ENGINEERING BY TRENCO
A MiTek Affiliate

Trenco
818 Soundside Rd
Edenton, NC 27932

RE: 2501-0212-A - The Farm at Neills Creek Lot 00.0042 OWF

Site Information:

Project Customer: DRB Raleigh Project Name: The Farm at Neills Creek Lot 00.0042
Lot/Block: Subdivision: The Farm at Neills Creek
Model: Drayton
Address: 492 Winding Creek Dr
City: Lillington State: NC

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

Design Code: IRC2021/TPI2014
Wind Code: ASCE 7-16
Wind Speed: 115 mph
Roof Load: 50.0 psf
Mean Roof Height (feet): 25

Design Program: MiTek 20/20 8.8
Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16
Floor Load: N/A psf

Exposure Category: B

No.	Seal#	Truss Name	Date
1	I70811079	F11	1/16/25
2	I70811080	F12	1/16/25
3	I70811081	F15	1/16/25
4	I70811082	F4	1/16/25
5	I70811083	F3	1/16/25
6		F2	1/16/25
7	I70811085	F5	1/16/25
8	I70811086	F6	1/16/25
9	I70811087	FGE2	1/16/25
10	I70811088	FGE1	1/16/25
11	I70811089	F1	1/16/25
12	I70811090	F10	1/16/25
13	I70811091	F9	1/16/25
14	I70811092	F7	1/16/25
		F8	1/16/25
16	I70811094	F14	1/16/25
17	I70811095	F13	1/16/25

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

Truss Design Engineer's Name: Gilbert, Eric
My license renewal date for the state of North Carolina is December 31, 2025.

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.

January 16,2025
Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F11	Floor	1	1	I70811079
					Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Thu Jan 16 07:07:47 Page: 1

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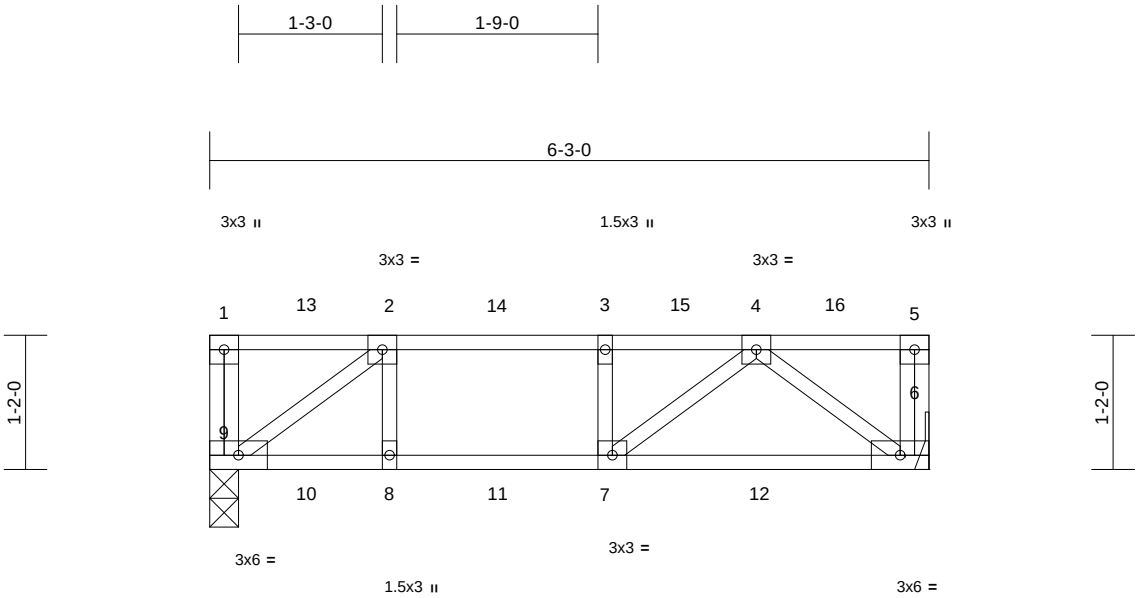

Scale = 1:20

Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.42	Vert(LL)	-0.13	6-7	>555	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.91	Vert(CT)	-0.14	6-7	>503	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	6	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 34 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)

BRACING

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

REACTIONS (size) 6= Mechanical, 9=0-3-0
Max Grav 6=325 (LC 12), 9=325 (LC 7)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-9=-256/37, 5-6=-261/19, 1-2=0/0, 2-3=-368/0, 3-4=-368/0, 4-5=0/0
BOT CHORD 8-9=0/368, 7-8=0/368, 6-7=0/322
WEBS 4-6=-404/0, 2-9=-454/0, 4-7=-119/226, 2-8=-22/230, 3-7=-144/116

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) Bearings are assumed to be: Joint 9 SP No.2 .
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 9.
5) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

January 16,2025

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Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F12	Floor	4	1	I70811080 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Thu Jan 16 07:07:47 Page: 1

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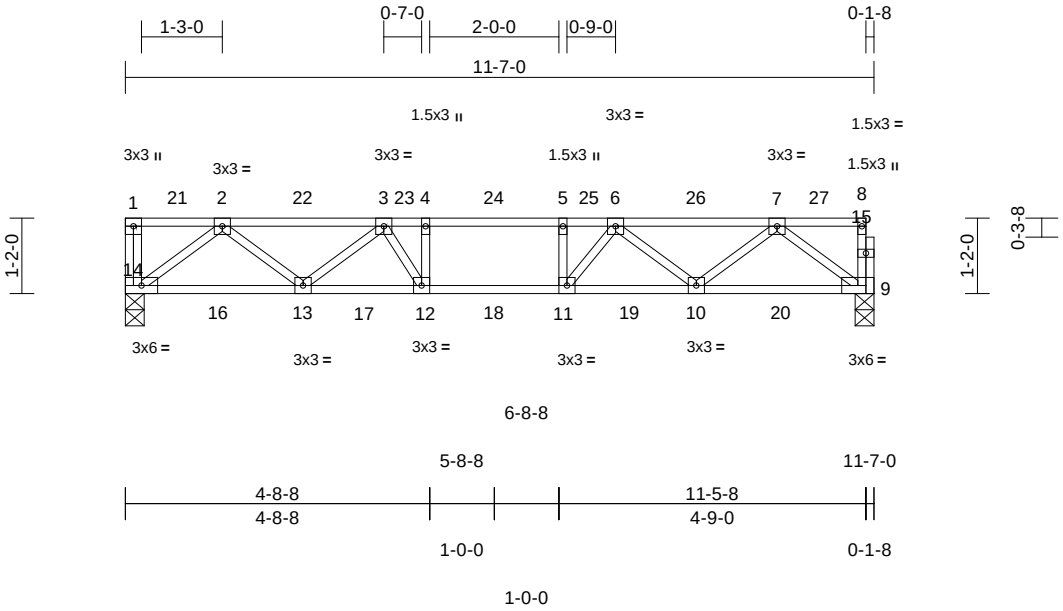

Scale = 1:34.9

Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.56	Vert(LL)	-0.10	10-11	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.80	Vert(CT)	-0.12	10-11	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.02	9	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 59 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING

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

REACTIONS (size) 9=0-3-8, 14=0-3-8
Max Grav 9=493 (LC 1), 14=498 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-14=-259/30, 8-9=-259/34, 1-2=0/0, 2-3=-937/0, 3-4=-1324/0, 4-5=-1324/0, 5-6=-1324/0, 6-7=-938/0, 7-8=-16/2
BOT CHORD 13-14=0/605, 12-13=0/1247, 11-12=0/1324, 10-11=0/1243, 9-10=0/605
WEBS 4-12=-247/201, 5-11=-214/164, 2-14=-759/0, 2-13=0/441, 3-13=-403/30, 3-12=-259/339, 7-9=-757/0, 7-10=0/442, 6-10=-398/23, 6-11=-231/311

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) Bearings are assumed to be: Joint 14 SP No.2 , Joint 9 SP No.3 .
3) Bearing at joint(s) 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
4) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

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Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F15	Floor	2	1	I70811081 Job Reference (optional)

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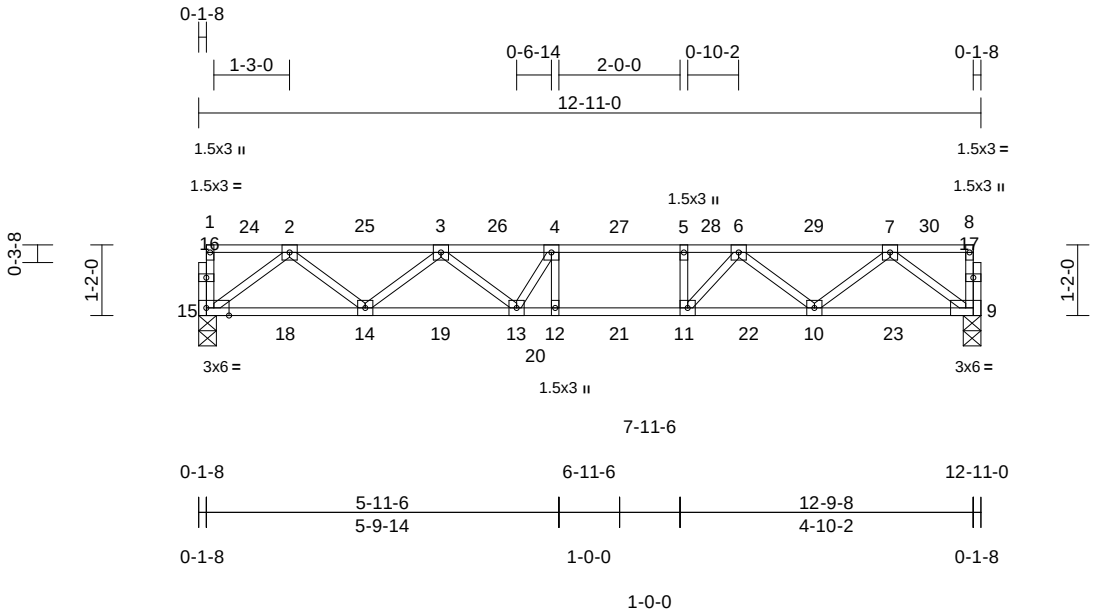

Scale = 1:34.9

Plate Offsets (X, Y): [15:0-4-8,Edge]

Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.60	Vert(LL)	-0.11	10-11	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.82	Vert(CT)	-0.13	12-13	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.02	9	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 65 lb	FT = 20%F, 12%E

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

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

REACTIONS (size) 9=0-3-8, 15=0-3-8
Max Grav 9=552 (LC 1), 15=552 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-15=-259/38, 8-9=-259/35, 1-2=-16/2, 2-3=-1087/0, 3-4=-1614/0, 4-5=-1650/0, 5-6=-1650/0, 6-7=-1078/0, 7-8=-15/2
BOT CHORD 14-15=0/679, 13-14=0/1468, 12-13=0/1650, 11-12=0/1650, 10-11=0/1467, 9-10=0/681
WEBS 4-12=-263/203, 5-11=-243/113, 2-15=-850/0, 2-14=0/530, 3-14=-496/0, 3-13=-96/285, 4-13=-279/351, 7-9=-852/0, 7-10=0/517, 6-10=-506/0, 6-11=-162/435

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x3 (=) MT20 unless otherwise indicated.
3) All bearings are assumed to be SP No.3 .
4) Bearing at joint(s) 15, 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

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Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F4	Floor	1	1	I70811082 Job Reference (optional)

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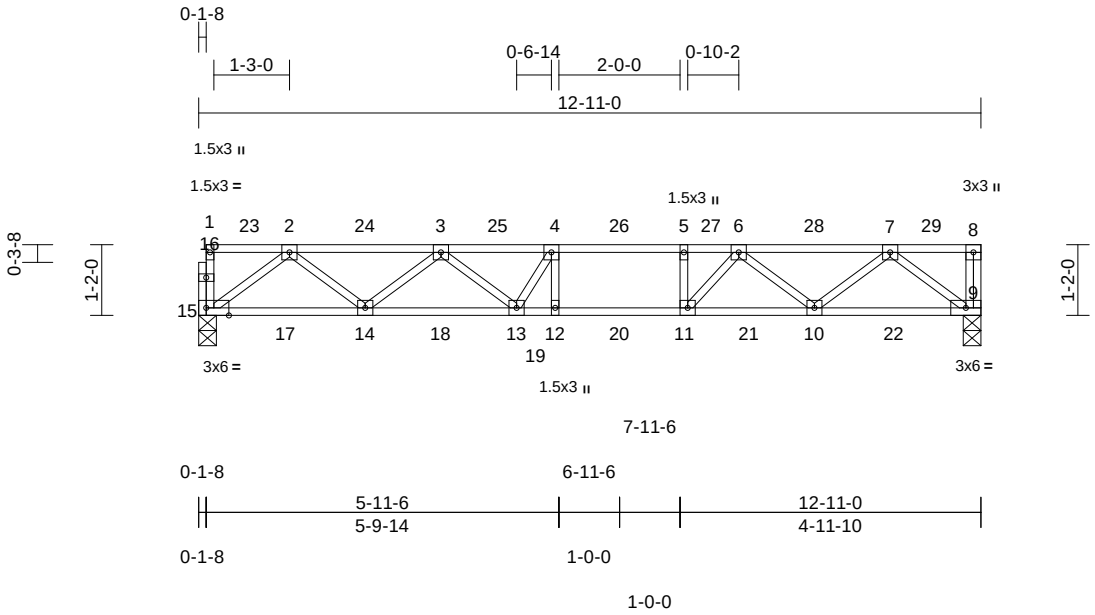

Scale = 1:34.9

Plate Offsets (X, Y): [15:0-4-8,Edge]

Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.60	Vert(LL)	-0.11	10-11	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.82	Vert(CT)	-0.13	12-13	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.02	9	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 66 lb	FT = 20%F, 12%E

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

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

REACTIONS (size) 9=0-3-8, 15=0-3-8
Max Grav 9=557 (LC 1), 15=552 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-15=-259/38, 8-9=-259/32, 1-2=-16/2, 2-3=-1087/0, 3-4=-1614/0, 4-5=-1650/0, 5-6=-1650/0, 6-7=-1078/0, 7-8=0/0
BOT CHORD 14-15=0/679, 13-14=0/1468, 12-13=0/1650, 11-12=0/1650, 10-11=0/1467, 9-10=0/681
WEBS 4-12=-263/203, 5-11=-243/113, 2-15=-850/0, 2-14=0/530, 3-14=-496/0, 3-13=-96/285, 4-13=-279/351, 7-9=-855/0, 7-10=0/517, 6-10=-505/0, 6-11=-162/435

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x3 (=) MT20 unless otherwise indicated.
3) Bearings are assumed to be: Joint 15 SP No.3 , Joint 9 SP No.2 .
4) 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.
5) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

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Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F3	Floor	4	1	I70811083 Job Reference (optional)

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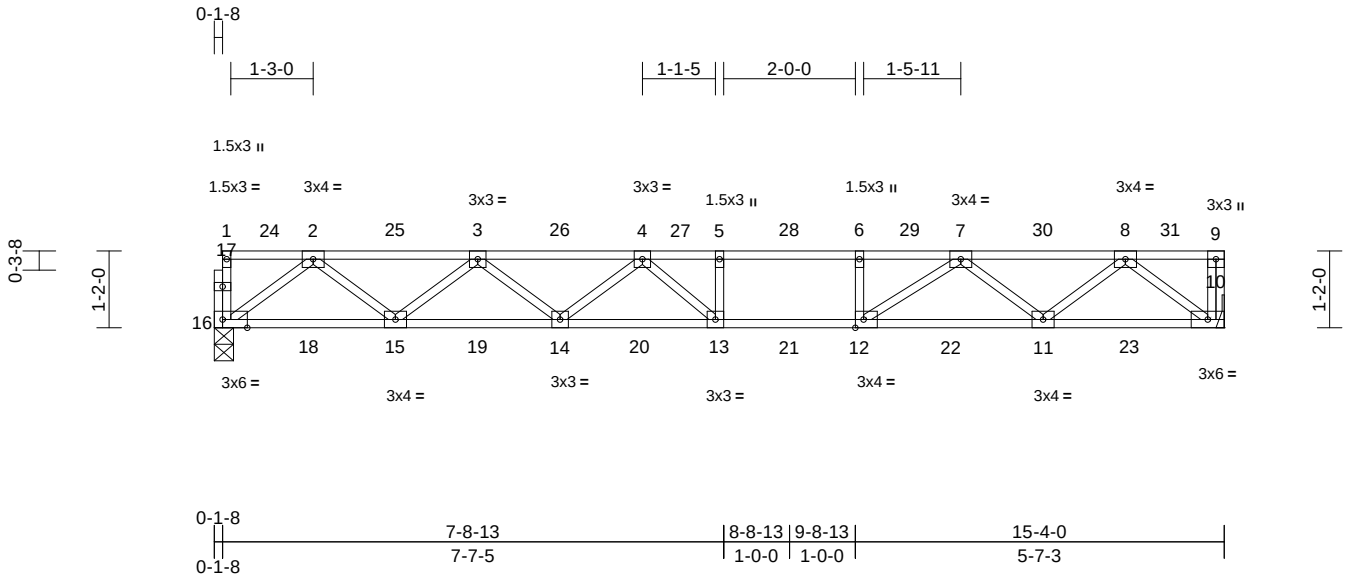

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Plate Offsets (X, Y): [12:0-1-8,Edge], [16:0-4-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.63	Vert(LL)	-0.18	13-14	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.48	Vert(CT)	-0.24	13-14	>744	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.03	10	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 77 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP SS(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

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) 10=663/ Mechanical, 16=658/0-3-8

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

TOP CHORD 16-17=-259/40, 1-17=-259/40, 9-10=-258/35, 2-25=-1352/0, 3-25=-1352/0, 3-26=-2138/0, 4-26=-2138/0, 4-27=-2315/0, 5-27=-2315/0, 5-28=-2315/0, 6-28=-2315/0, 6-29=-2315/0, 7-29=-2315/0, 7-30=-1338/0, 8-30=-1338/0

BOT CHORD 16-18=0/816, 15-18=0/816, 15-19=0/1870, 14-19=0/1870, 14-20=0/2347, 13-20=0/2347, 13-21=0/2315, 12-21=0/2315, 12-22=0/1856, 11-22=0/1856, 11-23=0/820, 10-23=0/820

WEBS 6-12=-255/49, 2-16=-1022/0, 2-15=0/698, 3-15=-674/0, 3-14=0/395, 4-14=-271/99, 4-13=-335/267, 8-10=-1029/0, 8-11=0/674, 7-11=-675/0, 7-12=-43/679

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) Refer to girder(s) for truss to truss connections.
3) 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.
4) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.

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Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F2	Floor	3	1	I70811084 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Thu Jan 16 07:07:44 Page: 1

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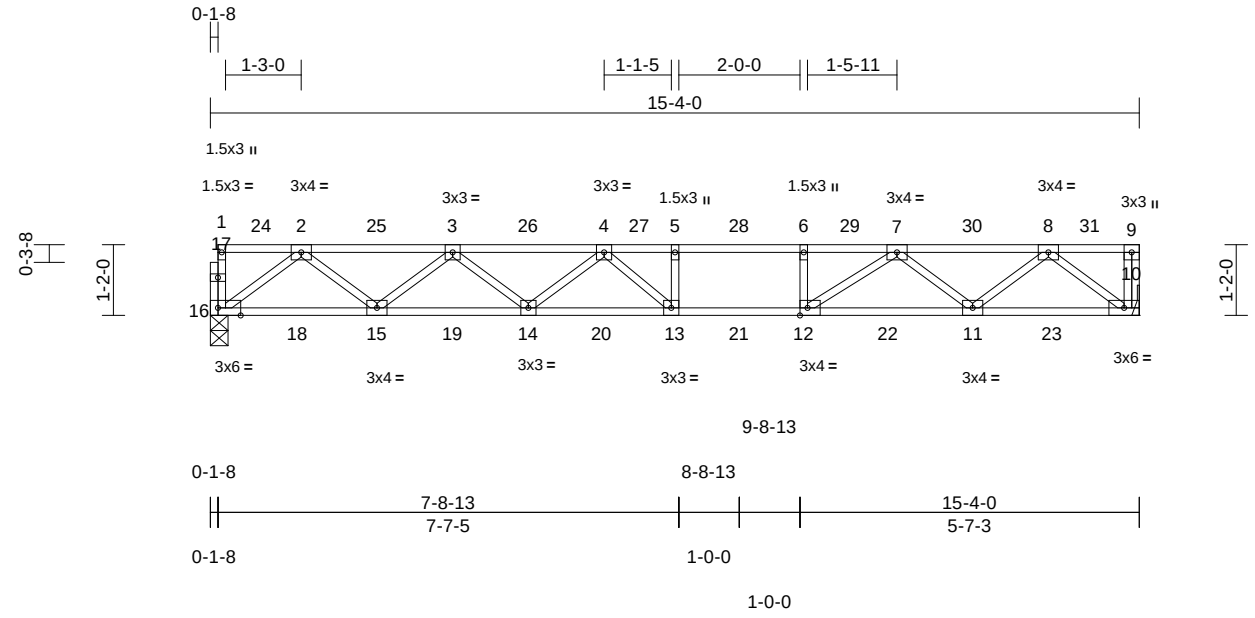

Scale = 1:34.9

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

Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.63	Vert(LL)	-0.18	13-14	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.48	Vert(CT)	-0.24	13-14	>744	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.03	10	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 77 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP SS(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING

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

REACTIONS (size) 10= Mechanical, 16=0-3-8
Max Grav 10=663 (LC 1), 16=658 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-16=-259/40, 9-10=-258/35, 1-2=-16/2, 2-3=-1352/0, 3-4=-2138/0, 4-5=-2315/0, 5-6=-2315/0, 6-7=-2315/0, 7-8=-1338/0, 8-9=0/0
BOT CHORD 15-16=0/816, 14-15=0/1870, 13-14=0/2347, 12-13=0/2315, 11-12=0/1856, 10-11=0/820
WEBS 5-13=-154/164, 6-12=-255/49, 2-16=-1022/0, 2-15=0/698, 3-15=-674/0, 3-14=0/395, 4-14=-271/99, 4-13=-335/267, 8-10=-1029/0, 8-11=0/674, 7-11=-675/0, 7-12=-43/679

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) Bearings are assumed to be: Joint 16 SP No.3 .
3) Refer to girder(s) for truss to truss connections.
4) 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.
5) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
6) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
7) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F5	Floor	4	1	I70811085 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Thu Jan 16 07:07:45 Page: 1

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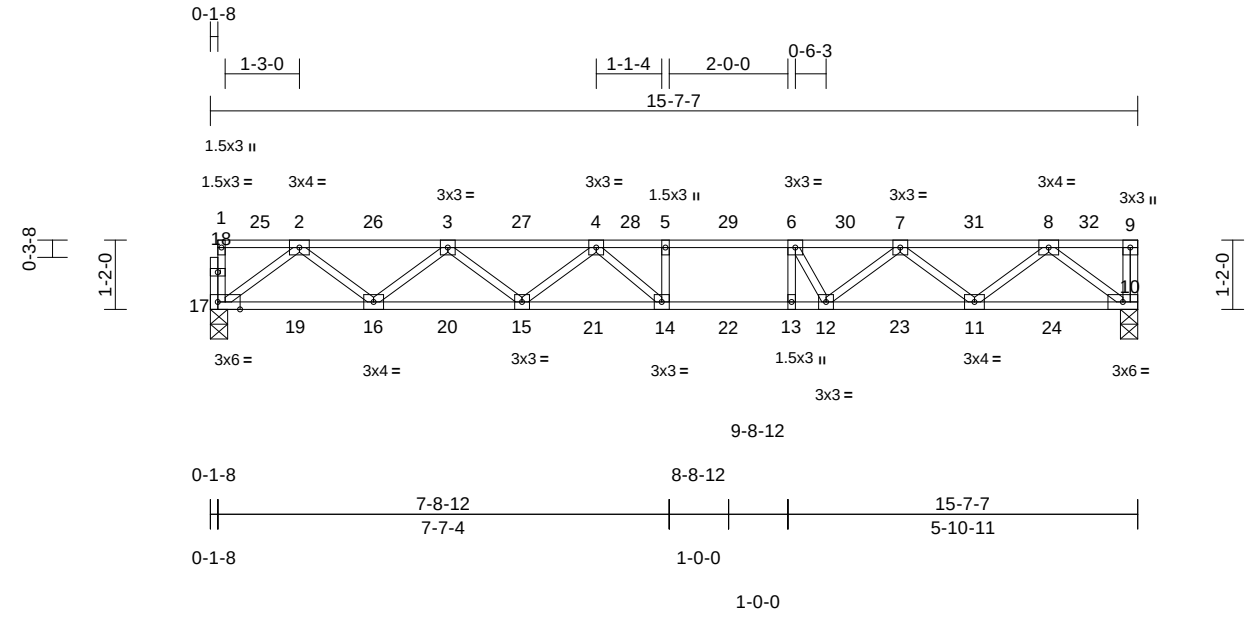

Scale = 1:34.9

Plate Offsets (X, Y): [17:0-4-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.62	Vert(LL)	-0.16	14-15	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.46	Vert(CT)	-0.22	14-15	>846	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.29	Horz(CT)	0.03	10	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 79 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP SS(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING

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

REACTIONS (size) 10=0-3-8, 17=0-3-8
Max Grav 10=564 (LC 1), 17=559 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-17=-258/41, 9-10=-258/36, 1-2=-15/2, 2-3=-1154/0, 3-4=-1832/0, 4-5=-2025/0, 5-6=-2025/0, 6-7=-1853/0, 7-8=-1153/0, 8-9=0/0
BOT CHORD 16-17=0/694, 15-16=0/1598, 14-15=0/2021, 13-14=0/2025, 12-13=0/2025, 11-12=0/1578, 10-11=0/701
WEBS 5-14=-168/141, 6-13=-223/304, 2-17=-869/0, 2-16=0/599, 3-16=-578/0, 3-15=-7/382, 4-15=-259/102, 4-14=-307/249, 8-10=-880/0, 8-11=0/588, 7-11=-554/0, 7-12=-34/411, 6-12=-484/259

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) Bearings are assumed to be: Joint 17 SP No.3 , Joint 10 SP SS .
3) Bearing at joint(s) 17 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
4) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

January 16,2025

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F6	Floor	7	1	I70811086 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Thu Jan 16 07:07:45 Page: 1
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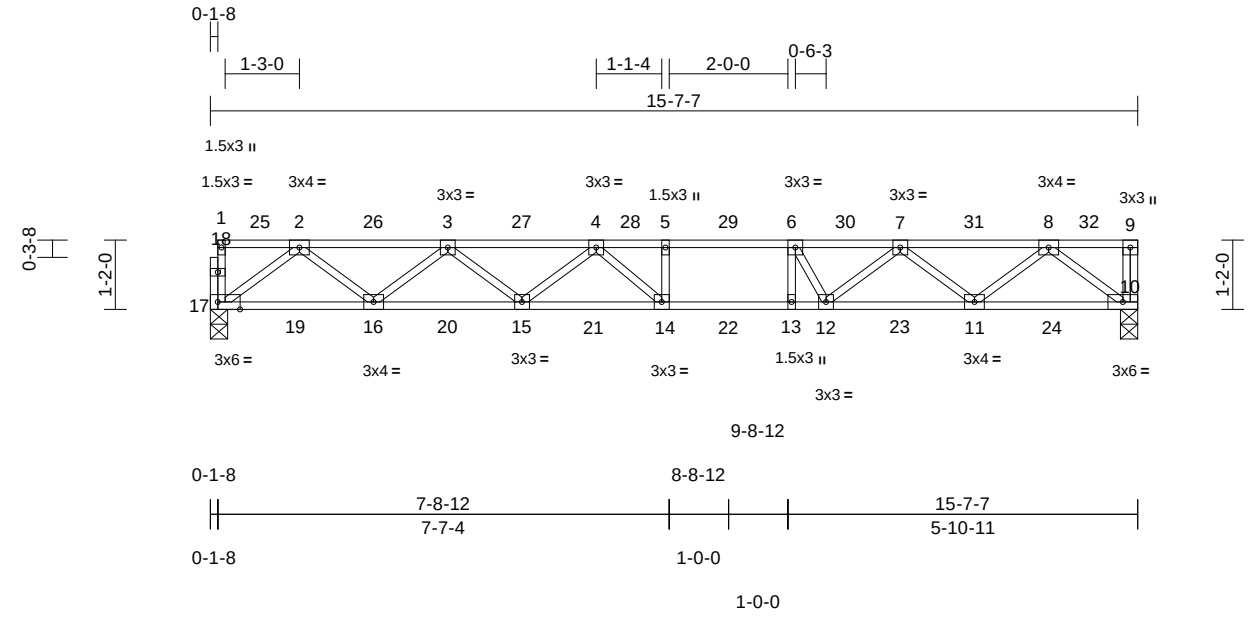


Scale = 1:34.9

Plate Offsets (X, Y): [17:0-4-8,Edge]

Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.63	Vert(LL)	-0.17	14-15	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.47	Vert(CT)	-0.23	14-15	>798	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.34	Horz(CT)	0.03	10	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 79 lb	FT = 20%F, 12%E

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP SS(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

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

REACTIONS (size) 10=0-3-8, 17=0-3-8
Max Grav 10=676 (LC 1), 17=671 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-17=-259/40, 9-10=-259/35, 1-2=-16/2, 2-3=-1384/0, 3-4=-2197/0, 4-5=-2428/0, 5-6=-2428/0, 6-7=-2222/0, 7-8=-1382/0, 8-9=0/0
BOT CHORD 16-17=0/833, 15-16=0/1917, 14-15=0/2424, 13-14=0/2428, 12-13=0/2428, 11-12=0/1892, 10-11=0/841
WEBS 5-14=-169/140, 6-13=-215/312, 2-17=-1042/0, 2-16=0/718, 3-16=-693/0, 3-15=0/401, 4-15=-296/91, 4-14=-306/290, 8-10=-1055/0, 8-11=0/705, 7-11=-664/0, 7-12=-14/493, 6-12=-580/240

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) Bearings are assumed to be: Joint 17 SP No.3 , Joint 10 SP SS .
3) Bearing at joint(s) 17 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
4) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
6) CAUTION, Do not erect truss backwards.

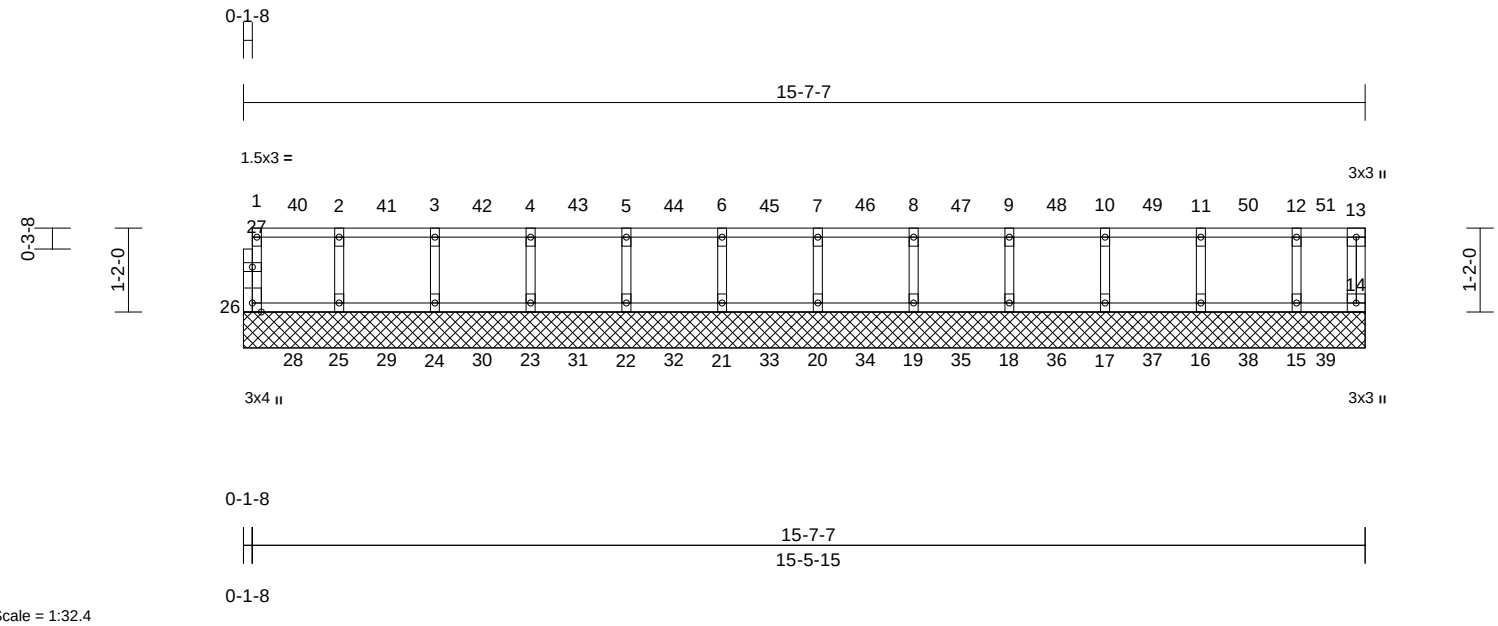
LOAD CASE(S) Standard

January 16,2025

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	FGE2	Floor Supported Gable	1	1	I70811087 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Thu Jan 16 07:07:49 Page: 1
ID:UwAve_IsinDnnVa80nkqhUyFIoW-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:32.4

Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.28	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.28	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	14	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 66 lb	FT = 20%F, 12%E

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

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

REACTIONS (size) 14=15-7-7, 15=15-7-7, 16=15-7-7, 17=15-7-7, 18=15-7-7, 19=15-7-7, 20=15-7-7, 21=15-7-7, 22=15-7-7, 23=15-7-7, 24=15-7-7, 25=15-7-7, 26=15-7-7
Max Uplift 14=-37 (LC 40), 15=-16 (LC 4), 17=-1 (LC 37), 26=-15 (LC 5)
Max Grav 14=262 (LC 54), 15=279 (LC 53), 16=286 (LC 52), 17=285 (LC 51), 18=285 (LC 50), 19=285 (LC 49), 20=285 (LC 48), 21=285 (LC 47), 22=285 (LC 46), 23=285 (LC 45), 24=285 (LC 44), 25=286 (LC 43), 26=265 (LC 42)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-26=-254/22, 13-14=-258/42, 1-2=-26/5, 2-3=-26/5, 3-4=-26/5, 4-5=-26/5, 5-6=-26/5, 6-7=-26/5, 7-8=-26/5, 8-9=-26/5, 9-10=-26/5, 10-11=-26/5, 11-12=-26/5, 12-13=-26/5
BOT CHORD 25-26=-5/26, 24-25=-5/26, 23-24=-5/26, 22-23=-5/26, 21-22=-5/26, 20-21=-5/26, 19-20=-5/26, 18-19=-5/26, 17-18=-5/26, 16-17=-5/26, 15-16=-5/26, 14-15=-5/26
WEBS 2-25=-272/12, 3-24=-272/10, 4-23=-272/10, 5-22=-272/10, 6-21=-272/10, 7-20=-272/10, 8-19=-272/10, 9-18=-272/10, 10-17=-272/10, 11-16=-273/10, 12-15=-266/21

NOTES
1) All plates are 1.5x3 (||) MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.3 .
6) Bearing at joint(s) 26 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 26.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 14, 25, 24, 23, 22, 21, 20, 19, 18, 17, and 15. This connection is for uplift only and does not consider lateral forces.
9) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
10) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
11) CAUTION, Do not erect truss backwards.

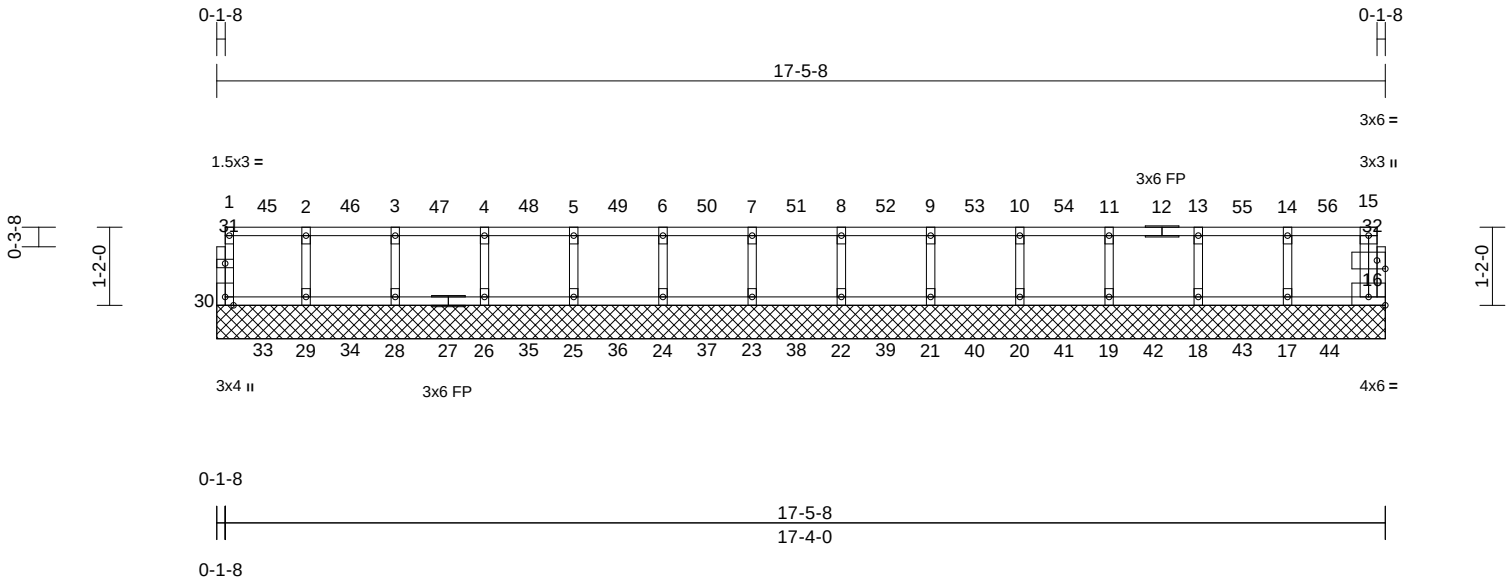
LOAD CASE(S) Standard

January 16,2025

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	FGE1	Floor Supported Gable	1	1	I70811088 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Thu Jan 16 07:07:49 Page: 1
ID:0kdXQeHExT5wAM?xS3Db9HyFIoX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:35.2

Plate Offsets (X, Y): [16:Edge,0-1-8], [32:0-1-8,0-1-8]

Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.28	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.28	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	16	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-R							Weight: 74 lb	FT = 20%F, 12%E

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

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

REACTIONS (size) 16=17-5-8, 17=17-5-8, 18=17-5-8, 19=17-5-8, 20=17-5-8, 21=17-5-8, 22=17-5-8, 23=17-5-8, 24=17-5-8, 25=17-5-8, 26=17-5-8, 28=17-5-8, 29=17-5-8, 30=17-5-8
Max Uplift 16=-12 (LC 15), 17=-2 (LC 14), 25=-2 (LC 34), 29=-1 (LC 6), 30=-14 (LC 5)
Max Grav 16=267 (LC 58), 17=285 (LC 57), 18=285 (LC 56), 19=285 (LC 55), 20=285 (LC 54), 21=285 (LC 53), 22=285 (LC 52), 23=285 (LC 51), 24=285 (LC 50), 25=285 (LC 49), 26=285 (LC 48), 28=285 (LC 47), 29=284 (LC 46), 30=266 (LC 45)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-30=-254/21, 15-16=-256/21, 1-2=-25/4, 2-3=-25/4, 3-4=-25/4, 4-5=-25/4, 5-6=-25/4, 6-7=-25/4, 7-8=-25/4, 8-9=-25/4, 9-10=-25/4, 10-11=-25/4, 11-13=-25/4, 13-14=-25/4, 14-15=-25/4
BOT CHORD 29-30=-4/25, 28-29=-4/25, 26-28=-4/25, 25-26=-4/25, 24-25=-4/25, 23-24=-4/25, 22-23=-4/25, 21-22=-4/25, 20-21=-4/25, 19-20=-4/25, 18-19=-4/25, 17-18=-4/25, 16-17=-4/25
WEBS 2-29=-271/12, 3-28=-272/10, 4-26=-272/10, 5-25=-272/10, 6-24=-272/10, 7-23=-272/10, 8-22=-272/10, 9-21=-272/10, 10-20=-272/10, 11-19=-272/10, 13-18=-272/10, 14-17=-271/14

NOTES
1) All plates are 1.5x3 (||) MT20 unless otherwise indicated.
2) Gable requires continuous bottom chord bearing.
3) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
4) Gable studs spaced at 1-4-0 oc.
5) All bearings are assumed to be SP No.3 .
6) Bearing at joint(s) 30 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 30.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 16, 29, 28, 26, 25, 24, 23, 22, 21, 20, 19, 18, and 17. This connection is for uplift only and does not consider lateral forces.
9) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
10) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

January 16,2025

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F1	Floor	7	1	I70811089 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Thu Jan 16 07:07:43 Page: 1

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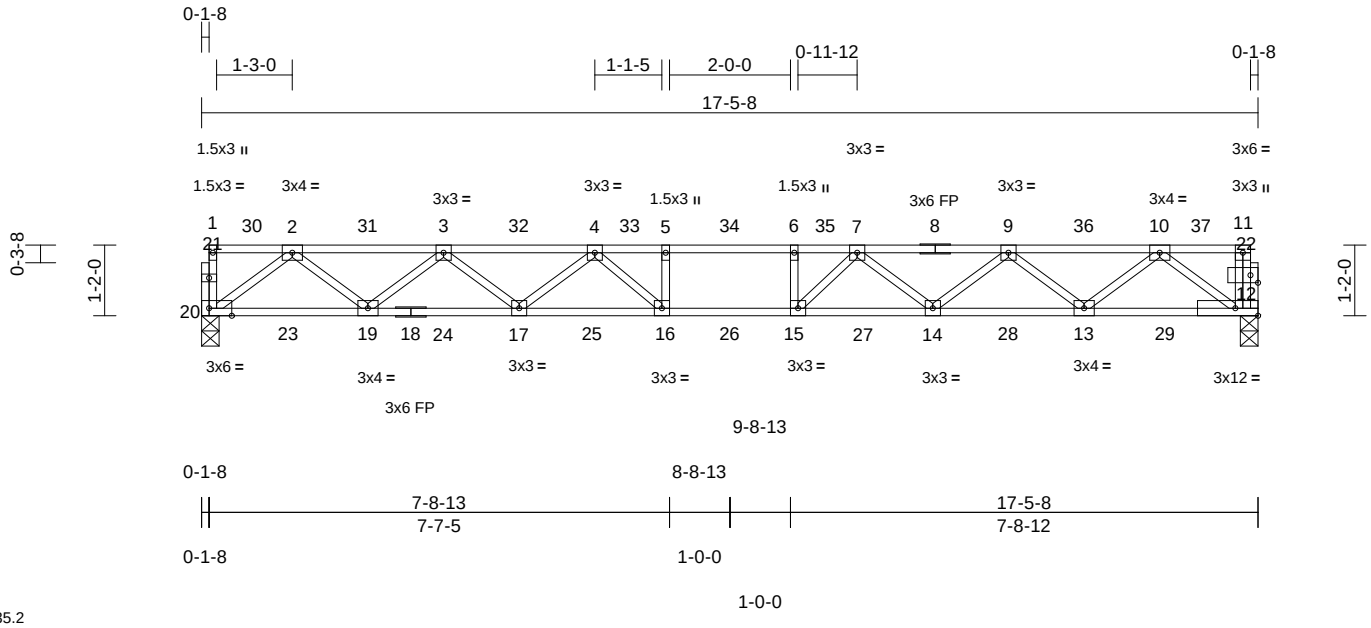

Scale = 1:35.2

Plate Offsets (X, Y): [20:0-4-8,Edge], [22:0-1-8,0-1-8]

Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.65	Vert(LL)	-0.21	15-16	>988	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.83	Vert(CT)	-0.29	15-16	>718	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.05	12	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 88 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)

BOT CHORD 2x4 SP No.2(flat) *Except* 18-12:2x4 SP SS (flat)

WEBS 2x4 SP No.3(flat)

OTHERS 2x4 SP No.3(flat)

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 12=0-3-8, 20=0-3-8

Max Grav 12=749 (LC 1), 20=749 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-20=-260/40, 11-12=-260/36, 1-2=-16/2, 2-3=-1584/0, 3-4=-2568/0, 4-5=-3063/0, 5-6=-3063/0, 6-7=-3063/0, 7-9=-2584/0, 9-10=-1615/0, 10-11=-16/2

BOT CHORD 19-20=0/936, 17-19=0/2204, 16-17=0/2908, 15-16=0/3063, 14-15=0/2921, 13-14=0/2228, 12-13=0/974

WEBS 5-16=-223/125, 6-15=-238/139, 2-20=-1172/0, 2-19=0/843, 3-19=-808/0, 3-17=0/473, 4-17=-443/38, 4-16=-234/472, 10-12=-1200/0, 10-13=0/834, 9-13=-799/0, 9-14=0/464, 7-14=-437/44, 7-15=-241/470

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) Bearings are assumed to be: Joint 20 SP No.3 , Joint 12 SP SS .
3) Bearing at joint(s) 20 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
4) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

January 16,2025

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F10	Floor	3	1	I70811090 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Thu Jan 16 07:07:47 Page: 1

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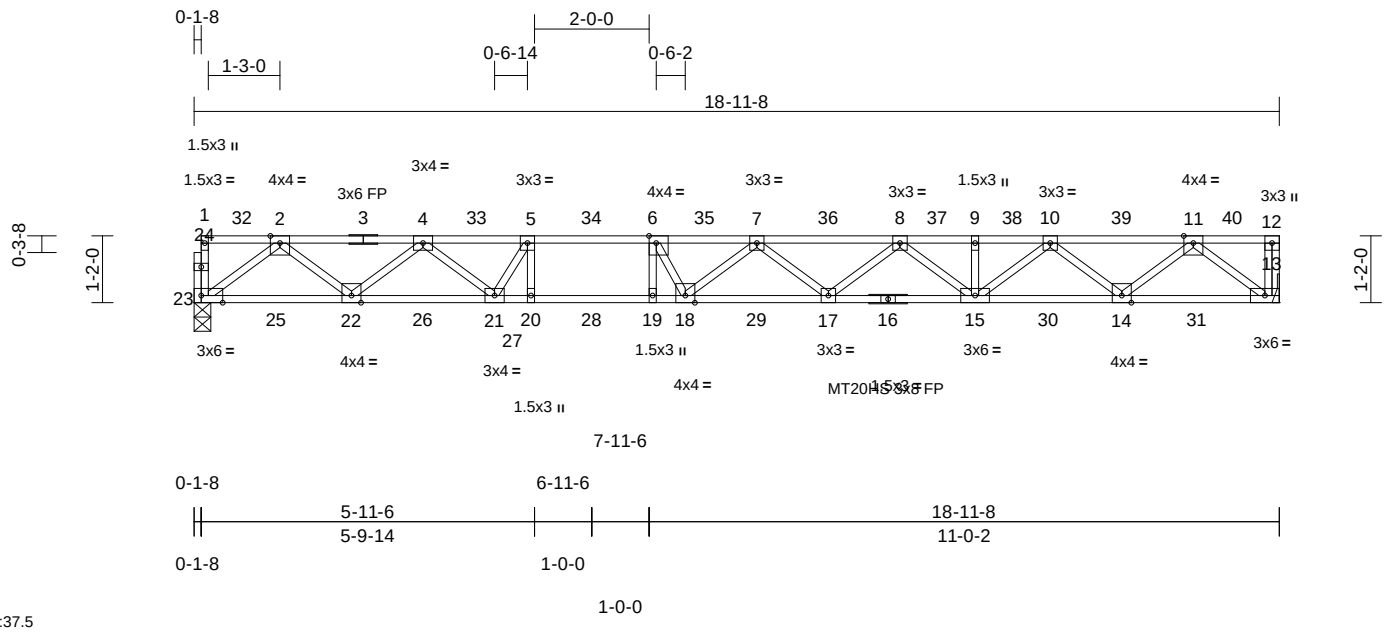


Scale = 1:37.5

Plate Offsets (X, Y): [6:0-1-8,Edge], [23:0-4-8,Edge]

Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.83	Vert(LL)	-0.37	18-19	>608	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.98	Vert(CT)	-0.51	18-19	>442	360	MT20HS	187/143
BCLL	0.0	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.06	13	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 96 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP SS(flat) *Except* 16-13:2x4 SP No.2 (flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 19-20,15-17.

REACTIONS (size) 13= Mechanical, 23=0-3-8
Max Grav 13=823 (LC 1), 23=818 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-23=-258/34, 12-13=-259/34, 1-2=-15/2, 2-4=-1749/0, 4-5=-2951/0, 5-6=-3383/0, 6-7=-3609/0, 7-8=-3546/0, 8-9=-2951/0, 9-10=-2951/0, 10-11=-1751/0, 11-12=0/0
BOT CHORD 22-23=0/1037, 21-22=0/2423, 20-21=0/3383, 19-20=0/3383, 18-19=0/3383, 17-18=0/3722, 15-17=0/3357, 14-15=0/2446, 13-14=0/1030
WEBS 5-20=-105/544, 6-19=-563/64, 2-23=-1300/0, 2-22=0/927, 4-22=-876/0, 4-21=0/720, 5-21=-942/77, 11-13=-1293/0, 11-14=0/939, 10-14=-904/0, 10-15=0/645, 9-15=-261/59, 8-15=-518/6, 8-17=-54/320, 7-17=-279/135, 7-18=-282/161, 6-18=-96/656

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) The Fabrication Tolerance at joint 16 = 12%
4) Bearings are assumed to be: Joint 23 SP No.3 .
5) Refer to girder(s) for truss to truss connections.
6) Bearing at joint(s) 23 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
8) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
9) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

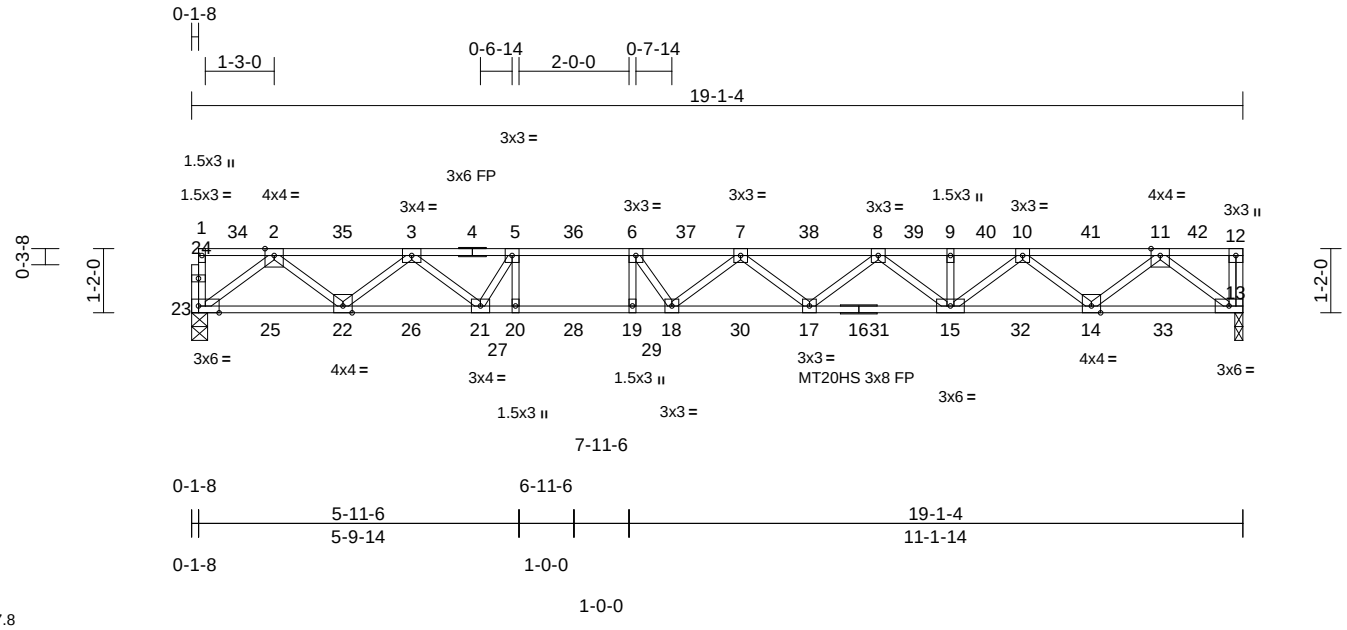
January 16,2025

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F9	Floor	5	1	I70811091 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Thu Jan 16 07:07:46 Page: 1

ID:YX39DIHcAAz3YCQluMhMc3yFIoY-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:37.8

Plate Offsets (X, Y): [23:0-4-8,Edge]

Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.85	Vert(LL)	-0.37	18-19	>615	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.83	Vert(CT)	-0.51	18-19	>447	360	MT20HS	187/143
BCLL	0.0	Rep Stress Incr	YES	WB	0.45	Horz(CT)	0.06	13	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 97 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP DSS(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING

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

REACTIONS (size) 13=0-1-12, 23=0-3-8
Max Grav 13=829 (LC 1), 23=824 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-23=-258/40, 12-13=-259/34, 1-2=-15/2, 2-3=-1766/0, 3-5=-2981/0, 5-6=-3429/0, 6-7=-3677/0, 7-8=-3594/0, 8-9=-2981/0, 9-10=-2981/0, 10-11=-1768/0, 11-12=0/0
BOT CHORD 22-23=0/1046, 21-22=0/2446, 20-21=0/3429, 19-20=0/3429, 18-19=0/3429, 17-18=0/3780, 15-17=0/3396, 14-15=0/2470, 13-14=0/1038
WEBS 5-20=-99/570, 6-19=-506/60, 2-23=-1310/0, 2-22=0/937, 3-22=-886/0, 3-21=0/729, 5-21=-972/70, 11-13=-1303/0, 11-14=0/949, 10-14=-915/0, 10-15=0/652, 9-15=-259/61, 8-15=-530/1, 8-17=-51/326, 7-17=-288/116, 7-18=-266/160, 6-18=-93/601

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) Bearings are assumed to be: Joint 23 SP No.3 , Joint 13 SP DSS .
4) Bearing at joint(s) 23 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 13.
6) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
7) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
8) CAUTION, Do not erect truss backwards.

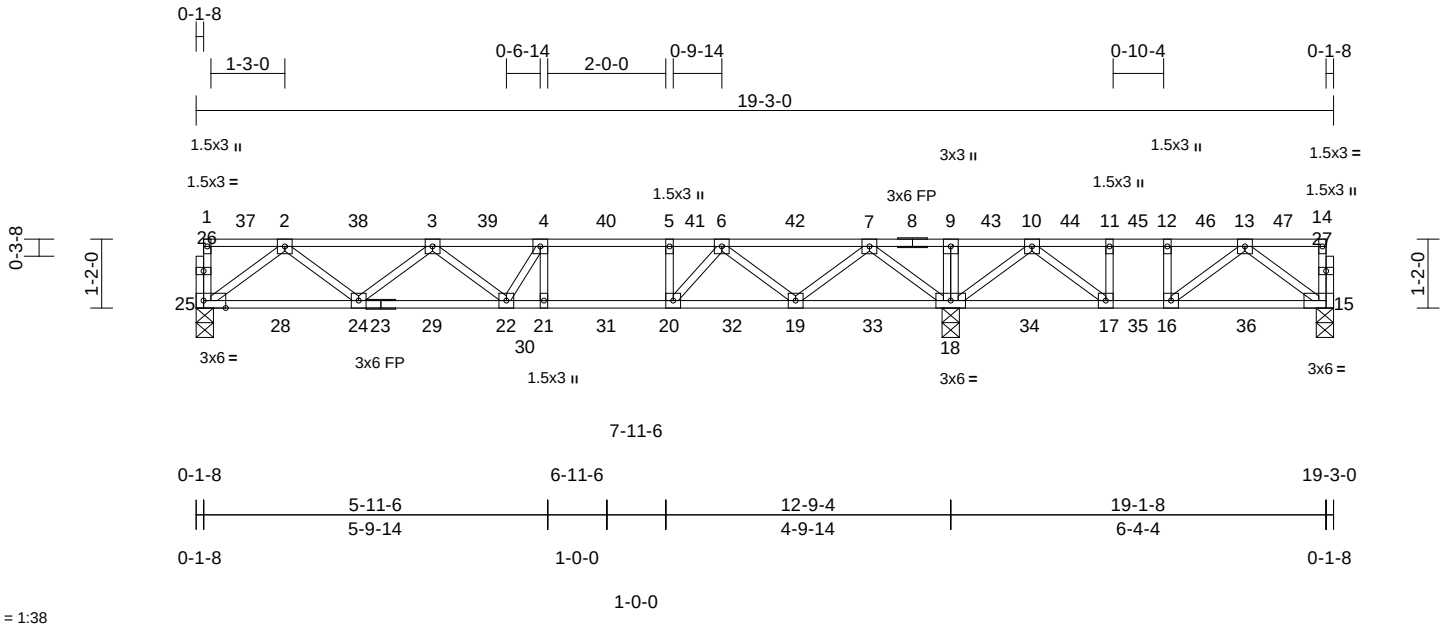
LOAD CASE(S) Standard

January 16,2025

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F7	Floor	2	1	I70811092 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Thu Jan 16 07:07:45 Page: 1
ID:4LVn?yG_PsrCw2rZLeA73syFIoZ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:38

Plate Offsets (X, Y): [25:0-4-8,Edge]

Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.60	Vert(LL)	-0.10	15-16	>791	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.82	Vert(CT)	-0.13	21-22	>999	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.02	18	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 99 lb	FT = 20%F, 12%E

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

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

REACTIONS (size) 15=0-3-8, 18=0-3-8, 25=0-3-8
Max Uplift 15=-29 (LC 46)
Max Grav 15=301 (LC 60), 18=986 (LC 1), 25=506 (LC 10)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-25=-260/37, 14-15=-260/16, 1-2=-16/2, 2-3=-973/0, 3-4=-1381/0, 4-5=-1352/0, 5-6=-1352/0, 6-7=-641/7, 7-9=0/636, 9-10=0/636, 10-11=-387/196, 11-12=-387/196, 12-13=-387/196, 13-14=-16/1
BOT CHORD 24-25=0/618, 22-24=0/1305, 21-22=0/1352, 20-21=0/1352, 19-20=0/1096, 18-19=-169/252, 17-18=-422/130, 16-17=-196/387, 15-16=-61/304
WEBS 4-21=-283/159, 5-20=-284/69, 9-18=-274/34, 2-25=-773/0, 2-24=0/463, 3-24=-432/0, 3-22=-125/229, 4-22=-164/386, 7-18=-912/0, 7-19=0/586, 6-19=-608/0, 6-20=-65/499, 10-18=-528/0, 13-15=-382/77, 10-17=0/400, 13-16=-172/199, 11-17=-222/58, 12-16=-147/146

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x3 (=) MT20 unless otherwise indicated.
3) Bearings are assumed to be: Joint 25 SP No.3 , Joint 18 SP No.2 , Joint 15 SP No.2 .
4) Bearing at joint(s) 25, 15 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 29 lb uplift at joint 15.
6) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
7) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
8) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

January 16,2025

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F8	Floor	5	1	I70811093 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Thu Jan 16 07:07:46 Page: 1
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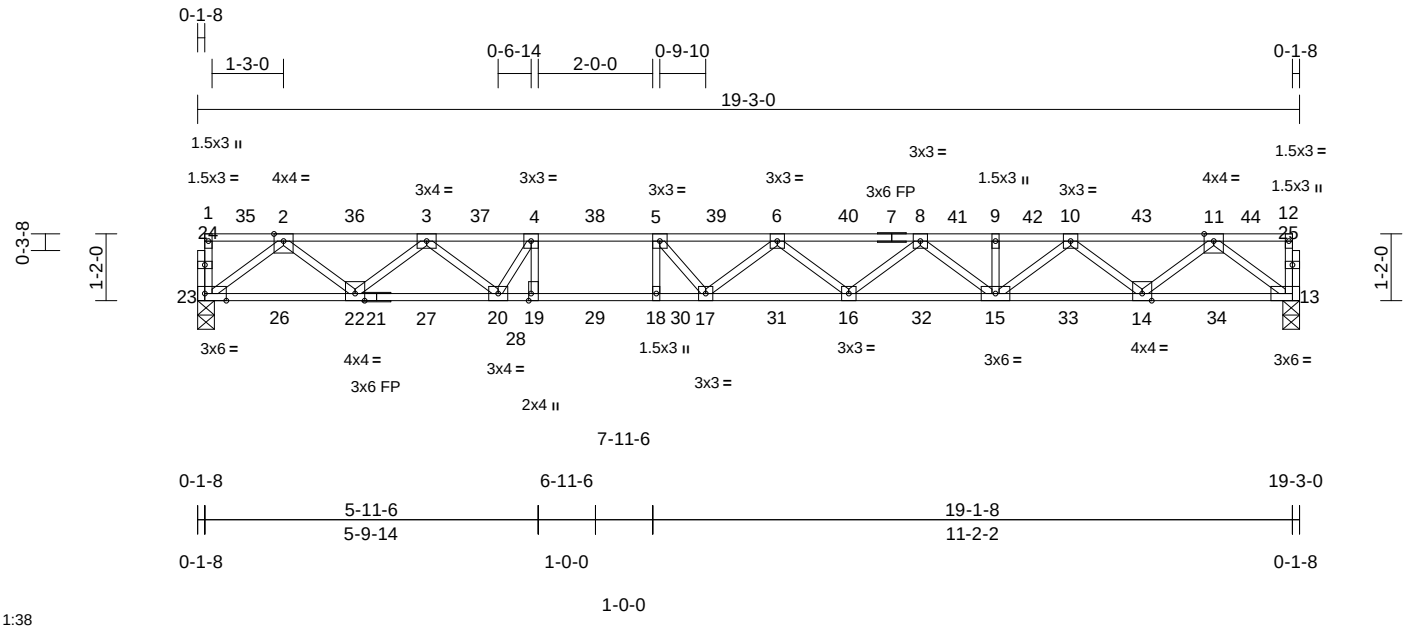


Scale = 1:38

Plate Offsets (X, Y): [19:0-1-8,Edge], [23:0-4-8,Edge]

Loading	(psf)	Spacing	1-7-3	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.89	Vert(LL)	-0.38	17-18	>595	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.84	Vert(CT)	-0.53	17-18	>433	360		
BCLL	0.0	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.06	13	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 97 lb	FT = 20%F, 12%E

LUMBER
TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP DSS(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

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

REACTIONS (size) 13=0-3-8, 23=0-3-8
Max Grav 13=830 (LC 1), 23=830 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-23=-258/40, 12-13=-259/37, 1-2=-15/2, 2-3=-1782/0, 3-4=-3014/0, 4-5=-3475/0, 5-6=-3742/0, 6-8=-3642/0, 8-9=-3013/0, 9-10=-3013/0, 10-11=-1783/0, 11-12=-16/2
BOT CHORD 22-23=0/1055, 20-22=0/2469, 19-20=0/3475, 18-19=0/3475, 17-18=0/3475, 16-17=0/3840, 15-16=0/3435, 14-15=0/2494, 13-14=0/1046
WEBS 4-19=-94/588, 5-18=-462/46, 2-23=-1321/0, 2-22=0/946, 3-22=-894/0, 3-20=0/742, 4-20=-997/63, 11-13=-1311/0, 11-14=0/959, 10-14=-925/0, 10-15=0/663, 9-15=-260/62, 8-15=-538/0, 8-16=-46/331, 6-16=-298/109, 6-17=-255/159, 5-17=-91/576

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) Bearings are assumed to be: Joint 23 SP No.3 , Joint 13 SP DSS .
3) Bearing at joint(s) 23, 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
4) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
5) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.

LOAD CASE(S) Standard

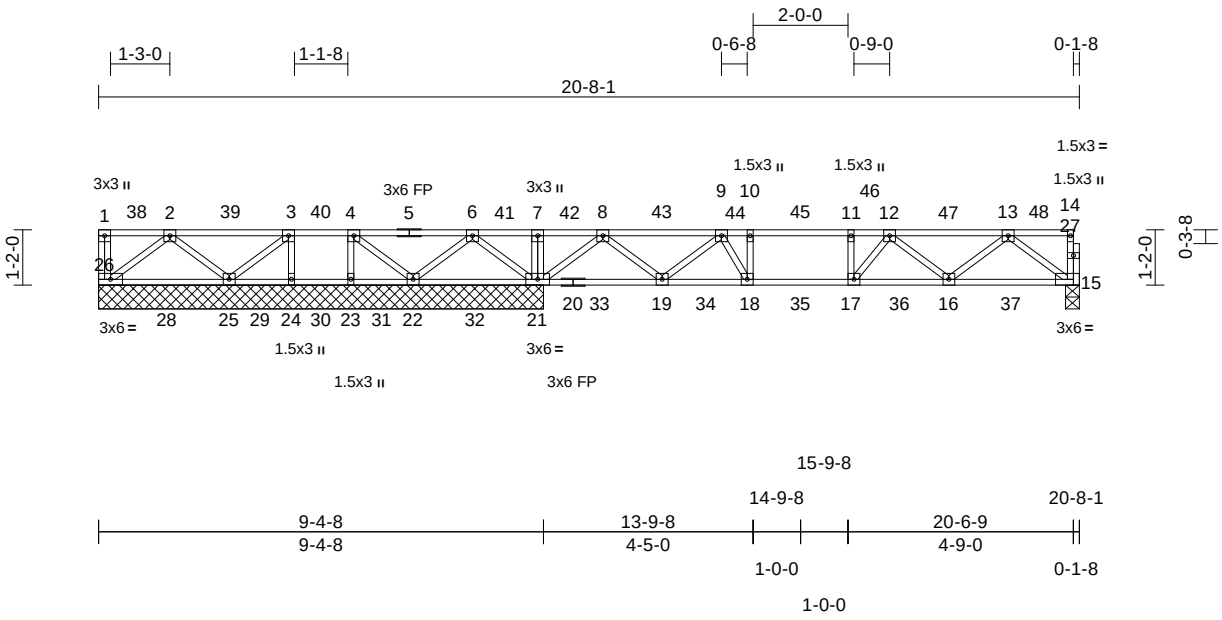
January 16,2025

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F14	Floor	1	1	I70811094 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Thu Jan 16 07:07:48 Page: 1

ID:Ur4CMkTCjufQd3N31VWtx9yFIpa-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:42.9

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.65	Vert(LL)	-0.10	16-17	>999	480	MT20	244/190
TCDL	10.0	Lumber DOL	1.00	BC	0.86	Vert(CT)	-0.11	16-17	>999	360		
BCLL	0.0	Rep Stress Incr	NO	WB	0.20	Horz(CT)	0.01	15	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 106 lb	FT = 20%F, 12%E

LUMBER

TOP CHORD 2x4 SP No.2(flat)
BOT CHORD 2x4 SP No.2(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

BRACING

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

REACTIONS (size) 15=0-3-8, 21=9-4-8, 22=9-4-8, 23=9-4-8, 24=9-4-8, 25=9-4-8, 26=9-4-8
Max Horiz 26=-2 (LC 6)
Max Uplift 22=-174 (LC 79), 23=-65 (LC 66), 24=-81 (LC 62)
Max Grav 15=365 (LC 14), 21=728 (LC 1), 22=252 (LC 76), 23=273 (LC 75), 24=280 (LC 74), 25=293 (LC 73), 26=276 (LC 72)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-26=-257/37, 14-15=-258/35, 1-2=-10/10, 2-3=-7/47, 3-4=-11/27, 4-6=-2/92, 6-7=-68/709, 7-8=-68/709, 8-9=-480/0, 9-10=-866/0, 10-11=-866/0, 11-12=-866/0, 12-13=-703/0, 13-14=-15/9
BOT CHORD 25-26=-2/156, 24-25=-29/13, 23-24=-27/11, 22-23=-27/11, 21-22=-366/81, 19-21=-296/295, 18-19=0/724, 17-18=0/866, 16-17=0/876, 15-16=0/444
WEBS 7-21=-264/55, 10-18=-312/131, 11-17=-159/180, 6-21=-430/19, 2-26=-196/3, 6-22=-177/364, 2-25=-257/0, 4-22=-91/5, 3-25=-53/14, 3-24=-247/39, 4-23=-237/49, 8-21=-691/0, 8-19=0/505, 9-19=-430/0, 9-18=-139/403, 13-15=-555/0, 13-16=0/417, 12-16=-309/65, 12-17=-261/189

NOTES

1) Unbalanced floor live loads have been considered for this design.
2) All plates are 3x3 (=) MT20 unless otherwise indicated.
3) All bearings are assumed to be SP No.2 .
4) 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.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 174 lb uplift at joint 22.
6) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 24 and 23. This connection is for uplift only and does not consider lateral forces.
7) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
8) This truss has been designed for a total drag load of 150 lb. Lumber DOL=(1.33) Plate grip DOL=(1.33) Connect truss to resist drag loads along bottom chord from 0-0-0 to 20-6-1 for 7.3 plf.
9) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
10) CAUTION, Do not erect truss backwards.

LOAD CASE(S) Standard

January 16,2025

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

Job	Truss	Truss Type	Qty	Ply	The Farm at Neills Creek Lot 00.0042 OWF
2501-0212-A	F13	Floor	6	1	I70811095 Job Reference (optional)

Structural, LLC, Thurmont, MD - 21788, Run: 8.83 S Dec 4 2024 Print: 8.830 S Dec 4 2024 MiTek Industries, Inc. Thu Jan 16 07:07:48 Page: 1
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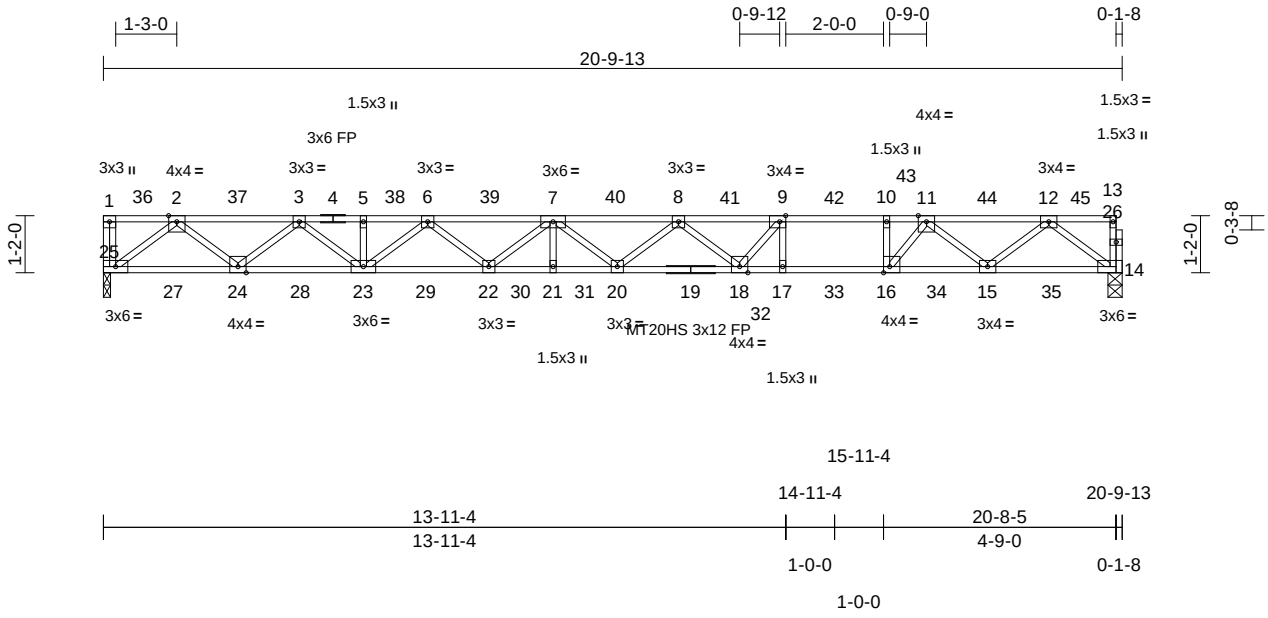


Scale = 1:42.9

Plate Offsets (X, Y): [9:0-1-8,Edge], [16:0-1-8,Edge]

Loading	(psf)	Spacing	1-4-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.00	TC	0.65	Vert(LL)	-0.41	17-18	>601	480	MT20HS	187/143
TCDL	10.0	Lumber DOL	1.00	BC	0.84	Vert(CT)	-0.56	17-18	>438	360	MT20	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.52	Horz(CT)	0.06	14	n/a	n/a		
BCDL	5.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 106 lb	FT = 20%F, 12%E

LUMBER
TOP CHORD 2x4 SP No.2(flat) *Except* 4-13:2x4 SP SS (flat)
BOT CHORD 2x4 SP DSS(flat)
WEBS 2x4 SP No.3(flat)
OTHERS 2x4 SP No.3(flat)

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

REACTIONS (size) 14=0-3-8, 25=0-1-12
Max Grav 14=750 (LC 1), 25=754 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-25=-258/35, 13-14=-256/37, 1-2=0/0, 2-3=-1631/0, 3-5=-2795/0, 5-6=-2795/0, 6-7=-3458/0, 7-8=-3691/0, 8-9=-3417/0, 9-10=-2967/0, 10-11=-2967/0, 11-12=-1588/0, 12-13=-15/2
BOT CHORD 24-25=0/948, 23-24=0/2293, 22-23=0/3230, 21-22=0/3682, 20-21=0/3682, 18-20=0/3711, 17-18=0/2967, 16-17=0/2967, 15-16=0/2348, 14-15=0/939
WEBS 9-17=-461/17, 10-16=-559/3, 2-25=-1190/0, 2-24=0/889, 3-24=-861/0, 3-23=0/641, 5-23=-251/73, 6-23=-555/0, 6-22=-37/333, 7-22=-318/160, 7-21=-68/257, 7-20=-187/259, 8-20=-206/185, 8-18=-437/32, 9-18=0/774, 12-14=-1177/0, 12-15=0/845, 11-15=-988/0, 11-16=0/1092

NOTES
1) Unbalanced floor live loads have been considered for this design.
2) All plates are MT20 plates unless otherwise indicated.
3) All bearings are assumed to be SP DSS .
4) Bearing at joint(s) 14 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 25.
6) This truss has been designed for a moving concentrated load of 250.0lb live and 3.0lb dead located at all mid panels and at all panel points along the Top Chord and Bottom Chord, nonconcurrent with any other live loads.
7) Recommend 2x6 strongbacks, on edge, spaced at 10-00-00 oc and fastened to each truss with 3-10d (0.131" X 3") nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
8) CAUTION, Do not erect truss backwards.

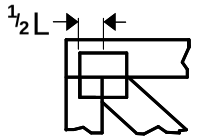
LOAD CASE(S) Standard

January 16,2025

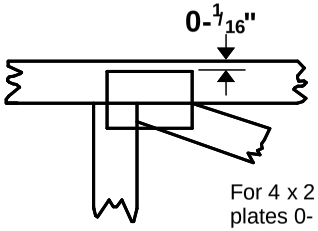
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

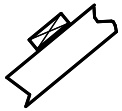
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

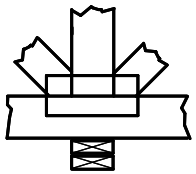
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

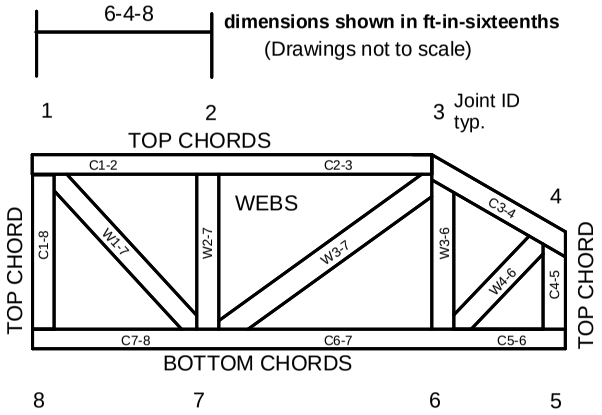


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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