

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: Asheville
200691RT1

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carolina Structural Systems, LLC.

Pages or sheets covered by this seal: E14365734 thru E14365744

My license renewal date for the state of North Carolina is December 31, 2020.

North Carolina COA: C-0844



May 4, 2020

Strzyzewski, Marvin

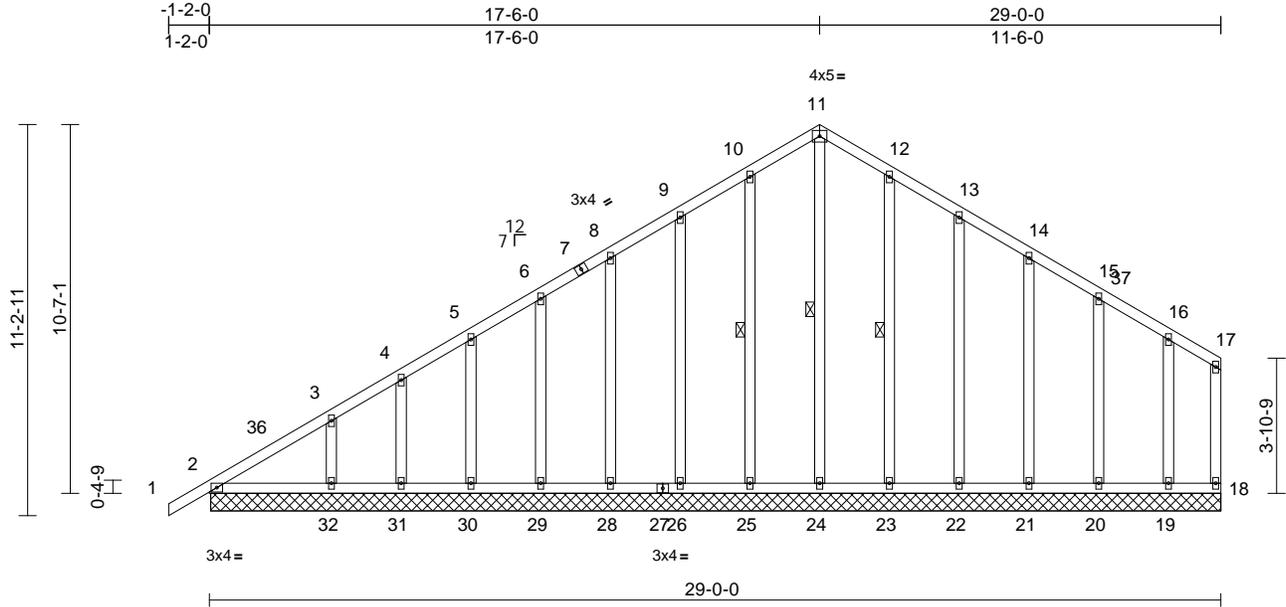
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

Job Asheville	Truss A01	Truss Type Common Supported Gable	Qty 1	Ply 1	200691RT1 Job Reference (optional)	E14365734
------------------	--------------	--------------------------------------	----------	----------	---------------------------------------	-----------

Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.33 S Mar 23 2020 Print: 8.330 S Mar 23 2020 MiTek Industries, Inc. Mon May 04 12:13:04
ID:9LT43pMo?FBSpQ1Isi?WB7zKxaE-YzeXYrxSAez0lacXCnWXGJa0vM0puTozwWhk9kzJtv

Page: 1



Scale = 1:65.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	18	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 220 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied.
WEBS 1 Row at midpt 11-24, 10-25, 12-23

REACTIONS (size)
2=28-11-8, 18=28-11-8,
19=28-11-8, 20=28-11-8,
21=28-11-8, 22=28-11-8,
23=28-11-8, 24=28-11-8,
25=28-11-8, 26=28-11-8,
28=28-11-8, 29=28-11-8,
30=28-11-8, 31=28-11-8,
32=28-11-8, 33=28-11-8
Max Horiz 2=249 (LC 10), 33=249 (LC 10)
Max Uplift 2=29 (LC 7), 18=14 (LC 11),
19=36 (LC 11), 20=21 (LC 11),
21=23 (LC 11), 22=29 (LC 11),
23=9 (LC 11), 24=31 (LC 10),
25=9 (LC 11), 26=29 (LC 11),
28=22 (LC 11), 29=24 (LC 11),
30=24 (LC 11), 31=22 (LC 11),
32=28 (LC 11), 33=29 (LC 7)
Max Grav 2=232 (LC 17), 18=51 (LC 17),
19=152 (LC 17), 20=165 (LC 1),
21=159 (LC 23), 22=161 (LC 17),
23=166 (LC 23), 24=203 (LC 11),
25=168 (LC 16), 26=159 (LC 22),
28=161 (LC 1), 29=158 (LC 22),
30=169 (LC 22), 31=122 (LC 1),
32=266 (LC 16), 33=232 (LC 17)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/35, 2-36=223/181, 3-36=212/200,
3-4=210/166, 4-5=195/161, 5-6=184/146,
6-7=171/150, 7-8=160/156, 8-9=159/199,
9-10=167/245, 10-11=187/280,
11-12=187/280, 12-13=167/245,
13-14=140/199, 14-15=115/157,
15-37=71/112, 16-37=89/105,
16-17=68/78, 17-18=60/55
BOT CHORD 2-32=50/57, 31-32=48/57, 30-31=48/57,
29-30=48/57, 28-29=48/57, 27-28=48/57,
26-27=48/57, 25-26=48/57, 24-25=48/57,
23-24=48/57, 22-23=48/57, 21-22=48/57,
20-21=48/57, 19-20=48/57, 18-19=48/57
WEBS 11-24=218/92, 10-25=128/49,
9-26=119/69, 8-28=120/61, 6-29=119/62,
5-30=125/64, 4-31=98/56, 3-32=183/87,
12-23=126/49, 13-22=121/69,
14-21=119/61, 15-20=123/65,
16-19=107/72

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=125mph (3-second gust) Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=29ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3E) -1-2-0 to 1-10-0, Exterior(2N) 1-10-0 to 17-6-0, Corner(3R) 17-6-0 to 20-6-0, Exterior(2N) 20-6-0 to 28-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable studs spaced at 2-0-0 oc.

- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 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 14 lb uplift at joint 18, 29 lb uplift at joint 2, 31 lb uplift at joint 24, 9 lb uplift at joint 25, 29 lb uplift at joint 26, 22 lb uplift at joint 28, 24 lb uplift at joint 29, 24 lb uplift at joint 30, 22 lb uplift at joint 31, 28 lb uplift at joint 32, 9 lb uplift at joint 23, 29 lb uplift at joint 22, 23 lb uplift at joint 21, 21 lb uplift at joint 20, 36 lb uplift at joint 19 and 29 lb uplift at joint 2.
- 8) Non Standard bearing condition. Review required.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



May 4, 2020

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.



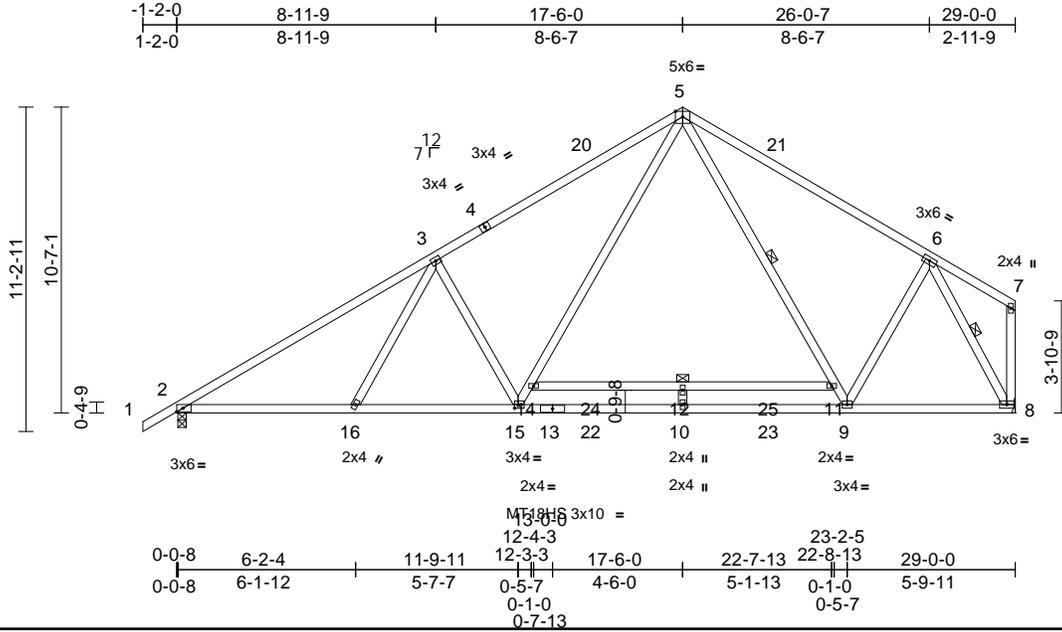
818 Soundside Road
Edenton, NC 27932

Job Asheville	Truss A02	Truss Type Common	Qty 7	Ply 1	200691RT1 Job Reference (optional)	E14365735
------------------	--------------	----------------------	----------	----------	---------------------------------------	-----------

Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.33 S Mar 23 2020 Print: 8.330 S Mar 23 2020 MITek Industries, Inc. Mon May 04 12:13:06
ID:C8m2xhjYUyWzyHTZF4Y4YyzKxb3-Rlu2OD_zEtITSECwIRdaTQ8lbAz86qCbZ8fxlVzJtxR

Page: 1



Scale = 1:79.3

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.57	Vert(LL)	-0.74	12	>467	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-1.17	12-14	>295	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.05	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 185 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP DSS *Except* 14-11:2x4 SP No.1
WEBS 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied. Except: 5-8-0 oc bracing: 11-14
WEBS 1 Row at midpt 6-8, 5-9

REACTIONS

(size) 2=0-3-8, 8= Mechanical
Max Horiz 2=249 (LC 10)
Max Uplift 2=-21 (LC 11)
Max Grav 2=1556 (LC 16), 8=1573 (LC 18)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-2409/11, 3-4=-2086/42, 4-20=-1967/64, 5-20=-1946/88, 5-21=-1308/87, 6-21=-1448/63, 6-7=-42/122, 7-8=-33/49
BOT CHORD 2-16=-67/2119, 15-16=-69/2048, 13-15=0/1246, 13-22=0/1246, 10-22=0/1246, 10-23=0/1246, 9-23=0/1246, 8-9=-38/862, 14-24=-134/0, 12-24=-134/0, 12-25=-134/0, 11-25=-134/0
WEBS 6-8=-1839/22, 14-15=-12/1133, 5-14=0/1336, 5-11=-60/269, 9-11=-157/87, 6-9=0/693, 3-15=-571/183, 3-16=0/150, 10-12=-159/0

NOTES

1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=125mph (3-second gust) Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=29ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -1-2-0 to 1-10-0, Interior (1) 1-10-0 to 17-6-0, Exterior(2R) 17-6-0 to 20-6-0, Interior (1) 20-6-0 to 28-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 2.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



May 4, 2020

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.



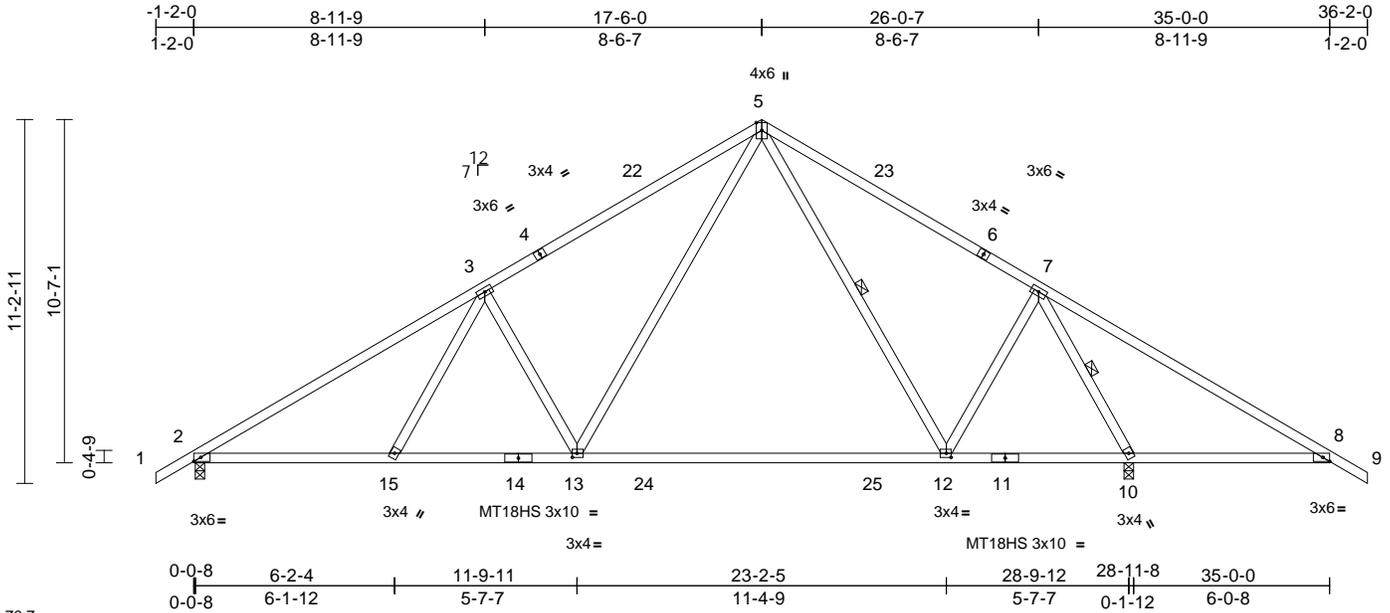
818 Soundside Road
Edenton, NC 27932

Job Asheville	Truss A03	Truss Type Common	Qty 13	Ply 1	200691RT1 Job Reference (optional)	E14365736
------------------	--------------	----------------------	-----------	----------	---------------------------------------	-----------

Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.33 S Mar 23 2020 Print: 8.330 S Mar 23 2020 MiTek Industries, Inc. Mon May 04 12:13:07
ID:46QG4d93YWbep2NX?iC382zKxbo-vxSqcZ?b?AbJrLVU_L6izMHksNUMZg6i4oPVqyzJtXQ

Page: 1



Scale = 1:70.7

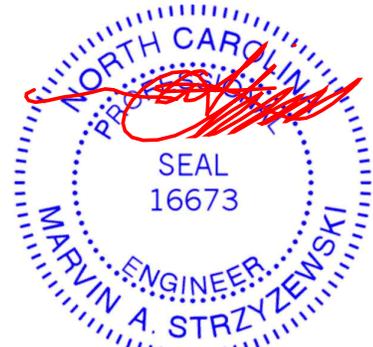
Plate Offsets (X, Y): [8:0-2-9,Edge], [12:0-1-12,0-1-8], [13:0-1-12,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.70	Vert(LL)	-0.62	12-13	>558	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.97	12-13	>356	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.38	Horz(CT)	0.04	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 185 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.1
BOT CHORD	2x4 SP No.1
WEBS	2x4 SP No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied.
WEBS	1 Row at midpt 5-12, 7-10
REACTIONS	
(size)	2=0-3-8, 10=0-3-8
Max Horiz	2=-202 (LC 9)
Max Uplift	2=-63 (LC 11), 10=-96 (LC 11)
Max Grav	2=1319 (LC 16), 10=1944 (LC 18)
FORCES	
(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/35, 2-3=-1958/71, 3-4=-1602/114, 4-22=-1481/137, 5-22=-1475/160, 5-23=-824/129, 6-23=-830/105, 6-7=-951/82, 7-8=-344/780, 8-9=0/35
BOT CHORD	2-15=0/1745, 14-15=0/1655, 13-14=0/1655, 13-24=0/849, 24-25=0/849, 12-25=0/849, 11-12=0/443, 10-11=0/443, 8-10=-547/372
WEBS	5-13=-44/1077, 5-12=-254/128, 7-12=0/654, 7-10=-1984/324, 3-13=-600/179, 3-15=0/190

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=125mph (3-second gust) Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=35ft; eave=5ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -1-2-0 to 2-4-0, Interior (1) 2-4-0 to 17-6-0, Exterior(2R) 17-6-0 to 21-0-0, Interior (1) 21-0-0 to 36-2-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - All plates are MT20 plates unless otherwise indicated.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 2 and 96 lb uplift at joint 10.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard



May 4, 2020

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

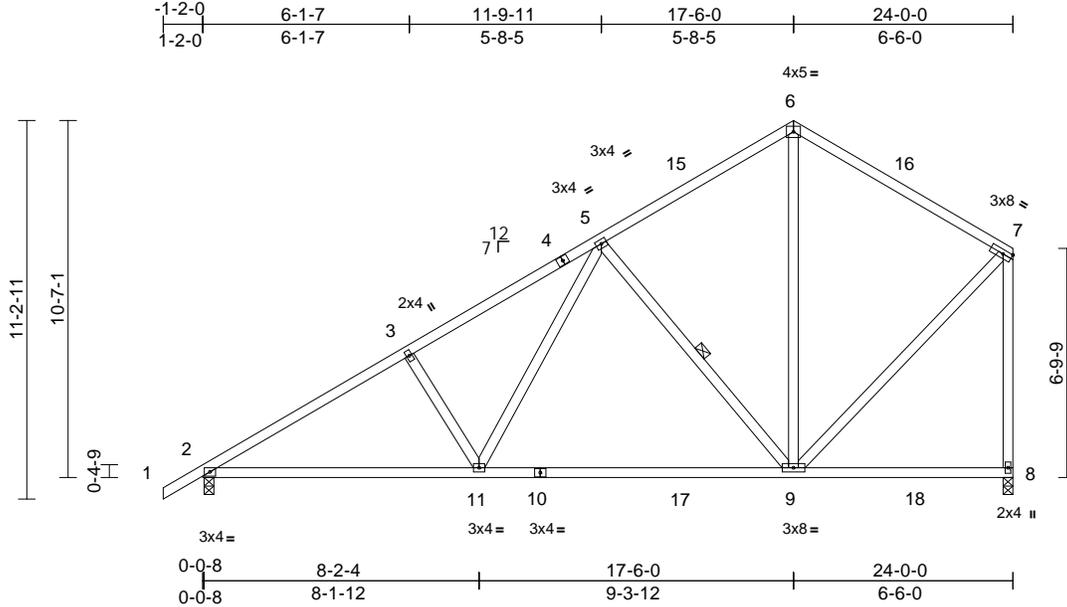
Job Asheville	Truss A04	Truss Type Common	Qty 11	Ply 1	200691RT1 Job Reference (optional)	E14365737
------------------	--------------	----------------------	-----------	----------	---------------------------------------	-----------

Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.33 S Mar 23 2020 Print: 8.330 S Mar 23 2020 MiTek Industries, Inc. Mon May 04 12:13:07

Page: 1

ID:_c0TGJOES8zBcQAjXr8cEzKxM?-vxSQcZ?b?AbJrLVU_L6izMHjDNZYi5i4oPVqyzJtxQ



Scale = 1:67.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.74	Vert(LL)	-0.24	9-11	>999	240	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.37	9-11	>765	180	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.03	8	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 147 lb FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
 BOT CHORD Rigid ceiling directly applied.
 WEBS 1 Row at midpt 5-9

REACTIONS

(size) 2=0-3-8, 8=0-3-8
 Max Horiz 2=289 (LC 10)
 Max Uplift 2=-61 (LC 11), 8=-36 (LC 11)
 Max Grav 2=1155 (LC 16), 8=1120 (LC 16)

FORCES

(lb) - Maximum Compression/Maximum Tension

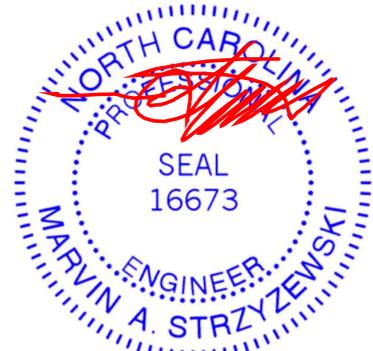
TOP CHORD 1-2=0/35, 2-3=-1680/97, 3-4=-1549/113, 4-5=-1418/130, 5-15=-706/139, 6-15=-603/157, 6-16=-613/146, 7-16=-697/128, 7-8=-1010/104
 BOT CHORD 2-11=-235/1533, 10-11=-177/1026, 10-17=-177/1026, 9-17=-177/1026, 9-18=-71/89, 8-18=-71/89
 WEBS 3-11=-325/117, 5-11=0/738, 5-9=-699/122, 6-9=-39/349, 7-9=-62/794

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=125mph (3-second gust) Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -1-2-0 to 1-10-0, Interior (1) 1-10-0 to 17-6-0, Exterior(2R) 17-6-0 to 20-6-0, Interior (1) 20-6-0 to 23-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 2 and 36 lb uplift at joint 8.
- 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

LOAD CASE(S) Standard



May 4, 2020

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-743 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.



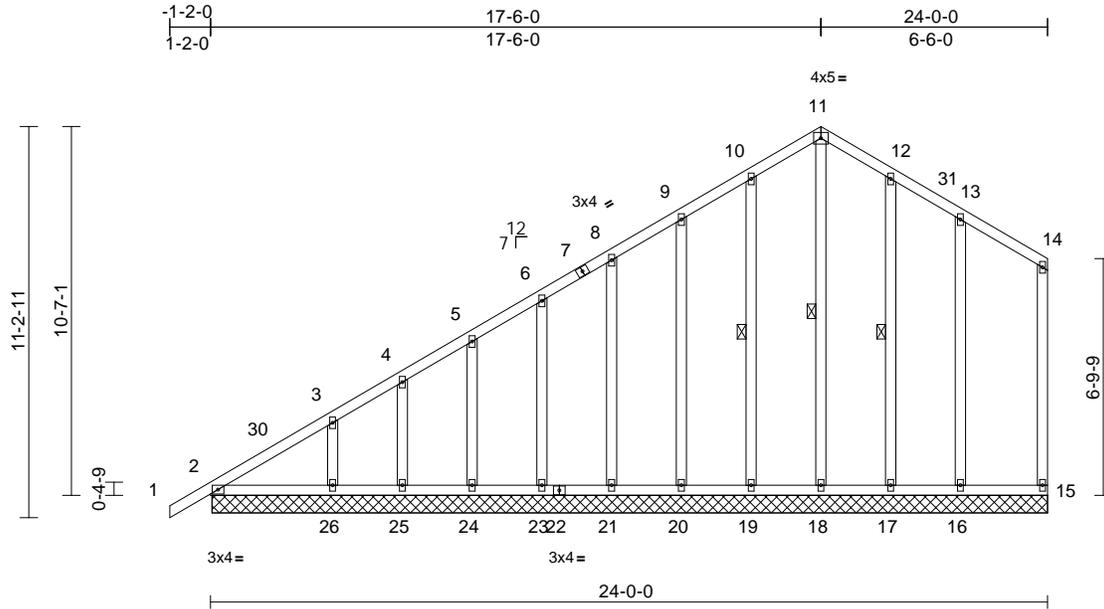
818 Soundside Road
 Edenton, NC 27932

Job Asheville	Truss A05	Truss Type Common Supported Gable	Qty 1	Ply 1	200691RT1 Job Reference (optional)	E14365738
------------------	--------------	--------------------------------------	----------	----------	---------------------------------------	-----------

Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.33 S Mar 23 2020 Print: 8.330 S Mar 23 2020 MiTek Industries, Inc. Mon May 04 12:13:08
ID:LNOe0T3MGM0FK1Sc?lrHuZzKxL7-N7?opu?DmUjATV3hY2dxVZQ08n2KlBurlS82NozJxP

Page: 1



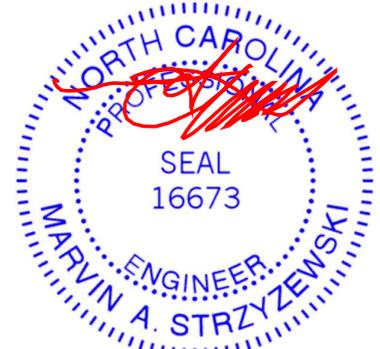
Scale = 1:65.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.00	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS								
											Weight: 184 lb	FT = 20%

LUMBER		TOP CHORD	1-2=0/35, 2-30=-262/195, 3-30=-253/213, 3-4=-220/162, 4-5=-206/146, 5-6=-194/130, 6-7=-182/107, 7-8=-170/117, 8-9=-170/151, 9-10=-159/196, 10-11=-173/234, 11-12=-173/234, 12-31=-140/194, 13-31=-150/186, 13-14=-138/163, 14-15=-127/126	7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 15, 11 lb uplift at joint 2, 36 lb uplift at joint 18, 11 lb uplift at joint 19, 28 lb uplift at joint 20, 23 lb uplift at joint 21, 24 lb uplift at joint 23, 24 lb uplift at joint 24, 22 lb uplift at joint 25, 30 lb uplift at joint 26, 7 lb uplift at joint 17, 39 lb uplift at joint 16 and 11 lb uplift at joint 2.
TOP CHORD	2x4 SP No.1			
BOT CHORD	2x4 SP No.1			
WEBS	2x4 SP No.2			
OTHERS	2x4 SP No.2			
BRACING		TOP CHORD	Structural wood sheathing directly applied, except end verticals.	8) Non Standard bearing condition. Review required.
TOP CHORD				
BOT CHORD		BOT CHORD	Rigid ceiling directly applied.	9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
BOT CHORD				
WEBS	1 Row at midpt 11-18, 10-19, 12-17	WEBS	1 Row at midpt 11-18, 10-19, 12-17	10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
WEBS				
REACTIONS	(size)			
Max Horiz	2=23-11-8, 15=23-11-8, 16=23-11-8, 17=23-11-8, 18=23-11-8, 19=23-11-8, 20=23-11-8, 21=23-11-8, 23=23-11-8, 24=23-11-8, 25=23-11-8, 26=23-11-8, 27=23-11-8			
Max Uplift	2=289 (LC 10), 27=289 (LC 10)			
Max Grav	2=258 (LC 17), 15=144 (LC 17), 16=259 (LC 17), 17=169 (LC 17), 18=209 (LC 16), 19=197 (LC 16), 20=187 (LC 16), 21=190 (LC 16), 23=186 (LC 16), 24=201 (LC 16), 25=139 (LC 16), 26=319 (LC 16), 27=258 (LC 17)			

NOTES	
1) Unbalanced roof live loads have been considered for this design.	
2) Wind: ASCE 7-16; Vult=125mph (3-second gust) Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3E) -1-2-0 to 1-10-0, Exterior(2N) 1-10-0 to 17-6-0, Corner(3R) 17-6-0 to 20-6-0, Exterior(2N) 20-6-0 to 23-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60	
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.	
4) All plates are 2x4 MT20 unless otherwise indicated.	
5) Gable studs spaced at 2-0-0 oc.	
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.	

FORCES (lb) - Maximum Compression/Maximum Tension



May 4, 2020

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.

ENGINEERING BY
TRENCO
A MiTek Affiliate

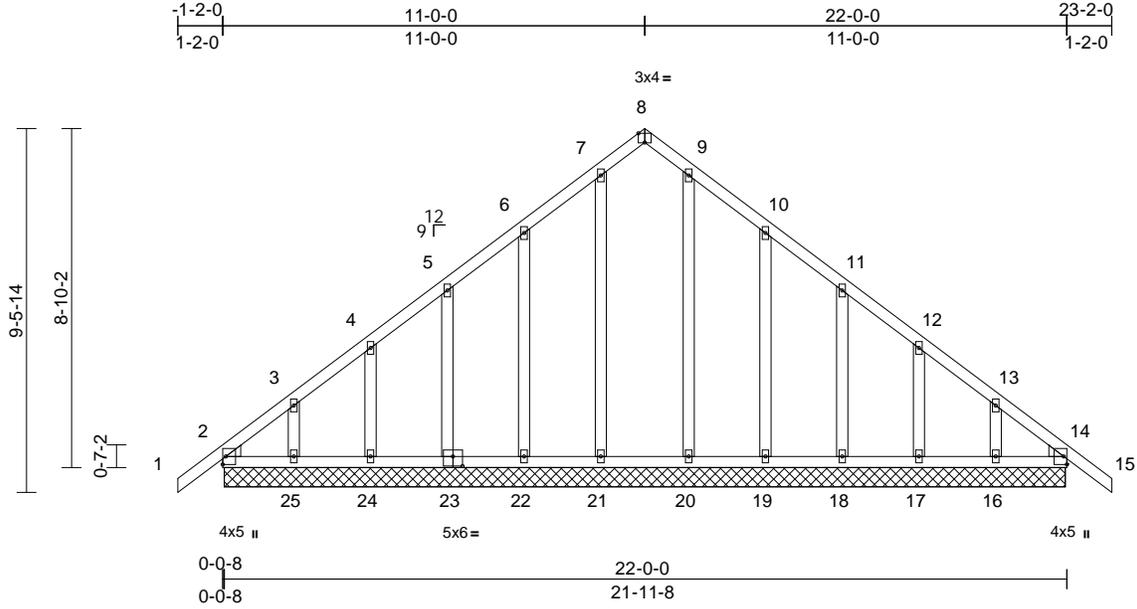
818 Soundside Road
Edenton, NC 27932

Job Asheville	Truss B01	Truss Type Common Supported Gable	Qty 1	Ply 1	200691RT1 Job Reference (optional)	E14365739
------------------	--------------	--------------------------------------	----------	----------	---------------------------------------	-----------

Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.33 S Mar 23 2020 Print: 8.330 S Mar 23 2020 MiTek Industries, Inc. Mon May 04 12:13:08
ID:?EA1gCdDRUpjr5zSiyg3llzKxKP-N7?opu?DmUjATV3hY2dxVzq2Xn3LICr1S82NOzJtxP

Page: 1



Scale = 1:59.7

Plate Offsets (X, Y): [8:0-2-0,Edge], [23:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.01	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 146 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.2
WEDGE Left: 2x4 SP No.2
Right: 2x4 SP No.2

BOT CHORD 2-25=-93/221, 24-25=-90/221, 23-24=-90/221, 22-23=-93/224, 21-22=-93/224, 20-21=-93/224, 19-20=-93/224, 18-19=-93/224, 17-18=-93/224, 16-17=-93/224, 14-16=-93/224
WEBS 7-21=-118/1, 9-20=-109/0, 6-22=-124/103, 5-23=-120/78, 4-24=-125/82, 3-25=-116/87, 10-19=-128/104, 11-18=-122/79, 12-17=-125/83, 13-16=-114/87

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

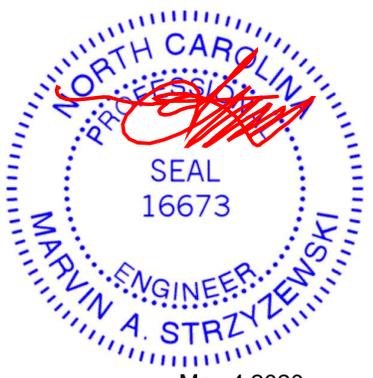
BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

LOAD CASE(S) Standard

REACTIONS (size) 2=21-11-0, 14=21-11-0, 16=21-11-0, 17=21-11-0, 18=21-11-0, 19=21-11-0, 20=21-11-0, 21=21-11-0, 22=21-11-0, 23=21-11-0, 24=21-11-0, 25=21-11-0, 26=21-11-0, 29=21-11-0
Max Horiz 2=172 (LC 10), 26=172 (LC 10)
Max Uplift 16=-46 (LC 11), 17=-34 (LC 11), 18=-33 (LC 11), 19=-52 (LC 11), 22=-53 (LC 11), 23=-32 (LC 11), 24=-32 (LC 11), 25=-46 (LC 11)
Max Grav 2=200 (LC 17), 14=179 (LC 16), 16=185 (LC 17), 17=195 (LC 17), 18=193 (LC 17), 19=193 (LC 17), 20=196 (LC 17), 21=216 (LC 16), 22=184 (LC 16), 23=192 (LC 16), 24=198 (LC 16), 25=188 (LC 16), 26=200 (LC 17), 29=179 (LC 16)

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=125mph (3-second gust) Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Corner(3E) -1-2-0 to 1-10-4, Exterior(2N) 1-10-4 to 11-0-0, Corner(3R) 11-0-0 to 14-1-12, Exterior(2N) 14-1-12 to 23-2-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-0-0-0 tall by 2-0-0-0 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 32 lb uplift at joint 23, 53 lb uplift at joint 22, 32 lb uplift at joint 24, 46 lb uplift at joint 25, 52 lb uplift at joint 19, 33 lb uplift at joint 18, 34 lb uplift at joint 17 and 46 lb uplift at joint 16.
8) Non Standard bearing condition. Review required.

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/42, 2-3=-189/109, 3-4=-128/89, 4-5=-112/70, 5-6=-95/54, 6-7=-85/90, 7-8=-70/90, 8-9=-70/90, 9-10=70/90, 10-11=-71/22, 11-12=-84/41, 12-13=-131/68, 13-14=-192/106, 14-15=0/42



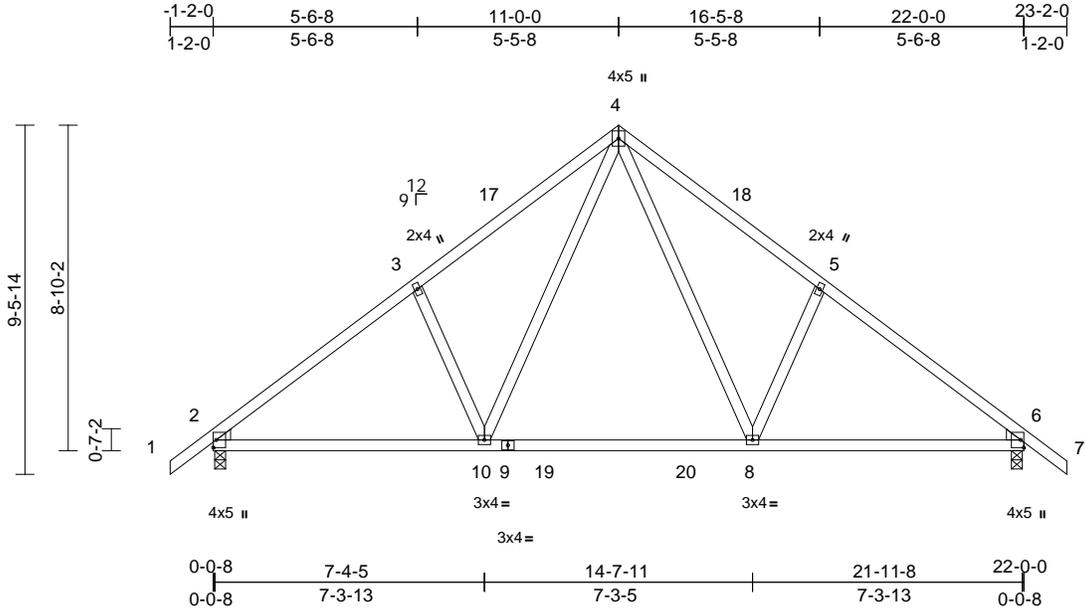
May 4, 2020

Job Asheville	Truss B02	Truss Type Common	Qty 3	Ply 1	200691RT1 Job Reference (optional)	E14365740
------------------	--------------	----------------------	----------	----------	---------------------------------------	-----------

Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.33 S Mar 23 2020 Print: 8.330 S Mar 23 2020 MiTek Industries, Inc. Mon May 04 12:13:08
ID:PLv0Rr3QjstTnNlZMErkJyZKxJq-N7?opu?DmUjATV3hY2dxVZq08nzZIBErIS82NOzJtxP

Page: 1



Scale = 1:62.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.22	Vert(LL)	-0.10	8-10	>999	240	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.16	8-10	>999	180	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.02	6	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 120 lb FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1
 BOT CHORD 2x4 SP No.1
 WEBS 2x4 SP No.2
 WEDGE Left: 2x4 SP No.2
 Right: 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied.
 BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 2=0-3-8, 6=0-3-8
 Max Horiz 2=172 (LC 10)
 Max Uplift 2=-62 (LC 11), 6=-62 (LC 11)
 Max Grav 2=1047 (LC 16), 6=1047 (LC 17)

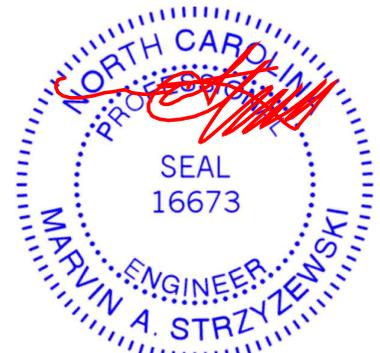
FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/42, 2-3=-1244/93, 3-17=-1162/142,
 4-17=-1074/164, 4-18=-1074/164,
 5-18=-1162/142, 5-6=-1244/93, 6-7=0/42
 BOT CHORD 2-10=-20/1053, 9-10=0/699, 9-19=0/699,
 19-20=0/699, 8-20=0/699, 6-8=0/957
 WEBS 4-8=-51/608, 5-8=-291/144, 4-10=-51/608,
 3-10=-291/144

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=125mph (3-second gust)
 Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;
 MWFRS (directional) and C-C Exterior(2E) -1-2-0 to 1-10-0, Interior (1) 1-10-0 to 11-0-0, Exterior(2R) 11-0-0 to 14-0-0, Interior (1) 14-0-0 to 23-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.

- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 62 lb uplift at joint 2 and 62 lb uplift at joint 6.
 - 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - 6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard



May 4, 2020

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.



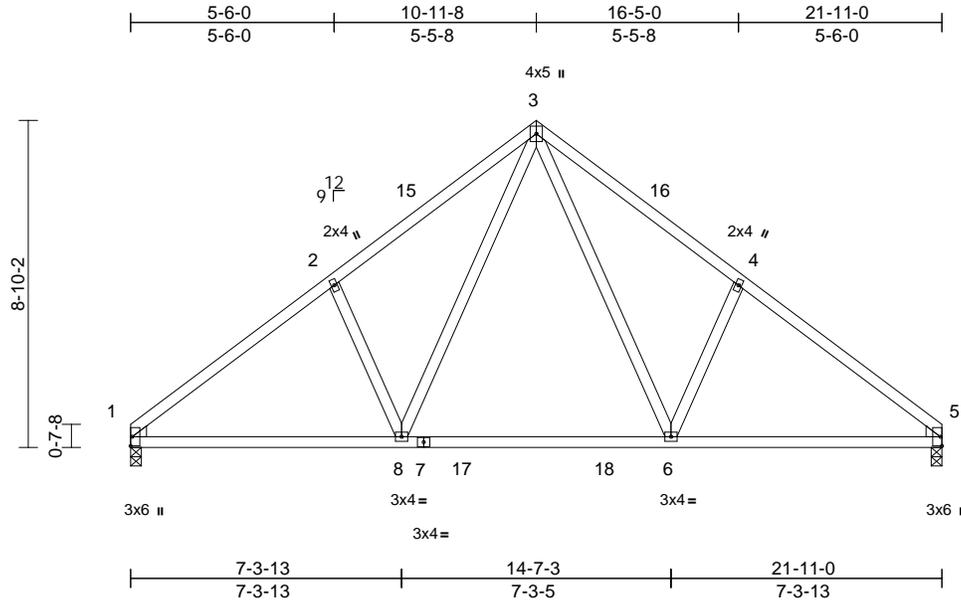
818 Soundside Road
 Edenton, NC 27932

Job Asheville	Truss B03	Truss Type Common	Qty 7	Ply 1	200691RT1 Job Reference (optional)	E14365741
------------------	--------------	----------------------	----------	----------	---------------------------------------	-----------

Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.33 S Mar 23 2020 Print: 8.330 S Mar 23 2020 MiTek Industries, Inc. Mon May 04 12:13:09
ID: mJivUZ7ZY06mtYAW9nQvSczKxJl-rZA0E0rXor15fet6m8A2nNBtBjP1eU?X6ucvqzJtx0

Page: 1



Scale = 1:61.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.22	Vert(LL)	-0.10	6-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.16	6-8	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS								
											Weight: 115 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1
 BOT CHORD 2x4 SP No.1
 WEBS 2x4 SP No.2
 WEDGE Left: 2x4 SP No.2
 Right: 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied.
 BOT CHORD Rigid ceiling directly applied.

REACTIONS

(size) 1=0-3-8, 5=0-3-8
 Max Horiz 1=155 (LC 10)
 Max Uplift 1=-29 (LC 11), 5=-29 (LC 11)
 Max Grav 1=980 (LC 16), 5=980 (LC 17)

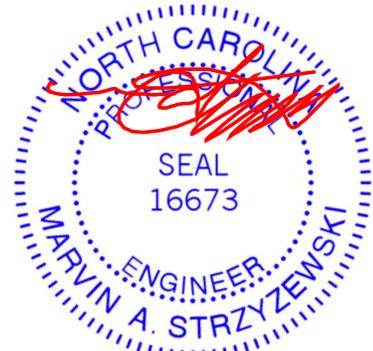
FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-1242/98, 2-15=-1160/148,
 3-15=-1072/170, 3-16=-1072/170,
 4-16=-1160/148, 4-5=-1242/98
 BOT CHORD 1-8=-48/1042, 7-8=0/689, 7-17=0/689,
 17-18=0/689, 6-18=0/689, 5-6=-9/944
 WEBS 3-6=-52/607, 4-6=-290/145, 3-8=-52/607,
 2-8=-290/145

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=125mph (3-second gust)
 Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;
 MWFRS (directional) and C-C Exterior(2E) 0-0-0 to
 3-0-0, Interior (1) 3-0-0 to 10-11-8, Exterior(2R) 10-11-8
 to 13-11-8, Interior (1) 13-11-8 to 21-11-0 zone;
 cantilever left and right exposed ; end vertical left and
 right exposed;C-C for members and forces & MWFRS
 for reactions shown; Lumber DOL=1.60 plate grip
 DOL=1.60
- 3) * This truss has been designed for a live load of 20.0psf
 on the bottom chord in all areas where a rectangle
 3-06-00 tall by 2-00-00 wide will fit between the bottom
 chord and any other members, with BCDL = 10.0psf.

- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 29 lb uplift at joint 1 and 29 lb uplift at joint 5.
 - 5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - 6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.
- LOAD CASE(S)** Standard



May 4, 2020

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.



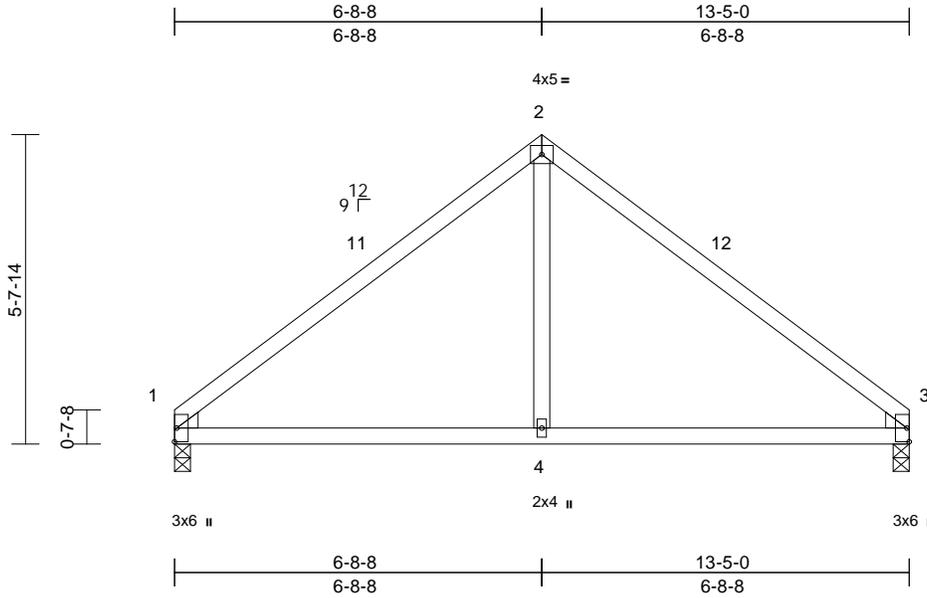
818 Soundside Road
 Edenton, NC 27932

Job Asheville	Truss C02	Truss Type Common	Qty 4	Ply 1	200691RT1 Job Reference (optional)	E14365743
------------------	--------------	----------------------	----------	----------	---------------------------------------	-----------

Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.33 S Mar 23 2020 Print: 8.330 S Mar 23 2020 MiTek Industries, Inc. Mon May 04 12:13:09
ID:EmojGjLrJwNC1JY_CZi8BPzKxJT-rJZA0E0rXor15fet6m8A2nN95BLw1gr?X6ucvqzJtx0

Page: 1



Scale = 1:41.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.34	Vert(LL)	-0.05	4-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.09	4-7	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.02	1	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-AS							Weight: 54 lb	FT = 20%

LUMBER

- TOP CHORD 2x4 SP No.1
- BOT CHORD 2x4 SP No.1
- WEBS 2x4 SP No.2
- WEDGE Left: 2x4 SP No.2
Right: 2x4 SP No.2

- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

BRACING

- TOP CHORD Structural wood sheathing directly applied.
- BOT CHORD Rigid ceiling directly applied.

LOAD CASE(S) Standard

REACTIONS

- (size) 1=0-3-8, 3=0-3-8
- Max Horiz 1=95 (LC 10)
- Max Uplift 1=-18 (LC 11), 3=-18 (LC 11)
- Max Grav 1=537 (LC 1), 3=537 (LC 1)

FORCES

- (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-11=-602/93, 2-11=-484/117, 2-12=-484/117, 3-12=-602/93
- BOT CHORD 1-4=-67/398, 3-4=0/398
- WEBS 2-4=0/192

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=125mph (3-second gust) Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 6-8-8, Exterior(2R) 6-8-8 to 9-8-8, Interior (1) 9-8-8 to 13-5-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 1 and 18 lb uplift at joint 3.



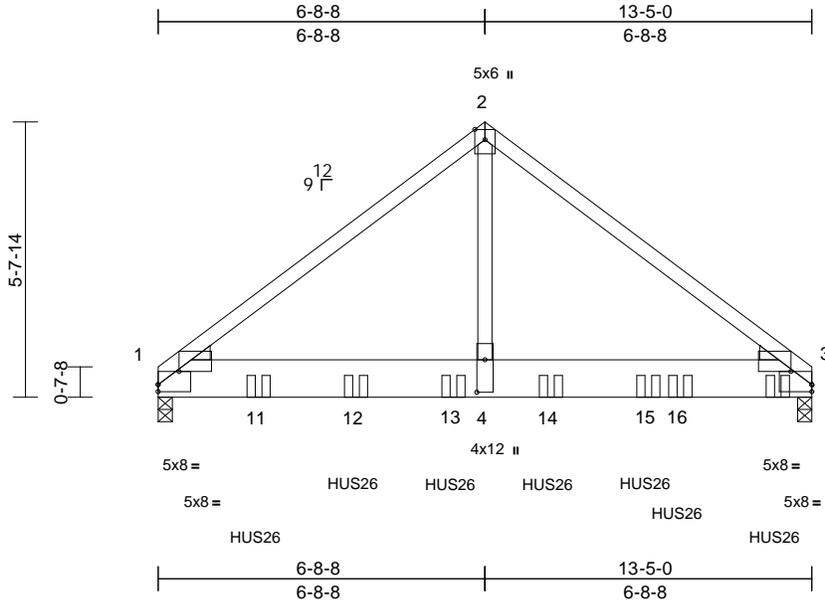
May 4, 2020

Job Asheville	Truss C03	Truss Type Common Girder	Qty 1	Ply 2	200691RT1 Job Reference (optional)	E14365744
------------------	--------------	-----------------------------	----------	----------	---------------------------------------	-----------

Carolina Structural Systems, LLC, Ether, NC - 27247,

Run: 8.33 S Mar 23 2020 Print: 8.330 S Mar 23 2020 MiTek Industries, Inc. Mon May 04 12:13:10
ID:Bu6RAyffhr7hABVHhGJn3zKxRj-rJZA0E0rXor15fet6m8A2nN4jBG11TB?X6ucvqzJtx0

Page: 1



Scale = 1:47.1

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.00	TC	0.68	Vert(LL)	-0.07	4-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.13	4-10	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.86	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-MS							Weight: 172 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1
 BOT CHORD 2x10 SP DSS
 WEBS 2x4 SP No.2
 WEDGE Left: 2x4 SP No.3
 Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-8-7 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 1=0-3-8, 3=0-3-8
 Max Horiz 1=95 (LC 24)
 Max Grav 1=5086 (LC 2), 3=6655 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-6008/0, 2-3=-5983/0
 BOT CHORD 1-11=0/4740, 11-12=0/4740, 12-13=0/4740,
 4-13=0/4740, 4-14=0/4740, 14-15=0/4740,
 15-16=0/4740, 3-16=0/4740
 WEBS 2-4=0/6774

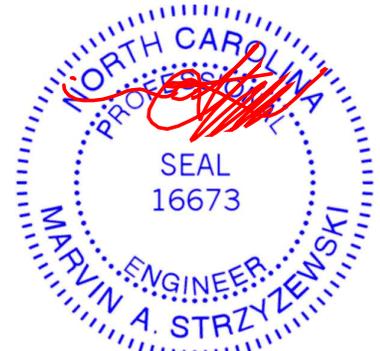
NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
 Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-4-0 oc.
 Web 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 7-16; Vult=125mph (3-second gust)
 Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
 B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed;
 MWFRS (directional); cantilever left and right exposed;
 end vertical left and right exposed; Lumber DOL=1.60
 plate grip DOL=1.60
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-12 from the left end to 12-8-10 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 + Roof Live (balanced): Lumber Increase=1.15,
 Plate Increase=1.00
 Uniform Loads (lb/ft)
 Vert: 1-2=-60, 2-3=-60, 5-8=-20
 Concentrated Loads (lb)
 Vert: 10=-1265 (B), 11=-1262 (B), 12=-1262 (B),
 13=-1262 (B), 14=-1262 (B), 15=-1262 (B),
 16=-1262 (B)



May 4, 2020

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

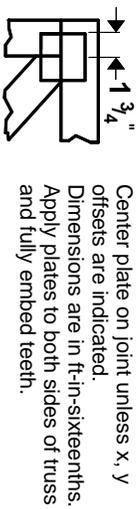
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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

Symbols

PLATE LOCATION AND ORIENTATION



For 4 x 2 orientation, locate plates 0- $\frac{1}{16}$ " from outside edge of truss.



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

PLATE SIZE

4 X 4

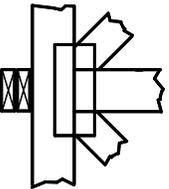
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

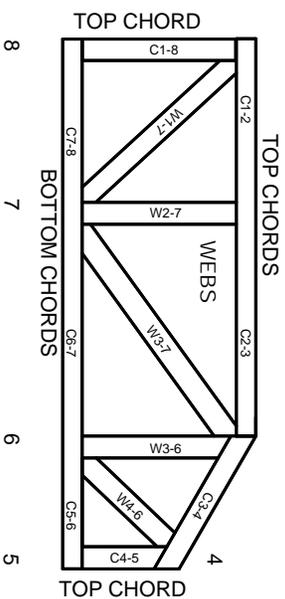


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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



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.

© 2012 MITTEK® All Rights Reserved



MITek Engineering Reference Sheet: MII-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.