

# 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 #: 46062

JOB: 24-1487-R01

JOB NAME: LOT 0.0130 BLAKE POND

Wind Code: 37

Wind Speed: Vult= 115mph

Exposure Category: B

Mean Roof Height (feet): 23

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

*42 Truss Design(s)*

Trusses:

PB01, R01, R02, R03, R04, R05, R06, R07, R08, R09, R10, R11, R12, R13, R14, R15, R16, R17, R18, R18A, R19, R19A, R19B, R20, R21, R22, R23, R24, R25, R26, VT01, VT02, VT03, VT04, VT05, VT06, VT07, VT08, VT09, VT10, VT11, VT12



**3/1/2024**

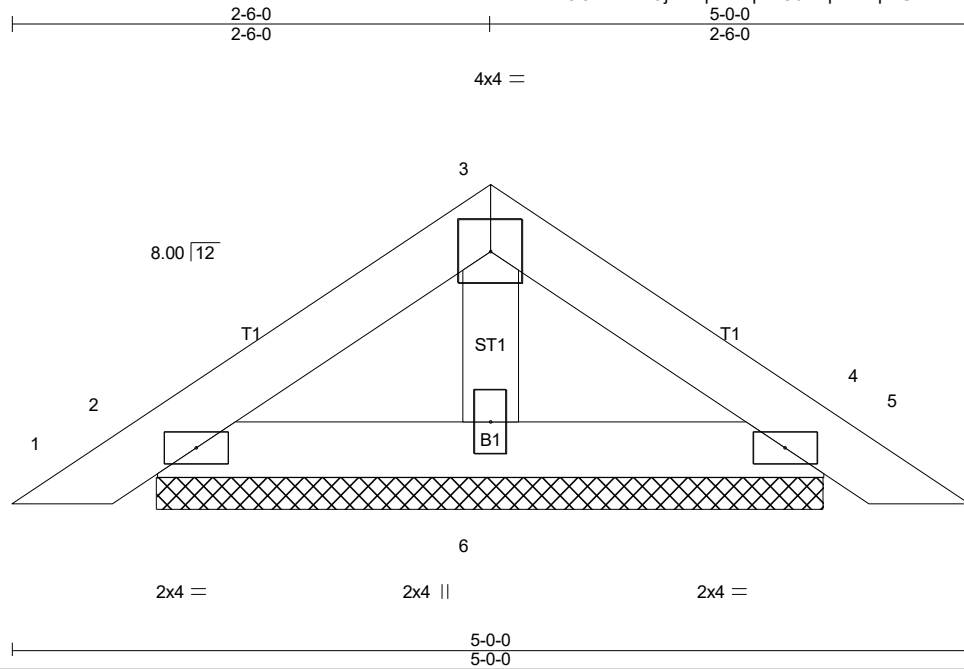
**Mark Morris**

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

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Job 24-1487-R01	Truss PB01	Truss Type Piggyback	Qty 16	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Scale: 1"=1'

<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 0.04	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.03	Vert(LL) 0.00 4 n/r 180		
TCDL 10.0	Lumber DOL 1.15	WB 0.02	Vert(CT) 0.00 4 n/r 80		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 4 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 15 lb	FT = 0%

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

**BRACING-**  
TOP CHORD  
BOT CHORD

Structural wood sheathing directly applied or 5-0-0 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) 2=108/3-5-12 (min. 0-1-8), 4=108/3-5-12 (min. 0-1-8), 6=121/3-5-12 (min. 0-1-8)  
Max Horz 2=-29(LC 10)  
Max Uplift 2=-22(LC 12), 4=-26(LC 13)

**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; BCDL=5.0psf; h=23ft; 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
- 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.
- 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 22 lb uplift at joint 2 and 26 lb uplift at joint 4.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



3/1/2024

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Job	Truss	Truss Type	Qty	Ply	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	R01	Common Supported Gable	1	1	
					<b># 46062</b>

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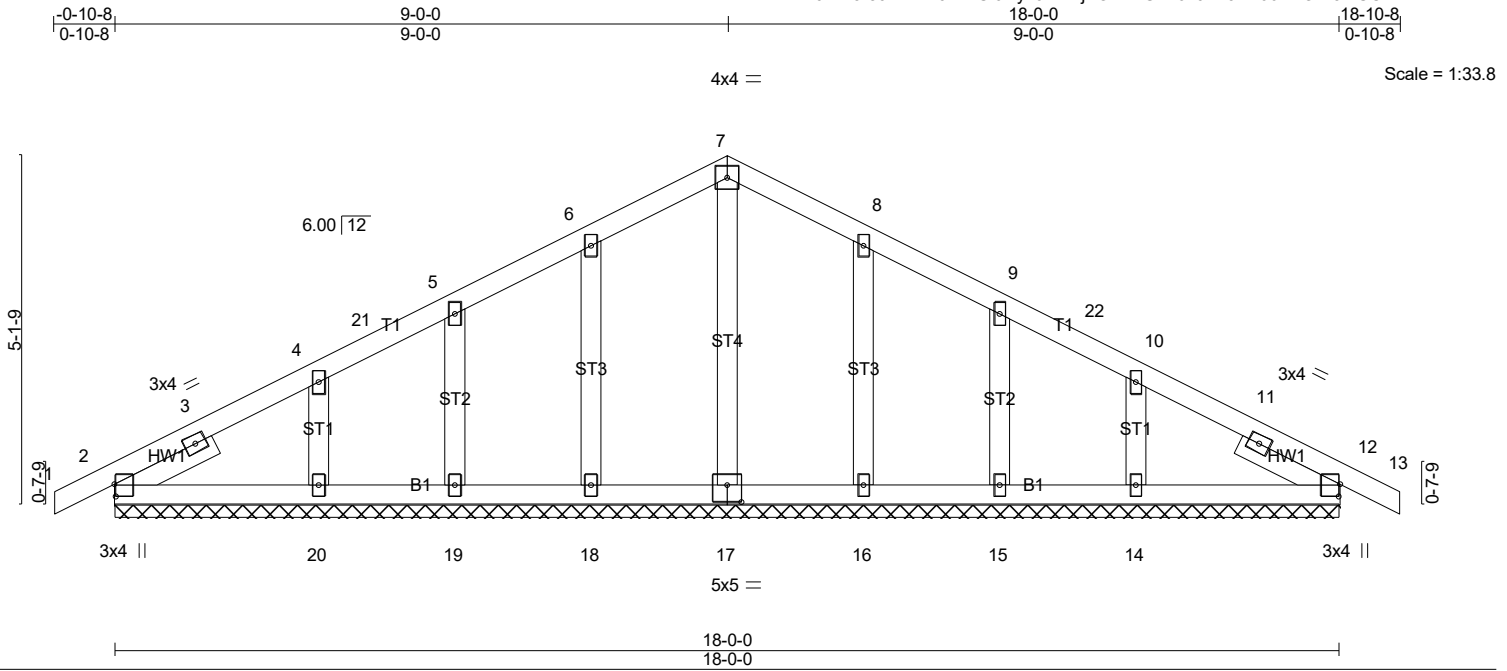


Plate Offsets (X,Y)-- [2:0-2-3,0-0-4], [12:0-2-3,0-0-4], [17:0-2-8,0-3-0]					
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.08	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.11	Vert(LL) 0.00 12 n/r 180		
TCDL 10.0	Lumber DOL 1.15	WB 0.07	Vert(CT) 0.00 13 n/r 80		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 12 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 95 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.
BOT CHORD 2x4 SP No.3	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	
SLIDER Left 2x4 SP No.3 -Ø 1-7-4, Right 2x4 SP No.3 -Ø 1-7-4	

**REACTIONS.** All bearings 18-0-0.  
 (lb) - Max Horz 2=-65(LC 15)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 18, 19, 20, 16, 15, 14, 12  
 Max Grav All reactions 250 lb or less at joint(s) 2, 17, 18, 19, 20, 16, 15, 14, 12

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

- NOTES-** (14)
- 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=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 3-11-2, Corner(3R) 3-11-2 to 14-0-14, Corner(3E) 14-0-14 to 18-10-8 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.
  - 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.
  - 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, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 18, 19, 20, 16, 15, 14, 12.
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.

**LOAD CASE(S)** Standard

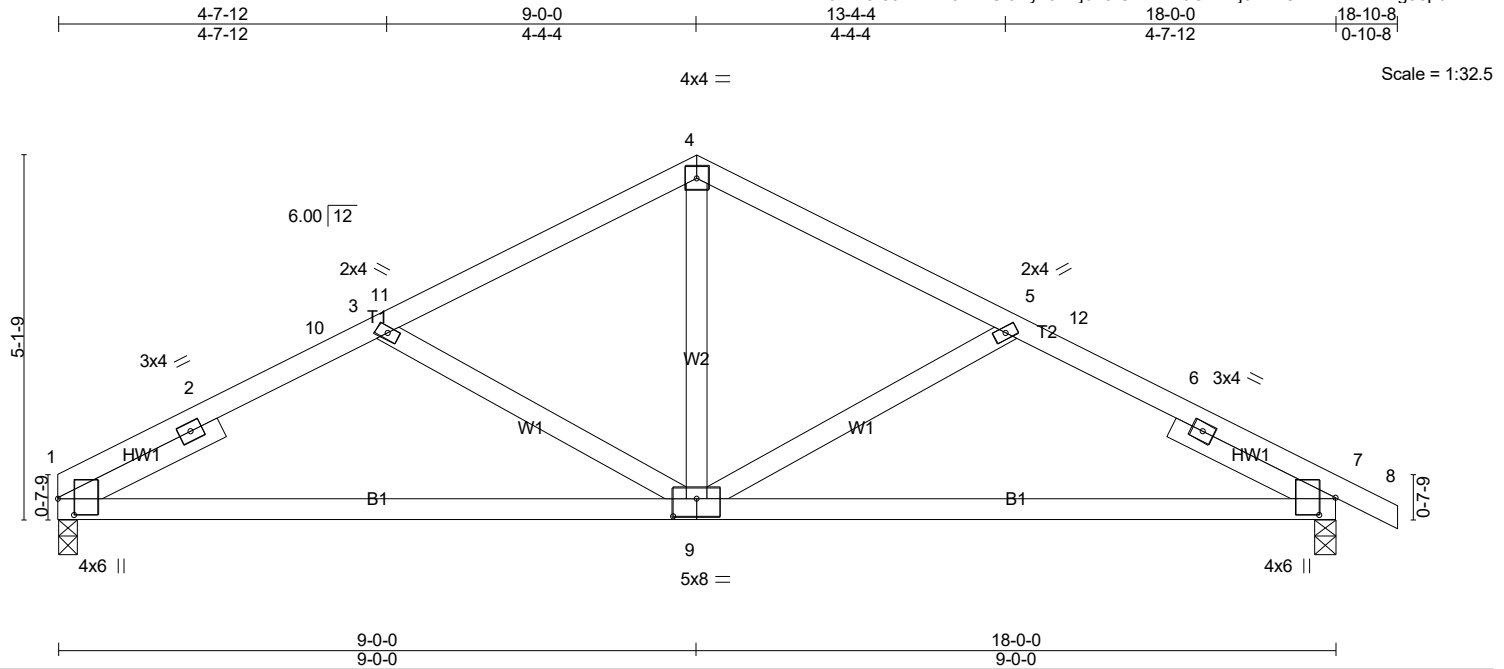


3/1/2024

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Job 24-1487-R01	Truss R02	Truss Type COMMON	Qty 7	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Scale = 1:32.5

Plate Offsets (X,Y)-- [1:0-2-12,0-2-12], [7:0-2-15,0-2-12], [9:0-4-0,0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.41	Vert(LL) -0.10	1-9	>999	240	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.71	Vert(CT) -0.20	1-9	>999	180		
TCDL 10.0	Lumber DOL 1.15	WB 0.20	Horz(CT) 0.03	7	n/a	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH						
BCDL 10.0	Code IRC2021/TPI2014						Weight: 87 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -Ø 2-6-3, Right 2x4 SP No.3 -Ø 2-6-3

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-3-3 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=719/0-3-8 (min. 0-1-8), 7=774/0-3-8 (min. 0-1-8)  
Max Horz 1=-67(LC 15)  
Max Uplift 1=-56(LC 14), 7=-71(LC 15)  
Max Grav 1=766(LC 21), 7=821(LC 22)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-1242/253, 2-10=-1131/270, 3-10=-1125/273, 3-11=-892/189, 4-11=-880/209,  
4-5=-891/209, 5-12=-1120/273, 6-12=-1126/270, 6-7=-1234/254  
BOT CHORD 1-9=-172/1042, 7-9=-172/1036  
WEBS 4-9=-57/485, 5-9=-377/151, 3-9=-383/151

- NOTES-** (9)
- 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) 0-0-0 to 4-9-10, Exterior(2R) 4-9-10 to 14-0-14, Exterior(2E) 14-0-14 to 18-10-8 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 7.

**LOAD CASE(S)** Standard



3/1/2024

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Job 24-1487-R01	Truss R03	Truss Type Monopitch Structural Gable	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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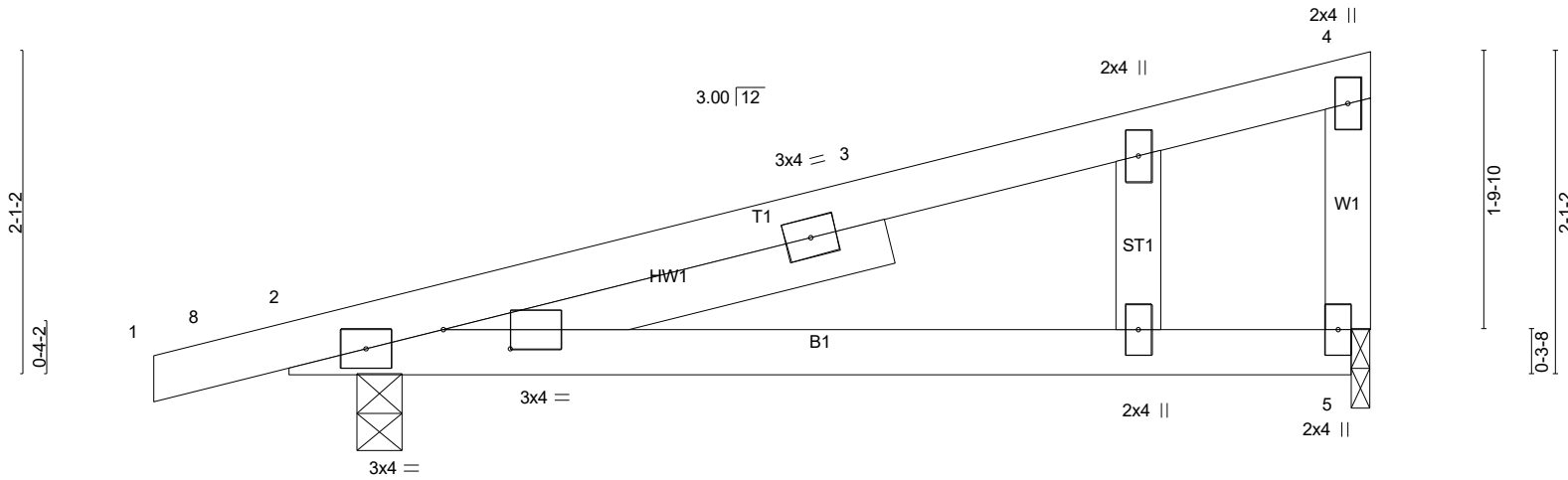


Plate Offsets (X,Y)-- [2:0-5-3,0-1-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.91	Vert(LL) 0.26	2-5	>309	240	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.59	Vert(CT) -0.24	2-5	>331	180		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Horz(CT) 0.00	n/a	n/a	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P						
BCDL 10.0	Code IRC2021/TPI2014						Weight: 31 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -Ø 2-11-5

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.  
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) 2=334/0-3-8 (min. 0-1-8), 5=264/0-1-8 (min. 0-1-8)  
Max Horz 2=61(LC 10)  
Max Uplift 2=-111(LC 10), 5=-89(LC 10)  
Max Grav 2=427(LC 21), 5=343(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 4-5=-275/153

- NOTES-** (12)
- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TC DL=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 exposed; porch 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) 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) 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 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) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
  - 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5 except (jt=lb) 2=111.

**LOAD CASE(S)** Standard



3/1/2024

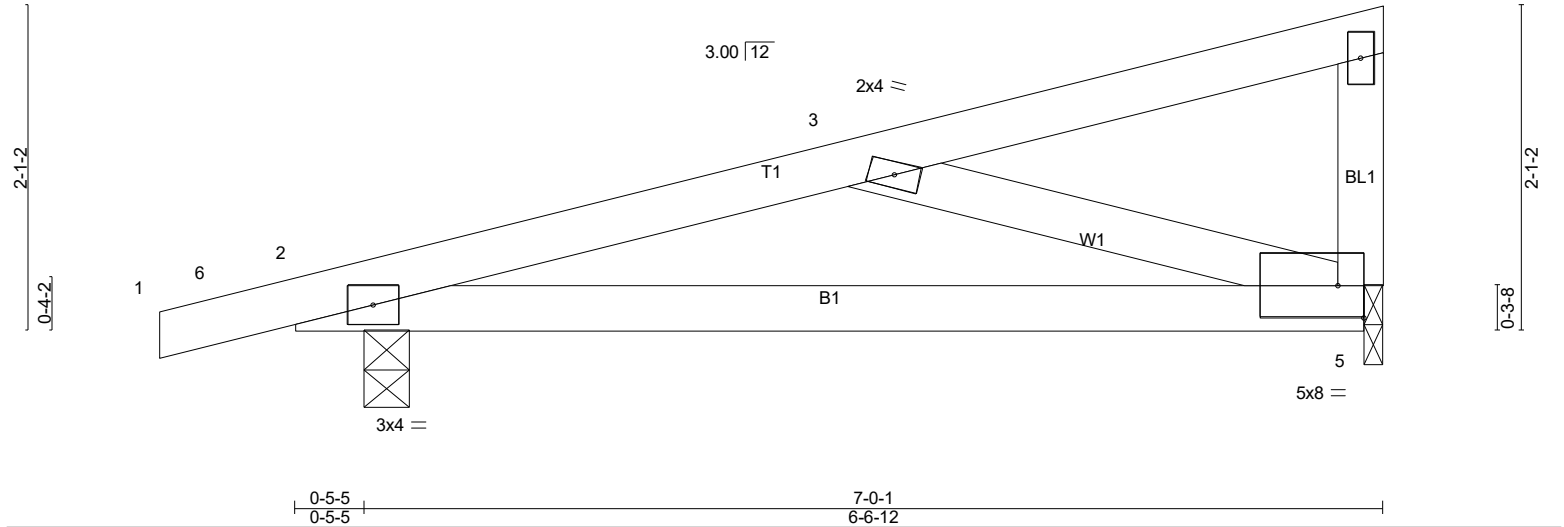
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Job	Truss	Truss Type	Qty	Ply	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	R04	Monopitch	3	1	Job Reference (optional) # 46062

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Scale = 1:14.8



<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 0.84	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.62	Vert(LL) 0.26 2-5 >309 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.16	Vert(CT) -0.24 2-5 >331 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.01 5 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 29 lb	FT = 20%

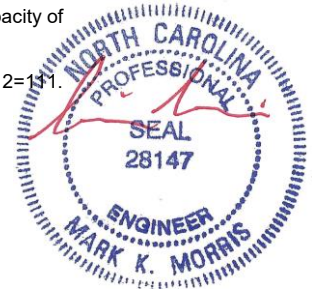
<b>LUMBER-</b>	<b>BRACING-</b>	
TOP CHORD 2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 7-5-9 oc bracing.
WEBS 2x4 SP No.3		
OTHERS 2x4 SP No.3		

**REACTIONS.** (lb/size) 2=334/0-3-8 (min. 0-1-8), 5=264/0-1-8 (min. 0-1-8)  
 Max Horz 2=61(LC 10)  
 Max Uplift 2=-111(LC 10), 5=-89(LC 10)  
 Max Grav 2=427(LC 21), 5=343(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-629/262  
 BOT CHORD 2-5=-318/574  
 WEBS 3-5=-596/331

- NOTES-** (10)
- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TC DL=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 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) Bearing at joint(s) 5 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 at joint(s) 5.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5 except (jt=lb) 2=141.

**LOAD CASE(S)** Standard



3/1/2024

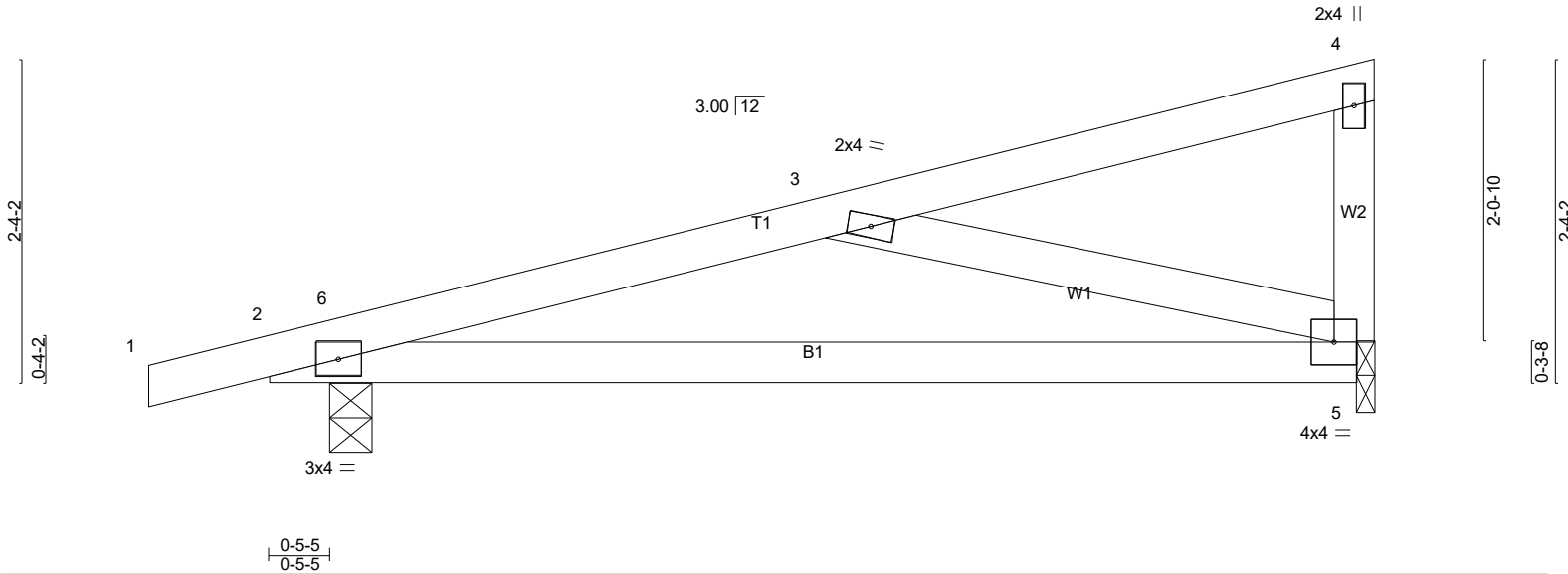
**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building 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 24-1487-R01	Truss R05	Truss Type Monopitch	Qty 5	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</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 0.36	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.83	Vert(LL) -0.21 2-5 >436 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.22	Vert(CT) -0.42 2-5 >218 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.01 5 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 34 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 9-8-7 oc bracing.

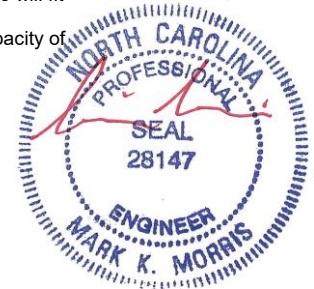
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=374/0-3-8 (min. 0-1-8), 5=304/0-1-8 (min. 0-1-8)  
Max Horz 2=63(LC 10)  
Max Uplift 2=-53(LC 10), 5=-37(LC 14)  
Max Grav 2=454(LC 21), 5=395(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-6=-746/265, 3-6=-712/274  
BOT CHORD 2-5=-332/687  
WEBS 3-5=-713/344

- NOTES-** (10)
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCCL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; Gable Roof; Common Truss; 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.
  - 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.
  - Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5.

**LOAD CASE(S)** Standard



3/1/2024

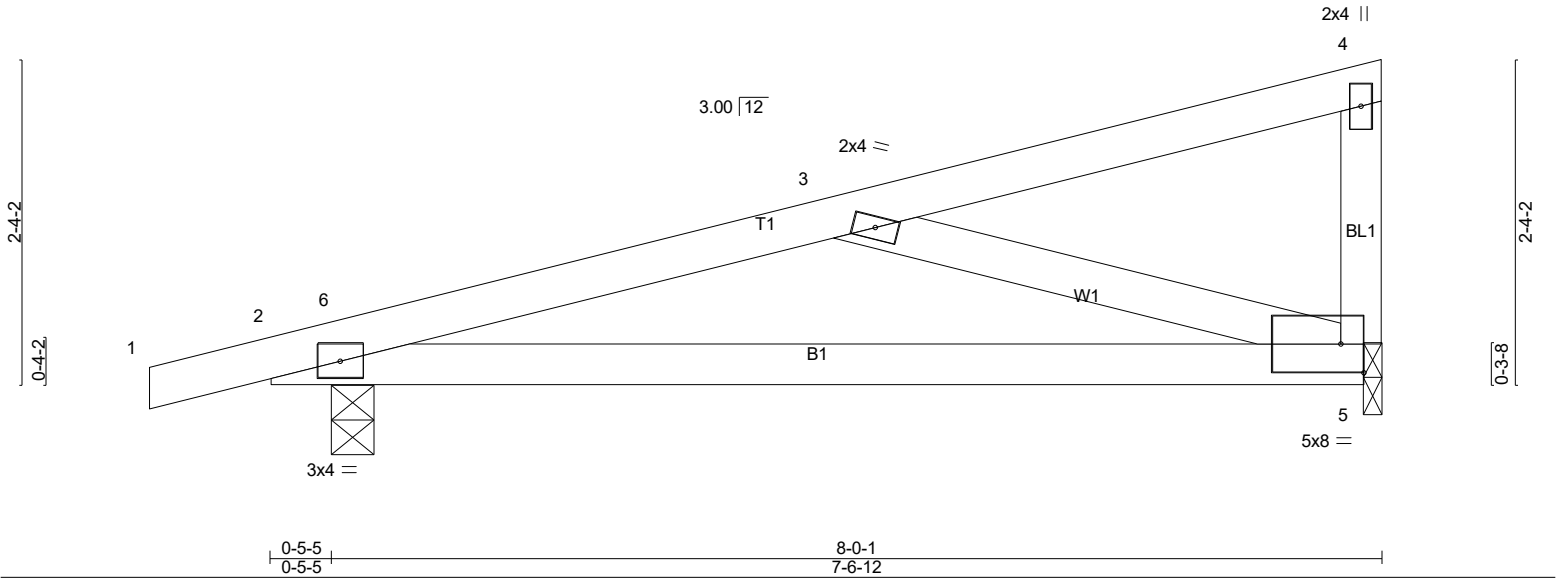
**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building 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 24-1487-R01	Truss R06	Truss Type Monopitch Structural Gable	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</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 0.73	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.39	Vert(LL) 0.35 2-5 >267 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.23	Vert(CT) -0.33 2-5 >280 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.01 5 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 34 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP SS  
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 8-7-7 oc bracing.

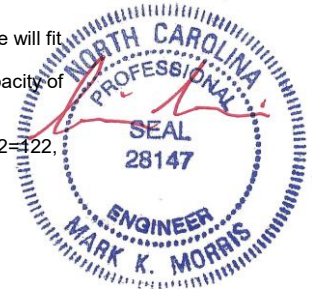
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=374/0-3-8 (min. 0-1-8), 5=304/0-1-8 (min. 0-1-8)  
Max Horz2=68(LC 10)  
Max Uplift2=-122(LC 10), 5=-102(LC 10)  
Max Grav2=454(LC 21), 5=395(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-6=-742/294, 3-6=-708/303  
BOT CHORD 2-5=-366/683  
WEBS 3-5=-709/380

- NOTES-** (12)
- 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 exposed ; porch 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) 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) 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 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) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
  - 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=422, 5=102.

**LOAD CASE(S)** Standard



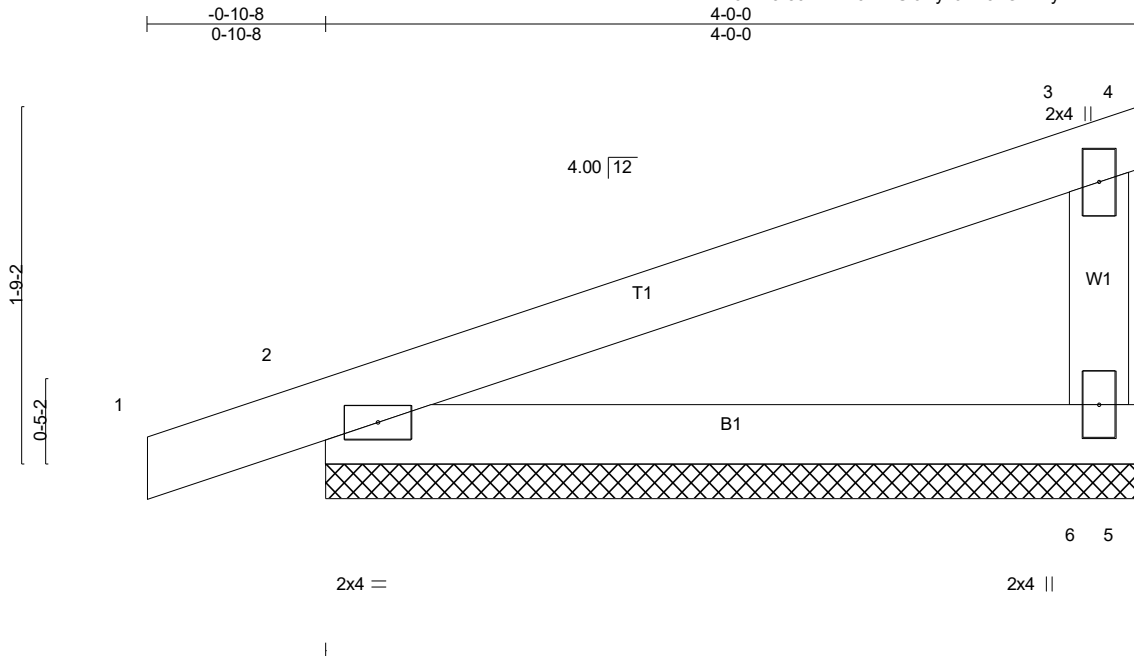
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**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation 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 24-1487-R01	Truss R07	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) # 46062
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Scale = 1:11.4

LOADING (psf)	SPACING-	CSI.	DEFL.			PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.35	in (loc) l/defl L/d			MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.29	Vert(LL) -0.00 3 n/r 180				
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) 0.00 4 n/r 80				
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 n/a n/a				
BCDL 10.0	Code IRC2021/TPI2014					Weight: 15 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals.  
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) 6=162/4-0-0 (min. 0-1-8), 2=211/4-0-0 (min. 0-1-8)  
Max Horz 2=51(LC 10)  
Max Uplift 6=-28(LC 14), 2=-42(LC 10)  
Max Grav 6=216(LC 21), 2=289(LC 21)

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

**NOTES-** (12)

- Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TC DL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 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) 6, 2.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.

**LOAD CASE(S)** Standard

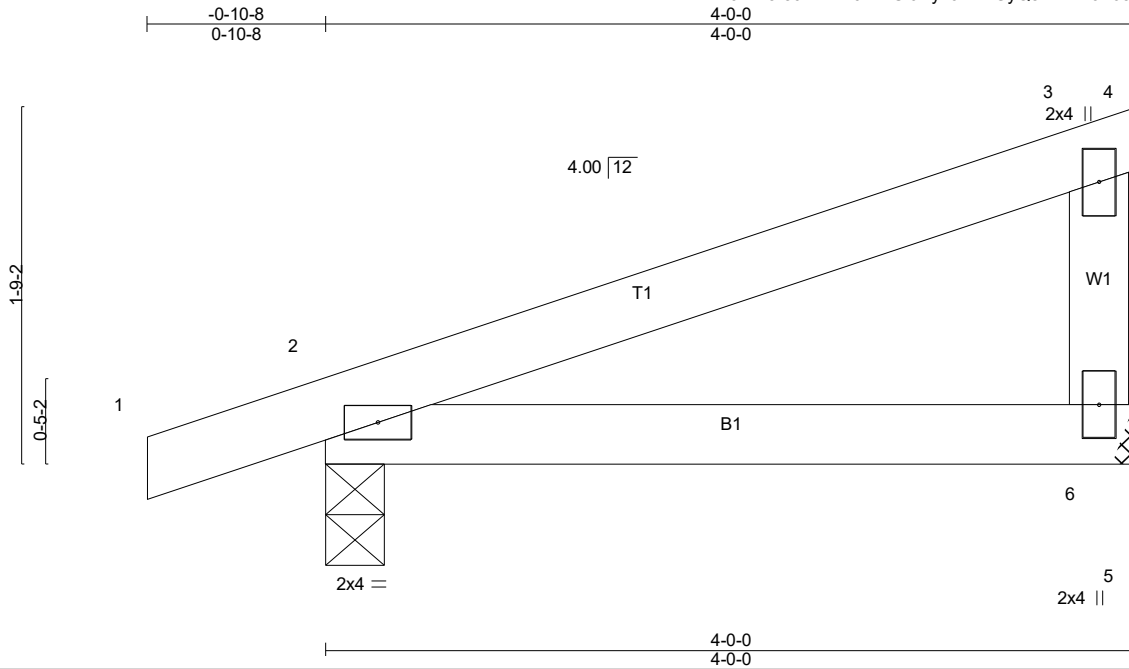


3/1/2024

**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 24-1487-R01	Truss R08	Truss Type Monopitch	Qty 6	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Scale = 1:11.4

<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 0.31	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.16	Vert(LL) -0.01 2-6 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.02 2-6 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 15 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals.  
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) 6=154/Mechanical, 2=216/0-3-8 (min. 0-1-8)  
Max Horz 2=51(LC 10)  
Max Uplift 6=-27(LC 14), 2=-46(LC 10)  
Max Grav 6=205(LC 21), 2=297(LC 21)

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

**NOTES-** (9)

- 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; 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 100 lb uplift at joint(s) 6, 2.

**LOAD CASE(S)** Standard



3/1/2024

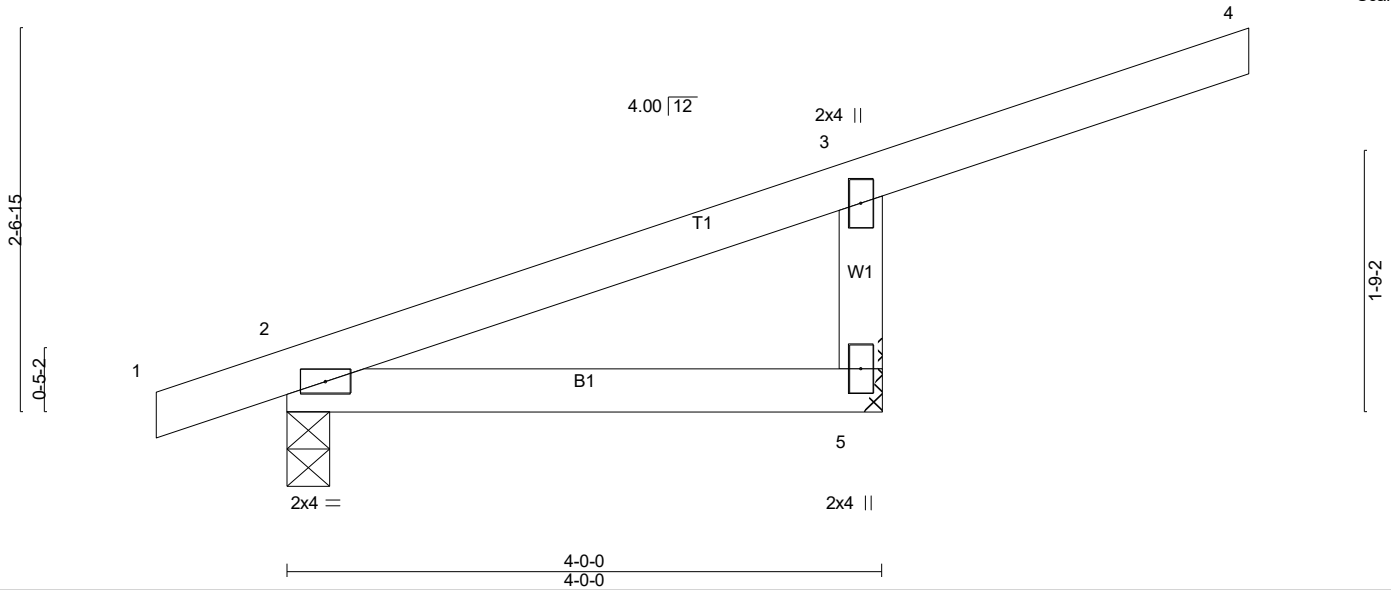
**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building 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 24-1487-R01	Truss R09	Truss Type Monopitch	Qty 3	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Scale = 1:15.5



<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 0.85	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.16	Vert(LL) -0.01 2-5 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.02 2-5 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 19 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals.  
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) 5=351/Mechanical, 2=163/0-3-8 (min. 0-1-8)  
Max Horz 2=72(LC 10)  
Max Uplift 5=93(LC 14), 2=-21(LC 10)  
Max Grav 5=497(LC 21), 2=189(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 3-5=-460/293

- NOTES-** (9)
- 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; 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 100 lb uplift at joint(s) 5, 2.

**LOAD CASE(S)** Standard



3/1/2024

**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.

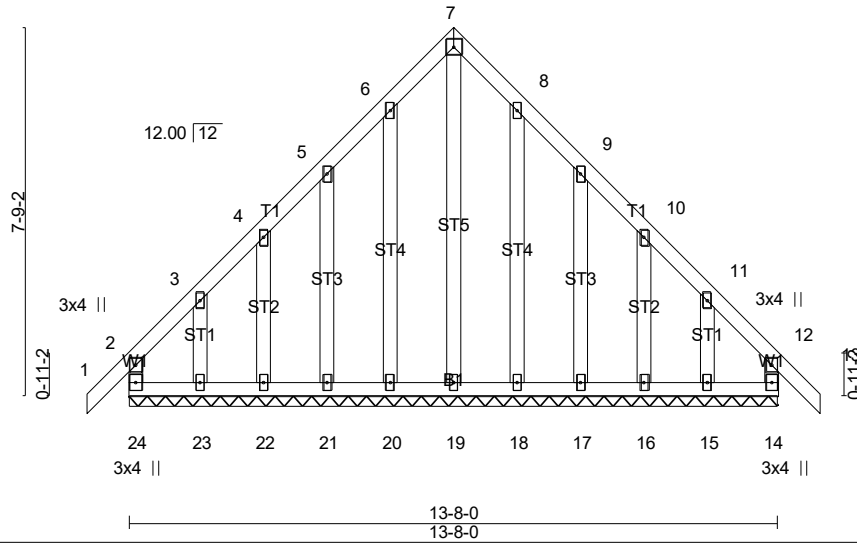
Job 24-1487-R01	Truss R10	Truss Type Common Supported Gable	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 4 16:31:47 2024 Page 1  
ID: oDuW00MhLxMOj2fwcp2aKqzMG6w-Ue3AZx?lffZBMOI\_BltSWue5vyVeyem0dw4Z4ezefYw

-0-10-8      6-10-0      13-8-0      14-6-8  
0-10-8      6-10-0      6-10-0      0-10-8

4x4 =

Scale: 1/4"=1'



<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 0.16	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.07	Vert(LL) -0.00 13 n/r 180		
TCDL 10.0	Lumber DOL 1.15	WB 0.32	Vert(CT) -0.00 13 n/r 80		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-R	Horz(CT) 0.00 14 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 112 lb	FT = 0%

**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, 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 13-8-0.  
(lb) - Max Horz 24=151(LC 11)  
Max Uplift All uplift 100 lb or less at joint(s) 24, 14, 20, 21, 22, 18, 17, 16 except 23=-129(LC 12), 15=-122(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 24, 14, 19, 20, 21, 22, 23, 18, 17, 16, 15

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 6-7=-117/264, 7-8=-117/264  
WEBS 7-19=-306/93

- 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 4-2-0, Corner(3R) 4-2-0 to 9-6-0, Corner(3E) 9-6-0 to 14-6-8 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
  - 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 1-4-0 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 BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24, 14, 20, 21, 22, 18, 17, 16 except (jt=lb) 23=129, 15=122.

**LOAD CASE(S)** Standard

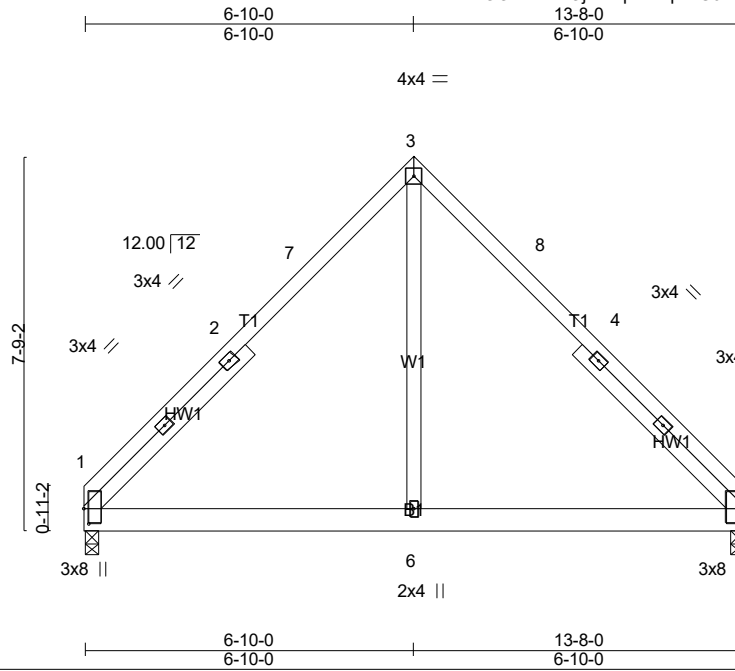


3/1/2024

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Job 24-1487-R01	Truss R11	Truss Type Common	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Scale: 1/4"=1'

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

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.39	Vert(LL) -0.03	5-6	>999	240	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.32	Vert(CT) -0.05	5-6	>999	180		
TCDL 10.0	Lumber DOL 1.15	WB 0.13	Horz(CT) 0.00	5	n/a	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH						
BCDL 10.0	Code IRC2021/TPI2014						Weight: 86 lb	FT = 0%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -Ø 4-9-3, Right 2x4 SP No.3 -Ø 4-9-3

**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.

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

**REACTIONS.** (lb/size) 1=547/0-3-8 (min. 0-1-8), 5=547/0-3-8 (min. 0-1-8)  
Max Horz 1=-143(LC 8)  
Max Uplift 1=-30(LC 13), 5=-30(LC 12)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-606/98, 2-7=-424/122, 3-7=-392/142, 3-8=-392/142, 4-8=-424/122, 4-5=-606/98  
BOT CHORD 1-6=-2/317, 5-6=-2/317  
WEBS 3-6=-38/341

**NOTES-** (7)

- 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=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 4-9-10, Exterior(2R) 4-9-10 to 8-10-6, Exterior(2E) 8-10-6 to 13-8-0 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
- 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, 5.

**LOAD CASE(S)** Standard



3/1/2024

**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 24-1487-R01	Truss R12	Truss Type Common Girder	Qty 1	Ply 2	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC	# 46062
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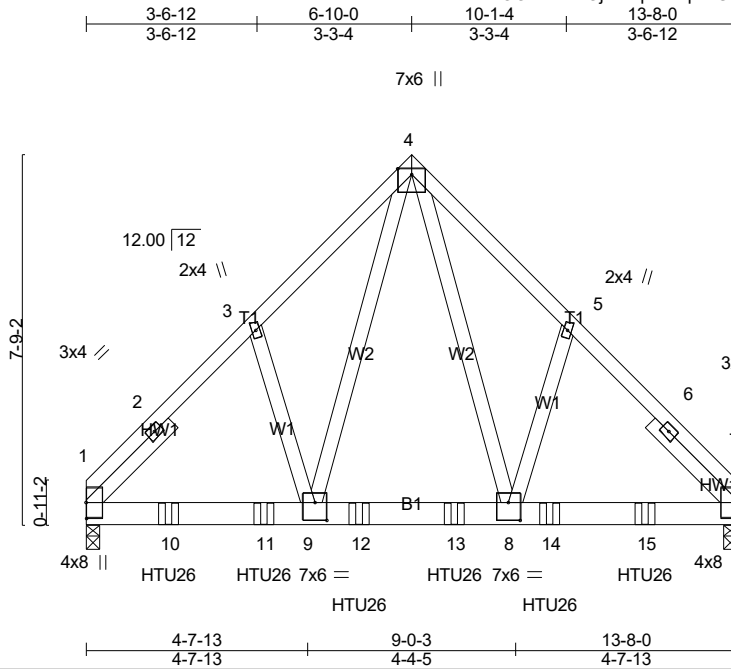


Plate Offsets (X,Y)-- [1:0-4-0,0-0-2], [7:0-4-11,0-0-2], [8:0-3-0,0-4-8], [9:0-3-0,0-4-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15	TC 0.40	Vert(LL) -0.04	8-9	>999	240	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15	BC 0.84	Vert(CT) -0.08	8-9	>999	180		
TCDL 10.0	Rep Stress Incr NO	WB 0.62	Horz(CT) 0.02	7	n/a	n/a		
BCLL 0.0 *	Code IRC2021/TPI2014	Matrix-SH						
BCDL 10.0							Weight: 204 lb	FT = 0%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.3  
SLIDER Left 2x4 SP No.3 -Ø 2-5-11, Right 2x4 SP No.3 -Ø 2-5-11

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-7-12 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 1=4371/0-3-8 (min. 0-2-9), 7=4256/0-3-8 (min. 0-2-8)  
Max Horz 1=-143(LC 33)  
Max Uplift 1=-332(LC 11), 7=-323(LC 10)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-4454/352, 2-3=-4397/377, 3-4=-4292/439, 4-5=-4274/438, 5-6=-4384/376,  
6-7=-4442/351  
BOT CHORD 1-10=-263/3014, 10-11=-263/3014, 9-11=-263/3014, 9-12=-158/2189, 12-13=-158/2189,  
8-13=-158/2189, 8-14=-210/2999, 14-15=-210/2999, 7-15=-210/2999  
WEBS 4-8=-332/2972, 4-9=-335/3013

- NOTES-** (11)
- 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 0-7-0 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; TC DL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; 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
  - 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) except (jt=lb) 1=332, 7=323.
  - 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 1-8-12 from the left end to 11-8-12 to connect truss(es) R24 (1 ply 2x6 SP) to back face of bottom chord.
  - Fill all nail holes where hanger is in contact with lumber.

**LOAD CASE(S)** Standard  
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15



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Continued on Page 2  
**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 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	R12	Common Girder	1	2	Job Reference (optional) # 46062

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**LOAD CASE(S)** Standard

Uniform Loads (plf)

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

Concentrated Loads (lb)

Vert: 10=-1256(B) 11=-1256(B) 12=-1256(B) 13=-1256(B) 14=-1256(B) 15=-1256(B)



3/1/2024

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Job 24-1487-R01	Truss R13	Truss Type Common Supported Gable	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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-0-10-8 9-1-12 18-3-8 19-2-0  
0-10-8 9-1-12 9-1-12 0-10-8

4x4 =

Scale = 1:62.6

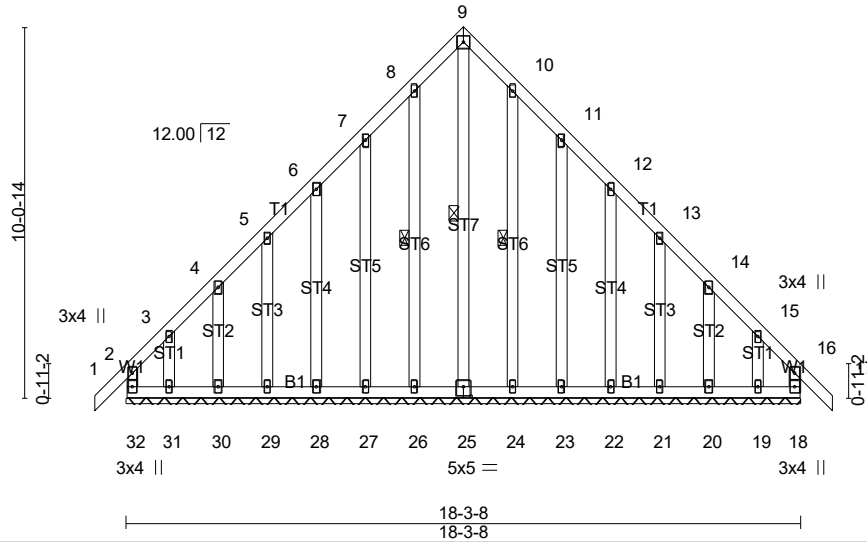


Plate Offsets (X,Y)-- [25:0-2-8,0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.18	Vert(LL) -0.00	17	n/r	180	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.10	Vert(CT) -0.00	17	n/r	80		
TCDL 10.0	Lumber DOL 1.15	WB 0.15	Horz(CT) 0.00	18	n/a	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-R						
BCDL 10.0	Code IRC2021/TPI2014							
							Weight: 172 lb	FT = 0%

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

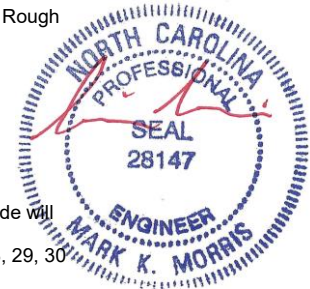
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 9-25, 8-26, 10-24

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

**REACTIONS.** All bearings 18-3-8.  
(lb) - Max Horz 32=-196(LC 10)  
Max Uplift All uplift 100 lb or less at joint(s) 18, 26, 27, 28, 29, 30, 24, 23, 22, 21, 20 except 32=-129(LC 8), 31=-181(LC 12), 19=-167(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 32, 18, 26, 27, 28, 29, 30, 31, 24, 23, 22, 21, 20, 19 except 25=251(LC 27)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 8-9=-125/271, 9-10=-125/271  
WEBS 9-25=-315/114

- 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=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 3-9-12, Exterior(2N) 3-9-12 to 4-4-2, Corner(3R) 4-4-2 to 13-11-6, Exterior(2N) 13-11-6 to 14-4-6, Corner(3E) 14-4-6 to 19-2-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 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
  - 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 1-4-0 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 BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 18, 26, 27, 28, 29, 30, 24, 23, 22, 21, 20 except (jt=lb) 32=129, 31=181, 19=167.



3/1/2024

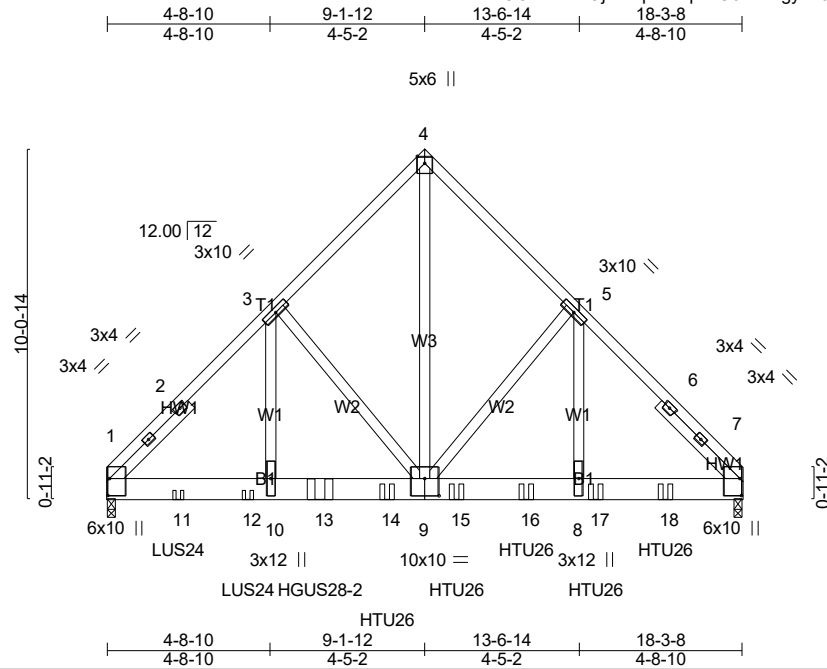
**LOAD CASE(S)** Standard

**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 24-1487-R01	Truss R14	Truss Type Common Girder	Qty 1	Ply 2	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC	Job Reference (optional) # 46062
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Scale = 1:66.2

Plate Offsets (X,Y)-- [1:0-5-14,0-0-9], [7:0-5-14,0-0-9], [9:0-5-0,0-6-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.88	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.43	Vert(LL) -0.10 9-10 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.88	Vert(CT) -0.16 9-10 >999 180		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-SH	Horz(CT) 0.03 7 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 303 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x8 SP DSS  
WEBS 2x4 SP No.3 \*Except\*  
W3: 2x4 SP No.2  
SLIDER Left 2x4 SP No.3 -Ø 3-2-0, Right 2x4 SP No.3 -Ø 3-2-0

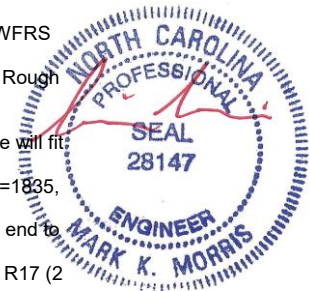
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 3-4-9 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (lb/size) 1=4898/0-3-8 (min. 0-3-2), 7=6013/0-3-8 (min. 0-3-7)  
Max Horz 1=-187(LC 40)  
Max Uplift 1=-1835(LC 11), 7=-1139(LC 10)  
Max Grav 1=6127(LC 3), 7=6864(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-7197/2391, 2-3=-7134/2427, 3-4=-5359/1454, 4-5=-5361/1462, 5-6=-7443/1376,  
6-7=-7503/1343  
BOT CHORD 1-11=-1659/4855, 11-12=-1659/4855, 10-12=-1659/4855, 10-13=-1659/4855,  
13-14=-1659/4855, 9-14=-1659/4855, 9-15=-877/5084, 15-16=-877/5084, 8-16=-877/5084,  
8-17=-877/5084, 17-18=-877/5084, 7-18=-877/5084  
WEBS 4-9=-1938/7190, 5-9=-2024/69, 5-8=-2/3011, 3-9=-1662/1156, 3-10=-1547/2540

**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: 2x8 - 2 rows staggered at 0-4-0 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=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; 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
- 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=1835, 7=1139.
- Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-12 from the left end to 4-0-12 to connect truss(es) R16 (1 ply 2x4 SP) to back face of bottom chord.
- Use Simpson Strong-Tie HGUS28-2 (36-10d Girder, 12-10d Truss) or equivalent at 6-1-10 from the left end to connect truss(es) R17 (2 ply 2x4 SP) to back face of bottom chord.



3/1/2024

Continued on Page 2  
**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 24-1487-R01	Truss R14	Truss Type Common Girder	Qty 1	Ply 2	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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**NOTES-** (13)

- 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 8-0-12 from the left end to 16-0-12 to connect truss(es) R18 (1 ply 2x4 SP), R18A (1 ply 2x4 SP), R19A (1 ply 2x4 SP) to back face of bottom chord.
- 12) Fill all nail holes where hanger is in contact with lumber.

**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, 1-7=-20

Concentrated Loads (lb)

Vert: 11=-708(B) 12=-708(B) 13=-818(B) 14=-1447(B) 15=-1447(B) 16=-1447(B) 17=-1447(B) 18=-1447(B)

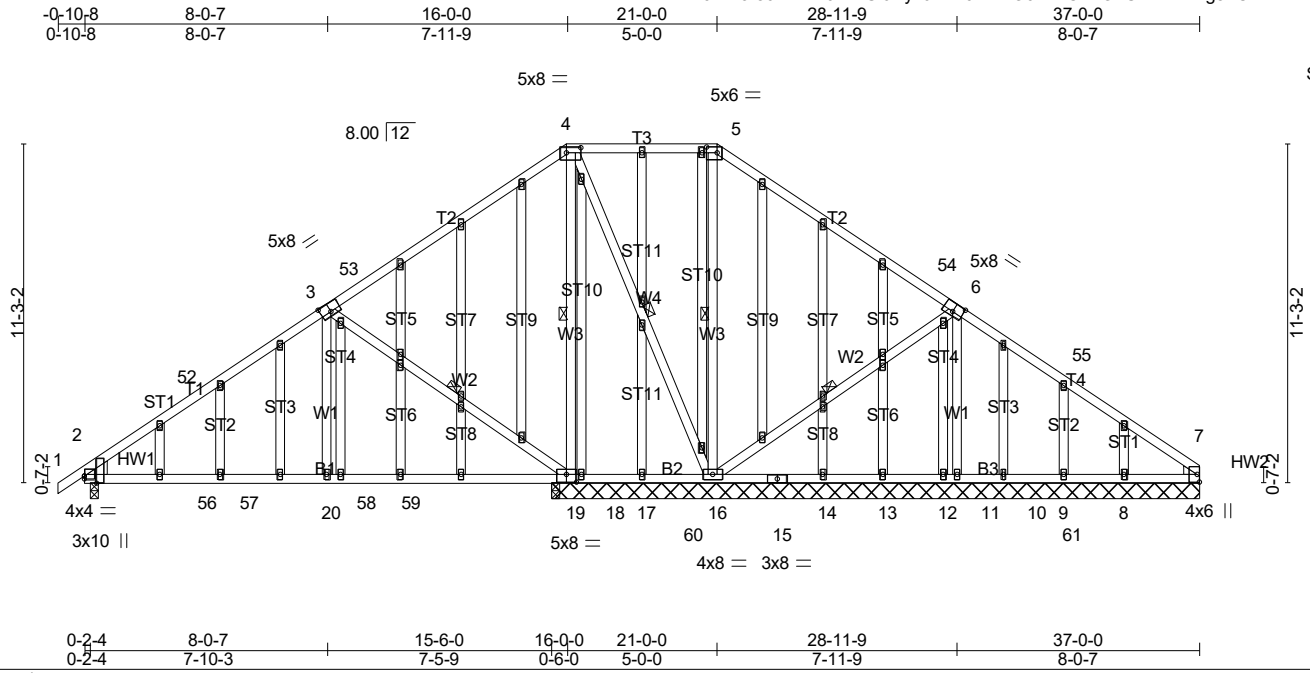


3/1/2024

**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 24-1487-R01	Truss R15	Truss Type Piggyback Base Structural Gable COMMON    Gable   Gable	Qty 1	Ply 28-11-9	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC	# 46062
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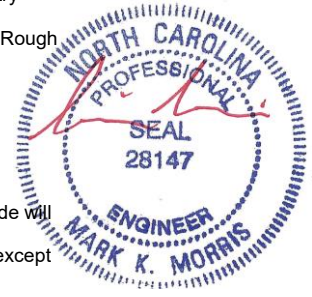
Plate Offsets (X,Y)-- [2:0-2-14,Edge], [2:0-0-0,0-1-3], [3:0-4-0,0-3-4], [4:0-5-12,0-2-0], [5:0-4-4,0-2-4], [6:0-4-0,0-3-4], [19:0-4-0,0-3-0]					
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.88	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.66	Vert(LL) 0.14 2-20 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.39	Vert(CT) -0.22 2-20 >889 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.01 19 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 376 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
WEBS 2x4 SP No.3	10-0-0 oc bracing: 2-20, 19-20.
OTHERS 2x4 SP No.3	WEBS 1 Row at midpt 3-19, 4-19, 4-16, 5-16, 6-16
WEDGE	
Left: 2x6 SP No.2, Right: 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 21-6-0 except (jt=length) 2=0-3-8.  
 (lb) - Max Horz 2=218(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 16, 7, 9, 8, 2 except 19=255(LC 9), 11=130(LC 13), 18=529(LC 5)  
 Max Grav All reactions 250 lb or less at joint(s) 7, 17, 18, 14, 13, 12, 10, 9, 8 except 19=1182(LC 5), 19=1049(LC 1), 16=732(LC 1), 11=359(LC 31), 2=610(LC 32)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-52=-669/219, 3-52=-559/249, 4-53=-53/348, 4-5=-37/257, 5-54=-19/354  
 BOT CHORD 2-56=-156/526, 56-57=-156/526, 20-57=-156/526, 20-58=-155/522, 58-59=-155/522, 19-59=-155/522  
 WEBS 3-20=-244/477, 3-19=-779/403, 4-19=-361/104, 5-16=-463/120, 6-11=-364/139

- NOTES-** (12)
- 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 Exterior(2E) -0-10-8 to 3-11-2, Interior(1) 3-11-2 to 9-2-9, Exterior(2R) 9-2-9 to 27-9-7, Interior(1) 27-9-7 to 32-2-6, Exterior(2E) 32-2-6 to 37-0-0 zone; cantilever left exposed; porch left exposed; 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
  - 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.
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - 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 BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 16, 7, 9, 8, 2 except (jt=lb) 19=255, 11=130, 18=529.

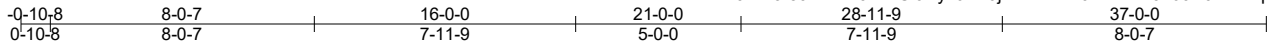


**LOAD CASE(S)** Standard 3/1/2024

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Job 24-1487-R01	Truss R16	Truss Type Piggyback Base	Qty 2	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC	# 46062
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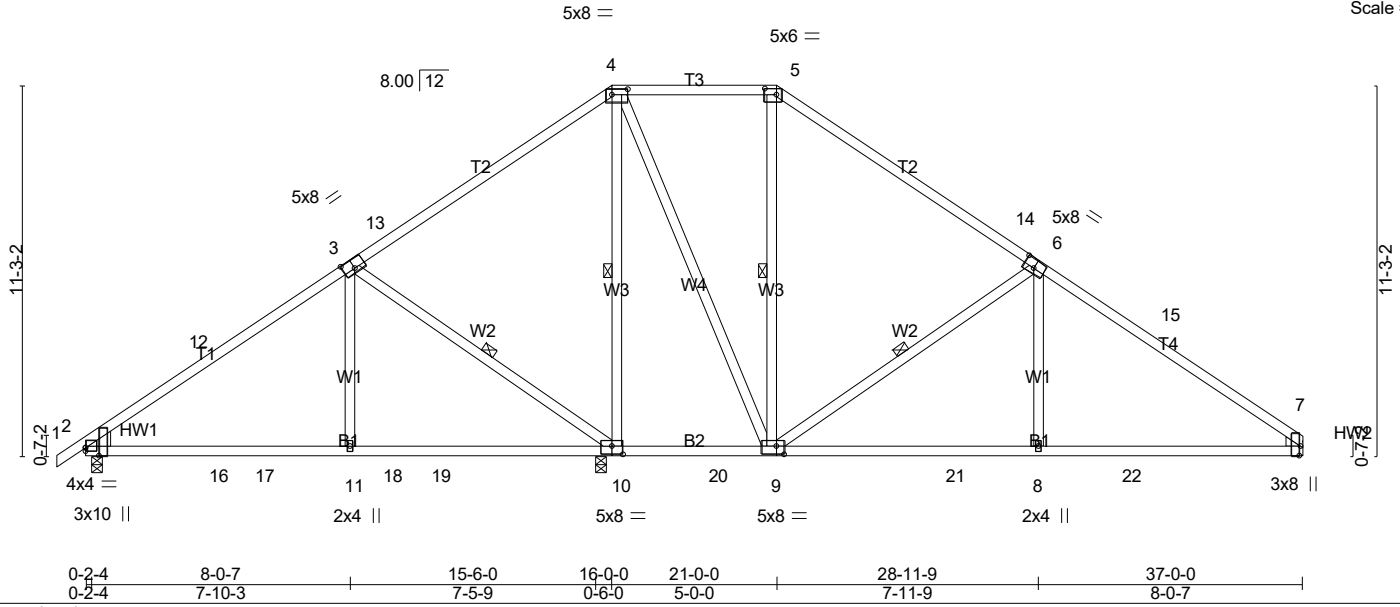


Plate Offsets (X,Y)-- [2:0-2-14,Edge], [2:0-0-0,0-1-3], [3:0-4-0,0-3-4], [4:0-5-12,0-2-0], [5:0-4-4,0-2-4], [6:0-4-0,0-3-0], [7:0-3-8,Edge], [9:0-2-12,0-3-0], [10:0-4-0,0-3-0]

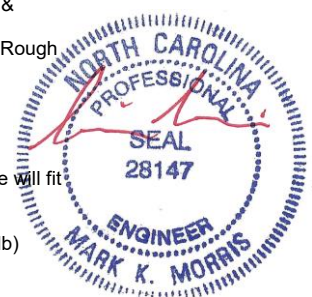
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.90	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.76	Vert(LL) 0.13 2-11 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.79	Vert(CT) -0.25 7-8 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.03 7 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 217 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
WEBS 2x4 SP No.3	6-0-0 oc bracing: 9-10.
WEDGE	1 Row at midpt 3-10, 4-10, 5-9, 6-9
Left: 2x6 SP No.2, Right: 2x4 SP No.3	MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 10=1708/0-3-8 (min. 0-2-4), 7=728/Mechanical, 2=568/0-3-8 (min. 0-1-8)  
 Max Horz 2=218(LC 9)  
 Max Uplift 10=-111(LC 12), 7=-89(LC 13), 2=-48(LC 12)  
 Max Grav 10=1929(LC 3), 7=824(LC 21), 2=599(LC 30)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-12=-622/239, 3-12=-512/269, 4-13=-214/12, 6-14=-390/109, 6-15=-885/137, 7-15=-1093/112  
 BOT CHORD 2-16=-183/464, 16-17=-183/464, 11-17=-183/464, 11-18=-182/460, 18-19=-182/460, 10-19=-182/460, 10-20=-296/200, 9-20=-296/200, 9-21=-14/789, 8-21=-14/789, 8-22=-13/794, 7-22=-13/794  
 WEBS 3-11=-257/474, 3-10=-776/413, 4-10=-1257/172, 4-9=-87/927, 5-9=-251/95, 6-9=-862/212, 6-8=0/481

- 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; 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, Interior(1) 3-11-2 to 9-2-9, Exterior(2R) 9-2-9 to 27-9-7, Interior(1) 27-9-7 to 32-1-10, Exterior(2E) 32-1-10 to 36-11-4 zone; cantilever left exposed; porch left 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
  - 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.
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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) 7, 2 except (jt=lb) 10=111.

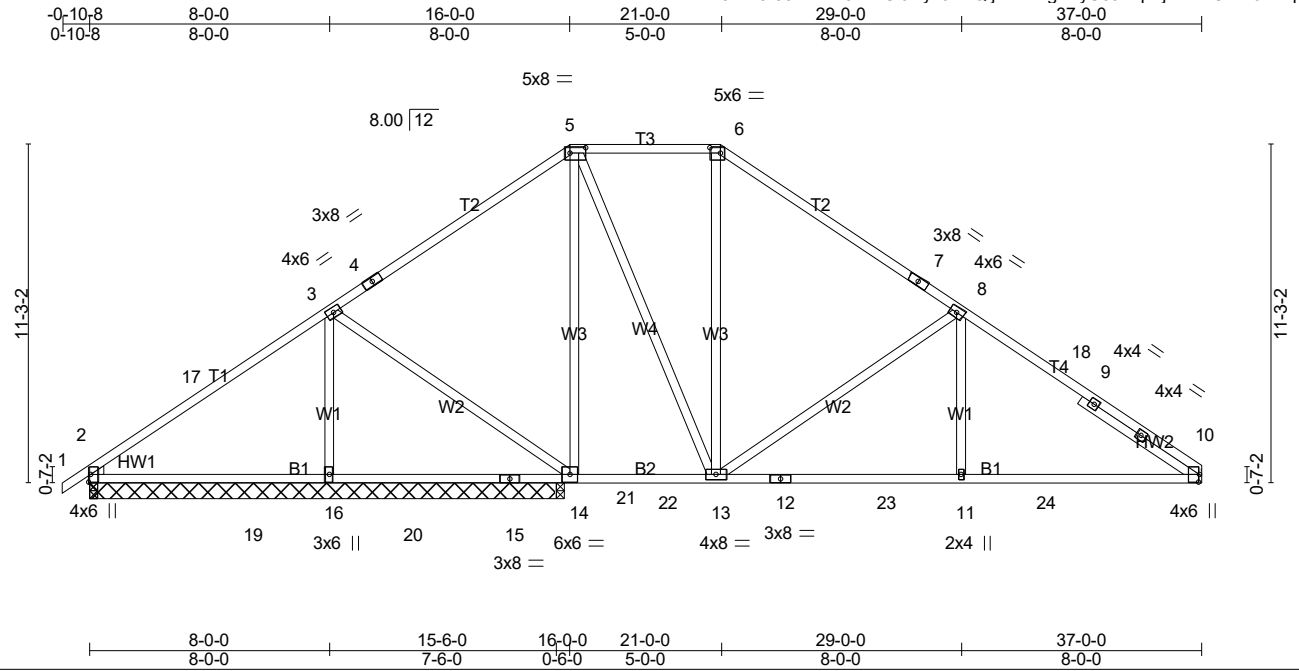


**LOAD CASE(S)** Standard  
 3/1/2024

**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 24-1487-R01	Truss R17	Truss Type PIGGYBACK BASE	Qty 1	Ply 2	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC	Job Reference (optional) # 46062
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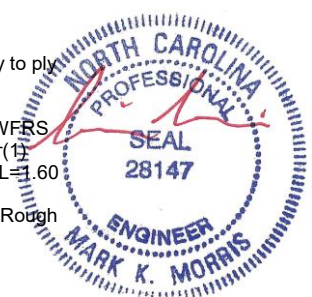
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.73	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.54	Vert(LL) -0.07 11-13 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.86	Vert(CT) -0.12 11-13 >999 180		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-SH	Horz(CT) 0.06 10 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 445 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 5-11-2 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3	
WEDGE	
Left: 2x4 SP No.3	
SLIDER Right 2x4 SP No.3 -Ø 4-8-2	

**REACTIONS.** All bearings 0-3-8 except (jt=length) 16=15-6-0, 10=Mechanical.  
 (lb) - Max Horz 2=245(LC 35)  
 Max Uplift All uplift 100 lb or less at joint(s) except 2=-2423(LC 42), 16=-1557(LC 40), 14=-1774(LC 41), 10=-2171(LC 43)  
 Max Grav All reactions 250 lb or less at joint(s) except 2=2558(LC 39), 2=377(LC 1), 2=377(LC 1), 16=1937(LC 57), 14=2590(LC 30), 10=2557(LC 38)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-17=-4208/4168, 3-17=-3288/3230, 3-4=-3570/3594, 4-5=-2383/3198, 5-6=-1383/1436, 6-7=-1332/1236, 7-8=-1871/1751, 8-18=-2798/2469, 9-18=-3121/2699, 9-10=-4098/3497  
 BOT CHORD 2-19=-3392/3418, 16-19=-468/503, 16-20=-1702/1582, 15-20=-2584/2618, 15-21=-4119/4154, 14-21=-4119/4154, 14-22=-2994/3061, 13-22=-2994/3061, 12-13=-2888/3296, 12-23=-2888/3296, 11-23=-2888/3296, 11-24=-2888/3296, 10-24=-2888/3296  
 WEBS 3-16=-1691/1626, 3-14=-1452/1485, 5-14=-1731/995, 5-13=-208/912, 8-13=-925/314, 8-11=0/462

- 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: 2x4 - 1 row at 0-9-0 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=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 3-11-2, Interior(1) 3-11-2 to 9-2-9, Exterior(2R) 9-2-9 to 27-9-7, Interior(1) 27-9-7 to 32-1-10, Exterior(2E) 32-1-10 to 36-11-4 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
  - 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.
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



3/1/2024

**Continued on Page 2** 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 24-1487-R01	Truss R17	Truss Type PIGGYBACK BASE	Qty 1	Ply 2	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) # 46062
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**NOTES-** (13)

- 9) \* 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.
- 10) Refer to girder(s) for truss to truss connections.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2423 lb uplift at joint 2, 1557 lb uplift at joint 16, 1774 lb uplift at joint 14 and 2171 lb uplift at joint 10.
- 12) This truss has been designed for a total drag load of 200 plf. Lumber DOL=(1.33) Plate grip DOL=(1.33) Connect truss to resist drag loads along bottom chord from 0-0-0 to 15-9-8 for 468.6 plf.

**LOAD CASE(S)** Standard

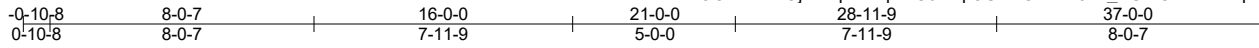


3/1/2024

**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 24-1487-R01	Truss R18	Truss Type PIGGYBACK BASE	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC	# 46062
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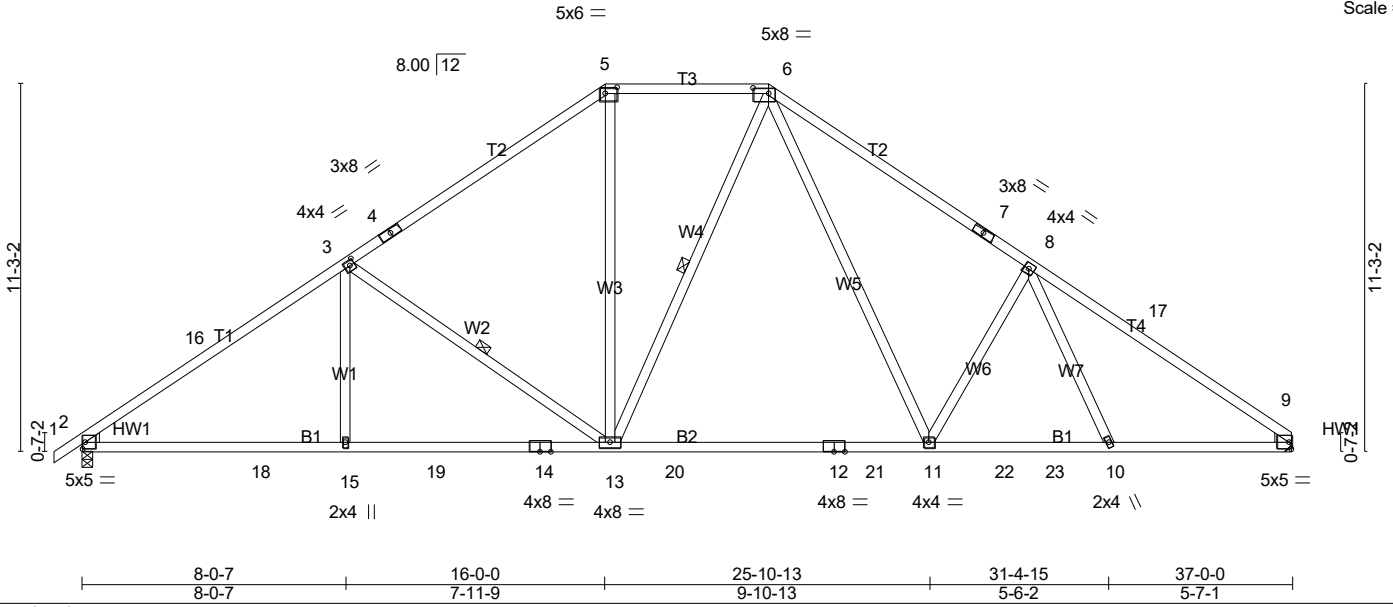


Plate Offsets (X,Y)--	[3:0-1-12,0-2-0], [5:0-4-4,0-2-4], [6:0-5-12,0-2-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.90	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.63	Vert(LL) -0.49 11-13 >897 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.38	Vert(CT) -0.71 11-13 >620 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.08 9 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 214 lb	FT = 0%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1 \*Except\*  
 T3,T1: 2x4 SP No.2  
 BOT CHORD 2x4 SP SS  
 WEBS 2x4 SP No.3  
 WEDGE  
 Left: 2x4 SP No.3 , Right: 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 3-13, 6-13

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

**REACTIONS.** (lb/size) 2=1530/0-3-8 (min. 0-2-0), 9=1467/Mechanical  
 Max Horz 2=218(LC 9)  
 Max Uplift 2=-110(LC 12), 9=-93(LC 13)  
 Max Grav 2=1681(LC 20), 9=1563(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-16=-2461/141, 3-16=-2352/168, 3-4=-1787/176, 4-5=-1661/216, 5-6=-1389/232,  
 6-7=-2002/257, 7-8=-2127/217, 8-17=-2217/169, 9-17=-2424/142  
 BOT CHORD 2-18=-164/2054, 15-18=-164/2054, 15-19=-164/2054, 14-19=-164/2054, 13-14=-164/2054,  
 13-20=0/1351, 12-20=0/1351, 12-21=0/1351, 11-21=0/1351, 11-22=-73/1841,  
 22-23=-73/1841, 10-23=-73/1841, 9-10=-60/1892  
 WEBS 3-15=0/423, 3-13=-766/213, 5-13=-36/667, 6-11=-136/874, 8-11=-473/245

- NOTES-** (10)
- 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 Exterior(2E) -0-10-8 to 3-11-2, Interior(1) 3-11-2 to 9-2-9, Exterior(2R) 9-2-9 to 27-9-7, Interior(1) 27-9-7 to 32-0-10, Exterior(2E) 32-0-10 to 36-10-4 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
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.0 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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 110 lb uplift at joint 2 and 93 lb uplift at joint 9.

**LOAD CASE(S)** Standard



3/1/2024

**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.

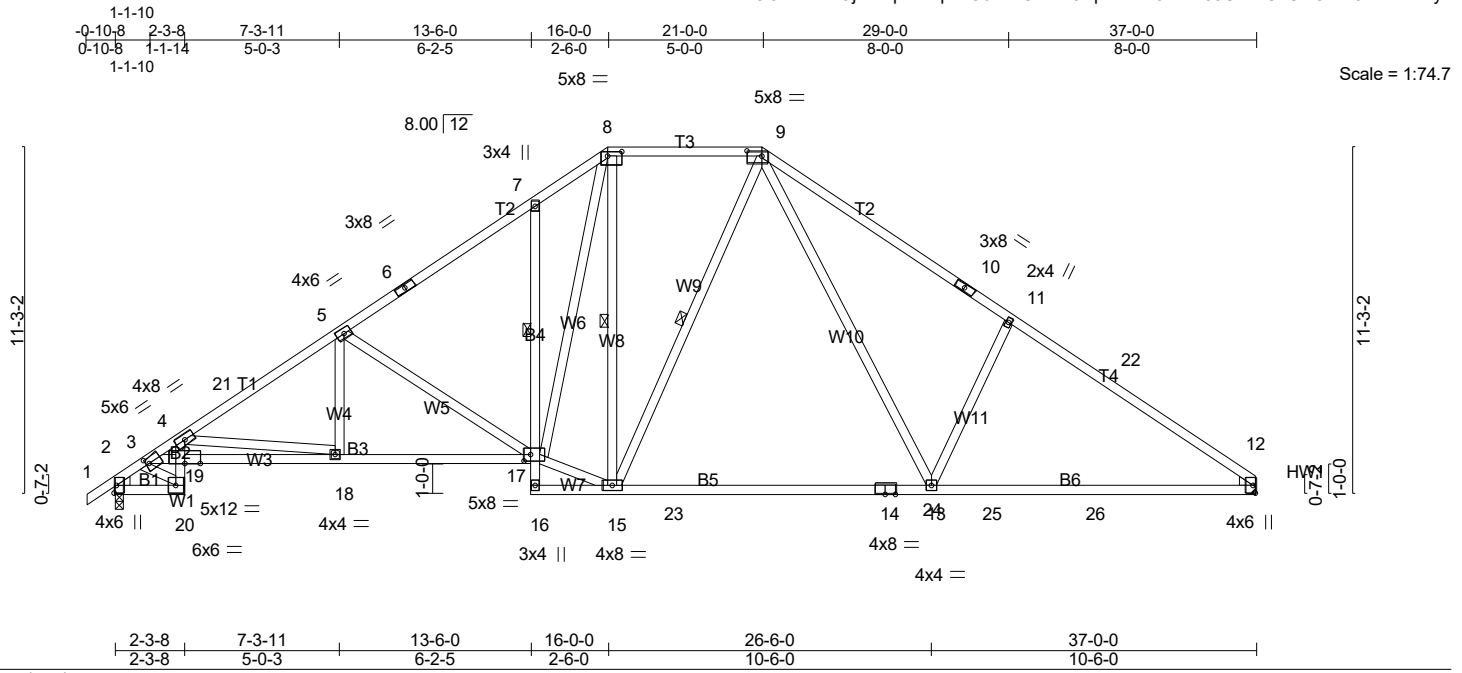


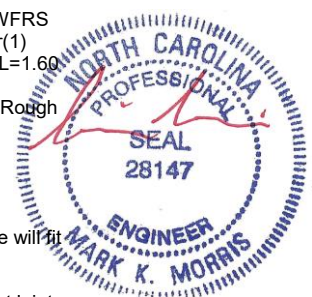
Plate Offsets (X,Y)-- [3:0-1-4,0-2-4], [8:0-5-8,0-1-12], [9:0-5-12,0-2-0], [17:0-2-8,0-2-8]					
<b>LOADING</b> (psf)	TCLL (roof) 20.0	Snow (Pf) 20.0	TCDL 10.0	BCLL 0.0 *	BCDL 10.0
<b>SPACING-</b>	2-0-0	Plate Grip DOL 1.15	Lumber DOL 1.15	Rep Stress Incr YES	Code IRC2021/TPI2014
<b>CSI.</b>	TC 0.91	BC 0.93	WB 0.91	Matrix-SH	
<b>DEFL.</b>	in (loc)	l/defl	L/d		
Vert(LL)	-0.52 13-15	>855	240		
Vert(CT)	-0.75 13-15	>584	180		
Horz(CT)	0.22 12	n/a	n/a		
<b>PLATES</b>	MT20		<b>GRIP</b>	244/190	
Weight: 244 lb FT = 20%					

<b>LUMBER-</b>	<b>BRACING-</b>
<b>TOP CHORD</b> 2x4 SP No.1 *Except* T3,T1: 2x4 SP No.2	<b>TOP CHORD</b> Structural wood sheathing directly applied.
<b>BOT CHORD</b> 2x4 SP No.2 *Except* B3,B5: 2x4 SP No.1, B6: 2x4 SP SS	<b>BOT CHORD</b> Rigid ceiling directly applied or 2-2-0 oc bracing. Except: 1 Row at midpt 7-17
<b>WEBS</b> 2x4 SP No.3 *Except* W2: 2x4 SP No.2	<b>WEBS</b> 1 Row at midpt 8-15, 9-15
<b>WEDGE</b> Left: 2x4 SP No.3 , Right: 2x4 SP No.3	MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=1530/0-3-8 (min. 0-1-13), 12=1467/Mechanical  
 Max Horz2=218(LC 9)  
 Max Uplift2=-110(LC 12), 12=-93(LC 13)  
 Max Grav2=1530(LC 1), 12=1592(LC 25)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**TOP CHORD** 2-3=-1952/122, 3-4=-4161/413, 4-21=-2599/174, 5-21=-2564/193, 5-6=-1981/189,  
 6-7=-1886/213, 7-8=-1933/313, 8-9=-1320/227, 9-10=-2069/258, 10-11=-2198/218,  
 11-22=-2162/185, 12-22=-2343/159  
**BOT CHORD** 2-20=-195/1410, 19-20=-139/1088, 4-19=-104/1019, 18-19=-521/4017, 17-18=-195/2272,  
 7-17=-299/176, 15-23=0/1318, 23-24=0/1318, 14-24=0/1318, 13-14=0/1318, 13-25=-73/1855,  
 25-26=-73/1855, 12-26=-73/1855  
**WEBS** 5-18=0/449, 5-17=-749/179, 15-17=0/1488, 8-17=-248/1195, 8-15=-400/150,  
 9-13=-146/1011, 11-13=-421/254, 3-19=-399/3186, 3-20=-1443/200, 4-18=-1761/328

- NOTES-** (10)
- 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; BCCL=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, Interior(1) 3-11-2 to 9-2-9, Exterior(2R) 9-2-9 to 27-9-7, Interior(1) 27-9-7 to 32-0-10, Exterior(2E) 32-0-10 to 36-10-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip 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=1.10
  - 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) 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 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.
  - 8) Refer to girder(s) for truss to truss connections.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 110 lb uplift at joint 2 and 93 lb uplift at joint 12.



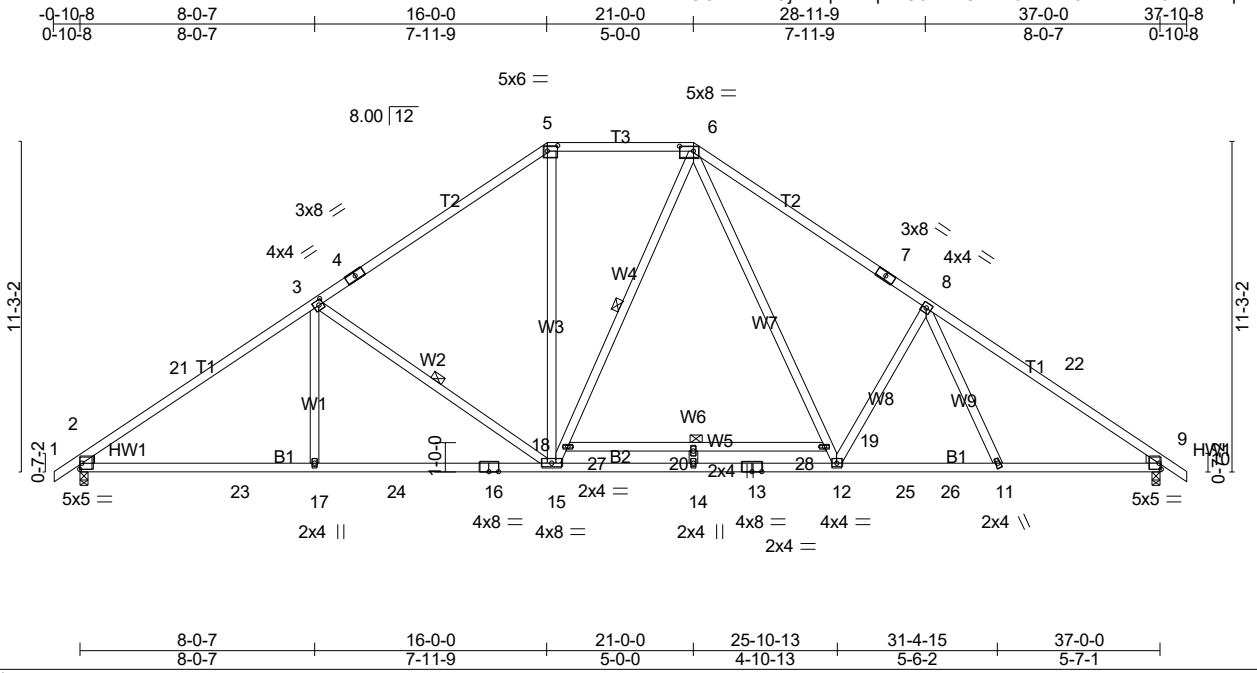
3/1/2024

**LOAD CASE(S)** - See 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 24-1487-R01	Truss R19	Truss Type PIGGYBACK BASE	Qty 2	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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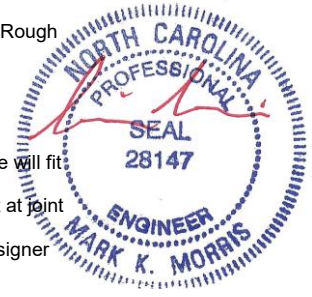
Plate Offsets (X,Y)-- [3:0-1-12,0-2-0], [5:0-4-4,0-2-4], [6:0-5-12,0-2-0]																																																						
<table border="1"> <thead> <tr> <th>LOADING (psf)</th> <th>SPACING-</th> <th>CSI.</th> <th>DEFL.</th> <th>in (loc)</th> <th>l/defl</th> <th>L/d</th> <th>PLATES</th> <th>GRIP</th> </tr> </thead> <tbody> <tr> <td>TCLL (roof) 20.0</td> <td>2-0-0</td> <td>TC 0.85</td> <td>Vert(LL) -0.57</td> <td>14</td> <td>&gt;778</td> <td>240</td> <td>MT20</td> <td>244/190</td> </tr> <tr> <td>Snow (Pf) 20.0</td> <td>Plate Grip DOL 1.15</td> <td>BC 1.00</td> <td>Vert(CT) -0.75</td> <td>14</td> <td>&gt;585</td> <td>180</td> <td></td> <td></td> </tr> <tr> <td>TCDL 10.0</td> <td>Lumber DOL 1.15</td> <td>WB 0.80</td> <td>Horz(CT) 0.09</td> <td>9</td> <td>n/a</td> <td>n/a</td> <td></td> <td></td> </tr> <tr> <td>BCLL 0.0 *</td> <td>Rep Stress Incr YES</td> <td>Matrix-SH</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>BCDL 10.0</td> <td>Code IRC2021/TPI2014</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Weight: 229 lb</td> <td>FT = 0%</td> </tr> </tbody> </table>	LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	TCLL (roof) 20.0	2-0-0	TC 0.85	Vert(LL) -0.57	14	>778	240	MT20	244/190	Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 1.00	Vert(CT) -0.75	14	>585	180			TCDL 10.0	Lumber DOL 1.15	WB 0.80	Horz(CT) 0.09	9	n/a	n/a			BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH							BCDL 10.0	Code IRC2021/TPI2014						Weight: 229 lb	FT = 0%
LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP																																														
TCLL (roof) 20.0	2-0-0	TC 0.85	Vert(LL) -0.57	14	>778	240	MT20	244/190																																														
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BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH																																																				
BCDL 10.0	Code IRC2021/TPI2014						Weight: 229 lb	FT = 0%																																														

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.1 *Except* T3: 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 2x4 SP No.3 *Except* W5: 2x4 SP No.2	WEBS 1 Row at midpt 3-15, 6-15, 18-19
WEDGE Left: 2x4 SP No.3, Right: 2x4 SP No.3	MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=1530/0-3-8 (min. 0-2-0), 9=1530/0-3-8 (min. 0-1-15)  
Max Horz2=220(LC 11)  
Max Uplift2=-110(LC 12), 9=-110(LC 13)  
Max Grav2=1699(LC 20), 9=1645(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-21=-2496/138, 3-21=-2386/165, 3-4=-1810/175, 4-5=-1684/215, 5-6=-1408/230,  
6-7=-2026/251, 7-8=-2151/211, 8-22=-2358/156, 9-22=-2468/128  
BOT CHORD 2-23=-160/2087, 17-23=-160/2087, 17-24=-160/2087, 16-24=-160/2087,  
14-15=0/1409, 13-14=0/1409, 12-13=0/1409, 12-25=-56/1866, 25-26=-56/1866,  
11-26=-56/1866, 9-11=-39/1927  
WEBS 3-17=0/439, 3-15=-781/213, 5-15=-37/691, 6-19=-137/882, 12-19=-139/774, 8-12=-479/241

- NOTES-** (11)
- 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) -0-10-8 to 3-11-2, Interior(1) 3-11-2 to 9-2-9, Exterior(2R) 9-2-9 to 27-9-7, Interior(1) 27-9-7 to 33-0-14, Exterior(2E) 33-0-14 to 37-10-8 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
  - 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.
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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 110 lb uplift at joint 2 and 110 lb uplift at joint 9.
  - Load case(s) 3, 4, 5, 19, 20, 21, 22, 23, 24, 25, 26, 27, 32, 33, 46, 47, 48, 49, 50, 51, 52, 53 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
  - In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).



3/1/2024

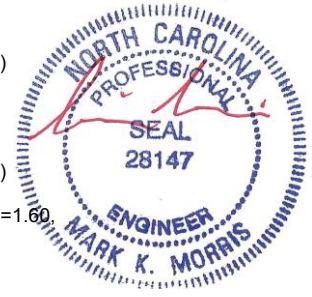
**LOAD CASE(S)** Standard  
Continued on page 2  
Design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is 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 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	R19	PIGGYBACK BASE	2	1	Job Reference (optional) # 46062

Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 4 16:32:14 2024 Page 2  
 ID: oDuWOOMhLxMOj2fwcp2aKqzMG6w-BrCNDADJhIXzMSYsAHwso6aFXKrVpT2y?qd7VYazeFYV

**LOAD CASE(S)** Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-5=-60, 5-6=-60, 6-10=-60, 2-9=-20
- 3) Dead + 0.75 Roof Live (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-5=-50, 5-6=-50, 6-10=-50, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)
- 4) Dead + 0.75 Snow (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-5=-50, 5-6=-50, 6-10=-50, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)
- 5) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25  
 Uniform Loads (plf)  
 Vert: 1-5=-20, 5-6=-20, 6-10=-20, 2-9=-40, 27-28=-60(F)
- 19) Dead + Uninhabitable Attic Storage: Lumber Increase=1.25, Plate Increase=1.25  
 Uniform Loads (plf)  
 Vert: 1-5=-20, 5-6=-20, 6-10=-20, 2-23=-20, 23-24=-80, 24-25=-20, 25-26=-80, 9-26=-20, 27-28=-60(F)
- 20) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-55, 2-5=-58, 5-6=-34, 6-9=-44, 9-10=-40, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)  
 Horz: 1-2=5, 2-5=8, 6-9=6, 9-10=10
- 21) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-40, 2-5=-44, 5-6=-34, 6-9=-58, 9-10=-55, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)  
 Horz: 1-2=-10, 2-5=-6, 6-9=-8, 9-10=-5
- 22) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-30, 2-5=-34, 5-6=-44, 6-9=-44, 9-10=-40, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)  
 Horz: 1-2=-20, 2-5=-16, 6-9=6, 9-10=10
- 23) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-40, 2-5=-44, 5-6=-44, 6-9=-34, 9-10=-30, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)  
 Horz: 1-2=-10, 2-5=-6, 6-9=16, 9-10=20
- 24) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-55, 2-5=-58, 5-6=-34, 6-9=-44, 9-10=-40, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)  
 Horz: 1-2=5, 2-5=8, 6-9=6, 9-10=10
- 25) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-40, 2-5=-44, 5-6=-34, 6-9=-58, 9-10=-55, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)  
 Horz: 1-2=-10, 2-5=-6, 6-9=-8, 9-10=-5
- 26) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-30, 2-5=-34, 5-6=-44, 6-9=-44, 9-10=-40, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)  
 Horz: 1-2=-20, 2-5=-16, 6-9=6, 9-10=10
- 27) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-40, 2-5=-44, 5-6=-44, 6-9=-34, 9-10=-30, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)  
 Horz: 1-2=-10, 2-5=-6, 6-9=16, 9-10=20
- 32) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-5=-50, 5-6=-50, 6-10=-20, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)
- 33) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-5=-20, 5-6=-50, 6-10=-50, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)
- 46) Reversal: Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-55, 2-5=-58, 5-6=-34, 6-9=-44, 9-10=-40, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)  
 Horz: 1-2=5, 2-5=8, 6-9=6, 9-10=10
- 47) Reversal: Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-40, 2-5=-44, 5-6=-34, 6-9=-58, 9-10=-55, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)  
 Horz: 1-2=-10, 2-5=-6, 6-9=-8, 9-10=-5
- 48) Reversal: Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-30, 2-5=-34, 5-6=-44, 6-9=-44, 9-10=-40, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)  
 Horz: 1-2=-20, 2-5=-16, 6-9=6, 9-10=10
- 49) Reversal: Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60  
 Uniform Loads (plf)  
 Vert: 1-2=-40, 2-5=-44, 5-6=-44, 6-9=-34, 9-10=-30, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)  
 Horz: 1-2=-10, 2-5=-6, 6-9=16, 9-10=20
- 50) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60



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Continued on Page 3  
 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 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	R19	PIGGYBACK BASE	2	1	Job Reference (optional) # 46062

Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 4 16:32:14 2024 Page 3  
ID:oDuWOOmHxMOj2fwcp2aKqzMG6w-BrCNDAJhIXzM5YsAHwso6aFXKrVpT2y?qd7VYazeFyV

**LOAD CASE(S) Standard**

Uniform Loads (plf)

Vert: 1-2=-55, 2-5=-58, 5-6=-34, 6-9=-44, 9-10=-40, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)

Horz: 1-2=5, 2-5=8, 6-9=6, 9-10=10

51) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-40, 2-5=-44, 5-6=-34, 6-9=-58, 9-10=-55, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)

Horz: 1-2=-10, 2-5=-6, 6-9=-8, 9-10=-5

52) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-30, 2-5=-34, 5-6=-44, 6-9=-44, 9-10=-40, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)

Horz: 1-2=-20, 2-5=-16, 6-9=6, 9-10=10

53) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-40, 2-5=-44, 5-6=-44, 6-9=-34, 9-10=-30, 2-23=-20, 23-24=-65, 24-25=-20, 25-26=-65, 9-26=-20, 27-28=-45(F)

Horz: 1-2=-10, 2-5=-6, 6-9=16, 9-10=20

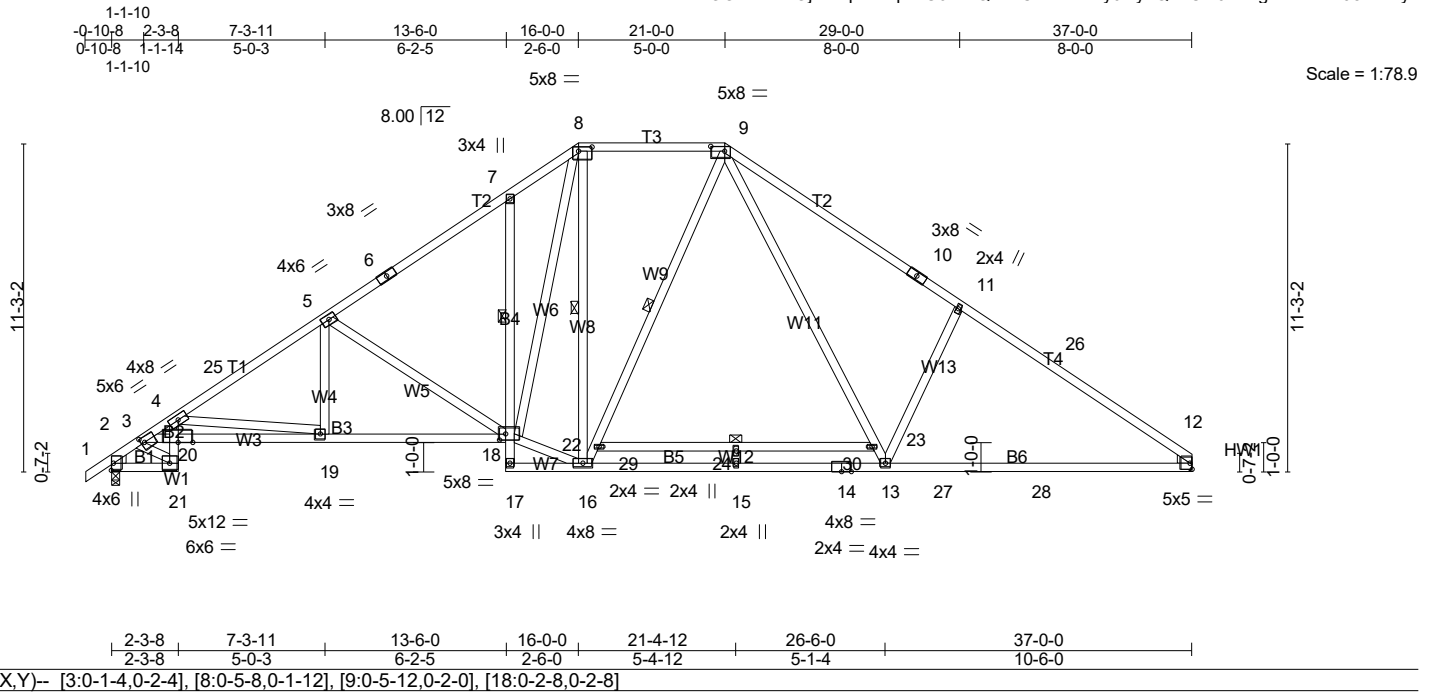


3/1/2024

**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 24-1487-R01	Truss R19A	Truss Type PIGGYBACK BASE	Qty 3	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC	Job Reference (optional) <b># 46062</b>
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Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 4 16:32:17 2024 Page 1  
ID: oDuWOOMhLxMOj2fwcp2aKqzMG6w-bQtWsCMZbSLwy0bly2QVkt192XugMnRWbL98vzeFyS



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15	TC 0.94	Vert(LL) -0.62 15 >709 240	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15	BC 0.91	Vert(CT) -0.82 15 >540 180		
TCDL 10.0	Rep Stress Incr YES	WB 0.92	Horz(CT) 0.22 12 n/a n/a		
BCLL 0.0 *	Code IRC2021/TPI2014	Matrix-SH			
BCDL 10.0					Weight: 259 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1 *Except* T3,T1: 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x4 SP No.2 *Except* B3: 2x4 SP No.1, B5,B6: 2x4 SP SS	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except: 1 Row at midpt 7-18
WEBS 2x4 SP No.3 *Except* W2,W10: 2x4 SP No.2	WEBS 1 Row at midpt 8-16, 9-16, 22-23
WEDGE Left: 2x4 SP No.3 , Right: 2x4 SP No.3	MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=1530/0-3-8 (min. 0-1-13), 12=1467/Mechanical  
Max Horz 2=218(LC 9)  
Max Uplift 2=110(LC 12), 12=93(LC 13)  
Max Grav 2=1531(LC 20), 12=1622(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1959/122, 3-4=-4220/413, 4-25=-2642/174, 5-25=-2607/193, 5-6=-2021/189,  
6-7=-1926/213, 7-8=-1972/313, 8-9=-1342/228, 9-10=-2112/260, 10-11=-2242/219,  
11-26=-2205/187, 12-26=-2386/161  
BOT CHORD 2-21=-196/1429, 20-21=-140/1103, 4-20=-105/1032, 19-20=-521/4071, 18-19=-195/2308,  
7-18=-298/177, 15-16=0/1390, 14-15=0/1390, 13-14=0/1390, 13-27=-74/1891,  
27-28=-74/1891, 12-28=-74/1891  
WEBS 5-19=0/476, 5-18=-753/179, 16-18=0/1484, 8-18=-243/1225, 8-16=-407/146,  
9-23=-147/1041, 13-23=-148/937, 11-13=-422/254, 3-20=-399/3229, 3-21=-1462/200,  
4-19=-1778/328

- 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=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 3-11-2, Interior(1) 3-11-2 to 9-2-9, Exterior(2R) 9-2-9 to 27-9-7, Interior(1) 27-9-7 to 32-0-10, Exterior(2E) 32-0-10 to 36-10-4 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
  - 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.
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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 110 lb uplift at joint 2 and 93 lb uplift at joint 12.



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Continued on Page 2  
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 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	R19A	PIGGYBACK BASE	3	1	Job Reference (optional) # 46062

Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 4 16:32:18 2024 Page 2  
 ID: oDuWOOMhLxMOj2fwcp2aKqzMG6w-4cRu3XNCMmTna9AxWlxkGQQCvSt7Pp1a1f5ihLzeFyR

**NOTES-** (12)

- 10) Load case(s) 3, 4, 5, 19, 20, 21, 22, 23, 24, 25, 26, 27, 32, 33, 46, 47, 48, 49, 50, 51, 52, 53 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- 11) 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 + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-8=-60, 8-9=-60, 9-12=-60, 2-21=-20, 18-20=-20, 12-17=-20
- 3) Dead + 0.75 Roof Live (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-8=-50, 8-9=-50, 9-12=-50, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)
- 4) Dead + 0.75 Snow (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-8=-50, 8-9=-50, 9-12=-50, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)
- 5) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (plf)  
Vert: 1-8=-20, 8-9=-20, 9-12=-20, 2-21=-40, 18-20=-40, 12-17=-40, 29-30=-60(F)
- 19) Dead + Uninhabitable Attic Storage: Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (plf)  
Vert: 1-8=-20, 8-9=-20, 9-12=-20, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-80, 12-28=-20, 29-30=-60(F)
- 20) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-55, 2-8=-58, 8-9=-34, 9-12=-44, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=5, 2-8=8, 9-12=6  
Drag: 8-9=0
- 21) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-40, 2-8=-44, 8-9=-34, 9-12=-58, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=-8  
Drag: 8-9=0
- 22) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-30, 2-8=-34, 8-9=-44, 9-12=-44, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=-20, 2-8=-16, 9-12=6  
Drag: 8-9=0
- 23) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-40, 2-8=-44, 8-9=-44, 9-12=-34, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=16  
Drag: 8-9=0
- 24) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-55, 2-8=-58, 8-9=-34, 9-12=-44, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=5, 2-8=8, 9-12=6  
Drag: 8-9=0
- 25) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-40, 2-8=-44, 8-9=-34, 9-12=-58, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=-8  
Drag: 8-9=0
- 26) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-30, 2-8=-34, 8-9=-44, 9-12=-44, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=-20, 2-8=-16, 9-12=6  
Drag: 8-9=0
- 27) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-40, 2-8=-44, 8-9=-44, 9-12=-34, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=16  
Drag: 8-9=0
- 32) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-8=-50, 8-9=-50, 9-12=-20, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)
- 33) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-8=-20, 8-9=-50, 9-12=-50, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)
- 46) Reversal: Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-55, 2-8=-58, 8-9=-34, 9-12=-44, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=5, 2-8=8, 9-12=6  
Drag: 8-9=0
- 47) Reversal: Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60



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Continued on Page 3  
 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 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	R19A	PIGGYBACK BASE	3	1	Job Reference (optional) # 46062

Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 4 16:32:18 2024 Page 3  
ID:oDuWOOmHxMOj2fwcp2aKqzMG6w-4cRu3XNCMmTna9AxWlxGQQCvSt7Pp1alF5ihLzeFyR

**LOAD CASE(S)** Standard

Uniform Loads (plf)

Vert: 1-2=-40, 2-8=-44, 8-9=-34, 9-12=-58, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=-8  
Drag: 8-9=0

48) Reversal: Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-30, 2-8=-34, 8-9=-44, 9-12=-44, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=-20, 2-8=-16, 9-12=6  
Drag: 8-9=0

49) Reversal: Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-40, 2-8=-44, 8-9=-44, 9-12=-34, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=16  
Drag: 8-9=0

50) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-55, 2-8=-58, 8-9=-34, 9-12=-44, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=5, 2-8=8, 9-12=6  
Drag: 8-9=0

51) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-40, 2-8=-44, 8-9=-34, 9-12=-58, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=-8  
Drag: 8-9=0

52) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-30, 2-8=-34, 8-9=-44, 9-12=-44, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=-20, 2-8=-16, 9-12=6  
Drag: 8-9=0

53) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60

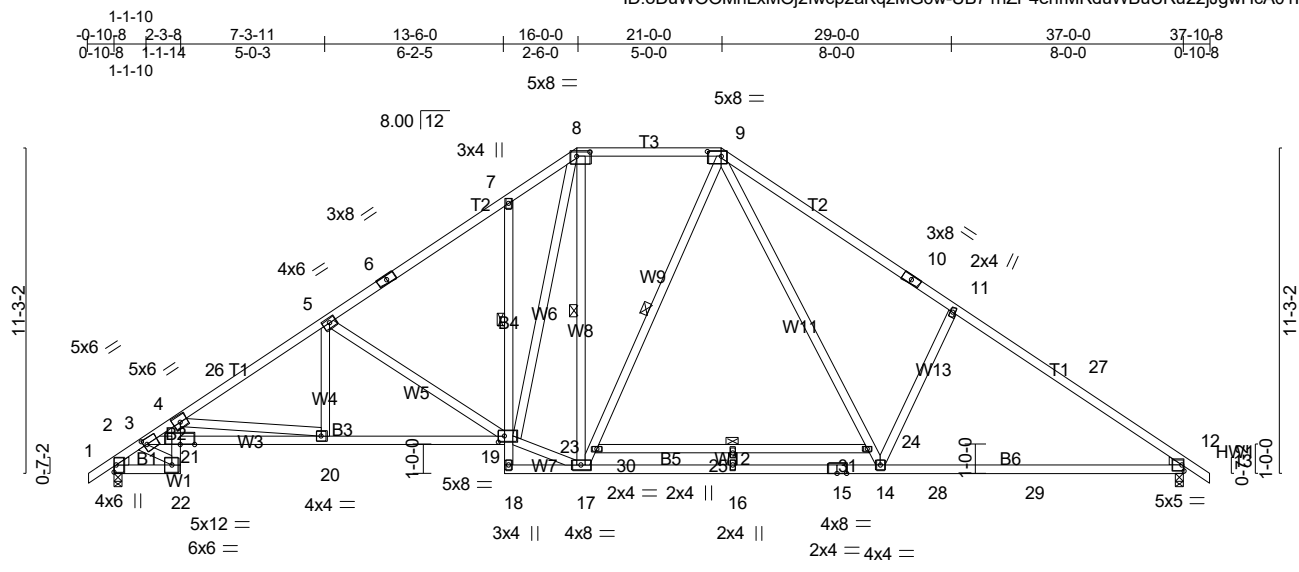
Uniform Loads (plf)

Vert: 1-2=-40, 2-8=-44, 8-9=-44, 9-12=-34, 2-21=-20, 18-20=-20, 17-27=-20, 27-28=-65, 12-28=-20, 29-30=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=16  
Drag: 8-9=0



3/1/2024

**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 = 1:79.7

Plate Offsets (X,Y)--	[3:0-1-4,0-2-4], [8:0-5-8,0-1-12], [9:0-5-12,0-2-0], [19:0-2-8,0-2-8]
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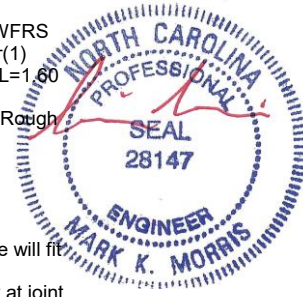
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15	2-0-0	TC 0.93	Vert(LL) -0.62	16	>711	240	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15		BC 0.88	Vert(CT) -0.81	16	>543	180		
TCDL 10.0	Rep Stress Incr YES		WB 0.90	Horz(CT) 0.22	12	n/a	n/a		
BCLL 0.0 *	Code IRC2021/TPI2014		Matrix-SH						
BCDL 10.0								Weight: 260 lb	FT = 20%

LUMBER-	BRACING-
<b>TOP CHORD</b> 2x4 SP No.1 *Except* T3: 2x4 SP No.2 <b>BOT CHORD</b> 2x4 SP No.2 *Except* B3: 2x4 SP No.1, B5,B6: 2x4 SP SS <b>WEBS</b> 2x4 SP No.3 *Except* W2,W10: 2x4 SP No.2 <b>WEDGE</b> Left: 2x4 SP No.3 , Right: 2x4 SP No.3	<b>TOP CHORD</b> Structural wood sheathing directly applied. <b>BOT CHORD</b> Rigid ceiling directly applied or 6-0-0 oc bracing. Except: 1 Row at midpt 7-19 <b>WEBS</b> 1 Row at midpt 8-17, 9-17, 23-24 <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">                         MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.                     </div>

**REACTIONS.** (lb/size) 2=1530/0-3-8 (min. 0-1-13), 12=1530/0-3-8 (min. 0-2-0)  
 Max Horz2=-221(LC 10)  
 Max Uplift2=-110(LC 12), 12=-110(LC 13)  
 Max Grav2=1531(LC 20), 12=1679(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**TOP CHORD** 2-3=-1954/122, 3-4=-4229/408, 4-26=-2642/173, 5-26=-2607/192, 5-6=-2020/185,  
 6-7=-1924/209, 7-8=-1970/309, 8-9=-1341/226, 9-10=-2108/251, 10-11=-2237/210,  
 11-27=-2295/179, 12-27=-2382/152  
**BOT CHORD** 2-22=-190/1424, 21-22=-137/1114, 4-21=-102/1042, 20-21=-506/4047, 19-20=-191/2314,  
 7-19=-294/175, 16-17=0/1392, 15-16=0/1392, 14-15=0/1392, 14-28=-57/1887,  
 28-29=-57/1887, 12-29=-57/1887  
**WEBS** 5-20=0/472, 5-19=-757/180, 17-19=0/1487, 8-19=-241/1224, 8-17=-407/145,  
 9-24=-145/1036, 14-24=-146/932, 11-14=-420/253, 3-21=-395/3251, 3-22=-1475/197,  
 4-20=-1749/317

- 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=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 3-11-2, Interior(1) 3-11-2 to 9-2-9, Exterior(2R) 9-2-9 to 27-9-7, Interior(1) 27-9-7 to 33-0-14, Exterior(2E) 33-0-14 to 37-10-8 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
  - 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.
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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 110 lb uplift at joint 2 and 110 lb uplift at joint 12.



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Job	Truss	Truss Type	Qty	Ply	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	R19B	PIGGYBACK BASE	1	1	Job Reference (optional) # 46062

Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 4 16:32:21 2024 Page 2  
ID:oDuW00MhLxMOj2fwcp2aKqzMG6w-UB71hZP4ehrMRduWBUrU22jgWcA01RCJNHgzeFyO

**NOTES-** (11)

- 9) Load case(s) 3, 4, 5, 19, 20, 21, 22, 23, 24, 25, 26, 27, 32, 33, 46, 47, 48, 49, 50, 51, 52, 53 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
- 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 + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-8=-60, 8-9=-60, 9-13=-60, 2-22=-20, 19-21=-20, 12-18=-20
- 3) Dead + 0.75 Roof Live (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-8=-50, 8-9=-50, 9-13=-50, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)
- 4) Dead + 0.75 Snow (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-8=-50, 8-9=-50, 9-13=-50, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)
- 5) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (plf)  
Vert: 1-8=-20, 8-9=-20, 9-13=-20, 2-22=-40, 19-21=-40, 12-18=-40, 30-31=-60(F)
- 19) Dead + Uninhabitable Attic Storage: Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (plf)  
Vert: 1-8=-20, 8-9=-20, 9-13=-20, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-80, 12-29=-20, 30-31=-60(F)
- 20) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-55, 2-8=-58, 8-9=-34, 9-12=-44, 12-13=-40, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=5, 2-8=8, 9-12=6, 12-13=10  
Drag: 8-9=0
- 21) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-40, 2-8=-44, 8-9=-34, 9-12=-58, 12-13=-55, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=-8, 12-13=-5  
Drag: 8-9=0
- 22) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-30, 2-8=-34, 8-9=-44, 9-12=-44, 12-13=-40, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=-20, 2-8=-16, 9-12=6, 12-13=10  
Drag: 8-9=0
- 23) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-40, 2-8=-44, 8-9=-44, 9-12=-34, 12-13=-30, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=16, 12-13=20  
Drag: 8-9=0
- 24) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-55, 2-8=-58, 8-9=-34, 9-12=-44, 12-13=-40, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=5, 2-8=8, 9-12=6, 12-13=10  
Drag: 8-9=0
- 25) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-40, 2-8=-44, 8-9=-34, 9-12=-58, 12-13=-55, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=-8, 12-13=-5  
Drag: 8-9=0
- 26) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-30, 2-8=-34, 8-9=-44, 9-12=-44, 12-13=-40, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=-20, 2-8=-16, 9-12=6, 12-13=10  
Drag: 8-9=0
- 27) Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-40, 2-8=-44, 8-9=-44, 9-12=-34, 12-13=-30, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=16, 12-13=20  
Drag: 8-9=0
- 32) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-8=-50, 8-9=-50, 9-13=-20, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)
- 33) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-8=-20, 8-9=-50, 9-13=-50, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)
- 46) Reversal: Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-55, 2-8=-58, 8-9=-34, 9-12=-44, 12-13=-40, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=5, 2-8=8, 9-12=6, 12-13=10  
Drag: 8-9=0
- 47) Reversal: Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60



3/1/2024

Continued on Page 3  
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Job	Truss	Truss Type	Qty	Ply	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	R19B	PIGGYBACK BASE	1	1	Job Reference (optional) # 46062

Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 4 16:32:21 2024 Page 3  
ID:oDuW00MhLxMOj2fwcp2aKqzMG6w-UB71hZP4ehrMRduWBUrU22jJgwHcA01RCJNHgzeFyO

**LOAD CASE(S)** Standard

Uniform Loads (plf)

Vert: 1-2=-40, 2-8=-44, 8-9=-34, 9-12=-58, 12-13=-55, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=-8, 12-13=-5  
Drag: 8-9=0

48) Reversal: Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-30, 2-8=-34, 8-9=-44, 9-12=-44, 12-13=-40, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=-20, 2-8=-16, 9-12=6, 12-13=10  
Drag: 8-9=0

49) Reversal: Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-40, 2-8=-44, 8-9=-44, 9-12=-34, 12-13=-30, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=16, 12-13=20  
Drag: 8-9=0

50) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-55, 2-8=-58, 8-9=-34, 9-12=-44, 12-13=-40, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=5, 2-8=8, 9-12=6, 12-13=10  
Drag: 8-9=0

51) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-40, 2-8=-44, 8-9=-34, 9-12=-58, 12-13=-55, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=-8, 12-13=-5  
Drag: 8-9=0

52) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-30, 2-8=-34, 8-9=-44, 9-12=-44, 12-13=-40, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=-20, 2-8=-16, 9-12=6, 12-13=10  
Drag: 8-9=0

53) Reversal: Dead + 0.75 Roof Live (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.60, Plate Increase=1.60

Uniform Loads (plf)

Vert: 1-2=-40, 2-8=-44, 8-9=-44, 9-12=-34, 12-13=-30, 2-22=-20, 19-21=-20, 18-28=-20, 28-29=-65, 12-29=-20, 30-31=-45(F)  
Horz: 1-2=-10, 2-8=-6, 9-12=16, 12-13=20  
Drag: 8-9=0



3/1/2024

**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 24-1487-R01	Truss R20	Truss Type Piggyback Base	Qty 2	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC	# 46062
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Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 4 16:32:23 2024 Page 1  
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0-10-8	8-0-7	16-0-0	21-0-0	28-11-9	37-0-0	37-10-8
0-10-8	8-0-7	7-11-9	5-0-0	7-11-9	8-0-7	0-10-8

Scale = 1:71.1

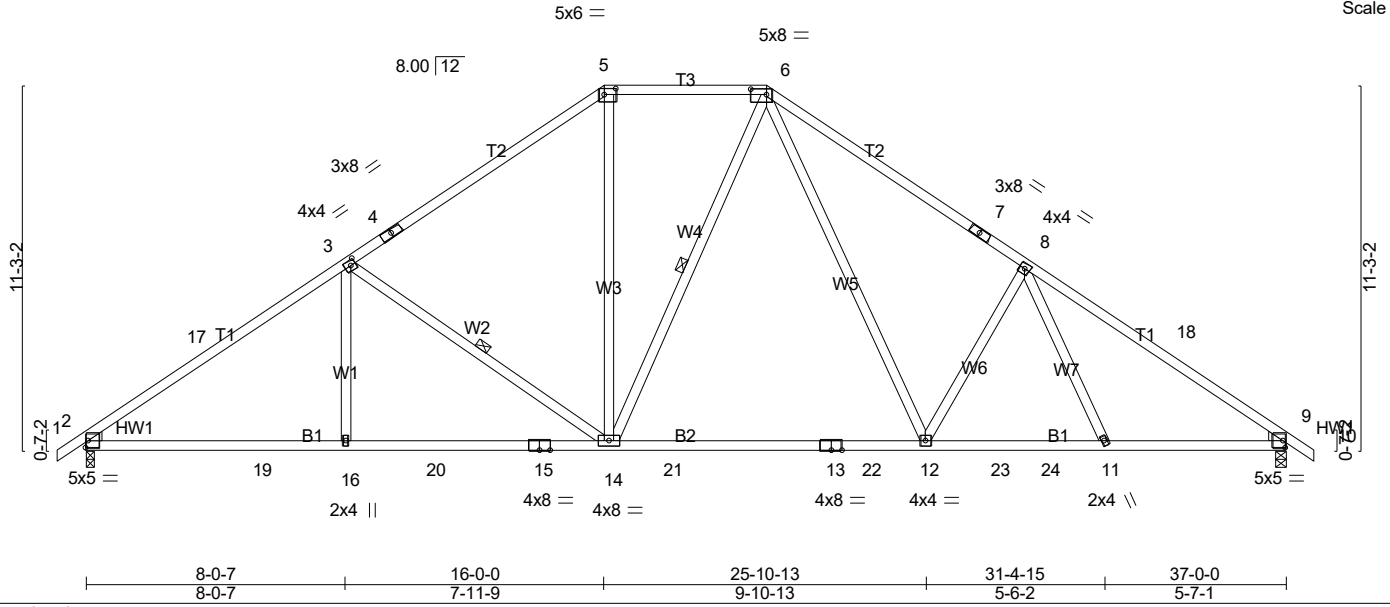


Plate Offsets (X,Y)-- [3:0-1-12,0-2-0], [5:0-4-4,0-2-4], [6:0-5-12,0-2-0]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15		TC 0.84	Vert(LL) -0.49	12-14	>899	240	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15		BC 0.63	Vert(CT) -0.71	12-14	>623	180		
TCDL 10.0	Rep Stress Incr YES		WB 0.38	Horz(CT) 0.08	9	n/a	n/a		
BCLL 0.0 *	Code IRC2021/TPI2014		Matrix-SH						
BCDL 10.0								Weight: 215 lb	FT = 0%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1 \*Except\*  
 T3: 2x4 SP No.2  
 BOT CHORD 2x4 SP SS  
 WEBS 2x4 SP No.3  
 WEDGE  
 Left: 2x4 SP No.3 , Right: 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 3-14, 6-14

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

**REACTIONS.** (lb/size) 2=1530/0-3-8 (min. 0-2-0), 9=1530/0-3-8 (min. 0-1-15)  
 Max Horz 2=220(LC 11)  
 Max Uplift 2=-110(LC 12), 9=-110(LC 13)  
 Max Grav 2=1680(LC 20), 9=1620(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-17=-2460/138, 3-17=-2350/166, 3-4=-1786/174, 4-5=-1660/214, 5-6=-1388/229,  
 6-7=-1999/249, 7-8=-2124/209, 8-18=-2307/157, 9-18=-2416/130  
 BOT CHORD 2-19=-160/2058, 16-19=-160/2058, 16-20=-160/2058, 15-20=-160/2058,  
 14-21=0/1354, 13-21=0/1354, 13-22=0/1354, 12-22=0/1354, 12-23=-56/1836,  
 23-24=-56/1836, 11-24=-56/1836, 9-11=-40/1885  
 WEBS 3-16=0/421, 3-14=-768/214, 5-14=-36/668, 6-12=-135/871, 8-12=-468/243

- NOTES-** (9)
- 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=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-10-8 to 3-11-2, Interior(1) 3-11-2 to 9-2-9, Exterior(2R) 9-2-9 to 27-9-7, Interior(1) 27-9-7 to 33-0-14, Exterior(2E) 33-0-14 to 37-10-8 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
  - This truss has been designed for greater of min roof live load of 12.0 psf or 2.0 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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 110 lb uplift at joint 2 and 110 lb uplift at joint 9.

**LOAD CASE(S)** Standard



3/1/2024

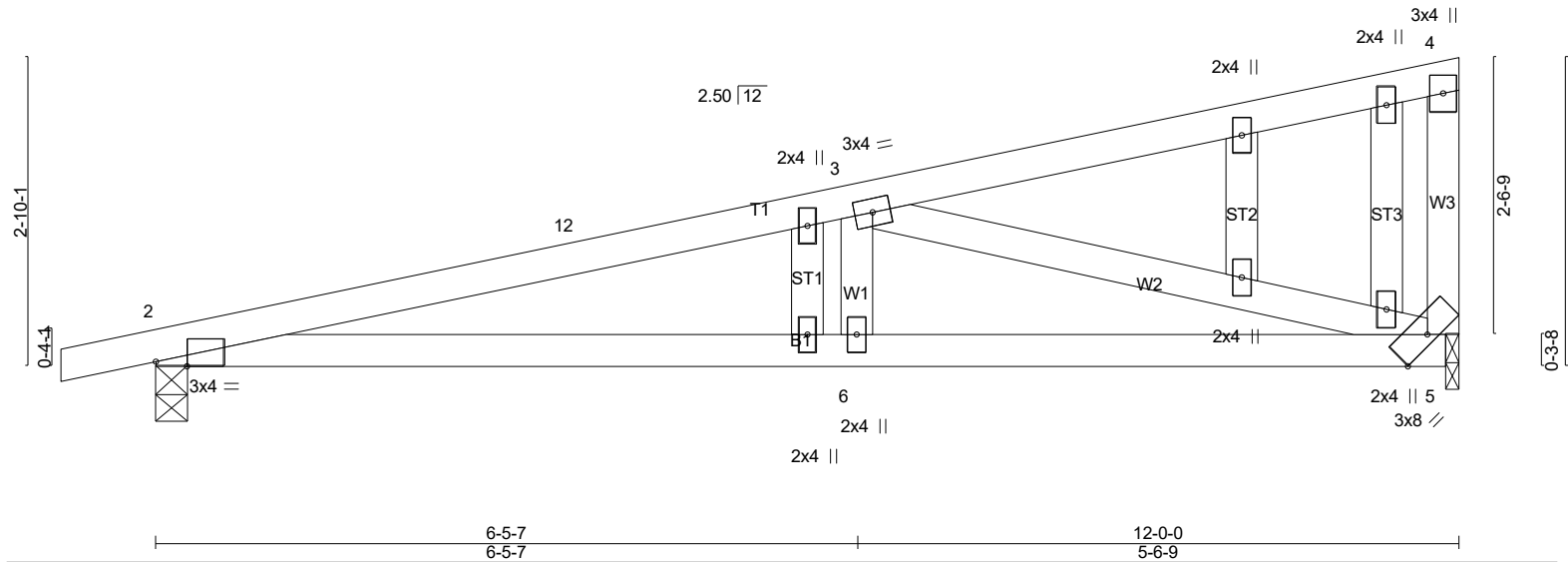
**Warning!**—Verify design parameters and read notes before use. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer – 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 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	R21	GABLE	1	1	# 46062

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Scale = 1:21.2



LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	GRIP
TCLL (roof)	20.0	2-0-0	2-0-0	TC	0.53	in	(loc)	l/defl	L/d	MT20	244/190
Snow (Pf)	20.0	Plate Grip DOL	1.15	BC	0.61	Vert(LL)	-0.08	2-6	>999	240	
TCDL	10.0	Lumber DOL	1.15	WB	0.84	Vert(CT)	-0.16	2-6	>881	180	
BCLL	0.0 *	Rep Stress Incr	YES	Matrix-SH		Horz(CT)	0.03	5	n/a	n/a	
BCDL	10.0	Code IRC2021/TPI2014									
											Weight: 57 lb FT = 20%

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 4-1-14 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.3		
OTHERS	2x4 SP No.3		

**REACTIONS.** (lb/size) 2=532/0-3-8 (min. 0-1-8), 5=466/0-1-8 (min. 0-1-8)  
 Max Horz 2=76(LC 10)  
 Max Uplift 2=-69(LC 10), 5=-54(LC 14)  
 Max Grav 2=590(LC 21), 5=579(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-12=-1462/114, 3-12=-1413/121  
 BOT CHORD 2-6=-167/1391, 5-6=-167/1391  
 WEBS 3-6=0/265, 3-5=-1392/167

- NOTES-** (12-15)
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 3-11-2, Interior(1) 3-11-2 to 7-0-10, Exterior(2E) 7-0-10 to 11-10-4 zone; 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) 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) Gable studs spaced at 1-4-0 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 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) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 10) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
  - 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 69 lb uplift at joint 2 and 54 lb uplift at joint 5.



3/1/2024

**Continued on Page 2** 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 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	R21	GABLE	1	1	Job Reference (optional) # 46062

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ID:r9MH5r89tuDnH9lxEtUJwylJIK-umo9KbRyxcExl4d5s028WhgJmt?8pYJT7AY1u?zeFYL

- 12) 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.
- 13) 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.
- 14) 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.
- 15) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/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

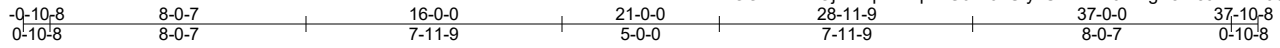


3/1/2024

**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 24-1487-R01	Truss R22	Truss Type Piggyback Base Structural Gable COMMON   Gable   Gable	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC	# 46062
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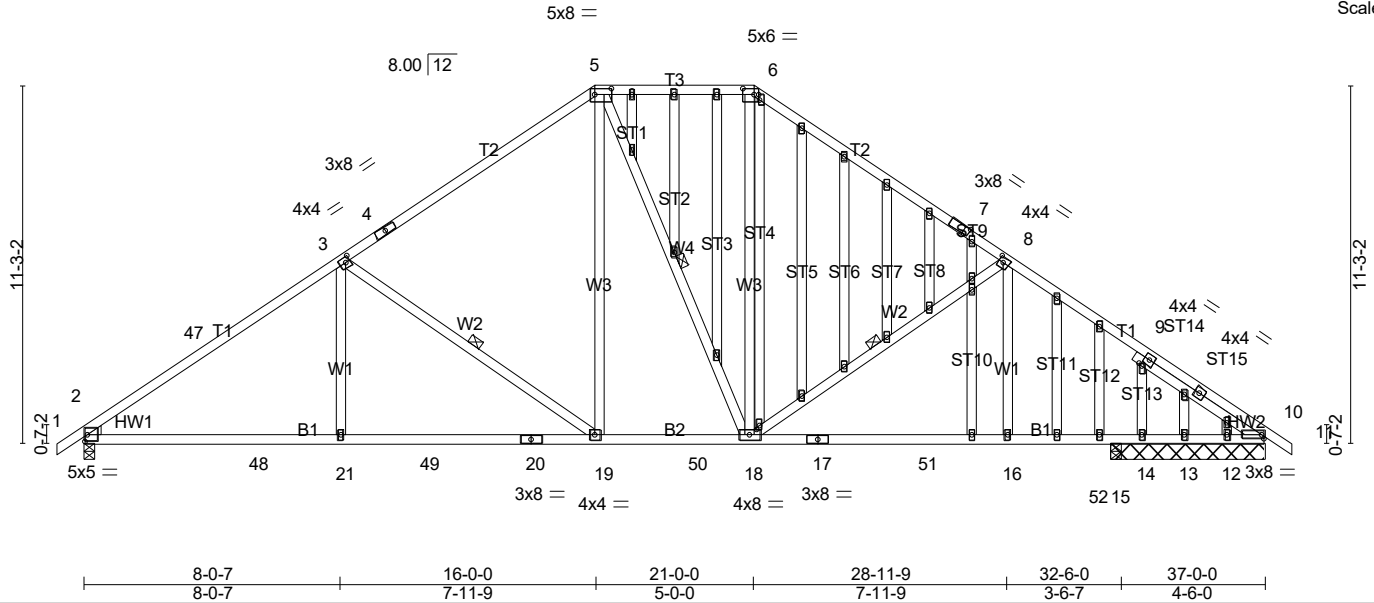


Plate Offsets (X,Y)--	[3:0-1-12,0-2-0], [5:0-6-4,0-2-4], [6:0-4-4,0-2-4], [7:0-2-1,Edge], [8:0-1-12,0-2-0], [18:0-1-8,0-1-0], [28:0-2-0,0-0-4], [44:0-1-2,0-1-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.90	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.97	Vert(LL) -0.15 16-18 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.40	Vert(CT) -0.34 16-18 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.11 10 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 325 lb	FT = 0%

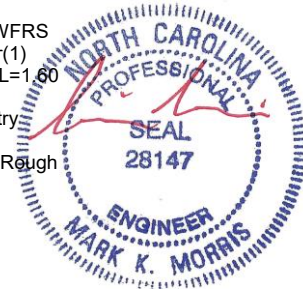
LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2 *Except* T2: 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 2-21,19-21.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 3-19, 5-18, 8-18
OTHERS 2x4 SP No.3	
WEDGE Left: 2x4 SP No.3	
SLIDER Right 2x4 SP No.3 -Ø 4-8-6	

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

**REACTIONS.** All bearings 4-9-8 except (jt=length) 2=0-3-8, 15=0-3-8.  
 (lb) - Max Horz 2=220(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 15 except 2=111(LC 12), 14=267(LC 3), 12=188(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 14, 13 except 2=1647(LC 20), 12=254(LC 31), 10=1350(LC 3), 15=378(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-47=-2415/137, 3-47=-2306/164, 3-4=1701/179, 4-5=-1575/219, 5-6=-1306/234, 6-7=-1562/219, 7-8=-1679/179, 8-9=-2046/168, 9-10=-2253/139  
 BOT CHORD 2-48=-159/2022, 21-48=-159/2022, 21-49=-159/2022, 20-49=-159/2022, 19-20=-159/2022, 19-50=0/1366, 18-50=0/1366, 17-18=-46/1754, 17-51=-46/1754, 16-51=-46/1754, 16-52=-46/1754, 15-52=-46/1754, 14-15=-46/1754, 13-14=-46/1754, 12-13=-46/1754, 10-12=-46/1754  
 WEBS 3-21=0/477, 3-19=-809/207, 5-19=-53/667, 6-18=-37/594, 8-18=-652/197, 8-16=0/341

- 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=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 3-11-2, Interior(1) 3-11-2 to 9-2-9, Exterior(2R) 9-2-9 to 27-9-7, Interior(1) 27-9-7 to 33-0-14, Exterior(2E) 33-0-14 to 37-10-8 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.
  - 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
  - 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.
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable studs spaced at 1-4-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



3/1/2024

**Continued on Page 2** 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 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	R22	Piggyback Base Structural Gable COMMON     Gable   Gable		1	Job Reference (optional) # 46062

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**NOTES-** (12)

- 10) \* 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.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 15 except (jt=lb) 2=111, 14=267, 12=188.

**LOAD CASE(S)** Standard

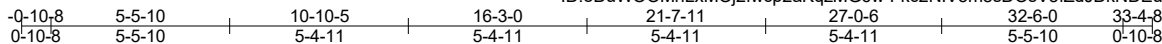


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Job 24-1487-R01	Truss R23	Truss Type COMMON	Qty 3	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC	# 46062
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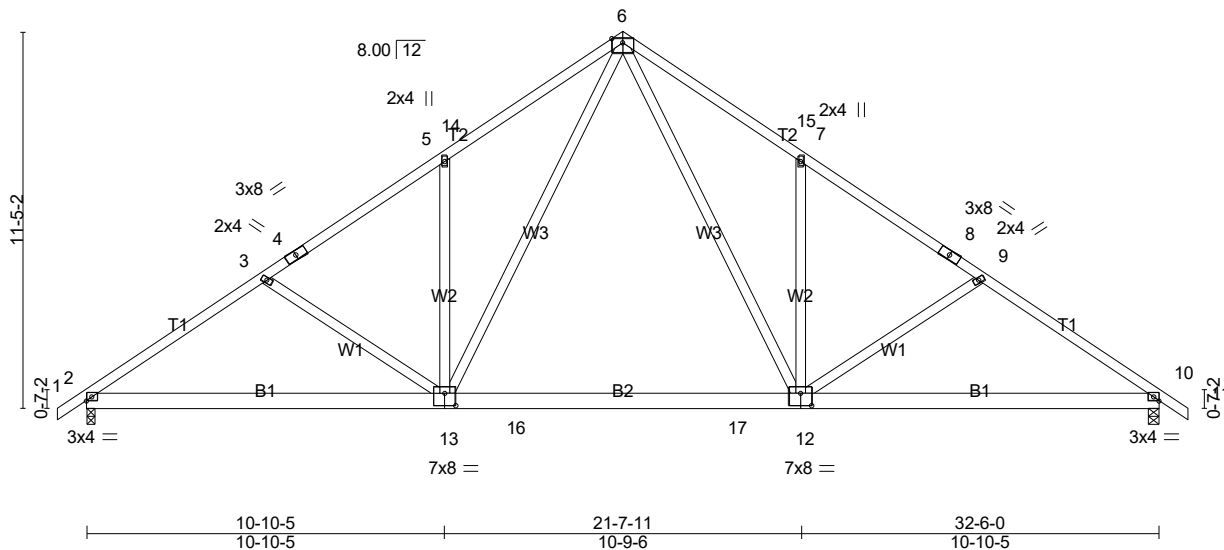


Plate Offsets (X,Y)-- [12:0-4-0,0-4-8], [13:0-4-0,0-4-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15		TC 0.36	Vert(LL) -0.31	12-13	>999	240	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15		BC 0.73	Vert(CT) -0.40	12-13	>965	180		
TCDL 10.0	Rep Stress Incr YES		WB 0.57	Horz(CT) 0.04	10	n/a	n/a		
BCLL 0.0 *	Code IRC2021/TPI2014		Matrix-SH						
BCDL 10.0								Weight: 213 lb	FT = 0%

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-11-2 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

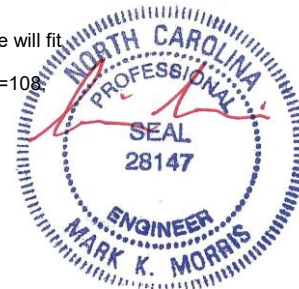
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=1350/0-3-8 (min. 0-1-10), 10=1350/0-3-8 (min. 0-1-10)  
 Max Horz2=223(LC 11)  
 Max Uplift2=-108(LC 12), 10=-108(LC 13)  
 Max Grav2=1381(LC 20), 10=1381(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1990/180, 3-4=-1755/145, 4-5=-1679/173, 5-14=-1798/264, 6-14=-1717/291,  
 6-15=-1717/291, 7-15=-1798/264, 7-8=-1679/173, 8-9=-1755/145, 9-10=-1990/180  
 BOT CHORD 2-13=-205/1707, 13-16=0/1078, 16-17=0/1078, 12-17=0/1078, 10-12=-71/1540  
 WEBS 6-12=-199/998, 7-12=-355/201, 6-13=-199/998, 5-13=-355/201

- NOTES-** (8)
- 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=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 3-11-2, Interior(1) 3-11-2 to 11-5-6, Exterior(2R) 11-5-6 to 21-0-10, Interior(1) 21-0-10 to 28-6-14, Exterior(2E) 28-6-14 to 33-4-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip 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=1.10
  - 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, 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=108, 10=108.

**LOAD CASE(S)** Standard

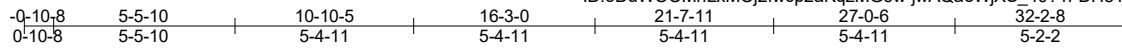


3/1/2024

**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 24-1487-R01	Truss R24	Truss Type Common	Qty 6	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 4 16:32:30 2024 Page 1  
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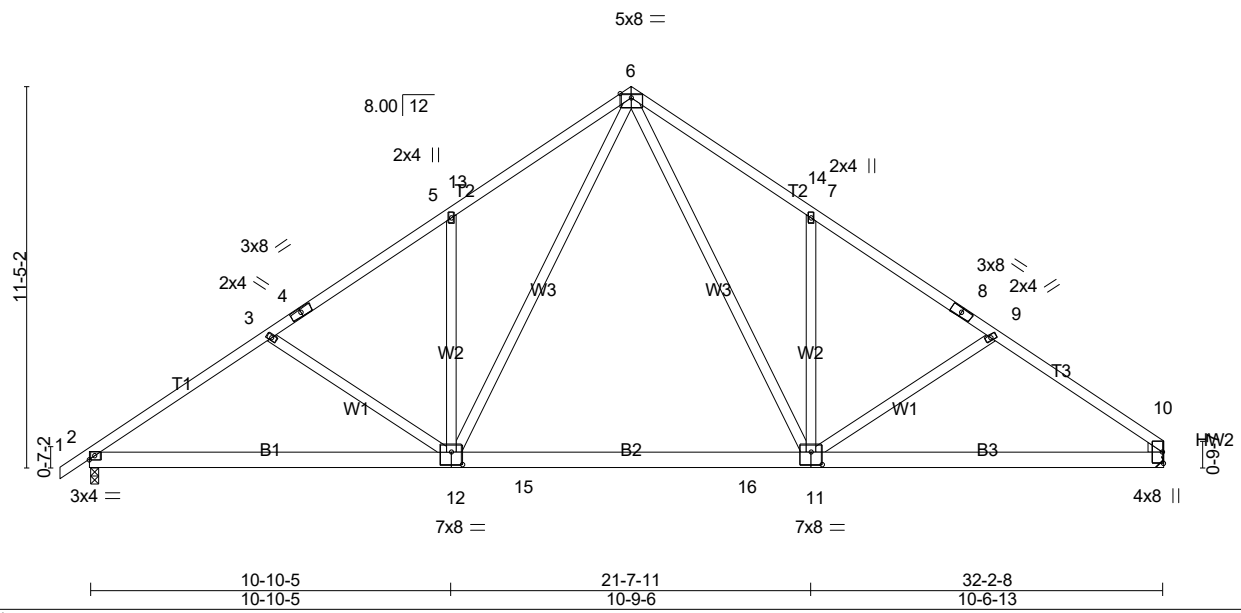


Plate Offsets (X,Y)-- [10:Edge,0-0-6], [11:0-4-0,0-4-8], [12:0-4-0,0-4-8]					
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.55	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.73	Vert(LL) -0.30 11-12 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.57	Vert(CT) -0.40 11-12 >965 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.04 10 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 211 lb	FT = 0%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 3-11-5 oc purlins.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	
WEDGE	
Right: 2x4 SP No.3	MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=1339/0-3-8 (min. 0-1-10), 10=1276/Mechanical  
 Max Horz 2=220(LC 9)  
 Max Uplift 2=-108(LC 12), 10=-89(LC 13)  
 Max Grav 2=1370(LC 20), 10=1313(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1971/180, 3-4=-1736/145, 4-5=-1660/172, 5-13=-1780/264, 6-13=-1698/291,  
 6-14=-1678/292, 7-14=-1760/265, 7-8=-1640/173, 8-9=-1715/145, 9-10=-1924/177  
 BOT CHORD 2-12=-209/1689, 12-15=0/1058, 15-16=0/1058, 11-16=0/1058, 10-11=-83/1461  
 WEBS 6-11=-199/962, 7-11=-357/201, 6-12=-199/999, 5-12=-355/201

- NOTES-** (9)
- 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 Exterior(2E) -0-10-8 to 3-11-2, Interior(1) 3-11-2 to 11-5-6, Exterior(2R) 11-5-6 to 21-0-10, Interior(1) 21-0-10 to 27-2-0, Exterior(2E) 27-2-0 to 32-0-12 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
  - 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) 10 except (jt=lb) 2=108.

**LOAD CASE(S)** Standard



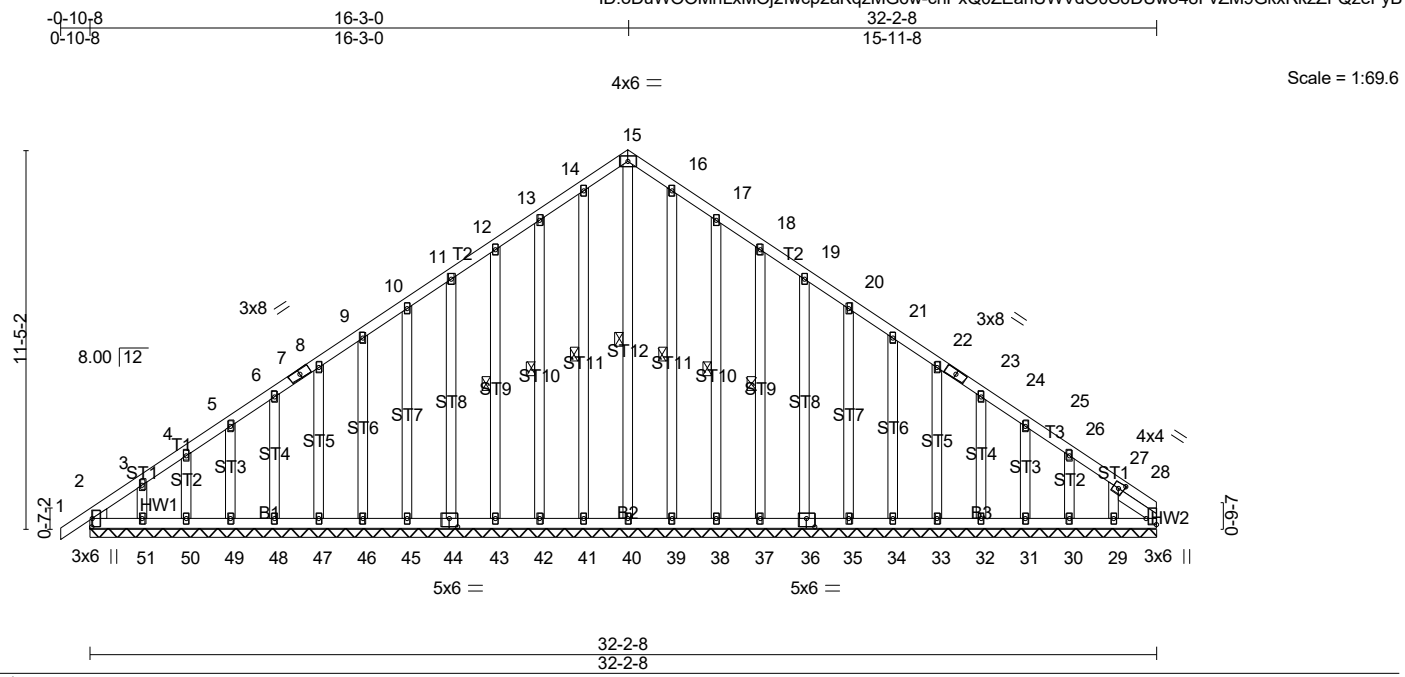
3/1/2024

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Job 24-1487-R01	Truss R25	Truss Type Common Supported Gable	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 4 16:32:34 2024 Page 1  
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Scale = 1:69.6

Plate Offsets (X,Y)-- [2:0-3-0,0-0-2], [27:0-1-14,0-2-0], [28:Edge,0-3-11], [36:0-3-0,0-3-0], [44:0-3-0,0-3-0]					
<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 0.09	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 1 n/r 180		
TCDL 10.0	Lumber DOL 1.15	WB 0.10	Vert(CT) -0.00 1 n/r 80		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.01 28 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 308 lb	FT = 0%

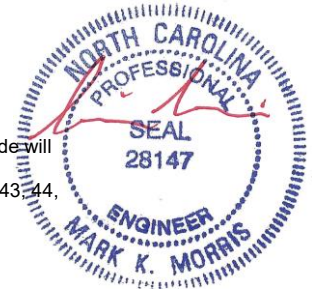
<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	WEBS 1 Row at midpt 15-40, 14-41, 13-42, 12-43, 16-39, 17-38, 18-37
WEDGE	
Left: 2x4 SP No.3	
SLIDER Right 2x4 SP No.3 -Ø 1-5-8	

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

**REACTIONS.** All bearings 32-2-8.  
 (lb) - Max Horz 2=221(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 28, 2, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29  
 Max Grav All reactions 250 lb or less at joint(s) 28, 2, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29

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

- 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=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 3-11-2, Exterior(2N) 3-11-2 to 11-5-6, Corner(3R) 11-5-6 to 21-0-10, Exterior(2N) 21-0-10 to 27-4-14, Corner(3E) 27-4-14 to 32-2-8 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
  - 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.
  - Gable studs spaced at 1-4-0 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 BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 28, 2, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29.



**LOAD CASE(S)** Standard

3/1/2024

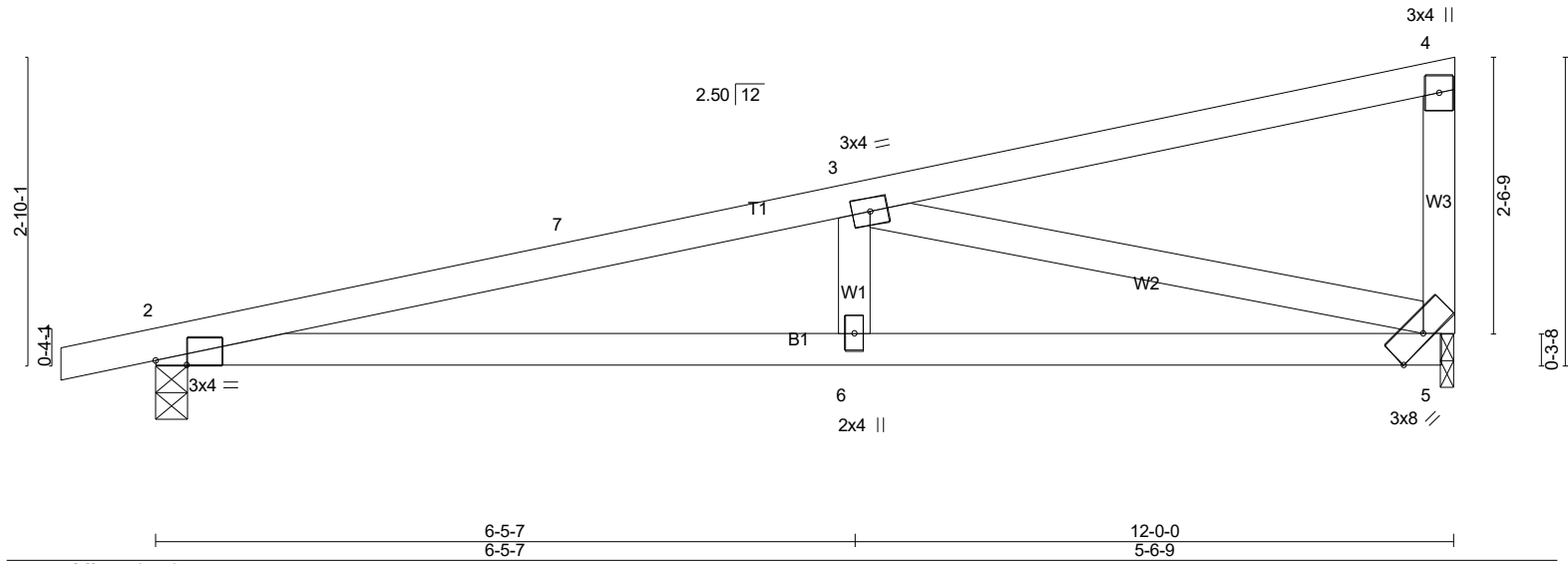
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Job	Truss	Truss Type	Qty	Ply	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	R26	Monopitch	5	1	# 46062

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Scale = 1:21.2



LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	GRIP
TCLL (roof)	20.0	2-0-0	2-0-0	TC	0.53	in	(loc)	l/defl	L/d	MT20	244/190
Snow (Pf)	20.0	Plate Grip DOL	1.15	BC	0.61	Vert(LL)	-0.08	2-6	>999	240	
TCDL	10.0	Lumber DOL	1.15	WB	0.83	Vert(CT)	-0.16	2-6	>881	180	
BCLL	0.0 *	Rep Stress Incr	YES	Matrix-SH		Horz(CT)	0.03	5	n/a	n/a	
BCDL	10.0	Code IRC2021/TPI2014									
Weight: 50 lb FT = 20%											

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-1-14 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS.** (lb/size) 2=532/0-3-8 (min. 0-1-8), 5=466/0-1-8 (min. 0-1-8)  
 Max Horz 2=76(LC 10)  
 Max Uplift 2=-69(LC 10), 5=-54(LC 14)  
 Max Grav 2=590(LC 21), 5=579(LC 21)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-7=-1462/114, 3-7=-1413/121  
 BOT CHORD 2-6=-167/1391, 5-6=-167/1391  
 WEBS 3-6=0/265, 3-5=-1392/167

- NOTES-** (10-13)
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; Gable Roof; Common Truss; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 3-11-2, Interior(1) 3-11-2 to 7-0-10, Exterior(2E) 7-0-10 to 11-10-4 zone; 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) Bearing at joint(s) 5 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 at joint(s) 5.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5.
  - 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.**  
 Continued on Page 2 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 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	R26	Monopitch	5	1	Job Reference (optional) # 46062

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LOAD CASE(S) Standard

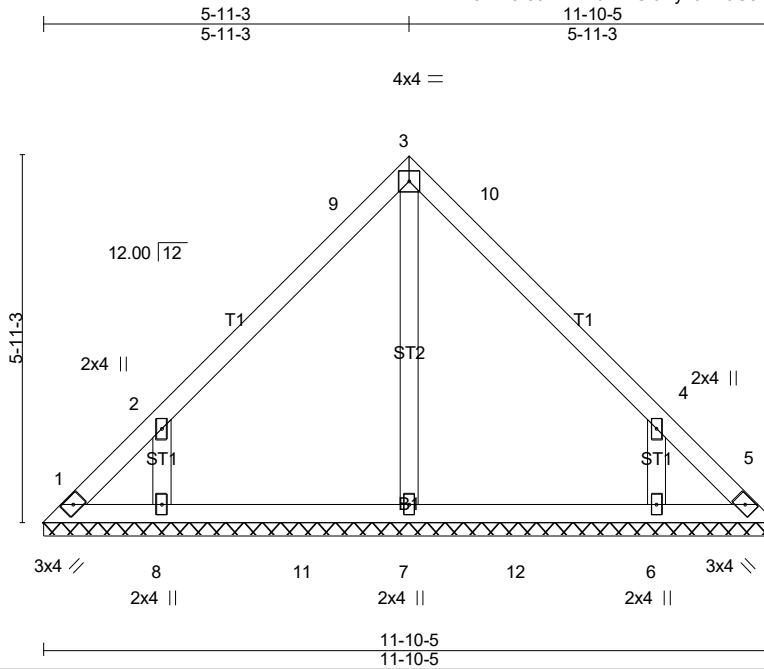


3/1/2024

**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 24-1487-R01	Truss VT01	Truss Type Valley	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Scale = 1:37.3

<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 0.19	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 0.09	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 53 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.** All bearings 11-10-5.  
(lb) - Max Horz 1=-109(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-160(LC 12), 6=-160(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=354(LC 19), 8=332(LC 19), 6=331(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 2-8=-257/206, 4-6=-257/206

- NOTES-** (8)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=5.0psf; BCCL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-4-4 to 5-1-13, Exterior(2R) 5-1-13 to 6-8-8, Exterior(2E) 6-8-8 to 11-6-2 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
  - 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, with BCCL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (jt=lb) 8=160, 6=160.

**LOAD CASE(S)** Standard

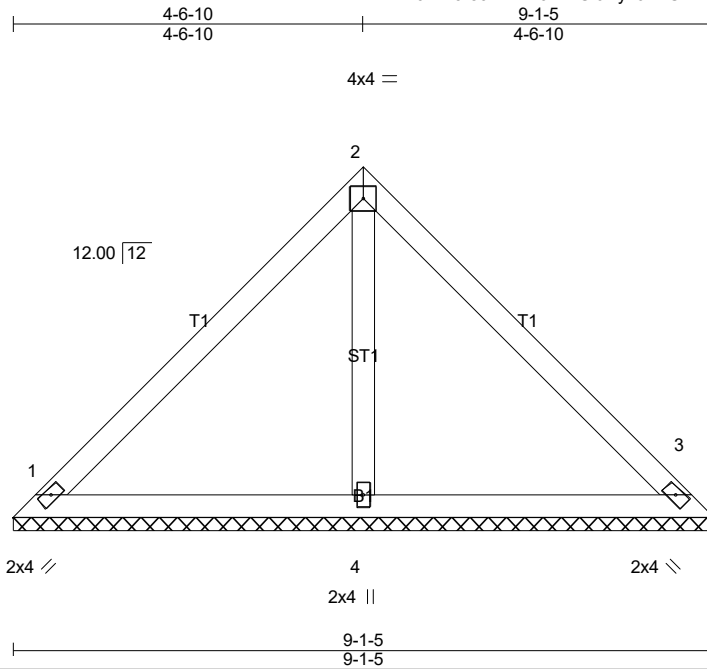


3/1/2024

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Job 24-1487-R01	Truss VT02	Truss Type Valley	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 4 16:32:38 2024 Page 1  
ID:r9MH5r89tuDnH9lxEtUtJwyLJK-USfSGNckev\_yzEinhyIQ4eFo6WsJ54QXMMxmOBzeFy7



Scale = 1:29.9

<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/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.30	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.06	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 3 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 37 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" oc purlins.  
Rigid ceiling directly applied or 10'-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=182/9-1-5 (min. 0-1-8), 3=182/9-1-5 (min. 0-1-8), 4=308/9-1-5 (min. 0-1-8)  
Max Horz 1=-82(LC 8)  
Max Uplift1=-22(LC 13), 3=-22(LC 13), 4=-9(LC 12)

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

**NOTES-** (8)

- 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 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
- 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" tall by 1'-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.

**LOAD CASE(S)** Standard

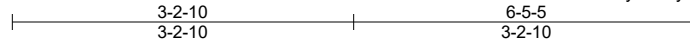


3/1/2024

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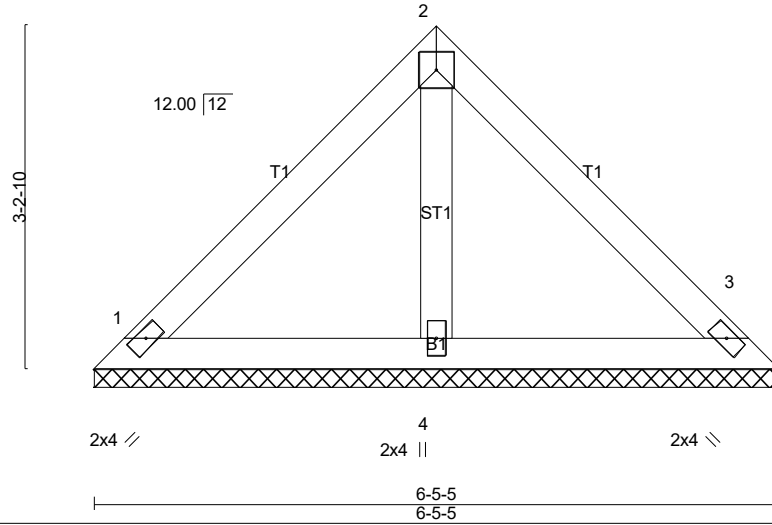
Job 24-1487-R01	Truss VT03	Truss Type Valley	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 4 16:32:39 2024 Page 1  
ID:r9MH5r89tuDnH9lxEtUtJwyLJK-yfCqTjdNPD6pbOG\_EgpfdrzvwE1qXAGA0gKwdzeFy6



4x4 =

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 0.15	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.14	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.03	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 IRC2021/TPI2014			Weight: 26 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=138/6-5-5 (min. 0-1-8), 3=138/6-5-5 (min. 0-1-8), 4=183/6-5-5 (min. 0-1-8)  
Max Horz 1=-56(LC 8)  
Max Uplift 1=-26(LC 13), 3=-26(LC 13)

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

**NOTES-** (8)

- 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 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
- 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.

**LOAD CASE(S)** Standard

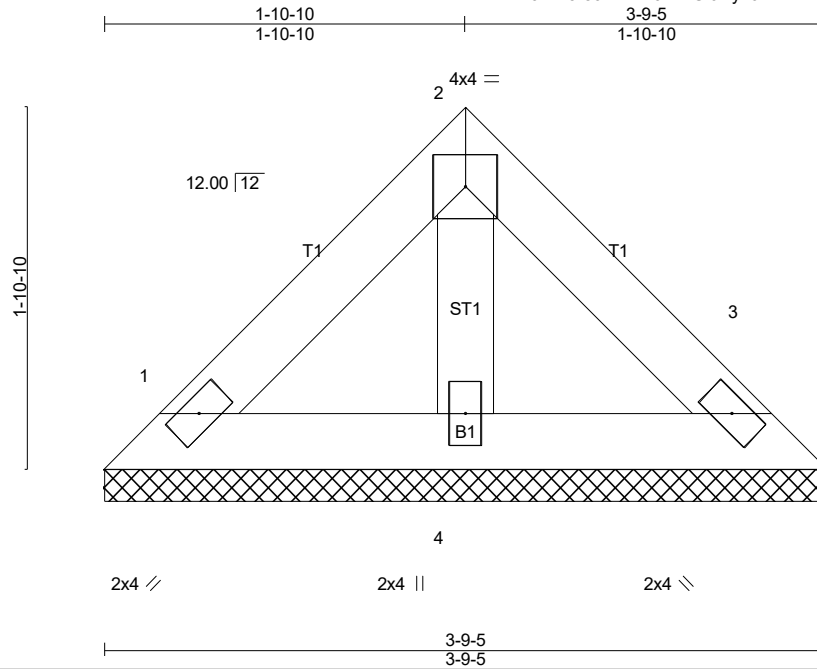


3/1/2024

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Job 24-1487-R01	Truss VT04	Truss Type Valley	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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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 0.05	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.04	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.01	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 IRC2021/TPI2014			Weight: 14 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 3-9-5 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=74/3-9-5 (min. 0-1-8), 3=74/3-9-5 (min. 0-1-8), 4=98/3-9-5 (min. 0-1-8)  
Max Horz 1=-30(LC 8)  
Max Uplift1=-14(LC 13), 3=-14(LC 13)

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

**NOTES-** (8)

- 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 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
- 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.

**LOAD CASE(S)** Standard

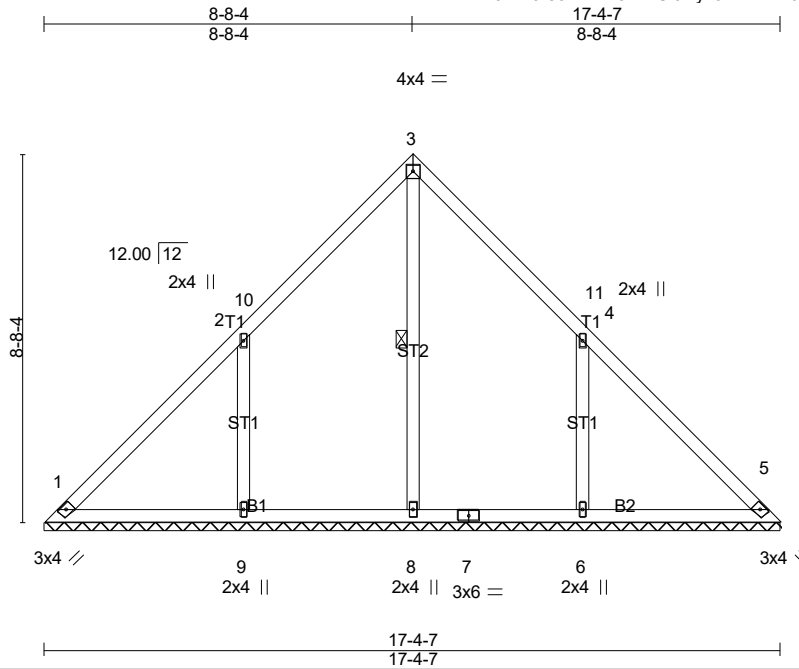


3/1/2024

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Job 24-1487-R01	Truss VT05	Truss Type Valley	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Scale = 1:54.4

LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	GRIP
TCLL (roof)	20.0	2-0-0	2-0-0	TC	0.24	in	(loc)	l/defl	L/d	MT20	244/190
Snow (Pf)	20.0	Plate Grip DOL	1.15	BC	0.42	Vert(LL)	n/a	-	n/a		
TCDL	10.0	Lumber DOL	1.15	WB	0.11	Vert(CT)	n/a	-	n/a		
BCLL	0.0 *	Rep Stress Incr	YES	Matrix-SH		Horz(CT)	0.00	5	n/a		
BCDL	10.0	Code IRC2021/TPI2014								Weight: 85 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 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.  
WEBS 1 Row at midpt 3-8

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

**REACTIONS.** All bearings 17-4-7.  
(lb) - Max Horz 1=-163(LC 10)  
Max Uplift All uplift 100 lb or less at joint(s) 1 except 9=-210(LC 12), 6=-210(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 8=425(LC 22), 9=516(LC 19), 6=515(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 2-9=-316/237, 4-6=-316/237

- NOTES-** (8)
- 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) 0-4-4 to 5-1-13, Exterior(2R) 5-1-13 to 12-2-10, Exterior(2E) 12-2-10 to 17-0-3 zone; 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) 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 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.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 9=210, 6=210.

**LOAD CASE(S)** Standard



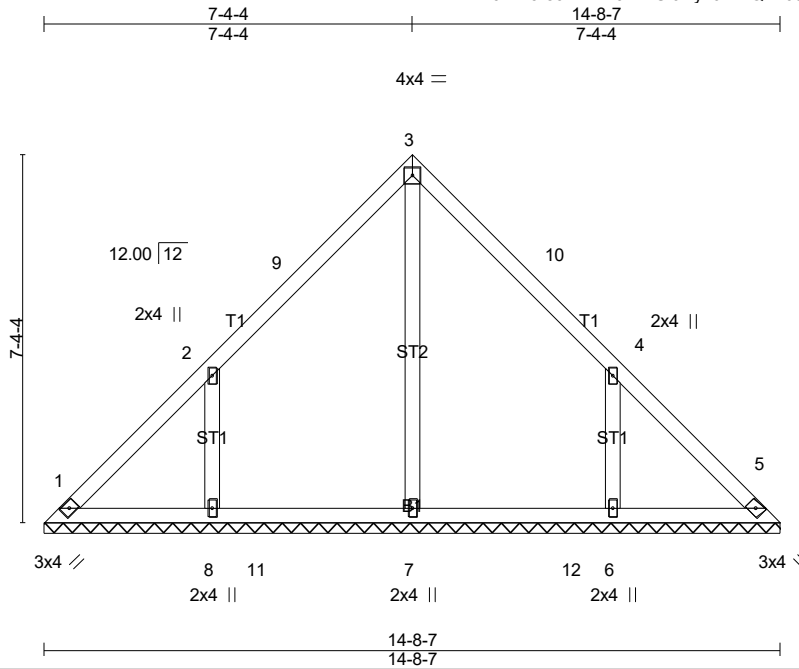
3/1/2024

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Job 24-1487-R01	Truss VT06	Truss Type Valley	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Scale = 1:46.0

<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 0.18	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.41	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.13	Vert(CT) n/a - n/a 999		
BCDL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 70 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.** All bearings 14-8-7.  
(lb) - Max Horz 1=-137(LC 8)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-176(LC 12), 6=-176(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=417(LC 22), 8=409(LC 23), 6=409(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 2-8=-270/206, 4-6=-270/206

- NOTES-** (8)
- 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 Exterior(2E) 0-4-4 to 5-1-13, Exterior(2R) 5-1-13 to 9-6-10, Exterior(2E) 9-6-10 to 14-4-3 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
  - 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, with BCDL = 10.0psf.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (t=lb) 8=176, 6=176.

**LOAD CASE(S)** Standard

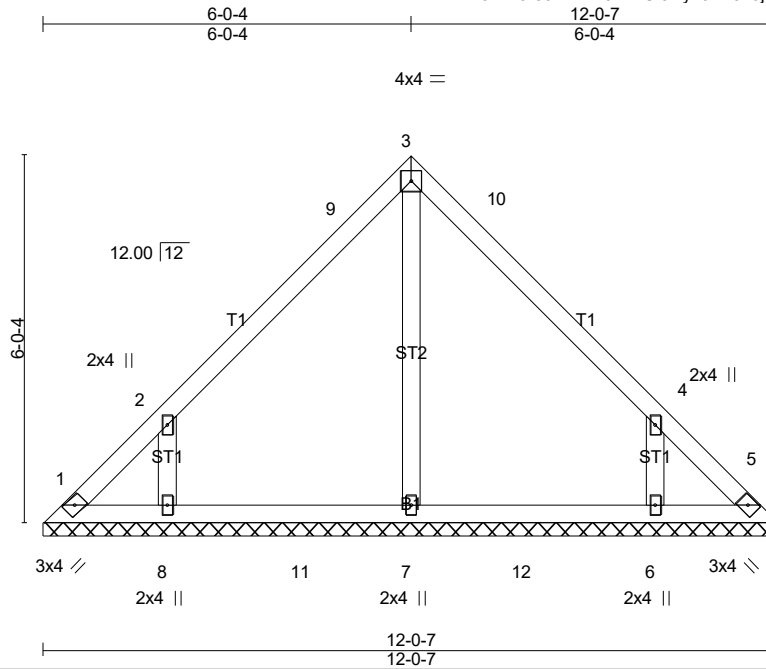


3/1/2024

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Job 24-1487-R01	Truss VT07	Truss Type Valley	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Scale = 1:37.8

<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 0.18	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.28	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.09	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 54 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.** All bearings 12-0-7.

(lb) - Max Horz 1=-111(LC 10)

Max Uplift All uplift 100 lb or less at joint(s) 1, 5 except 8=-159(LC 12), 6=-159(LC 13)

Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=360(LC 19), 8=333(LC 19), 6=333(LC 20)

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

WEBS 2-8=-256/202, 4-6=-256/202

**NOTES-** (8)

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) 0-4-4 to 5-1-13, Exterior(2R) 5-1-13 to 6-10-10, Exterior(2E) 6-10-10 to 11-8-3 zone; 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) 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 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.

7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 5 except (t=lb) 8=159, 6=159.

**LOAD CASE(S)** Standard

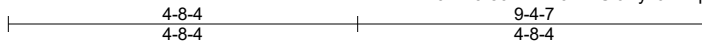


3/1/2024

**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.

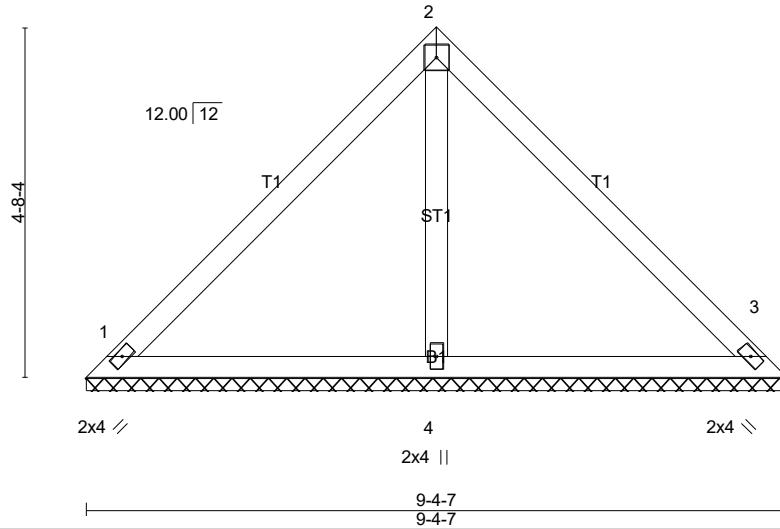
Job 24-1487-R01	Truss VT08	Truss Type Valley	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Run: 8.430 s Feb 12 2021 Print: 8.430 s Feb 12 2021 MiTek Industries, Inc. Mon Mar 4 16:32:45 2024 Page 1  
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4x4 =

Scale = 1:30.7



<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 0.24	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.32	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.06	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 3 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 38 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=188/9-4-7 (min. 0-1-8), 3=188/9-4-7 (min. 0-1-8), 4=317/9-4-7 (min. 0-1-8)  
Max Horz 1=-85(LC 10)  
Max Uplift1=-23(LC 13), 3=-23(LC 13), 4=-9(LC 12)

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

**NOTES-** (8)

- 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 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
- 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.

**LOAD CASE(S)** Standard

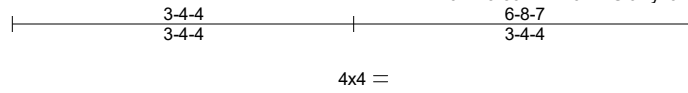


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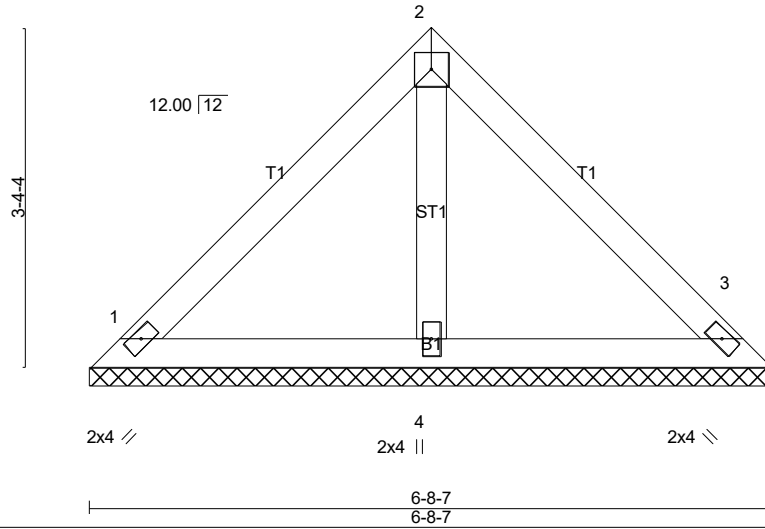
**Warning !—Verify design parameters and read notes before use.** This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building 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 24-1487-R01	Truss VT09	Truss Type Valley	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Scale = 1:22.6



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.17	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.16	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.03	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 IRC2021/TPI2014			Weight: 27 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=144/6-8-7 (min. 0-1-8), 3=144/6-8-7 (min. 0-1-8), 4=191/6-8-7 (min. 0-1-8)  
Max Horz 1=59(LC 9)  
Max Uplift1=-27(LC 13), 3=-27(LC 13)

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

**NOTES-** (8)

- 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 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
- 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.

**LOAD CASE(S)** Standard

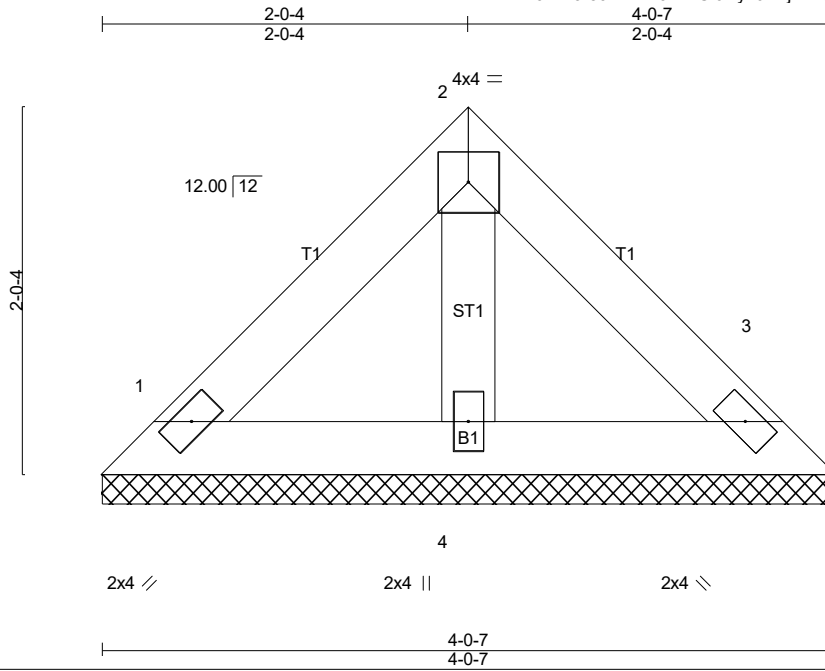


3/1/2024

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Job 24-1487-R01	Truss VT10	Truss Type Valley	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Scale = 1:12.7

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2'-0"	TC 0.06	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.05	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.01	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 IRC2021/TPI2014			Weight: 15 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 4'-0" oc purlins.  
Rigid ceiling directly applied or 10'-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=80/4-0-7 (min. 0-1-8), 3=80/4-0-7 (min. 0-1-8), 4=106/4-0-7 (min. 0-1-8)  
Max Horz 1=-33(LC 8)  
Max Uplift 1=-15(LC 13), 3=-15(LC 13)

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

**NOTES-** (8)

- 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 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
- 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" tall by 1'-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.

**LOAD CASE(S)** Standard



3/1/2024

**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 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC
24-1487-R01	VT11	Valley	1	1	
Job Reference (optional)					# 46062

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10-4-14  
10-4-14

Scale = 1:16.6

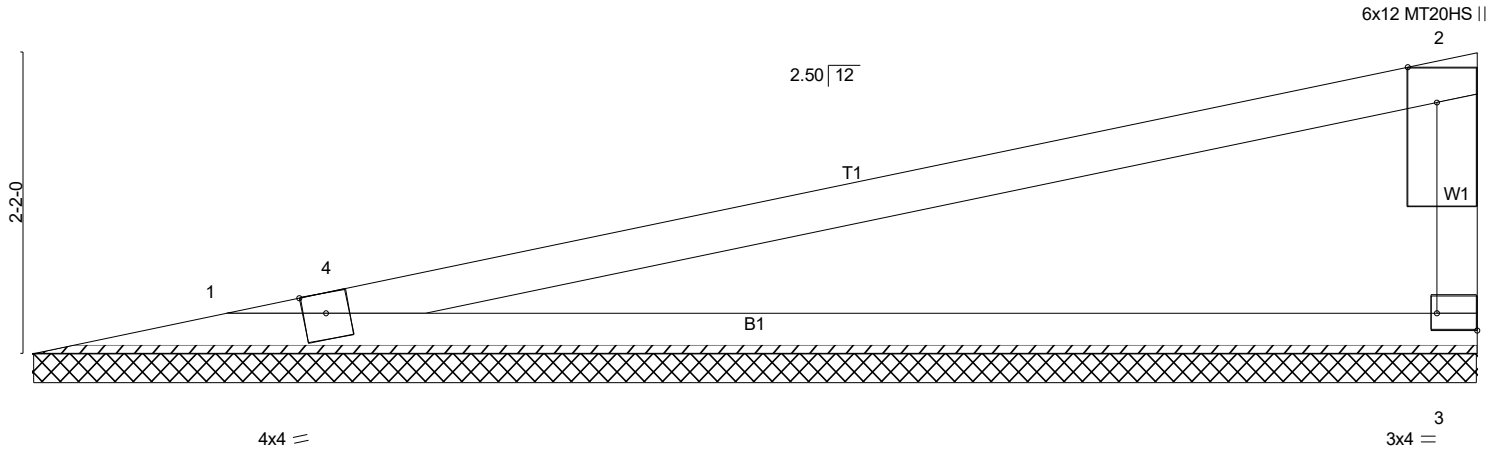


Plate Offsets (X,Y)-- [2:0-3-1,Edge], [3:Edge,0-1-8]

LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15		TC 0.73	Vert(LL) n/a	-	n/a	999	MT20	244/190
Snow (Pf) 20.0	Lumber DOL 1.15		BC 0.86	Vert(CT) n/a	-	n/a	999	MT20HS	187/143
TCDL 10.0	Rep Stress Incr YES		WB 0.00	Horz(CT) 0.00	3	n/a	n/a		
BCLL 0.0 *	Code IRC2021/TPI2014		Matrix-SH						
BCDL 10.0								Weight: 31 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
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.

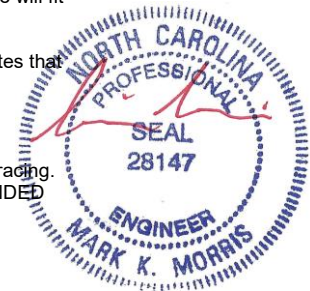
**REACTIONS.** (lb/size) 1=354/10-4-14 (min. 0-1-8), 3=354/10-4-14 (min. 0-1-8)  
Max Horz 1=52(LC 10)  
Max Uplift1=-30(LC 10), 3=-41(LC 10)  
Max Grav 1=431(LC 20), 3=448(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-4=-330/6, 2-4=-262/22, 2-3=-318/107  
BOT CHORD 1-3=-45/257

**NOTES-** (9-12)

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=5.0psf; BCCL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; Gable Roof; End Jack Truss; 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) 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
- 3) Unbalanced snow loads have been considered for this design.
- 4) All plates are MT20 plates 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 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) 1, 3.
- 9) 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.
- 10) 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.
- 11) 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.
- 12) SEE BCSI-B3 SUMMARY SHEET- PERMANENT RESTRAING/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

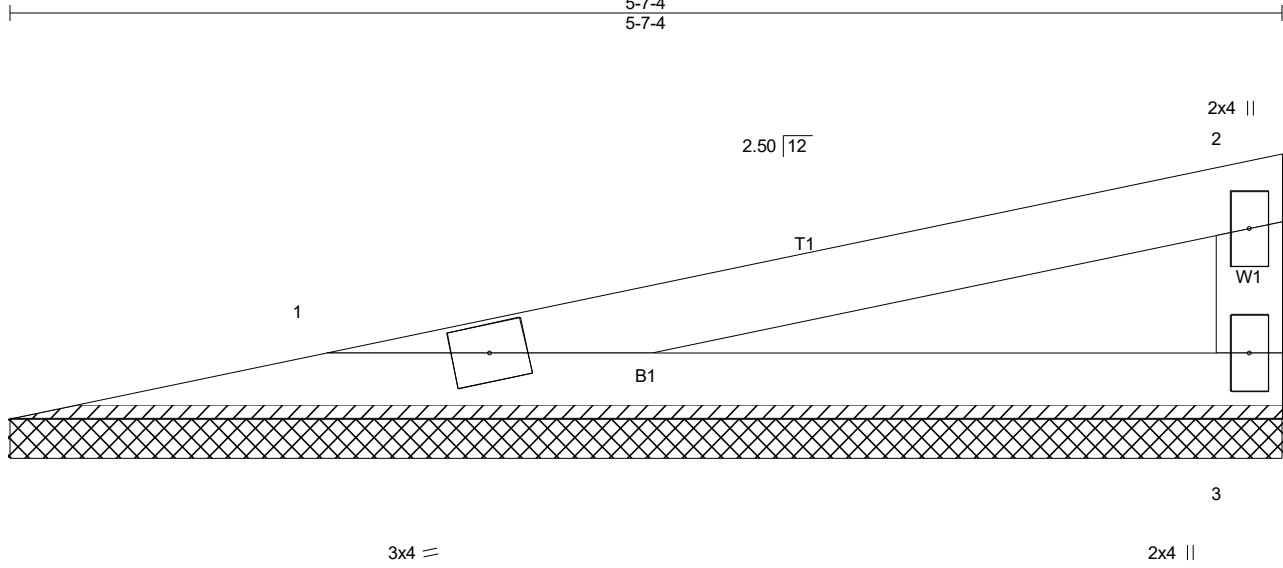


3/1/2024

**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 24-1487-R01	Truss VT12	Truss Type Valley	Qty 1	Ply 1	LOT 0.0130 BLAKE POND   95 GREAT SMOKY PLACE LILLINGTON, NC Job Reference (optional) <b># 46062</b>
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Scale = 1:10.1

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.41	in (loc) l/defl L/d	MT20	244/190
Snow (Pf) 20.0	Plate Grip DOL 1.15	BC 0.33	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 n/a n/a		
BCDL 10.0	Code IRC2021/TPI2014			Weight: 16 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-7-4 oc purlins, except end verticals.  
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.

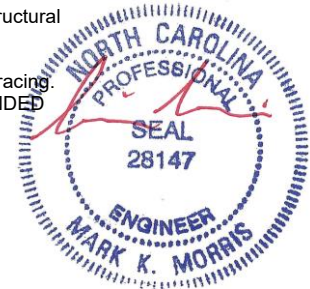
**REACTIONS.** (lb/size) 1=162/5-7-4 (min. 0-1-8), 3=162/5-7-4 (min. 0-1-8)  
Max Horz 1=24(LC 10)  
Max Uplift 1=14(LC 10), 3=19(LC 10)  
Max Grav 1=201(LC 20), 3=201(LC 20)

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

**NOTES-** (8-11)

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=5.0psf; BCDL=5.0psf; h=23ft; Cat. II; Exp B; Enclosed; Gable Roof; End Jack Truss; 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) 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) 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 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.
- 8) 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.
- 9) 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.
- 10) 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.
- 11) 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



3/1/2024

**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.