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

RE: 3582914 - NICKELSON RES.

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

Site Information:

Customer Info: MIKE NICKELSON Project Name: Nickelson Res. Model: Custom
Lot/Block: N/A Subdivision: N/A
Address: TBD, TBD
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 34 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	T31038116	EJ01	7/13/23	15	T31038130	T05	7/13/23
2	T31038117	EJ01G	7/13/23	16	T31038131	T06	7/13/23
3	T31038118	EJ02	7/13/23	17	T31038132	T06G	7/13/23
4	T31038119	EJ03	7/13/23	18	T31038133	T07	7/13/23
5	T31038120	PB01	7/13/23	19	T31038134	T08	7/13/23
6	T31038121	PB02	7/13/23	20	T31038135	T09	7/13/23
7	T31038122	PB03	7/13/23	21	T31038136	T10	7/13/23
8	T31038123	PB03G	7/13/23	22	T31038137	T11	7/13/23
9	T31038124	T01	7/13/23	23	T31038138	T12	7/13/23
10	T31038125	T01G	7/13/23	24	T31038139	T13	7/13/23
11	T31038126	T02	7/13/23	25	T31038140	T14	7/13/23
12	T31038127	T03	7/13/23	26	T31038141	T15	7/13/23
13	T31038128	T04	7/13/23	27	T31038142	T16	7/13/23
14	T31038129	T04G	7/13/23	28	T31038143	T17	7/13/23

This item has been electronically signed and sealed by Velez, Joaquin, PE using a Digital Signature.
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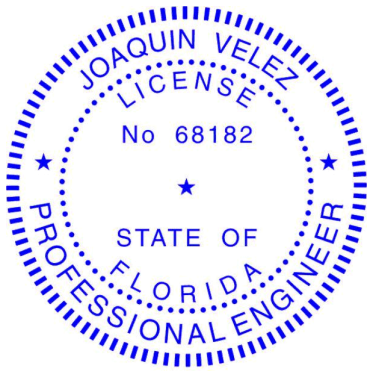
The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Builders FirstSource-Lake City, FL.

Truss Design Engineer's Name: Velez, Joaquin
My license renewal date for the state of Florida is February 28, 2025.



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

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

July 13,2023

RE: 3582914 - NICKELSON RES.

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

Site Information:

Customer Info: MIKE NICKELSON Project Name: Nickelson Res. Model: Custom
Lot/Block: N/A Subdivision: N/A
Address: TBD, TBD
City: Columbia Cty State: FL

No.	Seal#	Truss Name	Date
29	T31038144	T18G	7/13/23
30	T31038145	V01	7/13/23
31	T31038146	V02	7/13/23
32	T31038147	V03	7/13/23
33	T31038148	V04	7/13/23
34	T31038149	V05	7/13/23

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	EJ01	Jack-Open	5	1	T31038116
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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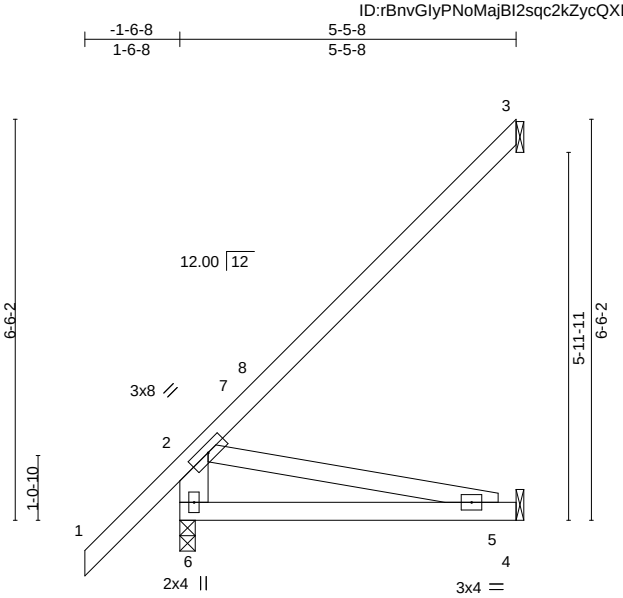

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.93	Vert(LL)	-0.04	5-6	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.33	Vert(CT)	-0.09	5-6	>725	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MP							Weight: 32 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x6 SP No.2 *Except*
2-5: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-2-1 oc bracing.

REACTIONS. (size) 6=0-3-0, 3=Mechanical, 4=Mechanical
Max Horz 6=219(LC 12)
Max Uplift 3=-141(LC 12), 4=-25(LC 12)
Max Grav 6=303(LC 1), 3=145(LC 19), 4=103(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-6=-252/69
BOT CHORD 5-6=-416/163
WEBS 2-5=-166/423

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) -1-6-8 to 1-5-8, Interior(1) 1-5-8 to 5-4-12 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 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 100 lb uplift at joint(s) 4 except (jt=lb) 3=141.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	EJ01G	GABLE	1	1	T31038117
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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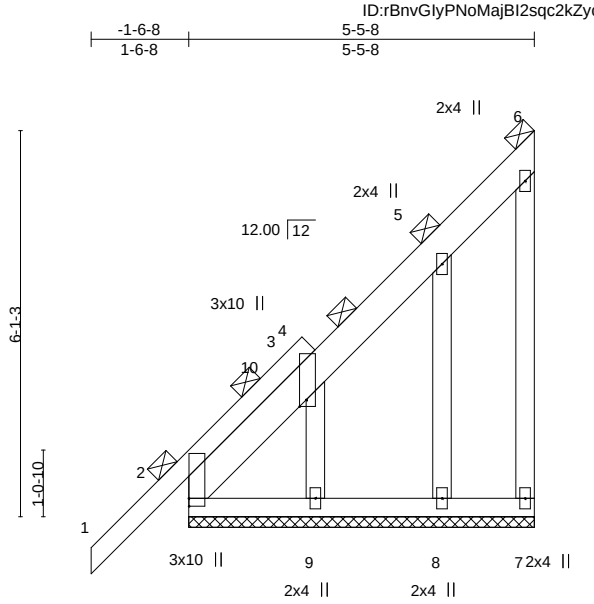

Plate Offsets (X,Y)-- [2:0-1-8,0-0-1], [3:0-1-4,Edge]

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	0.21	Vert(LL)	0.00	1	n/r	120	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.04	Vert(CT)	-0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.09	Horz(CT)	-0.00	7	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-P							Weight: 50 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.2 *Except*
	1-4: 2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING-

TOP CHORD	2-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 5-5-8.
(lb) - Max Horz 2=213(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 2, 7, 8 except 9=-128(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 2, 7, 9, 8

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-423/207
WEBS 3-9=-200/286

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 Corner(3E) -1-6-8 to 1-5-8, Exterior(2N) 1-5-8 to 5-3-9 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 7, 8 except (jt=lb) 9=128.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	EJ02	Jack-Open Girder	1	1	T31038118
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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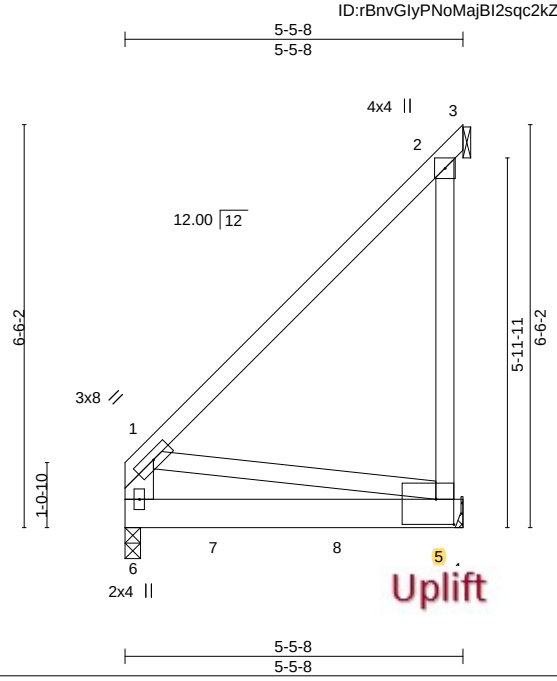

Plate Offsets (X,Y)-- [5:0-3-7,0-4-14]

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	0.34	Vert(LL)	-0.10	5-6	>575	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.73	Vert(CT)	-0.19	5-6	>306	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.44	Horz(CT)	-0.00	3	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MP							Weight: 41 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP M 26
WEBS 2x4 SP No.3 *Except*
1-6: 2x6 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-5-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 7-1-13 oc bracing.

REACTIONS. (size) 6=0-3-0, 5=Mechanical, 3=Mechanical
Max Horz 6=168(LC 8)
Max Uplift 6=-234(LC 4), 5=-931(LC 8), 3=-524(LC 15)
Max Grav 6=1393(LC 1), 5=1742(LC 1), 3=505(LC 8)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-378/357
WEBS 2-5=-717/692

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; end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
3) N/A
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=234, 5=931, 3=524.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1150 lb down and 257 lb up at 1-6-4, and 1150 lb down and 257 lb up at 3-6-4 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: 1-3=-54, 4-6=-20
Concentrated Loads (lb)
Vert: 7=-1150(B) 8=-1150(B)

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	EJ03	Jack-Open	8	1	T31038119
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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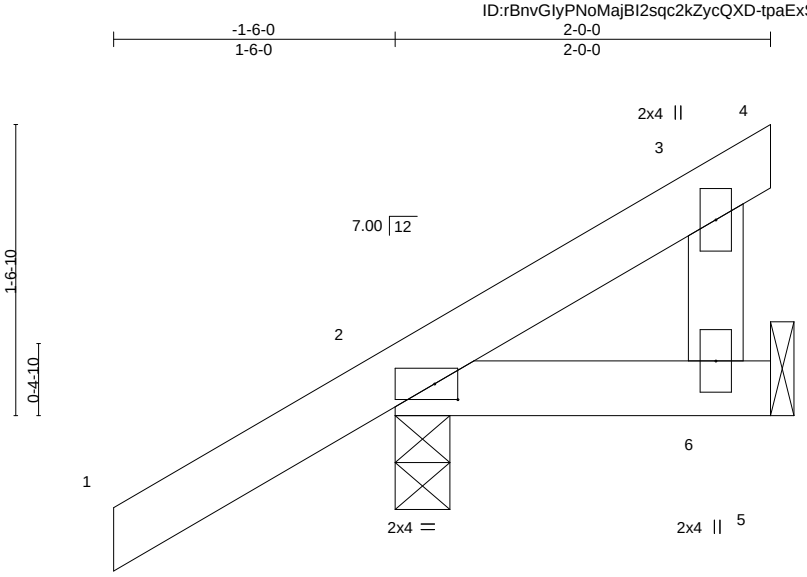

Plate Offsets (X,Y)-- [2:0-1-8,0-1-0]

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	0.15	Vert(LL)	-0.00	9	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.04	Vert(CT)	-0.00	9	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	2	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MP							Weight: 10 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 5=Mechanical
Max Horz 2=65(LC 12)
Max Uplift 2=-55(LC 12), 5=-15(LC 12)
Max Grav 2=184(LC 1), 5=46(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) 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 100 lb uplift at joint(s) 2, 5.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	PB01	Piggyback	14	1	T31038120
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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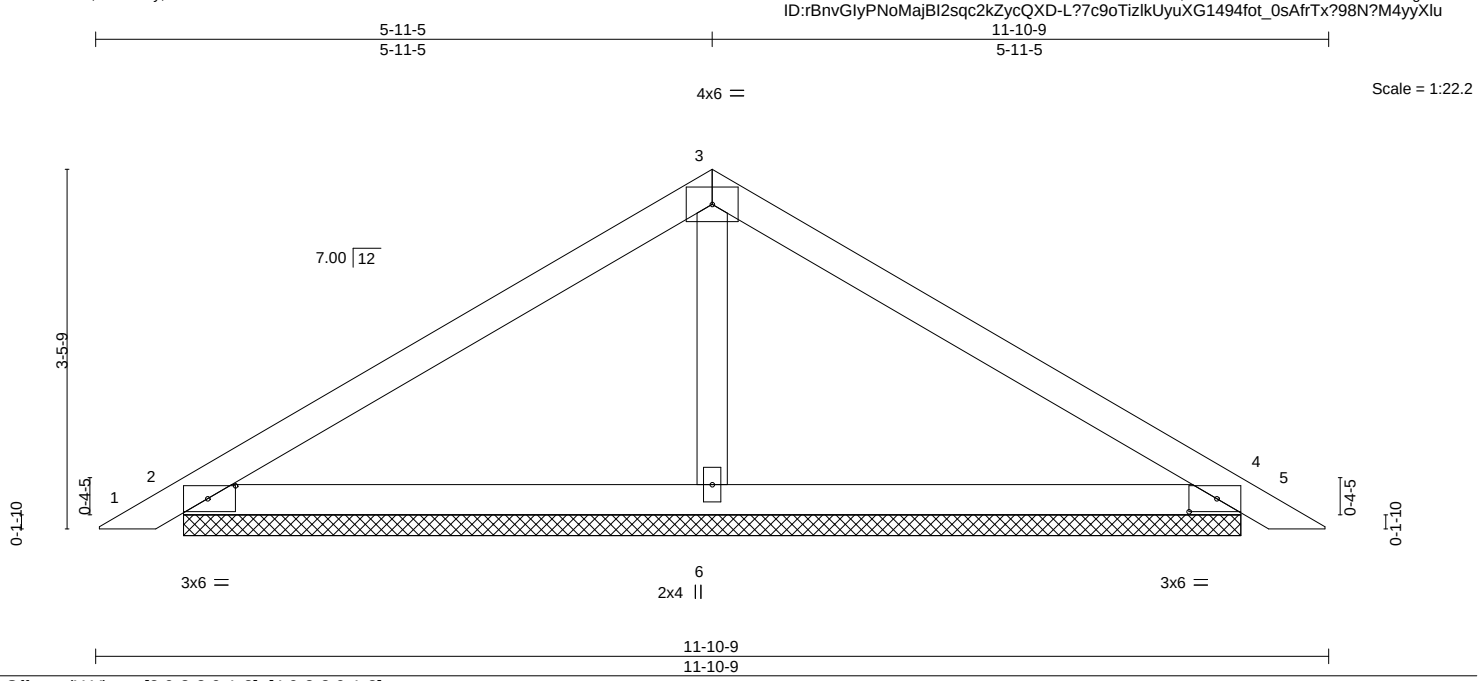

Plate Offsets (X,Y)-- [2:0-3-3,0-1-8], [4:0-3-3,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.30	Vert(LL)	0.01	5	n/r	120	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.25	Vert(CT)	0.02	5	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-S							Weight: 40 lb	FT = 20%

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

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

REACTIONS. (size) 2=10-2-4, 4=10-2-4, 6=10-2-4
Max Horz 2=-72(LC 10)
Max Uplift 2=-61(LC 12), 4=-70(LC 13), 6=-55(LC 12)
Max Grav 2=208(LC 23), 4=208(LC 24), 6=397(LC 1)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=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) 0-3-11 to 3-3-11, Interior(1) 3-3-11 to 5-11-5, Exterior(2R) 5-11-5 to 8-11-5, Interior(1) 8-11-5 to 11-6-14 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4, 6.
8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	PB02	GABLE	1	1	T31038121
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:36 2023 Page 1
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11-10-9
11-10-9

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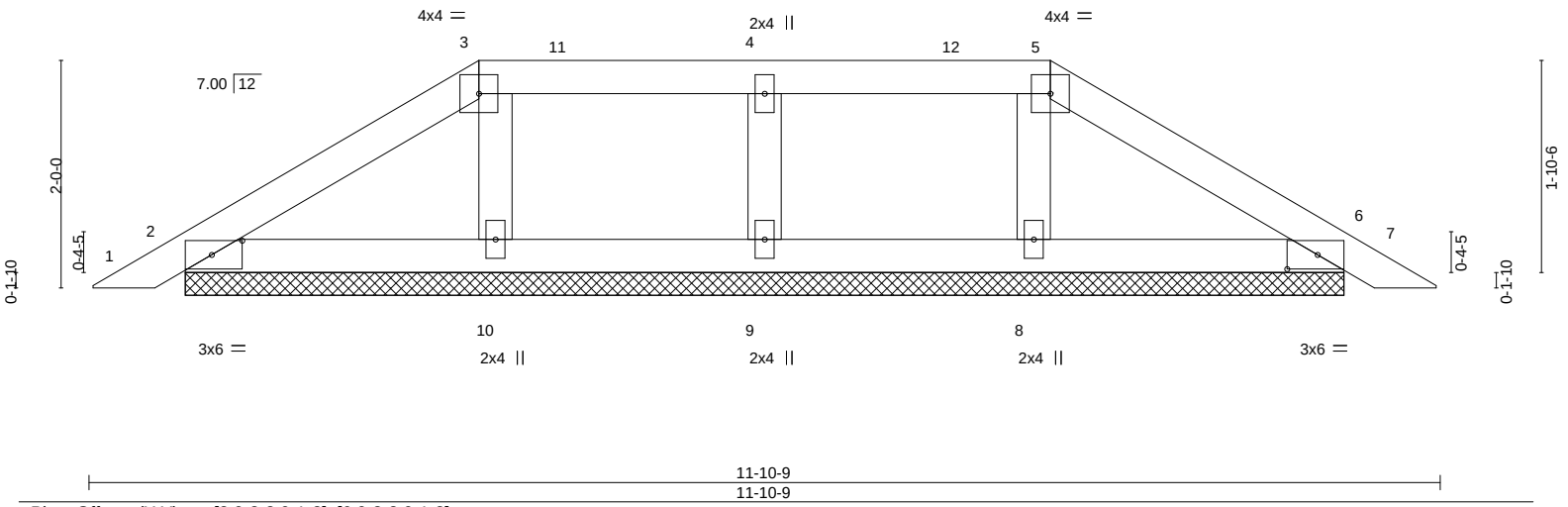

11-10-9
11-10-9

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.07	Vert(LL)	0.00	7	n/r	120	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.06	Vert(CT)	0.00	7	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-S							Weight: 40 lb	FT = 20%

LUMBER-

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

BRACING-

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

REACTIONS. All bearings 10-2-4.
(lb) - Max Horz 2=-40(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 6, 9, 10, 8
Max Grav All reactions 250 lb or less at joint(s) 2, 6, 9, 10, 8

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

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=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) 0-3-11 to 3-5-2, Exterior(2R) 3-5-2 to 7-8-1, Interior(1) 7-8-1 to 8-5-7, Exterior(2E) 8-5-7 to 11-6-14 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6, 9, 10, 8.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	PB03	Piggyback	26	1	T31038122
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:49 2023 Page 1
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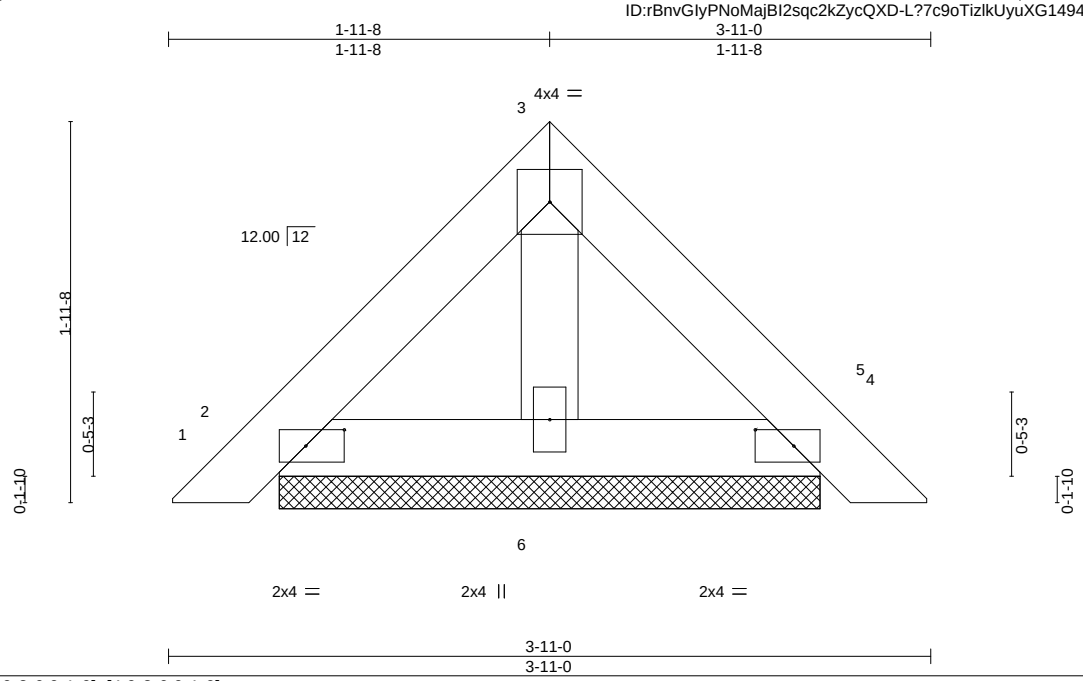

Plate Offsets (X,Y)-- [2:0-2-6,0-1-0], [4:0-2-6,0-1-0]

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	0.06	Vert(LL)	0.00	4	n/r	120	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.02	Vert(CT)	0.00	4	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-P							Weight: 14 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 3-11-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=2-9-5, 4=2-9-5, 6=2-9-5
Max Horz 2=-38(LC 10)
Max Uplift 2=-25(LC 12), 4=-29(LC 13)
Max Grav 2=82(LC 1), 4=82(LC 1), 6=81(LC 3)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=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
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

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16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	PB03G	GABLE	2	1	T31038123
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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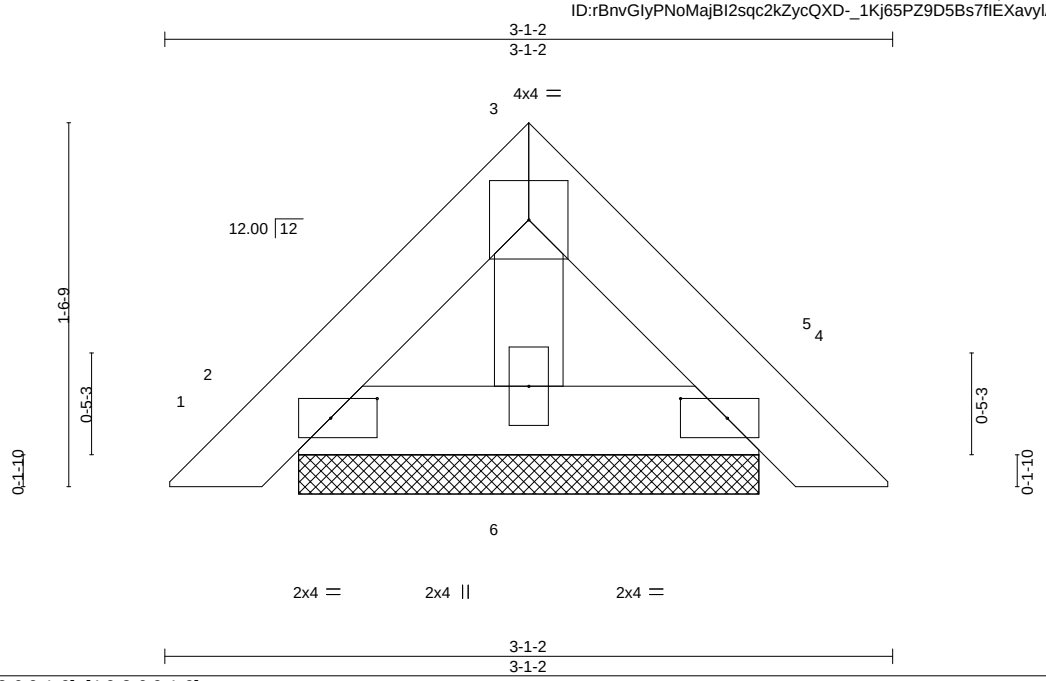

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Plate Offsets (X,Y)-- [2:0-2-6,0-1-0], [4:0-2-6,0-1-0]

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	0.03	Vert(LL)	0.00	4	n/r	120	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.01	Vert(CT)	0.00	4	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-P							Weight: 10 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-1-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=1-11-8, 4=1-11-8, 6=1-11-8
Max Horz 2=29(LC 11)
Max Uplift 2=-20(LC 12), 4=-23(LC 13)
Max Grav 2=64(LC 1), 4=64(LC 1), 6=57(LC 3)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=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
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

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16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T01	PIGGYBACK BASE	1	1	T31038124
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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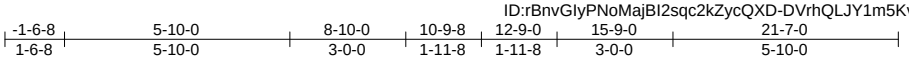

TOP CHORD UNDER PIGGYBACKS TO BE LATERALLY BRACED BY PURLINS AT 2-0-0 OC. MAX. (TYPICAL)

Scale = 1:59.6

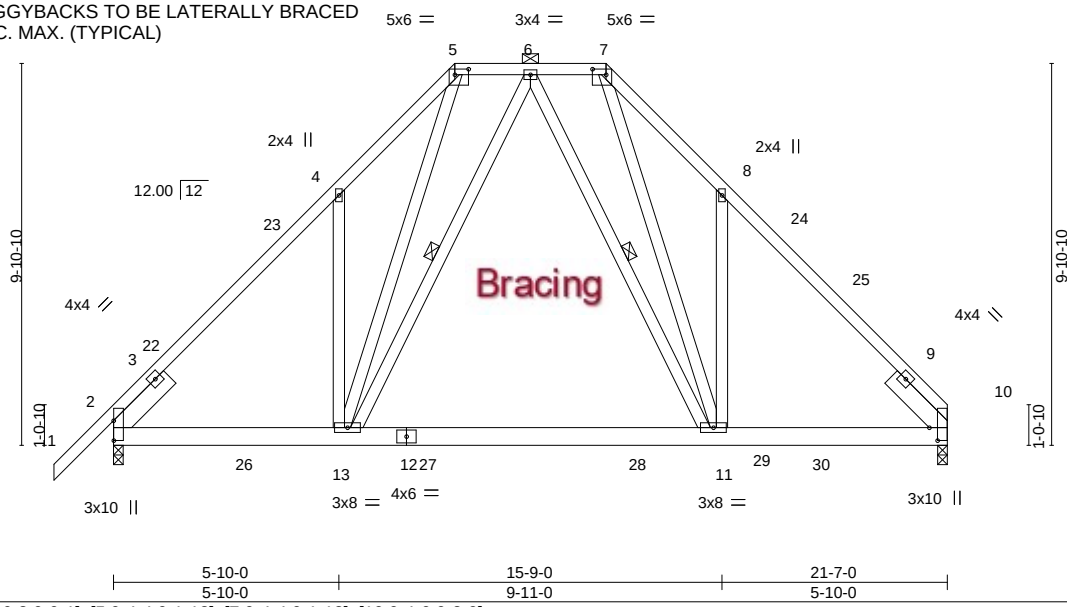

Plate Offsets (X,Y)-- [2:0-6-3,0-0-1], [5:0-4-4,0-1-12], [7:0-4-4,0-1-12], [10:0-4-0,0-2-9]

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	0.69	Vert(LL)	-0.21	11-13	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.94	Vert(CT)	-0.40	11-13	>646	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.56	Horz(CT)	0.03	10	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS							Weight: 184 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 1-11-8, Right 2x6 SP No.2 1-11-8

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 3-9-3 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 5-7.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 6-13, 6-11

REACTIONS. (size) 10=0-3-0, 2=0-3-0
Max Horz 2=218(LC 11)
Max Uplift 10=-220(LC 13), 2=-257(LC 12)
Max Grav 10=1188(LC 20), 2=1280(LC 19)

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

TOP CHORD	2-4=-1447/304, 4-5=-1449/510, 5-6=-733/298, 6-7=-731/298, 7-8=-1447/513, 8-10=-1436/315
BOT CHORD	2-13=-219/1062, 11-13=-139/745, 10-11=-131/967
WEBS	4-13=-222/277, 5-13=-304/879, 7-11=-307/879, 8-11=-227/279

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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) -1-6-8 to 1-5-8, Interior(1) 1-5-8 to 8-10-0, Exterior(2E) 8-10-0 to 12-9-0, Exterior(2R) 12-9-0 to 16-11-14, Interior(1) 16-11-14 to 21-7-0 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=220, 2=257.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-5=-54, 5-7=-54, 7-10=-54, 13-18=-20, 13-29=-80(F=-60), 14-29=-20

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16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T01G	Piggyback Base Girder	1	1	T31038125
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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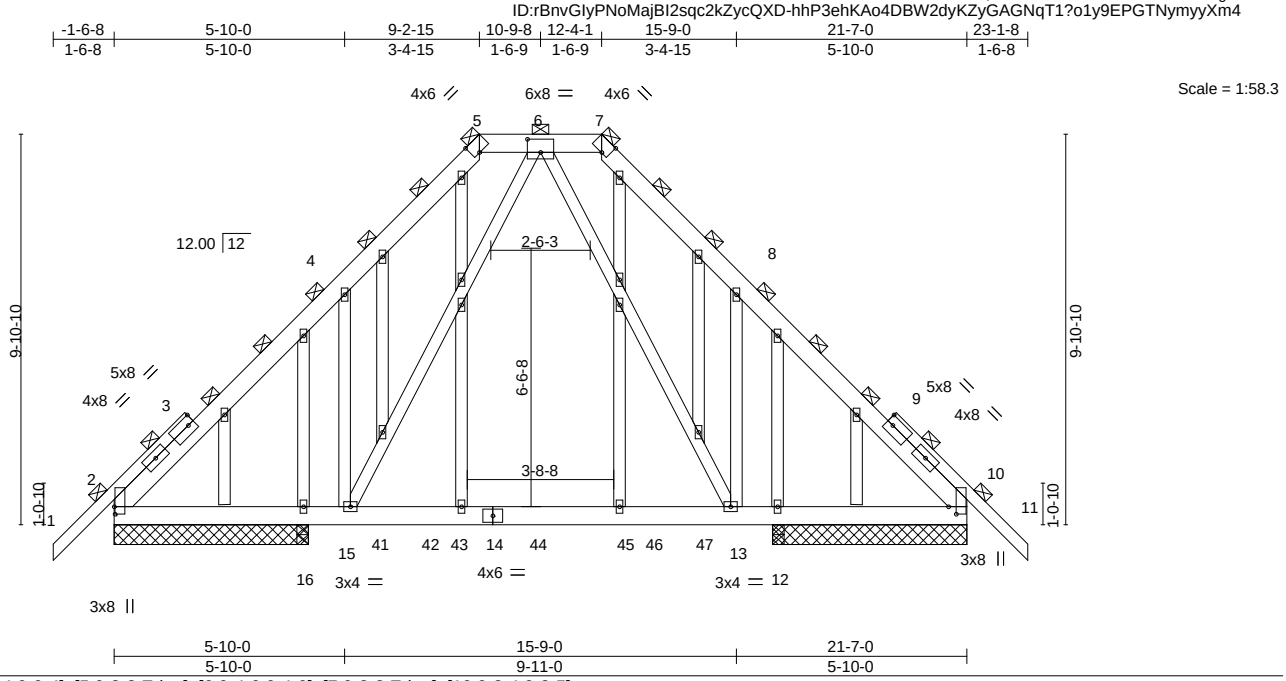

Plate Offsets (X,Y)-- [2:0-2-4,0-0-4], [5:0-2-2,Edge], [6:0-4-0,0-4-0], [7:0-2-2,Edge], [10:0-2-4,0-2-5]

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	0.72	Vert(LL)	-0.15	13-15	>967	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.57	Vert(CT)	-0.26	13-15	>563	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.37	Horz(CT)	0.01	10	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS							Weight: 241 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.2 *Except*
	1-3,9-11: 2x4 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING-

TOP CHORD	2-0-0 oc purlins (6-0-0 max.).
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 4-11-0 except (jt=length) 16=0-3-8, 16=0-3-8, 12=0-3-8, 12=0-3-8.
(lb) - Max Horz 2=-228(LC 6)
Max Uplift All uplift 100 lb or less at joint(s) 2, 10 except 16=-231(LC 8), 12=-222(LC 9)
Max Grav All reactions 250 lb or less at joint(s) except 2=618(LC 34), 10=611(LC 34), 16=489(LC 33), 16=402(LC 1), 12=479(LC 34), 12=402(LC 1), 2=531(LC 1), 10=531(LC 1)

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

TOP CHORD	2-4=-719/141, 4-5=-657/259, 5-6=-452/229, 6-7=-459/236, 7-8=-668/269, 8-10=-706/127
BOT CHORD	2-16=-131/559, 15-16=-131/559, 13-15=-91/419, 12-13=-67/522, 10-12=-67/522
WEBS	4-15=-270/327, 6-15=-169/372, 6-13=-175/379, 8-13=-269/326

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 2, 10 except (jt=lb) 16=231, 12=222.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 42 lb down and 25 lb up at 4-8-4, 42 lb down and 25 lb up at 6-8-4, 42 lb down and 25 lb up at 8-8-4, 42 lb down and 25 lb up at 10-8-4, 42 lb down and 25 lb up at 10-10-12, 42 lb down and 25 lb up at 12-10-12, and 42 lb down and 25 lb up at 14-10-12, and 42 lb down and 25 lb up at 16-10-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
13) 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

Continued on page 2

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Chesterfield, MO 63017
Date:

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
   Uniform Loads (plf)
   Vert: 1-5=-54, 5-7=-54, 7-11=-54, 33-37=-20
   Concentrated Loads (lb)
   Vert: 16=-13(B) 12=-13(B) 41=-13(B) 43=-13(B) 44=-26(B) 45=-13(B) 47=-13(B)

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T02	Piggyback Base	12	1	T31038126
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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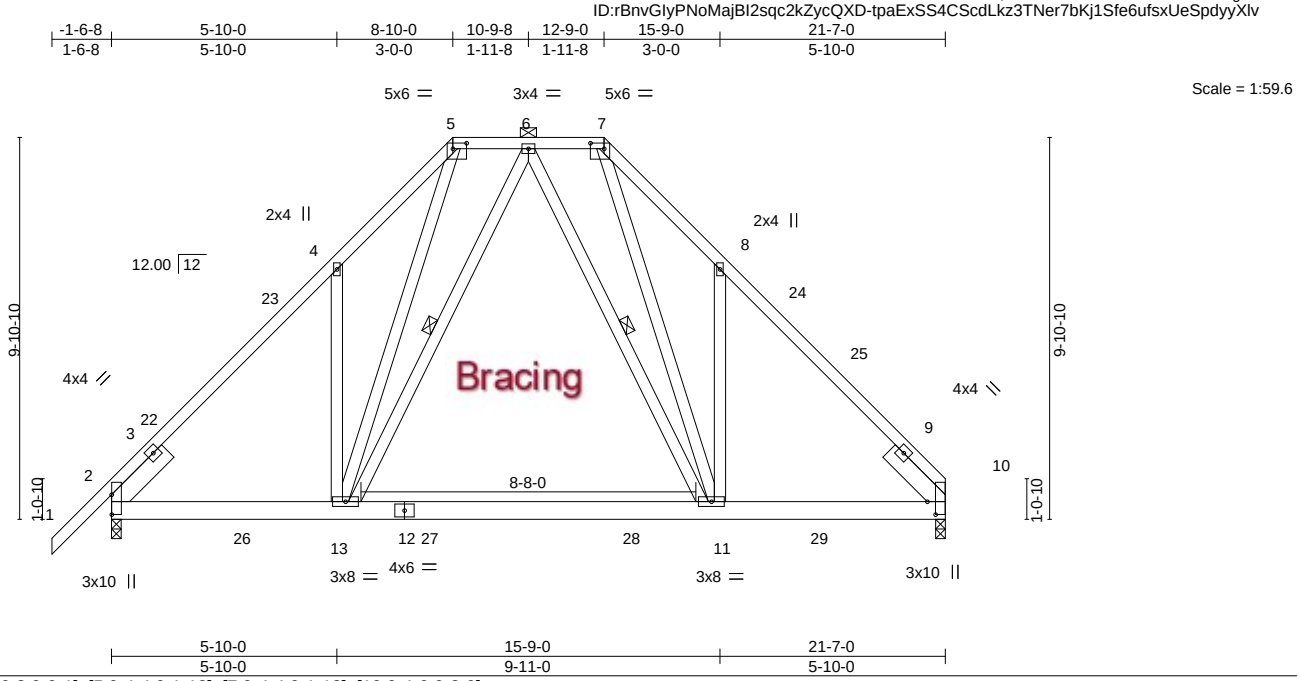

Plate Offsets (X,Y)-- [2:0-6-3,0-0-1], [5:0-4-4,0-1-12], [7:0-4-4,0-1-12], [10:0-4-0,0-2-9]

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	0.69	Vert(LL)	-0.21	11-13	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.94	Vert(CT)	-0.40	11-13	>644	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.57	Horz(CT)	0.03	10	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS							Weight: 184 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 1-11-8, Right 2x6 SP No.2 1-11-8

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 3-8-15 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 5-7.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 6-13, 6-11

REACTIONS. (size) 10=0-3-0, 2=0-3-0
Max Horz 2=218(LC 9)
Max Uplift 10=-225(LC 13), 2=-259(LC 12)
Max Grav 10=1204(LC 20), 2=1285(LC 19)

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

TOP CHORD	2-4=-1453/306, 4-5=-1455/512, 5-6=-737/299, 6-7=-741/302, 7-8=-1468/519, 8-10=-1457/321
BOT CHORD	2-13=-221/1067, 11-13=-141/751, 10-11=-135/981
WEBS	4-13=-222/277, 5-13=-306/883, 7-11=-312/894, 8-11=-226/279

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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) -1-6-8 to 1-5-8, Interior(1) 1-5-8 to 8-10-0, Exterior(2E) 8-10-0 to 12-9-0, Exterior(2R) 12-9-0 to 16-11-14, Interior(1) 16-11-14 to 21-7-0 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=225, 2=259.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-5=-54, 5-7=-54, 7-10=-54, 13-18=-20, 11-13=-80(F=-60), 11-14=-20

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T03	Piggyback Base	6	1	T31038127
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:48 2023 Page 1
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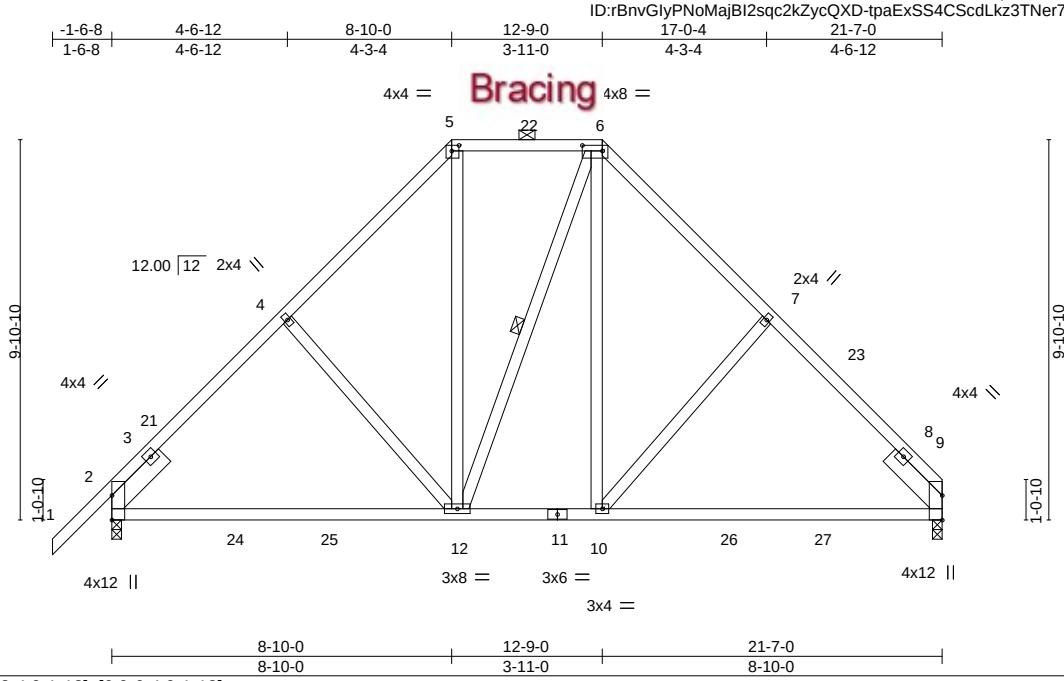

Plate Offsets (X,Y)-- [5:0-2-4,0-1-12], [6:0-6-4,0-1-12]

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	0.26	Vert(LL)	-0.18	10-15	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.73	Vert(CT)	-0.30	10-15	>867	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.02	9	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS							Weight: 150 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 1-11-8, Right 2x6 SP No.2 1-11-8

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 5-11-12 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 5-6.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 6-12

REACTIONS. (size) 9=0-3-0, 2=0-3-0
Max Horz 2=218(LC 9)
Max Uplift 9=-144(LC 13), 2=-178(LC 12)
Max Grav 9=887(LC 2), 2=959(LC 2)

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

TOP CHORD	2-4=-874/205, 4-5=-776/243, 5-6=-499/230, 6-7=-780/253, 7-9=-838/216
BOT CHORD	2-12=-173/687, 10-12=-54/525, 9-10=-80/592
WEBS	5-12=-101/355, 6-10=-126/394

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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) -1-6-8 to 1-5-8, Interior(1) 1-5-8 to 8-10-0, Exterior(2E) 8-10-0 to 12-9-0, Exterior(2R) 12-9-0 to 17-1-6, Interior(1) 17-1-6 to 21-7-0 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 9=144, 2=178.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T04	Piggyback Base	3	1	T31038128
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:45 2023 Page 1
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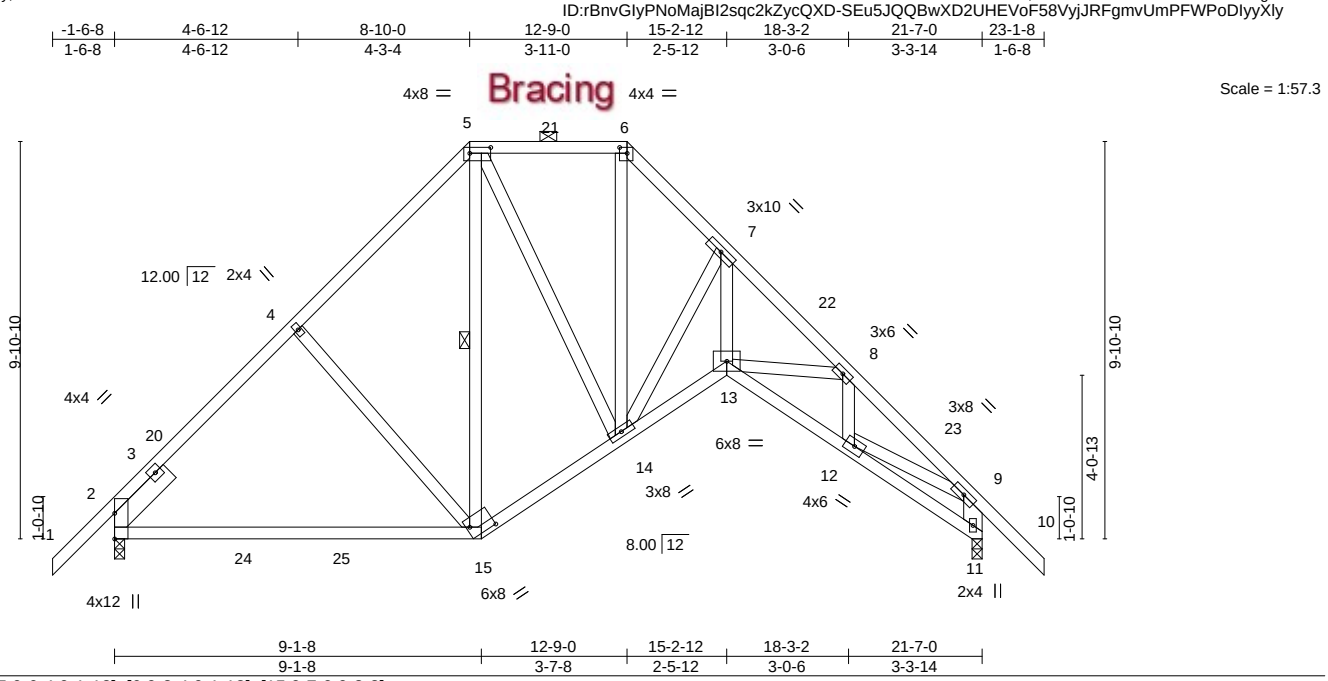

Plate Offsets (X,Y)-- [5:0-6-4,0-1-12], [6:0-2-4,0-1-12], [15:0-7-0,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.27	Vert(LL)	-0.24	15-18	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.82	Vert(CT)	-0.40	15-18	>636	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.17	11	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS							Weight: 162 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 9-11: 2x6 SP No.2
SLIDER	Left 2x6 SP No.2 1-11-8

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-3-8 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 5-15

REACTIONS. (size) 2=0-3-0, 11=0-3-0
Max Horz 2=251(LC 11)
Max Uplift 2=-177(LC 12), 11=-180(LC 13)
Max Grav 2=940(LC 2), 11=930(LC 2)

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

TOP CHORD	2-4=-824/201, 4-5=-738/236, 5-6=-608/193, 6-7=-879/238, 7-8=-1816/212, 8-9=-1686/200, 9-11=-891/179
BOT CHORD	2-15=-157/692, 14-15=-113/676, 13-14=-85/1592, 12-13=-78/1423
WEBS	5-14=0/324, 6-14=-126/498, 7-14=-1332/90, 7-13=-31/1731, 9-12=-93/1197

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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) -1-6-8 to 1-5-8, Interior(1) 1-5-8 to 8-10-0, Exterior(2E) 8-10-0 to 12-9-0, Exterior(2R) 12-9-0 to 16-11-14, Interior(1) 16-11-14 to 23-1-8 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=177, 11=180.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T04G	GABLE	1	1	T31038129
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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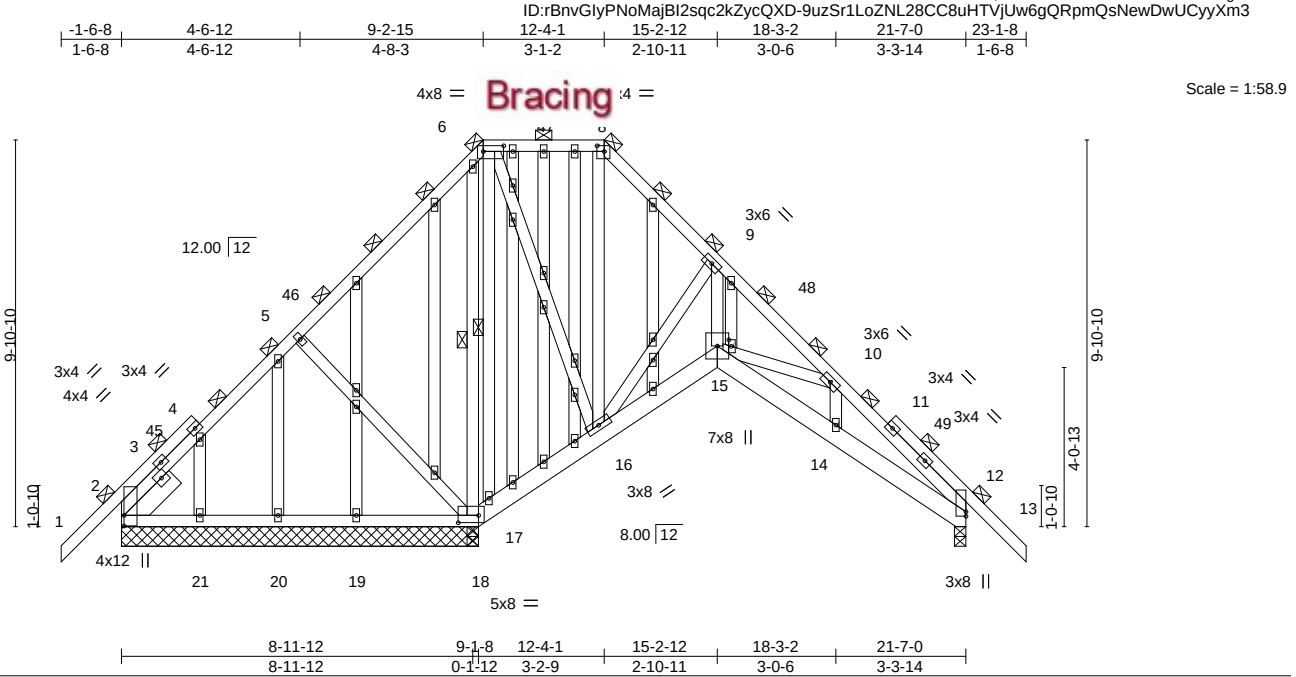

Plate Offsets (X,Y)-- [2:0-3-4,0-0-0], [7:0-6-4,0-1-12], [8:0-2-4,0-1-12], [15:0-2-0,0-0-12], [18:0-6-4,0-2-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.30	Vert(LL)	-0.02	14-15	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.14	Vert(CT)	-0.03	14-15	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.04	12	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS							Weight: 261 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 SP No.2 *Except* 2-18: 2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 1-7-7

BRACING-

TOP CHORD	2-0-0 oc purlins (6-0-0 max.).
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 7-17, 6-18

REACTIONS. All bearings 9-1-8 except (jt=length) 12=0-3-8.
(lb) - Max Horz 2=-232(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 21 except 2=-204(LC 24), 18=-216(LC 12), 12=-142(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 21, 20, 19 except 18=1197(LC 1), 18=1197(LC 1), 12=359(LC 24)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-5=-78/325, 5-6=-6/445, 10-12=-436/86
BOT CHORD 17-18=-643/141, 16-17=-354/259, 15-16=-87/285, 14-15=0/369, 12-14=0/327
WEBS 7-17=-463/0, 7-16=0/423, 8-16=-265/0, 9-16=-337/0, 9-15=0/342, 6-18=-431/149

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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) -1-6-8 to 1-5-8, Interior(1) 1-5-8 to 9-2-15, Exterior(2E) 9-2-15 to 12-4-1, Exterior(2R) 12-4-1 to 16-7-0, Interior(1) 16-7-0 to 23-1-8 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 21 except (jt=lb) 2=204, 18=216, 12=142.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T05	Piggyback Base	4	1	T31038130
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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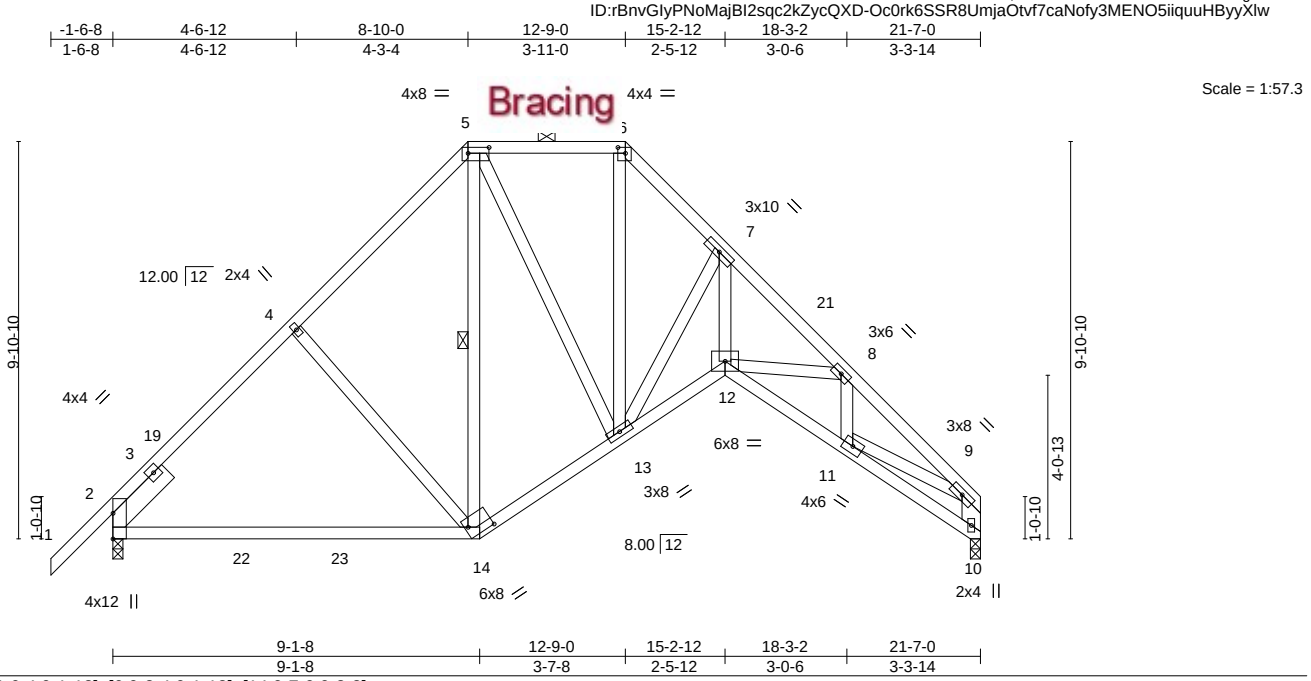

Plate Offsets (X,Y)-- [5:0-6-4,0-1-12], [6:0-2-4,0-1-12], [14:0-7-0,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.27	Vert(LL)	-0.24	14-17	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.82	Vert(CT)	-0.40	14-17	>635	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.17	10	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS							Weight: 159 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3 *Except*
	9-10: 2x6 SP No.2
SLIDER	Left 2x6 SP No.2 1-11-8

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-3-4 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-6.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 5-14

REACTIONS. (size) 2=0-3-0, 10=0-3-0
Max Horz 2=237(LC 11)
Max Uplift 2=-177(LC 12), 10=-141(LC 13)
Max Grav 2=943(LC 2), 10=849(LC 2)

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

TOP CHORD	2-4=-828/204, 4-5=-742/240, 5-6=-614/223, 6-7=-886/278, 7-8=-1819/333, 8-9=-1725/324, 9-10=-835/185
BOT CHORD	2-14=-173/675, 13-14=-132/656, 12-13=-146/1551, 11-12=-240/1424
WEBS	5-13=0/325, 6-13=-134/495, 7-13=-1325/232, 7-12=-190/1699, 9-11=-179/1184

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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) -1-6-8 to 1-5-8, Interior(1) 1-5-8 to 8-10-0, Exterior(2E) 8-10-0 to 12-9-0, Exterior(2R) 12-9-0 to 16-11-14, Interior(1) 16-11-14 to 21-4-4 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=177, 10=141.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T06	Common	3	1	T31038131
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:45 2023 Page 1
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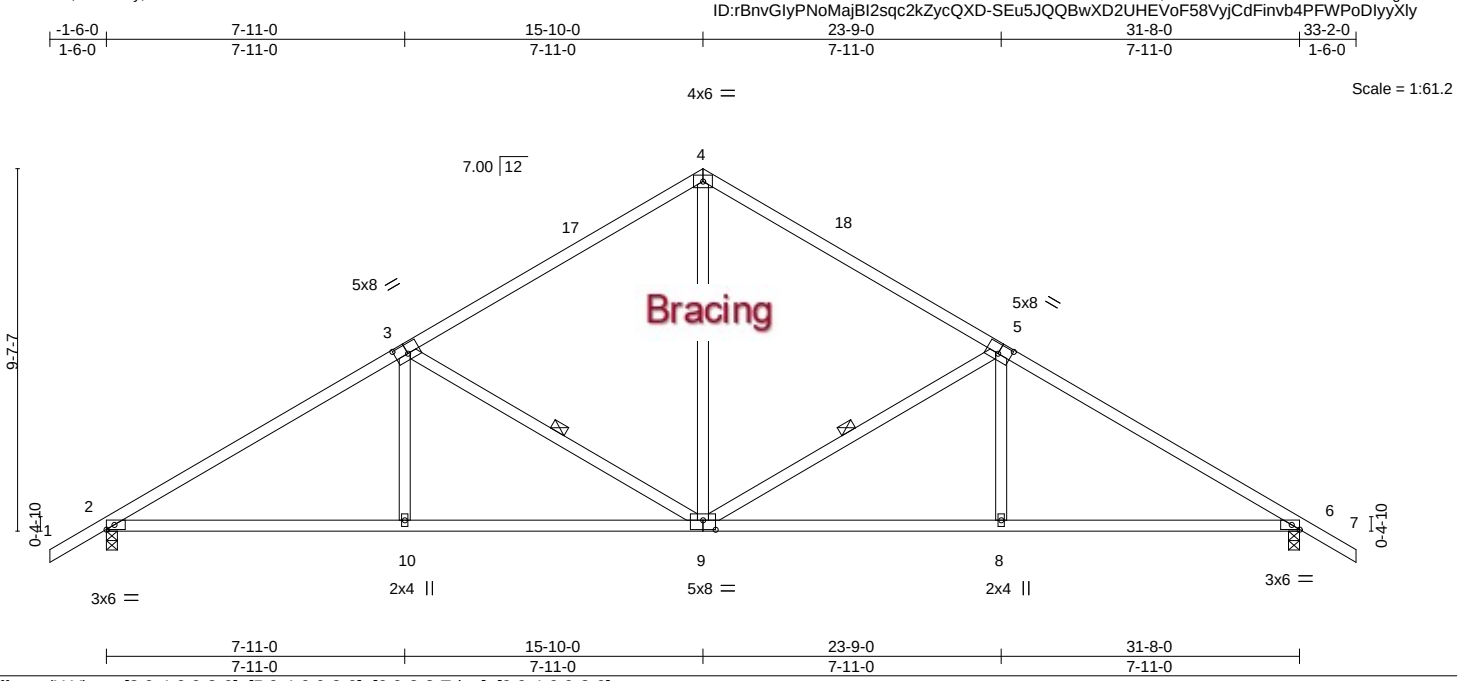

Plate Offsets (X,Y)-- [3:0-4-0,0-3-0], [5:0-4-0,0-3-0], [6:0-2-8,Edge], [9:0-4-0,0-3-0]

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	0.70	Vert(LL)	0.10	10-13	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.69	Vert(CT)	-0.22	10-13	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.07	6	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS							Weight: 160 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 3-5-10 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 9-7-6 oc bracing.
WEBS	1 Row at midpt 5-9, 3-9

REACTIONS. (size) 2=0-3-8, 6=0-3-8
Max Horz 2=-223(LC 10)
Max Uplift 2=-270(LC 12), 6=-270(LC 13)
Max Grav 2=1253(LC 1), 6=1253(LC 1)

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

TOP CHORD	2-3=-1901/370, 3-4=-1295/313, 4-5=-1295/313, 5-6=-1901/370
BOT CHORD	2-10=-355/1567, 9-10=-355/1566, 8-9=-209/1566, 6-8=-209/1567
WEBS	4-9=-150/804, 5-9=-672/293, 5-8=0/332, 3-9=-671/292, 3-10=0/332

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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 1-8-0, Interior(1) 1-8-0 to 15-10-0, Exterior(2R) 15-10-0 to 19-0-0, Interior(1) 19-0-0 to 33-2-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=270, 6=270.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T06G	Common Supported Gable	1	1	T31038132
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:38 2023 Page 1
ID:rBnvGIyPNoMajBI2sqc2kZycQXD-9uzSr1LoZNL28CC8uHTVjUw8IQTWmSxNewDwUCyyXm3

-1-6-0 1-6-0 | 15-10-0 15-10-0 | 31-8-0 15-10-0 | 33-2-0 1-6-0

Scale = 1:62.1

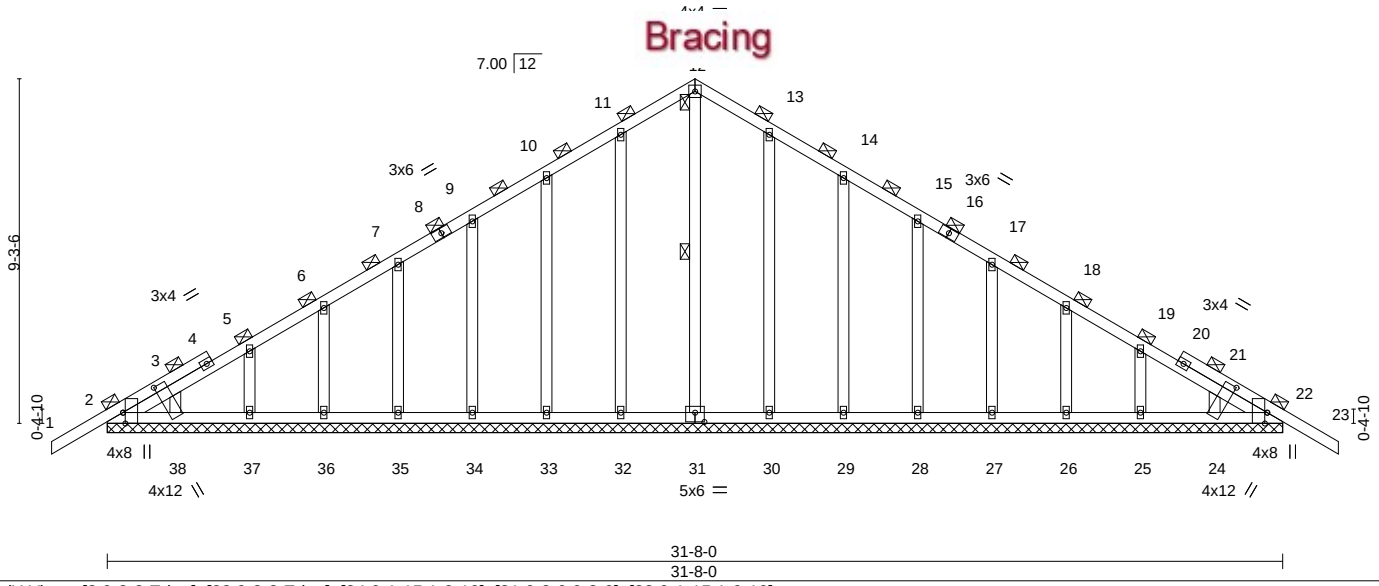

Plate Offsets (X,Y)-- [2:0-3-8,Edge], [22:0-3-8,Edge], [24:0-1-15,1-0-10], [31:0-3-0,0-3-0], [38:0-1-15,1-0-10]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.13	Vert(LL)	-0.01	23	n/r	120	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.03	Vert(CT)	-0.01	23	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	22	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-S							Weight: 213 lb	FT = 20%

LUMBER-

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

BRACING-

TOP CHORD	2-0-0 oc purlins (6-0-0 max.).
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 12-31

REACTIONS. All bearings 31-8-0.
(lb) - Max Horz 2=-215(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 32, 33, 34, 35, 36, 37, 38, 30, 29, 28, 27, 26, 25, 24, 22
Max Grav All reactions 250 lb or less at joint(s) 2, 31, 32, 33, 34, 35, 36, 37, 38, 30, 29, 28, 27, 26, 25, 24, 22

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

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=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 1-10-0, Exterior(2N) 1-10-0 to 15-10-0, Corner(3R) 15-10-0 to 19-0-0, Exterior(2N) 19-0-0 to 33-2-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 32, 33, 34, 35, 36, 37, 38, 30, 29, 28, 27, 26, 25, 24, 22.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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Joaquin Velez PE No.68182
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16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T07	Common	2	1	T31038133
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:45 2023 Page 1
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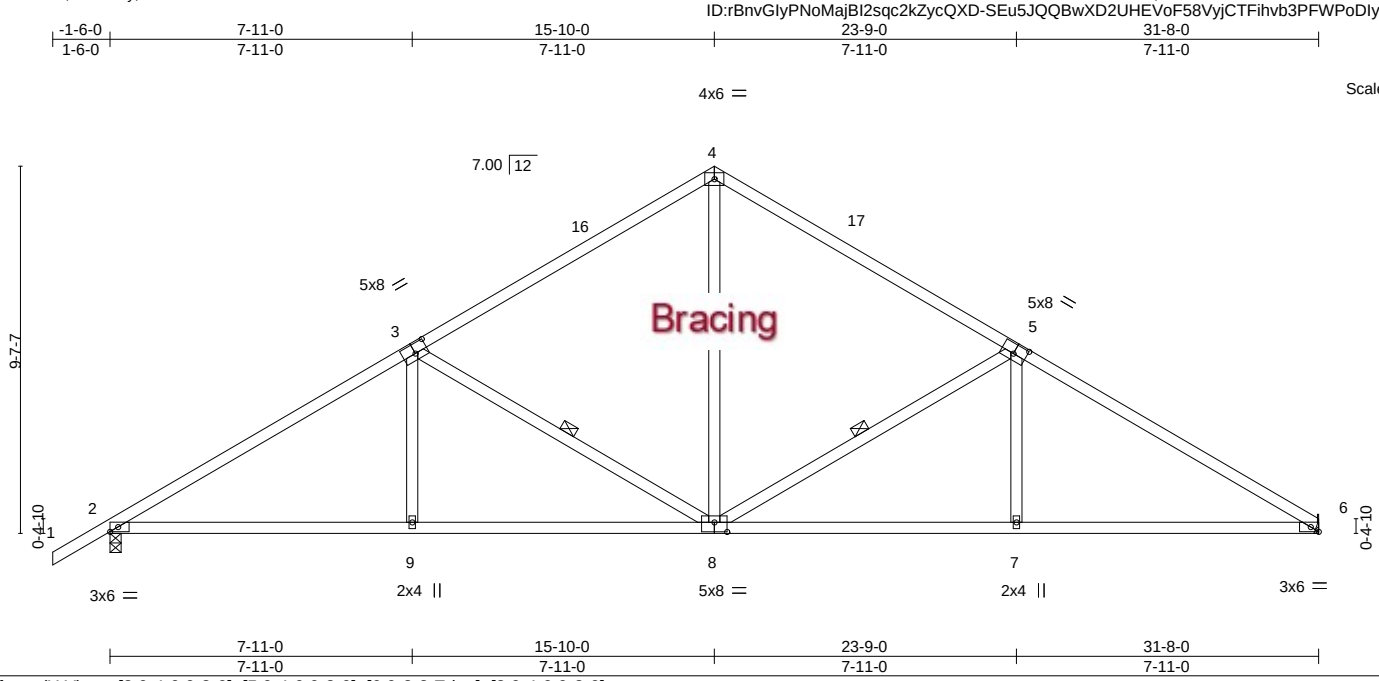

Plate Offsets (X,Y)-- [3:0-4-0,0-3-0], [5:0-4-0,0-3-0], [6:0-2-8,Edge], [8:0-4-0,0-3-0]

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	0.71	Vert(LL)	0.11	7-15	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.70	Vert(CT)	-0.23	7-15	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.07	6	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS							Weight: 158 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 3-4-5 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 9-5-5 oc bracing.
WEBS	1 Row at midpt 5-8, 3-8

REACTIONS. (size) 2=0-3-8, 6=Mechanical
Max Horz 2=216(LC 9)
Max Uplift 2=-270(LC 12), 6=-237(LC 13)
Max Grav 2=1255(LC 1), 6=1170(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1905/371, 3-4=-1299/314, 4-5=-1299/317, 5-6=-1914/377
BOT CHORD 2-9=-368/1570, 8-9=-368/1570, 7-8=-240/1579, 6-7=-240/1580
WEBS 4-8=-153/808, 5-8=-683/299, 5-7=0/334, 3-8=-672/292, 3-9=0/332

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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 1-8-0, Interior(1) 1-8-0 to 15-10-0, Exterior(2R) 15-10-0 to 19-0-0, Interior(1) 19-0-0 to 31-8-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=270, 6=237.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T08	ROOF SPECIAL GIRDER	1	1	T31038134
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:39 2023 Page 1
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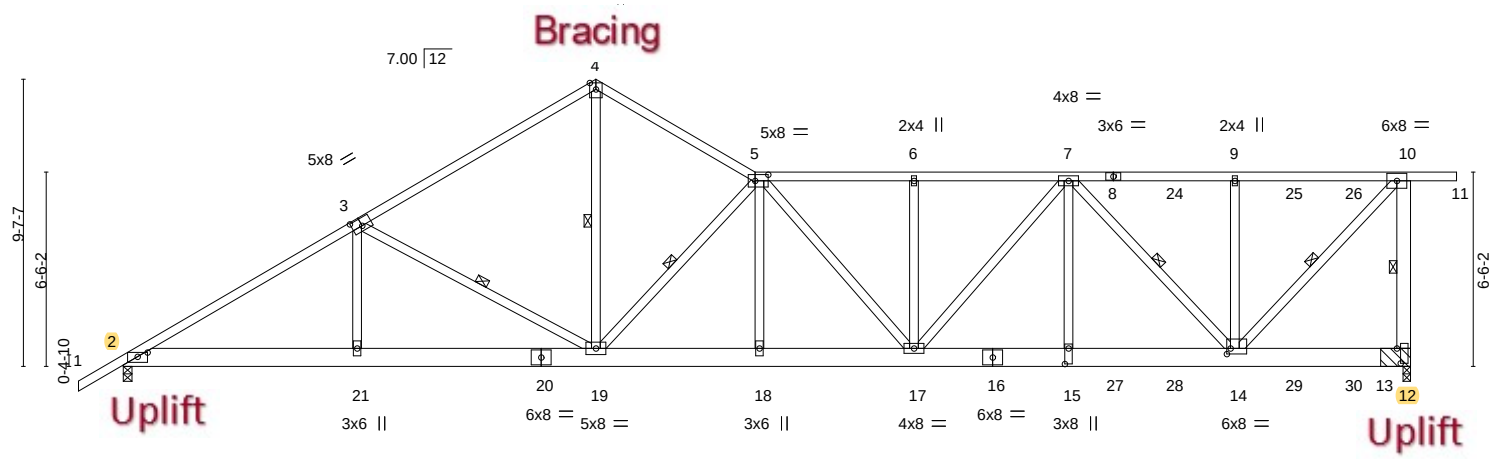
1-6-0	7-10-0	15-10-0	21-2-0	26-5-14	31-8-0	37-2-14	43-1-8	44-8-0
1-6-0	7-10-0	8-0-0	5-4-0	5-3-14	5-2-2	5-6-14	5-10-10	1-6-8

Scale = 1:77.2



7-10-0	15-10-0	21-2-0	26-5-14	31-8-0	37-2-14	43-1-8
7-10-0	8-0-0	5-4-0	5-3-14	5-2-2	5-6-14	5-10-10

Plate Offsets (X,Y)-- [2:0-4-0,0-1-11], [3:0-4-0,0-3-0], [5:0-5-4,0-2-8], [12:0-6-0,0-1-8], [14:0-1-8,0-2-4], [15:0-6-4,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.91	Vert(LL)	0.32	17-18	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.25	Vert(CT)	-0.50	17-18	>999	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	1.00	Horz(CT)	0.08	12	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS							Weight: 345 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2 *Except*
	3-4: 2x4 SP 2850F 2.0E or 2x4 SP M 31, 5-8: 2x4 SP No.1
BOT CHORD	2x8 SP 2400F 2.0E
WEBS	2x4 SP No.3 *Except*
	10-12: 2x6 SP No.2, 7-14,10-14: 2x4 SP No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 7-2-7 oc bracing.
WEBS	1 Row at midpt 10-12, 3-19, 4-19, 5-19, 7-14, 10-14

REACTIONS. (size) 12=(0-3-0 + bearing block) (req. 0-3-14), 2=0-3-8
Max Horz 2=286(LC 31)
Max Uplift 12=-1969(LC 9), 2=-756(LC 8)
Max Grav 12=3287(LC 40), 2=2156(LC 1)

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

TOP CHORD	2-3=-3664/1317, 3-4=-3088/1291, 4-5=-3031/1272, 5-6=-4753/2408, 6-7=-4753/2408, 7-9=-2737/1597, 9-10=-2737/1597, 10-12=-3177/1926
BOT CHORD	2-21=-1197/3090, 19-21=-1198/3086, 18-19=-2111/4444, 17-18=-2109/4445, 15-17=-2737/4750, 14-15=-2737/4750
WEBS	3-21=0/328, 3-19=-657/300, 4-19=-1159/2629, 5-19=-2842/1515, 5-17=-794/808, 6-17=-291/178, 7-17=-842/1063, 7-15=-896/1789, 7-14=-2918/1579, 9-14=-515/504, 10-14=-2339/3976

NOTES-

1) 2x8 SP 2400F 2.0E bearing block 12" long at jt. 12 attached to front face with 4 rows of 10d (0.131"x3") nails spaced 3" o.c. 16 Total fasteners. Bearing is assumed to be SP No.2.
2) Unbalanced roof live loads have been considered for this design.
3) 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; end vertical right exposed; Lumber DOL=1.60 plate grip DOL=1.60
4) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=1969, 2=756.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 531 lb down and 506 lb up at 31-8-12, 127 lb down and 145 lb up at 33-1-4, 127 lb down and 145 lb up at 35-1-4, 127 lb down and 145 lb up at 37-1-4, and 127 lb down and 145 lb up at 39-1-4, and 127 lb down and 145 lb up at 41-1-4 on top chord, and 1722 lb down and 951 lb up at 31-8-12, 63 lb down and 40 lb up at 33-1-4, 63 lb down and 40 lb up at 35-1-4, 63 lb down and 40 lb up at 37-1-4, and 63 lb down and 40 lb up at 39-1-4, and 63 lb down and 40 lb up at 41-1-4 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).

Continued on page 2

LOAD CASE(S) Standard

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Date:

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LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
   Uniform Loads (plf)
   Vert: 1-4=-54, 4-5=-54, 5-10=-54, 10-11=-54, 2-12=-20
   Concentrated Loads (lb)
   Vert: 8=-69(F) 15=-1722(F) 7=131(F) 9=-69(F) 14=-32(F) 24=-69(F) 25=-69(F) 26=-69(F) 27=-32(F) 28=-32(F) 29=-32(F) 30=-32(F)

16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T09	ROOF SPECIAL	1	1	T31038135
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:40 2023 Page 1
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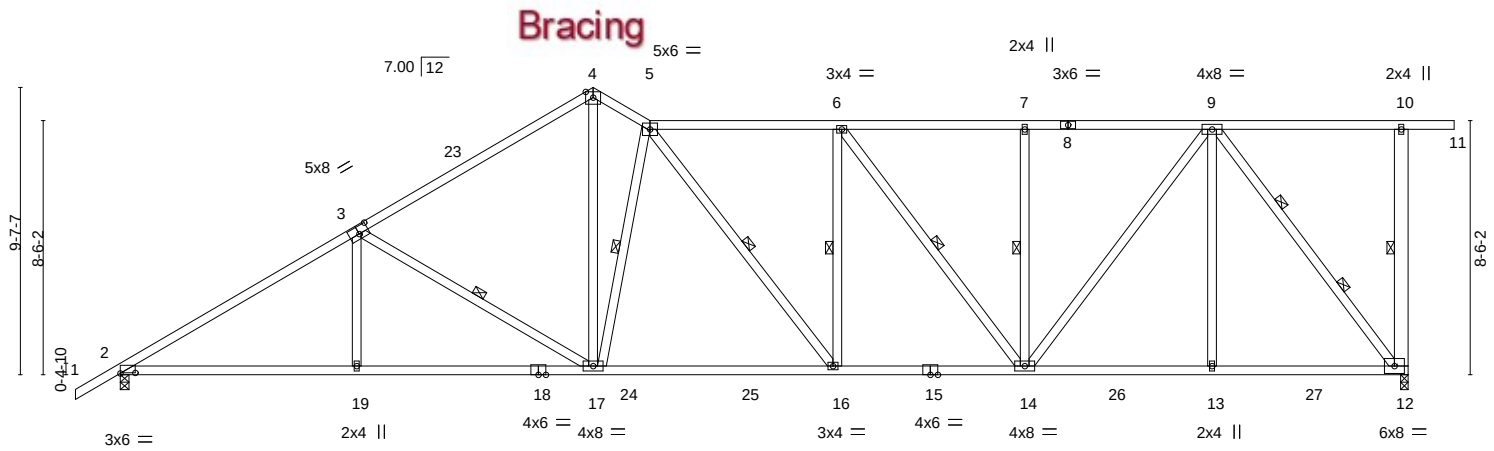
1-6-0	7-11-0	15-10-0	17-8-14	24-0-2	30-3-7	36-6-11	43-1-8	44-8-0
1-6-0	7-11-0	7-11-0	1-10-14	6-3-5	6-3-5	6-3-5	6-6-13	1-6-8

Scale = 1:77.2



7-11-0	15-10-0	24-0-2	30-3-7	36-6-11	43-1-8
7-11-0	7-11-0	8-2-2	6-3-5	6-3-5	6-6-13

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

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	0.96	Vert(LL)	-0.32	16-17	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.97	Vert(CT)	-0.54	16-17	>947	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.14	12	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS							Weight: 296 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 10-12: 2x6 SP No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS	1 Row at midpt 10-12, 3-17, 5-17, 5-16, 6-16, 6-14, 7-14
	2 Rows at 1/3 pts 9-12

REACTIONS. (size) 12=0-3-0, 2=0-3-8
Max Horz 2=312(LC 11)
Max Uplift 12=-457(LC 9), 2=-317(LC 12)
Max Grav 12=1912(LC 2), 2=1879(LC 19)

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

TOP CHORD	2-3=-3027/468, 3-4=-2371/430, 4-5=-2254/451, 5-6=-2377/459, 6-7=-1995/404, 7-9=-1995/404, 10-12=-262/142
BOT CHORD	2-19=-656/2679, 17-19=-656/2678, 16-17=-529/2303, 14-16=-556/2377, 13-14=-319/1241, 12-13=-319/1241
WEBS	3-19=0/323, 3-17=-770/289, 4-17=-340/2019, 5-17=-1392/345, 5-16=-109/269, 6-16=-53/312, 6-14=-658/146, 7-14=-327/156, 9-14=-273/1241, 9-13=0/383, 9-12=-2007/437

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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 2-9-12, Interior(1) 2-9-12 to 15-10-0, Exterior(2E) 15-10-0 to 17-8-14, Interior(1) 17-8-14 to 44-8-0 zone; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=457, 2=317.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES. T31038136
3582914	T10	HALF HIP	1	1	Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:40 2023 Page 1
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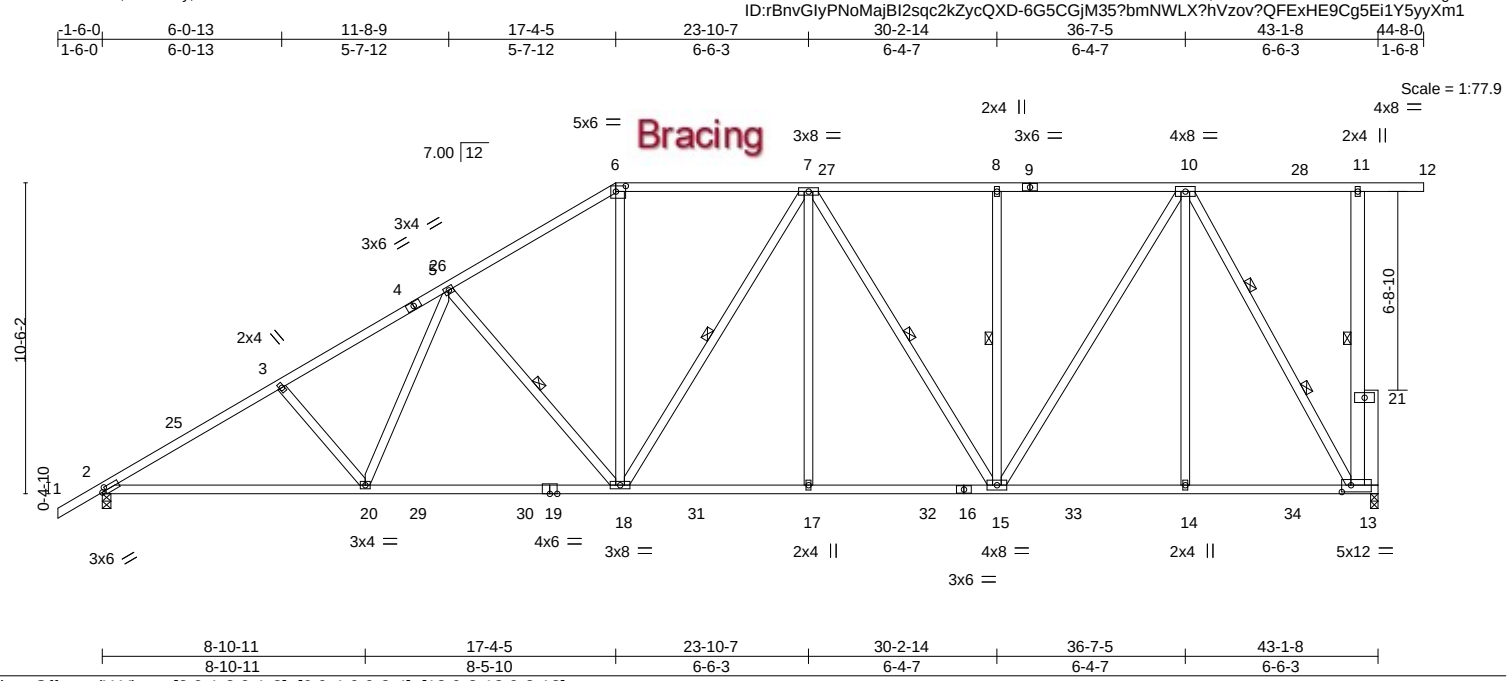

Plate Offsets (X,Y)-- [2:0-1-8,0-1-8], [6:0-4-0,0-2-4], [13:0-3-12,0-2-12]

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	0.43	Vert(LL)	-0.28	18-20	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.91	Vert(CT)	-0.45	18-20	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.12	13	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS							Weight: 326 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 2-19: 2x4 SP No.1
WEBS	2x4 SP No.3 *Except* 11-13: 2x6 SP No.2
OTHERS	2x6 SP No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 2-11-15 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 7-8-2 oc bracing.
WEBS	1 Row at midpt 11-13, 5-18, 7-18, 7-15, 8-15 2 Rows at 1/3 pts 10-13

REACTIONS. (size) 13=0-3-0, 2=0-3-8
Max Horz 2=375(LC 12)
Max Uplift 13=-477(LC 9), 2=-305(LC 12)
Max Grav 13=1951(LC 2), 2=1857(LC 2)

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

TOP CHORD	2-3=-3064/455, 3-5=-2916/450, 5-6=-2230/388, 6-7=-1878/357, 7-8=-1620/334, 8-10=-1620/334, 11-13=-276/160
BOT CHORD	2-20=-670/2617, 18-20=-513/2245, 17-18=-391/1933, 15-17=-391/1933, 14-15=-199/973, 13-14=-199/973
WEBS	3-20=-297/187, 5-20=-102/637, 5-18=-697/267, 6-18=-86/849, 7-17=0/348, 7-15=-592/147, 8-15=-340/163, 10-15=-254/1224, 10-14=0/375, 10-13=-1880/388

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 2-9-12, Interior(1) 2-9-12 to 17-4-5, Exterior(2R) 17-4-5 to 23-5-8, Interior(1) 23-5-8 to 44-8-0 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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 13=477, 2=305.

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

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T11	PIGGYBACK BASE	1	1	T31038137
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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1-6-0	5-11-4	11-9-3	17-4-5	23-3-9	29-2-14	30-7-3	36-9-5	43-1-8	44-8-0
1-6-0	5-11-4	5-9-15	5-7-2	5-11-5	5-11-5	1-4-5	6-2-2	6-4-3	1-6-8

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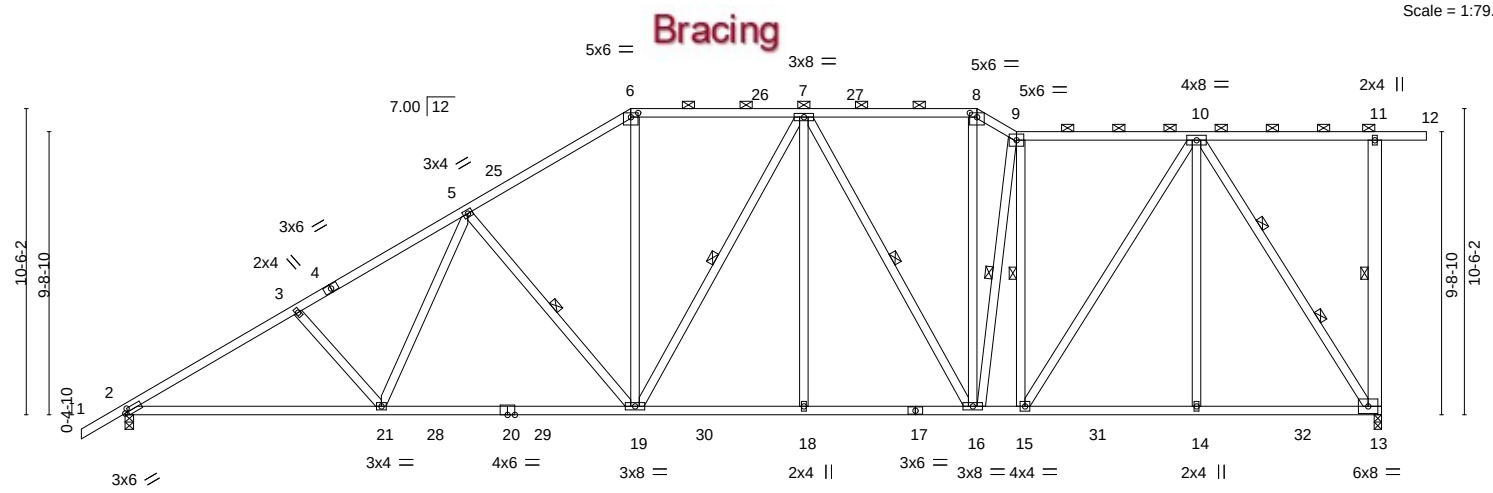

8-9-9	17-4-5	23-3-9	29-2-14	30-7-3	36-9-5	43-1-8
8-9-9	8-6-12	5-11-5	5-11-5	1-4-5	6-2-2	6-4-3

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

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	0.44	Vert(LL)	-0.30	19-21	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.91	Vert(CT)	-0.50	19-21	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.94	Horz(CT)	0.12	13	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS							Weight: 341 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 2-20: 2x4 SP No.1
WEBS	2x4 SP No.3 *Except* 11-13: 2x6 SP No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 3-0-7 oc purlins, except end verticals, and 2-0-0 oc purlins (3-11-15 max.): 6-8, 9-12.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS	1 Row at midpt 11-13, 5-19, 7-19, 7-16, 9-16, 9-15 2 Rows at 1/3 pts 10-13

REACTIONS. (size) 13=0-3-0, 2=0-3-8
Max Horz 2=346(LC 11)
Max Uplift 13=-448(LC 9), 2=-328(LC 12)
Max Grav 13=1940(LC 2), 2=1868(LC 19)

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

TOP CHORD	2-3=-3099/505, 3-5=-2938/507, 5-6=-2244/462, 6-7=-1889/430, 7-8=-1706/397, 8-9=-1959/447, 9-10=-1717/387
BOT CHORD	2-21=-725/2728, 19-21=-617/2284, 18-19=-478/1954, 16-18=-478/1954, 15-16=-405/1730, 14-15=-276/1070, 13-14=-276/1070
WEBS	3-21=-297/189, 5-21=-100/639, 5-19=-696/269, 6-19=-118/873, 7-19=-271/187, 7-18=0/317, 7-16=-579/142, 8-16=-163/812, 9-16=-255/106, 9-15=-875/230, 10-15=-259/1200, 10-14=0/383, 10-13=-1944/387

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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 2-9-12, Interior(1) 2-9-12 to 17-4-5, Exterior(2R) 17-4-5 to 21-8-1, Interior(1) 21-8-1 to 29-2-14, Exterior(2E) 29-2-14 to 30-7-3, Interior(1) 30-7-3 to 44-8-0 zone; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 13=448, 2=328.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T12	PIGGYBACK BASE	1	1	T31038138
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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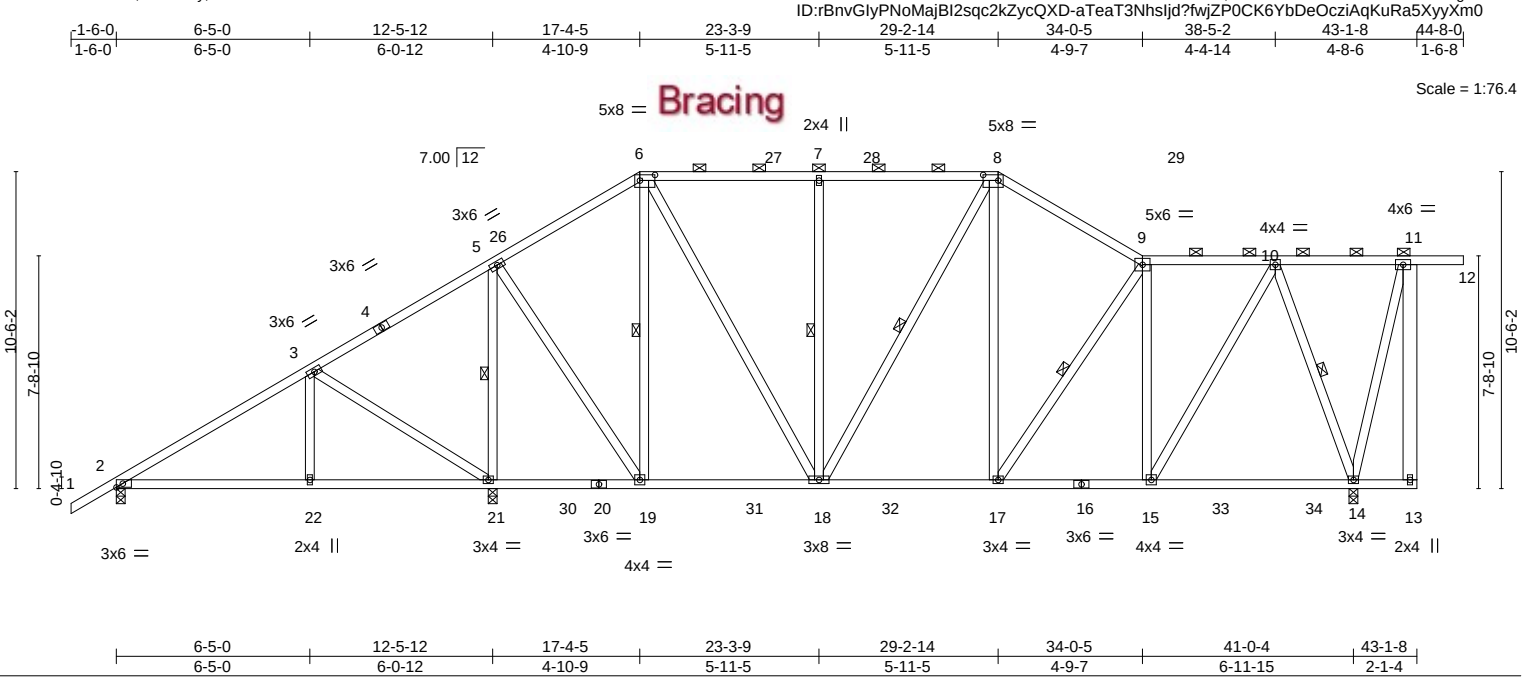

Plate Offsets (X,Y)-- [6:0-6-0,0-2-4], [8:0-6-0,0-2-4]

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	0.41	Vert(LL)	-0.08	14-15	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.45	Vert(CT)	-0.14	14-15	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.03	14	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS							Weight: 330 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 11-13: 2x6 SP No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 5-8-9 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-8, 9-12.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 5-21, 6-19, 7-18, 8-18, 9-17, 10-14

REACTIONS. (size) 2=0-3-8, 21=0-3-8, 14=0-3-8
Max Horz 2=323(LC 11)
Max Uplift 2=-94(LC 12), 21=-378(LC 9), 14=-312(LC 9)
Max Grav 2=488(LC 23), 21=1838(LC 2), 14=1436(LC 2)

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

TOP CHORD	2-3=-469/299, 5-6=-551/158, 6-7=-759/233, 7-8=-759/233, 8-9=-959/245, 9-10=-816/201
BOT CHORD	2-22=-391/402, 21-22=-391/402, 18-19=-153/414, 17-18=-162/789, 15-17=-160/828, 14-15=-98/336
WEBS	3-22=-277/271, 3-21=-531/460, 5-21=-1341/368, 5-19=-170/948, 6-19=-558/192, 6-18=-160/694, 7-18=-370/183, 8-17=-38/335, 9-15=-581/153, 10-15=-132/966, 10-14=-1107/241

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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 2-9-12, Interior(1) 2-9-12 to 17-4-5, Exterior(2R) 17-4-5 to 21-8-1, Interior(1) 21-8-1 to 29-2-14, Exterior(2R) 29-2-14 to 33-6-10, Interior(1) 33-6-10 to 44-8-0 zone; cantilever right exposed ; end vertical right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 21=378, 14=312.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T13	Piggyback Base	3	1	T31038139
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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1-6-0	6-5-0	6-0-12	2-1-12	2-8-13	4-5-9	4-2-2	3-2-14	6-10-2	7-0-8

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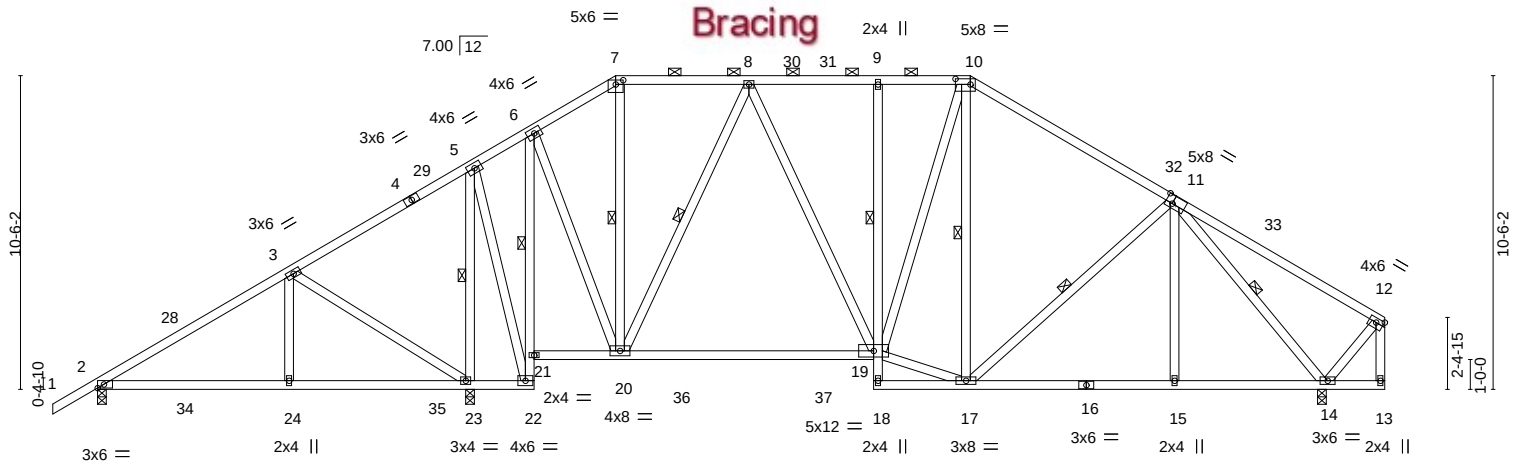

6-5-0	12-5-12	14-7-8	17-4-5	26-0-0	29-2-14	36-1-0	41-0-4	43-1-8
6-5-0	6-0-12	2-1-12	2-8-13	8-7-12	3-2-14	6-10-2	4-11-4	2-1-4

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

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	0.56	Vert(LL)	-0.27	19-20	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.86	Vert(CT)	-0.44	19-20	>788	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.06	14	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS							Weight: 330 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 6-22,9-18: 2x4 SP No.3
WEBS	2x4 SP No.3

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 5-5-9 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-10.
BOT CHORD	Rigid ceiling directly applied or 5-2-5 oc bracing. Except: 1 Row at midpt 6-21, 9-19
WEBS	1 Row at midpt 5-23, 7-20, 8-20, 10-17, 11-17, 11-14

REACTIONS. (size) 2=0-3-8, 23=0-3-8, 14=0-3-8
Max Horz 2=262(LC 11)
Max Uplift 2=-110(LC 12), 23=-386(LC 9), 14=-286(LC 13)
Max Grav 2=453(LC 25), 23=1846(LC 2), 14=1297(LC 20)

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

TOP CHORD	2-3=-419/345, 3-5=-182/339, 5-6=-259/192, 6-7=-538/225, 7-8=-443/207, 8-9=-860/314, 9-10=-855/313, 10-11=-973/311
BOT CHORD	2-24=-217/326, 23-24=-217/326, 21-22=-992/152, 6-21=-1050/152, 19-20=-120/699, 15-17=-160/804, 14-15=-160/804
WEBS	3-24=-211/270, 3-23=-533/331, 5-23=-1378/280, 5-22=-144/1012, 6-20=-119/899, 8-20=-624/166, 8-19=-87/384, 17-19=-44/945, 10-19=-136/345, 11-15=0/310, 11-14=-1355/294

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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 2-9-12, Interior(1) 2-9-12 to 17-4-5, Exterior(2R) 17-4-5 to 23-5-8, Interior(1) 23-5-8 to 29-2-14, Exterior(2R) 29-2-14 to 35-4-1, Interior(1) 35-4-1 to 42-11-12 zone; cantilever right exposed ; end vertical right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=110, 23=386, 14=286.
8) 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 Velez, Joaquin, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES. T31038140
3582914	T14	Piggyback Base	1	1	Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:42 2023 Page 1
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1-6-0	6-5-0	6-0-12	2-1-12	2-8-13	4-5-9	4-2-2	3-2-14	6-10-2	7-0-8	1-6-8

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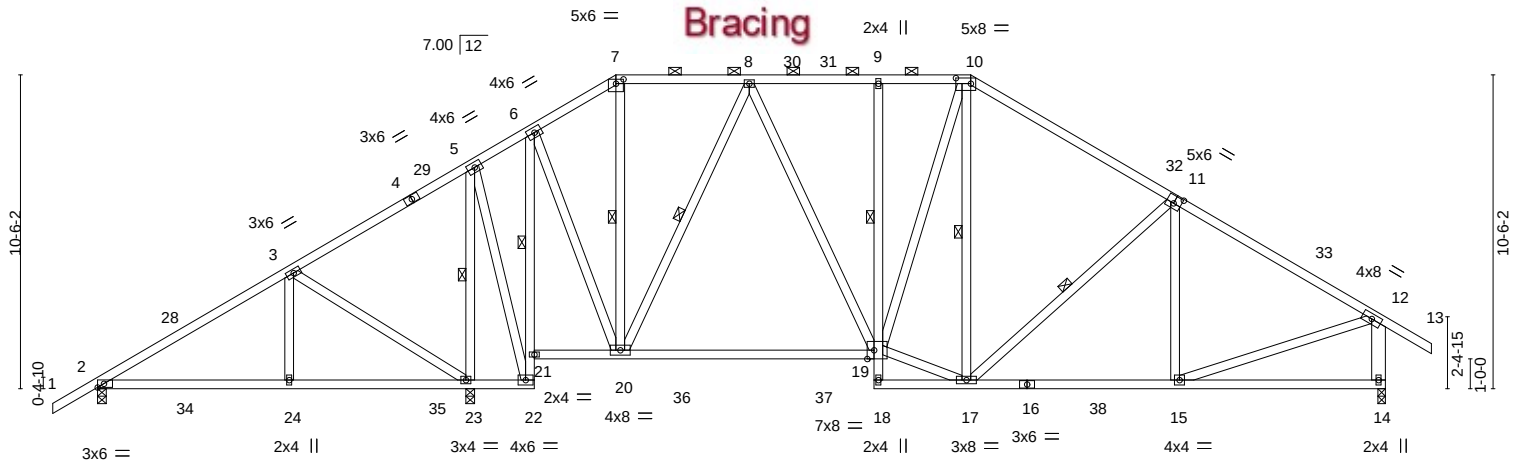

6-5-0	12-5-12	14-7-8	17-4-5	26-0-0	29-2-14	36-1-0	43-1-8
6-5-0	6-0-12	2-1-12	2-8-13	8-7-12	3-2-14	6-10-2	7-0-8

Plate Offsets (X,Y)-- [7:0-3-0,0-1-12], [10:0-6-0,0-2-4], [11:0-3-0,0-3-0], [19:0-2-12,Edge]

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	0.49	Vert(LL)	-0.27	19-20	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.87	Vert(CT)	-0.44	19-20	>821	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.06	14	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS							Weight: 329 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 6-22,9-18: 2x4 SP No.3
WEBS	2x4 SP No.3 *Except* 12-14: 2x6 SP No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-10-15 oc purlins, except end verticals, and 2-0-0 oc purlins (5-11-4 max.): 7-10.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 22-23,17-18 5-0-2 oc bracing: 21-22. 1 Row at midpt 6-21, 9-19
WEBS	1 Row at midpt 5-23, 7-20, 8-20, 10-17, 11-17

REACTIONS. (size) 2=0-3-8, 23=0-3-8, 14=0-3-0
Max Horz 2=271(LC 11)
Max Uplift 2=-115(LC 12), 23=-374(LC 9), 14=-309(LC 13)
Max Grav 2=440(LC 25), 23=1941(LC 2), 14=1319(LC 20)

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

TOP CHORD	2-3=-392/353, 3-5=-173/378, 5-6=-257/211, 6-7=-565/244, 7-8=-466/224, 8-9=-952/343, 9-10=-947/343, 10-11=-1092/348, 11-12=-1337/322, 12-14=-1214/326
BOT CHORD	2-24=-207/304, 23-24=-207/304, 21-22=-1072/142, 6-21=-1128/142, 19-20=-110/755, 15-17=-197/1069
WEBS	3-24=-211/270, 3-23=-533/331, 5-23=-1469/279, 5-22=-134/1091, 6-20=-110/970, 8-20=-710/180, 8-19=-101/468, 17-19=-51/1050, 10-19=-138/316, 11-17=-364/169, 12-15=-162/1051

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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 2-9-12, Interior(1) 2-9-12 to 17-4-5, Exterior(2R) 17-4-5 to 23-5-8, Interior(1) 23-5-8 to 29-2-14, Exterior(2R) 29-2-14 to 35-4-1, Interior(1) 35-4-1 to 44-8-0 zone; end vertical right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=115, 23=374, 14=309.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T15	Piggyback Base	3	1	T31038141
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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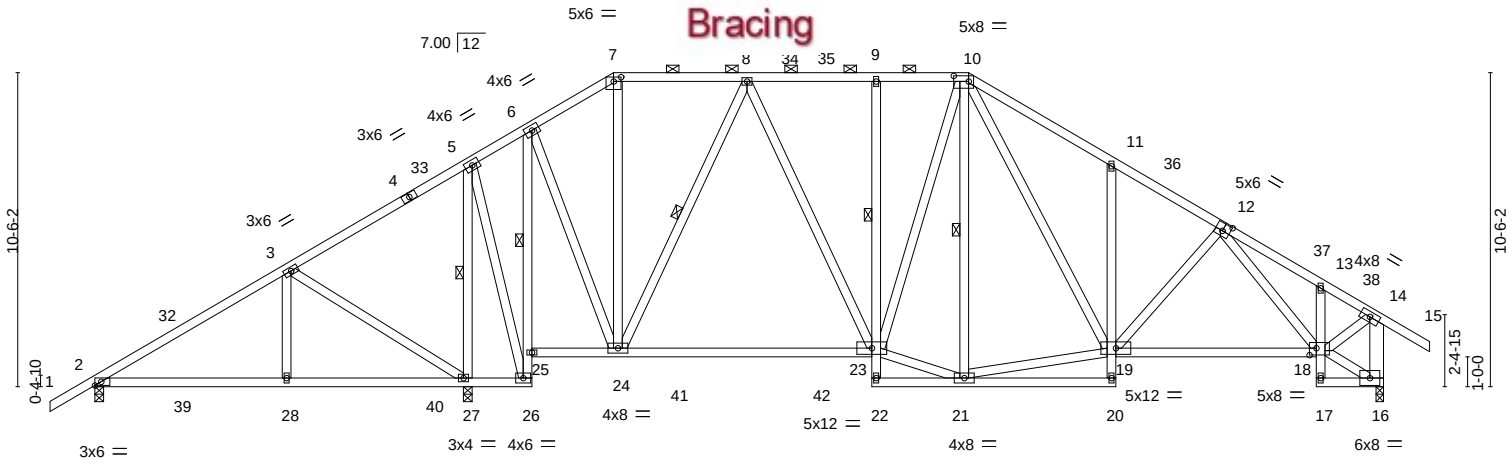
ID:rBnvGlyPNoMajBI2sqc2kZycQXD-wQSTWmRphqMv5RphMycN1AFQmfzmetpZTA9LIlyyXlx

1-6-0	6-5-0	12-5-12	14-7-8	17-4-5	21-9-14	26-0-0	29-2-14	34-2-0	37-8-0	40-10-8	43-1-8	44-8-0
1-6-0	6-5-0	6-0-12	2-1-12	2-8-13	4-5-9	4-2-2	3-2-14	4-11-2	3-6-0	3-2-8	2-3-0	1-6-8

Scale = 1:77.1



6-5-0	12-5-12	14-7-8	17-4-5	26-0-0	29-2-14	34-2-0	40-10-8	43-1-8
6-5-0	6-0-12	2-1-12	2-8-13	8-7-12	3-2-14	4-11-2	6-8-8	2-3-0

Plate Offsets (X,Y)-- [7:0-3-0,0-1-12], [10:0-6-0,0-2-4], [12:0-3-0,0-3-0], [18:0-2-12,0-2-12]

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	0.55	Vert(LL)	-0.27	23-24	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.97	Vert(CT)	-0.46	23-24	>796	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.98	Horz(CT)	0.10	16	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS							Weight: 355 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 6-26,9-22,11-20,13-17: 2x4 SP No.3
WEBS	2x4 SP No.3 *Except* 14-16: 2x6 SP No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 3-7-13 oc purlins, except end verticals, and 2-0-0 oc purlins (5-5-15 max.): 7-10.
BOT CHORD	Rigid ceiling directly applied or 4-8-13 oc bracing. Except: 1 Row at midpt 6-25, 9-23
WEBS	1 Row at midpt 5-27, 8-24, 10-21

REACTIONS. (size) 2=0-3-8, 27=0-3-8, 16=0-3-0
Max Horz 2=271(LC 11)
Max Uplift 2=-107(LC 12), 27=-467(LC 9), 16=-436(LC 13)
Max Grav 2=409(LC 25), 27=2110(LC 2), 16=1754(LC 20)

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

TOP CHORD	2-3=-319/306, 3-5=-196/451, 6-7=-603/256, 7-8=-500/234, 8-9=-1106/423, 9-10=-1101/423, 10-11=-1961/788, 11-12=-1892/671, 12-13=-1596/571, 13-14=-1494/500, 14-16=-1709/610
BOT CHORD	26-27=-261/138, 25-26=-1215/273, 6-25=-1269/263, 23-24=-174/846, 11-19=-502/357, 18-19=-519/1562, 13-18=-256/159
WEBS	3-28=-210/270, 3-27=-532/330, 5-27=-1629/366, 5-26=-220/1232, 6-24=-180/1097, 8-24=-870/288, 8-23=-206/639, 21-23=-220/1223, 10-23=-121/260, 10-21=-462/149, 19-21=-222/1050, 10-19=-476/1096, 14-18=-483/1480, 12-18=-549/198

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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 2-9-12, Interior(1) 2-9-12 to 17-4-5, Exterior(2R) 17-4-5 to 23-5-8, Interior(1) 23-5-8 to 29-2-14, Exterior(2R) 29-2-14 to 35-4-1, Interior(1) 35-4-1 to 44-8-0 zone; end vertical right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=107, 27=467, 16=436.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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

July 13,2023

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
   Uniform Loads (plf)
   Vert: 1-7=-54, 7-10=-54, 10-38=-104, 14-38=-54, 14-15=-54, 26-29=-20, 23-25=-20, 20-22=-20, 18-19=-20, 16-17=-20

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

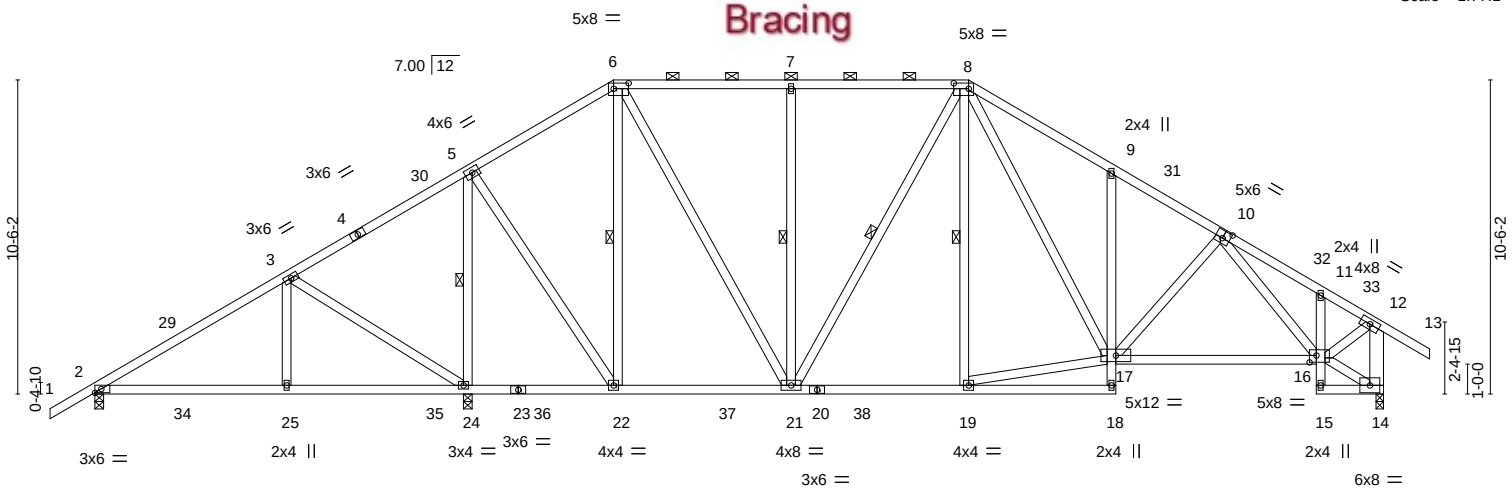
Job	Truss	Truss Type	Qty	Ply	NICKELSON RES. T31038142
3582914	T16	Piggyback Base	1	1	Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:42 2023 Page 1
ID:rBnvGIyPNoMajBI2sqc2kZycQXD-2fCyhPOJdcrUdpVw76XRtK5kq2f8i3dzYYB8d_yyXm?

-1-6-0	6-5-0	12-5-12	17-4-5	23-3-9	29-2-14	34-2-0	37-8-0	40-10-8	43-1-8	44-8-0
1-6-0	6-5-0	6-0-12	4-10-9	5-11-5	5-11-5	4-11-2	3-6-0	3-2-8	2-3-0	1-6-8

Scale = 1:77.1



6-5-0	12-5-12	17-4-5	23-3-9	29-2-14	34-2-0	40-10-8	43-1-8
6-5-0	6-0-12	4-10-9	5-11-5	5-11-5	4-11-2	6-8-8	2-3-0

Plate Offsets (X,Y)-- [6:0-6-0,0-2-4], [8:0-6-0,0-2-4], [10:0-3-0,0-3-0], [16:0-2-12,0-2-12]

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	0.55	Vert(LL)	-0.11	16-17	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.75	Vert(CT)	-0.23	16-17	>999	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.99	Horz(CT)	0.07	14	n/a	n/a		
BCDL	10.0	Code	FBC2020/TPI2014	Matrix-MS							Weight: 321 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 9-18,11-15: 2x4 SP No.3
WEBS	2x4 SP No.3 *Except* 12-14: 2x6 SP No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 3-7-9 oc purlins, except end verticals, and 2-0-0 oc purlins (5-8-14 max.): 6-8.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 5-24, 6-22, 7-21, 8-21, 8-19

REACTIONS. (size) 2=0-3-8, 24=0-3-8, 14=0-3-0
Max Horz 2=271(LC 11)
Max Uplift 2=-96(LC 12), 24=-439(LC 12), 14=-420(LC 13)
Max Grav 2=451(LC 23), 24=2105(LC 2), 14=1772(LC 20)

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

TOP CHORD	2-3=-396/219, 3-5=-127/343, 5-6=-613/218, 6-7=-937/331, 7-8=-937/331, 8-9=-1991/759, 9-10=-1920/649, 10-11=-1612/564, 11-12=-1510/494, 12-14=-1726/603
BOT CHORD	2-25=-200/331, 24-25=-200/331, 22-24=-262/219, 21-22=-125/482, 19-21=-229/1101, 9-17=-505/362, 16-17=-512/1587, 11-16=-257/158
WEBS	3-25=-219/271, 3-24=-532/338, 5-24=-1607/439, 5-22=-240/1178, 6-22=-768/246, 6-21=-288/946, 7-21=-362/179, 8-21=-431/203, 17-19=-211/1114, 8-17=-482/1100, 12-16=-477/1496, 10-16=-563/185

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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 2-9-12, Interior(1) 2-9-12 to 17-4-5, Exterior(2R) 17-4-5 to 23-3-9, Interior(1) 23-3-9 to 29-2-14, Exterior(2R) 29-2-14 to 35-4-1, Interior(1) 35-4-1 to 44-8-0 zone; end vertical right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2 except (jt=lb) 24=439, 14=420.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-6=-54, 6-8=-54, 8-33=-104, 12-33=-54, 12-13=-54, 18-26=-20, 16-17=-20, 14-15=-20

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

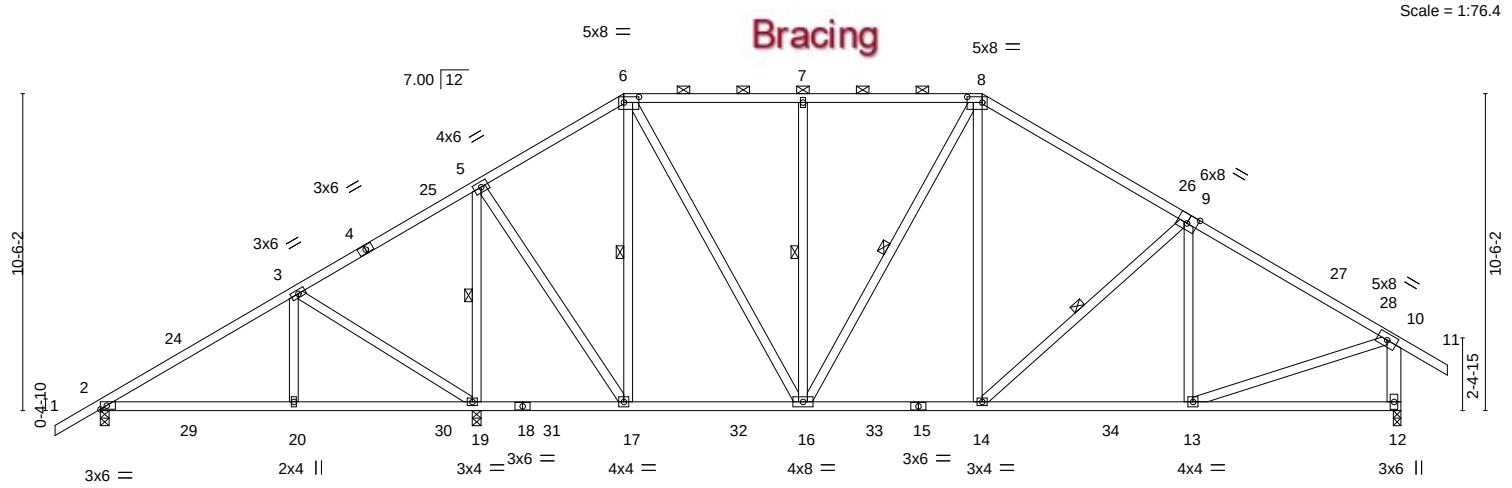
Job	Truss	Truss Type	Qty	Ply	NICKELSON RES. T31038143
3582914	T17	Piggyback Base	5	1	Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:48 2023 Page 1
ID:rBnvGIyPNoMajBI2sqc2kZycQXD-tpaExSS4CScdLkz3TNer7bKhFSjb6r5sxUeSpdyyXlv

1-6-0	6-5-0	12-5-12	17-4-5	23-3-9	29-2-14	36-1-0	43-1-8	44-8-0
1-6-0	6-5-0	6-0-12	4-10-9	5-11-5	5-11-5	6-10-2	7-0-8	1-6-8

Scale = 1:76.4



6-5-0	12-5-12	17-4-5	23-3-9	29-2-14	36-1-0	43-1-8
6-5-0	6-0-12	4-10-9	5-11-5	5-11-5	6-10-2	7-0-8

Plate Offsets (X,Y)-- [6:0-6-0,0-2-4], [8:0-6-0,0-2-4], [9:0-4-0,Edge]

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	0.81	Vert(LL)	-0.10	13-14	>999	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.69	Vert(CT)	-0.17	13-14	>999	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.74	Horz(CT)	0.04	12	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-MS							Weight: 295 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.1 *Except* 6-8,1-4: 2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 10-12: 2x6 SP No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-1-14 oc purlins, except end verticals, and 2-0-0 oc purlins (5-7-1 max.): 6-8.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 17-19 8-10-6 oc bracing: 13-14.
WEBS	1 Row at midpt 5-19, 6-17, 7-16, 8-16, 9-14

REACTIONS. (size) 2=0-3-8, 19=0-3-8, 12=0-3-0
Max Horz 2=271(LC 11)
Max Uplift 2=-102(LC 12), 19=-430(LC 12), 12=-425(LC 13)
Max Grav 2=479(LC 25), 19=2064(LC 2), 12=1817(LC 20)

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

TOP CHORD	2-3=-449/244, 3-5=-121/274, 5-6=-662/232, 6-7=-975/340, 7-8=-975/340, 8-9=-1502/514, 9-10=-1907/625, 10-12=-1710/636
BOT CHORD	2-20=-205/390, 19-20=-205/390, 16-17=-129/524, 14-16=-239/1146, 13-14=-443/1478
WEBS	3-20=-218/271, 3-19=-530/337, 5-19=-1568/420, 5-17=-224/1143, 6-17=-732/233, 6-16=-280/937, 7-16=-354/177, 8-16=-445/207, 8-14=-167/659, 9-14=-587/310, 9-13=-269/169, 10-13=-394/1420

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) 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 2-9-12, Interior(1) 2-9-12 to 17-4-5, Exterior(2R) 17-4-5 to 23-3-9, Interior(1) 23-3-9 to 29-2-14, Exterior(2R) 29-2-14 to 35-4-1, Interior(1) 35-4-1 to 44-8-0 zone; end vertical right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=102, 19=430, 12=425.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-6=-54, 6-8=-54, 8-28=-104, 10-28=-54, 10-11=-54, 12-21=-20

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

Date:

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	T18G	Common Supported Gable	1	1	T31038144
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:43 2023 Page 1
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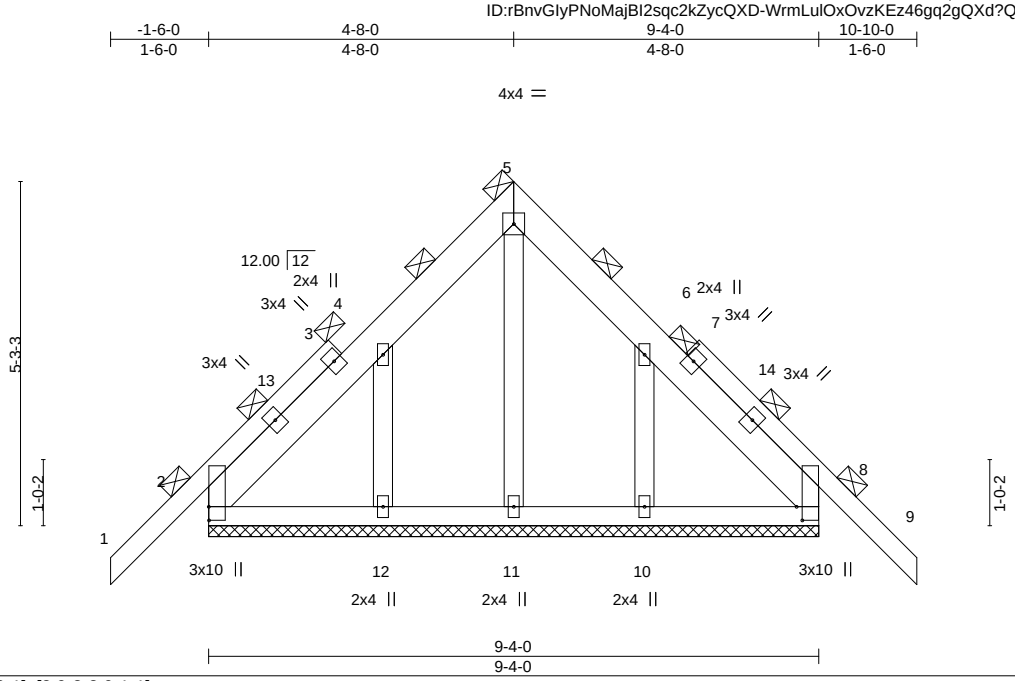

Plate Offsets (X,Y)-- [2:0-2-8,0-0-1], [8:0-2-8,0-1-1]

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	0.17	Vert(LL)	-0.01	9	n/r	120	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.05	Vert(CT)	-0.01	9	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-S							Weight: 74 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2 *Except*
1-3,7-9: 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD 2-0-0 oc purlins (6-0-0 max.).
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 9-4-0.
(lb) - Max Horz 2=-124(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 8 except 12=-125(LC 12), 10=-121(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 2, 8, 11, 12, 10

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=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 4-8-0, Corner(3R) 4-8-0 to 7-8-0, Exterior(2N) 7-8-0 to 10-10-0 zone; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 8 except (jt=lb) 12=125, 10=121.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	V01	Valley	1	1	T31038145
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:43 2023 Page 1
ID:rBnvGIyPNoMajBI2sqc2kZycQXD-WrmLulOxOvzKEz46gq2gQXd?KR8URiy7nCwh9QyyXm_

4-9-6	8-9-6	12-9-6	16-9-6	20-9-6	24-9-6	28-9-6	32-9-6	36-9-6	41-6-12
4-9-6	4-0-0	4-0-0	4-0-0	4-0-0	4-0-0	4-0-0	4-0-0	4-0-0	4-9-6

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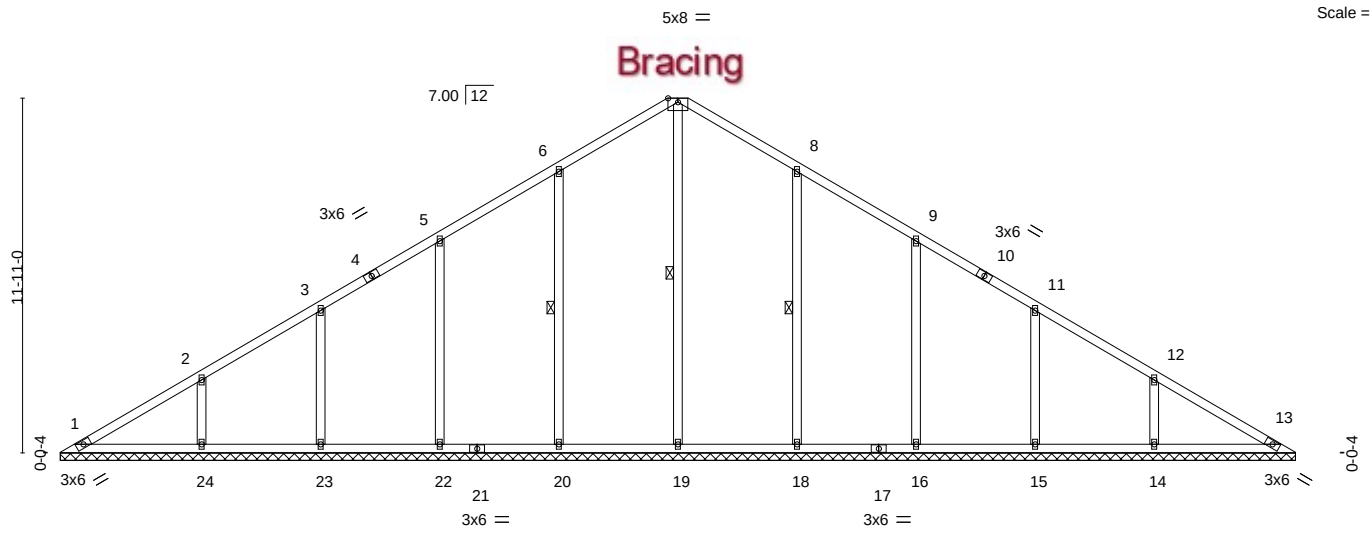

4-9-6	8-9-6	12-9-6	16-9-6	24-9-6	28-9-6	32-9-6	36-9-6	41-6-12
4-9-6	4-0-0	4-0-0	4-0-0	8-0-0	4-0-0	4-0-0	4-0-0	4-9-6

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	0.18	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.17	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.01	13	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-S							Weight: 217 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.
WEBS	1 Row at midpt 7-19, 6-20, 8-18

REACTIONS. All bearings 41-5-14.
(lb) - Max Horz 1=-260(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 20=-136(LC 12), 22=-126(LC 12), 23=-121(LC 12), 24=-149(LC 12), 18=-136(LC 13), 16=-127(LC 13), 15=-121(LC 13), 14=-149(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 13 except 19=413(LC 22), 20=440(LC 19), 22=430(LC 19), 23=378(LC 19), 24=427(LC 19), 18=439(LC 20), 16=431(LC 20), 15=378(LC 20), 14=427(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 6-7=-165/251
WEBS 2-24=-261/170, 12-14=-261/170

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) 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) 0-6-8 to 4-9-6, Interior(1) 4-9-6 to 20-9-6, Exterior(2R) 20-9-6 to 24-9-6, Interior(1) 24-9-6 to 41-0-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 20=136, 22=126, 23=121, 24=149, 18=136, 16=127, 15=121, 14=149.

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Joaquin Velez PE No.68182
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16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	V02	Valley	1	1	T31038146
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

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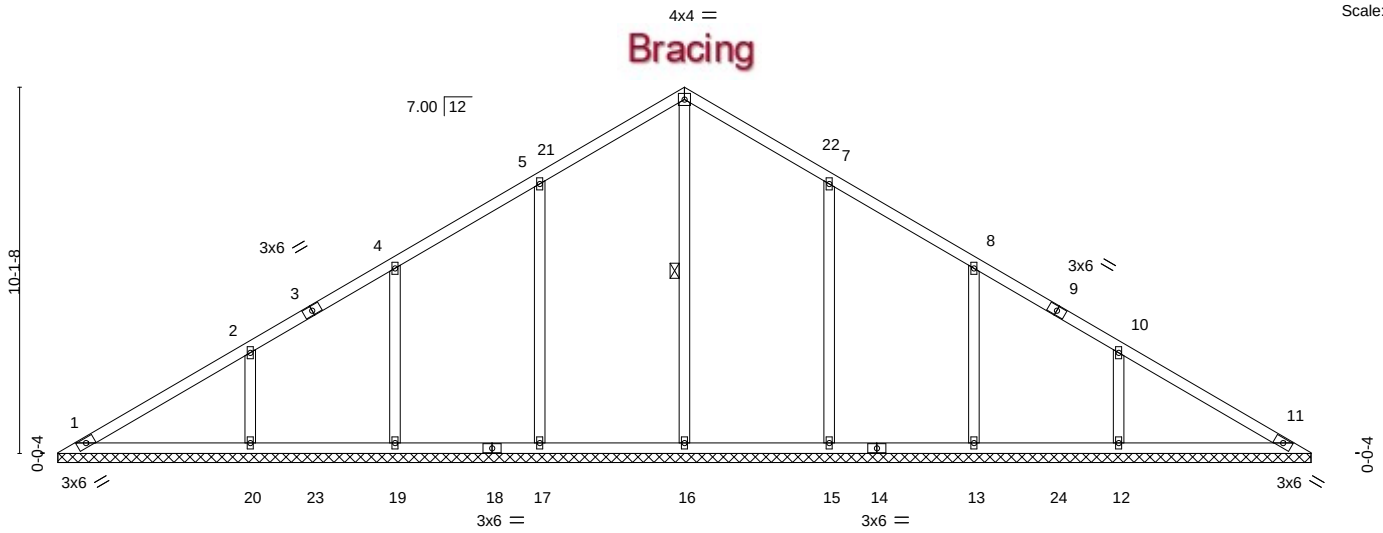
5-4-4	9-4-4	13-4-4	17-4-4	21-4-4	25-4-4	29-4-4	34-8-7
5-4-4	4-0-0	4-0-0	4-0-0	4-0-0	4-0-0	4-0-0	5-4-4

Scale: 3/16"=1'



5-4-4	9-4-4	13-4-4	21-4-4	25-4-4	29-4-4	34-8-7
5-4-4	4-0-0	4-0-0	8-0-0	4-0-0	4-0-0	5-4-4

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	0.23	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.18	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.01	11	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-S							Weight: 167 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.
WEBS	1 Row at midpt 6-16

REACTIONS. All bearings 34-7-10.
(lb) - Max Horz 1=216(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 17=-140(LC 12), 19=-113(LC 12), 20=-164(LC 12), 15=-140(LC 13), 13=-113(LC 13), 12=-164(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 11 except 16=388(LC 22), 17=452(LC 19), 19=387(LC 19), 20=479(LC 19), 15=451(LC 20), 13=387(LC 20), 12=479(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-20=-286/186, 10-12=-286/186

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) 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) 0-6-8 to 4-0-1, Interior(1) 4-0-1 to 17-4-4, Exterior(2R) 17-4-4 to 20-9-13, Interior(1) 20-9-13 to 34-2-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 17=140, 19=113, 20=164, 15=140, 13=113, 12=164.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	V03	Valley	1	1	T31038147
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:44 2023 Page 1
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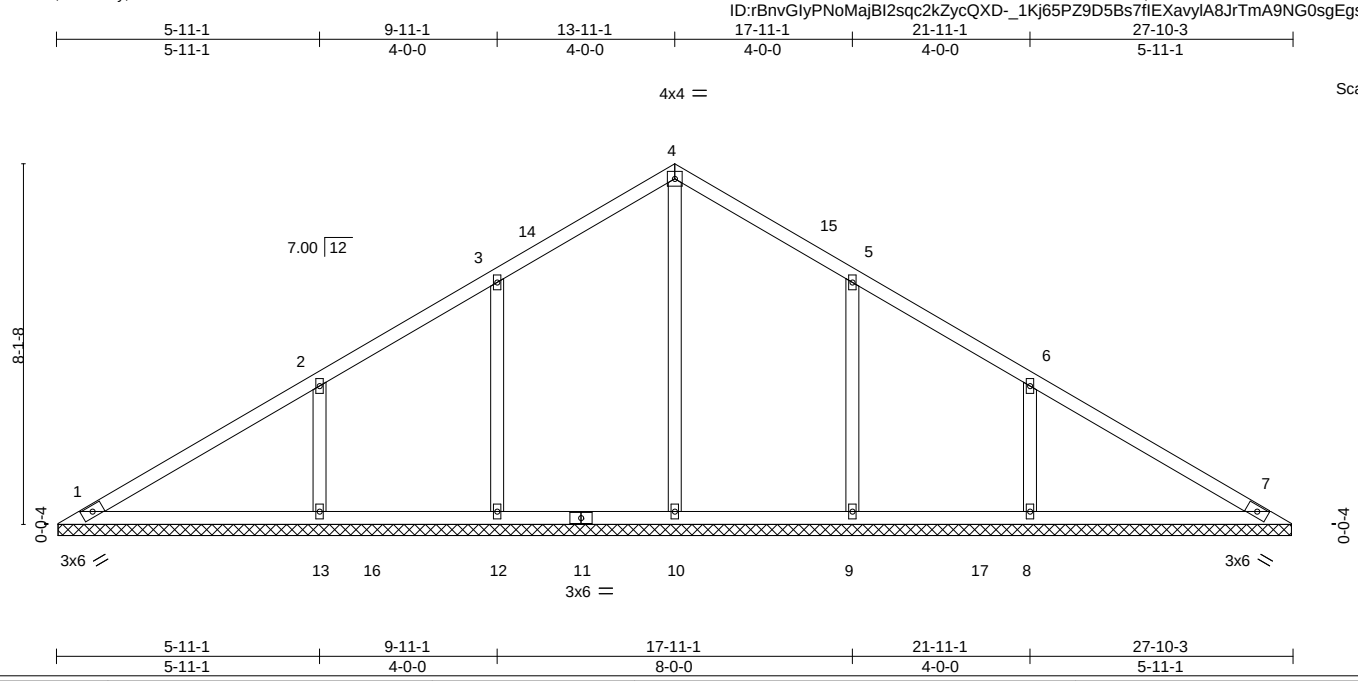

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.23	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.00	7	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-S							Weight: 123 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 27-9-5.
(lb) - Max Horz 1=-172(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 7 except 12=-121(LC 12), 13=-176(LC 12), 9=-120(LC 13), 8=-176(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 10=383(LC 22), 12=393(LC 19), 13=524(LC 19), 9=393(LC 20), 8=524(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-13=-307/199, 6-8=-307/199

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) 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) 0-6-8 to 3-6-8, Interior(1) 3-6-8 to 13-11-1, Exterior(2R) 13-11-1 to 16-11-1, Interior(1) 16-11-1 to 27-3-11 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7 except (jt=lb) 12=121, 13=176, 9=120, 8=176.

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

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	V04	Valley	1	1	T31038148
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:44 2023 Page 1
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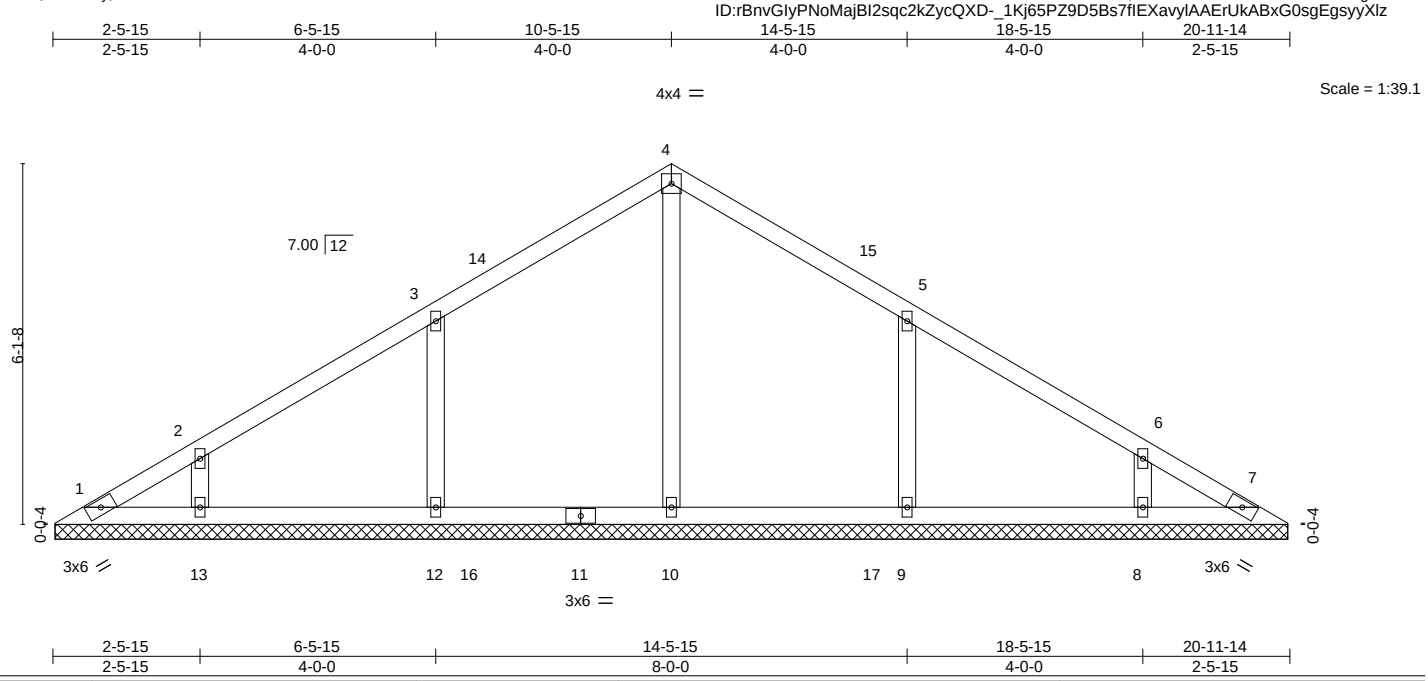

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.17	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	7	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-S							Weight: 86 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 20-11-1.
(lb) - Max Horz 1=-128(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 1, 7 except 12=-142(LC 12), 13=-104(LC 12), 9=-142(LC 13), 8=-104(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 7 except 10=356(LC 19), 12=415(LC 19), 13=301(LC 19), 9=415(LC 20), 8=301(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-12=-250/167

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) 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) 0-6-8 to 3-6-8, Interior(1) 3-6-8 to 10-5-15, Exterior(2R) 10-5-15 to 13-5-15, Interior(1) 13-5-15 to 20-5-6 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7 except (jt=lb) 12=142, 13=104, 9=142, 8=104.

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16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

July 13,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	NICKELSON RES.
3582914	V05	GABLE	1	1	T31038149
					Job Reference (optional)

Builders FirstSource, Lake City, FL 32055

Run: 8.530 s Jan 6 2022 Print: 8.530 s Jan 6 2022 MiTek Industries, Inc. Thu Jul 13 08:15:44 2023 Page 1
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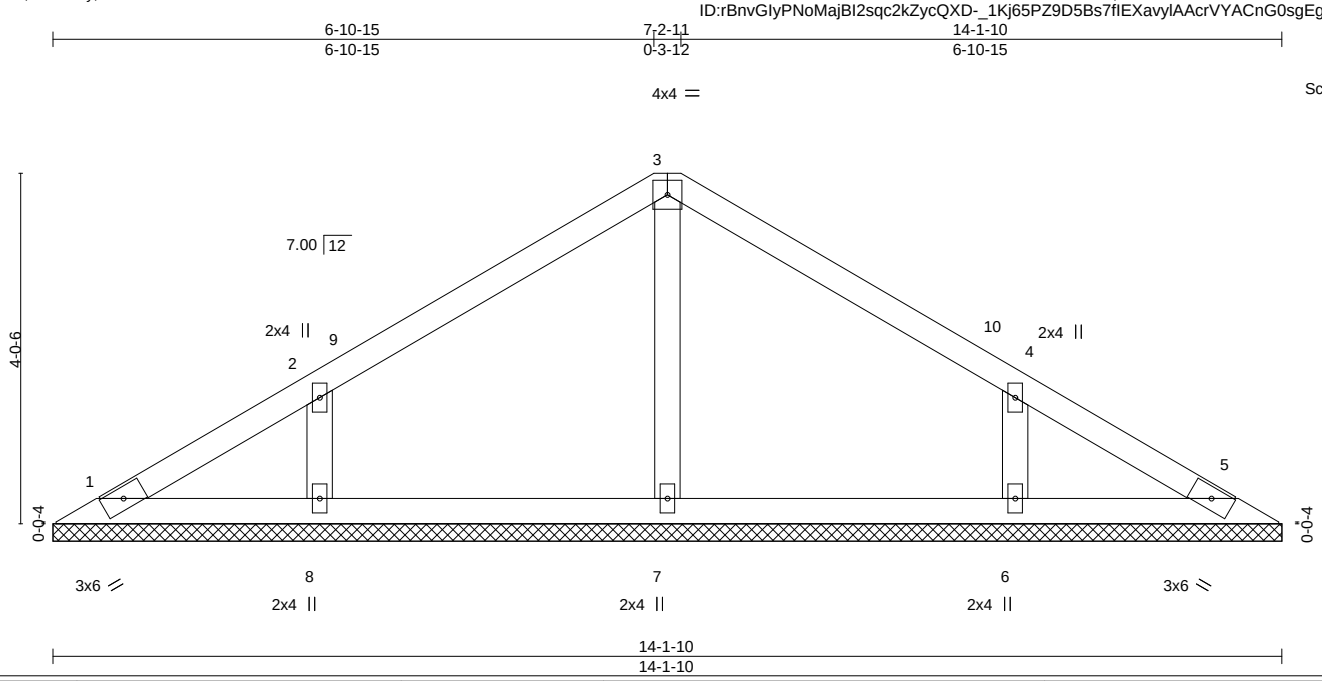


LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.12	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code FBC2020/TPI2014		Matrix-S							Weight: 52 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 14-1-10.
(lb) - Max Horz 1=-84(LC 8)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5, 7 except 8=-129(LC 12), 6=-129(LC 13)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=255(LC 1), 8=296(LC 19), 6=296(LC 20)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=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) 0-6-8 to 3-6-8, Interior(1) 3-6-8 to 7-0-13, Exterior(2R) 7-0-13 to 11-0-13, Interior(1) 11-0-13 to 13-7-2 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5, 7 except (jt=lb) 8=129, 6=129.

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

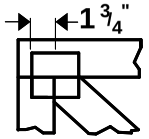
Joaquin Velez PE No.68182
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
Date:

July 13,2023

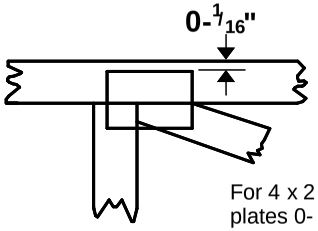
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

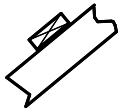
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

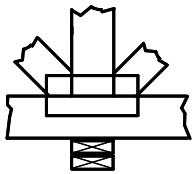
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

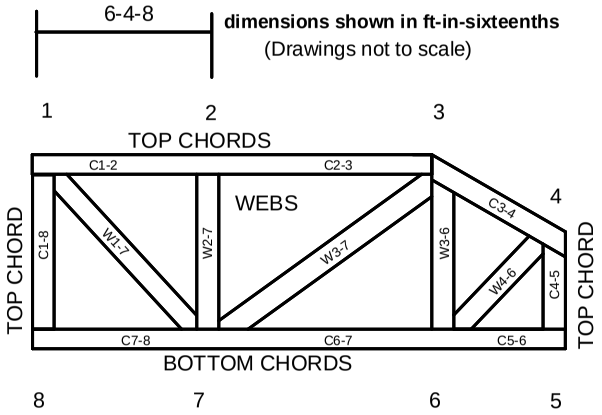


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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

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

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

RE: 2718981 - DETAILS

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

Site Information:

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

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

Name: License #:
Address:
City: State:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

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

This package includes 20 individual, General Truss Details and 0 Additional Drawings.
With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

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

This item has been electronically signed and sealed by ORegan, Philip, PE using a Digital Signature.
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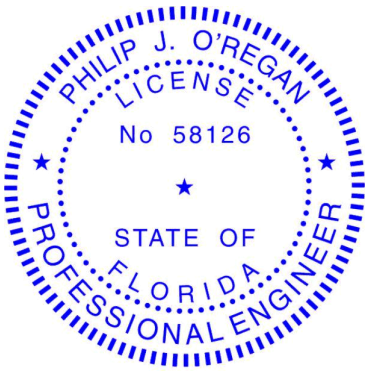
The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Builders FirstSource-Jacksonville.

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

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



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

April 2,2021

RE: $JOBNAME - $JOBDESC

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

Site Information:

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

MiTek USA, Inc.

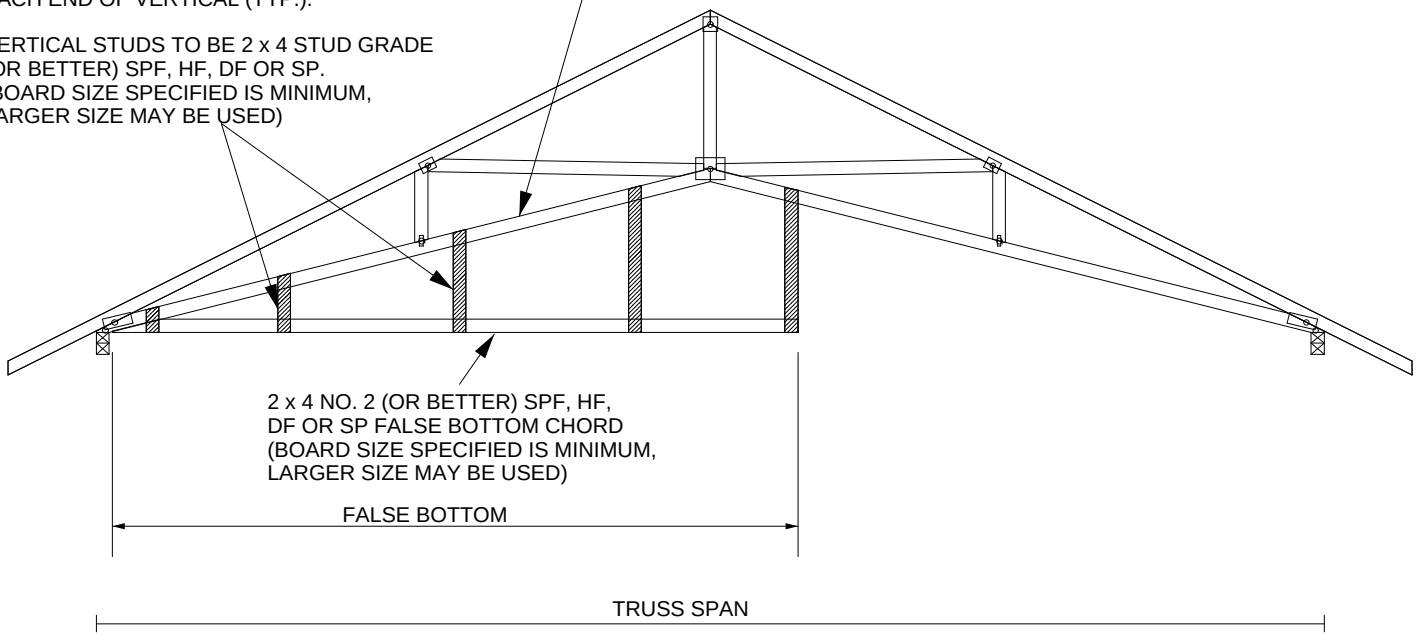
MAIN TRUSS MANUFACTURED WITHOUT FALSE BOTTOM CHORD.

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

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

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

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



NOTES:

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

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

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

April 2,2021

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

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

MiTek USA, Inc.

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

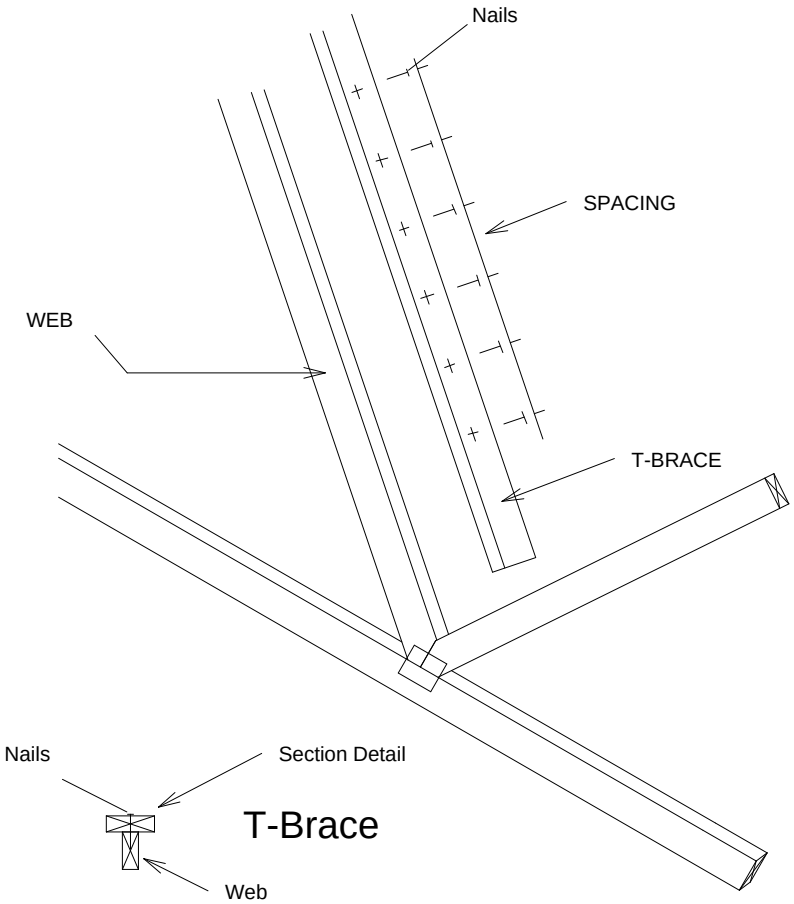
Note: This detail NOT to be used to convert T-Brace / I-Brace webs to continuous lateral braced webs.

Nailing Pattern		
T-Brace size	Nail Size	Nail Spacing
2x4 or 2x6 or 2x8	10d (0.131" X 3")	6" o.c.
Note: Nail along entire length of T-Brace / I-Brace (On Two-Ply's Nail to Both Plies)		

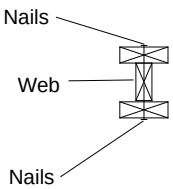
	Brace Size for One-Ply Truss	
	Specified Continuous Rows of Lateral Bracing	
Web Size	1	2
2x3 or 2x4	2x4 T-Brace	2x4 I-Brace
2x6	2x6 T-Brace	2x6 I-Brace
2x8	2x8 T-Brace	2x8 I-Brace

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

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



T-Brace



I-Brace

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

April 2,2021

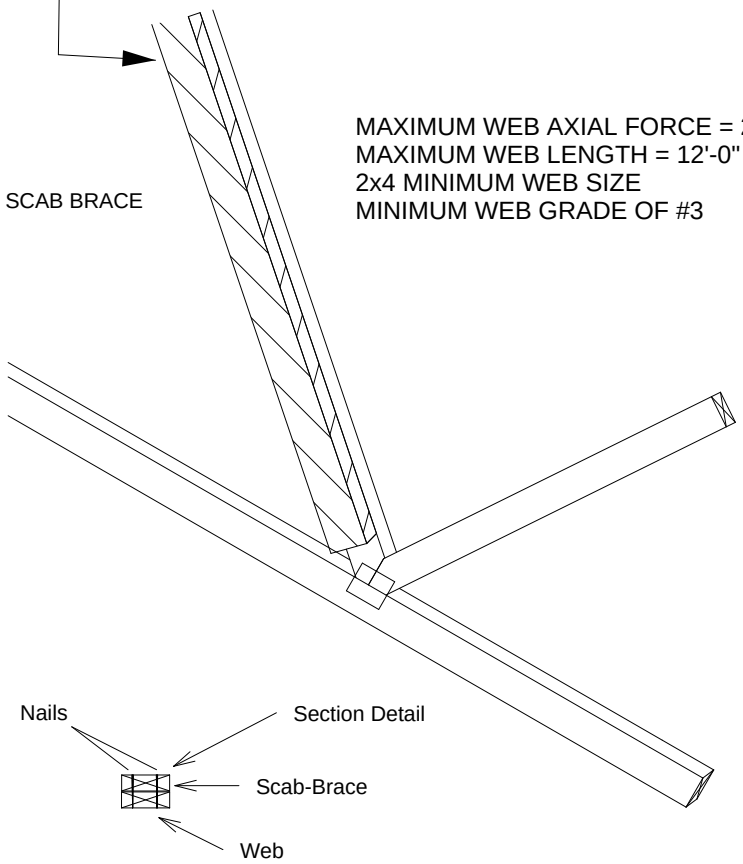
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

MiTek USA, Inc.

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

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

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



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

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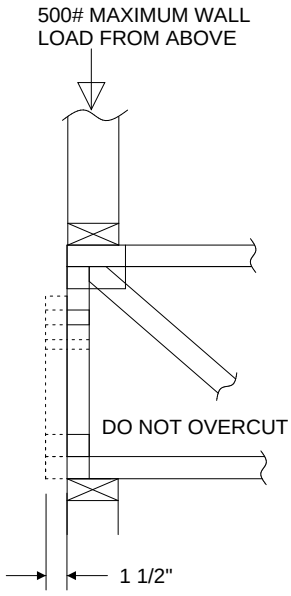
Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

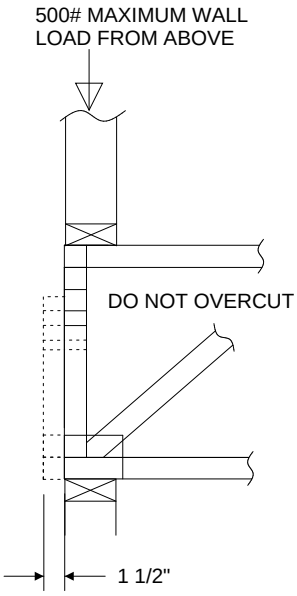
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

MiTek USA, Inc.

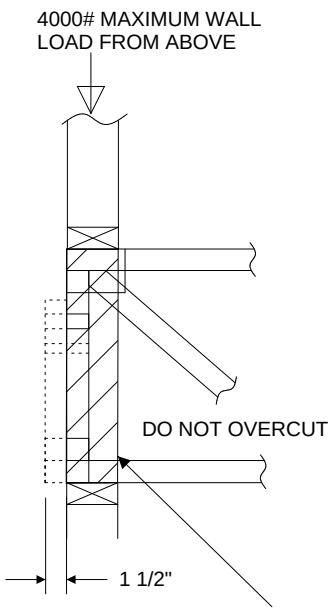
1. THIS IS A SPECIFIC REPAIR DETAIL TO BE USED ONLY FOR ITS ORIGINAL INTENTION. THIS REPAIR DOES NOT IMPLY THAT THE REMAINING PORTION OF THE TRUSS IS UNDAMAGED. THE ENTIRE TRUSS SHALL BE INSPECTED TO VERIFY THAT NO FURTHER REPAIRS ARE REQUIRED. WHEN THE REQUIRED REPAIRS ARE PROPERLY APPLIED, THE TRUSS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



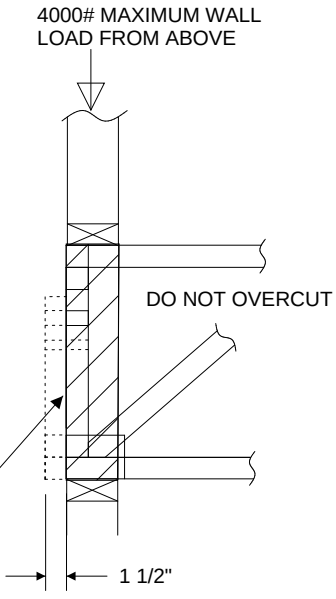
REFER TO INDIVIDUAL TRUSS DESIGN FOR PLATE SIZES AND LUMBER GRADES



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.

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

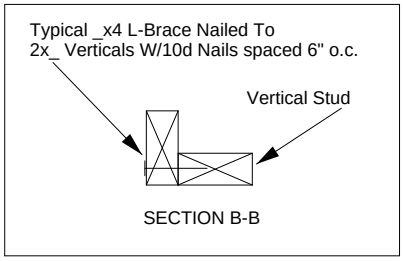
Philip J. O'Regan PE No.58126
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

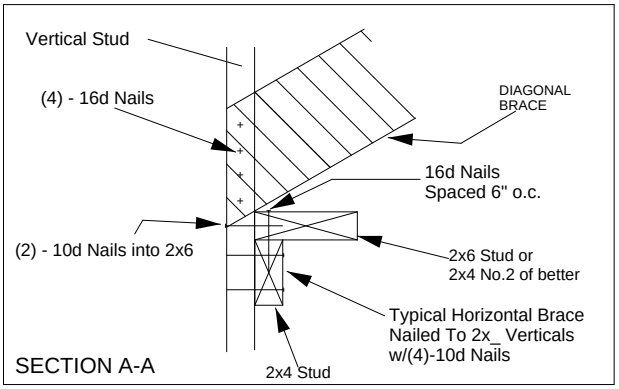
April 2,2021

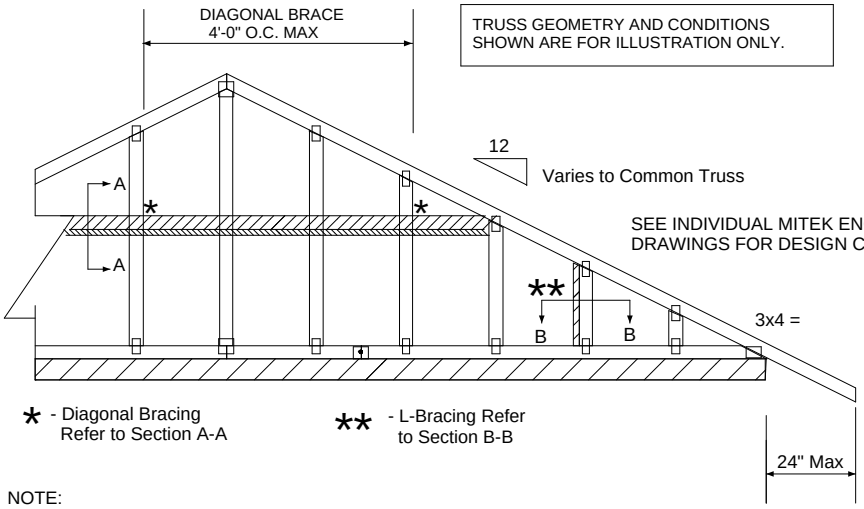
MiTek
6904 Parke East Blvd.
Tampa, FL 36610

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

MiTek USA, Inc.





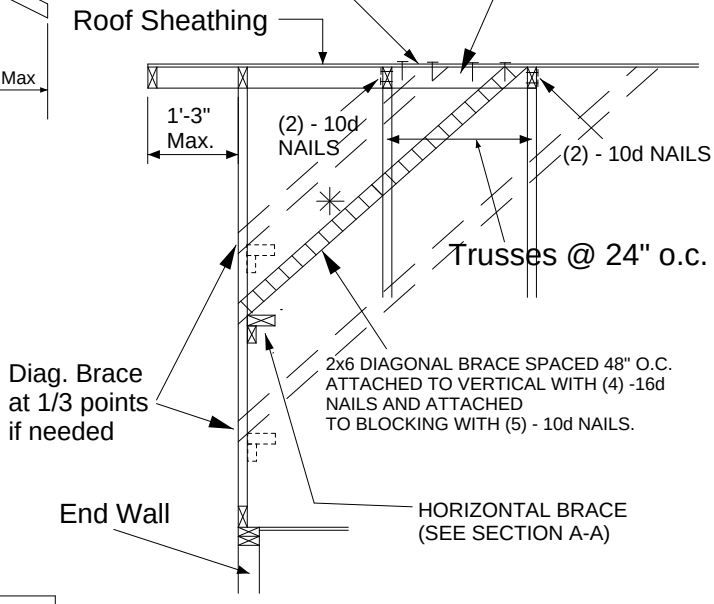


TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY.

SEE INDIVIDUAL MITEK ENGINEERING DRAWINGS FOR DESIGN CRITERIA

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

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



* - Diagonal Bracing Refer to Section A-A

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

24" Max

NOTE:
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH. GRADES: 1x4 SRB OR 2x4 STUD OR BETTER WITH ONE ROW OF 10d NAILS SPACED 6" O.C.
5. DIAGONAL BRACE TO BE APPROXIMATELY 45 DEGREES TO ROOF DIAPHRAM AT 4'-0" O.C.
6. CONSTRUCT HORIZONTAL BRACE CONNECTING A 2x6 STUD AND A 2x4 STUD AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST STUD. ATTACH TO VERTICAL STUDS WITH (4) 10d NAILS THROUGH 2x4. (REFER TO SECTION A-A)
7. GABLE STUD DEFLECTION MEETS OR EXCEEDS L/240.
8. THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
9. DO NOT USE FLAT BOTTOM CHORD GABLES NEXT TO SCISSOR TYPE TRUSSES.
10. SOUTHERN PINE LUMBER DESIGN VALUES ARE THOSE EFFECTIVE 06-01-13 BY SPIB/ALSC.
11. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

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

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

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Philip J. O'Regan PE No.58126
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6904 Parke East Blvd. Tampa FL 33610
Date:

April 2,2021

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

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

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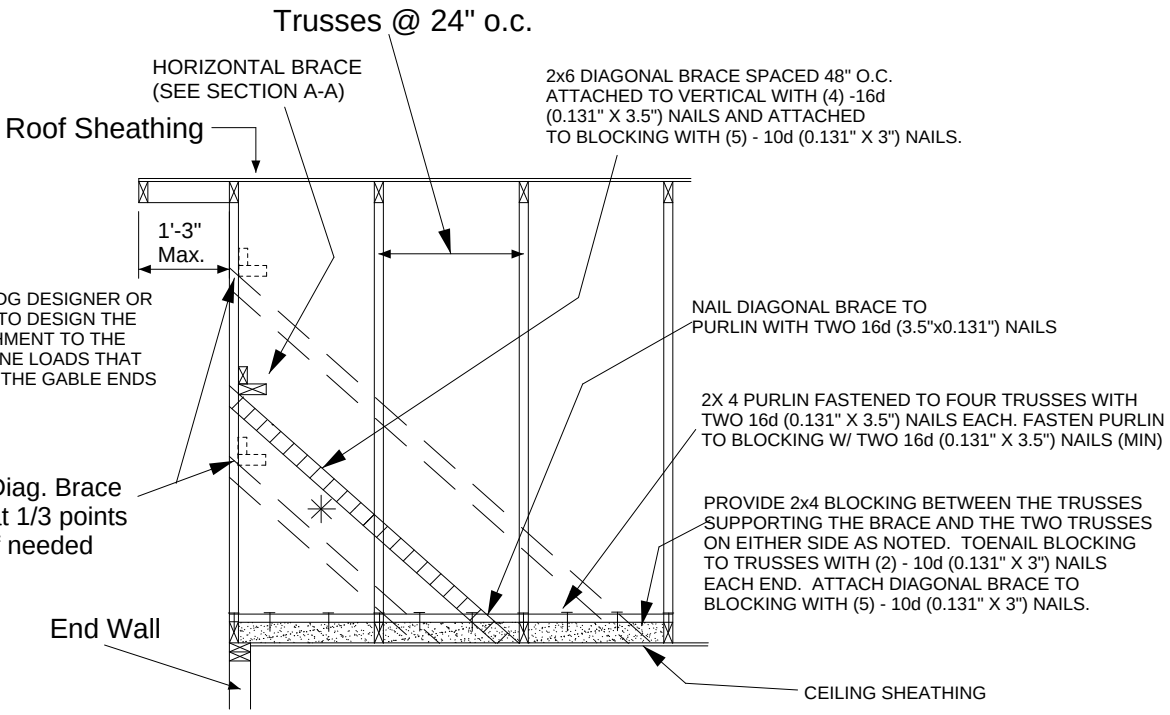
6904 Parke East Blvd.
Tampa, FL 36610

MiTek USA, Inc.

ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD



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

BRACING REQUIREMENTS FOR STRUCTURAL GABLE TRUSSES

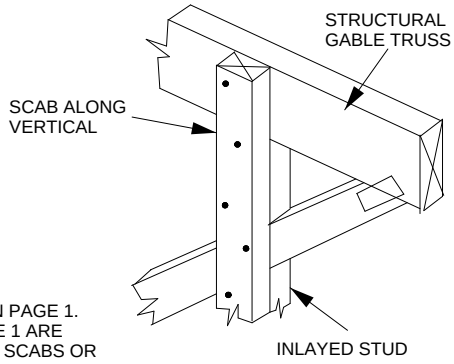
STRUCTURAL GABLE TRUSSES MAY BE BRACED AS NOTED:

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

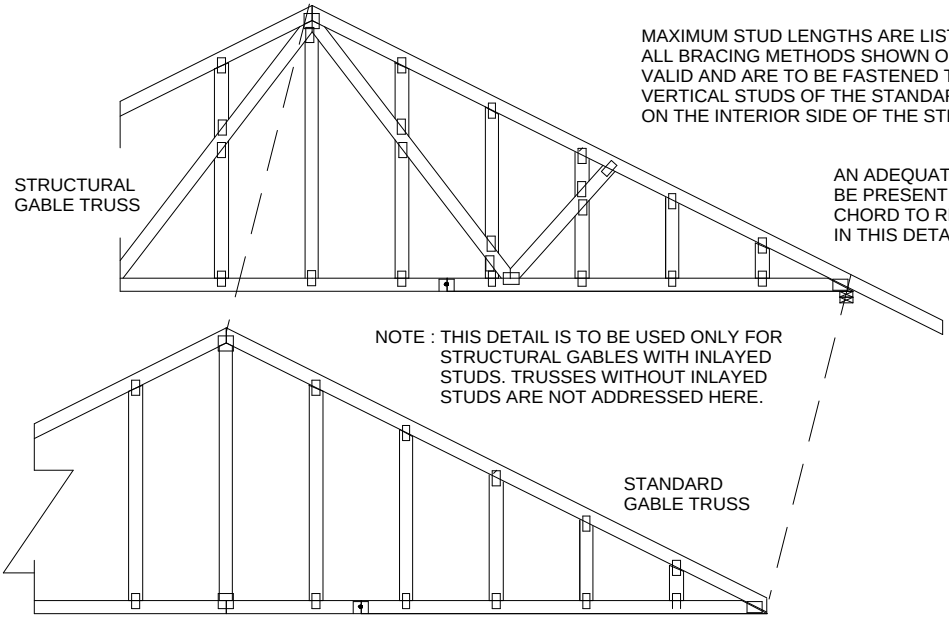
METHOD 2 : ATTACH 2X _ SCABS TO THE FACE OF EACH VERTICAL MEMBER ON THE STRUCTURAL GABLE PER THE FOLLOWING NAILING SCHEDULE. SCABS ARE TO BE OF THE SAME SIZE, GRADE AND SPECIES AS THE TRUSS VERTICALS

NAILING SCHEDULE:

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



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



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

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

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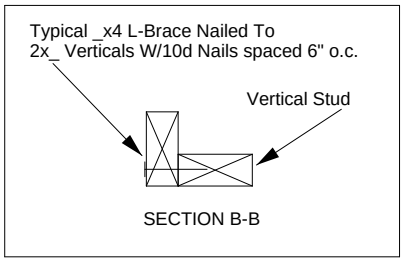
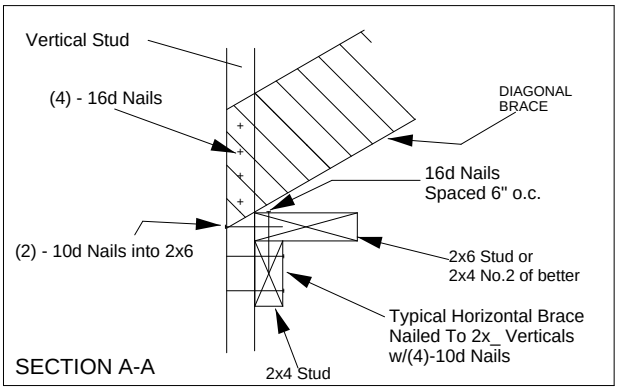
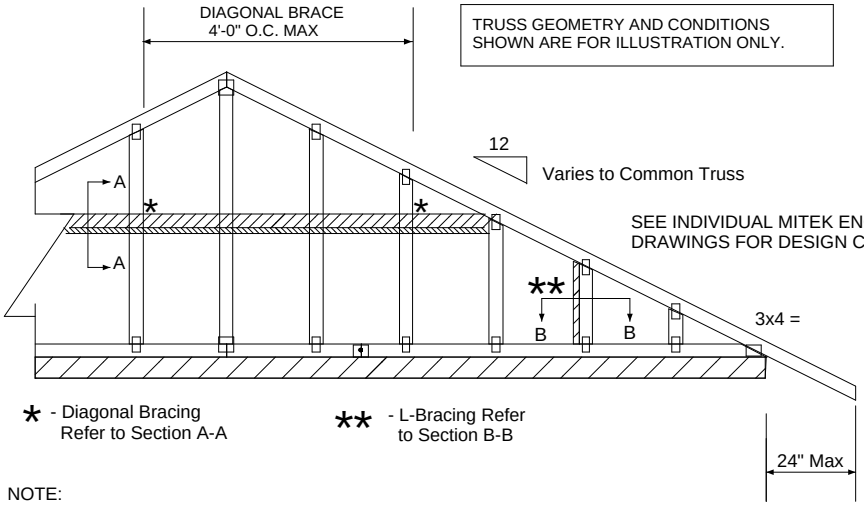


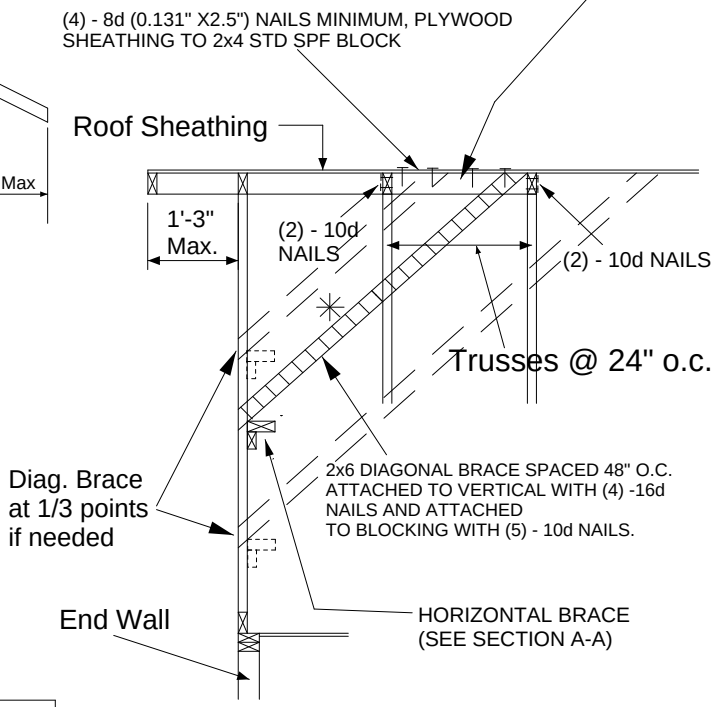




* - Diagonal Bracing Refer to Section A-A

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

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



NOTE:
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH. GRADES: 1x4 SRB OR 2x4 STUD OR BETTER WITH ONE ROW OF 10d NAILS SPACED 6" O.C.
5. DIAGONAL BRACE TO BE APPROXIMATELY 45 DEGREES TO ROOF DIAPHRAM AT 4'-0" O.C.
6. CONSTRUCT HORIZONTAL BRACE CONNECTING A 2x6 STUD AND A 2x4 STUD AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST STUD. ATTACH TO VERTICAL STUDS WITH (4) 10d NAILS THROUGH 2x4. (REFER TO SECTION A-A)
7. GABLE STUD DEFLECTION MEETS OR EXCEEDS L/240.
8. THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
9. DO NOT USE FLAT BOTTOM CHORD GABLES NEXT TO SCISSOR TYPE TRUSSES.
10. SOUTHERN PINE LUMBER DESIGN VALUES ARE THOSE EFFECTIVE 06-01-13 BY SPIB/ALSC.
11. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

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

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

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

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

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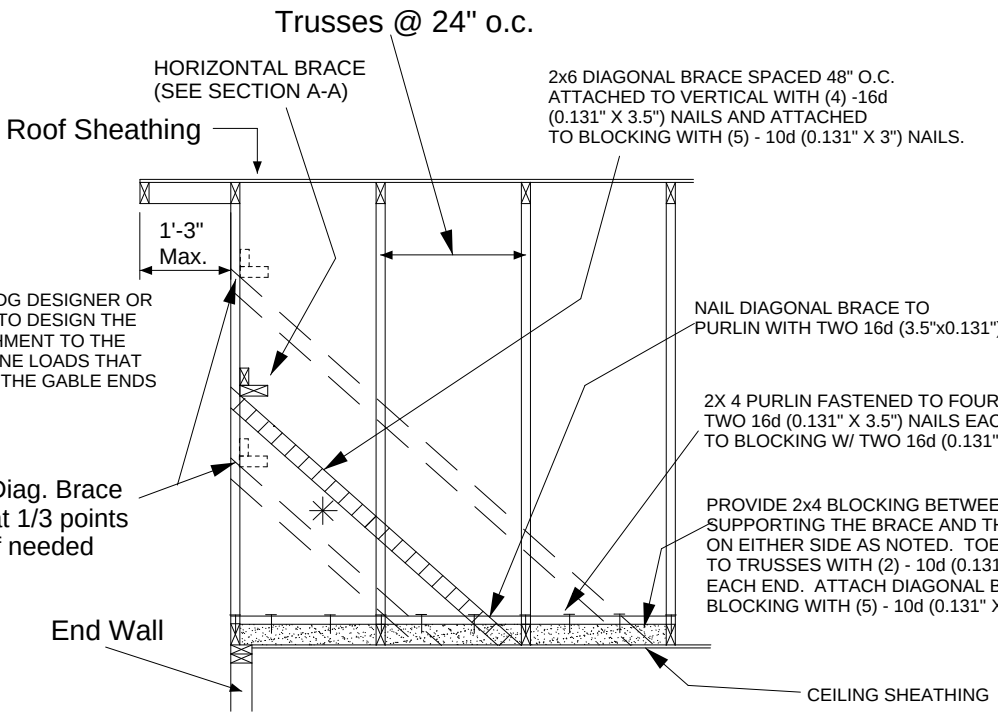
ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD



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BRACING REQUIREMENTS FOR STRUCTURAL GABLE TRUSSES

STRUCTURAL GABLE TRUSSES MAY BE BRACED AS NOTED:

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NAILING SCHEDULE:

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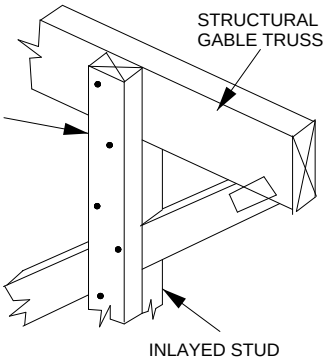
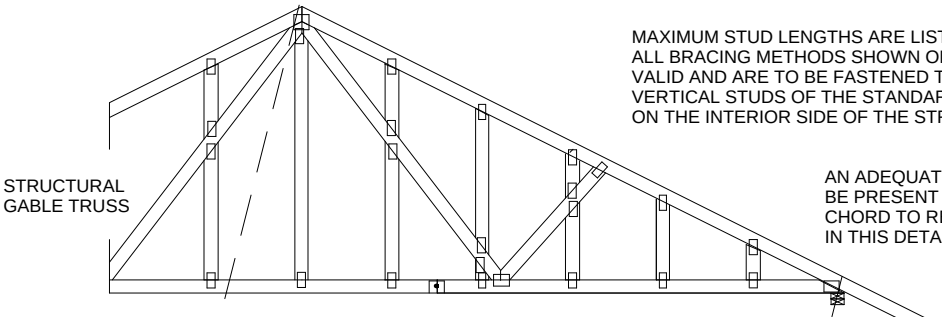


MAXIMUM STUD LENGTHS ARE LISTED ON PAGE 1. ALL BRACING METHODS SHOWN ON PAGE 1 ARE VALID AND ARE TO BE FASTENED TO THE SCABS OR VERTICAL STUDS OF THE STANDARD GABLE TRUSS ON THE INTERIOR SIDE OF THE STRUCTURE.



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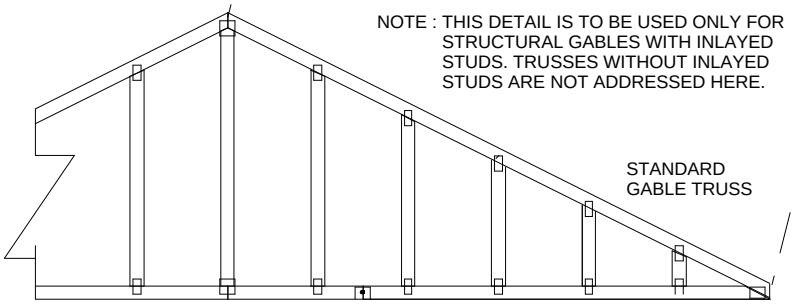

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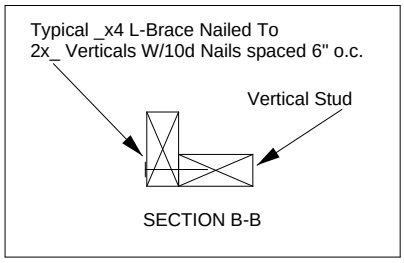
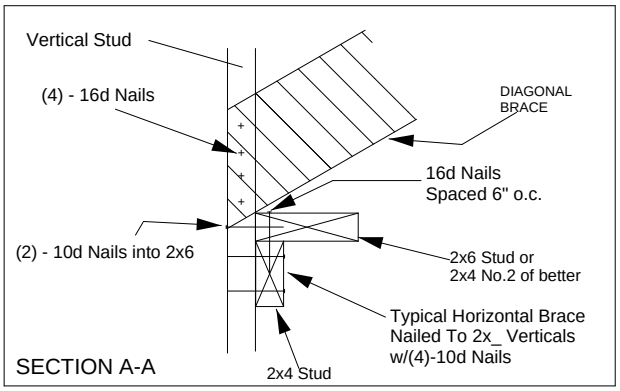
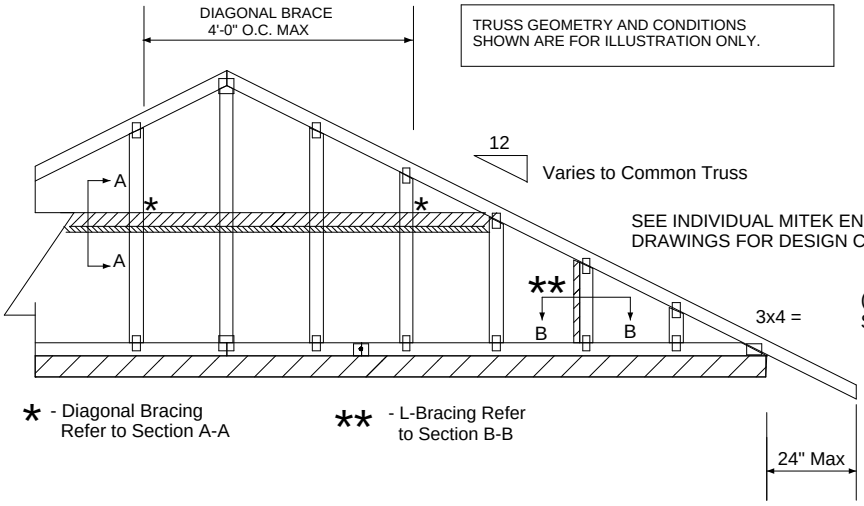


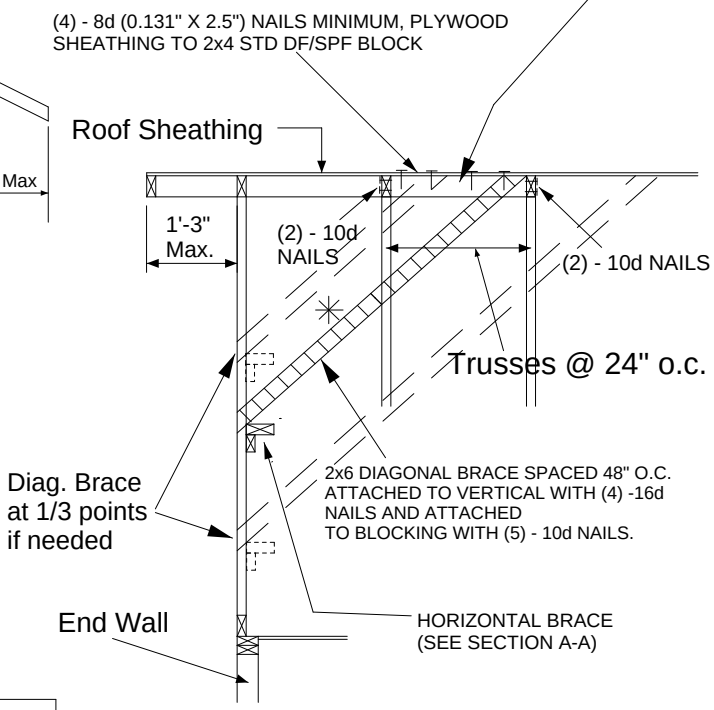




* - Diagonal Bracing Refer to Section A-A

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

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



NOTE:
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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.

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April 2,2021

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

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

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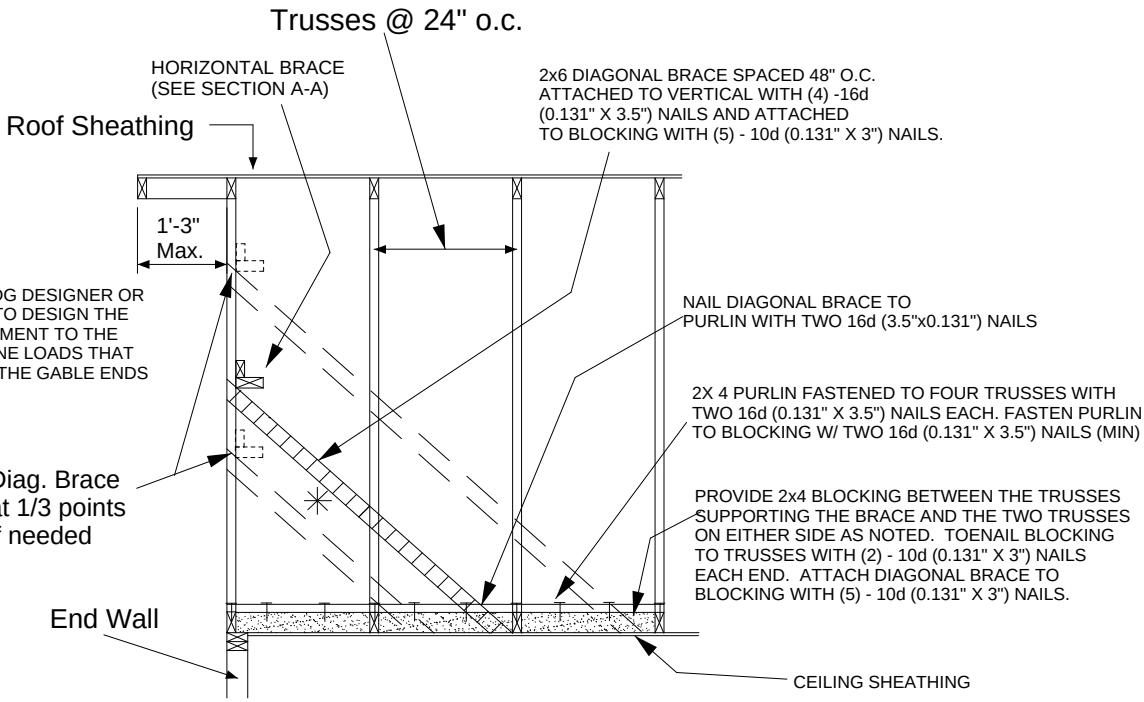
ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD



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NAILING SCHEDULE:

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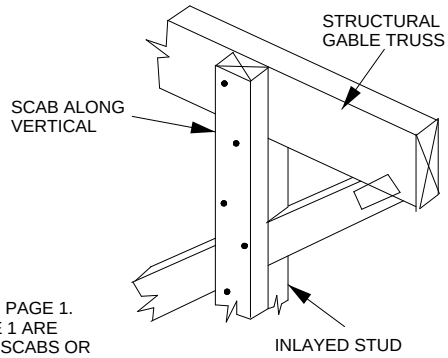

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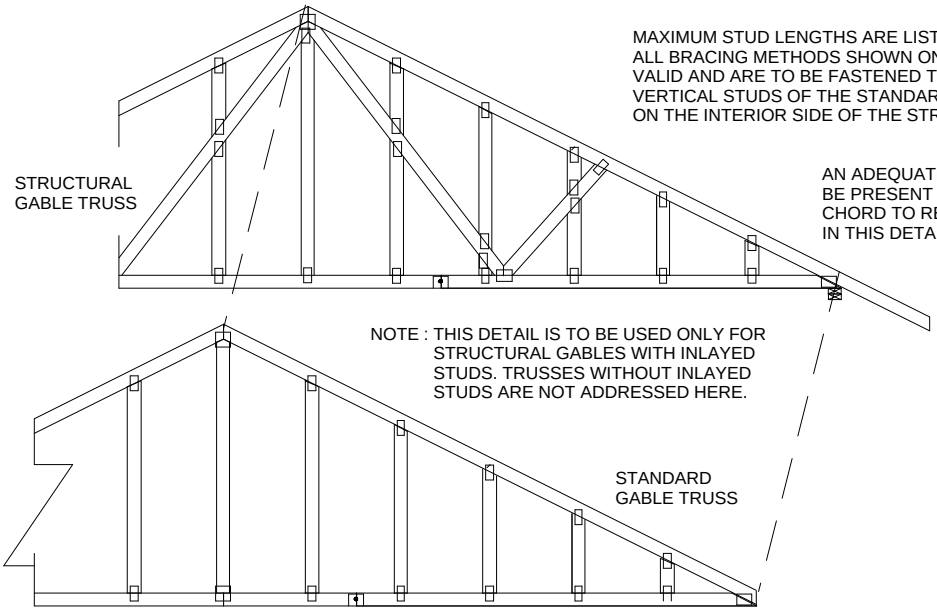

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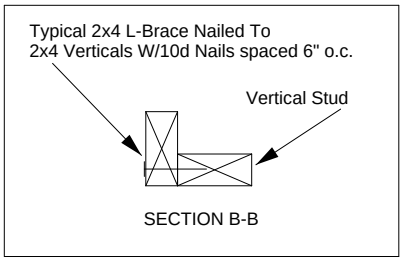
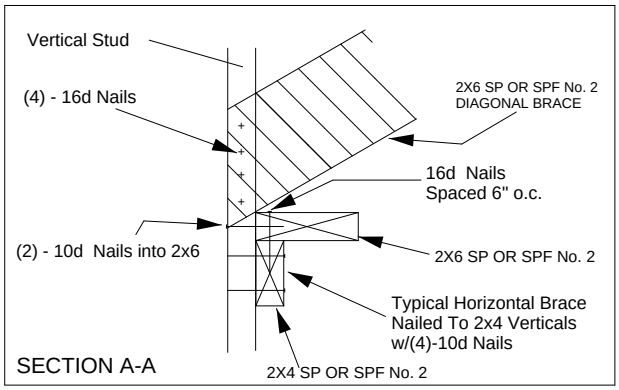
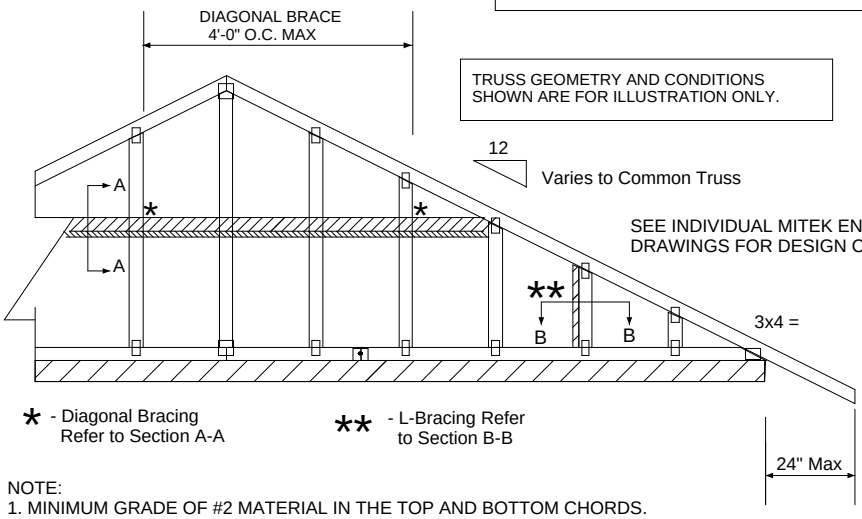


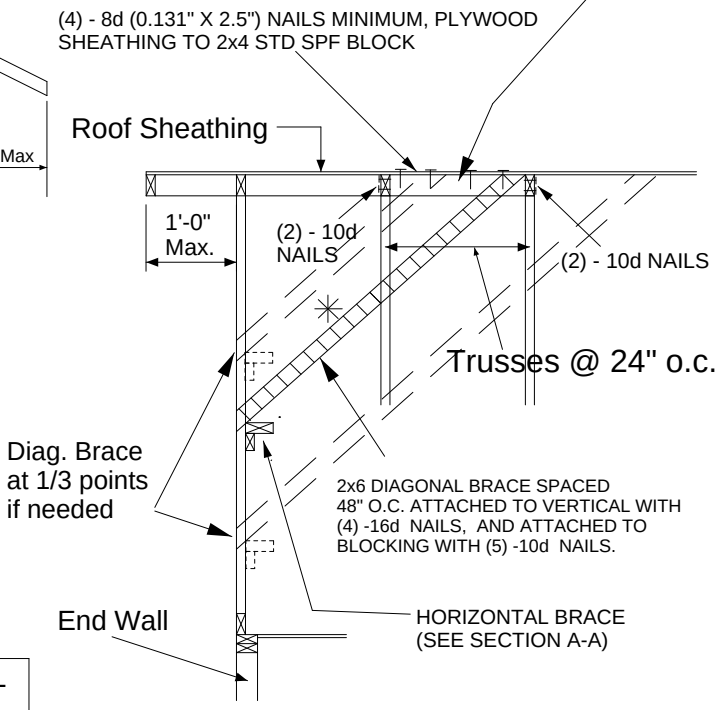




* - Diagonal Bracing Refer to Section A-A

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

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



NOTE:
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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)
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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.

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Date:

April 2,2021

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

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

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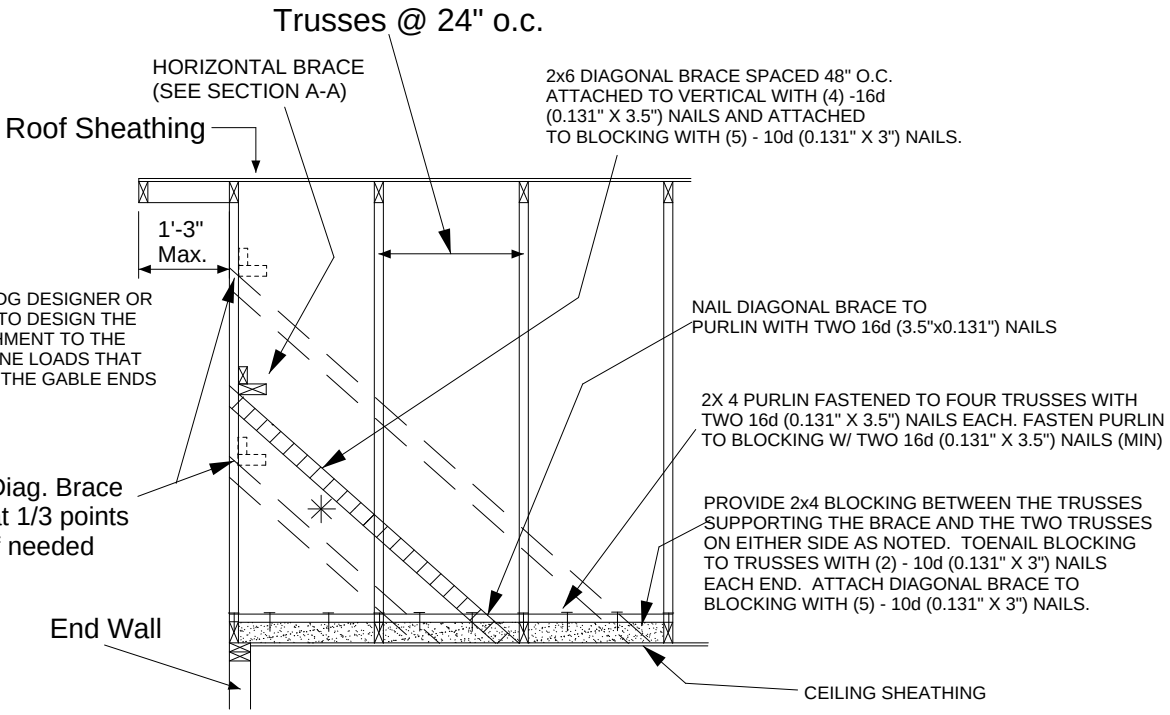
ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD



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

BRACING REQUIREMENTS FOR STRUCTURAL GABLE TRUSSES

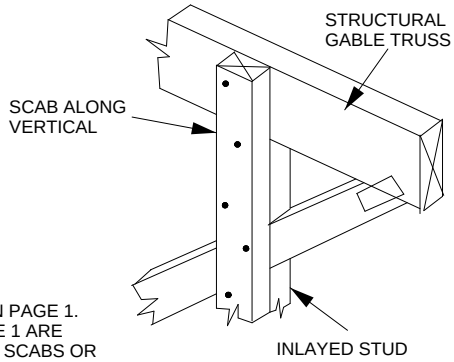
STRUCTURAL GABLE TRUSSES MAY BE BRACED AS NOTED:

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

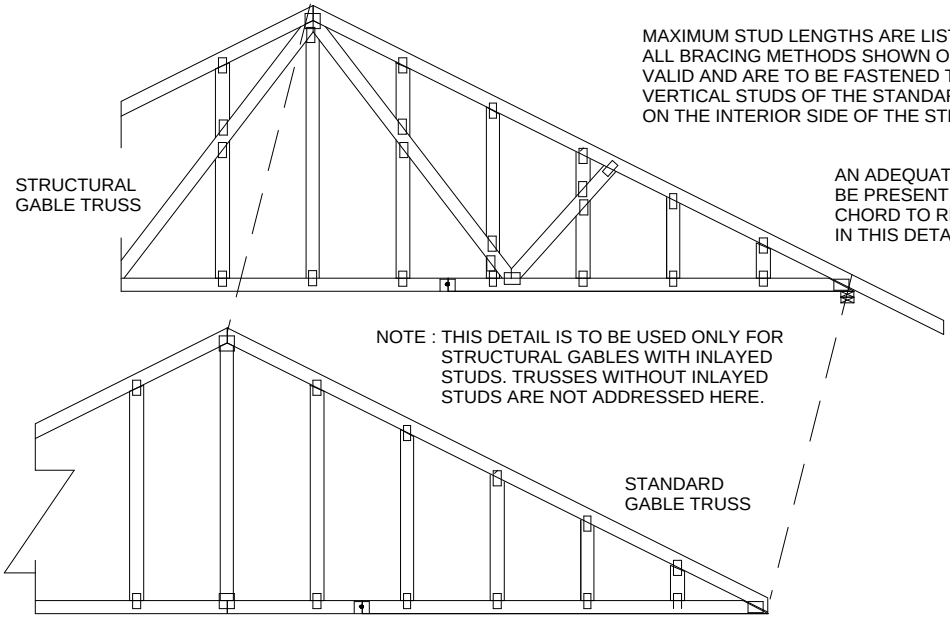
METHOD 2 : ATTACH 2X _ SCABS TO THE FACE OF EACH VERTICAL MEMBER ON THE STRUCTURAL GABLE PER THE FOLLOWING NAILING SCHEDULE. SCABS ARE TO BE OF THE SAME SIZE, GRADE AND SPECIES AS THE TRUSS VERTICALS

NAILING SCHEDULE:

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



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



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

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

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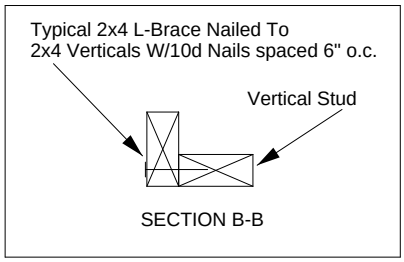
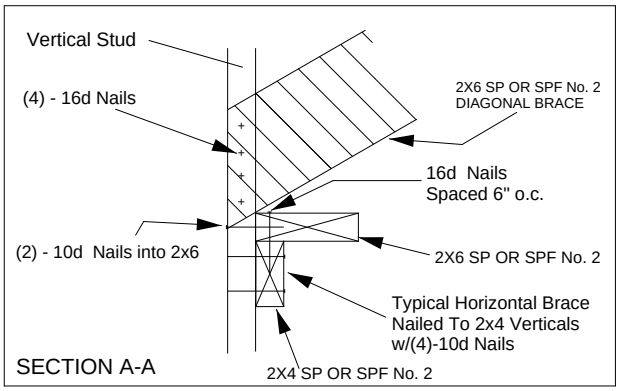
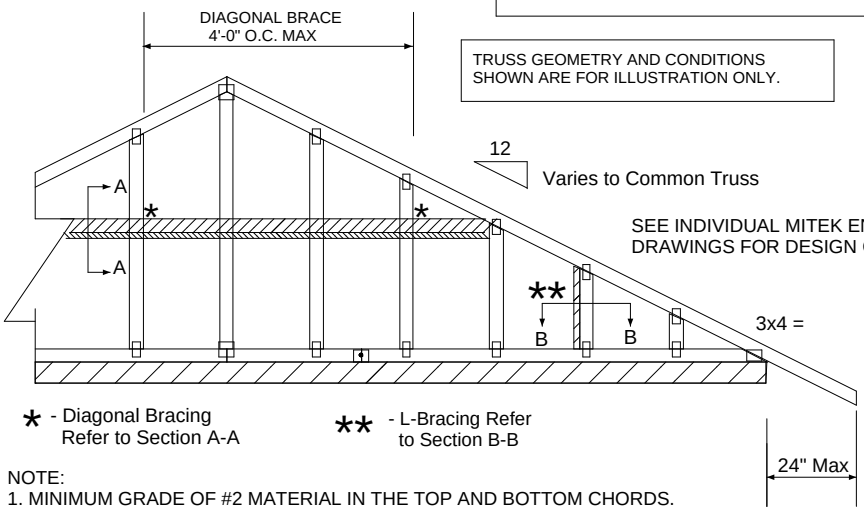






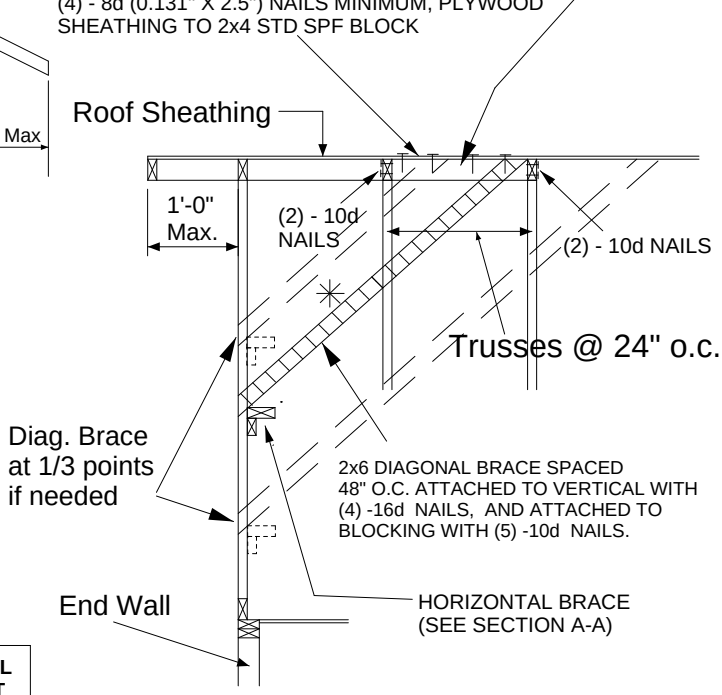
TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY.

SEE INDIVIDUAL MITEK ENGINEERING DRAWINGS FOR DESIGN CRITERIA

* - Diagonal Bracing Refer to Section A-A

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

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



NOTE:
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH, SPF or SP No.3 OR BETTER WITH ONE ROW OF 10d NAILS SPACED 6" O.C.
5. DIAGONAL BRACE TO BE APPROXIMATELY 45 DEGREES TO ROOF DIAPHRAM AT 4'-0" O.C.
6. CONSTRUCT HORIZONTAL BRACE CONNECTING A 2x6 AND A 2x4 AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST GABLE STUD. ATTACH TO VERTICAL GABLE STUDS WITH (4) 10d NAILS THROUGH 2x4. (REFER TO SECTION A-A)
7. GABLE STUD DEFLECTION MEETS OR EXCEEDS L/240.
8. THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
9. DO NOT USE FLAT BOTTOM CHORD GABLES NEXT TO SCISSOR TYPE TRUSSES.
10. SOUTHERN PINE LUMBER DESIGN VALUES ARE THOSE EFFECTIVE 06-01-13 BY SPIB/ALSC.
11. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

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

✳ Diagonal braces over 6'-3" require a 2x4 T-Brace attached to one edge. Diagonal braces over 12'-6" require 2x4 I-braces attached to both edges. Fasten T and I braces to narrow edge of diagonal brace with 10d nails 6in o.c., with 3in minimum end distance. Brace must cover 90% of diagonal length. T or I braces must be 2x4 SPF No. 2 or SP No. 2.

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

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

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Date:

April 2,2021

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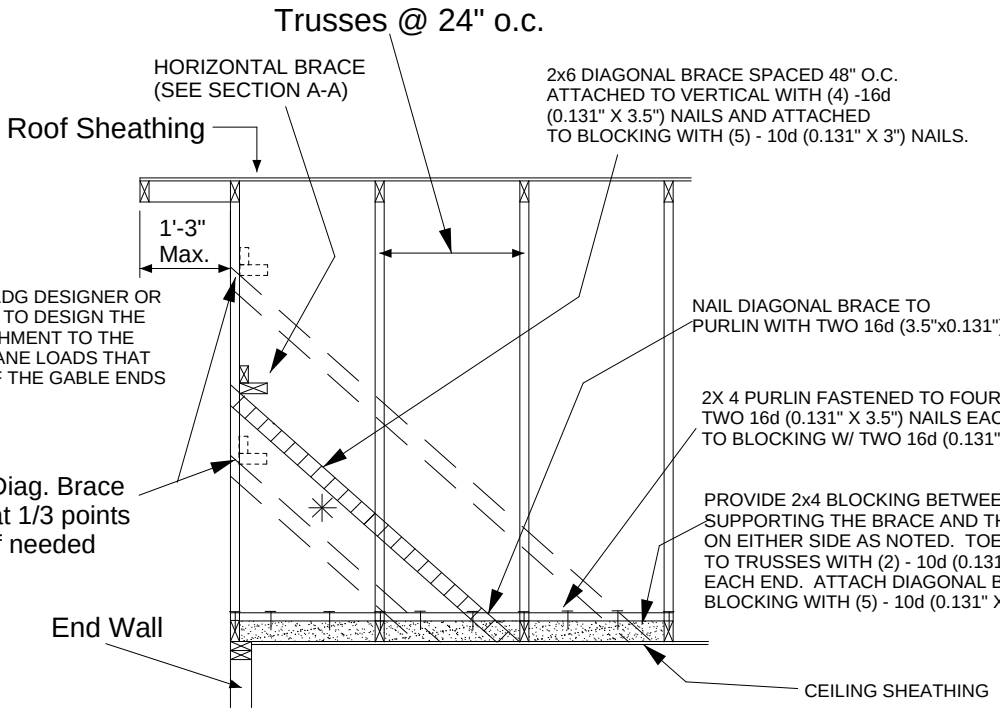
Tampa, FL 36610

MiTek USA, Inc.

ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD



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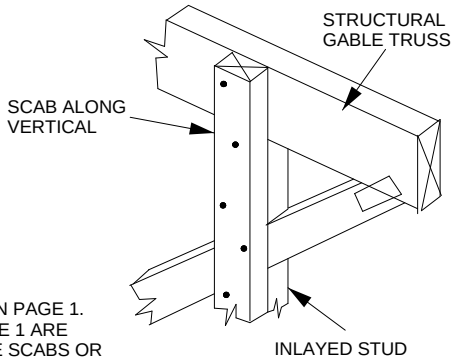
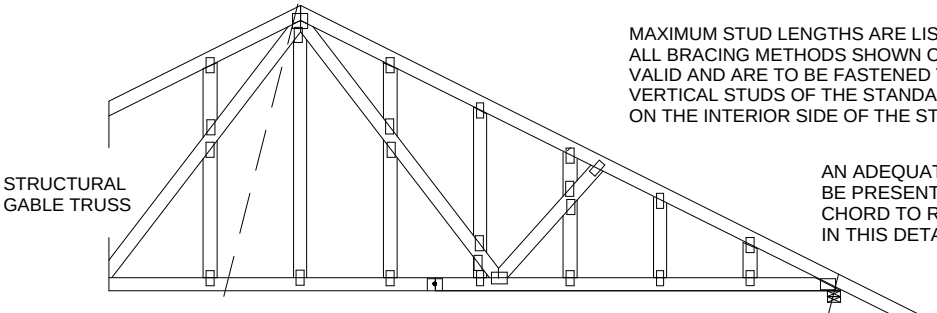
METHOD 2 : ATTACH 2X _ SCABS TO THE FACE OF EACH VERTICAL MEMBER ON THE STRUCTURAL GABLE PER THE FOLLOWING NAILING SCHEDULE. SCABS ARE TO BE OF THE SAME SIZE, GRADE AND SPECIES AS THE TRUSS VERTICALS

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

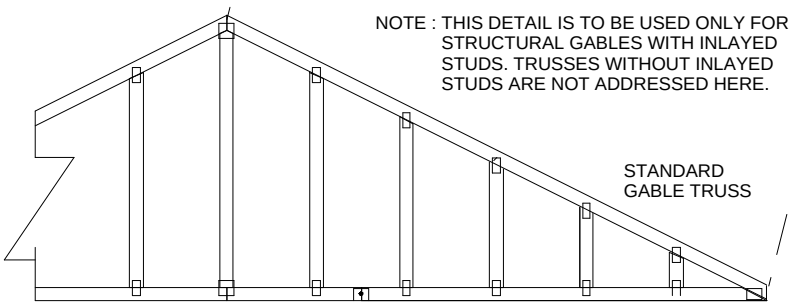


MAXIMUM STUD LENGTHS ARE LISTED ON PAGE 1. ALL BRACING METHODS SHOWN ON PAGE 1 ARE VALID AND ARE TO BE FASTENED TO THE SCABS OR VERTICAL STUDS OF THE STANDARD GABLE TRUSS ON THE INTERIOR SIDE OF THE STRUCTURE.



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

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



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MiTek
6904 Parke East Blvd.
Tampa, FL 36610

January 8, 2019	STANDARD PIGGYBACK TRUSS CONNECTION DETAIL	MII-PIGGY-7-16 T23399815

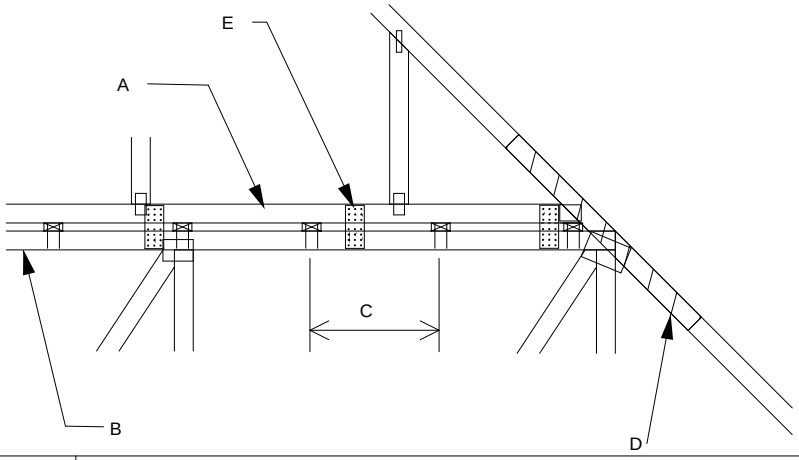
MiTek USA, Inc.

MAXIMUM WIND SPEED = REFER TO NOTES D AND OR E
MAX MEAN ROOF HEIGHT = 30 FEET
MAX TRUSS SPACING = 24 " O.C.
CATEGORY II BUILDING
EXPOSURE B or C
ENCLOSED BUILDING
LOADING = 5 PSF TCDL
ASCE 7-10, ASCE 7-16
DURATION OF LOAD INCREASE : 1.60

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

A - PIGGBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING. SHALL BE CONNECTED TO EACH PURLIN WITH (2) (0.131" X 3.5") TOE-NAILED.
B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C. UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING. CONNECT TO BASE TRUSS WITH (2) (0.131" X 3.5") NAILS EACH.
D - 2 X __ X 4'-0" SCAB, SIZE TO MATCH TOP CHORD OF PIGGYBACK TRUSS, MIN GRADE #2, ATTACHED TO ONE FACE, CENTERED ON INTERSECTION, WITH (2) ROWS OF (0.131" X 3") NAILS @ 4" O.C. SCAB MAY BE OMITTED PROVIDED THE TOP CHORD SHEATHING IS CONTINUOUS OVER INTERSECTION AT LEAST 1 FT. IN BOTH DIRECTIONS AND:
1. WIND SPEED OF 115 MPH OR LESS FOR ANY PIGGYBACK SPAN, OR
2. WIND SPEED OF 116 MPH TO 180 MPH WITH A MAXIMUM PIGGYBACK SPAN OF 12 ft.

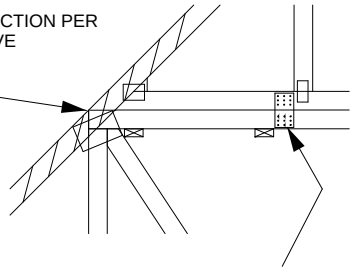
E - FOR WIND SPEEDS BETWEEN 116 AND 180 MPH, ATTACH MITEK NP37 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT 72" O.C. W/ (4) (0.131" X 1.5") NAILS PER MEMBER. STAGGER NAILS FROM OPPOSING FACES. ENSURE 0.5" NAIL EDGE DISTANCE. (MIN. 2 PAIRS OF PLATES REQ. REGARDLESS OF SPAN)



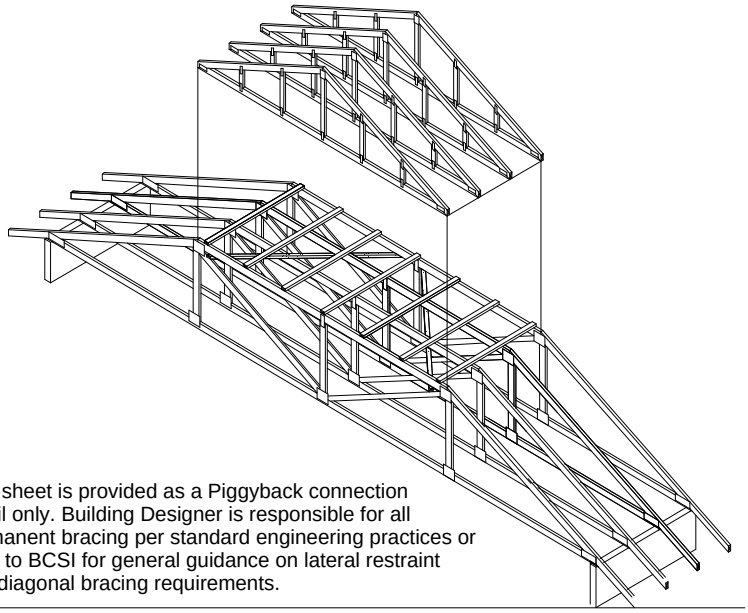
WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

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

SCAB CONNECTION PER NOTE D ABOVE

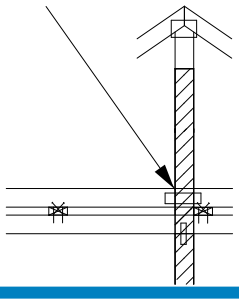


FOR ALL WIND SPEEDS, ATTACH MITEK NP37 20 GA Nail-On PLATES TO EACH FACE OF TRUSSES AT 48" O.C. W/ (4) (0.131" X 1.5") PER MEMBER. STAGGER NAILS FROM OPPOSING FACES ENSURE 0.5" NAIL EDGE DISTANCE.



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

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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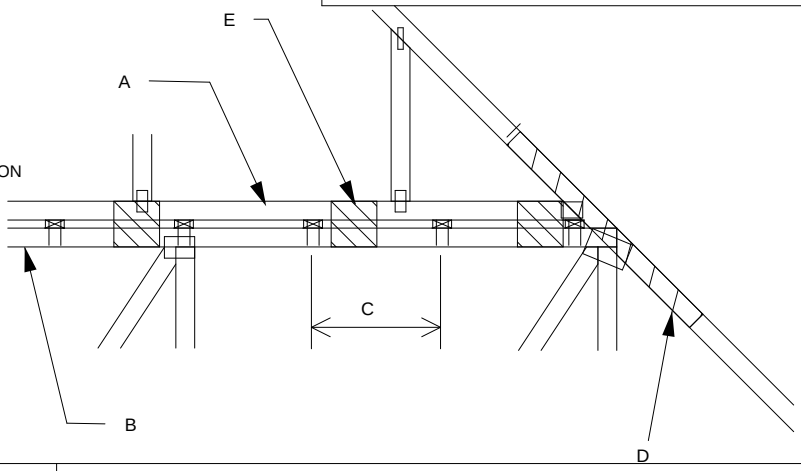
MAXIMUM WIND SPEED = REFER TO NOTES D AND OR E
MAX MEAN ROOF HEIGHT = 30 FEET
MAX TRUSS SPACING = 24 " O.C.
CATEGORY II BUILDING
EXPOSURE B or C
ENCLOSED BUILDING
LOADING = 5 PSF TCDL MINIMUM
ASCE 7-10, ASCE 7-16
DURATION OF LOAD INCREASE : 1.60

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

A - PIGGBACK TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING. SHALL BE CONNECTED TO EACH PURLIN WITH (2) 0(0.131" X 3.5") TOE-NAILED.
B - BASE TRUSS, REFER TO MITEK TRUSS DESIGN DRAWING.
C - PURLINS AT EACH BASE TRUSS JOINT AND A MAXIMUM 24" O.C. UNLESS SPECIFIED CLOSER ON MITEK TRUSS DESIGN DRAWING. CONNECT TO BASE TRUSS WITH (2) (0.131" X 3.5") NAILS EACH.
D - 2 X __ X 4'-0" SCAB, SIZE TO MATCH TOP CHORD OF PIGGYBACK TRUSS, MIN GRADE #2, ATTACHED TO ONE FACE, CENTERED ON INTERSECTION, WITH (2) ROWS OF (0.131" X 3") NAILS @ 4" O.C. SCAB MAY BE OMITTED PROVIDED THE TOP CHORD SHEATHING IS CONTINUOUS OVER INTERSECTION AT LEAST 1 FT. IN BOTH DIRECTIONS AND:
1. WIND SPEED OF 115 MPH OR LESS FOR ANY PIGGYBACK SPAN, OR
2. WIND SPEED OF 116 MPH TO 180 MPH WITH A MAXIMUM PIGGYBACK SPAN OF 12 ft.

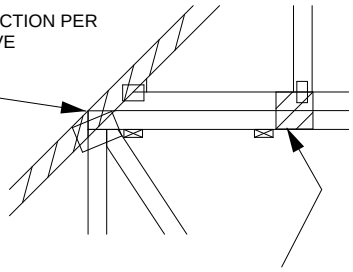
E - FOR WIND SPEED IN THE RANGE 116 MPH - 180 MPH ADD 9" x 9" x 1/2" PLYWOOD (or 7/16" OSB) GUSSET EACH SIDE AT 48" O.C. OR LESS. ATTACH WITH 3 - 6d (0.113" X 2") NAILS INTO EACH CHORD FROM EACH SIDE (TOTAL - 12 NAILS)



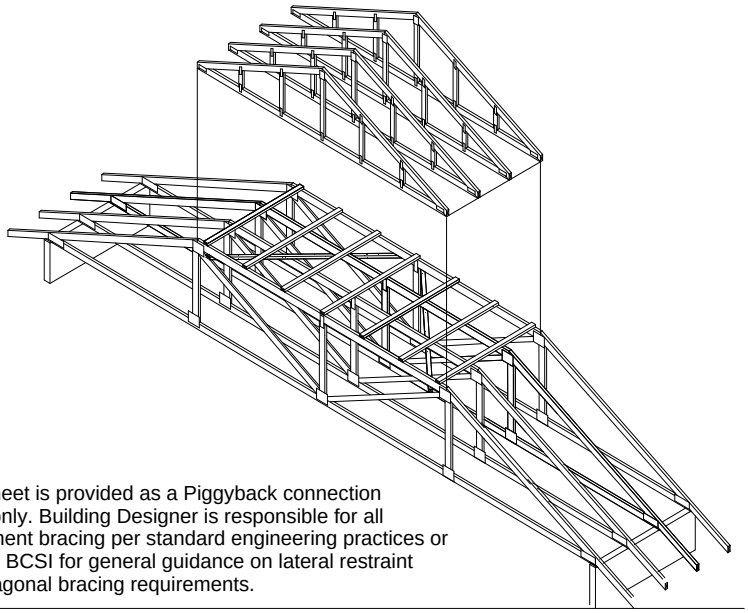
WHEN NO GAP BETWEEN PIGGYBACK AND BASE TRUSS EXISTS:

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

SCAB CONNECTION PER NOTE D ABOVE



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



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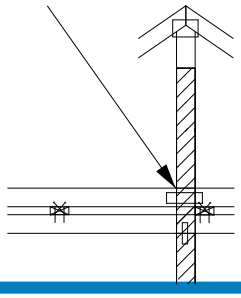
VERTICAL WEB TO EXTEND THROUGH BOTTOM CHORD OF PIGGYBACK



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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April 2,2021

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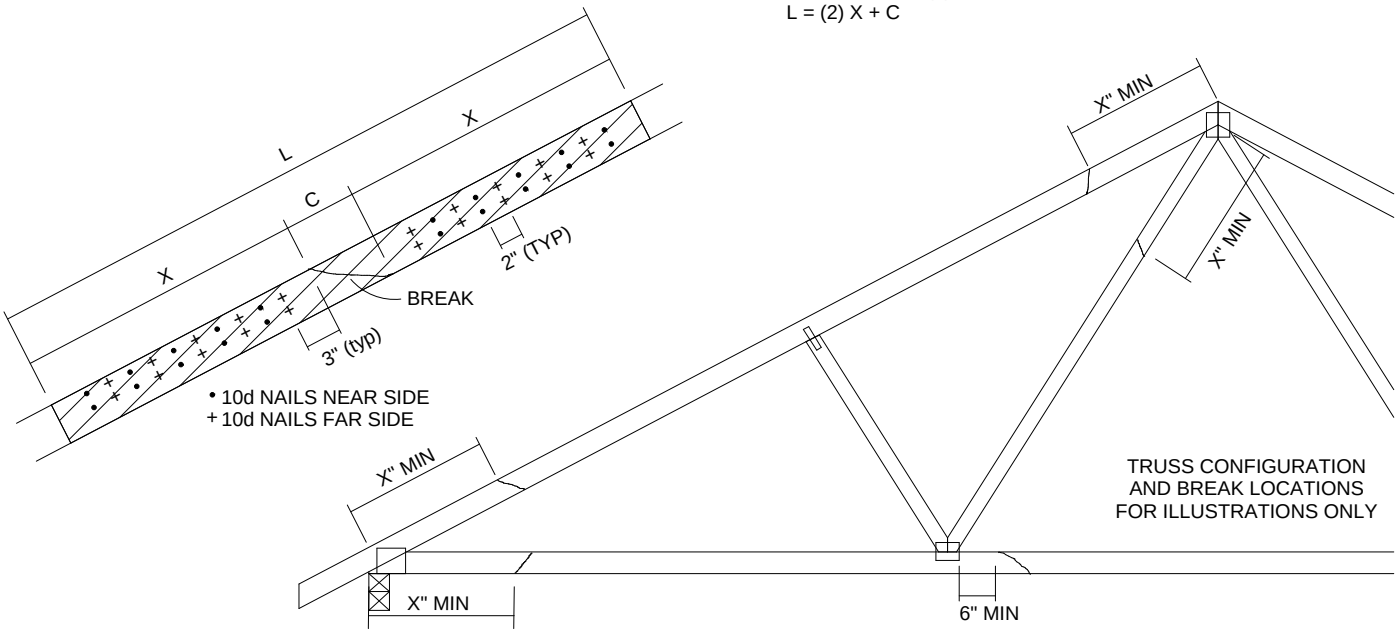
TOTAL NUMBER OF NAILS EACH SIDE OF BREAK *		X INCHES	MAXIMUM FORCE (lbs) 15% LOAD DURATION							
			SP		DF		SPF		HF	
2x4	2x6		2x4	2x6	2x4	2x6	2x4	2x6	2x4	2x6
20	30	24"	1706	2559	1561	2342	1320	1980	1352	2028
26	39	30"	2194	3291	2007	3011	1697	2546	1738	2608
32	48	36"	2681	4022	2454	3681	2074	3111	2125	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 APPLING REPAIR AND HELD IN PLACE DURING APPLICATION OF REPAIR.
3. THE END DISTANCE, EDGE DISTANCE AND SPACING OF NAILS SHALL BE SUCH AS TO AVOID UNUSUAL SPLITTING OF THE WOOD.
4. WHEN NAILING THE SCABS, THE USE OF A BACKUP WEIGHT IS RECOMMENDED TO AVOID LOOSENING OF THE CONNECTOR PLATES AT THE JOINTS OR SPLICES.
5. THIS REPAIR IS TO BE USED FOR SINGLE PLY TRUSSES IN THE 2x_ ORIENTATION ONLY.
6. THIS REPAIR IS LIMITED TO TRUSSES WITH NO MORE THAN THREE BROKEN MEMBERS.

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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

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

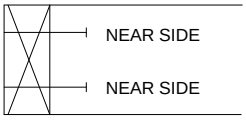
	DIAM.	SP	DF	HF	SPF	SPF-S
3.5" LONG	.131	88.0	80.6	69.9	68.4	59.7
	.135	93.5	85.6	74.2	72.6	63.4
	.162	108.8	99.6	86.4	84.5	73.8
3.25" LONG	.128	74.2	67.9	58.9	57.6	50.3
	.131	75.9	69.5	60.3	59.0	51.1
	.148	81.4	74.5	64.6	63.2	52.5

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

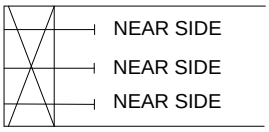
EXAMPLE:
(3) - 16d (0.162" X 3.5") NAILS WITH SPF SPECIES BOTTOM CHORD

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

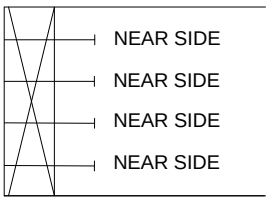
SIDE VIEW
(2x3)
2 NAILS

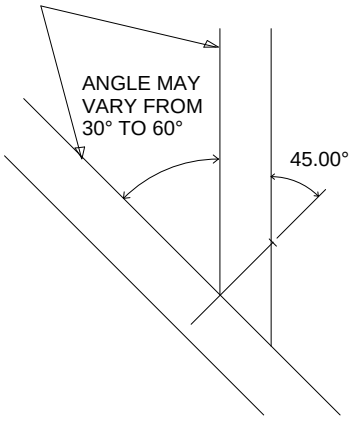


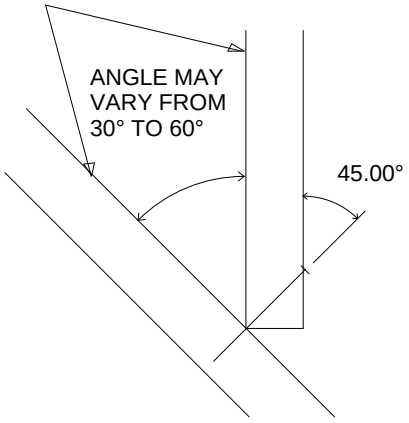
SIDE VIEW
(2x4)
3 NAILS

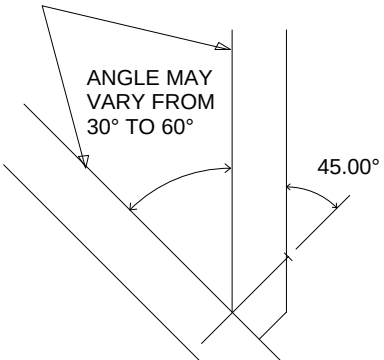


SIDE VIEW
(2x6)
4 NAILS









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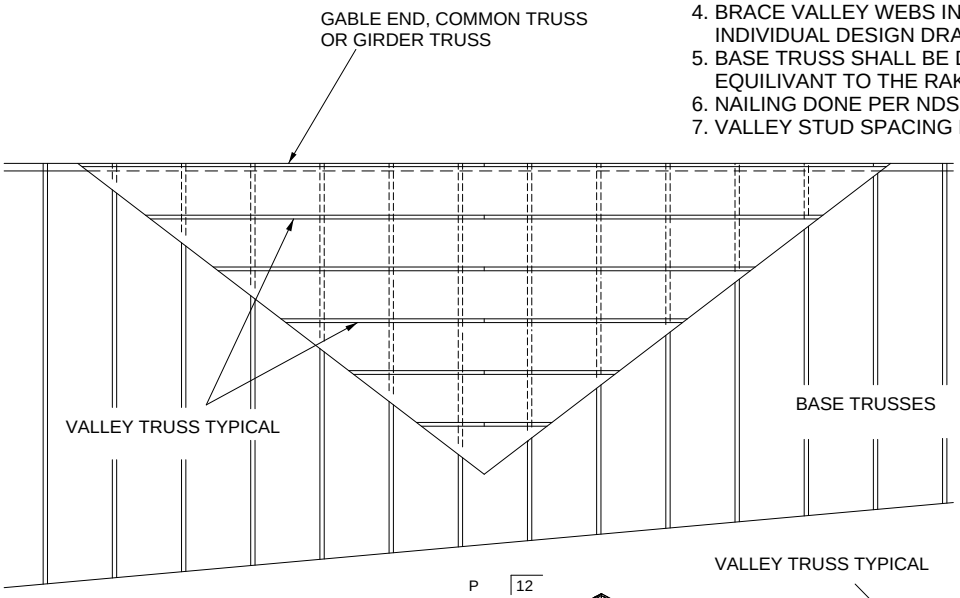
APRIL 12, 2019	TRUSSED VALLEY SET DETAIL	MII-VALLEY HIGH WIND1 T23399819

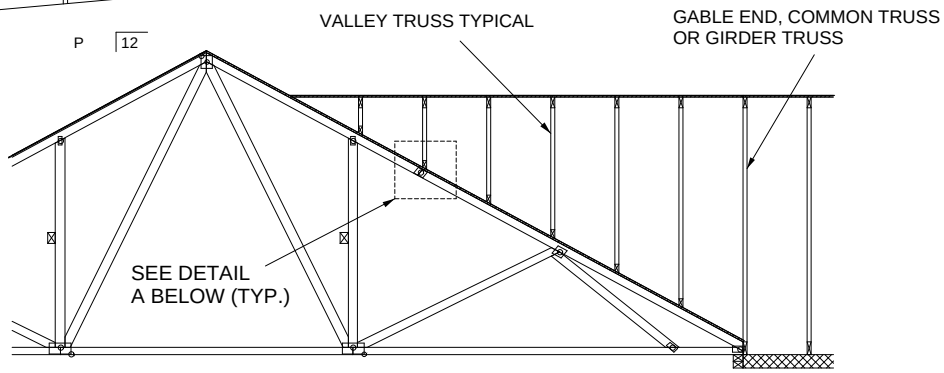
MiTek USA, Inc.

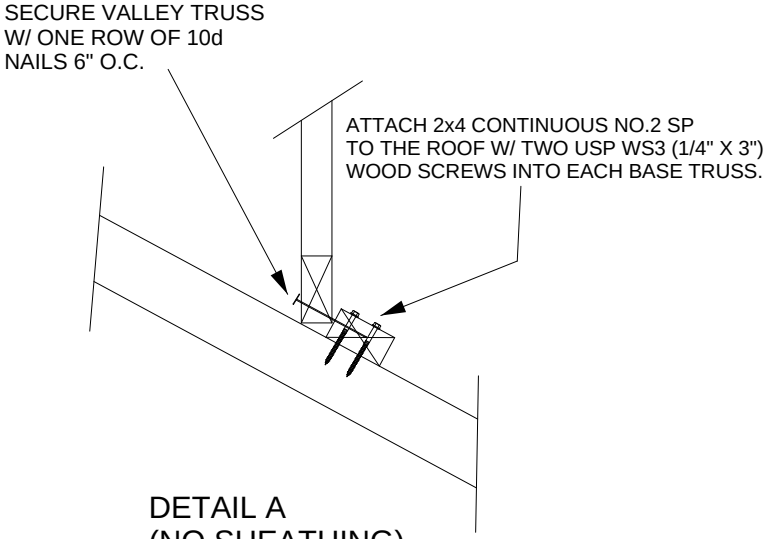
MiTek USA, Inc.

GENERAL SPECIFICATIONS

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







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

WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 146 MPH
WIND DESIGN PER ASCE 7-10, ASCE 7-16 160 MPH
MAX MEAN ROOF HEIGHT = 30 FEET
ROOF PITCH = MINIMUM 3/12 MAXIMUM 6/12
CATEGORY II BUILDING
EXPOSURE C
WIND DURATION OF LOAD INCREASE : 1.60
MAX TOP CHORD TOTAL LOAD = 50 PSF
MAX SPACING = 24" O.C. (BASE AND VALLEY)
MINIMUM REDUCED DEAD LOAD OF 6 PSF
ON THE TRUSSES

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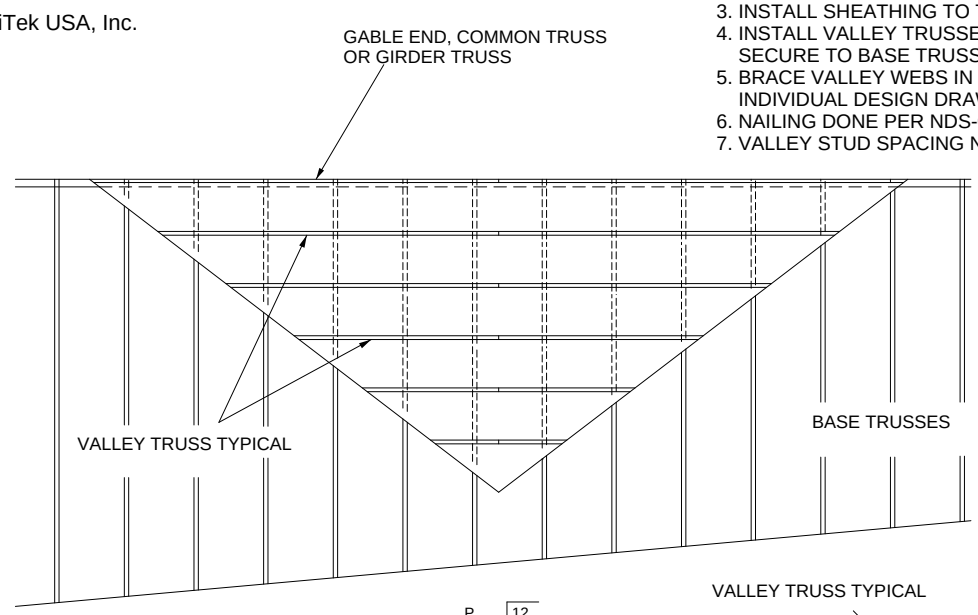
APRIL 12, 2019	TRUSSED VALLEY SET DETAIL	MII-VALLEY HIGH WIND2 T23399820

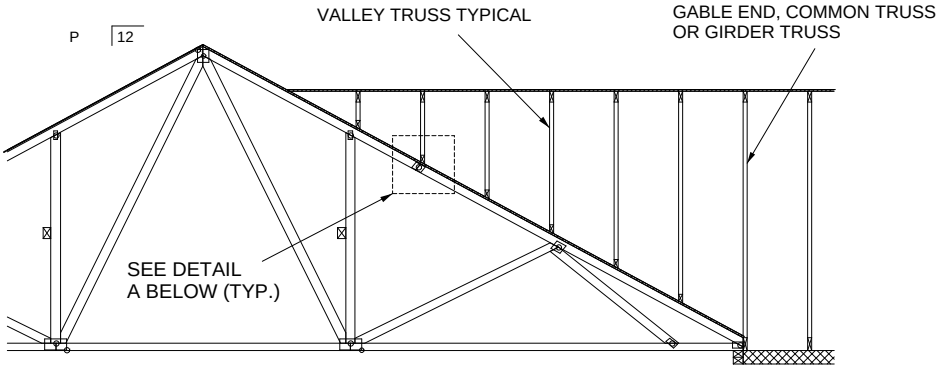
MiTek USA, Inc.

MiTek USA, Inc.

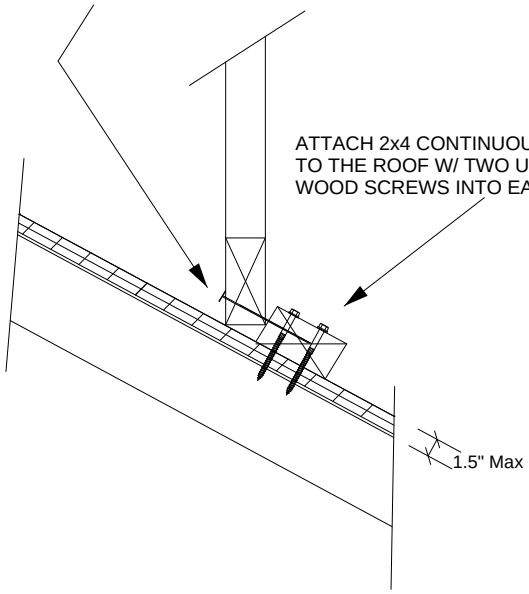
GENERAL SPECIFICATIONS

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





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



WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 146 MPH
WIND DESIGN PER ASCE 7-10, ASCE 7-16 160 MPH
MAX MEAN ROOF HEIGHT = 30 FEET
ROOF PITCH = MINIMUM 3/12 MAXIMUM 6/12
CATEGORY II BUILDING
EXPOSURE C
WIND DURATION OF LOAD INCREASE : 1.60
MAX TOP CHORD TOTAL LOAD = 50 PSF
MAX SPACING = 24" O.C. (BASE AND VALLEY)
MINIMUM REDUCED DEAD LOAD OF 6 PSF ON THE TRUSSES

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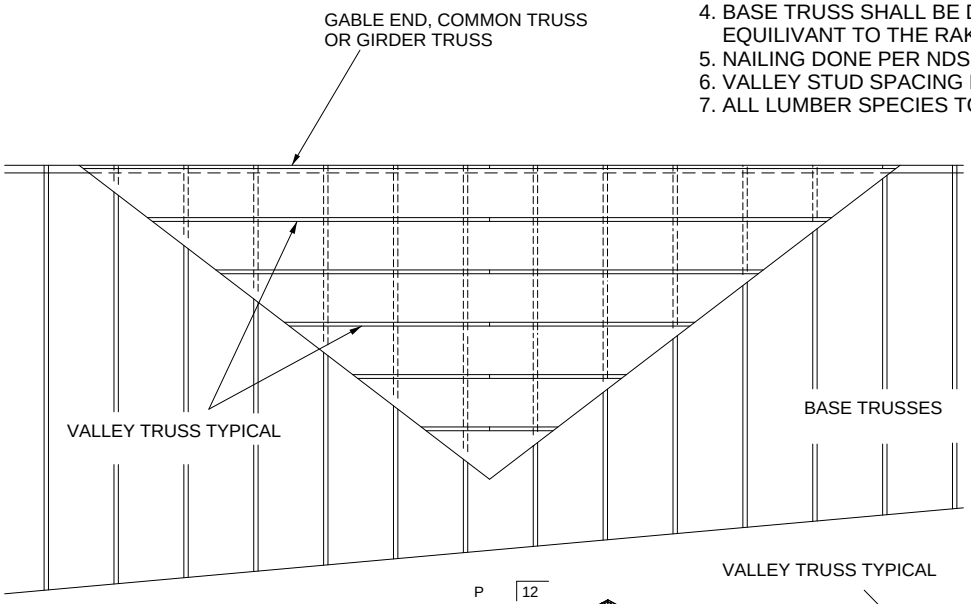
APRIL 12, 2019	TRUSSED VALLEY SET DETAIL	MII-VALLEY SP T23399821

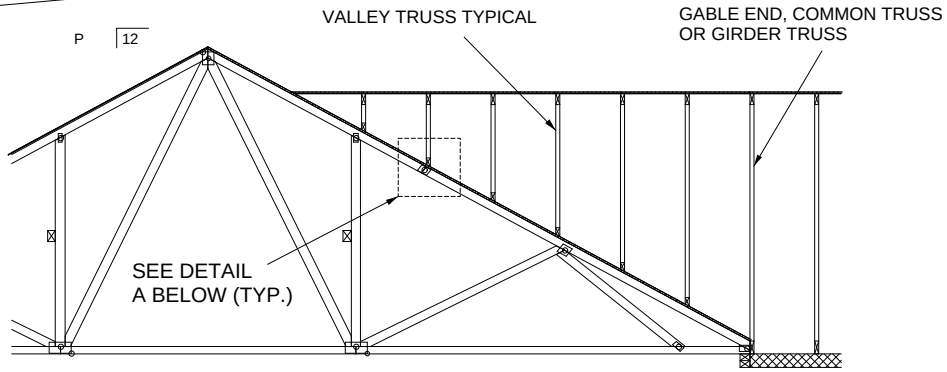
MiTek USA, Inc.

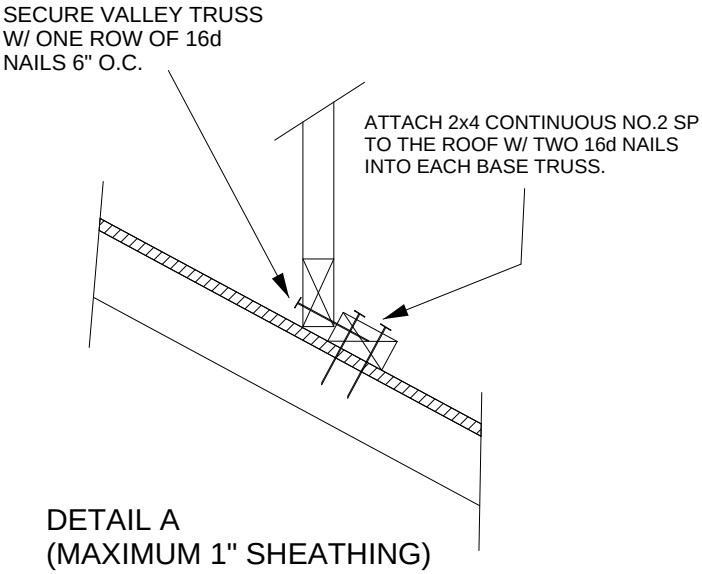
MiTek USA, Inc.

GENERAL SPECIFICATIONS

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







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

WIND DESIGN PER ASCE 7-98, ASCE 7-02, ASCE 7-05 120 MPH
WIND DESIGN PER ASCE 7-10, ASCE 7-16 150 MPH
MAX MEAN ROOF HEIGHT = 30 FEET
ROOF 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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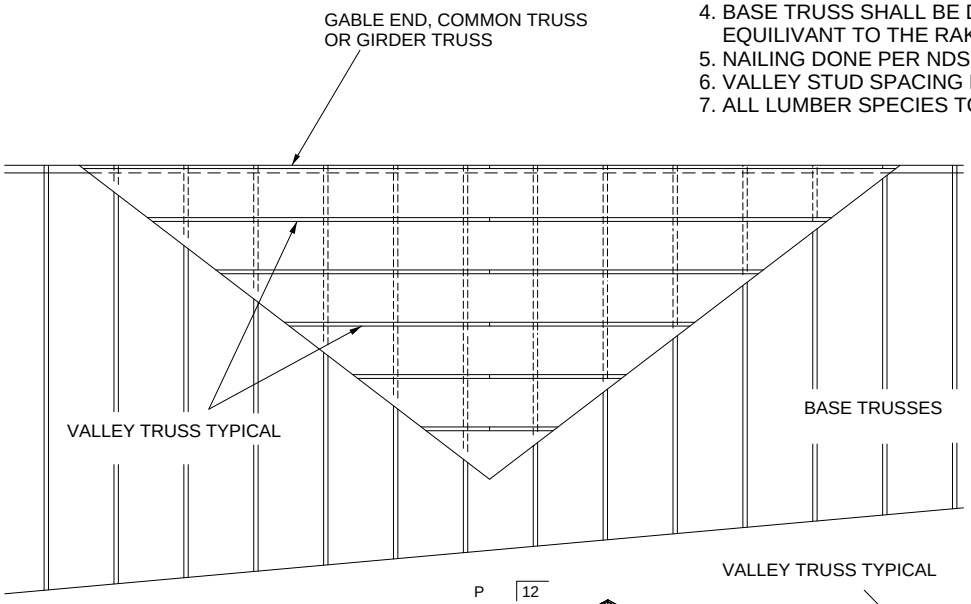
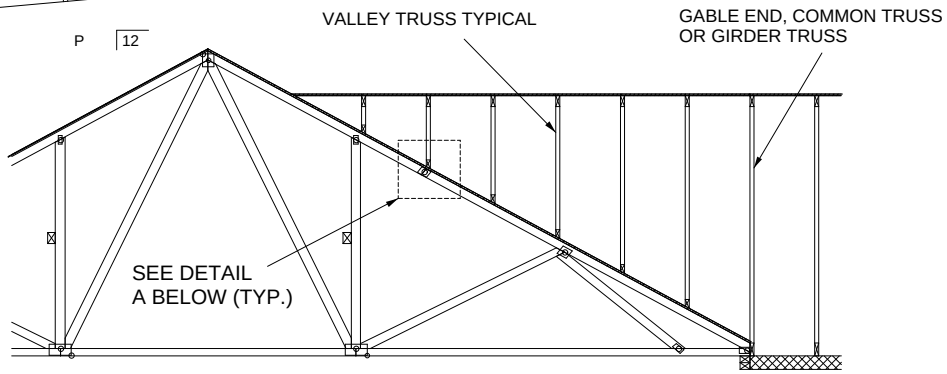
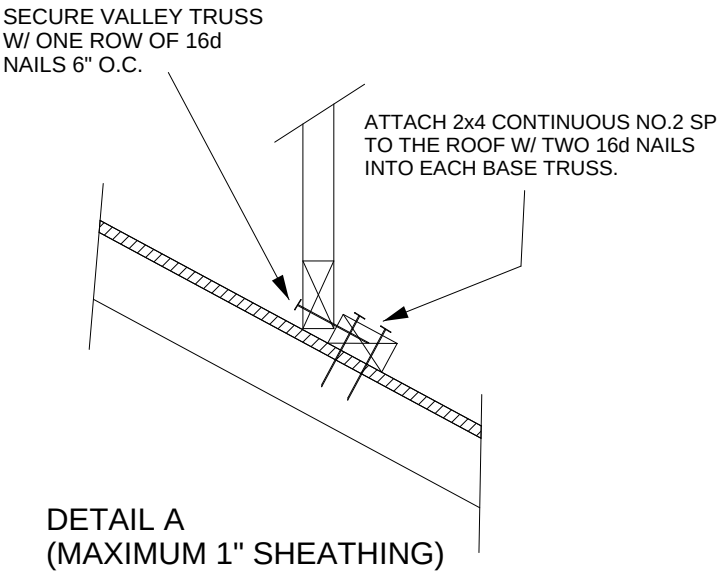
GENERAL SPECIFICATIONS

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







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

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

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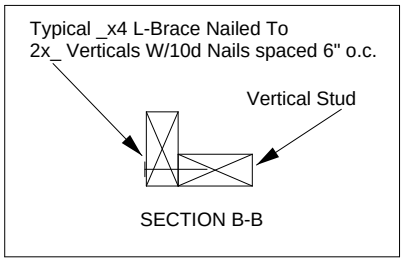
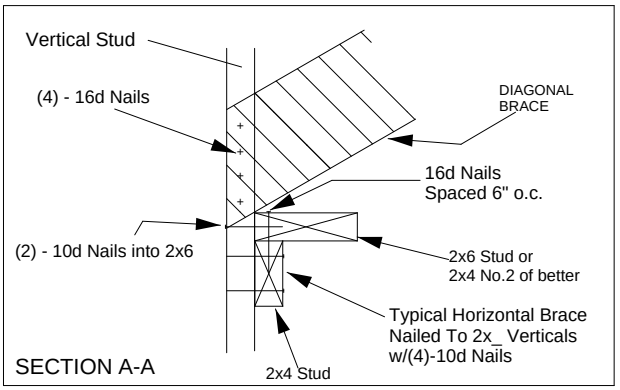
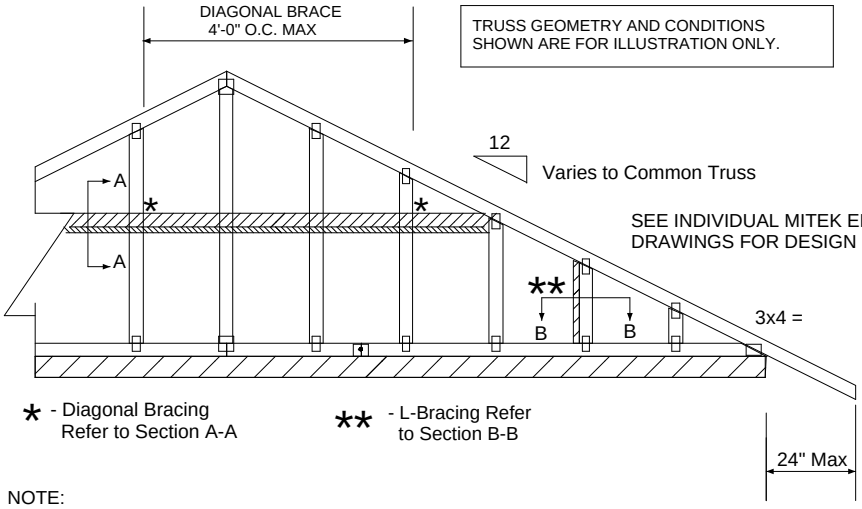




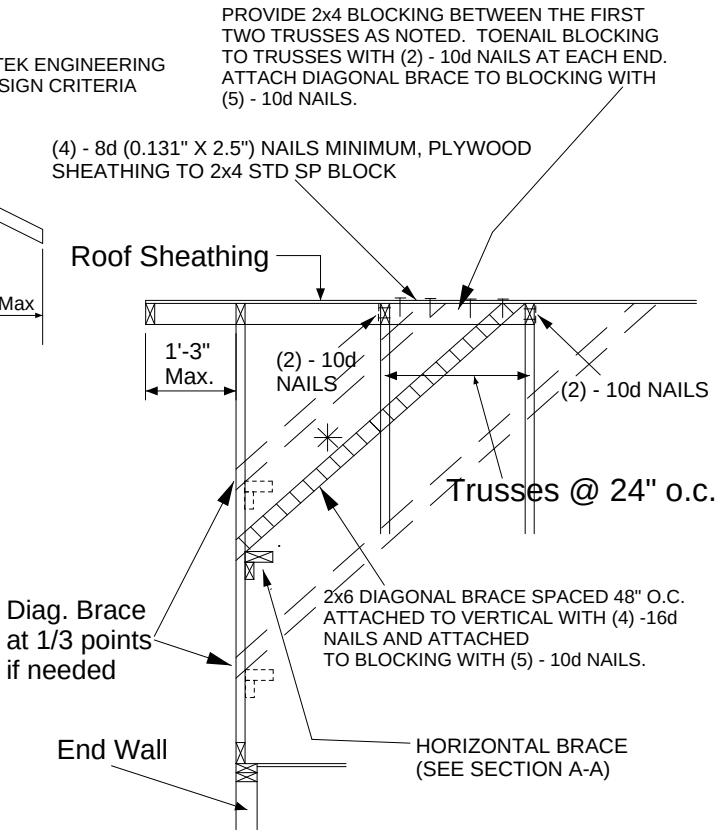


TRUSS GEOMETRY AND CONDITIONS SHOWN ARE FOR ILLUSTRATION ONLY.

SEE INDIVIDUAL MITEK ENGINEERING DRAWINGS FOR DESIGN CRITERIA

* - Diagonal Bracing Refer to Section A-A

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



NOTE:
1. MINIMUM GRADE OF #2 MATERIAL IN THE TOP AND BOTTOM CHORDS.
2. CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL TO BE PROVIDED BY PROJECT ENGINEER OR ARCHITECT.
3. BRACING SHOWN IS FOR INDIVIDUAL TRUSS ONLY. CONSULT BLDG. ARCHITECT OR ENGINEER FOR TEMPORARY AND PERMANENT BRACING OF ROOF SYSTEM.
4. "L" BRACES SPECIFIED ARE TO BE FULL LENGTH. GRADES: 2x4 No 3/STUD SP OR BETTER WITH ONE ROW OF 10d NAILS SPACED 6" O.C.
5. DIAGONAL BRACE TO BE APPROXIMATELY 45 DEGREES TO ROOF DIAPHRAM AT 4'-0" O.C.
6. CONSTRUCT HORIZONTAL BRACE CONNECTING A 2x6 STUD AND A 2x4 STUD AS SHOWN WITH 16d NAILS SPACED 6" O.C. HORIZONTAL BRACE TO BE LOCATED AT THE MIDSPAN OF THE LONGEST STUD. ATTACH TO VERTICAL STUDS WITH (4) 10d NAILS THROUGH 2x4. (REFER TO SECTION A-A)
7. GABLE STUD DEFLECTION MEETS OR EXCEEDS L/240.
8. THIS DETAIL DOES NOT APPLY TO STRUCTURAL GABLES.
9. DO NOT USE FLAT BOTTOM CHORD GABLES NEXT TO SCISSOR TYPE TRUSSES.
10. NAILS DESIGNATED 10d ARE (0.131" X 3") AND NAILS DESIGNATED 16d ARE (0.131" X 3.5")

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

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

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.

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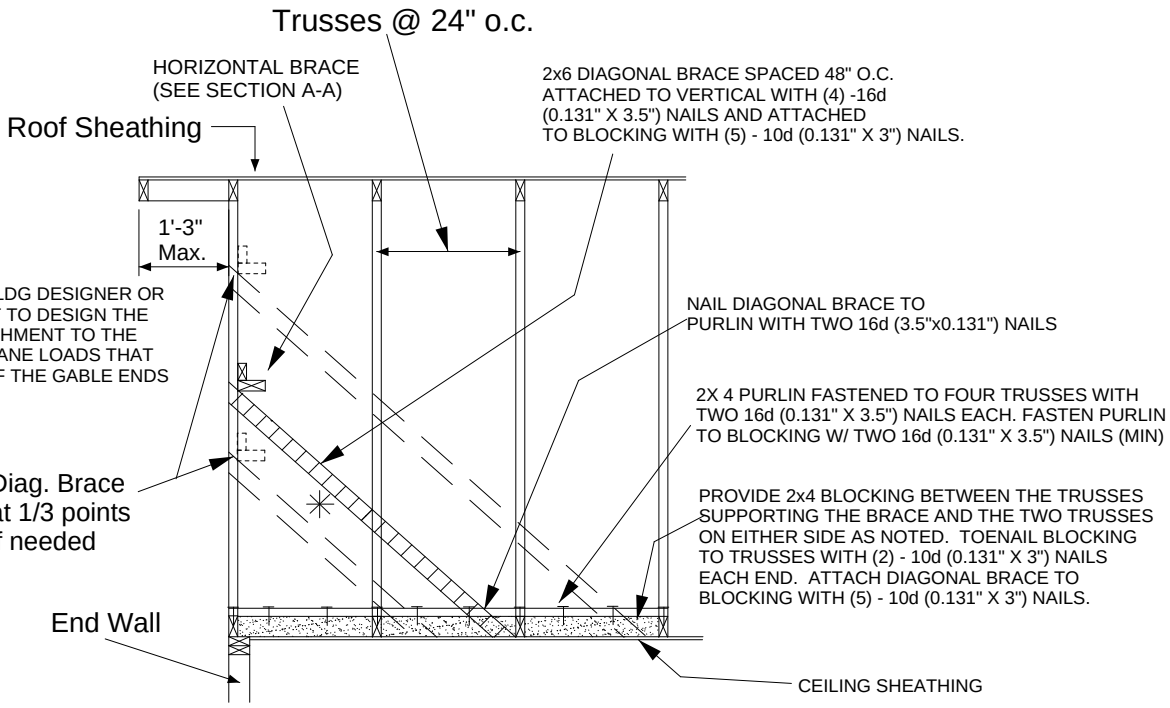
ALTERNATE DIAGONAL BRACING TO THE BOTTOM CHORD

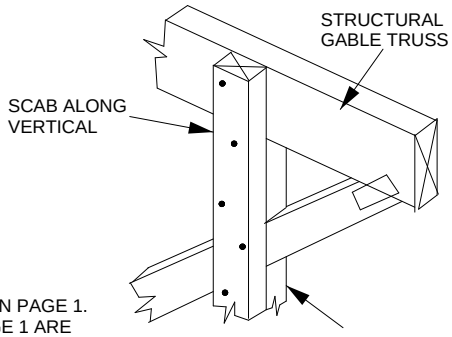


IT IS THE RESPONSIBILITY OF THE BLDG DESIGNER OR THE PROJECT ENGINEER/ARCHTECT TO DESIGN THE CEILING DIAPHRAGM AND ITS ATTACHMENT TO THE TRUSSES TO RESIST ALL OUT OF PLANE LOADS THAT MAY RESULT FROM THE BRACING OF THE GABLE ENDS

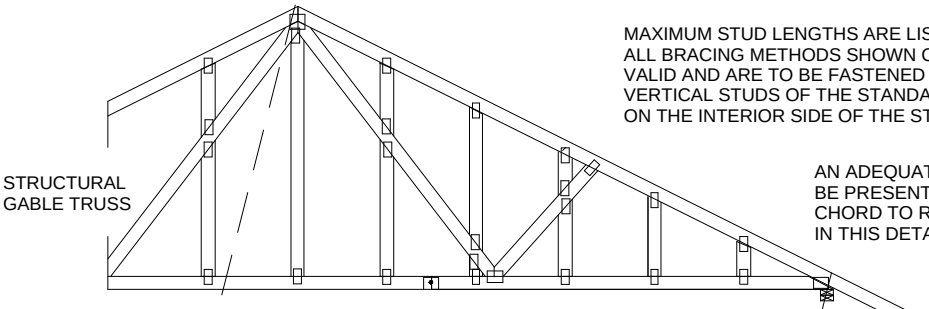
BRACING REQUIREMENTS FOR STRUCTURAL GABLE TRUSSES

STRUCTURAL GABLE TRUSSES MAY BE BRACED AS NOTED:
METHOD 1 : ATTACH A MATCHING GABLE TRUSS TO THE INSIDE FACE OF THE STRUCTURAL GABLE AND FASTEN PER THE FOLLOWING NAILING SCHEDULE.
METHOD 2 : ATTACH 2X _ SCABS TO THE FACE OF EACH VERTICAL MEMBER ON THE STRUCTURAL GABLE PER THE FOLLOWING NAILING SCHEDULE. SCABS ARE TO BE OF THE SAME SIZE, GRADE AND SPECIES AS THE TRUSS VERTICALS

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

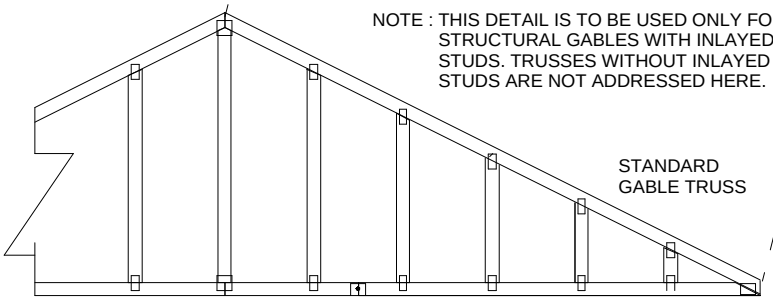


MAXIMUM STUD LENGTHS ARE LISTED ON PAGE 1. ALL BRACING METHODS SHOWN ON PAGE 1 ARE VALID AND ARE TO BE FASTENED TO THE SCABS OR VERTICAL STUDS OF THE STANDARD GABLE TRUSS ON THE INTERIOR SIDE OF THE STRUCTURE.



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

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



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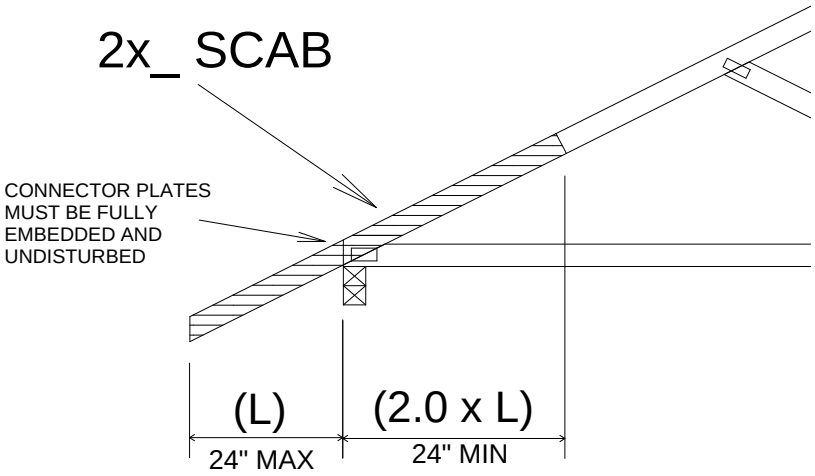
TRUSS CRITERIA:
- LOADING: 40-10-0-10
- DURATION FACTOR: 1.15
- SPACING: 24" O.C.
- TOP CHORD: 2x4 OR 2x6
- PITCH: 4/12 - 12/12
- HEEL HEIGHT: STANDARD HEEL UP TO 12" ENERGY HEEL
- END BEARING CONDITION

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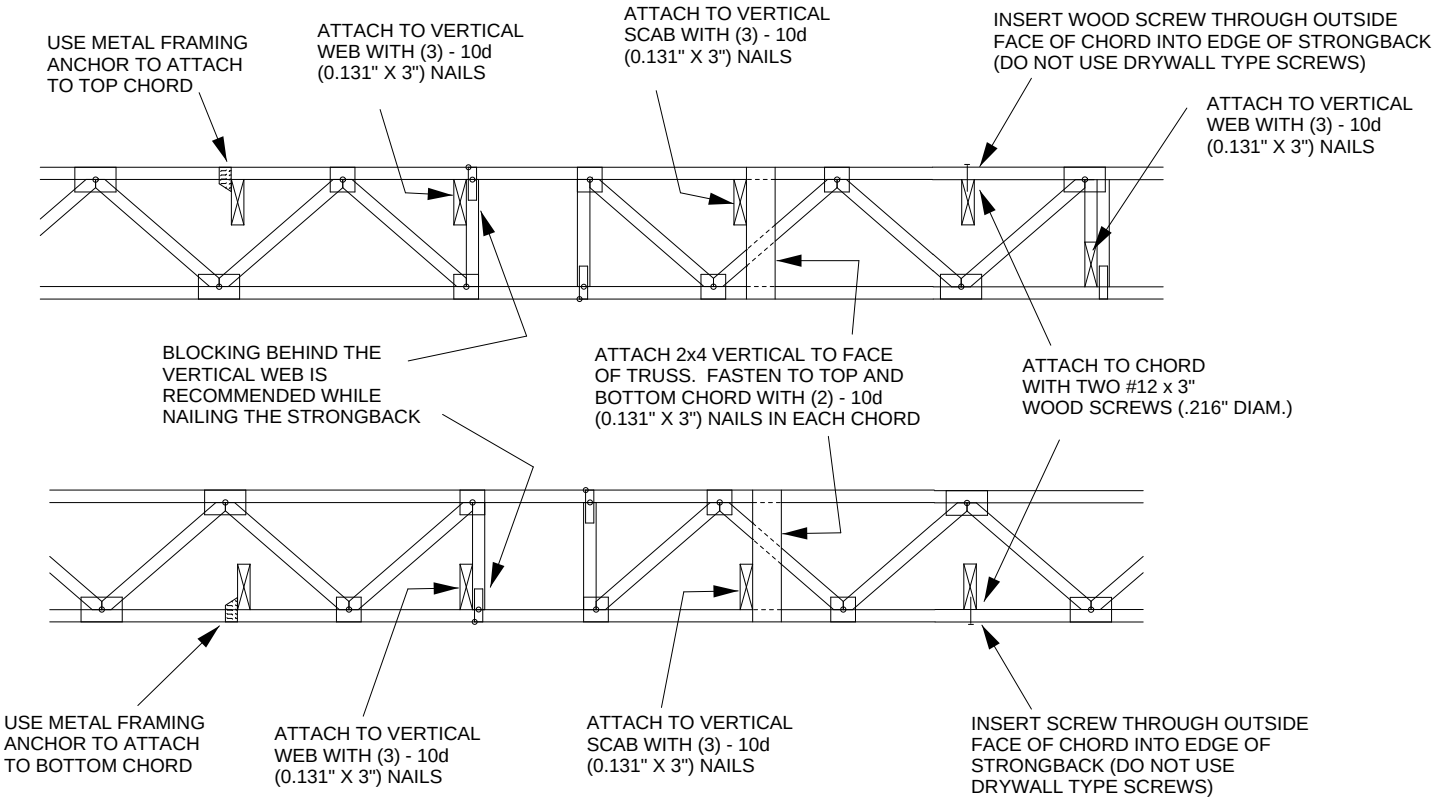
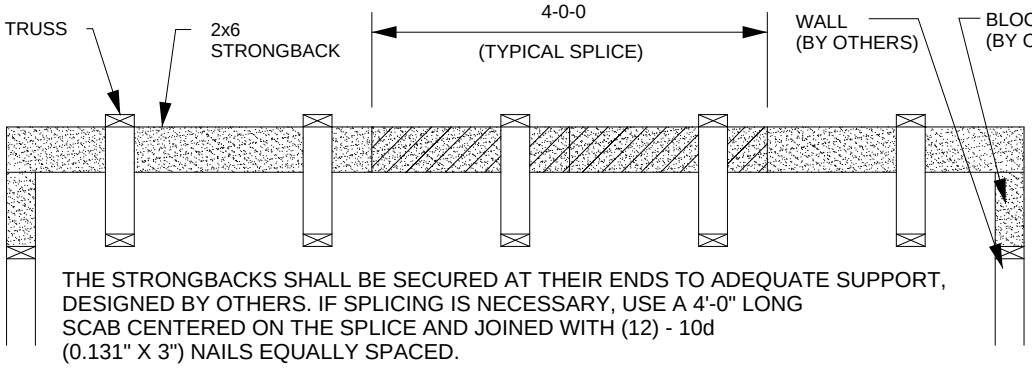
TO MINIMIZE VIBRATION COMMON TO ALL SHALLOW FRAMING SYSTEMS, 2x6 "STRONGBACK" IS RECOMMENDED, LOCATED EVERY 8 TO 10 FEET ALONG A FLOOR TRUSS.

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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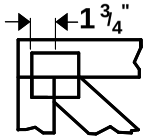
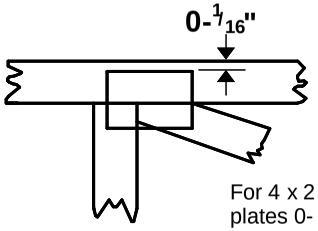
Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

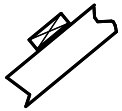
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

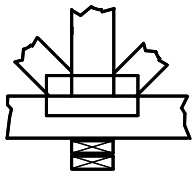
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

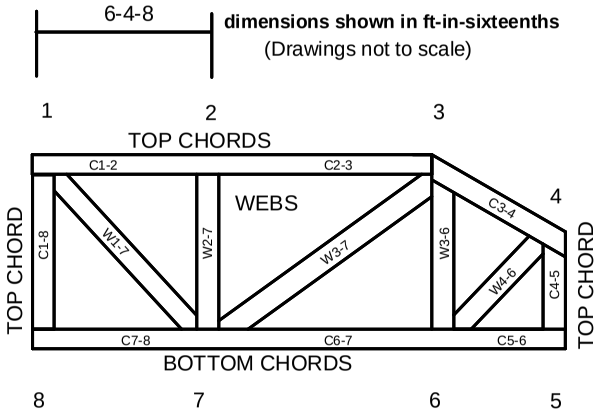


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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

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