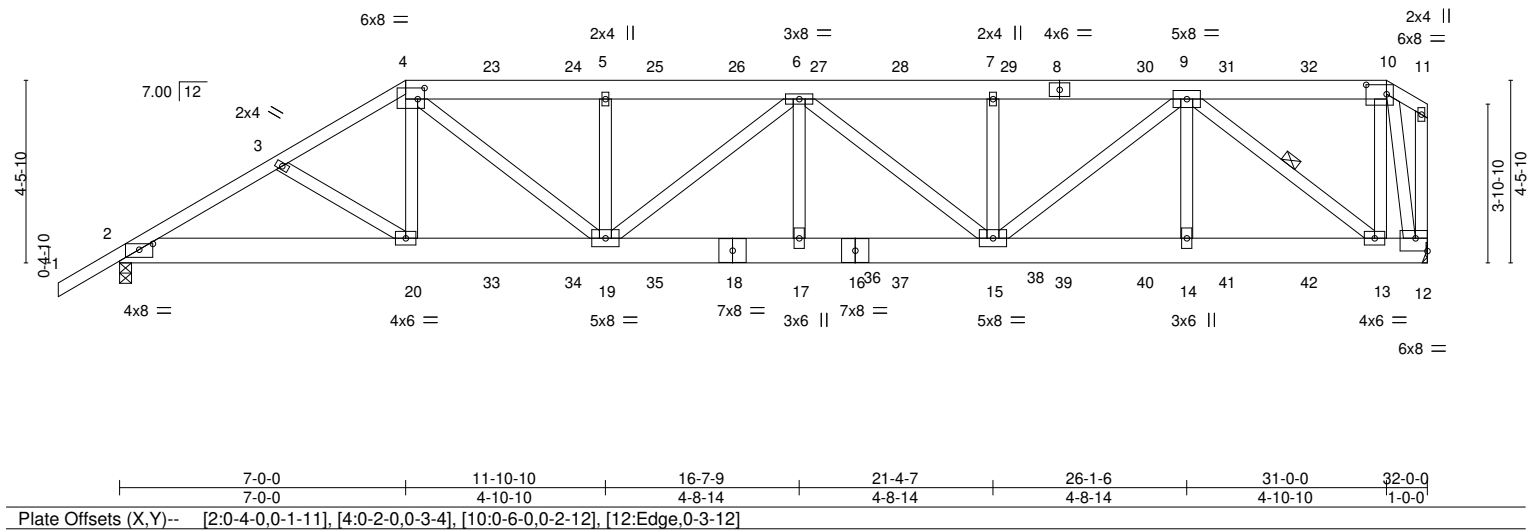
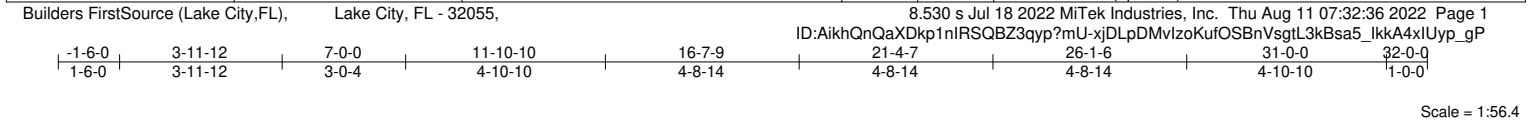


Plate Offsets (X,Y)-- [2:0-4-0-0-1-11], [4:0-2-0-0-3-4], [10:0-6-0-0-2-12], [12:Edge,0-3-12]									
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC 0.42	Vert(LL)	-0.19 17	>999	240	MT20	244/190
TCDL 7.0	Lumber DOL	1.25	BC 0.26	Vert(CT)	-0.36 17-19	>999	180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.83	Horz(CT)	0.07 12	n/a	n/a		
BCDL 10.0	Code FBC2020/TP12014		Matrix-MS					Weight: 259 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2 "Except"	TOP CHORD Structural wood sheathing directly applied or 2-8-8 oc purlins, except end verticals.
4-8,8-10: 2x6 SP No.2	
BOT CHORD 2x8 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
WEBS 2x4 SP No.3	8-10-14 oc bracing: 17-19,15-17.
	WEBS 1 Row at midpt 9-13

REACTIONS.	(size) 2=0-3-8, 12=Mechanical
	Max Horz 2=155(LC 27)
	Max Uplift 2=-784(LC 8), 12=-894(LC 5)
	Max Grav 2=2389(LC 1), 12=2586(LC 1)

FORCES.	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	2-3=-4202/1405, 3-4=-4071/1378, 4-5=-4859/1685, 5-6=-4855/1683, 6-7=-4583/1596, 7-9=-4583/1596, 9-10=-544/195
BOT CHORD	2-20=-1284/3581, 19-20=-1214/3520, 17-19=-1818/5220, 15-17=-1818/5220, 14-15=-1106/3146, 13-14=-1106/3146, 12-13=-166/476
WEBS	4-20=-119/662, 4-19=-677/1762, 5-19=-591/323, 6-19=-510/217, 6-17=-8/417, 6-15=-828/327, 7-15=-483/270, 9-15=-642/1867, 9-14=-34/507, 9-13=-3387/1195, 10-13=-543/1772, 10-12=-2111/741

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone; Lumber DOL=1.60 plate grip DOL=1.60
 - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - Provide adequate drainage to prevent water ponding.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - Refer to girder(s) for truss to truss connections.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=784, 12=894.

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 Inc.-DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd, Chesterfield, MO 63017
Date: 8/11/2022

August 12,2022

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510316
3267212	T13	Hip Girder	1	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL),
Lake City, FL - 32055,
8.530 s Jul 18 2022 MiTek Industries, Inc.
Thu Aug 11 07:32:36 2022
Page 2
ID:AikhQnQaXDkp1nIRSQBZ3qyp?mU-xjDLpDMvIzoKufOSBnVsgtL3kBs5_1kkA4xIUyp_gP

NOTES-

- 9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 128 lb down and 101 lb up at 7-0-0, 125 lb down and 98 lb up at 9-0-12, 125 lb down and 98 lb up at 11-0-12, 125 lb down and 98 lb up at 13-0-12, 125 lb down and 98 lb up at 15-0-12, 125 lb down and 98 lb up at 17-0-12, 125 lb down and 92 lb up at 19-0-12, 125 lb down and 98 lb up at 21-0-12, 125 lb down and 98 lb up at 23-0-12, 125 lb down and 98 lb up at 25-0-12, 125 lb down and 98 lb up at 27-0-12, and 125 lb down and 98 lb up at 29-0-12, and 132 lb down and 100 lb up at 31-0-0 on top chord, and 336 lb down and 126 lb up at 7-0-0, 86 lb down and 20 lb up at 9-0-12, 86 lb down and 20 lb up at 11-0-12, 86 lb down and 20 lb up at 13-0-12, 86 lb down and 20 lb up at 15-0-12, 86 lb down and 20 lb up at 17-0-12, 86 lb down and 20 lb up at 19-0-12, 86 lb down and 20 lb up at 21-0-12, 86 lb down and 20 lb up at 23-0-12, 86 lb down and 20 lb up at 25-0-12, 86 lb down and 20 lb up at 27-0-12, and 86 lb down and 20 lb up at 29-0-12, and 91 lb down and 18 lb up at 31-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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 (plf)

Vert: 1-4=-54, 4-10=-54, 10-11=-54, 2-12=-20
- Concentrated Loads (lb)

Vert: 4=-109(B) 8=-109(B) 10=-115(B) 18=-64(B) 20=-336(B) 13=-67(B) 23=-109(B) 24=-109(B) 25=-109(B) 26=-109(B) 27=-109(B) 28=-109(B) 29=-109(B) 30=-109(B) 31=-109(B) 32=-109(B) 33=-64(B) 34=-64(B) 35=-64(B) 36=-64(B) 37=-64(B) 38=-64(B) 39=-64(B) 40=-64(B) 41=-64(B) 42=-64(B)

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510317
3267212	T14	Hip	1	1	Job Reference (optional)	

Builders FirstSource (Lake City, FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:37 2022 Page 1

ID:AikhQnQaXDkp1nIRSQBZ3qyp?mU-Pwnj0ZMX2GwBWpzelU05D5uFWb5rqWvtzqpUqxyg_gO



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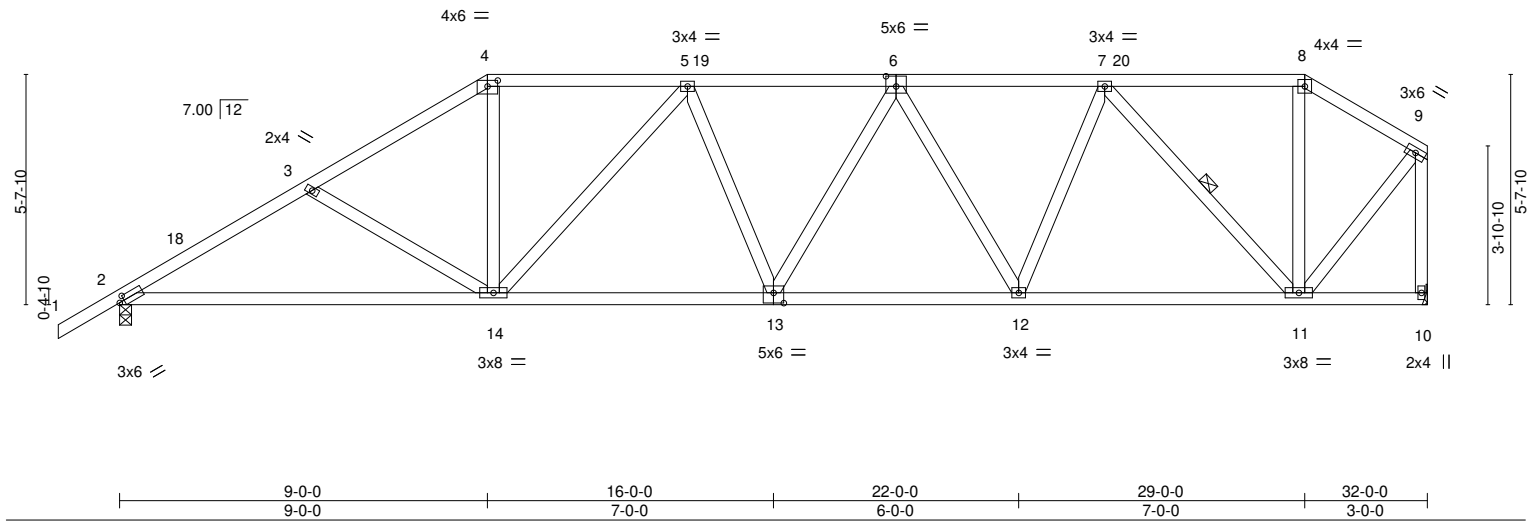


Plate Offsets (X,Y)--		[2:0-1-8,0-1-8], [4:0-3-0,0-1-12], [6:0-3-0,0-3-0], [13:0-3-0,0-3-0]							
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in (loc) l/defl L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.36	Vert(LL)	-0.15 14-17 >999 240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.77	Vert(CT)	-0.31 14-17 >999 180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.07 10 n/a n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS				Weight: 189 lb	FT = 20%

LUMBER-

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

REACTIONS.

(size) 2=0-3-8, 10=Mechanical
Max Horz 2=174(LC 12)
Max Uplift 2=302(LC 12), 10=235(LC 13)
Max Grav 2=1262(LC 1), 10=1177(LC 1)

FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1966/470, 3-4=-1737/409, 4-5=-1458/390, 5-6=-1750/420, 6-7=-1501/356,
7-8=-615/163, 8-9=-742/160, 9-10=-1164/236
BOT CHORD 2-14=-496/1668, 13-14=-435/1738, 12-13=-428/1701, 11-12=-328/1307
WEBS 3-14=-289/165, 4-14=-96/617, 5-14=-494/216, 6-12=-415/163, 7-12=-110/532,
7-11=-1052/299, 9-11=-204/954

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-8-6, Interior(1) 1-8-6 to 9-0-0, Exterior(2R) 9-0-0 to 13-6-5, Interior(1) 13-6-5 to 29-0-0, Exterior(2E) 29-0-0 to 31-10-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=302, 10=235.

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 Inc. DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

August 12, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



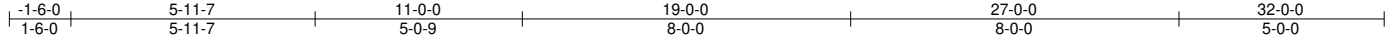
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510318
3267212	T15	Hip	1	1	Job Reference (optional)	

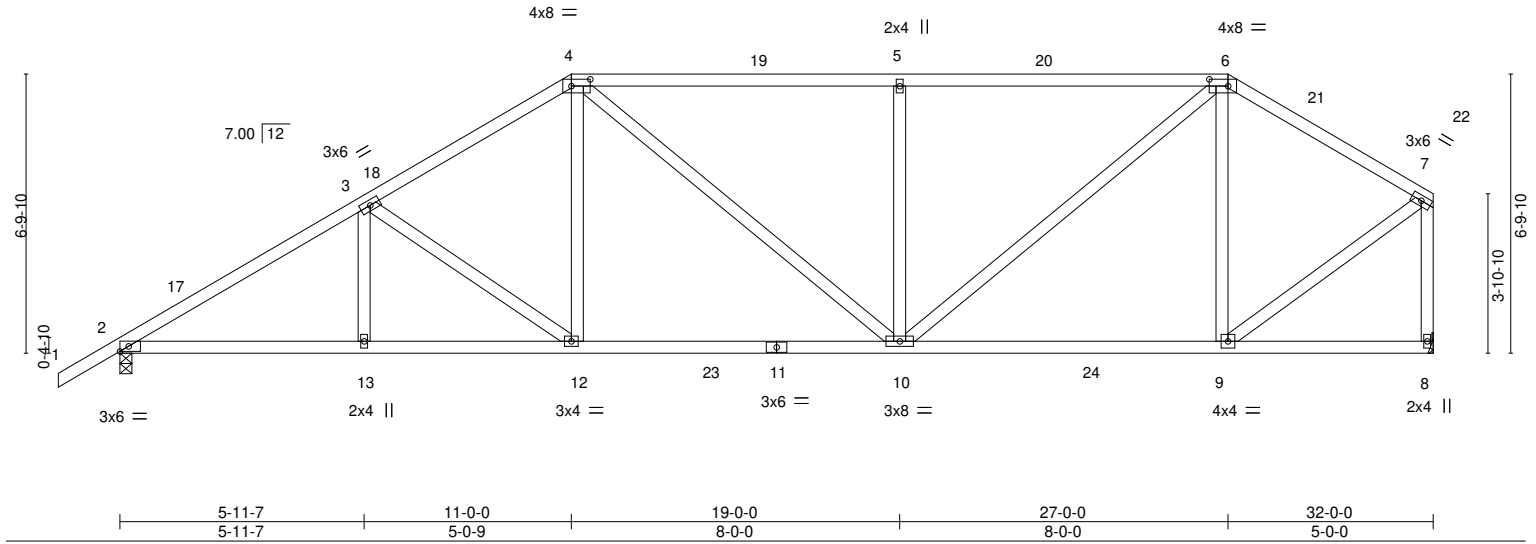
Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:38 2022 Page 1

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Scale = 1:56.1



LOADING (psf)		SPACING-		CSL		DEFL.		PLATES		GRIP	
TCLL	20.0	Plate Grip DOL	1.25	TC	0.74	Vert(LL)	-0.16 10-12 >999 240	MT20		244/190	
TCDL	7.0	Lumber DOL	1.25	BC	0.75	Vert(CT)	-0.29 10-12 >999 180				
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.06 8 n/a n/a				
BCDL	10.0	Code	FBC2020/TP12014	Matrix-MS							
								Weight: 186 lb		FT = 20%	

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 3-6-5 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 8-6-4 oc bracing.
WEBS	2x4 SP No.3		

REACTIONS.	
(size)	2=0-3-8, 8=Mechanical
Max Horz	2=192(LC 12)
Max Uplift	2=-299(LC 12), 8=-232(LC 13)
Max Grav	2=1365(LC 2), 8=1314(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
TOP CHORD	2-3=-2164/438, 3-4=-1778/392, 4-5=-1625/346, 5-6=-1625/346, 6-7=-1079/207, 7-8=-1256/241
BOT CHORD	2-13=-472/1820, 12-13=-472/1820, 10-12=-322/1494, 9-10=-137/881
WEBS	3-12=-497/183, 4-12=-62/555, 4-10=-175/289, 5-10=-501/245, 6-10=-251/982, 6-9=-425/147, 7-9=-180/1084

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 1-8-6, Interior(1) 1-8-6 to 11-0-0, Exterior(2R) 11-0-0 to 15-6-5, Interior(1) 15-6-5 to 27-0-0, Exterior(2R) 27-0-0 to 31-6-5, Interior(1) 31-6-5 to 31-10-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - Provide adequate drainage to prevent water ponding.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Refer to girder(s) for truss to truss connections.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=299, 8=232.

This item has been electronically signed and sealed by O'Regan, 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 Inc. DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

August 12, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510319
3267212	T16	Hip	1	1	Job Reference (optional)	

Builders FirstSource (Lake City, FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:40 2022 Page 1

ID:AikhQnQaXDkp1nIRSQBZ3qyp?mU-qUTsebPQLBImNGiDQcaoqjWigo7S1o4Jfn28RFyp_gL



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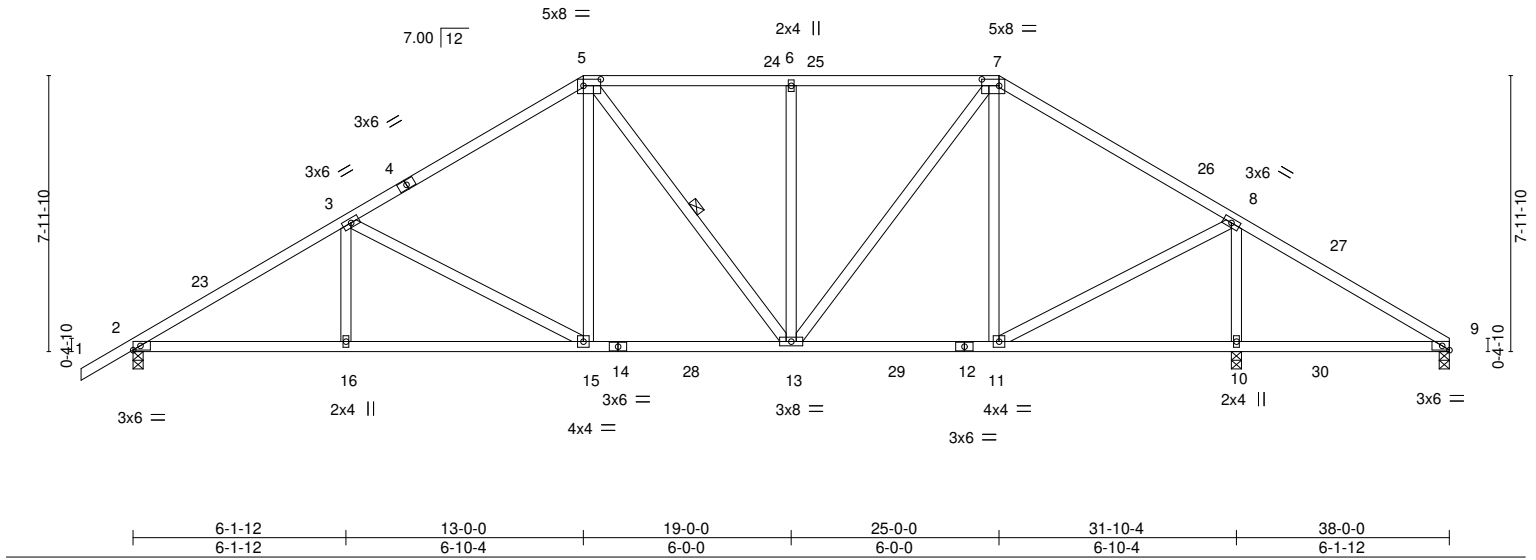


Plate Offsets (X,Y)--		[5:0-6-0,0-2-4], [7:0-6-0,0-2-4], [9:0-2-8,Edge]									
LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.55	Vert(LL)	0.08 10-19	>943	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.64	Vert(CT)	-0.21 15-16	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.05 10	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS						Weight: 215 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 3-10-10 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 5-13

REACTIONS.

(size) 9=0-3-8, 2=0-3-8, 10=0-3-8
Max Horz 2=180(LC 9)
Max Uplift 9=75(LC 8), 2=291(LC 12), 10=304(LC 13)
Max Grav 9=96(LC 24), 2=1321(LC 2), 10=1796(LC 2)

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

TOP CHORD 2-3=-2100/428, 3-5=-1557/348, 5-6=-1251/306, 6-7=-1251/306, 7-8=-1052/246,
8-9=-72/375
BOT CHORD 2-16=-414/1824, 15-16=-414/1824, 13-15=-231/1282, 11-13=-112/827, 10-11=-273/85,
9-10=-273/85
WEBS 3-16=0/271, 3-15=-662/238, 5-15=-70/573, 6-13=-365/184, 7-13=-194/724,
7-11=-368/126, 8-11=-173/1207, 8-10=-1525/329

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 2-3-10, Interior(1) 2-3-10 to 13-0-0, Exterior(2R) 13-0-0 to 18-4-8, Interior(1) 18-4-8 to 25-0-0, Exterior(2R) 25-0-0 to 30-4-8, Interior(1) 30-4-8 to 38-0-0 zone; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9 except (jt=lb) 2=291, 10=304.

This item has been electronically signed and sealed by O'Regan, 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 Inc. DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

August 12, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



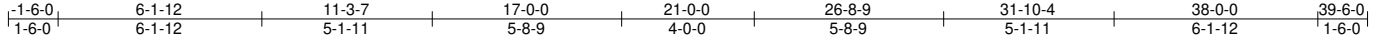
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510321
3267212	T18	Hip	1	1	Job Reference (optional)	

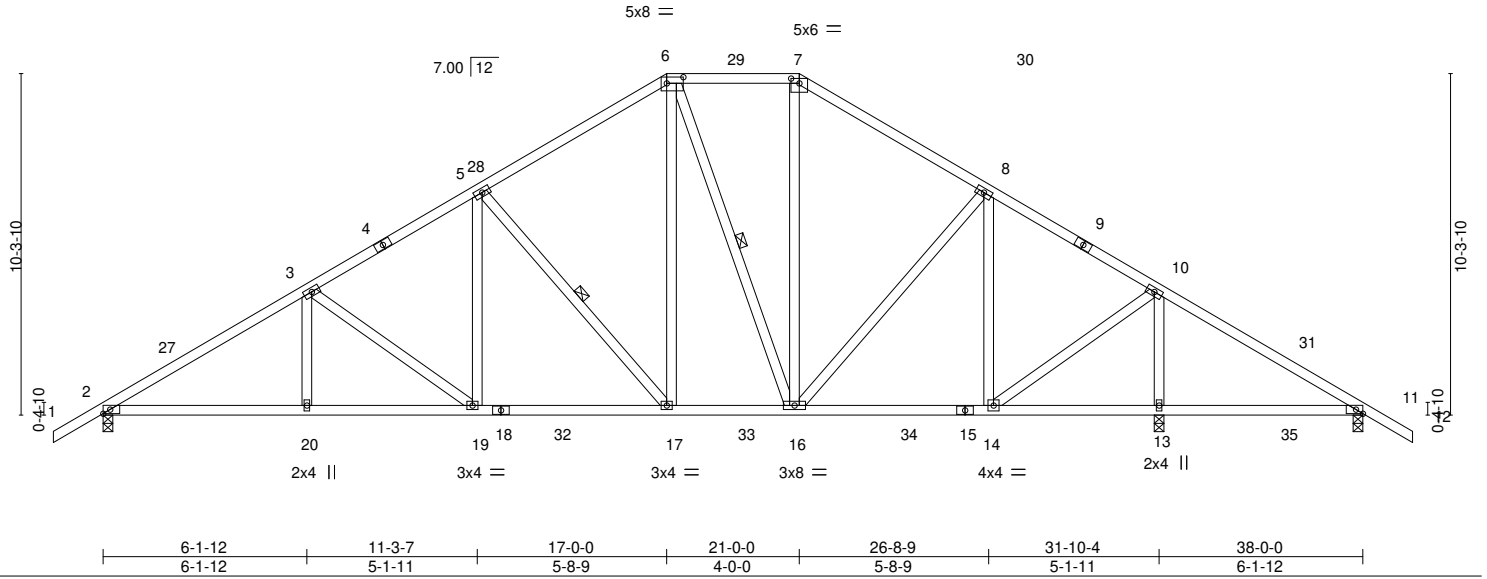
Builders FirstSource (Lake City, FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:43 2022 Page 1

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Scale = 1:69.5



Job	Truss	Truss Type	Qty	Ply	PFS SOLUTIONS - SPEC HSE	T28510322
3267212	T19	Piggyback Base	3	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.530 s Jul 18 2022 MiTek Industries, Inc. Thu Aug 11 07:32:44 2022 Page 1

ID:AikhQnQaXdkp1nIRSQBZ3qyp?mU-iGiNUySwPqPbst?_fSek?ZhQAQW8zhvvaP0Ma1yp_gH

1-6-0	6-1-12	11-3-8	17-0-0	21-0-0	26-8-8	32-0-10	38-0-0	39-6-0
1-6-0	6-1-12	5-1-12	5-8-8	4-0-0	5-8-8	5-4-2	5-11-6	1-6-0

Scale = 1:69.5

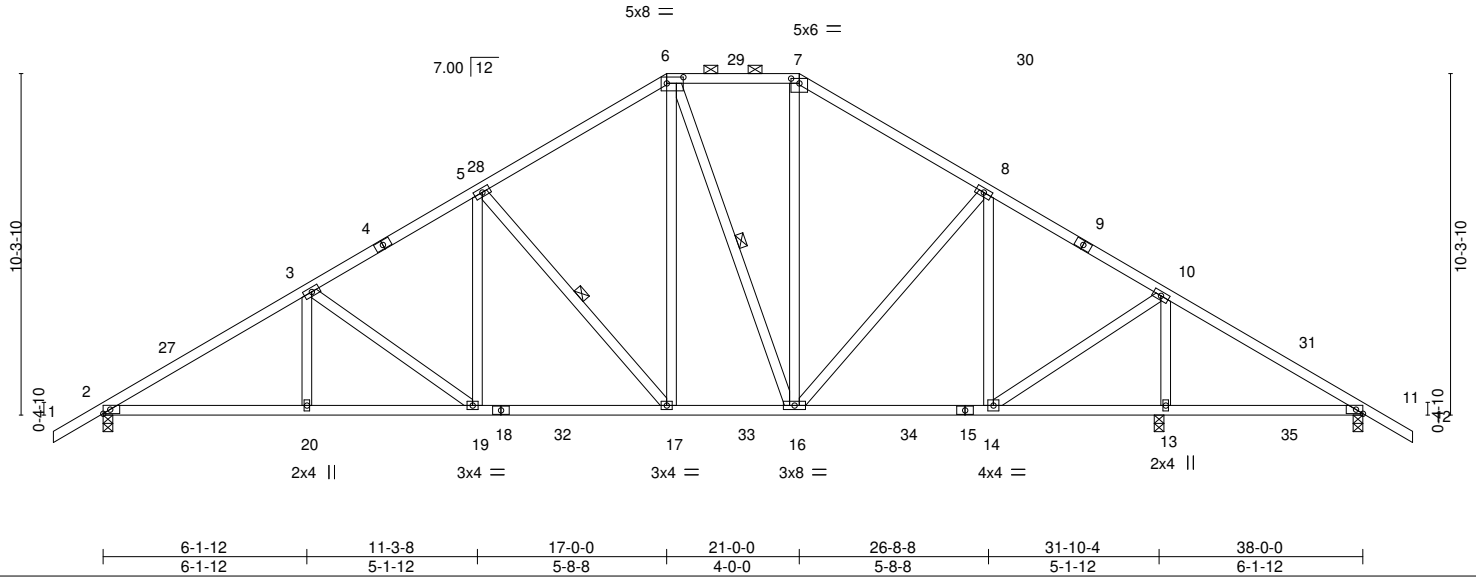


Plate Offsets (X,Y)-- [6:0-6-0,0-2-4], [7:0-3-0,0-1-12], [11:0-2-8,Edge]

LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.39	Vert(LL)	-0.11	17-19	>999	MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.60	Vert(CT)	-0.20	17-19	>999		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.48	Horz(CT)	0.06	13	n/a		
BCDL 10.0	Code FBC2020/TPI2014	Matrix-MS					Weight: 243 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 3-8-13 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 5-17, 6-16

REACTIONS.

(size) 2=0-3-8, 13=0-3-8, 11=0-3-8
Max Horz 2=-238(LC 10)
Max Uplift 2=-283(LC 12), 13=-283(LC 13), 11=-108(LC 8)
Max Grav 2=1389(LC 19), 13=1821(LC 2), 11=189(LC 24)

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

TOP CHORD 2-3=-2144/404, 3-5=-1711/364, 5-6=-1229/307, 6-7=-900/283, 7-8=-1106/279,
8-10=-942/233, 10-11=-75/465
BOT CHORD 2-20=-409/1958, 19-20=-409/1958, 17-19=-266/1557, 16-17=-103/1079, 14-16=-38/760,
13-14=-317/102, 11-13=-317/102
WEBS 3-19=-492/176, 5-19=-65/512, 5-17=-740/250, 6-17=-159/748, 6-16=-396/135,
7-16=-83/363, 8-16=-101/271, 8-14=-514/131, 10-14=-168/1292, 10-13=-1589/299

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-6-0 to 2-3-10, Interior(1) 2-3-10 to 17-0-0, Exterior(2E) 17-0-0 to 21-0-0, Exterior(2R) 21-0-0 to 26-4-8, Interior(1) 26-4-8 to 39-6-0 zone; porch right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- Provide adequate drainage to prevent water ponding.
- All plates are 3x6 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=283, 13=283, 11=108.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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 Inc. DBA MiTek USA, FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date: 8/11/2022

August 12, 2022

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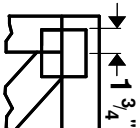
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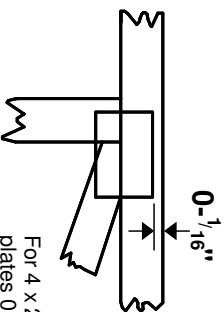
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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- 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

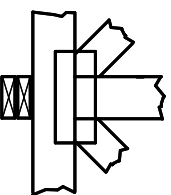
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



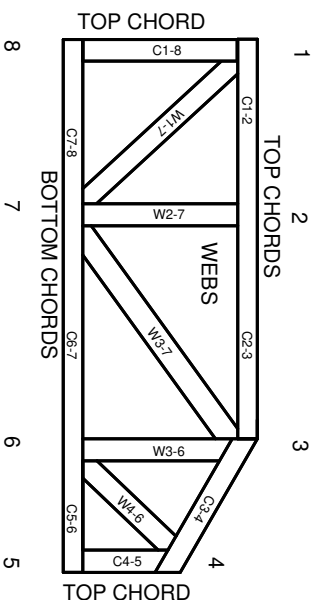
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP11: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths (Drawings not to scale)



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

Lumber design values are in accordance with ANSI/TP1 1 section 6.3 These truss designs rely on lumber values established by others.

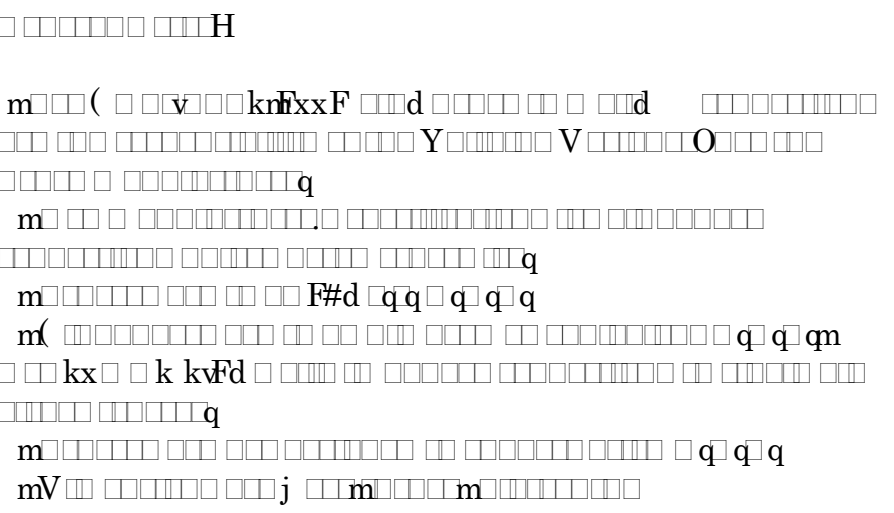
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General Safety Notes

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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

[illegible]

① 在图中，用点表示城市，用线表示道路，并标出道路长度。Y 表示城市，j 表示道路， l_{ij} 表示道路长度。

② 在图中，用点表示城市，用线表示道路，并标出道路长度。q 表示城市，71x 表示道路， l_{71x} 表示道路长度。

() 在图中，用点表示城市，用线表示道路，并标出道路长度。q 表示城市，() 表示道路， $l_{()}$ 表示道路长度。

③ 在图中，用点表示城市，用线表示道路，并标出道路长度。Uq 表示城市，() 表示道路， $l_{()}$ 表示道路长度。

④ 在图中，用点表示城市，用线表示道路，并标出道路长度。m 表示城市，O 表示道路， l_{O} 表示道路长度。

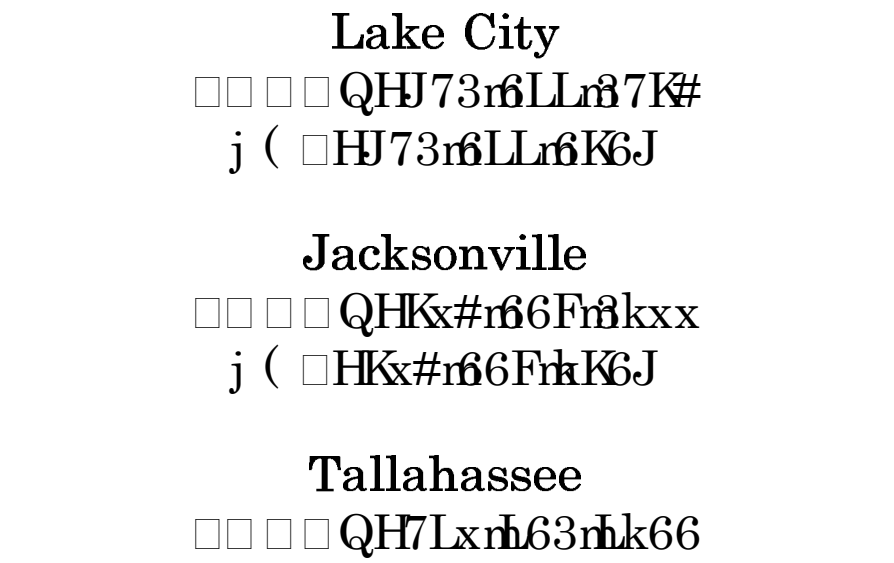
⑤ 在图中，用点表示城市，用线表示道路，并标出道路长度。Y 表示城市，() 表示道路， $l_{()}$ 表示道路长度。

⑥ 在图中，用点表示城市，用线表示道路，并标出道路长度。q 表示城市，() 表示道路， $l_{()}$ 表示道路长度。

1. 在 $\mathbb{R}^n$ 中，设 $\mathbf{a}, \mathbf{b} \in \mathbb{R}^n$ ，定义 $\mathbf{a} \cdot \mathbf{b} = \sum_{i=1}^n a_i b_i$ 为内积。若 $\mathbf{a} \cdot \mathbf{a} = 1$ ，则称 $\mathbf{a}$ 为单位向量。若 $\mathbf{a} \cdot \mathbf{b} = 0$ ，则称 $\mathbf{a}$ 与 $\mathbf{b}$ 正交。

1. 在 $\mathbb{R}^n$ 空间中，给定一个点集 S ，其凸包 $\text{conv}(S)$ 是指包含 S 的最小凸集。

(1) 在 $\mathbb{R}^n$ 中, 设 $\mathbf{O}$ 为原点, $\mathbf{q}$ 为任意一点, 则 $\mathbf{q}$ 的坐标为 $(q_1, q_2, \dots, q_n)$ 。



□ □ □ H		
) □ □ □ □		
V □ □ H	V □ □ □ Y □ H	□ □ □ □ □ □ □ g H
7 nk nf	□ □ □	JF36FkF
□ □ □ k □ □ g	j □ □ □ F □ □ g H	□ □ □ □ □ □ g H
□ v	□ v	JF36FkF

V□□□H 7nknFF	V□□□Y□H □□□	□□□□□□□□gH JF36FkF
□□□k□□g □√	□□□□F□□gH □√	□□□□□□gH JF36FkF