

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: Wilmington A VLT
Wilmington A VLT

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

Pages or sheets covered by this seal: I60353376 thru I60353391

My license renewal date for the state of North Carolina is December 31, 2023.

North Carolina COA: C-0844



August 24, 2023

Gilbert, Eric

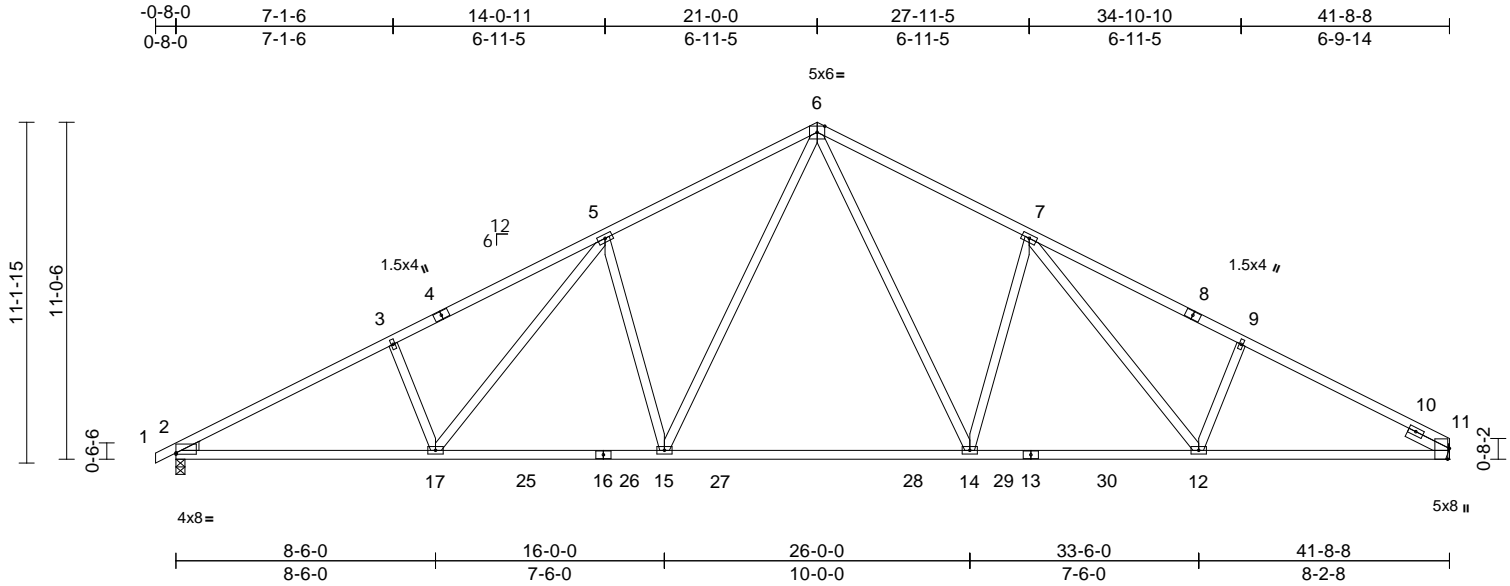
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which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

Job Wilmington A VLT	Truss A01	Truss Type Common	Qty 4	Ply 1	Wilmington A VLT Job Reference (optional)	I60353376
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84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:44
ID:FyJUGvM6CcFPEq8vxiR2htykr4-RFC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:75.5

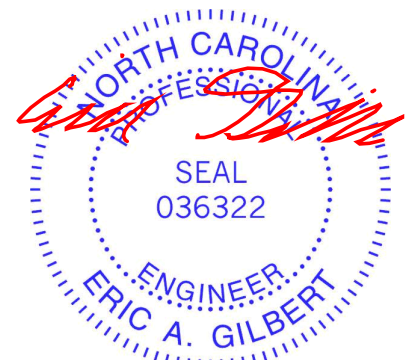
Plate Offsets (X, Y): [2:Edge,0-0-8], [11:0-4-4,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.40	14-15	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.74	14-15	>680	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.67	Horz(CT)	0.15	11	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 229 lb	FT = 20%

- LUMBER**
- TOP CHORD 2x4 SP No.2 *Except* 8-11:2x4 SP DSS
 - BOT CHORD 2x4 SP No.1
 - WEBS 2x4 SP No.2 *Except* 12-9,17-3:2x4 SP No.3
 - WEDGE Left: 2x4 SP No.3
 - SLIDER Right 2x4 SP No.3 -- 1-6-0
- BRACING**
- TOP CHORD Structural wood sheathing directly applied.
 - BOT CHORD Rigid ceiling directly applied or 8-2-5 oc bracing.
- REACTIONS** (size) 2=0-3-8, 11= Mechanical
 Max Horiz 2=190 (LC 12)
 Max Uplift 2=-211 (LC 12), 11=-194 (LC 13)
 Max Grav 2=1709 (LC 1), 11=1668 (LC 1)
- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=0/18, 2-3=-3078/749, 3-5=-2951/811, 5-6=-2465/762, 6-7=-2453/759, 7-9=-2856/790, 9-11=-2961/730
 - BOT CHORD 2-17=-581/2674, 15-17=-384/2275, 14-15=-179/1699, 12-14=-380/2255, 11-12=-557/2572
 - WEBS 6-14=-258/1000, 7-14=-650/353, 7-12=-155/490, 9-12=-300/231, 6-15=-265/1024, 5-15=-678/360, 5-17=-176/577, 3-17=-351/250

- 5) * 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.
 - 6) Refer to girder(s) for truss to truss connections.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 211 lb uplift at joint 2 and 194 lb uplift at joint 11.
 - 8) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - All plates are 3x6 MT20 unless otherwise indicated.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



August 24, 2023

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

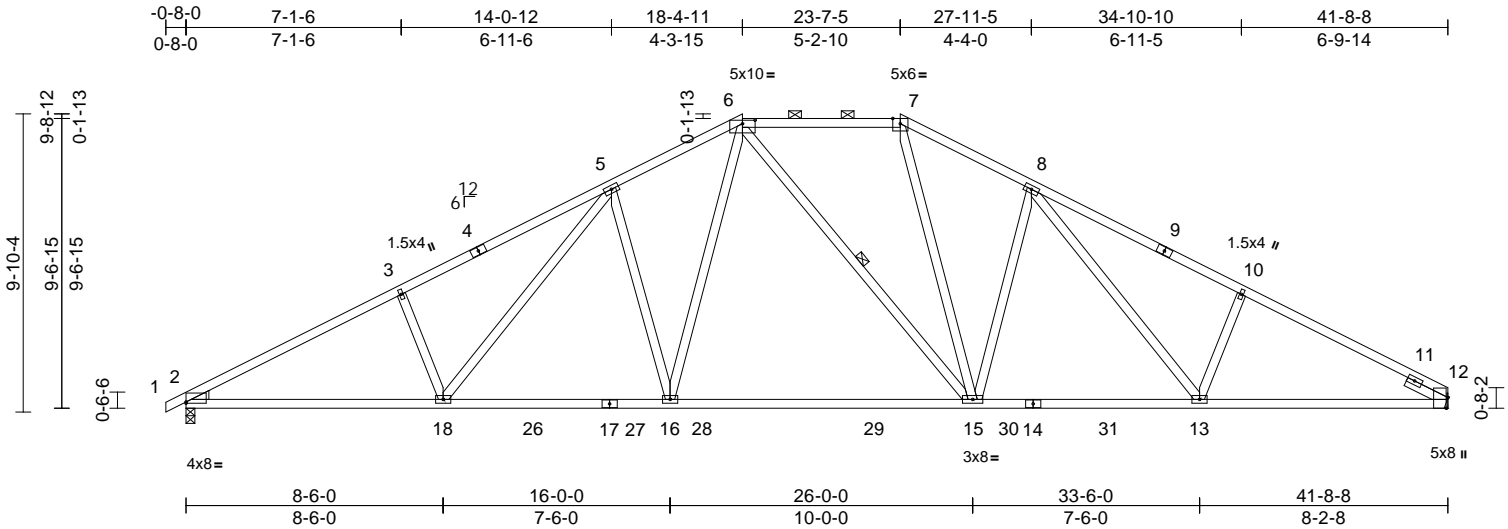
ENGINEERING BY
TRENCO
 A MiTek Affiliate
 818 Soundside Road
 Edenton, NC 27932

Job Wilmington A VLT	Truss A01A	Truss Type Hip	Qty 1	Ply 1	Wilmington A VLT Job Reference (optional)	160353377
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84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:46
ID:X5uQvFa0rDtcSJ_uVCuKTykxld-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:76.2

Plate Offsets (X, Y): [2:Edge,0-0-8], [6:0-5-0,0-1-7], [12:0-4-4,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.36	15-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.70	15-16	>720	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.57	Horz(CT)	0.15	12	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 240 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 9-12:2x4 SP No.1
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.2 *Except* 3-18,10-13:2x4 SP No.3
WEDGE Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied, except 2-0-0 oc purlins (3-7-2 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 8-3-4 oc bracing.
WEBS 1 Row at midpt 6-15

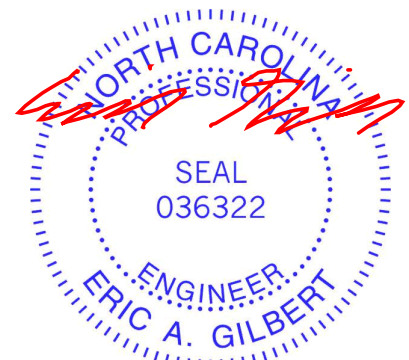
REACTIONS (size) 2=0-3-8, 12= Mechanical
Max Horiz 2=166 (LC 12), 12=176 (LC 13)
Max Uplift 2=193 (LC 12), 12=176 (LC 13)
Max Grav 2=1709 (LC 1), 12=1668 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-3071/735, 3-5=-2945/798, 5-6=-2424/711, 6-7=-1892/615, 7-8=-2393/709, 8-10=-2829/777, 10-12=-2936/716
BOT CHORD 2-18=-570/2668, 16-18=-361/2254, 15-16=-235/1915, 13-15=-357/2216, 12-13=-545/2549
WEBS 6-16=-193/879, 6-15=-219/198, 7-15=-191/832, 3-18=-368/262, 5-18=-189/593, 5-16=-572/305, 8-15=-544/300, 8-13=-167/497, 10-13=-314/242

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

- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) All plates are 3x6 MT20 unless otherwise indicated.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 193 lb uplift at joint 2 and 176 lb uplift at joint 12.
- 9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



August 24, 2023

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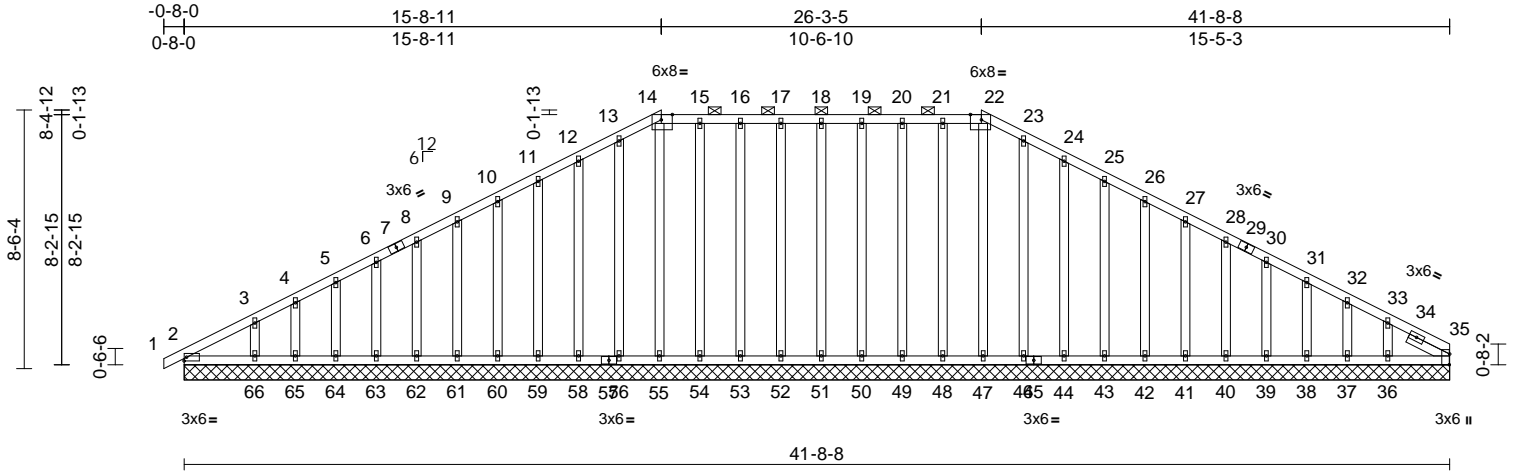
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job Wilmington A VLT	Truss A01B	Truss Type Hip Supported Gable	Qty 1	Ply 1	Wilmington A VLT Job Reference (optional)	I60353378
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84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:47
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Page: 1



Scale = 1:75.9

Plate Offsets (X, Y): [14:0-4-6,Edge], [22:0-4-6,Edge], [35:0-4-4,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.01	35	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS								
											Weight: 359 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3 *Except*
51-18,52-17,53-16,54-15,55-14,56-13,58-12,
50-19,49-20,48-21,47-22,46-23,44-24:2x4 SP
No.2
SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or
6-0-0 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 14-22.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (size)
2=41-8-8, 35=41-8-8, 36=41-8-8,
37=41-8-8, 38=41-8-8, 39=41-8-8,
40=41-8-8, 41=41-8-8, 42=41-8-8,
43=41-8-8, 44=41-8-8, 46=41-8-8,
47=41-8-8, 48=41-8-8, 49=41-8-8,
50=41-8-8, 51=41-8-8, 52=41-8-8,
53=41-8-8, 54=41-8-8, 55=41-8-8,
56=41-8-8, 58=41-8-8, 59=41-8-8,
60=41-8-8, 61=41-8-8, 62=41-8-8,
63=41-8-8, 64=41-8-8, 65=41-8-8,
66=41-8-8, 67=41-8-8, 70=41-8-8
Max Horiz 2=144 (LC 12), 67=144 (LC 12)

Max Uplift 2=-12 (LC 13), 36=-84 (LC 13),
37=-16 (LC 13), 38=-36 (LC 13),
39=-32 (LC 13), 40=-33 (LC 13),
41=-32 (LC 13), 42=-32 (LC 13),
43=-32 (LC 13), 44=-35 (LC 13),
46=-19 (LC 13), 48=-19 (LC 9),
49=-22 (LC 8), 50=-19 (LC 9),
51=-19 (LC 9), 52=-19 (LC 9),
53=-23 (LC 8), 54=-19 (LC 9),
56=-24 (LC 12), 58=-34 (LC 12),
59=-32 (LC 12), 60=-32 (LC 12),
61=-32 (LC 12), 62=-33 (LC 12),
63=-31 (LC 12), 64=-37 (LC 12),
65=-11 (LC 12), 66=-87 (LC 12),
67=-12 (LC 13)
Max Grav 2=135 (LC 21), 35=91 (LC 22),
36=162 (LC 24), 37=88 (LC 1),
38=111 (LC 24), 39=106 (LC 1),
40=107 (LC 24), 41=107 (LC 1),
42=107 (LC 24), 43=106 (LC 1),
44=107 (LC 1), 46=111 (LC 24),
47=103 (LC 22), 48=108 (LC 23),
49=108 (LC 23), 50=107 (LC 24),
51=107 (LC 1), 52=107 (LC 23),
53=108 (LC 24), 54=108 (LC 24),
55=113 (LC 22), 56=111 (LC 23),
58=107 (LC 1), 59=106 (LC 1),
60=107 (LC 23), 61=107 (LC 1),
62=107 (LC 23), 63=105 (LC 1),
64=112 (LC 23), 65=81 (LC 1),
66=176 (LC 23), 67=135 (LC 21),
70=91 (LC 22)

TOP CHORD 1-2=0/18, 2-3=-175/64, 3-4=-126/61,
4-5=-103/72, 5-6=-81/83, 6-8=-63/100,
8-9=-51/116, 9-10=-49/132, 10-11=-60/149,
11-12=-71/171, 12-13=-83/204,
13-14=-91/227, 14-15=-83/218,
15-16=-82/216, 16-17=-82/216,
17-18=-82/216, 18-19=-82/216,
19-20=-82/216, 20-21=-82/216,
21-22=-83/218, 22-23=-91/227,
23-24=-83/204, 24-25=-71/171,
25-26=-60/139, 26-27=-49/107,
27-28=-38/76, 28-30=-31/44, 30-31=-36/26,
31-32=-51/16, 32-33=-71/15, 33-35=-113/39

FORCES (lb) - Maximum Compression/Maximum Tension



August 24, 2023

Continued on page 3

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

Job	Truss	Truss Type	Qty	Ply	Wilmington A VLT	I60353378
Wilmington A VLT	A01B	Hip Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:47

Page: 2

ID:YA?7BVp?knEmvW3tnQq5pykxkZ-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWwCDoi7J4zJC?f

BOT CHORD 2-66=-92/116, 65-66=-31/116, 64-65=-31/116,
63-64=-31/116, 62-63=-31/116,
61-62=-31/116, 60-61=-31/116,
59-60=-31/116, 58-59=-31/116,
56-58=-31/116, 55-56=-31/116,
54-55=-31/116, 53-54=-31/116,
52-53=-31/116, 51-52=-31/116,
50-51=-31/116, 49-50=-31/116,
48-49=-31/116, 47-48=-31/116,
46-47=-31/116, 44-46=-31/116,
43-44=-31/116, 42-43=-31/116,
41-42=-31/116, 40-41=-31/116,
39-40=-31/116, 38-39=-31/116,
37-38=-31/116, 36-37=-31/116,
35-36=-31/116

WEBS 18-51=-80/37, 17-52=-80/36, 16-53=-81/42,
15-54=-81/35, 14-55=-86/0, 13-56=-84/40,
12-58=-80/58, 11-59=-79/55, 10-60=-80/55,
9-61=-80/55, 8-62=-80/55, 6-63=-80/55,
5-64=-83/57, 4-65=-66/44, 3-66=-122/90,
19-50=-80/36, 20-49=-81/42, 21-48=-81/35,
22-47=-77/0, 23-46=-84/38, 24-44=-80/58,
25-43=-79/55, 26-42=-80/55, 27-41=-80/55,
28-40=-80/55, 30-39=-80/55, 31-38=-82/57,
32-37=-71/45, 33-36=-111/91

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust)
Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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) Provide adequate drainage to prevent water ponding.
- 5) All plates are 1.5x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 1-4-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) N/A

- 11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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818 Soundside Road
Edenton, NC 27932

Job Wilmington A VLT	Truss A01M	Truss Type Common	Qty 5	Ply 1	Wilmington A VLT Job Reference (optional)	160353379
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84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:48
ID: SmlvfoYea2jSeTl2CBUW2ykoF-RfC?PsB70Hq3NSgPqnl8w3uTXbGKwRCDoi7J4zJC?f

Page: 1

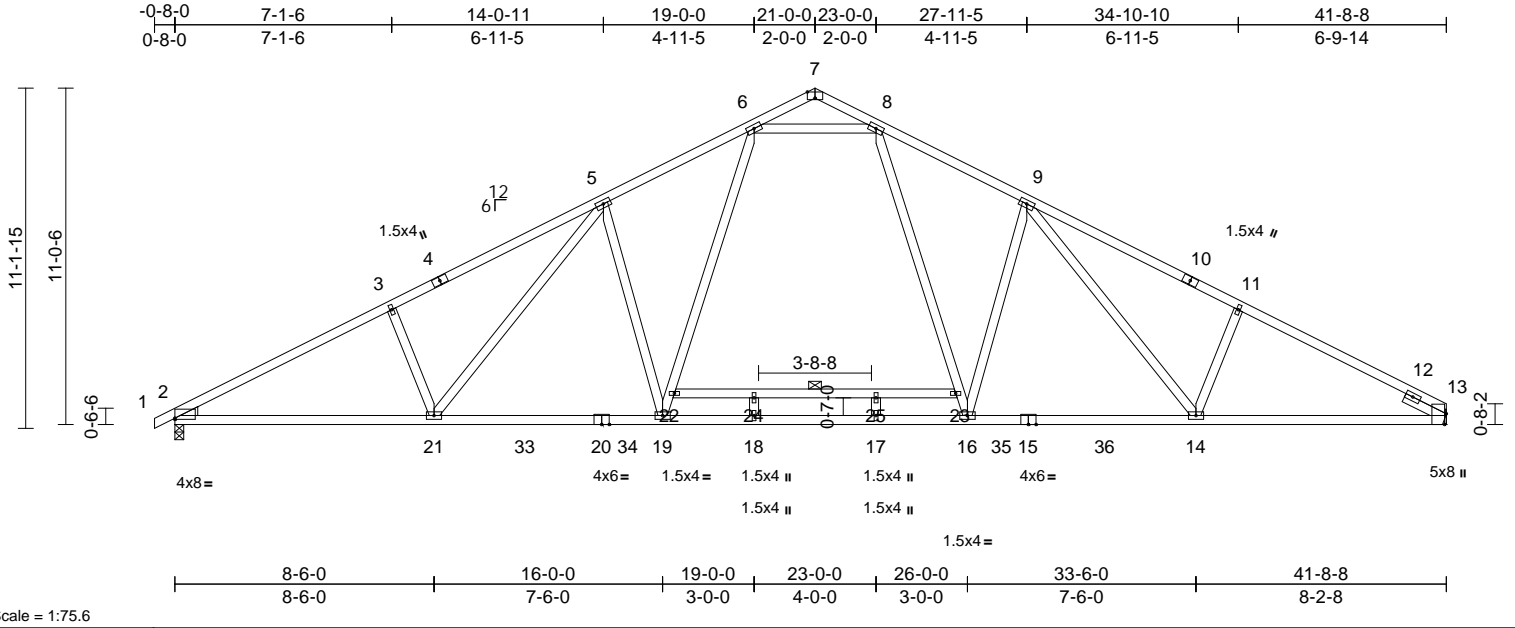


Plate Offsets (X, Y): [2:Edge,0-0-8], [7:0-3-0,Edge], [13:0-4-4,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.41	19-21	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.61	19-21	>827	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.14	13	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS								
											Weight: 246 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1 *Except* 1-4:2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.2 *Except*
14-11,21-3,6-8,24-18,25-17:2x4 SP No.3
WEDGE Left: 2x4 SP No.3
SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-2-4 oc bracing: 2-21
8-4-7 oc bracing: 13-14.

WEBS
1 Row at midpt 22-23

REACTIONS
(size) 2=0-3-8, 13= Mechanical
Max Horiz 2=190 (LC 12)
Max Uplift 2=211 (LC 12), 13=194 (LC 13)
Max Grav 2=1709 (LC 1), 13=1668 (LC 1)

FORCES
(lb) - Maximum Compression/Maximum Tension

TOP CHORD
1-2=0/18, 2-3=-3061/750, 3-5=-2910/812,
5-6=-2331/741, 6-7=-159/69, 7-8=-163/69,
8-9=-2319/738, 9-11=-2812/790,
11-13=-2935/730

BOT CHORD
2-21=-582/2647, 19-21=-379/2171,
18-19=-235/1785, 17-18=-235/1785,
16-17=-235/1785, 14-16=-375/2152,
13-14=-557/2543

WEBS
8-23=-210/860, 16-23=-219/834,
9-16=-690/330, 9-14=-158/512,
11-14=-296/239, 19-22=-226/856,
6-22=-218/884, 5-19=-724/333,
5-21=-182/604, 3-21=-353/258,
6-8=-1674/623, 22-24=-24/4, 24-25=-24/4,
23-25=-24/4, 18-24=-9/38, 17-25=-14/33

- Wind: ASCE 7-10; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- All plates are 3x6 MT20 unless otherwise indicated.
- 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 3-06-00 tall by 2-00-00 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 211 lb uplift at joint 2 and 194 lb uplift at joint 13.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

LOAD CASE(S) Standard



August 24, 2023

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



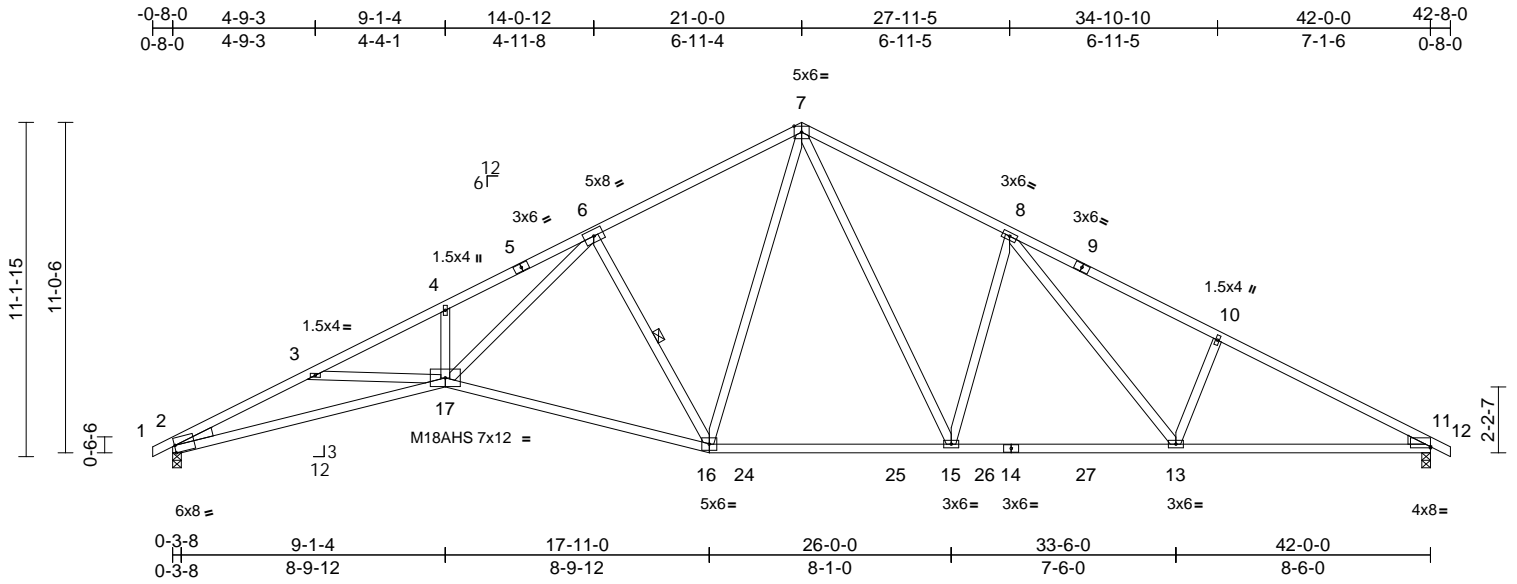
818 Soundside Road
Edenton, NC 27932

Job Wilmington A VLT	Truss A01S	Truss Type Roof Special	Qty 7	Ply 1	Wilmington A VLT Job Reference (optional)	I60353380
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84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:48
ID:HXMIOENwcpJ6pyTOwVr3BBykxi0-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:76.9
Plate Offsets (X, Y): [2:0-0-4,Edge], [11:Edge,0-0-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.40	15-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.90	16-17	>560	180	M18AHS	186/179
BCLL	0.0*	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.35	11	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS								Weight: 234 lb FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-5,9-12:2x4 SP DSS
BOT CHORD 2x4 SP No.1 *Except* 2-17:2x4 SP DSS
WEBS 2x4 SP No.2 *Except* 13-10,3-17,4-17:2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 6-7-9 oc bracing.
WEBS 1 Row at midpt 6-16

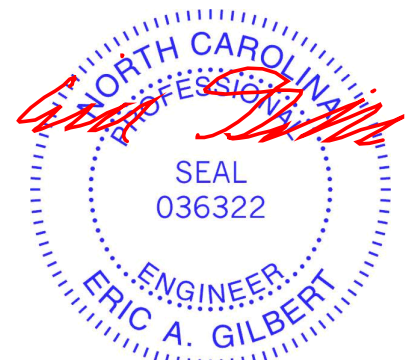
REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=-181 (LC 13)
Max Uplift 2=-211 (LC 12), 11=-211 (LC 13)
Max Grav 2=1720 (LC 1), 11=1720 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-5293/1266, 3-4=-5269/1175,
4-6=-5295/1290, 6-7=-2187/701,
7-8=-2374/769, 8-10=-2932/815,
10-11=-3084/753, 11-12=0/18
BOT CHORD 2-17=-1065/4756, 16-17=-460/2603,
15-16=-164/1651, 13-15=-372/2200,
11-13=-566/2666
WEBS 6-17=-650/3110, 6-16=-1369/455,
7-16=-205/798, 7-15=-274/991,
8-15=-680/355, 8-13=-172/586,
10-13=-349/251, 3-17=-20/198,
4-17=-311/199

- Wind: ASCE 7-10; Vult=130mph (3-second gust)
Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- All plates are MT20 plates unless otherwise indicated.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 211 lb uplift at joint 2 and 211 lb uplift at joint 11.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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



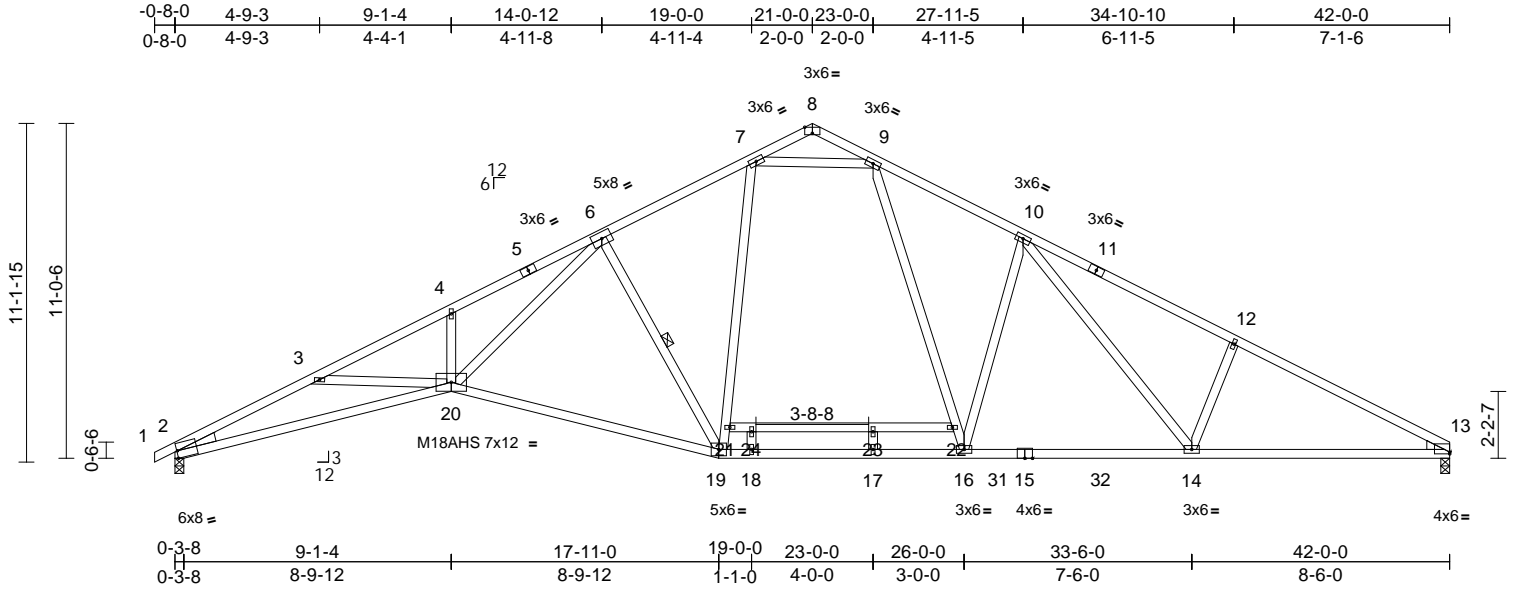
August 24, 2023

Job Wilmington A VLT	Truss A01SA	Truss Type Roof Special	Qty 1	Ply 1	Wilmington A VLT Job Reference (optional)	I60353381
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84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:49
ID:IV9ReAeDaHtaiGKNHivGcykx5-fRfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCdoi7J4zJC?f

Page: 1



Scale = 1:7.5
Plate Offsets (X, Y): [2:0-0-4,Edge], [8:0-3-0,Edge], [13:Edge,0-0-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.53	19-20	>946	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-1.07	19-20	>473	180	M18AHS	186/179
BCLL	0.0*	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.36	13	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS								Weight: 247 lb FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1 *Except* 1-5:2x4 SP DSS, 11-13:2x4 SP No.2
BOT CHORD 2x4 SP No.1 *Except* 2-20:2x4 SP DSS, 19-15:2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 12-14,3-20,4-20,7-9,23-17,24-18:2x4 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 6-6-12 oc bracing.
WEBS 1 Row at midpt 6-19

REACTIONS (size) 2=0-3-8, 13=0-3-8
Max Horiz 2=186 (LC 16)
Max Uplift 2=-211 (LC 12), 13=-197 (LC 13)
Max Grav 2=1720 (LC 1), 13=1680 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-5289/1277, 3-4=-5279/1196, 4-6=-5319/1323, 6-7=-2179/683, 7-8=-141/66, 8-9=-152/56, 9-10=-2351/750, 10-12=-2940/819, 12-13=-3090/756
BOT CHORD 2-20=-1088/4752, 19-20=-464/2590, 18-19=-219/1755, 17-18=-219/1755, 16-17=-219/1755, 14-16=-381/2192, 13-14=-582/2674
WEBS 6-20=-694/3145, 6-19=-1314/410, 19-21=-158/766, 7-21=-154/773, 9-22=-232/857, 16-22=-243/855, 10-16=-715/336, 10-14=-178/615, 12-14=-358/259, 3-20=-14/188, 4-20=-341/224, 7-9=-1737/642, 21-24=-15/61, 23-24=-15/61, 22-23=-15/61, 17-23=-12/30, 18-24=-4/20

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 211 lb uplift at joint 2 and 197 lb uplift at joint 13.
9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) ATTIC SPACE SHOWN IS DESIGNED AS UNINHABITABLE.

LOAD CASE(S) Standard



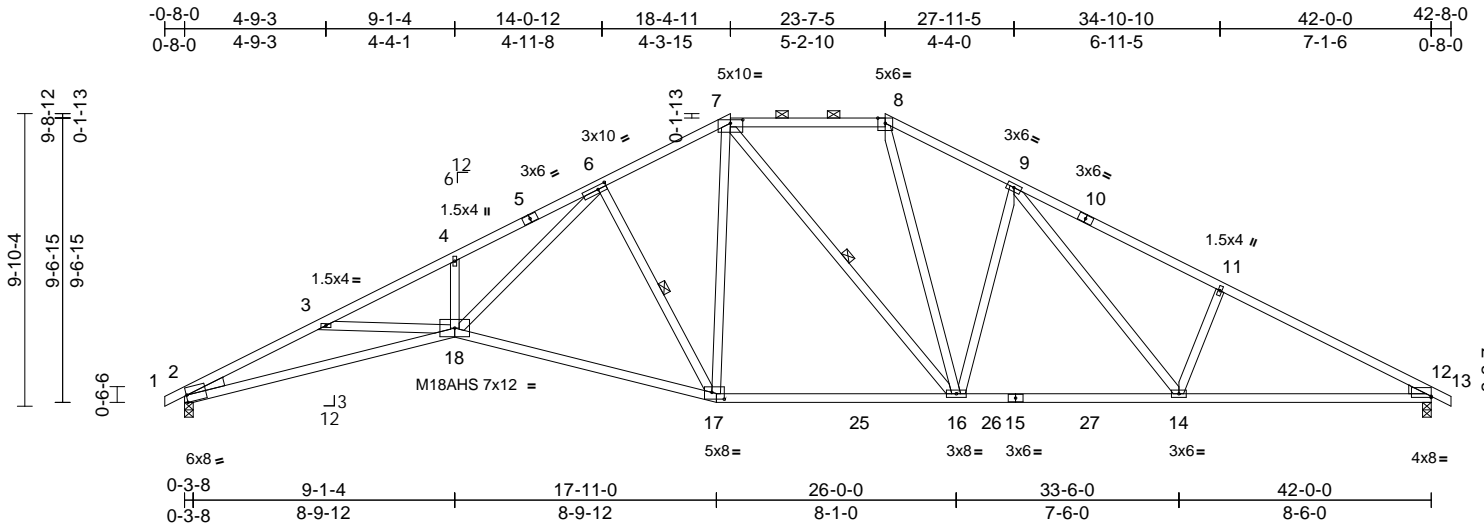
August 24, 2023

Job Wilmington A VLT	Truss A01SB	Truss Type Hip	Qty 1	Ply 1	Wilmington A VLT Job Reference (optional)	I60353382
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84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:49
ID:INRQVC0nbsz3PH14matVlykxRi-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCDoi7J4zJC?f

Page: 1



Scale = 1:77.6

Plate Offsets (X, Y): [2:0-0-4,Edge], [6:0-3-8,0-1-8], [7:0-5-0,0-1-7], [12:Edge,0-0-8], [17:0-5-0,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.38	16-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.90	17-18	>560	180	M18AHS	186/179
BCLL	0.0*	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.36	12	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS								Weight: 244 lb FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-5,10-13:2x4 SP DSS
BOT CHORD 2x4 SP No.1 *Except* 2-18:2x4 SP DSS, 17-15:2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 3-18,4-18,11-14:2x4 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, except 2-0-0 oc purlins (3-7-7 max.): 7-8.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 7-16, 6-17

REACTIONS (size) 2=0-3-8, 12=0-3-8
Max Horiz 2=158 (LC 16)
Max Uplift 2=-193 (LC 12), 12=-193 (LC 13)
Max Grav 2=1720 (LC 1), 12=1720 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-5287/1234, 3-4=-5279/1150, 4-6=-5323/1276, 6-7=-2175/659, 7-8=-1856/624, 8-9=-2340/719, 9-11=-2938/803, 11-12=-3088/740, 12-13=0/18
BOT CHORD 2-18=-1036/4750, 17-18=-433/2599, 16-17=-216/1870, 14-16=-348/2188, 12-14=-556/2671
WEBS 7-16=-233/190, 8-16=-194/797, 9-16=-572/300, 9-14=-187/602, 6-17=-1262/386, 3-18=0/223, 4-18=-348/223, 6-18=-663/3146, 7-17=-140/683, 11-14=-367/263

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

- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) All plates are MT20 plates unless otherwise indicated.
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 193 lb uplift at joint 2 and 193 lb uplift at joint 12.
- 9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



August 24, 2023

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

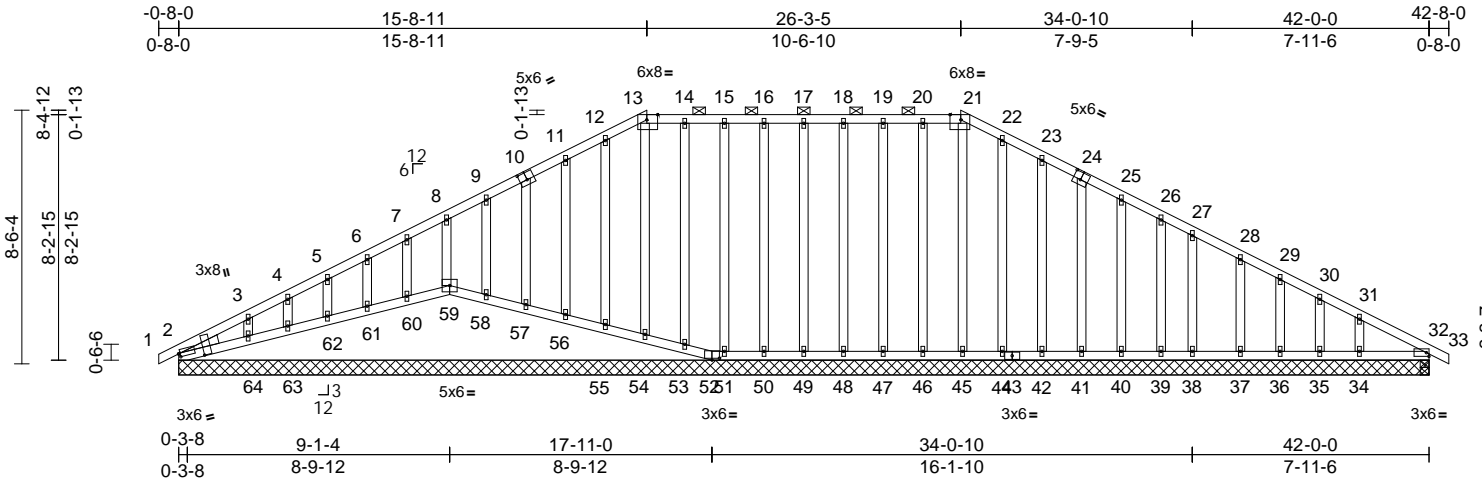
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job Wilmington A VLT	Truss A01SC	Truss Type Hip Supported Gable	Qty 1	Ply 1	Wilmington A VLT Job Reference (optional)	I60353383
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84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:50
ID:Vzqri8ClpQ_f7pua_VoYgoykxNb-RfC?PsB70Hq3NSgPqnL8w3uITxBGKWRCDoi7J4zJC?f

Page: 1



Scale = 1:77.4

Plate Offsets (X, Y): [2:0-0-10,0-1-5], [2:0-3-0,0-10-1], [10:0-3-0,0-3-0], [13:0-4-6,Edge], [21:0-4-6,Edge], [24:0-3-0,0-3-0], [52:0-3-0,0-0-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP		
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00	34-70	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	34-70	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.01	32	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS								
										Weight: 341 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 *Except*
49-17,50-16,51-15,53-14,54-13,55-12,48-18,
47-19,46-20,45-21,44-22,42-23:2x4 SP No.2
WEDGE Left: 2x4 SP No.3

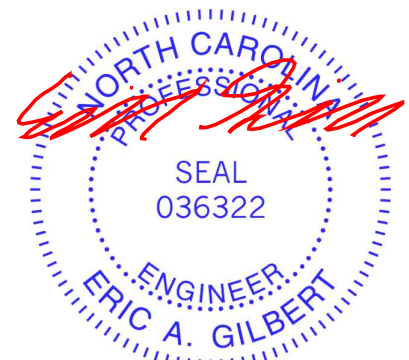
BRACING
TOP CHORD Structural wood sheathing directly applied or
6-0-0 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 13-21.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (size)
2=42-0-0, 32=0-3-8, 34=42-0-0,
35=42-0-0, 36=42-0-0, 37=42-0-0,
38=42-0-0, 39=42-0-0, 40=42-0-0,
41=42-0-0, 42=42-0-0, 44=42-0-0,
45=42-0-0, 46=42-0-0, 47=42-0-0,
48=42-0-0, 49=42-0-0, 50=42-0-0,
51=42-0-0, 52=42-0-0, 53=42-0-0,
54=42-0-0, 55=42-0-0, 56=42-0-0,
57=42-0-0, 58=42-0-0, 59=42-0-0,
60=42-0-0, 61=42-0-0, 62=42-0-0,
63=42-0-0, 64=42-0-0, 65=42-0-0
Max Horiz 2=-136 (LC 13), 65=-136 (LC 13)

Max Uplift 2=-49 (LC 13), 34=-75 (LC 13),
35=-16 (LC 13), 36=-35 (LC 13),
37=-36 (LC 13), 38=-33 (LC 13),
39=-28 (LC 13), 40=-32 (LC 13),
41=-33 (LC 13), 42=-36 (LC 13),
44=-18 (LC 13), 46=-19 (LC 9),
47=-23 (LC 8), 48=-19 (LC 9),
49=-20 (LC 9), 50=-19 (LC 9),
51=-26 (LC 8), 52=-27 (LC 13),
53=-20 (LC 9), 55=-24 (LC 12),
56=-34 (LC 12), 57=-33 (LC 12),
58=-28 (LC 12), 59=-12 (LC 12),
60=-31 (LC 12), 61=-32 (LC 12),
62=-36 (LC 12), 63=-17 (LC 12),
64=-84 (LC 12), 65=-49 (LC 13)
Max Grav 2=133 (LC 21), 32=130 (LC 1),
34=176 (LC 24), 35=82 (LC 1),
36=108 (LC 24), 37=122 (LC 1),
38=109 (LC 24), 39=90 (LC 24),
40=108 (LC 1), 41=106 (LC 24),
42=108 (LC 1), 44=111 (LC 24),
45=107 (LC 22), 46=108 (LC 23),
47=108 (LC 23), 48=107 (LC 24),
49=106 (LC 1), 50=108 (LC 23),
51=103 (LC 24), 52=10 (LC 3),
53=106 (LC 24), 54=118 (LC 22),
55=112 (LC 23), 56=107 (LC 1),
57=106 (LC 23), 58=107 (LC 1),
59=113 (LC 22), 60=108 (LC 1),
61=105 (LC 1), 62=112 (LC 23),
63=87 (LC 1), 64=168 (LC 23),
65=133 (LC 21)

TOP CHORD 1-2=0/18, 2-3=-166/72, 3-4=-130/73,
4-5=-103/83, 5-6=-82/94, 6-7=-62/110,
7-8=-51/126, 8-9=-50/143, 9-11=-71/182,
11-12=-83/215, 12-13=-91/238,
13-14=-83/227, 14-15=-82/226,
15-16=-82/226, 16-17=-82/226,
17-18=-82/226, 18-19=-82/226,
19-20=-82/226, 20-21=-83/227,
21-22=-91/238, 22-23=-83/215,
23-25=-71/182, 25-26=-49/118,
26-27=-39/90, 27-28=-33/59, 28-29=-28/25,
29-30=-41/17, 30-31=-60/16, 31-32=-106/42,
32-33=0/18

FORCES (lb) - Maximum Compression/Maximum Tension



August 24, 2023

Continued on page 3

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Wilmington A VLT	I60353383
Wilmington A VLT	A01SC	Hip Supported Gable	1	1	Job Reference (optional)	

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

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:50

Page: 2

ID:Vzqri8ClpO_7pua_VoYgoykxNb-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

BOT CHORD 2-64=-35/128, 63-64=-42/133,
62-63=-39/131, 61-62=-40/132,
60-61=-40/132, 59-60=-40/131,
58-59=-40/130, 57-58=-40/132,
56-57=-41/132, 55-56=-41/132,
54-55=-41/132, 53-54=-40/133,
52-53=-38/132, 51-52=-36/127,
50-51=-36/127, 49-50=-36/127,
48-49=-36/127, 47-48=-36/127,
46-47=-36/127, 45-46=-36/127,
44-45=-36/126, 42-44=-36/126,
41-42=-36/126, 40-41=-36/126,
39-40=-36/126, 38-39=-36/126,
37-38=-36/126, 36-37=-36/126,
35-36=-36/126, 34-35=-36/126,
32-34=-36/126

WEBS 27-38=-81/56, 17-49=-80/37, 16-50=-80/36,
15-51=-81/42, 14-53=-81/35, 13-54=-90/0,
12-55=-85/40, 11-56=-80/58, 10-57=-80/55,
9-58=-79/54, 8-59=-81/56, 7-60=-80/55,
6-61=-80/55, 5-62=-82/56, 4-63=-72/51,
3-64=-105/70, 18-48=-80/36, 19-47=-81/42,
20-46=-81/35, 21-45=-80/0, 22-44=-84/38,
23-42=-81/59, 24-41=-79/55, 25-40=-80/55,
26-39=-68/47, 28-37=-92/63, 29-36=-80/55,
30-35=-66/44, 31-34=-122/90

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) 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) Provide adequate drainage to prevent water ponding.
- 5) All plates are 1.5x4 MT20 unless otherwise indicated.
- 6) Gable studs spaced at 1-4-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 2, 12 lb uplift at joint 59, 27 lb uplift at joint 52, 33 lb uplift at joint 38, 20 lb uplift at joint 49, 19 lb uplift at joint 50, 26 lb uplift at joint 51, 20 lb uplift at joint 53, 24 lb uplift at joint 55, 34 lb uplift at joint 56, 33 lb uplift at joint 57, 28 lb uplift at joint 58, 31 lb uplift at joint 60, 32 lb uplift at joint 61, 36 lb uplift at joint 62, 17 lb uplift at joint 63, 84 lb uplift at joint 64, 19 lb uplift at joint 48, 23 lb uplift at joint 47, 19 lb uplift at joint 46, 18 lb uplift at joint 44, 36 lb uplift at joint 42, 33 lb uplift at joint 41, 32 lb uplift at joint 40, 28 lb uplift at joint 39, 36 lb uplift at joint 37, 35 lb uplift at joint 36, 16 lb uplift at joint 35, 75 lb uplift at joint 34 and 49 lb uplift at joint 2.
- 10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



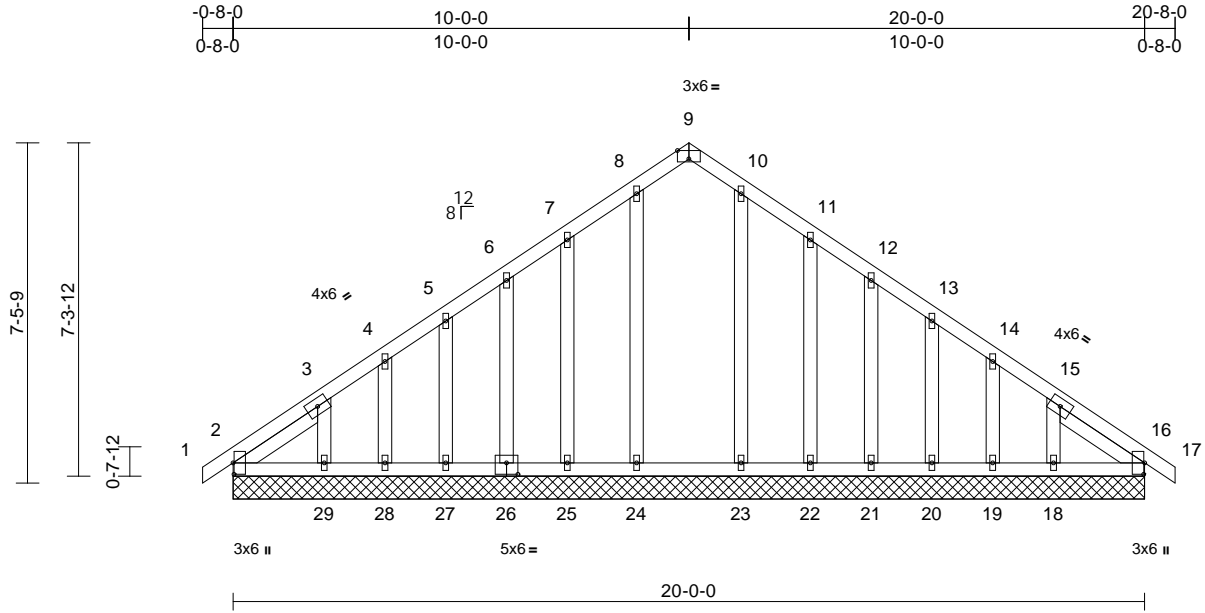
818 Soundside Road
Edenton, NC 27932

Job Wilmington A VLT	Truss B01E	Truss Type Common Supported Gable	Qty 1	Ply 1	Wilmington A VLT Job Reference (optional)	160353384
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84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:50
ID:Rd8szMzCu41eZE1cfW3Z2yKxM5-RfC?Psb70Hq3NSgPqnL8w3uITxbGKWrCdoi7J4zJC?F

Page: 1



Scale = 1:50.5

Plate Offsets (X, Y): [2:0-3-0,0-0-4], [9:0-3-0,Edge], [16:0-3-0,0-0-4], [26:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.06	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	0.08	Horz(CT)	0.01	16	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 141 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 2-2-12, Right 2x4 SP No.3 -- 2-2-12

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

REACTIONS (size)
2=20-0-0, 16=20-0-0, 18=20-0-0, 19=20-0-0, 20=20-0-0, 21=20-0-0, 22=20-0-0, 23=20-0-0, 24=20-0-0, 25=20-0-0, 26=20-0-0, 27=20-0-0, 28=20-0-0, 29=20-0-0, 30=20-0-0, 34=20-0-0
Max Horiz 2=176 (LC 11), 30=176 (LC 11)
Max Uplift 2=-19 (LC 8), 18=-92 (LC 13), 19=-34 (LC 13), 20=-44 (LC 13), 21=-38 (LC 13), 22=-68 (LC 13), 25=-63 (LC 12), 26=-39 (LC 12), 27=-44 (LC 12), 28=-34 (LC 12), 29=-96 (LC 12), 30=-19 (LC 8)
Max Grav 2=164 (LC 21), 16=151 (LC 22), 18=163 (LC 20), 19=101 (LC 20), 20=115 (LC 20), 21=115 (LC 20), 22=111 (LC 24), 23=174 (LC 20), 24=194 (LC 19), 25=111 (LC 23), 26=116 (LC 19), 27=115 (LC 19), 28=101 (LC 19), 29=167 (LC 19), 30=164 (LC 21), 34=151 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/22, 2-3=-95/21, 3-4=-146/87, 4-5=-108/75, 5-6=-97/60, 6-7=-87/54, 7-8=-85/88, 8-9=-91/82, 9-10=-91/82, 10-11=-85/76, 11-12=-61/28, 12-13=-70/24, 13-14=-90/42, 14-15=-122/71, 15-16=-87/13, 16-17=0/22
BOT CHORD 2-29=-117/183, 28-29=-117/183, 27-28=-117/183, 25-27=-117/183, 24-25=-117/183, 23-24=-117/183, 22-23=-117/183, 21-22=-117/183, 20-21=-117/183, 19-20=-117/183, 18-19=-117/183, 16-18=-117/183
WEBS 8-24=-110/22, 10-23=-97/1, 7-25=-107/79, 6-26=-86/55, 5-27=-88/59, 4-28=-81/54, 3-29=-132/100, 11-22=-107/83, 12-21=-85/55, 13-20=-88/59, 14-19=-81/54, 15-18=-132/97

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BC DL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BC DL = 10.0psf.

9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 2, 63 lb uplift at joint 25, 39 lb uplift at joint 26, 44 lb uplift at joint 27, 34 lb uplift at joint 28, 96 lb uplift at joint 29, 68 lb uplift at joint 22, 38 lb uplift at joint 21, 44 lb uplift at joint 20, 34 lb uplift at joint 19, 92 lb uplift at joint 18 and 19 lb uplift at joint 2.
10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
LOAD CASE(S) Standard



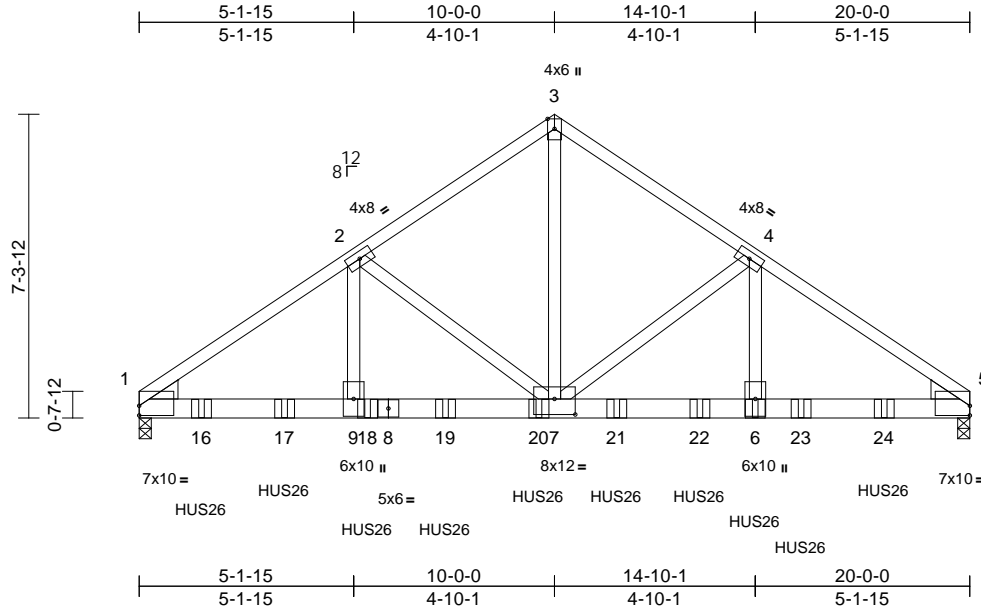
August 24, 2023

Job Wilmington A VLT	Truss B01G	Truss Type Common Girder	Qty 1	Ply 3	Wilmington A VLT Job Reference (optional)	160353385
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84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:51
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Page: 1



Scale = 1:55.5

Plate Offsets (X, Y): [1:Edge,0-2-13], [5:Edge,0-2-13], [7:0-6-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	-0.11	6-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.22	6-7	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.76	Horz(CT)	0.05	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS								Weight: 368 lb FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x6 SP DSS
 WEBS 2x4 SP No.3 *Except* 7-3:2x4 SP No.2
 WEDGE Left: 2x6 SP No.2
 Right: 2x6 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-7-14 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 1=0-3-8, 5=0-3-8
 Max Horiz 1=165 (LC 10)
 Max Uplift 1=1101 (LC 12), 5=1112 (LC 13)
 Max Grav 1=8940 (LC 1), 5=9140 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-12281/1595, 2-3=-8789/1212, 3-4=-8786/1211, 4-5=-13213/1704
 BOT CHORD 1-9=-1296/10132, 7-9=-1296/10132, 6-7=-1337/10899, 5-6=-1337/10899
 WEBS 2-9=-430/3868, 2-7=-3612/577, 3-7=-1215/9347, 4-7=-4576/690, 4-6=-562/4988

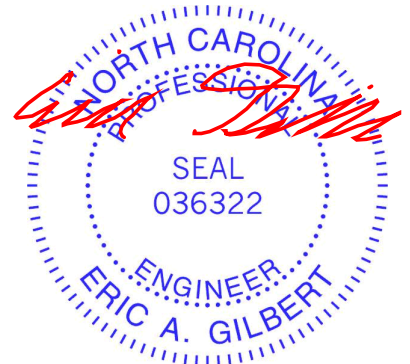
NOTES

- 3-ply truss to be connected together with 10d (0.148"x3") nails as follows:
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
 Bottom chords connected as follows: 2x6 - 3 rows staggered at 0-6-0 oc.
 Web connected as follows: 2x4 - 1 row at 0-9-0 oc, Except member 4-6 2x4 - 1 row at 0-4-0 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=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Two 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.
- This truss is designed in accordance with the 2015 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 2-3-0 oc max. starting at 1-6-0 from the left end to 17-11-4 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=1.15
 Uniform Loads (lb/ft)
 Vert: 1-3=-60, 3-5=-60, 10-13=-20
 Concentrated Loads (lb)
 Vert: 6=-1648 (B), 16=-1648 (B), 17=-1648 (B), 18=-1648 (B), 19=-1648 (B), 20=-1648 (B), 21=-1648 (B), 22=-1648 (B), 23=-1648 (B), 24=-1648 (B)



August 24, 2023

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



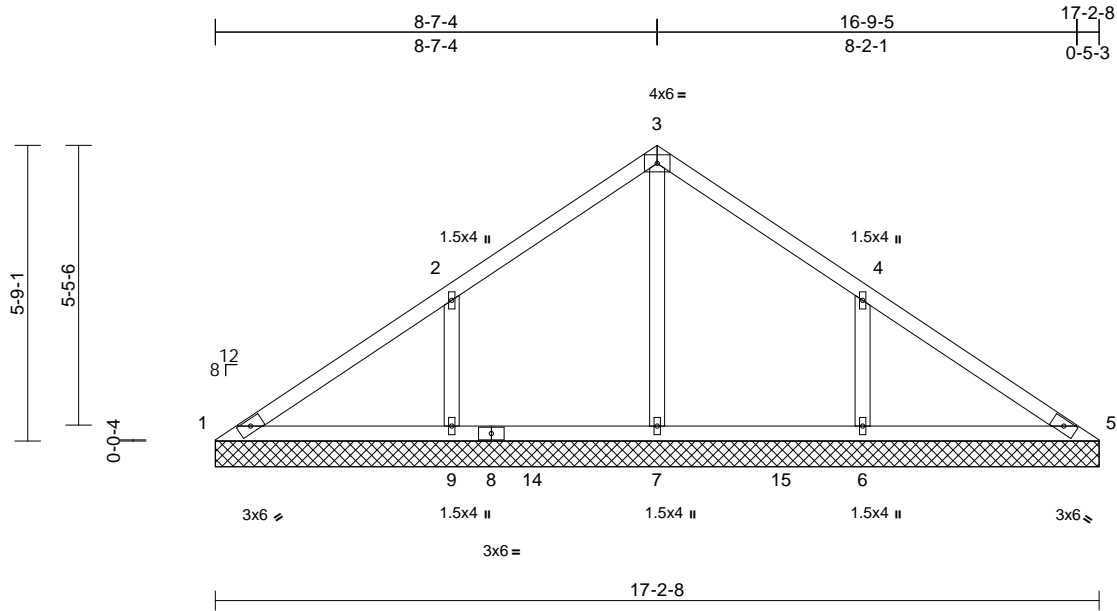
818 Soundside Road
 Edenton, NC 27932

Job Wilmington A VLT	Truss BV1	Truss Type Valley	Qty 1	Ply 1	Wilmington A VLT Job Reference (optional)	160353386
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84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:51
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Page: 1



Scale = 1:44.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MS							Weight: 70 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 1=17-2-8, 5=17-2-8, 6=17-2-8, 7=17-2-8, 9=17-2-8
Max Horiz 1=-138 (LC 8)
Max Uplift 1=-7 (LC 8), 6=-158 (LC 13), 9=-160 (LC 12)
Max Grav 1=102 (LC 23), 5=102 (LC 24), 6=447 (LC 20), 7=478 (LC 19), 9=448 (LC 19)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-126/235, 2-3=-11/180, 3-4=0/171, 4-5=-119/195
BOT CHORD 1-9=-162/132, 7-9=-162/109, 6-7=-162/109, 5-6=-162/109
WEBS 3-7=-330/13, 2-9=-308/195, 4-6=-307/194

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 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 3-06-00 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 7 lb uplift at joint 1, 160 lb uplift at joint 9 and 158 lb uplift at joint 6.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



August 24, 2023

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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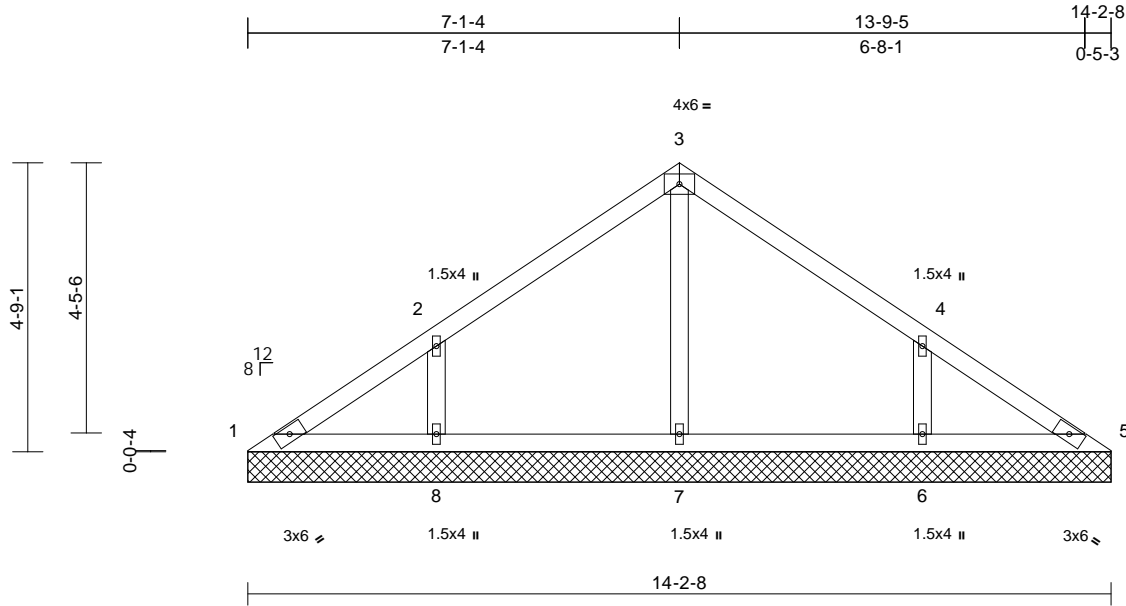
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Wilmington A VLT	160353387
Wilmington A VLT	BV2	Valley	1	1	Job Reference (optional)	

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

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:52
 ID:XbysSAOSbXiXAnAaaz0qaVyktd-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 56 lb	FT = 20%

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

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

REACTIONS (size) 1=14-2-8, 5=14-2-8, 6=14-2-8, 7=14-2-8, 8=14-2-8
 Max Horiz 1=-113 (LC 8)
 Max Uplift 1=-12 (LC 13), 6=-140 (LC 13), 8=-142 (LC 12)
 Max Grav 1=96 (LC 20), 5=83 (LC 1), 6=366 (LC 20), 7=274 (LC 1), 8=368 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-129/121, 2-3=-94/107, 3-4=-88/97, 4-5=-99/88
 BOT CHORD 1-8=-57/111, 7-8=-57/71, 6-7=-57/71, 5-6=-57/79
 WEBS 3-7=-195/0, 2-8=-285/183, 4-6=-284/183

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 3) 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) Gable requires continuous bottom chord bearing.
 - 5) Gable studs spaced at 4-0-0 oc.

- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 1, 142 lb uplift at joint 8 and 140 lb uplift at joint 6.
 - 9) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



August 24, 2023

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 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 and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



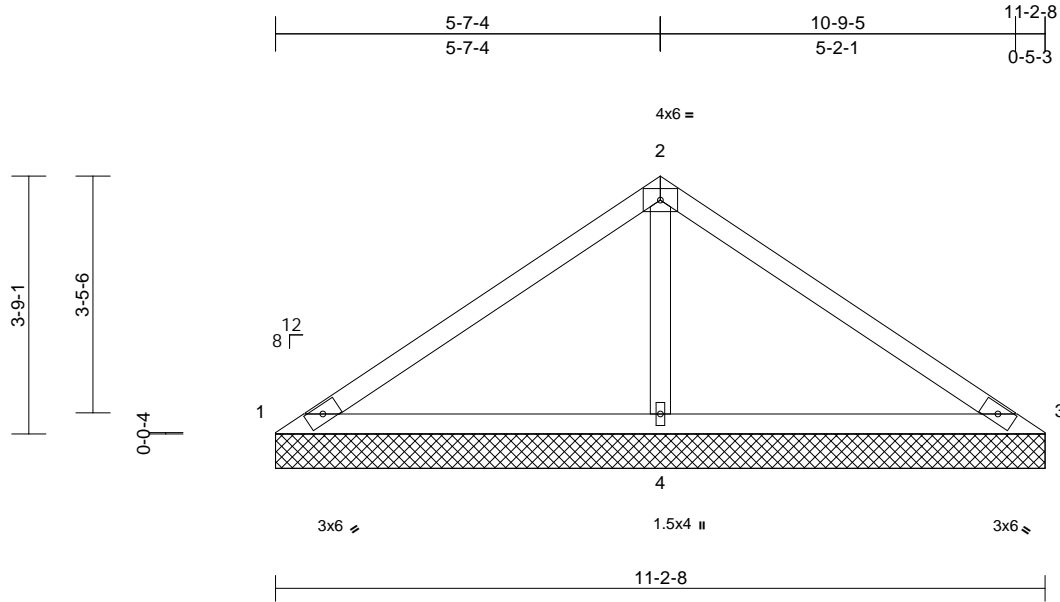
818 Soundside Road
 Edenton, NC 27932

Job Wilmington A VLT	Truss BV3	Truss Type Valley	Qty 1	Ply 1	Wilmington A VLT Job Reference (optional)	160353388
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84 Components (Dunn, NC), Dunn, NC - 28334,

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:52
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.37	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.20	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 40 lb	FT = 20%

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

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

REACTIONS (size) 1=11-2-8, 3=11-2-8, 4=11-2-8
Max Horiz 1=89 (LC 11)
Max Uplift 1=-66 (LC 24), 3=-66 (LC 23), 4=-149 (LC 12)
Max Grav 1=46 (LC 23), 3=53 (LC 12), 4=927 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-155/476, 2-3=-155/476
BOT CHORD 1-4=-411/202, 3-4=-411/202
WEBS 2-4=-721/258

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 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.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 4-0-0 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 3-06-00 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 66 lb uplift at joint 1, 66 lb uplift at joint 3 and 149 lb uplift at joint 4.
 - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



August 24, 2023

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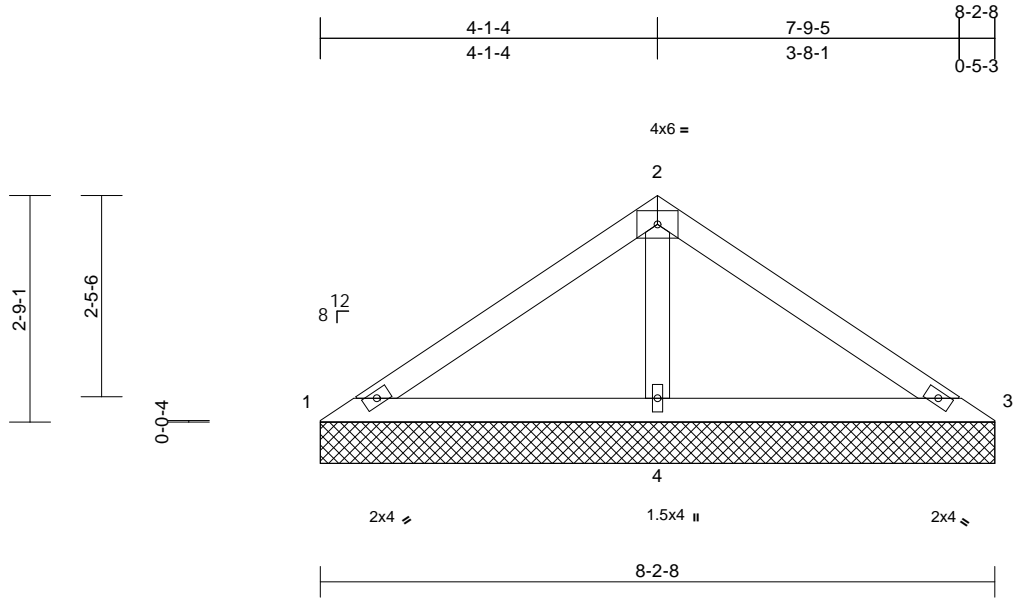
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Wilmington A VLT	160353389
Wilmington A VLT	BV4	Valley	1	1	Job Reference (optional)	

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

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:52
 ID:EF1D_nITENqWri8E_?OBo0yxtk-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 28 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 8-2-8 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size) 1=8-2-8, 3=8-2-8, 4=8-2-8
 Max Horiz 1=64 (LC 9)
 Max Uplift 1=-14 (LC 24), 3=-14 (LC 23),
 4=-81 (LC 12)
 Max Grav 1=68 (LC 23), 3=68 (LC 24), 4=586
 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-75/261, 2-3=-75/261
 BOT CHORD 1-4=-227/120, 3-4=-227/120
 WEBS 2-4=-424/149

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 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 3-06-00 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 14 lb uplift at joint 1, 14 lb uplift at joint 3 and 81 lb uplift at joint 4.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



August 24, 2023

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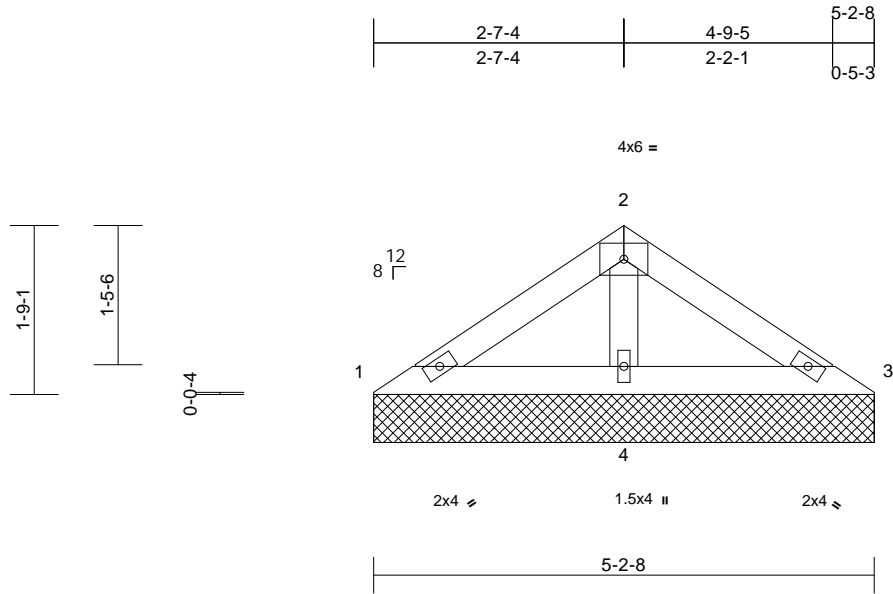
818 Soundside Road
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Wilmington A VLT	160353390
Wilmington A VLT	BV5	Valley	1	1	Job Reference (optional)	

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

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:52
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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MP							Weight: 17 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-2-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size) 1=5-2-8, 3=5-2-8, 4=5-2-8
Max Horiz 1=-39 (LC 8)
Max Uplift 1=-6 (LC 12), 3=-13 (LC 13), 4=-35 (LC 12)
Max Grav 1=65 (LC 23), 3=65 (LC 24), 4=313 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-62/107, 2-3=-62/107
BOT CHORD 1-4=-96/56, 3-4=-96/56
WEBS 2-4=-196/61

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 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 3-06-00 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 6 lb uplift at joint 1, 13 lb uplift at joint 3 and 35 lb uplift at joint 4.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



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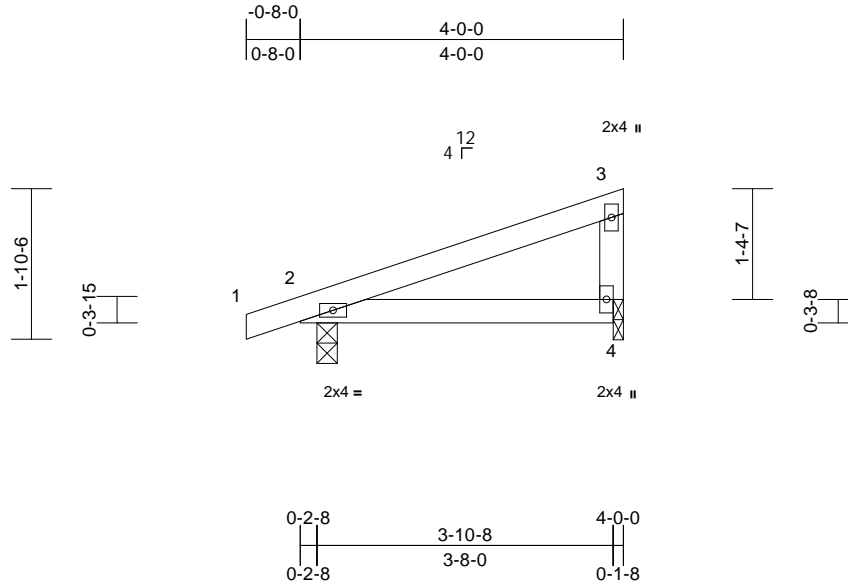
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Wilmington A VLT	I60353391
Wilmington A VLT	M1	Monopitch	10	1	Job Reference (optional)	

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

Run: 8.72 S Aug 11 2023 Print: 8.720 S Aug 11 2023 MiTek Industries, Inc. Wed Aug 23 15:00:53
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Page: 1



Scale = 1:28.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	0.01	4-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.01	4-7	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-MR							Weight: 15 lb	FT = 20%

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

7) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

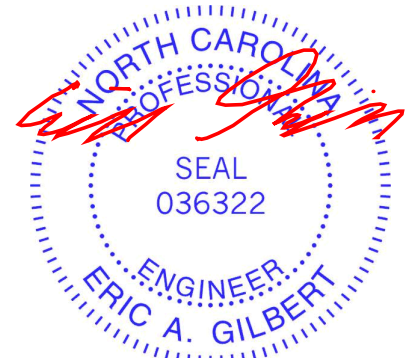
LOAD CASE(S) Standard

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

REACTIONS (size) 2=0-3-0, 4=0-1-8
 Max Horiz 2=61 (LC 8)
 Max Uplift 2=-48 (LC 8), 4=-35 (LC 12)
 Max Grav 2=198 (LC 1), 4=151 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/13, 2-3=-107/19, 3-4=-87/74
 BOT CHORD 2-4=-45/87

- NOTES**
- 1) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BC DL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - 4) Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - 5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
 - 6) 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.



August 24, 2023

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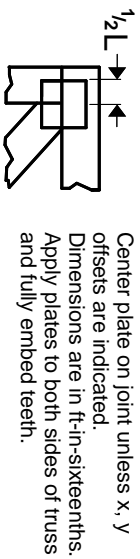
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ENGINEERING BY
TRENCO
 A MiTek Affiliate

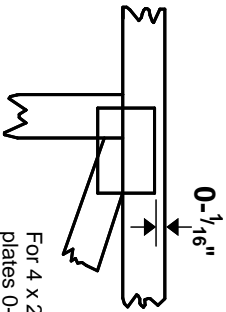
818 Soundside Road
 Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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



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

* Plate location details available in MITek 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

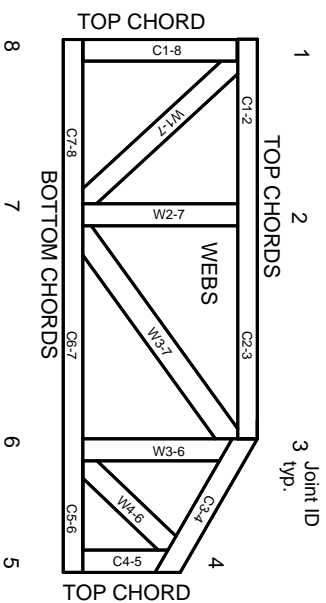


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & 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-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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

Lumber design values are in accordance with ANSI/TP1 section 6.3. These truss designs rely on Lumber values established by others.

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MITek

ENGINEERING BY
TRENGO
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MITek Engineering Reference Sheet: MIL-7473 rev. 1/2/2023

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability/bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.