

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: Elm\_Plan  
Lamco Custom Homes

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

Pages or sheets covered by this seal: E12952482 thru E12952505

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

North Carolina COA: C-0844



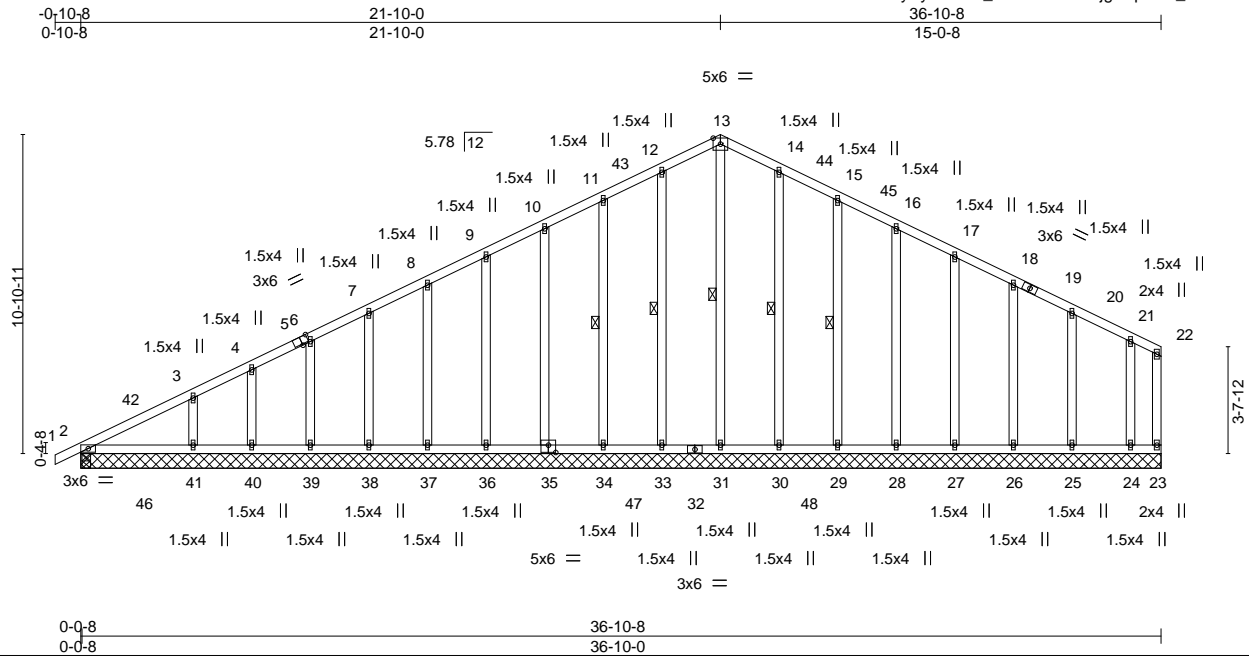
April 24, 2019

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Gilbert, Eric

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

Job Elm_Plan	Truss A1	Truss Type GABLE	Qty 1	Ply 1	Lamco Custom Homes	E12952482
Builders FirstSource, Albemarle, NC 28001					8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:18:43 2019 Page 1	
-0-10-8 0-10-8					ID:hHbMWfsRs4rdLb6QlKGEsGyKyaW-tAti_A1r18SZl623hg8HpOAs_2bl0Bx?IX91_zNoLQ	
21-10-0 21-10-0					36-10-8 15-0-8	



Scale = 1:78.6

LOADING (psf)	SPACING-	CSL	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.16	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.10	Vert(LL) -0.01 2-41 >999 360		
TCDL 10.0	Lumber DOL 1.15	WB 0.14	Vert(CT) -0.01 2-41 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 23 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Wind(LL) 0.01 2-41 >999 240	Weight: 279 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 13-31, 12-33, 11-34, 14-30, 15-29
OTHERS 2x4 SP No.3	

**REACTIONS.** All bearings 36-10-8.  
 (lb) - Max Horz 2=224(LC 16)  
 Max Uplift All uplift 100 lb or less at joint(s) 2, 33, 34, 35, 36, 37, 38, 39, 40, 41, 30, 29, 28, 27, 26, 25, 24  
 Max Grav All reactions 250 lb or less at joint(s) 23, 2, 2, 31, 33, 34, 35, 36, 37, 38, 39, 40, 30, 29, 28, 27, 26, 25, 24 except 41=300(LC 34)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 11-12=-89/268, 12-13=-102/301, 13-14=-102/300, 14-15=-89/267

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-1-8, Exterior(2) 2-1-8 to 21-10-0, Corner(3) 21-10-0 to 24-10-0, Exterior(2) 24-10-0 to 36-8-12 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 33, 34, 35, 36, 37, 38, 39, 40, 41, 30, 29, 28, 27, 26, 25, 24.

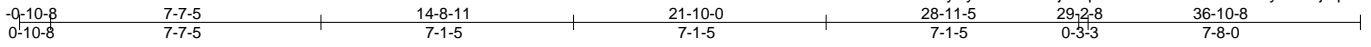


Job	Truss	Truss Type	Qty	Ply	Lamco Custom Homes	E12952483
Elm_Plan	A2	COMMON	3	1	Job Reference (optional)	

Builders FirstSource, Albemarle, NC 28001

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5x6 =

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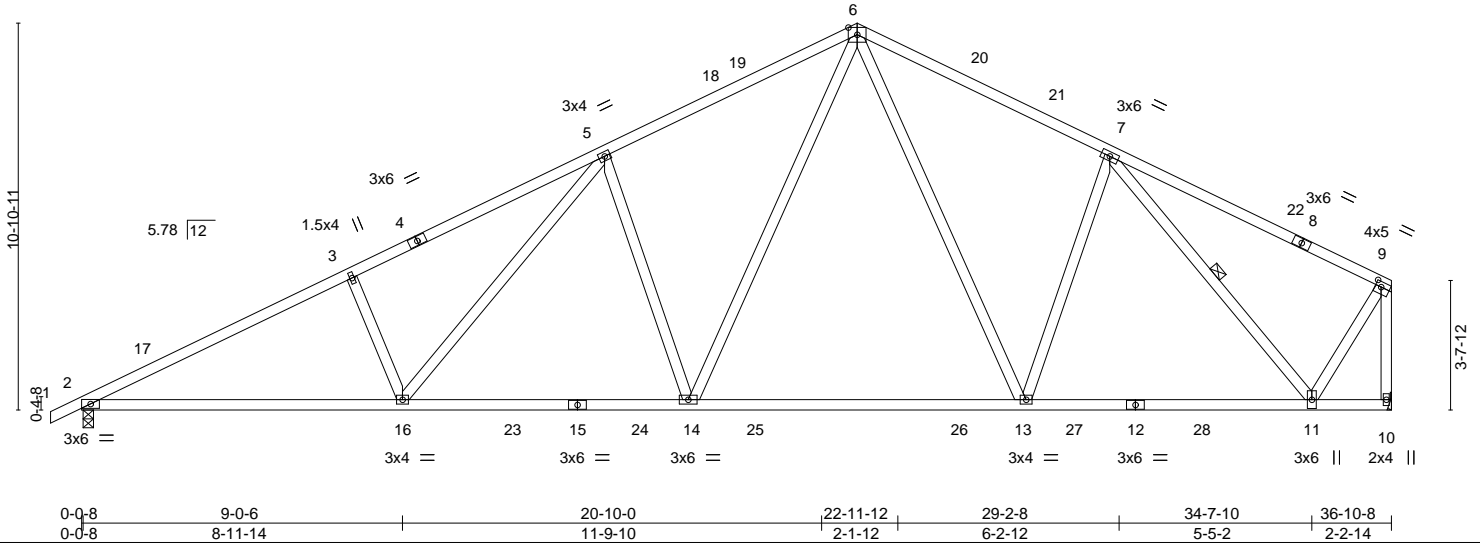


Plate Offsets (X,Y)-- [9:0-2,0-0,1-12]

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.85	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.73	Vert(LL) -0.25 13-14 >999 360		
TCDL 10.0	Lumber DOL 1.15	WB 0.80	Vert(CT) -0.45 13-14 >974 240		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.09 10 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Wind(LL) 0.12 2-16 >999 240		
				Weight: 215 lb	FT = 20%

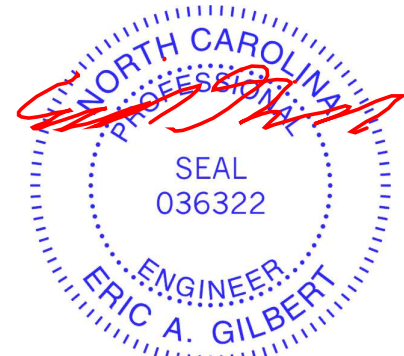
**LUMBER-**  
 TOP CHORD 2x4 SP No.2 \*Except\*  
 1-4: 2x4 SP No.1  
 BOT CHORD 2x4 SP No.1 \*Except\*  
 10-12: 2x4 SP No.2  
 WEBS 2x4 SP No.3

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
 8-10-10 oc bracing: 2-16.  
 WEBS 1 Row at midpt 7-11

**REACTIONS.** (lb/size) 10=1294/Mechanical, 2=1348/0-3-8  
 Max Horz 2=224(LC 16)  
 Max Uplift 10=-165(LC 17), 2=-222(LC 16)  
 Max Grav 10=1510(LC 3), 2=1525(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2780/389, 3-5=-2639/440, 5-6=-1969/359, 6-7=-1643/316, 7-9=-821/145,  
 9-10=-1534/185  
 BOT CHORD 2-16=-485/2422, 14-16=-312/1900, 13-14=-135/1290, 11-13=-140/1366  
 WEBS 6-13=-123/367, 7-11=-1114/138, 9-11=-74/1220, 6-14=-221/1020, 5-14=-722/271,  
 5-16=-167/707, 3-16=-385/187

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TC DL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-10-8 to 2-1-8, Interior(1) 2-1-8 to 21-10-0, Exterior(2) 21-10-0 to 24-10-0, Interior(1) 24-10-0 to 36-8-12 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Refer to girder(s) for truss to truss connections.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=165.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.



April 24, 2019

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

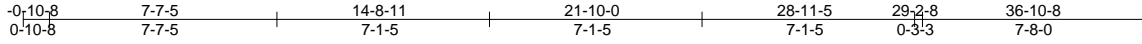
ENGINEERING BY  
**TRENCO**  
 A MiTek Affiliate  
 818 Soundside Road  
 Edenton, NC 27932

Job Elm_Plan	Truss A3	Truss Type COMMON	Qty 4	Ply 1	Lamco Custom Homes	E12952484
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Builders FirstSource, Albemarle, NC 28001

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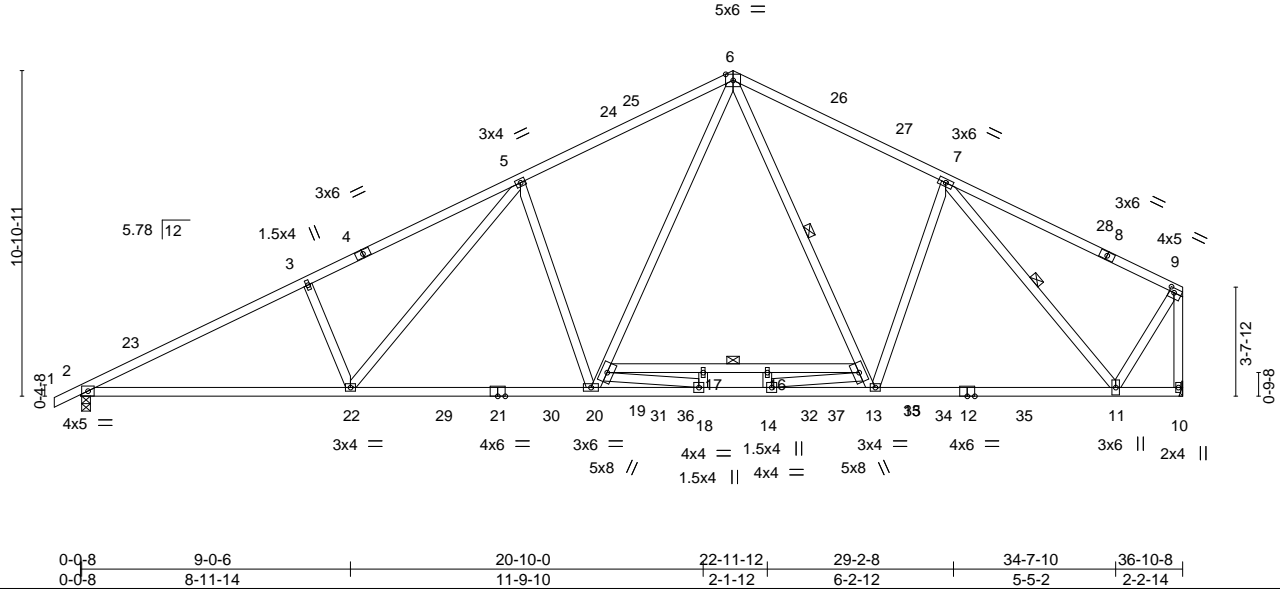


Plate Offsets (X,Y)-- [9:0-2-0,0-1-12]									
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>			<b>PLATES</b>	<b>GRIP</b>		
TCLL (roof) 20.0	2-0-0	TC 0.90	in (loc) l/defl L/d	in (loc)	l/defl	MT20	244/190		
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.90	Vert(LL) -0.22 20-22 >999 360						
TCDL 10.0	Lumber DOL 1.15	WB 0.80	Vert(CT) -0.41 20-22 >999 240						
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.10 10 n/a n/a						
BCDL 10.0	Code IRC2015/TPI2014		Wind(LL) 0.12 2-22 >999 240					Weight: 238 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2 *Except* 1-4: 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD 2x4 SP No.2 *Except* 2-21: 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 9-3-6 oc bracing. Except: 6-0-0 oc bracing: 15-19
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 6-13, 7-11

**REACTIONS.** (lb/size) 10=1393/Mechanical, 2=1415/0-3-8  
 Max Horz 2=224(LC 16)  
 Max Uplift 10=-136(LC 17), 2=-202(LC 16)  
 Max Grav 10=1685(LC 3), 2=1610(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3055/343, 3-5=-2913/395, 5-6=-2228/314, 6-7=-1868/278, 7-9=-924/128,  
 9-10=-1729/153  
 BOT CHORD 2-22=-444/2667, 20-22=-271/2136, 18-20=-50/1358, 14-18=0/2115, 13-14=-93/1502,  
 11-13=-109/1549, 17-19=-813/0, 16-17=-813/0, 15-16=-813/0  
 WEBS 6-15=-111/432, 13-15=-157/271, 7-13=-71/299, 7-11=-1259/112, 9-11=-45/1397,  
 19-20=-249/1029, 6-19=-198/1183, 5-20=-725/270, 5-22=-166/714, 3-22=-382/188,  
 18-19=0/890, 14-15=0/783

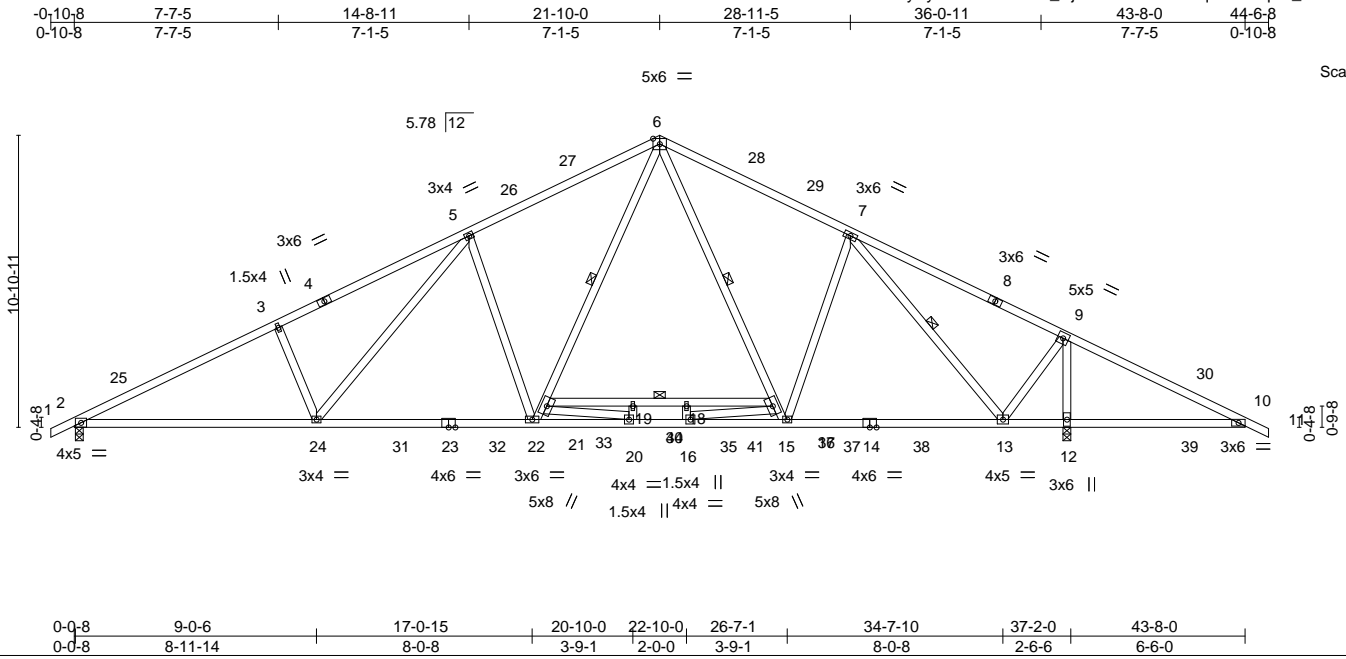
- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
  - 2) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 21-10-0, Exterior(2) 21-10-0 to 24-10-0, Interior(1) 24-10-0 to 36-8-12 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Refer to girder(s) for truss to truss connections.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 10=136.
  - 10) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2. This connection is for uplift only and does not consider lateral forces.



Job Elm_Plan	Truss A4	Truss Type COMMON	Qty 3	Ply 1	Lamco Custom Homes	E12952485
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Builders FirstSource, Albemarle, NC 28001

8.220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:18:49 2019 Page 1  
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.83	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.88	Vert(LL) -0.22 22-24 >999 360		
TCDL 10.0	Lumber DOL 1.15	WB 0.80	Vert(CT) -0.39 22-24 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.10 12 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Wind(LL) 0.25 2-24 >999 240	Weight: 261 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD 2x4 SP No.2 *Except*	BOT CHORD Rigid ceiling directly applied or 4-4-1 oc bracing. Except:
WEBS 2x4 SP No.3	6-0-0 oc bracing: 17-21
	WEBS 1 Row at midpt 6-15, 7-13, 6-22

**REACTIONS.** (lb/size) 2=1375/0-3-8, 12=1968/0-3-8  
 Max Horz 2=156(LC 16)  
 Max Uplift 2=-435(LC 13), 12=-542(LC 13)  
 Max Grav 2=1574(LC 3), 12=2251(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2972/1860, 3-5=-2830/1907, 5-6=-2144/1603, 6-7=-1734/1347, 7-9=-635/545, 9-10=-364/685  
 BOT CHORD 2-24=-1583/2593, 22-24=-1276/2061, 20-22=-826/1289, 16-20=-1819/2058, 15-16=-921/1451, 13-15=-878/1396, 12-13=-521/379, 10-12=-521/379, 19-21=-823/999, 18-19=-823/999, 17-18=-823/999  
 WEBS 6-17=-342/319, 7-15=-275/349, 7-13=-1452/941, 9-13=-1040/1601, 21-22=-622/1027, 6-21=-916/1183, 5-22=-725/322, 5-24=-420/714, 3-24=-382/188, 9-12=-2157/1311, 20-21=-1029/898, 16-17=-926/784

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 21-10-0, Exterior(2) 21-10-0 to 24-10-0, Interior(1) 24-10-0 to 44-6-8 zone; cantilever left and right exposed; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 12. This connection is for uplift only and does not consider lateral forces.

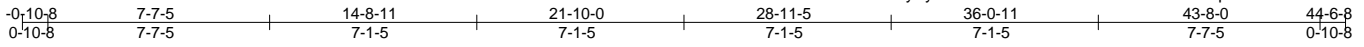


Job Elm_Plan	Truss A5	Truss Type COMMON	Qty 1	Ply 1	Lamco Custom Homes	E12952486
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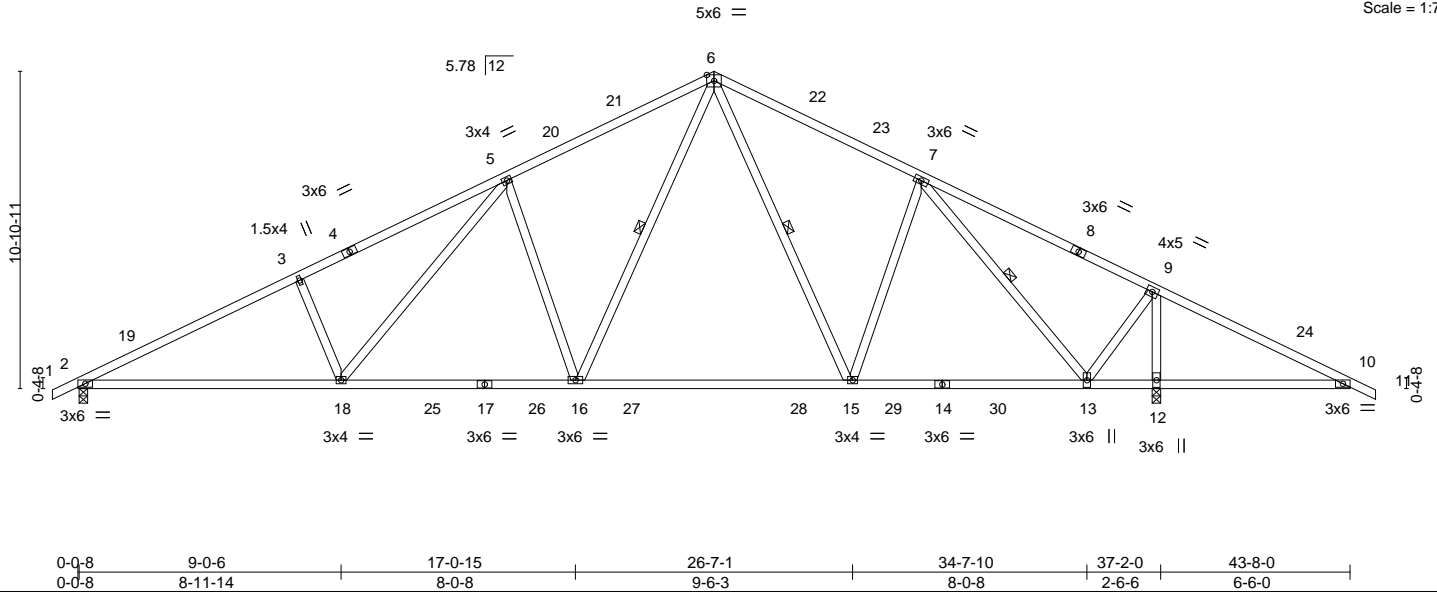
Builders FirstSource, Albemarle, NC 28001

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Scale = 1:79.1



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.99	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 1.00	Vert(LL) -0.24 15-16 >999 360		
TCDL 10.0	Lumber DOL 1.15	WB 0.80	Vert(CT) -0.45 15-16 >994 240		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.09 12 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Wind(LL) 0.25 2-18 >999 240	Weight: 238 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.1 *Except* 1-4,8-11: 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x4 SP No.2 *Except* 14-17: 2x4 SP No.1	BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 6-15, 7-13, 6-16

**REACTIONS.** (lb/size) 2=1307/0-3-8, 12=1871/0-3-8  
 Max Horz 2=156(LC 16)  
 Max Uplift 2=-295(LC 13), 12=-342(LC 13)  
 Max Grav 2=1479(LC 2), 12=2116(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-2695/1242, 3-5=-2553/1290, 5-6=-1882/978, 6-7=-1504/796, 7-9=-519/305,  
 9-10=-366/685  
 BOT CHORD 2-18=-1031/2345, 16-18=-714/1822, 15-16=-394/1212, 13-15=-434/1208, 12-13=-522/381,  
 10-12=-522/381  
 WEBS 6-15=-159/251, 7-15=-112/288, 7-13=-1322/573, 9-13=-678/1426, 6-16=-551/1019,  
 5-16=-722/326, 5-18=-429/708, 3-18=-385/186, 9-12=-1971/913

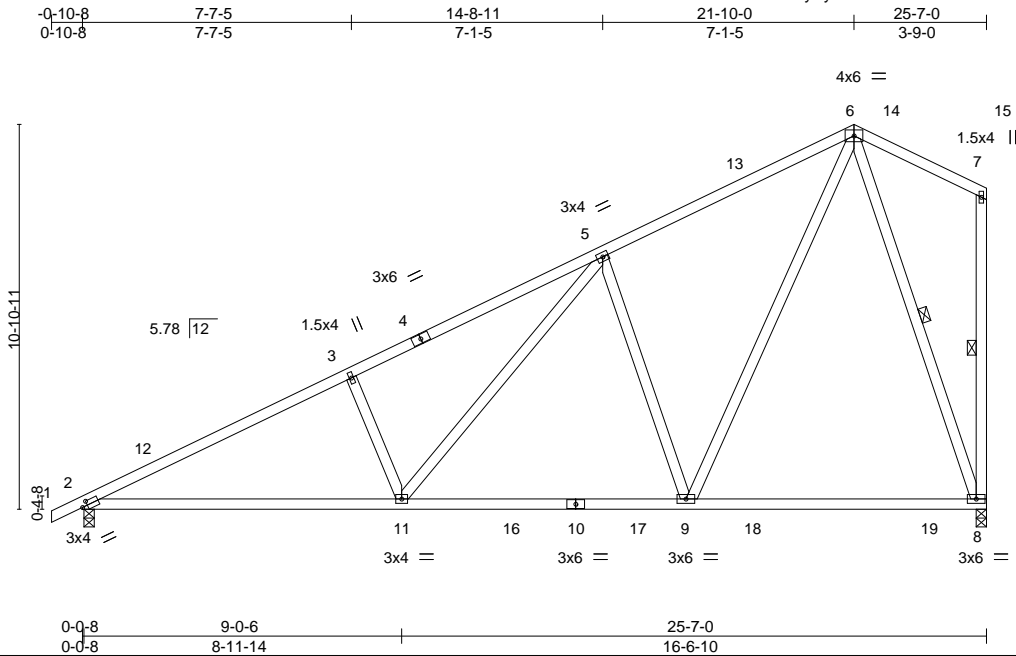
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-10-8 to 2-1-8, Interior(1) 2-1-8 to 21-10-0, Exterior(2) 21-10-0 to 24-10-0, Interior(1) 24-10-0 to 44-6-8 zone; cantilever left and right exposed; porch right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 12. This connection is for uplift only and does not consider lateral forces.



Job Elm_Plan	Truss A6	Truss Type COMMON	Qty 10	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952487
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Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:18:51 2019 Page 1  
ID:hHbMWfsRs4rdLbQIKGEsGyKyaW-eiMkfv7s8bTRiKfb9Op0bVjPVDdb\_dTI6r?TaJXzNoLI



Scale = 1:65.2

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

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.75	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.84	Vert(LL) -0.21 8-9 >999 360		
TCDL 10.0	Lumber DOL 1.15	WB 0.80	Vert(CT) -0.38 2-11 >797 240		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.04 8 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Wind(LL) 0.11 2-11 >999 240	Weight: 157 lb	FT = 20%

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

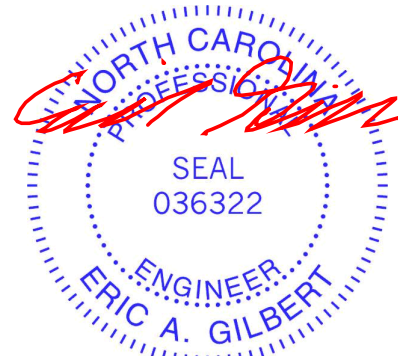
**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-8-14 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 8-9-15 oc bracing.  
WEBS 1 Row at midpt 7-8, 6-8

**REACTIONS.** (lb/size) 8=894/0-3-8, 2=948/0-3-8  
Max Horz 2=326(LC 16)  
Max Uplift 8=201(LC 16), 2=142(LC 16)  
Max Grav 8=1069(LC 3), 2=1074(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1770/209, 3-5=-1602/261, 5-6=-882/177  
BOT CHORD 2-11=-426/1506, 9-11=-249/923, 8-9=-72/302  
WEBS 5-9=-728/272, 5-11=-171/724, 6-8=-906/228, 3-11=-398/190, 6-9=-221/1031

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 21-10-0, Exterior(2) 21-10-0 to 24-10-0, Interior(1) 24-10-0 to 25-5-4 zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 2. This connection is for uplift only and does not consider lateral forces.



April 24, 2019

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

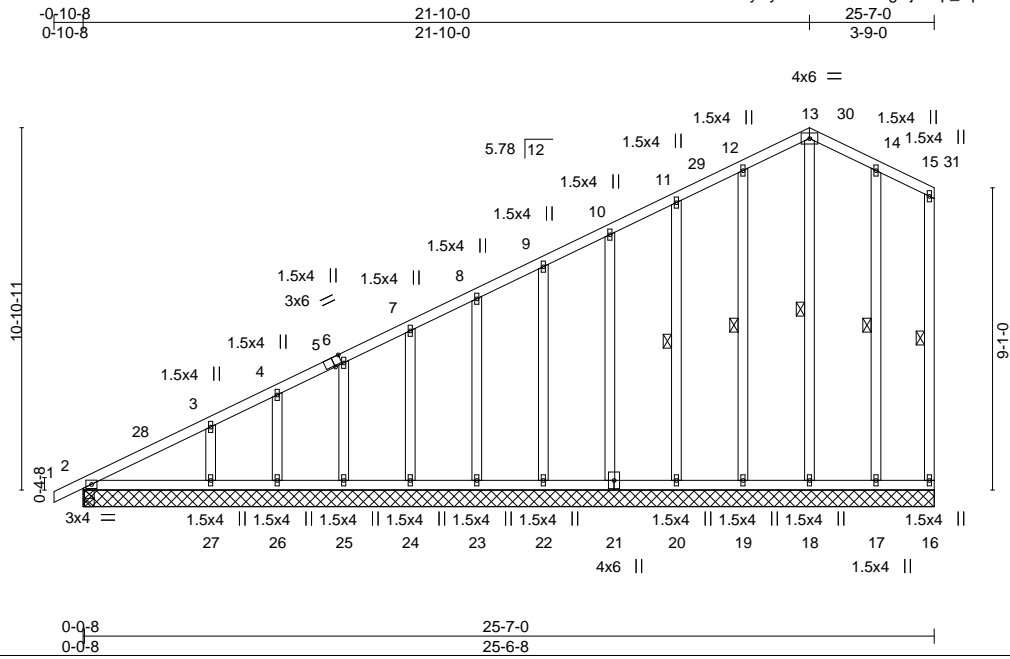


818 Soundside Road  
Edenton, NC 27932

Job Elm_Plan	Truss A7	Truss Type GABLE	Qty 1	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952488
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Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:18:53 2019 Page 1  
ID:hBmMWfsRs4rdLb6QlKGEsGyKyaW-b5UU4a86gDj9xep\_HprUhwouK0Tx5XgPIIyhNPzNoLG



Scale = 1:69.3

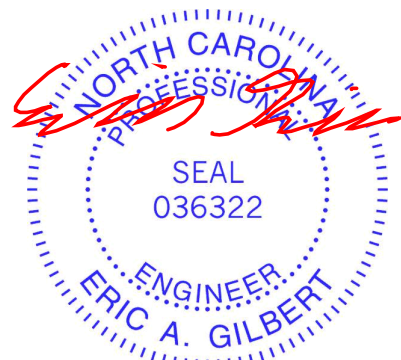
Plate Offsets (X,Y)-- [5:0-2-12,Edge]	
<b>LOADING</b> (psf)	<b>SPACING-</b>
TCLL (roof) 20.0	2-0-0
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15
TCDL 10.0	Lumber DOL 1.15
BCLL 0.0 *	Rep Stress Incr YES
BCDL 10.0	Code IRC2015/TPI2014
<b>CSI.</b>	<b>DEFL.</b>
TC 0.16	in (loc) l/defl L/d
BC 0.10	Vert(LL) -0.01 2-27 >999 360
WB 0.14	Vert(CT) -0.01 2-27 >999 240
Matrix-SH	Horz(CT) 0.00 16 n/a n/a
	Wind(LL) 0.00 2-27 >999 240
	<b>PLATES</b> MT20
	<b>GRIP</b> 244/190
	Weight: 198 lb FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 15-16, 13-18, 12-19, 11-20, 14-17
OTHERS 2x4 SP No.3	

**REACTIONS.** All bearings 25-7-0.  
 (lb) - Max Horz 2=326(LC 16)  
 Max Uplift All uplift 100 lb or less at joint(s) 16, 19, 20, 21, 22, 23, 24, 25, 26, 27, 17  
 Max Grav All reactions 250 lb or less at joint(s) 16, 2, 2, 18, 19, 20, 21, 22, 23, 24, 25, 26, 17 except 27=300(LC 34)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-329/130, 3-4=-262/90

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-1-8, Exterior(2) 2-1-8 to 21-10-0, Corner(3) 21-10-0 to 24-10-0, Exterior(2) 24-10-0 to 25-5-4 zone; cantilever left exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 16, 19, 20, 21, 22, 23, 24, 25, 26, 27, 17.



April 24, 2019



Job Elm_Plan	Truss B1	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952489
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Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:18:54 2019 Page 1

ID:hHbMWfsRs4rdLb6QIKGEGyKyaW-3H2sHw9kRWr?ZoOAqWmJd7L3wQoWq?eZXyiEvrzNoLF

0-10-8	10-3-8	20-7-0	21-5-8
0-10-8'	10-3-8	10-3-8	0-10-8'

3x6 =

Scale = 1:47.3

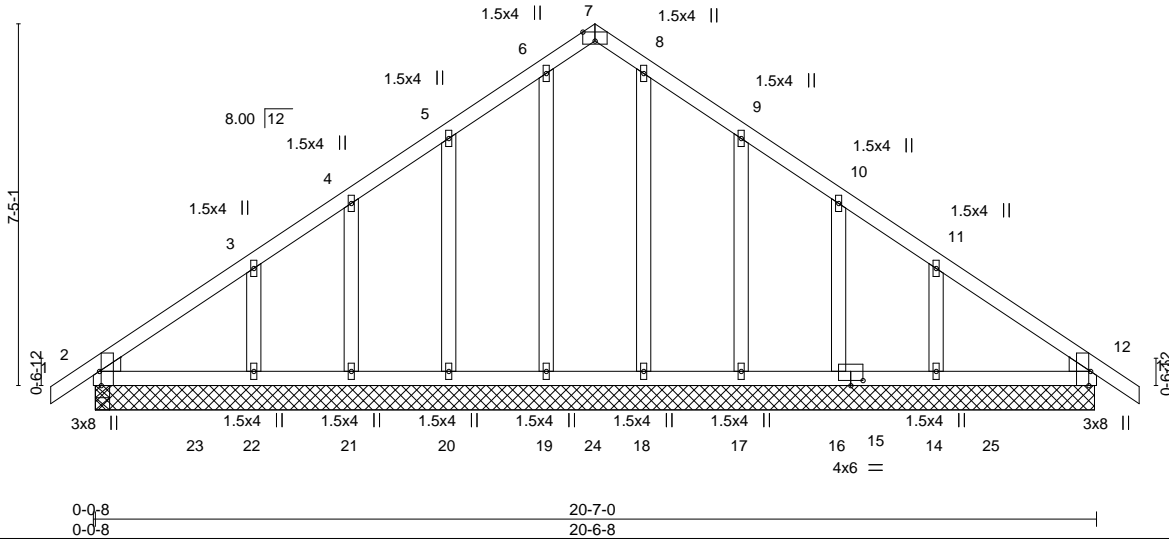


Plate Offsets (X,Y)-- [2:0-3-8,Edge], [2:0-1-0,0-5-0], [2:0-0-8,0-0-12], [7:0-3-0,Edge], [12:0-3-8,Edge], [12:0-1-0,0-5-0], [12:0-0-8,0-0-12], [15:0-3-0,0-1-4], [15:0-0-0,0-1-12], [16:0-1-12,0-0-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.10	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.08	Vert(LL) -0.00 2-22 >999 360		
TCDL 10.0	Lumber DOL 1.15	WB 0.09	Vert(CT) -0.01 2-22 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.01 12 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Wind(LL) 0.01 12-14 >999 240	Weight: 122 lb	FT = 20%

**LUMBER-**

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

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

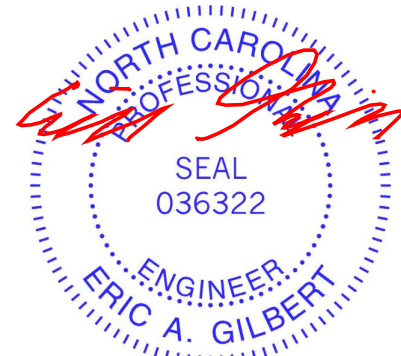
**REACTIONS.**

All bearings 20-6-0.  
(lb) - Max Horz 2=157(LC 13)  
Max Uplift All uplift 100 lb or less at joint(s) 2, 19, 20, 21, 17, 16, 12 except 22=109(LC 14), 14=108(LC 15)  
Max Grav All reactions 250 lb or less at joint(s) 2, 2, 19, 20, 21, 18, 17, 16, 12 except 22=270(LC 26), 14=254(LC 31)

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

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-10-8 to 2-1-8, Exterior(2) 2-1-8 to 10-3-8, Corner(3) 10-3-8 to 13-3-8, Exterior(2) 13-3-8 to 21-5-8 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 19, 20, 21, 17, 16, 12 except (jt=lb) 22=109, 14=108.



April 24, 2019

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

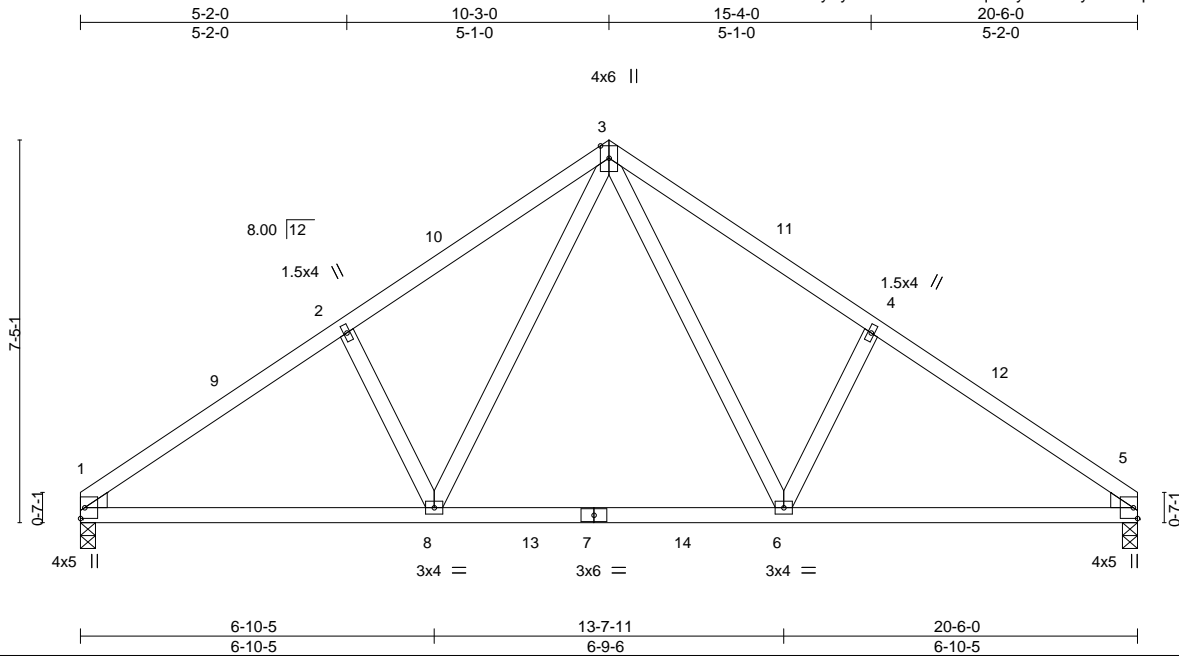


818 Soundside Road  
Edenton, NC 27932

Job Elm_Plan	Truss B2	Truss Type Common	Qty 10	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952490
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Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:18:55 2019 Page 1  
ID:hHbMWfsRs4rdLb6QIKGEsGyKyaW-XTcFVGANCqzsByzMOEuymluAiq2fZRximcRoSizNoLE



Scale = 1:44.7

Plate Offsets (X,Y)-- [1:0-0-5,0-0-8], [1:0-0-10,0-4-8], [5:0-0-5,0-0-8], [5:0-0-10,0-4-8]

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.36	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.47	Vert(LL) -0.09 6-8 >999 360		
TCDL 10.0	Lumber DOL 1.15	WB 0.18	Vert(CT) -0.13 6-8 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.03 5 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Wind(LL) 0.04 1-8 >999 240	Weight: 103 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3  
 WEDGE  
 Left: 2x4 SP No.3, Right: 2x4 SP No.3

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 5-2-1 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.**

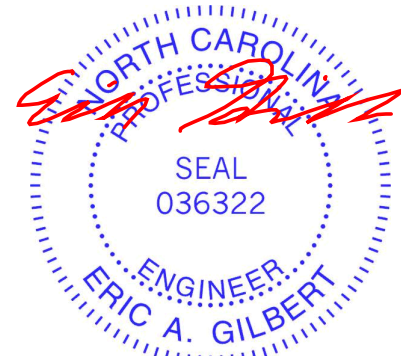
(lb/size) 1=715/0-3-8, 5=715/0-3-8  
 Max Horz 1=-150(LC 10)  
 Max Uplift 1=-97(LC 14), 5=-97(LC 15)  
 Max Grav 1=808(LC 2), 5=808(LC 2)

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

TOP CHORD 1-2=-1124/161, 2-3=-1005/215, 3-4=-1005/215, 4-5=-1124/161  
 BOT CHORD 1-8=-149/935, 6-8=-21/616, 5-6=-64/861  
 WEBS 3-6=-128/483, 4-6=-257/167, 3-8=-128/483, 2-8=-257/167

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 10-3-0, Exterior(2) 10-3-0 to 13-3-0, Interior(1) 13-3-0 to 20-4-4 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 5. This connection is for uplift only and does not consider lateral forces.



April 24, 2019

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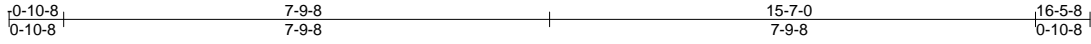


818 Soundside Road  
 Edenton, NC 27932

Job Elm_Plan	Truss C1	Truss Type COMMON SUPPORTED GAB	Qty 1	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952491
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Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:18:56 2019 Page 1  
ID:hHbMWfsRs4rdLb6QlKGEsGyKyaW-?g9dicB?z85jo6YZyxPBIYQPuEVOlwmr\_GBL\_kzNoLD



3x6 =

Scale = 1:36.9

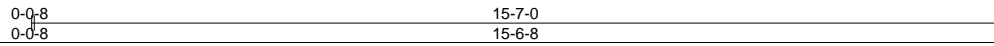
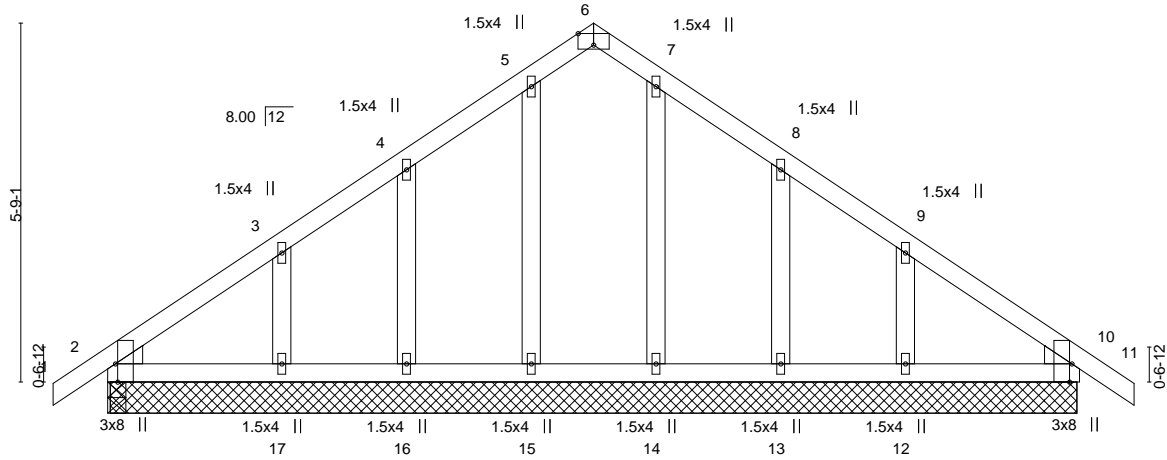


Plate Offsets (X,Y)-- [2:0-3-8,Edge], [2:0-1-0,0-5-0], [2:0-0-8,0-0-12], [6:0-3-0,Edge], [10:0-0-8,0-0-12], [10:0-1-0,0-5-0], [10:0-3-8,Edge]

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.07	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.05	Vert(LL) -0.00 2-17 >999 360		
TCDL 10.0	Lumber DOL 1.15	WB 0.05	Vert(CT) -0.00 2-17 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 10 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Wind(LL) -0.00 10-12 >999 240	Weight: 85 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 OTHERS 2x4 SP No.3  
 WEDGE  
 Left: 2x4 SP No.3, Right: 2x4 SP No.3

**BRACING-**

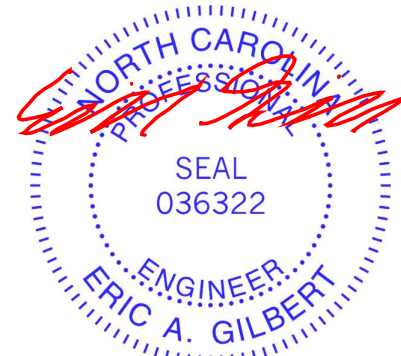
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** All bearings 15-6-0.  
 (lb) - Max Horz 2=122(LC 13)  
 Max Uplift All uplift 100 lb or less at joint(s) 15, 16, 17, 14, 13, 12  
 Max Grav All reactions 250 lb or less at joint(s) 2, 2, 10, 15, 16, 17, 14, 13, 12

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

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -0-10-8 to 2-1-8, Exterior(2) 2-1-8 to 7-9-8, Corner(3) 7-9-8 to 10-9-8, Exterior(2) 10-9-8 to 16-5-8 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 15, 16, 17, 14, 13, 12.



April 24, 2019

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road  
 Edenton, NC 27932

Job Elm_Plan	Truss C2	Truss Type COMMON	Qty 2	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952492
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Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:18:57 2019 Page 1  
ID:hHbMWfsRs4rdLb6QlKGEsGyKyaW-Tsj?wyBdkRDaQF6WfwQrmzNldhi1LO?DwwuWAZNoLC

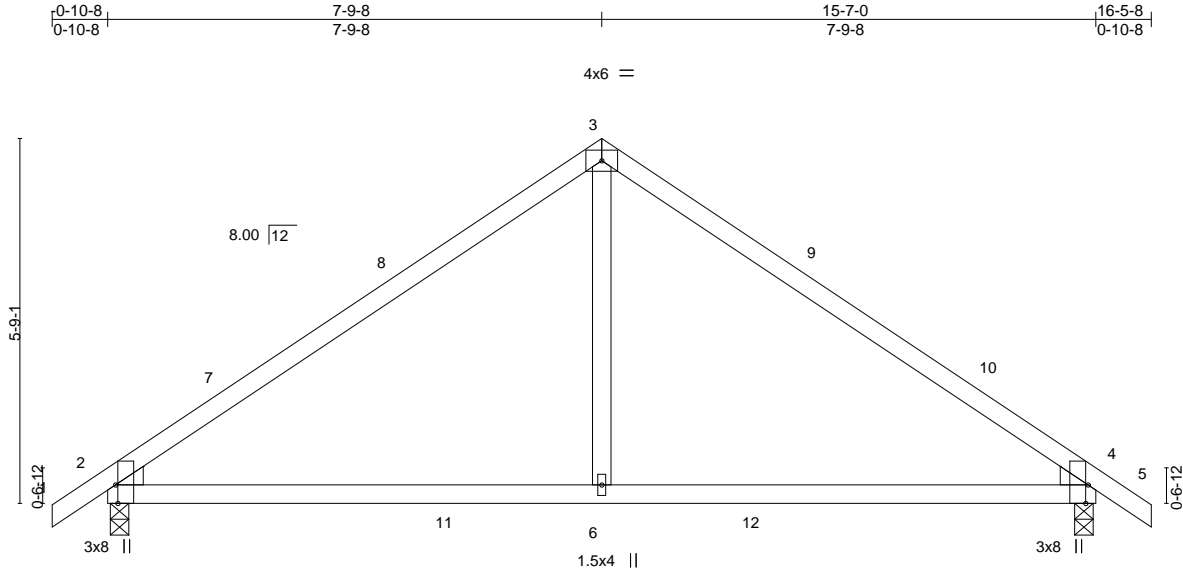


Plate Offsets (X,Y)--	[2:0-0-8,0-0-12], [2:0-1-0,0-5-0], [2:0-3-8,Edge], [4:0-0-8,0-0-12], [4:0-1-0,0-5-0], [4:0-3-8,Edge]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.90	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.69	Vert(LL) -0.10 2-6 >999 360		
TCDL 10.0	Lumber DOL 1.15	WB 0.15	Vert(CT) -0.20 2-6 >899 240		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.01 4 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Wind(LL) 0.10 2-6 >999 240	Weight: 64 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
WEDGE  
Left: 2x4 SP No.3, Right: 2x4 SP No.3

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

**REACTIONS.** (lb/size) 2=593/0-3-8, 4=593/0-3-8  
Max Horz 2=-122(LC 12)  
Max Uplift 2=-90(LC 14), 4=-90(LC 15)  
Max Grav 2=687(LC 26), 4=687(LC 27)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-797/120, 3-4=-797/120  
BOT CHORD 2-6=-21/587, 4-6=-21/587  
WEBS 3-6=0/380

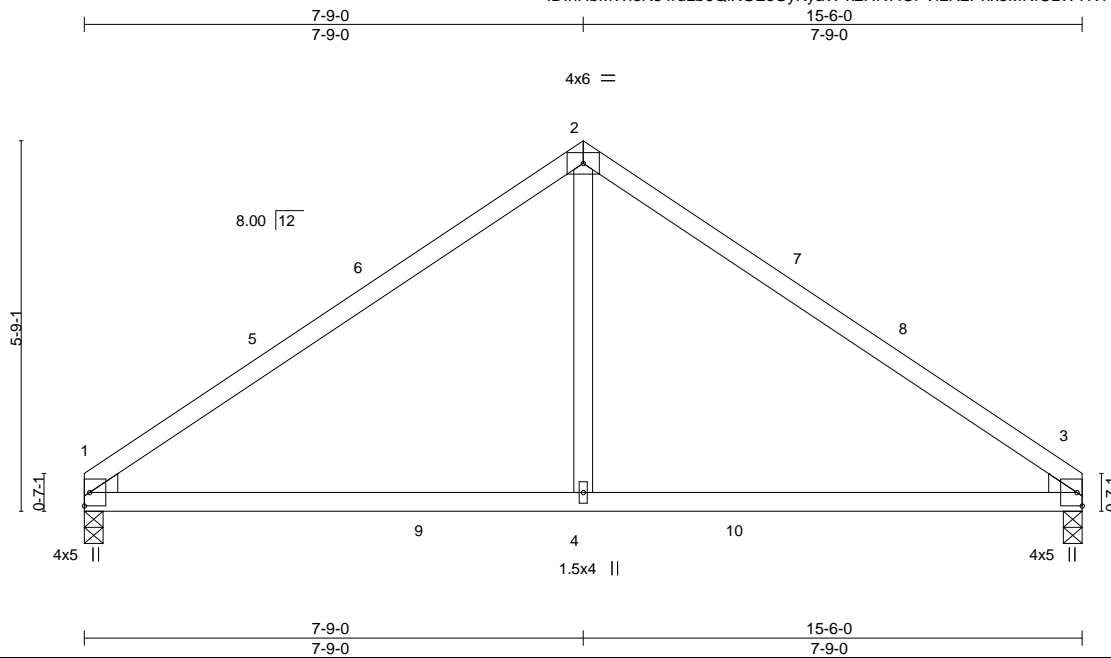
- NOTES-**
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) -0-10-8 to 2-1-8, Interior(1) 2-1-8 to 7-9-8, Exterior(2) 7-9-8 to 10-9-8, Interior(1) 10-9-8 to 16-5-8 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 4. This connection is for uplift only and does not consider lateral forces.



Job Elm_Plan	Truss C3	Truss Type Common	Qty 4	Ply 1	Lamco Custom Homes	E12952493
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Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:18:58 2019 Page 1  
ID:hHbMWfsRs4rdLb6QIKGEsGyKyaW-x2HN7ICFVILR2Phx3MRfOzWYN11jmob8SagS2dzNoLB



Scale = 1:35.8

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

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	Plate Grip DOL 1.15	TC 0.90	Vert(LL) -0.11	1-4	>999	360	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Lumber DOL 1.15	BC 0.70	Vert(CT) -0.21	1-4	>867	240		
TCDL 10.0	Rep Stress Incr YES	WB 0.16	Horz(CT) 0.01	3	n/a	n/a		
BCLL 0.0 *	Code IRC2015/TPI2014	Matrix-SH	Wind(LL) 0.11	1-4	>999	240		
BCDL 10.0							Weight: 60 lb	FT = 20%

**LUMBER-**

TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3  
 WEDGE  
 Left: 2x4 SP No.3, Right: 2x4 SP No.3

**BRACING-**

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

**REACTIONS.**

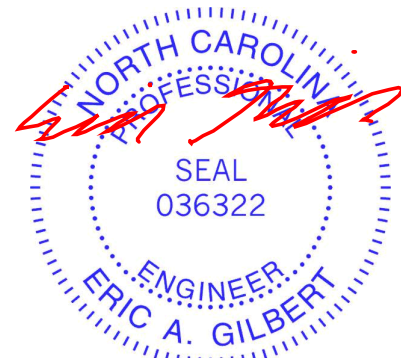
(lb/size) 1=538/0-3-8, 3=538/0-3-8  
 Max Horz 1=-115(LC 12)  
 Max Uplift 1=-73(LC 14), 3=-73(LC 15)  
 Max Grav 1=627(LC 25), 3=627(LC 26)

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

TOP CHORD 1-2=-799/125, 2-3=-799/125  
 BOT CHORD 1-4=-27/584, 3-4=-27/584  
 WEBS 2-4=0/381

**NOTES-**

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 7-9-0, Exterior(2) 7-9-0 to 10-9-0, Interior(1) 10-9-0 to 15-4-4 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 3. This connection is for uplift only and does not consider lateral forces.



April 24, 2019

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



818 Soundside Road  
 Edenton, NC 27932

Job Elm_Plan	Truss C4	Truss Type COMMON GIRDER	Qty 1	Ply 3	Lamco Custom Homes Job Reference (optional)	E12952494
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Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:18:59 2019 Page 1  
ID:hHbMwfsRs4rdLb6QIKGEsGyKyaW-PFrlLeDtG3TIfZG8d4yuuwB2uFRTYV4clgEP?b3zNoLA

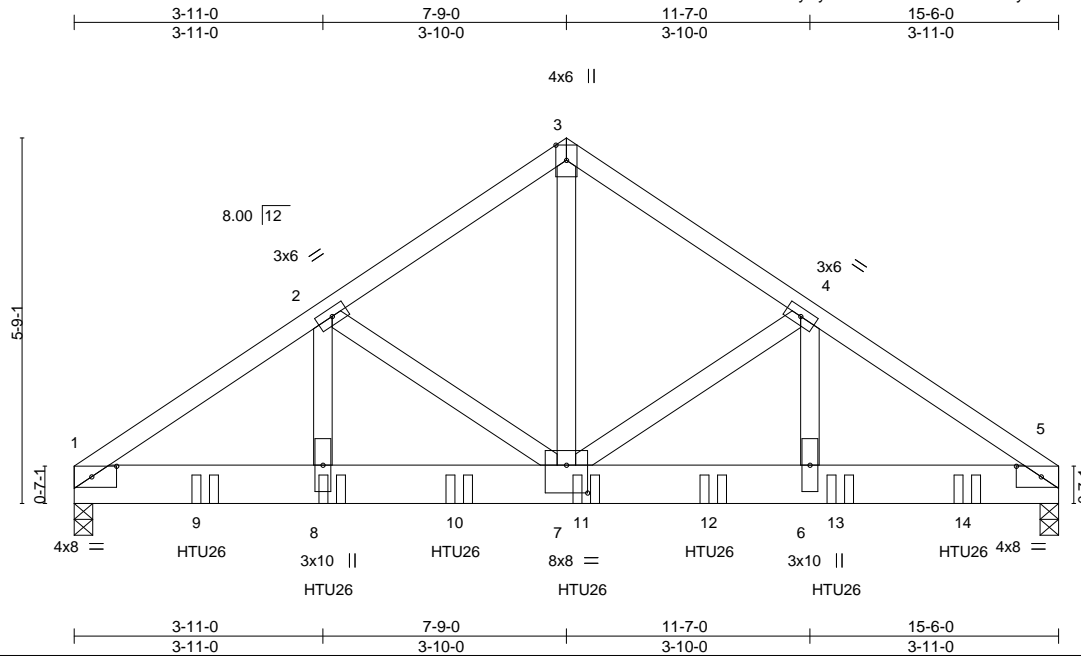


Plate Offsets (X,Y)-- [1:0-4-11,0-2-0], [5:0-4-11,0-2-0], [7:0-4-0,0-5-4]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.26	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.28	Vert(LL) -0.05 6-7 >999 360		
TCDL 10.0	Lumber DOL 1.15	WB 0.88	Vert(CT) -0.10 6-7 >999 240		
BCLL 0.0 *	Rep Stress Incr NO	Matrix-SH	Horz(CT) 0.02 5 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014		Wind(LL) 0.03 7 >999 240	Weight: 308 lb	FT = 20%

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

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

**REACTIONS.** (lb/size) 1=4938/0-3-8, 5=5452/0-3-8  
 Max Horz 1=-111(LC 6)  
 Max Uplift 1=-616(LC 10), 5=-610(LC 11)  
 Max Grav 1=5744(LC 3), 5=6449(LC 3)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-8245/877, 2-3=-5957/643, 3-4=-5958/643, 4-5=-8650/833  
 BOT CHORD 1-8=-732/6652, 7-8=-732/6652, 6-7=-628/6984, 5-6=-628/6984  
 WEBS 3-7=-640/6346, 4-7=-2531/302, 4-6=-230/3032, 2-7=-2124/345, 2-8=-280/2564

**NOTES-**

- 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.  
 Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-4-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=616, 5=610.
- Use Simpson Strong-Tie HTU26 (20-10d Girder, 11-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 2-0-12 from the left end to 14-0-12 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

**LOAD CASE(S)** Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
 Uniform Loads (plf)  
 Vert: 1-3=-51, 3-5=-51, 1-5=-20



Continued on page 2

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

Job Elm_Plan	Truss C4	Truss Type COMMON GIRDER	Qty 1	Ply <b>3</b>	Lamco Custom Homes Job Reference (optional)	E12952494
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Builders FirstSource, Albemarle, NC 28001

8.220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:19:00 2019 Page 2  
ID:hHbMWfs4rdLb6QIKGEsGyKyaW-tRP8Y\_EV1Mb9HjrKBnT7TOb3?ronEXsRvu9Z7VzNoL9

**LOAD CASE(S)** Standard

Concentrated Loads (lb)

Vert: 8=-1274(B) 9=-1274(B) 10=-1274(B) 11=-1373(B) 12=-1373(B) 13=-1373(B) 14=-1373(B)

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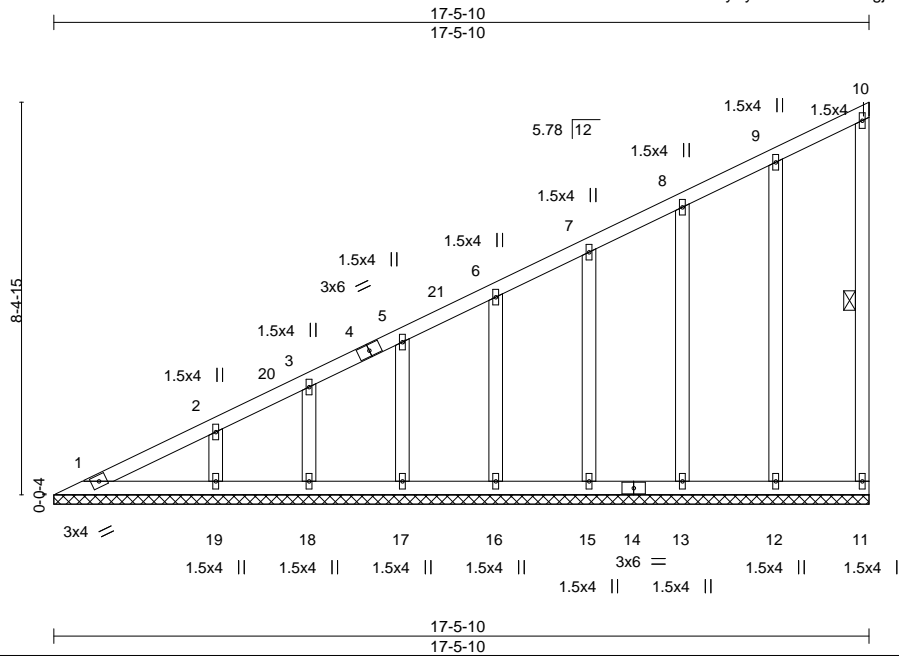
818 Soundside Road  
Edenton, NC 27932

Job Elm_Plan	Truss V1	Truss Type GABLE	Qty 1	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952495
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Builders FirstSource, Albemarle, NC 28001

8.220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:19:01 2019 Page 1

ID:hHbMWfRs4rdLb6QIKGEsGyKyaW-MdzWJF7ogjOvtQWIV\_N?b8GLFCXz9Jb8YU6fzNoL8



Scale = 1:49.4

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.09	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.06	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.16	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 11 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 107 lb	FT = 20%

**LUMBER-**

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

**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 1 Row at midpt 10-11

**REACTIONS.**

All bearings 17-5-10.  
 (lb) - Max Horz 1=222(LC 16)  
 Max Uplift All uplift 100 lb or less at joint(s) 11, 12, 13, 15, 16, 17, 18, 19  
 Max Grav All reactions 250 lb or less at joint(s) 11, 1, 12, 13, 15, 16, 17, 18, 19

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

TOP CHORD 1-2=-338/118, 2-3=-255/92

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-7-13 to 4-10-12, Exterior(2) 4-10-12 to 17-3-14 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) Gable requires continuous bottom chord bearing.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 11, 12, 13, 15, 16, 17, 18, 19.



April 24, 2019

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

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 Edenton, NC 27932

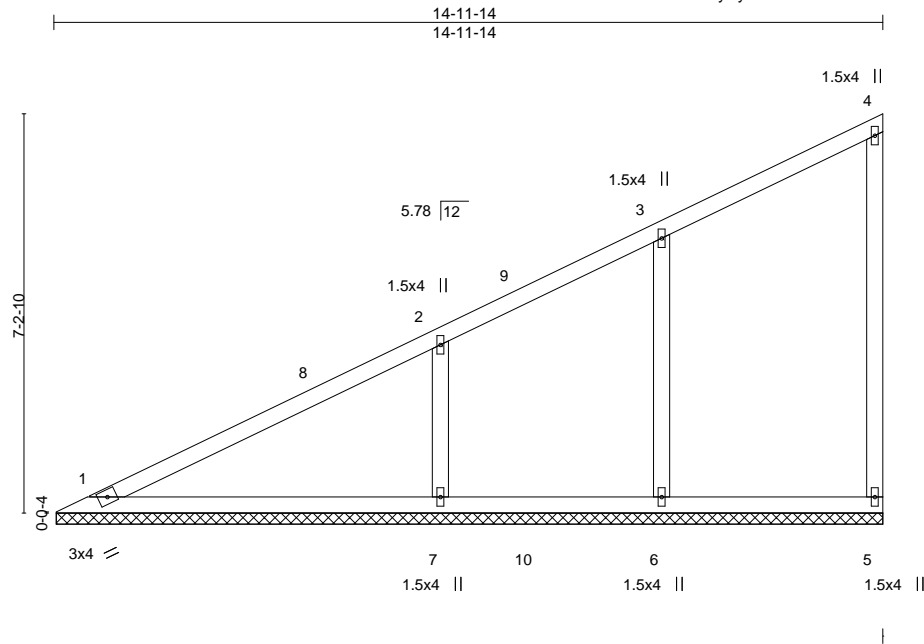


Job Elm_Plan	Truss V2	Truss Type Valley	Qty 1	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952496
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Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:19:03 2019 Page 1

ID:hHbMWfsRs4rdLb6QIKGEsGyKyaW-I04GA?GOKHzk8Aavsv1r50DWo2psR4UtsNDkqzNoL6



Scale = 1:41.7

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.48	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.32	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.12	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 67 lb	FT = 20%

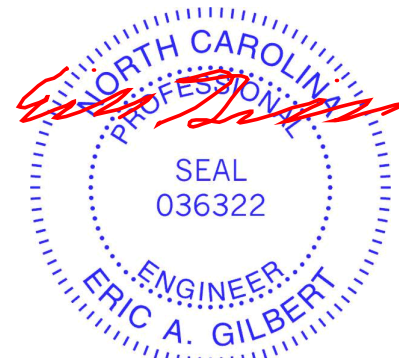
**LUMBER-**  
TOP CHORD 2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3  
OTHERS 2x4 SP No.3

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

**REACTIONS.** All bearings 14-11-6.  
(lb) - Max Horz 1=195(LC 16)  
Max Uplift All uplift 100 lb or less at joint(s) 5, 6 except 7=140(LC 16)  
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 6=379(LC 5), 7=515(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=256/109  
WEBS 2-7=360/250

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-7-13 to 4-10-12, Exterior(2) 4-10-12 to 14-10-2 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 6 except (jt=lb) 7=140.



April 24, 2019

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

Job Elm_Plan	Truss V3	Truss Type Valley	Qty 1	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952497
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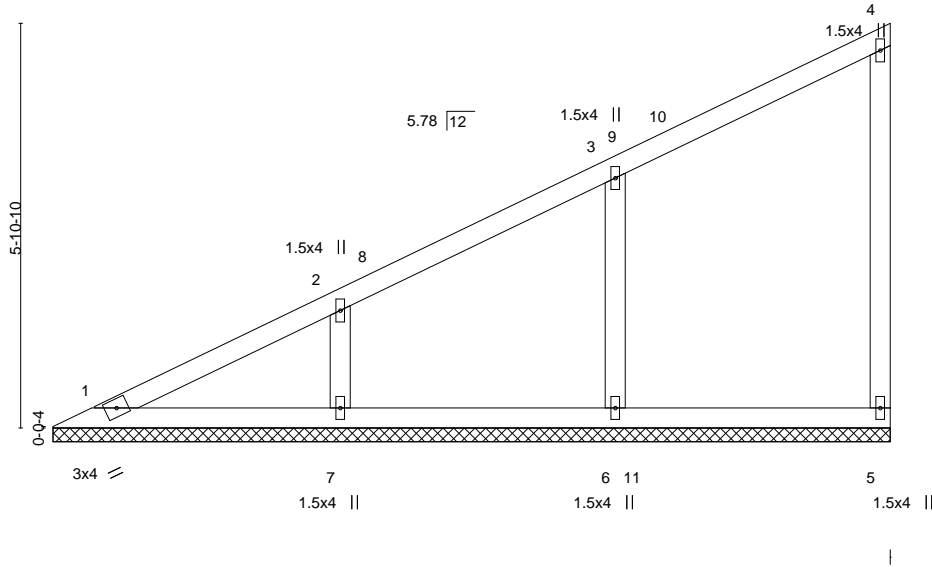
Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:19:04 2019 Page 1

ID:hHbMWfsRs4rdLb6QIKGEsGyKyaW-mCeeOLH04b5bmK95QdY4dEmluSCUAX11qW7mGGzNoL5

12-2-10  
12-2-10

Scale = 1:33.5



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.20	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.17	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.08	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 52 lb	FT = 20%

**LUMBER-**

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

**BRACING-**

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

**REACTIONS.**

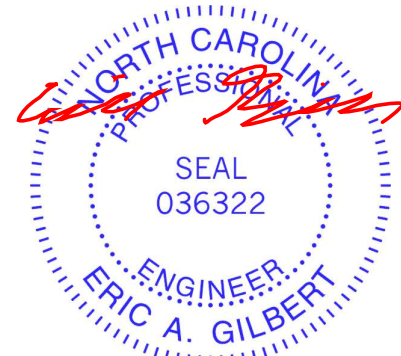
All bearings 12-2-2.  
(lb) - Max Horz 1=164(LC 16)  
Max Uplift All uplift 100 lb or less at joint(s) 5, 6, 7  
Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 6=358(LC 3), 7=333(LC 2)

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

WEBS 3-6=-258/163

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-7-13 to 4-10-12, Exterior(2) 4-10-12 to 12-0-14 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) Gable requires continuous bottom chord bearing.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 6, 7.



April 24, 2019

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

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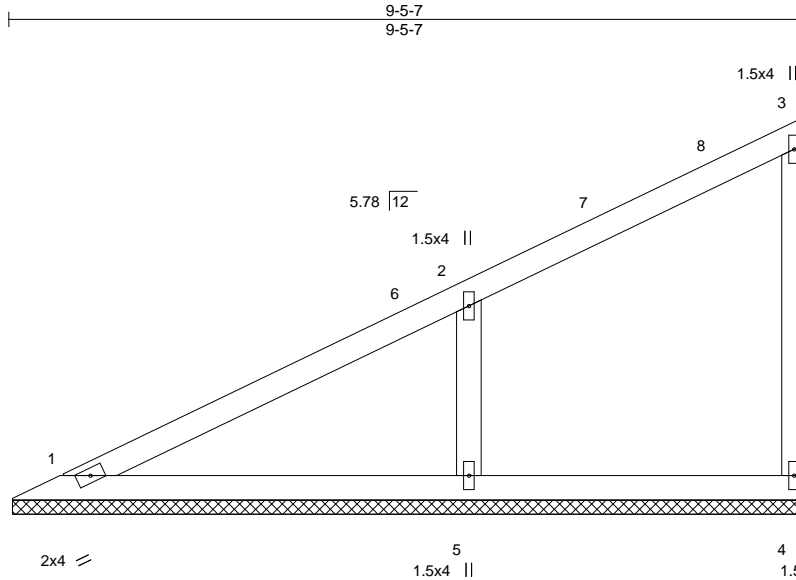
818 Soundside Road  
Edenton, NC 27932

Job Elm_Plan	Truss V4	Truss Type Valley	Qty 1	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952498
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Builders FirstSource, Albemarle, NC 28001

8.220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:19:05 2019 Page 1

ID:hHbMWfsRs4rdLb6QIKGEsGyKyaW-EPC0bhlervDSOUkH\_K3JARtuhSxJv\_OA3AsKojzNoL4



Scale = 1:27.3

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof) 20.0	2-0-0	TC 0.32	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.19	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.09	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 37 lb	FT = 20%

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

**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.** (lb/size) 1=134/9-4-15, 4=92/9-4-15, 5=386/9-4-15  
Max Horz 1=134(LC 16)  
Max Uplift 4=-21(LC 16), 5=-122(LC 16)  
Max Grav 1=152(LC 2), 4=111(LC 22), 5=437(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 2-5=-327/298

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-7-13 to 4-10-12, Exterior(2) 4-10-12 to 9-3-11 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 5=122.



April 24, 2019

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

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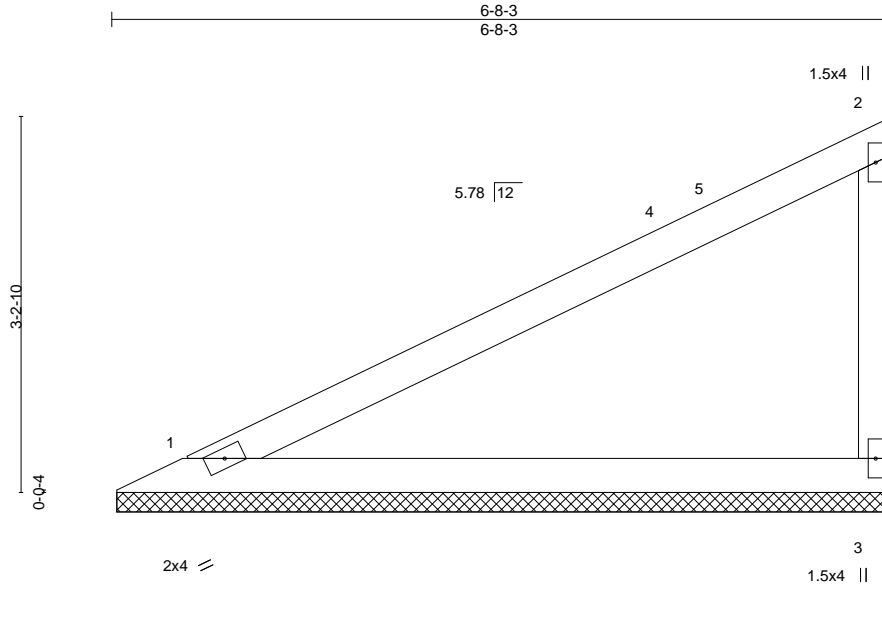
ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

Job Elm_Plan	Truss V5	Truss Type Valley	Qty 1	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952499
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Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:19:06 2019 Page 1  
ID:hHbMWfsRs4rdLb6QIKGEsGyKyaW-ibmPp1IGcCMI?eJUX2aYifr\_UGqeeS0KHqctL9zNoL3



Scale = 1:19.7

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.70	Vert(LL)	n/a	-	n/a	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.44	Vert(CT)	n/a	-	n/a		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Horz(CT)	0.00		n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P						
BCDL 10.0	Code IRC2015/TPI2014						Weight: 24 lb	FT = 20%

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

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

**REACTIONS.** (lb/size) 1=208/6-7-11, 3=208/6-7-11  
Max Horz 1=94(LC 16)  
Max Uplift 1=-21(LC 16), 3=-67(LC 16)  
Max Grav 1=235(LC 2), 3=235(LC 2)

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

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-7-13 to 4-10-12, Exterior(2) 4-10-12 to 6-6-7 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



April 24, 2019

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

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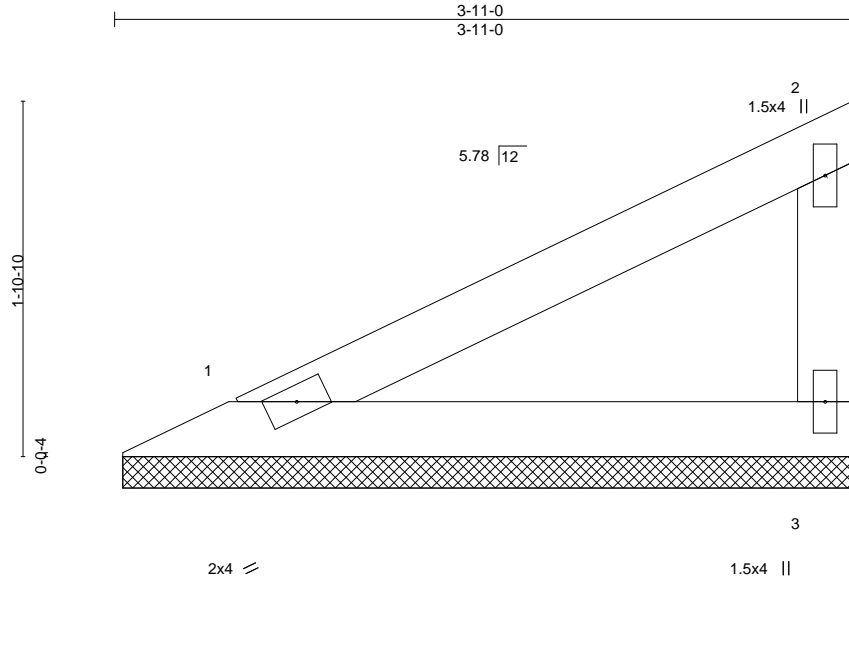


818 Soundside Road  
Edenton, NC 27932

Job Elm_Plan	Truss V6	Truss Type Valley	Qty 1	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952500
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Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:19:06 2019 Page 1  
ID:hHbMWfsRs4rdLb6QIKGEGyKyaW-ibmPp1IGcCMI?eJUX2aYifr6iGvqeS0KHqctL9zNoL3



Scale = 1:12.2

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.18	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.11	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 13 lb	FT = 20%

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

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

**REACTIONS.** (lb/size) 1=110/3-10-8, 3=110/3-10-8  
 Max Horz 1=50(LC 16)  
 Max Uplift 1=-11(LC 16), 3=-35(LC 16)  
 Max Grav 1=125(LC 2), 3=125(LC 2)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) Gable requires continuous bottom chord bearing.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



April 24, 2019

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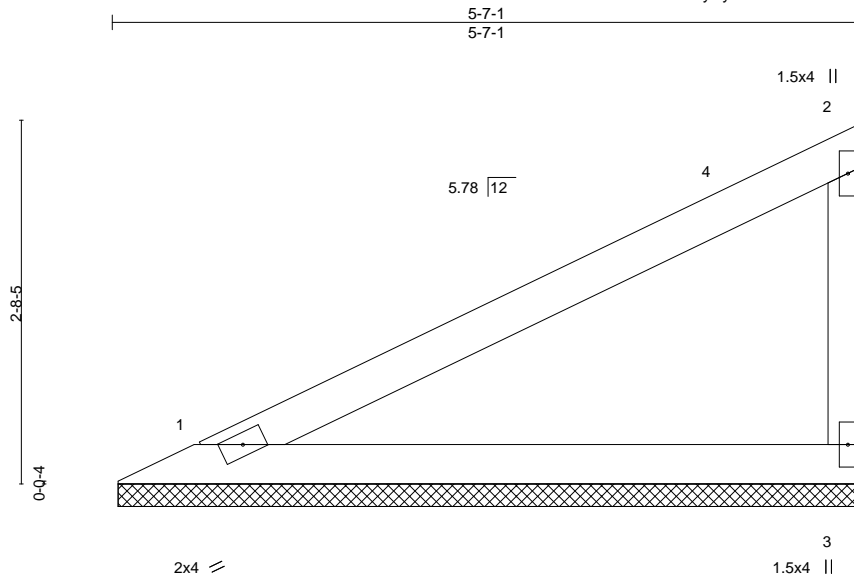


818 Soundside Road  
Edenton, NC 27932

Job Elm_Plan	Truss V7	Truss Type Valley	Qty 1	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952501
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Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:19:07 2019 Page 1  
ID:hHbMWfsRs4rdLb6QIKGEsGyKyaW-AnKn0NJuNWU9dotg5l5nFsOCBfBNNvGTWULQtzbNoL2



Scale = 1:17.1

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.45	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.28	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.00	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 19 lb	FT = 20%

**LUMBER-**

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

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 5-7-1 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

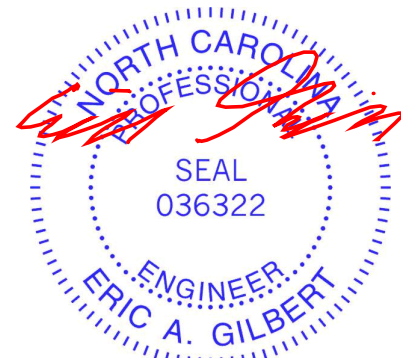
**REACTIONS.**

(lb/size) 1=170/5-6-9, 3=170/5-6-9  
Max Horz 1=76(LC 16)  
Max Uplift 1=-17(LC 16), 3=-54(LC 16)  
Max Grav 1=192(LC 2), 3=192(LC 2)

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

**NOTES-**

- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCCL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-7-13 to 4-10-12, Exterior(2) 4-10-12 to 5-5-5 zone; cantilever left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) Gable requires continuous bottom chord bearing.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.



April 24, 2019

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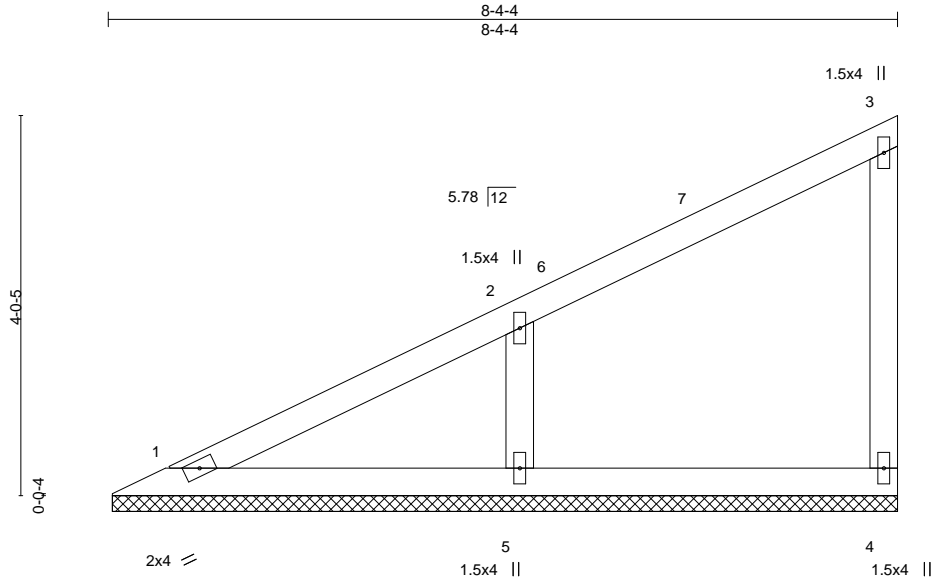
818 Soundside Road  
Edenton, NC 27932

Job Elm_Plan	Truss V8	Truss Type Valley	Qty 1	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952502
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Builders FirstSource, Albemarle, NC 28001

8.220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:19:08 2019 Page 1

ID:hHbMWfsRs4rdLb6QIKGEsGyKyaW-ezu9DjKW8qc0FySsfTc0o4wRj3Zp6LCcl85\_P2zNoL1



Scale = 1:24.4

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.23	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.14	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.08	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 32 lb	FT = 20%

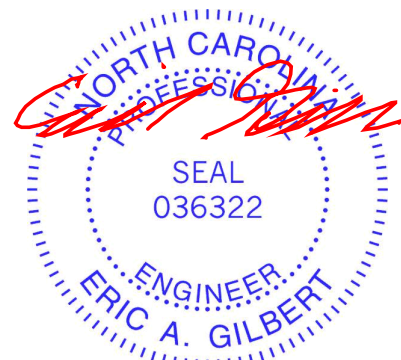
**LUMBER-**  
 TOP CHORD 2x4 SP No.2  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x4 SP No.3  
 OTHERS 2x4 SP No.3

**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.** (lb/size) 1=97/8-3-12, 4=104/8-3-12, 5=334/8-3-12  
 Max Horz 1=120(LC 16)  
 Max Uplift 4=-33(LC 16), 5=-107(LC 16)  
 Max Grav 1=110(LC 2), 4=118(LC 22), 5=378(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 WEBS 2-5=-283/283

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCCL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-7-13 to 4-10-12, Exterior(2) 4-10-12 to 8-2-8 zone; cantilever left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 5=107.



April 24, 2019

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

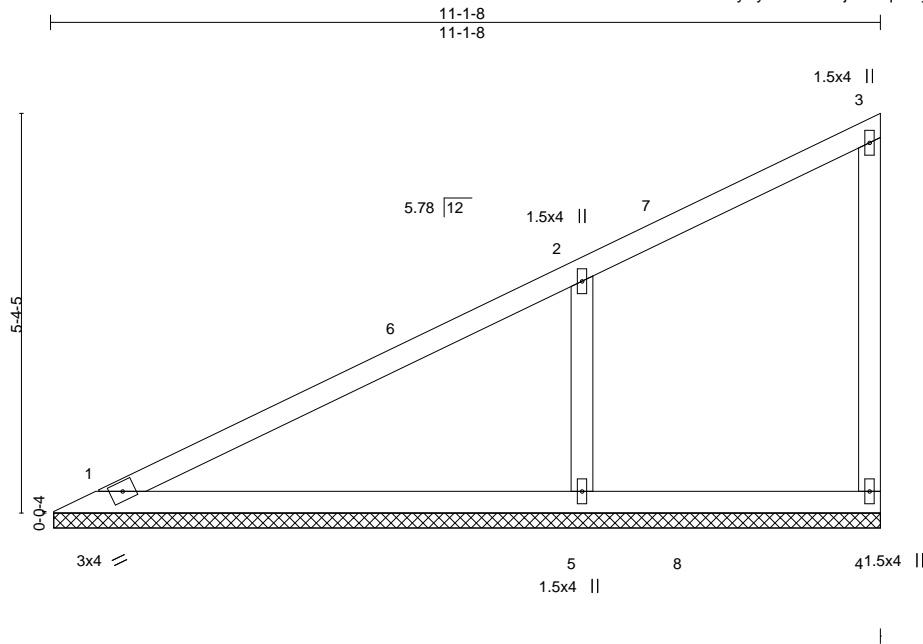


818 Soundside Road  
 Edenton, NC 27932

Job Elm_Plan	Truss V9	Truss Type Valley	Qty 1	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952503
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Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:19:08 2019 Page 1  
ID:hHbMWfsRs4rdLb6QIKGEsGyKyaW-ezu9DjKW8qc0FySsfTc0o4wN53Wu6Lzcl85\_P2zNoL1



Scale = 1:30.9

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.50	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.33	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.10	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 4 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 45 lb	FT = 20%

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

**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.

**REACTIONS.** (lb/size) 1=185/11-1-0, 4=63/11-1-0, 5=482/11-1-0  
Max Horz 1=151(LC 16)  
Max Uplift 4=-9(LC 18), 5=-141(LC 16)  
Max Grav 1=210(LC 2), 4=125(LC 5), 5=545(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 2-5=-383/290

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-7-13 to 4-10-12, Exterior(2) 4-10-12 to 10-11-12 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow; Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 5=141.



April 24, 2019

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

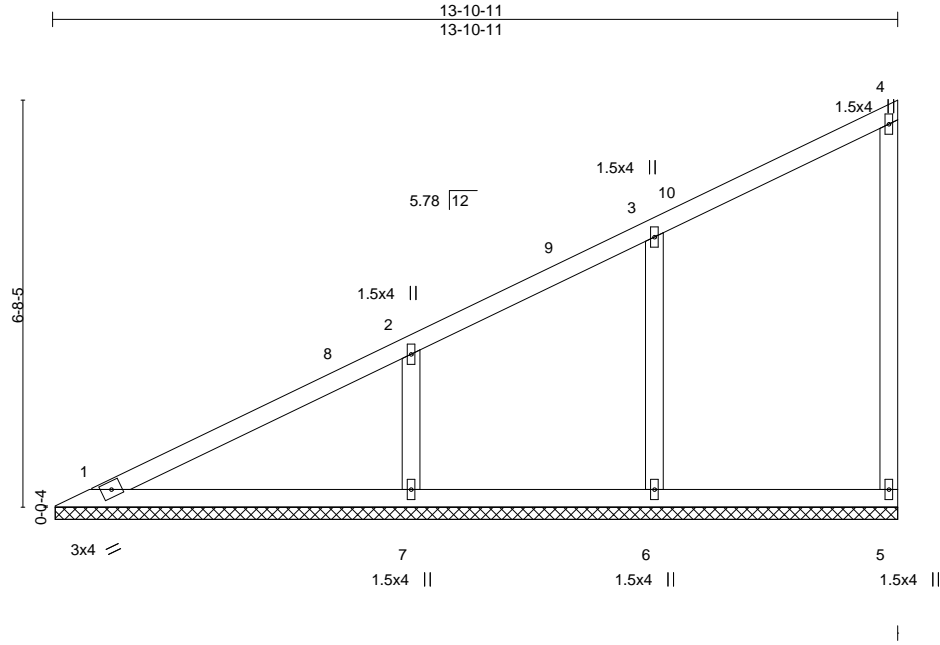


Job Elm_Plan	Truss V10	Truss Type Valley	Qty 1	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952504
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Builders FirstSource, Albemarle, NC 28001

8.220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:19:01 2019 Page 1

ID:hHbMWfRs4rdLb6QIKGEGyKyaW-MdzWJF7ogjOvtQWIV\_N?b8CKf96zAHb8Yu6fzNoL8



Scale = 1:37.9

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.32	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.21	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.10	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 5 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 61 lb	FT = 20%

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

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

**REACTIONS.** All bearings 13-10-3.  
 (lb) - Max Horz 1=183(LC 16)  
 Max Uplift All uplift 100 lb or less at joint(s) 5, 6 except 7=124(LC 16)  
 Max Grav All reactions 250 lb or less at joint(s) 1, 5 except 6=337(LC 5), 7=436(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=-251/101  
 WEBS 2-7=-307/234

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-7-13 to 4-10-12, Exterior(2) 4-10-12 to 13-8-15 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 6 except (jt=lb) 7=124.



April 24, 2019

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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, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

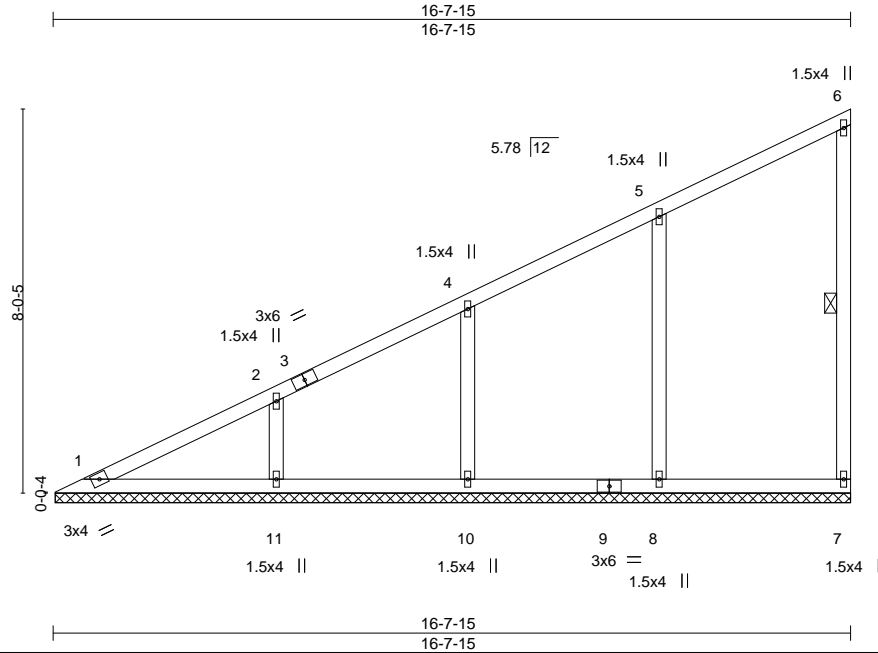


818 Soundside Road  
 Edenton, NC 27932

Job Elm_Plan	Truss V11	Truss Type Valley	Qty 1	Ply 1	Lamco Custom Homes Job Reference (optional)	E12952505
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Builders FirstSource, Albemarle, NC 28001

8,220 s Nov 16 2018 MiTek Industries, Inc. Tue Apr 23 15:19:02 2019 Page 1  
ID:hHbMWfsRs4rdLb6QIKGEGsGyKyaW-qqXuzfFmZ\_rtW1?ilCWcYpgP6eVvicBkNCefBozNoL7



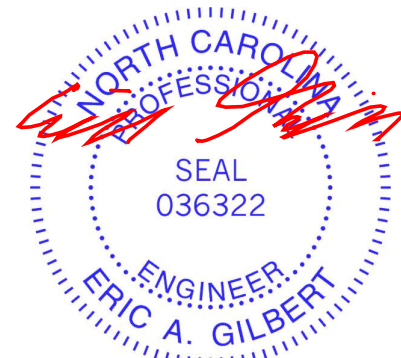
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL (roof) 20.0	2-0-0	TC 0.22	in (loc) l/defl L/d	MT20	244/190
Snow (Pf/Pg) 15.4/20.0	Plate Grip DOL 1.15	BC 0.20	Vert(LL) n/a - n/a 999		
TCDL 10.0	Lumber DOL 1.15	WB 0.18	Vert(CT) n/a - n/a 999		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-SH	Horz(CT) 0.00 7 n/a n/a		
BCDL 10.0	Code IRC2015/TPI2014			Weight: 78 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt 6-7
OTHERS 2x4 SP No.3	

**REACTIONS.** All bearings 16-7-7.  
(lb) - Max Horz 1=214(LC 16)  
Max Uplift All uplift 100 lb or less at joint(s) 7, 8, 10 except 11=106(LC 16)  
Max Grav All reactions 250 lb or less at joint(s) 7, 1 except 8=454(LC 5), 10=322(LC 3), 11=365(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-307/115  
WEBS 5-8=-277/147, 2-11=-262/200

- NOTES-**
- 1) Wind: ASCE 7-10; Vult=120mph (3-second gust) Vasd=95mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) 0-7-13 to 4-7-15, Exterior(2) 4-7-15 to 16-6-3 zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=20.0 psf (ground snow); Pf=15.4 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) Gable requires continuous bottom chord bearing.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 7, 8, 10 except (jt=lb) 11=106.



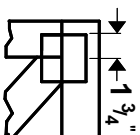
April 24, 2019

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

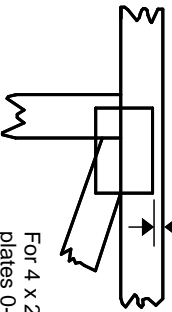
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Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION



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



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



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

\* Plate location details available in **MITrak 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



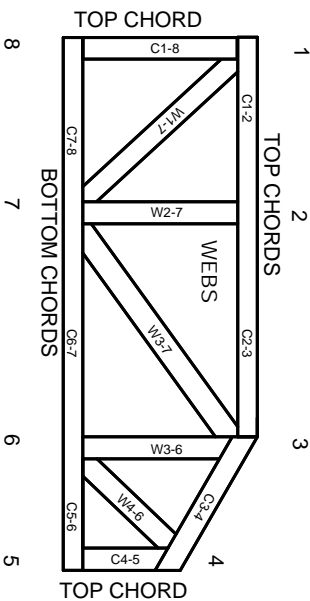
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

## Industry Standards:

ANSI/TPI 1: 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

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



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

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

## PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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MITek Engineering Reference Sheet: MI1-7473 rev. 10/03/2015



# General Safety Notes

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

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