ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: 238_2338_C
KB Home 238.2338.C

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: I44252907 thru I44252936

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

North Carolina COA: C-0844

January 7,2021

Sevier, Scott

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 238.2338.C
238_2338_C	A1	COMMON	2	1	I44252907
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:15 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-1?ph?CBk3oL6zehfFOARIl5Nz_nwelTom?nyTxzy1_2

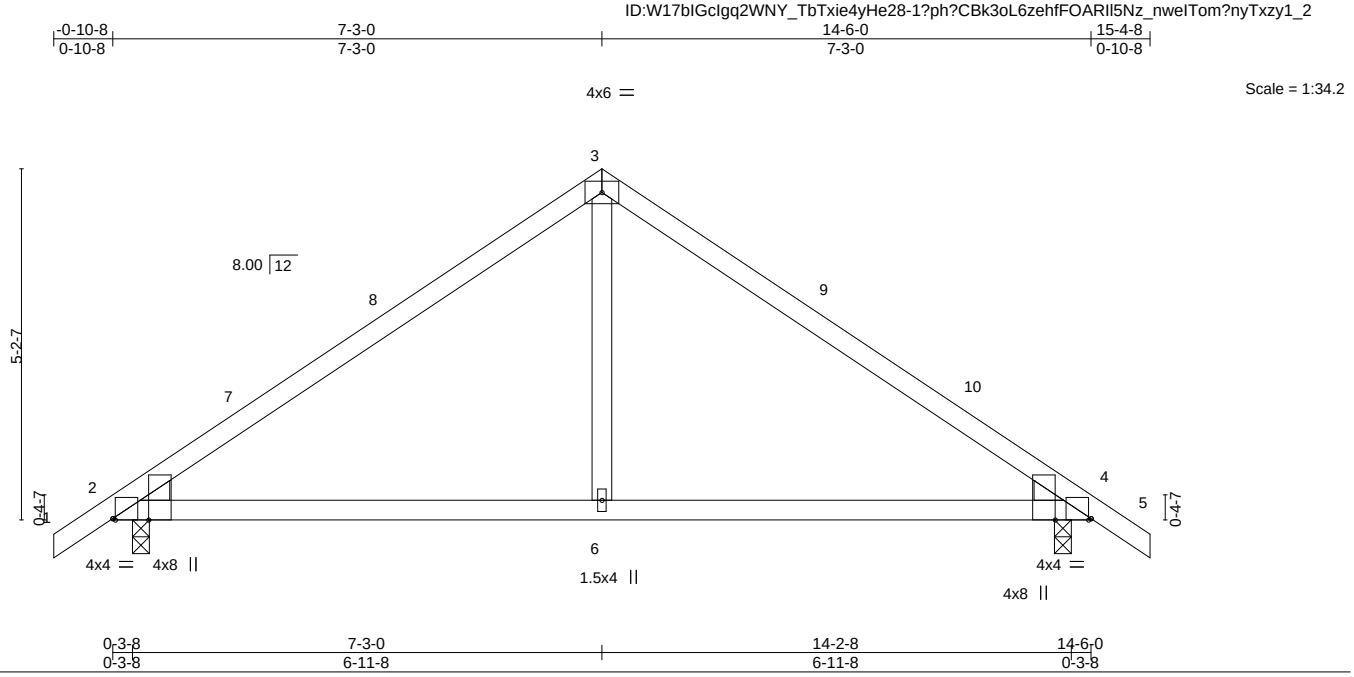


Plate Offsets (X,Y)-- [2:0-0-7,Edge], [2:0-0-4,Edge], [4:0-0-7,Edge], [4:0-0-4,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	0.11	4-6	>999	240	MT20	197/144
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.14	4-6	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 59 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
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

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

REACTIONS. (size) 2=0-3-0, 4=0-3-0
Max Horz 2=114(LC 13)
Max Uplift 2=-43(LC 14), 4=-43(LC 15)
Max Grav 2=630(LC 2), 4=630(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-699/390, 3-4=-699/390
BOT CHORD 2-6=-219/481, 4-6=-219/481
WEBS 3-6=-278/350

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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 7-3-0, Exterior(2) 7-3-0 to 10-3-0, Interior(1) 10-3-0 to 15-4-8 zone; cantilever left and right exposed ; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.6 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 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) 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.

January 7,2021

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

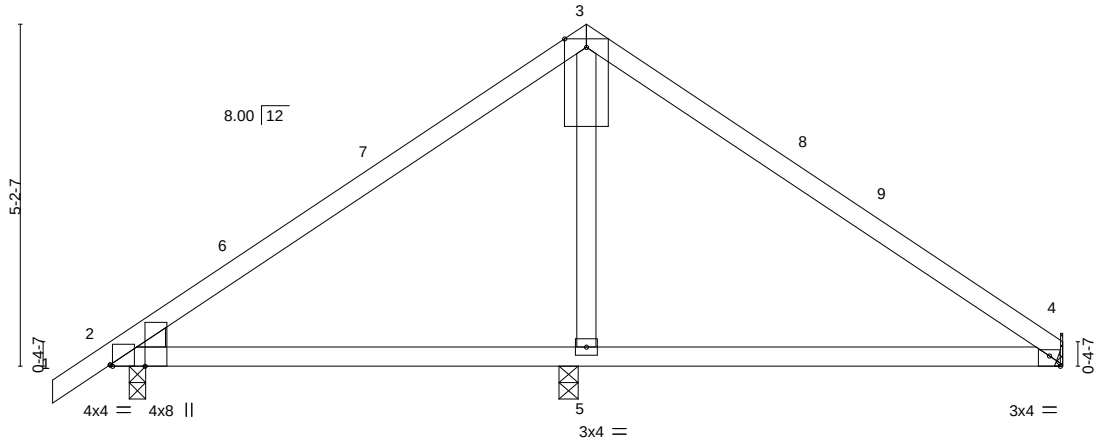
Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	A2	COMMON	2	1	I44252908
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:16 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-VCM4DYCMq6TzaoGrp6hgqydYfO8zNl6x?fXW?Nzy1_1

-0-10-8 7-3-0 14-6-0
0-10-8 7-3-0 7-3-0

8x16 MT18HS ||

Scale = 1:35.1



0-3-8 6-11-12 7-3-0 14-6-0
0-3-8 6-8-4 0-3-4 7-3-0

Plate Offsets (X,Y)-- [2:0-0-4,Edge], [2:0-0-7,Edge], [4:0-2-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	0.16	2-5	>550	240	MT20	197/144
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.13	4-5	>647	180	MT18HS	197/144
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	0.00	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S							Weight: 57 lb	FT = 20%
BCDL	10.0											

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
WEDGE
Left: 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) 4=Mechanical, 2=0-3-0, 5=0-3-8
Max Horz 2=110(LC 11)
Max Uplift 4=-46(LC 15), 2=-49(LC 14)
Max Grav 4=284(LC 2), 2=346(LC 2), 5=575(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 3-5=-360/79

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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 7-3-0, Exterior(2) 7-3-0 to 10-3-0, Interior(1) 10-3-0 to 14-5-4 zone; cantilever left exposed ; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.6 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 11.6 psf on overhangs non-concurrent with other live loads.
5) All plates are MT20 plates unless otherwise indicated.
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) 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) 4.
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.

January 7,2021

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

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	A3	COMMON	1	1	I44252909
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:17 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-zOwSQuD_bPbqCyr1NpCvNAAjHoT169f5EJG3Yqzy1_0

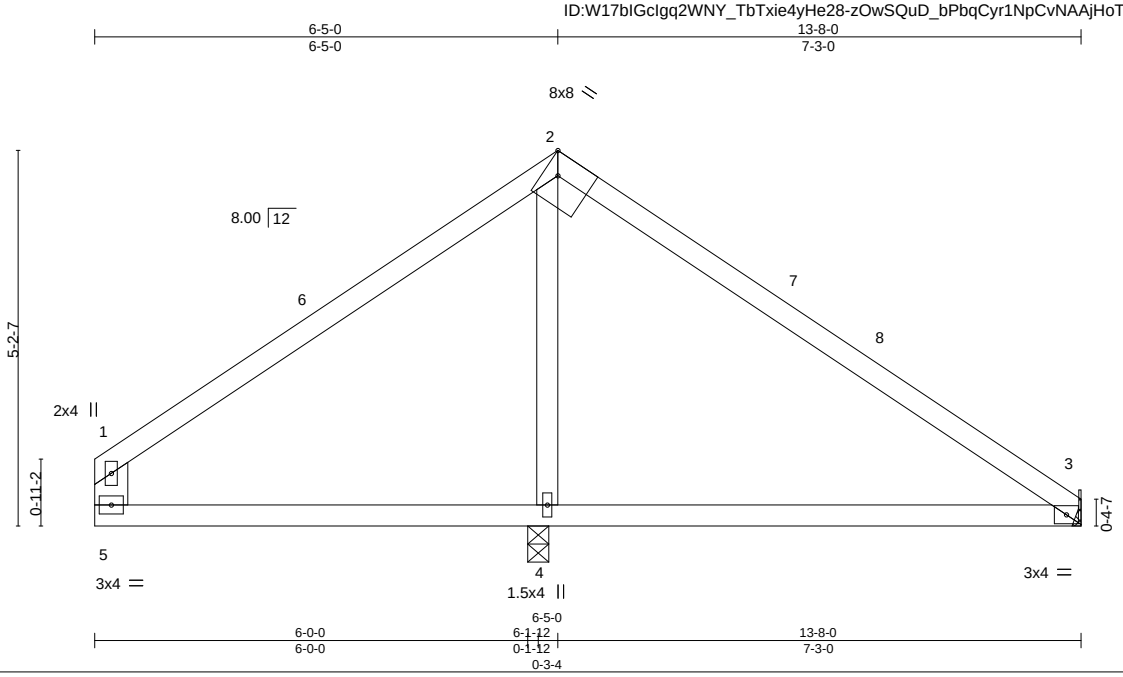


Plate Offsets (X,Y)-- [2:Edge,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	0.11	3-4	>767	240	MT20	197/144
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.14	3-4	>609	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.34	Horz(CT)	-0.00	3	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 53 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 *Except*
1-5: 2x6 SP No.2

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

REACTIONS. (size) 3=Mechanical, 4=0-3-8
Max Horz 4=-101(LC 10)
Max Uplift 3=-52(LC 29), 4=-37(LC 14)
Max Grav 3=194(LC 30), 4=976(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-165/412, 2-3=-171/381
WEBS 2-4=-746/309

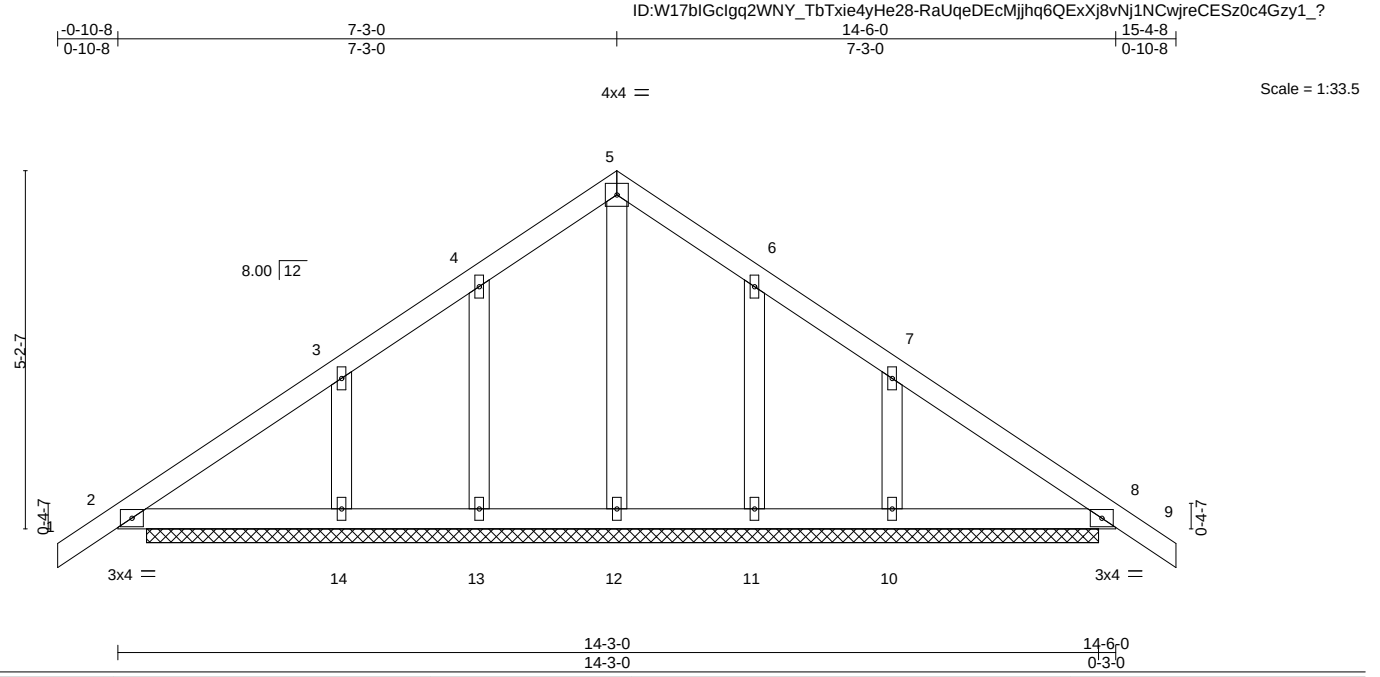
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-2-12 to 3-2-12, Interior(1) 3-2-12 to 6-5-0, Exterior(2) 6-5-0 to 9-5-0, Interior(1) 9-5-0 to 13-7-4 zone; cantilever left exposed ; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.6 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 a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 4. This connection is for uplift only and does not consider lateral forces.

January 7,2021

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

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	AE	COMMON SUPPORTED GAB	1	1	I44252910
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:18 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-RaUqeDEcMjjhq6QExXj8vNj1NCwjreCESz0c4Gzy1_?



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	0.00	9	n/r	120	MT20	197/144
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	0.00	9	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	-0.00	8	n/a	n/a		
BCLL	0.0 *	Code IRC2015/TPI2014		Matrix-S							Weight: 74 lb	FT = 20%
BCDL	10.0											

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

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

REACTIONS. All bearings 13-10-0.
(lb) - Max Horz 14=-114(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 8, 13, 14, 11, 10
Max Grav All reactions 250 lb or less at joint(s) 8, 13, 11 except 12=464(LC 2), 14=293(LC 26), 10=261(LC 27)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-88/337, 3-4=-11/295, 4-5=0/305, 5-6=0/303, 6-7=-11/300, 7-8=-89/333
WEBS 5-12=-412/0

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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 7-3-0, Corner(3) 7-3-0 to 10-3-0, Exterior(2) 10-3-0 to 15-4-8 zone; cantilever left and right exposed ; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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=15.0 psf (ground snow); Pf=11.6 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 11.6 psf on overhangs non-concurrent with other live loads.
6) All plates are 1.5x4 MT20 unless otherwise indicated.
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.

January 7,2021

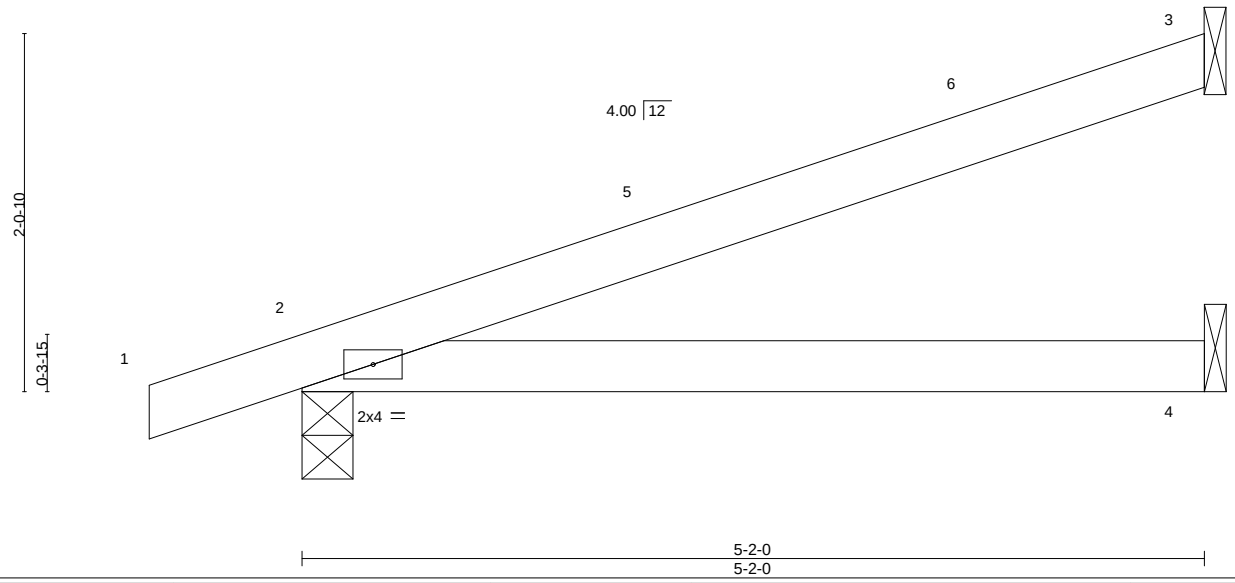
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	B1	MONOPITCH	1	1	I44252911
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:19 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-vn2CrZEE71rYRG_QUEENSbF9VcCra8XNhclAcizy1__

-0-10-8 5-2-0
0-10-8 5-2-0

Scale = 1:13.2



5-2-0
5-2-0

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	-0.04	2-4	>999	240	MT20	197/144
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.07	2-4	>821	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.00	3	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0										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

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

REACTIONS. (size) 3=Mechanical, 2=0-3-8, 4=Mechanical
Max Horz 2=69(LC 12)
Max Uplift 3=-60(LC 16), 2=-48(LC 12)
Max Grav 3=142(LC 2), 2=266(LC 2), 4=99(LC 7)

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

NOTES-
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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 5-1-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.6 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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) 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) 3.
9) 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.

January 7,2021

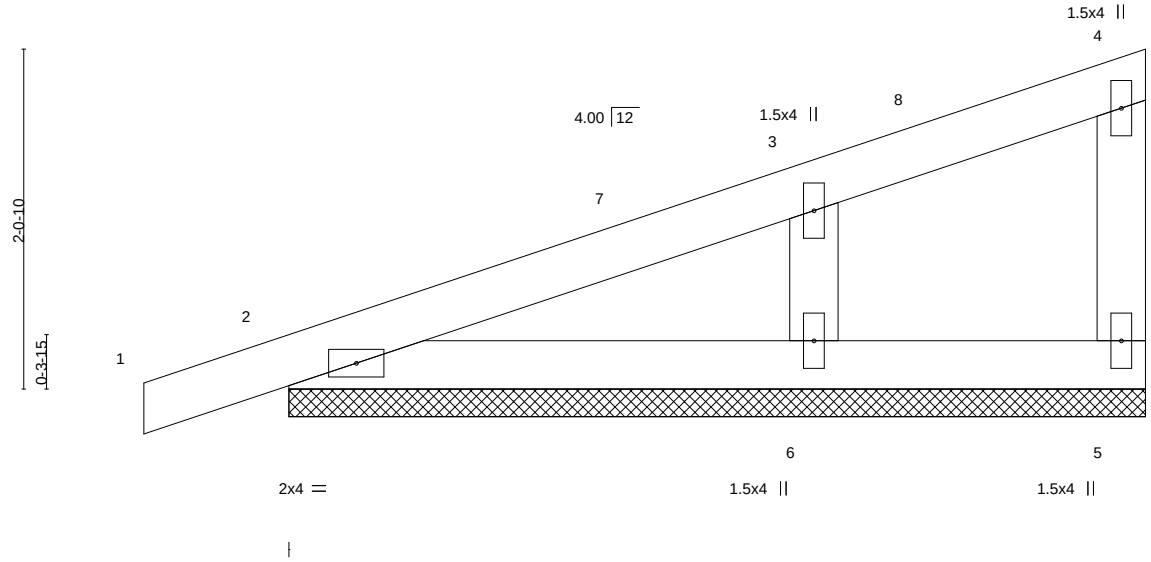
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	BE	MONOPITCH SUPPORTED	1	1	I44252912
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:20 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-Nzca2vFsuKzO3QZc2ylc?ooPR?bfJbvXwGVj78zy0zz

-0-10-8 5-2-0
0-10-8 5-2-0

Scale = 1:13.9



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	-0.00	1	n/r	120	MT20	197/144
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	1	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00		n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0										Weight: 21 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
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=5-2-0, 2=5-2-0, 6=5-2-0
Max Horz 2=68(LC 12)
Max Uplift 5=-8(LC 12), 2=-31(LC 12), 6=-38(LC 16)
Max Grav 5=37(LC 2), 2=165(LC 2), 6=252(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 Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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 5-0-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.6 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 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.

January 7,2021

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

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	BG	MONOPITCH GIRDER	1	1	I44252913
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:20 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-Nzca2vFsuKzO3QZc2ylc?ooIp?UaJbnXwGVj78zy0zz

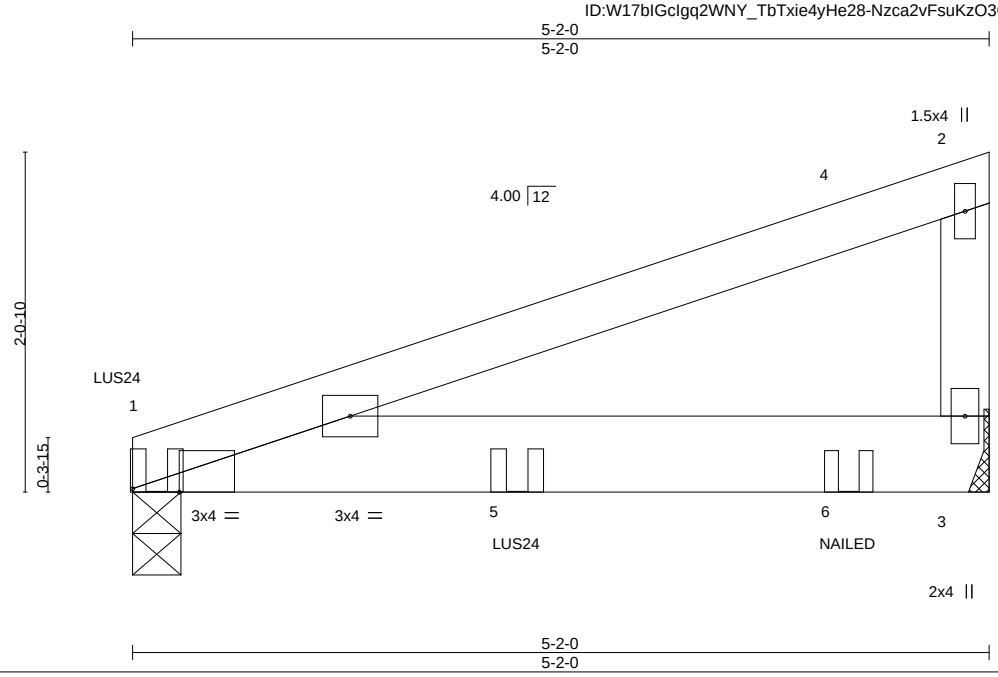


Plate Offsets (X,Y)-- [1:0-3-6,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	-0.03	1-3	>999	240	MT20	197/144
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.06	1-3	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00		n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-P							Weight: 22 lb	FT = 20%
BCDL	10.0											

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=0-3-8, 3=Mechanical
Max Horz 1=53(LC 8)
Max Uplift 1=-104(LC 8), 3=-91(LC 8)
Max Grav 1=639(LC 2), 3=464(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 Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; 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=15.0 psf (ground snow); Pf=11.6 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3.
8) One H2.5A 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.
9) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-2-1 oc max. starting at 0-1-12 from the left end to 2-3-13 to connect truss(es) to back face of bottom chord.
10) Fill all nail holes where hanger is in contact with lumber.
11) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-2=-43, 1-3=-20
Concentrated Loads (lb)
Vert: 1=-208(B) 5=-200(B) 6=-57(B)

January 7,2021

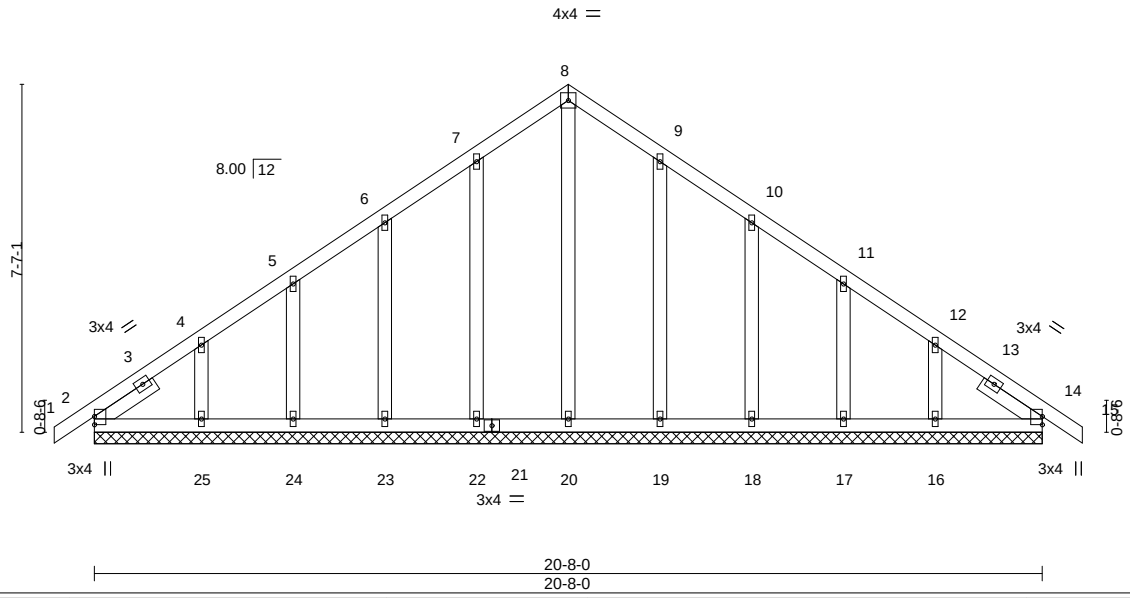
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	CE	COMMON SUPPORTED GAB	1	1	I44252914
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:22 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-KMkLTbH7QyD6Ijj?AMo44DtmfplinUOqNa_qC1zy0zx

-0-10-8 10-4-0 20-8-0 21-6-8
0-10-8 10-4-0 10-4-0 0-10-8

Scale = 1:50.2



20-8-0
20-8-0

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	-0.00	14	n/r	120	MT20	197/144
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	14	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 130 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
OTHERS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -t 1-6-9, Right 2x4 SP No.3 -t 1-6-9

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. All bearings 20-8-0.
(lb) - Max Horz 2=157(LC 13)
Max Uplift All uplift 100 lb or less at joint(s) 2, 22, 23, 24, 25, 19, 18, 17, 16
Max Grav All reactions 250 lb or less at joint(s) 2, 20, 22, 23, 24, 25, 19, 18, 17, 16, 14

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-4-0, Exterior(2) 2-4-0 to 10-4-0, Corner(3) 10-4-0 to 13-4-0, Exterior(2) 13-4-0 to 21-6-8 zone;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=15.0 psf (ground snow); Pf=11.6 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 11.6 psf on overhangs non-concurrent with other live loads.
6) All plates are 1.5x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
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) n/a
12) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.

January 7,2021

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

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	CG	COMMON GIRDER	1	2	I44252915
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:24 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-Gkr5uHINxZTqY1tOHnqY9ezvidtpFEP7ruTxGwzy0zv

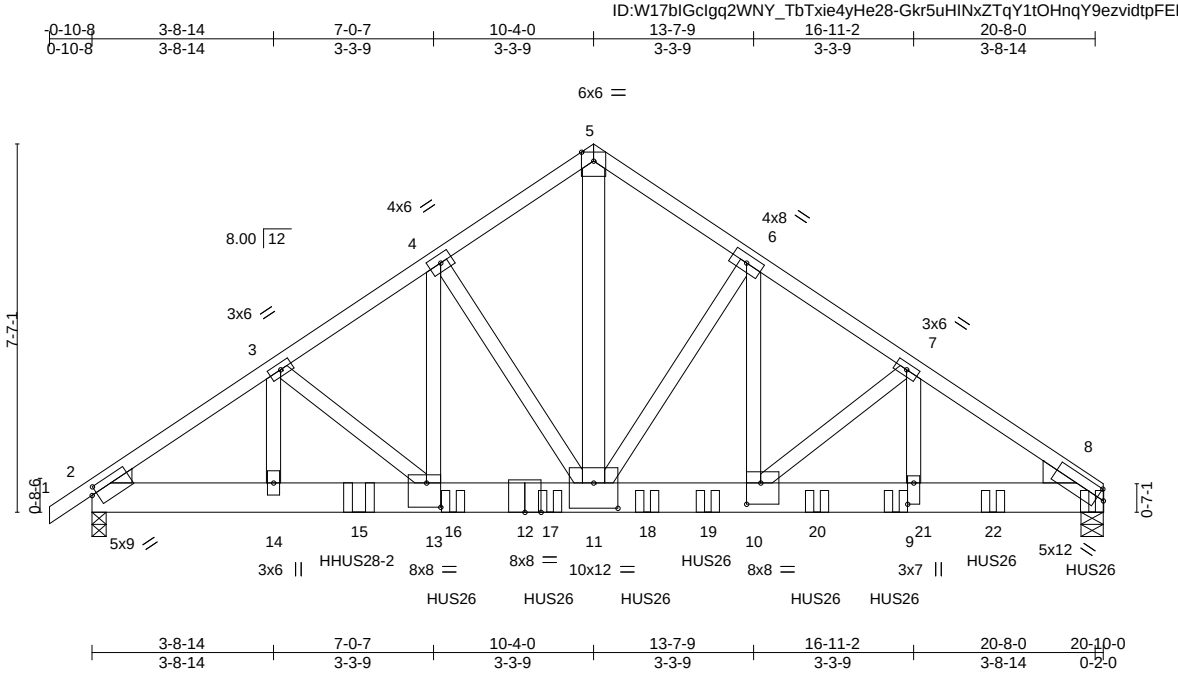


Plate Offsets (X,Y)-- [2:0-1-4,0-1-12], [8:0-1-12,0-2-6], [9:0-5-4,0-1-8], [10:0-3-8,0-5-4], [11:0-6-0,0-6-4], [13:0-3-8,0-6-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	-0.12	10-11	>999	240	MT20	197/144
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.23	10-11	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.73	Horz(CT)	0.05	8	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 338 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 *Except*
5-11: 2x6 SP No.2
WEDGE
Left: 2x4 SP No.3 , Right: 2x6 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-8-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 8=0-5-8, 2=(0-3-8 + TBE4 Simpson Strong-Tie) (req. 0-5-0)
Max Horz 2=155(LC 33)
Max Uplift 8=-607(LC 11), 2=-595(LC 10)
Max Grav 8=9107(LC 2), 2=6363(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-10072/954, 3-4=-9329/815, 4-5=-7505/621, 5-6=-7505/620, 6-7=-9568/704, 7-8=-11495/790
BOT CHORD 2-14=-806/7980, 13-14=-806/7980, 11-13=-645/7725, 10-11=-498/7925, 9-10=-583/9208, 8-9=-583/9208
WEBS 5-11=-623/8043, 6-11=-3071/278, 6-10=-216/3513, 7-10=-1675/172, 7-9=-114/2366, 4-11=-2713/448, 4-13=-417/3085, 3-13=-346/208, 3-14=-187/900

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-4-0 oc.
Webs connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; 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=15.0 psf (ground snow); Pf=11.6 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

Continued on page 2

January 7,2021

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

NOTES-

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) TBE4 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.
10) Two H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8. This connection is for uplift only and does not consider lateral forces.
11) Use Simpson Strong-Tie HHUS28-2 (22-10d Girder, 4-10d Truss) or equivalent at 5-6-0 from the left end to connect truss(es) to back face of bottom chord.
12) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-3-0 oc max. starting at 7-5-4 from the left end to 20-7-4 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

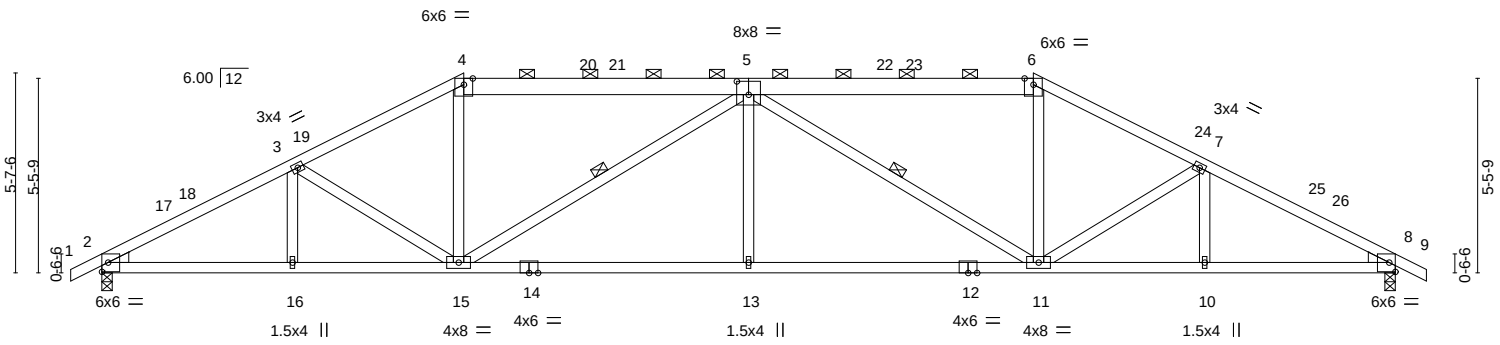
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-5=-43, 5-8=-43, 2-8=-20
   Concentrated Loads (lb)
   Vert: 8=-1121(B) 15=-2034(B) 16=-1303(B) 17=-1382(B) 18=-1424(B) 19=-1452(B) 20=-1111(B) 21=-1111(B) 22=-1111(B)

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	H1	HIP	1	1	I44252916
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:26 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-C7zrJzKdTAkYnL1mPCs0E32LpQSLjDgPICy1Lozy0zt

-0-10-8	5-4-4	10-2-0	18-2-0	26-2-0	30-11-12	36-4-0	37-2-8
0-10-8	5-4-4	4-9-12	8-0-0	8-0-0	4-9-12	5-4-4	0-10-8

Scale = 1:64.7



5-4-4	10-2-0	18-2-0	26-2-0	30-11-12	36-4-0
5-4-4	4-9-12	8-0-0	8-0-0	4-9-12	5-4-4

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.17	13	>999	240	MT20	197/144
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.39	13-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.42	Horz(CT)	0.14	8	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 203 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except* 4-5,5-6: 2x6 SP No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-1-9 oc purlins, except 2-0-0 oc purlins (4-7-13 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-15, 5-11

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=-77(LC 17)
Max Uplift 2=-39(LC 16), 8=-39(LC 17)
Max Grav 2=1503(LC 2), 8=1503(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2648/210, 3-4=-2326/220, 4-5=-2025/226, 5-6=-2025/226, 6-7=-2326/220, 7-8=-2648/210
BOT CHORD 2-16=-133/2254, 15-16=-133/2254, 13-15=-107/2687, 11-13=-107/2687, 10-11=-131/2254, 8-10=-131/2254
WEBS 3-15=-383/121, 4-15=0/659, 5-15=-877/128, 5-13=0/345, 5-11=-877/127, 6-11=0/659, 7-11=-383/122

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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 10-2-0, Exterior(2) 10-2-0 to 14-4-15, Interior(1) 14-4-15 to 26-2-0, Exterior(2) 26-2-0 to 30-4-15, Interior(1) 30-4-15 to 37-2-8 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) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 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.
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) Provide adequate drainage to prevent water ponding.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

January 7,2021

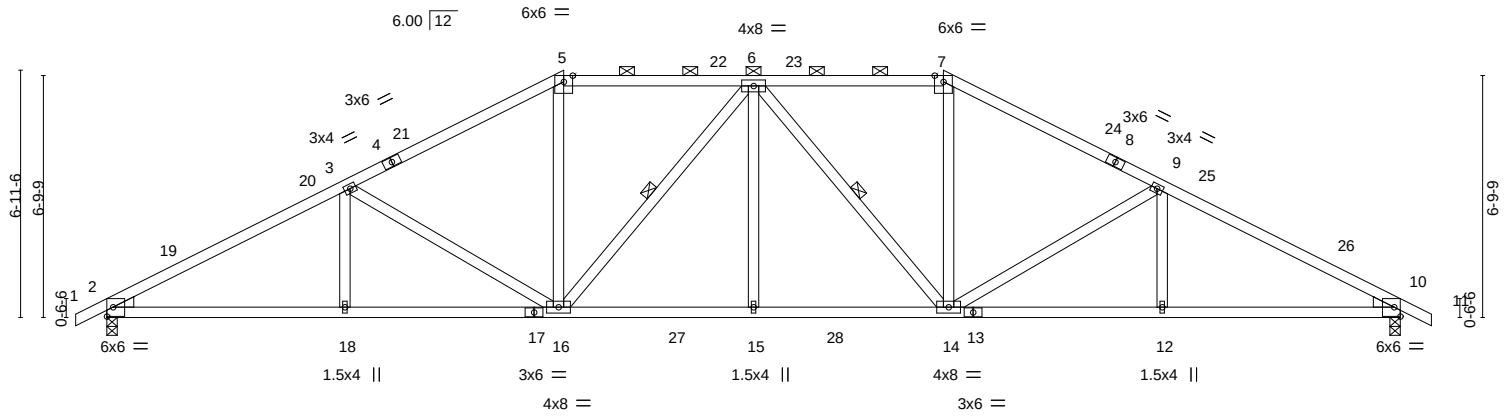
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	H2	HIP	1	1	I44252917
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:27 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-gJXEWILGEUsPPUcyywNFnHbSLqpGSejZXshbtEzy0zs

-0-10-8	6-8-4	12-10-0	18-2-0	23-6-0	29-7-12	36-4-0	37-2-8
0-10-8	6-8-4	6-1-12	5-4-0	5-4-0	6-1-12	6-8-4	0-10-8

Scale = 1:64.7



6-8-4	12-10-0	18-2-0	23-6-0	29-7-12	36-4-0
6-8-4	6-1-12	5-4-0	5-4-0	6-1-12	6-8-4

Plate Offsets (X,Y)-- [2:Edge,0-3-2], [10:Edge,0-3-2]

LOADING (psf)		**SPACING-**	2-0-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.14	15	>999	240	MT20	197/144
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.30	15-16	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.13	10	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 199 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
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-7-0 oc purlins, except 2-0-0 oc purlins (4-0-6 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-16, 6-14

REACTIONS. (size) 2=0-3-8, 10=0-3-8
Max Horz 2=-97(LC 21)
Max Uplift 2=-61(LC 16), 10=-61(LC 17)
Max Grav 2=1503(LC 2), 10=1503(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2634/196, 3-5=-2125/218, 5-6=-1814/230, 6-7=-1814/230, 7-9=-2125/218, 9-10=-2634/196
BOT CHORD 2-18=-112/2240, 16-18=-112/2240, 15-16=-45/2023, 14-15=-45/2023, 12-14=-109/2240, 10-12=-109/2240
WEBS 3-18=0/277, 3-16=-607/145, 5-16=0/611, 6-16=-455/83, 6-15=0/266, 6-14=-455/82, 7-14=0/611, 9-14=-607/145, 9-12=0/277

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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 12-10-0, Exterior(2) 12-10-0 to 17-0-15, Interior(1) 17-0-15 to 23-6-0, Exterior(2) 23-6-0 to 27-8-15, Interior(1) 27-8-15 to 37-2-8 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) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 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.
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) Provide adequate drainage to prevent water ponding.
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) 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.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

January 7,2021

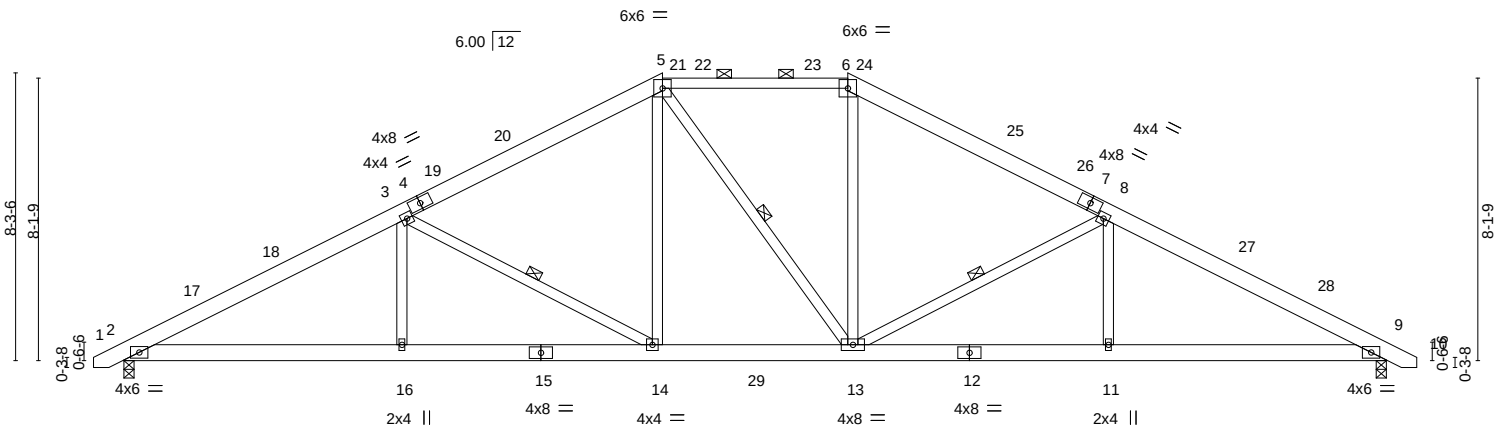
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	H3	HIP	1	1	I44252918
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:29 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-cif_x_MWm567eolL4KQjsigqOeZJwc6s_AAiy7zy0zq

-0-10-8	8-0-0	15-6-0	20-10-0	28-4-0	36-4-0	37-2-8
0-10-8	8-0-0	7-6-0	5-4-0	7-6-0	8-0-0	0-10-8

Scale = 1:66.3



8-0-0	15-6-0	20-10-0	28-4-0	36-4-0
8-0-0	7-6-0	5-4-0	7-6-0	8-0-0

LOADING (psf)		**SPACING-**	2-0-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	-0.10	14	>999	240	MT20	197/144
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.21	14-16	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.09	9	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 249 lb	FT = 20%

LUMBER-

TOP CHORD	2x6 SP No.2 *Except* 5-6: 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 4-2-2 oc purlins, except 2-0-0 oc purlins (4-0-9 max.): 5-6.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 3-14, 5-13, 8-13

REACTIONS. (size) 2=0-3-8, 9=0-3-8
Max Horz 2=-115(LC 21)
Max Uplift 2=-78(LC 16), 9=-78(LC 17)
Max Grav 2=1490(LC 2), 9=1490(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2750/186, 3-5=-2023/212, 5-6=-1672/229, 6-8=-2024/212, 8-9=-2749/186
BOT CHORD 2-16=-126/2398, 14-16=-126/2398, 13-14=-0/1671, 11-13=-93/2397, 9-11=-93/2397
WEBS 3-16=0/336, 3-14=-819/180, 5-14=-11/531, 6-13=0/523, 8-13=-816/181, 8-11=0/334

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-7-14 to 2-4-2, Interior(1) 2-4-2 to 15-6-0, Exterior(2) 15-6-0 to 19-8-15, Interior(1) 19-8-15 to 20-10-0, Exterior(2) 20-10-0 to 25-0-15, Interior(1) 25-0-15 to 36-11-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 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.
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) Provide adequate drainage to prevent water ponding.
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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 9. This connection is for uplift only and does not consider lateral forces.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

January 7,2021

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

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	H6	ROOF TRUSS	1	1	I44252919
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:31 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-Z4nkMgOmIjMrt6vkBlSBx7lA0RDeOVn8SUfo00zy0zo

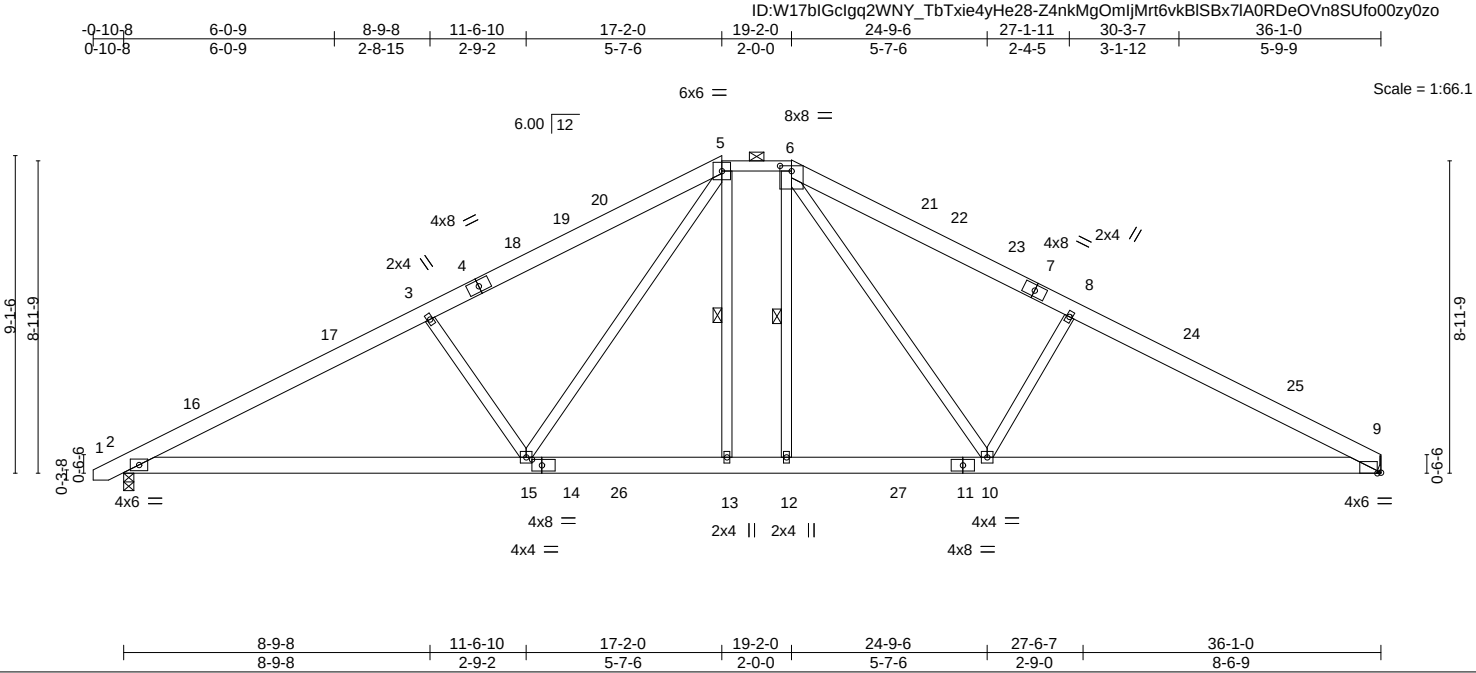


Plate Offsets (X,Y)-- [6:0-4-0,0-1-13], [9:0-1-4,Edge], [14:0-3-6,0-2-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	-0.15	2-15	>999	240	MT20	197/144
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.33	2-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.08	9	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 247 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.2 *Except* 5-6: 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-10-11 oc purlins, except 2-0-0 oc purlins (4-1-14 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-13, 6-12

REACTIONS. (size) 2=0-3-8, 9=Mechanical
Max Horz 2=130(LC 20)
Max Uplift 2=-88(LC 16), 9=-74(LC 17)
Max Grav 2=1504(LC 40), 9=1472(LC 40)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2741/194, 3-5=-2489/218, 5-6=-1638/217, 6-8=-2537/233, 8-9=-2756/196
BOT CHORD 2-15=-182/2398, 13-15=0/1636, 12-13=0/1637, 10-12=0/1637, 9-10=-94/2412
WEBS 3-15=-571/255, 5-15=-119/819, 5-13=-122/283, 6-10=-134/886, 8-10=-596/258

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-7-14 to 2-4-2, Interior(1) 2-4-2 to 17-2-0, Exterior(2) 17-2-0 to 23-4-15, Interior(1) 23-4-15 to 36-0-4 zone;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=15.0 psf (ground snow); Pf=16.5 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.
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) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

January 7,2021

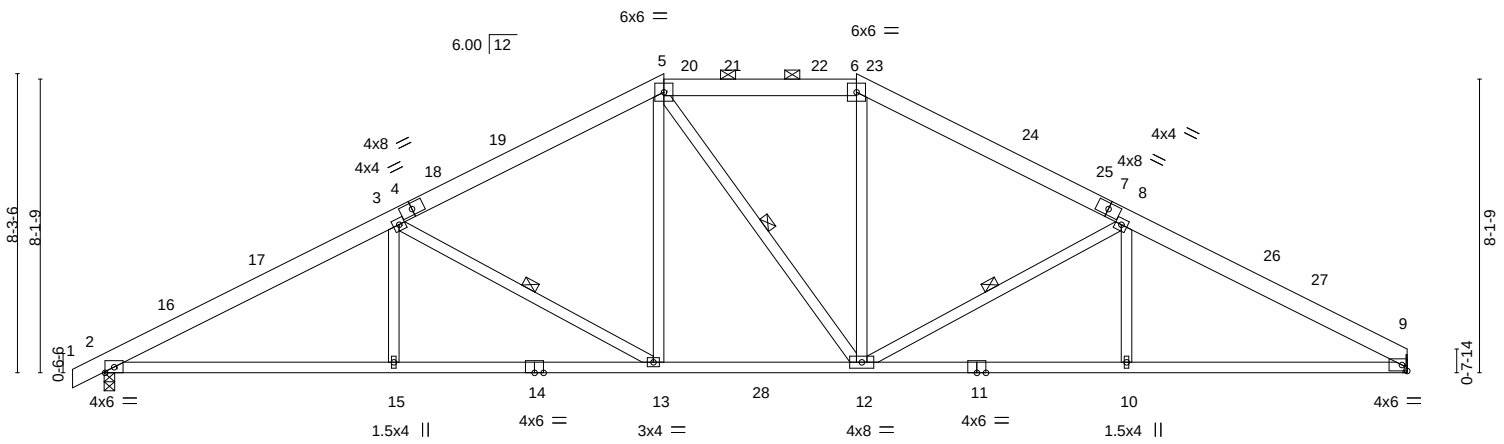
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	H7	HIP	1	1	I44252920
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:32 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-1HK7a0PO30UhVGUwlTzQUKIN9rWs7y2Ig8PMYSzy0zn

-0-10-8	8-0-4	15-6-0	20-10-0	28-3-12	36-1-0
0-10-8	8-0-4	7-5-12	5-4-0	7-5-12	7-9-4

Scale: 3/16"=1'



8-0-4	15-6-0	20-10-0	28-3-12	36-1-0
8-0-4	7-5-12	5-4-0	7-5-12	7-9-4

LOADING (psf)		**SPACING-**	2-0-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	-0.12	12-13	>999	240	MT20	197/144
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.26	13-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.13	9	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 221 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP 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 3-11-8 oc purlins, except
2-0-0 oc purlins (5-7-12 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-13, 5-12, 8-12

REACTIONS. (size) 2=0-3-8, 9=Mechanical
Max Horz 2=120(LC 20)
Max Uplift 2=-81(LC 16), 9=-63(LC 17)
Max Grav 2=1497(LC 2), 9=1444(LC 39)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2694/184, 3-5=-1996/213, 5-6=-1652/229, 6-8=-1993/215, 8-9=-2669/182
BOT CHORD 2-15=-126/2339, 13-15=-126/2339, 12-13=-14/1654, 10-12=-92/2307, 9-10=-92/2307
WEBS 3-15=0/335, 3-13=-775/174, 5-13=-11/518, 6-12=0/494, 8-12=-742/175, 8-10=0/332

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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 15-6-0, Exterior(2) 15-6-0 to 19-8-15, Interior(1) 19-8-15 to 20-10-0, Exterior(2) 20-10-0 to 25-0-15, Interior(1) 25-0-15 to 36-0-4 zone;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=15.0 psf (ground snow); Pf=16.5 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.
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) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

January 7,2021

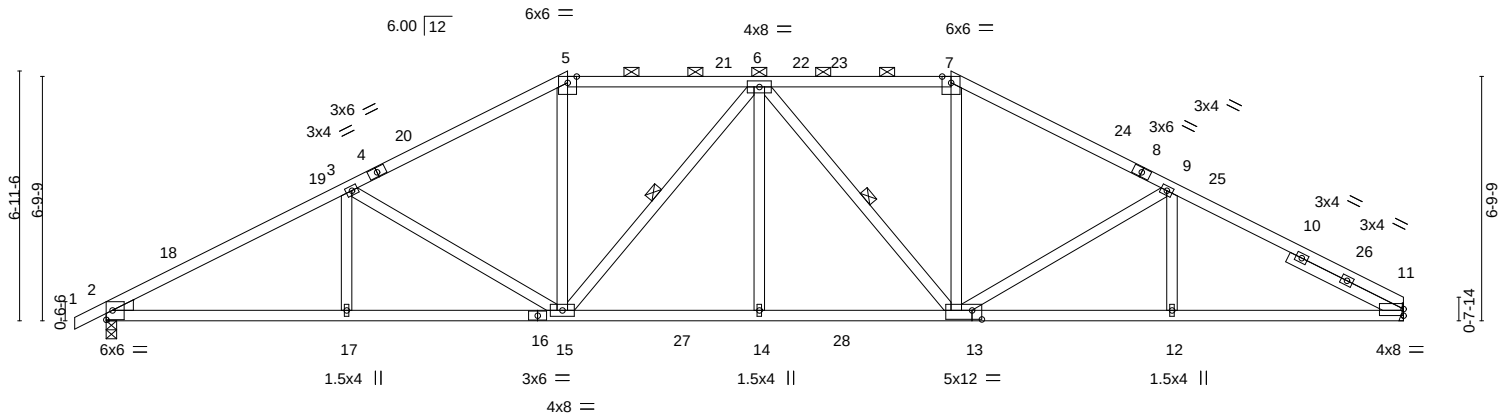
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	H8	HIP	1	1	I44252921
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:34 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-zfSt_iQfbekPkZeJtu?uZlNbUfCxboRb8SuTdKzy0zI

-0-10-8	6-8-4	12-10-0	18-2-0	23-6-0	29-7-12	36-1-0
0-10-8	6-8-4	6-1-12	5-4-0	5-4-0	6-1-12	6-5-4

Scale: 3/16"=1'



6-8-4	12-10-0	18-2-0	23-6-0	29-7-12	36-1-0
6-8-4	6-1-12	5-4-0	5-4-0	6-1-12	6-5-4

Plate Offsets (X,Y)-- [2:Edge,0-3-2], [11:0-0-0,0-2-3], [13:0-3-4,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.14	14	>999	240	MT20	197/144
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.29	13-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.13	11	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 201 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
WEDGE
Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.3 -t 3-6-7

BRACING-
TOP CHORD Structural wood sheathing directly applied, except 2-0-0 oc purlins (4-0-6 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-15, 6-13

REACTIONS. (size) 2=0-3-8, 11=Mechanical
Max Horz 2=100(LC 16)
Max Uplift 2=-62(LC 16), 11=-44(LC 17)
Max Grav 2=1500(LC 2), 11=1437(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2628/199, 3-5=-2118/221, 5-6=-1808/233, 6-7=-1786/231, 7-9=-2126/218, 9-11=-2546/195
BOT CHORD 2-17=-118/2235, 15-17=-118/2235, 14-15=-53/2013, 13-14=-53/2013, 12-13=-110/2170, 11-12=-110/2170
WEBS 3-17=0/277, 3-15=-608/145, 5-15=0/607, 6-15=-452/82, 6-14=0/273, 6-13=-476/81, 7-13=-2/590, 9-13=-520/143

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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 12-10-0, Exterior(2) 12-10-0 to 17-0-15, Interior(1) 17-0-15 to 23-6-0, Exterior(2) 23-6-0 to 27-8-15, Interior(1) 27-8-15 to 36-1-0 zone;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=15.0 psf (ground snow); Pf=16.5 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.
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) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

January 7,2021

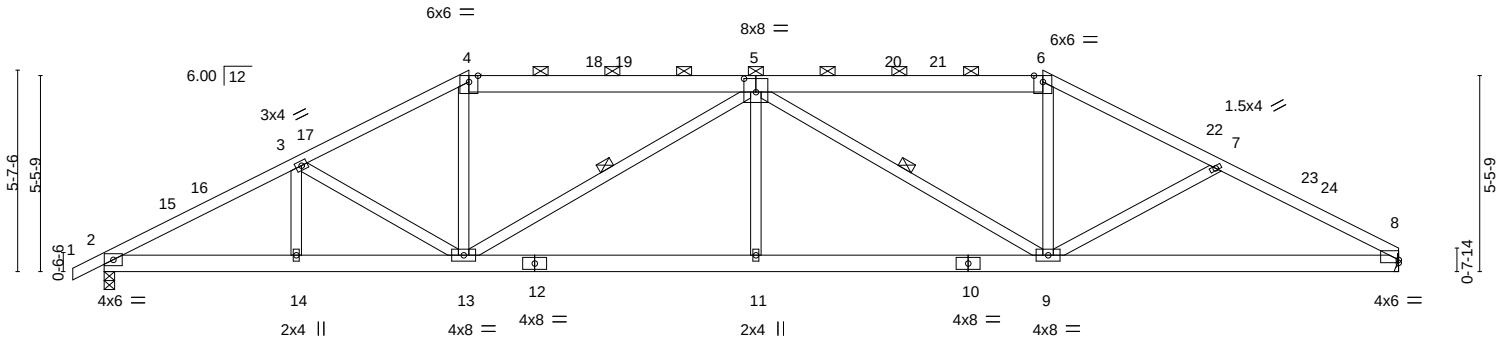
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	H9	HIP	1	1	I44252922
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:36 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-v2adPNSv6F_7_toh_J2MeAS_dSw33kHubmNZiDzy0zj

-0-10-8	5-4-4	10-2-0	18-2-0	26-2-0	30-11-12	36-1-0
0-10-8	5-4-4	4-9-12	8-0-0	8-0-0	4-9-12	5-1-4

Scale: 3/16"=1'



5-4-4	10-2-0	18-2-0	26-2-0	36-1-0
5-4-4	4-9-12	8-0-0	8-0-0	9-11-0

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	-0.14	11	>999	240	MT20	197/144
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.29	11-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.09	8	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 224 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 SP No.2 or 2x4 SPF No.2 *Except* 4-5,5-6: 2x6 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.3

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 3-2-12 oc purlins, except 2-0-0 oc purlins (4-7-10 max.): 4-6.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 5-13, 5-9

REACTIONS. (size) 8=Mechanical, 2=0-3-8
Max Horz 2=81(LC 20)
Max Uplift 8=-21(LC 17), 2=-39(LC 16)
Max Grav 8=1434(LC 2), 2=1497(LC 2)

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

TOP CHORD	2-3=-2670/216, 3-4=-2353/223, 4-5=-2050/229, 5-6=-2043/216, 6-7=-2349/206, 7-8=-2564/251
BOT CHORD	2-14=-146/2285, 13-14=-146/2285, 11-13=-123/2705, 9-11=-123/2705, 8-9=-174/2196
WEBS	3-13=-389/122, 4-13=0/672, 5-13=-866/133, 5-11=0/305, 5-9=-873/144, 6-9=0/667, 7-9=-290/171

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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 10-2-0, Exterior(2) 10-2-0 to 14-4-15, Interior(1) 14-4-15 to 26-2-0, Exterior(2) 26-2-0 to 30-4-15, Interior(1) 30-4-15 to 36-0-4 zone;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=15.0 psf (ground snow); Pf=16.5 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.
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) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

January 7,2021

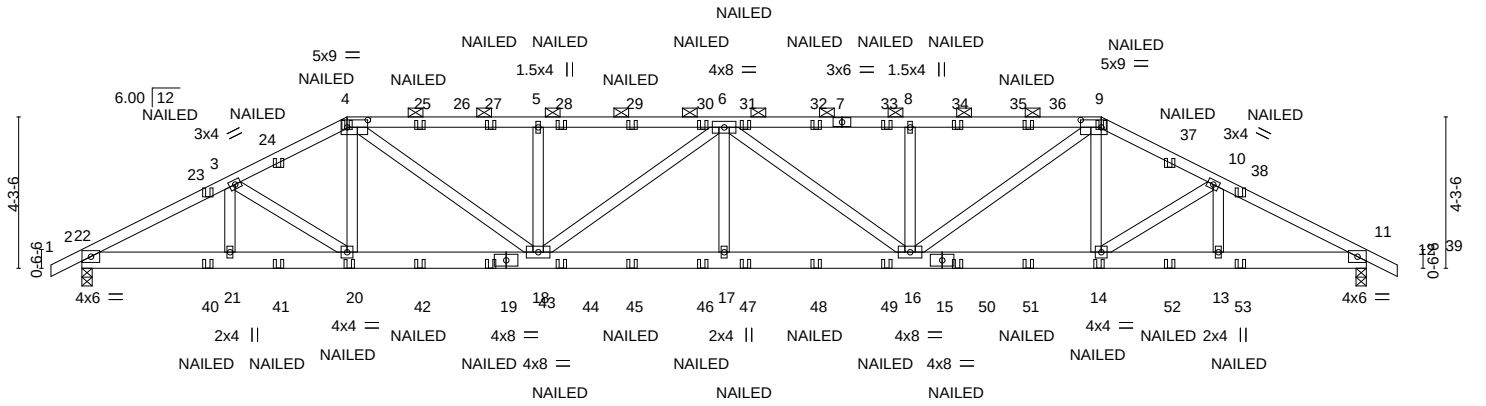
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	HG1	HIP GIRDER	1	2	I44252923
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:44 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-ga3f56YwEi?_x6PES_BEzsoNMhfixMF3R?J__Izy0zb

-0-10-8	4-2-4	7-6-0	12-10-14	18-2-0	23-5-2	28-10-0	32-1-12	36-4-0	37-2-8
0-10-8	4-2-4	3-3-12	5-4-14	5-3-2	5-3-2	5-4-14	3-3-12	4-2-4	0-10-8

Scale = 1:65.2



4-2-4	7-6-0	12-10-14	18-2-0	23-5-2	28-10-0	32-1-12	36-4-0
4-2-4	3-3-12	5-4-14	5-3-2	5-3-2	5-4-14	3-3-12	4-2-4

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	0.20	17	>999	240	MT20	197/144
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.38	17	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.41	Horz(CT)	0.09	11	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 448 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-6-14 oc purlins, except
2-0-0 oc purlins (4-7-10 max.): 4-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 11=0-3-8
Max Horz 2=60(LC 58)
Max Uplift 2=-477(LC 12), 11=-477(LC 13)
Max Grav 2=2558(LC 2), 11=2558(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-4770/972, 3-4=-4506/1035, 4-5=-5588/1382, 5-6=-5587/1382, 6-8=-5587/1382, 8-9=-5588/1382, 9-10=-4506/1035, 10-11=-4770/972
BOT CHORD 2-21=-856/4118, 20-21=-856/4118, 18-20=-890/3986, 17-18=-1487/6145, 16-17=-1487/6145, 14-16=-854/3986, 13-14=-817/4118, 11-13=-817/4118
WEBS 3-20=-252/104, 4-20=0/476, 4-18=-574/2004, 5-18=-599/349, 6-18=-721/208, 6-17=0/429, 6-16=-721/208, 8-16=-599/349, 9-16=-574/2004, 9-14=0/476, 10-14=-252/105

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=120mph 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
5) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=16.5 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 Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
6) Unbalanced snow loads have been considered for this design.
7) 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.
8) Provide adequate drainage to prevent water ponding.
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) 2 and 11. This connection is for uplift only and does not consider lateral forces.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

January 7,2021

Continued on page 2

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

NOTES-

13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

LOAD CASE(S) Standard

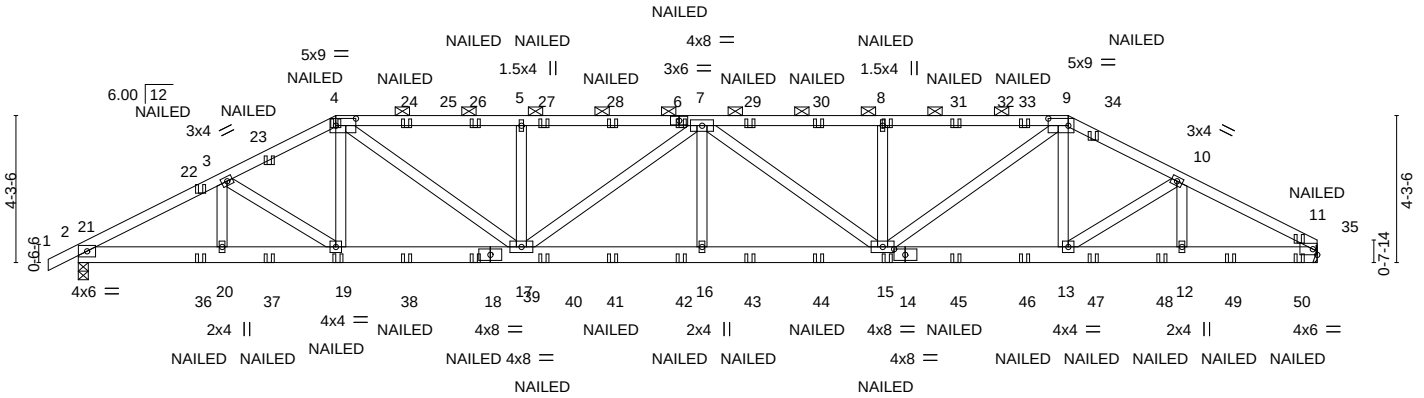
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-4=-43, 4-9=-53, 9-12=-43, 2-11=-20
   Concentrated Loads (lb)
   Vert: 4=-63(B) 9=-63(B) 20=-33(B) 14=-33(B) 23=-78(B) 24=-76(B) 25=-58(B) 27=-58(B) 28=-58(B) 29=-58(B) 30=-58(B) 31=-58(B) 32=-58(B) 33=-58(B) 34=-58(B) 36=-58(B) 37=-76(B) 38=-78(B) 40=-69(B) 41=-38(B) 42=-33(B) 43=-33(B) 44=-33(B) 45=-33(B) 46=-33(B) 47=-33(B) 48=-33(B) 49=-33(B) 50=-33(B) 51=-33(B) 52=-38(B) 53=-69(B)

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	HG2	HIP GIRDER	1	2	I44252924
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:52 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-R7YhmsexLA?svK0mwgK6IY7IhvL3pz8EHFFQGIzy0zT

-0-10-8	4-2-4	7-6-0	12-10-14	18-2-0	23-5-2	28-10-0	32-1-12	36-1-0
0-10-8	4-2-4	3-3-12	5-4-14	5-3-2	5-3-2	5-4-14	3-3-12	3-11-4

Scale = 1:67.1



4-2-4	7-6-0	12-10-14	18-2-0	23-5-2	28-10-0	32-1-12	36-1-0
4-2-4	3-3-12	5-4-14	5-3-2	5-3-2	5-4-14	3-3-12	3-11-4

Plate Offsets (X,Y)-- [4:0-7-0,0-2-8], [9:0-7-0,0-2-8], [14:0-3-14,0-2-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.60	Vert(LL)	0.19	16	>999	240	MT20	197/144
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.36	16	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.42	Horz(CT)	0.08	11	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 443 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-7-11 oc purlins, except
2-0-0 oc purlins (4-8-13 max.): 4-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 11=Mechanical, 2=0-3-8
Max Horz 2=64(LC 58)
Max Uplift 11=-488(LC 8), 2=-459(LC 9)
Max Grav 11=2465(LC 2), 2=2506(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-4666/935, 3-4=-4396/997, 4-5=-5420/1324, 5-7=-5420/1324, 7-8=-5346/1315, 8-9=-5347/1315, 9-10=-4211/969, 10-11=-4391/892
BOT CHORD 2-20=-830/4027, 19-20=-830/4027, 17-19=-862/3887, 16-17=-1409/5906, 15-16=-1409/5906, 13-15=-794/3732, 12-13=-721/3712, 11-12=-721/3712
WEBS 3-19=-259/97, 4-19=0/477, 4-17=-547/1918, 5-17=-601/350, 7-17=-632/179, 7-16=0/404, 7-15=-734/198, 8-15=-604/352, 9-15=-571/2030, 9-13=0/420, 10-13=-282/180

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; 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=15.0 psf (ground snow); Pf=16.5 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 Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
6) Unbalanced snow loads have been considered for this design.
7) 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.
8) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 11=488.

January 7,2021

Continued on page 2

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

NOTES-

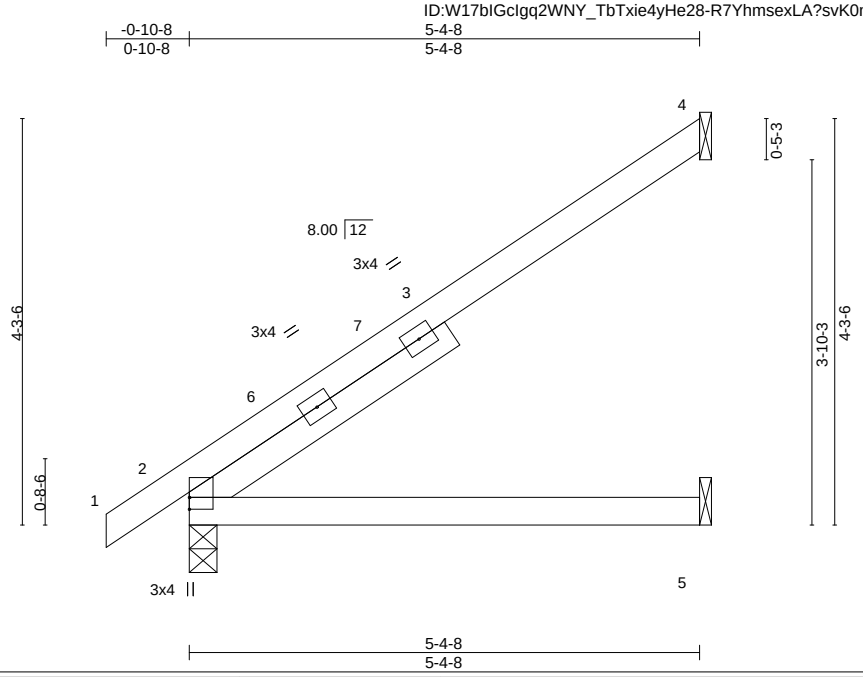
13) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-4=-43, 4-9=-53, 9-11=-43, 2-11=-20
   Concentrated Loads (lb)
   Vert: 4=-63(F) 6=-58(F) 19=-33(F) 8=-58(F) 15=-33(F) 22=-78(F) 23=-76(F) 24=-58(F) 26=-58(F) 27=-58(F) 28=-58(F) 29=-58(F) 30=-58(F) 31=-58(F) 33=-58(F) 34=-67(F) 35=-80(F) 36=-69(F) 37=-38(F) 38=-33(F) 39=-33(F) 40=-33(F) 41=-33(F) 42=-33(F) 43=-33(F) 44=-33(F) 45=-33(F) 46=-33(F) 47=-33(F) 48=-33(F) 49=-33(F) 50=-39(F)

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	J1	JACK-OPEN	27	1	I44252925
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:52 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-R7YhmsexLA?svK0mwgK6IY7mavSnp3iEHFFQGIzy0zT



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	-0.05	2-5	>999	240	MT20	197/144
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.10	2-5	>667	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0										Weight: 24 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
SLIDER Left 2x4 SP No.3 -t 3-3-2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-4-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 4=Mechanical, 2=0-3-8, 5=Mechanical
Max Horz 2=135(LC 14)
Max Uplift 4=-102(LC 14)
Max Grav 4=165(LC 26), 2=269(LC 2), 5=106(LC 5)

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

NOTES-
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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 5-3-12 zone;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=15.0 psf (ground snow); Pf=11.6 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
3) 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.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 4=102.

January 7,2021

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

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	J2	JACK-OPEN	3	1	I44252926
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:53 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-vJ63_BfZ6T7jWUbyUNrLqmgyhJp9YWyOWv_zokzy0zS

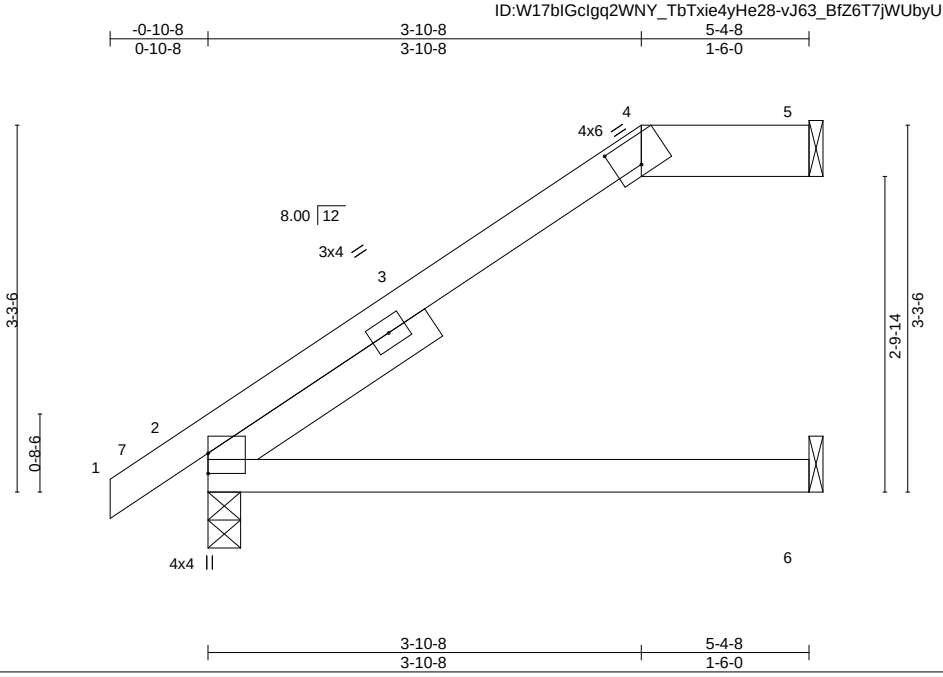


Plate Offsets (X,Y)-- [4:0-2-13,0-2-15]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	-0.03	2-6	>999	240	MT20	197/144
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.07	2-6	>898	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.07	5	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0										Weight: 24 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except* 4-5: 2x6 SP No.2
BOT CHORD 2x4 SP No.2 or 2x4 SPF No.2
SLIDER Left 2x4 SP No.3 -t 2-4-5

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-4-8 oc purlins, except 2-0-0 oc purlins: 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=Mechanical, 2=0-3-8, 6=Mechanical
Max Horz 2=102(LC 14)
Max Uplift 5=-47(LC 14), 2=-10(LC 14)
Max Grav 5=146(LC 2), 2=269(LC 2), 6=95(LC 5)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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 3-10-8, Exterior(2) 3-10-8 to 5-3-12 zone;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=15.0 psf (ground snow); Pf=16.5 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.
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) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 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) 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) 5.
10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 6 and 2. This connection is for uplift only and does not consider lateral forces.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

January 7,2021

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

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	J3	JACK-OPEN GIRDER	3	1	I44252927
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:55 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-siDpOtgqe5NRmolLbotpvBIIA6WT0QShzDT4tdzy0zQ

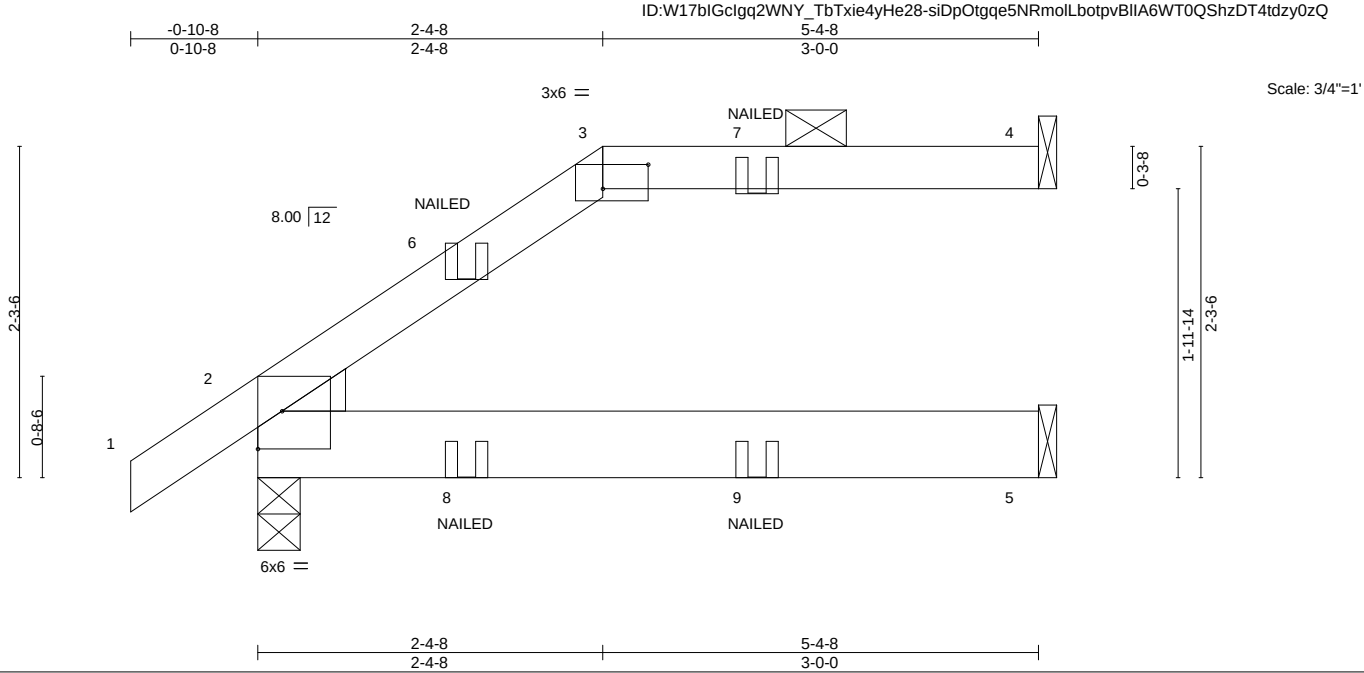


Plate Offsets (X,Y)-- [2:Edge,0-3-2], [3:0-3-12,0-2-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	-0.01	2-5	>999	240	MT20	197/144
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.03	2-5	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.08	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0										Weight: 24 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2
BOT CHORD 2x6 SP No.2
WEDGE
Left: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-4-8 oc purlins, except 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 4=Mechanical, 2=0-3-8, 5=Mechanical
Max Horz 2=71(LC 10)
Max Uplift 4=-59(LC 7), 2=-29(LC 10)
Max Grav 4=145(LC 2), 2=321(LC 2), 5=131(LC 5)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; 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=15.0 psf (ground snow); Pf=16.5 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.
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) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 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) 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) 4.
10) One MTS12 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.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-3=-43, 3-4=-53, 2-5=-20

January 7,2021

Continued on page 2

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

LOAD CASE(S) Standard
Concentrated Loads (lb)
Vert: 6=-44(F) 7=-11(F) 8=-16(F) 9=-13(F)

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	J4	JACK-OPEN	3	1	I44252928
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:55 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-siDpOtgqe5NRmolLbotpvBlNk6Y40QShzDT4tdzy0zQ

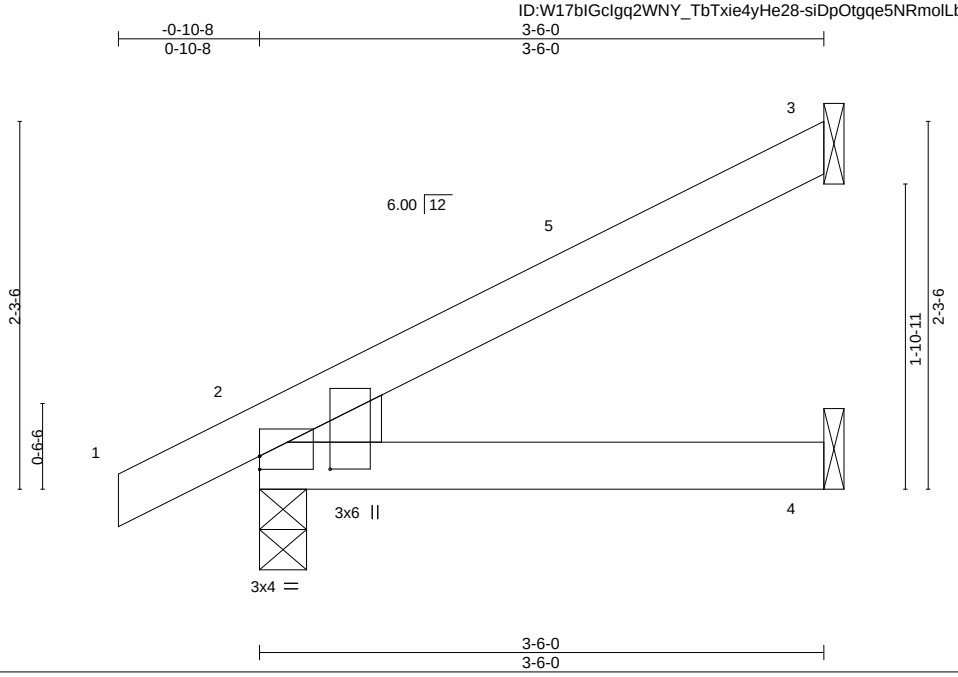


Plate Offsets (X,Y)-- [2:Edge,0-1-0], [2:0-0-15,0-5-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	-0.01	2-4	>999	240	MT20	197/144
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.01	2-4	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.00	3	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0										Weight: 14 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
WEDGE
Left: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-6-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 3=Mechanical, 2=0-3-8, 4=Mechanical
Max Horz 2=70(LC 16)
Max Uplift 3=-51(LC 16), 2=-15(LC 16)
Max Grav 3=89(LC 2), 2=202(LC 2), 4=66(LC 7)

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

NOTES-
1) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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 3-5-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=15.0 psf (ground snow); Pf=11.6 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; 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) 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) 3.
9) 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.

January 7,2021

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

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	J5	JACK-OPEN	3	1	I44252929
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:56 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-KunBcDhSPOVINyJX9VP2SOHYuWublthqCtDdP3zy0zP

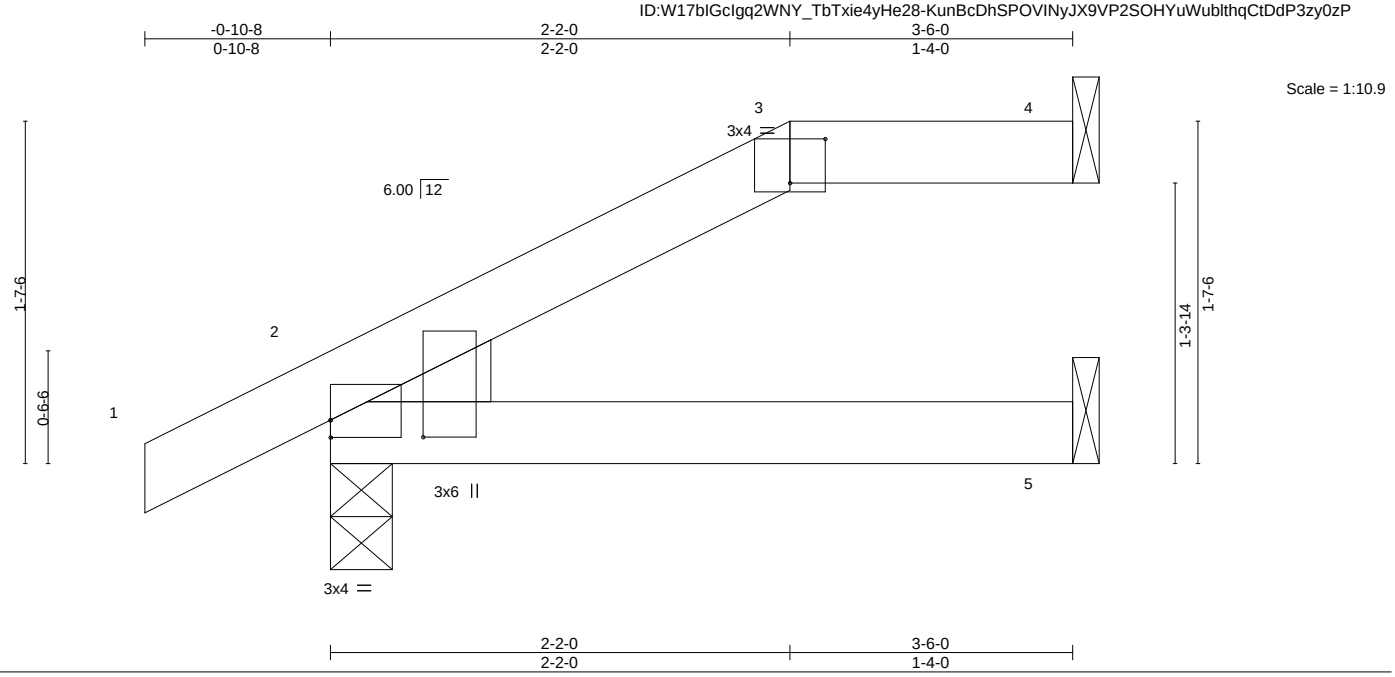


Plate Offsets (X,Y)-- [2:0-0-15,0-5-4], [2:0-0-0,0-1-0], [3:0-2-0,0-2-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	-0.01	2-5	>999	240	MT20	197/144
Snow (Pf/Pg)	16.5/15.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.01	2-5	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	4	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0										Weight: 13 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
WEDGE
Left: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-6-0 oc purlins, except 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 4=Mechanical, 2=0-3-8, 5=Mechanical
Max Horz 2=50(LC 16)
Max Uplift 4=-25(LC 13), 2=-22(LC 16)
Max Grav 4=87(LC 35), 2=235(LC 36), 5=61(LC 7)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;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=15.0 psf (ground snow); Pf=16.5 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.
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) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4.
11) One MTS12 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.
12) 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.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

January 7,2021

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

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	T4	ROOF TRUSS	2	1	I44252930
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:58 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-GHvy1vjix0m?dFTwHwRWXpNpgKObDhB7fBikTxzy0zN

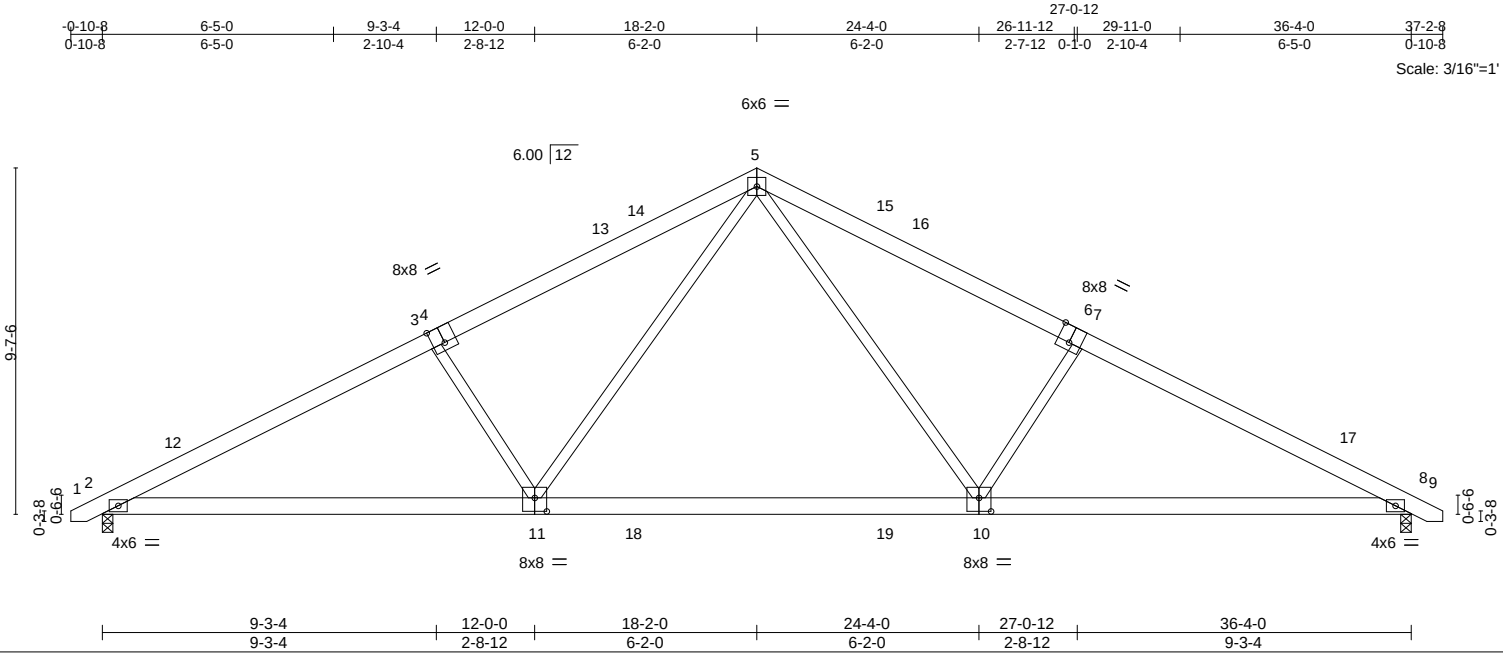


Plate Offsets (X,Y)-- [4:0-4-0,Edge], [6:0-4-0,Edge], [10:0-4-0,0-4-8], [11:0-4-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.32	10-11	>999	240	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.47	10-11	>926	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.38	Horz(CT)	0.07	8	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 231 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-0-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 8=0-3-8
Max Horz 2=134(LC 16)
Max Uplift 2=-93(LC 16), 8=-93(LC 17)
Max Grav 2=1490(LC 2), 8=1490(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2547/167, 3-5=-2280/193, 5-7=-2280/193, 7-8=-2547/168
BOT CHORD 2-11=-183/2198, 10-11=0/1432, 8-10=-49/2198
WEBS 5-10=-94/928, 7-10=-549/266, 5-11=-94/928, 3-11=-549/266

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-7-14 to 2-4-2, Interior(1) 2-4-2 to 18-2-0, Exterior(2) 18-2-0 to 21-2-0, Interior(1) 21-2-0 to 36-11-14 zone;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=15.0 psf (ground snow); Pf=11.6 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 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) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 8. This connection is for uplift only and does not consider lateral forces.
9) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

January 7,2021

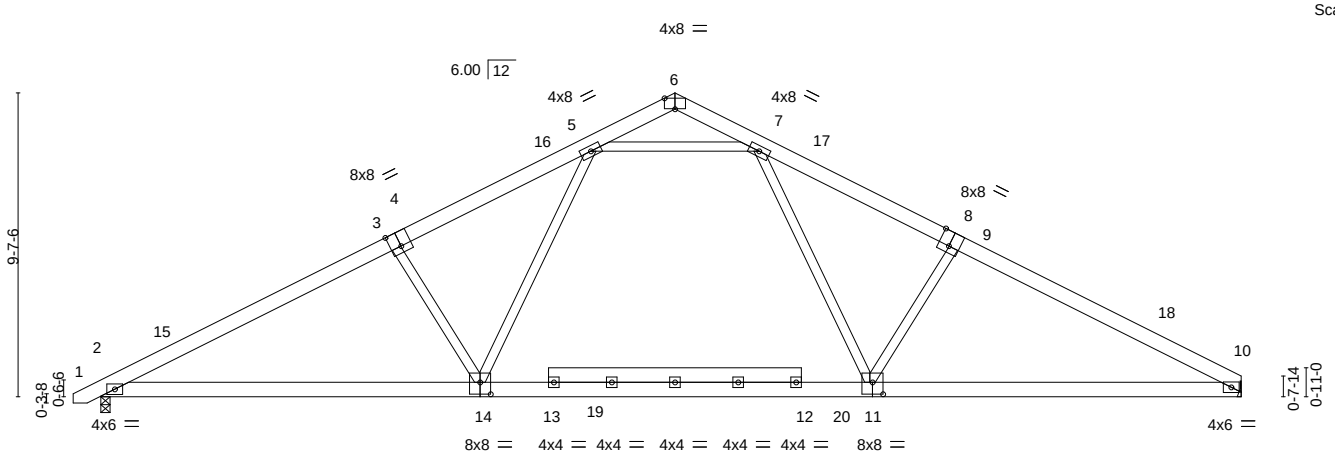
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	T5	ROOF TRUSS	4	1	I44252931
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:13:59 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-kTTKEFjKiJusEP26qeyl41vxHkl7y3mGurRH0Ozy0zM

-0-10-8	6-5-0	9-4-4	12-0-0	18-2-0	24-4-0	26-11-12	29-11-0	36-1-0
0-10-8	6-5-0	2-11-4	2-7-12	6-2-0	6-2-0	2-7-12	2-11-4	6-2-0

Scale = 1:72.9



9-4-4	12-0-0	18-2-0	24-4-0	26-11-12	36-1-0
9-4-4	2-7-12	6-2-0	6-2-0	2-7-12	9-1-4

Plate Offsets (X,Y)-- [4:0-4-0,Edge], [6:0-4-0,Edge], [8:0-4-0,Edge], [11:0-4-0,0-4-8], [14:0-4-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.20	2-14	>999	240	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.38	2-14	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.07	10	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 248 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-6-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-3-8, 10=Mechanical
Max Horz 2=138(LC 20)
Max Uplift 2=-94(LC 16), 10=-79(LC 17)
Max Grav 2=1484(LC 2), 10=1434(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2508/157, 3-5=-2272/176, 7-9=-2257/183, 9-10=-2487/160
BOT CHORD 2-14=-176/2158, 11-14=-11/1625, 10-11=-48/2133
WEBS 7-11=-74/822, 9-11=-538/266, 5-14=-75/846, 3-14=-562/264, 5-7=-1465/155

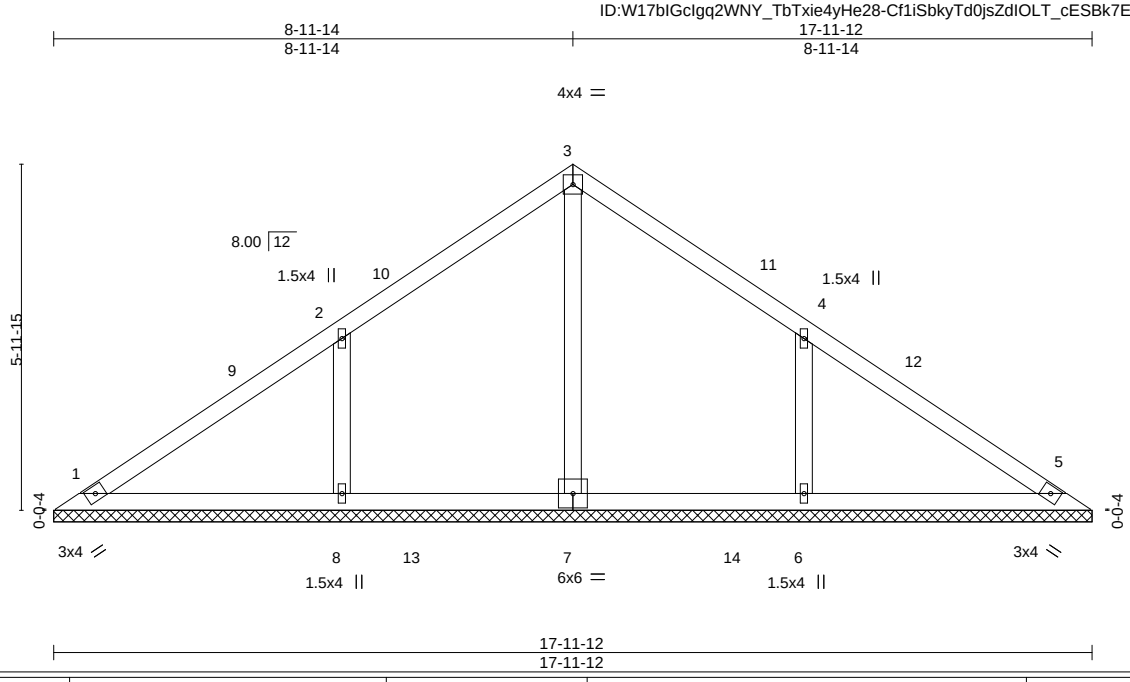
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-7-14 to 2-4-2, Interior(1) 2-4-2 to 18-2-0, Exterior(2) 18-2-0 to 20-11-3, Interior(1) 20-11-3 to 36-0-4 zone;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=15.0 psf (ground snow); Pf=11.6 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 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) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

January 7,2021

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

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	V1	GABLE	1	1	I44252932
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:14:00 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-Cf1iSbkyTd0jsZdIOLT_cESBk7Ehhg8Q7VBrYqzy0zL



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 73 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
OTHERS 2x4 SP No.3

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

REACTIONS. All bearings 17-11-12.
(lb) - Max Horz 1=-120(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 8=-125(LC 14), 6=-125(LC 15)
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=340(LC 28), 8=448(LC 25), 6=448(LC 26)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 2-8=-316/176, 4-6=-316/176

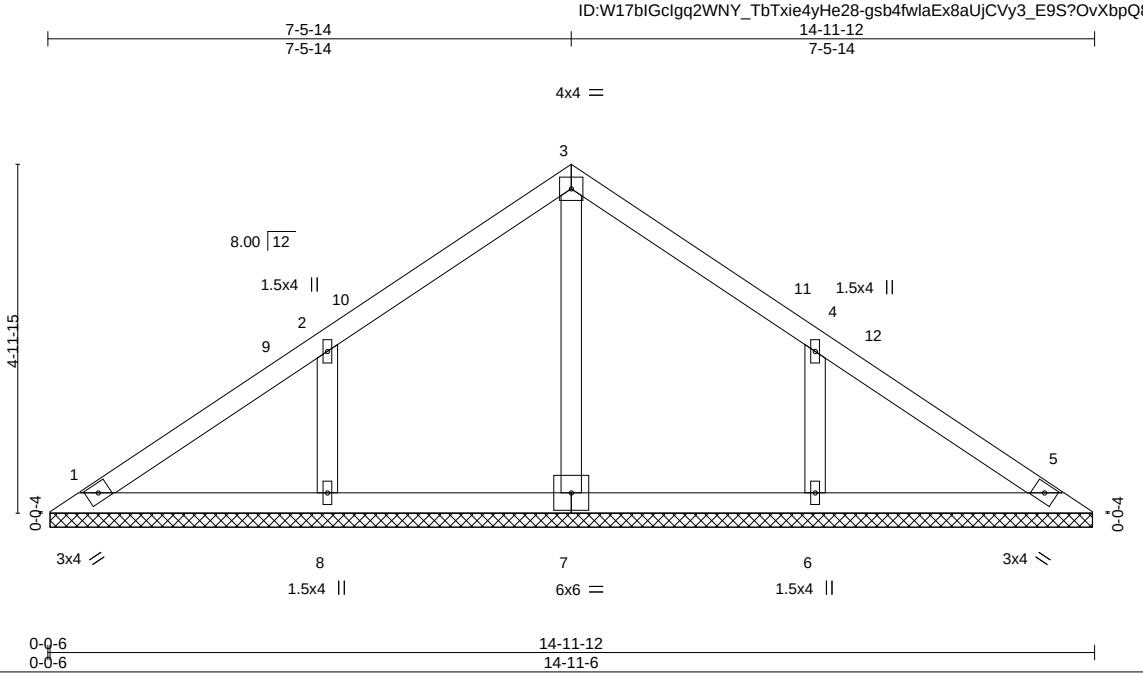
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 8-11-14, Exterior(2) 8-11-14 to 11-11-14, Interior(1) 11-11-14 to 17-6-0 zone;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=15.0 psf (ground snow); Pf=11.6 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 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.

January 7,2021

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

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	V2	Valley	1	1	I44252933
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:14:01 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-gsb4fwlaEx8aUjCVy3_E9S?OvXbpQ8yZL9wO4Gzy0zK



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	n/a	-	n/a	999	MT20	197/144
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 60 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
OTHERS 2x4 SP No.3

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

REACTIONS. All bearings 14-11-0.
(lb) - Max Horz 1=-98(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 1 except 6=-102(LC 15), 8=-102(LC 14)
Max Grav All reactions 250 lb or less at joint(s) 1, 5, 7 except 6=345(LC 26), 8=345(LC 25)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 4-6=-259/144, 2-8=-259/144

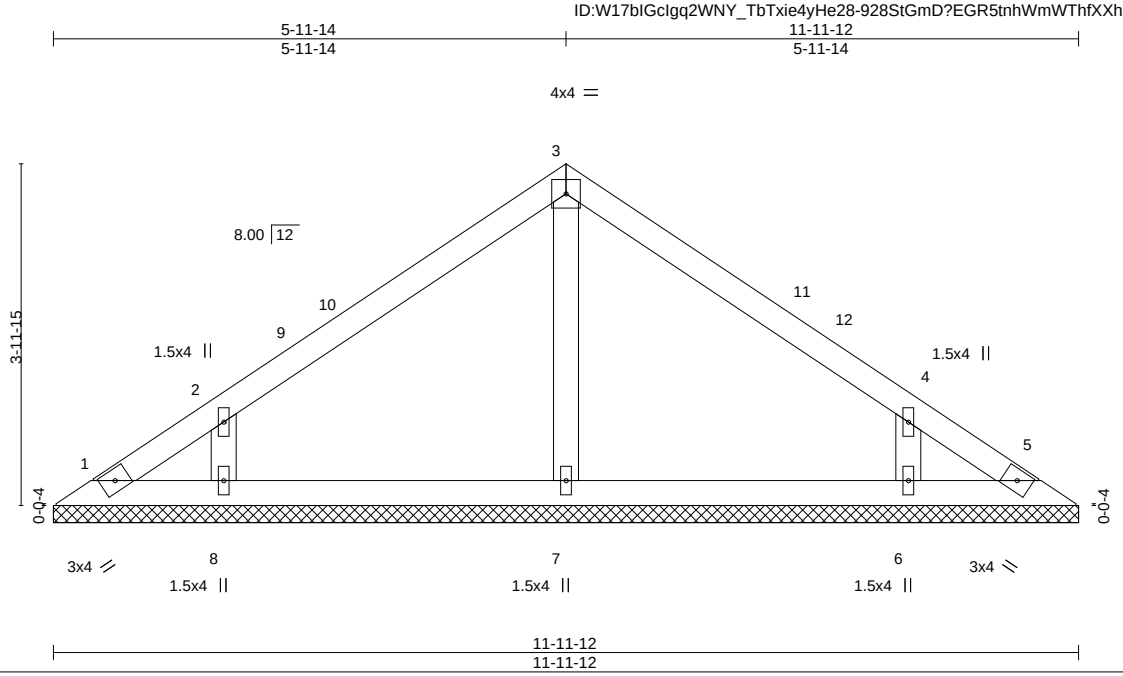
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 7-5-14, Exterior(2) 7-5-14 to 10-5-14, Interior(1) 10-5-14 to 14-6-0 zone;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=15.0 psf (ground snow); Pf=11.6 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 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.

January 7,2021

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

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	V3	GABLE	1	1	I44252934
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:14:02 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-928StGmD?EGR5tnhWmWThfXXhxvR9bJiapgxcjzy0zJ



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-S								
BCDL	10.0										Weight: 45 lb	FT = 20%

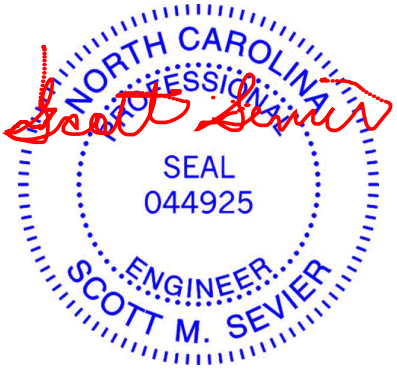
LUMBER-
TOP CHORD 2x4 SP No.3
BOT CHORD 2x4 SP No.3
OTHERS 2x4 SP No.3

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

REACTIONS. All bearings 11-11-12.
(lb) - Max Horz 1=77(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 1, 5, 8, 6
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 7=268(LC 2), 8=303(LC 25), 6=302(LC 26)

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 5-11-14, Exterior(2) 5-11-14 to 8-11-14, Interior(1) 8-11-14 to 11-5-15 zone;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=15.0 psf (ground snow); Pf=11.6 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 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.

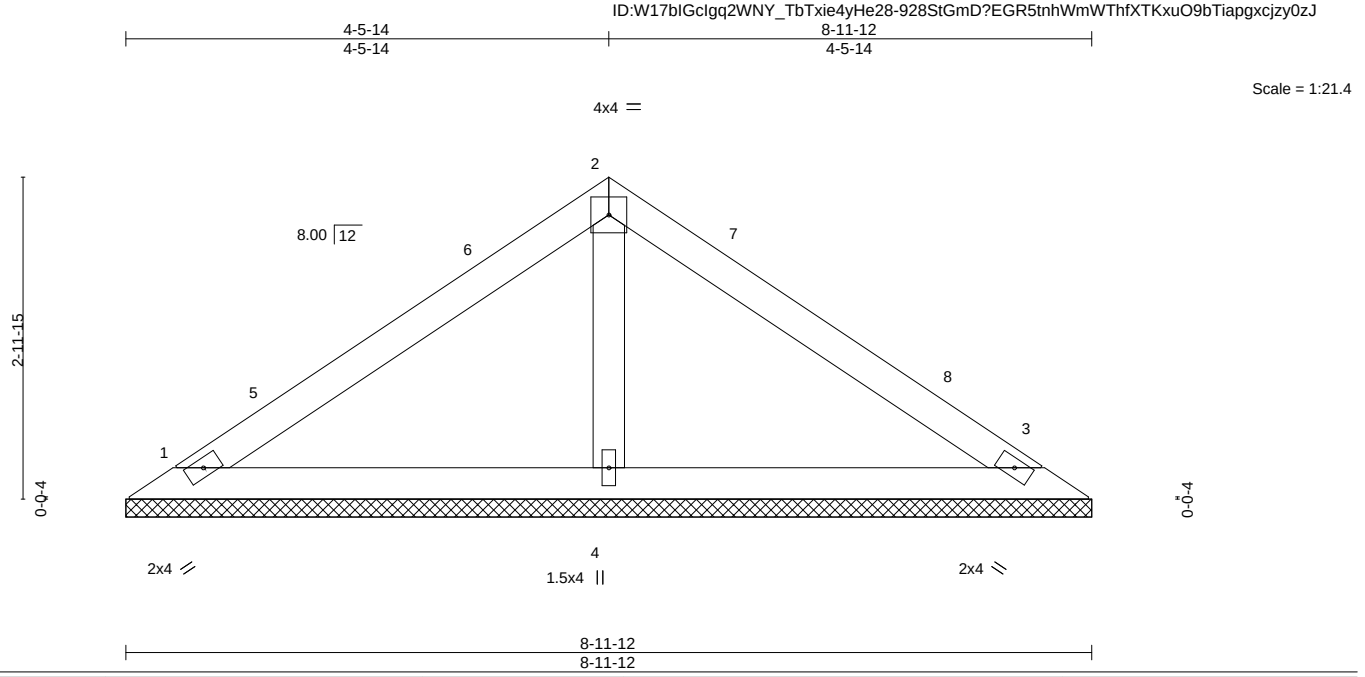


January 7,2021

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

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	V4	GABLE	1	1	I44252935
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:14:02 2021 Page 1
ID:W17bIGcIgq2WNY_TbTxie4yHe28-928StGmD?EGR5tnhWmWThfXTKxuO9bTiapgxcjzy0zJ



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0										Weight: 31 lb	FT = 20%

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

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

REACTIONS. (size) 1=8-11-12, 3=8-11-12, 4=8-11-12
Max Horz 1=-56(LC 10)
Max Uplift 1=-26(LC 14), 3=-33(LC 15)
Max Grav 1=172(LC 2), 3=172(LC 2), 4=298(LC 2)

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

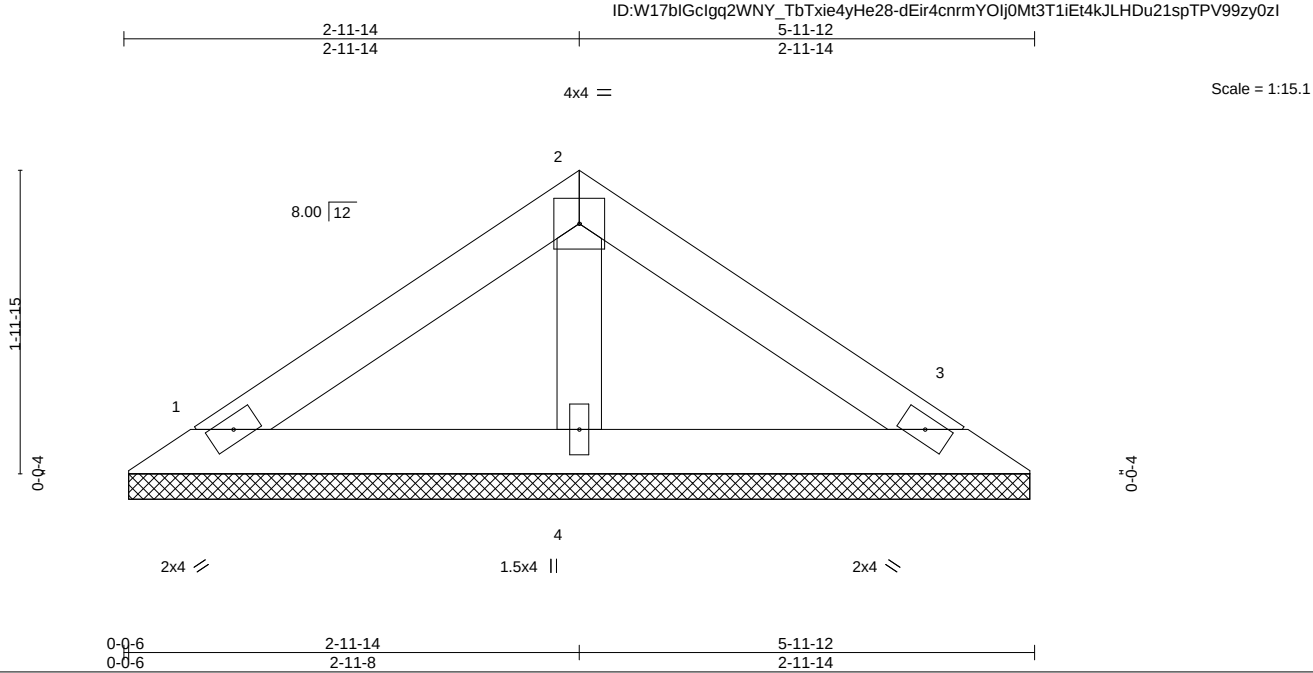
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-5-12 to 3-5-12, Interior(1) 3-5-12 to 4-5-14, Exterior(2) 4-5-14 to 7-5-14, Interior(1) 7-5-14 to 8-5-15 zone;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=15.0 psf (ground snow); Pf=11.6 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 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.

January 7,2021

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

Job	Truss	Truss Type	Qty	Ply	KB Home 238.2338.C
238_2338_C	V5	VALLEY	1	1	I44252936
					Job Reference (optional)

84 Components (Dunn), Dunn, NC - 28334, 8.430 s Nov 30 2020 MiTek Industries, Inc. Wed Jan 6 16:14:03 2021 Page 1
ID:W17blGcIgq2WNY_TbTxie4yHe28-dEir4cnrmYOIj0Mt3T1iEt4kJLHDu21spTPV99zy0zI



LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf/Pg)	11.6/15.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0 *	Code	IRC2015/TPI2014	Matrix-P								
BCDL	10.0										Weight: 20 lb	FT = 20%

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

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-11-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 1=5-11-0, 3=5-11-0, 4=5-11-0
Max Horz 1=35(LC 11)
Max Uplift 1=-16(LC 14), 3=-21(LC 15)
Max Grav 1=107(LC 2), 3=107(LC 2), 4=186(LC 2)

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

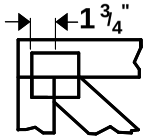
NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=120mph Vasd=95mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 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=15.0 psf (ground snow); Pf=11.6 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 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.

January 7,2021

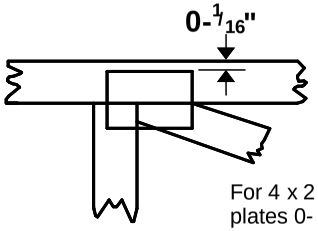
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

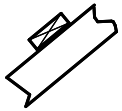
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

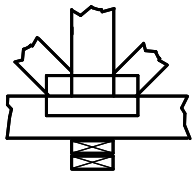
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

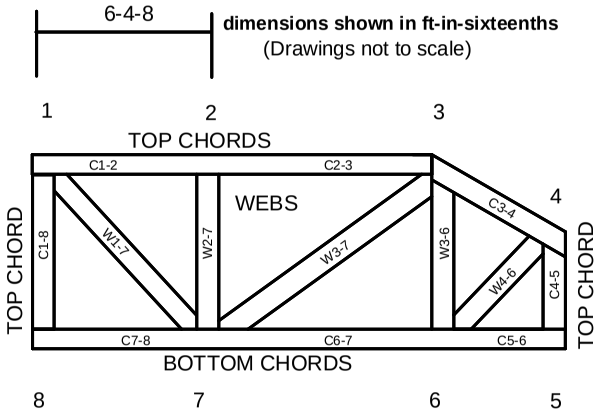


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

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

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

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

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 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/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.