

Trenco  
818 Soundside Rd  
Edenton, NC 27932

Re: 22030102  
DRB - 100 FARM AT NEILLS CREEK

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Pages or sheets covered by this seal: I51256987 thru I51257022

My license renewal date for the state of North Carolina is December 31, 2022.

North Carolina COA: C-0844



April 8, 2022

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Gilbert, Eric

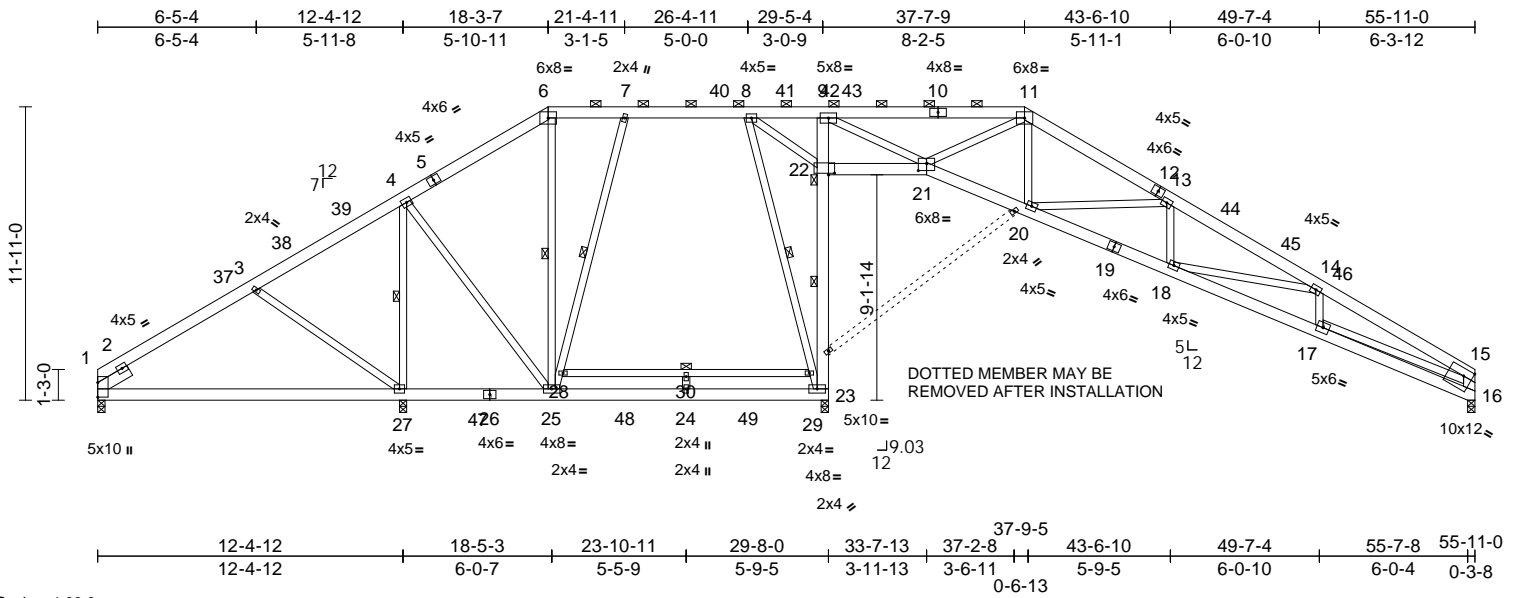
**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), 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 22030102	Truss A01	Truss Type Piggyback Base	Qty 3	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51256987
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:32  
ID:vmWSYKxMeSKeeaoGnh3QrczhvSE-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWRcDoi7J4zJC?f

Page: 1



Scale = 1:93.6

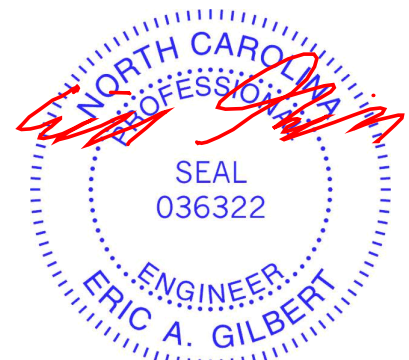
Plate Offsets (X, Y): [16:0-4-4-0-3-8], [21:0-4-0-0-3-8], [22:0-3-0,0-0-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	-0.20	17-18	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.34	24	>595	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.16	16	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 483 lb	FT = 20%

LUMBER	WEBS	SLIDER	BRACING	TOP CHORD	BOT CHORD	WEBS	JOINTS	REACTIONS	FORCES	TOP CHORD	BOT CHORD
TOP CHORD 2x6 SP No.2	9-21=75/2018, 11-21=-566/226, 11-20=-107/865, 15-17=-367/2541, 3-27=-524/190, 4-27=-1464/91, 4-25=0/951, 6-25=400/83, 25-28=220/220, 7-28=-190/243, 8-29=-273/374, 23-29=-294/356, 8-22=-1072/346, 28-30=-36/32, 29-30=-36/32, 24-30=0/60, 13-20=-1292/334, 13-18=0/324, 14-18=-304/168, 14-17=-295/140	Left 2x6 SP No.2 -- 1-6-0	TOP CHORD Structural wood sheathing directly applied or 3-9-7 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-11.	5-2-0 oc bracing: 22-23	1 Row at midpt 4-27, 6-25, 7-25, 8-23, 28-29	1 Brace at Jt(s): 22	(lb/size) 1=153/0-3-8, 16=991/0-3-8, 23=1768/0-3-8, 27=1743/0-3-8	(lb) - Maximum Compression/Maximum Tension	1-3=-671/553, 3-4=-147/755, 4-6=-247/274, 6-7=-182/254, 7-8=-184/281, 8-9=0/825, 9-11=-1086/118, 11-13=-1920/317, 13-14=-3292/547, 14-15=-3489/600, 15-16=-1272/269	1-27=-352/123, 25-27=-547/0, 24-25=-104/137, 23-24=-104/137, 22-23=-1727/430, 9-22=-1091/246, 21-22=-766/324, 20-21=0/1646, 18-20=-311/3031, 17-18=-494/3198, 16-17=-111/545	

- 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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 5-7-2, Interior (1) 5-7-2 to 10-4-9, Exterior(2R) 10-4-9 to 26-4-0, Interior (1) 26-4-0 to 29-5-4, Exterior(2R) 29-5-4 to 45-6-7, Interior (1) 45-6-7 to 50-1-2, Exterior(2E) 50-1-2 to 55-8-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - 200.0lb AC unit load placed on the bottom chord, 23-11-0 from left end, supported at two points, 5-0-0 apart.
  - Provide adequate drainage to prevent water ponding.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - Bearing at joint(s) 16 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1, 16, 27, and 23. This connection is for uplift only and does not consider lateral forces.
  - 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 8, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



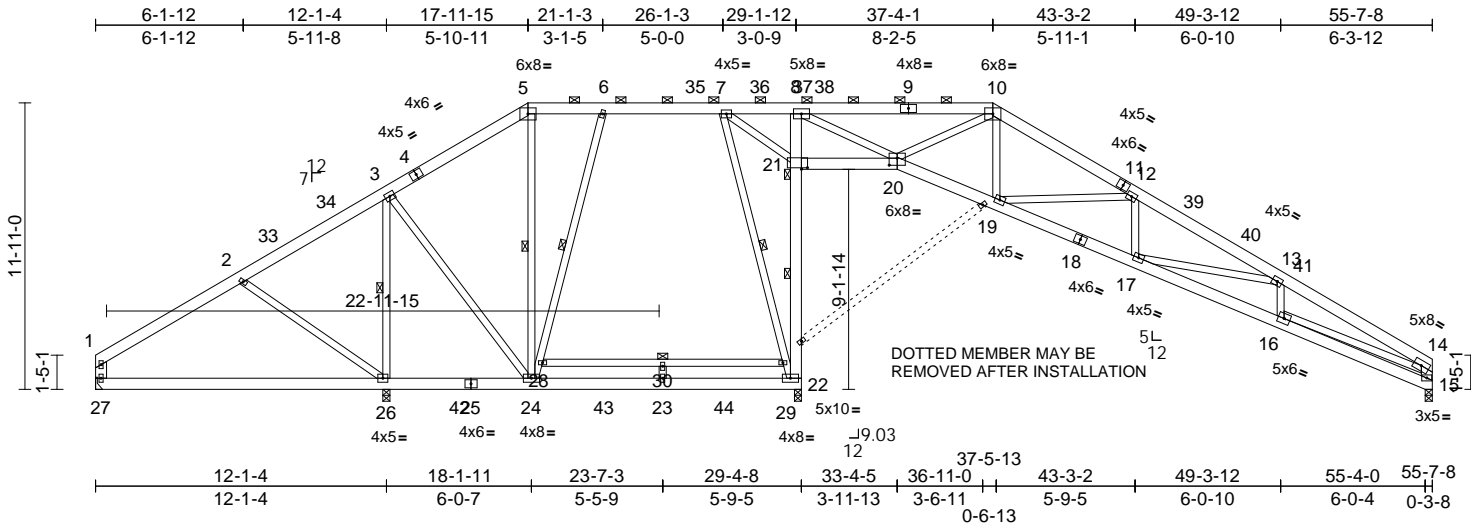
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss A02	Truss Type Piggyback Base	Qty 4	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51256988
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:35  
ID:vmWSYKxMeSKeeaoGnh3QrczhvSE-RfC?PsB70Hq3NSgPqnL8w3u1TXbGKWRCDoi7J4zJC?f

Page: 1



Scale = 1:95.9

Plate Offsets (X, Y): [20:0-4-0,0-3-8], [21:0-3-0,0-0-12]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.20	16-17	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.37	23-24	>549	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.27	15	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 480 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 15-14,1-27:2x6 SP No.2, 16-14,24-5,24-6,22-7,28-29:2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 3-8-14 oc purlins, except end verticals, and 2-0-0 oc purlins (5-6-15 max.): 5-10.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:  
6-0-0 oc bracing: 24-26.  
5-5-0 oc bracing: 21-22

WEBS 1 Row at midpt 3-26, 5-24, 6-24, 7-22, 28-29  
JOINTS 1 Brace at Jt(s): 21  
**REACTIONS** (lb/size) 15=1004/0-3-8, 22=1805/0-3-8, 26=1589/0-3-8, 27=216/Mechanical  
Max Horiz 27=269 (LC 13)  
Max Uplift 15=-181 (LC 15), 26=-192 (LC 14), 27=27 (LC 14)  
Max Grav 15=1218 (LC 48), 22=2016 (LC 43), 26=1916 (LC 34), 27=292 (LC 46)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-48/124, 2-3=-13/566, 3-5=-275/162, 5-6=-200/179, 6-7=-196/232, 7-8=-148/756, 8-10=-1334/0, 10-12=-2019/190, 12-13=-3359/433, 13-14=-3532/516, 14-15=-1268/243

**BOT CHORD** 26-27=-269/265, 24-26=-412/212, 23-24=-143/325, 22-23=-143/325, 21-22=-1630/695, 8-21=-1014/358, 20-21=-808/583, 19-20=0/1739, 17-19=-205/3109, 16-17=-416/3251, 15-16=-102/543  
**WEBS** 8-20=-118/1979, 10-20=-526/355, 10-19=-112/866, 14-16=-300/2586, 2-26=-435/222, 3-26=-1443/165, 3-24=0/704, 5-24=-395/83, 24-28=-41/327, 6-28=-10/356, 7-29=-783/468, 22-29=-827/458, 7-21=-1114/605, 28-30=-72/35, 29-30=-72/35, 23-30=0/61, 12-19=-1294/346, 12-17=0/324, 13-17=-305/194, 13-16=-301/130, 1-27=-124/88

**NOTES**  
1) Unbalanced roof live loads have been considered for this design.  
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-6-4 to 6-2-12, Interior (1) 6-2-12 to 10-4-9, Exterior(2R) 10-4-9 to 26-4-0, Interior (1) 26-4-0 to 29-5-4, Exterior(2R) 29-5-4 to 45-6-7, Interior (1) 45-6-7 to 50-1-2, Exterior(2E) 50-1-2 to 55-8-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60  
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10  
4) Unbalanced snow loads have been considered for this design.  
5) 200.0lb AC unit load placed on the bottom chord, 23-8-0 from left end, supported at two points, 5-0-0 apart.

- 6) Provide adequate drainage to prevent water ponding.
- 7) All plates are 2x4 MT20 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 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 10) Refer to girder(s) for truss to truss connections.
- 11) Bearing at joint(s) 15 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 27.
- 13) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 15 and 26. This connection is for uplift only and does not consider lateral forces.
- 14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



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Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss A02	Truss Type Piggyback Base	Qty 4	Ply 1	DRB - 100 FARM AT NEILLS CREEK I51256988 Job Reference (optional)
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:35  
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Page: 2

15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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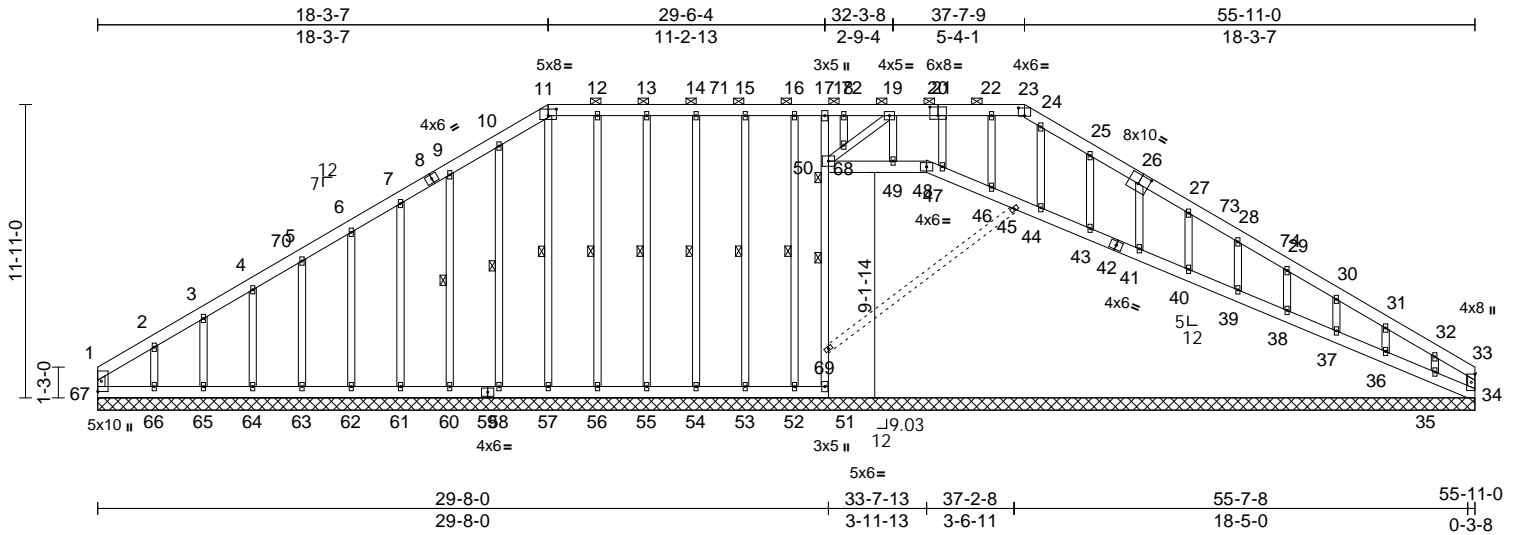
Job 22030102	Truss A03	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51256989
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:36

Page: 1

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Scale = 1:93.6

Plate Offsets (X, Y): [11:0-4-0,0-3-3], [20:0-4-0,0-4-4], [23:0-3-0,0-3-12], [26:0-5-0,0-4-8]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.47	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horiz(TL)	0.03	45	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 524 lb	FT = 20%

LUMBER		Max Uplift	35=-96 (LC 15), 36=-42 (LC 15), 37=-50 (LC 15), 38=-48 (LC 15), 39=-50 (LC 15), 40=-45 (LC 15), 41=-50 (LC 15), 43=-68 (LC 15), 44=-490 (LC 37), 45=-114 (LC 11), 51=-14 (LC 37), 52=-9 (LC 10), 53=-20 (LC 11), 54=-27 (LC 10), 55=-31 (LC 10), 56=-29 (LC 11), 57=-34 (LC 13), 58=-33 (LC 14), 60=-56 (LC 14), 61=-49 (LC 14), 62=-49 (LC 14), 63=-48 (LC 14), 64=-53 (LC 14), 65=-30 (LC 15), 66=-170 (LC 11), 67=-253 (LC 10), 69=-84 (LC 11)	TOP CHORD	1-67=-218/195, 1-2=-335/331, 2-3=-284/287, 3-4=-278/293, 4-5=-264/289, 5-6=-251/305, 6-7=-237/332, 7-9=-224/360, 9-10=-231/390, 10-11=-250/413, 11-12=-223/379, 12-13=-223/379, 13-14=-223/379, 14-15=-223/379, 15-16=-223/379, 16-17=-223/379, 17-18=-218/374, 18-19=-218/374, 19-21=-250/327, 21-22=-250/327, 22-23=-250/327, 23-24=-238/309, 24-25=-275/353, 25-27=-251/299, 27-28=-200/211, 28-29=-174/165, 29-30=-154/120, 30-31=-154/75, 31-32=-148/30, 32-33=-173/19, 33-34=-127/3
TOP CHORD	2x6 SP No.2				
BOT CHORD	2x6 SP No.2 *Except* 51-17:2x4 SP No.2				
WEBS	2x4 SP No.3				
OTHERS	2x4 SP No.3 *Except* 57-11,56-12,55-13,54-14,53-15,52-16:2x4 SP No.2				
BRACING		Max Grav	34=132 (LC 37), 35=138 (LC 48), 36=169 (LC 24), 37=161 (LC 48), 38=183 (LC 42), 39=235 (LC 42), 40=231 (LC 42), 41=225 (LC 42), 43=258 (LC 42), 44=122 (LC 10), 45=963 (LC 37), 51=14 (LC 10), 52=95 (LC 54), 53=134 (LC 37), 54=219 (LC 37), 55=220 (LC 37), 56=219 (LC 37), 57=204 (LC 51), 58=236 (LC 40), 60=236 (LC 40), 61=233 (LC 40), 62=235 (LC 40), 63=205 (LC 40), 64=169 (LC 23), 65=148 (LC 38), 66=310 (LC 23), 67=304 (LC 13), 69=588 (LC 37)		
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 11-23.				
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing. Except: 6-0-0 oc bracing: 50-69				
WEBS	1 Row at midpt 9-60, 10-58, 11-57, 12-56, 13-55, 14-54, 15-53, 16-52				
JOINTS	1 Brace at Jt(s): 50				
REACTIONS	(lb/size)				
	34=118/55-11-0, 35=77/55-11-0, 36=169/55-11-0, 37=152/55-11-0, 38=156/55-11-0, 39=154/55-11-0, 40=157/55-11-0, 41=144/55-11-0, 43=180/55-11-0, 44=-293/55-11-0, 45=699/55-11-0, 51=-8/55-11-0, 52=94/55-11-0, 53=120/55-11-0, 54=159/55-11-0, 55=156/55-11-0, 56=159/55-11-0, 57=150/55-11-0, 58=158/55-11-0, 60=155/55-11-0, 61=155/55-11-0, 62=155/55-11-0, 63=155/55-11-0, 64=156/55-11-0, 65=148/55-11-0, 66=185/55-11-0, 67=62/55-11-0, 69=436/55-11-0				
	Max Horiz 67=271 (LC 13)				



April 8, 2022

Continued on page 2

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DRB - 100 FARM AT NEILLS CREEK
22030102	A03	Piggyback Base Supported Gable	1	1	I51256989
					Job Reference (optional)

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:36

Page: 2

ID:ACS0SGCfmETEfJzgbpcWMMzhrbl-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCdoi7J4zJC?f

BOT CHORD 66-67=-7/2, 65-66=-7/2, 64-65=-7/2,  
63-64=-7/2, 62-63=-7/2, 61-62=-7/2,  
60-61=-7/2, 58-60=-7/2, 57-58=-7/2,  
56-57=-7/2, 55-56=-7/2, 54-55=-7/2,  
53-54=-7/2, 52-53=-7/2, 51-52=-7/2,  
51-69=0/0, 50-69=-588/84, 17-50=-377/95,  
49-50=-24/118, 48-49=-24/118,  
47-48=-27/114, 46-47=-30/117,  
45-46=-58/59, 44-45=-53/326,  
43-44=-28/118, 41-43=-30/140,  
40-41=-29/134, 39-40=-29/137,  
38-39=-29/137, 37-38=-29/137,  
36-37=-29/136, 35-36=-30/140,  
34-35=-25/119

16) N/A

17) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 44, 43, 41, 40, 39, 38, 37, 36, 35, 45.

18) 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.

19) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

WEBS 2-66=-197/123, 3-65=-113/65, 4-64=-124/73,  
5-63=-167/72, 6-62=-197/72, 7-61=-194/72,  
9-60=-197/79, 10-58=-198/57,  
11-57=-166/73, 12-56=-180/53,  
13-55=-182/54, 14-54=-180/50,  
15-53=-98/43, 16-52=-42/28, 18-68=-21/5,  
19-49=0/76, 21-47=-2/57, 22-46=-345/72,  
24-44=-139/28, 25-43=-189/98,  
26-41=-193/71, 27-40=-190/69,  
28-39=-197/73, 29-38=-144/72,  
30-37=-122/72, 31-36=-127/70,  
32-35=-108/91, 50-68=-179/33,  
19-68=-165/29

LOAD CASE(S) Standard

#### 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=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-1-12 to 5-8-14, Exterior(2N) 5-8-14 to 12-8-5, Corner(3R) 12-8-5 to 23-10-8, Exterior (2N) 23-10-8 to 32-0-8, Corner(3R) 32-0-8 to 43-2-11, Exterior(2N) 43-2-11 to 50-2-2, Corner(3E) 50-2-2 to 55-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCELL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) Provide adequate drainage to prevent water ponding.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 10) Gable studs spaced at 2-0-0 oc.
- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 13) Bearing at joint(s) 69 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 51.
- 15) N/A

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

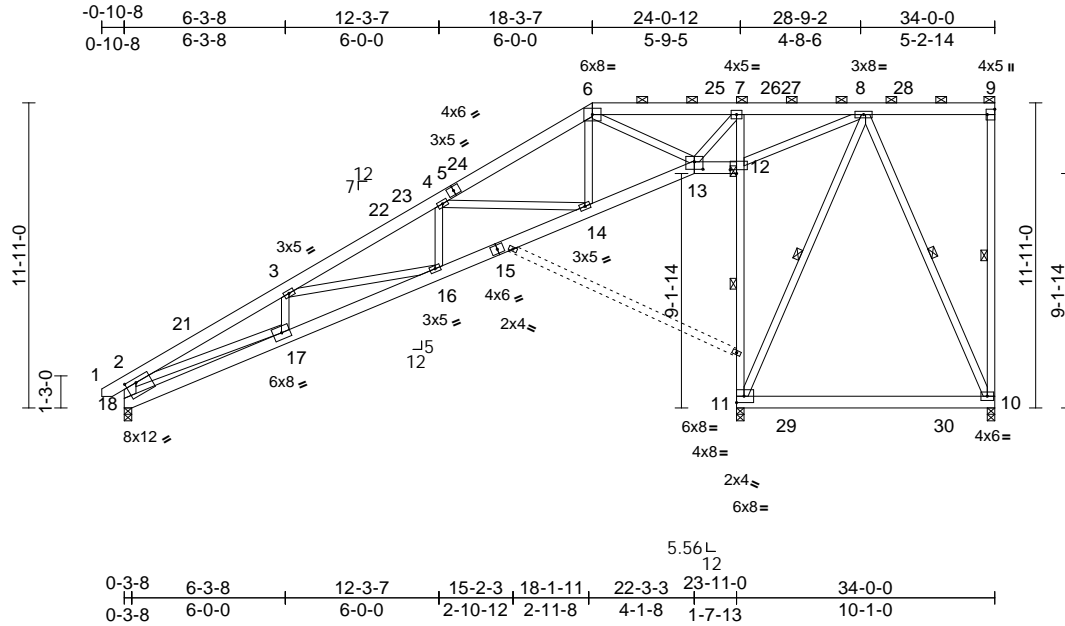
Job 22030102	Truss B01	Truss Type Piggyback Base	Qty 4	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51256990
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:38

Page: 1

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Scale = 1:90

Plate Offsets (X, Y): [9:Edge,0-3-8], [12:0-3-0,0-1-12], [13:0-4-0,0-3-8], [18:0-5-0,0-2-0]

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	0.73	Vert(LL)	-0.23	10-11	>520	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.35	10-11	>337	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.04	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 312 lb	FT = 20%

**LUMBER**

TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x6 SP No.2 \*Except\* 7-11:2x4 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 9-10,10-8,11-8:2x4 SP No.2, 18-2:2x6 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 4-1-2 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 6-9.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:  
 4-3-0 oc bracing: 11-12

WEBS 1 Row at midpt 9-10, 8-10, 8-11  
 JOINTS 1 Brace at Jt(s): 9, 12

**REACTIONS** (lb/size) 10=208/0-3-8, 11=1603/0-3-8, 18=933/0-3-8  
 Max Horiz 18=417 (LC 11)  
 Max Uplift 10=226 (LC 10), 11=346 (LC 11), 18=143 (LC 14)  
 Max Grav 10=463 (LC 41), 11=1781 (LC 37), 18=1067 (LC 40)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/27, 2-3=-3027/567, 3-4=-2615/510, 4-6=-1176/268, 6-7=-142/163, 7-8=-142/1021, 8-9=-156/169, 9-10=-188/86, 2-18=-1238/294  
 BOT CHORD 17-18=-431/843, 16-17=-645/2949, 14-16=-465/2586, 13-14=-244/1061, 12-13=-924/219, 11-12=-1604/342, 7-12=-1202/247, 10-11=-127/96  
 WEBS 4-14=-1358/348, 6-14=-110/880, 6-13=-1185/230, 7-13=-140/1401, 8-10=-128/247, 2-17=-297/1995, 8-11=-250/358, 8-12=-1052/243, 3-17=-178/128, 3-16=-397/165, 4-16=0/353

- NOTES**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-8-1 to 2-8-12, Interior (1) 2-8-12 to 13-5-12, Exterior(2R) 13-5-12 to 23-1-2, Interior (1) 23-1-2 to 30-5-7, Exterior(2E) 30-5-7 to 33-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
  - 5) Provide adequate drainage to prevent water ponding.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
  - 8) Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10, 11, and 18. This connection is for uplift only and does not consider lateral forces.
  - 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.

11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard



April 8, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 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 ANSITPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



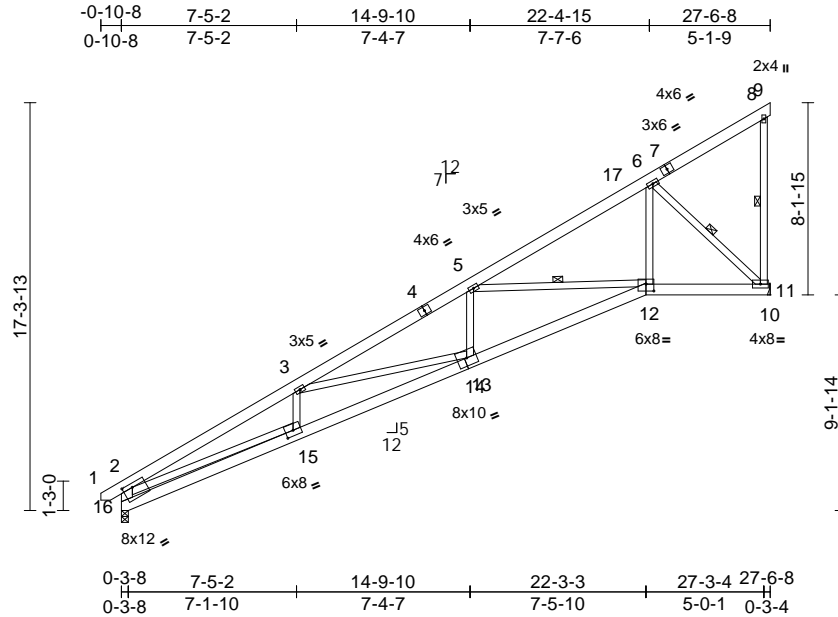
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss B02	Truss Type Monopitch	Qty 3	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51256991
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:97.8

Plate Offsets (X, Y): [12:0-4-0,0-3-8], [15:0-4-0,0-2-12], [16:0-5-0,0-2-0]

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	0.48	Vert(LL)	0.19	13-15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.37	13-15	>885	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.13	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 214 lb	FT = 20%

**LUMBER**

TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x6 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 16-2:2x6 SP No.2

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 3-7-5 oc purlins, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 7-2-7 oc bracing.  
 WEBS 1 Row at midpt 8-11, 6-11, 5-12

**REACTIONS**

(lb/size) 11=1103/ Mechanical,  
 16=1136/0-3-8  
 Max Horiz 16=469 (LC 11)  
 Max Uplift 11=300 (LC 14), 16=62 (LC 14)  
 Max Grav 11=1368 (LC 21), 16=1167 (LC 21)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/27, 2-3=-3418/697, 3-5=-2899/573,  
 5-6=-1464/250, 6-8=-169/99, 8-9=-15/0,  
 8-11=-233/50, 2-16=-1339/342  
 BOT CHORD 15-16=-655/956, 13-15=-1043/3216,  
 12-13=-771/2677, 11-12=-242/1129,  
 10-11=0/0  
 WEBS 6-12=-239/1170, 6-11=-1559/428,  
 2-15=-377/2251, 3-15=-173/145,  
 3-13=-500/253, 5-13=0/421, 5-12=-1359/445

**NOTES**

1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
 Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
 Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-8-1 to 2-3-15, Interior (1) 2-3-15 to 24-6-8, Exterior(2E) 24-6-8 to 27-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; 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 1.00 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.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 16 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 300 lb uplift at joint 11.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 16. This connection is for uplift only and does not consider lateral forces.
- 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 8, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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818 Soundside Road  
 Edenton, NC 27932



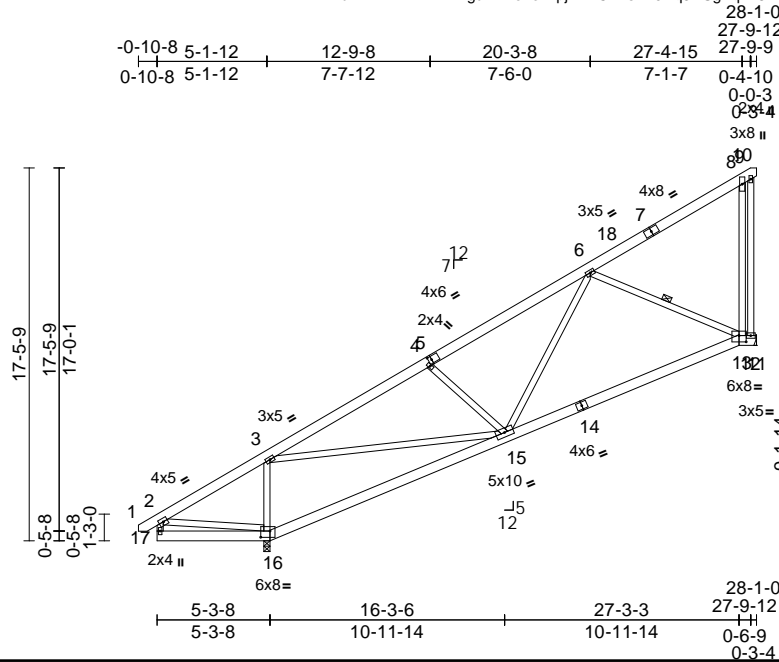
Job 22030102	Truss B03	Truss Type Monopitch	Qty 3	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51256992
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Carter Components (Sanford), Sanford, NC - 27332,

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Scale = 1:107.9

Plate Offsets (X, Y): [5:0-1-13,0-2-0], [13:0-4-0,0-3-8], [16:0-5-4,0-3-8]

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	0.70	Vert(LL)	-0.12	13-15	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.27	13-15	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.03	12	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 230 lb	FT = 20%	

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 15-3:2x4 SP No.2

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-9-13 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
WEBS 1 Row at midpt 6-13

**REACTIONS** (lb/size) 12=855/ Mechanical, 16=1421/0-3-8  
Max Horiz 16=598 (LC 14)  
Max Uplift 12=364 (LC 14)  
Max Grav 12=1119 (LC 21), 16=1462 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/25, 2-3=-233/377, 3-4=-1462/240, 4-6=-1127/208, 6-8=-235/83, 8-9=-79/372, 9-10=-7/0, 2-17=-101/71  
BOT CHORD 16-17=-23/7, 15-16=-566/258, 13-15=-417/888, 12-13=0/0, 11-12=0/0  
WEBS 3-16=-1145/293, 3-15=-101/1441, 4-15=-405/253, 6-15=-104/440, 6-13=-889/402, 2-16=-244/297, 8-13=-42/628, 9-12=-756/151

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; 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 1.00 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 364 lb uplift at joint 12.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard

**NOTES**  
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCCL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-8-1 to 2-3-15, Interior (1) 2-3-15 to 24-11-5, Exterior(2E) 24-11-5 to 27-11-5 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



April 8, 2022

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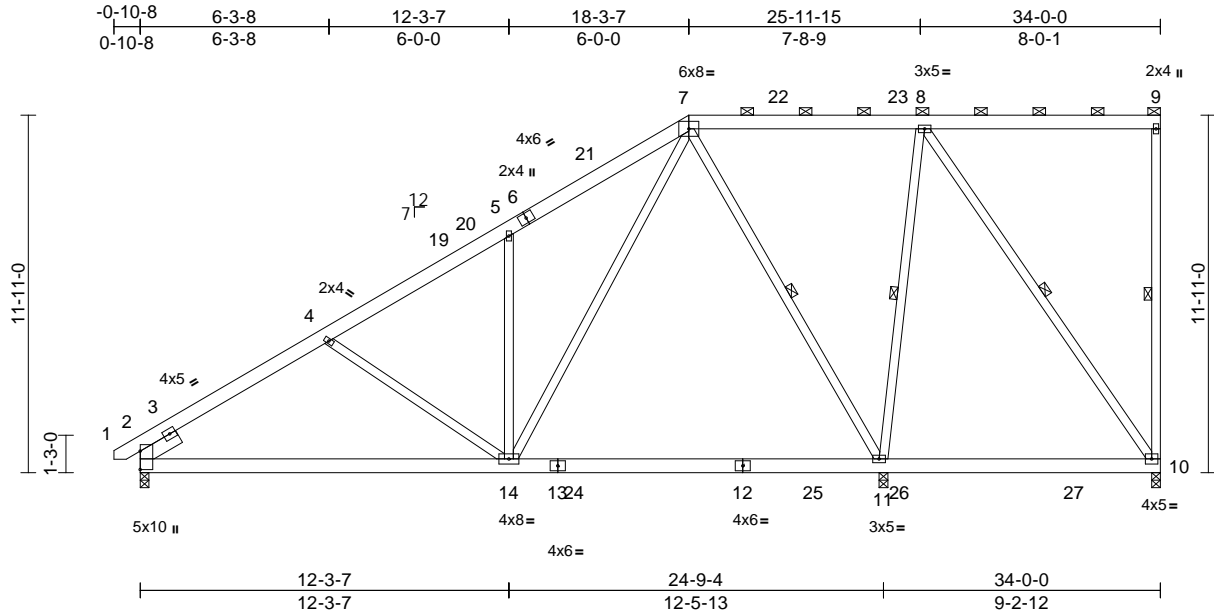


Job 22030102	Truss C01	Truss Type Piggyback Base	Qty 2	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51256993
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:76.8

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	0.63	Vert(LL)	-0.22	11-14	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.32	11-14	>925	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.82	Horz(CT)	0.02	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 284 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2  
WEBS 2x4 SP No.2 \*Except\* 14-5,14-4:2x4 SP No.3  
SLIDER Left 2x6 SP No.2 -- 1-6-0

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-9.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (lb/size)  
2=950/0-3-8, 10=144/0-3-8, 11=1655/0-3-8  
Max Horiz 2=405 (LC 14)  
Max Uplift 2=-57 (LC 14), 10=-147 (LC 10), 11=-160 (LC 14)  
Max Grav 2=1119 (LC 40), 10=402 (LC 35), 11=1949 (LC 3)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/20, 2-4=-1358/91, 4-5=-1094/41, 5-7=-1192/203, 7-8=-16/227, 8-9=-5/0, 9-10=-277/75  
BOT CHORD 2-14=-421/1196, 11-14=-106/305, 10-11=-188/45  
WEBS 7-11=-1073/247, 8-11=-794/172, 8-10=-72/337, 5-14=-568/248, 7-14=-241/1374, 4-14=-327/205

**NOTES**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-8-1 to 2-3-15, Interior (1) 2-3-15 to 15-3-7, Exterior(2R) 15-3-7 to 21-3-7, Interior (1) 21-3-7 to 30-10-4, Exterior(2E) 30-10-4 to 33-10-4 zone; cantilever left exposed; end vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) Provide adequate drainage to prevent water ponding.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 10, 2, and 11. This connection is for uplift only and does not consider lateral forces.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) 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 8, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss C02	Truss Type Piggyback Base	Qty 4	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51256994
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:39  
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Page: 1

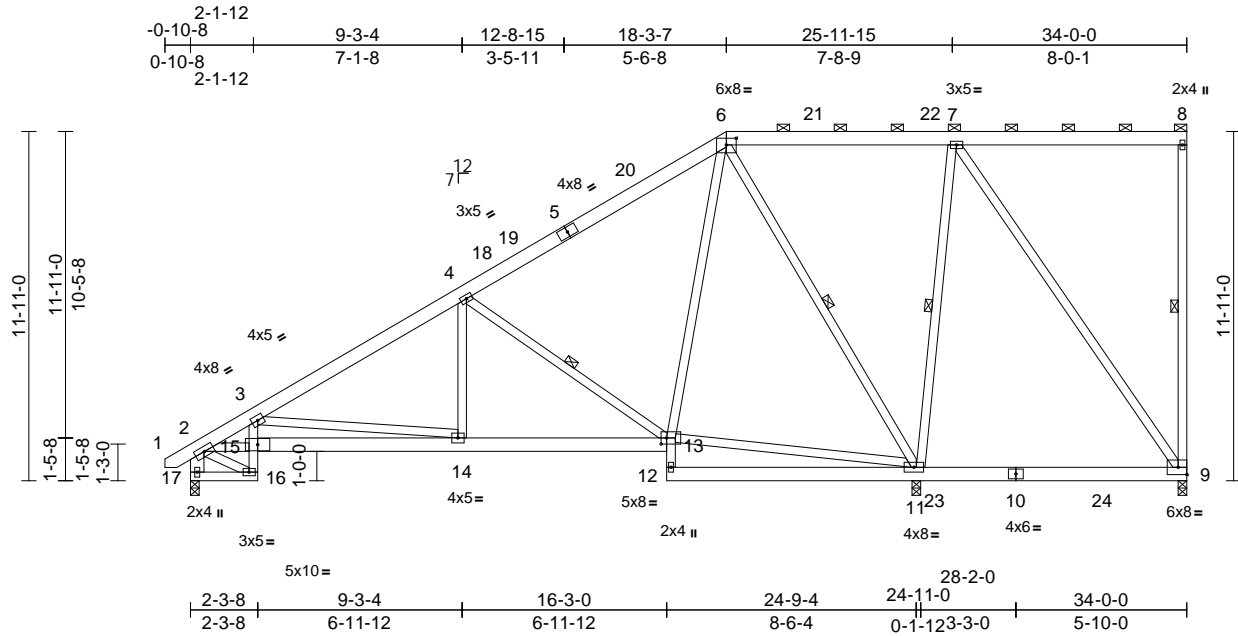


Plate Offsets (X, Y): [6:0-4-0,0-2-12], [13:0-2-4,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.10	9-11	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.14	9-11	>757	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.06	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 305 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x6 SP No.2 \*Except\* 17-16:2x4 SP No.2, 16-3,13-12:2x4 SP No.3  
WEBS 2x4 SP No.3 \*Except\* 8-9,13-6,11-6,11-7,9-7:2x4 SP No.2, 17-2:2x6 SP No.2

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

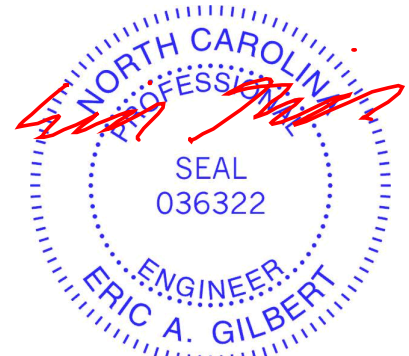
**REACTIONS** (lb/size) 9=33/0-3-8, 11=1799/0-3-8, 17=912/0-3-8  
Max Horiz 17=392 (LC 14)  
Max Uplift 9=-270 (LC 40), 11=-270 (LC 14), 17=-28 (LC 14)  
Max Grav 9=319 (LC 43), 11=2005 (LC 3), 17=1033 (LC 40)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/27, 2-3=-1821/362, 3-4=-1356/75, 4-6=-631/31, 6-7=-76/364, 7-8=-6/0, 8-9=-278/76, 2-17=-1013/57  
BOT CHORD 16-17=-342/207, 15-16=-134/80, 3-15=-107/178, 14-15=-707/1755, 13-14=-333/1221, 12-13=0/129, 11-12=-4/32, 9-11=-307/59  
WEBS 3-14=-605/378, 4-14=0/402, 4-13=-1053/308, 11-13=-70/225, 6-13=-112/857, 6-11=-1181/284, 7-11=-887/191, 7-9=-104/550, 2-16=-101/283, 2-15=-594/1485

**NOTES**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-8-1 to 2-1-12, Interior (1) 2-1-12 to 15-3-7, Exterior(2R) 15-3-7 to 21-3-7, Interior (1) 21-3-7 to 30-10-4, Exterior(2E) 30-10-4 to 33-10-4 zone; cantilever left exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 5) Provide adequate drainage to prevent water ponding.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9, 17, and 11. This connection is for uplift only and does not consider lateral forces.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) 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 8, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



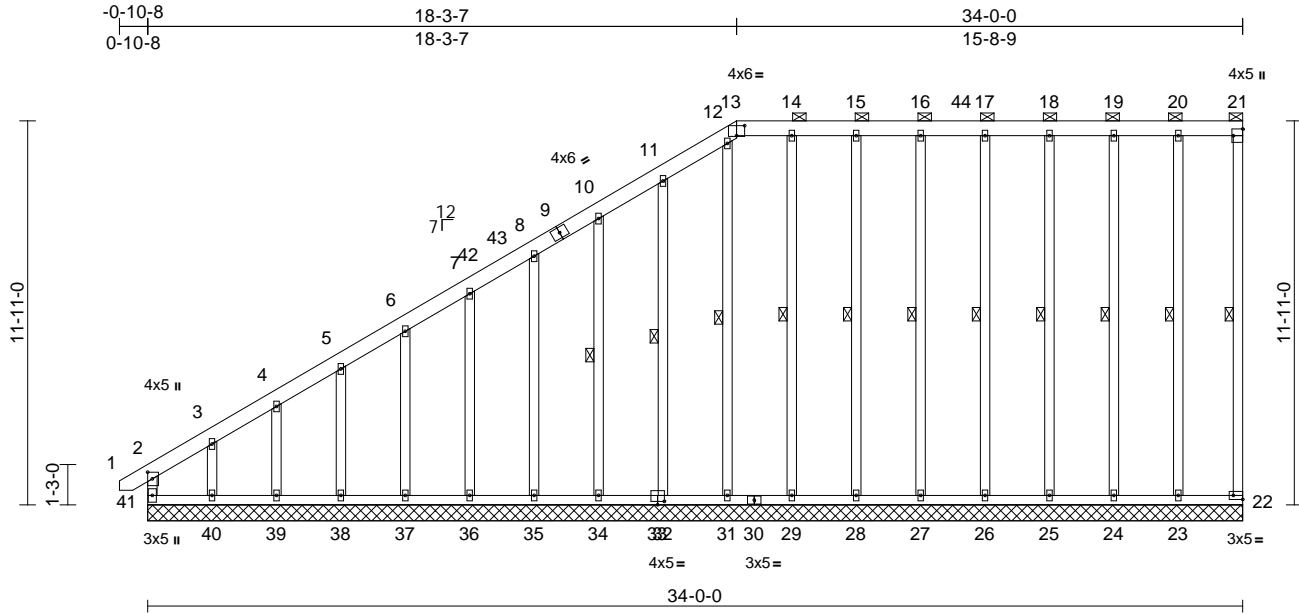
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss C03	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51256995
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:71.5

Plate Offsets (X, Y): [2:0-2-8,0-1-12], [13:0-3-0,0-3-12], [21:Edge,0-3-8], [22:Edge,0-1-8], [33:0-2-8,0-1-4]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	-0.01	22	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 358 lb	FT = 20%

**LUMBER**  
TOP CHORD 2x6 SP No.2  
BOT CHORD 2x4 SP No.2  
WEBS 2x4 SP No.3 \*Except\* 21-22:2x4 SP No.2  
OTHERS 2x4 SP No.2 \*Except\*  
32-11,34-10,35-8,36-7,37-6,38-5,39-4,40-3:2  
x4 SP No.3

Max Grav 22=86 (LC 35), 23=215 (LC 35),  
24=219 (LC 35), 25=215 (LC 35),  
26=214 (LC 35), 27=214 (LC 35),  
28=218 (LC 35), 29=212 (LC 35),  
31=168 (LC 36), 32=217 (LC 36),  
34=218 (LC 36), 35=213 (LC 36),  
36=177 (LC 40), 37=161 (LC 24),  
38=165 (LC 24), 39=156 (LC 36),  
40=268 (LC 40), 41=357 (LC 11)

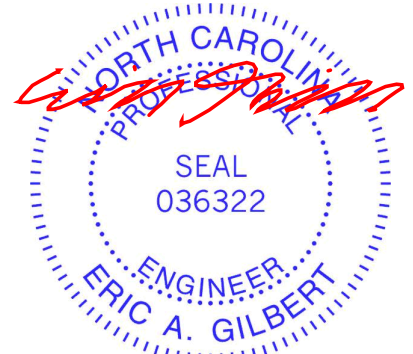
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior  
zone and C-C Corner(3E) -0-8-1 to 2-3-15, Exterior(2N)  
2-3-15 to 15-3-7, Corner(3R) 15-3-7 to 21-3-7, Exterior  
(2N) 21-3-7 to 30-10-4, Corner(3E) 30-10-4 to 33-10-4  
zone; cantilever left and right exposed; end vertical left  
and right exposed;C-C for members and forces &  
MWFRS for reactions shown; Lumber DOL=1.60 plate  
grip DOL=1.60
- 2) 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.
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15  
Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9;  
Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this  
design.

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or  
6-0-0 oc purlins, except end verticals, and  
2-0-0 oc purlins (6-0-0 max.): 13-21.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc  
bracing.  
WEBS 1 Row at midpt 21-22, 20-23, 19-24,  
18-25, 17-26, 16-27,  
15-28, 14-29, 12-31,  
11-32, 10-34

**FORCES**  
(lb) - Maximum Compression/Maximum  
Tension  
TOP CHORD 2-41=-279/131, 1-2=0/24, 2-3=-400/255,  
3-4=-302/193, 4-5=-286/183, 5-6=-258/165,  
6-7=-240/149, 7-8=-226/145, 8-10=-213/142,  
10-11=-201/139, 11-12=-184/172,  
12-13=-152/160, 13-14=-150/170,  
14-15=-150/170, 15-16=-150/170,  
16-17=-150/170, 17-18=-150/170,  
18-19=-150/170, 19-20=-150/170,  
20-21=-150/170, 21-22=-135/136  
BOT CHORD 40-41=-146/165, 39-40=-146/165,  
38-39=-146/165, 37-38=-146/165,  
36-37=-146/165, 35-36=-146/165,  
34-35=-146/165, 32-34=-146/165,  
31-32=-146/165, 29-31=-146/165,  
28-29=-146/165, 27-28=-146/165,  
26-27=-146/165, 25-26=-146/165,  
24-25=-146/165, 23-24=-146/165,  
22-23=-146/165  
WEBS 20-23=-174/108, 19-24=-181/53,  
18-25=-176/51, 17-26=-175/48,  
16-27=-176/48, 15-28=-179/52,  
14-29=-173/61, 12-31=-129/75,  
11-32=-178/70, 10-34=-179/75,  
8-35=-174/72, 7-36=-138/72, 6-37=-123/72,  
5-38=-124/74, 4-39=-117/52, 3-40=-186/198

**REACTIONS** (lb/size) 22=62/34-0-0, 23=157/34-0-0,  
24=158/34-0-0, 25=155/34-0-0,  
26=155/34-0-0, 27=155/34-0-0,  
28=155/34-0-0, 29=155/34-0-0,  
31=154/34-0-0, 32=155/34-0-0,  
34=155/34-0-0, 35=155/34-0-0,  
36=155/34-0-0, 37=155/34-0-0,  
38=155/34-0-0, 39=156/34-0-0,  
40=152/34-0-0, 41=116/34-0-0  
Max Horiz 41=406 (LC 13)  
Max Uplift 22=-19 (LC 11), 23=-52 (LC 10),  
24=-50 (LC 11), 25=-34 (LC 10),  
26=-26 (LC 11), 27=-26 (LC 10),  
28=-29 (LC 10), 29=-37 (LC 11),  
31=-52 (LC 11), 32=-47 (LC 14),  
34=-52 (LC 14), 35=-49 (LC 14),  
36=-49 (LC 14), 37=-47 (LC 14),  
38=-56 (LC 14), 39=-10 (LC 14),  
40=251 (LC 14), 41=-161 (LC 12)

**NOTES**



April 8, 2022

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)
22030102	C03	Piggyback Base Supported Gable	1	1	I51256995

Carter Components (Sanford), Sanford, NC - 27332,

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Page: 2

- 5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- 6) Provide adequate drainage to prevent water ponding.
- 7) All plates are 2x4 MT20 unless otherwise indicated.
- 8) Gable requires continuous bottom chord bearing.
- 9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 10) Gable studs spaced at 2-0-0 oc.
- 11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 12) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 13) N/A
  
- 14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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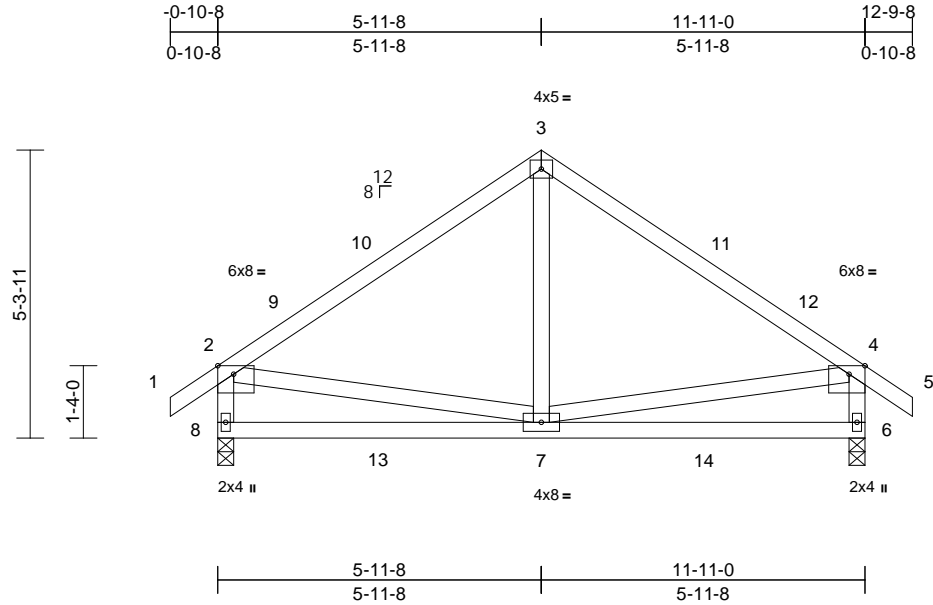
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss D01	Truss Type Common	Qty 4	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51256996
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:42.4

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	0.05	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.05	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 69 lb	FT = 20%

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

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

**REACTIONS** (lb/size) 6=526/0-3-8, 8=526/0-3-8  
Max Horiz 8=145 (LC 13)  
Max Uplift 6=-56 (LC 15), 8=-56 (LC 14)  
Max Grav 6=619 (LC 22), 8=619 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/34, 2-3=-539/408, 3-4=-539/408, 4-5=0/34, 2-8=-566/356, 4-6=-566/356  
BOT CHORD 7-8=-173/252, 6-7=-115/252  
WEBS 3-7=-284/208, 2-7=-88/249, 4-7=-92/249

- 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 1.00 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.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 6. This connection is for uplift only and does not consider lateral forces.
- 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

- 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=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 2-11-8, Exterior(2R) 2-11-8 to 8-11-8, Interior (1) 8-11-8 to 9-9-8, Exterior(2E) 9-9-8 to 12-9-8 zone;  
cantilever left and right exposed; end vertical left and right exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown;  
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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10



April 8, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**  
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**ENGINEERING BY**  
**TRENCO**  
A MiTek Affiliate

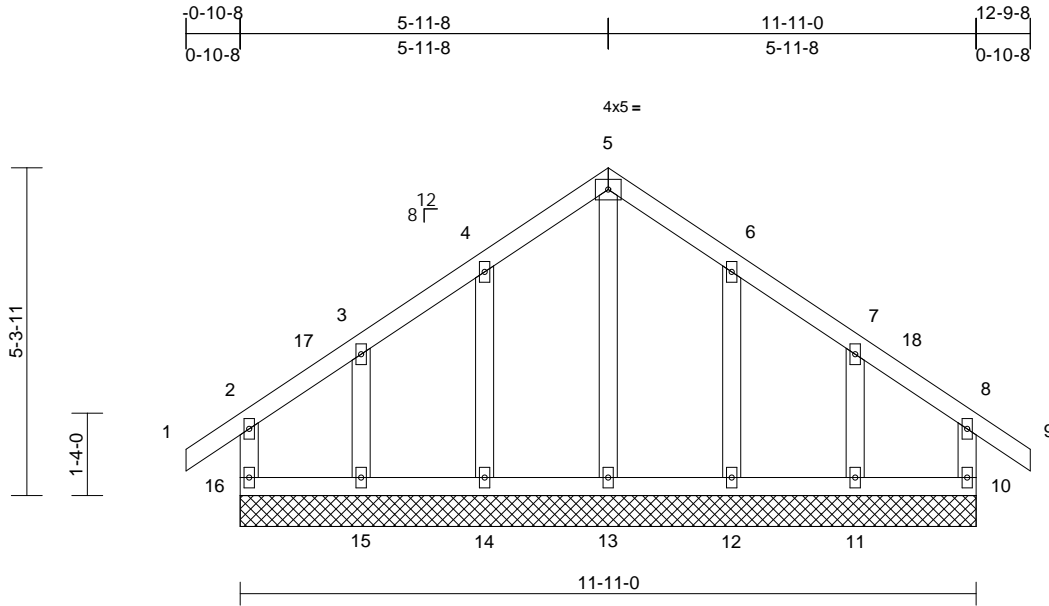
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss D02	Truss Type Common Supported Gable	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51256997
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 69 lb	FT = 20%

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

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

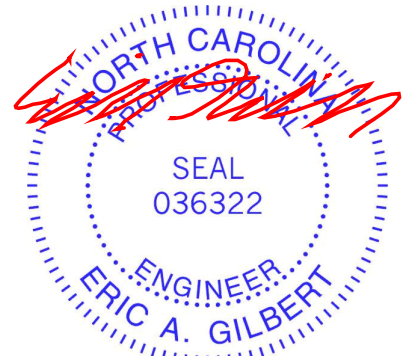
**REACTIONS** (lb/size)  
10=131/11-11-0, 11=141/11-11-0,  
12=165/11-11-0, 13=146/11-11-0,  
14=165/11-11-0, 15=141/11-11-0,  
16=131/11-11-0  
Max Horiz 16=141 (LC 12)  
Max Uplift 10=46 (LC 14), 11=80 (LC 15),  
12=53 (LC 15), 14=52 (LC 14),  
15=82 (LC 14), 16=53 (LC 10)  
Max Grav 10=143 (LC 24), 11=200 (LC 22),  
12=256 (LC 22), 13=161 (LC 27),  
14=256 (LC 21), 15=200 (LC 21),  
16=149 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 2-16=-118/157, 1-2=0/33, 2-3=-77/96,  
3-4=-75/173, 4-5=-113/248, 5-6=-113/248,  
6-7=-75/173, 7-8=-68/96, 8-9=0/33,  
8-10=-117/157  
BOT CHORD 15-16=-71/68, 14-15=-71/68, 13-14=-71/68,  
12-13=-71/68, 11-12=-71/68, 10-11=-71/68  
WEBS 5-13=-197/32, 4-14=-217/112,  
3-15=-162/117, 6-12=-217/112,  
7-11=-162/117

**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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 1-11-8, Exterior(2N) 1-11-8 to 2-11-8, Corner(3R) 2-11-8 to 8-11-8, Exterior (2N) 8-11-8 to 9-9-8, Corner(3E) 9-9-8 to 12-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 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.
- N/A

14) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.  
**LOAD CASE(S)** Standard



April 8, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

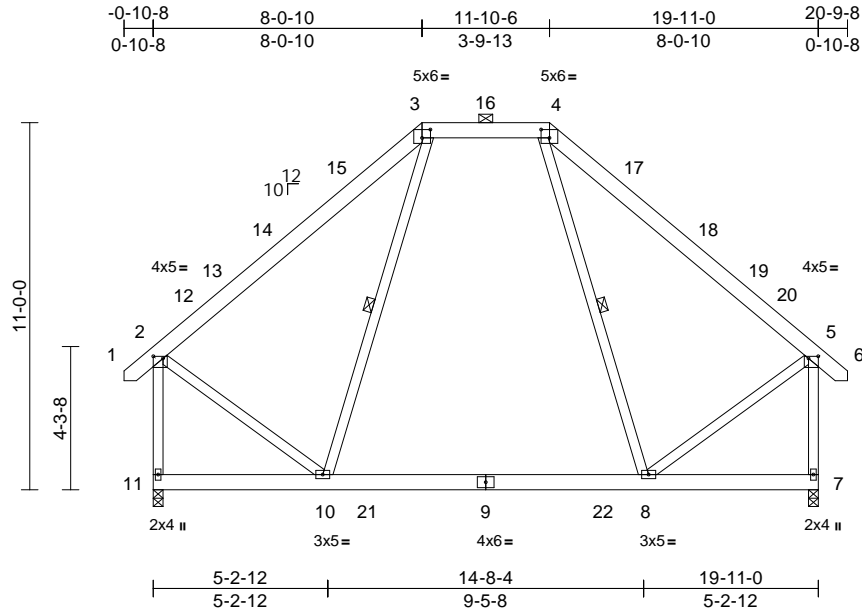
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss G01	Truss Type Piggyback Base	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51256998
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:41  
ID:wN9MV2a7ng00fSyKmTVeHlzhpg9-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:69

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.10	8-10	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.15	8-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 170 lb	FT = 20%

**LUMBER**

TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x6 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 10-3,8-4:2x4 SP No.2

**BRACING**

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

**REACTIONS**

(lb/size) 7=835/0-3-8, 11=835/0-3-8  
 Max Horiz 11=-306 (LC 12)  
 Max Uplift 7=-73 (LC 15), 11=-73 (LC 14)  
 Max Grav 7=1070 (LC 45), 11=1070 (LC 45)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/32, 2-3=-785/186, 3-4=-461/236, 4-5=-785/186, 5-6=0/32, 2-11=-1039/126, 5-7=-1039/126  
 BOT CHORD 10-11=-298/292, 8-10=-94/530, 7-8=-65/59  
 WEBS 2-10=-82/633, 5-8=-83/634, 3-10=-130/178, 4-8=-130/178

**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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-8-5 to 2-3-11, Interior (1) 2-3-11 to 3-9-11, Exterior(2R) 3-9-11 to 16-1-5, Interior (1) 16-1-5 to 17-7-5, Exterior(2E) 17-7-5 to 20-7-5 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; 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 1.00 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, with BCDL = 10.0psf.
- One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 11 and 7. This connection is for uplift only and does not consider lateral forces.
- 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 8, 2022

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818 Soundside Road  
 Edenton, NC 27932

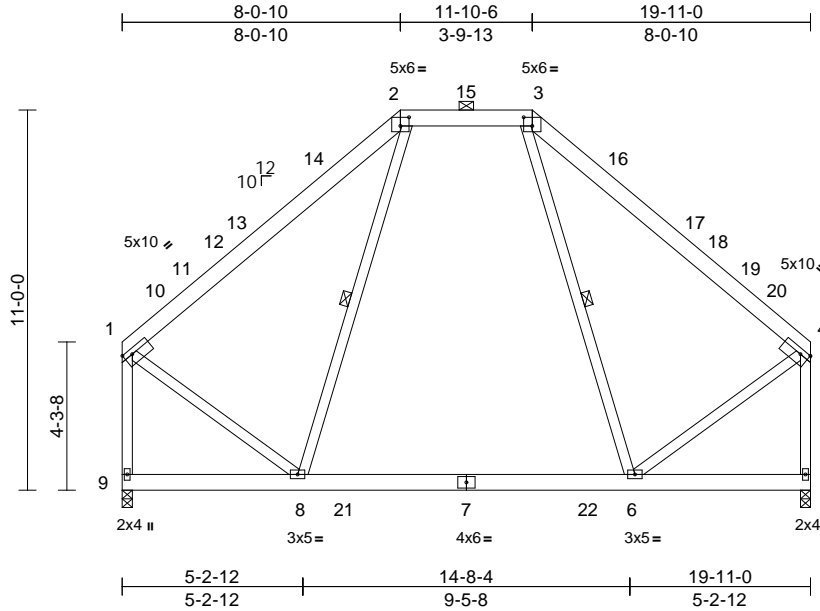


Job 22030102	Truss G02	Truss Type Piggyback Base	Qty 8	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51256999
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:41  
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Page: 1



Scale = 1:66.7

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.10	6-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.15	6-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 166 lb	FT = 20%

**LUMBER**

TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x6 SP No.2  
 WEBS 2x4 SP No.3 \*Except\* 8-2,6-3:2x4 SP No.2

**BRACING**

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

WEBS 1 Row at midpt 2-8, 3-6

**REACTIONS** (lb/size) 5=785/0-3-8, 9=785/0-3-8  
 Max Horiz 9=277 (LC 11)  
 Max Uplift 5=-57 (LC 15), 9=-56 (LC 14)  
 Max Grav 5=1028 (LC 44), 9=1028 (LC 44)

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

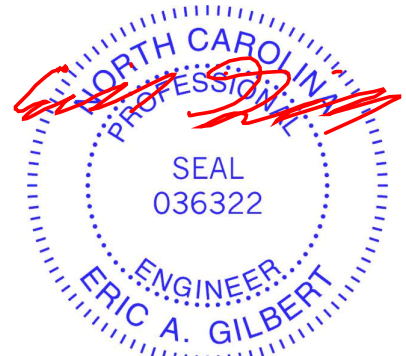
TOP CHORD 1-2=-789/165, 2-3=-464/228, 3-4=-786/165, 1-9=-1005/98, 4-5=-1004/98  
 BOT CHORD 8-9=-274/271, 6-8=-97/524, 5-6=-63/51  
 WEBS 1-8=-76/628, 4-6=-81/631, 2-8=-135/177, 3-6=-135/177

**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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) interior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 3-9-11, Exterior(2R) 3-9-11 to 16-1-5, Interior (1) 16-1-5 to 16-9-4, Exterior(2E) 16-9-4 to 19-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Provide adequate drainage to prevent water ponding.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9 and 5. This connection is for uplift only and does not consider lateral forces.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) 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 8, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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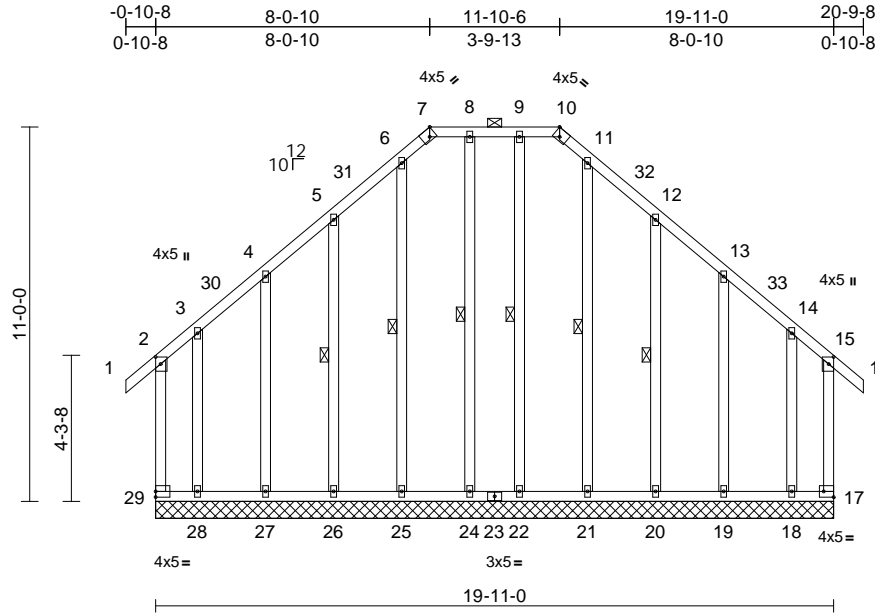
818 Soundside Road  
 Edenton, NC 27932

Job 22030102	Truss G03	Truss Type Piggyback Base Supported Gable	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51257000
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:41  
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Page: 1



Scale = 1:67.7

Plate Offsets (X, Y): [2:0-2-8,0-1-12], [7:0-2-4,Edge], [10:Edge,0-2-11], [15:0-2-8,0-1-12], [17:Edge,0-2-0]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.17	Horz(CT)	-0.01	17	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MR								
BCDL	10.0											
											Weight: 199 lb	FT = 20%

**LUMBER**

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3 *Except* 24-8,22-9:2x4 SP No.2

**BRACING**

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (10-0-0 max.): 7-10.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 8-24, 9-22, 6-25, 5-26, 11-21, 12-20

**REACTIONS** (lb/size)

17=109/19-11-0, 18=106/19-11-0, 19=161/19-11-0, 20=153/19-11-0, 21=160/19-11-0, 22=131/19-11-0, 24=131/19-11-0, 25=160/19-11-0, 26=153/19-11-0, 27=161/19-11-0, 28=106/19-11-0, 29=109/19-11-0	
Max Horiz	29=306 (LC 12)
Max Uplift	17=542 (LC 11), 18=539 (LC 10), 19=61 (LC 15), 20=101 (LC 15), 26=101 (LC 14), 27=61 (LC 14), 28=544 (LC 11), 29=547 (LC 10)
Max Grav	17=591 (LC 12), 18=647 (LC 13), 19=235 (LC 39), 20=236 (LC 49), 21=220 (LC 22), 22=189 (LC 22), 24=189 (LC 21), 25=220 (LC 21), 26=236 (LC 47), 27=235 (LC 39), 28=652 (LC 12), 29=596 (LC 13)

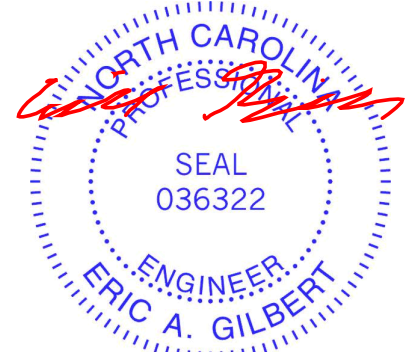
**FORCES** (lb) - Maximum Compression/Maximum Tension

**TOP CHORD**

2-29=-318/290, 1-2=0/38, 2-3=-269/264, 3-4=-111/250, 4-5=-154/333, 5-6=-207/438, 6-7=-185/371, 7-8=-172/373, 8-9=-172/373, 9-10=-172/373, 10-11=-185/371, 11-12=-207/438, 12-13=-154/333, 13-14=-111/250, 14-15=-266/262, 15-16=0/38, 15-17=-315/287
28-29=-169/151, 27-28=-169/151, 26-27=-169/151, 25-26=-169/151, 24-25=-169/151, 22-24=-169/151, 21-22=-169/151, 20-21=-169/151, 19-20=-169/151, 18-19=-169/151, 17-18=-169/151
8-24=-156/20, 9-22=-156/20, 6-25=-180/11, 5-26=-190/143, 4-27=-195/105, 3-28=-299/267, 11-21=-180/10, 12-20=-190/143, 13-19=-195/105, 14-18=-297/264

- 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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 5-0-10, Corner(3R) 5-0-10 to 14-8-4, Exterior (2N) 14-8-4 to 17-9-8, Corner(3E) 17-9-8 to 20-9-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 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.



April 8, 2022

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DRB - 100 FARM AT NEILLS CREEK	I51257000
22030102	G03	Piggyback Base Supported Gable	1	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:41  
ID:mTC1KUi0mrxofallau1\_zozhpVg-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?f

Page: 2

14) N/A

15) 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.

16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

**LOAD CASE(S)** Standard

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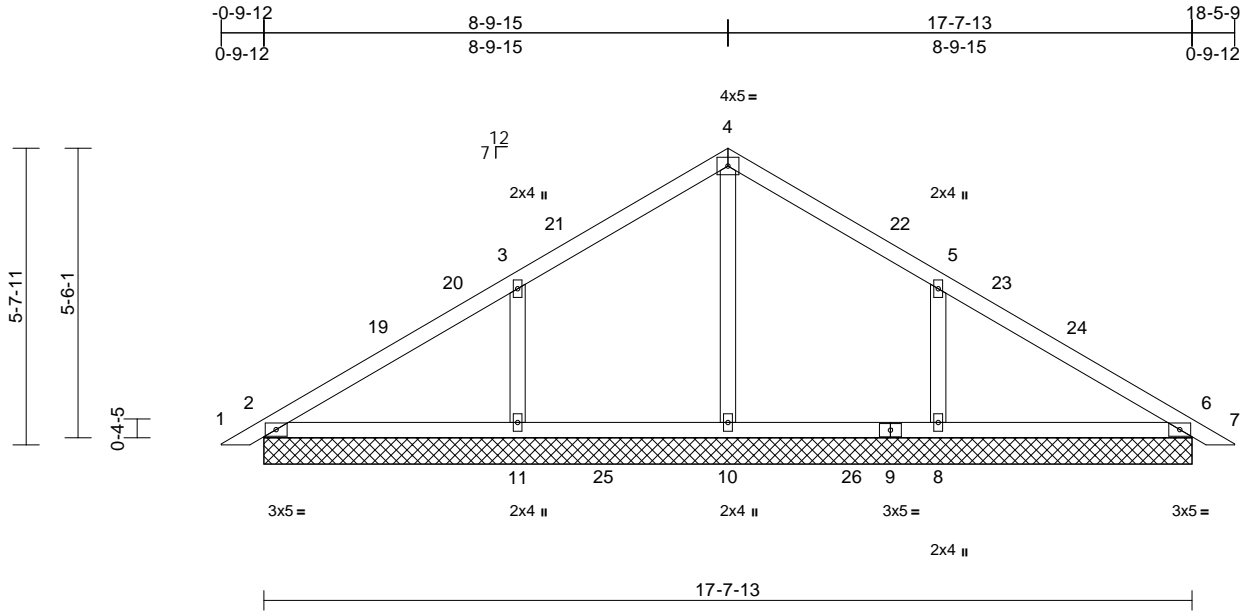
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss PB1	Truss Type Piggyback	Qty 7	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51257001
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 75 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** (lb/size)  
2=218/17-7-13, 6=218/17-7-13, 8=426/17-7-13, 10=189/17-7-13, 11=426/17-7-13, 12=218/17-7-13, 15=218/17-7-13  
Max Horiz 2=-128 (LC 12), 12=-128 (LC 12)  
Max Uplift 2=-17 (LC 15), 6=-18 (LC 15), 8=-139 (LC 15), 11=-140 (LC 14), 12=-17 (LC 15), 15=-18 (LC 15)  
Max Grav 2=229 (LC 25), 6=230 (LC 25), 8=551 (LC 6), 10=297 (LC 6), 11=551 (LC 5), 12=229 (LC 25), 15=230 (LC 25)

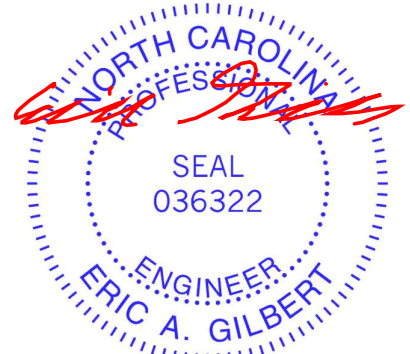
**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/16, 2-3=-142/82, 3-4=-172/123, 4-5=-172/108, 5-6=-105/44, 6-7=0/16  
BOT CHORD 2-11=-26/88, 10-11=-23/88, 8-10=-23/88, 6-8=-23/88  
WEBS 4-10=-167/0, 3-11=-428/178, 5-8=-428/178

**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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior (1) 3-3-11 to 6-8-1, Exterior(2R) 6-8-1 to 12-8-1, Interior (1) 12-8-1 to 16-0-7, Exterior(2E) 16-0-7 to 19-0-7 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- N/A

13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.  
**LOAD CASE(S)** Standard

12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



April 8, 2022

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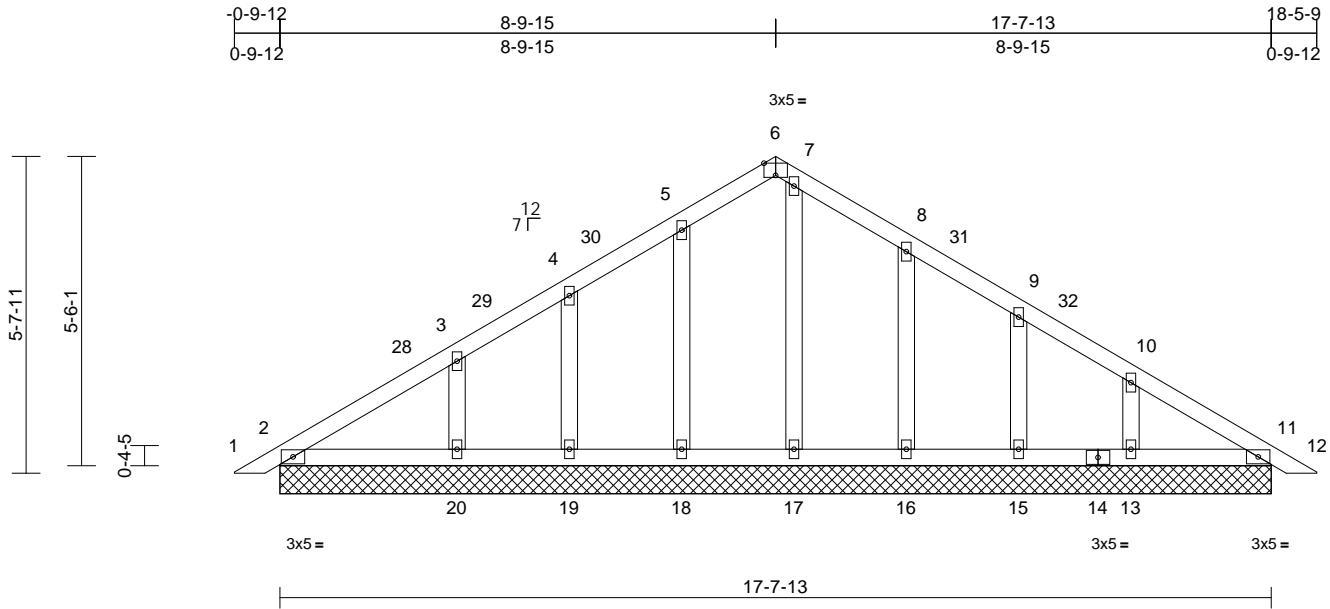
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss PB2	Truss Type Piggyback	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51257002
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:41  
Plate Offsets (X, Y): [6:0-2-8,Edge]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.00	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 90 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** (lb/size)  
2=145/17-7-13, 11=125/17-7-13, 13=199/17-7-13, 15=141/17-7-13, 16=162/17-7-13, 17=131/17-7-13, 18=161/17-7-13, 19=123/17-7-13, 20=244/17-7-13, 21=145/17-7-13, 24=125/17-7-13  
Max Horiz 2=-124 (LC 12), 21=-124 (LC 12)  
Max Uplift 2=-1 (LC 15), 13=-65 (LC 15), 15=-42 (LC 15), 16=-63 (LC 15), 18=-39 (LC 14), 19=-42 (LC 14), 20=-78 (LC 14), 21=-1 (LC 15)  
Max Grav 2=149 (LC 21), 11=125 (LC 1), 13=209 (LC 29), 15=197 (LC 22), 16=246 (LC 22), 17=165 (LC 22), 18=238 (LC 21), 19=197 (LC 21), 20=256 (LC 24), 21=149 (LC 21), 24=125 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/16, 2-3=-95/85, 3-4=-87/56, 4-5=-75/78, 5-6=-77/95, 6-7=-59/72, 7-8=-70/88, 8-9=-60/44, 9-10=-61/25, 10-11=-77/49, 11-12=0/16  
BOT CHORD 2-20=-42/100, 19-20=-42/100, 18-19=-42/100, 17-18=-42/100, 16-17=-42/100, 15-16=-42/100, 13-15=-42/100, 11-13=-42/100

**WEBS** 3-20=-177/94, 4-19=-174/68, 5-18=-195/61, 7-17=-128/0, 8-16=-205/85, 9-15=-166/67, 10-13=-145/80

**NOTES**

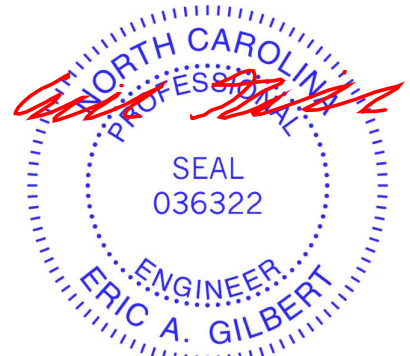
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior (1) 3-3-11 to 6-8-1, Exterior(2R) 6-8-1 to 12-8-1, Interior (1) 12-8-1 to 16-0-0, Exterior(2E) 16-0-0 to 19-0-7 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; 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 1.00 times flat roof load of 20.0 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.

11) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

12) N/A

- 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



April 8, 2022

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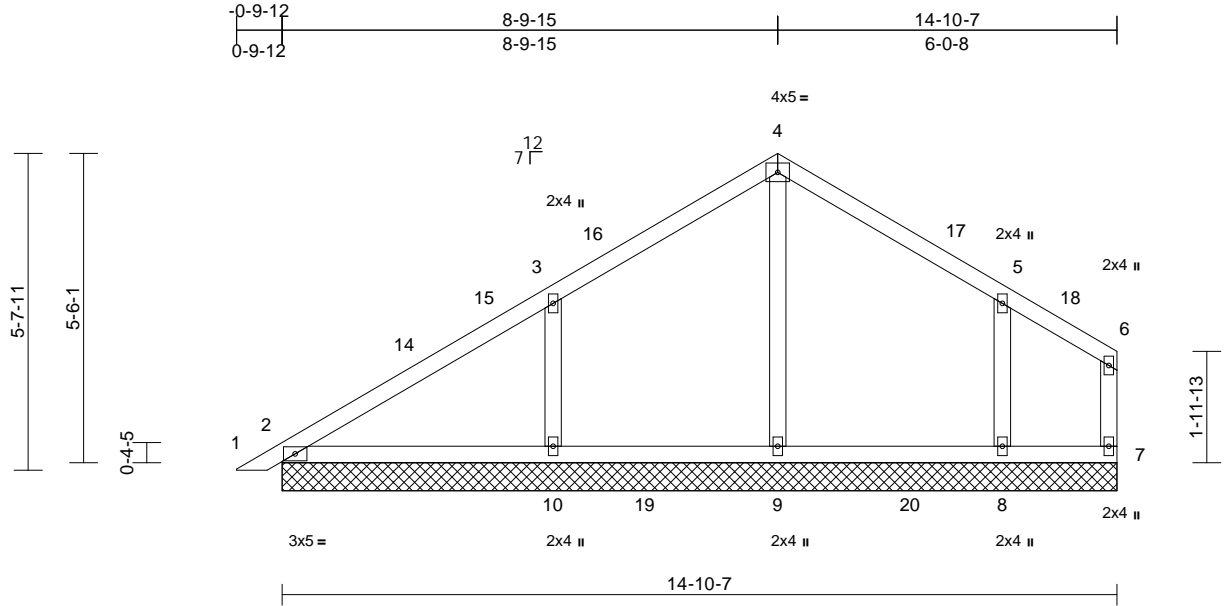
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss PB3	Truss Type Piggyback	Qty 10	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51257003
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:41

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	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	2	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 67 lb	FT = 20%

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

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

**REACTIONS** (lb/size)  
2=191/14-10-7, 7=28/14-10-7,  
8=295/14-10-7, 9=276/14-10-7,  
10=420/14-10-7, 11=191/14-10-7  
Max Horiz 2=148 (LC 13), 11=148 (LC 13)  
Max Uplift 2=-12 (LC 15), 7=-9 (LC 14),  
8=-106 (LC 15), 10=-140 (LC 14),  
11=-12 (LC 15)  
Max Grav 2=219 (LC 25), 7=33 (LC 25),  
8=440 (LC 22), 9=391 (LC 24),  
10=546 (LC 21), 11=219 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/16, 2-3=-131/145, 3-4=-124/134,  
4-5=-109/132, 5-6=-36/78, 6-7=-29/22  
BOT CHORD 2-10=-30/64, 9-10=-28/33, 8-9=-28/33,  
7-8=-28/33  
WEBS 4-9=-237/20, 3-10=-427/177, 5-8=-370/145

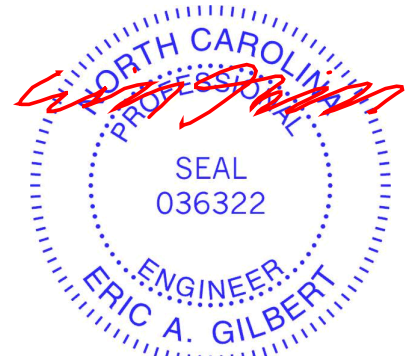
**NOTES**  
1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior (1) 3-3-11 to 6-8-1, Exterior(2R) 6-8-1 to 12-6-13, Exterior (2E) 12-6-13 to 15-6-13 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- N/A

13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard

12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



April 8, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

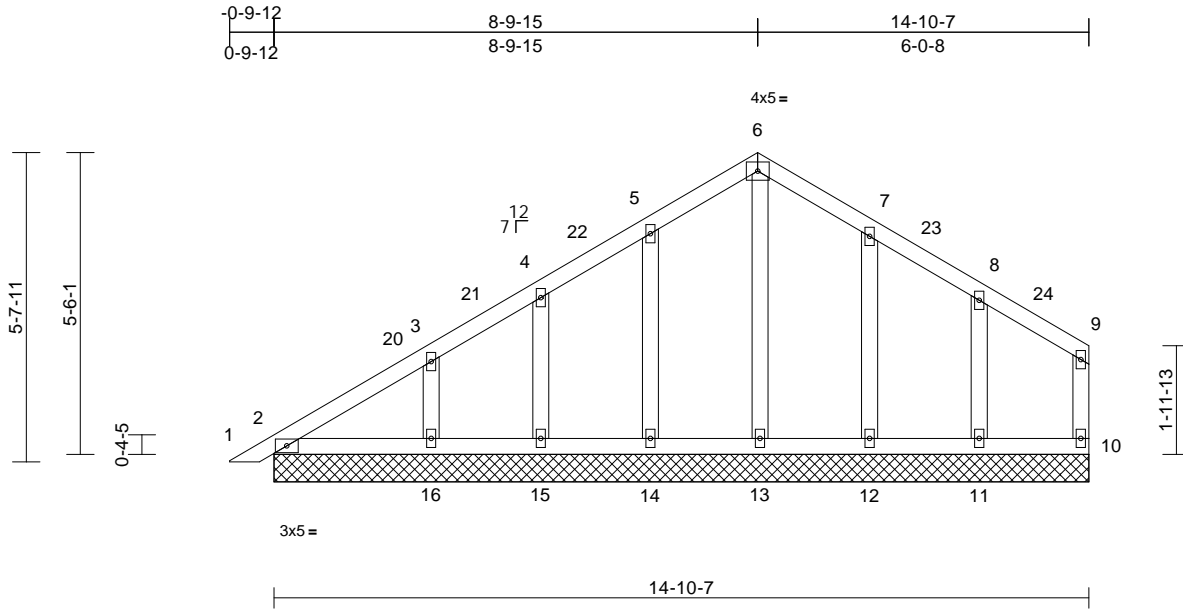
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss PB4	Truss Type Piggyback	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51257004
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:42

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	10	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 80 lb	FT = 20%

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

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

**REACTIONS** (lb/size)  
2=130/14-10-7, 10=66/14-10-7,  
11=157/14-10-7, 12=163/14-10-7,  
13=136/14-10-7, 14=166/14-10-7,  
15=130/14-10-7, 16=224/14-10-7,  
17=130/14-10-7  
Max Horiz 2=143 (LC 13), 17=143 (LC 13)  
Max Uplift 2=-24 (LC 10), 10=-10 (LC 14),  
11=-57 (LC 15), 12=-50 (LC 15),  
14=-52 (LC 14), 15=-41 (LC 14),  
16=-72 (LC 14), 17=-24 (LC 10)  
Max Grav 2=144 (LC 25), 10=72 (LC 25),  
11=221 (LC 22), 12=248 (LC 22),  
13=154 (LC 24), 14=248 (LC 21),  
15=197 (LC 21), 16=236 (LC 24),  
17=144 (LC 25)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/16, 2-3=-130/122, 3-4=-119/106,  
4-5=-105/106, 5-6=-111/143, 6-7=-111/144,  
7-8=-81/97, 8-9=-50/52, 9-10=-59/38  
BOT CHORD 2-16=-26/35, 15-16=-25/32, 14-15=-25/32,  
13-14=-25/32, 12-13=-25/31, 11-12=-25/31,  
10-11=-25/31  
WEBS 8-11=-182/79, 7-12=-209/73, 6-13=-116/33,  
5-14=-206/74, 4-15=-170/67, 3-16=-162/88

**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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-3-11 to 3-3-11, Interior (1) 3-3-11 to 6-8-1, Exterior(2R) 6-8-1 to 12-6-13, Exterior (2E) 12-6-13 to 15-6-13 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; 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 1.00 times flat roof load of 20.0 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" 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.
- N/A

- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
- LOAD CASE(S)** Standard



April 8, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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**TRENCO**  
A MiTek Affiliate

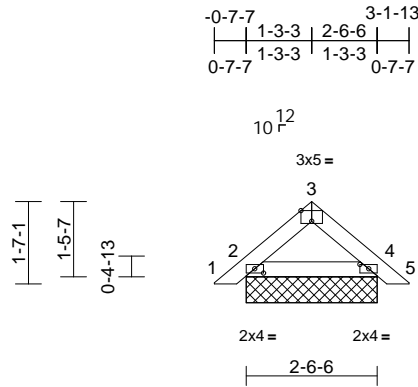
818 Soundside Road  
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	DRB - 100 FARM AT NEILLS CREEK	I51257005
22030102	PB5	Piggyback	10	1	Job Reference (optional)	

Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:43  
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Page: 1



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

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	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horz(CT)	0.00	9	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP							
BCDL	10.0									Weight: 11 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 3-9-13 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (lb/size) 2=138/2-6-6, 4=126/2-6-6, 6=138/2-6-6, 9=126/2-6-6  
Max Horiz 2=-33 (LC 12), 6=-33 (LC 12)  
Max Uplift 2=-8 (LC 14), 4=-15 (LC 15), 6=-8 (LC 14), 9=-15 (LC 15)  
Max Grav 2=167 (LC 21), 4=155 (LC 22), 6=167 (LC 21), 9=155 (LC 22)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/22, 2-3=-73/42, 3-4=-72/45, 4-5=0/22  
BOT CHORD 2-4=-53/53

**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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; 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 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- N/A
- 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



April 8, 2022

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

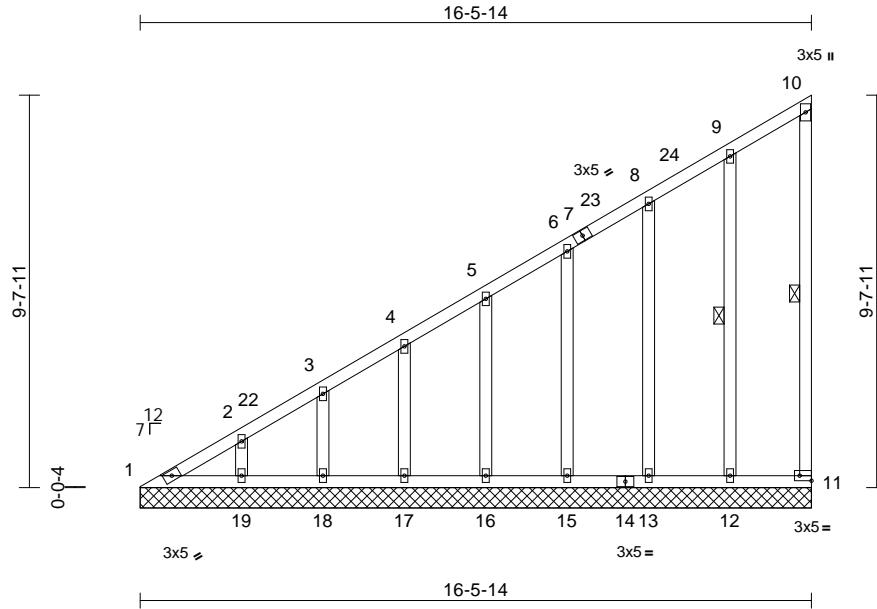


Job 22030102	Truss V1	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51257006
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:56.6

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

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.27	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horiz(TL)	0.00	11	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 112 lb	FT = 20%

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

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

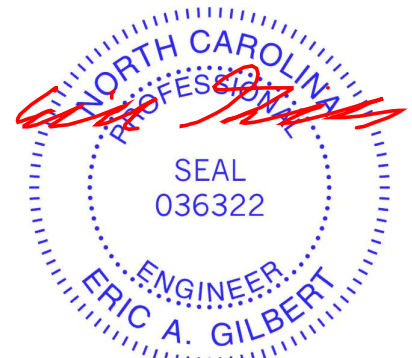
WEBS	
1 Row at midpt	10-11, 9-12

REACTIONS	(lb/size)
Max Horiz	1=323 (LC 11)
Max Uplift	1=-35 (LC 10), 11=-53 (LC 13), 12=-56 (LC 14), 13=-44 (LC 14), 15=-51 (LC 14), 16=-48 (LC 14), 17=-48 (LC 14), 18=-55 (LC 14), 19=30 (LC 14)
Max Grav	1=145 (LC 24), 11=87 (LC 20), 12=241 (LC 20), 13=223 (LC 20), 15=164 (LC 20), 16=161 (LC 23), 17=164 (LC 23), 18=150 (LC 23), 19=202 (LC 20)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-278/186, 2-3=-258/165, 3-4=-231/149, 4-5=-204/131, 5-6=-188/118, 6-8=-173/113, 8-9=-167/115, 9-10=-115/120, 10-11=-72/40
BOT CHORD	1-19=-133/163, 18-19=-133/163, 17-18=-133/163, 16-17=-133/163, 15-16=-133/163, 13-15=-133/163, 12-13=-133/163, 11-12=-133/163

WEBS	
9-12	=200/78, 8-13=-185/110, 6-15=-125/83, 5-16=-122/88, 4-17=-124/86, 3-18=-119/90, 2-19=-135/86

- NOTES**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCCL=6.0psf; BCCL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-7 to 3-0-7, Exterior(2N) 3-0-7 to 13-4-9, Corner(3E) 13-4-9 to 16-4-9 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) 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.
  - 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) All plates are 2x4 MT20 unless otherwise indicated.
  - 6) Gable requires continuous bottom chord bearing.
  - 7) Gable studs spaced at 2-0-0 oc.
  - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 35 lb uplift at joint 1.



April 8, 2022

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Edenton, NC 27932

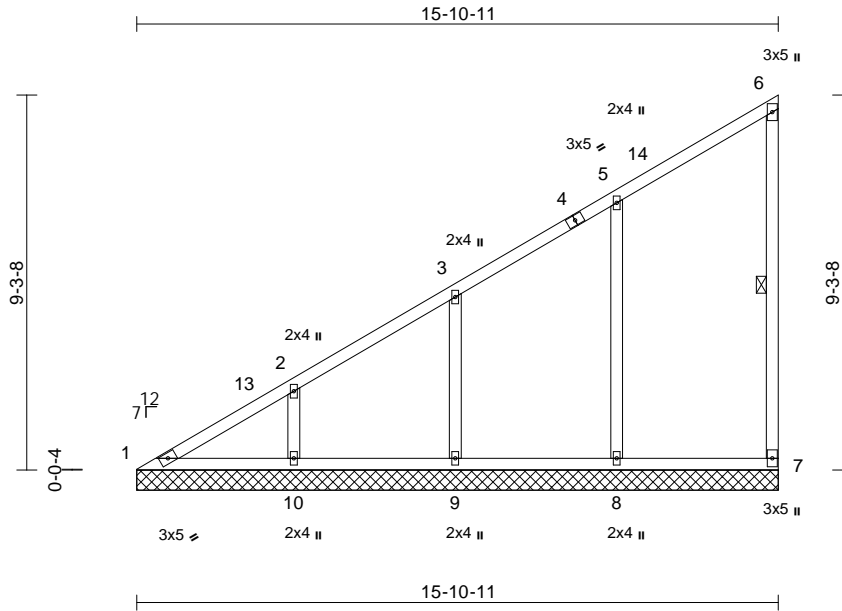
Job 22030102	Truss V2	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51257007
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Carter Components (Sanford), Sanford, NC - 27332,

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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.33	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 81 lb	FT = 20%

**LUMBER**

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

**BRACING**

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 6-7

**REACTIONS**

(lb/size)	1=123/15-10-11, 7=126/15-10-11, 8=348/15-10-11, 9=305/15-10-11, 10=358/15-10-11
Max Horiz	1=321 (LC 11)
Max Uplift	1=-20 (LC 10), 7=-46 (LC 11), 8=-109 (LC 14), 9=-101 (LC 14), 10=-93 (LC 14)
Max Grav	1=190 (LC 24), 7=205 (LC 5), 8=535 (LC 5), 9=405 (LC 23), 10=427 (LC 23)

**FORCES**

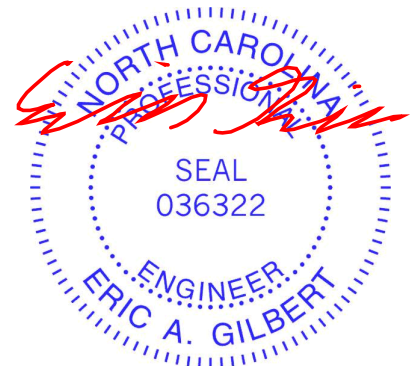
(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-310/189, 2-3=-227/150, 3-5=-195/124, 5-6=-156/126, 6-7=-159/48
BOT CHORD	1-10=-131/207, 9-10=-131/146, 8-9=-131/146, 7-8=-131/146
WEBS	5-8=-388/136, 3-9=-244/155, 2-10=-264/133

**NOTES**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 12-9-6, Exterior(2E) 12-9-6 to 15-9-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 2) 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.
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 1.



April 8, 2022

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**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



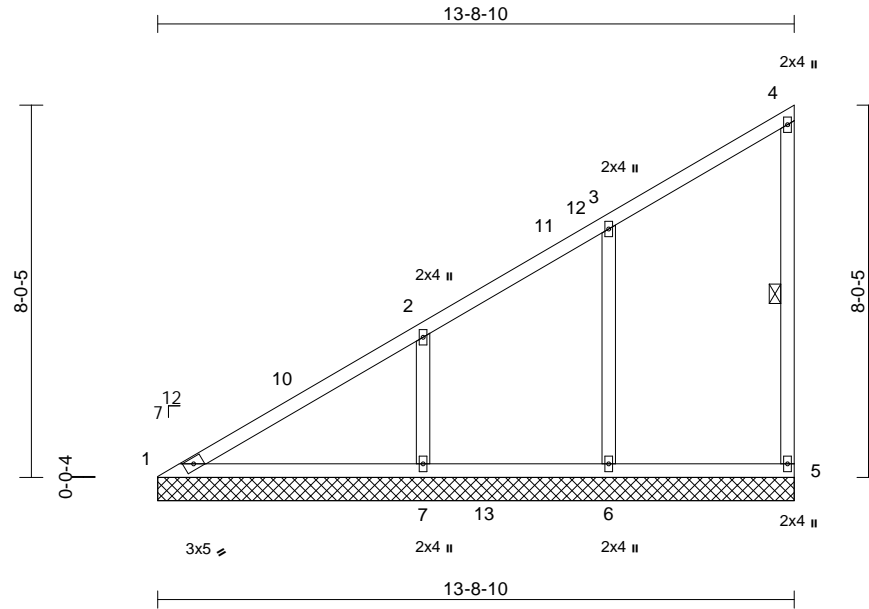
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss V3	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	151257008
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:49.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.34	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.01	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
										Weight: 66 lb	FT = 20%	

**LUMBER**

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

**BRACING**

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 4-5

**REACTIONS** (lb/size)

1=189/13-8-10, 5=136/13-8-10, 6=293/13-8-10, 7=469/13-8-10
Max Horiz 1=276 (LC 11)
Max Uplift 5=-40 (LC 11), 6=-41 (LC 16), 7=-110 (LC 14)
Max Grav 1=238 (LC 24), 5=216 (LC 5), 6=475 (LC 5), 7=578 (LC 23)

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

TOP CHORD	1-2=-394/173, 2-3=-179/105, 3-4=-143/104, 4-5=-164/47
BOT CHORD	1-7=-114/320, 6-7=-114/127, 5-6=-114/127
WEBS	3-6=-362/106, 2-7=-338/148

- NOTES**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 9-4-7, Exterior(2R) 9-4-7 to 13-7-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) 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.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.



April 8, 2022

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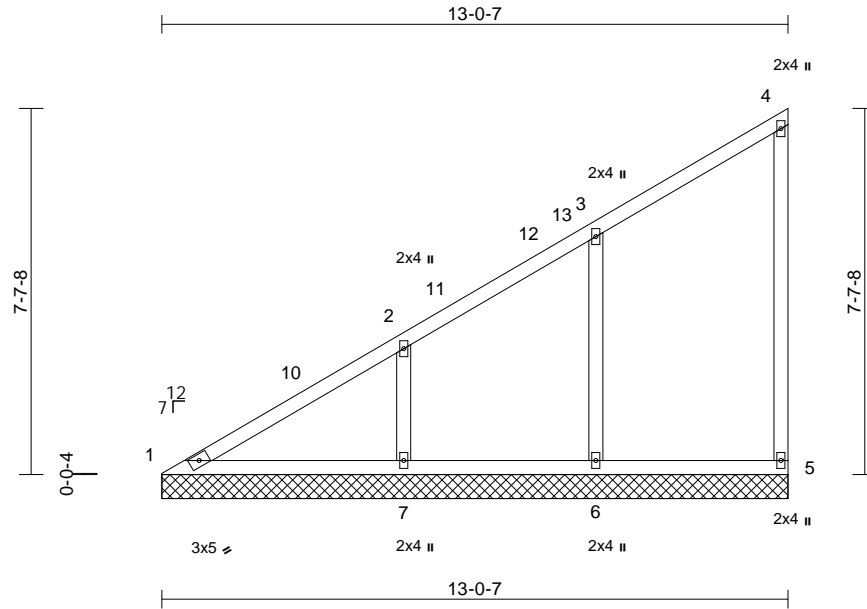
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss V4	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	151257009
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:48

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	0.57	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.26	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 62 lb	FT = 20%

**LUMBER**

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

**BRACING**

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

**REACTIONS**

(lb/size)	1=166/13-0-7, 5=132/13-0-7, 6=312/13-0-7, 7=421/13-0-7
Max Horiz	1=262 (LC 11)
Max Uplift	5=-38 (LC 11), 6=-43 (LC 16), 7=-107 (LC 14)
Max Grav	1=214 (LC 24), 5=216 (LC 5), 6=464 (LC 5), 7=506 (LC 23)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-351/160, 2-3=-172/107, 3-4=-141/98, 4-5=-162/46
BOT CHORD	1-7=-109/278, 6-7=-109/121, 5-6=-109/121
WEBS	3-6=-373/116, 2-7=-305/145

**NOTES**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 8-8-3, Exterior(2R) 8-8-3 to 12-11-2 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=1.60
- 2) 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.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.



April 8, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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818 Soundside Road  
Edenton, NC 27932

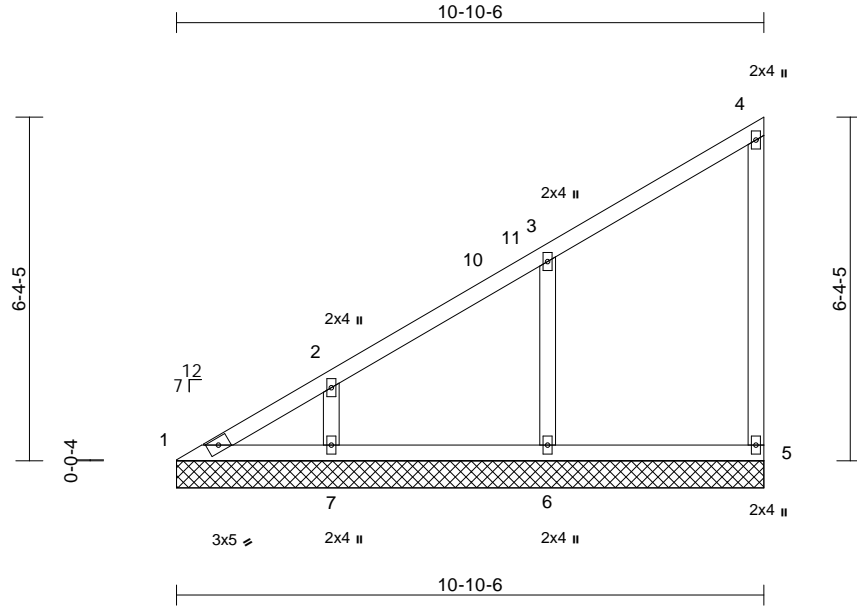
Job 22030102	Truss V5	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	151257010
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:44

Page: 1

ID:VVwwsFRpZYGWTSD8xEKGOzhpLw-RfC?PsB70Hq3NSgPqnL8w3uTXbGKwRCDoi7J4zJC7f



Scale = 1:42.6

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 49 lb	FT = 20%

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

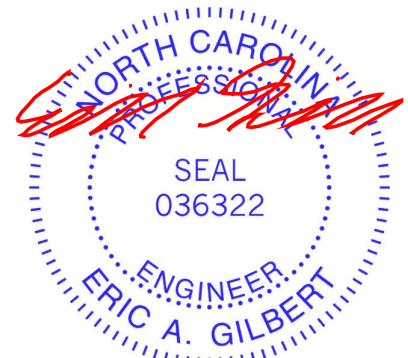
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size) 1=85/10-10-6, 5=126/10-10-6, 6=349/10-10-6, 7=298/10-10-6  
Max Horiz 1=216 (LC 11)  
Max Uplift 1=-13 (LC 10), 5=-33 (LC 11), 6=-62 (LC 14), 7=-83 (LC 14)  
Max Grav 1=127 (LC 24), 5=209 (LC 5), 6=503 (LC 5), 7=352 (LC 23)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-196/128, 2-3=-151/110, 3-4=-132/80, 4-5=-158/44  
BOT CHORD 1-7=-91/125, 6-7=-91/101, 5-6=-91/101  
WEBS 3-6=-393/143, 2-7=-223/127

- NOTES**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 2-10-13, Interior (1) 2-10-13 to 6-6-2, Exterior(2R) 6-6-2 to 10-9-1 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) 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.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 1.



April 8, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

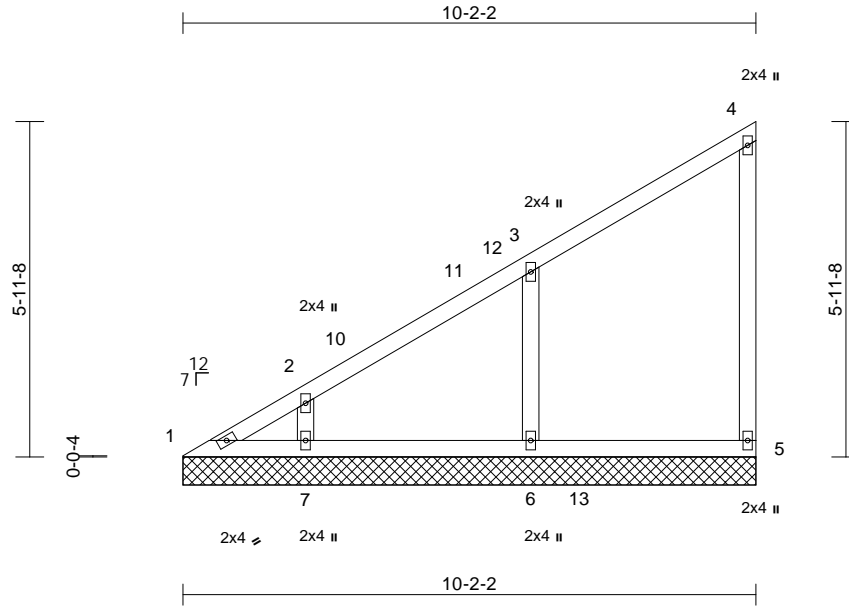
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss V6	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	151257011
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:45  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 45 lb	FT = 20%

**LUMBER**

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

**BRACING**

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

**REACTIONS** (lb/size)

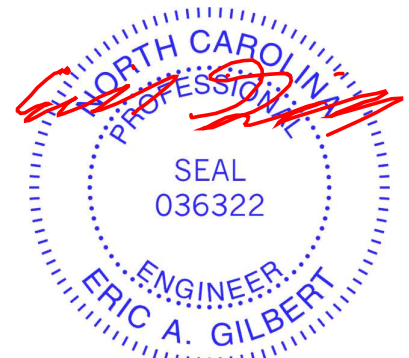
1=53/10-2-2, 5=125/10-2-2, 6=353/10-2-2, 7=272/10-2-2
Max Horiz 1=202 (LC 11)
Max Uplift 1=-21 (LC 10), 5=-31 (LC 11), 6=-78 (LC 14), 7=-75 (LC 14)
Max Grav 1=94 (LC 24), 5=207 (LC 5), 6=495 (LC 5), 7=319 (LC 23)

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

TOP CHORD	1-2=-174/122, 2-3=-146/109, 3-4=-129/74, 4-5=-157/43
BOT CHORD	1-7=-85/95, 6-7=-85/95, 5-6=-85/95
WEBS	3-6=-395/151, 2-7=-211/133

- NOTES**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 5-9-15, Exterior(2R) 5-9-15 to 10-0-13 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) 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.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 1.



April 8, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



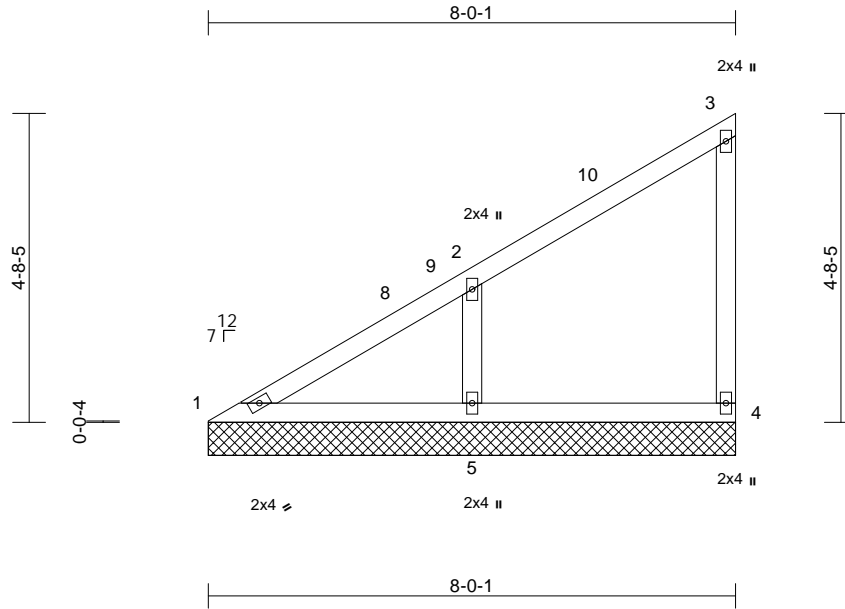
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss V7	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	151257012
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:35

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 34 lb	FT = 20%

**LUMBER**

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

**BRACING**

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

**REACTIONS**

(lb/size) 1=118/8-0-1, 4=111/8-0-1,  
5=380/8-0-1  
Max Horiz 1=152 (LC 11)  
Max Uplift 4=-24 (LC 11), 5=-102 (LC 14)  
Max Grav 1=130 (LC 24), 4=172 (LC 20),  
5=508 (LC 20)

**FORCES**

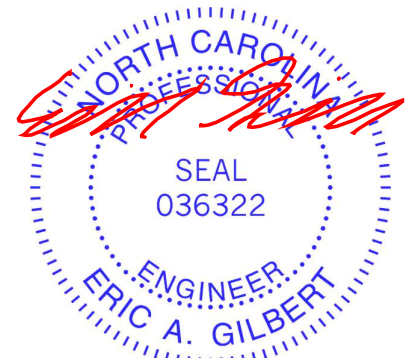
(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-200/109, 2-3=-112/55, 3-4=-146/42  
BOT CHORD 1-5=-68/162, 4-5=-68/75  
WEBS 2-5=-400/179

**NOTES**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 3-7-13, Exterior(2R) 3-7-13 to 7-10-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4'-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06-00 tall by 2'-00-00 wide will fit between the bottom chord and any other members.



April 8, 2022

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

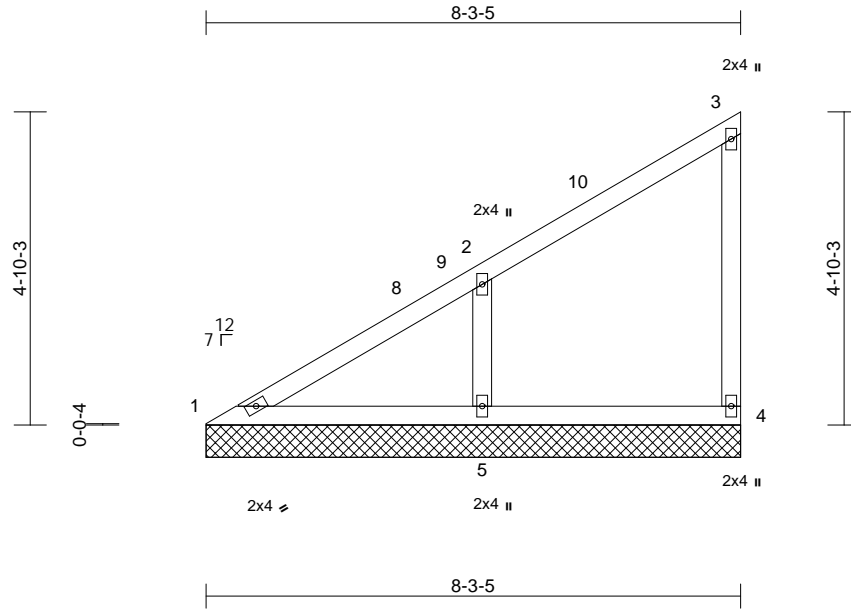
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss V8	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	151257013
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 35 lb	FT = 20%

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

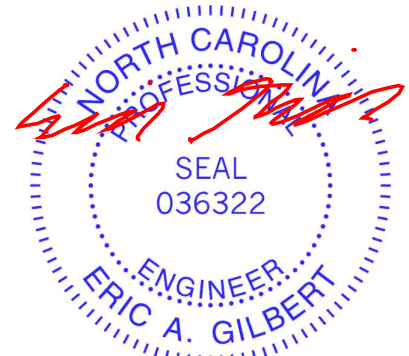
**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (lb/size)  
1=128/8-3-5, 4=108/8-3-5,  
5=394/8-3-5  
Max Horiz 1=157 (LC 11)  
Max Uplift 4=-25 (LC 11), 5=-104 (LC 14)  
Max Grav 1=139 (LC 24), 4=169 (LC 20),  
5=521 (LC 20)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-217/113, 2-3=-114/57, 3-4=-145/43  
BOT CHORD 1-5=-71/179, 4-5=-71/77  
WEBS 2-5=-407/181

- NOTES**
- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-7 to 3-0-7, Interior (1) 3-0-7 to 3-11-1, Exterior(2R) 3-11-1 to 8-1-15 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) 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.

- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.



April 8, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

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818 Soundside Road  
Edenton, NC 27932

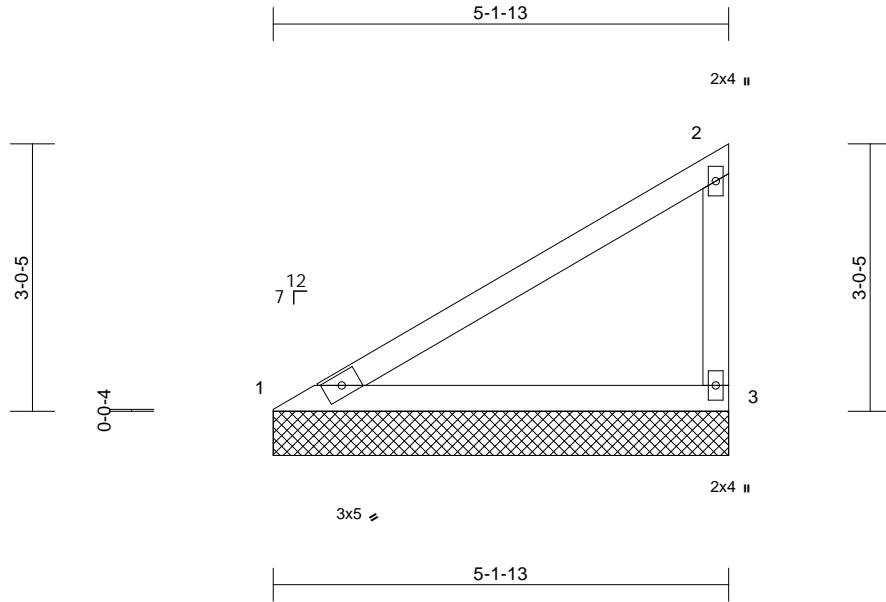


Job 22030102	Truss V9	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51257014
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:26

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	0.54	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.55	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 19 lb	FT = 20%	

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 5-1-13 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(lb/size) 1=200/5-1-13, 3=200/5-1-13  
Max Horiz 1=97 (LC 11)  
Max Uplift 1=-17 (LC 14), 3=-46 (LC 14)  
Max Grav 1=296 (LC 20), 3=296 (LC 20)

#### FORCES

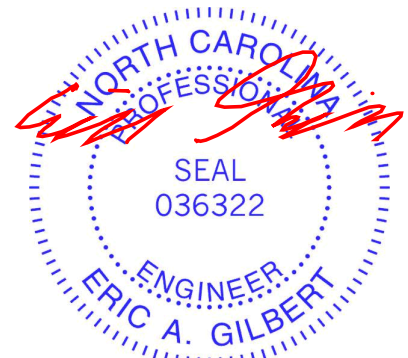
(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-459/83, 2-3=-203/65  
BOT CHORD 1-3=-82/389

#### NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); ls=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.

- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 1.



April 8, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

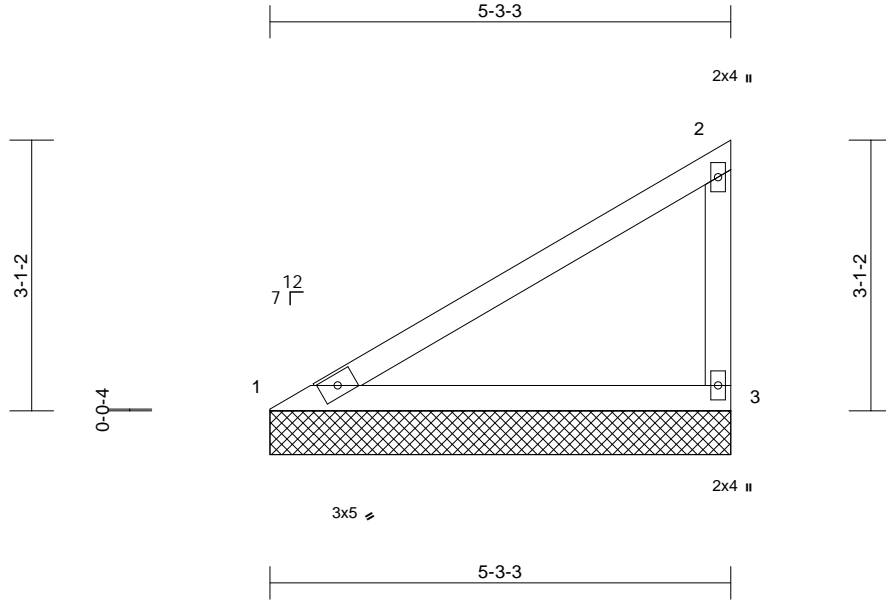
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss V10	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51257015
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:26.3

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	0.57	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.57	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
										Weight: 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 5-3-3 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS**

(lb/size) 1=205/5-3-3, 3=205/5-3-3  
Max Horiz 1=99 (LC 11)  
Max Uplift 1=-18 (LC 14), 3=-47 (LC 14)  
Max Grav 1=303 (LC 20), 3=303 (LC 20)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-471/85, 2-3=-208/66  
BOT CHORD 1-3=-84/399

**NOTES**

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)  
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;  
Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); ls=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.

- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 1.



April 8, 2022

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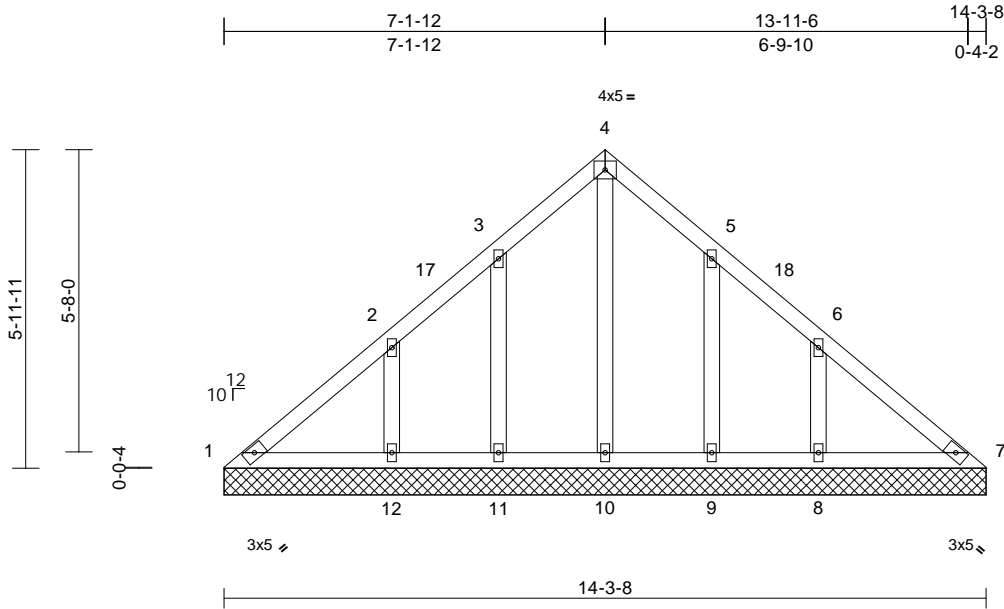
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss V11	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	151257016
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 73 lb	FT = 20%

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

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

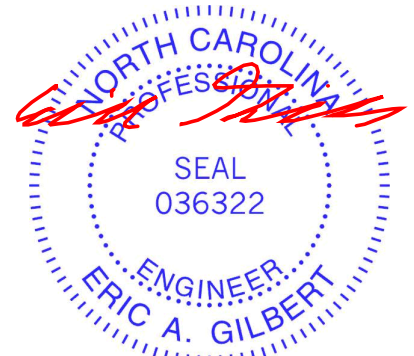
**REACTIONS** (lb/size)  
1=82/14-3-8, 7=82/14-3-8,  
8=242/14-3-8, 9=130/14-3-8,  
10=200/14-3-8, 11=130/14-3-8,  
12=242/14-3-8  
Max Horiz 1=132 (LC 11)  
Max Uplift 1=-18 (LC 10), 8=-98 (LC 15),  
9=-69 (LC 15), 11=-69 (LC 14),  
12=-101 (LC 14)  
Max Grav 1=103 (LC 28), 7=88 (LC 21),  
8=284 (LC 21), 9=234 (LC 21),  
10=203 (LC 26), 11=234 (LC 20),  
12=284 (LC 20)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-121/147, 2-3=-54/99, 3-4=-54/107,  
4-5=-54/107, 5-6=-49/83, 6-7=-99/113  
BOT CHORD 1-12=-82/111, 11-12=-82/111, 10-11=-82/111,  
9-10=-82/111, 8-9=-82/111, 7-8=-82/111  
WEBS 4-10=-158/0, 3-11=-213/101, 2-12=-199/115,  
5-9=-213/101, 6-8=-199/114

**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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-2-1, Interior (1) 3-2-1 to 4-2-1, Exterior(2R) 4-2-1 to 10-2-1, Interior (1) 10-2-1 to 11-2-1, Exterior(2E) 11-2-1 to 14-3-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- 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 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 1.

**LOAD CASE(S)** Standard



April 8, 2022

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ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

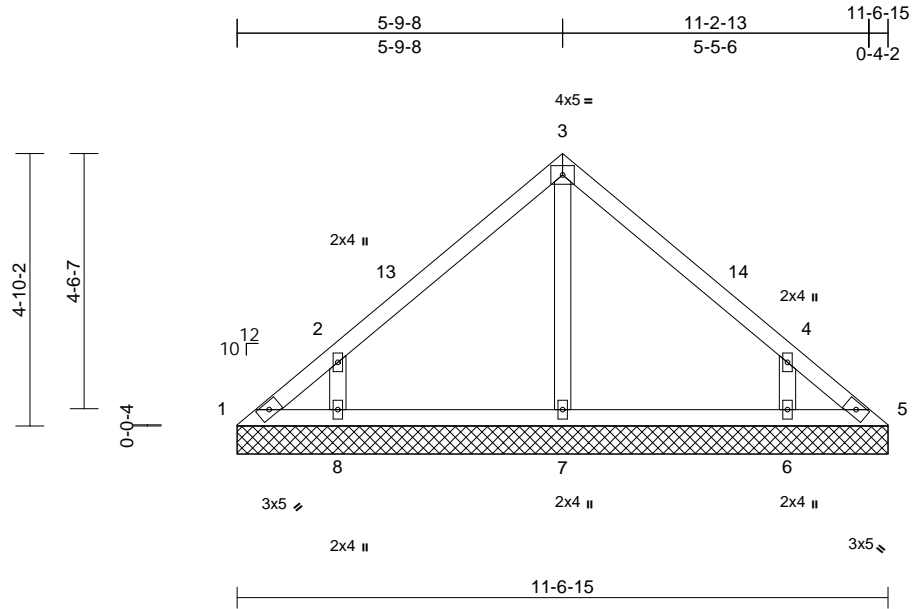
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss V12	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	151257017
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:41

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH								
BCDL	10.0											
											Weight: 47 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**

(lb/size) 1=48/11-6-15, 5=48/11-6-15, 6=297/11-6-15, 7=236/11-6-15, 8=297/11-6-15  
Max Horiz 1=-109 (LC 10)  
Max Uplift 1=-37 (LC 10), 5=-10 (LC 11), 6=-134 (LC 15), 8=-138 (LC 14)  
Max Grav 1=81 (LC 24), 5=61 (LC 26), 6=438 (LC 21), 7=254 (LC 20), 8=438 (LC 20)

**FORCES**

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-119/100, 2-3=-222/114, 3-4=-222/114, 4-5=-95/64  
BOT CHORD 1-8=-32/73, 7-8=-27/73, 6-7=-27/73, 5-6=-29/73  
WEBS 3-7=-166/0, 2-8=-420/234, 4-6=-420/234

**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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Exterior(2R) 3-0-5 to 8-7-4, Exterior(2E) 8-7-4 to 11-7-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 1 and 10 lb uplift at joint 5.



April 8, 2022

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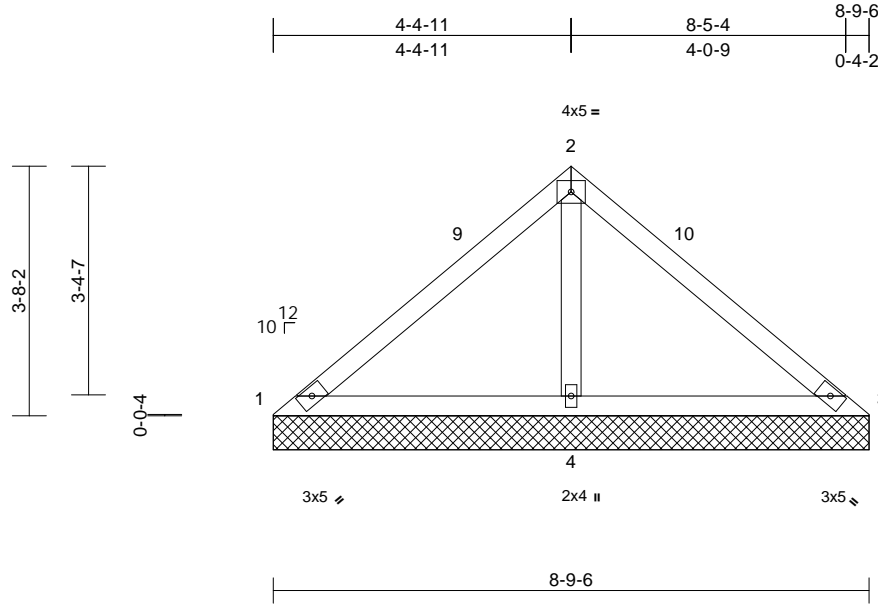
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss V13	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	151257018
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:46  
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Page: 1



Scale = 1:34

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)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.39	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 33 lb	FT = 20%

**LUMBER**

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

**BRACING**

TOP CHORD Structural wood sheathing directly applied or 8-9-6 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS**

(lb/size) 1=22/8-9-6, 3=22/8-9-6, 4=658/8-9-6  
Max Horiz 1=-82 (LC 12)  
Max Uplift 1=-50 (LC 21), 3=-50 (LC 20), 4=-109 (LC 14)  
Max Grav 1=76 (LC 20), 3=76 (LC 21), 4=709 (LC 21)

**FORCES**

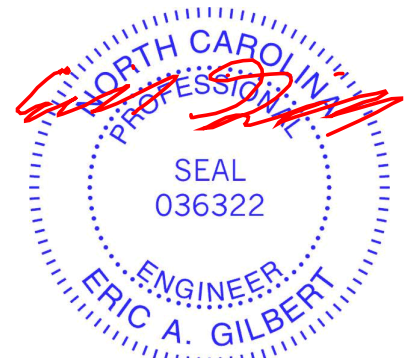
(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-201/329, 2-3=-201/329  
BOT CHORD 1-4=-223/284, 3-4=-223/284  
WEBS 2-4=-532/382

**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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-5 to 3-0-5, Corner(3R) 3-0-5 to 5-9-10, Corner(3E) 5-9-10 to 8-9-10 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 1 and 50 lb uplift at joint 3.



April 8, 2022

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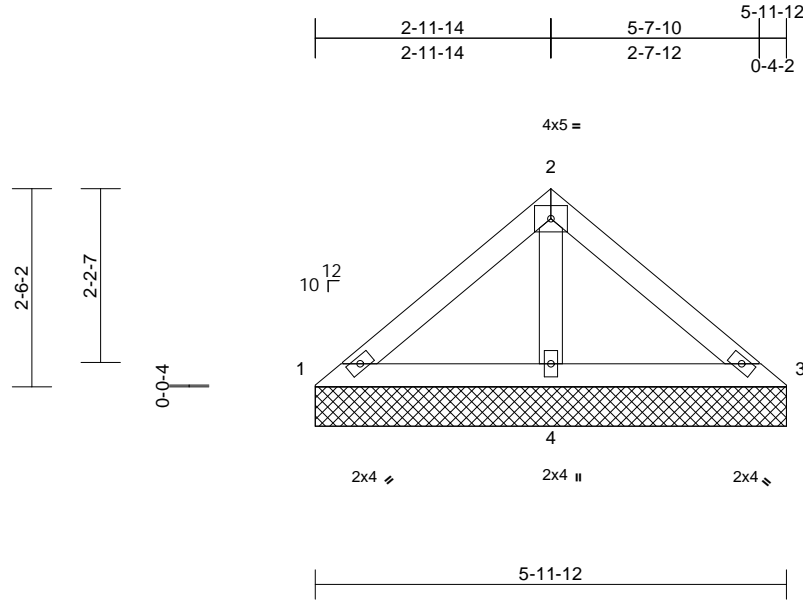
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss V14	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	151257019
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Carter Components (Sanford), Sanford, NC - 27332,

Run: 8.53 S Dec 6 2021 Print: 8.530 S Dec 6 2021 MiTek Industries, Inc. Thu Apr 07 20:54:46  
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 22 lb	FT = 20%

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

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 5-11-12 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (lb/size) 1=49/5-11-12, 3=49/5-11-12, 4=381/5-11-12  
Max Horiz 1=-55 (LC 12)  
Max Uplift 3=-4 (LC 15), 4=-50 (LC 14)  
Max Grav 1=99 (LC 20), 3=99 (LC 21), 4=399 (LC 21)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-88/157, 2-3=-88/157  
BOT CHORD 1-4=-116/120, 3-4=-116/120  
WEBS 2-4=-267/146

- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 3.

- 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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10



April 8, 2022

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



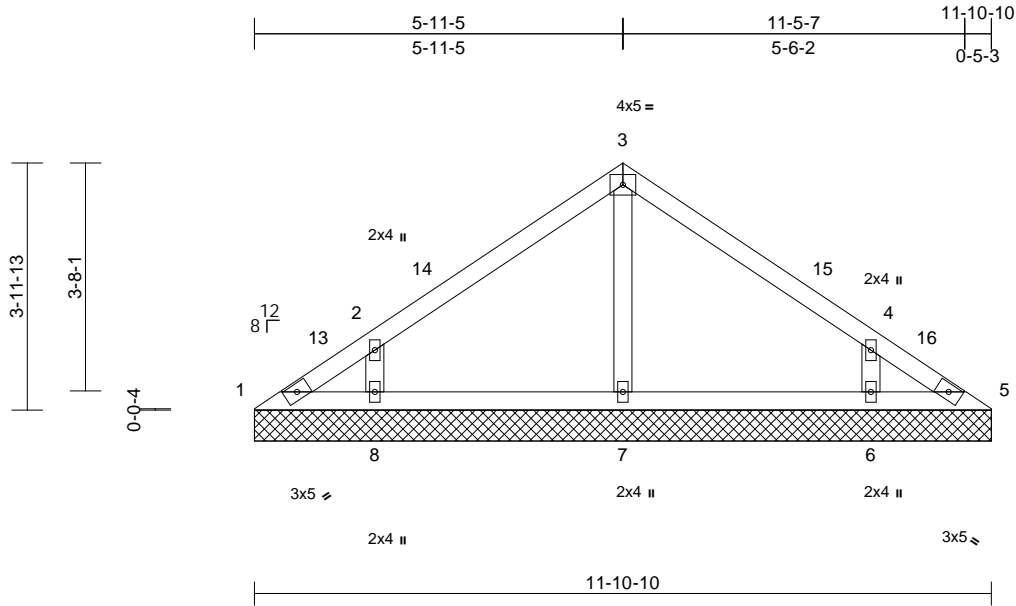
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss V15	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51257020
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.30	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MSH							
BCDL	10.0									Weight: 45 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** (lb/size)  
1=48/11-10-10, 5=48/11-10-10,  
6=297/11-10-10, 7=259/11-10-10,  
8=297/11-10-10  
Max Horiz 1=-89 (LC 10)  
Max Uplift 1=-21 (LC 10), 6=-106 (LC 15),  
8=-108 (LC 14)  
Max Grav 1=68 (LC 24), 5=52 (LC 23), 6=443  
(LC 21), 7=275 (LC 21), 8=443 (LC 20)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-88/79, 2-3=-180/92, 3-4=-180/92,  
4-5=-63/52  
BOT CHORD 1-8=-21/57, 7-8=-18/57, 6-7=-18/57,  
5-6=-18/57  
WEBS 3-7=-187/18, 2-8=-418/180, 4-6=-418/180

**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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-6 to 3-0-6, Exterior(2R) 3-0-6 to 8-11-0, Exterior(2E) 8-11-0 to 11-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 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); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 1.



April 8, 2022

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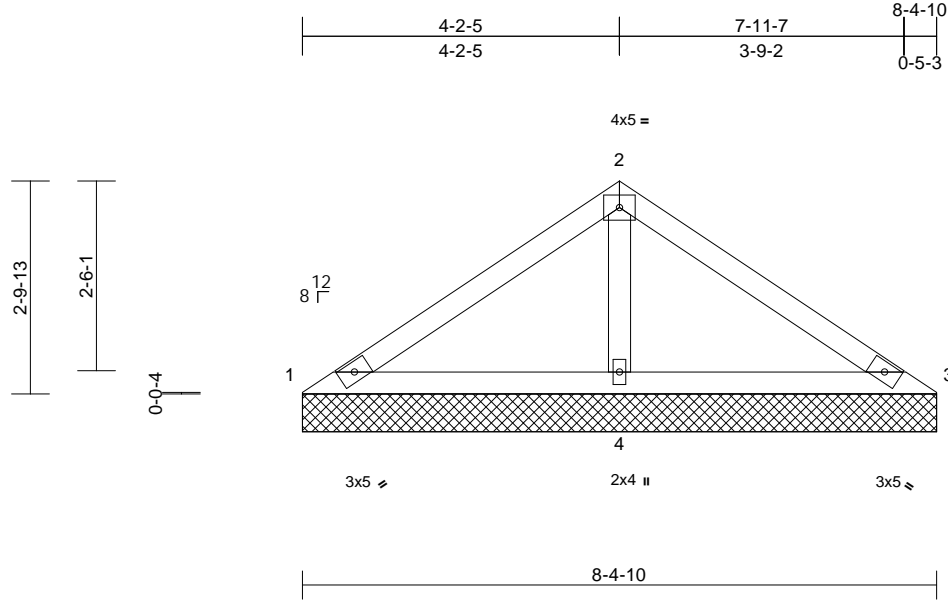
818 Soundside Road  
Edenton, NC 27932

Job 22030102	Truss V16	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	I51257021
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:30.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.34	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 29 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 8'-4-10 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6'-0-0 oc bracing.

#### REACTIONS

(lb/size) 1=33/8-4-10, 3=33/8-4-10, 4=604/8-4-10  
Max Horiz 1=62 (LC 11)  
Max Uplift 1=-34 (LC 21), 3=-34 (LC 20), 4=-71 (LC 14)  
Max Grav 1=104 (LC 20), 3=104 (LC 21), 4=641 (LC 20)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-102/314, 2-3=-102/314  
BOT CHORD 1-4=-214/155, 3-4=-214/155  
WEBS 2-4=-471/200

#### 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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-6 to 3-0-6, Exterior(2R) 3-0-6 to 5-5-0, Exterior(2E) 5-5-0 to 8-5-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4'-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06-00 tall by 2'-00-00 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 1 and 34 lb uplift at joint 3.



April 8, 2022

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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

818 Soundside Road  
Edenton, NC 27932

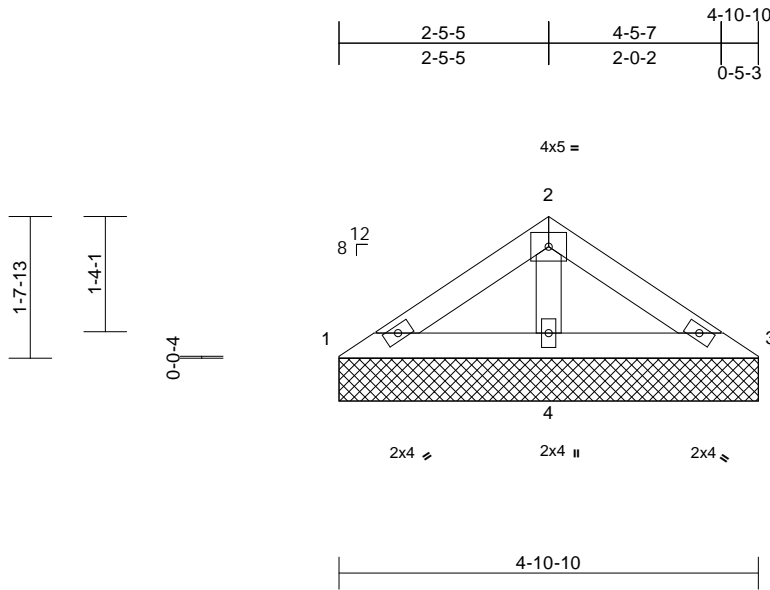


Job 22030102	Truss V17	Truss Type Valley	Qty 1	Ply 1	DRB - 100 FARM AT NEILLS CREEK Job Reference (optional)	151257022
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Carter Components (Sanford), Sanford, NC - 27332,

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Page: 1



Scale = 1:26.8

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-MP								
BCDL	10.0											
											Weight: 16 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4'-10'-10 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6'-0'-0 oc bracing.

#### REACTIONS

(lb/size) 1=51/4-10-10, 3=51/4-10-10, 4=288/4-10-10  
Max Horiz 1=-35 (LC 12)  
Max Uplift 1=-5 (LC 14), 3=-11 (LC 15), 4=-25 (LC 14)  
Max Grav 1=86 (LC 20), 3=86 (LC 21), 4=290 (LC 20)

#### FORCES

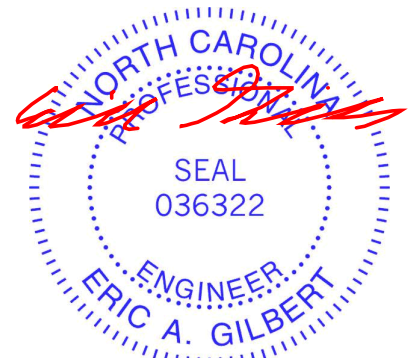
(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-84/107, 2-3=-84/107  
BOT CHORD 1-4=-82/76, 3-4=-82/76  
WEBS 2-4=-176/89

#### 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=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
- 5) Unbalanced snow loads have been considered for this design.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 4'-0'-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06'-00 tall by 2'-00'-00 wide will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 1 and 11 lb uplift at joint 3.



April 8, 2022

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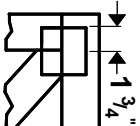
**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601  
**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

ENGINEERING BY  
**TRENCO**  
A MiTek Affiliate

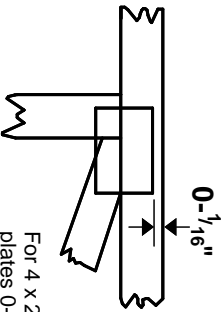
818 Soundside Road  
Edenton, NC 27932

# Symbols

## PLATE LOCATION AND ORIENTATION



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



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



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

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

## PLATE SIZE

**4 X 4**

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

## LATERAL BRACING LOCATION



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

## BEARING



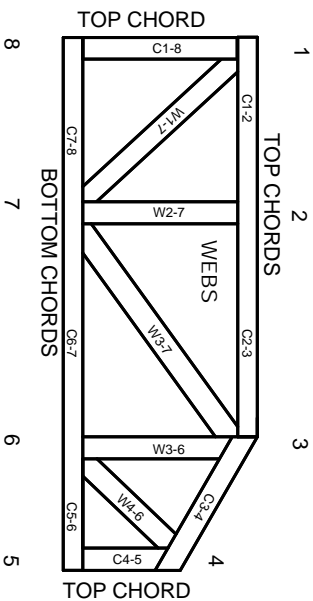
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & 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-1311, ESR-1352, ESR1988  
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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

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MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020



# 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.