

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: ELV F Roof
Roof F

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

Pages or sheets covered by this seal: I63425436 thru I63425469

My license renewal date for the state of North Carolina is December 31, 2024.

North Carolina COA: C-0844



February 6, 2024

Gilbert, Eric

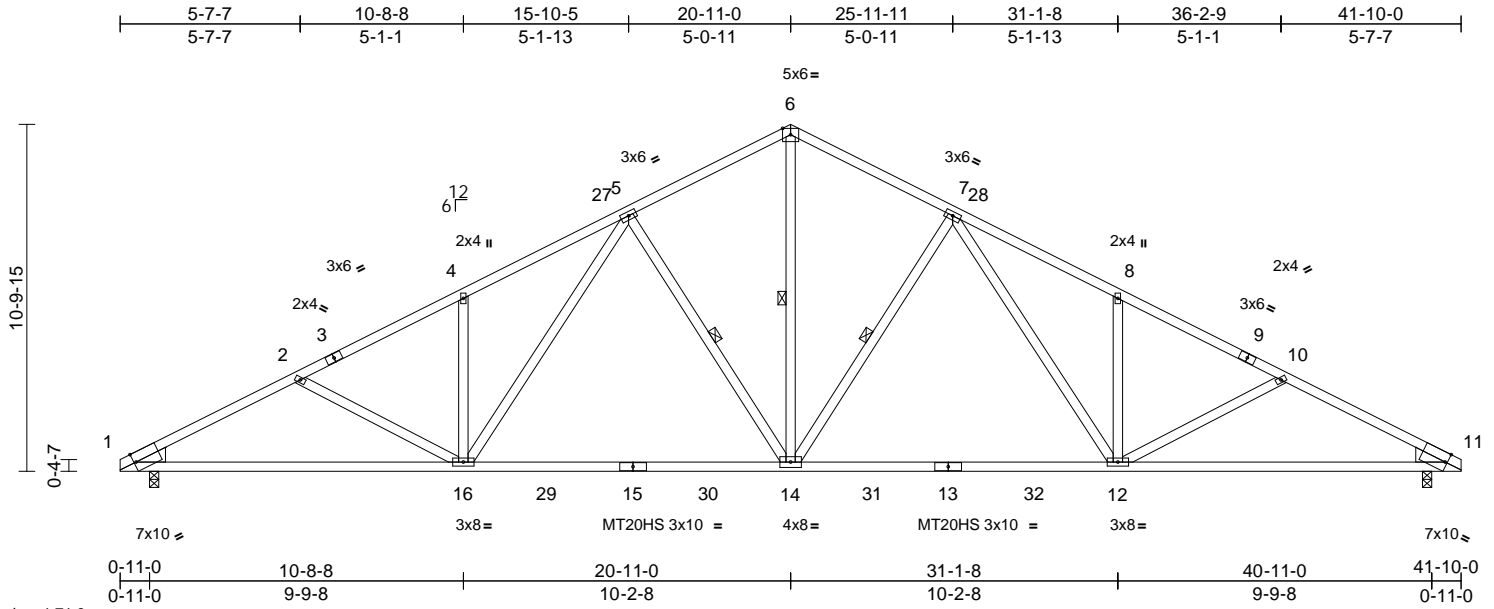
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which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

| | | | | | | |
|-------------------|--------------|----------------------|-----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A01 | Truss Type Common | Qty 11 | Ply 1 | Roof F Job Reference (optional) | I63425436 |
|-------------------|--------------|----------------------|-----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:12
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Page: 1



Scale = 1:71.9
Plate Offsets (X, Y): [1:0-0-13,Edge], [11:0-0-13,Edge]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.81 | Vert(LL) | -0.41 | 12-14 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.66 | Vert(CT) | -0.71 | 12-14 | >704 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.57 | Horz(CT) | 0.11 | 11 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 238 lb | FT = 20% |

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-3,9-11:2x4 SP SS
BOT CHORD 2x4 SP SS
WEBS 2x4 SP No.3
WEDGE Left: 2x6 SP No.2
Right: 2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-11-1 oc bracing.
WEBS 1 Row at midpt 6-14, 5-14, 7-14

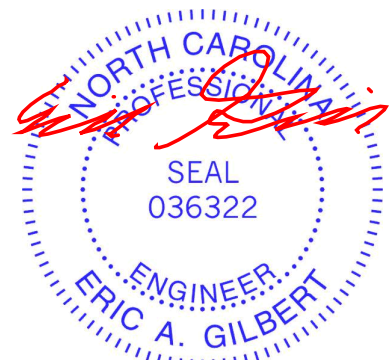
REACTIONS (size) 1=0-3-8, 11=0-3-8
Max Horiz 1=-232 (LC 17)
Max Uplift 1=-433 (LC 16), 11=-433 (LC 17)
Max Grav 1=1673 (LC 2), 11=1673 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-2678/1168, 2-4=-2526/1091, 4-5=-2564/1270, 5-6=-1840/967, 6-7=-1840/967, 7-8=-2564/1270, 8-10=-2526/1091, 10-11=-2678/1168
BOT CHORD 1-16=-905/2277, 14-16=-565/1889, 12-14=-565/1889, 11-12=-905/2277
WEBS 6-14=-645/1351, 2-16=-108/197, 4-16=-371/337, 5-16=-331/671, 5-14=-628/447, 7-14=-628/447, 7-12=-331/671, 8-12=-371/337, 10-12=-108/198

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

- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps=14.5 psf (roof snow: Lumber DOL=1.15 Plate DOL=1.00); Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP SS crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 433 lb uplift at joint 1 and 433 lb uplift at joint 11.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



February 6, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



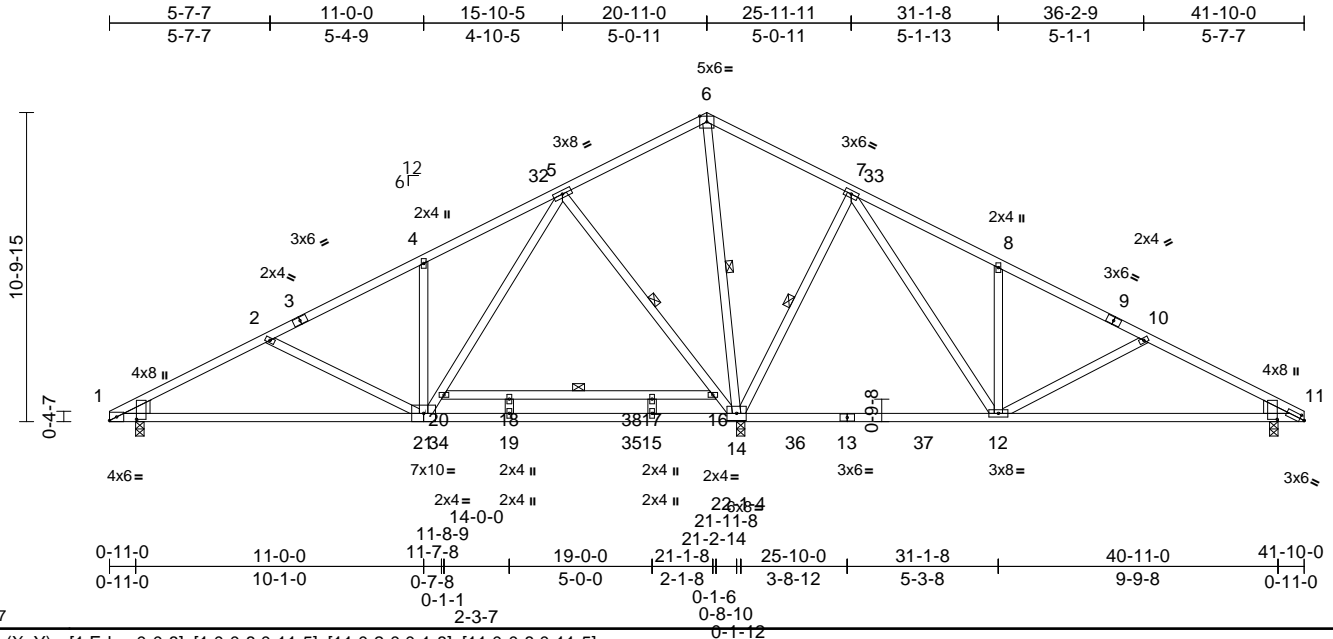
818 Soundside Road
Edenton, NC 27932

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|-------------------|---------------|----------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A01H | Truss Type Common | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425437 |
|-------------------|---------------|----------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:15
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Page: 1



| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in (loc) | l/defl | L/d | PLATES | GRIP | | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|--------|-------|--------|------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.56 | Vert(LL) | -0.40 | 17-18 | >660 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.65 | Vert(CT) | -0.70 | 17-18 | >377 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.70 | Horz(CT) | 0.01 | 11 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 255 lb | FT = 20% |

- LUMBER**
- TOP CHORD 2x4 SP No.2 *Except* 1-3,9-11:2x4 SP SS
 - BOT CHORD 2x4 SP SS
 - WEBS 2x4 SP No.3
 - WEDGE Left: 2x6 SP No.2
Right: 2x6 SP No.2
- BRACING**
- TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
 - BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except: 6-0-0 oc bracing: 16-20
 - WEBS 1 Row at midpt 6-14, 5-14, 7-14
- REACTIONS**
- (size) 1=0-3-8, 11=0-3-8, 14=0-3-8
 - Max Horiz 1=-232 (LC 17)
 - Max Uplift 1=-148 (LC 16), 11=-177 (LC 17), 14=-449 (LC 16)
 - Max Grav 1=754 (LC 33), 11=605 (LC 34), 14=2473 (LC 3)
- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=-979/250, 2-4=-695/85, 4-5=-688/249, 5-6=-88/632, 6-7=-119/717, 7-8=-392/282, 8-10=-395/131, 10-11=-689/251
 - BOT CHORD 1-19=-314/820, 15-19=-75/422, 14-15=-75/422, 12-14=-327/403, 11-12=-124/573, 18-20=-96/0, 17-18=-96/0, 16-17=-96/0
 - WEBS 6-14=-823/286, 2-21=-310/325, 4-21=-317/308, 20-21=-343/823, 5-20=-302/966, 5-16=-771/441, 14-16=-878/392, 7-14=-678/492, 7-12=-407/754, 8-12=-308/309, 10-12=-341/300, 15-17=-88/0, 18-19=-39/0

- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps=14.5 psf (roof snow: Lumber DOL=1.15 Plate DOL=1.00); Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP SS crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 449 lb uplift at joint 14, 148 lb uplift at joint 1 and 177 lb uplift at joint 11.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



February 6, 2024

NOTES

- Unbalanced roof live loads have been considered for this design.

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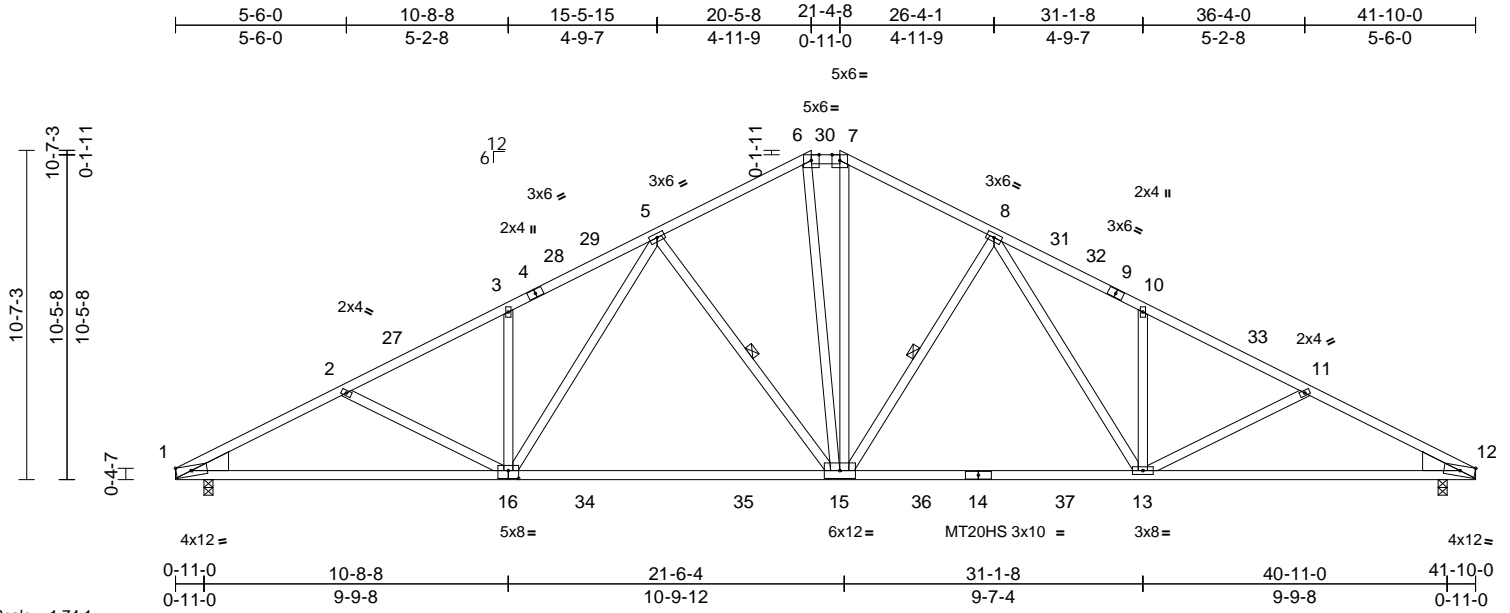
ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A03 | Truss Type Hip | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425438 |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:16
ID:Gf?mt2WzQDCECA7LQfubUEyhiCM-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:74.1

Plate Offsets (X, Y): [1:Edge,0-1-14], [12:0-5-12,Edge], [16:0-4-0,0-3-0]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.94 | Vert(LL) | -0.51 | 15-16 | >987 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.71 | Vert(CT) | -0.83 | 15-16 | >603 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.60 | Horz(CT) | 0.14 | 12 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 255 lb | FT = 20% |

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-4,9-12:2x4 SP SS
BOT CHORD 2x4 SP SS
WEBS 2x4 SP No.3
WEDGE Left: 2x8 SP DSS
Right: 2x8 SP DSS

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (3-9-12 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 6-11-13 oc bracing.
WEBS 1 Row at midpt 5-15, 8-15

REACTIONS
(size) 1=0-3-8, 12=0-3-8
Max Horiz 1=-226 (LC 17)
Max Uplift 1=-434 (LC 16), 12=-434 (LC 17)
Max Grav 1=2005 (LC 38), 12=2005 (LC 38)

FORCES
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3342/1161, 2-3=-3286/1086,
3-5=-3357/1260, 5-6=-2356/941,
6-7=-2090/924, 7-8=-2431/969,
8-10=-3350/1263, 10-11=-3280/1089,
11-12=-3340/1163
BOT CHORD 1-15=-897/2856, 13-15=-574/2509,
12-13=-898/2855
WEBS 3-16=-541/332, 5-16=-314/772,
2-16=-97/210, 5-15=-803/425,
7-15=-298/788, 6-15=-288/760,
8-15=-783/424, 8-13=-323/752,
10-13=-539/332, 11-13=-102/199

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

- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP SS crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 434 lb uplift at joint 1 and 434 lb uplift at joint 12.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-6=-49, 6-7=-60, 7-12=-49, 17-22=-20



February 6, 2024

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



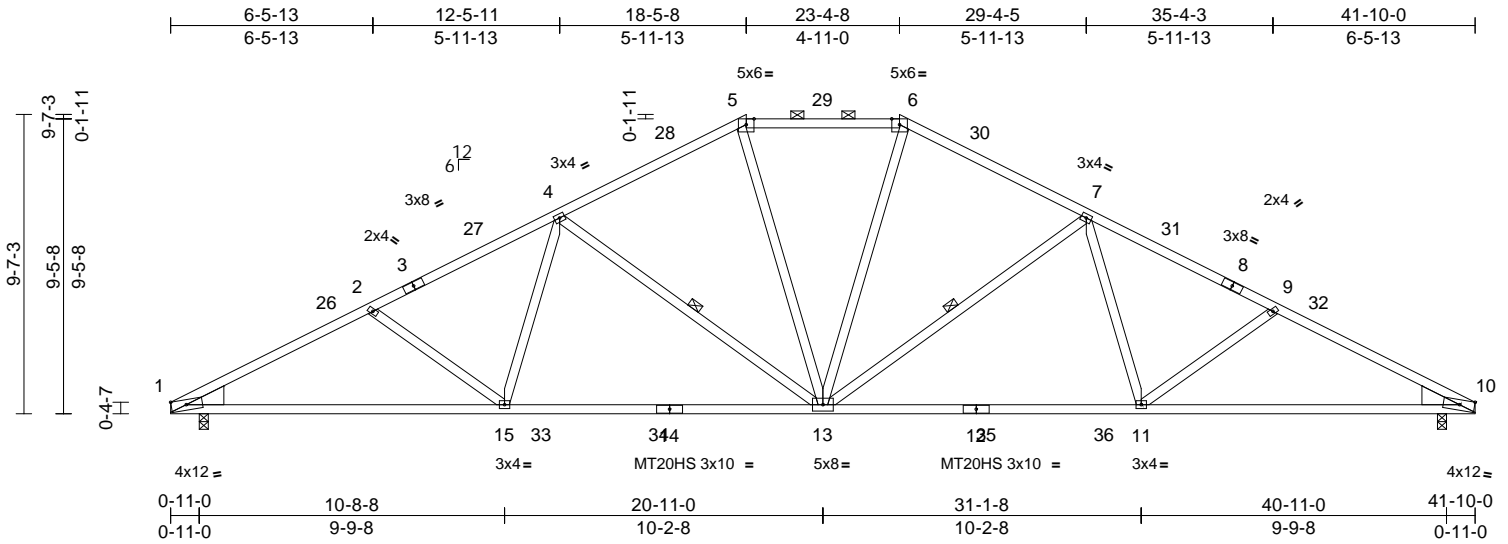
818 Soundside Road
Edenton, NC 27932

| | | | | | | |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A04 | Truss Type Hip | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425439 |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:16
ID:jmSRp8iyCdlkgtVT?5BuG6yhiDP-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:73.9

Plate Offsets (X, Y): [1:Edge,0-1-14], [10:0-5-12,Edge]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.99 | Vert(LL) | -0.43 | 13-15 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.98 | Vert(CT) | -0.73 | 13-15 | >684 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.51 | Horz(CT) | 0.15 | 10 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 231 lb | FT = 20% |

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-3,8-10:2x4 SP SS
BOT CHORD 2x4 SP SS *Except* 14-12:2x4 SP No.1
WEBS 2x4 SP No.3
WEDGE Left: 2x8 SP DSS
Right: 2x8 SP DSS

BRACING
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (3-3-12 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 4-13, 7-13
REACTIONS (size) 1=0-3-8, 10=0-3-8
Max Horiz 1=-204 (LC 17)
Max Uplift 1=-440 (LC 16), 10=-440 (LC 17)
Max Grav 1=1971 (LC 38), 10=1971 (LC 38)

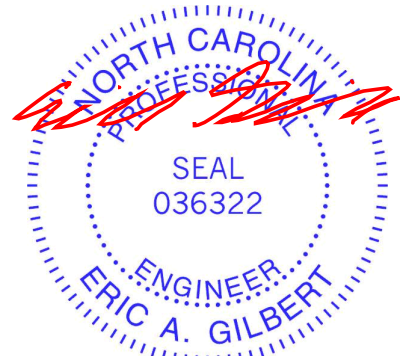
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3339/1154, 2-4=-3099/1076,
4-5=-2305/922, 5-6=-2114/936,
6-7=-2305/922, 7-9=-3099/1076,
9-10=-3339/1154
BOT CHORD 1-15=-887/2876, 13-15=-690/2640,
11-13=-690/2640, 10-11=-887/2876
WEBS 4-15=-12/386, 2-15=-209/244,
4-13=-871/403, 5-13=-191/667,
6-13=-191/667, 7-13=-871/403,
7-11=-13/386, 9-11=-209/244

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

- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP SS crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 440 lb uplift at joint 1 and 440 lb uplift at joint 10.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-5=-49, 5-6=-60, 6-10=-49, 16-21=-20



February 6, 2024

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

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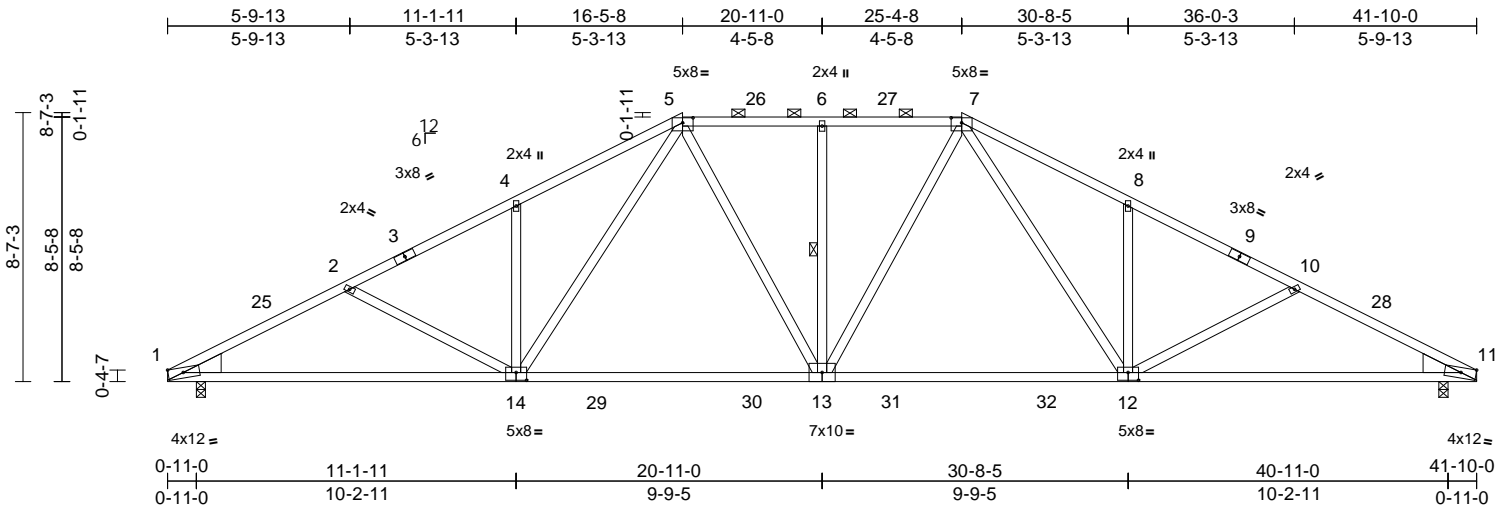
818 Soundside Road
Edenton, NC 27932

| | | | | | | |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A05 | Truss Type Hip | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425440 |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:17
ID:yhwZ_nBc5jThdQHOYGR1ZFyhiE3-RIC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:73.6

Plate Offsets (X, Y): [1:Edge,0-1-14], [5:0-4-0,0-1-15], [7:0-4-0,0-1-15], [11:0-5-12,Edge], [12:0-4-0,0-3-0], [14:0-4-0,0-3-0]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.83 | Vert(LL) | -0.44 | 13-14 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 1.00 | Vert(CT) | -0.71 | 13-14 | >703 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.68 | Horz(CT) | 0.13 | 11 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 238 lb | FT = 20% |

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-3,9-11:2x4 SP SS
BOT CHORD 2x4 SP SS *Except* 13-12,13-14:2x4 SP No.1
WEBS 2x4 SP No.3
WEDGE Left: 2x8 SP DSS
Right: 2x8 SP DSS

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (3-9-1 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 1-4-12 oc bracing.
WEBS 1 Row at midpt 6-13

REACTIONS (size) 1=0-3-8, 11=0-3-8
Max Horiz 1=-180 (LC 17)
Max Uplift 1=-445 (LC 16), 11=-445 (LC 17)
Max Grav 1=1938 (LC 38), 11=1938 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3215/1137, 2-4=-2955/1054, 4-5=-3006/1240, 5-6=-2191/995, 6-7=-2191/995, 7-8=-3006/1240, 8-10=-2955/1054, 10-11=-3215/1137
BOT CHORD 1-11=-873/2749
WEBS 4-14=-577/357, 5-14=-367/955, 2-14=-181/199, 5-13=-143/524, 6-13=-578/210, 7-13=-143/524, 7-12=-367/955, 8-12=-577/357, 10-12=-181/199

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

- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP SS crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 445 lb uplift at joint 1 and 445 lb uplift at joint 11.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

Uniform Loads (lb/ft)
Vert: 1-5=-49, 5-7=-60, 7-11=-49, 15-20=-20

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00



February 6, 2024

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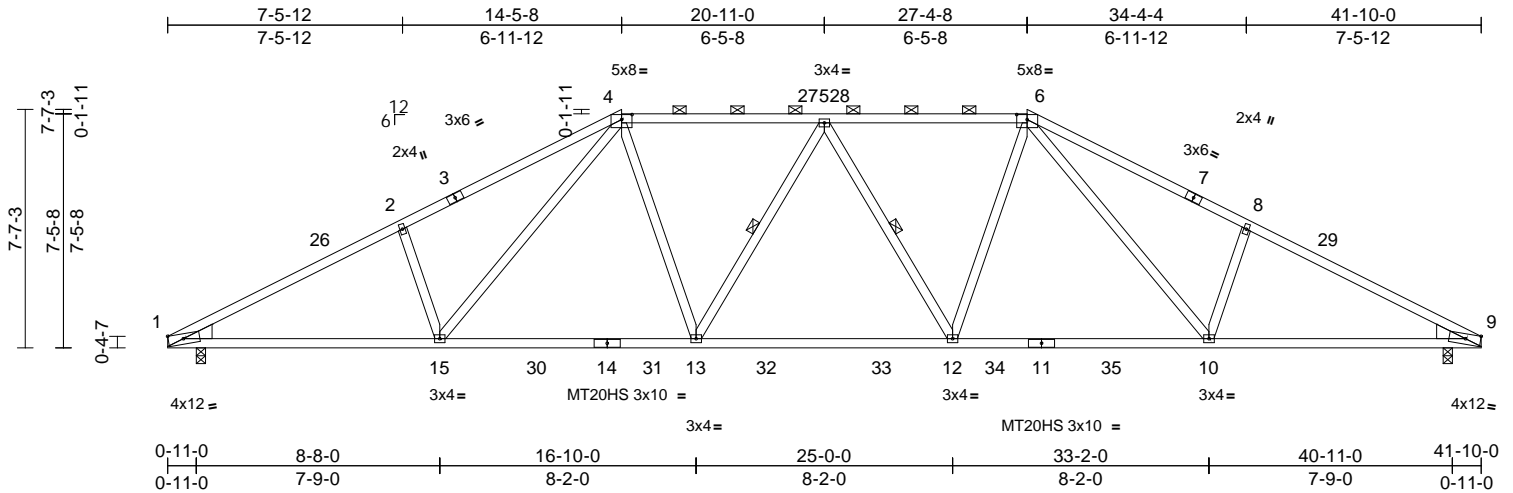
818 Soundside Road
Edenton, NC 27932

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|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A06 | Truss Type Hip | Qty 1 | Ply 1 | Roof F Job Reference (optional) | I63425441 |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:17
ID:uX_THqoXduREoVrEgYsXGVyhiEZ-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRCDoi7J4zJC?f

Page: 1



Scale = 1:73.4

Plate Offsets (X, Y): [1:Edge,0-1-14], [4:0-4-0,0-1-15], [6:0-4-0,0-1-15], [9:0-5-12,Edge]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.98 | Vert(LL) | -0.33 | 13-15 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.78 | Vert(CT) | -0.59 | 13-15 | >857 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.42 | Horz(CT) | 0.13 | 9 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 218 lb | FT = 20% |

- LUMBER**
TOP CHORD 2x4 SP SS *Except* 4-6:2x4 SP No.1
BOT CHORD 2x4 SP SS *Except* 14-11:2x4 SP No.1
WEBS 2x4 SP No.3
WEDGE Left: 2x6 SP No.2
Right: 2x6 SP No.2
- BRACING**
TOP CHORD Structural wood sheathing directly applied, except
2-0-0 oc purlins (3-0-9 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 7-2-6 oc bracing.
WEBS 1 Row at midpt 5-13, 5-12
(size) 1=0-3-8, 9=0-3-8
Max Horiz 1=-158 (LC 17)
Max Uplift 1=-449 (LC 16), 9=-449 (LC 17)
Max Grav 1=1901 (LC 38), 9=1901 (LC 38)
- FORCES**
(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3084/1098, 2-4=-2904/1184,
4-5=-2344/1001, 5-6=-2344/1001,
6-8=-2904/1184, 8-9=-3084/1098
BOT CHORD 1-15=-837/2618, 13-15=-577/2132,
12-13=-678/2547, 10-12=-577/2132,
9-10=-837/2618
WEBS 2-15=-466/335, 4-15=-248/645,
4-13=-108/672, 5-13=-463/229,
5-12=-463/229, 6-12=-108/672,
6-10=-248/645, 8-10=-466/335
- NOTES**
1) Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
 - ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
 - Roof design snow load has been reduced to account for slope.
 - Unbalanced snow loads have been considered for this design.
 - Provide adequate drainage to prevent water ponding.
 - All plates are MT20 plates unless otherwise indicated.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - All bearings are assumed to be SP SS crushing capacity of 565 psi.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 449 lb uplift at joint 1 and 449 lb uplift at joint 9.
 - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - 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



February 6, 2024

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TRENCO
A MiTek Affiliate

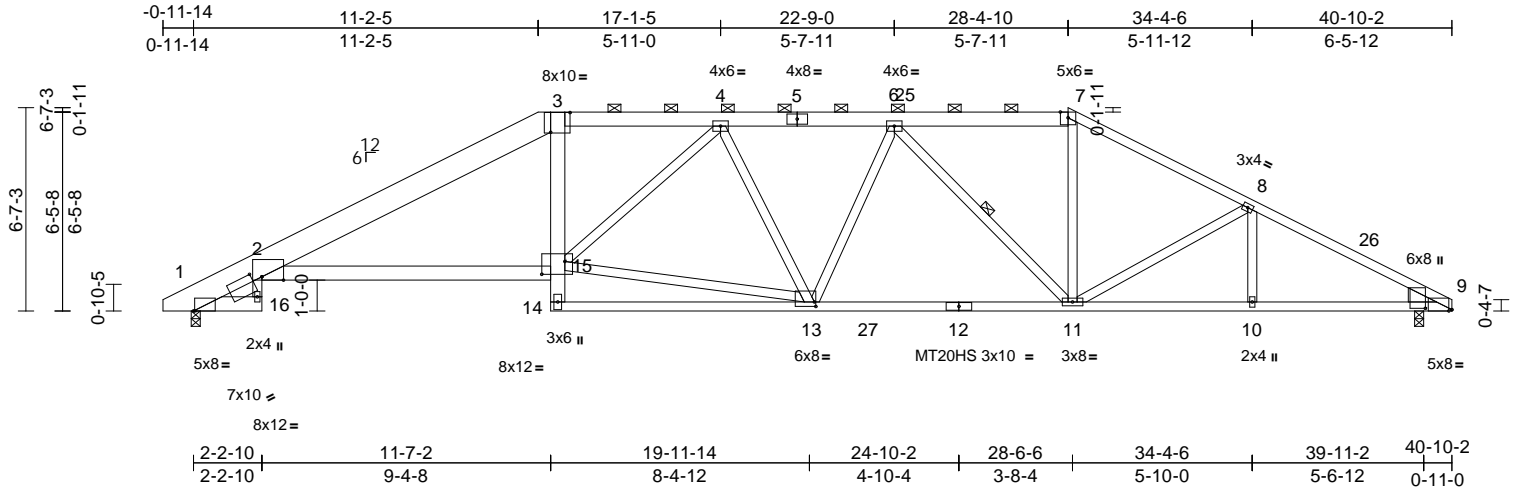
818 Soundside Road
Edenton, NC 27932

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|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A07 | Truss Type Hip | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425442 |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:18
ID:S5keLgYAXrNplzWY5qy_yhiNx-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC7f

Page: 1



Scale = 1:74.8
Plate Offsets (X, Y): [1:0-0-8,Edge], [2:0-8-7,Edge], [2:0-3-14,0-3-0], [3:0-7-8,0-7-11], [9:0-1-3,Edge], [9:0-0-8,0-10-5], [13:0-0-9,0-1-12], [15:0-9-0,0-5-0]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.85 | Vert(LL) | -0.31 | 2-15 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.95 | Vert(CT) | -0.61 | 2-15 | >800 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.92 | Horz(CT) | 0.31 | 9 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 278 lb | FT = 20% |

LUMBER
TOP CHORD 2x6 SP No.2 *Except* 1-3:2x10 SP DSS, 7-9:2x4 SP No.1
BOT CHORD 2x6 SP No.2 *Except* 16-2:2x4 SP No.3, 2-15:2x6 SP DSS, 14-12:2x4 SP No.1, 12-9:2x4 SP SS
WEBS 2x4 SP No.3 *Except* 13-15:2x4 SP No.2
WEDGE Right: 2x6 SP No.2
BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (3-11-1 max.): 3-7.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 6-11
REACTIONS (size) 1=0-3-8, 9=0-3-8
Max Horiz 1=-144 (LC 17)
Max Uplift 1=-318 (LC 16), 9=-339 (LC 17)
Max Grav 1=1748 (LC 39), 9=1846 (LC 39)
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-928/379, 2-3=-3629/1209, 3-4=-3193/1181, 4-6=-3196/1131, 6-7=-2469/979, 7-8=-2776/1023, 8-9=-2814/1054
BOT CHORD 1-16=-114/335, 2-16=-126/391, 2-15=-893/3329, 14-15=0/151, 3-15=-122/928, 13-14=-78/305, 11-13=-816/3170, 10-11=-811/2393, 9-10=-811/2393
WEBS 13-15=-809/3125, 4-15=-323/260, 4-13=-442/201, 6-13=-2/188, 6-11=-1031/310, 7-11=-221/890, 8-11=-363/267, 8-10=-92/116

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

- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearings are assumed to be: Joint 1 SP No.2 crushing capacity of 565 psi, Joint 9 SP SS crushing capacity of 565 psi.
- Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 318 lb uplift at joint 1 and 339 lb uplift at joint 9.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- 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
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-2=-49, 2-3=-49, 3-7=-60, 7-9=-49, 16-17=-20, 2-15=-20, 14-20=-20



February 6, 2024

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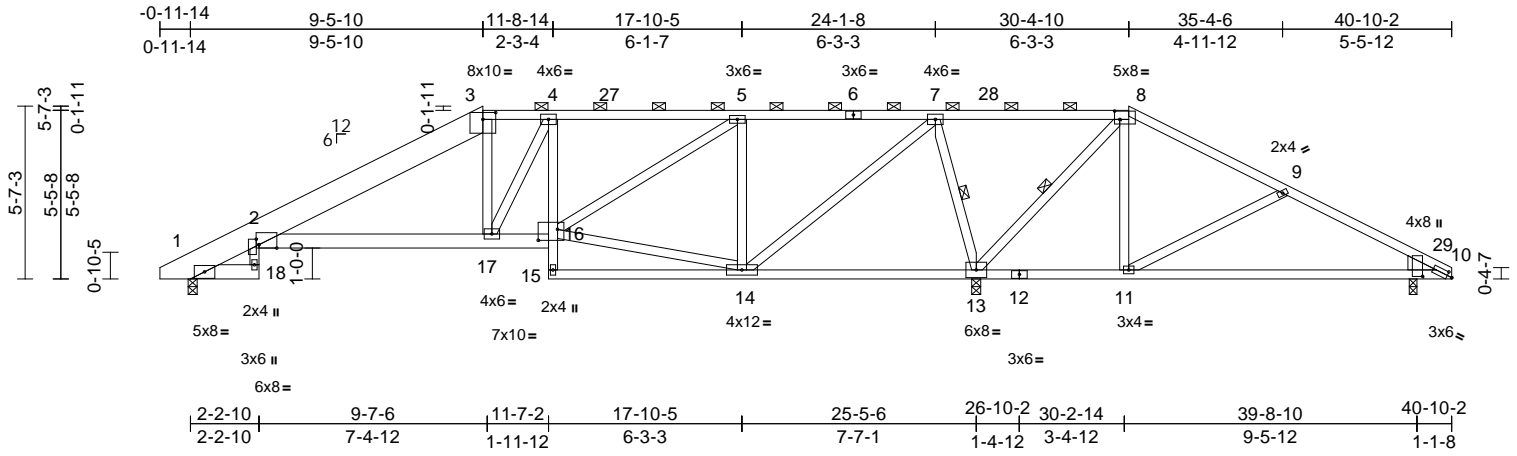
818 Soundside Road
Edenton, NC 27932

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|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A08 | Truss Type Hip | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425443 |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:19
ID:5WmBu5F27MYTSMIZhk6PyhiPc-RfC?PsB70Hq3NSgPqnL8w3uITxBGKwRcDoi7J4zJC?f

Page: 1



Scale = 1:74.6
Plate Offsets (X, Y): [2:0-6-15,Edge], [2:0-2-2,0-1-1], [3:0-5-0,0-2-11], [8:0-2-0,0-3-4], [10:0-2-0,0-1-8], [10:0-0-8,0-11-5], [16:0-7-8,0-4-4]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in (loc) | l/defl | L/d | PLATES | GRIP | | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|--------|-------|--------|------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.81 | Vert(LL) | -0.15 | 11-26 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.58 | Vert(CT) | -0.30 | 11-26 | >610 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.70 | Horz(CT) | 0.10 | 13 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 259 lb | FT = 20% |

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-3:2x10 SP DSS, 6-8:2x4 SP No.1
BOT CHORD 2x6 SP No.2 *Except* 18-2,4-15:2x4 SP No.3, 15-12,12-10:2x4 SP No.2
WEBS 2x4 SP No.3
WEDGE Right: 2x6 SP No.2

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

REACTIONS (size) 1=0-3-8, 10=0-3-0, 13=0-3-8
Max Horiz 1=-121 (LC 17)
Max Uplift 1=-177 (LC 16), 10=-144 (LC 17), 13=-551 (LC 13)
Max Grav 1=917 (LC 39), 10=513 (LC 43), 13=2648 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-456/198, 2-3=-1498/389, 3-4=-1376/456, 4-5=-1548/458, 5-7=-792/210, 7-8=-323/1022, 8-9=-159/368, 9-10=-430/237
BOT CHORD 1-18=-75/171, 2-18=-54/203, 2-17=-239/1364, 16-17=-290/1525, 15-16=0/102, 4-16=-360/195, 14-15=-2/110, 13-14=-774/463, 11-13=-267/310, 10-11=-126/336
WEBS 3-17=-139/363, 4-17=-333/336, 14-16=-119/723, 5-16=-282/862, 5-14=-1095/403, 7-14=-500/1695, 7-13=-1856/610, 8-13=-1141/444, 8-11=-54/394, 9-11=-555/316

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 1 SP No.2 crushing capacity of 565 psi, Joint 13 SP No.2 crushing capacity of 565 psi, Joint 10 SP No.2 crushing capacity of 565 psi.
- Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 177 lb uplift at joint 1, 551 lb uplift at joint 13 and 144 lb uplift at joint 10.

- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - 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
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-2=-49, 2-3=-49, 3-8=-60, 8-10=-49, 18-19=-20, 2-16=-20, 15-22=-20



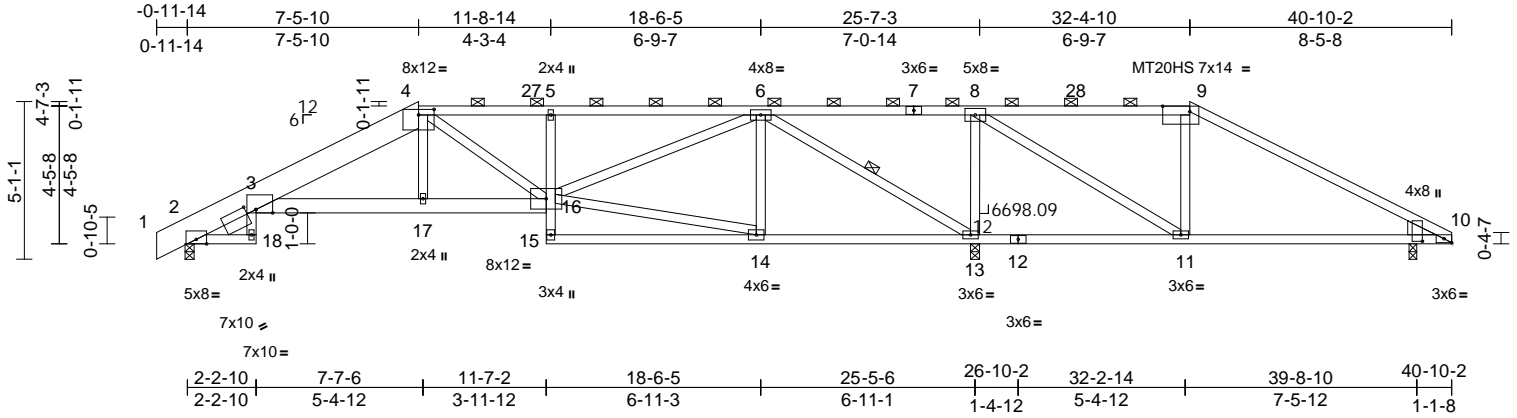
February 6, 2024

| | | | | | | |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A09 | Truss Type Hip | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425444 |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:20
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Page: 1



Scale = 1:74.4
Plate Offsets (X, Y): [3:0-6-7,Edge], [3:0-3-14,0-3-0], [4:0-6-0,0-2-3], [9:0-10-8,0-2-2], [10:0-0-8,0-11-5]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.95 | Vert(LL) | -0.14 | 5 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.58 | Vert(CT) | -0.24 | 14-15 | >999 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.87 | Horz(CT) | 0.12 | 13 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 239 lb | FT = 20% |

LUMBER
TOP CHORD 2x4 SP No.1 *Except* 1-4:2x10 SP DSS
BOT CHORD 2x4 SP No.2 *Except* 18-3,5-15:2x4 SP No.3, 3-16:2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE Right: 2x6 SP No.2

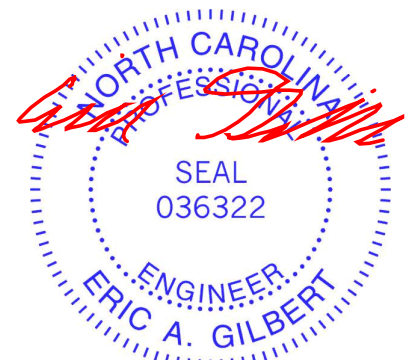
BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-8 oc purlins, except 2-0-0 oc purlins (2-2-0 max.): 4-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 5-7-14 oc bracing: 11-13
6-0-0 oc bracing: 10-11.
WEBS 1 Row at midpt 6-13

REACTIONS (size) 2=0-3-8, 10=0-3-0, 13=0-3-8
Max Horiz 2=105 (LC 20)
Max Uplift 2=-228 (LC 16), 10=-243 (LC 17), 13=-583 (LC 13)
Max Grav 2=1072 (LC 39), 10=709 (LC 39), 13=2751 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/44, 2-3=-432/212, 3-4=-1955/674, 4-5=-2187/804, 5-6=-2199/812, 6-8=-202/1006, 8-9=-372/314, 9-10=-558/278
BOT CHORD 2-18=-66/129, 3-18=-13/68, 3-17=-472/1821, 16-17=-470/1827, 15-16=0/122, 5-16=-604/234, 14-15=-27/179, 13-14=-292/1042, 11-13=-1003/262, 10-11=-145/378
WEBS 4-17=0/240, 4-16=-217/445, 6-14=-1/221, 14-16=-269/874, 6-16=-315/1272, 8-13=-1382/427, 9-11=-439/190, 6-13=-2389/547, 8-11=-256/1144

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof live load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 228 lb uplift at joint 2, 243 lb uplift at joint 10 and 583 lb uplift at joint 13.

- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - 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
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-3=-49, 3-4=-49, 4-9=-60, 9-10=-49, 18-19=-20, 3-16=-20, 15-22=-20



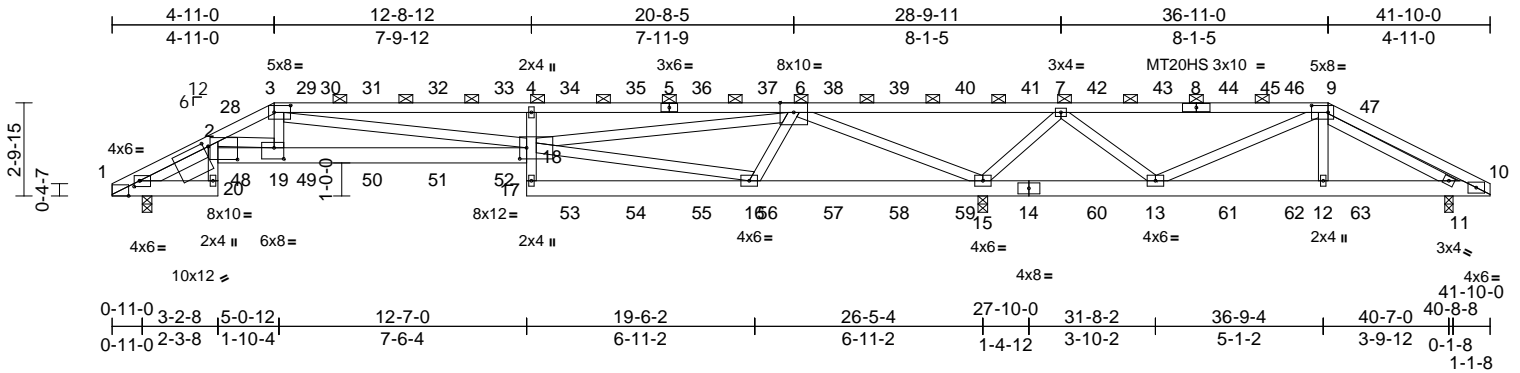
February 6, 2024

| | | | | | | |
|-------------------|----------------|--------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A11GR | Truss Type Hip Girder | Qty 1 | Ply 2 | Roof F Job Reference (optional) | 163425446 |
|-------------------|----------------|--------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

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Page: 1



Scale = 1:70

Plate Offsets (X, Y): [1:0-2-0,0-2-1], [1:0-4-0,Edge], [2:0-10-11,0-4-12], [2:0-1-12,0-2-0], [3:0-6-0,0-2-8], [9:0-6-0,0-2-8], [18:0-2-8,0-4-0], [19:0-3-8,0-4-0]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.90 | Vert(LL) | 0.29 | 4 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.67 | Vert(CT) | -0.43 | 4 | >744 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.89 | Horz(CT) | 0.15 | 15 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 495 lb | FT = 20% |

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 3-5:2x4 SP No.1, 5-8:2x4 SP SS
 BOT CHORD 2x6 SP No.2 *Except* 20-2:2x4 SP No.1, 2-18:2x6 SP DSS, 4-17:2x4 SP No.2
 WEBS 2x4 SP No.3
 SLIDER Left 2x4 SP No.2 -- 2-3-15

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-10-6 oc purlins, except 2-0-0 oc purlins (5-1-8 max.); 3-9.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size) 1=0-3-8, 11=0-3-0, 15=0-3-8
 Max Horiz 1=-55 (LC 13)
 Max Uplift 1=-529 (LC 12), 11=-190 (LC 56), 15=-1630 (LC 9)
 Max Grav 1=1231 (LC 33), 11=336 (LC 34), 15=3924 (LC 33)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-565/260, 2-3=-3517/1457, 3-4=-4178/1811, 4-6=-3890/1742, 6-7=-1973/4643, 7-9=-928/1778, 9-10=-212/163
 BOT CHORD 1-20=-53/36, 2-20=-140/341, 2-19=-1225/3036, 18-19=-1304/3229, 17-18=0/157, 4-18=-909/479, 16-17=-245/603, 15-16=-555/165, 13-15=-2840/1295, 12-13=-178/234, 11-12=-187/232, 10-11=-48/128
 WEBS 3-19=-338/908, 3-18=-543/965, 16-18=-957/397, 6-18=-1851/4301, 6-16=-26/523, 6-15=-4471/2068, 7-15=-2595/1140, 7-13=-388/1396, 9-13=-1839/845, 9-12=0/264, 9-11=-192/168

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
 Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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=1.33
- ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1630 lb uplift at joint 15, 529 lb uplift at joint 1 and 190 lb uplift at joint 11.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



818 Soundside Road
 Edenton, NC 27932

| | | | | | | |
|------------|-------|------------|-----|-----|--------------------------|-----------|
| Job | Truss | Truss Type | Qty | Ply | Roof F | I63425446 |
| ELV F Roof | A11GR | Hip Girder | 1 | 2 | Job Reference (optional) | |

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:25

Page: 2

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16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 82 lb down and 51 lb up at 3-11-0, 44 lb down and 53 lb up at 5-11-0, 44 lb down and 53 lb up at 7-11-0, 44 lb down and 53 lb up at 9-11-0, 44 lb down and 53 lb up at 11-11-0, 58 lb down and 76 lb up at 13-11-0, 58 lb down and 76 lb up at 15-11-0, 58 lb down and 76 lb up at 17-11-0, 58 lb down and 76 lb up at 19-11-0, 58 lb down and 76 lb up at 21-11-0, 58 lb down and 76 lb up at 23-11-0, 58 lb down and 76 lb up at 25-11-0, 62 lb down and 82 lb up at 27-11-0, 62 lb down and 82 lb up at 29-11-0, 62 lb down and 82 lb up at 31-11-0, 62 lb down and 82 lb up at 33-11-0, and 62 lb down and 82 lb up at 35-11-0, and 70 lb down and 54 lb up at 37-11-0 on top chord, and 95 lb down and 54 lb up at 3-11-0, 46 lb down and 40 lb up at 5-11-0, 46 lb down and 40 lb up at 7-11-0, 46 lb down and 40 lb up at 9-11-0, 46 lb down and 40 lb up at 11-11-0, 30 lb down and 16 lb up at 13-11-0, 30 lb down and 16 lb up at 15-11-0, 30 lb down and 16 lb up at 17-11-0, 30 lb down and 16 lb up at 19-11-0, 30 lb down and 16 lb up at 21-11-0, 30 lb down and 16 lb up at 23-11-0, 30 lb down and 16 lb up at 25-11-0, 37 lb down at 27-11-0, 37 lb down at 29-11-0, 37 lb down at 31-11-0, 37 lb down at 33-11-0, and 37 lb down at 35-11-0, and 72 lb down and 42 lb up at 37-11-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00

Uniform Loads (lb/ft)

Vert: 1-2=-49, 2-3=-49, 3-9=-60, 9-10=-49, 1-20=-20, 2-18=-20, 10-17=-20

Concentrated Loads (lb)

Vert: 14=-19 (F), 13=-19 (F), 28=-62 (F), 29=-16 (F), 31=-16 (F), 32=-16 (F), 33=-16 (F), 34=-30 (F), 35=-30 (F), 36=-30 (F), 37=-30 (F), 38=-30 (F), 39=-30 (F), 40=-30 (F), 41=-34 (F), 42=-34 (F), 43=-34 (F), 44=-34 (F), 46=-34 (F), 47=-50 (F), 48=-95 (F), 49=-40 (F), 50=-40 (F), 51=-40 (F), 52=-40 (F), 53=-27 (F), 54=-27 (F), 55=-27 (F), 56=-27 (F), 57=-27 (F), 58=-27 (F), 59=-27 (F), 60=-19 (F), 61=-19 (F), 62=-19 (F), 63=-72 (F)

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



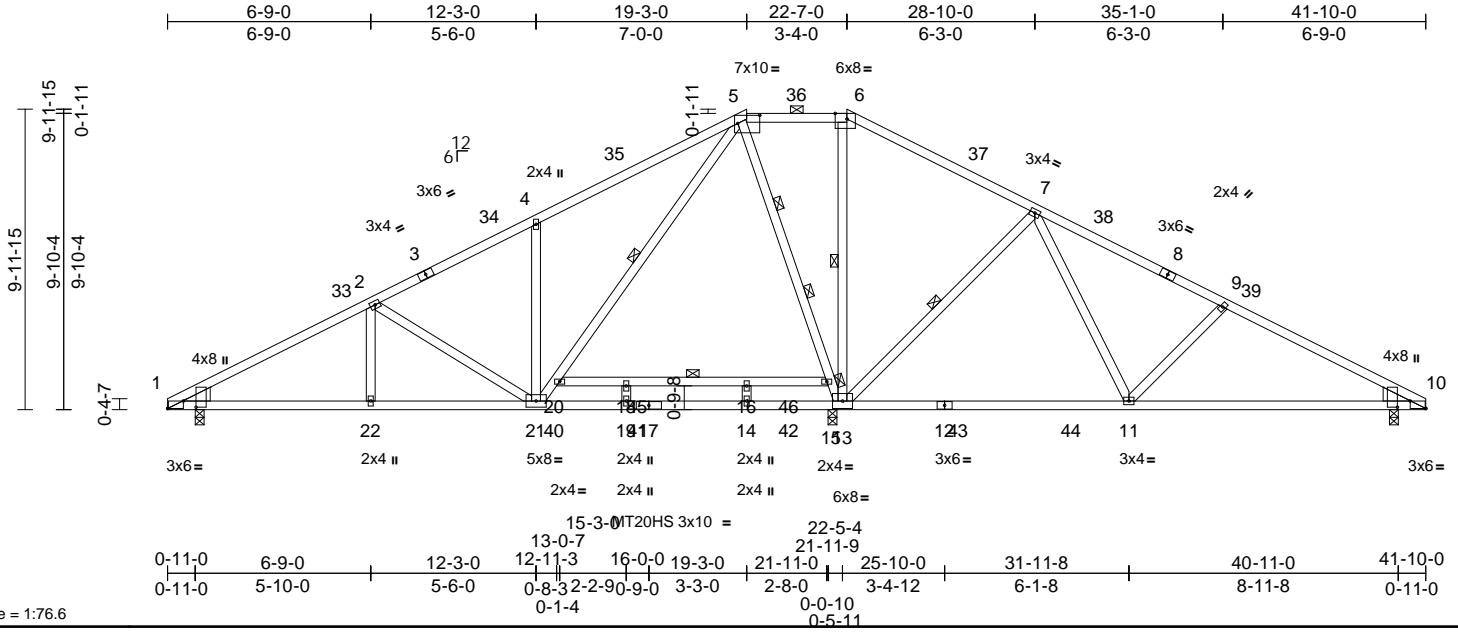
818 Soundside Road
Edenton, NC 27932

| | | | | | | |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A21 | Truss Type Hip | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425447 |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:27
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Page: 1



| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.95 | Vert(LL) | -0.40 | 14-19 | >681 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.96 | Vert(CT) | -0.66 | 14-19 | >406 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.97 | Horz(CT) | 0.01 | 13 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 249 lb | FT = 20% |

LUMBER
 TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2 *Except* 20-15,17-12:2x4 SP No.1
 WEBS 2x4 SP No.3
 WEDGE Left: 2x6 SP No.2
 Right: 2x6 SP No.2

BRACING
 TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 5-6.
 BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except: 6-0-0 oc bracing: 15-20

REACTIONS (size) 1=0-3-8, 10=0-3-8, 13=0-3-8
 Max Horiz 1=-212 (LC 17)
 Max Uplift 1=-211 (LC 16), 10=-219 (LC 17), 13=-351 (LC 16)
 Max Grav 1=792 (LC 53), 10=589 (LC 54), 13=2962 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-1018/340, 2-4=-671/236, 4-5=-737/452, 5-6=0/813, 6-7=-31/1001, 7-9=-394/257, 9-10=-632/305
 BOT CHORD 1-22=-336/838, 21-22=-336/838, 19-21=-284/361, 14-19=-284/361, 13-14=-284/361, 11-13=-161/147, 10-11=-159/509, 18-20=-133/0, 16-18=-133/0, 15-16=-133/0

WEBS 6-13=-677/183, 7-13=-962/475, 7-11=-142/528, 9-11=-424/319, 4-21=-661/403, 2-21=-412/283, 20-21=-509/1293, 5-20=-478/1426, 5-15=-1354/435, 13-15=-1439/397, 2-22=0/74, 18-19=-15/13, 14-16=-109/0

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
 - ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
 - Roof design snow load has been reduced to account for slope.
 - Unbalanced snow loads have been considered for this design.
 - Provide adequate drainage to prevent water ponding.
 - All plates are MT20 plates unless otherwise indicated.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Bearings are assumed to be: Joint 1 SP No.2 crushing capacity of 565 psi, Joint 13 SP No.1 crushing capacity of 565 psi.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 351 lb uplift at joint 13, 211 lb uplift at joint 1 and 219 lb uplift at joint 10.
 - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - 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
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00
 Uniform Loads (lb/ft)
 Vert: 1-5=-49, 5-6=-60, 6-10=-49, 23-28=-20, 15-20=-20



February 6, 2024

| | | | | | | |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A22 | Truss Type Hip | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425448 |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

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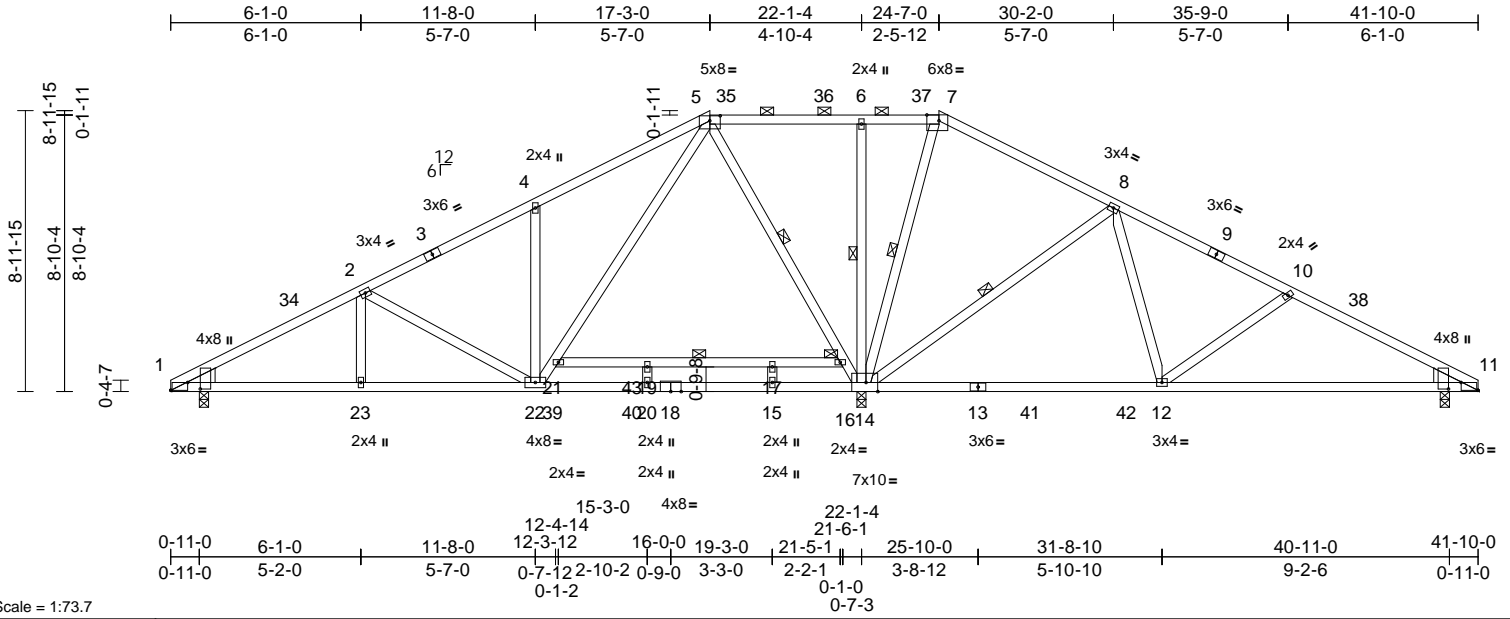


Plate Offsets (X, Y): [1:0-6-8,Edge], [1:0-0-8,0-11-5], [5:0-4-0,0-1-15], [7:0-4-10,Edge], [11:0-6-8,Edge], [11:0-0-8,0-11-5], [14:0-4-8,Edge]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.78 | Vert(LL) | -0.42 | 17-19 | >635 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.90 | Vert(CT) | -0.71 | 17-19 | >373 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.87 | Horz(CT) | 0.02 | 11 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 256 lb | FT = 20% |

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.3 *Except* 14-5,22-5:2x4 SP No.2
WEDGE Left: 2x6 SP No.2
Right: 2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-4-8 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except: 6-0-0 oc bracing: 16-21
WEBS 1 Row at midpt 7-14, 6-14, 8-14, 5-16

REACTIONS (size) 1=0-3-8, 11=0-3-8, 14=0-3-8
Max Horiz 1=-189 (LC 21)
Max Uplift 1=-200 (LC 16), 11=-206 (LC 17), 14=-375 (LC 16)
Max Grav 1=782 (LC 53), 11=587 (LC 54), 14=2782 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1028/302, 2-4=-722/181, 4-5=-763/366, 5-6=-40/915, 6-7=-42/916, 7-8=-80/916, 8-10=-389/205, 10-11=-644/293
BOT CHORD 1-23=-318/881, 22-23=-318/881, 20-22=-100/367, 15-20=-100/367, 14-15=-100/367, 12-14=-85/204, 11-12=-155/526, 19-21=-171/6, 17-19=-171/6, 16-17=-171/6
WEBS 7-14=-674/189, 6-14=-467/179, 8-14=-966/429, 8-12=-70/452, 10-12=-446/297, 5-16=-1351/433, 14-16=-1464/396, 4-22=-575/352, 21-22=-412/1148, 5-21=-384/1299, 2-22=-455/294, 2-23=-29/53, 19-20=-39/2, 15-17=-76/0

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
 - ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
 - Roof design snow load has been reduced to account for slope.
 - Unbalanced snow loads have been considered for this design.
 - Provide adequate drainage to prevent water ponding.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - All bearings are assumed to be SP No.1 crushing capacity of 565 psi.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 375 lb uplift at joint 14, 200 lb uplift at joint 1 and 206 lb uplift at joint 11.
 - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- 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
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-5=-49, 5-7=-60, 7-11=-49, 24-29=-20, 16-21=-20



February 6, 2024

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



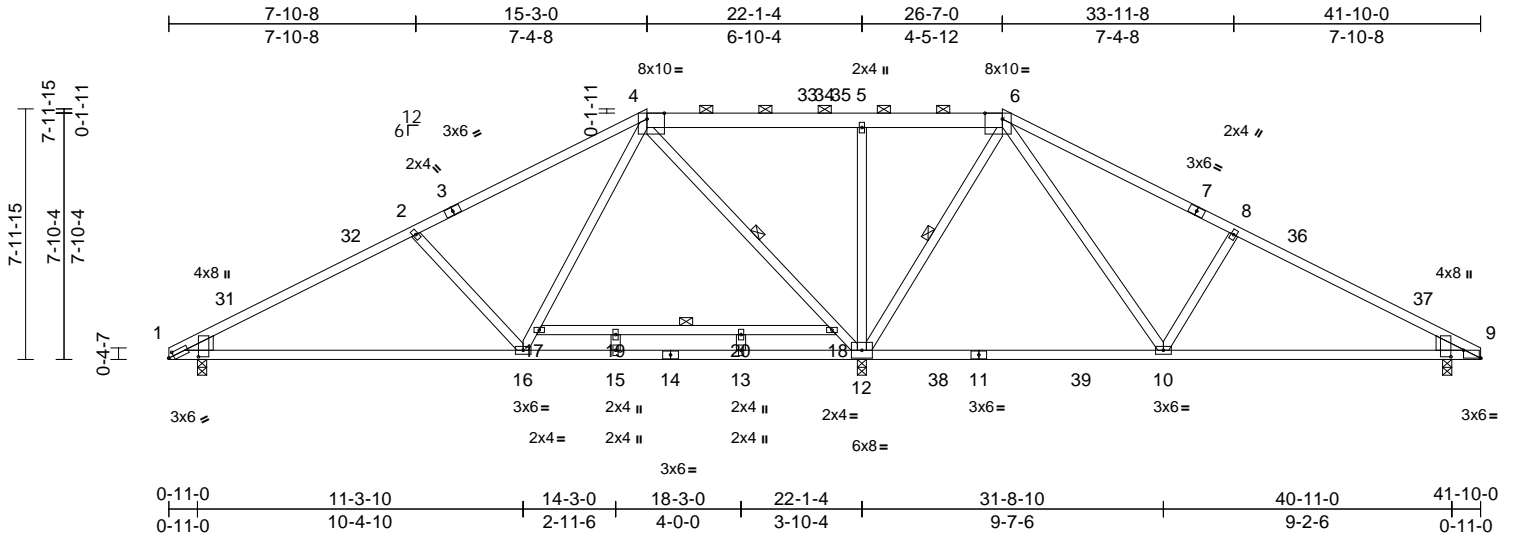
818 Soundside Road
Edenton, NC 27932

| | | | | | | |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A23 | Truss Type Hip | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425449 |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:28
 ID:HDmGN6Bc4NjzSPfBU8y1oyhf0n-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:73.5

Plate Offsets (X, Y): [1:0-2-0,0-1-8], [1:0-0-8,0-11-5], [4:0-6-10,Edge], [6:0-6-10,Edge], [9:0-6-8,Edge], [9:0-0-8,0-11-5]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.79 | Vert(LL) | -0.34 | 10-12 | >691 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.84 | Vert(CT) | -0.46 | 10-12 | >518 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.75 | Horz(CT) | 0.03 | 9 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 237 lb | FT = 20% |

LUMBER
 TOP CHORD 2x4 SP No.2 *Except* 4-6:2x6 SP No.2, 1-3,7-9:2x4 SP No.1
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3
 WEDGE Left: 2x6 SP No.2
 Right: 2x6 SP No.2

BRACING
 TOP CHORD Structural wood sheathing directly applied or 3-11-6 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 4-6.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
 WEBS 1 Row at midpt 6-12, 4-12, 17-18

REACTIONS (size) 1=0-3-8, 9=0-3-8, 12=0-3-8
 Max Horiz 1=-165 (LC 17)
 Max Uplift 1=-239 (LC 16), 9=-230 (LC 17), 12=-445 (LC 16)
 Max Grav 1=886 (LC 38), 9=756 (LC 38), 12=2192 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-1147/410, 2-4=-725/340, 4-5=-22/681, 5-6=-23/682, 6-8=-614/330, 8-9=-906/316
 BOT CHORD 1-16=-344/937, 15-16=-34/309, 13-15=-34/309, 12-13=-34/309, 10-12=-168/229, 9-10=-157/723
 WEBS 5-12=-704/264, 6-12=-1133/409, 6-10=-294/898, 8-10=-644/408, 4-18=-1214/446, 12-18=-1270/447, 16-17=-202/748, 4-17=-203/788, 2-16=-658/411, 17-19=-64/14, 19-20=-64/14, 18-20=-64/14, 15-19=0/20, 13-20=-12/48

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

- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 445 lb uplift at joint 12, 239 lb uplift at joint 1 and 230 lb uplift at joint 9.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

Uniform Loads (lb/ft)
 Vert: 1-4=-49, 4-6=-60, 6-9=-49, 21-26=-20

LOAD CASE(S) Standard
 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00



February 6, 2024

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

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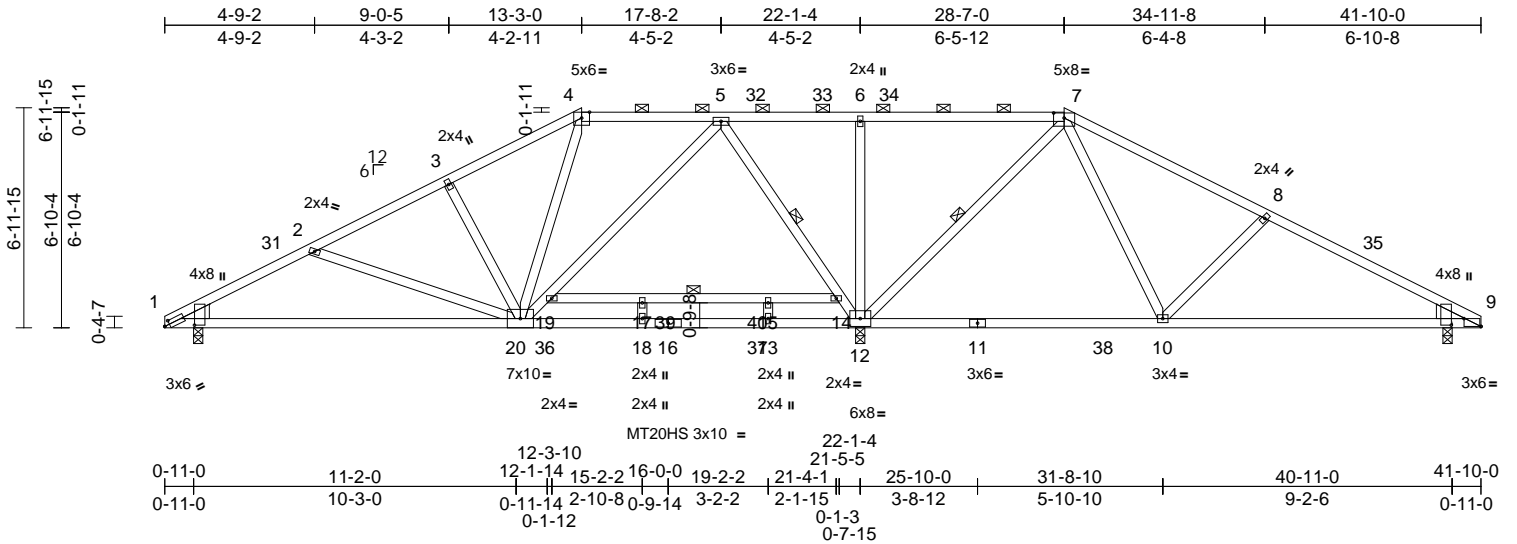
818 Soundside Road
 Edenton, NC 27932

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|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A24 | Truss Type Hip | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425450 |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:29
ID:x8f1n5Z6EO4OUzNJsQBhfyhf??-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRcDoi7J4zJC?f

Page: 1



Scale = 1:73.2
Plate Offsets (X, Y): [1:0-2-0,0-1-8], [1:0-0-8,0-11-5], [7:0-4-0,0-1-15], [9:0-6-8,Edge], [9:0-0-8,0-11-5]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in (loc) | l/defl | L/d | PLATES | GRIP | | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|--------|-------|--------|------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.98 | Vert(LL) | -0.37 | 15-17 | >708 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 1.00 | Vert(CT) | -0.70 | 15-17 | >376 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.72 | Horz(CT) | 0.02 | 9 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 241 lb | FT = 20% |

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 16-11:2x4 SP No.1
WEBS 2x4 SP No.3
WEDGE Left: 2x6 SP No.2
Right: 2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-7-13 oc purlins, except 2-0-0 oc purlins (2-2-0 max.): 4-7.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except: 6-0-0 oc bracing: 14-19
WEBS 1 Row at midpt 7-12, 5-12

REACTIONS (size) 1=0-3-8, 9=0-3-8, 12=0-3-8
Max Horiz 1=-145 (LC 17)
Max Uplift 1=-211 (LC 16), 9=-225 (LC 17), 12=-366 (LC 16)
Max Grav 1=974 (LC 38), 9=805 (LC 38), 12=2411 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1232/354, 2-3=-910/229, 3-4=-769/252, 4-5=-589/286, 5-6=-119/783, 6-7=-118/784, 7-8=-519/263, 8-9=-876/323
BOT CHORD 1-20=-325/1018, 18-20=-183/325, 13-18=-183/325, 12-13=-183/325, 10-12=-64/175, 9-10=-175/701, 17-19=-109/0, 15-17=-109/0, 14-15=-109/0
WEBS 7-12=-1147/449, 6-12=-646/247, 7-10=-166/646, 8-10=-580/357, 4-20=-5/164, 5-14=-1058/415, 12-14=-1120/361, 19-20=-295/959, 5-19=-241/1033, 2-20=-309/214, 3-20=-415/259, 17-18=-18/2, 13-15=-100/0

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Bearings are assumed to be: Joint 1 SP No.2 crushing capacity of 565 psi, Joint 12 SP No.1 crushing capacity of 565 psi, Joint 9 SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 366 lb uplift at joint 12, 211 lb uplift at joint 1 and 225 lb uplift at joint 9.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- 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
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-4=-49, 4-7=-60, 7-9=-49, 21-26=-20, 14-19=-20



February 6, 2024

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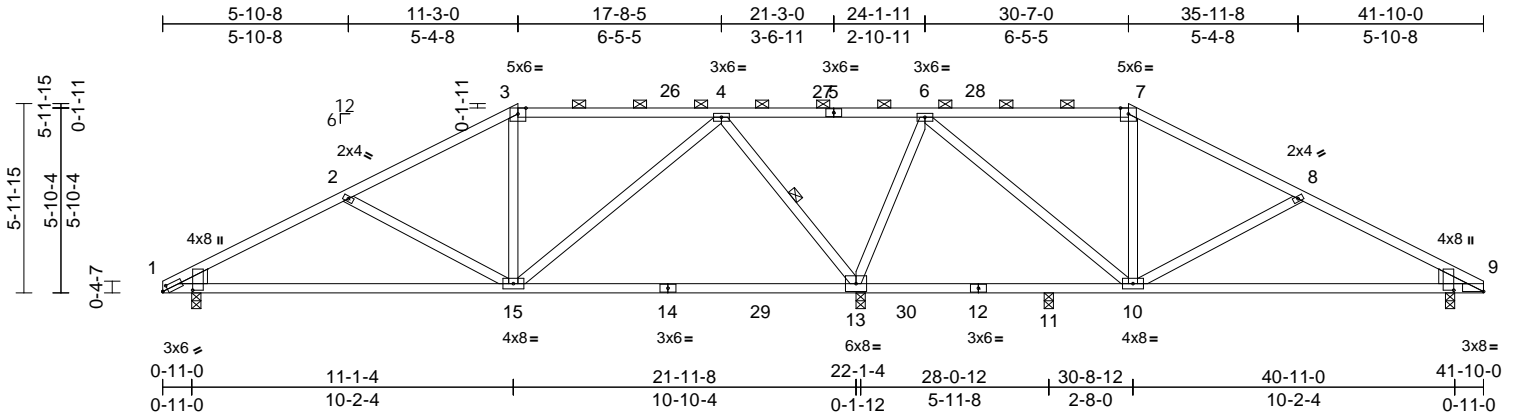
818 Soundside Road
Edenton, NC 27932

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|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A25 | Truss Type Hip | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425451 |
|-------------------|--------------|-------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:30
ID:rnWRSYrFN07iqF51TNfJGyhfA9-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCdoi7J4zJC?f

Page: 1



Scale = 1:73

Plate Offsets (X, Y): [1:0-2-0,0-1-8], [1:0-0-8,0-11-5], [9:0-0-8,0-11-5]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.76 | Vert(LL) | -0.27 | 13-15 | >985 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.91 | Vert(CT) | -0.51 | 13-15 | >512 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.88 | Horz(CT) | 0.02 | 9 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 210 lb | FT = 20% |

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 3-5,5-7:2x4 SP No.1
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.3
 WEDGE Left: 2x6 SP No.2
 Right: 2x6 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-1-8 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 3-7.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

WEBS 1 Row at midpt 4-13

REACTIONS (size) 1=0-3-8, 9=0-3-8, 11=0-3-8, 13=0-3-8
 Max Horiz 1=-122 (LC 17)
 Max Uplift 1=-228 (LC 16), 9=-215 (LC 17), 11=-12 (LC 17), 13=-523 (LC 13)
 Max Grav 1=914 (LC 38), 9=809 (LC 38), 11=45 (LC 36), 13=2431 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-1119/380, 2-3=-703/227, 3-4=-586/268, 4-6=-256/772, 6-7=-361/231, 7-8=-505/193, 8-9=-940/322
 BOT CHORD 1-15=-325/927, 13-15=-184/276, 11-13=-450/377, 10-11=-450/377, 9-10=-183/778
 WEBS 3-15=-106/152, 4-15=-248/862, 2-15=-512/315, 4-13=-1350/547, 6-13=-1251/526, 6-10=-332/943, 7-10=-219/181, 8-10=-552/322

NOTES

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

- 2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- 3) ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- 4) Roof design snow load has been reduced to account for slope.
- 5) Unbalanced snow loads have been considered for this design.
- 6) Provide adequate drainage to prevent water ponding.
- 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 523 lb uplift at joint 13, 228 lb uplift at joint 1, 12 lb uplift at joint 11 and 215 lb uplift at joint 9.
- 11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



February 6, 2024

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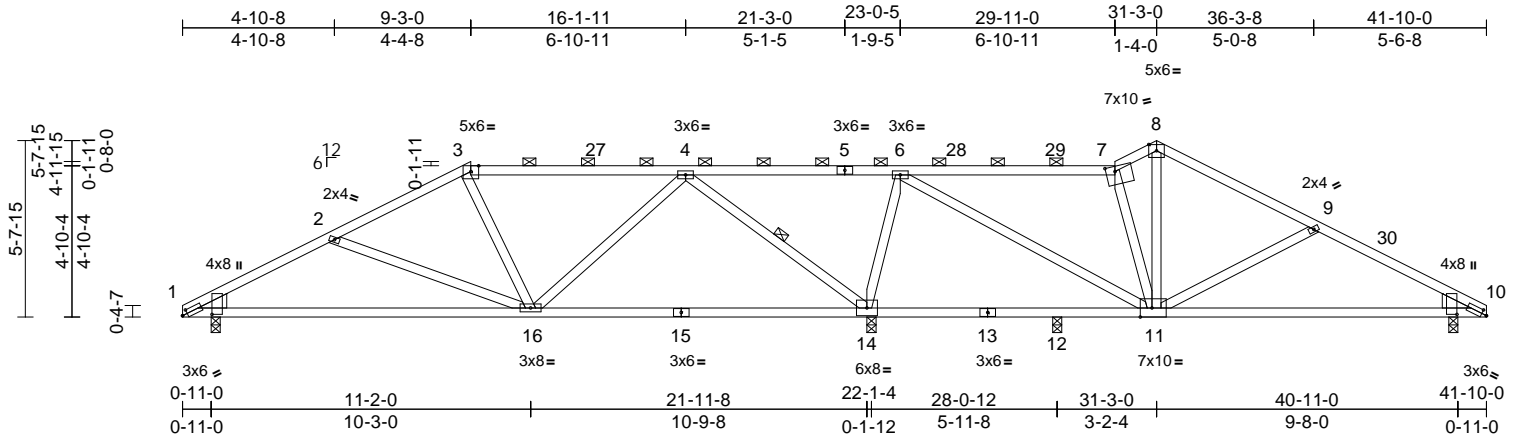
818 Soundside Road
Edenton, NC 27932

| | | | | | | |
|-------------------|--------------|----------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A26 | Truss Type Roof Special | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425452 |
|-------------------|--------------|----------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:31
 ID:N2uD5_VldGj7scNUdF1ouyhAi-RFC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?f

Page: 1



Scale = 1:73.9

Plate Offsets (X, Y): [1:0-2-0,0-1-8], [1:0-0-8,0-11-5], [7:0-3-8,0-2-0], [10:0-2-0,0-1-8], [10:0-0-8,0-11-5], [11:0-4-8,Edge]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.87 | Vert(LL) | -0.22 | 14-16 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.91 | Vert(CT) | -0.45 | 14-16 | >580 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.80 | Horz(CT) | 0.02 | 14 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 213 lb | FT = 20% |

- LUMBER**
- TOP CHORD 2x4 SP No.2 *Except* 3-5,5-7:2x4 SP No.1
 - BOT CHORD 2x4 SP No.2
 - WEBS 2x4 SP No.3
 - WEDGE Left: 2x6 SP No.2
Right: 2x6 SP No.2
- BRACING**
- TOP CHORD Structural wood sheathing directly applied or 4-11-8 oc purlins, except 2-0-0 oc purlins (5-3-13 max.): 3-7.
 - BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
 - WEBS 1 Row at midpt 4-14
- REACTIONS** (size)
- 1=0-3-8, 10=0-3-8, 12=0-3-8, 14=0-3-8
 - Max Horiz 1=-118 (LC 21)
 - Max Uplift 1=-229 (LC 16), 10=-190 (LC 17), 14=-663 (LC 16)
 - Max Grav 1=921 (LC 41), 10=731 (LC 23), 12=67 (LC 23), 14=2453 (LC 40)
- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=-1148/398, 2-3=-879/265, 3-4=-776/239, 4-6=-295/757, 6-7=-481/254, 7-8=-442/236, 8-9=-568/187, 9-10=-976/335
 - BOT CHORD 1-16=-329/952, 14-16=-35/518, 12-14=-489/425, 11-12=-489/425, 10-11=-191/829
 - WEBS 3-16=-42/172, 4-16=-99/541, 2-16=-392/228, 4-14=-1620/584, 6-14=-1296/554, 6-11=-482/1064, 8-11=-44/309, 7-11=-596/266, 9-11=-479/299
- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
 - ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
 - Roof design snow load has been reduced to account for slope.
 - Unbalanced snow loads have been considered for this design.
 - Provide adequate drainage to prevent water ponding.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 663 lb uplift at joint 14, 229 lb uplift at joint 1 and 190 lb uplift at joint 10.
 - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - 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



February 6, 2024

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



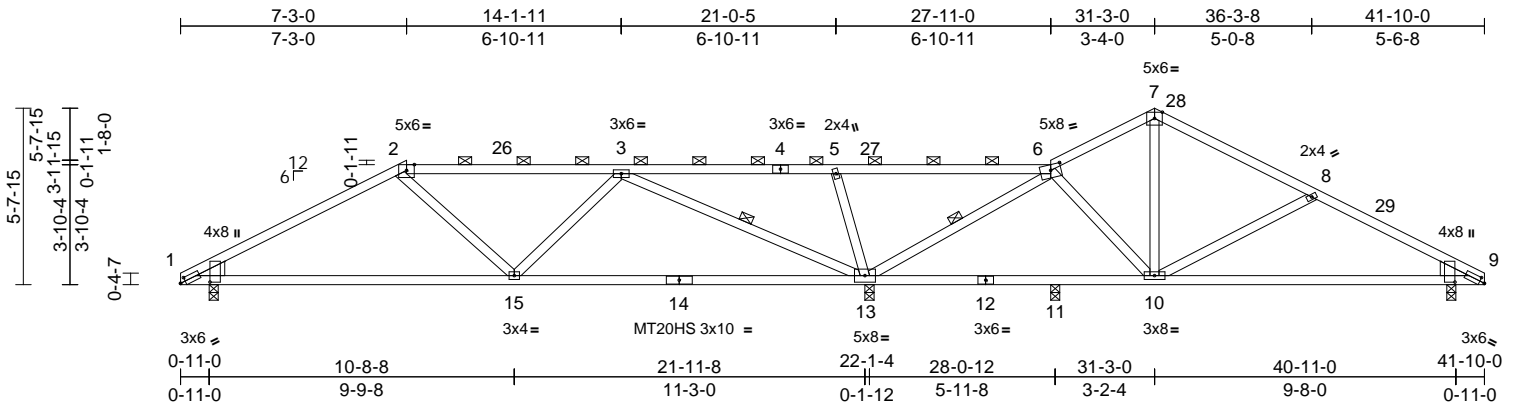
818 Soundside Road
Edenton, NC 27932

| | | | | | | |
|-------------------|--------------|----------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A27 | Truss Type Roof Special | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425453 |
|-------------------|--------------|----------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:31
 ID:MEJxOYuldbHvW1DZ?Pr4E7yhfBV-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCDoi7J4zJC?f

Page: 1



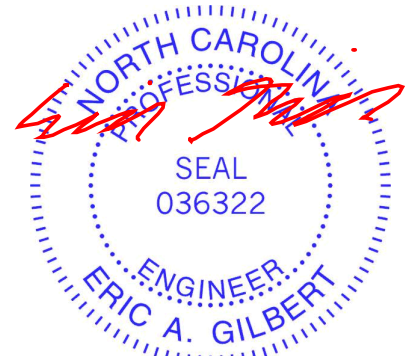
Scale = 1:73.9

Plate Offsets (X, Y): [1:0-2-0,0-1-8], [1:0-0-8,0-11-5], [6:0-4-0,0-2-3], [9:0-2-0,0-1-8], [9:0-0-8,0-11-5]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.95 | Vert(LL) | -0.29 | 13-15 | >906 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.99 | Vert(CT) | -0.60 | 13-15 | >442 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.84 | Horz(CT) | 0.04 | 9 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 198 lb | FT = 20% |

- LUMBER**
- TOP CHORD 2x4 SP No.2 *Except* 2-4,4-6:2x4 SP No.1
 - BOT CHORD 2x4 SP No.2
 - WEBS 2x4 SP No.3
 - WEDGE Left: 2x6 SP No.2
Right: 2x6 SP No.2
- BRACING**
- TOP CHORD Structural wood sheathing directly applied or 3-10-5 oc purlins, except 2-0-0 oc purlins (2-2-0 max.): 2-6.
 - BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
 - WEBS 1 Row at midpt 3-13, 6-13
- REACTIONS** (size)
- 1=0-3-8, 9=0-3-8, 11=0-3-8, 13=0-3-8
 - Max Horiz 1=-118 (LC 21)
 - Max Uplift 1=-259 (LC 16), 9=-200 (LC 17), 13=-599 (LC 16)
 - Max Grav 1=891 (LC 41), 9=746 (LC 23), 11=59 (LC 23), 13=2454 (LC 40)
- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=-1143/387, 2-3=-1103/326, 3-5=-189/824, 5-6=-274/1044, 6-7=-507/276, 7-8=-600/255, 8-9=-1006/397
 - BOT CHORD 1-15=-309/987, 13-15=-277/1027, 11-13=-10/362, 10-11=-10/362, 9-10=-244/855
 - WEBS 2-15=0/248, 3-15=0/356, 3-13=-2033/605, 5-13=-793/313, 6-13=-1227/568, 6-10=-11/273, 7-10=-45/282, 8-10=-480/292
- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
 - ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
 - Roof design snow load has been reduced to account for slope.
 - Unbalanced snow loads have been considered for this design.
 - Provide adequate drainage to prevent water ponding.
 - All plates are MT20 plates unless otherwise indicated.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 599 lb uplift at joint 13, 259 lb uplift at joint 1 and 200 lb uplift at joint 9.
 - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - 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



February 6, 2024

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbccomponents.com)



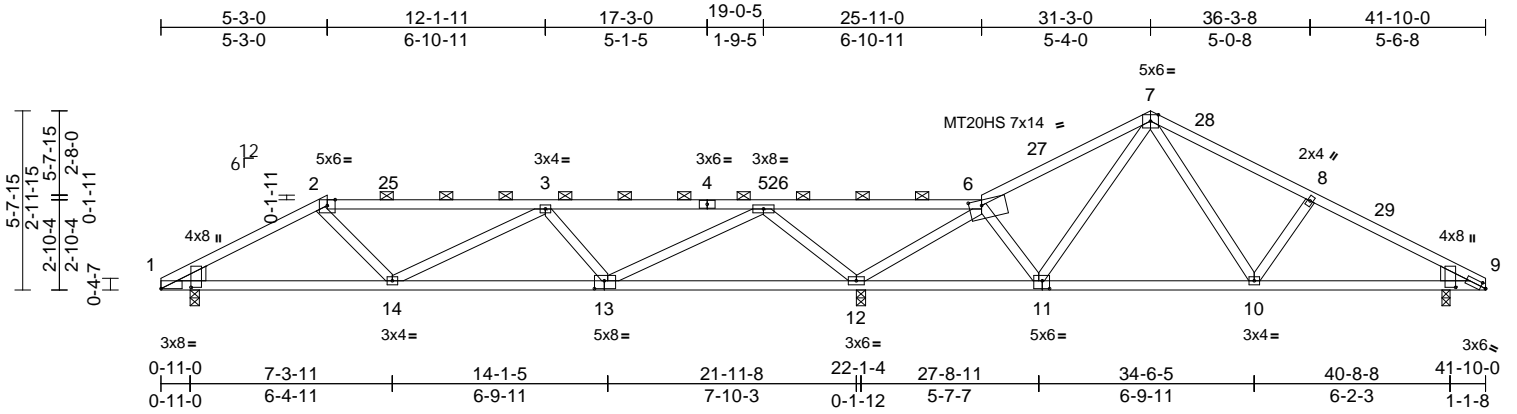
818 Soundside Road
Edenton, NC 27932

| | | | | | | |
|-------------------|--------------|----------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss A28 | Truss Type Roof Special | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425454 |
|-------------------|--------------|----------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:32
ID:mBqWcHcXpBy8p8X7ZsjFyhFD2-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRcDoi7J4zJC?f

Page: 1



Scale = 1:72.8

Plate Offsets (X, Y): [1:0-0-8,0-11-5], [6:0-4-12,0-2-0], [9:0-2-0,0-1-8], [9:0-0-8,0-11-5], [11:0-2-12,0-3-0], [13:0-3-12,0-3-0]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.85 | Vert(LL) | -0.15 | 13-14 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.82 | Vert(CT) | -0.22 | 13-14 | >999 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.79 | Horz(CT) | 0.03 | 12 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 198 lb | FT = 20% |

- LUMBER**
- TOP CHORD 2x4 SP No.2 *Except* 2-4:2x4 SP No.1, 4-6:2x4 SP SS
- BOT CHORD 2x4 SP No.2
- WEBS 2x4 SP No.3
- WEDGE Left: 2x6 SP No.2
Right: 2x6 SP No.2
- BRACING**
- TOP CHORD Structural wood sheathing directly applied or 4-0-6 oc purlins, except 2-0-0 oc purlins (2-11-15 max.); 2-6.
- BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
- REACTIONS** (size) 1=0-3-8, 9=0-3-0, 12=0-3-8
Max Horiz 1=118 (LC 16)
Max Uplift 1=-252 (LC 16), 9=-206 (LC 17), 12=-608 (LC 16)
Max Grav 1=836 (LC 40), 9=748 (LC 23), 12=2450 (LC 40)
- FORCES** (lb) - Maximum Compression/Maximum Tension
- TOP CHORD 1-2=-1334/394, 2-3=-1368/369, 3-5=-1315/322, 5-6=-540/1848, 6-7=-398/333, 7-8=-797/346, 8-9=-970/348
- BOT CHORD 1-14=-353/1162, 12-14=-448/1734, 10-12=-620/382, 9-10=-202/805
- WEBS 2-14=-14/329, 3-14=-418/219, 3-13=-713/309, 5-13=-347/1628, 5-12=-2270/679, 6-12=-1528/683, 6-11=-62/641, 7-11=-474/142, 7-10=-131/440, 8-10=-350/243
- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
 - ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
 - Roof design snow load has been reduced to account for slope.
 - Unbalanced snow loads have been considered for this design.
 - Provide adequate drainage to prevent water ponding.
 - All plates are MT20 plates unless otherwise indicated.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 206 lb uplift at joint 9, 608 lb uplift at joint 12 and 252 lb uplift at joint 1.
 - This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - 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



February 6, 2024

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



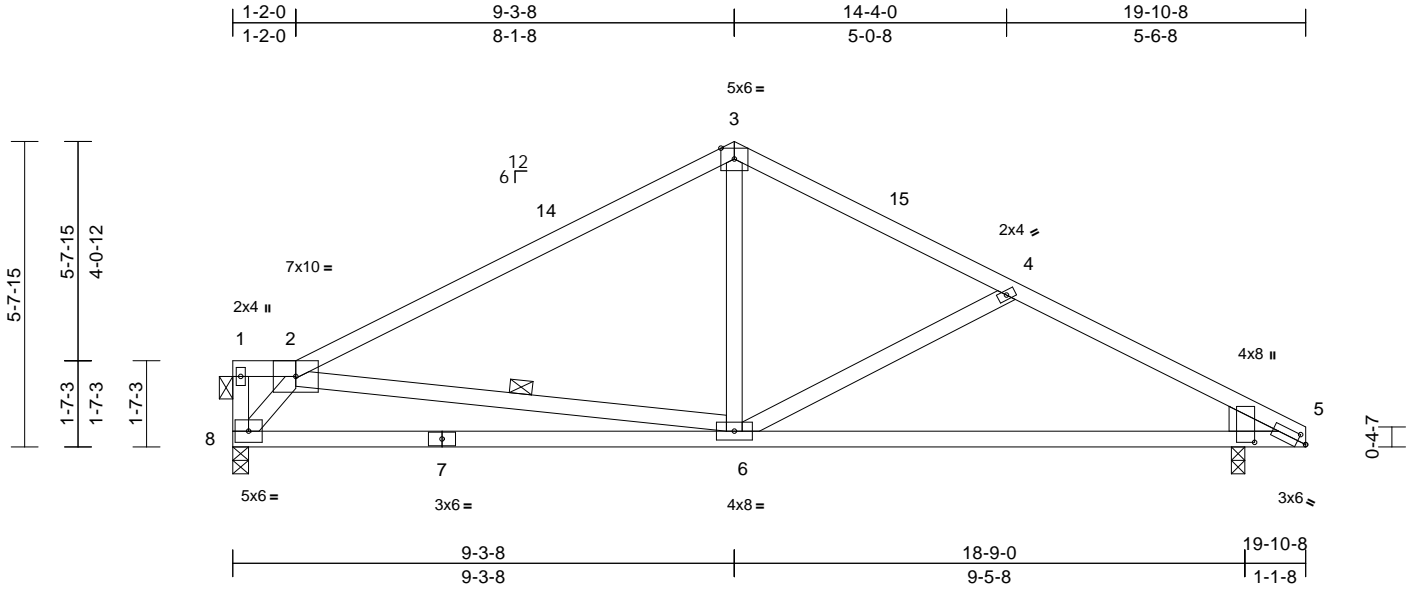
818 Soundside Road
Edenton, NC 27932

| | | | | | | |
|-------------------|--------------|----------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss C01 | Truss Type Roof Special | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425455 |
|-------------------|--------------|----------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:33
ID:lwJ42uUYygmBCLG2ltXgyhfDJ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:42.7

Plate Offsets (X, Y): [5:0-2-0,0-1-8], [5:0-0-8,0-11-5]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.80 | Vert(LL) | -0.17 | 6-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.77 | Vert(CT) | -0.36 | 6-8 | >657 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.27 | Horz(CT) | 0.03 | 5 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 96 lb | FT = 20% |

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2.

BOT CHORD Rigid ceiling directly applied or 9-11-1 oc bracing.

WEBS 1 Row at midpt 2-6

REACTIONS (size) 5=0-3-0, 8=0-3-8

Max Horiz 8=-133 (LC 14)
 Max Uplift 5=-220 (LC 17), 8=-188 (LC 16)
 Max Grav 5=837 (LC 2), 8=832 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-8=-190/296, 1-2=-120/0, 2-3=-960/368, 3-4=-829/396, 4-5=-1059/498

BOT CHORD 6-8=-332/859, 5-6=-323/871

WEBS 2-6=-156/234, 3-6=-11/408, 4-6=-244/241, 2-8=-1323/687

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33

- 3) ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- 4) Roof design snow load has been reduced to account for slope.
- 5) Unbalanced snow loads have been considered for this design.
- 6) Provide adequate drainage to prevent water ponding.
- 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 188 lb uplift at joint 8 and 220 lb uplift at joint 5.
- 11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00
 Uniform Loads (lb/ft)
 Vert: 1-2=-60, 2-3=-49, 3-5=-49, 8-9=-20



February 6, 2024

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



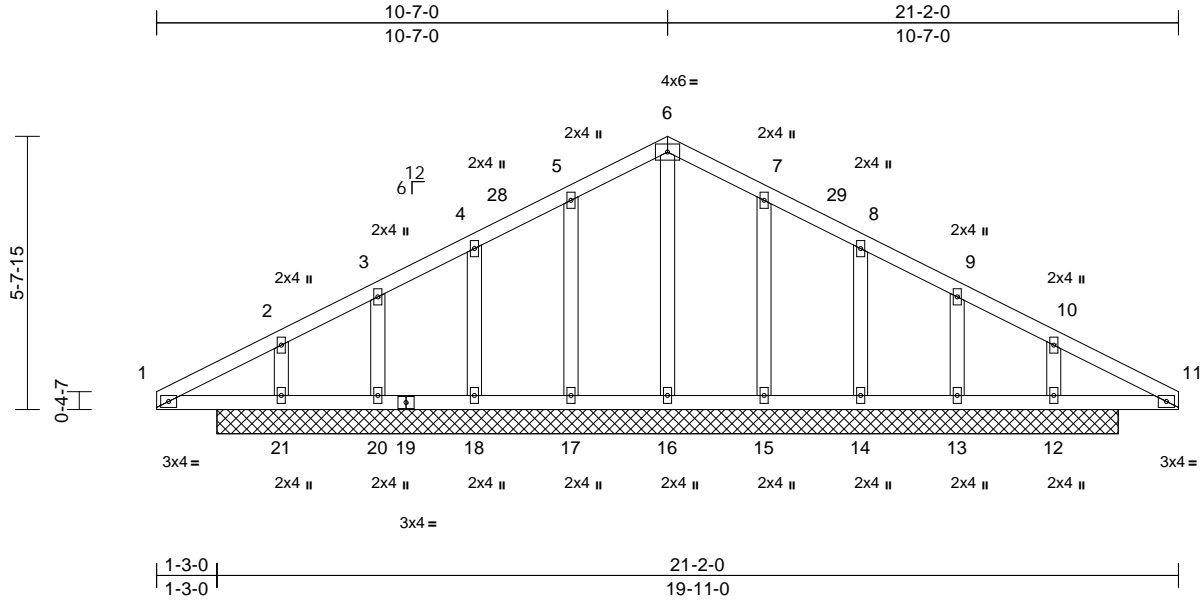
818 Soundside Road
 Edenton, NC 27932

| | | | | | | |
|-------------------|---------------|--------------------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss C01G | Truss Type Common Supported Gable | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425456 |
|-------------------|---------------|--------------------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:33
ID:fnfU4HtykXm3Y?i_yuL4yhfDa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWwCdoi7J4zJC7f

Page: 1



Scale = 1:47.7

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|-----------|-------|--------|-----|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.17 | Vert(LL) | n/a | - | n/a | 999 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.14 | Vert(TL) | n/a | - | n/a | 999 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.14 | Horiz(TL) | 0.00 | 12 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 106 lb | FT = 20% |

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

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

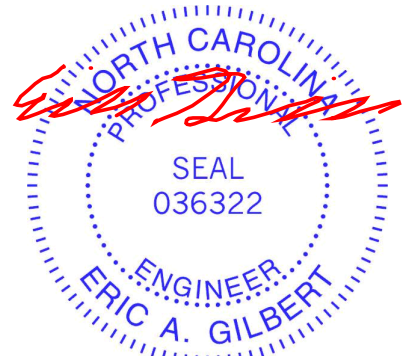
REACTIONS (size)
12=18-8-0, 13=18-8-0, 14=18-8-0,
15=18-8-0, 16=18-8-0, 17=18-8-0,
18=18-8-0, 20=18-8-0, 21=18-8-0
Max Horiz 21=118 (LC 17)
Max Uplift 12=71 (LC 16), 13=104 (LC 17),
14=75 (LC 17), 15=84 (LC 17),
17=85 (LC 16), 18=74 (LC 16),
20=108 (LC 16), 21=77 (LC 17)
Max Grav 12=298 (LC 34), 13=121 (LC 30),
14=177 (LC 34), 15=190 (LC 23),
16=282 (LC 2), 17=190 (LC 22),
18=177 (LC 33), 20=123 (LC 29),
21=298 (LC 33)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=90/193, 2-3=35/178, 3-4=0/191,
4-5=0/205, 5-6=0/207, 6-7=0/205, 7-8=0/201,
8-9=0/188, 9-10=31/174, 10-11=86/193
BOT CHORD 1-21=139/116, 20-21=138/111,
18-20=138/111, 17-18=138/111,
16-17=138/111, 15-16=138/111,
14-15=138/111, 13-14=138/111,
12-13=138/111, 11-12=138/111
WEBS 6-16=-241/0, 5-17=-152/118, 4-18=-125/121,
3-20=-101/117, 2-21=-185/137,
7-15=-152/118, 8-14=-125/121,
9-13=-101/115, 10-12=-185/137

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps=14.5 psf (roof snow: Lumber DOL=1.15 Plate DOL=1.00); Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 85 lb uplift at joint 17, 74 lb uplift at joint 18, 108 lb uplift at joint 20, 77 lb uplift at joint 21, 84 lb uplift at joint 15, 75 lb uplift at joint 14, 104 lb uplift at joint 13 and 71 lb uplift at joint 12.
- Non Standard bearing condition. Review required.

- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



February 6, 2024

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPH Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY
TRENCO
A MiTek Affiliate

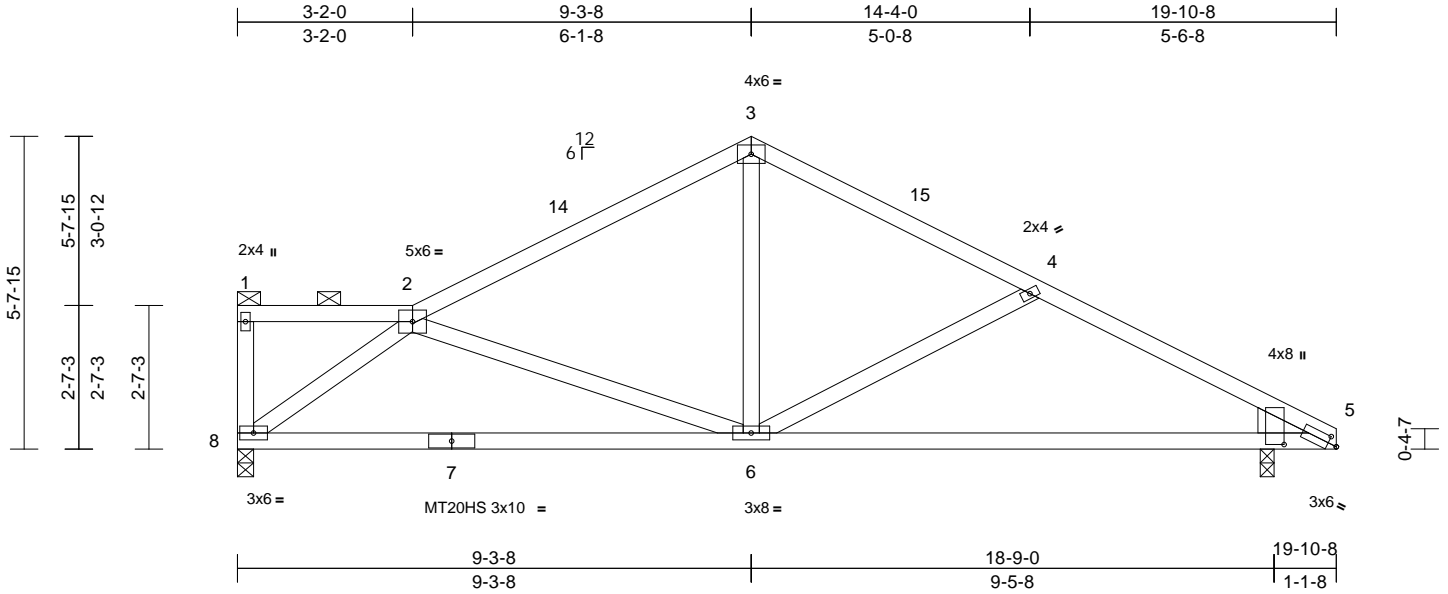
818 Soundside Road
Edenton, NC 27932

| | | | | | | |
|-------------------|--------------|----------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss C02 | Truss Type Roof Special | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425457 |
|-------------------|--------------|----------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:34
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Page: 1



Scale = 1:41.7
Plate Offsets (X, Y): [5:0-2-0,0-1-8], [5:0-0-8,0-11-5]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.91 | Vert(LL) | -0.16 | 6-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.78 | Vert(CT) | -0.34 | 6-8 | >692 | 180 | MT20HS | 187/143 |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.34 | Horz(CT) | 0.03 | 5 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 98 lb | FT = 20% |

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
WEDGE Right: 2x6 SP No.2

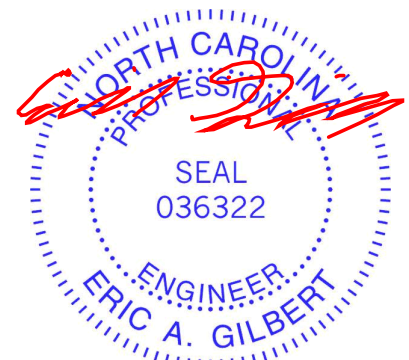
BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5=0-3-0, 8=0-3-8
Max Horiz 8=-169 (LC 14)
Max Uplift 5=-220 (LC 17), 8=-195 (LC 16)
Max Grav 5=837 (LC 2), 8=741 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-152/56, 1-2=-81/40, 2-3=-874/375, 3-4=-832/384, 4-5=-1062/499
BOT CHORD 6-8=-313/864, 5-6=-326/876
WEBS 2-6=-207/218, 3-6=-60/426, 4-6=-254/249, 2-8=-1051/527

- ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 195 lb uplift at joint 8 and 220 lb uplift at joint 5.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-2=-60, 2-3=-49, 3-5=-49, 8-9=-20



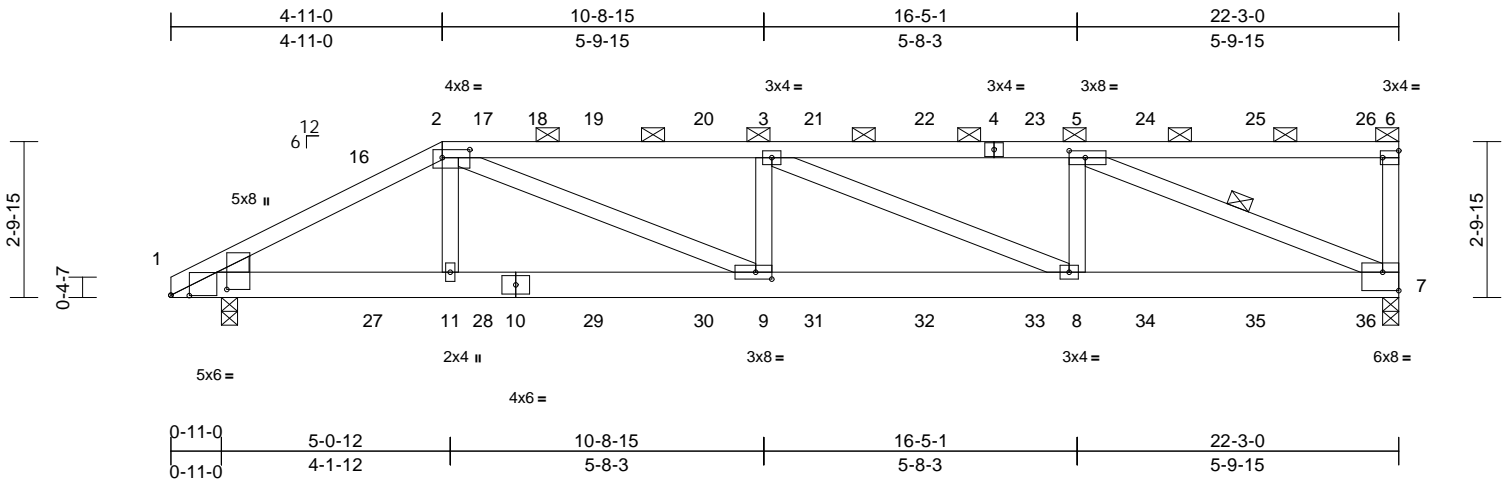
February 6, 2024

| | | | | | | |
|------------|-------|-----------------|-----|-----|--------------------------|-----------|
| Job | Truss | Truss Type | Qty | Ply | Roof F | 163425458 |
| ELV F Roof | D02 | Half Hip Girder | 1 | 1 | Job Reference (optional) | |

Builders FirstSource (Apex, NC), Apex, NC - 27523,

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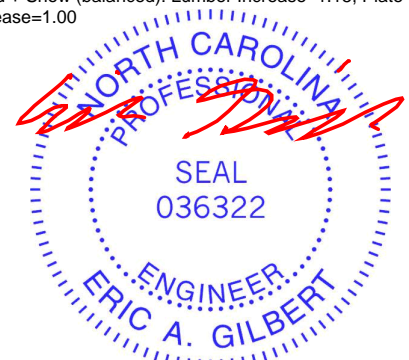
Page: 1



Scale = 1:41.7
 Plate Offsets (X, Y): [1:0-4-0,0-0-1], [1:0-1-4,1-0-3], [2:0-6-0,0-1-12], [5:0-3-8,0-1-8], [6:Edge,0-1-8], [7:Edge,0-4-0], [9:0-3-8,0-1-8]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|----------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.82 | Vert(LL) | 0.16 | 8-9 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.75 | Vert(CT) | -0.25 | 8-9 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.75 | Horz(CT) | 0.05 | 7 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MS | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 125 lb | FT = 20% |

- LUMBER**
 TOP CHORD 2x4 SP No.2 *Except* 2-4:2x4 SP SS
 BOT CHORD 2x6 SP DSS *Except* 10-7:2x6 SP No.2
 WEBS 2x4 SP No.3
 WEDGE Left: 2x4 SP No.3
- BRACING**
 TOP CHORD Structural wood sheathing directly applied or 3-7-14 oc purlins, except end verticals, and 2-0-0 oc purlins (2-11-4 max.): 2-6.
 BOT CHORD Rigid ceiling directly applied or 6-2-0 oc bracing.
 WEBS 1 Row at midpt 5-7
- REACTIONS** (size) 1=0-3-8, 7=0-3-8
 Max Horiz 1=129 (LC 9)
 Max Uplift 1=612 (LC 12), 7=634 (LC 9)
 Max Grav 1=1427 (LC 30), 7=1541 (LC 30)
- FORCES** (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-2171/910, 2-3=-3360/1388, 3-5=-2687/1117, 5-6=-89/72, 6-7=-300/192
 BOT CHORD 1-11=-852/1906, 9-11=-848/1906, 8-9=-1436/3360, 7-8=-1137/2687
 WEBS 2-11=0/151, 5-7=-2830/1165, 3-9=-398/274, 2-9=-673/1578, 3-8=-734/367, 5-8=-108/495
- NOTES**
 1) Unbalanced roof live loads have been considered for this design.
 2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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=1.33
- 3) ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
 4) Roof design snow load has been reduced to account for slope.
 5) Unbalanced snow loads have been considered for this design.
 6) Provide adequate drainage to prevent water ponding.
 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) Bearings are assumed to be: Joint 1 SP DSS crushing capacity of 660 psi, Joint 7 SP No.2 crushing capacity of 565 psi.
 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 634 lb uplift at joint 7 and 612 lb uplift at joint 1.
 11) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
 13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 52 lb down and 20 lb up at 3-8-0, 53 lb down and 76 lb up at 5-8-0, 58 lb down and 76 lb up at 7-8-0, 58 lb down and 76 lb up at 9-8-0, 58 lb down and 76 lb up at 11-8-0, 58 lb down and 71 lb up at 13-8-0, 58 lb down and 76 lb up at 15-8-0, 58 lb down and 76 lb up at 17-8-0, and 58 lb down and 76 lb up at 19-8-0, and 66 lb down and 86 lb up at 21-8-0 on top chord, and 162 lb down and 97 lb up at 3-8-0, 30 lb down and 16 lb up at 5-8-0, 30 lb down and 16 lb up at 7-8-0, 30 lb down and 16 lb up at 9-8-0, 30 lb down and 16 lb up at 11-8-0, 30 lb down and 16 lb up at 13-8-0, 30 lb down and 16 lb up at 15-8-0, 30 lb down and 16 lb up at 17-8-0, and 30 lb down and 16 lb up at 19-8-0, and 44 lb down at 21-8-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
 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=1.00



February 6, 2024

Continued on page 2

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



818 Soundside Road
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| Job | Truss | Truss Type | Qty | Ply | Roof F |
|------------|-------|-----------------|-----|-----|---------------------------------------|
| ELV F Roof | D02 | Half Hip Girder | 1 | 1 | I63425458 Job Reference (optional) |

Builders FirstSource (Apex, NC), Apex, NC - 27523,

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Page: 2

Uniform Loads (lb/ft)

Vert: 1-2=-49, 2-6=-60, 1-7=-20

Concentrated Loads (lb)

Vert: 16=-23 (B), 17=-31 (B), 19=-30 (B), 20=-30 (B),
21=-30 (B), 22=-30 (B), 23=-30 (B), 24=-30 (B),
25=-30 (B), 26=-46 (B), 27=-162 (B), 28=-27 (B),
29=-27 (B), 30=-27 (B), 31=-27 (B), 32=-27 (B),
33=-27 (B), 34=-27 (B), 35=-27 (B), 36=-30 (B)

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

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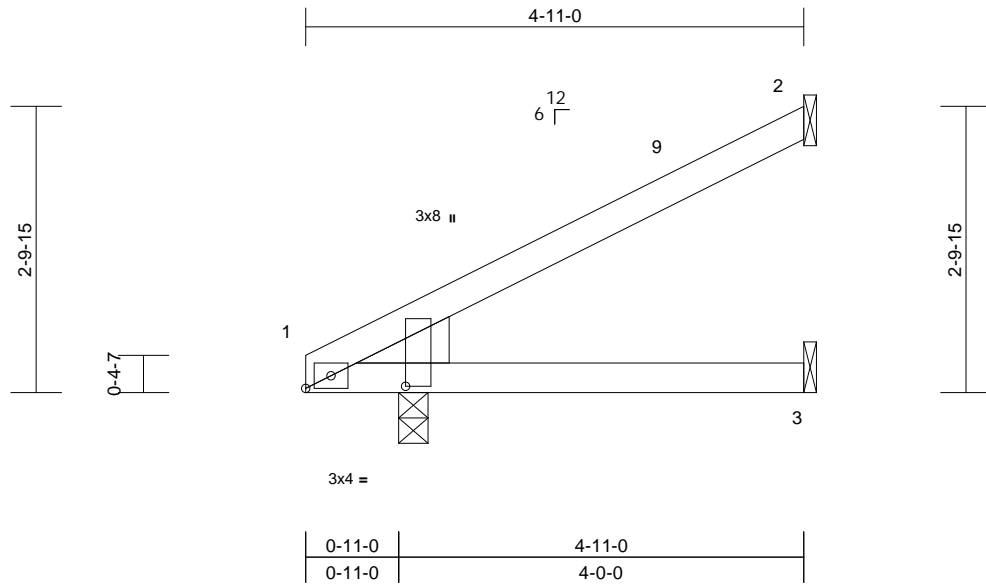
818 Soundside Road
Edenton, NC 27932

| | | | | | | |
|-------------------|--------------|-------------------------|-----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss J01 | Truss Type Jack-Open | Qty 15 | Ply 1 | Roof F Job Reference (optional) | I63425459 |
|-------------------|--------------|-------------------------|-----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

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Page: 1



Scale = 1:22.7

Plate Offsets (X, Y): [1:0-1-0,Edge], [1:0-0-4,0-11-13]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.22 | Vert(LL) | 0.02 | 3-8 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.24 | Vert(CT) | -0.02 | 3-8 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | -0.01 | 2 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 18 lb | FT = 20% |

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEDGE Left: 2x6 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) 1=0-3-8, 2= Mechanical, 3= Mechanical
Max Horiz 1=125 (LC 16)
Max Uplift 1=-42 (LC 16), 2=-87 (LC 16), 3=-4 (LC 16)
Max Grav 1=239 (LC 2), 2=100 (LC 2), 3=70 (LC 7)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-91/40
BOT CHORD 1-3=-170/68

NOTES

- 1) Wind: ASCE 7-10; Vult=150mph (3-second gust)
Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft;
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps=14.5 psf (roof snow: Lumber DOL=1.15 Plate DOL=1.00); Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- 3) Roof design snow load has been reduced to account for slope.
- 4) Unbalanced snow loads have been considered for this design.

- 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) Bearings are assumed to be: , Joint 1 SP No.2 crushing capacity of 565 psi.
- 8) Refer to girder(s) for truss to truss connections.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 87 lb uplift at joint 2, 4 lb uplift at joint 3 and 42 lb uplift at joint 1.
- 10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



February 6, 2024

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

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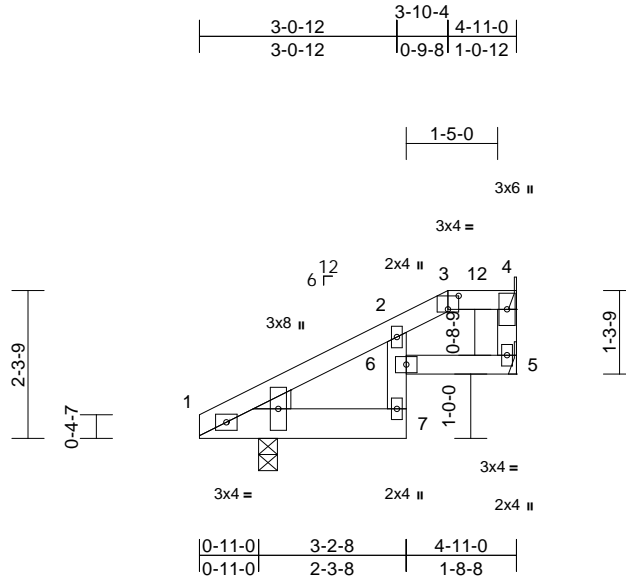
818 Soundside Road
Edenton, NC 27932

| | | | | | | |
|-------------------|-----------------|-------------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss J01GRT | Truss Type Half Hip Girder | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425460 |
|-------------------|-----------------|-------------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

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Page: 1



Scale = 1:35.7

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.28 | Vert(LL) | 0.01 | 7 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.47 | Vert(CT) | -0.01 | 7 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | 0.01 | 5 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MR | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 22 lb | FT = 20% |

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-11-0 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.

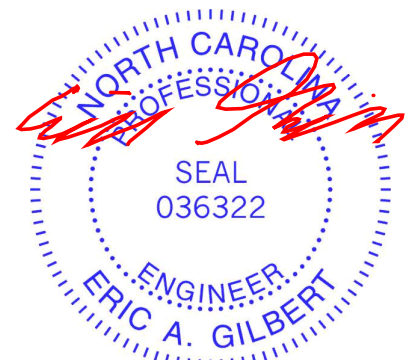
REACTIONS (size) 1=0-3-8, 4= Mechanical, 5= Mechanical
Max Horiz 1=82 (LC 49)
Max Uplift 1=-99 (LC 12), 4=-54 (LC 9), 5=-42 (LC 12)
Max Grav 1=388 (LC 31), 4=111 (LC 30), 5=115 (LC 31)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-243/94, 2-3=-124/57, 3-4=-127/77, 4-5=0/0
BOT CHORD 1-7=-89/160, 6-7=-83/133, 2-6=-29/80, 5-6=-68/127

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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=1.33

- ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: , Joint 1 SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 54 lb uplift at joint 4, 42 lb uplift at joint 5 and 99 lb uplift at joint 1.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 106 lb down and 70 lb up at 3-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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=1.00
Uniform Loads (lb/ft)
Vert: 1-3=-49, 3-4=-60, 1-7=-20, 5-6=-20
Concentrated Loads (lb)
Vert: 7=-106 (B)



February 6, 2024

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



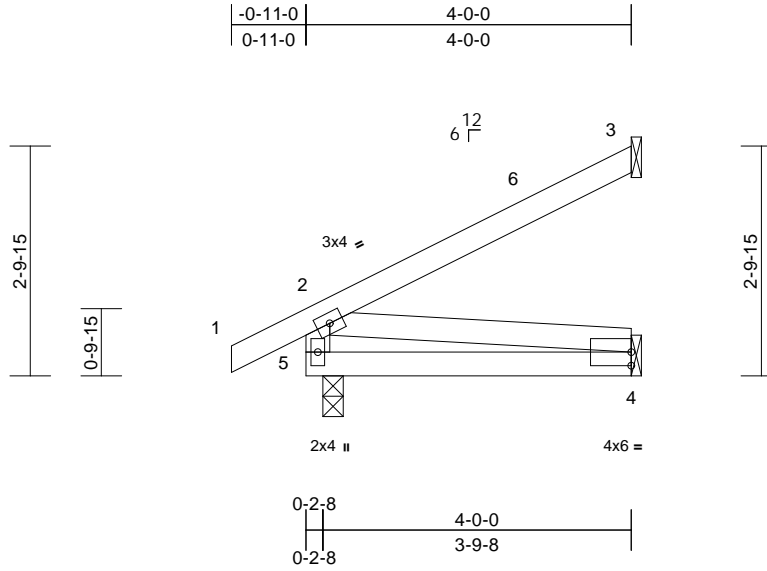
818 Soundside Road
Edenton, NC 27932

| | | | | | | |
|-------------------|--------------|-------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss J02 | Truss Type Jack-Open | Qty 5 | Ply 1 | Roof F Job Reference (optional) | I63425462 |
|-------------------|--------------|-------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:36
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Page: 1



Scale = 1:28.3

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|---------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.24 | Vert(LL) | -0.01 | 4-5 | >999 | 240 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.18 | Vert(CT) | -0.03 | 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 | IRC2015/TPI2014 | Matrix-MP | | | | | | | |
| BCDL | 10.0 | | | | | | | | | Weight: 20 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 4-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical,
5=0-3-0
Max Horiz 5=110 (LC 16)
Max Uplift 3=-93 (LC 16), 5=-50 (LC 16)
Max Grav 3=105 (LC 2), 4=77 (LC 7), 5=225 (LC 2)

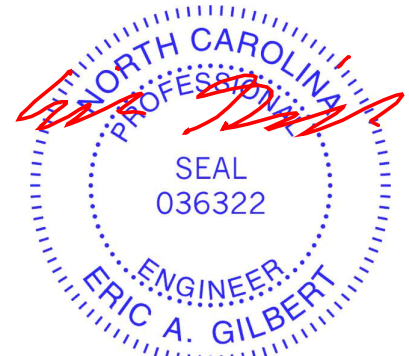
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-186/158, 1-2=0/48, 2-3=-87/44
BOT CHORD 4-5=-199/78
WEBS 2-4=-79/202

- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: , Joint 5 SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 5 and 93 lb uplift at joint 3.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

NOTES

- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps=14.5 psf (roof snow: Lumber DOL=1.15 Plate DOL=1.00); Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.



February 6, 2024

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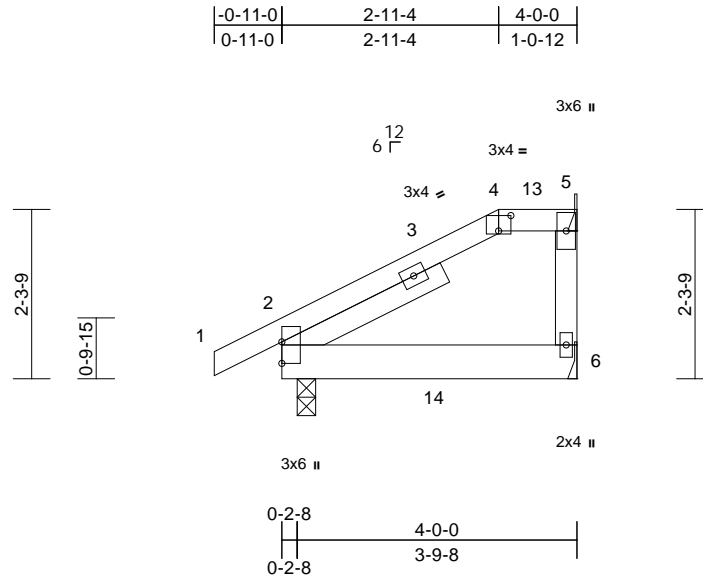
818 Soundside Road
Edenton, NC 27932

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|-------------------|----------------|-------------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss J02GR | Truss Type Half Hip Girder | Qty 1 | Ply 1 | Roof F Job Reference (optional) | I63425463 |
|-------------------|----------------|-------------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:37
ID: Au4trRalpNd707Z23o1gklyhip?-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRCDoi7J4zJC?F

Page: 1



Scale = 1:31.2

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.23 | Vert(LL) | 0.00 | 6-11 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.10 | Vert(CT) | 0.00 | 6-11 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | 0.00 | 5 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MR | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 23 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 -- 2-5-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 4-5.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 5= Mechanical, 6= Mechanical
 Max Horiz 2=105 (LC 11)
 Max Uplift 2=-114 (LC 12), 5=-57 (LC 9), 6=-30 (LC 9)
 Max Grav 2=379 (LC 32), 5=99 (LC 31), 6=92 (LC 32)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/41, 2-4=-75/87, 4-5=-55/55, 5-6=0/0
 BOT CHORD 2-6=-81/62

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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=1.33
- ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface

- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 57 lb uplift at joint 5, 30 lb uplift at joint 6 and 114 lb uplift at joint 2.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Gap between inside of top chord bearing and first diagonal or vertical web shall not exceed 0.500in.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 89 lb down and 67 lb up at 2-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00

Uniform Loads (lb/ft)
 Vert: 1-4=-49, 4-5=-60, 6-7=-20
 Concentrated Loads (lb)
 Vert: 14=-89 (F)



February 6, 2024

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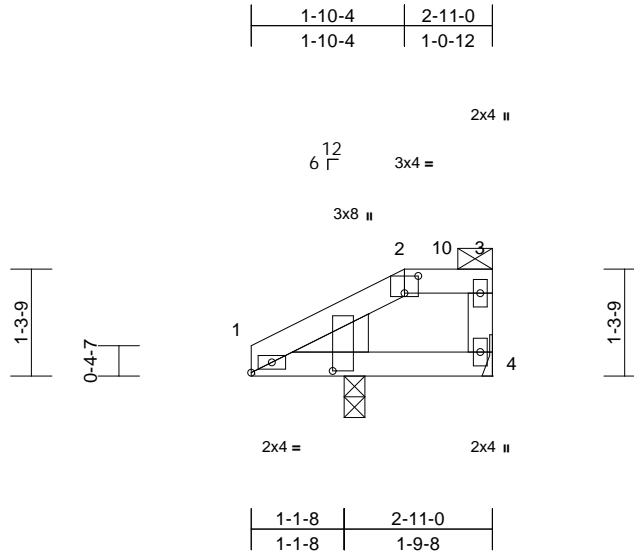
818 Soundside Road
 Edenton, NC 27932

| | | | | | | |
|-------------------|--------------|------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss J03 | Truss Type Half Hip | Qty 1 | Ply 1 | Roof F Job Reference (optional) | 163425464 |
|-------------------|--------------|------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:37
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Page: 1



Scale = 1:27.9
Plate Offsets (X, Y): [1:0-1-0,Edge], [1:0-0-4,0-11-13], [2:0-2-0,0-2-8]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.06 | Vert(LL) | 0.00 | 5 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.03 | Vert(CT) | 0.00 | 5 | >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 | IRC2015/TPI2014 | Matrix-MR | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 12 lb | FT = 20% |

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
WEDGE Left: 2x6 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-0 oc purlins, except end verticals, and 2-0-0 oc purlins: 2-3.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

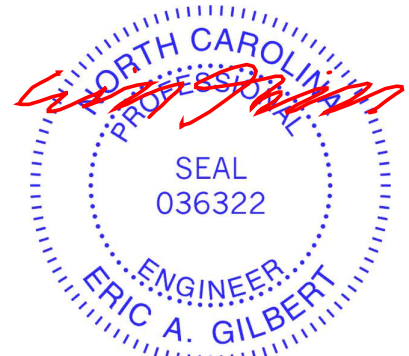
REACTIONS (size) 1=0-3-0, 4= Mechanical
Max Horiz 1=52 (LC 15)
Max Uplift 1=-55 (LC 16), 4=-32 (LC 31)
Max Grav 1=247 (LC 35), 4=71 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-33/102, 2-3=-19/32, 3-4=-58/52
BOT CHORD 1-4=-66/46

- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 1 SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 4 and 55 lb uplift at joint 1.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-2=-49, 2-3=-60, 4-5=-20

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-10; Vult=150mph (3-second gust)
Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
 - ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
 - Roof design snow load has been reduced to account for slope.



February 6, 2024

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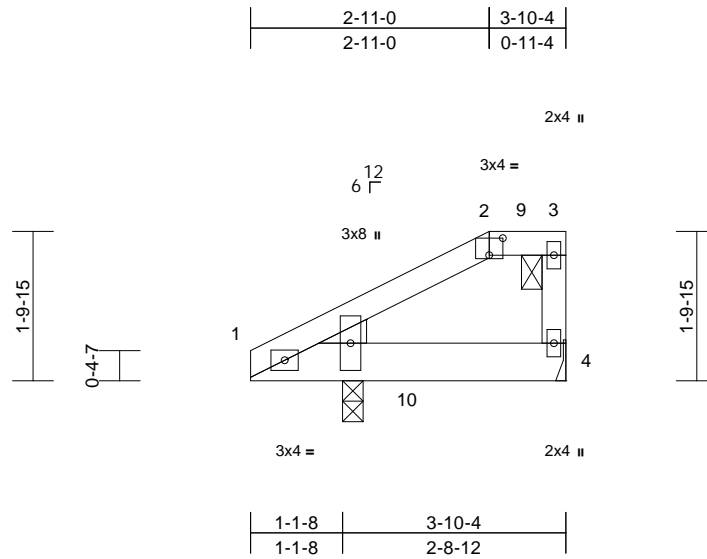
818 Soundside Road
Edenton, NC 27932

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|-------------------|----------------|-------------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss J03GR | Truss Type Half Hip Girder | Qty 1 | Ply 1 | Roof F Job Reference (optional) | I63425465 |
|-------------------|----------------|-------------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

Run: 8.63 S Nov 1 2023 Print: 8.630 S Nov 1 2023 MiTek Industries, Inc. Sun Feb 04 12:44:37
ID:aBEavfPz64s6LzVMERnOBnyhipD-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:28.2

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.09 | Vert(LL) | 0.00 | 1 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.04 | Vert(CT) | 0.00 | 1 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | 0.00 | 4 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MR | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | Weight: 18 lb | FT = 20% |

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
WEDGE Left: 2x4 SP No.3

BRACING

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

REACTIONS (size) 1=0-3-0, 4= Mechanical
Max Horiz 1=77 (LC 9)
Max Uplift 1=-95 (LC 12), 4=-55 (LC 9)
Max Grav 1=347 (LC 31), 4=109 (LC 30)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-69/100, 2-3=-23/35, 3-4=-76/41
BOT CHORD 1-4=-82/33

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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=1.33
- ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- Roof design snow load has been reduced to account for slope.

- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 1 SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 4 and 95 lb uplift at joint 1.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 55 lb down and 42 lb up at 1-11-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-2=-49, 2-3=-60, 1-4=-20
Concentrated Loads (lb)
Vert: 10=-55 (B)



February 6, 2024

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TP1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)



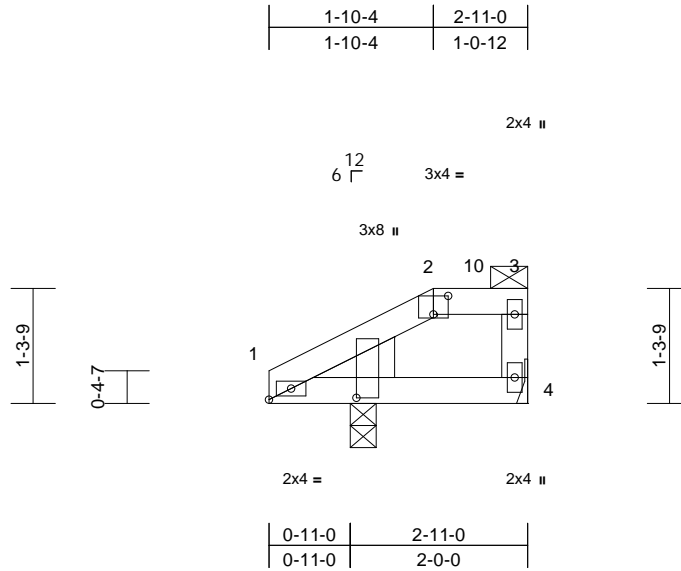
818 Soundside Road
Edenton, NC 27932

| | | | | | | |
|-------------------|--------------|------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss J04 | Truss Type Half Hip | Qty 2 | Ply 1 | Roof F Job Reference (optional) | 163425466 |
|-------------------|--------------|------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

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Page: 1



Scale = 1:26

Plate Offsets (X, Y): [1:0-1-0,Edge], [1:0-0-4,0-11-13], [2:0-2-0,0-2-8]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.05 | Vert(LL) | 0.00 | 5 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.03 | Vert(CT) | 0.00 | 5 | >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 | IRC2015/TPI2014 | Matrix-MR | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 12 lb | FT = 20% |

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
WEDGE Left: 2x6 SP No.2

BRACING

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

REACTIONS (size) 1=0-3-8, 4= Mechanical
Max Horiz 1=52 (LC 15)
Max Uplift 1=-48 (LC 16), 4=-33 (LC 13)
Max Grav 1=219 (LC 35), 4=86 (LC 34)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-36/76, 2-3=-30/40, 3-4=-65/57
BOT CHORD 1-4=-67/38

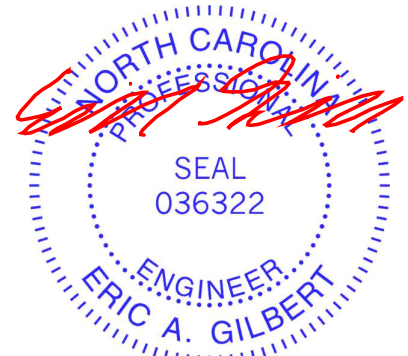
NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- 3) ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- 4) Roof design snow load has been reduced to account for slope.

- 5) Unbalanced snow loads have been considered for this design.
- 6) Provide adequate drainage to prevent water ponding.
- 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) Bearings are assumed to be: Joint 1 SP No.2 crushing capacity of 565 psi.
- 10) Refer to girder(s) for truss to truss connections.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 4 and 48 lb uplift at joint 1.
- 12) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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

- 1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-2=-49, 2-3=-60, 4-5=-20



February 6, 2024

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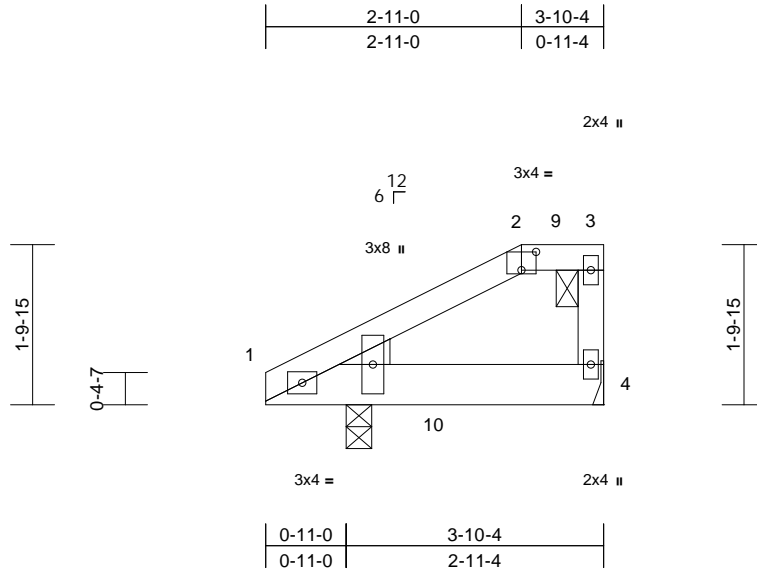
818 Soundside Road
Edenton, NC 27932

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|-------------------|----------------|-------------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss J04GR | Truss Type Half Hip Girder | Qty 2 | Ply 1 | Roof F Job Reference (optional) | I63425467 |
|-------------------|----------------|-------------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

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Page: 1



Scale = 1:26.3

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

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP |
|--------------|-----------|-----------------|-----------------|-----------|----------|------|-------|--------|-----|---------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | Vert(LL) | 0.00 | 1 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | Vert(CT) | 0.00 | 1 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | Horz(CT) | 0.00 | 4 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MR | | | | | | | |
| BCDL | 10.0 | | | | | | | | | Weight: 18 lb | FT = 20% |

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x6 SP No.2
 WEBS 2x4 SP No.3
 WEDGE Left: 2x4 SP No.3

BRACING

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

REACTIONS (size) 1=0-3-8, 4= Mechanical
 Max Horiz 1=77 (LC 49)
 Max Uplift 1=90 (LC 12), 4=58 (LC 9)
 Max Grav 1=331 (LC 31), 4=126 (LC 30)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=80/75, 2-3=34/39, 3-4=78/42
 BOT CHORD 1-4=67/34

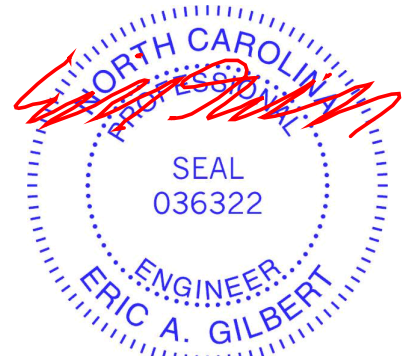
NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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=1.33
- 3) ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- 4) Roof design snow load has been reduced to account for slope.

- 5) Unbalanced snow loads have been considered for this design.
- 6) Provide adequate drainage to prevent water ponding.
- 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) Bearings are assumed to be: Joint 1 SP No.2 crushing capacity of 565 psi.
- 10) Refer to girder(s) for truss to truss connections.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 58 lb uplift at joint 4 and 90 lb uplift at joint 1.
- 12) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 68 lb down and 44 lb up at 1-11-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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=1.00
 Uniform Loads (lb/ft)
 Vert: 1-2=-49, 2-3=-60, 1-4=-20
 Concentrated Loads (lb)
 Vert: 10=-68 (F)



February 6, 2024

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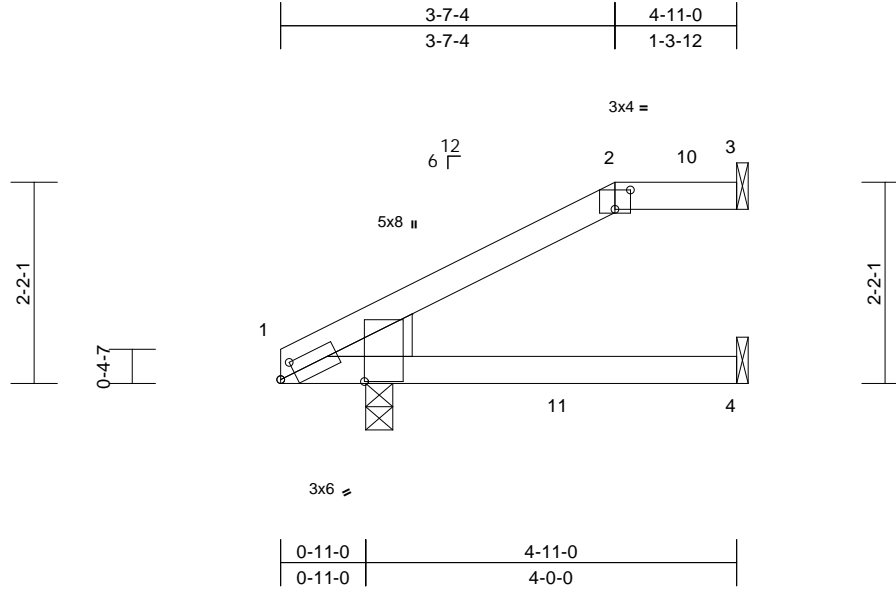
818 Soundside Road
 Edenton, NC 27932

| | | | | | | |
|-------------------|----------------|-------------------------------|----------|----------|------------------------------------|-----------|
| Job ELV F Roof | Truss J07GR | Truss Type Half Hip Girder | Qty 1 | Ply 1 | Roof F Job Reference (optional) | I63425468 |
|-------------------|----------------|-------------------------------|----------|----------|------------------------------------|-----------|

Builders FirstSource (Apex, NC), Apex, NC - 27523,

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Page: 1



Scale = 1:24.8

Plate Offsets (X, Y): [1:0-2-0,0-1-8], [1:0-0-4,0-10-13], [2:0-2-0,0-2-8]

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|--------|---------------|----------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.33 | Vert(LL) | 0.08 | 4-9 | >767 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.45 | Vert(CT) | -0.09 | 4-9 | >631 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | NO | WB | 0.00 | Horz(CT) | 0.20 | 3 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MP | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | | Weight: 18 lb | FT = 20% |

LUMBER

TOP CHORD 2x4 SP SS *Except* 2-3:2x4 SP No.2
BOT CHORD 2x4 SP SS
WEDGE Left: 2x6 SP No.2

BRACING

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

REACTIONS

(size) 1=0-3-8, 3= Mechanical, 4= Mechanical
Max Horiz 1=94 (LC 12)
Max Uplift 1=-92 (LC 12), 3=-25 (LC 8), 4=-85 (LC 12)
Max Grav 1=375 (LC 31), 3=65 (LC 30), 4=182 (LC 31)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-216/300, 2-3=0/0
BOT CHORD 1-4=-180/177

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; 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=1.33
- ** TCLL: ASCE 7-10; Pr=20.0 psf (roof live load; Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps= varies (min. roof snow=14.5 psf Lumber DOL=1.15 Plate DOL=1.00) see load cases; Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface

- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: , Joint 1 SP SS crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 3, 85 lb uplift at joint 4 and 92 lb uplift at joint 1.
- This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 106 lb down and 70 lb up at 2-11-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.00
Uniform Loads (lb/ft)
Vert: 1-2=-49, 2-3=-60, 4-5=-20
Concentrated Loads (lb)
Vert: 11=-106 (F)



February 6, 2024

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

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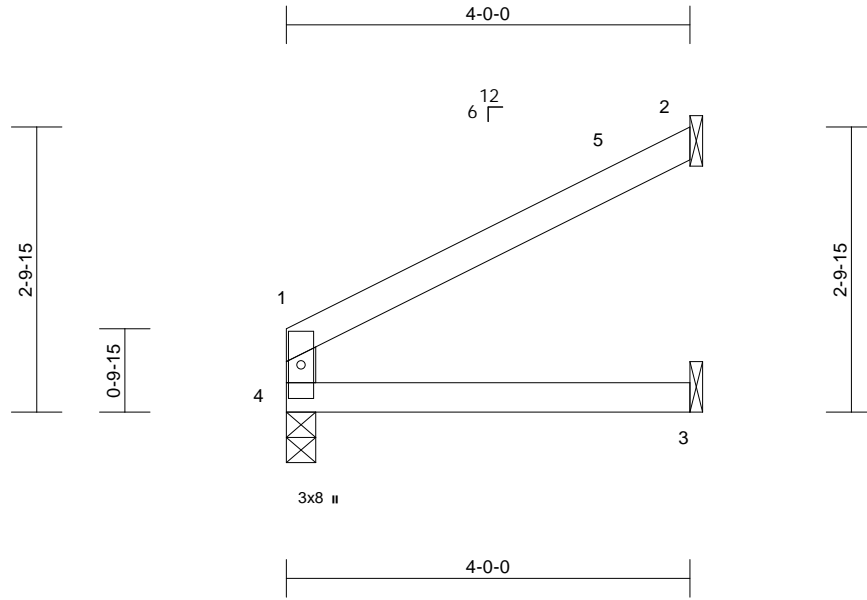
818 Soundside Road
Edenton, NC 27932

| | | | | | | |
|------------|-------|------------|-----|-----|--------------------------|-----------|
| Job | Truss | Truss Type | Qty | Ply | Roof F | I63425469 |
| ELV F Roof | J09 | Jack-Open | 1 | 1 | Job Reference (optional) | |

Builders FirstSource (Apex, NC), Apex, NC - 27523,

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Page: 1



Scale = 1:22.8

| Loading | (psf) | Spacing | 2-0-0 | CSI | DEFL | in | (loc) | l/defl | L/d | PLATES | GRIP | |
|--------------|-----------|-----------------|-----------------|-----------|------|----------|-------|--------|------|---------------|----------|---------|
| TCLL (roof) | 20.0 | Plate Grip DOL | 1.00 | TC | 0.35 | Vert(LL) | 0.02 | 3-4 | >999 | 240 | MT20 | 244/190 |
| Snow (Ps/Pf) | 14.5/20.0 | Lumber DOL | 1.15 | BC | 0.23 | Vert(CT) | -0.02 | 3-4 | >999 | 180 | | |
| TCDL | 10.0 | Rep Stress Incr | YES | WB | 0.00 | Horz(CT) | -0.02 | 2 | n/a | n/a | | |
| BCLL | 0.0* | Code | IRC2015/TPI2014 | Matrix-MR | | | | | | | | |
| BCDL | 10.0 | | | | | | | | | | | |
| | | | | | | | | | | Weight: 13 lb | FT = 20% | |

LUMBER

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

BRACING

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

REACTIONS (size) 2= Mechanical, 3= Mechanical, 4=0-3-8
Max Horiz 4=87 (LC 16)
Max Uplift 2=-93 (LC 16), 4=-13 (LC 16)
Max Grav 2=105 (LC 2), 3=73 (LC 7), 4=152 (LC 2)

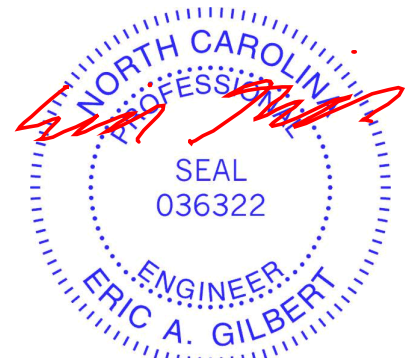
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-4=-122/96, 1-2=-88/42
BOT CHORD 3-4=0/0

NOTES

- 1) Wind: ASCE 7-10; Vult=150mph (3-second gust)
Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft;
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior (2) 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=1.33
- 2) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.00); Pf=20.0 psf (flat roof snow); Ps=14.5 psf (roof snow: Lumber DOL=1.15 Plate DOL=1.00); Category II; Exp B; Fully Exp.; Ct=1.10; Unobstructed slippery surface
- 3) Roof design snow load has been reduced to account for slope.
- 4) Unbalanced snow loads have been considered for this design.
- 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) Bearings are assumed to be: , Joint 4 SP No.2 crushing capacity of 565 psi.
 - 8) Refer to girder(s) for truss to truss connections.
 - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 4 and 93 lb uplift at joint 2.
 - 10) This truss is designed in accordance with the 2015 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



February 6, 2024

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

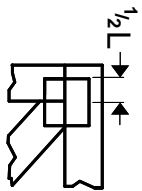
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

ENGINEERING BY
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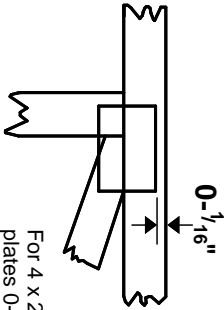
818 Soundside Road
Edenton, NC 27932

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\"/>



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

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

PLATE SIZE

4 X 4

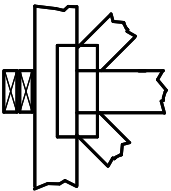
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING



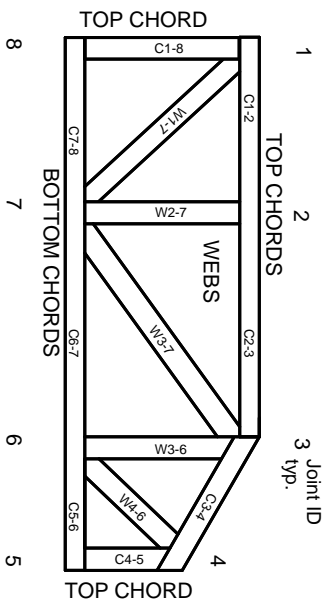
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

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



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

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

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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

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

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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