

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 240\_3174\_B  
KB Home 240.3174.B

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Components - #2383.

Pages or sheets covered by this seal: I45649700 thru I45649717

My license renewal date for the state of North Carolina is December 31, 2021.

North Carolina COA: C-0844



April 15, 2021

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	KB Home 240.3174.B	145649700
240_3174_B	AE	Common Supported Gable	1	1	Job Reference (optional)	

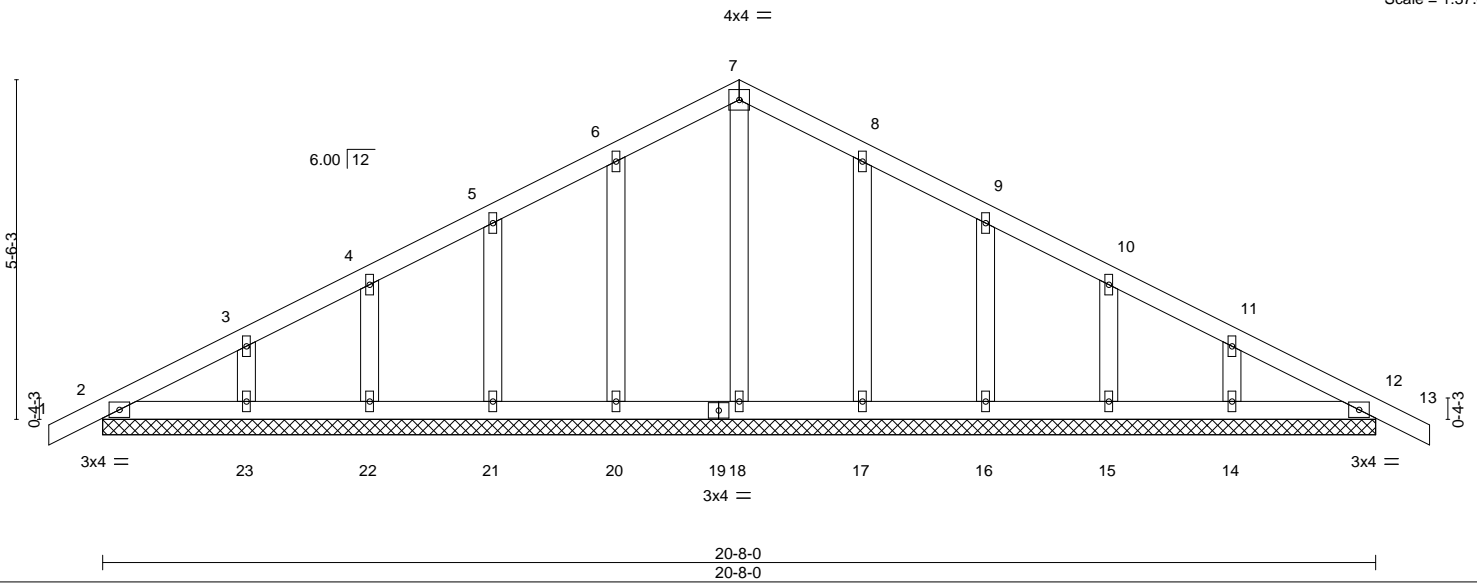
84 Components (Dunn), Dunn, NC - 28334,

8,500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:29:40 2021 Page 1

ID:nmX44zN03rkbOsnK0efyuQzR4QP-GGYBFi5j3i0pjNu2Nf?zHUfunSUhH2qOJfrLWFzQrfr



Scale = 1:37.4



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.05	in (loc) l/defl L/d	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.04	Vert(LL) -0.00 12 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.06	Vert(CT) 0.00 12 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 12 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 105 lb	FT = 20%

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

**REACTIONS.** All bearings 20-8-0.  
 (lb) - Max Horz 2=80(LC 16)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 20, 21, 22, 23, 17, 16, 15, 14, 12  
 Max Grav All reactions 250 lb or less at joint(s) 2, 18, 20, 21, 22, 23, 17, 16, 15, 14, 12

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-4-0, Exterior(2N) 2-4-0 to 10-4-0, Corner(3R) 10-4-0 to 13-4-0, Exterior(2N) 13-4-0 to 21-6-8 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 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 11.6 psf on overhangs non-concurrent with other live loads.
  - 7) All plates are 1.5x4 MT20 unless otherwise indicated.
  - 8) Gable requires continuous bottom chord bearing.
  - 9) Gable studs spaced at 2-0-0 oc.
  - 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 11) \* 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.
  - 12) N/A
  - 13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

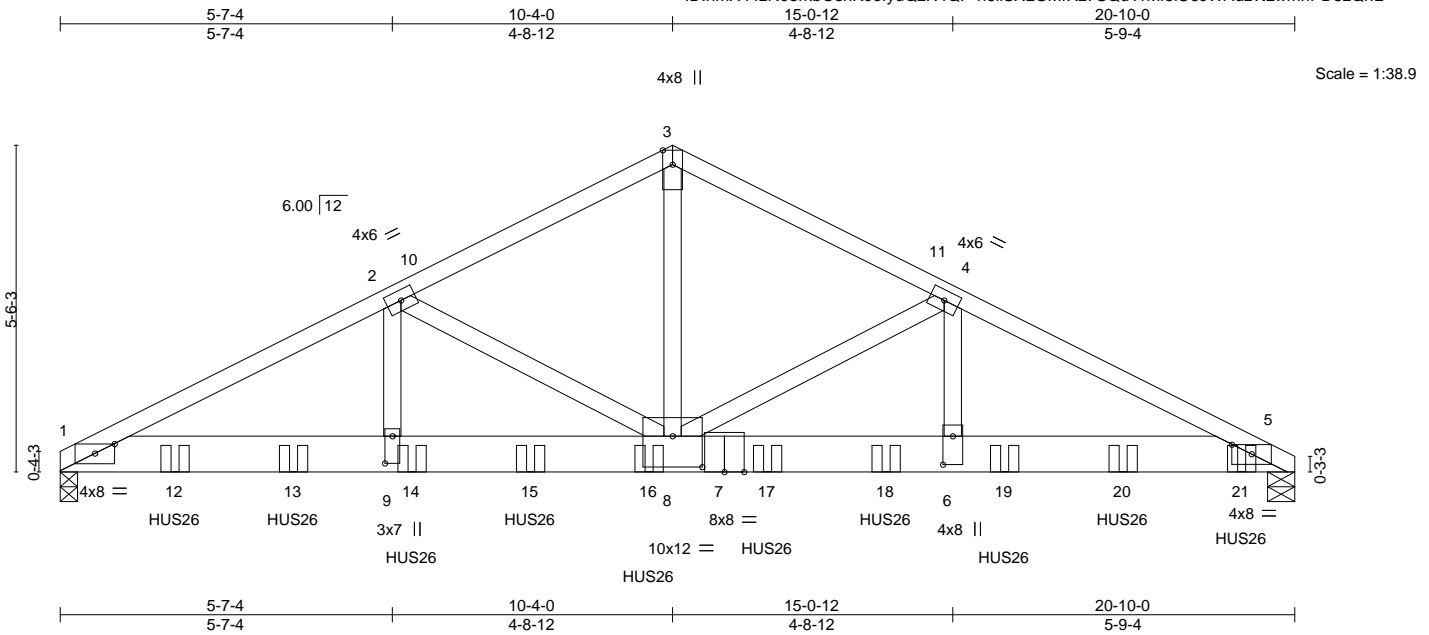


Job 240_3174_B	Truss AG	Truss Type ROOF TRUSS	Qty 1	Ply 3	KB Home 240.3174.B Job Reference (optional)	145649701
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84 Components (Dunn), Dunn, NC - 28334,

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ID:nmX44zN03rkbOsnKOfeyuQzR4QP-h6llSXLGMrXz7SQuYrMf5iU6JWAdzvtLwmhPD5zQrLL



PLY-TO-PLY CONNECTION REQUIRES THAT AN APPROVED FACE MOUNT HANGER (SPECIFIED BY OTHERS) IS REQUIRED FOR LOADS REPORTED IN NOTES. FACE MOUNT HANGER SHALL BE ATTACHED WITH A MINIMUM OF 0.148"x 3" NAILS PER HANGER MANUFACTURER SPECIFICATIONS.

Plate Offsets (X,Y)-- [1:0-4-0,0-1-15], [5:0-4-0,0-1-15], [6:0-5-12,0-2-0], [8:0-6-0,0-6-4], [9:0-5-8,0-1-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.78	Vert(LL) -0.15	8-9	>999	240	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.60	Vert(CT) -0.27	8-9	>913	180		
TCDL 10.0	Lumber DOL 1.15	WB 0.82	Horz(CT) 0.06	5	n/a	n/a		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-S						
BCDL 10.0	Code IRC2018/TPI2014						Weight: 382 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.1  
BOT CHORD 2x8 SP DSS  
WEBS 2x4 SP No.3 \*Except\*  
3-8: 2x4 SP No.2 or 2x4 SPF No.2

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-0-4 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) 1=(0-3-8 + TBE4 Simpson Strong-Tie) (req. 0-4-12), 5=0-5-8  
Max Horz 1=-72(LC 41)  
Max Uplift 1=-530(LC 12), 5=-593(LC 13)  
Max Grav 1=9137(LC 3), 5=10243(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-16591/959, 2-3=-11532/694, 3-4=-11532/695, 4-5=-16579/959  
BOT CHORD 1-9=-879/14848, 8-9=-879/14848, 6-8=-806/14816, 5-6=-806/14816  
WEBS 3-8=-548/10003, 4-8=-5221/391, 4-6=-197/4538, 2-8=-5257/392, 2-9=-195/4517

**NOTES-**

- 1) N/A
- 2) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x4 - 1 row at 0-7-0 oc.  
Bottom chords connected as follows: 2x8 - 4 rows staggered at 0-4-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- 3) 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.
- 4) Unbalanced roof live loads have been considered for this design.
- 5) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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
- 6) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 7) Unbalanced snow loads have been considered for this design.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 10) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.



April 15, 2021

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



818 Soundside Road  
Edenton, NC 27932

Job 240_3174_B	Truss AG	Truss Type ROOF TRUSS	Qty 1	Ply <b>3</b>	KB Home 240.3174.B Job Reference (optional)	I45649701
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84 Components (Dunn), Dunn, NC - 28334,

8.500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:30:00 2021 Page 2  
ID:nmX44zN03rkbOsnK0efyuQzR4QP-h6IISXLGMrXz7SQyYrMf5iU6JWAdzvtLwmhPD5zQrLL

**NOTES-**

- 11) TBE4 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1. This connection is for uplift only and does not consider lateral forces.
- 12) Two H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.
- 13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 14) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 1-11-4 from the left end to 19-11-4 to connect truss(es) to back face of bottom chord.
- 15) Fill all nail holes where hanger is in contact with lumber.

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-3=-43, 3-5=-43, 1-5=-20

Concentrated Loads (lb)

Vert: 12=-1278(B) 13=-1278(B) 14=-1278(B) 15=-1278(B) 16=-1278(B) 17=-1278(B) 18=-1278(B) 19=-1278(B) 20=-1278(B) 21=-1279(B)

**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 240_3174_B	Truss BE	Truss Type Common Supported Gable	Qty 1	Ply 1	KB Home 240.3174.B Job Reference (optional)	145649702
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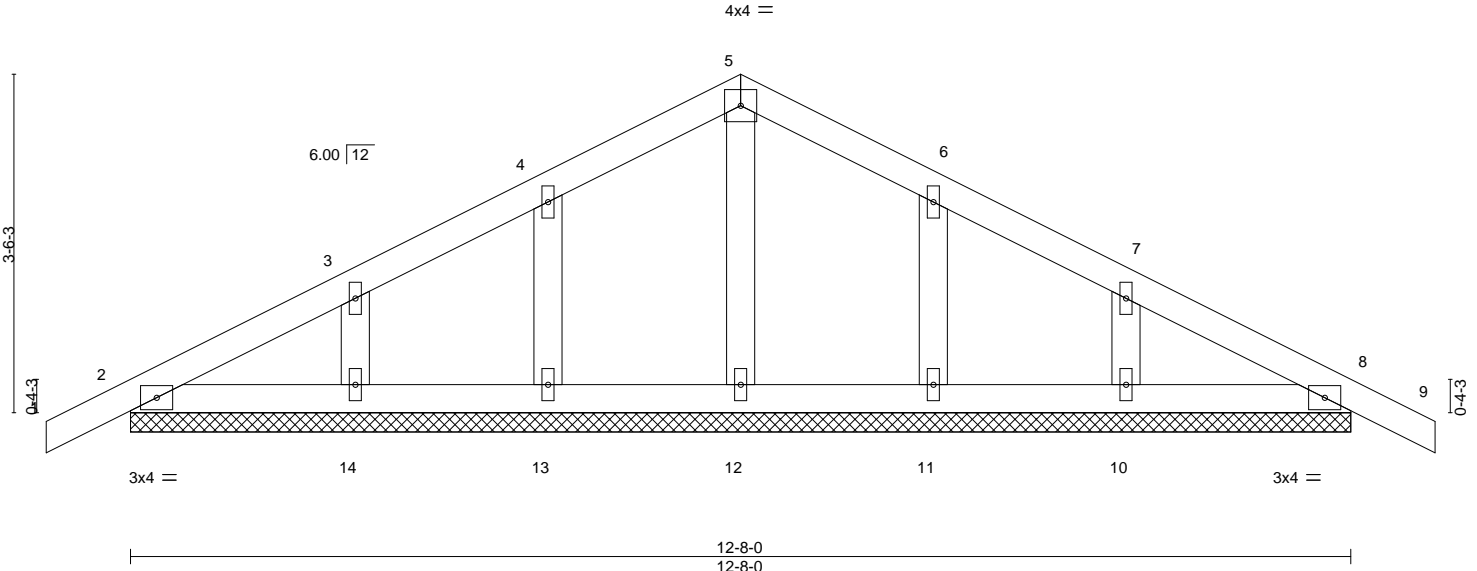
84 Components (Dunn), Dunn, NC - 28334,

8,500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:30:23 2021 Page 1

ID:nmX44zN03rkbOsnK0efyuQzR4QP-WXeSGPcixvRjO\_hJOBG2WYxEwn9IsUqjCrI7XGzQrI\_



Scale: 1/2"=1'



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.05	in (loc) l/defl L/d	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.04	Vert(LL) -0.00 8 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.03	Vert(CT) 0.00 8 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 8 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 56 lb	FT = 20%

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

**REACTIONS.** All bearings 12-8-0.  
 (lb) - Max Horz 2=51(LC 16)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 8, 13, 14, 11, 10  
 Max Grav All reactions 250 lb or less at joint(s) 2, 8, 12, 13, 14, 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 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-4-0, Exterior(2N) 2-4-0 to 6-4-0, Corner(3R) 6-4-0 to 9-4-0, Exterior(2N) 9-4-0 to 13-6-8 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 11.6 psf on overhangs non-concurrent with other live loads.
- 7) All plates are 1.5x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 2-0-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) \* 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.
- 12) N/A
- 13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2, 8.
- 14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

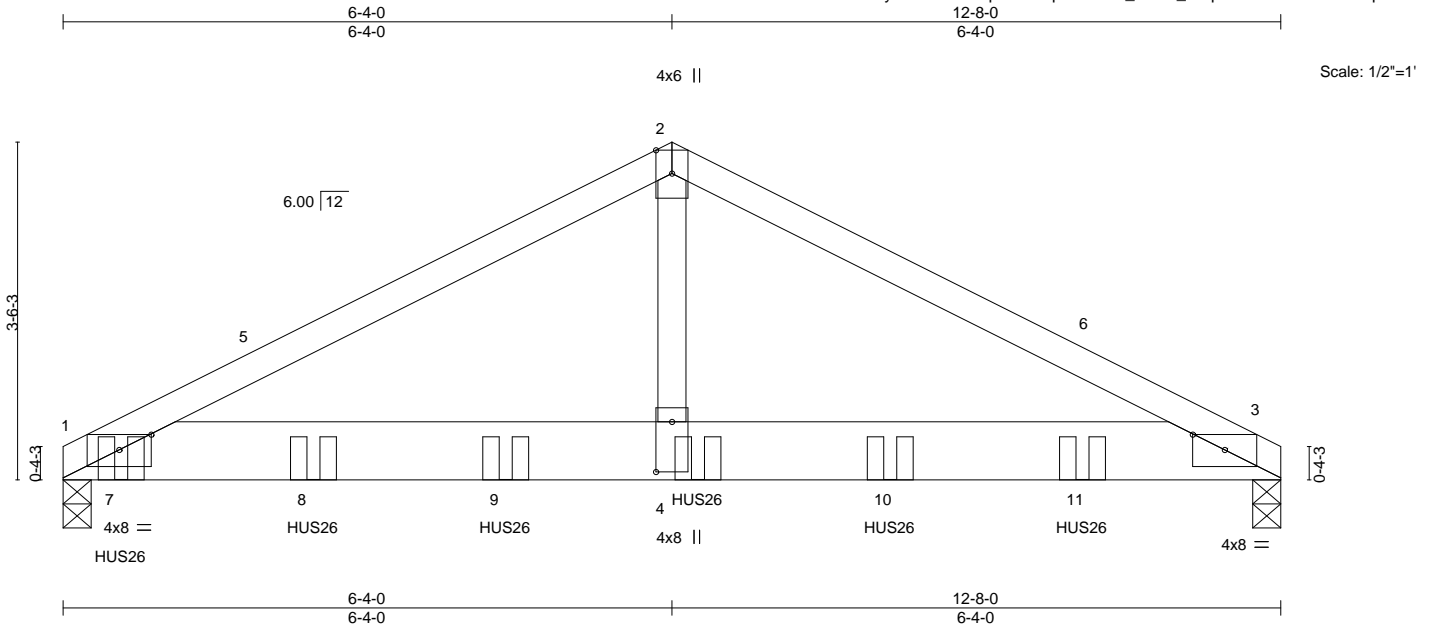


Job 240_3174_B	Truss BG	Truss Type COMMON GIRDER	Qty 1	Ply 3	KB Home 240.3174.B Job Reference (optional)	145649703
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84 Components (Dunn), Dunn, NC - 28334,

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ID:nmX44zN03rkbOsnK0efyuQzR4QP-hfpc9bLp9Ch0QX\_zdTtu\_ODpQxFeLk2wCP7zQrHp



PLY-TO-PLY CONNECTION REQUIRES THAT AN APPROVED FACE MOUNT HANGER (SPECIFIED BY OTHERS) IS REQUIRED FOR LOADS REPORTED IN NOTES. FACE MOUNT HANGER SHALL BE ATTACHED WITH A MINIMUM OF 0.148"x 3" NAILS PER HANGER MANUFACTURER SPECIFICATIONS.

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

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.55	Vert(LL)	-0.07	1-4	>999	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.48	Vert(CT)	-0.12	1-4	>999		
TCDL 10.0	Lumber DOL 1.15	WB 0.92	Horz(CT)	0.02	3	n/a		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-S						
BCDL 10.0	Code IRC2018/TPI2014						Weight: 193 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2  
BOT CHORD 2x8 SP DSS  
WEBS 2x4 SP No.3

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

**REACTIONS.** (size) 1=0-3-8, 3=0-3-8  
Max Horz 1=43(LC 39)  
Max Uplift 1=-373(LC 12), 3=-299(LC 13)  
Max Grav 1=6557(LC 3), 3=5160(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-8015/465, 2-3=-8017/465  
BOT CHORD 1-4=-376/7150, 3-4=-376/7150  
WEBS 2-4=-300/6695

- NOTES-**
- 1) N/A
  - 2) 3-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 - 4 rows staggered at 0-4-0 oc.  
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - 3) 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.
  - 4) Unbalanced roof live loads have been considered for this design.
  - 5) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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
  - 6) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 7) Unbalanced snow loads have been considered for this design.
  - 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 3. This connection is for uplift only and does not consider lateral forces.
  - 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and conform to standard ANSI/TPI 1.



April 15, 2021

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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 240_3174_B	Truss BG	Truss Type COMMON GIRDER	Qty 1	Ply <b>3</b>	KB Home 240.3174.B I45649703 Job Reference (optional)
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84 Components (Dunn), Dunn, NC - 28334,

8.500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:30:34 2021 Page 2  
ID:nmX44zN03rkbOsnK0efyuQzR4QP-hfzca9IbLp9Ch0QX\_zdTtu\_ODpQxFelk2wCP7zQrHp

**NOTES-**

- 12) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 0-7-4 from the left end to 10-7-4 to connect truss(es) to back face of bottom chord.
- 13) Fill all nail holes where hanger is in contact with lumber.

**LOAD CASE(S)** Standard

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

Uniform Loads (plf)

Vert: 1-2=-43, 2-3=-43, 1-3=-20

Concentrated Loads (lb)

Vert: 4=-1278(B) 7=-1284(B) 8=-1278(B) 9=-1278(B) 10=-1278(B) 11=-1278(B)

**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 240_3174_B	Truss D1	Truss Type Common	Qty 3	Ply 1	KB Home 240.3174.B	145649704
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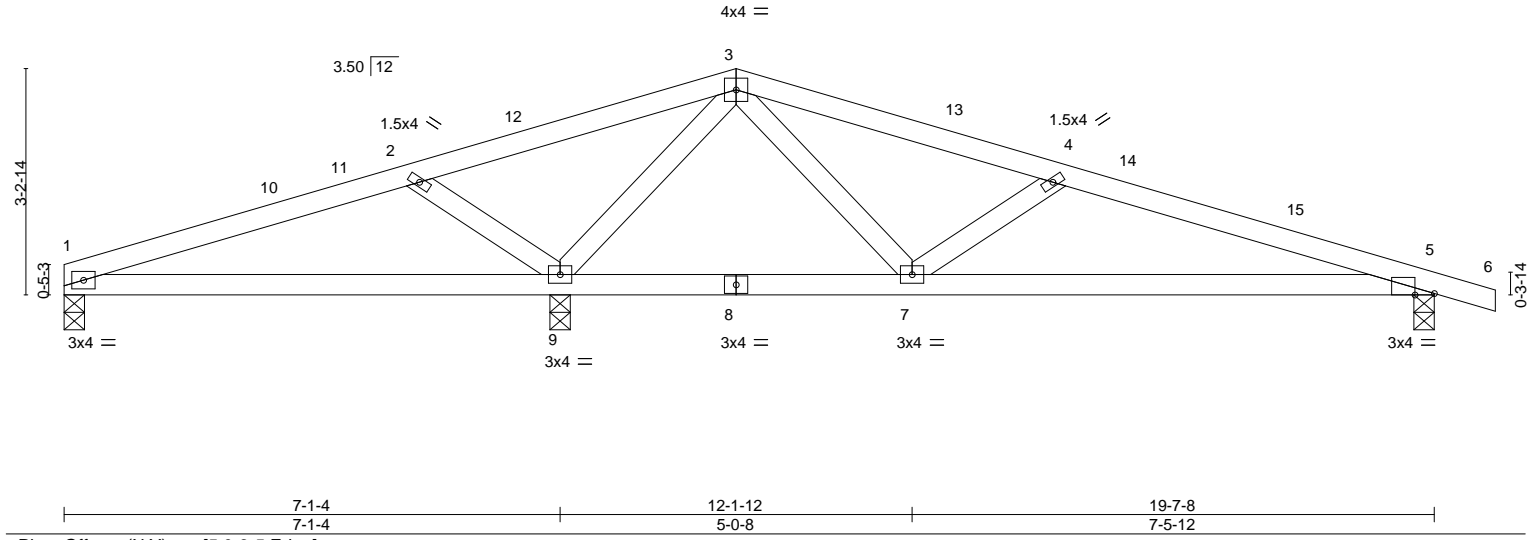
84 Components (Dunn), Dunn, NC - 28334,

8,500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:30:40 2021 Page 1

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Scale = 1:33.0



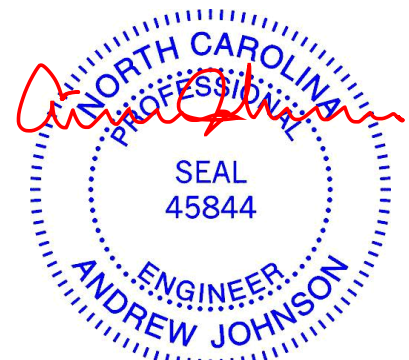
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.44	in (loc) l/def L/d	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.52	Vert(LL) -0.09 5-7 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.29	Vert(CT) -0.19 5-7 >785 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.01 5 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 80 lb	FT = 20%

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

**REACTIONS.** (size) 1=0-3-8, 9=0-3-8, 5=0-3-8  
 Max Horz 1=-48(LC 17)  
 Max Uplift 1=-22(LC 16), 9=-58(LC 12), 5=-79(LC 13)  
 Max Grav 1=171(LC 36), 9=1023(LC 2), 5=474(LC 37)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-40/290, 2-3=-70/546, 3-4=-449/57, 4-5=-780/136  
 BOT CHORD 1-9=-256/66, 5-7=-92/719  
 WEBS 2-9=-424/158, 3-9=-842/156, 3-7=-18/489, 4-7=-410/156

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 9-7-8, Exterior(2R) 9-7-8 to 12-7-8, Interior(1) 12-7-8 to 20-6-0 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
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 9, and 5. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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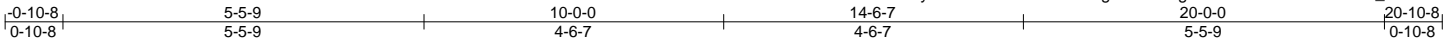


Job 240_3174_B	Truss DE	Truss Type GABLE	Qty 1	Ply 1	KB Home 240.3174.B Job Reference (optional)	145649705
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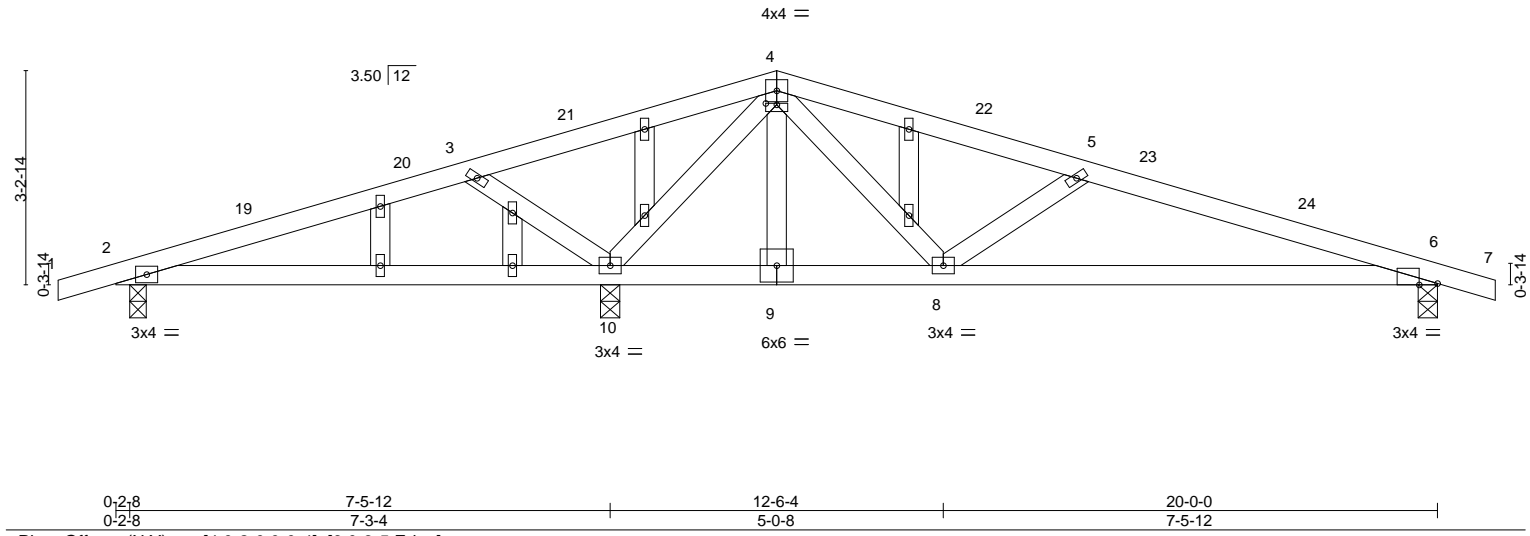
84 Components (Dunn), Dunn, NC - 28334,

8,500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:30:45 2021 Page 1

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Scale = 1:34.9



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.46	in (loc) l/defl L/d	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.53	Vert(LL) -0.09 6-8 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.29	Vert(CT) -0.19 6-8 >779 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.01 6 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 93 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3	
OTHERS 2x4 SP No.3	

**REACTIONS.** (size) 10=0-3-8, 6=0-3-8, 2=0-3-0  
 Max Horz 2=45(LC 16)  
 Max Uplift 10=57(LC 12), 6=79(LC 13), 2=55(LC 12)  
 Max Grav 10=1027(LC 2), 6=475(LC 37), 2=254(LC 36)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-46/279, 3-4=-67/543, 4-5=-452/61, 5-6=-784/140  
 BOT CHORD 6-8=-96/722  
 WEBS 3-10=-433/159, 4-10=-836/156, 4-8=-19/487, 5-8=-411/155

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 10-0-0, Exterior(2R) 10-0-0 to 13-0-0, Interior(1) 13-0-0 to 20-10-8 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 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 11.6 psf on overhangs non-concurrent with other live loads.
  - 7) All plates are 1.5x4 MT20 unless otherwise indicated.
  - 8) Gable studs spaced at 2-0-0 oc.
  - 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 10) \* 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.
  - 11) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10, 6, and 2. This connection is for uplift only and does not consider lateral forces.
  - 12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



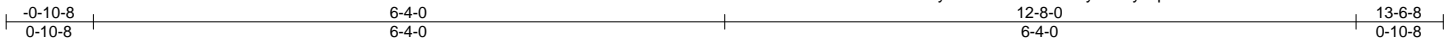
April 15, 2021

Job 240_3174_B	Truss EE	Truss Type Common Supported Gable	Qty 1	Ply 1	KB Home 240.3174.B Job Reference (optional)	145649706
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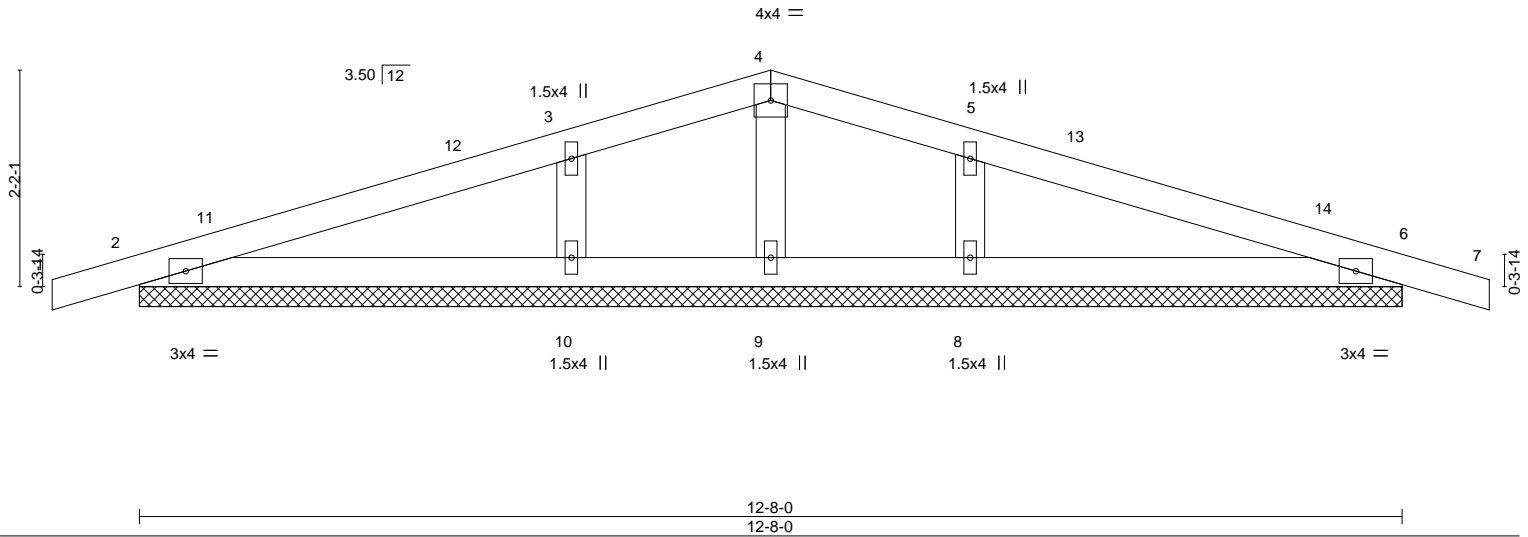
84 Components (Dunn), Dunn, NC - 28334,

8,500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:30:51 2021 Page 1

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Scale = 1:23.1



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.21	in (loc) l/defl L/d	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.15	Vert(LL) 0.01 7 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.06	Vert(CT) 0.01 7 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 6 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 47 lb	FT = 20%

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

**REACTIONS.** All bearings 12-8-0.  
 (lb) - Max Horz 2=30(LC 16)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 6, 9, 10, 8  
 Max Grav All reactions 250 lb or less at joint(s) 2, 6, 9 except 10=365(LC 23), 8=365(LC 24)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 3-10=-260/218, 5-8=-260/218

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 6-4-0, Corner(3R) 6-4-0 to 9-4-0, Exterior(2N) 9-4-0 to 13-6-8 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.
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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.
  - N/A
  - N/A
  - Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



Job 240_3174_B	Truss J1	Truss Type Monopitch	Qty 10	Ply 1	KB Home 240.3174.B	I45649707
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ID:nmX44zN03rkbOsnK0efyuQzR4QP-aha\_Y\_L?mPITADv7SGvrYplGeJh1oMzGRZqVpePzQrHU

-0-10-8  
0-10-8

4-4-0  
4-4-0

Scale = 1:10.7

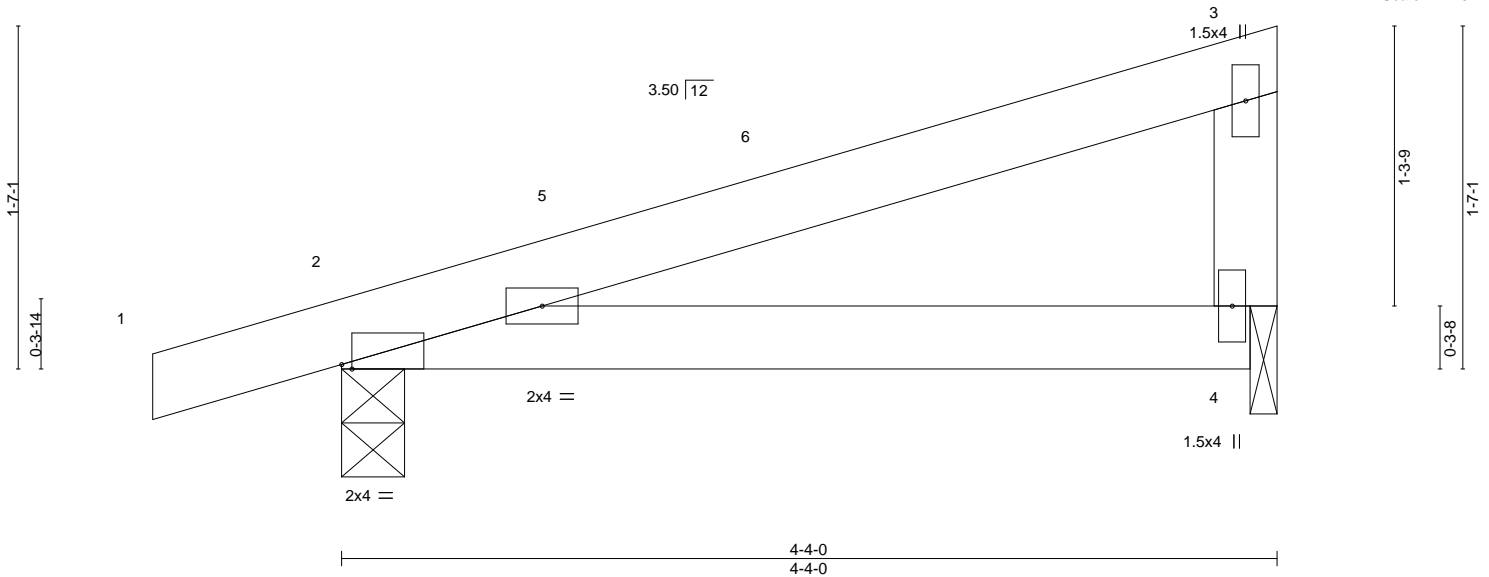


Plate Offsets (X,Y)-- [2:0-0-9,Edge]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.28	in (loc) l/def L/d	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.20	Vert(LL) -0.02 2-4 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) -0.03 2-4 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 4 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 16 lb	FT = 20%

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

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-4-0 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=48(LC 13)  
Max Uplift 2=-52(LC 12), 4=-19(LC 16)  
Max Grav 2=237(LC 23), 4=158(LC 23)

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

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 4-2-4 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



April 15, 2021

**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 240_3174_B	Truss JE	Truss Type Monopitch Supported Gable	Qty 1	Ply 1	KB Home 240.3174.B Job Reference (optional)	145649708
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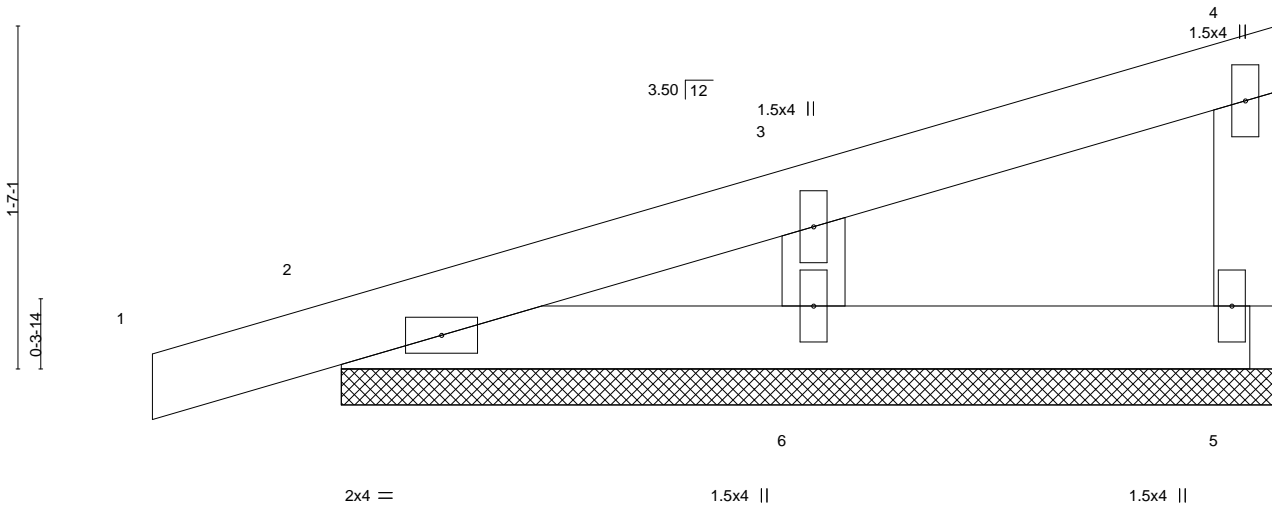
84 Components (Dunn), Dunn, NC - 28334,

8.500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:30:57 2021 Page 1

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Scale = 1:10.7



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.06	in (loc) l/defl L/d	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.04	Vert(LL) 0.00 1 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.06	Vert(CT) 0.00 1 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 17 lb	FT = 20%

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

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

**REACTIONS.** (size) 5=4-4-0, 2=4-4-0, 6=4-4-0  
 Max Horz 2=48(LC 13)  
 Max Uplift 5=7(LC 12), 2=37(LC 12), 6=26(LC 16)  
 Max Grav 5=63(LC 23), 2=137(LC 23), 6=198(LC 23)

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

**NOTES-**

- 1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 2-2-4, Exterior(2N) 2-2-4 to 4-2-4 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 10) N/A
- 11) N/A
- 12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



April 15, 2021

**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 240_3174_B	Truss T1	Truss Type ROOF TRUSS	Qty 13	Ply 1	KB Home 240.3174.B Job Reference (optional)	145649709
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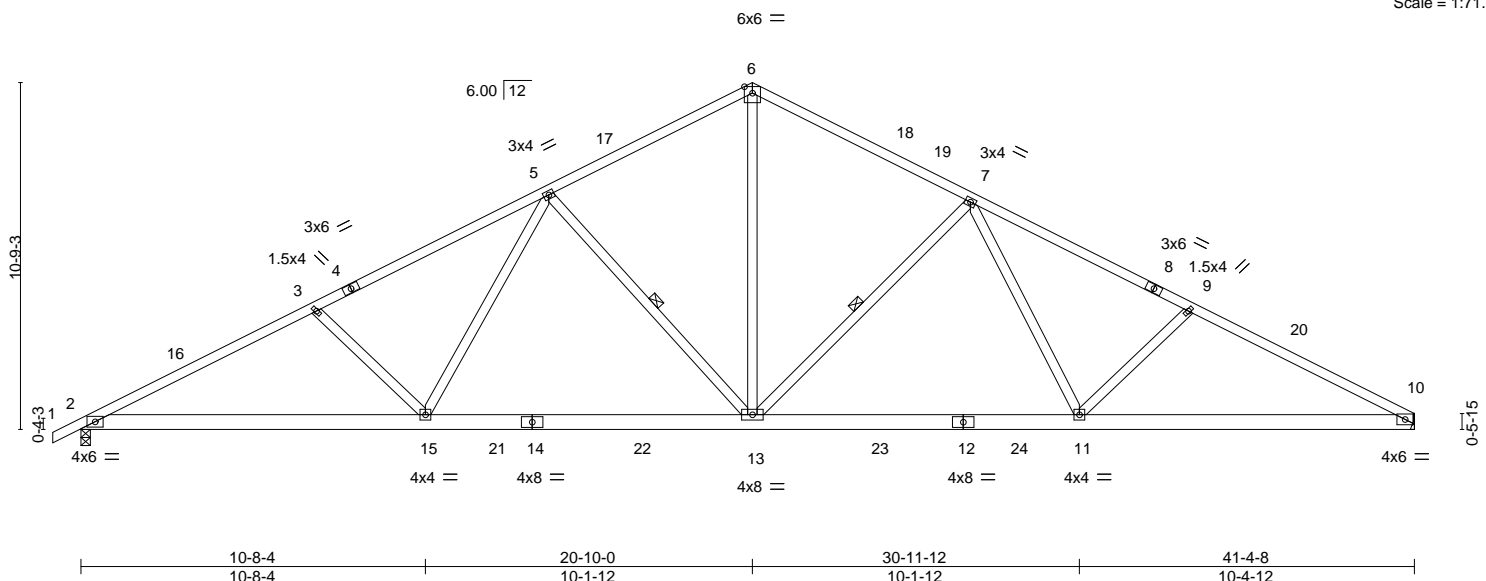
84 Components (Dunn), Dunn, NC - 28334,

8,500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:31:06 2021 Page 1

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Scale = 1:71.5



<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.83	in (loc) l/defl L/d	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.91	Vert(LL) -0.25 13-15 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.65	Vert(CT) -0.44 13-15 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.12 10 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 246 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except* 8-10: 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 2-15.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 7-13, 5-13

**REACTIONS.** (size) 2=0-3-8, 10=Mechanical  
 Max Horz 2=161(LC 16)  
 Max Uplift 2=-110(LC 16), 10=-91(LC 17)  
 Max Grav 2=1867(LC 3), 10=1816(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3442/203, 3-5=-3176/181, 5-6=-2171/215, 6-7=-2176/216, 7-9=-3138/188,  
 9-10=-3368/199  
 BOT CHORD 2-15=-255/3012, 13-15=-107/2398, 11-13=-17/2424, 10-11=-105/2944  
 WEBS 6-13=-63/1577, 7-13=-801/204, 7-11=-8/724, 9-11=-371/195, 5-13=-805/206,  
 5-15=-15/787, 3-15=-419/201

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 3-3-2, Interior(1) 3-3-2 to 20-10-0, Exterior(2R) 20-10-0 to 24-11-10, Interior(1) 24-11-10 to 41-3-12 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 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) Refer to girder(s) for truss to truss connections.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 10.
  - 10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - 12) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.



April 15, 2021

Job 240_3174_B	Truss T1A	Truss Type ROOF TRUSS	Qty 3	Ply 1	KB Home 240.3174.B	145649710
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84 Components (Dunn), Dunn, NC - 28334,

8,500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:31:13 2021 Page 1

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Scale = 1:82.8

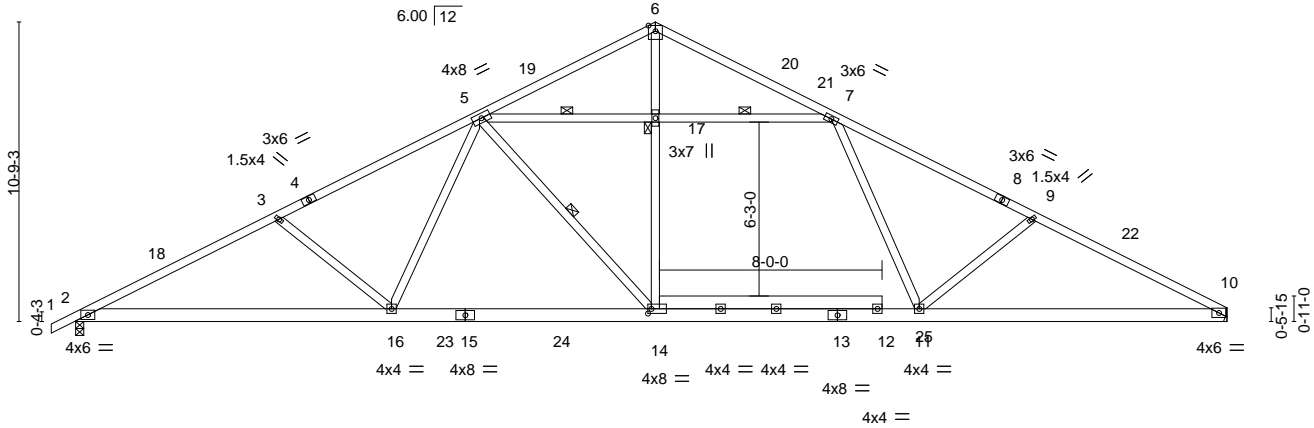


Plate Offsets (X,Y)--	[14:0-1-8,0-2-0]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.84	in (loc) l/defl L/d	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.97	Vert(LL) -0.20 2-16 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.31	Vert(CT) -0.42 2-16 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.11 10 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 271 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except* 8-10: 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 2x4 SP No.3 *Except* 5-7: 2x4 SP No.2 or 2x4 SPF No.2	WEBS 1 Row at midpt 5-14, 5-17, 7-17
	JOINTS 1 Brace at Jt(s): 17

**REACTIONS.** (size) 2=0-3-8, 10=Mechanical  
 Max Horz 2=161(LC 16)  
 Max Uplift 2=-110(LC 16), 10=-91(LC 17)  
 Max Grav 2=1887(LC 3), 10=1840(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3461/211, 3-5=-3161/174, 5-6=-1054/133, 6-7=-1002/152, 7-9=-3128/183,  
 9-10=-3393/208  
 BOT CHORD 2-16=-261/3030, 14-16=-105/2456, 11-14=-11/2447, 10-11=-114/2968  
 WEBS 14-17=-121/644, 7-11=0/708, 9-11=-404/210, 5-14=-430/404, 5-16=-0/750,  
 3-16=-432/205, 5-17=-1703/403, 7-17=-1703/403, 6-17=-73/673

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 3-3-2, Interior(1) 3-3-2 to 20-10-0, Exterior(2R) 20-10-0 to 24-11-10, Interior(1) 24-11-10 to 41-3-12 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
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 10.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.



Job 240_3174_B	Truss T2A	Truss Type ROOF TRUSS	Qty 3	Ply 1	KB Home 240.3174.B	145649711
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84 Components (Dunn), Dunn, NC - 28334,

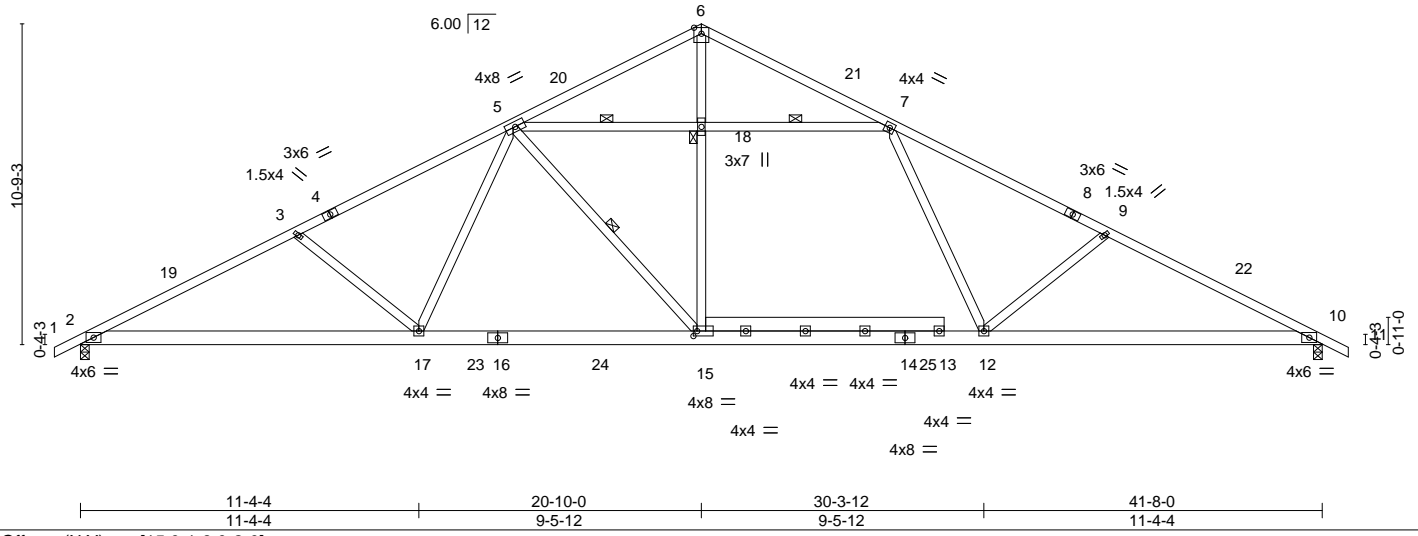
8,500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:31:38 2021 Page 1

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6x6 =

Scale = 1:77.3



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.84	in (loc) l/defl L/d	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 1.00	Vert(LL) -0.22 10-12 >999 240		
TCDL 10.0	Lumber DOL 1.15	WB 0.31	Vert(CT) -0.45 10-12 >999 180		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.11 10 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 273 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 2x4 SP No.3 *Except*	WEBS 1 Row at midpt 5-15, 5-18, 7-18
5-7: 2x4 SP No.2 or 2x4 SPF No.2	JOINTS 1 Brace at Jt(s): 18

**REACTIONS.** (size) 2=0-3-8, 10=0-3-8  
 Max Horz 2=154(LC 20)  
 Max Uplift 2=-109(LC 16), 10=-109(LC 17)  
 Max Grav 2=1895(LC 3), 10=1899(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3480/210, 3-5=-3179/178, 5-6=-1058/132, 6-7=-1006/151, 7-9=-3180/178, 9-10=-3482/209  
 BOT CHORD 2-17=-254/3047, 15-17=-98/2473, 12-15=-3/2469, 10-12=-99/3049  
 WEBS 6-18=-64/678, 7-12=0/749, 9-12=-438/208, 5-15=-424/410, 5-17=-0/750, 3-17=-432/205, 5-18=-1716/403, 7-18=-1716/403, 15-18=-127/638

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 3-3-8, Interior(1) 3-3-8 to 20-10-0, Exterior(2R) 20-10-0 to 25-0-0, Interior(1) 25-0-0 to 42-6-8 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
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 11.6 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 10. This connection is for uplift only and does not consider lateral forces.
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.



**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

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

Job	Truss	Truss Type	Qty	Ply	KB Home 240.3174.B	145649712
240_3174_B	TE	Common Supported Gable	2	1	Job Reference (optional)	

84 Components (Dunn), Dunn, NC - 28334,

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Scale = 1:77.0

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.08	in (loc) l/defl L/d	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.06	Vert(LL) -0.00 1 n/r 120		
TCDL 10.0	Lumber DOL 1.15	WB 0.13	Vert(CT) 0.00 1 n/r 120		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.01 24 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 287 lb	FT = 20%

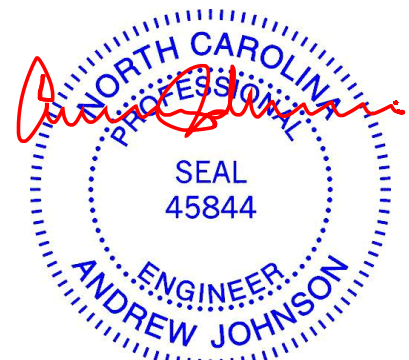
<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	WEBS 1 Row at midpt 13-35, 12-36, 11-37, 14-34, 15-33

**REACTIONS.** All bearings 41-4-8.  
 (lb) - Max Horz 2=160(LC 20)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 36, 37, 38, 40, 41, 42, 43, 44, 45, 34, 33, 32, 30, 29, 28, 27, 26, 25  
 Max Grav All reactions 250 lb or less at joint(s) 2, 35, 36, 37, 38, 40, 41, 42, 43, 44, 45, 34, 33, 32, 30, 29, 28, 27, 26, 25, 24

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 12-13=-125/277, 13-14=-125/277

**NOTES-**

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-10-8 to 3-3-2, Exterior(2N) 3-3-2 to 20-10-0, Corner(3R) 20-10-0 to 24-10-0, Exterior(2N) 24-10-0 to 41-4-8 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 11.6 psf on overhangs non-concurrent with other live loads.
- 7) All plates are 1.5x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Gable studs spaced at 2-0-0 oc.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) \* 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.
- 12) N/A
- 13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



April 15, 2021

**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

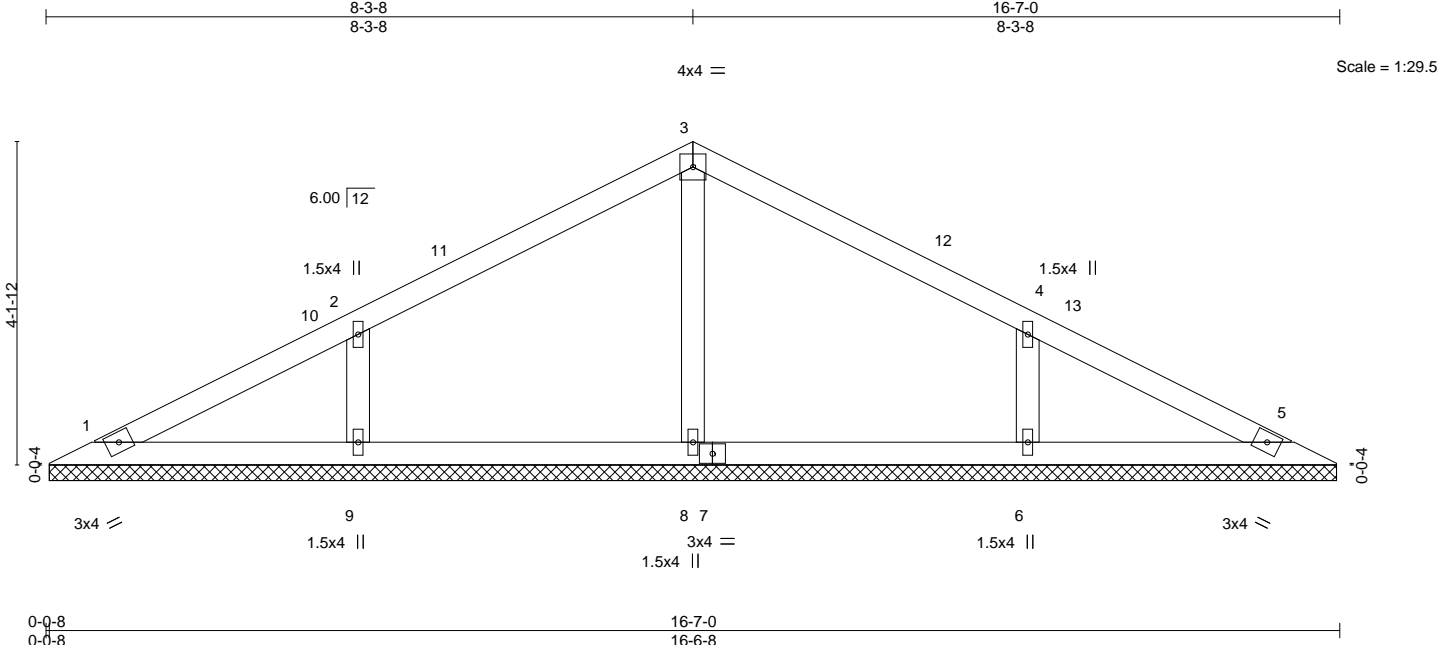


Job 240_3174_B	Truss V1	Truss Type Valley	Qty 1	Ply 1	KB Home 240.3174.B Job Reference (optional)	145649713
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84 Components (Dunn), Dunn, NC - 28334,

8.500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:31:48 2021 Page 1

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<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.23	in (loc) l/defl L/d	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.13	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.07	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 60 lb	FT = 20%

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

**REACTIONS.** All bearings 16-6-0.  
 (lb) - Max Horz 1=55(LC 17)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 6, 9  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 8=295(LC 2), 6=363(LC 36), 9=363(LC 35)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
**WEBS** 4-6=-275/150, 2-9=-275/150

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-7-9 to 3-7-9, Interior(1) 3-7-9 to 8-3-8, Exterior(2R) 8-3-8 to 11-3-8, Interior(1) 11-3-8 to 15-11-7 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
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - Gable requires continuous bottom chord bearing.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 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.
  - N/A
  - N/A
  - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



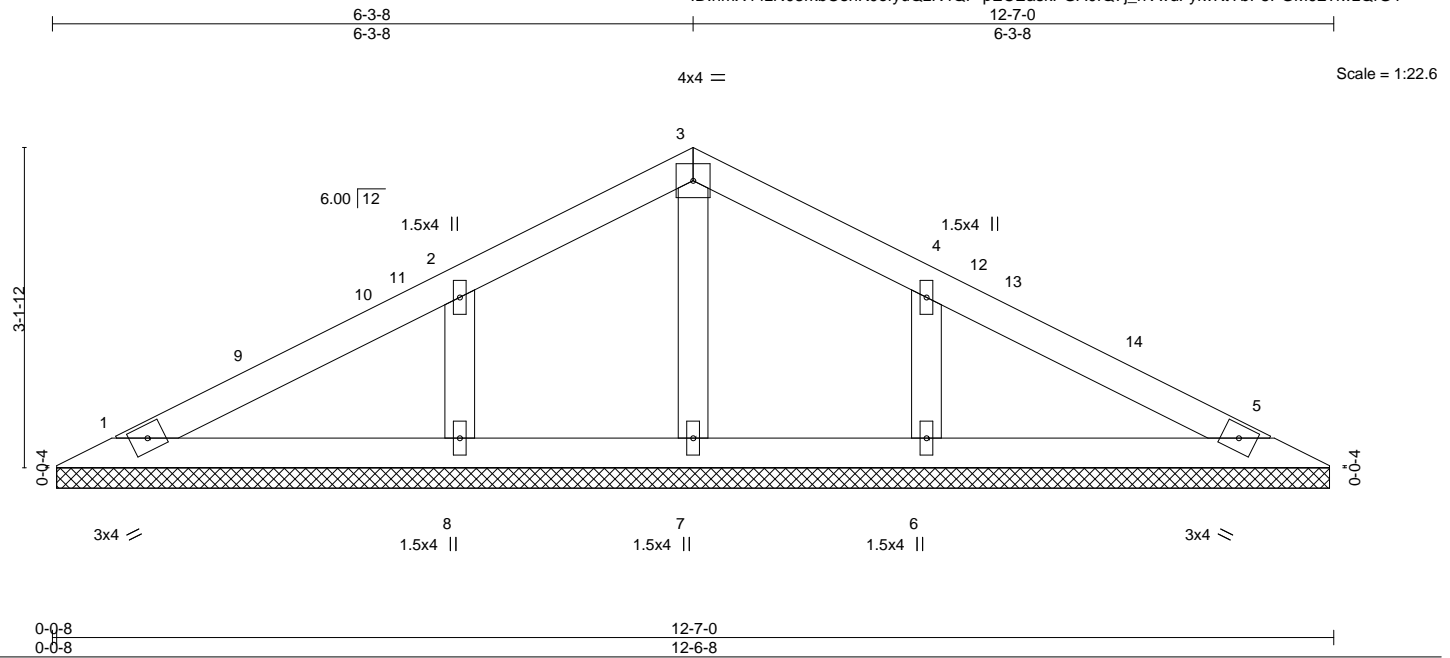
April 15, 2021

Job 240_3174_B	Truss V2	Truss Type Valley	Qty 1	Ply 1	KB Home 240.3174.B Job Reference (optional)	145649714
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84 Components (Dunn), Dunn, NC - 28334,

8,500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:31:55 2021 Page 1

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<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.14	in (loc) l/defl L/d	MT20	197/144
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.08	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.05	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 46 lb	FT = 20%

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

**REACTIONS.** All bearings 12-6-0.  
 (lb) - Max Horz 1=40(LC 17)  
 Max Uplift All uplift 100 lb or less at joint(s) 1, 5, 6, 8  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 6=304(LC 23), 8=304(LC 22)

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

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-7-9 to 3-7-9, Interior(1) 3-7-9 to 6-3-8, Exterior(2R) 6-3-8 to 9-3-8, Interior(1) 9-3-8 to 11-11-7 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) 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) N/A
  - 9) N/A
  - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



April 15, 2021

Job 240_3174_B	Truss V3	Truss Type Valley	Qty 1	Ply 1	KB Home 240.3174.B Job Reference (optional)	145649715
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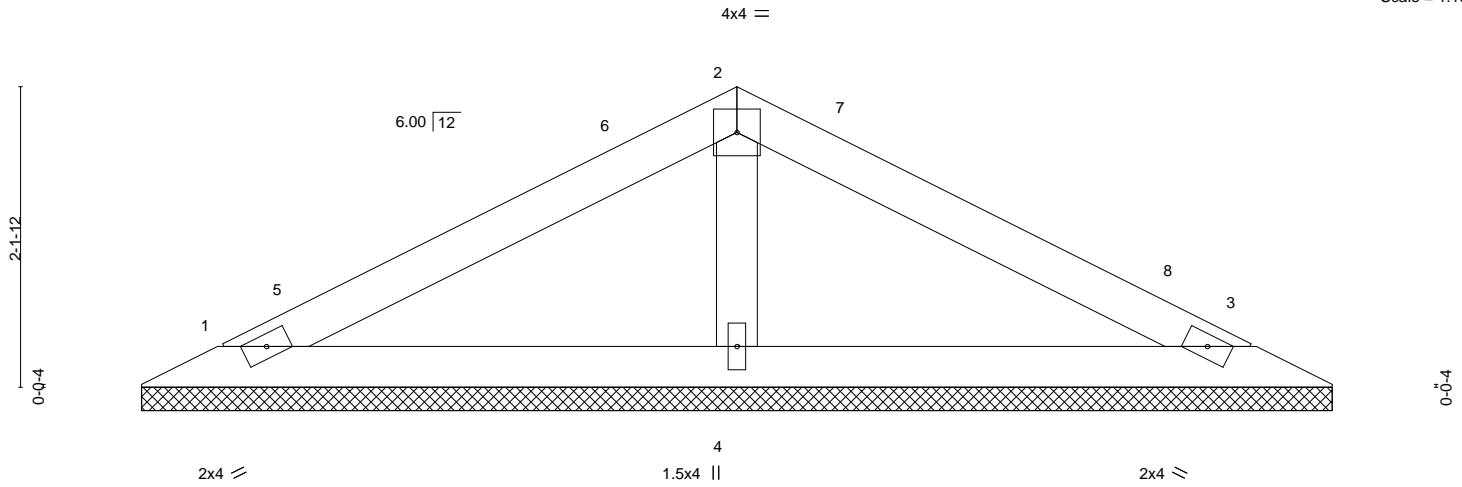
84 Components (Dunn), Dunn, NC - 28334,

8,500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:31:57 2021 Page 1

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Scale = 1:16.4



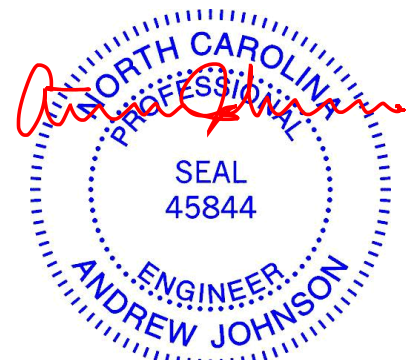
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.46	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.23	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.04	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 27 lb	FT = 20%

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

**REACTIONS.** (size) 1=8-6-0, 3=8-6-0, 4=8-6-0  
 Max Horz 1=-26(LC 17)  
 Max Uplift 1=-23(LC 16), 3=-28(LC 17)  
 Max Grav 1=153(LC 22), 3=153(LC 23), 4=290(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 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-7-9 to 3-7-9, Interior(1) 3-7-9 to 4-3-8, Exterior(2R) 4-3-8 to 7-3-8, Interior(1) 7-3-8 to 7-11-7 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) 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) N/A
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

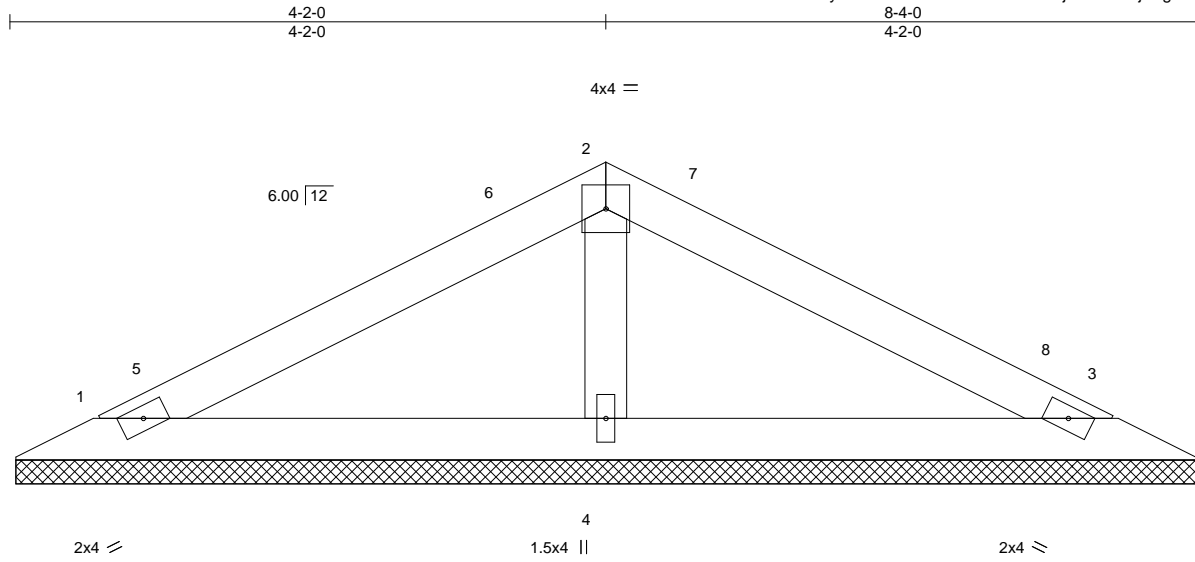


April 15, 2021

Job 240_3174_B	Truss V5	Truss Type Valley	Qty 1	Ply 1	KB Home 240.3174.B Job Reference (optional)	145649716
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84 Components (Dunn), Dunn, NC - 28334,

8.500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:32:04 2021 Page 1  
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.42	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 11.6/15.0	Plate Grip DOL 1.15	BC 0.21	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.04	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 3 n/a n/a		
BCDL 10.0	Code IRC2018/TPI2014			Weight: 26 lb	FT = 20%

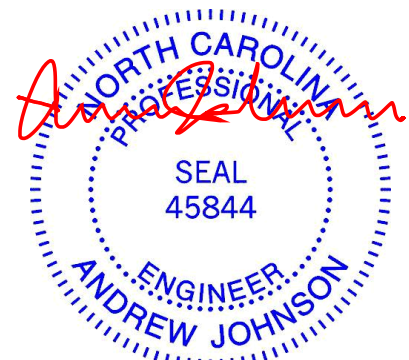
<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.3	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x4 SP No.3	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS 2x4 SP No.3	

**REACTIONS.** (size) 1=8-3-0, 3=8-3-0, 4=8-3-0  
 Max Horz 1=25(LC 16)  
 Max Uplift 1=22(LC 16), 3=27(LC 17)  
 Max Grav 1=147(LC 22), 3=147(LC 23), 4=280(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 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-7-9 to 3-7-9, Interior(1) 3-7-9 to 4-2-0, Exterior(2R) 4-2-0 to 7-2-0, Interior(1) 7-2-0 to 7-8-7 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) 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) N/A
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

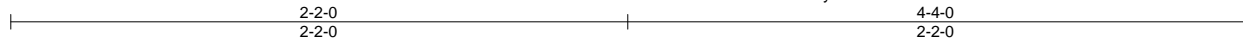


Job 240_3174_B	Truss V6	Truss Type Valley	Qty 1	Ply 1	KB Home 240.3174.B Job Reference (optional)	145649717
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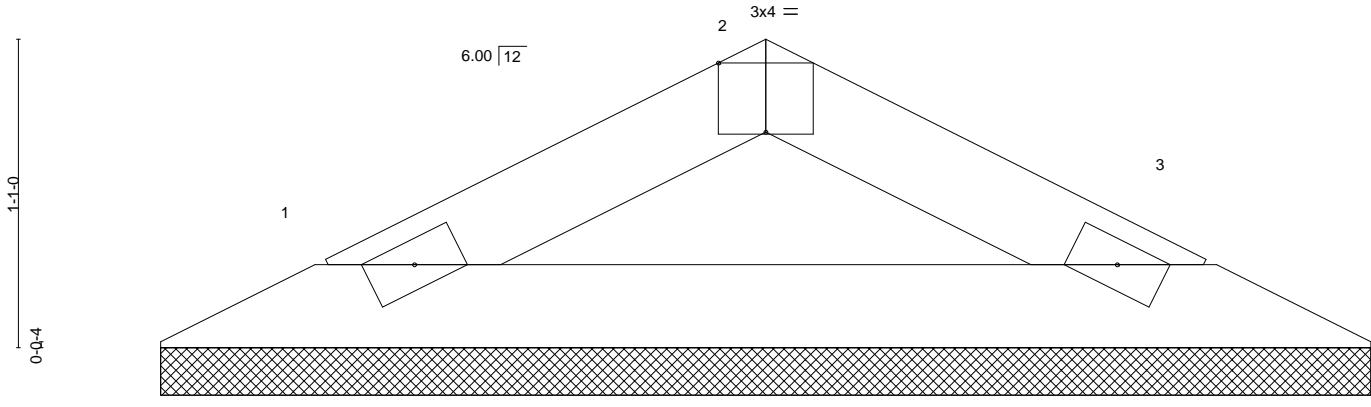
84 Components (Dunn), Dunn, NC - 28334,

8,500 s Feb 23 2021 MiTek Industries, Inc. Wed Apr 14 09:32:17 2021 Page 1

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Scale = 1:8.1



2x4

2x4

0-0-8  
0-0-8

4-4-0  
4-3-8

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

LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 2-0-0 1.15	TC 0.08	Vert(LL) n/a	-	n/a	999		MT20	244/190
Snow (Pf/Pg) 11.6/15.0	Lumber DOL 1.15	BC 0.19	Vert(CT) n/a	-	n/a	999			
TCDL 10.0	Rep Stress Incr YES	WB 0.00	Horz(CT) 0.00	3	n/a	n/a			
BCLL 0.0 *	Code IRC2018/TPI2014	Matrix-P							
BCDL 10.0								Weight: 11 lb	FT = 20%

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

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

**REACTIONS.** (size) 1=4-3-0, 3=4-3-0  
Max Horz 1=-11(LC 21)  
Max Uplift 1=-7(LC 16), 3=-7(LC 17)  
Max Grav 1=123(LC 2), 3=123(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 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=15.0 psf; Pf=11.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) 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) N/A
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



April 15, 2021

**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**

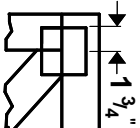
**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



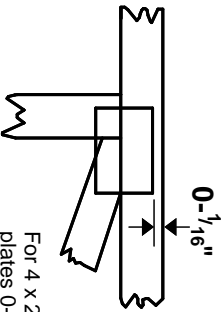
818 Soundside Road  
Edenton, NC 27932

# 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



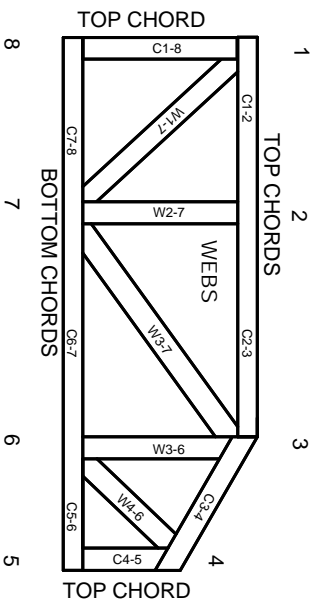
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### 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: Mill-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. Reviewing 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.