

# Mark Morris, P.E.

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The truss drawing(s) listed below have been prepared by **Atlantic Building Components** under my direct supervision based on the parameters provided by the truss designers.

AST #: 42238

JOB: 23-7730-R01

JOB NAME: LOT 7 PROVIDENCE CREEK

Wind Code: 37

Wind Speed: Vult= 120mph

Exposure Category: B

Mean Roof Height (feet): 23

These truss designs comply with IRC 2015 as well as IRC 2018.

*18 Truss Design(s)*

Trusses:

J01, J02, R01, R02, R02A, R03, R04, R05, R06, R07, R08, R09, SP01, SP02, V01, V02, V03,



**10/27/2023**

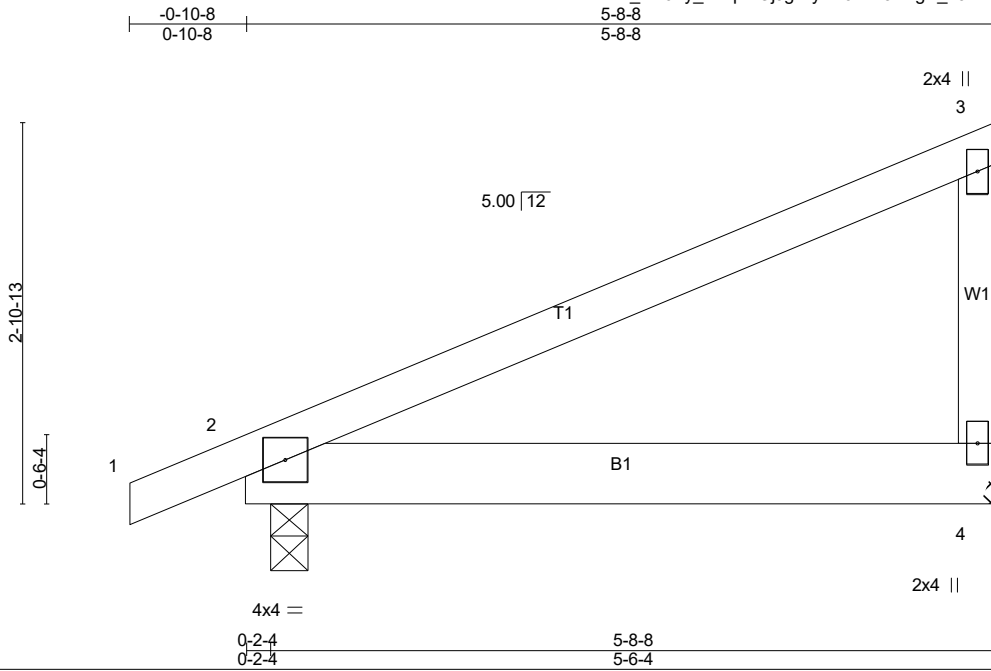
**Mark Morris**

***Warning !—Verify design parameters and read notes before use.***

This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 Guide to *Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI

Job	Truss	Truss Type	Qty	Ply	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN
23-7730-R01	J01	Jack-Closed	3	1	
					<b># 42238</b>

Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Sun Oct 29 12:41:53 2023 Page 1  
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<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	Plate Grip DOL 1.15	TC 0.47	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15	BC 0.34	Vert(LL) 0.04 4-7 >999 240		
TCDL 10.0	Rep Stress Incr YES	WB 0.00	Vert(CT) -0.05 4-7 >999 180		
BCLL 0.0 *	Code IRC2021/TPI2014	Matrix-AS	Horz(CT) 0.00 2 n/a n/a		
BCDL 10.0				Weight: 27 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD  
 BOT CHORD

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

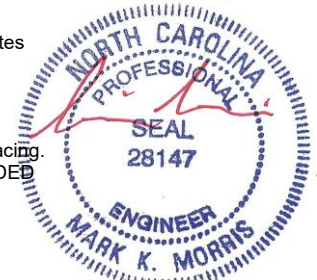
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 4=218/Mechanical, 2=279/0-3-8 (min. 0-1-8)  
 Max Horz 2=84(LC 13)  
 Max Uplift 4=-47(LC 10), 2=-64(LC 10)  
 Max Grav 4=303(LC 21), 2=364(LC 21)

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

**NOTES-** (10-13)

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 4 and 64 lb uplift at joint 2.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAINING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.



10/27/2023

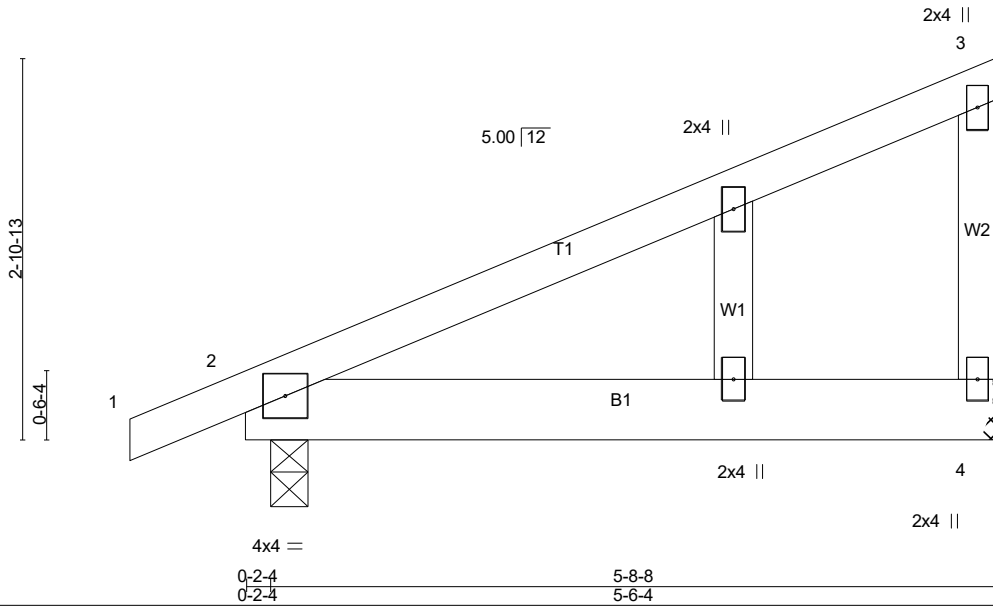
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Job	Truss	Truss Type	Qty	Ply	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN
23-7730-R01	J02	Jack-Closed	1	1	
					<b># 42238</b>

Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Sun Oct 29 12:41:54 2023 Page 1  
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Scale = 1:17.5



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.47	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.34	Vert(LL) 0.04 4-9 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.05 4-9 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.00 2 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 29 lb	FT = 20%

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

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

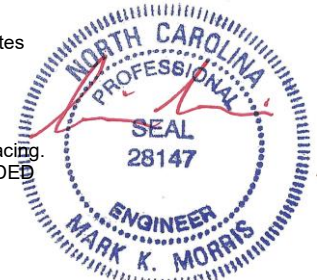
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 4=218/Mechanical, 2=279/0-3-8 (min. 0-1-8)  
 Max Horz 2=84(LC 13)  
 Max Uplift 4=-47(LC 10), 2=-64(LC 10)  
 Max Grav 4=303(LC 21), 2=364(LC 21)

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

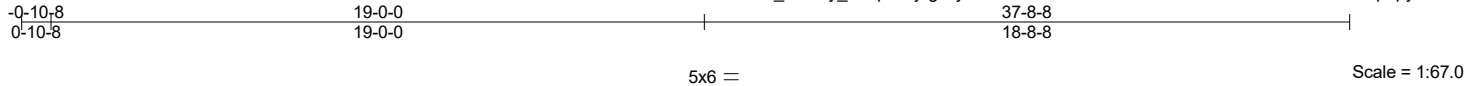
**NOTES-** (10-13)

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 4 and 64 lb uplift at joint 2.
- 9) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- 10) Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- 11) Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- 12) Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- 13) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAINING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.



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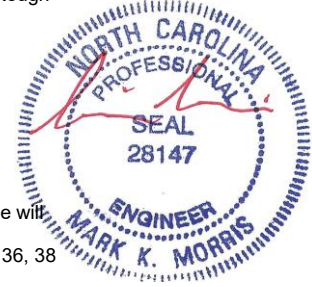
<b>LOADING</b> (psf)		<b>SPACING-</b>		<b>CSI.</b>		<b>DEFL.</b>		<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	-0.00 1 n/r 180	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.00 1 n/r 80		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00 23 n/a n/a		
BCLL	0.0 *	Code IRC2018/TPI2014		Matrix-R					
BCDL	10.0							Weight: 267 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.3	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 12-33, 11-34, 10-35, 13-32, 14-31
OTHERS 2x4 SP No.3	MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 37-8-8.  
 (lb) - Max Horz 43=142(LC 14)  
 Max Uplift All uplift 100 lb or less at joint(s) 43, 23, 34, 35, 36, 38, 39, 40, 41, 32, 31, 30, 28, 27, 26, 25, 24 except 42=-107(LC 14)  
 Max Grav All reactions 250 lb or less at joint(s) 43, 23, 36, 38, 39, 40, 41, 42, 30, 28, 27, 26, 25, 24 except 33=285(LC 27), 34=290(LC 5), 35=276(LC 5), 32=290(LC 6), 31=276(LC 6)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 9-44=-120/251, 10-44=-112/259, 10-11=-139/299, 11-12=-156/332, 12-13=-156/332, 13-14=-139/299, 14-45=-112/259, 15-45=-120/251

- NOTES-** (15)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=5.0psf; BCCL=5.0psf; h=24ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 3-0-0, Exterior(2N) 3-0-0 to 15-0-0, Corner(3R) 15-0-0 to 23-0-0, Exterior(2N) 23-0-0 to 33-6-12, Corner(3E) 33-6-12 to 37-6-12 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCCL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 43, 23, 34, 35, 36, 38, 39, 40, 41, 32, 31, 30, 28, 27, 26, 25, 24 except (jt=lb) 42=107.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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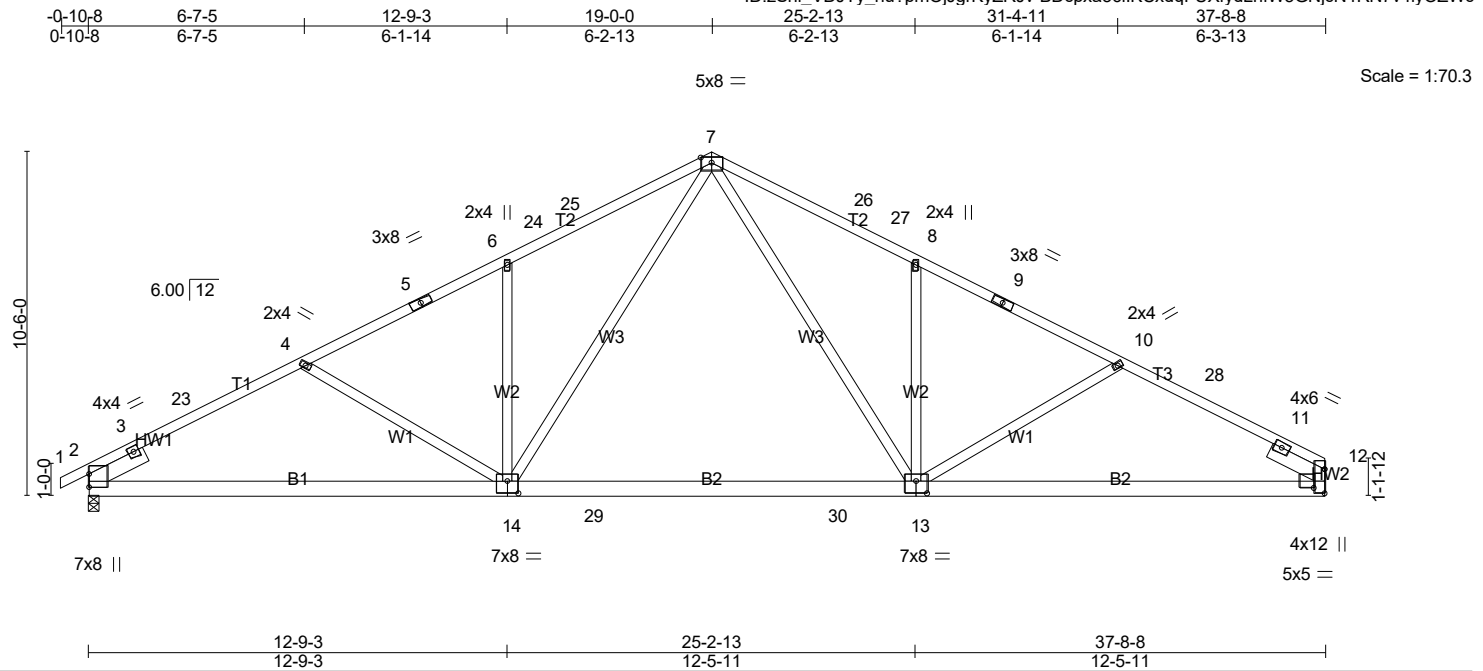


Plate Offsets (X,Y)-- [12:0-4-0,0-6-13], [13:0-4-0,0-4-8], [14:0-4-0,0-4-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.91	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.82	Vert(LL) -0.58 13-14 >786 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.49	Vert(CT) -0.82 13-14 >553 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.12 12 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 237 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.2 \*Except\*  
 T1: 2x4 SP No.1, T3: 2x4 SP SS  
 BOT CHORD 2x6 SP No.1 \*Except\*  
 B1: 2x6 SP No.2  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x6 SP No.2 -° 1-11-0, Right 2x6 SP No.2 -° 1-11-0

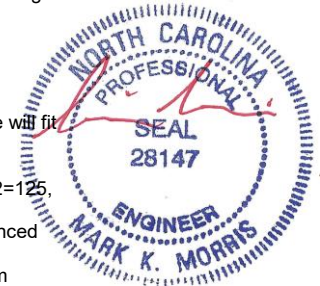
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 12=1508/Mechanical, 2=1561/0-3-8 (min. 0-1-13)  
 Max Horz 2=141(LC 14)  
 Max Uplift 12=-125(LC 15), 2=-141(LC 14)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-881/0, 3-23=-2478/252, 4-23=-2440/275, 4-5=-2262/231, 5-6=-2194/247,  
 6-24=-2297/319, 24-25=-2247/326, 7-25=-2221/344, 7-26=-2197/344, 26-27=-2249/326,  
 8-27=-2274/318, 8-9=-2166/246, 9-10=-2233/230, 10-28=-2320/274, 11-28=-2414/252,  
 11-12=-483/178  
 BOT CHORD 2-14=-277/2130, 14-29=-43/1453, 29-30=-43/1453, 13-30=-43/1453, 12-13=-178/2060  
 WEBS 7-13=-177/1052, 8-13=-525/198, 6-14=-513/197, 7-14=-181/1091, 4-14=-290/164

- NOTES-** (12)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=5.0psf; BCDL=5.0psf; h=24ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 3-1-8, Interior(1) 3-1-8 to 15-0-0, Exterior(2R) 15-0-0 to 23-0-0, Interior(1) 23-0-0 to 33-8-8, Exterior(2E) 33-8-8 to 37-8-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=125, 2=141.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



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Scale = 1:70.9

LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES		GRIP			
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.77	in (loc)	16	l/defl	>589	L/d	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-1.14		16	>395		180			
TCDL	10.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.14		12	n/a		n/a			
BCLL	0.0 *	Code IRC2018/TPI2014		Matrix-AS											
BCDL	10.0														

LUMBER-		BRACING-	
TOP CHORD	2x4 SP SS *Except* T2: 2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	2x6 SP DSS *Except* B1: 2x6 SP No.1, B3: 2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied. Except: 6-0-0 oc bracing: 15-17
WEBS	2x4 SP No.3		
SLIDER	Left 2x6 SP No.2 -° 2-5-0, Right 2x6 SP No.2 -° 1-11-0		

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 12=1624/Mechanical, 2=1676/0-3-8 (min. 0-2-1)  
 Max Horz 2=141(LC 14)  
 Max Uplift 12=-67(LC 15), 2=-84(LC 14)  
 Max Grav 12=1734(LC 3), 2=1772(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-758/0, 3-27=-2961/139, 4-27=-2933/159, 4-5=-2788/99, 5-6=-2752/124,  
 6-28=-2828/195, 28-29=-2804/202, 7-29=-2751/220, 7-30=-2723/219, 30-31=-2777/201,  
 8-31=-2802/194, 8-9=-2686/123, 9-10=-2754/108, 10-32=-2810/160, 11-32=-2904/138,  
 11-12=-203/275  
 BOT CHORD 2-18=-178/2552, 18-33=0/1822, 14-33=0/1822, 14-34=0/1822, 34-35=0/1822, 13-35=0/1822,  
 12-13=-81/2482  
 WEBS 7-15=-112/1329, 13-15=-142/1210, 4-18=-262/178, 6-18=-516/193, 17-18=-146/1253,  
 7-17=-114/1372, 8-13=-533/195, 14-16=-368/0

- NOTES-** (13)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=5.0psf; BCDL=5.0psf; h=24ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 3-1-8, Interior(1) 3-1-8 to 15-0-0, Exterior(2R) 15-0-0 to 23-0-0, Interior(1) 23-0-0 to 33-8-8, Exterior(2E) 33-8-8 to 37-8-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 2.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



10/27/2023

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN
23-7730-R01	R02A	COMMON	1	1	Job Reference (optional) # 42238

Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Sun Oct 29 12:42:00 2023 Page 2  
 ID:zSn\_VDJTy\_hu?pmOjgrKyZRJv-fPAB8w3kWcS3YnPR2FAB9ZEpxTbUS1QDf1tTc8yOZWb

**NOTES-** (13)

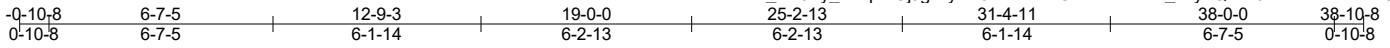
12) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard



10/27/2023

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Scale = 1:68.1

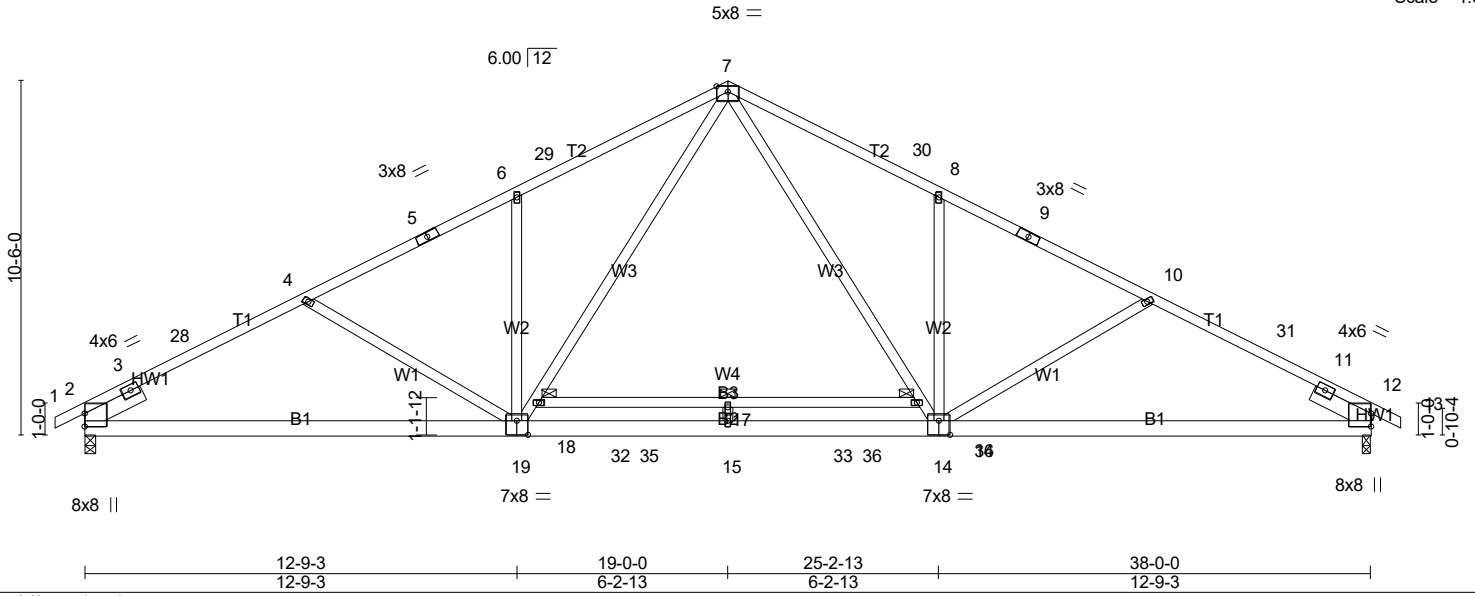


Plate Offsets (X,Y)-- [4:0-0-0,0-0-0], [14:0-4-0,0-5-0], [19:0-4-0,0-5-0]			
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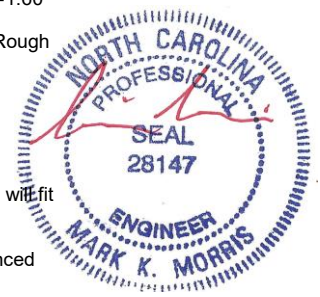
<b>LOADING</b> (psf)		<b>SPACING-</b>		<b>CSI.</b>		<b>DEFL.</b>		<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.78 17 >584 240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-1.16 17 >394 180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.12 12 n/a n/a		
BCLL	0.0 *	Code IRC2018/TPI2014		Matrix-AS					
BCDL	10.0							Weight: 257 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2 *Except* T1: 2x4 SP SS	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x6 SP No.1 *Except* B2: 2x6 SP DSS, B3: 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied. Except: 6-0-0 oc bracing: 16-18
WEBS 2x4 SP No.3	MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.
SLIDER Left 2x6 SP No.2 -° 1-11-0, Right 2x6 SP No.2 -° 1-11-0	

**REACTIONS.** (lb/size) 2=1688/0-3-8 (min. 0-2-2), 12=1688/0-3-8 (min. 0-2-2)  
 Max Horz2=133(LC 14)  
 Max Uplift2=-83(LC 14), 12=-83(LC 15)  
 Max Grav2=1785(LC 3), 12=1785(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-771/0, 3-28=-2996/389, 4-28=-2958/411, 4-5=-2809/318, 5-6=-2741/332,  
 6-29=-2849/431, 7-29=-2773/456, 7-30=-2773/456, 8-30=-2849/431, 8-9=-2741/332,  
 9-10=-2809/318, 10-31=-2958/411, 11-31=-2996/389, 11-12=-527/0  
 BOT CHORD 2-19=-246/2577, 19-32=0/1846, 15-32=0/1846, 15-33=0/1846, 33-34=0/1846,  
 12-14=-246/2577  
 WEBS 7-16=-149/1366, 14-16=-181/1247, 8-14=-516/214, 10-14=-266/201, 18-19=-181/1247,  
 7-18=-149/1366, 6-19=-516/214, 4-19=-266/201, 15-17=-367/0

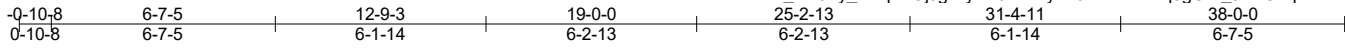
- NOTES-** (12)
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=5.0psf; BCDL=5.0psf; h=24ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-10-8 to 3-1-8, Exterior(2N) 3-1-8 to 15-0-0, Corner(3R) 15-0-0 to 23-0-0, Exterior(2N) 23-0-0 to 34-10-8, Corner(3E) 34-10-8 to 38-10-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60
  - 3) TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.0
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 6) All plates are 2x4 MT20 unless otherwise indicated.
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 12.
  - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 11) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



10/27/2023

**Warning!** Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.





5x8 =

Scale = 1:67.6

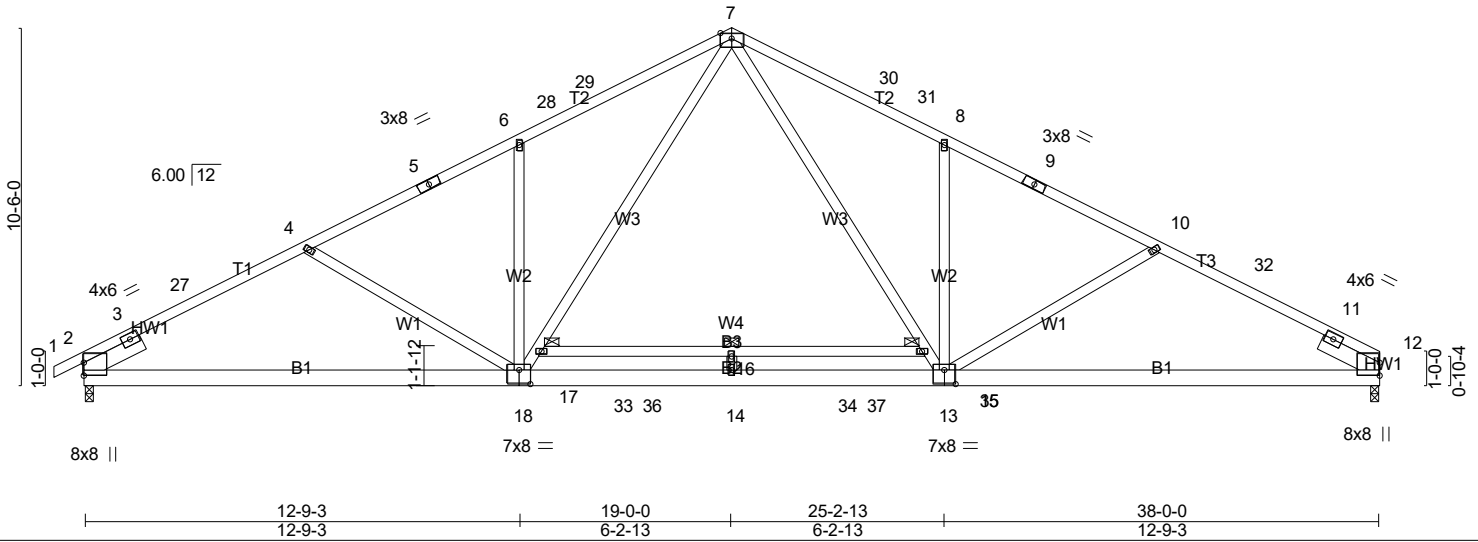


Plate Offsets (X,Y)-- [13:0-4-0,0-5-0], [18:0-4-0,0-5-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.82	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.90	Vert(LL) -0.78 16 >584 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.63	Vert(CT) -1.16 16 >395 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.12 12 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 255 lb	FT = 20%

**LUMBER-**  
**TOP CHORD** 2x4 SP SS \*Except\*  
 T2: 2x4 SP No.2  
**BOT CHORD** 2x6 SP No.1 \*Except\*  
 B2: 2x6 SP DSS, B3: 2x4 SP No.2  
**WEBS** 2x4 SP No.3  
**SLIDER** Left 2x6 SP No.2 -° 1-11-0, Right 2x6 SP No.2 -° 1-11-0

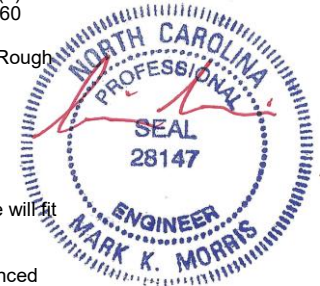
**BRACING-**  
**TOP CHORD** Structural wood sheathing directly applied.  
**BOT CHORD** Rigid ceiling directly applied. Except:  
 6-0-0 oc bracing: 15-17

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 12=1634/0-3-8 (min. 0-2-1), 2=1688/0-3-8 (min. 0-2-2)  
 Max Horz 2=139(LC 14)  
 Max Uplift 12=-69(LC 15), 2=-83(LC 14)  
 Max Grav 12=1741(LC 3), 2=1786(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**TOP CHORD** 2-3=-771/0, 3-27=-2997/137, 4-27=-2959/159, 4-5=-2810/109, 5-6=-2742/124,  
 6-28=-2850/195, 28-29=-2800/202, 7-29=-2774/220, 7-30=-2775/221, 30-31=-2802/203,  
 8-31=-2852/196, 8-9=-2744/126, 9-10=-2812/111, 10-32=-2942/164, 11-32=-2999/141,  
 11-12=-566/0  
**BOT CHORD** 2-18=-175/2577, 18-33=0/1847, 14-33=0/1847, 14-34=0/1847, 34-35=0/1847, 13-35=0/1847,  
 12-13=-81/2581  
**WEBS** 7-15=-114/1368, 13-15=-145/1250, 8-13=-516/193, 10-13=-269/178, 17-18=-145/1247,  
 7-17=-114/1366, 6-18=-517/193, 4-18=-266/178, 14-16=-367/0

- NOTES-** (12)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=5.0psf; BCDL=5.0psf; h=24ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 3-1-8, Interior(1) 3-1-8 to 15-0-0, Exterior(2R) 15-0-0 to 23-0-0, Interior(1) 23-0-0 to 34-0-0, Exterior(2E) 34-0-0 to 38-0-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 2.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum



10/27/2023

When used for purposes other than those shown on this drawing, the user assumes all responsibility for the design. This design is based upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction and BCSI I-03 Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN
23-7730-R01	R04	Common	1	1	Job Reference (optional) # 42238

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LOAD CASE(S) Standard



10/27/2023

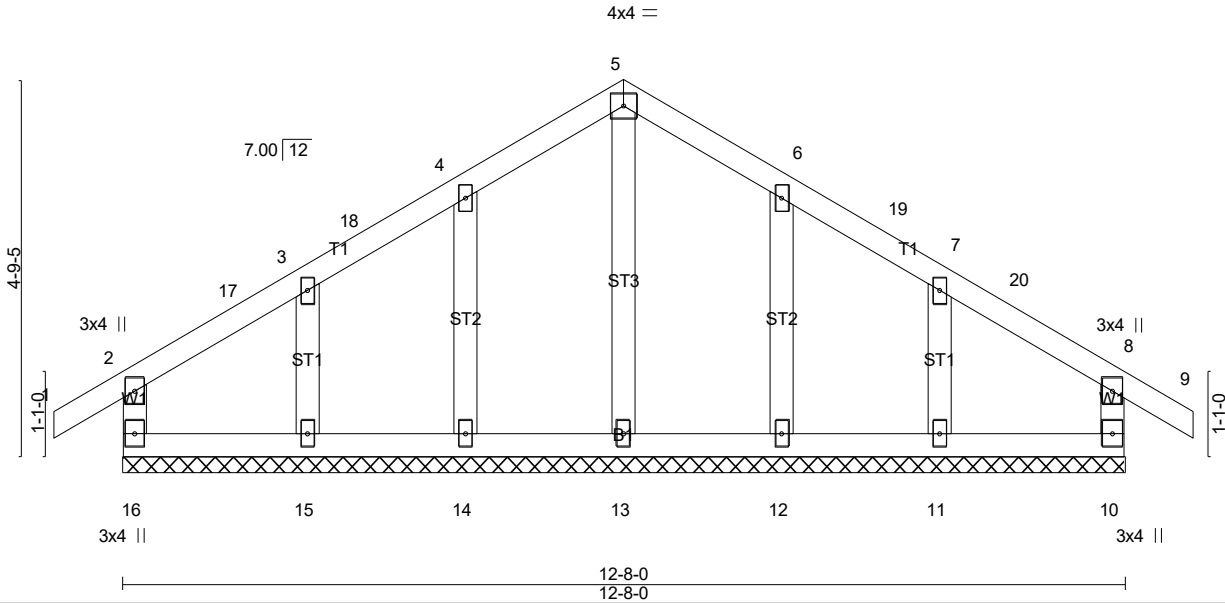
**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN
23-7730-R01	R05	COMMON SUPPORTED GAB	1	1	Job Reference (optional) # 42238

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Scale = 1:29.2



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.12	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.06	Vert(LL) -0.00 9 n/r 180		
TCDL 10.0	Lumber DOL 1.15	WB 0.06	Vert(CT) -0.00 9 n/r 80		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-R	Horz(CT) 0.00 10 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 67 lb	FT = 20%

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

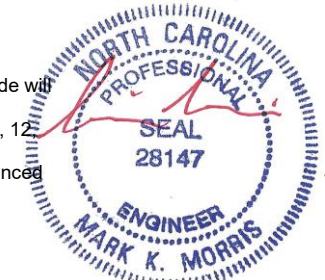
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 12-8-0.  
(lb) - Max Horz 16=80(LC 13)  
Max Uplift All uplift 100 lb or less at joint(s) 16, 10, 14, 15, 12, 11  
Max Grav All reactions 250 lb or less at joint(s) 16, 10, 13, 14, 15, 12, 11

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

- NOTES-** (15)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=5.0psf; BCCL=5.0psf; h=21ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 3-1-8, Corner(3R) 3-1-8 to 9-6-8, Corner(3E) 9-6-8 to 13-6-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 16, 10, 14, 15, 12, 11.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

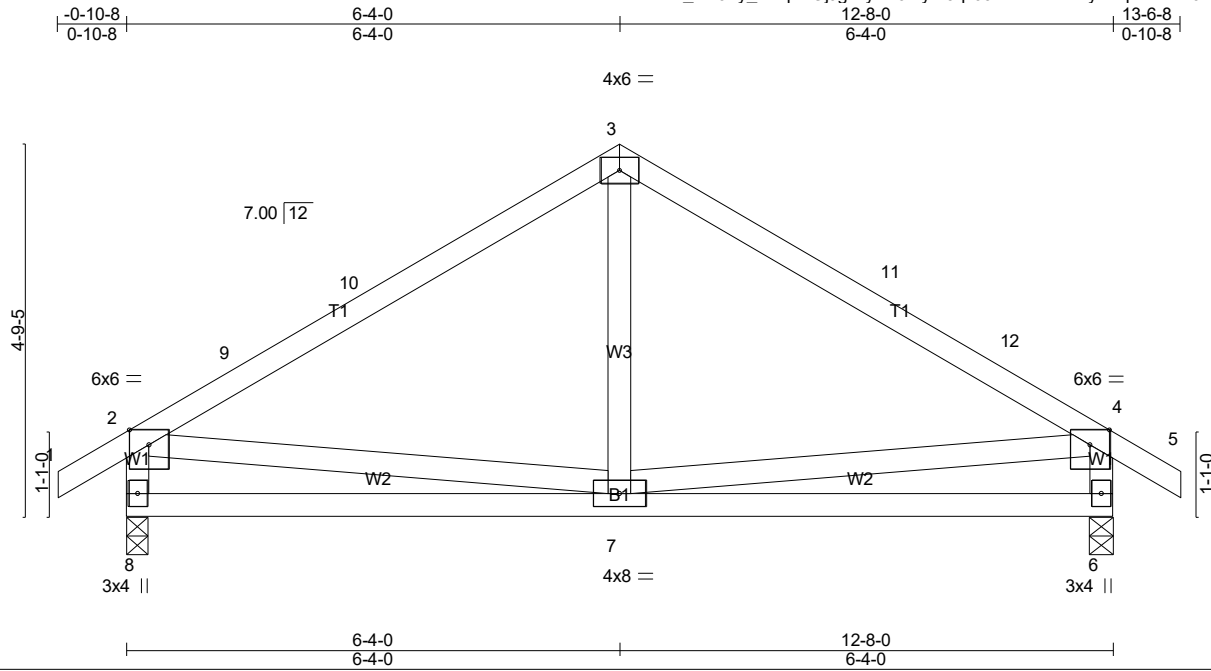


10/27/2023

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Job 23-7730-R01	Truss R06	Truss Type Common	Qty 3	Ply 1	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN Job Reference (optional) # 42238
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<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.97	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.32	Vert(LL) -0.03 7-8 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.11	Vert(CT) -0.06 7-8 >999 180		
BCDL 0.0 *	Rep Stress Incr YES	Matrix-AS	Horz(CT) 0.00 6 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 70 lb	FT = 20%

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

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

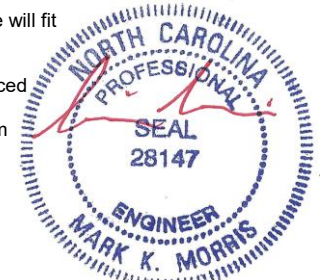
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 8=556/0-3-8 (min. 0-1-8), 6=556/0-3-8 (min. 0-1-8)  
Max Horz 8=-80(LC 12)  
Max Uplift 8=47(LC 14), 6=47(LC 15)  
Max Grav 8=632(LC 21), 6=632(LC 22)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-9=-600/125, 9-10=-482/137, 3-10=-461/153, 3-11=-461/153, 11-12=-482/137,  
4-12=-600/125, 2-8=-574/217, 4-6=-574/217  
BOT CHORD 7-8=-123/364, 6-7=-103/364  
WEBS 2-7=-35/277, 4-7=-39/277

- NOTES-** (11)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=5.0psf; BCDL=5.0psf; h=21ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 3-1-8, Corner(3R) 3-1-8 to 9-6-8, Corner(3E) 9-6-8 to 13-6-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 6.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

**LOAD CASE(S)** Standard

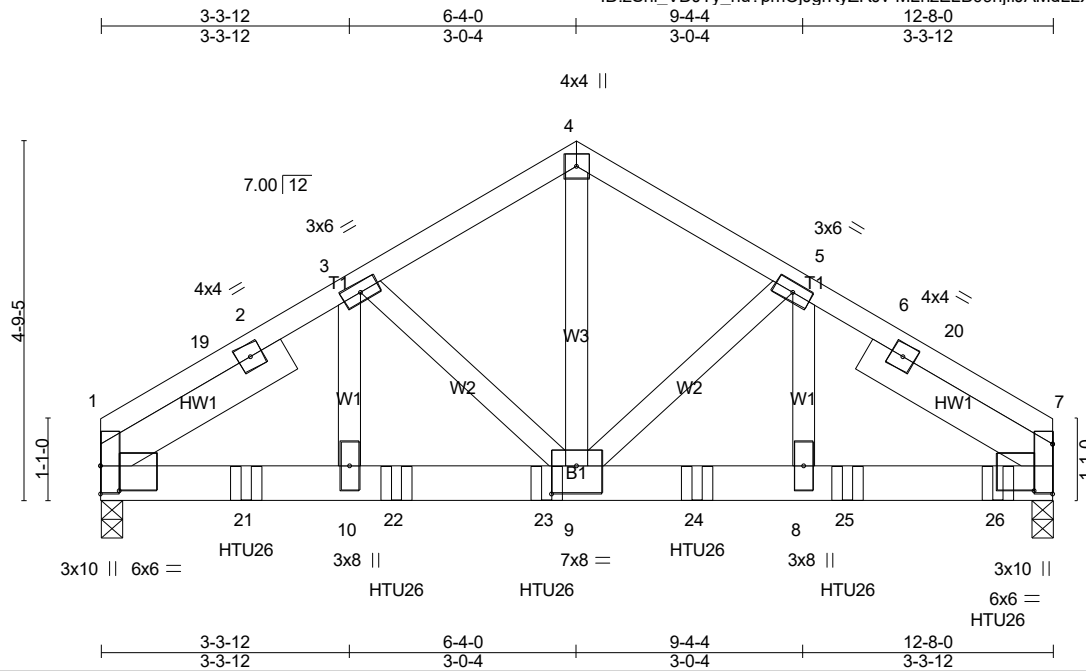


10/27/2023

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 Guide to *Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job 23-7730-R01	Truss R07	Truss Type Common Girder	Qty 1	Ply 2	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN Job Reference (optional) # 42238
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Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Sun Oct 29 12:42:10 2023 Page 1  
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Scale = 1:30.6

Plate Offsets (X,Y)-- [1:0-3-0,0-4-0], [7:0-3-0,0-7-7], [9:0-4-0,0-4-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.52	Vert(LL) -0.05	9-10	>999	240	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.77	Vert(CT) -0.10	9-10	>999	180		
TCDL 10.0	Lumber DOL 1.15	WB 0.87	Horz(CT) 0.03	7	n/a	n/a		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-MSH						
BCDL 10.0	Code IRC2018/TPI2014							
							Weight: 178 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x6 SP No.1  
WEBS 2x4 SP No.3  
SLIDER Left 2x6 SP No.2 -° 2-11-0, Right 2x6 SP No.2 -° 2-11-0

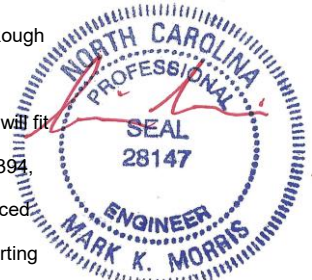
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-6-10 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 1=4551/0-3-8 (min. 0-2-12), 7=5508/0-3-8 (min. 0-3-5)  
Max Horz 1=71(LC 38)  
Max Uplift1=-394(LC 12), 7=-419(LC 13)  
Max Grav 1=4624(LC 18), 7=5581(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-19=-2124/196, 2-19=-2068/204, 2-3=-5785/511, 3-4=-4620/431, 4-5=-4622/431,  
5-6=-5883/507, 6-20=-2367/203, 7-20=-2422/195  
BOT CHORD 1-21=-434/4777, 10-21=-434/4777, 10-22=-434/4777, 22-23=-434/4777, 9-23=-434/4777,  
9-24=-383/4879, 8-24=-383/4879, 8-25=-383/4879, 25-26=-383/4879, 7-26=-383/4879  
WEBS 4-9=-369/4212, 5-9=-1175/142, 5-8=-121/1655, 3-9=-1040/147, 3-10=-126/1544

**NOTES-** (13)

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-5-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=5.0psf; BCDL=5.0psf; h=21ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; Lumber DOL=1.60 plate grip DOL=1.60
- TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=394, 7=419.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Use Simpson Strong-Tie HTU26 (20-10d Girder, 11-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-11-4 from the left end to 11-11-4 to connect truss(es) R02 (1 ply 2x6 SP), R02A (1 ply 2x6 SP) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.



10/27/2023

**LOAD CASE(S) and design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.



Job	Truss	Truss Type	Qty	Ply	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN
23-7730-R01	R07	Common Girder	1	2	Job Reference (optional) # 42238

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**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-4=-60, 4-7=-60, 11-15=-20

Concentrated Loads (lb)

Vert: 21=-1488(B) 22=-1488(B) 23=-1488(B) 24=-1488(B) 25=-1488(B) 26=-1606(B)

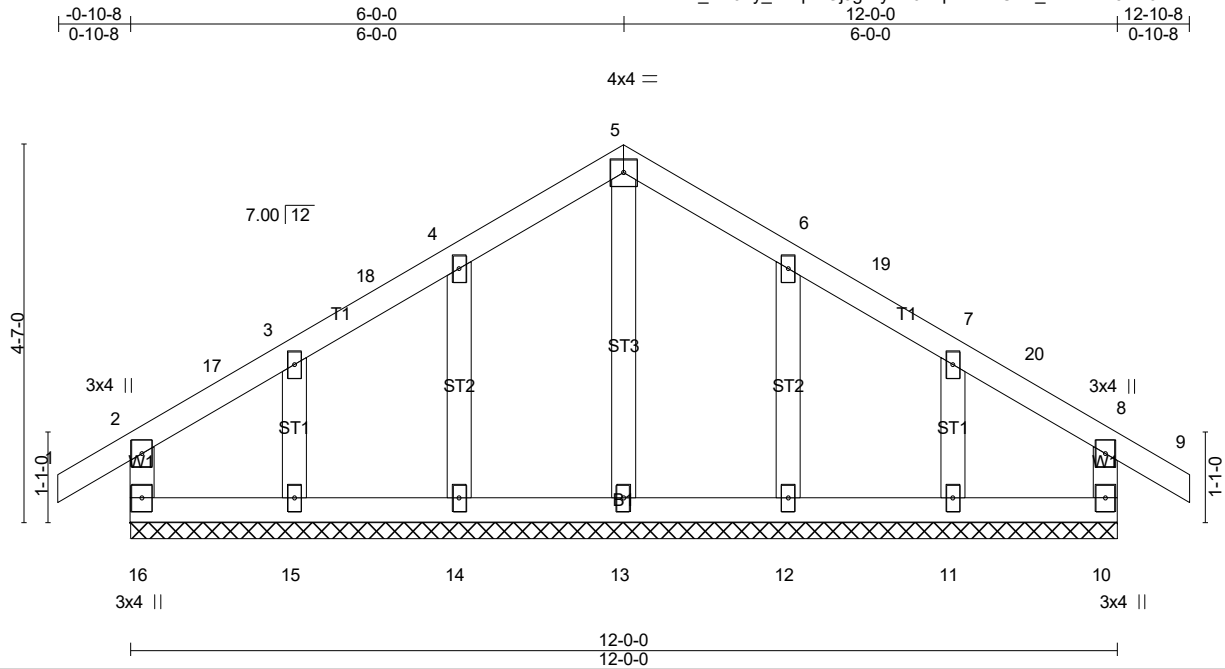


10/27/2023

**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN
23-7730-R01	R08	COMMON SUPPORTED GAB	1	1	
					<b># 42238</b>

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Scale = 1:28.0

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.12	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.05	Vert(LL) -0.00 9 n/r 180		
TCDL 10.0	Lumber DOL 1.15	WB 0.05	Vert(CT) -0.00 9 n/r 80		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-R	Horz(CT) 0.00 10 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 63 lb	FT = 20%

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

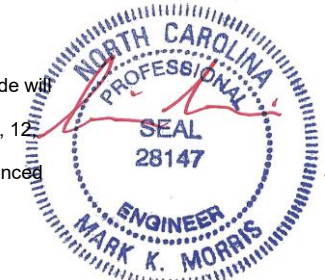
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
 MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 12-0-0.  
 (lb) - Max Horz 16=-76(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 16, 10, 14, 15, 12, 11  
 Max Grav All reactions 250 lb or less at joint(s) 16, 10, 13, 15, 11 except 14=252(LC 21), 12=252(LC 22)

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

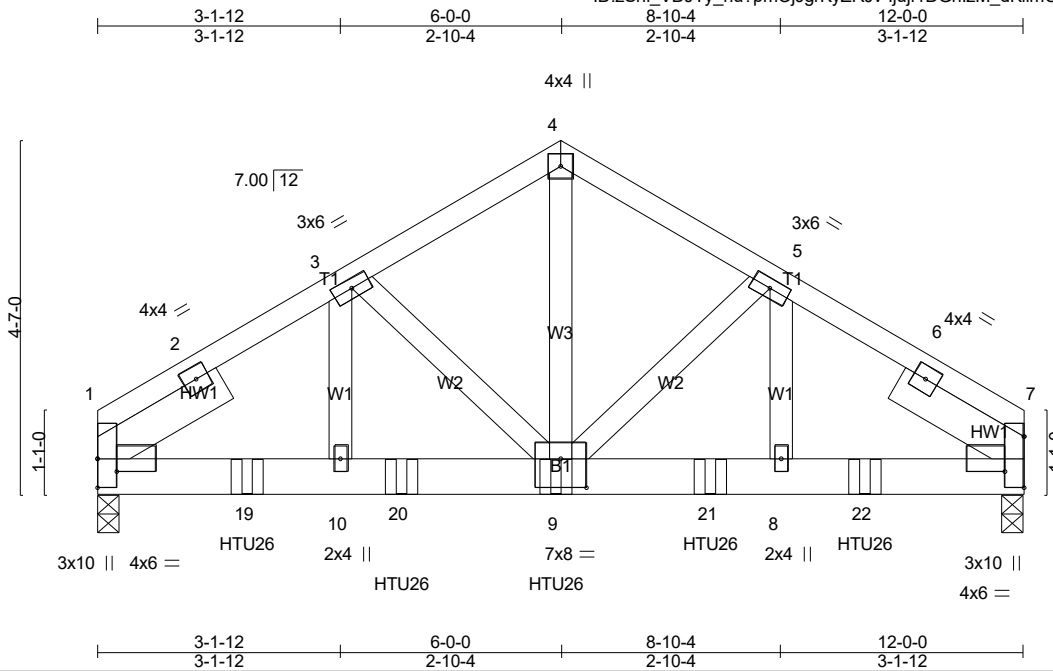
- NOTES-** (15)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=5.0psf; BCCL=5.0psf; h=21ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 3-1-8, Corner(3R) 3-1-8 to 8-10-8, Corner(3E) 8-10-8 to 12-10-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 16, 10, 14, 15, 12, 11.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



10/27/2023

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.



Scale = 1:29.8

Plate Offsets (X,Y)-- [1:0-3-0,0-2-0], [7:0-3-0,0-5-7], [9:0-4-0,0-4-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.73	Vert(LL) -0.05	8-9	>999	240	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.79	Vert(CT) -0.10	8-9	>999	180		
TCDL 10.0	Lumber DOL 1.15	WB 0.80	Horz(CT) 0.03	7	n/a	n/a		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-MSH						
BCDL 10.0	Code IRC2018/TPI2014							
							Weight: 161 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x6 SP No.1  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x6 SP No.2 -° 1-11-0, Right 2x6 SP No.2 -° 1-11-0

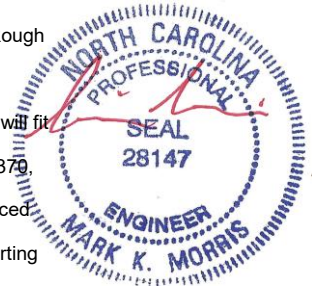
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-2-2 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 1=4230/0-3-8 (min. 0-2-9), 7=4168/0-3-8 (min. 0-2-8)  
 Max Horz 1=67(LC 38)  
 Max Uplift 1=-370(LC 12), 7=-364(LC 13)  
 Max Grav 1=4305(LC 18), 7=4243(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-224/194, 2-3=-5215/463, 3-4=-4303/407, 4-5=-4303/407, 5-6=-5218/464,  
 6-7=-2199/190  
 BOT CHORD 1-19=-396/4308, 10-19=-396/4308, 10-20=-396/4308, 9-20=-396/4308, 9-21=-352/4307,  
 8-21=-352/4307, 8-22=-352/4307, 7-22=-352/4307  
 WEBS 4-9=-346/3879, 5-9=-787/122, 5-8=-108/1183, 3-9=-789/122, 3-10=-106/1174

**NOTES-** (13)

- 1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-6-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- 3) Unbalanced roof live loads have been considered for this design.
- 4) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=5.0psf; BCDL=5.0psf; h=21ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; Lumber DOL=1.60 plate grip DOL=1.60
- 5) TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 6) Unbalanced snow loads have been considered for this design.
- 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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) except (jt=lb) 1=379, 7=364.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 11) Use Simpson Strong-Tie HTU26 (20-10d Girder, 11-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-11-4 from the left end to 9-11-4 to connect truss(es) R02 (1 ply 2x6 SP) to back face of bottom chord.
- 12) Fill all nail holes where hanger is in contact with lumber.



10/27/2023

**LOAD CASE(S) Parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN
23-7730-R01	R09	Common Girder	1	2	Job Reference (optional) # 42238

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**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-4=-60, 4-7=-60, 11-15=-20

Concentrated Loads (lb)

Vert: 9=-1488(B) 19=-1488(B) 20=-1488(B) 21=-1488(B) 22=-1488(B)

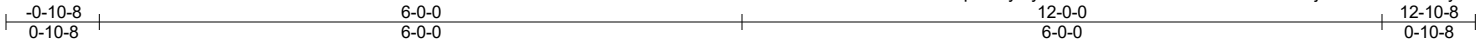


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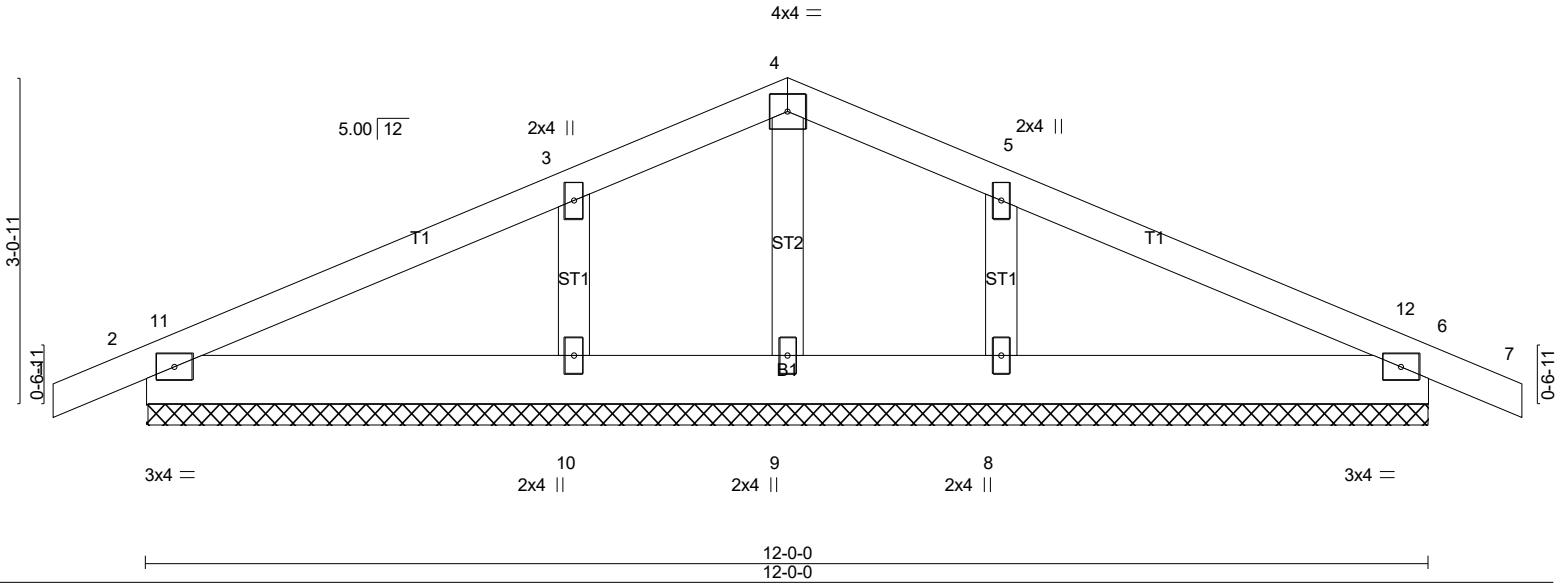
**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job 23-7730-R01	Truss SP01	Truss Type Common Supported Gable	Qty 1	Ply 1	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN
Job Reference (optional)					# 42238

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Scale = 1:21.6



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.22	in (loc) l/def L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.09	Vert(LL) 0.00 7 n/r 180		
TCDL 10.0	Lumber DOL 1.15	WB 0.07	Vert(CT) 0.00 7 n/r 80		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 6 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 58 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x6 SP No.2  
OTHERS 2x4 SP No.3

**BRACING-**  
TOP CHORD  
BOT CHORD

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

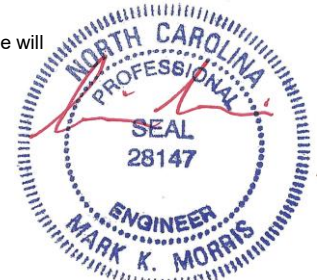
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** All bearings 12-0-0.  
(lb) - Max Horz 2=-38(LC 15)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 6, 10, 8  
Max Grav All reactions 250 lb or less at joint(s) 2, 6, 9 except 10=452(LC 21), 8=452(LC 22)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 3-10=-317/163, 5-8=-317/163

- NOTES-** (13)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 4-0-0, Corner(3R) 4-0-0 to 8-0-0, Corner(3E) 8-0-0 to 12-10-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6, 10, 8.
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.

**LOAD CASE(S)** Standard



10/27/2023

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Scale = 1:21.6

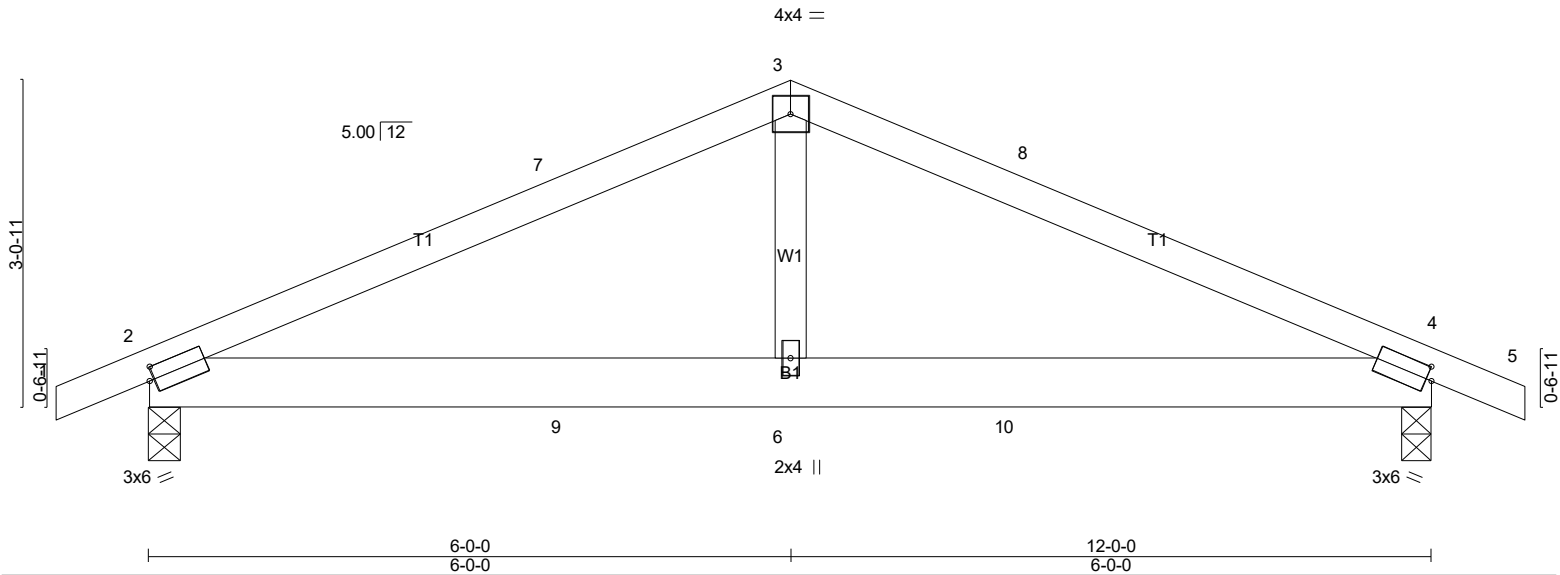


Plate Offsets (X,Y)-- [2:0-0-10,0-1-8], [4:0-0-10,0-1-8]							
<b>LOADING</b> (psf)	<b>SPACING-</b>		<b>CSI.</b>	<b>DEFL.</b>		<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0		TC 0.61	in (loc) l/defl L/d		MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15		BC 0.37	Vert(LL) -0.03 4-6 >999 240			
TCDL 10.0	Lumber DOL 1.15		WB 0.11	Vert(CT) -0.05 4-6 >999 180			
BCLL 0.0 *	Rep Stress Incr YES		Matrix-SH	Horz(CT) 0.01 4 n/a n/a			
BCDL 10.0	Code IRC2021/TPI2014					Weight: 54 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-4-12 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 9-6-0 oc bracing.

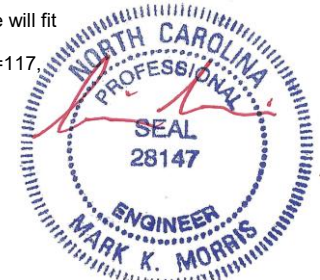
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=530/0-3-8 (min. 0-1-8), 4=530/0-3-8 (min. 0-1-8)  
 Max Horz 2=-38(LC 15)  
 Max Uplift 2=-117(LC 10), 4=-117(LC 11)  
 Max Grav 2=624(LC 21), 4=624(LC 22)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-7=-775/690, 3-7=-633/701, 3-8=-633/701, 4-8=-775/690  
 BOT CHORD 2-9=-559/594, 6-9=-559/594, 6-10=-559/594, 4-10=-559/594  
 WEBS 3-6=-379/297

- NOTES-** (9)
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 3-11-2, Exterior(2R) 3-11-2 to 8-0-14, Exterior(2E) 8-0-14 to 12-10-8 zone; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 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 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 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) 2=117, 4=117.

**LOAD CASE(S)** Standard

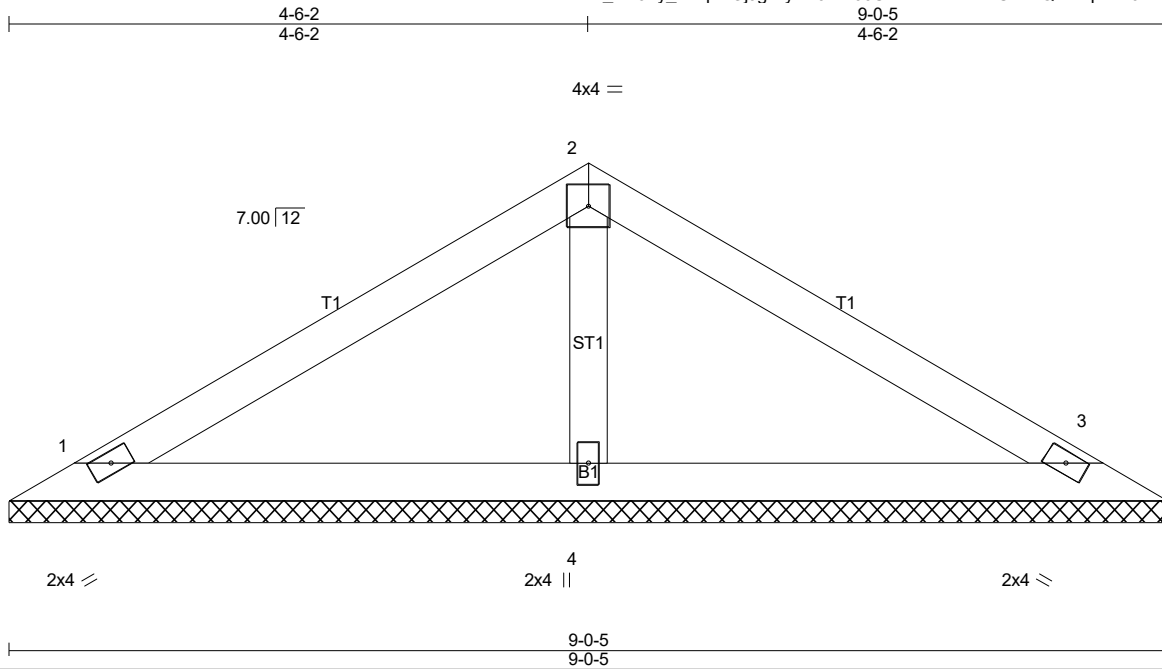


10/27/2023

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Job	Truss	Truss Type	Qty	Ply	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN
23-7730-R01	V01	Valley	1	1	
					<b># 42238</b>

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Scale = 1:18.0

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.33	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.27	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.05	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 3 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 30 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD  
 BOT CHORD

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

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=150/9-0-5 (min. 0-1-8), 3=150/9-0-5 (min. 0-1-8), 4=335/9-0-5 (min. 0-1-8)  
 Max Horz 1=45(LC 13)  
 Max Uplift 1=-21(LC 14), 3=-27(LC 15), 4=-4(LC 14)  
 Max Grav 1=214(LC 20), 3=214(LC 21), 4=344(LC 20)

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

**NOTES-** (10)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=5.0psf; BCCL=5.0psf; h=22ft; Cat. II; Exp B; Enclosed; 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

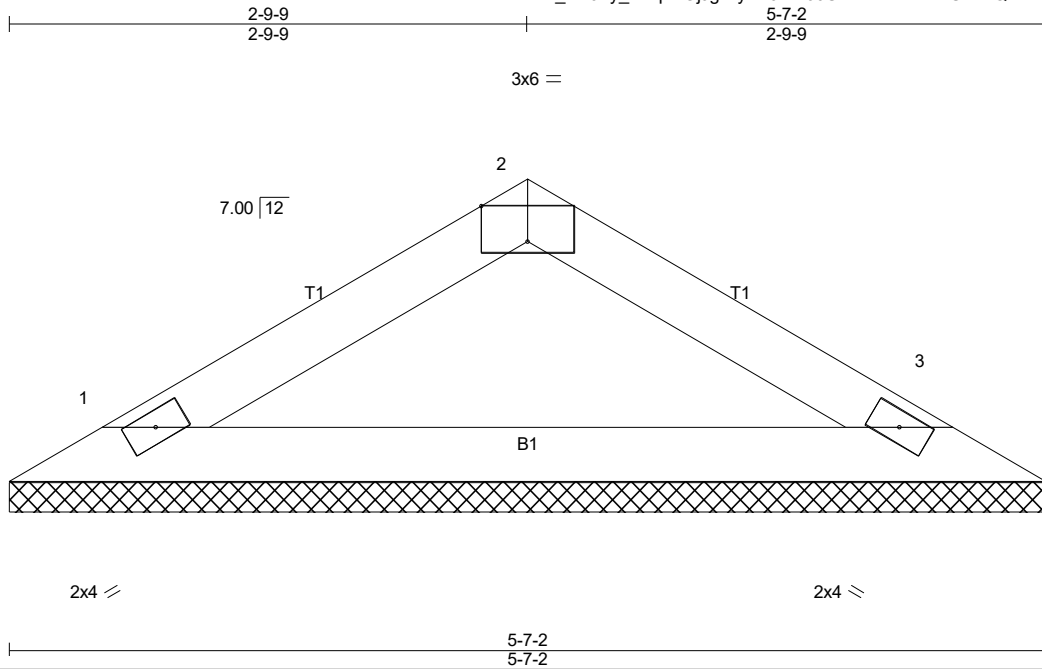


10/27/2023

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Job 23-7730-R01	Truss V02	Truss Type Valley	Qty 1	Ply 1	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN Job Reference (optional) <b># 42238</b>
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Scale = 1:12.4

LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	GRIP	
TCLL (roof)	20.0	2-0-0	Plate Grip DOL	1.15	TC	0.13	in	(loc)	l/defl	L/d	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.44	Vert(LL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Code IRC2018/TPI2014		Matrix-P		Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0										Weight: 16 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-7-2 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

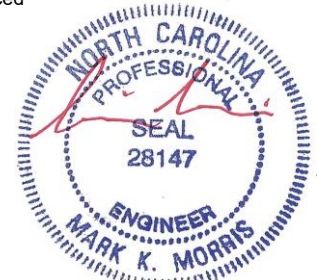
**REACTIONS.** (lb/size) 1=181/5-7-2 (min. 0-1-8), 3=181/5-7-2 (min. 0-1-8)  
Max Horz 1=26(LC 13)  
Max Uplift 1=13(LC 14), 3=13(LC 15)  
Max Grav 1=206(LC 20), 3=206(LC 21)

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

**NOTES-** (10)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TC DL=5.0psf; BC DL=5.0psf; h=22ft; Cat. II; Exp B; Enclosed; 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
- TC LL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

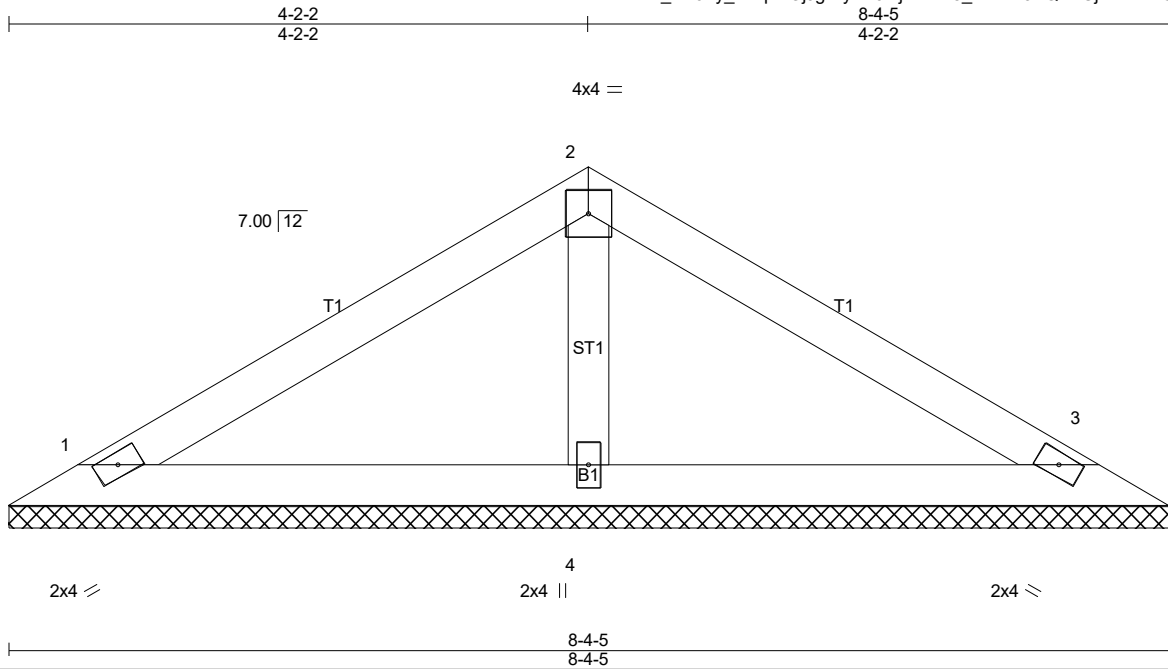


10/27/2023

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Job	Truss	Truss Type	Qty	Ply	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN
23-7730-R01	V03	Valley	1	1	
					<b># 42238</b>

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Scale = 1:16.6

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.38	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.23	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.04	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 28 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD  
 BOT CHORD

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

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 1=152/8-4-5 (min. 0-1-8), 3=152/8-4-5 (min. 0-1-8), 4=279/8-4-5 (min. 0-1-8)  
 Max Horz 1=-41(LC 10)  
 Max Uplift1=-25(LC 14), 3=-30(LC 15)  
 Max Grav 1=208(LC 20), 3=208(LC 21), 4=283(LC 21)

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

**NOTES-** (10)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=5.0psf; BCCL=5.0psf; h=22ft; Cat. II; Exp B; Enclosed; 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
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

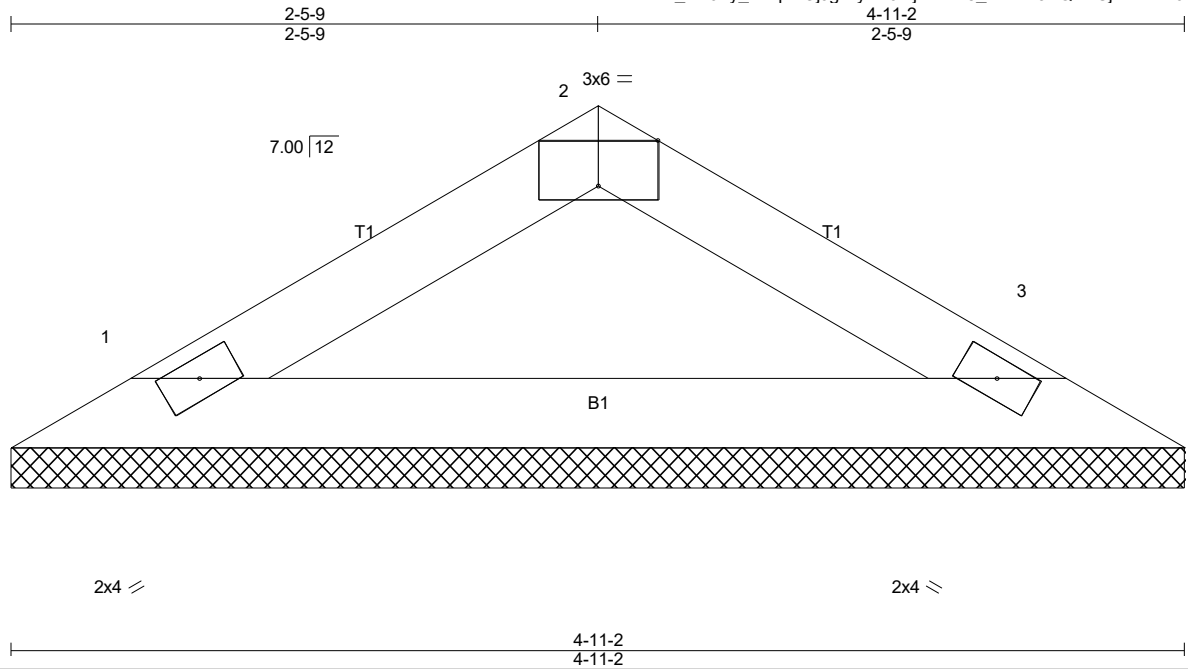


10/27/2023

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Job	Truss	Truss Type	Qty	Ply	LOT 7 PROVIDENCE CREEK   177 PROVIDENCE CREEK DRIVE FUQUAY-VARIN
23-7730-R01	V04	Valley	1	1	
					<b># 42238</b>

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Scale = 1:9.7

LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	GRIP	
TCLL (roof)	20.0	2-0-0	Plate Grip DOL	1.15	TC	0.09	in	(loc)	l/defl	L/d	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.31	Vert(LL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Code IRC2021/TPI2014		Matrix-P		Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0										Weight: 14 lb	FT = 20%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 4-11-2 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

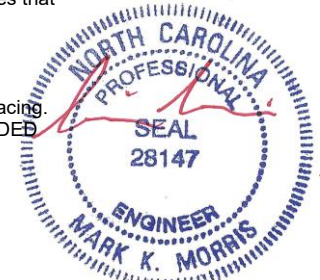
**REACTIONS.** (lb/size) 1=154/4-11-2 (min. 0-1-8), 3=154/4-11-2 (min. 0-1-8)  
 Max Horz 1=-22(LC 10)  
 Max Uplift 1=-12(LC 14), 3=-12(LC 15)  
 Max Grav 1=173(LC 20), 3=173(LC 21)

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

**NOTES-** (9-12)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCCL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed; 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
- TCCL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- Graphical bracing representation does not depict the size, type or the orientation of the brace on the member. Symbol only indicates that the member must be braced.
- Bearing symbols are only graphical representations of a possible bearing condition. Bearing symbols are not considered in the structural design of the truss to support the loads indicated.
- Web bracing shown is for lateral support of individual web members only. Refer to BCSI - Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses for additional bracing guidelines, including diagonal bracing.
- SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAINING/BRACING OF CHORDS & WEB MEMBERS FOR RECOMMENDED MINIMUM BRACING REQUIREMENTS OF TOP CHORD, BOTTOM CHORD, AND WEB PLANES. IN ADDITION TO THESE MINIMUM GUIDELINES, ALWAYS CONSULT THE PROJECT ARCHITECT OR ENGINEER FOR ADDITIONAL BRACING CONSIDERATIONS.

**LOAD CASE(S)** Standard



10/27/2023

**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – not truss designer or truss engineer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to ensure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI 1 *National Design Standard for Metal Plate Connected Wood Truss Construction* and BCSI 1-03 *Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses* from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.