ENGINEERING BY TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: J0121-0600
    Lot 51 Sierra Village

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by   Comtech, Inc - Fayetteville.

Pages or sheets covered by this seal: E15403142 thru E15403168

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

North Carolina COA: C-0844

NORTH CAROLINA
PROFESSIONAL
SEAL
036322
ERIC A. GILBERT
ENGINEER

February 11,2021

Gilbert, Eric

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.

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:18 2021 Page 1
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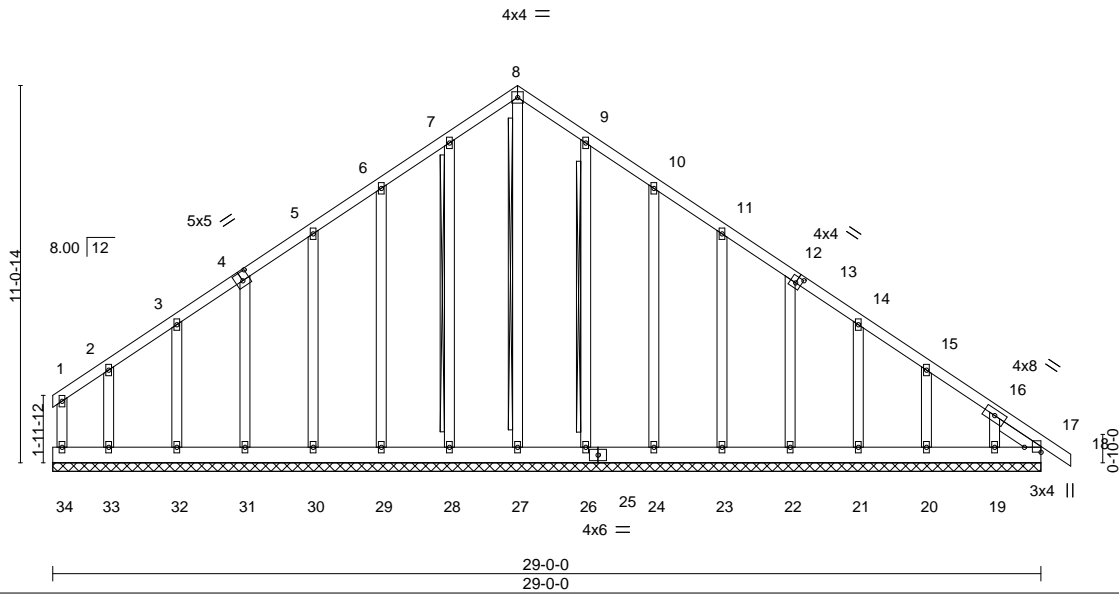
13-7-11 / 13-7-11   29-0-0 / 15-4-5   29-10-8 / 0-10-8

4x4 ⚌

Scale = 1:67.6

8.00 ⌐12

11-11-14

1-11-12

0-10-0

5x5 ⫽

4x4 ⫽

4x8 ⫽

3x4 ‖

4x6 ⫽

29-0-0 / 29-0-0

Plate Offsets (X,Y)-- [4:0-2-8,0-3-0], [12:0-2-2,0-0-0], [13:0-2-0,0-2-4], [13:0-0-0,0-1-12], [17:Edge,0-5-14]

LOADING (psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	-0.00	17	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00	17	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.01	17	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 244 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x6 SP No.1
WEBS   2x4 SP No.2
OTHERS   2x4 SP No.2
SLIDER   Right 2x4 SP No.2 -H 1-5-11

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS   T-Brace: 2x4 SPF No.2 - 8-27, 7-28, 9-26
            Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance. Brace must cover 90% of web length.

REACTIONS.   All bearings 29-0-0.
   (lb) - Max Horz   34=-256(LC 8)
           Max Uplift   All uplift 100 lb or less at joint(s) 34, 27, 28, 29, 30, 31, 32, 26, 24, 23, 22, 21, 20, 19 except 17=-161(LC 9), 33=-110(LC 12)
           Max Grav   All reactions 250 lb or less at joint(s) 34, 17, 28, 29, 30, 31, 32, 33, 26, 24, 23, 22, 21, 20, 19 except 27=287(LC 12)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   5-6=-222/257, 6-7=-284/332, 7-8=-335/393, 8-9=-335/393, 9-10=-284/332, 10-11=-221/257, 16-17=-306/286
WEBS   8-27=-346/235

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Corner(3) 0-3-4 to 4-8-1, Exterior(2) 4-8-1 to 13-7-11, Corner(3) 13-7-11 to 18-0-8, Exterior(2) 18-0-8 to 29-10-8 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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 34, 27, 28, 29, 30, 31, 32, 26, 24, 23, 22, 21, 20, 19 except (jt=lb) 17=161, 33=110.
10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	A2	COMMON	3	1	Job Reference (optional)	E15403143

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:19 2021 Page 1
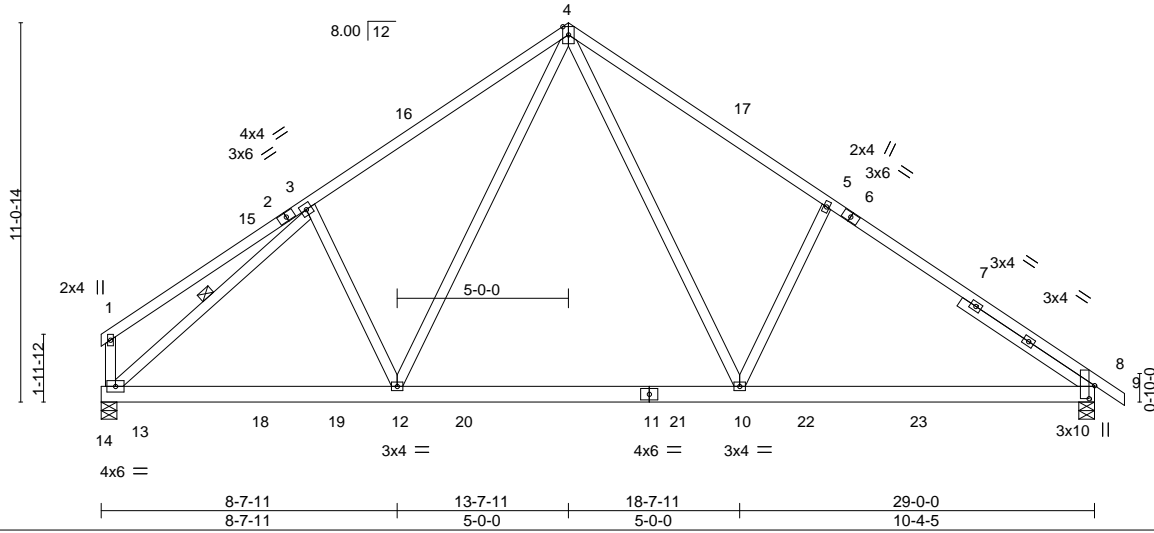ID:3B2lliU9aTYR6OtFvgEVAlyq8tk-zGsJvbd8giHdIkGRp0UUvJ7gp0btF0tdUCTknIzmFTw

6-1-5	13-7-11	21-2-2	29-0-0	29-10-8
6-1-5	7-6-6	7-6-6	7-9-14	0-10-8

Scale = 1:67.3

8.00 |12

4x6 ||

11-0-14

1-11-12

4x4 ==
3x6 ==

2x4 ||
3x6 ==

2x4 ||

5-0-0

3x4 ==

0-10-0

3x4 ==

3x10 ||

4x6 ==

4x6 ==

3x4 == 4x6 == 3x4 ==

8-7-11	13-7-11	18-7-11	29-0-0
8-7-11	5-0-0	5-0-0	10-4-5

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

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	-0.10	10-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.16	10-12	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.03	8-10	>999	240	Weight: 193 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x6 SP No.1
WEBS   2x4 SP No.2
SLIDER   Right 2x4 SP No.3 -H 4-7-11

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 4-1-4 oc purlins,
            except end verticals.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
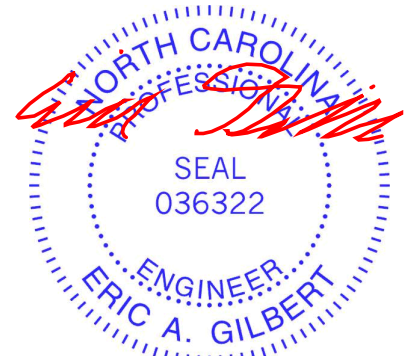WEBS   1 Row at midpt   3-13

REACTIONS.   (size) 13=0-5-8, 8=0-5-8
             Max Horz 13=-256(LC 8)
             Max Uplift 13=-49(LC 12), 8=-74(LC 13)
             Max Grav 13=1237(LC 19), 8=1297(LC 20)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   3-4=-1385/416, 4-5=-1560/437, 5-8=-1696/342
BOT CHORD   12-13=-96/1233, 10-12=0/927, 8-10=-141/1303
WEBS   3-12=-256/243, 4-12=-110/546, 4-10=-162/873, 5-10=-478/296, 3-13=-1377/215

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
   MWFRS (envelope) and C-C Exterior(2) 0-3-4 to 4-8-1, Interior(1) 4-8-1 to 13-7-11, Exterior(2) 13-7-11 to 18-0-8, Interior(1) 18-0-8 to
   29-10-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 13, 8.

NORTH CAROLINA
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ENGINEER
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February 11,2021

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	E15403144
J0121-0600	A2-P	COMMON	2	1	Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,   8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:20 2021 Page 1

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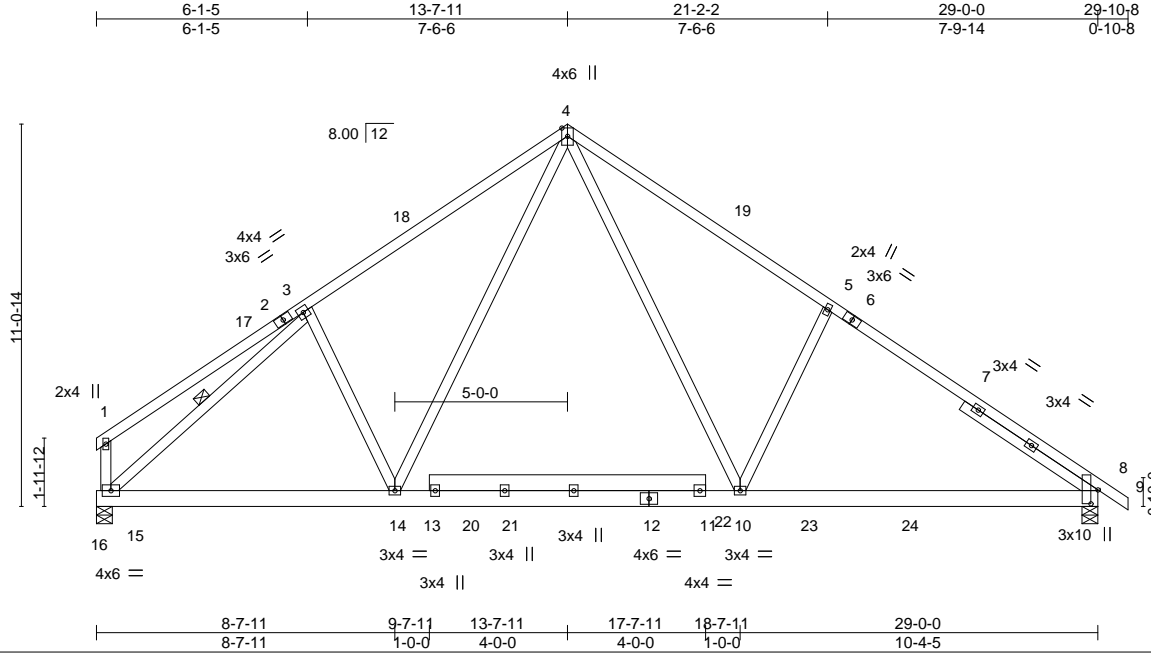
Scale = 1:66.7

Plate Offsets (X,Y)--   [8:0-4-13,0-2-7]

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	-0.07	8-10	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.15	10-14	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.43	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.03	8-10	>999	240	Weight: 212 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x6 SP No.1
WEBS   2x4 SP No.2 *Except*
              11-13: 2x6 SP No.1
SLIDER   Right 2x4 SP No.3 -H 4-7-11

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 3-7-11 oc purlins,
                    except end verticals.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS   1 Row at midpt   3-15

REACTIONS.   (size)   15=0-5-8, 8=0-5-8
           Max Horz   15=-256(LC 8)
           Max Grav   15=1280(LC 19), 8=1361(LC 20)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
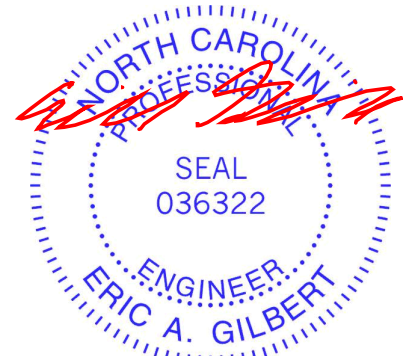TOP CHORD   3-4=-1462/262, 4-5=-1674/276, 5-8=-1811/181
BOT CHORD   14-15=0/1290, 10-14=0/983, 8-10=-10/1396
WEBS   3-14=-226/274, 4-14=-22/567, 4-10=-59/968, 5-10=-469/304, 3-15=-1468/53

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
    MWFRS (envelope) and C-C Exterior(2) 0-3-4 to 4-8-1, Interior(1) 4-8-1 to 13-7-11, Exterior(2) 13-7-11 to 18-0-8, Interior(1) 18-0-8 to
    29-8-15 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 200.0lb AC unit load placed on the bottom chord, 13-7-11 from left end, supported at two points, 5-0-0 apart.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide
    will fit between the bottom chord and any other members, with BCDL = 10.0psf.

LOAD CASE(S)   Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
    Uniform Loads (plf)
         Vert: 1-4=-60, 4-9=-60, 8-16=-20
    Concentrated Loads (lb)
         Vert: 12=-100 21=-100

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	E15403145
J0121-0600	A3-P	COMMON	1	1	Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:21 2021 Page 1
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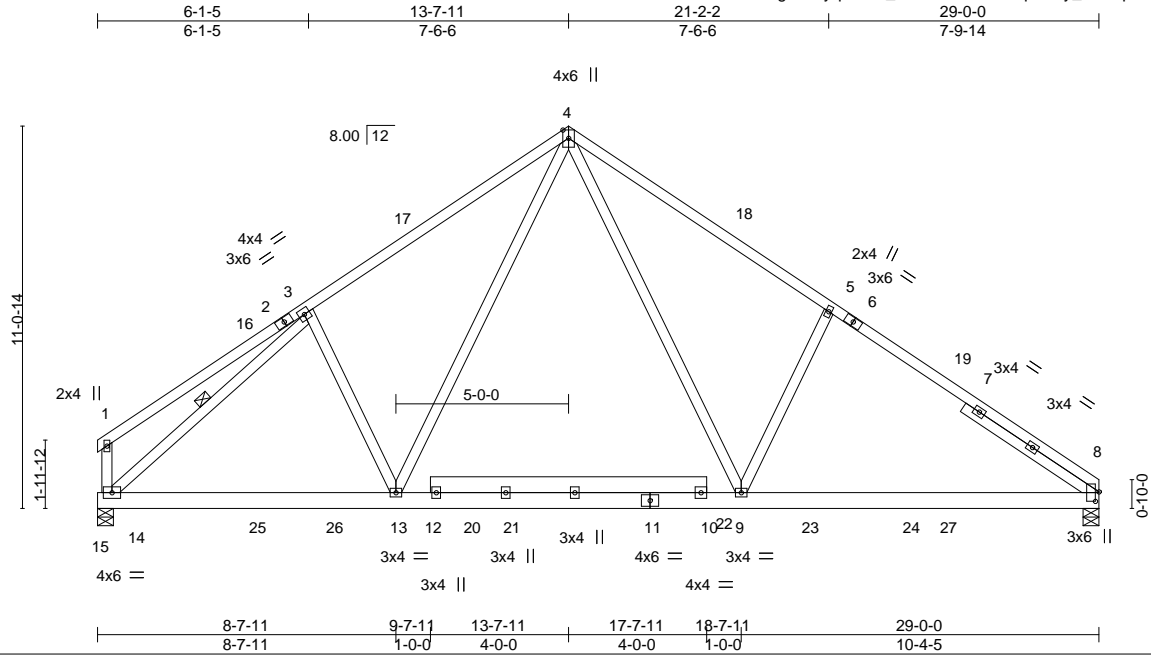
Scale = 1:66.7

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

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.08	8-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.16	8-9	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.03	8-9	>999	240	Weight: 211 lb	FT = 20%

LUMBER-
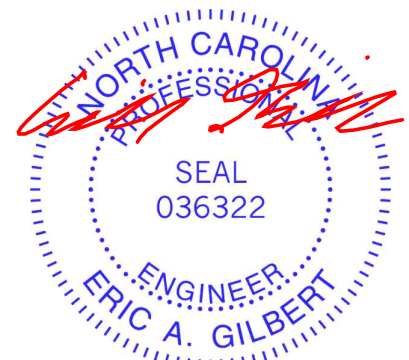TOP CHORD   2x4 SP No.1
BOT CHORD   2x6 SP No.1
WEBS   2x4 SP No.2 *Except*
                       10-12: 2x6 SP No.1
SLIDER   Right 2x4 SP No.3 -H 4-7-11

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 3-7-13 oc purlins,
                       except end verticals.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS   1 Row at midpt   3-14

REACTIONS.   (size)   14=0-5-8, 8=0-5-8
                       Max Horz 14=-254(LC 8)
                       Max Grav 14=1336(LC 19), 8=1331(LC 20)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   3-4=-1516/263, 4-5=-1705/284, 5-8=-1842/187
BOT CHORD   13-14=0/1330, 9-13=0/1005, 8-9=-16/1418
WEBS   3-13=-226/274, 4-13=-23/616, 4-9=-62/970, 5-9=-470/308, 3-14=-1508/56

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
   MWFRS (envelope) and C-C Exterior(2) 0-3-4 to 4-8-1, Interior(1) 4-8-1 to 13-7-11, Exterior(2) 13-7-11 to 18-0-8, Interior(1) 18-0-8 to
   29-0-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 200.0lb AC unit load placed on the bottom chord, 13-7-11 from left end, supported at two points, 5-0-0 apart.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide
   will fit between the bottom chord and any other members, with BCDL = 10.0psf.

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	A4-P	COMMON	2	1		E15403146
					Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:22 2021 Page 1
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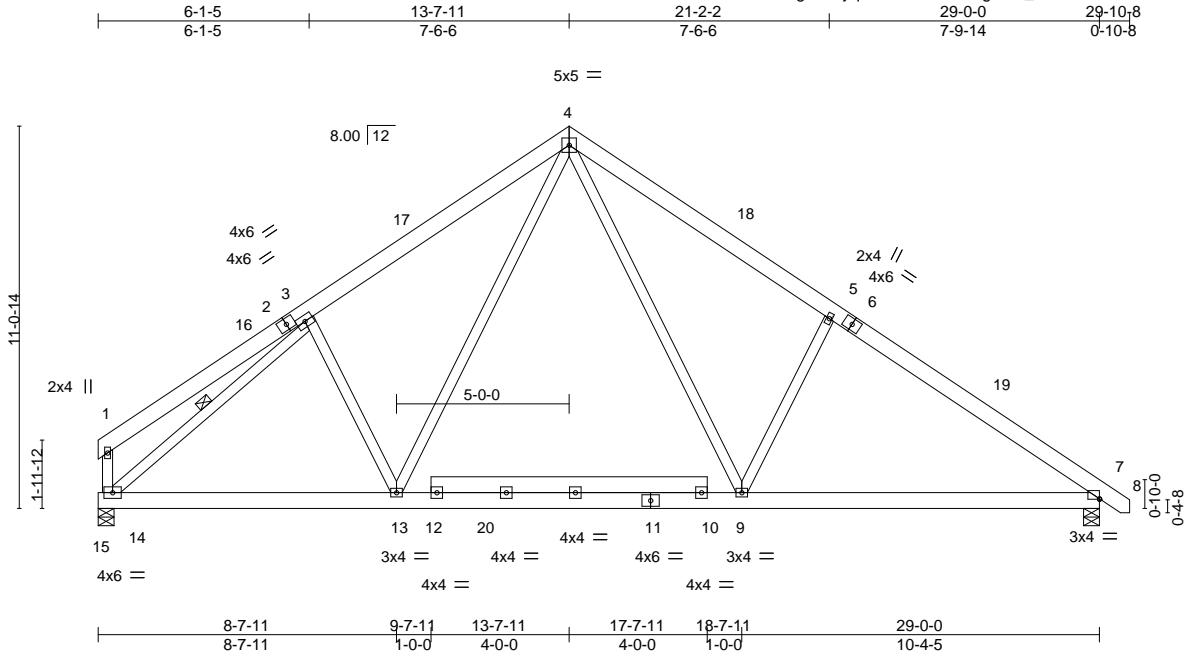
Scale = 1:66.7

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

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	-0.08	9-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.16	9-13	>999	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.45	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.03	7-9	>999	240	Weight: 235 lb	FT = 20%

LUMBER-
TOP CHORD   2x6 SP No.1
BOT CHORD   2x6 SP No.1
WEBS   2x4 SP No.2 *Except*
              10-12: 2x6 SP No.1

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 5-5-1 oc purlins,
              except end verticals.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS   1 Row at midpt   3-14

REACTIONS.   (size) 14=0-5-8, 7=0-5-8
                Max Horz 14=-270(LC 8)
                Max Grav 14=1393(LC 19), 7=1430(LC 20)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   3-4=-1615/285, 4-5=-1792/297, 5-7=-1959/199
BOT CHORD   13-14=0/1423, 9-13=0/1064, 7-9=-23/1487
WEBS   3-13=-248/289, 4-13=-29/677, 4-9=-65/996, 5-9=-491/324, 3-14=-1593/77

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
   MWFRS (envelope) and C-C Exterior(2) 0-3-4 to 4-8-1, Interior(1) 4-8-1 to 13-7-11, Exterior(2) 13-7-11 to 18-0-8, Interior(1) 18-0-8 to
   29-8-15 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 200.0lb AC unit load placed on the bottom chord, 13-7-11 from left end, supported at two points, 5-0-0 apart.
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 with a clearance greater than 6-0-0
   between the bottom chord and any other members, with BCDL = 10.0psf.

February 11,2021

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
						E15403147
J0121-0600	A5	COMMON	1	1	Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:23 2021 Page 1
ID:3B2IliU9aTYR6OtFvgEVAlyq8tk-s16pkzgekxo3nLZC2sZQ49HN0dyqBqvDPqRxwXzmFTs

Scale = 1:67.3

Plate Offsets (X,Y)--   [8:0-4-9,0-1-15]
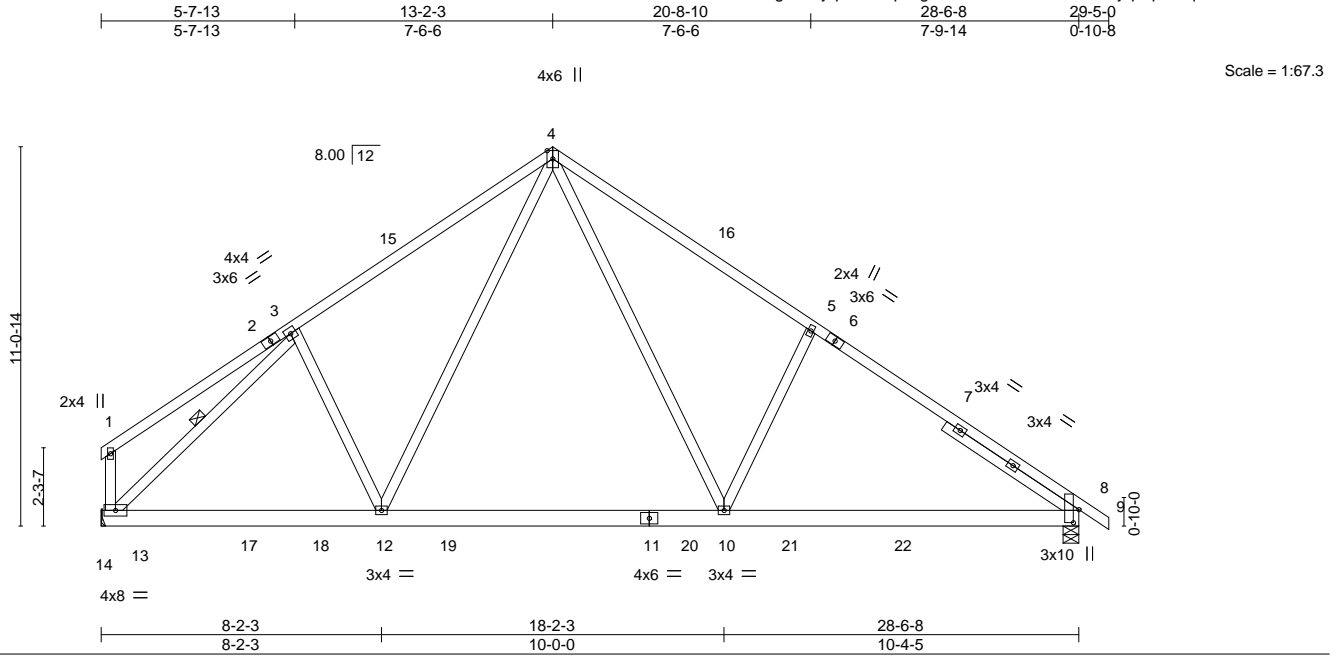
LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.10	10-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.16	10-12	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.03	8-10	>999	240	Weight: 191 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x6 SP No.1
WEBS   2x4 SP No.2
SLIDER   Right 2x4 SP No.3 -H 4-7-11

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 4-2-5 oc purlins, except end verticals.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS   1 Row at midpt   3-13

REACTIONS.   (size) 13=Mechanical, 8=0-5-8
               Max Horz 13=-256(LC 8)
               Max Uplift 13=-46(LC 12), 8=-73(LC 13)
               Max Grav 13=1217(LC 19), 8=1277(LC 20)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   3-4=-1314/405, 4-5=-1528/430, 5-8=-1664/335
BOT CHORD   12-13=-82/1149, 10-12=0/898, 8-10=-136/1275
WEBS   4-12=-100/478, 4-10=-162/876, 5-10=-479/296, 3-13=-1360/222

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-3-4 to 4-8-1, Interior(1) 4-8-1 to 13-2-3, Exterior(2) 13-2-3 to 17-7-0, Interior(1) 17-7-0 to 29-5-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 13, 8.

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ENGINEER
ERIC A. GILBERT

February 11,2021

⚠ WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601
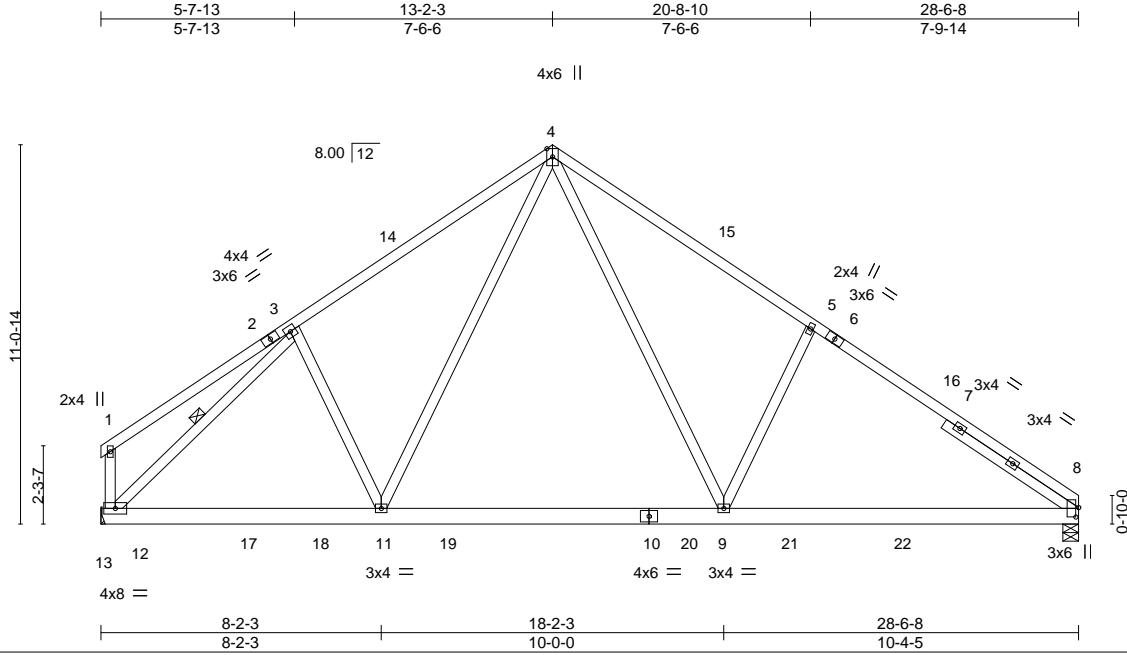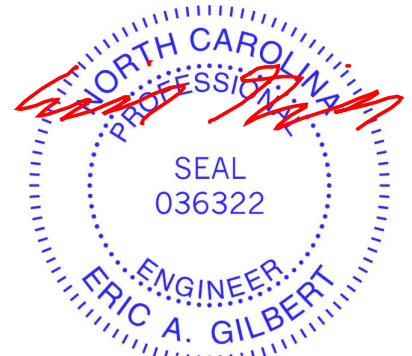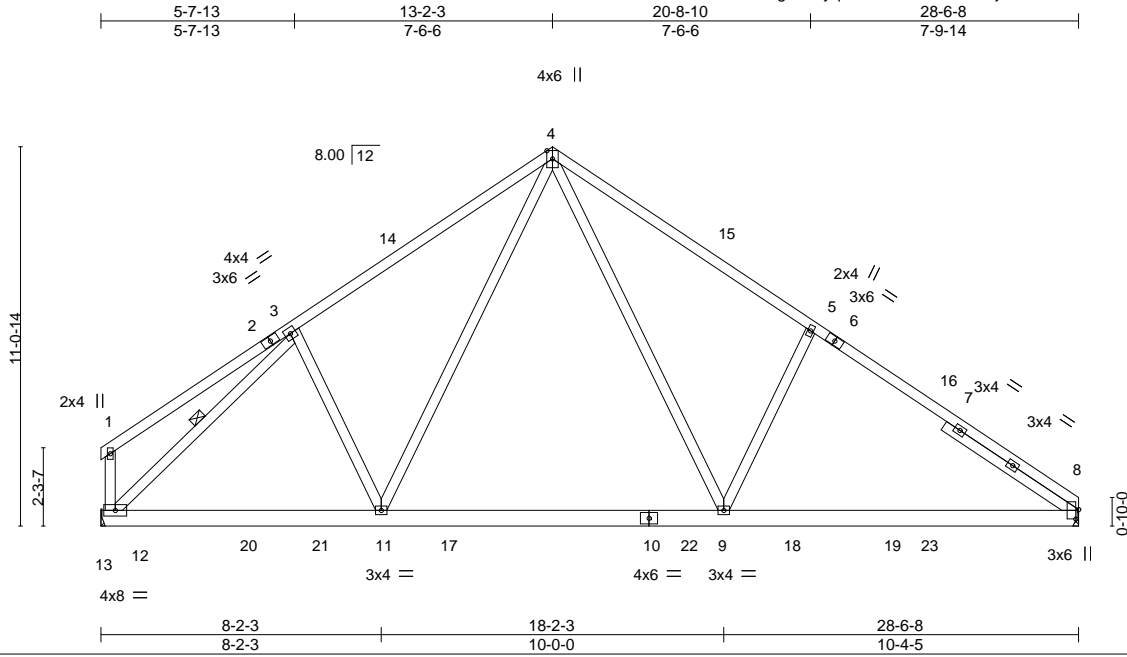
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TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:24 2021 Page 1
ID:3B2IliU9aTYR6OtFvgEVAlyq8tk-KDgCyJhGVFwwPV8PcZ4gcMqXo1I?wH8MdUBVTzzmFTr

5-7-13	13-2-3	20-8-10	28-6-8
5-7-13	7-6-6	7-6-6	7-9-14

4x6 ||

Scale = 1:67.3

8.00 | 12

11-0-14

2-3-7

4x4 //
3x6 //

2x4 //
3x6 //

3x4 //
3x4 //

2x4 ||

0-10-0

3x6 ||

| | 17 | 18 | 11 | 19 | | 10 | 20 | 9 | 21 | | 22 | |
| 13 | 12 | | | | | | | | | | | |

3x4 =

4x6 = 3x4 =

4x8 =

8-2-3	18-2-3	28-6-8
8-2-3	10-0-0	10-4-5

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

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.10	9-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.16	8-9	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.03	8-9	>999	240	Weight: 190 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x6 SP No.1
WEBS   2x4 SP No.2
SLIDER   Right 2x4 SP No.3 -H 4-7-11

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 4-2-3 oc purlins,
            except end verticals.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS   1 Row at midpt   3-12

REACTIONS.   (size) 12=Mechanical, 8=0-5-8
               Max Horz 12=-253(LC 8)
               Max Uplift 12=-46(LC 12), 8=-60(LC 13)
               Max Grav 12=1217(LC 19), 8=1227(LC 20)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   3-4=-1314/405, 4-5=-1531/436, 5-8=-1667/341
BOT CHORD   11-12=-87/1147, 9-11=0/897, 8-9=-143/1275
WEBS   4-11=-100/477, 4-9=-163/879, 5-9=-479/300, 3-12=-1361/225

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
   MWFRS (envelope) and C-C Exterior(2) 0-3-4 to 4-8-1, Interior(1) 4-8-1 to 13-2-3, Exterior(2) 13-2-3 to 17-7-0, Interior(1) 17-7-0 to
   28-6-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 8.

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February 11,2021

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818 Soundside Road
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Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	A7	COMMON	7	1		E15403149
					Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:25 2021 Page 1
ID:3B2IliU9aTYR6OtFvgEVAlyq8tk-oQEa9fiuGY2n0fjbAHbv9aMiXQeGfkMWs8w2?PzmFTq

5-7-13 | 13-2-3 | 20-8-10 | 28-6-8
5-7-13 | 7-6-6 | 7-6-6 | 7-9-14

4x6 ||

Scale = 1:67.3

8.00 [12

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

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.10	9-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.16	8-9	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.03	8-9	>999	240	Weight: 190 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x6 SP No.1
WEBS   2x4 SP No.2
SLIDER   Right 2x4 SP No.3 -H 4-7-11

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 4-2-5 oc purlins, except end verticals.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS   1 Row at midpt   3-12

REACTIONS.   (size) 12=Mechanical, 8=Mechanical
Max Horz 12=-253(LC 8)
Max Uplift 12=-46(LC 12), 8=-60(LC 13)
Max Grav 12=1216(LC 19), 8=1226(LC 20)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   3-4=-1313/405, 4-5=-1528/437, 5-8=-1664/341
BOT CHORD   11-12=-87/1146, 9-11=0/895, 8-9=-143/1273
WEBS   4-11=-100/476, 4-9=-163/877, 5-9=-479/300, 3-12=-1359/225

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) 0-3-4 to 4-8-1, Interior(1) 4-8-1 to 13-2-3, Exterior(2) 13-2-3 to 17-7-0, Interior(1) 17-7-0 to 28-6-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 8.

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February 11,2021

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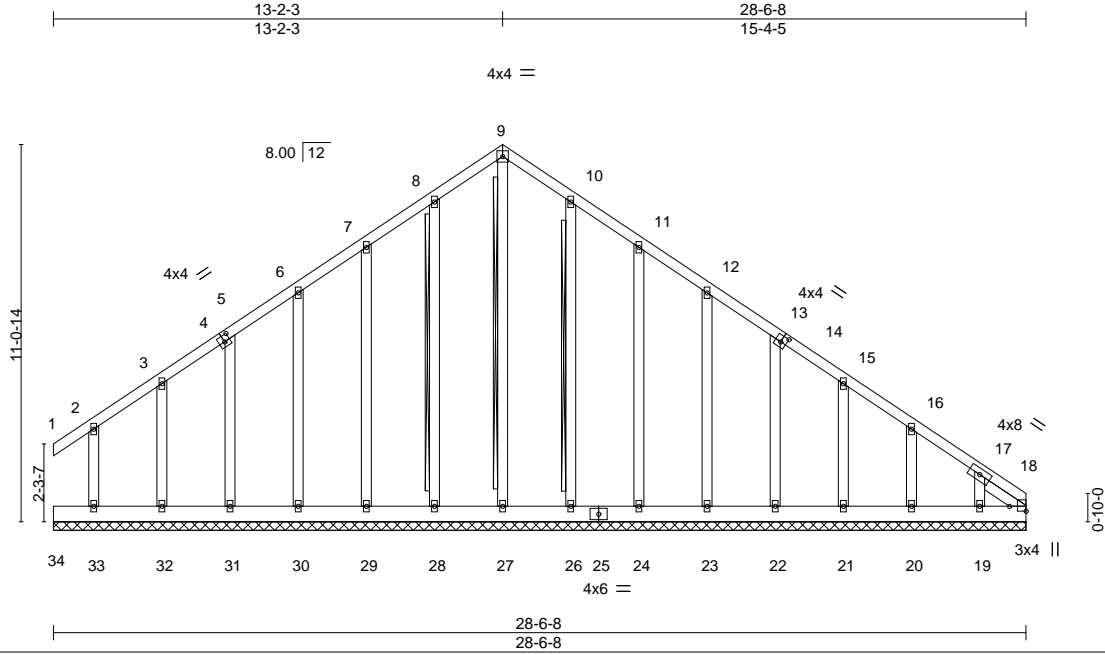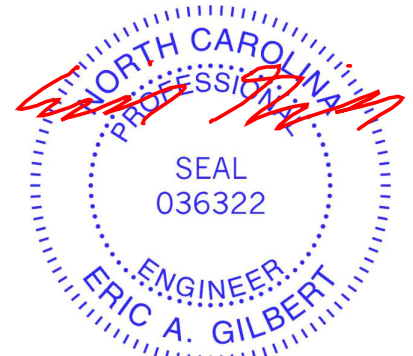| Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	A8®	GABLE	1	1		E15403150
					Job Reference (optional)	

Scale = 1:67.6

Plate Offsets (X,Y)--   [4:0-0-0,0-1-12], [4:0-2-0,0-2-4], [5:0-2-2,0-0-0], [13:0-2-2,0-0-0], [14:0-2-0,0-2-4], [14:0-0-0,0-1-12], [18:Edge,0-5-14]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.27	Horz(CT)	-0.03	1	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 239 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x6 SP No.1
OTHERS   2x4 SP No.2
SLIDER   Right 2x4 SP No.2 -H 1-5-11

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS   T-Brace: 2x4 SPF No.2 - 9-27, 8-28, 10-26
Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance. Brace must cover 90% of web length.

REACTIONS.   All bearings 28-6-8.
   (lb) - Max Horz   34=-313(LC 8)
     Max Uplift   All uplift 100 lb or less at joint(s) 1, 28, 29, 30, 31, 32, 33, 26, 24, 23, 22, 21, 20 except
         18=-255(LC 11), 27=-102(LC 10), 19=-165(LC 13)
     Max Grav   All reactions 250 lb or less at joint(s) 34, 1, 28, 29, 30, 31, 32, 33, 24, 23, 22, 21, 20, 19
         except 18=292(LC 8), 27=458(LC 12), 26=252(LC 20)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   6-7=-251/313, 7-8=-315/393, 8-9=-364/456, 9-10=-364/469, 10-11=-315/442,
         11-12=-251/394, 12-13=-263/352, 13-15=-284/312, 15-16=-302/317, 16-17=-326/326,
         17-18=-419/409
BOT CHORD   33-34=-295/313, 32-33=-295/313, 31-32=-295/313, 30-31=-295/313, 29-30=-295/313,
         28-29=-295/313, 27-28=-295/313, 26-27=-295/313, 24-26=-295/313, 23-24=-295/313,
         22-23=-295/313, 21-22=-295/313, 20-21=-295/313, 19-20=-295/313, 18-19=-295/313
WEBS   9-27=-434/266

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-0-0 to 4-4-13, Exterior(2) 4-4-13 to 13-2-3, Corner(3) 13-2-3 to 17-7-0, Exterior(2) 17-7-0 to 28-6-8 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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 28, 29, 30, 31, 32, 33, 26, 24, 23, 22, 21, 20 except (jt=lb) 18=255, 27=102, 19=165.
10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

February 11,2021

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Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	B1	ATTIC	1	1		E15403151
					Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:27 2021 Page 1
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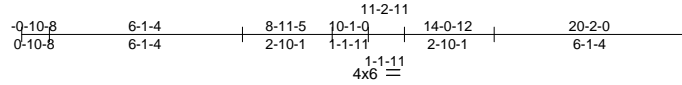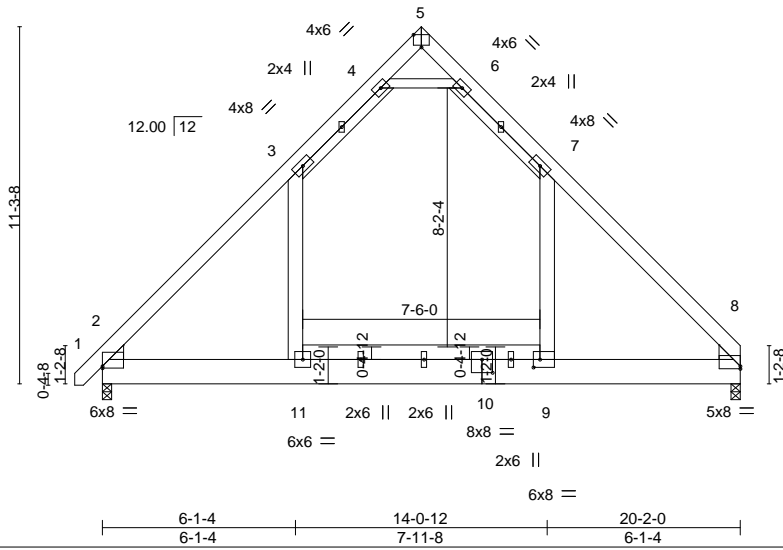
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Plate Offsets (X,Y)--   [2:0-0-0,0-0-12], [5:0-3-0,Edge], [8:0-0-0,0-1-0], [9:0-2-8,0-3-0], [10:0-4-0,0-5-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.13	9-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.25	9-11	>971	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.01	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.12	9-11	>999	240	Weight: 215 lb	FT = 20%

LUMBER-
TOP CHORD   2x6 SP No.1
BOT CHORD   2x10 SP No.1
WEBS   2x6 SP No.1 *Except*
             4-6: 2x4 SP No.1, 3-4,6-7: 2x4 SP No.2
WEDGE
Left: 2x6 SP No.2 , Right: 2x6 SP No.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.
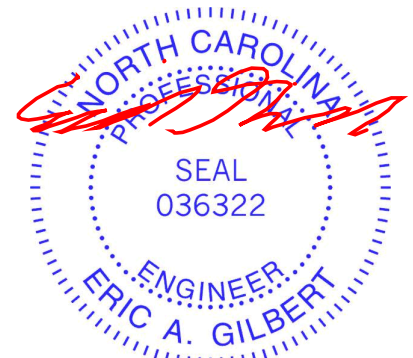
REACTIONS.   (size)   2=0-3-8, 8=0-3-8
          Max Horz 2=322(LC 9)
          Max Grav 2=1218(LC 20), 8=1180(LC 20)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-1505/28, 3-4=-778/167, 4-5=-135/579, 5-6=-128/574, 6-7=-786/173, 7-8=-1482/20
BOT CHORD   2-11=0/891, 9-11=0/891, 8-9=0/891
WEBS   4-6=-1600/444, 3-11=-27/645, 7-9=-33/602

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
   MWFRS (envelope) gable end zone and C-C Corner(3) -0-8-14 to 3-7-15, Exterior(2) 3-7-15 to 10-1-0, Corner(3) 10-1-0 to 14-5-13,
   Exterior(2) 14-5-13 to 20-0-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip
   DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0
   between the bottom chord and any other members.
5) Ceiling dead load (10.0 psf) on member(s). 3-4, 6-7, 4-6; Wall dead load (5.0psf) on member(s).3-11, 7-9
6) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 9-11
7) Attic room checked for L/360 deflection.

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February 11,2021

ENGINEERING BY
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	B2	ATTIC	2	1		E15403152
					Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:28 2021 Page 1
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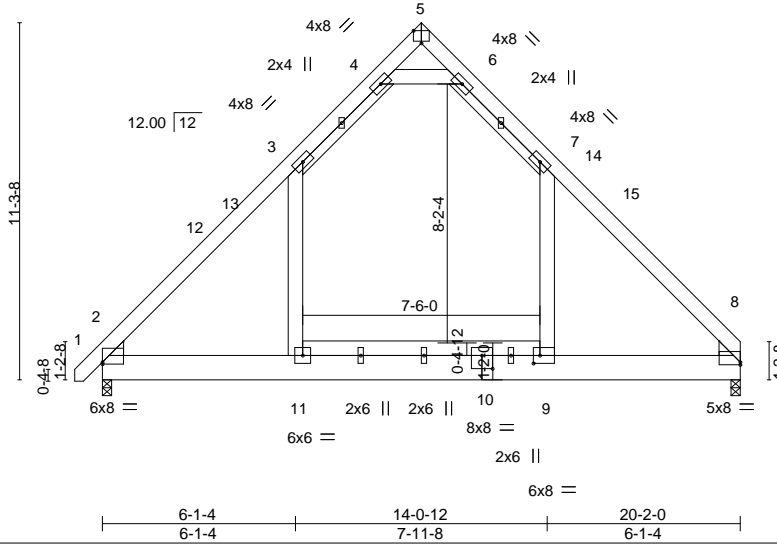

Scale = 1:72.8

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.13	9-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.25	9-11	>948	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.01	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.09	9-11	>999	240	Weight: 217 lb	FT = 20%

LUMBER-
TOP CHORD   2x6 SP No.1
BOT CHORD   2x10 SP No.1
WEBS   2x6 SP No.1 *Except*
3-4,6-7: 2x4 SP No.2
WEDGE
Left: 2x6 SP No.2 , Right: 2x6 SP No.2

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 5-6-9 oc purlins.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
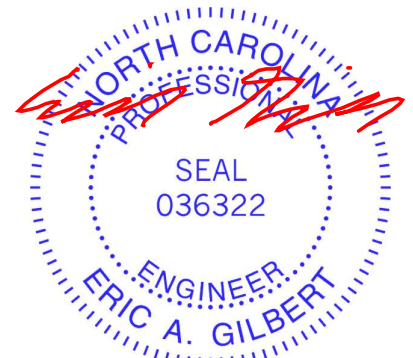
REACTIONS.   (size)   2=0-3-8, 8=0-3-8
Max Horz 2=258(LC 9)
Max Grav 2=1224(LC 20), 8=1184(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-1484/0, 3-4=-774/140, 4-5=-127/630, 5-6=-113/624, 6-7=-783/149, 7-8=-1459/0
BOT CHORD   2-11=0/865, 9-11=0/865, 8-9=0/865
WEBS   4-6=-1672/365, 3-11=0/620, 7-9=-0/574

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
   MWFRS (envelope) and C-C Exterior(2) -0-8-14 to 3-7-15, Interior(1) 3-7-15 to 10-1-0, Exterior(2) 10-1-0 to 14-5-13, Interior(1)
   14-5-13 to 20-0-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0
   between the bottom chord and any other members.
5) Ceiling dead load (10.0 psf) on member(s). 3-4, 6-7, 4-6; Wall dead load (5.0psf) on member(s).3-11, 7-9
6) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 9-11
7) Attic room checked for L/360 deflection.

SEAL
036322
NORTH CAROLINA PROFESSIONAL ENGINEER
ERIC A. GILBERT

February 11,2021

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

Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	B3	ATTIC	2	1		E15403153
					Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,
8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:29 2021 Page 1
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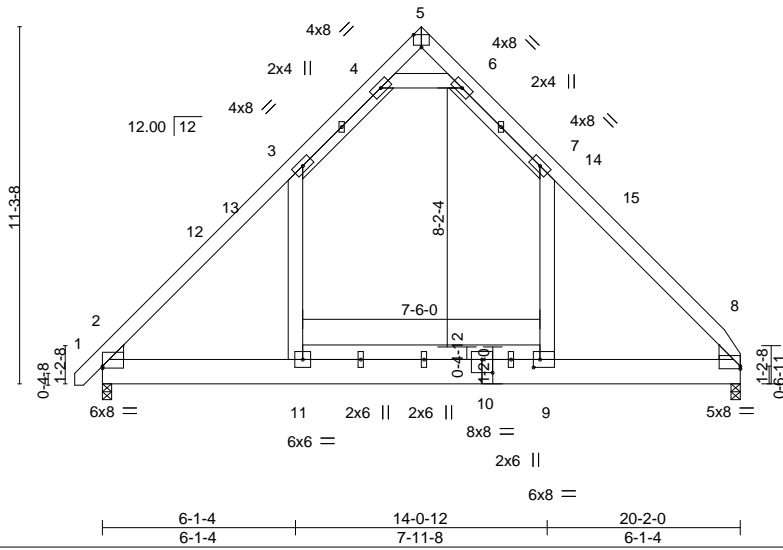
Scale = 1:72.8

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.13	9-11	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.25	9-11	>948	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.01	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.09	9-11	>999	240	Weight: 217 lb	FT = 20%

LUMBER-
TOP CHORD   2x6 SP No.1
BOT CHORD   2x10 SP No.1
WEBS   2x6 SP No.1 *Except*
3-4,6-7: 2x4 SP No.2
WEDGE
Left: 2x6 SP No.2 , Right: 2x6 SP No.2

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 5-6-9 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=258(LC 11)
Max Grav 2=1224(LC 20), 8=1184(LC 20)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-1484/0, 3-4=-774/140, 4-5=-127/630, 5-6=-113/624, 6-7=-783/149, 7-8=-1459/0
BOT CHORD   2-11=0/865, 9-11=0/865, 8-9=0/865
WEBS   4-6=-1672/365, 3-11=0/620, 7-9=-0/574

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
MWFRS (envelope) and C-C Exterior(2) -0-8-14 to 3-7-15, Interior(1) 3-7-15 to 10-1-0, Exterior(2) 10-1-0 to 14-5-13, Interior(1)
14-5-13 to 20-0-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0
between the bottom chord and any other members.
5) Ceiling dead load (10.0 psf) on member(s). 3-4, 6-7, 4-6; Wall dead load (5.0psf) on member(s).3-11, 7-9
6) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. 9-11
7) Attic room checked for L/360 deflection.

February 11,2021

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

Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
						E15403154
J0121-0600	C1	GABLE	1	1		
					Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:30 2021 Page 1
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         -0-10-8          9-0-8                    17-2-8        18-1-0
         0-10-8           8-2-0                     8-2-0        0-10-8
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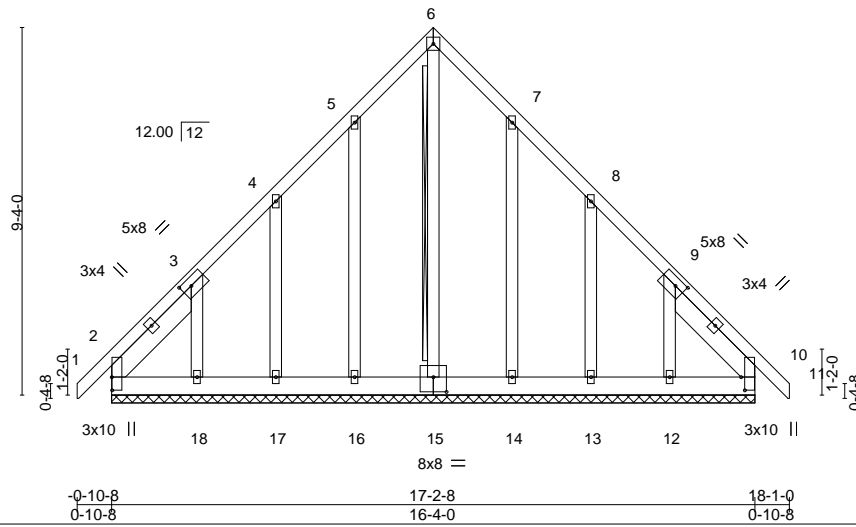
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Scale = 1:58.5

Plate Offsets (X,Y)--   [2:0-4-0,0-0-2], [3:0-3-0,0-2-4], [9:0-3-0,0-2-4], [10:0-4-0,0-1-2], [15:0-4-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	-0.00	10	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	-0.00	10	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.00	10	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 145 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x6 SP No.1
OTHERS   2x4 SP No.2
SLIDER   Left 2x6 SP No.1 -H 3-0-13, Right 2x6 SP No.1 -H 3-0-13

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS   T-Brace: 2x4 SPF No.2 - 6-15
Fasten (2X) T and I braces to narrow edge of web with 10d
(0.131"x3") nails, 6in o.c.,with 3in minimum end distance.
Brace must cover 90% of web length.

REACTIONS.   All bearings 16-4-0.
    (lb) -   Max Horz   2=270(LC 11)
        Max Uplift   All uplift 100 lb or less at joint(s) 10, 2 except 16=-141(LC 12), 17=-138(LC 12), 18=-249(LC 12),
                 14=-139(LC 13), 13=-139(LC 13), 12=-242(LC 13)
        Max Grav   All reactions 250 lb or less at joint(s) 10, 15, 16, 17, 18, 14, 13, 12 except 2=268(LC 21)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-386/235, 9-10=-352/236
BOT CHORD   2-18=-184/279, 17-18=-184/279, 16-17=-184/279, 15-16=-184/279, 14-15=-184/279,
             13-14=-184/279, 12-13=-184/279, 10-12=-184/279
WEBS   3-18=-258/259, 9-12=-258/252

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-4 to 3-6-8, Exterior(2) 3-6-8 to 8-2-0, Corner(3) 8-2-0 to 12-6-13,
Exterior(2) 12-6-13 to 17-2-4 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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide
will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 10, 2 except
(jt=lb) 16=141, 17=138, 18=249, 14=139, 13=139, 12=242.
10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building
designer.
11) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

February 11,2021

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

Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	C2	COMMON	1	1		E15403155
					Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:31 2021 Page 1
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0-10-8         8-2-0                    8-2-0             0-10-8
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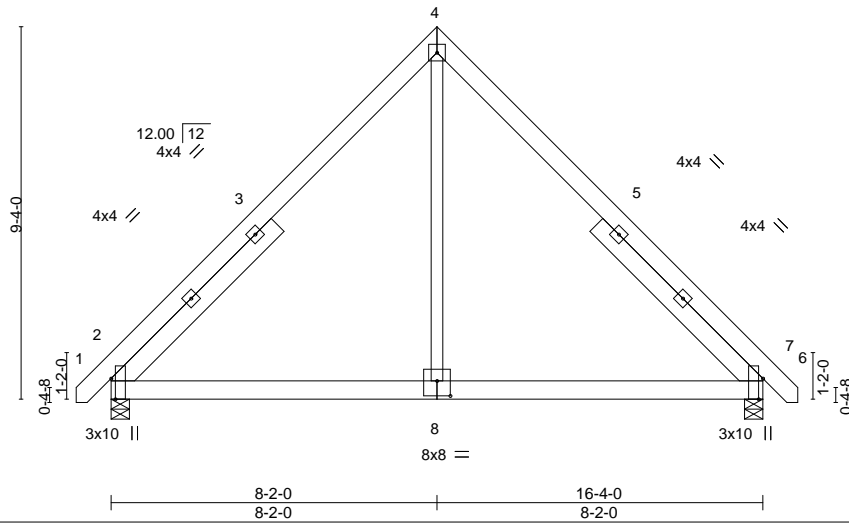
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12.00 12
4x4 //                                          4x4 \\

4x4 //    3                            5          4x4 \\

2                                                  7  6
1                                                      0-4-8
0-4-8                                              1-2-0
1-2-0                                              0-4-8

3x10 ||                    8                    3x10 ||
                          8x8 =
```

```
      8-2-0                16-4-0
      8-2-0                8-2-0
```
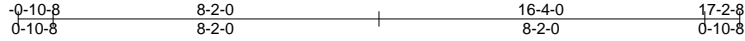
Plate Offsets (X,Y)--   [2:0-6-4,Edge], [6:0-6-4,Edge], [8:0-4-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	-0.02	2-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.05	2-8	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.02	2-8	>999	240	Weight: 138 lb	FT = 20%

LUMBER-
TOP CHORD   2x6 SP No.1
BOT CHORD   2x6 SP No.1
WEBS   2x4 SP No.2
SLIDER   Left 2x6 SP No.1 -H 5-8-9, Right 2x6 SP No.1 -H 5-8-9

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. (size) 6=0-5-8, 2=0-5-8
Max Horz   2=213(LC 11)
Max Uplift   6=-28(LC 13), 2=-28(LC 12)
Max Grav   6=698(LC 1), 2=698(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-4=-682/186, 4-6=-682/186
BOT CHORD   2-8=-2/384, 6-8=-2/384
WEBS   4-8=0/381

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
   MWFRS (envelope) and C-C Exterior(2) -0-8-14 to 3-7-15, Interior(1) 3-7-15 to 8-2-0, Exterior(2) 8-2-0 to 12-6-13, Interior(1) 12-6-13
   to 17-0-14 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2.
6) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building
   designer.

February 11,2021

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

Job	Truss	Truss Type	Qty	**Ply**	Lot 51 Sierra Village	
J0121-0600	C3	COMMON	1	**2**	Job Reference (optional)	E15403156

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:33 2021 Page 1
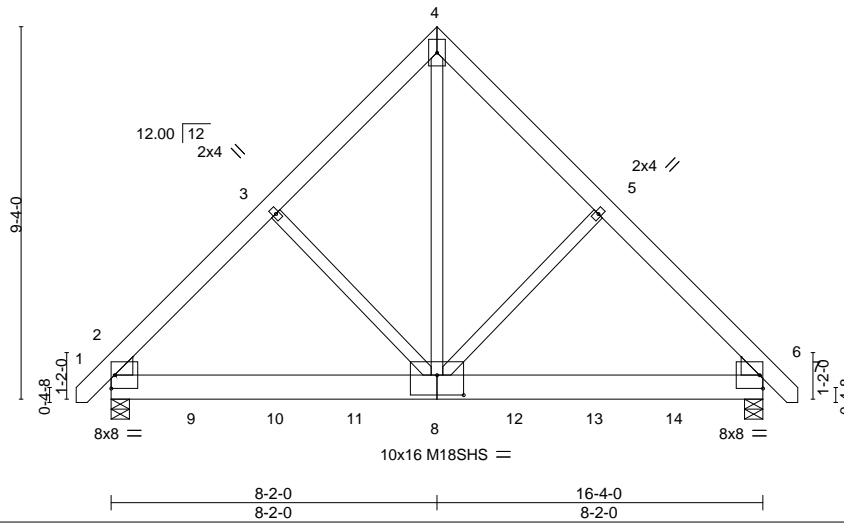ID:3B2IliU9aTYR6OtFvgEVAIyq8tk-ZyjbrOowN02e_uK7eyknUGi4PfLcXJbhiNsTHxzmFTi

Dimensions (top): -0-10-8 | 4-1-8 | 8-2-0 | 12-2-8 | 16-4-0 | 17-2-8
Dimensions (lower): 0-10-8 | 4-1-8 | 4-0-8 | 4-0-8 | 4-1-8 | 0-10-8

5x8 ||

Scale = 1:57.7

12.00 [12]
2x4 \\
2x4 //

9-4-0

Bottom spans: 8-2-0 | 16-4-0 ; 8-2-0 | 8-2-0

8x8 =   10x16 M18SHS =   8x8 =

Plate Offsets (X,Y)--   [2:0-4-11,0-1-0], [2:0-0-8,0-0-8], [6:0-4-11,0-1-0], [6:0-0-8,0-0-8], [8:0-8-0,0-6-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.07	6-8	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.14	6-8	>999	240	M18SHS	244/190
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.64	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.05	6-8	>999	240	Weight: 284 lb	FT = 20%

LUMBER-
TOP CHORD   2x6 SP No.1
BOT CHORD   2x8 SP 2400F 2.0E
WEBS   2x4 SP No.2
WEDGE
Left: 2x6 SP No.1 , Right: 2x6 SP No.1

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)   6=0-5-8, 2=0-5-8
         Max Horz 2=213(LC 26)
         Max Uplift 6=-280(LC 9), 2=-286(LC 8)
         Max Grav 6=4537(LC 1), 2=4625(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
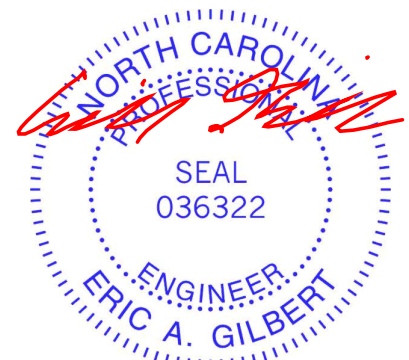TOP CHORD   2-3=-4120/309, 3-4=-3946/351, 4-5=-3946/351, 5-6=-4120/309
BOT CHORD   2-8=-232/2670, 6-8=-143/2668
WEBS   4-8=-398/5207, 5-8=-177/292, 3-8=-177/290

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
   Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
   Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-7-0 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=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=280, 2=286.
9) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1116 lb down and 80 lb up at 2-0-12, 1116 lb down and 80 lb up at 4-0-12, 1116 lb down and 80 lb up at 6-0-12, 1116 lb down and 80 lb up at 8-0-12, 1116 lb down and 80 lb up at 10-0-12, and 1116 lb down and 80 lb up at 12-0-12, and 1116 lb down and 80 lb up at 14-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

Continued on page 2

NORTH CAROLINA
PROFESSIONAL
SEAL
036322
ENGINEER
ERIC A. GILBERT

February 11,2021

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

Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	C3	COMMON	1	**2**		E15403156
					Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:33 2021 Page 2
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LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
    Uniform Loads (plf)
        Vert: 1-4=-60, 4-7=-60, 2-6=-20
    Concentrated Loads (lb)
        Vert: 8=-1111(B) 9=-1111(B) 10=-1111(B) 11=-1111(B) 12=-1111(B) 13=-1111(B) 14=-1111(B)

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	G1	COMMON SUPPORTED GAB	1	1		E15403157
					Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:34 2021 Page 1
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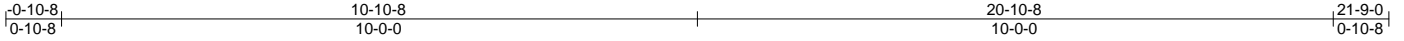
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Plate Offsets (X,Y)--   [18:0-2-8,0-3-0]

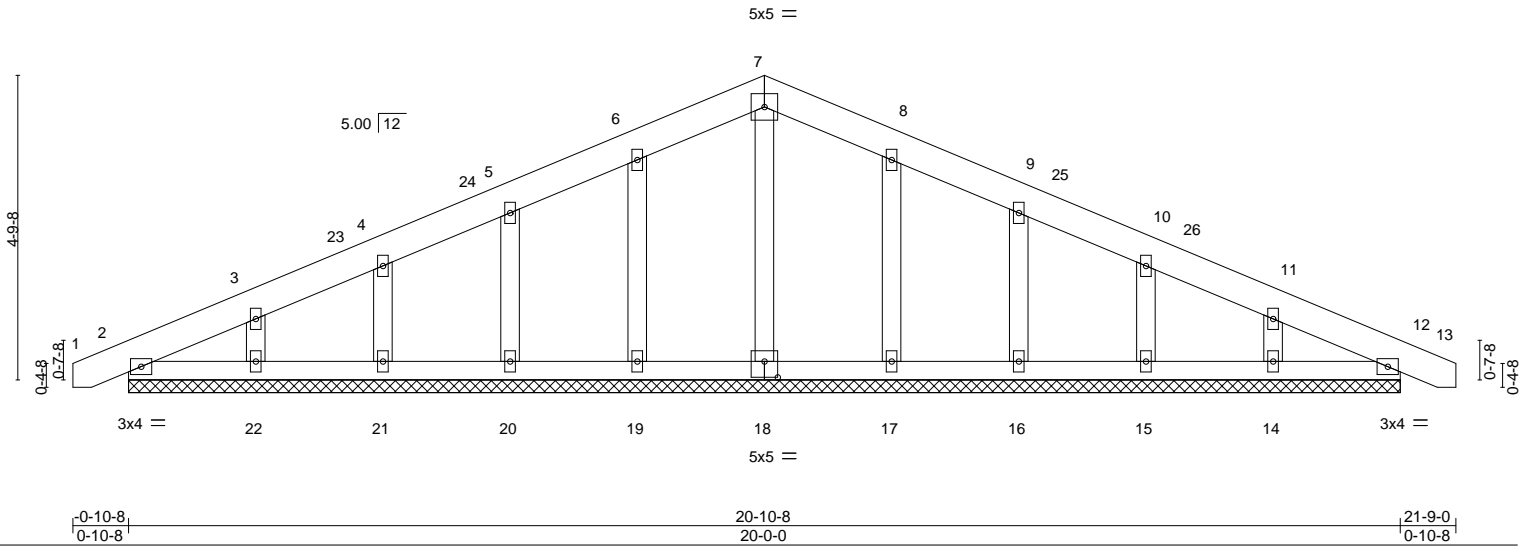| LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	0.00	12	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	12	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 115 lb	FT = 20%

LUMBER-
TOP CHORD   2x6 SP No.1
BOT CHORD   2x4 SP No.1
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 20-0-0.
(lb) - Max Horz 2=-90(LC 17)
        Max Uplift   All uplift 100 lb or less at joint(s) 2, 19, 20, 21, 22, 17, 16, 15, 14, 12
        Max Grav   All reactions 250 lb or less at joint(s) 2, 18, 19, 20, 21, 22, 17, 16, 15, 14, 12

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
   MWFRS (envelope) gable end zone and C-C Corner(3) -0-8-12 to 3-8-1, Exterior(2) 3-8-1 to 10-0-0, Corner(3) 10-0-0 to 14-4-13,
   Exterior(2) 14-4-13 to 20-8-12 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) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0
   between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 19, 20, 21, 22,
   17, 16, 15, 14, 12.
10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building
    designer.

SEAL 036322
NORTH CAROLINA PROFESSIONAL ENGINEER
ERIC A. GILBERT

February 11,2021

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

Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	G2	Common	5	1		E15403158
					Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,

| -0-10-8 | 10-0-0 | 20-0-0 | 20-10-8 |
| 0-10-8 | 10-0-0 | 10-0-0 | 0-10-8 |

Scale = 1:36.0

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.05	2-6	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.12	2-6	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.02	4	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.04	2-6	>999	240	Weight: 108 lb	FT = 20%

LUMBER-
TOP CHORD   2x6 SP No.1
BOT CHORD   2x6 SP No.1
WEBS   2x4 SP No.2

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 5-11-9 oc purlins.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.   (size)   2=0-5-8, 4=0-5-8
           Max Horz   2=54(LC 16)
           Max Uplift   2=-63(LC 12), 4=-63(LC 13)
           Max Grav   2=839(LC 1), 4=839(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-1233/292, 3-4=-1233/292
BOT CHORD   2-6=-137/1026, 4-6=-137/1026
WEBS   3-6=0/475

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
   MWFRS (envelope) and C-C Exterior(2) -0-8-12 to 3-8-1, Interior(1) 3-8-1 to 10-0-0, Exterior(2) 10-0-0 to 14-4-13, Interior(1) 14-4-13
   to 20-8-12 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0
   between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 4.
6) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building
   designer.

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February 11,2021

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Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	J1	GABLE	1	1		E15403159
					Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:36 2021 Page 1
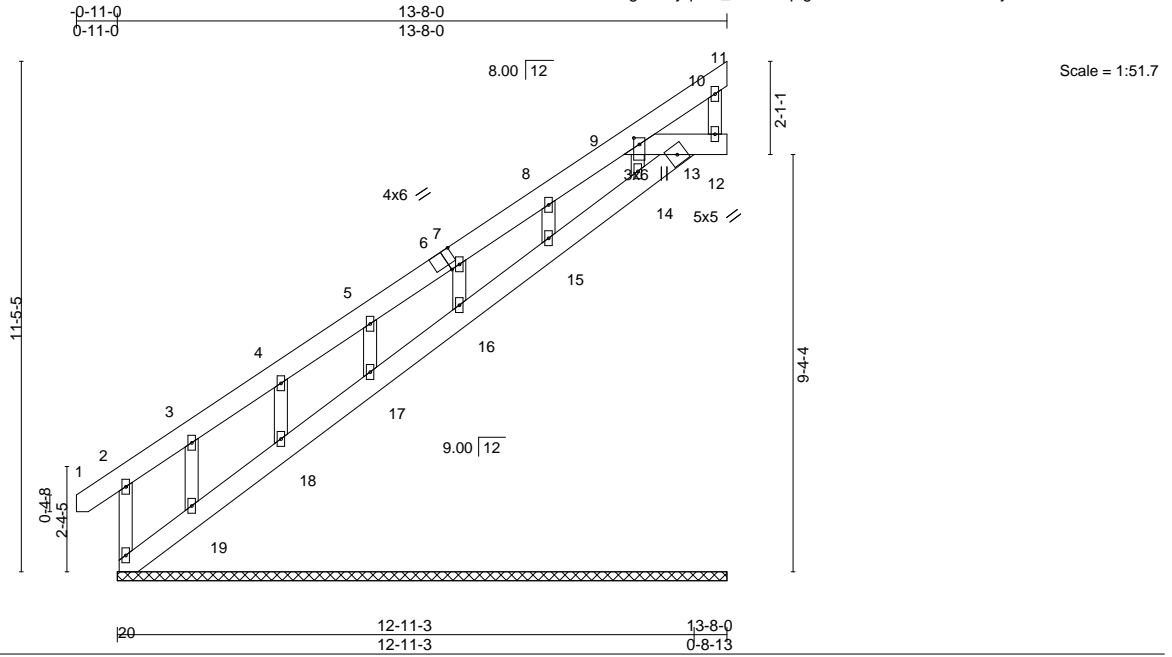ID:3B2lliU9aTYR6OtFvgEVAlyq8tk-_XOkTPqogxRDrL3iJ4IU5uKiSsUZkoy7OL57uGzmFTf

Scale = 1:51.7

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.02	Horz(CT)	-0.01	11	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-R							Weight: 98 lb	FT = 20%

LUMBER-
TOP CHORD   2x6 SP No.1
BOT CHORD   2x6 SP No.1
WEBS   2x4 SP No.2
OTHERS   2x4 SP No.2

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 6-0-0 oc purlins,
             except end verticals.
BOT CHORD   Rigid ceiling directly applied or 6-0-0 oc bracing,   Except:
             10-0-0 oc bracing: 19-20,12-13.

REACTIONS.   All bearings 13-8-0.
    (lb) - Max Horz 20=447(LC 12)
            Max Uplift   All uplift 100 lb or less at joint(s) 20, 11, 12, 15, 17, 18 except 13=-254(LC 12), 16=-101(LC 12),
                         19=-113(LC 12)
            Max Grav   All reactions 250 lb or less at joint(s) 11, 12, 13, 14, 15, 16, 17, 18, 19 except 20=291(LC 12)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   5-7=-203/262, 7-8=-270/342, 8-9=-303/385
BOT CHORD   19-20=-552/441, 18-19=-538/430, 17-18=-542/432, 16-17=-541/432, 15-16=-541/432,
             14-15=-542/432, 13-14=-593/434, 9-13=-338/462

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
   MWFRS (envelope) gable end zone and C-C Corner(3) -0-9-7 to 3-8-0, Exterior(2) 3-8-0 to 13-8-0 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) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
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 with a clearance greater than 6-0-0
   between the bottom chord and any other members.
8) Bearing at joint(s) 20, 11, 13, 14, 15, 16, 17, 18, 19 considers parallel to grain value using ANSI/TPI 1 angle to grain formula.
   Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 20, 11, 12, 15, 17,
   18 except (jt=lb) 13=254, 16=101, 19=113.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 11, 12, 13, 14, 15, 16, 17, 18, 19.
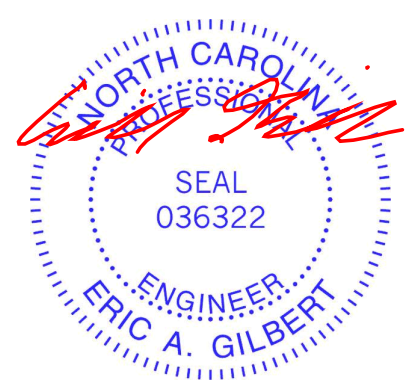
NORTH CAROLINA
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ERIC A. GILBERT
ENGINEER

February 11,2021

ENGINEERING BY
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818 Soundside Road
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Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	J2	MONOPITCH	9	1		E15403160
					Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:37 2021 Page 1
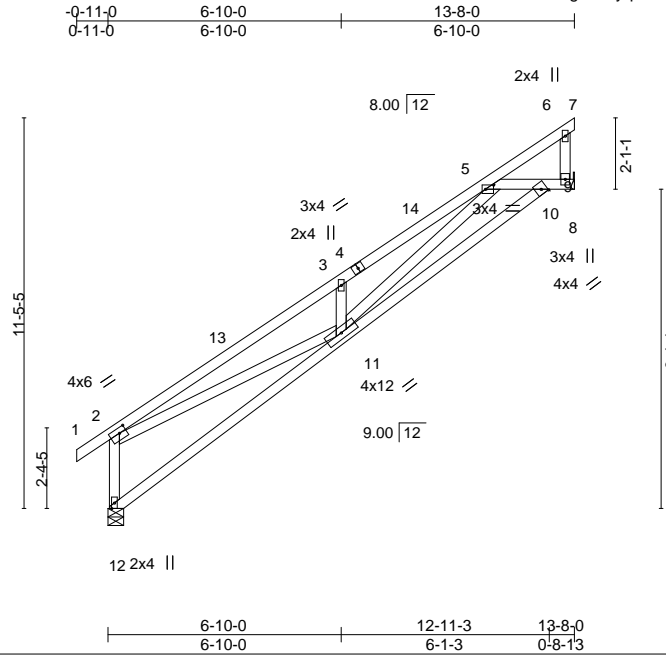ID:3B2IliU9aTYR6OtFvgEVAlyq8tk-Sky6glrQREZ4SVeutopje6so0GmiTBrHd?qhQjzmFTe

-0-11-0   6-10-0   13-8-0
0-11-0   6-10-0   6-10-0

Scale = 1:67.5

6-10-0   12-11-3   13-8-0
6-10-0   6-1-3   0-8-13

Plate Offsets (X,Y)--   [2:0-2-8,0-1-12], [5:0-2-14,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	-0.07	11-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.16	11-12	>986	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.03	9	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.07	11	>999	240	Weight: 81 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x4 SP No.1
WEBS   2x4 SP No.2

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 4-3-11 oc purlins, except end verticals.
BOT CHORD   Rigid ceiling directly applied or 7-11-9 oc bracing.

REACTIONS.   (size)   12=0-5-8, 9=Mechanical
Max Horz 12=311(LC 12)
Max Uplift 9=-209(LC 12)
Max Grav 12=597(LC 1), 9=595(LC 19)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-12=-671/362, 2-3=-1619/570, 3-5=-1729/713
BOT CHORD   11-12=-570/616, 10-11=-615/1231, 5-10=-863/427
WEBS   2-11=-316/1221, 3-11=-408/252, 5-11=-372/827

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-11-0 to 3-5-13, Interior(1) 3-5-13 to 13-8-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 9=209.
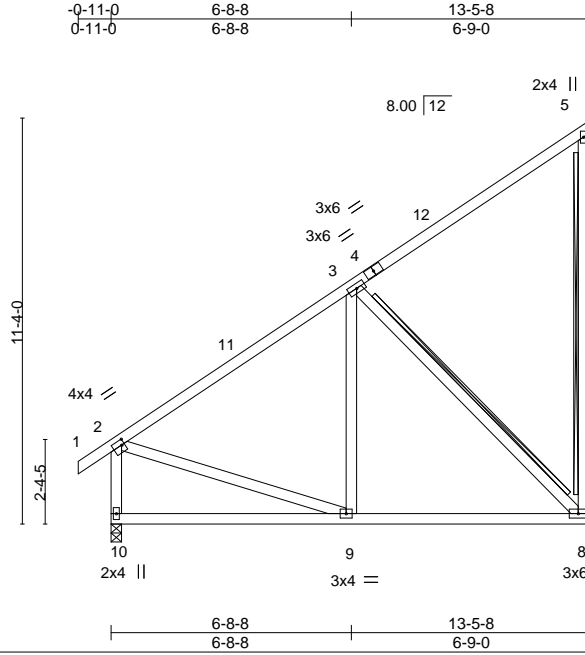
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ENGINEER
ERIC A. GILBERT

February 11,2021

ENGINEERING BY
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818 Soundside Road
Edenton, NC 27932
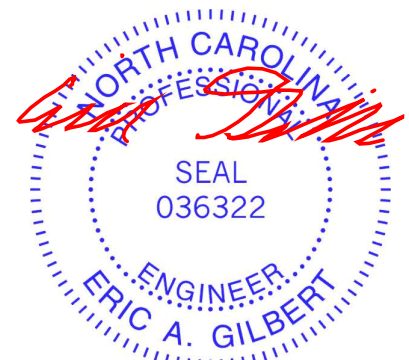
Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
						E15403161
J0121-0600	J3	MONOPITCH	1	1		
					Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:37 2021 Page 1
ID:3B2lliU9aTYR6OtFvgEVAlyq8tk-Sky6glrQREZ4SVeutopje6sovGkKTBDHd?qhQjzmFTe

-0-11-0 6-8-8 13-5-8
0-11-0 6-8-8 6-9-0

Scale: 3/16"=1'

8.00 ⌐12

2x4 ‖

3x6 ⫽
3x6 ⫽

4x4 ⫽

11-4-0

2-4-5

2x4 ‖

3x4 ═

3x6 ═

6-8-8 13-5-8
6-8-8 6-9-0

Plate Offsets (X,Y)--   [2:0-1-0,0-1-12]

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	-0.11	8-9	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.40	Vert(CT)	-0.15	8-9	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.01	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.00	9	>999	240	Weight: 97 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x4 SP No.1
WEBS   2x4 SP No.2

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD   Rigid ceiling directly applied or 9-6-13 oc bracing.
WEBS   T-Brace: 2x4 SPF No.2 - 5-8, 3-8
            Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance. Brace must cover 90% of web length.

REACTIONS.   (size)   8=Mechanical, 10=0-3-8
            Max Horz 10=306(LC 12)
            Max Uplift 8=-203(LC 12)
            Max Grav 8=723(LC 19), 10=589(LC 19)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-487/0, 2-10=-544/34
BOT CHORD   9-10=-427/430, 8-9=-194/427
WEBS   3-8=-593/270, 2-9=-3/354

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 13-6-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=203.
6) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

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February 11,2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see *ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information* available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601
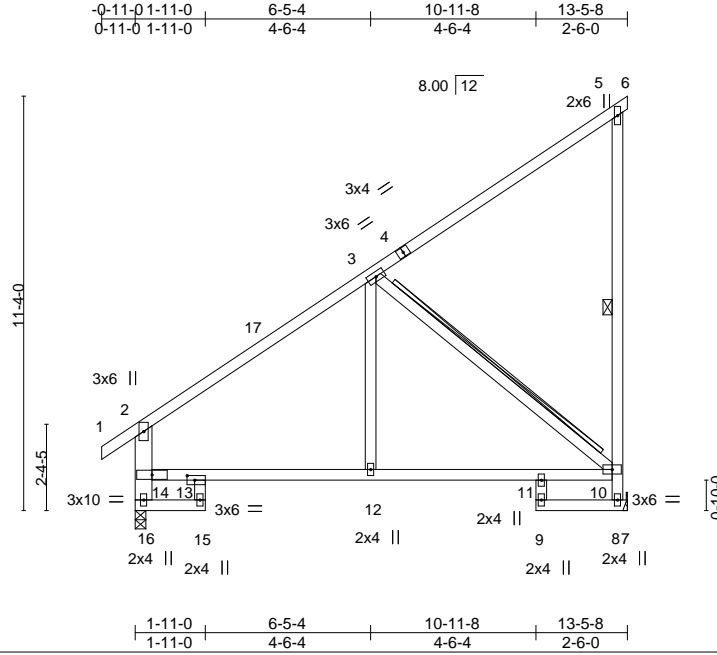
ENGINEERING BY
TRENCO
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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	J4	MONOPITCH	1	1		E15403162
					Job Reference (optional)	

Comtech, Inc,   Fayetteville, NC - 28314,
8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:38 2021 Page 1
ID:3B2IliU9aTYR6OtFvgEVAlyq8tk-wwWUu5s2CYhx4fD5RVKyBJPztg4oCeYQsfaEy9zmFTd

-0-11-0 1-11-0   6-5-4   10-11-8   13-5-8
0-11-0 1-11-0   4-6-4   4-6-4   2-6-0

Scale = 1:63.0

8.00 ⌐12

2x6 ||

3x4 ═
3x6 ═
3x6 ||
3x10 ═
3x6 ═
2x4 ||
2x4 ||
2x4 ||
2x4 ||
2x4 ||
2x4 ||
3x6 ═

1-11-0   6-5-4   10-11-8   13-5-8
1-11-0   4-6-4   4-6-4   2-6-0

Plate Offsets (X,Y)--   [13:0-2-8,0-1-8]

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.40	Vert(LL)	-0.05	11-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.39	Vert(CT)	-0.12	11-12	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.07	12-13	>999	240	Weight: 94 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x4 SP No.1 *Except*
    13-15,9-11: 2x4 SP No.2
WEBS   2x4 SP No.2 *Except*
    2-16: 2x6 SP No.1

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 6-0-0 oc purlins,
    except end verticals.
BOT CHORD   Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS   1 Row at midpt   5-8
    T-Brace: 2x4 SPF No.2 - 3-10
    Fasten (2X) T and I braces to narrow edge of web with 10d
    (0.131"x3") nails, 6in o.c.,with 3in minimum end distance.
    Brace must cover 90% of web length.

REACTIONS.   (size)   8=Mechanical, 16=0-3-8
    Max Horz   16=306(LC 12)
    Max Uplift   8=-204(LC 12)
    Max Grav   8=583(LC 19), 16=590(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-519/0, 8-10=-653/292, 14-16=-516/119, 2-14=-488/122
BOT CHORD   15-16=-351/148, 13-14=0/533, 12-13=-260/515, 11-12=-260/515, 10-11=-274/514
WEBS   3-10=-648/334

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
    MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 13-6-0 zone;C-C for members and forces & MWFRS for
    reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0
    between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb)
    8=204.
6) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

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February 11,2021

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Comtech, Inc,   Fayetteville, NC - 28314,

8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:39 2021 Page 1
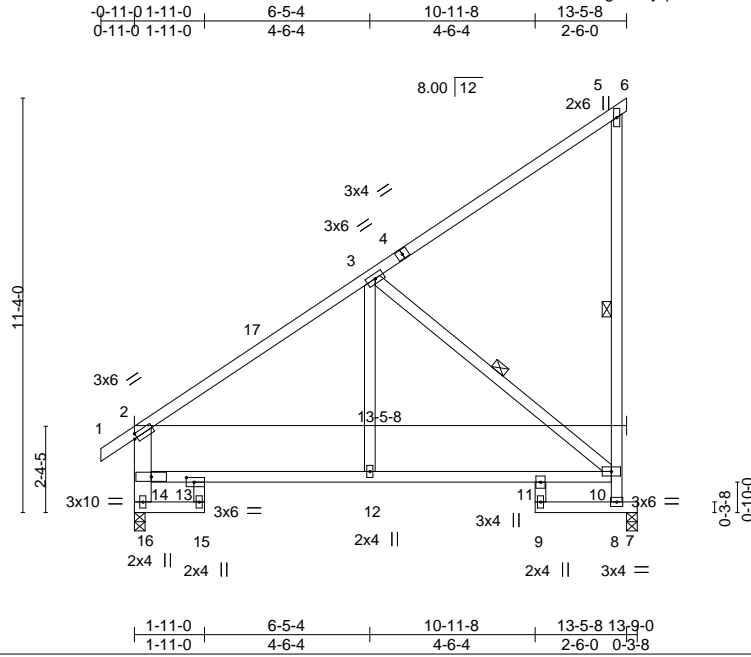ID:3B2IIiU9aTYR6OtFvgEVAIyq8tk-O64s5RtgzspoipoH_DrBjXy7S4Qkx6PZ4JJnVbzmFTc

-0-11-0 1-11-0   6-5-4   10-11-8   13-5-8
0-11-0 1-11-0   4-6-4   4-6-4   2-6-0

Scale = 1:63.0

8.00 [12]

1-11-0   6-5-4   10-11-8   13-5-8 13-9-0
1-11-0   4-6-4   4-6-4   2-6-0 0-3-8

Plate Offsets (X,Y)--   [2:0-1-0,0-1-8], [13:0-2-8,0-1-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	-0.08	11-12	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.19	11-12	>840	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.05	7	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-S		Wind(LL)	0.06	12-13	>999	240	Weight: 94 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x4 SP No.1 *Except*
13-15,9-11: 2x4 SP No.2
WEBS   2x4 SP No.2 *Except*
2-16: 2x6 SP No.1

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 6-0-0 oc purlins,
except end verticals.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 15-16,13-15.
WEBS   1 Row at midpt   5-8, 3-10

REACTIONS. (size)   16=0-3-8, 7=0-3-8
Max Horz 16=306(LC 12)
Max Uplift 7=-196(LC 12)
Max Grav 16=606(LC 1), 7=568(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-550/15, 8-10=-719/317, 14-16=-531/127, 2-14=-508/132
BOT CHORD   15-16=-345/132, 13-14=0/568, 12-13=-272/545, 11-12=-272/545, 10-11=-230/398
WEBS   3-10=-680/346, 3-12=-31/275

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 13-6-0 zone;C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0
between the bottom chord and any other members.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb)
7=196.

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Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	J6	GABLE	1	1		E15403164
					Job Reference (optional)	

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8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:40 2021 Page 1
ID:3B2IliU9aTYR6OtFvgEVAIyq8tk-sIeFJntJk9xfJzMTYwMQGkUNvTsYga7jJz3L11zmFTb
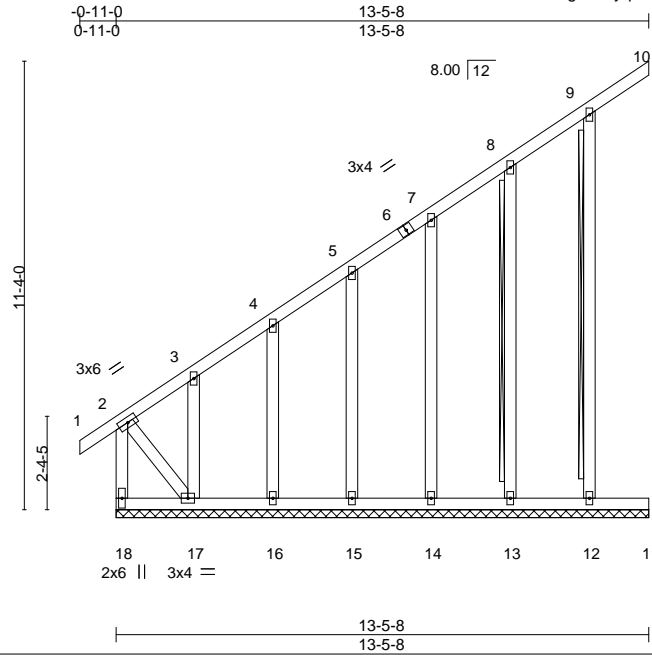
LOADING (psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	0.00	1	n/r	120	MT20	244/190
TCDL 10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	-0.00	2	n/r	120		
BCLL 0.0 *	Rep Stress Incr	YES	WB	0.14	Horz(CT)	-0.02	10	n/a	n/a		
BCDL 10.0	Code IRC2015/TPI2014		Matrix-S							Weight: 110 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x4 SP No.1
WEBS   2x4 SP No.2
OTHERS   2x4 SP No.2

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing,   Except: 6-0-0 oc bracing: 17-18.
WEBS   T-Brace: 2x4 SPF No.2 - 8-13, 9-12
            Fasten (2X) T and I braces to narrow edge of web with 10d (0.131"x3") nails, 6in o.c.,with 3in minimum end distance. Brace must cover 90% of web length.

REACTIONS.   All bearings 13-5-8.
  (lb) -   Max Horz 18=444(LC 12)
           Max Uplift   All uplift 100 lb or less at joint(s) 10, 16, 15, 14, 13, 12 except 18=-194(LC 10), 17=-595(LC 12)
           Max Grav   All reactions 250 lb or less at joint(s) 10, 11, 16, 15, 14, 13, 12 except 18=722(LC 12), 17=306(LC 10)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-18=-706/552, 2-3=-470/392, 3-4=-403/329, 4-5=-325/267, 5-7=-251/207
BOT CHORD   17-18=-442/347
WEBS   2-17=-537/683

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 3-6-5, Exterior(2) 3-6-5 to 13-6-0 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) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members, with BCDL = 10.0psf.
9) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 10, 16, 15, 14, 13, 12 except (jt=lb) 18=194, 17=595.
11) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

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-0-10-8
0-10-8
6-0-0
6-0-0

Scale = 1:13.7

2x4 ||
3

3.00 [12]

2x4 ||

1-11-2

2

1-7-8

1

0-5-8

5   4

2x6 =   2x4 || 2x4 ||

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.55	Vert(LL)	-0.01	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	0.01	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 23 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x4 SP No.1
WEBS   2x4 SP No.2
OTHERS   2x4 SP No.2

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

REACTIONS.   (size)   4=5-10-8, 2=5-10-8, 5=5-10-8
Max Horz 2=80(LC 4)
Max Uplift 4=-109(LC 8), 2=-119(LC 4)
Max Grav 4=173(LC 1), 2=265(LC 1), 5=165(LC 3)

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

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; porch left exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 4=109, 2=119.

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Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	M2	MONOPITCH	7	1	Job Reference (optional)	E15403166

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8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:41 2021 Page 1
ID:3B2IliU9aTYR6OtFvgEVAIyq8tk-KVCdW7uxVT3Wx6xg6etfoy1Qct?5P3XsYdouZUzmFTa

-0-10-8
0-10-8

6-0-0
6-0-0

Scale = 1:13.4

2x4 ||
3

3.00 |12

6

5

2

1

1-11-2

0-5-8

1-7-10

1-11-2

0-3-8

4

2x4 ||

2x6 =

0-3-0
0-3-0

6-0-0
5-9-0
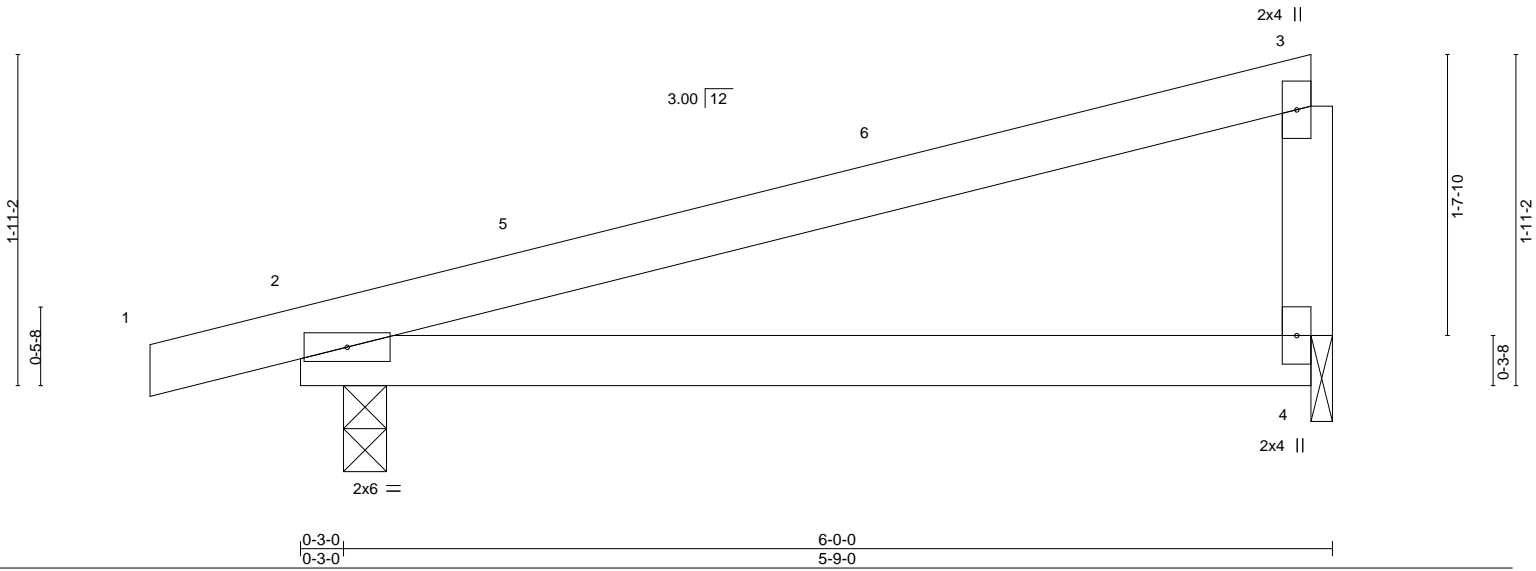
LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.06	2-4	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.11	2-4	>608	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P		Wind(LL)	0.13	2-4	>548	240	Weight: 21 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x4 SP No.1
WEBS   2x4 SP No.2

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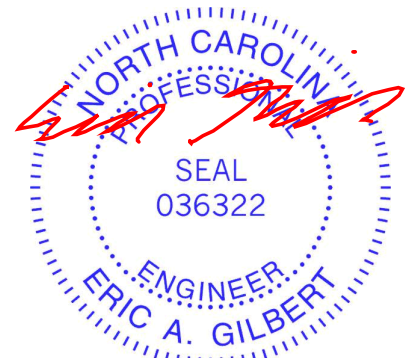BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.   (size)   2=0-3-0, 4=0-1-8
Max Horz 2=56(LC 8)
Max Uplift 2=-120(LC 8), 4=-92(LC 8)
Max Grav 2=294(LC 1), 4=223(LC 1)

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

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
   MWFRS (envelope) and C-C Exterior(2) -0-10-8 to 3-6-5, Interior(1) 3-6-5 to 5-10-1 zone; porch left exposed;C-C for members and
   forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0
   between the bottom chord and any other members.
4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify
   capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb)
   2=120.

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Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	P1	GABLE	2	1		E15403167
					Job Reference (optional)	

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8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:42 2021 Page 1
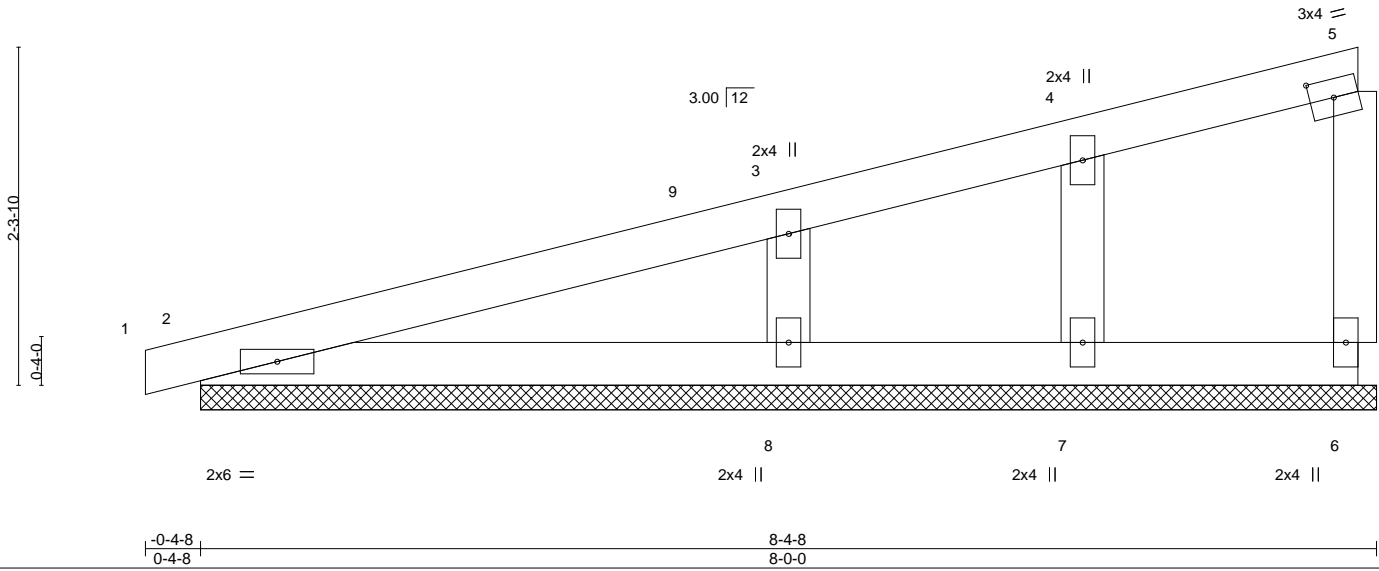ID:3B2IliU9aTYR6OtFvgEVAlyq8tk-ohl?kTvZGnBNZGWsgLPuL9aiiHWJ8Ws0mHYR5wzmFTZ

-0-4-8
0-4-8
6-9-10
6-5-2

Scale = 1:15.7

3x4
5

2x4 ||
4

3.00 |12

2x4 ||
3

9

2x4 ||
2

1

2-3-10

0-4-0

8
7
6

2x6 =

2x4 ||
2x4 ||
2x4 ||

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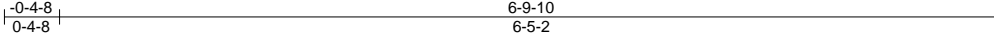
Plate Offsets (X,Y)--   [5:0-1-15,0-1-8]

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	0.00	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	-0.00	6	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P							Weight: 30 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x4 SP No.1
WEBS   2x4 SP No.2
OTHERS   2x4 SP No.2

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 8-0-0.
      (lb) - Max Horz 2=97(LC 8)
              Max Uplift   All uplift 100 lb or less at joint(s) 6, 2, 7 except 8=-105(LC 12)
              Max Grav   All reactions 250 lb or less at joint(s) 6, 2, 7 except 8=323(LC 1)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS   3-8=-242/338

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed;
   MWFRS (envelope) gable end zone and C-C Corner(3) -0-4-8 to 4-0-0, Exterior(2) 4-0-0 to 7-10-1 zone; porch left exposed;C-C for
   members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry
   Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0
   between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 2, 7 except
   (jt=lb) 8=105.
8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building
   designer.

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February 11,2021

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Job	Truss	Truss Type	Qty	Ply	Lot 51 Sierra Village	
J0121-0600	P2	MONOPITCH	5	1		E15403168
					Job Reference (optional)	

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8.330 s Oct 7 2020 MiTek Industries, Inc. Thu Feb 11 09:32:43 2021 Page 1
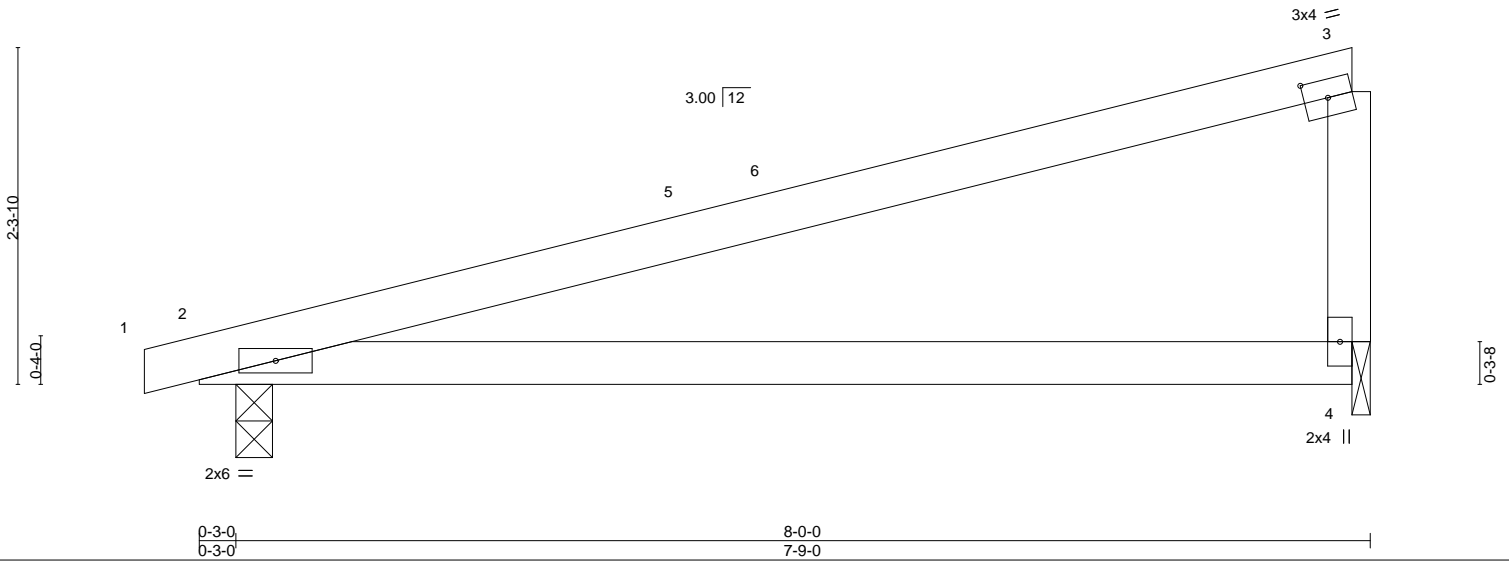ID:3B2lliU9aTYR6OtFvgEVAlyq8tk-GtJNxpwB14JDAQ52D3w7uN6hjhIrtzU9?xH?eMzmFTY

Scale = 1:15.7

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

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.15	2-4	>619	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.30	2-4	>310	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code IRC2015/TPI2014		Matrix-P		Wind(LL)	0.33	2-4	>283	240	Weight: 27 lb	FT = 20%

LUMBER-
TOP CHORD   2x4 SP No.1
BOT CHORD   2x4 SP 2400F 2.0E
WEBS   2x4 SP No.2

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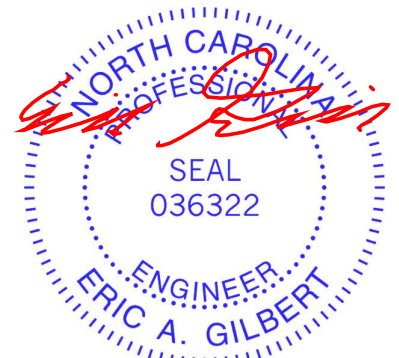BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS.   (size)   2=0-3-0, 4=0-1-8
Max Horz   2=68(LC 8)
Max Uplift 2=-130(LC 8), 4=-127(LC 8)
Max Grav   2=340(LC 1), 4=307(LC 1)

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

NOTES-
1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2) -0-4-8 to 4-0-5, Interior(1) 4-0-5 to 7-10-1 zone; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas with a clearance greater than 6-0-0 between the bottom chord and any other members.
4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=130, 4=127.
7) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

February 11,2021

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Symbols

PLATE LOCATION AND ORIENTATION

↑1 ³⁄₄"

0- ¹⁄₁₆"

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.

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

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

* 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

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

6-4-8

TOP CHORD

1 2 3 TOP CHORDS

C1-8
C1-2
W1-7
C7-8
W2-7
BOTTOM CHORDS WEBS
C6-7
W3-7
C2-3
C3-4
W3-6
C5-6 W4-6
C4-5

8 7 6 5

TOP CHORD

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.

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⚠ 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 T or 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.

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