ENGINEERING BY
TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: P02002-24592
1035 Serenity

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by 84 Lumber 1387 (Winter Haven, FL).

Pages or sheets covered by this seal: T37059464 thru T37059501

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844


April 18,2025

Johnson, Andrew

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

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | J13 | Jack-Open | 1 | 1 | T37059464 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:10
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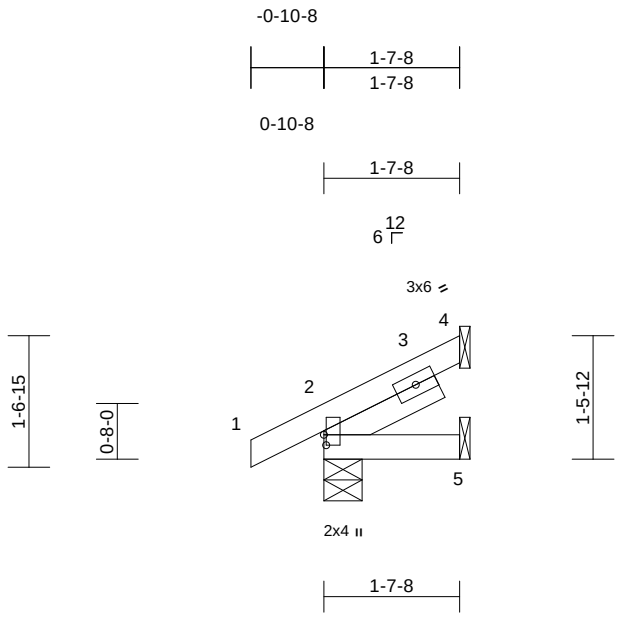



Scale = 1:27.6

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

| 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 | 0.05 | Vert(LL) | 0.00 | 8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(CT) | 0.00 | 8 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 2 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 9 lb | FT = 20% |

**LUMBER**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x4 SP No.2 |
| SLIDER | Left 2x4 SP No.3 -- 1-6-0 |

**BRACING**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 1-7-8 oc purlins. |
| BOT CHORD | Rigid ceiling directly applied or 10-0-0 oc bracing. |

**REACTIONS** (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=43 (LC 16)
Max Uplift 2=-22 (LC 16), 4=-23 (LC 16), 5=-3 (LC 16)
Max Grav 2=131 (LC 2), 4=34 (LC 2), 5=25 (LC 7)

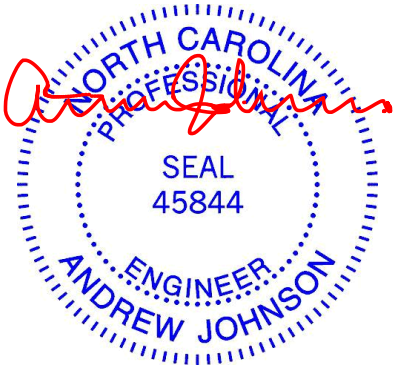
**FORCES** (lb) - Maximum Compression/Maximum Tension

| | |
|---|---|
| TOP CHORD | 1-2=0/23, 2-4=-40/17 |
| BOT CHORD | 2-5=-28/23 |

**NOTES**

1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 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
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 2, 3 lb uplift at joint 5 and 23 lb uplift at joint 4.
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.

**LOAD CASE(S)** Standard




April 18,2025



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | J12 | Jack-Open Girder | 1 | 1 | T37059465 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:10 Page: 1
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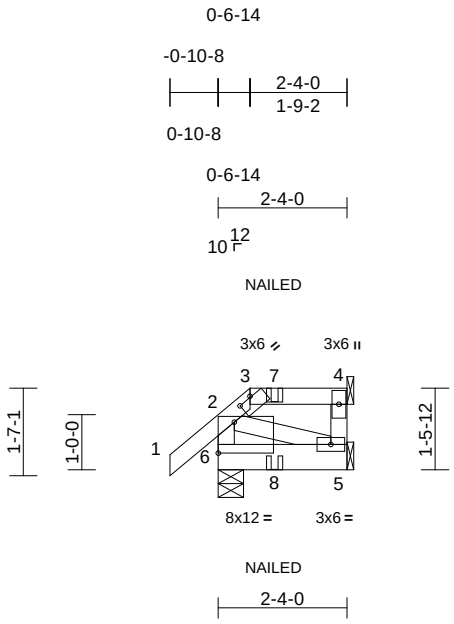



Scale = 1:41.8

Plate Offsets (X, Y): [3:0-3-0,0-0-4], [6:Edge,0-6-12]

| 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 | 0.10 | Vert(LL) | 0.00 | 5-6 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.02 | Vert(CT) | 0.00 | 5-6 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.01 | Horz(CT) | 0.00 | 4 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 16 lb | FT = 20% |

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

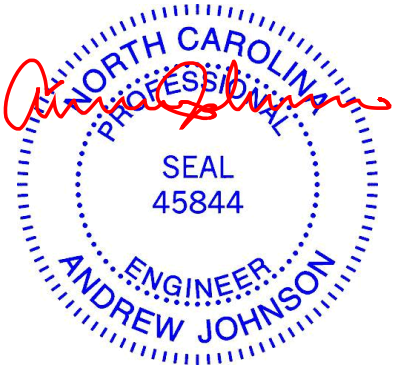
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 2-4-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (size) 4= Mechanical, 5= Mechanical, 6=0-5-8
Max Horiz 6=35 (LC 9)
Max Uplift 4=-21 (LC 8), 5=-8 (LC 9), 6=-32 (LC 12)
Max Grav 4=59 (LC 33), 5=41 (LC 7), 6=160 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-6=-136/36, 1-2=0/47, 2-3=-52/15, 3-4=0/0
BOT CHORD 5-6=-28/28
WEBS 4-5=0/0, 2-5=-29/29

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 6, 21 lb uplift at joint 4 and 8 lb uplift at joint 5.
12) 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.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
15) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
16) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-35, 2-3=-35, 3-4=-45, 5-6=-20
Concentrated Loads (lb)
Vert: 8=-2 (B)

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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | J11 | Jack-Open | 1 | 1 | T37059466 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:10
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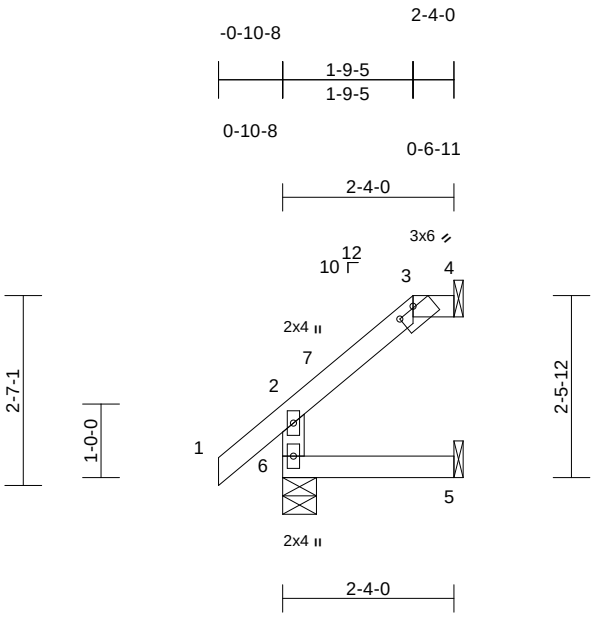


Scale = 1:31.4

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.23 | Vert(LL) | 0.00 | 5-6 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.13 | Vert(CT) | 0.00 | 5-6 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | -0.01 | 4 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MR | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 11 lb | FT = 20% |

**LUMBER**

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

**BRACING**

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

**REACTIONS** (size) 4= Mechanical, 5= Mechanical, 6=0-5-8
Max Horiz 6=68 (LC 16)
Max Uplift 4=-37 (LC 16), 5=-10 (LC 16), 6=-5 (LC 16)
Max Grav 4=50 (LC 2), 5=40 (LC 7), 6=186 (LC 38)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-6=-163/105, 1-2=0/47, 2-3=-60/26, 3-4=0/0
BOT CHORD 5-6=0/0

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 6, 37 lb uplift at joint 4 and 10 lb uplift at joint 5.
12) 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.
13) 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


April 18,2025



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | J10 | Jack-Open | 12 | 1 | T37059467 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:09
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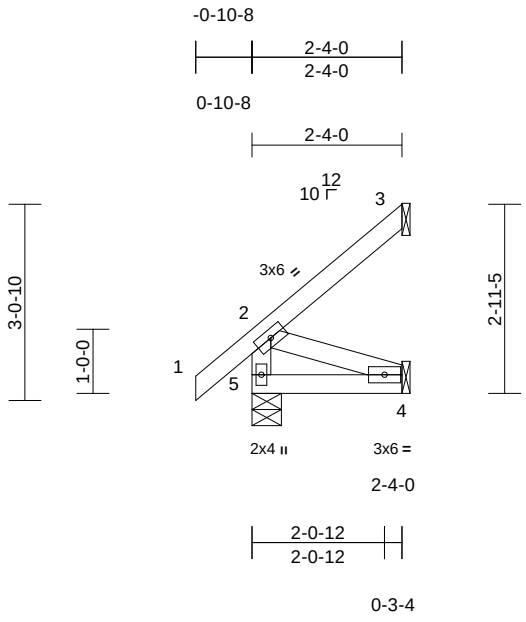



Scale = 1:35.9

| 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 | 0.10 | Vert(LL) | 0.00 | 4-5 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.05 | Vert(CT) | 0.00 | 4-5 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.06 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 14 lb | FT = 20% |

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

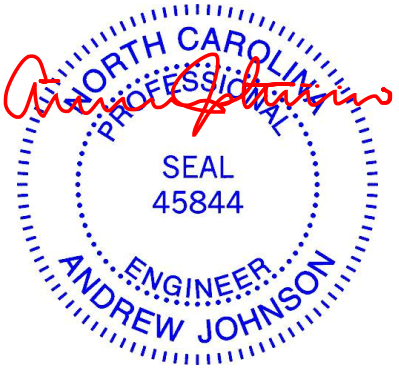
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 2-4-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 3= Mechanical, 4= Mechanical, 5=0-5-8
Max Horiz 5=82 (LC 14)
Max Uplift 3=-43 (LC 14), 4=-25 (LC 14)
Max Grav 3=56 (LC 26), 4=44 (LC 5), 5=162 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-140/50, 1-2=0/39, 2-3=-75/46
BOT CHORD 4-5=-198/58
WEBS 2-4=-62/211

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 43 lb uplift at joint 3 and 25 lb uplift at joint 4.
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.

**LOAD CASE(S)** Standard




April 18,2025



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | |
|---|---|---|---|---|---|---|
| P02002-24592 | H11 | Half Hip | 1 | 1 | Job Reference (optional) | T37059468 |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:08 Page: 1

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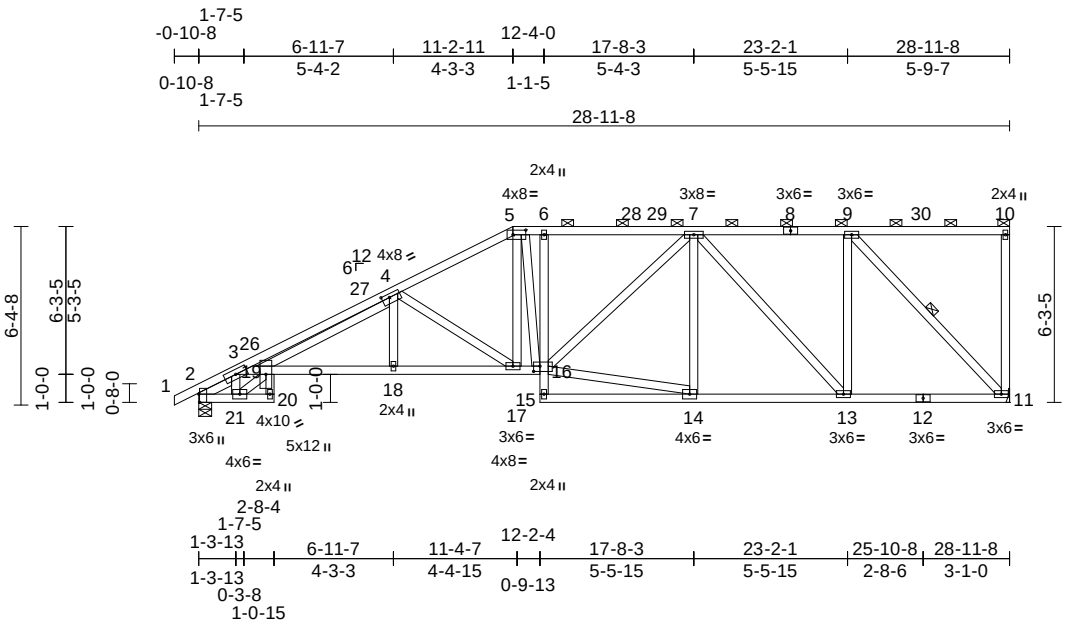



Scale = 1:82.3

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.85 | Vert(LL) | -0.17 | 18-19 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.93 | Vert(CT) | -0.36 | 18-19 | >974 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.75 | Horz(CT) | 0.19 | 11 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 206 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2

BOT CHORD 2x4 SP No.2 *Except* 20-19,6-15:2x4 SP No.3, 3-16:2x4 SP No.1

WEBS 2x4 SP No.3 *Except* 11-9,16-7,13-7:2x4 SP No.2

SLIDER Left 2x4 SP No.2 -- 1-4-0

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-1-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-3-14 max.): 5-10.

BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

WEBS 1 Row at midpt 9-11

**REACTIONS** (size) 2=0-5-8, 11= Mechanical
Max Horiz 2=227 (LC 15)
Max Uplift 2=-190 (LC 16), 11=-261 (LC 13)
Max Grav 2=1206 (LC 2), 11=1152 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/23, 2-3=-783/112, 3-4=-3950/918, 4-5=-1830/331, 5-6=-1633/329, 6-7=-1631/330, 7-9=-912/240, 9-10=-110/113, 10-11=-154/64

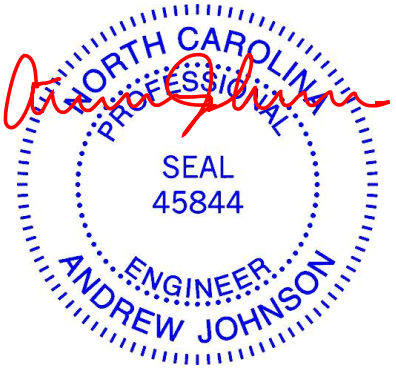
BOT CHORD 2-21=-462/1362, 20-21=-66/203, 19-20=-18/91, 3-19=-530/1916, 18-19=-641/2235, 17-18=-641/2234, 16-17=-449/1585, 15-16=0/99, 6-16=-276/108, 14-15=-20/124, 13-14=-344/1345, 11-13=-251/912

WEBS 9-11=-1312/296, 5-16=-133/314, 4-18=-4/280, 4-17=-790/236, 5-17=-96/507, 3-21=-1323/440, 19-21=-620/1823, 4-19=-507/1499, 7-16=-160/392, 7-14=-121/94, 14-16=-330/1242, 9-13=-59/596, 7-13=-641/140

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 11-2-11, Exterior(2R) 11-2-11 to 15-5-9, Interior (1) 15-5-9 to 28-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 261 lb uplift at joint 11 and 190 lb uplift at joint 2.
12) 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.
13) 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




April 18,2025

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Edenton, NC 27932

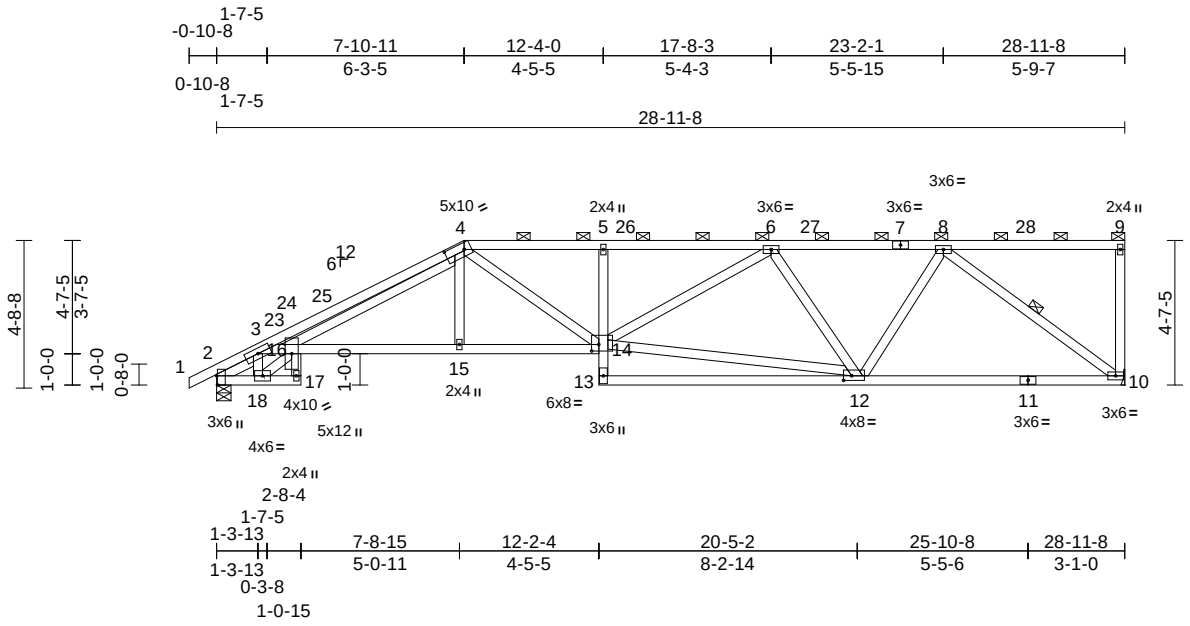
| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | T37059469 |
|---|---|---|---|---|---|---|
| P02002-24592 | H10 | Half Hip | 1 | 1 | Job Reference (optional) | |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:07

ID:4ZXepRdxGrSEx6WV24?_IszQTUs-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f






Scale = 1:73.5

Plate Offsets (X, Y): [2:0-3-8,Edge], [4:0-7-4,0-2-8], [12:0-3-2,0-1-12], [14:0-2-12,0-2-8]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.68 | Vert(LL) | -0.18 | 15-16 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.83 | Vert(CT) | -0.38 | 15-16 | >920 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.77 | Horz(CT) | 0.20 | 10 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 176 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2 *Except* 1-4:2x4 SP DSS

BOT CHORD 2x4 SP No.2 *Except* 17-16,5-13:2x4 SP No.3, 3-14:2x4 SP No.1

WEBS 2x4 SP No.3 *Except* 16-4,12-14,10-8:2x4 SP No.2

SLIDER Left 2x4 SP No.1 -- 1-4-0

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-7-9 oc purlins, except end verticals, and 2-0-0 oc purlins (3-5-14 max.): 4-9.

BOT CHORD Rigid ceiling directly applied or 8-7-14 oc bracing.

WEBS 1 Row at midpt 8-10

**REACTIONS** (size) 2=0-5-8, 10= Mechanical

Max Horiz 2=165 (LC 15)

Max Uplift 2=-165 (LC 13), 10=-266 (LC 13)

Max Grav 2=1206 (LC 2), 10=1152 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/25, 2-3=-795/121, 3-4=-4070/926, 4-5=-2456/540, 5-6=-2430/535, 6-8=-1589/334, 8-9=-94/83, 9-10=-158/62

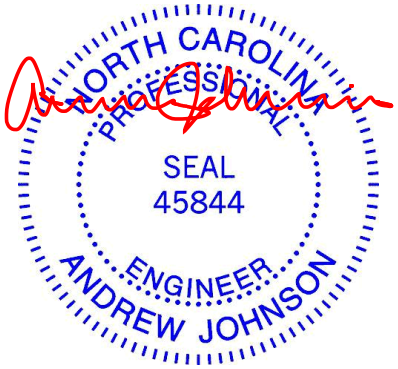
BOT CHORD 2-18=-421/1372, 17-18=-67/197, 16-17=-20/91, 3-16=-470/1972, 15-16=-500/2065, 14-15=-500/2055, 13-14=0/142, 5-14=-320/129, 12-13=-35/224, 10-12=-331/1239

WEBS 4-16=-552/1783, 4-15=0/301, 4-14=-196/606, 12-14=-471/1774, 6-14=-133/523, 6-12=-722/230, 8-12=-87/669, 8-10=-1530/373, 3-18=-1352/420, 16-18=-562/1850

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-10-11, Exterior(2R) 7-10-11 to 12-4-0, Interior (1) 12-4-0 to 28-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 266 lb uplift at joint 10 and 165 lb uplift at joint 2.
12) 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.
13) 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




April 18,2025



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | H9 | Half Hip Girder | 1 | **2** | T37059470 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:07 Page: 1
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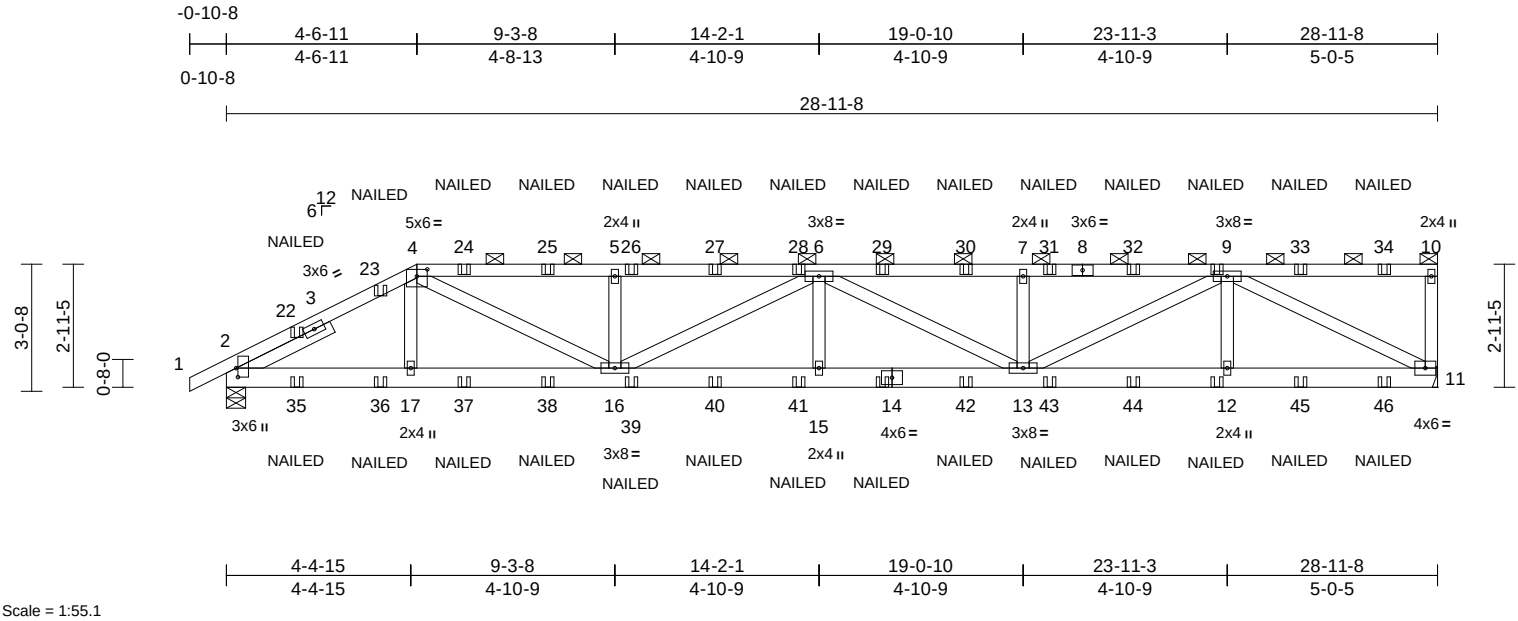


Scale = 1:55.1

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.20 | Vert(LL) | 0.14 | 13-15 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.34 | Vert(CT) | -0.18 | 13-15 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.31 | Horz(CT) | 0.03 | 11 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 348 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 -- 2-6-0

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-5-8, 11= Mechanical
Max Horiz 2=101 (LC 11)
Max Uplift 2=-506 (LC 9), 11=-597 (LC 9)
Max Grav 2=1228 (LC 2), 11=1173 (LC 29)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/31, 2-4=-1865/893, 4-5=-2839/1428, 5-6=-2839/1428, 6-7=-2967/1501, 7-9=-2967/1501, 9-10=-58/43, 10-11=-137/72
BOT CHORD 2-17=-845/1629, 16-17=-846/1628, 15-16=-1696/3272, 13-15=-1696/3272, 12-13=-990/1905, 11-12=-990/1905
WEBS 4-17=-2/110, 4-16=-725/1411, 5-16=-340/170, 6-16=-525/276, 6-15=-51/212, 6-13=-386/194, 7-13=-282/154, 9-13=-604/1177, 9-12=-50/221, 9-11=-2111/1074

**NOTES**
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
8) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
9) Provide adequate drainage to prevent water ponding.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * 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.
12) Refer to girder(s) for truss to truss connections.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 597 lb uplift at joint 11 and 506 lb uplift at joint 2.
14) 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.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
16) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

**LOAD CASE(S)** Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-35, 4-10=-45, 11-18=-20
Concentrated Loads (lb)
Vert: 14=-2 (F), 12=-2 (F), 22=-28 (F), 23=-8 (F), 35=-8 (F), 36=-1 (F), 37=-2 (F), 38=-2 (F), 39=-2 (F), 40=-2 (F), 41=-2 (F), 42=-2 (F), 43=-2 (F), 44=-2 (F), 45=-2 (F), 46=-2 (F)


April 18,2025



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| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | V5A | Valley | 1 | 1 | T37059471 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Feb 18 2025 Print: 8.830 S Feb 18 2025 MiTek Industries, Inc. Fri Apr 18 11:55:13

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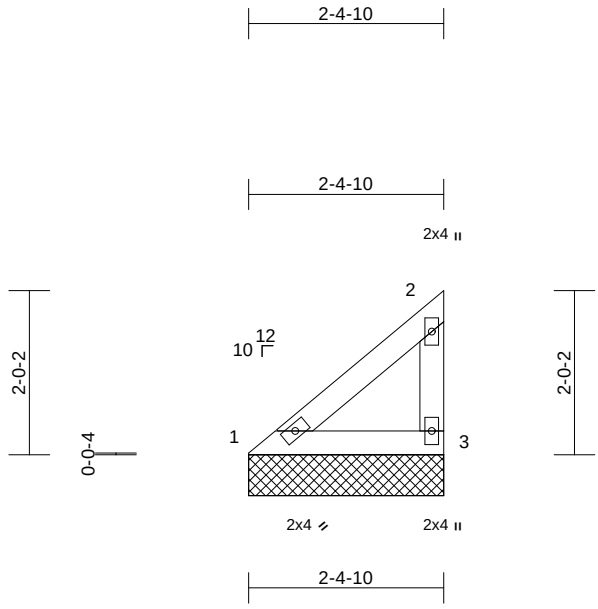


Scale = 1:28.2

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.05 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.07 | Vert(TL) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horiz(TL) | 0.00 | 3 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 9 lb | FT = 20% |

**LUMBER**

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

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 2-4-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=2-4-10, 3=2-4-10
Max Horiz 1=59 (LC 11)
Max Uplift 1=-9 (LC 14), 3=-33 (LC 14)
Max Grav 1=90 (LC 2), 3=100 (LC 25)

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

**JOINT STRESS INDEX**

1 = 0.33, 2 = 0.09 and 3 = 0.06

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 3 and 9 lb uplift at joint 1.
12) 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.


April 18,2025



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| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | T37059472 |
|---|---|---|---|---|---|---|
| P02002-24592 | V4A | Valley | 1 | 1 | Job Reference (optional) | |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:11
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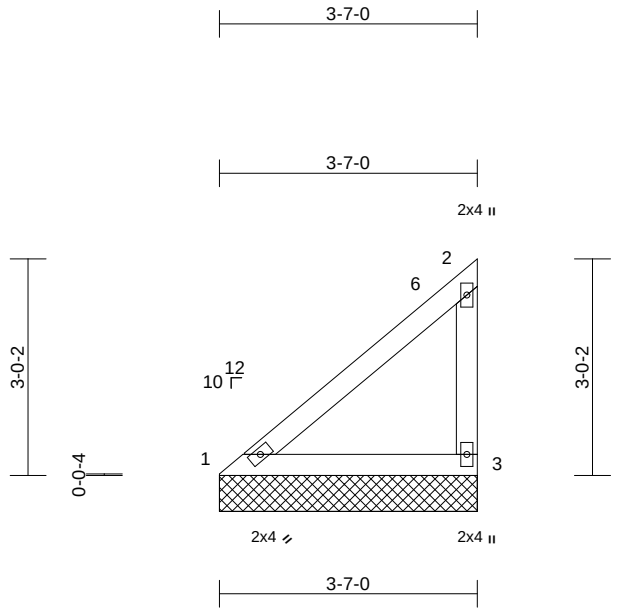


Scale = 1:32

| 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 | 0.15 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.16 | Vert(TL) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horiz(TL) | 0.00 | 3 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 15 lb | FT = 20% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 3-7-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=3-7-0, 3=3-7-0
Max Horiz 1=94 (LC 11)
Max Uplift 1=-12 (LC 14), 3=-52 (LC 14)
Max Grav 1=138 (LC 2), 3=155 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-169/99, 2-3=-118/155
BOT CHORD 1-3=-184/167

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 3-5-9 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 52 lb uplift at joint 3 and 12 lb uplift at joint 1.
11) 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.

**LOAD CASE(S)** Standard


April 18,2025



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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | T37059473 |
|---|---|---|---|---|---|---|
| P02002-24592 | V3A | Valley | 1 | 1 | Job Reference (optional) | |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:11
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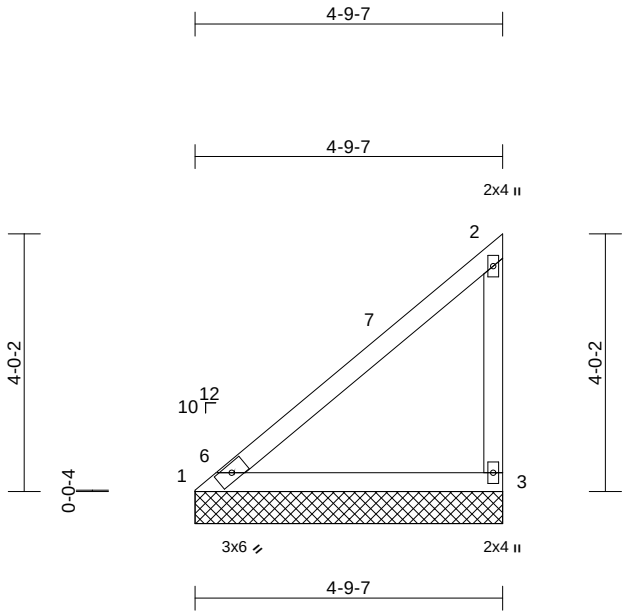



Scale = 1:35.9

| 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 | 0.30 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.30 | Vert(TL) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horiz(TL) | 0.01 | 3 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 21 lb | FT = 20% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-9-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=4-9-7, 3=4-9-7
Max Horiz 1=130 (LC 11)
Max Uplift 1=-16 (LC 14), 3=-71 (LC 14)
Max Grav 1=186 (LC 2), 3=210 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-234/134, 2-3=-160/206
BOT CHORD 1-3=-239/228

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 4-8-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 71 lb uplift at joint 3 and 16 lb uplift at joint 1.
11) 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.

**LOAD CASE(S)** Standard

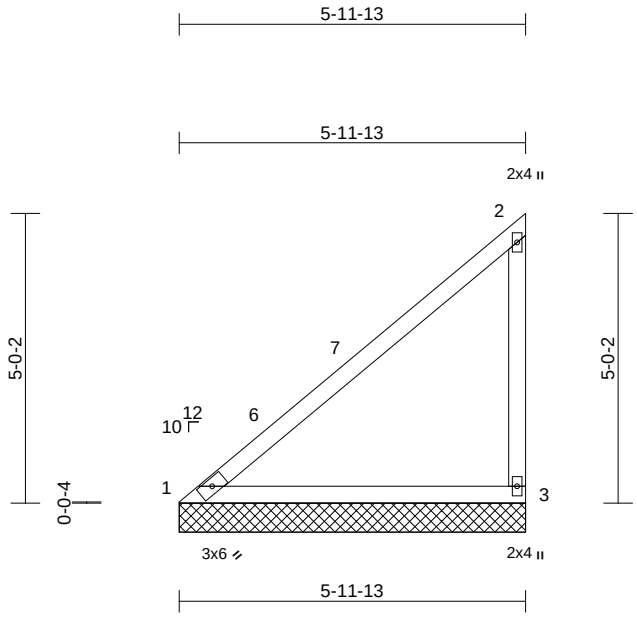

April 18,2025



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

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | T37059474 |
|---|---|---|---|---|---|---|
| P02002-24592 | V2A | Valley | 1 | 1 | Job Reference (optional) | |






Scale = 1:39.8

| 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 | 0.51 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.47 | Vert(TL) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horiz(TL) | 0.01 | 3 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 26 lb | FT = 20% |

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

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 5-11-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=5-11-13, 3=5-11-13
Max Horiz 1=166 (LC 11)
Max Uplift 1=-19 (LC 14), 3=-90 (LC 14)
Max Grav 1=234 (LC 2), 3=264 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-298/169, 2-3=-200/252
BOT CHORD 1-3=-266/287

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 5-10-6 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 90 lb uplift at joint 3 and 19 lb uplift at joint 1.
11) 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.

**LOAD CASE(S)** Standard


April 18,2025



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

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | V1A | Valley | 1 | 1 | T37059475 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:11
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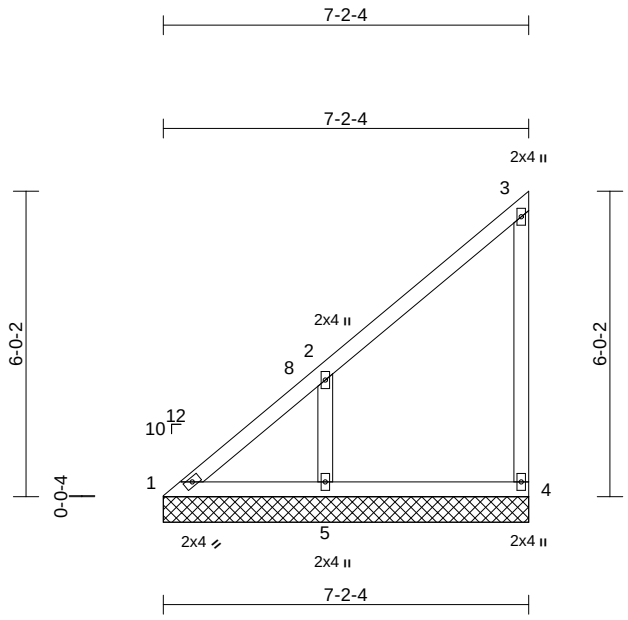


Scale = 1:45.3

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.53 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.12 | Vert(TL) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.09 | Horiz(TL) | 0.00 | 4 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 35 lb | FT = 20% |

**LUMBER**

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

**BRACING**

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

**REACTIONS** (size) 1=7-2-4, 4=7-2-4, 5=7-2-4
Max Horiz 1=202 (LC 11)
Max Uplift 1=-32 (LC 10), 4=-62 (LC 11), 5=-180 (LC 14)
Max Grav 1=141 (LC 26), 4=148 (LC 25), 5=379 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension

| | |
|---|---|
| TOP CHORD | 1-2=-420/257, 2-3=-201/148, 3-4=-151/188 |
| BOT CHORD | 1-5=-134/156, 4-5=-95/104 |
| WEBS | 2-5=-282/316 |

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-2-8, Interior (1) 3-2-8 to 7-0-12 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 62 lb uplift at joint 4, 32 lb uplift at joint 1 and 180 lb uplift at joint 5.
11) 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.

**LOAD CASE(S)** Standard


April 18,2025



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TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | T1 | Roof Special | 3 | 1 | T37059476 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:10 Page: 1

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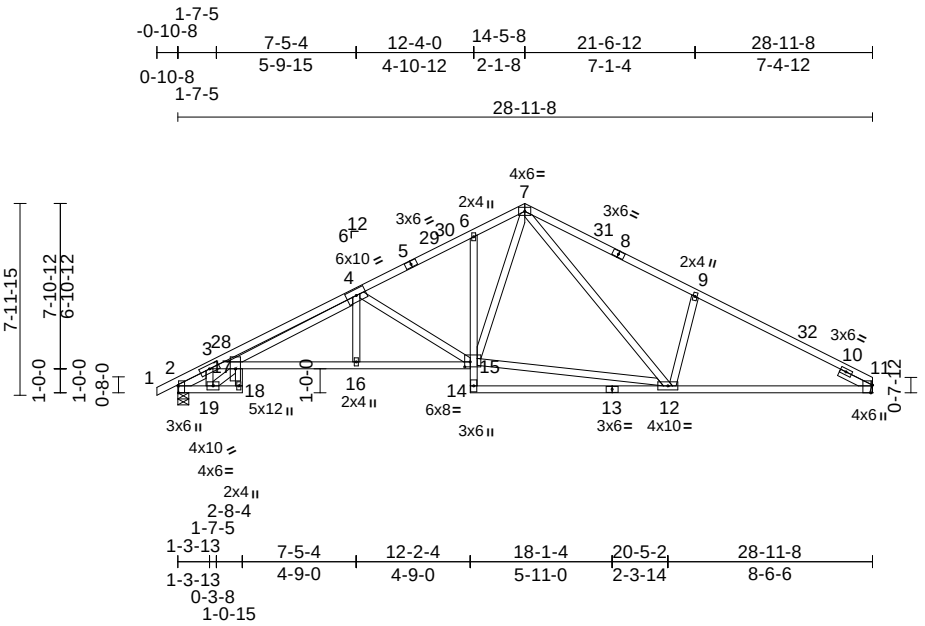






Scale = 1:96

Plate Offsets (X, Y): [2:0-3-8,Edge], [11:0-3-13,Edge], [15:0-2-12,0-2-8]

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.89 | Vert(LL) | -0.19 | 16-17 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.94 | Vert(CT) | -0.40 | 16-17 | >873 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.76 | Horz(CT) | 0.19 | 11 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 175 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2

BOT CHORD 2x4 SP No.2 *Except* 18-17:2x4 SP No.3, 3-15,13-11:2x4 SP No.1

WEBS 2x4 SP No.3 *Except* 12-15,15-7,12-7:2x4 SP No.2

SLIDER Left 2x4 SP No.2 -- 1-4-0, Right 2x4 SP No.3 -- 1-6-0

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 1-10-6 oc purlins.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 16-17
9-10-1 oc bracing: 15-16.

**REACTIONS** (size) 2=0-5-8, 11= Mechanical
Max Horiz 2=128 (LC 20)
Max Uplift 2=-214 (LC 16), 11=-198 (LC 17)
Max Grav 2=1212 (LC 2), 11=1158 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/23, 2-3=-781/127, 3-4=-3986/836, 4-6=-1740/348, 6-7=-1649/392, 7-9=-1834/421, 9-11=-1923/349

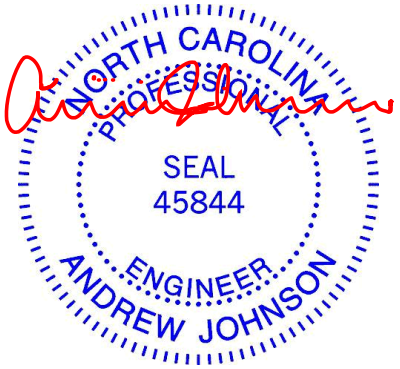
BOT CHORD 2-19=-345/1374, 18-19=-59/206, 17-18=-18/93, 3-17=-360/1927, 16-17=-409/2181, 15-16=-409/2181, 14-15=0/148, 6-15=-165/102, 12-14=-6/154, 11-12=-233/1652

WEBS 4-15=-821/252, 12-15=-118/1077, 7-15=-223/821, 7-12=-235/595, 9-12=-407/240, 4-16=0/302, 4-17=-424/1586, 3-19=-1338/348, 17-19=-455/1838

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-5-8, Exterior(2R) 14-5-8 to 17-5-8, Interior (1) 17-5-8 to 28-11-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 214 lb uplift at joint 2 and 198 lb uplift at joint 11.
11) 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.

**LOAD CASE(S)** Standard




April 18,2025



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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | |
|---|---|---|---|---|---|---|
| P02002-24592 | A9 | Common | 1 | 1 | Job Reference (optional) | T37059477 |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:03 Page: 1

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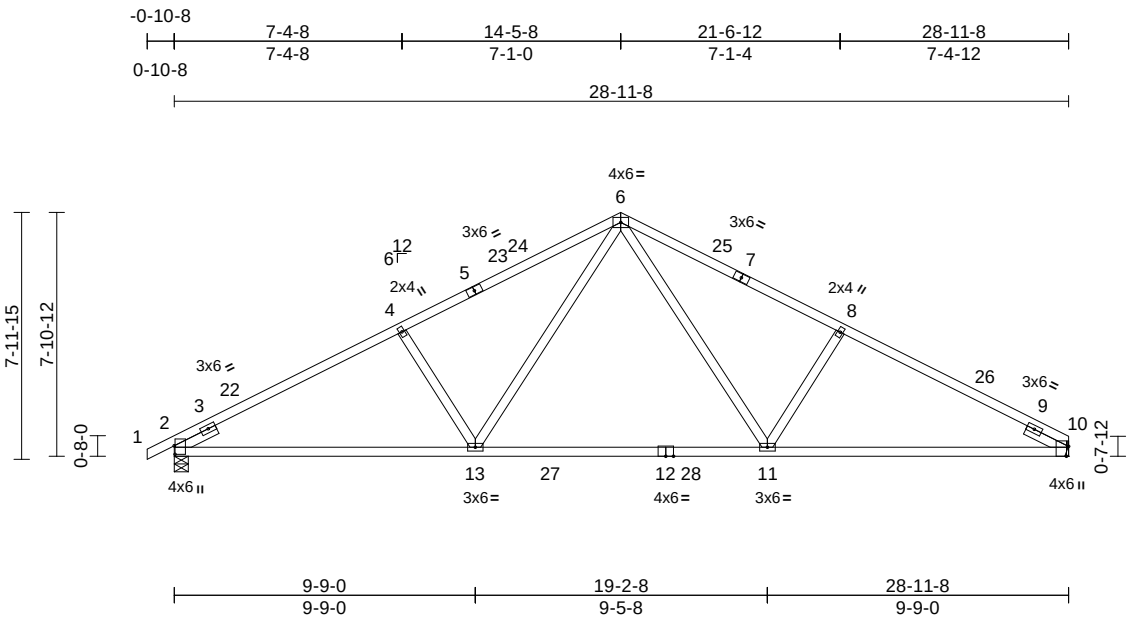


Scale = 1:74.6

Plate Offsets (X, Y): [2:0-3-5,0-0-5], [10:0-3-13,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 | 0.75 | Vert(LL) | -0.29 | 11-13 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.75 | Vert(CT) | -0.46 | 11-13 | >763 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.25 | Horz(CT) | 0.06 | 10 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 137 lb | FT = 20% |

**LUMBER**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x4 SP No.1 |
| WEBS | 2x4 SP No.2 |
| SLIDER | Left 2x4 SP No.2 -- 1-6-0, Right 2x4 SP No.2 -- 1-6-0 |

**BRACING**

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

**REACTIONS** (size) 2=0-5-8, 10= Mechanical
Max Horiz 2=128 (LC 20)
Max Uplift 2=-214 (LC 16), 10=-198 (LC 17)
Max Grav 2=1309 (LC 3), 10=1264 (LC 3)

**FORCES** (lb) - Maximum Compression/Maximum Tension

| | |
|---|---|
| TOP CHORD | 1-2=0/23, 2-4=-2056/347, 4-6=-1891/371, 6-8=-1904/379, 8-10=-2069/354 |
| BOT CHORD | 2-13=-330/1781, 11-13=-116/1221, 10-11=-237/1794 |
| WEBS | 4-13=-403/234, 6-13=-173/770, 6-11=-177/783, 8-11=-410/235 |

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 14-5-8, Exterior(2R) 14-5-8 to 17-5-8, Interior (1) 17-5-8 to 28-11-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 BCDL = 10.0psf.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 214 lb uplift at joint 2 and 198 lb uplift at joint 10.
11) 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.

**LOAD CASE(S)** Standard


April 18,2025



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

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | T37059478 |
|---|---|---|---|---|---|---|
| P02002-24592 | A8 | Common | 9 | 1 | Job Reference (optional) | |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:03
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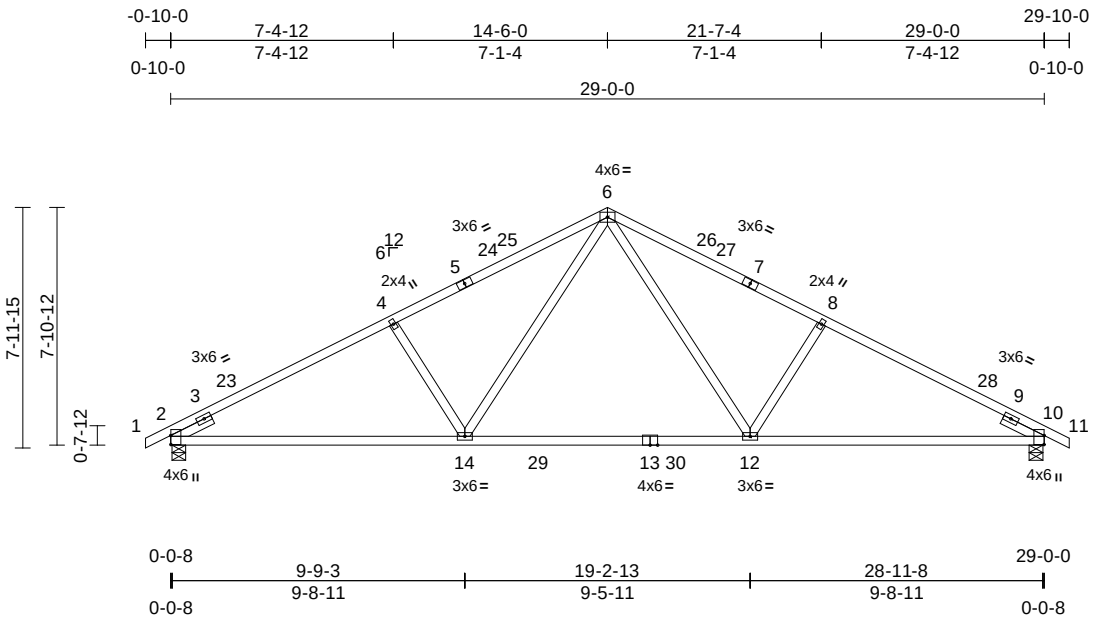


Scale = 1:76.5

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

| 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 | 0.74 | Vert(LL) | -0.29 | 12-14 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.75 | Vert(CT) | -0.45 | 12-14 | >765 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.25 | Horz(CT) | 0.06 | 10 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 138 lb | FT = 20% |

**LUMBER**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x4 SP No.1 |
| WEBS | 2x4 SP No.2 *Except* 12-8,14-4:2x4 SP No.3 |
| SLIDER | Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0 |

**BRACING**

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

**REACTIONS** (size) 2=0-5-8, 10=0-5-8
Max Horiz 2=121 (LC 16)
Max Uplift 2=-214 (LC 16), 10=-214 (LC 17)
Max Grav 2=1308 (LC 3), 10=1308 (LC 3)

**FORCES** (lb) - Maximum Compression/Maximum Tension

| | |
|---|---|
| TOP CHORD | 1-2=0/22, 2-4=-2069/348, 4-6=-1903/373, 6-8=-1903/373, 8-10=-2069/348, 10-11=0/22 |
| BOT CHORD | 2-14=-326/1794, 12-14=-111/1224, 10-12=-223/1794 |
| WEBS | 6-12=-175/779, 8-12=-408/235, 6-14=-175/779, 4-14=-408/235 |

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-0 to 2-2-0, Interior (1) 2-2-0 to 14-6-0, Exterior(2R) 14-6-0 to 17-6-0, Interior (1) 17-6-0 to 29-10-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 BCDL = 10.0psf.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 214 lb uplift at joint 2 and 214 lb uplift at joint 10.
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.

**LOAD CASE(S)** Standard


April 18,2025



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | T37059479 |
|---|---|---|---|---|---|---|
| P02002-24592 | A3E | Common Supported Gable | 1 | 1 | Job Reference (optional) | |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:02 Page: 1
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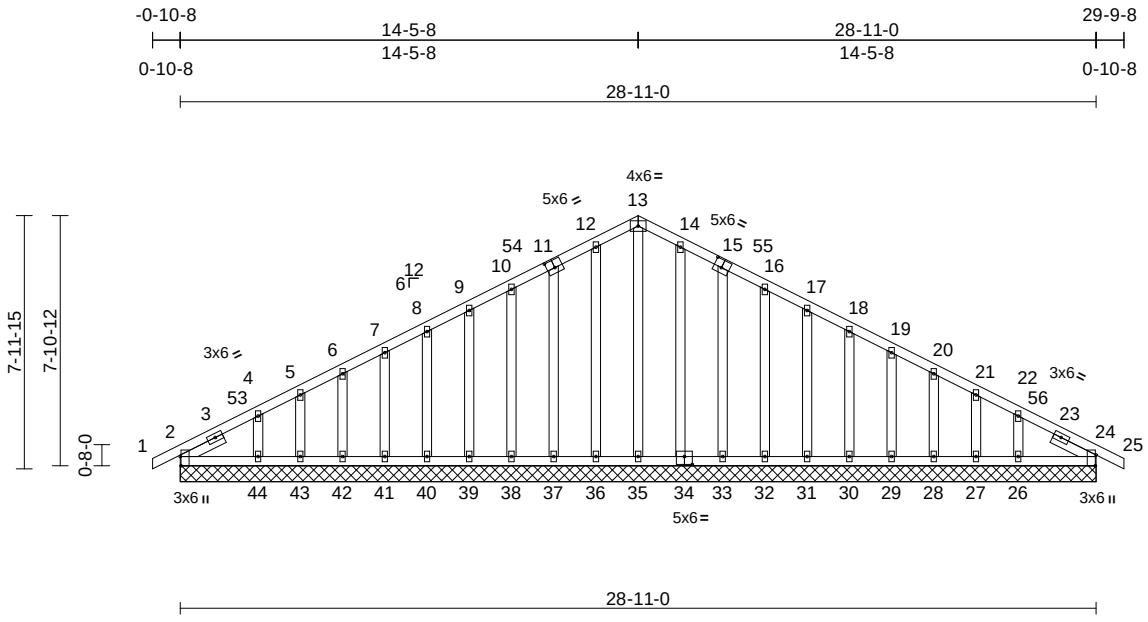


Scale = 1:72.7

Plate Offsets (X, Y): [2:0-3-8,Edge], [11:0-3-0,0-3-0], [15:0-3-0,0-3-0], [24:0-4-1,Edge], [34:0-3-0,0-3-0]

| 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 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.06 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.15 | Horz(CT) | 0.01 | 24 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 217 lb | FT = 20% |

**LUMBER**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x4 SP No.2 |
| OTHERS | 2x4 SP No.3 *Except* 35-13,36-12,37-11,34-14,33-15:2x4 SP No.2 |
| SLIDER | Left 2x4 SP No.3 -- 1-6-0, Right 2x4 SP No.3 -- 1-6-0 |

**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=28-11-0, 24=28-11-0, 26=28-11-0, 27=28-11-0, 28=28-11-0, 29=28-11-0, 30=28-11-0, 31=28-11-0, 32=28-11-0, 33=28-11-0, 34=28-11-0, 35=28-11-0, 36=28-11-0, 37=28-11-0, 38=28-11-0, 39=28-11-0, 40=28-11-0, 41=28-11-0, 42=28-11-0, 43=28-11-0, 44=28-11-0

Max Horiz 2=121 (LC 16)

Max Uplift 2=-25 (LC 17), 24=-1 (LC 13), 26=-90 (LC 17), 27=-17 (LC 17), 28=-41 (LC 17), 29=-36 (LC 17), 30=-37 (LC 17), 31=-37 (LC 17), 32=-35 (LC 17), 33=-45 (LC 17), 34=-22 (LC 17), 36=-27 (LC 16), 37=-42 (LC 16), 38=-36 (LC 16), 39=-37 (LC 16), 40=-37 (LC 16), 41=-36 (LC 16), 42=-42 (LC 16), 43=-12 (LC 16), 44=-102 (LC 16)

Max Grav 2=158 (LC 2), 24=157 (LC 2), 26=176 (LC 37), 27=81 (LC 2), 28=113 (LC 37), 29=105 (LC 2), 30=107 (LC 37), 31=107 (LC 37), 32=105 (LC 2), 33=106 (LC 37), 34=111 (LC 37), 35=133 (LC 33), 36=109 (LC 36), 37=108 (LC 36), 38=105 (LC 2), 39=107 (LC 36), 40=107 (LC 36), 41=105 (LC 2), 42=112 (LC 36), 43=81 (LC 2), 44=176 (LC 36)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/23, 2-4=-136/64, 4-5=-94/63, 5-6=-79/78, 6-7=-64/94, 7-8=-55/109, 8-9=-52/125, 9-10=-64/150, 10-12=-89/212, 12-13=-98/234, 13-14=-98/234, 14-16=-88/212, 16-17=-63/150, 17-18=-51/119, 18-19=-40/89, 19-20=-37/59, 20-21=-41/28, 21-22=-57/15, 22-24=-84/29, 24-25=0/23

BOT CHORD 2-44=-33/115, 43-44=-33/115, 42-43=-33/115, 41-42=-33/115, 40-41=-33/115, 39-40=-33/115, 38-39=-33/115, 37-38=-33/115, 36-37=-33/116, 35-36=-33/116, 33-35=-34/116, 32-33=-34/116, 31-32=-34/116, 30-31=-34/116, 29-30=-34/116, 28-29=-34/116, 27-28=-34/116, 26-27=-34/116, 24-26=-34/116

WEBS 13-35=-147/39, 12-36=-83/35, 11-37=-81/60, 10-38=-78/50, 9-39=-80/52, 8-40=-80/52, 7-41=-80/51, 6-42=-82/55, 5-43=-67/40, 4-44=-120/111, 14-34=-84/33, 15-33=-81/60, 16-32=-78/50, 17-31=-80/52, 18-30=-80/52, 19-29=-80/51, 20-28=-82/55, 21-27=-67/39, 22-26=-120/109

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 14-5-8, Corner(3R) 14-5-8 to 17-5-8, Exterior(2N) 17-5-8 to 29-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.


April 18,2025

Continued on page 2



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6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) All plates are 2x4 (||) MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 1-4-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * 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.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 2, 1 lb uplift at joint 24, 27 lb uplift at joint 36, 42 lb uplift at joint 37, 36 lb uplift at joint 38, 37 lb uplift at joint 39, 37 lb uplift at joint 40, 36 lb uplift at joint 41, 42 lb uplift at joint 42, 12 lb uplift at joint 43, 102 lb uplift at joint 44, 22 lb uplift at joint 34, 45 lb uplift at joint 33, 35 lb uplift at joint 32, 37 lb uplift at joint 31, 37 lb uplift at joint 30, 36 lb uplift at joint 29, 41 lb uplift at joint 28, 17 lb uplift at joint 27, 90 lb uplift at joint 26, 25 lb uplift at joint 2 and 1 lb uplift at joint 24.
14) 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.

**LOAD CASE(S)** Standard

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | A1G | Common Girder | 1 | **2** | T37059480 |
| | | | | | Job Reference (optional) |

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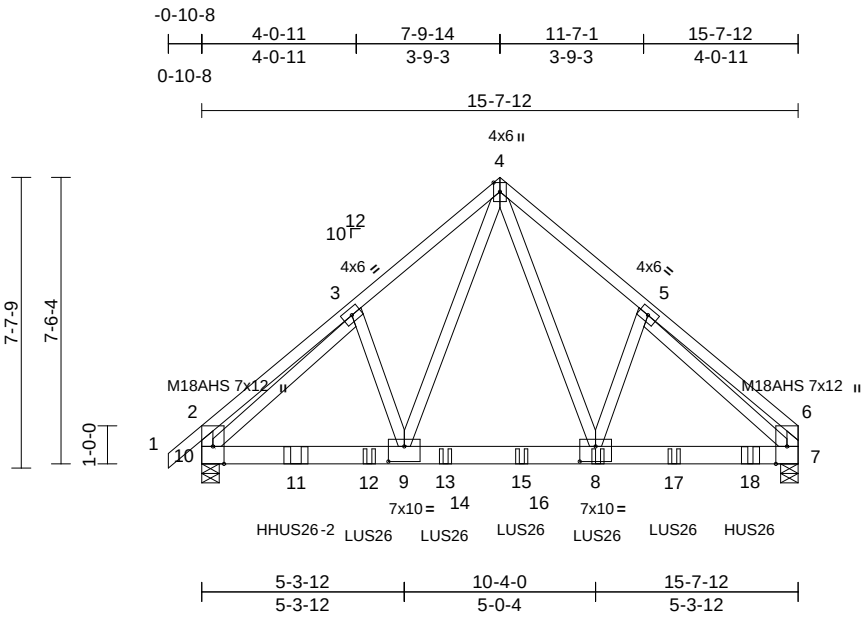


Scale = 1:60.4

Plate Offsets (X, Y): [8:0-5-0,0-4-12], [9:0-5-0,0-4-12]

| 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 | 0.78 | Vert(LL) | 0.05 | 9-10 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.40 | Vert(CT) | -0.10 | 8-9 | >999 | 180 | M18AHS | 186/179 |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.51 | Horz(CT) | 0.02 | 7 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 236 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP DSS
WEBS 2x4 SP No.2 *Except* 8-5,9-3,10-3,7-5:2x4 SP No.3

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

**REACTIONS** (size) 7=0-5-8, 10=0-5-8
Max Horiz 10=188 (LC 33)
Max Uplift 7=-959 (LC 11), 10=-1193 (LC 10)
Max Grav 7=4887 (LC 2), 10=4352 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-3=-1485/552, 3-4=-4721/1249, 4-5=-4786/1083, 5-6=-1546/366, 2-10=-1115/413, 6-7=-1076/268
BOT CHORD 9-10=-891/3503, 8-9=-552/2600, 7-8=-693/3560
WEBS 4-8=-598/3132, 5-8=-142/354, 4-9=-986/2990, 3-9=-146/377, 3-10=-3499/690, 5-7=-3493/699

**NOTES**
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) All plates are MT20 plates unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1193 lb uplift at joint 10 and 959 lb uplift at joint 7.
12) 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.
13) Use Simpson Strong-Tie HHUS26-2 (14-10d Girder, 4-10d Truss) or equivalent at 2-5-10 from the left end to connect truss(es) to back face of bottom chord.
14) Use Simpson Strong-Tie LUS26 (4-SD9112 Girder, 4-SD9212 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 4-4-12 from the left end to 12-4-12 to connect truss(es) to back face of bottom chord.
15) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent at 14-4-12 from the left end to connect truss(es) to back face of bottom chord.
16) Fill all nail holes where hanger is in contact with lumber.

**LOAD CASE(S)** Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-35, 2-4=-35, 4-6=-35, 7-10=-20
Concentrated Loads (lb)
Vert: 8=-789 (B), 11=-1101 (B), 12=-1121 (B), 13=-1100 (B), 15=-789 (B), 17=-789 (B), 18=-789 (B)


April 18,2025



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | A7 | Common | 1 | 1 | T37059481 |
| | | | | | Job Reference (optional) |

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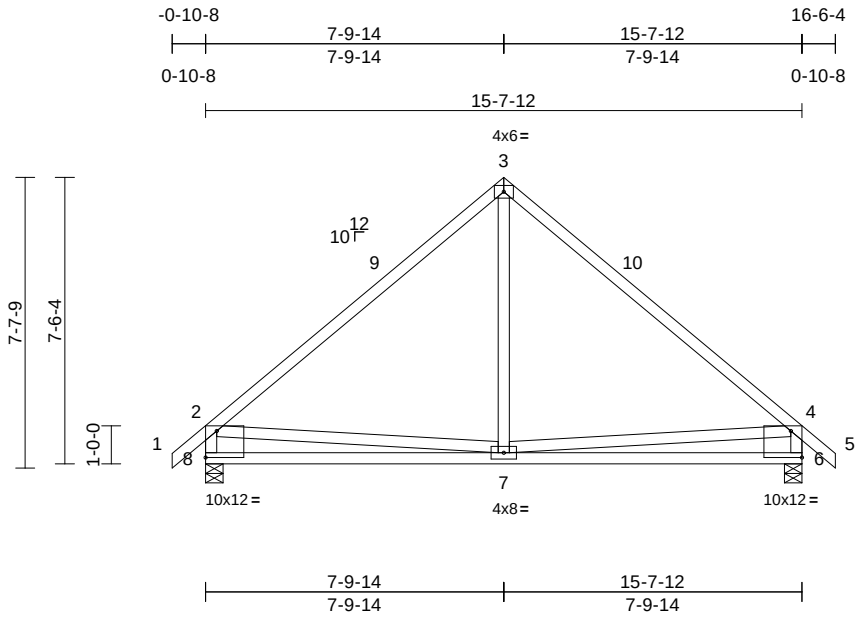


Scale = 1:60.4

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

| 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 | 0.76 | Vert(LL) | -0.07 | 6-7 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.54 | Vert(CT) | -0.14 | 6-7 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.25 | Horz(CT) | 0.01 | 6 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 92 lb | FT = 20% |

**LUMBER**

| | |
|---|---|
| TOP CHORD | 2x4 SP No.2 |
| BOT CHORD | 2x4 SP No.2 |
| WEBS | 2x4 SP No.2 |

**BRACING**

| | |
|---|---|
| TOP CHORD | Structural wood sheathing directly applied or 5-5-7 oc purlins, except end verticals. |
| BOT CHORD | Rigid ceiling directly applied or 9-5-12 oc bracing. |

**REACTIONS** (size) 6=0-5-8, 8=0-5-8
Max Horiz 8=-197 (LC 12)
Max Uplift 6=-107 (LC 15), 8=-107 (LC 14)
Max Grav 6=675 (LC 2), 8=675 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension

| | |
|---|---|
| TOP CHORD | 1-2=0/39, 2-3=-633/156, 3-4=-633/156, 4-5=0/39, 2-8=-609/175, 4-6=-609/176 |
| BOT CHORD | 7-8=-386/611, 6-7=-299/470 |
| WEBS | 3-7=-4/338, 2-7=-231/393, 4-7=-241/397 |

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-9-14, Exterior(2R) 7-9-14 to 10-9-14, Interior (1) 10-9-14 to 16-6-4 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 107 lb uplift at joint 8 and 107 lb uplift at joint 6.
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.

**LOAD CASE(S)** Standard


April 18,2025



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | A6 | Common Supported Gable | 1 | 1 | T37059482 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:02 Page: 1
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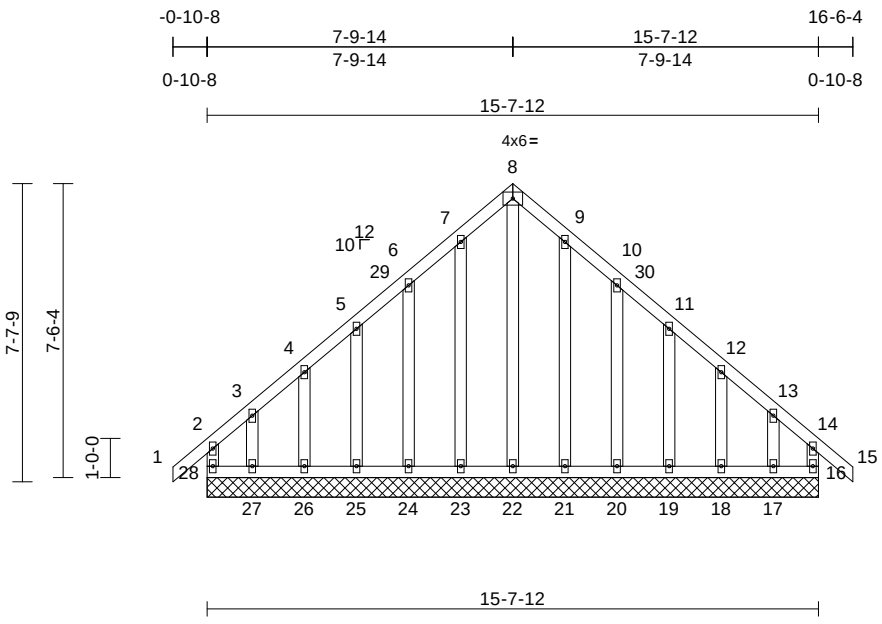


Scale = 1:59

| 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 | 0.13 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.07 | Vert(CT) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.18 | Horz(CT) | 0.00 | 16 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MR | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 124 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* 22-8:2x4 SP No.2

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

**REACTIONS** (size) 16=15-7-12, 17=15-7-12, 18=15-7-12, 19=15-7-12, 20=15-7-12, 21=15-7-12, 22=15-7-12, 23=15-7-12, 24=15-7-12, 25=15-7-12, 26=15-7-12, 27=15-7-12, 28=15-7-12
Max Horiz 28=-197 (LC 12)
Max Uplift 16=-91 (LC 11), 17=-135 (LC 15), 18=-46 (LC 15), 19=-61 (LC 15), 20=-67 (LC 15), 21=-39 (LC 15), 23=-40 (LC 14), 24=-66 (LC 14), 25=-61 (LC 14), 26=-45 (LC 14), 27=-145 (LC 14), 28=-125 (LC 10)
Max Grav 16=169 (LC 26), 17=147 (LC 13), 18=113 (LC 33), 19=117 (LC 27), 20=116 (LC 27), 21=118 (LC 27), 22=194 (LC 15), 23=121 (LC 26), 24=115 (LC 26), 25=117 (LC 26), 26=113 (LC 32), 27=170 (LC 12), 28=197 (LC 27)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-28=-153/92, 1-2=0/39, 2-3=-145/136, 3-4=-96/97, 4-5=-85/105, 5-6=-73/134, 6-7=-107/174, 7-8=-129/205, 8-9=-129/201, 9-10=-107/168, 10-11=-73/122, 11-12=-58/92, 12-13=-69/73, 13-14=-113/103, 14-15=0/39, 14-16=-132/67
BOT CHORD 27-28=-93/102, 26-27=-93/102, 25-26=-93/102, 24-25=-93/102, 23-24=-93/102, 22-23=-93/102, 21-22=-93/102, 20-21=-93/102, 19-20=-93/102, 18-19=-93/102, 17-18=-93/102, 16-17=-93/102
WEBS 8-22=-205/90, 7-23=-94/48, 6-24=-89/75, 5-25=-89/66, 4-26=-89/63, 3-27=-95/99, 9-21=-91/47, 10-20=-90/76, 11-19=-89/66, 12-18=-90/64, 13-17=-88/94

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-9-14, Exterior(2R) 7-9-14 to 10-9-14, Interior (1) 10-9-14 to 16-6-4 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) All plates are 2x4 (||) MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 1-4-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * 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.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 125 lb uplift at joint 28, 91 lb uplift at joint 16, 40 lb uplift at joint 23, 66 lb uplift at joint 24, 61 lb uplift at joint 25, 45 lb uplift at joint 26, 145 lb uplift at joint 27, 39 lb uplift at joint 21, 67 lb uplift at joint 20, 61 lb uplift at joint 19, 46 lb uplift at joint 18 and 135 lb uplift at joint 17.
14) 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.

**LOAD CASE(S)** Standard


April 18,2025



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

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | A4 | Common | 4 | 1 | T37059483 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:02 Page: 1
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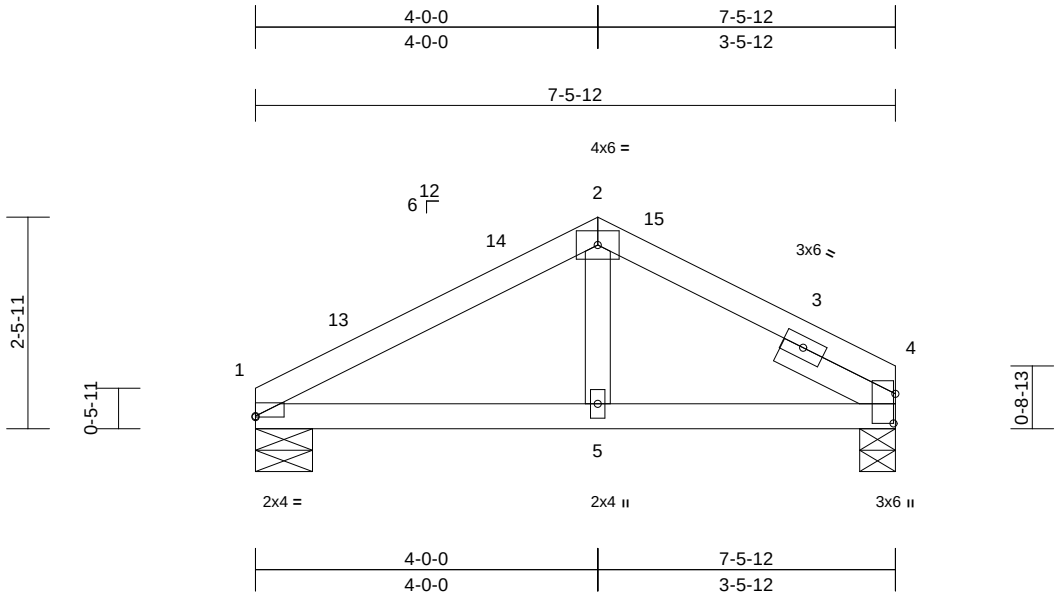


Scale = 1:26.9

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.21 | Vert(LL) | 0.01 | 5-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.19 | Vert(CT) | -0.02 | 5-8 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.06 | Horz(CT) | 0.00 | 1 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 29 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
SLIDER Right 2x4 SP No.3 -- 1-6-0

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

**REACTIONS** (size) 1=0-8-0, 4=0-5-0
Max Horiz 1=37 (LC 16)
Max Uplift 1=-52 (LC 16), 4=-48 (LC 17)
Max Grav 1=299 (LC 2), 4=299 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-366/203, 2-4=-310/213
BOT CHORD 1-5=-121/278, 4-5=-126/278
WEBS 2-5=-34/158

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 4-0-0, Exterior(2R) 4-0-0 to 7-0-12, Interior (1) 7-0-12 to 7-5-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 52 lb uplift at joint 1 and 48 lb uplift at joint 4.
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.

**LOAD CASE(S)** Standard


April 18,2025



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

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | T37059484 |
|---|---|---|---|---|---|---|
| P02002-24592 | A3 | Common | 1 | 1 | Job Reference (optional) | |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:01
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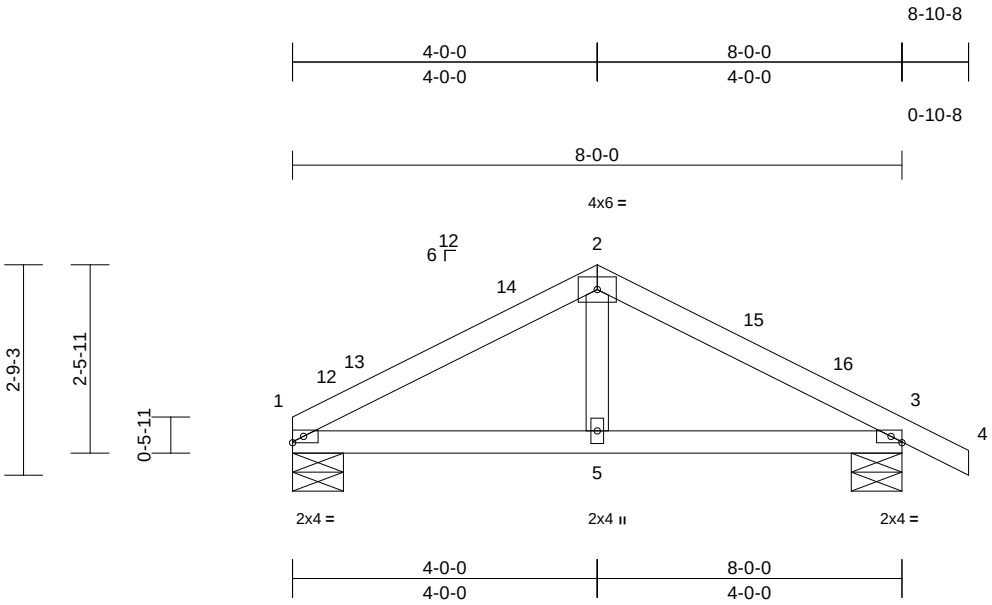


Scale = 1:30.3

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.21 | Vert(LL) | 0.01 | 5-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.19 | Vert(CT) | -0.02 | 5-8 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.07 | Horz(CT) | 0.00 | 1 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 30 lb | FT = 20% |

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

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

**REACTIONS** (size) 1=0-8-0, 3=0-8-0
Max Horiz 1=-45 (LC 21)
Max Uplift 1=-54 (LC 16), 3=-72 (LC 17)
Max Grav 1=317 (LC 2), 3=375 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-408/216, 2-3=-409/209, 3-4=0/23
BOT CHORD 1-5=-90/314, 3-5=-84/314
WEBS 2-5=-29/178

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 4-0-0, Exterior(2R) 4-0-0 to 7-0-0, Interior (1) 7-0-0 to 8-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 54 lb uplift at joint 1 and 72 lb uplift at joint 3.
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.

**LOAD CASE(S)** Standard


April 18,2025



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

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | A2 | Common Supported Gable | 1 | 1 | T37059485 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:01 Page: 1
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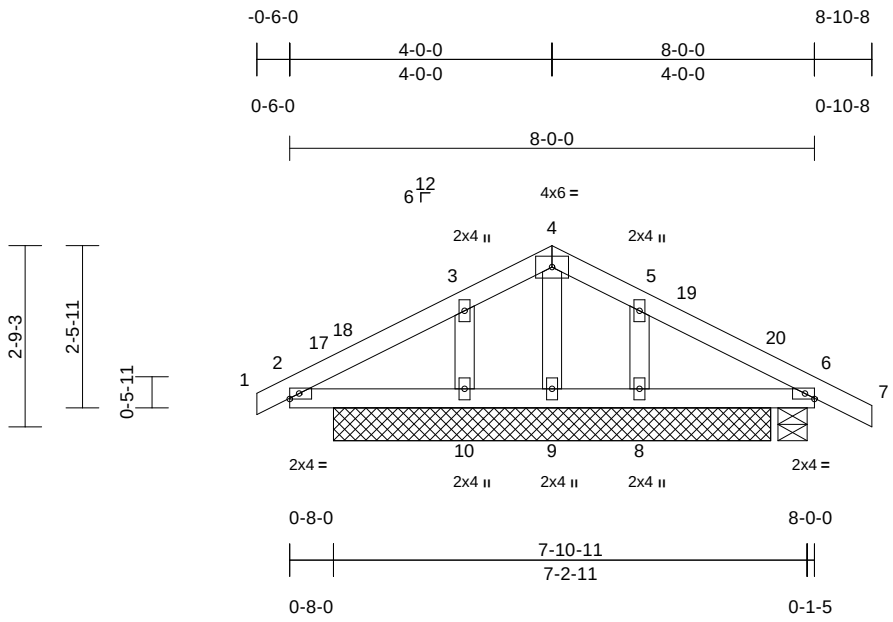



Scale = 1:35.1

| 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 | 0.16 | Vert(LL) | 0.00 | 8-16 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.10 | Vert(CT) | 0.00 | 8-16 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.05 | Horz(CT) | 0.00 | 6 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 34 lb | FT = 20% |

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

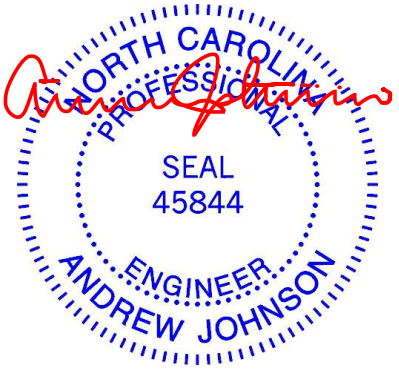
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 8-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (size) 6=0-5-5, 8=6-8-0, 9=6-8-0, 10=6-8-0
Max Horiz 10=-42 (LC 17)
Max Uplift 6=-44 (LC 36), 8=-78 (LC 17), 10=-92 (LC 16)
Max Grav 6=102 (LC 37), 8=237 (LC 2), 9=159 (LC 2), 10=284 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/13, 2-3=-121/250, 3-4=-44/205, 4-5=-53/210, 5-6=-143/245, 6-7=0/23
BOT CHORD 2-10=-186/157, 9-10=-186/180, 8-9=-186/180, 6-8=-186/180
WEBS 4-9=-200/57, 3-10=-174/178, 5-8=-152/172

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-6-0 to 2-8-0, Interior (1) 2-8-0 to 4-0-0, Exterior(2R) 4-0-0 to 7-0-0, Interior (1) 7-0-0 to 8-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
7) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
8) Gable studs spaced at 1-4-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 44 lb uplift at joint 6, 92 lb uplift at joint 10, 78 lb uplift at joint 8 and 44 lb uplift at joint 6.
12) 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.

**LOAD CASE(S)** Standard




April 18,2025



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

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | |
|---|---|---|---|---|---|---|
| P02002-24592 | J8 | Jack-Open | 1 | 1 | Job Reference (optional) | T37059486 |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

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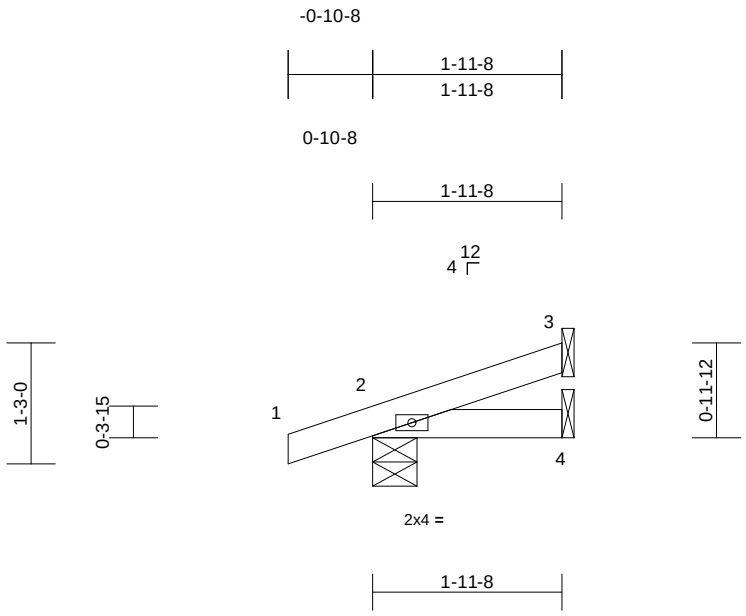



Scale = 1:23.8

| 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 | 0.05 | Vert(LL) | 0.00 | 7 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.03 | Vert(CT) | 0.00 | 7 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 7 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

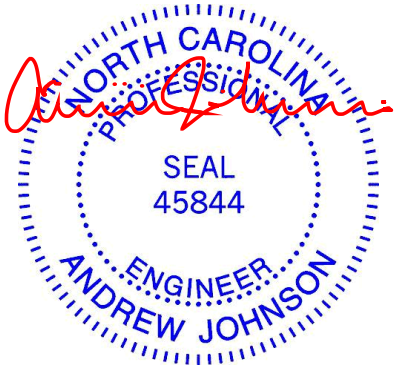
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-11-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=38 (LC 12)
Max Uplift 2=-54 (LC 12), 3=-17 (LC 16), 4=-1 (LC 16)
Max Grav 2=142 (LC 2), 3=42 (LC 2), 4=32 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-30/12
BOT CHORD 2-4=-9/32

**NOTES**
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 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
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 54 lb uplift at joint 2, 1 lb uplift at joint 4 and 17 lb uplift at joint 3.
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.

**LOAD CASE(S)** Standard




April 18,2025



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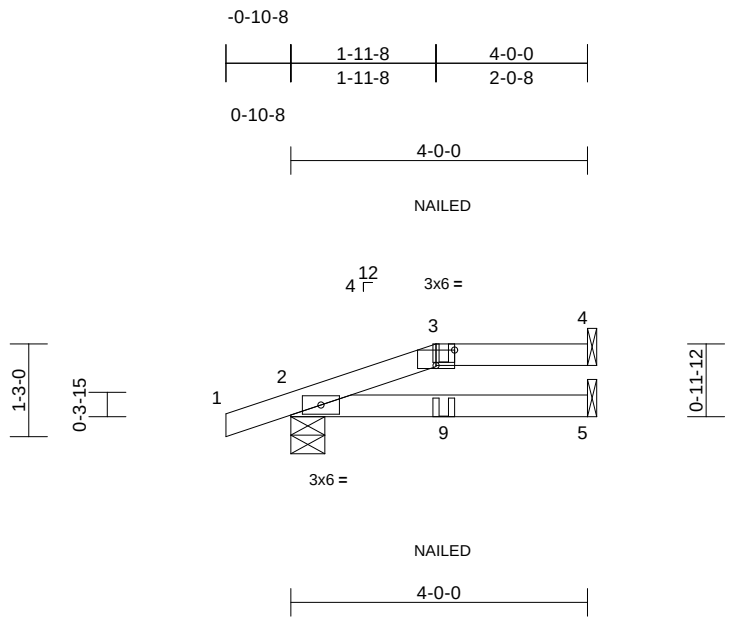
| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | J7 | Jack-Open Girder | 1 | 1 | T37059487 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:09 Page: 1
ID:zsq0nQ4mJXErVyQoG3huqtzQTUG-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:31.1

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.26 | Vert(LL) | -0.03 | 5-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.53 | Vert(CT) | -0.06 | 5-8 | >832 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | 0.03 | 4 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 14 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

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

**REACTIONS** (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=38 (LC 8)
Max Uplift 2=-74 (LC 8), 4=-24 (LC 8), 5=-14 (LC 8)
Max Grav 2=219 (LC 2), 4=59 (LC 2), 5=99 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-53/7, 3-4=0/0
BOT CHORD 2-5=-14/60

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 4, 74 lb uplift at joint 2 and 14 lb uplift at joint 5.
12) 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.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-35, 3-4=-45, 5-6=-20
Concentrated Loads (lb)
Vert: 9=-5 (F)


April 18,2025



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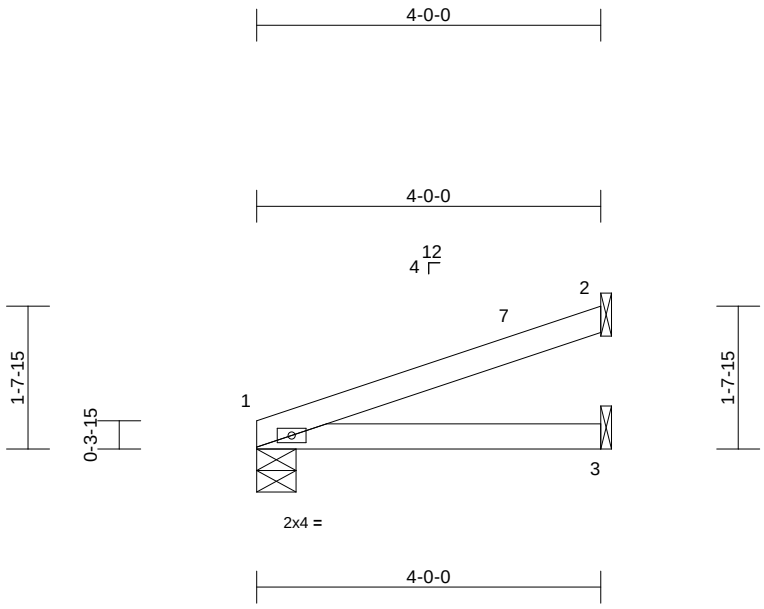
| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | J6 | Jack-Open | 1 | 1 | T37059488 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:09
ID:C3pZYtn5Cr4O?60?lJk1JbzQTUf-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f






Scale = 1:26.8

| 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 | 0.21 | Vert(LL) | 0.02 | 3-6 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.19 | Vert(CT) | -0.03 | 3-6 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 1 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 12 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

**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) 1=0-5-8, 2= Mechanical, 3= Mechanical
Max Horiz 1=48 (LC 12)
Max Uplift 1=-28 (LC 12), 2=-43 (LC 12), 3=-2 (LC 12)
Max Grav 1=158 (LC 2), 2=102 (LC 2), 3=72 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-95/36
BOT CHORD 1-3=-83/83

**NOTES**
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 3-11-4 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
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 1, 43 lb uplift at joint 2 and 2 lb uplift at joint 3.
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.

**LOAD CASE(S)** Standard


April 18,2025



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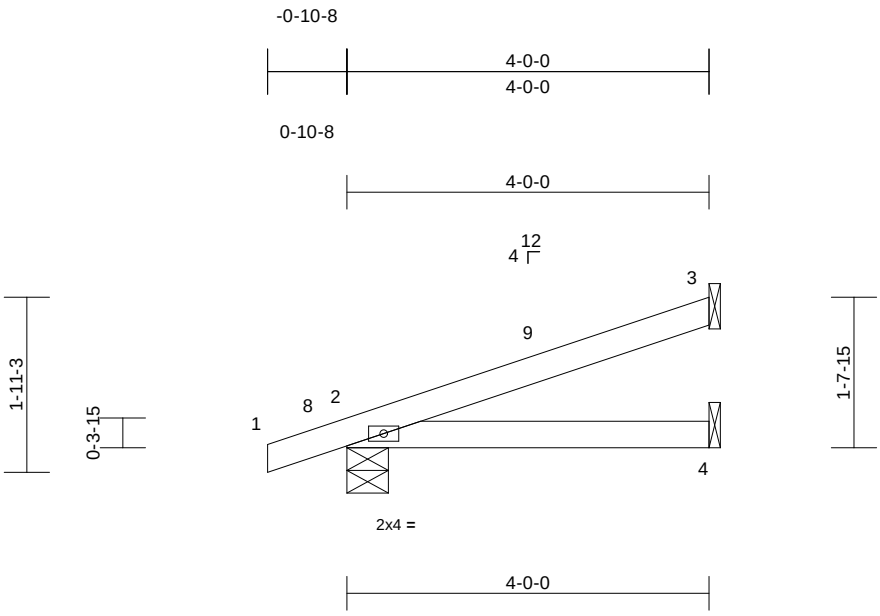
| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | J5 | Jack-Open | 7 | 1 | T37059489 |
| | | | | | Job Reference (optional) |






Scale = 1:25.4

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.20 | Vert(LL) | 0.02 | 4-7 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.17 | Vert(CT) | -0.02 | 4-7 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 14 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

**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=0-5-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=62 (LC 12)
Max Uplift 2=-65 (LC 12), 3=-42 (LC 16), 4=-1 (LC 16)
Max Grav 2=216 (LC 2), 3=99 (LC 2), 4=71 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-70/25
BOT CHORD 2-4=-66/76

**NOTES**
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-11-4 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
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 3, 65 lb uplift at joint 2 and 1 lb uplift at joint 4.
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.

**LOAD CASE(S)** Standard


April 18,2025



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| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | T37059490 |
|---|---|---|---|---|---|---|
| P02002-24592 | H8 | Half Hip | 1 | 1 | Job Reference (optional) | |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:06 Page: 1

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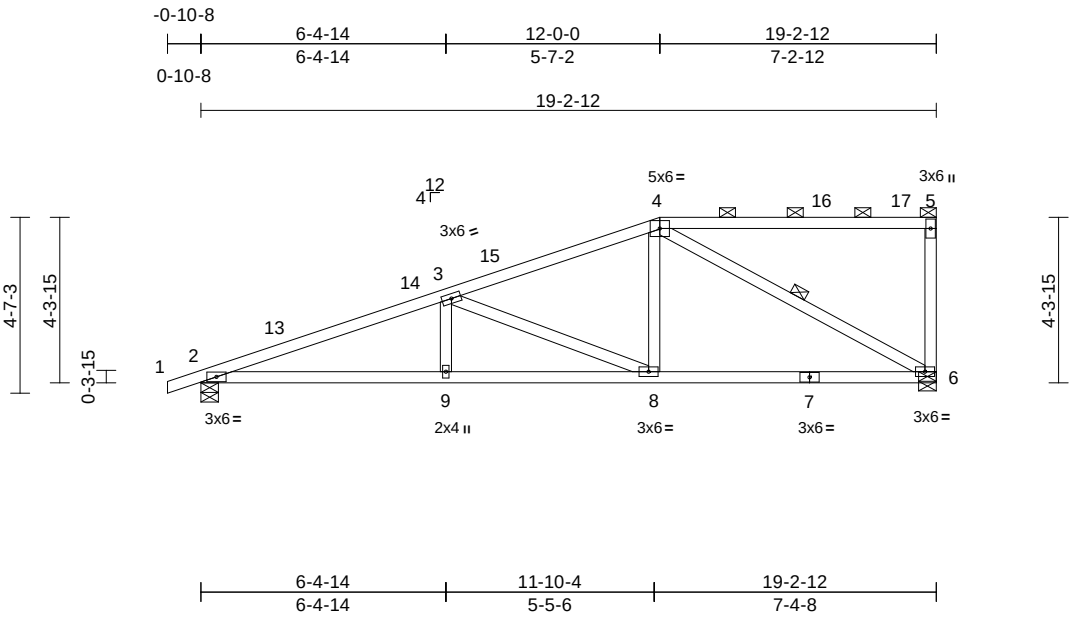


Scale = 1:60.3

| 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 | 0.76 | Vert(LL) | -0.09 | 6-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.67 | Vert(CT) | -0.19 | 6-8 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.51 | Horz(CT) | 0.04 | 6 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 94 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 6-4:2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-10-15 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 7-8-13 oc bracing.
WEBS 1 Row at midpt 4-6

**REACTIONS** (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=167 (LC 15)
Max Uplift 2=-204 (LC 12), 6=-185 (LC 12)
Max Grav 2=817 (LC 2), 6=762 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-1726/428, 3-4=-1008/300, 4-5=-97/89, 5-6=-214/98
BOT CHORD 2-9=-575/1607, 8-9=-575/1607, 6-8=-342/888
WEBS 3-9=0/228, 3-8=-769/249, 4-8=-45/481, 4-6=-975/326

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 12-0-0, Exterior(2R) 12-0-0 to 16-2-15, Interior (1) 16-2-15 to 19-1-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 204 lb uplift at joint 2 and 185 lb uplift at joint 6.
11) 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.
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


April 18,2025



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | T37059491 |
|---|---|---|---|---|---|---|
| P02002-24592 | H7 | Half Hip | 1 | 1 | Job Reference (optional) | |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:05
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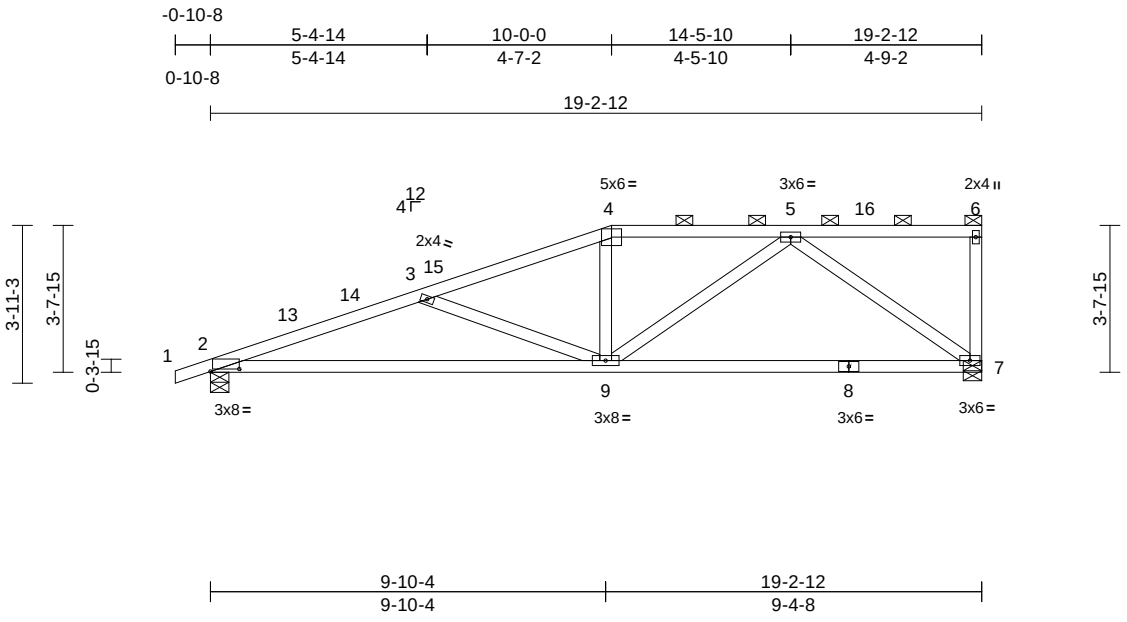



Scale = 1:57.4

Plate Offsets (X, Y): [2:0-8-10,0-0-12]

| 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 | 0.49 | Vert(LL) | -0.17 | 7-9 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.97 | Vert(CT) | -0.35 | 7-9 | >660 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.62 | Horz(CT) | 0.04 | 7 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 92 lb | FT = 20% |

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

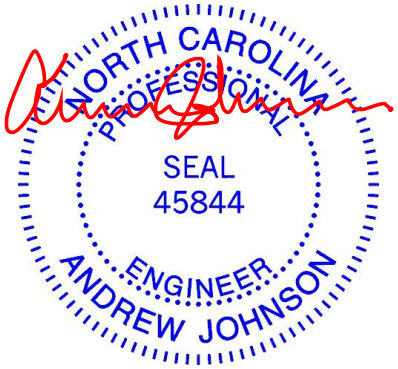
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 3-10-6 oc purlins, except end verticals, and 2-0-0 oc purlins (5-3-9 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

**REACTIONS** (size) 2=0-5-8, 7=0-5-8
Max Horiz 2=140 (LC 15)
Max Uplift 2=-206 (LC 12), 7=-183 (LC 12)
Max Grav 2=817 (LC 2), 7=762 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-1760/481, 3-4=-1271/348, 4-5=-1149/349, 5-6=-83/63, 6-7=-120/59
BOT CHORD 2-9=-619/1655, 7-9=-298/799
WEBS 3-9=-533/249, 4-9=0/243, 5-9=-110/459, 5-7=-955/319

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 10-0-0, Exterior(2R) 10-0-0 to 14-5-10, Interior (1) 14-5-10 to 19-1-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 206 lb uplift at joint 2 and 183 lb uplift at joint 7.
11) 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.
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




April 18,2025



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TRENCO
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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | |
|---|---|---|---|---|---|---|
| P02002-24592 | H6 | Half Hip | 1 | 1 | Job Reference (optional) | T37059492 |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:05 Page: 1
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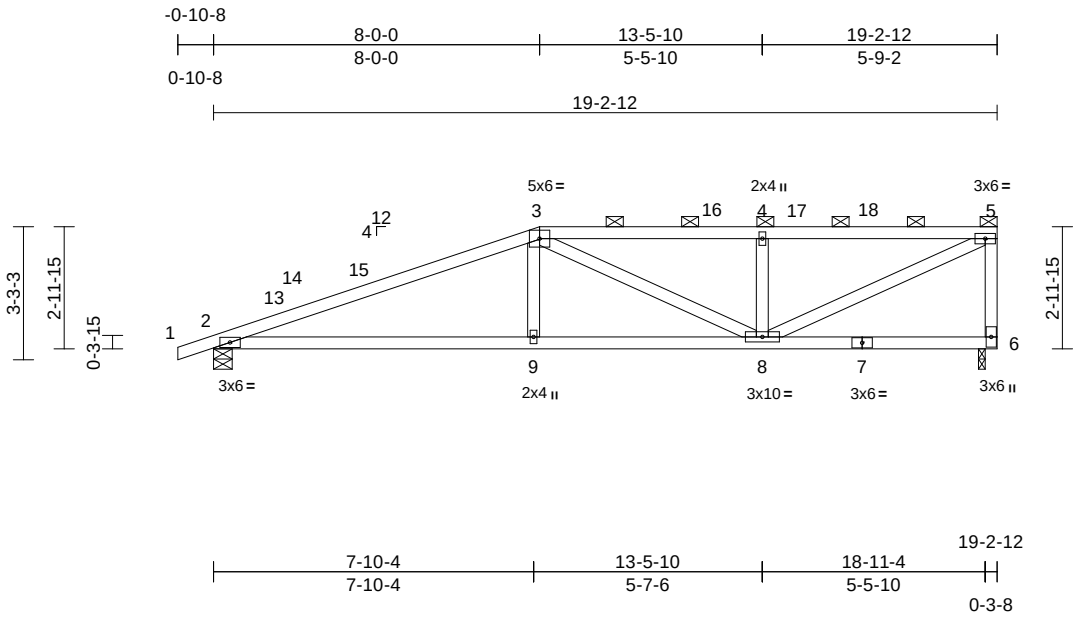


Scale = 1:56.5

| 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 | 0.81 | Vert(LL) | -0.13 | 9-12 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.90 | Vert(CT) | -0.30 | 9-12 | >770 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.53 | Horz(CT) | 0.03 | 6 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 87 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.1 *Except* 3-5:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-10-10 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 7-11-11 oc bracing.

**REACTIONS** (size) 2=0-5-8, 6=0-2-0
Max Horiz 2=113 (LC 15)
Max Uplift 2=-208 (LC 12), 6=-181 (LC 12)
Max Grav 2=817 (LC 2), 6=762 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-1552/422, 3-4=-1182/367, 4-5=-1182/367, 5-6=-702/223
BOT CHORD 2-9=-472/1424, 8-9=-473/1414, 6-8=-44/63
WEBS 3-9=0/303, 3-8=-330/134, 4-8=-373/161, 5-8=-343/1269

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 8-0-0, Exterior(2R) 8-0-0 to 12-2-15, Interior (1) 12-2-15 to 19-1-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 6.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 181 lb uplift at joint 6 and 208 lb uplift at joint 2.
12) 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.
13) 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


April 18,2025



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | T37059493 |
|---|---|---|---|---|---|---|
| P02002-24592 | H5 | Half Hip | 1 | 1 | Job Reference (optional) | |

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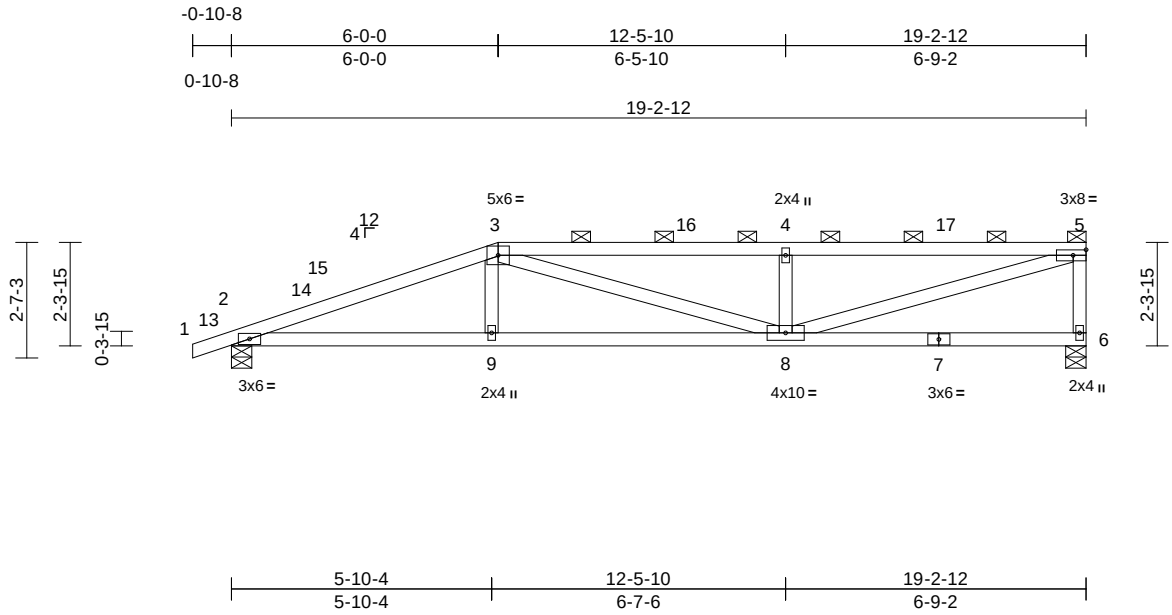






Scale = 1:51.8

| 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) | -0.09 | 8-9 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.67 | Vert(CT) | -0.20 | 8-9 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.43 | Horz(CT) | 0.03 | 6 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 86 lb | FT = 20% |

**LUMBER**

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 8-3,8-5:2x4 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-8-13 oc purlins, except end verticals, and 2-0-0 oc purlins (3-7-9 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 8-0-10 oc bracing.

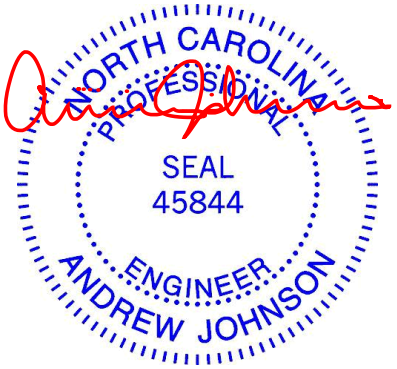
**REACTIONS** (size) 2=0-5-8, 6=0-5-8
Max Horiz 2=87 (LC 15)
Max Uplift 2=-209 (LC 12), 6=-179 (LC 12)
Max Grav 2=817 (LC 2), 6=762 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-1755/481, 3-4=-1757/494, 4-5=-1757/494, 5-6=-695/215
BOT CHORD 2-9=-500/1631, 8-9=-501/1619, 6-8=-46/79
WEBS 3-9=0/263, 3-8=-90/303, 4-8=-443/189, 5-8=-462/1759

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-0-0, Exterior(2R) 6-0-0 to 10-2-15, Interior (1) 10-2-15 to 19-1-0 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 179 lb uplift at joint 6 and 209 lb uplift at joint 2.
11) 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.
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




April 18,2025



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| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | H4 | Half Hip Girder | 1 | 1 | T37059494 |
| | | | | | Job Reference (optional) |

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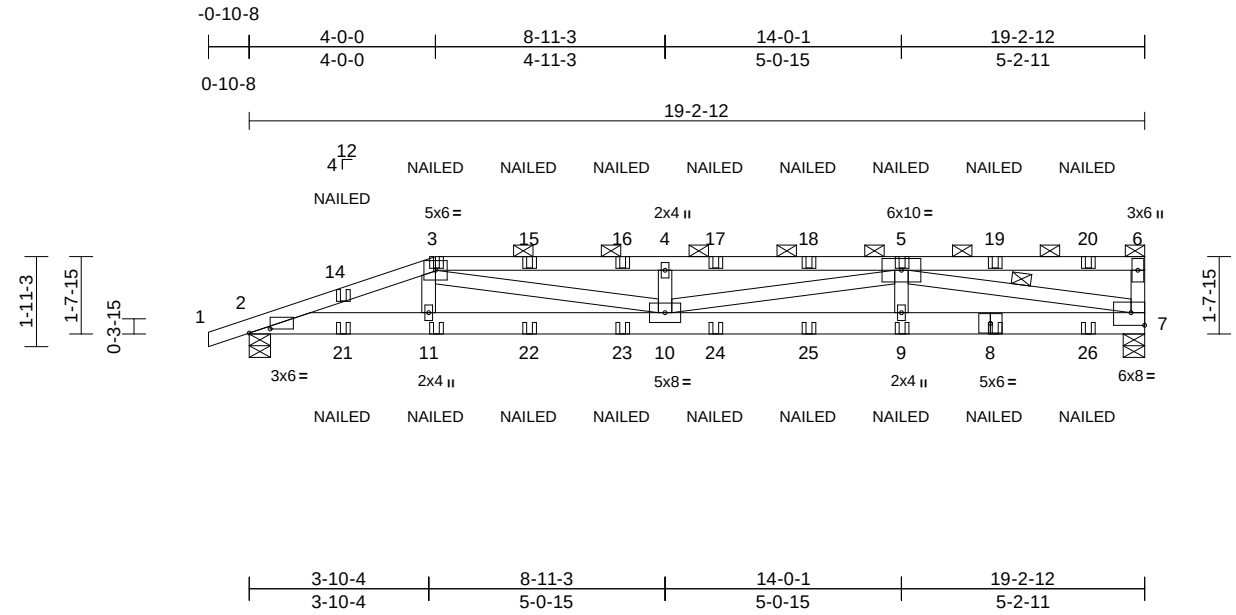





Scale = 1:49.5

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.82 | Vert(LL) | -0.22 | 9-10 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.88 | Vert(CT) | -0.45 | 9-10 | >504 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.74 | Horz(CT) | 0.06 | 7 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 102 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2 *Except* 3-6:2x4 SP No.1
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 3-3-4 oc purlins, except end verticals, and 2-0-0 oc purlins (2-5-8 max.): 3-6.
BOT CHORD Rigid ceiling directly applied or 7-10-7 oc bracing.
WEBS 1 Row at midpt 5-7

**REACTIONS** (size) 2=0-5-8, 7=0-5-8
Max Horiz 2=59 (LC 52)
Max Uplift 2=-311 (LC 8), 7=-295 (LC 8)
Max Grav 2=1128 (LC 2), 7=1106 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-2962/771, 3-4=-4027/1082, 4-5=-4027/1082, 5-6=-191/66, 6-7=-199/80
BOT CHORD 2-11=-731/2793, 10-11=-728/2761, 9-10=-868/3240, 7-9=-868/3240
WEBS 3-11=-27/332, 3-10=-359/1349, 4-10=-403/171, 5-10=-214/813, 5-9=0/274, 5-7=-3145/834

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 295 lb uplift at joint 7 and 311 lb uplift at joint 2.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-35, 3-6=-45, 2-7=-20
Concentrated Loads (lb)
Vert: 8=-30 (B), 11=-30 (B), 3=-46 (B), 5=-41 (B), 9=-30 (B), 14=-23 (B), 15=-41 (B), 16=-41 (B), 17=-41 (B), 18=-41 (B), 19=-41 (B), 20=-40 (B), 21=-60 (B), 22=-30 (B), 23=-30 (B), 24=-30 (B), 25=-30 (B), 26=-32 (B)


April 18,2025



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| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | A1 | Common | 2 | 1 | T37059495 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:47:59 Page: 1
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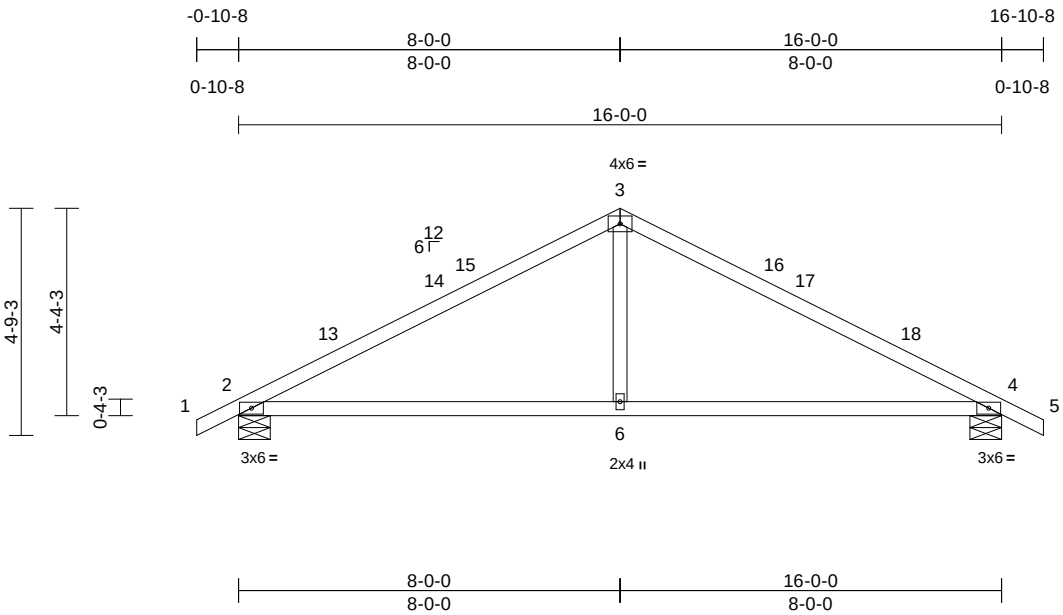


Scale = 1:48.3

| 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 | 0.93 | Vert(LL) | -0.14 | 6-9 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.77 | Vert(CT) | -0.26 | 6-9 | >737 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.15 | Horz(CT) | 0.01 | 4 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 59 lb | FT = 20% |

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

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

**REACTIONS** (size) 2=0-8-0, 4=0-8-0
Max Horiz 2=70 (LC 16)
Max Uplift 2=-127 (LC 16), 4=-127 (LC 17)
Max Grav 2=693 (LC 2), 4=693 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-923/282, 3-4=-923/282, 4-5=0/23
BOT CHORD 2-6=-123/741, 4-6=-123/741
WEBS 3-6=-6/383

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 8-0-0, Exterior(2R) 8-0-0 to 11-0-0, Interior (1) 11-0-0 to 16-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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 127 lb uplift at joint 2 and 127 lb uplift at joint 4.
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.

**LOAD CASE(S)** Standard


April 18,2025



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | J4 | Jack-Open | 4 | 1 | T37059496 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880,

Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:09 Page: 1
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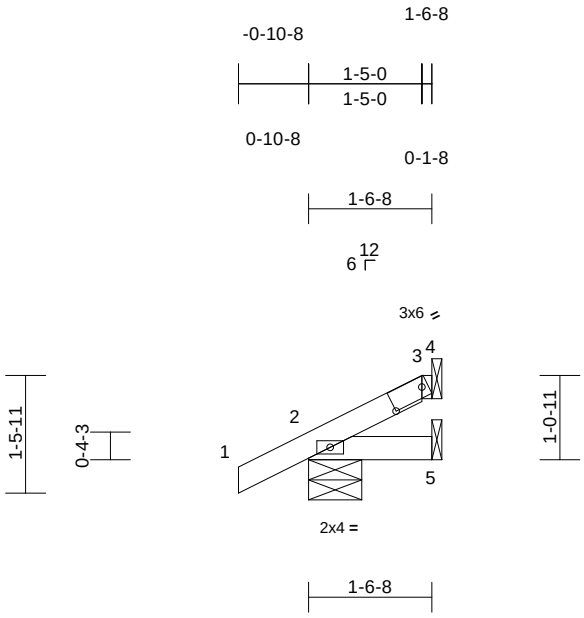


Scale = 1:28.8

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.06 | Vert(LL) | 0.00 | 5-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.07 | Vert(CT) | 0.00 | 5-8 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 4 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 7 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 1-6-8 oc purlins, except 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-8-0, 4= Mechanical, 5= Mechanical
Max Horiz 2=40 (LC 16)
Max Uplift 2=-31 (LC 16), 4=-1 (LC 12), 5=-13 (LC 16)
Max Grav 2=136 (LC 38), 4=4 (LC 38), 5=44 (LC 38)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-38/19, 3-4=0/0
BOT CHORD 2-5=-5/23

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 4, 31 lb uplift at joint 2 and 13 lb uplift at joint 5.
12) 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.
13) 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


April 18,2025



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A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | |
|---|---|---|---|---|---|---|
| P02002-24592 | J3 | Jack-Open | 4 | 1 | Job Reference (optional) | T37059497 |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:08 Page: 1
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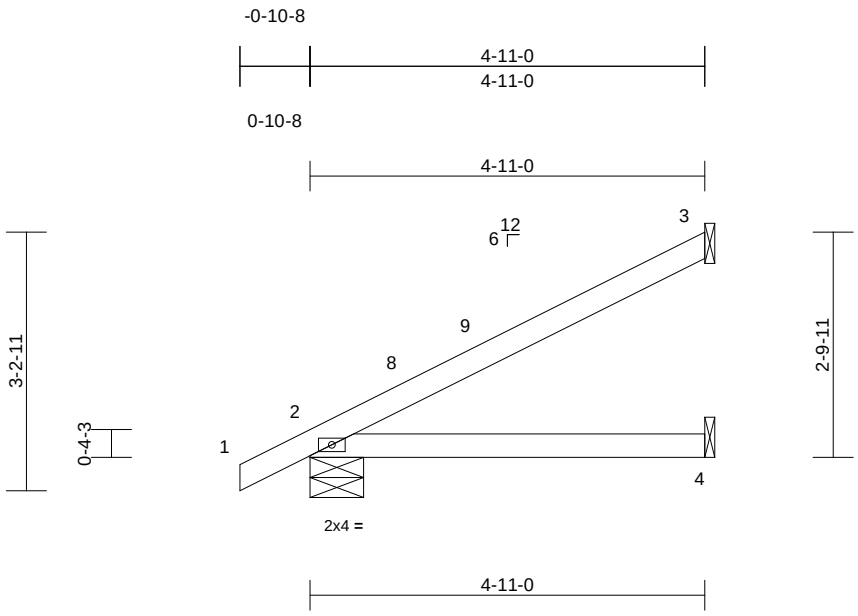


Scale = 1:28.7

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.34 | Vert(LL) | 0.04 | 4-7 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 7.7/10.0 | Lumber DOL | 1.15 | BC | 0.27 | Vert(CT) | -0.06 | 4-7 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | 0.00 | 3 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 17 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-11-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-8-0, 3= Mechanical, 4= Mechanical
Max Horiz 2=103 (LC 16)
Max Uplift 2=-41 (LC 16), 3=-65 (LC 16), 4=-1 (LC 16)
Max Grav 2=251 (LC 2), 3=126 (LC 2), 4=90 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-83/47
BOT CHORD 2-4=-62/76

**NOTES**
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 4-10-4 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
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=7.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
5) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
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) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 65 lb uplift at joint 3, 41 lb uplift at joint 2 and 1 lb uplift at joint 4.
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.

**LOAD CASE(S)** Standard


April 18,2025



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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | |
|---|---|---|---|---|---|---|
| P02002-24592 | J2 | Jack-Open | 2 | 1 | Job Reference (optional) | T37059498 |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:08 Page: 1
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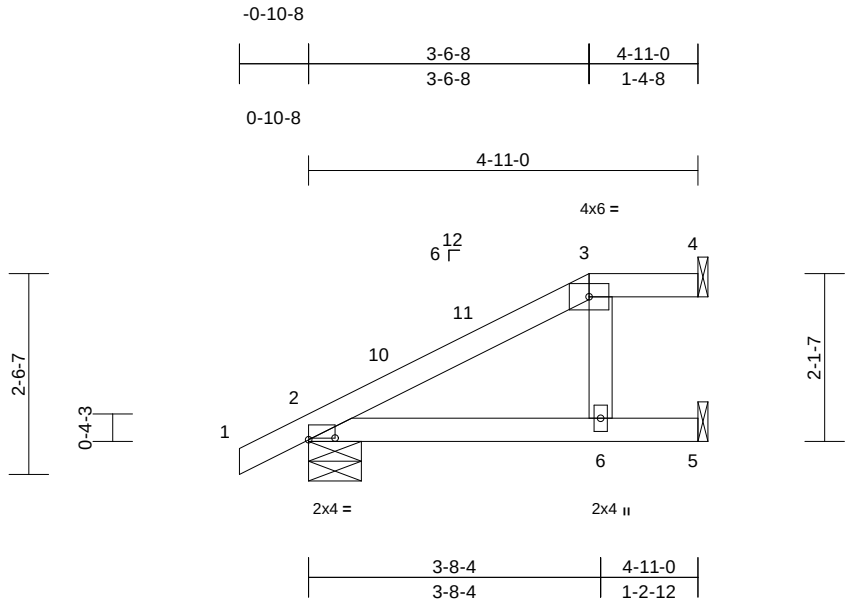



Scale = 1:29.1

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.23 | Vert(LL) | 0.05 | 6-9 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.41 | Vert(CT) | -0.08 | 6-9 | >755 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.04 | Horz(CT) | 0.03 | 4 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 19 lb | FT = 20% |

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

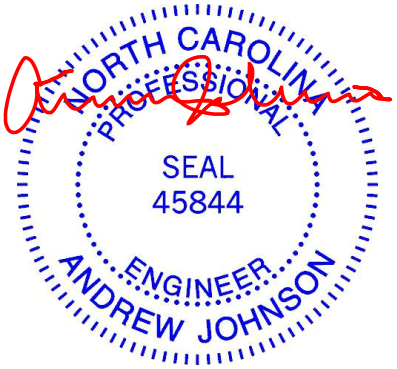
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-11-0 oc purlins, except 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-8-0, 4= Mechanical, 5= Mechanical
Max Horiz 2=79 (LC 16)
Max Uplift 2=-49 (LC 16), 4=-16 (LC 12), 5=-32 (LC 16)
Max Grav 2=257 (LC 38), 4=42 (LC 37), 5=150 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-72/30, 3-4=0/0
BOT CHORD 2-6=-43/69, 5-6=0/0
WEBS 3-6=-141/135

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 3-6-8, Exterior(2E) 3-6-8 to 4-10-4 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) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 4, 49 lb uplift at joint 2 and 32 lb uplift at joint 5.
12) 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.
13) 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




April 18,2025



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Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | J1 | Jack-Open Girder | 2 | 1 | T37059499 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:08 Page: 1
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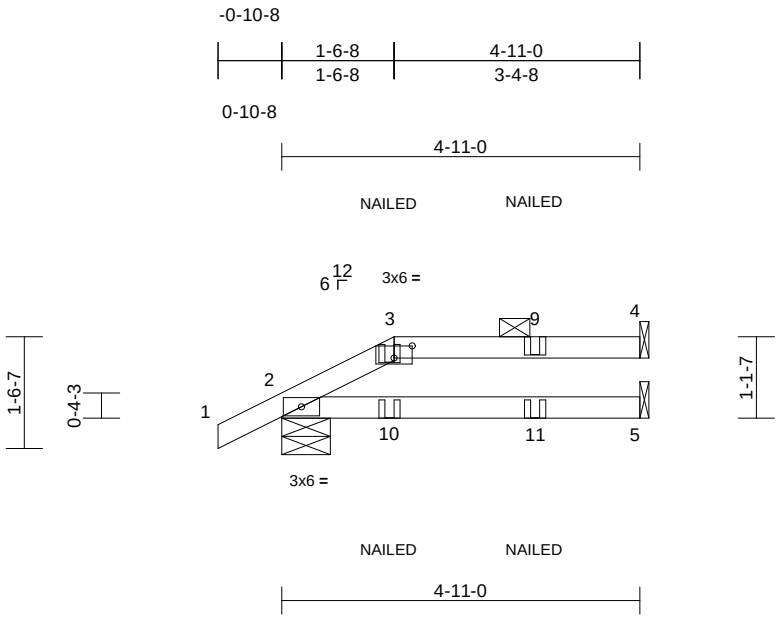


Scale = 1:31.6

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.31 | Vert(LL) | -0.06 | 5-8 | >969 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.65 | Vert(CT) | -0.12 | 5-8 | >490 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | 0.08 | 4 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 17 lb | FT = 20% |

**LUMBER**
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-11-0 oc purlins, except 2-0-0 oc purlins: 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-8-0, 4= Mechanical, 5= Mechanical
Max Horiz 2=43 (LC 12)
Max Uplift 2=-62 (LC 12), 4=-41 (LC 8), 5=-21 (LC 9)
Max Grav 2=274 (LC 2), 4=106 (LC 33), 5=115 (LC 7)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-73/18, 3-4=0/0
BOT CHORD 2-5=-22/64

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 4, 62 lb uplift at joint 2 and 21 lb uplift at joint 5.
12) 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.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
14) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
15) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-35, 3-4=-45, 5-6=-20
Concentrated Loads (lb)
Vert: 10=-24 (F), 11=-24 (F)


April 18,2025



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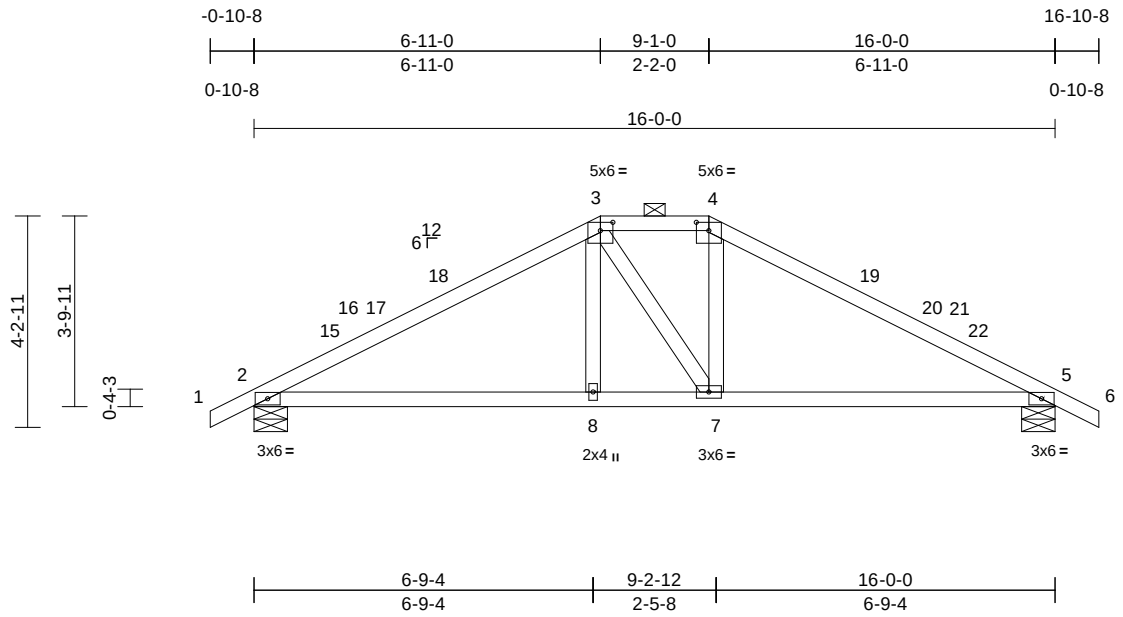
818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity |
|---|---|---|---|---|---|
| P02002-24592 | H2 | Hip | 1 | 1 | T37059500 |
| | | | | | Job Reference (optional) |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:04 Page: 1
ID:V8DnRSfpYmqpoZF4jDYhvUzQTUp-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f




Scale = 1:46

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.70 | Vert(LL) | 0.08 | 8-11 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.64 | Vert(CT) | -0.16 | 8-11 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.08 | Horz(CT) | 0.02 | 5 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 69 lb | FT = 20% |

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

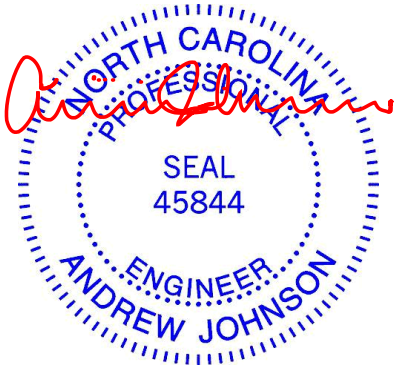
**BRACING**
TOP CHORD Structural wood sheathing directly applied or 4-2-11 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-8-0, 5=0-8-0
Max Horiz 2=62 (LC 16)
Max Uplift 2=-120 (LC 16), 5=-120 (LC 17)
Max Grav 2=693 (LC 2), 5=693 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-954/242, 3-4=-773/268, 4-5=-954/242, 5-6=0/25
BOT CHORD 2-8=-121/778, 7-8=-121/773, 5-7=-124/779
WEBS 3-8=-6/197, 3-7=-139/141, 4-7=-28/198

**NOTES**
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 6-11-0, Exterior(2E) 6-11-0 to 9-1-0, Exterior(2R) 9-1-0 to 13-3-15, Interior (1) 13-3-15 to 16-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 120 lb uplift at joint 2 and 120 lb uplift at joint 5.
11) 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.
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




April 18,2025



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818 Soundside Road
Edenton, NC 27932

| Job | Truss | Truss Type | Qty | Ply | 1035 Serenity | T37059501 |
|---|---|---|---|---|---|---|
| P02002-24592 | H1 | Hip Girder | 1 | 1 | Job Reference (optional) | |

84 Lumber-1387 (Winter Haven, FL), Winter Haven, FL - 33880, Run: 8.83 S Apr 11 2025 Print: 8.830 S Apr 11 2025 MiTek Industries, Inc. Fri Apr 18 11:48:04 Page: 1

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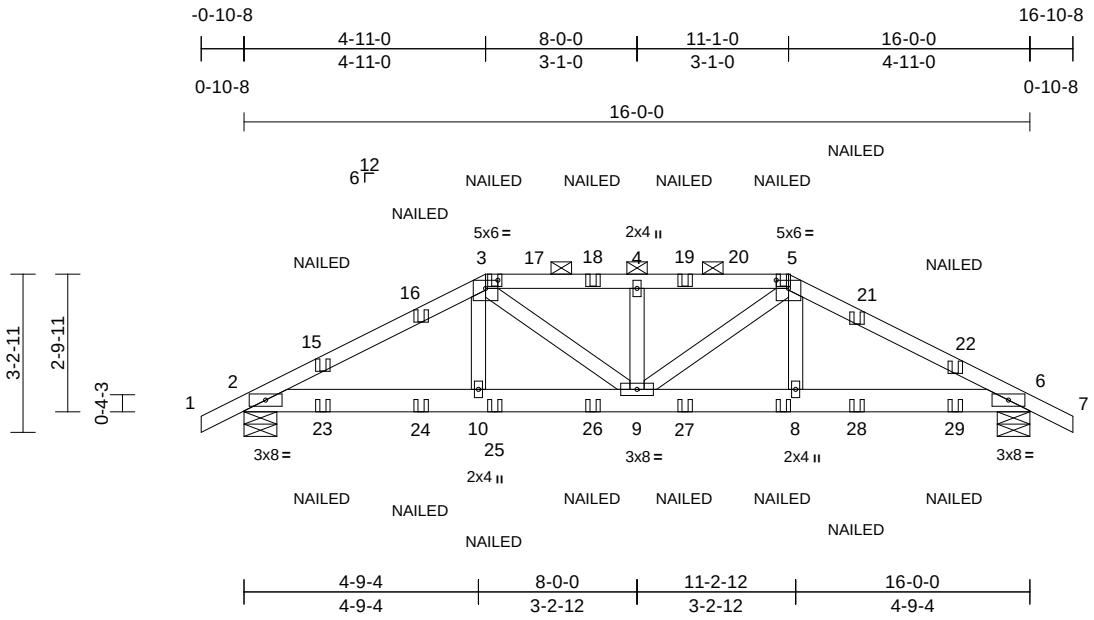



Scale = 1:46.9

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.15 | TC | 0.40 | Vert(LL) | -0.05 | 9 | >999 | 240 | MT20 | 244/190 |
| Snow (Pf/Pg) | 12.7/10.0 | Lumber DOL | 1.15 | BC | 0.67 | Vert(CT) | -0.10 | 9 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.17 | Horz(CT) | 0.03 | 6 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2018/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 86 lb | FT = 20% |

**LUMBER**

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

**BRACING**

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

**REACTIONS** (size) 2=0-8-0, 6=0-8-0
Max Horiz 2=46 (LC 58)
Max Uplift 2=-308 (LC 12), 6=-310 (LC 13)
Max Grav 2=1171 (LC 2), 6=1177 (LC 2)

**FORCES** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/25, 2-3=-1962/515, 3-4=-1850/527, 4-5=-1850/527, 5-6=-1963/516, 6-7=0/25
BOT CHORD 2-10=-440/1703, 9-10=-436/1678, 8-9=-416/1679, 6-8=-420/1703
WEBS 3-10=-80/413, 3-9=-94/259, 4-9=-288/146, 5-9=-94/259, 5-8=-79/412

**NOTES**

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=3.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=10.0 psf; Pf=12.7 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 7.7 psf on overhangs non-concurrent with other live loads.
6) Building Designer/Project engineer responsible for verifying Rain Load = 5.0 (psf) covers rain loading requirements specific to the use of this truss component.
7) Provide adequate drainage to prevent water ponding.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 308 lb uplift at joint 2 and 310 lb uplift at joint 6.
11) 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
14) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-35, 3-5=-45, 5-7=-35, 2-6=-20
Concentrated Loads (lb)
Vert: 3=-76 (B), 5=-77 (B), 8=-42 (B), 15=-70 (B), 16=-13 (B), 18=-72 (B), 19=-72 (B), 21=-13 (B), 22=-70 (B), 23=-91 (B), 24=-118 (B), 25=-42 (B), 26=-42 (B), 27=-42 (B), 28=-118 (B), 29=-91 (B)

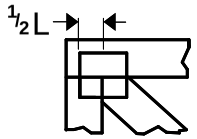

April 18,2025



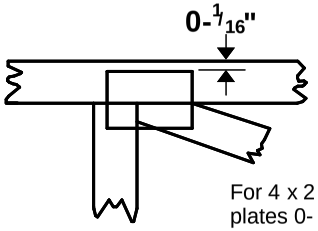
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

# 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.

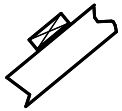
* Plate location details available in MiTek software or upon request.

### PLATE SIZE

4 x 4

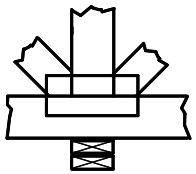
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

### 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

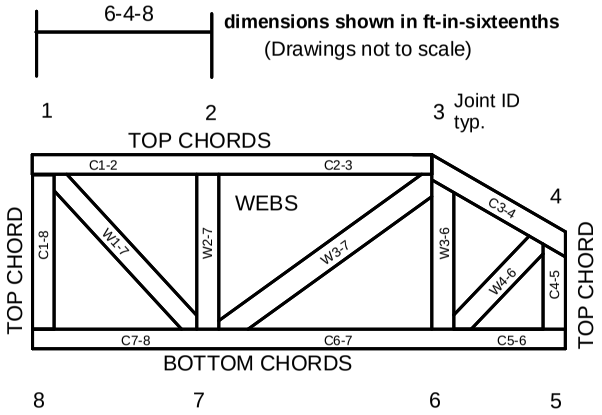


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

**Industry Standards:**

ANSI/TPI1: 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/TPI 1 section 6.3 These truss designs rely on lumber values established by others.



MiTek®

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MiTek Engineering Reference Sheet: MII-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/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.