

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: B  
DR Horton; Columbia; B; Maser.RT

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Builders FirstSource-Apex,NC.

Pages or sheets covered by this seal: I58777576 thru I58777590

My license renewal date for the state of North Carolina is December 31, 2023.

North Carolina COA: C-0844



June 7,2023

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Johnson, Andrew

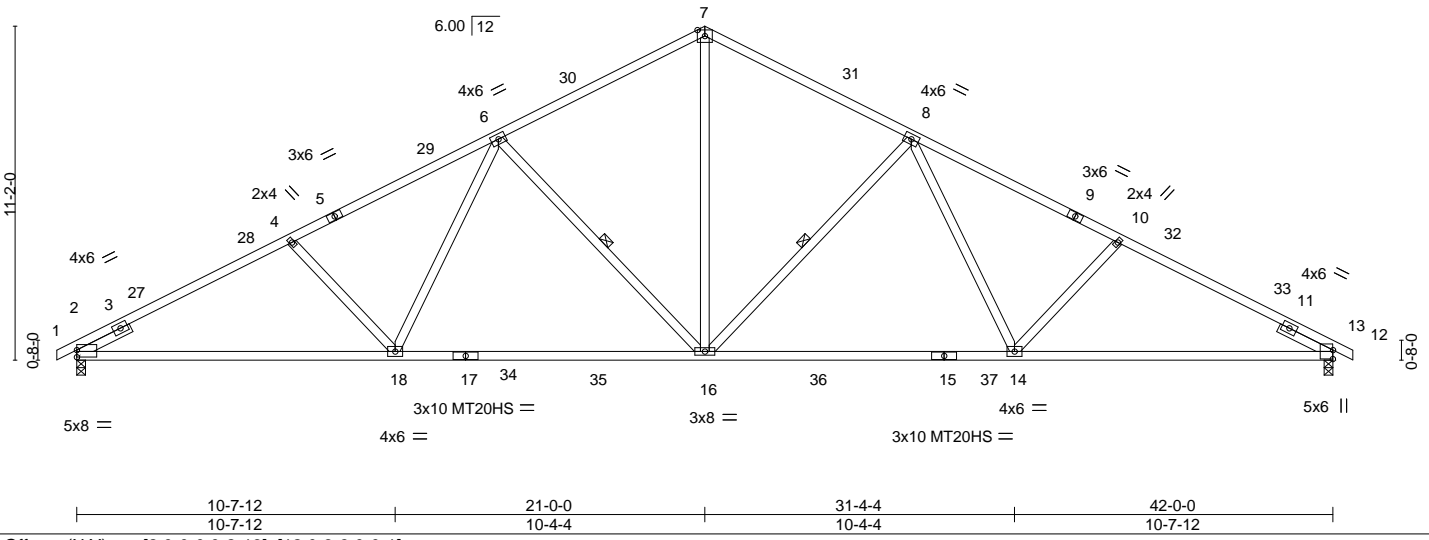
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes),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

Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	158777576
B	A05	COMMON	1	1		

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:39 2023 Page 1

0-8-0 7-2-5 14-1-3 21-0-0 27-10-13 34-9-11 42-0-0 42-8-0  
 0-8-0 7-2-5 6-10-13 6-10-13 6-10-13 6-10-13 7-2-5 0-8-0

5x6 = Scale = 1:77.0



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.15	TC 0.97	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.92	Vert(LL) -0.40 16-18 >999 360	MT20HS	187/143
BCLL 0.0 *	Rep Stress Incr NO	WB 0.60	Vert(CT) -0.70 14-16 >723 240		
BCDL 10.0	Code IRC2015/TP12014	Matrix-MS	Horz(CT) 0.15 12 n/a n/a		
			Wind(LL) 0.09 14-16 >999 240	Weight: 224 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.2 \*Except\*  
 1-5: 2x4 SP No.1, 9-13: 2x4 SP SS  
 BOT CHORD 2x4 SP No.1 \*Except\*  
 15-17: 2x4 SP SS  
 WEBS 2x4 SP No.3  
 SLIDER Left 2x4 SP No.3 1-11-12, Right 2x4 SP No.3 1-11-12

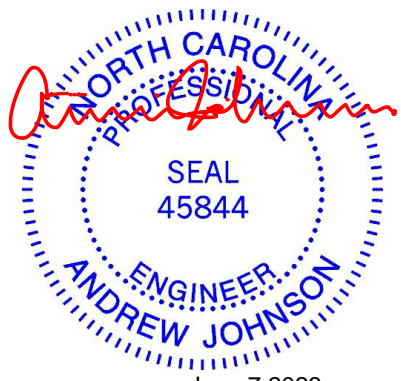
**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 8-16, 6-16

**REACTIONS.** (size) 2=0-3-8, 12=0-3-8  
 Max Horz 2=-127(LC 17)  
 Max Grav 2=2033(LC 1), 12=1768(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-3440/0, 4-6=-3034/0, 6-7=-2055/131, 7-8=-2054/131, 8-10=-2802/107,  
 10-12=-3035/105  
 BOT CHORD 2-18=0/2956, 16-18=0/2330, 14-16=0/2240, 12-14=-2/2639  
 WEBS 7-16=0/1454, 8-16=-744/142, 8-14=0/521, 10-14=-326/146, 6-16=-877/9, 6-18=0/709,  
 4-18=-544/0

**NOTES-**  
 1) Unbalanced roof live loads have been considered for this design.  
 2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-8-0 to 2-4-0, Interior(1) 2-4-0 to 21-0-0, Exterior(2) 21-0-0 to 25-2-15, Interior(1) 25-2-15 to 42-8-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
 3) All plates are MT20 plates unless otherwise indicated.  
 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.  
 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.  
 6) N/A

**LOAD CASE(S)** Standard  
 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-3=-60, 7-29=-60, 7-13=-60, 19-23=-20  
 Trapezoidal Loads (plf)  
 Vert: 3=-119-to-29=-70  
 2) Dead + 0.75 Roof Live (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15



Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**ENGINEERING BY**  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT
B	A05	COMMON	1	1	I5877576
					Job Reference (optional)

Builders FirstSource (Apex, NC), Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:39 2023 Page 2  
ID:fJZOU2ZLpXU3XKYCOPhCD1zheL\_RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

**LOAD CASE(S)** Standard

- Uniform Loads (plf)
  - Vert: 1-3=-50, 7-29=-50, 7-13=-50, 19-34=-20, 34-35=-50, 35-36=-20, 36-37=-50, 23-37=-20
- Trapezoidal Loads (plf)
  - Vert: 3=-109-to-29=-60
- 3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
  - Uniform Loads (plf)
    - Vert: 1-3=-20, 7-29=-20, 7-13=-20, 19-23=-40
  - Trapezoidal Loads (plf)
    - Vert: 3=-79-to-29=-30
- 4) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=47, 2-3=25, 7-29=14, 7-31=25, 12-31=14, 12-13=9, 19-23=-12
    - Horz: 1-2=-59, 2-27=-37, 7-27=-26, 7-31=37, 12-31=26, 12-13=21
  - Trapezoidal Loads (plf)
    - Vert: 3=-34-to-27=-30, 27=-41-to-29=4
- 5) Dead + 0.6 C-C Wind (Pos. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=9, 2-3=14, 29-30=14, 7-30=25, 7-33=14, 12-33=25, 12-13=47, 19-23=-12
    - Horz: 1-2=-21, 2-30=-26, 7-30=-37, 7-33=26, 12-33=37, 12-13=59
  - Trapezoidal Loads (plf)
    - Vert: 3=-45-to-29=4
- 6) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-12, 2-3=-33, 7-29=-33, 7-12=-33, 12-13=-28, 19-23=-20
    - Horz: 1-2=-8, 2-7=13, 7-12=-13, 12-13=-8
  - Trapezoidal Loads (plf)
    - Vert: 3=-92-to-29=-43
- 7) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-28, 2-3=-33, 7-29=-33, 7-12=-33, 12-13=-12, 19-23=-20
    - Horz: 1-2=8, 2-7=13, 7-12=-13, 12-13=8
  - Trapezoidal Loads (plf)
    - Vert: 3=-92-to-29=-43
- 8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=9, 2-3=-2, 7-29=-2, 7-12=9, 12-13=4, 19-23=-12
    - Horz: 1-2=-21, 2-7=-10, 7-12=21, 12-13=16
  - Trapezoidal Loads (plf)
    - Vert: 3=-61-to-29=-12
- 9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=4, 2-3=9, 7-29=9, 7-12=-2, 12-13=9, 19-23=-12
    - Horz: 1-2=-16, 2-7=-21, 7-12=10, 12-13=21
  - Trapezoidal Loads (plf)
    - Vert: 3=-50-to-29=-1
- 10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-15, 2-3=-20, 7-29=-20, 7-12=-9, 12-13=-4, 19-23=-20
    - Horz: 1-2=-5, 2-7=0, 7-12=11, 12-13=16
  - Trapezoidal Loads (plf)
    - Vert: 3=-79-to-29=-30
- 11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-4, 2-3=-9, 7-29=-9, 7-12=-20, 12-13=-15, 19-23=-20
    - Horz: 1-2=-16, 2-7=-11, 7-12=0, 12-13=5
  - Trapezoidal Loads (plf)
    - Vert: 3=-68-to-29=-19
- 12) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=17, 2-3=22, 7-29=11, 7-12=3, 12-13=-2, 19-23=-12
    - Horz: 1-2=-29, 2-28=-34, 7-28=-23, 7-12=15, 12-13=10
  - Trapezoidal Loads (plf)
    - Vert: 3=-37-to-28=-17, 28=-27-to-29=1
- 13) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-2, 2-3=3, 7-29=3, 7-32=11, 12-32=22, 12-13=17, 19-23=-12
    - Horz: 1-2=-10, 2-7=-15, 7-32=23, 12-32=34, 12-13=29
  - Trapezoidal Loads (plf)
    - Vert: 3=-56-to-29=-7
- 14) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=7, 2-3=11, 7-29=11, 7-12=3, 12-13=-2, 19-23=-12
    - Horz: 1-2=-19, 2-7=-23, 7-12=15, 12-13=10
  - Trapezoidal Loads (plf)
    - Vert: 3=-48-to-29=1

Continued on page 3

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Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT
B	A05	COMMON	1	1	I58777576
					Job Reference (optional)

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8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:39 2023 Page 3  
ID:fJZOU2ZLpXU3XKYCOPhCD1zheI\_RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCdoi7J4zJC?f

**LOAD CASE(S)** Standard

- 15) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-2, 2-3=3, 7-29=3, 7-12=11, 12-13=7, 19-23=-12  
Horz: 1-2=-10, 2-7=-15, 7-12=23, 12-13=19  
Trapezoidal Loads (plf)  
Vert: 3=-56-to-29=-7
- 16) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=9, 2-3=4, 7-29=-6, 7-12=-15, 12-13=-10, 19-23=-20  
Horz: 1-2=-29, 2-28=-24, 7-28=-14, 7-12=5, 12-13=10  
Trapezoidal Loads (plf)  
Vert: 3=-55-to-28=-34, 28=-44-to-29=-16
- 17) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-10, 2-3=-15, 7-29=-15, 7-32=-6, 12-32=4, 12-13=9, 19-23=-20  
Horz: 1-2=-10, 2-7=-5, 7-32=14, 12-32=24, 12-13=29  
Trapezoidal Loads (plf)  
Vert: 3=-74-to-29=-25
- 18) Dead + Uninhabitable Attic Storage: Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (plf)  
Vert: 1-3=-20, 7-29=-20, 7-13=-20, 19-34=-20, 34-35=-60, 35-36=-20, 36-37=-60, 23-37=-20  
Trapezoidal Loads (plf)  
Vert: 3=-79-to-29=-30
- 19) 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=-46, 2-3=-50, 7-29=-50, 7-12=-42, 12-13=-38, 19-34=-20, 34-35=-50, 35-36=-20, 36-37=-50, 23-37=-20  
Horz: 1-2=-4, 2-7=0, 7-12=8, 12-13=12  
Trapezoidal Loads (plf)  
Vert: 3=-109-to-29=-60
- 20) 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=-38, 2-3=-42, 7-29=-42, 7-12=-50, 12-13=-46, 19-34=-20, 34-35=-50, 35-36=-20, 36-37=-50, 23-37=-20  
Horz: 1-2=-12, 2-7=-8, 7-12=0, 12-13=4  
Trapezoidal Loads (plf)  
Vert: 3=-101-to-29=-52
- 21) 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=-28, 2-3=-32, 7-29=-40, 7-12=-46, 12-13=-43, 19-34=-20, 34-35=-50, 35-36=-20, 36-37=-50, 23-37=-20  
Horz: 1-2=-22, 2-28=-18, 7-28=-10, 7-12=4, 12-13=7  
Trapezoidal Loads (plf)  
Vert: 3=-91-to-28=-70, 28=-78-to-29=-50
- 22) 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=-43, 2-3=-46, 7-29=-46, 7-32=-40, 12-32=-32, 12-13=-28, 19-34=-20, 34-35=-50, 35-36=-20, 36-37=-50, 23-37=-20  
Horz: 1-2=-7, 2-7=-4, 7-32=10, 12-32=18, 12-13=22  
Trapezoidal Loads (plf)  
Vert: 3=-105-to-29=-56
- 23) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-3=-60, 7-29=-60, 7-13=-20, 19-23=-20  
Trapezoidal Loads (plf)  
Vert: 3=-119-to-29=-70
- 24) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-3=-20, 7-29=-20, 7-13=-60, 19-23=-20  
Trapezoidal Loads (plf)  
Vert: 3=-79-to-29=-30
- 25) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-3=-50, 7-29=-50, 7-13=-20, 19-34=-20, 34-35=-50, 35-36=-20, 36-37=-50, 23-37=-20  
Trapezoidal Loads (plf)  
Vert: 3=-109-to-29=-60
- 26) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-3=-20, 7-29=-20, 7-13=-50, 19-34=-20, 34-35=-50, 35-36=-20, 36-37=-50, 23-37=-20  
Trapezoidal Loads (plf)  
Vert: 3=-79-to-29=-30

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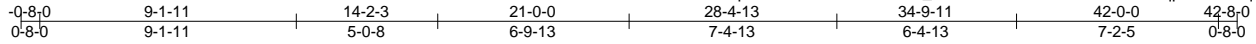


818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	158777577
B	A05BV	SPECIAL	1	1	Job Reference (optional)	

Builders FirstSource, Apex, NC 27523

ID:fJZOU2ZLpXU3XKYCOPhCD1zheI\_-9nrCOVV1UOEIR?XNrsA0NNqpdDjzS5iq0RzcGTz8z9P 8.630 s Mar 9 2023 MITek Industries, Inc. Tue Jun 6 15:16:36 2023 Page 1



Scale = 1:82.1

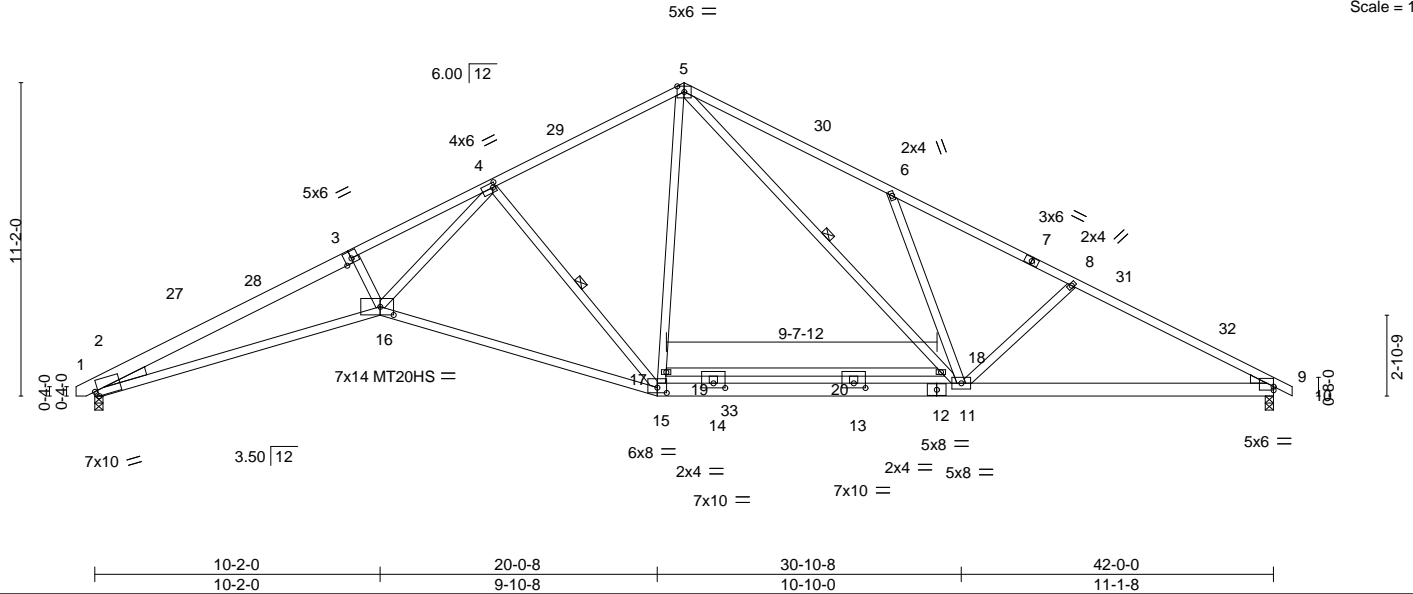


Plate Offsets (X,Y)--	[2:0-1-6,Edge], [4:0-1-4,0-2-0], [9:Edge,0-1-9], [15:0-4-0,0-2-4], [16:0-5-12,0-3-8], [19:0-5-0,0-2-0], [20:0-5-0,0-2-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.98	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.98	Vert(LL) -0.45 15-16 >999 360	MT20HS	187/143
BCLL 0.0 *	Lumber DOL 1.15	WB 0.83	Vert(CT) -1.12 15-16 >449 240		
BCDL 10.0	Rep Stress Incr NO	Matrix-MS	Horz(CT) 0.46 9 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.23 15-16 >999 240	Weight: 264 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x4 SP No.1 \*Except\*  
 5-7: 2x4 SP SS, 1-3: 2x6 SP DSS, 7-10: 2x4 SP No.2  
 BOT CHORD 2x6 SP No.2 \*Except\*  
 2-16: 2x4 SP SS, 15-16: 2x4 SP No.1  
 WEBS 2x4 SP No.3 \*Except\*  
 4-16,5-11,17-18: 2x4 SP No.2

**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 4-15, 5-11

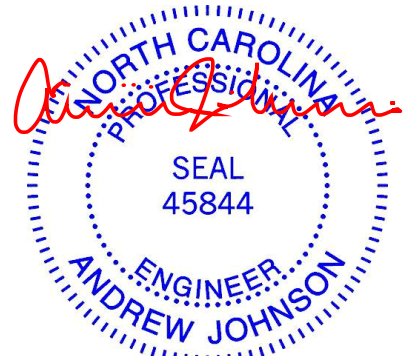
WEDGE  
 Left: 2x4 SP No.3 , Right: 2x4 SP No.3

**REACTIONS.** (lb/size) 2=1709/0-3-8 (min. 0-2-0), 9=1720/0-3-8 (min. 0-2-0)  
 Max Horz 2=-127(LC 17)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-27=-5862/212, 27-28=-5802/226, 3-28=-5673/248, 3-4=-5606/272, 4-29=-2011/218,  
 5-29=-1912/240, 5-30=-2866/387, 6-30=-2971/364, 6-7=-2562/195, 7-8=-2722/163,  
 8-31=-2857/202, 31-32=-2921/184, 9-32=-3022/169  
 BOT CHORD 2-16=-131/5276, 15-16=-51/2901, 15-33=0/1544, 14-33=0/1548,  
 12-13=0/1548, 11-12=0/1548, 9-11=-90/2612  
 WEBS 15-17=-1/769, 5-17=0/805, 4-15=-1708/156, 4-16=-45/3374, 5-18=-213/1381,  
 11-18=-217/1424, 6-11=-595/231, 8-11=-355/138

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-5-14 to 2-6-2, Interior(1) 2-6-2 to 21-0-0, Exterior(2) 21-0-0 to 25-2-15, Interior(1) 25-2-15 to 42-8-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) N/A



June 7, 2023

**LOAD CASE(S)**

Continued on page 2

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

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



818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	15877577
B	A05BV	SPECIAL	1	1	Job Reference (optional)	

Builders FirstSource, Apex, NC 27523

8.630 s Mar 9 2023 MiTek Industries, Inc. Tue Jun 6 15:16:37 2023 Page 2  
ID:FJZOU2ZLpXU3XKYCOPhCD1zheL\_d\_PbcRWFIM9396aPZhFvbM\_NdeCBYyzF5IAovz8z9O

**LOAD CASE(S)**

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-5=-60, 5-10=-60, 16-21=-20, 15-16=-20, 15-24=-20
- 2) 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, 5-10=-50, 16-21=-20, 15-16=-20, 15-33=-20, 13-33=-50, 13-24=-20
- 3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (plf)  
Vert: 1-5=-20, 5-10=-20, 16-21=-40, 15-16=-40, 15-24=-40
- 4) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=47, 2-27=25, 5-27=14, 5-30=25, 9-30=14, 9-10=9, 16-21=-12, 15-16=-12, 15-24=-12  
Horz: 1-2=-59, 2-27=-37, 5-27=-26, 5-30=37, 9-30=26, 9-10=21
- 5) Dead + 0.6 C-C Wind (Pos. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=9, 2-29=14, 5-29=25, 5-32=14, 9-32=25, 9-10=47, 16-21=-12, 15-16=-12, 15-24=-12  
Horz: 1-2=-21, 2-29=-26, 5-29=-37, 5-32=26, 9-32=37, 9-10=59
- 6) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-12, 2-5=-33, 5-9=-33, 9-10=-28, 16-21=-20, 15-16=-20, 15-24=-20  
Horz: 1-2=-8, 2-5=13, 5-9=-13, 9-10=8
- 7) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-28, 2-5=-33, 5-9=-33, 9-10=-12, 16-21=-20, 15-16=-20, 15-24=-20  
Horz: 1-2=8, 2-5=13, 5-9=-13, 9-10=8
- 8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=9, 2-5=-2, 5-9=9, 9-10=4, 16-21=-12, 15-16=-12, 15-24=-12  
Horz: 1-2=-21, 2-5=-10, 5-9=21, 9-10=16
- 9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=4, 2-5=9, 5-9=-2, 9-10=9, 16-21=-12, 15-16=-12, 15-24=-12  
Horz: 1-2=-16, 2-5=-21, 5-9=10, 9-10=21
- 10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-15, 2-5=-20, 5-9=-9, 9-10=-4, 16-21=-20, 15-16=-20, 15-24=-20  
Horz: 1-2=-5, 2-5=0, 5-9=11, 9-10=16
- 11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-4, 2-5=-9, 5-9=-20, 9-10=-15, 16-21=-20, 15-16=-20, 15-24=-20  
Horz: 1-2=-16, 2-5=-11, 5-9=0, 9-10=5
- 12) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=17, 2-28=22, 5-28=11, 5-9=3, 9-10=-2, 16-21=-12, 15-16=-12, 15-24=-12  
Horz: 1-2=-29, 2-28=-34, 5-28=-23, 5-9=15, 9-10=10
- 13) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-2, 2-5=3, 5-31=11, 9-31=22, 9-10=17, 16-21=-12, 15-16=-12, 15-24=-12  
Horz: 1-2=-10, 2-5=-15, 5-31=23, 9-31=34, 9-10=29
- 14) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=7, 2-5=11, 5-9=3, 9-10=-2, 16-21=-12, 15-16=-12, 15-24=-12  
Horz: 1-2=-19, 2-5=-23, 5-9=15, 9-10=10
- 15) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-2, 2-5=3, 5-9=11, 9-10=7, 16-21=-12, 15-16=-12, 15-24=-12  
Horz: 1-2=-10, 2-5=-15, 5-9=23, 9-10=19
- 16) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=9, 2-28=4, 5-28=-6, 5-9=-15, 9-10=-10, 16-21=-20, 15-16=-20, 15-24=-20  
Horz: 1-2=-29, 2-28=-24, 5-28=-14, 5-9=5, 9-10=10
- 17) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-2=-10, 2-5=-15, 5-31=-6, 9-31=4, 9-10=9, 16-21=-20, 15-16=-20, 15-24=-20  
Horz: 1-2=-10, 2-5=-5, 5-31=14, 9-31=24, 9-10=29
- 18) Dead + Uninhabitable Attic Storage: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90  
Uniform Loads (plf)  
Vert: 1-5=-20, 5-10=-20, 16-21=-20, 15-16=-20, 15-33=-20, 13-33=-60, 13-24=-20
- 19) 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=-46, 2-5=-50, 5-9=-42, 9-10=-38, 16-21=-20, 15-16=-20, 15-33=-20, 13-33=-50, 13-24=-20  
Horz: 1-2=-4, 2-5=0, 5-9=8, 9-10=12
- 20) 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

Continued on page 3

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818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	15877577
B	A05BV	SPECIAL	1	1	Job Reference (optional)	

Builders FirstSource, Apex, NC 27523

8.630 s Mar 9 2023 MiTek Industries, Inc. Tue Jun 6 15:16:37 2023 Page 3  
 ID:FJZOU2ZLpXU3XKYCOPhCD1zheL\_d\_PbcrWFiM9396aPZhFvbM\_NdeCBYyzF5iAovz8z9O

**LOAD CASE(S)**

Uniform Loads (plf)

Vert: 1-2=-38, 2-5=-42, 5-9=-50, 9-10=-46, 16-21=-20, 15-16=-20, 15-33=-20, 13-33=-50, 13-24=-20  
 Horz: 1-2=-12, 2-5=-8, 5-9=0, 9-10=4

21) 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=-28, 2-28=-32, 5-28=-40, 5-9=-46, 9-10=-43, 16-21=-20, 15-16=-20, 15-33=-20, 13-33=-50, 13-24=-20  
 Horz: 1-2=-22, 2-28=-18, 5-28=-10, 5-9=4, 9-10=7

22) 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=-43, 2-5=-46, 5-31=-40, 9-31=-32, 9-10=-28, 16-21=-20, 15-16=-20, 15-33=-20, 13-33=-50, 13-24=-20  
 Horz: 1-2=-7, 2-5=-4, 5-31=10, 9-31=18, 9-10=22

23) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-5=-60, 5-10=-20, 16-21=-20, 15-16=-20, 15-24=-20

24) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-5=-20, 5-10=-60, 16-21=-20, 15-16=-20, 15-24=-20

25) 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, 5-10=-20, 16-21=-20, 15-16=-20, 15-33=-20, 13-33=-50, 13-24=-20

26) 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, 5-10=-50, 16-21=-20, 15-16=-20, 15-33=-20, 13-33=-50, 13-24=-20

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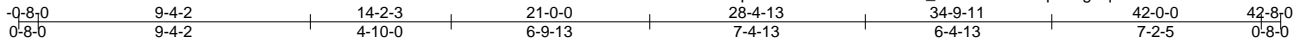


818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	158777578
B	A05V	SPECIAL	1	1	Job Reference (optional)	

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:42 2023 Page 1

ID:fJZOU2ZLpXU3XKYCOPhCD1zheL\_RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:79.1

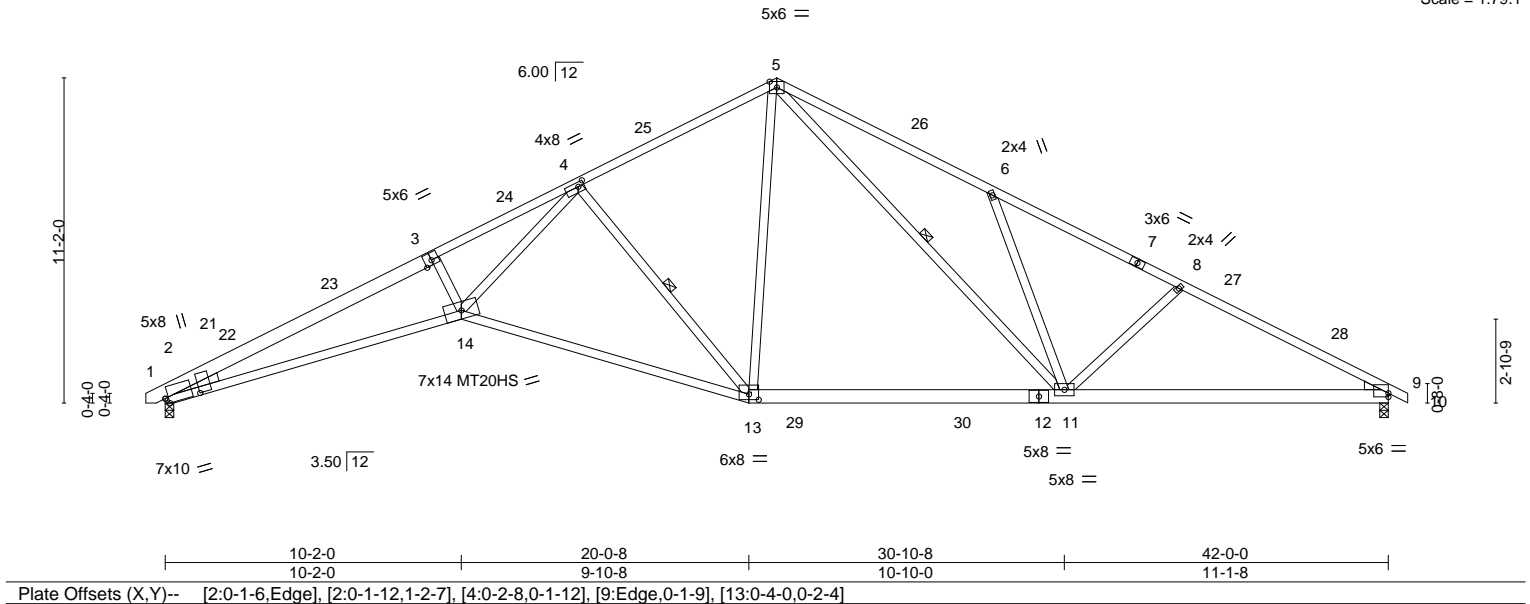


Plate Offsets (X, Y)--	[2:0-1-6,Edge], [2:0-1-12,1-2-7], [4:0-2-8,0-1-12], [9:Edge,0-1-9], [13:0-4-0,0-2-4]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.93	Vert(LL) -0.45 11-13 >999 360	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.91	Vert(CT) -1.08 13-14 >466 240	MT20HS	187/143
BCLL 0.0 *	Rep Stress Incr NO	WB 0.98	Horz(CT) 0.45 9 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-MS	Wind(LL) 0.20 14 >999 240		
				Weight: 248 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.1 \*Except\*  
5-7: 2x4 SP SS, 1-3: 2x6 SP DSS, 7-10: 2x4 SP No.2  
BOT CHORD 2x4 SP SS \*Except\*  
12-13,9-12: 2x6 SP No.2  
WEBS 2x4 SP No.3 \*Except\*  
4-14,5-11: 2x4 SP No.2  
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 4-13, 5-11

**REACTIONS.** (size) 2=0-3-8, 9=0-3-8  
Max Horz 2=127(LC 17)  
Max Grav 2=2034(LC 1), 9=1768(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-6696/0, 3-4=-6332/0, 4-5=-2121/128, 5-6=-3072/285, 6-8=-2823/93,  
8-9=-3123/101  
BOT CHORD 2-14=0/6030, 13-14=0/3141, 11-13=0/1737, 9-11=-0/2702  
WEBS 5-13=0/900, 4-13=-1917/0, 4-14=0/3976, 3-14=-349/0, 5-11=-215/1384, 6-11=-595/231,  
8-11=-353/140

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-5-14 to 2-6-2, Interior(1) 2-6-2 to 21-0-0, Exterior(2) 21-0-0 to 25-2-15, Interior(1) 25-2-15 to 42-8-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) All plates are MT20 plates unless otherwise indicated.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 6) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 7) N/A

**LOAD CASE(S)** Standard  
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-21=-60, 5-24=-60, 5-10=-60, 14-15=-20, 13-14=-20, 13-18=-20

Continued on page 2



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**ENGINEERING BY**  
**TRENCO**  
A MiTek Affiliate  
818 Soundside Road  
Edenton, NC 27932



Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT
B	A05V	SPECIAL	1	1	I58777578
					Job Reference (optional)

Builders FirstSource (Apex, NC), Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:42 2023 Page 2  
ID:fJZOU2ZLpXU3XKYCOPhCD1zheL\_RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

**LOAD CASE(S)** Standard

- Trapezoidal Loads (plf)
  - Vert: 21=-120-to-24=-70
- 2) Dead + 0.75 Roof Live (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-21=-50, 5-24=-50, 5-10=-50, 14-15=-20, 13-14=-20, 13-29=-20, 29-30=-50, 18-30=-20
  - Trapezoidal Loads (plf)
    - Vert: 21=-110-to-24=-60
- 3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25
  - Uniform Loads (plf)
    - Vert: 1-21=-20, 5-24=-20, 5-10=-20, 14-15=-40, 13-14=-40, 13-18=-40
  - Trapezoidal Loads (plf)
    - Vert: 21=-80-to-24=-30
- 4) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=47, 2-21=25, 5-24=14, 5-26=25, 9-26=14, 9-10=9, 14-15=-12, 13-14=-12, 13-18=-12
    - Horz: 1-2=-59, 2-22=-37, 5-22=-26, 5-26=37, 9-26=26, 9-10=21
  - Trapezoidal Loads (plf)
    - Vert: 21=-35-to-22=-29, 22=-40-to-24=4
- 5) Dead + 0.6 C-C Wind (Pos. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=9, 2-21=14, 24-25=14, 5-25=25, 5-28=14, 9-28=25, 9-10=47, 14-15=-12, 13-14=-12, 13-18=-12
    - Horz: 1-2=-21, 2-25=-26, 5-25=-37, 5-28=26, 9-28=37, 9-10=59
  - Trapezoidal Loads (plf)
    - Vert: 21=-46-to-24=4
- 6) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-12, 2-21=-33, 5-24=-33, 5-9=-33, 9-10=-28, 14-15=-20, 13-14=-20, 13-18=-20
    - Horz: 1-2=-8, 2-5=13, 5-9=-13, 9-10=-8
  - Trapezoidal Loads (plf)
    - Vert: 21=-93-to-24=-43
- 7) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-28, 2-21=-33, 5-24=-33, 5-9=-33, 9-10=-12, 14-15=-20, 13-14=-20, 13-18=-20
    - Horz: 1-2=8, 2-5=13, 5-9=-13, 9-10=8
  - Trapezoidal Loads (plf)
    - Vert: 21=-93-to-24=-43
- 8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=9, 2-21=-2, 5-24=-2, 5-9=9, 9-10=4, 14-15=-12, 13-14=-12, 13-18=-12
    - Horz: 1-2=-21, 2-5=-10, 5-9=21, 9-10=16
  - Trapezoidal Loads (plf)
    - Vert: 21=-62-to-24=-12
- 9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=4, 2-21=9, 5-24=9, 5-9=-2, 9-10=9, 14-15=-12, 13-14=-12, 13-18=-12
    - Horz: 1-2=-16, 2-5=-21, 5-9=10, 9-10=21
  - Trapezoidal Loads (plf)
    - Vert: 21=-51-to-24=-1
- 10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-15, 2-21=-20, 5-24=-20, 5-9=-9, 9-10=-4, 14-15=-20, 13-14=-20, 13-18=-20
    - Horz: 1-2=-5, 2-5=0, 5-9=11, 9-10=16
  - Trapezoidal Loads (plf)
    - Vert: 21=-80-to-24=-30
- 11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-4, 2-21=-9, 5-24=-9, 5-9=-20, 9-10=-15, 14-15=-20, 13-14=-20, 13-18=-20
    - Horz: 1-2=-16, 2-5=-11, 5-9=0, 9-10=5
  - Trapezoidal Loads (plf)
    - Vert: 21=-69-to-24=-19
- 12) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=17, 2-21=22, 5-24=11, 5-9=3, 9-10=-2, 14-15=-12, 13-14=-12, 13-18=-12
    - Horz: 1-2=-29, 2-23=-34, 5-23=-23, 5-9=15, 9-10=10
  - Trapezoidal Loads (plf)
    - Vert: 21=-38-to-23=-17, 23=-27-to-24=1
- 13) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-2, 2-21=3, 5-24=3, 5-27=11, 9-27=22, 9-10=17, 14-15=-12, 13-14=-12, 13-18=-12
    - Horz: 1-2=-10, 2-5=-15, 5-27=23, 9-27=34, 9-10=29
  - Trapezoidal Loads (plf)
    - Vert: 21=-57-to-24=-7
- 14) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60

Continued on page 3

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT
B	A05V	SPECIAL	1	1	I58777578

Builders FirstSource (Apex, NC), Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:42 2023 Page 3  
ID:fJZOU2ZLpXU3XKYCOPhCD1zheI\_RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

**LOAD CASE(S)** Standard

- Uniform Loads (plf)
  - Vert: 1-2=7, 2-21=11, 5-24=11, 5-9=3, 9-10=-2, 14-15=-12, 13-14=-12, 13-18=-12
  - Horz: 1-2=-19, 2-5=-23, 5-9=15, 9-10=10
- Trapezoidal Loads (plf)
  - Vert: 21=-49-to-24=1
- 15) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-2, 2-21=3, 5-24=3, 5-9=11, 9-10=7, 14-15=-12, 13-14=-12, 13-18=-12
    - Horz: 1-2=-10, 2-5=-15, 5-9=23, 9-10=19
  - Trapezoidal Loads (plf)
    - Vert: 21=-57-to-24=-7
- 16) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=9, 2-21=4, 5-24=6, 5-9=-15, 9-10=-10, 14-15=-20, 13-14=-20, 13-18=-20
    - Horz: 1-2=-29, 2-23=-24, 5-23=-14, 5-9=5, 9-10=10
  - Trapezoidal Loads (plf)
    - Vert: 21=-56-to-23=-34, 23=-44-to-24=-16
- 17) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60
  - Uniform Loads (plf)
    - Vert: 1-2=-10, 2-21=-15, 5-24=-15, 5-27=6, 9-27=4, 9-10=9, 14-15=-20, 13-14=-20, 13-18=-20
    - Horz: 1-2=-10, 2-5=-5, 5-27=14, 9-27=24, 9-10=29
  - Trapezoidal Loads (plf)
    - Vert: 21=-75-to-24=-25
- 18) Dead + Uninhabitable Attic Storage: Lumber Increase=1.25, Plate Increase=1.25
  - Uniform Loads (plf)
    - Vert: 1-21=-20, 5-24=-20, 5-10=-20, 14-15=-20, 13-14=-20, 13-29=-20, 29-30=-60, 18-30=-20
  - Trapezoidal Loads (plf)
    - Vert: 21=-80-to-24=-30
- 19) 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=-46, 2-21=-50, 5-24=-50, 5-9=-42, 9-10=-38, 14-15=-20, 13-14=-20, 13-29=-20, 29-30=-50, 18-30=-20
    - Horz: 1-2=-4, 2-5=0, 5-9=8, 9-10=12
  - Trapezoidal Loads (plf)
    - Vert: 21=-110-to-24=-60
- 20) 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=-38, 2-21=-42, 5-24=-42, 5-9=-50, 9-10=-46, 14-15=-20, 13-14=-20, 13-29=-20, 29-30=-50, 18-30=-20
    - Horz: 1-2=-12, 2-5=-8, 5-9=0, 9-10=4
  - Trapezoidal Loads (plf)
    - Vert: 21=-102-to-24=-52
- 21) 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=-28, 2-21=-32, 5-24=-40, 5-9=-46, 9-10=-43, 14-15=-20, 13-14=-20, 13-29=-20, 29-30=-50, 18-30=-20
    - Horz: 1-2=-22, 2-23=-18, 5-23=-10, 5-9=4, 9-10=7
  - Trapezoidal Loads (plf)
    - Vert: 21=-92-to-23=-70, 23=-78-to-24=-50
- 22) 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=-43, 2-21=-46, 5-24=-46, 5-27=-40, 9-27=-32, 9-10=-28, 14-15=-20, 13-14=-20, 13-29=-20, 29-30=-50, 18-30=-20
    - Horz: 1-2=-7, 2-5=-4, 5-27=10, 9-27=18, 9-10=22
  - Trapezoidal Loads (plf)
    - Vert: 21=-106-to-24=-56
- 23) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-21=-60, 5-24=-60, 5-10=-20, 14-15=-20, 13-14=-20, 13-18=-20
  - Trapezoidal Loads (plf)
    - Vert: 21=-120-to-24=-70
- 24) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-21=-20, 5-24=-20, 5-10=-60, 14-15=-20, 13-14=-20, 13-18=-20
  - Trapezoidal Loads (plf)
    - Vert: 21=-80-to-24=-30
- 25) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-21=-50, 5-24=-50, 5-10=-20, 14-15=-20, 13-14=-20, 13-29=-20, 29-30=-50, 18-30=-20
  - Trapezoidal Loads (plf)
    - Vert: 21=-110-to-24=-60
- 26) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-21=-20, 5-24=-20, 5-10=-50, 14-15=-20, 13-14=-20, 13-29=-20, 29-30=-50, 18-30=-20
  - Trapezoidal Loads (plf)
    - Vert: 21=-80-to-24=-30

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	158777579
B	A06G	GABLE	1	1	Job Reference (optional)	

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:45 2023 Page 1

ID:fJZOU2ZLpXU3XKYCOPhCD1zheL\_RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCDoi7J4zJC?f

0-8-0 21-0-0 42-0-0 42-8-0  
 0-8-0 21-0-0 21-0-0 0-8-0

Scale = 1:74.5

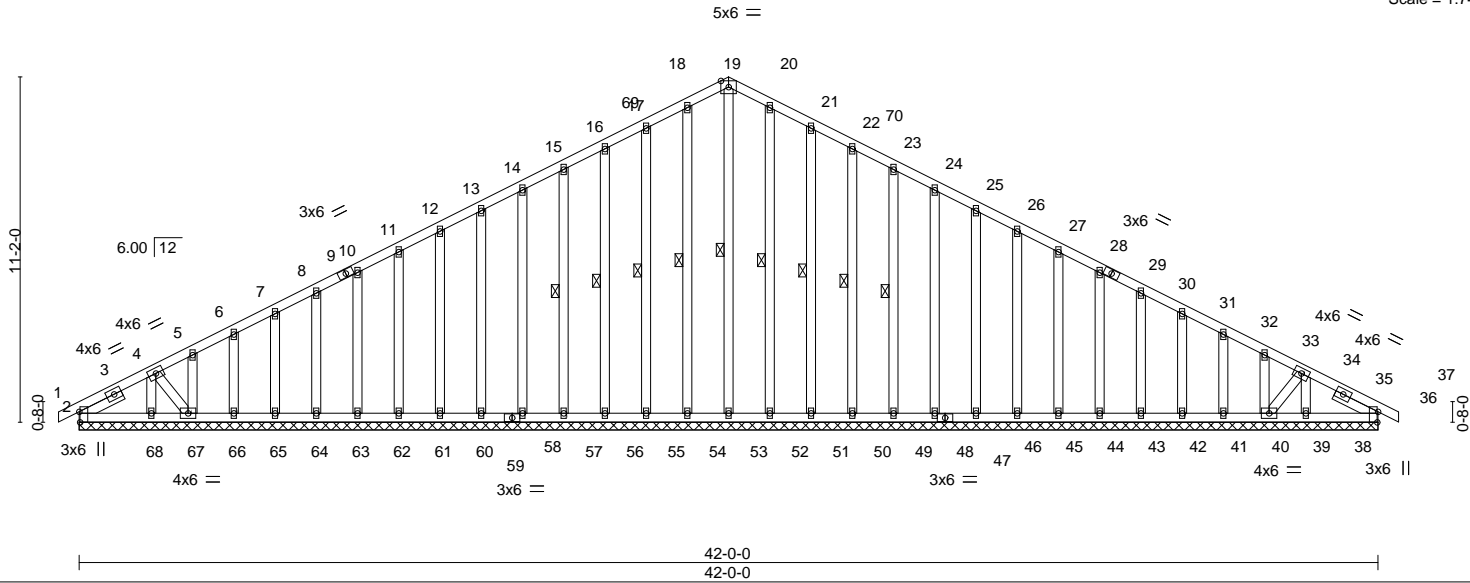


Plate Offsets (X, Y)--	[2:0-4-1,Edge], [36:0-4-1,Edge]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.09	Vert(LL) 0.00 36 n/r 120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.04	Vert(CT) 0.00 36 n/r 120		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.10	Horz(CT) 0.01 36 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S		Weight: 394 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 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 19-53, 18-54, 17-55, 16-56, 15-57, 20-52, 21-51, 22-50, 23-49
OTHERS 2x4 SP No.3	
SLIDER Left 2x4 SP No.3 1-6-7, Right 2x4 SP No.3 1-6-7	

**REACTIONS.** All bearings 42-0-0.  
 (lb) - Max Horz 2=157(LC 12)  
 Max Uplift All uplift 100 lb or less at joint(s) 54, 55, 56, 57, 58, 60, 61, 62, 63, 64, 65, 66, 67, 51, 50, 49, 48, 46, 45, 44, 43, 42, 41, 40, 2 except 39=-106(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 36, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 64, 65, 66, 67, 68, 52, 51, 50, 49, 48, 46, 45, 44, 43, 42, 41, 40, 39, 38, 2

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 17-18=-96/275, 18-19=-100/288, 19-20=-100/288, 20-21=-96/275

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-8-0 to 2-4-0, Exterior(2) 2-4-0 to 21-0-0, Corner(3) 21-0-0 to 24-0-0, Exterior(2) 24-0-0 to 42-8-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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.
  - 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 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 54, 55, 56, 57, 58, 60, 61, 62, 63, 64, 65, 66, 67, 51, 50, 49, 48, 46, 45, 44, 43, 42, 41, 40, 2 except (jt=lb) 39=106.



June 7, 2023

Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	158777580
B	A07G	GABLE	1	1	Job Reference (optional)	

Builders FirstSource (Apex, NC), Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:49 2023 Page 1

ID:fJZOU2ZLpXU3XKYCOPhCD1zheL\_RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCdoi7J4zJC?f

20-9-0 41-9-0 42-5-0  
20-9-0 21-0-0 0-8-0

5x6 =

Scale = 1:74.0

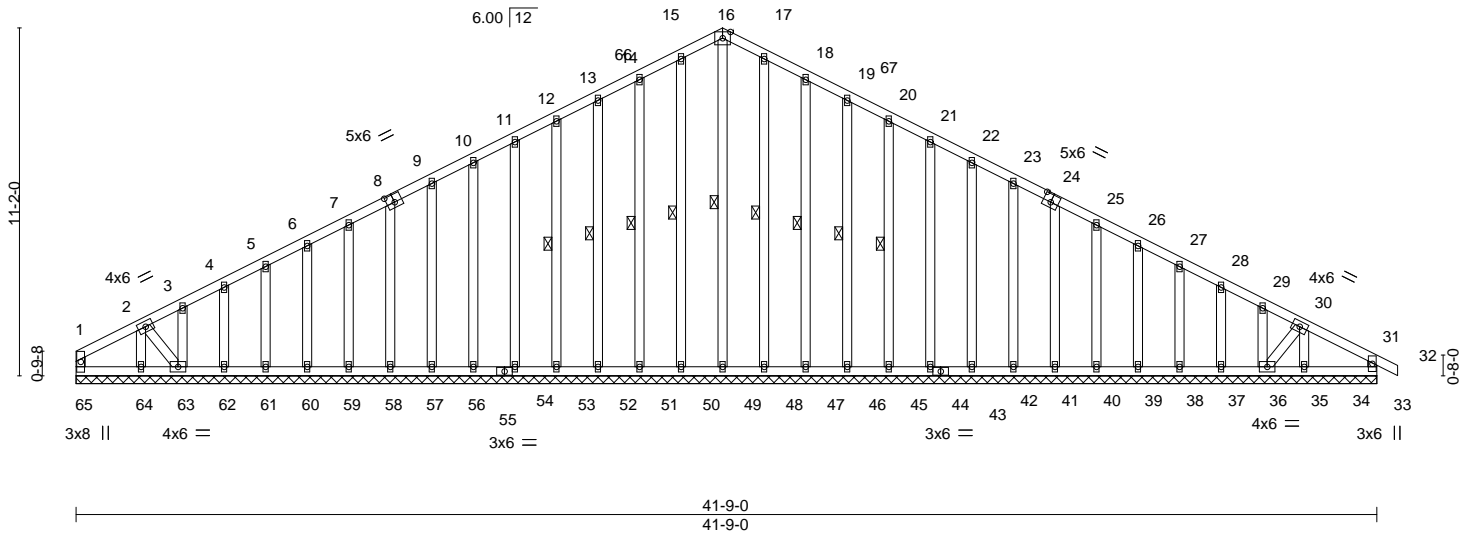


Plate Offsets (X, Y)--	[8:0-3-0,0-3-0], [24:0-3-0,0-3-0]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.09	Vert(LL) -0.00 31 n/r 120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.04	Vert(CT) -0.00 31 n/r 120		
BCLL 0.0 *	Rep Stress Incr NO	WB 0.10	Horz(CT) 0.01 33 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-S		Weight: 388 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 16-49, 15-50, 14-51, 13-52, 12-53, 17-48, 18-47, 19-46, 20-45
OTHERS 2x4 SP No.3	

**REACTIONS.** All bearings 41-9-0.  
 (lb) - Max Horz 65=151(LC 13)  
 Max Uplift All uplift 100 lb or less at joint(s) 65, 33, 50, 51, 52, 53, 54, 56, 57, 58, 59, 60, 61, 62, 47, 46, 45, 44, 42, 41, 40, 39, 38, 37, 36 except 63=166(LC 12), 35=134(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 65, 33, 49, 50, 51, 52, 53, 54, 56, 57, 58, 59, 60, 61, 62, 63, 64, 48, 47, 46, 45, 44, 42, 41, 40, 39, 38, 37, 36, 35, 34

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 13-14=89/253, 14-15=100/285, 15-16=104/297, 16-17=104/293, 17-18=100/280

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-1-12 to 3-5-0, Exterior(2) 3-5-0 to 20-9-0, Corner(3) 20-9-0 to 23-9-0, Exterior(2) 23-9-0 to 42-5-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable requires continuous bottom chord bearing.
  - 6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - 7) Gable studs spaced at 1-4-0 oc.
  - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 65, 33, 50, 51, 52, 53, 54, 56, 57, 58, 59, 60, 61, 62, 47, 46, 45, 44, 42, 41, 40, 39, 38, 37, 36 except (jt=lb) 63=166, 35=134.

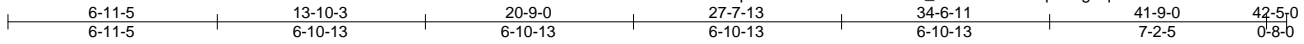


June 7, 2023

Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	158777581
B	A08	COMMON	1	1		

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:51 2023 Page 1

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5x6 =

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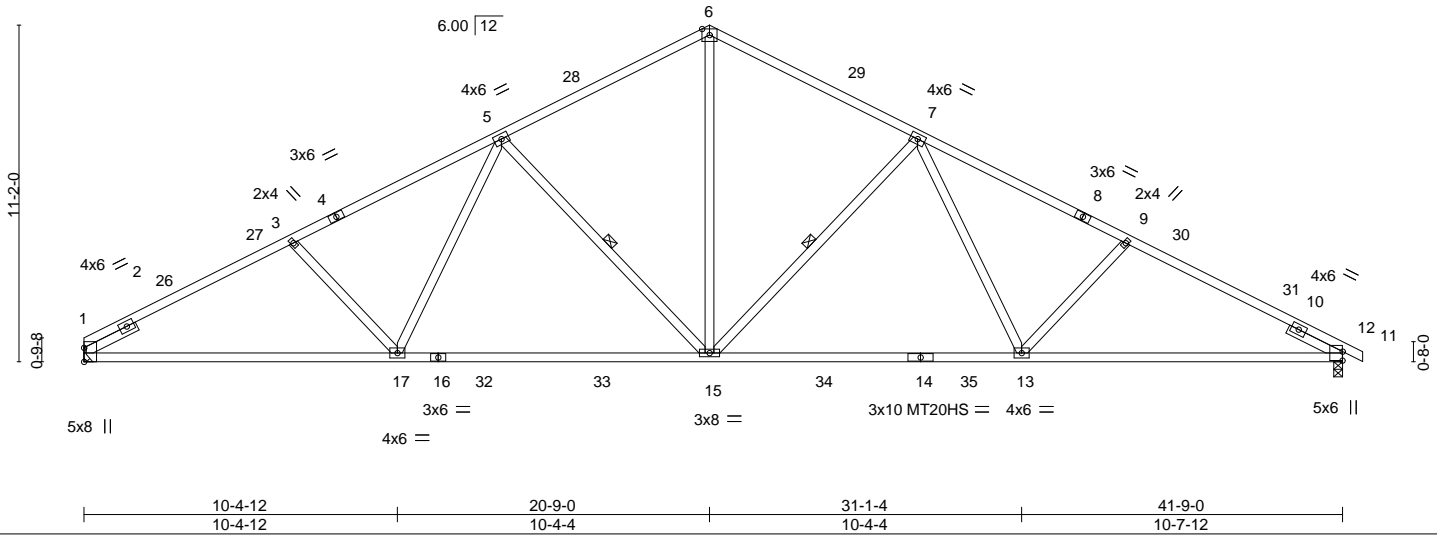


Plate Offsets (X,Y)-- [11:0-3-9,0-0-1]					
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	2-0-0	TC 0.86	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.95	Vert(LL) -0.42 15-17 >999 360	MT20HS	187/143
BCLL 0.0 *	Lumber DOL 1.15	WB 0.56	Vert(CT) -0.73 15-17 >688 240		
BCDL 10.0	Rep Stress Incr YES	Matrix-MS	Horz(CT) 0.14 11 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.10 15-17 >999 240	Weight: 222 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2 *Except*	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
1-4: 2x4 SP SS, 8-12: 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
BOT CHORD 2x4 SP No.1 *Except*	2-2-0 oc bracing: 1-17.
14-16: 2x4 SP SS	WEBS 1 Row at midpt 7-15, 5-15
WEBS 2x4 SP No.3	
SLIDER Left 2x4 SP No.3 1-11-12, Right 2x4 SP No.3 1-11-12	

**REACTIONS.** (size) 1=Mechanical, 11=0-3-8  
 Max Horz 1=-132(LC 13)  
 Max Grav 1=1670(LC 1), 11=1710(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-3=-2842/205, 3-5=-2628/208, 5-6=-1933/235, 6-7=-1932/233, 7-9=-2683/204, 9-11=-2917/201  
 BOT CHORD 1-17=-88/2454, 15-17=-22/2113, 13-15=-26/2131, 11-13=-87/2535  
 WEBS 6-15=-67/1346, 7-15=-746/140, 7-13=0/526, 9-13=-330/141, 5-15=-722/139, 5-17=0/478, 3-17=-284/145

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-3-0 to 3-3-0, Interior(1) 3-3-0 to 21-0-0, Exterior(2) 21-0-0 to 25-2-15, Interior(1) 25-2-15 to 42-8-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - All plates are MT20 plates unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.

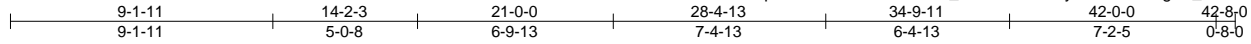




Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	15877582
B	A09BV	SPECIAL	1	1	Job Reference (optional)	

Builders FirstSource, Apex, NC 27523

8.630 s Mar 9 2023 Mitek Industries, Inc. Tue Jun 6 15:18:17 2023 Page 1  
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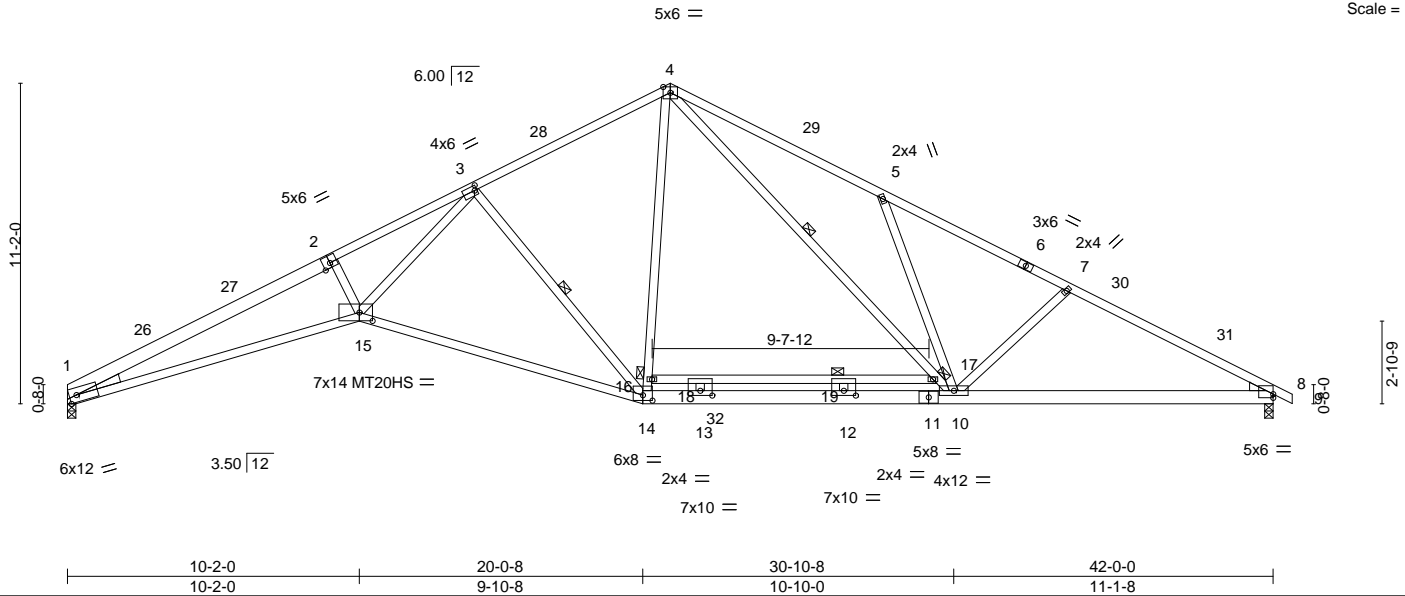


Plate Offsets (X,Y)-- [1:0-3-0,Edge], [3:0-1-0,0-2-0], [8:Edge,0-1-9], [14:0-4-0,0-2-4], [15:0-5-8,0-3-8], [18:0-5-0,0-2-0], [19:0-5-0,0-2-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.86	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.99	Vert(LL) -0.44 14-15 >999 360	MT20HS	187/143
BCLL 0.0 *	Lumber DOL 1.15	WB 0.84	Vert(CT) -1.07 14-15 >472 240		
BCDL 10.0	Rep Stress Incr NO	Matrix-MS	Horz(CT) 0.42 8 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.20 15 >999 240		
				Weight: 262 lb	FT = 20%

**LUMBER-**  
 TOP CHORD 2x4 SP No.1 \*Except\*  
 4-6: 2x4 SP SS, 1-2: 2x6 SP DSS, 6-9: 2x4 SP No.2  
 BOT CHORD 2x6 SP No.2 \*Except\*  
 1-15: 2x4 SP SS, 14-15: 2x4 SP No.1  
 WEBS 2x4 SP No.3 \*Except\*  
 3-15,4-10,16-17: 2x4 SP No.2  
 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, 4-17  
 JOINTS 1 Brace at Jt(s): 16, 17, 19

**REACTIONS.** (lb/size) 1=1680/0-3-8 (min. 0-2-0), 8=1720/0-3-8 (min. 0-2-0)  
 Max Horz 1=-130(LC 17)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-26=-5854/223, 26-27=-5820/235, 2-27=-5712/256, 2-3=-5636/280, 3-28=-2010/219,  
 4-28=-1913/241, 4-29=-2866/388, 5-29=-2971/365, 5-6=-2563/195, 6-7=-2722/163,  
 7-30=-2857/202, 30-31=-2921/184, 8-31=-3022/169  
 BOT CHORD 1-15=-132/5312, 14-15=-52/2901, 14-32=0/1544, 13-32=0/1548, 12-13=0/1548,  
 11-12=0/1548, 10-11=0/1548, 8-10=-91/2613  
 WEBS 14-16=-1/767, 4-16=0/804, 3-14=-1707/158, 3-15=-52/3408, 4-17=-213/1381,  
 10-17=-217/1423, 5-10=-594/231, 7-10=-355/138

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 21-0-0, Exterior(2) 21-0-0 to 25-2-15, Interior(1) 25-2-15 to 42-8-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) All plates are MT20 plates unless otherwise indicated.
  - 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 6) Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 8) N/A

**LOAD CASE(S)**



Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
 Design valid for use only with Mitek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601





Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	15877582
B	A09BV	SPECIAL	1	1	Job Reference (optional)	

Builders FirstSource, Apex, NC 27523

8.630 s Mar 9 2023 MiTek Industries, Inc. Tue Jun 6 15:18:17 2023 Page 2  
ID:fJZOUZLpXU3XKYCOPhCD1zheI\_-hDSOb1kNIRyz3XloGZUIzgV6\_wnZdnfHfXSl6z8z7q

**LOAD CASE(S)**

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-4=-60, 4-9=-60, 15-20=-20, 14-15=-20, 14-23=-20
- 2) Dead + 0.75 Roof Live (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (plf)  
Vert: 1-4=-50, 4-9=-50, 15-20=-20, 14-15=-20, 14-32=-20, 12-32=-50, 12-23=-20
- 3) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (plf)  
Vert: 1-4=-20, 4-9=-20, 15-20=-40, 14-15=-40, 14-23=-40
- 4) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-26=25, 4-26=14, 4-29=25, 8-29=14, 8-9=9, 15-20=-12, 14-15=-12, 14-23=-12  
Horz: 1-26=-37, 4-26=-26, 4-29=37, 8-29=26, 8-9=21
- 5) Dead + 0.6 C-C Wind (Pos. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-28=14, 4-28=25, 4-31=14, 8-31=25, 8-9=47, 15-20=-12, 14-15=-12, 14-23=-12  
Horz: 1-28=-26, 4-28=-37, 4-31=26, 8-31=37, 8-9=59
- 6) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-4=-33, 4-8=-33, 8-9=-28, 15-20=-20, 14-15=-20, 14-23=-20  
Horz: 1-4=13, 4-8=-13, 8-9=-8
- 7) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-4=-33, 4-8=-33, 8-9=-12, 15-20=-20, 14-15=-20, 14-23=-20  
Horz: 1-4=13, 4-8=-13, 8-9=8
- 8) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-4=-2, 4-8=9, 8-9=4, 15-20=-12, 14-15=-12, 14-23=-12  
Horz: 1-4=-10, 4-8=21, 8-9=16
- 9) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-4=9, 4-8=-2, 8-9=9, 15-20=-12, 14-15=-12, 14-23=-12  
Horz: 1-4=-21, 4-8=10, 8-9=21
- 10) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-4=-20, 4-8=-9, 8-9=-4, 15-20=-20, 14-15=-20, 14-23=-20  
Horz: 1-4=-0, 4-8=11, 8-9=16
- 11) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-4=-9, 4-8=-20, 8-9=-15, 15-20=-20, 14-15=-20, 14-23=-20  
Horz: 1-4=-11, 4-8=0, 8-9=5
- 12) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-27=22, 4-27=11, 4-8=3, 8-9=-2, 15-20=-12, 14-15=-12, 14-23=-12  
Horz: 1-27=-34, 4-27=-23, 4-8=15, 8-9=10
- 13) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-4=3, 4-30=11, 8-30=22, 8-9=17, 15-20=-12, 14-15=-12, 14-23=-12  
Horz: 1-4=-15, 4-30=23, 8-30=34, 8-9=29
- 14) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-4=11, 4-8=3, 8-9=-2, 15-20=-12, 14-15=-12, 14-23=-12  
Horz: 1-4=-23, 4-8=15, 8-9=10
- 15) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-4=3, 4-8=11, 8-9=7, 15-20=-12, 14-15=-12, 14-23=-12  
Horz: 1-4=-15, 4-8=23, 8-9=19
- 16) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-27=4, 4-27=-6, 4-8=-15, 8-9=-10, 15-20=-20, 14-15=-20, 14-23=-20  
Horz: 1-27=-24, 4-27=-14, 4-8=5, 8-9=10
- 17) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.60, Plate Increase=1.60  
Uniform Loads (plf)  
Vert: 1-4=-15, 4-30=-6, 8-30=4, 8-9=9, 15-20=-20, 14-15=-20, 14-23=-20  
Horz: 1-4=-5, 4-30=14, 8-30=24, 8-9=29
- 18) Dead + Uninhabitable Attic Storage: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90  
Uniform Loads (plf)  
Vert: 1-4=-20, 4-9=-20, 15-20=-20, 14-15=-20, 14-32=-20, 12-32=-60, 12-23=-20
- 19) 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: 1-4=-50, 4-8=-42, 8-9=-38, 15-20=-20, 14-15=-20, 14-32=-20, 12-32=-50, 12-23=-20  
Horz: 1-4=-0, 4-8=8, 8-9=12
- 20) 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

Continued on page 3

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818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	158777582
B	A09BV	SPECIAL	1	1	Job Reference (optional)	

Builders FirstSource, Apex, NC 27523

8.630 s Mar 9 2023 MiTek Industries, Inc. Tue Jun 6 15:18:17 2023 Page 3  
 ID:fJZOU2ZLpXU3XKYCOPhCD1zheI\_-hDSOb1kNiRyz3XloGZUIzgV6\_wnZdnfhFfxSl6z8z7q

**LOAD CASE(S)**

- Uniform Loads (plf)
  - Vert: 1-4=-42, 4-8=-50, 8-9=-46, 15-20=-20, 14-15=-20, 14-32=-20, 12-32=-50, 12-23=-20
  - Horz: 1-4=-8, 4-8=0, 8-9=4
- 21) 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: 1-27=-32, 4-27=-40, 4-8=-46, 8-9=-43, 15-20=-20, 14-15=-20, 14-32=-20, 12-32=-50, 12-23=-20
    - Horz: 1-27=-18, 4-27=-10, 4-8=4, 8-9=7
- 22) 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: 1-4=-46, 4-30=-40, 8-30=-32, 8-9=-28, 15-20=-20, 14-15=-20, 14-32=-20, 12-32=-50, 12-23=-20
    - Horz: 1-4=-4, 4-30=10, 8-30=18, 8-9=22
- 23) 1st Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-4=-60, 4-9=-20, 15-20=-20, 14-15=-20, 14-23=-20
- 24) 2nd Dead + Roof Live (unbalanced): Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-4=-20, 4-9=-60, 15-20=-20, 14-15=-20, 14-23=-20
- 25) 3rd Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-4=-50, 4-9=-20, 15-20=-20, 14-15=-20, 14-32=-20, 12-32=-50, 12-23=-20
- 26) 4th Dead + 0.75 Roof Live (unbalanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15
  - Uniform Loads (plf)
    - Vert: 1-4=-20, 4-9=-50, 15-20=-20, 14-15=-20, 14-32=-20, 12-32=-50, 12-23=-20

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

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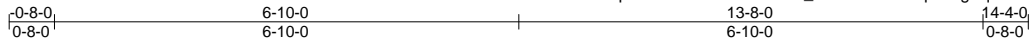


818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	158777583
B	B01G	GABLE	1	1	Job Reference (optional)	

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:55 2023 Page 1

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4x6 =

Scale = 1:33.9

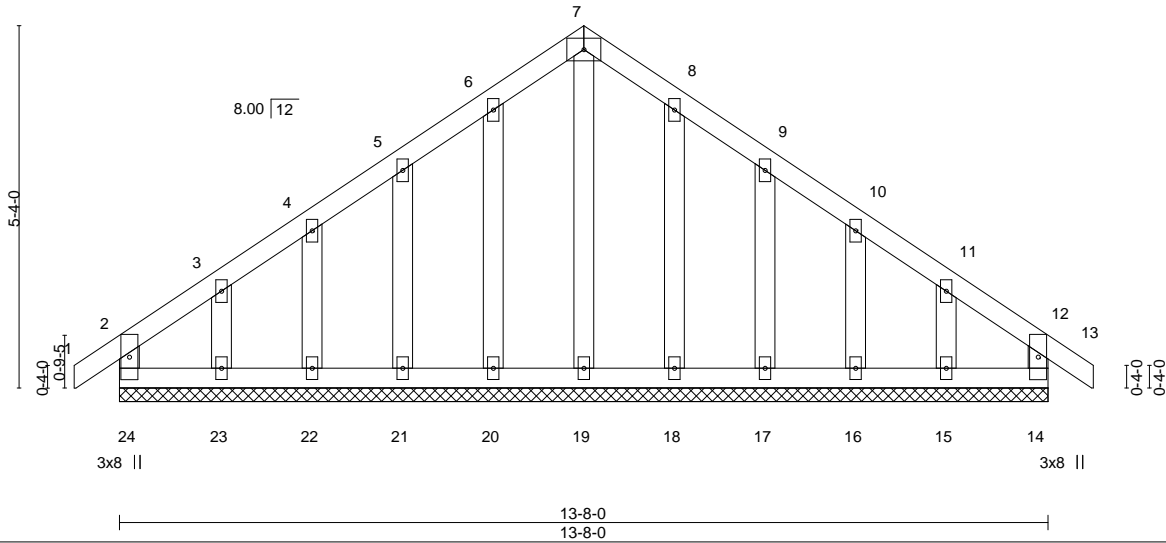


Plate Offsets (X,Y)-- [10:0-0-0,0-0-0], [11:0-0-0,0-0-0], [14:0-0-0,0-0-0]

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.07	Vert(LL)	-0.00	12	n/r	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	-0.00	13	n/r		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.05	Horz(CT)	0.00	14	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-R						
								Weight: 86 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	
OTHERS 2x4 SP No.3	

**REACTIONS.** All bearings 13-8-0.  
 (lb) - Max Horz 24=125(LC 11)  
 Max Uplift All uplift 100 lb or less at joint(s) 24, 14, 20, 21, 22, 23, 18, 17, 16, 15  
 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.

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-7-14 to 2-4-2, Exterior(2) 2-4-2 to 6-10-0, Corner(3) 6-10-0 to 9-10-0, Exterior(2) 9-10-0 to 14-3-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 4) All plates are 2x4 MT20 unless otherwise indicated.
  - 5) Gable requires continuous bottom chord bearing.
  - 6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
  - 7) Gable studs spaced at 1-4-0 oc.
  - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 24, 14, 20, 21, 22, 23, 18, 17, 16, 15.

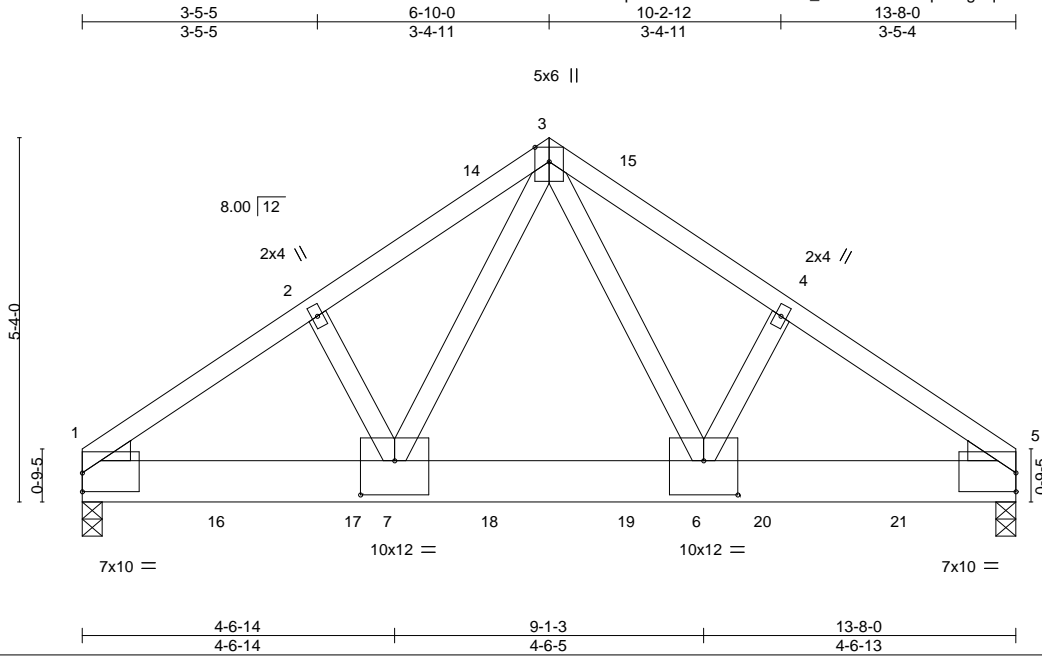


June 7, 2023

Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	158777584
B	B02-2PL	COMMON	1	2	Job Reference (optional)	

Builders FirstSource (Apex, NC), Apex, NC - 27523, 8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:56 2023 Page 1

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Scale = 1:33.7

Plate Offsets (X, Y)--	[1:0-0-0,0-3-5], [5:Edge,0-3-5], [6:0-6-0,0-6-0], [7:0-6-0,0-6-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.39	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.31	Vert(LL) -0.07 6-7 >999 360		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.83	Vert(CT) -0.13 6-7 >999 240		
BCDL 10.0	Rep Stress Incr NO	Matrix-MS	Horz(CT) 0.01 5 n/a n/a		
	Code IRC2015/TPI2014		Wind(LL) 0.06 6-7 >999 240	Weight: 180 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-6-7 oc purlins.
BOT CHORD 2x8 SP DSS	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	
WEDGE	
Left: 2x4 SP No.3, Right: 2x4 SP No.3	

**REACTIONS.** (size) 1=0-3-8, 5=0-3-8  
 Max Horz 1=98(LC 5)  
 Max Uplift 1=-573(LC 8), 5=-601(LC 9)  
 Max Grav 1=5230(LC 1), 5=5464(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-6837/760, 2-3=-6731/798, 3-4=-6773/803, 4-5=-6879/766  
 BOT CHORD 1-7=-662/5609, 6-7=-412/3933, 5-6=-592/5646  
 WEBS 3-6=-502/4001, 3-7=-491/3918

- NOTES-**
- 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 0-6-0 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 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=573, 5=601.
  - Magnitude of user added load(s) on this truss have been applied uniformly across all gravity load cases with no adjustments.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1600 lb down and 191 lb up at 2-0-0, 1600 lb down and 191 lb up at 4-0-0, 1600 lb down and 191 lb up at 6-0-0, 1600 lb down and 191 lb up at 8-0-0, and 1600 lb down and 191 lb up at 10-0-0, and 1600 lb down and 191 lb up at 12-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard



Continued on page 2

<p><b>WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.</b></p> <p>Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see <b>ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information</b> available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601</p>	<p style="text-align: center;"><b>ENGINEERING BY</b>  <b>TRENCO</b>  <small>A MiTek Affiliate</small></p> <p>818 Soundside Road        Edenton, NC 27932</p>
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Job B	Truss B02-2PL	Truss Type COMMON	Qty 1	Ply 2	DR Horton; Columbia; B; Maser.RT I58777584 Job Reference (optional)
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Builders FirstSource (Apex, NC), Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:56 2023 Page 2  
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**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-3=-60, 3-5=-60, 8-11=-20

Concentrated Loads (lb)

Vert: 16=-1600(F) 17=-1600(F) 18=-1600(F) 19=-1600(F) 20=-1600(F) 21=-1600(F)

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818 Soundside Road  
Edenton, NC 27932

Job B	Truss P01G	Truss Type GABLE	Qty 1	Ply 1	DR Horton; Columbia; B; Maser.RT Job Reference (optional)	158777585
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Builders FirstSource (Apex, NC),

Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:57 2023 Page 1

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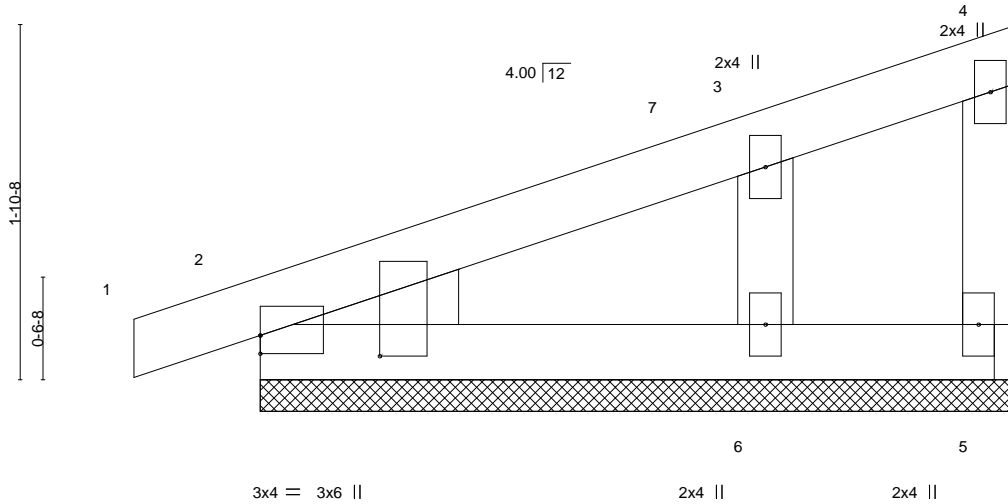


Plate Offsets (X,Y)--	[2:0-0-0,0-1-2], [2:0-1-5,0-7-9]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.08	Vert(LL) -0.00 1 n/r 120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.05	Vert(CT) 0.00 1 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.04	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-P		Weight: 18 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 4-0-0 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	
WEDGE	
Left: 2x4 SP No.3	

**REACTIONS.** (size) 2=4-0-0, 5=4-0-0, 6=4-0-0  
 Max Horz 2=55(LC 9)  
 Max Uplift 2=-27(LC 8), 5=-5(LC 11), 6=-38(LC 12)  
 Max Grav 2=134(LC 1), 5=7(LC 1), 6=208(LC 1)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-8-0 to 2-4-0, Interior(1) 2-4-0 to 3-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 1-4-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 5, 6.





Job B	Truss P02	Truss Type MONO TRUSS	Qty 1	Ply 1	DR Horton; Columbia; B; Maser.RT	158777586
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Builders FirstSource (Apex, NC),

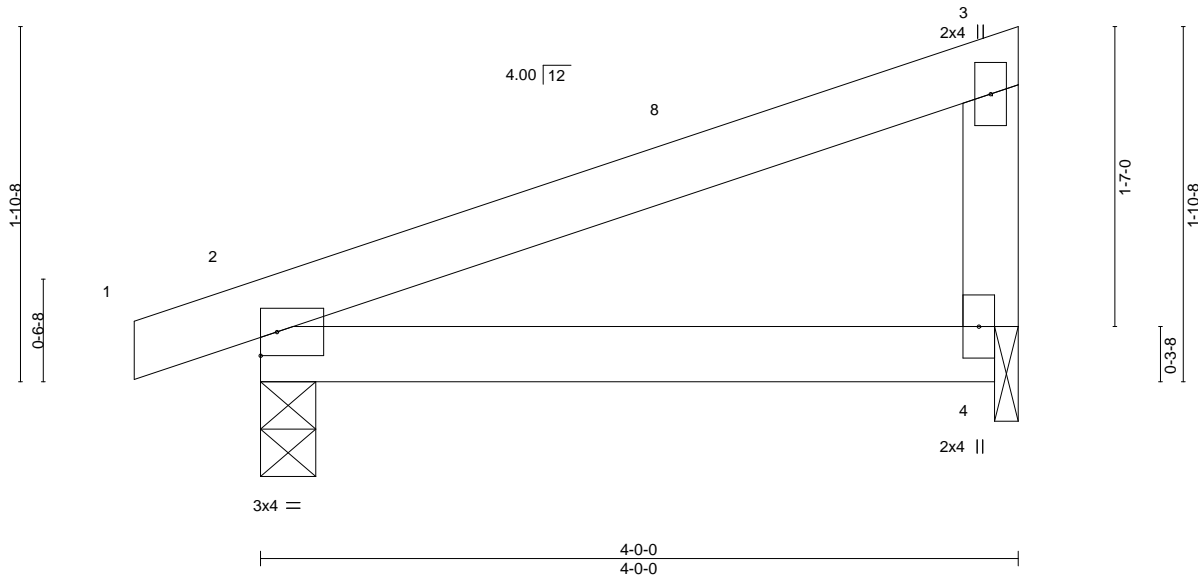
Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:58 2023 Page 1

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Scale = 1:12.2



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL 20.0	Plate Grip DOL	1.15	TC 0.22	Vert(LL)	0.02	4-7	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.15	Vert(CT)	-0.02	4-7	>999	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.00	2	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MP						Weight: 15 lb	FT = 20%

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

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

**REACTIONS.** (size) 2=0-3-8, 4=0-1-8  
 Max Horz 2=53(LC 8)  
 Max Uplift 2=63(LC 8), 4=57(LC 8)  
 Max Grav 2=198(LC 1), 4=151(LC 1)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-8-0 to 2-4-0, Interior(1) 2-4-0 to 3-10-4 zone; cantilever left and right exposed; end vertical left exposed; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.



June 7, 2023

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

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



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 Edenton, NC 27932

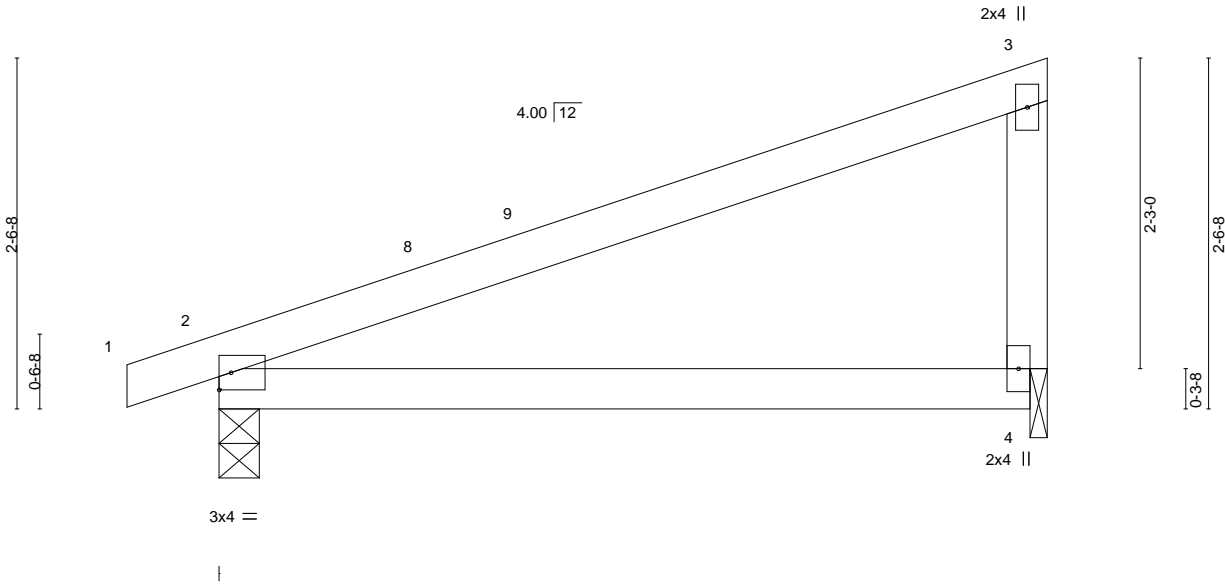
Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	158777587
B	P03	MONO TRUSS	1	1		

Builders FirstSource (Apex, NC),

Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:12:59 2023 Page 1

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Scale = 1:16.7

<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL	1.15	TC 0.56	Vert(LL)	0.12 4-7	>584	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC 0.38	Vert(CT)	-0.12 4-7	>589	240		
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	0.02 2	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-MP					Weight: 22 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 10-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 4=0-1-8  
 Max Horz 2=75(LC 8)  
 Max Uplift 2=84(LC 8), 4=87(LC 8)  
 Max Grav 2=276(LC 1), 4=232(LC 1)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-8-0 to 2-4-0, Interior(1) 2-4-0 to 5-10-4 zone; cantilever left and right exposed; end vertical left exposed; porch left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.



June 7, 2023

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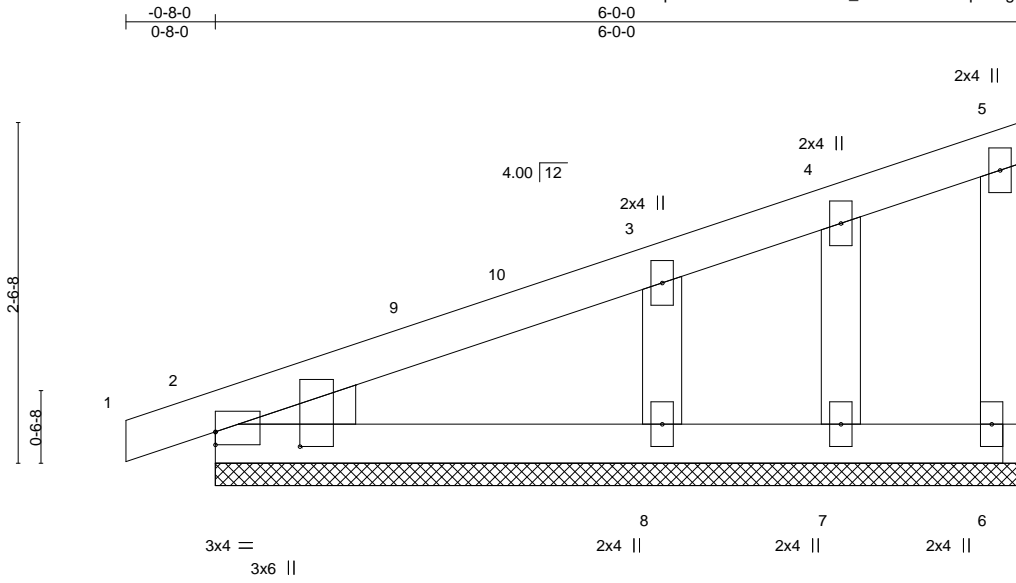
Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT	I58777588
B	P04G	GABLE	1	1	Job Reference (optional)	

Builders FirstSource (Apex, NC),

Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:13:00 2023 Page 1

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Scale = 1:17.2

Plate Offsets (X,Y)--	[2:0-0-0,0-1-2], [2:0-1-5,0-7-9]				
<b>LOADING</b> (psf)	<b>SPACING-</b> 2-0-0	<b>CSI.</b>	<b>DEFL.</b> in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plate Grip DOL 1.15	TC 0.13	Vert(LL) -0.00 1 n/r 120	MT20	244/190
TCDL 10.0	Lumber DOL 1.15	BC 0.09	Vert(CT) 0.00 1 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.04	Horz(CT) 0.00 6 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014	Matrix-P		Weight: 27 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3  
WEDGE  
Left: 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 10-0-0 oc bracing.

**REACTIONS.** All bearings 6-0-0.  
(lb) - Max Horz 2=80(LC 9)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 6, 7, 8  
Max Grav All reactions 250 lb or less at joint(s) 2, 6, 7 except 8=268(LC 1)

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

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCCL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-8-0 to 2-4-0, Interior(1) 2-4-0 to 5-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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) Gable requires continuous bottom chord bearing.
  - 4) Gable studs spaced at 1-4-0 oc.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6, 7, 8.



June 7, 2023

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Job	Truss	Truss Type	Qty	Ply	DR Horton; Columbia; B; Maser.RT
B	V03G	GABLE	1	1	158777589

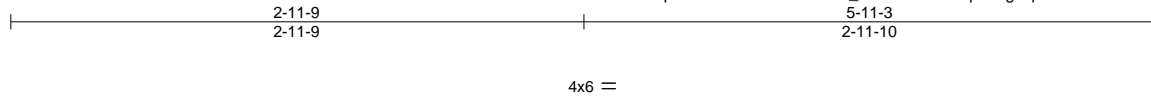
Builders FirstSource (Apex, NC),

Apex, NC - 27523,

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:13:01 2023 Page 1

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Job Reference (optional)



Scale: 1"=1'

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.10	Vert(LL)	n/a	-	n/a	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.06	Vert(CT)	n/a	-	n/a		
BCLL 0.0 *	Lumber DOL 1.15	WB 0.03	Horz(CT)	0.00	3	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P					Weight: 18 lb	FT = 20%
	Code IRC2015/TPI2014							

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

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 5-11-3 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=5-11-3, 3=5-11-3, 4=5-11-3  
 Max Horz 1=-17(LC 13)  
 Max Uplift 1=-16(LC 12), 3=-19(LC 13)  
 Max Grav 1=95(LC 1), 3=95(LC 1), 4=185(LC 1)

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

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Gable requires continuous bottom chord bearing.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



June 7, 2023

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

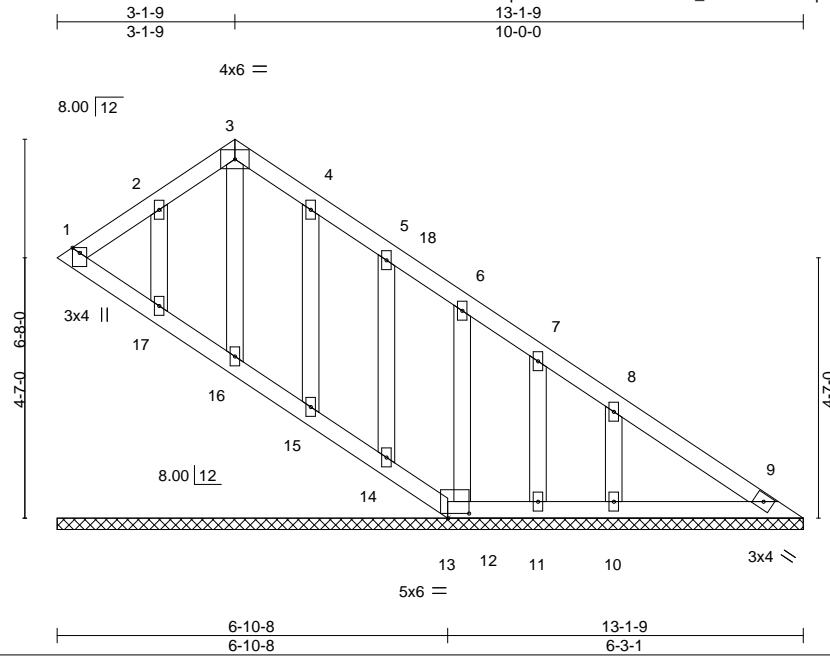
**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



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Job B	Truss V05G	Truss Type GABLE	Qty 1	Ply 1	DR Horton; Columbia; B; Maser.RT 158777590
Builders FirstSource (Apex, NC), Apex, NC - 27523,					Job Reference (optional)

8.630 s Nov 19 2022 MiTek Industries, Inc. Tue Jun 6 15:13:02 2023 Page 1  
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Scale = 1:40.5

Plate Offsets (X,Y)--	[13:0-4-8,0-1-0]						
<b>LOADING</b> (psf)	<b>SPACING-</b>	2-0-0	<b>CSI.</b>	<b>DEFL.</b>	in (loc)	l/defl	L/d
TCLL 20.0	Plate Grip DOL	1.15	TC 0.09	Vert(LL)	n/a	-	n/a 999
TCDL 10.0	Lumber DOL	1.15	BC 0.06	Vert(CT)	n/a	-	n/a 999
BCLL 0.0 *	Rep Stress Incr	YES	WB 0.04	Horz(CT)	0.00	9	n/a n/a
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S				
							<b>PLATES</b>
							MT20
							<b>GRIP</b>
							244/190
							Weight: 74 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 10'-0-0 oc bracing.
OTHERS	2x4 SP No.3		

**REACTIONS.** All bearings 13-1-9.  
 (lb) - Max Horz 1=176(LC 13)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 13, 16, 17, 15, 14, 12, 11, 10  
 Max Grav All reactions 250 lb or less at joint(s) 1, 9, 13, 16, 17, 15, 14, 12, 11, 10

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

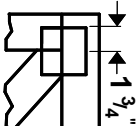
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=32ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-3-2 to 6-1-9, Interior(1) 6-1-9 to 12-7-13 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 13, 16, 17, 15, 14, 12, 11, 10.
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 1, 16, 17, 15, 14.



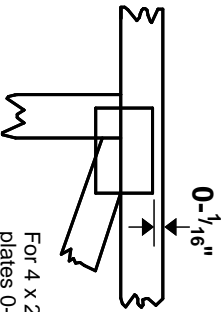
June 7, 2023

# Symbols

## PLATE LOCATION AND ORIENTATION



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



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



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

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

## PLATE SIZE

**4 X 4**

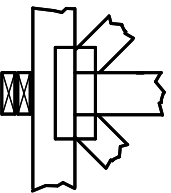
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



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

## BEARING



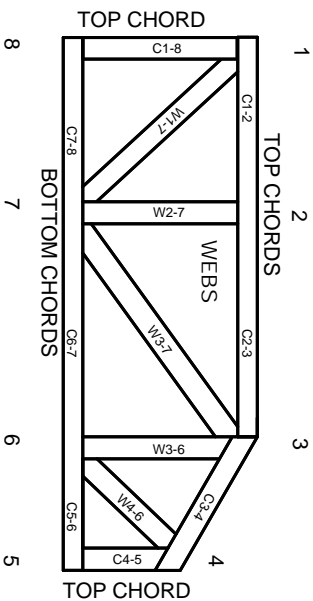
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System

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



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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



# General Safety Notes

## Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Rewriting pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.