

Trenco 818 Soundside Rd Edenton, NC 27932

Re: Kimberly\_RF

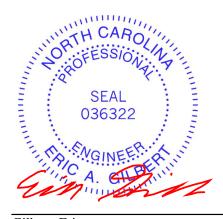
Lamco Custom Homes

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 (Albermarle, NC).

Pages or sheets covered by this seal: E12977815 thru E12977831

My license renewal date for the state of North Carolina is December 31, 2019.

North Carolina COA: C-0844



April 30,2019

Gilbert, Eric

**IMPORTANT NOTE:** Truss Engineer's responsibility is solely for design of individual trusses based upon design parameters shown on referenced truss drawings. Parameters have not been verified as appropriate for any use. Any location identification specified is for file reference only and has not been used in preparing design. Suitability of truss designs for any particular building is the responsibility of the building designer, not the Truss Engineer, per ANSI/TPI-1, Chapter 2.

Job Truss Truss Type Qty amco Custom Homes E12977815 Kimberly\_RF A01 COMMON Job Reference (optional) 8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Apr 29 13:59:26 2019 Page 1 ID:hOiCkMitwqziZH2QbN9YLozeyKu-5ehyOX83Nz3cW1Q80QGKOkQ0wcWXgfJh1ztoVyzLqxl Albemarle , NC 28001 Builders FirstSource. 25-10-0 0-10-8 -0-10-8 0-10-8 18-5-13 24-11-8 6-5-11 12-5-12 6-5-11 6-0-1 Scale = 1:46.0 4x6 | 7.00 12 1.5x4 \\ 1.5x4 // 5 3 15 10 9 16 8 3x4 / 3x4 3x4 = 3x6 =3x4 = 0-0-8 0-0-8 8-5-11 16-5-13 24-11-0 24-1,1-8 0-0-8 8-5-3 8-0-2 8-5-3 [2:0-2-4,0-1-8], [6:0-2-4,0-1-8] SPACING-CSI. DEFL. I /d **PLATES GRIP** 2-0-0 in (loc) I/defl

Plate Offsets (X,Y)-LOADING (psf)

TCLL (roof) 20.0 Plate Grip DOL 1.15 TC 0.54 Vert(LL) -0.18 Snow (Pf/Pg) 15.4/20.0 -0.27 Lumber DOL 1.15 BC 0.72 Vert(CT) **TCDL** 10.0 Rep Stress Incr YES WB 0.24 Horz(CT) 0.05 **BCLL** 0.0 Code IRC2015/TPI2014 Matrix-SH BCDL 10.0

244/190 8-10 >999 240 MT20 180 2-10 >999 6 n/a n/a Weight: 120 lb FT = 20%

LUMBER-**BRACING-**2x4 SP No.2 TOP CHORD

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

TOP CHORD Structural wood sheathing directly applied or 4-0-15 oc purlins. **BOT CHORD** Rigid ceiling directly applied or 10-0-0 oc bracing.

(lb/size) 2=925/0-3-8, 6=925/0-3-8 REACTIONS.

Max Horz 2=-164(LC 14)

Max Uplift 2=-68(LC 16), 6=-68(LC 17) Max Grav 2=1048(LC 2), 6=1048(LC 2)

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

TOP CHORD 2-3=-1539/99, 3-4=-1376/142, 4-5=-1376/142, 5-6=-1539/99

**BOT CHORD** 2-10=-106/1349, 8-10=0/871, 6-8=-4/1265

WEBS 4-8=-78/638, 5-8=-358/187, 4-10=-78/638, 3-10=-357/187

### NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 12-5-12, Exterior(2) 12-5-12 to 15-5-12, Interior(1) 15-5-12 to 25-10-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.



MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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 permanent. 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job Truss Truss Type Qty amco Custom Homes E12977816 Kimberly\_RF A01B COMMON Job Reference (optional) Albemarle , NC 28001 8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Apr 29 13:59:27 2019 Page 1 ID:hOiCkMitwqziZH2QbN9YLozeyKu-ZrFKbt9h8HBT7A?Ka7nZwxzBu?tiP2HrFdcy1PzLqxk Builders FirstSource. 12-5-12 18-5-13 24-11-8 25-10-0 0-10-8 6-5-11 6-0-6-5-11 6-0-1 Scale = 1:49.5 4x6 || 17 7.00 12 1.5x4 \\ 1.5x4 // 9 20 8 21 15 13 3x4 = 3x4 = 3x6 = 1.5x4 II 3x6 = 5x6 = 4x8 // 4x8 1 4x4 = 8-5-11 0-3-1 13-9-12 24-11-8 0-0-8 8-2-10 12-5-12 16-5-13 24-11-0 0-d-8 8-2-2 4-0-1 1-4-0 2-8-1 8-5-3 Plate Offsets (X,Y)--[13:0-2-8,0-3-0] LOADING (psf) SPACING-CSI. DEFL. I /d **PLATES GRIP** 2-0-0 in (loc) I/defl

TCLL (roof) 20.0

Plate Grip DOL TC 0.53 1.15 Snow (Pf/Pg) 15.4/20.0 Lumber DOL 1.15 BC 0.66 10.0 Rep Stress Incr YES WB 0.45 0.0 Code IRC2015/TPI2014 Matrix-SH 10.0

Vert(LL) -0.09 2-15 >999 240 180 Vert(CT) -0.21 2-15 >999 Horz(CT) 0.05 6 n/a n/a

MT20 244/190 Weight: 143 lb FT = 20%

**BRACING-**

TOP CHORD **BOT CHORD**  Structural wood sheathing directly applied or 3-10-8 oc purlins. Rigid ceiling directly applied or 10-0-0 oc bracing. Except:

6-0-0 oc bracing: 10-14

(lb/size) 2=1009/0-3-8, 6=1009/0-3-8 REACTIONS.

2x4 SP No.2

2x4 SP No.2

2x4 SP No.3

Max Horz 2=-164(LC 14) Max Uplift 2=-17(LC 16), 6=-17(LC 17) Max Grav 2=1142(LC 30), 6=1143(LC 31)

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

TOP CHORD 2-3=-1758/0, 3-4=-1682/80, 4-5=-1686/80, 5-6=-1762/0

**BOT CHORD** 2-15=-18/1551, 13-15=0/956, 9-13=0/1589, 8-9=0/980, 6-8=0/1431, 12-14=-792/0,

11-12=-792/0, 10-11=-792/0

**WEBS** 4-10=-49/858, 8-10=-142/716, 5-8=-361/195, 14-15=-145/707, 4-14=-49/851,

3-15=-362/195, 13-14=0/770, 9-10=0/772

### NOTES-

**TCDL** 

**BCLL** 

BCDL

**WEBS** 

LUMBER-

TOP CHORD

**BOT CHORD** 

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 12-5-12, Exterior(2) 12-5-12 to 15-5-12, Interior(1) 15-5-12 to 25-10-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 6. This connection is for uplift only and does not consider lateral forces.



MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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 permanent. 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.





8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Apr 29 13:59:29 2019 Page 1 ID:hOiCkMitwqziZH2QbN9YLozeyKu-VDN40YAxguRBNU9iiYp10M2eqph6t1y8jx526HzLqxi 24-11-8 25-10-0 0-10-8 12-5-12 12-5-12

Scale = 1.53.03x6 = 1.5x4 || 1.5x4 || R 9 1.5x4 II 1.5x4 II 10 7.00 12 1.5x4 II 1.5x4 || 11 1.5x4 || 1.5x4 12 1.5x4 || 1.5x4 || 3x4 1.5x4 П Ш 1.5x4 Ш 1.5x4 || 1.5x4 П Ш 1.5x4 Ш 1.5x4 1.5x4 Ш 1.5x4 Ш 1.5x4 1.5x4 - 11

<del>                                     </del>		24-11-0				0-0-8			
Plate Offsets (X,Y) [8:0-3-0,Edge]									
LOADING (psf) TCLL (roof) 20.0 Snow (Pf/Pg) 15.4/20.0 TCDL 10.0 BCLL 0.0 * BCDL 10.0	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IRC2015/TPI2014	CSI. TC 0.12 BC 0.08 WB 0.11 Matrix-SH	DEFL.         i           Vert(LL)         -0.00           Vert(CT)         -0.0           Horz(CT)         0.0	2-26 : 1 2-26 :	l/defl L/d >999 240 >999 180 n/a n/a	PLATES MT20 Weight: 146 lb	<b>GRIP</b> 244/190 FT = 20%		

24-11-0

21

LUMBER-**BRACING-**

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

2x4 SP No.3

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

24-11-8

REACTIONS. All bearings 24-10-8.

(lb) - Max Horz 2=-164(LC 14)

Max Uplift All uplift 100 lb or less at joint(s) 22, 24, 25, 26, 19, 18, 17, 16

All reactions 250 lb or less at joint(s) 2, 21, 22, 24, 25, 20, 19, 18, 17, 14, 14 except 26=278(LC Max Grav

24

23 22

3x6 =

30), 16=278(LC 31)

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

26

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-1-8, Exterior(2) 2-1-8 to 12-5-12, Corner(3) 12-5-12 to 15-5-12, Exterior(2) 15-5-12 to 25-10-0 zone; cantilever 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) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 22, 24, 25, 26, 19, 18, 17, 16.



MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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 permanent. 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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job Truss Truss Type Qty amco Custom Homes E12977818 Kimberly\_RF B01A COMMON Job Reference (optional)

Albemarle, NC 28001 Builders FirstSource.

8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Apr 29 13:59:30 2019 Page 1 ID:hOiCkMitwqziZH2QbN9YLozeyKu-zPxTDuBaRCZ2\_ekvFGKGYabljDtucQaHxarcekzLqxh

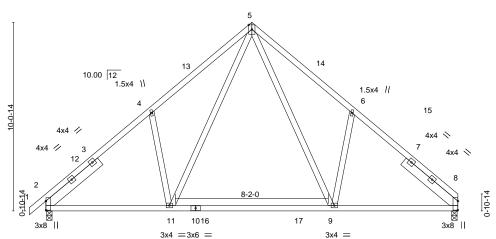
11-0-0 22-0-0 22-10-8 0-10-8 5-7-12 16-4-4 5-7-12

4x6 ||

Scale = 1:61.5

Structural wood sheathing directly applied or 5-3-2 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.



15-2-14 22-0-0 0-0-8 6-9-1 14-6-13 21-11-8 0-8-2 0-8-1 6-8-9 7-1-11 6-8-10

**BRACING-**

TOP CHORD

**BOT CHORD** 

Plate Offsets (X,Y)-- [2:0-5-13,0-0-2], [8:0-5-13,0-0-2]

LOADING (psf) TCLL (roof) 20.0 Snow (Pf/Pg) 15.4/20.0 TCDL 10.0 BCLL 0.0 *	SPACING-         2-0-0           Plate Grip DOL         1.15           Lumber DOL         1.15           Rep Stress Incr         YES	CSI. TC 0.36 BC 0.75 WB 0.35	DEFL. Vert(LL) Vert(CT) Horz(CT)	in -0.25 -0.38 0.02	(loc) 9-11 9-11 8	l/defl >999 >694 n/a	L/d 240 180 n/a	PLATES MT20	<b>GRIP</b> 244/190
BCDL 10.0	Code IRC2015/TPI2014	Matrix-SH						Weight: 141 lb	FT = 20%

LUMBER-TOP CHORD

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

SLIDER Left 2x6 SP No.2 3-8-14, Right 2x6 SP No.2 3-8-14

REACTIONS. (lb/size) 8=778/0-3-8, 2=824/0-3-8

Max Horz 2=207(LC 11)

Max Uplift 8=-28(LC 15), 2=-43(LC 14) Max Grav 8=879(LC 2), 2=934(LC 2)

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

TOP CHORD 2-4=-1100/81, 4-5=-1030/209, 5-6=-1033/210, 6-8=-1103/85

BOT CHORD 2-11=-76/863, 9-11=0/575, 8-9=0/763

**WEBS** 5-9=-159/581, 6-9=-294/241, 5-11=-158/577, 4-11=-295/240

### NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 11-0-0, Exterior(2) 11-0-0 to 14-0-0, Interior(1) 14-0-0 to 22-0-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 2.



MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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Job Truss Truss Type Qty PΙν amco Custom Homes E12977819 Kimberly\_RF B01E GABLE Job Reference (optional)

Builders FirstSource.

Albemarle, NC 28001

8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Apr 29 13:59:31 2019 Page 1 ID: hOiCkMitwqziZH2QbN9YLozeyKu-RcUrRECCCWhvcoJ5pzsV5n8? AcNdLxKQAEa9AAzLqxg

Structural wood sheathing directly applied or 6-0-0 oc purlins.

8-24, 10-23

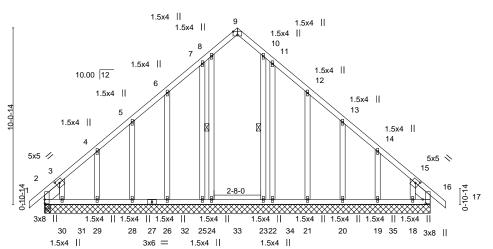
Rigid ceiling directly applied or 10-0-0 oc bracing.

1 Row at midpt

-0<u>-10-8</u> 11-0-0 22-0-0 22-10-8 0-10-8 11-0-0 11-0-0

3x6 =

Scale = 1:65.7



0-0<u>-8</u> 0-0-8 22-0-0 21-11-8

	Plate Offsets (X,Y)	[2:0-2-12,0-0-2], [3:0-2	-8,0-2-4], [9:0-3-0,Edge], [1	5:0-2-8,0-2-4], [16:0-2-12,0-2-2]	
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LOADING (psf) TCLL (roof) 20.0 Snow (Pf/Pg) 15.4/20.0 TCDL 10.0	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES	CSI. TC 0.06 BC 0.08 WB 0.12	DEFL.         in (loc)         l/defl         L/d           Vert(LL)         -0.00         23-24         >999         240           Vert(CT)         -0.00         23-24         >999         180           Horz(CT)         0.01         16         n/a         n/a	<b>PLATES GRIP</b> MT20 244/190
BCLL 0.0 * BCDL 10.0	Code IRC2015/TPI2014	Matrix-SH		Weight: 177 lb FT = 20%

**BRACING-**

WEBS

TOP CHORD

**BOT CHORD** 

LUMBER-

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

Left 2x6 SP No.2 1-3-2, Right 2x6 SP No.2 1-3-2 SLIDER

REACTIONS. All bearings 22-0-0.

Max Horz 2=-209(LC 12) (lb) -

Max Uplift All uplift 100 lb or less at joint(s) 2, 24, 25, 26, 28, 29, 22, 21, 20, 19, 16 except 30=-195(LC 14),

18=-189(LC 15)

Max Grav All reactions 250 lb or less at joint(s) 2, 24, 23, 25, 26, 28, 29, 30, 22, 21, 20, 19, 18 except

2=323(LC 14), 16=308(LC 15)

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

TOP CHORD 2-3=-415/273, 3-4=-257/158, 15-16=-397/274

**BOT CHORD** 2-30=-171/258, 29-30=-171/258, 28-29=-171/258, 26-28=-171/258, 25-26=-171/258,

24-25=-171/258, 23-24=-171/258, 22-23=-171/258, 21-22=-171/258, 20-21=-171/258,

19-20=-171/258, 18-19=-171/258, 16-18=-171/258

### NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-1-8, Exterior(2) 2-1-8 to 11-0-0, Corner(3) 11-0-0 to 14-0-0, Exterior(2) 14-0-0 to 22-10-8 zone; cantilever 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) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 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.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 24, 25, 26, 28, 29, 22, 21, 20, 19, 16 except (jt=lb) 30=195, 18=189.



MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 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 fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Qua Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



Job Truss Truss Type Qty Lamco Custom Homes E12977820 Kimberly\_RF B02G COMMON 4 Job Reference (optional)

Builders FirstSource. Albemarle, NC 28001

8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Apr 29 13:59:32 2019 Page 1 ID:hOiCkMitwqziZH2QbN9YLozeyKu-wo2DeaCqzppmEyuHNhNkd?g?q0dk4luaPuKiiczLqxfulldarukunldarukulldarukulldarukulldarukulldarukulldarukulldarukurukulldarukulldarukulldarukulldarukulldarukulldarukulldarukulldarukulldar

Structural wood sheathing directly applied or 6-0-0 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.



Scale = 1.62.0

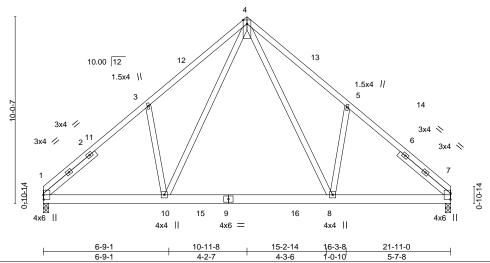


Plate Offsets (X,Y)-- [1:0-3-0,0-0-4], [7:0-3-13,0-0-4]

LOADING (psf) TCLL (roof) 20.0 Snow (Pf/Pg) 15.4/20.0 TCDL 10.0 BCLL 0.0 * BCDL 10.0	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr NO Code IRC2015/TPI2014	CSI. TC 0.71 BC 0.47 WB 0.49 Matrix-SH	( )	in (loc) -0.05 8-10 -0.10 8-10 0.04 7	l/defl >999 >999 n/a	L/d 240 180 n/a	PLATES MT20 MT18HS Weight: 600 lb	<b>GRIP</b> 244/190 244/190 FT = 20%

**BRACING-**

TOP CHORD

**BOT CHORD** 

LUMBER-

TOP CHORD 2x4 SP 2400F 2.0E **BOT CHORD** 2x6 SP No.2

2x4 SP No.3 **WEBS** SLIDER Left 2x4 SP No.3 3-7-10, Right 2x4 SP No.3 3-6-15

REACTIONS. (lb/size) 1=7625/0-3-8, 7=7625/0-3-8

Max Horz 1=-203(LC 12)

Max Uplift 1=-893(LC 14), 7=-893(LC 15) Max Grav 1=8616(LC 2), 7=8616(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 1-3=-11247/1154, 3-4=-10038/1178, 4-5=-10145/1192, 5-7=-11257/1154

**BOT CHORD** 1-10=-804/7323, 8-10=-469/5025, 7-8=-715/7306

**WEBS** 4-10=-550/4050, 4-8=-558/4090, 5-8=-3484/596, 3-10=-3448/589

### NOTES-

- 1) 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:
  - Top chords connected as follows: 2x4 1 row at 0-9-0 oc.
  - Bottom chords connected as follows: 2x6 2 rows staggered at 0-9-0 oc.
  - Webs connected as follows: 2x4 1 row at 0-9-0 oc.
  - Attach TC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 oc.
- 2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- 3) Unbalanced roof live loads have been considered for this design.
- 4) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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 10-11-8, Exterior(2) 10-11-8 to 13-11-8, Interior(1) 13-11-8 to 21-11-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 5) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 6) All plates are MT20 plates unless otherwise indicated.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 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.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=893, 7=893,

LOAD CASE(S) Standard

## ORTH

April 30,2019

### Continued on page

MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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Job Truss Truss Type Qty Ply Lamco Custom Homes E12977820 Kimberly\_RF B02G COMMON 4 Job Reference (optional)

Builders FirstSource,

Albemarle, NC 28001

8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Apr 29 13:59:32 2019 Page 2 ID:hOiCkMitwqziZH2QbN9YLozeyKu-wo2DeaCqzppmEyuHNhNkd?g?q0dk4luaPuKiiczLqxf

LOAD CASE(S) Standard

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

Vert: 1-4=-676, 4-7=-676, 1-7=-20





8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Apr 29 13:59:33 2019 Page 1 ID:hOiCkMitwqziZH2QbN9YLozeyKu-O\_cbswDSk7xcr5SUxOuzACDC?Q\_ppsjjeY3GF3zLqxe -0-10-8 6-0-0 6-0-0

1.5x4 || 3 3.00 12 6 9-9-1 5 2 0-3-14 0-3-8 1.5x4 ||

Plate Offsets (X,Y) [2:0-3-4,Edge]												
TCDL	20.0 5.4/20.0 10.0	SPACING- Plate Grip DOL Lumber DOL Rep Stress Incr	2-0-0 1.15 1.15 YES	CSI. TC BC WB	0.62 0.42 0.00	DEFL. Vert(LL) Vert(CT) Horz(CT)	in -0.06 -0.13 0.00	(loc) 2-4 2-4	l/defl >999 >532 n/a	L/d 240 180 n/a	PLATES MT20	<b>GRIP</b> 244/190
BCLL BCDL	0.0 * 10.0	Code IRC2015/T	PI2014	Matr	ix-P						Weight: 21 lb	FT = 20%

LUMBER-**BRACING-**

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 except end verticals. 2x4 SP No.3 **WEBS BOT CHORD** Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 2=258/0-3-0, 4=198/0-1-8

0-10-8

Max Horz 2=58(LC 12)

Max Uplift 2=-54(LC 12), 4=-30(LC 16) Max Grav 2=294(LC 2), 4=224(LC 2)

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

### NOTES-

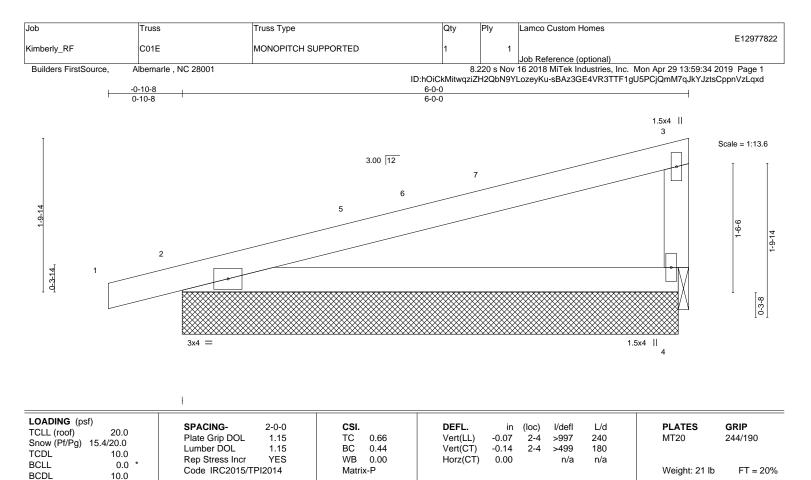
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 5-10-4 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

  2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat
- roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10; Min. flat roof snow load governs.
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 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) 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.
- 8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.



Scale = 1:13.3





**BRACING-**

TOP CHORD

**BOT CHORD** 

LUMBER-

REACTIONS.

**WEBS** 

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

2x4 SP No.3

(lb/size) 4=204/5-10-8, 4=204/5-10-8, 2=255/5-10-8 Max Horz 2=58(LC 12)

Max Uplift 4=-31(LC 16), 2=-50(LC 12)

Max Grav 4=230(LC 2), 4=204(LC 1), 2=291(LC 2)

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

### NOTES-

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-1-8, Exterior(2) 2-1-8 to 5-10-4 zone; cantilever 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) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10; Min. flat roof snow load governs.
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4, 2.



Structural wood sheathing directly applied or 6-0-0 oc purlins,

Rigid ceiling directly applied or 10-0-0 oc bracing.

except end verticals.

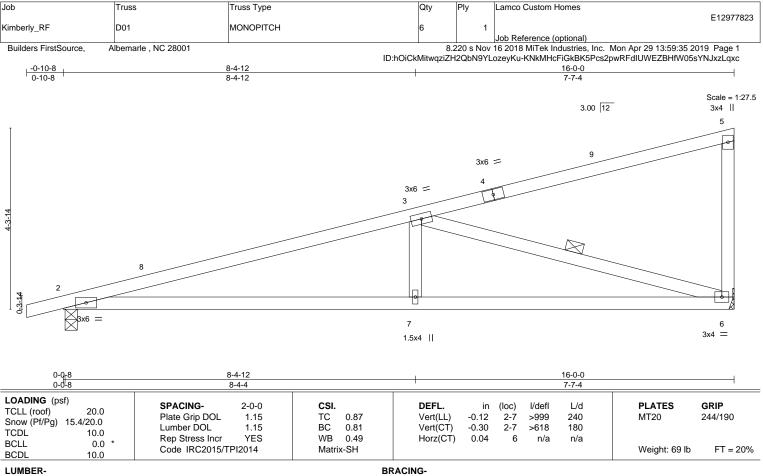




Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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 in-jury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see 

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TOP CHORD

**BOT CHORD** 

WEBS

LUMBER-

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

2x4 SP No.3 **WEBS** 

REACTIONS. (lb/size) 6=554/Mechanical, 2=610/0-3-8

Max Horz 2=140(LC 12)

Max Uplift 6=-86(LC 16), 2=-87(LC 12) Max Grav 6=636(LC 23), 2=692(LC 2)

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

TOP CHORD 2-3=-1498/111

**BOT CHORD** 2-7=-193/1399, 6-7=-193/1399 **WEBS** 3-7=0/365, 3-6=-1421/196

### NOTES-

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 15-10-4 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10; Min. flat roof snow load governs.
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 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) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2.



Structural wood sheathing directly applied or 2-2-0 oc purlins,

Rigid ceiling directly applied or 10-0-0 oc bracing.

except end verticals.

1 Row at midpt



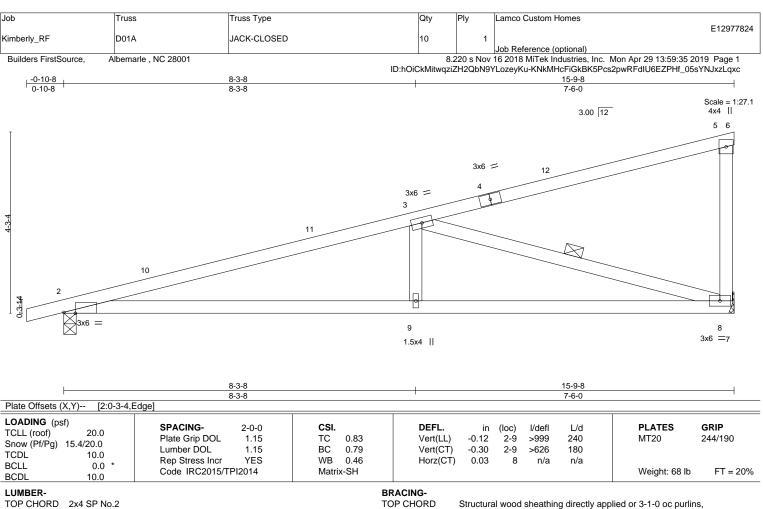
MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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Edenton, NC 27932



**BOT CHORD** 

WEBS

except end verticals.

1 Row at midpt

Rigid ceiling directly applied or 10-0-0 oc bracing.

3-8

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

2x4 SP No.3 **WEBS** 

REACTIONS. (lb/size) 8=559/Mechanical, 2=601/0-3-8

Max Horz 2=139(LC 12)

Max Uplift 8=-85(LC 12), 2=-86(LC 12) Max Grav 8=643(LC 23), 2=682(LC 2)

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

TOP CHORD 2-3=-1462/103

**BOT CHORD** 2-9=-185/1364, 8-9=-185/1364 **WEBS** 3-9=0/354, 3-8=-1372/186

### NOTES-

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 15-9-8 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10; Min. flat roof snow load governs.
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 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) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 2.





MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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Job Truss Truss Type Qty amco Custom Homes E12977825 Kimberly\_RF D01E MONOPITCH SUPPORTED Job Reference (optional)

Builders FirstSource.

Albemarle, NC 28001

8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Apr 29 13:59:36 2019 Page 1 ID: hOiCkMitwqziZH2QbN9YLozeyKu-oZlkUyFK12JBiZB3cWRgorrncd390DbAKWIwsNzLqxb

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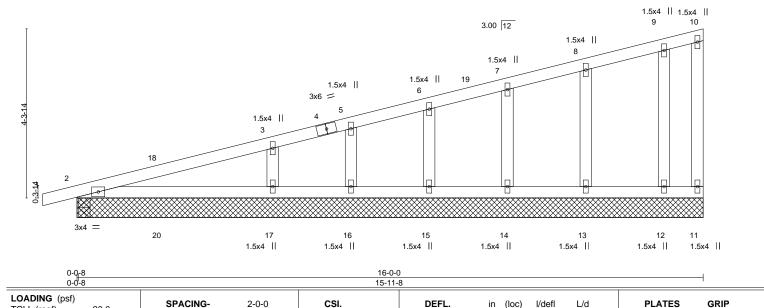
Scale = 1:29 4

244/190

FT = 20%

MT20

Weight: 76 lb



TC

BC

WB

Matrix-SH

0.27

0.19

0.06

Code IRC2015/TPI2014 LUMBER-**BRACING-**

Plate Grip DOI

Rep Stress Incr

Lumber DOL

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

20.0

10.0

10.0

0.0

15.4/20.0

**OTHERS** 2x4 SP No.3 TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.

>999

>999

n/a

240

180

n/a

**BOT CHORD** 

Vert(LL)

Vert(CT)

Horz(CT)

0.03 2-17

-0.03

-0.00

2-17

11

Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 16-0-0.

(lb) - Max Horz 2=140(LC 12)

Max Uplift All uplift 100 lb or less at joint(s) 11, 2, 16, 17, 15, 14, 13, 12

Max Grav All reactions 250 lb or less at joint(s) 11, 2, 2, 16, 15, 14, 13, 12 except 17=410(LC 2)

1 15

1.15

YES

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

**WEBS** 3-17=-285/153

TCLL (roof)

TCDL

**BCLL** 

BCDL

Snow (Pf/Pg)

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-1-8, Exterior(2) 2-1-8 to 15-10-4 zone; cantilever 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) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10; Min. flat roof snow load governs.
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11, 2, 16, 17, 15, 14, 13, 12.





MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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Job Truss Truss Type Qty Lamco Custom Homes E12977826 Kimberly\_RF D01G FLAT GIRDER 4 Job Reference (optional) Albemarle , NC 28001 8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Apr 29 13:59:38 2019 Page 1 Builders FirstSource. 10-2-4 5-2-0 15-2-2 20-4-2

5-0-4

10-2-4

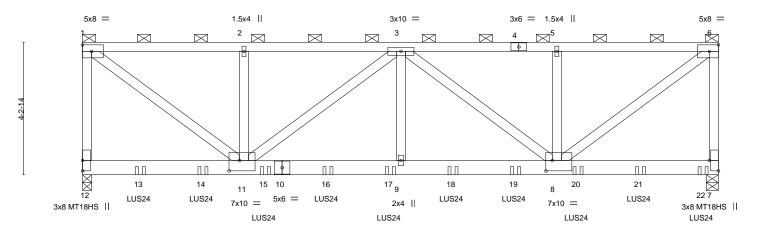
Scale = 1:36.9

5-2-0

20-4-2

2-0-0 oc purlins (6-0-0 max.): 1-6, except end verticals.

Rigid ceiling directly applied or 10-0-0 oc bracing.



,	5-2-0	5-0-4	4-11-14	'	5-2-0
Plate Offsets (X,Y) [7:Edge,0	0-3-8], [8:0-2-8,0-4-0], [11:0-4-0,0-4-0]				
LOADING (psf) TCLL (roof) 20.0 Snow (Pf/Pg) 20.4/20.0 TCDL 10.0 BCLL 0.0 * BCDL 10.0	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr NO Code IRC2015/TPI2014	CSI. TC 0.60 BC 0.95 WB 0.70 Matrix-SH	DEFL.         in (loc           Vert(LL)         -0.10           Vert(CT)         -0.19         9-1           Horz(CT)         0.04	9 >999 240	PLATES GRIP MT20 244/190 MT18HS 244/190 Weight: 555 lb FT = 20%

**BRACING-**

TOP CHORD

**BOT CHORD** 

15-2-2

LUMBER-

TOP CHORD 2x4 SP 2400F 2.0E BOT CHORD 2x6 SP No.2 WEBS 2x4 SP No.1 \*Except\*

1-12,6-7: 2x4 SP No.2, 2-11,3-9,5-8: 2x4 SP No.3

**REACTIONS.** (lb/size) 12=11164/0-3-8, 7=11594/0-4-10

Max Uplift 12=-1367(LC 6), 7=-1429(LC 6)

5-2-0

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 1-12=-10580/1310, 1-2=-11693/1439, 2-3=-11693/1439, 3-5=-11689/1438,

5-6=-11689/1438, 6-7=-10579/1310 BOT CHORD 9-11=-1878/15256, 8-9=-1878/15256

WEBS 1-11=-1782/14484, 2-11=-4392/575, 3-11=-4497/554, 3-9=-184/1648, 3-8=-4512/556,

5-8=-4373/572, 6-8=-1780/14477

### NOTES-

1) 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:

Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.

Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-8-0 oc.

Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.

Attach TC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 oc.

Attach BC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 oc.

- 2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- 3) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 4) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=20.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
- 5) Provide adequate drainage to prevent water ponding.
- 6) All plates are MT20 plates unless otherwise indicated.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=1367, 7=1429.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 11) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-10-4 from the left end to 19-10-4 to connect truss(es) to front face of bottom chord.
- 12) Fill all nail holes where hanger is in contact with lumber.

### Continued on page 2

### LOAD CASE(S) Standard WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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\*\*ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information\*\* available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.





Job Truss Truss Type Qty Lamco Custom Homes Ply E12977826 Kimberly\_RF D01G FLAT GIRDER 4 Job Reference (optional)

Builders FirstSource,

Albemarle, NC 28001

8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Apr 29 13:59:38 2019 Page 2 ID:hOiCkMitwqziZH2QbN9YLozeyKu-kyQUvdHbZfavytLRjxU8tGw2\_RZhUz1Snqn1wGzLqxZ

LOAD CASE(S) Standard

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

Uniform Loads (plf)

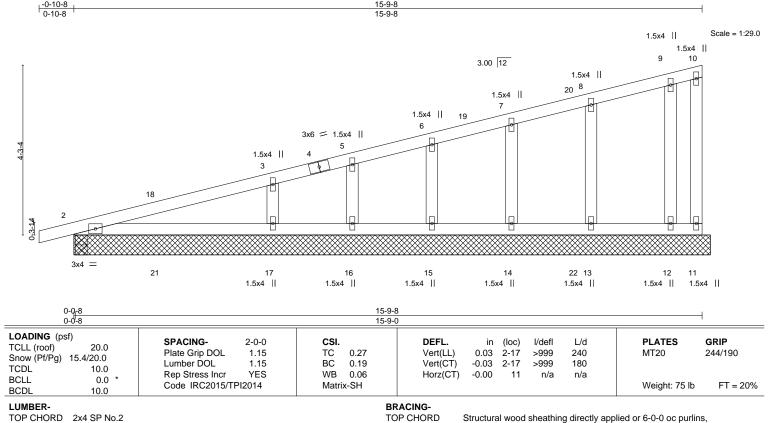
Vert: 1-6=-804, 7-12=-20

Concentrated Loads (lb)

Vert: 13=-623(F) 14=-623(F) 15=-623(F) 16=-623(F) 17=-623(F) 18=-623(F) 19=-623(F) 20=-623(F) 21=-623(F) 22=-630(F)



Job	Truss	Truss Type	Qty	Ply		Lamco Custom Homes		
							E12977827	
Kimberly_RF	D02E	MONOPITCH SUPPORTED	1		1			
						Job Reference (optional)		
Builders FirstSource,	Albemarle , NC 28001	8.220 s Nov 16 2018 MiTek Industries, Inc. Mon Apr 29 13:59:39 2019 Page 1						
		ID:hOiCkMitwqziZH2QbN9YLozeyKu-C8zs6zIDKzimZ0wdHf?NQTTIsr5sDaKc0UWaSizLqxY						
0.40.0			4500			-		



**BOT CHORD** 

except end verticals.

Rigid ceiling directly applied or 10-0-0 oc bracing.

2x4 SP No.3 WEBS 2x4 SP No.3 **OTHERS** 

2x4 SP No.2

REACTIONS. All bearings 16-0-0. (lb) - Max Horz 2=138(LC 12)

Max Uplift All uplift 100 lb or less at joint(s) 11, 2, 16, 17, 15, 14, 13, 12

Max Grav All reactions 250 lb or less at joint(s) 11, 2, 2, 16, 15, 14, 13, 12 except 17=410(LC 2)

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

**WEBS** 3-17=-285/154

BOT CHORD

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-1-8, Exterior(2) 2-1-8 to 15-7-12 zone; cantilever 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) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10; Min. flat roof snow load governs.
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11, 2, 16, 17, 15, 14, 13, 12.



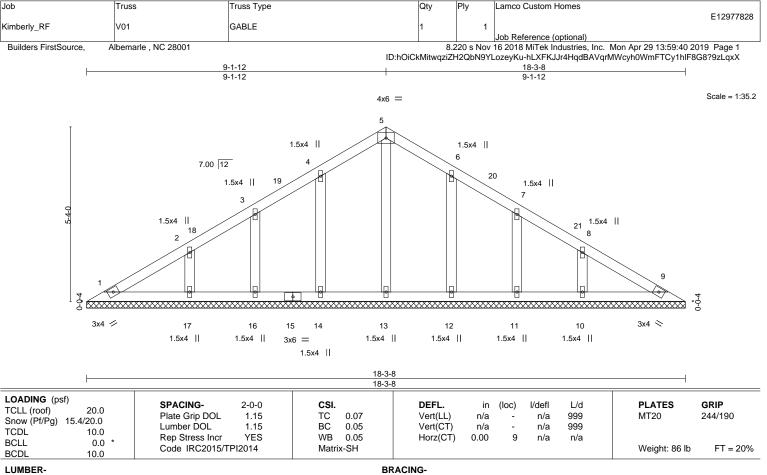


MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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 in-jury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see 

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LUMBER-

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

TOP CHORD **BOT CHORD**  Structural wood sheathing directly applied or 6-0-0 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 18-3-8.

> Max Horz 1=-106(LC 12) (lb) -

> > Max Uplift All uplift 100 lb or less at joint(s) 1, 14, 16, 17, 12, 11, 10

Max Grav All reactions 250 lb or less at joint(s) 1, 9, 13, 14, 16, 17, 12, 11, 10

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

### NOTES-

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-6-8 to 3-6-8, Interior(1) 3-6-8 to 9-1-12, Exterior(2) 9-1-12 to 12-1-12, Interior(1) 12-1-12 to 17-9-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 14, 16, 17, 12, 11, 10.



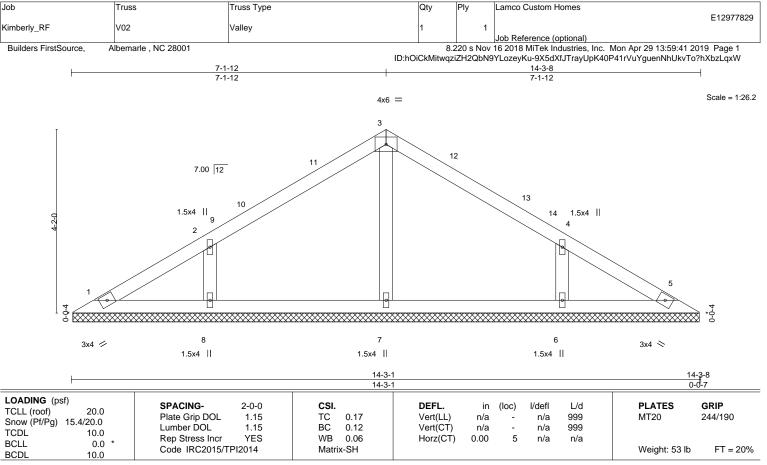


MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE. Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not

Design Valid to Use Only With New Connectors. This design is based only upon parameters shown, and is for an individual orbit middle of the property of 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 

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LUMBER-

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

**BRACING-**

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

REACTIONS. All bearings 14-2-11.

(lb) -Max Horz 1=-81(LC 12)

Max Uplift All uplift 100 lb or less at joint(s) 1, 8, 6

Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=273(LC 2), 8=321(LC 29), 6=320(LC 30)

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 (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-6-8 to 3-6-8, Interior(1) 3-6-8 to 7-1-12, Exterior(2) 7-1-12 to 10-1-12, Interior(1) 10-1-12 to 13-9-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 8, 6.

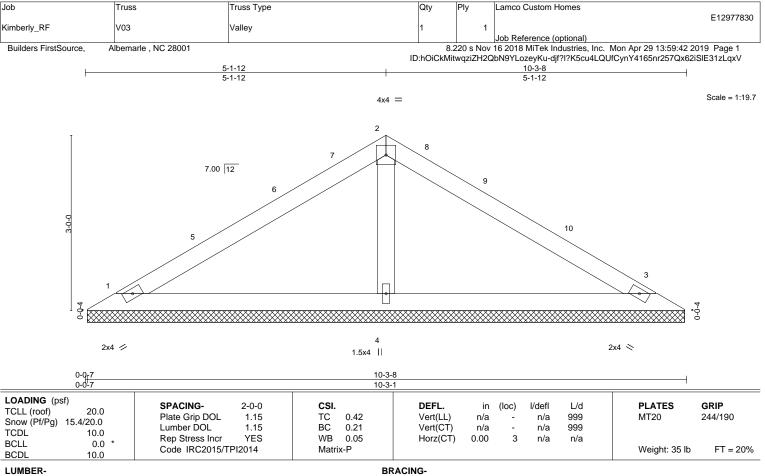




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TOP CHORD

**BOT CHORD** 

LUMBER-

REACTIONS.

TOP CHORD 2x4 SP No.2

**BOT CHORD** 2x4 SP No.2

2x4 SP No.3 **OTHERS** 

(lb/size) 1=168/10-2-11, 3=168/10-2-11, 4=315/10-2-11

Max Horz 1=-57(LC 12)

Max Uplift 1=-30(LC 16), 3=-37(LC 17)

Max Grav 1=193(LC 2), 3=193(LC 2), 4=352(LC 2)

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 (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-6-8 to 3-6-8, Interior(1) 3-6-8 to 5-1-12, Exterior(2) 5-1-12 to 8-1-12, Interior(1) 8-1-12 to 9-9-0 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



Structural wood sheathing directly applied or 6-0-0 oc purlins.

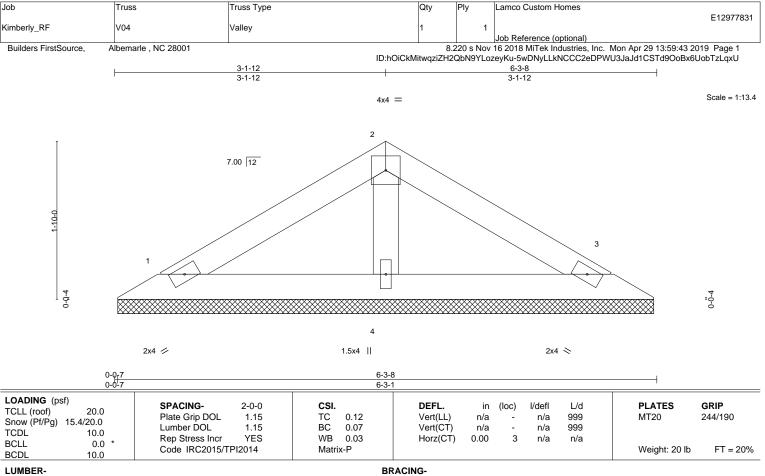
Rigid ceiling directly applied or 10-0-0 oc bracing.

MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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TOP CHORD

**BOT CHORD** 

REACTIONS.

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

2x4 SP No.3 **OTHERS** 

(lb/size) 1=95/6-2-11, 3=95/6-2-11, 4=178/6-2-11

Max Horz 1=-32(LC 12)

Max Uplift 1=-17(LC 16), 3=-21(LC 17)

Max Grav 1=109(LC 2), 3=109(LC 2), 4=199(LC 2)

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 (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-10; PI=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



Structural wood sheathing directly applied or 6-0-0 oc purlins.

Rigid ceiling directly applied or 10-0-0 oc bracing.



MARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

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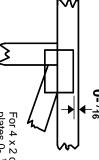


### **Symbols**

# PLATE LOCATION AND ORIENTATION



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



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

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

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

### PLATE SIZE

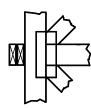
to slots. Second dimension is the length parallel to slots. width measured perpendicular The first dimension is the plate

## LATERAL BRACING LOCATION



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

### **BEARING**



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

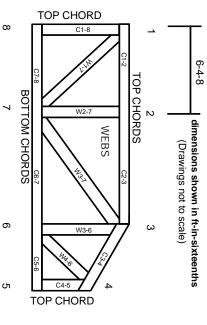
## Industry Standards:

National Design Specification for Metal

DSB-89: ANSI/TPI1:

Guide to Good Practice for Handling **Building Component Safety Information** Design Standard for Bracing. Connected Wood Trusses. Installing & Bracing of Metal Plate Plate Connected Wood Truss Construction.

# Numbering System



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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MiTek Engineering Reference Sheet: MII-7473 rev. 10/03/2015

# General Safety Notes

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

- Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI
- Ņ Truss bracing must be designed by an engineer. For bracing should be considered may require bracing, or alternative Tor I wide truss spacing, individual lateral braces themselves
- Never exceed the design loading shown and never stack materials on inadequately braced trusses.
- designer, erection supervisor, property owner and all other interested parties. Provide copies of this truss design to the building
- Cut members to bear tightly against each other

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- Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
- 7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.

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- 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 camber for dead load deflection responsibility of truss fabricator. General practice is to
- 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
- 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.
- Do not cut or alter truss member or plate without prior approval of an engineer
- 17. Install and load vertically unless indicated otherwise
- Use of green or treated lumber may pose unacceptable project engineer before use. environmental, health or performance risks. Consult with
- 19. Review all portions of this design (front, back, words is not sufficient. and pictures) before use. Reviewing pictures alone
- 20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.