

RE: 4600512  
SUNSET A - LOT 41 - ILA'S WAY

Trenco  
818 Soundside Rd  
Edenton, NC 27932

**Site Information:**

Customer: Project Name: 4600512  
Lot/Block:

Model:

Address:

Subdivision:

City:

State:

**General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):**

Design Code: IRC2018/TPI2014

Design Program: MiTek 20/20 8.8

Wind Code: ASCE 7 - 16[Low Rise]

Wind Speed: 130 mph

Roof Load: 40.0 psf

Floor Load: N/A psf

This package includes 18 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I72459532	A01G	4/2/2025
2	I72459533	A02	4/2/2025
3	I72459534	A02A	4/2/2025
4	I72459535	A03	4/2/2025
5	I72459536	A04	4/2/2025
6	I72459537	A05	4/2/2025
7	I72459538	A06	4/2/2025
8	I72459539	A07	4/2/2025
9	I72459540	A08	4/2/2025
10	I72459541	A09	4/2/2025
11	I72459542	B01G	4/2/2025
12	I72459543	C01	4/2/2025
13	I72459544	C02	4/2/2025
14	I72459545	J01	4/2/2025
15	I72459546	J02G	4/2/2025
16	I72459547	J03	4/2/2025
17	I72459548	J04	4/2/2025
18	I72459549	M01	4/2/2025

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

Truss Design Engineer's Name: Galinski, John

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

North Carolina COA: C-0844

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 TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.



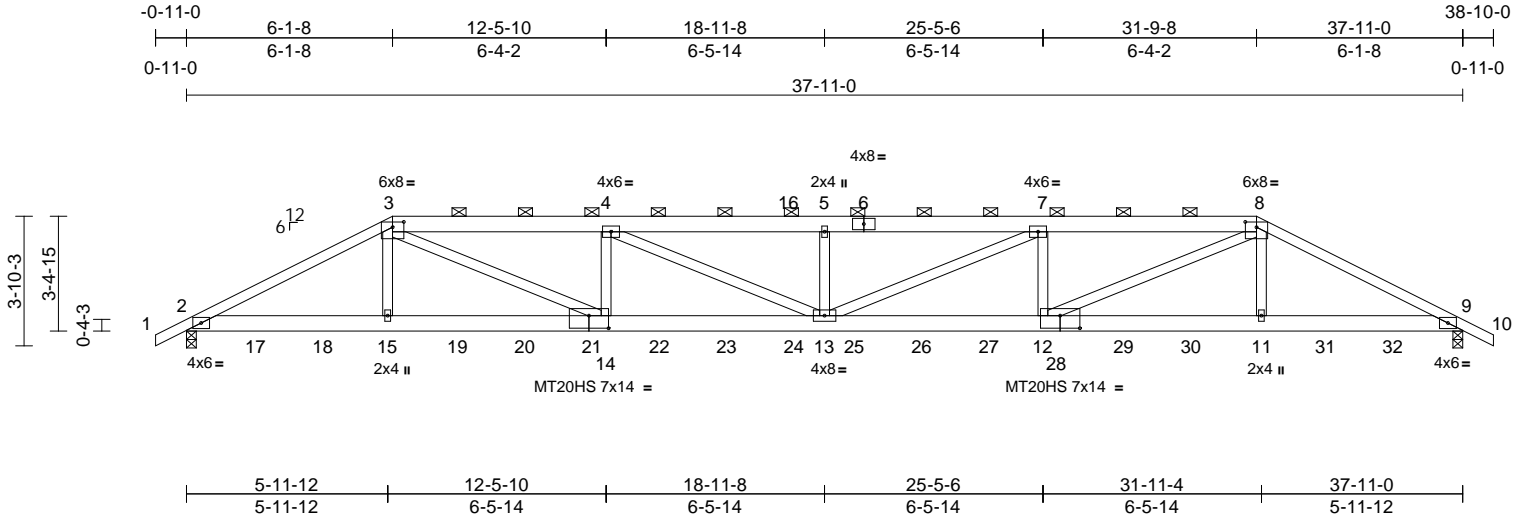
Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	I72459532
4600512	A01G	Hip Girder	1	2	Job Reference (optional)	

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:07

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Scale = 1:68.5

Plate Offsets (X, Y): [3:0-4-0,0-1-15], [8:0-4-0,0-1-15], [12:0-7-0,0-4-8], [14:0-7-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	-0.44	13-14	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.72	13-14	>626	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	NO	WB	0.67	Horz(CT)	0.13	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 462 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP 2400F 2.0E or 2x4 SP DSS or 2x4 SP SS \*Except\* 3-6,6-8:2x6 SP 2400F 2.0E or 2x6 SP DSS  
 BOT CHORD 2x6 SP 2400F 2.0E or 2x6 SP DSS  
 WEBS 2x4 SP No.3 \*Except\*  
 14-3,12-8,13-4,13-7:2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-10-5 oc purlins, except  
 2-0-0 oc purlins (4-8-15 max.): 3-8.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 2=0-3-8, 9=0-3-8  
 Max Horiz 2=58 (LC 12)  
 Max Uplift 2=-860 (LC 9), 9=-860 (LC 8)  
 Max Grav 2=3990 (LC 36), 9=3990 (LC 36)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/40, 2-3=-8174/1845, 3-4=-12209/2842, 4-5=-13834/3224, 5-7=-13834/3224, 7-8=-12208/2843, 8-9=-8174/1845, 9-10=0/40  
 BOT CHORD 2-15=-1625/7291, 13-15=-2796/12208, 11-13=-2767/12207, 9-11=-1592/7291  
 WEBS 3-15=-170/1024, 8-11=-171/1024, 3-14=-1351/5487, 8-12=-1351/5486, 4-14=-1373/383, 4-13=-453/1787, 5-13=-478/168, 7-13=-453/1788, 7-12=-1372/383

#### 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, 2x6 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
 Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
 Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 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 15.4 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 1-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP 2400F 2.0E or DSS .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 860 lb uplift at joint 2 and 860 lb uplift at joint 9.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



April 2,2025

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/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)

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**TRENCO**  
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818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY
4600512	A01G	Hip Girder	1	2	I72459532
					Job Reference (optional)

16) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 273 lb down and 55 lb up at 2-0-12, 216 lb down and 42 lb up at 4-0-12, 262 lb down and 83 lb up at 6-0-12, 262 lb down and 83 lb up at 8-0-12, 262 lb down and 83 lb up at 10-0-12, 262 lb down and 83 lb up at 12-0-12, 262 lb down and 83 lb up at 14-0-12, 262 lb down and 83 lb up at 16-0-12, 262 lb down and 83 lb up at 18-0-12, 262 lb down and 83 lb up at 19-10-4, 262 lb down and 83 lb up at 21-10-4, 262 lb down and 83 lb up at 23-10-4, 262 lb down and 83 lb up at 25-10-4, 262 lb down and 83 lb up at 27-10-4, 262 lb down and 83 lb up at 29-10-4, 262 lb down and 83 lb up at 31-10-4, and 216 lb down and 42 lb up at 33-10-4, and 273 lb down and 55 lb up at 35-10-4 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=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-51, 3-8=-61, 8-10=-51, 2-9=-20  
Concentrated Loads (lb)  
Vert: 15=-262, 11=-262, 17=-273, 18=-216, 19=-262, 20=-262, 21=-262, 22=-262, 23=-262, 24=-262, 25=-262, 26=-262, 27=-262, 28=-262, 29=-262, 30=-262, 31=-216, 32=-273

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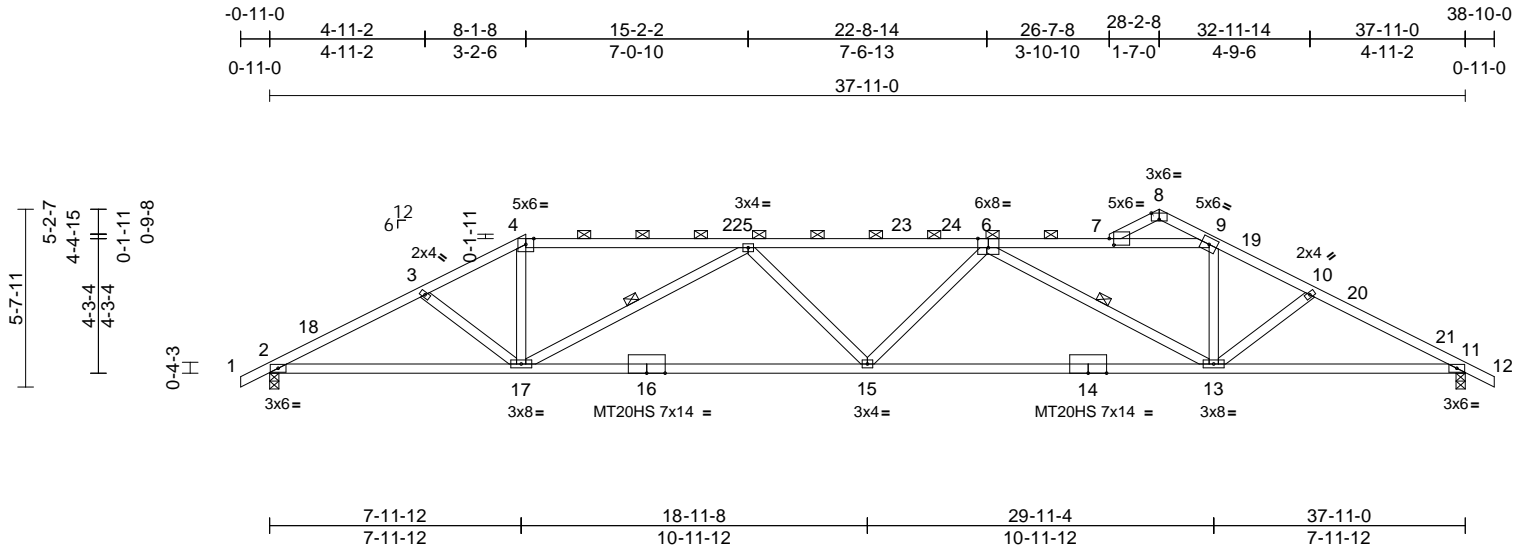
Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	I72459533
4600512	A02	Roof Special	1	1	Job Reference (optional)	

Builders FirstSource (Albermarle), Albermarle, NC - 28001,

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Scale = 1:73.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	-0.31	15	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.67	15-17	>672	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.17	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 186 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2 \*Except\* 6-4:2x4 SP 2400F  
2.0E or 2x4 SP DSS or 2x4 SP SS  
BOT CHORD 2x4 SP No.1 \*Except\* 16-14:2x4 SP 2400F  
2.0E or 2x4 SP DSS or 2x4 SP SS  
WEBS 2x4 SP No.3

#### BRACING

TOP CHORD Structural wood sheathing directly applied or  
3-0-2 oc purlins, except  
2-0-0 oc purlins (2-8-1 max.): 4-9.  
BOT CHORD Rigid ceiling directly applied or 8-2-9 oc  
bracing.

WEBS 1 Row at midpt 5-17, 6-13

#### REACTIONS

(size) 2=0-3-8, 11=0-3-8  
Max Horiz 2=-89 (LC 13)  
Max Uplift 2=-273 (LC 12), 11=-146 (LC 12)  
Max Grav 2=1569 (LC 2), 11=1569 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum  
Tension  
TOP CHORD 1-2=0/34, 2-3=-3001/502, 3-4=-2956/463,  
7-8=-144/29, 8-9=-185/52, 9-10=-2794/348,  
10-11=-2891/341, 11-12=0/32,  
4-5=-2631/436, 5-7=-4078/554,  
7-9=-2389/302  
BOT CHORD 2-17=-461/2634, 15-17=-568/4026,  
13-15=-515/3913, 11-13=-255/2505  
WEBS 4-17=-79/956, 9-13=-52/940, 3-17=-297/129,  
10-13=-190/152, 5-15=0/314,  
5-17=-1598/288, 6-15=0/317,  
6-13=-1633/322

#### NOTES

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

- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat.  
II; Exp B; Enclosed; MWFRS (envelope) exterior zone;  
cantilever left and right exposed ; Lumber DOL=1.60  
plate grip DOL=1.60
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15  
Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL =  
1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially  
Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 4) Unbalanced snow loads have been considered for this  
design.
- 5) This truss has been designed for greater of min roof live  
load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on  
overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) All plates are MT20 plates unless otherwise indicated.
- 8) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 1-00-00 wide will fit between the bottom  
chord and any other members.
- 10) All bearings are assumed to be SP No.1 .
- 11) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 146 lb uplift at joint  
11 and 273 lb uplift at joint 2.
- 12) This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.
- 13) Graphical purlin representation does not depict the size  
or the orientation of the purlin along the top and/or  
bottom chord.

LOAD CASE(S) Standard



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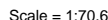
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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.sbcacompnents.com)

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818 Soundside Road  
Edenton, NC 27932

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**LUMBER**  
TOP CHORD 2x4 SP No.2 "Except" 4-6,6-8:2x4 SP 2400F  
2.0E or 2x4 SP DSS or 2x4 SP SS  
BOT CHORD 2x4 SP No.1 "Except" 15-13:2x4 SP 2400F  
2.0E or 2x4 SP DSS or 2x4 SP SS  
WEBS 2x4 SP No.3

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or  
2-11-11 oc purlins, except  
2-0-0 oc purlins (2-7-14 max.): 4-8.  
BOT CHORD Rigid ceiling directly applied or 8-10-1 oc  
bracing.  
WEBS 1 Row at midpt 5-16, 7-12

**REACTIONS** (size) 2=0-3-8, 10=0-3-8  
Max Horiz 2=-74 (LC 17)  
Max Uplift 2=-149 (LC 9), 10=-149 (LC 8)  
Max Grav 2=1588 (LC 36), 10=1588 (LC 36)

**FORCES** (lb) - Maximum Compression/Maximum  
Tension  
TOP CHORD 1-2=0/34, 2-3=-3101/338, 3-4=-3059/335,  
4-5=-2723/313, 5-7=-4305/466,  
7-8=-2723/313, 8-9=-3059/335,  
9-10=-3101/338, 10-11=0/34  
2-16=-297/2723, 14-16=-490/4198,  
12-14=-465/4198, 10-12=-250/2723  
BOT CHORD  
WEBS 4-16=-39/997, 8-12=-39/997, 3-16=-295/156,  
9-12=-295/156, 5-14=0/315, 5-16=-1689/319  
7-14=0/315, 7-12=-1689/319

- 3) TCELL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with any other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) All plates are MT20 plates unless otherwise indicated.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
- 10) All bearings are assumed to be SP No.1 .
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 149 lb uplift at joint 2 and 149 lb uplift at joint 10.
- 12) This truss is designed in accordance with the 2018 International Residential Code sections R502.1.1 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) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
 Vasd=103mph; TCDL=1.60psf, BCDE=1.6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60  
 plate grio DOL=1.60



April 2, 2025



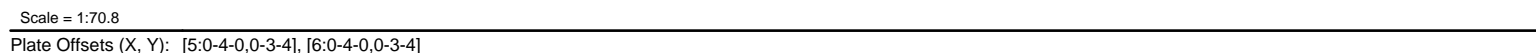
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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 DS8-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Components Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



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<b>LUMBER</b>			
TOP CHORD	2x4 SP No.2		4) Unbalanced snow loads have been considered for this design.
BOT CHORD	2x4 SP No.1		5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
WEBS	2x4 SP No.3		6) Provide adequate drainage to prevent water ponding.
<b>BRACING</b>			7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
TOP CHORD	Structural wood sheathing directly applied or 2-6-7 oc purlins, except 2-0-0 oc purlins (2-7-10 max.): 4-7.		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 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.		9) All bearings are assumed to be SP No.1 .
WEBS	1 Row at midpt 5-15, 6-11		10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 123 lb uplift at joint 2 and 123 lb uplift at joint 9.
<b>REACTIONS</b>		(size) 2=0-3-8, 9=0-3-8	11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
	Max Horiz	2=-91 (LC 17)	12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
	Max Uplift	2=-123 (LC 12), 9=-123 (LC 13)	
	Max Grav	2=1600 (LC 37), 9=1600 (LC 37)	
<b>FORCES</b>		(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/34, 2-3=-2830/283, 3-4=-2714/267, 4-5=-2393/254, 5-7=-3225/328, 7-8=-2714/267, 8-9=-2830/284, 9-10=0/34		
BOT CHORD	2-15=-254/2479, 13-15=-307/3173, 11-13=-281/3173, 9-11=-195/2479		
WEBS	3-15=-453/202, 4-15=-23/916, 7-11=-23/916, 8-11=-453/203, 5-13=0/199, 5-15=-1028/222, 6-13=0/199, 6-11=-1028/222		
<b>LOAD CASE(S)</b>		Standard	

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCFL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
- 3) TCFL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10; Lu=50-0-0

- 4) Unbalanced snow loads have been considered for this design.
- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 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 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 9) All bearings are assumed to be SP No.1 .
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 123 lb uplift at joint 2 and 123 lb uplift at joint 9.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

## LOAD CASE(S) Standard



April 2, 2025



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MIT-141.5 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 DS8-22** available from Truss Plate Institute ([www.tpinst.org](http://www.tpinst.org)) and **BCSI Building Component Safety Information** available from the Structural Building Components Association ([www.sbcacomponents.com](http://www.sbcacomponents.com))



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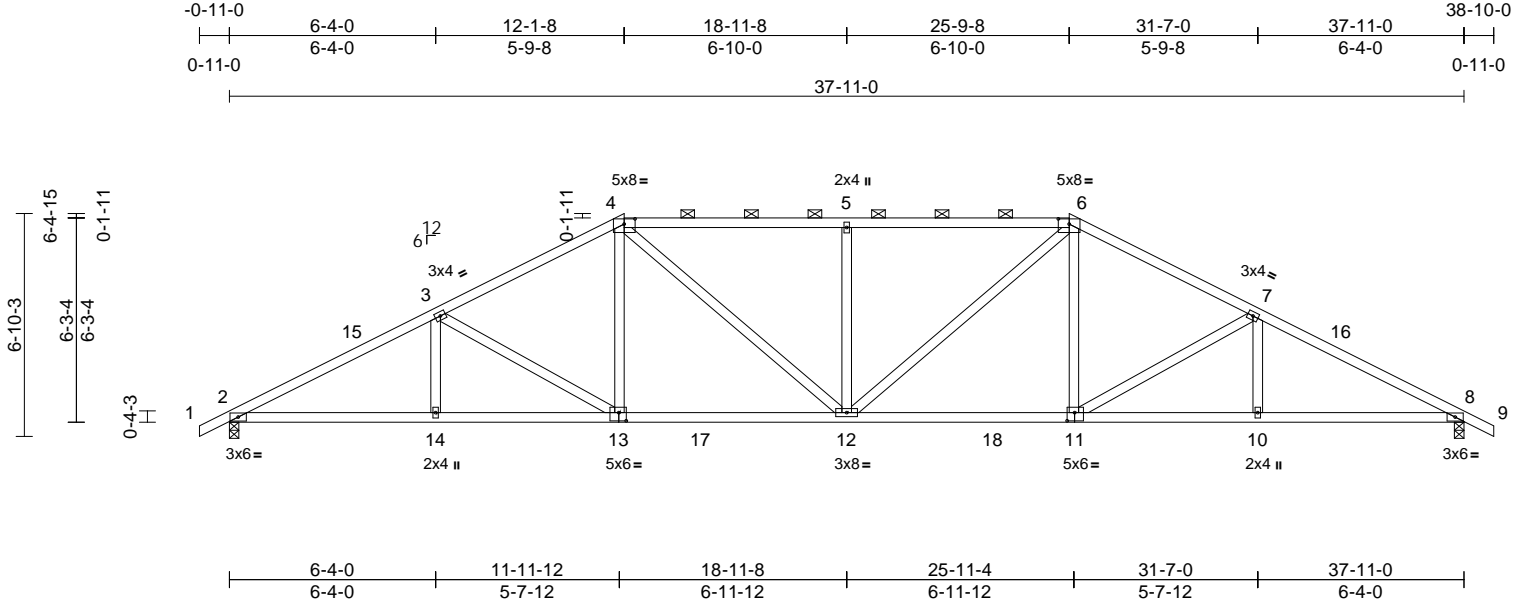
Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	I72459536
4600512	A04	Hip	2	1	Job Reference (optional)	

Builders FirstSource (Albermarle), Albermarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:10

Page: 1

ID:DyUGlcZDUBfqaBNq4UXV3eySSvY-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcD0i7J4zJC?f



Scale = 1:70.8

Plate Offsets (X, Y): [4:0-4-0,0-1-15], [6:0-4-0,0-1-15], [11:0-2-12,0-3-0], [13:0-2-12,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.17	12	>999	240	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.37	11-12	>999	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.15	8	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-S							
BCDL	10.0										
Weight: 199 lb FT = 20%											

#### LUMBER

TOP CHORD 2x4 SP No.2 \*Except\* 4-6:2x4 SP No.1  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3

#### BRACING

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

#### REACTIONS

(size) 2=0-3-8, 8=0-3-8  
Max Horiz 2=-108 (LC 13)  
Max Uplift 2=-144 (LC 12), 8=-144 (LC 13)  
Max Grav 2=1678 (LC 37), 8=1678 (LC 37)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/32, 2-3=-3037/209, 3-4=-2383/209, 4-5=-2569/246, 5-6=-2569/246, 6-7=-2383/209, 7-8=-3037/210, 8-9=0/32  
BOT CHORD 2-14=-207/2601, 12-14=-207/2601, 10-12=-100/2601, 8-10=-100/2601  
WEBS 3-14=0/248, 3-13=-719/189, 4-13=-19/489, 4-12=-142/669, 5-12=-743/217, 6-12=-142/669, 6-11=-19/489, 7-11=-719/190, 7-10=0/248

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0

- 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 15.4 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 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 144 lb uplift at joint 2 and 144 lb uplift at joint 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



April 2,2025

**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)

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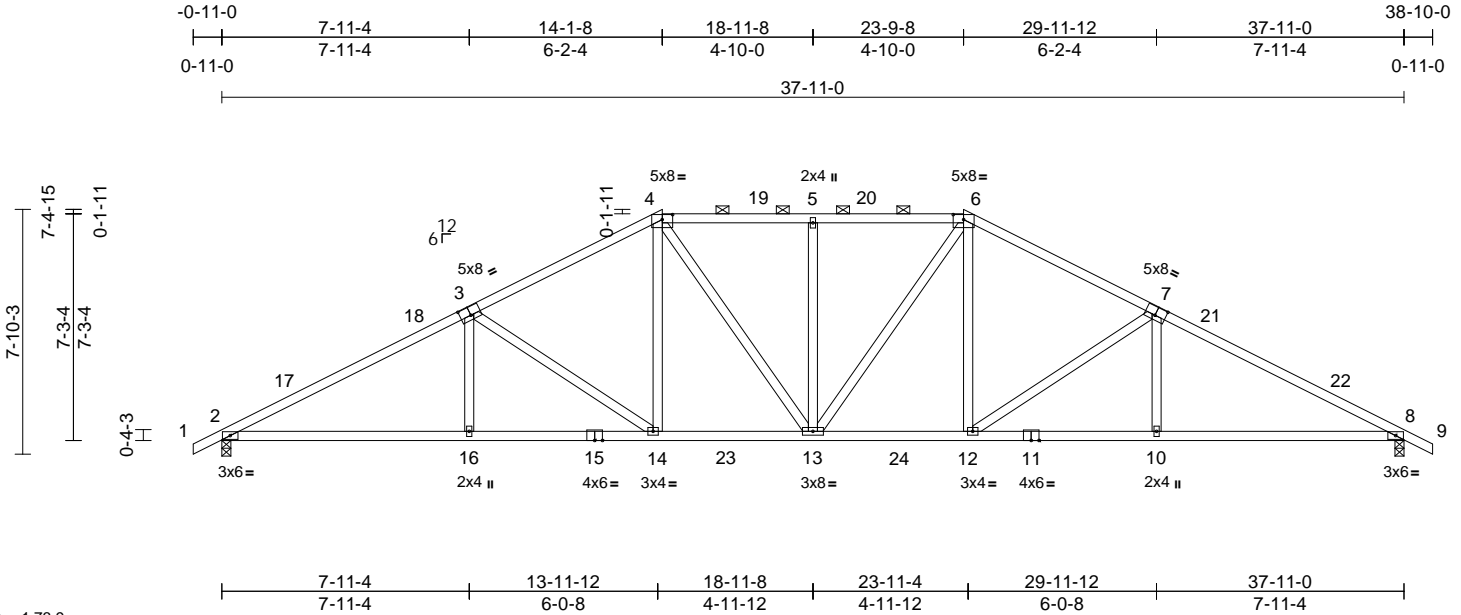
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	I72459537
4600512	A05	Hip	2	1	Job Reference (optional)	

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:10  
ID:pBPm18KAxi0KZ22uZOI?mySSuo-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:73.9

Plate Offsets (X, Y): [3:0-4-0,0-3-4], [4:0-4-0,0-1-15], [6:0-4-0,0-1-15], [7:0-4-0,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.17	12-13	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.32	12-13	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.14	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 207 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2 \*Except\* 1-3,7-9:2x4 SP 2400F  
2.0E or 2x4 SP DSS or 2x4 SP SS  
BOT CHORD 2x4 SP No.1 \*Except\* 15-11:2x4 SP No.2  
WEBS 2x4 SP No.3

#### BRACING

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

#### REACTIONS

(size) 2=0-3-8, 8=0-3-8  
Max Horiz 2=-125 (LC 17)  
Max Uplift 2=-163 (LC 12), 8=-163 (LC 13)  
Max Grav 2=1713 (LC 37), 8=1713 (LC 37)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-0/32, 2-4=-3119/235, 4-5=-2059/170,  
5-6=-2059/170, 6-8=-3119/236, 8-9=0/32  
BOT CHORD 2-16=-228/2681, 14-16=-228/2681,  
13-14=-50/1962, 12-13=0/1962,  
10-12=-104/2681, 8-10=-104/2681  
WEBS 3-14=-848/212, 4-14=-53/561, 6-12=-53/561,  
7-12=-848/213, 6-13=-105/413,  
5-13=-535/152, 4-13=-105/413, 3-16=0/318,  
7-10=0/318

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 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 15.4 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 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.1 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 163 lb uplift at joint 2 and 163 lb uplift at joint 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



April 2,2025

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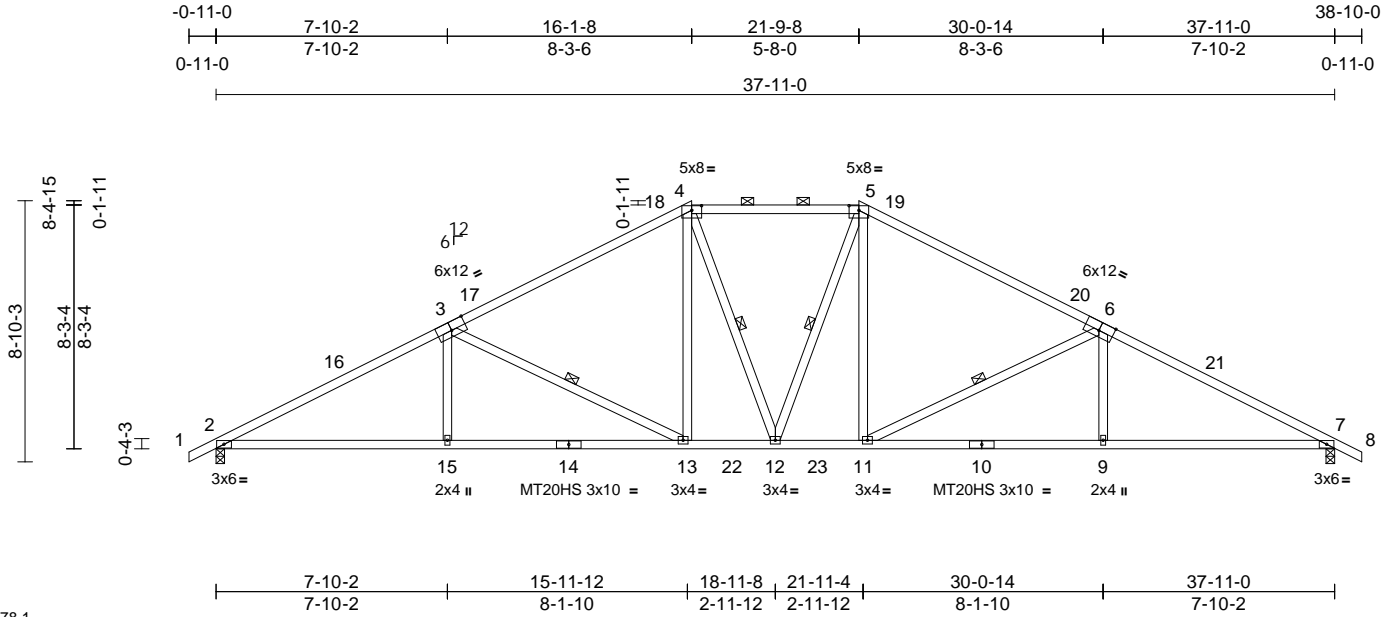


Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	I72459538
4600512	A06	Hip	2	1	Job Reference (optional)	

Builders FirstSource (Albermarle), Albermarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:11  
ID:7MIKXsrjWm0oHUTBHIRMMySStu-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:78.1

Plate Offsets (X, Y): [3:0-6-0,Edge], [4:0-4-0,0-1-15], [5:0-4-0,0-1-15], [6:0-6-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.18	9-11	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.38	9-11	>999	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.17	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 206 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP 2400F 2.0E or 2x4 SP DSS or 2x4 SP  
SS \*Except\* 4-5:2x4 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3

#### BRACING

TOP CHORD Structural wood sheathing directly applied, except  
2-0-0 oc purlins (2-10-13 max.): 4-5.  
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc  
bracing.  
WEBS 1 Row at midpt 3-13, 6-11, 4-12, 5-12

#### REACTIONS

(size) 2=0-3-8, 7=0-3-8  
Max Horiz 2=-141 (LC 13)  
Max Uplift 2=-180 (LC 12), 7=-180 (LC 13)  
Max Grav 2=1756 (LC 37), 7=1756 (LC 37)

#### FORCES

(lb) - Maximum Compression/Maximum  
Tension  
TOP CHORD 1-2=0/32, 2-4=-3292/278, 4-5=-1968/210,  
5-7=-3292/278, 7-8=0/32  
BOT CHORD 2-15=-287/2876, 13-15=-289/2873,  
12-13=-53/1968, 11-12=0/1968,  
9-11=-148/2873, 7-9=-146/2876  
WEBS 3-15=0/353, 3-13=-999/263, 4-13=-30/581,  
5-11=-30/581, 6-11=-999/264, 6-9=0/353,  
4-12=-157/155, 5-12=-157/155

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat.  
II; Exp B; Enclosed; MWFRS (envelope) exterior zone;  
cantilever left and right exposed ; Lumber DOL=1.60  
plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15  
Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL =  
1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially  
Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 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 15.4 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 1-00-00 wide will fit between the bottom  
chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 180 lb uplift at joint  
2 and 180 lb uplift at joint 7.
- This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size  
or the orientation of the purlin along the top and/or  
bottom chord.

LOAD CASE(S) Standard



April 2, 2025

**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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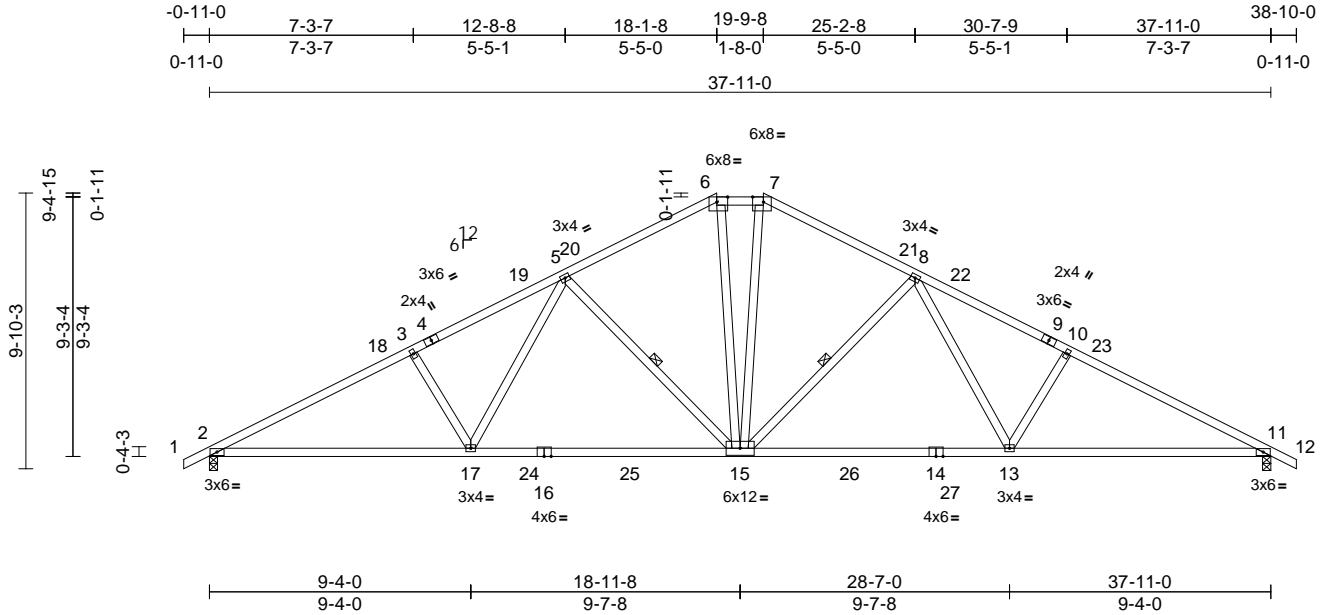
Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	I72459539
4600512	A07	Hip	2	1	Job Reference (optional)	

Builders FirstSource (Albermarle), Albermarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:11

Page: 1

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Scale = 1:82.3

Plate Offsets (X, Y): [6:0-4-10,Edge], [7:0-4-10,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.31	15-17	>999	240	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.53	15-17	>850	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.15	11	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-S							
BCDL	10.0										
Weight: 206 lb FT = 20%											

#### LUMBER

TOP CHORD 2x4 SP No.2 \*Except\* 1-4,9-12:2x4 SP No.1  
 BOT CHORD 2x4 SP No.1  
 WEBS 2x4 SP No.3

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (3-11-8 max.): 6-7.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.  
 WEBS 1 Row at midpt 5-15, 8-15

#### REACTIONS

(size) 2=0-3-8, 11=0-3-8  
 Max Horiz 2=158 (LC 13)  
 Max Uplift 2=194 (LC 12), 11=194 (LC 13)  
 Max Grav 2=1799 (LC 37), 11=1799 (LC 37)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/32, 2-3=3368/318, 3-5=3183/335, 5-6=2214/240, 6-7=1948/237, 7-8=2214/240, 8-10=3183/335, 10-11=3368/318, 11-12=0/32  
 BOT CHORD 2-17=341/2946, 15-17=195/2464, 13-15=59/2464, 11-13=184/2946  
 WEBS 3-17=388/216, 5-17=81/614, 5-15=828/233, 8-15=828/233, 8-13=81/615, 10-13=388/216, 6-15=82/689, 7-15=81/689

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 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 15.4 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 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.1 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 194 lb uplift at joint 2 and 194 lb uplift at joint 11.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



April 2,2025

**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

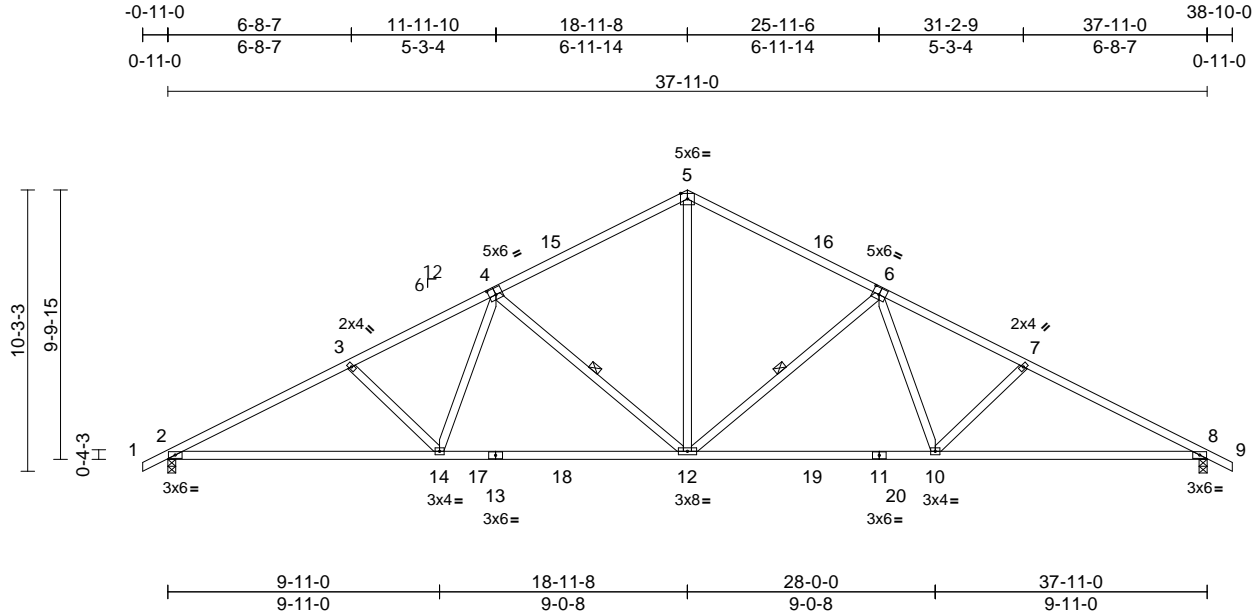
Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	I72459540
4600512	A08	Common	4	1	Job Reference (optional)	

Builders FirstSource (Albermarle), Albermarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:12

Page: 1

ID:PrXPdG5yJ6hDMAfivD7xWySSn6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRcD0i7J4zJC?i



Scale = 1:84.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.23	10-12	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.52	2-14	>862	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.13	8	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 195 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.1 \*Except\* 1-4,6-9:2x4 SP No.2  
 BOT CHORD 2x4 SP No.1 \*Except\* 13-11:2x4 SP No.2  
 WEBS 2x4 SP No.3

#### BRACING

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

WEBS 1 Row at midpt 4-12, 6-12

#### REACTIONS

(size) 2=0-3-8, 8=0-3-8  
 Max Horiz 2=-166 (LC 17)  
 Max Uplift 2=-200 (LC 12), 8=-200 (LC 13)  
 Max Grav 2=1569 (LC 2), 8=1569 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/32, 2-3=-2793/342, 3-5=-2538/311,  
 5-7=-2538/311, 7-8=-2793/342, 8-9=0/32  
 BOT CHORD 2-14=-376/2427, 12-14=-234/2063,  
 10-12=-74/2063, 8-10=-211/2427  
 WEBS 4-14=-19/521, 3-14=-315/193,  
 4-12=-736/249, 5-12=-85/1114,  
 6-12=-736/250, 6-10=-20/521, 7-10=-315/193

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
 Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 15.4 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.1 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 200 lb uplift at joint 2 and 200 lb uplift at joint 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



April 2,2025

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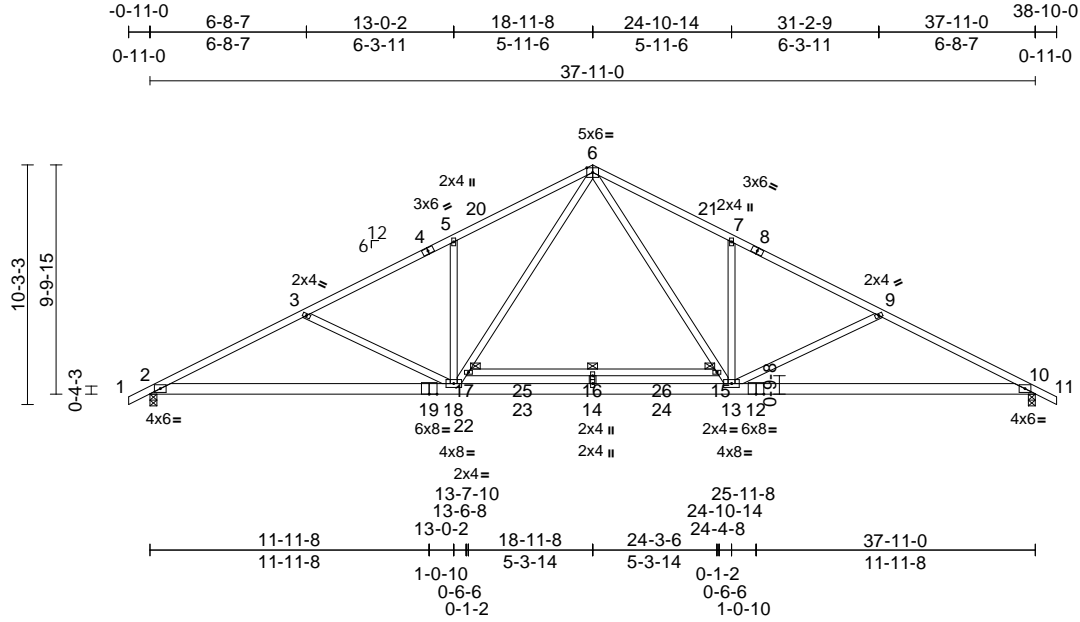
818 Soundside Road  
 Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	I72459541
4600512	A09	Common	6	1	Job Reference (optional)	

Builders FirstSource (Albermarle), Albermarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:12  
ID: sDbWCg?7Y920mCawK02eCLySSjL-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:98.7

Plate Offsets (X, Y): [7:0-0-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.41	16	>999	240	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.69	16	>651	180	
TCDL	10.0	Rep Stress Incr	YES	WB	0.60	Horz(CT)	0.09	10	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-S							
BCDL	10.0										
Weight: 243 lb FT = 20%											

#### LUMBER

TOP CHORD 2x4 SP No.2  
BOT CHORD 2x6 SP No.2 \*Except\* 17-15:2x4 SP No.2,  
19-12:2x6 SP 2400F 2.0E or 2x6 SP DSS  
WEBS 2x4 SP No.3

#### BRACING

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

#### REACTIONS

(size) 2=0-3-8, 10=0-3-8  
Max Horiz 2=-166 (LC 13)  
Max Uplift 2=-134 (LC 12), 10=-134 (LC 13)  
Max Grav 2=1679 (LC 2), 10=1679 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum  
Tension  
TOP CHORD 1-2=0/37, 2-3=-3137/227, 3-5=-2774/105,  
5-6=-2772/245, 6-7=-2772/245,  
7-9=-2774/105, 9-10=-3137/228, 10-11=0/37  
BOT CHORD 2-18=-275/2742, 14-18=0/1764,  
13-14=0/1764, 10-13=-110/2742,  
16-17=-42/0, 15-16=-42/0  
WEBS 5-18=-393/242, 17-18=-193/1191,  
6-17=-158/1273, 3-18=-450/262,  
7-13=-393/242, 9-13=-450/263,  
14-16=-275/0, 6-15=-158/1273,  
13-15=-192/1191

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat.  
II; Exp B; Enclosed; MWFRS (envelope) exterior zone;  
cantilever left and right exposed ; Lumber DOL=1.60  
plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15  
Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL =  
1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially  
Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 15.4 psf on  
overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 1-00-00 wide will fit between the bottom  
chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 134 lb uplift at joint  
2 and 134 lb uplift at joint 10.
- This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



April 2, 2025

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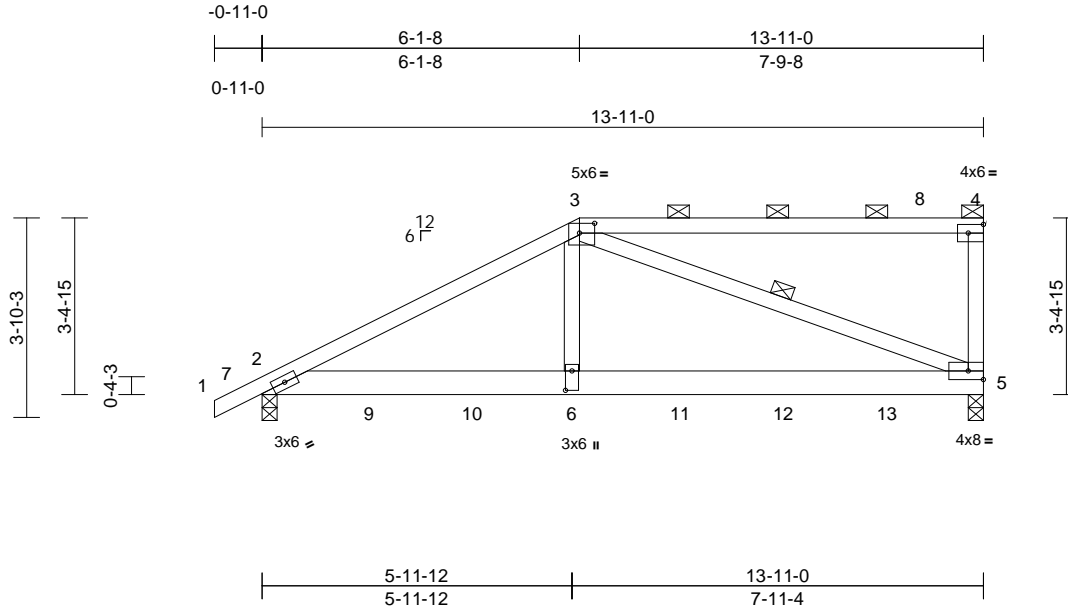
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	I72459542
4600512	B01G	Half Hip Girder	1	1	Job Reference (optional)	

Builders FirstSource (Albermarle), Albermarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:12  
ID:tzE3Guzmq?uFK4Xn6gMbRWyS8T7-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:44.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.12	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.21	5-6	>796	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.70	Horz(CT)	0.02	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 76 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2 \*Except\* 3-4:2x4 SP 2400F  
2.0E or 2x4 SP DSS or 2x4 SP SS  
BOT CHORD 2x6 SP 2400F 2.0E or 2x6 SP DSS  
WEBS 2x4 SP No.3 \*Except\* 4-5:2x4 SP No.2

#### BRACING

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

WEBS 1 Row at midpt 3-5

#### REACTIONS

(size) 2=0-3-8, 5=0-3-8  
Max Horiz 2=134 (LC 12)  
Max Uplift 2=-267 (LC 12), 5=-323 (LC 9)  
Max Grav 2=1457 (LC 34), 5=1440 (LC 33)

#### FORCES

(lb) - Maximum Compression/Maximum  
Tension  
TOP CHORD 1-2=0/40, 2-3=-2176/436, 3-4=-146/39,  
4-5=-344/105  
BOT CHORD 2-6=-412/1884, 5-6=-403/1828  
WEBS 3-6=-214/1236, 3-5=-1812/402

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 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 15.4 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 1-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP 2400F 2.0E or DSS .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 323 lb uplift at joint 5 and 267 lb uplift at joint 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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) 273 lb down and 55 lb up at 2-0-12, 216 lb down and 43 lb up at 4-0-12, 262 lb down and 83 lb up at 6-0-12, 262 lb down and 83 lb up at 8-0-12, and 262 lb down and 83 lb up at 10-0-12, and 262 lb down and 83 lb up at 12-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

#### LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-51, 3-4=-61, 2-5=-20  
Concentrated Loads (lb)  
Vert: 6=-262, 9=-273, 10=-216, 11=-262, 12=-262, 13=-262



April 2, 2025

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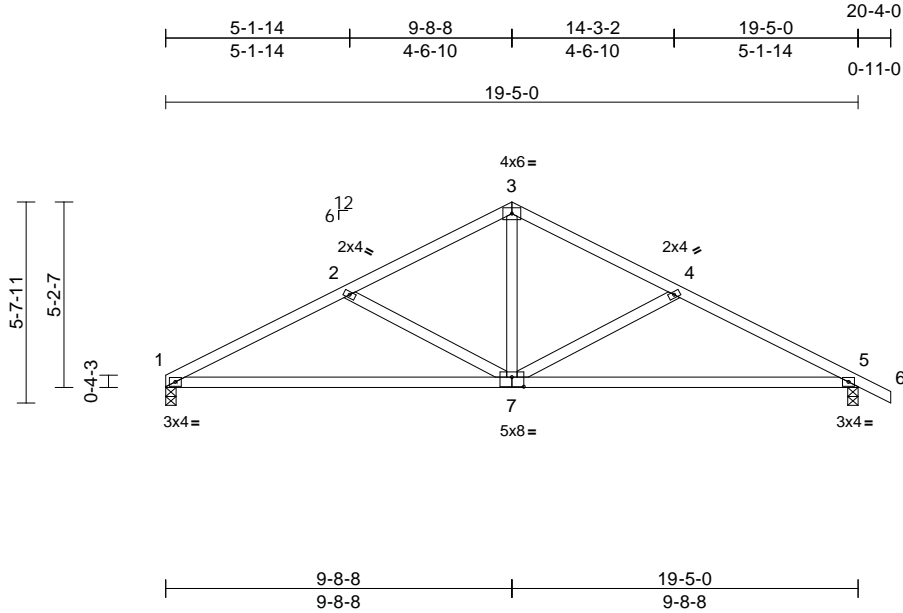


Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	I72459543
4600512	C01	Common	3	1	Job Reference (optional)	

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:13  
ID:nbixGq\_5b?6pSKHe23n8JuySRt8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:64.6

Plate Offsets (X, Y): [7:0-4-0,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.19	1-7	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.40	1-7	>580	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.03	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 85 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 4-8-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

#### REACTIONS

(size) 1=0-3-8, 5=0-3-8  
Max Horiz 1=-96 (LC 13)  
Max Uplift 1=-89 (LC 12), 5=-113 (LC 13)  
Max Grav 1=763 (LC 2), 5=831 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-1281/189, 2-3=-963/110, 3-4=-962/111,  
4-5=-1276/184, 5-6=0/32  
BOT CHORD 1-5=-185/1101  
WEBS 3-7=-5/572, 2-7=-383/210, 4-7=-377/204

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 15.4 psf on overhangs non-concurrent with other live loads.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 1 and 113 lb uplift at joint 5.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



April 2, 2025

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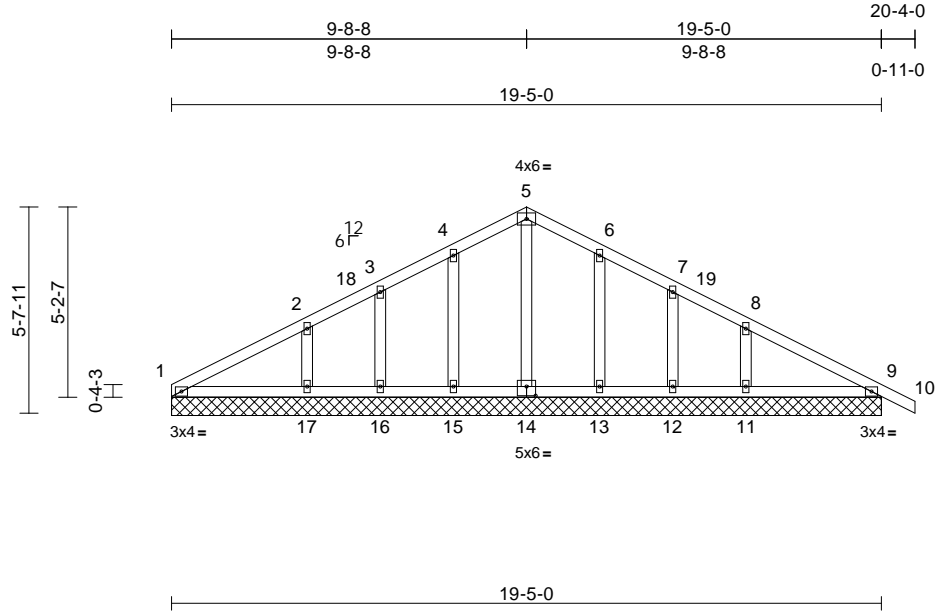
Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	172459544
4600512	C02	Common Supported Gable	1	1	Job Reference (optional)	

Builders FirstSource (Albermarle), Albermarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:13

Page: 1

ID: YPIOWOlnihGGy9hR?pj?py9SRs-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:63

Plate Offsets (X, Y): [14:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.16	Vert(LL)	n/a	-	999	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	9	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-S							
BCDL	10.0										
										Weight: 94 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 1=19-5-0, 9=19-5-0, 11=19-5-0,  
12=19-5-0, 13=19-5-0, 14=19-5-0,  
15=19-5-0, 16=19-5-0, 17=19-5-0  
Max Horiz 1=-96 (LC 13)  
Max Uplift 1=-12 (LC 13), 9=-26 (LC 13),  
11=-86 (LC 13), 12=-35 (LC 13),  
13=-53 (LC 13), 15=-55 (LC 12),  
16=-31 (LC 12), 17=-93 (LC 12)  
Max Grav 1=126 (LC 2), 9=190 (LC 2),  
11=288 (LC 33), 12=139 (LC 20),  
13=225 (LC 20), 14=214 (LC 29),  
15=226 (LC 19), 16=134 (LC 19),  
17=302 (LC 32)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-89/72, 2-3=-58/81, 3-4=-42/102,  
4-5=-52/126, 5-6=-52/119, 6-7=-42/73,  
7-8=-51/43, 8-9=-70/46, 9-10=0/31  
BOT CHORD 1-17=-6/83, 16-17=-6/83, 15-16=-6/83,  
13-15=-6/83, 12-13=-6/83, 11-12=-6/83,  
9-11=-6/83  
WEBS 5-14=-109/0, 4-15=-181/80, 3-16=-112/51,  
2-17=-217/128, 6-13=-180/79, 7-12=-117/55,  
8-11=-206/120

#### NOTES

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

- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 15.4 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 (||) MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- 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 1-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 1, 26 lb uplift at joint 9, 55 lb uplift at joint 15, 31 lb uplift at joint 16, 93 lb uplift at joint 17, 53 lb uplift at joint 13, 35 lb uplift at joint 12 and 86 lb uplift at joint 11.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



April 2, 2025

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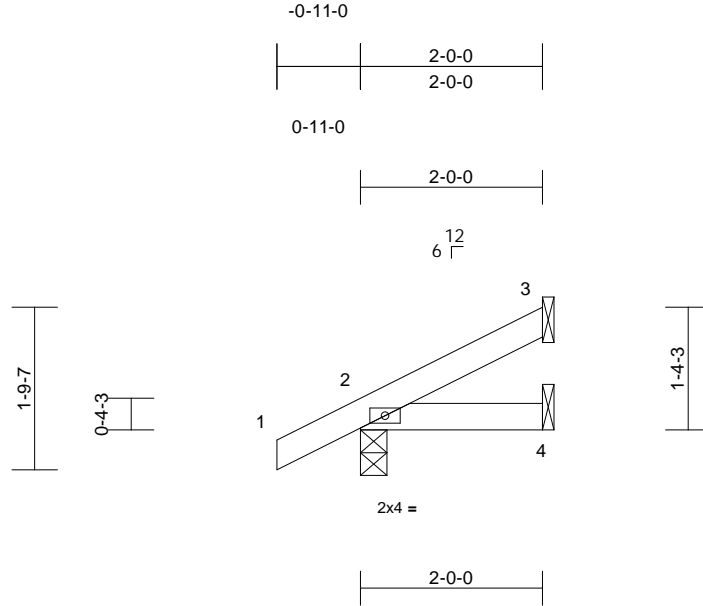
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY
4600512	J01	Jack-Open	6	1	Job Reference (optional)
					I72459545

Builders FirstSource (Albermarle), Albermarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:13  
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Page: 1



Scale = 1:25.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	0.00	2-4	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	2-4	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 8 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

**REACTIONS** (size) 2=0-3-8, 3= Mechanical, 4= Mechanical  
Max Horiz 2=54 (LC 12)  
Max Uplift 2=-30 (LC 12), 3=-30 (LC 12)  
Max Grav 2=176 (LC 19), 3=55 (LC 19), 4=39 (LC 7)

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

TOP CHORD 1-2=0/31, 2-3=-41/19  
BOT CHORD 2-4=0/0

#### NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- 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 1-00-00 wide will fit between the bottom chord and any other members.
  - 7) Bearings are assumed to be: , Joint 2 SP No.2 .
  - 8) Refer to girder(s) for truss to truss connections.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 2 and 30 lb uplift at joint 3.
  - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



April 2, 2025

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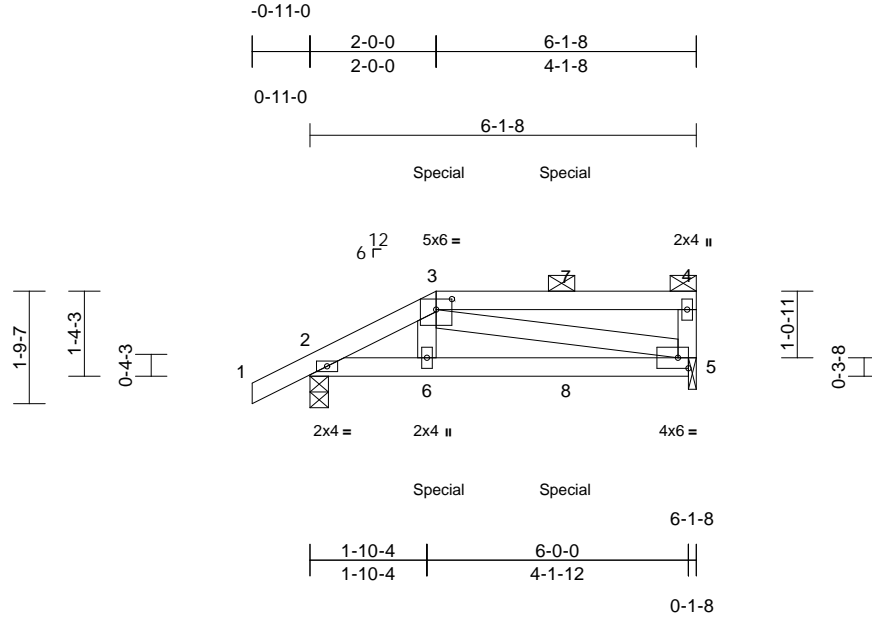
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	I72459546
4600512	J02G	Half Hip Girder	3	1	Job Reference (optional)	

Builders FirstSource (Albermarle), Albemarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:14  
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Page: 1



Scale = 1:36.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.01	5-6	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.03	5-6	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.12	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 28 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

**REACTIONS** (size) 2=0-3-8, 5=0-1-8  
Max Horiz 2=55 (LC 12)  
Max Uplift 2=-54 (LC 12), 5=-43 (LC 9)  
Max Grav 2=348 (LC 34), 5=293 (LC 33)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/34, 2-3=-387/23, 3-4=0/0, 4-5=-174/54  
BOT CHORD 2-6=-27/321, 5-6=-34/311  
WEBS 3-6=0/162, 3-5=-321/36

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0
- 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 15.4 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 1-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 2 SP No.2, Joint 5 SP No.3.
- Bearing at joint(s) 5 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 at joint(s) 5.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 54 lb uplift at joint 2 and 43 lb uplift at joint 5.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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) 46 lb down and 34 lb up at 2-0-0, and 53 lb down and 32 lb up at 4-0-12 on top chord, and 8 lb down at 2-0-12, and 8 lb down at 4-0-12 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=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-51, 3-4=-61, 2-5=-20  
Concentrated Loads (lb)  
Vert: 3=-4 (F)



April 2,2025

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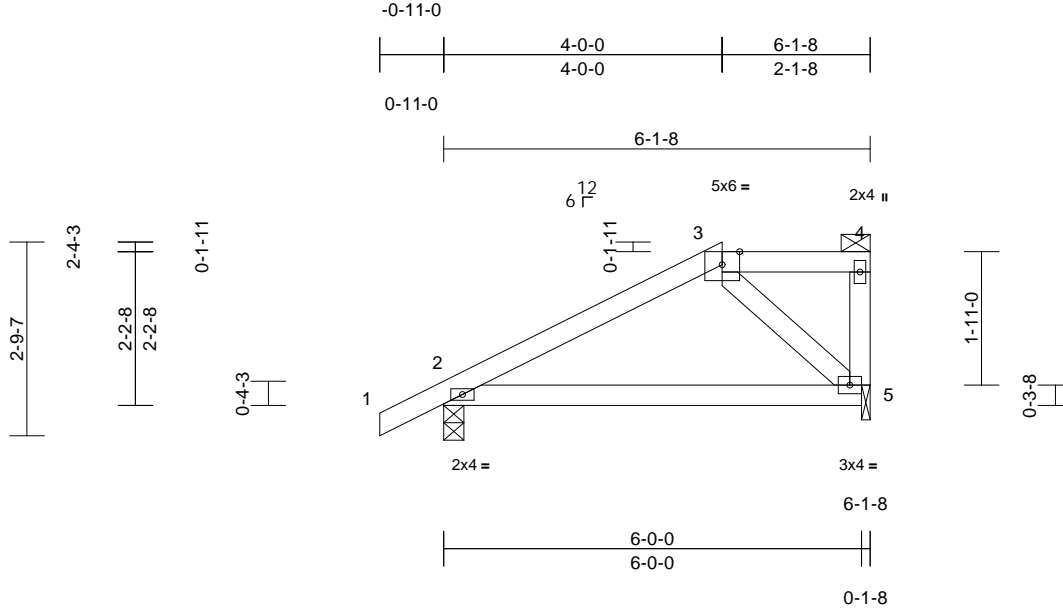
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	I72459547
4600512	J03	Half Hip	3	1	Job Reference (optional)	

Builders FirstSource (Albermarle), Albermarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:14  
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Page: 1



Scale = 1:33.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.07	2-5	>999	240	MT20	244/190
Snow (Pf/Pg)	20.4/20.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.14	2-5	>504	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 27 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size)	2=0-3-8, 5=0-1-8
Max Horiz	2=89 (LC 12)
Max Uplift	2=-50 (LC 12), 5=-30 (LC 9)
Max Grav	2=395 (LC 34), 5=236 (LC 33)

#### FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/34, 2-3=-220/29, 3-4=-2/2, 4-5=-87/26
BOT CHORD	2-5=-50/122
WEBS	3-5=-173/71

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ctx=1.10, Lu=50-0-0
- 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 15.4 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 1-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 2 SP No.2 , Joint 5 SP No.3 .
- Bearing at joint(s) 5 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 at joint(s) 5.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 2 and 30 lb uplift at joint 5.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



April 2,2025

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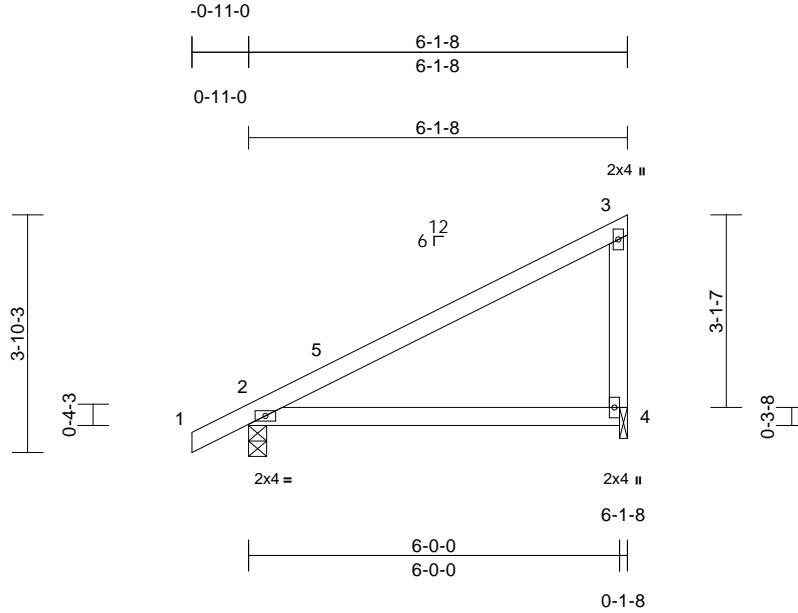
Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	I72459548
4600512	J04	Jack-Closed	18	1	Job Reference (optional)	

Builders FirstSource (Albermarle), Albermarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:14

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Scale = 1:37.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.07	2-4	>999	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.14	2-4	>504	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	n/a	-	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 25 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size)	2=0-3-8, 4=0-1-8
Max Horiz	2=131 (LC 12)
Max Uplift	2=-37 (LC 12), 4=-71 (LC 12)
Max Grav	2=319 (LC 19), 4=282 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/32, 2-3=-90/82, 3-4=-224/106
BOT CHORD	2-4=0/0

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 15.4 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
- Bearings are assumed to be: Joint 2 SP No.2 , Joint 4 SP No.3 .
- Bearing at joint(s) 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 2 and 71 lb uplift at joint 4.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



April 2,2025

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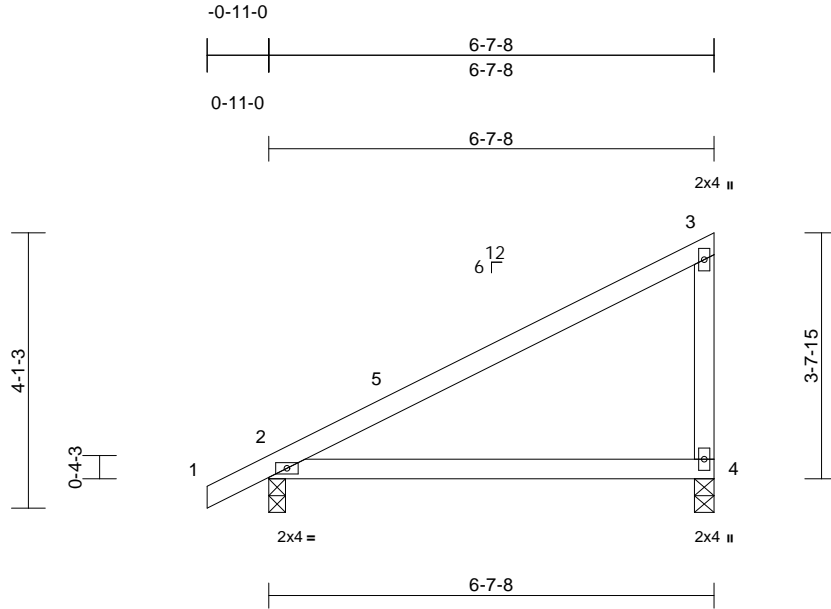
Job	Truss	Truss Type	Qty	Ply	SUNSET A - LOT 41 - ILA'S WAY	I72459549
4600512	M01	Monopitch	3	1	Job Reference (optional)	

Builders FirstSource (Albermarle), Albermarle, NC - 28001,

Run: 8.83 S Mar 20 2025 Print: 8.830 S Mar 20 2025 MiTek Industries, Inc. Wed Apr 02 09:06:14

Page: 1

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<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.10	2-4	>780	240	MT20	244/190
Snow (Pf/Pg)	15.4/20.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.20	2-4	>390	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	n/a	-	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 27 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.1  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3

#### BRACING

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

#### REACTIONS (size)

2=0-3-0, 4=0-3-8  
Max Horiz 2=141 (LC 12)  
Max Uplift 2=-38 (LC 12), 4=-77 (LC 12)  
Max Grav 2=331 (LC 19), 4=306 (LC 19)

#### FORCES (lb)

- Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/32, 2-3=-97/88, 3-4=-242/115  
BOT CHORD 2-4=0/0

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=15.4 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 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 15.4 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 1-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 77 lb uplift at joint 4 and 38 lb uplift at joint 2.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



April 2, 2025

**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.sbcacompoments.com)

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**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION



\* 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

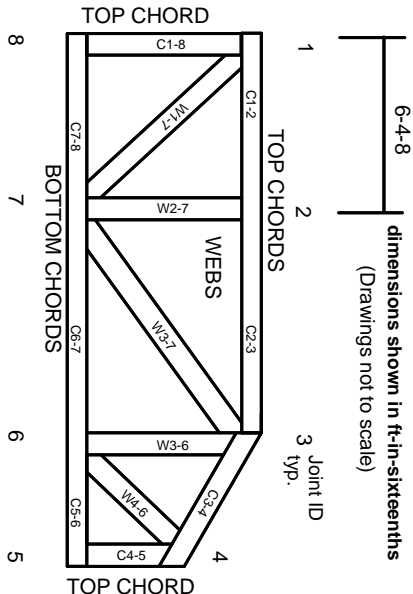


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

## Industry Standards:

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

# Numbering System



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

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

# Product Code Approvals

ICC-ES Reports:

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

# Design General Notes

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

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

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# 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.

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